

Federal Communications Commission

(REFERENCE COPY - Not for submission)

FCC Form 399: Reimbursement Request

Facility	25932	Service: DTV	Call	WHRO-TV	Channel: 31 (UHF)
ID:			Sign:		
File	000002	7736			
Number:					
FRN: 00(02062511	Date	05/10		
		Submitted:	/2021		

Applicant Name, Type, and Contact Information

Information Applicant Address Applicant Phone Email Туре **Hampton Roads** Chris G. +1 chris. Not-for-Educational Gunnufsen (757) gunnufsen@whro. Profit 5200 **Telecommunications** 889org HAMPTON 9394 Association, Inc. BOULEVARD NORFOLK, VA 23508 **United States**

Reimbursement Contact Name and Information Reimbursement Contact Information

Applicant	Address	Phone	Email
[Confidential]			

Preparer Contact Information	Preparer Contact Name and Information			
	Applicant	Address	Phone	Email
	The Preparer is same as the reimbursement contact.			

Broadcaster	Question
Information	
and	
Transition	
Plan	

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	The transition plan is being handled by the Owner of the Tower, American Tower Corporation. The tower is complicated due to the total number of broadcasters collocated on the tower. There will be a Wide Band interim antenna side mounted on the tower 987'

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

Primary	Existing Transmitter Infor	mation			
Transmitter	Section	Question	Response		
	Existing Transmitter Description	Type of change	Purchase New		
		Use	Primary (Main)		
		Description of Use	N/A		
		Ownership	Owned		
		Owner	N/A		
		Site	N/A		
		Is this transmitter currently shared with another station?	No		
		Is this transmitter currently in operating condition?	Yes		
	Existing Transmitter	Manufacturer			
	Manufacturer and Type	Model	DCX Millenium		
		Year	2001		
		Туре	Inductive Output Tube		
		IOT Power Type	Тwo		
		Power Capacity	60 kW		

Existing Transmitter Information

Primary	New Transmitter Costs		
Transmitter	Section	Question	Response
	New Transmitter	Use Change Type Is this a request for upgraded equipment? Manufacturer Model Transmitter Type Solid State Cooling Solid State Power capacity Justification for New Transmitter	Primary (Main)
		Change Type	Purchase New
		Is this a request for upgraded equipment?	No
		Manufacturer	
		Model	HPTV PRLX- U36
		Transmitter Type	Solid State
			Liquid Cooled
		Solid State Power capacity	58 kW
		Justification for New Transmitter	The Channels are to Far apart for Re- tuning. Channel 16 Pre and Channel 31 post Repacking. This has been verified with Hitachi Comark LLC. Manufacturer of the existing channel 16 antenna. The IOT Transmitters has been replaced by the Parallax SS

Primary	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	500 kVA	
		Rigid Conduit and Wiring	Yes	
		Size	4 inches	
		Length	300.0 feet	
		Other Electrical Service	Yes	
		Description	Installation of Transmitter Electrical systems	
	HVAC Service	Does the replacement transmitter require HVAC Service?	Yes	
		Туре	Cooling Only	
		Size	25 tons	
		Other Size	N/A	
	Transmitter Building Addition/Modification or Leasehold Improvement	Does the Transmitter Building require an addition, modification, other leashold improvement?	Yes	
		Size	1500.0 square feet	
	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
TransmitterOther Transmitter Cost Not ListedInformation not provided.

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

Primary	Existing Antenna Informa	tion				
Antenna	Section	tion Question Type of change Antenna Use Description of Use Ownership Owner	Response			
	Existing Antenna Description	Type of change	Lease New			
	Description	Antenna Use	Primary (Main)			
		Description of Use	N/A			
		Ownership	Owned			
		Owner	Primary (Main)N/AOwnedN/AN/ANoYesYesYesFull PowerTop MountBottomHorizontalSlotted CoaxialN/AN/AN/A			
		Site	N/A			
		Is the existing antenna shared with another station or stations?	No			
		Is the existing antenna directional?	Yes			
		Owner Site Site Is the existing antenna shared with another station or stations? Is the existing antenna directional? Is antenna in operating condition? Is antenna located on or in close proximity to an antenna farm? Class Mounting Antenna position in stack Polarization Type	Yes			
		Is antenna located on or in close proximity to an antenna farm?	Yes			
	Existing Antenna	Class	Full Power			
	Manufacturer and Type	Mounting	Top Mount			
		Antenna position in stack	Bottom			
		Polarization	Horizontal			
		Туре				
		Number of Stations Supported	N/A			
		Number of Panels	N/A			
		Design power capacity in use	N/A			
		Lower Limit	N/A			
		Antenna UsePrimary (Main)Description of UseN/AOwnershipOwnedOwnerN/ASiteN/ASiteN/AIs the existing antenna shared with another station or stations?YesIs antenna in operating condition?YesIs antenna located on or in close proximity to an antenna farm?YesClassFull PowMountingTop MouAntenna position in stackBottomPolarizationHorizontaTypeSlotted CoaxialNumber of Stations SupportedN/ADesign power capacity in useN/AUpper LimitN/AOther Antenna TypeN/AERP: (Effective Radiated Power)1000.0 k				
		Other Antenna Type	N/A			
		ERP: (Effective Radiated Power)	1000.0 kW			
		Manufacturer				

Model	TFU- 24GBH-R 08SP
Year	2000

Primary Antenna	New Antenna Costs			
	Section	Question	Response	
	New Antenna Description Use Description of Change Type	Use	Primary (Main)	
		Description of Use	N/A	
		Change Type	Lease New	
		Is this a request for upgraded equipment?	Primary (Main) N/A	
		Ownership	Leased	
		Owner		
		Is antenna shared?	Yes	
		Is antenna directional?	No	
		Will antenna be located on or in close proximity to an antenna farm?	Yes	
	New Antenna	Class	Full Power	
	Manufacturer and Types	Mounting	Top Mount	
		Antenna position in stack	Not in Stack	
		Polarization	Elliptical	
		Туре		
		Number of Stations Supported	4	
		Number of Panels/Bays	70	
		Lower Limit	470.00 MHz	
		Upper Limit	700.00 MHz	
		Design power capacity in use	41.0 %	
		Other Antenna Type	N/A	
		ERP: (Effective Radiated Power) 1950	1950.0 kW	
		Manufacturer		

Model	PEP70E-05- 2-T
Year	2019
Justification for New Antenna	Combining Stations to reduce load and Total FCC Costs

Primary Antenna Section Question Response **Combiner for Shared** Do you need a Combiner for a Shared Yes Antenna Antenna? Type New Number of channels supported 4 **RF** channel Frequencies of channels supported Frequency N/A 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 8 3/16 inches inches **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 No 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?

Other Antenna Costs

Enter a list of RF channel numbers.

RF Channel Number	
20	
16	
31	
33	

Primary Antenna

Other Antenna Cost Not Listed

Name	Description
Combiner Installation	ATC Estimated Costs for line item 3-C-2

Interim Antenna	New Antenna Costs				
	Section	Question	Response		
	New Antenna Description	Use	Interim		
		Description of Use	N/A		
		Change Type	Purchase New		
		Ownership	Leased		
		Owner	American Tower Corp		
		Is antenna shared?	Yes		
		Is antenna directional?	Yes		
		Will antenna be located on or in close proximity to an antenna farm?	Yes		
	New Antenna	Class	Full Power		
	Manufacturer and Type	Mounting	Side Mount		
		Antenna position in stack	Not in Stack		
		Polarization	Elliptical		
		Туре	Broadband Slot		
		Number of Stations Supported	5		
		Number of Panels/Bays	24		
		Lower Limit	N/AN/APurchase NewLeasedLeasedAmerican Tower CorpYesYesYesYesYesYesSide MountNot in StackEllipticalBroadband SlotSide Sot		
		Upper Limit	590.00 MHz		
		Design power capacity in use	75.0 %		
		Other Antenna Type	N/A		
		ERP: (Effective Radiated Power)	60.0 kW		
		Manufacturer			
		Model			

Year	2018
Justification for New Antenna	Complex antenna structure with multiple stations trying to remain on the air during the transition to new channels. See American Tower Plan

Interim O	ther Antenna Costs
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Antenna	Section	Question	Response
	Combiner for Shared Antenna	Do you need a Combiner for a Shared Antenna?	Yes
		Туре	New
		Number of channels supported	5
		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?	Yes
		Broadband or Single Channel?	В
		Feed Line Size	7 3/16 inches
	Side Mount Brackets	Do you require the separate purchase of side mount brackets for an antenna?	Yes

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		
16		
20		
31		
32		
33	-	

Interim Antenna	Other Antenna Cost Not Listed		
	Name	Description	
	Interim Tower Rental	One time tower rental during repack line item 1-B-1	
	Interim Antenna - New Combiner Installation	Interim Antenna - New Combiner Installation	

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

Primary	Existing Transmission Line			
Transmissio	n Line Section	Question	Response	
	Existing Transmission Line Description	Type of change	Lease New	
		Use	Primary (Main)	
		Description of Use	N/A	
		Ownership	Leased	
		Owner	American Tower LLC	
		Site	N/A	
		Is the existing transmission line shared with another station or stations?	No	
		Is Transmission Line in operating condition?	Yes	
	Existing Transmission	Manufacturer		
	Line Manufacturer and Type	Туре	Rigid	
		Diameter	6 1/8 inches	
		Other Diameter	N/A	
		Segment Length	19 1/2 inches	
		Other Segment Length	N/A	
		Number of parallel runs	1	
		Length	1307 feet per run	

Primary	New Transmission Line			
Transmissio	New Transmission Line Costs	Question	Response	
		Use	Primary (Main)	
		Description of Use	N/A	
		Change Type	Lease 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	2	
		Length	1350 feet per run	
		Justification for New Transmission Line	Part of a shared Broadband antenna system	

Other Transmission Line Expenses Not Listed **Primary** Transmission Line Description Combiner system for shared Broadband **Combiner system** antenna **Primary Transmission Line - Nitrogen** Primary Transmission Line - Nitrogen Generator Generator **Primary Transmission Line - Other Parts** Primary Transmission Line - Other Parts

Interim	New Transmission Line			
Transmissio	n Line Section	Question	Response	
	New Transmission Line	Use	Interim	
	Costs	Description of Use	N/A	
		Change Type	Purchase New	
		Туре	Rigid	
		Diameter	8 3/16 inches	
		Segment Length	Broadband	
		Other Segment Length		
		Number of parallel runs	1	
		Length	1100 feet per run	
		Justification for New Transmission Line	Single run Dielectric 8- 3/16" Digitline with 950 ft vertical plus 150 ft. run equals 1100 ft. total; Includes nitrogen generator plus 200' of vertical run to get to the combiner network in ATC owned building located in the compound total WHRO 1300	

Other Transmission Line Expenses Not Listed Transmission Line

ission Line	Description
Elbows	3 Elbows are needed to connect a new sections of 6 1/8' line to the interim broadband antenna located in American Tower owned building.
Interim Transmission Line - Nitrogen Generator	Interim Transmission Line - Nitrogen Generator
Interim Transmission Line - Other Parts	Interim Transmission Line - Other Parts
Transmission line interim	200 Ft of 6 1/8 " line to connect to the Wibeband Interim antenna located in the ATC building approx 200 ft away.

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

Existing Tower

Primary	Existing Tower			
Tower	Section	Question	Response	
	Existing Tower	Type of change	Modify Existing	
	Description	Tower Use	Primary (Main)	
		Description of Use	N/A	
		Ownership	Leased	
		Is this tower consider Complex?	Candelabra	
		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?	Yes	
	Existing Tower Structure Registration	Do you have a tower registration number?	Yes	
		ASR Number	1057874	
	Coordinates (NAD83 (North American Datum	Latitude (NAD83)	36° 48' 31.8" N-	
	of 1983))	Longitude (NAD83)	076° 30' 11.3" W-	
		Overall Structure Height	1258.84 feet	
		Support Structure Height	1254.91 feet	
		Ground Elevation Above Mean Sea Level (AMSL)	22.97 feet	

Structure Type	GTOWER - Guyed Structure Used for Communication Purposes
Tower Owner	American Towers, LLC
Date Constructed	02/03/2006

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
9762	WGNT	DTV
82574	WTPC-TV	DTV
25932	WHRO-TV	DTV
67077	WPXV-TV	DTV
47401	WTKR	DTV
40759	WTVZ-TV	DTV
25940	WHRO-FM	FM
25933	WHRV	FM

Primary Tower Modification Costs

Tower

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

Tower Rigging Costs

Primary Tower

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

Primary Tower

Other Tower Expenses Not Listed

Name	Description
Tower Permit Drawing Package	Tower Permit Drawing Package
Tower Construction Project Management	Tower Construction Project Management

Outside	Section	Question	Response		
Professional	Services Costs Outside Project Management Services	Do you require outside project management services?	Yes		
		Number of Hours	770		
		Explanation	This is for the project management costs associated with American Tower Corporation. This is a very complicated site and will require Project management from all Broadcasters collocated on the tower. Est is based on Previous conversion to digital in 2001		
	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	Prepare and file Form FCC Construction Permit Application	Yes
Services	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	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	Yes
	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
Number of Days	N/A
Justification	N/A

Outside Other Professional Services Expenses Not Listed Professional Services Costs

Services Costs	Description
Migratory Bird Assessment	Tower located in a migratory Bird Path
RF System Test	Testing of the combiner to ensure all one (1) frequencies are tuned for optimal patterns.
Site Coordination Meeting	Site coordination meetings with all broadcasters, contractors and vendors involved with the site deliveries and construction. This cost is for travel and logistics expenses accrued.
Ground and Building Drawing Package	Ground & Building A&E Permit Drawing Package

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?	Yes
	Permit and Filing Costs	Local Zoning	Yes
		Non-zoning permits	Yes
		BLM or NFS Coordination	Yes
		FCC Construction Permit Minor Change	No
		FCC License to Cover Application	Yes
		FCC Special Temporary Authority Application	Yes
	Other Miscellaneous Expenses	Does this relocation require paying Disposal Costs (for equipment and other waste, net of any salvage value)?	Yes
		Does this relocation require Equipment Delivery or Handling Charges not otherwise included in individual item costs?	Yes
		Does this relocation require Equipment Storage?	Yes
		Does this relocation require the Development and Airing of an Announcement regarding an upcoming channel change?	Yes
		Does this relocation require MVPD Notification of a Channel Change?	Yes

Other Expenses Not Listed

Other Expenses

Name	Description
Special Insurance Rider	Special insurance rider will need to be purchased by WHRO for the Homes locate within 1000' ft of the tower. WHRO owns all of the property surrounding the tower America Tower Leases only a small portion of the ground space, Anchor point Base an Buildin
Comark System Design and Site Survey	Cost associated with Hitachi Comark to do a site visit and design for the Transmitter installation
ATC One Time Tower Rental	ATC have 3 repack customers, one non repacked customer and one new customer on the Norfolk TT. The interim Main side mount antenna will allow the broadcasters to minimize their OTA disruption, maintain their coverage contour, complete in safe manner
Grading Road	The Gravel Road Will be destroyed during the repacking andwill require several Gradings during the process due to the complexity of the site and total number of broadcasters impacted
Public Hearing	Cost associated with Public hearings that might be required due to the repacking process and proximity of houses located around the tower
Site Security	Site Security Company during construction for theft prevention and vandalism

Transmitters

Cost Information

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

Description Primary Transmitter HPTV PRLX- U36	Predetermined Cost Estimate \$2,199,878.67	Estimated Cost \$2,549,834.00	Estimated Cost Justification	Actual Cost \$1,974,903.00	Actual Cost Justification
Other Building Addition Size: 1500.0	\$3,478.67	\$3,478.67	Please see American Tower WHRO Main Norfolk Tall Tower 10152 Customer Project Cost Estimation.	\$3,478.67	N/A
Switchgear - industrial 800 amp	\$38,200.00	\$36,300.00	N/A	\$0.00	N/A
25 Ton system	\$91,500.00	\$12,734.33	Please see American Tower WHRO Main Norfolk Tall Tower 10152 Customer Project Cost Estimation.	\$12,734.33	N/A

Transformer 3 phase /480v - 500 KVA	\$48,400.00	\$276,401.00	This is to replace the existing 3 wire 600 KVA Clean source UPS with a 4 wire 500KVA Clean Source UPS from Pillar Formerly Active Power	\$0.00	The Existing 3 wire 600 Kva UPS from Active power is not compatible with any solid state transmitter. The replacement is a 4 wire 500 kva UPS from Active power a division of Pillar power systems.
Other Electrical Service: Installation of Transmitter Electrical systems	\$200,000.00	\$200,000.00	N/A	\$0.00	N/A
4" Rigid Conduit and Wiring (Cost per foot)	\$30,300.00	\$28,800.00	After Digital conversion in 2009 all conduits and switch gear was removed that connected to the analog transmitter.	\$0.00	N/A

UHF - Liquid Cooled Solid State Transmitter 52 - 61 kW	\$1,788,000.00	\$1,992,120.00	Includes 342,120 dollars for the RFS 6 pole filter and switches to change from the interim antenna to the main antenna	\$1,958,690.00	N/A
Sub-total	\$2,199,878.67	\$2,549,834.00	N/A	\$1,974,903.00	N/A
Total for all systems	\$6,803,985.43	\$4,762,012.42	N/A	\$3,621,911.96	N/A

Components

Actual Information Description	File Name	
Other Building Addition Size: 1500.0	Component Description: Amount:	1. WHRO-TV-110- 1st Primary Transmitter - Building Addition, 1500 sq. ft. \$3,478.67
Switchgear - industrial 800 amp	Information not provided.	
25 Ton system	Component Description: Amount:	CAPITAL CONTRIBUTION - NORFOLK TALL TOWER \$12,734.33

Transformer 3 phase/480v - 500 KVA	Component Description:	ANNUAL PREVENTIVE
	Amount:	MAINTENANCE M F 8am TO 5pm \$276,401.00
	Component Description: Amount:	Invoice to be resubmitted to LMS N/A
Other Electrical Service: Installation of Transmitter Electrical systems	Information not provided.	
4" Rigid Conduit and Wiring (Cost per foot)	Information not provided.	
UHF - Liquid Cooled Solid State Transmitter 52 - 61 kW	Component Description:	Parallax 58kW Liquid Cooled
	Amount:	Digital Transmitter \$881,410.50
	Component Description:	Parallax 58kW Liquid Cooled Digital Transmitter
	Amount:	\$979,345.00
	Component Description:	Parallax 58kW liquid cooled digital
	Amount:	\$97,934.50
	Component Description:	Invoice to be resubmitted to LMS
	Amount:	N/A
	Component Description:	Invoice to be resubmitted to LMS
	Amount:	N/A

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
Interim Antenna SBB-EPD- 24 C160	\$440,476.60	\$312,725.93		\$252,142.59	
Interim Tower Rental	\$57,600.00	\$57,600.00	Interim antenna Tower rental during repack	\$57,600.00	N/A
Side mount brackets for high power antennas (if not included in antenna base cost)	\$23,150.00	\$8,500.00	Shared cost with Other Broadcasters being repacked See WHRO IM Norfolk Tall Tower 10152 Repack Cost Estimates	\$0.00	N/A
Combiner output splitting /switching for dual feed lines, if applicable	\$126,000.00	\$50,000.00	Shared Costs See American Tower document: WHRO IM Norfolk Tall Tower 10152 Repack Cost Estimates plus 10,000.00 as shared installation Costs line item 3-C-2	\$0.00	25 percent payment on combiners

New combiner, cost per channel (without antenna)	\$84,200.00	\$56,494.80	see Estimated Cost Justification WHRO-TV- 280-Interim Antenna - New Combiner v0	\$56,494.80	Combiner 25 % payment
Sweep test of existing antenna	\$6,730.00	\$8,333.33	Shared expense with Other Broadcasters Being repacked See American Tower Document: WHRO IM Norfolk Tall Tower 10152 Repack Cost Estimates	\$6,249.99	25 percent payment for sweep tests
UHF - High Power, Side Mount, basic slot antenna, 24 bay,, 60 - 65 kW input, directional,, elliptically or circularly polarized	\$116,265.00	\$116,265.00	Please see American Tower WHRO Main Norfolk Tall Tower 10152 Customer Project Cost Estimation.	\$116,265.00	N/A
Interim Antenna - New Combiner Installation	\$9,681.60	\$9,681.60	Please see American Tower WHRO Main Norfolk Tall Tower 10152 Customer Project Cost Estimation.	\$9,681.60	N/A

Elbow complex, broadband, at antenna input, per 7 3/16. feedline (if needed)	\$16,850.00	\$5,851.20	Please see WHRO American Tower quote Main Norfolk Tall Tower 10152	\$5,851.20	N/A
Primary Antenna PEP70E-05- 2-T	\$1,339,213.33	\$421,883.33		\$270,665.96	
Combiner Installation	\$13,333.33	\$13,333.33	Per station combiner installation costs	\$9,999.99	N/A
New combiner, cost per channel (without antenna)	\$84,200.00	\$66,000.00	N/A	\$65,589.98	N/A
UHF - High Power Top Mount (200- 1000 kW), Four Station broadband panel antenna, elliptically or circularly polarized	\$1,090,000.00	\$198,150.00	This is the per cost per station with 4 station total using the BBA	\$180,054.33	N/A
Sweep test of existing antenna	\$6,730.00	\$6,400.00	N/A	\$5,000.00	N/A
Elbow complex, broadband, at antenna input, per 8 3/16. feedline (if needed)	\$18,950.00	\$12,000.00	N/A	\$10,021.66	N/A

Combiner output splitting /switching for dual	\$126,000.00	\$126,000.00	N/A	\$0.00	N/A
feed lines, if applicable					
Sub-total	\$1,779,689.93	\$734,609.26	N/A	\$522,808.55	N/A
Total for all systems	\$6,803,985.43	\$4,762,012.42	N/A	\$3,621,911.96	N/A

Actual Information	
Description	File Name

Interim Tower Rental		
	Component Description:	23. WHRO-TV-280 Interim Antenna - Interim Tower
		Rental
	Amount:	\$28,800.00
	Component Description:	26. WHRO-TV-280- Interim Antenna - Interim Tower Renta
	Amount:	\$14,400.00
	Component Description:	Invoice to be
	Amount:	resubmitted to LMS N/A
	Component Description:	Invoice to be
	Amount:	resubmitted to LMS N/A
	Component Description:	23. WHRO-TV-280-
		Interim Antenna - Interim Tower Rental
	Amount:	\$14,400.00
Side mount brackets for high power antennas (if not included in antenna base cost)	Information not provided.	
Combiner output splitting /switching for dual feed lines, if applicable	Information not provided.	

channel (without antenna)	Component Description:	21. WHRO-TV-280
	eenipenen 2000 pilon	Interim Antenna -
		New Combiner
	Amount:	\$11,000.00
	Component Description:	23. WHRO-TV-280
		Interim Antenna -
		New Combiner
	Amount:	\$23,494.80
	Component Description:	21. WHRO-TV-280
		Interim Antenna -
		New Combiner
	Amount:	\$22,000.00
	Component Description:	Invoice to be
		resubmitted to LMS
	Amount:	N/A
	Component Description:	Invoice to be
		resubmitted to LMS
	Amount:	N/A

Sweep test of existing		
antenna	Component Description:	22. WHRO-TV-280-
		Interim Antenna -
	•	Sweep Test
	Amount:	\$2,083.33
	Component Description:	22. WHRO-TV-280-
		Interim Antenna -
		Sweep Test
	Amount:	\$4,166.66
	Component Description:	Invoice to be
		resubmitted to LMS.
	Amount:	N/A
	Component Description:	Invoice to be
		resubmitted to LMS.
	Amount:	N/A

UHF - High Power, Side		
Mount, basic slot antenna, 24 bay,, 60 - 65 kW input,	Component Description:	20. WHRO-TV-280-
directional,, elliptically or		Interim Antenna -
circularly polarized		UHF High Power
		Side Mount,
		Directional, E-POL
	Amount:	\$15,000.00
	Component Description:	20. WHRO-TV-280-
		Interim Antenna-
		UHF High Power
		Side Mount,
		Directional, E-POL
	Amount:	\$30,000.00
	Component Description:	22. WHRO-TV-280-
		Interim Antenna -
		UHF High Power
		Side Mount,
		Directional, E-POL
	Amount:	\$71,265.00
	Component Description:	Invoice to be
		resubmitted to LMS.
	Amount:	N/A
	Component Description:	Invoice to be
		resubmitted to LMS.
	Amount:	N/A
Interim Antenna - New		
Combiner Installation	Component Description:	25. WHRO-TV-280-
		Interim Antenna -
		New Combiner
		Installation
	Amount:	\$9,681.60
		ψ0,001.00

Elbow complex, broadband, at antenna input, per 7 3/16. feedline	Component Description:	3. WHRO-TV-280- Interim Antenna - 7
(if needed)	Amount:	3/16" Broadband Elbow Complex \$1,000.00
		• ,
	Component Description:	3. WHRO-TV-280- Interim Antenna - 7 3/16" Broadband Elbow Complex
	Amount:	\$2,000.00
	Component Description:	24. WHRO-TV-280- Interim Antenna - 7 3/16" Broadband
	Amount:	Elbow Complex \$2,851.20
Combiner Installation		
	Component Description:	2. WHRO-TV-210- Primary Antenna - Combiner
	Amount:	Installation \$3,333.33
	Component Description:	2. WHRO-TV-210- Primary Antenna - Combiner
	Amount:	Installation \$6,666.66
	Component Description:	Invoice to be
	Amount:	resubmitted to LMS N/A
	Component Description:	Invoice to be resubmitted to LMS
	Amount:	N/A

New combiner, cost per channel (without antenna)	Component Description:	1. WHRO-TV-210- Primary Antenna -
	Amount:	New Combiner \$16,500.00
	Component Description:	1. WHRO-TV-210- Primary Antenna -
	Amount:	New Combiner \$33,000.00
	Component Description:	3. WHRO-TV-210- Primary Antenna -
	Amount:	New Combiner \$16,089.98
	Component Description:	Invoice to be resubmitted to LMS
	Amount:	N/A
	Component Description:	Invoice to be resubmitted to LMS
	Amount:	N/A

UHF - High Power Top Mount (200-1000 kW), Four Station broadband	Component Description:	CAPITAL CONTRIBUTION -
panel antenna, elliptically		NORFOLK TALL
or circularly polarized		TOWER
	Amount:	\$49,537.50
	Component Description:	CAPITAL
	••••••••••••••••••••••••••••••••••••••	CONTRIBUTION -
		NORFOLK TALL
	Amount:	TOWER \$99,075.00
		ψ55,075.00
	Component Description:	2. WHRO-TV-210-
		Primary Antenna -
		UHF High Power Top Mount, 4
		Station Broadband,
		E-POL
	Amount:	\$31,441.83
	Component Description:	Invoice to be
		resubmitted to LMS
	Amount:	N/A
	Component Description:	Invoice to be
		resubmitted to LMS
	Amount:	N/A
Sweep test of existing		
antenna	Component Description:	4. WHRO-TV-210-
		Primary Antenna -
		Sweep Test
	Amount:	\$5,000.00

Elbow complex, broadband, at antenna input, per 8 3/16. feedline (if needed)	Component Description:	4. WHRO-TV-210- Primary Antenna - 3/16" Broadband
	Amount:	Elbow Complex \$3,000.00
	Component Description:	4. WHRO-TV-210- Primary Antenna - 3/16" Broadband
	Amount:	Elbow Complex \$6,000.00
	Component Description:	5. WHRO-TV-210- Primary Antenna - 3/16" Broadband
	Amount:	Elbow Complex \$1,021.66
	Component Description:	Invoice to be resubmitted to LMS
	Amount:	N/A
	Component Description:	Invoice to be resubmitted to LMS
	Amount:	N/A
Combiner output splitting /switching for dual feed lines, if applicable	Information not provided.	

Transmission Line

Cost Information

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

Description Interim Transmission Line	Predetermined Cost Estimate \$499,760.40	Estimated Cost \$203,360.40	Estimated Cost Justification	Actual Cost \$176,066.20	Actual Cost Justification
Transmission line interim	\$0.00	\$0.00	these costs are included in the Interim Transmission Line - Rigid Transmission Line budget category	\$0.00	N/A
Interim Transmission Line - Nitrogen Generator	\$2,391.00	\$2,391.00	Please see American Tower WHRO Main Norfolk Tall Tower 10152 Customer Project Cost Estimation at 50% of the cost, per the vendor	\$2,391.00	N/A
Interim Transmission Line - Other Parts	\$29,738.70	\$29,738.70	Please see Dielectric order confirmation 1929872	\$29,738.70	N/A

Elbows	\$28,730.70	\$28,730.70	Elbows to connect the vertical run to the interim antenna 3 Total @ 1930.00 each per Dielectric Quote	\$1,436.50	Includes additional items not ir the original quote
Rigid Transmission Line - copper, 8 3 /16" broadband	\$438,900.00	\$142,500.00	see WHRO American Tower quote Main Norfolk Tall Tower 10152, second section - Norfolk Tall Tower 10152	\$142,500.00	N/A
Primary Transmission Line	\$1,162,734.75	\$359,877.75		\$359,877.75	
Rigid Transmission Line - copper, 8 3 /16" broadband	\$1,077,300.00	\$274,443.00	Please see Estimated Cost Justification WHRO-TV- 310-Primary Transmission Line - 8 3_16_ Broadband Rigid Copper v0	\$274,443.00	N/A
Primary Transmission Line - Other Parts	\$7,309.60	\$7,309.60	Please see Dielectric order confirmations 1931780 and 1931858	\$7,309.60	N/A

Primary Transmission Line - Nitrogen Generator	\$2,391.00	\$2,391.00	Please see American Tower WHRO Main Norfolk Tall Tower 10152 Customer Project Cost Estimation at 50% of the cost, per the vendor	\$2,391.00	N/A
Combiner system	\$75,734.15	\$75,734.15	Please see WHRO 1931009 Order Confirmation - Primary Transmission Line - Combiner System	\$75,734.15	N/A
Sub-total	\$1,662,495.15	\$563,238.15	N/A	\$535,943.95	N/A
Total for all systems	\$6,803,985.43	\$4,762,012.42	N/A	\$3,621,911.96	N/A

Actual Information Description	File Name	
Transmission line interim		
	Component Description:	Invoice to be
		resubmitted to LMS.
	Amount:	N/A
	Component Description: Amount:	Invoice to be resubmitted to LMS. N/A

Interim Transmission Line - Nitrogen Generator	Component Description:	21. WHRO-TV-380- Interim Transmission Line -
	Amount:	Nitrogen Generator \$2,391.00
Interim Transmission Line - Other Parts	Component Description:	RIGID TRANSMISSION LINE
Elbows	Amount:	\$29,738.70
	Component Description: Amount:	Invoice to be resubmitted to LMS. N/A
	Component Description: Amount:	item 1 R0004542501 field Flange 5 at 287.30 \$1,436.50
	Component Description: Amount:	Invoice to be resubmitted to LMS. N/A
	Component Description: Amount:	Invoice to be resubmitted to LMS. N/A

Rigid Transmission Line - copper, 8 3/16" broadband	Component Description: Amount:	24. WHRO-TV-380- Interim Transmission Line - 8 3/16"" Broadband Rigid Copper \$22,000.00
	Component Description: Amount:	24. WHRO-TV-380- Interim Transmission Line - 8 3/16" Broadband Rigid Copper \$44,000.00
	Component Description: Amount:	27. WHRO-TV-380- Interim Transmission Line - 8 3/16" Broadband Rigid Copper \$76,500.00
	Component Description: Amount:	Invoice to be resubmitted to LMS. N/A
	Component Description: Amount:	Invoice to be resubmitted to LMS. N/A
	Component Description: Amount:	Invoice to be resubmitted to LMS. N/A

Rigid Transmission Line -		
copper, 8 3/16" broadband	Component Description:	5. WHRO-TV-310-
		Primary
		Transmission Line -
		8 3/16" Broadband
		Rigid Copper
	Amount:	\$55,167.75
	Component Description:	5. WHRO-TV-310-
		Primary
		Transmission Line -
		8 3/16" Broadband
		Rigid Copper
	Amount:	\$110,335.50
	Component Description:	6. WHRO-TV-310-
		Primary
		Transmission Line -
		8 3/16" Broadband
		Rigid Copper
	Amount:	\$108,939.75
	Component Description:	Invoice to be
		resubmitted to LMS.
	Amount:	N/A
	Component Description:	Invoice to be
	component Description.	resubmitted to LMS.
	Amount:	N/A
Primary Transmission Line		
- Other Parts	Component Description:	XFMR 6-50 /6-75
		UHF 3 ST
	Amount:	\$7,242.40
		•••••
	Component Description	
	Component Description: Amount:	O-RING BUNA \$67.20

Primary Transmission Line - Nitrogen Generator	Component Description:	20. WHRO-TV-310- Primary Transmission Line -
		Nitrogen Generator
	Amount:	\$2,391.00
Combiner system		
	Component Description:	RIGID
		TRANSMISSION
		LINE
	Amount:	\$75,734.15

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).

			Estimated		
	Predetermined	Estimated	Cost		Actual Cost
Description	Cost Estimate	Cost	Justification	Actual Cost	Justification
Primary Tower GTOWER	\$686,725.83	\$509,591.83		\$494,416.81	
Complex Tower (includes, for example, those with candelabras and/or stacked antennas)	\$421,000.00	\$321,912.67	please see Estimated Cost Justification WHRO-TV- 410-Existing Primary Tower - Tower Rigging v0	\$315,662.66	N/A
Minor tower reinforcement /modifications	\$158,000.00	\$79,953.33	please see Estimated Cost Justification WHRO-TV- 410-Existing Primary Tower - Minor Reinforcement Modifications v0	\$79,953.33	N/A
Structural engineering tower load study for a documented tower with candelabra	\$20,000.00	\$20,000.00	Part of the total tower rebuild with 4 other broadcasters American Tower Document WHRO IM Norfolk Tall Tower 10152 Repack Cost Estimates	\$14,600.00	this included structural and tower mapping for structural

Tower Helicopter Lift	\$55,525.83	\$55,525.83	Please see American Tower WHRO Main Norfolk Tall Tower 10152 Customer Project Cost Estimation	\$55,525.83	N/A
Tower Permit Drawing Package	\$4,700.00	\$4,700.00	Please see American Towers Customer Project Cost Estimation	\$4,700.00	N/A
Tower Construction Project Management	\$27,500.00	\$27,500.00	Please see Estimated Cost Justification WHRO-TV- 410-Existing Primary Tower - Tower Construction Project Management v0	\$23,974.99	N/A
Sub-total	\$686,725.83	\$509,591.83	N/A	\$494,416.81	N/A
Total for all systems	\$6,803,985.43	\$4,762,012.42	N/A	\$3,621,911.96	N/A

Actual Information	
Description	File Name

Complex Tower (includes, for example, those with candelabras and/or stacked antennas)	Component Description:	8. WHRO-TV-410- Existing Primary
		Tower - Tower Rigging, Complex
		Tower
	Amount:	\$40,416.70
	Component Description:	8. WHRO-TV-410-
		Existing Primary
		Tower - Tower
		Rigging, Complex
		Tower
	Amount:	\$80,833.42
	Component Description:	9. WHRO-TV-410-
		Existing Primary
		Tower - Tower
		Rigging, Complex
		Tower
	Amount:	\$194,412.54
	Component Description:	Invoice to be
		resubmitted to
		LMS.
	Amount:	N/A
	Component Description:	Invoice to be
		resubmitted to
		LMS.
	Amount:	N/A

Minor tower reinforcement /modifications	Component Description:	7. WHRO-TV-410- Existing Primary Tower - Minor Reinforcement
	Amount:	/Modifications \$12,500.00
	Component Description:	7. WHRO-TV-410- Existing Primary Tower - Minor Reinforcement
	Amount:	/Modifications \$25,000.00
	Component Description:	8. WHRO-TV-410- Existing Primary Tower - Minor Reinforcement /Modifications
	Amount:	\$42,453.33
	Component Description:	Invoice to be resubmitted to
	Amount:	LMS. N/A
	Component Description:	Invoice to be resubmitted to LMS.
	Amount:	LMS. N/A

tower load study for a documented tower with candelabra	Component Description:	6. WHRO-TV-41 Existing Primary Tower - Tower Load Study for Documented Tower with Candelabra
	Amount:	\$2,737.50
	Component Description:	6. WHRO-TV-410 Existing Primary Tower - Tower Load Study for Documented Tower with Candelabra
	Amount:	\$5,475.00
	Component Description:	7. WHRO-TV-410 Existing Primary Tower - Tower Load Study for Documented Tower with Candelabra
	Amount:	\$6,387.50
	Component Description:	Invoice to be resubmitted to LMS.
	Amount:	N/A
	Component Description:	Invoice to be resubmitted to LMS.
	Amount:	N/A

Tower Helicopter Lift	Component Description:	10. WHRO-TV-410- Existing Primary Tower - Helicopter
	Amount:	Lift \$55,525.83
Tower Permit Drawing Package	Component Description:	9. WHRO-TV-410-
		Existing Primary
		Tower - Tower
		Permit Drawing
	•	Package
	Amount:	\$1,175.00
	Component Description:	9. WHRO-TV-410-
		Existing Primary
		Tower - Tower
		Permit Drawing
	Amount:	Package \$2,350.00
	Component Description:	11. WHRO-TV-410-
	· · · · · · · · · · · · · · · · · · ·	Existing Primary
		Tower - Tower
		Permit Drawing
		Package
	Amount:	\$1,175.00

Tower Construction Project Management		
	Component Description:	11. WHRO-TV-410
		Existing Primary
		Tower - Tower
		Construction
		Project
		Management
	Amount:	\$1,796.87
	Component Description:	11. WHRO-TV-410
		Existing Primary
		Tower-Tower
		Construction
		Project
		Management
	Amount:	\$3,593.75
	Component Description:	12. WHRO-TV-410
		Existing Primary
		Tower-Tower
		Construction
		Project
		Management
	Amount:	\$18,584.37

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 Cc Justificat
Outside Professional Services	\$302,265.85	\$232,374.18		\$58,352.87	
Ground and Building Drawing Package	\$11,000.00	\$11,000.00	Cost to Generate the Construction Drawing package for 4 Broadcast stations. Cover the interim and Main antenna packages	\$3,525.00	All of the were und Non Zoning Permit which hav been Zeroed o but I can remove them.
RF System Test	\$5,000.00	\$5,000.00	Perform systems checks on Combiner network due to the volume of broadcaster using the antenna ATC Doc WHRO IM Norfolk Tall Tower 10152 Repack Cost Estimates	\$5,000.00	N/A
Comprehensive coverage verification via field study, if needed	\$84,200.00	\$80,000.00	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	\$700.00	To reimburse American Tower if needed	N/A	N//
ASR modification (prepare FCC Form 854)	\$2,105.00	\$800.00	Shared cost of the Broadcasters being repacked	N/A	N/J
Environmental Assessment, if triggered by NEPA Section 106 review or for certain structures over 450 feet	\$10,520.00	\$3,500.00	Per ATC Doc WHRO IM Norfolk Tall Tower 10152 Repack Cost Estimates	N/A	N//
NEPA Section 106 environmental review, if needed	\$6,310.00	\$2,000.00	Per ATC Doc WHRO IM Norfolk Tall Tower 10152 Repack Cost Estimates	N/A	N//
Attorney Fees - Prepare and File request for Special Temporary Authorization	\$3,680.00	\$3,500.00	N/A	N/A	N/J
Attorney Fees - Negotiation of lease and other matters for shared locations	\$4,210.00	\$4,000.00	N/A	N/A	N/J

Attorney Fees - Prepare and File FCC Form 2100 (main), License to Cover Application	\$2,365.00	\$2,250.00	N/A	N/A	N/ <i>F</i>
Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	\$5,260.00	\$5,000.00	N/A	N/A	N//
Prepare request for Special Temporary Authorization	\$2,050.00	\$1,500.00	N/A	N/A	N//
Prepare engineering section of FCC Form 2100 (main), License to Cover Application	\$1,580.00	\$1,500.00	N/A	N/A	N//
Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	\$3,155.00	\$3,000.00	N/A	N/A	N/A
Perform engineering study for new channel assignment and antenna development	\$7,360.00	\$7,000.00	N/A	\$5,000.00	N/#

Address transition timing and coordination issues w/ other stations and wireless	\$2,630.00	\$3,333.33	The estimated cost has been adjusted to include all invoices submitted for reimbursement at this time.	\$3,333.33	N/A
Project management of the transition	\$121,660.00	\$85,895.00	Shared Expense via American Tower Doc WHRO IM Norfolk Tall Tower 10152 Repack Cost Estimates. Also see Widelity Strategic Support Quote.	\$38,161.20	N/A
Migratory Bird Assessment	\$500.00	\$500.00	estimated costs for being in a bird migration mitigation ATC DocWHRO IM Norfolk Tall Tower 10152 Repack Cost Estimates	\$437.49	N/A
RF Exposure Measurements	\$21,050.00	\$6,500.00	Shared Expense	N/A	N/A
Prepare and or review reimbursement form	\$2,630.00	\$2,500.00	N/A	N/A	N/A
Site Coordination Meeting	\$2,895.85	\$2,895.85	The estimated cost has been adjusted to include all invoices submitted for reimbursement at this time.	\$2,895.85	N/A

Sub-total	\$302,265.85	\$232,374.18	N/A	\$58,352.87	N/A
Total for all systems	\$6,803,985.43	\$4,762,012.42	N/A	\$3,621,911.96	N/A

Actual Information	
Description	File Name

Component Description:	10. WHRO-TV- 590-Ground and
Amount:	Building Drawing Package \$2,350.00
Component Description:	Invoice to be resubmitted to LMS.
Amount:	N/A
Component Description:	Invoice to be resubmitted to
Amount:	LMS. N/A
Component Description:	10. WHRO-TV- 590-Ground and Building Drawing
Amount:	Package \$1,175.00
Component Description:	Invoice to be resubmitted to
Amount:	LMS. N/A
Component Description:	Invoice to be resubmitted to LMS.
Amount:	N/A

RF System Test		
	Component Description:	17. WHRO-TV- 580-Field Engineering Service - RF System Test
	Amount:	\$1,250.00
	Component Description:	17. WHRO-TV- 580-Field Engineering Service - RF System Test
	Amount:	\$2,500.00
	Component Description:	17. WHRO-TV- 580-Field Engineering Service - RF System Test
	Amount:	\$1,250.00
	Component Description:	Invoice to be resubmitted to LMS.
	Amount:	N/A
	Component Description:	Invoice to be resubmitted to LMS.
	Amount:	N/A
Comprehensive coverage verification via field study, if needed	Information not provided.	
FAA consultant, including cost of preparing FAA Form 7460 (Notice of Proposed Construction), if needed for height increase	Information not provided.	

ASR modification (prepare FCC Form 854)	Information not provided.
Environmental Assessment, if triggered by NEPA Section 106 review or for certain structures over 450 feet	Information not provided.
NEPA Section 106 environmental review, if needed	Information not provided.
Attorney Fees - Prepare and File request for Special Temporary Authorization	Information not provided.
Attorney Fees - Negotiation of lease and other matters for shared locations	Information not provided.
Attorney Fees -Prepare and File FCC Form 2100 (main), License to Cover Application	Information not provided.
Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	Information not provided.
Prepare request for Special Temporary Authorization	Information not provided.
Prepare engineering section of FCC Form 2100 (main), License to Cover Application	Information not provided.
Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	Information not provided.

Perform engineering study for new channel assignment and antenna development	Component Description:	14. WHRO-TV- 530-RF Eng - Engineering Study for New Channel
	Amount:	Assignment \$2,500.00
	Component Description:	15. WHRO-TV- 530-RF Eng - Engineering Study for New Channel
	Amount:	Assignment \$1,250.00
	Component Description:	Invoice to be resubmitted to LMS.
	Amount:	N/A
	Component Description:	14. WHRO-TV- 530-RF Eng - Engineering Study for New Channel
	Amount:	Assignment \$1,250.00
	Component Description:	Invoice to be resubmitted to LMS.
	Amount:	N/A

Address transition timing		
and coordination issues w/	Component Description:	13. WHRO-TV-
other stations and wireless	Component Description.	590-Transition
		Timing and
		Coordination
		Issues
	Amount:	\$625.00
	Component Description:	13. WHRO-TV-
		590-Transition
		Timing and
		Coordination
		Issues
	Amount:	
	Amount.	\$1,250.00
	Component Description:	14. WHRO-TV-
		590-Transition
		Timing and
		Coordination
		Issues
	Amount:	\$1,458.33
	Component Description:	Invoice to be
		resubmitted to
		LMS.
	Amount:	N/A
	Component Description:	Invoice to be
		resubmitted to
		LMS.
	Amount:	N/A
Project management of the transition		
	Component Description:	12. WHRO-TV-
		510-Project
		Management
	Amount:	\$2,370.00
		·

Component Description: Amount:	Project Management \$3,635.35
Component Description: Amount:	Project Management \$1,511.25
Component Description: Amount:	Project Management \$4,376.20
Component Description: Amount:	12. WHRO-TV- 510-Project Management \$4,740.00
Component Description: Amount:	Project Management \$3,118.05
Component Description: Amount:	Project Management \$778.75
Component Description: Amount:	Project Management \$3,511.40
Component Description: Amount:	13. WHRO-TV- 510-Project Management \$2,370.00
Component Description: Amount:	Project Management \$2,986.05

Component Description: Amount:	Project Management \$6,899.15
Component Description: Amount:	Invoice to be resubmitted to LMS. N/A
Component Description: Amount:	Invoice to be resubmitted to LMS. N/A
Component Description: Amount:	Invoice to be resubmitted to LMS. N/A
Component Description: Amount:	Invoice to be resubmitted to LMS. N/A
Component Description: Amount:	Project Management \$1,125.00
Component Description: Amount:	Project Management \$740.00

Component Description:	16. WHRO-TV- 590-Migratory Bird Assessment
Amount:	\$145.83
Component Description:	16. WHRO-TV- 590-Migratory Bird Assessment
Amount:	\$291.66
Component Description:	Invoice to be resubmitted to LMS.
Amount:	N/A
Component Description:	Invoice to be resubmitted to LMS.
Amount:	N/A
Information not provided.	
Information not provided.	
	Amount: Component Description: Amount: Component Description: Amount: Component Description: Amount: Information not provided.

Site Coordination Meeting		
	Component Description:	15. WHRO-TV- 590-Site
		Coordination Meeting
	Amount:	\$625.00
	Component Description:	16. WHRO-TV- 590-Site
		Coordination
	Amount:	Meeting \$1,020.85
		• .,
	Component Description:	15. WHRO-TV-
		590-Site Coordination
		Meeting
	Amount:	\$1,250.00
	Component Description:	Invoice to be
		resubmitted to
	Amount:	LMS. N/A
	Component Description:	Invoice to be
		resubmitted to LMS.
	Amount:	LMS. N/A

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	\$172,930.00	\$172,365.00		\$35,486.78	
Grading Road	\$4,500.00	\$4,500.00	Regrading drive access to the site for at least 1 year	N/A	N/A
MVPD Notification of Channel Change	\$500.00	\$500.00	N/A	N/A	N/A
Special Insurance Rider	\$2,500.00	\$2,500.00	Special insurance Rider to cover the costs of the homes that are within 2000 ft of the tower. ATC owes the tower WHRO Owns all the Land. ATC Lease the Base, Anchors and Building land from WHRO	N/A	N/A

Site Security	\$16,200.00	\$16,200.00	Very complicated site installation. lots o expensive materials lying around very easy to steal. The compound is gated but access under ditch area is possible	N/A	N/A
Public Hearing	\$500.00	\$500.00	Costs associated with Public hearing materials sent to surrounding homes, newspapers ETC.	N/A	N/A
ATC One Time Tower Rental	\$57,600.00	\$57,600.00	Rental Fee associated with repacking for the Interim antenna	N/A	N/A
Comark System Design and Site Survey	\$15,300.00	\$15,300.00	This is to visit the tower site location and design the transmitter installation locations and RF plumbing of the system.	\$15,300.00	See P3921E WHRO Site design and Survey quote.

Equipment Storage	\$24,000.00	\$24,000.00	N/A	\$2,429.34	N/A
Equipment Delivery and Handling Charges	\$12,500.00	\$12,500.00	N/A	\$10,257.44	N/A
Disposal Costs (for equipment and other waste, net of any salvage value)	\$3,500.00	\$3,500.00	N/A	N/A	N/A
Develop and air announcement of upcoming channel change	\$15,000.00	\$15,000.00	N/A	N/A	N/A
DTV Medical Facility Notification	\$11,550.00	\$11,000.00	N/A	\$6,750.00	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
Local Zoning	\$1,750.00	\$1,750.00	N/A	\$0.00	N/A
Non-zoning permits	\$5,000.00	\$5,000.00	N/A	\$750.00	N/A
BLM or NFS Coordination	\$2,000.00	\$2,000.00	N/A	N/A	N/A
Sub-total	\$172,930.00	\$172,365.00	N/A	\$35,486.78	N/A
Total for all systems	\$6,803,985.43	\$4,762,012.42	N/A	\$3,621,911.96	N/A

Components

Actual Information Description	File Name	
Grading Road	Information not provided.	
MVPD Notification of Channel Change	Information not provided.	
Special Insurance Rider	Information not provided.	
Site Security	Information not provided.	
Public Hearing	Information not provided.	
ATC One Time Tower Rental	Information not provided.	
Comark System Design and Site Survey	Component Description:	Invoice to be resubmitted to
	Amount:	LMS. N/A
	Component Description: Amount:	System Design Service / Site Survey \$15,300.00
Equipment Storage	Component Description: Amount:	19. WHRO-TV- 610-Equipment Storage \$2,429.34
Equipment Delivery and Handling Charges	Component Description: Amount: Component Description:	Freight and Shipping \$2,835.00 FREIGHT AND SHIPPING
	Amount:	\$84.83

Component Description:	Dielectric Freight Charges for invoice 637004. Cover letter for Dielectric Shipping is located in the Attachments \$41.86
Component Description: Amount:	FREIGHT AND SHIPPING \$304.51
Component Description: Amount:	Invoice to be resubmitted to LMS. N/A
Component Description: Amount:	19. WHRO-TV- 610-Equipment Delivery and Handling \$3,333.33
Component Description: Amount:	FREIGHT AND SHIPPING \$1,991.25
Component Description:	19. WHRO-TV- 610-Equipment Delivery and Handling
Amount: Component Description:	\$1,666.66 ATC MS1 1-A-4
Amount:	at 25% of total N/A

Amount:\$3,750.00FCC Filing Fees - Form 2100 license to cover applicationInformation not provided.FCC Filing Fees - Special Temporary Authorization requestInformation not provided.Local ZoningComponent Description:Invoice to be resubmitted to LMS. N/AComponent Description:ATC MS2 item : A-3 permit costs Additional 50% payment 25% remaining N/ANon-zoning permitsComponent Description:18. WHRO-TV-			
announcement of upcoming channel changeComponent Description: Medical Notification S3,000,00Medical Notification S3,000,00DTV Medical Facility Notification Amount:Component Description: Medical notification Mail S3,750,00Medical notification Mail S3,750,00FCC Filing Fees - Form 2100 license to cover applicationInformation not provided.Vertication Medical Temporary Authorization requestFCC Filing Fees - Special Temporary Authorization requestInformation not provided.Vertication Medical Medica	equipment and other waste,	Information not provided.	
NotificationComponent Description: Amount:Medical Notification \$3,000.00Component Description: Amount:Medical notification Mail Amount:Medical notification Mail Amount:FCC Filing Fees - Form 2100 license to cover applicationInformation not provided.Image: Component Description:FCC Filing Fees - Special Temporary Authorization requestInformation not provided.Image: Component Description:Local ZoningComponent Description: Manunt:Invoice to be resubmitted to LMS. N/ANon-zoning permitsComponent Description:ATC MS2 item A-3 permit costs Additional 50% payment 25% remaining N/A	announcement of upcoming	Information not provided.	
FCC Filing Fees - Form 2100 license to cover applicationInformation not provided.FCC Filing Fees - Special Temporary Authorization requestInformation not provided.Local ZoningComponent Description:Invoice to be resubmitted to LMS. Amount:Local ZoningComponent Description:ATC MS2 item a A-3 permit costs Additional 50% payment 25% remaining Amount:Non-zoning permitsComponent Description:ATC MS2 item a A-3 permit costs Additional 50% payment 25% remaining Permits			Notification
2100 license to cover application Information not provided. FCC Filing Fees - Special Temporary Authorization request Information not provided. Local Zoning Component Description: Invoice to be resubmitted to LMS. Amount: N/A Component Description: ATC MS2 item A-3 permit costs Additional 50% payment 25% remaining N/A Non-zoning permits Component Description: 18. WHRO-TV- 610-Non-Zoning Permits			notification Mailing
Temporary Authorization requestComponent Description:Invoice to be resubmitted to LMS. N/ALocal ZoningComponent Description:Invoice to be resubmitted to LMS. N/AAmount:Component Description:ATC MS2 item A-3 permit costs Additional 50% payment 25% remaining N/ANon-zoning permitsComponent Description:18. WHRO-TV- 610-Non-Zoning Permits	2100 license to cover	Information not provided.	
Component Description:Invoice to be resubmitted to LMS. N/AAmount:N/AComponent Description:ATC MS2 item 4 A-3 permit costs Additional 50% payment 25% remaining N/ANon-zoning permitsComponent Description:18. WHRO-TV- 610-Non-Zoning Permits	Temporary Authorization	Information not provided.	
Component Description:ATC MS2 item A-3 permit costs Additional 50% payment 25% remaining N/ANon-zoning permitsComponent Description:18. WHRO-TV- 610-Non-Zoning Permits	Local Zoning		resubmitted to LMS.
Amount: remaining N/A Non-zoning permits Component Description: 18. WHRO-TV-610-Non-Zoning Permits			ATC MS2 item 1- A-3 permit costs
Component Description: 18. WHRO-TV- 610-Non-Zoning Permits		Amount:	remaining
	Non-zoning permits	Component Description:	610-Non-Zoning
		Amount:	

	Component Description:	18. WHRO-TV- 610-Non-Zoning
		Permits
	Amount:	\$187.50
	Component Description:	ATC MS2 3-D-1 Ground and building Permit additional 50% payment 25% remaining
	Amount:	N/A
	Component Description:	3-D-1 Tower
	••••• • •••••	Permits drawing package
	Amount:	N/A
	Component Description:	3-D-1 Ground and building permit package MS1 at
	Amount:	25% of total N/A
	Component Description:	ATC MS2 item 3- D-1 Tower Permit additional 50% payment 25% remaining
	Amount:	N/A
	Component Description:	18. WHRO-TV- 610-Non-Zoning Permits
	Amount:	\$187.50
BLM or NFS Coordination	Information not provided.	
	-	

Cost	Grand Total			
Information		Predetermined Cost Estimate	Estimated Cost	Actual Cost
	Total for all systems	\$6,803,985.43	\$4,762,012.42	\$3,621,911.96

Reimbursem	entestiatus	Response
	The facility has ceased operating on its pre- auction channel.	Yes
	Construction of final facilities or all necessary modifications are complete.	Yes
	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. 	
		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).
- 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.

 The above-named entity certifies that it is in full compliance with all statutes, rules, regulations and governmental requirements for which compliance is a pre-requisite for obtaining the payments herein requested. 	
I declare, under penalty of perjury, that I am an authorized representative of the above- named applicant for the Authorization(s) specified above.	Chris Gunnar Gunnufsen Vice President Technology 05/10/2021

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.

8. The above-named entity acknowledges that overpayments or payments in error must be promptly refunded to the Commission.	
9. The above-named entity certifies that it is in full compliance with all statutes, rules, regulations and governmental requirements for which compliance is a prerequisite for obtaining the payments herein requested.	
I declare, under penalty of perjury, that I am an authorized representative of the above- named applicant for the Authorization(s) specified above.	Chris Gunnar Gunnufsen Vice President Technology 05/10/2021

Certification	Section	Question	Response
Germication	Submission of Final Allocation or Accounting Information 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 and represents that he /she is authorized to submit this TV Broadcaster Relocation Fund Reimbursement Form on behalf of the above-named entity. The above- named entity acknowledges that all certifications and attached documentation are considered material representations. The above-named entity acknowledges the submission of the information herein 	
		creates no obligation on the part of the government to pay any amount.	

3. The above-named entity certifies that all costs identified as "actual costs" herein accurately represent the costs actually paid by the above- named entity, including any discounts, refunds, or rebates.	
4. 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.	
 The above-named entity acknowledges that overpayments or payments in error must be promptly refunded to the Commission. 	
6. The above-named entity certifies that it is in full compliance with all statutes, rules, regulations and governmental requirements for which compliance is a pre-requisite for obtaining the payments herein requested.	
I declare, under penalty of perjury, that I am an authorized representative of the above- named applicant for the Authorization(s) specified above.	Chris Gunnar Gunnufsen Vice President Technology

Attachments