

Federal Communications Commission

(REFERENCE COPY - Not for submission)

FCC Form 399: Reimbursement Request

			-		
Facility	74070	Service: DTV	Call	WSOC-TV	Channel: 19 (UHF)
ID:			Sign:		
File	00000	27842			
Number:					
FRN: 00	01842491	Date	03/07		
		Submitted:	/2019		

Applicant Name, Type, and Contact Information

Information

Applicant	Address	Phone	Email	Applicant Type
WSOC TELEVISION, LLC Doing Business As: WSOC TELEVISION, LLC	Director of Engineering /Operations 1901 North Tryon Street CHARLOTTE, NC 28206 United States	+1 (704) 335- 4732	ted. hand@coxinc. com	Limited Liability Company

Reimbursement Contact Name and Information Reimbursement Contact Information

Applicant	Address	Phone	Email
[Confidential]			

Preparer Ontact Name and Information

Ted HandTed Hand+1 (704) 335-ted.hand@coxinc.Director of Engineering1901 North Tryon4732comOperationsStreetStreetVSOC Television, LLCCharlotte, NC28206United StatesUnited States	Contact Information	Applicant	Address	Phone	Email
		Director of Engineering Operations	1901 North Tryon Street Charlotte, NC 28206	()	

Broadcaster	Question	Response
Information and Transition Plan	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	WSOC will install main transmitter first while operating on the auxiliary transmitter /antenna, then install the auxiliary system.

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

Auxiliary	Existing Transmitter Information					
Transmitter	Section	Question	Response			
	Existing Transmitter Description	Type of change	Purchase New			
		Use	Auxiliary (Backup)			
		Description of Use	backup to main			
		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	DHD60P2			
		Year	2009			
		Туре	Solid State			
		Solid State Cooling	Air Cooled			
		Solid State Power Capacity	15 kW			

Auxiliary	New Transmitter Costs				
Transmitter	Section	Question	Response		
	New Transmitter	Use	Auxiliary (Backup)		
		Change Type	Purchase New		
		Is this a request for upgraded equipment?	No		
		Manufacturer			
		Model	ULXTE-30		
		Transmitter Type	Solid State		
		Solid State Cooling	Liquid Cooled		
		Solid State Power capacity	19.2 kW		
		Justification for New Transmitter	Current transmitter will not tune to channel 19		

Auxiliary 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	Yes
		Size	2 inches
		Length	250.0 feet
		Other Electrical Service	Yes

	Description	Wiring for water pumps and mask filter blowers
HVAC Service	Does the replacement transmitter require HVAC Service?	No
	Туре	N/A
	Size	N/A
	Other Size	N/A
Transmitter Building Addition/Modification or Leasehold Improvement	Does the Transmitter Building require an addition, modification, other leashold improvement?	No
	Size	N/A
Channel 14 Costs	Is an RF Consulting Engineer needed?	N/A
	Is a channel 14 Mask Filer needed?	N/A
	Is additional field engineering time needed?	N/A
	Number of Days	N/A

Auxiliary Other Transmitter Cost Not Listed

Transmitter	Name	Description	
	Combiner	Use to combine WSOC Aux with WAXN Aux. Shared with WAXN-TV	
	Coax Switch	Coaxial switch use to switch from main to aux	

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			
	Manufacturer and Type	Model	CD3200P2 Sigma		
		Year	1999		
		Туре	Inductive Output Tube		
		IOT Power Type	Three		
		Power Capacity	55 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	ULXTE-72	
		Transmitter Type	Solid State	
		Solid State Cooling	Liquid Cooled	
		Solid State Power capacity	47.2 kW	
		Justification for New Transmitter	Current transmitter is tuned for channel 34 and will not tuned to channel 19	

Primary	Other Transmitter Costs		
Transmitter	Section	Question	Response
	Electrical Service	Service Entrance (3 phases 800A 208V)	No
		Switchgear (industrial 800 amp)	No
		Transformer (480V)	Yes
		Power	500 kVA
		Rigid Conduit and Wiring	Yes
		Size	2 inches
		Length	250.0 feet
		Other Electrical Service	Yes

	Description	Wiring for water pumps and mask filter blowers
HVAC Service	Does the replacement transmitter require HVAC Service?	Yes
	Туре	Cooling Only
	Size	15 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	320.0 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 Other Transmitter Cost Not Listed

Transmitter	Name	Description
	Plumbing Supplies	Plumbing supplies for liquid cooled transmitter
	Distilled Water	Distilled water for cooling system
	RF Hanging Supplies	Equipment to hang new mask filters and wave guide
	RF Equipment	RF elbows, hangers, flanges, hardware kits

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

Primary Antenna	Existing Antenna Information				
	Section	Question	Response		
	Existing Antenna Description	Type of change	Purchase New		
		Antenna Use	Primary (Main)		
		Description of Use	N/A		
		Ownership	Owned		
		Owner	N/A		
		Site	N/A		
		Is the existing antenna shared with another station or stations?	No		
		Is the existing antenna directional?	No		
		Is antenna in operating condition?	Yes		
		Is antenna located on or in close proximity to an antenna farm?	No		
	Existing Antenna Manufacturer and Type	Class	Full Power		
		Mounting	Top Mount		
		Antenna position in stack	Bottom		
		Polarization	Horizontal		
		Туре	Broadband Panel		
		Number of Stations Supported	1		
		Number of Panels	48		
		Design power capacity in use	65.0 %		
		Lower Limit	470.00 MHz		
		Upper Limit	608.00 MHz		
		Other Antenna Type	N/A		
		ERP: (Effective Radiated Power)	1000.0 kW		

	Manufacturer	
	Model	TQP-0412-1
	Year	1999

Primary	New Antenna Costs				
Antenna	Section	Question	Response		
	New Antenna Description	Use	Primary (Main)		
		Description of Use	N/A		
		Change Type	Purchase New		
		Is this a request for upgraded equipment?	No		
		Ownership	Owned		
		Owner	N/A		
		Is antenna shared?	No		
		Is antenna directional?	No		
		Will antenna be located on or in close proximity to an antenna farm?	No		
	New Antenna Manufacturer and Types	Class	Full Power		
		Mounting	Top Mount		
		Antenna position in stack	Bottom		
		Polarization	Horizontal		
		Туре	Broadband Panel		
		Number of Stations Supported	1		
		Number of Panels/Bays	48		
		Lower Limit	470.00 MHz		
		Upper Limit	608.00 MHz		
		Design power capacity in use	100.0 %		
		Other Antenna Type	N/A		
		ERP: (Effective Radiated Power)	1000.0 kW		
		Manufacturer			
			1		

Model	TFU-31EBT /VP-R
Year	2019
Justification for New Antenna	Current antenna wil not tune to channel 19. Current antenna wil not support top mounted WAXN's antenna.

Primary Other Antenna Costs

Antenna	Section	Question	Response
	Combiner for Shared Antenna	Do you need a Combiner for a Shared Antenna?	No
		Туре	
		Number of channels supported	N/A
		Frequencies of channels supported	N/A
		Frequency	N/A
		Do you need a combiner output splitter /switcher for dual feed lines?	N/A
	Elbow Complex	Do you require the separate purchase of the Elbow Complex?	Yes
		Broadband or Single Channel?	Single Channel
		Feed Line Size	7 3/16 inches inches
	Side Mount Brackets	Do you require the separate purchase of side mount brackets for a high power antenna?	No

Pattern Scatter Analysis	Do you require separate purchase of pattern scatter analysis for a side mount high or medium power antenna?	No
Sweep Test	Do you require the sweep testing of transmission line and antenna?	Yes

Primary
AntennaOther Antenna Cost Not ListedInformation not provided.

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

Auxiliary	Existing Transmission Line			
Transmissio	on Line Section	Question	Response	
	Existing Transmission Line Description	Type of change	Purchase New	
		Use	Auxiliary (Backup)	
		Description of Use	backup to main	
		Ownership	Owned	
		Owner	N/A	
		Site	N/A	
		Is the existing transmission line shared with another station or stations?	Yes	
		Is Transmission Line in operating condition?	Yes	
	Existing Transmission Line Manufacturer and Type	Manufacturer		
		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	585 feet per run	

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

Facility ID	Call Sign
12793	WAXN-TV

Auxiliary	New Transmission Line			
Transmissio	on Line Section	Question	Response	
	New Transmission Line Costs	Use	Auxiliary (Backup)	
		Description of Use	backup to main	
		Change Type	Purchase New	
		Is this a request for upgraded equipment?	No	
		Туре	Rigid	
		Diameter	6 1/8 inches	
		Other Diameter	N/A	
		Segment Length	20 inches	
		Other Segment Length	N/A	
		Number of parallel runs	1	
		Length	585 feet per run	
		Justification for New Transmission Line	current line will not work at new channel 19	

Auxiliary Other Transmission Line Expenses Not Listed Transmission

Primary	Existing Transmission Line			
Transmissio	n Section	Question	Response	
	Existing Transmission Line Description	Type of change	Purchase New	
		Use	Primary (Main)	
		Description of Use	N/A	
		Ownership	Owned	
Line		Owner	N/A	
		Site	N/A	
		Is the existing transmission line shared with another station or stations?	No	
		Is Transmission Line in operating condition?	Yes	
	Existing Transmission Line Manufacturer and Type	Manufacturer		
		Туре	Rigid	
		Diameter	7 3/16 inches	
		Other Diameter	N/A	
		Segment Length	19 1/2 inches	
		Other Segment Length	N/A	
		Number of parallel runs	1	
		Length	1050 feet per run	

Primary	New Transmission Line			
Transmissio	on 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	7 3/16 inches	
		Other Diameter	N/A	
		Segment Length	20 inches	
		Other Segment Length	N/A	
		Number of parallel runs	1	
		Length	1050 feet per run	
		Justification for New Transmission Line	Current line is 19 1/2' and will not work for new channel 19	

Other Transmission Line Expenses Not Listed Transmission

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

Primary	Existing Tower

Primary Tower	Section	Question	Response
	Existing Tower Description	Type of change	Modify Existing
		Tower Use	Primary (Main)
		Description of Use	N/A
		Ownership	Leased
		Is this tower consider Complex?	No
		Is this tower currently shared with any other stations?	Yes
		One or more FM, AM or TV radio broadcaster(s)	Yes
		Others Types of Users	No
		Is tower documented for structural analysis?	Yes
		Is tower compliant with Rev G?	Yes
	Existing Tower Structure	Do you have a tower registration number?	Yes
	Registration	ASR Number	1004745
	Coordinates (NAD83 (North American Datum of 1983))	Latitude (NAD83)	35° 15' 42.0" N-
		Longitude (NAD83)	080° 43' 37.0" W-
		Overall Structure Height	1082.01 fee
		Support Structure Height	970.13 feet
		Ground Elevation Above Mean Sea Level (AMSL)	855.96 feet

Structure Type	TOWER - Free Standing or Guyed Structure
Tower Owner	IWG Towers Assets II, LLC
Date Constructed	01/31/2000

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
12793	WAXN-TV	DTV

Primary Tower Modification Costs

Tower

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 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 Primary Tower

Information not provided.

Outside	Section	Question	Response
Professional	Services Costs Outside Project Management Services	Do you require outside project management services?	Yes
		Number of Hours	25
		Explanation	Project Manager to coordinate crew and materials on site. Design interior RF design
	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	No
		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 Services	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	No
	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	No
RF Field Engineering Services	Comprehensive coverage verification via field study	Yes
	RF exposure measurements	Yes
	Additional Field Engineering Service	Yes
	Number of Days	2
	Justification	Combined Auxiliary antenna will have to be field tuned

Other Professional Services Expenses Not Listed Professional Services rCostsided.

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	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	No
	Other Miscellaneous Expenses	Does this relocation require paying Disposal Costs (for equipment and other waste, net of any salvage value)?	Yes
		Does this relocation require Equipment Delivery or Handling Charges not otherwise included in individual item costs?	Yes
		Does this relocation require Equipment Storage?	Yes
		Does this relocation require the Development and Airing of an Announcement regarding an upcoming channel change?	Yes
		Does this relocation require MVPD Notification of a Channel Change?	Yes

Other Expenses Not Listed

Expenses Information not provided.

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 Justification
Primary Transmitter ULXTE-72	\$1,720,300.00	\$2,006,700.00		\$1,958,776.36	
RF Equipment	\$50,000.00	\$50,000.00	Transmitter reject loads would not fit within the room and had to moved to another room needing additional transmission lines, elbows, hangers and flanges	\$47,351.93	N/A
RF Hanging Supplies	\$6,500.00	\$6,500.00	N/A	\$2,252.75	N/A
Distilled Water	\$1,300.00	\$1,300.00	N/A	\$637.50	N/A
Plumbing Supplies	\$3,200.00	\$3,200.00	N/A	\$2,803.03	N/A
Other Building Addition Size: 320.0	\$20,600.00	\$20,600.00	N/A	\$14,188.11	N/A
15 Ton system	\$55,800.00	\$14,000.00	Cost to move a HVAC unit. Shared cost with WAXN- TV 12793	\$13,288.00	N/A

Other Electrical Service: Wiring for water pumps and mask filter blowers	\$55,000.00	\$55,000.00	Based on actual quote. Changed conduit estimate to \$0. Reduced Transformer from \$41,000 to \$6100. Overall electrical cost are lower than first estimated. Changed from \$51482 to \$55000 due to change in mask filter setup.	\$53,149.90	N/A
2" Rigid Conduit and Wiring (Cost per foot)	\$6,500.00	\$0.00	Cost lowered here but added to overall electrical cost	N/A	N/A
Transformer 3 phase /480v - 500 KVA	\$48,400.00	\$6,100.00	Cost lowered by \$41,000. Some added back to Overall electrical cost	\$6,100.00	N/A

UHF - Liquid Cooled Solid State Transmitter 35 - 50 kW	\$1,473,000.00	\$1,850,000.00	Extra submission in transmitter line account. When removed, this will go down	\$1,819,005.14	The sub total is more than the Estimated Cost because the payment for \$497,967.16 has been requested twice. The last item (#5) needs to be deleted. Thank you Ted H.
Auxiliary Transmitter ULXTE-30	\$712,500.00	\$654,864.87		\$547,813.63	
Coax Switch	\$4,700.00	\$4,700.00	N/A	N/A	N/A
Combiner	\$7,300.00	\$7,300.00	This is half the cost. Shared with WAXN-TV	N/A	N/A
Other Electrical Service: Wiring for water pumps and mask filter blowers	\$10,000.00	\$10,000.00	N/A	N/A	N/A
UHF - Liquid Cooled Solid State Transmitter 14.2 - 20 kW	\$684,000.00	\$626,614.87	N/A	\$547,813.63	N/A
2" Rigid Conduit and Wiring (Cost per foot)	\$6,500.00	\$6,250.00	N/A	N/A	N/A

Sub-total	\$2,432,800.00	\$2,661,564.87	N/A	\$2,506,589.99	N/A
Total for all systems	\$4,211,570.00	\$4,345,562.37	N/A	\$2,795,097.62	N/A

Components

Actual Information Description	File Name	
RF Equipment		
	Component Description:	Transmission line, flange adapters, line hangers to move WSOC current Auxiliary Transmitter to make room for new WSOC Main transmitter
	Amount:	\$4,204.87
	Component Description:	WSOC inside T/L 7 3/16" and hangers
	Amount:	\$10,659.84
	Component Description: Amount:	RF sample cables \$1,630.70
	Component Description:	WSOC-TV 74070. \$270.00 parts plus \$18.72 freight
	Amount:	\$288.72
	Component Description:	RF parts for WSOC TV 74070 1098.00 plus 358.17 frieght
	Amount:	\$1,456.17

Component Description: Amount:	RF Equipment, Hangers, Elbows, Hardware Kits, Flangeds \$6,769.85
Component Description: Amount:	WSOC-TV 74070 \$8046.00 parts cost plus \$217.14 freight \$8,263.14
Component Description: Amount:	RF Parts for WSOC-TV 74070 \$544.30
Component Description: Amount:	RF parts for WSOC-TV 74070 6301.80 plus 175.49 for freight \$6,477.29
Component Description: Amount:	WSOC-TV 74070 \$508.50 parts cost plus \$83.08 freight \$591.58
Component Description:	WSOC 74070 Parts costs 2772.00 plus freight of 91.90
Amount: Component Description:	\$2,863.90 RF parts for WSOC-TV 74070 Parts were
Amount:	\$3492.00 plus \$109.57 for freight \$3,601.57

RF Hanging Supplies	Component Description:	Unistrit Channel
	Amount:	Washers 3/8" \$61.84
	Component Description:	Cleaner Degreaser used to clean copper pipes
	Amount:	after soldering \$265.83
	Component Description:	Copper Elbows Coolant Pipes 1 1 /2"
	Amount:	\$139.43
	Component Description:	Copper Elbows Coolant pipes 1 1 /2"
	Amount:	\$278.85
	Component Description: Amount:	Channel washers Unistruit 3/8" \$30.92
	Component Description:	Unistrit stands, connecting plates
	Amount:	\$457.75
	Component Description:	see attached letter Grainger 110718. pdf
	Amount:	\$1,018.13

Distilled Water	Component Description:	Distilled Water for
		cleaning and
		cooling of
	Amount:	transmitter \$637.50
	Amount:	QO37.50
Plumbing Supplies		
	Component Description:	Plumbing supplies,
		concrete anchors,
		threaded rod,
		unistruit, pipe
	Amount:	clamps
	Amount:	\$1,554.10
	Component Description:	Anchors Concrete,
		pipe cutter vise
	Amount:	\$647.84
	Component Description:	Struct washer,
		copper pipe,
		anchors, pipe
		cutter
	Amount:	\$601.09
Other Building Addition		
Size: 320.0	Component Description:	Building Addition
		Shared cost with
		WAXN-TV 12793
	Amount:	\$12,367.00
	Component Description:	Metal doors for
		building addition -
		WSOC Share
	Amount:	\$1,821.11

15 Ton system		
	Component Description:	Cost to move a HVAC Condenser, includes new concrete pad and ice bridge. ADDED CO PER MSG 1991307 \$13,288.00
	Amount.	φ13,200.00
Other Electrical Service: Wiring for water pumps and	Component Description:	Electrical work
mask filter blowers		during install of WSOC-TV transmitter
	Amount:	\$30,889.20
	Component Description:	Payment for additional AC breakers and unistrut ADDED QUOTE PER MSG 1994016
	Amount:	\$1,752.00
	Component Description:	Payment for installing Mask Filter cooling fans ADDED QUOTE PER MSG 1993914
	Amount:	\$2,490.00
	Component Description:	35% payment on PO CPG11681. Invoice # 13395
	Amount:	\$18,018.70
2" Rigid Conduit and Wiring (Cost per foot)	Information not provided.	

Transformer 3 phase/480v - 500 KVA	Component Description:	480 VAC to 240 VAC, 300 KVA transformer for WSOC transmitter
	Amount:	install \$6,100.00
UHF - Liquid Cooled Solid State Transmitter 35 - 50 kW	Component Description: Amount:	1/3 Down payment due prior to shipment \$453,899.62
	Anount.	ψ 1 00,000.02
	Component Description:	1/3 down payment of WSOC-TV MAIN transmitter
	Amount:	\$497,967.16
	Component Description:	WSOC Main Payment
	Amount:	\$37,211.61
	Component Description:	Invoice 3 of 3 for WSOC main Transmitter
	Amount:	\$331,959.59
	Component Description:	Re-submit of invoice & quote. Incorrect amount entered the first time. This is corrected amount.
	Amount:	\$497,967.16
	Component Description:	Down Payment for WSOC Main Transmitter
	Amount:	\$497,967.16

Coax Switch	Information not provided.	
Combiner	Information not provided.	
Other Electrical Service: Wiring for water pumps and mask filter blowers	Information not provided.	
UHF - Liquid Cooled Solid State Transmitter 14.2 - 20 kW	Component Description: Amount:	Re-submit with PO & Invoice \$208,871.62
	Component Description: Amount:	WSOC AUX TX 3rd payment \$146,738.97
	Component Description: Amount:	WSOC AUX TX 2nd payment \$192,203.04
	Component Description:	1/3 down payment of WSOC-TV AUX transmitter minus the estimated freight (1/3 of \$7700, \$2566.67) \$206,304.95
2" Rigid Conduit and Wiring (Cost per foot)	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 TUP-04-12- 1 (S)	\$6,730.00	\$4,185.00		\$4,185.00	
Sweep test of existing antenna	\$6,730.00	\$4,185.00	***System Notice: Estimate adjusted and locked because line has been superseded. ***Dummy enter per Jeff Newman 202-418- 2046	\$4,185.00	Actual is lower than estimated
Primary Antenna TFU-31EBT /VP-R	\$267,630.00	\$387,767.50		\$265,929.53	
UHF - High Power Top Mount (200-1000 kW), One station antenna, horizontally polarized	\$247,000.00	\$371,205.00	Based on actual quote from Dielectric LLC	\$265,929.53	N/A
Sweep test of existing antenna	\$6,730.00	\$4,180.00	N/A	\$0.00	N/A

Elbow complex, single channel, at antenna input, per 7 3/16. feedline (if	\$13,900.00	\$12,382.50	N/A	\$0.00	N/A
needed) Sub-total	\$274,360.00	\$391,952.50	N/A	\$270,114.53	N/A
Total for all systems	\$4,211,570.00	\$4,345,562.37	N/A	\$2,795,097.62	N/A

Components

Actual Information Description	File Name	
Sweep test of existing antenna	Component Description: Amount:	Reimbursement for Engineering Contract work. \$4,185.00
UHF - High Power Top Mount (200-1000 kW), One station antenna, horizontally polarized	Component Description: Amount:	Down payment of antenna/TL, elbow complex MSG 2122577 \$265,929.53
Sweep test of existing antenna	Component Description: Amount:	Item #21 Repack sweep Redo requested 5/9/18 per Natasha Lamothe \$2,880.00

per 7 3/16. feedline (if needed)	Component Description:	Down payment o elbow complex ADDED QUOTE
	Amount:	\$5,572.13

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	\$304,500.00	\$289,800.00		\$0.00	
Rigid Transmission Line - copper, 7 3 /16"	\$304,500.00	\$289,800.00	N/A	\$0.00	N/A
Auxiliary Transmission Line	\$118,170.00	\$112,320.00		\$0.00	
Rigid Transmission Line - copper, 6 1/8"	\$118,170.00	\$112,320.00	N/A	N/A	N/A
Sub-total	\$422,670.00	\$402,120.00	N/A	\$0.00	N/A
Total for all systems	\$4,211,570.00	\$4,345,562.37	N/A	\$2,795,097.62	N/A

Components

Actual Information	
Description	File Name

Rigid Transmission Line - copper, 7 3/16"	Component Description:	Item #20 Extra 7- 75 T/L redo requested 5/9/18 per Natasha Lamothe ADDED QUOTE \$5,872.50
	Component Description:	Down payment transmission line
	Amount:	(Item 4) ADDED QUOTE \$84,562.65
Rigid Transmission Line - copper, 6 1/8"	Information not provided.	

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	\$381,100.00	\$356,000.00		\$0.00	
Structural engineering tower load study for well documented tower	\$12,600.00	\$31,000.00	Based on actually quote from Tower Engineering Company, Seattle, WA	N/A	N/A
Minor tower reinforcement /modifications	\$158,000.00	\$125,000.00	N/A	N/A	N/A
Tall Tower (greater than 500')	\$210,500.00	\$200,000.00	This is half the cost. The other half is on WAXN-TV's form.	N/A	N/A
Sub-total	\$381,100.00	\$356,000.00	N/A	\$0.00	N/A
Total for all systems	\$4,211,570.00	\$4,345,562.37	N/A	\$2,795,097.62	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	\$155,365.00	\$163,700.00		\$18,393.10	
Additional Field Engineering Service, 2 Days	\$17,500.00	\$17,500.00	N/A	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	\$3,056.70	N/A
Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	\$5,260.00	\$5,000.00	N/A	\$4,813.40	N/A

RF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, License to Cover Application	\$1,580.00	\$1,500.00	N/A	N/A	N/A
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
Project management of the transition	\$3,950.00	\$3,750.00	N/A	N/A	N/A
Prepare and or review reimbursement form	\$2,630.00	\$2,500.00	N/A	N/A	N/A
Perform engineering study for new channel assignment and antenna development	\$7,360.00	\$22,200.00	Actual Engineering Cost. See attached.	\$10,523.00	Actual is less than Estimated This invoice is for work with WSOC an WAXN. Requestin 50% for WSOC

Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	\$3,155.00	\$3,000.00	N/A	N/A	N/A
Sub-total	\$155,365.00	\$163,700.00	N/A	\$18,393.10	N/A
Total for all systems	\$4,211,570.00	\$4,345,562.37	N/A	\$2,795,097.62	N/A

Components

Actual Information Description	File Name
Additional Field Engineering Service, 2 Days	Information not provided.
RF Exposure Measurements	Information not provided.
Comprehensive coverage verification via field study, if needed	Information not provided.
Attorney Fees -Prepare and File FCC Form 2100 (main), License to Cover Application	Information not provided.

Attorney Fees - Aux Antenna, prepare and File Form 2100 Construction Permit or License Application	Component Description: Amount:	Full payment of invoice for legal services for WSOC-TV repack. \$1,421.20
	Component Description: Amount:	Re-submit of invoice after removal of non- reimbursable item. New amount requested \$299.20
	Component Description: Amount:	Full payment of invoice for legal services for WSOC-TV repack. \$1,336.30
	Component Description: Amount:	Full payment of invoice for legal services for WSOC-TV repack. \$419.80

Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	Component Description: Amount:	Full payment of invoice for legal services for WSOC-TV repack. \$1,933.50
	Component Description: Amount:	Full Payment of invoice for legal services for WSOC-TV repack. #The is a redo, correcting the wrong amount of invoice 5/8/18 # \$2,521.80
	Component Description: Amount:	Full payment of invoice for legal services for WSOC-TV repack. \$358.10
RF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, License to Cover Application	Information not provided.	
RF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, Construction Permit Application	Information not provided.	
Project management of the transition	Information not provided.	
Prepare and or review reimbursement form	Information not provided.	

for new channel assignment and antenna development	Component Description:	Requesting 50% of invoice WSO
	Amount:	\$10,523.00
Prepare engineering section of FCC Form 2100 (main),	Information not provided.	
Construction Permit		
Application		

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	\$27,695.00	\$27,095.00		\$0.00	
MVPD Notification of Channel Change	\$7,500.00	\$7,500.00	N/A	N/A	N/A
Develop and air announcement of upcoming channel change	\$1,100.00	\$1,100.00	N/A	N/A	N/A
Equipment Storage	\$2,600.00	\$2,600.00	N/A	N/A	N/A
Equipment Delivery and Handling Charges	\$0.00	\$0.00	N/A	\$0.00	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
DTV Medical Facility Notification	\$11,550.00	\$11,000.00	N/A	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
Sub-total	\$27,695.00	\$27,095.00	N/A	\$0.00	N/A
Total for all systems	\$4,211,570.00	\$4,345,562.37	N/A	\$2,795,097.62	N/A

Components

Information not provided.

Cost	Grand Total			
Information		Predetermined Cost Estimate	Estimated Cost	Actual Cost
	Total for all systems	\$4,211,570.00	\$4,345,562.37	\$2,795,097.62

Reimbursem	entestiatus	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, that I am an authorized representative of the above- named applicant for the Authorization(s) specified above.	Ted Hand Director of Engineering /Operations 03/07/2019

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. 	
an a nam	clare, under penalty of perjury, that I am authorized representative of the above- ned applicant for the Authorization(s) cified above.	Ted Hand Director of Engineering /Operations

Attachments