Approved by OMB (Office of Management and Budget) 3060-1178

Federal Communications Commission

(REFERENCE COPY - Not for submission)

FCC Form 399: Reimbursement Request

Facility ID: **16817** | Service: **DTV** | Call Sign: **WTVS** | Channel: **20 (UHF)**

File Number: **0000027891**

FRN: **0002770360** | Date Submitted: **05/10/2019**

Applicant Information

Applicant Name, Type, and Contact Information

Applicant	Address	Phone	Email	Applicant Type
DETROIT EDUCATIONAL TELEVISION FOUNDATION Doing Business As: WTVS	John Mark RILEY BROADCASTCAST CENTER 1 CLOVER COURT WIXOM, MI 48393 United States	+1 (248) 305-3788	jmark@dptv.org	Not-for-Profit

Reimbursement Contact Information

Reimbursement Contact Name and Information

Applicant	Address	Phone	Email
[Confidential]			

Preparer Contact Information

Preparer Contact Name and Information

Applicant	Address	Phone	Email
John Mark *VP Engineering* *Detroit Educational Television Foundation*	John Mark 1 Clover Court Wixom, MI 48393 United States	+1 (248) 305-3760	jmark@dptv.org

Broadcaster Information and Transition Plan

Question	Response
Will the station be sharing equipment with another broadcast television station or stations (e.g., a shared antenna, co-location on a tower, use of the same transmitter room, multiple transmitters feeding a combiner, etc.)? If yes, enter the facility ID's of the other stations and click 'prefill' to download those stations' licensing information.	Yes
Briefly describe transition plan	3 stations Install and operate from a new side mount Broadband Antenna installed before implementation of Phase 3 due to WMYD early transition. Install new transmitter filters coax and antenna to operate on post transition assigned frequency of channel 20

Transmitters

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

Primary Transmitter

Existing Transmitter Information

Section	Question	Response
Existing Transmitter Description	Type of change	Purchase New
	Use	Primary (Main)
	Description of Use	N/A
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is this transmitter currently shared with another station?	No
	Is this transmitter currently in operating condition?	Yes
Existing Transmitter Manufacturer and Type	Manufacturer	
	Model	Visionary DT Dual HP25SDW
	Year	1999
	Type	Inductive Output Tube
	IOT Power Type	Two
	Power Capacity	60 kW

Primary Transmitter

New Transmitter Costs

Section	Question	Response
New Transmitter	Use	Primary (Main)
	Change Type	Purchase New
	Is this a request for upgraded equipment?	Yes
	Manufacturer	
	Model	ULXTE-60
	Transmitter Type	Solid State
	Solid State Cooling	Liquid Cooled
	Solid State Power capacity	38 kW
	Justification for New Transmitter	Current Transmitter Manufacture no longer in business Parts unavailable SS transmitter lower cost than IOT See Attached

Primary Transmitter

Other Transmitter Costs

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

	Size	2 inches
	Length	200.0 feet
	Other Electrical Service	Yes
	Description	Generator replacement Electrical installation for Transmitter
HVAC Service	Does the replacement transmitter require HVAC Service?	Yes
	Type	Cooling Only
	Size	10 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 Transmitter

Other Transmitter Cost Not Listed

Name	Description
electrical Sub panel	power distribution for new combiner room
10 ton Heating and cooling unit	antenna combiner room heating and cooling
HVAC ice shield	protection for external portion of HVAC

Antennas

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

Primary Antenna

Existing Antenna Information

Section	Question	Response
Existing Antenna Description	Type of change	Purchase New
	Antenna Use	Primary (Main)
	Description of Use	N/A
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is the existing antenna shared with another station or stations?	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
	Type	Slotted Coaxial
	Number of Stations Supported	N/A
	Number of Panels	N/A
	Design power capacity in use	N/A
	Lower Limit	N/A
	Upper Limit	N/A
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power)	600.0 kW

Manufacturer	
Model	TFU-18GBH-R04
Year	1999

Primary Antenna

New Antenna Costs

Section	Question	Response
New Antenna Description	Use	Primary (Main)
	Description of Use	N/A
	Change Type	Purchase New
	Is this a request for upgraded equipment?	Yes
	Ownership	Owned
	Owner	N/A
	Is antenna shared?	No
	Is antenna directional?	No
	Will antenna be located on or in close proximity to an antenna farm?	No
New Antenna Manufacturer and Types	Class	Full Power
	Mounting	Top Mount
	Antenna position in stack	Not in Stack
	Polarization	Elliptical
	Type	Slotted Coaxial
	Number of Stations Supported	N/A
	Number of Panels/Bays	N/A
	Lower Limit	N/A
	Upper Limit	N/A
	Design power capacity in use	N/A
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power)	345.0 kW
	Manufacturer	

	Model	TFU-24GTH-VP-R 06
	Year	2019
	Justification for New Antenna	Current antenna does not support new channel Vertical upgrade will be a separate line item on invoice

Primary Antenna

Other Antenna Costs

Section	Question	Response
Combiner for Shared Antenna	Do you need a Combiner for a Shared Antenna?	No
	Type	
	Number of channels supported	N/A
	Frequencies of channels supported	N/A
	Frequency	N/A
	Do you need a combiner output splitter /switcher for dual feed lines?	N/A
Elbow Complex	Do you require the separate purchase of the Elbow Complex?	Yes
	Broadband or Single Channel?	Single Channel
	Feed Line Size	6 1/8 inches inches
Side Mount Brackets	Do you require the separate purchase of side mount brackets for a high power antenna?	No

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

Primary Antenna

Other Antenna Cost Not Listed

Information not provided.

Interim Antenna

New Antenna Costs

Section	Question	Response
New Antenna Description	Use	Interim
	Description of Use	N/A
	Change Type	Purchase New
	Ownership	Leased
	Owner	American Tower
	Is antenna shared?	Yes
	Is antenna directional?	No
	Will antenna be located on or in close proximity to an antenna farm?	No
New Antenna Manufacturer and Type	Class	Full Power
	Mounting	Side Mount
	Antenna position in stack	Not in Stack
	Polarization	Elliptical
	Type	Broadband Slot
	Number of Stations Supported	3
	Number of Panels/Bays	24
	Lower Limit	470.00 MHz
	Upper Limit	698.00 MHz
	Design power capacity in use	100.0 %
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power)	60.0 kW
	Manufacturer	
	Model	TFU-24WB /VP

	Year	2018
	Justification for New Antenna	Candelabra will need extensive upgrades for repack of 3 stations 1 in phase 3 two in phase 8

Interim Antenna

Other Antenna Costs

Section	Question	Response
Combiner for Shared Antenna	Do you need a Combiner for a Shared Antenna?	Yes
	Type	New
	Number of channels supported	3
	Frequencies of channels supported	RF channel
	Frequency	N/A
	Do you need a combiner output splitter /switcher for dual feed lines?	No
Elbow Complex	Do you require the separate purchase of the Elbow Complex?	Yes
	Broadband or Single Channel?	B
	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
21
43
44

Interim Antenna

Other Antenna Cost Not Listed

Name	Description
combiner installation	installation of combiner by manufacture

Transmission Line

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

Primary Transmission Line

Existing Transmission Line

Section	Question	Response
Existing Transmission Line Description	Type of change	Purchase New
	Use	Primary (Main)
	Description of Use	N/A
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is the existing transmission line shared with another station or stations?	No
	Is Transmission Line in operating condition?	Yes
Existing Transmission Line Manufacturer and Type	Manufacturer	
	Type	Rigid
	Diameter	6 1/8 inches
	Other Diameter	N/A
	Segment Length	20 inches
	Other Segment Length	N/A
	Number of parallel runs	1
	Length	1200 feet per run

Primary Transmission Line

New Transmission Line

Section	Question	Response
New Transmission Line Costs	Use	Primary (Main)
	Description of Use	N/A
	Change Type	Purchase New
	Is this a request for upgraded equipment?	No
	Type	Rigid
	Diameter	6 1/8 inches
	Other Diameter	N/A
	Segment Length	19 1/2 inches
	Other Segment Length	N/A
	Number of parallel runs	1
	Length	1200 feet per run
	Justification for New Transmission Line	Cannel reassignment is forbidden channel on current coax

Primary Transmission Line

Other Transmission Line Expenses Not Listed

Information not provided.

Interim Transmission Line

New Transmission Line

Section	Question	Response
New Transmission Line Costs	Use	Interim
	Description of Use	N/A
	Change Type	Purchase New
	Type	Rigid
	Diameter	7 3/16 inches
	Segment Length	Broadband
	Other Segment Length	
	Number of parallel runs	1
	Length	995 feet per run
	Justification for New Transmission Line	no current interim coax cost for coax, 3 elbows and nitrogen generator for pressurization of line

Interim Transmission Line

Other Transmission Line Expenses Not Listed

Information not provided.

Tower Equipment And Rigging Costs

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

Primary Tower

Existing Tower

Section	Question	Response
Existing Tower Description	Type of change	Modify Existing
	Tower Use	Primary (Main)
	Description of Use	N/A
	Ownership	Leased
	Is this tower consider Complex?	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	Yes
	Is tower documented for structural analysis?	No
	Is tower compliant with Rev G?	Yes
Existing Tower Structure Registration	Do you have a tower registration number?	Yes
	ASR Number	1003429
Coordinates (NAD83 (North American Datum of 1983))	Latitude (NAD83)	42° 26' 52.5" N-
	Longitude (NAD83)	083° 10' 23.1" W-
	Overall Structure Height	1086.93 feet
	Support Structure Height	1012.13 feet
	Ground Elevation Above Mean Sea Level (AMSL)	662.07 feet

Structure Type	GTOWER - Guyed Structure Used for Communication Purposes
Tower Owner	American Tower, LLC
Date Constructed	06/11/1999

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
72123	WWJ-TV	DTV
74211	WMYD	DTV
6056	WRCJ-FM	FM

Other Types of Users

Users
WHNE-LD
W292DK
W224CC
W268CN
W232CA
T-Mobil

Primary Tower

Tower Modification Costs

Section	Question	Response

Engineering Study	Please what type of engineering study is required, if any:	Study needed for undocumented /poorly documented tower
Tower Reinforcements	Please select whether tower reinforcements are needed:	Minor Reinforcements needed

Primary Tower

Tower Rigging Costs

Section	Question	Response
Tower Rigging Costs	Complex Tower	Candelabra
Helicopter Services Required	Are helicopter services required?	No

Primary Tower

Other Tower Expenses Not Listed

Information not provided.

Outside Professional Services Costs

Section	Question	Response
Outside Project Management Services	Do you require outside project management services?	Yes
	Number of Hours	690
	Explanation	Project management fees charged by tower owner
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	2
	Do you have Distributed Transmission System engineering services?	N/A
	Critical Facility	N/A
	Terrain-Shielded Facility	N/A
Attorney and Other Outside Consulting Services	Prepare and file Form FCC Construction Permit Application	Yes
	For Auxiliary Facility	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	2
	NEPA Section 106 environmental review	No
	Environmental Assessment	No
	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	No
	RF exposure measurements	Yes
	Additional Field Engineering Service	No
	Number of Days	N/A
	Justification	N/A

Outside Professional Services Costs

Other Professional Services Expenses Not Listed

Name	Description
Site Coordination meeting	Coordination meeting of tenants tower owner and all contractors and vendors involved with the deliveries and construction. Travel and Logistical expenses incurred

Other Expenses

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

Other Expenses

Other Expenses Not Listed

Name	Description
tower owner permits	Permits for combiner room electrical and construction permits
Employee time	Employee's time spent working on paperwork accounting, transmitter work, and supervision
Interim antenna connection	Coax, switches, forward/reverse power meters to interconnect with interim antenna
Interim antenna tower lease	Tower rental space for interim antenna
Lift equipment rental	fork lift and/or crane for lifting heavy equipment
Site Security	Due to high value equipment stored outside additional security measures needed

Cost Information

Transmitters

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cos Justificati
Primary Transmitter ULXTE-60	**$1,710,167.00**	**$1,127,100.93**		**$321,842.49**	
electrical Sub panel	***$1,700.00***	$1,700.00	American Tower Charge	$833.34	X
Switchgear - industrial 800 amp	$38,200.00	$6,050.00	American tower charge	$0.00	N/A
UHF - Liquid Cooled Solid State Transmitter 35 - 50 kW	$1,473,000.00	$948,652.93	GatesAir Quote Q-80362	$316,217.64	N/A
2" Rigid Conduit and Wiring (Cost per foot)	$5,200.00	$1,667.00	American tower charge	$624.84	N/A
Other Electrical Service: Generator replacement Electrical installation for Transmitter	***$127,500.00***	$127,500.00	Electrical costs for 230KW generator and installation replacement due to inadequate power for new transmitter also transmitter electrical installation and decommissioning cost	$416.67	N/A

10 Ton system	$38,900.00	$15,864.00	Replace 5 ton unit with 10 ton unit due to increased heat load of transmitter Available wall space will not support 2 5 ton units	N/A	N/A
HVAC ice shield	***$1,500.00***	$1,500.00	American tower charge	N/A	N/A
10 ton Heating and cooling unit	***$19,167.00***	$19,167.00	Heating and cooling unit for American Towers new combiner room	N/A	N/A
Other -- Building Addition Size: 1500.0	***$5,000.00***	$5,000.00	American Tower Charge	$3,750.00	N/A
Sub-total	$1,710,167.00	$1,127,100.93	N/A	$321,842.49	N/A
Total for all systems	$3,872,655.50	$2,984,639.43	N/A	$1,073,656.23	N/A

Components

Actual Information Description	**File Name**	
electrical Sub panel	**Component Description:** **Amount:**	WTVS-110-1st Primary Transmitter - Electrical Sub Panel $833.34
Switchgear - industrial 800 amp	Information not provided.	

UHF - Liquid Cooled Solid State Transmitter 35 - 50 kW	**Component Description:** **Amount:**	ULXTE-60 Transmitter $316,217.64
2" Rigid Conduit and Wiring (Cost per foot)	**Component Description:** **Amount:** **Component Description:** **Amount:**	25% deposit for this component $208.34 Broadcast Repack $416.50
Other Electrical Service: Generator replacement Electrical installation for Transmitter	**Component Description:** **Amount:**	25% deposit on component $416.67
10 Ton system	Information not provided.	
HVAC ice shield	Information not provided.	
10 ton Heating and cooling unit	Information not provided.	
Other -- Building Addition Size: 1500.0	**Component Description:** **Amount:** **Component Description:** **Amount:**	WTVS-110-1st Primary Transmitter - Building Addition, 1,500 sq. ft. $2,500.00 25% downpayment on component $1,250.00

Cost Information

Antennas

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Interim Antenna TFU-24WB /VP	**$259,664.75**	**$243,134.75**		**$188,318.59**	
combiner installation	***$8,333.00***	$8,333.00	Per American Tower Project cost estimation	$6,249.83	a
Side mount brackets for high power antennas (if not included in antenna base cost)	$23,150.00	$22,000.00	N/A	N/A	N/A
Elbow complex, broadband, at antenna input, per 7 3/16. feedline (if needed)	$16,850.00	$6,000.00	N/A	$2,500.00	N/A
New combiner, cost per channel (without antenna)	$84,200.00	$80,000.00	N/A	$57,500.17	N/A
Sweep test of existing antenna	$6,730.00	$6,400.00	N/A	$1,666.84	X

UHF - High Power, Side Mount, basic slot antenna, 24 bay,, 60 - 65 kW input, elliptically or circularly polarized	***$120,401.75***	$120,401.75	American Tower cost estimate and PO #13-1652	$120,401.75	The actual amount reimbursed for invoice 460199507 is $15,000 (not $97,901.75)
Primary Antenna TFU-24GTH-VP-R 06	**$308,530.00**	**$293,100.00**		**$102,394.95**	
UHF - High Power Top Mount (200-1000 kW), One station antenna , elliptically or circularly polarized	$289,500.00	$275,000.00	N/A	$93,295.12	N/A
Sweep test of existing antenna	$6,730.00	$6,400.00	N/A	$3,713.33	N/A
Elbow complex, single channel, at antenna input, per 6 1/8. feedline (if needed)	$12,300.00	$11,700.00	N/A	$5,386.50	N/A
Sub-total	$568,194.75	$536,234.75	N/A	$290,713.54	N/A
Total for all systems	$3,872,655.50	$2,984,639.43	N/A	$1,073,656.23	N/A

Components

Actual Information Description	File Name	
combiner installation	**Component Description:** **Amount:**	WTVS-280-Interim Antenna - Combiner Installation $4,166.50
	Component Description: **Amount:**	25% downpayment on component $2,083.33
Side mount brackets for high power antennas (if not included in antenna base cost)	Information not provided.	
Elbow complex, broadband, at antenna input, per 7 3/16. feedline (if needed)	**Component Description:** **Amount:**	WTVS-280-Interim Antenna - Elbow Complex, Broadband, 7 3/16" $1,666.67
	Component Description: **Amount:**	25% downpayment for compenent $833.33

New combiner, cost per channel (without antenna)	**Component Description:**	WTVS-280-Interim Antenna - New Combiner
	Amount:	$38,333.50
	Component Description:	25% downpayment on component
	Amount:	$19,166.67
	Component Description:	PARTIAL PAYMENT FOR NEW COMBINER
	Amount:	N/A
Sweep test of existing antenna	**Component Description:**	WTVS-280-Interim Antenna - Sweep Test
	Amount:	$1,666.84

UHF - High Power, Side Mount, basic slot antenna, 24 bay,, 60 - 65 kW input, elliptically or circularly polarized	**Component Description:** **Amount:**	WTVS-280-Interim Antenna - UHF High Power Side Mount, E-POL $22,500.00
	Component Description: **Amount:**	CAPITAL CONTRIBUTION - DETROIT - OAK PARK T1 MI / 282678 / ASSET#282678-BT1 / OAA711327 / FID 1003429 / WTVS Channel 20 Phase 8 / MILESTONE 1 / BROADCAST REPACK / TAX ID: 65-0723837 $97,901.75
	Component Description: **Amount:**	PARTIAL PAYMENT ON UHF HIGH POWER SIDE MOUNT ANTENNA N/A
UHF - High Power Top Mount (200-1000 kW), One station antenna , elliptically or circularly polarized	**Component Description:** **Amount:**	UHF - High Power Top Mount $93,295.12

Sweep test of existing antenna	**Component Description:** **Amount:** **Component Description:** **Amount:**	WTVS-210-Primary Antenna - Sweep Test $2,880.00 25% downpayment on component $833.33
Elbow complex, single channel, at antenna input, per 6 1/8. feedline (if needed)	**Component Description:** **Amount:**	WTVS-210-Primary Antenna - Elbow Complex, 6 1/8" $5,386.50

Cost Information

Transmission Line

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Interim Transmission Line	**$331,335.00**	**$105,200.00**		**$78,755.25**	
Rigid Transmission Line - copper, 7 3 /16" broadband	$331,335.00	$105,200.00	N/A	$78,755.25	N/A
Primary Transmission Line	**$242,400.00**	**$230,400.00**		**$88,085.81**	
Rigid Transmission Line - copper, 6 1/8"	$242,400.00	$230,400.00	N/A	$88,085.81	N/A
Sub-total	$573,735.00	$335,600.00	N/A	$166,841.06	N/A
Total for all systems	$3,872,655.50	$2,984,639.43	N/A	$1,073,656.23	N/A

Components

Actual Information Description	File Name

Rigid Transmission Line - copper, 7 3/16" broadband	**Component Description:**	WTVS-380-Interim Transmission Line - Rigid, Copper, 7 3 /16"
	Amount:	$52,503.50
	Component Description:	PARTIAL PAYMENT FOR RIGID TRANSMISSION LINE
	Amount:	$26,251.75
Rigid Transmission Line - copper, 6 1/8"	**Component Description:**	WTVS-310-Primary Transmission Line - Rigid, Copper, 6 1 /8"
	Amount:	$88,085.81

Cost Information

Tower Equipment and Rigging Costs

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Primary Tower GTOWER	**$605,300.00**	**$575,000.00**		**$174,613.12**	
Minor tower reinforcement /modifications	$158,000.00	$150,000.00	N/A	$3,000.00	N/A
Complex Tower (includes, for example, those with candelabras and/or stacked antennas)	$421,000.00	$400,000.00	N/A	$157,013.12	N/A
Tower mapping for an undocumented /poorly documented tower and preparation of documentation necessary for tower load study	$26,300.00	$25,000.00	N/A	$14,600.00	Please remove $14,600 entry for Tower Mapping & Structural Engineering as FCC did not like two invoices attached in one request.
Sub-total	$605,300.00	$575,000.00	N/A	$174,613.12	N/A
Total for all systems	$3,872,655.50	$2,984,639.43	N/A	$1,073,656.23	N/A

Components

Actual Information Description	File Name

Minor tower reinforcement /modifications	**Component Description:**	WTVS-410-Existing Primary Tower - Minor Tower Reinforcement /Modifications
	Amount:	$2,000.00
	Component Description:	25% downpayment on component
	Amount:	$1,000.00
Complex Tower (includes, for example, those with candelabras and/or stacked antennas)	**Component Description:**	WTVS-410-Existing Primary Tower - Tower Rigging, Complex Tower
	Amount:	$106,363.12
	Component Description:	Tower Permit Drawing Package
	Amount:	$9,400.00
	Component Description:	25% downpayment on component
	Amount:	$13,750.00
	Component Description:	WTVS-410-Existing Primary Tower - Tower Rigging, Complex Tower
	Amount:	$27,500.00

Tower mapping for an undocumented/poorly documented tower and preparation of documentation necessary for tower load study	**Component Description:** **Amount:**	TOWER MAPPING & STRUCTURAL ENGINEERING N/A
	Component Description: **Amount:**	Broadcast structural $6,333.00
	Component Description: **Amount:**	Broadcast Tower Mapping Detroit OakPark Broadcast Repack Line 2 $8,267.00

Cost Information

Outside Professional Services

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justificatior
Outside Professional Services	**$177,430.00**	**$173,425.00**		**$41,511.40**	
Site Coordination meeting	***$2,500.00***	$2,500.00	N/A	$1,875.00	N/A
RF Exposure Measurements	$21,050.00	$20,000.00	N/A	$2,500.00	N/A
FAA consultant, including cost of preparing FAA Form 7460 (Notice of Proposed Construction), if needed for height increase	$2,105.00	$2,000.00	N/A	$300.00	N/A
ASR modification (prepare FCC Form 854)	$2,105.00	$2,000.00	N/A	N/A	N/A
Attorney Fees - Prepare and File request for Special Temporary Authorization	$7,360.00	$7,000.00	N/A	N/A	N/A
Attorney Fees - Negotiation of lease and other matters for shared locations	$4,210.00	$4,000.00	N/A	$227.50	N/A

Attorney Fees - Prepare and File FCC Form 2100 (main), License to Cover Application	$2,365.00	$2,250.00	N/A	N/A	N/A
Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	$5,260.00	$5,000.00	N/A	$90.00	N/A
Prepare request for Special Temporary Authorization	$4,100.00	$3,000.00	N/A	N/A	N/A
Prepare engineering section of FCC Form 2100 (main), License to Cover Application	$1,580.00	$1,500.00	N/A	N/A	N/A
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	N/A	N/A

Address transition timing and coordination issues w/ other stations and wireless	$2,630.00	$2,500.00	N/A	N/A	N/A
Prepare and or review reimbursement form	$2,630.00	$2,500.00	N/A	$1,707.75	N/A
Project management of the transition	$109,020.00	$109,175.00	Quote Widelity Project Management and ATC PO 13-1647 permit filing services	$34,811.15	N/A
Sub-total	$177,430.00	$173,425.00	N/A	$41,511.40	N/A
Total for all systems	$3,872,655.50	$2,984,639.43	N/A	$1,073,656.23	N/A

Components

Actual Information Description	File Name	
Site Coordination meeting	**Component Description:**	25% downpaymaent for this component
	Amount:	$625.00
	Component Description:	WTVS-590-Site Coordination Meeting
	Amount:	$1,250.00

RF Exposure Measurements	**Component Description:** **Amount:** **Component Description:** **Amount:**	WTVS-580-Field Engineering Service - Rf Exposure Measurements $1,666.67 25% down payment for component $833.33
FAA consultant, including cost of preparing FAA Form 7460 (Notice of Proposed Construction), if needed for height increase	**Component Description:** **Amount:** **Component Description:** **Amount:**	FCC repack Review of WTVS 399 $75.00 FCC repack: Analysis of WTVS impact $225.00
ASR modification (prepare FCC Form 854)	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	**Component Description:** **Amount:**	Television Repacking Services - WTVS $90.00
	Component Description: **Amount:**	Television Repacking Services - WTVS $60.00
	Component Description: **Amount:**	Legal Services - Television Repacking Services - WTVS $77.50
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	**Component Description:** **Amount:**	Television Repacking Services $90.00
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	Information not provided.	

Address transition timing and coordination issues w/ other stations and wireless	Information not provided.
Prepare and or review reimbursement form	**Component Description:** Legal services **Amount:** $90.00 **Component Description:** Legal services to prepare and review reimbursement form in addition to review & filing reports **Amount:** $1,617.75
Project management of the transition	**Component Description:** Project Management **Amount:** $3,166.55 **Component Description:** WTVS-510-Project Management **Amount:** $2,500.00 **Component Description:** Project Management **Amount:** $2,590.10 **Component Description:** Please deny this component **Amount:** N/A **Component Description:** Project Management **Amount:** $3,642.90

Component Description:	Project Management
Amount:	$4,170.20
Component Description:	Project Management
Amount:	$5,909.75
Component Description:	Project Management
Amount:	$2,591.50
Component Description:	Project Management
Amount:	$3,779.45
Component Description:	25% downpayment for work being done by American Tower
Amount:	$1,250.00
Component Description:	Project Management
Amount:	$4,760.70
Component Description:	CONSULTING WORK WITH STAFF TO CREATE A REPACK FACT SHEET.
Amount:	$450.00

Cost Information

Other Expenses

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Other Expenses	**$237,828.75**	**$237,278.75**		**$78,134.62**	
Site Security	***$5,000.00***	$5,000.00	N/A	N/A	N/A
Lift equipment rental	***$10,000.00***	$10,000.00	N/A	N/A	N/A
Interim antenna tower lease	***$57,600.00***	$57,600.00	American Tower cost estimate	$43,200.00	N/A
Interim antenna connection	***$27,847.65***	$27,847.65	Freight, Shipping and Handling on Dielectric invoice 286010, Bird quote #00144960, Menard's invoice #1252018	$27,847.65	N/A
Employee time	***$75,081.10***	$75,081.10	See Attachment	$4,896.97	Please remove this component. It was resubmitted under outside professional services for repack
tower owner permits	***$750.00***	$750.00	N/A	$750.00	N/A

MVPD Notification of Channel Change	***$2,000.00***	$2,000.00	N/A	N/A	N/A
Develop and air announcement of upcoming channel change	***$5,000.00***	$5,000.00	N/A	N/A	N/A
Equipment Storage	***$8,000.00***	$8,000.00	Outdoor covered storage for equipment and parts	$1,440.00	N/A
Disposal Costs (for equipment and other waste, net of any salvage value)	***$25,000.00***	$25,000.00	N/A	N/A	N/A
Local Zoning	***$10,000.00***	$10,000.00	Permits and inspections	N/A	N/A
DTV Medical Facility Notification	$11,550.00	$11,000.00	N/A	N/A	N/A
Sub-total	$237,828.75	$237,278.75	N/A	$78,134.62	N/A
Total for all systems	$3,872,655.50	$2,984,639.43	N/A	$1,073,656.23	N/A

Components

Actual Information Description	File Name
Site Security	Information not provided.
Lift equipment rental	Information not provided.

Interim antenna tower lease	**Component Description:** **Amount:**	25% downpayment on this component $14,400.00
	Component Description: **Amount:**	WTVS-610-Interim Antenna Tower Lease $28,800.00
Interim antenna connection	**Component Description:** **Amount:**	BPME4M-UH BPME 4-1/16" Flanged $7,032.75
	Component Description: **Amount:**	Insulator Conductor Adapter 4 1/16" Thin-Stand $336.84
	Component Description: **Amount:**	Clevis Hanger 1 1 /4 IN. 215LB Max Load $66.73
	Component Description: **Amount:**	Switch WR1500 H Plane 115 VAC 60000 SER $20,095.80
	Component Description: **Amount:**	Interim antenna connection $315.53

Employee time	**Component Description:** **Amount:**	Project Management $4,896.97
	Component Description: **Amount:**	this component should be removed $450.00
tower owner permits	**Component Description:** **Amount:**	Building permit $750.00
MVPD Notification of Channel Change	Information not provided.	
Develop and air announcement of upcoming channel change	Information not provided.	
Equipment Storage	**Component Description:** **Amount:**	WTVS-610-Equipment Storage $1,440.00
Disposal Costs (for equipment and other waste, net of any salvage value)	Information not provided.	
Local Zoning	Information not provided.	
DTV Medical Facility Notification	Information not provided.	

Cost Information

Grand Total

	Predetermined Cost Estimate	Estimated Cost	Actual Cost
Total for all systems	$3,872,655.50	$2,984,639.43	$1,073,656.23

Reimbursement Status

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

Certification

Section	Question	Response
Submission of Estimated Expenses Statements	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.	
	1. The Authorized Person signing below certifies that he /she is authorized to submit this TV Broadcaster Relocation Fund Reimbursement Form on behalf of the above-named entity. 2. The above-named entity acknowledges that all certifications and attached documentation are considered material representations. 3. The above-named entity acknowledges the submission of the information herein creates no obligation on the part of the government to pay any amount.	

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

	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.	**William Carignan** *Controller* 05/10/2019

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).	
	1. The Authorized Person signing below certifies and represents that he /she is authorized to submit this TV Broadcaster Relocation Fund Reimbursement Form on behalf of the above-named entity. 2. The above-named entity certifies that the statements in this form and attached documentation are true, complete, and correct. 3. The above-named entity acknowledges that all certifications and attached documentation are considered material representations.	

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

	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.	**William Carignan** *Controller* 05/10/2019

Attachments