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: **40618** | Service: **DTV** | Call Sign: **WCPB** | Channel: **16 (UHF)**

File Number: **0000027915**

FRN: **0003857380** | Date Submitted: **04/16/2018**

Applicant Information

Applicant Name, Type, and Contact Information

Applicant	Address	Phone	Email	Applicant Type
MARYLAND PUBLIC BROADCASTING COMMISSION Doing Business As: MARYLAND PUBLIC BROADCASTING COMMISSION	Larry D. Unger, President & CEO 11767 OWINGS MILLS BOULEVARD OWINGS MILLS, MD 21117 United States	+1 (410) 356-5600	lunger@mpt.org	Government Entity

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
Joseph L. Snelson , Jr . *Technical Consultant* *Meintel, Sgrignoli & Wallace*	1282 Smallwood Drive, Suite 372 Waldorf, MD 20603 United States	+1 (303) 344-8037	joe.snelson@mswdtv.com

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.	No
Briefly describe transition plan	Current transmission system consists of a transmitter feeding a transmission line which connects to an antenna on the tower. Work includes installing new transmission line, attaching to antenna and connecting to new repack channel transmitter.

Transmitters

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

Auxiliary Transmitter

Add Transmitter Information

Section	Question	Response
Existing Transmitter Description	Type of change	Purchase New
	Use	Auxiliary (Backup)
	Description of Use	Auxiliary use in case of main transmitter failure
	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	TDU2-10K0LV
	Year	2003
	Type	Solid State
	Solid State Cooling	Liquid Cooled
	Solid State Power Capacity	5 kW

Auxiliary Transmitter

New Transmitter Costs

Section	Question	Response
New Transmitter	Use	Auxiliary (Backup)
	Change Type	Purchase New
	Is this a request for upgraded equipment?	Yes
	Manufacturer	
	Model	PRLX-U8
	Transmitter Type	Solid State
	Solid State Cooling	Liquid Cooled
	Solid State Power capacity	13 kW
	Justification for New Transmitter	Current transmitter is not supported for a channel change. See attached Transmitter Replace Justification letter from manufacturer. Power upgrade is part of an agreement provided to the FCC to move WCPB to Ch. 16 to accommodate moving WETA to channel 31.

Auxiliary Transmitter

Other Transmitter Costs

Section	Question	Response

Electrical Service	Service Entrance (3 phases 800A 208V)	No
	Switchgear (industrial 800 amp)	No
	Transformer (480V)	No
	Power	N/A
	Rigid Conduit and Wiring	No
	Size	N/A
	Length	N/A
	Other Electrical Service	Yes
	Description	Electrical contractor to connect transmitter into existing electrical panel and wire heat exchanger into transmitter. Includes material and labor.
HVAC Service	Does the replacement transmitter require HVAC Service?	No
	Type	N/A
	Size	N/A
	Other Size	N/A
Transmitter Building Addition/Modification or Leasehold Improvement	Does the Transmitter Building require an addition, modification, other 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 Transmitter

Other Transmitter Cost Not Listed

Name	Description
Rigid Coax Line	Rigid interconnection coax lines from transmitter to filter to antenna switch.
Coolant	The coolant used for the transmitter heat exchanger is not included in the transmitter price
Remote Control Interface	License required to interface transmitter into current remote control system
Bag Filter	Bag type water filtration for heat exchanger system.

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	TDU2-10K0LV
	Year	2003
	Type	Solid State
	Solid State Cooling	Liquid Cooled
	Solid State Power Capacity	5 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	MPTV-PRLX-U8
	Transmitter Type	Solid State
	Solid State Cooling	Liquid Cooled
	Solid State Power capacity	13 kW
	Justification for New Transmitter	Current transmitter is not supported for a channel change. See attached Transmitter Replace Justification letter from manufacturer. Power upgrade is part of an agreement provided to the FCC to move WCPB to Ch. 16 to accommodate moving WETA to channel 31.

Primary Transmitter

Other Transmitter Costs

Section	Question	Response

Electrical Service	Service Entrance (3 phases 800A 208V)	No
	Switchgear (industrial 800 amp)	No
	Transformer (480V)	No
	Power	N/A
	Rigid Conduit and Wiring	No
	Size	N/A
	Length	N/A
	Other Electrical Service	Yes
	Description	Electrical contractor to connect transmitter into existing electrical panel and wire heat exchanger into transmitter. Includes material and labor.
HVAC Service	Does the replacement transmitter require HVAC Service?	No
	Type	N/A
	Size	N/A
	Other Size	N/A
Transmitter Building Addition/Modification or Leasehold Improvement	Does the Transmitter Building require an addition, modification, other leashold improvement?	No
	Size	N/A
Channel 14 Costs	Is an RF Consulting Engineer needed?	N/A
	Is a channel 14 Mask Filer needed?	N/A
	Is additional field engineering time needed?	N/A
	Number of Days	N/A

Primary Transmitter

Other Transmitter Cost Not Listed

Name	Description
Remote Control Interface	License required to interface transmitter into current remote control system
Bag Filter	Bag type water filtration for heat exchanger system.
Rigid Coax Line	Rigid interconnection coax lines from transmitter to filter to antenna switch.
Motorized Switch	Electric actuated switch to switch main /auxiliary transmitters into antenna
8-Pole Mask Filter	A more rigid mask filter to protect adjacent land mobile stations on Ch. 17 in Washington DC.
CIF Mask filter	Constant Impedance mask Filter. Station currently utilizes a CIF.
Coolant	The coolant used for the transmitter heat exchanger is not included in the transmitter price
Site Design and Survey	Incorporates all aspects of the transmitter room design, including power distribution requirements, equipment placement, RF system layout, plumbing, and remote control.

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	Retune Existing
	Antenna Use	Primary (Main)
	Description of Use	N/A
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is the existing antenna shared with another station or stations?	No
	Is the existing antenna directional?	Yes
	Is antenna in operating condition?	Yes
	Is antenna located on or in close proximity to an antenna farm?	No
Existing Antenna Manufacturer and Type	Class	Full Power
	Mounting	Top Mount
	Antenna position in stack	Top
	Polarization	Horizontal
	Type	Broadband Panel
	Number of Stations Supported	1
	Number of Panels	16
	Design power capacity in use	50.0 %
	Lower Limit	470.00 MHz

Upper Limit	698.00 MHz
Other Antenna Type	N/A
ERP: (Effective Radiated Power)	132.0 kW
Manufacturer	DIE
Model	TUP-16-O4-1
Year	2009

Primary Antenna

Adjustment to Existing Antenna

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

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	

Primary Antenna

Other Antenna Cost Not Listed

Name	Description
Antenna Optimizing	Optimize match to operate on channel 16 from 28

Transmission Line

Section	Question	Response
Transmission Line Related Expenses	Do you have transmission line related expenses?	No

Tower Equipment And Rigging Costs

Section	Question	Response
Tower Equipment or Rigging Costs Changes	Do you have tower equipment or rigging costs changes?	No

Outside Professional Services Costs

Section	Question	Response
Outside Project Management Services	Do you require outside project management services?	Yes
	Number of Hours	280
	Explanation	Applicant has limited internal resources to oversee installing and commissioning this repack project. It will rely on outside services to manage all work required.
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	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
	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	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	Yes
	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	No

RF exposure measurements	No
Additional Field Engineering Service	Yes
Number of Days	1
Justification	Initial sweep of the antenna to verify if antenna could operate on original repack channel 21.

Outside Professional Services Costs

Other Professional Services Expenses Not Listed

Name	Description
Progress Reports	Prepare and file 8 required progress reports on FCC Form 2100, Schedule 387 on a quarterly basis with the FCC.

Other Expenses

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

Other Expenses

Other Expenses Not Listed

Information not provided.

Cost Information

Transmitters

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Primary Transmitter MPTV-PRLX-U8	**$631,988.50**	**$607,488.50**		**$0.00**	
Site Design and Survey	***$15,300.00***	$15,300.00	Incorporates all aspects of the transmitter room design, including power distribution requirements, equipment placement, RF system layout, plumbing, and remote control.	N/A	N/A
Coolant	***$814.00***	$814.00	The coolant used for the transmitter heat exchanger is not included in the transmitter price. See attached coolant quote.	N/A	N/A
8-Pole Mask Filter	***$15,000.00***	$15,000.00	A more stringent mask filter to protect adjacent land mobile stations on Ch. 17 in Washington DC.	N/A	N/A

Motorized Switch	***$20,195.00***	$20,195.00	Electric actuated switch to switch main /auxiliary transmitters into antenna. Current transmitter has this capability but switch cannot be moved as it is in pre-repack service.	N/A	N/A
Rigid Coax Line	***$2,600.00***	$2,600.00	Rigid interconnection coax lines from transmitter to filter to antenna switch. Part of the internal RF systems and will be cut to length needed. This IS NOT an upgrade.	N/A	N/A
Bag Filter	***$6,975.00***	$6,975.00	Bag type water filtration for heat exchanger system. Current pre-repack cooling system has this filtering. This IS NOT an upgrade.	N/A	N/A

Remote Control Interface	***$2,197.50***	$2,197.50	License required to interface transmitter into current remote control system. These are in use now on the Comark transmitters. This IS NOT an upgrade.	N/A	N/A
UHF - Liquid Cooled Solid State Transmitter 8.2 - 13 kW	$494,500.00	$470,000.00	N/A	N/A	N/A
Other Electrical Service: Electrical contractor to connect transmitter into existing electrical panel and wire heat exchanger into transmitter. Includes material and labor.	***$14,200.00***	$14,200.00	Electrical contractor to connect transmitter into existing electrical panel and wire heat exchanger into transmitter. Includes material and labor.	N/A	N/A
CIF Mask filter	***$60,207.00***	$60,207.00	Constant Impedance mask Filter. Current mask filter is a CIF.	N/A	N/A
Auxiliary Transmitter PRLX-U8	**$521,286.50**	**$496,786.50**		**$0.00**	

Bag Filter	***$6,975.00***	$6,975.00	Bag type water filtration for heat exchanger system. Current pre-repack cooling system has this filtering. This IS NOT an upgrade.	N/A	N/A
Remote Control Interface	***$2,197.50***	$2,197.50	License required to interface transmitter into current remote control system. Current Comark transmitters have this interface. This IS NOT an upgrade.	N/A	N/A
Rigid Coax Line	***$2,600.00***	$2,600.00	Rigid interconnection coax lines from transmitter to filter to antenna switch. Part of the internal RF systems and will be cut to length needed. This IS NOT an upgrade.	N/A	N/A
UHF - Liquid Cooled Solid State Transmitter 8.2 - 13 kW	$494,500.00	$470,000.00	N/A	N/A	N/A

Other Electrical Service: Electrical contractor to connect transmitter into existing electrical panel and wire heat exchanger into transmitter. Includes material and labor.	***$14,200.00***	$14,200.00	Electrical contractor to connect transmitter into existing electrical panel and wire heat exchanger into transmitter. Includes material and labor. See attached electrical quote.	N/A	N/A
Coolant	***$814.00***	$814.00	The coolant used for the transmitter heat exchanger is not included in the transmitter price. See attached coolant quote.	N/A	N/A
Sub-total	$1,153,275.00	$1,104,275.00	N/A	$0.00	N/A
Total for all systems	$1,566,075.00	$1,262,645.00	N/A	$5,111.82	N/A

Components

Actual Information Description	**File Name**
Site Design and Survey	**Component Description:** Expenses for all 6 locations site surverys **Amount:** $2,111.82
Coolant	Information not provided.

8-Pole Mask Filter	Information not provided.
Motorized Switch	Information not provided.
Rigid Coax Line	Information not provided.
Bag Filter	Information not provided.
Remote Control Interface	Information not provided.
UHF - Liquid Cooled Solid State Transmitter 8.2 - 13 kW	Information not provided.
Other Electrical Service: Electrical contractor to connect transmitter into existing electrical panel and wire heat exchanger into transmitter. Includes material and labor.	Information not provided.
CIF Mask filter	Information not provided.
Bag Filter	Information not provided.
Remote Control Interface	Information not provided.
Rigid Coax Line	Information not provided.
UHF - Liquid Cooled Solid State Transmitter 8.2 - 13 kW	Information not provided.
Other Electrical Service: Electrical contractor to connect transmitter into existing electrical panel and wire heat exchanger into transmitter. Includes material and labor.	Information not provided.
Coolant	Information not provided.

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
Primary Antenna TUP-16-O4-1	**$256,730.00**	**$9,400.00**		**$3,000.00**	
Antenna Optimizing	***$3,000.00***	$3,000.00	Optimize antenna match from channel 28 to channel 16	N/A	N/A
Sweep test of existing antenna	$6,730.00	$6,400.00	N/A	$3,000.00	N/A
UHF - High Power Top Mount (200-1000 kW), One station antenna, horizontally polarized	$247,000.00	$0.00	N/A	N/A	N/A
Sub-total	$256,730.00	$9,400.00	N/A	$3,000.00	N/A
Total for all systems	$1,566,075.00	$1,262,645.00	N/A	$5,111.82	N/A

Components

Actual Information Description	File Name
Antenna Optimizing	Information not provided.

Sweep test of existing antenna	**Component Description:** **Amount:**	Sweep of existing system at WCPB salisbury $3,000.00
UHF - High Power Top Mount (200-1000 kW), One station antenna, horizontally polarized	Information not provided.	

Cost Information

Transmission Line

Information not provided.

Cost Information

Tower Equipment and Rigging Costs

Information not provided.

Cost Information

Outside Professional Services

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Outside Professional Services	**$105,200.00**	**$102,650.00**		**$0.00**	
Progress Reports	***$28,000.00***	$28,000.00	Prepare and file 8 required progress reports on FCC Form 2100, Schedule 387 on a quarterly basis with the FCC.	N/A	N/A
Additional Field Engineering Service, 1 Days	***$6,400.00***	$6,400.00	Initial sweep of antenna to evaluate operation on channel 21 from channel 28.	N/A	N/A

Attorney Fees - Negotiation of lease and other matters for shared locations	$4,210.00	$5,000.00	Fees related to multi-party resolution agreement with Maryland Public TV, WETA and HME Equity Fund II, LLC. Involved several stations moving channels to accommodate WETA moving from ch 14 to 31.	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 - Prepare and File FCC Form 2100 (main), Construction Permit Application	$5,260.00	$5,000.00	N/A	N/A	N/A
Prepare engineering section of FCC Form 2100 (main), License to Cover Application	$1,580.00	$1,500.00	N/A	N/A	N/A

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
Project management of the transition	$44,240.00	$42,000.00	N/A	N/A	N/A
Prepare and or review reimbursement form	$2,630.00	$2,500.00	N/A	N/A	N/A
Sub-total	$105,200.00	$102,650.00	N/A	$0.00	N/A
Total for all systems	$1,566,075.00	$1,262,645.00	N/A	$5,111.82	N/A

Components

Information not provided.

Cost Information

Other Expenses

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Other Expenses	**$50,870.00**	**$46,320.00**		**$0.00**	
MVPD Notification of Channel Change	***$1,000.00***	$1,000.00	Notification will need to be made to MVPD's as required. Applicant to explore using an outside firm to determine which facilities will need to be notified and send the appropriate notification letters.	N/A	N/A
DTV Medical Facility Notification	$11,550.00	$7,000.00	N/A	N/A	N/A

Disposal Costs (for equipment and other waste, net of any salvage value)	***$20,000.00***	$20,000.00	Applicant will be required to dispose of the current transmission line and transmitter and heavy oil filled high voltage power supplies. These cannot be disposed of in a typical landfill.	N/A	N/A
Equipment Delivery and Handling Charges	***$18,320.00***	$18,320.00	Transmitter shipping shown as options on attached quotes.	N/A	N/A
Sub-total	$50,870.00	$46,320.00	N/A	$0.00	N/A
Total for all systems	$1,566,075.00	$1,262,645.00	N/A	$5,111.82	N/A

Components

Information not provided.

Cost Information

Grand Total

	Predetermined Cost Estimate	Estimated Cost	Actual Cost
Total for all systems	$1,566,075.00	$1,262,645.00	$5,111.82

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

Attachments