



(REFERENCE COPY - Not for submission)

FCC Form 399: Reimbursement Request

Facility **9913** | Service: **DTV** | Call **WCMW** | Channel: **20 (UHF)** |
ID: | Sign:
File **0000028011**
Number:
FRN: **0002733764** | Date **01/12**
Submitted: **/2021**

Applicant Information

Applicant Name, Type, and Contact Information

Applicant	Address	Phone	Email	Applicant Type
CENTRAL MICHIGAN UNIVERSITY Doing Business As: CENTRAL MICHIGAN UNIVERSITY	Wayne Henderson PUBLIC BROADCASTING 1999 EAST CAMPUS DR. MT. PLEASANT, MI 48859 United States	+1 (989) 774-3105	hende1ww@cmich.edu	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
Wayne Henderson <i>Director of Technical Services Central Michigan University</i>	Wayne Henderson Public Broadcasting Center 1999 E. Campus Drive Mount Pleasant, MI 48859 United States	+1 (989) 774-6864	hende1ww@cmich.edu

**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	Pre-install the replacement transmitter, Mask Filter, and test/proof system into a dummy load. During Replacement of the antenna and elbow complex the transmitter will be cut over to the new antenna. See uploaded attachment for thorough description.

Transmitters

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

**Primary
Transmitter**

Add 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	NV7250V
	Year	2008
	Type	Solid State
	Solid State Cooling	Liquid Cooled
	Solid State Power Capacity	4.1 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?	No
	Manufacturer	
	Model	ULXTE-8
	Transmitter Type	Solid State
	Solid State Cooling	Liquid Cooled
	Solid State Power capacity	5.52 kW
	Justification for New Transmitter	No longer supported, no field service available, and many parts required for retune are not available. See attached notice from Rohde & Schwarz. Liquid Cooled is what the current transmitter is.

**Primary
Transmitter**

Other Transmitter Costs

Section	Question	Response
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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	Circuit Breakers, Disconnects, Conduits, and Electrical Wiring Needed for Solid State Transmitter and outdoor Exchangers. Additional Electrical to Hookup AC Heat Pumps Units also Part of Contract.
HVAC Service	Does the replacement transmitter require HVAC Service?	Yes
	Type	Heating and Cooling
	Size	Other
	Other Size	5 tons
Transmitter Building Addition/Modification or Leasehold Improvement	Does the Transmitter Building require an addition, modification, other leasehold 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
Mask Filter System	Packaged in a single frame with Mask Filter, 2 motorized switches, 1 Switch Controller
Concrete Pad	Additional concrete pad has to be put in for the new transmitters outdoor heat exchanger.
Heat Exchanger Ice Shield	Galvanized Ice Shield for Transmitter Heat Exchanger with supporting post and tall enough to navigate under.
Building outside wall panels	When the old AC Units are removed from the building two openings are left; this is replacement outside wall panels from the building manufacturer.
Gates Transmitter Services	GatesAir ULXTE-8 Installation /Commissioning and Program Management at WCMW Site.

Antennas

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

**Primary
Antenna**

Add 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 this antenna currently shared with any other stations?	No
	Is this 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	Side Mount
	Antenna position in stack	Not in Stack
	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)	70.0 kW

Manufacturer	
Model	TFU- 18JSC-R- C170
Year	2009

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?	No
	Ownership	Owned
	Owner	N/A
	Is antenna shared?	No
	Is antenna directional?	Yes
	Will antenna be located on or in close proximity to an antenna farm?	No
New Antenna Manufacturer and Types	Class	Full Power
	Mounting	Side Mount
	Antenna position in stack	Not in Stack
	Polarization	Horizontal
	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)	68.3 kW
	Manufacturer	
	Model	TFU-18JSC-R C170

Year	2019
Justification for New Antenna	Dielectric indicates by attempting to retune existing antenna from ch 21 down to ch 20 would leave us with a beam tilt spec that's unknown and unpredictable. Gain of the antenna would be a guess; see attached support document.

Primary Antenna

Other Antenna Costs

Section	Question	Response
Combiner for Shared Antenna	Do you need a Combiner for a Shared Antenna?	
	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?	No
	Broadband or Single Channel?	N/A
	Feed Line Size	N/A

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.

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	Utilize Existing
	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	Dielectric
	Type	Rigid
	Diameter	3 1/8 inches
	Other Diameter	N/A
	Segment Length	19 1/2 inches
	Other Segment Length	N/A
	Number of parallel runs	1
	Length	435 feet per run

Primary
Transmission Line

Other Transmission Line Expenses Not Listed

Name	Description
WCMW in Building Coaxial Transmission Line-General	Qty 3 20.5" Unflanged Transmission Lines, Qty 6 Elbows, Qty 8 Flange Adaptors, Qty 6 Coupling Assemblies, Qty 16 Anchor Connector Assemblies, 3 Flange Field, & Other Accessories
WCMW in Building Construction Spare Transmission Components	1 Elbow, 1 Flange Field Soft Solder, 1 Unflanged transmission Line, 1 Anchor Connector Assembly, O Rings, Misc.

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

Add Tower

Section	Question	Response
Existing Tower Description	Type of change	Move Equipment
	Tower Use	Primary (Main)
	Description of Use	N/A
	Ownership	Owned
	Is this tower consider Complex?	No
	Is this tower currently shared with any other stations?	No
	One or more FM, AM or TV radio broadcaster(s)	N/A
	Others Types of Users	N/A
	Is tower documented for structural analysis?	No
	Is tower compliant with Rev G?	Unknown
Existing Tower Structure Registration	Do you have a tower registration number?	Yes
	ASR Number	1052328
Coordinates (NAD83 (North American Datum of 1983))	Latitude (NAD83)	44° 03' 57.0" N-
	Longitude (NAD83)	086° 19' 58.3" W-
	Overall Structure Height	427.16 feet
	Support Structure Height	427.16 feet
	Ground Elevation Above Mean Sea Level (AMSL)	717.84 feet

Structure Type	TOWER - Free Standing or Guyed Structure
Tower Owner	CMU Public Broadcasting
Date Constructed	02/27/2009

Primary Tower

Tower Rigging Costs

Section	Question	Response
Tower Rigging Costs	Complex Tower	N/A
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?	No
	Number of Hours	N/A
	Explanation	N/A
Outside RF consulting Engineering Services	Perform engineering study for new channel assignment and antenna development	No
	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	No
	Prepare or Review FCC Form 399 for Reimbursement	Yes
	Address transition timing and coordination issues w/ other stations and wireless providers	Yes
RF Field Engineering Services	Comprehensive coverage verification via field study	No
	RF exposure measurements	No
	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
Tower Consultants, Inc.	Tower Consultants, Inc; Tower Analysis and Tensioning Chart, Rigging Plan Review, and On-Site Oversight and Inspection.

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)?	No
	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?	Yes
	Does this relocation require MVPD Notification of a Channel Change?	Yes

**Other
Expenses**

Other Expenses Not Listed

Name	Description
Internal Field Engineering Expense Estimate	Field Engineering Staff Initial Investigative Site Visits. Print workup, Manage Deliveries, On Site for Installations, Signal and Remote Control Wiring, Ice Bridge and RF Transmission Line Installation.
Internal Project Management Expense Estimate	Director of Technical Services Project Management. CP, Form 399, Site Investigation, Bid Specs, Purchasing Activity, On Site during Construction, Prep License to Cover. See Detailed Doc Attached.
Larsen's Landscaping LLC	Grading & Resurfacing Driveway for Access.

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 ULXTE-8	\$385,252.21	\$237,399.70		\$237,399.70	
Gates Transmitter Services	<i>\$33,541.40</i>	\$33,541.40	GatesAir ULXTE-8 Installation /Commissioning and Program Management at WCMW Site.	\$33,541.40	N/A
Concrete Pad	<i>\$1,309.79</i>	\$1,309.79	Additional concrete pad is needed for the new transmitter's outdoor heat exchanger to sit on. Additionally one of the new AC/Heat Pump Units will have the outdoor unit also placed on the pad.	\$1,309.79	N/A
Mask Filter System	<i>\$37,669.50</i>	\$37,669.50	N/A	\$37,669.50	N/A
UHF - Liquid Cooled Solid State Transmitter 4.9 . 6.5 kW	\$273,500.00	\$125,647.49	N/A	\$125,647.49	N/A

Heat Exchanger Ice Shield	\$15,230.32	\$15,230.32	Damage has been seen at site due to falling ice from the tower. New Heat Exchanger really needs to have an Ice Shield.	\$15,230.32	N/A
Other -- HVAC Service Type: H Size: 5 (Other)	\$15,200.00	\$15,200.00	Changed the size downward from 7 ton to 5 ton; planning for just the purchase of two Fujitsu AC/Heat Pump mini-split systems.	\$15,200.00	N/A
Other Electrical Service: Circuit Breakers, Disconnects, Conduits, and Electrical Wiring Needed for Solid State Transmitter and outdoor Exchangers. Additional Electrical to Hookup AC Heat Pumps Units also Part of Contract.	\$6,805.00	\$6,805.00	N/A	\$6,805.00	N/A

Building outside wall panels	\$1,996.20	\$1,996.20	When old Air Conditioning Wall Mount Units are removed from the building it will leave two openings; these are the outside wall panels from the building manufacturer as replacements.	\$1,996.20	N/A
Sub-total	\$385,252.21	\$237,399.70	N/A	\$237,399.70	N/A
Total for all systems	\$695,707.76	\$550,780.74	N/A	\$520,919.19	N/A

Components

Actual Information	
Description	File Name

Gates Transmitter Services	<div> Component Description: GatesAir Transmitter Services PO Line Item 90 Invoice Line Item "I" </div> <div> Amount: \$11,182.70 </div>
	<div> Component Description: GATES AIR TRANSMISSION INSTALLATION SERVICES INVOICE LINE - G / QUOTE LINES 54-56 </div> <div> Amount: \$11,122.33 </div>
	<div> Component Description: GATES AIR TRANSMISSION INSTALLATION SERVICES INVOICE LINE - G / QUOTE LINES 56-58 </div> <div> Amount: \$11,236.37 </div>
	<div> Component Description: Transmitter Services </div> <div> Amount: \$11,122.33 </div>
	<div> Component Description: Transmitter Services </div> <div> Amount: \$11,236.37 </div>
Concrete Pad	<div> Component Description: CONCRETE PAD </div> <div> Amount: \$1,309.79 </div>

Mask Filter System

Component Description: MASK FILTER
SYSTEM INVOICE
LINE - B / QUOTE
LINES 21-24
Amount: \$12,619.28

Component Description: MASK FILTER
SYSTEM INVOICE
LINE - B / QUOTE
LINES 20-23
Amount: \$12,491.21

Component Description: Mask Filter System
PO Line Item 40
Invoice Line Item "D"
Amount: \$12,559.01

Component Description: Mask Filter System
Amount: \$12,491.21

Component Description: Mask Filter System
Amount: \$12,619.28

UHF - Liquid Cooled
Solid State Transmitter
4.9 . 6.5 kW

Component Description: 5KW Transmitter for
WCMW PO Line Item
10 Invoice Line Item
"A"
Amount: \$45,189.77

Component Description: 5KW TRANSMITTER
INVOICE LINE - A /
QUOTE LINES 2-20
Amount: \$42,208.65

Component Description: 5KW TRANSMITTER
SYSTEM INVOICE
LINE - A / QUOTE
LINES 2-19
Amount: \$38,249.07

Component Description: Transmitter
Amount: \$42,208.65

Component Description: Transmitter
Amount: \$38,249.07

Heat Exchanger Ice Shield	<div> Component Description: 9 DAYS OF PER DIEM MOTEL AND MEALS </div> <div> Amount: \$1,350.00 </div>
	<div> Component Description: 6 DAYS TRANSPORTATION CHARGE FROM BASE TO TOWER SITE </div> <div> Amount: \$720.00 </div>
	<div> Component Description: 12 FT X 12 FT ICE SHIELD </div> <div> Amount: \$6,680.32 </div>
	<div> Component Description: INSTALLATION CHARGE FOR 12 FT X 12 FT ICE SHIELD OVER EQUIPMENT AT BUILDING FRONT </div> <div> Amount: \$6,480.00 </div>
	<div> Component Description: Ice Shield, Installation, Per Diem Motel and Meals and Transportation Charge </div> <div> Amount: \$15,230.32 </div>
Other -- HVAC Service Type: H Size:5 (Other)	<div> Component Description: Materials and Labor for installation of 2 Heat Pumps </div> <div> Amount: \$15,200.00 </div>

<p>Other Electrical Service: Circuit Breakers, Disconnects, Conduits, and Electrical Wiring Needed for Solid State Transmitter and outdoor Exchangers. Additional Electrical to Hookup AC Heat Pumps Units also Part of Contract.</p>	<table> <tr> <td data-bbox="668 87 1086 398">Component Description:</td><td data-bbox="1086 87 1428 398">Electrical materials and installation for Transmitter, Outdoor Exchangers and Hookup for AC Heat Pumps</td></tr> <tr> <td data-bbox="668 398 1086 528">Amount:</td><td data-bbox="1086 398 1428 528">\$6,805.00</td></tr> </table>	Component Description:	Electrical materials and installation for Transmitter, Outdoor Exchangers and Hookup for AC Heat Pumps	Amount:	\$6,805.00
Component Description:	Electrical materials and installation for Transmitter, Outdoor Exchangers and Hookup for AC Heat Pumps				
Amount:	\$6,805.00				
<p>Building outside wall panels</p>	<table> <tr> <td data-bbox="668 528 1086 667">Component Description:</td><td data-bbox="1086 528 1428 667">Materials and shipping for Building</td></tr> <tr> <td data-bbox="668 667 1086 777">Amount:</td><td data-bbox="1086 667 1428 777">\$1,996.20</td></tr> </table>	Component Description:	Materials and shipping for Building	Amount:	\$1,996.20
Component Description:	Materials and shipping for Building				
Amount:	\$1,996.20				

**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 TFU-18JSC- R C170	\$96,130.00	\$149,788.49		\$149,788.49	
UHF - Lower Power Side Mount, One station antenna - medium power (50- 200 kW), horizontally polarized	\$89,400.00	\$142,259.08	Gates Air Quote is attached pricing the same antenna on channel 20 that we currently are using for channel 21. Existing antenna can not be retuned as the beam tilt and power gain specifications can not be determined. See attached letter from Dielectric	\$142,259.08	N/A

Sweep test of existing antenna	\$6,730.00	\$7,529.41	Attached quotation from GatesAir includes expense for Dielectric Field Engineer on-site; includes field engineer on-site for one day, travel, expenses and report	\$7,529.41	N/A
Sub-total	\$96,130.00	\$149,788.49	N/A	\$149,788.49	N/A
Total for all systems	\$695,707.76	\$550,780.74	N/A	\$520,919.19	N/A

Components

Actual Information
Description

File Name

UHF - Lower Power Side
Mount, One station antenna
- medium power (50-200
kW), horizontally polarized

Component Description: New Dielectric
Antenna System
PO Line Item 70
Invoice Line Item
"G"

Amount: \$53,246.90

Component Description: NEW
DIELECTRIC
ANTENNA
SYSTEM
INVOICE LINE - E
/ QUOTE LINES
47-54

Amount: \$51,305.46

Component Description: NEW
DIELECTRIC
ANTENNA
SYSTEM
INVOICE LINE - E
/ QUOTE LINES
46-52

Amount: \$37,706.72

Component Description: Dielectric Antenna
System

Amount: \$51,305.46

Component Description: Dielectric Antenna
System

Amount: \$37,706.72

Sweep test of existing antenna

Component Description: Antenna Sweep
Test PO Line Item
80 Invoice Line
Item "H"
Amount: \$2,510.31

Component Description: ANTENNA
SWEEP
DIELECTRIC
SERVICES
INVOICE LINE - F
/ QUOTE LINE 55
Amount: \$2,522.35

Component Description: ANTENNA
SWEEP
DIELECTRIC
SERVICES
INVOICE LINE - F
/ QUOTE LINE 53
Amount: \$2,496.75

Component Description: Antenna Sweep
Dielectric Services
Amount: \$2,522.35

Component Description: Antenna Sweep
Dielectric Services
Amount: \$2,496.75

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
Primary Transmission Line	\$12,655.69	\$12,655.69		\$12,655.69	
WCMW in Building Construction Spare Transmission Components	<i>\$3,056.25</i>	\$3,056.25	Qty1 construction spares in the event of damage or oversight of need. 1 Unflanged line, 1 elbow, 1 flange field soft solder, 1 anchor connector assembly, o rings, caps, hangers.	\$3,056.25	N/A

WCMW in Building Coaxial Transmission Line-General	\$9,599.44	\$9,599.44	WCMW In-Building Coaxial Transmission Line-General. Unflanged Line Sections, Elbows, Anchor Connectors Assemblies, Couplings, Flange Field Solder, Gassing Kit, Manifold, O Rings, Suspension Hangers, & Misc.	\$9,599.44	N/A
Sub-total	\$12,655.69	\$12,655.69	N/A	\$12,655.69	N/A
Total for all systems	\$695,707.76	\$550,780.74	N/A	\$520,919.19	N/A

Components

Actual Information	
Description	File Name

WCMW in Building
Construction Spare
Transmission Components

Component Description:	Spare Transmission Components PO Line Item 60 Invoice Line Item "F"
Amount:	\$1,288.01

Component Description:	SPARE TRANSMISSION COMPONENTS FOR TRANSMISSION LINE INSTALLATION INVOICE LINE - D / QUOTES LINES 40- 46
Amount:	\$1,294.19

Component Description:	SPARE TRANSMISSION COMPONENTS FOR TRANSMISSION LINE INSTALLATION INVOICE LINE - D / QUOTES LINES 39- 45
Amount:	\$474.05

Component Description:	Spare Transmission Components
Amount:	\$474.05

Component Description:	Spare Transmission Components
Amount:	\$645.44

WCMW in Building Coaxial
Transmission Line-General

Component Description:	WCMW IN BUILDING COAXIAL TRANSMISSION LINE GNERAL INVOICE LINE - C / QUOTE LINES 25- 39
Amount:	\$3,621.33
Component Description:	WCMW IN BUILDING COAXIAL TRANSMISSION LINE GNERAL INVOICE LINE - C / QUOTE LINES 24- 38
Amount:	\$2,374.08
Component Description:	WCMW in building coaxial transmission line PO Line Item 50 Invoice Line Item "E"
Amount:	\$3,604.03
Component Description:	WCMW in Building Coaxial Transmission Line General
Amount:	\$2,374.08
Component Description:	WCMW in Building Coaxial Transmission Line General
Amount:	\$3,621.33

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 TOWER	\$84,200.00	\$42,740.00		\$42,740.00	
Short Tower (less than 500')	\$84,200.00	\$42,740.00	Antenna Replacement, Additional Day Charge due to Missing Dielectric Parts, and 1 Day Return Visit due to Incorrect Bolts Provided by Dielectric.	\$42,740.00	N/A
Sub-total	\$84,200.00	\$42,740.00	N/A	\$42,740.00	N/A
Total for all systems	\$695,707.76	\$550,780.74	N/A	\$520,919.19	N/A

Components

Actual Information Description	File Name
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Short Tower (less than
500')

Component Description: STANDBY TIME
DUE TO DELAY
WITH DIELECTRIC
SUPPLIED
MATERIALS PER
PROPOSAL TCI-19-
088

Amount: \$4,120.00

Component Description: MOBILIZATION
ANTENNA
REPLACEMENT
PER PROPOSAL
TCI-19-088

Amount: \$9,355.00

Component Description: CHANGE OUT
ANTENNA BOLTS
PER PROPOSAL
TCI-19-088

Amount: \$1,200.00

Component Description: ANTENNA
REPLACEMENT
PER PROPOSAL
TCI-19-088

Amount: \$18,710.00

Component Description: COMPLETION
ANTENNA
REPLACEMENT
PER PROPOSAL
TCI-19-088

Amount: \$9,355.00

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 Justification
Outside Professional Services	\$54,160.00	\$54,372.00		\$44,995.50	
Address transition timing and coordination issues w/ other stations and wireless	\$2,630.00	\$3,467.00	Attorney time and expense higher than originally estimated. Includes issues with linked station.	\$3,467.00	N/A
Tower Consultants, Inc.	<i>\$36,540.00</i>	\$36,540.00	Tower Consultants, Inc. Quote for Installation Project Management, Structural Analysis, Inspection, plus 1 Day. TCI conducts all of our Tower Structural Analysis, Inspections after Installations, and this tower has not been Analyzed to the G Standard	\$36,540.00	N/A

Attorney Fees - Prepare and File FCC Form 2100 (main), License to Cover Application	\$2,365.00	\$2,365.00	Actual Attorney cost were more than estimated	\$634.00	N/A
Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	\$5,260.00	\$5,000.00	N/A	\$1,218.50	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	\$3,000.00	N/A
Prepare and or review reimbursement form	\$2,630.00	\$2,500.00	N/A	\$136.00	N/A
Sub-total	\$54,160.00	\$54,372.00	N/A	\$44,995.50	N/A
Total for all systems	\$695,707.76	\$550,780.74	N/A	\$520,919.19	N/A

Components

Actual Information	
Description	File Name
Address transition timing and coordination issues	

w/ other stations and
wireless

Component Description:	Follow up on WCMW repack status and Phase 6 deadline
Amount:	\$101.00

Component Description:	Reminder regarding WCMW repack quarterly progress report required by FCC
Amount:	\$50.50

Component Description:	Prepare WCMW repack viewer notification certification; email to W. Henderson regarding repack progress and status
Amount:	\$105.00

Component Description:	Work on WCMW repack issues and quarterly repack progress report; telephone call with W. Henderson (WCMW engineering) regarding Phase 6 repack readiness and required FCC filings
Amount:	\$101.00

Component Description:	Analysis regarding WCMW repack status and issues
Amount:	\$35.00

Component Description:	Work on WCMW repack and interpretation of timing for FCC required 10-day reports
Amount:	\$101.00

Component Description:	Analysis regarding WCMW post-transition repack filing obligations
Amount:	\$70.00

Component Description:	PHONE CALL W/W. HENDERSON REGARDING WCMW ANTENNA INSTALLATION COORDINATION ISSUES, RESEARCH AND ANALYSIS REGARDING SAME
Amount:	\$140.00

Component Description:	Review repack-related certifications for WCMW; email regarding same
Amount:	\$35.00

Component Description:	Email reminder regarding WCMW repack progress report deadline
Amount:	\$35.00

Component Description:	Email reminder regarding WCMW repack progress report deadline
Amount:	\$35.00

Component Description:	Email regarding online public file obligations associated with WCMW repack; research regarding same
Amount:	\$70.00

Component Description:	Email to W. Henderson regarding WCMW repack transition sequencing and status
Amount:	\$70.00

Component Description:	Follow up on WCMW repack status and various required FCC repack filings
Amount:	\$101.00

Component Description:	Work on status of WCMW repack and upcoming Phase 6 transition deadline and coordination with lined station struggling to meet deadline
Amount:	\$202.00

Component Description:	Review and follow-up on transition timing and issues with other stations
Amount:	\$785.00

Component Description:	Work on transition timing and other related issues for WCMW
Amount:	\$151.50

Component Description:	Work on coordination of linked station and sequence of transitioning stations.
Amount:	\$136.00

Component Description:	Consultation regarding repack timing issues
Amount:	\$210.00

Component Description:	Follow up on WCMW repack status and Phase 6 deadline
Amount:	\$151.50

Component Description:	Review and discuss notification certification
Amount:	\$175.00

Component Description:	Follow up on WCMW repack status and Phase 6 deadline
Amount:	\$151.50

	Component Description:	Prepare chart for WCMW repack upstream and downstream dependencies.
	Amount:	\$140.00
	Component Description:	Review and discuss transition timing and coordination issues
	Amount:	\$315.00
	Component Description:	Discuss antenna installation issues
	Amount:	\$140.00
<hr/>		
Tower Consultants, Inc.	Component Description:	COMPLETION - ENGINEERING SUPPORT - ONSITE OVERSITE & INSPECTION REPORT PER PROPOSAL TCI-19-088
	Amount:	\$4,730.00
	Component Description:	MOBILIZATION - ENGINEERING SUPPORT - ONSITE OVERSITE PER PROPOSAL TCI-19-088
	Amount:	\$4,730.00

	Component Description:	TIME AND EXPENSE ONE DAY ENGINEER ABORTED TRIP DUE TO ANTENNA MOUNT MATERIAL ISSUES. PER PROPOSAL TCI-19-088
	Amount:	\$1,800.00
	Component Description:	ENGINEERING SUPPORT - ONSITE OVERSIGHT PER PROPOSAL TCI-19-088
	Amount:	\$9,460.00
	Component Description:	SERVICES RENDERED BY TCI IN CONNECTION WITH COMPLETION OF STRUCTURAL ANALYSIS AND TENSION CHART PER PROPOSAL TCI-19-081
	Amount:	\$15,820.00
Attorney Fees -Prepare and File FCC Form 2100 (main), License to Cover Application	Component Description:	PREPARE REPACK LICENSE AND EMAIL TO J. RADEMAKER
	Amount:	\$140.00
	Component Description:	EMAIL - LAUNCH REPACK LICENSE TO COVER APPLICATION FOR WCMW
	Amount:	\$105.00

Component Description:	Review grant of repack covering license; email J Rademaker
Amount:	regarding same \$70.00

Component Description:	FILE REPACK LICENSE TO COVER AND EMAILS TO J. RADEMAKER AND W. HENDERSON
Amount:	\$140.00

Component Description:	Review FCC grant of license to cover application for post-auction transition repack facilities
Amount:	\$39.00

Component Description:	WORK ON REPACK AND COVERING LICENSE APPLICATION FOR PERMANENT REPACK FACILITY
Amount:	\$101.00

	<p>Component Description:</p> <p>REVIEW FCC PUBLIC NOTICES AND DATABASES RE-SUBMISSION AND ACCEPTANCE FOR FILING OF WCMW LICENSE TO COVER APPLICATION FOR POST AUCTION TRANSITION REPACK FACILITIES</p> <p>Amount:</p> <p>\$39.00</p>
Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	<p>Component Description:</p> <p>Analysis and review FCC re-pack transition quarterly progress report.</p> <p>Amount:</p> <p>\$39.00</p> <p>Component Description:</p> <p>Review database re modification of construction permit for WCMW</p> <p>Amount:</p> <p>\$218.00</p> <p>Component Description:</p> <p>Work on FCC minor modification repack construction permit</p> <p>Amount:</p> <p>\$961.50</p>
Prepare engineering section of FCC Form 2100 (main), License to Cover Application	Information not provided.

<p>Prepare engineering section of FCC Form 2100 (main), Construction Permit Application</p>	<table> <tr> <td data-bbox="681 100 1114 360">Component Description:</td><td data-bbox="1114 100 1428 360">Prepare and upload Engineering Section of FCC Form 2100 Construction Permit Application</td></tr> <tr> <td data-bbox="681 360 1114 465">Amount:</td><td data-bbox="1114 360 1428 465">\$3,000.00</td></tr> </table>	Component Description:	Prepare and upload Engineering Section of FCC Form 2100 Construction Permit Application	Amount:	\$3,000.00												
Component Description:	Prepare and upload Engineering Section of FCC Form 2100 Construction Permit Application																
Amount:	\$3,000.00																
<p>Prepare and or review reimbursement form</p>	<table> <tr> <td data-bbox="681 465 1114 1070">Component Description:</td><td data-bbox="1114 465 1428 1070">PREPARE SUMMARY OF FCC RELEASES REGARDING TV ONLY TRANSLATOR /LPTV REIMBURSEMENT OF REPACK RELATED EXPENSES</td></tr> <tr> <td data-bbox="681 1070 1114 1272">Amount:</td><td data-bbox="1114 1070 1428 1272">\$35.00</td></tr> <tr> <td data-bbox="681 1272 1114 1384">Component Description:</td><td data-bbox="1114 1272 1428 1384">Review and reminder regarding quarterly report for reimbursement</td></tr> <tr> <td data-bbox="681 1384 1114 1496">Amount:</td><td data-bbox="1114 1384 1428 1496">\$50.50</td></tr> <tr> <td data-bbox="681 1496 1114 1697">Component Description:</td><td data-bbox="1114 1496 1428 1697">Prepare summary of FCC releases regarding reimbursement expenses</td></tr> <tr> <td data-bbox="681 1697 1114 1809">Amount:</td><td data-bbox="1114 1697 1428 1809">\$35.00</td></tr> <tr> <td data-bbox="681 1809 1114 2009">Component Description:</td><td data-bbox="1114 1809 1428 2009">Reminder regarding quarterly repack report due for repacked station WCMW</td></tr> <tr> <td data-bbox="681 2009 1114 2121">Amount:</td><td data-bbox="1114 2009 1428 2121">\$50.50</td></tr> </table>	Component Description:	PREPARE SUMMARY OF FCC RELEASES REGARDING TV ONLY TRANSLATOR /LPTV REIMBURSEMENT OF REPACK RELATED EXPENSES	Amount:	\$35.00	Component Description:	Review and reminder regarding quarterly report for reimbursement	Amount:	\$50.50	Component Description:	Prepare summary of FCC releases regarding reimbursement expenses	Amount:	\$35.00	Component Description:	Reminder regarding quarterly repack report due for repacked station WCMW	Amount:	\$50.50
Component Description:	PREPARE SUMMARY OF FCC RELEASES REGARDING TV ONLY TRANSLATOR /LPTV REIMBURSEMENT OF REPACK RELATED EXPENSES																
Amount:	\$35.00																
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Amount:	\$35.00																
Component Description:	Reminder regarding quarterly repack report due for repacked station WCMW																
Amount:	\$50.50																

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	\$63,309.86	\$53,824.86		\$33,339.81	
Internal Project Management Expense Estimate	<i>\$10,524.00</i>	\$10,524.00	Internal Expense Estimate for Director of Technical Services Project Management. CP, Form 399, Site Investigation, Bid Specs, Purchasing Activity, On Site during Construction, License to Cover. See Detailed Doc Attached.	\$662.11	N/A

Internal Field Engineering Expense Estimate	\$10,909.00	\$10,909.00	Field Engineering Staff Initial Investigative Site Visits. Print workup, Manage Deliveries; On Site for Installations of Transmitter, Signal and Remote Control Wiring, HVAC Units, and RF Transmission Line.	\$1,507.52	N/A
Larsen's Landscaping LLC	\$8,344.69	\$8,344.69	See Larsen's Landscaping Quote 1st Two Line items plus the change order for increased crushed concrete cost	\$7,356.51	N/A

MVPD Notification of Channel Change	\$1,785.00	\$1,785.00	Initial Work Up of Addresses and Contact Info for MVPD and Satellite Companies; then Preparation and Certified Mailing of Notices, Phone Time Working with Reception and Specifics of Receiving Station. See spreadsheet for internal expense estimates.	\$1,936.50	GRAY MILLER PERSH ATTORNEY FEES WERE NOT INCLUDED IN ORIGINAL ESTIMATE
Develop and air announcement of upcoming channel change	\$385.00	\$385.00	Set Up Scope of Effort, Make Assignments, Write and record copy; shoot, edit, export, and ingest the spot. Traffic and Programming staff efforts of spot placement and ensure FCC compliance.	N/A	N/A

Equipment Delivery and Handling Charges	\$19,812.17	\$19,812.17	Overall Shipping and Offloading; see the uploaded WCMW GatesAir Bid /Quote Q-81063. Includes transmitter, antenna, and all line.	\$19,812.17	N/A
DTV Medical Facility Notification	\$11,550.00	\$2,065.00	N/A	\$2,065.00	N/A
Sub-total	\$63,309.86	\$53,824.86	N/A	\$33,339.81	N/A
Total for all systems	\$695,707.76	\$550,780.74	N/A	\$520,919.19	N/A

Components

Actual Information	
Description	File Name
Internal Project Management Expense Estimate	Component Description:
	Compose bid specifications for new WCMU equipment
	Amount:
	\$392.36
	Component Description:
	Internal Labor - Resubmission on FCC form 399 for cost estimate changes
	Amount:
	\$269.75

Internal Field Engineering Expense Estimate	<div> <div>Component Description:</div> <div>Prepare bid specifications and concrete pad quote and req for transmitter exchange</div> </div> <div> <div>Amount:</div> <div>\$196.18</div> </div> <div> <div>Component Description:</div> <div>Internal Labor - meet with potential bidders / vendors for site visit at WCMW</div> </div> <div> <div>Amount:</div> <div>\$624.71</div> </div> <div> <div>Component Description:</div> <div>Meet with potential bidders / prospective vendors for site visit at WCMW</div> </div> <div> <div>Amount:</div> <div>\$686.63</div> </div>
Larsen's Landscaping LLC	<div> <div>Component Description:</div> <div>ROAD WORK AND BRUSH REMOVAL AT TOWER SITE</div> </div> <div> <div>Amount:</div> <div>\$3,678.26</div> </div> <div> <div>Component Description:</div> <div>ROAD WORK AND BRUSH REMOVAL AT TOWER SITE</div> </div> <div> <div>Amount:</div> <div>\$3,678.25</div> </div>

MVPD Notification of Channel Change	<div> <div> Component Description: </div> <div> Work on MVPD Notification Issues for repack and channel change. </div> </div> <div> Amount: </div> <div> \$151.50 </div> <div> Component Description: </div> <div> NOTIFICATION OF CABLE AND SATELLITE MVPD PROVIDERS OF NEW RF CHANNEL </div> <div> Amount: </div> <div> \$1,785.00 </div>
Develop and air announcement of upcoming channel change	Information not provided.
Equipment Delivery and Handling Charges	<div> <div> Component Description: </div> <div> GATES AIR FREIGHT /SHIPPING CHARGES </div> </div> <div> Amount: </div> <div> \$19,812.17 </div> <div> Component Description: </div> <div> Freight Charges </div> <div> Amount: </div> <div> \$19,812.17 </div>
DTV Medical Facility Notification	<div> <div> Component Description: </div> <div> Notification to medical facilities for transmitter medical facility notation </div> </div> <div> Amount: </div> <div> \$2,065.00 </div>

**Cost
Information****Grand Total**

	Predetermined Cost Estimate	Estimated Cost	Actual Cost
Total for all systems	\$695,707.76	\$550,780.74	\$520,919.19

Reimbursement Status

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

Certification	Section	Question	Response
	Submission of Estimated Expenses Statements	<p>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.</p>	
		<ol style="list-style-type: none"> <li data-bbox="738 779 1027 1167">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. <li data-bbox="738 1196 1007 1435">2. The above-named entity acknowledges that all certifications and attached documentation are considered material representations. <li data-bbox="738 1464 1023 1749">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.

**SHANNON
FRANZ**
*MANAGER
BUSINESS
OPERATIONS*

01/12/2021

Certification	Section	Question	Response
	Submission of Final Allocation or Accounting Information Statements	<p>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.</p>	
		<ol style="list-style-type: none"> 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. The above-named entity acknowledges that all certifications and attached documentation are considered material representations. 2. The above-named entity acknowledges the submission of the information herein creates no obligation on the part of the government to pay any amount. 	

3. The above-named entity certifies that all costs identified as "actual costs" herein accurately represent the costs actually paid by the above-named entity, including any discounts, refunds, or rebates.
4. The above-named entity certifies that all payments from the TV Broadcaster Relocation Fund (Fund) received by the entity listed on this form will be used only for expenses that are eligible for reimbursement from the Fund.
5. The above-named entity acknowledges that overpayments or payments in error must be promptly refunded to the Commission.
6. The above-named entity certifies that it is in full compliance with all statutes, rules, regulations and governmental requirements for which compliance is a pre-requisite for obtaining the payments herein requested.

I declare, under penalty of perjury, that I am an authorized representative of the above-named applicant for the Authorization(s) specified above.

**SHANNON
FRANZ**
MANAGER
BUSINESS
OPERATIONS

01/12/2021

Attachments