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: **8688** | Service: **DTV** | Call Sign: **WRAL-TV** | Channel: **17 (UHF)**

File Number: **0000027637**

FRN: **0001961713** | Date Submitted: **04/03/2018**

## Applicant Information

### Applicant Name, Type, and Contact Information

| Applicant | Address | Phone | Email | Applicant Type |
|---|---|---|---|---|
| **CAPITOL BROADCASTING COMPANY, INC.**<br>Doing Business As: CAPITOL BROADCASTING COMPANY, INC. | Vernessa L. Hoffman<br>2619 WESTERN BLVD<br>RALEIGH, NC 27606<br>United States | +1 (919) 821-8730 | vhoffman@cbc-raleigh.com | Corporation |

## 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 |
|---|---|---|---|
| **Peter Sockett**<br>*Director of Engineering and Operations*<br>*Capitol Broadcasting Company* | Pete Sockett<br>2619 Western Blvd<br>Raleigh, NC 27606<br>United States | +1 (919) 821-8573 | psockett@wral.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. | Yes |
| Briefly describe transition plan | All 4 broadcasters will need to replace antennas on the candelabra. The transition plan for WRAL / WRAZ is to replace the existing Aux antenna with a single ch15 / 17 slot antenna at approx 1720ft (524m) to use as both the new AUX and interim facility. |

## 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 | CD2400P4 |
| | Year | 1999 |
| | Type | Inductive Output Tube |
| | IOT Power Type | Other |
| | Other IOT Power Type | 4 tube system |
| | Power Capacity | 100 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 | ULXTED-120 |
| | Transmitter Type | Solid State |
| | Solid State Cooling | Liquid Cooled |
| | Solid State Power capacity | 76.0 kW |
| | Justification for New Transmitter | 1) Manufacturer (Gates Air) will not support channel changes to this model of transmitter. 2) Comark estimate for IOT transmitter is higher than a solid State transmitter from GatesAir |

## Primary Transmitter

### Other Transmitter Costs

| Section | Question | Response |
|---|---|---|
| **Electrical Service** | Service Entrance (3 phases 800A 208V) | No |
| | Switchgear (industrial 800 amp) | No |
| | Transformer (480V) | Yes |

| | | |
|---|---|---|
| | Power | 300 kVA |
| | Rigid Conduit and Wiring | Yes |
| | Size | 4 inches |
| | Length | 400.0 feet |
| | Other Electrical Service | No |
| | Description | N/A |
| **HVAC Service** | Does the replacement transmitter require HVAC Service? | Yes |
| | Type | Cooling Only |
| | Size | 15 tons |
| | Other Size | N/A |
| **Transmitter Building Addition/Modification or Leasehold Improvement** | Does the Transmitter Building require an addition, modification, other leashold improvement? | Yes |
| | Size | 1600.0 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 |
|---|---|
| **Spare Modules and Power supplies** | Currently we keep 1 spare IOT tube on hand in the event of a failure. This purchases spare parts for Solid State TX |
| **System installation** | Manufacturer to come to site to install and commission. |
| **RF System** | Magic T / Mask filter / Dummy load and RF Line for Installation |

## Antennas

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

## Auxiliary Antenna

### Existing Antenna Information

| Section | Question | Response |
|---|---|---|
| **Existing Antenna Description** | Type of change | Purchase New |
| | Antenna Use | Auxiliary (Backup) |
| | Description of Use | Auxilary (Backup) |
| | Ownership | Owned |
| | Owner | N/A |
| | Site | N/A |
| | Is the existing antenna shared with another station or stations? | Yes |
| | Is the existing antenna directional? | Yes |
| | Is antenna in operating condition? | Yes |
| | Is antenna located on or in close proximity to an antenna farm? | Yes |
| **Existing Antenna Manufacturer and Type** | Class | Full Power |
| | Mounting | Side Mount |
| | Antenna position in stack | Not in Stack |
| | Polarization | Horizontal |
| | Type | Broadband Panel |
| | Number of Stations Supported | 2 |
| | Number of Panels | 36 |
| | Design power capacity in use | 100.0 % |
| | Lower Limit | 674.00 MHz |
| | Upper Limit | 710.00 MHz |
| | Other Antenna Type | N/A |
| | ERP: (Effective Radiated Power) | 1000.0 kW |

| | |
|---|---|
| Manufacturer | |
| Model | ETU-P3H12-(48-53) |
| Year | 2008 |

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

| Facility ID | Call Sign |
|---|---|
| 64611 | WRAZ |

## Auxiliary Antenna

### New Antenna Costs

| Section | Question | Response |
|---|---|---|
| **New Antenna Description** | Use | Auxiliary (Backup) |
| | Description of Use | Interim Facility and Auxiliary (Backup) |
| | Change Type | Purchase New |
| | Is this a request for upgraded equipment? | No |
| | Ownership | Owned |
| | Owner | N/A |
| | Is antenna shared? | Yes |
| | Is antenna directional? | No |
| | Will antenna be located on or in close proximity to an antenna farm? | Yes |
| **New Antenna Manufacturer and Types** | Class | Full Power |
| | Mounting | Side 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) | 805.0 kW |

| | |
|---|---|
| Manufacturer | |
| Model | ATW25H3-ESO-15 /17H |
| Year | 2018 |
| Justification for New Antenna | This antenna will serve as both an Interim facility while the candelabra is rebuilt and will replace the existing AUX antenna already in service for both WRAL and WRAZ |

## Auxiliary 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 | 2 |
| | Frequencies of channels supported | Upper and lower frequency |
| | Frequency | 476.0 MHz - 494.0 MHz |
| | 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? | Broadband |
| | Feed Line Size | 8 3/16 inches inches |
| **Side Mount Brackets** | Do you require the separate purchase of side mount brackets for a high power antenna? | Yes |
| **Pattern Scatter Analysis** | Do you require separate purchase of pattern scatter analysis for a side mount high or medium power antenna? | Yes |
| **Sweep Test** | Do you require the sweep testing of transmission line and antenna? | Yes |

## Auxiliary Antenna

### Other Antenna Cost Not Listed

Information not provided.

## 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? | Yes |
| **Existing Antenna Manufacturer and Type** | Class | Full Power |
| | Mounting | Top Mount |
| | Antenna position in stack | Top |
| | Polarization | Elliptical |
| | 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) | 1000.0 kW |
| | | |

| | |
|---|---|
| Manufacturer | |
| Model | ATW25H5-ETO-48H |
| Year | 2008 |

## 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? | No |
| | Will antenna be located on or in close proximity to an antenna farm? | Yes |
| **New Antenna Manufacturer and Types** | Class | Full Power |
| | Mounting | Top Mount |
| | Antenna position in stack | Top |
| | 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) | 533.0 kW |
| | Manufacturer | |

| | | |
|---|---|---|
| | Model | ATW25H4-ETO-17M |
| | Year | 2018 |
| | Justification for New Antenna | Required as old antenna is cut for channel 48 |

**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 | 7 3/16 inches inches |
| **Side Mount Brackets** | Do you require the separate purchase of side mount brackets for a high power antenna? | No |
| **Pattern Scatter Analysis** | Do you require separate purchase of pattern scatter analysis for a side mount high or medium power antenna? | No |
| **Sweep Test** | Do you require the sweep testing of transmission line and antenna? | Yes |

**Primary 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 |

## Auxiliary Transmission Line

### Existing Transmission Line

| Section | Question | Response |
|---|---|---|
| **Existing Transmission Line Description** | Type of change | Purchase New |
| | Use | Auxiliary (Backup) |
| | Description of Use | Auxiliary (Backup) |
| | Ownership | Owned |
| | Owner | N/A |
| | Site | N/A |
| | Is the existing transmission line shared with another station or stations? | Yes |
| | Is Transmission Line in operating condition? | Yes |
| **Existing Transmission Line Manufacturer and Type** | Manufacturer | |
| | Type | Rigid |
| | Diameter | 7 3/16 inches |
| | Other Diameter | N/A |
| | Segment Length | 20 inches |
| | Other Segment Length | N/A |
| | Number of parallel runs | 1 |
| | Length | 1738 feet per run |

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

| Facility ID | Call Sign |
|---|---|
| 64611 | WRAZ |

**Auxiliary Transmission Line**

## New Transmission Line

| Section | Question | Response |
|---|---|---|
| **New Transmission Line Costs** | Use | Auxiliary (Backup) |
| | Description of Use | Auxiliary (Backup) and Interim Facility |
| | Change Type | Purchase New |
| | Is this a request for upgraded equipment? | No |
| | Type | Rigid |
| | Diameter | 8 3/16 inches |
| | Other Diameter | N/A |
| | Segment Length | Broadband |
| | Other Segment Length | N/A |
| | Number of parallel runs | 1 |
| | Length | 2013 feet per run |
| | Justification for New Transmission Line | Required to feed new Aux / Interim antenna. Cost will be split with WRAZ. |

**Auxiliary Transmission Line**

## Other Transmission Line Expenses Not Listed

No information not provided.

## 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 | Waveguide |
| | Diameter | N/A |
| | Other Diameter | N/A |
| | Segment Length | N/A |
| | Other Segment Length | N/A |
| | Number of parallel runs | 1 |
| | Length | 2210 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 | 7 3/16 inches |
| | Other Diameter | N/A |
| | Segment Length | 19 1/2 inches |
| | Other Segment Length | N/A |
| | Number of parallel runs | 1 |
| | Length | 2210 feet per run |
| | Justification for New Transmission Line | Existing run is GLW 1500 Waveguide that is frequency specific for High Band UHF |

**Primary 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 | Owned |
| | Is this tower consider Complex? | Candelabra |
| | Is this tower currently shared with any other stations? | Yes |
| | One or more FM, AM or TV radio broadcaster(s) | Yes |
| | Others Types of Users | No |
| | Is tower documented for structural analysis? | Yes |
| | Is tower compliant with Rev G? | Yes |
| **Existing Tower Structure Registration** | Do you have a tower registration number? | Yes |
| | ASR Number | 1027322 |
| **Coordinates (NAD83 ( North American Datum of 1983))** | Latitude (NAD83) | 35° 40' 29.0" N- |
| | Longitude (NAD83) | 078° 31' 39.0" W- |
| | Overall Structure Height | 1988.82 feet |
| | Support Structure Height | 1988.82 feet |
| | Ground Elevation Above Mean Sea Level (AMSL) | 359.90 feet |

| | |
|---|---|
| Structure Type | TOWER - Free Standing or Guyed Structure |
| Tower Owner | CBC REAL ESTATE COMPANY, INC. |
| Date Constructed | 03/23/2000 |

**FM, AM or TV radio broadcasters. Facility ID's, Call Signs and Services of other broadcast stations with whom the tower is shared**

| Facility ID | Call Sign | Service |
|---|---|---|
| 73936 | WTKK | FM |
| 73205 | WLFL | DTV |
| 64611 | WRAZ | DTV |
| 50782 | WNCN | DTV |

**Primary Tower**

**Tower Modification Costs**

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

| Name | Description |
|---|---|
| **Relocate ENG Dish** | Relocate 2 ENG receive dishes to create room for Interim / Aux antennas - Split with WRAZ |

## 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 | Yes |
| | Prepare engineering section of Form FCC Construction Permit Application | Yes |
| | For Auxiliary Facility | Yes |
| | For Main Facility | Yes |
| | Prepare engineering section of Form FCC License to Cover Application | Yes |
| | For Auxiliary Facility | Yes |
| | For Main Facility | 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 | Yes |
| | For Main Facility | Yes |
| | Prepare and file Form FCC License to Cover Application | Yes |
| | For Auxiliary Facility | Yes |
| | For Main Facility | Yes |

| | | |
|---|---|---|
| | Prepare request for Special Temporary Authority | No |
| | Quantity | N/A |
| | NEPA Section 106 environmental review | No |
| | Environmental Assessment | No |
| | ASR Modification | No |
| | FAA Consultation (including preparation of FAA Form 7460) | No |
| | Negotiation of Lease and other Matter for Shared Locations | No |
| | Prepare or Review FCC Form 399 for Reimbursement | Yes |
| | Address transition timing and coordination issues w/ other stations and wireless providers | Yes |
| **RF Field Engineering Services** | Comprehensive coverage verification via field study | Yes |
| | RF exposure measurements | Yes |
| | Additional Field Engineering Service | Yes |
| | Number of Days | 3 |
| | Justification | Independent verification and inspection of installed systems |

## Outside Professional Services Costs

### Other Professional Services Expenses Not Listed

Services not provided.

## 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 | Yes |
| | BLM or NFS Coordination | No |
| | FCC Construction Permit Minor Change | No |
| | FCC License to Cover Application | Yes |
| | FCC Special Temporary Authority Application | No |
| **Other Miscellaneous Expenses** | Does this relocation require paying Disposal Costs (for equipment and other waste, net of any salvage value)? | Yes |
| | Does this relocation require Equipment Delivery or Handling Charges not otherwise included in individual item costs? | No |
| | 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 |
| --- | --- |
| **Facilty remote control and monitoing modifications** | Modifications to existing system to add new telemetry and control. |

## 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 ULXTED-120** | **$2,986,782.00** | **$2,853,785.00** | | **$1,053,306.70** | |
| 4" Rigid Conduit and Wiring (Cost per foot) | $40,400.00 | $1.00 | Included in overall building estimate | N/A | N/A |
| 15 Ton system | $55,800.00 | $1.00 | Included in overall building estimate | N/A | N/A |
| Other -- Building Addition Size: 1600.0 | ***$668,782.00*** | $668,782.00 | Our facility is full with no room to install new equipment before old equipment is removed. This facility will be shared with WRAZ. This is 1/2 the cost, other half will be represented on WRAZ. Please see "building cost narrative" recently uploaded. | N/A | N/A |
| RF System | ***$165,000.00*** | $165,000.00 | N/A | N/A | N/A |

| | | | | | |
|---|---|---|---|---|---|
| System installation | ***$85,000.00*** | $85,000.00 | This is the installation costs from the Manufacturer to install and commission system | N/A | N/A |
| Spare Modules and Power supplies | ***$35,000.00*** | $35,000.00 | N/A | N/A | N/A |
| Transformer 3 phase /480v - 300 KVA | $36,800.00 | $1.00 | Included in overall building estimate | N/A | N/A |
| UHF - Liquid Cooled Solid State Transmitter 76.0 kW | ***$1,900,000.00*** | $1,900,000.00 | N/A | $1,053,306.70 | N/A |
| **Sub-total** | $2,986,782.00 | $2,853,785.00 | N/A | $1,053,306.70 | N/A |
| **Total for all systems** | $6,728,049.00 | $5,341,660.00 | N/A | $1,053,306.70 | N/A |

## Components

| Actual Information Description | File Name |
|---|---|
| 4" Rigid Conduit and Wiring (Cost per foot) | Information not provided. |
| 15 Ton system | Information not provided. |
| Other -- Building Addition Size: 1600.0 | Information not provided. |
| RF System | Information not provided. |
| System installation | Information not provided. |
| Spare Modules and Power supplies | Information not provided. |

| | | |
|---|---|---|
| Transformer 3 phase/480v - 300 KVA | Information not provided. | |
| UHF - Liquid Cooled Solid State Transmitter 76.0 kW | **Component Description:**<br>**Amount:** | 50% down for transmitter<br>$1,053,306.70 |

## 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 ATW25H4-ETO-17M** | **$310,130.00** | **$294,600.00** | | **$0.00** | |
| Elbow complex, single channel, at antenna input, per 7 3/16. feedline (if needed) | $13,900.00 | $13,200.00 | N/A | $0.00 | N/A |
| Sweep test of existing antenna | $6,730.00 | $6,400.00 | N/A | $0.00 | N/A |
| UHF - High Power Top Mount (200-1000 kW), One station antenna , elliptically or circularly polarized | $289,500.00 | $275,000.00 | N/A | $0.00 | N/A |
| **Auxiliary Antenna ATW25H3-ESO-15/17H** | **$275,790.00** | **$258,200.00** | | **$0.00** | |

| | | | | | |
|---|---|---|---|---|---|
| Pattern scatter analysis for side mount high/med power antennas (if not included in antenna base cost) | $5,260.00 | $2,500.00 | 1/2 split with WRAZ | N/A | N/A |
| Side mount brackets for high power antennas (if not included in antenna base cost) | $23,150.00 | $11,000.00 | 1/2 split with WRAZ | N/A | N/A |
| Elbow complex, broadband, at antenna input, per 8 3/16. feedline (if needed) | $18,950.00 | $9,000.00 | This antenna is a "combined antenna" the other 1 /2 of the cost is shared with WRAZ | N/A | N/A |
| New combiner, cost per channel (without antenna) | $84,200.00 | $95,000.00 | Interim (AUX) antenna will support full power from each station (WRAL and WRAZ) requiring larger sized combiner. | N/A | N/A |

| | | | | | |
|---|---|---|---|---|---|
| UHF - High Power, Side Mount, basic slot antenna, 805 kW input, elliptically or circularly polarized | ***$137,500.00*** | $137,500.00 | This antenna is a "combined antenna" the other 1/2 of the cost is shared with WRAZ | N/A | N/A |
| Sweep test of existing antenna | $6,730.00 | $3,200.00 | 1/2 split with WRAZ | N/A | N/A |
| **Sub-total** | $585,920.00 | $552,800.00 | N/A | $0.00 | N/A |
| **Total for all systems** | $6,728,049.00 | $5,341,660.00 | N/A | $1,053,306.70 | N/A |

### Components

Information not provided.

## 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** | **$640,900.00** | **$609,000.00** | | **$0.00** | |
| Rigid Transmission Line - copper, 7 3 /16" | $640,900.00 | $609,000.00 | N/A | $0.00 | N/A |
| **Auxiliary Transmission Line** | **$803,187.00** | **$381,000.00** | | **$0.00** | |
| Rigid Transmission Line - copper, 8 3 /16" broadband | $803,187.00 | $381,000.00 | This represents 1/2. WRAZ will cover the other 1 /2 | N/A | N/A |
| **Sub-total** | $1,444,087.00 | $990,000.00 | N/A | $0.00 | N/A |
| **Total for all systems** | $6,728,049.00 | $5,341,660.00 | N/A | $1,053,306.70 | N/A |

### Components

Information not provided.

## 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** | **$1,518,000.00** | **$844,000.00** | | **$0.00** | |
| Relocate ENG Dish | ***$25,000.00*** | $25,000.00 | This is 1/2 of the cost - other half will be covered by WRAZ | N/A | N/A |
| Complex Tower (includes, for example, those with candelabras and/or stacked antennas) | $421,000.00 | $300,000.00 | N/A | N/A | N/A |
| Serious tower reinforcement /modifications | $1,052,000.00 | $500,000.00 | Until designs are complete from all 5 stations on this tower we are splitting a $1M placeholder with WRAZ | N/A | N/A |
| Structural engineering tower load study for a documented tower with candelabra | $20,000.00 | $19,000.00 | N/A | N/A | N/A |

| | | | | | |
|---|---|---|---|---|---|
| **Sub-total** | $1,518,000.00 | $844,000.00 | N/A | $0.00 | N/A |
| **Total for all systems** | $6,728,049.00 | $5,341,660.00 | N/A | $1,053,306.70 | N/A |

## Components

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 Justificatio |
|---|---|---|---|---|---|
| **Outside Professional Services** | **$144,125.00** | **$59,750.00** | | **$0.00** | |
| Additional Field Engineering Service, 3 Days | ***$6,000.00*** | $6,000.00 | Estimating $2000 per day for an independent verification of the new transmission systems | N/A | N/A |
| RF Exposure Measurements | $21,050.00 | $2,500.00 | N/A | N/A | N/A |
| Attorney Fees - Prepare and File FCC Form 2100 (main), License to Cover Application | $2,365.00 | $2,250.00 | N/A | N/A | N/A |
| Attorney Fees - Aux Antenna, prepare and File Form 2100 Construction Permit or License Application | $4,210.00 | $4,000.00 | N/A | 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 |

| | | | | | |
|---|---|---|---|---|---|
| RF Consulting Engineer Fees-Aux Antenna: Prepare engineering section of FCC Form 2100, License to Cover Application | $1,580.00 | $1,500.00 | N/A | N/A | N/A |
| Prepare engineering section of FCC Form 2100 (main), License to Cover Application | $1,580.00 | $1,500.00 | N/A | N/A | N/A |
| RF Consulting Engineer Fees-Aux Antenna: Prepare engineering section of FCC Form 2100, Construction Permit Application | $2,105.00 | $2,000.00 | N/A | N/A | N/A |
| 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 | N/A | N/A |
| Comprehensive coverage verification via field study, if needed | $84,200.00 | $20,000.00 | N/A | N/A | N/A |
| **Sub-total** | $144,125.00 | $59,750.00 | N/A | $0.00 | N/A |
| **Total for all systems** | $6,728,049.00 | $5,341,660.00 | N/A | $1,053,306.70 | 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** | **$49,135.00** | **$41,325.00** | | **$0.00** | |
| Facilty remote control and monitoing modifications | ***$15,000.00*** | $15,000.00 | Facility remote control and monitoring modifications | N/A | N/A |
| MVPD Notification of Channel Change | ***$1,250.00*** | $1,250.00 | N/A | N/A | N/A |
| Develop and air announcement of upcoming channel change | ***$10,000.00*** | $10,000.00 | N/A | N/A | N/A |
| Disposal Costs (for equipment and other waste, net of any salvage value) | ***$10,000.00*** | $10,000.00 | N/A | N/A | N/A |
| Non-zoning permits | ***$1,000.00*** | $1,000.00 | N/A | N/A | N/A |
| FCC Filing Fees - Form 2100 license to cover application | $335.00 | $325.00 | N/A | N/A | N/A |
| DTV Medical Facility Notification | $11,550.00 | $3,750.00 | N/A | N/A | N/A |
| **Sub-total** | $49,135.00 | $41,325.00 | N/A | $0.00 | N/A |

| | | | | | |
|---|---|---|---|---|---|
| **Total for all systems** | $6,728,049.00 | $5,341,660.00 | N/A | $1,053,306.70 | N/A |

## Components

Information not provided.

## Cost Information

### Grand Total

| | Predetermined Cost Estimate | Estimated Cost | Actual Cost |
|---|---|---|---|
| **Total for all systems** | $6,728,049.00 | $5,341,660.00 | $1,053,306.70 |

## 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.<br>2. The above-named entity acknowledges that all certifications and attached documentation are considered material representations.<br>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. | **Peter Andrew Sockett**<br>*Dir of engineering and operations*<br><br>04/03/2018 |

## 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.<br>2. The above-named entity certifies that the statements in this form and attached documentation are true, complete, and correct.<br>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.<br>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. | **Pete Andrew Sockett**<br>*Dir of engineering and operations*<br><br>04/03/2018 |

## Attachments