

Federal Communications Commission

### (REFERENCE COPY - Not for submission)

# FCC Form 399: Reimbursement Request

| Facility (<br>ID:<br>File | 1      | Service: DTS | Call<br>Sign: | WUNF-TV | Channel: 20 (UHF) |
|---------------------------|--------|--------------|---------------|---------|-------------------|
| Number:                   | 000003 | 3807         |               |         |                   |
| FRN: <b>0001</b>          | 910066 | Date         | 09/26         |         |                   |
|                           |        | Submitted:   | /2019         |         |                   |

### Applicant Name, Type, and Contact Information

### Applicant Information

| Applicant   | Address                                    | Phone               | Email                    | Applicant<br>Type    |
|---|--|---------------------|--------------------------|----------------------|
| University of North<br>Carolina<br>Doing Business As: | PO Box 14900<br>Research<br>Triangle Park, | +1<br>(919)<br>549- | fcc_notice@unctv.<br>org | Government<br>Entity |
| University of North<br>Carolina                       | NC 27709<br>United States                  | 7000                |                          |                      |

#### Reimbursement Contact Name and Information Reimbursement Contact Information

| Applicant      | Address | Phone | Email |
|----------------|---------|-------|-------|
| [Confidential] |         |       |       |

# Preparer Contact Name and Information

| Contact<br>Information | Applicant                    | Address           | Phone    | Email         |
|------------------------|------------------------------|-------------------|----------|---------------|
|                        | Donald Smith                 | Donald Smith      | +1 (919) | dsmith@unctv. |
|                        | Director of New Technologies | 10 T.W. Alexander | 549-7025 | org           |
|                        | Compliance & Planning        | Drive             |          |               |
|                        | University of North Carolina | Research Triangle |          |               |
|                        | Center for Public Television | Park, NC 27709    |          |               |
|                        |                              | United States     |          |               |

| Broadcaster                              | Question   | Response  |
|--|--|---|
| Information<br>and<br>Transition<br>Plan | Will the station be sharing equipment with<br>another broadcast television station or<br>stations (e.g., a shared antenna, co-location<br>on a tower, use of the same transmitter<br>room, multiple transmitters feeding a<br>combiner, etc.)? If yes, enter the facility ID's<br>of the other stations and click 'prefill' to<br>download those stations' licensing<br>information. | No  |
|  | Briefly describe transition plan   | WUNF-TV is a DTS station with 2 sites. The transition plan for WUNF-TV is to construct a new facility at a different site for site #1 due to issues outlined in the unable to construct waiver request. Site #2 will be constructed at the existing site. |

| Transmitters | Section                         | Question                                  | Response |
|--------------|---------------------------------|---|----------|
|              | Transmitter Related<br>Expenses | Do you have transmitter related expenses? | Yes      |

| Auxiliary   | Add Transmitter Information         |  |                       |  |  |  |
|-------------|-------------------------------------|--|-----------------------|--|--|--|
| Transmitter | Section                             | Question   | Response              |  |  |  |
|             | Existing Transmitter<br>Description | Type of change   | Purchase<br>New       |  |  |  |
|             |                                     | Use  | Auxiliary<br>(Backup) |  |  |  |
|             |                                     | Description of Use   | Auxiliary -<br>Site 1 |  |  |  |
|             |                                     | Ownership  | Owned                 |  |  |  |
|             |                                     | Owner  | N/A                   |  |  |  |
|             |                                     | Site   | N/A                   |  |  |  |
|             |                                     | Is this transmitter currently shared with another station? | No                    |  |  |  |
|             |                                     | Is this transmitter currently in operating condition?      | Yes                   |  |  |  |
|             | Existing Transmitter                | Manufacturer   |                       |  |  |  |
|             | Manufacturer and Type               | Model  | LU2500ATD             |  |  |  |
|             |                                     | Year   | 2008                  |  |  |  |
|             |                                     | Туре   | Solid State           |  |  |  |
|             |                                     | Solid State Cooling  | Air Cooled            |  |  |  |
|             |                                     | Solid State Power Capacity                                 | 2.5 kW                |  |  |  |

Add Transmitter Information

| Auxiliary   | New Transmitter Costs |   |  |  |  |  |
|-------------|-----------------------|---|--|--|--|--|
| Transmitter | Section               | Question                                  | Response   |  |  |  |
|             | New Transmitter       | Use                                       | Auxiliary<br>(Backup)  |  |  |  |
|             |                       | Change Type                               | Purchase<br>New  |  |  |  |
|             |                       | Is this a request for upgraded equipment? | No   |  |  |  |
|             |                       | Manufacturer                              |  |  |  |  |
|             |                       | Model                                     | ULXTE-30   |  |  |  |
|             |                       | Transmitter Type                          | Solid State  |  |  |  |
|             |                       | Solid State Cooling                       | Liquid<br>Cooled   |  |  |  |
|             |                       | Solid State Power capacity                | 16 kW  |  |  |  |
|             |                       | Justification for New Transmitter         | A different<br>site is<br>having to<br>be used<br>due to the<br>inability to<br>construct<br>the new<br>channel<br>facility at<br>the existing<br>channel 25<br>site.#1. |  |  |  |

| Auxiliary   | Other Transmitter Costs |                                       |          |  |  |  |
|-------------|-------------------------|---------------------------------------|----------|--|--|--|
| Transmitter | Section                 | Question                              | Response |  |  |  |
|             | Electrical Service      | Service Entrance (3 phases 800A 208V) | No       |  |  |  |
|             |                         | Switchgear (industrial 800 amp)       | No       |  |  |  |
|             |                         | Transformer (480V)                    | No       |  |  |  |
|             |                         | Power                                 | N/A      |  |  |  |
|             |                         | Rigid Conduit and Wiring              | No       |  |  |  |

|   | Size   | N/A |
|---|--|-----|
|   | Length   | N/A |
|   | Other Electrical Service   | No  |
|   | Description  | N/A |
| HVAC Service  | Does the replacement transmitter require HVAC Service?                                       | No  |
|   | Туре   | N/A |
|   | Size   | N/A |
|   | Other Size   | N/A |
| Transmitter Building<br>Addition/Modification or<br>Leasehold Improvement | Does the Transmitter Building require an addition, modification, other leashold improvement? | No  |
|   | Size   | N/A |
| Channel 14 Costs  | Is an RF Consulting Engineer needed?   | N/A |
|   | Is a channel 14 Mask Filer needed?   | N/A |
|   | Is additional field engineering time needed?   | N/A |
|   | Number of Days   | N/A |

# Auxiliary Other Transmitter Cost Not Listed

Transmitter Information not provided.

| Primary     | Existing Transmitter Information    |  |                          |  |  |  |
|-------------|-------------------------------------|--|--------------------------|--|--|--|
| Transmitter | Section                             | Question   | Response                 |  |  |  |
|             | Existing Transmitter<br>Description | Type of change   | Purchase<br>New          |  |  |  |
|             |                                     | Use  | Primary<br>(Main)        |  |  |  |
|             |                                     | Description of Use   | N/A                      |  |  |  |
|             |                                     | Ownership  | Owned                    |  |  |  |
|             |                                     | Owner  | N/A                      |  |  |  |
|             |                                     | Site   | 1                        |  |  |  |
|             |                                     | Is this transmitter currently shared with another station? | No                       |  |  |  |
|             |                                     | Is this transmitter currently in operating condition?      | Yes                      |  |  |  |
|             | Existing Transmitter                | Manufacturer   |                          |  |  |  |
|             | Manufacturer and Type               | Model  | DCX-2                    |  |  |  |
|             |                                     | Year   | 1996                     |  |  |  |
|             |                                     | Туре   | Inductive<br>Output Tube |  |  |  |
|             |                                     | IOT Power Type   | Тwo                      |  |  |  |
|             |                                     | Power Capacity   | 40 kW                    |  |  |  |

### **Existing Transmitter Information**

| Primary     | New Transmitter Costs |   |  |  |  |  |
|-------------|-----------------------|---|--|--|--|--|
| Transmitter | Section               | Question                                  | Response   |  |  |  |
|             | New Transmitter       | Use                                       | Primary<br>(Main)  |  |  |  |
|             |                       | Change Type                               | Purchase<br>New  |  |  |  |
|             |                       | Is this a request for upgraded equipment? | Yes  |  |  |  |
|             |                       | Manufacturer                              |  |  |  |  |
|             |                       | Model                                     | ULXTE-100  |  |  |  |
|             |                       | Transmitter Type                          | Solid State  |  |  |  |
|             |                       | Solid State Cooling                       | Liquid<br>Cooled   |  |  |  |
|             |                       | Solid State Power capacity                | 53.5 kW  |  |  |  |
|             |                       | Justification for New Transmitter         | A different<br>site is<br>having to<br>be used<br>due to the<br>inability to<br>construct<br>the new<br>channel<br>facility at<br>the existing<br>channel 25<br>site.#1. |  |  |  |

| Primary     | Other Transmitter Costs |                                       |          |  |
|-------------|-------------------------|---------------------------------------|----------|--|
| Transmitter | Section                 | Question                              | Response |  |
|             | Electrical Service      | Service Entrance (3 phases 800A 208V) | No       |  |
|             |                         | Switchgear (industrial 800 amp)       | No       |  |
|             |                         | Transformer (480V)                    | No       |  |
|             |                         | Power                                 | N/A      |  |
|             |                         | Rigid Conduit and Wiring              | No       |  |
|             |                         |                                       |          |  |

|   | Size   | N/A |
|---|--|-----|
|   | Length   | N/A |
|   | Other Electrical Service   | No  |
|   | Description  | N/A |
| HVAC Service  | Does the replacement transmitter require HVAC Service?                                       | No  |
|   | Туре   | N/A |
|   | Size   | N/A |
|   | Other Size   | N/A |
| Transmitter Building<br>Addition/Modification or<br>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 Other Transmitter Cost Not Listed

**Transmitter** Information not provided.

| Primary     | Existing Transmitter Information    |  |                   |  |
|-------------|-------------------------------------|--|-------------------|--|
| Transmitter | Section                             | Question   | Response          |  |
|             | Existing Transmitter<br>Description | Type of change   | Purchase<br>New   |  |
|             |                                     | Use  | Primary<br>(Main) |  |
|             |                                     | Description of Use   | N/A               |  |
|             |                                     | Ownership  | Owned             |  |
|             |                                     | Owner  | N/A               |  |
|             |                                     | Site   | 2                 |  |
|             |                                     | Is this transmitter currently shared with another station? | No                |  |
|             |                                     | Is this transmitter currently in operating condition?      | Yes               |  |
|             | Existing Transmitter                | Manufacturer   |                   |  |
|             | Manufacturer and Type               | Model  | LU250             |  |
|             |                                     | Year   | 2003              |  |
|             |                                     | Туре   | Solid State       |  |
|             |                                     | Solid State Cooling  | Air Cooled        |  |
|             |                                     | Solid State Power Capacity                                 | 0.25 kW           |  |

**Existing Transmitter Information** 

| Primary     | New Transmitter Costs |   |  |  |  |
|-------------|-----------------------|---|--|--|--|
| Transmitter | Section               | Question                                  | Response   |  |  |
|             | New Transmitter       | Use                                       | Primary (Main)   |  |  |
|             |                       | Change Type                               | Purchase New   |  |  |
|             |                       | Is this a request for upgraded equipment? | No   |  |  |
|             |                       | Manufacturer                              |  |  |  |
|             |                       | Model                                     | TXUD-250   |  |  |
|             |                       | Transmitter Type                          | Solid State  |  |  |
|             |                       | Solid State Cooling                       | Air Cooled   |  |  |
|             |                       | Solid State Power capacity                | 0.25 kW  |  |  |
|             |                       | Justification for New Transmitter         | The<br>transmitter<br>support<br>company has<br>indicated that<br>they may be<br>able to<br>provide re-<br>channelization<br>proposals for<br>some models.<br>At this time<br>they have<br>failed to<br>provide a<br>proposal. See<br>attachment for<br>further details. |  |  |

| Primary<br>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      |  |

### Other Transmitter Costs

|   | Rigid Conduit and Wiring   | No  |
|---|--|-----|
|   | Size   | N/A |
|   | Length   | N/A |
|   | Other Electrical Service   | No  |
|   | Description  | N/A |
| HVAC Service  | Does the replacement transmitter require HVAC Service?                                       | No  |
|   | Туре   | N/A |
|   | Size   | N/A |
|   | Other Size   | N/A |
| Transmitter Building<br>Addition/Modification or<br>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 |

Other Transmitter Cost Not Listed PrimaryOther Transmitter CoTransmitterInformation not provided.

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

| Auxiliary |   |   |                       |  |  |
|-----------|---|---|-----------------------|--|--|
| Antenna   | Section                                   | Question  | Response              |  |  |
|           | Existing Antenna<br>Description           | Type of change  | Purchase<br>New       |  |  |
|           |   | Antenna Use   | Auxiliary<br>(Backup) |  |  |
|           |   | Description of Use  | Auxiliary -<br>Site 1 |  |  |
|           |   | 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<br>Manufacturer and Type | Class   | Full Power            |  |  |
|           |   | Mounting  | Side Mount            |  |  |
|           |   | Antenna position in stack                                       | Not in Stack          |  |  |
|           |   | Polarization  | Horizontal            |  |  |
|           |   | Туре  | Slotted<br>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)                                 | 113.5 kW              |  |  |

# Add Antenna Information

| Manufacturer |                 |
|--------------|-----------------|
| Model        | TFU-<br>16DSB-M |
| Year         | 2003            |

| Auxiliary | New Antenna Costs                     |  |                       |  |  |
|-----------|---------------------------------------|--|-----------------------|--|--|
| Antenna   | Section                               | Question   | Response              |  |  |
|           | New Antenna Description               | Use  | Auxiliary<br>(Backup) |  |  |
|           |                                       | Description of Use   | Auxiliary             |  |  |
|           |                                       | Change Type  | Purchase<br>New       |  |  |
|           |                                       | Is this a request for upgraded equipment?                            | Yes                   |  |  |
|           |                                       | 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<br>Manufacturer and Types | Class  | Full Power            |  |  |
|           |                                       | Mounting   | Side Mount            |  |  |
|           |                                       | Antenna position in stack  | Not in Stack          |  |  |
|           |                                       | Polarization   | Elliptical            |  |  |
|           |                                       | Туре   | Slotted<br>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)                                      | 1000.0 kW             |  |  |
|           |                                       | Manufacturer   |                       |  |  |
|           |                                       |  |                       |  |  |

| Model                         | SAA20-<br>C170-G400<br>ES6R-20   |
|-------------------------------|--|
| Year                          | 2019   |
| Justification for New Antenna | A different<br>site is<br>having to<br>be used<br>due to the<br>inability to<br>construct<br>the new<br>channel<br>facility at<br>the existing<br>channel 25<br>site.#1. |

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

**Other Antenna Costs** 

| 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 |

### Other Antenna Cost Not Listed

Auxiliary Antenna Information not provided.

| Primary | Existing Antenna Information    |  |                     |  |
|---------|---------------------------------|--|---------------------|--|
| Antenna | Section                         | Question   | Response            |  |
|         | Existing Antenna<br>Description | Type of change   | Purchase<br>New     |  |
|         |                                 | Antenna Use  | Primary<br>(Main)   |  |
|         |                                 | Description of Use   | N/A                 |  |
|         |                                 | Ownership  | Owned               |  |
|         |                                 | Owner  | N/A                 |  |
|         |                                 | Site   | 2                   |  |
|         |                                 | 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                | Class  | Full Power          |  |
|         | Manufacturer and Type           | Mounting   | Side Mount          |  |
|         |                                 | Antenna position in stack  | Not in Stack        |  |
|         |                                 | Polarization   | Horizontal          |  |
|         |                                 | Туре   | Other               |  |
|         |                                 | 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   | Narrowband<br>Panel |  |
|         |                                 | ERP: (Effective Radiated Power)                                  | 1.5 kW              |  |
|         |                                 |  | 1                   |  |

| Manufacturer |           |
|--------------|-----------|
| Model        | 4DR-8-2HW |
| Year         | 2003      |

| Primary | New Antenna Costs                     |  |                    |  |
|---------|---------------------------------------|--|--------------------|--|
| Antenna | Section                               | Question   | Response           |  |
|         | New Antenna Description               | Use  | Primary<br>(Main)  |  |
|         |                                       | Description of Use   | N/A                |  |
|         |                                       | Change Type  | Purchase<br>New    |  |
|         |                                       | Is this a request for upgraded equipment?                            | Yes                |  |
|         |                                       | 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<br>Manufacturer and Types | Class  | Full Power         |  |
|         |                                       | Mounting   | Side Mount         |  |
|         |                                       | Antenna position in stack  | Not in Stack       |  |
|         |                                       | Polarization   | Elliptical         |  |
|         |                                       | Туре   | Broadband<br>Panel |  |
|         |                                       | Number of Stations Supported   | 1                  |  |
|         |                                       | Number of Panels/Bays  | 4                  |  |
|         |                                       | Lower Limit  | 470.00 MHz         |  |
|         |                                       | Upper Limit  | 862.00 MHz         |  |
|         |                                       | Design power capacity in use   | 25.0 %             |  |
|         |                                       | Other Antenna Type   | N/A                |  |
|         |                                       | ERP: (Effective Radiated Power)                                      | 1.35 kW            |  |
|         |                                       | Manufacturer   |                    |  |
|         |                                       |  | 1                  |  |

| Model                         | 2x2 750<br>10325  |
|-------------------------------|---|
| Year                          | 2019  |
| Justification for New Antenna | The current<br>antenna is<br>designed to<br>operate on<br>channel 25<br>plus or<br>minus one<br>or two<br>channels.<br>The<br>antenna wil<br>not operate<br>properly on<br>channel 20 |

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

| 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<br/>AntennaOther Antenna Cost Not ListedInformation not provided.

| Primary | Existing Antenna Information    |  |                    |  |
|---------|---------------------------------|--|--------------------|--|
| Antenna | Section                         | Question   | Response           |  |
|         | Existing Antenna<br>Description | Type of change   | Purchase<br>New    |  |
|         |                                 | Antenna Use  | Primary<br>(Main)  |  |
|         |                                 | Description of Use   | N/A                |  |
|         |                                 | Ownership  | Owned              |  |
|         |                                 | Owner  | N/A                |  |
|         |                                 | Site   | 1                  |  |
|         |                                 | 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                | Class  | Full Power         |  |
|         | Manufacturer and Type           | Mounting   | Side Mount         |  |
|         |                                 | Antenna position in stack  | Not in Stack       |  |
|         |                                 | Polarization   | Elliptical         |  |
|         |                                 | Туре   | Slotted<br>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)                                  | 125.0 kW           |  |

| Manufacturer |                             |
|--------------|-----------------------------|
| Model        | ATW12HS4-<br>ESC170-<br>25S |
| Year         | 2010                        |

| Primary | New Antenna Costs       |  |                    |  |
|---------|-------------------------|--|--------------------|--|
| Antenna | Section                 | Question   | Response           |  |
|         | New Antenna Description | Use  | Primary<br>(Main)  |  |
|         |                         | Description of Use   | N/A                |  |
|         |                         | Change Type  | Purchase<br>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             | Class  | Full Power         |  |
|         | Manufacturer and Types  | Mounting   | Top Mount          |  |
|         |                         | Antenna position in stack  | Not in Stack       |  |
|         |                         | Polarization   | Elliptical         |  |
|         |                         | Туре   | Slotted<br>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)                                      | 1000.0 kW          |  |
|         |                         | Manufacturer   |                    |  |
|         |                         |  | 1                  |  |

| Model                         | SAA20-<br>C170-E400<br>ET6R-20   |
|-------------------------------|--|
| Year                          | 2019   |
| Justification for New Antenna | A different<br>site is<br>having to<br>be used<br>due to the<br>inability to<br>construct<br>the new<br>channel<br>facility at<br>the existing<br>channel 25<br>site.#1. |

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

**Other Antenna Costs** 

| 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<br>pattern scatter analysis for a side mount<br>high or medium power antenna? | Yes |
| Sweep Test               | Do you require the sweep testing of transmission line and antenna?  | Yes |

# Primary Other Antenna Cost Not Listed

Antenna Information not provided.

| Transmissior | n Seffien                             | Question  | Response |
|--------------|---------------------------------------|---|----------|
|              | Transmission Line<br>Related Expenses | Do you have transmission line related expenses? | Yes      |

| Auxiliary<br>Transmissio | n Line<br>Settion                         | Question   | Response                                    |
|--------------------------|---|--|---|
|                          | Existing Transmission<br>Line Description | Type of change   | Purchase<br>New                             |
|                          |   | Use  | Auxiliary<br>(Backup)                       |
|                          |   | Description of Use   | Site #1<br>Emergency<br>Auxiliary<br>Part 1 |
|                          |   | Ownership  | Owned                                       |
|                          |   | Owner  | N/A   |
|                          |   | Site   | N/A   |
|                          |   | Is this transmission currently shared with any other stations? | No  |
|                          |   | Is Transmission Line in operating condition?                   | Yes   |
|                          | Existing Transmission                     | Manufacturer   |   |
|                          | Line Manufacturer and<br>Type             | Туре   | Rigid                                       |
|                          |   | Diameter   | 6 1/8<br>inches                             |
|                          |   | Other Diameter   | N/A   |
|                          |   | Segment Length   | 19 1/2<br>inches                            |
|                          |   | Other Segment Length   | N/A   |
|                          |   | Number of parallel runs  | 1   |
|                          |   | Length   | 210 feet<br>per run                         |

| Auxiliary   | New Transmission Line          |   |  |
|-------------|--------------------------------|---|--|
| Transmissio | n Line<br>Section              | Question                                  | Response   |
|             | New Transmission Line<br>Costs | Use                                       | Auxiliary<br>(Backup)  |
|             |                                | Description of Use                        | Auxiliary  |
|             |                                | Change Type                               | Purchase<br>New  |
|             |                                | Is this a request for upgraded equipment? | No   |
|             |                                | Туре                                      | Rigid  |
|             |                                | Diameter                                  | 7 3/16<br>inches   |
|             |                                | Other Diameter                            | N/A  |
|             |                                | Segment Length                            | 19 1/2<br>inches   |
|             |                                | Other Segment Length                      | N/A  |
|             |                                | Number of parallel runs                   | 1  |
|             |                                | Length                                    | 650 feet<br>per run  |
|             |                                | Justification for New Transmission Line   | A different<br>site is<br>having to<br>be used<br>due to the<br>inability to<br>construct<br>the new<br>channel<br>facility at<br>the existing<br>channel 25<br>site.#1. |

#### Other Transmission Line Expenses Not Listed Auxiliary Transmission to provided.

| Primary     | Add Transmission Line                                  |  |                     |  |
|-------------|--|--|---------------------|--|
| Transmissio | n Line<br>Section                                      | Question   | Response            |  |
|             | Existing Transmission<br>Line Description              | Type of change   | Purchase<br>New     |  |
|             |  | Use  | Primary<br>(Main)   |  |
|             |  | Description of Use   | N/A                 |  |
|             |  | Ownership  | Owned               |  |
|             |  | Owner  | N/A                 |  |
|             |  | Site   | 1                   |  |
|             |  | Is this transmission currently shared with any other stations? | No                  |  |
|             |  | Is Transmission Line in operating condition?                   | Yes                 |  |
|             | Existing Transmission<br>Line Manufacturer and<br>Type | Manufacturer   |                     |  |
|             |  | Туре   | Rigid               |  |
|             |  | Diameter   | 8 3/16<br>inches    |  |
|             |  | Other Diameter   | N/A                 |  |
|             |  | Segment Length   | 19 1/2<br>inches    |  |
|             |  | Other Segment Length   | N/A                 |  |
|             |  | Number of parallel runs  | 1                   |  |
|             |  | Length   | 400 feet<br>per run |  |

Add Transmission Line

| Primary     | New Transmission Line          |   |  |  |
|-------------|--------------------------------|---|--|--|
| Transmissio | Section                        | Question                                  | Response   |  |
|             | New Transmission Line<br>Costs | Use                                       | Primary<br>(Main)  |  |
|             |                                | Description of Use                        | N/A  |  |
|             |                                | Change Type                               | Purchase<br>New  |  |
|             |                                | Is this a request for upgraded equipment? | No   |  |
|             |                                | Туре                                      | Rigid  |  |
|             |                                | Diameter                                  | 7 3/16<br>inches   |  |
|             |                                | Other Diameter                            | N/A  |  |
|             |                                | Segment Length                            | 19 1/2<br>inches   |  |
|             |                                | Other Segment Length                      | N/A  |  |
|             |                                | Number of parallel runs                   | 1  |  |
|             |                                | Length                                    | 830 feet<br>per run  |  |
|             |                                | Justification for New Transmission Line   | A different<br>site is<br>having to<br>be used<br>due to the<br>inability to<br>construct<br>the new<br>channel<br>facility at<br>the existing<br>channel 25<br>site.#1. |  |

## Other Transmission Line Expenses Not Listed Transmission

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

| Primary | Add Tower   |   |                      |  |
|---------|---|---|----------------------|--|
| Tower   | Section   | Question  | Response             |  |
|         | Existing Tower<br>Description                                     | Type of change  | Move<br>Equipment    |  |
|         |   | Tower Use   | Primary<br>(Main)    |  |
|         |   | Description of Use                                      | N/A                  |  |
|         |   | Ownership   | Leased               |  |
|         |   | Is this tower consider Complex?                         | Candelabra           |  |
|         |   | Is this tower currently shared with any other stations? | Yes                  |  |
|         |   | One or more FM, AM or TV radio<br>broadcaster(s)        | Yes                  |  |
|         |   | Others Types of Users                                   | No                   |  |
|         |   | Is tower documented for structural analysis?            | Unknown              |  |
|         |   | Is tower compliant with Rev G?                          | Unknown              |  |
|         | Existing Tower Structure<br>Registration                          | Do you have a tower registration number?                | Yes                  |  |
|         |   | ASR Number  | 1023079              |  |
|         | Coordinates ( <u>NAD83</u> (<br>North American Datum of<br>1983)) | Latitude (NAD83)  | 35° 13'<br>20.0" N-  |  |
|         |   | Longitude (NAD83)                                       | 082° 32'<br>58.0" W- |  |
|         |   | Overall Structure Height                                | 721.78 feet          |  |
|         |   | Support Structure Height                                | 672.56 feet          |  |
|         |   | Ground Elevation Above Mean Sea Level<br>(AMSL)         | 3425.16 feet         |  |
|         |   |   |                      |  |

| Structure Type   | TOWER -<br>Free<br>Standing or<br>Guyed<br>Structure |
|------------------|--|
| Tower Owner      | Capstar<br>Radio<br>Operating<br>Company             |
| Date Constructed | 09/01/1997   |

### 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 |
|-------------|-----------|---------|
| 59818       | WMYI      | FM      |
| 70149       | WYCW      | DTV     |

# Primary Tower Rigging Costs

Tower

| Section                         | Question                          | Response   |
|---------------------------------|-----------------------------------|------------|
| Tower Rigging Costs             | Complex Tower                     | Candelabra |
| Helicopter Services<br>Required | Are helicopter services required? | No         |

# Primary Other Tower Expenses Not Listed

**Tower** Information not provided.

| Primary | Existing Tower  |   |  |  |
|---------|---|---|--|--|
| Tower   | Section   | Question  | Response   |  |
|         | Existing Tower<br>Description                             | Type of change  | Move<br>Equipment                                    |  |
|         |   | Tower Use   | Primary<br>(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<br>Registration                  | Do you have a tower registration number?                | No   |  |
|         |   | ASR Number  |  |  |
|         | Coordinates (NAD83 (<br>North American Datum of<br>1983)) | Latitude (NAD83)  | 35° 28'<br>25.0" N-                                  |  |
|         |   | Longitude (NAD83)                                       | 083° 19'<br>23.0" W-                                 |  |
|         |   | Overall Structure Height                                | 98.00 feet   |  |
|         |   | Support Structure Height                                | 98.00 feet   |  |
|         |   | Ground Elevation Above Mean Sea Level (AMSL)            | 2421.00 feet   |  |
|         |   | Structure Type  | TOWER -<br>Free<br>Standing or<br>Guyed<br>Structure |  |
|         |   |   |  |  |

| Tower Owner      | University<br>of North<br>Carolina |
|------------------|------------------------------------|
| Date Constructed | 06/07/2012                         |

# **Tower Rigging Costs** Primary Tower

| Section                         | Question                          | Response |
|---------------------------------|-----------------------------------|----------|
| Tower Rigging Costs             | Complex Tower                     | N/A      |
| Helicopter Services<br>Required | Are helicopter services required? | No       |

### Other Tower Expenses Not Listed

Primary Tower Information not provided.

| Outside<br>Professional | Section   | Question   | Response  |
|-------------------------|---|--|---|
|                         | Il Services Costs<br>Outside Project<br>Management Services | Do you require outside project management services?                          | Yes   |
|                         |   | Number of Hours  | 250   |
|                         |   | Explanation  | Because the<br>transmission<br>site is<br>leased by<br>the State of<br>North<br>Carolina, it<br>is subject to<br>various<br>state<br>construction<br>project<br>rules. One<br>rule is the<br>hiring of a<br>designer to<br>create<br>submittals<br>for project<br>review and<br>approval by<br>the state. |
|                         | Outside RF consulting<br>Engineering Services               | Perform engineering study for new channel assignment and antenna development | Yes   |
|                         |   | Prepare engineering section of Form FCC<br>Construction Permit Application   | Yes   |
|                         |   | For Auxiliary Facility   | Yes   |
|                         |   | For Main Facility  | Yes   |
|                         |   | Prepare engineering section of Form FCC<br>License to Cover Application      | Yes   |
|                         |   | For Auxiliary Facility   | Yes   |
|                         |   | For Main Facility  | Yes   |
|                         |   | Prepare request for Special Temporary<br>Authority                           | Yes   |
|                         |   | Quantity   | 2   |

|  | Do you have Distributed Transmission<br>System engineering services?                       | Yes |
|--|--|-----|
|  | Critical Facility  | 1   |
|  | Terrain-Shielded Facility  | 10  |
| Attorney and Other<br>Outside Consulting | Prepare and file Form FCC Construction<br>Permit Application                               | Yes |
| Services                                 | For Auxiliary Facility   | Yes |
|  | For Main Facility  | Yes |
|  | Prepare and file Form FCC License to Cover Application                                     | Yes |
|  | For Auxiliary Facility   | Yes |
|  | For Main Facility  | Yes |
|  | Prepare request for Special Temporary<br>Authority   | Yes |
|  | Quantity   | 1   |
|  | NEPA Section 106 environmental review  | No  |
|  | Environmental Assessment   | No  |
|  | ASR Modification   | Yes |
|  | FAA Consultation (including preparation of FAA Form 7460)                                  | Yes |
|  | Negotiation of Lease and other Matter for Shared Locations                                 | 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<br>Services         | Comprehensive coverage verification via field study  | No  |
|  | RF exposure measurements   | No  |
|  | Additional Field Engineering Service   | No  |
|  | Number of Days   | N/A |

| Outside      |                               |  |  |  |
|--------------|-------------------------------|--|--|--|
| Professional | Services Costs                | Description  |  |  |
|              | Additional Legal Expenses     | Legal expenses for non-catalog advice and review, including transition status reports and other miscellaneous legal needs.         |  |  |
|              | Microwave Frequency Study     | Microwave system frequency search for available frequencies.   |  |  |
|              | Microwave License Preparation | Licensing of microwave system  |  |  |
|              | Microwave PCN                 | Prior coordination notices for microwave<br>system construction to extend program<br>content distribution to the replacement site. |  |  |
|              | Tower Structural Analysis     | Required by State  |  |  |
|              | Tower Structural Analysis     | content distribution to the replacement site.  |  |  |

# Outside Other Professional Services Expenses Not Listed

| Other    | Section                         | Question   | Response |
|----------|---------------------------------|--|----------|
| Expenses | AM Pattern Disturbance          | Is an Impact Study needed?   | No       |
|          |                                 | Is Remediation needed?   | No       |
|          | Facility Expenses               | Name   | N/A      |
|          |                                 | Other Distributed Transmission System<br>Expenses Not listed   | No       |
|          |                                 | 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<br>Application   | No       |
|          | Other Miscellaneous<br>Expenses | Does this relocation require paying<br>Disposal Costs (for equipment and other<br>waste, net of any salvage value)?        | Yes      |
|          |                                 | Does this relocation require Equipment<br>Delivery or Handling Charges not otherwise<br>included in individual item costs? | No       |
|          |                                 | Does this relocation require Equipment Storage?  | No       |
|          |                                 | Does this relocation require the<br>Development and Airing of an<br>Announcement regarding an upcoming<br>channel change?  | Yes      |
|          |                                 | Does this relocation require MVPD<br>Notification of a Channel Change?   | Yes      |

## Other Expenses Not Listed

### Other Expenses

| Name                                | Description   |
|-------------------------------------|---|
| Microwave System                    | Microwave radios, antenna systems,<br>configuration, and other items necessary for<br>a complete system                                       |
| Network Interfaces                  | Router interfaces and network switches  |
| Program Transport Stream Processing | Equipment necessary to "rebrand" for the station the generic transport delivered to the site.   |
| Mechanical Construction             | Construction and modifications to the HVAC infrastructure of the existing building as required to support the new transmitters.               |
| Electrical Construction             | Construction and modifications to the<br>electrical infrastructure of the existing<br>building as required to support the new<br>transmitters |
| General Construction                | General construction and administrative costs necessary for the installation of transmitters in an existing building.                         |

## Transmitters

#### Cost Information

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

|   |                                |                   | Estimated   |                |                              |
|---|--------------------------------|-------------------|---|----------------|------------------------------|
| Description   | Predetermined<br>Cost Estimate | Estimated<br>Cost | Cost<br>Justification   | Actual Cost    | Actual Cost<br>Justification |
| Primary<br>Transmitter<br>ULXTE-100                                   | \$1,824,800.00                 | \$1,705,744.00    |   | \$1,424,866.36 |                              |
| UHF -<br>Liquid<br>Cooled<br>Solid State<br>Transmitter<br>52 - 61 kW | \$1,788,000.00                 | \$1,700,000.00    | N/A   | \$1,419,122.36 | N/A                          |
| Transformer<br>3 phase<br>/480v - 300<br>KVA                          | \$36,800.00                    | \$5,744.00        | ***System<br>Notice:<br>Estimate<br>adjusted and<br>locked<br>because line<br>has been<br>superseded.<br>***Remainder<br>of expenses<br>relocated to<br>Other<br>Expenses | \$5,744.00     | N/A                          |
| Primary<br>Transmitter<br>TXUD-250                                    | \$15,040.00                    | \$15,040.00       |   | \$15,040.00    |                              |
| UHF - Air<br>Cooled<br>Solid State<br>Transmitter<br>0.25 kW          | \$15,040.00                    | \$15,040.00       | Manufacturer<br>purchase<br>quote   | \$15,040.00    | N/A                          |
| Auxiliary<br>Transmitter<br>ULXTE-30                                  | \$709,550.00                   | \$651,958.60      |   | \$347,916.61   |                              |

| UHF -<br>Liquid<br>Cooled<br>Solid State<br>Transmitter<br>14.2 - 20 kW | \$684,000.00   | \$650,000.00   | N/A   | \$345,958.01   | N/A |
|---|----------------|----------------|---|----------------|-----|
| Transformer<br>3 phase<br>/480v - 150<br>KVA                            | \$25,550.00    | \$1,958.60     | ***System<br>Notice:<br>Estimate<br>adjusted and<br>locked<br>because line<br>has been<br>superseded.<br>***Remaining<br>expense<br>relocated to<br>Other<br>Expenses | \$1,958.60     | N/A |
| Sub-total   | \$2,549,390.00 | \$2,372,742.60 | N/A   | \$1,787,822.97 | N/A |
| Total for all systems   | \$5,796,684.78 | \$5,298,399.67 | N/A   | \$2,840,984.27 | N/A |

| Actual Information |           |
|--------------------|-----------|
| Description        | File Name |

| UHF - Liquid Cooled Solid<br>State Transmitter 52 - 61 kW | Component Description: | 50% Primary<br>Transmitter &<br>Installation.<br>Installation<br>included w<br>/Transmitter Cost<br>on Form 399.<br>Purchase Order is<br>for all 11 Sites.<br>Transformer on<br>line 16 of quote is<br>separate Form<br>399 Line Item.<br>\$764,040.63   |
|---|------------------------|--|
|   | Amount:                | Primary<br>Transmitter Per<br>FCC Hotline<br>(Paige, 7/8/2019)<br>credit for<br>transformer<br>applied to<br>transmitter,<br>otherwise causes<br>system error.<br>Immediate Due<br>Date on invoice<br>adjusted to<br>vendor terms of<br>60 days. Refer to<br>attachment pgs 2-<br>4 & PO/Quotes<br>pgs 5-27.<br>\$655,081.73 |
|   | ,                      | <i>4000,001.10</i>   |

| nent Description: 50% Request for<br>Transformer that<br>is included on<br>invoice with the<br>cost for<br>transmitter.<br>Transformer has<br>unique 399 Line<br>Item. See line 16<br>of quote for detail |
|---|
| is included on<br>invoice with the<br>cost for<br>transmitter.<br>Transformer has<br>unique 399 Line<br>Item. See line 16<br>of quote for detail  |
| invoice with the<br>cost for<br>transmitter.<br>Transformer has<br>unique 399 Line<br>Item. See line 16<br>of quote for detail  |
| cost for<br>transmitter.<br>Transformer has<br>unique 399 Line<br>Item. See line 16<br>of quote for detail  |
| transmitter.<br>Transformer has<br>unique 399 Line<br>Item. See line 16<br>of quote for detail  |
| Transformer has<br>unique 399 Line<br>Item. See line 16<br>of quote for detail  |
| unique 399 Line<br>Item. See line 16<br>of quote for detail   |
| Item. See line 16<br>of quote for detail  |
| of quote for detail   |
|   |
|   |
| cost. Purchase  |
| Order is for all 11   |
| sites.  |
| t: \$5,744.00   |
|   |
| nent Description: Primary   |
| Transmitter   |
| t: \$15,040.00  |
|   |
|   |

| 50% Aux              |
|----------------------|
| Transmitter &        |
| Installation.        |
| Installation         |
| included w           |
| /Transmitter on      |
| Form 399.            |
| Purchase Order is    |
| for all 11 sites.    |
| Transformer on       |
| line 16 of quote is  |
| separate Form        |
| 399 Line Item.       |
| \$189,142.59         |
| Aux. Transm. See     |
| attach. pg. 2-4 for  |
| payment details.     |
| Per FCC Hotline      |
| (Paige, 7/8/2019)    |
| credit for           |
| transformer          |
| applied to           |
| transmitter,         |
| otherwise causes     |
| system error.        |
| Immediate Due        |
| Date adjusted to     |
| vendor terms of      |
| 60 days. PO for      |
| multiple sites.      |
| \$156,815.42         |
|                      |
| 50% Transformer      |
| on line 16 of        |
| quote included w     |
| /cost of transmitter |
| on invoice.          |
| Purchase Order       |
| includes all 11      |
| sites.               |
| \$1,958.60           |
|                      |

#### Antennas

#### Cost Information

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

| Description  | Predetermined<br>Cost Estimate | Estimated<br>Cost | Estimated Cost<br>Justification  | Actual Cost | Actual Cos<br>Justificatio |
|--|--------------------------------|-------------------|--|-------------|----------------------------|
| Primary<br>Antenna<br>2x2 750<br>10325   | \$14,741.80                    | \$14,411.80       |  | \$8,011.80  |                            |
| UHF - High<br>Power,<br>Side<br>Mount,<br>broadband<br>panel, 4<br>bay,, 1 kW<br>input,<br>directional,,<br>elliptically<br>or circularly<br>polarized | \$0.00                         | \$0.00            | N/A  | N/A         | N/A                        |
| Sweep test<br>of existing<br>antenna   | \$6,730.00                     | \$6,400.00        | N/A  | N/A         | N/A                        |
| UHF - High<br>Power,<br>Side<br>Mount,<br>broadband<br>panel, 4<br>bay,, 1 kW<br>input,<br>directional,,<br>horizontally<br>polarized                  | \$8,011.80                     | \$8,011.80        | ***System<br>Notice: Estimate<br>adjusted and<br>locked because<br>line has been<br>superseded.<br>***Manufacturer's<br>estimated cost | \$8,011.80  | N/A                        |
| Primary<br>Antenna<br>SAA20-<br>C170-E400-<br>ET6R-20  | \$315,390.00                   | \$182,236.50      |  | \$78,818.25 |                            |

| UHF - High<br>Power Top<br>Mount (200-<br>1000 kW),<br>One<br>station<br>antenna ,<br>elliptically<br>or circularly<br>polarized     | \$289,500.00 | \$157,636.50 | See attached<br>RFS Antenna<br>Change<br>Narrative with<br>Pricing | \$78,818.25 | N/ |
|--|--------------|--------------|--|-------------|----|
| Sweep test<br>of existing<br>antenna   | \$6,730.00   | \$6,400.00   | N/A  | N/A         | N/ |
| Elbow<br>complex,<br>single<br>channel, at<br>antenna<br>input, per 7<br>3/16.<br>feedline (if<br>needed)                            | \$13,900.00  | \$13,200.00  | N/A  | N/A         | N/ |
| Pattern<br>scatter<br>analysis for<br>side mount<br>high/med<br>power<br>antennas<br>(if not<br>included in<br>antenna<br>base cost) | \$5,260.00   | \$5,000.00   | N/A  | N/A         | N/ |
| Auxiliary<br>Antenna<br>SAA20-<br>C170-G400-<br>ES6R-20  | \$170,061.50 | \$167,621.50 |  | \$60,510.75 |    |

| Pattern<br>scatter<br>analysis for<br>side mount<br>high/med<br>power<br>antennas<br>(if not<br>included in<br>antenna<br>base cost)                 | \$5,260.00       | \$5,000.00         | N/A  | N/A         | N/A |
|--|------------------|--------------------|--|-------------|-----|
| Side mount<br>brackets<br>for high<br>power<br>antennas<br>(if not<br>included in<br>antenna<br>base cost)   | \$23,150.00      | \$22,000.00        | N/A  | N/A         | N/A |
| Elbow<br>complex,<br>single<br>channel, at<br>antenna<br>input, per 7<br>3/16.<br>feedline (if<br>needed)  | \$13,900.00      | \$13,200.00        | N/A  | N/A         | N/A |
| UHF - High<br>Power,<br>Side<br>Mount,<br>basic slot<br>antenna,<br>1000 kW<br>input,<br>directional,,<br>elliptically<br>or circularly<br>polarized | \$121,021.50     | \$121,021.50       | See attached<br>RFS Antenna<br>Change<br>Narrative with<br>Pricing | \$60,510.75 | N/A |
|  | <b>#0.700.00</b> | \$6,400.00         | N/A  | N/A         | N/A |
| Sweep test<br>of existing<br>antenna   | \$6,730.00       | <i>\$</i> 0,100100 |  |             |     |

| Actual Information<br>Description   | File Name                         |   |
|---|-----------------------------------|---|
| UHF - High Power, Side<br>Mount, broadband panel, 4<br>bay,, 1 kW input, directional,,<br>elliptically or circularly<br>polarized | Information not provided.         |   |
| Sweep test of existing antenna  | Information not provided.         |   |
| UHF - High Power, Side<br>Mount, broadband panel, 4<br>bay,, 1 kW input, directional,,<br>horizontally polarized                  | Component Description:<br>Amount: | Primary Antenna<br>w/freight cost.<br>\$8,011.80  |
| UHF - High Power Top<br>Mount (200-1000 kW), One<br>station antenna , elliptically<br>or circularly polarized                     | Component Description:<br>Amount: | 50% Primary<br>Antenna included<br>in Inv & PO Line<br>7. Invoice &<br>Purchase Order<br>are for 10 sites.<br>\$78,818.25 |
| Sweep test of existing antenna  | Information not provided.         |   |
| Elbow complex, single<br>channel, at antenna input,<br>per 7 3/16. feedline (if<br>needed)  | Information not provided.         |   |
| Pattern scatter analysis for<br>side mount high/med power<br>antennas (if not included in<br>antenna base cost)                   | Information not provided.         |   |

| side<br>ant        | tern scatter analysis for<br>e mount high/med power<br>ennas (if not included in<br>enna base cost)                | Information not provided. |  |
|--------------------|--|---------------------------|--|
| pov                | e mount brackets for high<br>ver antennas (if not<br>uded in antenna base<br>t)                                    | Information not provided. |  |
| cha<br>per         | ow complex, single<br>Innel, at antenna input,<br>7 3/16. feedline (if<br>eded)                                    | Information not provided. |  |
| Mo<br>100<br>ellip | F - High Power, Side<br>unt, basic slot antenna,<br>00 kW input, directional,,<br>otically or circularly<br>arized | Component Description:    | 50% Auxilliary<br>Antenna included<br>in Inv & PO Line<br>7. Invoice &<br>Purchase Order<br>are for 10 sites.<br>\$60,510.75 |
|                    | eep test of existing<br>enna   | Information not provided. |  |

#### **Transmission Line**

#### Cost Information

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

| Description  | Predetermined<br>Cost Estimate | Estimated<br>Cost | Estimated<br>Cost<br>Justification                                       |                | Actual Cost<br>Justification |
|--|--------------------------------|-------------------|--|----------------|------------------------------|
| Primary<br>Transmission<br>Line                        | \$240,700.00                   | \$172,486.63      |  | \$86,243.32    |                              |
| Rigid<br>Transmission<br>Line -<br>copper, 7 3<br>/16" | \$240,700.00                   | \$172,486.63      | See<br>attached<br>RFS<br>Antenna<br>Change<br>Narrative<br>with Pricing | \$86,243.32    | N/A                          |
| Auxiliary<br>Transmission<br>Line                      | \$188,500.00                   | \$146,788.88      |  | \$73,394.44    |                              |
| Rigid<br>Transmission<br>Line -<br>copper, 7 3<br>/16" | \$188,500.00                   | \$146,788.88      | See<br>attached<br>RFS<br>Antenna<br>Change<br>Narrative<br>with Pricing | \$73,394.44    | N/A                          |
| Sub-total  | \$429,200.00                   | \$319,275.51      | N/A  | \$159,637.76   | N/A                          |
| Total for all systems                                  | \$5,796,684.78                 | \$5,298,399.67    | N/A  | \$2,840,984.27 | N/A                          |

| Actual Information |           |
|--------------------|-----------|
| Description        | File Name |

| Rigid Transmission Line -<br>copper, 7 3/16" | Component Description: | 50% Primary<br>Transmission Line<br>included in Inv &<br>PO Line 7. Invoice<br>& Purchase Order<br>are for 10 sites. |
|--|------------------------|--|
|  | Amount:                | \$86,243.32  |
| Rigid Transmission Line -<br>copper, 7 3/16" | Component Description: | 50% Auxilliary   |
|  | component Description. | Transmission Line  |
|  |                        | included in Inv &  |
|  |                        | PO Line 7. Invoice   |
|  |                        | & Purchase Order   |
|  |                        | are for 10 sites.  |
|  | Amount:                | \$73,394.44  |

## **Tower Equipment and Rigging Costs**

#### Cost Information

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

| Description  | Predetermined<br>Cost Estimate | Estimated<br>Cost | Estimated<br>Cost<br>Justification                                       | Actual Cost    | Actual Cost<br>Justification |
|--|--------------------------------|-------------------|--|----------------|------------------------------|
| Primary<br>Tower<br>TOWER  | \$84,200.00                    | \$10,000.00       |  | \$0.00         |                              |
| Short Tower<br>(less than<br>500')   | \$84,200.00                    | \$10,000.00       | N/A  | N/A            | N/A                          |
| Primary<br>Tower<br>TOWER  | \$421,000.00                   | \$312,255.28      |  | \$156,127.64   |                              |
| Complex<br>Tower<br>(includes,<br>for<br>example,<br>those with<br>candelabras<br>and/or<br>stacked<br>antennas) | \$421,000.00                   | \$312,255.28      | See<br>attached<br>RFS<br>Antenna<br>Change<br>Narrative<br>with Pricing | \$156,127.64   | N/A                          |
| Sub-total  | \$505,200.00                   | \$322,255.28      | N/A  | \$156,127.64   | N/A                          |
| Total for all systems  | \$5,796,684.78                 | \$5,298,399.67    | N/A  | \$2,840,984.27 | N/A                          |

| Actual Information<br>Description | File Name                 |
|-----------------------------------|---------------------------|
| Short Tower (less than 500')      | Information not provided. |

| or example, those with     | <b>Component Description:</b> | 50% Primary        |
|----------------------------|-------------------------------|--------------------|
| candelabras and/or stacked |                               | /Complex Tower     |
| antennas)                  |                               | Installation for   |
|                            |                               | Auxilliary Antenna |
|                            |                               | included in Inv &  |
|                            |                               | PO Line 8.         |
|                            |                               | Invoice &          |
|                            |                               | Purchase Order     |
|                            |                               | are for 10 sites.  |
|                            | Amount:                       | \$24,217.81        |
|                            | Component Description:        | 50% Primary        |
|                            | <b>Component Description:</b> | 50% Primary        |
|                            |                               | /Complex Tower     |
|                            |                               | Installation for   |
|                            |                               | Primary Antenna    |
|                            |                               | included in Inv &  |
|                            |                               | PO Line 8.         |
|                            |                               | Invoice &          |
|                            |                               | Purchase Order     |
|                            |                               | are for 10 sites.  |
|                            | Amount:                       | \$131,909.83       |

#### **Outside Professional Services**

#### Cost Information

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

| Description                         | Predetermined<br>Cost Estimate | Estimated<br>Cost | Estimated Cost<br>Justification  | Actual Cost  | Actual Co<br>Justificat |
|-------------------------------------|--------------------------------|-------------------|--|--------------|-------------------------|
| Outside<br>Professional<br>Services | \$157,505.00                   | \$270,210.00      |  | \$180,765.04 |                         |
| Tower<br>Structural<br>Analysis     | \$25,320.00                    | \$25,320.00       | Tower<br>Consultants<br>Terminated<br>Contract<br>\$18,820 (see<br>approved<br>invoice 8593)<br>Potential<br>Services from<br>TEPCO (see<br>invoice 336764<br>w/supporting<br>documentation):<br>Structural<br>Analysis<br>\$2,500,<br>Updated App.<br>Map \$2,500,<br>TIA \$1,500 | \$20,320.00  | N/A                     |
| Microwave<br>PCN                    | \$1,000.00                     | \$1,000.00        | Preliminary<br>estimate of<br>services   | N/A          | N/A                     |
| Microwave<br>License<br>Preparation | \$1,000.00                     | \$1,000.00        | Preliminary<br>Estimate for<br>Services  | N/A          | N/A                     |
| Microwave<br>Frequency<br>Study     | \$1,100.00                     | \$1,100.00        | Preliminary<br>Estimate of<br>Engineering<br>Services  | N/A          | N/A                     |

| Additional<br>Legal<br>Expenses   | \$10,000.00 | \$10,000.00 | Preliminary<br>estimate for<br>legal expenses<br>for non-catalog<br>advice and<br>review including<br>transition status<br>reports and<br>other<br>miscellaneous<br>legal needs;<br>estimate<br>exceeds<br>predetermined<br>cost estimate. | \$5,219.44 | N/A |
|---|-------------|-------------|--|------------|-----|
| FAA<br>consultant,<br>including cost<br>of preparing<br>FAA Form<br>7460 (Notice<br>of Proposed<br>Construction),<br>if needed for<br>height increase | \$2,105.00  | \$2,000.00  | N/A  | N/A        | N/A |
| ASR<br>modification<br>(prepare FCC<br>Form 854)  | \$2,105.00  | \$2,000.00  | N/A  | N/A        | N/A |
| Attorney Fees<br>- Prepare and<br>File request<br>for Special<br>Temporary<br>Authorization   | \$3,680.00  | \$10,000.00 | Cost estimated<br>to exceed<br>Predetermined<br>Cost Estimate.   | \$5,278.50 | N/A |
| Attorney Fees -<br>Prepare and<br>File FCC Form<br>2100 (main),<br>License to<br>Cover<br>Application   | \$2,365.00  | \$2,250.00  | N/A  | N/A        | N/A |

| Attorney Fees<br>- Aux Antenna,<br>prepare and<br>File Form<br>2100<br>Construction<br>Permit or<br>License<br>Application                         | \$4,210.00  | \$4,000.00  | N/A | N/A        | N/A |
|--|-------------|-------------|-----|------------|-----|
| Attorney Fees<br>- Prepare and<br>File FCC Form<br>2100 (main),<br>Construction<br>Permit<br>Application   | \$5,260.00  | \$5,000.00  | N/A | \$2,089.40 | N/J |
| DTS Site RF<br>Consulting<br>Engineer -<br>Terrain-<br>shielded<br>Facility  | \$26,300.00 | \$25,000.00 | N/A | N/A        | N/J |
| DTS Site RF<br>Consulting<br>Engineer -<br>Critical Facility   | \$8,420.00  | \$8,000.00  | N/A | N/A        | N/  |
| Prepare<br>request for<br>Special<br>Temporary<br>Authorization  | \$4,100.00  | \$3,000.00  | N/A | \$1,425.00 | N/J |
| RF Consulting<br>Engineer<br>Fees- Aux<br>Antenna:<br>Prepare<br>engineering<br>section of FCC<br>Form 2100,<br>License to<br>Cover<br>Application | \$1,580.00  | \$1,500.00  | N/A | N/A        | N/# |

| Project<br>management<br>of the transition  | \$39,500.00 | \$147,540.00 | See attachment<br>"WUNF<br>Program<br>Designer -<br>Manager<br>Narrative" for<br>details on<br>estimated cost | \$137,245.20 | N/A |
|---|-------------|--------------|---|--------------|-----|
| Prepare and<br>or review<br>reimbursement<br>form   | \$2,630.00  | \$2,500.00   | N/A   | N/A          | N/A |
| Address<br>transition<br>timing and<br>coordination<br>issues w/<br>other stations<br>and wireless  | \$2,630.00  | \$2,500.00   | N/A   | N/A          | N/A |
| Perform<br>engineering<br>study for new<br>channel<br>assignment<br>and antenna<br>development  | \$7,360.00  | \$7,000.00   | N/A   | \$6,250.00   | N/A |
| Prepare<br>engineering<br>section of FCC<br>Form 2100<br>(main),<br>Construction<br>Permit<br>Application   | \$3,155.00  | \$3,000.00   | N/A   | \$2,937.50   | N/A |
| RF Consulting<br>Engineer<br>Fees- Aux<br>Antenna:<br>Prepare<br>engineering<br>section of FCC<br>Form 2100,<br>Construction<br>Permit<br>Application | \$2,105.00  | \$5,000.00   | Estimated Cost<br>Exceeds<br>PreDetermined<br>Cost Estimate   | N/A          | N/A |

| Prepare<br>engineering<br>section of FCC<br>Form 2100<br>(main),<br>License to<br>Cover<br>Application | \$1,580.00     | \$1,500.00     | N/A | N/A            | N/A |
|--|----------------|----------------|-----|----------------|-----|
| Sub-total  | \$157,505.00   | \$270,210.00   | N/A | \$180,765.04   | N/A |
| Total for all systems  | \$5,796,684.78 | \$5,298,399.67 | N/A | \$2,840,984.27 | N/A |

| Actual Information<br>Description | File Name                         |   |
|-----------------------------------|-----------------------------------|---|
| Tower Structural Analysis         | Component Description:<br>Amount: | Structural<br>Analysis, see<br>attachment pg. 7<br>for Schedule of<br>Services.<br>\$1,500.00 |
|                                   | Component Description:<br>Amount: | Outside<br>Professional<br>Services Tower<br>Structural Analysis<br>\$18,820.00               |
| Microwave PCN                     | Information not provided.         |   |
| Microwave License<br>Preparation  | Information not provided.         |   |
| Microwave Frequency Study         | Information not provided.         |   |
| Additional Legal Expenses         |                                   |   |

| Component Description:<br>Amount: | Outside<br>Professional<br>Services<br>Additional Legal<br>Expenses<br>\$105.00   |
|-----------------------------------|---|
| Component Description:            | Outside<br>Professional<br>Services<br>Additional Legal<br>Expenses Invoice<br>applies to all 11<br>repack stations,<br>amount requested<br>reflects portion<br>payable per<br>Station: \$323.00<br>/11 as indicated on<br>page 1 of Invoice<br>\$29.36   |
| Component Description:            | Outside<br>Professional<br>Services<br>Additional Legal<br>Expenses Invoice<br>applies to all 11<br>repack stations,<br>amount requested<br>reflects portion<br>payable per<br>Station: \$3472.00<br>/11 as indicated on<br>page 1 of Invoice<br>\$315.63 |

| Component Description:        | Outside<br>Professional               |
|-------------------------------|---------------------------------------|
|                               | Services                              |
|                               | Additional Legal                      |
|                               | Expenses Invoice                      |
|                               | applies to all 11                     |
|                               | repack stations,                      |
|                               | amount requested                      |
|                               | reflects portion                      |
|                               | payable per                           |
|                               | Station: \$315.00                     |
|                               | /11 as indicated on                   |
|                               | page 1 of Invoice                     |
| Amount:                       | \$28.64                               |
|                               |                                       |
| <b>Component Description:</b> | Outside                               |
|                               | Professional                          |
|                               | Services                              |
|                               | Additional Legal                      |
|                               | Expenses                              |
| Amount:                       | \$303.30                              |
|                               |                                       |
| Component Description:        | Outside                               |
|                               | Professional                          |
|                               | Services                              |
|                               | Additional Legal                      |
|                               | Expenses Invoice<br>applies to all 11 |
|                               | repack stations,                      |
|                               | amount requested                      |
|                               | reflects portion                      |
|                               | payable per                           |
|                               | Station: \$168.50                     |
|                               | /11 as indicated on                   |
|                               | page 1 of Invoice                     |
| Amount:                       | \$15.32                               |
|                               |                                       |
|                               |                                       |

| Component Description:            | Outside<br>Professional<br>Services<br>Additional Legal<br>Expenses Invoice<br>applies to all 11<br>repack stations,<br>amount requested<br>reflects portion<br>payable per<br>Station: \$175.00<br>/11 as indicated on<br>page 1 of Invoice<br>\$15.91 |
|-----------------------------------|---|
| Component Description:<br>Amount: | Outside<br>Professional<br>Services<br>Additional Legal<br>Expenses<br>\$70.00  |
| Component Description:            | Outside<br>Professional<br>Services<br>Additional Legal<br>Expenses Invoice<br>applies to all 11<br>repack stations,<br>amount requested<br>reflects portion<br>payable per<br>Station: \$959.50<br>/11 as indicated on<br>page 1 of Invoice<br>\$87.22 |
| Component Description:<br>Amount: | Outside Prof. Svcs<br>Additional Legal<br>Expenses<br>\$182.50  |

| I |                                   |   |
|---|-----------------------------------|---|
|   | Component Description:            | Outside Prof Svcs<br>Additional Legal<br>Expenses                   |
|   | Amount:                           | \$182.50  |
|   | Component Description:            | Outside<br>Professional<br>Services<br>Additional Legal<br>Expenses |
|   | Amount:                           | \$292.00  |
|   | Component Description:            | Outside<br>Professional<br>Services<br>Additional Legal<br>Expenses |
|   | Amount:                           | \$35.00   |
|   | Component Description:<br>Amount: | Outside<br>Professional<br>Services<br>Additional Legal<br>Expenses |
|   | Amount:                           | \$175.00  |
|   | Component Description:            | Outside<br>Professional<br>Services<br>Additional Legal<br>Expenses |
|   | Amount:                           | \$33.70   |
|   | Component Description:            | Outside<br>Professional Svcs<br>Additional Legal<br>Expenses        |
|   | Amount:                           | \$109.50  |

| Component Description:            | Outside<br>Professional<br>Services<br>Additional Legal<br>Expenses Invoice<br>applies to all 11<br>repack stations,<br>amount requested<br>reflects portion<br>payable per<br>Station: \$402.00<br>/11 as indicated on<br>page 1 of Invoice<br>\$36.55      |
|-----------------------------------|--|
| Component Description:            | Outside<br>Professional<br>Services<br>Additional Legal<br>Expenses Legal<br>services benefit<br>entire FCC<br>Repack project<br>across all 11 Call<br>Signs/Facility IDs,<br>1617.10/11 for<br>\$147.01 as<br>outlined on page 1<br>of invoice.<br>\$147.01 |
| Component Description:<br>Amount: | Outside<br>Professional<br>Services<br>Additional Legal<br>Expenses<br>\$303.30  |
| Component Description:<br>Amount: | Outside<br>Professional<br>Services<br>Additional Legal<br>Expenses<br>\$182.50  |

| Component Description:<br>Amount: | Outside<br>Professional<br>Services<br>Additional Legal<br>Expenses<br>\$630.00   |
|-----------------------------------|---|
| Component Description:<br>Amount: | Outside<br>Professional<br>Services<br>Additional Legal<br>Expenses<br>\$868.70   |
| Component Description:            | Outside<br>Professional<br>Services<br>Additional Legal<br>Expenses Invoice<br>applies to all 11<br>repack stations,<br>amount requested<br>reflects portion<br>payable per<br>Station: \$765.00<br>/11 as indicated on<br>page 1 of Invoice<br>\$69.55 |
| Component Description:<br>Amount: | Outside<br>Professional<br>Services<br>Additional Legal<br>Expenses \$292.00<br>for Attorney Fees<br>STA<br>\$146.00  |
|                                   |   |

| Component Description:<br>Amount: | Outside<br>Professional<br>Services<br>Additional Legal<br>Expenses<br>\$105.00   |
|-----------------------------------|---|
| Component Description:            | Outside<br>Professional<br>Services<br>Additional Legal<br>Expenses Invoice<br>applies to all 11<br>repack stations,<br>amount requested<br>reflects portion<br>payable per<br>Station: \$368.00<br>/11 as indicated on<br>page 1 of Invoice<br>\$33.46 |
| Amount.                           | <b>ФЭЭ.40</b>   |
| Component Description:<br>Amount: | Outside<br>Professional<br>Services<br>Additional Legal<br>Expenses<br>\$175.00   |
| Component Description:            | Outside<br>Professional<br>Services<br>Additional Legal<br>Expenses Invoice<br>applies to all 11<br>repack stations,<br>amount requested<br>reflects portion<br>payable per<br>Station: \$70.00/11<br>as indicated on<br>page 1 of Invoice<br>\$6.37    |
|                                   |   |

| Component Description: | Outside<br>Professional<br>Services<br>Additional Legal<br>Expenses Invoice<br>applies to all 11<br>repack stations,<br>amount requested<br>reflects portion<br>payable per<br>Station: \$572.90<br>/11 as indicated on<br>page 1 of Invoice   |
|------------------------|--|
| Amount:                | \$52.08  |
| Component Description: | Outside<br>Professional<br>Services<br>Additional Legal<br>Expenses Legal<br>services benefit<br>entire FCC<br>Repack project<br>across all 11 Call<br>Signs/Facility IDs,<br>2059.90/11 for<br>187.27 as outlined<br>on page 1 of<br>invoice. |
| Amount:                | \$187.27   |

| Component Description: | Outside<br>Professional<br>Services<br>Additional Legal<br>Expenses Legal<br>services benefit<br>entire FCC<br>Repack project<br>across all 11 Call<br>Signs/Facility IDs,<br>2594.40/11 for<br>235.85 as outlined                                      |
|------------------------|---|
| Amount:                | on page 1 of<br>invoice.<br>\$235.85  |
| Component Description: | Outside<br>Professional<br>Services<br>Additional Legal<br>Expenses Invoice<br>applies to all 11<br>repack stations,<br>amount requested<br>reflects portion<br>payable per<br>Station: \$67.40/11<br>as indicated on<br>page 1 of Invoice<br>\$6.13    |
| Component Description: | Outside<br>Professional<br>Services<br>Additional Legal<br>Expenses Invoice<br>applies to all 11<br>repack stations,<br>amount requested<br>reflects portion<br>payable per<br>Station: \$245.00<br>/11 as indicated on<br>page 1 of Invoice<br>\$22.27 |

|  | <b>Component Description:</b> | Outside             |
|--|-------------------------------|---------------------|
|  |                               | Professional        |
|  |                               | Services            |
|  |                               | Additional Legal    |
|  |                               | Expenses Invoice    |
|  |                               | applies to all 11   |
|  |                               | repack stations,    |
|  |                               | amount requested    |
|  |                               | reflects portion    |
|  |                               | payable per         |
|  |                               | Station: \$350.00   |
|  |                               | /11 as indicated or |
|  |                               | page 1 of Invoice   |
|  | Amount:                       | \$31.82             |
| FAA consultant, including cost of preparing FAA Form | Information not provided.     |                     |
| 7460 (Notice of Proposed                             |                               |                     |
| Construction), if needed for                         |                               |                     |
| height increase                                      |                               |                     |
| ASR modification (prepare                            | Information not provided.     |                     |
| FCC Form 854)  |                               |                     |

| Attorney Fees - Prepare<br>and File request for Special<br>Temporary Authorization       | Component Description:    | Outside Prof. Svcs           |
|--|---------------------------|------------------------------|
|  | Amount:                   | Attorney Fees STA<br>\$36.50 |
|  | Amount:                   | \$30.3U                      |
|  | Component Description:    | Outside Profess              |
|  |                           | Svcs. Attorney               |
|  | Amount:                   | Fees STA<br>\$265.50         |
|  | Amount.                   | ψ203.30                      |
|  | Component Description:    | Outside                      |
|  |                           | Professional                 |
|  |                           | Services Attorney            |
|  | A                         | Fees STA                     |
|  | Amount:                   | \$560.40                     |
|  | Component Description:    | Outside                      |
|  |                           | Professional                 |
|  |                           | Services Attorney            |
|  |                           | Fees STA                     |
|  | Amount:                   | \$1,519.80                   |
|  | Component Description:    | Outside                      |
|  |                           | Professional                 |
|  |                           | Services Attorney            |
|  |                           | Fees STA \$146.00            |
|  |                           | Other Legal                  |
|  | Amount                    | Expenses                     |
|  | Amount:                   | \$292.00                     |
|  | Component Description:    | Outside                      |
|  |                           | Professional                 |
|  |                           | Services Attorney            |
|  |                           | Fees STA                     |
|  | Amount:                   | \$2,604.30                   |
| Attorney Fees -Prepare and<br>File FCC Form 2100 (main),<br>License to Cover Application | Information not provided. |                              |

| Attorney Fees - Aux<br>Antenna, prepare and File<br>Form 2100 Construction<br>Permit or License<br>Application                   | Information not provided.         |  |
|--|-----------------------------------|--|
| Attorney Fees - Prepare<br>and File FCC Form 2100<br>(main), Construction Permit<br>Application                                  | Component Description:<br>Amount: | Outside<br>Professional<br>Services Attorney<br>Fees Construction<br>Permit<br>\$2,089.40  |
| DTS Site RF Consulting<br>Engineer - Terrain-shielded<br>Facility  | Information not provided.         |  |
| DTS Site RF Consulting<br>Engineer - Critical Facility   | Information not provided.         |  |
| Prepare request for Special<br>Temporary Authorization   | Component Description:<br>Amount: | Outside<br>Professional<br>Services Prepare<br>STA<br>\$1,425.00   |
| RF Consulting Engineer<br>Fees- Aux Antenna:<br>Prepare engineering section<br>of FCC Form 2100, License<br>to Cover Application | Information not provided.         |  |
| Project management of the transition   | Component Description:            | Outside<br>Professional<br>Services Project<br>Management of<br>Transition See<br>attachment pg 3-5<br>for Contract<br>/Invoice Summary. |

| Component Description: | Outside<br>Professional<br>Services Project<br>Management of<br>Transition See<br>attachment pg. 3-6<br>for Contract<br>/Invoice Summary.<br>PO/Contract for all<br>eleven transmitter<br>sites.<br>\$3,991.61 |
|------------------------|--|
| Component Description: | Outside<br>Professional<br>Services Project<br>Management of<br>Transition See<br>attachment pg 3-6<br>for Contract<br>/Invoice Summary.<br>PO/Contract for all<br>eleven transmitter<br>sites.<br>\$10,624.54 |
| Component Description: | Outside<br>Professional<br>Services Project<br>Management of<br>Transition See<br>attachment pg 3-5<br>for Contract<br>/Invoice Summary.<br>PO/Contract for all<br>eleven transmitter<br>sites.<br>\$5,312.27  |

| Outside<br>Professional<br>Services Project<br>Management of<br>Transition See<br>attachment pg 3-5<br>for Contract<br>/Invoice Summary.<br>\$26,350.00 |
|---|
| Outside<br>Professional<br>Services Project<br>Management of<br>Transition See<br>attachment pg 3-5<br>for Contract<br>/Invoice Summary.<br>\$4,446.41  |
| Outside<br>Professional<br>Services Project<br>Management<br>\$9,022.50   |
| Outside<br>Professional<br>Services Project<br>Management See<br>Attachment Pg. 3<br>& 4 for Summary<br>\$9,022.50                                      |
|   |

|  | Component Description:<br>Amount: | Outside<br>Professional<br>Services Project<br>Management of<br>Transition See<br>attachment pg 3-5<br>for Contract<br>/Invoice Summary.<br>\$12,375.40 |
|--|-----------------------------------|---|
|  | Component Description:            | Outside<br>Professional<br>Services Project<br>Management of<br>Transition See<br>attachment pg 3-5<br>for Contract<br>/Invoice Summary.<br>\$53,102.70 |
|  | Component Description:<br>Amount: | See project &<br>invoice summary<br>in attachment pgs<br>3-6<br>\$53,102.70   |
|  | Component Description:<br>Amount: | Outside<br>Professional<br>Services Project<br>Management See<br>attachment pg. 3 &<br>4 for Project<br>Summary<br>\$6,707.50                           |
| Prepare and or review reimbursement form   | Information not provided.         |   |
| Address transition timing<br>and coordination issues w/<br>other stations and wireless | Information not provided.         |   |

| for new channel assignment<br>and antenna development | <b>Component Description:</b> | Outside                 |
|---|-------------------------------|-------------------------|
| and antenna development                               |                               | Professional            |
|   |                               | Services Perform        |
|   |                               | Engineering             |
|   |                               | Studies Quote is        |
|   |                               | RATE CARD               |
|   |                               | furnished by            |
|   |                               | vendor for              |
|   |                               | Professional            |
|   |                               | Services they offe      |
|   |                               | and are not             |
|   |                               | specific to any         |
|   |                               | particular station.     |
|   | Amount:                       | \$1,775.00              |
|   | Component Description:        | Outside                 |
|   |                               | Professional            |
|   |                               | Services                |
|   |                               | Engineering Stud        |
|   |                               | New Channel             |
|   |                               | Assignment              |
|   |                               | Antenna                 |
|   |                               | Development             |
|   | Amount:                       | \$2,600.00              |
|   | Common and Decominations      | Quataida                |
|   | Component Description:        | Outside<br>Professional |
|   |                               | Services                |
|   |                               |                         |
|   |                               | Engineering Study       |
|   |                               |                         |
|   |                               | Assignment<br>Antenna   |
|   |                               |                         |
|   | Amount                        | Development             |
|   | Amount:                       | \$1,875.00              |

| Prepare engineering section<br>of FCC Form 2100 (main),<br>Construction Permit<br>Application  | Component Description:    | Outside<br>Professional<br>Services RF<br>Engineering<br>Consulting Fees<br>Construction<br>Permit Application<br>Main/Primary<br>\$2,937.50 |
|--|---------------------------|--|
| RF Consulting Engineer<br>Fees- Aux Antenna:<br>Prepare engineering section<br>of FCC Form 2100,<br>Construction Permit<br>Application | Information not provided. |  |
| Prepare engineering section<br>of FCC Form 2100 (main),<br>License to Cover Application  | Information not provided. |  |

## **Other Expenses**

## Cost Information

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

| Description  | Predetermined<br>Cost Estimate | Estimated<br>Cost | Estimated Cost<br>Justification                                   | Actual Cost  | Actual C<br>Justifica |
|--|--------------------------------|-------------------|---|--------------|-----------------------|
| Other<br>Expenses  | \$1,655,196.48                 | \$1,649,646.48    |   | \$409,290.06 |                       |
| General<br>Construction  | \$473,005.94                   | \$473,005.94      | See attached<br>document WUNF<br>GC Budget                        | \$191,330.00 | N/A                   |
| Electrical<br>Construction   | \$701,034.00                   | \$701,034.00      | See attached<br>document WUNF<br>GC Budget                        | \$78,319.90  | N/A                   |
| Mechanical<br>Construction   | \$197,624.00                   | \$197,624.00      | See attached<br>document WUNF<br>GC Budget                        | \$111,660.15 | N/A                   |
| Program<br>Transport<br>Stream<br>Processing                           | \$22,718.40                    | \$22,718.40       | See Program<br>Delivery and<br>Network Budget<br>Attachment       | \$22,718.40  | N/A                   |
| Network<br>Interfaces  | \$5,178.14                     | \$5,178.14        | See Program<br>Delivery and<br>Network Budget<br>Attachment       | \$1,047.97   | N/A                   |
| Microwave<br>System  | \$211,186.00                   | \$211,186.00      | See Program<br>Delivery and<br>Networking<br>Budget<br>attachment | N/A          | N/A                   |
| MVPD<br>Notification of<br>Channel<br>Change                           | \$6,000.00                     | \$6,000.00        | Preliminary<br>Service Estimate                                   | \$463.64     | N/A                   |
| Develop and<br>air<br>announcement<br>of upcoming<br>channel<br>change | \$2,000.00                     | \$2,000.00        | N/A   | N/A          | N/A                   |

| DTV Medical<br>Facility<br>Notification   | \$11,550.00    | \$6,000.00     | Preliminary<br>Service Estimate  | \$3,750.00     | N/A |
|---|----------------|----------------|--|----------------|-----|
| Disposal<br>Costs (for<br>equipment and<br>other waste,<br>net of any<br>salvage value) | \$24,900.00    | \$24,900.00    | The<br>decommissioning<br>of site #1 is an<br>unknown due to<br>the current site<br>access issues. | N/A            | N/A |
| Sub-total   | \$1,655,196.48 | \$1,649,646.48 | N/A  | \$409,290.06   | N/A |
| Total for all systems   | \$5,796,684.78 | \$5,298,399.67 | N/A  | \$2,840,984.27 | N/A |

## Components

| Actual Information<br>Description | File Name              |   |
|-----------------------------------|------------------------|---|
| General Construction              |                        |   |
|                                   | Component Description: | General Contract<br>PO for multiple             |
|                                   | Amount:                | sites<br>\$29,640.00                            |
|                                   | Component Description: | General Contract                                |
|                                   | Component Description. | PO for multiple<br>sites                        |
|                                   | Amount:                | \$161,690.00                                    |
| Electrical Construction           |                        |   |
|                                   | Component Description: | Electrical Contract<br>PO for multiple<br>sites |
|                                   | Amount:                | \$78,319.90                                     |
| Mechanical Construction           |                        |   |
|                                   | Component Description: | Mechanical/HVAC<br>Contract PO for              |
|                                   | Amount:                | multiple sites<br>\$111,660.15                  |
|                                   |                        | φτι,000.10                                      |

| <b>Component Description:</b> | Program  |
|-------------------------------|--|
|                               | Transport Stream   |
|                               | Processing   |
| Amount:                       | \$22,718.40  |
|                               |  |
|                               |  |
| Component Description:        | Other Expenses   |
|                               | Network Switch   |
|                               | 11 Switches for  |
|                               | total of 11,527.67   |
|                               | equals 1,047.97  |
|                               | per transmitter  |
|                               | site.  |
| Amount:                       | \$1,047.97   |
|                               |  |
| Information not provided.     |  |
|                               |  |
| <b>Component Description:</b> | MVPD Notify See  |
|                               | attach pg. 12-13   |
|                               | \$5,100 for 11   |
|                               | sites equal 463.64   |
|                               | each   |
| Amount:                       | \$463.64   |
|                               |  |
| Information not provided.     |  |
|                               |  |
|                               |  |
|                               |  |
| Component Description:        | Medical  |
|                               | Notification, See  |
|                               | schedule of  |
|                               | services. PO   |
|                               | /quote for multiple  |
|                               | call/locations.  |
| Amount:                       | \$3,750.00   |
| Information not provided      |  |
|                               |  |
|                               |  |
| Information not provided.     |  |
|                               | Amount:   Component Description:   Amount:   Information not provided.   Component Description:   Amount:   Information not provided.   Component Description: |

| Cost<br>Information | Grand Total           |                                |                |                |
|---------------------|-----------------------|--------------------------------|----------------|----------------|
|                     |                       | Predetermined<br>Cost Estimate | Estimated Cost | Actual Cost    |
|                     | Total for all systems | \$5,796,684.78                 | \$5,298,399.67 | \$2,840,984.27 |

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

| Certification | Section  | Question   | Response |
|---------------|--|--|----------|
|               | Submission of Estimated<br>Expenses Statements | WILLFUL FALSE STATEMENTS ON THIS<br>FORM ARE PUNISHABLE BY FINE AND<br>/OR IMPRISONMENT (U.S. CODE, TITLE<br>18, SECTION 1001), AND/OR<br>REVOCATION OF ANY STATION<br>LICENSE OR CONSTRUCTION PERMIT<br>(U.S. CODE, TITLE 47, SECTION 312(a)<br>(1), AND/OR FORFEITURE (U.S. CODE,<br>TITLE 47, SECTION 503), AND ANY<br>FALSE STATEMENTS COULD SUBJECT<br>THIS ENTITY TO LIABILITY UNDER THE<br>FALSE CLAIMS ACT.  |          |
|               |  | <ol> <li>The Authorized<br/>Person signing<br/>below certifies that he<br/>/she is authorized to<br/>submit this TV<br/>Broadcaster<br/>Relocation Fund<br/>Reimbursement<br/>Form on behalf of<br/>the above-named<br/>entity.</li> <li>The above-named<br/>entity acknowledges<br/>that all certifications<br/>and attached<br/>documentation are<br/>considered material<br/>representations.</li> <li>The above-named<br/>entity acknowledges<br/>the submission of the<br/>information herein<br/>creates no obligation<br/>on the part of the<br/>government to pay<br/>any amount.</li> </ol> |          |

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

| 8.              | The above-named<br>entity certifies that it<br>is in full compliance<br>with all statutes,<br>rules, regulations<br>and governmental<br>requirements for<br>which compliance is<br>a pre-requisite for<br>obtaining the<br>payments herein<br>requested. |   |
|-----------------|--|---|
| an aut<br>named | are, under penalty of perjury, that I am<br>horized representative of the above-<br>d applicant for the Authorization(s)<br>fied above.  | Donald<br>Smith<br>Director of<br>Compliance<br>and New<br>Technologies |

| Certification | Section  | Question   | Response |
|---------------|--|--|----------|
|               | Submission of Actual<br>Cost Documentation<br>Statements | WILLFUL FALSE, FRAUDULENT, OR<br>FICTITIOUS STATEMENTS ON THIS<br>FORM ARE PUNISHABLE BY FINE AND<br>/OR IMPRISIONMENT (U.S. CODE, TITLE<br>18, SECTION 1001), AND/OR<br>REVOCATION OF ANY STATION<br>LICENSE OR CONSTRUCTION PERMIT<br>(U.S. CODE, TITLE 47, SECTION 312(a)<br>(1), AND/OR FORFEITURE (U.S. CODE,<br>TITLE 47, SECTION 503), AND ANY<br>FALSE AND/OR FRAUDULENT<br>STATEMENTS COULD SUBJECT THIS<br>ENTITY TO LIABILITY UNDER THE<br>FALSE CLAIMS ACT (U.S. CODE, TITLE<br>31, SECTIONS 3729-3733). |          |
|               |  | <ol> <li>The Authorized<br/>Person signing<br/>below certifies and<br/>represents that he<br/>/she is authorized to<br/>submit this TV<br/>Broadcaster<br/>Relocation Fund<br/>Reimbursement<br/>Form on behalf of<br/>the above-named<br/>entity.</li> </ol>  |          |
|               |  | 2. The above-named<br>entity certifies that<br>the statements in this<br>form and attached<br>documentation are<br>true, complete, and<br>correct.   |          |
|               |  | 3. The above-named<br>entity acknowledges<br>that all certifications<br>and attached<br>documentation are<br>considered material<br>representations.   |          |
|               |  |  |          |

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

| 8.   | The above-named<br>entity acknowledges<br>that overpayments or<br>payments in error<br>must be promptly<br>refunded to the<br>Commission.   |   |
|--|---|---|
| 9.   | The above-named<br>entity certifies that it<br>is in full compliance<br>with all statutes,<br>rules, regulations<br>and governmental<br>requirements for<br>which compliance is<br>a prerequisite for<br>obtaining the<br>payments herein<br>requested. |   |
| I declare, under penalty of perjury, that I am<br>an authorized representative of the above-<br>named applicant for the Authorization(s)<br>specified above. |   | Robert<br>Levin<br>Director of<br>Finance and<br>Administration<br>09/26/2019 |

## Attachments

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