



(REFERENCE COPY - Not for submission)

# FCC Form 399: Reimbursement Request

Facility **10802** | Service: **DTV** | Call **WTTW** | Channel: **47 (UHF)**  
ID: | Sign:  
File **0000028360**  
Number:  
FRN: **0002860179** | Date **03/28**  
Submitted: **/2019**

## Applicant Information

### Applicant Name, Type, and Contact Information

| Applicant  | Address   | Phone             | Email             | Applicant Type |
|--|---|-------------------|-------------------|----------------|
| <b>WINDOW TO THE WORLD COMMUNICATIONS, INC.</b><br>Doing Business As: WINDOW TO THE WORLD COMMUNICATIONS, INC. | Eshed Halpern<br>5400 NORTH ST.<br>LOUIS AVE<br>CHICAGO,<br>IL 60625<br>United States | +1 (773) 509-5412 | ehalpern@wttw.com | Not-for-Profit |

## Reimbursement Contact Information

### Reimbursement Contact Name and Information

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

## Preparer Contact Information

### Preparer Contact Name and Information

| Applicant  | Address   | Phone             | Email             |
|--|---|-------------------|-------------------|
| <b>Mike Tompary</b><br><i>Window to the World Communications, Inc.</i> | 5400 N. St.<br>Louis Ave<br>Chicago, IL<br>60625<br>United States | +1 (773) 509-2460 | mtompary@wttw.com |

**Broadcaster  
Information  
and  
Transition  
Plan**

| Question   | Response  |
|--|---|
| Will the station be sharing equipment with another broadcast television station or stations (e.g., a shared antenna, co-location on a tower, use of the same transmitter room, multiple transmitters feeding a combiner, etc.)? If yes, enter the facility ID's of the other stations and click 'prefill' to download those stations' licensing information. | Yes   |
| Briefly describe transition plan   | Replace aux transmitter with new transmitter and place on air. Replace main transmitter and antenna and place on air at end of phase six. Reconfigure aux and antenna and place into standby. |

**Transmitters**

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

**Auxiliary  
Transmitter****Existing Transmitter Information**

| <b>Section</b>  | <b>Question</b>   | <b>Response</b>                               |
|---|---|---|
| <b>Existing Transmitter<br/>Description</b>           | Type of change  | Purchase<br>New                               |
|   | Use   | Auxiliary<br>(Backup)                         |
|   | Description of Use  | For backup<br>if main<br>transmitter<br>fails |
|   | Ownership   | Owned   |
|   | Owner   | N/A   |
|   | Site  | N/A   |
|   | Is this transmitter currently shared with<br>another station? | No  |
|   | Is this transmitter currently in operating<br>condition?      | Yes   |
| <b>Existing Transmitter<br/>Manufacturer and Type</b> | Manufacturer  |   |
|   | Model   | Sigma CD<br>Diamond<br>Drive                  |
|   | Year  | 2001  |
|   | Type  | Inductive<br>Output Tube                      |
|   | IOT Power Type  | Single  |
|   | Power Capacity  | 24 kW   |

**Auxiliary  
Transmitter**

**New Transmitter Costs**

| Section                | Question                                  | Response  |
|------------------------|---|---|
| <b>New Transmitter</b> | Use                                       | Auxiliary<br>(Backup)   |
|                        | Change Type                               | Purchase<br>New   |
|                        | Is this a request for upgraded equipment? | No  |
|                        | Manufacturer                              |   |
|                        | Model                                     | ULXTE-20  |
|                        | Transmitter Type                          | Solid State   |
|                        | Solid State Cooling                       | Liquid Cooled   |
|                        | Solid State Power capacity                | 10.8 kW   |
|                        | Justification for New Transmitter         | Due to<br>channel<br>reassignment<br>need lower<br>power<br>transmitter<br>and new<br>exciters. |

**Auxiliary  
Transmitter**

**Other Transmitter Costs**

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

**Auxiliary Transmitter**

**Other Transmitter Cost Not Listed**

| Name                     | Description                         |
|--------------------------|-------------------------------------|
| <b>XTE-EXCITER-MS</b>    | XTE MULTI STANDARD EXCITER          |
| <b>9710023510</b>        | CPLR FLANGED 4-1/16 PORT MALE ENDS  |
| <b>7740156095</b>        | KIT, MASK FILTER PLUMBING KIT       |
| <b>ULXTED-INST-C-020</b> | ULXTED-20 INSTALL SERVICES          |
| <b>FLUL-22000-6AT-C</b>  | REFLECTIVE ATSC CRITICAL MASKFILTER |
| <b>9435276550</b>        | KIT, ULXT SYSTEM WIRING             |
| <b>9929139090</b>        | iINSTALL MATERIAL KIT               |
| <b>2602142000</b>        | EQ ELBOW/90 4-1/16 MYAT COMPATIBLE  |
| <b>7401278000</b>        | PARALLEL SURGE SUPPRESSOR, FOR 3 PH |

|                       |  |
|-----------------------|--|
| <b>480TO208-75KVA</b> | 75 KVA TRANSFORMER THREE PHASE<br>480V DELTA PRIMARY |
| <b>7905609698</b>     | BRAZED PLATE HEAT EXCHANGER KIT                      |
| <b>9950333006</b>     | ASSY EXTERNAL PUMP MODULE                            |
| <b>9929138139</b>     | KIT, RF LINE 4-1/16" 50 Ohm                          |
| <b>7740156081</b>     | PLUMBING COPPER LINE KIT                             |
| <b>5830163500</b>     | SWITCH COAX 4 PORT 50 Ohm                            |
| <b>0511010030</b>     | EXTENDED LIFE ABTIFREEZE/COOLANT                     |

**Primary  
Transmitter****Existing Transmitter Information**

| <b>Section</b>  | <b>Question</b>  | <b>Response</b>              |
|---|--|------------------------------|
| <b>Existing Transmitter<br/>Description</b>           | Type of change   | Purchase<br>New              |
|   | Use  | Primary<br>(Main)            |
|   | Description of Use   | N/A                          |
|   | Ownership  | Owned                        |
|   | Owner  | N/A                          |
|   | Site   | N/A                          |
|   | Is this transmitter currently shared with another station? | No                           |
|   | Is this transmitter currently in operating condition?      | Yes                          |
| <b>Existing Transmitter<br/>Manufacturer and Type</b> | Manufacturer   |                              |
|   | Model  | Sigma CD<br>Diamond<br>Drive |
|   | Year   | 2001                         |
|   | Type   | Inductive<br>Output Tube     |
|   | IOT Power Type   | Single                       |
|   | Power Capacity   | 24 kW                        |

**Primary  
Transmitter**

**New Transmitter Costs**

| Section                | Question                                  | Response   |
|------------------------|---|--|
| <b>New Transmitter</b> | Use                                       | Primary (Main)   |
|                        | Change Type                               | Purchase New   |
|                        | Is this a request for upgraded equipment? | Yes  |
|                        | Manufacturer                              |  |
|                        | Model                                     | ULXTE-20   |
|                        | Transmitter Type                          | Solid State  |
|                        | Solid State Cooling                       | Liquid Cooled  |
|                        | Solid State Power capacity                | 10.8 kW  |
|                        | Justification for New Transmitter         | Due to channel reassignment need lower power transmitter and new excitors. |

**Primary  
Transmitter**

**Other Transmitter Costs**

| Section                   | Question                              | Response |
|---------------------------|---------------------------------------|----------|
| <b>Electrical Service</b> | Service Entrance (3 phases 800A 208V) | No       |
|                           | Switchgear (industrial 800 amp)       | No       |
|                           | Transformer (480V)                    | No       |
|                           | Power                                 | N/A      |
|                           | Rigid Conduit and Wiring              | No       |
|                           | Size                                  | N/A      |
|                           | Length                                | N/A      |
|                           | Other Electrical Service              | Yes      |



|  |   |   |
|--|---|---|
|  | Description   | Electricians to remove old equipment and install new equipment. Relocate or remove and reinstall all electric work. To remove existing and hang new transmission line. To remove offsite all old equipment. |
| <b>HVAC Service</b>  | Does the replacement transmitter require HVAC Service?  | No  |
|  | Type  | N/A   |
|  | Size  | N/A   |
|  | Other Size  | N/A   |
| <b>Transmitter Building Addition/Modification or Leasehold Improvement</b> | Does the Transmitter Building require an addition, modification, other leasehold improvement? | No  |
|  | Size  | N/A   |
| <b>Channel 14 Costs</b>  | Is an RF Consulting Engineer needed?  | N/A   |
|  | Is a channel 14 Mask Filer needed?  | N/A   |
|  | Is additional field engineering time needed?  | N/A   |
|  | Number of Days  | N/A   |

**Primary Transmitter**

**Other Transmitter Cost Not Listed**

| Name       | Description              |
|------------|--------------------------|
| 7740156081 | PLUMBING COPPER LINE KIT |

|                             |   |
|-----------------------------|---|
| <b>9710023510</b>           | CPLR FLANGED 4-1/16 4 PORT MALE ENDS 48D                |
| <b>5830163500</b>           | SWITCH COAX 4 PORT 50 Ohm                               |
| <b>9810243002</b>           | MAIN/ALT CONTROL RACK 37RU                              |
| <b>0511010030</b>           | EXTENDED LIFE ANTIFREEZE/COOLANT                        |
| <b>480TO208-75KVA</b>       | 75KVA TRANSFORMER THREE PHASE 480v DELTA PRIMARY        |
| <b>9435276550</b>           | ULXT SYSTEM WIRING KIT                                  |
| <b>2602142000</b>           | EQ ELBOW/90 4 1/16 MYAT COMPATIBLE                      |
| <b>7905609698</b>           | BRAZED PLATE HEAT EXCHANGER KIT                         |
| <b>BRDDA25F15</b>           | BIRD FORCED-AIR COOLED DUMMY LOAD                       |
| <b>Great Lakes Plumbing</b> | GL Plumbing to connect cooling system to building water |
| <b>ULXTED-INST-C-020</b>    | ILXTED-20 INSTALL SERVICES                              |
| <b>7401278000</b>           | PARALLEL SURGE SUPPRESSOR                               |
| <b>XTE-EXCITER-MS</b>       | XTE Multi Standard Exciter                              |
| <b>6202395000</b>           | STEP REDUCER FLANGED 4 1/16 TO 3 1/8 50 Ohm             |
| <b>9950333006</b>           | ASSY, EXTERNAL PUMP MODULE                              |
| <b>FLUL-22000-6AT-C</b>     | REFLECTIVE ATSC CRITICAL MASK FILTER                    |
| <b>9929139090</b>           | INSTALL MATERIAL KIT, MAXVIVA                           |
| <b>7740156095</b>           | MASK FILTER PLUNBING KIT                                |
| <b>9929138139</b>           | KIT, RF LINE 4-1/16" 50 Ohm                             |
| <b>S and H</b>              | Shipping and Handling                                   |

**Antennas**

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

**Auxiliary  
Antenna****Existing Antenna Information**

| Section   | Question   | Response   |
|---|--|--|
| <b>Existing Antenna<br/>Description</b>           | Type of change   | Retune<br>Existing                               |
|   | Antenna Use  | Auxiliary<br>(Backup)                            |
|   | Description of Use   | Used as<br>backup if<br>main<br>antenna<br>fails |
|   | Ownership  | Owned  |
|   | Owner  | N/A  |
|   | Site   | N/A  |
|   | Is the existing antenna shared with another station or stations? | Yes  |
|   | Is the existing antenna directional?                             | Yes  |
|   | Is antenna in operating condition?                               | Yes  |
|   | Is antenna located on or in close proximity to an antenna farm?  | Yes  |
| <b>Existing Antenna<br/>Manufacturer and Type</b> | Class  | Full Power                                       |
|   | Mounting   | Side Mount                                       |
|   | Antenna position in stack  | Middle   |
|   | Polarization   | Horizontal                                       |
|   | Type   | Broadband<br>Panel                               |
|   | Number of Stations Supported                                     | 7  |
|   | Number of Panels   | 8  |

|                                 |            |
|---------------------------------|------------|
| Design power capacity in use    | 100.0 %    |
| Lower Limit                     | 470.00 MHz |
| Upper Limit                     | 700.00 MHz |
| Other Antenna Type              | N/A        |
| ERP: (Effective Radiated Power) | 300.0 kW   |
| Manufacturer                    | RFS        |
| Model                           | PHP24C     |
| Year                            | 2004       |

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

| Facility ID | Call Sign |
|-------------|-----------|
| 10981       | WCPX-TV   |
| 22211       | WFLD      |
| 32334       | WJYS      |
| 47905       | WMAQ-TV   |
| 71428       | WCIU-TV   |
| 72115       | WGN-TV    |

**Auxiliary Antenna**

**Adjustment to Existing Antenna**

| Section                               | Question                                      | Response |
|---------------------------------------|---|----------|
| <b>Sweep Test of Existing Antenna</b> | Do you need a sweep test of existing antenna? | Yes      |

**Auxiliary Antenna**

**Other Antenna Costs**

| Section                            | Question                                     | Response |
|------------------------------------|--|----------|
| <b>Combiner for Shared Antenna</b> | Do you need a Combiner for a Shared Antenna? | No       |

|                                   |     |
|-----------------------------------|-----|
| Type                              |     |
| Number of channels supported      | N/A |
| Frequencies of channels supported | N/A |
| Frequency                         |     |

**Auxiliary  
Antenna**

**Other Antenna Cost Not Listed**

Information not provided.

**Primary  
Antenna**

**Existing Antenna Information**

| Section   | Question   | Response           |
|---|--|--------------------|
| <b>Existing Antenna<br/>Description</b>           | Type of change   | Purchase<br>New    |
|   | Antenna Use  | Primary<br>(Main)  |
|   | Description of Use   | N/A                |
|   | Ownership  | Owned              |
|   | Owner  | N/A                |
|   | Site   | N/A                |
|   | Is the existing antenna shared with another station or stations? | No                 |
|   | Is the existing antenna directional?                             | Yes                |
|   | Is antenna in operating condition?                               | Yes                |
|   | Is antenna located on or in close proximity to an antenna farm?  | Yes                |
| <b>Existing Antenna<br/>Manufacturer and Type</b> | Class  | Full Power         |
|   | Mounting   | Side Mount         |
|   | Antenna position in stack  | Middle             |
|   | Polarization   | Horizontal         |
|   | Type   | 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)<br>.....                         | 300.0 kW           |

|              |                         |
|--------------|-------------------------|
| Manufacturer |                         |
| Model        | ATW13H4 -<br>HSC1 - 47S |
| Year         | 2001                    |

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**Primary  
Antenna**

**New Antenna Costs**

| Section                                       | Question   | Response           |
|---|--|--------------------|
| <b>New Antenna<br/>Description</b>            | 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?   | Yes                |
|   | Is antenna directional?  | Yes                |
|   | Will antenna be located on or in close proximity to an antenna farm? | Yes                |
| <b>New Antenna<br/>Manufacturer and Types</b> | Class  | Full Power         |
|   | Mounting   | Side Mount         |
|   | Antenna position in stack  | Middle             |
|   | Polarization   | Elliptical         |
|   | Type   | Broadband<br>Panel |
|   | Number of Stations Supported   | 2                  |
|   | Number of Panels/Bays  | 24                 |
|   | Lower Limit  | 488.00 MHz         |
|   | Upper Limit  | 608.00 MHz         |
|   | Design power capacity in use   | 100.0 %            |
|   | Other Antenna Type   | N/A                |
|   | ERP: (Effective Radiated Power)                                      | 193.0 kW           |
|   | Manufacturer   |                    |
| Model   | PEPL24C  |                    |



|                               |                                  |
|-------------------------------|----------------------------------|
| Year                          | 2017                             |
| Justification for New Antenna | Channel reassignment from repack |

**Primary Antenna**

**Other Antenna Costs**

| Section                            | Question  | Response                  |
|------------------------------------|---|---------------------------|
| <b>Combiner for Shared Antenna</b> | Do you need a Combiner for a Shared Antenna?  | Yes                       |
|                                    | Type  | New                       |
|                                    | Number of channels supported  | 2                         |
|                                    | Frequencies of channels supported   | Upper and lower frequency |
|                                    | Frequency   | 488.0 MHz - 608.0 MHz     |
|                                    | Do you need a combiner output splitter /switcher for dual feed lines?                                       | No                        |
| <b>Elbow Complex</b>               | Do you require the separate purchase of the Elbow Complex?  | No                        |
|                                    | Broadband or Single Channel?  | N/A                       |
|                                    | Feed Line Size  | N/A                       |
| <b>Side Mount Brackets</b>         | Do you require the separate purchase of side mount brackets for a high power antenna?                       | Yes                       |
| <b>Pattern Scatter Analysis</b>    | Do you require separate purchase of pattern scatter analysis for a side mount high or medium power antenna? | Yes                       |
| <b>Sweep Test</b>                  | Do you require the sweep testing of transmission line and antenna?  | Yes                       |

**Primary  
Antenna**

**Other Antenna Cost Not Listed**

| Name   | Description  |
|--|--|
| <b>Structural Engineering</b>                  | See Willis Tower Preliminary Budget Overview WEST Tower RFS Antenna /Combiner System |
| <b>Radome Modifications</b>                    | See Willis Tower Preliminary Budget Overview WEST Tower RFS Antenna /Combiner System |
| <b>Combiner Installation and Commissioning</b> | See Willis Tower Preliminary Budget Overview WEST Tower RFS Antenna /Combiner System |
| <b>Equipment Storage</b>                       | See Willis Tower Preliminary Budget Overview WEST Tower RFS Antenna /Combiner System |
| <b>RFR Measurements</b>                        | See Willis Tower Preliminary Budget Overview WEST Tower RFS Antenna /Combiner System |
| <b>Combiner Freight</b>                        | See Willis Tower Preliminary Budget Overview WEST Tower RFS Antenna /Combiner System |
| <b>Tower Modifications</b>                     | See Willis Tower Preliminary Budget Overview WEST Tower RFS Antenna /Combiner System |
| <b>Antenna Delivery to Willis</b>              | See Willis Tower Preliminary Budget Overview WEST Tower RFS Antenna /Combiner System |
| <b>Antenna Installation and Commissioning</b>  | See Willis Tower Preliminary Budget Overview WEST Tower RFS Antenna /Combiner System |
| <b>RF Safety Coordination</b>                  | See Willis Tower Preliminary Budget Overview WEST Tower RFS Antenna /Combiner System |
| <b>Permitting</b>                              | See Willis Tower Preliminary Budget Overview WEST Tower RFS Antenna /Combiner System |
| <b>Transmission Line Installation</b>          | See Willis Tower Preliminary Budget Overview WEST Tower RFS Antenna /Combiner System |

|                                    |  |
|------------------------------------|--|
| <b>Combiner Module</b>             | See Willis Tower Preliminary Budget Overview WEST Tower RFS Antenna /Combiner System |
| <b>Antenna Freight</b>             | See Willis Tower Preliminary Budget Overview WEST Tower RFS Antenna /Combiner System |
| <b>Antenna Mounts</b>              | See Willis Tower Preliminary Budget Overview WEST Tower RFS Antenna /Combiner System |
| <b>Combiner Spine</b>              | See Willis Tower Preliminary Budget Overview WEST Tower RFS Antenna /Combiner System |
| <b>Outside Project Management</b>  | See Willis Tower Preliminary Budget Overview WEST Tower RFS Antenna /Combiner System |
| <b>Transmission Line</b>           | See Willis Tower Preliminary Budget Overview WEST Tower RFS Antenna /Combiner System |
| <b>Combiner Room Construction</b>  | See Willis Tower Preliminary Budget Overview WEST Tower RFS Antenna /Combiner System |
| <b>Transmission Line Mounts</b>    | See Willis Tower Preliminary Budget Overview WEST Tower RFS Antenna /Combiner System |
| <b>Combiner Delivery to Willis</b> | See Willis Tower Preliminary Budget Overview WEST Tower RFS Antenna /Combiner System |
| <b>Internal Transmission Line</b>  | See Willis Tower Preliminary Budget Overview WEST Tower RFS Antenna /Combiner System |

**Transmission  
Line**

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

**Auxiliary  
Transmission  
Line**

**Existing Transmission Line**

| Section   | Question   | Response                  |
|---|--|---------------------------|
| <b>Existing Transmission<br/>Line Description</b>               | Type of change   | Purchase<br>New           |
|   | Use  | Auxiliary<br>(Backup)     |
|   | Description of Use   | Use if main<br>line fails |
|   | Ownership  | Owned                     |
|   | Owner  | N/A                       |
|   | Site   | N/A                       |
|   | Is the existing transmission line shared with another station or stations? | No                        |
|   | Is Transmission Line in operating condition?                               | Yes                       |
| <b>Existing Transmission<br/>Line Manufacturer and<br/>Type</b> | Manufacturer   |                           |
|   | Type   | Rigid                     |
|   | Diameter   | 4 1/16<br>inches          |
|   | Other Diameter   | N/A                       |
|   | Segment Length   | 20 inches                 |
|   | Other Segment Length   | N/A                       |
|   | Number of parallel runs  | 1                         |
|   | Length   | 100 feet<br>per run       |

**Auxiliary  
Transmission  
Line**

**New Transmission Line**

| Section                            | Question                                  | Response   |
|------------------------------------|---|--|
| <b>New Transmission Line Costs</b> | Use                                       | Auxiliary (Backup)                                       |
|                                    | Description of Use                        | Use if main fails  |
|                                    | Change Type                               | Purchase New   |
|                                    | Is this a request for upgraded equipment? | No   |
|                                    | Type                                      | Rigid  |
|                                    | Diameter                                  | 6 1/8 inches   |
|                                    | Other Diameter                            | N/A  |
|                                    | Segment Length                            | 20 inches  |
|                                    | Other Segment Length                      | N/A  |
|                                    | Number of parallel runs                   | 1  |
|                                    | Length                                    | 100 feet per run   |
|                                    | Justification for New Transmission Line   | Additional power to antenna. See exhibit attached page 6 |

**Auxiliary  
Transmission  
Line**

**Other Transmission Line Expenses Not Listed**

| Name                       | Description  |
|----------------------------|--|
| <b>Electrician Hanging</b> | Electrician to hang and remove old transmission lines. |

**Primary  
Transmission  
Line**

**Existing Transmission Line**

| Section   | Question   | Response            |
|---|--|---------------------|
| <b>Existing Transmission Line Description</b>           | Type of change   | Purchase<br>New     |
|   | Use  | Primary<br>(Main)   |
|   | Description of Use   | N/A                 |
|   | Ownership  | Owned               |
|   | Owner  | N/A                 |
|   | Site   | N/A                 |
|   | Is the existing transmission line shared with another station or stations? | No                  |
|   | Is Transmission Line in operating condition?                               | Yes                 |
| <b>Existing Transmission Line Manufacturer and Type</b> | Manufacturer   |                     |
|   | Type   | Rigid               |
|   | Diameter   | 4 1/16<br>inches    |
|   | Other Diameter   | N/A                 |
|   | Segment Length   | 20 inches           |
|   | Other Segment Length   | N/A                 |
|   | Number of parallel runs  | 1                   |
|   | Length   | 100 feet<br>per run |

**Primary  
Transmission  
Line**      **New Transmission Line**

| Section                            | Question                                  | Response   |
|------------------------------------|---|--|
| <b>New Transmission Line Costs</b> | Use                                       | Primary (Main)   |
|                                    | Description of Use                        | N/A  |
|                                    | Change Type                               | Purchase New   |
|                                    | Is this a request for upgraded equipment? | No   |
|                                    | Type                                      | Rigid  |
|                                    | Diameter                                  | 6 1/8 inches   |
|                                    | Other Diameter                            | N/A  |
|                                    | Segment Length                            | 20 inches  |
|                                    | Other Segment Length                      | N/A  |
|                                    | Number of parallel runs                   | 1  |
|                                    | Length                                    | 100 feet per run   |
|                                    | Justification for New Transmission Line   | Additional power to antenna. See exhibit attached page 6 |

**Primary  
Transmission  
Line**      **Other Transmission Line Expenses Not Listed**

| Name                       | Description  |
|----------------------------|--|
| <b>Electrician Hanging</b> | Electrician to hang and remove old transmission line |



**Tower Equipment And Rigging Costs**

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

**Auxiliary Tower**

**Existing Tower**

| Section   | Question  | Response                |
|---|---|-------------------------|
| Existing Tower Description                          | Type of change  | Modify Existing         |
|   | Tower Use   | Auxiliary (Backup)      |
|   | Description of Use                                      | Use if main tower fails |
|   | Ownership   | Leased                  |
|   | Is this tower consider Complex?                         | Located on Building     |
|   | Is this tower currently shared with any other stations? | Yes                     |
|   | One or more FM, AM or TV radio broadcaster(s)           | Yes                     |
|   | Others Types of Users                                   | No                      |
|   | Is tower documented for structural analysis?            | Yes                     |
|   | Is tower compliant with Rev G?                          | Yes                     |
| Existing Tower Structure Registration               | Do you have a tower registration number?                | Yes                     |
|   | ASR Number  | 1032960                 |
| Coordinates (NAD83 ( North American Datum of 1983)) | Latitude (NAD83)  | 41° 52' 44.0" N-        |
|   | Longitude (NAD83)                                       | 087° 38' 08.0" W-       |
|   | Overall Structure Height                                | 1722.09 feet            |
|   | Support Structure Height                                | 1435.35 feet            |

|  |                            |
|--|----------------------------|
| Ground Elevation Above Mean Sea Level (AMSL) | 595.14 feet                |
| Structure Type                               | BMAST - Building with Mast |
| Tower Owner                                  | 233 Broadcast, LLC         |
| Date Constructed                             | 09/30/2012                 |

**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 |
|-------------|-----------|---------|
| 168662      | WMEU-CD   | DTV     |
| 70042       | WLIT-FM   | FM      |
| 71425       | WWME-CD   | DTV     |
| 6377        | WTMX      | FM      |
| 28621       | WBMX      | FM      |
| 74178       | WKSC-FM   | FM      |
| 51165       | WGCI-FM   | FM      |
| 22211       | WFLD      | DTV     |
| 9617        | WBBM-TV   | DTV     |
| 9613        | WBBM-FM   | FM      |
| 53971       | WEBG      | FM      |
| 66978       | WEDE-CD   | DTV     |
| 10801       | WFMT      | FM      |
| 32334       | WJYS      | DTV     |
| 72115       | WGN-TV    | DTV     |
| 71283       | WCFS-FM   | FM      |

|       |         |     |
|-------|---------|-----|
| 47906 | KNBC    | DTV |
| 73228 | WLS-FM  | FM  |
| 48772 | WPWR-TV | DTV |
| 10981 | WCPX-TV | DTV |
| 10802 | WTTW    | DTV |
| 73226 | WLS-TV  | DTV |
| 70119 | WSNS-TV | DTV |
| 71428 | WCIU-TV | DTV |

**Auxiliary Tower**

**Tower Modification Costs**

| Section                     | Question   | Response                    |
|-----------------------------|--|-----------------------------|
| <b>Engineering Study</b>    | Please what type of engineering study is required, if any: | No study needed             |
| <b>Tower Reinforcements</b> | Please select whether tower reinforcements are needed:     | Major Reinforcements needed |

**Auxiliary Tower**

**Tower Rigging Costs**

| Section                             | Question                          | Response            |
|-------------------------------------|-----------------------------------|---------------------|
| <b>Tower Rigging Costs</b>          | Complex Tower                     | Located on Building |
| <b>Helicopter Services Required</b> | Are helicopter services required? | No                  |

**Auxiliary Tower**

**Other Tower Expenses Not Listed**

Information not provided.

**Primary Tower**

**Existing Tower**

| Section  | Question  | Response                   |
|--|---|----------------------------|
| <b>Existing Tower Description</b>                          | Type of change  | Modify Existing            |
|  | Tower Use   | Primary (Main)             |
|  | Description of Use                                      | N/A                        |
|  | Ownership   | Leased                     |
|  | Is this tower consider Complex?                         | Located on Building        |
|  | Is this tower currently shared with any other stations? | Yes                        |
|  | One or more FM, AM or TV radio broadcaster(s)           | Yes                        |
|  | Others Types of Users                                   | No                         |
|  | Is tower documented for structural analysis?            | Yes                        |
|  | Is tower compliant with Rev G?                          | Yes                        |
| <b>Existing Tower Structure Registration</b>               | Do you have a tower registration number?                | Yes                        |
|  | ASR Number  | 1032959                    |
| <b>Coordinates (NAD83 ( North American Datum of 1983))</b> | Latitude (NAD83)  | 41° 52' 44.1" N-           |
|  | Longitude (NAD83)                                       | 087° 38' 10.2" W-          |
|  | Overall Structure Height                                | 1729.97 feet               |
|  | Support Structure Height                                | 1435.35 feet               |
|  | Ground Elevation Above Mean Sea Level (AMSL)            | 595.14 feet                |
|  | Structure Type  | BTWR - Building with Tower |

|  |                  |                          |
|--|------------------|--------------------------|
|  | Tower Owner      | 233<br>Broadcast,<br>LLC |
|  | Date Constructed | 01/01/2002               |

**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 |
|-------------|-----------|---------|
| 10802       | WTTW      | DTV     |
| 71283       | WCFS-FM   | FM      |
| 71428       | WCIU-TV   | DTV     |
| 47906       | KNBC      | DTV     |
| 72115       | WGN-TV    | DTV     |
| 9617        | WBBM-TV   | DTV     |
| 70042       | WLIT-FM   | FM      |
| 71425       | WWME-CD   | DTV     |
| 74178       | WKSC-FM   | FM      |
| 73226       | WLS-TV    | DTV     |
| 73228       | WLS-FM    | FM      |
| 51165       | WGCI-FM   | FM      |
| 53971       | WEBG      | FM      |
| 9613        | WBBM-FM   | FM      |
| 66978       | WEDE-CD   | DTV     |
| 6377        | WTMX      | FM      |
| 48772       | WPWR-TV   | DTV     |
| 32334       | WJYS      | DTV     |
| 22211       | WFLD      | DTV     |

|        |         |     |
|--------|---------|-----|
| 168662 | WMEU-CD | DTV |
| 10801  | WFMT    | FM  |
| 10981  | WCPX-TV | DTV |
| 70119  | WSNS-TV | DTV |
| 28621  | WBMX    | FM  |

**Primary Tower**

**Tower Modification Costs**

| Section                     | Question   | Response                    |
|-----------------------------|--|-----------------------------|
| <b>Engineering Study</b>    | Please what type of engineering study is required, if any: | No study needed             |
| <b>Tower Reinforcements</b> | Please select whether tower reinforcements are needed:     | Major Reinforcements needed |

**Primary Tower**

**Tower Rigging Costs**

| Section                             | Question                          | Response            |
|-------------------------------------|-----------------------------------|---------------------|
| <b>Tower Rigging Costs</b>          | Complex Tower                     | Located on Building |
| <b>Helicopter Services Required</b> | Are helicopter services required? | Yes                 |

**Primary Tower**

**Other Tower Expenses Not Listed**

| Name   | Description                                  |
|--|--|
| <b>WTTW Antenna Removal Engineering</b>            | Antenna Removal Engineering                  |
| <b>SW Pole Decommission Preparation Work</b>       | Estimated 10 nights of work for preparation. |
| <b>WTTW Antenna Removal RF Safety Coordination</b> | Antenna Removal RF Safety Coordination       |
| <b>Willis Tower Project Management</b>             | Willis Tower Project Management              |
| <b>WTTW T L Removal to 100 in smoke shaft</b>      | Removal of line in shaft from 109 to 100.    |

|   |   |
|---|---|
| <b>WTTW Transmission Line Removal to Smoke Shaft</b>    | Estimated 5 nights of work to complete.             |
| <b>SW Pole Decommission Engineering</b>                 | Pole Decommission Engineering                       |
| <b>SW Pole Decommission Prep. Work RF Safety Coord.</b> | RF safety coordination for SW pole decom. prep work |
| <b>SW Pole Material Removal and Disposal</b>            | Removal and disposal of remaining SW pole material  |
| <b>WTTW T L Removal RF Safety Coordination</b>          | RF safety coordination during line removal to shaft |
| <b>WTTW Antenna Removal</b>                             | Helicopter not required. Estimated 4 nights.        |

**Outside Professional Services Costs**

| <b>Section</b>  | <b>Question</b>  | <b>Response</b>   |
|---|--|---|
| <b>Outside Project Management Services</b>            | Do you require outside project management services?                          | Yes   |
|   | Number of Hours  | 500   |
|   | Explanation  | Outside services, such as legal, engineering, consultant. |
| <b>Outside RF consulting Engineering Services</b>     | Perform engineering study for new channel assignment and antenna development | No  |
|   | Prepare engineering section of Form FCC Construction Permit Application      | No  |
|   | For Auxiliary Facility   | N/A   |
|   | For Main Facility  | N/A   |
|   | Prepare engineering section of Form FCC License to Cover Application         | No  |
|   | For Auxiliary Facility   | N/A   |
|   | For Main Facility  | N/A   |
|   | Prepare request for Special Temporary Authority                              | No  |
|   | Quantity   | N/A   |
|   | Do you have Distributed Transmission System engineering services?            | N/A   |
|   | Critical Facility  | N/A   |
|   | Terrain-Shielded Facility  | N/A   |
| <b>Attorney and Other Outside Consulting Services</b> | Prepare and file Form FCC Construction Permit Application                    | No  |
|   | For Auxiliary Facility   | N/A   |
|   | For Main Facility  | N/A   |
|   | Prepare and file Form FCC License to Cover Application                       | Yes   |



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

**Outside Professional Services Costs**      **Other Professional Services Expenses Not Listed**  
Information not provided.

**Other Expenses**

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

**Other  
Expenses**

**Other Expenses Not Listed**

Information not provided.

**Cost Information**

**Transmitters**

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

| Description                         | Predetermined Cost Estimate | Estimated Cost      | Estimated Cost Justification | Actual Cost   | Actual Cost Justification |
|-------------------------------------|-----------------------------|---------------------|------------------------------|---------------|---------------------------|
| <b>Primary Transmitter ULXTE-20</b> | <b>\$916,015.88</b>         | <b>\$801,035.88</b> |                              | <b>\$0.00</b> |                           |
| S and H                             | <i>\$11,800.00</i>          | \$11,800.00         | N/A                          | N/A           | N/A                       |
| 7401278000                          | <i>\$1,726.66</i>           | \$1,726.66          | N/A                          | N/A           | N/A                       |
| ULXTED-INST-C-020                   | <i>\$77,318.52</i>          | \$77,318.52         | N/A                          | N/A           | N/A                       |
| Great Lakes Plumbing                | <i>\$35,000.00</i>          | \$35,000.00         | N/A                          | N/A           | N/A                       |
| BRDDA25F15                          | <i>\$16,129.32</i>          | \$16,129.32         | N/A                          | N/A           | N/A                       |
| 7905609698                          | <i>\$6,862.00</i>           | \$6,862.00          | N/A                          | N/A           | N/A                       |
| 2602142000                          | <i>\$3,816.00</i>           | \$3,816.00          | N/A                          | N/A           | N/A                       |
| 9435276550                          | <i>\$695.00</i>             | \$695.00            | N/A                          | N/A           | N/A                       |
| 480TO208-75KVA                      | <i>\$5,222.93</i>           | \$5,222.93          | N/A                          | N/A           | N/A                       |
| 0511010030                          | <i>\$290.90</i>             | \$290.90            | N/A                          | N/A           | N/A                       |
| 9810243002                          | <i>\$10,972.64</i>          | \$10,972.64         | N/A                          | N/A           | N/A                       |
| 5830163500                          | <i>\$9,075.25</i>           | \$9,075.25          | N/A                          | N/A           | N/A                       |
| 9710023510                          | <i>\$1,826.41</i>           | \$1,826.41          | N/A                          | N/A           | N/A                       |
| 7740156081                          | <i>\$3,720.00</i>           | \$3,720.00          | N/A                          | N/A           | N/A                       |

|   |                     |                     |     |               |     |
|---|---------------------|---------------------|-----|---------------|-----|
| Other Electrical Service: Electricians to remove old equipment and install new equipment. Relocate or remove and reinstall all electric work. To remove existing and hang new transmission line. To remove offsite all old equipment. | <i>\$174,400.00</i> | \$174,400.00        | N/A | N/A           | N/A |
| XTE-EXCITER-MS  | <i>\$14,950.00</i>  | \$14,950.00         | N/A | N/A           | N/A |
| 9929138139  | <i>\$11,527.04</i>  | \$11,527.04         | N/A | N/A           | N/A |
| 7740156095  | <i>\$259.39</i>     | \$259.39            | N/A | N/A           | N/A |
| 9929139090  | <i>\$695.00</i>     | \$695.00            | N/A | N/A           | N/A |
| FLUL-22000-6AT-C  | <i>\$25,698.82</i>  | \$25,698.82         | N/A | N/A           | N/A |
| 9950333006  | <i>\$8,800.00</i>   | \$8,800.00          | N/A | N/A           | N/A |
| 6202395000  | <i>\$730.00</i>     | \$730.00            | N/A | N/A           | N/A |
| UHF - Liquid Cooled Solid State Transmitter 8.2 - 13 kW   | \$494,500.00        | \$379,520.00        | N/A | N/A           | N/A |
| <b>Auxiliary Transmitter ULXTE-20</b>   | <b>\$666,983.92</b> | <b>\$552,003.92</b> |     | <b>\$0.00</b> |     |
| 0511010030  | <i>\$290.90</i>     | \$290.90            | N/A | N/A           | N/A |
| 5830163500  | <i>\$9,075.25</i>   | \$9,075.25          | N/A | N/A           | N/A |

|   |                    |                |     |              |     |
|---|--------------------|----------------|-----|--------------|-----|
| 9929138139  | <i>\$11,527.04</i> | \$11,527.04    | N/A | N/A          | N/A |
| 480TO208-75KVA  | <i>\$5,222.93</i>  | \$5,222.93     | N/A | N/A          | N/A |
| 7401278000  | <i>\$1,726.66</i>  | \$1,726.66     | N/A | N/A          | N/A |
| 2602142000  | <i>\$3,816.00</i>  | \$3,816.00     | N/A | N/A          | N/A |
| FLUL-22000-6AT-C  | <i>\$25,698.82</i> | \$25,698.82    | N/A | N/A          | N/A |
| ULXTED-INST-C-020                                       | <i>\$77,318.52</i> | \$77,318.52    | N/A | N/A          | N/A |
| 7740156095  | <i>\$259.39</i>    | \$259.39       | N/A | N/A          | N/A |
| 9710023510  | <i>\$1,826.41</i>  | \$1,826.41     | N/A | N/A          | N/A |
| 9929139090  | <i>\$695.00</i>    | \$695.00       | N/A | N/A          | N/A |
| 9435276550  | <i>\$695.00</i>    | \$695.00       | N/A | N/A          | N/A |
| 7740156081  | <i>\$3,720.00</i>  | \$3,720.00     | N/A | N/A          | N/A |
| 9950333006  | <i>\$8,800.00</i>  | \$8,800.00     | N/A | N/A          | N/A |
| 7905609698  | <i>\$6,862.00</i>  | \$6,862.00     | N/A | N/A          | N/A |
| XTE-EXCITER-MS  | <i>\$14,950.00</i> | \$14,950.00    | N/A | N/A          | N/A |
| UHF - Liquid Cooled Solid State Transmitter 8.2 - 13 kW | \$494,500.00       | \$379,520.00   | N/A | N/A          | N/A |
| <b>Sub-total</b>  | \$1,582,999.80     | \$1,353,039.80 | N/A | \$0.00       | N/A |
| <b>Total for all systems</b>                            | \$5,299,720.40     | \$3,241,590.40 | N/A | \$333,206.56 | N/A |

## Components

Information not provided.

**Cost Information**

**Antennas**

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

| Description  | Predetermined Cost Estimate | Estimated Cost        | Estimated Cost Justification   | Actual Cost         | Actual Cost Justification |
|--|-----------------------------|-----------------------|--|---------------------|---------------------------|
| <b>Primary Antenna PEPL24C</b>   | <b>\$1,339,570.60</b>       | <b>\$1,220,230.60</b> |  | <b>\$330,060.06</b> |                           |
| UHF - High Power, Side Mount, broadband panel, 24 bay,, 193 kW input, directional,, elliptically or circularly polarized | <i>\$120,862.50</i>         | \$120,862.50          | See Willis Tower Preliminary Budget Overview WEST Tower RFS Antenna /Combiner System | \$120,862.50        | N/A                       |
| Internal Transmission Line   | <i>\$75,000.00</i>          | \$75,000.00           | N/A  | N/A                 | N/A                       |
| Combiner Delivery to Willis  | <i>\$10,000.00</i>          | \$10,000.00           | N/A  | N/A                 | N/A                       |
| Transmission Line Mounts   | <i>\$15,000.00</i>          | \$15,000.00           | N/A  | N/A                 | N/A                       |
| Combiner Room Construction   | <i>\$45,000.00</i>          | \$45,000.00           | See Willis Tower Preliminary Budget Overview WEST Tower RFS Antenna /Combiner System | N/A                 | N/A                       |
| Transmission Line  | <i>\$111,298.10</i>         | \$111,298.10          | N/A  | \$111,298.10        | N/A                       |

|  |                            |              |     |             |  |
|--|----------------------------|--------------|-----|-------------|--|
| Outside Project Management             | <b><i>\$92,500.00</i></b>  | \$92,500.00  | N/A | \$1,355.46  | N/A  |
| Combiner Spine                         | <b><i>\$20,000.00</i></b>  | \$20,000.00  | N/A | N/A         | N/A  |
| Antenna Mounts                         | <b><i>\$15,000.00</i></b>  | \$15,000.00  | N/A | N/A         | N/A  |
| Antenna Freight                        | <b><i>\$12,500.00</i></b>  | \$12,500.00  | N/A | N/A         | N/A  |
| Combiner Module                        | <b><i>\$60,980.00</i></b>  | \$60,980.00  | N/A | \$60,980.00 | Price increases since the cost estimates were entered. |
| Transmission Line Installation         | <b><i>\$75,000.00</i></b>  | \$75,000.00  | N/A | N/A         | N/A  |
| Permitting                             | <b><i>\$20,000.00</i></b>  | \$20,000.00  | N/A | N/A         | N/A  |
| RF Safety Coordination                 | <b><i>\$75,000.00</i></b>  | \$75,000.00  | N/A | N/A         | N/A  |
| Antenna Installation and Commissioning | <b><i>\$16,482.50</i></b>  | \$16,482.50  | N/A | N/A         | N/A  |
| Antenna Delivery to Willis             | <b><i>\$10,000.00</i></b>  | \$10,000.00  | N/A | N/A         | N/A  |
| Tower Modifications                    | <b><i>\$200,000.00</i></b> | \$200,000.00 | N/A | N/A         | N/A  |
| Combiner Freight                       | <b><i>\$5,000.00</i></b>   | \$5,000.00   | N/A | N/A         | N/A  |
| RFR Measurements                       | <b><i>\$5,000.00</i></b>   | \$5,000.00   | N/A | N/A         | N/A  |
| Equipment Storage                      | <b><i>\$1,000.00</i></b>   | \$1,000.00   | N/A | N/A         | N/A  |



|  |                     |              |   |             |     |
|--|---------------------|--------------|---|-------------|-----|
| Combiner Installation and Commissioning  | <i>\$9,062.50</i>   | \$9,062.50   | N/A   | N/A         | N/A |
| Radome Modifications   | <i>\$50,000.00</i>  | \$50,000.00  | N/A   | N/A         | N/A |
| Structural Engineering   | <i>\$150,000.00</i> | \$150,000.00 | N/A   | \$10,019.00 | N/A |
| Pattern scatter analysis for side mount high/med power antennas (if not included in antenna base cost) | \$5,260.00          | \$0.00       | N/A   | N/A         | N/A |
| Side mount brackets for high power antennas (if not included in antenna base cost)                     | \$23,150.00         | \$0.00       | N/A   | N/A         | N/A |
| New combiner, cost per channel (without antenna)   | \$84,200.00         | \$0.00       | N/A   | N/A         | N/A |
| Sweep test of existing antenna   | \$6,730.00          | \$0.00       | N/A   | N/A         | N/A |
| Combiner Commissioning   | <i>\$9,062.50</i>   | \$9,062.50   | ***System Notice: Estimate adjusted and locked because line has been superseded.<br>*** | \$9,062.50  | N/A |

|  |                       |                       |   |                     |     |
|--|-----------------------|-----------------------|---|---------------------|-----|
| Antenna Commissioning  | <b>\$16,482.50</b>    | \$16,482.50           | ***System Notice: Estimate adjusted and locked because line has been superseded.<br>*** | \$16,482.50         | N/A |
| <b>Auxiliary Antenna PHP24C</b>  | <b>\$11,990.00</b>    | <b>\$0.00</b>         |   | <b>\$0.00</b>       |     |
| Pattern scatter analysis for side mount high/med power antennas (if not included in antenna base cost) | \$5,260.00            | \$0.00                | N/A   | N/A                 | N/A |
| Sweep test of existing antenna   | \$6,730.00            | \$0.00                | N/A   | N/A                 | N/A |
| UHF "Broadband Panel, Side Mount Auxiliary /Interim, 300 horizontally polarized                        | <b>\$0.00</b>         | \$0.00                | N/A   | N/A                 | N/A |
| <b>Sub-total</b>   | <b>\$1,351,560.60</b> | <b>\$1,220,230.60</b> | N/A   | <b>\$330,060.06</b> | N/A |
| <b>Total for all systems</b>   | <b>\$5,299,720.40</b> | <b>\$3,241,590.40</b> | N/A   | <b>\$333,206.56</b> | N/A |

## Components

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

|   |  |
|---|--|
| <p>UHF - High Power, Side Mount, broadband panel, 24 bay,, 193 kW input, directional,, elliptically or circularly polarized</p> | <p><b>Component Description:</b> 50% UHF High Power, Side Mount, Broadband panel, 24Bay 193kW input, Directional, Elliptically or circular polarized. Quotation #20061310</p> <p><b>Amount:</b> \$120,862.50</p> |
| <p>Internal Transmission Line</p>   | <p>Information not provided.</p>   |
| <p>Combiner Delivery to Willis</p>  | <p>Information not provided.</p>   |
| <p>Transmission Line Mounts</p>   | <p>Information not provided.</p>   |
| <p>Combiner Room Construction</p>   | <p>Information not provided.</p>   |
| <p>Transmission Line</p>  | <p><b>Component Description:</b> 50% of various Transmission Line costs as indicated by line number on quotation #20061310</p> <p><b>Amount:</b> \$111,298.10</p>  |
| <p>Outside Project Management</p>   | <p><b>Component Description:</b> Shared cost EAST RFS System</p> <p><b>Amount:</b> \$65.29</p> <p><b>Component Description:</b> Share of West RFS Antenna/Combiner System</p> <p><b>Amount:</b> \$1,290.17</p>   |
| <p>Combiner Spine</p>   | <p>Information not provided.</p>   |
| <p>Antenna Mounts</p>   | <p>Information not provided.</p>   |

|  |   |
|--|---|
| Antenna Freight  | Information not provided.   |
| Combiner Module  | <p><b>Component Description:</b> 50% Combiner, Module from manufacturer quotation #20061310</p> <p><b>Amount:</b> \$60,980.00</p> |
| Transmission Line Installation   | Information not provided.   |
| Permitting   | Information not provided.   |
| RF Safety Coordination   | Information not provided.   |
| Antenna Installation and Commissioning   | Information not provided.   |
| Antenna Delivery to Willis   | Information not provided.   |
| Tower Modifications  | Information not provided.   |
| Combiner Freight   | Information not provided.   |
| RFR Measurements   | Information not provided.   |
| Equipment Storage  | Information not provided.   |
| Combiner Installation and Commissioning  | Information not provided.   |
| Radome Modifications   | Information not provided.   |
| Structural Engineering   | <p><b>Component Description:</b> WTTW share of WEST RFS Antenna/Combiner System</p> <p><b>Amount:</b> \$10,019.00</p>             |
| Pattern scatter analysis for side mount high/med power antennas (if not included in antenna base cost) | Information not provided.   |

|  |  |
|--|--|
| Side mount brackets for high power antennas (if not included in antenna base cost)                     | Information not provided.  |
| New combiner, cost per channel (without antenna)   | Information not provided.  |
| Sweep test of existing antenna   | Information not provided.  |
| Combiner Commissioning   | <p><b>Component Description:</b> 50% Combiner Commissioning</p> <p><b>Amount:</b> \$9,062.50</p> |
| Antenna Commissioning  | <p><b>Component Description:</b> 50% Antenna Commissioning</p> <p><b>Amount:</b> \$16,482.50</p> |
| Pattern scatter analysis for side mount high/med power antennas (if not included in antenna base cost) | Information not provided.  |
| Sweep test of existing antenna   | Information not provided.  |
| UHF " Broadband Panel, Side Mount Auxiliary /Interim, 300 horizontally polarized                       | Information not provided.  |

**Cost Information**

**Transmission Line**

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

| Description                              | Predetermined Cost Estimate | Estimated Cost        | Estimated Cost Justification | Actual Cost         | Actual Cost Justification |
|--|-----------------------------|-----------------------|------------------------------|---------------------|---------------------------|
| <b>Primary Transmission Line</b>         | <b>\$30,200.00</b>          | <b>\$29,000.00</b>    |                              | <b>\$0.00</b>       |                           |
| Rigid Transmission Line - copper, 6 1/8" | \$20,200.00                 | \$19,000.00           | N/A                          | N/A                 | N/A                       |
| Electrican Hanging                       | <i>\$10,000.00</i>          | \$10,000.00           | N/A                          | N/A                 | N/A                       |
| <b>Auxiliary Transmission Line</b>       | <b>\$30,200.00</b>          | <b>\$29,000.00</b>    |                              | <b>\$0.00</b>       |                           |
| Electrican Hanging                       | <i>\$10,000.00</i>          | \$10,000.00           | N/A                          | N/A                 | N/A                       |
| Rigid Transmission Line - copper, 6 1/8" | \$20,200.00                 | \$19,000.00           | N/A                          | N/A                 | N/A                       |
| <b>Sub-total</b>                         | <b>\$60,400.00</b>          | <b>\$58,000.00</b>    | N/A                          | <b>\$0.00</b>       | N/A                       |
| <b>Total for all systems</b>             | <b>\$5,299,720.40</b>       | <b>\$3,241,590.40</b> | N/A                          | <b>\$333,206.56</b> | N/A                       |

**Components**

Information not provided.

**Cost Information**

**Tower Equipment and Rigging Costs**

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

| Description                                      | Predetermined Cost Estimate | Estimated Cost      | Estimated Cost Justification | Actual Cost   | Actual Cost Justification |
|--|-----------------------------|---------------------|------------------------------|---------------|---------------------------|
| <b>Primary Tower BTWR</b>                        | <b>\$1,349,500.00</b>       | <b>\$507,500.00</b> |                              | <b>\$0.00</b> |                           |
| WTTW T L Removal RF Safety Coordination          | <i>\$12,500.00</i>          | \$12,500.00         | N/A                          | N/A           | N/A                       |
| WTTW Transmission Line Removal to Smoke Shaft    | <i>\$50,000.00</i>          | \$50,000.00         | N/A                          | N/A           | N/A                       |
| SW Pole Decommission Preparation Work            | <i>\$50,000.00</i>          | \$50,000.00         | N/A                          | N/A           | N/A                       |
| SW Pole Material Removal and Disposal            | <i>\$25,000.00</i>          | \$25,000.00         | N/A                          | N/A           | N/A                       |
| SW Pole Decommission Prep. Work RF Safety Coord. | <i>\$12,500.00</i>          | \$12,500.00         | N/A                          | N/A           | N/A                       |
| WTTW T L Removal to 100 in smoke shaft           | <i>\$40,000.00</i>          | \$40,000.00         | N/A                          | N/A           | N/A                       |
| WTTW Antenna Removal Engineering                 | <i>\$30,000.00</i>          | \$30,000.00         | N/A                          | N/A           | N/A                       |

|   |                     |               |     |               |     |
|---|---------------------|---------------|-----|---------------|-----|
| SW Pole<br>Decommission<br>Engineering  | <i>\$32,500.00</i>  | \$32,500.00   | N/A | N/A           | N/A |
| Willis Tower<br>Project<br>Management   | <i>\$27,500.00</i>  | \$27,500.00   | N/A | N/A           | N/A |
| WTTW<br>Antenna<br>Removal  | <i>\$40,000.00</i>  | \$40,000.00   | N/A | N/A           | N/A |
| WTTW<br>Antenna<br>Removal RF<br>Safety<br>Coordination   | <i>\$10,000.00</i>  | \$10,000.00   | N/A | N/A           | N/A |
| Tower<br>Helicopter Lift  | <i>\$177,500.00</i> | \$177,500.00  | N/A | N/A           | N/A |
| Complex<br>Tower<br>(includes, for<br>example,<br>those with<br>candelabras<br>and/or<br>stacked<br>antennas) | \$421,000.00        | \$0.00        | N/A | N/A           | N/A |
| Major tower<br>reinforcement<br>/modifications  | \$421,000.00        | \$0.00        | N/A | N/A           | N/A |
| <b>Auxiliary<br/>Tower BMAST</b>  | <b>\$842,000.00</b> | <b>\$0.00</b> |     | <b>\$0.00</b> |     |
| Complex<br>Tower<br>(includes, for<br>example,<br>those with<br>candelabras<br>and/or<br>stacked<br>antennas) | \$421,000.00        | \$0.00        | N/A | N/A           | N/A |
| Major tower<br>reinforcement<br>/modifications  | \$421,000.00        | \$0.00        | N/A | N/A           | N/A |



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|                              |                |                |     |              |     |
|------------------------------|----------------|----------------|-----|--------------|-----|
| <b>Sub-total</b>             | \$2,191,500.00 | \$507,500.00   | N/A | \$0.00       | N/A |
| <b>Total for all systems</b> | \$5,299,720.40 | \$3,241,590.40 | N/A | \$333,206.56 | N/A |

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### **Components**

Information not provided.

**Cost Information**

**Outside Professional Services**

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

| Description  | Predetermined Cost Estimate | Estimated Cost        | Estimated Cost Justification | Actual Cost         | Actual Cost Justification |
|--|-----------------------------|-----------------------|------------------------------|---------------------|---------------------------|
| <b>Outside Professional Services</b>   | <b>\$107,150.00</b>         | <b>\$96,750.00</b>    |                              | <b>\$3,146.50</b>   |                           |
| RF Exposure Measurements   | \$21,050.00                 | \$20,000.00           | N/A                          | N/A                 | N/A                       |
| Attorney Fees - Prepare and File FCC Form 2100 (main), License to Cover Application                | \$2,365.00                  | \$2,250.00            | N/A                          | \$274.50            | N/A                       |
| Attorney Fees - Aux Antenna, prepare and File Form 2100 Construction Permit or License Application | \$2,105.00                  | \$2,000.00            | N/A                          | \$576.00            | N/A                       |
| Prepare and or review reimbursement form   | \$2,630.00                  | \$2,500.00            | N/A                          | \$549.00            | N/A                       |
| Project management of the transition   | \$79,000.00                 | \$70,000.00           | N/A                          | \$1,747.00          | N/A                       |
| <b>Sub-total</b>   | <b>\$107,150.00</b>         | <b>\$96,750.00</b>    | <b>N/A</b>                   | <b>\$3,146.50</b>   | <b>N/A</b>                |
| <b>Total for all systems</b>   | <b>\$5,299,720.40</b>       | <b>\$3,241,590.40</b> | <b>N/A</b>                   | <b>\$333,206.56</b> | <b>N/A</b>                |

**Components**

| Actual Information<br>Description  | File Name   |
|--|---|
| RF Exposure Measurements   | Information not provided.   |
| Attorney Fees -Prepare and File FCC Form 2100 (main), License to Cover Application                 | <p data-bbox="708 392 1348 616"><b>Component Description:</b> regarding repack transition report and form 2100 schedule 387 availability<br/><b>Amount:</b> \$56.00</p> <p data-bbox="708 728 1348 840"><b>Component Description:</b> ungranted repack applications<br/><b>Amount:</b> \$50.50</p> <p data-bbox="708 952 1348 1064"><b>Component Description:</b> repack process and timing<br/><b>Amount:</b> \$168.00</p> |
| Attorney Fees - Aux Antenna, prepare and File Form 2100 Construction Permit or License Application | <p data-bbox="708 1198 1372 1422"><b>Component Description:</b> preparation of construction permit application and form 399 application<br/><b>Amount:</b> \$498.00</p> <p data-bbox="708 1534 1372 1646"><b>Component Description:</b> review construction permit application<br/><b>Amount:</b> \$78.00</p>   |

Prepare and or review  
reimbursement form

**Component Description:** Analysis and  
research for  
reimbursement form  
**Amount:** \$156.00

**Component Description:** Prepare & review  
reimbursement form  
**Amount:** \$112.00

**Component Description:** Review form 399  
estimates  
**Amount:** \$336.00

**Component Description:** Analysis of  
reimbursement form  
**Amount:** \$78.00

**Component Description:** Email regarding  
form 1876  
**Amount:** \$101.00

Project management of the transition

**Component Description:** Analysis and review of FCC online databases, etc.

**Amount:** \$39.00

**Component Description:** Preparation of 2100 CP application and maximization application

**Amount:** \$1,657.50

**Component Description:** Email regarding auction closing and channel reassignment

**Amount:** \$50.50

**Component Description:** email on FCC post-auction transition procedures and payments

**Amount:** \$50.50

**Cost Information**

**Other Expenses**

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

| Description  | Predetermined Cost Estimate | Estimated Cost        | Estimated Cost Justification | Actual Cost         | Actual Cost Justification |
|--|-----------------------------|-----------------------|------------------------------|---------------------|---------------------------|
| <b>Other Expenses</b>  | <b>\$6,110.00</b>           | <b>\$6,070.00</b>     |                              | <b>\$0.00</b>       |                           |
| FCC Filing Fees - Form 2100 minor change CP application                  | \$1,110.00                  | \$1,070.00            | N/A                          | N/A                 | N/A                       |
| Disposal Costs (for equipment and other waste, net of any salvage value) | <i>\$0.00</i>               | \$0.00                | N/A                          | N/A                 | N/A                       |
| Equipment Storage  | <i>\$0.00</i>               | \$0.00                | N/A                          | N/A                 | N/A                       |
| Develop and air announcement of upcoming channel change                  | <i>\$5,000.00</i>           | \$5,000.00            | N/A                          | N/A                 | N/A                       |
| <b>Sub-total</b>   | <b>\$6,110.00</b>           | <b>\$6,070.00</b>     | <b>N/A</b>                   | <b>\$0.00</b>       | <b>N/A</b>                |
| <b>Total for all systems</b>   | <b>\$5,299,720.40</b>       | <b>\$3,241,590.40</b> | <b>N/A</b>                   | <b>\$333,206.56</b> | <b>N/A</b>                |

**Components**

Information not provided.

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

|                              | <b>Predetermined Cost Estimate</b> | <b>Estimated Cost</b> | <b>Actual Cost</b> |
|------------------------------|------------------------------------|-----------------------|--------------------|
| <b>Total for all systems</b> | \$5,299,720.40                     | \$3,241,590.40        | \$333,206.56       |

**Reimbursement Status**

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

| Certification | Section   | Question  | Response |
|---------------|---|---|----------|
|               | <p><b>Submission of Estimated Expenses Statements</b></p> | <p>WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND /OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a) (1), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503), AND ANY FALSE STATEMENTS COULD SUBJECT THIS ENTITY TO LIABILITY UNDER THE FALSE CLAIMS ACT.</p>   |          |
|               |   | <ol style="list-style-type: none"> <li data-bbox="758 772 1061 1176">1. The Authorized Person signing below certifies that he /she is authorized to submit this TV Broadcaster Relocation Fund Reimbursement Form on behalf of the above-named entity.</li> <li data-bbox="758 1198 1061 1444">2. The above-named entity acknowledges that all certifications and attached documentation are considered material representations.</li> <li data-bbox="758 1467 1061 1758">3. The above-named entity acknowledges the submission of the information herein creates no obligation on the part of the government to pay any amount.</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).
5. The above-named entity certifies that all payments from the TV Broadcaster Relocation Fund (Fund) received by the entity listed on this form will be used only for expenses that are eligible for reimbursement from the Fund.
6. The above-named entity certifies that it will maintain and provide to the Commission detailed records, including receipts, of all costs eligible for reimbursement actually incurred.
7. The above-named entity acknowledges that overpayments or payments in error must be promptly refunded to the Commission.

|   |  |
|---|--|
| <p>8. The above-named entity certifies that it is in full compliance with all statutes, rules, regulations and governmental requirements for which compliance is a pre-requisite for obtaining the payments herein requested.</p> |  |
| <p>I declare, under penalty of perjury, that I am an authorized representative of the above-named applicant for the Authorization(s) specified above.</p>   | <p><b>Michael Tompany</b><br/><i>Director of Engineering</i></p> <p>03/28/2019</p> |

**Attachments**