Approved by OMB (Office of Management and Budget) 3060-1178

Federal Communications Commission

(REFERENCE COPY - Not for submission)

FCC Form 399: Reimbursement Request

Facility ID: **73226** | Service: **DTV** | Call Sign: **WLS-TV** | Channel: **44 (UHF)**

File Number: **0000028376**

FRN: **0003471315** | Date Submitted: **05/15/2020**

Applicant Information

Applicant Name, Type, and Contact Information

Applicant	Address	Phone	Email	Applicant Type
WLS TELEVISION, INC. Doing Business As: WLS TELEVISION, INC.	John W. Zucker 77 W 66TH ST FL 16 NEW YORK, NY 10023 United States	+1 (212) 456-7777	john.w.zucker@abc.com	Corporation

Reimbursement Contact Information

Reimbursement Contact Name and Information

Applicant	Address	Phone	Email
[Confidential]			

Preparer Contact Information

Preparer Contact Name and Information

Applicant	Address	Phone	Email
The Preparer is same as the reimbursement contact.			

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	Please see attached WLS Description of Transition Plan exhibit

Transmitters

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

Auxiliary Transmitter

Existing Transmitter Information

Section	Question	Response
Existing Transmitter Description	Type of change	Purchase New
	Use	Auxiliary (Backup)
	Description of Use	Hancock Auxiliary site
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is this transmitter currently shared with another station?	No
	Is this transmitter currently in operating condition?	Yes
Existing Transmitter Manufacturer and Type	Manufacturer	
	Model	DHD120P2 Diamond
	Year	2002
	Type	Solid State
	Solid State Cooling	Air Cooled
	Solid State Power Capacity	30 kW

Auxiliary Transmitter

New Transmitter Costs

Section	Question	Response
New Transmitter	Use	Auxiliary (Backup)
	Change Type	Purchase New
	Is this a request for upgraded equipment?	No
	Manufacturer	
	Model	ULXTE-50
	Transmitter Type	Solid State
	Solid State Cooling	Liquid Cooled
	Solid State Power capacity	31.7 kW
	Justification for New Transmitter	Our existing Harris Diamond solid state transmitter on Channel 44 cannot be retuned to our new Channel 22 assignment.

Auxiliary Transmitter

Other Transmitter Costs

Section	Question	Response
Electrical Service	Service Entrance (3 phases 800A 208V)	No
	Switchgear (industrial 800 amp)	No
	Transformer (480V)	Yes
	Power	300 kVA
	Rigid Conduit and Wiring	Yes

	Size	2.00 inches
	Length	130.0 feet
	Other Electrical Service	Yes
	Description	See "WLS Schedule 399 Supplemental Statement" Exhibit
HVAC Service	Does the replacement transmitter require HVAC Service?	No
	Type	N/A
	Size	N/A
	Other Size	N/A
Transmitter Building Addition/Modification or Leasehold Improvement	Does the Transmitter Building require an addition, modification, other leashold improvement?	No
	Size	N/A
Channel 14 Costs	Is an RF Consulting Engineer needed?	N/A
	Is a channel 14 Mask Filer needed?	N/A
	Is additional field engineering time needed?	N/A
	Number of Days	N/A

Auxiliary Transmitter

Other Transmitter Cost Not Listed

Name	Description
Partial demolition of existing space	This covers the cost of removal of the old Transmitter equipment and related equipment
Plumbing work	The new transmitter has liquid cooling and needs hookup and pumps to building condenser water

Primary Transmitter

Add Transmitter Information

Section	Question	Response
Existing Transmitter Description	Type of change	Purchase New
	Use	Primary (Main)
	Description of Use	N/A
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is this transmitter currently shared with another station?	No
	Is this transmitter currently in operating condition?	Yes
Existing Transmitter Manufacturer and Type	Manufacturer	
	Model	PWR90D3 Power CD
	Year	2012
	Type	Inductive Output Tube
	IOT Power Type	Three
	Power Capacity	90 kW

Primary Transmitter

New Transmitter Costs

Section	Question	Response
New Transmitter	Use	Primary (Main)
	Change Type	Purchase New
	Is this a request for upgraded equipment?	Yes
	Manufacturer	
	Model	ULXTE-150
	Transmitter Type	Solid State
	Solid State Cooling	Liquid Cooled
	Solid State Power capacity	92.8 kW
	Justification for New Transmitter	Please see attached justification of costs

Primary Transmitter

Other Transmitter Costs

Section	Question	Response
Electrical Service	Service Entrance (3 phases 800A 208V)	No
	Switchgear (industrial 800 amp)	Yes
	Transformer (480V)	Yes
	Power	500 kVA
	Rigid Conduit and Wiring	Yes
	Size	4.0 inches
	Length	240.0 feet
	Other Electrical Service	No
	Description	N/A

HVAC Service	Does the replacement transmitter require HVAC Service?	Yes
	Type	Cooling Only
	Size	Other
	Other Size	40 tons
Transmitter Building Addition/Modification or Leasehold Improvement	Does the Transmitter Building require an addition, modification, other leashold improvement?	Yes
	Size	2500.0 square feet
Channel 14 Costs	Is an RF Consulting Engineer needed?	N/A
	Is a channel 14 Mask Filer needed?	N/A
	Is additional field engineering time needed?	N/A
	Number of Days	N/A

Primary Transmitter

Other Transmitter Cost Not Listed

Name	Description
Demolition of existing transmitter space	This covers the cost of demolition of existing transmitter space and disposal of old transmitter and equipment

Antennas

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

Auxiliary Antenna

Add Antenna Information

Section	Question	Response
Existing Antenna Description	Type of change	Retune Existing
	Antenna Use	Auxiliary (Backup)
	Description of Use	Hancock Auxiliary Site Antenna
	Ownership	Leased
	Owner	American Tower
	Site	N/A
	Is this antenna currently shared with any other stations?	Yes
	Is this antenna directional?	Yes
	Is antenna in operating condition?	Yes
	Is antenna located on or in close proximity to an antenna farm?	Yes
Existing Antenna Manufacturer and Type	Class	Full Power
	Mounting	Side Mount
	Antenna position in stack	Not in Stack
	Polarization	Horizontal
	Type	Broadband Panel
	Number of Stations Supported	4
	Number of Panels	24

Design power capacity in use	100.0 %
Lower Limit	488.00 MHz
Upper Limit	698.00 MHz
Other Antenna Type	N/A
ERP: (Effective Radiated Power)	1000.0 kW
Manufacturer	Dielectric
Model	TUF-C4-12 /48U-2BR
Year	2004

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

Facility ID	Call Sign
12498	WGBO-DT
47905	WMAQ-TV
72115	WGN-TV
73226	WLS-TV

Auxiliary Antenna

Adjustment to Existing Antenna

Section	Question	Response
Sweep Test of Existing Antenna	Do you need a sweep test of existing antenna?	No

Auxiliary Antenna

Other Antenna Costs

Section	Question	Response
Combiner for Shared Antenna	Do you need a Combiner for a Shared Antenna?	Yes
	Type	Additional Module

Number of channels supported	4
Frequencies of channels supported	Upper and lower frequency
Frequency	488.0 MHz - 698.0 MHz

Auxiliary Antenna

Other Antenna Cost Not Listed

Name	Description
RF Project Management	RF project management at the John Hancock Center
Combiner Installation	Labor and Materials to install Channel 22 filter
Hancock Aux Sweep Test	Hancock Aux Sweep Invoice 2001532 & Q-191101-1

Auxiliary Antenna

Add Antenna Information

Section	Question	Response
Existing Antenna Description	Type of change	Purchase New
	Antenna Use	Auxiliary (Backup)
	Description of Use	Willis Aux Antenna
	Ownership	Leased
	Owner	233 Broadcast, LLC
	Site	N/A
	Is this antenna currently shared with any other stations?	Yes
	Is this antenna directional?	Yes
	Is antenna in operating condition?	Yes
	Is antenna located on or in close proximity to an antenna farm?	Yes
Existing Antenna Manufacturer and Type	Class	Full Power
	Mounting	Side Mount
	Antenna position in stack	Not in Stack
	Polarization	Horizontal
	Type	Broadband Panel
	Number of Stations Supported	3
	Number of Panels	24
	Design power capacity in use	100.0 %
	Lower Limit	488.00 MHz
	Upper Limit	608.00 MHz
	Other Antenna Type	N/A

ERP: (Effective Radiated Power)	700.0 kW
Manufacturer	
Model	PHP24C
Year	2012

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

Facility ID	Call Sign
10981	WCPX-TV
32334	WJYS
73226	WLS-TV

Auxiliary Antenna

New Antenna Costs

Section	Question	Response
New Antenna Description	Use	Auxiliary (Backup)
	Description of Use	Willis Aux Antenna
	Change Type	Purchase 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
New Antenna Manufacturer and Types	Class	Full Power
	Mounting	Side Mount
	Antenna position in stack	Not in Stack
	Polarization	Elliptical
	Type	Broadband 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)	700.0 kW
	Manufacturer	

	Model	PEPL-24C
	Year	2018
	Justification for New Antenna	Please see Cost Justification Exhibit attachment

Auxiliary Antenna

Other Antenna Costs

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

Auxiliary Antenna

Other Antenna Cost Not Listed

Name	Description
NE Pole decommissioning	Engineering
Combiner Delivery	Delivery from ISI to Willis Tower
Antenna Delivery	Delivery from ISI to Willis
outside project management	Project managers at Willis
Permitting	City of Chicago
Antenna Installation	No helicopter lift
NE Pole decommissioning lift	Helicopter lift removal
Combiner Commissioning	RFS-Loney
East Pole material disposal	Scrap
East Pole transmission line removal	Remove transmission line
Radome modifications	Design and fabrication
Equipment Storage	ISI storage
NE Pole Prep work	Prep for removal
RF Safety Coordibnatio	For antenna and line installation
Combiner Room Construction EAST	Construction of existing combiner room where existing combiners will be removed
Combiner Reconfiguration Labor	Reconfiguration of existing combiner
Antenna Freight	From Australia to ISI
Combiner Room Construction WEST	Prepping space for new Combiner on floor 100 at Willis
RF Safety coordination NE Pole	NE Pole decommissioning
Combiner Freight	From Australia to ISI
RFR measurements	Post installation
Cylinder entry port Restoration	Restoring the East Cylinder
Antenna Commissioning	RFS-Loney

Primary Antenna

Existing Antenna Information

Section	Question	Response
Existing Antenna Description	Type of change	Purchase New
	Antenna Use	Primary (Main)
	Description of Use	N/A
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is the existing antenna shared with another station or stations?	No
	Is the existing antenna directional?	Yes
	Is antenna in operating condition?	Yes
	Is antenna located on or in close proximity to an antenna farm?	Yes
Existing Antenna Manufacturer and Type	Class	Full Power
	Mounting	Top Mount
	Antenna position in stack	Not in Stack
	Polarization	Elliptical
	Type	Slotted Coaxial
	Number of Stations Supported	N/A
	Number of Panels	N/A
	Design power capacity in use	N/A
	Lower Limit	N/A
	Upper Limit	N/A
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power)	1000.0 kW

Manufacturer	
Model	TFU 19ETT /VP -R S140
Year	2012

Primary Antenna

New Antenna Costs

Section	Question	Response
New Antenna Description	Use	Primary (Main)
	Description of Use	N/A
	Change Type	Purchase New
	Is this a request for upgraded equipment?	No
	Ownership	Owned
	Owner	N/A
	Is antenna shared?	No
	Is antenna directional?	Yes
	Will antenna be located on or in close proximity to an antenna farm?	Yes
New Antenna Manufacturer and Types	Class	Full Power
	Mounting	Top Mount
	Antenna position in stack	Not in Stack
	Polarization	Elliptical
	Type	Slotted Coaxial
	Number of Stations Supported	N/A
	Number of Panels/Bays	N/A
	Lower Limit	N/A
	Upper Limit	N/A
	Design power capacity in use	N/A
	Other Antenna Type	N/A
	ERP: (Effective Radiated Power)	700.0 kW
	Manufacturer	

	Model	TFU-15ETT /VP-R S140 Directional Antenna
	Year	2019
	Justification for New Antenna	Our present antenna is a Dielectric channel 44 antenna that cannot be retuned to our new channel 22 assignment.

Primary Antenna

Other Antenna Costs

Section	Question	Response
Combiner for Shared Antenna	Do you need a Combiner for a Shared Antenna?	No
	Type	
	Number of channels supported	N/A
	Frequencies of channels supported	N/A
	Frequency	N/A
	Do you need a combiner output splitter /switcher for dual feed lines?	N/A
Elbow Complex	Do you require the separate purchase of the Elbow Complex?	Yes
	Broadband or Single Channel?	Single Channel
	Feed Line Size	8 3/16 inches inches
Side Mount Brackets	Do you require the separate purchase of side mount brackets for a high power antenna?	No

Pattern Scatter Analysis	Do you require separate purchase of pattern scatter analysis for a side mount high or medium power antenna?	No
Sweep Test	Do you require the sweep testing of transmission line and antenna?	Yes

Primary Antenna

Other Antenna Cost Not Listed

Name	Description
Antenna Storage	The new antenna needs to be on site early to meet the FCC timeline

Transmission Line

Section	Question	Response
Transmission Line Related Expenses	Do you have transmission line related expenses?	Yes

Primary Transmission Line

Existing Transmission Line

Section	Question	Response
Existing Transmission Line Description	Type of change	Utilize Existing
	Use	Primary (Main)
	Description of Use	N/A
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is the existing transmission line shared with another station or stations?	No
	Is Transmission Line in operating condition?	Yes
Existing Transmission Line Manufacturer and Type	Manufacturer	Dielectric
	Type	Rigid
	Diameter	8 3/16 inches
	Other Diameter	N/A
	Segment Length	Other
	Other Segment Length	10 feet
	Number of parallel runs	1
	Length	480 feet per run

Primary Transmission Line

Other Transmission Line Expenses Not Listed

Name	Description
Modification of rigid line	Modification of main antenna 8 3/16' rigid transmission line at Willis transmitter site

Auxiliary Transmission Line

Existing Transmission Line

Section	Question	Response
Existing Transmission Line Description	Type of change	Utilize Existing
	Use	Auxiliary (Backup)
	Description of Use	Hancock Auxilliary Site
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is the existing transmission line shared with another station or stations?	No
	Is Transmission Line in operating condition?	Yes
Existing Transmission Line Manufacturer and Type	Manufacturer	Dielectric
	Type	Rigid
	Diameter	4 1/16 inches
	Other Diameter	N/A
	Segment Length	Other
	Other Segment Length	10 feet
	Number of parallel runs	1
	Length	160 feet per run

Auxiliary Transmission Line

Other Transmission Line Expenses Not Listed

Name	Description
Hancock Auxiliary Site	Modification of existing transmission line to accommodate new transmitter and new combiner configuration

Auxiliary Transmission Line

Add Transmission Line

Section	Question	Response
Existing Transmission Line Description	Type of change	Purchase New
	Use	Auxiliary (Backup)
	Description of Use	willis Aux Antenna
	Ownership	Owned
	Owner	N/A
	Site	N/A
	Is this transmission currently shared with any other stations?	Yes
	Is Transmission Line in operating condition?	Yes
Existing Transmission Line Manufacturer and Type	Manufacturer	
	Type	Rigid
	Diameter	6 1/8 inches
	Other Diameter	N/A
	Segment Length	Other
	Other Segment Length	10 feet
	Number of parallel runs	2
	Length	485 feet per run

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

Facility ID	Call Sign
32334	WJYS
10981	WCPX-TV

73226	WLS-TV

Auxiliary Transmission Line

New Transmission Line

Section	Question	Response
New Transmission Line Costs	Use	Auxiliary (Backup)
	Description of Use	Willis Aux Antenna
	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	Other
	Other Segment Length	10 feet
	Number of parallel runs	2
	Length	400 feet per run
	Justification for New Transmission Line	The existing transmission line needs to be replaced to feed the new Willis Aux antenna from the new shared Combiner due to the repack work at Willis

Auxiliary Transmission Line

Other Transmission Line Expenses Not Listed

Name	Description

Transmission Line installation	Mix of day and night work
Internal Transmission line	To Combiner. With Parts
Transmission Line Mounts	Design and Fabrication

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	Hancock Aux Antenna
	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?	Unknown
	Is tower compliant with Rev G?	Unknown
Existing Tower Structure Registration	Do you have a tower registration number?	Yes
	ASR Number	1009012
Coordinates (NAD83 (North American Datum of 1983))	Latitude (NAD83)	41° 53' 56.1" N-
	Longitude (NAD83)	087° 37' 23.2" W-
	Overall Structure Height	1505.89 feet
	Support Structure Height	1206.35 feet
	Ground Elevation Above Mean Sea Level (AMSL)	592.84 feet

Structure Type	BTWR - Building with Tower
Tower Owner	SpectraSite Communications, LLC. through American Towers, LLC.
Date Constructed	12/05/2002

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
35092	WOCK-CD	DTV
12498	WGBO-DT	DTV
60539	WXFT-DT	DTV
47905	WMAQ-TV	DTV
72115	WGN-TV	DTV
12279	WYCC	DTV
35101	WOCH-CD	DTV

Auxiliary Tower

Tower Modification Costs

Section	Question	Response
Engineering Study	Please what type of engineering study is required, if any:	No study needed
Tower Reinforcements	Please select whether tower reinforcements are needed:	No reinforcements needed

Auxiliary Tower

Tower Rigging Costs

Section	Question	Response
Tower Rigging Costs	Complex Tower	Located on Building
Helicopter Services Required	Are helicopter services required?	No

Auxiliary Tower

Other Tower Expenses Not Listed

Information not provided.

Auxiliary Tower

Existing Tower

Section	Question	Response
Existing Tower Description	Type of change	Modify Existing
	Tower Use	Auxiliary (Backup)
	Description of Use	Willis Auxiliary Antenna
	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?	No
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
53971	WEBG	FM
6377	WTMX	FM
70042	WLIT-FM	FM
47905	WMAQ-TV	DTV
48772	WPWR-TV	DTV
51165	WGCI-FM	FM
71428	WCIU-TV	DTV
71283	WCFS-FM	FM
72115	WGN-TV	DTV
66978	WEDE-CD	DTV
70119	WSNS-TV	DTV
71425	WWME-CD	DTV
10801	WFMT	FM
22211	WFLD	DTV
9613	WBBM-FM	FM
73228	WLS-FM	FM
9617	WBBM-TV	DTV
74178	WKSC-FM	FM
32334	WJYS	DTV

10981	WCPX-TV	DTV
168662	WMEU-CD	DTV
10802	WTTW	DTV

Auxiliary Tower

Tower Modification Costs

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

Auxiliary Tower

Tower Rigging Costs

Section	Question	Response
Tower Rigging Costs	Complex Tower	Located on Building
Helicopter Services Required	Are helicopter services required?	No

Auxiliary Tower

Other Tower Expenses Not Listed

Information not provided.

Primary Tower

Existing Tower

Section	Question	Response
Existing Tower Description	Type of change	Modify Existing
	Tower Use	Primary (Main)
	Description of Use	N/A
	Ownership	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?	No
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
32334	WJYS	DTV
10801	WFMT	FM
9617	WBBM-TV	DTV
51165	WGCI-FM	FM
10802	WTTW	DTV
70119	WSNS-TV	DTV
72115	WGN-TV	DTV
66978	WEDE-CD	DTV
10981	WCPX-TV	DTV
48772	WPWR-TV	DTV
47905	WMAQ-TV	DTV
22211	WFLD	DTV
168662	WMEU-CD	DTV
73228	WLS-FM	FM
71428	WCIU-TV	DTV
71283	WCFS-FM	FM
9613	WBBM-FM	FM
74178	WKSC-FM	FM
71425	WWME-CD	DTV

70042	WLIT-FM	FM
53971	WEBG	FM
6377	WTMX	FM

Primary Tower

Tower Modification Costs

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

Primary Tower

Tower Rigging Costs

Section	Question	Response
Tower Rigging Costs	Complex Tower	Located on Building
Helicopter Services Required	Are helicopter services required?	Yes

Primary Tower

Other Tower Expenses Not Listed

Name	Description
Remove Channel 44 antenna	Helicopter lifts to remove channel 44 antenna and damper assembly at 1700'
Install channel 22 antenna	Helicopter lifts to install channel 22 antenna at 1700'

Outside Professional Services Costs

Section	Question	Response
Outside Project Management Services	Do you require outside project management services?	Yes
	Number of Hours	100
	Explanation	Willis tower RF management services for Main antenna replacement requiring at least 4 helicopter lifts. WIllis Tower RF management services for Aux antenna modifications and filter. Hancock site RF management services for combiner mods and filter.
Outside RF consulting Engineering Services	Perform engineering study for new channel assignment and antenna development	Yes
	Prepare engineering section of Form FCC Construction Permit Application	Yes
	For Auxiliary Facility	Yes
	For Main Facility	Yes
	Prepare engineering section of Form FCC License to Cover Application	Yes
	For Auxiliary Facility	Yes
	For Main Facility	Yes
	Prepare request for Special Temporary Authority	Yes

	Quantity	2
	Do you have Distributed Transmission System engineering services?	N/A
	Critical Facility	N/A
	Terrain-Shielded Facility	N/A
Attorney and Other Outside Consulting Services	Prepare and file Form FCC Construction Permit Application	Yes
	For Auxiliary Facility	Yes
	For Main Facility	Yes
	Prepare and file Form FCC License to Cover Application	Yes
	For Auxiliary Facility	Yes
	For Main Facility	Yes
	Prepare request for Special Temporary Authority	Yes
	Quantity	2
	NEPA Section 106 environmental review	No
	Environmental Assessment	No
	ASR Modification	No
	FAA Consultation (including preparation of FAA Form 7460)	No
	Negotiation of Lease and other Matter for Shared Locations	Yes
	Prepare or Review FCC Form 399 for Reimbursement	Yes
	Address transition timing and coordination issues w/ other stations and wireless providers	Yes
RF Field Engineering Services	Comprehensive coverage verification via field study	Yes
	RF exposure measurements	No
	Additional Field Engineering Service	No

Number of Days	N/A
Justification	N/A

Outside Professional Services Costs

Other Professional Services Expenses Not Listed

Name	Description
Legal advice re Reimbursement Process	Review and provide guidance on completion of form 399 including research and advice on eligibility of WLS reimburseable expenses, drafting cost justification document and requirements regarding reimbursable legal expenses and required backup support
Structural analysis of new Channel 22 antenna	Vortex study of new antenna at top of East Mast and vetting of antenna mounts
Outsult RF Consulting Engineering Services	Outside RF consulting services at John Hancock

Other Expenses

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

Other Expenses

Other Expenses Not Listed

Name	Description
Engineering management charge	This covers the cost of Engineering management for 16 weeks (640hrs at $150 /hr)
Outside labor cost	this covers the labor cost of two electricians for 12 weeks (960hours @$123.89/hr)
Hancock non dormant charges	Switching to Hancock site for more than 24 hours/month triggers a rent increase. We anticipate 5 months of $21,746.22/month increase due to repack overnight work at Willis

Cost Information

Transmitters

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Primary Transmitter ULXTE-150	**$3,604,920.00**	**$3,641,575.88**		**$2,532,588.79**	
UHF - Liquid Cooled Solid State Transmitter 86.8 . 106 kW	$2,630,000.00	$2,670,955.88	See exhibit "WLS ULXTE-150 system (003)"", also "WLS Schedule 399 Supplemental Statement"	$2,532,588.79	N/A
Demolition of existing transmitter space	***$85,578.00***	$85,578.00	See attached "WLS Cost Justification Exhibit", also "WLS Schedule 399 Supplemental Statement"	$0.00	N/A
Other -- Building Addition Size: 2500.0	***$618,742.00***	$618,742.00	See attached cost justification exhibit	N/A	N/A
Other -- HVAC Service Type: C Size: 40 (Other)	***$160,000.00***	$160,000.00	X2 Catalog price of $80,000.00 for 20 Ton HVAC	N/A	N/A
4.0" Rigid Conduit and Wiring	***$24,000.00***	$24,000.00	catalog price estimate	N/A	N/A
Switchgear - industrial 800 amp	$38,200.00	$36,300.00	Catalog price estimate	N/A	N/A

Transformer 3 phase/480v - 500 KVA	$48,400.00	$46,000.00	catalog price estimate	N/A	N/A
Auxiliary Transmitter ULXTE-50	**$1,307,089.49**	**$1,306,139.49**		**$1,244,453.68**	
Plumbing work	***$47,075.00***	$47,075.00	Transmitter room condenser water pumps and heat exchanger installation, plus prep for removal of AC unit, estimate based on previous work at Hancock. See "WLS Hancock Project Plumbing Estimated Cost Increase Justification (May 2020). pdf" for more info	$47,075.00	N/A
Partial demolition of existing space	***$20,000.00***	$20,000.00	Removal of 20 Ton AC unit and Transmitter from Hancock. Estimate based on prior work at Hancock.	$16,975.00	N/A

Other Electrical Service: See "WLS Schedule 399 Supplemental Statement" Exhibit	***$66,378.00***	$66,378.00	See "WLS Schedule 399 Supplemental Statement" Exhibit	$58,264.00	N/A
2.00" Rigid Conduit and Wiring	***$9,100.00***	$9,100.00	Catalog price estimate	$2,400.00	N/A
Transformer 3 phase/480v - 300 KVA	$36,800.00	$35,850.00	Catalog price estimate	$33,987.00	o.oo
UHF - Liquid Cooled Solid State Transmitter 31.7 kW	***$1,127,736.49***	$1,127,736.49	See exhibit "WLS-TV Hancock ULXTE-50 updated", also "WLS Schedule 399 Supplemental Statement"	$1,085,752.68	N/A
Sub-total	$4,912,009.49	$4,947,715.37	N/A	$3,777,042.47	N/A
Total for all systems	$11,475,383.31	$8,910,145.58	N/A	$4,375,109.28	N/A

Components

Actual Information Description	File Name

UHF - Liquid Cooled Solid State Transmitter 86.8 . 106 kW	**Component Description:**	WLS-TV Willis Tower ULXTE-150 2nd (15%) Down Payment
	Amount:	$349,940.44
	Component Description:	70% down payment, transmitter, main
	Amount:	$1,473,307.82
	Component Description:	70% down Electrical for main transmitter
	Amount:	$11,883.65
	Component Description:	WLS-TV Willis Tower ULXTE-150 Final Payment. Revised amount reduced by $.01, see attachment "WLS Response to FCC Fund Administrator Email dated 5-14-2020".
	Amount:	$549,592.95
	Component Description:	70% down RF Accessories for main transmitter
	Amount:	$77,234.00
	Component Description:	70% down mask filter system for main transmitter
	Amount:	$70,629.93

Demolition of existing transmitter space	Information not provided.
Other -- Building Addition Size: 2500.0	Information not provided.
Other -- HVAC Service Type: C Size:40 (Other)	Information not provided.
4.0" Rigid Conduit and Wiring	Information not provided.
Switchgear - industrial 800 amp	Information not provided.
Transformer 3 phase/480v - 500 KVA	Information not provided.
Plumbing work	**Component Description:** Move (1) 1 1/2" sprinkler line to make clearance for the new filter **Amount:** $2,375.00 **Component Description:** Final mechanical invoice for Hancock aux transmitter site **Amount:** $43,200.00 **Component Description:** Uninstall/Add drain fitting to cooling module stainless steel fitting **Amount:** $1,500.00

Partial demolition of existing space	**Component Description:** **Amount:**	Nickelson HVAC demolition invoice $14,965.00
	Component Description: **Amount:**	Nickelson Platinum TX disposal invoice $2,010.00
Other Electrical Service: See "WLS Schedule 399 Supplemental Statement" Exhibit	**Component Description:** **Amount:**	Prime Electric final invoice for "Other Electrical Service" $47,264.00
	Component Description: **Amount:**	Knight E/A progress payment 1 $5,950.00
	Component Description: **Amount:**	Knight E/A final payment $5,050.00
2.00" Rigid Conduit and Wiring	**Component Description:** **Amount:**	Prime extras invoice $2,400.00
Transformer 3 phase/480v - 300 KVA	**Component Description:** **Amount:**	Prime Hancock electrical final invoice $33,987.00
UHF - Liquid Cooled Solid State Transmitter 31.7 kW		

Component Description:	WLS-TV Final Hancock ULXTE-50 Payment
Amount:	$257,557.04
Component Description:	WLS-TV 15% (2nd) Hancock ULXTE-50 Down Payment
Amount:	$146,152.17
Component Description:	70% down payment for RF accessories for the aux transmitter
Amount:	$34,609.11
Component Description:	70% down payment for aux transmitter spare parts
Amount:	$8,441.41
Component Description:	70% Down Payment down payment for the aux transmitter
Amount:	$611,648.74
Component Description:	70% down payment for aux transmitter electrical equipment
Amount:	$5,166.58

Component Description:	70% down payment for the aux transmitter mask filter system
Amount:	$22,177.63

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	Actu Justi
Primary Antenna TFU-15ETT/VP-R S140 Directional Antenna	**$317,240.00**	**$292,196.18**		**$65,180.25**	
Antenna Storage	***$5,760.00***	$5,760.00	24 weeks at $240/ week storage	N/A	N
Elbow complex, single channel, at antenna input, per 8 3/16. feedline (if needed)	$15,250.00	$17,238.29	Sales tax and an additional piece of transmission line to interface to the new elbow complex increased the original price. See attached "WLS Dielectric Main Antenna Cover Letter, Quote and Invoice 2-4-2019 . pdf"	$4,018.25	N
UHF - High Power Top Mount (200-1000 kW), One station antenna , elliptically or circularly polarized	$289,500.00	$262,797.89	See attached "WLS Dielectric Main Antenna Cover Letter, Quote and Invoice 2-4-2019 . pdf" for explanation of new Estimated Cost	$59,562.00	N
Sweep test of existing antenna	$6,730.00	$6,400.00	Catalog price estimate	$1,600.00	N
Auxiliary Antenna TUF-C4-12/48U-2BR	**$131,066.00**	**$111,612.00**		**$99,693.00**	

Hancock Aux Sweep Test	***$6,400.00***	$6,400.00	This additional sweep test of transmission line between the transmitter and combiner was not anticipated in WLS-TV's original Cost Estimate. See JHC Aux Sweep (Hancock) Invoice 2001532 Q-191101-1	$6,400.00	N
Combiner Installation	***$23,800.00***	$23,800.00	Please see attached WLS 280282 John Hancock-East Tower IL Repack Estimates	$22,900.00	N
RF Project Management	***$9,936.00***	$9,936.00	Please see attached WLS 280282 John Hancock-East Tower IL Repack Estimates	$9,480.00	N
Adding a module to existing combiner (without antenna)	$84,200.00	$65,076.00	Please see attached WLS 280282 John Hancock-East Tower IL Repack Estimates	$55,913.00	N
Sweep test of existing antenna	$6,730.00	$6,400.00	Catalog price estimate	$5,000.00	N
Auxiliary Antenna PEPL-24C	**$1,160,134.20**	**$1,147,194.20**		**$195,026.08**	
Antenna Delivery	***$10,000.00***	$10,000.00	Delivery from ISI to Willis Tower Please see attached Cost Justification	N/A	N

Combiner Delivery	***$10,000.00***	$10,000.00	From ISI facility to Willis Tower Please see attached Cost Justification	N/A	N
NE Pole decommissioning	***$16,666.67***	$16,666.67	Engineering Please see attached Cost Justification	N/A	N
Pattern scatter analysis for side mount high/med power antennas (if not included in antenna base cost)	$5,260.00	$5,000.00	Based on catalog estimate	N/A	N
Side mount brackets for high power antennas (if not included in antenna base cost)	$23,150.00	$15,000.00	Custom Design /Fabrication Please see attached Cost Justification	N/A	N
New combiner, cost per channel (without antenna)	$84,200.00	$80,000.00	WLS 1/2 share of Combiner Module and Spine Please see attached Cost Justification	$65,401.05	N
Sweep test of existing antenna	$6,730.00	$6,400.00	based on catalog estimate	N/A	N
UHF - High Power, Side Mount, broadband panel, 24 bay,, 700 kW input, directional,, elliptically or circularly polarized	***$129,625.03***	$129,625.03	Please see attached "WLS Invoice 058641 Explanation 4823-6332-3783, 1 Antenna.pdf"	$129,625.03	N

Permitting	***$20,000.00***	$20,000.00	City of Chicago Please see attachment : Please see attached Cost Justification	N/A	N
Antenna Commissioning	***$10,782.50***	$10,782.50	Please see attached Cost Justification	N/A	N
Cylinder entry port Restoration	***$25,000.00***	$25,000.00	Restoring East Cylinder at Willis Please see attached Cost Justification	N/A	N
RFR measurements	***$5,000.00***	$5,000.00	Post installation and construction Please see attachment : Willis Tower-Budget Overview West Tower RFS Antenna /Combiner System	N/A	N
Combiner Freight	***$5,000.00***	$5,000.00	from Australia to ISI Please see attached Cost Justification	N/A	N
RF Safety coordination NE Pole	***$16,666.67***	$16,666.67	RF coordination East Pole Decommissioning Please see attached Cost Justification	N/A	N
Combiner Room Construction WEST	***$45,000.00***	$45,000.00	New combiner room Please see attachment: Willis Tower - Budget Overview WEST Tower RFS Antenna /Combiner System	N/A	N

Antenna Freight	***$12,500.00***	$12,500.00	From Australia to ISI Please see attached Cost Justification	N/A	N
Combiner Reconfiguration Labor	***$7,142.86***	$7,142.86	Reconfiguration of existing combiner Please see attachment: Willis Tower Budget Overview EAST Tower RFS System	N/A	N
Combiner Room Construction EAST	***$12,857.14***	$12,857.14	Construction in existing combiner room where existing combiners are to be removed	N/A	N
RF Safety Coordibnatio	***$75,000.00***	$75,000.00	For Antenna and line install Please see attached Cost Justification	N/A	N
NE Pole Prep work	***$33,333.33***	$33,333.33	East Pole Decommissioning Prep work Please see attached Cost Justification	N/A	N
Equipment Storage	***$1,000.00***	$1,000.00	ISI storage Please see attachment : Willis Tower- Budget Overview West Tower RFS Antenna /Combiner System	N/A	N
Radome modifications	***$50,000.00***	$50,000.00	Design and Fabrication Please see attached Cost Justification	N/A	N

East Pole transmission line removal	***$41,666.67***	$41,666.67	Remove transmission line NE pole at Willis Please see attached Cost Justification	N/A	N
East Pole material disposal	***$13,333.33***	$13,333.33	scrap Please see attached Cost Justification	N/A	N
Combiner Commissioning	***$7,720.00***	$7,720.00	RFS-Loney Please see attached Cost Justification	N/A	N
NE Pole decommissioning lift	***$200,000.00***	$200,000.00	Expected 2 helicopter lifts at Willis Please see attached Cost Justification	N/A	N
Antenna Installation	***$200,000.00***	$200,000.00	West Tower combined Aux antenna install Please see attached Cost Justification	N/A	N
outside project management	***$92,500.00***	$92,500.00	Willis charges Please see attached Cost Justification	N/A	N
Sub-total	$1,608,440.20	$1,551,002.38	N/A	$359,899.33	N
Total for all systems	$11,475,383.31	$8,910,145.58	N/A	$4,375,109.28	N

Components

Actual Information Description	File Name
Antenna Storage	Information not provided.

Elbow complex, single channel, at antenna input, per 8 3/16. feedline (if needed)	**Component Description:** **Amount:**	1st 25% down payment on line item 3 $3,395.75
	Component Description: **Amount:**	1st 25% down payment for line item 4 $622.50
UHF - High Power Top Mount (200-1000 kW), One station antenna , elliptically or circularly polarized	**Component Description:** **Amount:**	1st 25% down payment on line item 2 $2,450.00
	Component Description: **Amount:**	1st 25% down payment on line items 1 $57,112.00
Sweep test of existing antenna	**Component Description:** **Amount:**	1st down payment on line item 5 $1,600.00
Hancock Aux Sweep Test	**Component Description:** **Amount:**	Hancock Aux Sweep Invoice 2001532 $6,400.00

Combiner Installation	**Component Description:** **Amount:** **Component Description:** **Amount:**	ATC down payment for Hancock combiner installation $5,933.53 ATC final payment for Hancock combiner installation $16,966.47
RF Project Management	**Component Description:** **Amount:** **Component Description:** **Amount:**	Down payment for ATC Hancock project management $2,456.33 Final payment for ATC Hancock project management $7,023.67
Adding a module to existing combiner (without antenna)	**Component Description:** **Amount:** **Component Description:** **Amount:**	ATC down payment for Hancock combiner module $14,487.41 ATC final payment for Hancock combiner module $41,425.59

Sweep test of existing antenna	**Component Description:** **Amount:** **Component Description:** **Amount:**	ATC Hancock down payment for sweep of existing antenna/combiner $1,295.53 ATC Hancock final payment for sweep of existing antenna/combiner $3,704.47
Antenna Delivery	Information not provided.	
Combiner Delivery	Information not provided.	
NE Pole decommissioning	Information not provided.	
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)	**Component Description:** **Amount:**	Willis Tower aux antenna combiner, WLS 50% share, including taxes (6.35% IL, 1% Chicago). $65,401.05
Sweep test of existing antenna	Information not provided.	

UHF - High Power, Side Mount, broadband panel, 24 bay,, 700 kW input, directional,, elliptically or circularly polarized	**Component Description:** **Amount:**	WLS 50% share of the Willis Tower aux antenna $129,625.03
Permitting	Information not provided.	
Antenna Commissioning	Information not provided.	
Cylinder entry port Restoration	Information not provided.	
RFR measurements	Information not provided.	
Combiner Freight	Information not provided.	
RF Safety coordination NE Pole	Information not provided.	
Combiner Room Construction WEST	Information not provided.	
Antenna Freight	Information not provided.	
Combiner Reconfiguration Labor	Information not provided.	
Combiner Room Construction EAST	Information not provided.	
RF Safety Coordibnatio	Information not provided.	
NE Pole Prep work	Information not provided.	
Equipment Storage	Information not provided.	
Radome modifications	Information not provided.	
East Pole transmission line removal	Information not provided.	
East Pole material disposal	Information not provided.	
Combiner Commissioning	Information not provided.	
NE Pole decommissioning lift	Information not provided.	
Antenna Installation	Information not provided.	
outside project management	Information not provided.	

Cost Information

Transmission Line

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justification
Primary Transmission Line	**$40,000.00**	**$40,000.00**		**$0.00**	
Modification of rigid line	***$40,000.00***	$40,000.00	Estimate based on previous construction experience at Willis	N/A	N/A
Auxiliary Transmission Line	**$326,600.00**	**$284,367.21**		**$119,367.21**	
Transmission Line Mounts	***$15,000.00***	$15,000.00	Design and Fabrication Please see attached cost justification	N/A	N/A
Internal Transmission line	***$75,000.00***	$75,000.00	To Combiner, with parts Please see attached cost justification	N/A	N/A
Transmission Line installation	***$75,000.00***	$75,000.00	Mix of day and night work Please see attached cost justification	N/A	N/A

Rigid Transmission Line - copper, 6 1/8"	$161,600.00	$119,367.21	Please see attached "WLS Invoice 059935 Explanation 4824-1149-7094, 4 Transmission Line 2-13-2019.pdf"	$119,367.21	N/A
Auxiliary Transmission Line	**$35,000.00**	**$35,000.00**		**$13,901.00**	
Hancock Auxiliary Site	***$35,000.00***	$35,000.00	Estimate based on previous work at Hancock.	$13,901.00	N/A
Sub-total	$401,600.00	$359,367.21	N/A	$133,268.21	N/A
Total for all systems	$11,475,383.31	$8,910,145.58	N/A	$4,375,109.28	N/A

Components

Actual Information Description	File Name
Modification of rigid line	Information not provided.
Transmission Line Mounts	Information not provided.
Internal Transmission line	Information not provided.
Transmission Line installation	Information not provided.
Rigid Transmission Line - copper, 6 1/8"	**Component Description:** Willis Tower aux transmission line, WLS 50% share. **Amount:** $119,367.21

Hancock Auxiliary Site	**Component Description:**	ATC Hancock down payment for combiner transmission line
	Amount:	$3,042.17
	Component Description:	Hancock overnight transmission line work and site clean up.
	Amount:	$2,160.00
	Component Description:	ATC Hancock final payment for combiner transmission line
	Amount:	$8,698.83

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 Justificatior
Primary Tower BMAST	**$2,115,975.00**	**$1,180,375.00**		**$0.00**	
Structural engineering tower load study for well documented tower	$12,600.00	$150,000.00	ERE. Same as study for West mast Please see attachment : Willis Tower-Budget Overview West Tower RFS Antenna /Combiner System, provided by Willis Tower representatives	N/A	N/A
Serious tower reinforcement /modifications	$1,052,000.00	$400,000.00	Will install channel 44 antenna on East Mast, and has based cost estimate for structural modifications on Willis Tower West Mast estimates. See Willis Tower-Budget Overview West Tower RFS Antenna /Combiner System.	N/A	N/A

Complex Tower (includes, for example, those with candelabras and/or stacked antennas)	$421,000.00	$0.00	Not applicable to WLS	N/A	N/A
Tower Helicopter Lift	***$209,275.00***	$209,275.00	See attached ABC-WLS Willis Tower Chicago Channel 44 Removal ($88.5K for helicopter lift /permits and $9.5K for lift insurance); ABC-WLS Willis Tower Chicago Channel 44 Install ($101,775 for helicopter lift /permits and $9.5K for lift insurance).	N/A	N/A

Install channel 22 antenna	***$243,200.00***	$243,200.00	See attached ABC-WLS Willis Tower Chicago Channel 44 Install (ISI estimate to prep East Mast at Willis and labor for transporting /installing ch. 22 antenna). Helicopter lift /permits /insurance costs excluded from Install Channel 44 Antenna line item.	N/A	N/A
Remove Channel 44 antenna	***$177,900.00***	$177,900.00	See attached ABC-WLS Willis Tower Chicago Channel 44 Removal (ISI estimate to prep East Mast at Willis and labor for uninstalling and transporting ch. 44 antenna). Helicopter lift /permits /insurance costs excluded from Remove Channel 44 Antenna line item.	N/A	N/A
Auxiliary Tower BTWR	**$421,000.00**	**$0.00**		**$0.00**	

Complex Tower (includes, for example, those with candelabras and/or stacked antennas)	$421,000.00	$0.00	Not applicable to WLS	N/A	N/A
Auxiliary Tower BMAST	**$1,485,600.00**	**$350,000.00**		**$0.00**	
Structural engineering tower load study for well documented tower	$12,600.00	$150,000.00	ERE Please see attached cost justification	N/A	N/A
Serious tower reinforcement /modifications	$1,052,000.00	$200,000.00	Structural. WLS 1/2 share Please see attached cost justification	N/A	N/A
Complex Tower (includes, for example, those with candelabras and/or stacked antennas)	$421,000.00	$0.00	Not applicable to WLS	N/A	N/A
Sub-total	$4,022,575.00	$1,530,375.00	N/A	$0.00	N/A
Total for all systems	$11,475,383.31	$8,910,145.58	N/A	$4,375,109.28	N/A

Components

Information not provided.

Cost Information

Outside Professional Services

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Cost Justificatior
Outside Professional Services	**$227,153.12**	**$221,763.12**		**$91,376.77**	
Outsult RF Consulting Engineering Services	***$750.00***	$750.00	Please see attachment WLS 280282 JOHN HANCOCK - EAST TOWER ILRepack Cost Estimate	N/A	N/A
Structural analysis of new Channel 22 antenna	***$7,000.00***	$7,000.00	Please see attached WLS Vortex shedding study PO exhibit	N/A	N/A
Legal advice re Reimbursement Process	***$70,858.12***	$70,858.12	Please see two attached proposals from Akin Gump Strauss Hauer & Feld, LLP	$69,475.49	N/A
Comprehensive coverage verification via field study, if needed	$84,200.00	$80,000.00	Price based on catalog estimate	N/A	N/A

Attorney Fees - Prepare and File request for Special Temporary Authorization	$7,360.00	$7,000.00	N/A	N/A	N/A
Attorney Fees - Negotiation of lease and other matters for shared locations	$4,210.00	$4,000.00	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	N/A	N/A
Attorney Fees - Aux Antenna, prepare and File Form 2100 Construction Permit or License Application	$4,210.00	$4,000.00	N/A	N/A	N/A
Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	$5,260.00	$5,000.00	N/A	$4,579.03	N/A
Prepare request for Special Temporary Authorization	$4,100.00	$3,000.00	N/A	$840.00	N/A

RF Consulting Engineer Fees-Aux Antenna: Prepare engineering section of FCC Form 2100, License to Cover Application	$1,580.00	$1,500.00	N/A	N/A	N/A
Prepare engineering section of FCC Form 2100 (main), License to Cover Application	$1,580.00	$1,500.00	N/A	N/A	N/A
RF Consulting Engineer Fees-Aux Antenna: Prepare engineering section of FCC Form 2100, Construction Permit Application	$2,105.00	$2,000.00	N/A	N/A	N/A
Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	$3,155.00	$3,015.00	Slightly more work was required than was accounted for in the original cost estimate.	$3,015.00	N/A

Perform engineering study for new channel assignment and antenna development	$7,360.00	$9,890.00	Please see attached CTJC Invoice # 850-03-0081. See "WLS Hancock Project Engineering Study Estimated Cost Increase Justification (May 2020) Rev 3.pdf" for more information on this revised cost estimate.	$9,890.00	N/A
Address transition timing and coordination issues w/ other stations and wireless	$2,630.00	$2,500.00	N/A	$1,200.00	N/A
Prepare and or review reimbursement form	$2,630.00	$2,500.00	N/A	$2,377.25	N/A
Project management of the transition	$15,800.00	$15,000.00	Willis tower estimated charges	N/A	N/A
Sub-total	$227,153.12	$221,763.12	N/A	$91,376.77	N/A
Total for all systems	$11,475,383.31	$8,910,145.58	N/A	$4,375,109.28	N/A

Components

Actual Information Description	File Name

Outsult RF Consulting Engineering Services	Information not provided.
Structural analysis of new Channel 22 antenna	Information not provided.
Legal advice re Reimbursement Process	**Component Description:** Legal Advice RE Reimbursement Process **Amount:** $982.02 **Component Description:** Legal Advice RE Reimbursement Process **Amount:** $1,670.39 **Component Description:** Legal Advice RE Reimbursement Process **Amount:** $550.78 **Component Description:** Legal Advice RE Reimbursement Process **Amount:** $821.12 **Component Description:** Legal Advice RE Reimbursement Process **Amount:** $1,983.32 **Component Description:** Legal Advice RE Reimbursement Process **Amount:** $39,239.15

	Component Description: **Amount:**	Legal Advice RE Reimbursement Process $642.31
	Component Description: **Amount:**	Legal Advice RE Reimbursement Process $23,586.40
Comprehensive coverage verification via field study, if needed	Information not provided.	
Attorney Fees - Prepare and File request for Special Temporary Authorization	Information not provided.	
Attorney Fees - Negotiation of lease and other matters for shared locations	Information not provided.	
Attorney Fees -Prepare and File FCC Form 2100 (main), License to Cover Application	Information not provided.	
Attorney Fees - Aux Antenna, prepare and File Form 2100 Construction Permit or License Application	Information not provided.	
Attorney Fees - Prepare and File FCC Form 2100 (main), Construction Permit Application	**Component Description:** **Amount:**	Prepare & File 2100, Main CP $216.27
	Component Description: **Amount:**	Prepare & File 2100, Main CP $4,362.76

Prepare request for Special Temporary Authorization	**Component Description:** **Amount:**	Prepare Special Temporary Authorization (partial) $840.00
RF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, License to Cover Application	Information not provided.	
Prepare engineering section of FCC Form 2100 (main), License to Cover Application	Information not provided.	
RF Consulting Engineer Fees- Aux Antenna: Prepare engineering section of FCC Form 2100, Construction Permit Application	Information not provided.	
Prepare engineering section of FCC Form 2100 (main), Construction Permit Application	**Component Description:** **Amount:**	Prepare engineering section of FCC Form 2100 (Main), Construction Permit Application $3,015.00

Perform engineering study for new channel assignment and antenna development	**Component Description:**	Hancock American Tower down payment "Perform Engineering Study for New Channel Assignment and Antenna Development"
	Amount:	$1,295.53
	Component Description:	Perform Engineering Study for New Channel Assignment & Antenna Dev
	Amount:	$4,890.00
	Component Description:	Hancock American Tower final payment "Perform Engineering Study for New Channel Assignment and Antenna Development"
	Amount:	$3,704.47
Address transition timing and coordination issues w/ other stations and wireless	**Component Description:**	Address transition timing with other stations and wireless
	Amount:	$1,200.00
Prepare and or review reimbursement form	**Component Description:**	Prepare and or Review Reimbursement Form
	Amount:	$2,377.25

Project management of the transition	Information not provided.

Cost Information

Other Expenses

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

Description	Predetermined Cost Estimate	Estimated Cost	Estimated Cost Justification	Actual Cost	Actual Co Justificati
Other Expenses	**$303,605.50**	**$299,922.50**		**$13,522.50**	
Hancock non dormant charges	***$108,731.10***	$108,731.10	See attached lease text: "WLS Hancock Lease Dormant vs Energized Language", And See "WLS Schedule 399 Supplemental Statement" Exhibit	N/A	N/A
Outside labor cost	***$118,934.40***	$118,934.40	Two electricians for 12 weeks at $123.89/hr (960 hrs). See attached hourly quote: "WLS Prime Electric Hourly Quote" and See "WLS Schedule 399 Supplemental Statement" Exhibit	N/A	N/A
Engineering management charge	***$0.00***	$0.00	Do not anticipate seeking reimbursement of cost for internal Engineering	N/A	N/A

MVPD Notification of Channel Change	***$0.00***	$0.00	Do not anticipate seeking reimbursement of cost	N/A	N/A
Develop and air announcement of upcoming channel change	***$25,000.00***	$25,000.00	1/2 of catalog estimate	N/A	N/A
Equipment Storage	***$5,000.00***	$5,000.00	Based on catalog estimate	N/A	N/A
Equipment Delivery and Handling Charges	***$10,000.00***	$10,000.00	based on catalog estimate	$6,250.50	N/A
Disposal Costs (for equipment and other waste, net of any salvage value)	***$20,000.00***	$20,000.00	Based on catalog estimate	N/A	N/A
Non-zoning permits	***$2,000.00***	$2,000.00	N/A	N/A	N/A
Local Zoning	***$750.00***	$750.00	Please see attached WLS 280282 John Hancock-East Tower IL Repack Estimates	N/A	N/A
FCC Filing Fees - Special Temporary Authorization request	$195.00	$190.00	N/A	N/A	N/A
FCC Filing Fees - Form 2100 license to cover application	$335.00	$975.00	X3 $325/ license filing fee	N/A	N/A

FCC Filing Fees - Form 2100 minor change CP application	$1,110.00	$1,070.00	X2 $1070.00 for two Aux facilities	N/A	N/A
DTV Medical Facility Notification	$11,550.00	$7,272.00	Please see attached "DTV Notifications ABC Stations " quote	$7,272.00	N/A
Sub-total	$303,605.50	$299,922.50	N/A	$13,522.50	N/A
Total for all systems	$11,475,383.31	$8,910,145.58	N/A	$4,375,109.28	N/A

Components

Actual Information Description	File Name
Hancock non dormant charges	Information not provided.
Outside labor cost	Information not provided.
Engineering management charge	Information not provided.
MVPD Notification of Channel Change	Information not provided.
Develop and air announcement of upcoming channel change	Information not provided.
Equipment Storage	Information not provided.

Equipment Delivery and Handling Charges	**Component Description:** **Amount:**	Lift and install Hancock PA Cabinets $2,320.00
	Component Description: **Amount:**	Load Willis Transmitter from storage $649.50
	Component Description: **Amount:**	Willis Tower TX Cooling Module Delivery $714.00
	Component Description: **Amount:**	Lift and install Hancock TX Cooling Module $1,940.00
	Component Description: **Amount:**	Unload Willis Transmitter into storage $627.00
Disposal Costs (for equipment and other waste, net of any salvage value)	Information not provided.	
Non-zoning permits	Information not provided.	
Local Zoning	Information not provided.	
FCC Filing Fees - Special Temporary Authorization request	Information not provided.	
FCC Filing Fees - Form 2100 license to cover application	Information not provided.	

FCC Filing Fees - Form 2100 minor change CP application	Information not provided.	
DTV Medical Facility Notification	**Component Description:** **Amount:**	Medical Facility Notification Invoice $7,272.00

Cost Information

Grand Total

	Predetermined Cost Estimate	Estimated Cost	Actual Cost
Total for all systems	$11,475,383.31	$8,910,145.58	$4,375,109.28

Reimbursement Status

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

Certification

Section	Question	Response
Submission of Estimated Expenses Statements	WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND /OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a)(1), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503), AND ANY FALSE STATEMENTS COULD SUBJECT THIS ENTITY TO LIABILITY UNDER THE FALSE CLAIMS ACT.	
	1. The Authorized Person signing below certifies that he /she is authorized to submit this TV Broadcaster Relocation Fund Reimbursement Form on behalf of the above-named entity. 2. The above-named entity acknowledges that all certifications and attached documentation are considered material representations. 3. The above-named entity acknowledges the submission of the information herein creates no obligation on the part of the government to pay any amount.	

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

	8. The above-named entity certifies that it is in full compliance with all statutes, rules, regulations and governmental requirements for which compliance is a pre-requisite for obtaining the payments herein requested.	
	I declare, under penalty of perjury, that I am an authorized representative of the above-named applicant for the Authorization(s) specified above.	**John W Zucker** *Assistant Secretary* 05/15/2020

Certification

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

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

	8. The above-named entity acknowledges that overpayments or payments in error must be promptly refunded to the Commission. 9. The above-named entity certifies that it is in full compliance with all statutes, rules, regulations and governmental requirements for which compliance is a prerequisite for obtaining the payments herein requested.	
	I declare, under penalty of perjury, that I am an authorized representative of the above-named applicant for the Authorization(s) specified above.	**John W Zucker** *Assistant Secretary* 05/15/2020

Attachments