



State of New Jersey

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December 2018 WNJS Interim Facility

The New Jersey Public Broadcasting Authority (“NJPBA”), the licensee of WNJS, Camden, New Jersey (facility ID 48481), which has been repacked from channel 22 to channel 23 and assigned to Phase 4 of the transition, will not be able to construct the post repack, full-power facility (“facility”) by the August 2019 Phase 4 transition deadline due to state procurement delays. NJPBA seeks, instead, to move to an interim (low power) facility to meet its Phase 4 assignment deadline.

The following narrative is in support of the NJPBA’s request for additional Auction Relocation Reimbursement Funds for project costs related to the procurement and installation of an interim (low power transmission) facility to meet phase-four transition date of August 2, 2019.

Background: The NJPBA is a state agency that operates a noncommercial educational public TV network, consisting of eight transmission sites, which serves the entire State of New Jersey with high-quality public TV programming and emergency communications.

Pursuant to its FCC-mandated repack, the NJPBA developed a \$1.3 million project to transition WNJS to a post-repack, full-power facility using FCC Reimbursement Funds. The NJPBA sought and was granted FCC reimbursement funds for its repack transition to a full-power facility.

The total project expense for the facility exceeds New Jersey State procurement thresholds for an inter-agency contract award. Therefore the NJPBA is required to bid and award the WNJS facility project through the State’s Department of Purchase and Property.

Starting in June of 2017, the NJPBA began the RFP development process with the State for the WNJS post-repack facility. To date, the State’s procurement process has not yielded an RFP. Assuming typical state procurement timeframes, NJPBA estimates a contract award for the WNJS facility will occur in the late fall of 2019 and project build will be completed by the summer of 2020.

During all procurement phases, the NJPBA disclosed the following to our State agency procurement partners: “the *Federal Communications Commission has ordered many broadcasters, including the NJPBA, to change their broadcast channels under a national program referred to as Channel Repacking.....The FCC mandated Channel Repacking will impose a nation-wide strain on available resources (equipment and labor) required to fulfill this RFP. It is of the States' best interest to expedite approval of this RFP to secure the resources necessary to accomplish the repack project by the FCC-imposed deadline of June 2019. Should the NJPBA fail to meet the 2019 project deadline, the FCC may order the Authority to cease operations at our Camden site.*”

The NJPBA has been unsuccessful in mitigating the delay in issuing the WNJS facility RFP. With our desire to maintain public TV service to the viewing public during the phase-four transition period, the NJPBA requested and was granted a one-time purchasing waiver from the State with a procurement threshold of \$150,000. This exemption has enabled the NJPBA to expedite the RFP and contract award for the equipment necessary to build the WNJS interim, low-power facility. The NJPBA is scheduled to begin construction of the interim facility in March of 2019 and will complete testing during the phase four transition testing period. The NJPBA intends to operate the WNJS low-power facility during and after the post-repack transition until the full power facility can be procured consistent with state procurement requirements.

The NJPBA requires an interim transmitter capable of operating on our post-repack assigned channel to meet its Phase 4 assignment. The NJPBA must avoid the possibility of shutting down the WNJS facility during the phase-four transition period primarily due to our State mandate to provide services to the citizens of New Jersey. Moreover, WNJS is designated as a Local Primary distribution source within the New Jersey State Emergency Communications plan. *Note: WNJS provides coverage within the emergency communications zones of two nuclear-generating stations and over 300 miles of coastline bordering the Delaware Bay and the Atlantic Ocean.* The NJPBA also intends to honor our commitment to deliver a good quality signal from WNJS for the various multi-program-service providers throughout the Philadelphia media market to ensure no disruption for its MVPD viewers.

The NJPBA seeks the reimbursement funding for a 3-kilowatt low power transmitter and filter, installation costs, and professional fees associated with this interim facility. The NJPBA will reuse portions of the WNJS facility, including the main antenna and transmission line. An attached breakdown of the project costs and quotes has been provided for your review.

As a state entity, the NJPBA is required to use state contracts for goods and services. The NJPBA and all contractors working for the NJPBA must also comply with the New Jersey Prevailing Wage Act (N.J.S.A. 34: 11-56.26 et seq.). The goods and services quoted for the WNJS full power and interim repack projects, including project management, electrical contracting, tower rigging, legal, and RF consulting are currently under New Jersey State contracts and comply with state procurement guidelines.

A final project design plan has been included below. The NJPBA has begun implementing portions of this plan, including demolition, electrical, and hazardous waste removal.

The following transition plan incorporates the reuse of portions of the WNJS facility, including the main antenna and transmission line.

Abbreviations used below:

23A = former analog channel 23

22D = current digital channel 22

23D = post-repack digital channel 23

Phase I – Auxiliary Antenna Installation and RF System Prep

1. File for a construction permit for the 23D auxiliary antenna to replace the existing 22D auxiliary antenna.
2. Remove remains of the 23A/22D combining system including combiner, magic tee, waveguide switches, intermod notch filter, water-cooled load, etc. During portions of this work, 22D will operate on its auxiliary antenna but otherwise will remain on the air continuously. ***23A-COMPLETED. Perform the necessary steps required under the INTERIM facility plan.***
3. Install/plumb two coaxial switches* to allow for switching current 22D transmitter, new 23D transmitter, main antenna (via 50/75 ohm transformer), auxiliary antenna, and test load. The portions of this work that will require a total shutdown of the 22D transmitter will be scheduled for overnight maintenance windows. ***Perform the necessary steps required under the interim facility plan, including transformer and test load installation. RF switching to be completed under the full-power transition plan.***
4. Install 23D side-mount auxiliary antenna utilizing an existing run of 4-1/16" transmission line. Sweep-test and tune system. Plumb to coax switches above. ***To be completed under the full-power transition plan.***

Phase II – Building Preparations for New Transmitter Installation

5. Decommission and remove remaining portions of 23A transmission equipment including IOT transmitter and high-voltage power supplies, electrical conduits and associated branch circuit wiring, high-voltage conduits and wiring, liquid cooling system, retired remote control equipment, electrical panels, etc. Drain and flush cooling system before demolition. Arrange for hazardous materials transport. (Transmitter tubes have been sent to the manufacturer for recycling and will not pose a disposal hazard for this project). ***COMPLETED***

6. Reconstruct wall between equipment room and control room where 23A transmitter was installed with new through-wall openings framed out to correspond to 23D transmitter profile. Temporarily seal off wall openings with plywood to maintain proper HVAC airflow (separate HVAC systems for control room and equipment room areas).
COMPLETED
7. To the extent practicable, begin electrical work for the new transmitter avoiding overhead conduit runs that could interfere with forthcoming ceiling-mounted RF system equipment installation (mask filter, transmission lines, etc.). ***To be completed under the full-power transition plan.***
8. To the extent practicable, begin electrical work associated with new transmitter cooling system including conduits/wiring between electrical panels, transmitter location, pump controller, exterior disconnects, heat exchanger, pumps, etc. ***To be completed under the full-power transition plan.***

Phase III - New Transmitter Equipment Installation

9. Install new 23D RF system overhead including mask filter and associated transmission lines and connect to coaxial switches. ***Partially install RF components required for the INTERIM facility plan.***
10. Install new 23D cooling system including interior and exterior coolant plumbing, flow meters, valves, heat exchanger, pumps, etc. Stub out supply and return lines to the vicinity of new transmitter location. Finish any associated electrical work that could not be completed previously. ***To be completed under the full-power transition plan.***
11. Install transmission line from mask filter output to coaxial switches. Make final connections from the cooling system supply/return to the transmitter: complete power wiring and final connections to the transmitter. ***To be completed under the full-power transition plan.***
12. Integrate/wire new transmitter and existing systems including remote controls, STL/switching equipment, monitoring equipment, etc. Configure and test remote controls. ***To be completed under the full-power transition plan.***
13. Perform final system optimizing and testing including precorrection, antenna system sweeps, RF proof of performance, etc. ***Perform the necessary steps required under the INTERIM facility plan.***

Phase IV –Cutover

14. Switch 23D transmitter to the main antenna and shut down the 22D transmitter. ***Perform the necessary steps required under the INTERIM facility plan.***
15. File applications for a license to cover 23D construction permits for both main antenna and the auxiliary antenna. ***Perform the necessary steps required under the INTERIM facility plan.***

Phase V –Post-Cutover

16. Convert 22D transmitter for backup service as reduced-power 23D transmitter.*
17. Replace 22D mask filter.*
18. Perform RF switching tests and RF proof of performance.*

* Portions of the transition plan will be funded by the NJPBA.