



KVCR UHF to VHF Transition / KVCR Technology Core Modernization Project Updates

UHF-to-VHF TRANSITION

SCOPE

KVCR will be transitioning from ultra-high frequency (UHF) channel 24 to very-high frequency (VHF) channel 5. The scope includes replacing the existing transmitter and antenna solutions systems located at 10550 Box Springs Mountain Rd., Moreno Valley, CA 92324. District Facilities Planning & Construction and KVCR have formed a collaborative and expert team and are working towards the successful delivery of this project.

SCHEDULE

The project has five major milestones. The District has successfully fulfilled all five milestones.

1. File FCC construction permit by July 12, 2017. ✓
2. Tower permit received on October 2, 2018. ✓
3. Complete construction of new tower by January 31, 2019. ✓
4. Complete installation of both antenna and transmitter solution systems by March 20, 2019. ✓
5. KVCR goes live with VHF transmission by April 12, 2019. This was completed on March 25, 2019. ✓

CHALLENGES

- The KVCR FM antenna at Box Springs attached to the existing tower (3-leg) would not fit into the configuration of the new 345-foot broadcasting tower (4-leg). This will require a new FM antenna. After further negotiation with Jampro Antenna, Inc., the new FM antenna will cost the District about \$148,000 for labor, materials, equipment, taxes, shipping and handling. The amendment was approved by the Board of Trustees on September 13, 2018. The new FM Antenna has been designed and is under final adjustments with testing and commissioning.
- It has been uncovered that the antenna systems at the KVCR studio tower at SBVC need to be replaced and raised higher on the tower profile in order to provide the proper transmission frequency to the new antenna systems at the new tower at Box Springs in Moreno Valley. This required Division of the State Architect (DSA) involvement in order to justify the loading requirements and procurement and installation of these antenna systems. This has been approved by DSA and the work is now pending the installation of the FM antenna at Box Springs.
- The installation of a new TV transmitter system required mechanical, electrical, plumbing and structural upgrades to the existing facility. The District engaged DLR Group architects under a master services agreement to provide a professional design services for this scope of work. The mechanical, electrical, plumbing and structural work to the transmitter building is now complete.



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- Results from the FM Antenna pattern testing have been received. Study of the pattern results determined that adjustments to the FM Antenna are required to reach current target audiences. Adjustments to the antenna and pattern are underway. Antenna is anticipated to be completed in September and installation will be completed in October 2019.

PROCUREMENT

- TV Antenna: Jampro Antenna, Inc. (BOT approved on October 12, 2017 and subsequently September 13, 2018) is procuring the TV and FM antenna at the Box Springs facility. The TV antenna is installed and in use, and the FM antenna is planned for installation in October 2019.
- TV Transmitter: GatesAir (BOT approved on March 8, 2018) is procuring Transmitter equipment/system at Box Springs Facility. The District selected GatesAir and Salvador Castillo (BOT approval requested October 11, 2018) as independent contractors to provide technical services for the transmitter facility and the integration scope with the new antenna/tower systems. The District hired Allen Communications, Inc. to remove a portion of the existing transmitter equipment that is not operational. This work has been completed.
- New Broadcasting Tower: Sabre Communications Corporation (BOT approved on March 8, 2018) has completed the new tower.
- Studio FM Antenna: SBCCD procured the KVCR studio FM antenna system at SBVC.
- FM Antenna & TV Transmitter Install: SBCCD procured Allen Communications, Inc. for construction services to install the FM Antenna at SBVC and TV Transmitter at Box Springs. This TV Transmitter has been completed and the remaining work is now pending the FM antenna completion and delivery to the site.
- Transmitter Facility at Moreno Valley: SBCCD has contracted with Champion Electric and Emcor for the electrical and mechanical upgrades at the transmitter facility. The essential pieces for the transition have been completed.

CONSTRUCTION PROGRESS

- The new tower was fully erected on January 28, 2019 and ready to receive TV and FM Antenna. ✓
- The design of the new TV antenna system by Jampro Antenna has been completed and tested, and was installed by March, 20, 2019. ✓
- The installation of the new TV transmitter by GatesAir Inc. has been completed at the Box Springs facility, and was finished by March 20, 2019. ✓



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- Survey of the new tower facility area per the approved design at Box Springs has been completed. The lease was amended to include the footprint required for KVCR's new tower with the owner, Henry Broadcasting. ✓
- Declare a successful transitioning with FCC by March 25, 2019 (FCC due date is April 12, 2019). ✓

THINGS TO FOLLOW

- Installing new KVCR FM studio antenna system at SBVC and at Box Springs in October 2019. The FM antenna work at SBVC has received DSA approval and is pending the delivery of the FM Antenna for the Box springs site. The FM antenna design and assembly for Box Springs has been completed and is being shipped to the site. The demolition of the existing tower will immediately follow. This will be completed in October 2019.

TECHNOLOGY CORE MODERNIZATION

SCOPE

KVCR will be transitioning from ultra-high frequency (UHF) channel 24 to very-high frequency (VHF) channel 5 and will need to upgrade its existing technology and equipment to accommodate the transition. The project scope includes modernizing and updating the TV and radio studio to better serve the station and community.

The overall scope of this initiative includes two major components:

1. Technology & Equipment Upgrades to TV and Radio Station at KVCR facility.
2. Space Repurposing, Reutilization, and Maximization.

SCHEDULE

- Hire a professional consultant (program manager) to oversee the project from programming development to closeout under the supervision of District staff. ✓
- Scope development, perform needs assessment, and develop an overall budget. ✓
- Solicit a design professional team to design the system upgrade by February 8, 2018. ✓
- Procure TV and Radio station equipment separately by August 2018. Recommendation has been submitted to the BOT in August 9, 2018. ✓
- Solicit an integrator (contractor) to procure, install the technology upgrade by February 21, 2019 board date. ✓
- Received DSA permit for the building repurposing on January 2, 2019. Construction services procurement is in the process and will be submitted to for approval on February 21, 2019. ✓
- Complete the building repurposing, and procure furniture by the end of September 2019. ✓
- The staff will move in after the technology upgrades have been installed in October 2019.



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CHALLENGES

- It is imperative that the “portion of” technology core equipment and system upgrades are complete and the transition is complete to maintain FCC deadline in order to mitigate any potential penalties and loss of license. ✓
- System design implementations:
 - Introduce and implement advanced television system committee (ATSC 3.0) for KVCR. ✓
 - Introduce and implement offsite master control, which could potentially save in the technology core upgrade project budget and will lower KVCR annual operating cost. ✓
- Due to the technology rapid evolving and new ATSC 3.0 generation, many new high tech companies are wrapping up their design packages to launch the new system generation. Therefore, the District, KVCR alongside with the system engineer teams have decided to re-strategize integration procurement package. ✓
- Since KVCR is looking at repurposing more of the broadcast areas to maximize their efficiency and accommodate the new technology, some of the large pieces of the integration equipment will move after the repurposing is complete. ✓
- The KVCR staff has temporarily moved to multiple locations during the construction of the tech core and building repurpose. These locations include the PDC, ATTC, other location at SBVC and two temporary trailers next to KVCR. Move is in progress and will be completed by April 5, 2019. ✓

PROCUREMENT

- Procure a professional design team through an RFQ/RFP. ✓
- Engage the District with Public Media Management (PMM) for the master joint control. Some of the benefits to the District/KVCR for the master control system are: no up-front investment is required, cloud -based sourcing, reduced cost of station operation, significant reduction of capital investment at the station level, retention of control over KVCR local schedule deadlines, no need for expensive dedicated high-capacity fiber connectivity, general reduction in KVCR’s need for storage, built-in disaster recovery, etc. BOT approved this contract on July 12, 2018. ✓
- Procure the radio and TV production systems and equipment. To be installed by the integrator. Pending BOT approval August 9, 2018. ✓
- For the technology core modernization scope, the District staff issued a request for qualification (RFQ) and secured (3) prequalified vendors. Viper Cabling, Inc. is being recommended to BOT on February 21, 2019. ✓
- Procure a general contractor for building repurpose through competitive bidding process. Monet Construction, Inc. is being recommended to BOT on February 21, 2019. ✓



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CONSTRUCTION PROGRESS

- Upon BOT approval on for Viper Cabling and Monet Construction, Inc., notice to proceed was be issued on February 28, 2019. ✓
- The district has engaged DLR Group for architectural services under a district master services agreement to start the space design and repurposing for phase 1 (broadcast space associated with technology upgrade) and phase 2 (open offices and FF&E upgrades and space maximization). KVCR received DSA approval for the building repurpose. The bid process has been completed and the project was awarded to Money Construction. ✓
- Relocate at least 20 staff members from KVCR building to PDC, ATTC, other location at SBVC and two temporary trailers next to KVCR. Move was completed by April 5, 2019, followed by equipment decommissioning, and construction start on April 10, 2019. ✓
- Construction on the building repurpose and the technology upgrades are underway. Majority of building repurpose is complete, and technology upgrades are underway.
- Additional physical and technology security measures were identified during the construction process. This work will be completed as part of other campus security upgrades.

THINGS TO FOLLOW

- Building construction began on April 10, 2019 and will be completed in October 2019. The technology upgrades and final commissioning will continue into November 2019.
- KVCR staff will move back into the building in October 2019.



KVCR UHF to VHF Transition / KVCR Technology Core Modernization \$16,000,000 Budget Update

Overall Project Support \$534,570

- Consultants**
\$84,570
 - Russ Walker
 - Kessler & Gehman
- Legal Counsel**
\$450,000
 - Womble Bond* (FCC)
 - Burke Sorenson (Ed Law)
 - *Formerly Bennet & Bennet
- Contingency**
\$0

UHF-to-VHF Transition \$4,541,833

- Consultants**
\$222,805
 - NCA (Project Management)
 - Trileaf (Environmental)
 - Snipes-Dye (Engineering)
 - CHJ (Geotechnical)
 - Knowland (Inspection)
 - DLR (Transmitter Design)
 - Gates Air (Site Assessment)
 - Salvador Castillo (RF Technical)
 - Magnum Tower (Structural Analyst)
 - P&R Tower (Structural Analyst)
- Construction**
\$3,494,944
 - Sabre Communication (Tower)
 - Jampro (Antenna)
 - Allen Communication (Transmitter Demo/Installation)
 - Emcor (HVAC)
 - Champion (electrical)
- Equipment**
\$796,084
 - GatesAir (TV and FM Transmitter)
 - Heartland Video (Antenna at Studio Tower)
- Other**
\$28,000
 - Advertising
 - County Permits

Technology Core Modernization \$10,923,597

- Consultants**
\$924,960
 - NCA (Project Management)
 - Key Code (Engineering)
 - TMS (ATSC3.0* and PBS)
 - DLR Group (Architectural)
 - Knowland Construction (Inspection)
 - *Advanced TV Systems Committee Standards
- Construction**
\$7,558,097
 - Viper Cabling, Inc. (Technology Upgrades Integrator)
 - Monet Construction, Inc. (Building Repurpose)
- Furniture, Fixtures & Equipment**
\$2,373,284
 - Sony (4K Upgradable Camera System)
 - Evertz (Ultra-High Definition Router)
 - Sony (Master Control)
 - Peoplespace (Furniture, Fixtures & Equipment)
 - Various (IT for Offices & Editing)
 - Various (Field Camera, Sound & Lighting)
 - Graphics
- Other**
\$67,256
 - Moving Services
 - Division of the State Architect Fees
 - Advertising