



Application for Minor Change
Translator K271BW Lubbock TX
FCC Facility ID 142374

TECHNICAL EXHIBITS

This technical exhibit is prepared on behalf of *Grace Community Church of Amarillo*, Licensee of Translator K271BW Lubbock TX. This instant application requests a minor modification of the active Construction Permit for the facility at a new tower location, height and effective radiated power on the authorized channel with a non-directional FM antenna. The translator will provide fill-in service for the HD-3 channel of the primary station which is virtually co-located.

CONTOUR OVERLAP REQUIREMENTS

The attached Map of Contours depicts the proposed allocation situation with respect to all pertinent co-channel and adjacent channel facilities. All facilities have been depicted utilizing either the maximum ERP or directional pattern data as on file with the commission. AAT data for the proposed facility was derived from the FCC's 30 second database, *ComStudy*.

As seen on the attached maps of contours, channel 271-D is operable at the proposed location with the following facility notes:

- In compliance with 47 CFR 74.1204(g) the proposed facility operates at an effective radiated power which is over 100 watts, therefore protection to intermediate frequency facilities has been calculated and meets all mileage separation requirements.
- The proposed location is within the protected 60dbu (50,50) contour of second-adjacent translator K269FZ located 0.4 km away. Therefore, an interference analysis has been conducted based on the u/d ratio of +40 dB at the proposed site. The signal of K269FZ at the proposed location is 114.8dBu (50,50) making the relevant interfering contour of the proposed facility 154.9 dBu (50,10). The free space distance to this contour in a worse-case scenario utilizing a single dipole antenna is less than 1 meter
- The proposed location is within the protected 60dbu (50,50) contour of second-adjacent station KZII (FM) channel 273-C1 located 2.2 km away. Therefore, an interference analysis has been conducted based on the u/d ratio of +40 dB at the

proposed site. The signal of KZII (FM) at the proposed location is 125.9dBu (50,50) making the relevant interfering contour of the proposed facility 165.9 dBu (50,10). The free space distance to this contour in a worse-case scenario utilizing a single dipole antenna is less than 1 meter.

- The proposed antenna height is 162 meters above ground making neither of the interfering contours capable of reaching the general public.

Based on this showing, a waiver of Section 74.1204 is requested in accordance with *Living Way ministries, Inc.* (FCC 08-242) on the basis of zero population in the area of interference.

It should be noted that should any actual real world interference occur, the applicant acknowledges that it will promptly suspend operation of this translator in accordance with 47 c.f.r. 74.1203.

ENVIRONMENTAL PROTECTION ACT

This environmental statement is limited to the study of potential rf radiation from the proposed facility.

RF radiation from the proposed facility has been reviewed in accordance with the radio frequency protection guides, adopted by the commission in OET Bulletin no. 65, edition 97-01. RF radiation from the proposed facility will not have a significant environmental impact.

The proposed antenna system consists of a Nicom BKG-77, circularly polarized, two bay antenna with its radiation center 162 meters above ground. Utilizing formula 10 of oet bulletin no. 65, edition 97-01, and a worst case value f of 1.0, the maximum power density level for an ERP of 250 watts circular has been calculated to reach the allowable 200.0 microwatts per centimeter squared power density for uncontrolled environments at a distance of 9.2 meters from the aperture of the antenna element. The allowable 1000.0 microwatts per centimeter squared power density for a controlled environment is reached at a distance of 4.1 meters from the aperture of the antenna element. As demonstrated above, neither of these distances is within any area where humans are present at any time near the antenna. Therefore, it is believed that this instant application should be exempt from further environmental processing with respect to section 1.1306.

The applicant also certifies that it, in coordination with other users of the site, will reduce power or cease operation as necessary to protect persons having access to the site, tower or antenna from radiofrequency electromagnetic fields in excess of FCC guidelines.

PRIMARY STATION

The facility herein proposes to repeat the HD-3 channel of the primary station. The primary is virtually co-located on an adjacent tower 0.4km away. As such this translator provides fill-in service in compliance with applicable FCC rules.

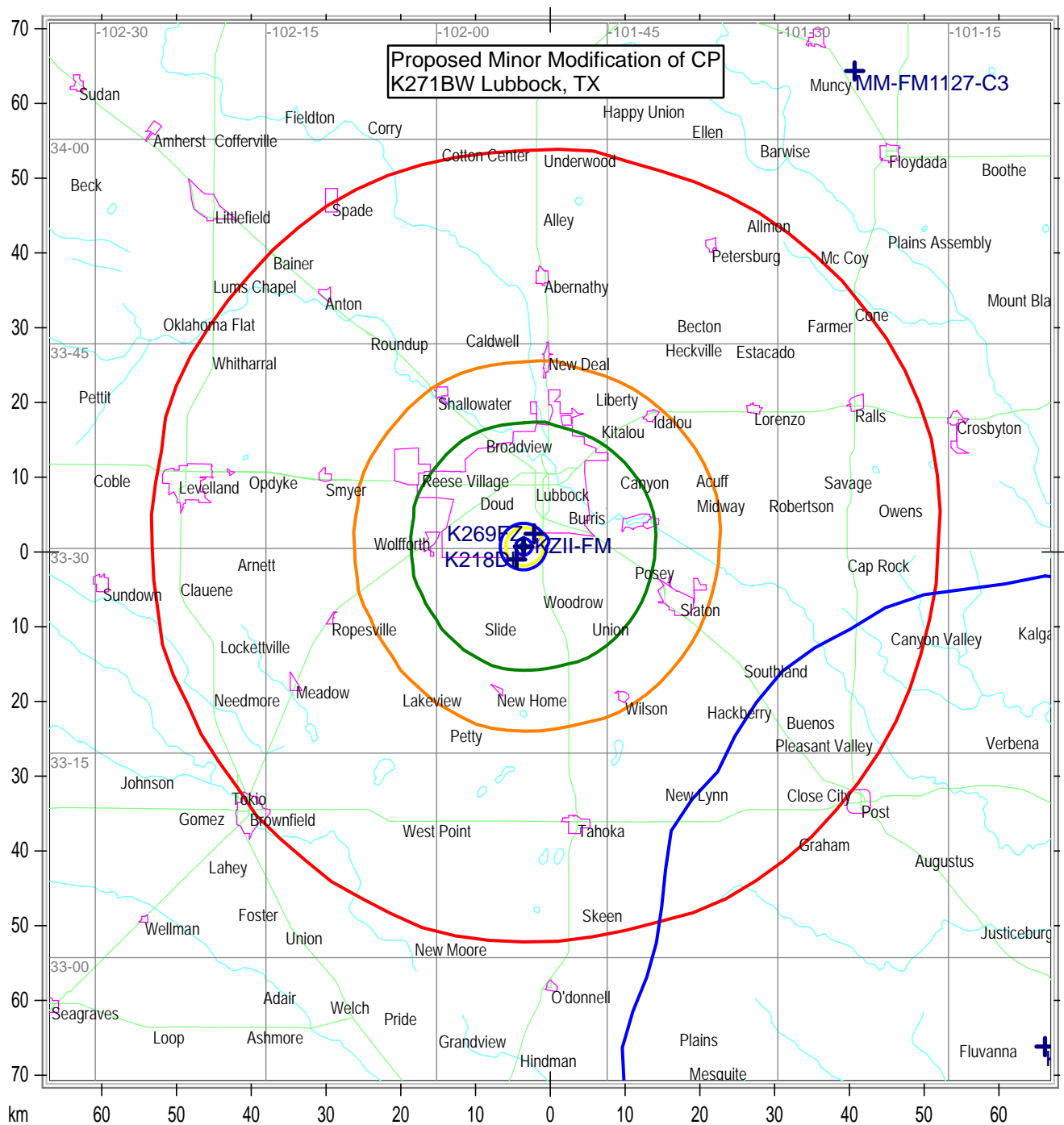
Respectfully,

A handwritten signature in black ink, appearing to read "Jim Turvaille". The signature is stylized with large loops and a cursive script.

Jim Turvaille, Owner
Turbo Tech Services
Certified Radio Engineer – Consultant

Attachments:

Map of Contours



State Borders City Borders Highways Water Features Lat/Lon Grid