



2355 Ranch Drive, Westminster, CO 80234
Phone: 303-465-5742 ~ Fax: 303-465-4067
E-Mail: stcl@comcast.net

B. W. St. Clair

**Engineering Examination of the
Mandatory Change of WQXT-CD from Ch 28 to Ch 29**

The repacking process has re-assigned WQXT-CD from Channel 28 to 29.

The location, ERP, antenna pattern and antenna height above ground remain unchanged.

The 51dB μ protected contours are based on 40.14 dB μ for channel 28 and 40.23 dB μ for channel 29. An incoming interference analysis shows no incoming interference within either protected contour and an interference free population count of 441,462. As there is no change in this population count there is no basis for objecting to the FCC's action in assigning channel 29 in their "Repacking Process."

When the total interference free population count for the two channels are compared the new channel 29 is found to be much less advantageous than the original channel 28. The total interference free population for licensed channel 28 is 1,017,876. For the repacked channel 29 the total drops to 736,476.. This is due primarily to the presence of LPTV stations WUBF-LD on channel 30, Jacksonville and WGFL-DT, High Spring, FL reassigned to channel 30. Both cause interference to otherwise useful coverage for WQXT-CD outside its protected contour. The lost coverage due to WUBF-LD is north of WQXT-CD and due to WGFL-DT to the northwest.

It is unlikely the FCC will consider a channel change from channel 29 because of the loss of coverage outside the protected contour.

Respectfully submitted,

B. W. St. Clair
Engineering Consultant
June 1, 2017

Calculated Per FCC OET Bulletin 69

Interference Free Breakdown:

White:	694,235	[68.1%]
Black:	180,881	[17.8%]
Hispanic:	78,886	[7.7%]
Native American:	3,014	[0.3%]
Asian:	37,648	[3.7%]
Pacific Islander:	862	[0.1%]
Mixed Race:	20,952	[2.1%]
Other:	2,398	[0.2%]

Total: 1,018,876

WQXT-CD-D

0000001382

Latitude: 29-54-14.11 N

Longitude: 081-22-54.73 W

FRP: 15.00 kW

Channel: 28

Frequency: 557.0 MHz

Frequency: 337.0 MHz
AMSL Height: 128.5 m

Elevation: 10 7 m

Elevation: 10,711 ft.

Horiz. Pattern: Df

vert. Pattern:

Elec Tilt: 0.0

Prop Model: Longley-Rice

Climate: Cont temperate

Conductivity: 0.0050

Dielec Const: 15.0

Refractivity: 301.0

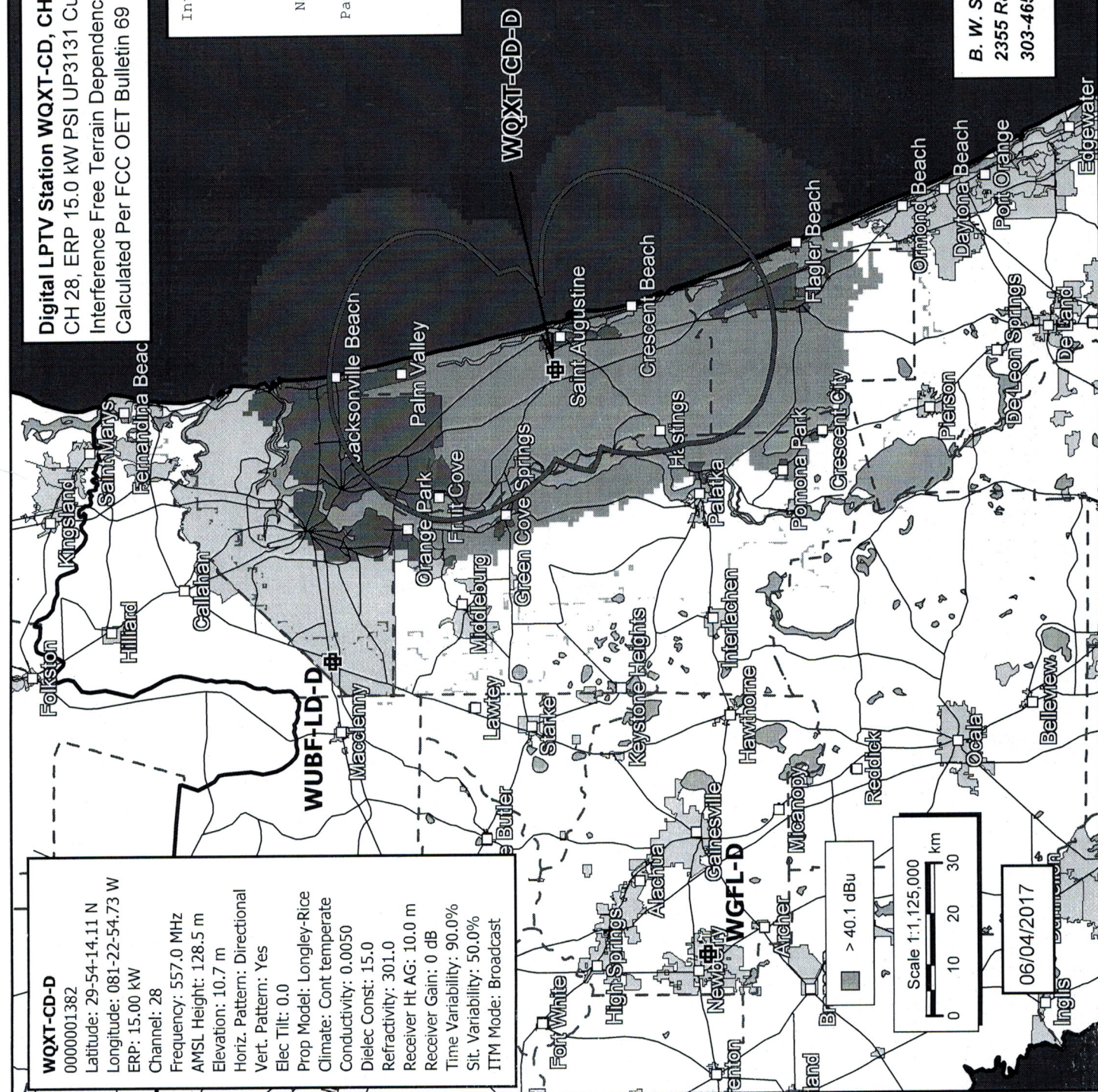
Receiver Ht AG: 10.0 m

Receiver Gain: 0 dB

Time Variability: 90.0%

Sit. Variability: 50.0%

ITM Made: Broadcast



B. W. St. Clair, Engineering Consultant
2355 Ranch Drive, Westminster, CO 80234
303-465-5742 FAX 4067 stcl@comcast.net

Class A LPTV Station WQXT-CD, CH29, St. Augustine, FL As Repacked
 ERP 15.0 kW, Directional Antenna: PSUIP31-31 Custom
 Interference Free Terrain Dependence Coverage
 Calculated Per FCC OET Bulletin 69

WQXT-CD-A-D

DTVBL39241
 Latitude: 29-54-14.11 N
 Longitude: 081-22-54.73 W
 ERP: 15.00 kW
 Channel: 29
 Frequency: 563.0 MHz
 AMSL Height: 128.5 m
 Elevation: 9.0 m
 Horiz. Pattern: Directional
 Vert. Pattern: Yes
 Elec Tilt: 0.0
 Prop Model: Longley-Rice
 Climate: Cont temperature
 Conductivity: 0.0050
 Dielec Const: 15.0
 Refractivity: 301.0
 Receiver Ht AG: 10.0 m
 Receiver Gain: 0 dB
 Time Variability: 90.0%
 Sit. Variability: 50.0%
 ITM Mode: Broadcast

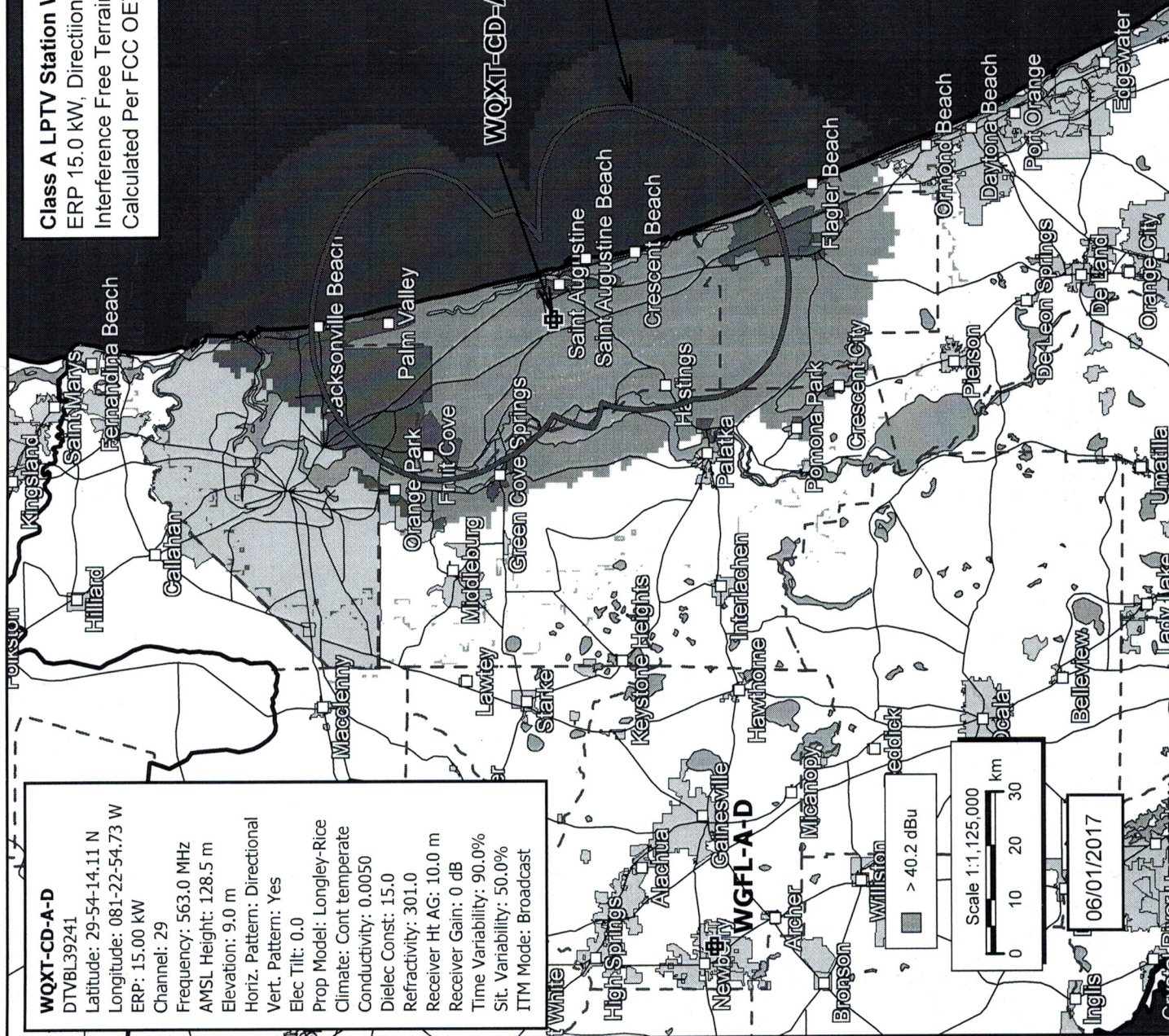
Interference Free Breakdown:

White: 555,584 [75.4%]
 Black: 72,862 [9.9%]
 Hispanic: 58,553 [8.0%]
 Native American: 2,025 [0.3%]
 Asian: 30,225 [4.1%]
 Pacific Islander: 625 [0.1%]
 Mixed Race: 14,786 [2.0%]
 Other: 1,816 [0.2%]

Total: 736,476

51 dBu Protected Contour

WQXT-CD-A-D



B. W. St. Clair, Engineering Consultant
 2355 Ranch Drive, Westminster, CO 80234
 303-465-5742 FAX 4067 stcl@comcast.net