

SECTION 74.1204(d) STUDY

This narrative exhibit demonstrates that the predicted interference to the 54 dBu contour of the second-adjacent WQKX, Sunbury, PA and the 57 dBu contour of the second adjacent WBZD-FM, Muncy, PA is allowable under the rules stated in 47 CFR 74.1204(d).

In support thereof this Applicant states the following:

1. WQKX, Sunbury, PA and WBZD-FM, Muncy, PA second adjacent channel facilities to this translator proposal, are protected from interference within their 54 dBu and 57 dBu contours from the associated interference contour (based on 47 CFR 74.1204(a)(1); using the FCC F(50/10) curves) which need be 40 dBu greater than the associated coverage contours (WQKX & WBZD-FM) that would encompass the proposed translator antenna site and that contour which is 40 dBu greater than the associated coverage contour.
2. This translator's antenna location is located within the 54 dBu and 57 dBu contours (based on 73.333 F(50/50)) of WQKX, Sunbury, PA and WBZD-FM, Muncy, PA. This proposal will use the predicted desired to undesired coverage method to determine the appropriate interference contour that need be used with regard to WQKX & WBZD-FM. Included as Figure 1 of this exhibit is a map showing that the 61.3 dBu coverage contour of WQKX encompasses the proposed antenna site along with the entire proposed 101.3 dBu interference contour. As the proposed 101.3 dBu interference contour is 40 dBu greater than the 61.3 dBu contour of WQKX then this contour is the appropriate interference contours for this analysis and it is clearly evident that interference will only occur within this interference contour for this proposed translator. Included as Figure 2 of this exhibit is a map showing that the 105 dBu coverage contours of

WBZD-FM encompasses the proposed antenna site along with the entire proposed 145 dBu interference contour. As the proposed 145 dBu interference contour is 40 dBu greater than the 105 dBu contour of WBZD-FM then this contour is the appropriate interference contours for this analysis and it is clearly evident that interference will only occur within this interference contour for this proposed translator. As the 145 dBu contour is much smaller than the 101.3 dBu contour, no further showing of the 145 dBu contour will need to be made as the 101.3 dBu lack of population showing will prove no interference to WBZD-FM.

3. Given this translator's requested effective radiated power of 250 watts, Directional; the predicted 101.3 dBu interference contour for this proposal would be small. At any HAAT value, the 101.3 dBu contour distance for this proposal is 0.95 kilometers (950 meters) at 310 degrees from true north and smaller than this in all other directions.

4. This proposed translator is situated in a sparsely populated hilltop tower farm area 30 meters above ground on a radio communications tower. The area of potential interference is within 950 meters at most from the antenna, and less because of the directional pattern of the proposed antenna. Based on the proposed antenna pattern, the entire area of interference is in a rural, forested, unpopulated area. A "Google Maps" geographic satellite map has been provided as an attachment to show this unpopulated area within the 101.3 dBu contour of this proposal. A uniform circular 950 meters from the site is unpopulated on the map. The rule in 47 CFR 74.1204(d) states "an application otherwise precluded by this section will be accepted if it can be demonstrated that no actual interference will occur due to intervening terrain, lack of population or such factors as may be applicable." In this particular case, as shown in this exhibit, it is clearly evident that there is a "lack of population"

as defined in 47 CFR 1204(d) thus allowing this translator to operate at this proposed location.

For the foregoing reasons this applicant submits that the predicted interference to WQKX, Sunbury, PA and WBZD-FM, Muncy, PA is allowable under Section 74.1204(d) of the Commission's rules. Furthermore, grant of this application is in the public interest as it would increase the coverage area of a radio facility in this area and impose no hardship to the referenced facilities, WQKX, Sunbury, PA and WBZD-FM, Muncy, PA.

By: Kevin Fitzgerald, Technical Consultant

Contour Analysis

Kevin Fitzgerald

Job: W281AR 93.7 Desired to Undesired.fmj

Master Database: 2021_Feb_28.fmd

Lat: N41:12:32 Lon: W076:57:30 NAD-83

Scale: 1:24000

Channel: 229 Class: DX

Status: Licensed, Construction Permit, Application

Channels:

Range: 100 km, Clearance: -0.5km

Comments: No Comments

Description: W281AR, 93.7, Williamsport, PA; Desired to Undesired Analysis; 250w DA

rfInvestigator Version 3.8.16

by rfSoftware, Inc.

Date: 3/8/2021 2:20:51 AM

Key:

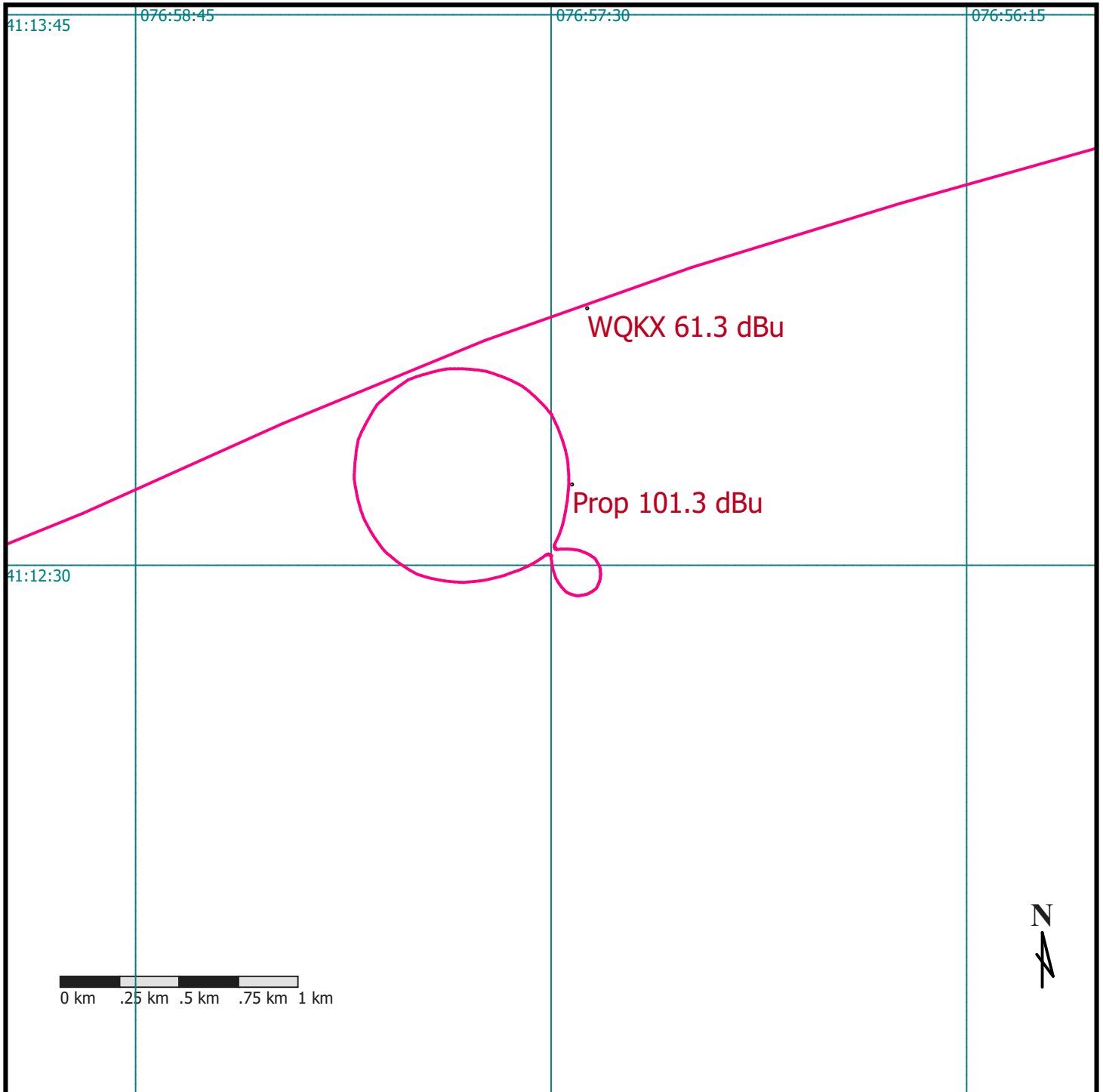
City Grade

Protected

Co-Channel

1st Adj

2nd/3rd Adj



Contour Analysis

Kevin Fitzgerald

Job: W281AR 93.7 Desired to Undesired to WBZDFM.fmj

Master Database: 2020_Oct_18.fmd

Lat: N41:12:49 Lon: W076:57:19 NAD-83

Scale: 1:24000

Channel: 229 Class: DX

Status: Licensed, Construction Permit, Application

Channels:

Range: 100 km, Clearance: -0.5km

Comments: No Comments

Description: W281AR, 93.7, Williamsport, PA; Desired to Undesired to WBZDFM; Proposed 145 dBu is very small

rfInvestigator Version 3.8.16

by rfSoftware, Inc.

Date: 3/29/2021 5:04:17 AM

Key:

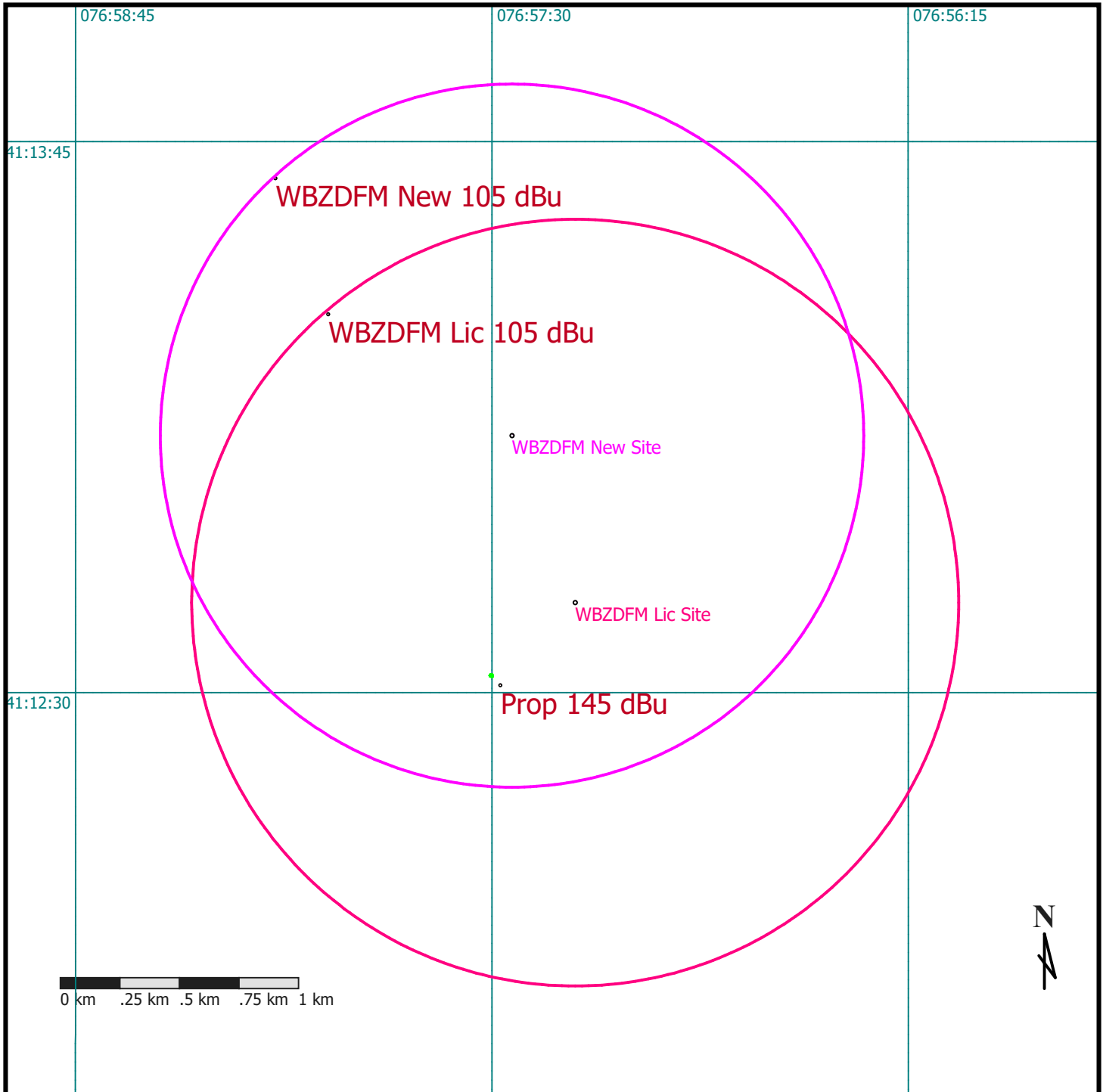
City Grade

Protected

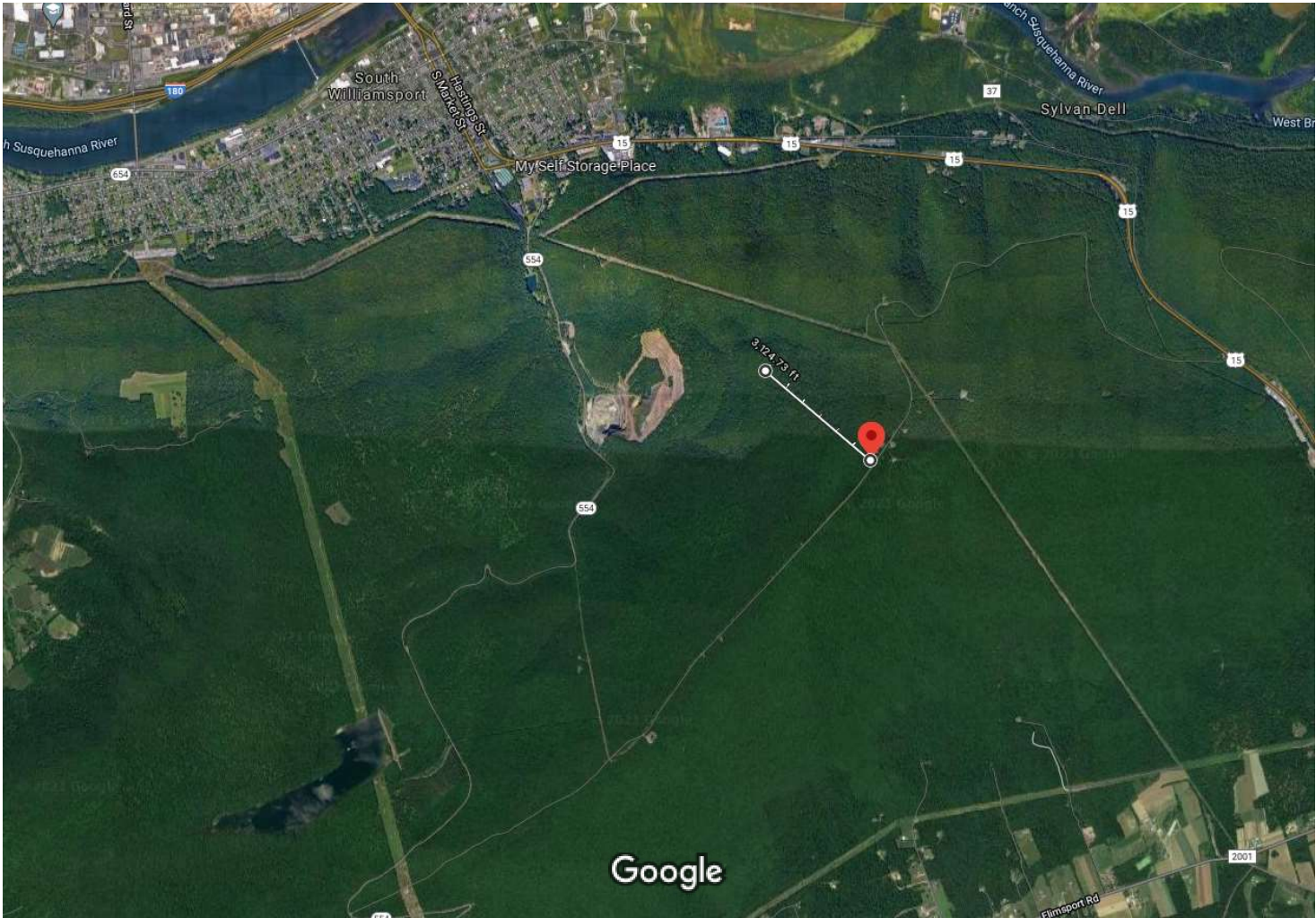
Co-Channel


1st Adj

2nd/3rd Adj



Google Maps 41°12'31.6"N 76°57'30.0"W



Imagery ©2021 Landsat / Copernicus, Maxar Technologies, PA Department of Conservation and Natural Resources-PAMAP/USGS, 2000 ft 
USDA Farm Service Agency, Map data ©2021



41°12'31.6"N 76°57'30.0"W

41.208778, -76.958333



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Armstrong Township, PA 17702



625R+GM South Williamsport, Pennsylvania

Measure distance
Total distance: 3,124.73 ft (952.42 m)