# Agency Tracking ID:PGC3410820 Authorization Number:288646

# **Successful Authorization -- Date Paid: 6/26/20 FILE COPY ONLY!!**

READ INSTRUCTIONS CAREFULLY BEFORE PROCEEDING	FEDERAL COMMUNICATIONS COMMISSION REMITTANCE ADVICE FORM 159				APPROVED BY OMB 3060-059 PECIAL USE
(1) LOCKBOX # <b>979089</b>	PAGE NO	O 1 OF 1		F	CC USE ONLY
	SECTION	N A - Payer Info	mation	Ŋ <del>.</del>	-
(2) PAYER NAME (if paying by credit of Townsquare Media Monmout	eard, enter name exactly as it appears on you	our card)		(3) TOTA \$725.0	AL AMOUNT PAID (dollars and cents)
(4) STREET ADDRESS LINE NO. 1 1800 M Street, NW				'	
(5) STREET ADDRESS LINE NO. 2 Suite 800N					
(6) CITY <b>Washington</b>			(7) ST. <b>DC</b>	ATE	(8) ZIP CODE <b>20036</b>
(9) DAYTIME TELEPHONE NUMBER <b>202-3833373</b>	R (INCLUDING AREA CODE)		(10) COUNTRY C US	ODE (IF NO	T IN U.S.A.)
	REGISTRATION NUMBER (FRN) AN			ER (TIN) RE	QUIRED
(11) PAYER (FRN) <b>0007277700</b>		(12) FCC	USE ONLY		
IF	PAYER NAME AND THE APPLICANT IF MORE THAN ONE APPLICANT				
(13) APPLICANT NAME Townsquare Media Monmout	th-Ocean License, LLC	,	,		,
(14) STREET ADDRESS LINE NO. 1 1800 M Street, NW					
(15) STREET ADDRESS LINE NO. 2 Suite 800N					
(16) CITY <b>Washington</b>			(17) ST <b>DC</b>	ГАТЕ	(18) ZIP CODE <b>20036</b>
(19) DAYTIME TELEPHONE NUMBE <b>202-3833373</b>	ER (INCLUDING AREA CODE)		(20) COUNTRY C	ODE (IF NO	Γ IN U.S.A.)
	REGISTRATION NUMBER (FRN) AN			ER (TIN) RE	QUIRED
(21) APPLICANT (FRN) <b>0007277700</b>		(22) FCC	USE ONLY		
COMPLETE	SECTION C FOR EACH SERVICE, I	F MORE BOXE	S ARE NEEDED, U	SE CONTIN	UATION SHEET
(23A) FCC Call Sign/Other ID	WOBM	(24A) Pa	yment Type Code(PTC <b>MM</b>	· ·	(25A) Quantity 1
(26A) Fee Due for (PTC)	\$725.00	(27A) To	tal Fee <b>\$725</b> .	.00	FCC Use Only
(28A) FCC CODE 1 <b>49</b> 2	295	(29A) FCC COD	E 2	302-A	M
(23B) FCC Call Sign/Other ID		(24B) Pa	yment Type Code(PTG	C)	(25B) Quantity
(26B) Fee Due for (PTC)		(27B) To	tal Fee		FCC Use Only
(28B) FCC CODE 1		(29B) FCC COD	E 2		



#### **Online Payment**

#### **Step 3: Confirm Payment**

1 | 2 | 3

Thank you.

Your transaction has been successfully completed.

**Pay.gov Tracking Information** 

Country: USA

Application Name: Remittance Advice Pay.gov Tracking ID: 26P9NSTK Agency Tracking ID: PGC3410820

Transaction Date and Time: 06/26/2020 16:36 EDT

**Payment Summary** 

**Address Information Account Information Payment Information Account Holder** Christopher Credit Card Type: American Express Payment Amount: \$725.00 Name: Kitchen Credit Card \*\*\*\*\*\*\*\*\*\*1232 **Transaction Date** 06/26/2020 16:36 1 Manhattanville and Time: EDT Number: Billing Address: Road Billing Address 2: Suite 202 City: Purchase State/Province: NY **ZIP/Postal Code: 10577-0000** 

Federal Communications Commission Washington, D. C. 20554

Approved by OMB 3060-0627 Expires 01/31/98

# FCC 302-AM APPLICATION FOR AM BROADCAST STATION LICENSE

(Please read instructions before filling out form.

FOR FCC	
USE ONLY	

FOR COMMISSION USE ONLY

(Please read instructions before miling out form.	FILE NO.		
SECTION I - APPLICANT FEE INFORMATION			
PAYOR NAME (Last, First, Middle Initial)			
Townsquare Media Monmouth-Ocean License, LLC			
MAILING ADDRESS (Line 1) (Maximum 35 characters)  1 Manhattanville Road			_
MAILING ADDRESS (Line 2) (Maximum 35 characters) Suite 202			
CITY Purchase	STATE OR COUNTRY (if for NY	eign address)	ZIP CODE 10577
TELEPHONE NUMBER (include area code) (203) 861-0900	CALL LETTERS WOBM	OTHER FCC IDEN 49295	NTIFIER (If applicable)
2. A. Is a fee submitted with this application?			Yes No
B. If No, indicate reason for fee exemption (see 47 C.F.R. Section			
Governmental Entity Noncommercial educat	tional licensee Ot	her (Please explain)	:
C. If Yes, provide the following information:			
Enter in Column (A) the correct Fee Type Code for the service you are Fee Filing Guide." Column (B) lists the Fee Multiple applicable for this			
	арриования	(0)	
(A) (B)	(C)		
FEE TYPE FEE MULTIPLE	FEE DUE FOR FEE TYPE CODE IN COLUMN (A)		FOR FCC USE ONLY
M M R 0 0 0 1	\$ 725.00		
To be used only when you are requesting concurrent actions which result	It in a requirement to list mor	than one Fee Type	Code
, , ,		e triair one ree Type	, code.
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	(C)		FOR FCC USE ONLY
ADD ALL AMOUNTS SHOWN IN COLUMN C, AND ENTER THE TOTAL HERE.	TOTAL AMOUNT REMITTED WITH THI APPLICATION	s	FOR FCC USE ONLY
THIS AMOUNT SHOULD EQUAL YOUR ENCLOSED REMITTANCE.	\$ 725.00		

SECTION II - APPLICAN  1. NAME OF APPLICANT Townsquare Media Monmou							
MAILING ADDRESS  1 Manhattanville Road, Suite	202						
CITY Purchase			STATE NY		ZIP CODE 10577		
2. This application is for:	Commercial  AM Direction	[ onal	☐ Noncomm	nercial on-Directional			
Call letters	Community of License Co	onstruct	ion Permit File No.	Modification of Construction Permit File No(s).	Expiration Date of Last Construction Permit		
WOBM	Lakewood Township			remit rile No(s).	Construction Fermit		
3. Is the station now operating pursuant to automatic program test authority in accordance with 47 C.F.R. Section 73.1620?  If No, explain in an Exhibit.  ✓ Yes No  Exhibit No.							
	4. Have all the terms, conditions, and obligations set forth in the above described construction permit been fully met?  ✓ Yes No  Exhibit No.						
If No, state exceptions in	n an Exhibit.						
the grant of the underl	5. Apart from the changes already reported, has any cause or circumstance arisen since the grant of the underlying construction permit which would result in any statement or representation contained in the construction permit application to be now incorrect?    Yes   Ves   No						
If Yes, explain in an Ex	hibit.						
	6. Has the permittee filed its Ownership Report (FCC Form 323) or ownership certification in accordance with 47 C.F.R. Section 73.3615(b)?						
If No, explain in an Exhi	bit.				Exhibit No.		
7. Has an adverse finding been made or an adverse final action been taken by any court or administrative body with respect to the applicant or parties to the application in a civil or criminal proceeding, brought under the provisions of any law relating to the following: any felony; mass media related antitrust or unfair competition; fraudulent statements to another governmental unit; or discrimination?							
If the answer is Yes, attach as an Exhibit a full disclosure of the persons and matters involved, including an identification of the court or administrative body and the proceeding (by dates and file numbers), and the disposition of the litigation. Where the requisite information has been earlier disclosed in connection with another application or as required by 47 U.S.C. Section 1.65(c), the applicant need only provide: (i) an identification of that previous submission by reference to the file number in the case of an application, the call letters of the station regarding which the application or Section 1.65 information was filed, and the date of filing; and (ii) the disposition of the previously reported matter.							

8. Does the applicant, or any party to the application, have a the expanded band (1605-1705 kHz) or a permit or license expanded band that is held in combination (pursuant to the 5 with the AM facility proposed to be modified herein?	either in the existing band or	Yes V No			
If Yes, provide particulars as an Exhibit.		Exhibit No.			
The APPLICANT hereby waives any claim to the use of any against the regulatory power of the United States because requests and authorization in accordance with this application amended).	use of the same, whether by lic	cense or otherwise, and			
The APPLICANT acknowledges that all the statements made material representations and that all the exhibits are a material	• •				
CERTIFIC	CATION				
1. By checking Yes, the applicant certifies, that, in the case of an individual applicant, he or she is not subject to a denial of federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. Section 862, or, in the case of a non-individual applicant (e.g., corporation, partnership or other unincorporated association), no party to the application is subject to a denial of federal benefits that includes FCC benefits pursuant to that section. For the definition of a "party" for these purposes, see 47 C.F.R. Section 1.2002(b).					
2. I certify that the statements in this application are true, co and are made in good faith.	mplete, and correct to the best of m	y knowledge and belief,			
Name	Signature				

Name	Signature			
Christopher Kitchen	/s/ Christopher Kitchen			
Title Executive Vice President & General Counsel	Date 06/26/2020	Telephone Number (203) 861-0900		

# WILLFUL FALSE STATEMENTS ON THIS FORM ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION

FCC NOTICE TO INDIVIDUALS REQUIRED BY THE PRIVACY ACT AND THE PAPERWORK REDUCTION ACT

The solicitation of personal information requested in this application is authorized by the Communications Act of 1934, as amended. The Commission will use the information provided in this form to determine whether grant of the application is in the public interest. In reaching that determination, or for law enforcement purposes, it may become necessary to refer personal information contained in this form to another government agency. In addition, all information provided in this form will be available for public inspection. If information requested on the form is not provided, the application may be returned without action having been taken upon it or its processing may be delayed while a request is made to provide the missing information. Your response is required to obtain the requested authorization.

Public reporting burden for this collection of information is estimated to average 639 hours and 53 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, can be sent to the Federal Communications Commission, Records Management Branch, Paperwork Reduction Project (3060-0627), Washington, D. C. 20554. Do NOT send completed forms to this address.

THE FOREGOING NOTICE IS REQUIRED BY THE PRIVACY ACT OF 1974, P.L. 93-579, DECEMBER 31, 1974, 5 U.S.C. 552a(e)(3), AND THE PAPERWORK REDUCTION ACT OF 1980, P.L. 96-511, DECEMBER 11, 1980, 44 U.S.C. 3507.

SECTION III - L Name of Applicar	ICENSE APPLICATION ENG nt	INEERING DATA	<b>.</b>				
	Media Monmouth-Ocean	License, LLC	1				
PURPOSE OF A	UTHORIZATION APPLIED FO	R: (check one)					
	Station License	X Direct Mea	asurement of Pow	er er			
1. Facilities auth	orized in construction permit						
Call Sign	File No. of Construction Permi		Hours of Opera	ation		kilowatts	
WOBM	(if applicable)	( <b>kHz</b> ) 1160	Unlimited		Night 8.9	<b>Day</b> 5.0	
2. Station location	n						
State			City or Town				
New Jers	sey		Lakewood T	ownship			
3. Transmitter lo	cation						
State	County		City or Town		Street address	-+i\	
NJ	Monmouth		Howell		(or other identific 46 Clayton	•	
4. Main studio lo	cation				_		
State	County		City or Town		Street address (or other identific	ation)	
NJ	Ocean		Toms River	•	8 Robbins S	,	
5. Remote contro	ol point location (specify only if	authorized direction	nal antenna)				
State	County		City or Town		Street address	ation)	
NJ	Ocean		Toms River	Toms River (or other identification)  8 Robbins St St			
6. Has type-approved stereo generating equipment been installed?  7. Does the sampling system meet the requirements of 47 C.F.R. Section 73.68?  X Yes No  Not Applicable  Attach as an Exhibit a detailed description of the sampling system as installed.  Exhibit No.							
8. Operating con		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	DE	• • •	17:	\ ''.	
modulation for nig	t or antenna current (in ampere ght system 13 . 67	s) without	modulation for	day system	current (in ampere	s) without	
Measured antenr operating frequer Night	na or common point resistance ( ncy Day 5 0	in ohms) at	Measured antenna or common point reactance (in ohms) at operating frequency Night Day				
Antenna indication	ns for directional operation						
Towe	Phase readin	a monitor g(s) in degrees	Antenna moi current	ratio(s)		ase currents	
1	Night +134.2	Day -42.6	Night 0.613	<b>Day</b> 0.272	Night	Day	
2	134.2	+127.2	1.0	0.272			
3	-174.5	0.0	0.990	1.0			
4	+33.9	-93.1	0.588	0.432			
Manufacturer and	type of antenna monitor:	comac Instrum	nents AM19D	(210)			

#### SECTION III - Page 2

9. Description of antenr the array. Use separate	na system ((f directional anter sheets if necessary.)	nna is used, the	e informatior	n requested below should be	given f	for each elemer	nt of	
Type Radiator Uniform cross-section guyed towers	radiator above base above gooss-section insulator, or above base, if obstruction		t in meters d (without ghting)	Overall height in meters above ground (include obstruction lighting)	If antenna is either top loaded or sectionalized describe fully in an Exhibit.		zed,	
guyeu cowers	74.6	77	7.1	77.1		Exhibit No.		
Excitation	X Series	Shunt						
Geographic coordinates tower location.	to nearest second. For direct	tional antenna	give coordin	ates of center of array. For	single v	ertical radiator (	give	
North Latitude 40	0 8'	9	West Longi	itude 74 O	13	48		
	ove, attach as an Exhibit furth ver and associated isolation c		l dimensions	including any other		Exhibit No. None		
Also, if necessary for a dimensions of ground sy	a complete description, attac estem.	ch as an Exhi	bit a sketch	of the details and		Exhibit No. On file		
10. In what respect, if a permit?  None	ny, does the apparatus const	ructed differ fro	om that desc	ribed in the application for c	onstruct	tion permit or in	the	
11. Give reasons for the	e change in antenna or comm	on point resista	ance.					
None								
	the applicant in the capacity true to the best of my knowle			I have examined the forego	oing sta	tement of techr	ıical	
Name (Please Print or T	• • •	:	Signature (ch	neck appropriate box below)	Ples	368		
Address (include ZIP Co	ode)	1	Date					
Hatfield & Dav 9500 Greenwood	vson Consulting Engi d Ave N			16, 2020				
Seattle, WA	98103-3012		Telephone No. (Include Area Code) (206) 783-9151					
Technical Director		х	Registe	ered Professional Engineer				
Chief Operator			Technic	cal Consultant				
Other (specify)								

#### HATFIELD & DAWSON

THOMAS M. ECKELS, PE STEPHEN S. LOCKWOOD, PE DAVID J. PINION, PE ERIK C. SWANSON, PE

THOMAS S. GORTON, PE

JAMES B. HATFIELD, PE BENJAMIN F. DAWSON III, PE CONSULTANTS CONSULTING ELECTRICAL ENGINEERS 9500 GREENWOOD AVE. N. SEATTLE, WASHINGTON 98103

TELEPHONE (206) 783-9151 FACSIMILE (206) 789-9834 E-MAIL hatdaw@hatdaw.com

> Maury L. Hatfield, PE (1942-2009) Paul W. Leonard, PE (1925-2011)

# ENGINEERING REPORT PARTIAL PROOF of PERFORMANCE and APPLICATION FOR DIRECT MEASUREMENT OF POWER

WOBM(AM) 1160 kHz 5 kW Day, 8.9 kW Night DA-2

Lakewood Township, New Jersey
Facility ID 49295

Townsquare Media Monmouth-Ocean License, LLC

June 2020

#### TABLE OF CONTENTS

- 1. Engineering Statement Narrative
- 2. Table of Antenna System Operating Parameters
- 3. Table of Measured Inverse Field Strengths
- 4. Certification
- 5. Field Intensity Measurement Data Sheets
- 6. FCC Form 302, Section II-A

#### **Engineering Statement**

This Engineering Report is submitted on behalf of Townsquare Media Monmouth-Ocean, LLC, ("Townsquare") licensee of AM station WOBM Lakewood Township, NJ. Townsquare seeks return to direct measurement of power following readjustment of the directional antenna operating parameters as required to bring the monitor points below their specified limits.

The partial proof of performance of the daytime and nighttime directional antenna patterns were conducted after adjustment of the antenna system. All measurements used in the partial proof of performance were taken per §73.154(b)(1). On each of the monitored radials, field strength readings were taken at a minimum of eight points, including the assigned monitor point. At each of these points, measurements were taken in the appropriate directional mode, operating at the power specified by the station license with the operating parameters specified below.

Measurements were compared to those taken at the same points during the most recent (1988) full proof of performance.

All measurements were taken by Townsquare engineer Thomas Trembly, using a Potomac Instruments FIM-41, serial No. 2018. This FIM was calibrated in September 2018.

# Directional Antenna Operating Parameters

Tower	Ratio Day	Phase Day	Ratio Night	Phase Night
1	0.272	-42.6°	0.613	134.2°
2	0.478	127.2°	1.0	0°
3	1.0	0°	0.990	-174.5°
4	0.432	-93.1°	0.588	33.9°

# Table of Measured Inverse Field Strengths

Radial	1988 DA IDF	2019 / 1988 Ratio	2019 DA-D IDF	Std Pattern Limit
28.5° Day	12.3	1.1068	13.61	28.27
330° Day	15.4	0.8196	12.62	24.86
35° Night	78.6	0.8723	68.56	126.09
106° Night	161.8	0.6030	97.56	176.45
228.5° Night	94.6	0.8841	83.64	102.81
275° Night	116.5	0.3150	36.7	119.96
307° Night	191.1	0.6696	127.97	200.43

#### Certification

This Engineering Report has been prepared personally by the undersigned or under my immediate supervision, and all representations are true and correct to the best of my knowledge. I am an experienced radio engineer whose qualifications are a matter of record with the Federal Communications Commission. I am an engineer in the firm of Hatfield & Dawson Consulting Engineers, LLC, and I am Registered as a Professional Engineer in the States of Washington and Oregon.

June 16, 2020



Thomas S. Gorton P.E.

# Partial Proof of Performance Data Sheets

# WOBM PARTIAL PROOF 28.5 DEGREE RADIAL - DA-D

DATE: 8-19-2019 WEATHER: SUNNY, 90 ENGINEER: TOM TREMBLY

PROOF	DISTANCE	DISTANCE	DA 1988	MEASURE	DA 2019	RATIO	POINT
POINT	(mi)	(km)	(mv/m)	TIME	(mv/m)	2019/1988	DESCRIPTION
6	1.56	2.51	2.130	1408	3.000	1.40845070	IFO 3 Chatham Dr.
7	1.62	2.61	1.500	1412	2.100	1.40000000	Across from 38 Salem Hill Rd.
8	1.80	2.90	1.700	1414	1.730	1.01764706	Southgate Dr. & Arlington Dr., at corner near street sign
9	1.90	3.06	1.380	1418	1.150	0.83333333	IFO 19 Hampton Rd.
11	2.14	3.44	1.380	1424	1.590	1.15217391	IFO 46 Darien Rd.
MP 12	2.50	4.02	1.060	1426	1.100	1.03773585	Aldrich Rd., northeast curb across from mailbox 205
13	2.62	4.22	0.430	1430	0.450	1.04651163	274 & 284 Windeler Rd., north side of road between two houses
16	4.71	7.58	0.480	1449	0.680	1.41666667	580 Squankum-Yellowbrook Road, in line with Anthony Way
17	5.06	8.14	0.460	1457	0.470	1.02173913	West Farms Rd., 100 feet into driveway at Applegate grave
18	6.10	9.82	0.300	1506	0.220	0.73333333	Cranberry Rd., across from pole 40679HL (near 244)

1988 DA IDF: 12.30 MEAN RATIO: 1.106759

2019 DA IDF: 13.61 STANDARD IDF: 28.27

# WOBM PARTIAL PROOF 330 DEGREE RADIAL - DA-D

DATE: 8-19-2019 WEATHER: SUNNY, 90 ENGINEER: TOM TREMBLY

PROOF	DISTANCE	DISTANCE	DA 1988	MEASURE	DA 2019	RATIO	POINT
POINT	(mi)	(km)	(mv/m)	TIME	(mv/m)	2019/1988	DESCRIPTION
1	1.25	2.01	4.700	1645	4.100	0.87234043	Across from 566 Aldrich Rd.
2	1.76	2.83	4.100	1636	1.720	0.41951220	Thorpe's Nursery & Landscaping, sixth post from corner on Georgia Tavern Rd.
3	1.78	2.86	4.000	1635	1.750	0.43750000	760 Georgia Tavern Rd., near mailbox
4	2.67	4.30	1.550	1628	0.900	0.58064516	69 Sunnyside, across from mailbox
MP 5	2.95	4.75	0.830	1624	0.860	1.03614458	Fort Plains Rd., west side of road across from pole JC4761HL
6	3.44	5.54	0.650	1617	0.500	0.76923077	Snyder Rd., across from pole JC5308HL (west of trailers)
7	3.60	5.79	0.520	1610	0.580	1.11538462	West Farms Rd., SE corner of Immanuel Baptist Church parking lot
8	4.72	7.60	0.135	1602	0.176	1.30370370	IFO 40 Geislers Rd.
10	6.03	9.70	0.146	1549	0.120	0.82191781	Michael J. Tighe Park, SE corner of bridge over creek at path
13	8.16	13.13	0.150	1525	0.126	0.84000000	Rt. 537, across from fire plug before creek

1988 DA IDF: 15.40 MEAN RATIO: 0.819638

2019 DA IDF: 12.62 STANDARD IDF: 24.86

# WOBM PARTIAL PROOF 35 DEGREE RADIAL - DA-N

DATE: 11-1-2019 WEATHER: SUNNY, 55 ENGINEER: TOM TREMBLY

PROOF	DISTANCE	DISTANCE	DA 1988	MEASURE	DA 2019	RATIO	POINT
POINT	(mi)	(km)	(mv/m)	TIME	(mv/m)	2019/1988	DESCRIPTION
4	1.15	1.85	37.500	1448	34.800	0.92800000	34 Forrest Hill Dr., in front of red house
5	1.20	1.93	31.000	1450	26.000	0.83870968	IFO 17 Monticello Dr.
6	1.39	2.24	28.100	1452	26.700	0.95017794	Opposite 5 Stockport Way, on sidewalk
7	1.50	2.41	17.800	1455	15.200	0.85393258	IFO 27 Westbrook Rd.
MP 8	1.60	2.57	21.800	1458	20.200	0.92660550	Newbury Rd., on sidewalk in front of first wood post to east of "No Littering" sign
11	1.90	3.06	15.500	1508	12.200	0.78709677	IFO 107 Darien Rd.
12	2.81	4.52	5.420	1522	4.700	0.86715867	360 Aldrich Rd., across from driveway
13	2.96	4.76	4.870	1526	4.800	0.98562628	Old Tavern Rd., across from pole BT4813HL
14	3.20	5.15	3.800	1530	4.000	1.05263158	Old Tavern Rd., at 20 mph sign opposite pole BT4787HL
15	3.70	5.95	3.000	1537	3.050	1.01666667	Manassa Rd., creek bridge entrance to reservoir
16	4.15	6.68	2.410	1541	1.640	0.68049793	Southard Ave., at Manasquan River Greenway sign
18	4.58	7.37	2.600	1552	1.510	0.58076923	467 Yellowbrook in front of stone house, across from pole JC938HL

1988 DA IDF: 78.60 MEAN RATIO: 0.872323

2019 DA IDF: 68.56 STANDARD IDF: 126.09

# WOBM PARTIAL PROOF 106 DEGREE RADIAL - DA-N

DATE: 10-28-2019 WEATHER: SUNNY, 65 ENGINEER: TOM TREMBLY

PROOF	DISTANCE	DISTANCE	DA 1988	MEASURE	DA 2019	RATIO	POINT
POINT	(mi)	(km)	(mv/m)	TIME	(mv/m)	2019/1988	DESCRIPTION
3	1.20	1.93	35.000	1410	46.000	1.314285714	1216 Maxim Southard Rd., across from mailbox in front of parking area
4	1.72	2.77	18.700	1419	11.400	0.609625668	Laurel Pl., 75 ft. from corner (with Lanes Pond Rd.)
5	1.78	2.86	18.000	1420	13.300	0.738888889	Laurel Pl. & Lanes Pond Rd., corner next to street sign
6	2.28	3.67	10.700	1427	4.800	0.448598131	IFO 39 Maida Ln.
MP 9	3.78	6.08	4.600	1437	2.080	0.452173913	Lakewood-Allenwood Rd., Big Sky Horse Farm at south edge of road, in line with tree line
10	4.42	7.11	2.380	1445	1.770	0.743697479	Mistletoe Ct. & Ramtown-Greenville Rd.
11	4.81	7.74	1.900	1455	0.780	0.410526316	103 Newton Corner Rd., at mailbox
12	5.80	9.33	1.520	1507	0.540	0.355263158	628 Carolina Ave., next to storm drain on north side of property
13	6.38	10.27	1.300	1512	0.460	0.353846154	IFO 2245 Lanes Mill Rd.

1988 DA IDF: 161.80 MEAN RATIO: 0.602989

2019 DA IDF: 97.56 STANDARD IDF: 176.45

# WOBM PARTIAL PROOF 228.5 DEGREE RADIAL - DA-N

DATE: 10-28-2019 WEATHER: PARTLY SUNNY, 65 ENGINEER: TOM TREMBLY

PROOF	DISTANCE	DISTANCE	DA 1988	MEASURE	DA 2019	RATIO	POINT
POINT	(mi)	(km)	(mv/m)	TIME	(mv/m)	2019/1988	DESCRIPTION
1	1.50	2.41	19.100	1352	17.000	0.89005236	New Hampshire St. & Citadel Dr., NE corner
2	1.68	2.70	16.500	1349	17.100	1.03636364	New Prospect Rd., across from Oak Dr.
3	1.80	2.90	11.000	1341	9.200	0.83636364	County Line Rd. & Seminole Dr., south side IFO A&M Auto entrance door
4	2.13	3.43	7.500	1337	4.600	0.61333333	234 Metedeconk, at mailbox
5	2.62	4.22	5.920	1318	3.900	0.65878378	324 Clearstream Rd., IFO driveway
MP 6	3.12	5.02	3.840	1323	2.500	0.65104167	Brewers Bridge Rd., east side of road directly across from mailbox 376
7	3.58	5.76	3.300	1330	3.200	0.96969697	Cooks Bridge Rd., across from pole JC5740
10	8.18	13.16	0.590	1254	0.730	1.23728814	1008 Lakehurst Ave., at driveway
11	8.39	13.50	0.545	1250	0.580	1.06422018	959 Rt. 571, at mailbox

1988 DA IDF: 94.60 MEAN RATIO: 0.884127

2019 DA IDF: 83.64 STANDARD IDF: 102.81

# WOBM PARTIAL PROOF 275 DEGREE RADIAL - DA-N

DATE: 10-24-2019 WEATHER: SUNNY, 60 ENGINEER: TOM TREMBLY

PROOF	DISTANCE	DISTANCE	DA 1988	MEASURE	DA 2019	RATIO	POINT
POINT	(mi)	(km)	(mv/m)	TIME	(mv/m)	2019/1988	DESCRIPTION
1	1.31	2.11	19.500	1453	4.600	0.23589744	967 Woodlane Rd., IFO mailbox
2	1.58	2.54	19.500	1457	3.200	0.16410256	IFO 18 Albany Ave.
3	1.75	2.82	12.200	1507	3.300	0.27049180	70 South New Prospect Rd., across from driveway
4	2.07	3.33	12.000	1513	2.620	0.21833333	Bennetts Mills Rd. & Arboretum Dr., IFO brown ranch to NW
5	2.36	3.80	9.800	1520	2.700	0.27551020	Salem Ln. & Susan Dr., at street sign
6	2.65	4.26	7.300	1529	1.800	0.24657534	245 Bartley Rd., across from mailbox
7	3.57	5.75	3.950	1533	1.100	0.27848101	Cook Rd., north of County Line Rd., across from pole BT1047JK
8	3.74	6.02	3.700	1538	1.320	0.35675676	Harmony Rd., north of County Line Rd., east side in line with storm drain in center median
9	3.89	6.26	2.000	1544	1.330	0.66500000	IFO Walgreens, at east side of entrance at curb (.15 mi. west of Harmony Rd.)
MP 10	4.20	6.76	3.300	1550	1.100	0.33333333	Huntington Rd., 60 feet west in line with center of opening in median by parking area
11	5.60	9.01	1.830	1558	0.770	0.42076503	Pamela Ct. & Jackson Mills Rd., 50 ft. north of corner

1988 DA IDF: 116.50 MEAN RATIO: 0.315022

2019 DA IDF: 36.70 STANDARD IDF: 119.96

# WOBM PARTIAL PROOF 307 DEGREE RADIAL - DA-N

DATE: 10-31-2019 WEATHER: CLOUDY, 70 ENGINEER: TOM TREMBLY

PROOF	DISTANCE	DISTANCE	DA 1988	MEASURE	DA 2019	RATIO	POINT
POINT	(mi)	(km)	(mv/m)	TIME	(mv/m)	2019/1988	DESCRIPTION
1	1.38	2.22	30.500	1558	26.000	0.85245902	Front of 4 Marion Ave.
2	1.47	2.37	36.500	1551	27.200	0.74520548	Aldrich Rd. & Cooper Dr., corner on east side
3	1.75	2.82	31.500	1548	21.100	0.66984127	IFO 18 Addison at curb, side toward gray house by trees
4	2.00	3.22	28.500	1544	20.100	0.70526316	Larsen Rd., north of culvert on west side
MP 5	2.52	4.06	19.200	1536	14.500	0.75520833	New Prospect Rd., east side of road across from Bridge Freezes sign
6	3.20	5.15	13.500	1532	5.600	0.41481481	414 Pfister Rd., driveway
7	4.10	6.60	6.950	1525	4.800	0.69064748	Corner of Jackson Mills Rd. & Tree Top Cir., opposite speed limit sign
8	4.90	7.89	3.950	1516	2.500	0.63291139	Pittenger Pond Rd., in driveway to Serendipity Forest
9	5.56	8.95	3.070	1511	1.720	0.56026059	Nomoco Rd., at curve, west of pedestrian sign, south side along picket fence

1988 DA IDF: 191.10 MEAN RATIO: 0.669624

2019 DA IDF: 127.97 STANDARD IDF: 200.43

#### DAY

Tower	Pl	nase	Ratio
	1	-42.6	0.272
	2	127.2	0.478
	3	0.0	1.000
	4	-93.1	0.432

# NIGHT

Tower	Ρ	hase	Ratio	
	1	134.2	0.613	
	2	0.0	1.000	
	3	-174.5	0.990	
	4	33.9	0.588	

Potomac FIM-41, S/N 2018 Calibrated 9-20-2018