

**APPLICATION FOR STATION LICENSE**  
**CENTRAL FLORIDA EDUCATIONAL FOUNDATION, INC.**  
**WPOZ (FM) RADIO STATION**  
**CH 202C – 88.3 MHZ – 100.0 KW (DA)**  
**UNION PARK, FL**  
**July 2015**

**EXHIBIT 7**

**WPOZ Transmission System Calculations**

Effective Radiated Power (Horizontal & Vertical)	100.0 kilowatts maximum 98.4 kilowatts at horizon
Antenna:	Electronic Research Incorporated (ERI) Model: 1193-5CP-DA-SP 5 Bay Panel / 0.8 lambda spaced
Power gain:	5.828 (7.656 dB) horizontal & vertical
Transmission System Loss:	Dielectric, RCA and Harris 3 and 6-inch air-dielectric rigid line and components. 78.69% Efficiency (See next page for inventory)
Required Transmitter Power Output To Reach Effective Radiated Power:	21.80 kilowatts

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Facilities Authorized:	Channel 202C – 88.3 MHz
Effective Radiated Power:	100.0 kilowatts (circularly polarized)
Geographic Coordinates:	North Latitude 28° 36' 07" West Longitude 81° 05' 37"
Antenna Center of Radiation:	Above Ground 443 meters Above MSL 462 meters HAAT 452 meters
Antenna Structure Registration #:	1026744

Details of Transmission Line Calculations

Item	Quantity	Description	Value	Units	Extended
1	5	3" elbows	-0.001	dB per elbow	-0.005
2	4	6" elbows	-0.0005	dB per elbow	-0.002
3	2	6" to 3" reducer	-0.0015	dB per reducer	-0.003
4	2	motorized coaxial switches	-0.1	dB per switch	-0.2
5	66	3 inch hardline	-0.093	dB/100ft @ 88 MHz	-0.06138
6	1518	6 inch hardline	-0.049	dB/100ft @ 88 MHz	-0.74382
7	1	Harris 3" TV-6 fine matcher	-0.025	dB per unit	-0.025
8	1	6" Gas stop	-0.0005	dB per stop	-0.0005
		Total Loss		dB	-1.0407
		Power Gain/Loss		multiplier	0.786919
	Antenna Input Required From ERI Proof			kW	17.157
		Total System Losses		Percent	78.69189
	Transmitter Power Output Required			kW	<u>21.80275</u>