ATTACHMENT 2

Flow From Additional Permanent Impervious Area Calculations

PROJECT: DUKE ENERGY HINES ENERGY COMPLEX SOUTH LAYDOWN AREA
TITLE: FLOW FROM ADDITIONAL PERMENANT IMPERVIOUS AREA
DATE: 2025-02-20

ADDITIONAL IMPERVIOUS AREA (AC)
1.57

PEAK DISCHARGE USING RATIONAL METHOD

Q=CiA

Q	=	C	i (inch/hour)	A (ac)
	=	0.9	10	1.57
	=	14.13	cfs	

NOTES:
1. C, RUNOFF COEFFICIENT USED IS 0.9 FOR IMPERVIOUS AREA.
2. I, RAINFALL INTENTSITY USED IS FROM FDOT DRAINAGE MANUAL APPENDIX B IDF CURVE FOR ZONE 8 (POLK COUNTY IS IN ZONE 8), 100 YEAR-10 MINUTES DURATION

RUNOFF VOLUME FROM IMPERVIOUS AREA

	IMPERVIOUS AREA (AC)	X	RAINFALL (IN)	X	FT/IN
=	1.57	X	9.5	x	0.083
=	**1.24**	AC-FT			

NOTES:
1. RAINFALL AMOUNT OBTAINED FROM SWFWMD, APPLICANT HANDBOOK VOL II, APPENDIX A, FIG D-7 24-HOUR 100 YEAR RETURN PERIOD RAINFALL MAP.

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