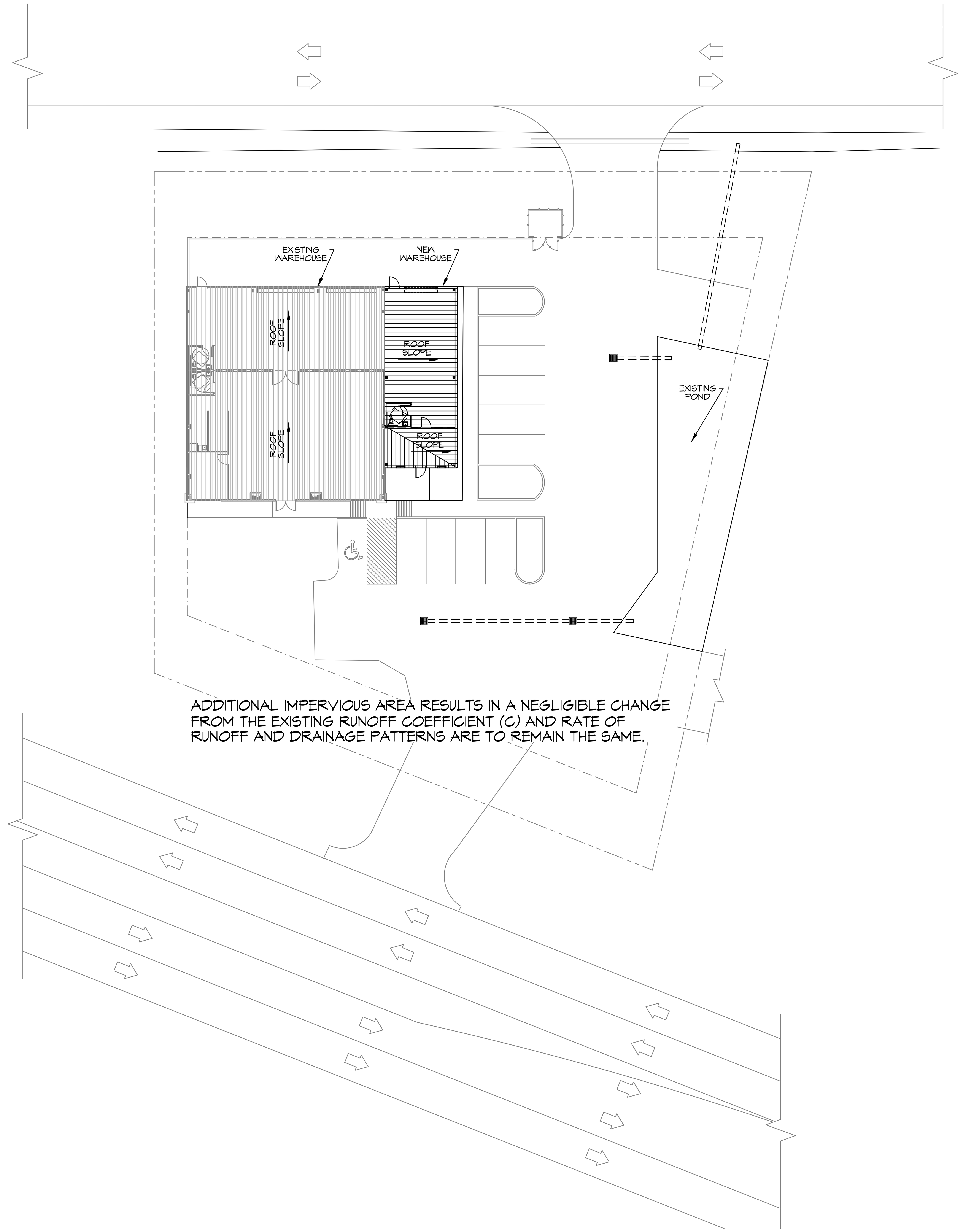

4 EXISTING DRAINAGE PLAN
SCALE: 1" = 20'-0"

NOTE TO ENGINEERING:
THESE CALCULATIONS ARE FROM THE ORIGINAL DESIGN THAT INCLUDED A FULL BUILDING AT TIME OF DESIGN.

PROJECT: RAY HORVATH BUILDING

STORMWATER RUN-OFF CALCULATIONS

Formulas used:

[1] RATIONAL METHOD: Q=Aci

where:
- Q= Peak discharge of watershed in cubic feet per second (cfs) due to maximum storm assumed.
- A= Area of watershed in acres.
- c= Coefficient of run-off [2].
- i= Intensity of rainfall in inches per hour based on concentration time. [3]

[4] TC=

where:
- TC=Time of concentration= time required for rain falling at most remote point to reach discharge point.
- c= Site run-off coefficient based on conditions shown.
- s= Percent slope of overland flow.

PRIOR DEVELOPMENT
25 Year Frequency

Q_1 = Aci

Watertight Surfaces		838	sqft =	0.019 Acres
c(1) =	0.9			
Gravel Surface		3554	sqft =	0.082 Acres
c(2) =	0.25			
Green Space		28428	sqft =	0.653 Acres
c(3) =	0.15			
Summary		32820	sqft =	0.753 Acres
c =	0.18			

Duration (D) = Time of concentration (TC)

where	L = 218	run-off length ft	Elev diff 1.4
	c = 0.18	run-off coef	
	S = 0.6422	percent slope	
therefore	TC = D = 21.80	minutes	
Expected rainfall intensity	i = 3.64	in/hr	

Q_1 = 0.494 cfs 10% reduction **0.049 cfs**

POST DEVELOPMENT
25 Year Frequency

Q_2 = Aci

Watertight Surfaces		18018	sqft =	0.414 Acres
c(1) =	0.9			
Gravel Surface		0	sqft =	0.000 Acres
c(2) =	0.25			
Green Space		14712	sqft =	0.338 Acres
c(3) =	0.15			
Summary		32730	sqft =	0.751 Acres
c =	0.56			

Duration (D) = Time of concentration (TC)

where	L = 205	run-off length ft	Elev diff 3.1
	c = 0.56	run-off coef	
	S = 1.5122	percent slope	
therefore	TC = D = 14.30	minutes	
Expected rainfall intensity	i = 3.64	in/hr	

Q_2 = 1.539 cfs

DETENTION REQUIREMENTS

Detention required Q-Q	1.05 cfs		
ONE HOUR DETENTION	3765.2 cuft		
DETENTION DIMENSIONS		WIDTH	16.5 feet
		LENGTH	191 feet
		DEPTH	**2.0 feet**

DISCHARGE END AREA REQUIREMENTS

where:
- A= Discharge Area required
- g= Acceleration of gravity
- c= Discharge coefficient
- h= Hydraulic head
- Q= Flow volume from run-off

Pipe Servicing Site Drainage

Q =	0.049 cfs	h =	3.00 feet
c =	0.62 coefficient	A =	0.006 sqft
g =	32.16 ft/sec/sec		

REQUIRED CONDUIT = 1.03 inch inside diameter

5 EXISTING CALCULATIONS
SCALE: N.T.S.

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REVISIONS

#	DESCRIPTION	DATE

SEAL:
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BRIAN A. MISTICH
License No. 30187
PROFESSIONAL ENGINEER

ADDITION TO OFFICE/WAREHOUSE
RAY HORVATH FLOORWORKS AND BLINDS
1860 SHORTCUT HWY
SLIDELL, LA 70458

JOB No:	2026	DATE:	2-4-2026
DRAWN BY:	CKD	CHECKED BY:	JMS

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SHEET TITLE:
EXISTING DRAINAGE PLAN

DRAWING NUMBER:
C103