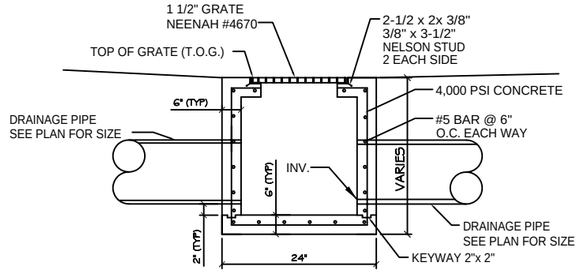


TYPICAL DROP INLET
N.T.S.

PROJECT: **GREEN BLDG.**

DRAINAGE RUN OFF CALCULATIONS -- MODIFIED RATIONAL METHOD

PRIOR DEVELOPMENT
10 Year Frequency

Q_1 = CIA

Watertight Surfaces		0	sqft =	0.000	Acres
c(1) =	0.9				
Gravel Surface		0	sqft =	0.000	Acres
c(2) =	0.25				
Green Space		45,094.00	sqft =	1.035	Acres
c(3) =	0.35				
Summary		45094	sqft =	1.035	Acres
c =	0.35				

Duration (D) = Time of concentration (TC)
TC = .7039(L^.3917)(c^-1.1309)(S^-.1985)

where	L = 236	Runoff length ft	Elev diff = 0.5
	c = 0.35	Runoff coef	
	S = 0.2119	Percent Slope	
therefore	TC = D = 26.69	minutes	
and from Rainfall Intensity Table	I = 3.50	in/hr	

Q_1 = 1.268 cfs **RUNOFF LIMIT 85% 1.078 cfs**

POST DEVELOPMENT
10 Year Frequency

Q_2 = CIA

Watertight Surfaces		32330	sqft =	0.742	Acres
c(1) =	0.9				
Gravel Surface		0	sqft =	0.000	Acres
c(2) =	0.25				
Green Space		12764	sqft =	0.293	
c(3) =	0.35				
Summary		45094	sqft =	1.035	Acres
c =	0.74				

D = Time of concentration (TC)
TC = .7039(L^.3917)(c^-1.1309)(S^-.1985)

where	L = 174	Runoff length ft	Elev diff = 0.75
	c = 0.74	Runoff coef	
	S = 0.4310	Percent Slope	
therefore	TC = D = 8.77	minutes or	
and from Rainfall Intensity Table	I = 3.50	in/hr	

Q_2 = 2.697 cfs

RESULTS

DETENTION REQUIRED Q_2-Q_1	1.619	cfs
TWO HOUR DETENTION	11656.4	cuft
DETENTION DIMENSIONS		
WIDTH	187	feet
LENGTH	106	feet
DEPTH	**0.59**	**feet**

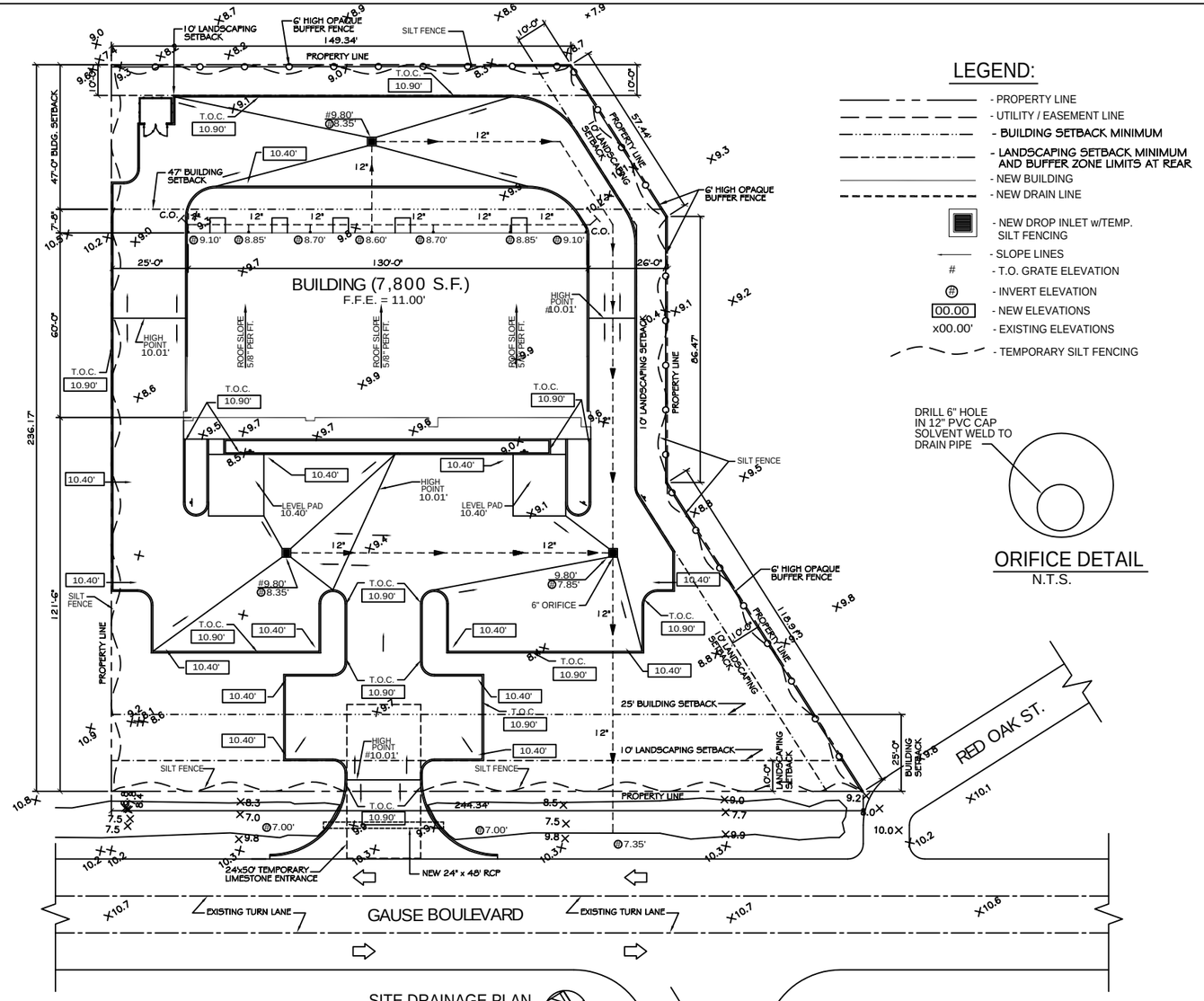
DISCHARGE END AREA CALCULATIONS

Q = cA(2gH)^1/2 where Q is allowable run off

Allowable run off	Q =	1.078	cfs
Friction loss factor	c =	0.98	coefficient
Acceleration	g =	32.2	ft/ft/sec
Height above invert	if H =	2.00	feet
End area	A =	0.10	sqft

REQUIRED CONDUIT = 4.22 inch diameter

USE 6 inch orifice

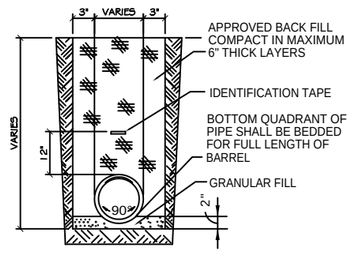


SITE DRAINAGE PLAN
SCALE: 1"=20'

LEGEND:

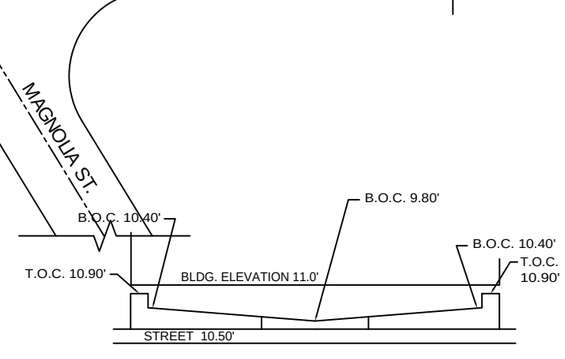
- PROPERTY LINE
- UTILITY / EASEMENT LINE
- BUILDING SETBACK MINIMUM
- LANDSCAPING SETBACK MINIMUM AND BUFFER ZONE LIMITS AT REAR
- NEW BUILDING
- NEW DRAIN LINE
- NEW DROP INLET w/TEMP. SILT FENCING
- SLOPE LINES
- # - T.O. GRATE ELEVATION
- (#) - INVERT ELEVATION
- 00.00 - NEW ELEVATIONS
- x00.00' - EXISTING ELEVATIONS
- TEMPORARY SILT FENCING

ORIFICE DETAIL
N.T.S.



DRAIN PIPE BEDDING
N.T.S.

NOTES:
1) DRAIN PIPE & FITTINGS WITHIN PROPERTY LINE SHALL BE POLYVINYL CHLORIDE PLASTIC PIPE, MEETING CLASS 100 C-900 PVC.
2) ELEVATIONS SHOWN ARE M.S.L.
3) FIELD VERIFY ALL ELEVATIONS AND DRAINAGE SYSTEM PLACEMENT PRIOR TO START OF WORK.
4) MUCK OUT 24" DEEP FOR FOUNDATION PAD MINIMUM, OR TO UNDISTURBED SOIL CAPABLE OF 1500 PSF BEARING.
5) DOWN SPOUTS SHALL FLOW INTO SUB-SUFRACE DRAINAGE.
6) THERE IS NO EVIDENCE OF EXISTING OFF-SITE FLOW CROSSING THE PROPERTY. NEW DRAINAGE CALCULATIONS ARE DETERMINED ACCORDINGLY.



SECTION
N.T.S.

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SITE
DRAINAGE
PLAN

REV:

SCALE: AS NOTED
JOB#: 2057
DATE: 06-23-10
SHEET 4

C-3

OF 19