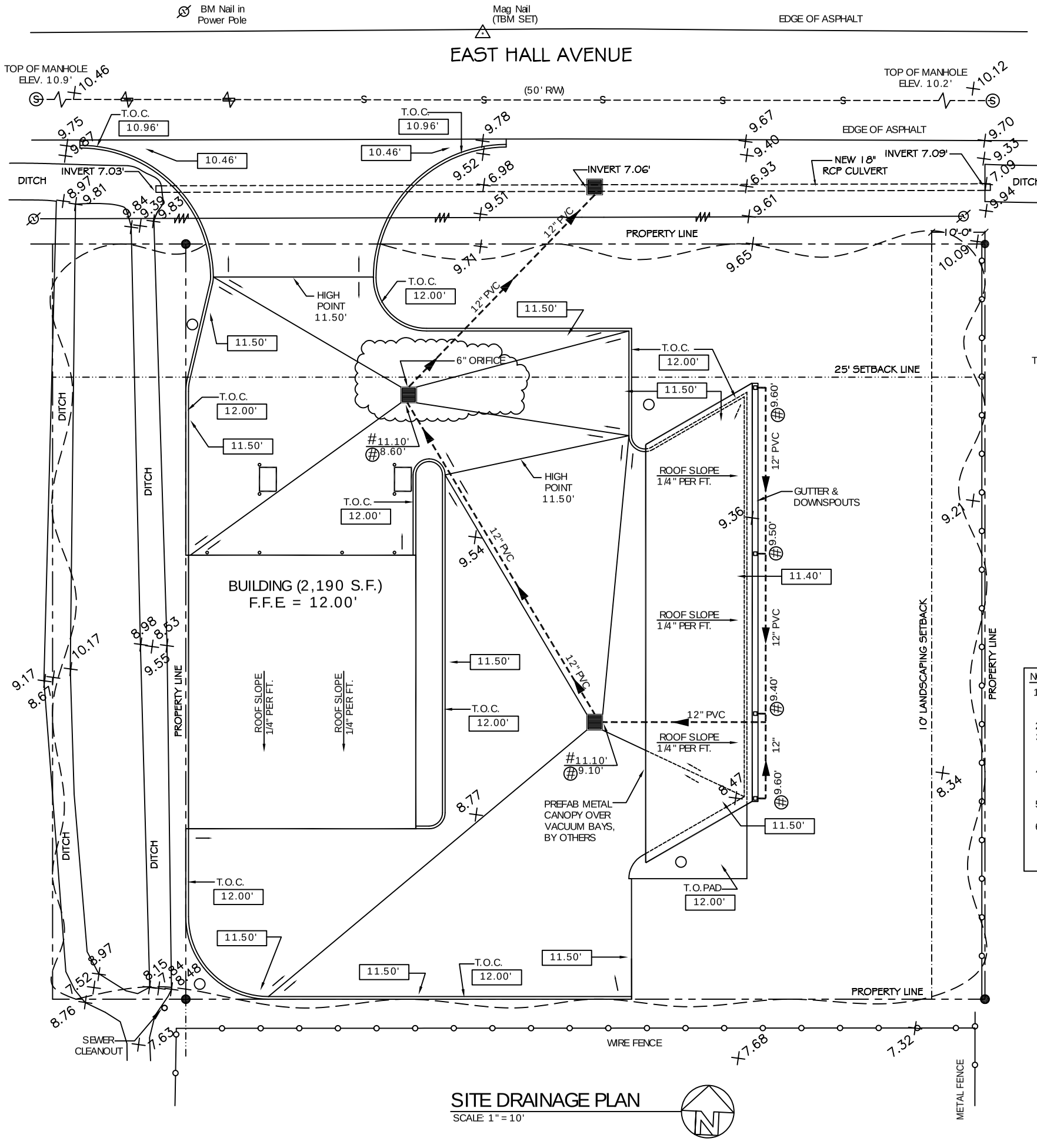
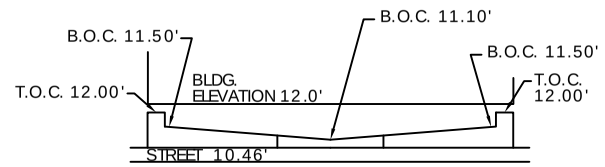
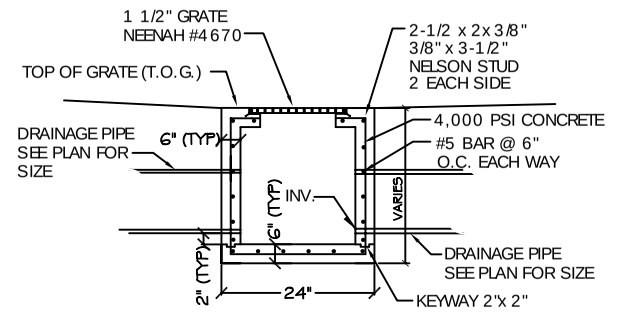


LEGEND:

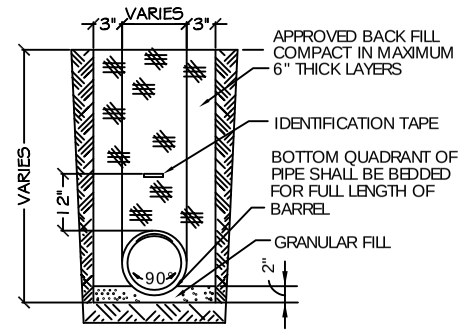
- PROPERTY LINE
- UTILITY / EASEMENT LINE
- BUILDING SETBACK MINIMUM
- LANDSCAPING SETBACK, MINIMUM AND BUFFER ZONE LIMITS AT REAR
- NEW BUILDING
- NEW DRAIN LINE
- NEW DROP INLET w/TEMP. SILT FENCING
- SLOPE LINES
- # - T.O. GRATE ELEVATION
- (#) - INVERT ELEVATION
- 00.00 - NEW ELEVATIONS
- x00.00'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



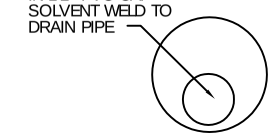
SECTION
N.T.S.



TYPICAL DROP INLET
N.T.S.



DRAIN PIPE BEDDING
N.T.S.



ORIFICE DETAIL
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 UNDISTRUBED SOIL CAPABLE OF 1500 PSF BEARING.
5) DOWNSPOUTS SHALL FLOW INTO SUB-SURFACE DRAINAGE.
6) THERE IS NO EVIDENCE OF EXISTING OFF-SITE FLOW CROSSING THE PROPERTY. NEW DRAINAGE CALCULATIONS ARE DETERMINED ACCORDINGLY.

PROJECT: CAR WASH

DRAINAGE RUN OFF CALCULATIONS -- MODIFIED RATIONAL METHOD

Q_1 = CIA — **PRIOR DEVELOPMENT**, 10 Year Frequency

Watertight Surfaces		0	sqft =	0.000	Acres
	c(1) = 0.9				
Gravel Surface		0	sqft =	0.000	Acres
	c(2) = 0.25				
Green Space		21,262.00	sqft =	0.488	Acres
	c(3) = 0.35				
Summary	c = 0.35	21262	sqft =	0.488	Acres

Duration (D) = Time of concentration (TC)
TC = .7039(L^.3917)(c^-1.1309)(S^-.1985)
where L = 141 Runoff length ft; Elev diff = 0.5
c = 0.35 Runoff coef
S = 0.3546 Percent Slope
therefore TC = D = 19.69 minutes
and from Rainfall Intensity Table I = 3.50 in/hr

Q_1 = 0.598 cfs **RUNOFF LIMIT 85%** **0.508 cfs**

POST DEVELOPMENT
Q_2 = CIA — 10 Year Frequency

Watertight Surfaces		8784	sqft =	0.202	Acres
	c(1) = 0.9				
Gravel Surface		0	sqft =	0.000	Acres
	c(2) = 0.25				
Green Space		12478	sqft =	0.286	
	c(3) = 0.35				
Summary	c = 0.58	21262	sqft =	0.488	Acres

D = Time of concentration (TC)
TC = .7039(L^.3917)(c^-1.1309)(S^-.1985)
where L = 113 Runoff length ft; Elev diff = 0.75
c = 0.58 Runoff coef
S = 0.6637 Percent Slope
therefore TC = D = 9.06 minutes or
and from Rainfall Intensity Table I = 3.50 in/hr

Q_2 = 0.986 cfs

RESULTS

DETENTION REQUIRED	Q_2-Q_1	0.478 cfs
TWO HOUR DETENTION		3440.7 cuft
DETENTION DIMENSIONS	WIDTH	105 feet
	LENGTH	113 feet
	DEPTH	**0.29 feet**

DISCHARGE END AREA CALCULATIONS

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

Allowable run off	Q =	0.508	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 =	0.05	sqft

REQUIRED CONDUIT = **4.22 inch diameter**

USE 6 inch orifice

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SLIDELL, LA

DRAINAGE PLAN

REV:10-4-10

SCALE: AS NOTED

JOB#: 2074

DATE: 09-13-10

SHEET 5

C-4

OF 18