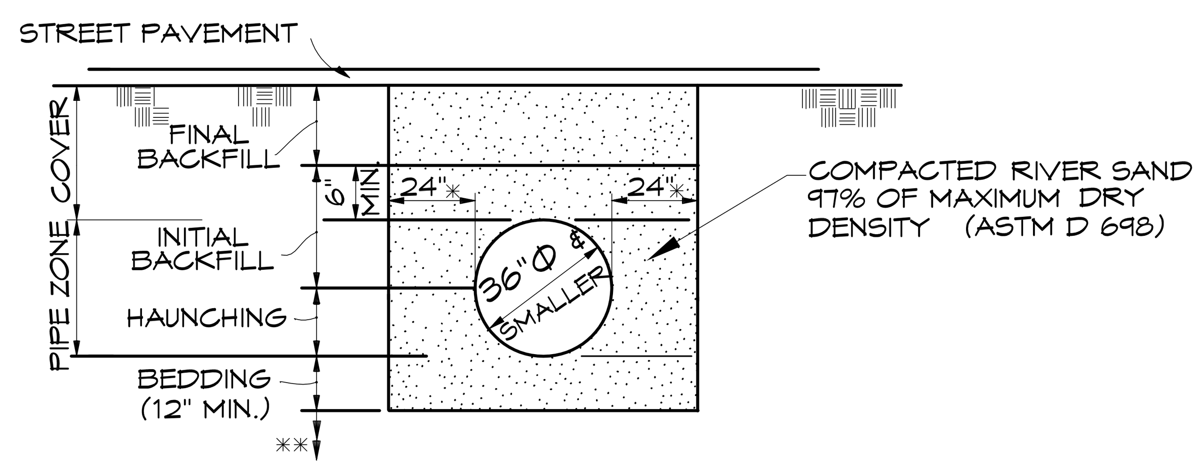


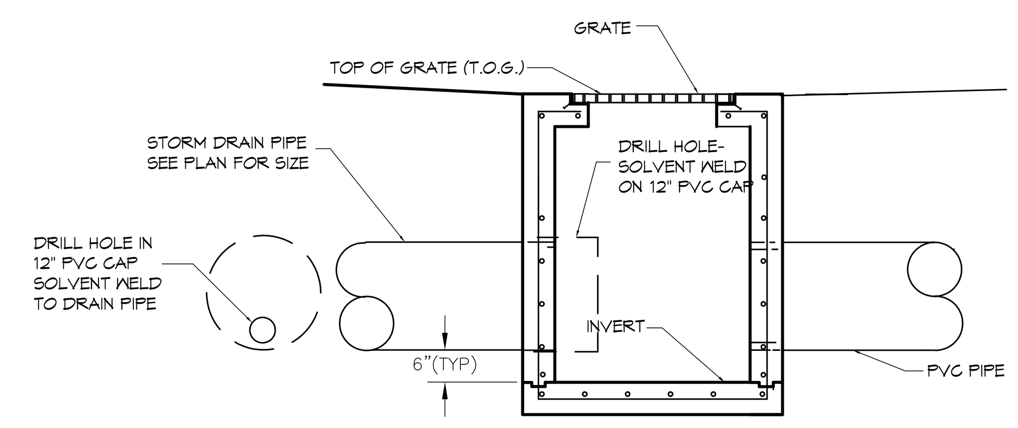
FOR A-2000, CORR-21, AND ULTRA CORR PVC PIPE (ASTM F-794 AND ASTM D2321) N.T.S.

MIN. COVER (PVC PIPE)	PAVEMENT TYPE
12"	CONCRETE
18"	ASPHALT
24"	NON-PAVED

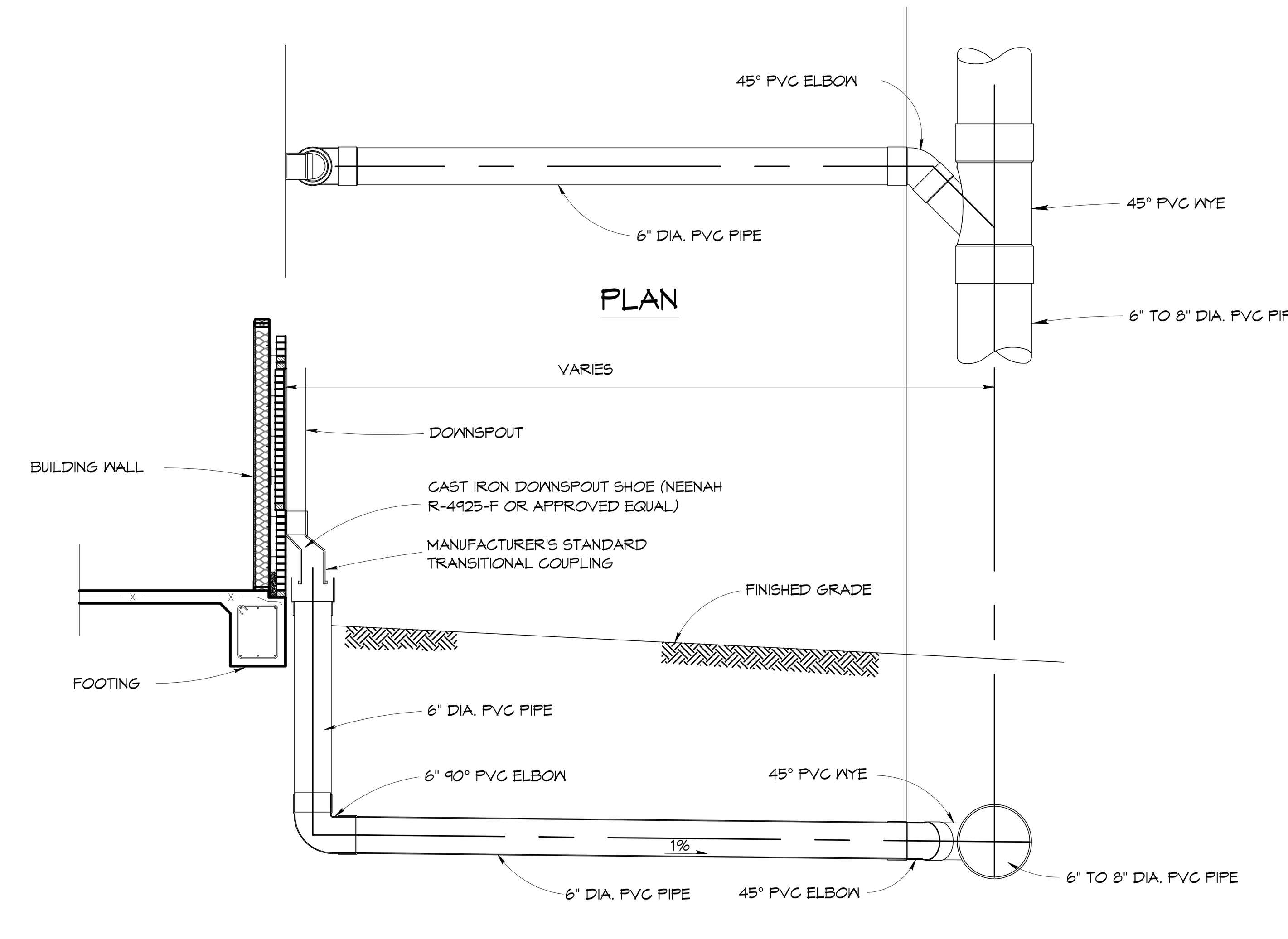
4 DETAIL
SCALE: N.T.S. PVC PIPE DRAIN LINE STANDARD TRENCH DETAIL

NOTES FOR TIE-IN TO EXISTING CATCH BASIN

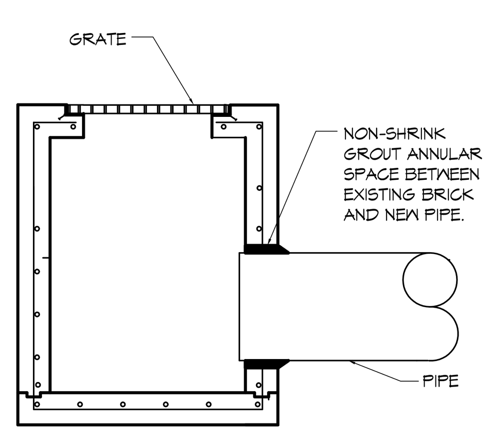
1. FOR CONCRETE STRUCTURES CORE-DRILL THE REQUIRED OPENING OR DRILL HOLES AROUND THE PERIMETER OF THE REQUIRED OPENING UNTIL THE SECTION CAN BE TAKEN OUT WITHOUT DAMAGE TO THE STRUCTURE. SAW-CUTTING MAY BE REQUIRED. FOR ANY METHOD, ALLOW ADEQUATE SPACING FOR PLACING NON-SHRINK GROUT. ANY REINFORCEMENT LEFT IN-PLACE SHALL BE INCORPORATED IN THE PATCH WORK.
2. FOR BRICK STRUCTURES, CHISEL OR DRILL OUT THE OPENING AND INSERT PIPE. REPLACE GAPS AND CRACKS WITH NEW BRICK AND MORTAR AND PLACE NON-SHRINK GROUT BETWEEN THE PIPE AND THE WALL. GROUT SHALL BE PLACED A MINIMUM OF 1/2" THICK IN THE INSIDE AND OUTSIDE WALLS OF THE STRUCTURE AROUND THE OPENING TO COVER THE BRICK SURFACES.
3. PROPOSED PLASTIC PIPE FOR THE SEWER TIE-IN SHALL BE COATED WITH AN APPROVED EPOXY AND ROLLED IN MORTAR SAND TO PROVIDE A BONDING SURFACE BETWEEN THE OUTER PIPE WALL AND THE PATCH MATERIAL. CONTRACTOR HAS THE OPTION OF PURCHASING PIPE STUBS WITH PREPARED SURFACES FROM SUPPLIER.



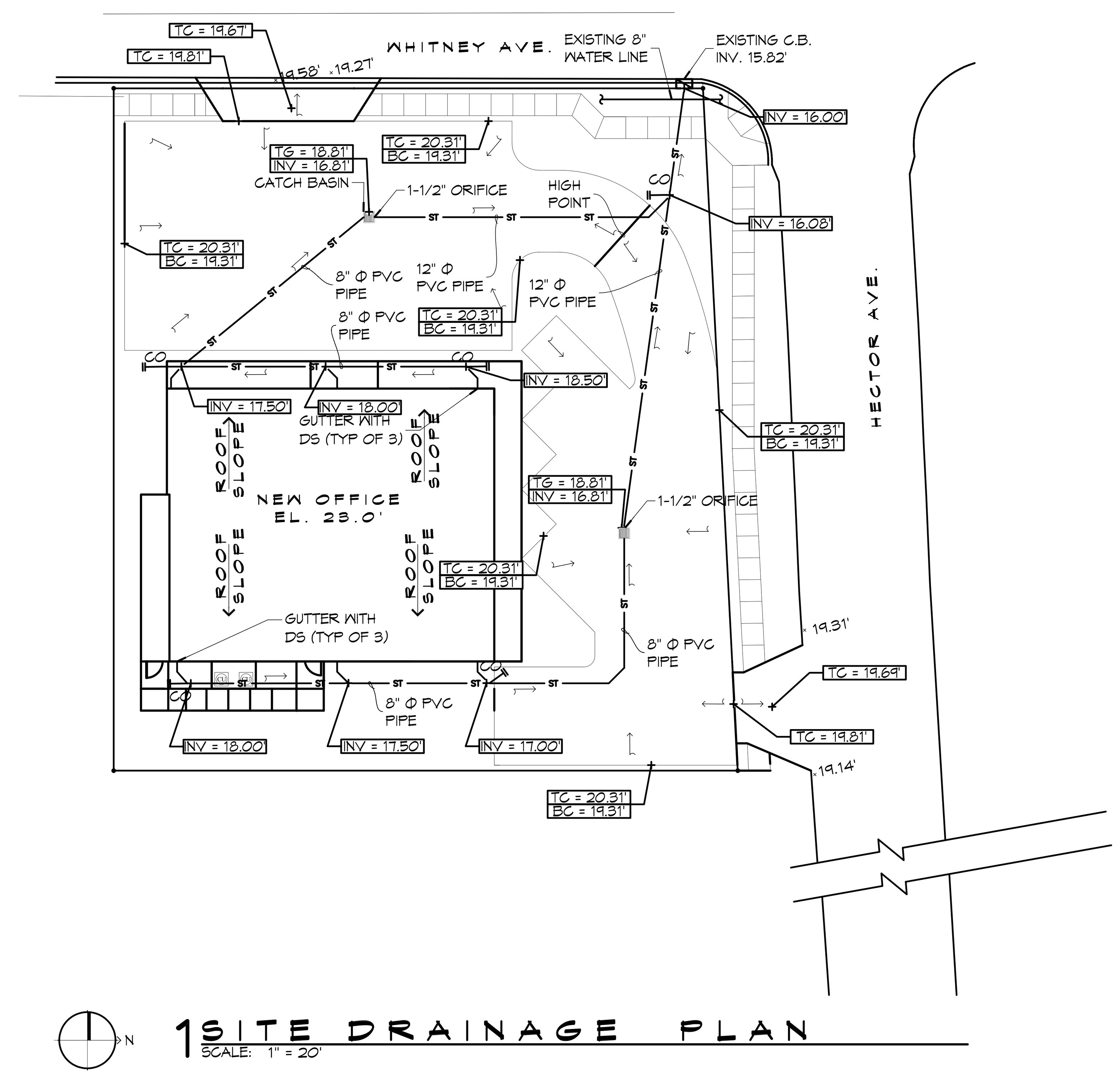
2 DETAIL
SCALE: N.T.S. TYPICAL CATCH BASIN IN PARKING LOT



3 DETAIL
SCALE: 3/4" = 1'-0" TYPICAL ROOF DRAIN DETAIL



5 DETAIL
SCALE: N.T.S. DRAIN LINE TIE-IN EXISTING CATCH BASIN-DROP INELET-MANHOLE



1 SITE DRAINAGE PLAN
SCALE: 1" = 20'

GENERAL SITE DRAINAGE NOTES

1. DRAIN PIPE & FITTINGS WITHIN PROPERTY LINE SHALL BE POLYVINYL CHLORIDE PLASTIC PIPE, MEETING SDR35.
2. ELEVATIONS SHOWN ARE M.S.L.
3. FIELD VERIFY ALL ELEVATIONS AND AND DRAINAGE SYSTEM PLACEMENT PRIOR TO START OF WORK.
4. PROVIDE VERTICAL ELBOW AT DOWNSPOUTS FOR CONNECTION TO SUBSURFACE DRAINAGE WHERE INDICATED. ELBOW ID SHALL BE SIZED SUCH THAT THE DOWNSPOUT CAN BE INSERTED INTO THE PIPE OPENING.
5. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL UTILITIES. IF CONFLICT EXISTS CONTACT THE ARCHITECT/ENGINEER.

SITE DRAINAGE LEGEND

- PROPERTY LINE
- TC = 11.47 / BC = 10.97 — TOP OF CURB / BOTTOM OF CURB
- TG = 11.47 / INV = 10.97 — TOP OF GRATE / INVERT OF PIPE
- EXISTING ELEVATIONS
- NEW SUBSURFACE DRAINAGE PIPE
- DRAINAGE FLOW DIRECTION ARROWS

STORMWATER RUN-OFF CALCULATIONS

PROJECT: State Farm

DRAINAGE RUN OFF CALCULATIONS -- RATIONAL METHOD

PRIOR DEVELOPMENT
10 Year Frequency

Q_1 = CIA

Watertight Surfaces		82	sqft =	0.002	Acres
c(1) =	0.9				
Gravel Surface		0	sqft =	0.000	Acres
c(2) =	0.21				
Green Space		13816	sqft =	0.317	Acres
c(3) =	0.35				
Summary		13898	sqft =	0.319	Acres
c =	0.35				

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

where	L =	125	Runoff length ft	Elev diff	0.5
	c =	0.35	Runoff coef		
	S =	0.4000	Percent Slope		
therefore	TC = D =	18.16	minutes or		
and from Rainfall Intensi	I =	4.50	in/hr		
Q_1 =	0.507	cfs	UNOFF LIMIT 90%	0.456	cfs

POST DEVELOPMENT
10 Year Frequency

Q_2 = CIA

Watertight Surfaces		10538	sqft =	0.242	Acres
c(1) =	0.9				
Gravel Surface		0	sqft =	0.000	Acres
c(2) =	0.21				
Green Space		3360	sqft =	0.077	
c(3) =	0.35				
Summary		13898	sqft =	0.319	Acres
c =	0.77				

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

where	L =	108	Runoff length ft	Elev diff	1.5
	c =	0.77	Runoff coef		
	S =	1.3889	Percent Slope		
therefore	TC = D =	5.57	minutes or		
and from Rainfall Intensi	I =	7.60	in/hr		
Q_2 =	1.860	cfs			

RESULTS

DETENTION REQUIRED	Q_2-Q_1		1.403	cfs
ONE HOUR DETENTION			5052.4	cuft
DETENTION DIMENSIONS		WIDTH	40	feet
		LENGTH	100	feet
		DEPTH	1.26	feet

DISCHARGE END AREA CALCULATIONS

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

Allowable run off	Q =	0.456	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 =	0.04	sqft
REQUIRED CONDUIT =		2.74	inch diameter
	USE	3	

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REVISIONS		
#	DESCRIPTION	DATE

SEAL: STATE OF LOUISIANA — BRIAN A. MISTICH License No. 30187 — PROFESSIONAL ENGINEER — 6/24/2015 — BAM

NEW OFFICE BUILDING
STATEFARM OFFICE
501 WHITNEY AVE
TERRY TOWN, LOUISIANA 70056

JOB No:	2243	DATE:	JUNE 09, 2015
DRAWN BY:	CKD	CHECKED BY:	BAM

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SHEET TITLE: SITE DRAINAGE PLAN AND DETAILS

DRAWING NUMBER: C100

SHEET No: 01 of 02