

**DAMMON ENGINEERING, INC.**

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ARCHITECTURE  
ENGINEERING  
STUDIES  
PLANNING  
INVESTIGATION  
EXPERT WITNESS

FEAST  
CATERING  
NEW  
ADDITION

109 TAOS  
STREET  
SLIDELL  
LA

PAVING  
AND  
DRAINAGE  
PLAN

REV:

SCALE: AS NOTED

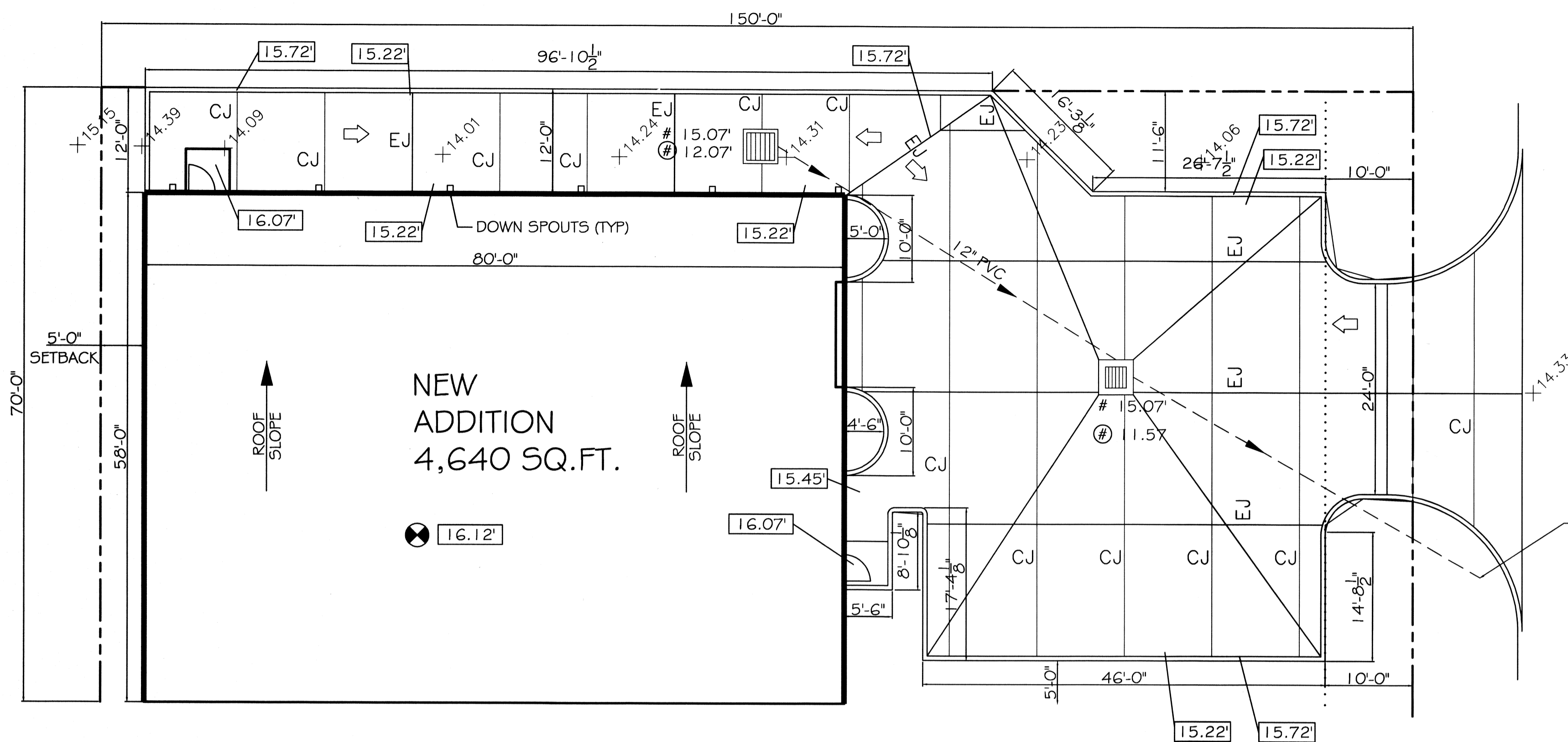
JOB#: 2140

DATE: 04-20-12

SHEET

C-2

OF



**LEGEND**

- - - - - PROPERTY LINE
- ..... SETBACK LINE
- CONTROL JT. 10'x15'
- EXPANSION JT. 30'x45'
- ← SHEET FLOW ARROW
- # 0.00' - INVERT ELEVATION
- # 0.00' - TOP OF GRATE ELEVATION
- 00.00 - NEW ELEVATION

TIE INTO  
EXISTING  
DRAINAGE

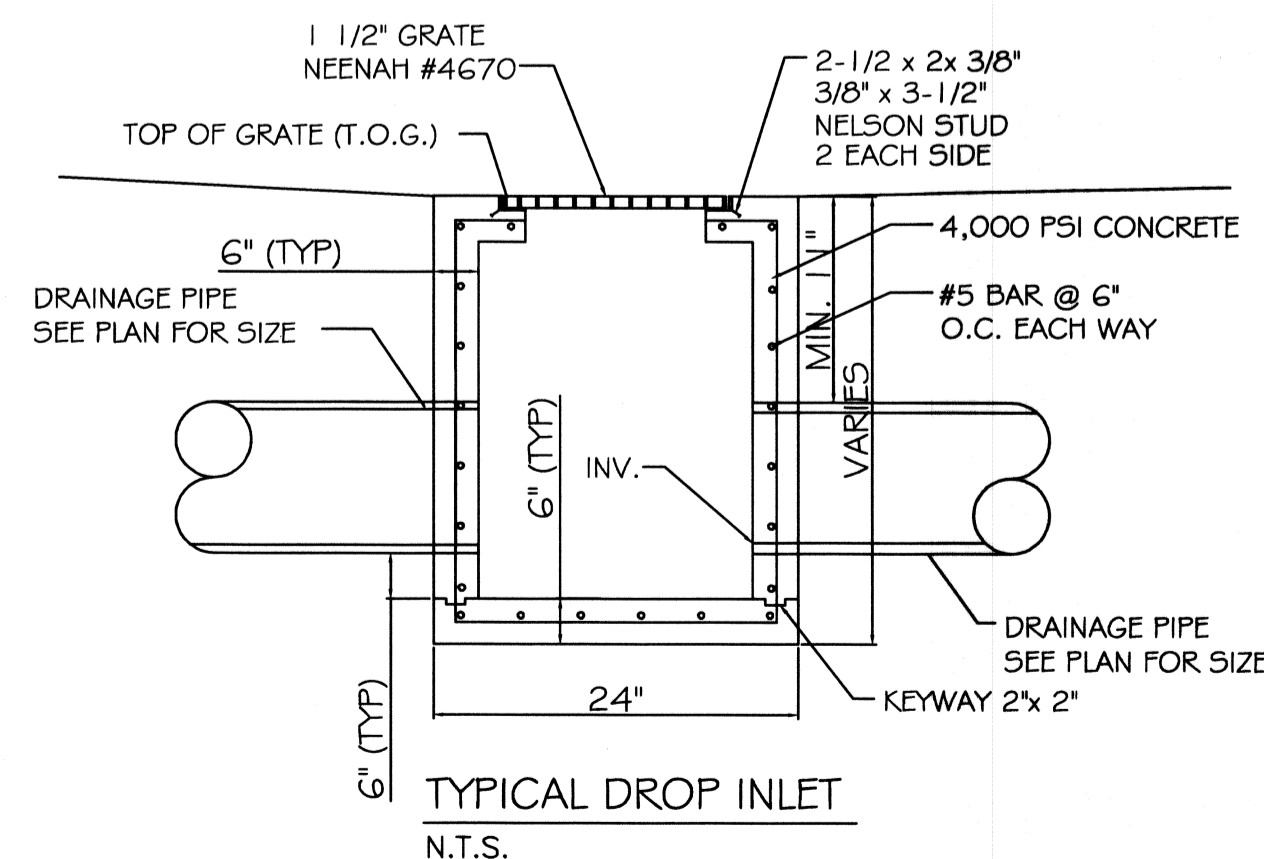
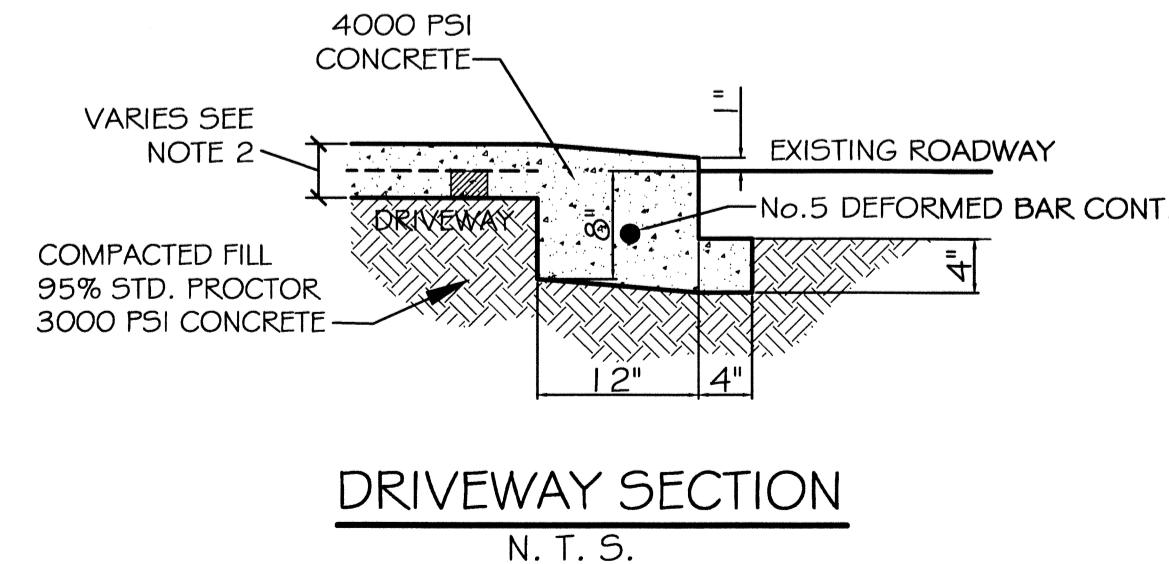
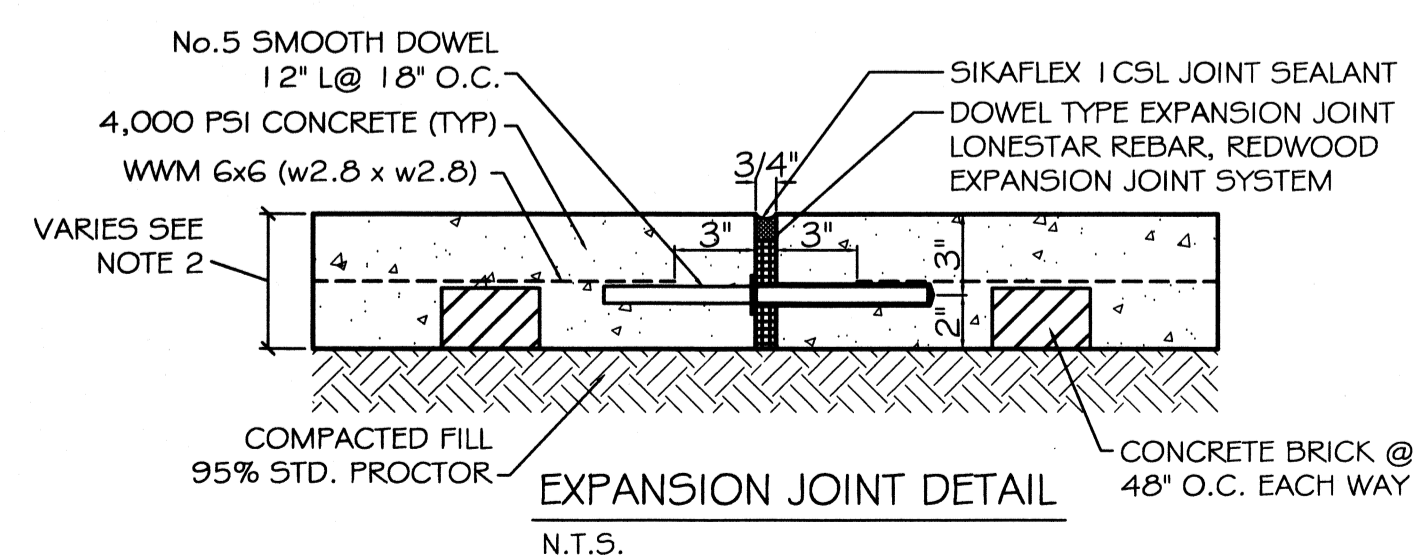
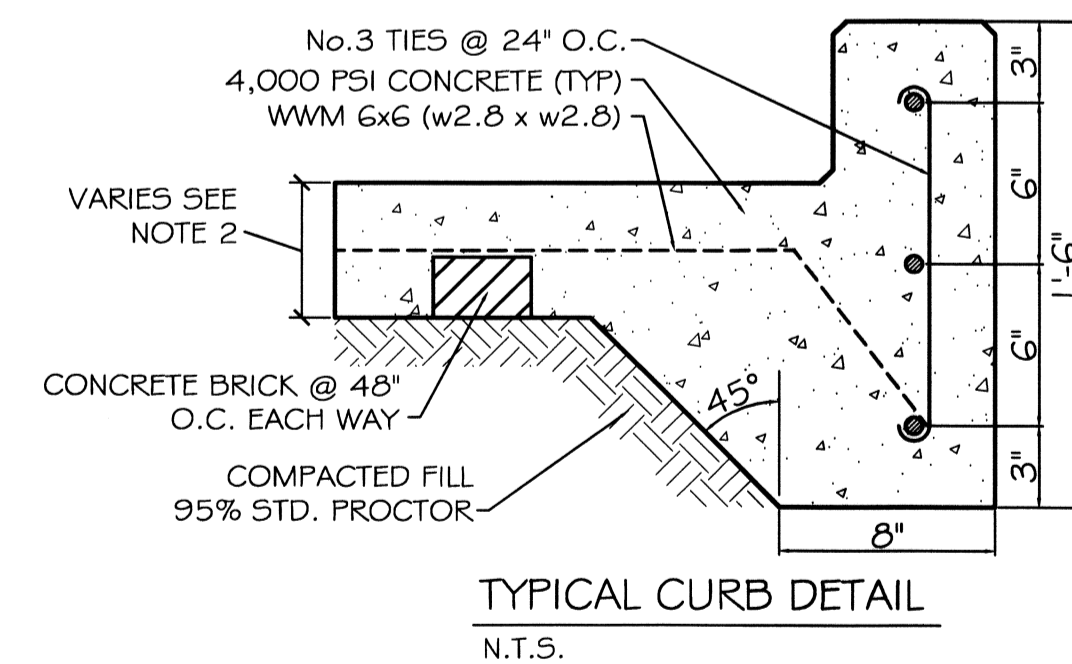
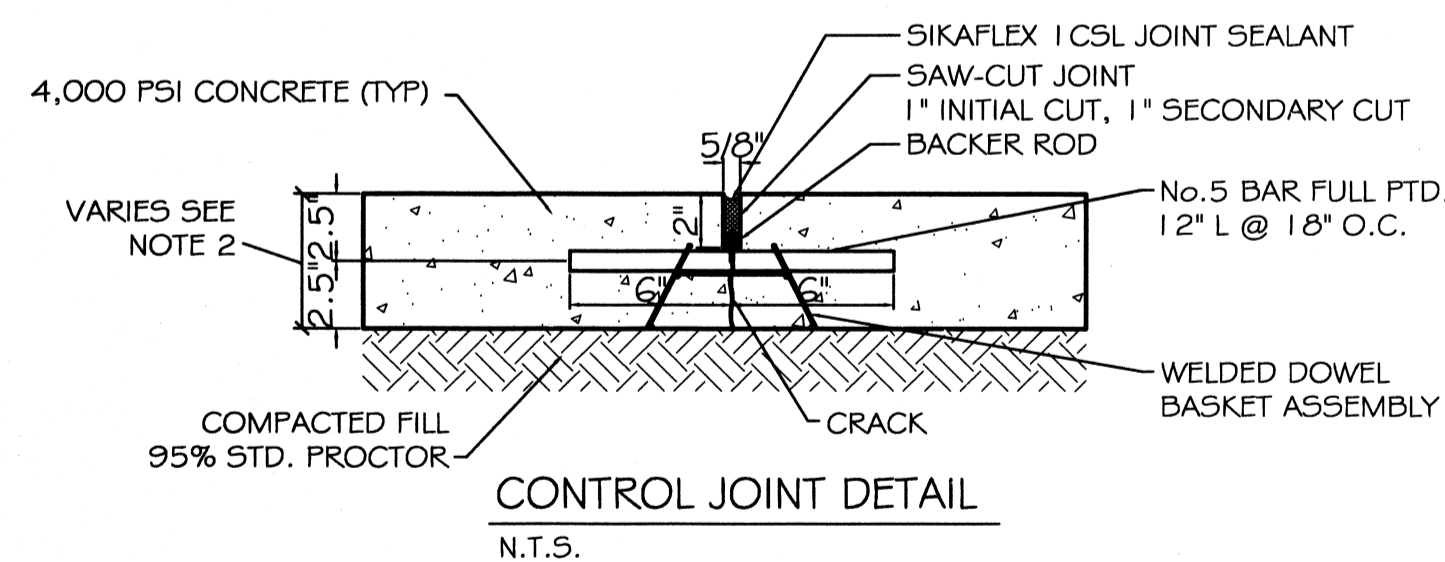
**PAVING & DRAINAGE PLAN**  
SCALE: 1"=10'

**PAVING NOTES:**

- 1) ALL NEW CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS AND A MINIMUM THICKNESS OF 5". CONCRETE MIX SHALL BE IN ACCORDANCE WITH THE LATEST REVISION OF ASTM C-150 TYPE 1.
- 2) CONCRETE PAVING THICKNESS SHALL VARY AS FOLLOWS:
  - a) APRONS = 7" THICKNESS
  - b) DRIVELANES = 6" THICKNESS
  - c) PARKING AREAS = 5" THICKNESS
- 3) ALL REINFORCING STEEL SHALL MEET ASTM-A615 (GRADE 60).
- 4) ALL REINFORCING STEEL SHALL BE SECURELY SUPPORTED TO PREVENT BOTH VERTICAL AND HORIZONTAL MOVEMENT DURING CONCRETE PLACEMENT. ALL CONTROL AND EXPANSION JOINTS SHALL BE LOCATED AND INSTALLED AS SHOWN ON THE PAVING PLAN AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- 5) ALL SUB GRADE FILL SHALL BE SELECT GRANULAR MATERIAL COMPACTED TO 95% STANDARD PROCTOR DENSITY IN A MAXIMUM OF 6" LIFTS.
- 6) CONTRACTOR SHALL CONTACT THEIR REGULATORY DEPARTMENT OF ENGINEERING PRIOR TO CONDUCTING ANY WORK.
- 7) ANY WORK WITHIN THE ROADWAY OR ADJACENT TO THE ROADWAY CAUSING AN INTERFERENCE TO VEHICULAR TRAFFIC REQUIRES PRIOR APPROVAL FROM THE CITY TRAFFIC ENGINEERING DIVISION, AND MUST CONFORM TO THE REQUIREMENTS SET FORTH BY THE UNIFORM MANUAL OF TRAFFIC CONTROL DEVICES OF THE STATE OF LOUISIANA. THE CONTRACTOR MUST FURNISH ALL NECESSARY TRAFFIC SIGNS AND/OR BARRICADES AND MAINTAIN THEM DURING CONSTRUCTION ACTIVITY.

**DRAINAGE PLAN 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. THERE IS NO EVIDENCE OF EXISTING OFF-SITE FLOW CROSSING THE PROPERTY.



**PROJECT: Feast Catering**

**DRAINAGE RUN OFF CALCULATIONS -- RATIONAL METHOD**

**PRIOR DEVELOPMENT**  
10 Year Frequency

**Q = CIA**

Watertight Surfaces	c(1) = 0.9	0	sqft = 0.000 Acres
Gravel Surface	c(2) = 0.14	0	sqft = 0.000 Acres
Green Space	c(3) = 0.21	10500	sqft = 0.241 Acres
Summary	c = 0.21	10500	sqft = 0.241 Acres

Duration (D) = Time of concentration (TC)  
TC = .7039(L<sup>.3917</sup>)(c<sup>-.1309</sup>)(S<sup>-.1985</sup>)

where	L = 150	Runoff length ft	Elev diff #
	c = 0.21	Runoff coef	
	S = 1.3333	Percent Slope	
therefore	TC = D 27.66	minutes or	
and from Rainfall Intensity Table	I = 4.50	in/hr	

**Q = 0.228 cfs RUNOFF LIMIT% 0.205 cfs**

**POST DEVELOPMENT**  
10 Year Frequency

**Q = CIA**

Watertight Surfaces	c(1) = 0.9	8968	sqft = 0.206 Acres
Gravel Surface	c(2) = 0.14	0	sqft = 0.000 Acres
Green Space	c(3) = 0.21	1532	sqft = 0.035
Summary	c = 0.80	10500	sqft = 0.241 Acres

D = Time of concentration (TC)  
TC = .7039(L<sup>.3917</sup>)(c<sup>-.1309</sup>)(S<sup>-.1985</sup>)

where	L = 109	Runoff length ft	Elev diff #.5
	c = 0.80	Runoff coef	
	S = 0.4587	Percent Slope	
therefore	TC = D 8.65	minutes or	
and from Rainfall Intensity Table	I = 7.60	in/hr	

**Q = 1.464 cfs**

**RESULTS**

DETENTION REQUIRED	1.259cfs
ONE HOUR DETENTION	4533.5cft
DETENTION DIMENSIONS	WIDTH 64feet
	LENGTH 109feet
	DEPTH 0.65feet

**DISCHARGE END AREA CALCULATIONS**

**Q = cA(2gH)<sup>1/2</sup>** where Q is allowable run off

Allowable run off	Q = 0.205 cfs
Friction loss factor	c = 0.98 coefficient
Acceleration	g = 32.2 ft/sec
Height above invert	if H = 2.00 feet
End area	A = 0.02 sqft

**REQUIRED CONDUIT = 1.84 inch diameter**  
USE 4 inch orifice

414757  
REVIEWED FOR  
STATE FIRE MARSHAL  
AS PER REVIEW LETTER  
BY: WILLIAM D. JONES, ARCHITECT, CBO  
*William D. Jones*

*Robert Wiltse*