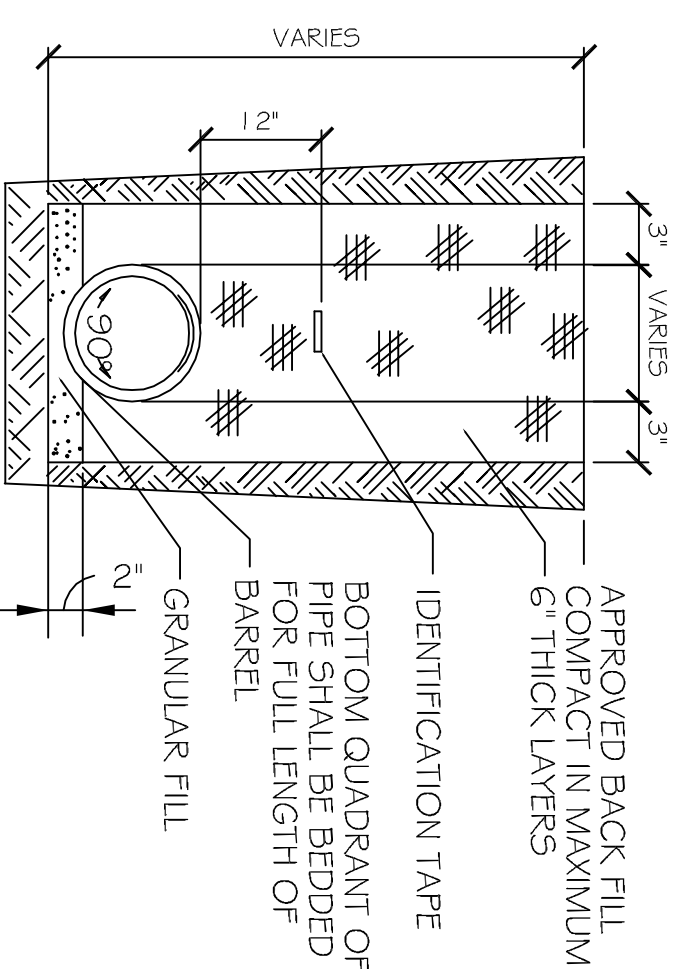


SITE DRAINAGE PLAN  
SCALE: 1"=20'-0"

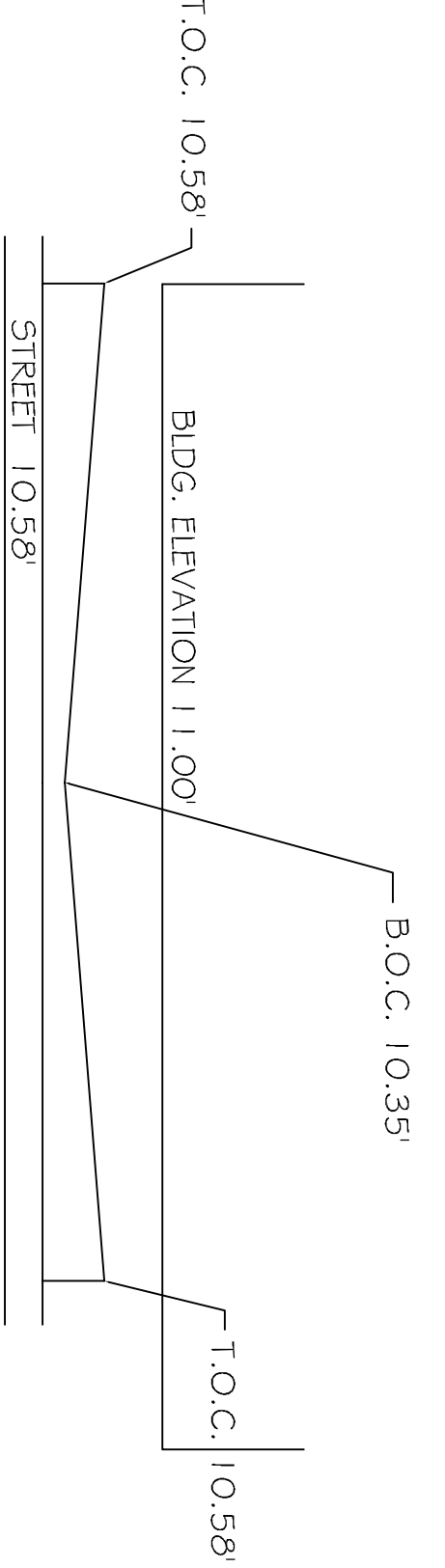
- LEGEND**
- - - PROPERTY LINE
  - - - SETBACK LINE
  - - - TEMPORARY SLIT FENCING
  - - - NEW DRAIN LINE
  - - - 6" OPAQUE FENCE
  - - - NEW DROP INLET w/TEMP. SLIT FENCING
  - - - SLOPE LINES
  - - - T.O. GRADE ELEVATION
  - - - INVERT ELEVATION
  - - - NEW ELEVATIONS
  - - - EXISTING ELEVATIONS



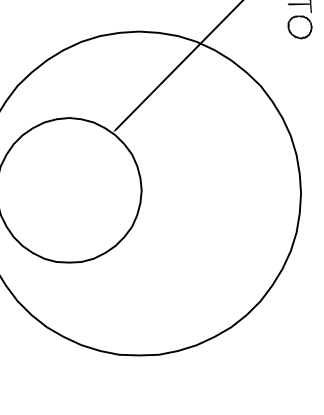
DRAIN PIPE BEDDING  
N.T.S.

GUTTERS AND DOWN SPOUTS TO BE SEAMLESS ALUMINUM 24 GAUGE. COLOR TO BE SELECTED BY OWNER. GUTTERS TO BE TOGETHER IN CROSS SECTION, MINIMUM 6" WIDTH.

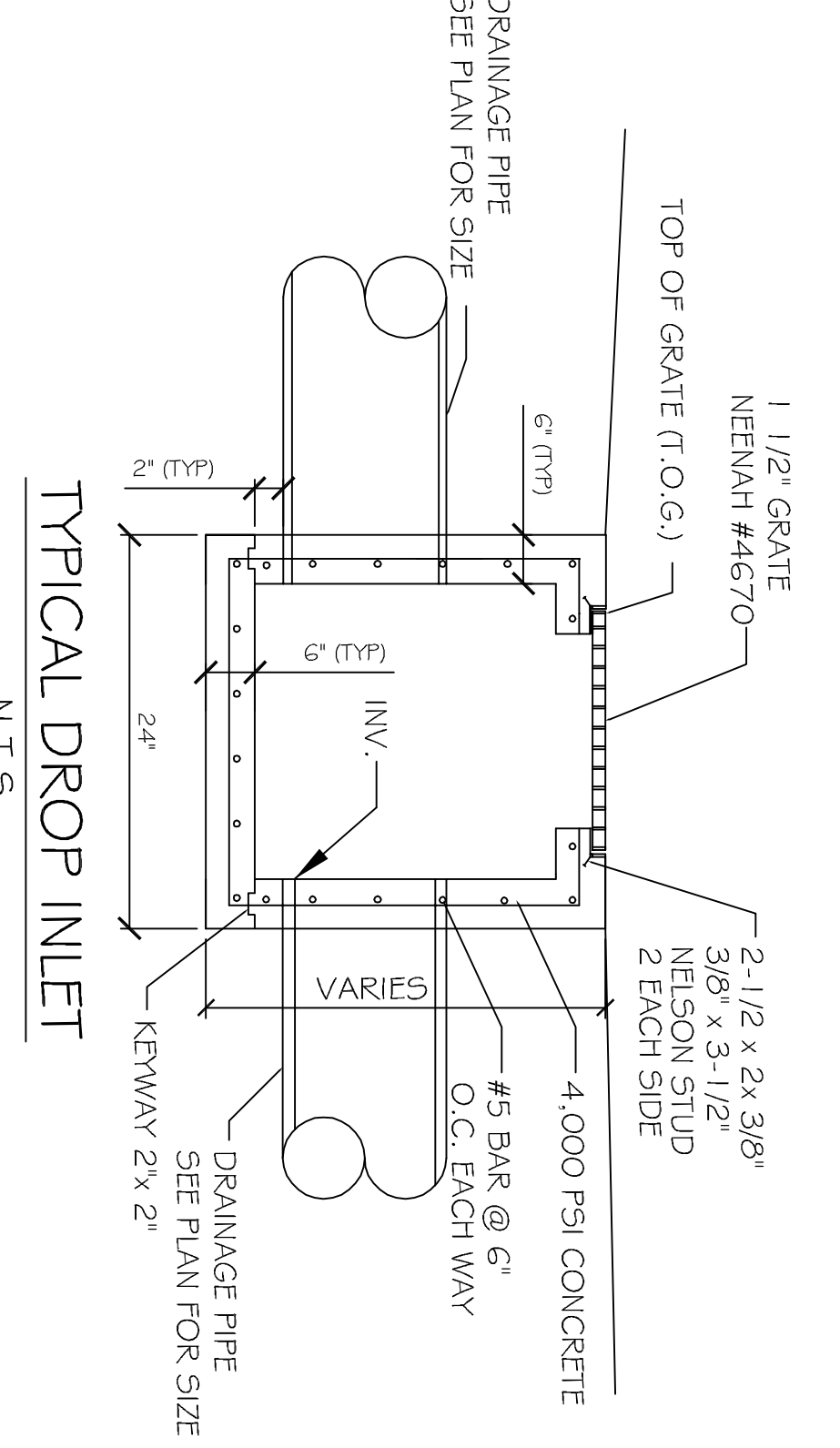
- NOTES:**
- 1) DRAIN PIPE & FITTINGS WITHIN PROPERTY LINE SHALL BE POLYVINYL CHLORIDE PLASTIC PIPE, MEETING CLASS 100 C-300 PVC.
  - 2) ELEVATIONS SHOWN ARE M.S.L.
  - 3) FIELD VERIFY ALL ELEVATIONS AND DRAINAGE SYSTEM
  - 4) MUCK OUT 24" DEEP FOR FOUNDATION PAD MINIMUM, OR TO UNDISTURBED SOIL CAPABLE OF 1,500 PSF BEARING.
  - 5) DOWN SPOUTS 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.



SECTION  
N.T.S.



ORIFICE DETAIL  
N.T.S.



TYPICAL DROP INLET  
N.T.S.

**PROJECT:** BULK SYSTEMS  
**Formulas used:** STORMWATER RUN-OFF CALCULATIONS

**[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]  
TC= Time of concentration= time required for rain falling at most remote point to reach discharge point  
S= Percent slope of watershed  
P= Prior development  
25 Year Frequency

**Q = AdI**

Watershed Surfaces	cfs	sqft = 0.095 Acres
Gravel Surface	0.25	sqft = 0.000 Acres
Green Space	0.15	sqft = 0.654 Acres
Summary	0.23	sqft = 0.949 Acres

**Q = 0.778 cfs**  
10% reduction 0.078 cfs  
25 Year Frequency

Duration (D) = Time of concentration (TC)	L = 170	run-off length ft	Elev diff ft
where	C = 0.23	run-off coef	
therefore	S = 0.4808	percent slope	
Expected rainfall	TC = D = 15.53	minutes	
Intensity	I = 3.64	in/hr	

**Q = AdI**

Watershed Surfaces	cfs	sqft = 0.264 Acres
Gravel Surface	0.25	sqft = 0.000 Acres
Green Space	0.15	sqft = 0.684 Acres
Summary	0.36	sqft = 0.949 Acres

**DETENTION REQUIREMENTS**  
Detention required Q-Q  
ONE-HOUR DETENTION  
DETENTION DIMENSIONS  
DISCHARGE END AREA REQUIREMENTS

- REQUIREMENTS:**
1. Chen, W.F. The Civil Engineering Handbook, 1985, 64-431, 1, 99, 1008
  2. Spangler, E. Drainage Engineering, Vol. 1, 1980, 14, 8, 99, 1002
  3. Spangler, E. Drainage Engineering, Vol. 2, 1980, 14, 8, 99, 1002
  4. Chen, W.F. The Civil Engineering Handbook, 1985, 14, 31, 2, Reprint Edition (1-0-13)
  5. Chen, W.F. The Civil Engineering Handbook, 1985, 64-283, 2, 99, 989

**BULK SYSTEM'S NEW OFFICE/WAREHOUSE BUILDING**

1226 FREMEAUX AVENUE  
SLIDELL, LOUISIANA 70455

JOB No: 2173 DATE: 04-22-2013

DRAWN BY: JTL CHECKED BY:

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**C4**

SHEET No: 5 OF 20

SITE DRAINAGE PLAN