

PRECIOUS JEWELS DAYCARE CENTER

DRAINAGE RUN OFF CALCULATIONS - RATIONAL METHOD

PRIOR DEVELOPMENT

25 Year Frequency

Waterfront Surfaces	0.9	sqft =	0.000 Acres
Gravel Surfaces (C1)	0.21	sqft =	0.000 Acres
Green Space (C3)	0.35	sqft =	0.490 Acres
Summary	0.35	sqft =	0.490 Acres

Duration (D) = Time of concentration (TC)

TC = 7.039(L^{0.3977}C^{-1.1309})^{0.889}

Where L = 150 Feet Runoff length

S = 0.0273 Percent Slope

TC = D = 17.81 minutes of

Intensity Table

I = 6.56 in/hr

Q_p = 1.412 cfs

10% Reduction

POST DEVELOPMENT

25 Year Frequency

Waterfront Surfaces

Gravel Surfaces (C1)

Green Space (C3)

Summary

c = 0.58

sqft = 0.186 Acres

sqft = 0.000 Acres

sqft = 0.304 Acres

sqft = 2.1334 Acres

0.892 cfs

3272.5 cfs

4525 feet

100 feet

0.71 feet

0.17 feet

486 inch diameter

Install 6" orifice

REQUIRED CONDUIT =

DISCHARGE END AREA CALCULATIONS

where Q is allowable run off

Q = 1.012 cfs

Q = 3.99 coefficient

Q = 1.00 feet

Height above invert

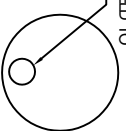
Find area

A = 0.13 sqft

REQUIRED CONDUIT =

486 inch diameter

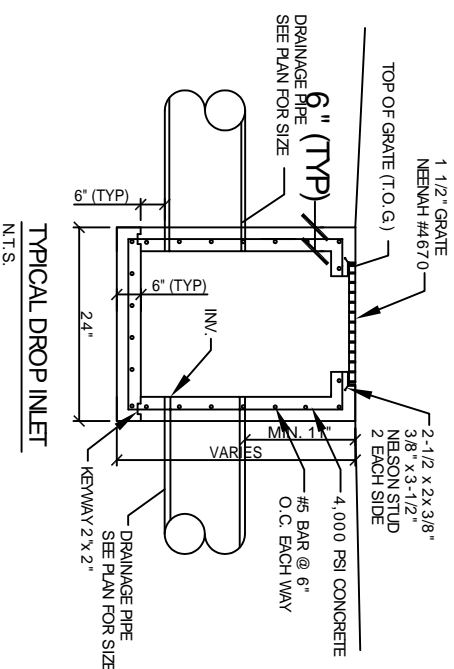
Install 6" orifice



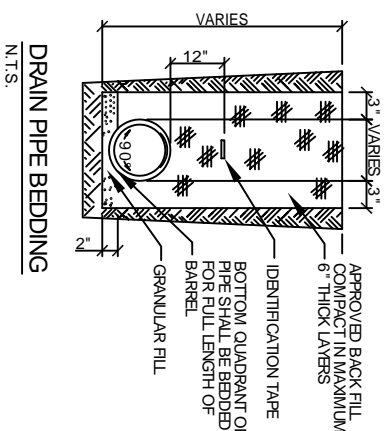
ORIFICE DETAIL
N.T.S.

LEGEND

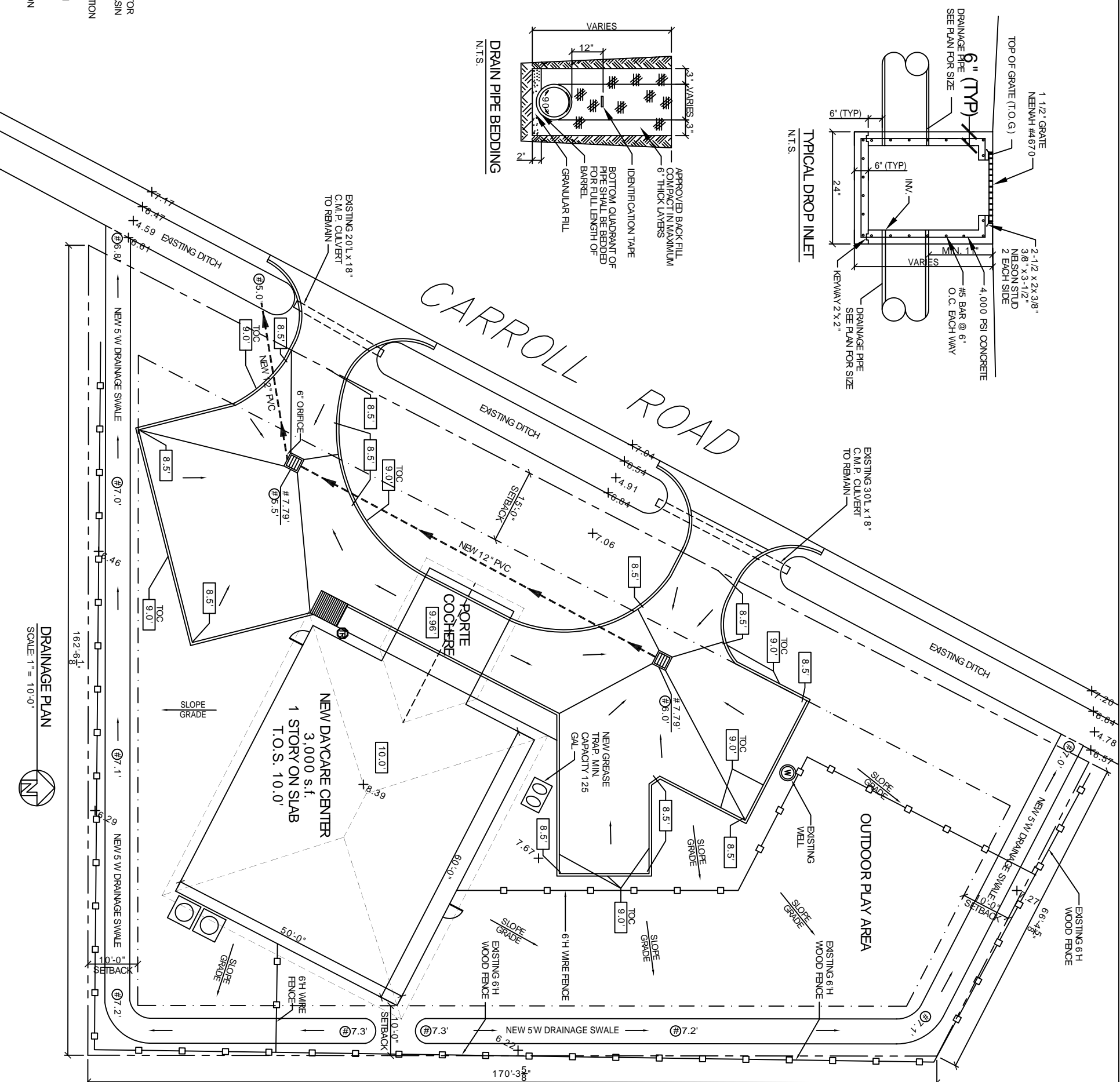
- PROPERTY LINE
- NEW BLDG. FOOTPRINT
- SETBACK LINE
- NEW FENCE
- 6" CONCRETE CURB
- PAVEMENT SLOPE INDICATOR
- NEW DRAINAGE CATCH BASIN
- NEW ELEVATION
- NEW TOP OF CURB ELEVATION
- INVERT ELEVATION
- TOP OF GRATE ELEVATION
- DRAINAGE PIPE
- DRAINAGE FLOW
- EXISTING GRADE ELEVATION



TYPICAL DROP INLET
N.T.S.



DRAIN PIPE BEDDING
N.T.S.



DRAINAGE PLAN
SCALE: 1" = 10'-0"



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PRECIOUS JEWELS DAY CARE CENTER

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DRAINAGE PLAN

REV:
SCALE AS NOTED
JOB#: 1991
DATE: XX-XX-08
SHEET

C-3

OF