

APPENDIX 1

LEGEND

○	SET IRON PIN
●	FOUND IRON PIN
⊕PP	EXISTING POWER POLE
☀	EXISTING LIGHT POLE
•	EXISTING POST INDICATOR VALVE
⊗	EXISTING WATER VALVE
++++	RAILROAD TRACKS
STM ○ MH	EXISTING STORM SEWER MANHOLE
SAN ○ MH	EXISTING SANITARY SEWER MANHOLE
TELE □ PED.	EXISTING TELEPHONE PEDESTAL
○	EXISTING WATER METER
△	EXISTING GAS METER
■	PROPOSED TELEPHONE PEDESTAL
SAN/STM ● MH	PROPOSED STORM SEWER MANHOLE
●	PROPOSED FIRE HYDRANT
●	PROPOSED POWER POLE
⊗	PROPOSED WATER VALVE
⬠	PROPOSED WATER METER
▲	PROPOSED GAS METER
▩	EXISTING GRATED INLET
□	EXISTING DROP INLET
=====	EXISTING CURB
—— SS ——	EXISTING SANITARY SEWER LINE (SPECIFY SIZE & TYPE)
—— GAS ——	EXISTING GAS LINE
—— WTR ——	EXISTING WATER LINE (SPECIFY SIZE & TYPE)
—— UGT ——	EXISTING UNDERGROUND TELEPHONE
—— OHE ——	EXISTING OVERHEAD ELECTRIC
—— UGTV ——	EXISTING UNDERGROUND TELEVISION
—— OHTV ——	EXISTING OVERHEAD TELEVISION
* * * * *	CHAIN LINK OR WIRE FENCE
—————	PROPERTY LINE
—— BSL ——	BUILDING SET BACK
—————	EASEMENT
—— SS ——	PROPOSED SANITARY SEWER LINE
—— GAS ——	PROPOSED GAS LINE
—— WTR ——	PROPOSED WATER LINE

———— UGT —————

PROPOSED UNDERGROUND TELEPHONE

———— OHE —————

PROPOSED OVERHEAD ELECTRIC

=====

PROPOSED CURB

———— UGTV —————

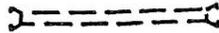
PROPOSED UNDERGROUND TELEVISION

———— OHTV —————

PROPOSED OVERHEAD TELEVISION



GUY



EXISTING REINFORCED CONCRETE PIPE
OR CORRUGATED METAL PIPE



NEW REINFORCED CONCRETE PIPE
OR CORRUGATED METAL PIPE



EXISTING JUNCTION BOX W/ MANWAY



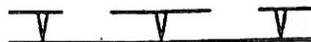
PROPOSED JUNCTION BOX W/ MANWAY



EXISTING TREE



TREE TO BE REMOVED



DITCH - SPECIFY GRASS CHANNEL LINING



M.H.	Manhole
W.M.	Water Meter
P.P.	Power Pole
T.P.	Telephone Pole
	Other Pole (Specify)
F.H.	Fire Hydrant
W.V.	Water Valve
G.V.	Gas Valve
G.R.	Gas Riser
R.C.P.	Reinforced Concrete pipe (Specify size and pipe)
C.M.P.	Corrugated metal pipe (Specify size and gauge)
C.M.A.P.	Corrugated Metal Arch Pipe (Specify size and gauge)
B.C.	Back of Street Curb
T.C	Top of Street Curb
Wr. Fe.	Wire Fence (Specify type & Height)
C.L. Fe.	Chain Link Fence (Specify Height)

A	Tributary area in acres
AHW	Allowable headwater at culvert entrance in feet
B	Width of culvert barrel or diameter of pipe culvert in feet
B_f	Width of face section of improved inlets in feet
C	Coefficient in the Rational Formula
cfs	Cubic feet per second
D	Height of box culvert or diameter of pipe culvert in feet
d	Dimension of top bevel in inches
d_n	Normal depth of flow in feet
d_c	Critical depth of flow in feet
fps	Feet per second
F	Froude number
FALL	Approximate depression of control section below the stream bed in feet
g	Acceleration of gravity; 32.2 feet per second
H	Head of energy required to pass a given quantity of water through a culvert (outlet control) in feet
h_e	Entrance head loss in feet
H_f	Depth of pool, or head, above the face section invert in feet
h_f	Friction head loss in feet
h_o	Empirical approximation of equivalent hydraulic grade line in feet

H_t	Depth of pool, or head, above the throat section invert in feet
HGL	Hydraulic grade line in feet
HW	Headwater elevation; HW is equivalent to H_f
HW_f	Headwater elevation required for flow to pass face section in face control in feet
HW_o	Headwater elevation required for culvert to pass flow in outlet control in feet
HW_t	Headwater elevation required for flow to pass throat section in throat control in feet
h_o	Elevation of equivalent hydraulic grade line referenced to the outlet invert in feet
h_v	Velocity head $V^2/2g$ in feet (V is based on full flow in culvert)
I	Average rainfall rate in inches
K_e	Entrance energy loss coefficient
L	Approximate total length of culvert, including inlet in feet
L_1, L_2, L_3	Dimensions relating to the improved inlet as shown in computation charts of the different types of inlets in feet
N	Number of barrels
n	Manning's roughness coefficient
P	Perimeter in feet
Q	Volume rate of flow in cubic feet per second
q	Discharge per foot of width for rectangular channels in cubic feet per second
Q_d	Design Volume rate of flow in cubic feet per second
R	Hydraulic radius = $\frac{\text{Area}}{\text{Wetted Perimeter}}$ in feet

S	Slope of culvert barrel in feet/foot
S_c	Critical slope in feet/foot
S_f	Slope of FALL for slope-tapered inlets (a ratio of horizontal to vertical) in feet per foot
S_o	Slope of natural channel in feet per foot
T_c	Time of concentration in minutes
Taper	Sidewall flare angle (also expressed as the cotangent of the flare angle) in feet per foot
TW	Tailwater depth at outlet of culvert referenced to outlet invert elevation in feet
V	Mean velocity of flow in feet per second
V_c	Critical velocity in feet per second
V_o	Velocity of outlet flow in feet per second
W	Width of channel in feet