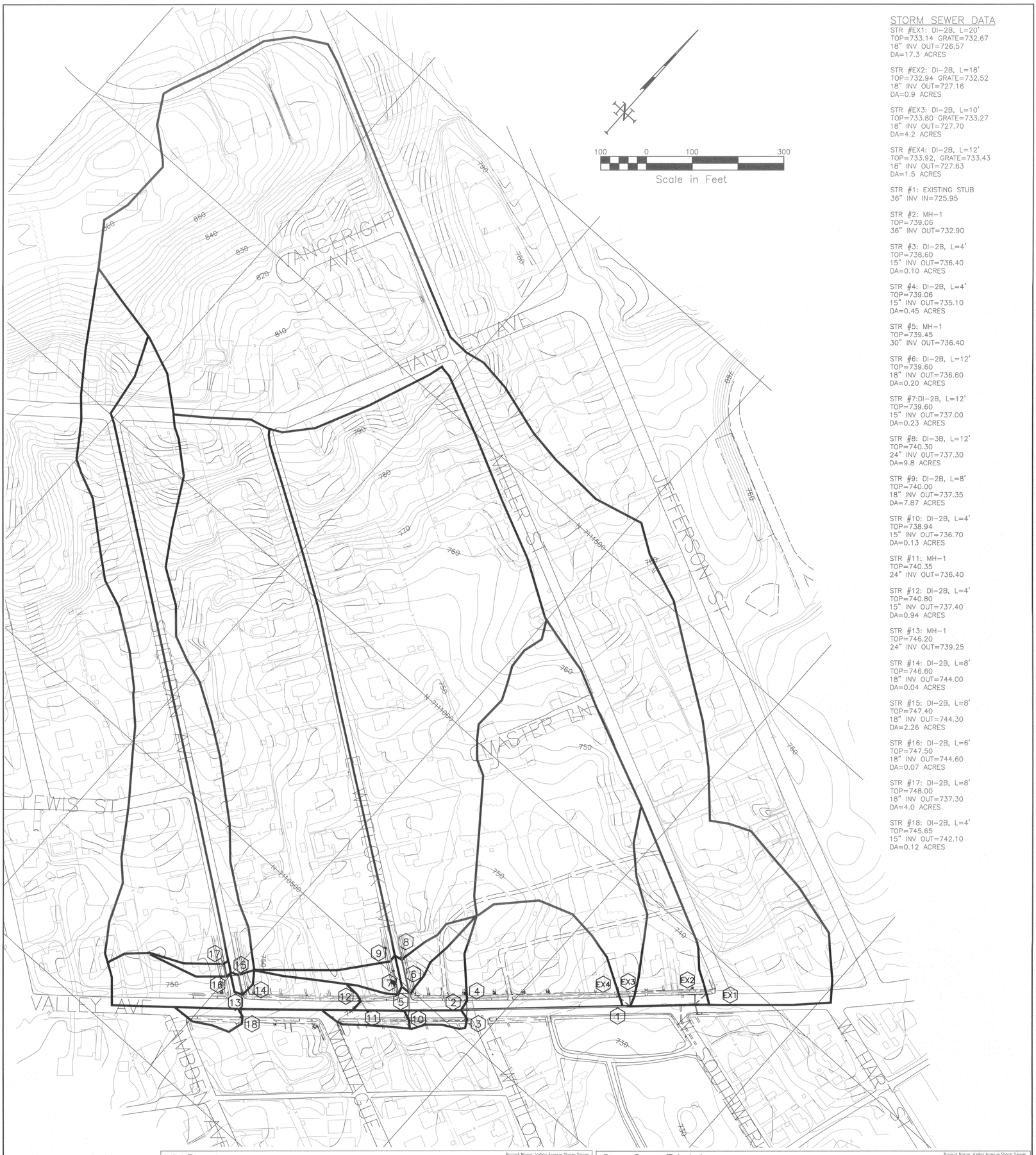

STORM SEWER DATA

STR #EX1: DI-2B, L=20'
TOP=733.14 GRATE=732.67
18" INV OUT=726.57
DA=17.3 ACRES

STR #EX2: DI-2B, L=18'
TOP=732.94 GRATE=732.52
18" INV OUT=727.16
DA=0.9 ACRES

STR #EX3: DI-2B, L=10'
TOP=733.80 GRATE=733.27
18" INV OUT=727.70
DA=4.2 ACRES

STR #EX4: DI-2B, L=12'
TOP=733.92, GRATE=733.43
18" INV OUT=727.63
DA=1.5 ACRES

STR #1: EXISTING STUB
36" INV IN=725.95

STR #2: MH-1
TOP=739.06
36" INV OUT=732.90

STR #3: DI-2B, L=4'
TOP=738.60
15" INV OUT=736.40
DA=0.10 ACRES

STR #4: DI-2B, L=4'
TOP=739.06
15" INV OUT=735.10
DA=0.45 ACRES

STR #5: MH-1
TOP=739.45
30" INV OUT=736.40

STR #6: DI-2B, L=12'
TOP=739.60
18" INV OUT=736.60
DA=0.20 ACRES

STR #7:DI-2B, L=12'
TOP=739.60
15" INV OUT=737.00
DA=0.23 ACRES

STR #8: DI-3B, L=12'
TOP=740.30
24" INV OUT=737.30
DA=9.8 ACRES

STR #9: DI-2B, L=8'
TOP=740.00
18" INV OUT=737.35
DA=7.87 ACRES

STR #10: DI-2B, L=4'
TOP=738.94
15" INV OUT=736.70
DA=0.13 ACRES

STR #11: MH-1
TOP=740.35
24" INV OUT=736.40

STR #12: DI-2B, L=4'
TOP=740.80
15" INV OUT=737.40
DA=0.94 ACRES

STR #13: MH-1
TOP=746.20
24" INV OUT=739.25

STR #14: DI-2B, L=8'
TOP=746.60
18" INV OUT=744.00
DA=0.04 ACRES

STR #15: DI-2B, L=8'
TOP=747.40
18" INV OUT=744.30
DA=2.26 ACRES

STR #16: DI-2B, L=6'
TOP=747.50
18" INV OUT=744.60
DA=0.07 ACRES

STR #17: DI-2B, L=8'
TOP=748.00
18" INV OUT=737.30
DA=4.0 ACRES

STR #18: DI-2B, L=4'
TOP=745.65
15" INV OUT=742.10
DA=0.12 ACRES

Inlet Report

Stormwater Studio v 1.0.1.12

Project Name: Valley Avenue Storm Sewer

07-05-2015

Line No	Inlet		Q			Curb		Grate			Gutter							Inlet		Byp Line No
	Id	Type	Catch (cfs)	Carry (cfs)	Capt (cfs)	Byp (cfs)	Ht (in)	L (ft)	L (ft)	W (ft)	Area (sqft)	Sc (ft/ft)	Sw (ft)	Sx (ft/ft)	n	Depth (ft)	Spread (ft)	Depth (ft)	Spread (ft)	Depr (in)
1	2	Manhole	0.00	0.00	0.00	0.00	4.00	4.00	2.00	2.00	2.00	Sag	2.00	0.050	0.020	0.013	0.00	0.00	0.00	0.00	0.0	0
2	4	Combination	0.83	0.00	0.83	0.00	5.0	4.00	2.00	2.00	1.00	0.012	2.00	0.083	0.020	0.013	0.20	4.30	0.18	4.73	1.0	1
3	3	Combination	0.33	0.00	0.33	0.00	5.0	4.00	2.00	2.00	1.00	0.012	2.00	0.083	0.020	0.013	0.14	1.90	0.13	2.33	1.0	1
4	5	Manhole	0.00	0.00	0.00	0.00	4.0	4.00	2.00	2.00	2.00	Sag	2.00	0.050	0.020	0.013	0.00	0.00	0.00	0.00	0.0	1
5	10	Combination	0.43	0.00	0.43	0.00	5.0	4.00	2.00	2.00	1.00	0.012	2.00	0.083	0.020	0.013	0.16	1.93	0.14	2.98	1.0	3
6	6	Combination	0.47	0.00	0.47	0.00	5.0	12.00	2.00	2.00	1.00	0.010	2.00	0.083	0.020	0.013	0.17	2.50	0.15	3.48	1.0	2
7	7	Combination	0.54	0.00	0.54	0.00	5.0	8.00	2.00	2.00	1.00	0.010	2.00	0.083	0.020	0.013	0.18	2.90	0.16	3.83	1.0	2
8	9	Combination	8.95	0.00	8.95	0.00	5.0	12.00	2.00	2.00	1.00	0.010	2.00	0.083	0.020	0.013	0.41	14.60	0.38	14.73	1.0	6
9	9	Combination	7.95	0.00	7.95	0.00	5.0	8.00	2.00	2.00	1.00	0.010	2.00	0.083	0.020	0.013	0.40	13.85	0.36	14.08	1.0	7
10	11	Manhole	0.00	0.00	0.00	0.00	4.0	4.00	2.00	2.00	2.00	Sag	2.00	0.050	0.020	0.013	0.00	0.00	0.00	0.00	0.0	4
11	12	Combination	1.73	0.00	1.73	0.00	5.0	4.00	2.00	2.00	1.00	0.012	2.00	0.083	0.020	0.013	0.25	5.50	0.22	5.98	1.0	2
12	13	Manhole	0.00	0.00	0.00	0.00	4.0	4.00	2.00	2.00	2.00	Sag	2.00	0.050	0.020	0.013	0.00	0.00	0.00	0.00	0.0	10
13	15	Combination	0.35	0.00	0.35	0.00	5.0	4.00	2.00	2.00	1.00	0.012	2.00	0.083	0.020	0.013	0.15	1.93	0.14	2.78	1.0	5
14	14	Combination	0.06	0.00	0.06	0.00	5.0	8.00	2.00	2.00	1.00	0.010	2.00	0.083	0.020	0.013	0.09	1.16	0.08	1.38	1.0	11
15	15	Combination	4.18	0.00	4.18	0.00	5.0	8.00	2.00	2.00	1.00	0.010	2.00	0.083	0.020	0.013	0.33	10.45	0.30	10.78	1.0	14
16	16	Combination	0.23	0.00	0.23	0.00	5.0	8.00	2.00	2.00	1.00	0.010	2.00	0.083	0.020	0.013	0.13	1.54	0.12	1.93	1.0	11
17	17	Combination	5.20	0.00	5.20	0.00	5.0	8.00	2.00	2.00	1.00	0.010	2.00	0.083	0.020	0.013	0.35	11.55	0.32	11.83	1.0	16

Notes: Return Period = 2 yrs. All curb inlets are Horiz throat.

Project File: Valley Ave Storm Sewer.stm

Storm Sewer Tabulation

Stormwater Studio v 1.0.1.12

Project Name: Valley Avenue Storm Sewer

07-05-2015

Line ID	Length	Drng Area		Rational	C x Area		Tc		Intensity	Total Q	Capacity	Velocity	Pipe		Invert Elev		HGL Elev		Surface Elev		Line No
		Incr	Total		Incr	Total	Inlet	Syst					Size	Slope	Dn	Up	Dn	Up	Dn	Up	
	(ft)	(ac)	(ac)	(C)			(min)	(min)	(in/hr)	(cfs)	(cfs)	(ft/s)	(in)	(%)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	
EX1-2	348	0.00	26.24	0.00	0.00	12.79	0.0	30.00	2.84	36.11	94.29	9.70	30	2.00	725.90	732.90	726.41	734.82	733.71	739.06	1
4-2	19.40	0.45	0.45	0.50	0.23	0.23	10.0	10.00	5.09	1.15	9.83	1.58	15	2.32	734.65	735.50	735.73	735.67	739.00	739.06	2
3-2	18.60	0.10	0.10	0.70	0.07	0.07	5.0	5.00	6.46	0.45	4.71	2.32	15	0.53	736.30	735.40	736.57	736.67	739.00	738.60	3
5-2	127	0.00	25.69	0.00	0.00	12.41	0.0	30.00	2.90	35.97	44.57	8.53	30	1.18	733.90	735.40	735.93	737.40	739.00	739.45	4
10-5	17.20	0.13	0.13	0.70	0.09	0.09	5.0	5.00	6.46	0.59	4.02	0.48	15	0.58	736.70	735.80	736.53	738.53	739.45	739.94	5
6-5	37.0	0.23	10.10	0.50	0.10	8.56	5.0	30.10	2.90	24.82	22.78	7.06	15x30in	1.98	735.80	733.30	737.84	738.41	739.45	739.80	6
7-6	22.90	0.23	6.10	0.50	0.12	4.05	5.0	30.10	2.90	11.75	9.81	5.65	18	0.87	736.40	735.60	738.59	739.28	739.60	739.80	7
8-6	89.6	6.83	6.83	0.45	4.41	4.41	30.0	30.00	2.90	12.79	9.06	7.24	18	0.74	736.40	737.00	738.92	740.11	739.60	740.30	8
9-7	59.2	7.87	7.87	0.50	3.94	3.94	30.0	30.00	2.90	11.41	9.37	6.46	18	0.68	736.60	737.00	739.69	740.29	739.60	740.00	9
11-5	91.7	6.03	7.46	0.00	0.00	3.75	0.0	21.65	3.47	13.02	22.41	4.15	24	0.98	735.50	735.40	736.37	736.68	739.45	740.35	10
12-11	28.3	0.94	0.94	0.50	0.47	0.47	10.0	10.00	5.09	2.39	6.07	1.95	15	0.38	737.15	737.40	738.55	739.02	740.35	740.80	11
13-11	275	0.03	6.52	0.00	0.00	3.28	0.0	20.42	3.85	12.60	19.78	5.05	24	0.76	737.15	739.25	738.87	740.46	740.35	740.20	12
18-13	10.00	0.12	0.12	0.70	0.08	0.08	5.0	5.00	6.46	0.54	4.81	2.44	15	0.56	743.00	743.10	743.33	743.48	746.20	745.65	13
14-13	33.0	0.04	0.40	0.50	0.02	3.20	5.0	20.34	3.85	11.73	12.93	7.17	18	1.32	743.40	743.90	744.73	745.28	746.20	746.00	14
15-14	41.2	2.23	6.39	0.50	1.13	3.18	10.0	20.23	3.85	11.62	11.57	9.58	18	1.21	743.90	744.40	745.63	746.19	746.60	747.40	15
16-15	25.8	0.13	4.10	0.50	0.05	2.05	0.0	20.13	3.85	7.49	9.24	4.24	18	0.78	744.40	744.00	746.77	746.99	747.40	747.50	16
17-16	32.2	4.00	4.00	0.50	2.00	2.00	20.0	20.00	3.85	7.31	8.28	4.14	18	0.62	744.60	744.80	747.07	747.23	747.50	748.00	17

Notes: IDF File = FredCo VA.idf. Return Period = 10 yrs. r = rectangular e = elliptical

Project File: Valley Ave Storm Sewer.stm

SURVEY:	P-L
DRAWN BY:	P-L
SCALE:	2'
SHOWN:	JOB NO.: 1308005
DATE:	7/1/15
SHEET:	1/1

COMMONWEALTH OF VIRGINIA
JOHN W. LEWIS
LICENSED
PROFESSIONAL ENGINEER
7-15-15

CONSULTING ENGINEERS

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PROJECT:
VALLEY AVENUE–PHASE II
STORM SEWER SYSTEM EXTENSION
CITY OF WINCHESTER, VIRGINIA

TITLE:
SUPPLEMENTAL DATA
DRAINAGE AREA MAP
HYDRAULIC ANALYSIS DATA

REVISIONS

NO.	DATE	DESCRIPTION	BY