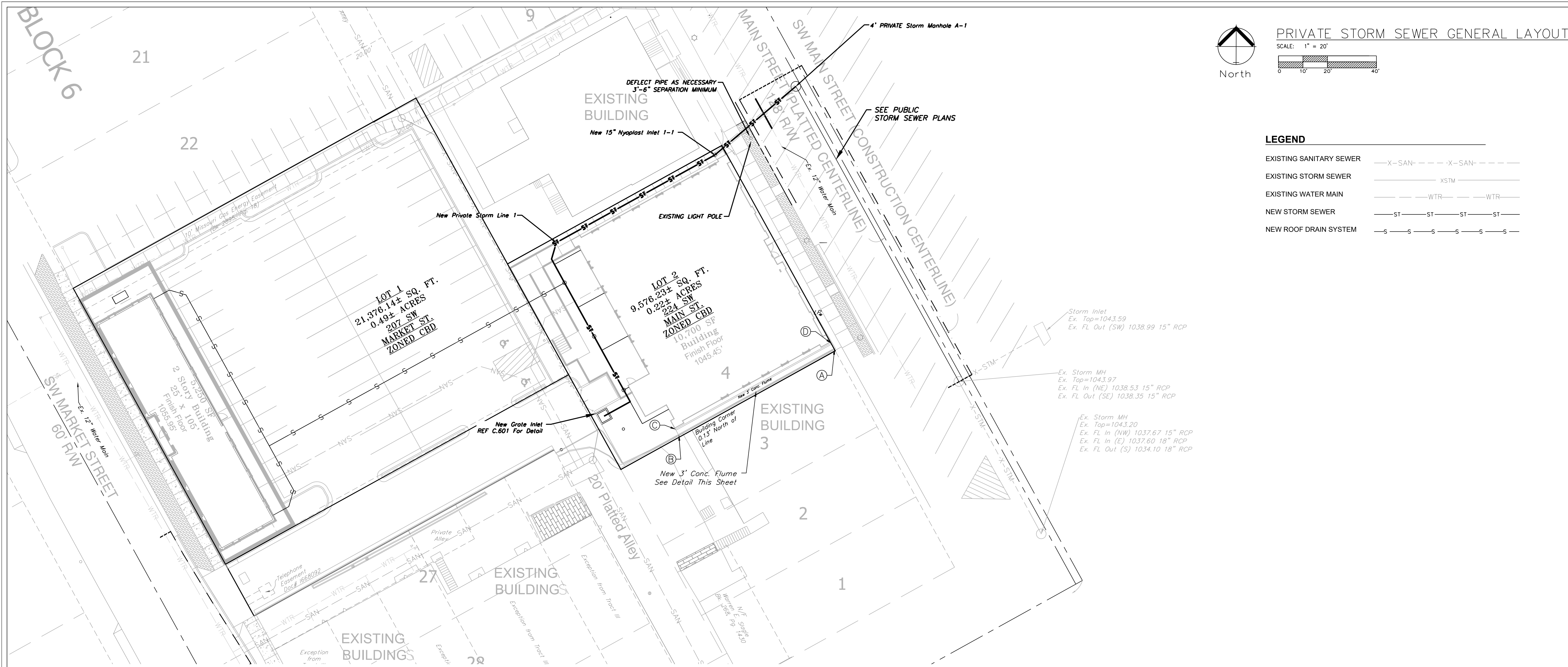
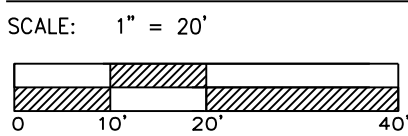


PRIVATE STORM SEWER GENERAL LAYOUT



LEGEND

EXISTING SANITARY SEWER	X-SAN- - - - X-SAN- - - -
EXISTING STORM SEWER	XSTM
EXISTING WATER MAIN	WTR- - - - WTR- - - -
NEW STORM SEWER	ST- - - - ST- - - - ST- - - - ST- - - -
NEW ROOF DRAIN SYSTEM	S- - - - S- - - - S- - - - S- - - -

APWA STORM DRAINAGE "TC" COMPUTATIONS FOR : REECE NICHOLS																			
AREA ID		TOTAL ACRES		WTRSHD LENGTH		UP ELEV		DN ELEV		SURFACE CODE		"C" VALUE		OVLND LENGTH		UP ELEV		DN ELEV	
2		0.55		244.0		1055.0		1048.0		B		0.87		100.0		1055.0		1050.7	
2		0.55		244.0		1055.0		1048.0		B		0.87		100.0		1055.0		1050.7	

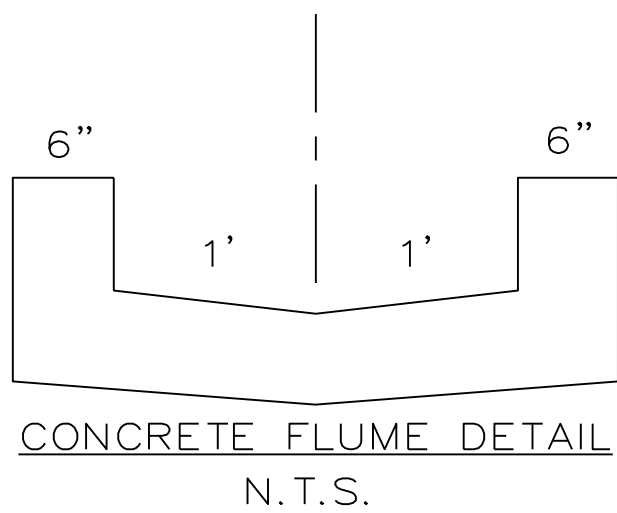
TC FOR ALL OTHER AREAS EQUAL 5 MINUTES.

10-YR PIPE																			
D.S. Str.	U.S. Str.	LineLength	Incr.Area	TotalArea	RunoffCoeff.	IncrC x A	TotalC x A	InletTime	TimeConc	RnfallInt	TotalRunoff	TotalFlow	CapacFull	Veloc	PipeSize	PipeSlope	Inv ElevDn	Inv ElevUp	HGLDn
A-1	1-1	42.45	0.04	0.83	0.87	0.03	0.72	5	6.4	6.9	4.97	4.96	4.6	15	0.59	1039.85	1040.1	1040.88	1041.13
1-1	1-2	91.98	0.14	0.79	0.87	0.12	0.69	5	6.1	7	4.79	4.79	6.19	5.15	15	0.54	1040.35	1040.85	1041.24
1-2	1-3	25	0.1	0.65	0.87	0.09	0.57	5	6	7	3.95	3.95	6.5	5.15	15	0.6	1041.1	1041.25	1041.8
1-3	1-4	25	0	0.55	0	0	0.48	0	6	7	3.35	3.35	6.5	4.89	15	0.6	1041.5	1041.65	1042.14
1-4	1-5	17.63	0.55	0.55	0.87	0.48	0.48	5.9	5.9	7	3.36	3.36	6.32	4.84	15	0.57	1041.9	1042	1042.55

100-YR PIPE																			
D.S. Str.	U.S. Str.	LineLength	Incr.Area	TotalArea	RunoffCoeff.	IncrC x A	TotalC x A	InletTime	TimeConc	RnfallInt	TotalRunoff	TotalFlow	CapacFull	Veloc	PipeSize	PipeSlope	Inv ElevDn	Inv ElevUp	HGLDn
A-1	1-1	42.45	0.04	0.83	0.87	0.03	0.72	5	6.4	10.4	7.52	7.52	4.96	6.13	15	0.59	1039.85	1040.1	1041.1
1-1	1-2	91.98	0.14	0.79	0.87	0.12	0.69	5	6.2	10.5	7.23	7.23	6.19	5.89	15	0.54	1040.35	1040.85	1041.76
1-2	1-3	25	0.1	0.65	0.87	0.09	0.57	5	6.1	10.6	5.97	5.97	6.5	4.86	15	0.6	1041.1	1041.25	1043.52
1-3	1-4	25	0	0.55	0	0	0.48	0	6	10.6	5.07	5.07	6.5	4.13	15	0.6	1041.5	1041.65	1043.83
1-4	1-5	17.63	0.55	0.55	0.87	0.48	0.48	5.9	5.9	10.6	5.08	5.08	6.32	4.14	15	0.57	1041.9	1042	1044.32

100 YEAR AND 10 YEAR OVERFLOW FLUME SECTIONS												
Section	Drainage Area	100 Yr. Runoff (c.f.s.)	10 Yr. Runoff (c.f.s.)	Bed Slope (%)	Base Width (ft)	Side Slope (1:V)	Normal Depth (ft)	Sectional Area	Velocity 100Yr. (f.p.s.)	Velocity 10Yr. (f.p.s.)	Hydraulic Radius (ft)	Shear Stress (p.s.f.)
1	0.58	6.29	3.58	3.59	2	0	0.36	0.72	8.34	7.16	0.26	0.58

NOTE: Flume contains uniform cross section and constant longitudinal (Bed) slope.



CONCRETE FLUME DETAIL
N.T.S.
Q100 = 6.29 CFS
ASSUMING INLET 5-1
100% PLUGGED
100 YR WSE = 1048.36
AT POINT B
SLOPE = 3.59%

Finish Grade Elevations of Channel	
Pt.	Elevation
A	1045.79
B	1048.50
C	1048.50
D	1045.79

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Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821

Construction Plans for:
Reece Nichols
Lee's Summit, Jackson County, Missouri

Project AND
NICHOLS, LSNM
Issue Date:
January 29, 2019

Private Storm Sewer General Layout
Construction Plans for:
Reece Nichols
Lee's Summit, Jackson County, Missouri

Matthew J. Schlicht
MO PE 2006019708
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OK PE 25226

REVISIONS

Revised 6/28/19
Revised 7/2/19

C. 300