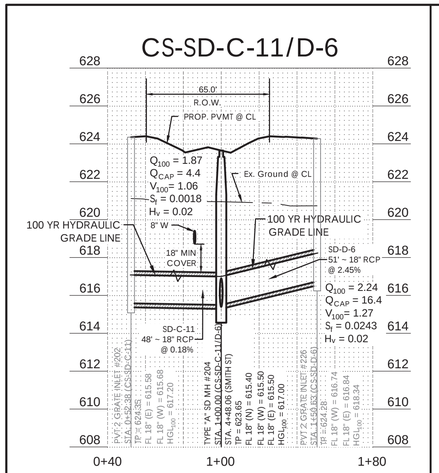
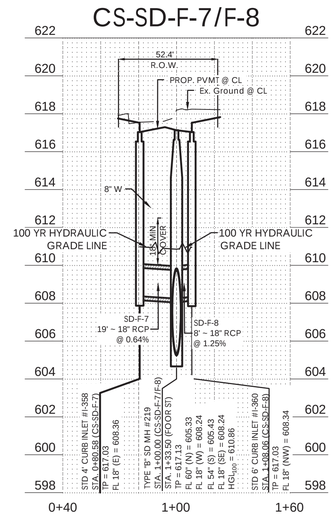
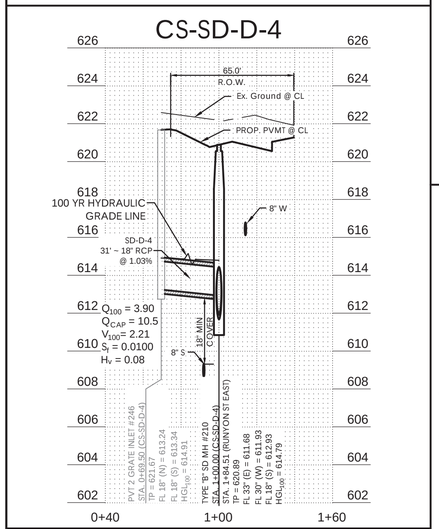
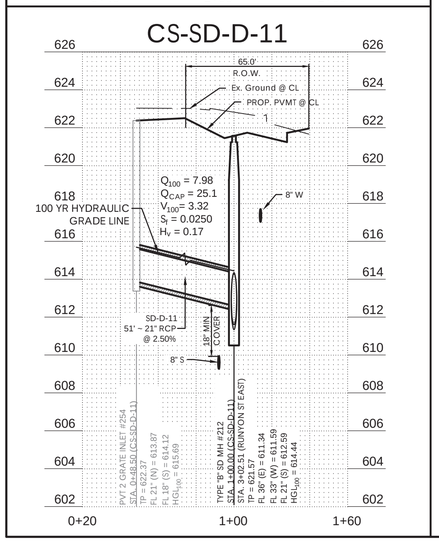
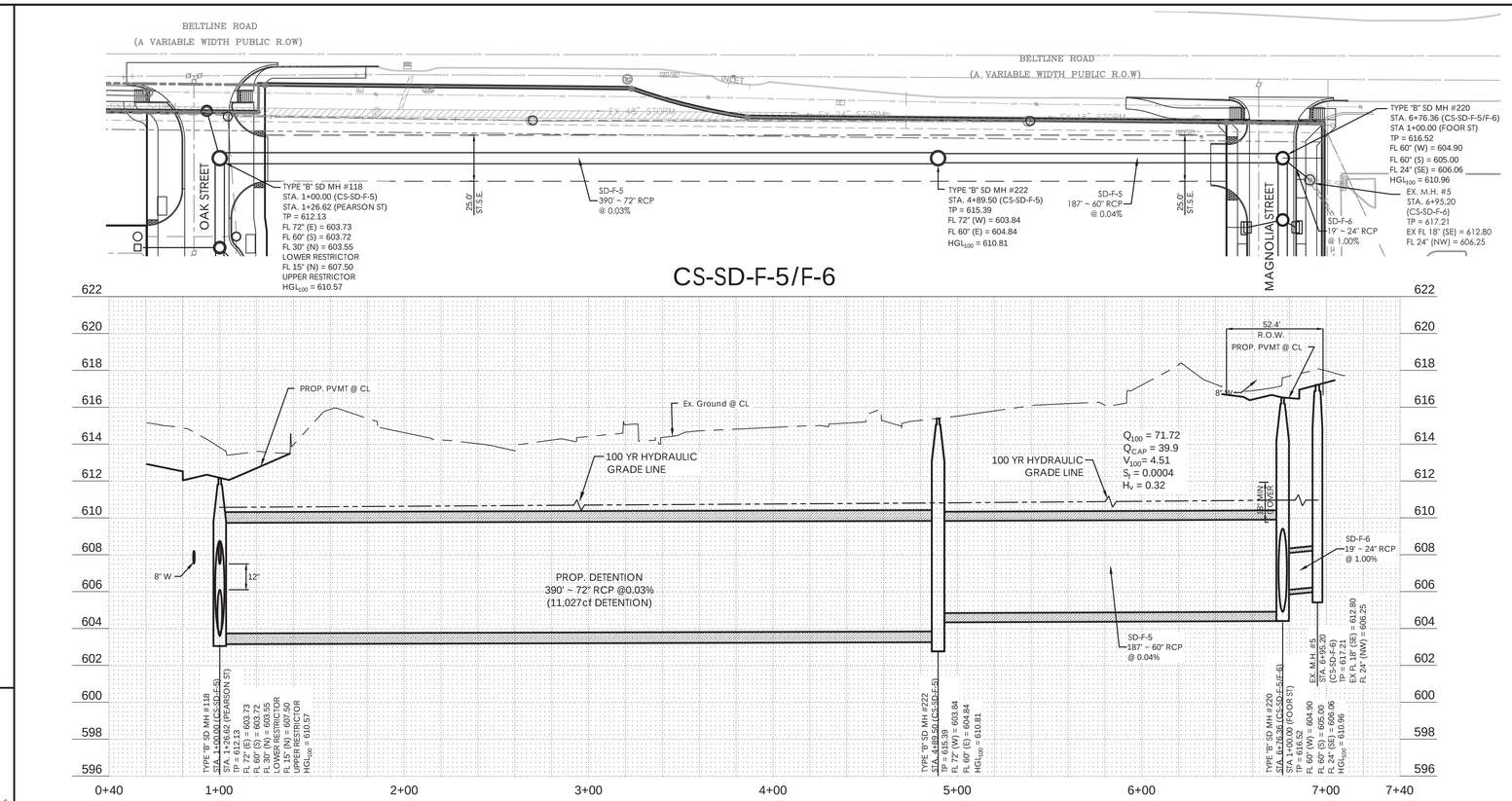


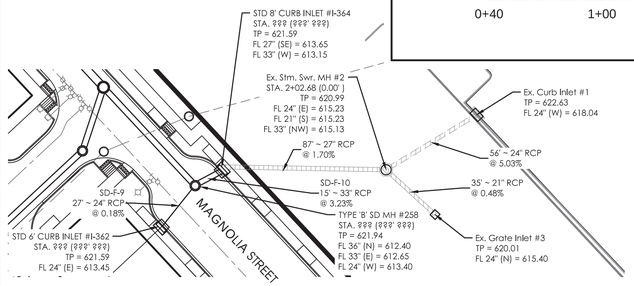


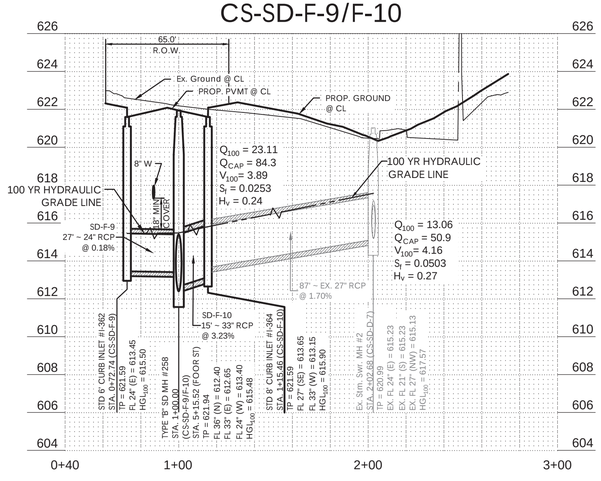






PROPOSED DETENTION





Restrictor Calcs - 100 YR		
Total Area	21.260	AC
$Q_{release}$	**105.5**	**cfs**
Maximum Ponding (WSE)	611.70	FT
Flowline Restrictor	603.51	FT
h_{100} = 611.70 FT - 603.55 FT	8.19	FT
Restrictor Size		
D = Q^0.5 / (2.25 * h_{100}^0.25)	2.699	FT
	32.382	IN
	Use 30" Pipe	
Pipe Size	30.0	IN
Area	4.91	FT^2
Flow through restrictor when the pipes are full.		
h_{100} = 8.15 -1.25'	6.94	FT
Q=0.8*A*(2*32.2*h)^0.5	83.02	CFS
Q Remainder	22.48	CFS
Flow through Secondary Restrictor		
WSE	611.70	
FL of Secondary Restrictor	607.50	
Head	3.867	FT
High Level Restrictor Size		
D = Q^0.5 / (2.25 * h^0.25)	1.503	FT
	18.033	IN
	Use 18" Pipe	

STATE OF TEXAS
CARMEN D. PEARSON
95885
LICENSED PROFESSIONAL ENGINEER
2017/12/19

SAWYER ENGINEERING, LLC
TBPE FIRM NUMBER F-9171

NO.	REVISION	BY	DATE

TOWN OF ADDISON
DALLAS COUNTY, TEXAS

IMPROVEMENT PLANS
ADDISON GROVE

STORM DRAIN LATERAL PROFILES

SAWYER ENGINEERING, LLC
TBPE: F-9171
1520 OLIVER STREET
HOUSTON, TEXAS 77007
(832) 553-5948

PROJECT	DESIGN	DRAWN	DATE	FILE	SHEET
	CDP	JDS	MAY 2017		28