

STORM SEWER PROFILE
SCALE: 1"=20' HORIZ.
1"= 5' VERT.

Description = Cracker Barrel - O'Fallon, MO
System Number = 1
Return Period (yr) = 25
Rainfall duration (min) = 20
Runoff Factor Multiplier = 1.00
Starting HGL Elev. (ft) = 534.10
Use St. Louis Co./MSD Losses? = Y

STRUCTURES- UPR/LWR	FLOWLINES- UPR/LWR	DIAM/ INCH	LENGTH/ FEET	n	AREA/ PI	Qadd	Qtotal/ Qfull	Cons/ Reqds	Yn/ Yc	PARTIAL	FULL	LOSSES	COND	HGL	UPPER STR TOP/FREED	
GI 1-8	537.00	12	108.00	0.013	0.25	1.14	1.14	0.52	0.47	1.68	1.45	0.22	0.21	ND	537.68	540.90
GI 1-7	536.44	1	4.60	N	4.60	2.57	0.10	0.10	0.45	0.80	0.03	0.00	0.00	OC	537.24	3.22
GI 1-7	536.24	15	110.16	0.013	0.10	0.44	1.57	0.53	0.50	1.28	1.28	0.06	0.00	OC	537.24	542.10
GI 1-6	535.66	47	N	N	4.38	4.70	0.06	0.06	0.50	1.52	1.03	0.00	0.00	FP	537.18	4.86
GI 1-6	535.46	15	147.51	0.013	0.41	1.78	3.35	0.56	0.76	2.73	2.73	0.39	0.14	FP	537.18	541.50
CI 1-5	534.63	72	N	N	4.35	4.35	4.86	0.27	0.74	2.01	0.12	0.00	0.01	FP	536.64	4.32
CI 1-5	534.43	15	112.00	0.013	0.52	1.63	4.99	0.52	1.25	4.07	1.07	0.66	0.24	FP	536.64	543.00
CI 1-4	533.85	56	N	N	3.12	3.12	4.66	0.59	0.91	1.84	0.26	0.00	0.05	FP	535.69	6.36
CI 1-4	533.65	15	112.00	0.013	0.21	0.98	5.96	0.46	1.25	4.86	4.86	0.74	0.20	FP	535.69	543.70
CI 1-3	533.25	59	N	N	4.62	4.62	4.39	0.85	0.99	1.39	0.37	0.00	0.11	FP	534.64	8.01
CI 1-3	533.05	15	28.83	0.013	0.06	0.31	6.27	0.69	1.25	5.11	5.11	0.27	0.08	FP	534.64	544.25
CI 1-2	532.85	0	N	N	4.75	5.40	0.94	1.01	1.25	2.01	0.41	0.00	0.19	FP	534.10	9.61

LEGEND

UPR - At upper end of pipe	Yn - Normal depth (ft)	COND - Flow condition code at each end of pipe:
LWR - At lower end of pipe	Yc - Critical depth (ft)	FP - full pipe flow
DIAM - Pipe diameter (in)	PARTIAL - Conditions at lower end of pipe	OC - open channel flow
ANGL - Downstream deflection (deg)	FULL - Conditions assuming full pipe flow	ND - set to normal depth
LENGTH - Pipe length (ft)	V - Velocity (fps)	CD - set to critical depth
CURVES - Curves in pipe	Y - Depth (ft)	OP - initially set to open channel depth
n - Manning's roughness factor	Vhead - Velocity head (ft)	then set to full pipe flow
AREA - Upper drainage area (ac)	LOSSES - Major and minor head losses	OJ - open channel flow but hydraulic
PI - Runoff factor (cfs/ac)	F - Friction in pipe (ft)	jump will occur downstream
Qadd - Added flow rate (cfs)	HGL - Hydraulic grade line elevation (ft)	
Qtotal - Total flow rate (cfs)	C - Curve in pipe (ft)	TOP - Elevation of top of upper structure (ft)
Qfull - Pipe full capacity (cfs)	V - Velocities in upper structure (ft)	FREEDB - Difference btwn upper HGL and TOP (ft)
Cons - Construction slope of pipe (%)	T - Turns in upper structure (ft)	
Reqds - Minimum required slope (%)		

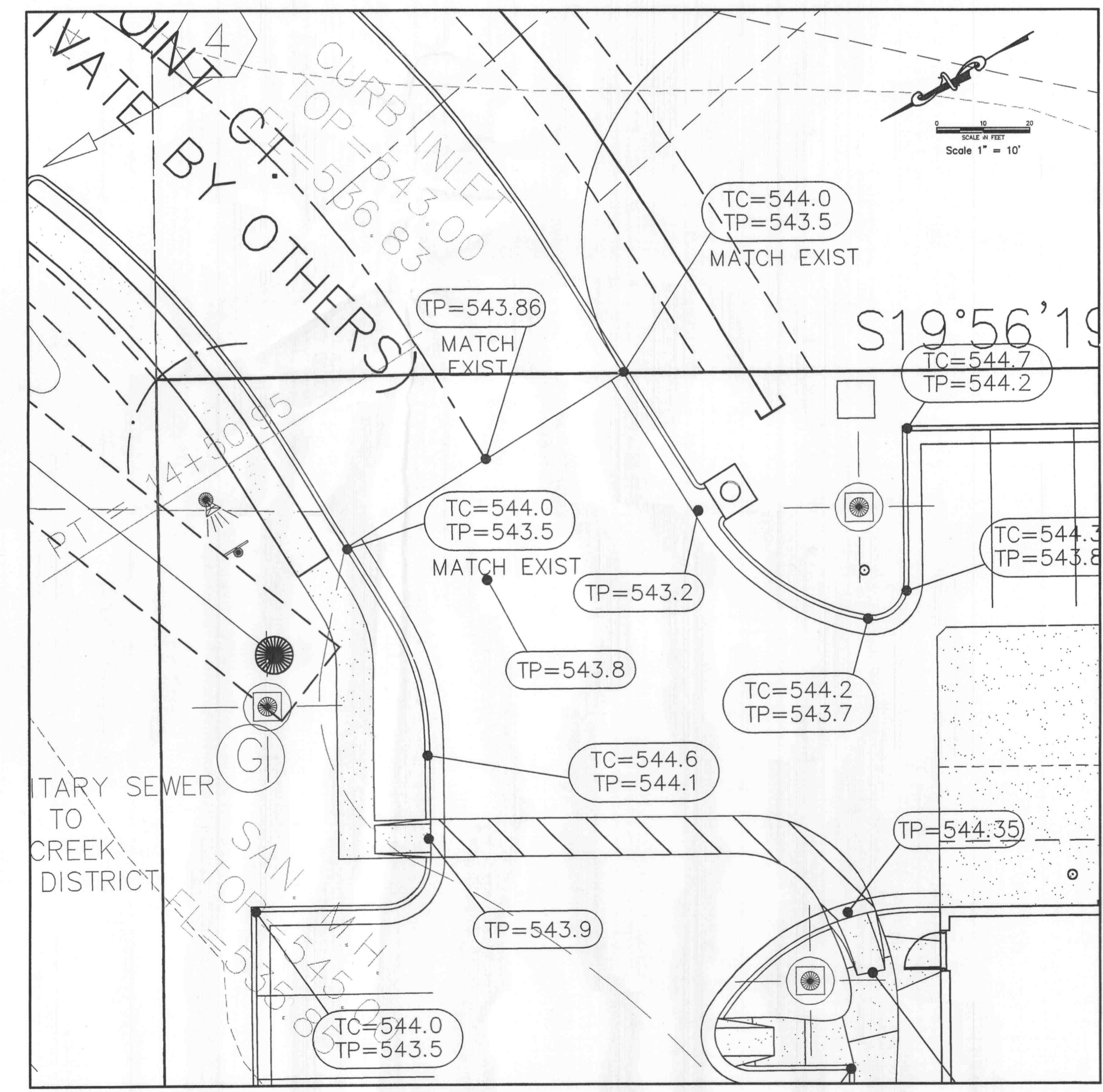
Notes:
1. Friction losses computed with Manning's formula if full pipe flow or back-calculated if open channel flow (simulating flow profile)
2. HGL at upper structure includes structure losses calculated with actual inflowing velocities using iterative procedure
3. Velocity and turn structure loss components only computed for incoming pipes with invert elevations below outlet crown elevation

Description = Cracker Barrel
System Number = 2
Return Period (yr) = 15
Rainfall duration (min) = 20
Runoff Factor Multiplier = 1.00
Starting HGL Elev. (ft) = 538.00
Use St. Louis Co./MSD Losses? = Y

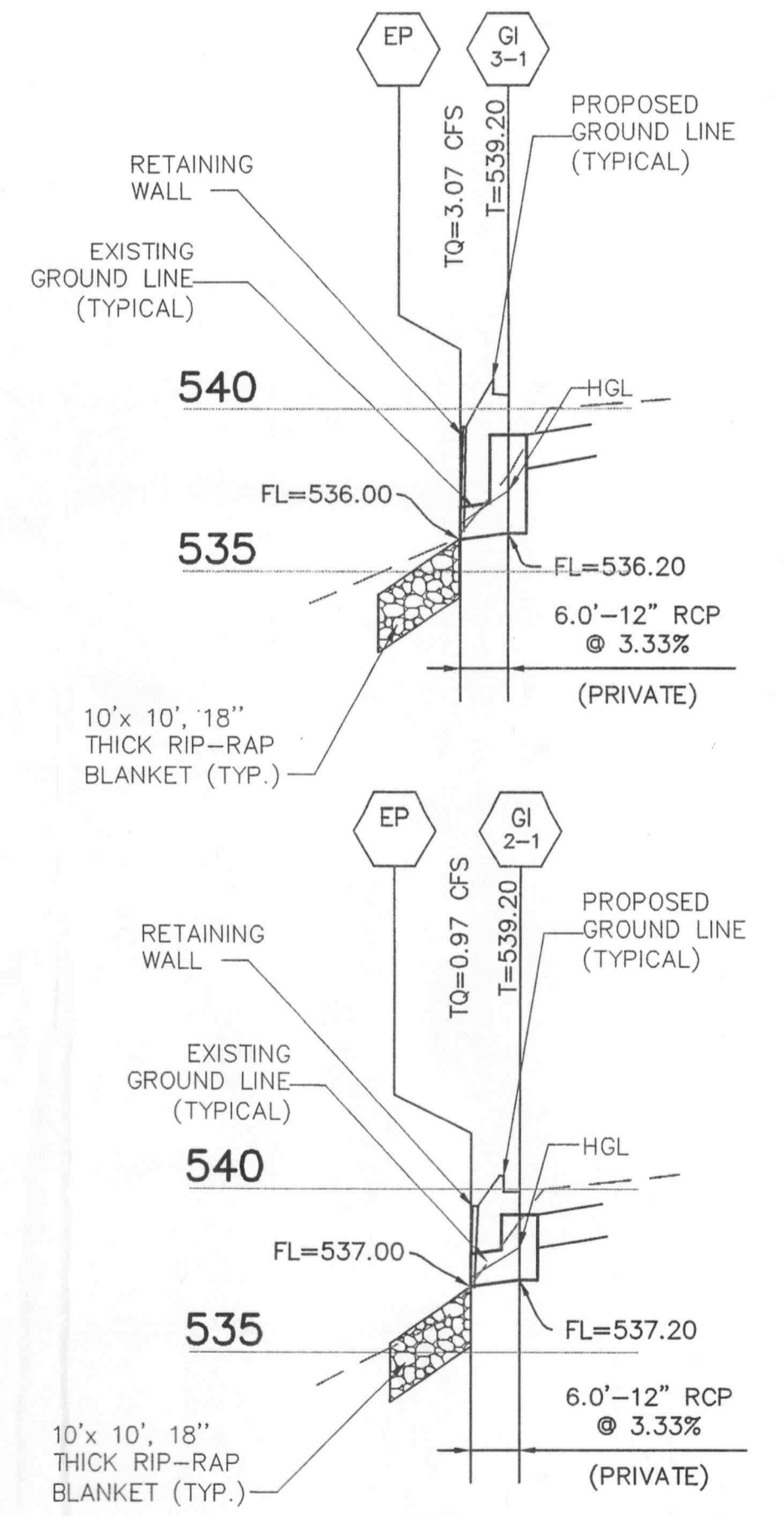
STRUCTURES- UPR/LWR	FLOWLINES- UPR/LWR	DIAM/ INCH	LENGTH/ FEET	n	AREA/ PI	Qadd	Qtotal/ Qfull	Cons/ Reqds	Yn/ Yc	PARTIAL	FULL	LOSSES	COND	HGL	UPPER STR TOP/FREED	
GI 2-2	537.20	12	6.00	0.013	0.21	0.97	0.97	3.33	0.26	1.24	1.24	0.00	0.04	OC	538.05	539.20
EP 2-1	537.00	0	N	N	4.60	6.52	0.07	0.41	1.00	0.02	0.00	0.00	OJ	538.00	1.15	

Description = Cracker Barrel
System Number = 3
Return Period (yr) = 15
Rainfall duration (min) = 20
Runoff Factor Multiplier = 1.00
Starting HGL Elev. (ft) = 537.00
Use St. Louis Co./MSD Losses? = Y

STRUCTURES- UPR/LWR	FLOWLINES- UPR/LWR	DIAM/ INCH	LENGTH/ FEET	n	AREA/ PI	Qadd	Qtotal/ Qfull	Cons/ Reqds	Yn/ Yc	PARTIAL	FULL	LOSSES	COND	HGL	UPPER STR TOP/FREED	
GI 3-2	536.20	12	6.00	0.013	0.68	3.07	3.07	3.33	0.48	3.90	3.90	0.20	0.32	OF	537.52	539.20
EP 3-1	536.00	0	N	N	4.53	6.52	0.74	0.75	1.00	0.24	0.00	0.00	OJ	536.00	1.68	



ROADWAY ENTRANCE
SCALE: 1"=10'



STORM SEWER PROFILE
SCALE: 1"=20' HORIZ.
1"= 5' VERT.



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Prepared for:
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PLANNING & ZONING FILE #99104.06

REV #	DATE	DESCRIPTION
1		ISSUED FOR PERMITS
2		REVISED FOR CITY COMMENTS
3		REVISED FOR CITY COMMENTS

CRACKER BARREL OLD COUNTRY STORE, INC.
307 Hartmann Drive
Lebanon, Tennessee 37087
(615) 444-5533 Fax (615) 443-9576



STORE NAME & LOCATION
PROPOSED LOT 1 OF PROGRESS POINT VILLAGE
SEWER PROFILES
MO. STATE HWY. K. & WELDON SPRING ROAD
CITY OF O'FALLON
ST. CHARLES COUNTY, MO. 63304

DRAWN BY: HLT
CHECKED BY: DJB
DATE: 7/7/03
SHEET: