



MCCOY IN BRAZORIA
DRAINAGE HYDRAULIC CALCULATIONS FOR THE 5-YEAR STORM EVENT
BAKER & LAWSON, INC. JOB NO. 9113

D.A. NO.	STORM SEWER RUN	AREA AC	C	T.C. MIN	I-5 YR MIN	TOTAL AC	COMPOS. C	TRAVEL TIME MIN	ACCUM. T.C. MIN	ACCUM. I-5 YR	INLET Q CFS	INLET OPNG SF	ST SEW LEAD IN. DIA	SLOPE LEAD %	CAPAC. LEAD CFS	OUTFALL Q CFS	ST SEW OUTFALL IN DIA	SLOPE OUTFALL %	CAPAC. OUTFALL CFS
I-1	I-1 TO I-2	0.837	0.95	15.0	6.64		0.95				5.3	1.32	2-15"	0.20	6.82				
I-2	I-2 TO I-3	0.953	0.95	15.0	6.64	1.790	0.95	0.6	15.6	6.52	6.0	1.50				11.08	2-18"	0.20	11.10
I-3	I-3 TO I-4	0.218	0.95	15.0	6.64	2.008	0.95	0.7	16.3	6.38	1.4	0.34				12.16	2-18"	0.25	12.10
I-4	I-4 TO I-5	0.321	0.95	15.0	6.64	2.329	0.95	0.4	16.7	6.30	2.0	0.51				13.93	2-18"	0.30	14.70
I-5	I-5 TO I-6	0.562	0.95	15.0	6.64	2.891	0.95	0.4	17.1	6.22	3.5	0.89				17.09	2-24"	0.40	34.90
I-6	I-6 TO I-8	0.436	0.95	15.0	6.64	3.327	0.95	0.4	17.5	6.15	2.8	0.69				19.43	2-24"	0.55	39.90
I-7	I-7 TO I-8	0.275	0.75	15.0	6.64						1.4	0.34	18"	0.20	5.55				
I-8	I-8 TO I-10	0.367	0.75	15.0	6.64	3.969	0.92	0.1	15.1	6.62	1.8	0.46				24.12	2-36"	0.10	49.86
I-9	I-9 TO I-10	0.220	0.75	15.0	6.64						1.1	0.27	24"	0.20	14.35				
I-10	I-10 TO O.F.	0.262	0.75	15.0	6.64	4.451	0.90	2.2	17.2	6.20	1.3	0.33				24.84	2-36"	0.10	49.86
I-11	I-11 TO I-12	0.186	0.75	15.0	6.64						0.9	0.23	18"	0.20	5.55				
I-12	I-12 TO O.F.	0.186	0.75	15.0	6.64	0.372	0.75	0.2	15.2	6.60	0.9	0.23				1.84	12"	0.20	1.88
I-13	I-13 TO O.F.	0.801	0.95	15.0	6.64						5.1	1.26	18"	0.20	5.55				
I-14	I-14 TO O.F.	1.092	0.95	15.0	6.64						6.9	1.72	18"	0.20	5.55				

Inlet Opening = Q/4

- Notes:
1. Polyethylene storm sewer pipe to be Advanced Drainage Systems (ADS) N-12, AASHTO Type S or Hancor Sure-Lok F477 (only allowed at I-13 and I-14)
 2. Pipe shall be marked in accordance with AASHTO Designations M252 and M294.
 3. Fittings shall be water tight as provided by ADS or Hancor.
 4. All storm sewer pipe shall be backfilled with cement stabilized sand (1.1 sack/c.y.) to 12 inches below finish pavement, grade and hand tamped to compact.
 5. Type "A" Grate Inlets shall be constructed of precast blocks in the field as detailed.
 6. RCP Storm Sewer shall be C-76, Class C
 7. RCP pipe may be used in lieu of P.V.C. at all locations

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|---|---|---|--|--|---|
| PROP. TY. "A" INLET I-1
T.G. ELEV. = 27.20
FL. ELEV. (15")(N) = 25.00 | ① PROP. 100 L.F. 2-15" RCP
ST. SEW. @ 0.20% | PROP. TY. "C" INLET I-7
T.C. ELEV. = 27.53 (4" CURB HT.)
FL. ELEV. (18")(S) = 23.74 | ⑦ PROP. 32 L.F. 18" RCP
ST. SEW. @ 0.20% | PROP. TY. "C" INLET I-11
T.C. ELEV. = 26.83 (4" CURB HT.)
FL. ELEV. (18")(S) = 23.40 | ⑫ PROP. 32 L.F. 18" RCP
ST. SEW. @ 0.20% |
| PROP. TY. "A" INLET I-2
T.G. ELEV. = 27.20
FL. ELEV. (15")(S) = 24.82
FL. ELEV. (18")(N) = 24.82 | ② PROP. 130 L.F. 2-18" RCP
ST. SEW. @ 0.20% | PROP. TY. "C" INLET I-8
T.C. ELEV. = 27.53 (4" CURB HT.)
FL. ELEV. (18")(N) = 23.73
FL. ELEV. (24")(S) = 23.73
FL. ELEV. (36")(E) = 23.73
FL. ELEV. (18")(W) = 25.50 | ⑧ PROP. 390 L.F. 2-36" RCP
ST. SEW. @ 0.10% | PROP. TY. "A" INLET I-12
T.C. ELEV. = 26.83 (4" CURB HT.)
FL. ELEV. (18")(N) = 23.34
FL. ELEV. (12")(W) = 23.34 | ⑬ PROP. 20 L.F. 12" RCP
ST. SEW. @ 0.20% |
| PROP. TY. "A" INLET I-3
T.G. ELEV. = 27.20
FL. ELEV. (18")(S) = 24.56
FL. ELEV. (18")(W) = 24.56 | ③ PROP. 80 L.F. 2-18" RCP
ST. SEW. @ 0.25% | PROP. TY. "C" INLET I-9
T.C. ELEV. = 27.96 (4" CURB HT.)
FL. ELEV. (24")(N) = 23.80 | ⑨ PROP. 32 L.F. 24" RCP
ST. SEW. @ 0.20% | PROP. TY. "A" INLET I-13
T.G. ELEV. = 25.50
FL. ELEV. (18")(W) = 23.1 | ⑭ PROP. 20 L.F. 18" RCP
ST. SEW. @ 0.20% |
| PROP. TY. "A" INLET I-4
T.G. ELEV. = 27.20
FL. ELEV. (18")(E) = 24.40
FL. ELEV. (18")(W) = 24.40 | ④ PROP. 80 L.F. 2-18" RCP
ST. SEW. @ 0.30% | PROP. TY. "C" INLET I-10
T.C. ELEV. = 27.96 (4" CURB HT.)
FL. ELEV. (24")(N) = 23.74
FL. ELEV. (36")(E) = 23.34
FL. ELEV. (36")(W) = 23.34 | ⑩ PROP. 12 L.F. 24" RCP
ST. SEW. @ 0.20% W/CONC.PLUG | PROP. TY. "A" INLET I-14
T.G. ELEV. = 25.50
FL. ELEV. (18")(W) = 23.1 | ⑮ PROP. 20 L.F. 18" RCP
ST. SEW. @ 0.20% |
| PROP. TY. "A" INLET I-5
T.G. ELEV. = 27.20
FL. ELEV. (18")(E) = 24.15
FL. ELEV. (24")(W) = 24.15 | ⑤ PROP. 80 L.F. 2-24" RCP
ST. SEW. @ 0.40% | PROP. ST. SEW. MANHOLE
TOP ELEV. = 28.20
FL. ELEV. (36")(E) = 23.29
FL. ELEV. (36")(S) = 23.29 | ⑪ PROP. 6 L.F. 2-36" RCP
ST. SEW. @ 0.10%
W/ PRECAST CONC. PLUGS | | |
| PROP. TY. "A" INLET I-6
T.G. ELEV. = 27.20
FL. ELEV. (24")(S) = 23.84
FL. ELEV. (24")(N) = 23.84 | ⑥ PROP. 11 L.F. 2-24" RCP
ST. SEW. @ 0.55%
W/ PRECAST CONC. PLUGS | | | | |

DESIGNED	DBR		
DRAWN	BB		
CHECKED			
DATE	FEB 2004		
NO.	DATE	DESCRIPTION	APPROVED
		REVISIONS	

BAKER & LAWSON, INC.
ENGINEERS • PLANNERS • SURVEYORS
300 E. CEDAR ST., ANGLETON, TEXAS 77515

The seal appearing on this document was authorized by Douglas B. Roessler P.E. 56739
Date: 3/18/04

OWNER:
MCCOY BUILDING SUPPLY CENTERS
1200 I.H. 35 NORTH
P.O. BOX 1028
SAN MARCUS, TX. 78667

SCALE:
PLAN: 1" = 50'
PROFILE:
HORIZONTAL:
VERTICAL:

McCOY
BRAZORIA, TEXAS
GRADING, PAVING, DRAINAGE, WATER, & SANITARY SEWER LINES

SHEET OF SHEETS
STORM SEWER LAYOUT
DRAINAGE AREA
MAP
& CALCULATIONS
PROJECT NO. 9113 9113_da2_04.dwg