

REVISIONS

REV	DATE	COMMENT	BY
1	3/18/19	DOMESTIC WATER REVISION	MJH
2	4/19/19	TAS REVIEW COMMENTS	MJH

811
 KNOW WHAT'S BELOW
 ALWAYS CALL 811
 BEFORE YOU DIG
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ASBUILT RECORD DRAWING

PROJECT No.: TD180033
 DRAWN BY: MJH
 CHECKED BY: DOC
 DATE: 02/25/2019
 SCALE: 1"=30'
 CAD I.D.: HPD

CONSTRUCTION DOCUMENTS

FOR

brakes plus

LOCATION OF SITE
 1902 S. GOLIAD ST
 LOTS 1 & 2, BLOCK A, BILLY PEOPLES ADDITION NO. 1
 ROCKWALL, TX 75087
 ROCKWALL COUNTY

BOHLER ENGINEERING
 6017 MAIN STREET
 FRISCO, TX 75034
 Phone: (469) 458-7300
 TX@BohlerEng.com

STATE OF TEXAS
 DEAN O. CARDWELL
 115432
 1/16/20
 PROFESSIONAL ENGINEER

SHEET TITLE:
PROPOSED DRAINAGE AREA MAP

SHEET NUMBER:
C-403

CASE NUMBER: SP2018-030

LEGEND

SWALE	
RIDGE	
DIRECTION OF DRAINAGE	
PROP. AREA BOUNDARY	
EXISTING CONTOUR	
PROPOSED CONTOUR	
PROPERTY LINE	
DRAINAGE AREA NUMBER	
AREA (ACRE)	

DRAINAGE GENERAL NOTES:

- CONTRACTOR TO FIELD VERIFY HORIZONTAL AND VERTICAL LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.
- SEE GRADING SHEET C-401 FOR DETAILED INFORMATION ON STORM DRAIN LINES.
- ALL RESPONSIBILITY FOR ADEQUACY OF DESIGN REMAINS WITH THE DESIGN ENGINEER. THE CITY OF ROCKWALL, IN REVIEWING AND RELEASING PLANS FOR CONSTRUCTION, ASSUMES NO RESPONSIBILITY FOR ADEQUACY OR ACCURACY OF DESIGN.
- CI-F18 AND CI-F19 ARE 15" TY II CURB INLETS. SEE NOTE 5 BELOW FOR THE REFERENCE PLAN SET.
- REFER TO TXDOT PLANS TITLED "SH 205 0451-01-032 AS-BUILT INDEX VOL. I" PREPARED BY PARSONS BRINKERHAFF QUADE & DOUGLAS, INC. DATED 6/9/06.

FLOOD NOTE:

ACCORDING TO FLOOD INSURANCE RATE MAP (FIRM) NO. 48397C0040L, EFFECTIVE SEPTEMBER 26, 2005, ROCKWALL COUNTY, TEXAS, THIS PROPERTY IS WITHIN ZONE X. NO 100-YEAR FLOODPLAIN EXISTS ON THE SITE.

C VALUE CALCULATIONS

DRAINAGE AREA	AREA (AC)	PAVEMENT C=0.90	INDUSTRIAL C=0.85	WEIGHTED COEFFICIENT
B1	0.39	0.26	0.13	0.883
B2.1	0.13	0.13	0.00	0.900
B2.2	0.46	0.00	0.46	0.850
B2.3	0.01	0.00	0.01	0.850
B2.4	0.01	0.00	0.01	0.850
B2.5	0.14	0.00	0.14	0.850
B2.6	0.10	0.06	0.04	0.880
B3	0.32	0.22	0.10	0.884
B4	0.73	0.00	0.73	0.850

*COEFFICIENT VALUES BASED ON TXDOT DESIGN PLANS.

5-YR DRAINAGE AREA TABLE

DRAINAGE AREA	AREA (AC)	RUNOFF COEFFICIENT "C"	C*A	TIME OF CONCENTRATION (MINUTES)	RAINFALL INTENSITY "I _s " (IN/HR)	PROPOSED FLOW Q _s (CFS)	COLLECTION POINT
B1	0.39	0.883	0.341	10	6.93	2.38	CI-F21
B2.1	0.13	0.900	0.117	10	6.93	0.81	CI-F21
B2.2	0.68	0.850	0.578	10	6.93	4.01	CI-F20
B2.3	0.01	0.850	0.009	10	6.93	0.06	CI-F20
B2.4	0.01	0.850	0.009	10	6.93	0.06	CI-F20
B2.5	0.14	0.850	0.119	10	6.93	0.82	CI-F20
B2.6	0.10	0.880	0.088	10	6.93	0.61	CI-F20
B3	0.32	0.884	0.282	10	6.93	1.96	CI-F19
B4	0.95	0.850	0.621	10	6.93	4.30	CI-F18

TOTAL EXISTING Q ₅ YR TO TXDOT SYSTEM	15.13 CFS
TOTAL PROPOSED Q ₅ YR TO TXDOT SYSTEM	15.01 CFS
DELTA Q ₅ YR TO TXDOT SYSTEM	-0.12 CFS

100-YR DRAINAGE AREA TABLE

DRAINAGE AREA	AREA (AC)	RUNOFF COEFFICIENT "C"	C*A	TIME OF CONCENTRATION (MINUTES)	RAINFALL INTENSITY "I ₁₀₀ " (IN/HR)	PROPOSED FLOW Q ₁₀₀ (CFS)	COLLECTION POINT
B1	0.39	0.883	0.341	10	9.80	3.38	CI-F21
B2.1	0.13	0.900	0.117	10	9.80	1.15	CI-F21
B2.2	0.68	0.850	0.578	10	9.80	5.66	CI-F20
B2.3	0.01	0.850	0.009	10	9.80	0.09	CI-F20
B2.4	0.01	0.850	0.009	10	9.80	0.09	CI-F20
B2.5	0.14	0.850	0.119	10	9.80	1.17	CI-F20
B2.6	0.10	0.880	0.088	10	9.80	0.86	CI-F20
B3	0.32	0.884	0.282	10	9.80	2.76	CI-F19
B4	0.95	0.850	0.621	10	9.80	6.09	CI-F18

TOTAL EXISTING Q ₁₀₀ YR TO TXDOT SYSTEM	21.40 CFS
TOTAL PROPOSED Q ₁₀₀ YR TO TXDOT SYSTEM	21.25 CFS
DELTA Q ₁₀₀ YR TO TXDOT SYSTEM	-0.15 CFS

*TXDOT PLANS UTILIZE A RUNOFF COEFFICIENT OF 0.9 FOR PAVEMENT AREAS WITHIN THE TXDOT RIGHT-OF-WAY. ALL PRIVATE DEVELOPMENT IS CALCULATED USING A COEFFICIENT BY USE - AN INDUSTRIAL USE WITH A COEFFICIENT VALUE OF 0.85. BECAUSE THE PAVEMENT VALUES WITHIN THE TXDOT ROW ARE NEGLIGIBLY IMPACTED AND THE COEFFICIENT BY USE REMAINING, THE FLOW VALUES WERE MINIMALLY IMPACTED. A DECREASE IN DISCHARGE WILL BE INCURRED WITH THE RUNOFF CALCULATIONS. HENCE, THE EXISTING STORM SYSTEM WILL HAVE ADEQUATE CAPACITY FOR THE PROPOSED DEVELOPMENT IMPROVEMENTS INCLUDED IN THIS PLANSET.

