



Turner

Construction Managers/General Contractors
 460 West Dussel Drive
 Maumee, Ohio 43537
 p | 419.893.7000 f | 419.893.1741
 www.turnerconstruction.com/lathrop

CONSULTANTS:
WIA WIER & ASSOCIATES, INC.
 ENGINEERS SURVEYORS LAND PLANNERS
 701 HIGHLANDER BLVD., SUITE 300 ARLINGTON, TEXAS 76015 METRO (817)457-7700
 6049 ELM STREET FRESNO, TEXAS 75034 METRO (214)387-8000
 Texas Firm Registration No. T-1776 www.wierassociates.com

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SEAL ID:
 DATE: 5/19/12

PROJECT INFORMATION:
ROCKWALL TECHNOLOGY PARK PHASE III BIMBO BAKERIES USA ROCKWALL, TEXAS

CLIENT INFORMATION:
ALLEN FOODS, INC
 3055 Discovery Blvd.
 Rockwall, Texas
 75032

CLIENT PROJECT NO: 00-00000-00

NO.	DATE	REVISION OR SUBJECT
1	XXXXXX	REVISION NAME

PROJECT NO: **WA # 12002**
 PROJECT MANAGER: RON RAMIREZ, P.E.
 DESIGNED: RON RAMIREZ, P.E.
 CHECKED: RON RAMIREZ, P.E.

DRAWING TITLE:
DRAINAGE CALCULATIONS

DRAWING NO:
C-D201

DATE: 04-27-2012

Area Designation	Acreage	Runoff Coefficient		'CxA'		Time of Conc. (min)	Intensity (in/hr)					EXISTING Q (cfs)					PROPOSED Q (cfs)					REMARKS
		Existing	Developed	Existing	Developed		2yr	5yr	10yr	25yr	100yr	2yr	5yr	10yr	25yr	100yr	2yr	5yr	10yr	25yr	100yr	
A-2	1.73	0.35	0.9	0.61	1.56	10	5.3	6.1	7.1	8.3	9.8	3.2	3.7	4.3	5.0	5.9	8.3	9.5	11.1	12.9	15.3	10' CURB INLET A-2
A-3	21.7	0.35	0.9	7.60	19.53	10	5.3	6.1	7.1	8.3	9.8	40.3	46.3	53.9	63.0	74.4	103.5	119.1	138.7	162.1	191.4	DETENTION POND A
	27.1			9.5	24.4							50.2	57.8	67.3	78.6	92.9	129.1	148.6	173.0	202.2	238.8	
B-1	0.62	0.35	0.9	0.22	0.56	10	5.3	6.1	7.1	8.3	9.8	1.2	1.3	1.5	1.8	2.1	3.0	3.4	4.0	4.6	5.5	10' CURB INLET B-1
B-2	0.37	0.35	0.9	0.13	0.33	10	5.3	6.1	7.1	8.3	9.8	0.7	0.8	0.9	1.1	1.3	1.8	2.0	2.4	2.8	3.3	10' CURB INLET B-2
B-3	0.38	0.35	0.9	0.13	0.34	10	5.3	6.1	7.1	8.3	9.8	0.7	0.8	0.9	1.1	1.3	1.8	2.1	2.4	2.8	3.4	10' CURB INLET B-3
B-4	0.78	0.35	0.9	0.27	0.70	10	5.3	6.1	7.1	8.3	9.8	1.4	1.7	1.9	2.3	2.7	3.7	4.3	5.0	5.8	6.9	10' CURB INLET B-4
B-5	0.73	0.35	0.9	0.26	0.66	10	5.3	6.1	7.1	8.3	9.8	1.4	1.6	1.8	2.1	2.5	3.5	4.0	4.7	5.5	6.4	10' CURB INLET B-5
B-6	0.81	0.35	0.9	0.28	0.73	10	5.3	6.1	7.1	8.3	9.8	1.5	1.7	2.0	2.4	2.8	3.9	4.4	5.2	6.1	7.1	10' CURB INLET B-6
B-7	3.71	0.35	0.9	1.30	3.34	10	5.3	6.1	7.1	8.3	9.8	6.9	7.9	9.2	10.8	12.7	17.7	20.4	23.7	27.7	32.7	DETENTION POND B
	7.4			2.6	6.7							13.7	15.8	18.4	21.5	25.4	35.3	40.6	47.3	55.3	65.3	
O-1	1.2	0.35	0.9	0.42	1.08	10	5.3	6.1	7.1	8.3	9.8	2.2	2.6	3.0	3.5	4.1	5.7	6.6	7.7	9.0	10.6	OFF-SITE TO WEST
O-2	0.6	0.35	0.9	0.21	0.54	10	5.3	6.1	7.1	8.3	9.8	1.1	1.3	1.5	1.7	2.1	2.9	3.3	3.8	4.5	5.3	OFF-SITE TO SPRINGER
O-3	1.7	0.35	0.9	0.60	1.53	10	5.3	6.1	7.1	8.3	9.8	3.2	3.6	4.2	4.9	5.8	8.1	9.3	10.9	12.7	15.0	OFF-SITE TO SPRINGER THEN POND A
O-4	2.6	0.35	0.9	0.91	2.34	10	5.3	6.1	7.1	8.3	9.8	4.8	5.6	6.5	7.6	8.9	12.4	14.3	16.6	19.4	22.9	OFF-SITE TO SPRINGER THEN POND A
O-5	1.4	0.35	0.9	0.49	1.26	10	5.3	6.1	7.1	8.3	9.8	2.6	3.0	3.5	4.1	4.8	6.7	7.7	8.9	10.5	12.3	OFF-SITE TO DISCOVERY THEN WEST
O-6	0.3	0.35	0.9	0.11	0.27	10	5.3	6.1	7.1	8.3	9.8	0.6	0.7	0.9	1.0	1.4	1.6	1.9	2.2	2.6	2.8	OFF-SITE TO DISCOVERY THEN EAST
	7.8			2.7	7.0							14.5	16.7	19.4	22.7	26.8	37.2	42.8	49.8	58.3	68.8	

Area Designation	Acreage	Runoff Coefficient		'CxA'		Time of Conc. (min)	Intensity (in/hr)					EXISTING Q (cfs)					PROPOSED Q (cfs)					REMARKS
		Existing	Developed	Existing	Developed		2yr	5yr	10yr	25yr	100yr	2yr	5yr	10yr	25yr	100yr	2yr	5yr	10yr	25yr	100yr	
A-2	1.73	0.35	0.9	0.61	1.56	20	3.9	4.9	5.9	6.6	8.3	2.4	3.0	3.6	4.0	5.0	6.1	7.6	9.2	10.3	12.9	10' CURB INLET A-2
A-3	21.7	0.35	0.9	7.60	19.53	20	3.9	4.9	5.9	6.6	8.3	29.6	37.2	44.8	50.1	63.0	76.2	95.7	115.2	129.9	162.1	DETENTION POND A
	26.8			9.5	24.4							37.0	46.4	55.9	62.5	78.6	95.0	119.4	143.7	160.8	202.2	
B-1	0.62	0.35	0.9	0.22	0.56	20	3.9	4.9	5.9	6.6	8.3	0.8	1.1	1.3	1.4	1.8	2.2	2.7	3.3	3.7	4.6	10' CURB INLET B-1
B-2	0.37	0.35	0.9	0.13	0.33	20	3.9	4.9	5.9	6.6	8.3	0.5	0.6	0.8	0.9	1.1	1.3	1.6	2.0	2.2	2.8	10' CURB INLET B-2
B-3	0.38	0.35	0.9	0.13	0.34	20	3.9	4.9	5.9	6.6	8.3	0.5	0.7	0.8	0.9	1.1	1.3	1.7	2.0	2.3	2.8	10' CURB INLET B-3
B-4	0.78	0.35	0.9	0.27	0.70	20	3.9	4.9	5.9	6.6	8.3	1.1	1.3	1.6	1.8	2.3	2.7	3.4	4.1	4.6	5.8	10' CURB INLET B-4
B-5	0.73	0.35	0.9	0.26	0.66	20	3.9	4.9	5.9	6.6	8.3	1.0	1.3	1.5	1.7	2.1	2.6	3.2	3.9	4.3	5.5	10' CURB INLET B-5
B-6	0.81	0.35	0.9	0.28	0.73	20	3.9	4.9	5.9	6.6	8.3	1.1	1.4	1.7	1.9	2.4	2.8	3.6	4.3	4.8	6.1	10' CURB INLET B-6
B-7	3.71	0.35	0.9	1.30	3.34	20	3.9	4.9	5.9	6.6	8.3	5.1	6.4	7.7	8.6	10.8	13.0	16.4	19.7	22.0	27.7	DETENTION POND B
	7.4			2.6	6.7							10.1	12.7	15.3	17.1	21.5	26.0	32.6	39.3	44.0	55.3	
O-1	1.2	0.35	0.9	0.42	1.08	20	3.9	4.9	5.9	6.6	8.3	1.6	2.1	2.5	2.8	3.5	4.2	5.3	6.4	7.1	9.0	OFF-SITE TO WEST
O-2	0.6	0.35	0.9	0.21	0.54	20	3.9	4.9	5.9	6.6	8.3	0.8	1.0	1.2	1.4	1.7	2.1	2.6	3.2	3.6	4.5	OFF-SITE TO SPRINGER
O-3	1.7	0.35	0.9	0.60	1.53	20	3.9	4.9	5.9	6.6	8.3	2.3	2.9	3.5	3.9	4.9	6.0	7.5	9.0	10.1	12.7	OFF-SITE TO SPRINGER THEN POND A
O-4	2.6	0.35	0.9	0.91	2.34	20	3.9	4.9	5.9	6.6	8.3	3.5	4.5	5.4	6.0	7.6	9.1	11.5	13.8	15.4	19.4	OFF-SITE TO SPRINGER THEN POND A
O-5	1.4	0.35	0.9	0.49	1.26	20	3.9	4.9	5.9	6.6	8.3	1.9	2.4	2.9	3.2	4.1	4.9	6.2	7.4	8.3	10.5	OFF-SITE TO DISCOVERY THEN WEST
O-6	0.3	0.35	0.9	0.11	0.27	20	3.9	4.9	5.9	6.6	8.3	0.4	0.5	0.6	0.7	0.9	1.1	1.3	1.6	1.8	2.2	OFF-SITE TO DISCOVERY THEN EAST
	7.8			2.7	7.0							10.6	13.4	16.1	18.0	22.7	27.4	34.4	41.4	46.3	58.3	

STREET STA	INLET NO.	CONTRIBUTING DRAINAGE AREAS	DESIGN STORM FREQUENCY (yr)	TIME OF CONC (min)	RAINFALL INTENSITY (in/hr)	DRAINAGE AREA (Ac)	C' FACTOR	CxA	CA INTERCEPTED	GUTTER FLOW (cfs)	GUTTER SLOPE (%)	STREET SECTION	CROWN	DEPTH OF FLOW AT INLET (ft)	WIDTH OF FLOW IN STREET @ GUTTER (ft)	INLET LENGTH (ft)	FLOW COLLECTED (cfs)	FLOW BYPASSED (cfs)	REMARKS
N/A	A1	A1	100	10	9.8	3.64	0.9	3.28	32.1	-	N/A	N/A	0.54	-	15	32.1	0.0		
N/A	A2	A2	100	10	9.8	1.73	0.9	1.56	15.3	-	N/A	N/A	0.41	-	10	15.3	0.0		
N/A	B1	B1	100	10	9.8	0.62	0.9	0.56	5.5	-	N/A	N/A	0.28	-	15	5.5	0.0		
N/A	B2	B2	100	10	9.8	0.37	0.9	0.33	3.3	-	N/A	N/A	0.23	-	15	3.3	0.0		
N/A	B3	B3	100	10	9.8	0.38	0.9	0.34	3.3	-	N/A	N/A	0.23	-	16	3.3	0.0		
N/A	B4	B4	100	10	9.8	0.78	0.9	0.7	6.9	-	N/A	N/A	0.30	-	10	6.9	0.0		
N/A	B5	B5	100	10	9.8	0.73	0.9	0.66	6.4	-	N/A	N/A	0.30	-	10	6.4	0.0		
N/A	B6	B6	100	10	9.8	0.81	0.9	0.73	7.1	-	N/A	N/A	0.31	-	15	7.1	0.0		

FROM	TO	LENGTH (FT)	CxA	INLET TIME (min)	TOTAL INTERCEPTED CxA	TIME AT UPSTREAM OF REACH (min)	DESIGN STORM FREQUENCY (yr)	RAINFALL INTENSITY (in/hr)	INTERCEPTED FLOW (cfs)	STORM DRAIN DIAMETER (in)	VELOCITY (ft/s)	SLOPE OF FRICTION GRADIENT (ft/ft)	STRUCTURE LOSS COEFFICIENT	STRUCTURE LOSS AT UPSTREAM OF REACH	FLOW TIME IN DRAIN (min)	TIME AT DOWNSTREAM OF REACH (min)	H.G. AT UPSTREAM OF REACH (ft)	REMARKS
INLET A1-A	9+03.83	76.36	1.64	10	1.6	10.0	100.00	9.80	16.1	24	5.1	0.0051	1.25	0.5	0.2	10.20	609.06	
9+03.83	8+97.52	6.31																