



EXHIBIT A ESTIMATED WASTEWATER GENERATION

DEVELOPMENT NAME: DEL MAR SOUTH CAMPUS BLOCK 1, LOT 3
DESIGN DATE: May 2, 2024

ENGINEERING FIRM: MUNOZ ENGINEERING, LLC (TBPELS F-12240)
1608 S. BROWNLEE BLVD., CORPUS CHRISTI, TEXAS 78404

DESIGN ENGINEER: RAMIRO MUNOZ III, PE (TX PE #100346)

WASTEWATER GENERATION

A. DEVELOPMENT ACREAGE (TOTAL): 5.00 ACRE(S)

B. WASTEWATER GENERATION FROM LAND USE

DESCRIPTION	UNIT	UNIT QTY	PERSONS PER UNIT	RATE PER PERSON (GPD)	TOTAL FLOW (GPD)
RESIDENTIAL - SINGLE-FAMILY	EACH	0	3.5	75	0
RESIDENTIAL - TOWNHOUSE	EACH	0	3.5	75	0
RESIDENTIAL - APARTMENT - 1 BEDROOM	EACH	0	2.0	50	0
RESIDENTIAL - APARTMENT - 2+ BEDROOM	EACH	0	3.5	50	0
RESIDENTIAL - MANUFACTURED HOME	EACH	0	3.5	75	0
RESIDENTIAL - RECREATIONAL VEHICLE	EACH	0	2.5	16	0
COMMERCIAL - HOTEL	ROOM	0	2.5	60	0
COMMERCIAL - STORAGE CENTER OFFICE	EACH	0	0.0	4	0

DESCRIPTION	UNIT	UNIT QTY	PERSONS PER 1,000-SFT	RATE PER PERSON (GPD)	TOTAL FLOW (GPD)
COMMERCIAL - OFFICE	SQFT FLOOR SPACE	7,618	76	8	610
COMMERCIAL - RETAIL	SQFT FLOOR SPACE	0	0	15	0
COMMERCIAL - RESTURANT	SQFT FLOOR SPACE	0	0	28	0
COMMERCIAL - WAREHOUSE	SQFT FLOOR SPACE	0	0	4	0

ESTIMATED WASTEWATER GENERATION FLOW IN GALLONS PER DAY (GPD) (B) = 610

C. PEAK WASTEWATER FLOW

ESTIMATED POPULATION = 76
 PEAKING FACTOR EQUATION * = $(18 + VP) / (4 + VP)$
 CALCULATED PEAKING FACTOR = 4.30
 NOTE: THE PEAKING FACTOR SHALL BE 2 MINIMUM AND 4 MAXIMUM
 PEAKING FACTOR TO BE USED = 4.00

PEAK WASTEWATER FLOW (PWWF) EQUATION = (B) x PEAKING FACTOR
 PWWF = 610 x 4.00 = 2,440
ESTIMATED PEAK WASTEWATER FLOW (PWWF) IN GALLONS PER DAY (GPD) (C) = 2,440

D. INFILTRATION AND INFLOW (I/I) INTO WASTEWATER UTILITY

BASIN ACREAGE 5.00 ACRES
 AVERAGE I/I PER ACRE 200 GPD
 INFILTRATION AND INFLOW (I/I) EQUATION = ACRES x I/I GPD
 I/I = 5.00 x 200 = 1,000
ESTIMATED TOTAL WASTEWATER INFILTRATION & INFLOW FLOW IN GALLONS PER DAY (GPD) (D) = 1,000

E. ESTIMATED TOTAL PEAK WASTEWATER FLOWS

ESTIMATED PEAK WASTEWATER FLOW (PWWF) IN GALLONS PER DAY (GPD) (C) = 2,440
 ESTIMATED TOTAL WASTEWATER INFILTRATION & INFLOW FLOW IN GALLONS PER DAY (GPD) (D) = 1,000
ESTIMATED TOTAL PEAK WASTEWATER FLOW IN GALLONS PER DAY (GPD) = 3,440
 ESTIMATED TOTAL PEAK WASTEWATER FLOW IN GALLONS PER MINUTE (GPM) = 2

F. REQUIRED MINIMUM WASTEWATER PIPE SIZE FROM DEVELOPMENT

GALLONS PER MINUTE (GPM) = 2 | MINIMUM PIPE SIZE = 6-INCH

EXHIBIT B ESTIMATED WATER DEMAND

DEVELOPMENT NAME: DEL MAR SOUTH CAMPUS BLOCK 1, LOT 3
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DESIGN ENGINEER: RAMIRO MUNOZ III, PE (TX PE #100346)

WATER DEMAND

A. DEVELOPMENT ACREAGE (TOTAL): 5.00 ACRE(S)

B. WATER DEMAND FROM LAND USE

DESCRIPTION	UNIT	UNIT QTY	PERSONS PER UNIT	RATE PER PERSON (GPD)	TOTAL FLOW (GPD)
RESIDENTIAL - SINGLE-FAMILY	EACH	0	3.5	110	0
RESIDENTIAL - TOWNHOUSE	EACH	0	3.5	110	0
RESIDENTIAL - APARTMENT - 1 BEDROOM	EACH	0	2.0	75	0
RESIDENTIAL - APARTMENT - 2+ BEDROOM	EACH	0	3.5	75	0
RESIDENTIAL - MANUFACTURED HOME	EACH	0	3.5	110	0
RESIDENTIAL - RECREATIONAL VEHICLE	EACH	0	2.5	24	0
COMMERCIAL - HOTEL	ROOM	0	2.5	65	0
COMMERCIAL - STORAGE CENTER OFFICE	EACH	0	0.0	6	0

DESCRIPTION	UNIT	UNIT QTY	PERSONS PER 1,000-SFT	RATE PER PERSON (GPD)	TOTAL FLOW (GPD)
COMMERCIAL - OFFICE	SQFT FLOOR SPACE	7,618.00	76	10	762
COMMERCIAL - RETAIL	SQFT FLOOR SPACE	-	0	16	0
COMMERCIAL - RESTURANT	SQFT FLOOR SPACE	-	0	32	0
COMMERCIAL - WAREHOUSE	SQFT FLOOR SPACE	-	0	6	0

ESTIMATED WATER DEMAND FLOW IN GALLONS PER DAY (GPD) = 762
ESTIMATED WATER DEMAND FLOW IN GALLONS PER MINUTE (GPM) = 1

PLAT - FULL SIZE - 16" x 24" - 2023 (M:\Projects\DelMar - Ramiro\DelMar - Ramiro\DelMar\DWG\SS\SUBSTATION SWUMP AND UTILITY.dwg)
 MUNOZ ENGINEERING, LLC © 2023

ENGINEER: RAMIRO MUNOZ III, PE
 SURVEYOR: JAMES D. CARR, RPLS
 OWNER: DEL MAR COLLEGE DISTRICT
 ENGINEER: SURVEYOR: OWNER: PE
 DRAWN BY: CHKD BY: APPD BY: REV #
 JMC JDC JCC JCC
 SURVEY DATE: DRAWING DATE: 03/27/2024 12/23/2024

BRANCH: 701 N. US HWY 281 SUITE 14 #203 MARBLE FALLS, TEXAS 78641 830-321-4569
 HEADQUARTERS: 6537 S. STAPLES STREET SUITE 125 #557 361-248-1850
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MUNOZ ENGINEERING
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 CORPUS CHRISTI, TX 78404
 OFFICE: 361.946.4848
 TBPELS FIRM F-12240

CIVIL | STRUCTURAL | MARINE | LAND DEVELOPMENT

UTILITY PLAN FOR THE FINAL PLAT OF
**DEL MAR SOUTH CAMPUS
 BLOCK 1, LOT 3**
 6702 YORKTOWN BOULEVARD, CORPUS CHRISTI, NUECES COUNTY, TEXAS

PAGE
 UTILITY