



ALL EXCAVATION FOR DITCHES TO BE EITHER HAULED OFFSITE. IF CONTRACTOR PLANS TO SPREAD ON SITE, EXISTING DRAINAGE AREAS NEED TO REMAIN.

SEE SHEET C-0 FOR ADDITIONAL TOPOGRAPHIC INFORMATION

CONTRACTOR SHALL COORDINATE WITH OWNER, GEOTECHNICAL ENGINEER, AND STRUCTURAL FOR SELECT FILL REQUIREMENTS AND PROCEDURES UNDER BUILDING SLABS. REFER TO SOILS REPORT FOR ALL DESIGN CRITERIA. CONTRACTOR SHALL NOT PROCEED WITH CONSTRUCTION UNTIL THE REQUIRED SELECT FILL PROCEDURE UNDER BUILDING SLABS HAS BEEN APPROVED.

ALL DRAINAGE EASEMENTS TO BE KEPT CLEAR OF FENCES, BUILDINGS, VEGETATION AND OTHER OBSTRUCTIONS TO THE OPERATION OF MAINTENANCE OF THE DRAINAGE FACILITY.

NOTIFY FORT BEND COUNTY ENGINEERING OF PRE-CONSTRUCTION MEETING AND ALL PAVING ACTIVITIES AT CONSTRUCTION@FORTBENDCOUNTYTX.GOV

OWNERS TO OBTAIN ALL PERMITS REQUIRED BY FORT BEND COUNTY, TEXAS AND TXDOT PRIOR TO STARTING CONSTRUCTION OF UTILITY AND/OR CULVERTS WITHIN FORT BEND COUNTY ROAD AND TXDOT RIGHTS OF WAY.

MAINTENANCE OF THE DETENTION FACILITIES/STRUCTURES LOCATED WITHIN DRAINAGE RESERVES AND EASEMENTS DEDICATED HEREON SHALL BE THE RESPONSIBILITY OF THE OWNERS OF RESERVE "A" AND "B" AND/OR THE HOME OWNERS ASSOCIATION. FORT BEND COUNTY RESERVES THE RIGHT TO MAINTAIN THESE FACILITIES, IF NECESSARY.

THE SUBJECT PROPERTY DOES NOT APPEAR TO BE LOCATED IN A SPECIAL FLOOD HAZARD ARE AS PER FEMA F.I.R.M. MAP NUMBER 48157C0400 L (MAP REVISION DATE: APRIL 2, 2014).

- LEGEND**
- 70.5 EXISTING ELEV.
 - 71.20 TOP OF PAVEMENT
 - 69.80 FINISHED GRADE
 - 69.80 TOP OF GRATE
 - 69.80 FLOW LINE
 - 69.80 TOP OF BANK
 - DRAINAGE FLOW
 - ⊕ TYPE 'A' INLET
 - ⊕ JUNCTION BOX
 - ⊕ DRAINAGE AREA NUMBER

Mannings Open Ditch Analysis

Trapezoidal Channel		Point A
m Width-b=	1	Q = (1.49/n x R ^{4.75} x S ^{1.49}) x A
Depth y =	5.25	
Slope ratio z =	3:1	V = 2.21 fps
Total Width =	32.5	Q = 194.40 cfs
AREA =	87.9375	Q ₁₀₀ = 15.6 cfs
WP =	34.20391543	
HR=A/WP =	2.570977588	
n =	0.04	
S =	0.001	

Trapezoidal Channel		Point B
m Width-b=	8	Q = (1.49/n x R ^{4.75} x S ^{1.49}) x A
Depth y =	1.5	
Slope ratio z =	4:1	V = 1.20 fps
Total Width =	20	Q = 25.24 cfs
AREA =	21	Q ₁₀₀ = 22.7 cfs
WP =	20.36931688	
HR=A/WP =	1.030962409	
n =	0.04	
S =	0.001	

Trapezoidal Channel		Point D
m Width-b=	8	Q = (1.49/n x R ^{4.75} x S ^{1.49}) x A
Depth y =	2	
Slope ratio z =	3:1	V = 1.44 fps
Total Width =	20	Q = 40.41 cfs
AREA =	28	Q ₁₀₀ = 40.8 cfs
WP =	20.64911064	
HR=A/WP =	1.355990604	
n =	0.04	
S =	0.001	

Weir Analysis

Cipoletti (Trapezoidal) - Point C	
Side Slopes =	4:1 (required)
b (ft) =	20
High Point (ft) =	86
Low Point (ft) =	85
H (ft) =	1
Q ₁₀₀ (cfs) =	40.79
Q _{Pump} (cfs) =	0.81
Q _{Res} (cfs) =	39.98
Q _{weir} (cfs) =	67.34

Traffic Generation

Maximum Building Occupancy	100	People
Trips per day/Person	5	Trips/Person/Day
Total estimated Trips	500	Trips/Day

THESE SIGNATURES ARE VOID IF CONSTRUCTION HAS NOT COMMENCED IN ONE (1) YEAR FROM DATE OF APPROVAL.

APPROVED: Chad Carter
DEVELOPMENT STAFF

DATE: 1-28-2020

C-1 GRADING & DRAINAGE
Scale 1" = 40' JOB: 1466-1

SEE SHT C-0 FOR TOPOGRAPHIC SURVEY
SEE SHT C-1 FOR GRADING & DRAINAGE
SEE SHT C-2 FOR UNDERGROUND UTILITIES
SEE SHT C-3 FOR GENERAL NOTES & DETAILS
SEE SHT C-4 FOR PAVEMENT DESIGN
SEE SHT C-5 FOR SWPPP
SEE SHT C-6 FOR SWPPP DETAILS
SEE SHT C-7 FOR STORMWATER PUMP STATION DETAILS

36 BUSINESS PARK
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DRAWN BY: CAN
DATE: 09-20-19
JOB NO: 1466-1
REVISION DATE: N/A