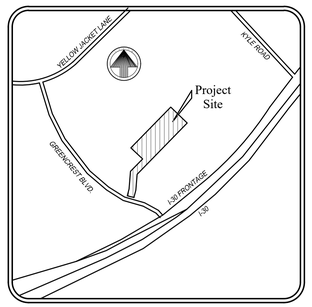
Development Plans

TOWNEPLACE
SUITES
MARRIOTT

908 E. Interstate 30, Rockwall, TX 75087
City of Rockwall ~ Rockwall County, Texas



LOCATION MAP

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Construction Note
All construction to be by City of Rockwall Standards and NCTCOG 4th Edition Standards.

Owner:
Greencrest TPS Hotel, L.P.
3021 Ridge Road, A-120
Rockwall, TX 75032

Engineer:
F.C. Cuny Corp.
#2 Horizon Court
Suite 500
Heath, Texas 75032
469.402.7700
Texas Registered Engineering Firm F-7449

12/23/2021

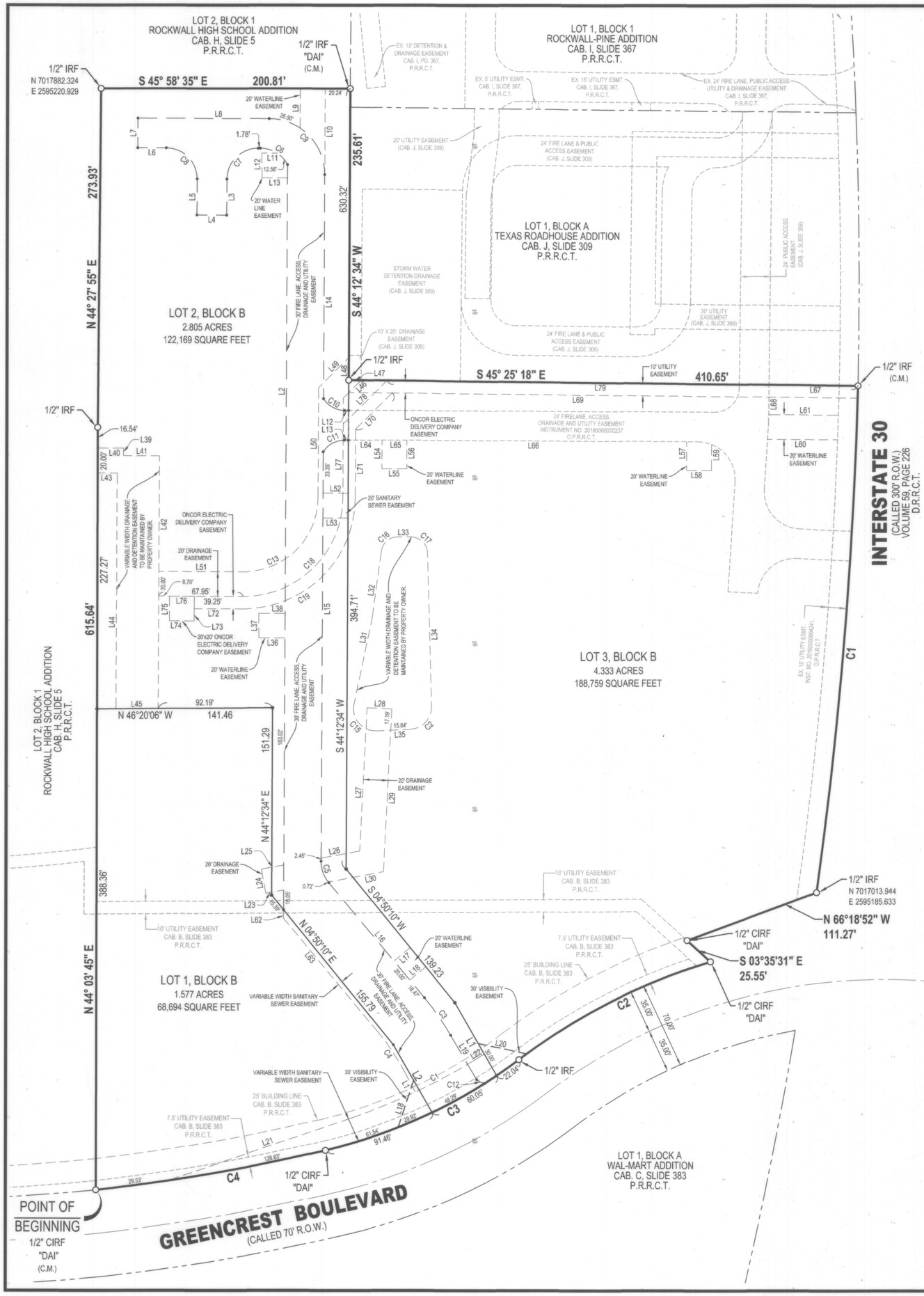
STATE OF TEXAS
CAMERON A. SLOWN
106317
LICENSED PROFESSIONAL ENGINEER

RECORD DRAWINGS

December 2021

TOWNEPLACE - SUITES - MARRIOTT

20190000019144 1/2 PLAT 10/28/2019 08:41:42 AM



BOUNDARY CURVE TABLE					
CURVE #	RADIUS	DELTA	ARC LENGTH	CHORD BEARING	CHORD LENGTH
C1	3669.86'	6°24'58"	410.95'	S 48°33'37" W	410.74'
C2	485.00'	20°36'28"	174.44'	N 73°10'49" W	173.50'
C3	415.00'	23°57'39"	173.55'	N 71°09'06" W	172.29'
C4	1493.00'	7°12'39"	187.90'	N 55°47'35" W	187.77'

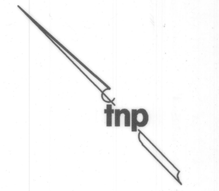
LOT LINE TABLE		
LINE #	BEARING	LENGTH
L1	S14°11'02"W	67.86'
L2	N14°11'02"E	63.09'

EASEMENT LINE TABLE		
LINE #	BEARING	LENGTH
L1	N16°15'08"E	18.13'
L2	S44°12'34"W	602.01'
L3	N44°12'34"E	29.10'
L4	S45°47'26"E	24.00'
L5	S44°12'34"W	29.10'
L6	S45°47'26"E	23.00'
L7	S44°12'34"W	24.00'
L8	N45°47'26"W	105.78'
L9	N44°12'20"E	32.01'
L10	N44°12'20"E	69.49'
L11	S45°47'26"E	12.34'
L12	N45°47'26"W	3.23'
L12	N43°21'50"E	20.00'
L13	S45°47'26"E	3.23'
L13	N45°47'26"W	20.48'
L14	N44°12'34"E	181.04'
L15	N44°12'34"E	330.57'
L16	N04°14'54"E	120.92'
L17	N85°45'06"W	16.97'
L18	N62°07'53"E	40.06'
L18	N85°45'06"W	16.76'
L19	N13°35'46"E	41.58'
L20	N33°49'29"W	40.04'
L21	N64°53'31"W	156.13'
L22	N77°40'28"W	9.60'
L23	N56°28'57"W	14.65'
L24	N33°31'03"E	20.00'
L25	S56°28'57"E	18.43'
L26	S56°28'57"E	31.67'
L27	N46°50'36"E	115.80'

EASEMENT LINE TABLE		
LINE #	BEARING	LENGTH
L28	S43°09'24"E	20.00'
L29	S46°50'36"W	131.61'
L30	N56°28'57"W	45.31'
L31	N55°46'44"E	70.63'
L32	N51°48'40"E	55.14'
L33	S45°47'26"E	11.26'
L34	S42°22'47"W	124.20'
L35	N48°51'59"W	26.98'
L36	S45°47'26"E	21.02'
L37	S43°21'50"W	20.00'
L38	N45°47'26"W	21.32'
L39	N44°12'34"E	6.00'
L40	N45°47'26"W	20.81'
L41	N45°47'26"W	29.00'
L42	N44°12'34"E	204.26'
L43	S45°47'26"E	15.76'
L44	S44°12'34"W	190.58'
L45	S46°20'06"E	34.00'
L46	S89°13'48"W	20.12'
L47	S45°26'03"E	10.00'
L48	S44°12'34"W	18.23'
L49	N89°12'34"E	34.27'
L50	N44°12'34"E	89.09'
L51	S45°47'26"E	67.95'
L52	S45°47'26"E	20.23'
L53	S45°47'26"E	20.23'
L54	S44°12'34"W	23.13'
L55	S45°47'26"E	20.00'
L56	N44°12'34"E	23.13'
L57	S44°12'34"W	23.13'

EASEMENT LINE TABLE		
LINE #	BEARING	LENGTH
L58	S45°47'26"E	20.00'
L59	N44°12'34"E	21.08'
L60	N45°47'26"W	56.53'
L61	N45°47'26"W	56.20'
L62	N44°12'34"E	6.81'
L63	N04°14'54"E	118.65'
L64	S45°47'26"E	27.15'
L65	S45°47'26"E	20.00'
L66	S45°47'26"E	225.76'
L67	N45°25'18"W	71.61'
L68	S44°39'11"W	24.26'
L69	N45°25'18"W	375.33'
L70	S89°12'34"W	41.50'
L71	S44°12'34"W	55.53'
L72	N45°47'26"W	39.25'
L73	S44°12'34"W	10.00'
L74	N45°47'26"W	20.00'
L75	N44°12'34"E	20.00'
L76	S45°47'26"E	20.00'
L77	S44°12'34"W	80.81'
L78	N89°12'34"E	49.82'
L79	S45°25'18"E	379.65'

EASEMENT CURVE TABLE					
CURVE #	RADIUS	DELTA	ARC LENGTH	CHORD BEARING	CHORD LENGTH
C1	490.00'	12°46'57"	109.32'	N 71°17'00" W	109.09'
C2	18.00'	88°45'14"	27.88'	S 86°45'24" W	25.18'
C3	226.50'	9°20'53"	36.95'	N 08°55'20" E	36.91'
C4	190.00'	12°00'14"	39.81'	N 10°15'01" E	39.73'
C5	27.00'	39°57'40"	18.83'	N 24°13'44" E	18.45'
C6	25.00'	61°38'33"	26.90'	S 14°58'10" E	25.62'
C7	25.00'	90°00'00"	39.27'	N 89°12'34" E	35.36'
C8	25.00'	90°00'00"	39.27'	S 00°47'26" E	35.36'
C9	45.00'	90°00'00"	70.69'	N 00°47'26" W	63.64'
C10	20.00'	58°12'42"	20.32'	N 16°41'05" W	19.46'
C11	20.00'	58°12'42"	20.32'	S 74°53'47" E	19.46'
C12	30.00'	13°22'38"	7.00'	N 18°56'04" W	6.99'
C13	60.00'	90°00'00"	94.25'	N 89°12'34" E	84.85'
C15	18.00'	104°38'44"	32.88'	N 03°27'22" E	28.49'
C16	13.00'	82°23'54"	18.70'	S 86°59'23" E	17.13'
C17	13.00'	88°10'13"	20.01'	S 01°42'20" E	18.09'
C18	80.00'	90°00'00"	125.66'	S 89°12'34" W	113.14'
C19	90.00'	90°00'00"	141.37'	S 89°12'34" W	127.28'



LEGEND

(C.M.) - CONTROLLING MONUMENT
IRF - IRON ROD FOUND
CIRF - CAPPED IRON ROD FOUND
INST. - INSTRUMENT
CAB. - CABINET
VOL. - VOLUME
NO. - NUMBER
PG. - PAGE
D.R.R.C.T. - DEED RECORDS ROCKWALL COUNTY, TEXAS
P.R.R.C.T. - PLAT RECORDS ROCKWALL COUNTY TEXAS
O.P.R.R.C.T. - OFFICIAL PUBLIC RECORDS ROCKWALL COUNTY TEXAS

GENERAL NOTES:

(1) BEARINGS ARE REFERENCED TO GRID NORTH OF THE TEXAS COORDINATE SYSTEM OF 1983 (NORTH CENTRAL ZONE 4202; NAD83(2011) EPOCH 2010) AS DERIVED LOCALLY FROM WESTERN DATA SYSTEMS CONTINUOUSLY OPERATING REFERENCE STATIONS (CORS) VIA REAL TIME KINEMATIC (RTK) SURVEY METHODS. ALL DISTANCES SHOWN ARE SURFACE DISTANCES USING A COMBINED SCALE FACTOR OF 1.000146135.

(2) BY GRAPHIC SCALE ONLY AND PER THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP FOR ROCKWALL COUNTY, TEXAS AND INCORPORATED AREAS, MAP NO. 48397C0040L, EFFECTIVE DATE: SEPTEMBER 26, 2008, THE SUBJECT PROPERTY IS SHOWN TO BE LOCATED IN ZONE "X". THE LOCATION OF THE SAID FLOOD ZONES IS BASED ON SAID MAP AND IS APPROXIMATE AND IS NOT LOCATED ON THE GROUND. THIS STATEMENT SHALL NOT CREATE LIABILITY ON THE PART OF THE SURVEYOR. RELEVANT ZONES ARE DEFINED AS FOLLOWS

(3) THE SURVEYOR, AS REQUIRED BY STATE LAW, IS RESPONSIBLE FOR SURVEYING INFORMATION ONLY AND BEARS NO RESPONSIBILITY FOR THE ACCURACY OF THE ENGINEERING DATA ON THIS PLAT.

(4) THE SURVEYOR HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS, ENCUMBRANCES, OR ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE.

(5) ALL CORNERS ARE A 5/8" IRON ROD WITH CAP STAMPED "TNP" UNLESS OTHERWISE SHOWN.

(6) COORDINATES SHOWN ARE GRID VALUES REFERENCED TO THE CITY OF ROCKWALL GPS MONUMENT NETWORK.

(7) IT SHALL BE THE POLICY OF THE CITY OF ROCKWALL TO WITHHOLD ISSUING BUILDING PERMITS UNTIL ALL STREETS, WATER, SEWER, AND STORM DRAINAGE SYSTEMS HAVE BEEN ACCEPTED BY THE CITY. THE APPROVAL OF THE PLAT BY THE CITY DOES NOT CONSTITUTE ANY REPRESENTATION, ASSURANCE OR GUARANTEE THAT ANY BUILDING WITHIN SUCH PLAT SHALL BE APPROVED, AUTHORIZE OR PERMIT THEREFORE ISSUED NOR SHALL SUCH APPROVAL CONSTITUTE ANY REPRESENTATION, ASSURANCE OR GUARANTEE BY THE CITY OF THE ADEQUACY AND AVAILABILITY FOR WATER FOR PERSONAL USE AND FIRE PROTECTION WITHIN SUCH PLAT, AS REQUIRED UNDER ORDINANCE 83-54.

FINAL PLAT
TOWN PLACE MARRIOTT ADDITION
LOT 1, LOT 2, AND LOT 3, BLOCK B
3 LOTS

8.715 ACRES OR 379,622 SQUARE FEET

SITUATED IN THE JD MCFARLAND SURVEY, ABSTRACT NO. 145
CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS

OWNER
GREENCREST TPS HOTEL, LP.
10000 North Central Expressway
Suite 400
Dallas, TX 75231

OWNER
ROCKWALL RENTAL PROPERTIES L.P.
P.O. Box. B
Terrell, TX. 75160

CASE NO. P2019-021

PROJECT INFORMATION
Project No.: FCU 18061
Date: October 2, 2019
Drawn By: GS9
Scale: 1"=60'
SHEET 1 of 2

SURVEYOR
TEAGUE NALL AND PERKINS, INC.
825 Watters Creek Boulevard, Suite M300
Allen, Texas 75013
214.461.9867 ph 214.461.9864 fx
T.B.P.L.S. Registration No. 10194381
www.tnpinc.com

Drawing: 2019 10 02 FCU 18061 Townplace Marriot Final Plat at 2019/10/02 4:30 PM by gshaner

OWNERS CERTIFICATE

STATE OF TEXAS}
COUNTY OF ROCKWALL}

WHEREAS, Greencrest TPS Hotel, LP. and Rockwall Rental Properties, LP. are the owner's of a tract of land out of the J.D. McFarland Survey, Abstract Number 145 being a portion of Lot 1, Block B of Goldencrest Addition, an addition to the city of Rockwall as recorded in Cabinet B, Slide 383 of the Plat Records of Rockwall County, Texas, same being a portion of a called 14.45 acre tract of land described by deed to Rockwall Rental Properties, L.P. as recorded in Volume 4076, Page 48 of the Deed Records of Rockwall County, Texas, and all of a called 2.805 acre tract of land to Greencrest TPS Hotel, LP. as recorded in Instrument Number 20180000020236 of the Official Public Records of Rockwall County, Texas and being more particularly described as follows:

BEGINNING at a 1/2 inch iron rod with cap stamped "DAI" found for the south corner of Lot 2, Block 1 of Rockwall Highschool Addition, an addition to the City of Rockwall as recorded in Cabinet H, Slide 5 of the Plat Records of Rockwall County, Texas, said point also being the west corner of said 14.45 acre tract and lying on the northeast line of Greencrest Boulevard, a called 70.00 feet wide right-of-way;

THENCE North 44 degrees 03 minutes 45 seconds East along the southeast line of said Lot 2, a distance of 615.64 feet to a 1/2 inch iron rod found for corner;

THENCE North 44 degrees 27 minutes 55 seconds East continuing along the southeast line of said Lot 2, a distance of 273.93 feet to a 1/2 inch iron rod found for an inner ell corner of said Lot 2;

THENCE South 45 degrees 58 minutes 35 seconds East continuing along the southeast line of said Lot 2, a distance of 200.81 feet to a 1/2 inch iron rod with cap stamped "DAI" found for a south corner of same lying on the northwest line of Lot 1, Block 1 Rockwall Pine Addition, an addition to the City of Rockwall as recorded in Cabinet I, Slide 367 of the Plat Records of Rockwall County, Texas

THENCE South 44 degrees 12 minutes 34 seconds West along the northwest line of said Rockwall-Pine Addition, passing a 1/2 inch iron rod with cap stamped "ADAMS" found for the west corner of same, also for the north corner of Lot 1, Block A, Texas Roadhouse Addition, an addition to the City of Rockwall as recorded in Cabinet J, Slide 309 of the Plat Records of Rockwall County, Texas, and continuing along the northwest line of said Texas Roadhouse Addition, a total distance of 235.61 feet to a 1/2 inch iron rod found for the west corner of said Lot 1, Block A, Texas Roadhouse Addition;

THENCE South 45 degrees 25 minutes 18 seconds East along the southwest line of said Lot 1, Block A, Texas Roadhouse Addition, a distance of 410.65 feet to a 1/2 inch iron rod found for the south corner of same lying on the northwest right-of-way line of Interstate Highway No. 30 (a variable width right-of-way) at the beginning of a curve to the right;

THENCE with said curve to the right along the northwest right-of-way line of Interstate Highway No. 30 having a radius of 3669.86 feet, a central angle of 06 degrees 24 minutes 58 seconds, an arc length of 410.95 feet, a chord bearing of South 48 degrees 33 minutes 37 seconds West, a distance of 410.74 feet to a 1/2 inch iron rod found for corner on the northeast line of previously mentioned Greencrest Boulevard;

THENCE long the northeast line of said Greencrest Boulevard the following courses and distances;

North 66 degrees 18 minutes 52 seconds West, a distance of 111.27 feet to a 1/2 inch iron rod with cap stamped "DAI" found for corner;

South 03 degrees 35 minutes 31 seconds East, a distance of 25.55 feet to a 1/2 inch iron rod with cap stamped "DAI" found for corner at the beginning of a curve to the left;

With said curve to the left having a radius of 485.00 feet, a central angle of 20 degrees 36 minutes 28 seconds, an arc length of 174.44 feet, a chord bearing of North 73 degrees 10 minutes 49 seconds West, a distance of 173.50 feet to a 1/2 inch iron rod found for corner at the beginning of a reverse curve to the right;

With said reverse curve to the right having a radius of 415.00 feet, a central angle of 23 degrees 57 minutes 39 seconds, an arc length of 173.55 feet, a chord bearing of North 71 degrees 09 minutes 06 seconds West, a distance of 172.29 feet to a 1/2 inch iron rod with cap stamped "DAI" found for corner at the beginning of a compound curve continuing to the right;

With said compound curve continuing to the right having a radius of 1493.00 feet, a central angle of 07 degrees 12 minutes 39 seconds, an arc length of 187.90 feet, a chord bearing of North 55 degrees 47 minutes 35 seconds West, a distance of 187.77 feet to the POINT OF BEGINNING containing 379,622 square Feet, or 8.715 acres of land.

SURVEYOR'S CERTIFICATE

NOW, THEREFORE KNOW ALL MEN BY THESE PRESENTS:

THAT I, Brian J. Maddox, do hereby certify that I prepared this plat from an actual and accurate survey of the land, and that the corner monuments shown thereon were properly placed under my personal supervision.

GIVEN UNDER MY HAND AND SEAL OF OFFICE THIS THE 4th DAY OF October, 2019

BRIAN J. MADDOX, R.P.L.S. NO. 5430

STATE OF TEXAS
REGISTERED
BRIAN J. MADDOX
5430
PROFESSIONAL
LAND SURVEYOR

Planning & Zoning Commission, Chairman — Date: 5/28/19

APPROVED:

I hereby certify that the above and foregoing plat of an addition to the City of Rockwall, Texas was approved by the City Council of the City of Rockwall on the 3 day of June 2019.

This approval shall be invalid unless the approved Plat for such Addition is recorded in the office of the County Clerk of Rockwall County, Texas, within one hundred eighty (180) days from said date of final approval.

Witness our hands this the 14th day of October 2019.

Mayor, City of Rockwall — City Secretary — City Engineer

CITY OF ROCKWALL, TEXAS
SEAL

OWNERS DEDICATION

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS:

STATE OF TEXAS}
COUNTY OF ROCKWALL}

I the undersigned owner of the land shown on this plat, and designated herein as TOWN PLACE MARRIOTT ADDITION to the City of Rockwall, Texas, and whose name is subscribed hereto, hereby dedicate to the use of the public forever all streets, alleys, parks, water courses, drains, easements and public places thereon shown on the purpose and consideration therein expressed. I understand and do hereby reserve the easement strips shown on this plat for the purposes stated and for the mutual use and accommodation of all utilities desiring to use or using same. I also understand the following;

1. No buildings shall be constructed or placed upon, over, or across the utility easements as described herein.

2. Any public utility shall have the right to remove and keep removed all or part of any buildings, fences, trees, shrubs, or other growths or improvements which in any way endanger or interfere with construction, maintenance or efficiency of their respective system on any of these easement strips; and any public utility shall at all times have the right of ingress or egress to, from and upon the said easement strips for purpose of construction, reconstruction, inspecting, patrolling, maintaining, and either adding to or removing all or part of their respective system without the necessity of, at any time, procuring the permission of anyone.

3. The City of Rockwall will not be responsible for any claims of any nature resulting from or occasioned by the establishment of grade of streets in the subdivision.

4. The developer and subdivision engineer shall bear total responsibility for storm drain improvements.

5. The developer shall be responsible for the necessary facilities to provide drainage patterns and drainage controls such that properties within the drainage area are not adversely affected by storm drainage from the development.

6. Drainage/Detention Easements/Facilities shall be owned, operated, maintained and repaired by property owner.

7. No house dwelling unit, or other structure shall be constructed on any lot in this addition by the owner or any other person until the developer and/or owner has complied with all requirements of the Subdivision Regulations of the City of Rockwall regarding improvements with respect to the entire block on the street or streets on which property abuts, including the actual installation of streets with the required base and paving, curb and gutter, water and sewer, drainage structures, storm structures, storm sewers, and alleys, all according to the specifications of the City of Rockwall; or until an escrow deposit, sufficient to pay for the cost of such improvements, as determined by the city's engineer and/or city administrator, computed on a private commercial rate basis, has been made with the city secretary, accompanied by an agreement signed by the developer and/or owner, authorizing the city to make such improvements at prevailing private commercial rates, or have the same made by a contractor and pay for the same out of the escrow deposit, should the developer and/or owner fail or refuse to install the required improvements within the time stated in such written agreement, but in no case shall the City be obligated to make such improvements itself. Such deposit may be used by the owner and/or developer as progress payments as the work progresses in making such improvements by making certified requisitions to the city secretary, supported by evidence of work done; or until the developer and/or owner files a corporate surety bond with the city secretary in a sum equal to the cost of such improvements for the designated area, guaranteeing the installation thereof within the time stated in the bond, which time shall be fixed by the city council of the City of Rockwall.

We further acknowledge that the dedications and/or exaction's made herein are proportional to the impact of the Addition upon the public services required in order that the development will comport with the present and future growth needs of the City; we, our successors and assigns hereby waive any claim, damage, or cause of action that we may have as a result of the dedication of exactions made herein.

ROCKWALL RENTAL PROPERTIES, LP

Representative: Randall H. Noe

STATE OF TEXAS}
COUNTY OF ROCKWALL}

Before me, the undersigned authority, on this day personally appeared Randall H. Noe, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purpose and consideration therein stated.
Given upon my hand and seal of office this 7 day of October, 2019.

Notary Public in and for the State of Texas

My Commission Expires: 1/31/22

JASMINE GALAN
Notary ID #131430520
My Commission Expires
January 31, 2022

GREENCREST TPS HOTEL, LP.

Representative: Thomas E Kirkland

STATE OF TEXAS}
COUNTY OF ROCKWALL}

Before me, the undersigned authority, on this day personally appeared Thomas E Kirkland, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purpose and consideration therein stated.
Given upon my hand and seal of office this 7 day of October, 2019.

Notary Public in and for the State of Texas

My Commission Expires: 1/31/22

JASMINE GALAN
Notary ID #131430520
My Commission Expires
January 31, 2022

Filed and Recorded
Official Public Records
Shelli Miller, County Clerk
Rockwall County, Texas
10/28/2019 08:41:42 AM
$100.00
20190000019144

FINAL PLAT
TOWN PLACE MARRIOTT ADDITION
LOT 1, LOT 2, AND LOT 3, BLOCK B
3 LOTS
8.715 ACRES OR 379,622 SQUARE FEET
SITUATED IN THE JD MCFARLAND SURVEY, ABSTRACT NO. 145
CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS

OWNER
GREENCREST TPS HOTEL, LP.
10000 North Central Expressway
Suite 400
Dallas, TX 75231

OWNER
ROCKWALL RENTAL PROPERTIES L.P.
P.O. Box. B
Terrell, TX. 75160

CASE NO. P2019-021

PROJECT INFORMATION
Project No.: FCU 18061
Date: October 2, 2019
Drawn By: GS9
Scale: 1"=60'
SHEET 2 of 2

tnp

SURVEYOR
TEAGUE NALL AND PERKINS, INC.
825 Watters Creek Boulevard, Suite M300
Allen, Texas 75013
214.461.9867 ph 214.461.9864 fx
T.B.P.L.S. Registration No. 10194381
www.tnpinc.com

Drawing: 2019.10.02 FCU 18061 Townplace Marriot Final Plat at 2019/10/02 4:30 PM by gshaner

CAUTION EXISTING UTILITIES !!!

CALL TEXAS 811!!! EXISTING UTILITIES AND UNDERGROUND FACILITIES INDICATED ON THESE PLANS HAVE BEEN LOCATED FROM REFERENCE INFORMATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY BOTH HORIZONTALLY AND VERTICALLY THE LOCATION OF ALL EXISTING UTILITIES AND UNDERGROUND FACILITIES PRIOR TO CONSTRUCTION, TO TAKE THE NECESSARY PRECAUTIONS IN ORDER TO PROTECT ALL FACILITIES ENCOUNTERED. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION.

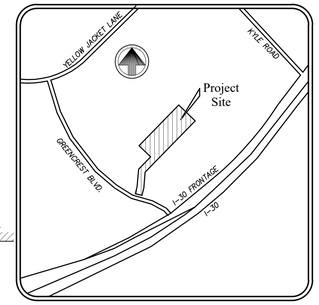
LEGEND

PROPERTY LINE

PROPOSED SAWCUT LIMITS

ROCKWALL HIGH SCHOOL SITE

ROCKWALL HIGH SCHOOL BUILDING



LOCATION MAP

PRECAST MODULAR RETAINING WALL

N 44°03'45" E 615.64'

N 44°27'55" E 273.93'

S 45°58'35" E 200.81'

S 44°12'34" W 235.61'

S 45°25'18" E 410.65'

TOWNEPLACE MARRIOTT SITE

R 1493.00'
Δ 7°12'39"
L 187.90'
CB N 55°47'35" W
CL 187.77'

EX. 6" SEWER

EX. 4' DIA. SEWER MANHOLE

R 415.00'
Δ 23°57'39"
L 173.55'
CB N 71°09'06" W
CL 172.29'

2.00

94.92

47.86

39.05

SAWCUT, REMOVE AND REPLACE EXISTING CONCRETE PAVEMENT FOR WATER LINE CONNECTION. CONTRACTOR TO REPLACE FULL PANEL OF CONCRETE.

SAWCUT AND REMOVE EXISTING CURB AND GUTTER FOR DRIVE CONNECTION.

EX. 16" PVC WATER

GREENCREST BOULEVARD (CALLED 70' R.O.W.)

SAWCUT 2' TYP.

R 485.00'
Δ 20°36'28"
L 174.44'
CB N 73°10'49" W
CL 173.50'

S 03°35'31" E 25.55'

N 66°18'52" W 111.27'

EX. 15' UTILITY ESMT.

EX. 12" PVC WATER

INTERSTATE 30 (CALLED 300' R.O.W.) VOLUME 59, PAGE 226 D.R.R.C.T.

R 3719.71'
Δ 6°19'48"
L 410.94'
CB S 48°33'37" W

SILT FENCE

SILT FENCE TO BE REMOVED FROM CORNER

SILT FENCE TO REMAIN

SILT FENCE TO BE REMOVED

SILT FENCE TO BE REMOVED

SILT FENCE TO REMAIN

SILT FENCE TO REMAIN

SILT FENCE TO REMAIN

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SP 2018-029
RECORD DRAWING

Revision	Date	Description

Owner:
Greencrest TPS Hotel, L.P.
3021 Ridge Road, A-120
Rockwall, TX 75032
Phone: (214) 890-9225

~ Civil Engineer ~
F.C. CUNY CORPORATION
#2 Horizon Court • Heath, Texas 75032 • (469) 402-7700
Texas Registered Engineering Firm F-7448

TOWNEPLACE SUITES MARRIOTT

908 E. INTERSTATE 30
ROCKWALL, TX 75087

12/23/2021

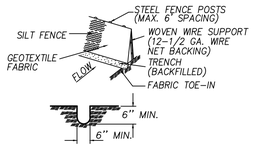
STATE OF TEXAS
CAMERON A. SLOWN
106317
LICENSED PROFESSIONAL ENGINEER

Drawn By:	Checked By:
F.C. CUNY	F.C. CUNY
Date: 11/19/2018	Project No.: -

Sheet Title:
Demolition Plan

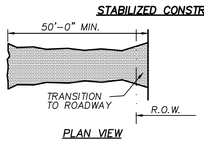
Scale:	Sheet No.:
1"=40'	2 of 14

SILT FENCE

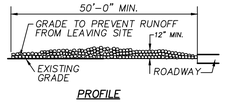


SILT FENCE TRENCH CROSS-SECTION

STABILIZED CONSTRUCTION ENTRANCE/EXIT



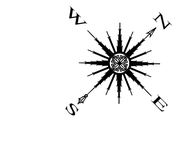
PLAN VIEW



PROFILE

CAUTION EXISTING UTILITIES !!!

CALL TEXAS 811!!! EXISTING UTILITIES AND UNDERGROUND FACILITIES INDICATED ON THESE PLANS HAVE BEEN LOCATED FROM REFERENCE INFORMATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY BOTH HORIZONTALLY AND VERTICALLY THE LOCATION OF ALL EXISTING UTILITIES AND UNDERGROUND FACILITIES PRIOR TO CONSTRUCTION, TO TAKE THE NECESSARY PRECAUTIONS IN ORDER TO PROTECT ALL FACILITIES ENCOUNTERED. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION.

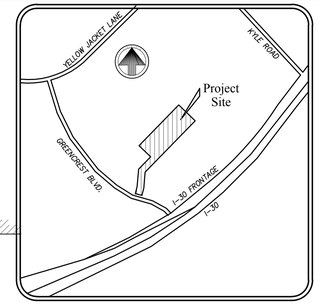


ROCKWALL HIGH SCHOOL SITE

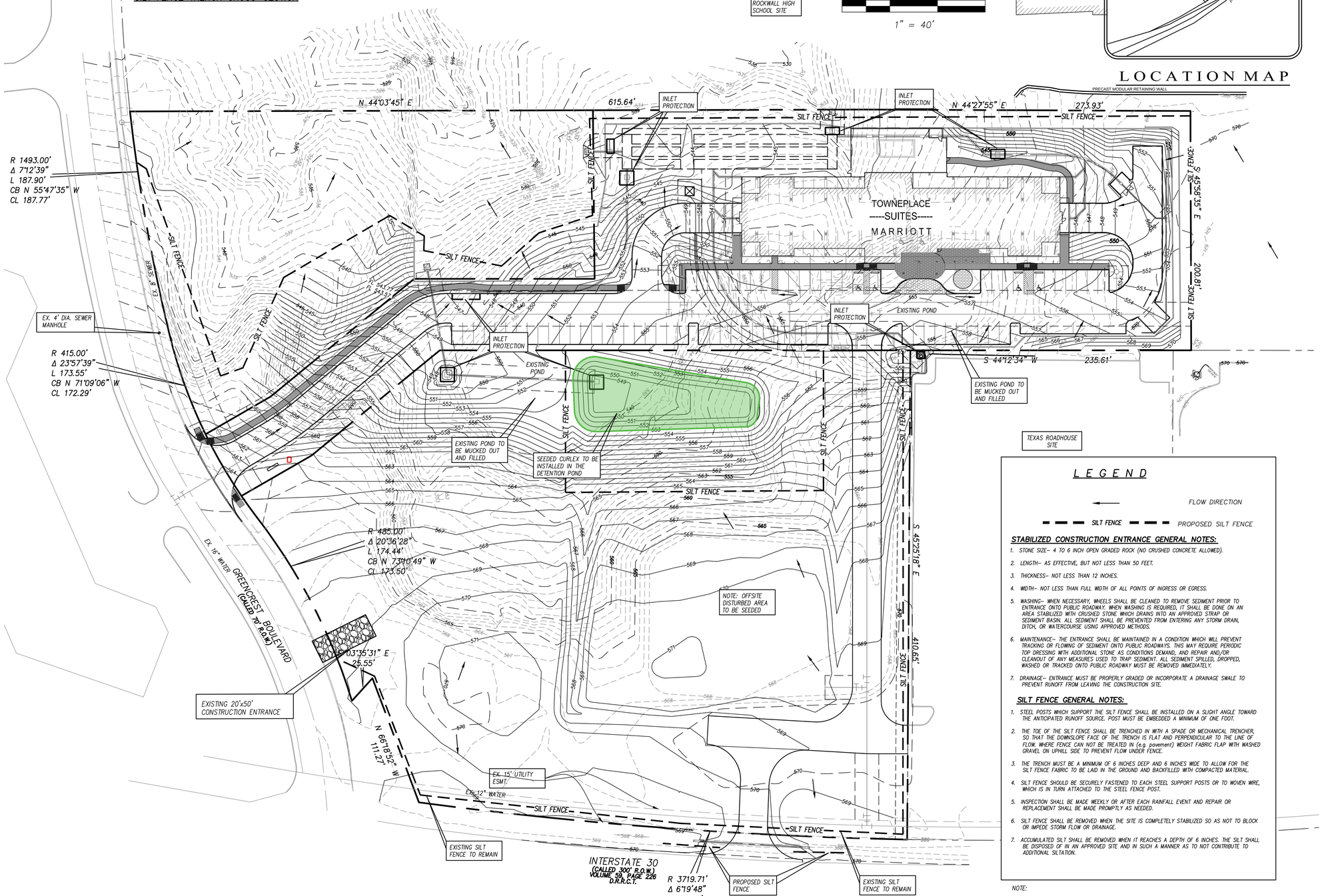
40 20 0 40 80

1" = 40'

ROCKWALL HIGH SCHOOL BUILDING



LOCATION MAP



LEGEND

FLOW DIRECTION

SILT FENCE — PROPOSED SILT FENCE

STABILIZED CONSTRUCTION ENTRANCE GENERAL NOTES:

1. STONE SIZE– 4 TO 6 INCH OPEN GRADED ROCK (NO CRUSHED CONCRETE ALLOWED).
2. LENGTH– AS EFFECTIVE, BUT NOT LESS THAN 50 FEET.
3. THICKNESS– NOT LESS THAN 12 INCHES.
4. WIDTH– NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
5. WASHING– WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH, OR WATERCOURSE USING APPROVED METHODS.
6. MAINTENANCE– THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAYS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
7. DRAINAGE– ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

SILT FENCE GENERAL NOTES:

1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CAN NOT BE TREATED IN (e.g. pavement) WEIGHT FABRIC FLAP WITH WASHED GRAVEL ON UPHILL SIDE TO PREVENT FLOW UNDER FENCE.
3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POSTS OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST.
5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES. THE SILT SHALL BE DISPOSED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.

NOTE:

ALL DISTURBED AREA TO HAVE 80% COVERAGE OF 1" STAND OF GRASS (NOT RYE OR WEEDS) PRIOR TO ACCEPTANCE.

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12/23/2021

STATE OF TEXAS
CAMERON A. SLOWN
106317
LICENSED PROFESSIONAL ENGINEER

Drawn By:	Checked By:
F.C. CUNY	F.C. CUNY
Date: 11/19/2018	Project No.: -

Sheet Title:
Erosion Control Plan

Scale:	Sheet No.:
1"=40'	3 of 14

NOTES BY SYMBOL

1. 8" WATER PLUG
2. 4" DOM. WATER METER
3. 1" IRRIGATION WATER METER AND TESTABLE BACKFLOW
4. 6" FIRE LINE
5. FIRE HYDRANT W/IN 20' UTILITY EASEMENT
6. 8" SANITARY SEWER STUB
7. 4' DIA. SANITARY SEWER MANHOLE
7a. 5' DIA. SANITARY SEWER MANHOLE
8. STORM DRAIN
9. WHEEL STOP (TYP.)
10. CONNECTION TO EX. STORM (TEXAS ROADHOUSE DETENTION)
11. GREASE/OIL SEPARATOR DRAIN
12. SWIMMING POOL AREA W/ BRICK AND WROUGHT IRON PERIMETER FENCING
13. 5' WIDE SIDEWALK
14. RETAINING WALL
15. DECORATIVE CONCRETE RE: ARCH SPEC.
16. GREASE INTERCEPTOR WITH SAMPLE PORT

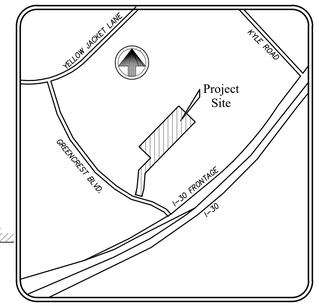
FIRE LANE (6" THICK CONCRETE)

NOTE: NO TREES WITHIN 5 FEET OF PUBLIC UTILITIES

40 20 0 40 80

1" = 40'

LOCATION MAP



ROCKWALL HIGH SCHOOL BUILDING

ROCKWALL HIGH SCHOOL SITE

ROCKWALL HIGH SCHOOL ADDITION BLOCK A, LOT 1 35.295 ACRES

PRECAST MODULAR RETAINING WALL

8' TALL TRASH ENCLOSURE AREA W/ SELF LATCHING OPAQUE GATE. ENCLOSURE MATERIAL TO MATCH BUILDING

VARIABLE WIDTH DETENTION EASEMENT TO BE MAINTAINED BY PROPERTY OWNER

PROPOSED UNDERGROUND DETENTION PONDS

29'X49' U.G. DET. SYSTEM

29'X120' UNDERGROUND DETENTION SYSTEM

21" RCP (PUBLIC)

24" RCP (PRIVATE)

18" RCP (PRIVATE)

20'X20' ONCOR ELECTRIC DELIVERY ESMT. FOR PAD MOUNTED TRANSFORMER

GARAGE FFE: 546.00
1ST FLOOR EL: 558.00

TOWNEPLACE SUITES MARRIOTT

PROPOSED LOT 2

PROPOSED LOT 1

ROCKWALL RENTAL PROPERTIES, L.P. GOLDENCREST ADDITION, PT. B, LOT 1 1.815 ACRES

ROCKWALL HIGH SCHOOL ADDITION BLOCK A, LOT 1 35.295 ACRES

N 44°03'45" E 615.64'

N 44°27'55" E 273.03'

S 45°56'35" E 200.81'

S 44°12'34" W 235.61'

S 45°25'18" E 410.65'

R 1493.00'
Δ 7°12'39"
L 187.90'
CB N 55°47'35" W
CL 187.77'

R 415.00'
Δ 23°57'39"
L 173.55'
CB N 71°09'06" W
CL 172.29'

R 485.00'
Δ 20°36'28"
L 174.44'
CB N 73°10'49" W
CL 173.50'

S 03°35'31" E 25.55'

N 66°16'52" W 111.27'

R 3719.71'
Δ 6°19'48"
L 410.94'
CB S 48°33'37" W

323.46'

EX. 6" SEWER

EX. 4' DIA. SEWER MANHOLE

20' SAN. SEWER EASEMENT

30' FIRE LANE, ACCESS, DRAINAGE AND UTILITY ESMT.

20' WATER LINE EASEMENT

30' VISIBILITY EASEMENT

8" SEWER (PUBLIC)

8" WATER (PUBLIC)

8" SEWER (PRIVATE)

FIRE LANE

18" RCP (PUBLIC)

20' DRAINAGE EASEMENT

VARIABLE WIDTH FIRE LANE, ACCESS, DRAINAGE AND UTILITY ESMT.

GAS METER

MONUMENT SIGN

20' SAN. SEWER EASEMENT

24' FIRE LANE, ACCESS, DRAINAGE AND UTILITY ESMT.

10' ONCOR ELECTRIC DELIVERY ESMT.

EX. 16" WATER

GREENCREST BOULEVARD (CALLED 70' R.O.W.)

EX. 15' UTILITY ESMT.

EX. 12" WATER

INTERSTATE 30
(CALLED 300' R.O.W.)
VOLUME 59, PAGE 226
D.R.R.C.T.

TEXAS ROADHOUSE SITE

TEXAS ROADHOUSE ADDITION BLOCK A, LOT 1 2.076 ACRES

ROCKWALL RENTAL PROPERTIES, L.P. TRACT 4 3.731 ACRES

ROCKWALL-PINE ADDITION BLOCK 1, LOT 1 3.642 ACRES

PROPOSED LOT 3

SITE INFORMATION

LAND AREA:	2.80 ACRES (122,169 S.F.)
CURRENT ZONING:	COMMERCIAL (C) & I-30 OVERLAY
EXISTING USE:	VACANT
PROPOSED USE:	HOTEL
BUILDING AREA:	16,210 S.F.
BUILDING HEIGHT:	49' (4 STORIES)
BUILDING TO LOT COVERAGE:	16,210/122,169=.133--> 13.3%
BUILDING REQUIRED PARKING:	HOTEL: 1/UNIT+50% OF REQ'D SPACES FOR ACCESSORY USES
ACCESSORY USES:	MEETING ROOM - 1 SPACE/3 SEATS => 10 SEATS =3.33 SPACES BREAKFAST ROOM - 1 SPACE/4 SEATS => 33 SEATS =8.25 SPACES BUSINESS OFFICE - 1 SPACE/300 S.F. => 791 S.F./300 = 2.6 SPACES FITNESS CENTER - 1 SPACE/200 S.F. => 606 S.F./200 = 3.03 SPACES TOTAL ACCESSORY PARKING = 17.21 SPACES
	112 UNITS + (.50)*17.21 SPACES = 121 SPACES
BUILDING PARKING PROVIDED:	GARAGE: 45 AT GRADE: 76 TOTAL: 121
IMPERVIOUS AREA:	55,064 S.F.
LANDSCAPE AREA REQUIRED:	15% OF TOTAL SITE
LANDSCAPE AREA PROVIDED:	55,064 S.F. (1.26 AC. = 45% OF SITE)

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SP 2018-029
RECORD DRAWING

Revision	Date	Description

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Phone: (214) 890-9225

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ROCKWALL, TX 75087

12/23/2021

STATE OF TEXAS
CAMERON A. SLOWN
106317
LICENSED PROFESSIONAL ENGINEER

Drawn By:	Checked By:
F.C. CUNY	F.C. CUNY
Date: 11/19/2018	Project No.: -

Sheet Title: Site Plan

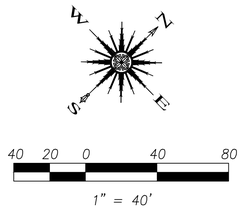
Scale:	Sheet No.:
1"=40'	4 of 14

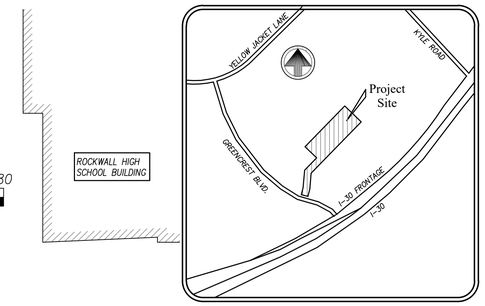
LEGEND

- PROPERTY LINE
- GREENCREST BLVD PAVEMENT
- DUMPSTER PAD AREA PAVEMENT
- HEAVY TRUCK TRAFFIC AREA PAVEMENT
- LIGHT TRUCK/PARKING AREA PAVEMENT
- PROPOSED SIDEWALK

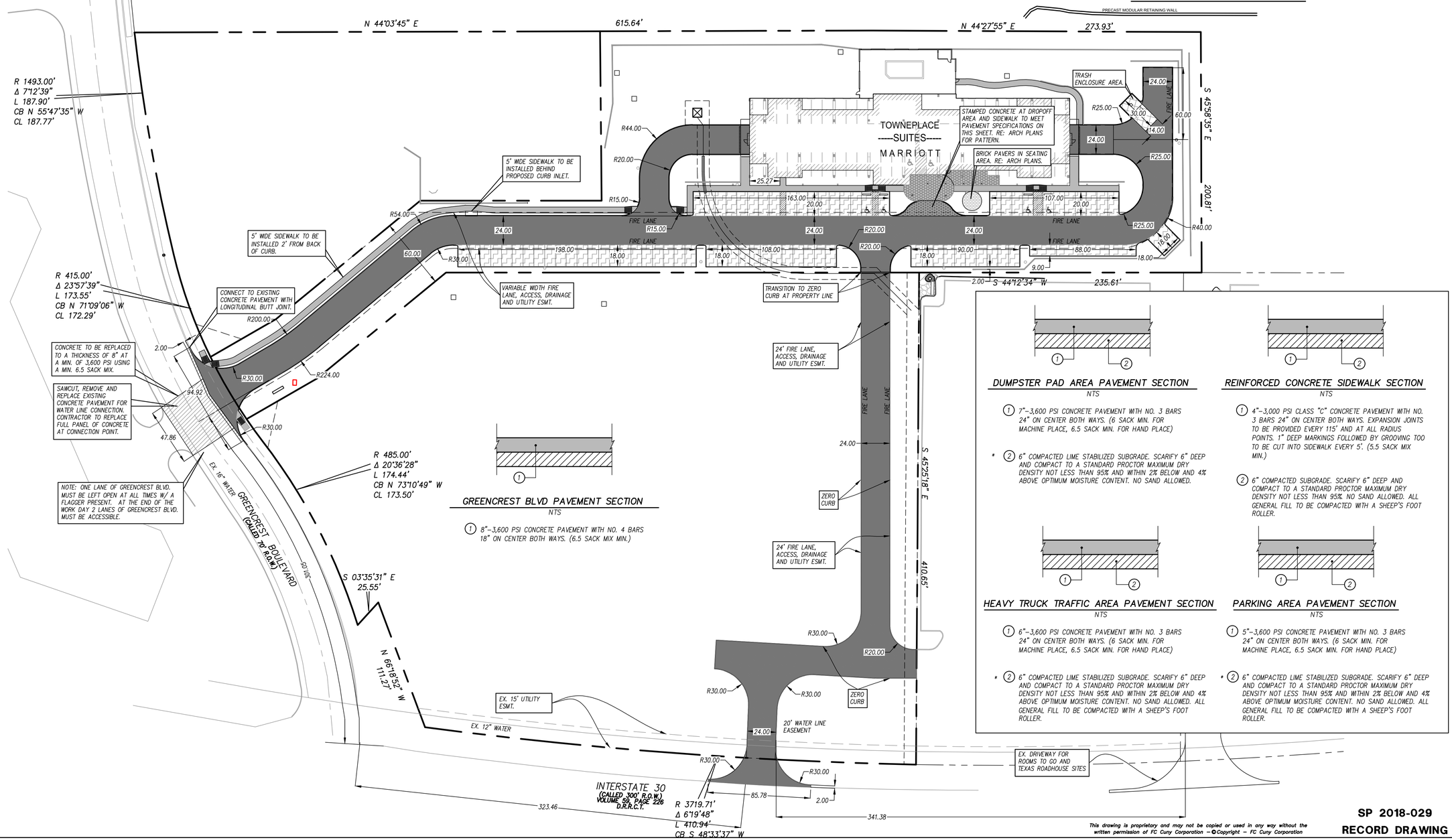
GENERAL NOTES:

1. ALL DIMENSIONS IN FEET.
2. ALL PAVEMENT DIMENSIONS ARE TO FACE OF CURB UNLESS INDICATED OTHERWISE.
3. SEE ARCHITECTURAL PLANS FOR EXACT BUILDING DIMENSIONS AND LAYOUT.
4. DIMENSIONS ARE TO THE OUTSIDE FACE OF BUILDING WALL AND STRUCTURES.
5. MARK FIRELANE TO CITY SPECIFICATION. "NO PARKING FIRE LANE" EVERY 25' WHITE 4" LETTERS ON A 6" RED STRIPED BACKGROUND.
6. PROPERTY OWNER IS RESPONSIBLE FOR MAINTAINING ALL PAVING INCLUDING FIRE LANE, ACCESS AND UTILITY EASEMENTS.
7. PUBLIC BARRIER FREE RAMP MUST BE TRUNCATED DOME PLATES PER CITY REQUIREMENT. (www.advantagetactile.com)
8. ALL GENERAL FILL MATERIAL SHALL BE COMPACTED WITH A SHEEPS FOOT ROLLER TO 95% STANDARD PROCTOR.
9. * PER GEOTECH REPORT BY ALPHA TESTING, ADD 1 INCH TO PAVEMENT THICKNESS AS AN ALTERNATIVE OPTION TO LIME STABILIZATION.





LOCATION MAP



GREENCREST BLVD PAVEMENT SECTION

NTS

(1) 8"–3,600 PSI CONCRETE PAVEMENT WITH NO. 4 BARS 18" ON CENTER BOTH WAYS. (6.5 SACK MIX MIN.)

DUMPSTER PAD AREA PAVEMENT SECTION

NTS

(1) 7"–3,600 PSI CONCRETE PAVEMENT WITH NO. 3 BARS 24" ON CENTER BOTH WAYS. (6 SACK MIN. FOR MACHINE PLACE, 6.5 SACK MIN. FOR HAND PLACE)

* (2) 6" COMPACTED LIME STABILIZED SUBGRADE. SCARIFY 6" DEEP AND COMPACT TO A STANDARD PROCTOR MAXIMUM DRY DENSITY NOT LESS THAN 95% AND WITHIN 2% BELOW AND 4% ABOVE OPTIMUM MOISTURE CONTENT. NO SAND ALLOWED.

REINFORCED CONCRETE SIDEWALK SECTION

NTS

(1) 4"–3,000 PSI CLASS "C" CONCRETE PAVEMENT WITH NO. 3 BARS 24" ON CENTER BOTH WAYS. EXPANSION JOINTS TO BE PROVIDED EVERY 115' AND AT ALL RADIUS POINTS. 1" DEEP MARKINGS FOLLOWED BY GROOVING TOO TO BE CUT INTO SIDEWALK EVERY 5'. (5.5 SACK MIX MIN.)

(2) 6" COMPACTED SUBGRADE. SCARIFY 6" DEEP AND COMPACT TO A STANDARD PROCTOR MAXIMUM DRY DENSITY NOT LESS THAN 95% NO SAND ALLOWED. ALL GENERAL FILL TO BE COMPACTED WITH A SHEEP'S FOOT ROLLER.

HEAVY TRUCK TRAFFIC AREA PAVEMENT SECTION

NTS

(1) 6"–3,600 PSI CONCRETE PAVEMENT WITH NO. 3 BARS 24" ON CENTER BOTH WAYS. (6 SACK MIN. FOR MACHINE PLACE, 6.5 SACK MIN. FOR HAND PLACE)

* (2) 6" COMPACTED LIME STABILIZED SUBGRADE. SCARIFY 6" DEEP AND COMPACT TO A STANDARD PROCTOR MAXIMUM DRY DENSITY NOT LESS THAN 95% AND WITHIN 2% BELOW AND 4% ABOVE OPTIMUM MOISTURE CONTENT. NO SAND ALLOWED. ALL GENERAL FILL TO BE COMPACTED WITH A SHEEP'S FOOT ROLLER.

PARKING AREA PAVEMENT SECTION

NTS

(1) 5"–3,600 PSI CONCRETE PAVEMENT WITH NO. 3 BARS 24" ON CENTER BOTH WAYS. (6 SACK MIN. FOR MACHINE PLACE, 6.5 SACK MIN. FOR HAND PLACE)

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TOWNEPLACE
SUITES
MARRIOTT

908 E. INTERSTATE 30
ROCKWALL, TX 75087

12/23/2021

STATE OF TEXAS
CAMERON A. SLOWN
106317
LICENSED PROFESSIONAL ENGINEER

Drawn By:	Checked By:
F.C. CUNY	F.C. CUNY
Date: 11/19/2018	Project No.: ~

Sheet Title:
Paving Plan

Scale:	Sheet No.:
1"=40'	5 of 14

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LOT 2, BLOCK 1
ROCKWALL HIGHS CHOOL ADDITION
CABINET H, SLIDE
P.R.R.C.T.

ROCKWALL HIGH SCHOOL SITE

ROCKWALL HIGH SCHOOL BUILDING

40 20 0 40 80

1" = 40'

TOWNEPLACE SUITES

N 44°03'45" E

R 1493.00'
Δ 7°12'39"
L 187.90'
CB N 55°47'35" W
CL 187.77'

R 415.00'
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EX. 8" SEWER

EX. 8" WATER

EX. 16" WATER

GREENCREST BOULEVARD
(CALLED 70' R.O.W.)

N 44°27'55" E

273.97'

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235.61'

S 45°25'18" E

410.65'

S 03°35'31" E
25.55'

N 66°18'52" W
111.27'

R 485.00'
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L 174.44'
CB W 73°10'49" W
CL 173.50'

REMAINDER OF CALLED 14.45 ACRES
ROCKWALL RENTAL PROPERTIES, L.P.
VOLUME 4076, PAGE 48
D.R.R.C.T.

LOT 1, BLOCK 1
ROCKWALL-PINE ADDITION
CABINET I, SLIDE 367
P.R.R.C.T.

TEXAS ROADHOUSE SITE

INTERSTATE 30
(CALLED 300' R.O.W.)
VOLUME 69, PAGE 226
D.R.R.C.T.

R 3719.71'
Δ 6°19'48"
L 410.94'
CB S 48°33'37" W
CL 410.74'

NOTE: ALL RIGHT OF WAYS TO BE SODDED PRIOR TO CITY ACCEPTANCE AND CERTIFICATE OF OCCUPANCY

LEGEND

- PROPERTY LINE
- 550 EXISTING CONTOUR
- 554 PROPOSED CONTOUR
- PROPOSED SWALE
- PROPOSED RETAINING WALL
- FLOW DIRECTION
- FF PROPOSED FINISHED FLOOR ELEVATION
- GF PROPOSED GARAGE FLOOR ELEVATION
- TC PROPOSED TOP OF CURB ELEVATION
- TP PROPOSED TOP OF PAVEMENT ELEVATION
- FG PROPOSED FINISHED GRADE ELEVATION
- TW PROPOSED TOP OF WALL ELEVATION

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STATE OF TEXAS
CAMERON A. SLOWN
106317
LICENSED PROFESSIONAL ENGINEER

Drawn By:	Checked By:
F.C. CUNY	F.C. CUNY
Date: 11/19/2018	Project No.: -

Sheet Title: *Grading Plan*

Scale:	Sheet No.:
1"=40'	6 of 14

CAUTION EXISTING UTILITIES !!!

CALL TEXAS 811!!! EXISTING UTILITIES AND UNDERGROUND FACILITIES INDICATED ON THESE PLANS HAVE BEEN LOCATED FROM REFERENCE INFORMATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY BOTH HORIZONTALLY AND VERTICALLY THE LOCATION OF ALL EXISTING UTILITIES AND UNDERGROUND FACILITIES PRIOR TO CONSTRUCTION, TO TAKE THE NECESSARY PRECAUTIONS IN ORDER TO PROTECT ALL FACILITIES ENCOUNTERED. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION.

N W E S

40 20 0 40 80

1" = 40'

ROCKWALL HIGH SCHOOL SITE

ROCKWALL HIGH SCHOOL BUILDING

PRECAST MODULAR RETAINING WALL

N 44°03'45" E 615.64'

N 44°27'55" E 273.93'

S 45°56'35" E 200.81'

S 44°12'34" W 235.61'

S 45°25'18" E 410.55'

R 1493.00'
Δ 7°12'39"
L 187.90'
CB N 55°47'35" W
CL 187.77'

R 415.00'
Δ 23°57'39"
L 173.55'
CB N 71°09'06" W
CL 172.29'

R 485.00'
Δ 20°36'28"
L 174.44'
CB W 73°10'49" W
CL 173.50'

S 03°35'31" E 25.55'

N 66°18'52" W 111.27'

EX. 8" SEWER

EX. 16" WATER

GREENCREST BOULEVARD (CALLED 70' R.O.W.)

EX. 12" WATER

INTERSTATE 30
(CALLED 300' R.O.W.)
VOLUME 59, PAGE 226
D.R.R.C.T.

R 3719.71'
Δ 6°19'48"
L 410.94'
CB S 48°33'37" W
CL 410.74'

TEXAS ROADHOUSE SITE

1 — 1.31 / 3.81

2 — 1.49 / 4.33

OS-1* — 0.98 / 2.85

OS-2 — 1.40 / 4.07

OS-2.1 — 2.08 / 6.04

OS-3 — 0.10 / 0.29

LEGEND

- Property Line
- 550 Ex. Contour
- Flow Direction
- Drainage Area No. / Drainage Area (Ac.) / Drainage Runoff - Q (cfs)
- Existing Drainage Divide

PREDEVELOPED DRAINAGE AREA CALCULATIONS

Drainage Area No.	Total Area (Acres)	Runoff Coefficient C	Time of Concentration Tc (Min.)	Rainfall Intensity I_{100} (in/hr)	Proposed Flow Q_{100} (cfs)	Remarks
OS-1*	0.98	0.35	20	8.30	2.85	FLOW FROM TEXAS ROADHOUSE SITE
OS-2	1.40	0.35	20	8.30	4.07	FLOWS TO EXISTING NORTHWEST POND
OS-2.1	2.08	0.35	20	8.30	6.04	FLOWS TO EXISTING NORTHWEST POND
OS-3	0.10	0.35	20	8.30	0.29	FLOWS TO EXISTING NORTH POND
1	1.31	0.35	20	8.30	3.81	FLOWS TO NORTHWEST PROP. CORNER
2	1.49	0.35	20	8.30	4.33	FLOWS TO NORTH PROP. LINE
TOTAL	***7.36***				***21.38***	

* DRAINAGE AREA AND FLOW BASED ON ENGINEERING PLANS FOR TEXAS ROADHOUSE SITE

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RECORD DRAWING

Revision	Date	Description

Owner:
Greencrest TPS Hotel, L.P.
3021 Ridge Road, A-120
Rockwall, TX 75032
Phone: (214) 890-9225

~ Civil Engineer ~
F.C. CUNY CORPORATION
#2 Horizon Court - Heath, Texas 75032 - (469) 402-7700
Texas Registered Engineering Firm F-7448

TOWNEPLACE SUITES MARRIOTT

908 E. INTERSTATE 30
ROCKWALL, TX 75087

12/23/2021

STATE OF TEXAS
CAMERON A. SLOWN
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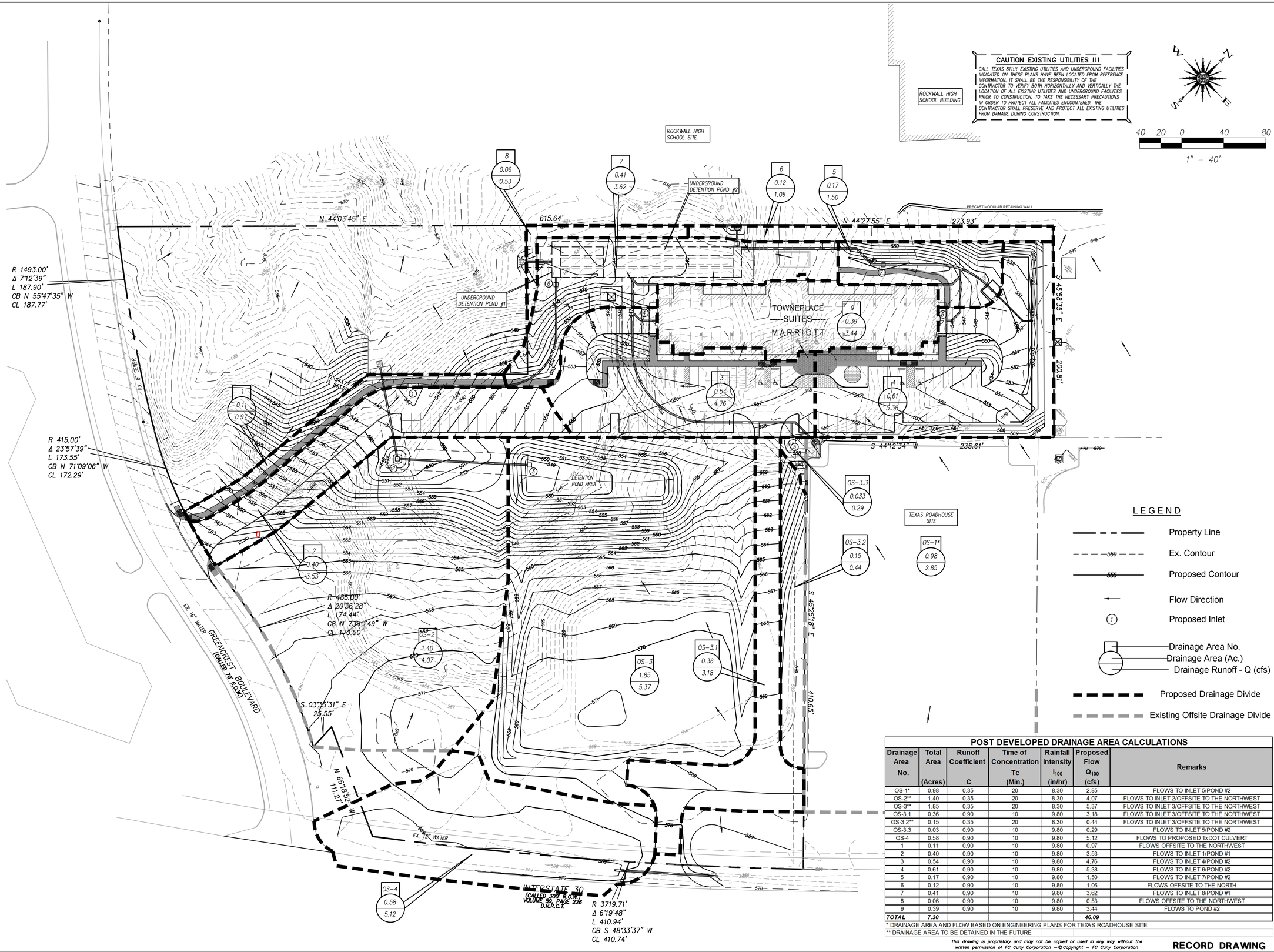
LICENSED PROFESSIONAL ENGINEER

Drawn By:	Checked By:
F.C. CUNY	F.C. CUNY
Date: 11/19/2018	Project No.: –

Sheet Title:
Pre Developed Drainage Area Map

Scale:	Sheet No.:
1"=40'	7 of 14



POST DEVELOPED DRAINAGE AREA CALCULATIONS

Drainage Area No.	Total Area (Acres)	Runoff Coefficient C	Time of Concentration Tc (Min.)	Rainfall Intensity I_{100} (in/hr)	Proposed Flow Q_{100} (cfs)	Remarks
OS-1*	0.98	0.35	20	8.30	2.85	FLOWS TO INLET 5/POND #2
OS-2**	1.40	0.35	20	8.30	4.07	FLOWS TO INLET 2/OFFSITE TO THE NORTHWEST
OS-3**	1.85	0.35	20	8.30	5.37	FLOWS TO INLET 3/OFFSITE TO THE NORTHWEST
OS-3.1	0.36	0.90	10	9.80	3.18	FLOWS TO INLET 3/OFFSITE TO THE NORTHWEST
OS-3.2**	0.15	0.35	20	8.30	0.44	FLOWS TO INLET 3/OFFSITE TO THE NORTHWEST
OS-3.3	0.03	0.90	10	9.80	0.29	FLOWS TO INLET 5/POND #2
OS-4	0.58	0.90	10	9.80	5.12	FLOWS TO PROPOSED TxDOT CULVERT
1	0.11	0.90	10	9.80	0.97	FLOWS OFFSITE TO THE NORTHWEST
2	0.40	0.90	10	9.80	3.53	FLOWS TO INLET 1/POND #1
3	0.54	0.90	10	9.80	4.76	FLOWS TO INLET 4/POND #2
4	0.61	0.90	10	9.80	5.38	FLOWS TO INLET 6/POND #2
5	0.17	0.90	10	9.80	1.50	FLOWS TO INLET 7/POND #2
6	0.12	0.90	10	9.80	1.06	FLOWS OFFSITE TO THE NORTH
7	0.41	0.90	10	9.80	3.62	FLOWS TO INLET 8/POND #1
8	0.06	0.90	10	9.80	0.53	FLOWS OFFSITE TO THE NORTHWEST
9	0.39	0.90	10	9.80	3.44	FLOWS TO POND #2
TOTAL	***7.30***				***46.09***	

* DRAINAGE AREA AND FLOW BASED ON ENGINEERING PLANS FOR TEXAS ROADHOUSE SITE
** DRAINAGE AREA TO BE DETAINED IN THE FUTURE

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Rockwall, TX 75032
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~ Civil Engineer ~
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TOWNEPLACE SUITES MARRIOTT

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ROCKWALL, TX 75087

1/23/2021

STATE OF TEXAS
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LICENSED PROFESSIONAL ENGINEER

Drawn By:	Checked By:
F.C. CUNY	F.C. CUNY
Date: 11/19/2018	Project No.: –

Sheet Title: *Drainage Area Map*

Scale:	Sheet No.:
1"=40'	8 of 14

ROCKWALL HIGH SCHOOL SITE

STA. 0+02 STORM LINE-3=
STA. 0+00 LAT-3
INSTALL 18"x18" WYE
FL 21" 541.04
FL 18" 541.16

STA. 0+00 STORM LINE-6
INSTALL TxDOT (CH-FW-0)
FLARED HDWL
W/ 5'x8' WIDE 8"-12" DIA.
GROUTED ROCK RIP RAP
FL 18" 534.40

STA. 0+25 STORM LINE-5
CONNECT TO UNDERGROUND
DETENTION SYSTEM
FL 96" 533.05
FL 18" 533.05

UNDERGROUND
DETENTION
POND #1

STA. 0+00 STORM LINE-3
CONNECT TO UNDERGROUND
DETENTON SYSTEM
FL 96" 534.80
FL 21" 539.30

UNDERGROUND
DETENTION
POND #2

STA. 0+13 STORM LINE-6
INSTALL 4'x4' BOX
W/OVERFLOW GRATE.
TI 545.55
FL 18" 534.53

STA. 0+16 STORM LINE-6
CONNECT TO UNDERGROUND
DETENTION SYSTEM
FL 96" 534.55
FL 18" 534.55

STA. 1+40 STORM LINE-4
INSTALL 2'x2' "Y" INLET
TI 544.50
THROAT 543.50
FL 24" 539.50

STA. 0+14 STORM LINE-5
INSTALL 4'x4' BOX
W/OVERFLOW GRATE.
TI 543.00
FL 18" 533.03

STORM
LINE-6

STORM
LINE-5

STA. 1+09 STORM LINE-4
INSTALL 45° BEND

(PRIVATE)
STORM
LINE-4

N 44°03'45" E

615.64'

N 44°27'55" E

273.93'

PRECAST MODULAR DETENTION UNIT

STA. 2+23 STORM LINE-4=
STA. 0+00 LAT-2
INSTALL 24"x18" WYE
FL 24" 540.90
FL 18" 541.15
FL 18" 541.40

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STA. 0+00 STORM LINE-5
INSTALL TxDOT (CH-FW-0) FLARED
HDWL W/ 5'x8' WIDE 8"-12" DIA.
GROUTED ROCK RIP RAP
FL 18" 533.02

STA. 0+26 LAT-3
CONNECT TO DOWNSPOUT
RE: MEP PLAN
FL 18" 542.00

STA. 0+00 STORM LINE-2
CONNECT TO UNDERGROUND
DETENTON SYSTEM
FL 96" 533.25
FL 18" 536.50

STA. 0+33 STORM LINE-3=
STA. 0+00 LAT-1
INSTALL 21"x18" WYE
FL 21" 541.00
FL 18" 541.25

STA. 0+00 STORM LINE-4
CONNECT TO UNDERGROUND
DETENTON SYSTEM
FL 96" 534.60
FL 24" 537.60

STA. 0+07 LAT-2 =
STA. 0+00 LAT-4
INSTALL 18"x18" WYE
FL 18" 541.23

STA. 0+40 DRAIN (NORTH)
INSTALL 8" DIA. RISER
RE: DETAIL SHEET 9B
TI 553.50
FL 8" (IN) 550.50

STA. 2+12 STORM LINE-2
INSTALL 10' CURB INLET
TC 547.05
FL 18" 542.05

STA. 0+07 STORM LINE-2
INSTALL 2'x2' "Y" INLET
TI 543.50
THROAT 542.50
FL 18" 536.85

STA. 0+24 LAT-1 (PRIVATE)
CONNECT TO BLDG DRAINAGE
RE: MEP PLANS
FL 18" 541.50

STA. 1+31 STORM LINE-4
INSTALL 45° BEND

STA. 0+24 LAT-4
CONNECT TO DOWNSPOUT
RE: MEP PLAN
FL 18" 542.00

STA. 2+50 STORM LINE-4
INSTALL OIL/WATER SEPARATOR
TI 549.80
FL 18"(OUT) 545.80
FL 8" (IN) 546.00

STA. 0+00 STORM LINE-1
INSTALL TxDOT (CH-FW-0)
FLARED HDWL
W/ 5'x8' WIDE 8"-12" DIA.
GROUTED ROCK RIP RAP
FL 18" 533.27

L=78.54
R=50.00
DELTA=090.00
CH=70.71
CB=S00°47'26"E

PC: 0+52.95

PT: 0+67.95

STA. 0+00 6" SW
CONNECT TO TRENCH DRAIN
FL 18" 541.45
FL 6" 541.45

(PUBLIC)
STORM
LINE-3

Q=4.76 CFS

Q=3.62 CFS

(PRIVATE)
STORM
LINE-2

TOWNEPLACE
SUITES
MARRIOTT

STA. 1+62 6" NE/SW
FL 6" 543.00

STA. 0+57 LAT-2 (PRIVATE)
INSTALL TRENCH DRAIN
TI 545.85
FL 18" 541.90

6" PERF. PIPE

6" PERF. PIPE

STA. 0+00 6" NE
CONNECT TO TRENCH DRAIN
FL 18" 541.90
FL 6" 541.90

Q=5.38 CFS

DRAIN
(NORTH)

STA. 3+00 STORM LINE-4=
STA. 0+00 DRAIN (NORTH)
STA. 0+00 DRAIN (SOUTH)
INSTALL 24" DIA. PERF. DRAIN
BASIN. RE: DETAIL SHEET 9B
TI 552.00
FL 8"(OUT) 548.00
FL 8" (IN) 548.00

STA. 0+19 LAT-1 (PRIVATE)
INSTALL TRENCH DRAIN
TI=545.85
FL 18" 541.45

STA. 0+89 STORM LINE-1
INSTALL 3'x3' "Y" INLET
TI 546.50
THROAT 545.50
FL 18" 537.50

20' DRAINAGE
ESMT.

18" RCP

Q=3.53 CFS

L=109.96
R=70.00
DELTA=090.00
CH=98.99
CB=N89°12'34"E

PT: 1+31.49

PI: 1+77.99

18" RCP

STA. 2+63 STORM LINE-3
INSTALL 45° BEND

STA. 2+63 STORM LINE-3
INSTALL 45° BEND

STA. 0+86 DRAIN (SOUTH)
INSTALL 8" 45° BEND
FL 8" 551.70

STA. 1+00 DRAIN (SOUTH)
INSTALL 8" 45° BEND
FL 8" 552.30

DRAIN
(SOUTH)

(PUBLIC)
STORM
LINE-3

STA. 2+28 STORM LINE-3=
STA. 0+00 DRAIN-1 (PRIVATE STORM)
INSTALL 18"X12" CONNECTION.
STUB AND PLUG 13' OF 12" PERFORATED
STORM PIPE WRAPPED IN GEOTEXTILE FABRIC.
FL 18" 550.69
FL 12" 550.94

Q=0.49 CFS

Q=2.85 CFS

S 44°12'34" W

235.61'

STA. 1+10 DRAIN (SOUTH)
INSTALL 8" DIA. RISER
RE: DETAIL SHEET 9B
TI 555.75
FL 8" (IN) 552.75

EXISTING SLOPED HDWL.
AND RIP RAP AT OUTFALL.
EX. FL 18" 556.60

EXISTING
RETAINING WALL

STA. 0+89 STORM LINE-1
INSTALL 3'x3' "Y" INLET
TI 546.50
THROAT 545.50
FL 18" 537.50

18" RCP

20.50

Q=4.07 CFS

STORM
LINE-1
(PUBLIC)

20' DRAINAGE
ESMT.

STA. 2+12 STORM LINE-1
INSTALL 3'x3' WEIR OUTLET
STRUCTURE (O.S.) RE: OFFSITE
DETENTION PLAN FOR DETAIL.
TOP O.S. 553.00
FL O.S.=548.50
FL 18" 542.00

Q=5.56 CFS

STA. 2+59 STORM LINE-3=
STA. 0+00 DRAIN-2 (PRIVATE STORM)
INSTALL 18"X12" CONNECTION.
STUB AND PLUG 13' OF 12" PERFORATED
STORM PIPE WRAPPED IN GEOTEXTILE FABRIC.
FL 18" 551.55
FL 12" 551.80

STA. 2+89 STORM LINE-3
INSTALL 2'x2' "Y" INLET
W/ CONCRETE APRON
TI 557.40
THROAT 556.40
FL 18" 552.40

CONTRACTOR TO GRADE
THIS AREA TO DRAIN

N 66°18'52" W
111.27'

STA. 0+97 TXDOT STORM
CONST. 6:1 TxDOT S.E.T.
FL 18" 567.98

EX. 12" WATER

INTERSTATE 30
(CALLED 300' R.O.W.)
VOLUME 59, PAGE 226
D.R.R.C.T.

R 3719.71'
Δ 6°19'48"
L 410.94'
CB S 48°33'37" W
CL 410.74'

STA. 0+00 TXDOT STORM
CONST. 6:1 TxDOT S.E.T.
FL 18" 567.84

TRENCH WIDTH AT GRADE TO BE DETERMINED BY CONTRACTOR AS NEEDED FOR TRENCH SAFETY AND INSTALLATION OF IMPROVEMENT

EXISTING GROUND

INSTALL SOD FOR ENTIRE TRENCH WIDTH MATCHING EXISTING GRADE

MINIMUM 6" OF TOP SOIL COMPACTED TO BETWEEN 95 TO 100 PERCENT OF STANDARD PROCTOR DENSITY AS DETERMINED BY ASTM D 698

6" MIN.

NATIVE SOIL

OVERLAP GEOTEXTILE FABRIC

GRANULAR FILL (TXDOT #57 AGGREGATE OR APPROVED EQUAL)

PERFORATED CORRUGATED PIPE AT 0.5% MINIMUM

DEPTH VARIES PER PROFILE

NON-WOVEN GEOTEXTILE FABRIC (AMOCO 4551 OR APPROVED EQUAL)

F/L PER PROFILE

24"

2"

NOTE: WHERE FRENCH DRAIN IS UNDERNEATH CONCRETE FLUME, REMOVE AND REPLACE EXISTING CONCRETE MATCHING EXISTING CONCRETE THICKNESS. MINIMUM OF 6" OF TOP SOIL IS TO BE PLACED UNDERNEATH CONCRETE FLUME. USE PERFORATION SCHEDULE PER NYLOPLAST DETAIL.

FRENCH DRAIN TYPICAL SECTION

NOT TO SCALE

30 15 0 30 60

1" = 30'

Revision	Date	Description

Owner:
Greencrest TPS Hotel, L.P.
3021 Ridge Road, A-120
Rockwall, TX 75032
Phone: (214) 890-9225

~ Civil Engineer ~
F.C. CUNY CORPORATION
12 Horizon Court • Heath, Texas 75032 (469) 402-7700
Texas Registered Engineering Firm F-7448

TOWNEPLACE SUITES MARRIOTT
908 E. INTERSTATE 30
ROCKWALL, TX 75087

12/23/2021

STATE OF TEXAS
CAMERON A. SLOWN
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Drawn By:	Checked By:
F.C. CUNY	F.C. CUNY
Date: 11/19/2018	Project No.: -

Sheet Title: Storm Sewer Plan

Scale:	Sheet No.:
1"=30'	9 of 14

SP 2018-029
RECORD DRAWING

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SUITES
MARRIOTT

908 E. INTERSTATE 30
ROCKWALL, TX 75087

12/23/2021

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106317
LICENSED PROFESSIONAL ENGINEER

Drawn By:	Checked By:
F.C. CUNY	F.C. CUNY
Date: 11/19/2018	Project No.: –

Sheet Title:
Storm Sewer Plan

Scale:	Sheet No.:
1"=30'	9A of 14

| System ID | Conduit Properties | | | | | | | | | | | | | | Incremental Drainage Area | | | | | | | | | | | | | |

Section 2721

Engineered Surface Drainage Products

GENERAL
PVC surface drainage inlets shall include the drain basin type as indicated on the contract drawing and referenced within the contract specifications. The ductile iron grates for each of these fittings are to be considered an integral part of the surface drainage inlet and shall be furnished by the same manufacturer. The surface drainage inlets shall be as manufactured by Nyloplast a division of Advanced Drainage Systems, Inc., or prior approved equal.

MATERIALS
The drain basins required for this contract shall be manufactured from PVC pipe stock, utilizing a thermoforming process to reform the pipe stock to the specified configuration. The drainage pipe connection stubs shall be manufactured from PVC pipe stock and formed to provide a watertight connection with the specified pipe system. This joint tightness shall conform to ASTM D3212 for joints for drain and sewer plastic pipe using flexible elastomeric seals. The flexible elastomeric seals shall conform to ASTM F477. The pipe bell spigot shall be joined to the main body of the drain basin or catch basin. The raw material used to manufacture the pipe stock that is used to manufacture the main body and pipe stubs of the surface drainage inlets shall conform to ASTM D1784 cell class 12454.

The grates and frames furnished for all surface drainage inlets shall be ductile iron for structure sizes 8", 10", 12", 15", 18", 24", 30" and 36" and shall be made specifically for each basin so as to provide a round bottom flange that closely matches the diameter of the surface drainage inlet. Grates for drain basins shall be capable of supporting various wheel loads as specified by Nyloplast. 12" and 15" square grates will be hinged to the frame using pins. Ductile iron used in the manufacture of the castings shall conform to ASTM A536 grade 70-50-05. Grates and covers shall be provided painted black.

INSTALLATION
The specified PVC surface drainage inlet shall be installed using conventional flexible pipe backfill materials and procedures. The backfill material shall be crushed stone or other granular material meeting the requirements of class 1, class 2, or class 3 material as defined in ASTM D2321. Bedding and backfill for surface drainage inlets shall be well placed and compacted uniformly in accordance with ASTM D2321. The drain basin body will be cut at the time of the final grade. No brick, stone or concrete block will be required to set the grate to the final grade height. For load rated installations, a concrete slab shall be poured under and around the grate and frame. The concrete slab must be designed taking into consideration local soil conditions, traffic loading, and other applicable design factors. For other installation considerations such as migration of fines, ground water, and soft foundations refer to ASTM D2321 guidelines.

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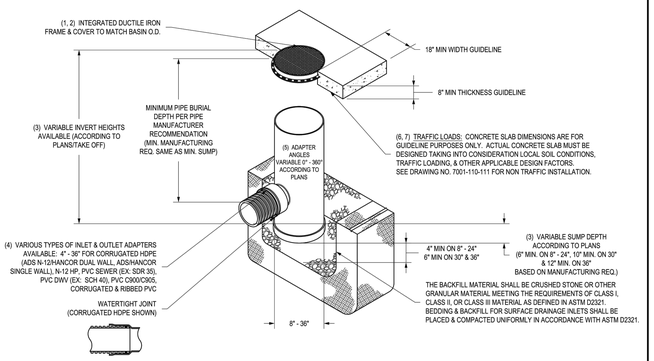
DRAWN BY CJA	MATERIAL	Nyloplast	3130 VERONA AVE BUFORD, GA 30518 PHN (770) 932-2443 FAX (770) 932-2490 www.nyloplast-us.com
DATE 3-10-00			
REVISED BY NMH	PROJECT NO./NAME	TITLE	8 IN - 36 IN DRAIN BASIN SPECIFICATIONS
DATE 02-21-18			
DWG SIZE A	SCALE 1:1 SHEET 1 OF 1	DWG NO.	7001-110-011 REV J

NYLOPLAST DRAIN BASIN WITH SOLID COVER



1 - 8" - 30" SOLID COVERS SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2 - 12" - 30" FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05. 8" & 10" SOLID COVERS FIT DIRECTLY ONTO DRAIN BASINS WITH THE USE OF A PVC BODY TOP. SEE DRAWING NO. 7001-110-045.
3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-065.
4 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER (4" - 36").
5 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.
6 - 12" - 30" SOLID COVERS SHALL MEET H-20 LOAD RATING.
7 - 8" & 10" SOLID COVERS ARE RATED FOR LIGHT DUTY APPLICATIONS ONLY; NO CONCRETE COLLAR NEEDED FOR LIGHT DUTY RATING.

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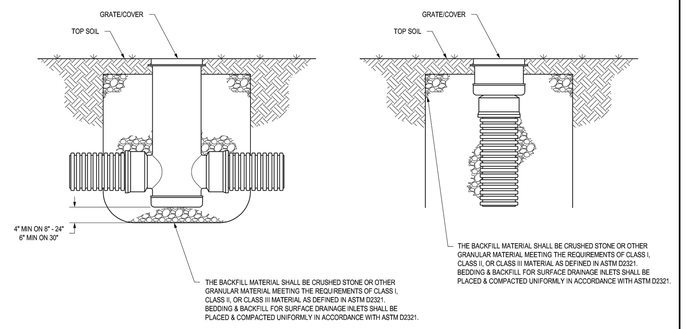
DRAWN BY EBC	MATERIAL	Nyloplast	3130 VERONA AVE BUFORD, GA 30518 PHN (770) 932-2443 FAX (770) 932-2490 www.nyloplast-us.com
DATE 09-14-07			
REVISED BY NMH	PROJECT NO./NAME	TITLE	DRAIN BASIN WITH SOLID COVER QUICK SPEC INSTALLATION DETAIL
DATE 06-12-18			
DWG SIZE A	SCALE 1:40 SHEET 1 OF 1	DWG NO.	7001-110-298 REV E

NON TRAFFIC INSTALLATION



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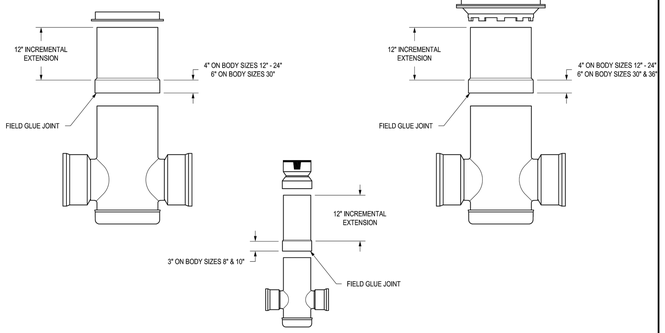
DRAWN BY CJA	MATERIAL	Nyloplast	3130 VERONA AVE BUFORD, GA 30518 PHN (770) 932-2443 FAX (770) 932-2490 www.nyloplast-us.com
DATE 9-30-99			
REVISED BY NMH	PROJECT NO./NAME	TITLE	DRAIN BASIN & INLINE DRAIN NON TRAFFIC INSTALLATION
DATE 03-11-16			
DWG SIZE A	SCALE 1:25 SHEET 1 OF 1	DWG NO.	7001-110-111 REV E

NYLOPLAST RISER EXTENSION: 29 _ _ AG



1. NYLOPLAST RISER JOINTS SHALL BE FIELD INSTALLED USING THE GUIDELINES OUTLINED IN ASTM D2855.
2. PVC CEMENT USED SHALL MEET THE REQUIREMENTS OF ASTM D2564.
3. PVC PRIMER USED SHALL MEET THE REQUIREMENTS OF ASTM F656.

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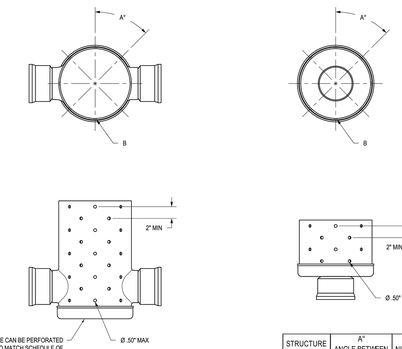
DRAWN BY CJA	MATERIAL	Nyloplast	3130 VERONA AVE BUFORD, GA 30518 PHN (770) 932-2443 FAX (770) 932-2490 www.nyloplast-us.com
DATE 9-18-00			
REVISED BY NMH	PROJECT NO./NAME	TITLE	8 IN - 36 IN RISER EXTENSION
DATE 3-22-18			
DWG SIZE A	SCALE 1:20 SHEET 1 OF 1	DWG NO.	7001-110-065 REV E

PERFORATION SCHEDULE



STRUCTURE SIZE	A° ANGLE BETWEEN HOLES	B NUMBER OF HOLES
8"	90°	4
10"	90°	4
12"	60°	6
15"	60°	6
18"	45°	8
24"	45°	8
30"	36°	10
36"	30°	12
*36" Structure Size for Drain Basin only		

1. PERFORATIONS SHOULD NOT BE ON OR WITHIN 1" OF ADAPTERS.
2. HOLES SHOULD BE STAGGERED EVERY OTHER ROW, AS SHOWN.
3. TO PREVENT BLOCKAGE OF PERFORATIONS, BASIN SHOULD BE WRAPPED IN AN ENGINEER APPROVED GEO-TEXTILE FABRIC.
4. PERFORATIONS CANNOT BE INSTALLED IN 30" BASIN REDUCING CONE.

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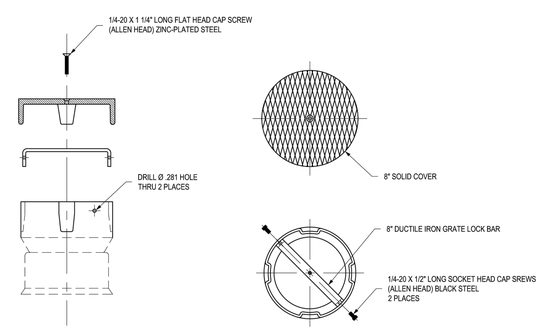
DRAWN BY CJA	MATERIAL	Nyloplast	3130 VERONA AVE BUFORD, GA 30518 PHN (770) 932-2443 FAX (770) 932-2490 www.nyloplast-us.com
DATE 7-20-99			
REVISED BY NMH	PROJECT NO./NAME	TITLE	NYLOPLAST STRUCTURE PERFORATION SCHEDULE
DATE 11-2-18			
DWG SIZE A	SCALE NTS SHEET 1 OF 1	DWG NO.	7001-110-008 REV E

0899CGCL



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DRAWN BY AWA	MATERIAL	Nyloplast	3130 VERONA AVE BUFORD, GA 30518 PHN (770) 932-2443 FAX (770) 932-2490 www.nyloplast-us.com
DATE 7-5-00			
REVISED BY EBC	PROJECT NO./NAME	TITLE	8" SOLID LOCKING COVER ASSEMBLY
DATE 2-20-10			
DWG SIZE A	SCALE 1:6 SHEET 1 OF 1	DWG NO.	7001-110-036 REV B

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SP 2018-029
RECORD DRAWING

Revision	Date	Description

Owner:
Greencrest TPS Hotel, L.P.
3021 Ridge Road, A-120
Rockwall, TX 75032
Phone: (214) 890-9225

~ Civil Engineer ~
F.C. CUNY CORPORATION
#2 Horizon Court - Heath, Texas 75032 - (469) 402-7700
Texas Registered Engineering Firm F-7448

TOWNEPLACE SUITES MARRIOTT
908 E. INTERSTATE 30
ROCKWALL, TX 75087

12/23/2021

STATE OF TEXAS
CAMERON A. SLOWN
106317
LICENSED PROFESSIONAL ENGINEER

Drawn By: F.C. CUNY	*Checked By:* F.C. CUNY
Date: 11/19/2018	*Project No.:* –

Sheet Title: Storm Sewer Plan

Scale: NTS	*Sheet No.:* 9B of 14

LINE – 1

RIP RAP

0+00 STORM LINE –1
CONST TYPE B HDWL
INSTALL GROUTED ROCK RIP RAP
HGL 535.00

0+50 STORM LINE –1
P.I.

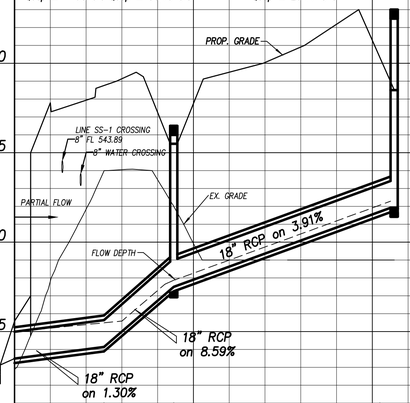
0+89 STORM LINE–1
INSTALL 3'x3' "Y" INLET
THRT. 546.90

2+12 STORM LINE–1
INSTALL OUTLET STRUCTURE
TI 553.00

18" RCP
Q = 9.63 cfs
Partial Flow
d = 1.02'
v = 7.54 fps
Qcap = 11.98 cfs

18" RCP
Q = 9.63 cfs
Partial Flow
d = 0.58'
v = 15.43 fps
Qcap = 30.79 cfs

18" RCP
Q = 5.56 cfs
Partial Flow
d = 0.53'
v = 10.00 fps
Qcap = 20.77 CFS



F.L. 18" 533.50
F.L. 18" 534.15
F.L. 18" 537.50
F.L. 18" 542.00

0+00 1+00 2+00

LINE – 2 (PRIVATE)

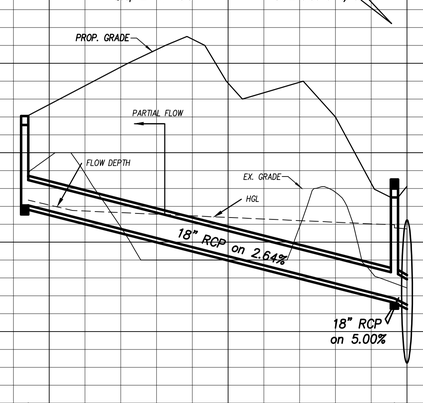
2+12 STORM LINE –2
INSTALL 10' CORB INLET

0+17 STORM LINE–2
INSTALL 3'x3' "Y" INLET
THRT. 542.50
HGL (IN) 540.97
HGL (OUT) 540.80

0+00 STORM LINE –2
CONNECT TO UNDER GROUND DETENTION SYSTEM
HGL 540.74

18" RCP
Q = 3.53 cfs
Partial Flow
d = 0.30'
v = 9.14 fps
Qcap = 17.11 cfs

18" RCP
Q = 7.14 cfs
v = 4.04 fps
Qcap = 17.99 cfs
Hv = 0.25
Sf = 0.0046 ft/ft



F.L. 18" 542.05
F.L. 18" 538.85
F.L. 18" 538.50
F.L. 96" 533.25

0+00 1+00 2+00

LINE – 3

0+00 STORM LINE –3
CONNECT TO UNDER GROUND DETENTION SYSTEM
HGL 542.01

0+02 STORM LINE –3
0+00 LAT–3
W/E CONN.

0+33 STORM LINE –3
INSTALL 3'x3' "Y" INLET
THRT. 542.50
HGL (IN) 542.50
HGL (OUT) 542.18

0+00 LAT–1
W/E CONN.

21" RCP
Q = 11.34 cfs
v = 4.72 fps
Qcap = 38.62 cfs
Hv = 0.35
Sf = 0.0051 ft/ft

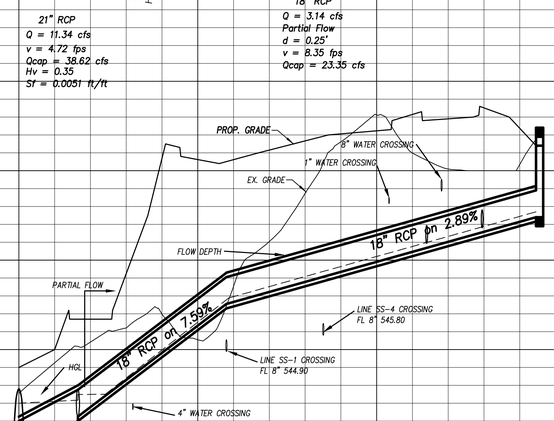
1+16 STORM LINE –3
P.I.

18" RCP
Q = 3.14 cfs
Partial Flow
d = 0.25'
v = 8.35 fps
Qcap = 23.35 cfs

2+28 STORM LINE –3
0+00 DRAIN–1
W/E CONN.

2+59 STORM LINE –3
0+00 DRAIN–2
W/E CONN.

2+89 STORM LINE–3
INSTALL 3'x3' "Y" INLET
THRT. 566.40



F.L. 21" 539.30
F.L. 96" 534.80
F.L. 21" 541.04
F.L. 18" 541.16
F.L. 21" 541.00
F.L. 18" 541.25

0+00 1+00

F.L. 18" 547.67
F.L. 18" 549.11
F.L. 18" 550.69
F.L. 12" 550.94
F.L. 18" 551.55
F.L. 12" 551.80
F.L. 18" 552.40

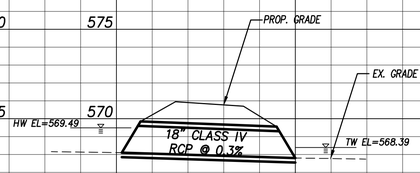
1+00 2+00 3+00

TxDOT STORM LINE

0+97 TxDOT STORM
CONST. 6:1 TxDOT S.E.T.

0+00 TxDOT STORM
CONST. 6:1 TxDOT S.E.T.

18" RCP
Q = 5.12 cfs
v = 4.85 fps
Qcap = 10.87 cfs



F.L. 18" 560.10
F.L. 18" 567.80

560 575 1+00 0+00

LINE – 4 (PRIVATE)

0+00 STORM LINE –4
CONNECT TO UNDER GROUND DETENTION SYSTEM
HGL 542.00

1+09 STORM LINE –4
INSTALL 45° BEND
HGL (OUT) 542.13
HGL (IN) 542.13

1+31 STORM LINE –4
INSTALL 45° BEND
HGL (OUT) 542.15
HGL (IN) 542.17

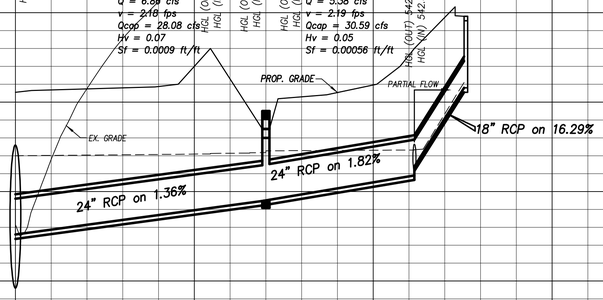
1+40 STORM LINE–4
INSTALL 2'x2' "X" INLET
THRT. 543.50
HGL (OUT) 542.16
HGL (IN) 542.28

2+23 STORM LINE–4
0+00 LAT–2
W/E CONN.
HGL (OUT) 542.32
HGL (IN) 542.33

2+50 STORM LINE –4
INSTALL OIL/WATER SEPARATOR

18" RCP
Q = 6.86 cfs
v = 2.18 fps
Qcap = 28.08 cfs
Hv = 0.07
Sf = 0.0009 ft/ft

18" RCP
Q = 5.38 cfs
v = 2.19 fps
Qcap = 30.59 cfs
Hv = 0.05
Sf = 0.00056 ft/ft



F.L. 24" 537.60
F.L. 96" 534.60
F.L. 18" 539.50
F.L. 24" 540.90
F.L. 18" 541.40
F.L. 18" 541.15
F.L. 18" 545.80
F.L. 18" 549.25

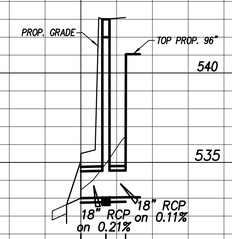
0+00 1+00 2+00 3+00

LINE – 5 (PRIVATE)

0+00 STORM LINE–5
CONST TYPE B HDWL
W/ GROUTED ROCK RIP RAP

0+13 STORM LINE–6
INSTALL 4'x4' BOX
W/ OVERFLOW GRATE
TI. 543.00

0+48 STORM LINE–5
CONNECT TO UNDER GROUND DETENTION SYSTEM



F.L. 18" 533.00
F.L. 18" 533.03
F.L. 18" 533.05
F.L. 96" 533.05

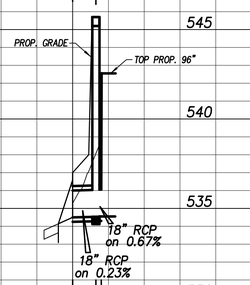
0+00

LINE – 6 (PRIVATE)

0+00 STORM LINE–6
CONST TYPE B HDWL
W/ GROUTED ROCK RIP RAP

0+13 STORM LINE–6
INSTALL 4'x4' BOX
W/ OVERFLOW GRATE
TI. 545.55

0+16 STORM LINE–6
CONNECT TO UNDER GROUND DETENTION SYSTEM



F.L. 18" 534.50
F.L. 18" 534.53
F.L. 18" 534.55
F.L. 96" 534.55

0+00 0+00

LAT – 1 (PRIVATE)

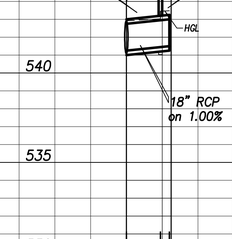
0+00 LAT–1=
0+00 STORM LINE–3
W/E CONN.
HGL (OUT) 542.50

0+19 LAT–1=
INSTALL TRENCH DRAIN
HGL (IN) 543.03
HGL (OUT) 543.22

0+24 LAT–1=
CONNECT TO CARRIAGE DRAINAGE

18" RCP
Q = 8.20 cfs
v = 4.64 fps
Qcap = 10.81 cfs
Hv = 0.33
Sf = 0.006 ft/ft

18" RCP
Q = 3.44 cfs
v = 1.95 fps
Qcap = 10.53 cfs
Hv = 0.06
Sf = 0.001 ft/ft



F.L. 18" 541.25
F.L. 21" 541.00
F.L. 18" 541.45
F.L. 18" 541.30

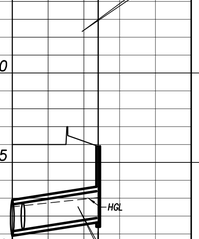
0+00 0+00

LAT – 2 (PRIVATE)

0+00 LAT–2=
2+17 STORM LINE–4
W/E CONN.
HGL (OUT) 542.77

0+07 LAT–2=
0+00 LAT–4
W/E CONN.
0+57 LAT–2
INSTALL TRENCH DRAIN
HGL (IN) 543.08
HGL (OUT) 542.90

18" RCP
Q = 5.38 cfs
v = 3.04 fps
Qcap = 13.17 cfs
Hv = 0.14
Sf = 0.0026 ft/ft



F.L. 18" 541.15
F.L. 24" 540.90
F.L. 18" 541.23
F.L. 18" 541.90

0+00 0+00

H: 1"=40'
V: 1"=4'

SP 2018-029

RECORD DRAWING

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Revision	Date	Description

Owner:
Greencrest TPS Hotel, L.P.
3021 Ridge Road, A-120
Rockwall, TX 75032
Phone: (214) 890-9225

~ Civil Engineer ~
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#2 Horizon Court – Heath, Texas 75032 – (469) 402–7700
Texas Registered Engineering Firm F–7448

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908 E. INTERSTATE 30
ROCKWALL, TX 75087

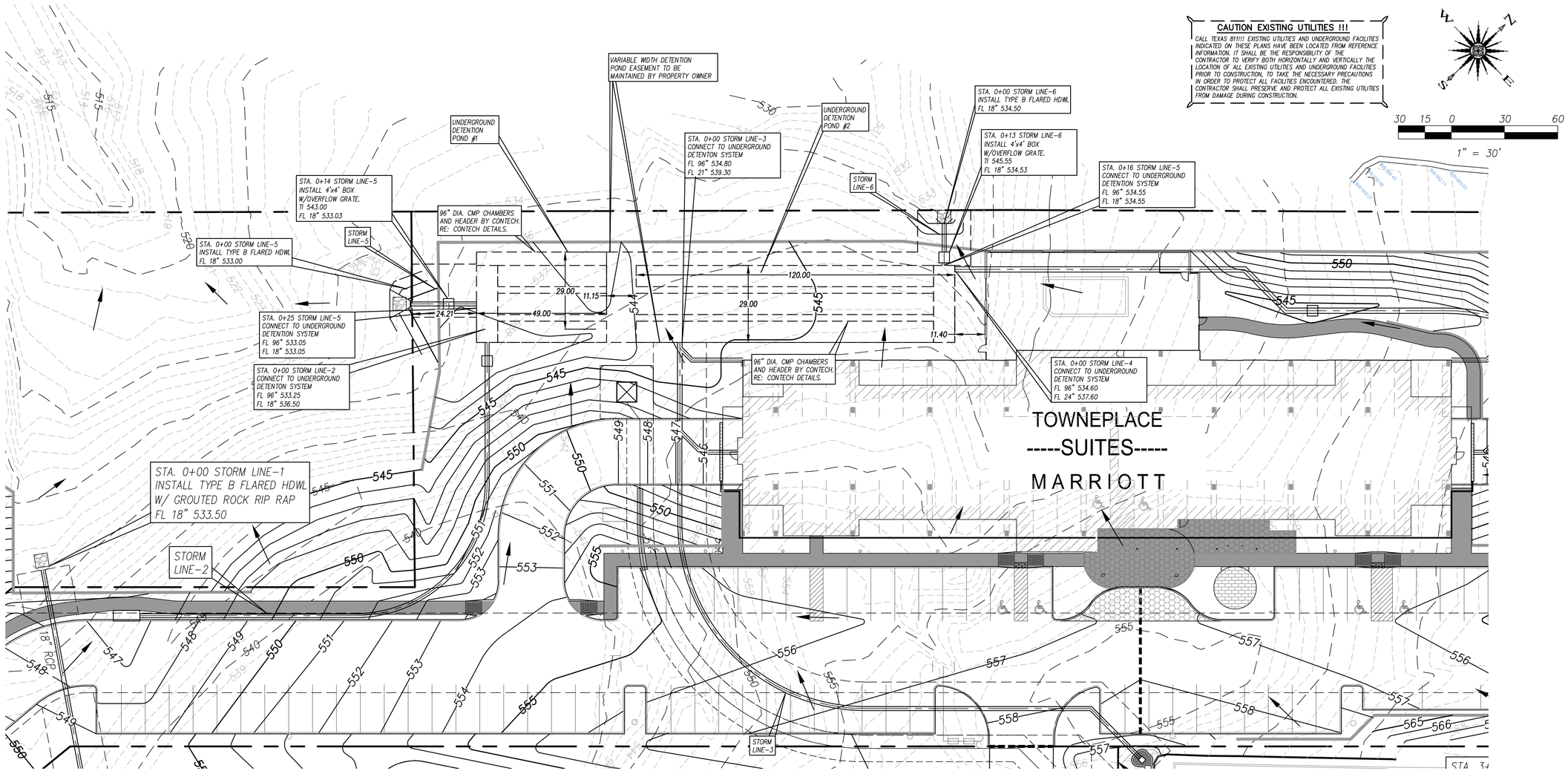
12/23/2021

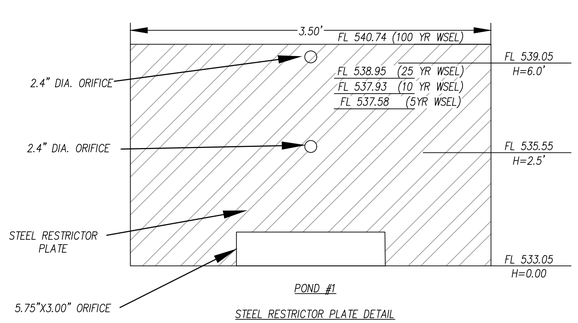
STATE OF TEXAS
CAMERON A. SLOWN
106317
LICENSED
PROFESSIONAL ENGINEER

Drawn By:	Checked By:
F.C. CUNY	F.C. CUNY
Date: 11/19/2018	Project No.: –

Sheet Title:
Storm Sewer Profiles

Scale:	Sheet No.:
H: 1"=40' V: 1"=4'	10 of 14

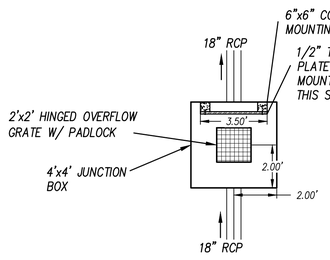




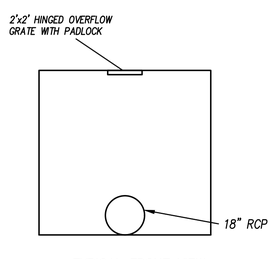
POND #1

STEEL RESTRICTOR PLATE DETAIL

N.T.S

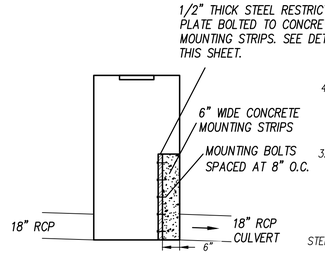


TYPICAL PLAN VIEW

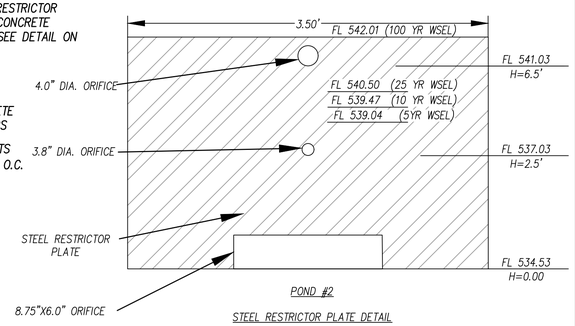


TYPICAL FRONT VIEW

TYPICAL JUNCTION BOX DETAIL



TYPICAL SIDE VIEW



POND #2

STEEL RESTRICTOR PLATE DETAIL

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SP 2018-029

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Texas Registered Engineering Firm F-7448

TOWNEPLACE
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MARRIOTT

908 E. INTERSTATE 30
ROCKWALL, TX 75087

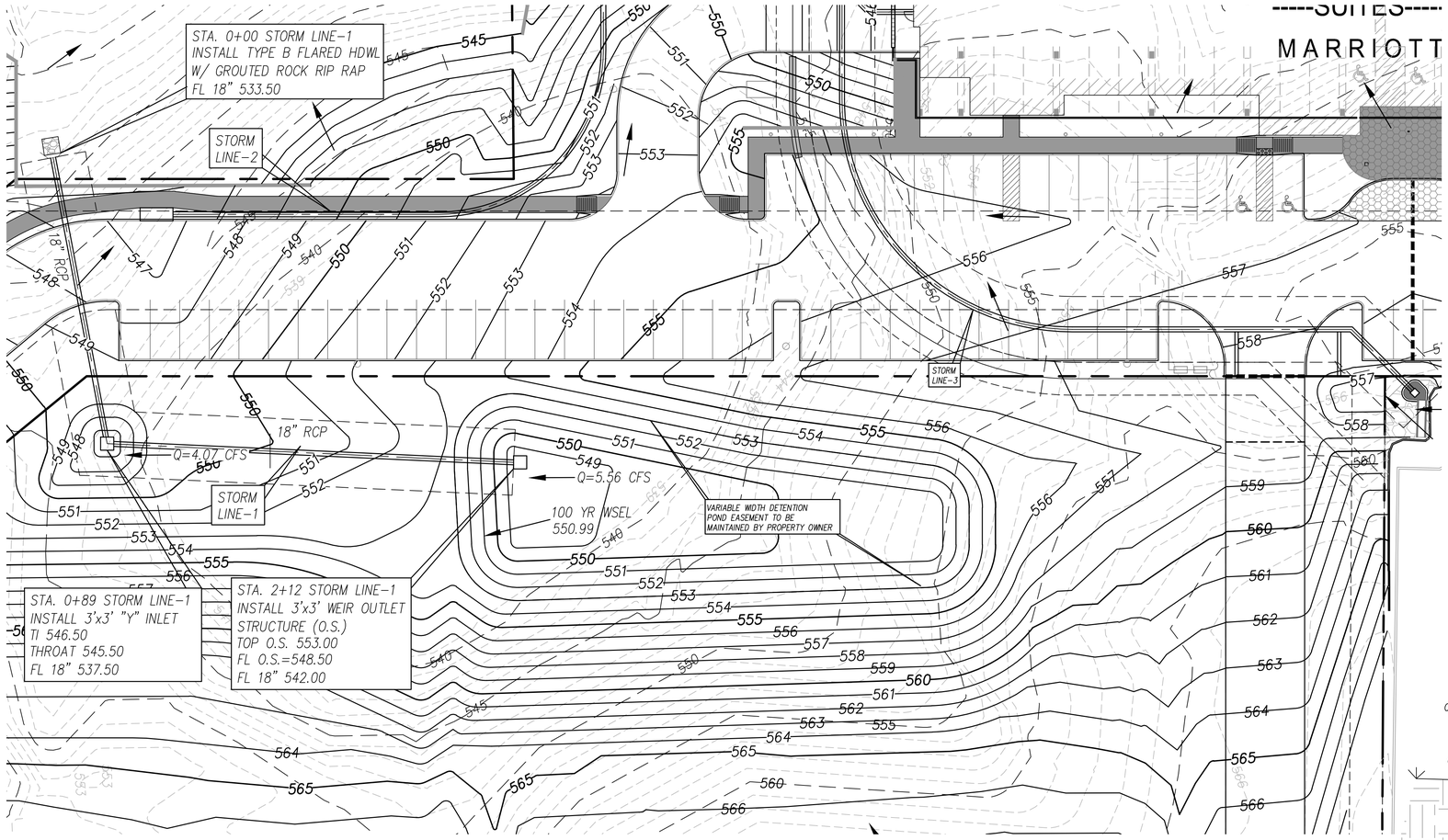
12/23/2021

STATE OF TEXAS
CAMERON A. SLOWN
106317
LICENSED PROFESSIONAL ENGINEER

Drawn By:	Checked By:
F.C. CUNY	F.C. CUNY
Date: 11/19/2018	Project No.: –

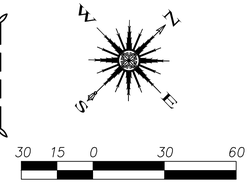
Sheet Title: Detention Pond Plan

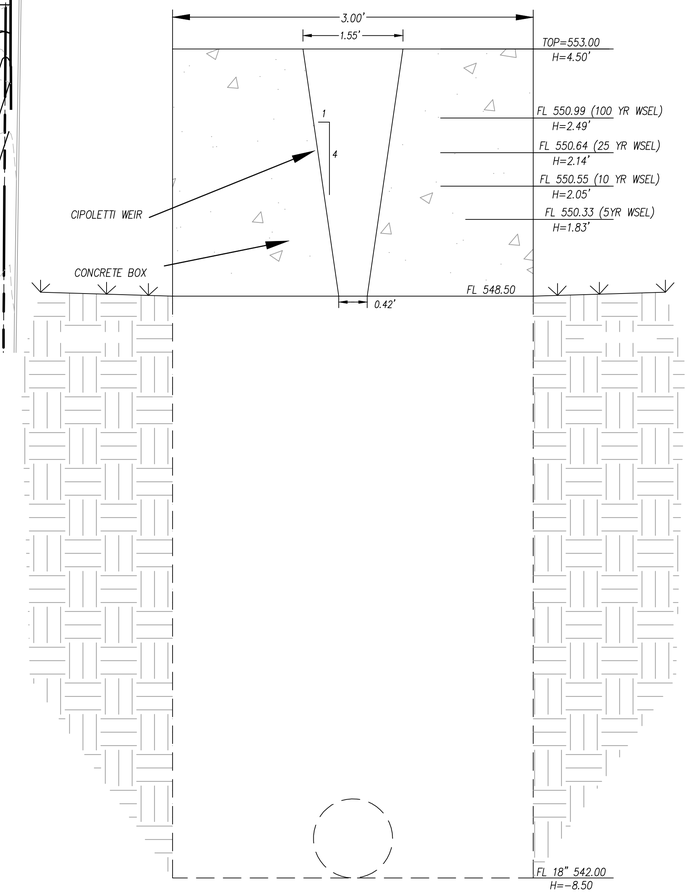
Scale:	Sheet No.:
1"=30'	11 of 14



CAUTION EXISTING UTILITIES !!!

CALL TEXAS 811!!! EXISTING UTILITIES AND UNDERGROUND FACILITIES INDICATED ON THESE PLANS HAVE BEEN LOCATED FROM REFERENCE INFORMATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY BOTH HORIZONTALLY AND VERTICALLY THE LOCATION OF ALL EXISTING UTILITIES AND UNDERGROUND FACILITIES PRIOR TO CONSTRUCTION, TO TAKE THE NECESSARY PRECAUTIONS IN ORDER TO PROTECT ALL FACILITIES ENCOUNTERED. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION.

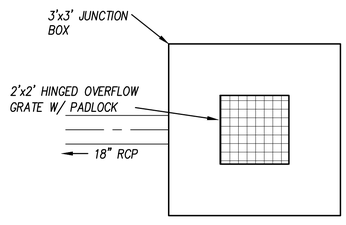




OFFSITE DETENTION POND OUTLET STRUCTURE DETAIL

FRONT/SECTION VIEW

N.T.S



TYPICAL PLAN VIEW

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SP 2018-029

RECORD DRAWING

Revision	Date	Description

Owner:
Greencrest TPS Hotel, L.P.
3021 Ridge Road, A-120
Rockwall, TX 75032
Phone: (214) 890-9225

~ Civil Engineer ~
F.C. CUNY CORPORATION
812 Horizon Court - Heath, Texas 75032 - (469) 402-7700
Texas Registered Engineering Firm F-7448

TOWNEPLACE
SUITES
MARRIOTT

908 E. INTERSTATE 30
ROCKWALL, TX 75087

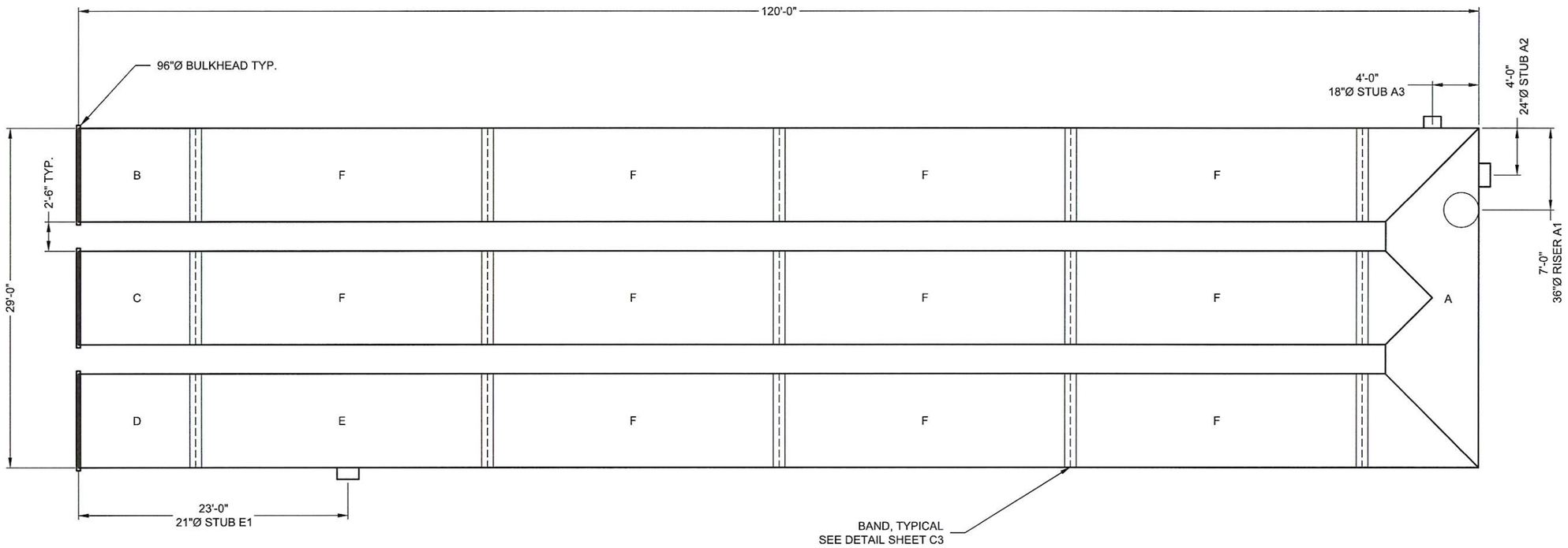
12/23/2021

STATE OF TEXAS
CAMERON A. SLOWN
106317
LICENSED
PROFESSIONAL ENGINEER

Drawn By:	Checked By:
F.C. CUNY	F.C. CUNY
Date: 11/19/2018	Project No.: –

Sheet Title:
Offsite Detention Pond Plan

Scale:	Sheet No.:
1"=30'	11a of 14



THE UNDERSIGNED HEREBY APPROVES THE ATTACHED (5) PAGES INCLUDING THE FOLLOWING:

- **PIPE STORAGE = 18,347 CF**
- **MAINLINE PIPE GAGE = 16**
- **WALL TYPE = SOLID**
- **DIAMETER = 96"**
- **FINISH = ALT2**
- **CORRUGATION = 5x1**

CUSTOMER _____ DATE 8/6/2019

STATE OF TEXAS
MITCHELL T HARDERT
109405
LICENSED
PROFESSIONAL ENGINEER
5/3/19

CBC ENGINEERS & ASSOCIATES, LTD.
TBPE FIRM NUMBER F-16105

ASSEMBLY
SCALE: 1" = 10'
PIPE STORAGE: 18,347 CF
LOADING: H20
PIPE INV. = VARIES'±

STUB INFORMATION		
PIECE	STUB INVERT	SYSTEM INVERT
24"Ø STUB A2	537.60	534.60
18"Ø STUB A3	534.55	534.55
21"Ø STUB E1	539.30	534.80

RISER INFORMATION		
PIECE	RIM ELEV.	SYSTEM INVERT
36"Ø RISER A1	545.55	534.60

NOTES

- ALL RISER AND STUB DIMENSIONS ARE TO CENTERLINE.
- ALL ELEVATIONS, DIMENSIONS, AND LOCATIONS OF RISERS AND INLETS, SHALL BE VERIFIED BY THE ENGINEER OF RECORD (EOR) PRIOR TO RELEASING FOR FABRICATION.
- ALL FITTINGS AND REINFORCEMENT COMPLY WITH ASTM A998.
- ALL RISERS AND STUBS ARE 2⅔" x ½" CORRUGATION AND 16 GAGE UNLESS OTHERWISE NOTED.
- RISERS TO BE FIELD TRIMMED TO GRADE AS REQUIRED, BY CONTRACTOR.
- QUANTITY OF PIPE SHOWN DOES NOT PROVIDE EXTRA PIPE FOR CONNECTING THE SYSTEM TO EXISTING PIPE OR DRAINAGE STRUCTURES. OUR SYSTEM AS DETAILED PROVIDES NOMINAL INLET AND/OR OUTLET PIPE STUB FOR CONNECTION TO EXISTING DRAINAGE FACILITIES. IF ADDITIONAL PIPE IS NEEDED IT IS THE RESPONSIBILITY OF THE CONTRACTOR.
- ALL ACCESS CASTINGS ARE THE RESPONSIBILITY OF THE CONTRACTOR AND ARE NOT SUPPLIED BY CONTECH.

Approved By	Date
MTH	4/30/19
Project No.	Rev.
CBC-22340	1

CBC Engineers

Rev.	Date	By	Description
1	5/3/19	JBE	REV. 1

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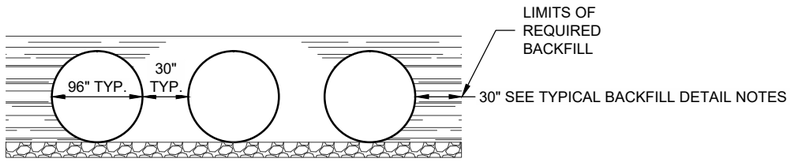
www.ContechES.com
11815 NE Glenn Widing Drive, Portland, OR 97220
800-548-4667 503-240-3393 800-561-1271 FAX

CONTECH CMP DETENTION SYSTEMS
CONTECH PROPOSAL DRAWING

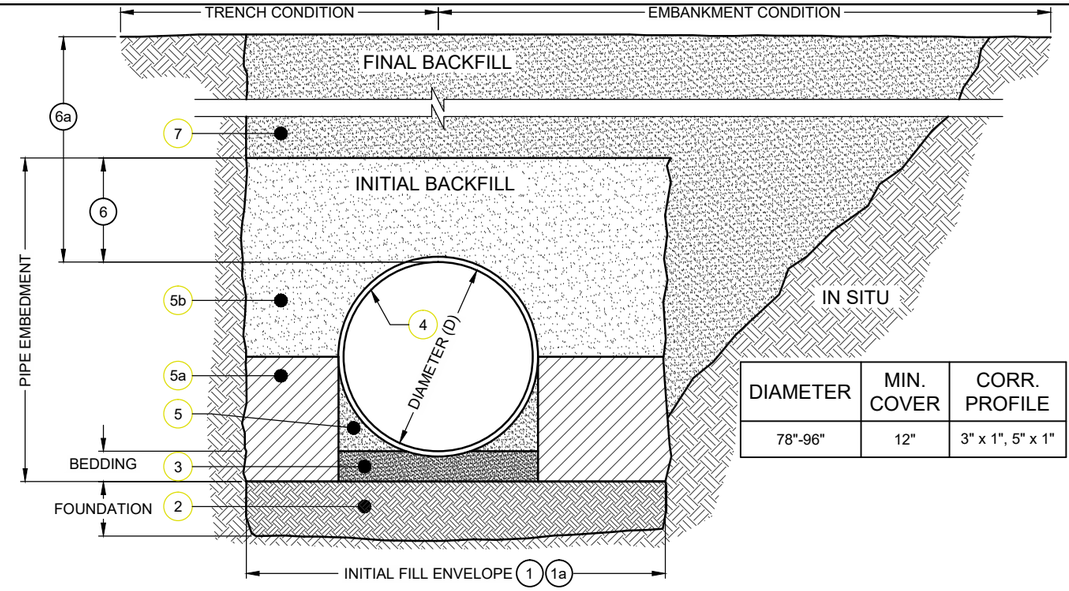
96"Ø UNDERGROUND DETENTION SYSTEM - 609760-010
TOWNEPLACE SUITES MARRIOTT - ROCKWALL TX
ROCKWALL, TX
SITE DESIGNATION: POND #2

PROJECT No.:	SEQ. No.:	DATE:
609760	010	4/2/2019
DESIGNED:	DRAWN:	
SJ	SJ	
CHECKED:	APPROVED:	
SJ	SJ	
SHEET NO.:		
C1 OF 5		



TYPICAL SECTION VIEW

NOT TO SCALE



DIAMETER	MIN. COVER	CORR. PROFILE
78"-96"	12"	3" x 1", 5" x 1"

BACKFILL REQUIREMENTS FOLLOW THE GUIDELINES OF AASHTO LRFD BRIDGE DESIGN (SEC 12) AND CONSTRUCTION (SEC 26)

1 MINIMUM TRENCH WIDTH MUST ALLOW ROOM FOR PROPER COMPACTION OF HAUNCH MATERIALS UNDER THE PIPE.
THE MINIMUM TRENCH WIDTH (12.6.6.1):
PIPE ≤ 12": D + 16"
PIPE > 12": 1.5D + 12"

1a MINIMUM EMBANKMENT WIDTH (IN FEET) FOR INITIAL FILL ENVELOPE (12.6.6.2):
PIPE < 24": 3.0D
PIPE 24" - 144": D + 4'0"
PIPE > 144": D + 10'0"

2 THE FOUNDATION UNDER THE PIPE AND SIDE BACKFILL SHALL BE ADEQUATE TO SUPPORT THE LOADS ACTING UPON IT (26.5.2).

3 BEDDING MATERIAL SHALL BE A RELATIVELY LOOSE MATERIAL THAT IS ROUGHLY SHAPED TO FIT THE BOTTOM OF THE PIPE, AND A MINIMUM OF TWICE THE CORRUGATION DEPTH IN THICKNESS, WITH THE MAXIMUM PARTICLE SIZE OF ONE-HALF OF THE CORRUGATION DEPTH (26.3.8.1, 26.5.3).

4 CORRUGATED STEEL PIPE (CSP / HEL-COR), DIAMETERS 78" - 96"

5 HAUNCH ZONE MATERIAL SHALL BE HAND SHOVELED OR SHOVEL SLICED INTO PLACE TO ALLOW FOR PROPER COMPACTION (26.5.4).

5a INITIAL BACKFILL SHALL BE WELL GRADED CRUSHED ROCK UP TO 2/3 ABOVE THE INVERT OF THE PIPE.

5b BACKFILL PLACED ABOVE THE SPRINGLINE TO MEET AASHTO A-1, A-2 OR A-3 CLASSIFICATION, OR APPROVED EQUAL, COMPACTED TO 90% STANDARD PROCTOR (T 99). MAXIMUM PARTICLE SIZE NOT TO EXCEED 3" (12.4.1.2). ALL LIFTS PLACED IN A CONTROLLED MANNER. IT IS RECOMMENDED THAT LIFTS NOT EXCEED AN 8" UNCOMPACTED LIFT HEIGHT TO PREVENT UNEVEN LOADING, AND THE LESSER OF 1/3 THE DIAMETER OR 24" AS THE MAXIMUM DIFFERENTIAL SIDE-TO-SIDE (26.5.4).

6 SAND BACKFILL (AASHTO A-3 OR APPROVED EQUAL) TO BE PLACED FROM FROM 2/3 ABOVE INVERT OF THE PIPE TO 12" ABOVE PIPE.

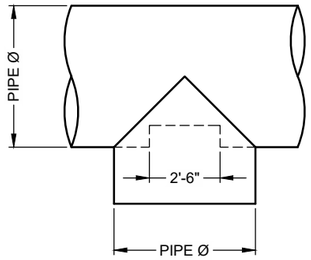
6a TOTAL HEIGHT OF COMPACTED COVER FOR CONVENTIONAL HIGHWAY LOADS IS MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TOP OF RIGID PAVEMENT (12.6.6.3).

7 FINAL BACKFILL MATERIAL SELECTION AND COMPACTION REQUIREMENTS SHALL FOLLOW THE PROJECT PLANS AND SPECIFICATIONS PER THE ENGINEER OF RECORD (26.5.4.1).

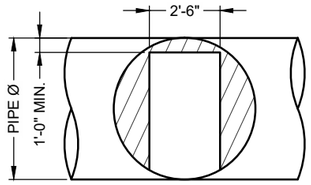
NOTES:
- GEOTEXTILE SHOULD BE CONSIDERED FOR USE TO PREVENT SOIL MIGRATION INTO VARYING SOIL TYPES (PROJECT ENGINEER).
- FOR MULTIPLE BARREL INSTALLATIONS THE RECOMMENDED STANDARD SPACING BETWEEN PARALLEL PIPE RUNS SHALL BE PIPE DIA./2 BUT NO LESS THAN 12", OR 36" FOR PIPE DIAMETERS 72" AND LARGER. CONTACT YOUR CONTECH REPRESENTATIVE FOR NONSTANDARD SPACING (TABLE C12.6.7-1).

TYPICAL BACKFILL DETAIL

NOT TO SCALE



PLAN

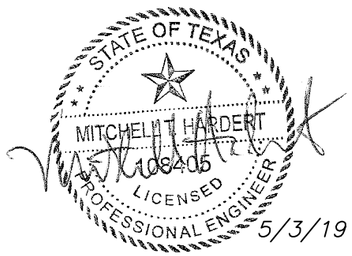


FRONT

48"Ø to 90"Ø FITTING REINFORCEMENT
MAY BE REQUIRED BASED ON HEIGHT OF
COVER AND LIVE LOAD CONDITION

TYPICAL MANWAY DETAIL

NOT TO SCALE



CBC ENGINEERS & ASSOCIATES, LTD.
TBPE FIRM NUMBER F-16105

Approved By	Date
MTH	4/30/19
Project No.	Rev.
CBC-22340	1

CBC Engineers

Rev.	Date	By	Description
1	5/3/19	JBE	REV. 1

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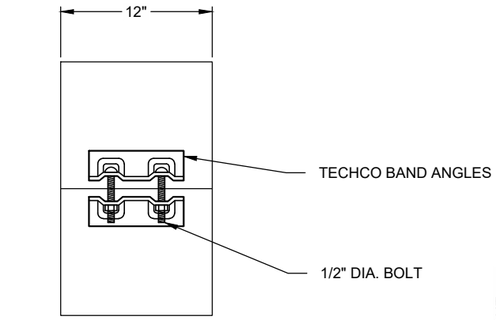
800-548-4667 503-240-3393 800-561-1271 FAX

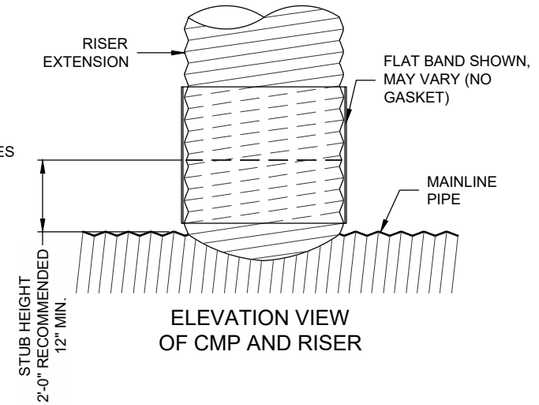
CONTECH CMP DETENTION SYSTEMS
CONTECH PROPOSAL DRAWING

96"Ø UNDERGROUND DETENTION SYSTEM - 609760-010
TOWNEPLACE SUITES MARRIOTT - ROCKWALL TX
ROCKWALL, TX
SITE DESIGNATION: POND #2

PROJECT No.:	SEQ. No.:	DATE:
609760	010	4/2/2019
DESIGNED: SJ	DRAWN: SJ	
CHECKED: SJ	APPROVED: SJ	
SHEET NO.: C2 OF 5		



CONNECTION DETAIL
7 1/2" TECHCO SHOWN - MAY VARY



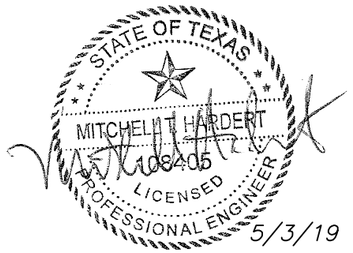
ELEVATION VIEW
OF CMP AND RISER

PLAIN END CMP RISER PIPE

GENERAL NOTES:

1. **DELIVERED BAND STYLE AND FASTENER TYPE MAY VARY BY FABRICATION PLANT.**
2. JOINT IS TO BE ASSEMBLED PER AASHTO BRIDGE CONSTRUCTION SPECIFICATION SEC 26.4.2.4.
3. BAND MATERIAL AND GAGE TO BE SAME AS RISER MATERIAL.
4. IF RISER HAS A HEIGHT OF COVER OF 10' OR MORE, USE A SLIP JOINT.
5. BANDS ARE NORMALLY FURNISHED AS FOLLOWS:
   - 12" THRU 48" 1-PIECE
   - 54" 2-PIECES
6. ALL RISER JOINT COMPONENTS WILL BE FIELD ASSEMBLED.
7. MANHOLE RISERS IN APPLICATIONS WHERE TRAFFIC LOADS ARE IMPOSED REQUIRE SPECIAL DESIGN CONSIDERATIONS.
8. DIMENSIONS SUBJECT TO MANUFACTURING TOLERANCES.

12" RISER BAND DETAIL
NOT TO SCALE



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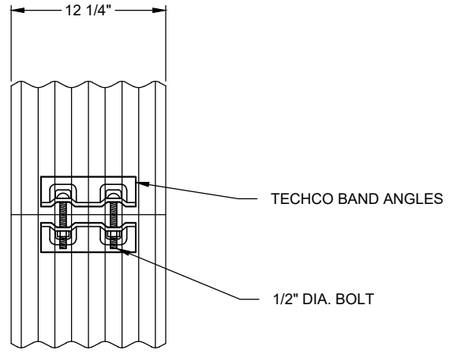
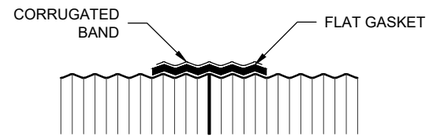
TBPE FIRM NUMBER F-16105



CONNECTION DETAIL
7 1/2" TECHCO



FLAT GASKET

2 2/3"x1/2" RIVETED PIPE

GENERAL NOTES:

1. JOINT IS TO BE ASSEMBLED PER AASHTO BRIDGE CONSTRUCTION SPECIFICATION SEC 26.4.2.4.
2. BAND MATERIALS AND/OR COATING CAN VARY BY LOCATION. CONTACT YOUR CONTECH REPRESENTATIVE FOR AVAILABILITY.
3. BANDS ARE SHAPED TO MATCH THE PIPE-ARCH WHEN APPLICABLE.
4. BANDS ARE NORMALLY FURNISHED AS FOLLOWS:
   - 12" THRU 48" 1-PIECE
   - 54" THRU 96" 2-PIECES
   - 102" THRU 144" 3-PIECES
5. BAND FASTENERS ARE ATTACHED WITH SPOT WELDS, RIVETS OR HAND WELDS.
6. ALL CMP IS REROLLED TO HAVE ANNULAR END CORRUGATIONS OF 2 2/3"x1/2"
7. DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.
8. ORDER SHALL DESIGNATE GASKET OPTION, IF REQUIRED (SEE DETAILS ABOVE).

5-C BAND DETAIL
NOT TO SCALE

Approved By	Date
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CBC-22340	1

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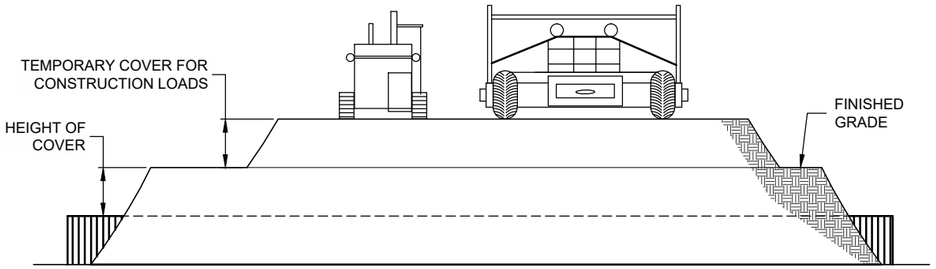
CONTECH CMP DETENTION SYSTEMS
CONTECH **PROPOSAL** DRAWING

96"Ø UNDERGROUND DETENTION SYSTEM - 609760-010
TOWNEPLACE SUITES MARRIOTT - ROCKWALL TX
ROCKWALL, TX
SITE DESIGNATION: POND #2

PROJECT No.:	SEQ. No.:	DATE:
609760	010	4/2/2019
DESIGNED: SJ	DRAWN: SJ	
CHECKED: SJ	APPROVED: SJ	
SHEET NO.: C3 OF 5		



CONSTRUCTION LOADS

FOR TEMPORARY CONSTRUCTION VEHICLE LOADS, AN EXTRA AMOUNT OF COMPACTED COVER MAY BE REQUIRED OVER THE TOP OF THE PIPE. THE HEIGHT-OF-COVER SHALL MEET THE MINIMUM REQUIREMENTS SHOWN IN THE TABLE BELOW. THE USE OF HEAVY CONSTRUCTION EQUIPMENT NECESSITATES GREATER PROTECTION FOR THE PIPE THAN FINISHED GRADE COVER MINIMUMS FOR NORMAL HIGHWAY TRAFFIC.

PIPE SPAN, INCHES	AXLE LOADS (kips)			
	18-50	50-75	75-110	110-150
	MINIMUM COVER (FT)			
12-42	2.0	2.5	3.0	3.0
48-72	3.0	3.0	3.5	4.0
78-120	3.0	3.5	4.0	4.0
126-144	3.5	4.0	4.5	4.5

*MINIMUM COVER MAY VARY, DEPENDING ON LOCAL CONDITIONS. THE CONTRACTOR MUST PROVIDE THE ADDITIONAL COVER REQUIRED TO AVOID DAMAGE TO THE PIPE. MINIMUM COVER IS MEASURED FROM THE TOP OF THE PIPE TO THE TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE.

CONSTRUCTION LOADING DIAGRAM

NOT TO SCALE

SPECIFICATION FOR CORRUGATED STEEL PIPE-ALUMINIZED TYPE 2 STEEL

SCOPE

THIS SPECIFICATION COVERS THE MANUFACTURE AND INSTALLATION OF THE CORRUGATED STEEL PIPE (CSP) DETAILED IN THE PROJECT PLANS.

MATERIAL

THE ALUMINIZED TYPE 2 STEEL COILS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M274 OR ASTM A929.

PIPE

THE CSP SHALL BE MANUFACTURED IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF AASHTO M36 OR ASTM A760. THE PIPE SIZES, GAGES AND CORRUGATIONS SHALL BE AS SHOWN ON THE PROJECT PLANS.

ALL FABRICATION OF THE PRODUCT SHALL OCCUR WITHIN THE UNITED STATES.

HANDLING AND ASSEMBLY

SHALL BE IN ACCORDANCE WITH RECOMMENDATIONS OF THE NATIONAL CORRUGATED STEEL PIPE ASSOCIATION (NCSPA)

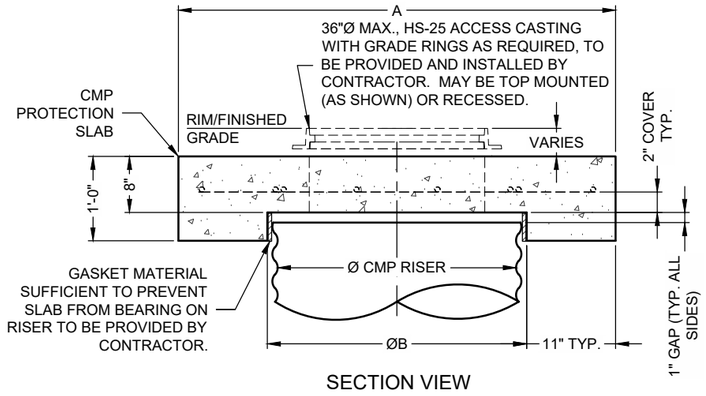
INSTALLATION

SHALL BE IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SECTION 26, DIVISION II OR ASTM A798 AND IN CONFORMANCE WITH THE PROJECT PLANS AND SPECIFICATIONS. IF THERE ARE ANY INCONSISTENCIES OR CONFLICTS THE CONTRACTOR SHOULD DISCUSS AND RESOLVE WITH THE SITE ENGINEER.

IT IS ALWAYS THE RESPONSIBILITY OF THE CONTRACTOR TO FOLLOW OSHA GUIDELINES FOR SAFE PRACTICES.

MATERIAL SPECIFICATION

NOT TO SCALE

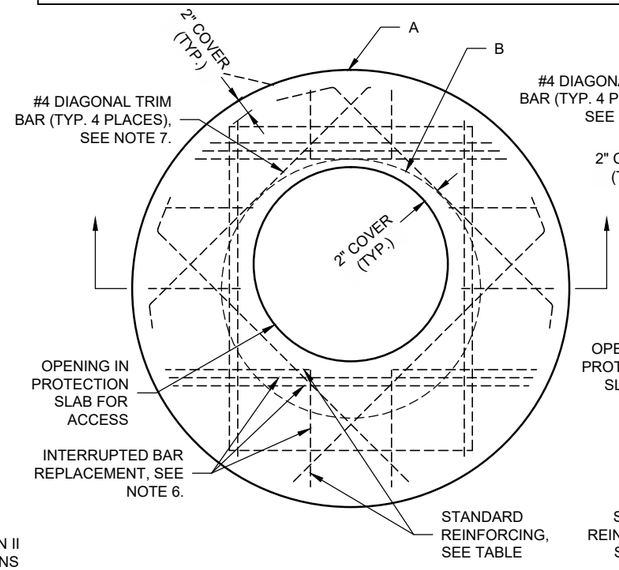


SECTION VIEW

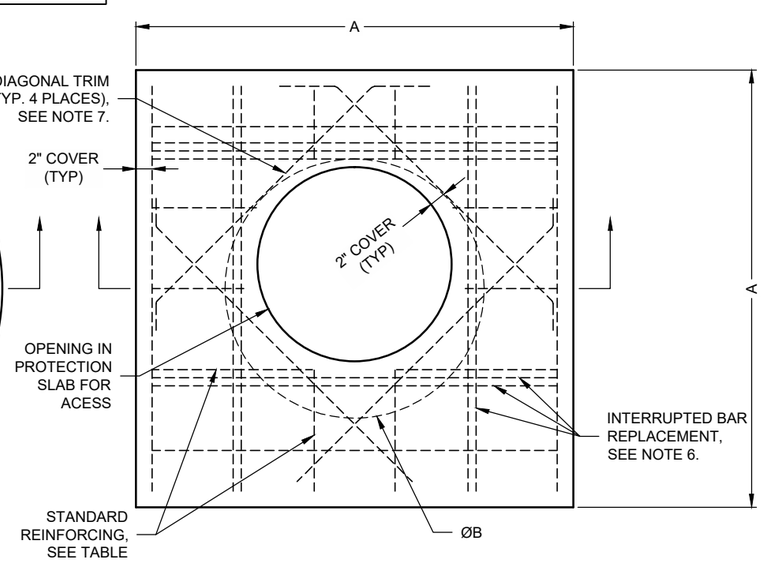
REINFORCING TABLE				
Ø CMP RISER	A	B Ø	REINFORCING	**BEARING PRESSURE (PSF)
24"	4'Ø 4'x4'	26"	#5 @ 10" OCEW #5 @ 10" OCEW	2,540 1,900
30"	4'-6"Ø 4'-6" x 4'-6"	32"	#5 @ 10" OCEW #5 @ 9" OCEW	2,260 1,670
36"	5'Ø 5' x 5'	38"	#5 @ 9" OCEW #5 @ 8" OCEW	2,060 1,500
42"	5'-6"Ø 5'-6" x 5'-6"	44"	#5 @ 8" OCEW #5 @ 8" OCEW	1,490 1,370
48"	6'Ø 6' x 6'	50"	#5 @ 7" OCEW #5 @ 7" OCEW	1,210 1,270

** ASSUMED SOIL BEARING CAPACITY

ACCESS CASTING NOT SUPPLIED BY CONTECH



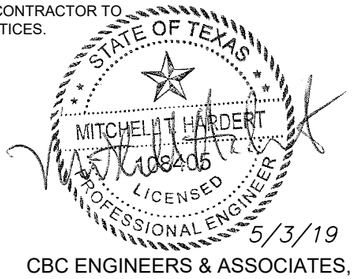
ROUND OPTION PLAN VIEW



SQUARE OPTION PLAN VIEW

NOTES:

1. DESIGN IN ACCORDANCE WITH AASHTO, 17th EDITION AND ACI 350.
2. DESIGN LOAD HS25.
3. EARTH COVER = 1' MAX.
4. CONCRETE STRENGTH = 4,000 psi
5. REINFORCING STEEL = ASTM A615, GRADE 60.
6. PROVIDE ADDITIONAL REINFORCING AROUND OPENINGS EQUAL TO THE BARS INTERRUPTED, HALF EACH SIDE. ADDITIONAL BARS TO BE IN THE SAME PLANE.
7. TRIM OPENING WITH DIAGONAL #4 BARS, EXTEND BARS A MINIMUM OF 12" BEYOND OPENING, BEND BARS AS REQUIRED TO MAINTAIN BAR COVER.
8. PROTECTION SLAB AND ALL MATERIALS TO BE PROVIDED AND INSTALLED BY CONTRACTOR.
9. DETAIL DESIGN BY DELTA ENGINEERS, ARCHITECTS AND LAND SURVEYORS, ENDWELL, NY.



CBC ENGINEERS & ASSOCIATES, LTD.
TBPE FIRM NUMBER F-16105

MANHOLE CAP DETAIL

NOT TO SCALE

Approved By	Date
MTH	4/30/19
Project No.	Rev.
CBC-22340	1

CBC Engineers

Rev.	Date	By	Description
1	5/3/19	JBE	REV. 1

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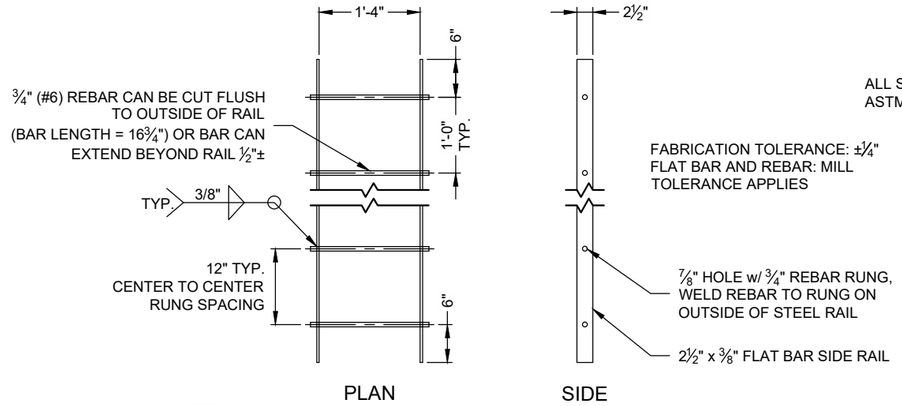
CONTECH CMP DETENTION SYSTEMS

CONTECH **PROPOSAL** DRAWING

96"Ø UNDERGROUND DETENTION SYSTEM - 609760-010
TOWNEPLACE SUITES MARRIOTT - ROCKWALL TX
ROCKWALL, TX
SITE DESIGNATION: POND #2

PROJECT No.:	SEQ. No.:	DATE:
609760	010	4/2/2019
DESIGNED:	DRAWN:	
SJ	SJ	
CHECKED:	APPROVED:	
SJ	SJ	
SHEET NO.:		
C4 OF 5		



ALL STEEL PER ASTM A36

FABRICATION TOLERANCE: ±¼" FLAT BAR AND REBAR: MILL TOLERANCE APPLIES

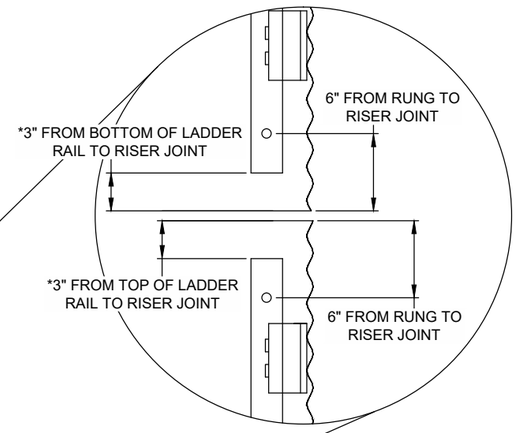
NOTES:
1. LADDERS CAN BE MADE IN 20'-0" STANDARD LENGTHS AND CUT TO FIT
2. ALL MATERIAL TO MEET ASTM A36
3. LADDER TO BE HOT DIPPED GALVANIZED PER ASTM A-123 AFTER FABRICATION IS COMPLETE

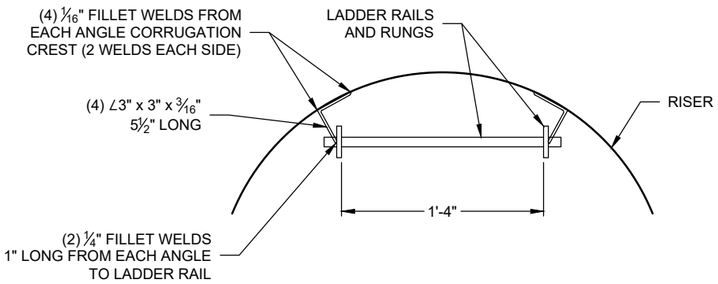
STANDARD LADDER DETAIL

NOT TO SCALE

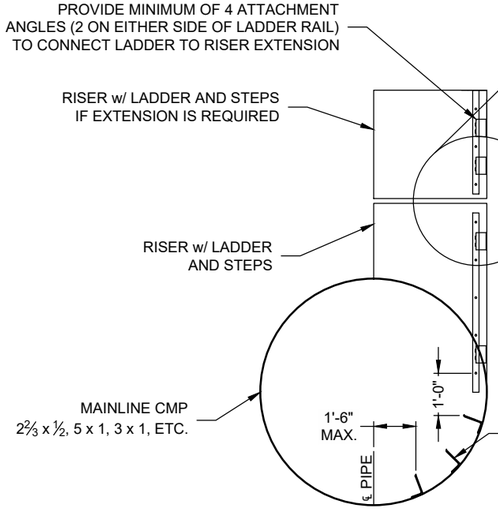
PART NO. HALAGVL16

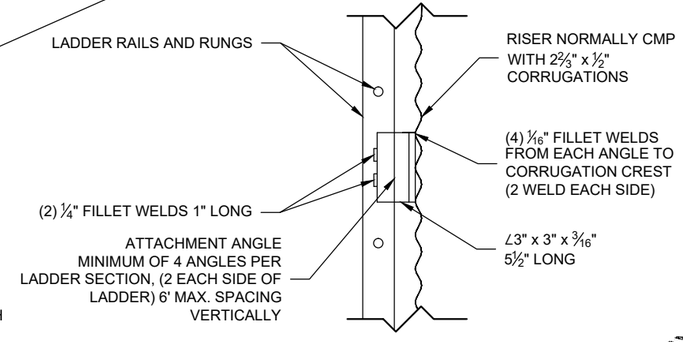
*NOTE: WHEN RISER EXTENSIONS ARE USED, THE PLANT SHOULD CUT 3" FROM THE SIDE RAILS AS SHOWN



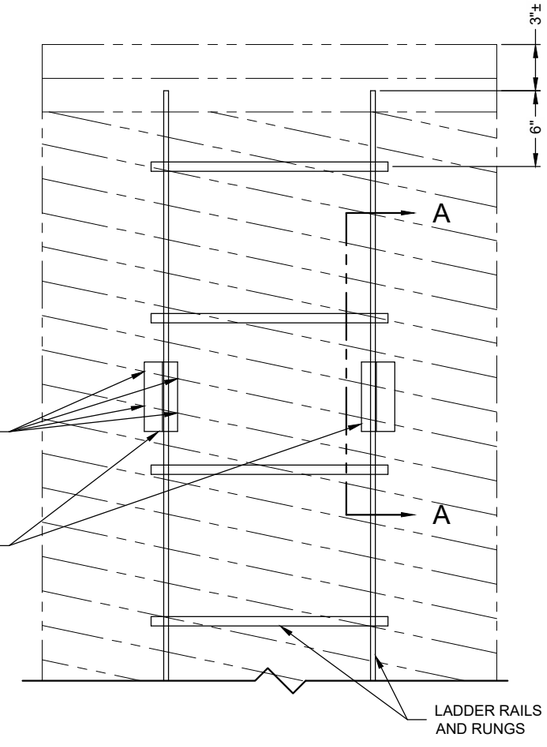


PLAN





SECTION A-A



ELEVATION

NOTE:
THIS DRAWING IS INTENDED TO APPLY TO LADDERS INSTALLED IN RISERS HAVING A DIAMETER OF 30" OR LARGER. DUE TO SPACE CONSTRAINTS AND LIMITED ACCESSIBILITY, THE PRACTICALITY AND SUITABILITY OF UTILIZING RISERS SMALLER THAN 30" DIAMETER AND/OR INCORPORATING LADDERS IN THESE SMALLER DIAMETER RISERS SHOULD BE ADDRESSED BY THE OWNER AND PROJECT ENGINEER

RISER LADDER DETAIL

NOT TO SCALE

CBC ENGINEERS & ASSOCIATES, LTD.
TBPE FIRM NUMBER F-16105

Approved By	Date
MTH	4/30/19
Project No.	Rev.
CBC-22340	1

CBC Engineers

Rev.	Date	By	Description
1	5/3/19	JBE	REV. 1

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www.ContechES.com
11815 NE Glenn Widing Drive, Portland, OR 97220
800-548-4667 503-240-3393 800-561-1271 FAX

CONTECH CMP DETENTION SYSTEMS

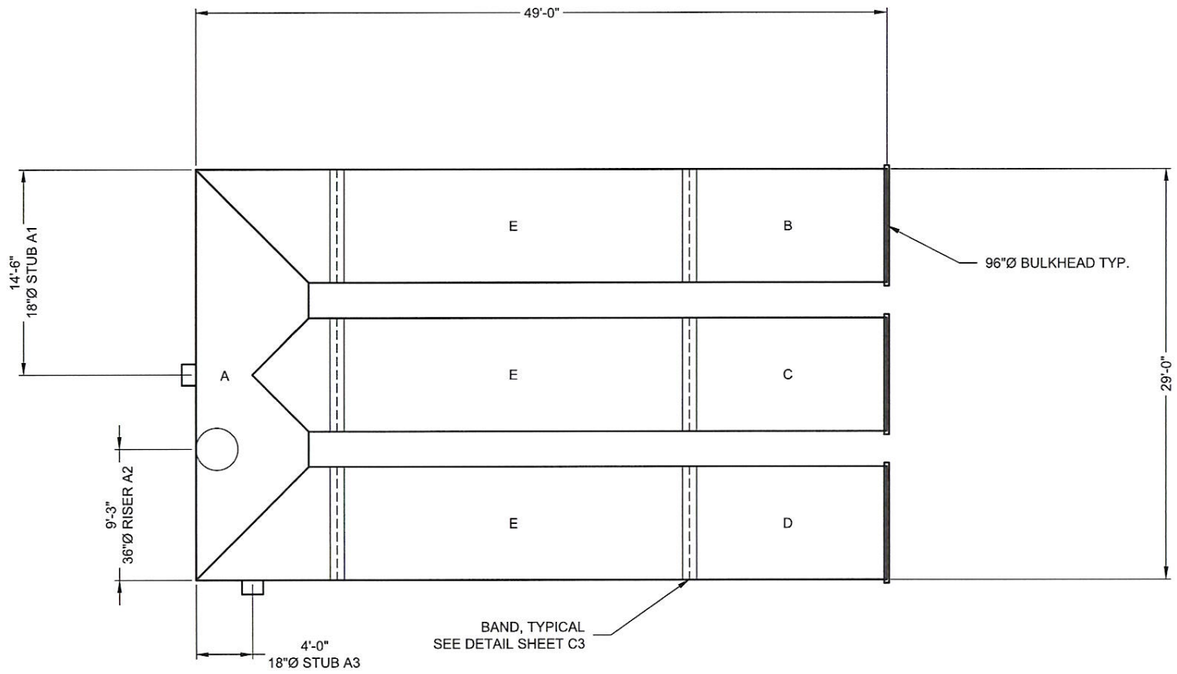
CONTECH **PROPOSAL** DRAWING

96"Ø UNDERGROUND DETENTION SYSTEM - 609760-010
TOWNEPLACE SUITES MARRIOTT - ROCKWALL TX
ROCKWALL, TX
SITE DESIGNATION: POND #2

PROJECT No.:	SEQ. No.:	DATE:
609760	010	4/2/2019
DESIGNED:	DRAWN:	
SJ	SJ	
CHECKED:	APPROVED:	
SJ	SJ	
SHEET NO.:		
C5 OF 5		

STUB INFORMATION		
PIECE	STUB INVERT	SYSTEM INVERT
18"Ø STUB A1	533.05	533.05
18"Ø STUB A3	536.50	533.25

RISER INFORMATION		
PIECE	RIM ELEV.	SYSTEM INVERT
36"Ø RISER A2	542.50	533.15



THE UNDERSIGNED HEREBY APPROVES THE ATTACHED (5) PAGES INCLUDING THE FOLLOWING:

- **PIPE STORAGE = 7,641 CF**
- **MAINLINE PIPE GAGE = 16**
- **WALL TYPE =**
- **DIAMETER = 96"**
- **FINISH = ALT2**
- **CORRUGATION = 5x1**

CUSTOMER _____ DATE 8/6/2019

STATE OF TEXAS
MITCHELL T. HARDERT
100405
LICENSED
PROFESSIONAL ENGINEER
5/3/19

CBC ENGINEERS & ASSOCIATES, LTD.
TBPE FIRM NUMBER F-16105

ASSEMBLY
SCALE: 1" = 10'
PIPE STORAGE: 7,641 CF
LOADING: H20
PIPE INV. = VARIES'±

NOTES

- ALL RISER AND STUB DIMENSIONS ARE TO CENTERLINE.
- ALL ELEVATIONS, DIMENSIONS, AND LOCATIONS OF RISERS AND INLETS, SHALL BE VERIFIED BY THE ENGINEER OF RECORD (EOR) PRIOR TO RELEASING FOR FABRICATION.
- ALL FITTINGS AND REINFORCEMENT COMPLY WITH ASTM A998.
- ALL RISERS AND STUBS ARE 2⅔" x ½" CORRUGATION AND 16 GAGE UNLESS OTHERWISE NOTED.
- RISERS TO BE FIELD TRIMMED TO GRADE AS REQUIRED, BY CONTRACTOR.
- QUANTITY OF PIPE SHOWN DOES NOT PROVIDE EXTRA PIPE FOR CONNECTING THE SYSTEM TO EXISTING PIPE OR DRAINAGE STRUCTURES. OUR SYSTEM AS DETAILED PROVIDES NOMINAL INLET AND/OR OUTLET PIPE STUB FOR CONNECTION TO EXISTING DRAINAGE FACILITIES. IF ADDITIONAL PIPE IS NEEDED IT IS THE RESPONSIBILITY OF THE CONTRACTOR.
- ALL ACCESS CASTINGS ARE THE RESPONSIBILITY OF THE CONTRACTOR AND ARE NOT SUPPLIED BY CONTECH.

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Project No.	Rev.
CBC-22340	-

CBC Engineers

Rev.	Date	By	Description

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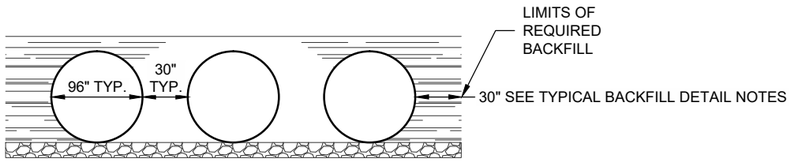
CONTECH CMP DETENTION SYSTEMS
CONTECH PROPOSAL DRAWING

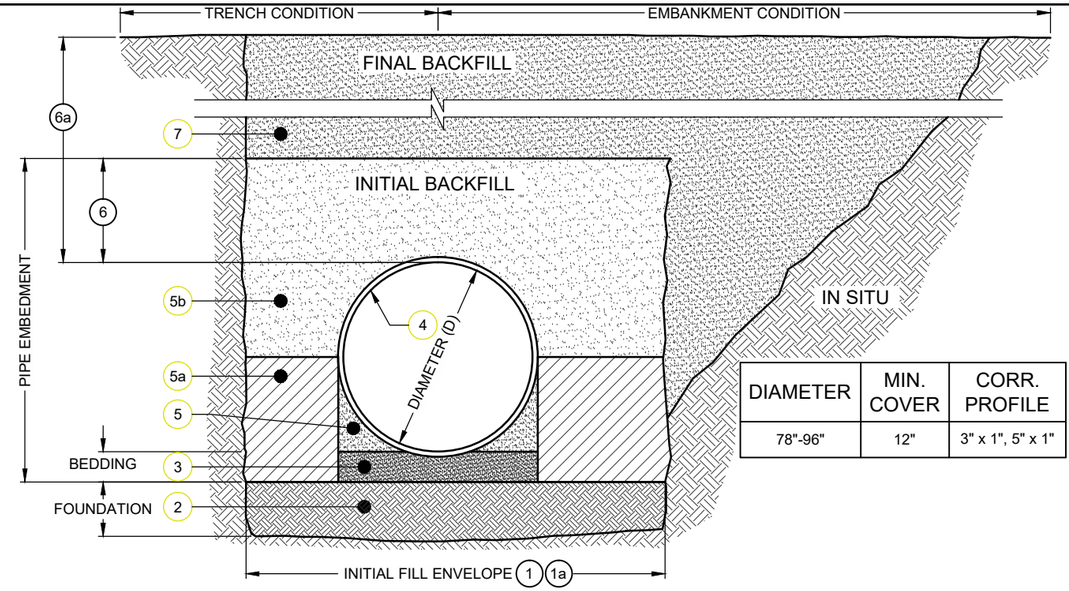
96"Ø UNDERGROUND DETENTION SYSTEM - 609760-020
TOWNEPLACE SUITES MARRIOTT - ROCKWALL TX
ROCKWALL, TX
SITE DESIGNATION: NORTHWEST

PROJECT No.:	SEQ. No.:	DATE:
609760	020	2/13/2019
DESIGNED:		DRAWN:
SJ		SJ
CHECKED:		APPROVED:
SJ		SJ
SHEET NO.:		
C1 OF 5		



TYPICAL SECTION VIEW

NOT TO SCALE



DIAMETER	MIN. COVER	CORR. PROFILE
78"-96"	12"	3" x 1", 5" x 1"

BACKFILL REQUIREMENTS FOLLOW THE GUIDELINES OF AASHTO LRFD BRIDGE DESIGN (SEC 12) AND CONSTRUCTION (SEC 26)

1 MINIMUM TRENCH WIDTH MUST ALLOW ROOM FOR PROPER COMPACTION OF HAUNCH MATERIALS UNDER THE PIPE.
THE MINIMUM TRENCH WIDTH (12.6.6.1):
PIPE ≤ 12": D + 16"
PIPE > 12": 1.5D + 12"

1a MINIMUM EMBANKMENT WIDTH (IN FEET) FOR INITIAL FILL ENVELOPE (12.6.6.2):
PIPE < 24": 3.0D
PIPE 24" - 144": D + 4'0"
PIPE > 144": D + 10'0"

2 THE FOUNDATION UNDER THE PIPE AND SIDE BACKFILL SHALL BE ADEQUATE TO SUPPORT THE LOADS ACTING UPON IT (26.5.2).

3 BEDDING MATERIAL SHALL BE A RELATIVELY LOOSE MATERIAL THAT IS ROUGHLY SHAPED TO FIT THE BOTTOM OF THE PIPE, AND A MINIMUM OF TWICE THE CORRUGATION DEPTH IN THICKNESS, WITH THE MAXIMUM PARTICLE SIZE OF ONE-HALF OF THE CORRUGATION DEPTH (26.3.8.1, 26.5.3).

4 CORRUGATED STEEL PIPE (CSP / HEL-COR), DIAMETERS 78" - 96"

5 HAUNCH ZONE MATERIAL SHALL BE HAND SHOVELED OR SHOVEL SLICED INTO PLACE TO ALLOW FOR PROPER COMPACTION (26.5.4).

5a INITIAL BACKFILL SHALL BE WELL GRADED CRUSHED ROCK UP TO 2/3 ABOVE THE INVERT OF THE PIPE.

5b BACKFILL PLACED ABOVE THE SPRINGLINE TO MEET AASHTO A-1, A-2 OR A-3 CLASSIFICATION, OR APPROVED EQUAL, COMPACTED TO 90% STANDARD PROCTOR (T 99). MAXIMUM PARTICLE SIZE NOT TO EXCEED 3" (12.4.1.2). ALL LIFTS PLACED IN A CONTROLLED MANNER. IT IS RECOMMENDED THAT LIFTS NOT EXCEED AN 8" UNCOMPACTED LIFT HEIGHT TO PREVENT UNEVEN LOADING, AND THE LESSER OF 1/3 THE DIAMETER OR 24" AS THE MAXIMUM DIFFERENTIAL SIDE-TO-SIDE (26.5.4).

6 SAND BACKFILL (AASHTO A-3 OR APPROVED EQUAL) TO BE PLACED FROM FROM 2/3 ABOVE INVERT OF THE PIPE TO 12" ABOVE PIPE.

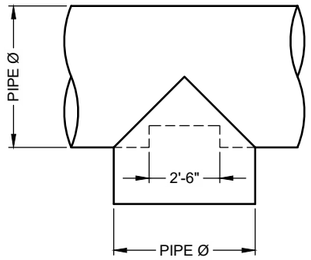
6a TOTAL HEIGHT OF COMPACTED COVER FOR CONVENTIONAL HIGHWAY LOADS IS MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TOP OF RIGID PAVEMENT (12.6.6.3).

7 FINAL BACKFILL MATERIAL SELECTION AND COMPACTION REQUIREMENTS SHALL FOLLOW THE PROJECT PLANS AND SPECIFICATIONS PER THE ENGINEER OF RECORD (26.5.4.1).

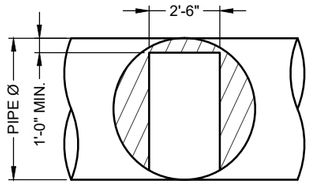
NOTES:
- GEOTEXTILE SHOULD BE CONSIDERED FOR USE TO PREVENT SOIL MIGRATION INTO VARYING SOIL TYPES (PROJECT ENGINEER).
- FOR MULTIPLE BARREL INSTALLATIONS THE RECOMMENDED STANDARD SPACING BETWEEN PARALLEL PIPE RUNS SHALL BE PIPE DIA./2 BUT NO LESS THAN 12", OR 36" FOR PIPE DIAMETERS 72" AND LARGER. CONTACT YOUR CONTECH REPRESENTATIVE FOR NONSTANDARD SPACING (TABLE C12.6.7-1).

TYPICAL BACKFILL DETAIL

NOT TO SCALE



PLAN

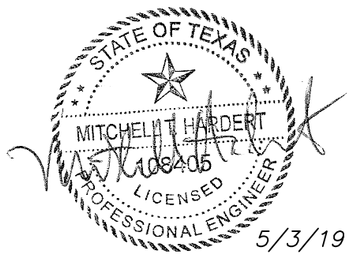


FRONT

48"Ø to 90"Ø FITTING REINFORCEMENT MAY BE REQUIRED BASED ON HEIGHT OF COVER AND LIVE LOAD CONDITION

TYPICAL MANWAY DETAIL

NOT TO SCALE



CBC ENGINEERS & ASSOCIATES, LTD.
TBPE FIRM NUMBER F-16105

Approved By	Date
MTH	4/30/19
Project No.	Rev.
CBC-22340	-

CBC Engineers

Rev.	Date	By	Description

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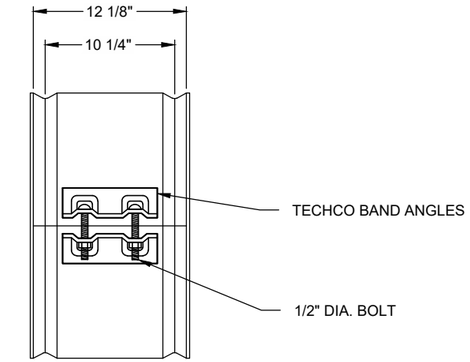
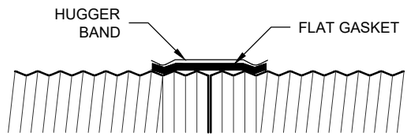
CONTECH CMP DETENTION SYSTEMS
CONTECH **PROPOSAL** DRAWING

96"Ø UNDERGROUND DETENTION SYSTEM - 609760-020
TOWNEPLACE SUITES MARRIOTT - ROCKWALL TX
ROCKWALL, TX
SITE DESIGNATION: NORTHWEST

PROJECT No.:	SEQ. No.:	DATE:
609760	020	2/13/2019
DESIGNED: SJ	DRAWN: SJ	
CHECKED: SJ	APPROVED: SJ	
SHEET NO.: C2 OF 5		



CONNECTION DETAIL
7 1/2" TECHCO



FLAT GASKET

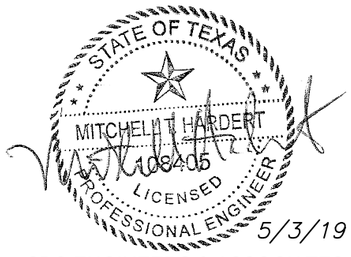
2 2/3"x1/2" RE-ROLLED END HEL-COR PIPE

GENERAL NOTES:

1. JOINT IS TO BE ASSEMBLED PER AASHTO BRIDGE CONSTRUCTION SPECIFICATION SEC 26.4.2.4.
2. BAND MATERIALS AND/OR COATING CAN VARY BY LOCATION. CONTACT YOUR CONTECH REPRESENTATIVE FOR AVAILABILITY.
3. BANDS ARE SHAPED TO MATCH THE PIPE-ARCH WHEN APPLICABLE.
4. BANDS ARE NORMALLY FURNISHED AS FOLLOWS:
   - 12" THRU 48" 1-PIECE
   - 54" THRU 96" 2-PIECES
   - 102" THRU 144" 3-PIECES
5. BAND FASTENERS ARE ATTACHED WITH SPOT WELDS, RIVETS OR HAND WELDS.
6. ALL CMP IS REROLLED TO HAVE ANNULAR END CORRUGATIONS OF 2 2/3"x1/2"
7. DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.
8. ORDER SHALL DESIGNATE GASKET OPTION, IF REQUIRED (SEE DETAILS ABOVE).

H-12 HUGGER BAND DETAIL

NOT TO SCALE



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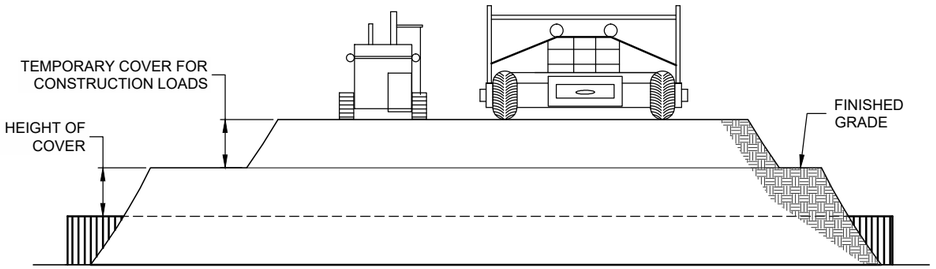
CHECKED: SJ	APPROVED: SJ	
SHEET NO.: C3 OF 5		



CONSTRUCTION LOADS

FOR TEMPORARY CONSTRUCTION VEHICLE LOADS, AN EXTRA AMOUNT OF COMPACTED COVER MAY BE REQUIRED OVER THE TOP OF THE PIPE. THE HEIGHT-OF-COVER SHALL MEET THE MINIMUM REQUIREMENTS SHOWN IN THE TABLE BELOW. THE USE OF HEAVY CONSTRUCTION EQUIPMENT NECESSITATES GREATER PROTECTION FOR THE PIPE THAN FINISHED GRADE COVER MINIMUMS FOR NORMAL HIGHWAY TRAFFIC.

PIPE SPAN, INCHES	AXLE LOADS (kips)			
	18-50	50-75	75-110	110-150
	MINIMUM COVER (FT)			
12-42	2.0	2.5	3.0	3.0
48-72	3.0	3.0	3.5	4.0
78-120	3.0	3.5	4.0	4.0
126-144	3.5	4.0	4.5	4.5

*MINIMUM COVER MAY VARY, DEPENDING ON LOCAL CONDITIONS. THE CONTRACTOR MUST PROVIDE THE ADDITIONAL COVER REQUIRED TO AVOID DAMAGE TO THE PIPE. MINIMUM COVER IS MEASURED FROM THE TOP OF THE PIPE TO THE TOP OF THE MAINTAINED CONSTRUCTION ROADWAY SURFACE.

CONSTRUCTION LOADING DIAGRAM

NOT TO SCALE

SPECIFICATION FOR CORRUGATED STEEL PIPE-ALUMINIZED TYPE 2 STEEL

SCOPE

THIS SPECIFICATION COVERS THE MANUFACTURE AND INSTALLATION OF THE CORRUGATED STEEL PIPE (CSP) DETAILED IN THE PROJECT PLANS.

MATERIAL

THE ALUMINIZED TYPE 2 STEEL COILS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF AASHTO M274 OR ASTM A929.

PIPE

THE CSP SHALL BE MANUFACTURED IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF AASHTO M36 OR ASTM A760. THE PIPE SIZES, GAGES AND CORRUGATIONS SHALL BE AS SHOWN ON THE PROJECT PLANS.

ALL FABRICATION OF THE PRODUCT SHALL OCCUR WITHIN THE UNITED STATES.

HANDLING AND ASSEMBLY

SHALL BE IN ACCORDANCE WITH RECOMMENDATIONS OF THE NATIONAL CORRUGATED STEEL PIPE ASSOCIATION (NCSPA)

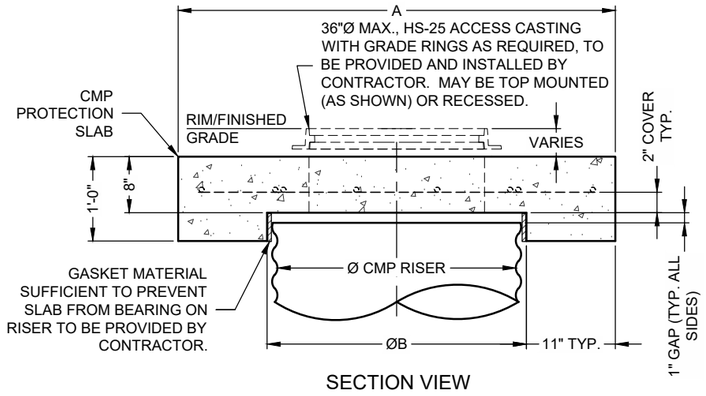
INSTALLATION

SHALL BE IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, SECTION 26, DIVISION II OR ASTM A798 AND IN CONFORMANCE WITH THE PROJECT PLANS AND SPECIFICATIONS. IF THERE ARE ANY INCONSISTENCIES OR CONFLICTS THE CONTRACTOR SHOULD DISCUSS AND RESOLVE WITH THE SITE ENGINEER.

IT IS ALWAYS THE RESPONSIBILITY OF THE CONTRACTOR TO FOLLOW OSHA GUIDELINES FOR SAFE PRACTICES.

MATERIAL SPECIFICATION

NOT TO SCALE

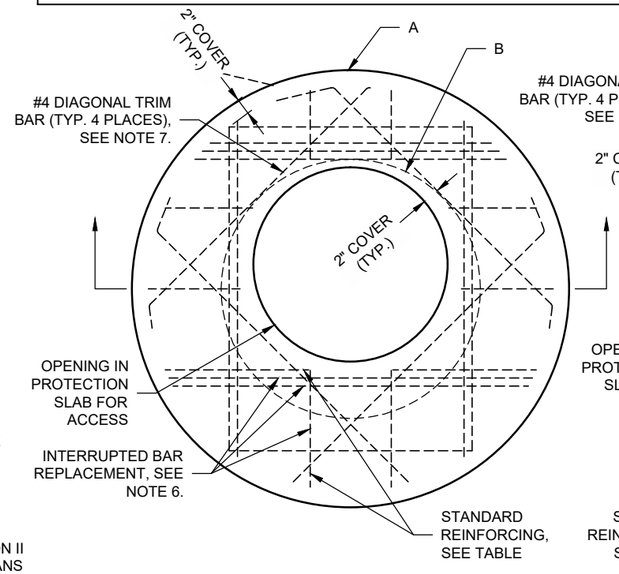


SECTION VIEW

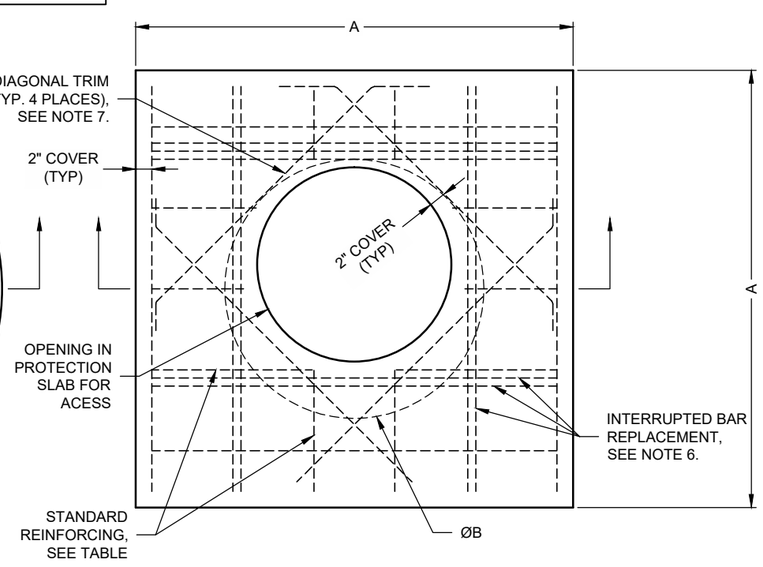
REINFORCING TABLE				
Ø CMP RISER	A	B Ø	REINFORCING	**BEARING PRESSURE (PSF)
24"	4'Ø 4'x4'	26"	#5 @ 10" OCEW #5 @ 10" OCEW	2,540 1,900
30"	4'-6"Ø 4'-6" x 4'-6"	32"	#5 @ 10" OCEW #5 @ 9" OCEW	2,260 1,670
36"	5'Ø 5' x 5'	38"	#5 @ 9" OCEW #5 @ 8" OCEW	2,060 1,500
42"	5'-6"Ø 5'-6" x 5'-6"	44"	#5 @ 8" OCEW #5 @ 8" OCEW	1,490 1,370
48"	6'Ø 6' x 6'	50"	#5 @ 7" OCEW #5 @ 7" OCEW	1,210 1,270

** ASSUMED SOIL BEARING CAPACITY

ACCESS CASTING NOT SUPPLIED BY CONTECH



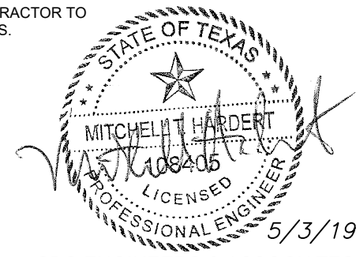
ROUND OPTION PLAN VIEW



SQUARE OPTION PLAN VIEW

NOTES:

1. DESIGN IN ACCORDANCE WITH AASHTO, 17th EDITION AND ACI 350.
2. DESIGN LOAD HS25.
3. EARTH COVER = 1' MAX.
4. CONCRETE STRENGTH = 4,000 psi
5. REINFORCING STEEL = ASTM A615, GRADE 60.
6. PROVIDE ADDITIONAL REINFORCING AROUND OPENINGS EQUAL TO THE BARS INTERRUPTED, HALF EACH SIDE. ADDITIONAL BARS TO BE IN THE SAME PLANE.
7. TRIM OPENING WITH DIAGONAL #4 BARS, EXTEND BARS A MINIMUM OF 12" BEYOND OPENING, BEND BARS AS REQUIRED TO MAINTAIN BAR COVER.
8. PROTECTION SLAB AND ALL MATERIALS TO BE PROVIDED AND INSTALLED BY CONTRACTOR.
9. DETAIL DESIGN BY DELTA ENGINEERS, ARCHITECTS AND LAND SURVEYORS, ENDWELL, NY.



CBC ENGINEERS & ASSOCIATES, LTD.
TBPE FIRM NUMBER F-16105

MANHOLE CAP DETAIL

NOT TO SCALE

Approved By	Date
MTH	4/30/19
Project No.	Rev.
CBC-22340	-

CBC Engineers

Rev.	Date	By	Description

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MARK	DATE	REVISION DESCRIPTION	BY

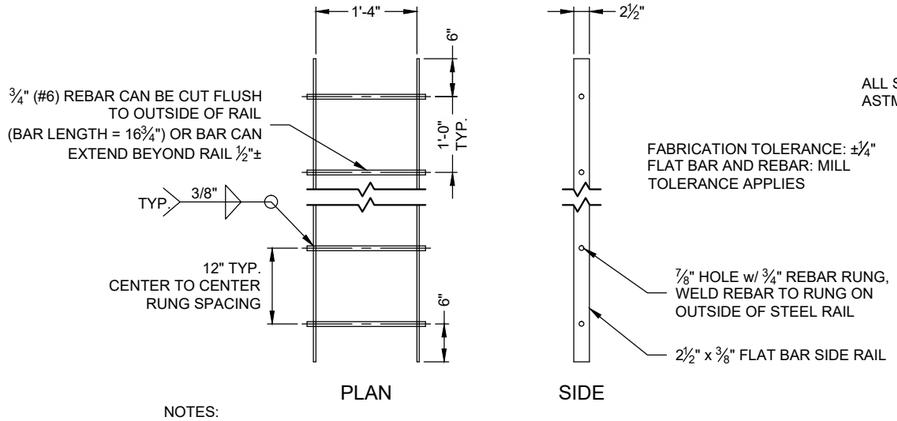
CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
11815 NE Glenn Widing Drive, Portland, OR 97220
800-548-4667 503-240-3393 800-561-1271 FAX

CONTECH CMP DETENTION SYSTEMS

CONTECH **PROPOSAL** DRAWING

96"Ø UNDERGROUND DETENTION SYSTEM - 609760-020
TOWNEPLACE SUITES MARRIOTT - ROCKWALL TX
ROCKWALL, TX
SITE DESIGNATION: NORTHWEST

PROJECT No.:	SEQ. No.:	DATE:
609760	020	2/13/2019
DESIGNED:		DRAWN:
SJ		SJ
CHECKED:		APPROVED:
SJ		SJ
SHEET NO.:		
C4 OF 5		



PLAN SIDE

ALL STEEL PER ASTM A36

FABRICATION TOLERANCE: ±¼" FLAT BAR AND REBAR: MILL TOLERANCE APPLIES

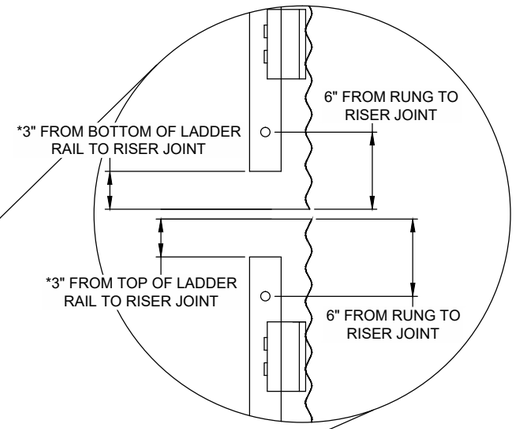
NOTES:
1. LADDERS CAN BE MADE IN 20'-0" STANDARD LENGTHS AND CUT TO FIT
2. ALL MATERIAL TO MEET ASTM A36
3. LADDER TO BE HOT DIPPED GALVANIZED PER ASTM A-123 AFTER FABRICATION IS COMPLETE

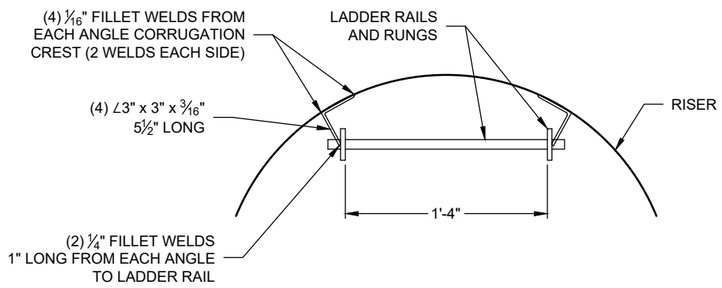
STANDARD LADDER DETAIL

NOT TO SCALE

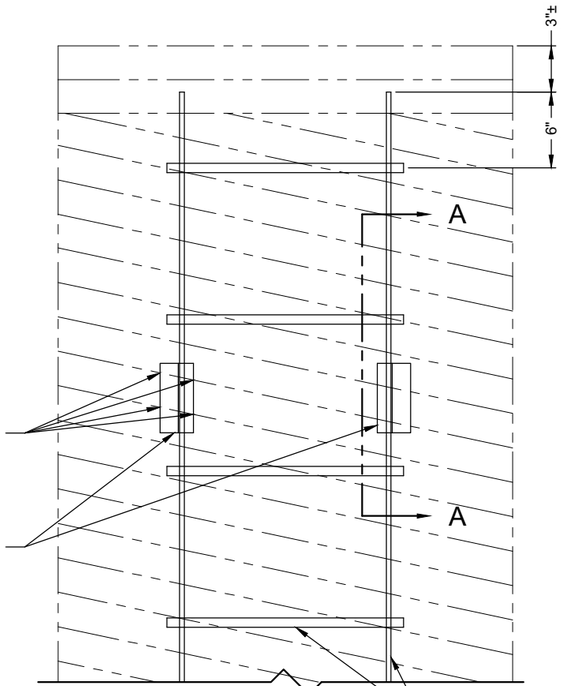
PART NO. HALAGVL16

*NOTE: WHEN RISER EXTENSIONS ARE USED, THE PLANT SHOULD CUT 3" FROM THE SIDE RAILS AS SHOWN

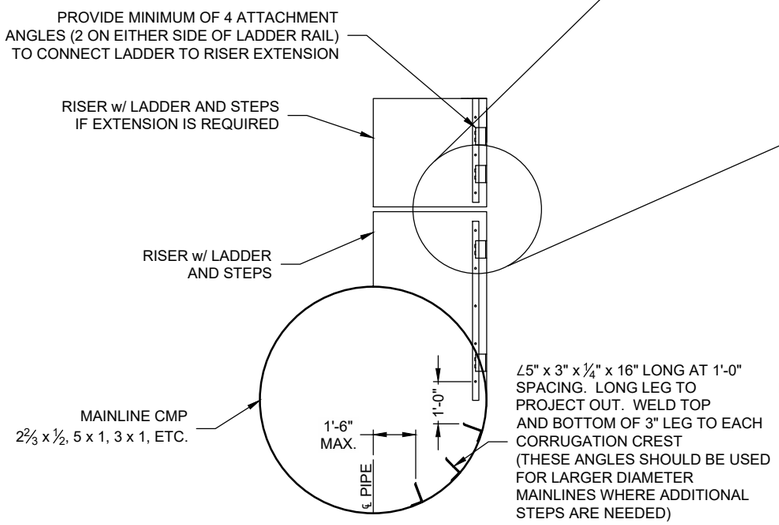


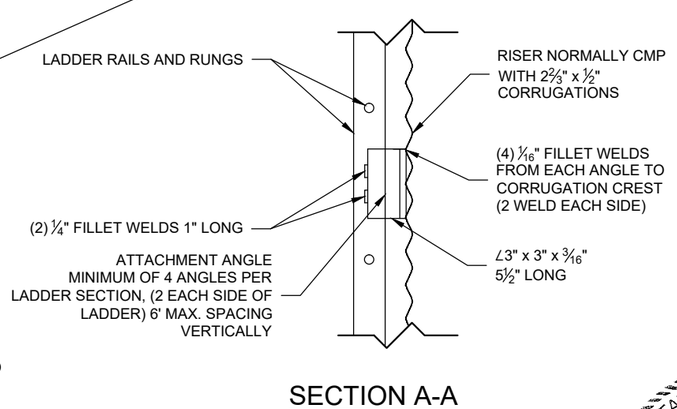


PLAN



ELEVATION



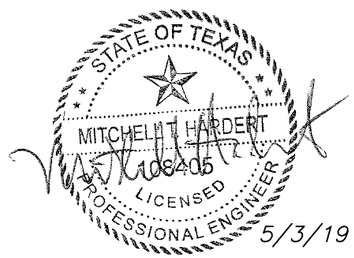


SECTION A-A

NOTE:
THIS DRAWING IS INTENDED TO APPLY TO LADDERS INSTALLED IN RISERS HAVING A DIAMETER OF 30" OR LARGER. DUE TO SPACE CONSTRAINTS AND LIMITED ACCESSIBILITY, THE PRACTICALITY AND SUITABILITY OF UTILIZING RISERS SMALLER THAN 30" DIAMETER AND/OR INCORPORATING LADDERS IN THESE SMALLER DIAMETER RISERS SHOULD BE ADDRESSED BY THE OWNER AND PROJECT ENGINEER

RISER LADDER DETAIL

NOT TO SCALE



CBC ENGINEERS & ASSOCIATES, LTD.
TBPE FIRM NUMBER F-16105

Approved By	Date
MTH	4/30/19
Project No.	Rev.
CBC-22340	-

CBC Engineers

Rev.	Date	By	Description

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MARK	DATE	REVISION DESCRIPTION	BY

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CONTECH CMP DETENTION SYSTEMS
CONTECH **PROPOSAL** DRAWING

96"Ø UNDERGROUND DETENTION SYSTEM - 609760-020
TOWNEPLACE SUITES MARRIOTT - ROCKWALL TX
ROCKWALL, TX
SITE DESIGNATION: NORTHWEST

PROJECT No.:	SEQ. No.:	DATE:
609760	020	2/13/2019
DESIGNED:	DRAWN:	
SJ	SJ	
CHECKED:	APPROVED:	
SJ	SJ	
SHEET NO.:		
C5 OF 5		

100 YR STORM

Present Conditions Q = CIA		PRE. DEVELOPED DRAINAGE AREAS	Bypass Flow Q = CIA		DRAINAGE AREAS
A =	1.31	1	A =	0.18	1,8
C =	0.35		C =	0.90	
Tc =	20		Tc =	10	
I100 =	8.30		I100 =	9.80	
Q100 =	3.81	cfs	Q100 =	1.59	cfs
Q100 =	3.81	cfs	Q100 TOTAL =	1.59	cfs

Q100 Allowable = 2.22 cfs

Future Conditions Q = CIA		DRAINAGE AREAS
A =	0.81	2, 7
C =	0.90	
Tc =	10	
I100 =	9.80	
Q100 =	7.14	cfs

Flow for Storm Durations			
Time	I	C	Q
10	9.80	0.90	7.14
15	9.00	0.90	6.56
20	8.30	0.90	6.05
30	6.90	0.90	5.03
40	5.80	0.90	4.23
50	5.00	0.90	3.65
60	4.50	0.90	3.28
70	4.00	0.90	2.92
80	3.70	0.90	2.70
90	3.50	0.90	2.55
100	3.40	0.90	2.48
110	3.20	0.90	2.33

Storage Calculations			
10 min			
Inflow	4287	Storage =	2956
Outflow	1331		
15 min			
Inflow	5905	Storage =	4241
Outflow	1663		
20 min			
Inflow	7261	Storage =	5265
Outflow	1996		
30 min			
Inflow	9054	Storage =	6393
Outflow	2662		
40 min			
Inflow	10148	Storage =	6821
Outflow	3327		
50 min			
Inflow	10935	Storage =	6943
Outflow	3992		
60 min			
Inflow	11810	Storage =	7152
Outflow	4658		
70 min			
Inflow	12247	Storage =	6924
Outflow	5323		
80 min			
Inflow	12947	Storage =	6959
Outflow	5988		
90 min			
Inflow	13778	Storage =	7124
Outflow	6654		
100 min			
Inflow	14872	Storage =	7552
Outflow	7319		
110 min			
Inflow	15396	Storage =	7412
Outflow	7985		

Storage Required = 7552 CF

25 YR STORM

Present Conditions Q = CIA		PRE. DEVELOPED DRAINAGE AREAS	Bypass Flow Q = CIA		DRAINAGE AREAS
A =	1.31	1	A =	0.18	1,8
C =	0.35		C =	0.90	
Tc =	20		Tc =	10	
I25 =	6.80		I25 =	8.30	
Q25 =	3.12	cfs	Q25 =	1.34	cfs
Q25 =	3.12	cfs	Q25 TOTAL =	1.34	cfs

Q25 Allowable = 1.77 cfs

Future Conditions Q = CIA		DRAINAGE AREAS
A =	0.81	2, 7
C =	0.90	
Tc =	10	
I25 =	8.30	
Q25 =	6.05	cfs

Flow for Storm Durations			
Time	I	C	Q
10	8.30	0.90	6.05
15	7.40	0.90	5.39
20	6.80	0.90	4.96
30	5.50	0.90	4.01
40	4.70	0.90	3.43
50	4.00	0.90	2.92
60	3.50	0.90	2.55
70	3.30	0.90	2.41
80	3.10	0.90	2.26
90	2.80	0.90	2.04
100	2.60	0.90	1.90
110	2.40	0.90	1.75

Storage Calculations			
10 min			
Inflow	3630	Storage =	2567
Outflow	1064		
15 min			
Inflow	4855	Storage =	3525
Outflow	1330		
20 min			
Inflow	5949	Storage =	4353
Outflow	1596		
30 min			
Inflow	7217	Storage =	5089
Outflow	2128		
40 min			
Inflow	8223	Storage =	5563
Outflow	2660		
50 min			
Inflow	8748	Storage =	5556
Outflow	3192		
60 min			
Inflow	9185	Storage =	5462
Outflow	3724		
70 min			
Inflow	10104	Storage =	5848
Outflow	4256		
80 min			
Inflow	10848	Storage =	6060
Outflow	4788		
90 min			
Inflow	11022	Storage =	5703
Outflow	5320		
100 min			
Inflow	11372	Storage =	5521
Outflow	5852		
110 min			
Inflow	11547	Storage =	5164
Outflow	6384		

Storage Required = 6060 CF

10 YR STORM

Present Conditions Q = CIA		PRE. DEVELOPED DRAINAGE AREAS	Bypass Flow Q = CIA		DRAINAGE AREAS
A =	1.31	1	A =	0.18	1,8
C =	0.35		C =	0.90	
Tc =	20		Tc =	10	
I10 =	5.90		I10 =	7.10	
Q10 =	2.71	cfs	Q10 =	1.15	cfs
Q10 =	2.71	cfs	Q10 TOTAL =	1.15	cfs

Q10 Allowable = 1.55 cfs

Future Conditions Q = CIA		DRAINAGE AREAS
A =	0.81	2, 7
C =	0.90	
Tc =	10	
I10 =	7.10	
Q10 =	5.18	cfs

Flow for Storm Durations			
Time	I	C	Q
10	7.10	0.90	5.18
15	6.50	0.90	4.74
20	5.90	0.90	4.30
30	4.90	0.90	3.57
40	4.00	0.90	2.92
50	3.40	0.90	2.48
60	3.00	0.90	2.19
70	2.80	0.90	2.04
80	2.60	0.90	1.90
90	2.40	0.90	1.75
100	2.20	0.90	1.60
110	2.00	0.90	1.46

Storage Calculations			
10 min			
Inflow	3106	Storage =	2173
Outflow	933		
15 min			
Inflow	4265	Storage =	3098
Outflow	1166		
20 min			
Inflow	5161	Storage =	3762
Outflow	1399		
30 min			
Inflow	6430	Storage =	4564
Outflow	1866		
40 min			
Inflow	6998	Storage =	4666
Outflow	2332		
50 min			
Inflow	7436	Storage =	4637
Outflow	2799		
60 min			
Inflow	7873	Storage =	4608
Outflow	3265		
70 min			
Inflow	8573	Storage =	4841
Outflow	3732		
80 min			
Inflow	9098	Storage =	4900
Outflow	4198		
90 min			
Inflow	9448	Storage =	4783
Outflow	4665		
100 min			
Inflow	9623	Storage =	4491
Outflow	5131		
110 min			
Inflow	9623	Storage =	4025
Outflow	5598		

Storage Required = 4900 CF

5 YR STORM

Present Conditions Q = CIA		PRE. DEVELOPED DRAINAGE AREAS	Bypass Flow Q = CIA		DRAINAGE AREAS
A =	1.31	1	A =	0.18	1,8
C =	0.35		C =	0.90	
Tc =	20		Tc =	10	
I5 =	4.90		I5 =	6.10	
Q5 =	2.25	cfs	Q5=	0.99	cfs
Q5 =	2.25	cfs	Q5 TOTAL=	0.99	cfs

Q5 Allowable = 1.26 cfs

Future Conditions Q = CIA		DRAINAGE AREAS
A =	0.81	2, 7
C =	0.90	
Tc =	10	
I5 =	6.10	
Q5 =	4.45	cfs

Flow for Storm Durations			
Time	I	C	Q
10	6.10	0.90	4.45
15	5.60	0.90	4.08
20	4.90	0.90	3.57
30	4.00	0.90	2.92
40	3.40	0.90	2.48
50	2.90	0.90	2.11
60	2.60	0.90	1.90
70	2.40	0.90	1.75
80	2.20	0.90	1.60
90	2.10	0.90	1.53
100	1.90	0.90	1.39
110	1.70	0.90	1.24

Storage Calculations			
10 min			
Inflow	2668	Storage =	1913
Outflow	755		
15 min			
Inflow	3674	Storage =	2730
Outflow	944		
20 min			
Inflow	4287	Storage =	3154
Outflow	1133		
30 min			
Inflow	5249	Storage =	3739
Outflow	1510		
40 min			
Inflow	5949	Storage =	4061
Outflow	1888		
50 min			
Inflow	6342	Storage =	4077
Outflow	2265		
60 min			
Inflow	6823	Storage =	4181
Outflow	2643		
70 min			
Inflow	7348	Storage =	4328
Outflow	3020		
80 min			
Inflow	7698	Storage =	4300
Outflow	3398		
90 min			
Inflow	8267	Storage =	4492
Outflow	3775		
100 min			
Inflow	8311	Storage =	4158
Outflow	4153		
110 min			
Inflow	8179	Storage =	3649
Outflow	4530		

Storage Required = 4492 CF

CHAMBER DETENTION VOLUME CALCULATIONS	
NUMBER OF CHAMBERS =	3
LENGTH OF CHAMBERS (FT) =	41
NUMBER OF HEADERS =	1
LENGTH OF HEADERS =	29
TOTAL LENGTH OF CHAMBERS (FT)	152
CHAMBER DIAMETER (FT) =	8
AREA OF CHAMBERS (SF)=	50.27
VOLUME OF CHAMBERS (CF) =	7640

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SP 2018-029
RECORD DRAWING

Revision	Date	Description

Owner:
Greencrest TPS Hotel, L.P.
3021 Ridge Road, A-120
Rockwall, TX 75032
Phone: (214) 890-9225

~ Civil Engineer ~
F.C. CUNY CORPORATION
#2 Horizon Court - Heath, Texas 75032 - (469) 402-7700
Texas Registered Engineering Firm F-7448

TOWNEPLACE SUITES MARRIOTT
908 E. INTERSTATE 30
ROCKWALL, TX 75087

12/23/2021

STATE OF TEXAS
CAMERON A. SLOWN
106317
LICENSED PROFESSIONAL ENGINEER

Drawn By:	Checked By:
F.C. CUNY	F.C. CUNY
Date: 11/19/2018	Project No.: –

Sheet Title: Pond #1 Calculations

Scale:	Sheet No.:
N.T.S.	12a of 14

100 YR STORM

100 YEAR 96" PIPE STORAGE CALCULATION		
PIPE DIAMETER (in.)	96.00	
AREA OF PIPE (SF)	50.27	
LENGTH OF PIPE (FT)	152.00	
PIPE AREA ITERATIONS (GIVEN d> RADIUS)		
INPUT d (in)	92.52	<= USER INPUT
h = 2R-d	3.48	
ø = 2arccos((r-h)/r)	0.77	
K = (r^2(Ø-sin(Ø)))/2	0.58	
A = ∏r^2 - K	49.68	
PROVIDED VOLUME (96 in. PIPE)	7552	

100YR WSEL

533.03+92.52/12 = 540.74

CIRCLE

ORIFICE CALCULATION		
Equation: Q = Cd*A*((2*g*H)^0.5)		FL= 6
Q =	0.20	ft³/sec
Cd =	0.62	
g =	32.20	ft/sec²
H =	1.61	ft
A = PI*R^2	0.03	ft²
D =	2.40	in
R =	1.20	in

CIRCLE

ORIFICE CALCULATION		
Equation: Q = Cd*A*((2*g*H)^0.5)		FL= 2.5
Q =	0.35	ft³/sec
Cd =	0.62	
g =	32.20	ft/sec²
H =	5.11	ft
A = PI*R^2	0.03	ft²
D =	2.40	in
R =	1.20	in

RECTANGULAR

ORIFICE CALCULATION		
Equation: Q = Cd*A*((2*g*H)^0.5)		FL= 0
Q =	1.64	ft³/sec
Cd =	0.62	
g =	32.20	ft/sec²
H =	7.59	ft
A = BH	0.12	ft²
B =	5.75	in
H=	3.00	in

100YR Qallowable = 2.22 cfs

Q total = 1.64+0.35+0.20 = 2.19 cfs

25 YR STORM

25 YEAR 96" PIPE STORAGE CALCULATION		
PIPE DIAMETER (in.)	96.00	
AREA OF PIPE (SF)	50.27	
LENGTH OF PIPE (FT)	152.00	
PIPE AREA ITERATIONS (GIVEN d> RADIUS)		
INPUT d (in)	71.02	<= USER INPUT
h = 2R-d	24.98	
ø = 2arccos((r-h)/r)	2.14	
K = (r^2(Ø-sin(Ø)))/2	10.40	
A = ∏r^2 - K	39.87	
PROVIDED VOLUME (96 in. PIPE)	6060	

25YR WSEL

533.03+71.02/12 = 538.95

CIRCLE

ORIFICE CALCULATION		
Equation: Q = Cd*A*((2*g*H)^0.5)		FL= 2.5
Q =	0.28	ft³/sec
Cd =	0.62	
g =	32.20	ft/sec²
H =	3.32	ft
A = PI*R^2	0.03	ft²
D =	2.40	in
R =	1.20	in

RECTANGULAR

ORIFICE CALCULATION		
Equation: Q = Cd*A*((2*g*H)^0.5)		FL= 0
Q =	1.43	ft³/sec
Cd =	0.62	
g =	32.20	ft/sec²
H =	5.79	ft
A = BH	0.12	ft²
B =	5.75	in
H=	3.00	in

25YR Qallowable = 1.77 cfs

Qtotal = 1.43+0.28 = 1.71 cfs

10 YR STORM

10 YEAR 96" PIPE STORAGE CALCULATION		
PIPE DIAMETER (in.)	96.00	
AREA OF PIPE (SF)	50.27	
LENGTH OF PIPE (FT)	152.00	
PIPE AREA ITERATIONS (GIVEN d> RADIUS)		
INPUT d (in)	58.75	<= USER INPUT
h = 2R-d	37.25	
ø = 2arccos((r-h)/r)	2.69	
K = (r^2(Ø-sin(Ø)))/2	18.03	
A = ∏r^2 - K	32.24	
PROVIDED VOLUME (96 in. PIPE)	4900	

10YR WSEL

533.03+58.75/12 = 537.93

CIRCLE

ORIFICE CALCULATION		
Equation: Q = Cd*A*((2*g*H)^0.5)		FL= 2.5
Q =	0.24	ft³/sec
Cd =	0.62	
g =	32.20	ft/sec²
H =	2.30	ft
A = PI*R^2	0.03	ft²
D =	2.40	in
R =	1.20	in

RECTANGULAR

ORIFICE CALCULATION		
Equation: Q = Cd*A*((2*g*H)^0.5)		FL= 0
Q =	1.30	ft³/sec
Cd =	0.62	
g =	32.20	ft/sec²
H =	4.77	ft
A = BH	0.12	ft²
B =	5.75	in
H=	3.00	in

10YR Qallowable = 1.55 cfs

Qtotal = 1.30+0.24 = 1.54 cfs

5 YR STORM

5 YEAR 96" PIPE STORAGE CALCULATION		
PIPE DIAMETER (in.)	96.00	
AREA OF PIPE (SF)	50.27	
LENGTH OF PIPE (FT)	152.00	
PIPE AREA ITERATIONS (GIVEN d> RADIUS)		
INPUT d (in)	54.65	<= USER INPUT
h = 2R-d	41.35	
ø = 2arccos((r-h)/r)	2.86	
K = (r^2(Ø-sin(Ø)))/2	20.71	
A = ∏r^2 - K	29.55	
PROVIDED VOLUME (96 in. PIPE)	4492	

5YR WSEL

533.03+54.65/12 = 537.58

RECTANGULAR

ORIFICE CALCULATION		
Equation: Q = Cd*A*((2*g*H)^0.5)		FL= 0
Q =	1.25	ft³/sec
Cd =	0.62	
g =	32.20	ft/sec²
H =	4.43	ft
A = BH	0.12	ft²
B =	5.75	in
H=	3.00	in

5YR Qallowable = 1.26 cfs

Qtotal = 1.25 cfs

Revision	Date	Description

Owner:
Greencrest TPS Hotel, L.P.
3021 Ridge Road, A-120
Rockwall, TX 75032
Phone: (214) 890-9225

~ Civil Engineer ~
F.C. CUNY CORPORATION
#2 Horizon Court - Heath, Texas 75032 - (469) 402-7700
Texas Registered Engineering Firm F-7448

TOWNEPLACE
SUITES
MARRIOTT

908 E. INTERSTATE 30
ROCKWALL, TX 75087

12/23/2021

STATE OF TEXAS
CAMERON A. SLOWN
106317
LICENSED
PROFESSIONAL ENGINEER

Drawn By:	Checked By:
F.C. CUNY	F.C. CUNY
Date: 11/19/2018	Project No.: –

Sheet Title:
Pond #1 Calculations

Scale:	Sheet No.:
N.T.S.	12b of 14

SP 2018-029
RECORD DRAWING

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100 YR STORM

Present Conditions Q = CIA		PRE. DEVELOPED DRAINAGE AREAS	Bypass Flow (AREA 6) Q = CIA		DRAINAGE AREAS
A =	1.49	2	A =	0.12	6
C =	0.35		C =	0.90	
Tc =	20		Tc =	10	
I100 =	8.30		I100 =	9.80	
Q100 =	4.33 cfs		Q100 =	1.06 cfs	
Q100 =	4.33 cfs		Q100 TOTAL =	1.06 cfs	

Q100 Allowable = 6.41 cfs

Future Conditions Q = CIA		DRAINAGE AREAS	Offsite Pass-Through Q = CIA			DRAINAGE AREAS
A =	1.71	3,4,5,9	A =	0.98	0.03	OS-1, OS-3.3
C =	0.90		C =	0.35	0.90	
Tc =	10		Tc =	20	10	
I100 =	9.80		I100 =	8.30	9.80	
Q100 =	15.08 cfs		Q100 =	2.85	0.29 cfs	

Flow for Storm Durations			
Time	I	Cw	Q
10	9.80	0.70	18.73
15	9.00	0.70	17.21
20	8.30	0.70	15.87
30	6.90	0.70	13.19
40	5.80	0.70	11.09
50	5.00	0.70	9.56
60	4.50	0.70	8.60
70	4.00	0.70	7.65
80	3.70	0.70	7.07
90	3.50	0.70	6.69
100	3.40	0.70	6.50
110	3.20	0.70	6.12

Storage Calculations			
10 min			
Inflow	11241	Storage =	7396
Outflow	3845		
15 min			
Inflow	15485	Storage =	10679
Outflow	4806		
20 min			
Inflow	19041	Storage =	13273
Outflow	5767		
30 min			
Inflow	23743	Storage =	16054
Outflow	7690		
40 min			
Inflow	26611	Storage =	16999
Outflow	9612		
50 min			
Inflow	28676	Storage =	17141
Outflow	11534		
60 min			
Inflow	30970	Storage =	17513
Outflow	13457		
70 min			
Inflow	32117	Storage =	16737
Outflow	15379		
80 min			
Inflow	33952	Storage =	16650
Outflow	17302		
90 min			
Inflow	36131	Storage =	16907
Outflow	19224		
100 min			
Inflow	38999	Storage =	17852
Outflow	21146		
110 min			
Inflow	40375	Storage =	17306
Outflow	23069		

Storage Required = 17852 CF

25 YR STORM

Present Conditions Q = CIA		PRE. DEVELOPED DRAINAGE AREAS	Bypass Flow (AREA 6) Q = CIA		DRAINAGE AREAS
A =	1.49	2	A =	0.12	6
C =	0.35		C =	0.90	
Tc =	20		Tc =	10	
I25 =	6.80		I25 =	8.30	
Q25 =	3.55 cfs		Q25 =	0.90 cfs	
Q25 =	3.55 cfs		Q25 TOTAL =	0.90 cfs	

Q25 Allowable = 5.23 cfs

Future Conditions Q = CIA		DRAINAGE AREAS	Offsite Pass-Through Q = CIA			DRAINAGE AREAS
A =	1.71	3,4,5,9	A =	0.98	0.03	OS-1, OS-3.3
C =	0.90		C =	0.35	0.90	
Tc =	10		Tc =	20	10	
I25 =	8.30		I25 =	6.80	8.30	
Q25 =	12.77 cfs		Q25 =	2.33	0.25 cfs	

Flow for Storm Durations			
Time	I	C	Q
10	8.30	0.70	15.87
15	7.40	0.70	14.15
20	6.80	0.70	13.00
30	5.50	0.70	10.51
40	4.70	0.70	8.98
50	4.00	0.70	7.65
60	3.50	0.70	6.69
70	3.30	0.70	6.31
80	3.10	0.70	5.93
90	2.80	0.70	5.35
100	2.60	0.70	4.97
110	2.40	0.70	4.59

Storage Calculations			
10 min			
Inflow	9520	Storage =	6383
Outflow	3137		
15 min			
Inflow	12732	Storage =	8810
Outflow	3922		
20 min			
Inflow	15599	Storage =	10894
Outflow	4706		
30 min			
Inflow	18926	Storage =	12651
Outflow	6274		
40 min			
Inflow	21564	Storage =	13721
Outflow	7843		
50 min			
Inflow	22940	Storage =	13529
Outflow	9412		
60 min			
Inflow	24087	Storage =	13107
Outflow	10980		
70 min			
Inflow	26496	Storage =	13947
Outflow	12549		
80 min			
Inflow	28446	Storage =	14329
Outflow	14118		
90 min			
Inflow	28905	Storage =	13219
Outflow	15686		
100 min			
Inflow	29823	Storage =	12568
Outflow	17255		
110 min			
Inflow	30281	Storage =	11458
Outflow	18823		

Storage Required = 14329 CF

10 YR STORM

Present Conditions Q = CIA		PRE. DEVELOPED DRAINAGE AREAS	Bypass Flow (AREA 6) Q = CIA		DRAINAGE AREAS
A =	1.49	2	A =	0.12	6
C =	0.35		C =	0.90	
Tc =	20		Tc =	10	
I10 =	5.90		I10 =	7.10	
Q10 =	3.08 cfs		Q10 =	0.77 cfs	
Q10 =	3.08 cfs		Q10 TOTAL =	0.77 cfs	

Q10 Allowable = 4.54 cfs

nditions	DRAINAGE AREAS	Offsite Pass-Through Q = CIA			DRAINAGE AREAS
1.71	3,4,5,9	A =	0.98	0.03	OS-1, OS-3.3
0.90		C =	0.35	0.90	
10		Tc =	20	10	
7.10		I25 =	5.90	7.10	
10.93	cfs	Q25 =	2.02	0.21	cfs

Flow for Storm Durations			
Time	I	C	Q
10	7.10	0.70	13.57
15	6.50	0.70	12.43
20	5.90	0.70	11.28
30	4.90	0.70	9.37
40	4.00	0.70	7.65
50	3.40	0.70	6.50
60	3.00	0.70	5.74
70	2.80	0.70	5.35
80	2.60	0.70	4.97
90	2.40	0.70	4.59
100	2.20	0.70	4.21
110	2.00	0.70	3.82

Storage Calculations			
10 min			
Inflow	8144	Storage =	5417
Outflow	2727		
15 min			
Inflow	11183	Storage =	7775
Outflow	3408		
20 min			
Inflow	13535	Storage =	9445
Outflow	4090		
30 min			
Inflow	16861	Storage =	11408
Outflow	5454		
40 min			
Inflow	18352	Storage =	11535
Outflow	6817		
50 min			
Inflow	19499	Storage =	11319
Outflow	8180		
60 min			
Inflow	20646	Storage =	11103
Outflow	9544		
70 min			
Inflow	22482	Storage =	11575
Outflow	10907		
80 min			
Inflow	23858	Storage =	11588
Outflow	12270		
90 min			
Inflow	24776	Storage =	11142
Outflow	13634		
100 min			
Inflow	25234	Storage =	10237
Outflow	14997		
110 min			
Inflow	25234	Storage =	8874
Outflow	16361		

Storage Required = 11588 CF

5 YR STORM

Present Conditions Q = CIA		PRE. DEVELOPED DRAINAGE AREAS	Bypass Flow (AREA 6) Q = CIA		DRAINAGE AREAS
A =	1.49	2	A =	0.12	6
C =	0.35		C =	0.90	
Tc =	20		Tc =	10	
I5 =	4.90		I5 =	6.10	
Q5 =	2.56 cfs		Q5=	0.66 cfs	
Q5 =	2.56 cfs		Q5 TOTAL=	0.66 cfs	

Q5 Allowable = 3.76 cfs

nditions	DRAINAGE AREAS	Offsite Pass-Through Q = CIA			DRAINAGE AREAS
1.71	3,4,5,9	A =	0.98	0.03	OS-1, OS-3.3
0.90		C =	0.35	0.90	
10		Tc =	20	10	
6.10		I25 =	4.90	6.10	
9.39	cfs	Q25 =	1.68	0.18	cfs

Flow for Storm Durations			
Time	I	C	Q
10	6.10	0.70	11.66
15	5.60	0.70	10.71
20	4.90	0.70	9.37
30	4.00	0.70	7.65
40	3.40	0.70	6.50
50	2.90	0.70	5.54
60	2.60	0.70	4.97
70	2.40	0.70	4.59
80	2.20	0.70	4.21
90	2.10	0.70	4.01
100	1.90	0.70	3.63
110	1.70	0.70	3.25

Storage Calculations			
10 min			
Inflow	6997	Storage =	4742
Outflow	2255		
15 min			
Inflow	9635	Storage =	6816
Outflow	2819		
20 min			
Inflow	11241	Storage =	7858
Outflow	3383		
30 min			
Inflow	13764	Storage =	9254
Outflow	4510		
40 min			
Inflow	15599	Storage =	9962
Outflow	5638		
50 min			
Inflow	16632	Storage =	9867
Outflow	6765		
60 min			
Inflow	17894	Storage =	10001
Outflow	7893		
70 min			
Inflow	19270	Storage =	10250
Outflow	9020		
80 min			
Inflow	20188	Storage =	10040
Outflow	10148		
90 min			
Inflow	21679	Storage =	10403
Outflow	11275		
100 min			
Inflow	21793	Storage =	9391
Outflow	12403		
110 min			
Inflow	21449	Storage =	7919
Outflow	13530		

Storage Required = 10403 CF

CHAMBER DETENTION VOLUME CALCULATIONS	
NUMBER OF CHAMBERS =	3
LENGTH OF CHAMBERS (FT) =	112
NUMBER OF HEADERS =	1
LENGTH OF HEADERS =	29
TOTAL LENGTH OF CHAMBERS (FT)	365
CHAMBER DIAMETER (FT) =	8
AREA OF CHAMBERS (SF)=	50.27
VOLUME OF CHAMBERS (CF) =	18347

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SP 2018-029
RECORD DRAWING

Revision	Date	Description

Owner:
Greencrest TPS Hotel, L.P.

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TOWNEPLACE
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MARRIOTT

908 E. INTERSTATE 30
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12/23/2021

STATE OF TEXAS
CAMERON A. SLOWN
106317
LICENSED
PROFESSIONAL ENGINEER

Drawn By:	Checked By:
F.C. CUNY	F.C. CUNY
Date: 11/19/2018	Project No.: –

Sheet Title:
Pond #2 Calculations

Scale:	Sheet No.:
N.T.S.	12c of 14

100 YR STORM

100 YEAR 96" PIPE STORAGE CALCULATION		
PIPE DIAMETER (in.)	96.00	
AREA OF PIPE (SF)	50.27	
LENGTH OF PIPE (FT)	365.00	
PIPE AREA ITERATIONS (GIVEN d> RADIUS)		
INPUT d (in)	89.85	<= USER INPUT
h = 2R-d	6.15	
ø = 2arccos((r-h)/r)	1.02	
K = (r^2(Ø-sin(Ø)))/2	1.36	
A = ∏r^2 - K	48.91	
PROVIDED VOLUME (96 in. PIPE)	17852	

100YR WSEL

534.53+89.85/12 = 542.01

CIRCLE

ORIFICE CALCULATION		
Equation: Q = Cd*A*((2*g*H)^0.5)		FL= 6.5
Q =	0.39	ft³/sec
Cd =	0.62	
g =	32.20	ft/sec²
H =	0.82	ft
A = PI*R^2	0.09	ft²
D =	4.00	in
R =	2.00	in

CIRCLE

ORIFICE CALCULATION		
Equation: Q = Cd*A*((2*g*H)^0.5)		FL= 2.5
Q =	0.86	ft³/sec
Cd =	0.62	
g =	32.20	ft/sec²
H =	4.83	ft
A = PI*R^2	0.08	ft²
D =	3.80	in
R =	1.90	in

RECTANGULAR

ORIFICE CALCULATION		
Equation: Q = Cd*A*((2*g*H)^0.5)		FL= 0
Q =	4.88	ft³/sec
Cd =	0.62	
g =	32.20	ft/sec²
H =	7.24	ft
A = BH	0.36	ft²
B =	8.75	in
H=	6.00	in

100YR Qallowable = 6.41 cfs

Q total = 4.88+0.86+0.39 = 6.13 cfs

25 YR STORM

25 YEAR 96" PIPE STORAGE CALCULATION		
PIPE DIAMETER (in.)	96.00	
AREA OF PIPE (SF)	50.27	
LENGTH OF PIPE (FT)	365.00	
PIPE AREA ITERATIONS (GIVEN d> RADIUS)		
INPUT d (in)	69.98	<= USER INPUT
h = 2R-d	26.02	
ø = 2arccos((r-h)/r)	2.19	
K = (r^2(Ø-sin(Ø)))/2	11.01	
A = ∏r^2 - K	39.26	
PROVIDED VOLUME (96 in. PIPE)	14329	

25YR WSEL

534.53+69.98/12 = 540.36

CIRCLE

ORIFICE CALCULATION		
Equation: Q = Cd*A*((2*g*H)^0.5)		FL= 2.5
Q =	0.70	ft³/sec
Cd =	0.62	
g =	32.20	ft/sec²
H =	3.17	ft
A = PI*R^2	0.08	ft²
D =	3.80	in
R =	1.90	in

RECTANGULAR

ORIFICE CALCULATION		
Equation: Q = Cd*A*((2*g*H)^0.5)		FL= 0
Q =	4.29	ft³/sec
Cd =	0.62	
g =	32.20	ft/sec²
H =	5.58	ft
A = BH	0.36	ft²
B =	8.75	in
H=	6.00	in

25YR Qallowable = 5.23 cfs

Qtotal = 4.29 + 0.70 = 4.99 cfs

10 YR STORM

10 YEAR 96" PIPE STORAGE CALCULATION		
PIPE DIAMETER (in.)	96.00	
AREA OF PIPE (SF)	50.27	
LENGTH OF PIPE (FT)	365.00	
PIPE AREA ITERATIONS (GIVEN d> RADIUS)		
INPUT d (in)	58.00	<= USER INPUT
h = 2R-d	38.00	
ø = 2arccos((r-h)/r)	2.72	
K = (r^2(Ø-sin(Ø)))/2	18.51	
A = ∏r^2 - K	31.75	
PROVIDED VOLUME (96 in. PIPE)	11589	

10YR WSEL

534.53+58.00/12 = 539.36

CIRCLE

ORIFICE CALCULATION		
Equation: Q = Cd*A*((2*g*H)^0.5)		FL= 2.5
Q =	0.58	ft³/sec
Cd =	0.62	
g =	32.20	ft/sec²
H =	2.18	ft
A = PI*R^2	0.08	ft²
D =	3.80	in
R =	1.90	in

RECTANGULAR

ORIFICE CALCULATION		
Equation: Q = Cd*A*((2*g*H)^0.5)		FL= 0
Q =	3.88	ft³/sec
Cd =	0.62	
g =	32.20	ft/sec²
H =	4.58	ft
A = BH	0.36	ft²
B =	8.75	in
H=	6.00	in

10YR Qallowable = 4.54 cfs

Qtotal = 3.88 + 0.58 = 4.46 cfs

5 YR STORM

5 YEAR 96" PIPE STORAGE CALCULATION		
PIPE DIAMETER (in.)	96.00	
AREA OF PIPE (SF)	50.27	
LENGTH OF PIPE (FT)	365.00	
PIPE AREA ITERATIONS (GIVEN d> RADIUS)		
INPUT d (in)	53.07	<= USER INPUT
h = 2R-d	42.93	
ø = 2arccos((r-h)/r)	2.93	
K = (r^2(Ø-sin(Ø)))/2	21.76	
A = ∏r^2 - K	28.51	
PROVIDED VOLUME (96 in. PIPE)	10405	

5YR WSEL

534.53+53.07/12 = 538.95

RECTANGULAR

ORIFICE CALCULATION		
Equation: Q = Cd*A*((2*g*H)^0.5)		FL= 0
Q =	3.71	ft³/sec
Cd =	0.62	
g =	32.20	ft/sec²
H =	4.17	ft
A = BH	0.36	ft²
B =	8.75	in
H=	6.00	in

5YR Qallowable = 3.76 cfs

Qtotal = 3.71 cfs

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SP 2018-029

RECORD DRAWING

Revision	Date	Description

Owner:

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Texas Registered Engineering Firm F-7448

TOWNEPLACE
SUITES
MARRIOTT

908 E. INTERSTATE 30
ROCKWALL, TX 75087

12/23/2021

STATE OF TEXAS
CAMERON A. SLOWN
106317
LICENSED
PROFESSIONAL ENGINEER

Drawn By:	Checked By:
F.C. CUNY	F.C. CUNY
Date: 11/19/2018	Project No.: –

Sheet Title:
Pond #2 Calculations

Scale:	Sheet No.:
N.T.S.	12d of 14

100 YR STORM

Present Conditions Q = CIA		PRE. DEVELOPED DRAINAGE AREAS
A =	2.08	OS-2.1
C =	0.35	
Tc =	20	
I100 =	8.30	
Q100 =	6.04	cfs
Q100 =	6.04	cfs

Q100 Allowable = 6.04 cfs

Future Conditions Q = CIA		DRAINAGE AREAS	Future Conditions Q = CIA		DRAINAGE AREAS
A =	2.00	OS-3, OS-3.2	A =	0.36	OS-3.1
C =	0.35		C =	0.90	
Tc =	20		Tc =	10	
I100 =	8.30		I100 =	9.80	
Q100 =	5.81	cfs	Q100 =	3.18	cfs

Flow for Storm Durations			
Time	I	Cw	Q
10	9.80	0.43	10.04
15	9.00	0.43	9.22
20	8.30	0.43	8.50
30	6.90	0.43	7.07
40	5.80	0.43	5.94
50	5.00	0.43	5.12
60	4.50	0.43	4.61
70	4.00	0.43	4.10
80	3.70	0.43	3.79
90	3.50	0.43	3.58
100	3.40	0.43	3.48
110	3.20	0.43	3.28

Storage Calculations

10 min			
Inflow	6021	Storage =	2396
Outflow	3625		
15 min			
Inflow	8294	Storage =	3763
Outflow	4532		
20 min			
Inflow	10199	Storage =	4761
Outflow	5438		
30 min			
Inflow	12718	Storage =	5467
Outflow	7251		
40 min			
Inflow	14254	Storage =	5190
Outflow	9064		
50 min			
Inflow	15360	Storage =	4484
Outflow	10876		
60 min			
Inflow	16589	Storage =	3900
Outflow	12689		
70 min			
Inflow	17203	Storage =	2701
Outflow	14502		
80 min			
Inflow	18186	Storage =	1872
Outflow	16314		
90 min			
Inflow	19354	Storage =	1226
Outflow	18127		
100 min			
Inflow	20890	Storage =	950
Outflow	19940		
110 min			
Inflow	21627	Storage =	-126
Outflow	21753		

Storage Required = 5467 CF

100 YR WSEL = 550.99

Weir Equation	
Q = Cd*L*H^(3/2)	
Q =	5.56 cfs
Cd =	3.37
L =	0.42 ft
Solving for H =	2.49 ft

25 YR STORM

Present Conditions Q = CIA		PRE. DEVELOPED DRAINAGE AREAS
A =	2.08	OS-2.1
C =	0.35	
Tc =	20	
I25 =	6.80	
Q25 =	4.95	cfs
Q25 =	4.95	cfs

Q25 Allowable = 4.95 cfs

Future Conditions Q = CIA		DRAINAGE AREAS	Future Conditions Q = CIA		DRAINAGE AREAS
A =	2.00	OS-3, OS-3.2	A =	0.36	OS-3.1
C =	0.35		C =	0.90	
Tc =	20		Tc =	10	
I25 =	6.80		I25 =	8.30	
Q25 =	4.76	cfs	Q25 =	2.69	cfs

Flow for Storm Durations			
Time	I	C	Q
10	8.30	0.43	8.50
15	7.40	0.43	7.58
20	6.80	0.43	6.96
30	5.50	0.43	5.63
40	4.70	0.43	4.81
50	4.00	0.43	4.10
60	3.50	0.43	3.58
70	3.30	0.43	3.38
80	3.10	0.43	3.17
90	2.80	0.43	2.87
100	2.60	0.43	2.66
110	2.40	0.43	2.46

Storage Calculations

10 min			
Inflow	5100	Storage =	2129
Outflow	2970		
15 min			
Inflow	6820	Storage =	3107
Outflow	3713		
20 min			
Inflow	8356	Storage =	3900
Outflow	4455		
30 min			
Inflow	10138	Storage =	4197
Outflow	5940		
40 min			
Inflow	11551	Storage =	4125
Outflow	7426		
50 min			
Inflow	12288	Storage =	3377
Outflow	8911		
60 min			
Inflow	12902	Storage =	2507
Outflow	10396		
70 min			
Inflow	14193	Storage =	2312
Outflow	11881		
80 min			
Inflow	15237	Storage =	1871
Outflow	13366		
90 min			
Inflow	15483	Storage =	632
Outflow	14851		
100 min			
Inflow	15974	Storage =	-362
Outflow	16336		
110 min			
Inflow	16220	Storage =	-1601
Outflow	17821		

Storage Required = 4197 CF

25 YR WSEL = 550.64

Weir Equation	
Q = Cd*L*H^(3/2)	
Q =	4.43 cfs
Cd =	3.37
L =	0.42 ft
H =	2.14 ft

Proposed Pond Volume			
Elevation	Area	Volume	Total Volume
548.5	10	0	0
549	801	203	203
550	2567	1684	1887
551	4654	3611	5497
552	4836	4745	10242
553	4836	4836	15078
554	4836	4836	19914
555	4836	4836	24750

10 YR STORM

Present Conditions Q = CIA		PRE. DEVELOPED DRAINAGE AREAS
A =	2.08	OS-2.1
C =	0.35	
Tc =	20	
I10 =	5.90	
Q10 =	4.30	cfs
Q10 =	4.30	cfs

Q10 Allowable = 4.30 cfs

Future Conditions Q = CIA		DRAINAGE AREAS	Offsite Pass-Through Q = CIA		DRAINAGE AREAS
A =	2.00	OS-3, OS-3.2	A =	0.36	OS-3.1
C =	0.35		C =	0.90	
Tc =	20		Tc =	10	
I10 =	5.90		I25 =	7.10	
Q10 =	4.13	cfs	Q25 =	2.30	cfs

Flow for Storm Durations			
Time	I	C	Q
10	7.10	0.43	7.27
15	6.50	0.43	6.66
20	5.90	0.43	6.04
30	4.90	0.43	5.02
40	4.00	0.43	4.10
50	3.40	0.43	3.48
60	3.00	0.43	3.07
70	2.80	0.43	2.87
80	2.60	0.43	2.66
90	2.40	0.43	2.46
100	2.20	0.43	2.25
110	2.00	0.43	2.05

Storage Calculations

10 min			
Inflow	4362	Storage =	1785
Outflow	2577		
15 min			
Inflow	5990	Storage =	2769
Outflow	3221		
20 min			
Inflow	7250	Storage =	3384
Outflow	3866		
30 min			
Inflow	9032	Storage =	3877
Outflow	5154		
40 min			
Inflow	9830	Storage =	3388
Outflow	6443		
50 min			
Inflow	10445	Storage =	2713
Outflow	7731		
60 min			
Inflow	11059	Storage =	2039
Outflow	9020		
70 min			
Inflow	12042	Storage =	1734
Outflow	10308		
80 min			
Inflow	12780	Storage =	1182
Outflow	11597		
90 min			
Inflow	13271	Storage =	385
Outflow	12886		
100 min			
Inflow	13517	Storage =	-657
Outflow	14174		
110 min			
Inflow	13517	Storage =	-1946
Outflow	15463		

Storage Required = 3877 CF

10 YR WSEL = 550.55

Weir Equation	
Q = Cd*L*H^(3/2)	
Q =	4.15 cfs
Cd =	3.37
L =	0.42 ft
H =	2.05 ft

5 YR STORM

Present Conditions Q = CIA		PRE. DEVELOPED DRAINAGE AREAS
A =	2.08	OS-2.1
C =	0.35	
Tc =	20	
I5 =	4.90	
Q5 =	3.57	cfs
Q5 =	3.57	cfs

Q5 Allowable = 3.57 cfs

Future Conditions Q = CIA		DRAINAGE AREAS	Offsite Pass-Through Q = CIA		DRAINAGE AREAS
A =	2.00	OS-3, OS-3.2	A =	0.36	OS-3.1
C =	0.35		C =	0.90	
Tc =	20		Tc =	10	
I5 =	20.00		I5 =	6.10	
Q5 =	14.00	cfs	Q5 =	1.98	cfs

Flow for Storm Durations			
Time	I	C	Q
10	6.10	0.43	6.25
15	5.60	0.43	5.73
20	4.90	0.43	5.02
30	4.00	0.43	4.10
40	3.40	0.43	3.48
50	2.90	0.43	2.97
60	2.60	0.43	2.66
70	2.40	0.43	2.46
80	2.20	0.43	2.25
90	2.10	0.43	2.15
100	1.90	0.43	1.95
110	1.70	0.43	1.74

Storage Calculations

10 min			
Inflow	3748	Storage =	1608
Outflow	2140		
15 min			
Inflow	5161	Storage =	2486
Outflow	2675		
20 min			
Inflow	6021	Storage =	2811
Outflow	3210		
30 min			
Inflow	7373	Storage =	3092
Outflow	4281		
40 min			
Inflow	8356	Storage =	3005
Outflow	5351		
50 min			
Inflow	8909	Storage =	2488
Outflow	6421		
60 min			
Inflow	9585	Storage =	2094
Outflow	7491		
70 min			
Inflow	10322	Storage =	1761
Outflow	8561		
80 min			
Inflow	10813	Storage =	1182
Outflow	9631		
90 min			
Inflow	11612	Storage =	911
Outflow	10702		
100 min			
Inflow	11674	Storage =	-98
Outflow	11772		
110 min			
Inflow	11489	Storage =	-1353
Outflow	12842		

Storage Required = 3092 CF

5YR WSEL = 550.33

Weir Equation	
Q = Cd*L*H^(3/2)	
Q =	3.50 cfs
Cd =	3.37
L =	0.42 ft
H =	1.83 ft

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SP 2018-029
RECORD DRAWING

Revision	Date	Description

Owner:
Greencrest TPS Hotel, L.P.
3021 Ridge Road, A-120
Rockwall, TX 75032
Phone: (214) 890-9225

~ Civil Engineer ~
F.C. CUNY CORPORATION
#2 Horizon Court • Heath, Texas 75032 • (469) 402–7700
Texas Registered Engineering Firm F–7448

TOWNEPLACE
SUITES
MARRIOTT

908 E. INTERSTATE 30
ROCKWALL, TX 75087

12/23/2021

STATE OF TEXAS
CAMERON A. SLOWN
NO. 106317
LICENSED
PROFESSIONAL ENGINEER

Drawn By:	Checked By:
F.C. CUNY	F.C. CUNY
Date: 11/19/2018	Project No.: –

Sheet Title:
Offsite Pond Calculations

Scale:	Sheet No.:
N.T.S.	12e of 14

CAUTION EXISTING UTILITIES !!!

CALL TEXAS 811!!! EXISTING UTILITIES AND UNDERGROUND FACILITIES INDICATED ON THESE PLANS HAVE BEEN LOCATED FROM REFERENCE INFORMATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY BOTH HORIZONTALLY AND VERTICALLY THE LOCATION OF ALL EXISTING UTILITIES AND UNDERGROUND FACILITIES PRIOR TO CONSTRUCTION, TO TAKE THE NECESSARY PRECAUTIONS IN ORDER TO PROTECT ALL FACILITIES ENCOUNTERED. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION.

LOT 2, BLOCK 1
ROCKWALL HIGHS CHOOL ADDITION
CABINET H, SLIDE
P.R.R.C.T.

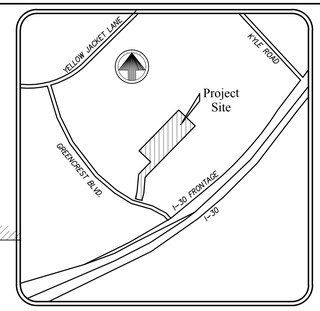
ROCKWALL HIGH SCHOOL SITE

40 20 0 40 80

1" = 40'

ROCKWALL HIGH SCHOOL BUILDING

LOCATION MAP



EX. STA. ±11+18 LN. A
EX. RIM 528.52
FL 6"(OUT) NW ± 523.52
FL 6"(IN) SE ±523.62
FL 6" (IN) SW ±523.65

EX. 6" SEWER

EX. STA. 13+23 LN. A=
STA. 0+00 ~ SS-1
STA. 0+00 ~ SS-2
INSTALL 4' DIA. RAVEN LINED SS. MANHOLE INLINE WITH EXISTING SEWER LINE
RIM 544.00
FL 6"(OUT) ± 539.20
FL 8" (IN) 539.40

STA. 0+10.00 ~ SS-1
PROVIDE 8" SEWER STUB AND PLUG AT PROPERTY LINE
FL 8" 539.50

8" PVC SS LINE SS-2 @ 1.00% SLOPE

R 1493.00'
Δ 7°12'39"
L 187.90'
CB N 55°47'35" W
CL 187.77'

N 44°03'45" E 615.64'

PAD MOUNTED TRANSFORMER TO BE INSTALLED WITHIN 20'x20' ONCOR ESMT.

N 44°27'55" E 273.93'

PRECAST MODULAR RETAINING WALL

INSTALL:
1-FDC AT BUILDING
RE: MEP PLAN

10' ONCOR ELECTRIC DELIVERY ESMT.

INSTALL:
2-4" 45° BEND
1-4" 90° BEND
1-4" DOM. METER
1-4" TESTABLE BACK FLOW DEVICE W/ DOUBLE CHECK IN CONCRETE VAULT

20' WATER LINE ESMT.

INSTALL 1000 GAL. GREASE INTERCEPTOR W/ SAMPLE PORT PER MEP SPECIFICATIONS

NOTE: ALL 4" S.S. LATERALS TO ENTER THE BUILDING AT FL 554.00.
RE: MEP PLAN

TOWNEPLACE
----SUITES----
MARRIOTT

20' WATER LINE ESMT.

S 45°56'35" E 200.81'

INSTALL:
1-8" PLUG

STA. 4+58.57 ~ SS-1
INSTALL 4' DIA. RAVEN LINED MANHOLE.
RIM 548.20
FL 8" (IN) 543.78
FL 8" (OUT) 543.58

8" PVC SS LINE SS-1

INSTALL:
1-8"x6" TEE
1-8" VALVE
1-6" VALVE
1-6" F.H. ASSEMBLY

4" WTR.

6.00

GAS

4" S.S. (GREASE)

4" S.S.

6.00

5+00 6+00 7+00

8" PVC S.S.

8" PVC WATER

PRIVATE 8" S.S.

30' FIRELANE, ACCESS, DRAINAGE AND UTILITY ESMT.

EX. STA. 15+02.62 LN. A
EX. RIM 556.67
FL 6"(OUT) ± 552.25
FL 6"(IN) ±552.65

EX. MANHOLE TO REMAIN AND BE PLUGGED AND ABANDONED IN PLACE.

R 415.00'
Δ 23°57'39"
L 173.55'
CB N 71°09'06" W
CL 172.29'

8" PVC S.S.

4+00

20' SANITARY SEWER LINE ESMT.

L=70.40
R=200.63
DELTA=020°06'15"
CH=70.04
CB=N14°18'35"E

20' WATER LINE ESMT.

8" PVC WATER

3+00

INSTALL:
1-8" CROSS
3-8" VALVES
2-8" PLUGS

20' WATER LINE ESMT.

INSTALL:
1-8"x4" TEE
1-4" VALVE
1-8" VALVE

INSTALL:
1-8"x6" TEE
1-6" VALVE
1-8" VALVE

20' SAN. SWR. ESMT.

10' UTILITY EASEMENT

ONCOR PULL BOX

INSTALL:
1-8" TEE
2-8" VALVES

INSTALL:
1-8"x6" TEE
1-8" VALVE
1-6" VALVE
1-6" F.H. ASSEMBLY

S 44°12'34" W 235.61'

8" PVC SS LINE SS-4 @ 2.00% SLOPE

INSTALL:
1-8"x1" TEE
1-1" VALVE
1-8" VALVE
1-1" IRR. METER
1-1" TESTABLE BACK FLOW DEVICE W/ DOUBLE CHECK

STA. 7+88.57 ~ SS-1=
STA. 0+00 ~ SS-4
INSTALL 5' DIA. RAVEN LINED MANHOLE.
RIM 556.15
FL 8" (IN) 545.30
FL 8" PRIVATE (IN) 546.50
FL 8" (OUT) 545.10

STA. 0+40.23 ~ SS-4
PROVIDE 8" SEWER STUB AND PLUG AT PROPERTY LINE
FL 8" 546.10

INSTALL:
1-8" TEE
2-8" VALVES
1-8" PLUG

TEXAS ROADHOUSE SITE

20' WATER LINE ESMT.

8" PVC SS LINE SS-3 @ 2.00% SLOPE

GAS METER

STA. 2+73.16 ~ SS-1=
STA. 0+00 ~ SS-3
INSTALL 5' DIA. RAVEN LINED MANHOLE.
RIM 562.50
FL 8" (IN) 542.80
FL 8" (OUT) 542.60

CONNECT TO EXISTING 16" WATER LINE.
INSTALL:
1-16"x8" TAPPING SLEEVE AND VALVE ASSEMBLY

PROPOSED GAS METER LOCATION

R 485.00'
Δ 20°36'28"
L 174.44'
CB N 73°10'49" W
CL 173.50'

20' SANITARY SEWER LINE ESMT.

EX. 16" WATER

GREENCREST (CALLED 70' R.O.W.) BOULEVARD

STA. 0+56.00 ~ SS-2
PROVIDE 8" SEWER STUB AND PLUG AT PROPERTY LINE
FL 8" 543.92

EXISTING CLEANOUT TO BE ABANDONED

2-4" CONDUIT (ONCOR)

2-4" CONDUIT (AT&T)

AT&T PULL BOX

LOT 1, BLOCK 1
ROCKWALL-PINE ADDITION
CABINET I, SLIDE 367
P.R.R.C.T.

10' ONCOR ELECTRIC DELIVERY ESMT.

S 45°25'18" E 410.69'

8" PVC WATER

10' UTILITY EASEMENT

REMAINDER OF CALLED 14.45 ACRES
ROCKWALL RENTAL PROPERTIES, L.P.
VOLUME 4076, PAGE 48
D.R.R.C.T.

S 03°35'31" E 25.55'

N 66°18'52" W 111.27'

20' WATER LINE ESMT.

INSTALL:
1-8" TEE
2-8" VALVES
1-8" PLUG

EX. 15' UTILITY ESMT.

EX. 12" WATER

20' WATER LINE ESMT.

CONNECT TO EXISTING 12" WATER LINE.
INSTALL:
1-12"x8" TAPPING SLEEVE AND VALVE ASSEMBLY

INTERSTATE 30
(CALLED 300' R.O.W.)
VOLUME 59, PAGE 226
D.R.R.C.T.

R 3719.71'
Δ 6°19'48"
L 410.94'
CB S 48°33'37" W
CL 410.74'

LEGEND

	PROPERTY LINE
W W	EXISTING WATER LINE
SS SS	EXISTING SANITARY SEWER LINE
W W	PROPOSED WATER LINE
SS SS	PROPOSED SANITARY SEWER LINE

FRANCHISE UTILTIY CONTACTS

ELECTRIC:	ONCOR ELECTRIC
CONTACT:	MARK RUSSELL
PHONE:	(469) 502-8663
GAS:	ATMOS ENERGY
CONTACT:	DINAH WOOD
PHONE:	(972) 485-6277
TELEPHONE:	AT&T
CONTACT:	TYSON PATE
PHONE:	(903) 457-2302

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SP 2018-029
RECORD DRAWING

Revision	Date	Description

Owner:
Greencrest TPS Hotel, L.P.
3021 Ridge Road, A-120
Rockwall, TX 75032
Phone: (214) 890-9225

~ Civil Engineer ~
F.C. CUNY CORPORATION
#2 Horizon Court - Heath, Texas 75032 - (469) 402-7700
Texas Registered Engineering Firm F-7448

TOWNEPLACE SUITES MARRIOTT
908 E. INTERSTATE 30
ROCKWALL, TX 75087

12/23/2021

STATE OF TEXAS
CAMERON A. SLOWN
106317
LICENSED PROFESSIONAL ENGINEER

Drawn By:	Checked By:
F.C. CUNY	F.C. CUNY
Date: 11/19/2018	Project No.: –

Sheet Title: Utility Plan

Scale:	Sheet No.:
1"=40'	13 of 14

Revision	Date	Description

Owner:
Greencrest TPS Hotel, L.P.

3021 Ridge Road, A-120
Rockwall, TX 75032
Phone: (214) 890-9225

~ Civil Engineer ~
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908 E. INTERSTATE 30
ROCKWALL, TX 75087

12/23/2021

STATE OF TEXAS
CAMERON A. SLOWN
106317
LICENSED PROFESSIONAL ENGINEER

Drawn By:	Checked By:
F.C. CUNY	F.C. CUNY
Date: 11/19/2018	Project No.: -

Sheet Title:
Sanitary Sewer Profile

Scale:	Sheet No.:
V: 1"=4' H: 1"=40'	14 of 14

EX. 13+23 LN. A =
0+00 ~ SS-1
0+40 ~ SS-2
INSTALL 4" DIA. RAVEN
LINED M.H. INLINE WITH
EX. SEWER LINE
PROVIDE 8" STUB AND PLUG
FOR FUTURE CONNECTION
RIM 544.00

2+13.16 ~ SS-1=
0+40 ~ SS-3
INSTALL 5" DIA. RAVEN
LINED M.H.
PROVIDE 8" STUB AND PLUG FOR
FUTURE CONNECTION
RIM 562.50

LINE SS-1

4+58.57 SS-1
INSTALL 4" DIA. RAVEN
LINED M.H.
RIM 548.20

5+50.57 ~ SS-1
END CONC. ENCASEMENT

7+88.57 ~ SS-1=
0+40 ~ SS-4
INSTALL 5" DIA. RAVEN
LINED M.H.
PROVIDE 8" STUB AND PLUG TO
PROPERTY LINE FOR
FUTURE CONNECTION
RIM 556.15

EX. 13+23 LN. A =
0+00 ~ SS-1
0+00 ~ SS-4
INSTALL 4" DIA. RAVEN
LINED M.H. INLINE WITH
EX. SEWER LINE

LINE SS-2

0+10 ~ SS-2
PROVIDE 8" STUB
AND PLUG FOR
FUTURE CONNECTION

0+01 ~ SS-2=
2+32.16 ~ SS-1
INSTALL 6" DIA. RAVEN
LINED M.H.
RIM 562.50

LINE SS-3

0+56.00 ~ SS-2
PROVIDE 8" STUB AND PLUG AT
PROPERTY LINE FOR
FUTURE CONNECTION

0+00 ~ SS-3=
7+88.57 ~ SS-1
INSTALL 4" DIA. RAVEN
LINED M.H.
RIM 556.15

LINE SS-4

0+40 ~ SS-4
PROVIDE 8" STUB AND PLUG AT
PROPERTY LINE FOR
FUTURE CONNECTION

EX. GRADE
PROP. GRADE
EX. 6" SEWER @ ±7.60%
EX. 6" SEWER @ ±7.60%
EX. 6" SEWER @ ±3.80%
8" WATER LINE CROSSING
8" SDR 26 PVC on 1.17%
8" SDR 26 PVC on 0.40%
8" SDR 26 PVC on 0.40%
NO SERVICES ALLOWED
PROVIDE 92 FEET OF CONCRETE ENCASEMENT
STORM LINE -1
FL 18" RCP 533.83
4" WATER CROSSING
6" WATER CROSSING
6" WATER CROSSING
STORM LINE-3
FL 18" RCP 547.55
8" SDR 35 PVC on 1.0%
WATER LINE CROSSING
8" SDR 26 PVC on 2.0%
WATER LINE CROSSING
STRM CROSSING
STORM LINE-3
FL 18" RCP 547.55
8" SDR 26 PVC on 2.0%

F.L. 6" (OUT) ±538.20
F.L. 8" (IN) 539.40
F.L. 8" (OUT) 542.60
F.L. 8" (IN) 542.80
F.L. 8" (OUT) 543.58
F.L. 8" (IN) 543.78
F.L. 8" (OUT) 545.10
F.L. 8" (IN) 545.30
F.L. 8" PRIVATE (IN) 546.50
F.L. 6" (OUT) ±538.20
F.L. 8" (IN) 539.40
F.L. 8" 539.50
F.L. 8" (OUT) 542.60
F.L. 8" (IN) 542.80
F.L. 8" 543.92
F.L. 8" (OUT) 545.10
F.L. 8" (IN) 545.30
F.L. 8" PRIVATE (IN) 546.50
F.L. 8" (OUT) 546.10

0+00 1+00 2+00 3+00 4+00 5+00 6+00 7+00 7+89 0+00 0+00

SP 2018-029
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CAUTION EXISTING UTILITIES !!!

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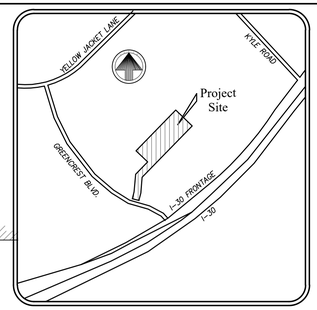
LOT 2, BLOCK 1
ROCKWALL HIGHS CHOOL ADDITION
CABINET H, SLIDE
P.R.R.C.T.

ROCKWALL HIGH SCHOOL SITE

40 20 0 40 80

1" = 40'

ROCKWALL HIGH SCHOOL BUILDING



LOCATION MAP

EX. STA. ±11+18 LN. A
EX. RIM 528.52
FL 6"(OUT) NW ± 523.52
FL 6"(IN) SE ±523.62
FL 6" (IN) SW ±523.65

EX. 6" SEWER

N 44°03'45" E 615.64'

N 44°27'55" E 273.93'

PRECAST MODULAR RETAINING WALL

R 1493.00'
Δ 7°12'39"
L 187.90'
CB N 55°47'35" W
CL 187.77'

8" PVC SS LINE SS-2 @ 1.00% SLOPE

EX. STA. 15+02.62 LN. A
EX. RIM 556.67
FL 6"(OUT) ± 552.25
FL 6"(IN) ±552.65

8" PVC SS

20' SANITARY SEWER LINE ESMT.

20' WATER LINE ESMT.

12" DIP SS

8" PVC WATER

R 415.00'
Δ 23°57'39"
L 173.55'
CB N 71°09'06" W
CL 172.29'

8" PVC SS LINE SS-1

TOWNEPLACE
----SUITES-----
MARRIOTT

S 45°58'35" E 200.81'

6.24

S 44°12'34" W 235.61'

ONCOR PULL BOX

LOT 1, BLOCK 1
ROCKWALL-PINE ADDITION

TREE MITIGATION ZOOMED VIEW
1"=10' SCALE

TREE MITIGATION LIST

Tree Tag Number	Tree Type	Tree Diameter (inches)
127	HACKBERRY *	16
128	CEDAR ELM	8
129	HACKBERRY *	16
130	HACKBERRY *	12
131	OAK	6
132	CEDAR ELM	10
135	CEDAR ELM	4
	TOTAL	46

* MITIGATION FOR HACKBERRY TREES ARE 1/2 OF THE EXISTING TREE DIAMETER

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TOWNEPLACE
SUITES
MARRIOTT

908 E. INTERSTATE 30
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12/23/2021

STATE OF TEXAS
CAMERON A. SLOWN
106317
LICENSED PROFESSIONAL ENGINEER

Drawn By:	Checked By:
F.C. CUNY	F.C. CUNY
Date: 11/19/2018	Project No.: –

Sheet Title:
Tree Mitigation Plan

Scale:	Sheet No.:
1"=40'	1 of 1