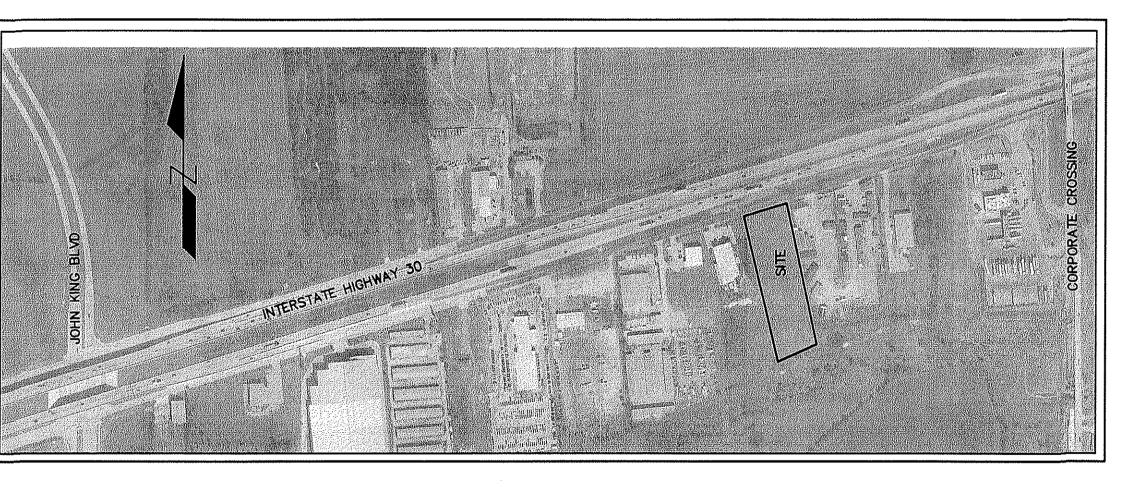
# PAVING, GRADING, DRAINAGE & UTILITIES FOR CAVENDER'S LOT 1, BLOCK 1 CAVENDER'S ADDITION CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS

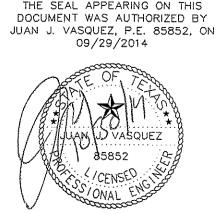
THOMPSON ARCHITECTURAL GROUP P.O. Box 8113 / Tyler, Texas 75711 (903) 871-0200 / (903) 539-4067



LOCATION MAP N. T. S.

**RECORD DRAWING** 

TO THE BEST OF OUR KNOWLEDGE THE IMPROVEMENTS SHOWN ON THIS PLAN WERE COMPLETED IN GENERAL CONFORMANCE WITH THE DESIGN PLANS. THIS DETERMINATION WAS MADE BASED ON POST-CONSTRUCTION SURVEY DATA AND RMATION PROVIDED BY THE CONTRACTOR VASQUEZ ENGINEERING, LLC **TEXAS REG. F-12266** 



SH	EE	Т	I	N	D	E	Х

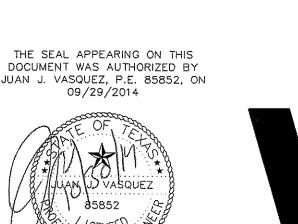
	COVER
	FINAL PLAT
SP1	SITE PLAN
01	DIMENSIONAL CONTROL PLAN
C2	PAVING PLAN
03	GRADING PLAN
C4	DRAINAGE AREA MAP & DETENTION CALCUATIONS
C5	EROSION CONTROL PLAN
26	STORM SEWER PLAN
C7	UTILITY PLAN
28	DETAILS & GENERAL NOTES
_P1	LANDSCAPE PLAN
_P2	LANDSCAPE SPECIFICATIONS AND DETAILS

RETAINING WALL DETAILS

1374	
W1	COVER SHEET
W2	GENERAL NOTES
WЗ	CROSS SECTIONS
W4	DETAIL SHEET
W5	DETAIL SHEET
W6	DETAIL SHEET

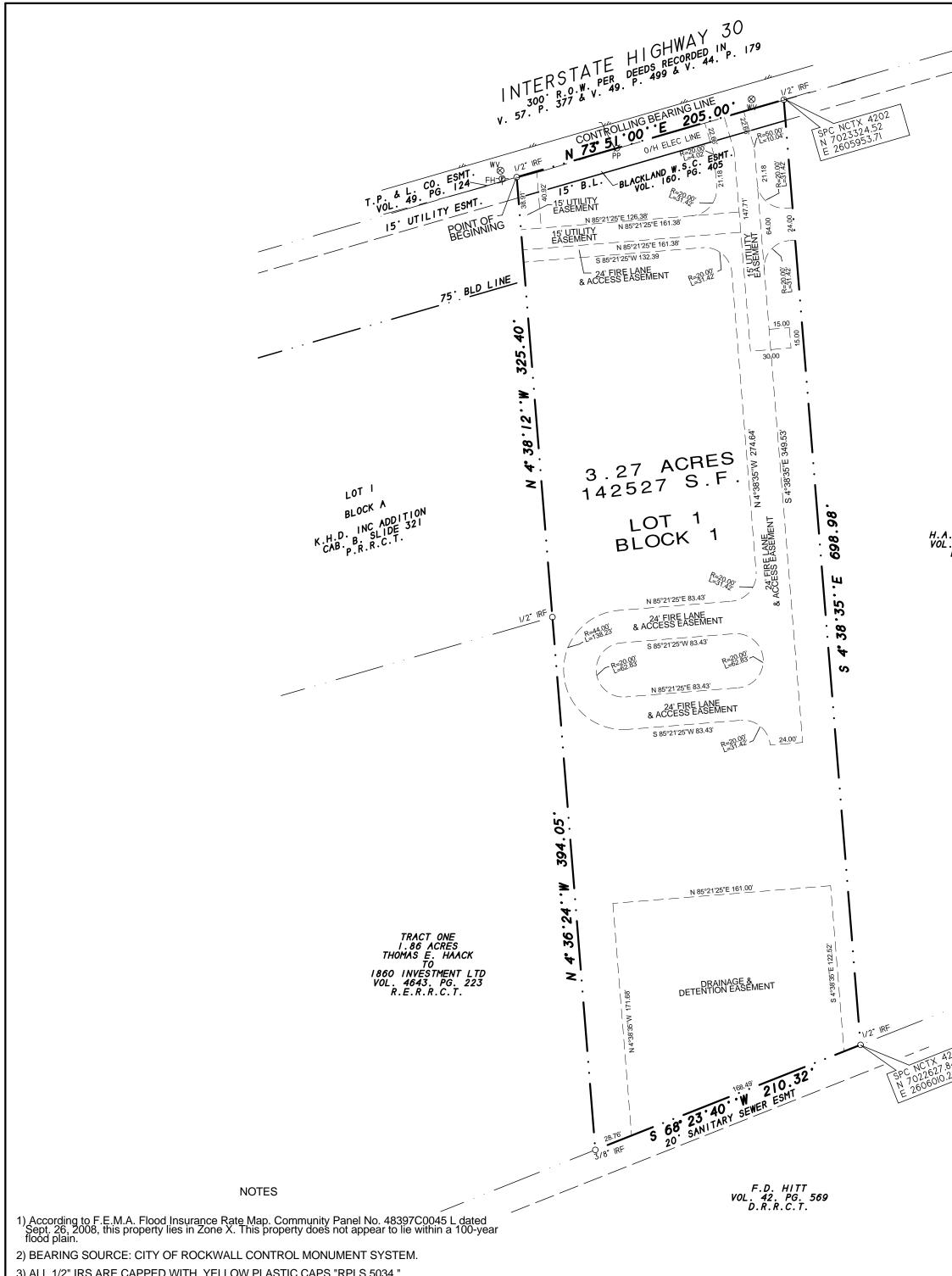
# SUBMITTALS

NO	DATE	COMMENTS
1	10/06/2014	FIRST CITY SUBMITTAL
2	10/27/2014	SECOND CITY SUBMITTAL
3	10/30/2014	THIRD CITY SUBMITTAL

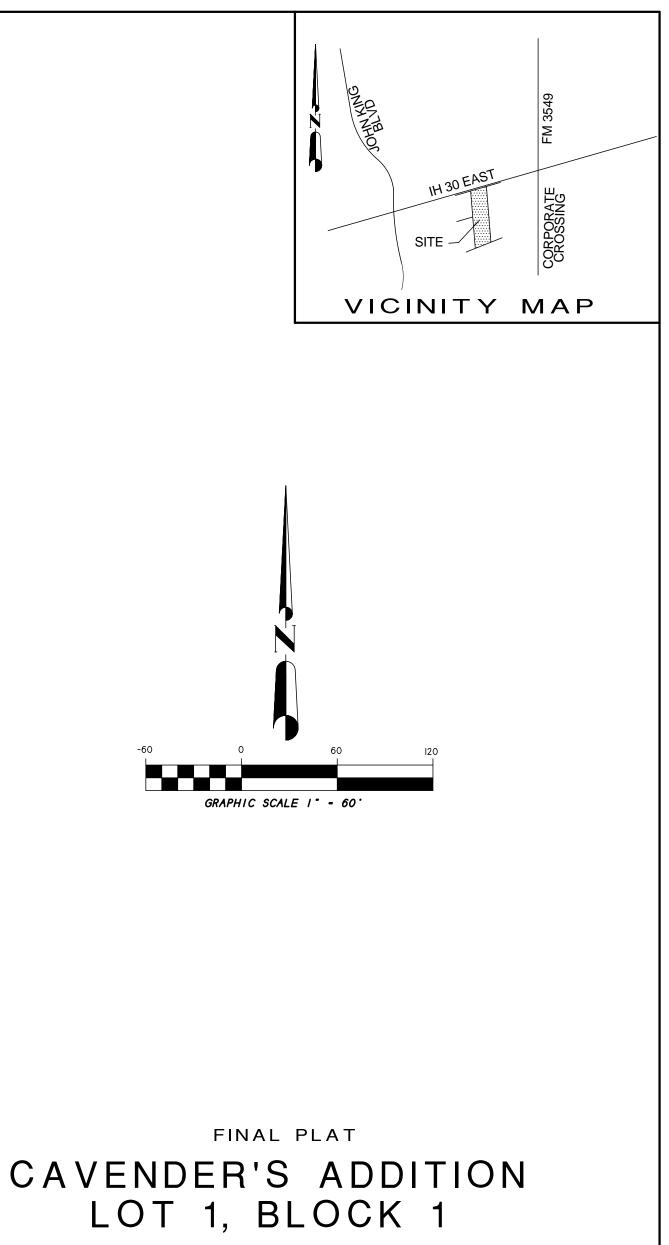




VASQUEZ ENGINEERING, L.L.C. 1919 S. Shiloh Road Suite 440, LB 44 Garland, Texas 75042 Ph: 972-278-2948 TX Registration #F-12266

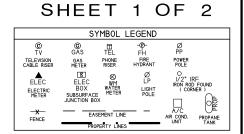


3) ALL 1/2" IRS ARE CAPPED WITH YELLOW PLASTIC CAPS "RPLS 5034."



3.27 ACRES OR 142,527 S.F. ( 1 LOT ) JOHN LOCKHART SURVEY, A-134 CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS

OWNER: CAVENDER INVESTMENT PROPERTIES E LTD 7820 SOUTH BROADWAY TYLER, TX 75703



 
 SURVEY DATE
 JUNE 26. 2014.

 SCALE
 1" - 60'
 FILE # 992500-PP

 CLIENT
 CIPE.LTD
 GF # 14-178632-RW
 H.D. Fetty Land Surveyor, LLC 6770 FM 1565 ROYSE CITY, TX 75189 972-635-2255 PHONE tracy@hdfetty.com

CITY CASE P2014-039

H.A. & GWEN COWAN VOL. 209. PG. 367 D.R.R.C.T.

STATE OF TEXAS COUNTY OF ROCKWALL **OWNER'S CERTIFICATE** (Public Dedication)

WHEREAS, CAVENDER INVESTMENT PROPERTIES E LTD, BEING the Owners of a tract of land in the County of Rockwall, State of Texas, said tract being described as follows:

All that certain lot, tract or parcel of land situated in the JOHN LOCKHART SURVEY, ABSTRACT NO. 134, City of Rockwall, Rockwall County, Texas, and being all of a 3.268 acres tract of land as described as Tract II in a Warranty deed from Thomas E. Haack to 1860 Investments, LTD., dated May 31, 2006 and being recorded in Volume 4643, Page 223 of the Official Public Records of Rockwall County, Texas, and being more particularly described as follows:

BEGINNING at a 1/2" iron rod found for corner in the Southeast right-of-way line of Interstate Highway 30, at the Northwest corner of said 3.268 acres tract, said point also being at the Northeast corner of Lot 1, Block A, of K.H.D, INC., an Addition to the City of Rockwall, Texas, according to the Plat thereof recorded in Cabinet B, Slide 321, of the Plat Records of Rockwall County, Texas;

THENCE N. 73 deg. 51 min. 00 sec. E. along said right-of-way line, a distance of 205.00 feet to a 1/2" iron rod with yellow plastic cap stamped "R.S.C.I. RPLS 5034" found for corner at Northwest corner of a tract of land as described in a Deed to H.A. & Gwen Cowan, as recorded in Volume 209, Page 367 of the Real Property Records of Rockwall County, Texas;

THENCE S. 04 deg. 38 min. 35 sec. E. along the West line of said Cowan tract, a distance of 698.98 feet to a 1/2" iron rod found for corner at the Southeast corner of said 3.268 acres tract and being in the Northwest line of a tract of land as described in a Deed to F.D. Hitt, as recorded in Volume 42, Page 569 of the Deed Records of Rockwall County, Texas;

THENCE S. 68 deg. 23 min. 40 sec. W. along the Northwest line of said Hitt tract, a distance of 210.32 feet to a 3/8" iron rod found for corner at the Southwest corner of said 3.268 acres tract;

THENCE N. 04 deg. 36 min. 24 sec. W. a distance of 394.05 feet to a 1/2" iron rod found for corner at the Southeast corner of said Lot 1;

THENCE N. 04 deg. 38 min. 12 sec. W. along the East line of said Lot 1, a distance of 325.40 feet to the POINT OF BEGINNING and containing 142,527 square feet or 3.27 acres of land.

NOW, THEREFORE, KNOW ALL MEN BY THESE PRESENTS:

# STATE OF TEXAS COUNTY OF ROCKWALL

We the undersigned owner of the land shown on this plat, and designated herein as CAVENDER'S ADDITION LOT 1, BLOCK 1, an 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, easements and public places thereon shown on the purpose and consideration therein expressed. I further certify that all other parties who have a mortgage or lien interest in the subdivision have been notified and signed this plat

We 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.

We also understand the following;

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, maint aining, 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.

No house dwelling unit, or other structure shall be constructed on any lot in this 6. 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, sto rm 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 an d/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 p rogress nents as the work progresses in maki rovements 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.

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

CAVENDER INVESTMENT PROPERTIES E LTD

STATE OF TEXAS COUNTY OF ROCKWALL

Before me, the undersigned authority, on this day personally appeared \_ 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 \_\_\_\_\_day of \_

Notary Public in and for the State of Texas

My Commission Expires:

NOTE: 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 a plat by the City does not constitute any representation, assurance or guarantee that any building within such plat shall be approved, authorized or permit therefore issued, as required under Ordinance 83-54.

SURVEYOR'S CERTIFICATE
NOW, THEREFORE KNOW ALL MEN BY THESE PRESENTS:
THAT I, Harold D. Fetty, III, R.P.L.S. No. 5034, 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.
Harold D. Fetty, III Registered Professional Land Surveyor No. 5034
RECOMMENDED FOR FINAL APPROVAL
Planning and Zoning Commission Date
APPROVED
I hereby certify that the above and foregoing plat of CAVENDER'S ADDITION LOT 1, BLOCK 1 an addition to the City of Rockwall, Texas, an addition to the City of Rockwall, Texas, was approved by the City Council of the City of Rockwall on the day of,
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.
Said addition shall be subject to all the requirements of the Subdivision Regulations of the City of Rockwall.
WITNESS OUR HANDS, this day of,
Mayor, City of Rockwall City Secretary City of Rockwall
City Engineer Date



3.27 ACRES OR 142,527 S.F. (1 LOT)JOHN LOCKHART SURVEY, A-134 CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS

OWNER: CAVENDER INVESTMENT PROPERTIES E LTD 7820 SOUTH BROADWAY TYLER, TX 75703

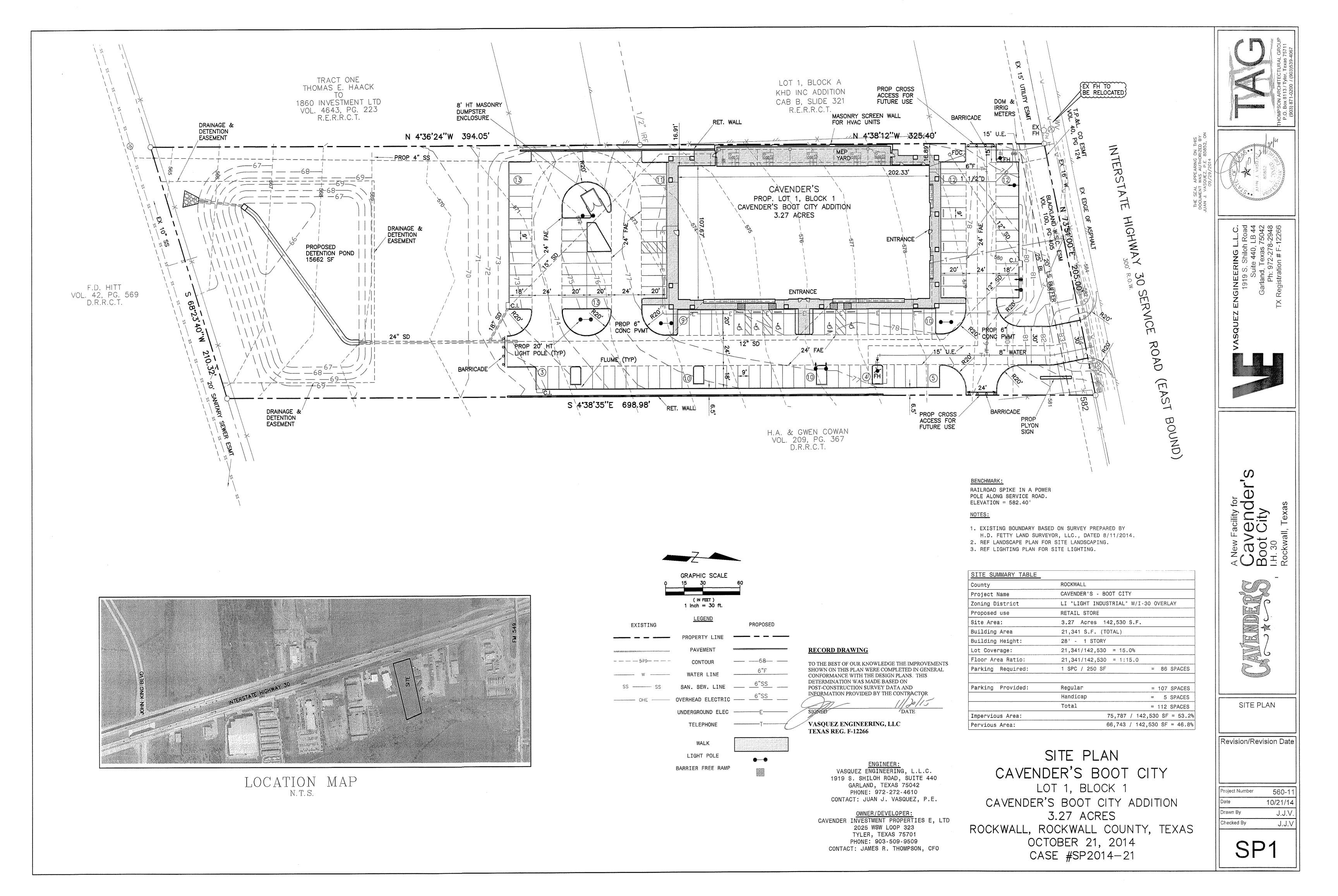
SH	EE	Γ 2	2 C	)F	2
	SY	MBOL I	EGEND		
© TV TELEVISION CABLE RISER	© GAS METER	TEL PHONE RISER	-®- FH FIRE HYDRANT	Ø PP POWER POLE	
ELEC ELECTRIC METER	E ELEC BOX SUBSURFACE JUNCTION BO	⊗ WM WATER METER	Ø LP LIGHT POLE	O I/2" II IRON ROL ( COR	FOUND
-X- FENCE		EMENT LINE		A/C AIR COND. UNIT	

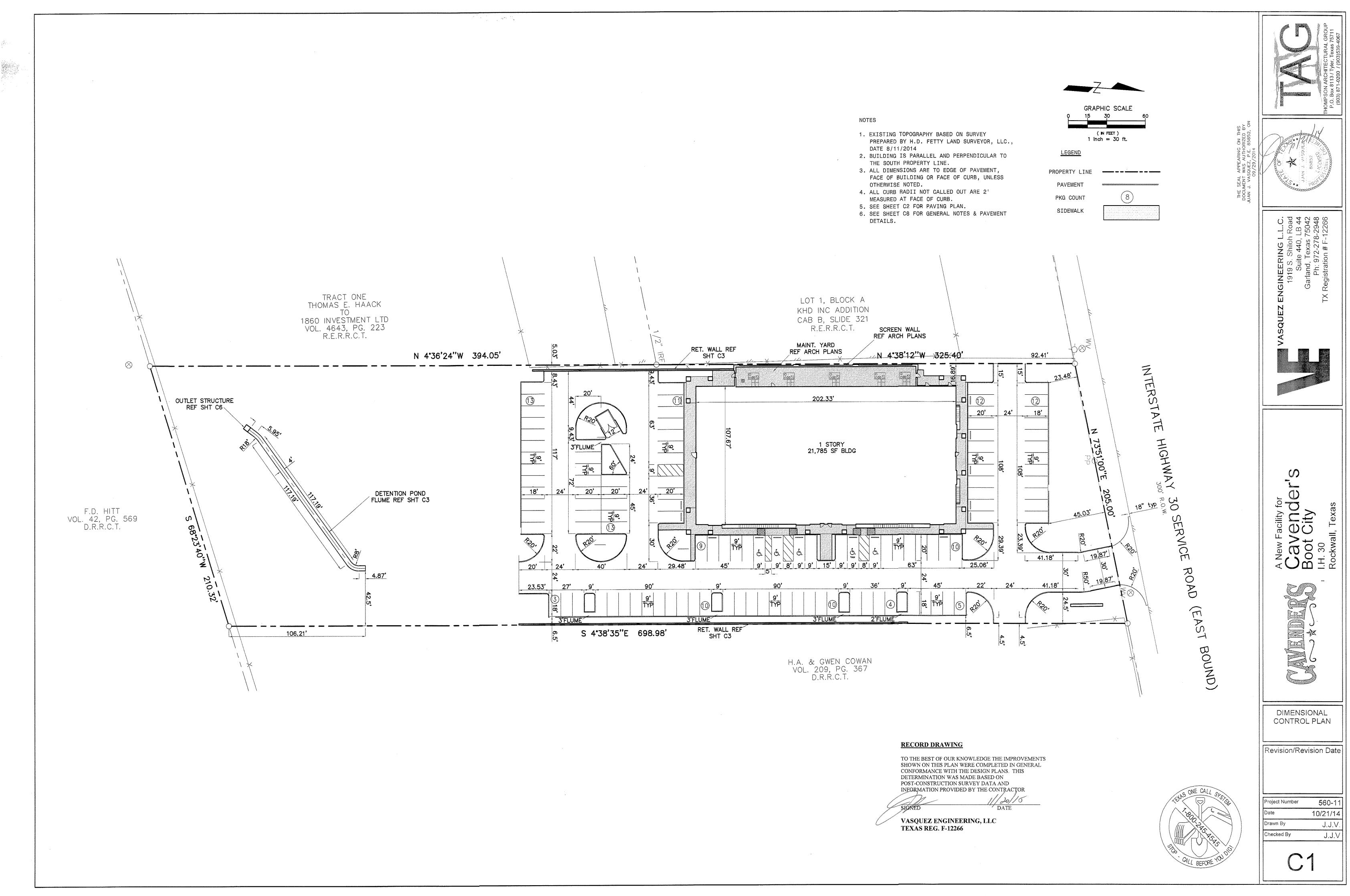
 SURVEY DATE
 JUNE
 26.
 2014.

 SCALE
 1" - 60"
 FILE # 992500-PP

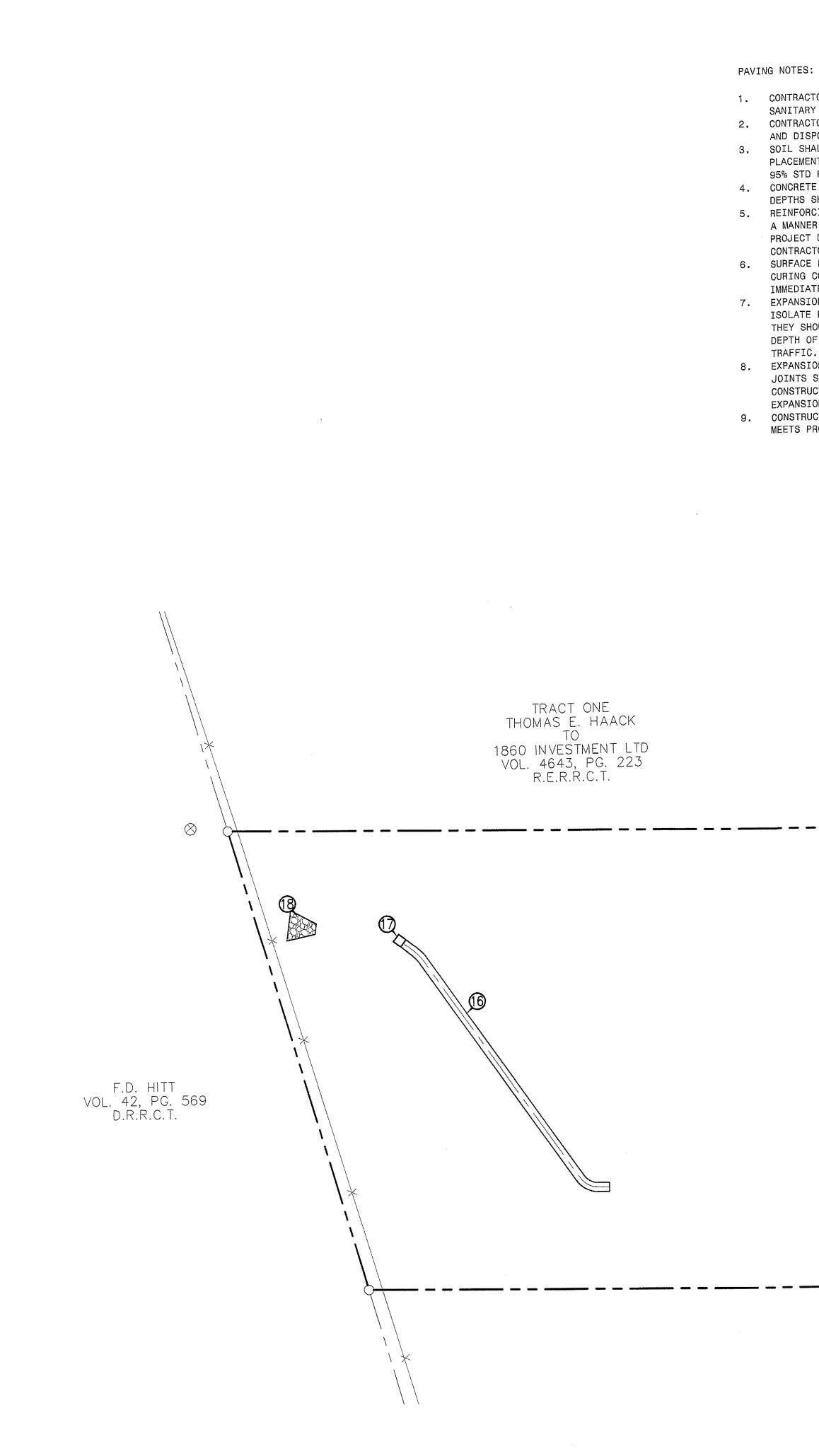
 CLIENT
 CIPE.LTD
 GF # 14-178632-RW

H.D. Fetty Land Surveyor, LLC 6770 FM 1565 ROYSE CITY, TX 75189 972-635-2255 PHONE tracy@hdfetty.com









- 1. CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING WATER AND SANITARY SEWER APPURTENANCES PER CITY STANDARDS.
- AND DISPOSE OF IN A LEGAL MANNER OFF SITE. 3. SOIL SHALL BE IN A MOIST AND COMPACTED CONDITIONS PRIOR TO
- PLACEMENT OF THE CONCRETE. ALL FILL TO BE COMPACTED TO 95% STD PROCTOR USING A SHEEP'S FOOT ROLLER. 4. CONCRETE SHALL BE AS SHOWN ON THE PLANS. CONCRETE TO THE DEPTHS SHOWN ON THE PLANS. FLY ASH WILL NOT BE ALLOWED.
- A MANNER TO PROVIDE A UNIFORM MESH CLEARANCE PER THE PROJECT DETAILS IN THE PLANS OR REQUIRED BY THE CITY. CONTRACTOR SHALL OBTAIN AND PAY FOR ANY PERMITS REQUIRED. 6. SURFACE FINISHING SHALL BE SKID RESISTANT AND A LIQUID
- IMMEDIATELY AFTER THE FINISHING OPERATION. 7. EXPANSION JOINTS OR ISOLATION JOINTS SHALL BE USED TO ISOLATE FIXED OBJECTS ABUTTING OR WITHIN THE PAVED AREAS. THEY SHOULD CONTAIN PREMOLDED JOINT FILLER FOR THE FULL
- DEPTH OF THE PAVEMENT AND BE SEALED PRIOR TO ALLOWING TRAFFIC. 8. EXPANSION JOINTS SHALL BE PLACED AS SHOWN ON PLAN, SAWED
  - JOINTS SHALL BE PLACED AT 15 FT MAX INTERVALS, AND CONSTRUCTION JOINTS SHALL BE LOCATED AT SAWED JOINTS OR EXPANSION JOINTS.

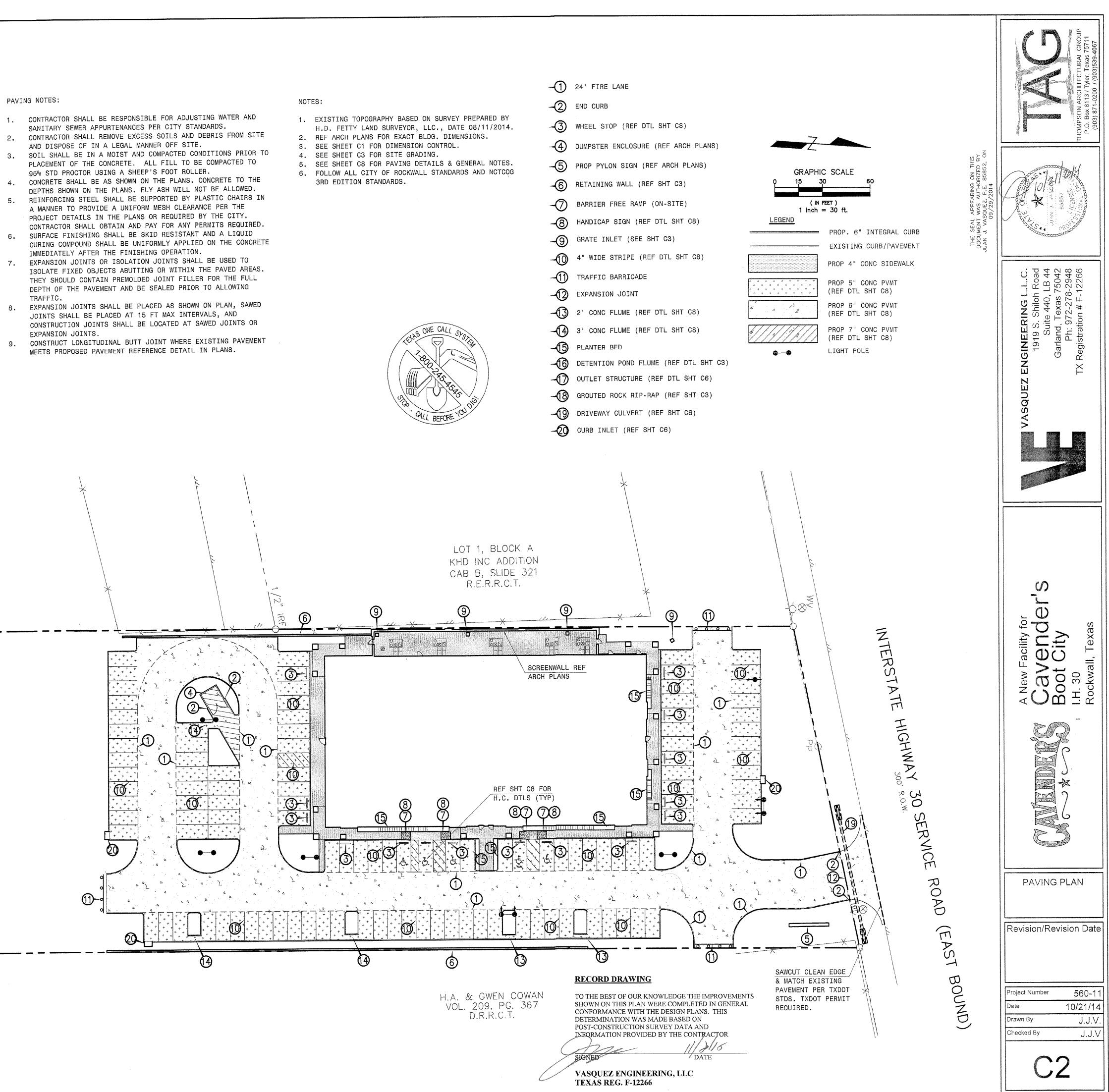
**(1)**-

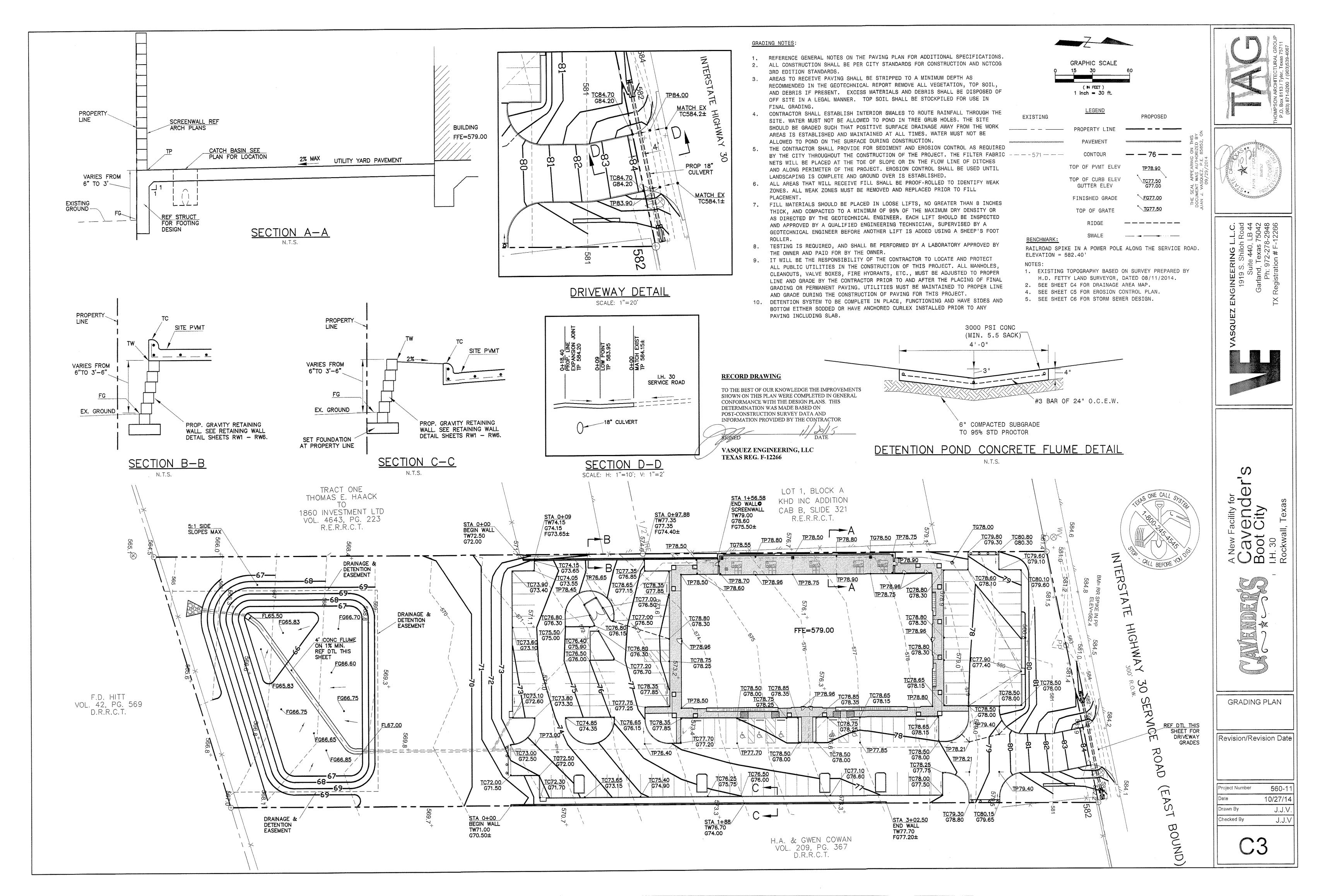
9. CONSTRUCT LONGITUDINAL BUTT JOINT WHERE EXISTING PAVEMENT MEETS PROPOSED PAVEMENT REFERENCE DETAIL IN PLANS.

- 3RD EDITION STANDARDS.



1	24' FIRE LANE
2	END CURB
3	WHEEL STOP (RE
4	DUMPSTER ENCLOS
5	PROP PYLON SIG
6	RETAINING WALL
Ø	BARRIER FREE R
-8	HANDICAP SIGN
•9	GRATE INLET (S
-10	4" WIDE STRIPE
-11	TRAFFIC BARRIC
-12	EXPANSION JOIN
-13	2' CONC FLUME
-13	3' CONC FLUME
-15	PLANTER BED
-16	DETENTION POND
0	OUTLET STRUCTU
-18	GROUTED ROCK R
-19	DRIVEWAY CULVE
-00	CURB INLET (RE





5-YEAR STORM

A. TOTAL AREA DRAINING TO POND = 2.96 ACRES (DA 1-7)

B. TOTAL BYPASS AROUND POND = 0.31 ACRES (DA 8)

C. ALLOWABLE DISCHARGE FROM POND = CIA = 0.35(5.0)(2.96)=5.18 CFS D. PROPOSED BYPASS AROUND POND = CIA = 0.90(6.10)(0.31) = 1.70 CFS

E. EXISTING BYPASS AROUND POND = CIA = 0.35(5.0)(0.31) = 0.54 CFS

F. DESIGN DISCHARGE FROM POND = C - (D - E) = 5.18 - (1.70 - 0.54) = 4.02 CFS

	Area, acres	2.96				
	Present Cor	ditions		Proposed	Condition	18
	С	0.35		С	0.90	
	To	20.00		Tc	10.00	
	i(5)	5.00		i(5)	6.10	
	Q(5)	5.18		Q(5)	16.25	
	Q(release)	4.02				
			Pro	oposed In	tensities	
Time	Inflow	Outflow	Storage (cf)		Te	Intensity
10	9750	2412	7338		10	6,10
20	15984	3618	12366		20	
30	19181	4824	14357		30	4.00
40	22378	6030	16348		40	3.50
50	23177	7236	15941		50	2.90
60	24935	8442	16493		60	2.60
70	27413	9648	17765		70	2.45
80	28132	10854	17278		80	2.20
90	28771	12060	16711		90	2.00

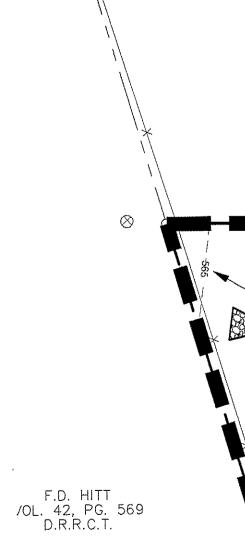
E. EXISTING F. DESIGN D	BYPASS AROUND ISCHARGE FROM	POND = CIA POND = C-(D-	= 0.35(5.9)(0.31 E)=6.11-(2.016
	Area, acres	2.96	
	Present Cor	ditions	
	C	0.35	(
	To	20.00	
	i(10)	5.90	:
	Q(10)	6.11	(
	Q(release)	4.74	
	-		Pro
Time	Inflow	Outflow	Storage (cf)
10	11508	2844	8664
20	18861	4266	14595
30	23496	5688	17808
40	25574	7110	18464
50	27972	8532	19440
60	28771	9954	18817
70	30210	11376	18834
80	31329	12798	18531
90	32368	14220	18148

_				TION POND VOLUME (C			
	5-YR WSEL		5-YR VOLUME	CUMM. VOLUME (CF)	VOLUME (CF)	AREA (SF)	CONTOUR
						15662	569.0
				33430	14485		
_						13307	568.0
				18945	12208		
)	567.90	17765				11108	567.0
				6738	6569		
						2029	566.0
				169	169		
						0	565.5

L						_						120[	523	747[ 26	403 263	44	120	2.75
	*****	DETEN	TION POND VOLUME (CF	=)					ION POND VOLUME (CI									******
CONTOUR	AREA (SF)	VOLUME (CF)	CUMM. VOLUME (CF)	10-YR VOLUME	10-YR WSEL	CONTOUR	AREA (SF)	VOLUME (CF)	CUMM. VOLUME (CF)	5-YR VOLUME	25-YR WSEL				ITION POND VOLUM			
569.				· · · · · · · · · · · · · · · · · · ·		569.0		·····				CONTOUR	AREA (SF)	VOLUME (CF)	CUMM. VOLUME (	OF) 100-YR VOLUM	E 100	D-YR WSEL
		14485	33430		······································			14485	33430			569.0	15662	2				
568.	0 13307					568.0	1330			2	2964 568.28			1448	5 33	430		
	10001	12208	18945					12208	18945			568.0	13307				30422	568.79
	1110		10010	188	34 567.99	567.0	1110							12208	3 18	945		
567.	0 11108		6738	100	001.00		13700	6569	6738			567.0	11108	8				
		6569	0736			566.0	2029							6569	9	738		
566.	0 2029	3	400				202	160	160		water www.alignet.	566.0	2029	9				
		169	109					108	100					169	9	169		
565.	5  (	)	<u> </u>			565.5		<u>v</u>	L			565.5	5 (	0		····		

	V-N	OTCHED WEIR	CALCUL	ATION	
	WSEL	FLOW LINE	С	ANGLE	Q CFS
5YEAR	567.90	565.50	0.60	0.262	3.02
10YEAR	567.99	565.50	0.60	0.262	3.31
25YEAR	568.28	565.50	0.60	0.262	4.36
100YEAR	568.79	565.50	0.60	0.262	6.64
Q = 8/15*C	2*(2g)^0.5*	TAN(ANGLE/2)*	H^2.5		
ANLGE =	15 DEGRE	ES = 0.262 RA	DIANS		
H = WSEL	- FLOW L	INE			

	DISCHARGE FROM	A POND
EVENT	DESIGN DISCHARGE FROM POND (CFS)	ACTUAL DISCHARGE FROM POND (CFS)
5YEAR	4.02	3.02
10YEAR	4.74	3.31
25YEAR	5.35	4.36
100YEAR	6.77	6.64



10-YEAR STORM

PATIONAL METHOD (0=CIA)

25-YEAR STORM

RATIONAL METHOD: (Q=CIA)						
		DRAINA	GE CAL	CULATIO	DNS - PR	OPOSED
AREA NAME	AREA (acres)	С	INLET TIME (min)	l 100 (in/hr)	Q100 (cfs)	COMMENTS
1	0.02	0.90	10.00	9.8	0.18	TO GRATE INLET
2	0.34	0.90	10.00	9.8	3.00	TO CURB INLET
3	0.69	0.90	10.00	9.8	6.09	TO CURB INLET
4	0.50	0.90	10.00	9.8	4.41	TO DOWNSPOUTS
5	0.07	0.90	10.00	9.8	0.62	TO GRATE INLETS
6	0.39	0.90	10.00	9.8	3.44	TO CURB INLET
7	0.95	0.90	10.00	9.8	8.38	TO DETENTION POND
8	0.31	0.90	10.00	9.8	2.73	TO SOUTH PROPERTY LINE
T1	0.46	0.65	10.00	9.8	2.93	TO 18" CULVERT

A. TOTAL AREA DRAINING TO POND = 2.96 ACRES (DA 1-7)

C. ALLOWABLE DISCHARGE FROM POND = CIA = 0.35(6.7)(2.96)=6.94 CFS

D. PROPOSED BYPASS AROUND POND = CIA = 0.90(8.3)(0.31) = 2.32 CFS

B. TOTAL BYPASS AROUND POND = 0.31 ACRES (DA 8)

NOTES:

- 1. EXISTING TOPOGRAPHY BASED ON SURVEY PREPARED BY H.D. FETTY LAND SURVEYOR, LLC., DATED 8/11/2014
- 2. SEE SHEET C3 FOR GRADING AND DRAINAGE PLAN. 3. SEE SHEET C5 FOR EROSION CONTROL PLAN.
- 4. SEE SHEET C6 FOR STORM SEWER DESIGN.

**BENCHMARK:** 

RAILROAD SPIKE IN A POWER POLE ALONG SERVICE ROAD. ELEVATION = 582.40'

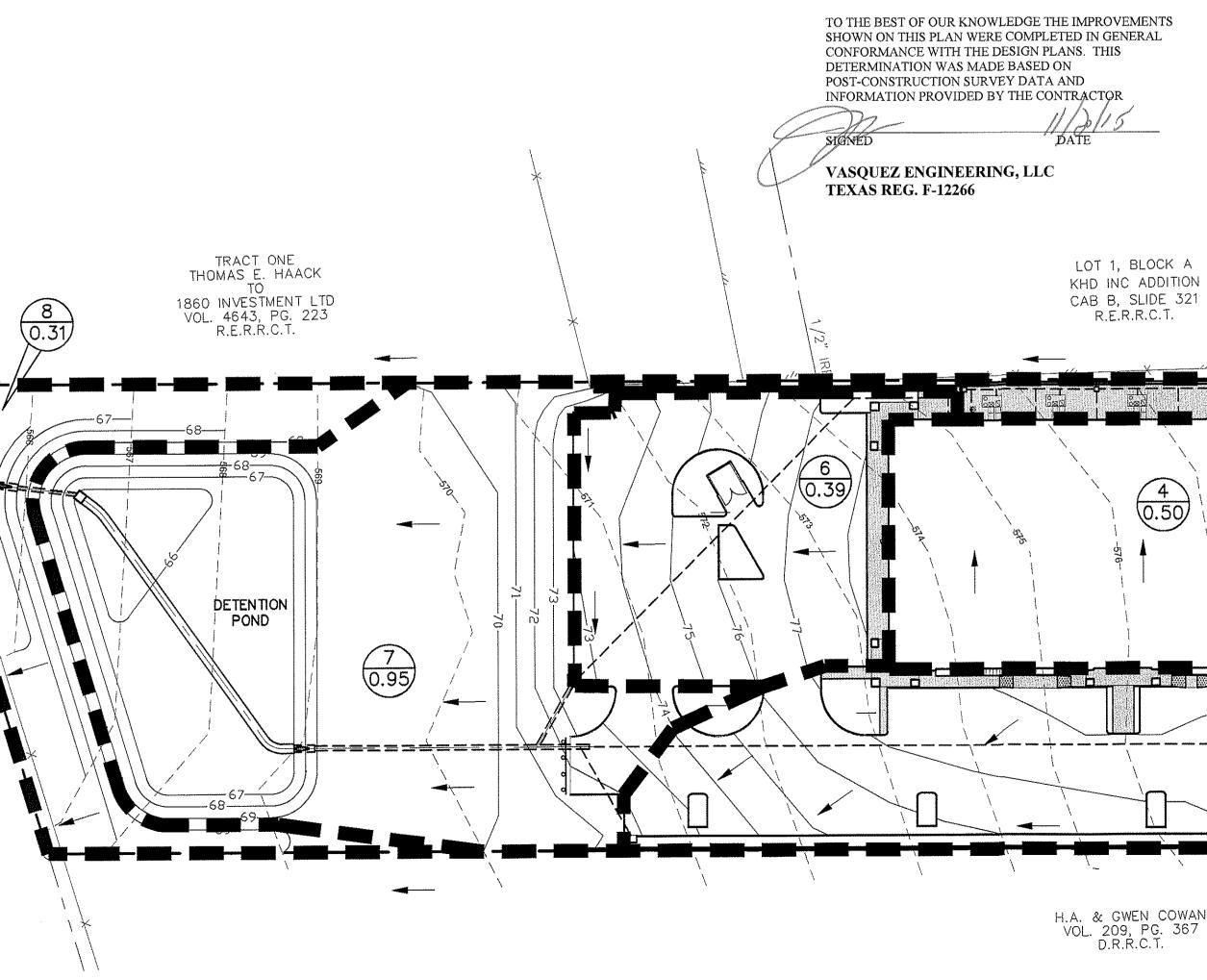
100	D-YEAR
Α.	TOTAL
в.	TOTAL
С.	ALLOWA
D.	PROPOS
Ε.	EXIST

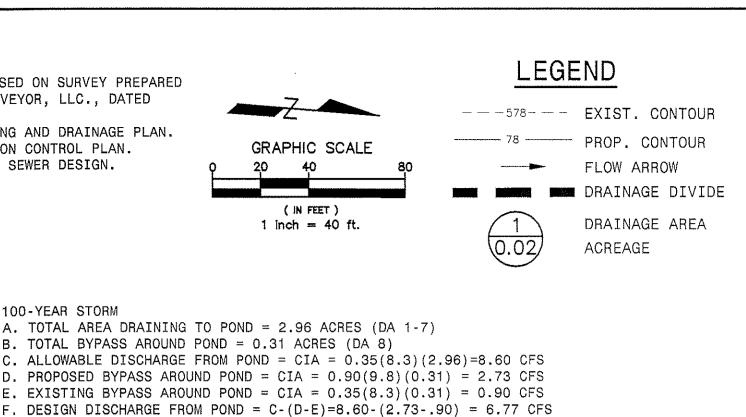
#### A. TOTAL AREA DRAINING TO POND = 2.96 ACRES (DA 1-7) B. TOTAL BYPASS AROUND POND = 0.31 ACRES (DA 8) C. ALLOWABLE DISCHARGE FROM POND = CIA = 0.35(5.9)(2.96)=6.11 CFS D. PROPOSED BYPASS AROUND POND = CIA = 0.90(7.2)(0.31) = 2.01 CFS

35(5.9)(0.31) = 0.64 CFS .11 - (2.01 - .64) = 4.74 CFS

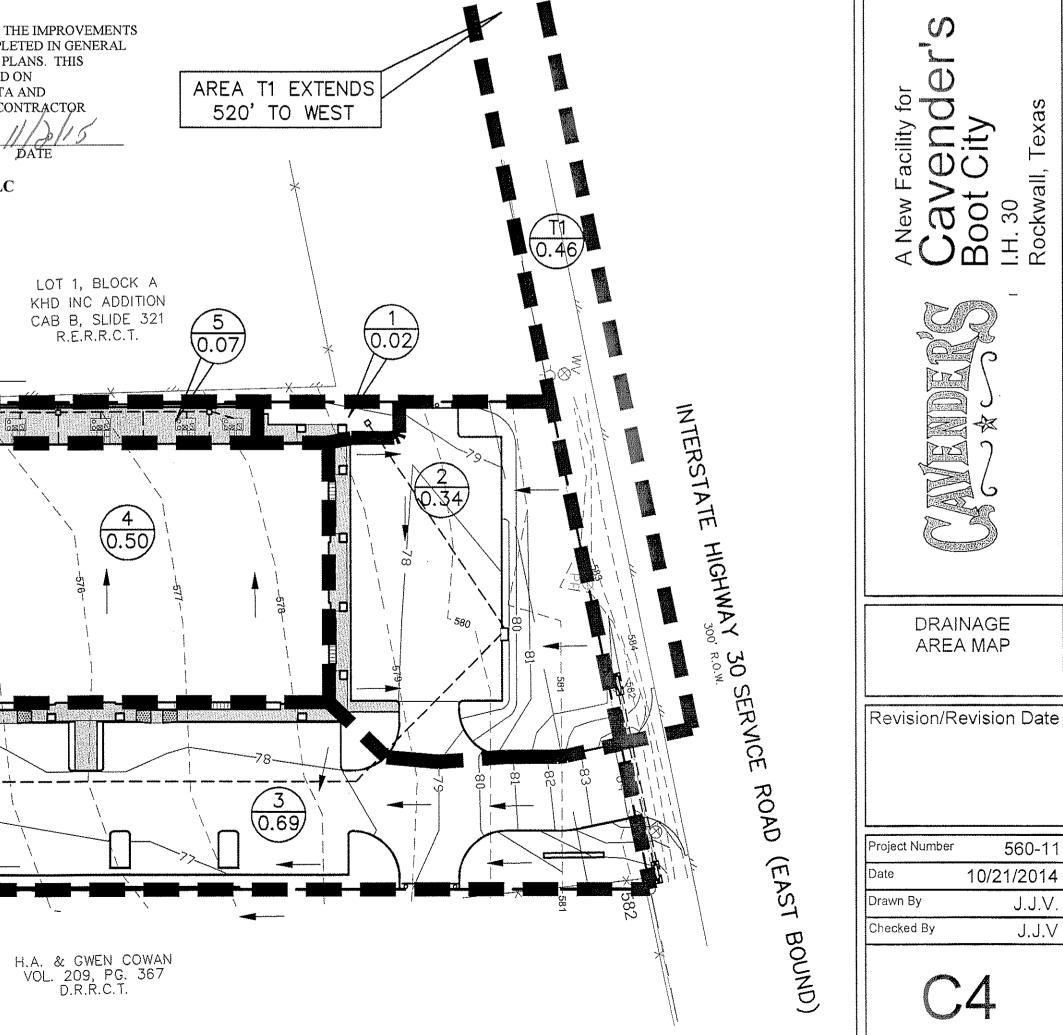
€)(o.3	$(31) = 2.01 \ 0$ $(31) = 0.64 \ C$ (.64) = 4.74	FS		E. EXISTING	BYPASS AROUND ISCHARGE FROM	POND = CIA	= 0.35(6.7)(0.3 -E)=6.94-(2.32	(31) = 0.73 C (73) = 5.35	FS CFS		E. EXISTING F. DESIGN D
	 				Area, acres	2.96					
	Proposed	 Conditio	ns		Present Cor	ditions		Proposed	Condition	13	
	С	0.90	) [		C	0.35		С	0.90		
	Tc	10.00	)		Тс	20.00		Тс	10.00		
	i(10)	7.20	)		i(25)	6.70		i(25)	8.30		
	Q(10)	19.18	3		Q(25)	6.94		Q(25)	22.11		
				· · · · · · · · · · · · · · · · · · ·	Q(release)	5.35					
Pr	oposed In	tensities	s				Pr	oposed In	tensities		Time
(cf)	)	Ta	Intensity	Time	Inflow	Outflow	Storage (cf)		Tc	Intensity	10
8664		1(	7.20	10	13267	3210	10057		10	8.30	20
4595		20	5.90	20	21419	4815	16604		20	6.70	30
7808		30	4.90	30	26374	6420	19954		30	5.50	40
8464		40	4.00	40	29730	8025	21705		40	4.65	50
9440		50	3.50	50	31968	9630	22338		50	4.00	60
8817	A contraction of the second se	60	3.00	60	34046	11235	22811		60	3.55	70
8834		70	2.70	70	35804	12840	22964		70	3.20	80
8531		80	2.45	80	36444	14445	21999		80	2.85	90
8148		90	2.25	90	37403	16050	21353		90	2.60	100
		1		L	<b></b>						120
OLUME							TION POND VOLUM				
JME (C	F) 10-YR VOL	UME	10-YR WSEL	CONTOUR	AREA (SF)	OLUME (CF)	CUMM. VOLUME (C	25-YR VOL	UME	25-YR WSEL	

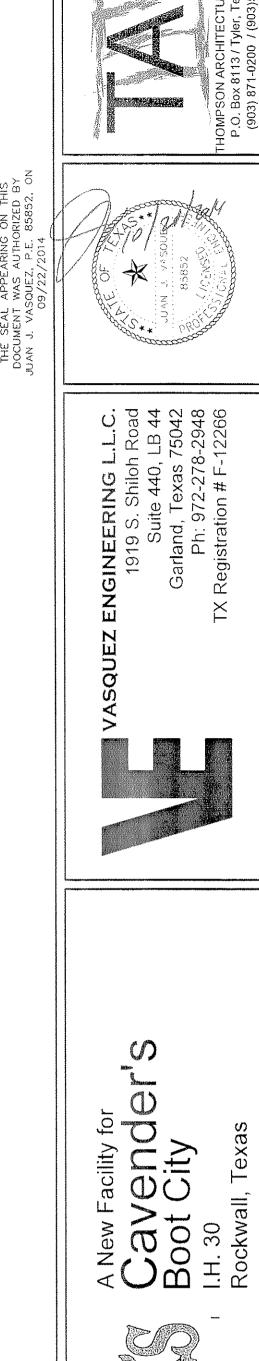
# **RECORD DRAWING**



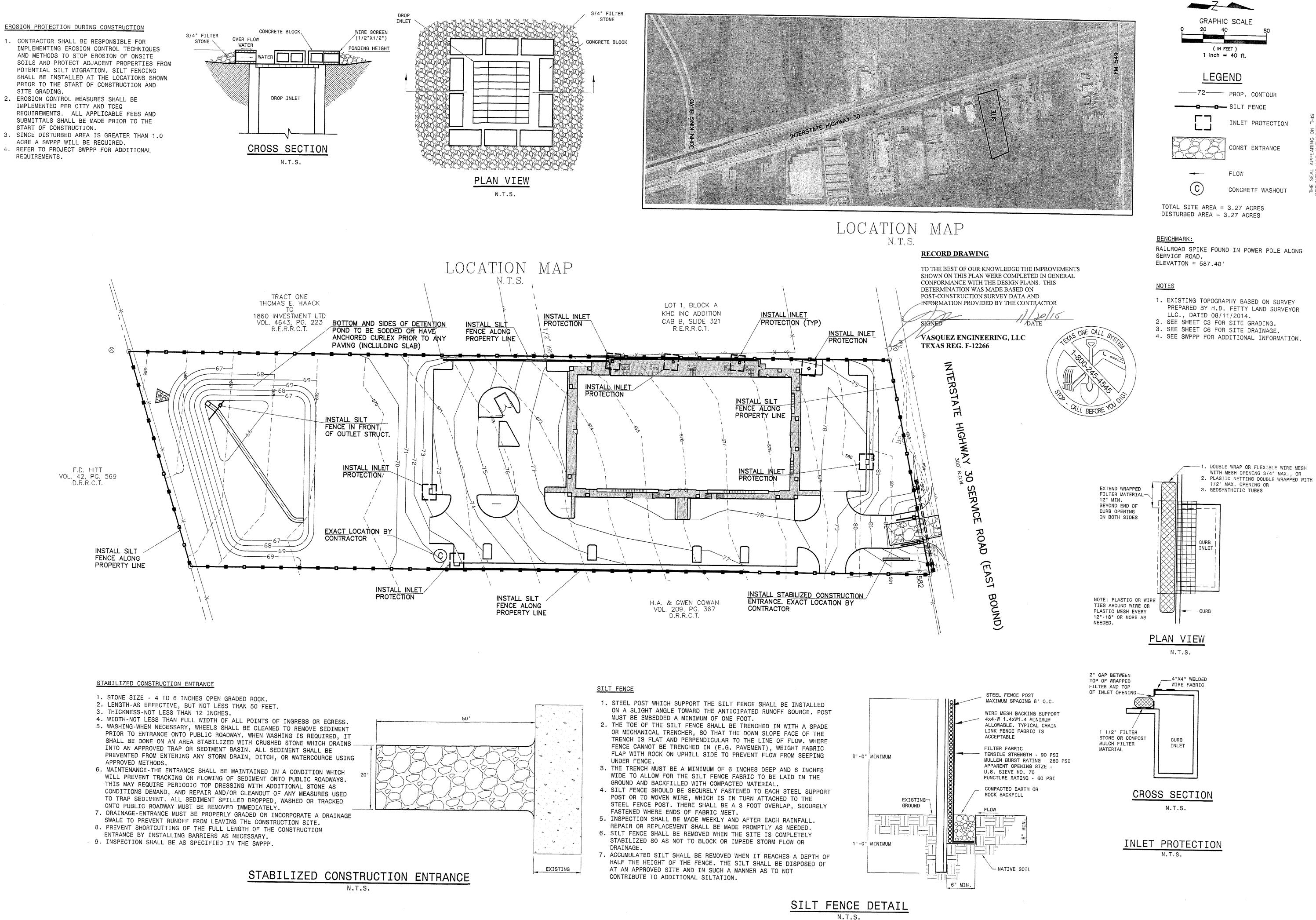


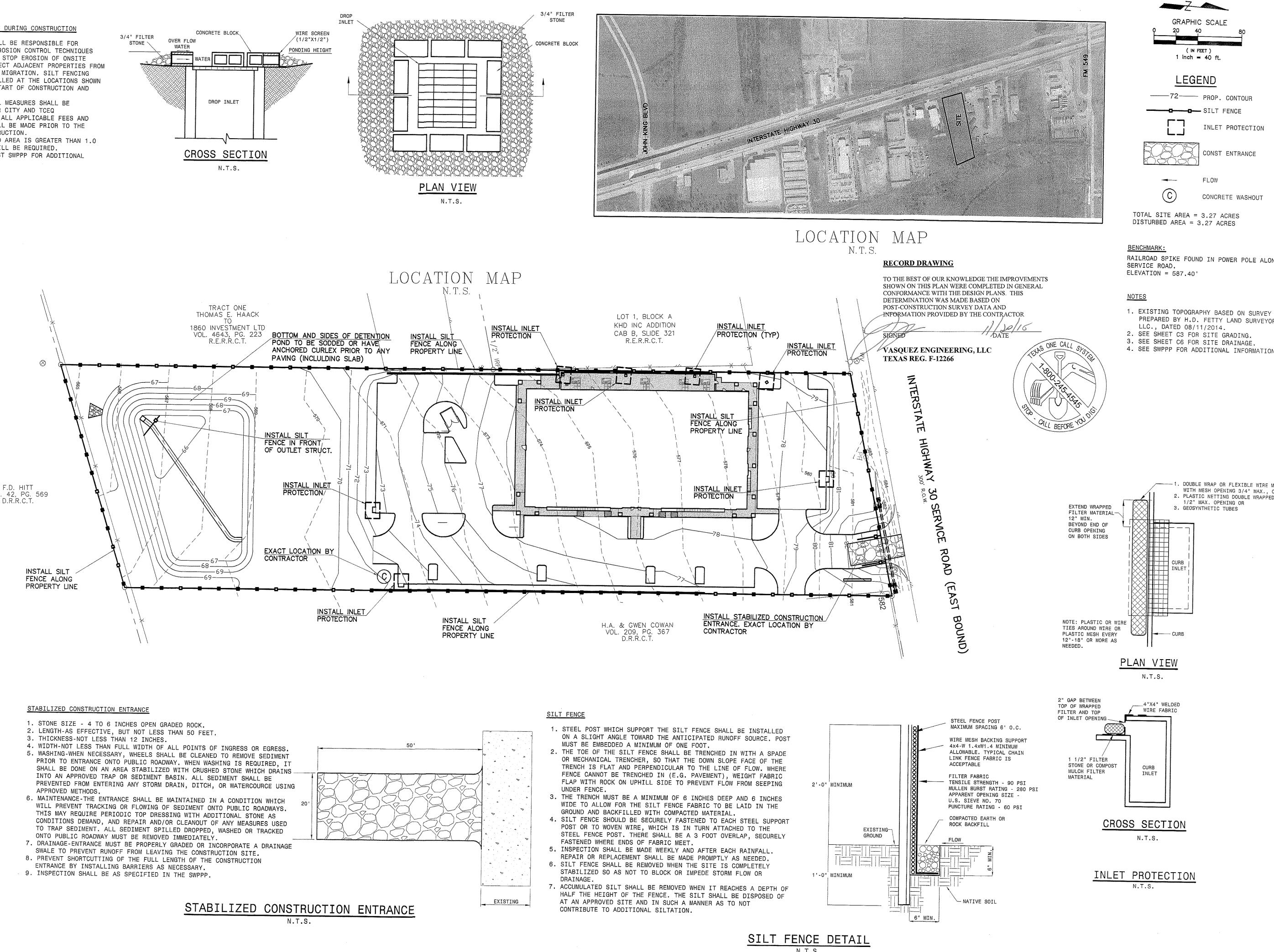
	Area, acres	2.96				
	Present Condi	tions		Proposed	Condition	.5
	С	0.35		С	0.90	
	Tc	20.00		To	10.00	
	i(100)	8.30		i(100)	9.80	
	Q(100)	8.60		Q(100)	26.11	
	Q(release)	6.77				
			Pro	oposed In	tensities	
Time	Inflow	Outflow	Storage (cf)		Te	Intensity
10	15664	4062	11602		10	9.80
20	26533	6093	20440		20	8.30
30	33087	8124	24963		30	6.90
40	37083.	10155	26928		40	5,80
50	39960	12186	27774		50	5.00
60	43157	14217	28940		60	4.50
70	44755	16248	28507	1	70	4.00
80	47313	18279	29034		80	3.70
90	50350	20310	30040		90	3.50
100	52763	22341	30422		100	3.30
120	52747	26403	26344		120	2.75

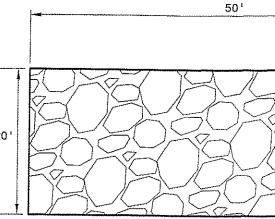


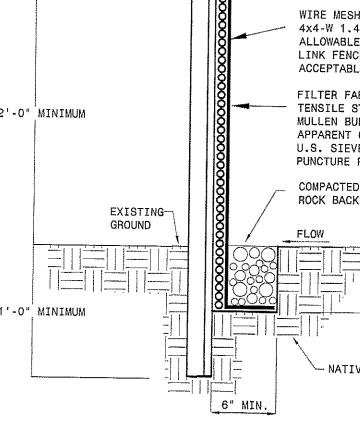


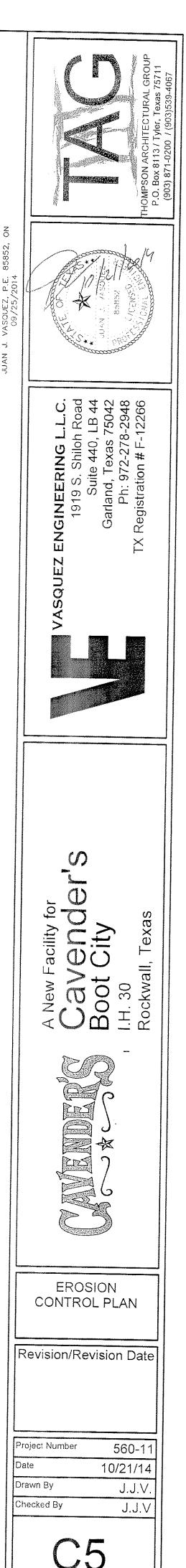
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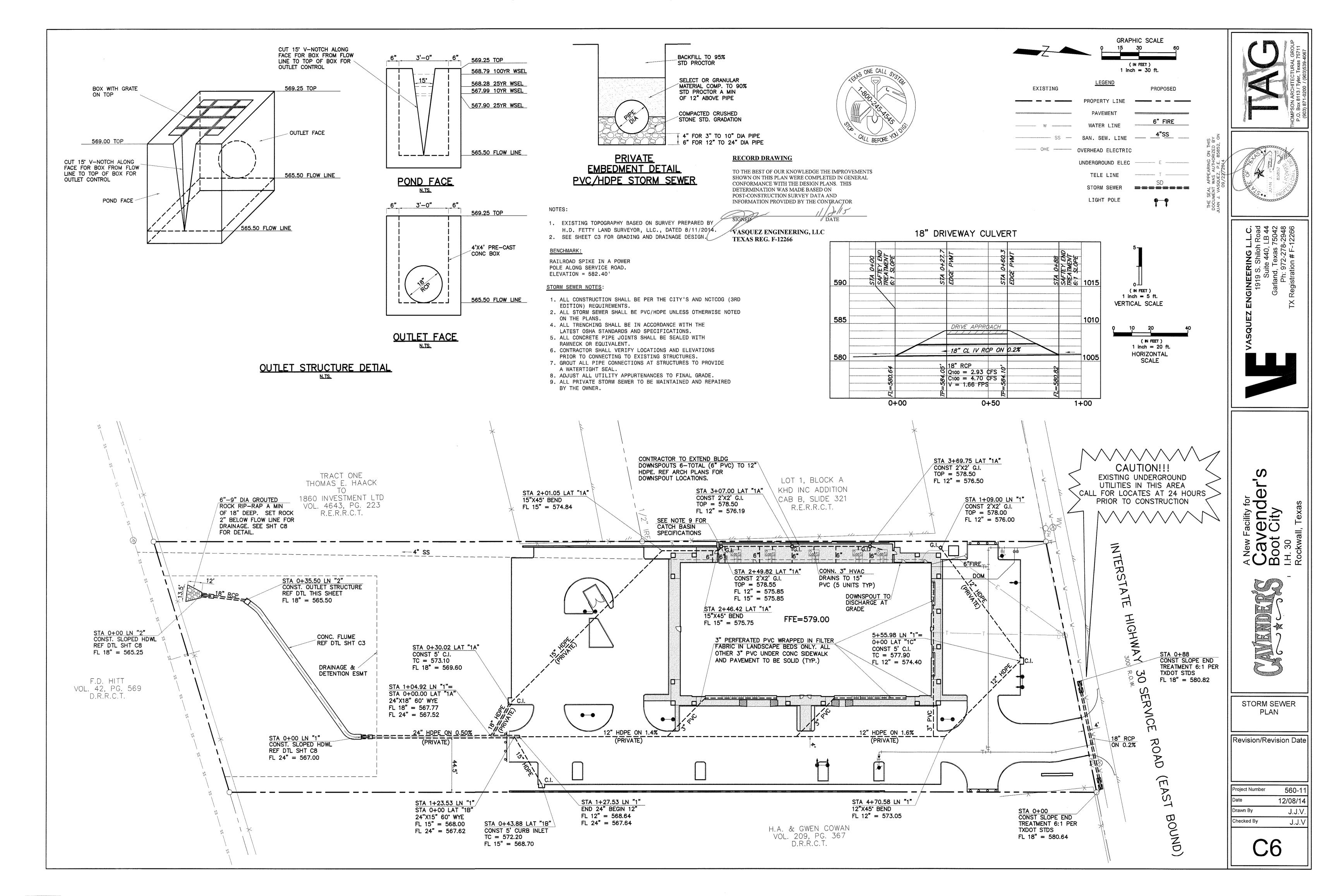


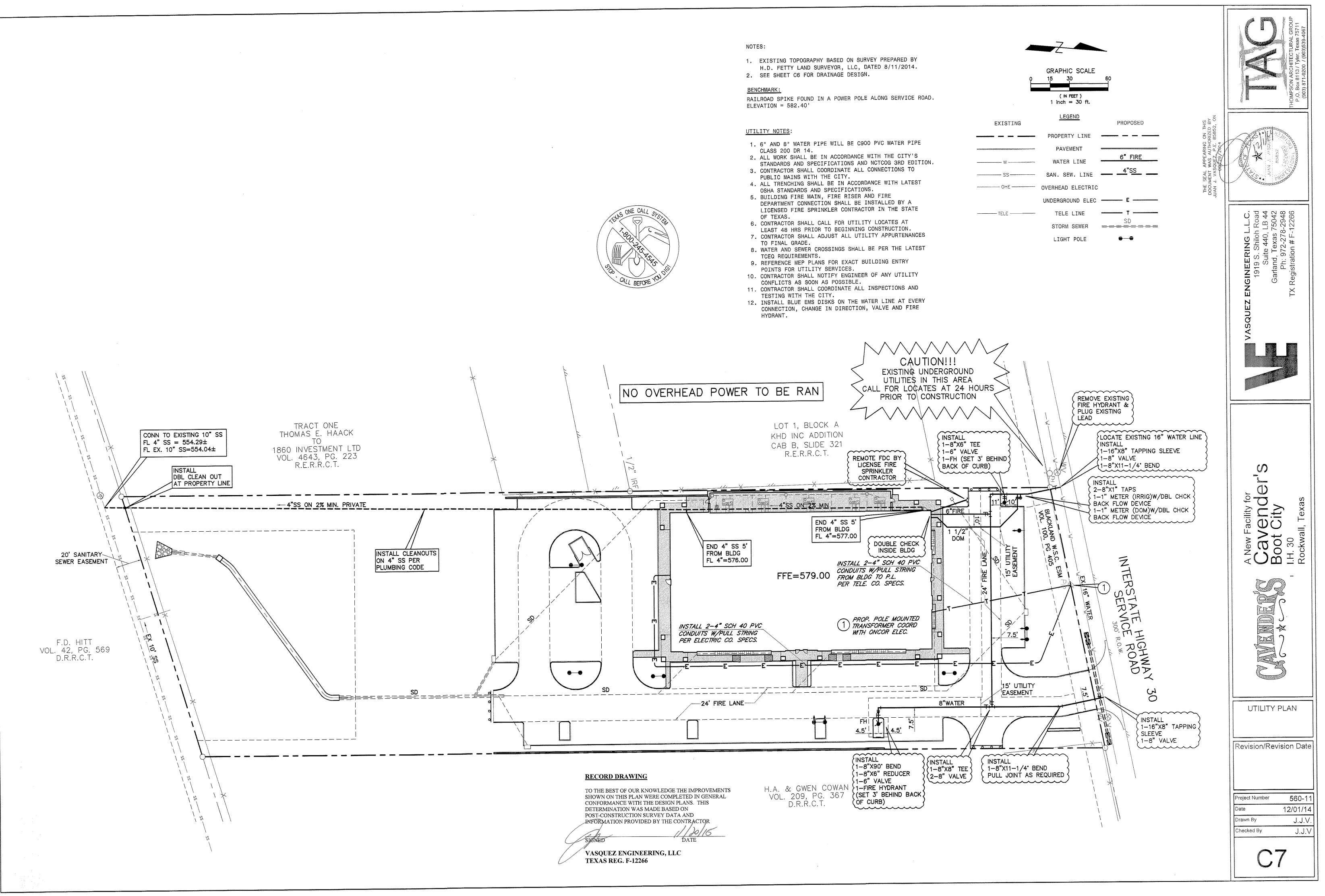


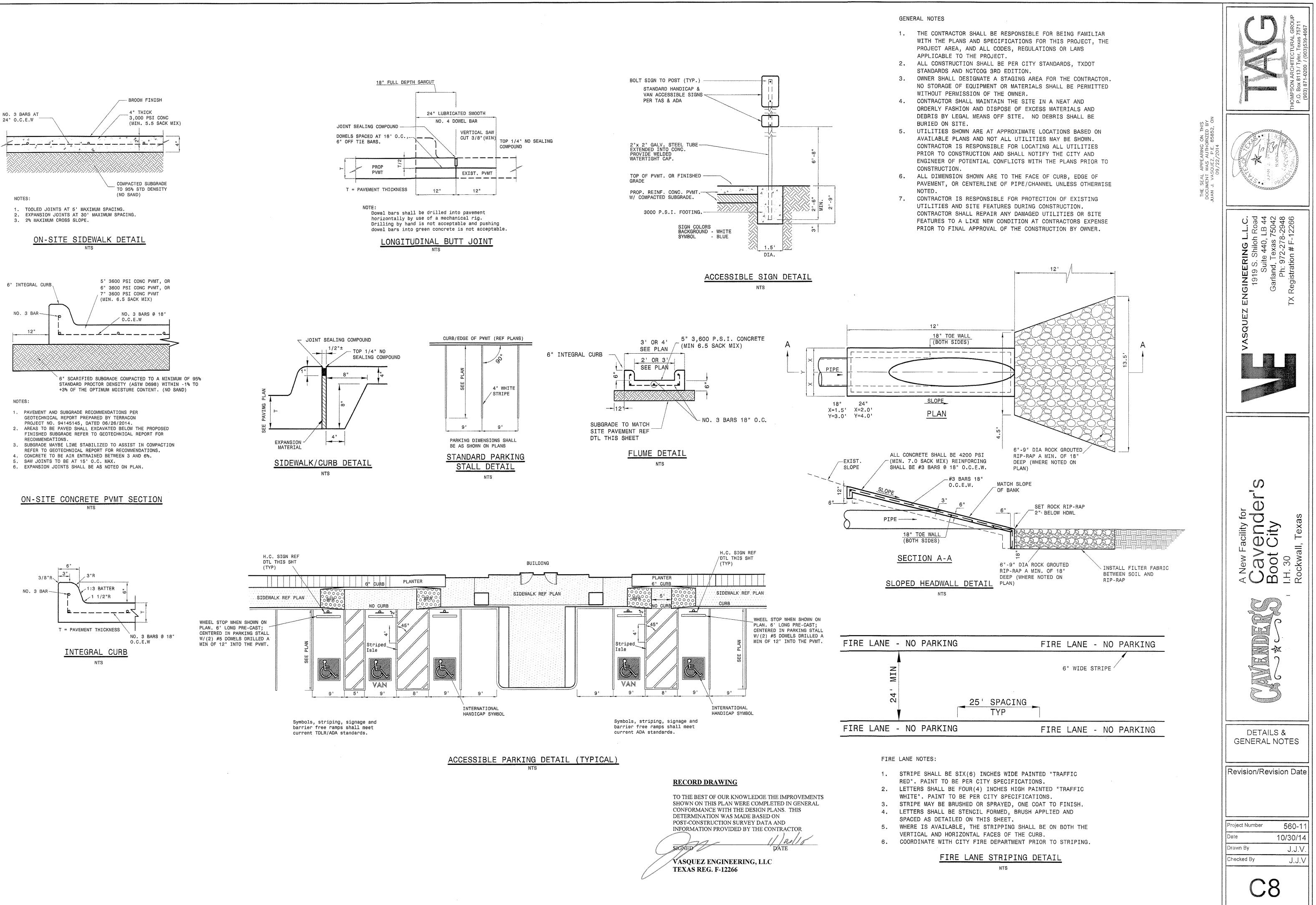




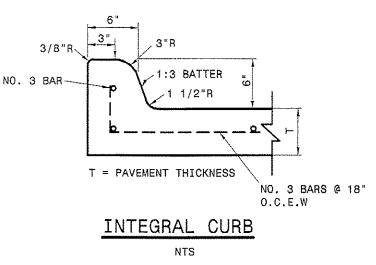


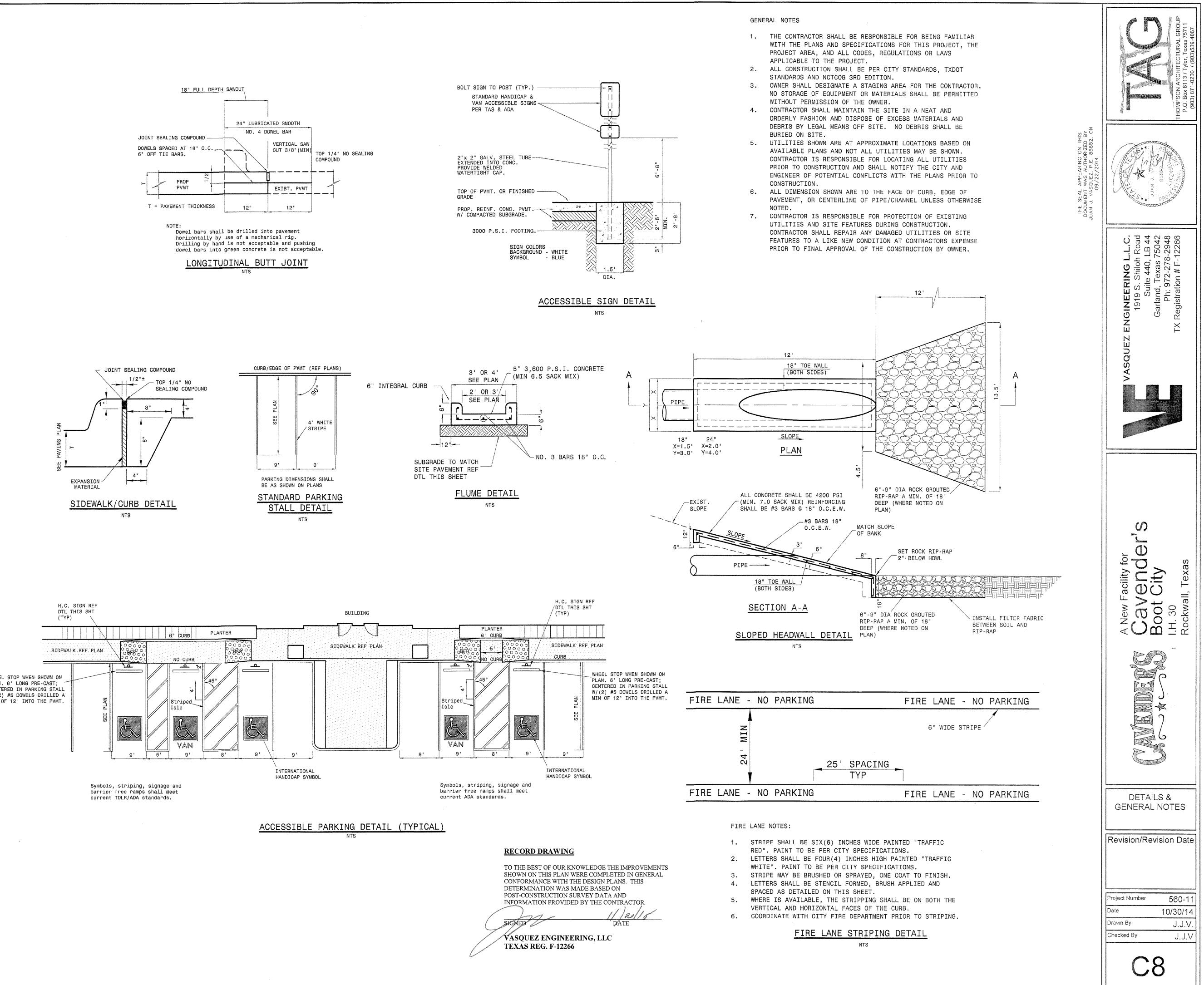


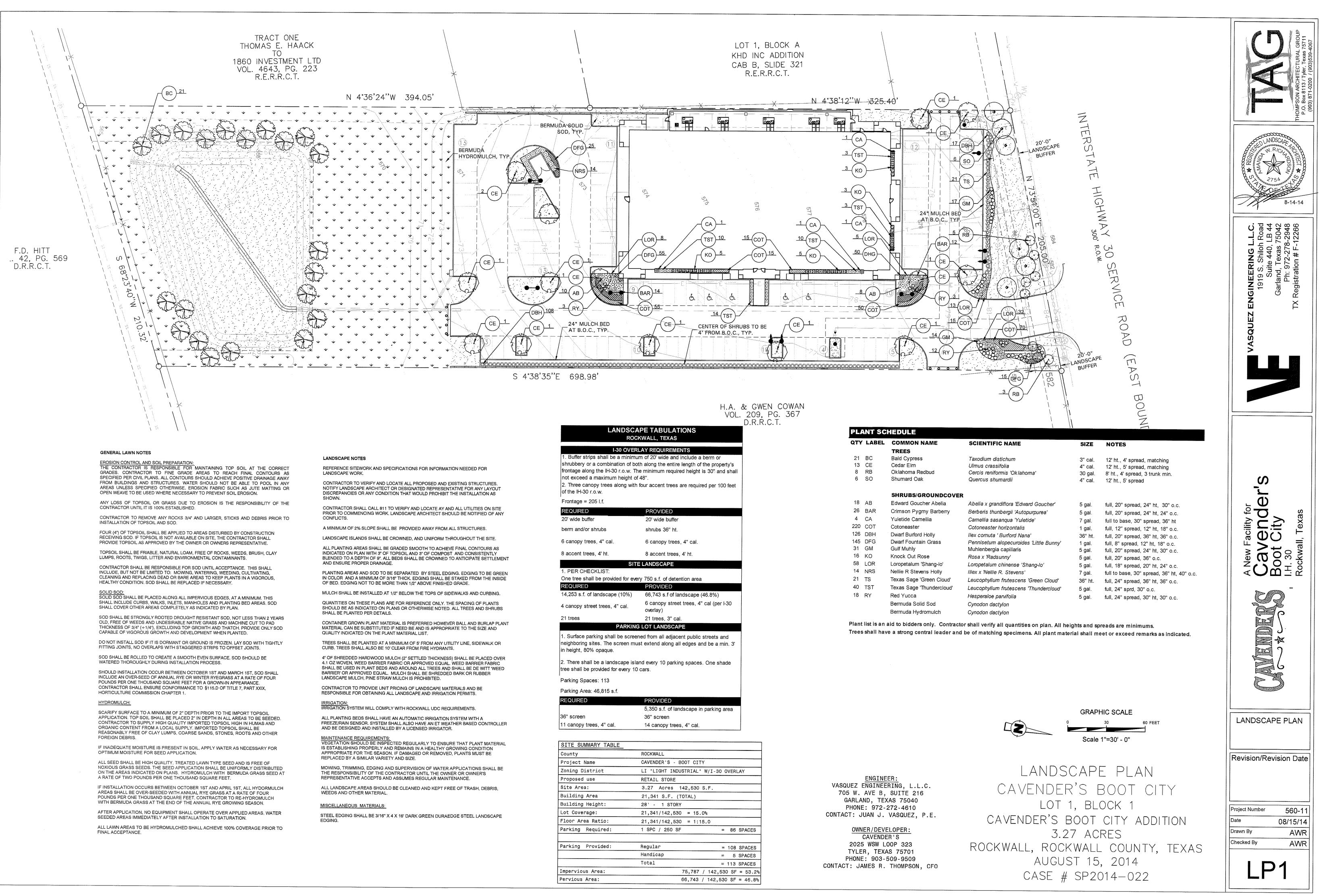












	H.A. 8
	VOL.
LANDSC	APE TABULATIONS
ROO	CKWALL, TEXAS
1-30 OVE	RLAY REQUIREMENTS
<ol> <li>Buffer strips shall be a minim shrubbery or a combination of be frontage along the IH-30 r.o.w. T not exceed a maximum height c</li> </ol>	um of 20' wide and include a berm or oth along the entire length of the property's he minimum required height is 30'' and shall
Frontage = 205 I.f.	
REQUIRED	PROVIDED
20' wide buffer	20' wide buffer
perm and/or shrubs	shrubs 36" ht.
5 canopy trees, 4" cal.	6 canopy trees, 4" cal.
3 accent trees, 4' ht.	8 accent trees, 4' ht.
1. PER CHECKLIST:	
One tree shall be provided for ev REQUIRED	PROVIDED
14,253 s.f. of landscape (10%)	66,743 s.f of landscape (46.8%)
4 canopy street trees, 4" cal.	6 canopy street trees, 4" cal (per I-30
21 trees	overlay) 21 trees, 3" cal.
	G LOT LANDSCAPE
	ened from all adjacent public streets and ust extend along all edges and be a min. 3'
2. There shall be a landscape isl ree shall be provided for every 10	and every 10 parking spaces. One shade 0 cars.
Parking Spaces: 113	
Parking Area: 46,815 s.f.	
REQUIRED	PROVIDED
	5,350 s.f. of landscape in parking area
6" screen	36" screen
1 canopy trees, 4" cal.	14 canopy trees, 4" cal.
SITE SUMMARY TABLE	
County	ROCKWALL
Project Name	CAVENDER'S - BOOT CITY
Coning District	LI "LIGHT INDUSTRIAL" W/I-30 OVERLAN
Proposed use	RETAIL STORE
Site Area:	3.27 Acres 142,530 S.F.
Building Area	21-341 S.E. (TOTAL)

۹.	28	GWE	EN C	OWAN	
OL.	. 2	209,	PG.	367	
		-	.C.T.		

PLA	INT SC	HEDULE
QTY	LABEL	COMMON N
		TREES
21	BC	Bald Cypress
13	CE	Cedar Elm
8	RB	Oklahoma Red
6	SO	Shumard Oak
		SHRUBS/GF
18	AB	Edward Gouch
26	BAR	Crimson Pygn
4	CA	Yuletide Came
220	COT	Cotoneaster
126	DBH	Dwarf Burford
145	DFG	Dwarf Fountair
31	GM	Gulf Muhly
16	KO	Knock Out Ro
58	LOR	Loropetalum 'S
14	NRS	Nellie R Steve
21	TS	Texas Sage 'G
40	TST	Texas Sage 'T
18	RY	Red Yucca
		Bermuda Solid
		Bermuda Hydr

ENGINEER:	
VASQUEZ ENGINEERING, L.L.	(
705 W. AVE B, SUITE 216	
GARLAND, TEXAS 75040	
PHONE: 972-272-4610	
CONTACT: JUAN J. VASQUEZ, F	2

# SECTION 32 9300 - LANDSCAPE

# PART 1 - GENERAL

## 1.1 REFERENCE DOCUMENTS

- A. REFER TO LANDSCAPE PLANS, NOTES, AND DETAILS FOR ADDITIONAL REQUIREMENTS
- 1,2 DESCRIPTION OF WORK
- A. FURNISH ALL LABOR, MATERIALS, EQUIPMENT, AND SERVICES NECESSARY TO PROVIDE ALL WORK, COMPLETE IN PLACE AS SHOWN AND SPECIFIED. WORK SHOULD INCLUDE: A. PLANTING OF TREES, SHRUBS AND GRASSES
  - a. SEEDING
  - b. BED PREPARATION AND FERTILIZATION
  - c. WATER AND MAINTENANCE UNTIL FINAL ACCEPTANCE d. WORK GUARANTEE
- 1,3 REFERENCES
- A. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) Z60.1 NURSERY STOCK B. TEXAS STATE DEPARTMENT OF AGRICULTURE C. TEXAS ASSOCIATION OF NURSERYMEN, GRADES AND STANDARDS
- 1.4 SUBMITTALS
- A, PROVIDE REPRESENTATIVE QUANTITIES OF EACH SOIL, MULCH, BED MIX, GRAVEL AND STONE BEFORE INSTALLATION. SAMPLES TO BE APPROVED BY OWNER'S REPRESENTATIVE BEFORE USE.
- B. SOIL AMENDMENTS AND FERTILIZERS SHOULD BE RESEARCHED AND BASED ON THE SOILS IN THE AREA. C. BEFORE INSTALLATION, SUBMIT DOCUMENTATION THAT PLANT MATERIALS
- ARE AVAILABLE AND HAVE BEEN RESERVED. FOR ANY PLANT MATERIAL NOT AVAILABLE, SUBMIT REQUEST FOR SUBSTITUTION.
- 1.5 JOB CONDITIONS, DELIVERY, STORAGE AND HANDLING
- A. GENERAL CONTRACTOR TO COMPLETE WORK BEFORE LANDSCAPE CONTRACTOR TO COMMENCE. ALL PLANTING BED AREAS SHALL BE LEFT THREE INCHES BELOW FINAL GRADE OF SIDEWALKS, DRIVES AND CURBS ALL AREAS TO RECEIVE SOLID SOD SHALL BE LEFT ONE INCH BELOW THE FINAL GRADE OF WALKS, DRIVES AND CURBS. CONSTRUCTION DEBRIS SHALL BE REMOVED PRIOR TO LANDSCAPE CONTRACTOR BEGINNING
- B. ALL PACKAGED MATERIALS SHALL BE SEALED IN CONTAINERS SHOWING WEIGHT, ANALYSIS AND NAME OF MANUFACTURER. ALL MATERIALS SHALL BE PROTECTED FROM DETERIORATION IN TRANSIT AND WHILE STORED ON
- C. DELIVER PLANT MATERIALS IMMEDIATELY PRIOR TO INSTALLATION. PLANT MATERIALS SHOULD BE INSTALLED ON THE SAME DAY AS DELIVERED. IF PLANTING CANNOT BE INSTALLED ON THE SAME DAY, PROVIDE ADDITIONAL PROTECTION TO MAINTAIN PLANTS IN A HEALTHY, VIGOROUS CONDITION. D. STORE PLANT MATERIALS IN SHADE, PROTECT FROM FREEZING AND
- DRYING. E. KEEP PLANT MATERIALS MOIST AND PROTECT FROM DAMAGE TO ROOT
- BALLS, TRUNKS AND BRANCHES. F. PROTECT ROOT BALLS BY HEELING WITH SAWDUST OR OTHER MOISTURE RETAINING MATERIAL IF NOT PLANTED WITHIN 24 HOURS OF DELIVERY.
- G. NOTIFY OWNER'S REPRESENTATIVE OF DELIVERY SCHEDULE 72 HOURS IN ADVANCE. H. FOR BALLED AND BURLAPPED PLANTS - DIG AND PREPARE SHIPMENT IN A
- MANNER THAT WILL NOT DAMAGE ROOTS, BRANCHES, SHAPE, AND FUTURE DEVELOPMENT
- I. CONTAINER GROWN PLANTS DELIVER PLANTS IN CONTAINER TO HOLD BALL SHAPE AND PROTECT ROOT MASS. J. STORAGE OF ALL MATERIALS AND EQUIPMENT WILL BE AT THE RISK OF THE LANDSCAPE CONTRACTOR. OWNER WILL NOT BE HELD RESPONSIBLE FOR THEFT OR DAMAGE.
- 1,6 SEQUENCING
- A. INSTALL TREES, SHRUBS, AND LINER STOCK PLANT MATERIALS PRIOR TO INSTALLATION OF LAWN/SOLID SOD.
- 1.7 WARRANTIES/GUARANTEE
- A. FURNISH WRITTEN WARRANTY THAT PLANT MATERIALS WILL BE IN A HEALTHY, VIGOROUS GROWING CONDITION FOR ONE YEAR (TWELVE MONTHS) AFTER FINAL ACCEPTANCE. DAMAGE DUE TO ACTS OF GOD, VANDALISM, OR NEGLIGENCE BY OWNER IS EXCLUDE
- B. REPLACE DEAD, UNHEALTHY, AND UNSIGHTLY PLANT MATERIAL WITHIN WARRANTY PERIOD UPON NOTIFICATION BY OWNER OR OWNER'S REPRESENTATIVE. PLANTS USED FOR REPLACEMENT SHALL BE OF THE SAME SIZE AND KIND AS THOSE ORIGINALLY PLANTED OR SPECIFIED.
- C. THE OWNER AGREES THAT FOR THE ONE YEAR WARRANTY PERIOD TO BE EFFECTIVE, HE WILL WATER PLANTS AT LEAST TWICE A WEEK DURING DRY PERIODS D. NOTIFY OWNER OR OWNER'S REPRESENTATIVE SEVEN DAYS PRIOR TO THE
- EXPIRATION OF THE WARRANTY PERIOD. a. REMOVE DEAD, UNHEALTHY AND UNSIGHTLY PLANTS b. REMOVE GUYING AND STAKING MATERIALS.
- 1.8 MAINTENANCE
- A. MAINTAIN PLANT LIFE AND PLANTING BEDS IMMEDIATELY AFTER PLACEMENT
- AND FOR MINIMUM 30 DAYS AFTER FINAL ACCEPTANCE. B. REPLACE DEAD OR DYING PLANTS WITH PLANTS OF SAME SIZE AND SPECIES
- AS SPECIFIED.
- C. REMOVE TRASH, DEBRIS, AND LITTER. WATER, PRUNE, FERTILIZE, WEED AND APPLY HERBICIDES AND FUNGICIDES AS REQUIRED.
- D. REMOVE CLIPPINGS AND DEBRIS FROM SITE PROMPTLY.

- E. COORDINATE WITH OPERATION OF IRRIGATION SYSTEM TO ENSURE THAT PLANTS ARE ADEQUATELY WATERS. HAND WATER AREAS NOT RECEIVING ADEQUATE WATER FROM AN IRRIGATION SYSTEM.
- F. RESET SETTLED PLANTS G. REAPPLY MULCH TO BARE AND THIN AREAS,
- 1.9 QUALITY ASSURANCE
- A. COMPLY WITH ALL FEDERAL, STATE, COUNTY AND LOCAL REGULATIONS GOVERNING LANDSCAPE MATERIALS AND WORK. B. EMPLOY PERSONNEL EXPERIENCED AND FAMILIAR WITH THE REQUIRED
- WORK AND SUPERVISION BY A FOREMAN. C. DO NOT MAKE PLANT MATERIAL SUBSTITUTIONS. IF THE LANDSCAPE MATERIAL SPECIFIED IS NOT READILY AVAILABLE, SUBMIT PROOF TO LANDSCAPE ARCHITECT ALONG WITH THE PROPOSED MATERIAL TO BE USED IN LIEU OF THE SPECIFIED PLANT.
- D. ALL TREES SHALL BE MEASURED BY DIAMETER BREAST HEIGHT (DBH). DO NOT TRIM OR PRUNE TREES AND SHRUBS TO MEET THE REQUIREMENTS. E. OWNER'S REPRESENTATIVE SHALL INSPECT ALL PLANT MATERIAL AND RETAINS THE RIGHT TO INSPECT MATERIALS UPON ARRIVAL TO THE SITE
- AND DURING INSTALLATION. THE OWNER'S REPRESENTATIVE MAY ALSO REJECT ANY MATERIALS HE FEELS TO BE UNSATISFACTORY OR DEFECTIVE DURING THE WORK PROCESS. ALL PLANTS DAMAGED IN TRANSIT OR AT THE JOB SITE SHALL BE REJECTED.

PART 2 - PRODUCTS 2,1 PLANT MATERIALS

- A. ALL PLANTS SHALL BE CERTIFIED IN ACCORDANCE THE AMERICAN STANDARD FOR NURSERY STOCK.
- B. PLANTS SHALL CONFORM TO THE MEASUREMENTS SPECIFIED, EXCEPT THE PLANTS LARGER THAN THOSE SPECIFIED MAY BE USED. USE OF LARGER PLANTS SHALL NOT INCREASE THE CONTRACT PRICE.
- C. WHERE MATERIALS ARE PLANTED IN MASSES, PROVIDE PLANTS OF UNIFORM SIZE
- D. PLANTS SHALL BE GROWN IN CLIMATIC CONDITIONS SIMILAR TO THOSE AT THE INSTALLATION LOCATION, E. SHALL BE FREE OF DISEASE, INSECT INFESTATION, DEFECTS INCLUDING WEAK OR BROKEN LIMBS, CROTCHES, AND DAMAGED TRUNKS, ROOTS OR
- LEAVES, SUN SCALD, FRESH BARK ABRASIONS, EXCESSIVE ABRASIONS, OBJECTIONABLE DISFIGUREMENT, INSECT EGGS AND LARVAE. F. ALL PLANTS SHALL EXHIBIT NORMAL GROWTH HABITS, VIGOROUS, HEALTHY,
- FULL, WELL BRANCHES, WELL ROOTED, PROPORTIONATE AND SYMMETRICAL. G. TREE TRUNKS TO BE STURDY, EXHIBIT HARDENED SYSTEMS AND VIGOROUS
- AND FIBROUS ROOT SYSTEMS, NOT ROOT OR POT BOUND. H. TREES WITH DAMAGED OR CROOKED LEADERS, BARK ABRASIONS,
- SUNSCALD, DISFIGURING KNOTS, OR\INSECT DAMAGE WILL BE REJECTED.
- I. PLANT SCHEDULE ON DRAWING IS FOR CONTRACTOR'S INFORMATION ONLY AND NO GUARANTEE IS EXPRESSED OR IMPLIED THAT QUANTITIES THEREIN ARE CORRECT. THE CONTRACTOR SHALL ENSURE THAT ALL PLANT MATERIALS SHOWN ON THE DRAWINGS ARE INCLUDED IN HIS OR HER BID.

2.2 ACCESSORIES/MISCELLANEOUS MATERIALS

- A. MULCH DOUBLE SHREDDED HARDWOOD MULCH, PARTIALLY DECOMPOSED BY LIVING EARTH TECHNOLOGIES OR APPROVED SUBSTITUTE. MULCH SHOULD BE FREE OF STICKS, STONES, CLAY, GROWTH AND GERMINATION
- INHIBITING INGREDIENTS. B. FERTILIZER - COMMERCIAL FERTILIZER CONTAINING 10-20-10 OR SIMILAR ANALYSIS.
- C. SOIL PREPARATION SHALL BE FERTILE, LOAMY SOIL ORGANIC MATTER SHALL ENCOMPASS BETWEEN 3% AND 10% OF THE TOTAL DRY WEIGHT. SOIL SHALL BE FREE FROM SUBSOIL, REFUSE, ROOTS, HEAVY OR STIFF CLAY, STONES LARGER THAN 1", NOXIOUS WEEDS, STICKS , BRUSH, LITTER AND OTHER SUBSTANCES. IT SHOULD BE SUITABLE FOR THE GERMINATION OF SEEDS AND THE SUPPORT OF VEGETATIVE GROWTH. THE PH VALUE SHOULD BE BETWEEN 4 AND 7.

APPROXIMATE PARTICLE DISTRIBUTION FOR TOPSOIL

- BETWEEN 15% AND 25% CLAY
- SILT BETWEEN 15% AND 25%
- LESS THAN 50% SAND
- GRAVEL LESS THAN 10%
- D. EXISTING TOPSOIL MAY BE USED IF IT MEETS THE REQUIREMENTS FOR THE IMPORTED TOPSOIL OR IF APPROVED BY THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE. TOPSOIL SHALL NOT BE STRIPPED, TRANSPORTED OR GRADED IF MOISTURE CONTENT EXCEEDS FIELD CAPACITY. TOPSOIL STOCKPILES SHALL BE PROTECTED FROM EROSION OR
- CONTAMINATION E. STEEL EDGING - SHALL BE 3/16" X 4" X 16" DARK GREEN LANDSCAPE EDGING.
- F. TREE STAKING REFER TO DETAILS.
- G. FILTER FABRIC MIRAFI 1405 BY MIRAFI INC. OR APPROVED SUBSTITUTE.
- H. SAND UNIFORMLY GRADED, WASHED, CLEAN, BANK RUN SAND.
- I. DECOMPOSED GRANITE BASE MATERIAL OF NATURAL MATERIAL MIX OF GRANITE AGGREGATE NOT TO EXCEED 1/8" IN DIAMETER. J. RIVER ROCK - LOCALLY AVAILABLE RIVER ROCK BETWEEN 2"-4" IN DIAMETER.
- PART 3 EXECUTION

3.1 PREPARATION

A, IF WEEDS ARE GROWING IN PLANTING AREAS, APPLY HERBICIDE RECOMMENDED BY MANUFACTURER AND APPLIED BY AN APPROVED LICENSED APPLICATOR. ALLOW WEEDS TO DIE, AND THEN GRUB OUT ROOTS TO A MINIMUM OF 1/2 INCH DEPTH.

#### B. PREPARE NEW PLANTING BEDS BY TILLING EXISTING SOIL TO A DEPTH OF SIX INCHES PRIOR TO PLACING COMPOST AND FERTILIZER. ADD SIX INCHES

- OF COMPOSE AND TILL INTO A DEPTH OF SIX INCHES OF THE TOPSOIL. C. POSITION TREES AND SHRUBS AS DESIGNED ON PLAN. OBTAIN OWNER'S
- REPRESENTATIVE'S APPROVAL PRIOR TO PROCEEDING. D. ALL PLANTING AREAS SHALL RECEIVE A MINIMUM OF 2 INCH LAYER OF

# 3.2 EXCAVATING

MULCH.

- A. EXCAVATE PITS FOR PLANTING. TREE PITS SHALL BE LARGE ENOUGH TO PERMIT THE HANDLING OF THE ROOT BALL WITHOUT DAMAGE TO THE ROOTS. TREES SHALL BE PLANTED AT A DEPTH THAT WHEN SETTLED, THE CROWN OF THE PLANT SHALL BEAR THE SAME RELATIONSHIP TO THE FINISH GRADE AS IT DID TO THE SOIL SURFACE IN ORIGINAL PLACE OF GROWTH. B. TREE PITS PERCOLATION TEST: FILL PIT WITH WATER AND ALLOW TO STAND
- FOR 24 HOURS. IF PIT DOES NOT DRAIN, THE TREE NEEDS TO BE MOVED TO ANOTHER LOCATION OR HAVE DRAINAGE ADDED. C, SHRUB AND TREE PITS SHALL BE NO LESS THAN 24" WIDER THAN THE ROOT BALL AND 6" DEEPER THAN ITS VERTICAL DIMENSION. HOLES SHOULD BE ROUGH, NOT SMOOTH OR GLAZED.

# 3.3 PLANTING

- A. REMOVE CONTAINERS WITHOUT DAMAGE TO ROOTS. B. REMOVE BOTTOM OF PLANT BOXES PRIOR TO PLACING PLANTS. REMOVE
- SIDES AFTER PLACEMENT AND PARTIAL BACKFILLING. C. REMOVE UPPER THIRD OF BURLAP FROM BALLED AND BURLAPPED TREES
- AFTER PLACEMENT. D. PLACE PLANT UPRIGHT AND PLUMB IN CENTER OF HOLE. ORIENT PLANTS
- FOR BEST APPEARANCE. E. SET PLANTS WITH TOP OF ROOT BALLS FLUSH WITH ADJACENT GRADE AFTER COMPACTION. ADJUST PLANT HEIGHT IF SETTLEMENT OCCURS
- AFTER BACKFILLING F. BACKFILL HOLES IMMEDIATELY AFTER PLANT IS PLACED USING BACKFILL MIX. BACKFILL TO ONE HALF DEPTH, FILL HOLE WITH WATER AND LIGHTLY
- TAMP SOIL TO REMOVE VOIDS AND AIR POCKETS. G. TRIM PLANTS TO REMOVE DEAD AND INJURED BRANCHES ONLY. BRACE PLANTS OVER 65 GALLONS IN SIZE.
- H. MULCH TO THE TOP OF THE ROOT BALL. DO NOT PLANT GRASS ALL THE WAY TO TRUNK OF THE TREE. MULCH WITH AT LEAST 2" OF SPECIFIED MULCH.
- I. DO NOT WRAP TREES. J. DO NOT OVER PRUNE.
- E. BLOCKS OF SOD SHOULD BE LAID JOINT TO JOINT AFTER FERTILIZING THE GROUND FIRST. ROLL GRASS AREAS TO ACHIEVE A SMOOTH, EVEN SURFACE. THE JOINTS BETWEEN BLOCKS SHOULD BE FILLED WITH TOPSOIL AND THEN WATERED THOROUGHLY.

## 3.4 STEEL EDGING

- A. STEEL EDGING SHALL BE INSTALLED AND ALIGNED AS INDICATED ON PLANS. OWNER'S REPRESENTATIVE TO APPROVE THE STAKED OR PAINTED LOCATION OF STEEL EDGE PRIOR TO INSTALLATION
- B. ALL STEEL EDGING SHALL BE FREE OF BENDS OR KINKS. C. TOP OF EDGING SHALL BE 1/2" MAXIMUM HEIGHT ABOVE FINAL FINISHED
- GRADE. D. STAKES ARE TO BE INSTALLED ON THE PLANTING BED SIDE OF THE EDGING,
- NOT THE GRASS SIDE. E. STEEL EDGING SHALL NOT BE INSTALLED ALONG SIDEWALKS OR CURBS.
- F. EDGING SHOULD BE CUT AT A 45 DEGREE ANGLE WHERE IT MEETS SIDEWALKS OR CURBS.

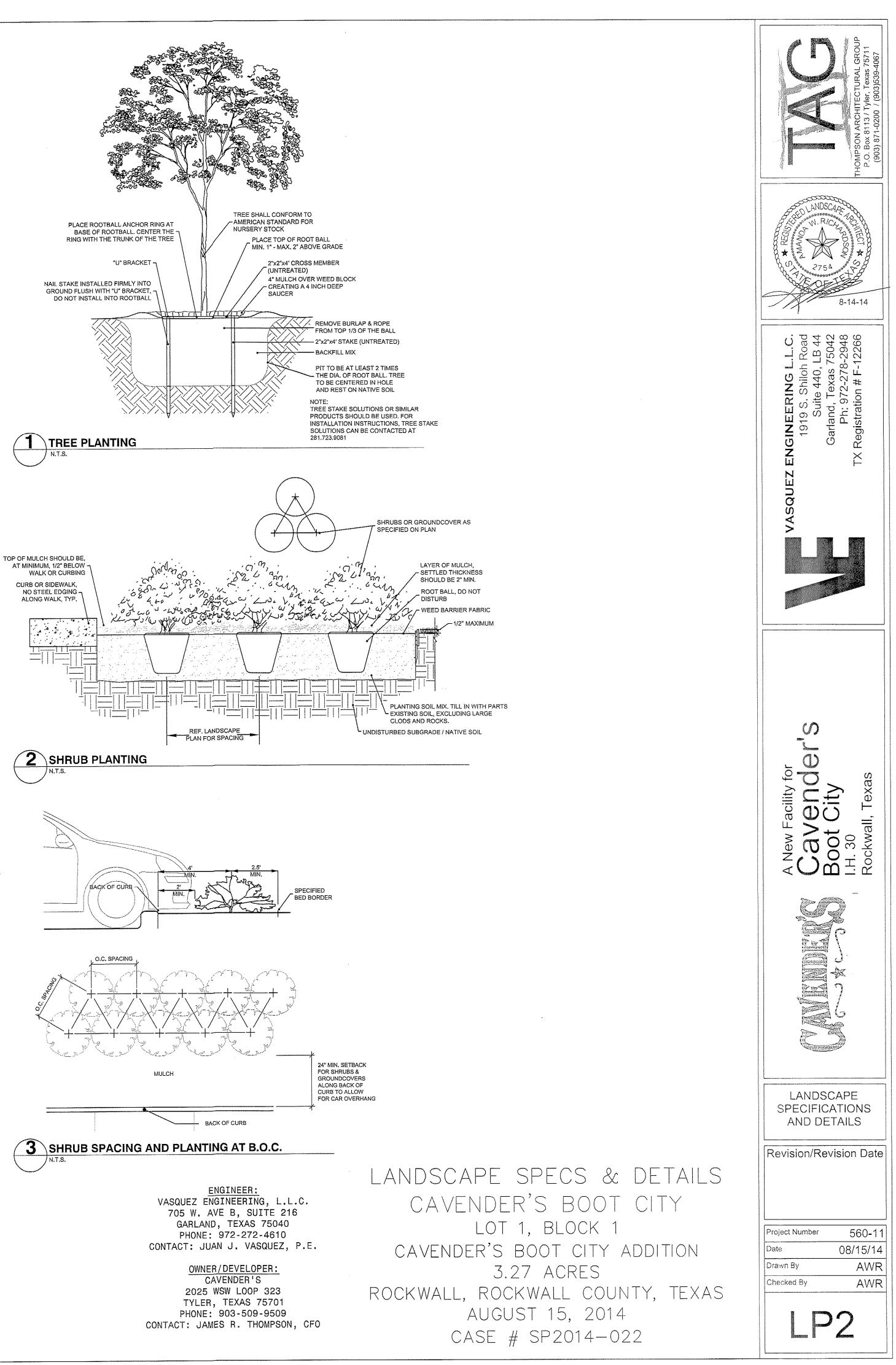
## 3.5 CLEANUP

- A. REMOVE CONTAINERS, TRASH, RUBBISH AND EXCESS SOILS FROM SITE AS WORK PROGRESSES.
- B. REPAIR RUTS, HOLES AND SCARES IN GROUND SURFACES.
- C. PREMISES SHALL BE KEPT NEAT AT ALL TIMES AND ORGANIZED. D. ALL PAVED AREAS SHOULD BE CLEANED AT THE END OF EACH WORK DAY.

# 3.6 ACCEPTANCE

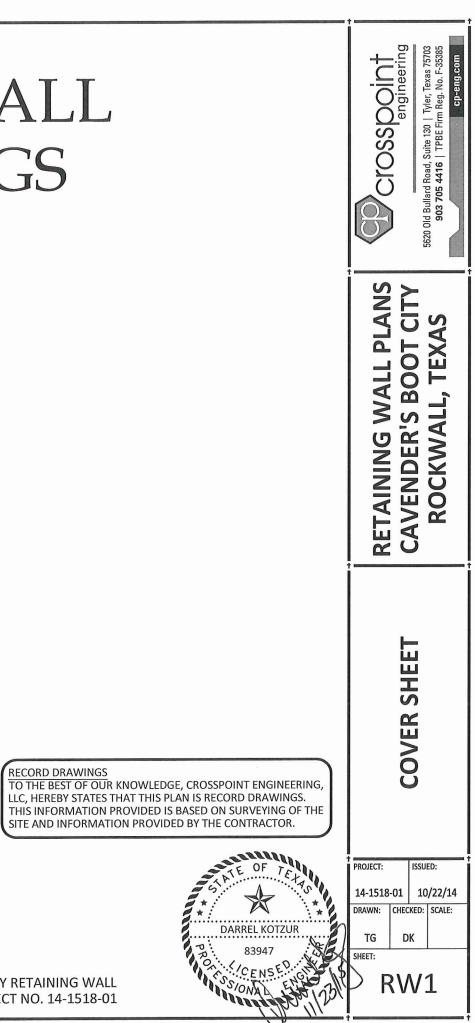
A. ENSURE THAT WORK IS COMPLETE AND PLANT MATERIALS ARE IN VIGOROUS AND HEALTHY GROWING CONDITION.

END OF SECTION



# SEGMENTAL RETAINING WALL CONSTRUCTION DRAWINGS CAVENDER'S BOOT CITY ROCKWALL, TEXAS

$\bigcap$	SHEET INDEX
RW1	COVER SHEET
RW2	GENERAL NOTES
RW3	CROSS SECTION
RW4	DETAIL SHEET
RW5	DETAIL SHEET
RW6	DETAIL SHEET



CAVENDER'S BOOT CITY RETAINING WALL CP PROJECT NO. 14-1518-01

#### 1.0 GENERAL REQUIREMENTS

CONSTRUCTION AND INSPECTION OF THE SEGMENTAL RETAINING WALL SHALL BE PERFORMED IN 11 ACCORDANCE WITH THESE REQUIREMENTS

RETAINING WALL CONTRACTOR SHALL BE CERTIFIED BY THE NATIONAL CONCRETE MASONRY ASSOCIATION AS A SEGMENTAL RETAINING WALL INSTALLER AT LEAST ONE CERTIFIED WORKER SHALL BE ONSITE DURING ANY RETAINING WALL CONSTRUCTION

RETAINING WALL CONTRACTOR SHALL DEMONSTRATE SUCCESSFUL CONSTRUCTION OF AT LEAST FIVE 1.3 SEGMENTAL RETAINING WALLS THAT ARE AT LEAST 12 FEET OR TALLER.

1.4 OWNER'S REPRESENTATIVE SHALL INSPECT CONSTRUCTION OF THE WALL FOR CONFORMANCE TO PLANS, SPECIFICATIONS AND THESE CONSTRUCTION REQUIREMENTS.

1.5 THE CONTRACTOR SHALL CLEAR AND GRUB THE REINFORCED BACKFILL ZONE AREA, REMOVING TOPSOIL, OR OTHER ORGANIC OR DELETERIOUS MATERIAL. ANY UNSUITABLE MATERIAL SHALL BE OVER EXCAVATED, REPLACED AND COMPACTED WITH BACKFILL MATERIAL TO PROJECT SPECIFICATIONS, OR AS OTHERWISE DIRECTED BY THE OWNER'S REPRESENTATIVE

OWNER'S REPRESENTATIVE SHALL VERIFY THAT REINFORCED BACKFILL MATERIAL MEETS THE GRADATION AND OTHER REQUIREMENTS PRIOR TO PROCEEDING WITH CONSTRUCTION.

OWNER'S REPRESENTATIVE SHALL VERIFY THAT FOUNDATION SOIL MEETS THESE CONSTRUCTION REQUIREMENTS.

CONTRACTOR SHALL PLACE FILL, NOT EXCEEDING 8 INCHES FOR HEAVY COMPACTION EQUIPMENT AND NOT 1.8 EXCEEDING 6 INCHES FOR LIGHTWEIGHT EQUIPMENT, WITHIN FOUR FEET OF THE BACK FACE OF THE WALL, ONLY HAND OPERATED COMPACTION EQUIPMENT MAY BE USED.

THE COMPACTED DENSITY AND MOISTURE CONTENT OF THE SOIL IN THE REINFORCED ZONE AREA SHALL BE TESTED AT LEAST ONCE PER EVERY 1000 SF PER 8" VERTICAL LIFT OR AT LEAST ONCE PER EVERY 2 FEET OF VERTICAL WALL ERECTION

1.10 ALL VOIDS IN THE BLOCK UNITS SHALL BE FILLED WITH GRAVEL FILL, AND COMPACTED. CORE FILL AGGREGATE SHALL SATISFY ASTM D2487 FOR CLASSIFICATION AS GW OR GP.

1.11 DRAINAGE AGREGATE SHALL EXTEND A MINIMUM OF 12" BEHIND THE ENDS OF THE BLOCK UNITS. ANY OVER EXCAVATED AREAS SHALL BE FILLED WITH GRAVEL AND COMPACTED. DRAINAGE AGGREGATE SHALL SATISFY ASTM C33 FOR CLASSIFICATION FOR SIZE NO. 57 OR 67.

1.12 BLOCK CAP UNITS SHALL BE PERMANENTLY SECURED TO THE FULL BLOCK UNITS USING AN APPROVED CONSTRUCTION ADHESIVE, AS PER THE BLOCK MANUFACTURER'S RECOMMENDATIONS.

1.13 THE CONTRACTOR SHALL FOLLOW ALL OF THE MANUFACTURER'S INSTALLATION RECOMMENDATIONS.

#### 2.0 MATERIAL

BACKFILL SOIL- BACKFILL MATERIAL SPECIFIED BELOW SHALL BE APPROVED BY OWNER'S 2.1 REPRESENTATIVE AND SHALL MEET THE STRENGTH PARAMETERS AS PER SPECIFICATIONS AND CONSTRUCTION **REOUIREMENTS** 

REINFORCED BACKFILL AND RETAINED SOIL/FILL MATERIALS SHALL BE FREE OF EXCESS MOISTURE, ROOTS MUCK, ORGANIC MATERIAL, OR OTHER DELETERIOUS MATERIALS. ALL ROCK PARTICLES AND HARD EARTH SHALL BE LESS THAN THREE INCHES IN THE LONGEST DIMENSION. REINFORCED BACKFILL MATERIALS THAT DO NOT MEET THESE CRITERIA SHALL BE CONSIDERED UNSUITABLE AND SHALL BE REMOVED.

REINFORCED FILL MATERIAL SHALL BE CLEAN FILL WITH MAXIMUM AGGREGATE SIZE LIMITED TO 1", WITH USCS CLASSIFICATION GW, GP, GC, SW, SP, SM, SC, WITH A PLASTICITY INDEX LESS THAN OR EQUAL TO 15 AND A LIQUID LIMIT LESS THAN OR EQUAL TO 40 PER ASTM D-4318.

FILL IN THE REINFORCED FILL ZONE SHALL BE COMPACTED AS SPECIFIED BY PROJECT SPECIFICATIONS OR TO 2.4 A MINIMUM OF 95% OF THE MAXIMUM STANDARD PROCTOR DENSITY (AASHTO T-99). AT A MOISTURE CONTENT NO GREATER THAN 2 PERCENTAGE POINTS AND NO LESS THAN 1 PERCENTAGE POINT OF DRY OPTIMUM.

REINFORCED FILL MATERIAL SHALL HAVE THE FOLLOWING GRADATION TESTED IN ACCORDANCE WITH ASTM 2.5 D-422:

SIEVE SIZE	PERCENT PASSING
1"	100-75
No. 4	100-20
NO. 40	0-60
NO. 200	0-35

2.6 DRAINAGE AGGREGATE SHALL BE A CLEAN CRUSHED STONE OR GRANULAR FILL (NO PEA GRAVEL) MEETING THE FOLLOWING GRADATION:

SIEVE SIZE	PERCENT PASSING
1"	100
3/4"	75-100
NO. 4	0-60
NO. 40	0-50
NO. 200	0-5

REINFORCED FILL AND DRAINAGE FILL SHALL HAVE PH BETWEEN 3 AND 9 PER ASTM G-51. 2.7

SEGMENTAL BLOCK UNITS SHALL BE: 2.8 **KEYSTONE 'COMPAC II'** 

SEGMENTAL BLOCK UNITS SHALL MEET THE PUBLISHED MANUFACTURER'S SPECIFICATIONS AND THE 2.9 MATERIAL SPECIFICATIONS AS SHOWN IN THE ASTM C1372 'STANDARD SPECIFICATION FOR DRY-CAST SEGMENTAL RETAINING WALL UNITS.

2.10 GEOGRID REINFORCEMENT SHALL BE:

#### MIRAFI 3XT - SYNTEEN SF35 - STRATA 200

2.11 CONNECTORS AND ACCESSORIES SHALL BE AS RECOMMENDED AND SUPPLIED BY THE WALL MANUFACTURER

#### 3.0 DRAINAGE

3.1 AT THE END OF EACH WORKDAY, THE CONTRACTOR SHALL GRADE THE SURFACE OF THE LAST LIFT OF REINFORCED SOIL AWAY FROM THE WALL FACE AND COMPACT.

DURING SITE CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR PROTECTION OF THE WALL AGAINST SURFACE WATER AT ALL TIMES BY THE USE OF BERMS, DIVERSION DITCHES, TEMPORARY DRAINS AND ALL OTHER MEANS THAT ARE REQUIRED.

WATER SHALL NOT BE PERMITTED TO POND IN THE REINFORCED SOIL ZONE.

ALL SLOPES ABOVE OR BELOW THE WALL SHALL BE VEGETATED AND PROTECTED FROM EROSION AS SOON 3.4 AS POSSIBLE FOLLOWING CONSTRUCTION OF THE WALL.

THE SEGMENTAL RETAINING WALL HAS BEEN DESIGNED ON THE ASSUMPTION THAT THE REINFORCED 35 BACKFILL MATERIAL SHALL BE FREE OF SUBSURFACE DRAINAGE OF WATER (SEEPAGE). PERMANENT SUBSURFACE WATER COLLECTION AND DIVERSION SHALL BE THE RESPONSIBILITY OF THE OWNER'S REPRESENTATIVE.

#### 4.0 LEVELING PAD

- 4.1 LEVELING PAD SHALL COMPRISE OF COMPACTED CRUSHED STONE BASE OR UNREINFORCED CONCRETE.
- THE LEVELING PAD SHALL BE AT LEAST 24 INCHES AND 6 INCHES THICK. 4.2

THE LEVELING PAD SHALL BE CONSTRUCTED AST TO PROVIDE A LEVEL, HARD SURFACE UPON WHICH TO 4.3 PLACE THE FIRST COURSE OF SEGMENTAL RETAINING WALL UNITS.

4.4 IF GRAVEL IS USED TO CONSTRUCT THE LEVELING PAD, IT SHALL BE COMPACTED WITH A MINIMUM OF THREE PASSES OF A VIBRATORY SLED AND TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.

THE LEVELING PAD SHALL BE PREPARED AS TO ENSURE COMPLETE CONTACT BETWEEN THE PAD AND THE 4.5 FIRST COURSE OF THE SEGMENTAL RETAINING WALL UNITS.

#### 4.0 DESIGN PARAMETERS

4.1 DESIGN OF THE SEGMENTAL RETAINING WALL IS BASED UPON THE FOLLOWING PARAMETERS:

	EFFECTIVE FRICTION ANGLE (DEG)	EFFECTIVE COHESION	MOIST UNIT WEIGHT
REINFORCED	28	0 PSF	120 PCF
RETAINED SOIL	28	0 PSF	120 PCF
FOUNDATION SOIL	28	0 PSF	120 PCF

4.2 FACTORS OF SAFETY (F.S.)

F.S. FOR SLIDING AT BAS	E = 1.5
F.S. FOR OVERTURNING	= 2.0
F.S. FOR BEARING	= 2.0
F.S. FOR PULLOUT	= 1.5
F.S. FOR CONNECTION	= 1.5

ANALYSIS OF GLOBAL STABILITY IS BEYOND THE SCOPE OF THIS DESIGN. IF GLOBAL STABILITY ANALYSIS IS DEEMED NECESSARY, OWNER SHOULD CONSULT GEOTECHNICAL ENGINEER

ADDITIONAL LOADINGS: 4.3

BUILDING LOADS	N/A
SURCHARGE	PER PROFILE
SEISMIC LOADING	N/A

HYDROSTATIC DESIGN IS NOT CONSIDERED IN WALL DESIGN. WATER SURFACE ASSUMED TO BE SUFFICIENTLY BELOW THE BOTTOM OF WALL AS NOT TO INFLUENCE INTERNAL AND EXTERNAL STABILITY.

5.0 GENERAL ASSUMPTIONS

ALL SEGMENTAL WALL LAYOUTS ARE BASED UPON INFORMATION PROVIDED BY THE OWNER'S REPRESENTATIVE. THE OWNER SHOULD VERIFY THAT THE LAYOUT AND GEOMETRIC INFORMATION SHOWN HEREIN IS ACCURATE. CROSSPOINT ENGINEERING ASSUMES NO LIABILITY FOR THE ACCURACY OF THE GEOMETRIC AND OR LAYOUT INFORMATION

SEGMENTAL RETAINING WALLS ARE DESIGNED TO SUPPORT STATIC SOIL LOADING AS SHOWN IN PLANS. 5.2 OWNER'S REPRESENTATIVE SHALL VERIFY THAT THE WALL STRUCTURE IS ISOLATED FROM ALL OTHER STRUCTURAL, VEHICLE AND OTHER LIVE AND DEAD LOADS AND SURCHARGES.

5.3 WALL ELEVATIONS AND LOCATIONS, AND GEOMETRY OF EXISTING STRUCTURES MUST BE VERIFIED BY THE OWNER OR OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION

CROSSPOINT ENGINEERING ASSUMES NO LIABILITY FOR INTERPRETATION OR VERIFICATION OF SUBSURFACE 5.4 CONDITIONS, FOR THE SUITABILITY OF SOIL DESIGN PARAMETER, OR FOR INTERPRETATION OF SUBSURFACE GROUNDWATER CONDITIONS.

OWNER'S REPRESENTATIVE IS RESPONSIBLE FOR REVIEWING AND VERIFYING THAT THE ACTUAL SITE CONDITIONS AND PARAMETERS ARE AS DESCRIBED HEREIN, PRIOR TO AND DURING CONSTRUCTION. OWNER'S REPRESENTATIVE SHALL BE ONSITE TO ASSURE CONSTRUCTION IS IN ACCORDANCE WITH THESE NOTES AND DRAWINGS AND THE CONTRACT PLANS AND SPECIFICATIONS.

5.5 PROCEEDING WITH CONSTRUCTION WITHOUT FIRST VERIFYING THE CONDITIONS AND PARAMETERSSHALL ABSOLVE CROSSPOINT ENGINEERING FROM ALL LIABILITY FOR THE DESIGN AND CONSTRUCTION OF THIS STRUCTURE AND THE CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS CROSSPOINT ENGINEERING FROM ALL RESULTING CLAIMS, DAMAGES, LOSSES, AND EXPENSES.

5.6 IF ANY GROUNDWATER IS ENCOUNTERED DURING CONSTRUCTION, IMMEDIATELY CONTACT CROSSPOINT ENGINEERING AT 903-705-4416 AND THE OWNER'S REPRESENTATIVE.

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DIFFERENTIAL SETTLEMENT, TOTAL SETTLEMENT AND CONSOLIDATION OF SUBGRADE MATERIALS SHALL BE THE RESPONSIBILITY OF THE OWNER'S GEOTECHNICAL ENGINEER OR OWNER'S REPRESENTATIVE. CROSSPOINT ENGINEERING ACCEPTS NO LIABILITY FOR THE EVALUATION OF SETTLEMENTS.

STRUCTURAL DESIGN HEREIN REPRESENTS A FINISHED STRUCTURE. THE CONTRACTOR SHALL PROVIDE ALL INTERIM BRACING, SHORING, INTERIM DRAINAGE PROVISIONS AND EROSION PROTECTION REQUIRED UNTIL FINAL CAPPING, PAVING, CURBING AND COMPLETION OF FINAL STORM DRAIN SYSTEM IS COMPLETE.

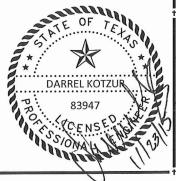
RECORD DRAWINGS

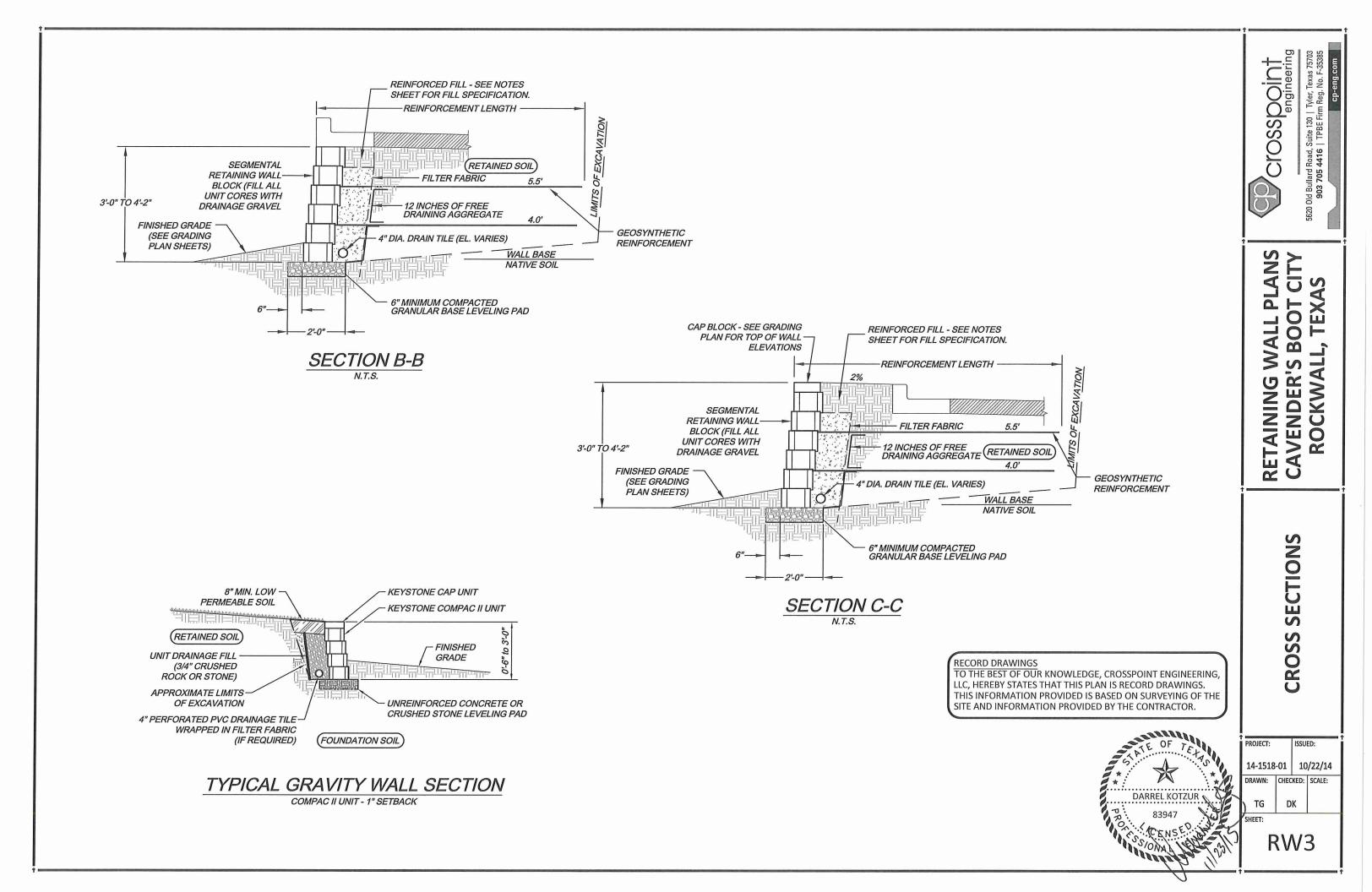
THIS DESIGN IS ONLY VALID FOR THE PROPOSED SEGMENTAL RETAINING WALL DETAILED AT THIS LOCATION AS PER THESE PLANS. THESE PLANS ARE NOT TRANSFERABLE TO ANY OTHER PROJECT.

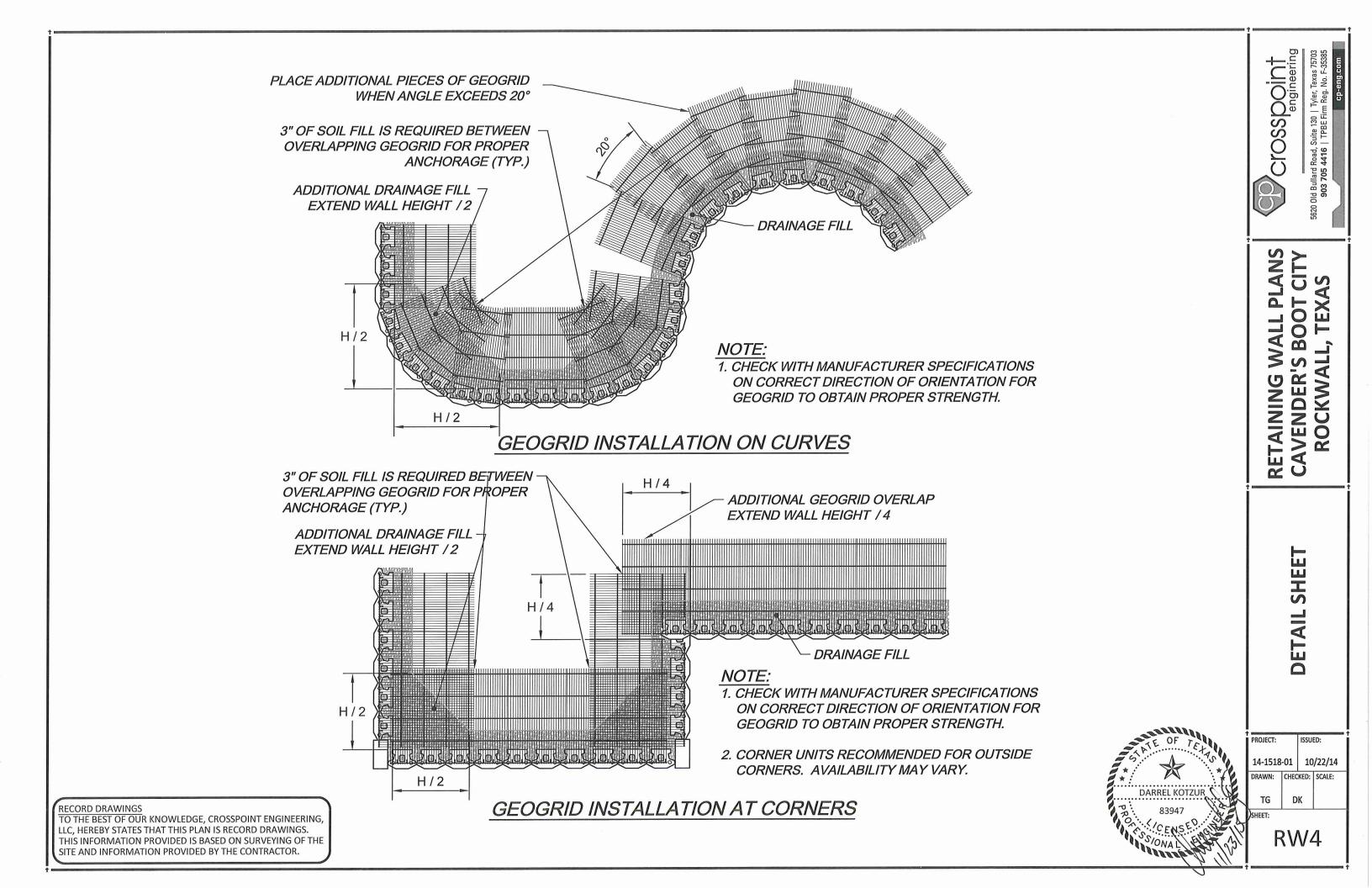
EVALUATION AND MITIGATION OF POTENTIAL EROSION, SCOUR AND HYDRAULIC EFFECTS OF WATER FLOWING IN ANY PROJECT AREAS IS THE RESPONSIBILITY OF THE OWNER'S REPRESENTATIVE

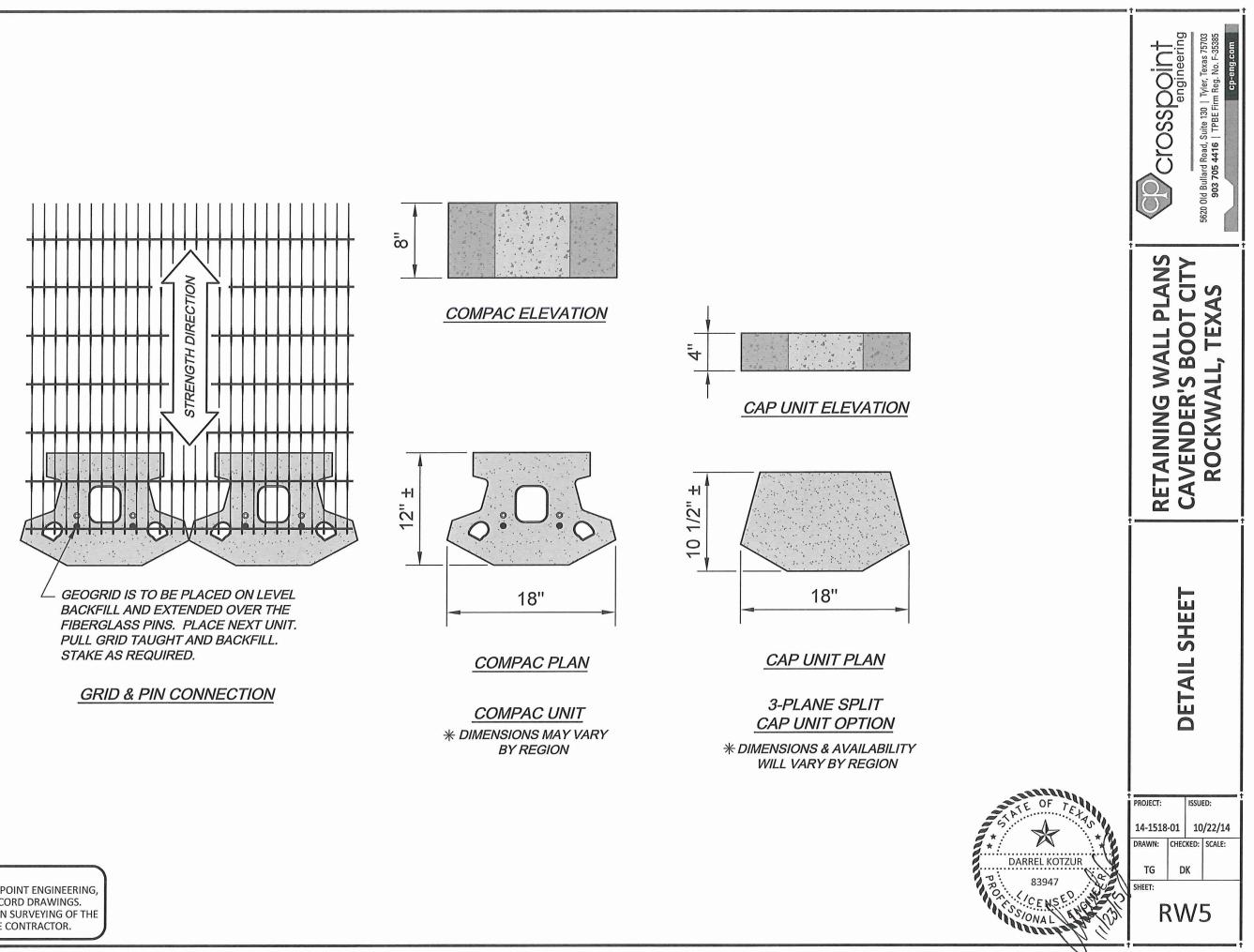


TO THE BEST OF OUR KNOWLEDGE, CROSSPOINT ENGINEERING, LLC, HEREBY STATES THAT THIS PLAN IS RECORD DRAWINGS. THIS INFORMATION PROVIDED IS BASED ON SURVEYING OF THE SITE AND INFORMATION PROVIDED BY THE CONTRACTOR.

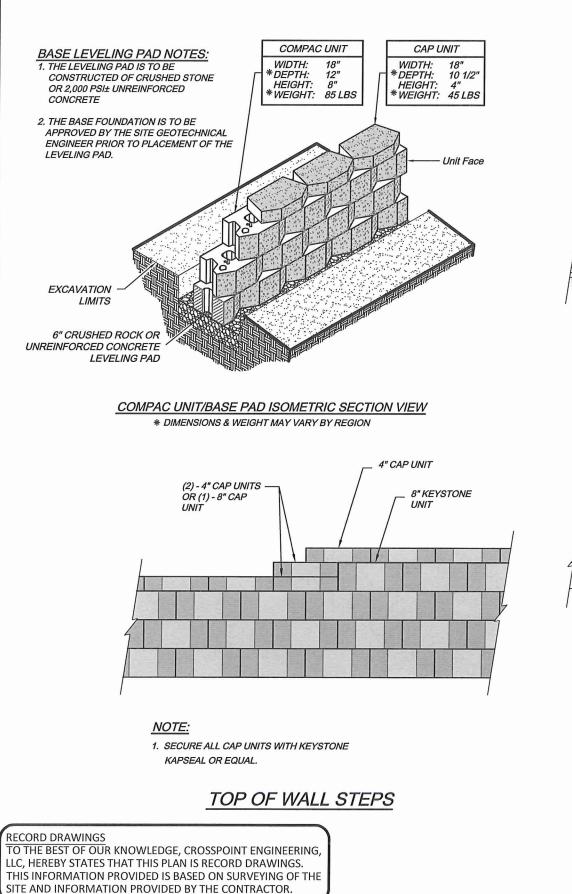


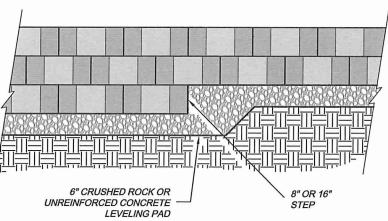






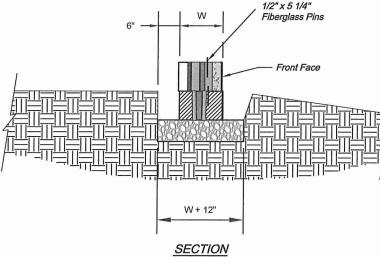
RECORD DRAWINGS TO THE BEST OF OUR KNOWLEDGE, CROSSPOINT ENGINEERING, LLC, HEREBY STATES THAT THIS PLAN IS RECORD DRAWINGS. THIS INFORMATION PROVIDED IS BASED ON SURVEYING OF THE SITE AND INFORMATION PROVIDED BY THE CONTRACTOR.





#### ELEVATION

NOTE: 1. THE LEVELING PAD IS TO BE CONSTRUCTED OF CRUSHED STONE OR 2000 PSI ± UNREINFORCED CONCRETE.



# LEVELING PAD DETAIL

# PERMEABLE SOIL PLASTIC

8" MIN. LOW

