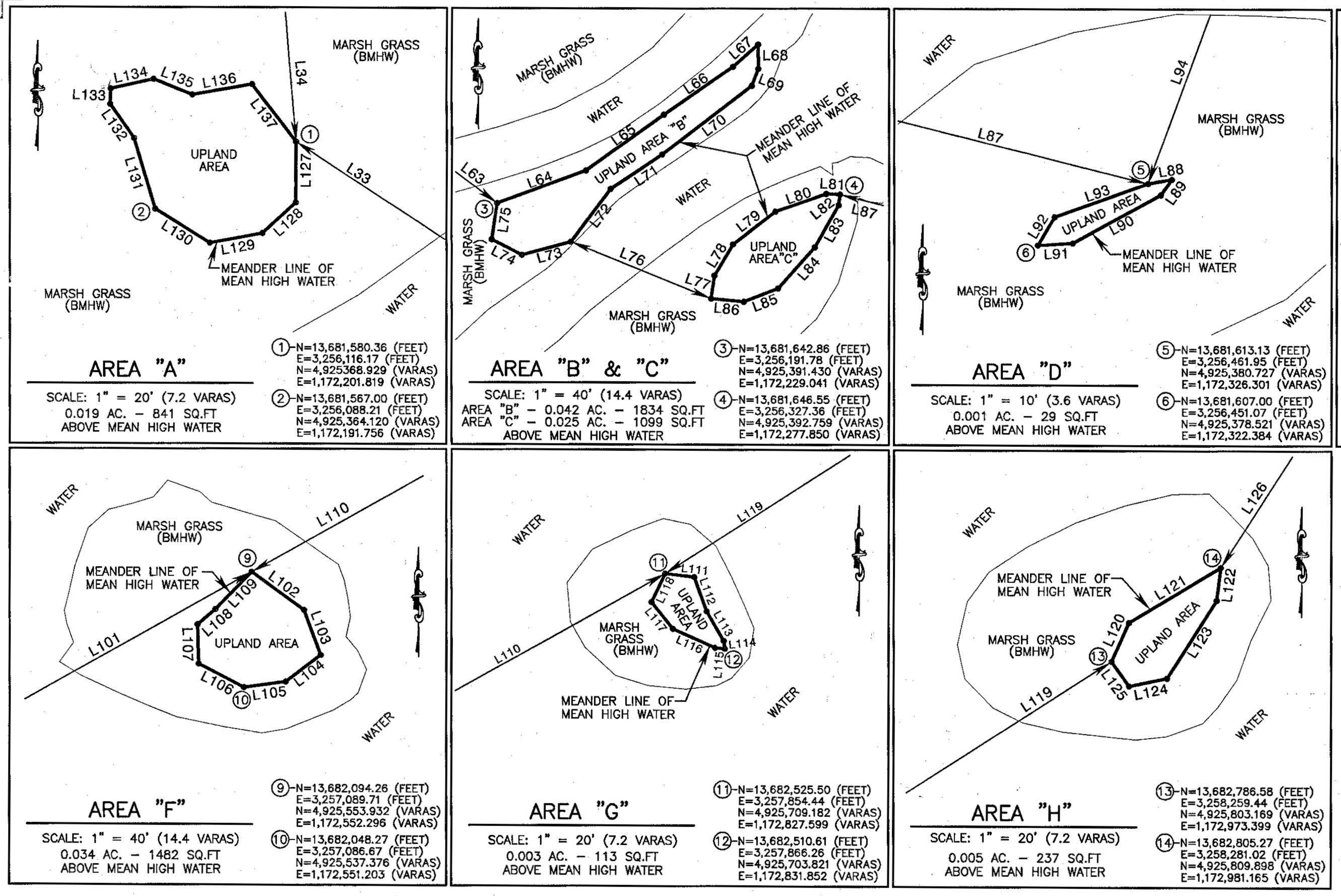
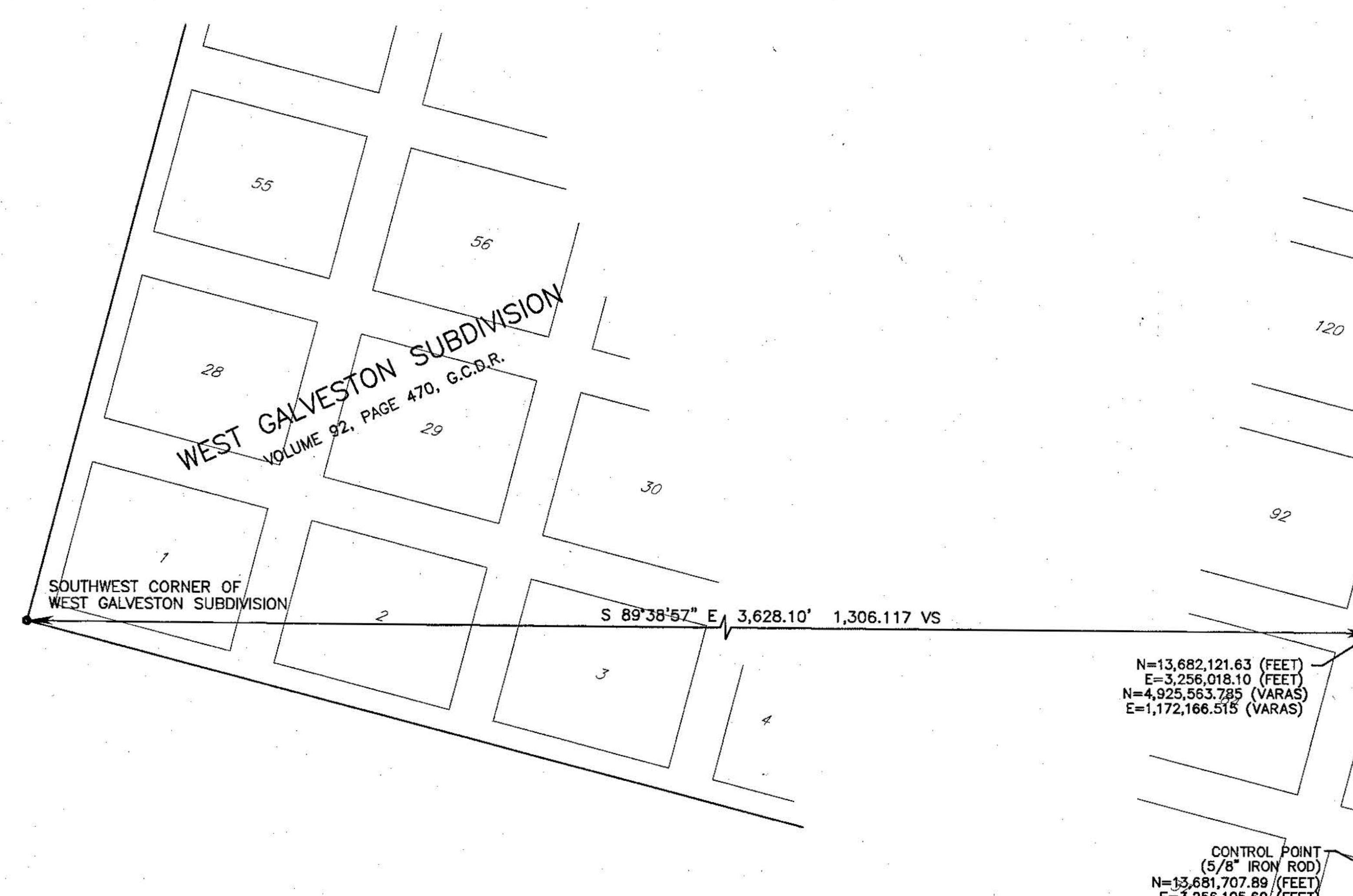
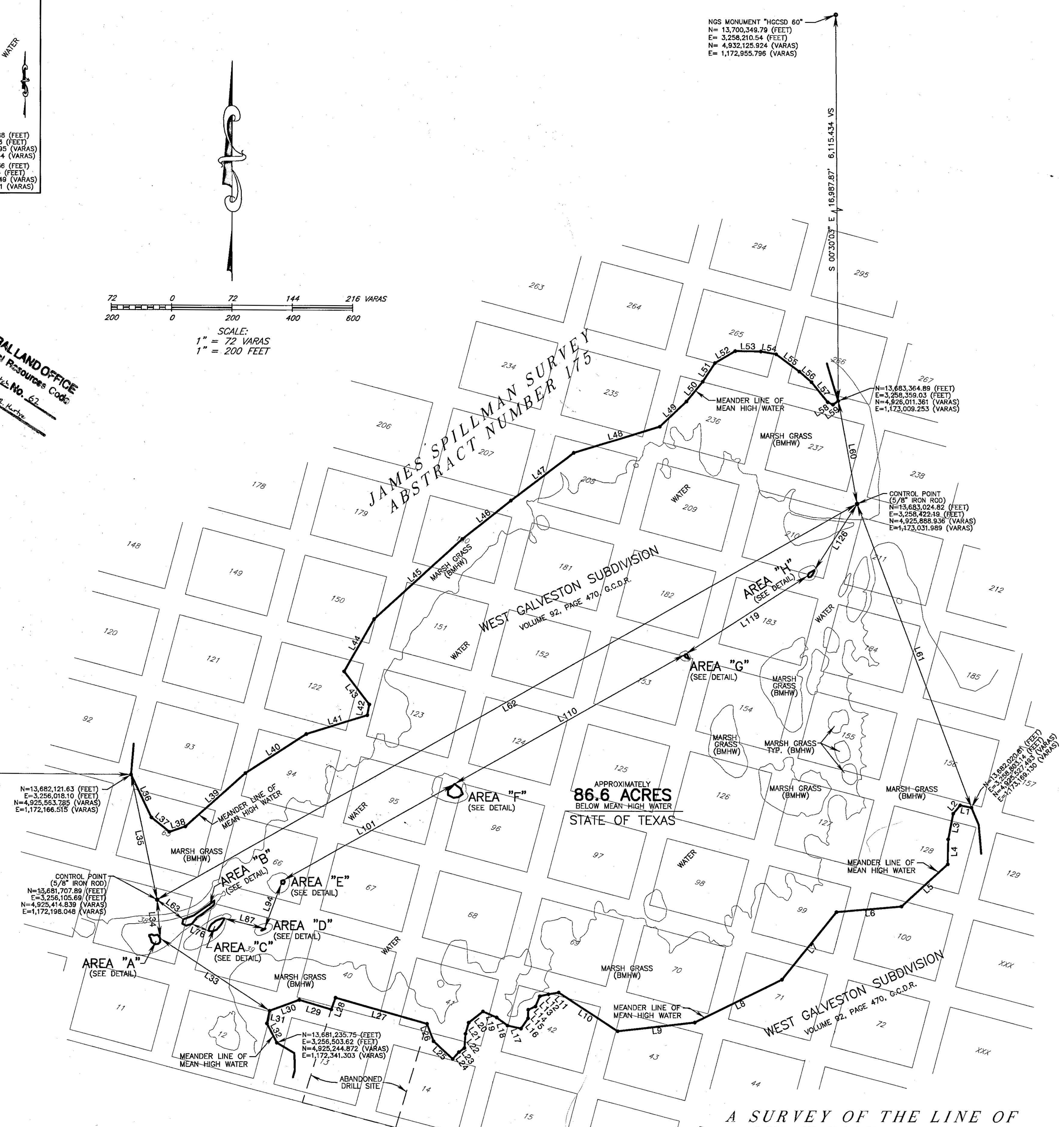

AREA "A"
SCALE: 1" = 20' (7.2 VARAS)
0.019 AC. – 841 SQ.FT
ABOVE MEAN HIGH WATER
N=13,681,580.36 (FEET)
E=3,256,116.17 (FEET)
N=4,925,368.929 (VARAS)
E=1,172,201.819 (VARAS)
N=13,681,567.00 (FEET)
E=3,256,088.21 (FEET)
N=4,925,364.120 (VARAS)
E=1,172,191.756 (VARAS)
AREA "B" & "C"
SCALE: 1" = 40' (14.4 VARAS)
AREA "B" – 0.042 AC. – 1834 SQ.FT
AREA "C" – 0.025 AC. – 1099 SQ.FT
ABOVE MEAN HIGH WATER
AREA "D"
SCALE: 1" = 10' (3.6 VARAS)
0.001 AC. – 29 SQ.FT
ABOVE MEAN HIGH WATER
AREA "E"
SCALE: 1" = 20' (7.2 VARAS)
0.003 AC. – 115 SQ.FT
ABOVE MEAN HIGH WATER
AREA "F"
SCALE: 1" = 40' (14.4 VARAS)
0.034 AC. – 1482 SQ.FT
ABOVE MEAN HIGH WATER
N=13,682,048.27 (FEET)
E=3,257,086.67 (FEET)
N=4,925,537.376 (VARAS)
E=1,172,551.203 (VARAS)
AREA "G"
SCALE: 1" = 20' (7.2 VARAS)
0.003 AC. – 113 SQ.FT
ABOVE MEAN HIGH WATER
E=3,257,866.26 (FEET)
N=4,925,703.821 (VARAS)
E=1,172,831.852 (VARAS)
AREA "H"
SCALE: 1" = 20' (7.2 VARAS)
0.005 AC. – 237 SQ.FT
ABOVE MEAN HIGH WATER
MARSH GRASS (BMHW)
MEANDER LINE OF MEAN HIGH WATER
UPLAND AREA
WATER




NGS MONUMENT "HGCSD 60"
N= 13,700,349.79 (FEET)
E= 3,258,210.54 (FEET)
N= 4,932,125.924 (VARAS)
E= 1,172,955.796 (VARAS)
SCALE:
1" = 72 VARAS
1" = 200 FEET
JAMES SPILLMAN SURVEY
ABSTRACT NUMBER 175
WEST GALVESTON SUBDIVISION
VOLUME 92, PAGE 470, G.C.D.R.
APPROXIMATELY
86.6 ACRES
BELOW MEAN HIGH WATER
STATE OF TEXAS
CONTROL POINT (5/8" IRON ROD)
N=13,683,024.82 (FEET)
E=3,258,422.19 (FEET)
N=4,925,888.936 (VARAS)
E=1,173,031.989 (VARAS)
N=13,683,364.89 (FEET)
E=3,258,359.03 (FEET)
N=4,926,011.361 (VARAS)
E=1,173,009.253 (VARAS)
N=13,682,121.63 (FEET)
E=3,256,018.10 (FEET)
N=4,925,563.785 (VARAS)
E=1,172,166.515 (VARAS)
CONTROL POINT (5/8" IRON ROD)
N=13,681,707.89 (FEET)
E=3,256,105.69 (FEET)
N=4,925,414.839 (VARAS)
E=1,172,198.048 (VARAS)
N=13,681,235.75 (FEET)
E=3,256,503.62 (FEET)
N=4,925,244.872 (VARAS)
E=1,172,341.303 (VARAS)
ABANDONED DRILL SITE
MEANDER LINE OF MEAN HIGH WATER
MARSH GRASS (BMHW)
WATER

Line	Bearing	Distance	Distance
L1	N 79°04'42" W	38.43'	13.834 VS
L2	S 39°46'50" W	35.87'	12.914 VS
L3	S 10°59'28" W	86.22'	31.041 VS
L4	S 00°53'42" W	82.89'	29.841 VS
L5	S 47°32'56" W	207.59'	74.732 VS
L6	S 84°51'28" W	215.74'	77.667 VS
L7	S 38°57'31" W	287.20'	103.391 VS
L8	S 63°36'41" W	321.88'	115.878 VS
L9	S 83°24'26" W	257.45'	92.682 VS
L10	N 56°43'32" W	233.75'	84.151 VS
L11	S 79°28'33" W	34.74'	12.507 VS
L12	S 76°57'54" W	28.99'	10.435 VS
L13	S 22°55'21" W	36.87'	13.274 VS
L14	S 65°56'43" W	26.10'	9.397 VS
L15	S 01°15'29" W	28.96'	10.424 VS
L16	S 34°33'37" W	41.07'	14.784 VS
L17	N 77°41'48" W	46.07'	16.584 VS
L18	N 53°24'04" W	44.61'	16.061 VS
L19	N 66°19'06" W	49.37'	17.773 VS
L20	S 51°38'27" W	60.31'	21.713 VS
L21	S 15°47'07" W	38.06'	13.703 VS
L22	S 04°05'24" W	47.58'	17.129 VS
L23	S 53°29'51" W	22.79'	8.206 VS
L24	S 41°27'05" W	30.75'	11.072 VS
L25	N 47°34'22" W	86.42'	31.113 VS
L26	N 20°22'00" W	62.09'	22.352 VS
L27	N 74°18'21" W	315.58'	113.607 VS
L28	S 19°51'22" W	41.45'	14.920 VS
L29	N 73°23'51" W	110.56'	39.800 VS
L30	S 69°40'53" W	104.84'	37.742 VS
L31	S 11°41'11" W	43.01'	15.483 VS
L32	S 27°27'41" E	72.17'	25.982 VS
L33	N 56°41'24" W	434.29'	156.343 VS
L34	N 04°41'46" W	127.97'	46.071 VS
L35	N 11°57'13" W	422.97'	152.268 VS
L36	S 25°37'27" E	157.44'	56.680 VS
L37	S 51°22'03" E	75.79'	27.286 VS
L38	N 71°34'56" E	56.16'	20.219 VS
L39	N 48°10'58" E	266.14'	95.809 VS
L40	N 57°07'13" E	239.70'	86.293 VS
L41	N 72°43'26" E	211.96'	76.307 VS
L42	N 10°21'03" E	35.99'	12.956 VS
L43	N 37°40'29" W	137.10'	49.357 VS
L44	N 29°46'09" E	200.02'	72.008 VS
L45	N 47°34'22" E	395.23'	142.281 VS
L46	N 51°37'13" E	205.29'	73.906 VS
L47	N 52°39'19" E	261.01'	93.962 VS
L48	N 73°03'26" E	298.01'	107.284 VS
L49	N 46°29'13" E	121.60'	43.775 VS
L50	N 38°58'44" E	85.60'	30.815 VS
L51	N 33°06'33" E	73.98'	26.632 VS
L52	N 59°34'00" E	77.64'	27.952 VS
L53	S 89°20'41" E	84.69'	30.487 VS
L54	S 80°11'29" E	51.94'	18.697 VS
L55	S 53°23'59" E	95.70'	34.451 VS
L56	S 49°31'48" E	53.03'	19.092 VS
L57	S 38°58'18" E	86.25'	31.051 VS
L58	S 65°45'40" E	19.14'	6.889 VS
L59	N 54°38'20" E	21.20'	7.633 VS
L60	S 10°31'16" E	345.93'	124.535 VS
L61	S 20°46'41" E	1074.00'	386.639 VS
L62	S 60°22'54" W	2665.04'	959.415 VS
L63	S 52°56'10" E	107.90'	38.845 VS
L64	N 69°39'17" E	37.47'	13.488 VS
L65	N 54°26'17" E	37.96'	13.666 VS
L66	N 55°06'45" E	33.40'	12.026 VS
L67	N 48°24'18" E	13.24'	4.766 VS
L68	S 00°29'20" E	9.61'	3.460 VS
L69	S 20°38'52" W	7.19'	2.590 VS
L70	S 52°24'36" W	44.88'	16.156 VS

Line	Bearing	Distance	Distance
L71	S 56°20'34" W	24.53'	8.830 VS
L72	S 36°47'20" W	26.17'	9.423 VS
L73	S 74°50'16" W	20.12'	7.243 VS
L74	N 62°28'13" W	13.43'	4.834 VS
L75	N 08°25'00" E	14.49'	5.216 VS
L76	S 67°57'55" E	59.90'	21.566 VS
L77	N 07°55'31" E	9.19'	3.309 VS
L78	N 30°39'01" E	14.55'	5.238 VS
L79	N 52°16'27" E	21.17'	7.620 VS
L80	N 70°29'30" E	21.25'	7.650 VS
L81	S 87°36'18" E	5.41'	1.949 VS
L82	S 06°42'42" W	4.25'	1.529 VS
L83	S 29°14'14" W	19.21'	6.914 VS
L84	S 41°36'56" W	21.92'	7.890 VS
L85	S 68°28'42" W	14.55'	5.239 VS
L86	N 84°25'33" W	12.96'	4.664 VS
L87	S 76°03'15" E	138.69'	49.930 VS
L88	N 80°13'47" E	2.40'	0.864 VS
L89	S 35°09'25" W	1.90'	0.684 VS
L90	S 61°13'43" W	9.93'	3.574 VS
L91	S 86°35'28" W	3.46'	1.244 VS
L92	N 30°42'09" E	3.26'	1.174 VS
L93	N 70°09'10" E	9.80'	3.528 VS
L94	N 20°17'53" E	159.13'	57.287 VS
L95	N 04°10'57" W	8.66'	3.119 VS
L96	N 68°16'10" E	7.78'	2.799 VS
L97	S 48°46'21" E	5.79'	2.085 VS
L98	S 01°57'52" E	3.15'	1.135 VS
L99	S 29°06'07" W	7.36'	2.651 VS
L100	N 75°51'20" W	7.71'	2.774 VS
L101	N 60°29'15" E	650.46'	234.164 VS
L102	S 54°09'41" E	25.76'	9.274 VS
L103	S 20°08'28" E	19.09'	6.873 VS
L104	S 52°15'57" W	17.56'	6.320 VS
L105	S 82°18'21" W	16.76'	6.034 VS
L106	N 62°22'46" W	20.26'	7.293 VS
L107	N 01°21'39" W	15.74'	5.665 VS
L108	N 49°32'40" E	9.25'	3.329 VS
L109	N 43°55'39" E	20.65'	7.433 VS
L110	N 60°34'49" E	878.06'	316.103 VS
L111	S 83°08'22" E	5.81'	2.093 VS
L112	S 20°01'01" E	7.20'	2.590 VS
L113	S 30°01'27" E	6.77'	2.437 VS
L114	S 06°59'33" E	1.59'	0.572 VS
L115	N 85°10'51" W	1.97'	0.710 VS
L116	N 65°33'34" W	9.12'	3.283 VS
L117	N 38°32'48" W	6.79'	2.444 VS
L118	N 25°24'16" E	6.25'	2.250 VS
L119	N 57°11'35" E	481.92'	173.492 VS
L120	N 23°50'52" E	8.52'	3.066 VS
L121	N 58°58'29" E	21.16'	7.618 VS
L122	S 06°47'17" W	6.54'	2.353 VS
L123	S 32°16'43" W	18.38'	6.618 VS
L124	S 78°17'39" W	7.62'	2.745 VS
L125	N 35°48'14" W	6.02'	2.168 VS
L126	N 32°44'32" E	261.06'	93.981 VS
L127	S 00°23'12" W	12.05'	4.337 VS
L128	S 47°26'06" W	9.03'	3.253 VS
L129	S 79°18'06" W	10.58'	3.808 VS
L130	N 58°01'17" W	12.76'	4.595 VS
L131	N 16°40'53" W	14.59'	5.251 VS
L132	N 34°42'09" W	8.23'	2.962 VS
L133	N 01°54'54" E	3.04'	1.093 VS
L134	N 77°08'55" E	8.65'	3.115 VS
L135	S 68°20'31" E	8.30'	2.986 VS
L136	N 80°06'57" E	12.08'	4.349 VS
L137	S 37°24'45" E	14.29'	5.143 VS

NOTICE:.

This survey was performed in accordance with Section 33.136, Natural Resources Code, for the purpose of evidencing the location of the shoreline in the area depicted in this survey as that shoreline existed before commencement of erosion response activity, as required by Chapter 33, Natural Resources Code. The meander line depicted on this survey fixes the shoreline for the purpose of locating a shoreline boundary, subject to movement landward as provided by Section 33.136, Natural Resources Code.

NOTE:

1) All coordinates and bearings shown hereon are grid values referenced to the Texas Coordinate System of 1983, South Central Zone and NGS Monument "HGCSD 60". All distances shown hereon are surface distances unless noted and may be converted to grid distances by multiplying by a scale factor of 0.999863486. The mapping angle for this project is 01°59'03".

I, William E. Merten, Licensed State Land Surveyor in and for the State of Texas, do hereby certify that during the month of September, 2009, I have located the natural contour line of Mean High Water on the ground, according to law and with the personnel stated, and that the meanders of said contour line are true and correct as shown hereon. To the best of my knowledge, no artificial fill or any development, other than as shown hereon, that would cause alteration to said contour line has occurred within the area surveyed.

Field Personnel:
Steve Smith
Brandon Windsor

William E. Merten
Licensed State Land Surveyor

OWNERS OF UPLAND AREAS:

Galveston Bay Foundation
(undivided interest)
17330 Highway 3
Webster, Texas 77598

The Nature Conservancy
(undivided interest)
4702 Highway 146
Texas City, Texas 77590

Areas shown below the line of Mean High Water (BMHW) fall within the ownership of the State of Texas.

CobbFendley
13430 Northwest Freeway, Suite 1100
Houston, Texas 77040
713.462.3242 | fax 713.462.3262 | www.cobfen.com

A SURVEY OF THE LINE OF MEAN HIGH WATER IN A PORTION OF THE JAMES SPILLMAN SURVEY ABSTRACT NUMBER 175 GALVESTON COUNTY, TEXAS

PROJECT NO.: 0902-028-01 DATE: OCTOBER 30, 2009
SCALE: 1" = 200' (72 VARAS)

TEXAS GENERAL LAND OFFICE

JERRY PATTERSON, COMMISSIONER

Surveying Division
Coastal Boundary Survey Approval

TEXAS GENERAL LAND OFFICE
Art. 33.136, Natural Resources Code
Co. Galveston, Sketch No. 62
File Date 06/18/2018 by N. Kartye

Project: Pierce Marsh-2009

Project No: CL960007 (GLO)

Project Manager: Jeffrey Davis, Regional Director, Upper Coast

Surveyor: William E. Merten, Licensed State Land Surveyor

Description: Coastal Boundary Survey, dated September, 2009, conducted by Mr. William E. Merten, Licensed State Land Surveyor, along the line of Mean High Water, in the southwest portion of Pierce Marsh, situated about 1.9 miles, South 40° West, from the Interstate Highway 45, State Highway No. 6 and State Highway No. 197, interchange and being a portion of the littoral boundary of the James Spillman Survey, Abstract No. 175, Galveston County.

A Coastal Boundary Survey for the above-referenced project has been reviewed and accepted; upon completion of public notice requirements, the survey will be filed in the Texas General Land Office, Archives and Records, in accordance with provisions of the *Texas Natural Resources Code*, Chapter 33.136.

Approved:

Signed: David L. Yale — Survey Division

May 17, 2010 — Date

Approval Filed as:

Tex.Nat.Res.Code Article 33.136 Galveston ~~County Report No.~~ Sketch 62

Stephen F. Austin Building • 1700 North Congress Avenue • Austin, Texas 78701-1495
Post Office Box 12873 • Austin, Texas 78711-2873
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www.glo.state.tx.us

94597

SURVEYORS REPORT
SURVEY OF THE LINE OF MEAN HIGH WATER
ALONG A PORTION OF THE JAMES SPILLMAN SURVEY
GALVESTON COUNTY, TEXAS

At the request of the Galveston Bay Foundation and in my capacity as a Licensed State Land Surveyor in Texas, I have determined the line of Mean High Water along a portion of the James Spillman Survey, Abstract Number 175, in Galveston County, Texas. This survey was performed as per the requirements outlined in the Coastal Public Lands Management Act of 1973, as amended, Chapter 33, Natural Resources Code, and specifically per Section 33.136, Natural Resources Code, "Property Rights: Preservation of Littoral Rights".

The purpose of this survey was to evidence "...the location of the shoreline in the area depicted in this survey as that shoreline existed before commencement of erosion response activity..."(Section 33.136(b), Natural Resources Code).

The James Spillman Survey was a first class headright grant surveyed on April 16, 1847 under the laws of the State of Texas. This survey borders on Highland Bayou and Galveston Bay and consists of mainly low lying areas covered with marsh grasses. This survey also has many "inland" waters connected to Highland Bayou, Basford Bayou and Galveston Bay which are tidally influenced and therefore subject to ownership by the State of Texas.

In the case of Humble Oil & Refining Co. vs. Sun Oil Co. (190 F 2d 191), the court held that "grants issued by the King of Spain and the Mexican State before the adoption of common law in Texas, the boundary between sea and upland must be determined in accordance with principals announced in Las Siete Partidas, the basic law of Spain and Mexico which defines "shore" as all ground covered with water at high tide during the whole year, whether in winter or summer."

In a decision by the Texas Supreme Court in the case of Luttes vs. State (324 SW 2nd 167, on remand 328 SW 2nd 920) it was found that the littoral boundaries for civil law grants differs from the boundaries of common law grants. The court states that for civil law grants (grants by Spain and Mexico) the boundary is the line of Mean Higher High Water (MHHW) and for common law grants (grants made by the Republic and State of Texas) the boundary is the line of Mean High Water (MHW). Therefore, the littoral boundary within the James Spillman Survey, a common law grant, will be the line of Mean High Water. This case also described that the best method of determining MHHW and MHW is to employ the use of scientific tide gauges.

The Luttes case defined Mean Higher High Water as a tidal datum that is the average of the higher of the two daily tides observed over a specific 19 year period (epoch) and Mean High Water as a tidal datum that is the average of all high tides over a specific 19 year period (epoch). Tides being defined as the regular and predictable rise and fall in sea level due to the

gravitational pull of the sun and moon. Also, sea levels are influenced by weather conditions, geographical location and topography of the coastline. The combination of these conditions can result in a wide variation in the elevation of the tidal datum from location to location.

Tide gauges along the Texas coastline are installed, operated and maintained by a joint effort involving the National Oceanic and Atmospheric Administration (NOAA), the Conrad Blucher Institute (CBI) and Lamar University. Tidal datum's, benchmarks and gauge readings are published and available from NOAA and CBI.

The project site is located in close proximity of the Galveston Pier 21 Tide Gauge, a primary gauge in use since 1908. Currently the published tidal datum for this gauge is based on the 19-year epoch from 1983 to 2001.

During the month of September, 2009, a site staff gauge was installed and observed simultaneously with the Pier 21 Tide Gauge for ten high tide cycles. These readings were compared to the Pier 21 Tide Gauge resulting in a calculated elevation for mean higher high water, mean high water, mean low water and mean lower low water at the site staff gauge.

The project site is an "inland" water body approximately 3000 feet long by 1800 feet wide lying southwest of the Village of Bayou Vista in an area commonly known as Pierce Marsh. The Project area has direct channel connection to Basford Bayou at the southwesterly end of the site. From the project site there are several other connections to adjacent "inland" waters on the northeast and northwest.

The project site is located in West Galveston Subdivision, a subdivision platted in Galveston County in Volume 92, Page 470 of the Galveston County Deed Records. Out of this subdivision, which was never developed, the lots and blocks were sold to individual private owners and are still carried in the Galveston County Appraisal District tax rolls as active accounts. All of the lots and blocks within the subject area are owned jointly by the Nature Conservancy and the Galveston Bay Foundation. The areas below the line of Mean High Water are owned by the State of Texas.

During the Month of September, 2009, using the calculated elevation for the site staff gauge, points were located on the natural contour line of Mean High Water along the entire shoreline and each of the islands for the entire project area. These points were incorporated into surveyed meanders delineating the littoral boundary between the state owned seabed and the privately owned uplands.

The surveyed meander line was tied to the Texas Coordinate System of 1983, South Central Zone using NGS Monument "HGCSD 60" for reference. The scale factor used for this project is 0.999863486 and a mapping angle of 01°59'03".

As shown of the survey, there is an area near the southwest corner of the site that is an abandoned oil drilling site.

To the best of my knowledge no artificial fill or development, other than previously stated, that would cause alteration to the line of mean high water, has occurred within the area surveyed.

A plat showing the results of this survey was prepared and accompanies this report.

Respectfully submitted,

William E. Merten
Licensed State Land Surveyor
Cobb Fendley & Assopciates, Inc.
3027 Marina Bay Drive, Suite 105
League City, Texas 77573
281-334-2935

Project No. 0902-028-01
Date: October 31, 2009

94600

A F F I D A V I T

Attachment

GENERAL LAND OFFICE NOTICE OF APPROVAL OF COASTAL BOUNDARY SURVEY

Pursuant to §33.136 of the Texas Natural Resources Code, notice is hereby given that Jerry Patterson, Commissioner of the General Land Office, approved a coastal boundary survey, submitted by William E. Merten, Licensed State Land Surveyor, conducted in September 2009, locating the following shoreline boundary:

Survey in Galveston County, a portion of the Texas Gulf Coast shoreline along the line of Mean High Water, in the southwest portion of Pierce Marsh 1.9 miles southwest of the intersection of Interstate Highway 45 and State Highways No. 6 and No. 197 near Hitchcock, Texas, the same line being a portion of the boundary of the James Spillman Survey, Abstract No. 175.

This survey is intended to provide pre-project baseline information related to an erosion response activity on coastal public lands. An owner of uplands adjoining the project area is entitled to continue to exercise littoral rights possessed prior to the commencement of the erosion response activity, but may not claim any additional land as a result of accretion, reliction, or avulsion resulting from the erosion response activity.

For a copy of this survey or more information on this matter, contact Bill O'Hara, Director of the Survey Division, Texas General Land Office by phone at 512-463-5212, email bill.ohara@glo.state.tx.us, or fax 512-463-5223

Published: June 17, 24/2010
00245042

County of Galveston §
§
State of Texas §

Before me, the undersigned authority, on this day personally came and appeared **Lois Colvin**, to me well known (or proved to me on the basis of satisfactory evidence), and who after being duly sworn (affirmed) did depose and say that she is an **AGENT** for **THE GALVESTON COUNTY DAILY NEWS**, a newspaper of general circulation, which has been continuously and regularly published for a period of not less than one year, in the County of Galveston, and that the **NOTICE**, a copy of which is hereto attached was published in said newspaper on the following days, to wit:

June 17, 24, 2010

Lois Colvin
Agent Signature

Sworn and subscribed before me

On this the 24th day of June, 2010

Lynette Tisdale
Notary for the State of Texas

LYNETTE TISDALE
Notary Public, State of Texas
My Commission Expires
2-11-2012

TEXAS GENERAL LAND OFFICE
Art. 33.136, Natural Resources Code
Co. GALVESTON, SKETCH No. 62
File Date 10/01/2018 by K. Schreiber

CL960007

95301