DRAWING INDEX

SHEET NO.	TITLE
G1 G2 C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14	COVER SHEET & INDEX SURVEY CONTROL MAP SITE PLAN
C15	SITE PLAN
C15 C16	SITE PLAN SITE PLAN
C17	SITE PLAN

CONSTRUCTION PLANS FOR

BEACH SURVEY OF WEST GALVESTON ISLAND

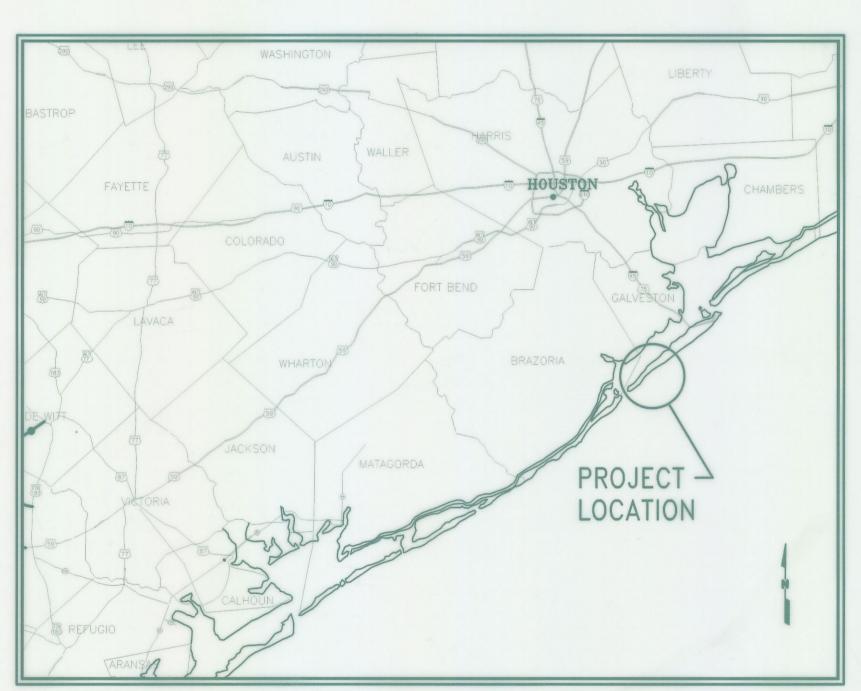
FOR

CITY OF GALVESTON

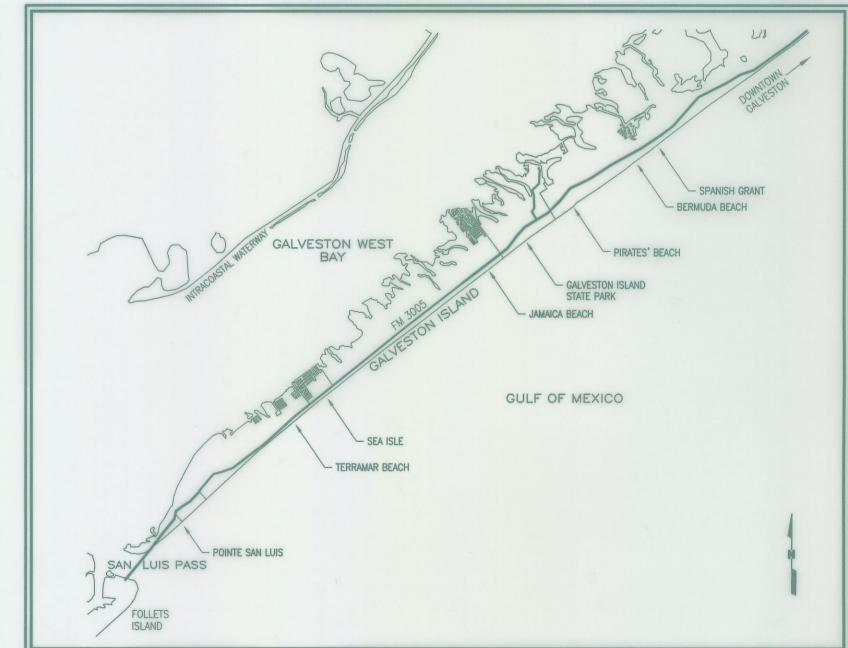
BY

SHINER MOSELEY AND ASSOCIATES, INC. **CORPUS CHRISTI / HOUSTON, TEXAS**

2001



VICINITY MAP



LOCATION MAP See Galveston Co. Art. 33.136 Report No. 2

TEXAS GENERAL LAND OFFICE Art. 33.136, Natural Resources Code County Galveston, Sk. No. 4 File Date July 2, 2001by D.J. H. Sht. 1 of 19

BEACH SURVEY OF WEST GALVESTON ISLAND

SHEET

OF 19 REV 1

No.	NAME	NORTHING	EASTING	DESCRIPTION
H1	ROBINSON	13,658,826.47	3,285,776.30	BRASS DISK
H2	162+87.6	13,658,765.39	3,285,708.91	BRASS DISK
НЗ	HGCSD 62	13,645,727.06	3,264,124.36	S. STEEL ROD
H4	JAMA	13,641,496.19	3,250,736.33	BRASS DISK
H5	G460	13,621,154.13	3,233,204.29	BRASS DISK
Н6	BAY HARBOR	13,613,564.90	3,223,723.45	BRASS DISK
H7	HGCSD 61	13,622,595.36	3,229,492.42	S. STEEL ROD

VERTICAL CONTROL					
No.	NAME	ELEVATION	DESCRIPTION		
V1	S1237	7.19	BRASS DISK		
V2	R1237	6.38'	BRASS DISK		
٧3	PARK RM 2	7.26'	BRASS DISK		
V4	K1186	3.44'	BRASS DISK		
V5	U1237	6.54	BRASS DISK		
V6	M460	9.09'	BRASS DISK		
۷7	G460	8.75'	BRASS DISK		
V8	J1186	9.19'	BRASS DISK		
٧9	H1186	5.91'	BRASS DISK		
V10	G1186	6.05'	BRASS DISK		
V11	162+87.6	14.95	BRASS DISK		

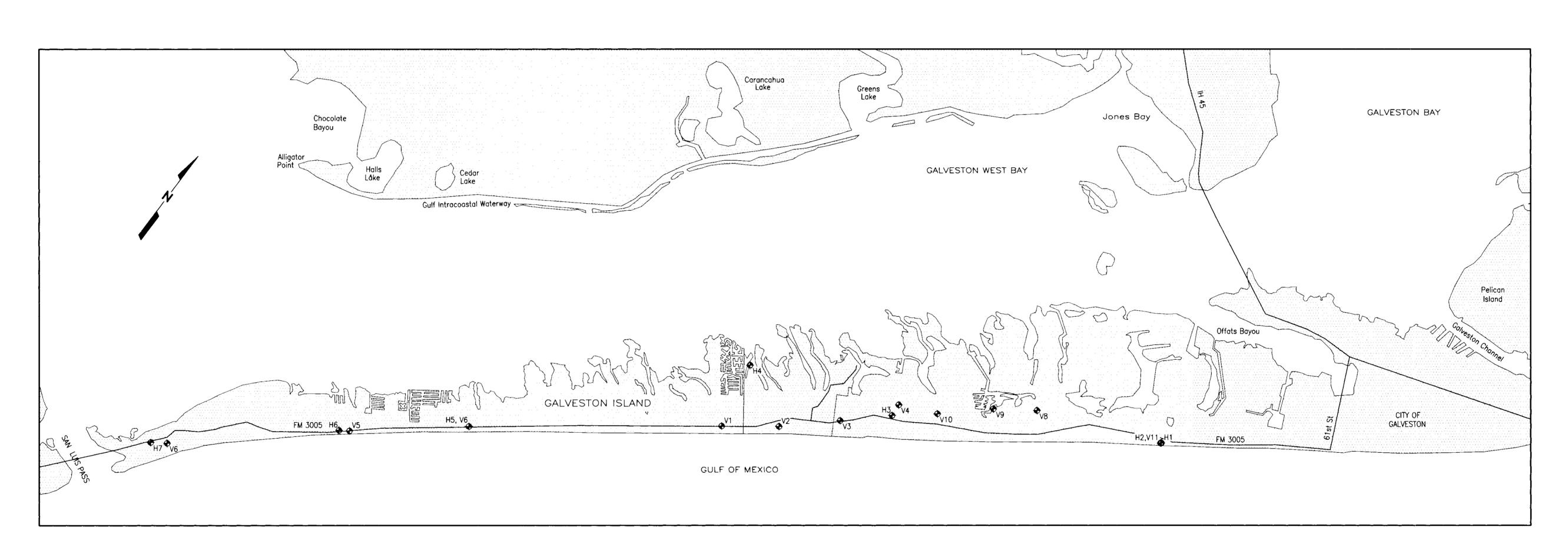
NOTES:

1. COORDINATES SHOWN ARE IN FEET BASED ON LAMBERT GRID, TEXAS SOUTH CENTRAL ZONE, NAD '83

2. ELEVATIONS SHOWN ARE BASED ON NAVD '88.

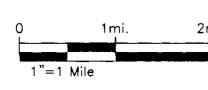
H1 HORIZONTAL SURVEY CONTROL POINT (SEE SCHEDULE)

•V1 VERTICAL SURVEY CONTROL POINT (SEE SCHEDULE)



SURVEY CONTROL MAP

た水内の GENERAL LAND UFFIC で、33.136, Natural Resources Cone nunty Golveston, Sk. No. 4 sht. 2 of 19

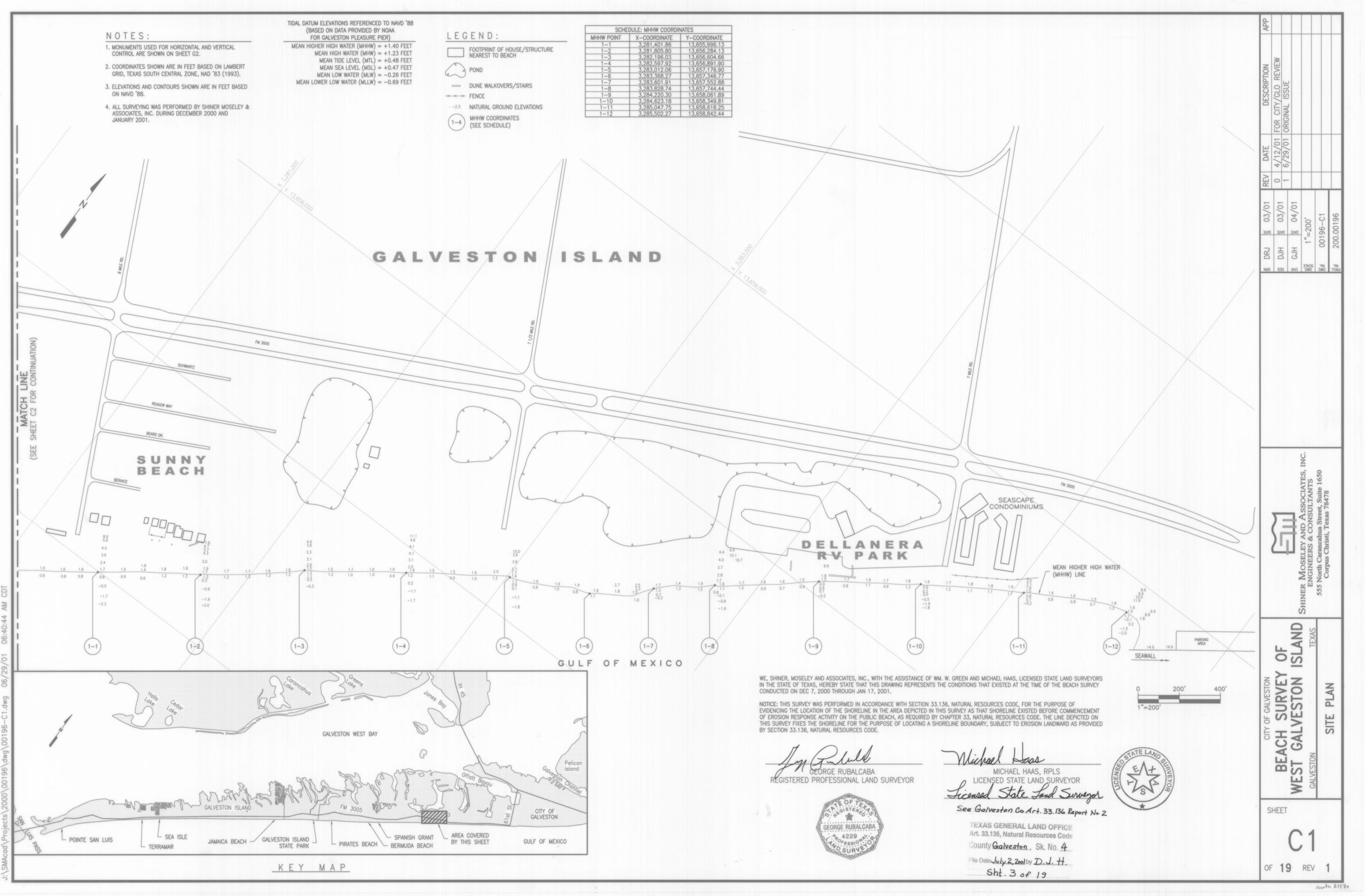


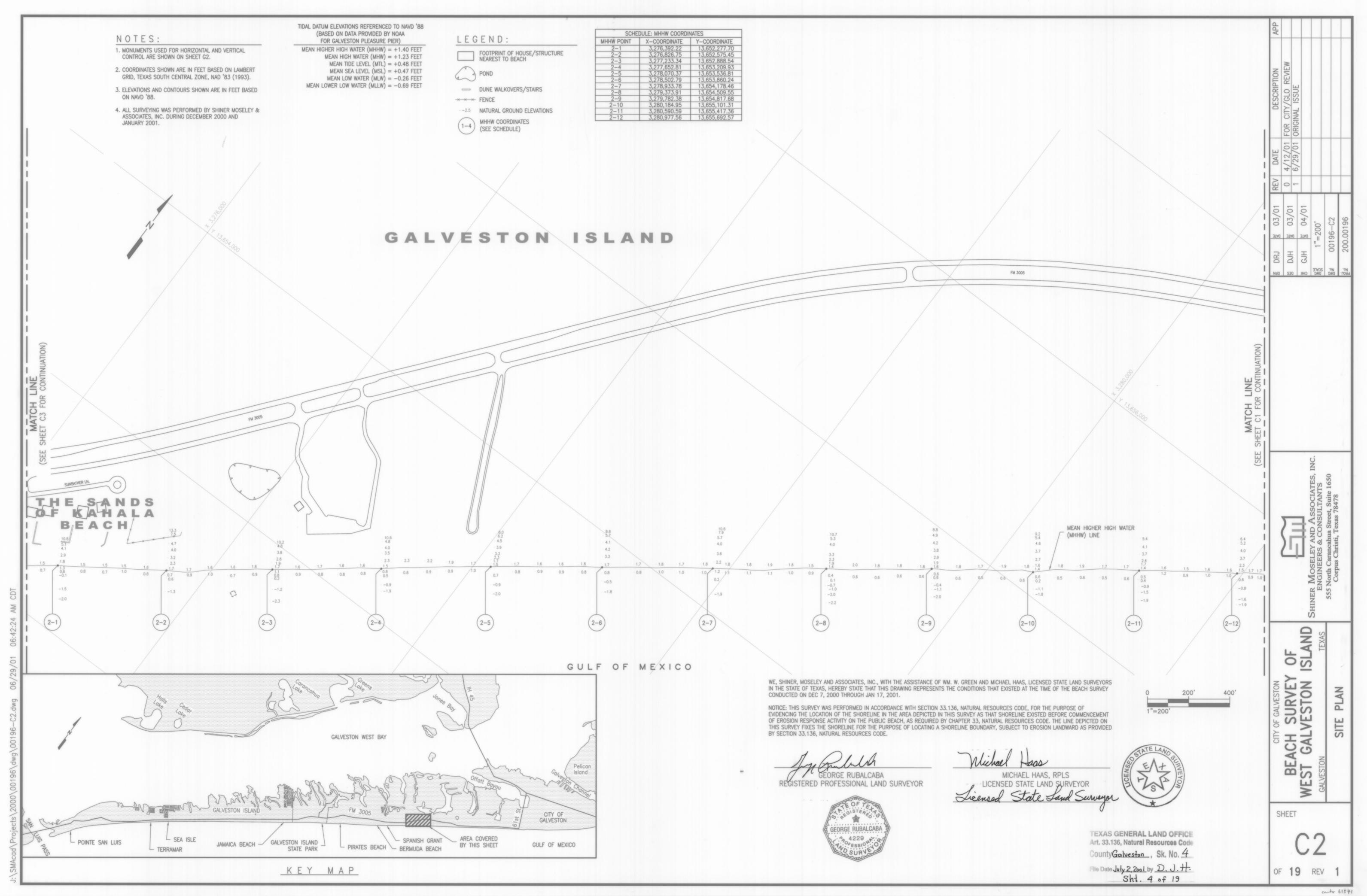
SURVEY CONTROL MAP

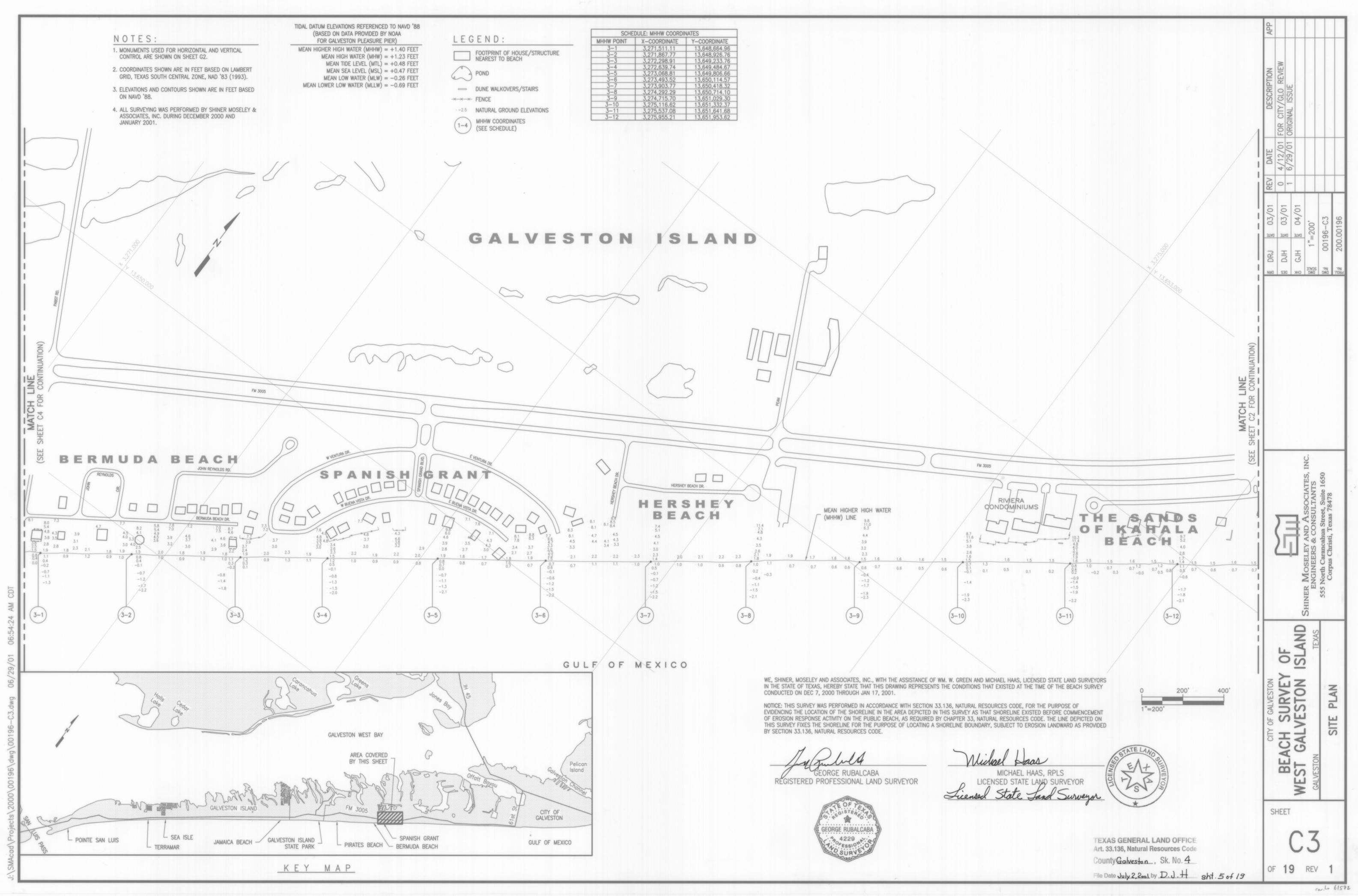
BEACH SURVEY OF WEST GALVESTON ISLAND

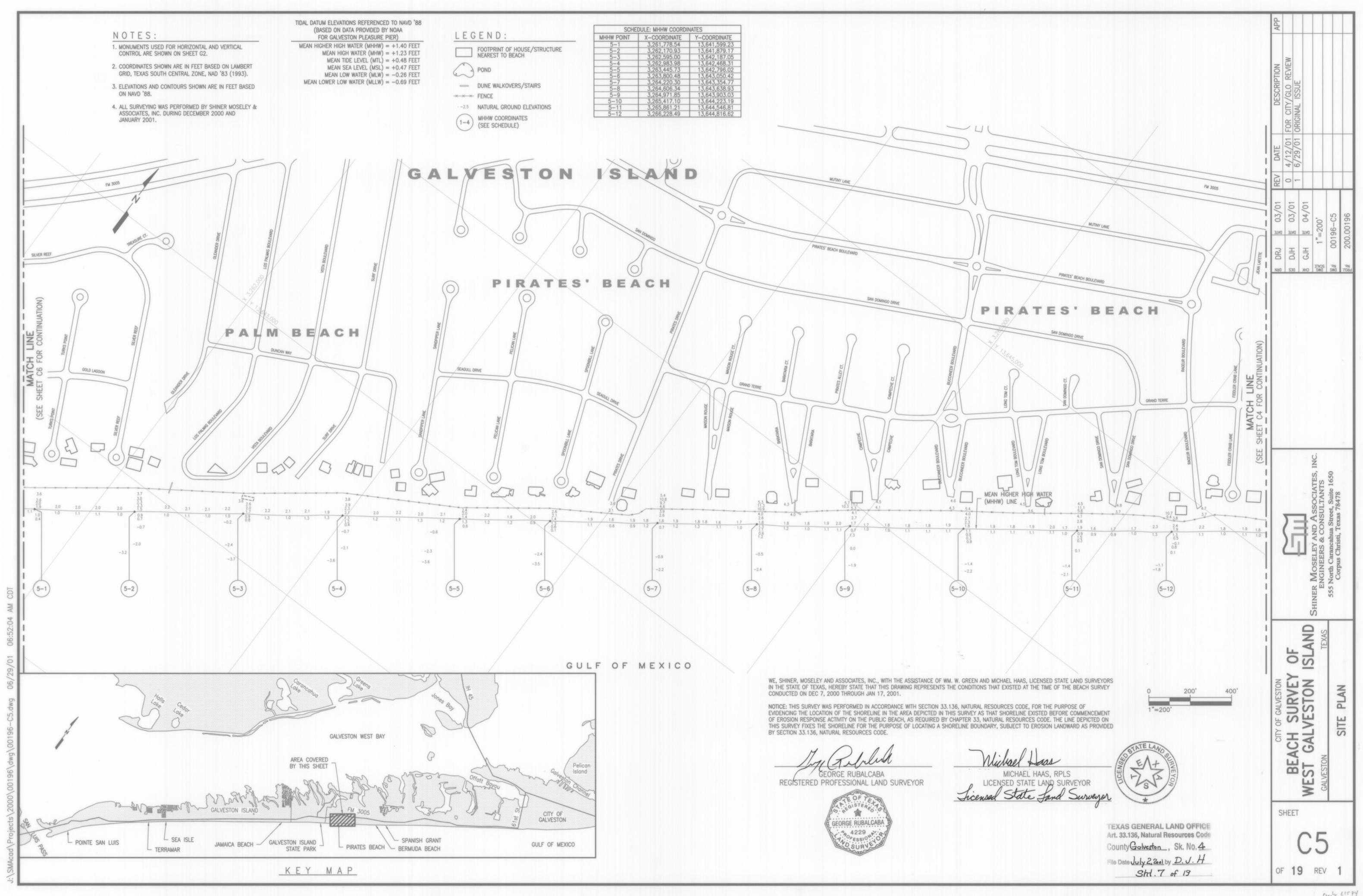
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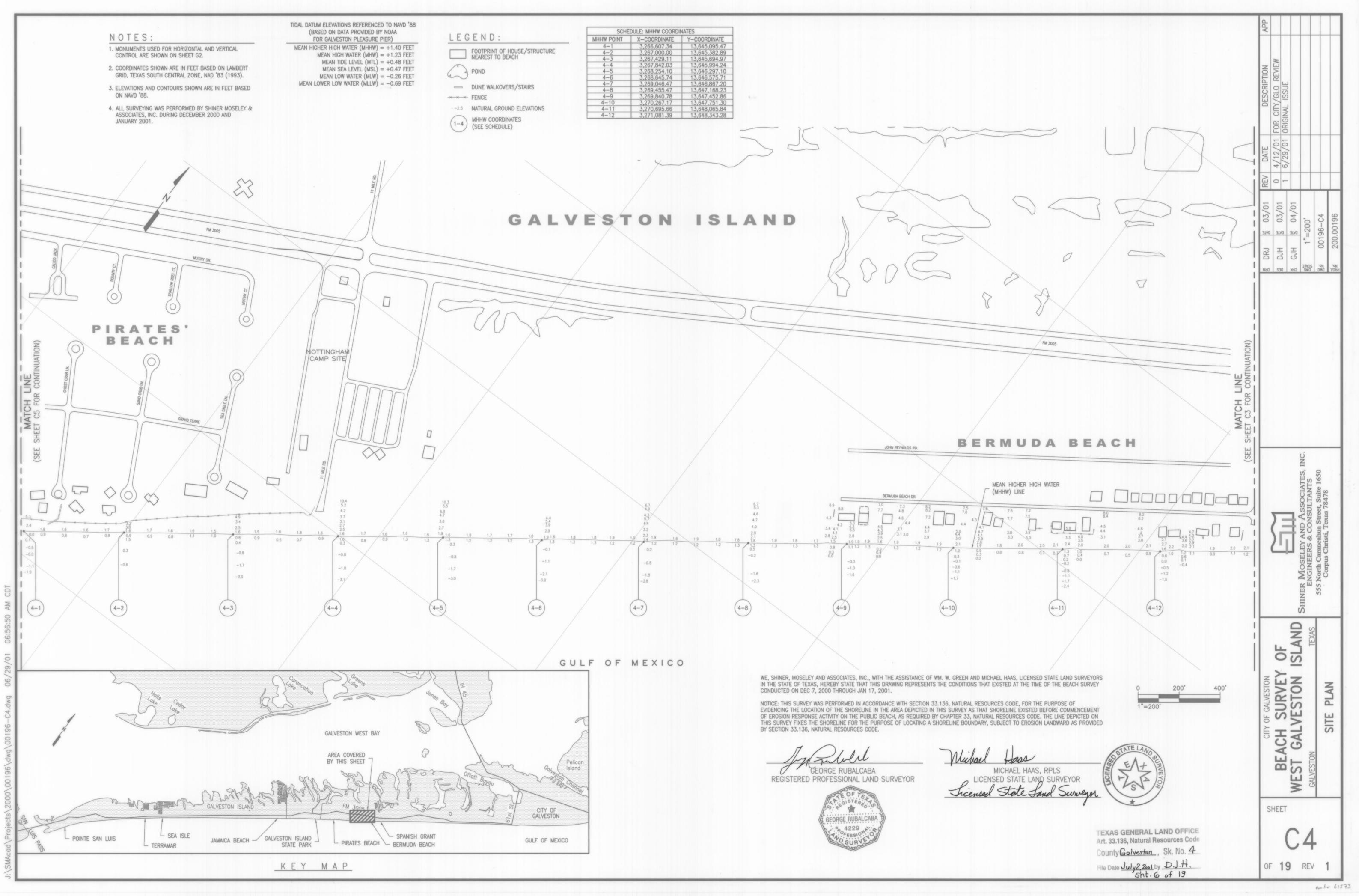
OF 19 REV 1

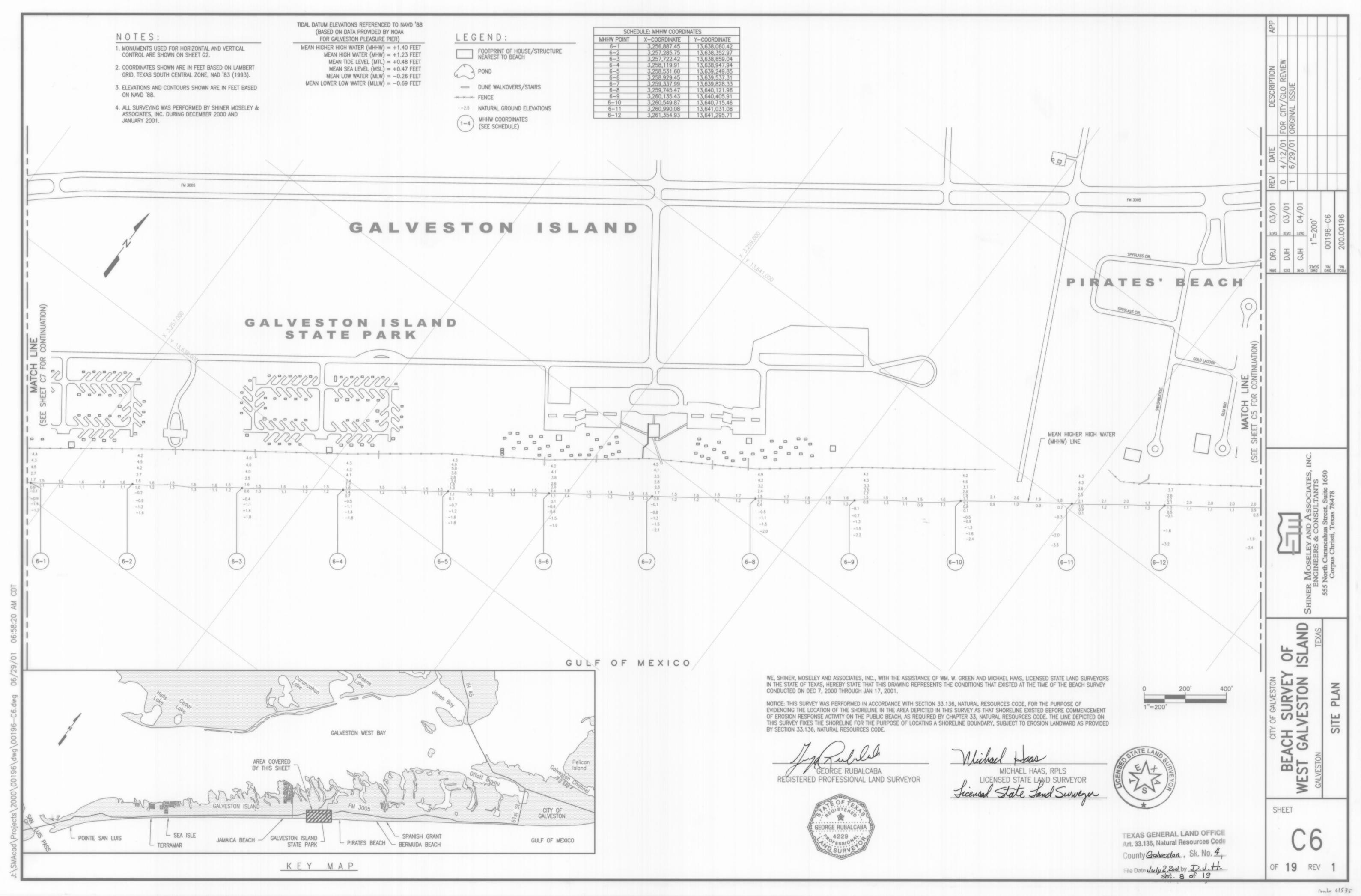


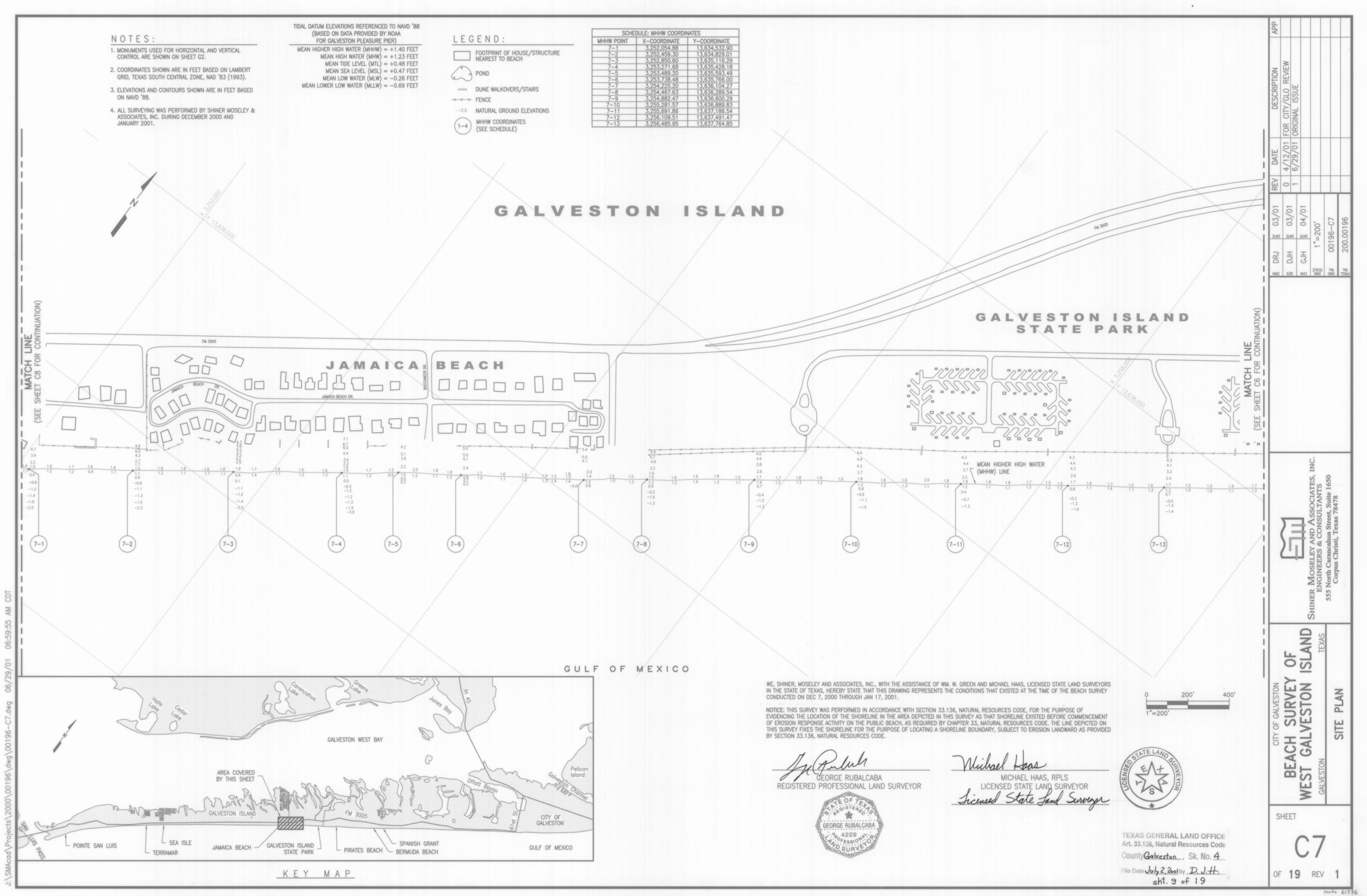


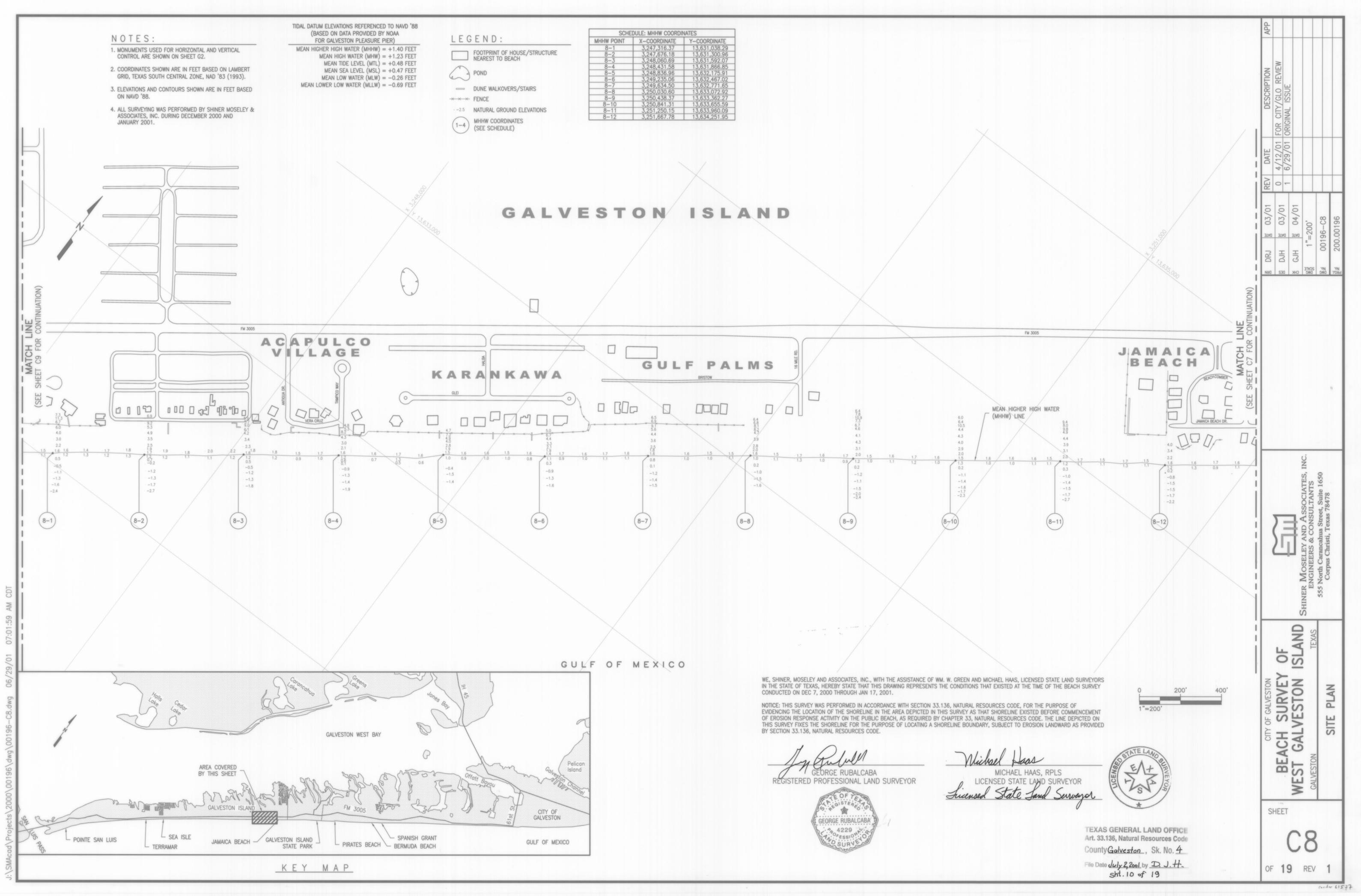


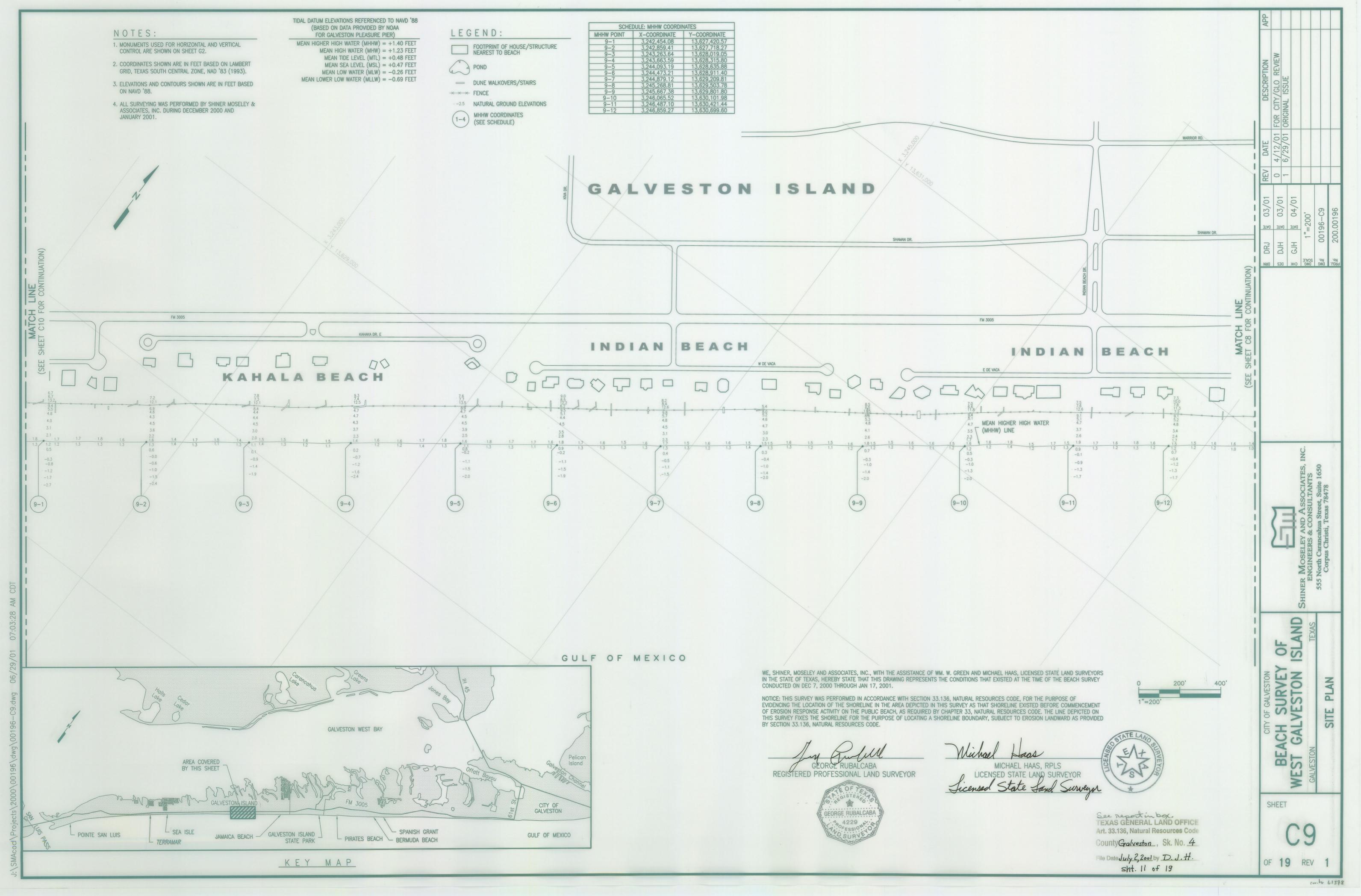


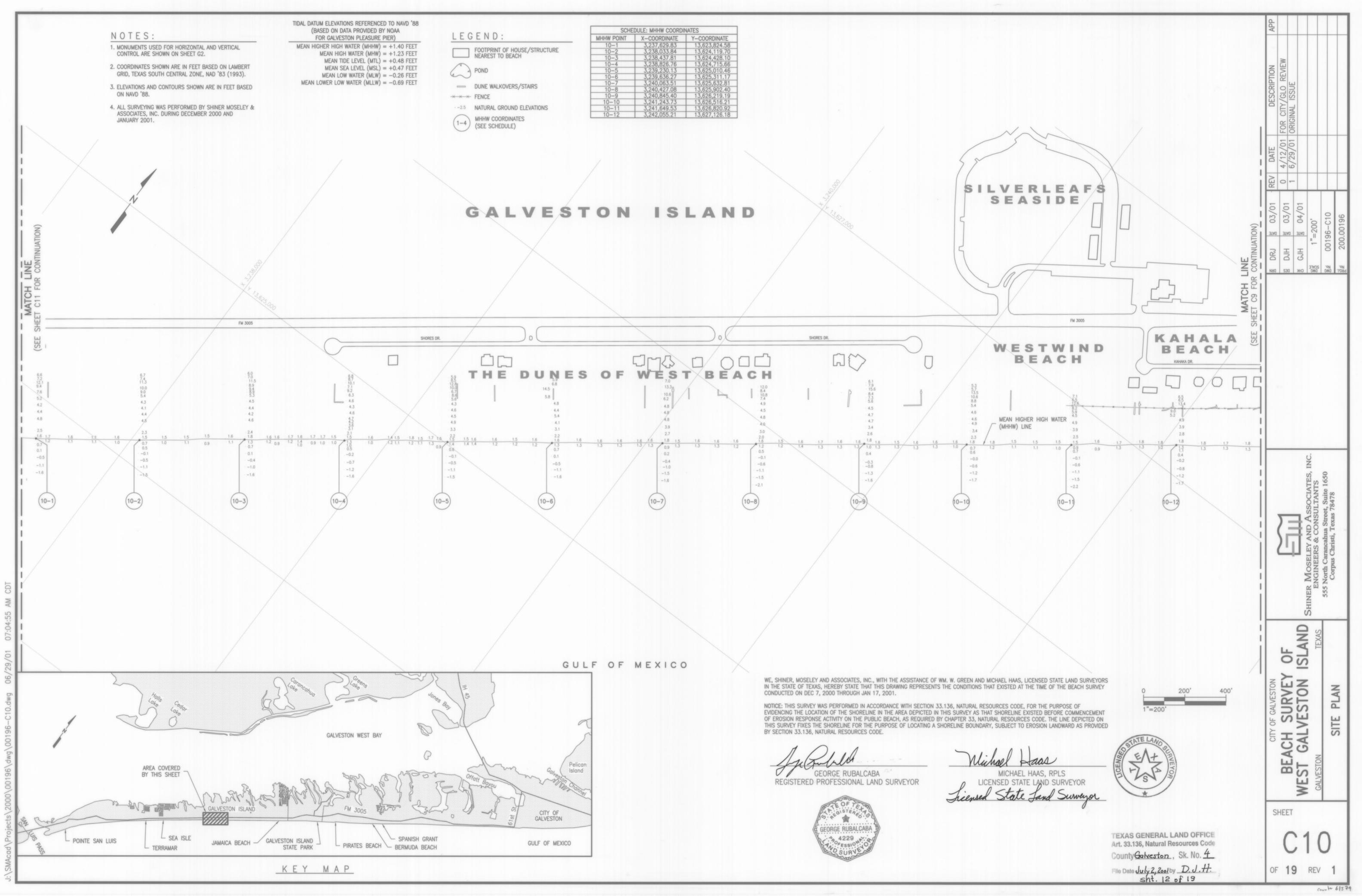


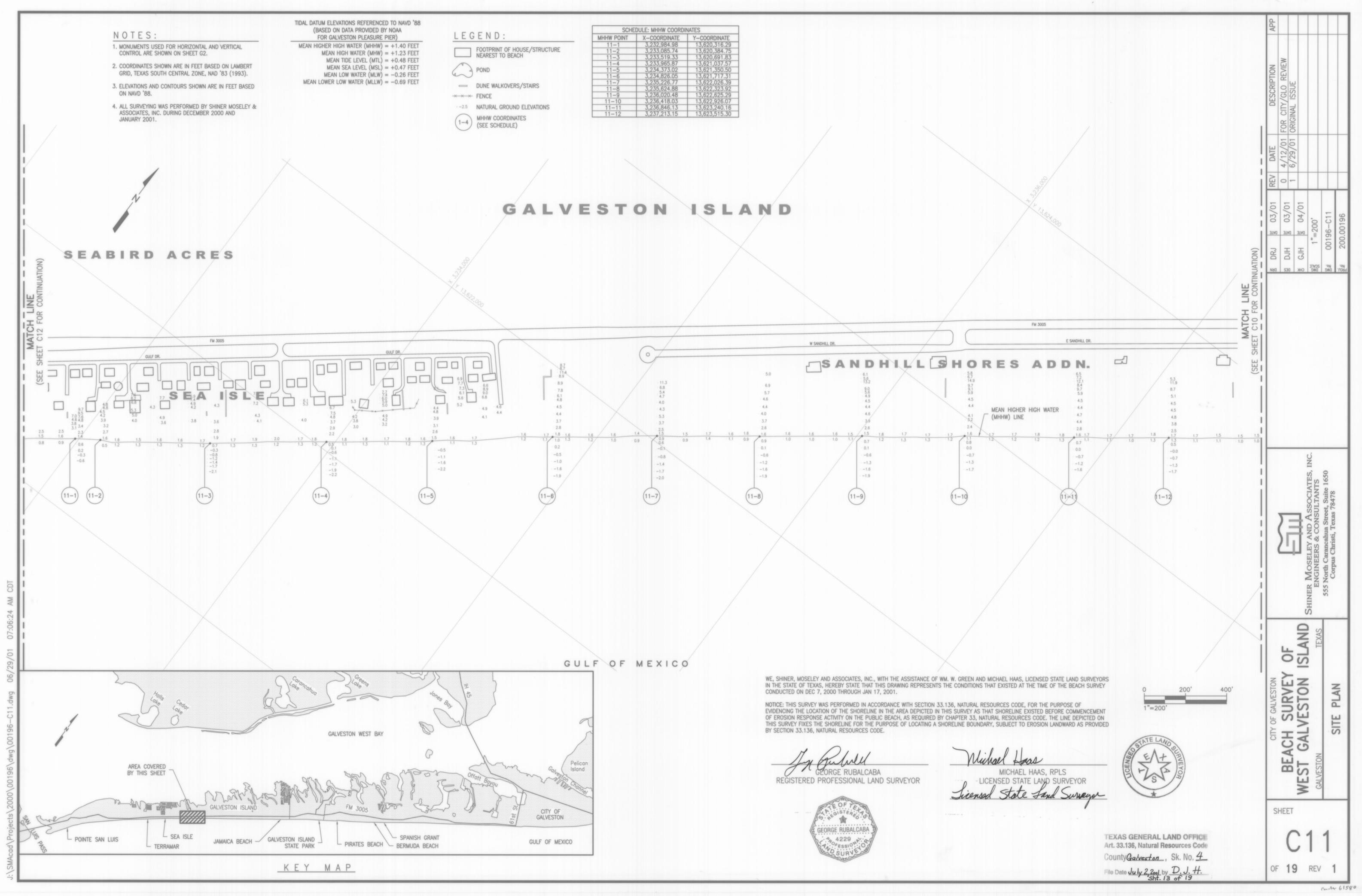


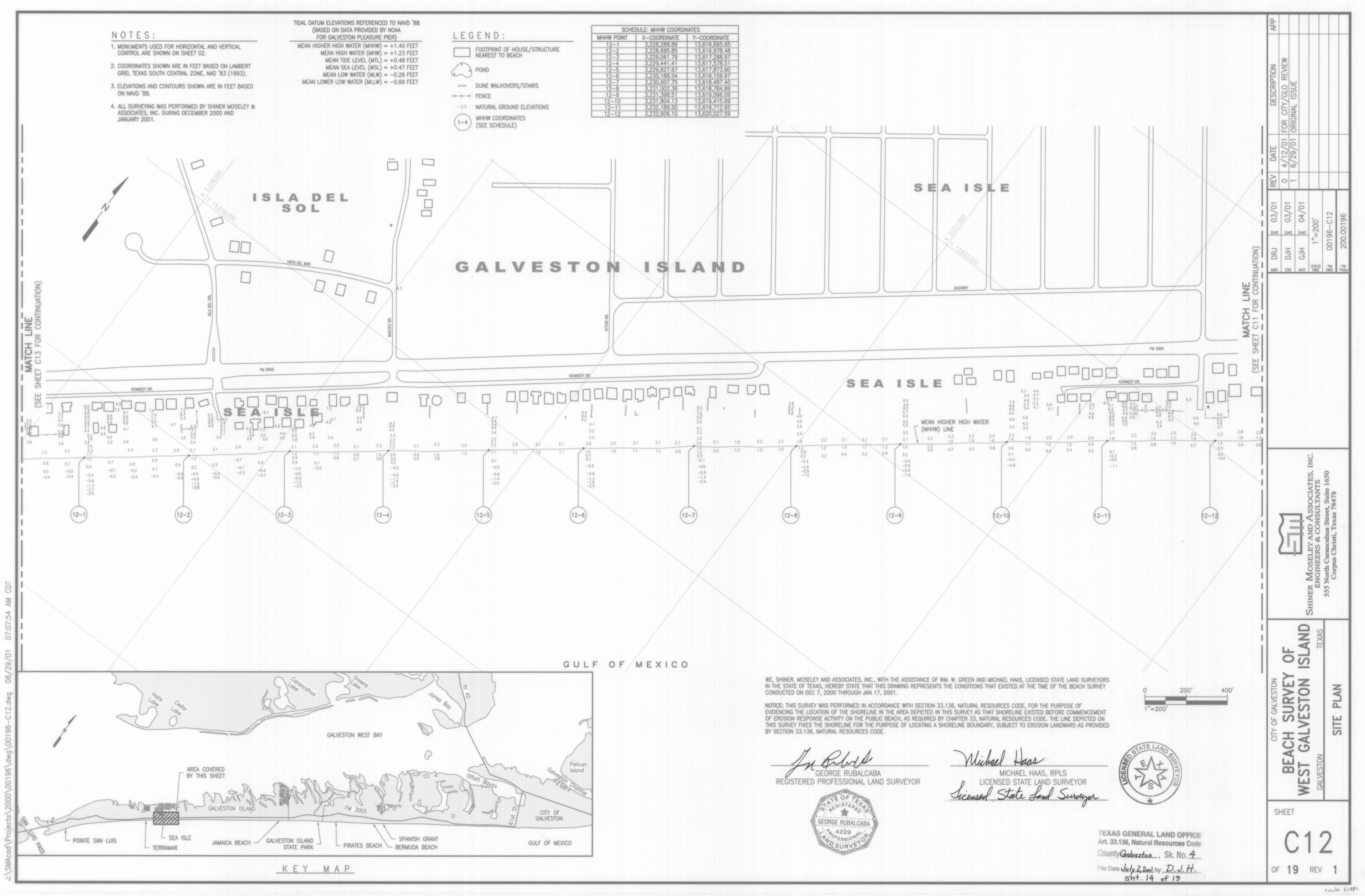


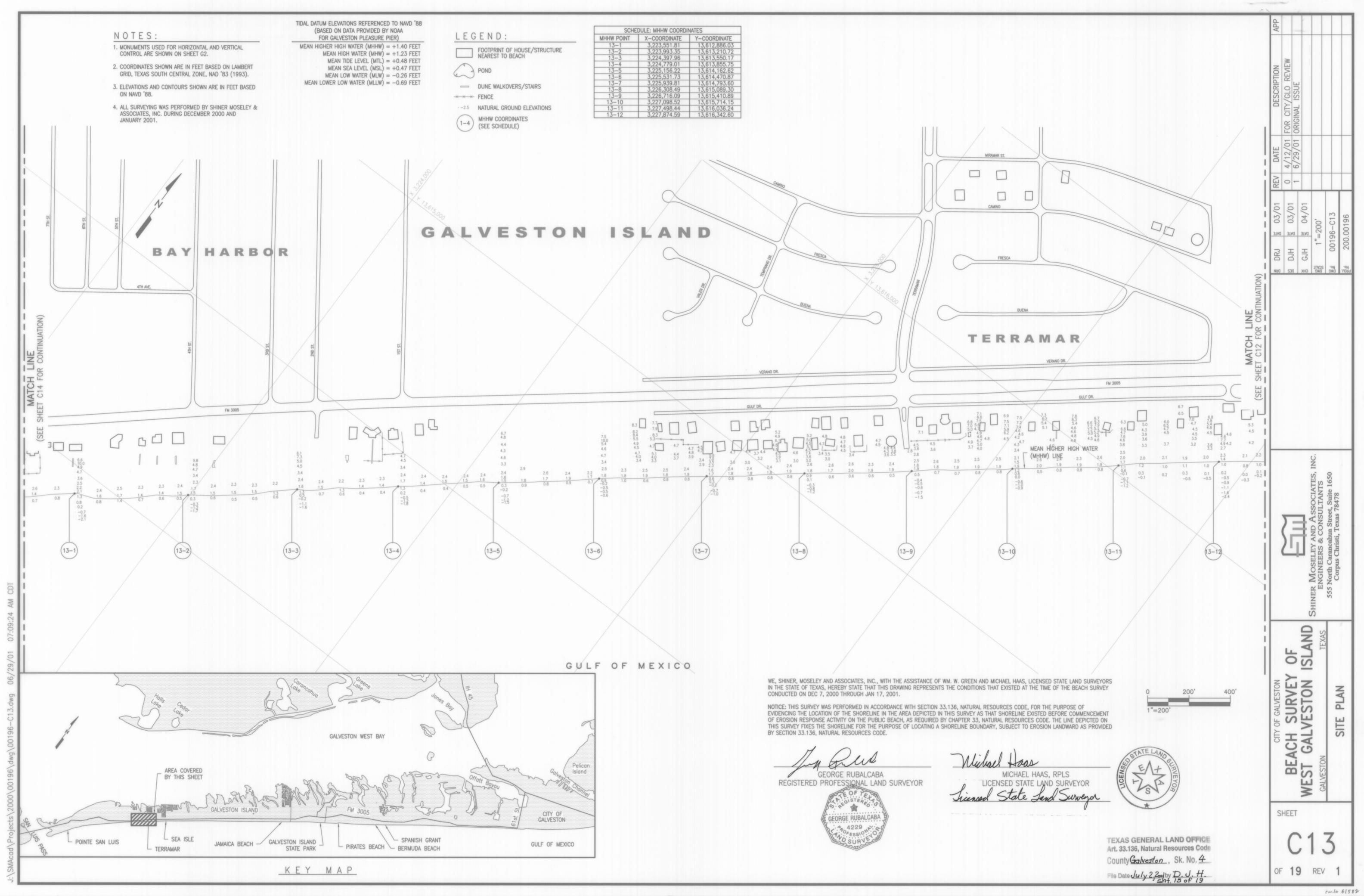


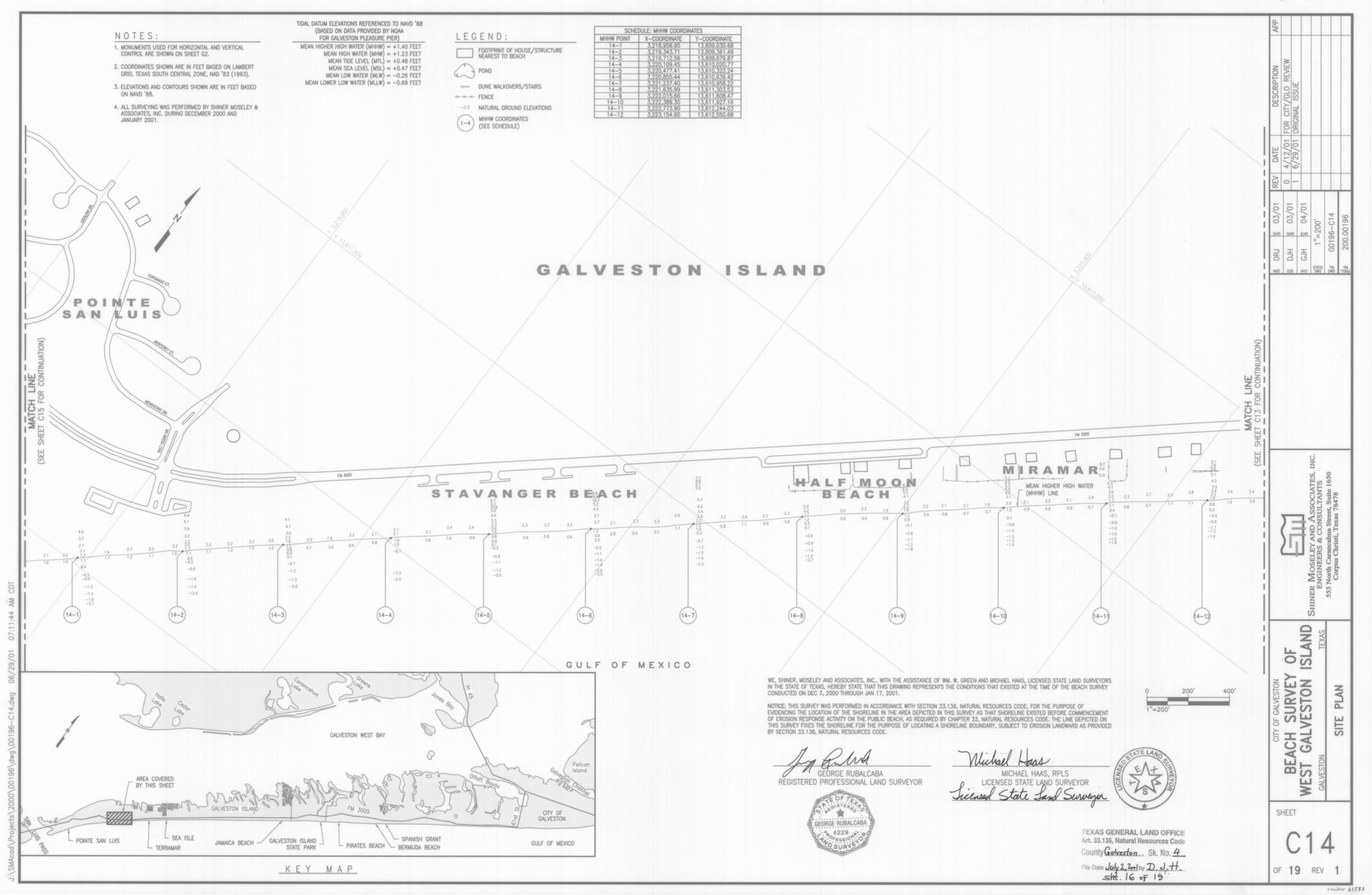


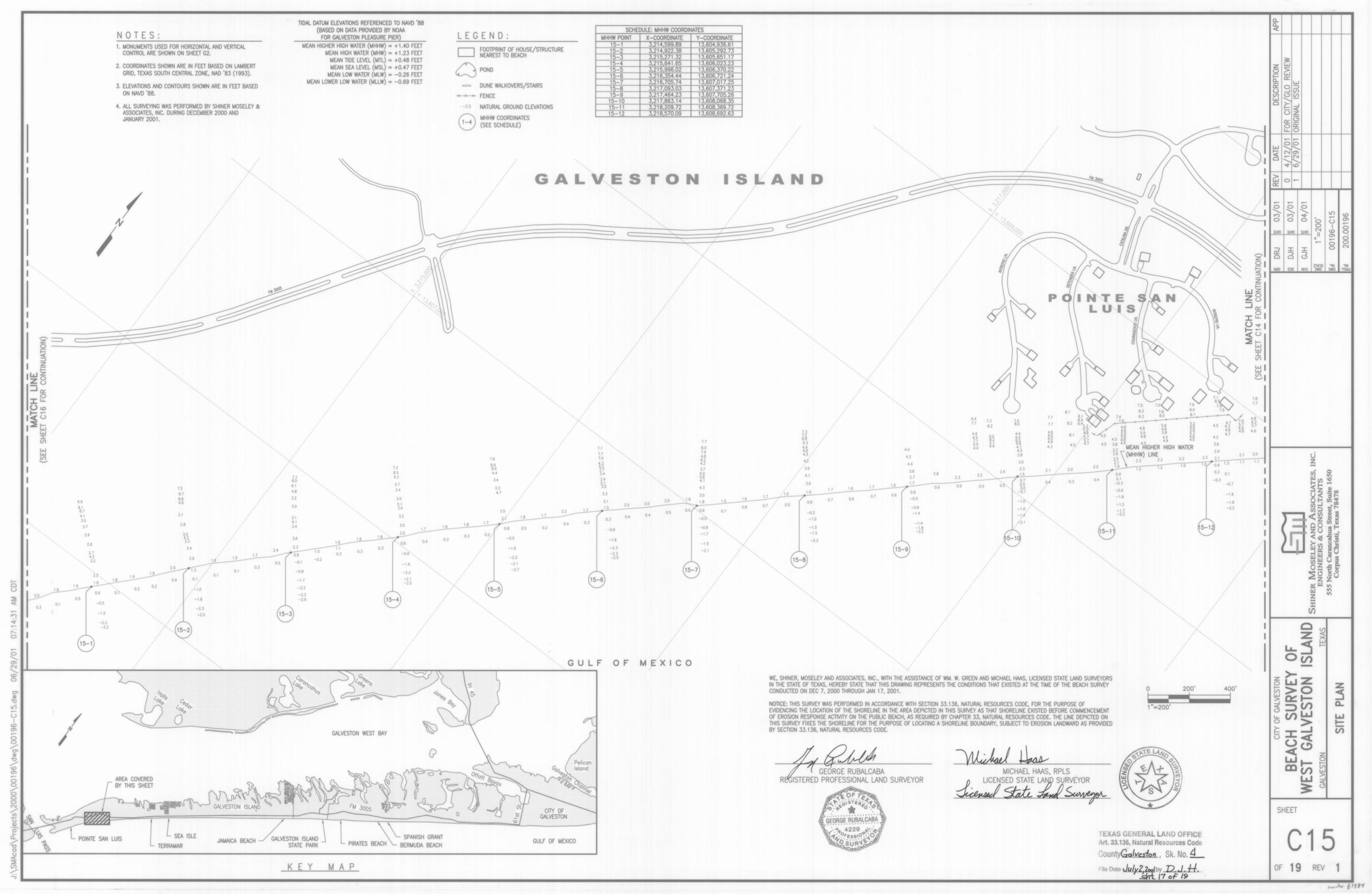


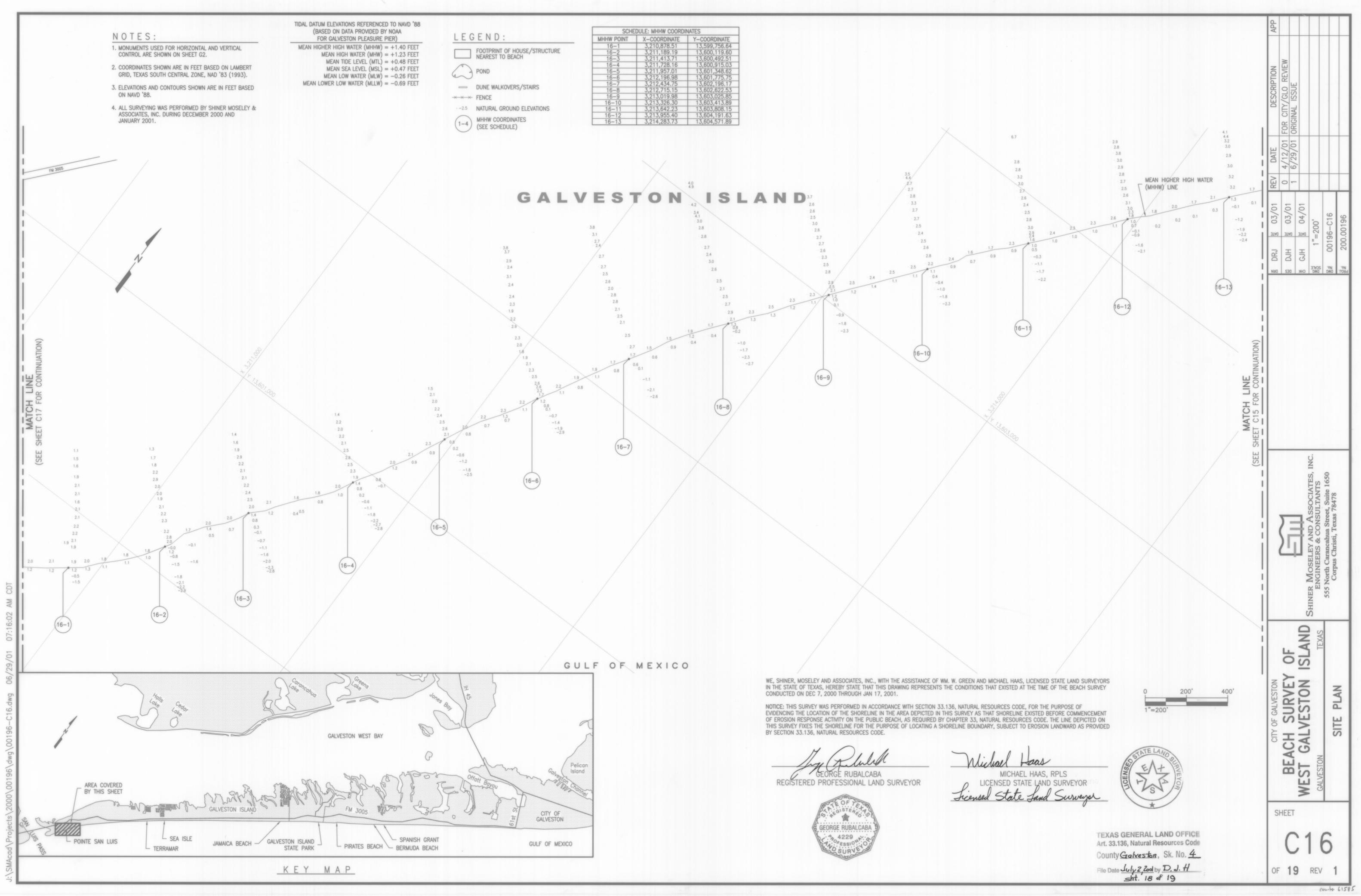


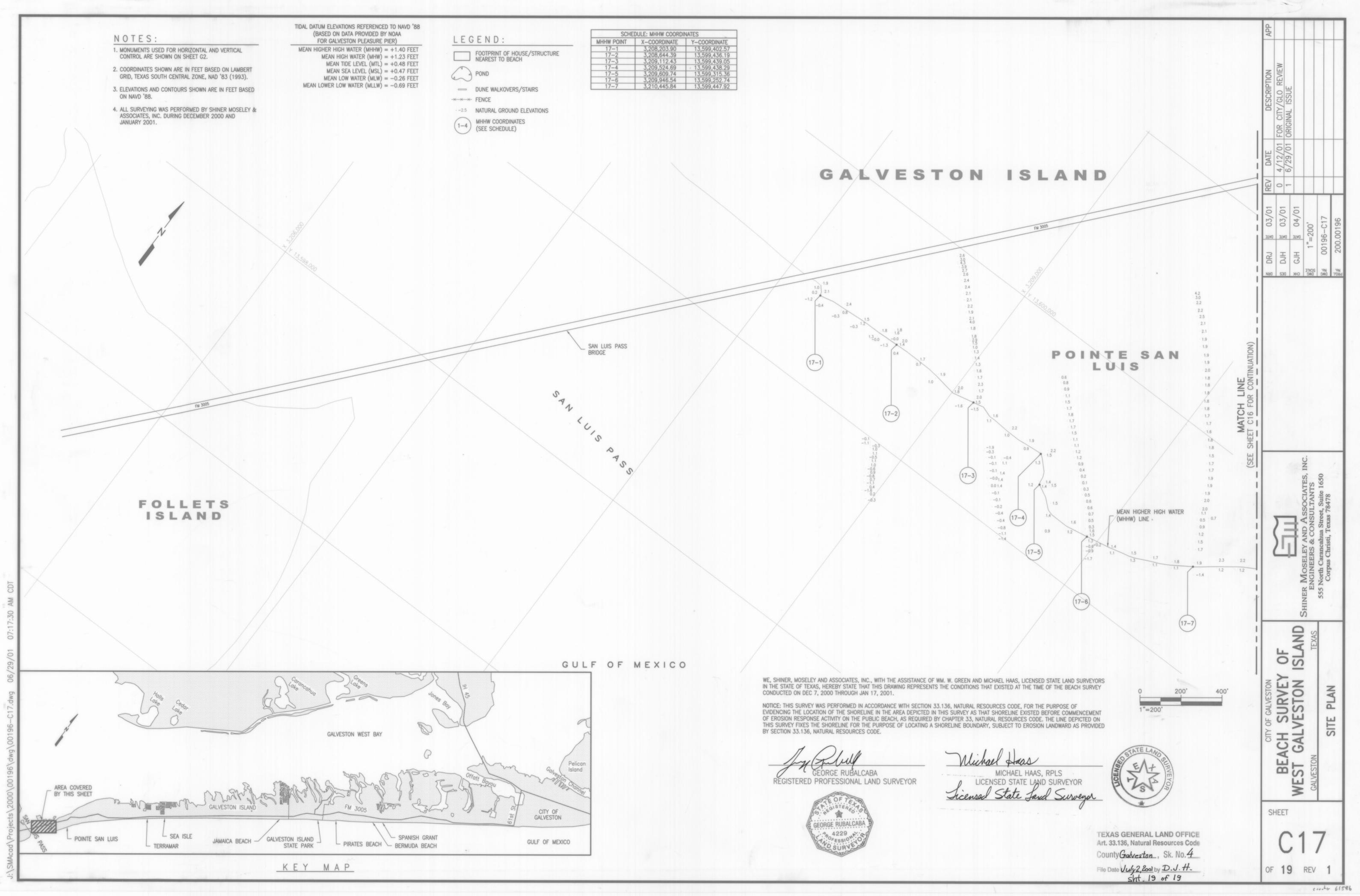












June 29, 2001

J200.00196 VIA FEDEX

Mr. Ben Thomson, RPLS, LSLS Texas General Land Office 1700 N. Congress Avenue Austin, TX 78701-1495

RE:

BEACH SURVEY OF WEST GALVESTON ISLAND

(STATE COASTAL BOUNDARY SURVEY)

Dear Mr. Thomson:

Enclosed is final drawing package for the referenced survey sealed by Michael Haas, LSLS and George Rubalcaba, RPLS. This survey has been performed in accordance with Section 33.136 of the Natural Resources Code.

Please do not hesitate to call should there be any questions.

Sincerely,

SHINER MOSELEY AND ASSOCIATES, INC.

Gerald J. Hauske, P.E.

Project Manager

Cc:

Enclosure: Final Sealed Drawing Package (Sheets G1, G2, C1 through C17)

Jimmy Tyree, Project Manager Texas General Land Office 1700 N. Congress Avenue

Austin, TX 78701-1495

Larry Wise, P.E.

Shiner Moseley and Associates 3300 South Gessner, Suite 111

Houston, Texas 77063

.....

Monica Franke, Director

Department of Planning and Community Development

City of Galveston

823 Rosenberg, Room 401

Post Office Box 779

Galveston, Texas 77553-0779

File No. Art. 33.136 Report 2

Galveston

Tidal INformation from Pleasure Pier Gauge

Date Filed: July 2, 2001

David Dewhurst, Commissioner

Douglas Howard

See Galveston Co.

Art. 33.136 Sketch No. 4

flattened

HI

County

June 29, 2001

J200.00196

Mr. Ben Thomson Texas General Land Office 1700 N. Congress Avenue Austin, TX 78701-1495

RE: BEACH SURVEY OF WEST GALVESTON ISLAND (STATE COASTAL BOUNDARY SURVEY)

Dear Mr. Thomson:

Enclosed is the tidal information from the Pleasure Pier Gauge which was the basis for our surveys. If you recall, I consulted with you via a phone conversation prior to our commencement of beach surveys to determine what would be the acceptable method for determining the Mean Higher High Water Line. You indicated that the Pleasure Pier data would be acceptable for our surveys.

I consulted NOAA on April 15, 1999, and was given the correlation as shown on sheet 6 of 9 attached which showed 0.00' MHHW = 1.39' NAVD '88. Leveling from the benchmarks at Pleasure Pier to the various benchmarks along the scope of our project, we averaged out to 0.00' MHHW = 1.40' NAVD '88, which is what we indicate on our drawings. The latest NOAA publication shows 0.00' MHHW = 1.44' NAVD '88. I have shown all these correlations on the attached sheet 6 of 9.

Thank you for your time and assistance on this and previous projects. Should you have any questions, just call.

Sincerely,

SHINER MOSELEY AND ASSOCIATES, INC.

George Rubalcaba, P.E., R.P.L.S.

Project Manager

GR/lfb

Enclosures

Page 1 of 8

Station ID: 8771510

PUBLICATION DATE: 01/14/2000

GALVESTON PLEASURE PIER

TEXAS

NOAA Chart: 11324 USGS Quad: GALVESTON Latitude: Longitude:

29ø 17.1' N 94ø 47.3' W

To reach the tidal bench marks from the Post Office on the west side of Rosenberg Avenue (25th Street) and Winnie Street (Avenue G), proceed SE on Rosenberg Avenue for 1.6 km (1.0 mi) to Seawall Boulevard and the entrance to Flagship Pier (formerly known as Pleasure Pier). The bench marks are primarily east of the pier on the seawall along Seawall Boulevard. The tide gage and staff are approximately 0.3 km (0.2 mi) SE of Seawall Boulevard on the SE corner of the pier.

TIDAL BENCH MARKS

PRIMARY BENCH MARK STAMPING: NO 43 1957

DESIGNATION:

877 1510 TIDAL 43

MONUMENTATION:

Tidal Station disk

VM#:

854

AGENCY:

Coast and Geodetic Survey (CGS)

PID#: AW0592 .

SETTING CLASSIFICATION: Concrete pier deck

The primary bench mark is a disk set in the top of the concrete floor of the Flagship Motor Hotel Fishing Pier, 0.3 km (0.2 mi) SE of the center line of Seawall Boulevard, at a narrow drive between the Hotel and Fishing Pier parking lots, 18.84 m (61.8 ft) NW of the NW edge of the Fishing Pier parking lot, 10.73 m (35.2 ft) SE of the SE edge of the hotel parking lot, 1.2 m (3.9 ft) east of a wire gate, and 0.37 m (1.2 ft) SW of the NE edge of the drive.

BENCH MARK STAMPING: WALL 1933 ELEV 15.279 FT

DESIGNATION:

WALL

MONUMENTATION:

Triangulation Station disk Coast and Geodetic Survey (CGS) VM#: 855

AGENCY:

PID#: AW0588

SETTING CLASSIFICATION: Concrete sea wall

The bench mark is a disk set in the top of the sea wall, along Seawall Boulevard about midway between 12th and 13th Streets, 10.91 m (35.8 ft) SW of the west corner of a concrete bench, 0.79 m (2.6 ft) south of a small angle in the sidewalk, 0.52 m (1.7 ft) SE of the SE edge of the sidewalk, and about level with the boulevard.

Page 2 of 8

PID#: AW0590

Station ID: 8771510 PUBLICATION DATE: 01/14/2000

Name: GALVESTON PLEASURE PIER

TEXAS

 NOAA Chart: 11324
 Latitude: 29ø 17.1' N

 USGS Quad: GALVESTON
 Longitude: 94ø 47.3' W

TIDAL BENCH MARKS

BENCH MARK STAMPING: E 168 1936 ELEV 15.502 FT

DESIGNATION: E 168

MONUMENTATION: Bench Mark disk VM#: 856

AGENCY: Coast and Geodetic Survey (CGS)
SETTING CLASSIFICATION: Concrete sea wall

The bench mark is a disk set in the top center of the concrete sea wall in line with the center of a rock bracker, about 104 m (342 ft) SW of the junction of Seawall Boulevard and 23rd Street North across the boulevard from Playland Park, 21.18 m (69.5 ft) NE of the NE end of a concrete bench, 8.47 m (27.8 ft) SW of the south corner of a concrete block planter with two palm trees, 5.43 m (17.8 ft) SE of the SE curb of the boulevard, 0.94 m (3.1 ft) north of the NW end of a pipe handrail along steps leading to the beach, and about 0.3 m (1 ft) higher than the boulevard.

BENCH MARK STAMPING: WALL NO 1 1942 DESIGNATION: WALL RM 1

MONUMENTATION: Reference Mark disk VM#: 857
AGENCY: Coast and Geodetic Survey (CGS) PID#: AW0589

SETTING CLASSIFICATION: Concrete sea wall

The bench mark is a disk set in the top of the concrete sea wall, along Seawall Boulevard about midway between 12th and 13th Streets, 14.23 m (46.7 ft) NE of the station, 1.71 m (5.6 ft) NE of the east corner of a conctete bench, 1.19 m (3.9 ft) SE of the SE edge of the sidewalk, and about level with the boulevard.

Page 3 of 8

Station ID: 8771510 PUBLICATION DATE: 01/14/2000

Name: GALVESTON PLEASURE PIER

TEXAS

 NOAA Chart: 11324
 Latitude: 29ø 17.1' N

 USGS Quad: GALVESTON
 Longitude: 94ø 47.3' W

TIDAL BENCH MARKS

BENCH MARK STAMPING: NO 44 1957

DESIGNATION: 877 1510 TIDAL 44

MONUMENTATION: Tidal Station disk VM#: 858

AGENCY: Coast and Geodetic Survey (CGS) PID#: AW0591

SETTING CLASSIFICATION: Concrete sea wall

The bench mark is a disk set in the top center of the concrete sea wall, at the junction of Seawall Boulevard and Rosenberg Avenue North (25th Street), 3 m (10 ft) SW of the centerline of a concrete ramp leading down to the beach, 0.88 m (2.9 ft) NW of the extended concrete curb of the ramp leading up along the NE side of the Flagship Motor Hotel Pier, 0.70 m (2.3 ft) north of the NE corner of a chain link fence around the Flagship Motor Hotel, and about 0.61 m (2.0 ft) higher than the boulevard.

BENCH MARK STAMPING: NO 10 1973

DESIGNATION: 877 1510 TIDAL 10

MONUMENTATION: Tidal Station disk VM#: 859
AGENCY: National Ocean Survey (NOS) PID#: AW1221

GENCI: National Ocean Survey (NOS)

SETTING CLASSIFICATION: Concrete sea wall

The bench mark is a disk set flush in the top of the sea wall at the junction of Seawall Boulevard and Tremont Street (22nd Street), 17.28 m (56.7 ft) ESE of the centerline of Seawall Boulevard, 7.50 m (24.6 ft) SW of steps leading to the beach at the foot of Tremont Street, and 0.79 m (2.6 ft) NW of the edge of the sea wall.

Page 4 of 8

Station ID: 8771510

PUBLICATION DATE: 01/14/2000

GALVESTON PLEASURE PIER

NOAA Chart: 11324 USGS Quad: GALVESTON Latitude: Longitude: 29ø 17.1' N 94ø 47.3' W

TIDAL BENCH MARKS

BENCH MARK STAMPING: NO 45 1975

DESIGNATION:

877 1510 TIDAL 45

MONUMENTATION:

Tidal Station disk

860 VM#:

AGENCY: SETTING CLASSIFICATION: Concrete sea wall

National Ocean Survey (NOS)

PID#: AW1247

The bench mark is a disk set in the top center of the concrete sea wall, at the junction of Seawall Boulevard and Moody Avenue (21st Street), across the boulevard from the SE corner of Moody Center, 22.01 m (72.2 ft) east of a red and yellow fire hydrant, 15.48 m (50.8 ft) SE of the center line of Seawall Boulevard, 9.54 m (31.3 ft) SW of the SW corner of a planter with one palm tree, and 0.79 m (2.6 ft) NW of the seaward side of the sea wall.

BENCH MARK STAMPING: NO 46 1975

DESIGNATION:

877 1510 TIDAL 46

MONUMENTATION:

Tidal Station disk

VM#:

AGENCY:

National Ocean Survey (NOS)

861 PID#: AW1703

SETTING CLASSIFICATION: Concrete sea wall

The bench mark is a disk set in the top of the sea wall, near the junction of Seawall Boulevard and 18th Street, 15.03 m (49.3 ft) SE of the center line of

Seawall Boulevard, 3.17 m (10.4 ft) SW of the SW edge of a concrete bench along the sea wall, and 0.79 m (2.6 ft) NW of the seaward side of the sea wall.

H6

BENCH MARK STAMPING: NO 47 1975

DESIGNATION: 877 1510 TIDAL 47

MONUMENTATION: Tidal Station disk

VM#: AGENCY: National Ocean Survey (NOS) PID#: AW1887

SETTING CLASSIFICATION: Concrete sea wall

The bench mark is a disk set in the top of the sea wall, at the junction of Seawall Boulevard and 14th Street, 14.57 m (47.8 ft) SE of the centerline of Seawall Boulevard, 2.10 m (6.9 ft) north of the NE side of steps leading to the beach, and 0.85 m (2.8 ft) NW of the seaward side of the sea wall.

> U.S. DEPARTMENT OF COMMERCE National Oceanic and Atmospheric Administration National Ocean Service

> > Page 5 of 8

Station ID: 8771510 PUBLICATION DATE: 01/14/2000

GALVESTON PLEASURE PIER

TEXAS

NOAA Chart: 11324 Latitude: 29ø 17.1' N USGS Quad: GALVESTON Longitude: 94ø 47.3' W

TIDAL BENCH MARKS

BENCH MARK STAMPING: S 449 5 DESIGNATION: S 449 5

Survey disk MONUMENTATION: VM#: 863 PID#: AW4850 AGENCY: US Army Corps of Engineers

SETTING CLASSIFICATION: Concrete sea wall

The bench mark is a disk set in the top center of the concrete sea wall, at the junction of Seawall Boulevard and 24th Street, 23.04 m (75.6 ft) NE of bench mark NO 44 1957, 19.99 m (65.6 ft) NE of the NE ramp leading to the Flagship Motor Hotel, 15.18 m (49.8 ft) SE of the centerline of Seawall Boulevard, and 3.23 m (10.6 ft) west of the west side of steps leading to the beach.

Page 6 of 8

Station ID: 8771510 PUBLICATION DATE: 01/14/2000

GALVESTON PLEASURE PIER

TEXAS

NOAA Chart: 11324 Latitude: 29ø 17.1' N USGS Quad: GALVESTON Longitude: 94ø 47.3' W

TIDAL DATUMS

Tidal datums at GALVESTON PLEASURE PIER based on:

LENGTH OF SERIES: 5 Years

January 1990 - December 1994 1960-1978 TIME PERIOD:

TIDAL EPOCH:

CONTROL TIDE STATION: 8771450 GALVESTON PIER 21, GALVESTON CHANNEL

Elevations of tidal datums referred to Mean Lower Low Water (MLLW), in METERS: MTRS. FT. DATA IN Applit 1999 HIGHEST OBSERVED WATER LEVEL (09/11/1961) = 2.829 9.28

MEAN HIGHER HIGH WATER (MHHW) = 0.649 2.13 2.08 = 0.578 MEAN HIGH WATER (MHW) 1.40 1.91 MEAN TIDE LEVEL (MTL) = 0.364 1.19 1.17 MEAN SEA LEVEL (MSL) = 0.359 0.69 1.16 NORTH AMERICAN VERTICAL DATUM-1988 (NAVD) = 0.209 MEAN LOW WATER (MLW) = 0.151 = 0.209 0.50 MEAN LOWER LOW WATER (MLLW) = 0.000 LOWEST OBSERVED WATER LEVEL (02/12/1985) = -1.463 4.80

From Published Data of V14/2000 0.00 MHHW = 1.44 MHHW
" Data Retareved 4/15/1999 0.00 MHHW = 1.49 MHHW
From Field Loops 0.00 MHHW = 1.40 MHHW

HB

Bench Mark Elevation Information	In METERS	above:
Stamping or Designation	MLLW	MHW
NO 43 1957	7.563	6.985
WALL 1933 ELEV 15.279 FT	4.557	3.979
E 168 1936 ELEV 15.502 FT	4.611	4.033
WALL NO 1 1942	4.530	3.952
NO 44 1957	4.590	4.012
NO 10 1973	4.579	4.001
NO 45 1975	4.597	4.019
NO 46 1975	4.585	4.007
NO 47 1975	4.549	3.971
S 449 5	4.599	4.021

Page 7 of 8

Station ID: 8771510 PUBLICATION DATE: 01/14/2000

Name: GALVESTON PLEASURE PIER

TEXAS

NOAA Chart: 11324 Latitude: 29ø 17.1' N USGS Quad: GALVESTON Longitude: 94ø 47.3' W

Foot Notes:

Galveston Bay, Texas has anomalous relative sea level trends compared to most other geographic regions in the United States. This is due to a general subsidence of land in this area, which is occurring at a rapid rate. Because of the magnitude of the sea level trends in these areas, NOAA has adopted a procedure for computing accepted tidal datums for the National Water Level Observation Network (NWLON) using the last several years of sea level data rather than the 19 - year tidal epoch. The tide ranges are still based on the 1960 - 1978 National Tidal Datum Epoch (NTDE) and are applied to the five year (1990 - 1994) mean tide level (MTL) to compute other tidal datums. The adoption of this procedure was necessary to ensure that these tidal datums accurately represent the existing stand of sea level.

Page 8 of 8

Station ID: 8771510

GALVESTON PLEASURE PIER

Name:

TEXAS

NOAA Chart: 11324

USGS Quad: GALVESTON

PUBLICATION DATE: 01/14/2000

Latitude: Longitude:

29ø 17.1' N 94ø 47.3' W

DEFINITIONS

Mean Sea Level (MSL) is a tidal datum determined over a 19-year National Tidal Datum Epoch. It pertains to local mean sea level and should not be confused with the fixed datums of North American Vertical Datum of 1988 (NAVD 88).

NGVD 29 is a fixed datum adopted as a national standard geodetic reference for heights but is now considered superseded. NGVD 29 is sometimes referred to as Sea Level Datum of 1929 or as Mean Sea Level on some early issues of Geological Survey Topographic Quads. NGVD 29 was originally derived from a general adjustment of the first-order leveling networks of the U.S. and Canada after holding mean sea level observed at 26 long term tide stations as fixed. Numerous local and wide-spread adjustments have been made since establishment in 1929. Bench mark elevations relative to NGVD 29 are available from the National Geodetic Survey (NGS) data base via the World Wide Web at National Geodetic Survey.

Hio

NAVD 88 is a fixed datum derived from a simultaneous, least squares, minimum constraint adjustment of Canadian/Mexican/United States leveling observations. Local mean sea level observed at Father Point/Rimouski, Canada was held fixed as the single initial constraint. NAVD 88 replaces NGVD 29 as the national standard geodetic reference for heights. Bench mark elevations relative to NAVD 88 are available from NGS through the World Wide Web at National Geodetic Survey.

NGVD 29 and NAVD 88 are fixed geodetic datums whose elevation relationships to local MSL and other tidal datums may not be consistent from one location to another.

The Vertical Mark Number (VM#) and PID# shown on the bench mark sheet are unique identifiers for bench marks in the tidal and geodetic databases, respectively. Each bench mark in either database has a single, unique VM# and/or PID# assigned. Where both VM# and PID# are indicated, both tidal and geodetic elevations are available for the bench mark listed.

The NAVD 88 elevation is shown on the Elevations of Tidal Datums Table Referred to MLLW only when two or more of the bench marks listed have NAVD 88 elevations. The NAVD 88 elevation relationship shown in the table is derived from an average of several bench mark elevations relative to tide station datum. As a result of this averaging, NAVD 88 bench mark elevations computed indirectly from the tidal datums elevation table may differ slightly from NAVD 88 elevations listed for each bench mark in the NGS database.

Texas General Land Office

7/2/2001

```
Input
  Horizontal: Ethpqn, Texas South Central - 4204, U.S. Survey Feet
 Horizontal: NAD 27, Texas South Central - 4204, U.S. Survey Feet
 -----
Name
                        Input
                                                Output
     1-10
     Grid Shift (US ft)
                        Delta North = -13123435.478
                        Delta East = 31593.745
Delta Lat. = 26.434
Delta Lon. = 19.218
     Datum Shift (m)
3-8
                   13650714.10000 N 527278.68026 N
                    3274292.29000 E 3305886.16333 E
                     02 00 21.93309 02 00 22.29344
0.999865210 0.999865227
     Convergence
     Scale Factor
     Grid Shift (US ft) Delta North = -13123435.420
                        Delta East = 31593.873
     Datum Shift (m)
                        Delta Lat. = 26.484
                         Delta Lon. = 19.327
5-6
                   13643050.42000 N 519615.05225 N
                    3263800.48000 E 3295394.48790 E
                      01 59 22.48174 01 59 22.84408
0.999865963 0.999865981
     Convergence
     Scale Factor
     Grid Shift (US ft)
                        Delta North = -13123435.368
                         Delta East = 31594.008
     Datum Shift (m)
                         Delta Lat. = 26.535
                         Delta Lon. = 19.439
7-7
                   13636104.27000 N 512668.94417 N
                    3254225.20000 E 3285819.33500 E
                      Convergence
     Scale Factor
     Grid Shift (US ft)
                        Delta North = -13123435.326
                         Delta East = 31594.135
    Datum Shift (m)
                         Delta Lat. = 26.582
                         Delta Lon. = 19.543
9-7
                   13629209.81000 N 505774.52023 N
                    3244879.12000 E 3276473.38389 E
                    01 57 35.31979 01 57 35.68578
0.999867633 0.999867654
     Convergence
     Scale Factor
     Grid Shift (US ft)
                         Delta North = -13123435.290
                         Delta East = 31594.264
Delta Lat. = 26.630
Delta Lon. = 19.646
    Datum Shift (m)
```

U.S. Army Topographic Engineering Center, Corpscon 5.11.04, Page 1

Texas General Land Office

7/2/2001

```
Input
 Horizontal: Ethpgn, Texas South Central - 4204, U.S. Survey Feet
Output
 Horizontal: NAD 27, Texas South Central - 4204, U.S. Survey Feet
 -----
                                                              Output
                              Input
Name
     13621717.31000 N

3234826.05000 E

Convergence 01 56 38.38854

Scale Factor 0.999868705 0.999868727
11-6
      Grid Shift(US ft) Delta North = -13123435.328
                               Delta East = 31594.472

Delta Lat. = 26.707

Delta Lon. = 19.776
      Datum Shift (m)
      13613855.75000 N
3224779.01000 E

Convergence
01 55 41.44379
Scale Factor
0.999869958
Grid Shift(US ft)
Delta North = -13123435.358

Delta Fast = 31594.688
13-4
                                Delta East = 31594.688
                                Delta Lat. = 26.785
Delta Lon. = 19.909
      Datum Shift (m)
                        13606370.22000 N 482934.84823 N
15-5
                          3215996.02000 E 3247590.90347 E

      Convergence
      01 54 51.56911
      01 54 51.94189

      Scale Factor
      0.999871277
      0.999871302

                               Delta North = -13123435.372
       Grid Shift (US ft)
                                Delta East = 31594.883
                                 Delta Lat. = 26.855
       Datum Shift (m)
                                 Delta Lon. = 20.028
                         13599402.57000 N 475967.19394 N
17-1
                         3208203.90000 E 3239798.96223 E
                         01 54 07.27734 01 54 07.65202
0.999872614 0.999872640
       Convergence
       Scale Factor
                                Delta North = -13123435.376
       Grid Shift (US ft)
                                 Delta East = 31595.062
                                 Delta Lat. = 26.918
       Datum Shift (m)
                                 Delta Lon. = 20.135
                         13599402.57000 N 475967.19394 N
 17-1
                         3208203.90000 E 3239798.96223 E

      Convergence
      01 54 07.27734
      01 54 07.65202

      Scale Factor
      0.999872614
      0.999872640

                                Delta North = -13123435.376
       Grid Shift (US ft)
                                 Delta East = 31595.062
                                Delta Lat. = 26.918
Delta Lon. = 20.135
       Datum Shift (m)
```