

# CITY OF BRIDGEPORT

## 2008 GEODETIC CONTROL MONUMENTS

PREPARED BY:

BAIRD, HAMPTON & BROWN, INC.

ENGINEERING & SURVEYING

WWW.BHBINC.COM



## CITY OF BRIDGEPORT - GEODETIC CONTROL MONUMENTATION ESTABLISHED SEPTEMBER 2008

In September 2008, Baird, Hampton & Brown established positions for 8 geodetic control monuments throughout the City of Bridgeport, Texas. After meeting with the City development team to discuss the scope, field reconnaissance teams selected 8 locations for the establishment of new monuments, as well as, the incorporation of the Primary Airport Control Station at the Bridgeport Municipal Airport, PID AB2811. The positions were selected based upon the following location attributes:

1. Coverage
2. Current surrounding development
3. Safety in accessing and occupying
4. Longevity
5. Stability and accessibility
6. Sky visibility, both now and future observations



Each new position was monumented with a 3 ½-inch aluminum disk set in concrete or on ¾-inch iron rods driven to refusal. New monuments set in concrete were set with disk manufacturer recommended mortar. Monuments established by iron rod are housed in a 40-inch long 6-inch diameter Schedule 40 PVC sleeve set in concrete and filled with sand. The PVC sleeves are capped with 6-inch aluminum access covers set flush with the natural ground.

Observations used to determine position for each of the monuments consist of a minimum of two (2) independent static observations, occupied for a minimum of two (2) hours each. All positions were observed with Trimble 5700 Dual Frequency receivers using Zephyr Geodetic and Zephyr Geodetic w/ Ground Plane antennas.

Coordinates for the new positions were generated using Trimble Geomatics Office v1.63. The Primary Airport Control Station, PID AB2811, designation 'IF9 A' was used as the coordinate seed for all direct and indirect baseline solutions. Holding as fixed the published values for AB2811, all baseline solutions from this point were either L1 fixed or lono free fixed solutions.

### Horizontal Information

All horizontal values shown are based upon baseline solutions from AB2811. Raw observables for each session were further uploaded to the Online Positioning User Service (OPUS) as a secondary independent check. Horizontal datum is NAD83(2007). Published State Plane Coordinates are listed in Texas North Central Zone (4202) in US feet and meters.

### Vertical Information

All orthometric heights (elevation) shown are based upon OPUS solutions using three GPS Continuously Operating Reference Stations:

Decatur CORS ARP – ID:TXDC, PID-DH7139, TX/WISE  
 Jacksboro CORS ARP – ID:TXJA, PID-DH7143, TX/JACK  
 Weatherford CORS ARP – ID:TXWE, PID-DH7153, TX/PARKER

Geoidal separation was determined using GEOID03. Vertical datum is NAVD88. Published elevations are listed in US feet and meters.



## CONTROL MONUMENT DESCRIPTIONS

### **#1 HALSELL**

#### **STATION DESCRIPTION**

A 3-1/2 inch aluminum cap with access lid set in the south lawn of the U.S. Post Office located at 1305 Halsell Street. Monument is located approximately 8 feet north of the north curb line of Halsell Street, 13 feet south of the sidewalk of the west parking lot for the post office, and approximately 106 feet east of the intersection of Halsell and 13<sup>th</sup> Street centerlines.

### **#2 HIGH SCHOOL**

#### **STATION DESCRIPTION**

A 3-1/2 inch aluminum cap with access lid set in the west lawn of Bridgeport High School located at 1 Maroon Drive. Monument is located approximately 82 feet north of the north curb line of Maroon Drive, 45 feet east of the east edge of asphalt of Overland Drive, and 83 feet west of the west parking lot for the high school.

### **#3 DEPOT**

#### **STATION DESCRIPTION**

A 3-1/2 inch aluminum cap set in the remains of the concrete foundation of the "Old" train depot. The monument is located approximately 30 feet northeast of the centerline of the Union Pacific rail road tracks, approximately 74 feet west of the west edge of asphalt of State Highway 114, and approximately 60 feet north of the centerline of Cates Street.

### **#4 101**

#### **STATION DESCRIPTION**

A 3-1/2 inch aluminum cap set at 2008 State Highway 101 (a.k.a. State Highway 114). Monument is located at the southeast corner of a 6 foot by 20 foot concrete curb inlet located on the east side of State Highway 101 and located approximately 1000 feet (0.2 miles) southeast of the intersection of U.S. Highway 380 and State Highway 101.

### **#5 16<sup>th</sup>**

#### **STATION DESCRIPTION**

A 3-1/2 inch aluminum cap located at 2008 U.S. Highway 380. Monument is set in the west end of a 40 foot concrete headwall on the north side of U.S. Highway 380 and located approximately 400 feet east of the intersection of U.S. Highway 380 and 16<sup>th</sup> Street, 40 feet north of the north edge of the westbound lane of U.S. Highway 380, and 120 feet west of Johns Street.

### **#6 INDUSTRIAL**

#### **STATION DESCRIPTION**

A 3-1/2 inch aluminum cap set in the south end of a 5 foot concrete headwall on the east side of State Highway 114, and approximately 250 north of the intersection of State Highway 114 and F.M. 2123. Monument is located approximately 3 feet east of the guard rail.

### **#7 REC PARK**

#### **STATION DESCRIPTION**

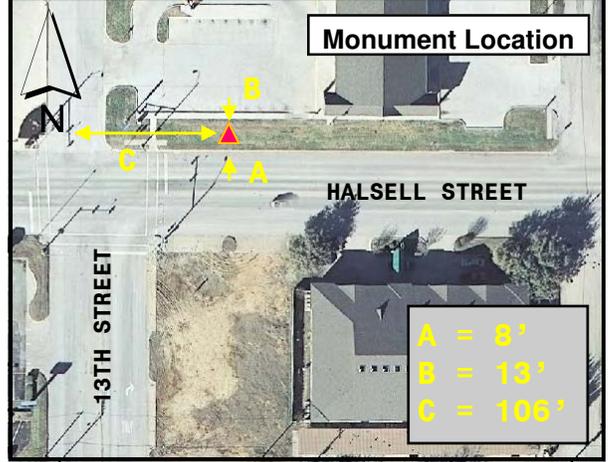
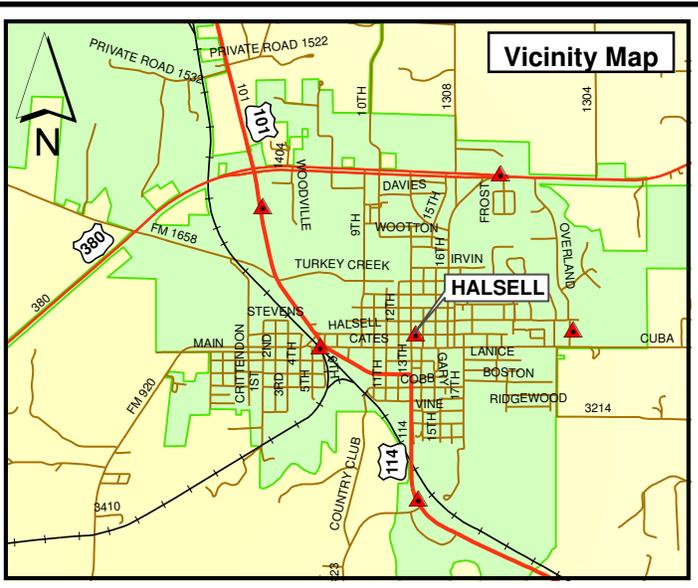
A 3-1/2 inch aluminum cap located in the City of Bridgeport Recreation Park. From the intersection of U.S. Highway 380 and State Highway 101, proceed north on 101 approximately 0.85 miles to the main entrance of the Recreation Park on the west side of 101. Proceed westerly across the rail road tracks, along a gravel road (previously posted as Wesco Stone Spur) approximately 1.2 miles to the top of a hill. On the south side of the gravel road is a tank battery with perimeter fence. The monument is a 3-1/2 inch aluminum cap set 4 feet southwest of a metal fence corner post for the southwest corner of the perimeter fence.

### **#8 AIRPORT**

#### **STATION DESCRIPTION**

A steel rod with a punch hole encased in a 5-inch pvc pipe set in concrete is located at the City of Bridgeport Municipal Airport. The monument is a Primary Airport Control Station (PAC) designated 'IF9' and identified by PID # AB2811. The monument is located 550 feet southeast of the intersection of U.S. Highway 380 and Private Road 3509 and 170 feet east of the east edge of asphalt of Private Road 3509, and 4 feet west of a fence corner post.

STATION NAME	<b>HALSELL</b>	
NUMBER	<b>1</b>	
DATE SET	SEPTEMBER 2008	
<b>GEOGRAPHIC COORDINATES - NAD 83 (2007)</b>		
LATITUDE	33°12'37.75990"N	
LONGITUDE	97°45'15.17846"W	
<b>STATE PLANE COORDS - TX NORTH CENTRAL ZONE (4202)</b>		
	<i>METERS</i>	<i>US FEET</i>
NORTHING	2,171,441.264	7,124,136.88
EASTING	669,520.753	2,196,586.00
CONVERGENCE	+0 24 24	
COMBINED SCALE FACTOR	0.99984258	
<b>ORTHOMETRIC HEIGHT (ELEVATION) - NAVD 88</b>		
	<i>METERS</i>	<i>US FEET</i>
ORTHOMETRIC	244.101	800.85

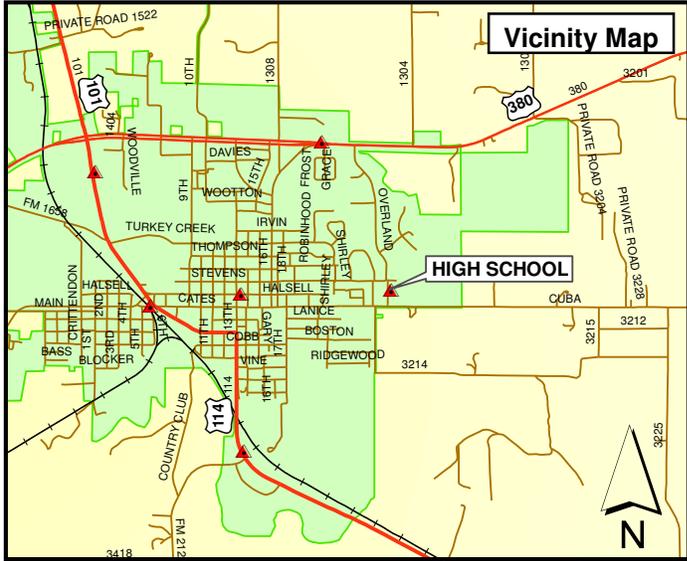


**Description of Monument**  
 A 3-1/2 inch aluminum cap with access lid set in the south lawn of the U.S. Post Office located at 1305 Halsell Street. Monument is located approximately 8 feet north of the north curb line of Halsell Street, 13 feet south of the sidewalk of the west parking lot for the post office, and approximately 106 feet east of the intersection of Halsell and 13<sup>th</sup> Street centerlines.

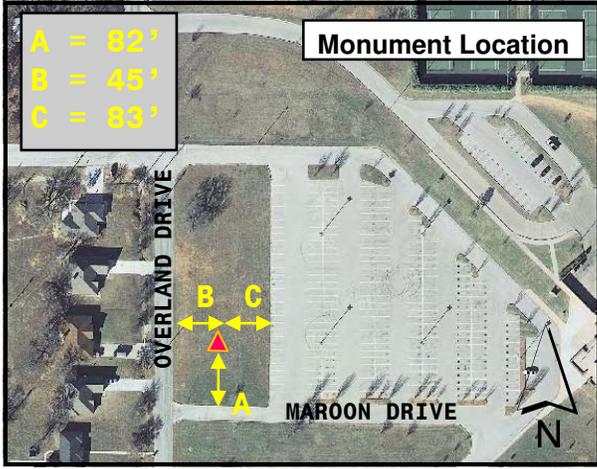
**CITY OF BRIDGEPORT**  
 900 THOMPSON ST.  
 BRIDGEPORT, TEXAS 76426  
 PHONE: 940.683.3410  
 FAX: 940.683.3401



STATION NAME	<b>HIGH SCHOOL</b>	
NUMBER	<b>2</b>	
DATE SET	SEPTEMBER 2008	
<b>GEOGRAPHIC COORDINATES - NAD 83 (2007)</b>		
LATITUDE	33°12'38.66750"N	
LONGITUDE	97°44'22.34316"W	
<b>STATE PLANE COORDS - TX NORTH CENTRAL ZONE (4202)</b>		
	<i>METERS</i>	<i>US FEET</i>
NORTHING	2,171,479.029	7,124,260.78
EASTING	670,888.644	2,201,073.83
CONVERGENCE	+0 24 53	
COMBINED SCALE FACTOR	0.99984328	
<b>ORTHOMETRIC HEIGHT (ELEVATION) - NAVD 88</b>		
	<i>METERS</i>	<i>US FEET</i>
ORTHOMETRIC	239.637	786.21



**Geodetic Control Monument No. 2  
"High School"**



**Monument Location**



**Monument Detail**

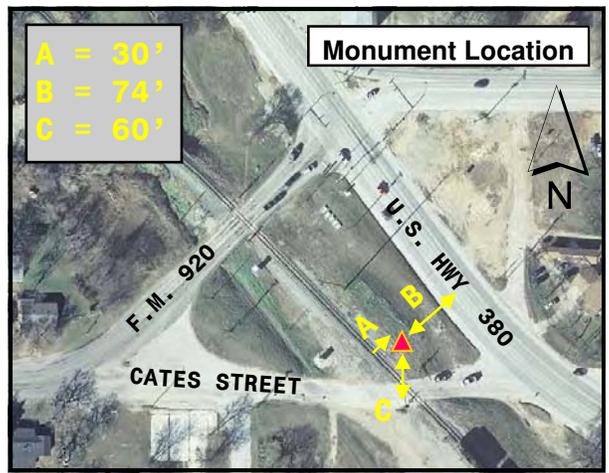
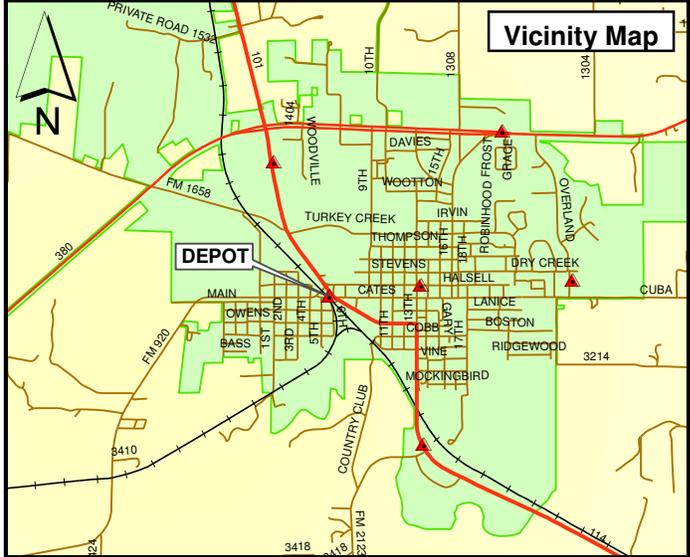
**Description of Monument**

A 3-1/2 inch aluminum cap with access lid set in the west lawn of Bridgeport High School located at 1 Maroon Drive. Monument is located approximately 82 feet north of the north curb line of Maroon Drive, 45 feet east of the east edge of asphalt of Overland Drive, and 83 feet west of the west parking lot for the high school.

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STATION NAME	<b>DEPOT</b>	
NUMBER	<b>3</b>	
DATE SET	SEPTEMBER 2008	
<b>GEOGRAPHIC COORDINATES - NAD 83 (2007)</b>		
LATITUDE	33°12'34.46974"N	
LONGITUDE	97°45'47.09650"W	
<b>STATE PLANE COORDS - TX NORTH CENTRAL ZONE (4202)</b>		
	<i>METERS</i>	<i>US FEET</i>
NORTHING	2,171,334.084	7,123,785.24
EASTING	668,694.992	2,193,876.82
CONVERGENCE	+0 24 07	
COMBINED SCALE FACTOR	0.99984449	
<b>ORTHOMETRIC HEIGHT (ELEVATION) - NAVD 88</b>		
	<i>METERS</i>	<i>US FEET</i>
ORTHOMETRIC	231.541	759.65

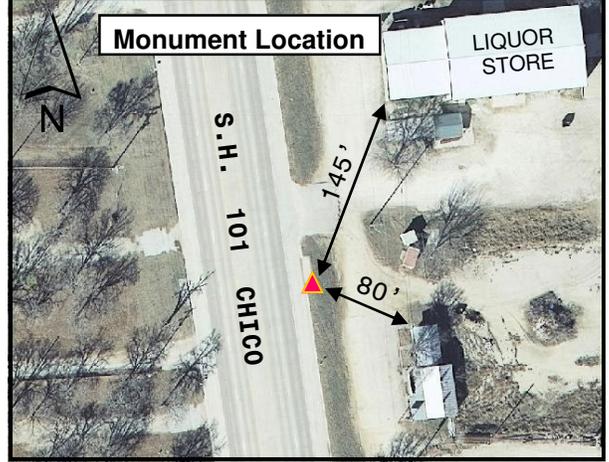
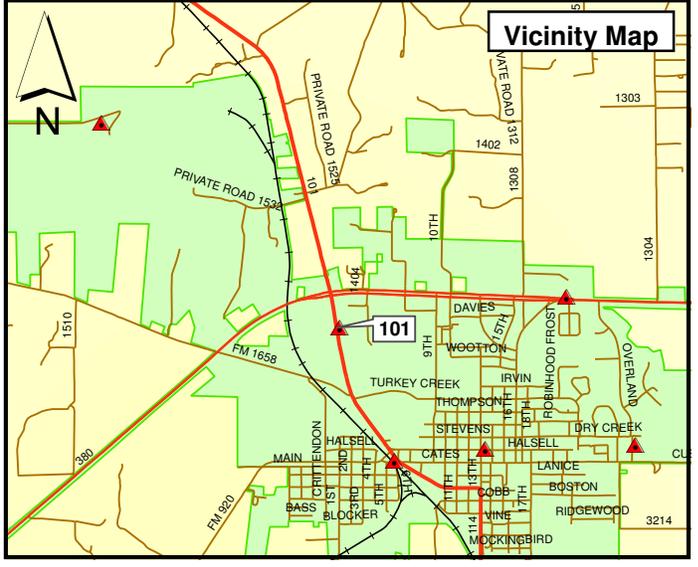


**Description of Monument**  
 A 3-1/2 inch aluminum cap set in the remains of the concrete foundation of the "Old" train depot. The monument is located approximately 30 feet northeast of the centerline of the Union Pacific rail road tracks, approximately 74 feet west of the west edge of asphalt of State Highway 114, and approximately 60 feet north of the centerline of Cates Street.

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STATION NAME	<b>101</b>	
NUMBER	<b>4</b>	
DATE SET	SEPTEMBER 2008	
<b>GEOGRAPHIC COORDINATES - NAD 83 (2007)</b>		
LATITUDE	33°13'14.03873"N	
LONGITUDE	97°46'06.06905"W	
<b>STATE PLANE COORDS - TX NORTH CENTRAL ZONE (4202)</b>		
	<i>METERS</i>	<i>US FEET</i>
NORTHING	2,172,549.506	7,127,772.84
EASTING	668,195.231	2,192,237.19
CONVERGENCE	+0 23 57	
COMBINED SCALE FACTOR	0.99984432	
<b>ORTHOMETRIC HEIGHT (ELEVATION) - NAVD 88</b>		
	<i>METERS</i>	<i>US FEET</i>
ORTHOMETRIC	236.106	774.62

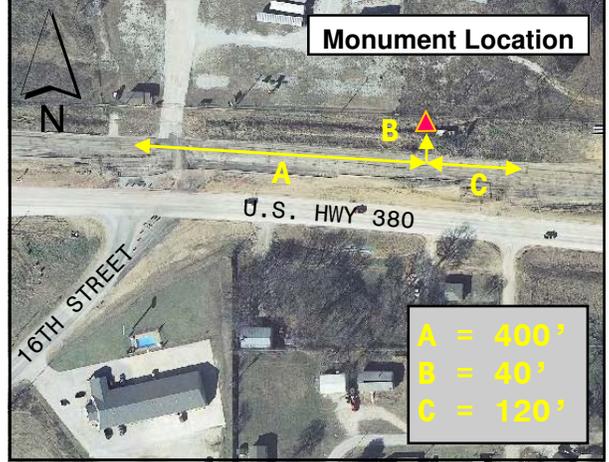
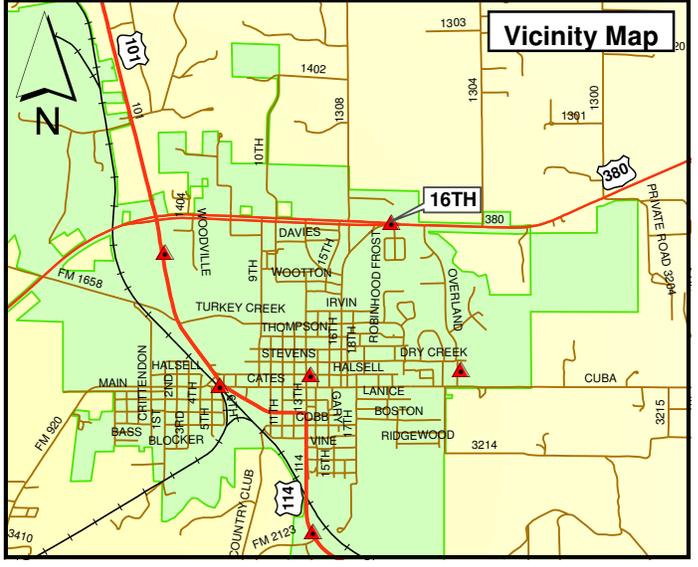


**Description of Monument**  
 A 3-1/2 inch aluminum cap set at 2008 State Highway 101 (a.k.a. State Highway 114). Monument is located at the southeast corner of a 6 foot by 20 foot concrete curb inlet located on the east side of State Highway 101 and located approximately 1000 feet (0.2 miles) southeast of the intersection of U.S. Highway 380 and State Highway 101.

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STATION NAME	<b>16th</b>	
NUMBER	<b>5</b>	
DATE SET	SEPTEMBER 2008	
<b>GEOGRAPHIC COORDINATES - NAD 83 (2007)</b>		
LATITUDE	33°13'22.54959"N	
LONGITUDE	97°44'46.30665"W	
<b>STATE PLANE COORDS - TX NORTH CENTRAL ZONE (4202)</b>		
	<i>METERS</i>	<i>US FEET</i>
NORTHING	2,172,826.269	7,128,680.85
EASTING	670,258.447	2,199,006.26
CONVERGENCE	+0 24 40	
COMBINED SCALE FACTOR	0.99984457	
<b>ORTHOMETRIC HEIGHT (ELEVATION) - NAVD 88</b>		
	<i>METERS</i>	<i>US FEET</i>
ORTHOMETRIC	235.222	771.72

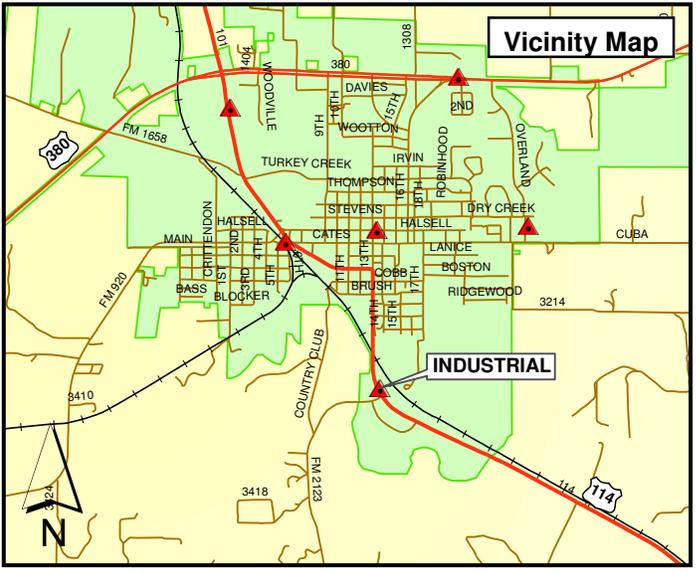


**Description of Monument**  
 A 3-1/2 inch aluminum cap located at 2008 U.S. Highway 380. Monument is set in the west end of a 40 foot concrete headwall on the north side of U.S. Highway 380 and located approximately 400 feet east of the intersection of U.S. Highway 380 and 16<sup>th</sup> Street, 40 feet north of the north edge of the westbound lane of U.S. Highway 380, and 120 feet west of Johns Street.

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STATION NAME	<b>INDUSTRIAL</b>	
NUMBER	<b>6</b>	
DATE SET	SEPTEMBER 2008	
<b>GEOGRAPHIC COORDINATES - NAD 83 (2007)</b>		
LATITUDE	33°11'51.14148"N	
LONGITUDE	97°45'14.59629"W	
<b>STATE PLANE COORDS - TX NORTH CENTRAL ZONE (4202)</b>		
	<i>METERS</i>	<i>US FEET</i>
NORTHING	2,170,005.374	7,119,425.97
EASTING	669,546.024	2,196,688.91
CONVERGENCE	+0 24 25	
COMBINED SCALE FACTOR	0.99984394	
<b>ORTHOMETRIC HEIGHT (ELEVATION) - NAVD 88</b>		
	<i>METERS</i>	<i>US FEET</i>
ORTHOMETRIC	231.536	759.63

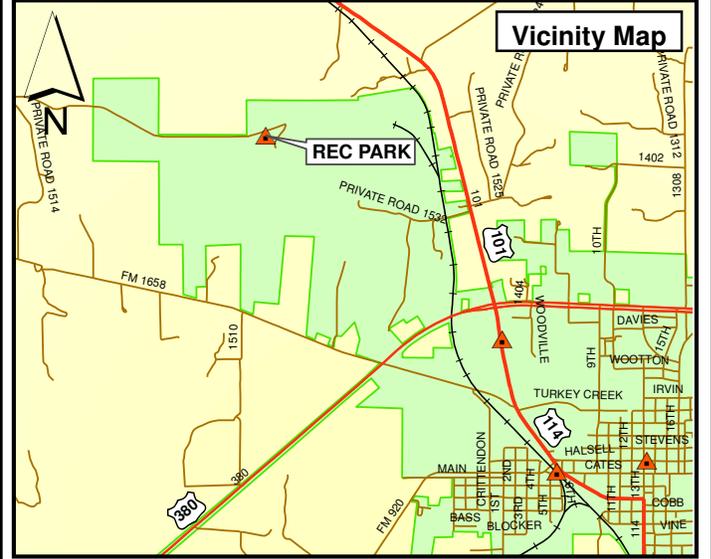


**Description of Monument**  
 A 3-1/2 inch aluminum cap set in the south end of a 5 foot concrete headwall on the east side of State Highway 114, and approximately 250 north of the intersection of State Highway 114 and F.M. 2123. Monument is located approximately 3 feet east of the guard rail.

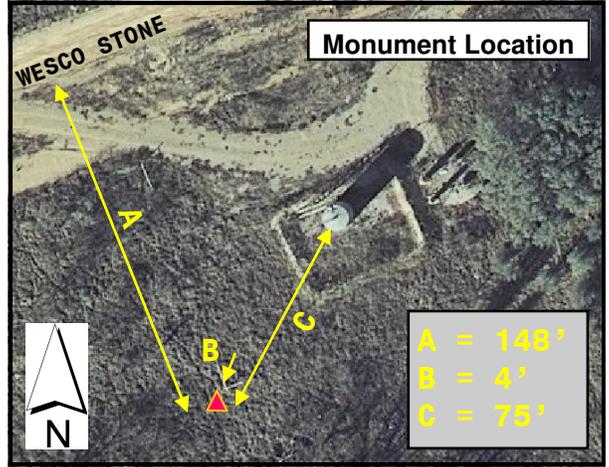
**CITY OF BRIDGEPORT**  
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STATION NAME	<b>REC PARK</b>	
NUMBER	<b>7</b>	
DATE SET	SEPTEMBER 2008	
<b>GEOGRAPHIC COORDINATES - NAD 83 (2007)</b>		
LATITUDE	33°14'15.04008"N	
LONGITUDE	97°47'29.26034"W	
<b>STATE PLANE COORDS - TX NORTH CENTRAL ZONE (4202)</b>		
	<i>METERS</i>	<i>US FEET</i>
NORTHING	2,174,413.794	7,133,889.26
EASTING	666,028.681	2,185,129.10
CONVERGENCE	+0 23 11	
COMBINED SCALE FACTOR	0.99983687	
<b>ORTHOMETRIC HEIGHT (ELEVATION) - NAVD 88</b>		
	<i>METERS</i>	<i>US FEET</i>
ORTHOMETRIC	289.424	949.55



**Geodetic Control Monument No. 7  
"Rec. Park"**



**Monument Location**

A = 148'  
B = 4'  
C = 75'



**Monument Detail**

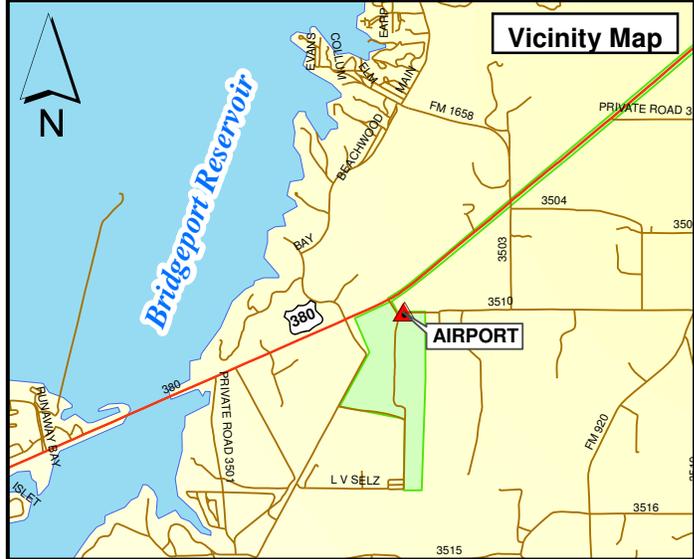
**Description of Monument**

A 3-1/2 inch aluminum cap located in the City of Bridgeport Recreation Park. From the intersection of U.S. Highway 380 and State Highway 101, proceed north on 101 approximately 0.85 miles to the main entrance of the Recreation Park on the west side of 101. Proceed westerly across the rail road tracks, along a gravel road (previously posted as Wesco Stone Spur) approximately 1.2 miles to the top of a hill. On the south side of the gravel road is a tank battery with perimeter fence. The monument is a 3-1/2 inch aluminum cap set 4 feet southwest of a metal fence corner post for the southwest corner of the perimeter fence.

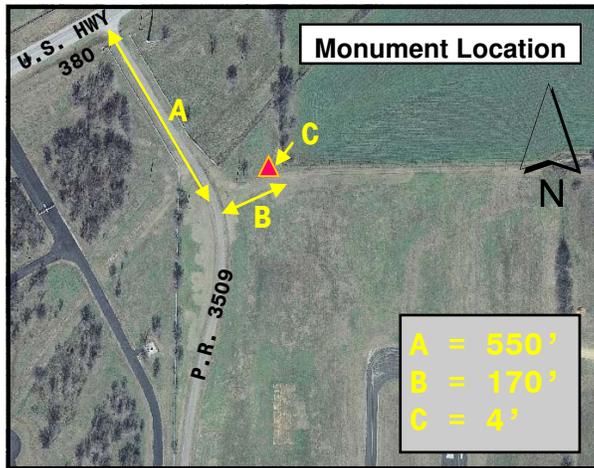
**CITY OF BRIDGEPORT**  
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STATION NAME	<b>AIRPORT</b>	
NUMBER	<b>8</b>	
DATE SET	SEPTEMBER 2008	
<b>GEOGRAPHIC COORDINATES - NAD 83 (2007)</b>		
LATITUDE	33°10'55.30600"N	
LONGITUDE	97°49'46.61890"W	
<b>STATE PLANE COORDS - TX NORTH CENTRAL ZONE (4202)</b>		
	<i>METERS</i>	<i>US FEET</i>
NORTHING	2,168,237.970	7,113,627.41
EASTING	662,512.316	2,173,592.49
CONVERGENCE	+0 21 56	
COMBINED SCALE FACTOR	0.99984109	
<b>ORTHOMETRIC HEIGHT (ELEVATION) - NAVD 88</b>		
	<i>METERS</i>	<i>US FEET</i>
ORTHOMETRIC	245.220	804.53



**Geodetic Control Monument No. 8  
"Airport"**



**Monument Detail**

**Description of Monument**

A steel rod with a punch hole encased in a 5-inch pvc pipe set in concrete is located at the City of Bridgeport Municipal Airport. The monument is a Primary Airport Control Station (PAC) designated 'IF9' and identified by PID # AB2811. The monument is located 550 feet southeast of the intersection of U.S. Highway 380 and Private Road 3509 and 170 feet east of the east edge of asphalt of Private Road 3509, and 4 feet west of a fence corner post.

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... and finally, a special thanks goes out to David Turnbow and the guys at the Public Services Department for their extra effort in helping us accomplish the goals of this project. Thanks again!

BHB Survey