

**CITY OF  
COLLEGE STATION**

**FIRM REFERENCE MARK  
UPGRADE PROJECT  
JUNE 2012**



**JOE ORR, INC.**

*SURVEYORS & ENGINEERS*

2167 Post Oak Circle

College Station, Texas 77845

(979) 693-2777 [joeorinc@verizon.net](mailto:joeorinc@verizon.net)

TX Surveying Firm no. 160544-00 / Engineering Firm no. F-433



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## **Survey Report - City of College Station FIRM Reference Marks Upgrade Project**

Friday, August 24, 2012

City of College Station  
attn: Alan Gibbs, P.E.

### **Background**

Joe Orr, Inc. was contracted by the City of College Station to locate the remaining elevation reference marks (RMs) identified on the series “C” and “D” FEMA Flood Insurance Rate Maps (FIRMs), and to determine NAVD1988-based elevations on them. The elevations listed for the reference marks in the Flood Insurance Study were based on NGVD1929 datum, but the newly-released FIRMs (series “E”) are referenced to the North American Vertical Datum of 1988 (NAVD1988).

Although the RMs are no longer identified on the new FIRMs, the elevation upgrade was desired to provide flood plain managers, engineers and surveyors with these benchmarks to supplement the City GPS monuments, and also to allow the conversion of previous elevation certificates and flood plain calculations to the new datum.

The new FIRMs include the location of the City of College Station 2010 GPS primary rod monuments (MONs) as well as benchmarks (BMs) listed in the National Geodetic Survey (NGS) database. In addition to locating the RMs, the referenced BMs in the College Station area were included.

### **Method**

In 2011, Joe Orr, Inc. established NGVD1988 elevations on the remaining City of College Station GPS monuments which were set in 1994. The elevations were determined by averaging multiple GPS (RTK) observations, adjusted to the NGVD1988 elevations determined by CDS Muery Services when they established the eleven new deep rod, primary GPS monuments in 2010.

The NGVD1988 reference elevations for this Reference Marks Upgrade Project were also the elevations from Muery on the primary GPS monuments. Depending on the distance from GPS monuments, either of two methods was used to determine the reference mark elevations: averaging multiple GPS (RTK) observations, or differential leveling runs with a Leica Sprinter 150 digital level from a GPS monument.

## Results

Individual data sheets were created for each recovered reference mark, but the following list is a summary of all marks which were investigated:

Point ID number	2012 Determined NAVD1988 elevation	Previously Published NGVD1929 elev. & change	Comments
BM0023	not found	305.56	Probably destroyed by utility construction. Set as T313 in 1935
BM0024	not found	308.28	Probably destroyed by utility construction. Set as U313 in 1935
BM0025	not found	335.68	Probably destroyed by utility construction. Set as V313 in 1935
<b>BM0026</b>	<b>291.84</b>	291.94 (-0.10)	Found where described, but slightly damaged. Set as W313 in 1935
BM0027	not found	351.86	This BM was destroyed when Albritton Tower was constructed
<b>BM0028</b>	<b>360.91</b>	360.93 (-0.02)	Found as described (NGS sheet has NAVD88 elev. of 361.0)
BM0030	not found	318.46	Probably destroyed by construction of John Kimbrough Drive
BM0031	not found	311.62	Apparently replaced by BM0032 in 1972
<b>BM0032</b>	<b>312.21</b>	313.2 (0.0)	Found as described (NGS sheet notes that elev. should be 312.14)
<b>BM0033</b>	<b>310.72</b>	310.85 (-0.13)	Found as described (NGS sheet has NAVD88 elev. of 311.5)
BM0134	not found	288.59	Probably destroyed by utility construction. Set as S313 in 1935
<b>RM29</b>	<b>294.09</b>	296.11 (-2.02)	Spike found is possibly not RM29, or power pole has sunk 2 ft.
RM30	not found	340.81	This RM was destroyed during railroad/highway construction
<b>RM31</b>	<b>292.24</b>	292.70 (-0.46)	Found as described, new elevation by level run, checked w/GPS
RM32	not searched	263.94	Destroyed when Texas Ave. was widened in 1990's
RM41	not found	269.00	Probably destroyed when Highway 30 curve was lengthened
RM43	not found	208.88	This RM may exist, but location is brushy and description is poor
<b>RM46</b>	<b>275.97</b>	276.02 (-0.05)	Found at center of headwall, not NW corner as described
<b>RM47</b>	<b>273.88</b>	274.18 (-0.30)	Found at north corner of culvert, but shown on FIRM at east corner
<b>RM48</b>	<b>290.97</b>	291.07 (-0.10)	Found where described and shown on FIRM
<b>RM49</b>	<b>278.95</b>	279.02 (-0.07)	Found at east corner of intersection, but shown on FIRM at south
<b>RM50</b>	<b>235.74</b>	235.82 (-0.08)	Found where described, good condition. Set as BJ-5 in 1973
RM51	not found	285.78	No power pole w/spike found where described (poles were replaced)
RM52	not found	296.15	The power poles in this area have been replaced since the 1980's
<b>RM53</b>	<b>280.01</b>	280.04 (-0.03)	Found where described, but slightly damaged. Set as 26SC in 1958
<b>RM54</b>	<b>244.20</b>	244.37 (-0.17)	Found as described. Mark set for City of CS sewer project in 1987
RM55	not found	250.71	This RM may exist, but location is brushy and description is poor
RM56	not found	209.16	No double oak tree w/spike was found at location described
RM57	not found	249.17	The highway bridge over Alum Creek was removed in recent years
RM58	not found	196.70	No powerline, nor power pole w/spike, found at location described
RM59	not found	193.92	This RM may exist, but location is brushy and description is poor
<b>27SC</b>	<b>258.60</b>	259	Not on FIRM. Set as 27SC by US Coast & Geodetic Survey in 1958

## Summary

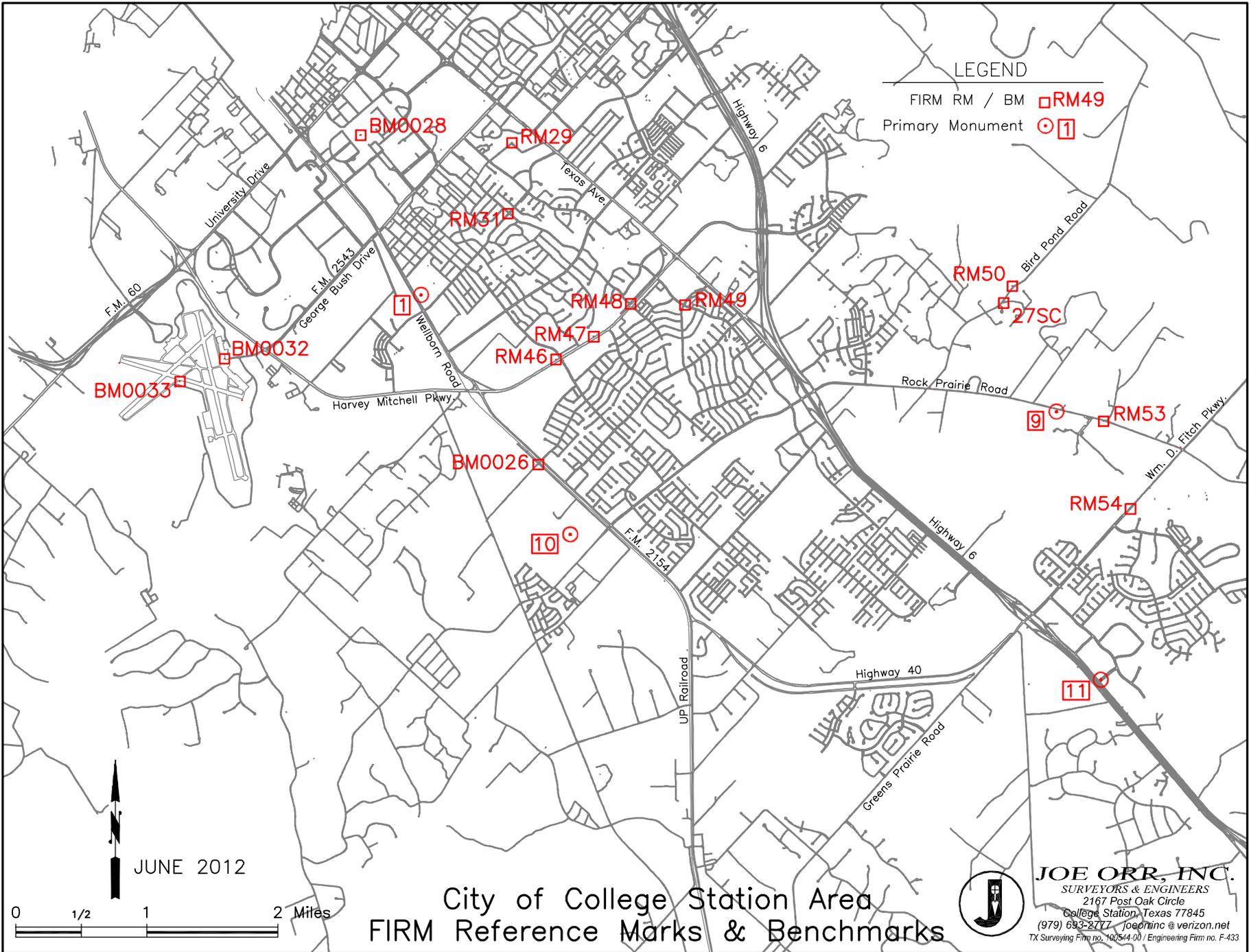
Only a handful of the FEMA reference marks could be confirmed as exactly the ones described in the Flood Insurance Study list. Others were described and/or shown at slightly different locations than what was found, which could be attributed to the original descriptions being vague or new points set nearby. Square cut marks in concrete and railroad spikes in power poles are common benchmark methods and it is possible that some of the ones found were not the actual FEMA marks but ones set by later surveyors for unrelated projects.

It was found that the corners of the headwall at RM46 were within 0.04 ft. of being the same elevation as the mark found at the center of the headwall. At RM47, the headwall corner on the southeast side of F.M. 2818, where the mark is shown to be on the FIRM, is only 0.03 ft. lower than the mark found. Therefore, even if the found marks are not the ones originally set for FEMA, they are very close to the same elevation.

The vertical stability of these reference marks is susceptible to slight variations caused by seasonal soil conditions, and these elevations should not be relied upon for critical elevation work. NGS has not established high-order elevation monuments in Brazos County. The eleven deep rod, primary GPS monuments set by CDS/Muery Services in 2010 are the basis of this project upgrade, and they should be used for critical NAVD1988 elevation determination. Muery used GPS observations from TXDOT CORS stations to determine NAD83(CORS) positions and NAVD88 elevations on these eleven deep rod monuments.

The large difference (0.8 ft.) between the NGS published NAVD elevation on BM0033 and the elevation determined by this upgrade survey is apparently the result of their recalculations based on the new GEOID12 model. Care should be exercised when comparing the results of this survey to elevations determined from VERCON shifts and other methods utilizing recalculated survey observations.

Henry Mayo, RPLS



LEGEND  
 FIRM RM / BM □ RM49  
 Primary Monument ⊙ 1

JUNE 2012

0 1/2 1 2 Miles

City of College Station Area  
 FIRM Reference Marks & Benchmarks



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<u>Station Name:</u> <b><i>BM0026</i></b> stamped as W313	
<u>General Location:</u> <u>FIRM Panel:</u>	Old Wellborn Rd. at Cain Rd. 305E (current FIRM)
<u>Established by:</u> <u>Date Established:</u>	U.S. Coast & Geodetic Survey 1935
<u>Upgrade Survey by:</u> <u>Upgrade Method:</u>	Joe Orr, Inc. conventional levelling (digital) from GPS mon. CS94-120
<u>Upgraded Elevation:</u> NAVD1988 Datum (Feet)	<b><i>291.84</i></b>
<u>Surveyed Location:</u> (map-grade accuracy)	Northing (State Plane Grid): 10196834.7 feet Easting (State Plane Grid): 3559267.2 feet Latitude: N 30° 34' 41.822" Longitude: W 96° 19' 11.301" <u>Datum:</u> NAD83(CORS) TX Central zone
<u>Point Location Description:</u>	Brass disc in 8 in. square concrete, up 1 in. on private property (mini warehouses) at the south corner of Cain Rd. and Old Wellborn Rd. Monument is 3.0 ft. SE and 6.1 ft. SW of chain-link fences along property lines.
<u>Note:</u>	Projects requiring critical elevation determinations, such as flood plain certifications and gravity sewer projects, should be field verified from the nearest primary GPS monument, by reliable survey methods and not rely solely on the data presented herein.
<u>Nearest City of College Station Monuments:</u>	2010 Mon 10 (primary) SE 0.6 miles CS94-117 S 1.0 miles

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**CITY OF COLLEGE STATION  
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<u>Station Name:</u> <b>BM0028</b> NGS Designation "A and M College"	
<u>General Location:</u>	near Sul Ross statue at A&M
<u>FIRM Panel:</u>	305E (current FIRM)
<u>Established by:</u>	U.S. Coast & Geodetic Survey
<u>Date Established:</u>	1935
<u>Upgrade Survey by:</u>	Joe Orr, Inc.
<u>Upgrade Method:</u>	GPS (RTK) averaging of multiple observations
<u>Upgraded Elevation:</u>	<b>360.91</b>
NAVD1988 Datum (Feet)	
<u>Surveyed Location:</u> (map-grade accuracy)	
Northing (State Plane Grid): 10210102.3 feet	
Easting (State Plane Grid): 3552115.0 feet	
Latitude: N 30° 36' 55.615"	
Longitude: W 96° 20' 27.626"	
<u>Datum:</u> NAD83(CORS) TX Central zone	
<u>Point Location Description:</u>	
Brass disc in concrete, within a 12 in. iron ring set flush in concrete sidewalk, 500 ft. northeast of Houston Street, along a projection of Old Main Drive. (1900' NE of railroad)	
Monument is 57 ft. east of Sul Ross statue and 86 ft. south of center top of concrete steps on the southwest side of the Texas A&M University Academic Building (built 1912).	
<u>Note:</u>	
Projects requiring critical elevation determinations, such as flood plain certifications and gravity sewer projects, should be field verified from the nearest primary GPS monument, by reliable survey methods and not rely solely on the data presented herein.	
<u>Nearest City of College Station Monuments:</u>	
2010 Mon 1 (primary)	SE 1.3 miles
CS94-110	NW 0.7 miles

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<u>Station Name:</u> <b>BM0032</b> stamped as P 933 RESET1972	
<u>General Location:</u>	Easterwood Airport, old hangar
<u>FIRM Panel:</u>	305E (not on current FIRMs)
<u>Established by:</u>	U.S. Coast & Geodetic Survey
<u>Date Established:</u>	1972 (replaced BM0031)
<u>Upgrade Survey by:</u>	Joe Orr, Inc.
<u>Upgrade Method:</u>	GPS (RTK) averaging of multiple observations
<u>Upgraded Elevation:</u> NAVD1988 Datum (Feet)	<b>312.21</b>
<u>Surveyed Location:</u> (map-grade accuracy)	
<u>Northing (State Plane Grid):</u>	10201088.9 feet
<u>Easting (State Plane Grid):</u>	3546623.5 feet
<u>Latitude:</u>	N 30° 35' 28.398"
<u>Longitude:</u>	W 96° 21' 34.120"
<u>Datum:</u>	NAD83(CORS) TX Central zone
<u>Point Location Description:</u>	Brass disc in top, south edge of concrete drain grate inlet box, located on the west side of the old hangar (built 1940s) at Easterwood airport Monument is 60 ft.± NW of the south corner of the old hangar building and 365 ft.± NW of the airport control tower (built in 1970s)
<u>Note:</u>	Projects requiring critical elevation determinations, such as flood plain certifications and gravity sewer projects, should be field verified from the nearest primary GPS monument, by reliable survey methods and not rely solely on the data presented herein.
<u>Nearest City of College Station Monuments:</u>	
2010 Mon 1 (primary)	NE 1.6 miles
CS94-165	NW 0.8 miles

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**CITY OF COLLEGE STATION  
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<u>Station Name:</u> <b><i>BM0033</i></b> stamped as ARP 2	
<u>General Location:</u> Easterwood Airport primary mon. <u>FIRM Panel:</u> 305E (on current FIRM)	
<u>Established by:</u> U.S. Coast & Geodetic Survey <u>Date Established:</u> 1963	
<u>Upgrade Survey by:</u> Joe Orr, Inc. <u>Upgrade Method:</u> conventional levelling (digital) from monument BM0032	
<u>Upgraded Elevation:</u> NAVD1988 Datum (Feet)	<b><i>310.72</i></b>
<u>Surveyed Location:</u> (map-grade accuracy) <u>Northing (State Plane Grid):</u> 10200180.4 feet <u>Easting (State Plane Grid):</u> 3544825.5 feet <u>Latitude:</u> N 30° 35' 20.045" <u>Longitude:</u> W 96° 21' 55.049" <u>Datum:</u> NAD83(CORS) TX Central zone	
<u>Point Location Description:</u> Brass disc in concrete, flush with ground, approximately 2000 ft. southwest of the airport control tower (built in 1970s) Monument is 125 ft. southwest of the centerline of runway 10-28, and 87 ft. southeast of the centerline of a taxiway for runway 4-22. Note: Airport secondary monuments were found in good condition, but the following elevations are approximate, being determined only by single, 1-minute RTK observations: BM1143 (A): 309.14 / BM1144 (B): 316.81	
<u>Note:</u> Projects requiring critical elevation determinations, such as flood plain certifications and gravity sewer projects, should be field verified from the nearest primary GPS monument, by reliable survey methods and not rely solely on the data presented herein.	
<u>Nearest City of College Station Monuments:</u> 2010 Mon 1 (primary) NE 2.0 miles CS94-165 NW 0.6 miles	

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reference BM:  
Square mark  
cut in E corner  
storm inlet box  
18 ft. SW of  
PP / RM29  
Elev.= 294.48

<u>Station Name:</u> <b>RM 29</b>	
<u>General Location:</u> 1623 Park Place, at bend	<u>FIRM Panel:</u> 144 (not on current FIRMs)
<u>Established by:</u> FEMA contractors	
<u>Date Established:</u> late 1970s	
<u>Upgrade Survey by:</u> Joe Orr, Inc.	
<u>Upgrade Method:</u> GPS (RTK) averaging of multiple observations (on ref BM)	
<u>Upgraded Elevation:</u> NAVD1988 Datum (Feet)	<b>294.09</b>
<u>Surveyed Location:</u> (map-grade accuracy)	
Northing (State Plane Grid): 10209790.3 feet	
Easting (State Plane Grid): 3558198.7 feet	
Latitude: N 30° 36' 50.362"	
Longitude: W 96° 19' 18.173"	
<u>Datum:</u> NAD83(CORS) TX Central zone	
<u>Point Location Description:</u> Top of head on railroad spike driven into the south side of a power pole, 2 in. below grade, in front of the house at 1623 Park Place	
<u>Elevation Note:</u> The elevation determined for this railroad spike is 2.0 ft. lower than the supplied elevation for this Ref. Mark by FEMA. It is possible that the spike found is not RM29, but no other spike was found.	
<u>Note:</u> Projects requiring critical elevation determinations, such as flood plain certifications and gravity sewer projects, should be field verified from the nearest primary GPS monument, by reliable survey methods and not rely solely on the data presented herein.	
<u>Nearest City of College Station Monuments:</u>	
2010 Mon 1 (primary)	SW 1.4 miles
CS94-120	S 0.8 miles

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<u>Station Name:</u> <b>RM 31</b>	
<u>General Location:</u>	Holleman Drive at Glade Street
<u>FIRM Panel:</u>	144 (not on current FIRMs)
<u>Established by:</u>	FEMA Contractors
<u>Date Established:</u>	late 1970s
<u>Upgrade Survey by:</u>	Joe Orr, Inc.
<u>Upgrade Method:</u>	conventional levelling (digital) from GPS mon. CS94-120
<u>Upgraded Elevation:</u> NAVD1988 Datum (Feet)	<b>292.24</b>
<u>Surveyed Location:</u> (map-grade accuracy)	
<u>Northing (State Plane Grid):</u>	10206935.6 feet
<u>Easting (State Plane Grid):</u>	3558046.2 feet
<u>Latitude:</u>	N 30° 36' 22.177"
<u>Longitude:</u>	W 96° 19' 21.095"
<u>Datum:</u>	NAD83(CORS) TX Central zone
<u>Point Location Description:</u>	Square mark cut into the front, east corner of the storm drain inlet box on the northwest side of Holleman Drive, 48' southwest of the centerline of Glade Street.
<u>Note:</u>	Projects requiring critical elevation determinations, such as flood plain certifications and gravity sewer projects, should be field verified from the nearest primary GPS monument, by reliable survey methods and not rely solely on the data presented herein.
<u>Nearest City of College Station Monuments:</u>	
2010 Mon 1 (primary)	SW 0.9 miles
CS94-120	SE 1425 feet

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<u>Station Name:</u> <b>RM 46 (r12)</b> relocated nearby	
<u>General Location:</u>	F.M. 2818, SW of Welsh Ave.
<u>FIRM Panel:</u>	182 (not on current FIRMs)
<u>Established by:</u>	unknown
<u>Date Established:</u>	unknown
<u>Upgrade Survey by:</u>	Joe Orr, Inc.
<u>Upgrade Method:</u>	conventional levelling (digital) from GPS mon. CS94-120
<u>Upgraded Elevation:</u> NAVD1988 Datum (Feet)	<b>275.97</b>
<u>Surveyed Location:</u> (map-grade accuracy)	
<u>Northing (State Plane Grid):</u>	10201062.9 feet
<u>Easting (State Plane Grid):</u>	3559977.3 feet
<u>Latitude:</u>	N 30° 35' 23.394"
<u>Longitude:</u>	W 96° 19' 01.437"
<u>Datum:</u> NAD83(CORS) TX Central zone	
<u>Point Location Description:</u> Square mark cut into the northwest edge of the concrete headwall, over the middle wall, on the northwest end (upstream) of the box culvert under F.M. 2818, 170' southwest of the centerline of Welsh Avenue.	
<u>Relocation Note:</u> No mark was found at the northwest corner, as originally described.	
<u>Note:</u> Projects requiring critical elevation determinations, such as flood plain certifications and gravity sewer projects, should be field verified from the nearest primary GPS monument, by reliable survey methods and not rely solely on the data presented herein.	
<u>Nearest City of College Station Monuments:</u>	
2010 Mon 1 (primary)	NW 1.1 miles
CS94-220	NW 0.9 miles

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Station Name:

**RM 47**

General Location: F.M. 2818, NE of Nueces Dr.  
FIRM Panel: 182 (not on current FIRMs)

Established by: FEMA Contractors  
Date Established: late 1970s

Upgrade Survey by: Joe Orr, Inc.  
Upgrade Method: conventional levelling (digital)  
from GPS mon. CS94-120

Upgraded Elevation: **273.88**  
NAVD1988 Datum (Feet)

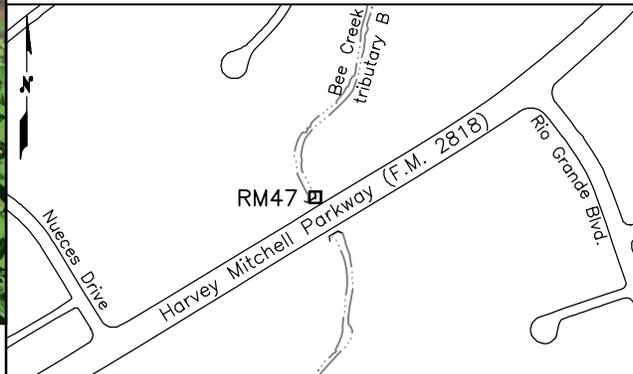
Surveyed Location: (map-grade accuracy)  
Northing (State Plane Grid): 10201982.6 feet  
Easting (State Plane Grid): 3561500.0 feet  
Latitude: N 30° 35' 31.948"  
Longitude: W 96° 18' 43.646"  
Datum: NAD83(CORS) TX Central zone

Point Location Description:  
Square mark cut into the northeast end of the concrete headwall, on the northwest end (downstream) of the box culvert under F.M. 2818, between Nueces Drive and Rio Grand Boulevard.

Location Note: FIRM 182 shows this reference mark on the southeast side of F.M. 2818

Note:  
Projects requiring critical elevation determinations, such as flood plain certifications and gravity sewer projects, should be field verified from the nearest primary GPS monument, by reliable survey methods and not rely solely on the data presented herein.

Nearest City of College Station Monuments:  
2010 Mon 1 (primary) NW 1.4 miles  
CS94-120 NW 0.9 miles



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	<p align="center"><u>Station Name:</u> <b>RM 48</b></p> <p><u>General Location:</u> F.M. 2818 at Southwood Drive  <u>FIRM Panel:</u> 182 (not on current FIRMs)</p>				
	<p><u>Established by:</u> FEMA Contractors  <u>Date Established:</u> late 1970s</p> <p><u>Upgrade Survey by:</u> Joe Orr, Inc.  <u>Upgrade Method:</u> GPS (RTK) averaging of multiple observations</p>				
	<p><u>Upgraded Elevation:</u> <b>290.97</b>      NAVD1988 Datum (Feet)</p>				
	<p><u>Surveyed Location:</u> (map-grade accuracy)      Northing (State Plane Grid): 10203304.8 feet      Easting (State Plane Grid): 3562992.4 feet      Latitude: N 30° 35' 44.493"      Longitude: W 96° 18' 26.033"  <u>Datum:</u> NAD83(CORS) TX Central zone</p>				
	<p><u>Point Location Description:</u>      Square mark cut into the top, west corner of the sloped culvert headwall, on the northeast side of Southwood Drive, between Harvey Mitchell Parkway main lanes and its northwest frontage road</p>				
	<p><u>Note:</u>      Projects requiring critical elevation determinations, such as flood plain certifications and gravity sewer projects, should be field verified from the nearest primary GPS monument, by reliable survey methods and not rely solely on the data presented herein.</p>				
	<p><u>Nearest City of College Station Monuments:</u></p> <table border="0"> <tr> <td>2010 Mon 1 (primary)</td> <td>W 1.6 miles</td> </tr> <tr> <td>CS94-120</td> <td>NW 0.9 miles</td> </tr> </table>	2010 Mon 1 (primary)	W 1.6 miles	CS94-120	NW 0.9 miles
2010 Mon 1 (primary)	W 1.6 miles				
CS94-120	NW 0.9 miles				

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<u>Station Name:</u> <b>RM 49</b>	
<u>General Location:</u>	Brothers Blvd. at Longmire Dr.
<u>FIRM Panel:</u>	182 (not on current FIRMs)
<u>Established by:</u>	FEMA Contractors
<u>Date Established:</u>	late 1970s
<u>Upgrade Survey by:</u>	Joe Orr, Inc.
<u>Upgrade Method:</u>	GPS (RTK) averaging of multiple observations
<u>Upgraded Elevation:</u> NAVD1988 Datum (Feet)	<b>278.95</b>
<u>Surveyed Location:</u> (map-grade accuracy)	
Northing (State Plane Grid):	10203261.2 feet
Easting (State Plane Grid):	3565175.5 feet
Latitude:	N 30° 35' 43.278"
Longitude:	W 96° 18' 01.087"
<u>Datum:</u> NAD83(CORS) TX Central zone	
<u>Point Location Description:</u> Square mark cut into the top of curb, in the radius on the northeast side of Longmire Dr. and the southeast side of Brothers Boulevard	
<u>Location Note:</u> FIRM 182 shows this reference mark at the south corner of this intersection.	
<u>Note:</u> Projects requiring critical elevation determinations, such as flood plain certifications and gravity sewer projects, should be field verified from the nearest primary GPS monument, by reliable survey methods and not rely solely on the data presented herein.	
<u>Nearest City of College Station Monuments:</u>	
2010 Mon 10 (primary)	SW 2.0 miles
CS94-129	NE 0.8 miles

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<u>Station Name:</u> <b>RM 50</b> stamped as BJ-5	
<u>General Location:</u>	NE of 1975 Bird Pond Road
<u>FIRM Panel:</u>	205 (not on current FIRMs)
<u>Established by:</u>	U.S. Army Corp of Engineers
<u>Date Established:</u>	1973
<u>Upgrade Survey by:</u>	Joe Orr, Inc.
<u>Upgrade Method:</u>	terrestrial survey methods from GPS mon. CS94-130
<u>Upgraded Elevation:</u>	<b>235.74</b>
NAVD1988 Datum (Feet)	
<u>Surveyed Location:</u> (map-grade accuracy)	
Northing (State Plane Grid): 10204017.7 feet	
Easting (State Plane Grid): 3578374.7 feet	
Latitude: N 30° 35' 46.001"	
Longitude: W 96° 15' 29.841"	
<u>Datum:</u> NAD83(CORS) TX Central zone	
<u>Point Location Description:</u> Brass disk in concrete, 2 in. deep, 46.5' NW from $\odot$ of Bird Pond Road, 205 ft. NE from $\odot$ of private drive at 1975 Bird Pond Road Monument is 2.0 ft. SE of small angle-iron guard post, 6.0 ft. SE of 12 in. treated fence angle post and 2.7 ft. S of 20 in. Oak ( $\odot$ ).	
<u>Note:</u> Projects requiring critical elevation determinations, such as flood plain certifications and gravity sewer projects, should be field verified from the nearest primary GPS monument, by reliable survey methods and not rely solely on the data presented herein.	
<u>Nearest City of College Station Monuments:</u>	
2010 Mon 9 (primary)	SE 1.0 miles
CS94-148	SE 0.7 miles

Disclaimer: No expressed or implied warranties are made for the accuracy, completeness, reliability, usability, or suitability of the point data. The City of College Station and Joe Orr, Inc. assume no responsibility for incorrect results or damages resulting from the use of data.



**CITY OF COLLEGE STATION  
FIRM REFERENCE MARK UPGRADE PROJECT  
JUNE 2012**



<u>Station Name:</u> <b>RM 53</b> stamped as 26SC	
<u>General Location:</u>	Rock Prairie Rd. at Olden Ln.
<u>FIRM Panel:</u>	205 (not on current FIRMs)
<u>Established by:</u>	U.S. Coast & Geodetic Survey
<u>Date Established:</u>	1958
<u>Upgrade Survey by:</u>	Joe Orr, Inc.
<u>Upgrade Method:</u>	conventional levelling (digital) from GPS mon. CS-9
<u>Upgraded Elevation:</u>	<b>280.01</b>
NAVD1988 Datum (Feet)	
<u>Surveyed Location:</u> (map-grade accuracy)	
Northing (State Plane Grid): 10198574.6 feet	
Easting (State Plane Grid): 3582051.8 feet	
Latitude: N 30° 34' 50.824"	
Longitude: W 96° 14' 50.081"	
<u>Datum:</u> NAD83(CORS) TX Central zone	
<u>Point Location Description:</u> Aluminum disk (damaged) in flush concrete, 32 ft. S from $\bar{C}$ of Rock Prairie Road, approx. 100 ft. W from Olden Lane (private) Monument is 2.0 ft. N of barbed-wire fence and 14.5 ft. E of a concrete power pole.	
<u>Note:</u> Projects requiring critical elevation determinations, such as flood plain certifications and gravity sewer projects, should be field verified from the nearest primary GPS monument, by reliable survey methods and not rely solely on the data presented herein.	
<u>Nearest City of College Station Monuments:</u>	
2010 Mon 9 (primary)	W 1942 feet
CS94-148	NW 0.5 miles

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**CITY OF COLLEGE STATION  
FIRM REFERENCE MARK UPGRADE PROJECT  
JUNE 2012**



Station Name:

**RM 54**

General Location: Wm. D. Fitch at Lick Creek  
FIRM Panel: 205 (not on current FIRMs)

Established by: Riewe & Wischmeyer, Inc.  
Date Established: January 1987

Upgrade Survey by: Joe Orr, Inc.  
Upgrade Method: GPS (RTK) averaging  
of multiple observations

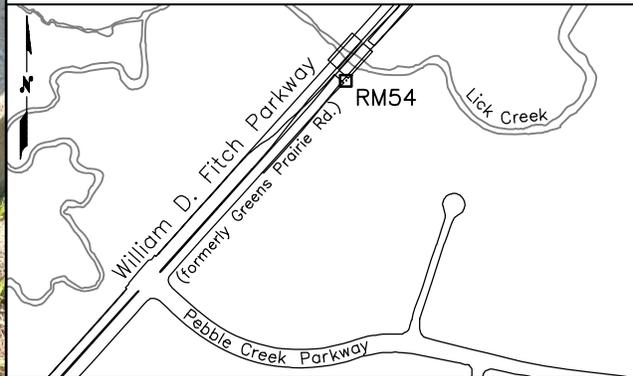
Upgraded Elevation: **244.20**  
NAVD1988 Datum (Feet)

Surveyed Location: (map-grade accuracy)  
Northing (State Plane Grid): 10195045.9 feet  
Easting (State Plane Grid): 3583127.5 feet  
Latitude: N 30° 34' 15.527"  
Longitude: W 96° 14' 39.267"  
Datum: NAD83(CORS) TX Central zone

Point Location Description:  
Square mark cut into the concrete abutment, 3 in. from south corner, on the southeast bridge over Lick Creek, on Wm. D. Fitch Pkwy. Mark is 940 ft. northeast from the centerline of Pebble Creek Parkway.

Note:  
Projects requiring critical elevation determinations, such as flood plain certifications and gravity sewer projects, should be field verified from the nearest primary GPS monument, by reliable survey methods and not rely solely on the data presented herein.

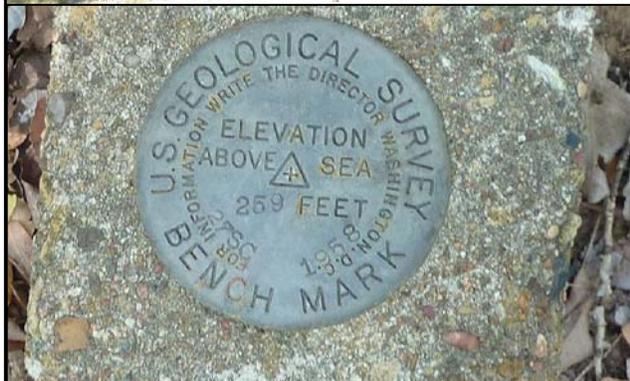
Nearest City of College Station Monuments:  
2010 Mon 9 (primary) NW 0.9 miles  
CS94-256 SE 0.5 miles



Disclaimer: No expressed or implied warranties are made for the accuracy, completeness, reliability, usability, or suitability of the point data. The City of College Station and Joe Orr, Inc. assume no responsibility for incorrect results or damages resulting from the use of data.



**CITY OF COLLEGE STATION  
FIRM REFERENCE MARK UPGRADE PROJECT  
JUNE 2012**



<u>Station Name:</u> <b>27SC</b>	
<u>General Location:</u> Bird Pond Rd. at East Placid Dr. <u>FIRM Panel:</u> not identified on FIRMs	
<u>Established by:</u> U.S. Coast & Geodetic Survey <u>Date Established:</u> 1958	
<u>Upgrade Survey by:</u> Joe Orr, Inc. <u>Upgrade Method:</u> conventional levelling (digital) from GPS mon. CS-9	
<u>Upgraded Elevation:</u> NAVD1988 Datum (Feet)	<b>258.60</b>
<u>Surveyed Location:</u> (map-grade accuracy) Northing (State Plane Grid): 10203338.5 feet Easting (State Plane Grid): 3578019.5 feet Latitude: N 30° 35' 39.411" Longitude: W 96° 15' 34.188" <u>Datum:</u> NAD83(CORS) TX Central zone	
<u>Point Location Description:</u> Aluminum disk in concrete, 8 in. tall, 60 ft. SE from $\text{C}$ of Bird Pond Road, and 40 ft. S from $\text{C}$ of East Placid Dr. (gravel) This Benchmark is 766 ft. S of RM50 and is used as a property corner.	
<u>Note:</u> Projects requiring critical elevation determinations, such as flood plain certifications and gravity sewer projects, should be field verified from the nearest primary GPS monument, by reliable survey methods and not rely solely on the data presented herein.	
<u>Nearest City of College Station Monuments:</u> 2010 Mon 9 (primary) SE 0.9 miles CS94-148 SE 0.7 miles	

Disclaimer: No expressed or implied warranties are made for the accuracy, completeness, reliability, usability, or suitability of the point data. The City of College Station and Joe Orr, Inc. assume no responsibility for incorrect results or damages resulting from the use of data.

Flood Insurance Study - Reference Mark List  
(College Station area)

EXHIBIT 3 - ELEVATION REFERENCE MARKS - continued

<u>Reference Mark</u>	<u>FIRM Panel</u>	<u>Elevation (Feet NGVD)</u>	<u>Description of Location</u>
RM 19	133	344.45	Square cut in top of curb at northeast corner of intersection of Sandy Point Road and 25th Street.
RM 20	133	305.85	Square cut in sidewalk at the southwest corner of a bridge located east of Old Reliance Road bridge over Carters Creek Tributary B.
RM 21	134	307.69	Square cut in southeast corner of a headwall located at the Villa Maria Road bridge over Briar Creek.
RM 22	134	308.32	Square cut in east headwall of State Route 6 Bypass bridge over Carters Creek Tributary B.
RM 23	141	304.56	Square cut in a culvert side wall located at the northeast corner of the intersection of College Avenue and Dellwood Street.
RM 24	141	297.40	Square cut in top of curb at the northwest corner of Texas Avenue bridge over Tributary D.
RM 25	141	314.72	Square cut in top of north curb of Texas Avenue near the intersection of Dunn Street and Texas Avenue.
RM 26	142	292.10	Square cut in southwest corner of the Broadmoore Street bridge over Briar Creek.
RM 27	142	299.91	Square cut in top of curb at the southeast corner of the intersection of Inwood Drive and Texas Avenue.
RM 28	142	279.05	Square cut in top of curb in front of house 824 on Vine Street.
RM 29	144	296.11	Railroad spike set in a power pole at the north side of a right angle turn of Park Place approximately 2,000 feet north of Glade Street.

Flood Insurance Study - Reference Mark List  
(College Station area)

EXHIBIT 3 - ELEVATION REFERENCE MARKS - continued

<u>Reference Mark</u>	<u>FIRM Panel</u>	<u>Elevation (Feet NGVD)</u>	<u>Description of Location</u>
RM 30	144	340.81	Square cut in the southwest corner of the base of railroad signal at northeast corner of intersection of Jersey Street and Southern Pacific Railroad.
RM 31	144	292.70	Square cut in the corner of inlet located at the intersection of Holleman Drive and Glade Street.
RM 32	144	263.94	Square cut in the culvert headwall at the southeast corner of the intersection of Texas Avenue and Brothers Boulevard.
RM 33	155	263.56	Chiseled square on top of culvert, approximately 200 feet east of Wickson Creek bridge on Old Reliance Road.
RM 34	155	257.78	Chiseled square on the northeast corner of the east concrete guard rail of FM 1179 bridge over Wickson Creek.
RM 35	155	292.32	60d spike located 38 feet south and 42 feet west of the intersection of Grassbur Road and Cobb Road.
RM 36	155	263.18	Railroad spike set in power pole approximately 147.5 feet west of curve in Grassbur Road, approximately 0.6 miles south of the intersection of Grassbur Road and Vick's Lane.
RM 37	155	230.60	Chiseled square on northwest corner of north headwall of a cattle guard located approximately 0.7 mile east of the intersection of Elmo Wheedon Road and Wickson Creek and approximately 71 feet south of the road.
RM 38	155	230.60	Railroad spike set in power pole approximately 35 feet west of Elmo Wheedon Road; approximately 0.3 mile north, thence 1.2 miles southeast, thence 0.5 mile from the intersection of Elmo Wheedon and Grassbur Roads.

Flood Insurance Study - Reference Mark List  
(College Station area)

EXHIBIT 3 - ELEVATION REFERENCE MARKS - continued'

<u>Reference Mark</u>	<u>FIRM Panel</u>	<u>Elevation (Feet NGVD)</u>	<u>Description of Location</u>
RM 39	160	211.98	From Kurton, go southwest on State Route 21 approximately 0.35 mile, thence southeast along a paved road approximately 5.65 miles to end of pavement, thence straight on gravel road approximately 2.25 miles to standard disk on the right.
RM 40	163	226.07	Chiseled square on the southwest corner of concrete bridge headwall of Bird Pond Road over Carters Creek.
RM 41	165	269.00	From the intersection of State Route 30 and FM 244, proceed west on State Route 30 approximately 10.0 miles; Monument is approximately 59 feet north of the centerline of State Route 30 and approximately 3 feet south of a fence line.
RM 42	165	212.27	From the intersection of State Route 30 and State Route 158 at Harvey, proceed east on State Route 30 approximately 0.95 mile, thence north on paved road approximately 2.0 miles to T intersection; take right fork approximately 2.8 miles to monument on right.
RM 43	165	208.88	From the intersection of State Route 30 and State Route 158 at Harvey, proceed east on State Route 30 approximately 6.5 miles to monument on right at curve.
RM 44	170	264.80	From the intersection of State Route 30 and FM 244, proceed west on State Route 30 approximately 5.8 miles; monument is approximately 51 feet south of the centerline of State Route 30, and approximately 135 feet east of a fence corner.
RM 45	182	340.81	Square cut in the southwest corner of the base of railroad signal at northeast corner of intersection of Jersey Street and Southern Pacific Railroad.

Flood Insurance Study - Reference Mark List  
(College Station area)

EXHIBIT 3 - ELEVATION REFERENCE MARKS - continued

<u>Reference Mark</u>	<u>FIRM Panel</u>	<u>Elevation (Feet NGVD)</u>	<u>Description of Location</u>
RM 46	182	276.02	Square cut in the northwest corner of the top of a concrete headwall located at the north side of the bridge over Tributary B on FM 2818, approximately 0.75 mile east of Wellborn Road.
RM 47	182	274.18	Square cut in the northeast corner of a concrete headwall located at the north side of the bridge over Tributary B on FM 2818, approximately 1.0 mile east of Wellborn Road.
RM 48	182	291.07	Square cut in the top of a culvert headwall at the northeast corner of the intersection of FM 2818 and Southwood Drive.
RM 49	182	279.02	Square cut in the top of the curb at the southeast corner of the intersection of Brothers Boulevard and Longwire Drive.
RM 50	205	235.82	A concrete monument located approximately 0.9 mile north along Bird Pond Road from the intersection of Rock Prairie Road. Marker is located approximately 45 feet northwest of the centerline of the road.
RM 51	205	285.78	Railroad spike set in a power pole located on the south side of State Route 6 at Lick Creek.
RM 52	205	296.15	From the intersection of State Route 6 and Rock Prairie Road, proceed east approximately 0.9 mile to the intersection of Rock Prairie Road and Bird Pond Road; railroad spike is in power pole located approximately 34.0 feet east of Bird Pond Road.
RM 53	205	280.04	From State Route 6 and Greens Prairie Road, go approximately 2.5 miles on Greens Prairie Road to the intersection of Rock Prairie Road, thence west approximately 0.6 mile to monument on left side of road.

Flood Insurance Study - Reference Mark List  
(College Station area)

EXHIBIT 3 - ELEVATION REFERENCE MARKS - continued

<u>Reference Mark</u>	<u>FIRM Panel</u>	<u>Elevation (Feet NGVD)</u>	<u>Description of Location</u>
RM 54	205	244.37	Chiseled square on the south east abutment wall of Greens Prairie Road bridge over Lick Creek.
RM 55	205	250.71	From State Route 6 and FM 159, go north on Rock Prairie Road approximately 6.6 miles to monument on south side of road.
RM 56	205	209.16	Railroad spike in a 24 inch twin post oak on the south side of Rock Prairie road, approximately 4.8 miles west from the intersection of State Route 6 and Peach Creek Road.
RM 57	205	249.17	Chiseled square on the southeast side of State Route 6 bridge abutment over Alum Creek.
RM 58	210	196.70	Railroad spike in a power pole on the right side of Peach Creek Road, approximately 3.1 miles north of State Route 6.
RM 59	210	193.92	From the intersection of State Route 6 and Peach Creek Road, go east approximately 3.6 miles to a T intersection; take right fork for approximately 0.2 mile to a Y intersection; take left fork for approximately 1.45 miles to monument on the left.
RM 60	220	262.90	From the intersection of State Route 6 and State Route 30, proceed southeast on State Route 6 approximately 14.3 miles, thence northeast along a gravel road approximately 0.40 mile to site of monument located 109 feet north of the centerline of the dirt road on top of a small hill.
RM 61	220	178.97	From the intersection of State Route 6 and State Route 30, proceed southeast on State Route 6 approximately 14.3 miles, thence northeast along a gravel road approximately 1.25 miles to Dim Field Road, then approximately 800 feet to monument on right.

Dist	PID...	H V	Vert_Source	Latitude.....	Longitude.....	Stab	C	Designation
....	BM0027	.	u	29/ADJ UNCH	N303646.....	W0962041.....	C...	G 349.638
....	BM0052	.	u	29/ADJ UNCH	N304035.....	W0962219.....	C... X A	314
....	BM0028	.	u	29/ADJ UNCH	N303655.92...	W0962027.60...	C... G A	AND M COLLEGE
....	BM0053	.	u	29/ADJ UNCH	N304149.....	W0962309.....	D... X B	314
....	BM0037	1	u	29/ADJ UNCH	N304003.46308	W0962203.70760	D... X BRYAN	
....	BM0847	.	2	29/COMPUTED	N304020.....	W0962221.....	.... Z BRYAN	BM
....	DG9804	A	h	88/GPS OBS.	N304108.98748	W0962213.91973	....	BRYAN CORS ARP
....	BM0038	.	u	29/ADJ UNCH	N304004.....	W0962203.....	D... G BRYAN	RM 2
....	BM0039	.	u	29/ADJ UNCH	N304004.....	W0962203.....	D... N BRYAN	RM 3
....	BM0054	.	u	29/ADJ UNCH	N304311.....	W0962530.....	C... N C	314
....	BM1143	0	.	88/GPS OBS.	N303511.67889	W0962126.64032	C... G CLL	AP STA A
....	BM1144	0	.	88/GPS OBS.	N303528.12833	W0962222.53595	C... G CLL	AP STA B
....	BM0033	0	.	88/GPS OBS.	N303520.04551	W0962155.04928	C... G CLL	ARP 2
....	BM0055	.	u	29/ADJ UNCH	N304407.....	W0962648.....	C... N D	314
....	BM0290	.	u	29/ADJ UNCH	N304846.....	W0963126.....	C... X H	314
....	BM0960	2	3	29/LEVELING	N304754.25072	W0961656.29730	.... N KURTEN	
....	BM0128	.	u	29/ADJ UNCH	N302555.32...	W0960714.94...	C... N N	313
....	BM0131	1	u	29/ADJ UNCH	N302654.84723	W0960957.48252	C... G NELLEVA	
....	BM0130	.	3	29/RESET...	N302658.....	W0961008.....	C... G NELLEVA	AZ MK
....	BM0129	.	u	29/ADJ UNCH	N302644.....	W0960901.....	C... N P	313
....	BM0031	.	u	29/ADJ UNCH	N303530.....	W0962131.....	D... N P	933
....	BM0032	.	3	29/RESET...	N303530.....	W0962131.....	D... G P	933 RESET 1972
....	BM0132	.	u	29/ADJ UNCH	N302753.....	W0961156.....	C... N Q	313
....	BM0040	.	2	29/COMPUTED	N304034.....	W0962324.....	C... X Q	900
....	BM0041	.	3	29/RESET...	N304034.....	W0962324.....	C... N Q	900 RESET 1959
....	BM0133	.	u	29/ADJ UNCH	N302824.40...	W0961337.64...	C... N R	313
....	BM0035	.	u	29/ADJ UNCH	N303916.....	W0962231.....	D... N R	900
....	BM0030	.	u	29/ADJ UNCH	N303611.....	W0962111.....	D... N S	1181

|....|BM0134|. u|29/ADJ UNCH|N302908.....|W0961528.....|C...|N|S 313  
 |....|BM0043|. u|29/ADJ UNCH|N304013.....|W0962412.....|C...|N|S 900  
 |....|BM0048|0 .|88/GPS OBS.|N303817.38806|W0962831.49059|C...|G|SMETANA  
 |....|BM0047|. u|29/ADJ UNCH|N303816.....|W0962804.....|C...|G|SMETANA AZ MK  
 |....|BM0049|. u|29/ADJ UNCH|N303818.....|W0962831.....|C...|G|SMETANA RM 1  
 |....|BM0050|. u|29/ADJ UNCH|N303818.....|W0962831.....|D...|G|SMETANA RM 2  
 |....|BM0984|1 3|29/LEVELING|N302658.06768|W0961424.20391|....|G|STEELE  
 |....|BM0023|. u|29/ADJ UNCH|N303009.....|W0961704.....|C...|N|T 313  
 |....|BM0042|. u|29/ADJ UNCH|N303946.....|W0962506.....|C...|N|T 900  
 |....|BM0024|. u|29/ADJ UNCH|N303138.....|W0961801.....|C...|G|U 313  
 |....|BM0044|. u|29/ADJ UNCH|N303911.....|W0962552.....|C...|N|U 900  
 |....|BM0025|. u|29/ADJ UNCH|N303321.....|W0961804.....|C...|G|V 313  
 |....|BM0045|. u|29/ADJ UNCH|N303914.....|W0962704.....|D...|X|V 900  
 |....|BM0026|. u|29/ADJ UNCH|N303442.....|W0961909.....|C...|G|W 313  
 |....|BM0046|. 2|29/COMPUTED|N303903.....|W0962802.....|C...|X|W 900  
 |....|BM0029|. u|29/ADJ UNCH|N303640.....|W0962039.....|D...|X|X 313  
 |....|BM0051|. u|29/ADJ UNCH|N303818.....|W0962831.....|C...|N|X 900  
 |....|BM0034|. u|29/ADJ UNCH|N303823.....|W0962216.....|C...|G|Y 313  
 |....|BM0036|. u|29/ADJ UNCH|N304002.....|W0962224.....|C...|N|Z 313

# The NGS Data Sheet

See file [dsdata.txt](#) for more information about the datasheet.

```

PROGRAM = datasheet95, VERSION = 7.89.2
1      National Geodetic Survey,  Retrieval Date = AUGUST  3, 2012
BM0023 *****
BM0023 DESIGNATION -  T 313
BM0023 PID          -  BM0023
BM0023 STATE/COUNTY-  TX/BRAZOS
BM0023 COUNTRY      -  US
BM0023 USGS QUAD    -  WELLBORN (1980)
BM0023
BM0023                      *CURRENT SURVEY CONTROL
BM0023 _____
BM0023* NAD 83(1986) POSITION- 30 30 09.      (N) 096 17 04.      (W)  SCALED
BM0023* NAVD 88 ORTHO HEIGHT -   93.16   (+/-2cm)      305.6   (feet) VERTCON
BM0023 _____
BM0023 GEOID HEIGHT   -          -26.94 (meters)                GEOID12
BM0023 VERT ORDER    -  SECOND      CLASS 0 (See Below)
BM0023
BM0023.The horizontal coordinates were scaled from a topographic map and have
BM0023.an estimated accuracy of +/- 6 seconds.
BM0023.
BM0023.The NAVD 88 height was computed by applying the VERTCON shift value to
BM0023.the NGVD 29 height (displayed under SUPERSEDED SURVEY CONTROL.)
BM0023
BM0023.The vertical order pertains to the NGVD 29 superseded value.
BM0023
BM0023;              North      East      Units  Estimated Accuracy
BM0023;SPC TX C      - 3,099,730.   1,088,560.   MT   (+/- 180 meters Scaled)
BM0023
BM0023                      SUPERSEDED SURVEY CONTROL
BM0023
BM0023 NGVD 29 (??/??/92)  93.136 (m)                305.56 (f) ADJ UNCH  2 0
BM0023
BM0023.Superseded values are not recommended for survey control.
BM0023
BM0023.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
BM0023.See file dsdata.txt to determine how the superseded data were derived.
BM0023
BM0023_U.S. NATIONAL GRID SPATIAL ADDRESS: 14RQU606776(NAD 83)
BM0023
BM0023_MARKER: DB = BENCH MARK DISK
BM0023_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
BM0023_SP_SET: SET IN TOP OF CONCRETE MONUMENT
BM0023_STAMPING: T 313 1935
BM0023_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
BM0023+STABILITY: SURFACE MOTION
BM0023
BM0023 HISTORY      - Date      Condition      Report By
BM0023 HISTORY      - 1935      MONUMENTED    CGS
BM0023 HISTORY      - 1944      GOOD          CGS
BM0023 HISTORY      - 1961      MARK NOT FOUND USGS
BM0023
BM0023                      STATION DESCRIPTION
BM0023
BM0023'DESCRIBED BY COAST AND GEODETIC SURVEY 1944
BM0023'2.6 MI SE FROM WELLBORN.

```

BM0023'2.6 MILES SOUTHEAST ALONG THE TEXAS AND NEW ORLEANS RAILROAD FROM THE  
 BM0023'STATION AT WELLBORN, BRAZOS COUNTY, 21 YARDS NORTHEAST OF MILEPOST 86,  
 BM0023'13 YARDS NORTHEAST OF THE CENTERLINE OF THE TRACK, 10 YARDS SOUTHWEST  
 BM0023'OF THE CENTERLINE OF MILLICAN ROAD, AND 5 FEET SOUTHWEST OF THE  
 BM0023'RIGHT-OF-WAY FENCE. A STANDARD DISK, STAMPED T 313 1935 AND SET IN  
 BM0023'THE TOP OF A CONCRETE POST.

BM0023

BM0023 STATION RECOVERY (1961)

BM0023

BM0023'RECOVERY NOTE BY US GEOLOGICAL SURVEY 1961

BM0023'MARK NOT FOUND.

1 National Geodetic Survey, Retrieval Date = AUGUST 3, 2012

BM0024 \*\*\*\*\*

BM0024 DESIGNATION - U 313

BM0024 PID - BM0024

BM0024 STATE/COUNTY- TX/BRAZOS

BM0024 COUNTRY - US

BM0024 USGS QUAD - WELLBORN (1980)

BM0024

BM0024 \*CURRENT SURVEY CONTROL

BM0024

BM0024\* NAD 83(1986) POSITION- 30 31 38. (N) 096 18 01. (W) SCALED

BM0024\* NAVD 88 ORTHO HEIGHT - 93.99 (+/-2cm) 308.4 (feet) VERTCON

BM0024

BM0024 GEOID HEIGHT - -26.88 (meters) GEOID12

BM0024 VERT ORDER - SECOND CLASS 0 (See Below)

BM0024

BM0024.The horizontal coordinates were scaled from a topographic map and have  
 BM0024.an estimated accuracy of +/- 6 seconds.

BM0024.

BM0024.The NAVD 88 height was computed by applying the VERTCON shift value to  
 BM0024.the NGVD 29 height (displayed under SUPERSEDED SURVEY CONTROL.)

BM0024

BM0024.The vertical order pertains to the NGVD 29 superseded value.

BM0024

BM0024; North East Units Estimated Accuracy

BM0024;SPC TX C - 3,102,410. 1,086,940. MT (+/- 180 meters Scaled)

BM0024

BM0024 SUPERSEDED SURVEY CONTROL

BM0024

BM0024 NGVD 29 (??/??/92) 93.964 (m) 308.28 (f) ADJ UNCH 2 0

BM0024

BM0024.Superseded values are not recommended for survey control.

BM0024

BM0024.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

BM0024.[See file dsdata.txt](#) to determine how the superseded data were derived.

BM0024

BM0024\_U.S. NATIONAL GRID SPATIAL ADDRESS: 14RQU590803(NAD 83)

BM0024

BM0024\_MARKER: DB = BENCH MARK DISK

BM0024\_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

BM0024\_SP\_SET: SET IN TOP OF CONCRETE MONUMENT

BM0024\_STAMPING: U 313 1935

BM0024\_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

BM0024+STABILITY: SURFACE MOTION

BM0024

BM0024 HISTORY - Date Condition Report By

BM0024 HISTORY - 1935 MONUMENTED CGS

BM0024 HISTORY - 1944 GOOD CGS

BM0024 HISTORY - 1950 GOOD CGS

BM0024

BM0024 STATION DESCRIPTION

BM0024

BM0024'DESCRIBED BY COAST AND GEODETIC SURVEY 1944  
 BM0024'0.5 MI SE FROM WELLBORN.  
 BM0024'0.5 MILE SOUTHEAST ALONG THE TEXAS AND NEW ORLEANS RAILROAD FROM THE  
 BM0024'STATION AT WELLBORN, BRAZOS COUNTY, ABOUT 200 YARDS NORTHWEST OF  
 BM0024'MILEPOST 88, OPPOSITE A FARMHOUSE, 17 YARDS NORTHEAST OF THE  
 BM0024'CENTERLINE OF THE TRACK, AND 10 YARDS WEST OF THE CENTERLINE OF  
 BM0024'WILLICAN ROAD. A STANDARD DISK, STAMPED U 313 1935 AND SET IN THE TOP  
 BM0024'OF A CONCRETE POST.

BM0024

STATION RECOVERY (1950)

BM0024

BM0024'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1950

BM0024'RECOVERED IN GOOD CONDITION.

1 National Geodetic Survey, Retrieval Date = AUGUST 3, 2012

BM0025 \*\*\*\*\*

BM0025 DESIGNATION - V 313

BM0025 PID - BM0025

BM0025 STATE/COUNTY- TX/BRAZOS

BM0025 COUNTRY - US

BM0025 USGS QUAD - WELLBORN (1980)

BM0025

BM0025 \*CURRENT SURVEY CONTROL

BM0025

BM0025\* NAD 83(1986) POSITION- 30 33 21. (N) 096 18 04. (W) SCALED

BM0025\* NAVD 88 ORTHO HEIGHT - 102.34 (+/-2cm) 335.8 (feet) VERTCON

BM0025

BM0025 GEOID HEIGHT - -26.83 (meters) GEOID12

BM0025 VERT ORDER - SECOND CLASS 0 (See Below)

BM0025

BM0025.The horizontal coordinates were scaled from a topographic map and have  
 BM0025.an estimated accuracy of +/- 6 seconds.

BM0025.

BM0025.The NAVD 88 height was computed by applying the VERTCON shift value to  
 BM0025.the NGVD 29 height (displayed under SUPERSEDED SURVEY CONTROL.)

BM0025

BM0025.The vertical order pertains to the NGVD 29 superseded value.

BM0025

BM0025;	North	East	Units	Estimated Accuracy
BM0025;SPC TX C	- 3,105,580.	1,086,750.	MT	(+/- 180 meters Scaled)

BM0025

BM0025 SUPERSEDED SURVEY CONTROL

BM0025

BM0025 NGVD 29 (??/??/92) 102.314 (m) 335.68 (f) ADJ UNCH 2 0

BM0025

BM0025.Superseded values are not recommended for survey control.

BM0025

BM0025.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

BM0025.[See file dsdata.txt](#) to determine how the superseded data were derived.

BM0025

BM0025\_U.S. NATIONAL GRID SPATIAL ADDRESS: 14RQU588834(NAD 83)

BM0025

BM0025\_MARKER: DB = BENCH MARK DISK

BM0025\_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

BM0025\_SP\_SET: SET IN TOP OF CONCRETE MONUMENT

BM0025\_STAMPING: V 313 1935

BM0025\_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

BM0025+STABILITY: SURFACE MOTION

BM0025

BM0025	HISTORY	- Date	Condition	Report By
BM0025	HISTORY	- 1935	MONUMENTED	CGS
BM0025	HISTORY	- 1939	GOOD	CGS
BM0025	HISTORY	- 1944	GOOD	CGS

BM0025

BM0025

BM0025

BM0025

BM0025 STATION DESCRIPTION  
 BM0025  
 BM0025'DESCRIBED BY COAST AND GEODETIC SURVEY 1939  
 BM0025'1.5 MI NW FROM WELLBORN.  
 BM0025'1.5 MILES NORTHWEST ALONG THE TEXAS AND NEW ORLEANS RAILROAD FROM THE  
 BM0025'STATION AT WELLBORN, BRAZOS COUNTY, ABOUT 125 YARDS NORTHWEST OF  
 BM0025'MILEPOST 90, NEAR THE TOP OF A SMALL HILL, 15 YARDS SOUTHWEST OF THE  
 BM0025'CENTERLINE OF THE TRACK, AND 9 YARDS NORTHEAST OF THE CENTERLINE OF  
 BM0025'MILLICAN ROAD. A STANDARD DISK, STAMPED V 313 1935 AND SET IN THE TOP  
 BM0025'OF A CONCRETE POST.  
 BM0025  
 BM0025 STATION RECOVERY (1944)  
 BM0025  
 BM0025'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1944  
 BM0025'RECOVERED IN GOOD CONDITION.  
 1 National Geodetic Survey, Retrieval Date = AUGUST 3, 2012  
 BM0026 \*\*\*\*\*  
 BM0026 DESIGNATION - W 313  
 BM0026 PID - BM0026  
 BM0026 STATE/COUNTY- TX/BRAZOS  
 BM0026 COUNTRY - US  
 BM0026 USGS QUAD - WELLBORN (1980)  
 BM0026  
 BM0026 \*CURRENT SURVEY CONTROL  
 BM0026  
 BM0026\* NAD 83(1986) POSITION- 30 34 42. (N) 096 19 09. (W) SCALED  
 BM0026\* NAVD 88 ORTHO HEIGHT - 89.01 (+/-2cm) 292.0 (feet) VERTCON  
 BM0026  
 BM0026 GEOID HEIGHT - -26.77 (meters) GEOID12  
 BM0026 VERT ORDER - SECOND CLASS 0 (See Below)  
 BM0026  
 BM0026.The horizontal coordinates were scaled from a topographic map and have  
 BM0026.an estimated accuracy of +/- 6 seconds.  
 BM0026.  
 BM0026.The NAVD 88 height was computed by applying the VERTCON shift value to  
 BM0026.the NGVD 29 height (displayed under SUPERSEDED SURVEY CONTROL.)  
 BM0026  
 BM0026.The vertical order pertains to the NGVD 29 superseded value.  
 BM0026  
 BM0026;  
 BM0026;SPC TX C - 3,108,010. 1,084,930. MT (+/- 180 meters Scaled)  
 BM0026  
 BM0026 SUPERSEDED SURVEY CONTROL  
 BM0026  
 BM0026 NGVD 29 (??/??/92) 88.983 (m) 291.94 (f) ADJ UNCH 2 0  
 BM0026  
 BM0026.Superseded values are not recommended for survey control.  
 BM0026  
 BM0026.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.  
 BM0026.[See file dsdata.txt](#) to determine how the superseded data were derived.  
 BM0026  
 BM0026\_U.S. NATIONAL GRID SPATIAL ADDRESS: 14RQU570859(NAD 83)  
 BM0026  
 BM0026\_MARKER: DB = BENCH MARK DISK  
 BM0026\_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT  
 BM0026\_SP\_SET: SET IN TOP OF CONCRETE MONUMENT  
 BM0026\_STAMPING: W 313 1935  
 BM0026\_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO  
 BM0026+STABILITY: SURFACE MOTION  
 BM0026\_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR  
 BM0026+SATELLITE: SATELLITE OBSERVATIONS - February 01, 2004  
 BM0026  
 BM0026 HISTORY - Date Condition Report By

BM0026 HISTORY - 1935 MONUMENTED CGS  
 BM0026 HISTORY - 1939 GOOD CGS  
 BM0026 HISTORY - 1944 GOOD CGS  
 BM0026 HISTORY - 20040201 GOOD GEOCAC

BM0026  
 BM0026 STATION DESCRIPTION  
 BM0026

BM0026'DESCRIBED BY COAST AND GEODETIC SURVEY 1939  
 BM0026'2.6 MI SE FROM COLLEGE STATION.  
 BM0026'2.6 MILES SOUTHEAST ALONG THE TEXAS AND NEW ORLEANS RAILROAD FROM THE  
 BM0026'STATION AT COLLEGE STATION, BRAZOS COUNTY, ABOUT 110 YARDS NORTHWEST  
 BM0026'OF MILEPOST 92, 34 YARDS WEST OF THE CENTERLINE OF THE TRACK, 11 YARDS  
 BM0026'WEST OF THE CENTERLINE OF MILLICAN ROAD, AND 6 YARDS SOUTH OF THE  
 BM0026'CENTER OF THE JUNCTION OF A ROAD LEADING WEST. A STANDARD DISK,  
 BM0026'STAMPED W 313 1935 AND SET IN THE TOP OF A CONCRETE POST.

BM0026  
 BM0026 STATION RECOVERY (1944)  
 BM0026

BM0026'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1944  
 BM0026'RECOVERED IN GOOD CONDITION.

BM0026  
 BM0026 STATION RECOVERY (2004)  
 BM0026

BM0026'RECOVERY NOTE BY GEOCACHING 2004 (DMW)  
 BM0026'MILLICAN ROAD IS NOW NAMED OLD WELLBORN ROAD. THE ROAD LEADING WEST IS  
 BM0026'NOW NAMED CAIN ROAD.

1 National Geodetic Survey, Retrieval Date = AUGUST 3, 2012

BM0134 \*\*\*\*\*

BM0134 DESIGNATION - S 313  
 BM0134 PID - **BM0134**  
 BM0134 STATE/COUNTY- TX/BRAZOS  
 BM0134 COUNTRY - US  
 BM0134 USGS QUAD - CLAY (1980)

BM0134  
 BM0134 \*CURRENT SURVEY CONTROL

BM0134  
 BM0134\* NAD 83(1986) POSITION- 30 29 08. (N) 096 15 28. (W) SCALED  
 BM0134\* [NAVD 88](#) ORTHO HEIGHT - 87.99 (+/-2cm) 288.7 (feet) VERTCON

BM0134  
 BM0134 GEOID HEIGHT - -26.99 (meters) GEOID12  
 BM0134 VERT ORDER - SECOND CLASS 0 (See Below)

BM0134  
 BM0134.The horizontal coordinates were scaled from a topographic map and have  
 BM0134.an estimated accuracy of +/- 6 seconds.  
 BM0134.

BM0134.The NAVD 88 height was computed by applying the VERTCON shift value to  
 BM0134.the NGVD 29 height (displayed under SUPERSEDED SURVEY CONTROL.)

BM0134  
 BM0134.The vertical order pertains to the NGVD 29 superseded value.

BM0134  
 BM0134;  
 BM0134;SPC TX C North East Units Estimated Accuracy  
 - 3,097,950. 1,091,190. MT (+/- 180 meters Scaled)

BM0134  
 BM0134 SUPERSEDED SURVEY CONTROL

BM0134  
 BM0134 NGVD 29 (??/??/92) 87.962 (m) 288.59 (f) ADJ UNCH 2 0

BM0134  
 BM0134.Superseded values are not recommended for survey control.

BM0134  
 BM0134.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.  
 BM0134.[See file dsdata.txt](#) to determine how the superseded data were derived.

BM0134  
 BM0134\_U.S. NATIONAL GRID SPATIAL ADDRESS: 14RQU632757(NAD 83)

BM0134

BM0134\_MARKER: DB = BENCH MARK DISK

BM0134\_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

BM0134\_SP\_SET: SET IN TOP OF CONCRETE MONUMENT

BM0134\_STAMPING: S 313 1935

BM0134\_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

BM0134+STABILITY: SURFACE MOTION

BM0134

BM0134	HISTORY	- Date	Condition	Report By
BM0134	HISTORY	- 1935	MONUMENTED	CGS
BM0134	HISTORY	- 1939	GOOD	CGS
BM0134	HISTORY	- 1944	GOOD	CGS
BM0134	HISTORY	- 19910714	MARK NOT FOUND	USPSQD

BM0134

BM0134 STATION DESCRIPTION

BM0134

BM0134'DESCRIBED BY COAST AND GEODETIC SURVEY 1939

BM0134'4.6 MI SE FROM WELLBORN.

BM0134'4.6 MILES SOUTHEAST ALONG THE TEXAS AND NEW ORLEANS RAILROAD FROM THE  
 BM0134'STATION AT WELLBORN, BRAZOS COUNTY, 19 YARDS NORTHEAST OF MILEPOST 84,  
 BM0134'15 YARDS NORTHWEST OF THE CENTER OF A ROAD CROSSING, 14 YARDS  
 BM0134'SOUTHWEST OF THE CENTERLINE OF MILLICAN ROAD, AND 11 YARDS NORTHEAST  
 BM0134'OF THE CENTERLINE OF THE TRACK. A STANDARD DISK, STAMPED S 313 1935  
 BM0134'AND SET IN THE TOP OF A CONCRETE POST.

BM0134

BM0134 STATION RECOVERY (1944)

BM0134

BM0134'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1944

BM0134'RECOVERED IN GOOD CONDITION.

BM0134

BM0134 STATION RECOVERY (1991)

BM0134

BM0134'RECOVERY NOTE BY US POWER SQUADRON 1991 (RAL)

BM0134'MARK NOT FOUND.

\*\*\* retrieval complete.

Elapsed Time = 00:00:02

# The NGS Data Sheet

See file [dsdata.txt](#) for more information about the datasheet.

```

PROGRAM = datasheet95, VERSION = 7.89.2
1      National Geodetic Survey,  Retrieval Date = AUGUST  3, 2012
BM0027 *****
BM0027 DESIGNATION - 349.638
BM0027 PID - BM0027
BM0027 STATE/COUNTY- TX/BRAZOS
BM0027 COUNTRY - US
BM0027 USGS QUAD - WELLBORN (1980)
BM0027
BM0027 *CURRENT SURVEY CONTROL
BM0027
BM0027* NAD 83(1986) POSITION- 30 36 46. (N) 096 20 41. (W) SCALED
BM0027* NAVD 88 ORTHO HEIGHT - 107.28 (+/-2cm) 352.0 (feet) VERTCON
BM0027
BM0027 GEOID HEIGHT - -26.69 (meters) GEOID12
BM0027 VERT ORDER - SECOND CLASS 0 (See Below)
BM0027
BM0027.The horizontal coordinates were scaled from a topographic map and have
BM0027.an estimated accuracy of +/- 6 seconds.
BM0027.
BM0027.The NAVD 88 height was computed by applying the VERTCON shift value to
BM0027.the NGVD 29 height (displayed under SUPERSEDED SURVEY CONTROL.)
BM0027
BM0027.The vertical order pertains to the NGVD 29 superseded value.
BM0027
BM0027; North East Units Estimated Accuracy
BM0027;SPC TX C - 3,111,740. 1,082,340. MT (+/- 180 meters Scaled)
BM0027
BM0027 SUPERSEDED SURVEY CONTROL
BM0027
BM0027 NGVD 29 (??/??/92) 107.248 (m) 351.86 (f) ADJ UNCH 2 0
BM0027
BM0027.Superseded values are not recommended for survey control.
BM0027
BM0027.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
BM0027.See file dsdata.txt to determine how the superseded data were derived.
BM0027
BM0027_U.S. NATIONAL GRID SPATIAL ADDRESS: 14RQU545896(NAD 83)
BM0027
BM0027_MARKER: DD = SURVEY DISK
BM0027_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT
BM0027_SP_SET: SET IN TOP OF CONCRETE MONUMENT
BM0027_STAMPING: 349.638
BM0027_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO
BM0027+STABILITY: SURFACE MOTION
BM0027
BM0027 HISTORY - Date Condition Report By
BM0027 HISTORY - UNK MONUMENTED LOCENG
BM0027 HISTORY - 1935 GOOD CGS
BM0027 HISTORY - 1963 GOOD CGS
BM0027
BM0027 STATION DESCRIPTION
BM0027
BM0027'DESCRIBED BY COAST AND GEODETIC SURVEY 1935
BM0027'IN COLLEGE STATION.

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BM0027'AT COLLEGE STATION, BRAZOS COUNTY, ABOUT 200 YARDS EAST OF THE  
 BM0027'CENTERLINE OF THE TEXAS AND NEW ORLEANS RAILROAD TRACK, AT THE WEST  
 BM0027'ENTRANCE TO THE CAMPUS OF THE TEXAS A. AND M. COLLEGE, NEAR THE WEST  
 BM0027'END OF THE PARKWAY BETWEEN DRIVES, AND 3 FEET WEST OF A WORLD WAR  
 BM0027'MONUMENT. A TEXAS A. AND M. COLLEGE STANDARD DISK, STAMPED 349.638  
 BM0027'AND SET IN THE TOP OF A CONCRETE POST.

BM0027

BM0027 STATION RECOVERY (1963)

BM0027

BM0027'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1963

BM0027'RECOVERED IN GOOD CONDITION.

1 National Geodetic Survey, Retrieval Date = AUGUST 3, 2012

BM0028 \*\*\*\*\*

BM0028 DESIGNATION - A AND M COLLEGE

BM0028 PID - **BM0028**

BM0028 STATE/COUNTY- TX/BRAZOS

BM0028 COUNTRY - US

BM0028 USGS QUAD - WELLBORN (1980)

BM0028

BM0028 \*CURRENT SURVEY CONTROL

BM0028

BM0028\* NAD 83(1986) POSITION- 30 36 55.92 (N) 096 20 27.60 (W) HD\_HELD1

BM0028\* NAVD 88 ORTHO HEIGHT - 110.04 (+/-2cm) 361.0 (feet) VERTCON

BM0028

BM0028 GEOID HEIGHT - -26.69 (meters) GEOID12

BM0028 VERT ORDER - SECOND CLASS 0 (See Below)

BM0028

BM0028.The horizontal coordinates were established by differentially corrected  
 BM0028.hand held GPS obs and have an estimated accuracy of +/- 3 meters.

BM0028.

BM0028.The NAVD 88 height was computed by applying the VERTCON shift value to  
 BM0028.the NGVD 29 height (displayed under SUPERSEDED SURVEY CONTROL.)

BM0028

BM0028.The vertical order pertains to the NGVD 29 superseded value.

BM0028

BM0028; North East Units Estimated Accuracy

BM0028;SPC TX C - 3,112,054.8 1,082,687.2 MT (+/- 3 meters HH1 GPS)

BM0028

BM0028 SUPERSEDED SURVEY CONTROL

BM0028

BM0028 NGVD 29 (??/??/92) 110.012 (m) 360.93 (f) ADJ UNCH 2 0

BM0028

BM0028.Superseded values are not recommended for survey control.

BM0028

BM0028.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

BM0028.[See file dsdata.txt](#) to determine how the superseded data were derived.

BM0028

BM0028\_U.S. NATIONAL GRID SPATIAL ADDRESS: 14RQU5490190008(NAD 83)

BM0028

BM0028\_MARKER: DB = BENCH MARK DISK

BM0028\_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

BM0028\_SP\_SET: SET IN TOP OF CONCRETE MONUMENT

BM0028\_STAMPING: A AND M COLLEGE 1935

BM0028\_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

BM0028+STABILITY: SURFACE MOTION

BM0028\_SATELLITE: THE SITE LOCATION WAS REPORTED AS NOT SUITABLE FOR

BM0028+SATELLITE: SATELLITE OBSERVATIONS - April 11, 2010

BM0028

BM0028 HISTORY - Date Condition Report By

BM0028 HISTORY - 1935 MONUMENTED CGS

BM0028 HISTORY - 1963 GOOD CGS

BM0028 HISTORY - 1979 GOOD NGS

BM0028 HISTORY - 19940820 GOOD USPSQD

BM0028 HISTORY - 20021006 GOOD INDIV  
 BM0028 HISTORY - 20100411 GOOD GEOCAC

BM0028  
 BM0028 STATION DESCRIPTION

BM0028 'DESCRIBED BY COAST AND GEODETIC SURVEY 1963  
 BM0028 'IN COLLEGE STATION.  
 BM0028 'AT COLLEGE STATION, BRAZOS COUNTY, ON THE CAMPUS OF THE TEXAS A. AND  
 BM0028 'M. COLLEGE, 60 YARDS NORTH OF THE CIVIL ENGINEERING BUILDING, 22 YARDS  
 BM0028 'WEST OF THE ACADEMIC BUILDING, 16 YARDS SOUTHEAST OF THE LAWRENCE  
 BM0028 'SULLIVAN ROSS STATUE, AND AT THE WEST EDGE OF A NORTH-AND-SOUTH  
 BM0028 'SIDEWALK. A STANDARD DISK, STAMPED A. AND M. COLLEGE 1935 AND SET IN  
 BM0028 'THE TOP OF A CONCRETE POST. NOTE-- WITH THESE EXCEPTIONS, THE  
 BM0028 'SIDEWALKS HAVE BEEN REALIGNED AND THEY COVER A LARGER AREA AROUND THE  
 BM0028 'MARK, AND THE MARK NOW SETS IN THE SIDEWALK AREA AND IS COVERED BY A  
 BM0028 '20 INCH STEEL COVER.

BM0028  
 BM0028 STATION RECOVERY (1979)

BM0028 'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1979  
 BM0028 'RECOVERED IN GOOD CONDITION.

BM0028  
 BM0028 STATION RECOVERY (1994)

BM0028 'RECOVERY NOTE BY US POWER SQUADRON 1994  
 BM0028 'RECOVERED IN GOOD CONDITION.

BM0028  
 BM0028 STATION RECOVERY (2002)

BM0028 'RECOVERY NOTE BY INDIVIDUAL CONTRIBUTORS 2002 (FG)  
 BM0028 'RECOVERED IN GOOD CONDITION.

BM0028  
 BM0028 STATION RECOVERY (2010)

BM0028 'RECOVERY NOTE BY GEOCACHING 2010 (LPC)  
 BM0028 'RECOVERED IN GOOD CONDITION.

1 National Geodetic Survey, Retrieval Date = AUGUST 3, 2012

BM0030 \*\*\*\*\*

BM0030 DESIGNATION - S 1181  
 BM0030 PID - **BM0030**  
 BM0030 STATE/COUNTY- TX/BRAZOS  
 BM0030 COUNTRY - US  
 BM0030 USGS QUAD - WELLBORN (1980)

BM0030  
 BM0030 \*CURRENT SURVEY CONTROL

BM0030 \* NAD 83(1986) POSITION- 30 36 11. (N) 096 21 11. (W) SCALED

BM0030 \* [NAVD 88](#) ORTHO HEIGHT - 97.10 (+/-2cm) 318.6 (feet) VERTCON

BM0030  
 BM0030 GEOID HEIGHT - -26.70 (meters) GEOID12

BM0030 VERT ORDER - SECOND CLASS 0 (See Below)

BM0030 .The horizontal coordinates were scaled from a topographic map and have  
 BM0030 .an estimated accuracy of +/- 6 seconds.

BM0030 .  
 BM0030 .The NAVD 88 height was computed by applying the VERTCON shift value to  
 BM0030 .the NGVD 29 height (displayed under SUPERSEDED SURVEY CONTROL.)

BM0030  
 BM0030 .The vertical order pertains to the NGVD 29 superseded value.

BM0030  
 BM0030 ;  
 BM0030 ;SPC TX C - 3,110,630. North East Units Estimated Accuracy  
 BM0030 MT (+/- 180 meters Scaled)

BM0030 SUPERSEDED SURVEY CONTROL  
 BM0030  
 BM0030 NGVD 29 (??/??/92) 97.067 (m) 318.46 (f) ADJ UNCH 2 0  
 BM0030  
 BM0030.Superseded values are not recommended for survey control.  
 BM0030  
 BM0030.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.  
 BM0030.[See file dsdata.txt](#) to determine how the superseded data were derived.  
 BM0030  
 BM0030\_U.S. NATIONAL GRID SPATIAL ADDRESS: 14RQU537885(NAD 83)  
 BM0030  
 BM0030\_MARKER: DB = BENCH MARK DISK  
 BM0030\_SETTING: 30 = SET IN A LIGHT STRUCTURE  
 BM0030\_SP\_SET: SEWER DUCT  
 BM0030\_STAMPING: S 1181 1963  
 BM0030\_STABILITY: D = MARK OF QUESTIONABLE OR UNKNOWN STABILITY  
 BM0030  
 BM0030 HISTORY - Date Condition Report By  
 BM0030 HISTORY - 1963 MONUMENTED CGS  
 BM0030 HISTORY - 1975 GOOD NGS  
 BM0030 HISTORY - 1979 GOOD NGS  
 BM0030 HISTORY - 19940820 MARK NOT FOUND USPSQD  
 BM0030  
 BM0030 STATION DESCRIPTION  
 BM0030  
 BM0030'DESCRIBED BY COAST AND GEODETIC SURVEY 1963  
 BM0030'1.0 MI W FROM COLLEGE STATION.  
 BM0030'FROM THE POST OFFICE IN COLLEGE STATION, GO SOUTHWEST ALONG FARM ROAD  
 BM0030'60 FOR 1 MILE TO TEXAS A AND M COLLEGE POULTRY CENTER AT T ROAD  
 BM0030'INTERSECTION. TURN LEFT AND GO .35 MILES TO T ROAD INTERSECTION. TURN  
 BM0030'RIGHT AND GO .05 MILE. 274 FEET SOUTHEAST OF THE CENTERLINE OF THE  
 BM0030'ROAD. A STANDARD DISK STAMPED S 1181 1963 AND SET IN THE TOP OF AND  
 BM0030'NE CORNER OF A CONCRETE SEWER DUCT, PROJECTING 30 INCHES ABOVE THE  
 BM0030'GROUND.  
 BM0030  
 BM0030 STATION RECOVERY (1975)  
 BM0030  
 BM0030'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1975  
 BM0030'RECOVERED IN GOOD CONDITION.  
 BM0030  
 BM0030 STATION RECOVERY (1979)  
 BM0030  
 BM0030'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1979  
 BM0030'RECOVERED IN GOOD CONDITION.  
 BM0030  
 BM0030 STATION RECOVERY (1994)  
 BM0030  
 BM0030'RECOVERY NOTE BY US POWER SQUADRON 1994  
 BM0030'MARK NOT FOUND.  
 1 National Geodetic Survey, Retrieval Date = AUGUST 3, 2012  
 BM0031 \*\*\*\*\*  
 BM0031 DESIGNATION - P 933  
 BM0031 PID - **BM0031**  
 BM0031 STATE/COUNTY- TX/BRAZOS  
 BM0031 COUNTRY - US  
 BM0031 USGS QUAD - WELLBORN (1980)  
 BM0031  
 BM0031 \*CURRENT SURVEY CONTROL  
 BM0031  
 BM0031\* NAD 83(1986) POSITION- 30 35 30. (N) 096 21 31. (W) SCALED  
 BM0031\* [NAVD 88](#) ORTHO HEIGHT - 95.02 (+/-2cm) 311.7 (feet) VERTCON  
 BM0031  
 BM0031 GEOID HEIGHT - -26.71 (meters) GEOID12

BM0031 VERT ORDER - SECOND CLASS 0 (See Below)  
 BM0031  
 BM0031.This mark is at Easterwood Fld (CLL) Airport (CLL)  
 BM0031  
 BM0031.The horizontal coordinates were scaled from a topographic map and have  
 BM0031.an estimated accuracy of +/- 6 seconds.  
 BM0031.  
 BM0031.The NAVD 88 height was computed by applying the VERTCON shift value to  
 BM0031.the NGVD 29 height (displayed under SUPERSEDED SURVEY CONTROL.)  
 BM0031  
 BM0031.The vertical order pertains to the NGVD 29 superseded value.  
 BM0031  
 BM0031;  
 BM0031;SPC TX C - 3,109,350. 1,081,090. MT (+/- 180 meters Scaled)  
 BM0031  
 BM0031 SUPERSEDED SURVEY CONTROL  
 BM0031  
 BM0031 NGVD 29 (??/??/92) 94.983 (m) 311.62 (f) ADJ UNCH 2 0  
 BM0031  
 BM0031.Superseded values are not recommended for survey control.  
 BM0031  
 BM0031.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.  
 BM0031.[See file dsdata.txt](#) to determine how the superseded data were derived.  
 BM0031  
 BM0031\_U.S. NATIONAL GRID SPATIAL ADDRESS: 14RQU532873(NAD 83)  
 BM0031  
 BM0031\_MARKER: DB = BENCH MARK DISK  
 BM0031\_SETTING: 30 = SET IN A LIGHT STRUCTURE  
 BM0031\_SP\_SET: CONCRETE RIM  
 BM0031\_STAMPING: P 933 1953  
 BM0031\_STABILITY: D = MARK OF QUESTIONABLE OR UNKNOWN STABILITY  
 BM0031  
 BM0031 HISTORY - Date Condition Report By  
 BM0031 HISTORY - 1953 MONUMENTED CGS  
 BM0031 HISTORY - 1963 GOOD CGS  
 BM0031 HISTORY - 19940820 MARK NOT FOUND USPSQD  
 BM0031  
 BM0031 STATION DESCRIPTION  
 BM0031  
 BM0031'DESCRIBED BY COAST AND GEODETIC SURVEY 1963  
 BM0031'2.0 MI SW FROM COLLEGE STATION.  
 BM0031'1.4 MILES SOUTHWEST ON FARM ROAD 60, FROM THE CROSSING OF THE SOUTHERN  
 BM0031'PACIFIC RAILROAD AND FARM ROAD 60 AT COLLEGE STATION, TEXAS. TURN LEFT  
 BM0031'SE FOR 0.8 MILE TO MAIN HANGAR AT EASTERWOOD FIELD. BENCH MARK  
 BM0031'LOCATED IN CENTER OF S EDGE OF CONCRETE RIM OF SQUARE DRAIN. 124 FEET  
 BM0031'S OF SW LEG OF THE CONTROL TOWER AND 60 FEET NW OF THE SW CORNER OF  
 BM0031'THE HANGAR. A STANDARD DISK, STAMPED P 933 1953.  
 BM0031  
 BM0031 STATION RECOVERY (1994)  
 BM0031  
 BM0031'RECOVERY NOTE BY US POWER SQUADRON 1994  
 BM0031'MARK NOT FOUND.  
 1 National Geodetic Survey, Retrieval Date = AUGUST 3, 2012  
 BM0032 \*\*\*\*\*  
 BM0032 DESIGNATION - P 933 RESET 1972  
 BM0032 PID - **BM0032**  
 BM0032 STATE/COUNTY- TX/BRAZOS  
 BM0032 COUNTRY - US  
 BM0032 USGS QUAD - WELLBORN (1980)  
 BM0032  
 BM0032 \*CURRENT SURVEY CONTROL  
 BM0032  
 BM0032\* NAD 83(1986) POSITION- 30 35 30. (N) 096 21 31. (W) SCALED

BM0032\* [NAVD 88](#) ORTHO HEIGHT - 95.48 (+/-2cm) 313.3 (feet) VERTCON  
 BM0032

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BM0032 GEOID HEIGHT - -26.71 (meters) GEOID12  
 BM0032 VERT ORDER - THIRD (See Below)  
 BM0032

BM0032.This mark is at Easterwood Fld (CLL) Airport (CLL)  
 BM0032

BM0032.The horizontal coordinates were scaled from a topographic map and have  
 BM0032.an estimated accuracy of +/- 6 seconds.  
 BM0032.

BM0032.The NAVD 88 height was computed by applying the VERTCON shift value to  
 BM0032.the NGVD 29 height (displayed under SUPERSEDED SURVEY CONTROL.)  
 BM0032

BM0032.The vertical order pertains to the NGVD 29 superseded value.  
 BM0032

BM0032;	North	East	Units	Estimated Accuracy
BM0032;SPC TX C	- 3,109,350.	1,081,090.	MT	(+/- 180 meters Scaled)

BM0032  
 BM0032 SUPERSEDED SURVEY CONTROL  
 BM0032

BM0032	NGVD 29 (01/29/03)	95.45 (m)	313.2 (f)	RESET	3
BM0032					

BM0032.Superseded values are not recommended for survey control.  
 BM0032

BM0032.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.  
 BM0032.[See file dsdata.txt](#) to determine how the superseded data were derived.  
 BM0032

BM0032\_U.S. NATIONAL GRID SPATIAL ADDRESS: 14RQU532873(NAD 83)  
 BM0032

BM0032\_MARKER: DB = BENCH MARK DISK  
 BM0032\_SETTING: 30 = SET IN A LIGHT STRUCTURE  
 BM0032\_SP\_SET: CONCRETE RM  
 BM0032\_STAMPING: P 933 RESET 1972  
 BM0032\_STABILITY: D = MARK OF QUESTIONABLE OR UNKNOWN STABILITY  
 BM0032\_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR  
 BM0032+SATELLITE: SATELLITE OBSERVATIONS - October 06, 2002  
 BM0032

BM0032	HISTORY	- Date	Condition	Report By
BM0032	HISTORY	- 1972	MONUMENTED	NGS
BM0032	HISTORY	- 1975	GOOD	NGS
BM0032	HISTORY	- 1979	GOOD	NGS
BM0032	HISTORY	- 20021006	GOOD	INDIV

BM0032

BM0032 STATION DESCRIPTION  
 BM0032

BM0032'DESCRIBED BY NATIONAL GEODETIC SURVEY 1975  
 BM0032'2.0 MI SW FROM COLLEGE STATION.  
 BM0032'AT EASTERWOOD FIELD AIRPORT, THE MARK IS LOCATED IN THE CENTER OF S  
 BM0032'EDGE OF CONCRETE RIM OF A SQUARE DRAIN IN THE APRON 60 FEET NW OF THE  
 BM0032'SW CORNER OF A HANGER. 124 FEET S OF THE SW LEG OF THE CONTROL TOWER.  
 BM0032'NOTE-- A NEW CONTROL IS TO BE BUILT AND THE MARK WILL BE ABOUT 400  
 BM0032'FEET NW OF THE NEW CONTROL TOWER.  
 BM0032

BM0032 STATION RECOVERY (1979)  
 BM0032

BM0032'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1979  
 BM0032'FROM THE CROSSING OF FARM ROAD 60 AND THE SOUTHERN PACIFIC RAILROAD  
 BM0032'AT COLLEGE STATION, GO SOUTHWEST ON FARM ROAD 60 1.4 MILES TO FARM  
 BM0032'ROAD 2818. TURN LEFT AND GO ABOUT 1 MILE TO FARM ROAD 2347. TURN  
 BM0032'RIGHT AND GO 0.3 MILE TO THE MAIN HANGAR AT EASTERWOOD FIELD. BENCH  
 BM0032'MARK LOCATED IN THE CENTER OF S EDGE OF CONCRETE RIM OF SQUARE DRAIN.  
 BM0032'60 FEET NW OF SW CORNER OF MAIN HANGAR. A STANDARD DISK STAMPED P 933  
 BM0032'RESET 1972. THE PRESENTLY CARRIED ELEVATION OF 313.143 FT. IS WRONG

BM0032'BY 1 FT. AND SHOULD BE ABOUT 312.143 FT.  
 BM0032  
 BM0032 STATION RECOVERY (2002)  
 BM0032  
 BM0032'RECOVERY NOTE BY INDIVIDUAL CONTRIBUTORS 2002 (FG)  
 BM0032'RECOVERED IN GOOD CONDITION.  
 1 National Geodetic Survey, Retrieval Date = AUGUST 3, 2012  
 BM0033 \*\*\*\*\*  
 BM0033 PACS - This is a Primary Airport Control Station.  
 BM0033 DESIGNATION - CLL ARP 2  
 BM0033 PID - **BM0033**  
 BM0033 STATE/COUNTY- TX/BRAZOS  
 BM0033 COUNTRY - US  
 BM0033 USGS QUAD - WELLBORN (1980)  
 BM0033  
 BM0033 \*CURRENT SURVEY CONTROL  
 BM0033  
 BM0033\* NAD 83(2011) POSITION- 30 35 20.04551(N) 096 21 55.04928(W) ADJUSTED  
 BM0033\* NAD 83(2011) ELLIP HT- 68.142 (meters) (06/27/12) ADJUSTED  
 BM0033\* NAD 83(2011) EPOCH - 2010.00  
 BM0033\* [NAVD 88](#) ORTHO HEIGHT - 94.96 (meters) 311.5 (feet) GPS OBS  
 BM0033  
 BM0033 NAVD 88 orthometric height was determined with geoid model GEOID93  
 BM0033 GEOID HEIGHT - -27.08 (meters) GEOID93  
 BM0033 GEOID HEIGHT - -26.71 (meters) GEOID12  
 BM0033 NAD 83(2011) X - -609,256.155 (meters) COMP  
 BM0033 NAD 83(2011) Y - -5,461,505.667 (meters) COMP  
 BM0033 NAD 83(2011) Z - 3,226,777.358 (meters) COMP  
 BM0033 LAPLACE CORR - -1.15 (seconds) DEFLECO9  
 BM0033  
 BM0033 FGDC Geospatial Positioning Accuracy Standards (95% confidence, cm)  
 BM0033 Type Horiz Ellip Dist(km)  
 BM0033 -----  
 BM0033 NETWORK 1.91 2.02  
 BM0033 -----  
 BM0033 MEDIAN LOCAL ACCURACY AND DIST (009 points) 1.28 1.90 33.87  
 BM0033 -----  
 BM0033 NOTE: Click [here](#) for information on individual local accuracy  
 BM0033 values and other accuracy information.  
 BM0033  
 BM0033  
 BM0033.This mark is at Easterwood Fld (CLL) Airport (CLL)  
 BM0033  
 BM0033.The horizontal coordinates were established by GPS observations  
 BM0033.and adjusted by the National Geodetic Survey in June 2012.  
 BM0033  
 BM0033.NAD 83(2011) refers to NAD 83 coordinates where the reference  
 BM0033.frame has been affixed to the stable North American tectonic plate. See  
 BM0033.[www.ngs.noaa.gov/web/surveys/NA2011](http://www.ngs.noaa.gov/web/surveys/NA2011) for more information.  
 BM0033  
 BM0033.The horizontal coordinates are valid at the epoch date displayed above  
 BM0033.which is a decimal equivalence of Year/Month/Day.  
 BM0033  
 BM0033.The orthometric height was determined by GPS observations and a  
 BM0033.high-resolution geoid model.  
 BM0033  
 BM0033.GPS derived orthometric heights for airport stations designated as  
 BM0033.PACS or SACS are published to 2 decimal places. This maintains  
 BM0033.centimeter relative accuracy between the PACS and SACS. It does  
 BM0033.not indicate centimeter accuracy relative to other marks which are  
 BM0033.part of the NAVD 88 network.  
 BM0033  
 BM0033  
 BM0033.[Photographs](#) are available for this station.

BM0033

BM0033.The X, Y, and Z were computed from the position and the ellipsoidal ht.

BM0033

BM0033.The Laplace correction was computed from DEFLEC09 derived deflections.

BM0033

BM0033.The ellipsoidal height was determined by GPS observations

BM0033.and is referenced to NAD 83.

BM0033

BM0033. The following values were computed from the NAD 83(2011) position.

BM0033

BM0033;	North	East	Units	Scale Factor	Converg.
BM0033;SPC TX C	- 3,109,021.202	1,080,464.976	MT	0.99990749	+2 02 37.6
BM0033;SPC TX C	-10,200,180.39	3,544,825.51	sFT	0.99990749	+2 02 37.6
BM0033;UTM 14	- 3,387,000.587	752,641.029	MT	1.00038746	+1 20 29.2

BM0033

BM0033! - Elev Factor x Scale Factor = Combined Factor

BM0033!SPC TX C - 0.99998930 x 0.99990749 = 0.99989679

BM0033!UTM 14 - 0.99998930 x 1.00038746 = 1.00037675

BM0033

BM0033:	Primary Azimuth Mark	Grid Az
BM0033:SPC TX C	- CLL AP STA A	106 45 12.0
BM0033:UTM 14	- CLL AP STA A	107 27 20.4

BM0033

BM0033	PID	Reference Object	Distance	Geod. Az
BM0033			ddmmss.s	
BM0033	BM1143	CLL AP STA A	APPROX. 0.8 KM	1084749.6
BM0033	BM1144	CLL AP STA B	APPROX. 0.8 KM	2884630.6

BM0033

BM0033

## SUPERSEDED SURVEY CONTROL

BM0033

BM0033	NAD 83(2007)-	30 35 20.04556(N)	096 21 55.04996(W)	AD( ) 0
BM0033	ELLIP H (02/10/07)	68.155 (m)		GP( )
BM0033	ELLIP H (10/24/00)	68.178 (m)		GP( ) 4 2
BM0033	NAD 83(1993)-	30 35 20.04540(N)	096 21 55.04974(W)	AD( ) B
BM0033	ELLIP H (02/20/96)	68.221 (m)		GP( ) 1 1
BM0033	NAD 83(1993)-	30 35 20.04568(N)	096 21 55.04562(W)	AD( ) 2
BM0033	NAD 83(1986)-	30 35 20.06086(N)	096 21 55.02752(W)	AD( ) 2
BM0033	NGVD 29 (??/??/92)	94.746 (m)	310.85 (f)	ADJ UNCH 2 0

BM0033

BM0033.Superseded values are not recommended for survey control.

BM0033

BM0033.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

BM0033.[See file dsdata.txt](#) to determine how the superseded data were derived.

BM0033

BM0033\_U.S. NATIONAL GRID SPATIAL ADDRESS: 14RQU5264187000(NAD 83)

BM0033

BM0033\_MARKER: DT = TOPOGRAPHIC STATION DISK

BM0033\_SETTING: 9 = SET IN PREFABRICATED CONCRETE POST IMBEDDED IN GROUND

BM0033\_SP\_SET: CONCRETE POST

BM0033\_STAMPING: ARP 2 1963

BM0033\_MARK LOGO: CGS

BM0033\_MAGNETIC: N = NO MAGNETIC MATERIAL

BM0033\_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

BM0033+STABILITY: SURFACE MOTION

BM0033\_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

BM0033+SATELLITE: SATELLITE OBSERVATIONS - June 22, 2005

BM0033

BM0033	HISTORY	- Date	Condition	Report By
BM0033	HISTORY	- 1963	MONUMENTED	CGS
BM0033	HISTORY	- 1982	GOOD	USGS
BM0033	HISTORY	- 19910615	GOOD	NGS

BM0033 HISTORY - 19921029 GOOD NOS  
 BM0033 HISTORY - 19950227 GOOD NGS  
 BM0033 HISTORY - 20030312 GOOD NGS  
 BM0033 HISTORY - 20050622 GOOD JCLS

BM0033

BM0033 STATION DESCRIPTION

BM0033

BM0033'DESCRIBED BY COAST AND GEODETIC SURVEY 1963

BM0033'2.0 MI SW FROM COLLEGE STATION.

BM0033'2 MILES SOUTHWEST OF COLLEGE STATION ON THE PROPERTY OF EASTERWOOD

BM0033'AIRPORT AND AT THE GEOMETRIC CENTER OF THE AIRPORT. MIDWAY BETWEEN

BM0033'THE ENDS OF THE EAST-WEST RUNWAY AND SOUTH OF THE RUNWAY. 146.0 FEET

BM0033'N OF A FENCE CORNER. 45.8 FEET SE OF RUNWAY LIGHT NO. 33. 49.9 FEET

BM0033'S OF THE S EDGE OF THE RUNWAY. A STANDARD TOPO DISK, STAMPED ARP 2

BM0033'1963, SET IN THE TOP OF A 10 INCH CONCRETE POST PROJECTING 1 INCH

BM0033'ABOVE THE GROUND.

BM0033

BM0033 STATION RECOVERY (1982)

BM0033

BM0033'RECOVERY NOTE BY US GEOLOGICAL SURVEY 1982

BM0033'NEW DESC: 2 MILES SOUTHWEST OF COLLEGE STATION ON THE PROPERTY OF

BM0033'EASTERWOOD FIELD AIRPORT AT THE GEOMETRIC CENTER OF THE AIRPORT. IT

BM0033'IS AT THE MID POINT OF RUNWAY 10/28 AND SOUTH OF THE RUNWAY, 146 FEET

BM0033'NORTH OF A FENCE CORNER, 87.0 FEET SOUTHEAST OF THE CENTERLINE

BM0033'EXTENDED OF THE TAXIWAY TO THE SOUTHWEST, 49.9 FEET SOUTH OF THE

BM0033'SOUTH EDGE OF THE RUNWAY AND 45.8 FEET SOUTH OF A RUNWAY LIGHT. A

BM0033'STANDARD TOPOGRAPHICAL DISK STAMPED 'ARP 2 1963', SET IN THE TOP OF A

BM0033'10 INCH CONCRETE POST WHICH IS FLUSH WITH THE SURFACE OF THE GROUND.

BM0033

BM0033 STATION RECOVERY (1991)

BM0033

BM0033'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1991

BM0033'THE STATION IS LOCATED AT THE CENTER OF EASTERWOOD FIELD SOUTH OF

BM0033'RUNWAY 10/28. IT IS 146 FT (44.5 M) NORTH OF A FENCE CORNER, 87.0 FT

BM0033'(26.5 M) SOUTHEAST OF THE CENTERLINE EXTENDED OF THE TAXIWAY TO THE

BM0033'SOUTHWEST, 49.9 FT (15.2 M) SOUTH OF THE SOUTH EDGE OF THE RUNWAY AND

BM0033'45.8 FT (14.0 M) SOUTH OF A RUNWAY LIGHT. A STANDARD TOPOGRAPHIC DISK

BM0033'STAMPED ARP 2 1963 SET IN THE TOP OF A CONCRETE POST WHICH IS FLUSH

BM0033'WITH THE GROUNDS SURFACE.

BM0033

BM0033 STATION RECOVERY (1992)

BM0033

BM0033'RECOVERY NOTE BY NATIONAL OCEAN SERVICE 1992

BM0033'RECOVERED IN GOOD CONDITION.

BM0033

BM0033 STATION RECOVERY (1995)

BM0033

BM0033'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1995 (AJL)

BM0033'THE STATION IS LOCATED ON THE SOUTHWEST SIDE OF COLLEGE STATION AT

BM0033'EASTERWOOD FIELD, IN GRASS ADJACENT TO A ROW OF TREES, IN THE SOUTH

BM0033'QUADRANT OF THE JUNCTION OF RUNWAY 10-28 AND THE PARALLEL TAXI FOR

BM0033'RUNWAY 4-22, AND AT MIDFIELD. OWNERSHIP--TEXAS A AND M UNIVERSITY,

BM0033'MCKENZIE TERMINAL BUILDING NUMBER 7, COLLEGE STATION, TX 77845.

BM0033'CONTACT JIM ALLEN, OPERATIONS SUPERVISOR, OR RICHARD ARNOLD, ASSOCIATE

BM0033'DIRECTOR AT 409-845-4811 TWO DAYS IN ADVANCE TO ARRANGE FOR AN ESCORT

BM0033'TO THIS STATION. TO REACH FROM THE UNDERPASS AT THE JUNCTION OF STATE

BM0033'HIGHWAY 60 AND FARM ROAD 2818 ON THE SOUTHWEST SIDE OF COLLEGE

BM0033'STATION, GO SOUTHEAST ON FARM ROAD 2818 FOR 1.45 KM (0.90 MI) TO A

BM0033'PAVED CROSSROAD (FARM ROAD 2347) . TURN RIGHT, WEST-SOUTHWEST, ON

BM0033'FARM ROAD 2347 FOR 0.41 KM (0.25 MI) TO A PAVED ROAD LEFT JUST BEFORE

BM0033'A GATE AT GENERAL AVIATION. TURN LEFT, SOUTH, ON THE PAVED ROAD FOR

BM0033'0.10 KM (0.05 MI) TO THE AIRPORT TERMINAL. AN ESCORT WILL TAKE YOU

BM0033'FROM HERE. ENTER GATE AT THE SOUTH SIDE OF THE GENERAL AVIATION

BM0033 'TERMINAL AND PROCEED SOUTHWEST TO RAMP TAXIWAY (A) . TURN RIGHT,  
 BM0033 'NORTHWEST, FOR 0.08 KM (0.05 MI) TO EAST-WEST TAXIWAY (B) . TURN LEFT  
 BM0033 'ON TAXIWAY FOR 0.5 KM (0.30 MI) CROSSING RUNWAY 16-34, TO  
 BM0033 'SOUTHWEST-NORTHEAST TAXIWAY (E) . TURN LEFT, SOUTHWEST, AND PROCEED  
 BM0033 '0.3 KM (0.20 MI) ALONG TAXIWAY, CROSSING RUNWAY 10-28, TO THE STATION  
 BM0033 'ON THE LEFT. THE STATION IS SET IN THE TOP OF A 25-CM SQUARE CONCRETE  
 BM0033 'POST SET FLUSH WITH THE GROUND. IT IS 74.6 M (244.8 FT) NORTH OF A  
 BM0033 'FENCE CORNER, 64.3 M (211.0 FT) NORTH-NORTHEAST OF THE FENCE, 38.0 M  
 BM0033 '(124.7 FT) SOUTH-SOUTHWEST OF THE CENTER OF RUNWAY 10-28, 26.5 M (86.9  
 BM0033 'FT) SOUTHEAST OF THE EXTENDED CENTER OF THE PARALLEL TAXI FOR RUNWAY  
 BM0033 '4-22, 17.3 M (56.8 FT) SOUTHWEST OF A RUNWAY LIGHT, 15.2 M (49.9 FT)  
 BM0033 'SOUTH-SOUTHWEST OF THE SOUTH EDGE OF THE RUNWAY, AND 0.3 M (1.0 FT)  
 BM0033 'NORTH OF A WITNESS POST. DESCRIBED BY D.G AUG

BM0033

BM0033 STATION RECOVERY (2003)

BM0033

BM0033 'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 2003

BM0033 'RECOVERED IN GOOD CONDITION.

BM0033

BM0033 STATION RECOVERY (2005)

BM0033

BM0033 'RECOVERY NOTE BY JOHN CHANCE LAND SURVEYS INC 2005 (FJO)

BM0033 'RECOVERED IN GOOD CONDITION.

1 National Geodetic Survey, Retrieval Date = AUGUST 3, 2012

BM1143 \*\*\*\*\*

BM1143 SACS - This is a Secondary Airport Control Station.

BM1143 DESIGNATION - CLL AP STA A

BM1143 PID - **BM1143**

BM1143 STATE/COUNTY- TX/BRAZOS

BM1143 COUNTRY - US

BM1143 USGS QUAD - WELLBORN (1980)

BM1143

BM1143 \*CURRENT SURVEY CONTROL

BM1143

BM1143\* NAD 83(2011) POSITION- 30 35 11.67889(N) 096 21 26.64032(W) ADJUSTED

BM1143\* NAD 83(2011) ELLIP HT- 67.647 (meters) (06/27/12) ADJUSTED

BM1143\* NAD 83(2011) EPOCH - 2010.00

BM1143\* [NAVD 88](#) ORTHO HEIGHT - 94.48 (meters) 310.0 (feet) GPS OBS

BM1143

BM1143 NAD 83(2011) X - -608,518.404 (meters) COMP

BM1143 NAD 83(2011) Y - -5,461,719.407 (meters) COMP

BM1143 NAD 83(2011) Z - 3,226,555.304 (meters) COMP

BM1143 LAPLACE CORR - -1.16 (seconds) DEFLECO9

BM1143 GEOID HEIGHT - -26.72 (meters) GEOID12

BM1143

BM1143 FGDC Geospatial Positioning Accuracy Standards (95% confidence, cm)

BM1143 Type Horiz Ellip Dist(km)

BM1143 -----

BM1143 NETWORK 2.14 2.49

BM1143 -----

BM1143 MEDIAN LOCAL ACCURACY AND DIST (001 points) 0.94 1.45 0.80

BM1143 -----

BM1143 NOTE: Click [here](#) for information on individual local accuracy

BM1143 values and other accuracy information.

BM1143

BM1143

BM1143.This mark is at Easterwood Fld (CLL) Airport (CLL)

BM1143

BM1143.The horizontal coordinates were established by GPS observations

BM1143.and adjusted by the National Geodetic Survey in June 2012.

BM1143

BM1143.NAD 83(2011) refers to NAD 83 coordinates where the reference

BM1143.frame has been affixed to the stable North American tectonic plate. See

BM1143.[www.ngs.noaa.gov/web/surveys/NA2011](http://www.ngs.noaa.gov/web/surveys/NA2011) for more information.

BM1143

BM1143.The horizontal coordinates are valid at the epoch date displayed above BM1143.which is a decimal equivalence of Year/Month/Day.

BM1143

BM1143.The orthometric height was determined by GPS observations and a BM1143.high-resolution geoid model.

BM1143

BM1143.GPS derived orthometric heights for airport stations designated as BM1143.PACS or SACS are published to 2 decimal places. This maintains BM1143.centimeter relative accuracy between the PACS and SACS. It does BM1143.not indicate centimeter accuracy relative to other marks which are BM1143.part of the NAVD 88 network.

BM1143

BM1143.The X, Y, and Z were computed from the position and the ellipsoidal ht.

BM1143

BM1143.The Laplace correction was computed from DEFLEC09 derived deflections.

BM1143

BM1143.The ellipsoidal height was determined by GPS observations

BM1143.and is referenced to NAD 83.

BM1143

BM1143. The following values were computed from the NAD 83(2011) position.

BM1143

BM1143;	North	East	Units	Scale Factor	Converg.
BM1143;SPC TX C	- 3,108,790.756	1,081,230.503	MT	0.99990778	+2 02 52.2
BM1143;SPC TX C	-10,199,424.34	3,547,337.08	sFT	0.99990778	+2 02 52.2
BM1143;UTM 14	- 3,386,760.658	753,404.042	MT	1.00039223	+1 20 43.4
BM1143!	- Elev Factor	x Scale Factor	=	Combined Factor	
BM1143!SPC TX C	- 0.99998938	x 0.99990778	=	0.99989716	
BM1143!UTM 14	- 0.99998938	x 1.00039223	=	1.00038160	

BM1143

BM1143:	Primary Azimuth Mark	Grid Az
BM1143:SPC TX C	- CLL AP STA B	286 44 33.0
BM1143:UTM 14	- CLL AP STA B	287 26 41.8

BM1143

BM1143	PID	Reference Object	Distance	Geod. Az
BM1143				ddmmss.s
BM1143	BM1144	CLL AP STA B	APPROX. 1.6 KM	2884725.2
BM1143	BM0033	CLL ARP 2	APPROX. 0.8 KM	2884804.1

BM1143

BM1143 SUPERSEDED SURVEY CONTROL

BM1143

BM1143	NAD 83(2007)-	30 35 11.67894(N)	096 21 26.64100(W)	AD( ) 0
BM1143	ELLIP H (02/10/07)	67.661 (m)		GP( )
BM1143	ELLIP H (02/27/01)	67.684 (m)		GP( ) 4 2
BM1143	NAD 83(1993)-	30 35 11.67878(N)	096 21 26.64077(W)	AD( ) 1
BM1143	ELLIP H (08/20/96)	67.727 (m)		GP( ) 4 2
BM1143	NAD 83(1993)-	30 35 11.67925(N)	096 21 26.63737(W)	AD( ) 2
BM1143	NAD 83(1986)-	30 35 11.69431(N)	096 21 26.61921(W)	AD( ) 2
BM1143	NGVD 29 (12/03/93)	94.22 (m)	309.1 (f)	LEVELING 3

BM1143

BM1143.Superseded values are not recommended for survey control.

BM1143

BM1143.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

BM1143.[See file dsdata.txt](#) to determine how the superseded data were derived.

BM1143

BM1143\_U.S. NATIONAL GRID SPATIAL ADDRESS: 14RQU5340486760(NAD 83)

BM1143

BM1143\_MARKER: DT = TOPOGRAPHIC STATION DISK

BM1143\_SETTING: 9 = SET IN PREFABRICATED CONCRETE POST IMBEDDED IN GROUND

BM1143\_SP\_SET: CONCRETE POST  
 BM1143\_STAMPING: AP 1963 STA A  
 BM1143\_MARK LOGO: CGS  
 BM1143\_MAGNETIC: N = NO MAGNETIC MATERIAL  
 BM1143\_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO  
 BM1143+STABILITY: SURFACE MOTION  
 BM1143\_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR  
 BM1143+SATELLITE: SATELLITE OBSERVATIONS - February 27, 1995

BM1143  
 BM1143 HISTORY - Date Condition Report By  
 BM1143 HISTORY - 1963 MONUMENTED CGS  
 BM1143 HISTORY - 19910615 GOOD NGS  
 BM1143 HISTORY - 19921029 GOOD  
 BM1143 HISTORY - 19940820 MARK NOT FOUND USPSQD  
 BM1143 HISTORY - 19950227 GOOD NGS

BM1143  
 BM1143 STATION DESCRIPTION

BM1143  
 BM1143'DESCRIBED BY COAST AND GEODETIC SURVEY 1963  
 BM1143'THE STATION IS LOCATED 2.0 MI (3.2 KM) SOUTHWEST OF COLLEGE STATION,  
 BM1143'TEXAS ON THE PROPERTY OF EASTERWOOD AIRPORT NEAR THE RUNWAY 28 END.  
 BM1143'PERMISSION MUST BE OBTAINED FROM AIRPORT MANGER AND TOWER CHIEF BEFORE  
 BM1143'ACCESSING STATION IN THE CONTROLLED MOVEMENT AREAS OF THIS AIRPORT.  
 BM1143'POINT OF CONTACT RICHARD ARNOLD EASTERWOOD AIRPORT, MCKENZIE TERMINAL  
 BM1143'BLVD. 7, COLLEGE STATION, TX. 77845-1583, PHONE (409)845-4811.  
 BM1143'THE STATION IS A STANDARD TOPO DISK SET IN THE TOP OF A 10 INCH  
 BM1143'CONCRETE POST WHICH IS FLUSH WITH THE GROUND, AND STAMPED---AP 1963  
 BM1143'STA A---. THE STATION IS 173.2 FT (52.8 M) SOUTHEAST OF RUNWAY LIGHT  
 BM1143'61, 50.01 FT (15.24 M) SOUTH OF THE SOUTH EDGE OF RUNWAY 28, AND 46.9  
 BM1143'FT (14.3 M) SOUTHWEST OF THRESHOLD LIGHT 63.  
 BM1143'DESC. BY ALG

BM1143  
 BM1143 STATION RECOVERY (1991)

BM1143  
 BM1143'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1991  
 BM1143'THE STATION IS LOCATED NEAR RUNWAY END 28, 173.2 FT (52.8 M) SOUTHEAST  
 BM1143'OF RUNWAY LIGHT 61, 50.01 FT (15.24 M) SOUTH OF THE SOUTH EDGE OF THE  
 BM1143'RUNWAY, 46.9 FT (14.3 M) SOUTHWEST OF THRESHOLD LIGHT 63. A STANDARD  
 BM1143'TOPO DISK STAMPED AP 1963 STA A SET IN THE TOP OF A 10 INCH CONCRETE  
 BM1143'POST WHICH PROJECTS 1 INCH ABOVE THE GROUND LEVEL.

BM1143  
 BM1143 STATION RECOVERY (1992)

BM1143  
 BM1143'RECOVERED 1992  
 BM1143'RECOVERED IN GOOD CONDITION.

BM1143  
 BM1143 STATION RECOVERY (1994)

BM1143  
 BM1143'RECOVERY NOTE BY US POWER SQUADRON 1994  
 BM1143'MARK NOT FOUND.

BM1143  
 BM1143 STATION RECOVERY (1995)

BM1143  
 BM1143'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1995 (AJL)  
 BM1143'THE STATION IS LOCATED ON THE SOUTHWEST SIDE OF COLLEGE STATION AT  
 BM1143'EASTERWOOD FIELD, IN GRASS ALONG THE SOUTH SIDE OF AND IN LINE WITH  
 BM1143'RUNWAY END 28, AND NEAR THE CENTER OF THE EAST SIDE OF THE AIRFIELD.  
 BM1143'OWNERSHIP--TEXAS A AND M UNIVERSITY, MCKENZIE TERMINAL BUILDING NUMBER  
 BM1143'7, COLLEGE STATION, TX 77845. CONTACT JIM ALLEN, OPERATIONS  
 BM1143'SUPERVISOR, OR RICHARD ARNOLD, ASSOCIATE DIRECTOR AT 409-845-4811 TWO  
 BM1143'DAYS IN ADVANCE TO ARRANGE FOR AN ESCORT TO THIS STATION. TO REACH  
 BM1143'FROM THE UNDERPASS AT THE JUNCTION OF STATE HIGHWAY 60 AND FARM ROAD  
 BM1143'2818 ON THE SOUTHWEST SIDE OF COLLEGE STATION, GO SOUTHEAST ON FARM

BM1143'ROAD 2818 FOR 1.45 KM (0.90 MI) TO A PAVED CROSSROAD (FARM ROAD 2347) BM1143'. TURN RIGHT, WEST-SOUTHWEST, ON FARM ROAD 2347 FOR 0.41 KM (0.25 MI) BM1143'TO A PAVED ROAD LEFT JUST BEFORE A GATE AT GENERAL AVIATION. TURN BM1143'LEFT, SOUTH, ON THE PAVED ROAD FOR 0.10 KM (0.05 MI) TO THE AIRPORT BM1143'TERMINAL. AN ESCORT WILL TAKE YOU FROM HERE. ENTER THE GATE AT THE BM1143'SOUTH SIDE OF THE GENERAL AVIATION BUILDING AND PROCEED SOUTHWEST TO BM1143'RAMP TAXIWAY (A) . TURN LEFT, SOUTHEAST, AND PROCEED 0.3 KM (0.20 MI) BM1143'ALONG TAXIWAY, CROSSING THE END OF RUNWAY 28, TO THE STATION. THE BM1143'STATION IS SET IN THE TOP OF A 25-CM SQUARE CONCRETE POST SET FLUSH BM1143'WITH THE GROUND. IT IS 38.1 M (125.0 FT) SOUTH-SOUTHWEST OF THE BM1143'CENTER OF RUNWAY END 28, 15.4 M (50.5 FT) SOUTH-SOUTHWEST OF THE BM1143'SOUTHEAST CORNER OF THE RUNWAY, 15.3 M (50.2 FT) WEST OF THE REIL BM1143'LIGHT, 12.7 M (41.7 FT) SOUTHWEST OF THE SOUTHERN MOST THRESHOLD BM1143'LIGHT, AND 0.3 M (1.0 FT) NORTH OF A WITNESS POST. DESCRIBED BY D.G BM1143'AUG NOTE THIS STATION IS SELECT AS A SACS STATION.

1 National Geodetic Survey, Retrieval Date = AUGUST 3, 2012  
 BM1144 \*\*\*\*\*  
 BM1144 SACS - This is a Secondary Airport Control Station.  
 BM1144 DESIGNATION - CLL AP STA B  
 BM1144 PID - **BM1144**  
 BM1144 STATE/COUNTY- TX/BRAZOS  
 BM1144 COUNTRY - US  
 BM1144 USGS QUAD - WELLBORN (1980)  
 BM1144  
 BM1144 \*CURRENT SURVEY CONTROL  
 BM1144  
 BM1144\* NAD 83(2011) POSITION- 30 35 28.12833(N) 096 22 22.53595(W) ADJUSTED  
 BM1144\* NAD 83(2011) ELLIP HT- 70.011 (meters) (06/27/12) ADJUSTED  
 BM1144\* NAD 83(2011) EPOCH - 2010.00  
 BM1144\* [NAVD 88](#) ORTHO HEIGHT - 96.82 (meters) 317.7 (feet) GPS OBS  
 BM1144  
 BM1144 NAVD 88 orthometric height was determined with geoid model GEOID93  
 BM1144 GEOID HEIGHT - -27.07 (meters) GEOID93  
 BM1144 GEOID HEIGHT - -26.70 (meters) GEOID12  
 BM1144 NAD 83(2011) X - -609,970.064 (meters) COMP  
 BM1144 NAD 83(2011) Y - -5,461,300.141 (meters) COMP  
 BM1144 NAD 83(2011) Z - 3,226,992.582 (meters) COMP  
 BM1144 LAPLACE CORR - -1.10 (seconds) DEFLECO9  
 BM1144  
 BM1144 FGDC Geospatial Positioning Accuracy Standards (95% confidence, cm)  
 BM1144 Type Horiz Ellip Dist(km)  
 BM1144 -----  
 BM1144 NETWORK 2.02 2.25  
 BM1144 -----  
 BM1144 MEDIAN LOCAL ACCURACY AND DIST (001 points) 0.67 1.00 0.77  
 BM1144 -----  
 BM1144 NOTE: Click [here](#) for information on individual local accuracy  
 BM1144 values and other accuracy information.  
 BM1144  
 BM1144  
 BM1144.This mark is at Easterwood Fld (CLL) Airport (CLL)  
 BM1144  
 BM1144.The horizontal coordinates were established by GPS observations  
 BM1144.and adjusted by the National Geodetic Survey in June 2012.  
 BM1144  
 BM1144.NAD 83(2011) refers to NAD 83 coordinates where the reference  
 BM1144.frame has been affixed to the stable North American tectonic plate. See  
 BM1144.[www.ngs.noaa.gov/web/surveys/NA2011](http://www.ngs.noaa.gov/web/surveys/NA2011) for more information.  
 BM1144  
 BM1144.The horizontal coordinates are valid at the epoch date displayed above  
 BM1144.which is a decimal equivalence of Year/Month/Day.  
 BM1144  
 BM1144.The orthometric height was determined by GPS observations and a

BM1144.high-resolution geoid model.

BM1144

BM1144.GPS derived orthometric heights for airport stations designated as BM1144.PACS or SACS are published to 2 decimal places. This maintains BM1144.centimeter relative accuracy between the PACS and SACS. It does BM1144.not indicate centimeter accuracy relative to other marks which are BM1144.part of the NAVD 88 network.

BM1144

BM1144.The X, Y, and Z were computed from the position and the ellipsoidal ht.

BM1144

BM1144.The Laplace correction was computed from DEFLEC09 derived deflections.

BM1144

BM1144.The ellipsoidal height was determined by GPS observations

BM1144.and is referenced to NAD 83.

BM1144

BM1144. The following values were computed from the NAD 83(2011) position.

BM1144

BM1144;	North	East	Units	Scale	Factor	Converg.
BM1144;SPC TX C	- 3,109,243.844	1,079,724.347	MT	0.99990721	+2 02	23.4
BM1144;SPC TX C	-10,200,910.84	3,542,395.63	sFT	0.99990721	+2 02	23.4
BM1144;UTM 14	- 3,387,232.400	751,902.832	MT	1.00038287	+1 20	15.5

BM1144

BM1144! - Elev Factor x Scale Factor = Combined Factor

BM1144!SPC TX C - 0.99998901 x 0.99990721 = 0.99989622

BM1144!UTM 14 - 0.99998901 x 1.00038287 = 1.00037187

BM1144

BM1144:	Primary Azimuth Mark	Grid Az
BM1144:SPC TX C	- CLL AP STA A	106 44 33.4
BM1144:UTM 14	- CLL AP STA A	107 26 41.3

BM1144

BM1144	PID	Reference Object	Distance	Geod. Az
BM1144				dddmmss.s
BM1144	BM1143	CLL AP STA A	APPROX. 1.6 KM	1084656.8
BM1144	BM0033	CLL ARP 2	APPROX. 0.8 KM	1084616.6

BM1144

BM1144

#### SUPERSEDED SURVEY CONTROL

BM1144

BM1144	NAD 83(2007)-	30 35	28.12838(N)	096 22	22.53663(W)	AD( )	0
BM1144	ELLIP H (02/10/07)		70.025 (m)			GP( )	
BM1144	ELLIP H (02/27/01)		70.048 (m)			GP( )	4 2
BM1144	NAD 83(1993)-	30 35	28.12821(N)	096 22	22.53641(W)	AD( )	1
BM1144	ELLIP H (08/20/96)		70.091 (m)			GP( )	4 2
BM1144	NAD 83(1993)-	30 35	28.12861(N)	096 22	22.53290(W)	AD( )	2
BM1144	NAD 83(1986)-	30 35	28.14388(N)	096 22	22.51466(W)	AD( )	2
BM1144	NGVD 29 (12/03/93)		96.56 (m)		316.8 (f)	LEVELING	3

BM1144

BM1144.Superseded values are not recommended for survey control.

BM1144

BM1144.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

BM1144.[See file dsdata.txt](#) to determine how the superseded data were derived.

BM1144

BM1144\_U.S. NATIONAL GRID SPATIAL ADDRESS: 14RQU5190287232(NAD 83)

BM1144

BM1144\_MARKER: DT = TOPOGRAPHIC STATION DISK

BM1144\_SETTING: 9 = SET IN PREFABRICATED CONCRETE POST IMBEDDED IN GROUND

BM1144\_SP\_SET: CONCRETE POST

BM1144\_STAMPING: AP 1963 STA B

BM1144\_MARK LOGO: CGS

BM1144\_MAGNETIC: N = NO MAGNETIC MATERIAL

BM1144\_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

BM1144+STABILITY: SURFACE MOTION

BM1144\_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR  
 BM1144+SATELLITE: SATELLITE OBSERVATIONS - February 27, 1995

BM1144

BM1144	HISTORY	- Date	Condition	Report By
BM1144	HISTORY	- 1963	MONUMENTED	CGS
BM1144	HISTORY	- 19910615	GOOD	NGS
BM1144	HISTORY	- 19921029	GOOD	
BM1144	HISTORY	- 19940820	MARK NOT FOUND	USPSQD
BM1144	HISTORY	- 19950227	GOOD	NGS

BM1144

STATION DESCRIPTION

BM1144

BM1144'DESCRIBED BY COAST AND GEODETIC SURVEY 1963  
 BM1144'THE STATION IS LOCATED 2.0 MI (3.2 KM) SOUTHWEST OF COLLEGE STATION,  
 BM1144'TEXAS ON THE PROPERTY OF EASTERWOOD AIRPORT NEAR THE RUNWAY 10 END.  
 BM1144'PERMISSION MUST BE OBTAINED FROM AIRPORT MANGER AND TOWER CHIEF BEFORE  
 BM1144'ACCESSING STATION IN THE CONTROLLED MOVEMENT AREAS OF THIS AIRPORT.  
 BM1144'POINT OF CONTACT RICHARD ARNOLD EASTERWOOD AIRPORT, MCKENZIE TERMINAL  
 BM1144'BLVD. 7, COLLEGE STATION, TX. 77845-1583, PHONE (409)845-4811.  
 BM1144'THE STATION IS A STANDARD TOPO DISK SET IN THE TOP OF A 10 INCH  
 BM1144'CONCRETE POST WHICH IS FLUSH WITH THE GROUND, AND STAMPED---AP 1963  
 BM1144'STA B---. THE STATION IS 178.8 FT (54.5 M) SOUTHWEST OF RUNWAY LIGHT  
 BM1144'9, 50.05 FT (15.26 M) SOUTH OF THE SOUTH EDGE OF RUNWAY 10,AND 46.95  
 BM1144'FT (14.31 M) SOUTHWEST OF THRESHOLD LIGHT 7.

BM1144'DESC. BY ALG

BM1144

STATION RECOVERY (1991)

BM1144

BM1144

BM1144'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1991  
 BM1144'THE STATION IS LOCATED NEAR THE WEST END OF RUNWAY 10, 178.8 FT (54.5  
 BM1144'M) SOUTHWEST OF RUNWAY LIGHT 9, 50.05 FT (15.26 M) SOUTH OF THE SOUTH  
 BM1144'EDGE OF THE RUNWAY, 46.95 FT (14.31 M) SOUTHEAST OF THRESHOLD LIGHT 7.  
 BM1144'A STANDARD TOPO DISK STAMPED AP 1963 STA B SET IN THE TOP OF A 10 INCH  
 BM1144'CONCRETE POST WHICH PROJECTS 1 INCH ABOVE GROUND LEVEL.

BM1144

STATION RECOVERY (1992)

BM1144

BM1144

BM1144'RECOVERED 1992  
 BM1144'RECOVERED IN GOOD CONDITION.

BM1144

STATION RECOVERY (1994)

BM1144

BM1144

BM1144'RECOVERY NOTE BY US POWER SQUADRON 1994

BM1144'MARK NOT FOUND.

BM1144

STATION RECOVERY (1995)

BM1144

BM1144'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1995 (AJL)  
 BM1144'THE STATION IS LOCATED ON THE SOUTHWEST SIDE OF COLLEGE STATION AT  
 BM1144'EASTERWOOD FIELD, IN GRASS ALONG THE SOUTH SIDE OF AND IN LINE WITH  
 BM1144'RUNWAY END 10, AND JUST NORTH OF THE CENTER OF THE WEST SIDE OF THE  
 BM1144'AIRFIELD. OWNERSHIP--TEXAS A AND M UNIVERSITY, MCKENZIE TERMINAL  
 BM1144'BUILDING NUMBER 7, COLLEGE STATION, TX 77845. CONTACT JIM ALLEN,  
 BM1144'OPERATIONS SUPERVISOR, OR RICHARD ARNOLD, ASSOCIATE DIRECTOR AT  
 BM1144'409-845-4811 TWO DAYS IN ADVANCE TO ARRANGE FOR AN ESCORT TO THIS  
 BM1144'STATION. TO REACH FROM THE UNDERPASS AT THE JUNCTION OF STATE HIGHWAY  
 BM1144'60 AND FARM ROAD 2818 ON THE SOUTHWEST SIDE OF COLLEGE STATION, GO  
 BM1144'SOUTHEAST ON FARM ROAD 2818 FOR 1.45 KM (0.90 MI) TO A PAVED CROSSROAD  
 BM1144'(FARM ROAD 2347) . TURN RIGHT, WEST-SOUTHWEST, ON FARM ROAD 2347 FOR  
 BM1144'0.41 KM (0.25 MI) TO A PAVED ROAD LEFT JUST BEFORE A GATE AT GENERAL  
 BM1144'AVIATION. TURN LEFT, SOUTH, ON THE PAVED ROAD FOR 0.10 KM (0.05 MI)  
 BM1144'TO THE AIRPORT TERMINAL. AN ESCORT WILL TAKE YOU FROM HERE. ENTER  
 BM1144'THE GATE AT THE SOUTH SIDE OF THE GENERAL AVIATION BUILDING AND

BM1144'PROCEED SOUTHWEST TO RAMP TAXIWAY (A) . TURN RIGHT, NORTHWEST, AND  
 BM1144'CONTINUE TO EAST-WEST TAXIWAY (B) . TURN LEFT, WEST, AND PROCEED 1.4  
 BM1144'KM (0.85 MI) ALONG TAXIWAY, CROSSING RUNWAYS 16-34 AND 4-22, AND  
 BM1144'RUNWAY END 10, TO THE STATON. THE STATION IS SET IN THE TOP OF A  
 BM1144'25-CM SQUARE CONCRETE POST SET FLUSH WITH THE GROUND. IT IS 56.5 M  
 BM1144'(185.4 FT) NORTH-NORTHEAST OF THE PERIMETER FENCE, 38.1 M (125.0 FT)  
 BM1144'SOUTH-SOUTHWEST OF THE CENTER OF RUNWAY END 10, 15.4 M (50.5 FT)  
 BM1144'SOUTH-SOUTHWEST OF THE SOUTHWEST CORNER OF THE RUNWAY, 15.3 M (50.2  
 BM1144'FT) WEST OF THE REIL LIGHT, 12.7 M (41.7 FT) SOUTH OF THE SOUTHERN  
 BM1144'MOST THRESHOLD LIGHT, AND 0.4 M (1.3 FT) NORTH OF A WITNESS POST.  
 BM1144'DESCRIBED BY D.G AUG NOTE THIS STATION IS SELECT AS A SACS STATION.

\*\*\* retrieval complete.  
 Elapsed Time = 00:00:04

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- This listing contains control for which complete digital -
- data sheets where not provided. The complete data sheets were -
- not provided for the reason listed below. The reason below is -
- associated with a horizontal control Nonpub code shown under -
- the heading 'H' and/or a vertical control Nonpub code shown under -
- the heading 'v' -
- -
- The format of the records are as follows: -
- Pid = Station Permanent Identifier) -
- Name = Station Designation -
- Lat = Approx. Latitude (Degrees, Minutes, truncated Seconds) -
- Lon = Approx. Longitude (Degrees, Minutes, truncated Seconds) -
- O = Horizontal Order -
- o = Vertical Order -
- H = Horizontal Nonpub Code -
- v = Vertical Nonpub Code -
- -
- H Nonpub HORIZONTAL CONTROL NONPUB REASON -
- ----- -
- A CORS site is not active -
- B Station is a RBN antenna -
- C Not a publishable datum within the state -
- D No descriptive text available -
- L CORS L1 Phase Center is not publishable -
- N No geodetic control -
- O Outside NGS publication area -
- P Purpose of position is not for network control -
- R Restricted position -
- T Station is a temporary point/bench mark -
- V Station is a VOR antenna -
- W Weakly determined position -
- X Surface mark reported destroyed -
- Y Surface and underground mark reported destroyed -
- -
- v Nonpub VERTICAL CONTROL NONPUB REASON -
- ----- -
- A CORS site is not active -
- D No descriptive text available -
- F Bench mark not yet adjusted -
- N No geodetic control -
- L CORS L1 Phase Center is not publishable -
- O Outside NGS publication area -
- R Restricted elevation -
- S Mark is in a subsidence area -
- T Station is a temporary point/bench mark -

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- X Surface mark reported destroyed -
- Y Surface and underground mark reported destroyed -
- Z Presumed destroyed -
- -
- -
- NOTE - Stations found in this listing may still have a valid -
- datasheet produced by use of other publishable values. -
- For example, an ADJUSTED height may be non-publishable -
- but a good GPS height might be found on the datasheet. -
- This listing does not imply that values found on the datasheet -
- are restricted. If it's on the datasheet, use it. -
- -

Pid	Name	Lat	Lon	Elev	O o Hv
>BM0029	X 313	30 36 40.	/096 20 39.	106.	2 XX
>BM0029	X 313	30 36 40.	/096 20 39.	106.	2 NN