



CITY OF THE COLONY GPS CONTROL SHEET

ESTABLISHED BY: BRITAIN & CRAWFORD, LLC.
LAND SURVEYING & TOPOGRAPHIC MAPPING PH. 817-926-0211

| | | | | |
|---|-------------------------------------|--|-----------------|--------------------------|
| MONUMENT NAME: MONUMENT No. 10 | DATE ESTABLISHED: FEBRUARY, 2009 | COUNTY: DENTON | STATE: TEXAS | MAPSCO PAGE NO. 553-N |
| NAD-83 (CORS 96) GEODETIC POSITION LATITUDE N 033° 04' 53.03149" LONGITUDE W 096° 55' 06.50577" | | NAD-83 (CORS 96) STATE PLANE COORDINATES NORTH CENTRAL ZONE (METERS) NORTHING (Y) 2157990.498 EASTING (X) 747638.476 | | |
| ELLIPSOIDAL ELEVATION (METERS) 135.489 ELLIPSOIDAL HEIGHT (METERS) -26.595 | | NAD-83 (CORS 96) STATE PLANE COORDINATES NORTH CENTRAL ZONE (U.S. SURVEY FEET) NORTHING (Y) 7080007.15885 EASTING (X) 2452877.23334 | | |
| AZIMUTH MARK: MONUMENT #11 LYING S88°29'02"E 7391.20 FROM MONUMENT #10 | | NAVD-88 ELEV: 531.770' (U.S. SURVEY FEET) | | |

DESCRIPTION: 3 1/4" ALUMINUM DISK SET IN CONCRETE IN STEWART CREEK PARK 19.8 FEET SOUTH OF THE MOST SOUTHERLY PARK ROAD AND 0.3 MILE SOUTHWESTERLY FROM GUARD SHACK AT ENTRANCE TO PARK, 55.7 FEET SOUTHWEST OF THE SOUTHWEST CONCRETE PAD OF A PICNIC TABLE PAVILION AND 72.1 FEET NORTHWEST OF THE WEST CORNER OF THE CONCRETE PAD OF A PICNIC TABLE PAVILION.

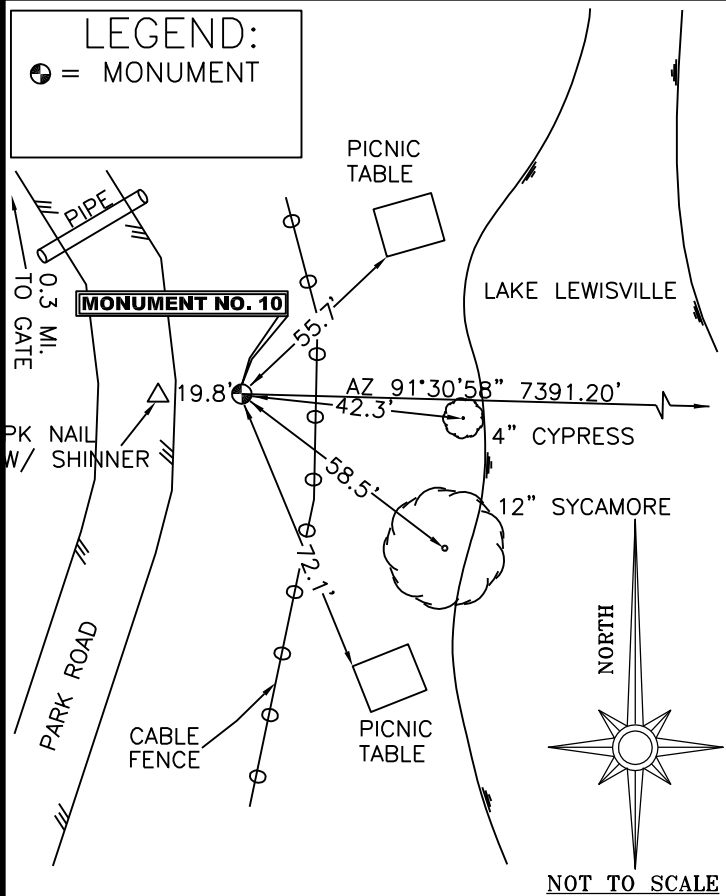


PHOTO TAKEN FROM NORTH LOOKING SOUTH TOWARDS 12" SYCAMORE, PICNIC TABLE AND ACROSS LAKE TO THE MARINA.



FILE: CO100364.090 000513744

2005 NOTE: The IGS precise and IGS rapid orbits were not available
 2005 at processing time. The IGS ultra-rapid orbit was/will be used to
 2005 process the data.
 2005

NGS OPUS SOLUTION REPORT

All computed coordinate accuracies are listed as peak-to-peak values.
 For additional information: www.ngs.noaa.gov/OPUS/Using_OPUS.html#accuracy

RINEX FILE: co10036s.09o DATE: February 06, 2009
 TIME: 15:05:46 UTC

SOFTWARE: page5 0810.20 master12.p] 081023 START: 2009/02/05 18:09:00
 EPHEMERIS: igu15174.eph [ultra-rapid] STOP: 2009/02/05 21:56:00
 NAV FILE: brdc0360.09n OBS USED: 10355 / 10912 :95%
 ANT NAME: THA800961+REC NONE # FIXED AMB: 53 / 61 :87%
 ARP HEIGHT: 1.164338 OVERALL RMS: 0.014(m)

REF FRAME: NAD_83(CORS96)(EPOCH:2002.0000) ITRF00 (EPOCH:2009.0982)

| | | | | |
|----|-----------------|----------|-----------------|----------|
| X: | -644404.354(m) | 0.013(m) | -644405.060(m) | 0.013(m) |
| Y: | -5310712.949(m) | 0.034(m) | -5310711.527(m) | 0.034(m) |
| Z: | 3461600.131(m) | 0.027(m) | 3461599.961(m) | 0.027(m) |

| | | | | |
|------------|----------------|----------|-----------------------------------|----------|
| LAT: | 33 4 53.03149 | 0.005(m) | 33 4 53.05037 | 0.005(m) |
| E LON: | 263 4 53.49423 | 0.009(m) | 263 4 53.46060 | 0.009(m) |
| W LON: | 96 55 6.50577 | 0.009(m) | 96 55 6.53940 | 0.009(m) |
| EL HGT: | 135.489(m) | 0.043(m) | 134.284(m) | 0.043(m) |
| ORTHO HGT: | 162.084(m) | 0.077(m) | [NAVD88 (Computed using GEOID03)] | |

| | UTM COORDINATES | STATE PLANE COORDINATES |
|-----------------------|-----------------|-------------------------|
| | UTM (Zone 14) | SPC (4202 TXNC) |
| Northing (Y) [meters] | 3662237.587 | 2157990.498 |
| Easting (X) [meters] | 694286.167 | 747638.476 |
| Convergence [degrees] | 1.13651535 | 0.86255554 |
| Point Scale | 1.00006543 | 0.99987276 |
| Combined Factor | 1.00004416 | 0.99985149 |

US NATIONAL GRID DESIGNATOR: 14SPB9428662238(NAD 83)

| | | BASE STATIONS USED | | |
|--------|---------------------------------|--------------------|--------------|-------------|
| PID | DESIGNATION | LATITUDE | LONGITUDE | DISTANCE(m) |
| DF8986 | TXDE DENTON CORS ARP | N331237.612 | W0970945.970 | 26914.5 |
| DF4385 | ZFW1 FORT WORTH WAAS 1 CORS ARP | N324950.320 | W0970359.262 | 31062.3 |
| DF8982 | TXCO COLLIN CORS ARP | N330954.927 | W0963740.571 | 28665.2 |

| NEAREST NGS PUBLISHED CONTROL POINT | | | |
|-------------------------------------|-------------|----------|------------------|
| ID | DESIGNATION | LATITUDE | DISTANCE(m) |
| DN0271 | Z 262 | N330516. | W0965124. 5808.4 |

This position and the above vector components were computed without any knowledge by the National Geodetic Survey regarding the equipment or field operating procedures used.