### GPS Station Observation Log

<table>
<thead>
<tr>
<th>Station Designation</th>
<th>(Check applicable: X GEO. CNTRL. ___ Trav. PT. ___ BM)</th>
<th>Station PID, if any:</th>
<th>DATE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAD83 Latitude:</td>
<td>32° 53' 39.74865 ft./meters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NAD83 Longitude:</td>
<td>96° 37' 20.3914 ft./meters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NAD83 Ellipsoidal Height</td>
<td></td>
<td>1.743 ft./meters</td>
<td></td>
</tr>
<tr>
<td>Observation Session Time</td>
<td>135.643 ft./meters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sched. Start:</td>
<td>7:52 AM</td>
<td>Stop: 11:52 AM</td>
<td></td>
</tr>
<tr>
<td>Actual Start:</td>
<td>7:52 AM</td>
<td>Stop: 11:52 AM</td>
<td></td>
</tr>
<tr>
<td>Epoch Interval =</td>
<td>5 Seconds</td>
<td>GEOID03 Geoid Height</td>
<td>Phone# (972) 205 - 2157</td>
</tr>
<tr>
<td>Elevation Mask =</td>
<td>5 Degrees</td>
<td>ft./meters</td>
<td>E-mail: <a href="mailto:gbreysac@ci.garland.tx.us">gbreysac@ci.garland.tx.us</a></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Receiver Brand &amp; Model:</td>
<td>Topcon Hiper Lite-Internal Antenna</td>
<td>Comments: 4HRS. STATIC DATA RECORDED.</td>
<td></td>
</tr>
<tr>
<td>Base: X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rover:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P/N: 01-840802-03</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S/N: 263-0243</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ID: 8QATEMNVCHS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ID: 8OKPW2V2RR4</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>ANTENNA HEIGHT</strong></th>
<th>Meters</th>
<th>Feet</th>
<th>NAD83 TXNC (4202)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slant Height to ARP:</td>
<td>1.743</td>
<td>5.72</td>
<td>N = 7013470.24469</td>
</tr>
<tr>
<td>Vertical Height to ARP:</td>
<td>Z = 529.81*</td>
<td>CSF = 0.99985507</td>
<td></td>
</tr>
<tr>
<td>Meters = Feet x (0.3048)</td>
<td></td>
<td></td>
<td>Note: &amp;/or sketch ANY unusual conditions be Very Explicit as to where and how Measured.</td>
</tr>
<tr>
<td>Height Entered into receiver = 1.7099 Meters.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**LOG Checked By:**

**Data File Name(s):**

**Specifications:**

- **Citation:** City of Garland
- **Agency Full Name:**
- **Operation Full Name:**
- **Phone #:**
- **E-mail:**

**Environmental Conditions:**

- **Visibility:** Good
- **Temperature:** 78°F
- **Cloud Cover:** Partly Cloudy
- **Wind:** 5 - 10 MPH

---

**Problem:**

- Radio Interference source nearby?
- Any obstructions above 10°?

**RPLS:** GSB  P.Chief: TG  Field Tech: KW  Field Tech: CW

---

**Additional Information:**

- 2" BRASS DISK STAMPED 126 IS LOCATED IN THE SIDEWALK ON THE N.W. COR. OF E. MILLER RD. AND DAIRY RD. APPROX. 28.30 W. OF DAIRY RD C/L AND APPROX. 47.80' N. OF THE C/L OF MILLER RD.
- **COG MAP GRID 1-8*** MAPSCO 29A-F***
### GPS Station Observation Log

**Station Designation:** (Check applicable: X GEO. CNTRL. _Trav. PT._ BM)  
**Station PID, if any:** GPS 127  
**DATE:** 8/31/2005

<table>
<thead>
<tr>
<th>Project Name: Geodetic Monument</th>
<th>Project Number: GPS-127</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NAD83 Latitude:</strong> 32 54 13.14602 ft./meters</td>
<td><strong>NAD83 Longitude:</strong> 96 37 18.46252 ft./meters</td>
</tr>
<tr>
<td><strong>NAD83 Ellipsoidal Height</strong></td>
<td><strong>NAD83 Orthometric Height</strong></td>
</tr>
</tbody>
</table>
| Observation Session Time: 132.218 ft./meters | **Session ID:** (A,B,C,etc.)
| **Sched. Start:** | **Stop:** |
| **Actual Start:** 8:56 AM | **Stop:** 1:02 PM |
| **Epoch Interval = 5 Seconds** | **GEOID03 Geoid Height** |
| **Elevation Mask = Degrees** | **Phone# (972) 205-2157** |

**Receiver Brand & Model:** Topcon HiPer Lite/Internal Antenna  
**Comments:** 4HRS. STATIC DATA RECORDED.

<table>
<thead>
<tr>
<th>Base: P/N: 01-840802-03</th>
<th>Rover: X P/N: 01-840802-03</th>
</tr>
</thead>
<tbody>
<tr>
<td>S/N: 263-0243</td>
<td>S/N: 263-0233</td>
</tr>
<tr>
<td>ID: 8QATEMNVCHS</td>
<td>ID: 8OKPW2V2RR4</td>
</tr>
</tbody>
</table>

**ANTENNA HEIGHT**

<table>
<thead>
<tr>
<th>Slant Height to ARP: 1.511 ft.</th>
<th>Vertical Height to ARP: 4.96 ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Meters</strong></td>
<td><strong>Feet</strong></td>
</tr>
<tr>
<td>N = 7016847.47874</td>
<td>E = 2544888.77504</td>
</tr>
<tr>
<td>Z = 518.577*</td>
<td>CSF = 0.99985518</td>
</tr>
</tbody>
</table>

**Height Entered into receiver = 1.4783** Meters.

**LOG Checked By:**  
**Data File Name(s):**

*(standard NGS Format = aaaaaddds.xxx)*

(aaa=4 character ID, ddd=Day of Year, xxx=Station Observation Log, ccc=Comments)

---

**Table of Weather**

<table>
<thead>
<tr>
<th>Problem</th>
<th>Visibility</th>
<th>Temperature</th>
<th>Cloud Cover</th>
<th>Wind</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>Good</td>
<td>80°</td>
<td>CLEAR</td>
<td>5-10 MPH</td>
</tr>
<tr>
<td>Any obstructions above 10°?</td>
<td>(Y/N)</td>
<td>Radio Interference source nearby?</td>
<td>(Y/N)</td>
<td></td>
</tr>
<tr>
<td>RPLS: GSB</td>
<td>P.Chief: TG</td>
<td>Field Tech: KW</td>
<td>Field Tech: CW</td>
<td></td>
</tr>
</tbody>
</table>

---

GPS 127, 2" BRASS DISK STAMPED 127 IS LOCATED ON E. SIDE OF DAIRY RD. APPROX. 41.40' SOUTH OF THE ENTRANCE TO FIRST HISPANIC ASAMBLEA DE DIOS @ 1035 DAIRY RD. AND APPROX. 21.80' E. OF C/L OF DAIRY RD.  
***COG MAP GRID I-8***MAPSCO 29A-B***

---

4/12/2008
GPS Station Observation Log

Station Designation: (Check applicable: X GEO. CNTRL. __ Trav. PT.__ BM )

Project Name: Geodetic Monument
Project Number: GPS-128

NAD83 Latitude: 32° 54' 28.37906"
NAD83 Longitude: 96° 37' 15.55917"
NAD83 Ellipsoidal Height: 123.4051 ft./meters

Observation Session Time: 149.236 ft./meters

NAD83 Longitude: 96° 37' 15.55917"

Station PID, if any: NAD30 Projection

Date: 8/31/2005

Stat.4-Char ID: ______ Day of Year: ______

Agency Full Name: City of Garland

GPS 128

Station Observation Log

Stat.4-Char ID: ______ Day of Year: ______

Receiver Brand & Model: Topcon Hiper Lite-Internal Antenna
Comments: 4HRS. STATIC DATA RECORDED.

Base: X Rover: N

P/N: 01-840802-03
S/N: 263-0243
ID: 8QATEMNVCHS

TOPOCON HIGHER LITE
P/N 01-840802-03
S/N 263-0233
ID 8QATEMNVCHS

NOTE: ELEV. 489.618 IS ORTHO HT. CALC. BY OPUS.

Antenna Height:

** ANTEANNA HEIGHT **

<table>
<thead>
<tr>
<th>Meters</th>
<th>Feet</th>
<th>NAD83 TXNC (4202)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.755</td>
<td>5.755</td>
<td>N = 7018391.07474</td>
</tr>
<tr>
<td></td>
<td></td>
<td>E = 2545108.71227</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Z = 489.51 (NAVD 88)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CSF = 0.99985638</td>
</tr>
</tbody>
</table>

Slant Height to ARP:

Vertical Height to ARP:

Note: &/or sketch ANY unusual conditions. be Very Explicit as to where and how Measured.

LOG Checked By: Data File Name(s):

(standard NGS Format = aaaaaddds.xxx)

AAA = 4 character ID, ddd = Day of Year,

CASE:

GPS 128, 2" BRASS DISK STAMPED 128 IS LOCATED ON INLET TOP AT THE S.E. COR. OF DAIRY RD. AND SH 66 APPROX. 27.70" E. OF C/L OF DAIRY RD. AND APPROX. 62.80" S. OF STATE HIGHWAY No. 66

***COG MAP GRID H-8*** MAPSCO 29A-B***

Table of Weather

<table>
<thead>
<tr>
<th>Problem</th>
<th>Visibility</th>
<th>Temperature</th>
<th>Cloud Cover</th>
<th>Wind</th>
</tr>
</thead>
<tbody>
<tr>
<td>NONE</td>
<td>GOOD</td>
<td>80°F</td>
<td>CLEAR</td>
<td>5-10 MPH</td>
</tr>
</tbody>
</table>

Any obstructions above 10°? (Y/N) Radio Interference source nearby? (Y/N)

RPLS: GSB P.Chief: TG Field Tech: KW Field Tech: CW
## GPS Station Observation Log

**Station Designation**

<table>
<thead>
<tr>
<th>NAD83 Latitude:</th>
<th>32 54 35.66712 ft./meters</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAD83 Longitude:</td>
<td>96 37 31.38301 ft./meters</td>
</tr>
<tr>
<td>NAD83 Ellipsoidal Height</td>
<td>128.996 ft./meters</td>
</tr>
</tbody>
</table>

**Project Name:** Geodetic Monument  
**Project Number:** GPS-129  
**Station PID, if any:** GPS 129  
**DATE:** 9/22/2005

**Project Name:** Geodetic Monument  
**Project Number:** GPS-129  
**Stat. 4-Char ID:**  
**Day of Year:**

**Observation Session Time**

<table>
<thead>
<tr>
<th>Sched. Start:</th>
<th>Stop:</th>
<th>NAVD88 Orthometric Height</th>
<th>GEOID03 Geoid Height</th>
<th>Phone# (972) 205 - 2157</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:45 AM</td>
<td>11:51 AM</td>
<td>154.838 ft./meters</td>
<td>507.9566 (NAVD 88)</td>
<td></td>
</tr>
</tbody>
</table>

**Epoch Interval:** 10 Seconds  
**Elevation Mask:**

---

**Receiver Brand & Model:** Topcon HiPer Lite-Internal Antenna  
**Comments:** 4HRS STATIC DATA RECORDED.

**Base:** X  
**Rover:**

**P/N:** 01-840802-03  
**S/N:** 263-0243  
**ID:** 8QATEMNVCHS  
**S/N:** 263-0233  
**ID:** 8OKPW2V2RR4

---

**** ANTENNA HEIGHT **

<table>
<thead>
<tr>
<th>Slant Height to ARP:</th>
<th>1.670</th>
<th>5.48'</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical Height to ARP:</td>
<td>Z = 507.9566 (NAVD 88)</td>
<td></td>
</tr>
<tr>
<td>Meters = Feet x (0.3048)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**LOG Checked By:**  
**Data File Name(s):**

**NAD83 TXNC (4202):**  
**Vertical Height to ARP:**

| E = 2543746.87116 |

---

**Vertical Height to ARP:**

| Z = 507.9566 (NAVD 88) |
| CSF = 0.99985542 |

---

**Agency Full Name:** City of Garland  
**Operator Full Name:** Toney E. Gibson  
**Phone# (972) 205 - 2157:**

---

**GPS 129, 2" BRASS DISK STAMPED 129 LOCATED IN B.C. POC @ N.W. COR. OF AVE. B & ALLEN ST. INT. APPROX. 27.60' N.E. OF THE C/L OF AVE. B AND ALLEN ST.**

---

**Table of Weather**

<table>
<thead>
<tr>
<th>Problem</th>
<th>Visibility</th>
<th>Temperature</th>
<th>Cloud Cover</th>
<th>Wind</th>
</tr>
</thead>
<tbody>
<tr>
<td>NONE</td>
<td>GOOD</td>
<td>78°</td>
<td>CLEAR</td>
<td>5 - 10 MPH</td>
</tr>
<tr>
<td>Any obstructions above 10°?</td>
<td>(Y / N)</td>
<td>Radio Interference source nearby?</td>
<td>(Y / N)</td>
<td></td>
</tr>
<tr>
<td>RPLS: GSB</td>
<td>P.Chief: TG</td>
<td>Field Tech: KW</td>
<td>Field Tech: CW</td>
<td></td>
</tr>
</tbody>
</table>

---

4/12/2008
GPS Station Observation Log

Station Designation: NAD83 Latitude: 32° 54' 38.96600 ft./meters
NAD83 Longitude: 96° 37' 41.39519 ft./meters
NAD83 Ellipsoidal Height: 131.219 ft./meters
NAD83 Latitude: 32° 54' 38.96600 ft./meters
NAD83 Longitude: 96° 37' 41.39519 ft./meters
NAD83 Ellipsoidal Height: 131.219 ft./meters

Observation Session Time: 10.00 AM

Sched. Start: 7:56 AM Stop: 12:00 PM

Epoch Interval = 10 Seconds

GNSS Receiver Brand & Model: Topcon HiPer Lite-Internal Antenna

Data File Name(s): N = 7019421.48606
E = 2542887.59138
Z = 515.3666 (NAVD 88)

ID: 8QATEMNVCHS

Receiver Brand & Model: Topcon HiPer Lite-Internal Antenna

Comments: 4HRS STATIC DATA RECORDED.

** ANTENNA HEIGHT **

Slant Height to ARP: 1.710 Meters 5.61 Feet

Vertical Height to ARP: Z = 515.3666 (NAVD 88)

Meters = Feet x (0.3048)

Height Entered into receiver = 1.6764 Meters.

LOG Checked By: Data File Name(s): (standard NGS Format = aaaaaddds.xxx)

E = 2542887.59138

Agencgy Full Name: City of Garland

Operator Full Name: Toney E. Gibson

Phone#: (972) 205 - 2157

E-mail: gbreysac@ci.garland.tx.us

GEOID03 Geoid Height: 157.069

Agency Full Name: City of Garland

Operator Full Name: Tony E. Gibson

Phone#: (972) 205 - 2157

E-mail: gbreysac@ci.garland.tx.us

GPS Station Observation Log

Station Designation: NAD83 Latitude: 32° 54' 38.96600 ft./meters
NAD83 Longitude: 96° 37' 41.39519 ft./meters
NAD83 Ellipsoidal Height: 131.219 ft./meters

Observation Session Time: 10.00 AM

Sched. Start: 7:56 AM Stop: 12:00 PM

Epoch Interval = 10 Seconds

GNSS Receiver Brand & Model: Topcon HiPer Lite-Internal Antenna

Data File Name(s): N = 7019421.48606
E = 2542887.59138
Z = 515.3666 (NAVD 88)

ID: 8QATEMNVCHS

Receiver Brand & Model: Topcon HiPer Lite-Internal Antenna

Comments: 4HRS STATIC DATA RECORDED.

** ANTENNA HEIGHT **

Slant Height to ARP: 1.710 Meters 5.61 Feet

Vertical Height to ARP: Z = 515.3666 (NAVD 88)

Meters = Feet x (0.3048)

Height Entered into receiver = 1.6764 Meters.

LOG Checked By: Data File Name(s): (standard NGS Format = aaaaaddds.xxx)

E = 2542887.59138

Agencgy Full Name: City of Garland

Operator Full Name: Toney E. Gibson

Phone#: (972) 205 - 2157

E-mail: gbreysac@ci.garland.tx.us

GEOID03 Geoid Height: 157.069

Agency Full Name: City of Garland

Operator Full Name: Tony E. Gibson

Phone#: (972) 205 - 2157

E-mail: gbreysac@ci.garland.tx.us

GPS 130, 2" BRASS DISK STAMPED 130 LOCATED IN SIDEWALK ON N. SIDE OF EAST AVE. B. APPROX. 63.70' E. OF C/L INT. OF HOPKINS ST. AND APPROX. 36' NORTH OF C/L OF EAST AVE. B.

***COG MAP GRID H-8***MAPSCO 19A-W***

Table of Weather

<table>
<thead>
<tr>
<th>Problem</th>
<th>Visibility</th>
<th>Temperature</th>
<th>Cloud Cover</th>
<th>Wind</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>GOOD</td>
<td>78°</td>
<td>CLEAR</td>
<td>5 - 10 MPH</td>
</tr>
<tr>
<td>Any obstructions above 10°?</td>
<td>(Y / N)</td>
<td>Radio Interference source nearby?</td>
<td>(Y / N)</td>
<td></td>
</tr>
</tbody>
</table>

RPLS: GSB  P.Chief: TG  Field Tech: KW  Field Tech: CW

4/12/2008
GPS Station Observation Log

Station Designation: (Check applicable: X GEO. CNTRL__Trav. PT._BM )  Station PID, if any: DATE:  

GPS 131 9/23/2005

Project Name: Geodetic Monument  Project Number: GPS- 131  Stat.4-Char ID:  Day of Year:  

NAD83 Latitude:  NAD83 Longitude:  NAD83 Ellipsoidal Height  
32 54 39.04046  96 37 50.68371  

Session ID: (A,B,C,etc.)  
Agency Full Name: City of Garland

Observation Session Time  
Sched. Start:  Stop:  
Actual Start: 7:38 AM  Stop: 11:49 AM  
Epoch Interval = 5 Seconds  
Elevation Mask = Degrees  
Navd88 Ellipsoid Height  
Geoid03 Geoid Height  

Receiver Brand & Model: Topcon Hiper Lite-Internal Antenna  
Comments: 4HRS STATIC DATA RECORDED.  
NOTE: ELEV. 530.06 IS ORTHO HT. CALC. BY OPUS.

Base: X  Rover:  
P/N: 01-840802-03  P/N: 01-840802-03  "LEVEL LOOP ELEV. FRPM RM 33 ELEV. 530.1533 (NAVD 88)"

S/N: 263-0243  S/N: 263-0233  
ID: 8QATEMNVCHS  ID: 8OKPW2V2RR4

** ANTENNA HEIGHT **  

<table>
<thead>
<tr>
<th>Slant Height to ARP:</th>
<th>1.642</th>
<th>5.39</th>
<th>N = 7019414.91127</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical Height to ARP:</td>
<td>Z = 530.1533 (NAVD 88)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meters = Feet x (0.3048)</td>
<td>CSF = 0.99985432</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Height Entered into receiver = 1.6093 Meters.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

LOG Checked By:  
Data File Name(s):  
(standard NGS Format = aaaaaddds.xxx)  
aaa=4 character ID, ddd=Day of Year,  

\[ \text{NAD83 TXNC (4202)} \]

GPS 131, 2" BRASS DISK STAMPED 131 LOCATED IN C/L MEDIAN NOSE APPROX. 33' N. OF THE C/L OF S.  
FIRST ST AND AVE. B. AND APPROX. 25' E. OF S. BOUND FIRST ST C/L.  
***COG MAP GRID H-8***MAPSCO 19A-W***

<table>
<thead>
<tr>
<th>Problem</th>
<th>Visibility</th>
<th>Temperature</th>
<th>Cloud Cover</th>
<th>Wind</th>
</tr>
</thead>
<tbody>
<tr>
<td>NONE</td>
<td>GOOD</td>
<td>78°</td>
<td>P/CLOUDY</td>
<td>5 - 10 MPH</td>
</tr>
</tbody>
</table>

Any obstructions above 10° ?  (Y/N)  Radio Interference source nearby ?  (Y/N)

RPLS: GSB  P.Chief: TG  Field Tech: KW  Field Tech: CW

Table of Weather

4/12/2008
### GPS Station Observation Log

<table>
<thead>
<tr>
<th>Station Designation</th>
<th>(Check applicable: GEO. CNTRL. Trav. PT. BM)</th>
<th>Station PID, if any</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>GPS 132</td>
<td>9/23/2005</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project Name: Geodetic Monument</th>
<th>Project Number: GPS-132</th>
<th>Stat 4-Char ID:</th>
<th>Day of Year:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>NAD83 Latitude</th>
<th>NAD83 Longitude</th>
<th>NAD83 Ellipsoidal Height</th>
<th>Agency Full Name: City of Garland</th>
</tr>
</thead>
<tbody>
<tr>
<td>32°54'23.30605&quot;</td>
<td>96°37'50.82239&quot;</td>
<td>136.782 ft./meters</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Observation Session Time</th>
<th>162.642 ft./meters</th>
<th>NAVD88 Orthometric Height</th>
<th>Operator Full Name: Toney E. Gibson</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Actual Start: 7:55 AM</th>
<th>Stop: 12:00 PM</th>
<th>Epoch Interval = 5 Seconds</th>
<th>GEOID03 Geoid Height</th>
<th>Phone# (972) 205 - 2157</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Elevation Mask = ___ Degrees</th>
<th>ft./meters</th>
<th>E-mail: <a href="mailto:gbreysac@ci.garland.tx.us">gbreysac@ci.garland.tx.us</a></th>
</tr>
</thead>
</table>

**Receiver Brand & Model:** Topcon Hiper Lite-Internal Antenna **Comments:** 4HRS STATIC DATA RECORDED.

<table>
<thead>
<tr>
<th>Base:</th>
<th>Rover: X</th>
<th>ELEV. IS ORTHO HT. CALC. BY OPUS.</th>
</tr>
</thead>
<tbody>
<tr>
<td>P/N:01-840802-03</td>
<td>S/N: 263-0243</td>
<td>ID:8QATEMNVCHS</td>
</tr>
<tr>
<td>S/N: 263-0233</td>
<td>ID:8OKPW2V2RR4</td>
<td></td>
</tr>
</tbody>
</table>

**** ANTENNA HEIGHT ****

<table>
<thead>
<tr>
<th>Meters</th>
<th>Feet</th>
<th>NAD83 TXNC (4202)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slant Height to ARP: 1.692</td>
<td>5.55</td>
<td></td>
</tr>
<tr>
<td>Vertical Height to ARP: Z = 533.60129</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meters = Feet x (0.3048)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meter Height Entered into receiver = 1.6581 Meters</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| **Note:** &/or sketch ANY unusual conditions be Very Explicit as to where and how Measured. |
|                                                                                   |

<table>
<thead>
<tr>
<th><strong>LOG Checked By:</strong></th>
<th>Data File Name(s):</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(standard NGS Format = aaaaaddds.xxx)</td>
</tr>
<tr>
<td></td>
<td>aaaa=4 character ID, ddd=Day of Year,</td>
</tr>
</tbody>
</table>

---

**GPS 132, 2" BRASS DISK STAMPED 132 LOCATED ON C/L MEDIAN NOSE @ S. FIRST ST & E. AVE. F INT. APPROX. 39.60° S. OF E. AVE. F & S. FIRST ST INT. APPROX 25.80° E. OF S. FIRST ST S. BOUND C/L.***COG MAP GRID H-8***MAPSCO 29A-***A***

---

<table>
<thead>
<tr>
<th><strong>Table of Weather</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Problem</strong></td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>NONE</td>
</tr>
</tbody>
</table>

- Any obstructions above 10° ? (Y / N)
- Radio Interference source nearby ? (Y / N)

- RPLS: GSB P.Chief: TG
- Field Tech: KW Field Tech: CW

---

4/12/2008
### GPS Station Observation Log

<table>
<thead>
<tr>
<th>Station Designation</th>
<th>Project Number</th>
<th>Project Name</th>
<th>Project Number</th>
<th>Project Name</th>
<th>Stat.4-Char ID</th>
<th>Day of Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPS 133</td>
<td>GPS-133</td>
<td>Geodetic Monument</td>
<td>GPS-133</td>
<td>GPS-133</td>
<td>City of Garland</td>
<td>9/26/2005</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NAD83 Latitude</th>
<th>NAD83 Longitude</th>
<th>NAD83 Ellipsoidal Height</th>
<th>NAD83 Orthometric Height</th>
<th>Agency Full Name</th>
<th>Operation Full Name</th>
<th>Phone#</th>
<th>E-mail</th>
</tr>
</thead>
<tbody>
<tr>
<td>32°54'06''00645</td>
<td>96°37'51.23268</td>
<td>1.674</td>
<td>5.49</td>
<td>City of Garland</td>
<td>City of Garland</td>
<td>(972) 205-2157</td>
<td><a href="mailto:gbreysac@ci.garland.tx.us">gbreysac@ci.garland.tx.us</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Observation Session Time</th>
<th>Sched. Start</th>
<th>Stop</th>
<th>Actual Start</th>
<th>Stop</th>
<th>Epoch Interval</th>
<th>Elevation Mask</th>
<th>GEOID03 Geoid Height</th>
<th>Phone#</th>
<th>E-mail</th>
</tr>
</thead>
<tbody>
<tr>
<td>139.060 m ft./meters</td>
<td>164.924 m ft./meters</td>
<td></td>
<td>7:44 AM</td>
<td>11:55 AM</td>
<td>10 Seconds</td>
<td>Degrees</td>
<td>164.924 m</td>
<td>(972) 205-2157</td>
<td><a href="mailto:gbreysac@ci.garland.tx.us">gbreysac@ci.garland.tx.us</a></td>
</tr>
</tbody>
</table>

Receiver Brand & Model: Topcon Hiper Lite-Internal Antenna

Log Checked By: NOTE: ELEV. IS ORTHO HT. CALC. BY OPUS.

Data File Name(s): (standard NGS Format = aaaaddds.xxx)

**ANTENNA HEIGHT**

<table>
<thead>
<tr>
<th>Slant Height to ARP</th>
<th>Vertical Height to ARP</th>
<th>Height Entered into receiver</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.674</td>
<td>5.49</td>
<td>1.6398</td>
</tr>
</tbody>
</table>

Note: &/or sketch ANY unusual conditions. be Very Explicit as to where and how Measured.

** Table of Weather **

<table>
<thead>
<tr>
<th>Problem</th>
<th>Visibility</th>
<th>Temperature</th>
<th>Cloud Cover</th>
<th>Wind</th>
</tr>
</thead>
<tbody>
<tr>
<td>NONE</td>
<td>GOOD</td>
<td>77°</td>
<td>CLEAR</td>
<td>3 - 5 MPH</td>
</tr>
</tbody>
</table>

Any obstructions above 10°? ( Y / N )
Radio Interference source nearby? ( Y / N )

RPLS: GSB  P.Chief: TG  Field Tech: KW  Field Tech: CW

GPS 133, 2" BRASS DISK STAMPED 133, LOCATED ON B.C. OF MEDIAN ON FIRST ST APPROX. 23' E. OF S. BOUND FIRST ST C/L AND APPROX. 144.30' N. OF WANDA DR & FIRST ST INT C/L.

***COG MAP GRID I-8***MAPSCO 29A-A***

4/12/2008
GPS Station Observation Log

Station Designation: NAD83 Latitude: 32 53 48.50752 ft./meters
Station PID, if any: DATE: 9/26/2005

Project Name: Geodetic Monument Project Number: GPS- 134 Stat.4-Char ID: _____
Stat.4-Char ID: _____ Day of Year: _____
NAD83 Longitude: 96 37 51.89144 ft./meters
NAD83 Ellipsoidal Height: 147.6761 ft./meters
Agency Full Name: City of Garland

Observation Session Time: Sched. Start: Stop: NAVD88 Orthometric Height: Operator Full Name: Toney E. Gibson
Actual Start: 7:48 AM Stop: 12:00 PM 173.543 ft./meters
Epoch Interval = 10 Seconds GEOID03 Geoid Height: Phone# (972) 205 - 2157
Elevation Mask = Degrees ft./meters E-mail: gbreyseac@ci.garland.tx.us

Receiver Brand & Model: Topcon HiPer Lite-Internal Antenna Comments: 4HRS STATIC DATA RECORDED.

Base: Rover: X NOTE: ELEV. 569.365 IS ORTHO HT. CALC. BY OPUS.
P/N: 01-840802-03 S/N: 263-0243 ID: 8QATEMNVCHS
P/N: 01-840802-03 S/N: 263-0233 ID: 8OKPW2V2RR4

** ANTELE CONTRA HEIGHT **

Meters Feet NAD83 TXNC (4202)

Slant Height to ARP: 1.562 5.125 N = 7014307.13606
Vertical Height to ARP: Z = 569.36566
Meters = Feet x (0.3048)
Height Entered into receiver = 1.5286 Meters.

Note: &/or sketch ANY unusual conditions be Very Explicit as to where and how Measured.

LOG Checked By: Data File Name(s):

GPS 134, 2" BRASS DISK STAMPED 134, LOCATED ON INLET TOP S.W. COR. ON S. BOUND SIDE OF FIRST
APP. 20.80' W. OF S. BOUND FIRST ST C/L & APP. 47.50' N. OF 1725 S. FIRST ST THRIFT CITY
STORE DRIVEWAY C/L. ***COG MAP GRID I-8***MAPSCO 29A-E***

Table of Weather

<table>
<thead>
<tr>
<th>Problem</th>
<th>Visibility</th>
<th>Temperature</th>
<th>Cloud Cover</th>
<th>Wind</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>Good</td>
<td>77°</td>
<td>CLEAR</td>
<td>3 - 5 MPH</td>
</tr>
<tr>
<td>Any obstructions above 10°?</td>
<td>(Y/N)</td>
<td>Radio Interference source nearby?</td>
<td>(Y/N)</td>
<td></td>
</tr>
<tr>
<td>RPLS: GSB</td>
<td>P.Chief: TG</td>
<td>Field Tech: KW</td>
<td>Field Tech: CW</td>
<td></td>
</tr>
</tbody>
</table>

4/12/2008
**GPS Station Observation Log**

<table>
<thead>
<tr>
<th>Station Designation</th>
<th>Check applicable:</th>
<th>GEO. CNTRL.</th>
<th>Trav. PT.</th>
<th>BM</th>
<th>Station PID, if any:</th>
<th>DATE:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>GPS 135</td>
<td>2/8/2007</td>
</tr>
</tbody>
</table>

**Project Name:** Geodetic Monument    **Project Number:** GPS-135    **Stat 4-Char ID:**     **Day of Year:**

NAD83 Latitude: 32 53 39.66577 ft./meters

NAD83 Longitude: 96 38 31.45432 ft./meters

NAD83 Ellipsoidal Height: 132.729 ft./meters

**Observation Session Time:**

**Sched. Start:**

**Stop:**

**Actual Start:** 9:05 AM   **Stop:** 1:10 PM

**Epoch Interval:** 10 Seconds

NAD83 Orthometric Height: 158.630 ft./meters

**GEOD03 Geoid Height:**

**Elevation Mask:**

**Receiver Brand & Model:** Topcon Hiper Lite - Internal Antenna

**Output Level:**

**Data File Name(s):**

**LOG Checked By:**

**Geometry CNTRL. Travel PT. BM**

**Antenna Height:**

**Meters** | **Feet** | **NAD83 TXNC (4202)**

**NAD83 Ellipsoidal Height:** 1.708 | 5.595 | N = 7013353.92300

**Orthometric Height:** 1.6718 | 5.485 | E = 2538727.05800

**Geoid Height:** 1.6718 | 5.485 | Z = 520.439

**CSF:** 0.99985553

**Base** | **Rover** | **NOTE:** ELEV. 520.44 IS ORTHO HT. CALC. BY OPUS.

**P/N: 01-840802-03**

**S/N: 263-0243**

**ID: 8QATEMNVCHS**

**ID: 8OKPW2V2RR4**

**Vertical Height to ARP:**

**Slant Height to ARP:**

**Height Entered into receiver:** 1.6718 Meters

**Problem:**

**Visibility:**

**Temperature:** 57°

**Cloud Cover:** CLOUDY

**Wind:** 5 - 10 MPH

**Observation Site:**

**Problem:**

**Visibility:** GOOD

**Temperature:** 57°

**Cloud Cover:** CLOUDY

**Wind:** 5 - 10 MPH

**Table of Weather**

<table>
<thead>
<tr>
<th>Problem</th>
<th>Visibility</th>
<th>Temperature</th>
<th>Cloud Cover</th>
<th>Wind</th>
</tr>
</thead>
<tbody>
<tr>
<td>NONE</td>
<td>GOOD</td>
<td>57°</td>
<td>CLOUDY</td>
<td>5 - 10 MPH</td>
</tr>
</tbody>
</table>

**Any obstructions above 10°?**

**Radio Interference source nearby?**

**RPLS:**

**GSB**

**P.Chief:**

**Field Tech:**

**KW**

**CW**

**5/6/2008**
GPS Station Observation Log

Station Designation: (Check applicable: X GEO. CNTRL. _Trav. PT._BM )
Station PID, if any: GPS 136

Date: 9/16/2005

Station Designation
NAD83 Latitude: 32°53'39.78347"
NAD83 Ellipsoidal Height: 143.351 m ft./meters
NAD83 Longitude: 96°38'16.31296"

GEOID03 Geoid Height: GEOID03 Geoid Height

Receiver Brand & Model: Topcon Hiper Lite-Internal Antenna
Receiver Brand & Model: Topcon Hiper Lite-Internal Antenna

**ANTENNA HEIGHT**

<table>
<thead>
<tr>
<th>Slant Height to ARP:</th>
<th>1.726</th>
<th>5.665</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical Height to ARP:</td>
<td>Z = 555.41*</td>
<td></td>
</tr>
<tr>
<td>CSF = 0.99985386</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: &/or sketch ANY unusual conditions be Very Explicit as to where and how Measured.

LOG Checked By: | Data File Name(s): | (standard NGS Format = aaaaddds.xxx) | ID:8QATEMNVCHS | ID:8OKPW2V2RR4 |

GPS 136, 2" BRASS DISK STAMPED 136 LOCATED IN C/L MEDIAN NOSE @ 601 MILLER RD. IN FRONT OF THE
W. ENTRY TO W.C. DAUGHERTY ELEM. SCHOOL. APPROX. 16.20' S. OF W. BOUND MILLER RD C/L AND
APPROX. 33.80' W. OF DAUGHERTY ELEM. SCHOOL W. DRIVEWAY. ***COG MAP GRID I-7***MAPSCO 29-H***

Table of Weather

<table>
<thead>
<tr>
<th>Problem</th>
<th>Visibility</th>
<th>Temperature</th>
<th>Cloud Cover</th>
<th>Wind</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANY obstructions above 10°?</td>
<td>GOOD</td>
<td>73°</td>
<td>CLOUDY</td>
<td>5 - 10 MPH</td>
</tr>
<tr>
<td>Radio Interference source nearby?</td>
<td>(Y/N)</td>
<td></td>
<td></td>
<td>(Y/N)</td>
</tr>
</tbody>
</table>

RPLS: GSB  P.Chief: TG  Field Tech: KW  Field Tech: CW

4/12/2008
GPS Station Observation Log

Station Designation: (Check applicable: X GEO. CNTRL. __Trav. PT.__BM ) Station PID, if any: DATE:

Project Name: Geodetic Monument Project Number: GPS-137 Stat. 4-Char ID: _____ Day of Year: _____

NAD83 Latitude: 32 53 39.29443 NAD83 Longitude: 96 37 50.65356 NAD83 Ellipsoidal Height: 1.575 ft./meters

Observation Session Time: 147.940 m ft./meters

Sched. Start: Stop: NAVD88 Orthometric Height: 173.807 m ft./meters

Actual Start: 7:58 AM Stop: 12:00 PM Epoch Interval = 10 Seconds GEOID03 Geoid Height: Phone# (972) 205 - 2157

Elevation Mask = Degrees ft./meters E-mail: gbreysac@ci.garland.tx.us

Receiver Brand & Model: Topcon HiPer Lite-Internal Antenna Comments: 4HRS STATIC DATA RECORDED.

Base: X Rover: *NOTE: ELEV. 570.50 EST. BY LEVELING FROM RM20.

P/N:01-840802-03 S/N: 263-0243 ID: 8QATEMNVCHS

P/N:01-840802-03 S/N: 263-0233 ID: 8OKPW2V2RR4

** ANTEANNA HEIGHT ** Meters Feet
NAD83 TXNC (4202)

Slant Height to ARP: 1.575 5.17 N = 7013378.10904

Vertical Height to ARP: 570.50* Z = 570.231 IS ORTHO HT. CALC. BY OPUS.

E = 2542205.79812 CSF = 0.99985315

Meters = Feet x (0.3048) Height Entered into receiver = 1.5423 Meters. Note: &/or sketch ANY unusual conditions be Very Explicit as to where and how Measured.

LOG Checked By: Data File Name(s): (standard NGS Format = aaaaaddds.xxx)

aaaa=4 character ID, ddd=Day of Year,_

GPS 137, 2" BRASS DISK STAMPED 137 IS LOCATED IN C/L MEDIAN NOSE APPROX. 58.60' E. OF C/L INT. OF MILLER RD. & FIRST ST AND APPROX. 5.30' S. OF MILLER RD C/L.

***COG MAP GRID I-7***MAPSCO 29A-E***

Table of Weather

<table>
<thead>
<tr>
<th>Problem</th>
<th>Visibility</th>
<th>Temperature</th>
<th>Cloud Cover</th>
<th>Wind</th>
</tr>
</thead>
<tbody>
<tr>
<td>NONE</td>
<td>GOOD</td>
<td>73°</td>
<td>CLOUDY</td>
<td>5 - 10 MPH</td>
</tr>
<tr>
<td>Any obstructions above 10°?</td>
<td>(Y / N)</td>
<td>Radio Interference source nearby?</td>
<td>(Y / N)</td>
<td></td>
</tr>
</tbody>
</table>

RPLS: GSB P.Chief: TG Field Tech: KW Field Tech: CW

4/12/2008
GPS Station Observation Log

Station Designation: (Check applicable: X GEO. CNTRL. __Trav. PT. __BM )  Station PID, if any:  DATE:  
Project Name: Geodetic Monument  Project Number: GPS-138  Stat 4 char ID:  Day of Year: 
NAD83 Latitude:  NAD83 Longitude: NAD83 Ellipsoidal Height  Session ID: (A,B,C, etc) 
32 53 39.26536  96 37 32.76777  OBSERVATION SESSION TIME: 
NAD83 Longitude:  NAD83 Ellipsoidal Height  Agency Full Name: City of Garland 
Observation Session Time: 146.671 ft./meters  
Sched. Start:  Stop:  NAVD88 Orthometric Height  Operator Full Name: Toney E. Gibson 
Actual Start: 7:54 AM Stop: 12:00 PM  172.524 ft./meters  
Epoch Interval = 10 Seconds  GEOID03 Geoid Height  Phone#: (972) 205  2157  
Elevation Mask = ___ Degrees  ft./meters  E-mail: gbreysac@ci.garland.tx.us  
Receiver Brand & Model: Topcon Hiper Lite-Internal Antenna  Comments: 4HRS STATIC DATA RECORDED.

** ANTENNA HEIGHT **  
Meters  Feet  
NAD83 TXNC (4202)

Slant Height to ARP:  1.650  5.41  
Vertical Height to ARP:  

E = 2543730.52933  
Z = 565.99

Meters = Feet x (0.3048) 
Height Entered into receiver = 1.6154 Meters.  

LOG Checked By:  Data File Name(s):  (standard NGS Format = aaaaaddds.xxx) 

aaa=4 character ID, ddd=Day of Year,

GPS 138, 2" BRASS DISK STAMPED 138 IS LOCATED IN C/L MEDIAN ON MILLER RD. APPROX. 49.40' E. OF THE INT. OF MILLER RD & CUMBERLAND DR AND APPROX. 16.60' S. OF W. BOUND MILLER RD C/L.

***COG MAP GRID I-8***MAPSCO 29A-E***

Table of Weather

<table>
<thead>
<tr>
<th>Problem</th>
<th>Visibility</th>
<th>Temperature</th>
<th>Cloud Cover</th>
<th>Wind</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANY obstructions above 10°?</td>
<td>GOOD</td>
<td>80°</td>
<td>CLEAR</td>
<td>5 - 10 MPH</td>
</tr>
<tr>
<td>Radio Interference source nearby?</td>
<td>(Y / N)</td>
<td>(Y / N)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RPLS: GSB  P.Chief: TG  Field Tech: KW  Field Tech: CW</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4/12/2008
## GPS Station Observation Log

<table>
<thead>
<tr>
<th>Station Designation</th>
<th>Check applicable:</th>
<th>Check applicable:</th>
<th>Station PID, if any:</th>
<th>DATE:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>GEO. CNTRL.</td>
<td>Trav. PT.</td>
<td>BM</td>
<td></td>
</tr>
<tr>
<td>GPS 139</td>
<td></td>
<td></td>
<td></td>
<td>6/6/2006</td>
</tr>
</tbody>
</table>

### Project Information
- **Project Name:** Geodetic Monument
- **Project Number:** GPS-139
- **Stat. 4-Char ID:**
- **Day of Year:**

### NAD83 Coordinates
- **Latitude:** 32° 58' 00.50529" N
- **Longitude:** 96° 38' 30.30719" W
- **Ellipsoidal Height:** 167.683
- **Orthometric Height:** 141.819

### Session Information
- **Observation Session Time:** 141.819 ft./meters
- **Actual Start:** 12:10 AM
- **Stop:** 4:10 PM
- **Epoch Interval:** 10 Seconds
- **Elevation Mask:**

### Receiver Information
- **Brand & Model:** Topcon HiPer Lite-Internal Antenna
- **Model:** 01-840802-03
- **ID:** 8QATEMNCHS
- **P/N:** 01-840802-03
- **S/N:** 263-0243
- **S/N:** 263-0233

### Data File Name(s):**
- **ID:** 8QATEMNCHS
- **ID:** 8OIPW2V2RRR

### **ANTENNA HEIGHT**

<table>
<thead>
<tr>
<th>Meters</th>
<th>Feet</th>
<th>NAD83 TXNC (4202)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.691</td>
<td>5.55</td>
<td>7039711.49798</td>
</tr>
<tr>
<td>5.44</td>
<td></td>
<td>2538358.60109</td>
</tr>
</tbody>
</table>

### Elevation Mask
- **Degrees:**

**Note:**
- **ELEV. 550.197 LEVEL FROM NGSCS 1337 (NAVD 88)**
- **ELEV. 550.14 IS ORTHO HT. CALC. BY OPUS.**

### Table of Weather

<table>
<thead>
<tr>
<th>Problem</th>
<th>Visibility</th>
<th>Temperature</th>
<th>Cloud Cover</th>
<th>Wind</th>
</tr>
</thead>
<tbody>
<tr>
<td>NONE</td>
<td>GOOD</td>
<td>98°</td>
<td>CLEAR</td>
<td>10 - 15 MPH</td>
</tr>
</tbody>
</table>

- **Any obstructions above 10°?**
- **Radio Interference source nearby?**

- **RPLS:** GSB
- **P.Chief:** TG
- **Field Tech:** KW
- **Field Tech:** CW

**NOTE:**
- **ELEV. 550.197 LEVEL FROM NGSCS 1337 (NAVD 88)**
- **ELEV. 550.14 IS ORTHO HT. CALC. BY OPUS.**

**Table of Weather**

<table>
<thead>
<tr>
<th>Problem</th>
<th>Visibility</th>
<th>Temperature</th>
<th>Cloud Cover</th>
<th>Wind</th>
</tr>
</thead>
<tbody>
<tr>
<td>NONE</td>
<td>GOOD</td>
<td>98°</td>
<td>CLEAR</td>
<td>10 - 15 MPH</td>
</tr>
</tbody>
</table>

**COG GPS MON 139, 2" BRASS DISK LOCATED IN C/L MEDIAN NOSE ON N.GARLAND N. OF IH190 OVERPASS AND N.GARLAND INT. APPROX. 48' N OF W. BOUND IH190 FRONTAGE RD C/L.**

**III COG MAP GRID B-7***MAPSCO 9-Y,Z***

3/26/2008
GPS Station Observation Log

Station Designation: NAD83 Latitude: 32° 51' 12.17012
Station Designation: NAD83 Longitude: 96° 35' 58.78962
Station Designation: NAD83 Ellipsoidal Height: 129.1091 ft./meters
Station Designation: Session ID: (A,B,C,etc.)
Station Designation: Observation Session Time: 0.99985831
Station Designation: NAD83 Longitude:
Station Designation: RPLS: GSB
Station Designation: GPS 140, 2" BRASS DISK STAMPED 140, LOCATED ON N. BOUND SIDE OF BROADWAY BLVD. ON INLET TOP.
Station Designation: APPROX. 90° S.E. OF BROADWAY BLVD & PALO ALTO CT C/L AND APPROX 43° N.E. OF BROADWAY BLVD. C/L.
Station Designation: +++COG MAP GRID M-10***MAPSCO 39A-D+++**

GPS 140  2/6/2006

Project Name: Geodetic Monument  Project Number: GPS- 140
Stat.4-Char ID:  Day of Year: ______
NAD83 Latitude:  NAD83 Longitude:  NAD83 Ellipsoidal Height: 129.1091 ft./meters

Sched. Start:  Stop:  NAVD88 Orthometric Height: Operator Full Name: Toney E. Gibson
Actual Start: 8:57 AM  Stop:1:14 PM  154.908 ft./meters
Epoch Interval = 5 Seconds  GEOID03 Geoid Height: Phone# (972) 205 - 2157
Elevation Mask = _____ Degrees  ft./meters  E-mail: gbreysac@ci.garland.tx.us

Receiver Brand & Model: Topcon Hiperm Lite-Internal  Antenna Comments: 4 HRS. STATIC DATA RECORDED.

Base  Rover  NOTE: ELEV. 508.227 IS ORTHO HT. CALC. BY OPUS.

P/N:01-840802-03  P/N:01-840802-03
S/N: 263-0243  S/N: 263-0233
ID:8QATEMNCHS  ID:8OKPW2V2RR4

** ANTENNA HEIGHT **

| Slant Height to ARP: 1.521 Meters | Feets | 4.99 | 4.88 |
| Vertical Height to ARP: | | |
| Meters = Feet x (0.3048) | 1.4874 Meters |
| Z = 508.22733 |
| CSF = 0.99985831 |

LOG Checked By:  Data File Name(s):  (standard NGS Format = aaaaddds.xxx)

<table>
<thead>
<tr>
<th>** Problem **</th>
<th>Visibility</th>
<th>Temperature</th>
<th>Cloud Cover</th>
<th>Wind</th>
</tr>
</thead>
<tbody>
<tr>
<td>NONE</td>
<td>CLEAR</td>
<td>70°</td>
<td>CLOUDY</td>
<td>5 - 10 MPH</td>
</tr>
</tbody>
</table>

Any obstructions above 10°?  YES  NO
Radio Interference source nearby?  YES  NO

RPLS: GSB  P.Chief: TG  Field Tech: KW  Field Tech: CW

4/28/2008
GPS Station Observation Log

Station Designation: GPS 141  
Project Name: Geodetic Monument  
Project Number: GPS-141  
Stat.4-Char ID:  
NAD83 Latitude: 32°51'27.98441"  
NAD83 Longitude: 96°36'39.33784"  
NAD83 Ellipsoidal Height:  
observation Time: 128.819 ft./meters  
Sched. Start:  
Stop:  
Actual Start: 8:35 AM  
Stop: 1:10 PM  
Epoch Interval = 5 Seconds  
Elevation Mask =  
Receiver Brand & Model: Topcon Hiper Lite-Internal Antenna  
Comments: 4 HRS. STATIC DATA RECORDED.  
DATA FILE NAME(S):  
ID: 8QATEMNVC8  
ID: 8OKPW2V2RR4  
** ANTENNA HEIGHT **  
Slant Height to ARP:  
Vertical Height to ARP:  
Meters = Feet x (0.3048)  
Height Entered into receiver: 1.7038 Meters.  
LOG Checked By:  
Data File Name(s): (standard NGS Format = aaaaaddds.xxx)  
aaa=4 character ID, ddd=Day of Year,  

Table of Weather

<table>
<thead>
<tr>
<th>Problem</th>
<th>Visibility</th>
<th>Temperature</th>
<th>Cloud Cover</th>
<th>Wind</th>
</tr>
</thead>
<tbody>
<tr>
<td>NONE</td>
<td>CLEAR</td>
<td>70°</td>
<td>CLOUDY</td>
<td>5 - 10 MPH</td>
</tr>
</tbody>
</table>

Any obstructions above 10°?  
Radio Interference source nearby?  
RPLS: GSB  
P.Chief: TG  
Field Tech: KW  
Field Tech: CW  

GPS 141, 2" BRASS DISK STAMPED 141, LOCATED ON INLET TOP @ N.W. COR. OF BROADWAY BLVD. & E. OATES RD INT. APPROX. 45° S.W. OF BROADWAY BLVD. C/L AND APPROX. 106° N.W. OF E. OATES RD C/L.  
***COG MAP GRID M-10***MAPSCO 29A-Z***  

4/28/2008
GPS Station Observation Log

Station Designation: NAD83 Latitude:
NAD83 Longitude:
NAD83 Ellipsoidal Height:
Observation Session Time:
NAD83 Longitude:
NAD83 Ellipsoidal Height:
NAD83 Ellipsoidal Height:

Comments:
1.646 ft./meters
5.40 N =
5.29 E =
Z =
CSF =

Project Name: Geodetic Monument
Project Number: GPS-142

Meters = Feet x (0.3048)
Height Entered into receiver:
1.6124 Meters.

Receiver Brand & Model: Topcon Hiper Lite-Internal Antenna

Agency Full Name: City of Garland
Operator Full Name: Toney E. Gibson
Phone# (972) 205 - 2157
E-mail: gbreyssac@ci.garland.tx.us

Elevation Mask = _____ Degrees

LOG Checked By:

Data File Name(s):

(standard NGS Format = aaaaddds.xxx)
aaa=4 character ID, ddd=Day of Year,

Note: &/or sketch ANY unusual conditions. be Very Explicit as to where and how Measured.

GEOID03 Geoid Height:

Meters = Feet

NAD83 TXNC (4202)

** ANTENNA HEIGHT **

<table>
<thead>
<tr>
<th>Meters</th>
<th>Feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.646</td>
<td>5.40</td>
</tr>
<tr>
<td>5.29</td>
<td></td>
</tr>
</tbody>
</table>

N = 7040822.41400
E = 2531470.77400
Z = 540.908
CSF = 0.99985182

GPS Station Observation Log

GEO. CNTRL. Trav. PT. BM

Rover

NOTE: ELEV. 540.91 IS ORTHO HT. CALC. BY OPUS.

GPS 142, 2" BRASS DISK STAMPED 142 LOCATED IN SIGN FOOTER, APPROX. 42.60' E. OF N. BOUND LANE SHILOH RD C/L @ SPRING CREEK GREENBELT PARK.

***COG MAP GRID B-5*** MAPCSO 9-S***

Table of Weather

<table>
<thead>
<tr>
<th>Problem</th>
<th>Visibility</th>
<th>Temperature</th>
<th>Cloud Cover</th>
<th>Wind</th>
</tr>
</thead>
<tbody>
<tr>
<td>NONE</td>
<td>GOOD</td>
<td>70°</td>
<td>CLEAR</td>
<td>15 - 20 MPH</td>
</tr>
</tbody>
</table>

Any obstructions above 10°? □ YES □ NO
Radio Interference source nearby? □ YES □ NO
RPLS: GSB          P.Chief: TG    Field Tech: KW    Field Tech: CW

3/26/2008
GPS Station Observation Log

Station Designation: GPS 143  7/7/2006

NAD83 Latitude: 32° 58' 23.15582" N
NAD83 Longitude: 96° 39' 16.23645" W
NAD83 Ellipsoidal Height: 151.242 ft./meters

Agent Full Name: City of Garland
Operator Full Name: Toney E. Gibson
Phone#: (972) 205-2157
E-mail: gbreysac@ci.garland.tx.us

Receiver Brand & Model: Topcon Hiper Lite - Internal Antenna

Session ID: (A,B,C,etc.)

Elevation Mask = _____ Degrees

Receiver P/N: 01-840802-03
ID: 8QATEMNVCHS
S/N: 263-0243

Slant Height to ARP: N = 7041931.20800 E = 2534406.33200
Vertical Height to ARP: Z = 581.173

Meters = Feet x (0.3048)
Height Entered into receiver: -0.0335 Meters.

LOG Checked By: Data File Name(s):

ANTENNA HEIGHT

NAD83 TXNC (4202)

LOG Checked By: Data File Name(s):

Elevations = Orthometric Height

GPS 143, 2" BRASS DISK STAMPED 143, LOCATED APPROX 24' N.E. OF IH 190 E. BOUND LANE FRONTAGE RD
C/L AND APPROX 21' S. OF THE S.E. COR. OF CAMPBELL RD. ON RAMP TOLLBOOTHS.
***COG MAP GRID B-6***MAPSCO 9-T***

Table of Weather

<table>
<thead>
<tr>
<th>Problem</th>
<th>Visibility</th>
<th>Temperature</th>
<th>Cloud Cover</th>
<th>Wind</th>
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<tbody>
<tr>
<td>NONE</td>
<td>GOOD</td>
<td>°</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Any obstructions above 10°?  YES  NO
Radio Interference source nearby?  YES  NO

RPLS: GSB   P.Chief: TG   Field Tech: KW   Field Tech: CW

3/26/2008
## GPS Station Observation Log

<table>
<thead>
<tr>
<th>Station Designation</th>
<th>Check applicable:</th>
<th>Station PID, if any:</th>
<th>DATE:</th>
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<tbody>
<tr>
<td></td>
<td>GEO. CNTRL.</td>
<td></td>
<td>3/13/2007</td>
</tr>
</tbody>
</table>

**Project Name:** Geodetic Monument  
**Project Number:** GPS-149  
**NAD83 Latitude:** 32 58 00.209  
**NAD83 Longitude:** 96 36 33.43419  
**NAD83 Ellipsoidal Height:** 131.772 ft./meters  
**Agency Full Name:** City of Garland  
**Oper. Full Name:** Toney E. Gibson  
**Phone#:** (972) 205 - 2157  
**E-mail:** gbreysac@ci.garland.tx.us

**Observation Session Time:**  
**Actual Start:** 11:05 AM  
**Stop:** 3:10 PM  
**Epoch Interval:** 10 Seconds  
**Elevation Mask:**  
**Receiver Brand & Model:** Topcon HiPer Lite-Internal Antenna  
**P/N:** 01-840802-03  
**S/N:** 263-0243  
**ID:** 8QATEMNVCHS  
**P/N:** 01-840802-03  
**S/N:** 263-0233  
**ID:** 8OKPW2V2RR4

**ANTENNA HEIGHT**  
**Meters** | **Feet** | **NAD83 TXNC (4202)**  
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Slant Height to ARP:</td>
<td>1.562</td>
<td>5.12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.01 N</td>
</tr>
<tr>
<td>Vertical Height to ARP:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.5270</td>
<td>Z = 516.869</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CSF = 0.99985303</td>
</tr>
</tbody>
</table>

**Height Entered into receiver:** 1.5270 Meters.  
**Note:** &/or sketch ANY unusual conditions be Very Explicit as to where and how Measured.

**LOG Checked By:**  
**Data File Name(s):** (standard NGS Format = aaaaddds.xxx)  
aaa=4 character ID, ddd=Day of Year.

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**GPS 149, 2" BRASS DISK STAMPED 149, LOCATED ON INLET TOP @ THE N.E. COR. INT. OF 5500 LAVON DR & LAVON DR (HWY 78). APPROX. 62' N.E. OF 5500 LAVON DR C/L & APPROX. 48' S.E. OF LAVON DR (HWY 78) C/L.***COG MAP GRID B-9***MAPSCO 9A-Y***

### Table of Weather

<table>
<thead>
<tr>
<th>Problem</th>
<th>Visibility</th>
<th>Temperature</th>
<th>Cloud Cover</th>
<th>Wind</th>
</tr>
</thead>
<tbody>
<tr>
<td>NONE</td>
<td>GOOD</td>
<td>70°</td>
<td>P/ CLOUDY</td>
<td>5 - 10 MPH</td>
</tr>
</tbody>
</table>

**Any obstructions above 10°?**  
**RPLS:** GSB  
**P.Chief:** TG  
**Field Tech:** KW  
**Field Tech:** CW

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3/26/2008
**GPS Station Observation Log**

<table>
<thead>
<tr>
<th>Station Designation</th>
<th>Check applicable:</th>
<th>GEO. CNTRL.</th>
<th>Trav. PT.</th>
<th>BM</th>
<th>Station PID,if any:</th>
<th>DATE:</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>GPS 150</td>
<td>3/15/2007</td>
</tr>
</tbody>
</table>

- **Project Name:** Geodetic Monument
- **Project Number:** GPS- 150
- **Stat.4-Char ID:**
- **Day of Year:**

<table>
<thead>
<tr>
<th>NAD83 Latitude:</th>
<th>NAD83 Longitude:</th>
<th>NAD83 Ellipsoidal Height</th>
<th>Agency Full Name:</th>
<th>City of Garland</th>
</tr>
</thead>
<tbody>
<tr>
<td>32 57 47.58801</td>
<td>96 36 44.03250</td>
<td>149.884 ft./meters</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Observation Session Time:** 124.105 ft./meters

**Sched. Start:**

**Stop:**

**Actual Start:** 9:00 AM
**Stop:** 1:05 PM

**Epoch Interval = 10 Seconds**

**GEOID03 Geoid Height**

**Operator Full Name:** Toney E. Gibson
**Phone#:** (972) 205 - 2157
**E-mail:** gbreysac@ci.garland.tx.us

**Receiver Brand & Model:** Topcon Hiper Lite-Internal Antenna
**Comments:** 4 HRS. STATIC DATA RECORDED.

**LOG Checked By:**

**Data File Name(s):**

(standard NGS Format = aaaaddds.xxx)

aaa=4 character ID, ddd=Day of Year,

**Antenna Height**

<table>
<thead>
<tr>
<th><strong>Meters</strong></th>
<th><strong>Feet</strong></th>
<th><strong>NAD83 TXNC (4202)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.656</td>
<td>5.435</td>
<td>5.325</td>
</tr>
</tbody>
</table>

**Vertical Height to ARP:**

- **Z:** 491.744
- **CSF:** 0.99985432

**Meters = Feet x (0.3048)**

**Height Entered into receiver:** 1.6231 Meters

** NOTE: ELEV. 491.74 IS ORTHO HT. CALC. BY OPUS.**

<table>
<thead>
<tr>
<th>Base P/N:01-840802-03</th>
<th>Rover P/N:01-840802-03</th>
<th>S/N: 263-0243</th>
<th>S/N: 263-0233</th>
<th>ID:8QATEMNVCHS</th>
<th>ID:80KPW2V2RR4</th>
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</table>

**Table of Weather**

<table>
<thead>
<tr>
<th>Problem</th>
<th>Visibility</th>
<th>Temperature</th>
<th>Cloud Cover</th>
<th>Wind</th>
</tr>
</thead>
<tbody>
<tr>
<td>NONE</td>
<td>GOOD</td>
<td>60°</td>
<td>CLEAR</td>
<td>5 - 10 MPH</td>
</tr>
</tbody>
</table>

- Any obstructions above 10°? □ YES □ NO
- Radio Interference source nearby? □ YES □ NO

- **RPLS:** GSB
- **P.Chief:** TG
- **Field Tech:** KW
- **Field Tech:** CW

**GPS 150, 2" BRASS DISK STAMPED 150, LOCATED IN MEDIAN NOSE APPROX. 33' N.E. OF N. BOUND LAVON DR. C/L & APPROX. 48' S.W. 5225 LAVON DR. DRIVEWAY C/L.**

***COG MAP GRID C-9***MAPSCO 9A-Y***

**3/26/2008**