

**G.P.S. SURVEY REPORT
GEODETIC CONTROL POINTS 1 to 8
ESTABLISHED BY TEAGUE NALL AND PERKINS
FOR THE CITY OF KELLER, TEXAS
IN DECEMBER OF 2004**

Geodetic Control Points 1 to 8 were established by the Teague Nall and Perkins Survey Department in the month of December of 2004. The purpose of this project was to establish Geodetic Control on the NAD 83(93) System, for use as control for the City's Comprehensive Storm Water Master Plan, and for use as control for future projects.

The project was performed using Trimble 4000SSi receivers and Trimble 5700 Series Receivers. The receivers were logging both L1 and L2 frequencies. Trimble Geomatics Office version 1.5 was used to process the baselines. All baselines used were either L1 fixed or Iono Free Fixed. The adjustment was performed using the least squares adjustment in Trimble Geomatics Office Adjustment module.

The City of Keller's Geodetic Control Network is based on the N.G.S. A Order Station "Arlington RRP". The Datum used is NAD 83(93). The State Plane Coordinates published herein are Texas North Central Zone.

The Vertical Datum published herein is based on the NAVD 88. The precision of the data published herein meets and/or exceeds Second Order Accuracy.

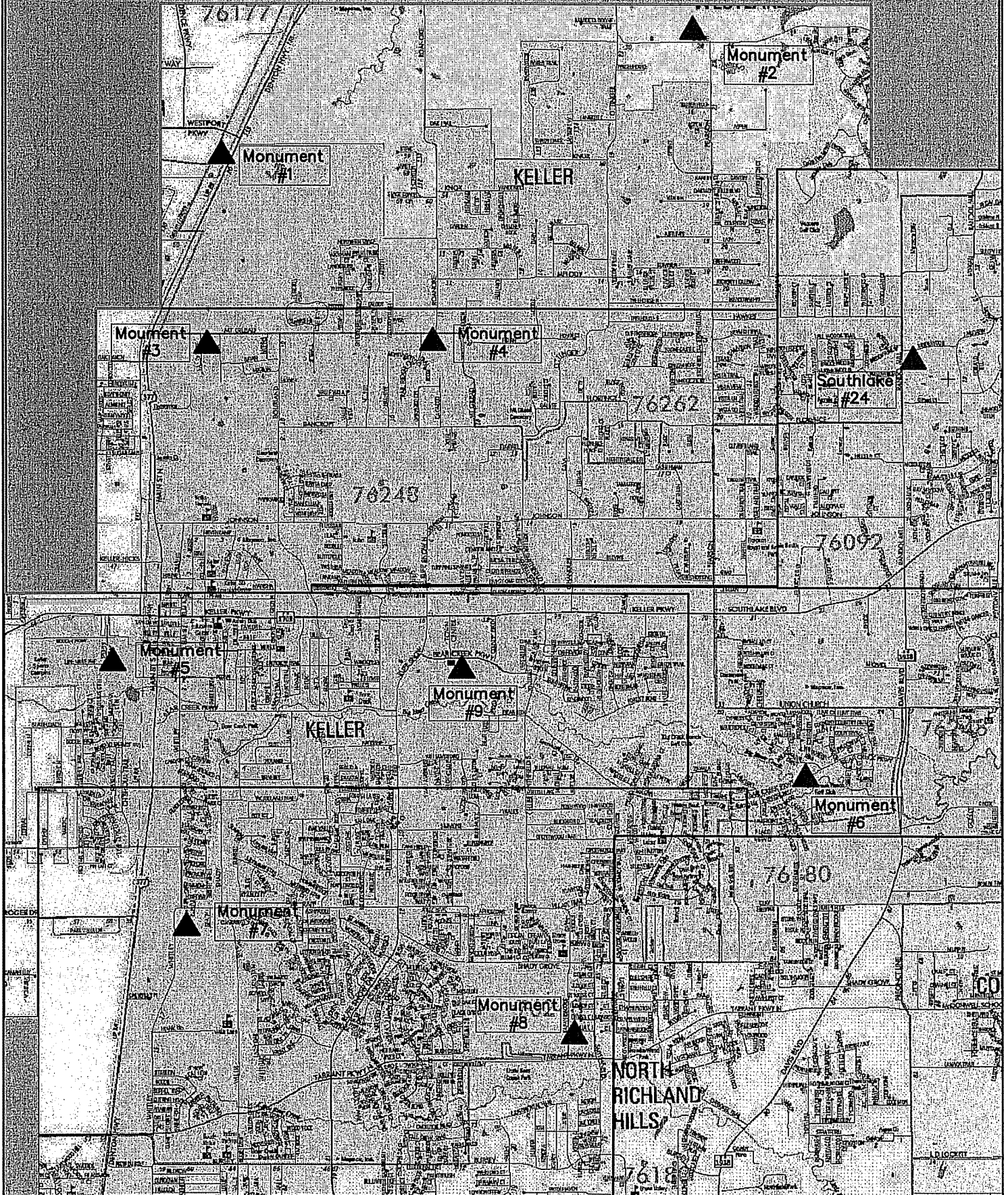
BASIS FOR HORIZONTAL POSITION

The positions for the Geodetic Control Network for the City of Keller were established using the N.G.S. A Order Station "ARLINGTON RRP", and the City of Southlake # 24 based upon the N.G.S. Second Order Station "ARGYLE". These points were held fixed for Horizontal Positioning on the City of Keller's monuments 1 to 8. Precision on horizontal positions for monuments 1 to 8 meet and/or exceed Second Order Accuracy.

BASIS FOR VERTICAL DATUM

The vertical datum for the Geodetic Control Network for the City of Keller was established using the N.G.S. First Order Class 2 Station "ARLINGTON RRP", the N.G.S. Second Order Class 0 Station "N 946", and the "City of Southlake # 24". These points were held fixed using Static G.P.S. techniques. The precision for the vertical datum on the City of Keller's Geodetic Control Network points 1 to 8 meets and/or exceeds Third Order Accuracy.

The City of Keller Geodetic Control Network



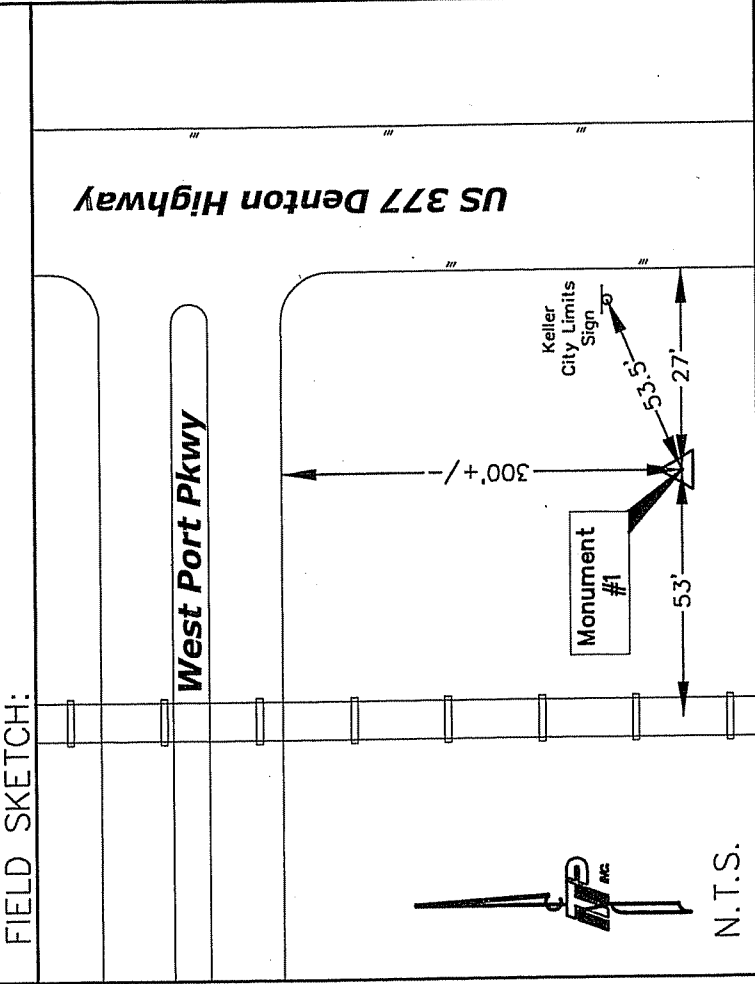
GEODETTIC CONTROL DATA SHEET

STATION NAME: MONUMENT #1	DATE: DEC. 2005	ADJUSTED HORIZONTAL CONTROL DATA	
MONUMENT TYPE: BERNTSEN TOP SECURITY W/ACCESS COVER		ORDER: 2ND	SURVEY METHOD: GPS <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>
CITY: KELLER	COUNTY: TARRANT	COMBINED SCALE FACTOR: 0.999840774	
SURVEYOR: TEAGUE NALL AND PERKINS PREPARED BY: TWS		NAD 27	COORDINATES
PROJECT NAME: KELLER GEODETTIC CONTROL NETWORK		(U.S. SURVEY FEET)	
DISTANCES & DIRECTIONS TO PROMINENT & REFERENCE MARKS		STATE: N	PLANE AZIMUTH ANGLE (CONVERGENCE)
		ZONE: E	
AZIMUTH MARK		TX	PLANE AZIMUTH ANGLE (CONVERGENCE)
		NC	
		4202	00°41'00.95592"
		METRIC CONVERSION FACTOR: 3.2808333333	

GEODETTIC DATA	POSITION	NAD 27 <input type="checkbox"/>	NAD 83(93) <input checked="" type="checkbox"/>	ELEV.(GPS)
	LATITUDE	32°58'13.46359"		NORTH
	LONGITUDE	97°14'47.75004"		WEST

DESCRIPTION OF POINTS:

THE BERNTSEN TOP SECURITY MONUMENT WITH ACCESS COVER IS LOCATED 27' WEST OF THE WEST EDGE OF PAVEMENT OF HWY 377 AND 300'+/- SOUTH OF THE SOUTH LINE OF WEST PORT PARKWAY.



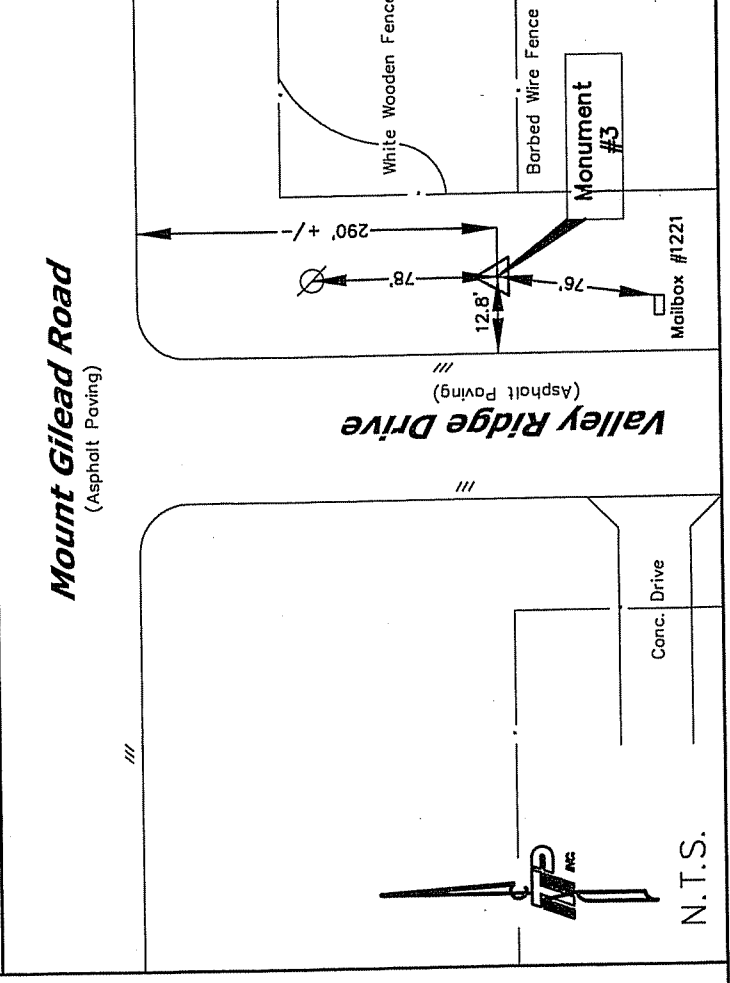
GEODETTIC CONTROL DATA SHEET

STATION NAME: MONUMENT #3	DATE: DEC. 2005		
MONUMENT TYPE: BERTNSEN TOP SECURITY W/ACCESS COVER			
CITY: KELLER	COUNTY: TARRANT	STATE: TX	
SURVEYOR: TEAGUE NALL AND PERKINS PREPARED BY: IWS			
PROJECT NAME: KELLER GEODETTIC CONTROL NETWORK			
DISTANCES & DIRECTIONS TO PROMINENT & REFERENCE MARKS			
AZIMUTH MARK	AZIMUTH	DISTANCE	

ADJUSTED HORIZONTAL CONTROL DATA			
ORDER: 2ND	SURVEY METHOD: GPS <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>		
COMBINED SCALE FACTOR: 0.999838169			
NAD 27 GRID DATA	COORDINATES (U.S. SURVEY FEET)	PLANE AZIMUTH ANGLE (CONVERGENCE)	
STATE: N			
ZONE: E			
CODE:			
NAD 83(93) GRID DATA	COORDINATES (U.S. SURVEY FEET)	PLANE AZIMUTH ANGLE (CONVERGENCE)	
STATE: TX	N 7032856.473		
ZONE: NC			
CODE: 4202	E 2352017.508	00°40'55.08948"	
METRIC CONVERSION FACTOR: 3.2808333333			

GEODETTIC DATA	POSITION	NAD 27 <input type="checkbox"/>	NAD 83(93) <input checked="" type="checkbox"/>	ELEV.(GPS)
	LATITUDE	32°57'19.96078"		NORTH
	LONGITUDE	97°14'58.50636"		WEST

FIELD SKETCH:



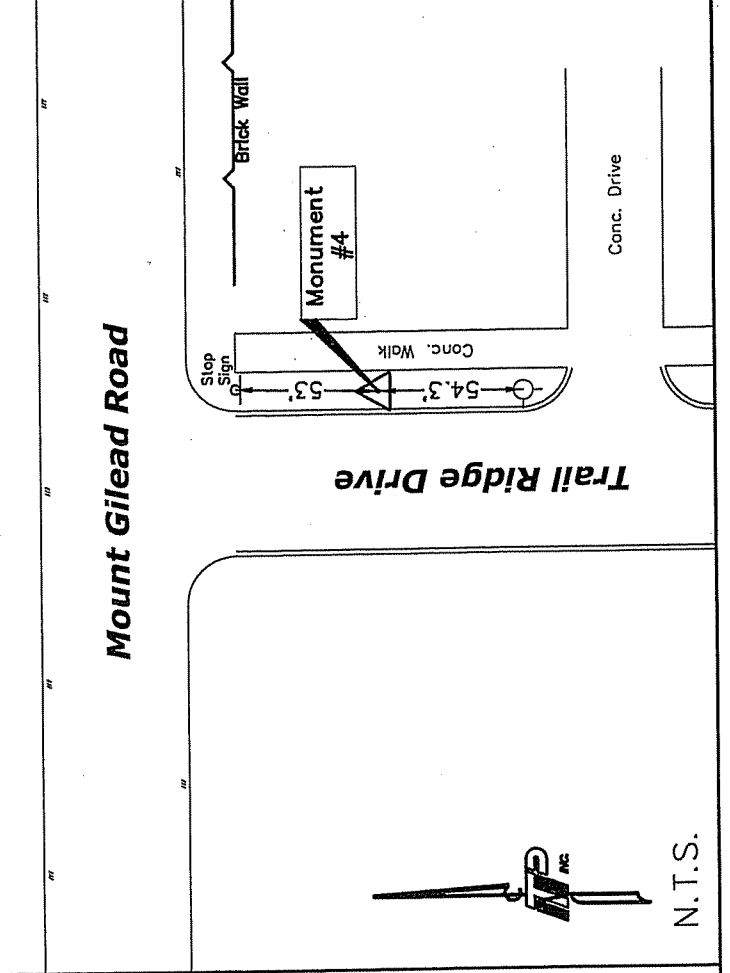
DESCRIPTION OF POINTS:
 THE BERTNSEN TOP SECURITY MONUMENT WITH ACCESS COVER IS LOCATED 12.8' EAST OF THE EAST EDGE OF PAVEMENT OF VALLEY RIDGE DRIVE, +/- 290' SOUTH OF SOUTH EDGE OF PAVEMENT OF MOUNT GILEAD ROAD.

GEODETIC CONTROL DATA SHEET

STATION NAME: MONUMENT #4	DATE: DEC. 2005	ADJUSTED HORIZONTAL CONTROL DATA	
MONUMENT TYPE: BERTSEN TOP SECURITY W/ACCESS COVER		ORDER: 2ND	SURVEY METHOD: GPS <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>
CITY: KELLER	COUNTY: TARRANT	COMBINED SCALE FACTOR: 0.999838688	
SURVEYOR: TEAGUE NALL AND PERKINS		NAD 27 COORDINATES	PLANE AZIMUTH ANGLE (CONVERGENCE)
PREPARED BY: IWS		GRID DATA (U.S. SURVEY FEET)	
PROJECT NAME:			
DISTANCES & DIRECTIONS TO PROMINENT & REFERENCE MARKS			
AZIMUTH MARK	AZIMUTH	DISTANCE	

DESCRIPTION OF POINTS:
 THE BERTSEN TOP SECURITY MONUMENT WITH ACCESS COVER IS LOCATED 10.6' EAST OF THE EAST BACK OF CURB OF TRAIL RIDGE DRIVE, AND IS 53'+/- SOUTH OF THE SOUTH EDGE OF PAVEMENT OF MOUNT GILEAD ROAD.

METRIC CONVERSION FACTOR: 3.2808333333	
GEODETIC DATA POSITION <input type="checkbox"/> NAD 27 <input checked="" type="checkbox"/> NAD 83(93) <input checked="" type="checkbox"/> ELEV.(GPS) LATITUDE 32°57'21.59455" NORTH LONGITUDE 97°13'45.97149" WEST	PLANE AZIMUTH ANGLE (CONVERGENCE) 00°41'34.64959"
NAD 83(93) GRID DATA STATE: TX ZONE: NC CODE: 4202	COORDINATES (U.S. SURVEY FEET) N 7033095.716 E 2358195.026

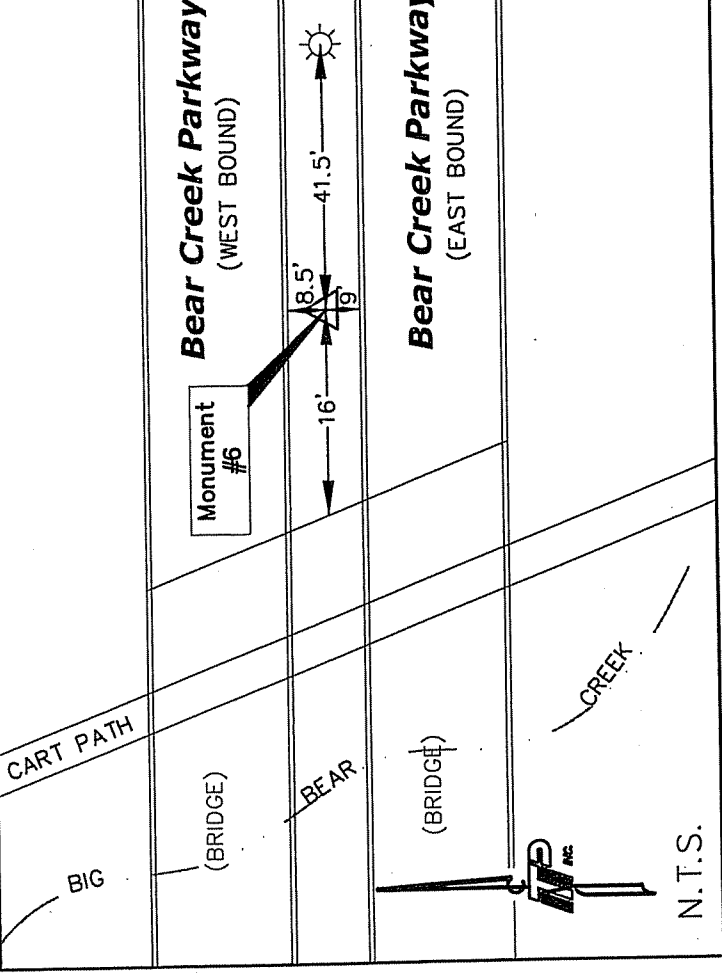


GEODETIC CONTROL DATA SHEET

STATION NAME: MONUMENT #6		DATE: Dec. 2005	
ADJUSTED HORIZONTAL CONTROL DATA			
MONUMENT TYPE: BERTNSEN TOP SECURITY W/ACCESS COVER		ORDER: 2ND	SURVEY METHOD: GPS <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>
CITY: KELLER		COMBINED SCALE FACTOR: 0.999844838	
COUNTY: TARRANT	STATE: TX	PLANE AZIMUTH ANGLE (CONVERGENCE)	
SURVEYOR: TEAGUE NALL AND PERKINS PREPARED BY: TWS		COORDINATES (U.S. SURVEY FEET)	
PROJECT NAME: KELLER GEODETIC CONTROL NETWORK		NAD 27 GRID DATA	
DISTANCES & DIRECTIONS TO PROMINENT & REFERENCE MARKS		STATE: N	
		ZONE: E	
		CODE:	
		NAD 83(93) GRID DATA	
		COORDINATES (U.S. SURVEY FEET)	
		PLANE AZIMUTH ANGLE (CONVERGENCE)	
		STATE: TX	
		ZONE: NC	
		CODE: 4202	
		N 7020613.405	
		E 2368697.383	
		00°42'40.88204"	
METRIC CONVERSION FACTOR: 3.280833333			

GEODETIC POSITION	NAD 27 <input type="checkbox"/>	NAD 83(93) <input checked="" type="checkbox"/>	ELEV.(GPS)
DATA LATITUDE	32°55'16.81432"	NORTH	634.72'
LONGITUDE	97°11'44.53194"	WEST	

FIELD SKETCH:

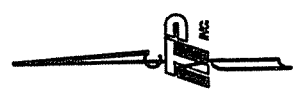
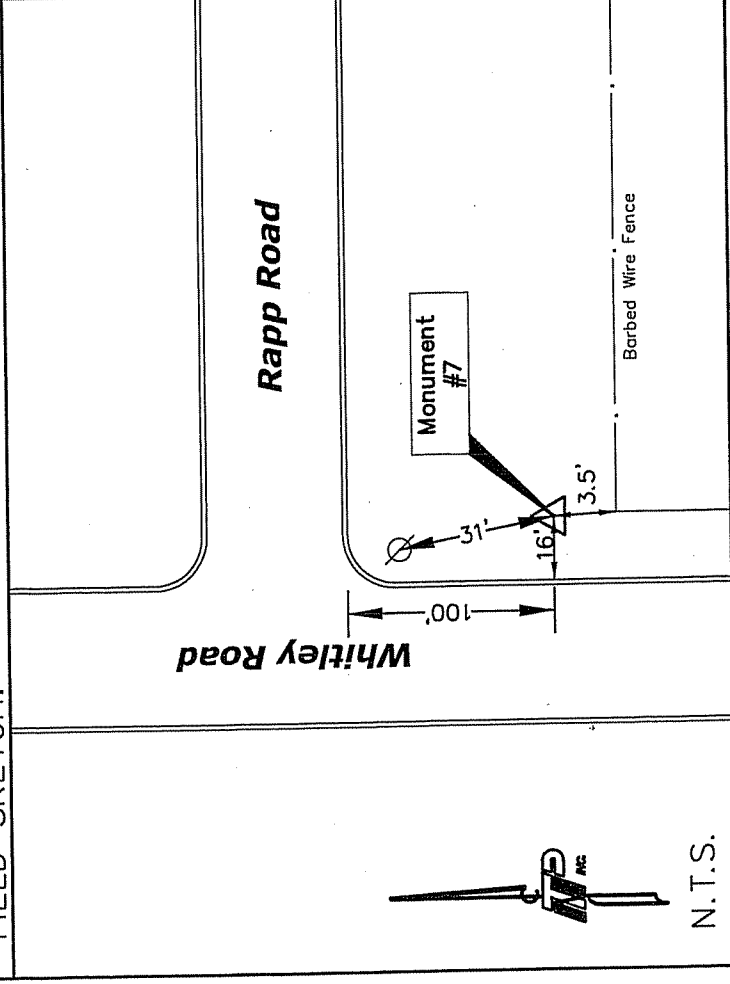


DESCRIPTION OF POINTS:
 THE BERTNSEN TOP SECURITY MONUMENT WITH ACCESS COVER IS LOCATED IN THE MEDIAN OF BEAR CREEK PARKWAY APPROXIMATELY 16' EAST OF THE EAST SIDE OF THE BRIDGE OVER BIG BEAR CREEK.

GEODETIC CONTROL DATA SHEET

STATION NAME: MONUMENT #7		DATE: DEC. 2005	
ADJUSTED HORIZONTAL CONTROL DATA			
MONUMENT TYPE: BERTNSEN TOP SECURITY MONUMENT W/ACCESS COVER		ORDER: 2ND	SURVEY METHOD: GPS <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>
CITY: KELLER		COMBINED SCALE FACTOR: 0.999840434	
COUNTY: TARRANT	STATE: TX	NAD 27 COORDINATES	
SURVEYOR: TEAGUE NALL AND PERKINS PREPARED BY: TWS		GRID DATA (U.S. SURVEY FEET)	
PROJECT NAME: KELLER GEODETIC CONTROL NETWORK		PLANE AZIMUTH ANGLE (CONVERGENCE)	
DISTANCES & DIRECTIONS TO PROMINENT & REFERENCE MARKS		STATE: N	
		ZONE: E	
		CODE:	
NAD 83(93) GRID DATA		COORDINATES (U.S. SURVEY FEET)	
STATE: TX		PLANE AZIMUTH ANGLE (CONVERGENCE)	
ZONE: NC		00°40'49.58932"	
CODE: 4202			
METRIC CONVERSION FACTOR: 3.280833333			
GEODETTIC DATA		POSITION	NAD 27 <input type="checkbox"/> NAD 83(93) <input checked="" type="checkbox"/> ELEV.(GPS)
		LATITUDE	32°54'42.70435" NORTH
		LONGITUDE	97°15'08.59110" WEST
FIELD SKETCH:			

DESCRIPTION OF POINTS:
 THE BERTNSEN TOP SECURITY MONUMENT WITH ACCESS COVER IS LOCATED 16' EAST OF THE EAST BACK OF CURB OF WHITLEY ROAD AND 100' SOUTH OF THE SOUTH BACK OF CURB OF RAPP ROAD.



MAPSCO 23W

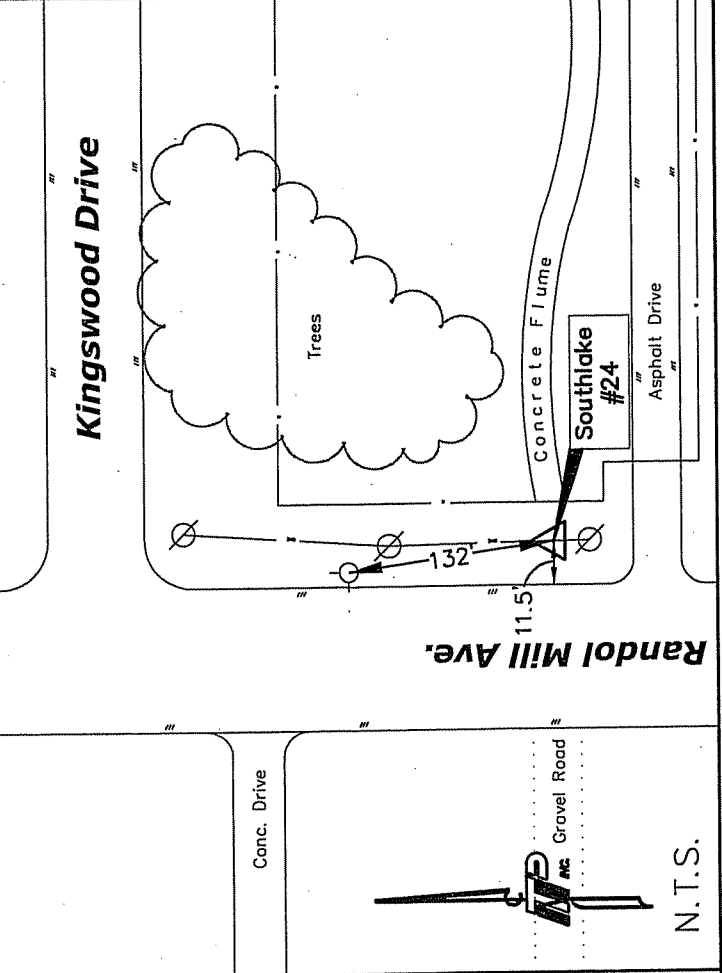
N.T.S.

GEODETIC CONTROL DATA SHEET

STATION NAME: SOUTHLAKE 24	DATE: DEC. 2005	ADJUSTED HORIZONTAL CONTROL DATA	
MONUMENT TYPE: IRON ROD W/DISK IN CONCRETE	ORDER: 2ND	SURVEY METHOD: GPS <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>	
CITY: SOUTHLAKE	COUNTY: TARRANT	COMBINED SCALE FACTOR: 0.999840843	
SURVEYOR: TEAGUE NALL AND PERKINS	STATE: TX	PLANE AZIMUTH ANGLE (CONVERGENCE)	
PROJECT NAME: KELLER GEODETIC CONTROL NETWORK	NAD 27 COORDINATES (U.S. SURVEY FEET)		
DISTANCES & DIRECTIONS TO PROMINENT & REFERENCE MARKS		STATE: N	
		ZONE: E	
		CODE:	
		NAD 83(93) COORDINATES (U.S. SURVEY FEET)	
		PLANE AZIMUTH ANGLE (CONVERGENCE)	
		STATE: N	
		ZONE: NC	
		CODE: 4202	
		METRIC CONVERSION FACTOR: 3.280833333	

GEODETTIC DATA	POSITION	NAD 27 <input type="checkbox"/>	NAD 83(93) <input checked="" type="checkbox"/>	ELEV.(GPS)
	LATITUDE	32°57'09.78346"		NORTH
	LONGITUDE	97°11'08.26450"		WEST

FIELD SKETCH:



DESCRIPTION OF POINTS:
 THE SOUTHLAKE #24 MONUMENT IS LOCATED 11.5' EAST OF THE EDGE OF PAVEMENT OF RANDOL MILL AVENUE SOUTH OF KINGSWOOD DRIVE, AND 132' SOUTH OF A FIRE HYDRANT SOUTH OF KINGSWOOD DRIVE.