

**Description Sheets for NGS Control used in this Project**

**2001 Geodetic Control Densification**

**of**

**Jefferson County, Kentucky**

# The NGS Data Sheet

DATABASE = Sybase ,PROGRAM = datasheet, VERSION = 6.57

1 National Geodetic Survey, Retrieval Date = DECEMBER 18, 2001

HA1773 \*\*\*\*\*

HA1773 CBN - This is a Cooperative Base Network Control Station.

HA1773 DESIGNATION - **SNOW RM A RESET**

HA1773 PID - HA1773

HA1773 STATE/COUNTY- KY/MEADE

HA1773 USGS QUAD - ROCK HAVEN (1991)

HA1773

\*CURRENT SURVEY CONTROL

HA1773

HA1773*	NAD 83(1993)-	37 53 50.01694(N)	086 00 06.90026(W)	ADJUSTED
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HA1773*	NAVD 88	-	273.0 (meters)	896. (feet)	GPS OBS
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HA1773

HA1773	X	-	351,378.905 (meters)	COMP
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HA1773	Y	-	-5,027,369.329 (meters)	COMP
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HA1773	Z	-	3,896,596.103 (meters)	COMP
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HA1773	LAPLACE CORR-	-	1.70 (seconds)	DEFLEC99
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HA1773	ELLIP HEIGHT-		240.20 (meters)	GPS OBS
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HA1773	GEOID HEIGHT-		-32.78 (meters)	GEOID99
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HA1773

HA1773 HORZ ORDER - B

HA1773 ELLP ORDER - FOURTH CLASS I

HA1773

HA1773.The horizontal coordinates were established by GPS observations

HA1773.and adjusted by the National Geodetic Survey in September 1994.

HA1773

HA1773.The orthometric height was determined by GPS observations and a

HA1773.high-resolution geoid model.

HA1773

HA1773.The X, Y, and Z were computed from the position and the ellipsoidal ht.

HA1773

HA1773.The Laplace correction was computed from DEFLEC99 derived deflections.

HA1773

HA1773.The ellipsoidal height was determined by GPS observations

HA1773.and is referenced to NAD 83.

HA1773

HA1773.The geoid height was determined by GEOID99.

HA1773

HA1773;		North	East	Units	Scale	Converg.
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HA1773;SPC KY S	-	673,587.308	477,842.857	MT	0.99999361	-0 09 10.0
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HA1773;UTM 16	-	4,194,881.739	587,752.295	MT	0.99969484	+0 36 47.2
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HA1773

SUPERSEDED SURVEY CONTROL

HA1773

HA1773.No superseded survey control is available for this station.

HA1773

HA1773\_MARKER: DS = TRIANGULATION STATION DISK

HA1773\_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

HA1773\_STAMPING: SNOW RM A 1970 1984

HA1773\_MARK LOGO: NGS

HA1773\_PROJECTION: PROJECTING 10 CENTIMETERS

HA1773\_MAGNETIC: N = NO MAGNETIC MATERIAL

HA1773\_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

HA1773+STABILITY: SURFACE MOTION

HA1773\_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

HA1773+SATELLITE: SATELLITE OBSERVATIONS - February 08, 1994

HA1773

HA1773	HISTORY	-	Date	Condition	Report By
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HA1773	HISTORY	-	1984	MONUMENTED	NGS
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HA1773 HISTORY - 19931028 GOOD NGS  
 HA1773 HISTORY - 19940208 GOOD

HA1773  
 HA1773  
 HA1773

STATION DESCRIPTION

HA1773'DESCRIBED BY NATIONAL GEODETIC SURVEY 1984 (CLN)  
 HA1773'THE UNDERGROUND MARK WAS RECOVERED IN GOOD CONDITION. THE RADAR  
 HA1773'FACILITY AT THE STATION HAS BEEN DEMOLISHED AND ALL OTHER MARKS AND  
 HA1773'REFERENCE OBJECTS WERE DESTROYED. A NEW STATION MARK RM 1 RM 2 AND RM  
 HA1773'3 WERE ESTABLISHED. A NEW DESCRIPTION FOLLOWS.  
 HA1773'THE STATION IS LOCATED ABOUT 13 KM (8.05 MI) SOUTHWEST OF WEST POINT  
 HA1773'10 KM (6.20 MI) NORTH OF VINE GROVE ON THE EASTERN PART OF THE FORT  
 HA1773'KNOX MILITARY RESERVATION AND ON TOP OF SNOW MOUNTAIN. TO REACH THE  
 HA1773'STATION FROM THE JUNCTION OF U.S HIGHWAYS 60 AND 31W GO WEST ON  
 HA1773'HIGHWAY 60 FOR 2.3 KM (1.40 MI) TO A PAVED ROAD ON THE LEFT. TURN  
 HA1773'LEFT GOING SOUTHEAST AND UPHILL FOR 1.6 KM (1.00 MI) TO A CLEARED AREA  
 HA1773'AND THE STATION NEAR THE EAST EDGE OF THE HILL TOP.  
 HA1773'THE STATION IS A STANDARD NGS DISK STAMPED--SNOW RM A 1970 1984-- , SET  
 HA1773'INTO THE TOP OF A ROUND CONCRETE MONUMENT, 11 INCHES (28 CM) IN  
 HA1773'DIAMETER, PROJECTING 4 INCHES (10 CM) ABOVE THE GROUND. THE STATION  
 HA1773'IS LOCATED 66.8 METERS (219.2 FT) SOUTH SOUTHEAST FROM THE CENTERLINE  
 HA1773'OF THE ROAD 63.1 METERS (207.0 FT) SOUTH SOUTHEAST FROM THE SOUTHEAST  
 HA1773'END OF A CONCRETE CULVERT 15.8 METERS (51.8 FT) SOUTH SOUTHWEST FROM  
 HA1773'AN 18 INCH WHITE OAK TREE 13.60 METERS (44.62 FT) EAST FROM A TRACK  
 HA1773'SPIKE SET IN BEDROCK 1.2 METERS (3.9 FT) NORTH FROM A METAL WITNESS  
 HA1773'POST. REFERENCE MARK NO 1 IS A STANDARD NGS DISK STAMPED---SNOW RM A  
 HA1773'1970 NO 1 1984--- , SET INTO ROCK OUTCROP. THE STATION IS LOCATED 61.9  
 HA1773'METERS (203.1 FT) SOUTH FROM THE SOUTHEAST END OF A CONCRETE CULVERT,  
 HA1773'56.4 METERS (185.0 FT) SOUTHEAST FROM THE CENTERLINE OF THE ROAD, 34.4  
 HA1773'METERS (112.9 FT) SOUTHWEST FROM AN 18 INCH WHITE OAK TREE, 21.1  
 HA1773'METERS (69.2 FT) WEST FROM A STEEL WITNESS POST, AND 0.3 METERS (1.0  
 HA1773'FT) HIGHER THAN THE STATION. REFERENCE MARK NO 2 IS A STANDARD NGS  
 HA1773'DISK STAMPED---SNOW RM A 1970 RM 2 1984--- , SET INTO ROCK OUTCROP.  
 HA1773'THE STATION IS LOCATED 53.3 METERS (174.9 FT) SOUTHEAST FROM THE  
 HA1773'CENTERLINE OF THE ROAD, 50.3 METERS (165.0 FT) SOUTH SOUTHEAST FROM  
 HA1773'THE SOUTHEAST END OF THE CONCRETE CULVERT, 18.0 METERS (59.1 FT) WEST  
 HA1773'SOUTHWEST FROM AN 18 INCH WHITE OAK TREE, 14.0 METERS (45.9 FT)  
 HA1773'NORTHWEST FROM A STEEL WITNESS POST, AND 0.3 METERS (1.0 FT) HIGHER  
 HA1773'THAN THE STATION. REFERENCE MARK NO 3 IS A STANDARD NGS DISK  
 HA1773'STAMPED---SNOW RM A 1970 RM 3 1984--- , SET INTO THE TOP OF A ROUND  
 HA1773'CONCRETE MONUMENT, 9 INCHES (23 CM) IN DIAMETER, PROJECTING 2 INCHES  
 HA1773'(4 CM) ABOVE THE GROUND. THE MARK IS LOCATED ON THE EAST SIDE OF A  
 HA1773'FENCE SURROUNDING A RADIO FACILITY ON THE HIGHEST PART OF THE HILL.  
 HA1773'THE STATION IS LOCATED 39.3 METERS (128.9 FT) SOUTH FROM THE NORTHEAST  
 HA1773'FENCE CORNER, 9.6 METERS (31.5 FT) NORTH FROM THE SOUTHEAST FENCE  
 HA1773'CORNER, 0.7 METERS (2.3 FT) EAST FROM THE FENCE, 0.9 METERS (3.0 FT)  
 HA1773'SOUTHEAST FROM A CARSONITE WITNESS POST, AND 2.3 METERS (7.5 FT)  
 HA1773'HIGHER THAN THE STATION.

HA1773  
 HA1773  
 HA1773

STATION RECOVERY (1993)

HA1773'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1993  
 HA1773'THE STATION IS LOCATED ABOUT 40.0 KM (24.85 MI) SOUTHWEST OF  
 HA1773'LOUISVILLE, 10.0 KM (6.20 MI) SOUTH OF THE OHIO RIVER AND 5.0 KM  
 HA1773'(3.10 MI) WEST OF FORT KNOX ON A HILL LOCALLY KNOWN AS SNOW MOUNTAIN.  
 HA1773'OWNERSHIP--U.S. GOVERNMENT. FORT KNOX, KENTUCKY. NO PERMISSION IS  
 HA1773'NEEDED.  
 HA1773'TO REACH THE STATION FROM THE JUNCTION OF U.S. HIGHWAYS 31W AND 60 IN  
 HA1773'FORT KNOX, GO WEST ON U.S. HIGHWAY 60 FOR 1.35 MI (2.17 KM) TO A  
 HA1773'PAVED ROAD LEFT, TURN LEFT AND GO SOUTH THEN WEST 0.85 MI (1.37 KM)  
 HA1773'TO A ROAD RIGHT LEADING TO A BUILDING, CONTINUE AHEAD WEST ON PAVED  
 HA1773'ROAD FOR 0.05 MI (0.08 KM) TO A DIM TRACK ROAD LEFT, TURN LEFT AND GO  
 HA1773'0.05 MI (0.08 KM) SOUTH ON DIM TRACK ROAD TO THE STATION STRAIGHT  
 HA1773'AHEAD.  
 HA1773'LOCATED 15.5 M (50.9 FT) SOUTHWEST FROM A DEAD TREE TRUNK STILL  
 HA1773'STANDING, 1.2 M (3.9 FT) EAST FROM A METAL WITNESS POST AND 0.4 M  
 HA1773'(1.3 FT) WEST FROM A WITNESS POST. LOCATED APPROXIMATELY 65 METERS  
 HA1773'(213.3 FT) SOUTH OF THE PAVED ROAD.

HA1773  
 HA1773  
 HA1773

STATION RECOVERY (1994)

HA1773'RECOVERED 1994  
 HA1773'RECOVERED IN GOOD CONDITION.

1 National Geodetic Survey, Retrieval Date = DECEMBER 18, 2001  
 HZ1348 \*\*\*\*\*

HZ1348 FBN - This is a Federal Base Network Control Station.  
 HZ1348 DESIGNATION - EDWARD 2  
 HZ1348 PID - HZ1348  
 HZ1348 STATE/COUNTY- IN/FLOYD  
 HZ1348 USGS QUAD - GEORGETOWN (1993)

\*CURRENT SURVEY CONTROL

HZ1348*	NAD 83(1997) -	38 17 01.83167(N)	085 54 22.99745(W)	ADJUSTED
HZ1348*	NAVD 88 -	279.530 (meters)	917.09 (feet)	ADJUSTED
HZ1348	X -	357,870.907 (meters)		COMP
HZ1348	Y -	-5,000,374.247 (meters)		COMP
HZ1348	Z -	3,930,375.697 (meters)		COMP
HZ1348	LAPLACE CORR-	-1.67 (seconds)		DEFLEC99
HZ1348	ELLIP HEIGHT-	246.34 (meters)		GPS OBS
HZ1348	GEOID HEIGHT-	-33.22 (meters)		GEOID99
HZ1348	DYNAMIC HT -	279.337 (meters)	916.46 (feet)	COMP
HZ1348	MODELED GRAV-	979,931.4 (mgal)		NAVD 88

HZ1348 HORZ ORDER - B  
 HZ1348 VERT ORDER - FIRST CLASS II  
 HZ1348 ELLP ORDER - FOURTH CLASS I

HZ1348.The horizontal coordinates were established by GPS observations  
 HZ1348.and adjusted by the National Geodetic Survey in April 1998.  
 HZ1348  
 HZ1348.The orthometric height was determined by differential leveling  
 HZ1348.and adjusted by the National Geodetic Survey in June 1991.  
 HZ1348  
 HZ1348.The X, Y, and Z were computed from the position and the ellipsoidal ht.  
 HZ1348  
 HZ1348.The Laplace correction was computed from DEFLEC99 derived deflections.  
 HZ1348  
 HZ1348.The ellipsoidal height was determined by GPS observations  
 HZ1348.and is referenced to NAD 83.  
 HZ1348  
 HZ1348.The geoid height was determined by GEOID99.  
 HZ1348  
 HZ1348.The dynamic height is computed by dividing the NAVD 88  
 HZ1348.geopotential number by the normal gravity value computed on the  
 HZ1348.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45  
 HZ1348.degrees latitude (g = 980.6199 gals.).  
 HZ1348  
 HZ1348.The modeled gravity was interpolated from observed gravity values.

	North	East	Units	Scale	Converg.
HZ1348;SPC IN E	- 337,026.399	79,026.768	MT	0.99997208	-0 08 54.7
HZ1348;UTM 16	- 4,237,874.232	595,646.299	MT	0.99971266	+0 40 39.4

PID	Reference Object	Distance	Geod. Az
			dddmss.s
HZ1348	EDWARD 2 RM 3	23.560 METERS	23841
HZ1348	HZ1349 EDWARD 2 RM 4	8.461 METERS	26956
HZ1348	HZ2294 EDWARD	23.586 METERS	29819
HZ1348	HZ1350 EDWARD RM 1	37.497 METERS	33854

SUPERSEDED SURVEY CONTROL

HZ1348

HZ1348 NAD 83(1993)- 38 17 01.83077(N) 085 54 23.00010(W) AD( ) 2  
 HZ1348 NAD 83(1986)- 38 17 01.83449(N) 085 54 23.00672(W) AD( ) 2  
 HZ1348 NAD 27 - 38 17 01.59100(N) 085 54 23.13100(W) AD( ) 2  
 HZ1348 NGVD 29 - 279.664 (m) 917.53 (f) ADJ UNCH 1 2  
 HZ1348

HZ1348.Superseded values are not recommended for survey control.  
 HZ1348.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.  
 HZ1348.

HZ1348

HZ1348\_MARKER: DS = TRIANGULATION STATION DISK  
 HZ1348\_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT  
 HZ1348\_STAMPING: EDWARD 2 1948  
 HZ1348\_MARK LOGO: CGS  
 HZ1348\_MAGNETIC: N = NO MAGNETIC MATERIAL  
 HZ1348\_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO  
 HZ1348+STABILITY: SURFACE MOTION  
 HZ1348\_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR  
 HZ1348+SATELLITE: SATELLITE OBSERVATIONS - August 26, 1997

HZ1348

HZ1348	HISTORY	- Date	Condition	Report By
HZ1348	HISTORY	- 1948	MONUMENTED	CGS
HZ1348	HISTORY	- 1965	GOOD	CGS
HZ1348	HISTORY	- 1965	GOOD	NGS
HZ1348	HISTORY	- 1973	GOOD	NGS
HZ1348	HISTORY	- 1973	GOOD	NGS
HZ1348	HISTORY	- 19970826	GOOD	SEC

HZ1348

STATION DESCRIPTION

HZ1348

HZ1348'DESCRIBED BY COAST AND GEODETIC SURVEY 1948 (RCB)  
 HZ1348'STATION IS LOCATED AT THE JUNCTION OF STATE HIGHWAYS 62 AND 64 IN THE  
 HZ1348'SMALL SETTLEMENT OF EDWARDSVILLE, WHICH IS ABOUT 5 MILES WEST  
 HZ1348'OF NEW ALBANY. IT IS IDENTICAL WITH EDWARD NO. 2 1947 AND IS 76 FEET  
 HZ1348'EAST OF THE SOUTHEAST CORNER OF THE BRICK STORE, 72 FEET SOUTH OF  
 HZ1348'THE CENTER OF HIGHWAY 64, 70 FEET NORTH OF THE CENTER OF HIGHWAY 62  
 HZ1348'AND 55 FEET SOUTHEAST OF THE SOUTHEAST CORNER OF THE STORE. THE  
 HZ1348'MARK IS FLUSH WITH THE GROUND AND THE DISK IS STAMPED EDWARD 2 1948.  
 HZ1348'  
 HZ1348'REFERENCE MARK NO. 1 IS 123.00 FEET NORTH OF THE STATION. IT IS 44  
 HZ1348'FEET NORTHEAST OF THE CENTER OF HIGHWAY 64 AND 2 FEET WEST OF A  
 HZ1348'TELEPHONE POLE. THE MARK IS FLUSH WITH THE GROUND AND THE DISK IS  
 HZ1348'STAMPED EDWARD NO. 1 1947.  
 HZ1348'  
 HZ1348'REFERENCE MARK NO. 3 IS 77.30 FEET WEST OF THE STATION AT THE  
 HZ1348'SOUTHEAST CORNER OF THE STORE AND 78 FEET NORTH OF THE CENTER OF  
 HZ1348'HIGHWAY 62. THE MARK IS FLUSH WITH THE GROUND AND THE DISK IS STAMPED  
 HZ1348'EDWARD NO 3 1948.  
 HZ1348'  
 HZ1348'AZIMUTH MARK IS 0.45 MILE WEST-NORTHWEST OF THE STATION ON THE SOUTH  
 HZ1348'SIDE OF HIGHWAY 64. IT IS 36 FEET SOUTH OF THE CENTER OF THE  
 HZ1348'HIGHWAY, 3 FEET NORTHEAST OF A TELEPHONE POLE AND 1.8 FEET NORTH OF A  
 HZ1348'WITNESS POST. THE MARK PROJECTS 4 INCHES AND THE DISK IS STAMPED  
 HZ1348'EDWARD 1947.  
 HZ1348'  
 HZ1348'HEIGHT OF LIGHT ABOVE STATION MARK 1 METER.

HZ1348

STATION RECOVERY (1965)

HZ1348

HZ1348'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1965 (DDJ)  
 HZ1348'THE STATION MARK, STAMPED EDWARD 2 1948, IS ABOUT 3.0 MILES EAST  
 HZ1348'ALONG THE SOUTHERN RAILROAD FROM THE UNITED BRETHERN CHURCH AT  
 HZ1348'GEORGETOWN, THENCE 1.1 MILES SOUTHEAST ALONG STATE HIGHWAY 64, IN  
 HZ1348'SECTION 1, T 3 S, R 5 E, AT THE INTERSECTION OF U.S.  
 HZ1348'HIGHWAY 460 AND STATE HIGHWAYS 64 AND 62, AT THE SMALL SETTLEMENT OF  
 HZ1348'EDWARDSVILLE, 76 FEET EAST OF THE SOUTHEAST CORNER OF HITNERS  
 HZ1348'BRICK STORE BUILDING, 72 FEET SOUTH OF THE CENTER LINE OF STATE  
 HZ1348'HIGHWAY 64, 70 FEET NORTH OF THE CENTER LINE OF HIGHWAYS 460  
 HZ1348'AND 62, 23 FEET EAST OF THE EAST CORNER OF A CONCRETE BOX AROUND A

HZ1348'WELL, ABOUT LEVEL WITH THE HIGHWAYS, SET IN THE TOP OF A  
 HZ1348'CONCRETE POST 4 INCHES BELOW THE SURFACE OF THE GROUND.  
 HZ1348'  
 HZ1348'R.M. 1, STAMPED EDWARD NO 1 1947, IS 123 FEET NORTH AND ACROSS STATE  
 HZ1348'HIGHWAY 64 FROM EDWARD 2 1948, 44 FEET NORTHEAST OF THE CENTER  
 HZ1348'LINE OF STATE HIGHWAY 64, 2 FEET WEST OF A TELEPHONE POLE, ABOUT  
 HZ1348'LEVEL WITH THE HIGHWAY, SET IN THE TOP OF A CONCRETE POST  
 HZ1348'FLUSH WITH THE GROUND.  
 HZ1348'  
 HZ1348'R.M. 3 WAS SEARCHED FOR BUT NOT RECOVERED.  
 HZ1348'  
 HZ1348'THE AZIMUTH MARK WAS SEARCHED FOR BUT NOT RECOVERED.  
 HZ1348'  
 HZ1348  
 STATION RECOVERY (1965)  
 HZ1348  
 HZ1348'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1965  
 HZ1348'4.1 MI E FROM GEORGETOWN.  
 HZ1348'ABOUT 3.0 MILES EAST ALONG THE SOURR FROM THE UNITED  
 HZ1348'BRETHERN CHURCH AT GEORGETOWN, THENCE 1.1 MILES SOUTHEAST ALONG  
 HZ1348'STATE HIGHWAY 64, IN SECTION 1, T 3 S, R 5 E, AT THE INTERSECTION  
 HZ1348'OF U.S. HIGHWAY 460 AND STATE HIGHWAYS 64 AND 62, AT THE SMALL  
 HZ1348'SETTLEMENT O EDWARDSVILLE, 76 FEET EAST OF THE SOUTHEAST CORNER  
 HZ1348'OF HITNERS BRICK STORE BUILDING, 72 FEET SOUTH OF THE CENTER LINE  
 HZ1348'OF STATE HIGHWAY 64, 70 FEET NORTH OF THE CENTER LINE OF U.S.  
 HZ1348'HIGHWAY 460 AND STATE HIGHWAY 62, 23 FEET EAST OF THE EAST CORNER  
 HZ1348'OF A CONCRETE BOX AROUND A WELL, ABOUT LEVEL WITH THE HIGHWAYS,  
 HZ1348'AND SET IN THE TOP OF A CONCRETE POST WHICH IS 4 INCHES BELOW  
 HZ1348'THE SURFACE OF THE GROUND.  
 HZ1348  
 HZ1348  
 STATION RECOVERY (1973)  
 HZ1348  
 HZ1348'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1973 (LFS)  
 HZ1348'THE STATION MARK WAS FOUND IN GOOD CONDITION. REFERENCE MARK 1 WAS  
 HZ1348'FOUND TO BE LEANING SLIGHTLY TO THE EAST. THE DISTANCE TO  
 HZ1348'REFERENCE MARK 1 CHECKED. REFERENCE MARK 3 SITE HAS BEEN PAVED OVER  
 HZ1348'AND NO ATTEMPT WAS MADE TO DIG IT UP. THE AZIMUTH MARK WAS  
 HZ1348'SEARCHED FOR BUT NOT FOUND AND ASSUMED TO HAVE BEEN DESTROYED.  
 HZ1348'REFERENCE MARK 4 WAS SET. A NEW DESCRIPTION FOLLOWS-  
 HZ1348'  
 HZ1348'THE STATION IS LOCATED AT EDWARDSVILLE, 76 FEET EAST OF THE SOUTHEAST  
 HZ1348'CORNER OF HITNERS GROCERY STORE, 72 FEET SOUTH OF THE CENTERLINE  
 HZ1348'OF ROAD OLD HIGHWAY 64, 70 FEET NORTH OF THE CENTERLINE OF ROAD OLD  
 HZ1348'HIGHWAY 62 AND 23 FEET EAST OF THE SOUTHEAST CORNER OF A LARGE  
 HZ1348'CONCRETE WELL COVER. THE MONUMENT IS 4 INCHES UNDERGROUND AND THE  
 HZ1348'DISK IS STAMPED EDWARD 2 1948.  
 HZ1348'  
 HZ1348'TO REACH THE STATION FROM THE JUNCTION OF INTERSTATE HIGHWAY 64 AND  
 HZ1348'STATE HIGHWAYS 62 AND 64 AND 460, GO SOUTHEAST ON HIGHWAY 460 AND  
 HZ1348'62 FOR 0.3 MILE TO A ROAD LEFT. TURN LEFT AND GO EASTERLY ON THE  
 HZ1348'PAVED ROAD FOR 0.1 MILE TO THE STATION AT ROAD INTERSECTION.  
 HZ1348'  
 HZ1348'REFERENCE MARK 1 IS 44 FEET NORTHEAST OF THE CENTERLINE OF PAVED  
 HZ1348'ROAD OLD HIGHWAY 64 AND 2 FEET WEST OF A TELEPHONE  
 HZ1348'POLE. THE MONUMENT IS FLUSH AND THE DISK IS STAMPED EDWARD NO 1 1947.  
 HZ1348'  
 HZ1348'REFERENCE MARK 4 IS A STANDARD DISK STAMPED EDWARD 2 1948 NO 4 1973  
 HZ1348'SET IN A DRILL HOLE IN THE SOUTHWEST CORNER OF A 6 X 6 FOOT  
 HZ1348'SQUARE CONCRETE WELL COVER WHICH PROJECTS ABOUT 1 FOOT, 53 FEET EAST  
 HZ1348'OF THE SOUTHEAST CORNER OF THE STORE AND 14 FEET SOUTHEAST OF A  
 HZ1348'UTILITY POLE WITH A LIGHT.  
 HZ1348'  
 HZ1348'AIRLINE DISTANCE AND DIRECTION FROM NEAREST TOWN AT EDWARDSVILLE.  
 HZ1348'  
 HZ1348'HEIGHT OF LIGHT ABOVE STATION MARK 2 METERS.  
 HZ1348  
 HZ1348  
 STATION RECOVERY (1973)  
 HZ1348  
 HZ1348'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1973

HZ1348'RECOVERED IN GOOD CONDITION.

HZ1348

HZ1348

STATION RECOVERY (1997)

HZ1348

HZ1348'RECOVERY NOTE BY SCHNEIDER ENGINEERING CORPORATION 1997 (RGR)

HZ1348'THE STATION IS LOCATED IN EDWARDSVILLE, ON CORYDON PIKE ROAD ABOUT 5 HZ1348'MILES (8.0 KM) WEST OF NEW ALBANY. FOR ACCESS CONTACT JASON AT HZ1348'812-945-1686, PRIVATE RESIDENCE, FORMERLY HITNERS GROCERY STORE. TO HZ1348'REACH THE STATION FROM THE JUNCTION OF I-64, STATE ROAD 62 AND 64, GO HZ1348'SOUTH ON STATE ROAD 62 FOR 0.3 MILES (0.5 KM) TO THE SECOND ROAD OR HZ1348'TURN ON THE LEFT (EAST SIDE OF THE ROAD). TURN LEFT AND GO EASTERLY HZ1348'ON CORYDON PIKE FOR APPROXIMATELY 0.1 MILES (0.2 KM) TO THE STATION, HZ1348'ON THE SOUTH SIDE OF CORYDON PIKE. YOU WILL PASS QUARRY ROAD ON THE HZ1348'LEFT (NORTH SIDE OF THE ROAD) FIRST, THEN THE STATION IS LOCATED IN A HZ1348'YARD ON THE RIGHT (SOUTH SIDE). LOCATED AT EDWARDSVILLE, 63 FEET HZ1348'(19.2 M) SOUTH OF THE CENTERLINE OF CORYDON PIKE, 73 FEET (22.3 M) HZ1348'NORTH OF THE CENTERLINE OF A ROAD, 23 FEET (7.0 M) EAST OF THE HZ1348'SOUTHEAST CORNER OF A LARGE CONCRETE WELL COVER RECESSED 10 CM BELOW HZ1348'GROUND. VERIFIED NGS REMARKS FROM 1973 REGARDING REFERENCE MARKS 1 HZ1348'AND 4. REFERENCE MARK 1 IS 44 FEET (13.4 M) NORTHEAST OF THE HZ1348'CENTERLINE OF PAVED ROAD (OLD HIGHWAY 64) AND 2 FEET (0.6 M) WEST OF A HZ1348'TELEPHONE POLE. THE MONUMENT IS FLUSH WITH GROUND AND THE DISK IS HZ1348'STAMPED EDWARD NO 1 1947. REFERENCE MARK 4 IS A STANDARD DISK STAMPED HZ1348'EDWARD 2 1948 NO 4 1973, SET IN A DRILL HOLE IN THE SOUTHWEST CORNER HZ1348'OF A 6 FT (1.8 M) X 6 FT (1.8 M) SQUARE CONCRETE WELL COVER WHICH HZ1348'PROJECTS ABOUT 1 FOOT (0.3 M) ABOVE GROUND, 53 FEET (16.2 M) EAST OF HZ1348'THE SOUTHEAST CORNER OF THE FORMER STORE (NOW RESIDENTIAL PROPERTY) HZ1348'AND 14 FEET (4.3 M) SOUTHEAST OF A UTILITY POLE WITH A LIGHT. THERE HZ1348'IS A WITNESS POST APPROXIMATELY 35 FEET (10.7 M) AWAY, BEARING 290 HZ1348'DEGREES.

1 National Geodetic Survey, Retrieval Date = DECEMBER 18, 2001

HZ1767 \*\*\*\*\*

HZ1767 DESIGNATION - 489.78 RM USGS

HZ1767 PID - HZ1767

HZ1767 STATE/COUNTY- KY/SPENCER

HZ1767 USGS QUAD - TAYLORSVILLE (1993)

HZ1767

\*CURRENT SURVEY CONTROL

HZ1767

HZ1767\* NAD 83(1986) - 38 01 52. (N) 085 20 41. (W) SCALED

HZ1767\* NAVD 88 - 149.052 (meters) 489.01 (feet) ADJUSTED

HZ1767

HZ1767 GEOID HEIGHT- -33.67 (meters) GEOID99

HZ1767 DYNAMIC HT - 148.942 (meters) 488.65 (feet) COMP

HZ1767 MODELED GRAV- 979,889.8 (mgal) NAVD 88

HZ1767

HZ1767 VERT ORDER - SECOND CLASS 0

HZ1767

HZ1767.The horizontal coordinates were scaled from a topographic map and have HZ1767.an estimated accuracy of +/- 6 seconds.

HZ1767

HZ1767.The orthometric height was determined by differential leveling

HZ1767.and adjusted by the National Geodetic Survey in June 1991.

HZ1767

HZ1767.The geoid height was determined by GEOID99.

HZ1767

HZ1767.The dynamic height is computed by dividing the NAVD 88

HZ1767.geopotential number by the normal gravity value computed on the

HZ1767.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

HZ1767.degrees latitude (g = 980.6199 gals.).

HZ1767

HZ1767.The modeled gravity was interpolated from observed gravity values.

HZ1767

HZ1767; North East Units Estimated Accuracy

HZ1767;SPC KY N - 59,520. 403,890. MT (+/- 180 meters Scaled)

HZ1767

HZ1767

SUPERSEDED SURVEY CONTROL

HZ1767

HZ1767 NGVD 29 - 149.222 (m) 489.57 (f) ADJ UNCH 2 0

HZ1767

HZ1767.Superseded values are not recommended for survey control.  
HZ1767.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.  
HZ1767.

HZ1767

HZ1767\_MARKER: Q = CHISELED SQUARE  
HZ1767\_SETTING: 36 = BUILDING  
HZ1767\_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

HZ1767

HZ1767 HISTORY - Date Condition Report By  
HZ1767 HISTORY - UNK MONUMENTED USGS  
HZ1767 HISTORY - 1935 GOOD NGS

HZ1767

HZ1767 STATION DESCRIPTION

HZ1767

HZ1767'DESCRIBED BY NATIONAL GEODETIC SURVEY 1935  
HZ1767'AT TAYLORVILLE.  
HZ1767'AT TAYLORVILLE, SPENCER COUNTY, ON MAIN STREET, AT THE SOUTH  
HZ1767'ENTRANCE TO THE COUNTY COURTHOUSE, ON THE TOP OF THE BOTTOM STEP,  
HZ1767'5.9 FEET WEST OF THE CENTERLINE OF THE STEP, 45 FEET NORTH OF THE  
HZ1767'CENTERLINE OF THE STREET, 23 FEET EAST OF THE SOUTHEAST CORNER  
HZ1767'OF THE PEOPLES BANK BUILDING, AND ABOUT 1 FOOT HIGHER THAN THE  
HZ1767'HIGHWAY. AN OUTLINED SQUARE.

1 National Geodetic Survey, Retrieval Date = DECEMBER 18, 2001

HZ1254 \*\*\*\*\*

HZ1254 FBN - This is a Federal Base Network Control Station.

HZ1254 DESIGNATION - 164 L 21

HZ1254 PID - HZ1254

HZ1254 STATE/COUNTY- KY/SHELBY

HZ1254 USGS QUAD - FISHERVILLE (1993)

HZ1254

HZ1254 \*CURRENT SURVEY CONTROL

HZ1254

HZ1254\* NAD 83(1993)- 38 12 56.61023(N) 085 23 38.08632(W) ADJUSTED

HZ1254\* NAVD 88 - 228.317 (meters) 749.07 (feet) ADJUSTED

HZ1254

HZ1254 X - 402,953.930 (meters) COMP

HZ1254 Y - -5,001,599.156 (meters) COMP

HZ1254 Z - 3,924,405.823 (meters) COMP

HZ1254 LAPLACE CORR- -1.11 (seconds) DEFLEC99

HZ1254 ELLIP HEIGHT- 194.96 (meters) GPS OBS

HZ1254 GEOID HEIGHT- -33.40 (meters) GEOID99

HZ1254 DYNAMIC HT - 228.159 (meters) 748.55 (feet) COMP

HZ1254 MODELED GRAV- 979,931.6 (mgal) NAVD 88

HZ1254

HZ1254 HORZ ORDER - B

HZ1254 VERT ORDER - SECOND CLASS 0

HZ1254 ELLP ORDER - FOURTH CLASS I

HZ1254

HZ1254.The horizontal coordinates were established by GPS observations

HZ1254.and adjusted by the National Geodetic Survey in September 1994.

HZ1254

HZ1254.The orthometric height was determined by differential leveling

HZ1254.and adjusted by the National Geodetic Survey in June 1991.

HZ1254

HZ1254.The X, Y, and Z were computed from the position and the ellipsoidal ht.

HZ1254

HZ1254.The Laplace correction was computed from DEFLEC99 derived deflections.

HZ1254

HZ1254.The ellipsoidal height was determined by GPS observations

HZ1254.and is referenced to NAD 83.

HZ1254

HZ1254.The geoid height was determined by GEOID99.

HZ1254

HZ1254.The dynamic height is computed by dividing the NAVD 88

HZ1254.geopotential number by the normal gravity value computed on the

HZ1254.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

HZ1254.degrees latitude (g = 980.6199 gals.).

HZ1254

HZ1254.The modeled gravity was interpolated from observed gravity values.

HZ1254

HZ1254;	North	East	Units	Scale	Converg.
HZ1254;SPC KY N	- 80,065.056	399,827.767	MT	0.99997166	-0 42 41.7
HZ1254;UTM 16	- 4,230,969.858	640,600.452	MT	0.99984346	+0 59 37.4

HZ1254

HZ1254 SUPERSEDED SURVEY CONTROL

HZ1254

HZ1254	NAD 83(1986)	- 38 12 56.61411(N)	085 23 38.08070(W)	AD( )	2
HZ1254	NAD 27	- 38 12 56.34350(N)	085 23 38.24436(W)	AD( )	2
HZ1254	NGVD 29	- 228.469 (m)	749.57 (f)	ADJ UNCH	2 0

HZ1254

HZ1254.Superseded values are not recommended for survey control.

HZ1254.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

HZ1254.

HZ1254

HZ1254\_MARKER: DD = SURVEY DISK

HZ1254\_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

HZ1254\_STAMPING: I-64 L-21 1966

HZ1254\_MARK LOGO: PAS

HZ1254\_MAGNETIC: N = NO MAGNETIC MATERIAL

HZ1254\_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

HZ1254+STABILITY: SURFACE MOTION

HZ1254\_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

HZ1254+SATELLITE: SATELLITE OBSERVATIONS - January 05, 1994

HZ1254

HZ1254	HISTORY	- Date	Condition	Report By
HZ1254	HISTORY	- 1966	MONUMENTED	KYHD
HZ1254	HISTORY	- 1966	GOOD	PAS
HZ1254	HISTORY	- 19931028	GOOD	NGS
HZ1254	HISTORY	- 19940105	GOOD	

HZ1254

HZ1254 STATION DESCRIPTION

HZ1254

HZ1254'DESCRIBED BY KENTUCKY HIGHWAY DEPARTMENT 1966 (HB)

HZ1254'STATION IS LOCATED ABOUT 2-1/2 MILES SOUTHWEST OF SIMPSONVILLE, NEAR

HZ1254'THE SOUTH R/W FENCE OF INTERSTATE ROUTE 64. IT IS ABOUT 117 FEET

HZ1254'WEST OF A TWO WIRE POWER LINE CROSSING INTERSTATE 64, 2-1/2 FEET

HZ1254'NORTH OF SOUTH R/W FENCE AND 2.1 FEET NORTH OF METAL WITNESS POST

HZ1254'AND SIGN. A KENTUCKY DEPARTMENT OF HIGHWAYS BENCH MARK DISK SET IN

HZ1254'TOP OF CONCRETE POST FLUSH WITH GROUND AND STAMPED I 64 L-21 1966.

HZ1254'

HZ1254'TO REACH THE STATION FROM THE SIMPSONVILLE INTERCHANGE, GO WEST ON

HZ1254'INTERSTATE ROUTE 64 FOR 2.5 MILES TO STATION ON LEFT AS DESCRIBED.

HZ1254'

HZ1254'HEIGHT OF LIGHT ABOVE STATION MARK 1.6 METERS.

HZ1254

HZ1254 STATION RECOVERY (1966)

HZ1254

HZ1254'RECOVERY NOTE BY PARK AERIAL SURVEYS INCORPORATED 1966

HZ1254'2.1 MI SW FROM SIMPSONVILLE.

HZ1254'ABOUT 2.5 MILES WEST ALONG I-64 FROM THE SIMPSONVILLE INTERCHANGE,

HZ1254'AT MILE POST 24.65, NEAR THE SOUTH RIGHT OF WAY FENCE, 117 FEET

HZ1254'WEST OF A 2 WIRE POWER LINE CROSSING I-64, 33.5 FEET WEST OF METAL

HZ1254'FENCE POST WITH BRACE BARS, 2.5 FEET NORTH OF RIGHT OF WAY FENCE

HZ1254'AND 2.1 FEET NORTH OF METAL WITNESS POST AND SIGN. A KENTUCKY

HZ1254'DEPARTMENT OF HIGHWAYS BENCH MARK DISK SET IN CONCRETE POST

HZ1254'AND STAMPED I-64 L-21 1966.

HZ1254

HZ1254 STATION RECOVERY (1993)

HZ1254

HZ1254'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1993

HZ1254'THE STATION IS LOCATED ABOUT 30.0 KM (18.65 MI) EAST OF LOIUSVILLE,

HZ1254'15.0 KM (9.30 MI) WEST OF SHELBYVILLE, 4.0 KM (2.50 MI) WEST OF

HZ1254'SIMPSONVILLE AND ALONG THE SOUTH SIDE OF INTERSTATE 64 HIGHWAY.

HZ1254'OWNERSHIP--HIGHWAY RIGHT AWAY.

HZ1254'TO REACH THE STATION FROM THE INTERSTATE HIGHWAY 64 (EXIT 28) IN  
 HZ1254'SIMPSONVILLE, GO WEST ON INTERSTATE 64 FOR 2.5 MI (4.0 KM) TO A  
 HZ1254'UTILITY LINE CROSSING THE INTERSTATE AND THE STATION ON THE LEFT.  
 HZ1254'LOCATED 35.7 M (117.1 FT) WEST FROM TELEPHONE POLE WITH WIRES ACROSS  
 HZ1254'THE INTERSTATE, 28.2 M (92.5 FT) SOUTHWEST FROM MILE POST 25, 1.0 M  
 HZ1254'(3.3 FT) WEST FROM A WITNESS POST AND 0.9 M (3.0 FT) NORTH FROM A  
 HZ1254'FENCE LINE.

HZ1254

HZ1254

STATION RECOVERY (1994)

HZ1254

HZ1254'RECOVERED 1994

HZ1254'RECOVERED IN GOOD CONDITION.

1 National Geodetic Survey, Retrieval Date = DECEMBER 18, 2001

HZ2660 \*\*\*\*\*

HZ2660 CBN - This is a Cooperative Base Network Control Station.

HZ2660 DESIGNATION - **LOUISVILLE S BASE RESET**

HZ2660 PID - HZ2660

HZ2660 STATE/COUNTY- KY/JEFFERSON

HZ2660 USGS QUAD - LOUISVILLE WEST (1994)

HZ2660

\*CURRENT SURVEY CONTROL

HZ2660

HZ2660\* NAD 83(1993)- 38 09 03.69568(N) 085 49 58.24029(W) ADJUSTED

HZ2660\* NAVD 88 - 143.4 (meters) 470. (feet) GPS OBS

HZ2660

HZ2660 X - 364,943.983 (meters) COMP

HZ2660 Y - -5,008,900.688 (meters) COMP

HZ2660 Z - 3,918,708.331 (meters) COMP

HZ2660 LAPLACE CORR- -1.13 (seconds) DEFLEC99

HZ2660 ELLIP HEIGHT- 110.17 (meters) GPS OBS

HZ2660 GEOID HEIGHT- -33.18 (meters) GEOID99

HZ2660

HZ2660 HORZ ORDER - B

HZ2660 VERT ORDER - THIRD (See Below)

HZ2660 ELLP ORDER - FOURTH CLASS I

HZ2660

HZ2660.The horizontal coordinates were established by GPS observations

HZ2660.and adjusted by the National Geodetic Survey in September 1994.

HZ2660

HZ2660.The orthometric height was determined by GPS observations and a

HZ2660.high-resolution geoid model.

HZ2660.The vertical order pertains to the superseded datum.

HZ2660

HZ2660.The X, Y, and Z were computed from the position and the ellipsoidal ht.

HZ2660

HZ2660.The Laplace correction was computed from DEFLEC99 derived deflections.

HZ2660

HZ2660.The ellipsoidal height was determined by GPS observations

HZ2660.and is referenced to NAD 83.

HZ2660

HZ2660.The geoid height was determined by GEOID99.

HZ2660

HZ2660; North East Units Scale Converg.

HZ2660;SPC KY N - 73,453.727 361,270.458 MT 0.99997722 -0 59 04.7

HZ2660;SPC IN E - 322,270.150 85,434.655 MT 0.99996928 -0 06 09.6

HZ2660;UTM 16 - 4,223,215.432 602,264.314 MT 0.99972880 +0 43 15.8

HZ2660

HZ2660: Primary Azimuth Mark Grid Az

HZ2660:SPC KY N - COX RESET 084 10 13.6

HZ2660:SPC IN E - COX RESET 083 17 18.5

HZ2660:UTM 16 - COX RESET 082 27 53.1

HZ2660

HZ2660	PID	Reference Object	Distance	Geod. Az
HZ2660				dddmmss.s
HZ2660	HZ2232	COX RESET	APPROX. 5.4 KM	0831108.9
HZ2660	HZ1402	LOUISVILLE SOUTH BASE RM 1	51.228 METERS	21057

HZ2660  
 HZ2660 SUPERSEDED SURVEY CONTROL  
 HZ2660  
 HZ2660 NAD 83(1986) - 38 09 03.70040(N) 085 49 58.24973(W) AD( ) 1  
 HZ2660 NAD 27 - 38 09 03.43900(N) 085 49 58.38100(W) AD( ) 1  
 HZ2660 NGVD 29 - 143.47 (m) 470.7 (f) RESET 3

HZ2660  
 HZ2660.Superseded values are not recommended for survey control.  
 HZ2660.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

HZ2660.  
 HZ2660  
 HZ2660\_MARKER: DH = HORIZONTAL CONTROL DISK  
 HZ2660\_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT  
 HZ2660\_STAMPING: LOUISVILLE SOUTH BASE 1879 1978  
 HZ2660\_MARK LOGO: NGS  
 HZ2660\_MAGNETIC: N = NO MAGNETIC MATERIAL  
 HZ2660\_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO  
 HZ2660+STABILITY: SURFACE MOTION  
 HZ2660\_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR  
 HZ2660+SATELLITE: SATELLITE OBSERVATIONS - August 28, 1997

HZ2660

HZ2660 HISTORY	- Date	Condition	Report By
HZ2660 HISTORY	- 1978	MONUMENTED	NGS
HZ2660 HISTORY	- 1978	GOOD	NGS
HZ2660 HISTORY	- 19931028	GOOD	NGS
HZ2660 HISTORY	- 19940105	GOOD	
HZ2660 HISTORY	- 19970828	GOOD	NGS

HZ2660  
 HZ2660 STATION DESCRIPTION  
 HZ2660

HZ2660'DESCRIBED BY NATIONAL GEODETIC SURVEY 1978 (CLN)  
 HZ2660'THE STATION MARK WAS FOUND IN GOOD CONDITION EVEN THOUGH IT WAS  
 HZ2660'REPORTED LOOSE BY LEVEL PARTY. THE SURFACE MARK WAS REMOVED AND FOUND  
 HZ2660'TO BE EXACTLY PLUMB WITH THE UNDERGROUND MARK. THE TWO REFERENCE  
 HZ2660'STONES WERE NOT FOUND AND ASSUMED DESTROYED BY GRADING. LOUISVILLE  
 HZ2660'S. BASE 2 WAS NOT FOUND AND ASSUMED DESTROYED BY UTILITY CONSTRUCTION  
 HZ2660'AT THE SITE. A NEW UNDERGROUND STATION AND SURFACE MARK ALONG WITH  
 HZ2660'REFERENCE MARKS 2 AND 3 WERE SET. NO SUITABLE PLACE FOR AN AZIMUTH  
 HZ2660'MARK AT THIS TIME. A NEW DESCRIPTION FOLLOWS--

HZ2660'  
 HZ2660'THE STATION IS LOCATED ON RAILROAD RIGHT-OF-WAY, DIRECTLY BEHIND THE  
 HZ2660'DIXIE MANOR SHOPPING CENTER, 24 FEET EAST OF EAST RAIL OF RAILROAD, 46  
 HZ2660'FEET NORTH OF POWER POLE 40431 LGE 84384 AND 1 FOOT NORTH OF A METAL  
 HZ2660'WITNESS POST. THE MONUMENT PROJECTS 4 INCHES AND THE DISK IS  
 HZ2660'STAMPED---LOUISVILLE SOUTH BASE 1879 1978---.

HZ2660'  
 HZ2660'TO REACH THE STATION FROM THE INTERSECTION OF ST PAULS CHURCH RD AND  
 HZ2660'DIXIE HIGHWAY IN THE SOUTHWEST SECTION OF LOUISVILLE, GO EAST ON ST  
 HZ2660'PAULS CHURCH ROAD FOR 0.2 MILE TO RAILROAD TRACKS. CROSS THE TRACKS  
 HZ2660'THEN TURN LEFT AND GO NORTH ALONG THE EAST SIDE OF THE TRACKS FOR 0.1  
 HZ2660'MILE TO THE STATION.

HZ2660'  
 HZ2660'REFERENCE MARK 2 IS A STANDARD PRE-CAST ALUMINUM MONUMENT WITH  
 HZ2660'MAGNETS PROJECTING 3 INCHES, STAMPED---LOUISVILLE S BASE 1879 NO 2  
 HZ2660'1978---23 FEET EAST OF EAST RAIL OF RAILROAD AND 2 FEET NORTH OF  
 HZ2660'A POWER POLE.

HZ2660'  
 HZ2660'REFERENCE MARK 3 IS A STANDARD PRE-CAST ALUMINUM MONUMENT WITH  
 HZ2660'MAGNETS, PROJECTING 3 INCHES, STAMPED---LOUISVILLE S BASE 1879 NO  
 HZ2660'3 1978---25 FEET EAST OF EAST RAIL OF RAILROAD AND 1 FOOT SOUTH OF  
 HZ2660'A METAL WITNESS POST.

HZ2660  
 HZ2660 STATION RECOVERY (1978)  
 HZ2660

HZ2660'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1978  
 HZ2660'RECOVERED IN GOOD CONDITION.

HZ2660  
 HZ2660 STATION RECOVERY (1993)

HZ2660  
 HZ2660'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1993  
 HZ2660'THE STATION IS LOCATED ABOUT 7.0 MI (11.3 KM) SOUTHWEST OF LOUISVILLE,  
 HZ2660'IN PLEASURE RIDGE ALONG THE EAST SIDE OF THE ILLINOIS CENTRAL  
 HZ2660'RAILROAD. OWNERSHIP--ILLINOIS CENTRAL RAILROAD.  
 HZ2660'TO REACH THE STATION FROM THE JUNCTION OF THE DIXIE HIGHWAY (U.S  
 HZ2660'60,31W) AND THE GENE SNYDER FREEWAY (STATE ROUTE 841 EAST), GO NORTH  
 HZ2660'ON THE DIXIE HIGHWAY 1.0 MI (1.6 KM) TO STATE ROUTE 907 ON THE RIGHT  
 HZ2660'AND VALLEY HIGH SCHOOL ON THE LEFT. CONTINUE AHEAD NORTH ON THE  
 HZ2660'DIXIE HIGHWAY 2.9 MI (4.7 KM) TO STATE ROUTE 1931. CONTINUE AHEAD  
 HZ2660'NORTH ON DIXIE HIGHWAY FOR 0.5 MI (0.8 KM) TO ST. PAUL CHURCH ROAD.  
 HZ2660'TURN RIGHT AND GO EAST ON ST. PAUL CHURCH ROAD FOR 0.2 MI (0.3 KM) TO  
 HZ2660'RAILROAD TRACKS. CROSS OVER TRACKS AND TURN LEFT IMMEDIATELY AND GO  
 HZ2660'NORTH ALONG THE EAST SIDE OF RAILROAD TRACKS BESIDE HOUSE (4205 ST.  
 HZ2660'PAUL CHURCH ROAD) WITH FENCE FOR 0.1 MI (0.2 KM) TO OPEN FIELD AND  
 HZ2660'STATION.  
 HZ2660'LOCATED 14.0 M (45.9 FT) NORTHEAST FROM UTILITY POLE NO. 40431-84384,  
 HZ2660'7.4 M (24.3 FT) SOUTHEAST FROM THE EAST RAIL AND 0.4 M (1.3 FT)  
 HZ2660'NORTHEAST FROM WITNESS POST.  
 HZ2660  
 HZ2660 STATION RECOVERY (1994)  
 HZ2660  
 HZ2660'RECOVERED 1994  
 HZ2660'RECOVERED IN GOOD CONDITION.  
 HZ2660  
 HZ2660 STATION RECOVERY (1997)  
 HZ2660  
 HZ2660'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1997 (CSM)  
 HZ2660'RECOVERED AS DESCRIBED.

1 National Geodetic Survey, Retrieval Date = DECEMBER 18, 2001

HZ1532 \*\*\*\*\*

HZ1532 DESIGNATION - **GOSHEN RM 1**  
 HZ1532 PID - HZ1532  
 HZ1532 STATE/COUNTY- KY/OLDHAM  
 HZ1532 USGS QUAD - OWEN (1983)

HZ1532  
 HZ1532 \*CURRENT SURVEY CONTROL

HZ1532*	NAD 83(1986)-	38 24 27.	(N)	085 33 50.	(W)	SCALED
HZ1532*	NAVD 88	- 217.872	(meters)	714.80	(feet)	ADJUSTED
HZ1532	GEOID HEIGHT-	-33.46	(meters)			GEOID99
HZ1532	DYNAMIC HT -	217.726	(meters)	714.32	(feet)	COMP
HZ1532	MODELED GRAV-	979,953.7	(mgal)			NAVD 88

HZ1532 VERT ORDER - FIRST CLASS II

HZ1532  
 HZ1532.The horizontal coordinates were scaled from a topographic map and have  
 HZ1532.an estimated accuracy of +/- 6 seconds.

HZ1532  
 HZ1532.The orthometric height was determined by differential leveling  
 HZ1532.and adjusted by the National Geodetic Survey in June 1991.

HZ1532  
 HZ1532.The geoid height was determined by GEOID99.

HZ1532  
 HZ1532.The dynamic height is computed by dividing the NAVD 88  
 HZ1532.geopotential number by the normal gravity value computed on the  
 HZ1532.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45  
 HZ1532.degrees latitude (g = 980.6199 gals.).

HZ1532  
 HZ1532.The modeled gravity was interpolated from observed gravity values.

HZ1532;	North	East	Units	Estimated Accuracy
HZ1532;SPC KY N	- 101,550.	385,250.	MT	(+/- 180 meters Scaled)

HZ1532  
 HZ1532 SUPERSEDED SURVEY CONTROL

HZ1532	NGVD 29	- 218.031	(m)	715.32	(f)	ADJ UNCH	1 2
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HZ1532

HZ1532.Superseded values are not recommended for survey control.  
HZ1532.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

HZ1532.  
HZ1532

HZ1532\_MARKER: DR = REFERENCE MARK DISK  
HZ1532\_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT  
HZ1532\_STAMPING: GOSHEN NO 1 1947  
HZ1532\_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO  
HZ1532+STABILITY: SURFACE MOTION

HZ1532

HZ1532 HISTORY - Date Condition Report By  
HZ1532 HISTORY - 1947 MONUMENTED CGS  
HZ1532 HISTORY - 1954 GOOD NGS

HZ1532

HZ1532 STATION DESCRIPTION

HZ1532

HZ1532'DESCRIBED BY NATIONAL GEODETIC SURVEY 1954  
HZ1532'0.7 MI NE FROM GOSHEN.  
HZ1532'ABOUT 0.7 MILE NORTHEAST ALONG U.S. HIGHWAY 42 FROM THE PRESBYTERIAN  
HZ1532'CHURCH AT GOSHEN, 33 FEET SOUTHEAST OF CENTER LINE OF HIGHWAY AT  
HZ1532'CENTER OF JUNCTION OF ROAD NORTHWEST, 105.2 FEET NORTHEAST OF STATION  
HZ1532'MARK, 46 FEET NORTHEAST OF CENTER OF A FARM GATE, 17 FEET SOUTHWEST  
HZ1532'OF TELEPHONE CABLE POLE NO. 145, 1 FOOT SOUTHEAST OF A FENCE LINE,  
HZ1532'ABOUT 3 1/2 FEET ABOVE LEVEL OF HIGHWAY AND SET IN THE TOP OF A  
HZ1532'CONCRETE POST PROJECTING 6 INCHES.

1 National Geodetic Survey, Retrieval Date = DECEMBER 18, 2001  
HZ2666 \*\*\*\*\*

HZ2666 CBN - This is a Cooperative Base Network Control Station.  
HZ2666 DESIGNATION - **KY 05**  
HZ2666 PID - HZ2666  
HZ2666 STATE/COUNTY- KY/JEFFERSON  
HZ2666 USGS QUAD - LOUISVILLE EAST (1994)

HZ2666

HZ2666 \*CURRENT SURVEY CONTROL

HZ2666

HZ2666\* NAD 83(1993)- 38 11 42.85079(N) 085 44 15.88099(W) ADJUSTED  
HZ2666\* NAVD 88 - 149.1 (meters) 489. (feet) GPS OBS

HZ2666

HZ2666 X - 373,032.195 (meters) COMP  
HZ2666 Y - -5,005,268.006 (meters) COMP  
HZ2666 Z - 3,922,569.789 (meters) COMP  
HZ2666 LAPLACE CORR- -0.60 (seconds) DEFLEC99  
HZ2666 ELLIP HEIGHT- 115.92 (meters) GPS OBS  
HZ2666 GEOID HEIGHT- -33.28 (meters) GEOID99

HZ2666

HZ2666 HORZ ORDER - B  
HZ2666 ELLP ORDER - FOURTH CLASS I

HZ2666

HZ2666.The horizontal coordinates were established by GPS observations  
HZ2666.and adjusted by the National Geodetic Survey in September 1994.

HZ2666

HZ2666.The orthometric height was determined by GPS observations and a  
HZ2666.high-resolution geoid model.

HZ2666

HZ2666.The X, Y, and Z were computed from the position and the ellipsoidal ht.  
HZ2666

HZ2666.The Laplace correction was computed from DEFLEC99 derived deflections.  
HZ2666

HZ2666.The ellipsoidal height was determined by GPS observations  
HZ2666.and is referenced to NAD 83.

HZ2666

HZ2666.The geoid height was determined by GEOID99.

HZ2666

HZ2666;  
HZ2666;SPC KY N - North East Units Scale Converg.  
78,221.300 369,684.060 MT 0.99997329 -0 55 31.7  
HZ2666;UTM 16 - 4,228,230.171 610,530.315 MT 0.99975046 +0 46 50.1  
HZ2666

HZ2666 SUPERSEDED SURVEY CONTROL  
 HZ2666  
 HZ2666.No superseded survey control is available for this station.  
 HZ2666  
 HZ2666\_MARKER: I = METAL ROD  
 HZ2666\_SETTING: 49 = STAINLESS STEEL ROD W/O SLEEVE (10 FT.+)  
 HZ2666\_STAMPING: KY 05 DOT 1993  
 HZ2666\_MARK LOGO: NGS  
 HZ2666\_PROJECTION: FLUSH  
 HZ2666\_MAGNETIC: N = NO MAGNETIC MATERIAL  
 HZ2666\_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL  
 HZ2666\_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR  
 HZ2666+SATELLITE: SATELLITE OBSERVATIONS - November 11, 1995  
 HZ2666\_ROD/PIPE-DEPTH: 4.9 meters  
 HZ2666\_SLEEVE-DEPTH : 1.0 meters

HZ2666	HISTORY	- Date	Condition	Report By
HZ2666	HISTORY	- 1993	MONUMENTED	NGS
HZ2666	HISTORY	- 19940105	GOOD	
HZ2666	HISTORY	- 19951111	GOOD	LOWE

HZ2666 STATION DESCRIPTION

HZ2666  
 HZ2666'DESCRIBED BY NATIONAL GEODETIC SURVEY 1993  
 HZ2666'THE STATION IS LOCATED ABOUT 13 MI (20.9 KM) NORTH OF SHEPHERDSVILLE,  
 HZ2666'12.0 MI (19.3 KM) WEST-SOUTHWEST OF MIDDLETOWN, 9.0 MI (14.5 KM) WEST  
 HZ2666'OF JEFFERSONTOWN AND IN LOUISVILLE, AT THE KENTUCKY TRANSPORTION  
 HZ2666'CABINET DISTRICT OFFICE NUMBER 5, AT ENTRANCE TO THE FAIRGROUNDS.  
 HZ2666'OWNERSHIP--DISTRICT OFFICE 5. CONTACT--LARRY CHANEY, DISTRICT DESIGN  
 HZ2666'ENGINEER--PHONE 502-367-6411 BEFORE TRACKING.  
 HZ2666'TO REACH THE STATION FROM INTERSTATE HIGHWAY 264 WESTBOUND AT (EXIT  
 HZ2666'11) CRITTENDEN DRIVE (WHICH IS JUST WEST OF INTERSTATE HIGHWAY 65  
 HZ2666'NORTHBOUND), GO NORTHWESTERLY ON CRITTENDEN DRIVE FOR 0.75 MI  
 HZ2666'(1.21 KM) TO A TRAFFIC LIGHT AT PHILLIPS LANE, TURN RIGHT ON PHILLIPS  
 HZ2666'LANE FOR 0.1 MI (0.2 KM) TO THE DISTRICT 5 OFFICE ON THE LEFT, TURN  
 HZ2666'LEFT ONTO THE DRIVEWAY FOR 0.05 MI (0.08 KM) TO STATION ON THE RIGHT.  
 HZ2666'THE STATION IS ABOUT 1.0 M (3.3 FT) HIGHER THAN THE DRIVEWAY LEADING  
 HZ2666'TO THE DISTRICT 5 OFFICE BUILDING. LOCATED 143.0 FT (43.6 M)  
 HZ2666'NORTHWEST OF THE CENTER OF PHILLIPS LANE, 96.0 FT (29.3 M) SOUTHEAST  
 HZ2666'FROM THE CARSONITE WITNESS POST IN A FENCE LINE, 95.0 FT (29.0 M)  
 HZ2666'EAST-NORTHEAST FROM THE CENTER OF THE DRIVEWAY, 71.0 FT (21.6 M)  
 HZ2666'NORTHWEST FROM A 30-INCH DIAMETER TREE AND 63.0 FT (19.2 M)  
 HZ2666'WEST-SOUTHWEST OF THE CENTER OF THE DRIVEWAY.

HZ2666 STATION RECOVERY (1994)

HZ2666  
 HZ2666'RECOVERED 1994  
 HZ2666'RECOVERED IN GOOD CONDITION.

HZ2666 STATION RECOVERY (1995)

HZ2666  
 HZ2666'RECOVERY NOTE BY LOWE ENGINEERS 1995 (LDS)  
 HZ2666'RECOVERED AS DESCRIBED.

1 National Geodetic Survey, Retrieval Date = DECEMBER 18, 2001

GZ3121 \*\*\*\*\*

GZ3121 CBN - This is a Cooperative Base Network Control Station.  
 GZ3121 DESIGNATION - **KY 13**  
 GZ3121 PID - GZ3121  
 GZ3121 STATE/COUNTY- KY/NELSON  
 GZ3121 USGS QUAD - SAMUELS (1991)

GZ3121 \*CURRENT SURVEY CONTROL

GZ3121*	NAD 83(1993)-	37 53 49.22778(N)	085 33 56.19389(W)	ADJUSTED
GZ3121*	NAVD 88	- 207.3 (meters)	680. (feet)	GPS OBS
GZ3121				
GZ3121	X	- 389,648.874 (meters)		COMP
GZ3121	Y	- -5,024,510.604 (meters)		COMP

GZ3121 Z - 3,896,536.196 (meters) COMP  
 GZ3121 LAPLACE CORR- -2.94 (seconds) DEFLEC99  
 GZ3121 ELLIP HEIGHT- 173.93 (meters) GPS OBS  
 GZ3121 GEOID HEIGHT- -33.42 (meters) GEOID99

GZ3121  
 GZ3121 HORZ ORDER - B  
 GZ3121 ELLP ORDER - FOURTH CLASS I  
 GZ3121

GZ3121.The horizontal coordinates were established by GPS observations  
 GZ3121.and adjusted by the National Geodetic Survey in September 1994.

GZ3121  
 GZ3121.The orthometric height was determined by GPS observations and a  
 GZ3121.high-resolution geoid model.

GZ3121  
 GZ3121.The X, Y, and Z were computed from the position and the ellipsoidal ht.

GZ3121  
 GZ3121.The Laplace correction was computed from DEFLEC99 derived deflections.

GZ3121  
 GZ3121.The ellipsoidal height was determined by GPS observations  
 GZ3121.and is referenced to NAD 83.

GZ3121  
 GZ3121.The geoid height was determined by GEOID99.

GZ3121

GZ3121;	North	East	Units	Scale	Converg.
GZ3121;SPC KY S	- 673,549.263	516,217.988	MT	0.99999357	+0 06 42.6
GZ3121;SPC KY N	- 44,892.962	384,287.998	MT	1.00001127	-0 49 06.2
GZ3121;UTM 16	- 4,195,357.692	626,114.850	MT	0.99979589	+0 52 52.3

GZ3121  
 GZ3121 SUPERSEDED SURVEY CONTROL

GZ3121  
 GZ3121.No superseded survey control is available for this station.

GZ3121  
 GZ3121\_MARKER: DH = HORIZONTAL CONTROL DISK  
 GZ3121\_SETTING: 66 = SET IN ROCK OUTCROP  
 GZ3121\_STAMPING: KY 13 GPS 1993  
 GZ3121\_MARK LOGO: NGS  
 GZ3121\_MAGNETIC: N = NO MAGNETIC MATERIAL  
 GZ3121\_STABILITY: A = MOST RELIABLE AND EXPECTED TO HOLD  
 GZ3121+STABILITY: POSITION/ELEVATION WELL  
 GZ3121\_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR  
 GZ3121+SATELLITE: SATELLITE OBSERVATIONS - February 08, 1994

GZ3121

GZ3121	HISTORY	- Date	Condition	Report By
GZ3121	HISTORY	- 1993	MONUMENTED	NGS
GZ3121	HISTORY	- 19940208	GOOD	

GZ3121  
 GZ3121 STATION DESCRIPTION

GZ3121  
 GZ3121'DESCRIBED BY NATIONAL GEODETIC SURVEY 1993  
 GZ3121'THE STATION IS LOCATED ABOUT 35.0 KM (21.75 MI) SOUTHEAST OF  
 GZ3121'LOUISVILLE, 10.0 KM (6.20 MI) EAST OF INTERSTATE HIGHWAY 65, ON THE  
 GZ3121'NORTH SIDE OF DEATSVILLE. OWNERSHIP--HIGHWAY RIGHT OF WAY.  
 GZ3121'TO REACH THE STATION FROM THE JUNCTION OF STATE HIGHWAYS 245 AND 509  
 GZ3121'JUST SOUTH OF ROOSTER RUN, GO NORTHWEST ON HIGHWAY 245 FOR 2.25 MI  
 GZ3121'(3.62 KM) TO THE STATION ON THE RIGHT.  
 GZ3121'THE STATION IS SET IN A DRILL HOLE IN ROCK OUTCROP ABOUT 1.0 M  
 GZ3121'(3.3 FT) ABOVE THE HIGHWAY. LOCATED 19.1 M (62.7 FT) SOUTHEAST FROM  
 GZ3121'CONCRETE DRAINAGE DITCH, 17.8 M (58.4 FT) NORTHEAST FROM THE  
 GZ3121'CENTERLINE OF THE HIGHWAY 245 AND 1.2 M (3.9 FT) NORTHWEST FROM A  
 GZ3121'WITNESS POST.

GZ3121  
 GZ3121 STATION RECOVERY (1994)

GZ3121  
 GZ3121'RECOVERED 1994  
 GZ3121'RECOVERED IN GOOD CONDITION.

1 National Geodetic Survey, Retrieval Date = DECEMBER 18, 2001

AC6014 \*\*\*\*\*

AC6014 PACS - This is a Primary Airport Control Station.

AC6014 DESIGNATION - **SDF A**

AC6014 PID - AC6014

AC6014 STATE/COUNTY- KY/JEFFERSON

AC6014 USGS QUAD - LOUISVILLE EAST (1994)

AC6014

AC6014 \*CURRENT SURVEY CONTROL

AC6014

AC6014*	NAD 83(1993)-	38 10 42.96336(N)	085 43 57.96418(W)	ADJUSTED
AC6014*	NAVD 88	- 145.97 (meters)	478.9 (feet)	GPS OBS

AC6014

AC6014	X	- 373,551.722 (meters)	COMP
AC6014	Y	- 5,006,371.479 (meters)	COMP
AC6014	Z	- 3,921,116.391 (meters)	COMP
AC6014	LAPLACE CORR-	-0.81 (seconds)	DEFLEC99
AC6014	ELLIP HEIGHT-	112.68 (meters)	GPS OBS
AC6014	GEOID HEIGHT-	-33.27 (meters)	GEOID99

AC6014

AC6014 HORZ ORDER - B

AC6014 ELLP ORDER - SECOND CLASS II

AC6014

AC6014.This mark is at Louisville Intl (STANDIFORD) Airport (SDF)

AC6014

AC6014.The horizontal coordinates were established by GPS observations  
AC6014.and adjusted by the National Geodetic Survey in January 1997.

AC6014

AC6014.The orthometric height was determined by GPS observations and a  
AC6014.high-resolution geoid model.

AC6014

AC6014.GPS derived orthometric heights for airport stations designated as  
AC6014.PACS or SACS are published to 2 decimal places. This maintains  
AC6014.centimeter relative accuracy between the PACS and SACS. It does  
AC6014.not indicate centimeter accuracy relative to other marks which are  
AC6014.part of the NAVD 88 network.

AC6014

AC6014.The X, Y, and Z were computed from the position and the ellipsoidal ht.

AC6014

AC6014.The Laplace correction was computed from DEFLEC99 derived deflections.

AC6014

AC6014.The ellipsoidal height was determined by GPS observations  
AC6014.and is referenced to NAD 83.

AC6014

AC6014.The geoid height was determined by GEOID99.

AC6014

AC6014;	North	East	Units	Scale	Converg.
AC6014;SPC KY N	- 76,368.028	370,090.239	MT	0.99997470	-0 55 20.6
AC6014;UTM 16	- 4,226,390.222	610,991.381	MT	0.99975172	+0 47 00.1

AC6014

AC6014 SUPERSEDED SURVEY CONTROL

AC6014

AC6014.No superseded survey control is available for this station.

AC6014

AC6014\_MARKER: I = METAL ROD

AC6014\_SETTING: 49 = STAINLESS STEEL ROD W/O SLEEVE (10 FT.+)

AC6014\_STAMPING: SDF A 1995

AC6014\_MARK LOGO: NGS

AC6014\_MAGNETIC: N = NO MAGNETIC MATERIAL

AC6014\_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

AC6014\_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

AC6014+SATELLITE: SATELLITE OBSERVATIONS - January 21, 2000

AC6014

AC6014	HISTORY	- Date	Condition	Report By
AC6014	HISTORY	- 1995	MONUMENTED	LOWE
AC6014	HISTORY	- 20000121	GOOD	NGS

AC6014

AC6014

STATION DESCRIPTION

AC6014

AC6014'DESCRIBED BY LOWE ENGINEERS 1995 (LDS)

AC6014'STATION IS LOCATED IN LOUISVILLE AT THE STANDIFORD FIELD AIRPORT
AC6014'(LOUISVILLE INTERNATIONAL AIRPORT) ESCORT REQUIRED, POINT OF CONTACT
AC6014'IS TOM PUCKETT TELEPHONE NUMBER 502-368-6524. TO REACH FROM THE
AC6014'INTERSECTION OF INTERSTATE 65 AND INTERSTATE 264 IN SOUTHERN
AC6014'LOUISVILLE, GO WEST ON INTERSTATE 65 AND INTERSTATE 264 0.3 KM (0.20
AC6014'MI) TO AIRPORT EXIT RAMP (EXIT 12) , EXIT AND GO SOUTH ON AIRPORT
AC6014'ACCESS ROAD 1.8 KM (1.10 MI) TO THE TERMINAL DEPARTURE GATES.
AC6014'CONTINUE AHEAD 0.3 KM (0.20 MI) TO A PAVED ROAD RIGHT LEADING TO THE
AC6014'AIRPORT AUTHORITY OFFICES ON THE RIGHT AND GATE W AHEAD. PASS THROUGH
AC6014'GATE W AND TAKE THE EAST SECURITY ROAD 0.3 KM (0.20 MI) TO TERMINAL
AC6014'RAMP (EAST SIDE) . GO SOUTHEAST ACROSS TERMINAL RAMP 0.40 KM (0.25
AC6014'MI) TO TAXIWAY H. CONTINUE SOUTHEAST ON TAXIWAY H CROSSING RUNWAY
AC6014'1-19 0.56 KM (0.35 MI) TO TAXIWAY P. GO SOUTH ON TAXIWAY P 0.08 KM
AC6014'(0.05 MI) TO CFR RAMP AT THE INTERSECTION OF A ASPHALT DRIVE TO THE
AC6014'ELECTRICAL VAULT BUILDING. GO SOUTH ON ASPHALT DRIVE 0.2 KM (0.10 MI)
AC6014'TO STATION ON THE RIGHT. THE STATION IS THE CENTER OF A STAINLESS
AC6014'STEEL ROD DRIVEN TO REFUSAL RECESSED 0.08 M (0.26 FT) BELOW GROUND
AC6014'LEVEL IN A 0.025 M (0.082 FT) GREASE FILLED FLUTED PLASTIC SLEEVE 0.90
AC6014'M (2.95 FT) LONG ENCASED IN A 0.16 M (0.52 FT) PVC PIPE WITH AN NGS
AC6014'LOGO CAP SURROUNDED BY CONCRETE. THE LOGO CAP AND CONCRETE ARE SET
AC6014'FLUSH WITH THE GROUND. THE STATION IS 99.1 M (325.1 FT) WEST FROM THE
AC6014'WEST FACE OF THE CONTROL TOWER. 57.2 M (187.7 FT) DUE EAST FROM THE
AC6014'CENTERLINE OF TAXIWAY P. 34.7 M (113.8 FT) NORTHWEST FROM THE
AC6014'NORTHEAST CORNER OF THE ELECTRICAL VAULT BUILDING. 30.9 M (101.4 FT)
AC6014'NORTH-NORTHEAST FROM THE NORTHWEST CORNER OF THE ELECTRICAL VAULT
AC6014'BUILDING. 22.3 M (73.2 FT) DUE WEST FROM CENTER LINE OF ASPHALT
AC6014'DRIVE. THIS STATION IS A PRIMARY AIRPORT CONTROL STATION.

AC6014

AC6014

STATION RECOVERY (2000)

AC6014

AC6014'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 2000 (GFS)
AC6014'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 2000 (GFS) STATION IS
AC6014'LOCATED AT LOUISVILLE AT THE LOUISVILLE INTERNATIONAL-STANDIFORD FIELD
AC6014'AIRPORT, NEAR THE AIRPORT FIRE HOUSE. POINT OF CONTACT IS PAUL ABEL,
AC6014'GROUNDS ENGINEER, PHONE 502-368-6524, EXT 135. TO REACH FROM THE
AC6014'INTERSECTION OF INTERSTATE 65 AND INTERSTATE 264 IN SOUTHERN
AC6014'LOUISVILLE, GO WEST ON INTERSTATE 264 FOR 0.20 MI (0.32 KM) TO THE
AC6014'AIRPORT EXIT (EXIT 12) , EXIT AND GO SOUTH ON THE AIRPORT ACCESS ROAD
AC6014'FOR 1.10 MI (1.77 KM) TO THE TERMINAL DEPARTURE GATES. CONTINUE
AC6014'EASTERLY PAST THE DEPARTURE GATES FOR 0.20 MILE (0.32 KM) TA A PAVED
AC6014'ROAD RIGHT LEADING TO THE AIRPORT AUTHORITY OFFICES. TURN RIGHT
AC6014'SOUTHERLY FOLLOWING PAVED ROAD FOR 0.20 MILE (0.32 KM) TO A AUTOMATIC
AC6014'GATE AHEAD (AIRPORT GATE W) . PASS THROUGH THE GATE AND TURN RIGHT
AC6014'SOUTHEASTERLY ON A SERVICE ROAD FOR 0.20 MI (0.32 KM) TO THE TERMINAL
AC6014'RAMP. GO SOUTHEAST ACROSS TERMINAL RAMP 0.25 MI (0.40 KM) TO TAXIWAY
AC6014'H. CONTINUE SOUTHEASTERLY ALONG TAXIWAY H FOR 0.35 MI TO TAXIWAY P.
AC6014'GO SOUTH ON TAXIWAY P FOR 0.05 MILE (0.08 KM) TO PAVED ROAD LEFT
AC6014'LEADING TO THE FIREHOUSE. TURN LEFT FOR 0.04 MILE (0.06 KM) TO PAVED
AC6014'DRIVE RIGHT. TURN RIGHT SOUTH ON PAVED DRIVE FOR 0.10 MI (0.16 KM) TO
AC6014'THE MARK ON THE RIGHT. THE STATION IS THE CENTER OF A STAINLESS STEEL
AC6014'ROD DRIVEN TO REFUSAL RECESSED 0.26 FT (7.92 CM) BELOW GROUND LEVEL IN
AC6014'A 0.082 FT (2.499 CM) GREASE FILLED FLUTED PLASTIC SLEEVE 2.95 FT
AC6014'(0.90 M) LONG ENCASED IN A 0.52 FT (15.85 CM) PVC PIPE WITH A NGS LOGO
AC6014'CAP SURROUNDED BY CONCRETE. THE LOGO CAP AND CONCRETE ARE SET FLUSH
AC6014'WITH THE GROUND. THE STATION IS 187.7 FEET (57.2 M) DUE EAST FROM THE
AC6014'CENTERLINE OF TAXIWAY P. 113.8 FT (34.7 M) NORTHWEST FROM THE
AC6014'NORTHEAST CORNER OF AN ELECTRICAL VAULT BUILDING. 101.4 FT (30.9 M)
AC6014'NORTH-NORTHEAST FROM THE NORTHWEST CORNER OF THE ELECTRICAL VAULT
AC6014'BUILDING AND 73.2 FT (22.3 M) WEST FROM THE CENTERLINE OF THE DRIVE.
AC6014'THIS STATION IS DESIGNATED AS THE PRIMARY AIRPORT CONTROL STATION PACS

1 National Geodetic Survey, Retrieval Date = DECEMBER 18, 2001

HZ2664 \*\*\*\*\*

HZ2664 CBN - This is a Cooperative Base Network Control Station.

HZ2664 SACS - This is a Secondary Airport Control Station.

HZ2664 DESIGNATION - **SDF E**  
 HZ2664 PID - HZ2664  
 HZ2664 STATE/COUNTY- KY/JEFFERSON  
 HZ2664 USGS QUAD - LOUISVILLE EAST (1994)  
 HZ2664  
 HZ2664 \*CURRENT SURVEY CONTROL  
 HZ2664  

HZ2664*	NAD 83(1993)	-	38 11 16.87355(N)	085 44 09.87805(W)	ADJUSTED
HZ2664*	NAVD 88	-	149.09 (meters)	489.1 (feet)	GPS OBS

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HZ2664	X	-	373,214.679 (meters)	COMP
HZ2664	Y	-	-5,005,750.931 (meters)	COMP
HZ2664	Z	-	3,921,940.193 (meters)	COMP
HZ2664	LAPLACE CORR-		-0.69 (seconds)	DEFLEC99
HZ2664	ELLIP HEIGHT-		115.81 (meters)	GPS OBS
HZ2664	GEOID HEIGHT-		-33.27 (meters)	GEOID99

HZ2664  
 HZ2664 HORZ ORDER - B  
 HZ2664 ELLP ORDER - FOURTH CLASS I  
 HZ2664

HZ2664.This mark is at Louisville Intl (STANDIFORD) Airport (SDF)

HZ2664  
 HZ2664.The horizontal coordinates were established by GPS observations  
 HZ2664.and adjusted by the National Geodetic Survey in September 1994.  
 HZ2664

HZ2664.The orthometric height was determined by GPS observations and a  
 HZ2664.high-resolution geoid model.

HZ2664  
 HZ2664.GPS derived orthometric heights for airport stations designated as  
 HZ2664.PACS or SACS are published to 2 decimal places. This maintains  
 HZ2664.centimeter relative accuracy between the PACS and SACS. It does  
 HZ2664.not indicate centimeter accuracy relative to other marks which are  
 HZ2664.part of the NAVD 88 network.

HZ2664  
 HZ2664.The X, Y, and Z were computed from the position and the ellipsoidal ht.  
 HZ2664  
 HZ2664.The Laplace correction was computed from DEFLEC99 derived deflections.  
 HZ2664

HZ2664.The ellipsoidal height was determined by GPS observations  
 HZ2664.and is referenced to NAD 83.

HZ2664  
 HZ2664.The geoid height was determined by GEOID99.

HZ2664;	North	East	Units	Scale	Converg.
HZ2664;SPC KY N	- 77,418.101	369,817.185	MT	0.99997389	-0 55 28.0
HZ2664;UTM 16	- 4,227,431.470	610,687.258	MT	0.99975089	+0 46 53.4

HZ2664  
 HZ2664 SUPERSEDED SURVEY CONTROL

HZ2664.No superseded survey control is available for this station.

HZ2664  
 HZ2664\_MARKER: DD = SURVEY DISK  
 HZ2664\_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT  
 HZ2664\_STAMPING: SDF E 1978  
 HZ2664\_MARK LOGO: NOS  
 HZ2664\_MAGNETIC: N = NO MAGNETIC MATERIAL  
 HZ2664\_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO  
 HZ2664+STABILITY: SURFACE MOTION  
 HZ2664\_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR  
 HZ2664+SATELLITE: SATELLITE OBSERVATIONS - January 21, 2000

HZ2664	HISTORY	- Date	Condition	Report By
HZ2664	HISTORY	- 1978	MONUMENTED	NOS
HZ2664	HISTORY	- 19931215	GOOD	NGS
HZ2664	HISTORY	- 19940201	GOOD	
HZ2664	HISTORY	- 19940203	GOOD	
HZ2664	HISTORY	- 19951001	GOOD	LOWE
HZ2664	HISTORY	- 19970828	GOOD	NGS

HZ2664 HISTORY - 20000121 GOOD NGS

HZ2664

HZ2664 STATION DESCRIPTION

HZ2664

HZ2664'DESCRIBED BY NATIONAL GEODETIC SURVEY 1993

HZ2664'THE STATION IS LOCATED IN SOUTHERN LOUISVILLE ON THE STANDIFORD FIELD

HZ2664'AIRPORT. OWNERSHIP---LOUISVILLE-STANDIFORD REGIONAL AIRPORT

HZ2664'AUTHORITY. AIRFIELD DIRECTOR, GEORGE GAWTHROP. PHONE (502)

HZ2664'368-6524. NOTE ESCORT IS REQUIRED.

HZ2664'TO REACH THE STATION FROM THE INTERSECTION OF INTERSTATE HIGHWAY 65

HZ2664'AND INTERSTATE 264 IN SOUTHERN LOUISVILLE, GO WEST ON INTERSTATE

HZ2664'HIGHWAY 264 FOR 0.2 MI (0.3 KM) TO THE AIRPORT ACCESS ROAD (EXIT 12),

HZ2664'EXIT AND GO SOUTH ON AIRPORT ACCESS ROAD FOR 1.1 MI (1.8 KM) TO THE

HZ2664'TERMINAL DEPARTURE GATES, CONTINUE AHEAD EASTERLY ON AIRPORT ACCESS

HZ2664'ROAD FOR 0.2 MI (0.3 KM) TO A PAVED ROAD RIGHT LEADING TO AIRPORT

HZ2664'AUTHORITY OFFICES, TURN RIGHT SOUTHERLY FOLLOWING PAVED ROAD FOR 0.2

HZ2664'MI (0.3 KM) TO A GATE AHEAD (AIRPORT OFFICE ON RIGHT), CONTINUE AHEAD

HZ2664'EASTERLY PASSING THROUGH GATE TO A SERVICE ROAD, TURN RIGHT SOUTHERLY

HZ2664'ON SERVICE ROAD FOR 150 FT (45.7 M) TO THE STATION ON LEFT.

HZ2664'THE STATION IS FLUSH WITH THE GROUND. LOCATED 187.4 FT (57.1 M)

HZ2664'NORTHEAST OF THE SOUTHEAST CORNER OF THE ADMINISTRATION BUILDING,

HZ2664'127.3 FT (38.8 M) NORTHEAST OF A FENCE CORNER, 122.7 FT (37.4 M)

HZ2664'SOUTHEAST OF A FENCE CORNER AND 34.8 FT (10.6 M) EAST OF A P-K NAIL

HZ2664'AND WASHER SET INTO THE CENTERLINE OF THE AIRPORT SERVICE ROAD.

HZ2664

HZ2664 STATION RECOVERY (1994)

HZ2664

HZ2664'RECOVERED 1994

HZ2664'RECOVERED IN GOOD CONDITION.

HZ2664

HZ2664 STATION RECOVERY (1994)

HZ2664

HZ2664'RECOVERED 1994

HZ2664'RECOVERED IN GOOD CONDITION.

HZ2664

HZ2664 STATION RECOVERY (1995)

HZ2664

HZ2664'RECOVERY NOTE BY LOWE ENGINEERS 1995 (LDS)

HZ2664'STATION WAS FOUND IN GOOD CONDITION AS DESCRIBED, NEW POINT OF CONTACT

HZ2664'IS TOM PUCKETT. STATION IS SECONDARY AIRPORT CONTROL STATION (SACS) .

HZ2664

HZ2664 STATION RECOVERY (1997)

HZ2664

HZ2664'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1997 (CSM)

HZ2664'THE STATION IS LOCATED IN SOUTHERN LOUISVILLE ON THE STANDIFORD FIELD

HZ2664'AIRPORT. OWNERSHIP---LOUISVILLE-STANDIFORD REGIONAL AIRPORT

HZ2664'AUTHORITY, CONTACT PAUL ABEL, GROUNDS ENGINEER, PHONE 502-368-6524,

HZ2664'EXT 135. NOTE ESCORT IS REQUIRED. TO REACH THE STATION FROM THE

HZ2664'INTERSECTION OF INTERSTATE HIGHWAY 65 AND INTERSTATE 264 IN SOUTHERN

HZ2664'LOUISVILLE, GO WEST ON INTERSTATE HIGHWAY 264 FOR 0.2 MI (0.3 KM) TO

HZ2664'THE AIRPORT ACCESS ROAD (EXIT 12), EXIT AND GO SOUTH ON AIRPORT ACCESS

HZ2664'ROAD FOR 1.1 MI (1.8 KM) TO THE TERMINAL DEPARTURE GATES, CONTINUE

HZ2664'AHEAD EASTERLY ON AIRPORT ACCESS ROAD FOR 0.2 MI (0.3 KM) TO A PAVED

HZ2664'ROAD RIGHT LEADING TO AIRPORT AUTHORITY OFFICES, TURN RIGHT SOUTHERLY

HZ2664'FOLLOWING PAVED ROAD FOR 0.2 MI (0.3 KM) TO A GATE AHEAD (AIRPORT

HZ2664'OFFICE ON RIGHT), CONTINUE AHEAD EASTERLY PASSING THROUGH GATE TO A

HZ2664'SERVICE ROAD, TURN RIGHT SOUTHERLY ON SERVICE ROAD FOR 150 FT (45.7 M)

HZ2664'TO THE STATION ON LEFT. THE STATION IS FLUSH WITH THE GROUND.

HZ2664'LOCATED 187.4 FT (57.1 M) NORTHEAST OF THE SOUTHEAST CORNER OF THE

HZ2664'ADMINISTRATION BUILDING, 127.3 FT (38.8 M) NORTHEAST OF A FENCE

HZ2664'CORNER, 122.7 FT (37.4 M) SOUTHEAST OF A FENCE CORNER AND 34.8 FT

HZ2664'(10.6 M) EAST OF A PK NAIL AND WASHER SET INTO THE CENTERLINE OF THE

HZ2664'AIRPORT SERVICE ROAD.

HZ2664

HZ2664 STATION RECOVERY (2000)

HZ2664

HZ2664'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 2000 (GFS)

HZ2664'RECOVERED AS DESCRIBED.



HZ2105.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

HZ2105.

HZ2105

HZ2105\_MARKER: DS = TRIANGULATION STATION DISK

HZ2105\_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

HZ2105\_STAMPING: HORRODS 1947

HZ2105\_MARK LOGO: CGS

HZ2105\_MAGNETIC: N = NO MAGNETIC MATERIAL

HZ2105\_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

HZ2105+STABILITY: SURFACE MOTION

HZ2105\_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR

HZ2105+SATELLITE: SATELLITE OBSERVATIONS - August 26, 1997

HZ2105

HZ2105	HISTORY	- Date	Condition	Report By
HZ2105	HISTORY	- 1947	MONUMENTED	CGS
HZ2105	HISTORY	- 1947	GOOD	CGS
HZ2105	HISTORY	- 1952	MARK NOT FOUND	CGS
HZ2105	HISTORY	- 1961	GOOD	PAS
HZ2105	HISTORY	- 19931028	GOOD	NGS
HZ2105	HISTORY	- 19940105	GOOD	
HZ2105	HISTORY	- 19970826	GOOD	NGS

HZ2105

HZ2105 STATION DESCRIPTION

HZ2105

HZ2105'DESCRIBED BY COAST AND GEODETIC SURVEY 1947 (FXP)  
 HZ2105'STATION IS 8.4 MILES SOUTHWEST FROM THE JUNCTION OF STATE HIGHWAY 153  
 HZ2105'AND U.S. HIGHWAY 42 IN SLIGO VIA HIGHWAY 42, IN THE SOUTHEAST  
 HZ2105'CORNER OF A FIELD OF ASHBOURNE FARM 1, ON THE PROPERTY OWNED BY W.L.  
 HZ2105'LYONS BROWN, 65 FEET NORTH OF THE CENTERLINE OF THE HIGHWAY, 52  
 HZ2105'FEET NORTHWEST OF A RED GATE, 36 FEET WEST OF THE EAST FENCE OF THE  
 HZ2105'FIELD, AND 36 FEET NORTH OF THE SOUTH FENCE OF THE FIELD. THE  
 HZ2105'MARK IS 12 INCHES UNDERGROUND, AND THE DISK IS STAMPED HORRODS 1947.  
 HZ2105'  
 HZ2105'REFERENCE MARK NO. 1 IS 100.85 FEET SOUTHWEST OF THE STATION AND 3  
 HZ2105'FEET WEST OF A WHITE WITNESS POST. THE MARK PROJECTS 1  
 HZ2105'INCH, AND THE DISK IS STAMPED HORRODS NO 1 1947.  
 HZ2105'  
 HZ2105'REFERENCE MARK NO. 2 IS 97.82 FEET NORTH-NORTHWEST OF THE STATION AND  
 HZ2105'1 FOOT WEST OF THE EAST FENCE OF THE FIELD. THE MARK PROJECTS 1  
 HZ2105'INCH AND THE DISK IS STAMPED HORRODS NO 2 1947.  
 HZ2105'  
 HZ2105'AZIMUTH MARK IS 0.25 MILE EAST-NORTHEAST OF THE STATION, AT THE TOP  
 HZ2105'OF A BANK, 31 FEET SOUTH OF THE CENTERLINE OF THE HIGHWAY, 2 FEET  
 HZ2105'WEST OF A TELEPHONE POLE, AND 2 FEET SOUTHWEST OF A WHITE WITNESS  
 HZ2105'POST. THE MARK PROJECTS 6 INCHES, AND THE DISK IS STAMPED  
 HZ2105'HORRODS 1947.

HZ2105'

HZ2105'HEIGHT OF LIGHT ABOVE STATION MARK IS 34 METERS.

HZ2105

HZ2105 STATION RECOVERY (1947)

HZ2105

HZ2105'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1947

HZ2105'RECOVERED IN GOOD CONDITION.

HZ2105

HZ2105 STATION RECOVERY (1952)

HZ2105

HZ2105'RECOVERY NOTE BY COAST AND GEODETIC SURVEY 1952

HZ2105'STATION WAS UNDERGROUND AND NOT RECOVERED. R.M.S WERE FOUND AS

HZ2105'DESCRIBED.

HZ2105

HZ2105 STATION RECOVERY (1961)

HZ2105

HZ2105'RECOVERY NOTE BY PARK AERIAL SURVEYS INCORPORATED 1961 (EB)

HZ2105'STATION AND REFERENCE MARKS 1 AND 2 WERE FOUND AS DESCRIBED AND IN

HZ2105'GOOD CONDITION. THE OLD DESCRIPTION AND TO REACH IS ADEQUATE.

HZ2105'

HZ2105'THE AZIMUTH MARK WAS FOUND AND IN GOOD CONDITION. THE MARK HAS

HZ2105'EVIDENTLY BEEN MOVED FROM ITS ORIGINAL POSITION, BUT IS STILL IN

HZ2105'THE SAME GENERAL VICINITY. THE LOCAL REFERENCE FAILED TO CHECK THE  
 HZ2105'ORIGINAL DESCRIPTION AND THE AZIMUTH CHECK BETWEEN REFERENCE  
 HZ2105'MARKS, AND ALSO STATE PENAL FARM STACK, WAS IN ERROR OF APPROX. 0  
 HZ2105'DEG 55 MINUTE. THERE WAS ALSO EVIDENCE OF SOME GRADING HAVING  
 HZ2105'BEEN DONE IN THE VICINITY, AND A NEW FENCE WAS BUILT. A NEW  
 HZ2105'DESCRIPTION IS AS FOLLOWS -  
 HZ2105'  
 HZ2105'AZIMUTH MARK IS 58 FEET SOUTH OF THE CENTER OF U.S. HIGHWAY 42, 46  
 HZ2105'FEET EAST OF THE CENTER OF A GRAVEL DRIVE, 15 FEET SOUTHEAST OF A  
 HZ2105'BOARD FENCE AND ABOUT 5 FEET HIGHER THAN HIGHWAY. THE MARK IS FLUSH  
 HZ2105'AND THE DISK IS STAMPED HORRODS 1947.  
 HZ2105'  
 HZ2105'HEIGHT OF LIGHT ABOVE STATION MARK IS 1.7 METERS.

HZ2105  
 HZ2105 STATION RECOVERY (1993)  
 HZ2105

HZ2105'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1993  
 HZ2105'THE STATION IS LOCATED ABOUT 38.0 KM (23.60 MI) NORTHEAST OF  
 HZ2105'LOUISVILLE, 6.0 KM (3.70 MI) NORTHWEST OF LA GRANGE, AND INSIDE OF A  
 HZ2105'FENCE LINE ON THE NORTH SIDE OF U.S. HIGHWAY 42. OWNERSHIP--DR.  
 HZ2105'CHARLE HUBER, 3801 GREEN HAVEN LANE, LA GRANGE KY. PHONE  
 HZ2105'502-222-1935.

HZ2105'TO REACH THE STATION FROM THE JUNCTION OF INTERSTATE 71 AND STATE  
 HZ2105'HIGHWAY 53 IN LA GRANGE, GO NORTH ON HIGHWAY 53 FOR 4.6 MI (7.4 KM)  
 HZ2105'TO U.S. HIGHWAY 42. TURN LEFT AND GO WEST 1.6 MI (2.6 KM) TO THE  
 HZ2105'STATION ON THE RIGHT.

HZ2105'THE STATION IS RECESSED ABOUT 25 CM UNDER GROUND. LOCATED 19.7 M  
 HZ2105'(64.6 FT) NORTHWEST FROM THE CENTERLINE OF U.S. HIGHWAY 42, 14.6 M  
 HZ2105'(47.9 FT) WEST FROM UTILITY PLOE NO. 45, 12.6 M (41.3 FT)  
 HZ2105'SOUTH-SOUTHWEST FROM A Y-JUNCTION OF TWO FENCES, AND 3.3 M (10.8 FT)  
 HZ2105'WEST FROM A FENCE LINE.

HZ2105  
 HZ2105 STATION RECOVERY (1994)  
 HZ2105

HZ2105'RECOVERED 1994  
 HZ2105'RECOVERED IN GOOD CONDITION.

HZ2105  
 HZ2105 STATION RECOVERY (1997)  
 HZ2105

HZ2105'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1997 (CSM)  
 HZ2105'RECOVERED AS DESCRIBED.

1 National Geodetic Survey, Retrieval Date = DECEMBER 18, 2001

HZ1576 \*\*\*\*\*

HZ1576 DESIGNATION - **H 323**  
 HZ1576 PID - HZ1576  
 HZ1576 STATE/COUNTY- IN/FLOYD  
 HZ1576 USGS QUAD - LANESVILLE (1993)

HZ1576  
 HZ1576 \*CURRENT SURVEY CONTROL

HZ1576*	NAD 83(1986)	-	38 11 39.	(N)	085 53 23.	(W)	SCALED
HZ1576*	NAVD 88	-	130.998	(meters)	429.78	(feet)	ADJUSTED

HZ1576	GEOID HEIGHT-	-33.17	(meters)	GEOID99
HZ1576	DYNAMIC HT -	130.909	(meters)	429.49 (feet) COMP
HZ1576	MODELED GRAV-	979,948.6	(mgal)	NAVD 88

HZ1576 VERT ORDER - FIRST CLASS II

HZ1576.The horizontal coordinates were scaled from a topographic map and have  
 HZ1576.an estimated accuracy of +/- 6 seconds.

HZ1576.The orthometric height was determined by differential leveling  
 HZ1576.and adjusted by the National Geodetic Survey in June 1991.

HZ1576.The geoid height was determined by GEOID99.

HZ1576.The dynamic height is computed by dividing the NAVD 88

HZ1576.geopotential number by the normal gravity value computed on the  
 HZ1576.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45  
 HZ1576.degrees latitude (g = 980.6199 gals.).  
 HZ1576  
 HZ1576.The modeled gravity was interpolated from observed gravity values.  
 HZ1576  
 HZ1576;  

		North	East	Units	Estimated Accuracy
HZ1576;SPC IN E	-	327,070.	80,460.	MT	(+/- 180 meters Scaled)

 HZ1576  
 HZ1576 SUPERSEDED SURVEY CONTROL  
 HZ1576  

HZ1576	NGVD 29	-	131.135	(m)	430.23	(f)	ADJ UNCH	1 2
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 HZ1576

HZ1576.Superseded values are not recommended for survey control.  
 HZ1576.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.  
 HZ1576.

HZ1576  
 HZ1576\_MARKER: DB = BENCH MARK DISK  
 HZ1576\_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT  
 HZ1576\_STAMPING: H 323 1965  
 HZ1576\_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO  
 HZ1576+STABILITY: SURFACE MOTION

HZ1576	HISTORY	-	Date	Condition	Report By
HZ1576	HISTORY	-	1965	MONUMENTED	CGS

HZ1576 STATION DESCRIPTION

HZ1576  
 HZ1576'DESCRIBED BY COAST AND GEODETIC SURVEY 1965  
 HZ1576'7.3 MI S FROM NEW ALBANY.  
 HZ1576'ABOUT 1.05 MILES WEST ALONG THE SOURR FROM THE  
 HZ1576'STATION AT NEW ALBANY, THENCE 6.25 MILES SOUTH ALONG STATE  
 HZ1576'HIGHWAY 111, IN SECTION 6, T 4 S, R 6 E, 30 FEET SOUTHEAST OF  
 HZ1576'THE CENTER LINE OF THE HIGHWAY 33 FEET SOUTHWEST OF THE CENTER  
 HZ1576'LINE OF A PRIVATE DRIVEWAY LEADING TO PLEASURE RIDGE CAMP, 50  
 HZ1576'FEET NORTHEAST OF THE CENTER LINE OF A PRIVATE DRIVEWAY LEADING  
 HZ1576'TO A CONCRETE BLOCK HOUSE, 1 1/2 FEET SOUTHWEST OF A POWER POLE  
 HZ1576'BEARING A TRANSFORMER, 1.4 FEET NORTHEAST OF A METAL WITNESS POST,  
 HZ1576'ABOUT 1 FOOT ABOVE THE LEVEL OF THE HIGHWAY, AND SET IN THE TOP  
 HZ1576'OF A CONCRETE POST PROJECTING 8 INCHES.

1 National Geodetic Survey, Retrieval Date = DECEMBER 18, 2001

HZ1456 \*\*\*\*\*

HZ1456 DESIGNATION - **BOWMAN RM 2**  
 HZ1456 PID - HZ1456  
 HZ1456 STATE/COUNTY- KY/JEFFERSON  
 HZ1456 USGS QUAD - LOUISVILLE EAST (1994)

HZ1456  
 HZ1456 \*CURRENT SURVEY CONTROL  
 HZ1456  

HZ1456*	NAD 83(1986)	-	38 13 23.	(N)	085 39 55.	(W)	SCALED
HZ1456*	NAVD 88	-	163.820	(meters)	537.47	(feet)	ADJUSTED

 HZ1456  

HZ1456	GEOID HEIGHT-	-33.31	(meters)			GEOID99
HZ1456	DYNAMIC HT -	163.709	(meters)	537.10	(feet)	COMP
HZ1456	MODELED GRAV-	979,948.2	(mgal)			NAVD 88

 HZ1456

HZ1456 VERT ORDER - FIRST CLASS II  
 HZ1456

HZ1456.This mark is at Louisville (BOWMAN) Airport (LOU)  
 HZ1456  
 HZ1456.The horizontal coordinates were scaled from a topographic map and have  
 HZ1456.an estimated accuracy of +/- 6 seconds.  
 HZ1456

HZ1456.The orthometric height was determined by differential leveling  
 HZ1456.and adjusted by the National Geodetic Survey in June 1991.  
 HZ1456

HZ1456.The geoid height was determined by GEOID99.  
 HZ1456





HZ1863

HZ1863

STATION DESCRIPTION

HZ1863

HZ1863'DESCRIBED BY NATIONAL GEODETIC SURVEY 1977

HZ1863'3.2 KM (2.0 MI) SOUTH FROM ST MATTHEWS.

HZ1863'AT BOWMAN FLYING FIELD, JUST EAST OF THE ADMINISTRATION BUILDING, 14.6

HZ1863'METERS (48.0 FT) EAST OF A WOVEN WIRE FENCE, 29.0 METERS (95.0 FT)

HZ1863'SOUTHWEST OF THE NORTHWEST CORNER OF AN AIRPLANE HANGAR, 39.3 METERS

HZ1863'(129.0 FT) NORTHWEST OF THE SOUTHWEST CORNER OF THE HANGAR, AND

HZ1863'SURROUNDED BY PAVEMENT OF PAVED TAXI AND PLANE PARKING AREA.

HZ1863

HZ1863

STATION RECOVERY (1977)

HZ1863

HZ1863'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1977 (CLN)

HZ1863'THE STATION MARK AND REFERENCE MARKS 1 AND 2 WERE FOUND IN GOOD

HZ1863'CONDITION. THE DISTANCE AND DIRECTION TO REFERENCE MARK 1 CHECKED.

HZ1863'THE DISTANCE TO REFERENCE MARK 2 CHECKED BUT A DIRECTION COULD NOT BE

HZ1863'MADE DUE TO PLANE PARKED AT THE SITE. REFERENCE MARK 3 WAS SET TO

HZ1863'HELP IN FUTURE RECOVERY OF THE STATION. THE AZIMUTH MARK WAS NOT

HZ1863'SEARCHED FOR DUE TO IT BEING ON THE AIRFIELD. THE STATION MARK WAS

HZ1863'FOUND TO BE BELOW PAVEMENT AND A NEW MONUMENT WAS SET ON TOP OF IT IN

HZ1863'ORDER TO BRING THE MARK TO PAVEMENT LEVEL. A NEW DESCRIPTION FOLLOWS.

HZ1863'THE STATION IS LOCATED AT THE BOWMAN FLYING FIELD ABOUT 220 FT (67.1

HZ1863'M) EAST OF THE ADMINISTRATION BUILDING 48 FT (14.6 M) EAST OF A WOVEN

HZ1863'WIRE FENCE 95 FT (29.0 M) SOUTHWEST OF THE NORTHWEST CORNER OF

HZ1863'AIRPLANE HANGAR 129 FT (39.3 M) NORTHWEST OF THE SOUTHWEST CORNER OF

HZ1863'THE HANGAR. THE MONUMENT IS SET FLUSH WITH THE PAVEMENT OF AIRPLANE

HZ1863'TAXI AND PARKING AREA. THE DISK IS STAMPED--BOWMAN 1935 1977--.

HZ1863'REFERENCE MARK 1 IS A STANDARD DISK SET IN A DRILL HOLE IN THE CENTER

HZ1863'OF CONCRETE SIDEWALK 59 FT (18.0 M) NORTHWEST OF ENTRANCE TO OFFICES

HZ1863'OF HANGAR AND 34 FT (10.4 M) NORTH OF THE NORTHWEST CORNER OF THE

HZ1863'HANGAR. REFERENCE MARK 2 IS A STANDARD DISK SET IN A DRILL HOLE IN THE

HZ1863'CENTER OF CONCRETE SIDEWALK 15 FT (4.6 M) EAST AND DIRECTLY ON LINE

HZ1863'WITH GATE 39 FT (11.9 M) SOUTHEAST OF A FENCE CORNER. THE DISK IS

HZ1863'STAMPED --BOWMANM 1935 NO 2 1977--. REFERENCE MARK 3 IS A STANDARD

HZ1863'PRE-CAST ALUMINUM MONUMENT FLUSH WITH THE GROUND, STAMPED---BOWMAN

HZ1863'1935 NO 3 1977---, 6 INCHES EAST OF FENCE 11 FT (3.4 M) NORTH OF NORTH

HZ1863'EDGE OF SIDEWALK AND 46 FT (14.0 M) SOUTH OF THE CENTER OF GATE TO

HZ1863'ADMINISTRATION BUILDING.

HZ1863

HZ1863

STATION RECOVERY (1978)

HZ1863

HZ1863'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1978 (JWB)

HZ1863'THE STATION WAS RECOVERED BUT THE DISK HAS EVIDENTLY BEEN RESET AS

HZ1863'IT IS A STANDARD NGS DISK STAMPED BOWMAN 1935 - 1977. REFERENCE

HZ1863'MARKS 1 AND 2 WERE RECOVERED AND REFERENCE MEASUREMENTS TO THE

HZ1863'STATION CHECKED 0.01 FT. AND 0.06 FT. ( BOWMAN 1935 - 1977 TO RM 1

HZ1863'120.14 FT. BOWMAN 1935 - 1977 TO RM 2 59.13 FT.)

HZ1863'THE AZIMUTH MARK, BOWMAN 1935 RESET 1961 WAS RECOVERED AS

HZ1863'DESCRIBED.

HZ1863'

HZ1863'DUE TO CHANGES AROUND THE STATION A NEW DESCRIPTION IS AS FOLLOWS--

HZ1863'THE STATION IS LOCATED IN THE APPROXIMATE CENTER OF AIRCRAFT RAMP

HZ1863'AREA WEST OF THE EAST HANGAR, 95.4 SOUTHWEST OF THE NORTHEAST

HZ1863'CORNER OF THE EAST HANGAR (CENTRAL AMERICAN AIRWAYS FLYING

HZ1863'SERVICE), 97.5 FEET SOUTHEAST OF FENCE CORNER OF WOVEN STEEL

HZ1863'FENCE AROUND OLD ADMINISTRATION BUILDING AND 47.9 FEET EAST OF

HZ1863'WOVEN STEEL FENCE ON EAST SIDE OF OLD ADMINISTRATION BUILDING.

HZ1863'

HZ1863'AIRLINE DISTANCE AND DIRECTION FROM NEAREST TOWN--5 MILE

HZ1863'EAST-SOUTHEAST OF LOUISVILLE.

HZ1863

HZ1863

STATION RECOVERY (1982)

HZ1863

HZ1863'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1982 (DAH)

HZ1863'RECOVERED IN GOOD CONDITION AS DESCRIBED IN THE 1978 NOTE BY J.W.

HZ1863'BARTON. REFERENCE MARKS 1 AND 2 AND THE 1961 AZIMUTH MARK WERE ALSO

HZ1863'RECOVERED.

HZ1863'

HZ1863' AIRLINE DISTANCE AND DIRECTION FROM NEAREST TOWN--AT BOWMAN FIELD,  
HZ1863' SOUTHEAST PART OF LOUISVILLE.

HZ1863

STATION RECOVERY (1996)

HZ1863

HZ1863' RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1996 (AJL)

HZ1863' THE STATION IS LOCATED IN THE EAST PART OF LOUISVILLE KENTUCKY, AT THE  
HZ1863' BOWMAN FIELD AIRPORT AND IN THE MIDDLE OF A PAVED AIRCRAFT PARKING  
HZ1863' APRON LOCATED IN BETWEEN THE OLD ADMINISTRATION BUILDING AND THE  
HZ1863' CENTRAL AMERICAN AIRWAYS HANGER ON THE SOUTHWEST SIDE OF THE AIRPORT.  
HZ1863' OWNERSHIP--REGIONAL AIRPORT AUTHORITY, PO BOX 9129, LOUISVILLE, KY  
HZ1863' 40209-0129. PHONE (502) 368-6524. CONTACT PAUL ABLE ENGINEERING  
HZ1863' SECTION EXT 135. THIS STATION IS IN A UNCONTROLLED AREA AT THE  
HZ1863' AIRPORT. TO REACH THE STATION FROM THE JUNCTION OF INTERSTATE HIGHWAY  
HZ1863' 264 AND STATE HIGHWAY 55 (TAYLORSVILLE ROAD, EXIT 17) ON THE EAST SIDE  
HZ1863' OF LOUISVILLE, GO NORTHWEST ON TAYLORSVILLE ROAD FOR 0.65 MI (1.05 KM)  
HZ1863' TO A PAVED ROAD RIGHT, TURN RIGHT THEN RIGHT AGAIN AND GO SOUTHEAST ON  
HZ1863' A PAVED ROAD/PARKING LOT FOR 0.1 MI (0.2 KM) TO A GATE, PASS THROUGH  
HZ1863' GATE TURN LEFT AND GO NORTHEAST ON THE APRON FOR 0.05 MI (0.08 KM) TO  
HZ1863' THE STATION. THE STATION IS FLUSH WITH THE PAVEMENT AND THE CONCRETE  
HZ1863' POST IS VISIBLE, 95.4 FT (29.1 M) SOUTHWEST OF THE NORTHWEST CORNER OF  
HZ1863' THE EAST HANGER, 97.5 FT (29.7 M) SOUTHEAST OF THE CORNER OF A CHAIN  
HZ1863' LINK FENCE AND 47.9 FT (14.6 M) EAST OF A CHAIN LINK FENCE.

1 National Geodetic Survey, Retrieval Date = DECEMBER 18, 2001

GZ2382 \*\*\*\*\*

GZ2382 DESIGNATION - 31 K

GZ2382 PID - GZ2382

GZ2382 STATE/COUNTY- KY/BULLITT

GZ2382 USGS QUAD - SHEPHERDSVILLE (1991)

GZ2382

\*CURRENT SURVEY CONTROL

GZ2382

GZ2382\* NAD 83(1986) - 37 59 17. (N) 085 42 58. (W) SCALED

GZ2382\* NAVD 88 - 136.865 (meters) 449.03 (feet) ADJUSTED

GZ2382

GZ2382 GEOID HEIGHT- -33.23 (meters) GEOID99

GZ2382 DYNAMIC HT - 136.768 (meters) 448.71 (feet) COMP

GZ2382 MODELED GRAV- 979,918.9 (mgal) NAVD 88

GZ2382

GZ2382 VERT ORDER - SECOND CLASS 0

GZ2382

GZ2382. The horizontal coordinates were scaled from a topographic map and have  
GZ2382. an estimated accuracy of +/- 6 seconds.

GZ2382

GZ2382. The orthometric height was determined by differential leveling  
GZ2382. and adjusted by the National Geodetic Survey in June 1991.

GZ2382

GZ2382. The geoid height was determined by GEOID99.

GZ2382

GZ2382. The dynamic height is computed by dividing the NAVD 88

GZ2382. geopotential number by the normal gravity value computed on the

GZ2382. Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

GZ2382. degrees latitude (g = 980.6199 gals.).

GZ2382

GZ2382. The modeled gravity was interpolated from observed gravity values.

GZ2382

GZ2382; North East Units Estimated Accuracy

GZ2382; SPC KY N - 55,200. 371,210. MT (+/- 180 meters Scaled)

GZ2382

SUPERSEDED SURVEY CONTROL

GZ2382

GZ2382 NGVD 29 - 137.012 (m) 449.51 (f) ADJ UNCH 2 0

GZ2382

GZ2382. Superseded values are not recommended for survey control.

GZ2382. NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

GZ2382.

GZ2382

GZ2382\_MARKER: DD = SURVEY DISK  
 GZ2382\_SETTING: 36 = BUILDING  
 GZ2382\_STAMPING: 31 K 1928  
 GZ2382\_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

GZ2382 HISTORY - Date Condition Report By  
 GZ2382 HISTORY - 1928 MONUMENTED USGS  
 GZ2382 HISTORY - 1942 GOOD NGS  
 GZ2382 HISTORY - 1983 GOOD KYDT

GZ2382 STATION DESCRIPTION

GZ2382'DESCRIBED BY NATIONAL GEODETIC SURVEY 1942  
 GZ2382'AT SHEPHERDSVILLE.  
 GZ2382'AT SHEPHERDSVILLE, BULLITT COUNTY, AT THE INTERSECTION OF  
 GZ2382'THIRD AND MAIN STREETS, 93 FEET EAST OF THE CENTERLINE OF MAIN  
 GZ2382'STREET, 89 FEET SOUTH OF THE CENTERLINE OF THIRD STREET, AT  
 GZ2382'THE COURTHOUSE, IN THE WEST WALL, 2.4 FEET SOUTH OF THE  
 GZ2382'NORTHWEST CORNER, AND 2.8 FEET ABOVE THE GROUND. A UNITED  
 GZ2382'STATES GEOLOGICAL SURVEY STANDARD DISK, STAMPED 31 K 1928 AND  
 GZ2382'SET VERTICALLY.

GZ2382 STATION RECOVERY (1983)

GZ2382'RECOVERY NOTE BY KENTUCKY DEPARTMENT OF TRANSPORTATION 1983  
 GZ2382'RECOVERED IN GOOD CONDITION.

1 National Geodetic Survey, Retrieval Date = DECEMBER 18, 2001

HZ1383 \*\*\*\*\*  
 HZ1383 DESIGNATION - **J 334**  
 HZ1383 PID - HZ1383  
 HZ1383 STATE/COUNTY- KY/HARDIN  
 HZ1383 USGS QUAD - KOSMOSDALE (1994)

HZ1383 \*CURRENT SURVEY CONTROL

HZ1383*	NAD 83(1986)	-	38 00 02.	(N)	085 56 35.	(W)	SCALED
HZ1383*	NAVD 88	-	133.659	(meters)	438.51	(feet)	ADJUSTED
HZ1383	GEOID HEIGHT-		-32.97	(meters)			GEOID99
HZ1383	DYNAMIC HT -		133.566	(meters)	438.21	(feet)	COMP
HZ1383	MODELED GRAV-		979,928.1	(mgal)			NAVD 88

HZ1383 VERT ORDER - FIRST CLASS II

HZ1383.The horizontal coordinates were scaled from a topographic map and have  
 HZ1383.an estimated accuracy of +/- 6 seconds.

HZ1383.The orthometric height was determined by differential leveling  
 HZ1383.and adjusted by the National Geodetic Survey in June 1991.

HZ1383.The geoid height was determined by GEOID99.

HZ1383.The dynamic height is computed by dividing the NAVD 88  
 HZ1383.geopotential number by the normal gravity value computed on the  
 HZ1383.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45  
 HZ1383.degrees latitude (g = 980.6199 gals.).

HZ1383.The modeled gravity was interpolated from observed gravity values.

HZ1383;	North	East	Units	Estimated Accuracy
HZ1383;SPC KY S	- 685,040.	483,040.	MT	(+/- 180 meters Scaled)

HZ1383 SUPERSEDED SURVEY CONTROL

HZ1383 NGVD 29 - 133.789 (m) 438.94 (f) ADJ UNCH 1 2

HZ1383.Superseded values are not recommended for survey control.  
 HZ1383.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

HZ1383.

HZ1383

HZ1383\_MARKER: DB = BENCH MARK DISK

HZ1383\_SETTING: 36 = ABUTMENT

HZ1383\_STAMPING: J 334 1953

HZ1383\_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL

HZ1383

HZ1383	HISTORY	- Date	Condition	Report By
HZ1383	HISTORY	- 1953	MONUMENTED	CGS

HZ1383

HZ1383 STATION DESCRIPTION

HZ1383

HZ1383'DESCRIBED BY COAST AND GEODETIC SURVEY 1953

HZ1383'AT WEST POINT.

HZ1383'AT WEST POINT, SET IN THE TOP OF THE WEST END OF THE BRIDGE SEAT

HZ1383'OF SOUTH ABUTMENT OF U.S. HIGHWAY 31W BRIDGE OVER SALT RIVER,

HZ1383'134 FEET EAST OF EAST RAIL OF ILLINOIS CENTRAL RAILROAD.

\*\*\* retrieval complete.

Elapsed Time = 00:00:52

\*\*\*ITRF 97\*\*\*  
LOUISVILLE 1 (LOU1), KENTUCKY

Retrieved from NGS DataBase on 09/11/00 at 09:12:45.

Antenna Reference Point (ARP): **LOUISVILLE 1 CORS ARP**

-----  
PID = AF9661

ITRF97 POSITION (EPOCH 1997.0)

Computed in July 2000 using every third day of data through 1999.

X = 412408.598 m latitude = 38 00 37.06321 N  
Y = -5014947.222 m longitude = 085 17 55.71509 W  
Z = 3906461.909 m ellipsoid height = 190.818 m

ITRF97 VELOCITY

Computed in July 2000 using every third day of data through 1999.

VX = -0.0140 m/yr northward = -0.0007 m/yr  
VY = -0.0016 m/yr eastward = -0.0141 m/yr  
VZ = -0.0006 m/yr upward = 0.0000 m/yr

NAD\_83 POSITION (EPOCH 1997.0)

Transformed from ITRF97 (epoch 1997.0) position in July 2000.

X = 412409.126 m latitude = 38 00 37.03742 N  
Y = -5014948.657 m longitude = 085 17 55.69834 W  
Z = 3906462.051 m ellipsoid height = 192.067 m

NAD\_83 VELOCITY

Transformed from ITRF97 velocity in July 2000.

VX = 0.0017 m/yr northward = 0.0008 m/yr  
VY = 0.0006 m/yr eastward = 0.0017 m/yr  
VZ = 0.0006 m/yr upward = 0.0000 m/yr

L1 Phase Center of the current GPS antenna: LOUISVILLE 1 CORS L1 PC C

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The Geodetic III 'Whopper' (USCG) +radome antenna

(Antenna Code = ASH700829.A1 SNOW) was installed on 02/12/98.

The L2 phase center is 0.032 m below the L1 phase center.

PID = AE7137

ITRF97 POSITION (EPOCH 1997.0)

Computed in July 2000 using every third day of data through 1999.

X = 412408.605 m latitude = 38 00 37.06319 N  
Y = -5014947.295 m longitude = 085 17 55.71508 W  
Z = 3906461.965 m ellipsoid height = 190.910 m

The ITRF97 VELOCITY of the L1 PC is the same as that for the ARP.

NAD\_83 POSITION (EPOCH 1997.0)

Transformed from ITRF97 (epoch 1997.0) position in July 2000.

X = 412409.133 m latitude = 38 00 37.03740 N  
Y = -5014948.730 m longitude = 085 17 55.69832 W  
Z = 3906462.107 m ellipsoid height = 192.159 m

The NAD\_83 VELOCITY of the L1 PC is the same as that for the ARP.

\* Latitude, longitude and ellipsoid height are computed from their corresponding cartesian coordinates using dimensions for the GRS 80 ellipsoid: semi-major axis = 6,378,137.0 meters  
flattening = 1/298.257222101...

- \* WARNING: Mixing of antenna types can lead to errors of up to 10 cm. in height unless antenna-phase-center variation is properly modeled.
  
- \* For additional information about the interpretation and/or derivation of these positions and velocities, consult <http://www.ngs.noaa.gov/CORS/Derivation.html>. For additional information on the relation of the GPS antenna to other relevant points at the site and on GPS equipment, consult the link <ftp://www.ngs.noaa.gov/cors/.html/lou1.log.txt>
  
- \* The NAD\_83 position & velocity were revised in July 2000.

DATABASE = Sybase ,PROGRAM = datasheet, VERSION = 6.58

1 National Geodetic Survey, Retrieval Date = FEBRUARY 6, 2002

HZ1504 \*\*\*\*\*

HZ1504 DESIGNATION - **X 349**  
 HZ1504 PID - HZ1504  
 HZ1504 STATE/COUNTY- KY/JEFFERSON  
 HZ1504 USGS QUAD - JEFFERSONVILLE (1993)

HZ1504 \*CURRENT SURVEY CONTROL

HZ1504*	NAD 83(1986)-	38 17 23.	(N)	085 40 55.	(W)	SCALED
HZ1504*	NAVD 88	-	132.211 (meters)	433.76	(feet)	ADJUSTED
HZ1504	GEOID HEIGHT-	-33.36	(meters)			GEOID99
HZ1504	DYNAMIC HT -	132.122	(meters)	433.47	(feet)	COMP
HZ1504	MODELED GRAV-	979,954.8	(mgal)			NAVD 88

HZ1504 VERT ORDER - FIRST CLASS II

HZ1504.The horizontal coordinates were scaled from a topographic map and have  
 HZ1504.an estimated accuracy of +/- 6 seconds.

HZ1504.The orthometric height was determined by differential leveling  
 HZ1504.and adjusted by the National Geodetic Survey in June 1991.

HZ1504.The geoid height was determined by GEOID99.

HZ1504.The dynamic height is computed by dividing the NAVD 88  
 HZ1504.geopotential number by the normal gravity value computed on the  
 HZ1504.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45  
 HZ1504.degrees latitude (g = 980.6199 gals.).

HZ1504.The modeled gravity was interpolated from observed gravity values.

	North	East	Units	Estimated Accuracy
HZ1504; SPC KY1Z	- 1,217,130.	1,505,950.	MT	(+/- 180 meters Scaled)

HZ1504 SUPERSEDED SURVEY CONTROL

HZ1504	NGVD 29	-	132.364 (m)	434.26	(f) ADJ UNCH	1 2
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HZ1504.Superseded values are not recommended for survey control.  
 HZ1504.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

HZ1504  
 HZ1504\_MARKER: DB = BENCH MARK DISK  
 HZ1504\_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT  
 HZ1504\_STAMPING: X349 1954  
 HZ1504\_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO  
 HZ1504+STABILITY: SURFACE MOTION

HZ1504	HISTORY	- Date	Condition	Report By
HZ1504	HISTORY	- 1954	MONUMENTED	CGS
HZ1504	HISTORY	- 1960	GOOD	PAS
HZ1504	HISTORY	- 1961	GOOD	NGS
HZ1504	HISTORY	- 1981	GOOD	KYDT

HZ1504 STATION DESCRIPTION

HZ1504'DESCRIBED BY PARK AERIAL SURVEYS INCORPORATED 1960

HZ1504'4.6 MI NE FROM LOUISVILLE.  
HZ1504'4.55 MILES NORTHEAST ALONG RIVER ROAD FROM MUNICIPAL BRIDGE OVER  
HZ1504'OHIO RIVER AND RIVER ROAD AT LOUISVILLE, 4.35 MILES SOUTHWEST  
HZ1504'OF MASONIC BUILDING AT HARRODS CREEK, 29 1/2 FEET SOUTHEAST  
HZ1504'OF CENTERLINE OF ROAD, 126 FEET NORTHEAST OF CENTERLINE OF INDIAN  
HZ1504'HILL ROAD, 15 FEET EAST OF NORTHEAST END OF SOUTHEAST CONCRETE  
HZ1504'HEADWALL OF AN 18-INCH PIPE CULVERT UNDER RIVER ROAD, 12 FEET  
HZ1504'SOUTH-SOUTHWEST OF TELEPHONE CABLE POLE NO. 78, 11 FEET  
HZ1504'WEST-SOUTHWEST OF A 48-INCH SYCAMORE TREE WHICH IS LOCATED IN  
HZ1504'THE WEST CORNER OF GENERAL DRIVERS UNION PARK AND CLUB GROUNDS,  
HZ1504'9 FEET SOUTH-SOUTHWEST OF WEST STEEL FENCE CORNER, 2 FEET  
HZ1504'NORTHWEST OF A WHITE WOODEN WITNESS POST, ABOUT LEVEL WITH ROAD  
HZ1504'AND SET IN THE TOP OF A CONCRETE POST PROJECTING 3 INCHES.

HZ1504

HZ1504

STATION RECOVERY (1961)

HZ1504

HZ1504'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1961

HZ1504'RECOVERED IN GOOD CONDITION.

HZ1504

HZ1504

STATION RECOVERY (1981)

HZ1504

HZ1504'RECOVERY NOTE BY KENTUCKY DEPARTMENT OF TRANSPORTATION 1981

HZ1504'RECOVERED IN GOOD CONDITION.

\*\*\* retrieval complete.

Elapsed Time = 00:00:01