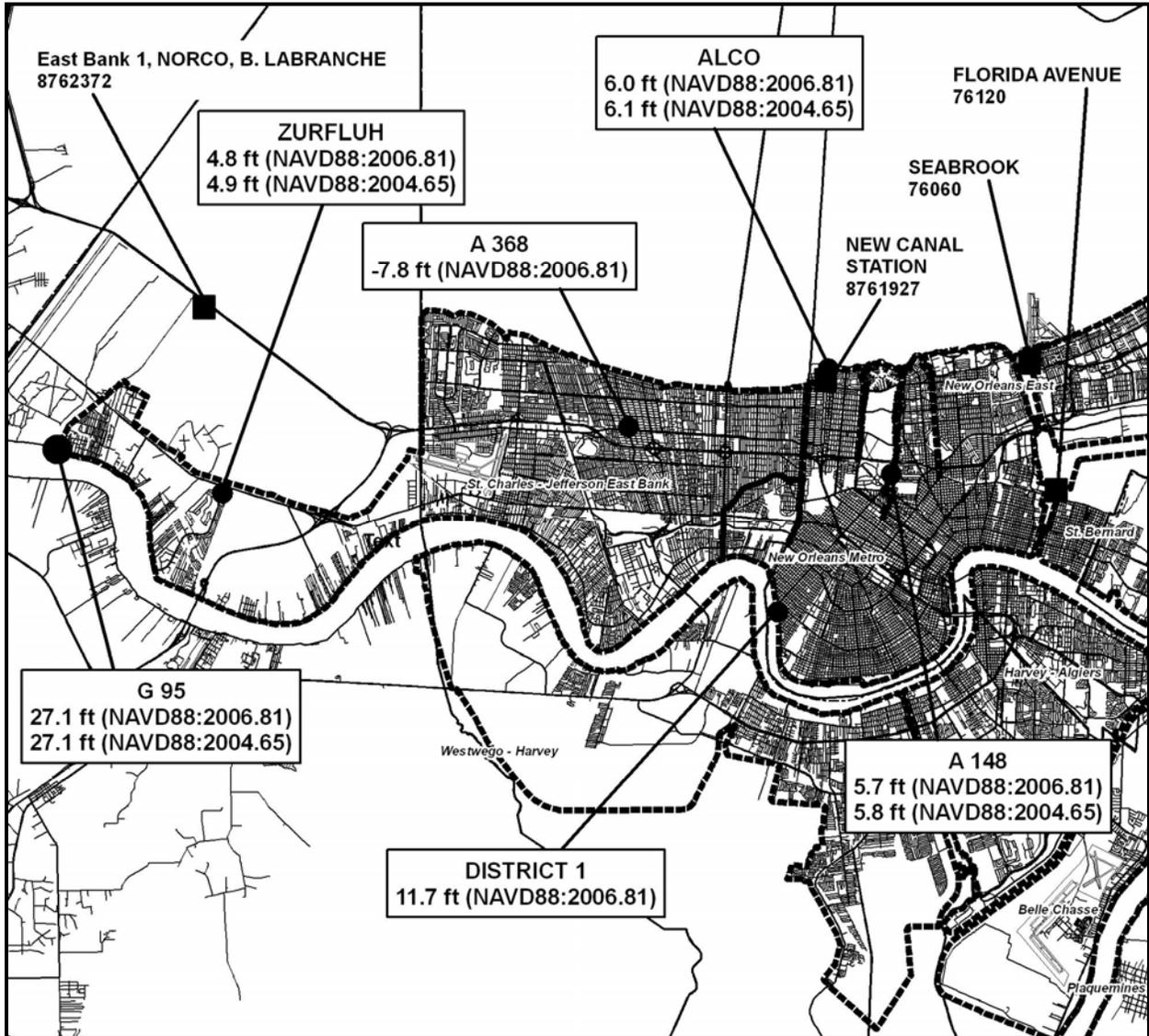


Saint Charles - Jefferson - Orleans Metro Polder Vertical Datum Report



Original Date: 1 April 2010
Expiration Date: 31 December 2010

USACE, New Orleans District
CEMVN-ED-SS

Purpose:

This Polder Vertical Datum Report contains detailed information about six National Spatial Reference System (NSRS) "Permanent Bench Marks" established by the National Geodetic Survey (NGS). For USACE-MVN projects that lie within the extent of the subject polder, these "Permanent Bench Marks" are approved for use by USACE-MVN-ED as "Vertical Project Control" for all designs, plans and specifications. This report also contains information (when available) on tide gauges within or near the Polder and their associated geodetic/tidal datum relationships.

Expiration Date:

Due to regional subsidence and global sea-level rise, the published elevations of the referenced benchmarks and the published tidal datum values at the referenced gauges (as well as the geodetic/tidal datum relationships computed therefrom) are time-dependant and subject to change. Therefore, the information contained in this report shall be updated on a regular basis (every year) and/or as new information becomes available.

Section 1: Saint Charles - Jefferson - Orleans Metro, Polder Bench Marks

The six National Spatial Reference System (NSRS) Permanent Bench Marks established by the National Geodetic Survey (NGS) and designated for use in this Polder are as follows:

DESIGNATION: ZURFLUH
PID: DH3814

STATE/COUNTY: LA/ST CHARLES
USGS QUAD: LULING (1992)
LAT/LON: N 29°59'04.11825" W 090°21'40.60455" NAD83(2007)
NORTH/EAST: N 541,152.63' E 3,588,563.72' SPC LA S (US feet)
ELEVATION: 4.8 feet NAVD88(2006.81)
ELEVATION: 4.9 feet NAVD88(2004.65)
MARKER: HORIZONTAL CONTROL DISK
STAMPING: ZURFLUH 2003

DESCRIPTION: THE STATION IS LOCATED ABOUT 4 MILES NORTHWEST OF ST. ROSE, 3-1/2 MILES SOUTHEAST OF NORCO, AT THE DESTRAHAN NO. 2 PUMP STATION, AT 2998 ORMOND BOULEVARD. TO REACH THE STATION FROM THE INTERSECTION OF U.S. HIGHWAY 61 AND ORMOND BOULEVARD, GO SOUTH ON ORMOND FOR 0.15 MILE TO A GRAVEL ROAD ON THE LEFT, JUST PAST SOME RAILROAD TRACKS. TURN LEFT AND GO SOUTHEASTERLY ON GRAVELED ROAD FOR 0.2 MILE TO THE MARK ON THE RIGHT, AT THE NORTHEAST END OF A CONCRETE DRIVE TO THE PUMP STATION. THE STATION IS 69.5 FEET SOUTH-SOUTHEAST FROM A POWER POLE WITH A LIGHT, 49.0 FEET NORTHWEST FROM THE NORTHWEST CORNER OF THE PUMP STATION BUILDING, 3.0 FEET NORTH FROM THE NORTHERN MOST GUARD RAIL SUPPORT POST ON THE WEST SIDE OF THE DRIVE, AND 0.4 FOOT EAST FROM THE WEST EDGE OF THE PIER. THE DISK IS SET IN A DRILL HOLE ATOP A 2-FOOT SQUARE CONCRETE PILE DRIVEN TO A DEPTH OF 71 FEET.

DESIGNATION: G 95
PID: BJ0710

STATE/COUNTY: LA/ST CHARLES
USGS QUAD: LAPLACE (1992)
LAT/LON: N 30°00'02.35266" W 090°25'44.92711" NAD83(2007)
NORTH/EAST: N 546,859.21' E 3,567,032.49' SPC LA S (US feet)
ELEVATION: 27.1 feet NAVD88(2006.81)
ELEVATION: 27.1 feet NAVD88(2004.65)
MARKER: BENCH MARK DISK
STAMPING: G 95 1938 PLMS 53 03 5357 75

DESCRIPTION: TO REACH THE STATION FROM THE INTERSECTION OF US HIGHWAY 61 AND STATE HIGHWAY 48 IN NORCO GO SOUTH FOR 1.3 MI ON THE STATE HIGHWAY TO THE INTERSECTION OF PARISH HIGHWAY 12, TURN RIGHT AND GO WESTERLY ON THE PARISH HIGHWAY FOR 1.0 MI TO THE BONNET CARRE SPILLWAY WEIR ON THE LEFT AND THE STATION ON THE LEFT SET IN TOP OF AN NEAR THE CENTER OF THE EAST CONCRETE ABUTMENT OF THE WEIR. THE STATION IS LOCATED 32.6 M WEST OF THE CENTER OF THE HIGHWAY, 4.0 M NORTH FROM THE SOUTH END OF THE ABUTMENT, 2.4 M SOUTHWEST OF A DEPARTMENT OF INTERIOR HISTORICAL MARKER, 0.8 M SOUTH-SOUTHEAST OF THE CENTER ONE OF THREE GATE POSTS, 0.2 M EAST FROM A LARGE METAL GATE, AND 0.1 M BELOW THE LEVEL OF THE CONCRETE DRIVE LEADING TO THE WEIR. NOTE--A KEY TO THE LARGE METAL GATE NEXT TO STATION CAN BE ACQUIRED FROM THE USCE OFFICE LOCATED ACROSS THE STREET FROM THE STATION, THE GATE SHOULD BE COMPLETELY OPENED DURING DATA COLLECTION TO MINIMIZE GPS SIGNAL MULTIPATH. RECOVERED AS DESCRIBED. STAMPING HAS BEEN ADDED TO INDICATE USACE PONCHARTRAIN LEVEE MARKER SYSTEM, PLMS 53, AND STATIONING.

DESIGNATION: A 368

PID: BJ3243

STATE/COUNTY: LA/JEFFERSON

USGS QUAD: INDIAN BEACH (1992)

LAT/LON: N 30°00'22.10231" W 090°11'41.67668" NAD83(2007)

NORTH/EAST: N 549,514.98' E 3,641,152.47' SPC LA S (US feet)

ELEVATION: -7.8 feet NAVD88(2006.81)

MARKER: FLANGE-ENCASED ROD

STAMPING: A 368 1984

DESCRIPTION: IN METAIRIE, AT THE INTERSECTION OF VETERANS MEMORIAL BOULEVARD AND TRANSCONTINENTAL DRIVE, 16.8 M (55.1 FT) NORTH OF AND LEVEL WITH THE CENTER OF THE WESTBOUND LANES OF THE BOULEVARD, 8.5 M (27.9 FT) EAST-NORTHEAST OF THE EAST CURB OF THE NORTHBOUND LANES OF THE DRIVE, 8.4 M (27.6 FT) SOUTHEAST OF THE SOUTH LEG OF A SIGN (SHELL FOOD MART), AND 1.2 M (3.9 FT) NORTH OF THE NORTH EDGE OF A SIDEWALK. NOTE--ACCESS TO THE DATUM POINT IS THROUGH A 5-INCH LOGO CAP.

DESIGNATION: ALCO

PID: BJ1342

STATE/COUNTY: LA/ORLEANS

USGS QUAD: SPANISH FORT (1992)

LAT/LON: N 30°01'36.52280" W 090°06'46.21037" NAD83(2007)

NORTH/EAST: N 557,299.69' E 3,667,048.45' SPC LA S (US feet)

ELEVATION: 6.0 feet NAVD88(2006.81)

ELEVATION: 6.1 feet NAVD88(2004.65)

MARKER: TRIANGULATION STATION DISK

STAMPING: ALCO 1931

DESCRIPTION: THE STATION IS LOCATED IN NEW ORLEANS ON A SEA WALL BESIDE JOES RESTURANT AT THE LAKE SHORE. ITI IS NEXT TO A GREEN AND WHITE LIGHT HOUSE. THE STATION IS 3.8 MILES FROM METAIRIE, 8.0 MILES FROM KENNER, AND 10.7 MILES FROM CHALMETTE. OWNERSHIP- UNKNOWN. TO REACH THE STATION FROM THE INTERSECTION OF I-10 AND I-610 DRIVE NORTH ON WEST END BLVD. FOR 1.7 MILES. THE ROAD BECOMES LAKE FRONT DRIVE. KEEP GOING FOR 0.4 MILES TO A CURVE IN THE ROAD. TURN INTO JOE'S RESTURANT PARKING LOT ON THE LEFT SIDE OF THE ROAD. THE STATION IS LOCATED NORTH OF THE PARKING AREA IN THE SEAWALL. THE STATION IS A TRIANGULATION STATION DISK SET FLUSH IN A SEAWALL. IT IS LOCATED 68.7 FT. EAST FROM THE CORNER OF THE SEAWALL, 23.5 FT. NORTHEAST FROM A LIGHT POLE, AND 54 FEET NORTHWEST OF A STORM DRAIN.

DESIGNATION: A 148

PID: AU0429

STATE/COUNTY: LA/ORLEANS

USGS QUAD: NEW ORLEANS EAST (1992)

LAT/LON: N 29°59'20.98723" W 090°05'14.21505" NAD83(2007)

NORTH/EAST: N 543,696.11' E 3,675,283.42' SPC LA S (US feet)

ELEVATION: 5.7 feet NAVD88(2006.81)

ELEVATION: 5.8 feet NAVD88(2004.65)

MARKER: BENCH MARK DISK

STAMPING: A 148 1951

DESCRIPTION: IN NEW ORLEANS, AT THE INTERSECTION OF WISNER AND DE SAIX BOULEVARDS, IN TOP OF AND 9.8 M (32.2 FT) WEST OF THE EAST END OF THE SOUTH CONCRETE SIDEWALK OF THE DE SAIX BOULEVARD BRIDGE SPANNING BAYOU SAINT JOHN, DIRECTLY OVER THE SOUTH END OF THE MOST EASTERLY OF 2 PIERS UNDER THE BRIDGE, 50.0 M (164.0 FT) EAST OF THE CENTERLINE OF THE NORTHBOUND LANES OF WISNER BOULEVARD, 1.2 M (3.9 FT) SOUTH OF THE SOUTH CURB OF DE SAIX BOULEVARD, AND 0.2 M (0.7 FT) ABOVE THE LEVEL OF DE SAIX BOULEVARD.

DESIGNATION: DISTRICT 1

PID: AB2623

STATE/COUNTY: LA/ORLEANS

USGS QUAD: NEW ORLEANS WEST (1992)

LAT/LON: N 29°56'24.28043" W 090°08'04.98628" NAD83(2007)

NORTH/EAST: N 525,686.59' E 3,660,454.21' SPC LA S (US feet)

ELEVATION: 11.7 feet NAVD88(2006.81)

ELEVATION: 11.85 feet (per Job# 07-012C) NAVD88(2004.65)

MARKER: METAL ROD

STAMPING: DISTRICT 1

DESCRIPTION: IN NEW ORLEANS, AT THE INTERSECTION OF LEAKE AVENUE AND FERN STREET, 36.7 M (120.4 FT) WEST OF THE AVENUE CENTERLINE, 26.2 M (86.0 FT) NORTHWEST OF THE EXTENDED STREET CENTERLINE, 1.5 M (4.9 FT) WEST OF A CONCRETE FILLED PIPE PROJECTING 3-FEET ABOVE THE GROUND SURFACE, 1.0 M (3.3 FT) ABOVE THE LEVEL OF THE AVENUE, 0.6 M (2.0 FT) NORTH OF A CONCRETE FILLED PIPE PROJECTING 3-FEET ABOVE THE GROUND SURFACE, AND 0.3 M (1.0 FT) SOUTH OF A CONCRETE FILLED PIPE PROJECTING 3-FEET ABOVE THE GROUND SURFACE. NOTE--ACCESS TO THE DATUM POINT IS THROUGH A 5-INCH LOGO CAP. THE ROD DEPTH IS UNKNOWN.

Use of the above benchmarks for all USACE MVN funded survey field work and in all plans and specifications shall be in accordance with: USACE MVN Engineering Division Datum Policy Memo #3, "Requirements for Use of Benchmarks for USACE Projects," dated March 23, 2009; the USACE New Orleans District Guide for Minimum Survey Standards for performing Topographic, Hydrographic, and Static GPS Control Surveys, Edition 2, dated September 2009 (ref: <http://www.mvn.usace.army.mil/ed/edss/surveyingguidelines.asp>); and a Survey Plan approved by the MVN District Datum Coordinator.

Section 2: Saint Charles - Jefferson - Orleans Metro, Polder Tide Gauge Network (Complete for each tide gauge in Network)

2.1 Current Data

2.1.1 NOAA Gauge 8762372, East Bank 1, Norco, B. Labranche, LA

The Local Tidal Datums (LMSL, MLLW, MHHW) for the 2001-2005 National Tidal Datum Epoch (NTDE) have been determined at NOAA Gauge 8762372, East Bank 1, Norco, B. Labranche, LA. Documentation of the Local Tidal Datum determinations at this tide gauge station may be obtained from <http://www.co-ops.nos.noaa.gov/>. Note that this gauge is outside of the Polder boundary.

The NAVD88:2004.65 geodetic elevation of Local Mean Sea Level (LMSL:2001-2005 NTDE) at the above described gauge was determined to be **0.58 feet** as per tie to NGS Station "876 2372 F TIDAL" (PID DH3787). Documentation of this geodetic/tidal datum relationship may be found in the IPET Study (Volume II - Geodetic Vertical and Water Level Datums) dated 26 March 2007.

2.1.2 NOAA Gauge 8761927, New Canal Station, LA

The Local Tidal Datums (LMSL, MLLW, MHHW) for the 2001-2005 National Tidal Datum Epoch (NTDE) have been determined at NOAA Gauge 8761927, New Canal Station, LA. Documentation of the Local Tidal Datum determinations at this tide gauge station may be obtained from <http://www.co-ops.nos.noaa.gov/>.

The NAVD88:2004.65 geodetic elevation of Local Mean Sea Level (LMSL:2001-2005 NTDE) at the above described gauge was determined to be **0.51 feet** as per tie to NGS Station "ALCO" (PID BJ1342). Documentation of this geodetic/tidal datum relationship may be found in the IPET Study (Volume II - Geodetic Vertical and Water Level Datums) dated 26 March 2007.

2.1.3 USACE Gauge 76060, Seabrook

The Local Tidal Datums (LMSL, MLLW, MHHW) for the 2001-2005 National Tidal Datum Epoch (NTDE) have been determined at USACE Gauge 76060, Seabrook. Documentation of the Local Tidal Datum determinations at this tide gauge station may be obtained from NOAA. Note that this gauge is outside of the Polder boundary.

The NAVD88:2004.65 geodetic elevation of Local Mean Sea Level (LMSL:2001-2005 NTDE) at the above described gauge was determined to be **0.67 feet** as per tie to an unspecified benchmark. Documentation of this geodetic/tidal datum relationship may be found in the IPET Study (Volume II - Geodetic Vertical and Water Level Datums) dated 26 March 2007.

2.1.4 USACE Gauge 76120, Florida Avenue

The Local Tidal Datums (LMSL, MLLW, MHHW) for the 2001-2005 National Tidal Datum Epoch (NTDE) have been determined at USACE Gauge 76120, Florida Avenue. Documentation of the Local Tidal Datum determinations at this tide gauge station may be obtained from NOAA.

The NAVD88:2004.65 geodetic elevation of Local Mean Sea Level (LMSL:2001-2005 NTDE) at the above described gauge was determined to be **0.57 feet** as per tie to USACE Station "WEST #4". Documentation of this geodetic/tidal datum relationship may be found in the IPET Study (Volume II - Geodetic Vertical and Water Level Datums) dated 26 March 2007.

2.2 Superseded Data

2.2.1 NOAA Gauge 8762372, East Bank 1, Norco, B. Labranche, LA

The Local Tidal Datums (LMSL, MLLW, MHHW) for the 1983-2001 National Tidal Datum Epoch (NTDE) have been determined at NOAA Gauge 8762372, East Bank 1, Norco, B. Labranche, LA. Documentation of the Local Tidal Datum determinations at this tide gauge station may be obtained from <http://www.co-ops.nos.noaa.gov/>. Note that this gauge is outside of the Polder boundary.

The NAVD88:2004.65 geodetic elevation of Local Mean Sea Level (LMSL:1983-2001 NTDE) at the above described gauge was determined to be **0.41 feet** as per tie to NGS Station "876 2372 F TIDAL" (PID DH3787). Documentation of this geodetic/tidal datum relationship may be found in the IPET Study (Volume II - Geodetic Vertical and Water Level Datums) dated 26 March 2007.

2.2.2 NOAA Gauge 8761927, New Canal Station, LA

The Local Tidal Datums (LMSL, MLLW, MHHW) for the 1983-2001 National Tidal Datum Epoch (NTDE) have been determined at NOAA Gauge 8761927, New Canal Station, LA. Documentation of the Local Tidal Datum determinations at this tide gauge station may be obtained from <http://www.co-ops.nos.noaa.gov/>.

The NAVD88:2004.65 geodetic elevation of Local Mean Sea Level (LMSL:1983-2001 NTDE) at the above described gauge was determined to be **0.25 feet** as per tie to NGS Station "ALCO" (PID BJ1342). Documentation of this geodetic/tidal datum relationship may be found in the IPET Study (Volume II - Geodetic Vertical and Water Level Datums) dated 26 March 2007.

2.3 Summary Tabulation of Geodetic/Tidal Datum Relationships

Gauge ID	Agency	Tidal Datums with respect to Gauge Zero or Station Datum (in feet)			National Tidal Datum Epoch	Geodetic Elev. of Gauge Zero	Geodetic Elevation of Tidal Datums (in feet)			Reference: PBM/TBM, Geodetic Datum/Epoch
		LMSL	MLLW	MHHW			LMSL	MLLW	MHHW	
8762372	NOAA				2001-2005		0.58			876 2372 F TIDAL NAVD88:2004.65
8761927	NOAA				2001-2005		0.51			ALCO NAVD88:2004.65
76060	USACE				2001-2005		0.67			UNSPECIFIED NAVD88:2004.65
76120	USACE				2001-2005		0.57			WEST #4 NAVD88:2004.65
8762372	NOAA				1983-2001		0.41			876 2372 F TIDAL NAVD88:2004.65
8761927	NOAA				1983-2001		0.25			ALCO NAVD88:2004.65

Section 3: Saint Charles - Jefferson - Orleans Metro, Polder Vertical Datum/Control Deficiencies

Local Tidal Datums at tide gauges _____ need to be determined with respect to the current tidal datum epoch (2002-2006).

The “gauge zero” elevations of tide gauges _____ need to be determined with respect to the NAVD88:2004.65/2006.81.

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