

F.A. ROUTE	SECTION
999	82-1B-2
FED. AID PROJECT	ILLINOIS
COUNTY	ST. CLAIR

USER NAME = John Keeven  
 PLOT SCALE = 1:2000' / IN.  
 PLOT DATE = 4/14/2010

DESIGNED - HNTB
CHECKED - CMT
DRAWN - CMT / HNTB
REVISED -
REVISED -
REVISED -
REVISED -

REFERENCE POINTS	ILLINOIS APPROACH STRUCTURE FOR NEW I-70 MISSISSIPPI RIVER BRIDGE
------------------	---

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
---	--

**HNTB**  
 715 K IRK DRIVE  
 KANSAS CITY, MO 64105  
 TELEPHONE (816) 472-1201  
 CERTIFICATE OF AUTHORITY NO. 001270

**CMT**  
 CRAWFORD, MURPHY & TILLY, INC.  
 2750 WEST WASHINGTON STREET  
 SPRINGFIELD, IL 62702  
 TELEPHONE (217) 787-8050  
 ENGINEERING CORPORATION - 000631

**BENCHMARK MONUMENT #3**

DESCRIPTION:  
 SET AT THE END OF A CONCRETE WALK AT THE NORTHWEST CORNER OF MULLANPHY STREET AND 1ST STREET; AND THE SOUTHEAST CORNER OF THE PROPERTY OF STATE CORRECTIONAL FACILITY

NORTHING = 14044432.0298  
 EASTING = 2444615.4314  
 ELEV = 444.67

**BENCHMARK MONUMENT #7**

DESCRIPTION:  
 SET IN THE SOUTHWEST CORNER OF CONCRETE TO A 6'X6' S.O. MANHOLE STRUCTURE ON THE EAST SIDE OF FRONT STREET IN GRAVEL AT EDGE OF ASPHALT BETWEEN LOW SERVICE PUMPSTATION AND BISTATE WAREHOUSING, INC. 650 N. FRONT STREET, 0.7 MILE NORTH OF THE INTERSECTION OF FRONT STREET AND RIVERPARK

NORTHING = 14044016.7556  
 EASTING = 2448022.8515  
 ELEV = 416.06

**BENCHMARK MONUMENT #8**

DESCRIPTION:  
 SET IN SOUTH END OF A HEADWALL TO A BOX CULVERT UNDER ILLINOIS ROUTE 3, 0.7 MILES SOUTH OF CANAL STREET, 0.1 MILES SOUTH OF INDUSTRIAL DRIVE AND NORTH OF SINGLE RAILROAD TRACK.

NORTHING = 14045393.2950  
 EASTING = 2451580.4763  
 ELEV = 401.95

**BENCHMARK MONUMENT #10**

DESCRIPTION:  
 SET IN CONCRETE MEDIAN ON THE EAST SIDE OF ROUTE 3 (ST. CLAIR AVE) BETWEEN TWO RAILROAD BRIDGES. APPROXIMATELY 0.1 MILE SOUTH OF 1ST STREET (IN FRONT OF 301 ST. CLAIR AVE WAREHOUSE & STORE FIXTURE CO.)

NORTHING = 14042385.4974  
 EASTING = 2454724.8844  
 ELEV = 420.78

**BENCHMARK MONUMENT #11**

DESCRIPTION:  
 SET IN THE BACK OF A 4.5' CONCRETE WALK (END OF WALK), LOCATED ON THE WEST SIDE OF ILLINOIS ROUTE 3 APPROXIMATELY 0.3 MILES SOUTH OF CANAL STREET. (BROOKLYN)

NORTHING = 14048411.5720  
 EASTING = 2449306.9042  
 ELEV = 414.02

**BENCHMARK MONUMENT #12**

DESCRIPTION:  
 SET IN THE SOUTHWEST CORNER OF A LARGE CONCRETE WATER VAULT AT THE NORTHEAST CORNER OF CORNELL AND CANAL /EAGLE PARK ROAD, 0.3+ MILES FROM THE INTERSECTION OF CANAL AND ILLINOIS ROUTE 3.

NORTHING = 14050279.7954  
 EASTING = 2450624.9022  
 ELEV = 411.30

**COORDINATE SYSTEM**

THE MISSISSIPPI RIVER BRIDGE (MRB) PROJECT COORDINATE SYSTEM IS BASED ON A MODIFIED UNIVERSAL TRANSVERSE MERCATOR (UTM) SYSTEM. THE MRB PROJECT COORDINATE SYSTEM HAS CONVERTED FROM UTM ZONE 15 NORTH BY AN AVERAGE PROJECTION FACTOR AND ALSO CONVERTED FROM METERS TO U.S. SURVEY FEET.

**HORIZONTAL DATUM**

THE DATUM USED IS NAD-83

THE MRB PROJECT COORDINATES HAVE BEEN TRANSFORMED FROM UTM BY USING AN AVERAGE PROJECTION FACTOR IN THE PROJECT AREA.

AVERAGE GRID FACTOR = 1.000339495  
 PROJECTION FACTOR = 1/GRID = 0.999660620

THE BASE POINT THAT ALL UTM COORDINATES WERE SCALED FROM WAS THE CENTRALLY LOCATED MONUMENT NO. 10. EACH VECTOR FROM MONUMENT NO. 10 TO ALL OTHER MONUMENTS WAS MULTIPLIED BY THE PROJECTION FACTOR TO CALCULATE A SURFACE VECTOR AND THEN THIS SURFACE VECTOR WAS USED TO CALCULATE THE SURFACE COORDINATE (MRB). (NOTE: 1 METER EQUALS 3.28083333 U.S. SURVEY FOOT).

UTM ZONE 15 NORTH (METERS) = PROJECTED GRID COORDINATES  
 MRB (FEET) = PROJECT SURFACE COORDINATES

**VERTICAL DATUM**

THE DATUM USED IS NAVD 1988