

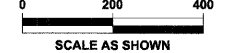
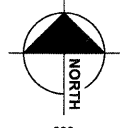
DATUM CONVERSION FOR CARY COMMUNITY BIKE TRAIL TOPOGRAPHIC SURVEY

THE DATUM USED FOR THE CARY COMMUNITY BIKE TRAIL TOPOGRAPHIC SURVEY PERFORMED BY HAEGER ENGINEERING, LLC DATED FEB. 2, 2009 ("THE TOPO") WAS BASED ON MH 46 ON PAGE 25 OF 38 ON THE MANHARD CONSULTING LTD. RECORD DRAWINGS FOR FOXFORD HILLS SUBDIVISION - PHASE 1 DATED MARCH 6, 2007. THIS DATUM WAS REQUESTED TO BE USED IN ORDER FOR "THE TOPO" TO STAY CONSISTENT WITH PROJECTS DONE IN THE AREA (FOXFORD HILLS). THE PUBLISHED RECORD ELEVATION FOR MH 46 WAS 881.45 FEET. THIS ELEVATION WAS USED TO ESTABLISH THE ELEVATIONS REPORTED BY "THE TOPO". IT IS UNKNOWN TO HAEGER ENGINEERING, LLC AS TO THE SOURCE BENCHMARK OR PUBLISHED DATUM THAT WAS ORIGINALLY USED FOR THE RECORD DRAWINGS OF FOXFORD HILLS SUBDIVISION PROJECT. DUE TO THE FACT HAEGER ENGINEERING, LLC WAS NEVER SUPPLIED THIS INFORMATION, HOWEVER, HAEGER ENGINEERING, LLC DID CHECK INTO MH 46 ELEVATION WITH ITS RTK GPS UNIT THAT IS BASED ON KARLA COMPANY'S RTK CORE REFERENCE NETWORK USING NAVD 83 (GEOID 03) AS ITS REFERENCE DATUM. HAEGER ENGINEERING, LLC FOUND MH 46 ELEVATION TO BE 0.11' HIGHER THAN THAT MEASURED WITH THE GPS EQUIPMENT (881.34) USING NAVD 83 (GEOID 03) AS THE REFERENCE DATUM BASED ON THE GPS MEASURED HEIGHT THE CONVERSION TO NAVD 29 ELEVATION FOR MH 46 USING NAD 29 VERTCON CONVERSION WOULD BE 881.22 (0.07' HIGHER THAN PUBLISHED MH 46 ELEVATION). THEREFORE DUE TO VERTICAL ACCURACY OF THE GPS RTK MEASUREMENT (PLUS OR MINUS 0.05') IT IS UNKNOWN TO HAEGER ENGINEERING, LLC AS TO THE TRUE PUBLISHED DATUM USED FOR "THE TOPO" WITH OUT BEING SUPPLIED THE SOURCE BENCHMARK OR CONTROL INFORMATION THE FOXFORD HILLS SUBDIVISION WAS BUILT ON.

BASED ON HAEGER ENGINEERING, LLC GPS RTK MEASUREMENT OF MH 46 THE DATUM CONVERSION FOR "THE TOPO" IS AS FOLLOWS:
 NAVD 83 (GEOID 03)-LOWER TOPO 0.11' (WITH AN ACCURACY OF PLUS OR MINUS 0.05')
 NAVD 29-RAISE TOPO 0.07' (WITH AN ACCURACY OF PLUS OR MINUS 0.05')

BENCHMARKS

- SOURCE BENCHMARK**
 DESCRIPTION: MANNHOLE #46 FROM THE AS-BUILT RECORD DRAWINGS BY MANHARD CONSULTING LTD. DATED 3-6-07 FOR THE FOXFORD HILLS SUBDIVISION-PHASE 1 IN THE VILLAGE OF CARY, ILLINOIS.
 LOCATION: 120' NORTHEAST OF THE DAMIAN DRIVE AND PARKSTONE DRIVE INTERSECTION ON DAMIAN DRIVE.
 ELEVATION: 881.45
- SITE BENCHMARKS**
- HE OF #10
 DESCRIPTION: IRON PIPE
 LOCATION: 1000' EAST OF THE INTERSECTION OF 1ST AND THREE OAKS ROAD, 884' NORTH OF THE NORTH SIDE OF THREE OAKS ROAD, 31' NORTHEAST OF STORM MANNHOLE, AND 25' NORTHWEST OF POWER POLE.
 ELEVATION: 854.94
- HE OF #1
 DESCRIPTION: "PK" NAIL IN EDGE OF PAVEMENT.
 LOCATION: 502' WEST OF THE INTERSECTION OF RAWSON BRIDGE ROAD AND MINK TRAIL, 45' SOUTHWEST OF TREE, 27' SOUTHEAST OF IRON ROD, AND 10' SOUTH OF CONCRETE WALK.
 ELEVATION: 880.87
- HE OF #8
 DESCRIPTION: RAIL ROAD SPIKE
 LOCATION: NORTHWEST CORNER OF INTERSECTION OF CRYSTAL LAKE ROAD AND RAWSON BRIDGE ROAD, 22' SOUTHWEST OF FENCE CORNER, 18' SOUTHWEST OF POWER POLE, AND 11' NORTHWEST OF PAVEMENT.
 ELEVATION: 823.23



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DESIGNED	JWH	REVISED	
DRAWN	LES	REVISED	
CHECKED	JMM	REVISED	
DATE	10/02/2009	REVISED	

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**CARY PARK DISTRICT
 CARY COMMUNITY TRAIL**

**OVERALL TRAIL
 ALIGNMENT PLAN**

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
06-P4001-00-BR	MCHENRY	64	14
FED. ROAD DIST. NO. 1 ILLINOIS		CONTRACT NO. 63333	