



Mn/DOT Name: DOAN

NGS Name: DOAN

County: ITASCA, MN (Sheet 1)

NGS ACRN: [DM8185](#) [Get Map](#)
NGS Quad / Sta Num : 47093311/
USGS Quad: WABANA LAKE

<u>1/4</u>	<u>Sec</u>	<u>Twp</u>	<u>Rng</u>	<u>Reference</u> <u>Latitude</u>	<u>Reference</u> <u>Longitude</u>	<u>Vert</u> <u>Order</u>	<u>Horz</u> <u>Order</u>	<u>Year Set</u>	<u>Last Recovery</u>	<u>Condition</u>	<u>Geodetic Usability</u>	<u>Photos</u>	<u>Bridge Num</u>	<u>F/P/R</u>	<u>Magnetic Properties</u>
SW	13	57 N	26 W	472500.39	933535.16	2	C	2009	2020	GOOD	Horz=YES Vert=YES	YES		FLUSH	BAR MAG IN DRILL HOLE

<u>Monument Type</u>	<u>Disk Type</u>	<u>Mon. Agency</u>
ALUMINUM ALLOY ROD (NO SLEEVE) (DEPTH 75 FT)	METAL ROD (WITH REMOVABLE ID DISK)	MNDT

Description: (2009) **Stamping:** DOAN 2009

14.0 MILES NORTH OF GRAND RAPIDS, 13.8 MILES NORTHERLY ALONG TRUNK HIGHWAY 38 FROM THE JUNCTION OF TRUNK HIGHWAY 38 AND TRUNK HIGHWAY 2 IN GRAND RAPIDS, AT TRUNK HIGHWAY 38 MILEPOINT 13.80, 68.1 FEET SOUTHEAST OF A GUYED POWER POLE, 50.5 FEET NORTH OF A FOOT TRAVEL PATH, 41.5 FEET SOUTHWEST OF TRUNK HIGHWAY 38, 34.8 FEET EAST OF A NO CAMPING SIGN, 1.8 FEET NORTHEAST OF A WITNESS POST.

Leveling-Derived Orthometric Heights (Feet)

<u>NAVD88</u>			<u>Ellipsoid (NAD83)</u>			<u>Project Info</u>	
<u>Height</u>	<u>Acc</u>	<u>Order (/Class)</u>	<u>Height</u>	<u>Acc</u>	<u>Adj</u>	<u>Determination Method</u>	<u>Year</u> <u>Reference</u>
1361.933	.016	2/1				VERTICAL ADJUSTMENT	2012 00000723
1361.854	.016	2/1				VERTICAL CONTROL SURVEY	2010 VTH38

Non Leveling-Derived Orthometric and Ellipsoid Heights (Feet)

<u>NAVD88</u>			<u>Ellipsoid (NAD83)</u>			<u>Project Info</u>	
<u>Height</u>	<u>Acc</u>	<u>Order (/Class)</u>	<u>Height</u>	<u>Acc</u>	<u>Adj</u>	<u>Determination Method</u>	<u>Year</u> <u>Reference</u>
1361.940	.262		1265.529	.197	2011	GPS - OPUS	2020 GPSBM
1361.795	.262		1265.437	.197	2011	GPS - RTRN	2020 RTRN2020
			1265.503	.009	2011	HORIZONTAL ADJUSTMENT	2012 GPS2800
1361.841	.131		1265.601	.066	2007	HORIZONTAL ADJUSTMENT	2011 GPS2802
1361.841	.131		1265.601	.066	2007	GPS - STATIC	2010 HASCA
1361.841	.131		1265.663	.066	1996	GPS - STATIC	2010 HASCA

Geoid Separations(ft): GEOID18 = -96.411 12B = -96.355 09 = -96.263 03 = -96.214

Lat/Lon and County Coordinates (Feet)

<u>NAD83(2011)</u>		<u>Itasca County - South Zone</u>		<u>Project Info</u>		
<u>Latitude</u>	<u>Longitude</u>	<u>X</u>	<u>Y</u>	<u>Acc</u>	<u>Order</u>	<u>Determination Method</u>
47 25 00.39421	93 35 35.15723	534721.530	242433.318	.131	3	GPS - OPUS
47 25 00.39566	93 35 35.15345	534721.789	242433.465	.131	3	GPS - RTRN
47 25 00.39459	93 35 35.15690	534721.552	242433.356	.010		ADJUSTMENT
<u>NAD83(2007)</u>		<u>Itasca County - South Zone</u>		<u>Project Info</u>		
<u>Latitude</u>	<u>Longitude</u>	<u>X</u>	<u>Y</u>	<u>Acc</u>	<u>Order</u>	<u>Determination Method</u>
47 25 00.39445	93 35 35.15768	534721.498	242433.342	.033	C	ADJUSTMENT
47 25 00.39445	93 35 35.15768	534721.498	242433.342	.033	C	GPS - STATIC
<u>NAD83(1996)</u>		<u>Itasca County - South Zone</u>		<u>Project Info</u>		
<u>Latitude</u>	<u>Longitude</u>	<u>X</u>	<u>Y</u>	<u>Acc</u>	<u>Order</u>	<u>Determination Method</u>
47 25 00.39451	93 35 35.15747	534721.513	242433.348	.033	C	GPS - STATIC



State Plane and UTM Coordinates (Feet)

NAD83(2011)

MN State Plane - North Zone		UTM - Zone 15		Acc	Order	Determination Method	Project Info	
X	Y	X	Y				Year	Reference
2502594.583	662858.604	1493636.078	17229792.065	.131	3	GPS - OPUS	2020	GPSBM
2502594.844	662858.749	1493636.339	17229792.210	.131	3	GPS - RTRN	2020	RTRN2020
2502594.606	662858.642	1493636.101	17229792.104	.010		ADJUSTMENT	2012	GPS2800

NAD83(2007)

MN State Plane - North Zone		UTM - Zone 15		Acc	Order	Determination Method	Project Info	
X	Y	X	Y				Year	Reference
2502594.553	662858.629	1493636.047	17229792.090	.033	C	ADJUSTMENT	2011	GPS2802
2502594.553	662858.629	1493636.047	17229792.090	.033	C	GPS - STATIC	2010	HASCA

NAD83(1996)

MN State Plane - North Zone		UTM - Zone 15		Acc	Order	Determination Method	Project Info	
X	Y	X	Y				Year	Reference
2502594.567	662858.635	1493636.062	17229792.096	.033	C	GPS - STATIC	2010	HASCA

Station Photos

Type	File Name	Dir	Date
Location:	https://www.olmweb.dot.state.mn.us/geod/StationPhotos/itasca/DOAN-DM8185-3SW-02NOV2009.jpg	SW	Nov 2, 2009
Monument:	https://www.olmweb.dot.state.mn.us/geod/StationPhotos/itasca/DOAN-DM8185-2-02NOV2009.jpg		Nov 2, 2009
Disk:	https://www.olmweb.dot.state.mn.us/geod/StationPhotos/itasca/DOAN-DM8185-1-09JAN2020.jpg		Jan 9, 2020

** All station images can be viewed at: <ftp://ftp.olmweb.dot.state.mn.us/geod/StationPhotos> **