

The City of Johnston

Vertical and Horizontal Control

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City of Johnston, Iowa

The vertical control system (Bench Marks) that was established for the City of Johnston, Iowa utilized the National Geodetic Survey reference point "Dodge" PID-MH0677 as the prime reference point for the vertical system. The NGS Data sheet for "Dodge" is enclosed at the back of the booklet. The vertical control datum is third order accuracy tied to the North America Vertical Datum of 1988 (NAVD88).

Horizontal control was also established on the Bench Marks by GPS survey on Bench Marks that have unrestricted open sky for satellite observation. The horizontal datum that was used is from the Polk County system reference point GPS 20. The Data sheet for GPS 20 is enclosed in the back of the booklet. Note there is a difference between the Polk County GPS system and the horizontal coordinates NGS established for "Dodge". The horizontal values for GPS 20 were used to establish the horizontal control for the City of Johnston control system.

The reference ellipsoid used to compute the horizontal control is WGS 1984, and the geoid model is 1983. The projection set is Iowa South Zone State Plane coordinates in US Survey Foot.

The Bench Marks established for the vertical control are on a City of Johnston standard 3" round brass disk with the City of Johnston stamped on the disk with a numerical number system starting with number 1. The disks are located in concrete structures that have a deep foundation for stability or placed in the top of a 6" round concrete monument that are 48" deep. A steel reinforcing rod was installed in the concrete monument.

A Location Map is enclosed in the back of the booklet with the location of the Bench Marks shown on a map of the City of Johnston.

The City of Johnston and Veenstra & Kimm, Inc. do not warranty the current condition of the Bench Marks. Notify the City of Johnston for any discrepancies or change in the status of any of the Bench Marks.

Vertical and Horizontal Control Johnston, Iowa

BM-1

Location: Located in the southwest corner of the concrete top slab of the water meter Vault. The water meter vault is located on the west side of Merle Hay Road 200 feet north of Beaver Creek in front of Jordan Motors.

Description: City of Johnston standard 3" round brass cap

Datum: North 602619.294 East 1586315.414 Elev 814.94
Lat 41°39'13.803140" N Long 93°41'52.687068" W Ell 713.690

BM-2

Location: Located in the southwest corner of the concrete base for a traffic signal base. The traffic signal is located at the southeast corner of Merle Hay Road and Johnston Drive.

Description: City of Johnston standard 3" round brass cap

Datum: Elev 834.70

BM-3

Location: Located at the northeast corner of Merle Hay Road and 55th Avenue; 2.0 feet east of north south sidewalk and 25.0 feet north of the north edge of the pavement.

Description: City of Johnston standard 3" round brass cap in a 6" concrete monument

Datum: Elev 834.37

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BM-7

Location: Located at the northeast corner of 60th Street and Merle Hay Road; 1.7 feet east of the north south sidewalk and 34.8 feet north of the north edge of pavement of 60th Street.

Description: City of Johnston standard 3" round brass cap in a 6" concrete monument

Datum: North 608308.961 East 1586451.972 Elev 831.17
Lat 41°40' 10.018137"N Long 93°41' 51.058364"W Ell 730.04

BM-8

Location: Located at the northeast corner of NW 62th Street and Merle Hay Road; 9.7 feet east of the north south sidewalk and 59.6 feet north of the north edge of pavement on NW 62th Street.

Description: City of Johnston standard 3" round brass cap in a 6" concrete monument

Datum: North 609670.305 East 1586460.459 Elev 831.70
Lat 41°40'23.467898" N Long 93°41'50.987267" W Ell 730.60

BM-9

Location: Located at the northeast corner of 64th Street and Merle Hay Road; 2.0 feet east of the north south sidewalk and 16.1 feet north to the north back of the curb of 64th Street.

Description: City of Johnston standard 3" round brass cap in a 6" concrete monument

Datum: North 611389.932 East 1586444.355 Elev 832.93
Lat 41°40'40.456777" N Long 93°41'51.250944" W Ell 731.87

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BM-10

Location: Located at the southwest corner of the concrete top slab of the water booster station on the west side of Merle Hay Road 200 ± feet north of NW 66th Ave.

Description: City of Johnston standard 3" round brass cap

Datum: North 612618.051 East 1586356.511 Elev 838.40
Lat 41°40'52.588123 N Long 93°41'52.445370 W Ell 737.37

BM-11

Location: Located in the median island on Morningside Drive on the west side of Merle Hay Road; in the center of the island 1.5 feet west of the nose of the median.

Description: City of Johnston standard 3" round brass cap in a 6" concrete monument

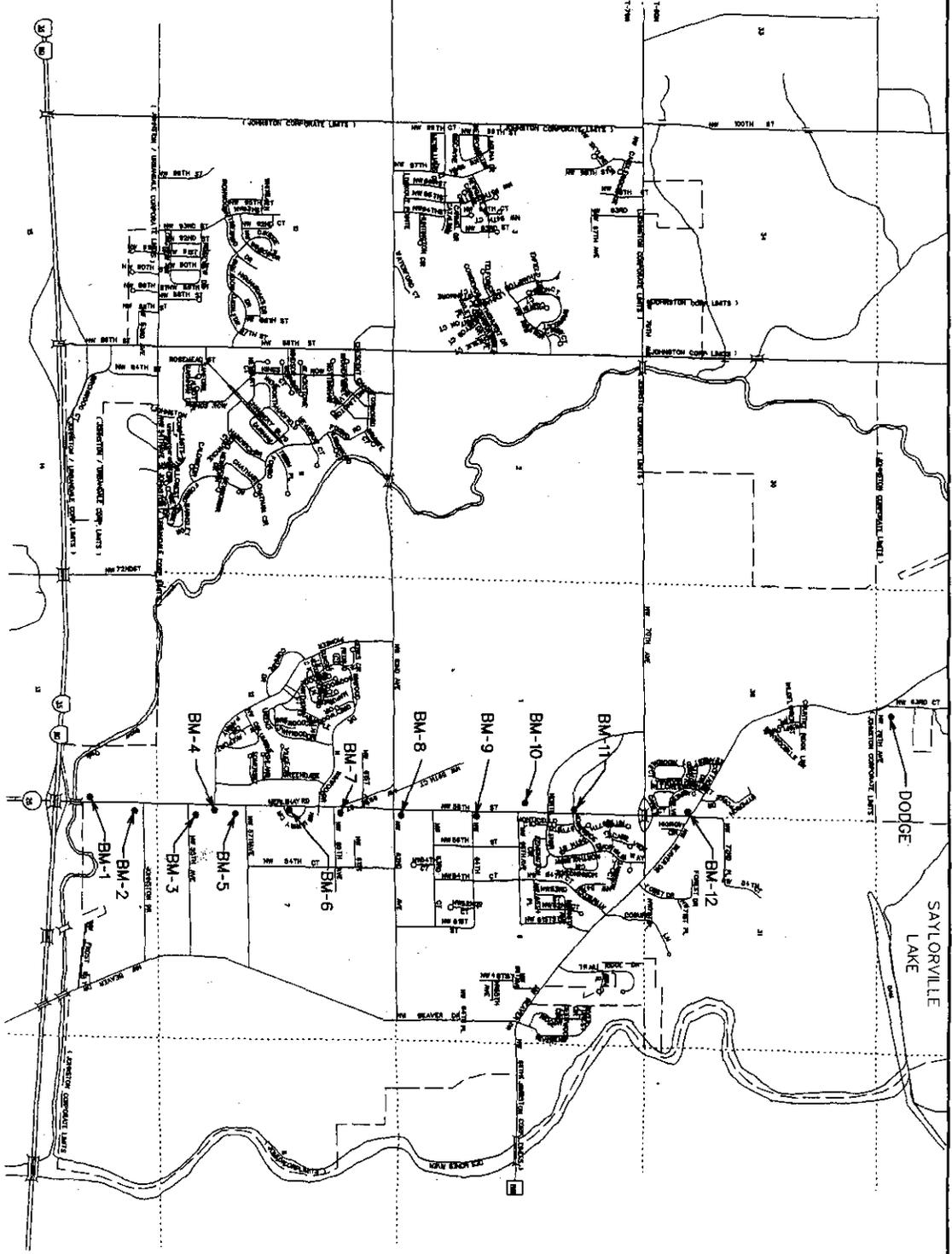
Datum: North 613893.456 East 1586356.686 Elev 857.95
Lat 41°41'05.188607" N Long 93°41'52.481308" W Ell 756.95

BM-12

Location: Located at southwest corner of NW Beaver Drive and Merle Hay Road, 125 feet south of the south edge of slab of NW Beaver Drive, 89 feet west of the west edge of slab of Merle Hay Road.

Description: City of Johnston standard 3" round brass cap a 6" in concrete monument

Datum: North 616191.722 East 1586335.352 Elev 944.62
Lat 41°41'27.894001" N Long 93°41'52.831424 W Ell 843.68



DATE		REVISIONS		SCALE		JOB	
15	NOV 02	ORIGINAL		DRAWN	DMS	DATE	11/13/02
				CHECKED	DMS	DATE	
				APPROVED	DMS	A.C.	



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CITY OF JOHNSTON, IOWA
VERTICAL & HORIZONTAL CONTROL
LOCATION MAP

DWG. NO.

1

PROJECT

98228