

Project: C 287-158 – 17538

According to the milepost on the OTIS MapView the milepost on the Title Sheet of this LSCD are reversed.

MP 0.0-0.2 is on SH 88 and MP 282.7-282.8 is US 287

Notes By: Betty Claybrook 05-20-14



Sheet Revisions

Date	Description	Initials
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Sheet Revisions

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Sheet Revisions

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mm/dd/yy	XXXXXXXX	XXX



Land Survey Control Diagram

Title Sheet

Project Number: C 2873-158				
Project Location: SH-287, Federal Blvd. at W. Colfax Ave.				
Sec. 32, T3S R68W & Sec. 5, T4S R68W/6th PM, Denver County				
Project Code:	Last Mod. Date	Subset	Sheet No.	
17538	04-07-10	1 of 3	3.01	

DEPARTMENT OF TRANSPORTATION

STATE OF COLORADO

LAND SURVEY CONTROL DIAGRAM

State Highway 287 MP 0.0 to 0.2
State Highway 88 MP 282.7 to 282.8
Section 32, Township 3 South, Range 68 West
Section 5, Township 4 South, Range 68 West
of the 6th Principle Meridian
City & County of Denver

GENERAL NOTES:

- This **Land Survey Control Diagram** is to document the recovery and/or establishment of survey points that will be the basis of future surveys for design purposes, and/or roadway construction. This Project Control Diagram is not a Monumented Land Survey or a Boundary Survey and does not address matters of title.
- BASIS OF BEARINGS:** Bearings are grid bearings of the Colorado state plane coordinate system of 1983, central zone. The line between point 401 and point 405, described herein, bears N76°48'58"E, a distance of 779.68 feet.
- Geodetic coordinates are NAD'83 (1992) datum based on a Fast Static GPS survey holding published values on the primary control points shown herein.
- Project specific** coordinates were obtained by multiplying the project's state plane coordinates by 1.0002472900 and then truncating the northing by 1,000,000 and the easting by 3,000,000. Published units are in US survey feet: 1 survey foot = (1200/3937) meters
- Horizontal Control Tolerances meet the precision requirements of CDOT type A control (+/- 0.07' with 95% certainty).
- Vertical Datum: Elevations are NAVD '88 Datum established by digital differential levels run from control point 335 of CDOT Project No. BR R600-297 elevation = 5194.50' established by digital differential levels run from NGS horizontal control point "ARGO" (PID AE5245), elevation = 5136.34' (based on **preliminary** data from US-36/I-70 EIS control survey).
- Elevations on control points were established by digital differential levels with an accuracy meeting or exceeding 0.035' times the square root of the distance leveled in miles.

NOTICE: According to Colorado law you **must** commence any legal action based upon any defect in this survey within three years after you first discover such defect. In no event may any action based upon any defect in this survey be commenced more than ten years from the date of the certification shown hereon.

NOTE:

This **Right-of-Way Plan** Set is subject to change. Until such time as the Plan Set bears the signature and seal of the Surveyor in responsible charge and has been deposited in the appropriate county(ies), it is the users responsibility to verify with CDOT that their plan set is up to date.

Surveyor's Statement (Land Survey Control Diagram):

I, Donald D. Hansen, a professional land surveyor licensed in the State of Colorado, do hereby state to the Colorado Department of Transportation that this **Land Survey Control Diagram** was prepared and the field survey it represents was performed under my responsible charge and, based upon my knowledge, information and belief, is in accordance with applicable standards of practice defined by Colorado Department of Transportation publications. This statement is not a guaranty or warranty, either expressed or implied.

Donald D. Hansen, PLS No. 14599 Date

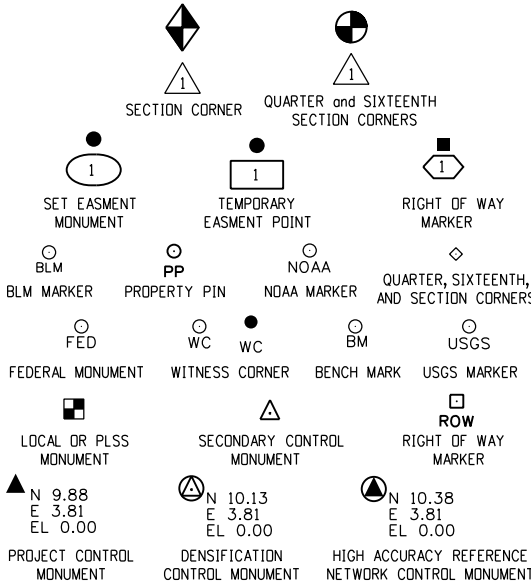
CITY AND COUNTY OF DENVER DEPOSITING CERTIFICATE:

Deposited this _____ day of _____, 201__ at _____

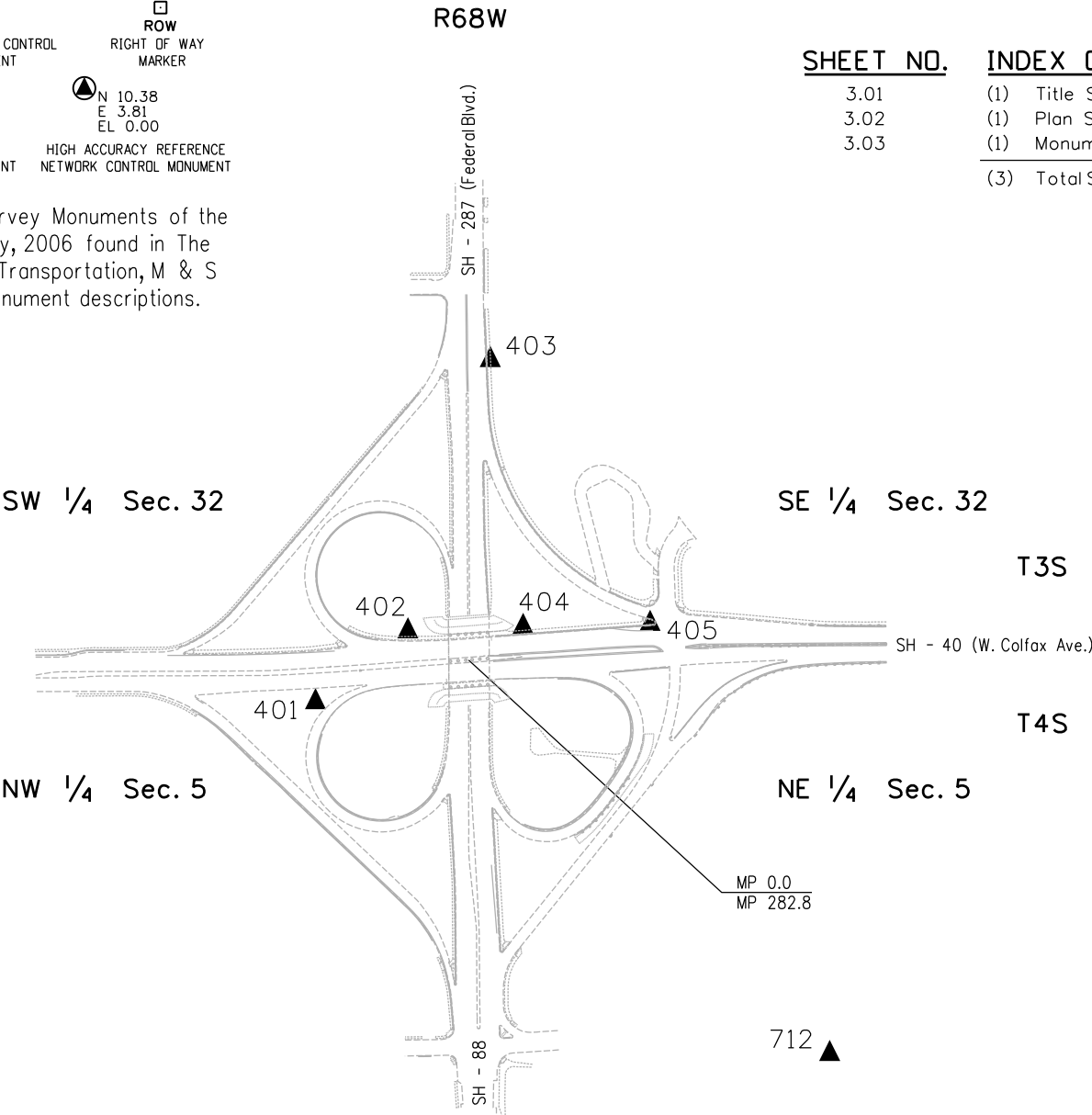
o'clock __.M. under Reception No. _____.

By: _____

Title: _____



Refer to the M-629-1 Survey Monuments of the Standard Plans dated July, 2006 found in The Colorado Department of Transportation, M & S Standards for survey monument descriptions.





2000 South Holly
Denver, CO 80222
Phone: 303-757-9922 FAX: 303-757-9390

Region 6

SLK

Sheet Revisions

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Sheet Revisions

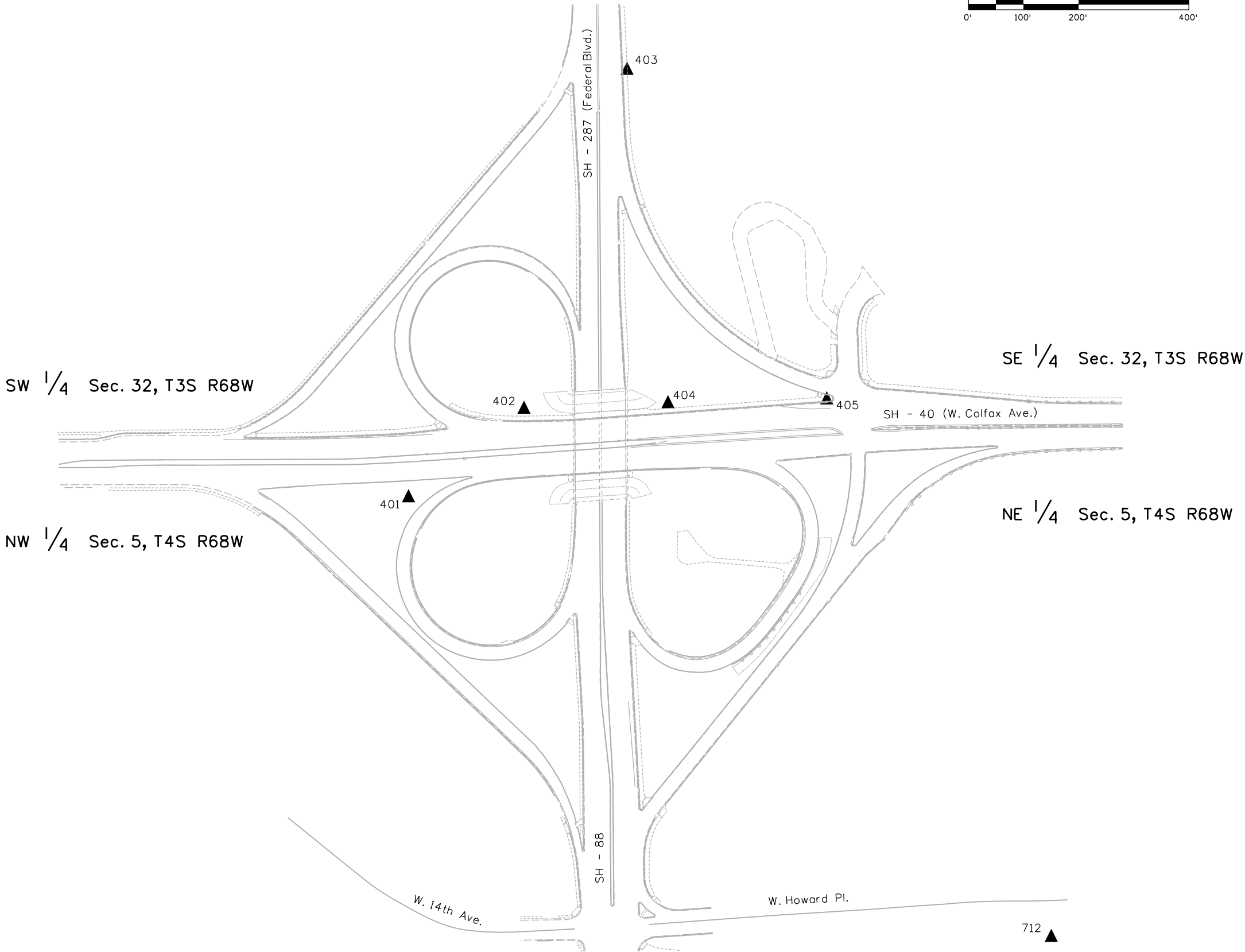
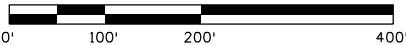
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Land Survey Control Diagram

Plan Sheet

Project Number: C 2873-158				
Project Location: SH-287, Federal Blvd. at W. Colfax Ave.				
Sec. 32, T3S R68W & Sec. 5, T4S R68W/6th PM, Denver County				
Project Code:	Last Mod. Date	Subset	Sheet No.	
17538	04-07-10	2 of 3	3.02	





2000 South Holly
Denver, CO 80222
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Region 6

SLK

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mm/dd/yy	XXXXXXXX	XXX

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mm/dd/yy	XXXXXXXX	XXX

Land Survey ControlDiagram

Tabulation Sheet

Project Number: C 2873-158				
Project Location: SH-287, Federal Blvd. AT W. Colfax Ave.				
Sec. 32, T3S R68W & Sec. 5, T4S R68W/6th PM, Denver County				
Project Code:	Last Mod. Date	Subset	Sheet No.	
17538	04-07-10	3 of 3	3.03	

Existant control used in constaining Fast Static GPS Survey (Published Elevations)

Geodetic Coordinates							Project Specific Coordinates				Description
Point	Latitude	Longittude	Ellipsoid Height	Convergence Angle	Northing (SP 502)	Easting (SP 502)	Point	Northing (Project)	Easting (Project)	Elevation NAVD'88	
15	39°46'08.95345"N	104°59'46.67589"W	5124.99	0°19'03.6"	1705437.159	3141592.304	15	705858.897	142369.188	5181.07	3.25" CDOH Alum. cap in logo box "4.038007" (CDOT R6 Metro Network point)
70	39°44'34.68938"N	105°00'03.94511"W	5152.79	0°18'52.8"	1695891.615	3140296.243	70	696310.992	141072.806	5208.65	HARN point, 5/8" stainless steel rod in logo box "MCDONNELL 1991 " PID - KK2099
331	39°44'45.10215"N	105°01'03.94171"W	5147.83	0°18'14.9"	1696919.920	3135604.147	331	697339.552	136379.550	5203.48	CDOT Type 2 mon w/3-1/4" Alum Cap "CP 331," gore/EB Off Ramp
712	39°44'16.62678"N	105°01'20.35400"W	5155.05	0°18'04.6"	1694031.880	3134337.339	712	694450.797	135112.429	5210.60	2" Alum. Cap "LPI 712" (Lund Partnership) SE quad Decatur St. & Howard Pl.
CTMC	39°43'17.49291"N	105°11'34.33618"W	5971.68	0°11'37.3"	1687841.250	3086394.015	CTMC	688258.637	87157.249	6023.21	CDOT Region 6 Base Station at Colorado Transportation Management Center
DU	39°40'28.29695"N	104°57'47.69959"W	5351.16	0°20'18.7"	1671021.570	3151086.047	DU	671470.072	151931.798	5408.01	Compass Tools, Inc. (University of Denver) Base Station

Fast Static GPS Survey Project Control (Benched Elevations)

Geodetic coordinates							Project Specific Coordinates				Description
Point	Latitude	Longitude	Ellipsoid Height	Convergence Angle	Northing (SP 502)	Easting (SP 502)	Point	Northing (Project)	Easting (Project)	Elevation NAVD'88	
401	39°44'24.57287"N	105°01'35.23067"W	5212.55	0°17'55.2"	1694829.817	3133171.005	401	695248.932	133945.807	5268.03	Set CDOT Type 5S monument "CP 401" SW quad SH-287 & SH-40
402	39°44'26.14963"N	105°01'32.53698"W	5202.49	0°17'56.9"	1694990.458	3133380.592	402	695409.612	134155.446	5257.99	Set CDOT Type 2 monument w/3-1/4" Alum Cap "CP 402" NW quad SH-287 & SH-40
403	39°44'32.22152"N	105°01'30.10282"W	5227.02	0°17'58.4"	1695605.833	3133567.526	403	696025.140	134342.426	5282.56	Set CDOT Type 5S monument "CP 403" NE quad SH-287 & SH-40
404	39°44'26.23524"N	105°01'29.19225"W	5197.32	0°17'59.0"	1695000.486	3133641.823	404	695419.643	134416.741	5252.83	Set CDOT Type 2 monument w/3-1/4" Alum Cap "CP 404" NE quad SH-287 & SH-40
405	39°44'26.29062"N	105°01'25.50346"W	5191.69	0°18'01.3"	1695007.598	3133929.944	405	695426.757	134704.934	5247.23	Set CDOT Type 5S monument "CP 401" NE quad SH-287 & SH-40

Local site settings

Project latitude: 39°44'26.23525"N
Project longitude: 105°01'29.19225"W
Project height: 5197.319sft
Ground scale factor: 1.0002472900
False northing offset: 999580. 843sft
False easting offset: 2999225.082sft

Aliquot evidence, reference points, double based RTK, or conventional survey methods from double based RTK established control, GPS derived elevations

Point	Northing (Project)	Easting (Project)	Elevation NAVD'88	Description
621	695340.350	134318.140	5253.59	1" Brass Tag "LS 11434" in median curb under Federal Blvd. Bridge
622	695292.365	134313.525	5253.11	1" Brass Tag "LS 11434" in sidewalk under Federal Blvd. Bridge
623	695289.045	134270.810	5254.30	1" Brass Tag "LS 11434" in sidewalk under Federal Blvd. Bridge
624	695336.705	134266.790	5255.00	1" Brass Tag "LS 11434" in median curb under Federal Blvd. Bridge