

100 ft

Colorado Department of Transportation



2000 South Holly
Denver, CO 80222
Phone: 303-757-9923 FAX: 303-757-9390

Region 6

SLK

Sheet Revisions

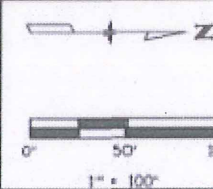
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Sheet Revisions

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Sheet Revisions

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Land Survey Control Diagram

Plan Sheet

Project Number: FBR 0704-224			
Project Location: Pecos St. over I-70 Bridge Replacement			
Sec. 16 & 21, T3S, R68W, 6th P.M. City and County of Denver			
Project Code:	Last Mod. Date:	Subset:	Sheet No.
18119		4.01 of 4.04	4.02

AS-BUILT

NW ¼ Sec. 21, T3S, R68W, 6th P.M.

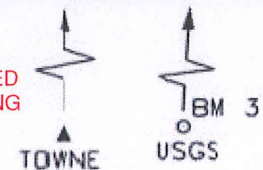
SW ¼ Sec. 16, T3S, R68W, 6th P.M.

NE ¼ Sec. 21, T3S, R68W, 6th P.M.

SE ¼ Sec. 16, T3S, R68W, 6th P.M.

1018
1009

POINT 101 DESTROYED
DUE TO PLAN GRADING



PP305

W. Elk Place

I-70 E.B.

Pecos St.

W. 48th Ave.

Dixie Place

W. 47th Ave.

I-70 W.B.

1003

1013

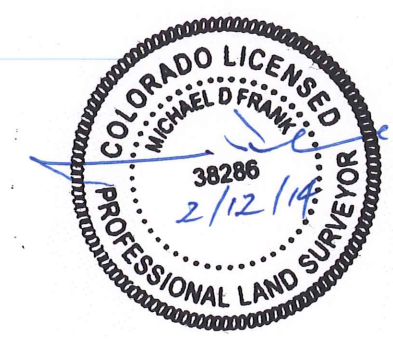
1007

1019

POINT 100 DESTROYED
DUE TO PLAN GRADING

100

1008

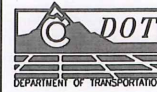


RTD 101 SATJ

T452

PP4
PP311

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Date	Description	Initials
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Date	Description	Initials
mm/dd/yy	XXXXXXXX	XXX

Land Survey Control Diagram			
Tabulation Sheet			
Project Number: FBR 0704-224			
Project Location: Pecos St. over I-70 Bridge Replacement			
Sec.16 & 21,T3S,R68W,6th P.M. City and County of Denver			
Project Code:	Last Mod. Date	Subset	Sheet No.
18149		4.01 to 4.04	4.03

BASIS OF GPS SURVEY IN U.S. SURVEY FEET

Point	Latitude	Longitude	Ellipsoid Height	Convergence Angle	Northing (UTM 13North)	Easting (UTM 13North)	Point	Northing (Project)	Easting (Project)	Elevation NAVD 88	Description
T452	39°48'23.15410"N	104°59'13.58732"W	5143.75	0°00'29.7"	14456248.874	1644037.373	T452	465651.244	645106.658	5200.31	Stainless Steel Rod In Sleeve Stmp T 452 2003 NGS on the rim of the box
A768	39°45'42.93598"N	105°00'18.61016"W	5139.31	-0°00'11.9"	14440043.178	1638963.932	A768	449435.008	640029.917	5195.44	3.25" CDOT TYPE 5 R.O.W. Monument stmp "3111" L 703 379
RTD 101	39°47'02.27056"N	105°00'00.26073"W	5179.09	-0°00'00.2"	14448067.523	1640396.320	RTD 101	457464.572	641463.237	5235.42	3.25" Alum. Cap w/Dimple Stmp "Regional Trans. District Corridor Ctrl Pt RTD#101 PLS 24942
BM 37 5392.97	39°47'08.43247"N	105°02'39.10579"W	5340.15	-0°01'41.8"	14448693.842	1628000.911	BM 37 5392.97	458091.298	629059.766	5395.30	Bench Mark Disk Stmp BM 37 5392.97 1936 DENVER

PRIMARY SURVEY CONTROL POINT TABULATION IN U.S. SURVEY FEET

Point	Latitude	Longitude	Ellipsoid Height	Convergence Angle	Northing (UTM 13North)	Easting (UTM 13North)	Point	Northing (Project)	Easting (Project)	Elevation NAVD 88	Description
491A	39°47'02.36265"N	105°00'22.65646"W	5197.58	-0°00'14.5"	14448075.900	1638648.636	491A	457473.955	639714.416	5253.78	2" Brass Cap w/Dimple Stmp "Denver City Engineer BM 491 A 2000"
TOWNE	39°47'02.18618"N	105°00'42.38730"W	5220.12	-0°00'27.1"	14448059.206	1637108.908	TOWNE	457456.249	638173.687	5276.18	3.25" Alum Cap w/Dimple Stmp "GPS CDOH 4.048020 PLS No. 1993" In Range Box
SATO	39°47'02.47545"N	104°59'54.57145"W	5197.39	0°00'03.5"	14448083.251	1640840.291	SATO	457485.313	641907.497	5253.80	3.25" Alum Cap w/Dimple Stmp "CDOH Mark 4.048009 L.S. No." In sidewalk over bridge
100	39°46'59.05702"N	105°00'19.88892"W	5178.30	-0°00'12.7"	14447742.534	1638864.584	100	457139.371	639930.305	5234.51	3.25" Alum. Cap w/Dimple Stmp "CDOT, STATE HIGHWAY, MILE POST, CONTROL MONUMENT 100
101	39°47'00.22947"N	105°00'26.61912"W	5177.48	0°00'17.0"	14447861.161	1638330.386	101	457258.075	639404.965	5233.67	3.25" Alum. Cap w/Dimple Stmp "CDOT, STATE HIGHWAY, MILE POST, CONTROL MONUMENT 101
102	39°47'01.39906"N	105°00'21.38774"W	5196.78	-0°00'13.7"	14447979.430	1638747.636	102	457376.421	639813.481	5252.99	CDOT TYPE 5S Brass Cap stmp "102"
103	39°47'01.43084"N	105°00'24.51215"W	5200.37	-0°00'15.7"	14447982.661	1638503.817	103	457379.655	639569.503	5256.57	CDOT TYPE 5S Brass Cap stmp "103"

SECONDARY SURVEY CONTROL IN U.S. SURVEY FEET

Point	Northing(Project)	Easting(Project)	Elevation(NAVD88)	DESCRIPTION
1003	456715.389	639713.684	5249.21	CDOT 1" BRASS MONUMENT
1007	457452.113	639392.215	5258.01	CDOT 1" BRASS MONUMENT
1008	457448.303	640066.814	5248.91	CDOT 1" BRASS MONUMENT
1009	456931.542	639344.417	5253.38	CDOT 1" BRASS MONUMENT
1013	456936.582	639707.162	5251.72	CDOT 1" BRASS MONUMENT
1018	457092.600	639310.174	5246.87	CDOT 1" BRASS MONUMENT

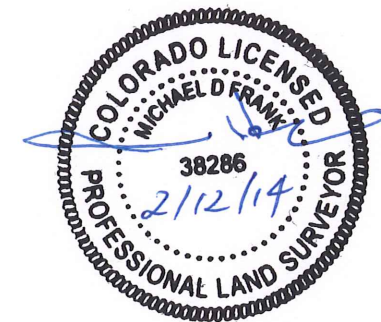
GENERAL NOTES

- 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 Land Survey Control Diagram is not a Land Survey Plat, Boundary Survey or Right of Way Plat and does not address matters of title.
- BASIS OF BEARINGS:** Bearings are grid bearings of the Universal Transverse Mercator (UTM) Zone 13 North, NAD 1983 (1992) as published for CDOT project NH 0361-070 (US36-EIS). The line between points RTD 101 and A768, described herein, bears S10°07'16"W.
- BASIS OF ELEVATIONS:** Project elevations are based on City and County of Denver Benchmark Number 491A, described herein. NAVD 88 vertical datum is 5253.78 feet. Project elevations were established by differential leveling.
- Elevations were run to an accuracy of +/- 0.035 ft. times the square root of the distance traversed in miles.
- Primary Horizontal Control Tolerance meets C.D.O.T. Class A (+/- 0.07" with 95% certainty).
- Aliquot, Right of Way Markers, Denver Range Points and Property Pin evidence coordinates are project specific and were established with single base RTK, GPS derived elevations.
- To convert UTM Coordinates to Project Coordinates:
(UTM Northing in USFT x 1.000650402) - 14,000,000 =Project Northing
(UTM Easting in USFT x 1.000650402) - 1,000,000 =Project Easting

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.

8. Secondary Horizontal and Vertical Control Tolerance meets C.D.O.T. Class B -Secondary Survey.
(Secondary Horizontal Control defined by Conventional Survey Methods.)
(Secondary Vertical Control defined by a closed loop differential level run.)

Local site settings
Project latitude : 39°44'34.68938"N
Project longitude : 105°00'03.94511"W
Project height : 5241.559sf
Ground scale factor : 1.0006504025
False northing offset : 13990612.660sf
False easting offset : 998933.270sf



SURVEYOR STATEMENT (LAND SURVEY CONTROL DIAGRAM)
I, Michael Frank, a professional land surveyor licensed in the State of Colorado, do hereby state to the Colorado Department of Transportation this Project 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.

PLS No. 38286 Date 2/12/14

AS-BUILT