Colorado Department of Transportation
Region 6 Right of Way
2000 South Holly Street
Denver, CO 80222
Phone: (303) 757-9922 FAX: (303) 757-9053
Survey Unit: SLK PLS II

Sheet Revisions		
Date	Description	Initials
REV 1 01/11/12	Revise Control Point Data	DRT

ZYLSTRA BAKER SURVEYING, INC.
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CIVIL ENGINEERING & SURVEYING

Land Survey Control Diagram
Title Sheet

Project Number:	NCPD 0852-094
Project Location:	C470 / US HIGHWAY 85 INTERCHANGE
	DOUGLAS & ARAPAHOE COUNTY, COLORADO

Project Code:	Last Mod. Date	Subset	Sheet No.
14679	12-17-09	1 of 4	3.01

DEPARTMENT OF TRANSPORTATION
STATE OF COLORADO
LAND SURVEY CONTROL DIAGRAM

C-470 / US HIGHWAY 85 INTERCHANGE
LOCATED IN SECTIONS 5 AND 6, TOWNSHIP 6 SOUTH, RANGE 68 WEST, OF THE 6TH P.M.,
DOUGLAS COUNTY, COLORADO
AND SECTIONS 31 AND 32, TOWNSHIP 5 SOUTH, RANGE 68 WEST OF THE 6TH P.M.,
ARAPAHOE COUNTY , COLORADO

GENERAL NOTES:

1. This Land Survey Control Diagram is to document the recovery and/or establishment of survey control points that will be the basis of future surveys for design purposes, right-of-way acquisitions, monumentation, and/or roadway construction. This Land Survey Control Diagram is not a Monumented Land Survey or Boundary Survey and does not address matters of title. No analysis was made to determine the status or validity of recovered monuments.

2. BASIS OF BEARINGS: All bearings shown herein are Grid bearings of the Colorado coordinate system of 1983, central zone (502), based on the line connecting the W 1/4 corner of Sec. 5 and the C 1/4 corner of Sec. 5, Township 6 South, Range 68 West, of the 6th Principal Meridian being a grid bearing of N 89°28'26" E (2685.49'), as obtained from a global positioning system (GPS) survey based on the Colorado High Accuracy Reference Network (CHARN). Said corners are monumented as shown herein.

3. Project specific coordinates were obtained by multiplying the project's state plane coordinates by 1.0002929980 and then truncating the northing by 1312326.66 and the easting by 2952737.03. Published units are in US survey feet: 1 survey foot = (1200/3937) meters

4. Horizontal Control Tolerances meet the precision requirements of CDOT type A control (+/- 0.07' with 95% certainty).

5. Elevations are GPS derived, using Geoid 2003, based on NGS First Order Class II Bench Mark Q 401 PID KK1465, Published Elevation = 5520.20 Feet. Elevations were further verified by differential leveling between various control points as indicated herein. Leveled elevations were established by electronic differential levels with an accuracy meeting or exceeding 0.035 times the square root of the distance leveled in miles.

6. This Land Survey Control diagram is based on previously established control coordinates as shown on the Control Diagram prepared by Wilson and Company in December 2003, Project No. C-4701-103 Project Code 14222.

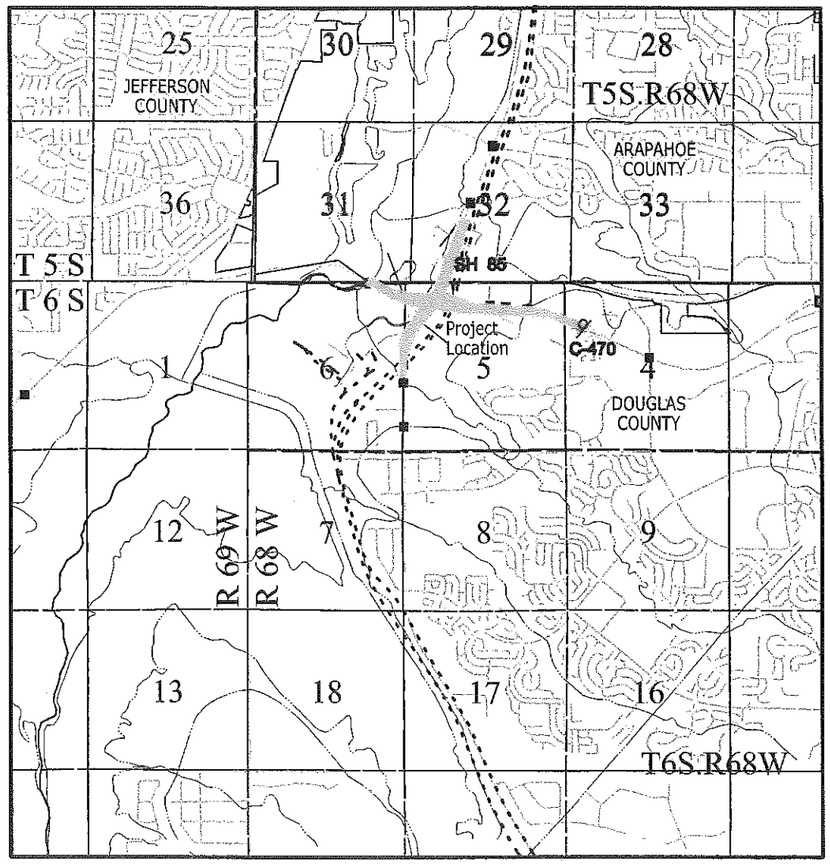
NOTICE: According to Colorado law you must commence any legal action based upon any defect in this survey within three years after you first discover such defect. In no event may any action based upon any defect in this survey be commenced more than ten years from the date of the certification shown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

ZYLSTRA BAKER SURVEYING, INC. NOTES (REV 1)

7. POINT NOS. 21, 22 AND 54 WERE DESTROYED BY CONSTRUCTION IN CDOT PROJECT ES6 0852-103. POINT NO.S 96, 97, 98 AND 99 WERE ESTABLISHED TO PROVIDE REPLACEMENT CONTROL IN THE PROJECT AREA. POINT NO. 78 SCHEDULED TO BE DESTROYED IS STILL INTACT.

8. NGS POINT Q23 WAS HELD IN THE MINIMALLY CONSTRAINED ADJUSTMENT AND EXISTING CONTROL POINTS 51 AND 53 ADDED FOR THE FULLY CONSTRAINED ADJUSTMENT. BASELINES BETWEEN ADJACENT CONTROL POINTS WERE VERIFIED USING A TOTAL STATION. EXISTING PROJECT COORDINATE PARAMETERS WERE USED TO MODIFY AND TRUNCATE NEW COORDINATE VALUES TO MATCH PROJECT COORDINATES.

9. ELEVATIONS WERE ESTABLISHED BY DIFFERENTIAL LEVELS RUN IN A CLOSED LOOP FROM EXISTING PROJECT CONTROL. ALL NEW HORIZONTAL AND VERTICAL CONTROL MEETS OR EXCEEDS THE TOLERANCES FROM THE ORIGINAL CONTROL SURVEY, AS STATED IN NOTES 4 AND 5 ABOVE.

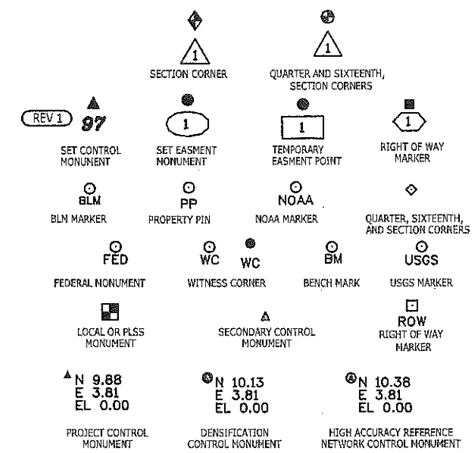


PROJECT LOCATION MAP

N

0' 2500' 5000' 10000'
(Scale: 1" = 5000')

SHEET NO.	INDEX OF SHEETS	
3.01	(1)	Title Sheet
3.02-3.03	(2)	Monument Coordinate Tables
3.04	(1)	Plan Sheets
	(4)	Total Sheets



Note: For a complete listing of symbololgy used within this set of plans, please refer to the M-100-1 Standard Symbols of the Colorado Department of Transportation M&S Standards Publication dated July 2006. Existing features are shown as screened weight (gray scale). Proposed or new features are shown as full weight without screening.

SURVEYOR'S CERTIFICATE FOR REVISION 1 SHOWN HEREON IN BOLD (REV 1)

I, BRIAN L. LEFEBRE, A PROFESSIONAL LAND SURVEYOR DULY REGISTERED IN THE STATE OF COLORADO, BASED UPON MY PROFESSIONAL OPINION, DO HEREBY STATE TO THE COLORADO DEPARTMENT OF TRANSPORTATION THAT THIS SURVEY WAS PERFORMED UNDER MY DIRECTION AND SUPERVISION, SAID SURVEY BEING MADE ON THE GROUND TO THE NORMAL STANDARD OF CARE OF PROFESSIONAL LAND SURVEYORS PRACTICING IN THE STATE OF COLORADO, AND TO THE STANDARDS AS STATED IN THE CDOT SURVEY MANUAL, THAT TO THE BEST OF MY KNOWLEDGE I FIND THE INFORMATION CONTAINED HEREON TO BE CORRECT AND AN ACCURATE REPRESENTATION OF SAID SURVEY.

COLORADO LICENSED
BRIAN L. LEFEBRE
34579
1/11/12
PROFESSIONAL LAND SURVEYOR

BRIAN L. LeFEBRE
PROFESSIONAL LAND SURVEYOR
COLORADO NO. 34579

INDEXING STATEMENT
Deposited This_____Day of_____, 200_, at_____M.,
in Book _____ of the County Surveyor's Land Survey/ Right of Way
Survey at Page(s)_____, Reception No._____

_____
County Surveyor / Deputy County Surveyor

SURVEYOR STATEMENT (LAND SURVEY CONTROL DIAGRAM)
I, Geoffrey F. Stephenson, a professional land surveyor licensed in the State of Colorado, do hereby state to the Colorado Department of Transportation 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.

Geoffrey F. Stephenson PLS No. 23521 Date

Colorado Department of Transportation
Region 6 Right of Way
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Denver, CO 80222
Phone: (303) 757-9922 FAX: (303) 757-9053
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Land Survey Control Diagram
Geodetic Control Tabulation

Project Number: NCPD 0852-094
Project Location: C470 / US HIGHWAY 85 INTERCHANGE
DOUGLAS & ARAPAHOE COUNTY, COLORADO

Project Code:	Last Mod. Date	Subset	Sheet No.
14679	12-17-09	2 of 4	3.02

GEODETIC COORDINATE SUMMARY TABLE (ADJUSTED FIELD DATA) - US FEET

	FAST STATIC GPS SURVEY PROJECT CONTROL POINTS - NAD 83 / 92				COLORADO STATE PLANE CENTRAL ZONE 502			PROJECT COORDINATES			
	POINT NO.	LATITUDE	LONGITUDE	ELLIPSOID HEIGHT	MAPPING ANGLE	NORTHING (FT)	EASTING (FT)	ELEVATION (FT)	POINT NO.	NORTHING (FT)	EASTING (FT)	DESCRIPTIONS
	10***	39° 34' 32.58116" N	105° 01' 50.69855" W	5318.12	0° 17' 45.4"	1634924.89	3132272.11	5372.51	10***	323077.26	180452.84	Set 2" Alum. Cap on #5 rebar, 0.0' above ground, "LPI #10"
	11	39° 34' 27.63995" N	105° 01' 34.57555" W	5350.89	0° 17' 55.6"	1634431.50	3133537.14	5405.35	11	322583.72	181718.23	Set 2" Alum. Cap on #5 rebar, 0.0' above ground, "LPI #11"
	12	39° 34' 24.47576" N	105° 01' 45.25185" W	5331.54	0° 17' 48.9"	1634107.00	3132702.84	5385.93**	12	322259.13	180883.68	Set 2" Alum. Cap on #5 rebar, 0.0' above ground, "LPI #12"
	13	39° 34' 12.25925" N	105° 01' 51.38828" W	5337.37	0° 17' 45.0"	1632868.47	3132228.73	5391.69	13	321020.24	180409.43	Set 2" Alum. Cap on #5 rebar, 0.0' above ground, "LPI #13"
	14	39° 34' 04.92295" N	105° 02' 53.72438" W	5334.68	0° 17' 05.7"	1632101.45	3127351.16	5388.63	14	320253.00	175530.44	Set 2" Alum. Cap on #5 rebar, 0.0' above ground, "LPI #14"
	15	39° 34' 02.71020" N	105° 02' 56.70375" W	5338.25	0° 17' 03.8"	1631876.41	3127118.96	5392.19	15	320027.89	175298.17	Set 2" Alum. Cap on #5 rebar, 0.0' above ground, "LPI #15"
	16	39° 34' 05.16598" N	105° 02' 44.32154" W	5325.59	0° 17' 11.6"	1632129.71	3128087.35	5379.62	16	320281.27	176266.84	Set 2" Alum. Cap on #5 rebar, 0.0' above ground, "LPI #16"
	17	39° 33' 58.11985" N	105° 02' 25.40237" W	5323.54	0° 17' 23.5"	1631424.25	3129572.47	5377.64	17	319575.59	177752.40	Set 2" Alum. Cap on #5 rebar, 0.0' above ground, "LPI #17"
	18	39° 33' 52.96126" N	105° 02' 25.91479" W	5320.17	0° 17' 23.2"	1630902.11	3129534.98	5374.24	18	319053.30	177714.90	Set 2" Alum. Cap on #5 rebar, 0.0' above ground, "LPI #18"
	19	39° 33' 40.32429" N	105° 02' 15.67370" W	5358.20	0° 17' 29.7"	1629627.59	3130343.49	5412.29	19	317778.41	178523.64	Set 2" Alum. Cap on #5 rebar, 0.0' above ground, "LPI #19"
	20	39° 33' 44.31545" N	105° 02' 03.50884" W	5353.72	0° 17' 37.3"	1630036.27	3131294.11	5407.89	20	318187.21	179474.55	Set 2" Alum. Cap on #5 rebar, 0.0' above ground, "LPI #20"
REV 1	~~21~~	~~39° 33' 48.91343" N~~	~~105° 01' 56.74329" W~~	~~5390.92~~	~~0° 17' 45.4"~~	~~1630506.63~~	~~3132291.43~~	~~5445.18~~	~~21~~	~~318657.71~~	~~180472.16~~	~~Set 2" Alum. Cap on #5 rebar, 0.0' above ground, "LPI #21"~~
REV 1	~~22~~	~~39° 33' 57.76573" N~~	~~105° 01' 58.72231" W~~	~~5337.57~~	~~0° 17' 40.4"~~	~~1631399.07~~	~~3131661.89~~	~~5391.80**~~	~~22~~	~~319550.41~~	~~179842.43~~	~~Set 2" Alum. Cap on #5 rebar, 0.0' above ground, "LPI #22"~~
	23	39° 33' 58.79196" N	105° 01' 50.62132" W	5341.42	0° 17' 45.5"	1631506.18	3132295.82	5395.69**	23	319657.55	180476.55	Set 2" Alum. Cap on #5 rebar, 0.0' above ground, "LPI #23"
	24	39° 33' 50.86026" N	105° 01' 32.14535" W	5442.90	0° 17' 57.1"	1630711.17	3133746.86	5497.16	24	318862.31	181928.01	Set 2" Alum. Cap on #5 rebar, 0.0' above ground, "LPI #24"
	25	39° 33' 48.90060" N	105° 01' 12.11593" W	5499.88	0° 18' 09.8"	1630521.14	3135316.45	5554.23	25	318672.22	183498.06	Set 2" Alum. Cap on #5 rebar, 0.0' above ground, "LPI #25"
	26	39° 33' 54.93201" N	105° 01' 02.30573" W	5476.31	0° 18' 15.9"	1631135.46	3136081.47	5530.63	26	319286.72	184263.31	Set 2" Alum. Cap on #5 rebar, 0.0' above ground, "LPI #26"
	27	39° 33' 40.87037" N	105° 01' 04.88812" W	5513.88	0° 18' 14.3"	1629711.65	3135886.79	5568.20	27	317862.49	184068.57	Set 2" Alum. Cap on #5 rebar, 0.0' above ground, "LPI #27"
	28	39° 33' 19.66433" N	105° 02' 13.19848" W	5430.09	0° 17' 31.2"	1627538.23	3130547.99	5484.14	28	315688.44	178728.20	Set 2" Alum. Cap on #5 rebar, 0.0' above ground, "LPI #28"
	29***	39° 33' 16.06735" N	105° 02' 23.56664" W	5441.35	0° 17' 24.7"	1627170.17	3129737.78	5495.35	29***	315320.27	177917.76	Set 2" Alum. Cap on #5 rebar, 0.0' above ground, "LPI #29"
	30***	39° 33' 11.77624" N	105° 02' 09.59949" W	5468.37	0° 17' 33.5"	1626741.57	3130833.94	5522.42	30***	314891.54	179014.24	Set 2" Alum. Cap on #5 rebar, 0.0' above ground, "LPI #30"
	31	39° 33' 40.65468" N	105° 00' 42.56165" W	5487.48	0° 18' 28.4"	1629699.16	3137635.41	5541.95	31	317850.00	185817.70	Set 2" Alum. Cap on #5 rebar, 0.0' above ground, "LPI #31"
	50	39° 33' 58.55346" N	105° 01' 47.75960" W	5346.80	0° 17' 47.3"	1631483.20	3132520.05	5401.07**	50	319634.57	180700.84	Set 2" Alum. Cap on #5 rebar, 0.0' above ground, "LPI #50"
	51	39° 34' 00.92463" N	105° 01' 53.69451" W	5342.23	0° 17' 43.5"	1631720.71	3132054.05	5396.49**	51	319872.15	180234.71	Set 2" Alum. Cap on #5 rebar, 0.0' above ground, "LPI #51"
	52	39° 33' 52.17165" N	105° 02' 15.48683" W	5323.65	0° 17' 29.8"	1630826.36	3130352.02	5377.75	52	318977.53	178532.18	Set 2" Alum. Cap on #5 rebar, 0.0' above ground, "LPI #52"
	53	39° 33' 49.62244" N	105° 02' 00.71795" W	5360.51	0° 17' 39.1"	1630574.35	3131509.92	5414.71**	53	318725.44	179690.42	Set 2" Alum. Cap on #5 rebar, 0.0' above ground, "LPI #53"
REV 1	~~54~~	~~39° 33' 50.62327" N~~	~~105° 01' 51.91369" W~~	~~5356.57~~	~~0° 17' 44.7"~~	~~1630679.16~~	~~3132198.88~~	~~5410.80**~~	~~54~~	~~318830.29~~	~~180379.58~~	~~Set 2" Alum. Cap on #5 rebar, 0.0' above ground, "LPI #54"~~
	55	39° 33' 53.29753" N	105° 02' 03.75629" W	5333.89	0° 17' 37.2"	1630944.96	3131270.08	5388.08**	55	319096.17	179450.50	Set 2" Alum. Cap on #5 rebar, 0.0' above ground, "LPI #55"
	56	39° 33' 26.51230" N	105° 02' 10.97660" W	5393.11	0° 17' 32.6"	1628231.99	3130718.47	5447.21**	56	316382.40	178898.74	Set 2" Alum. Cap on #5 rebar, 0.0' above ground, "LPI #56"
	70***	39° 33' 53.81920" N	105° 04' 03.21758" W	5454.86	0° 16' 21.8"	1630951.51	3121914.64	5508.29**	70***	319102.71	170092.33	Fnd. 3.5" Alum. Cap, 0.0' up, "Corps of Eng. PLS 28656"
	73***	39° 34' 03.33885" N	105° 03' 09.75101" W	5351.98	0° 16' 55.6"	1631934.96	3126096.93	5405.74**	73***	320086.46	174275.85	Fnd. 3.25" CDOT Alum. Cap, in Range Box "Proj. No. 10305 PLS 10734"
	78	39° 33' 48.70676" N	105° 01' 22.06998" W	5478.15	0° 18' 03.5"	1630497.42	3134537.03	5532.40**	78	318648.49	182718.41	Fnd. 3.25" CDOT Alum. Cap, 0.0' above ground, "Proj. No. 10305 PLS 10734"
	90	39° 33' 53.79547" N	105° 01' 50.69988" W	5382.91	0° 17' 45.4"	1631000.61	3132292.28	5437.11	90	319151.83	180473.01	Fnd. 3.25" CDOT Alum. Cap, 0.0' above ground, "Proj. No. 10305 PLS 10734"
	91	39° 34' 11.27882" N	105° 01' 49.01510" W	5350.78	0° 17' 46.5"	1632770.23	3132415.07	5404.53**	91	320921.97	180595.83	Fnd. 3.25" CDOT Alum. Cap, 0.0' above ground, "Proj. No. 10305 PLS 10734"
	92	39° 34' 05.71059" N	105° 01' 47.12912" W	5377.16	0° 17' 47.7"	1632207.61	3132565.67	5431.44	92	320359.18	180746.48	Fnd. 3.25" CDOT Alum. Cap, 0.0' above ground, "Proj. No. 10305 PLS 10734"
REV 1	**96**	**39° 34' 07.84503" N**	**105° 01' 52.59472" W**	**5349.65**	**0° 17' 44.2"**	**1632421.36**	**3132136.56**	**5403.80**	**96**	**320572.99**	**180317.24**	**Set CDOT Type 2 Monument, "STATE HWY 85 2011 CP96"**
REV 1	**97**	**39° 33' 50.71815" N**	**105° 01' 55.08629" W**	**5346.73**	**0° 17' 42.7"**	**1630687.48**	**3131950.38**	**5400.91**	**97**	**318838.61**	**180131.01**	**Set CDOT Type 2 Monument, "STATE HWY 470 2011 CP97"**
REV 1	**98**	**39° 33' 48.76862" N**	**105° 01' 50.88725" W**	**5390.59**	**0° 17' 45.3"**	**1630491.92**	**3132280.23**	**5444.79**	**98**	**318642.99**	**180460.96**	**Set CDOT Type 2 Monument, "STATE HWY 470 2011 CP98"**
REV 1	**99**	**39° 33' 48.49888" N**	**105° 01' 43.84083" W**	**5418.24**	**0° 17' 49.8"**	**1630467.49**	**3132832.20**	**5472.45**	**99**	**318618.55**	**181013.08**	**Set CDOT Type 2 Monument, "STATE HWY 470 2011 CP99"**

NGS CONTROL POINTS USED IN CONSTRAINING FAST STATIC GPS SURVEY - NAD 83 / 92					COLORADO STATE PLANE CENTRAL ZONE						
					ZONE 502	ZONE 502		PROJECT COORDINATES			
POINT NO.	LATITUDE	LONGITUDE	ELLIPSOID HEIGHT	MAPPING ANGLE	NORTHING (FT)	EASTING (FT)	ELEVATION (FT)	POINT NO.	NORTHING (FT)	EASTING (FT)	DESCRIPTIONS
Q 23 *	39° 34' 36.44068" N	105° 01' 36.49178" W	5340.41	0° 17' 54.4"	1635321.16	3133382.46	5394.63*	Q 23 *	323473.65	181563.51	NGS PID KK0556
Q 401	39° 32' 57.06306" N	105° 05' 11.35436" W	5467.29	0° 15' 38.9"	1625184.15	3116604.95	5520.30	Q 401	313333.67	164781.08	NGS PID KK1465
R 409	39° 35' 44.30090" N	105° 05' 27.73194" W	5510.86	0° 15' 28.5"	1642099.30	3115245.90	5564.19	R 409	330253.77	163421.63	NGS PID KK1471

NGS CORS CONTROL STATIONS TIED DURING THE FAST STATIC GPS SURVEY - NAD83 (CORS) 2002				
POINT NO.	LATITUDE	LONGITUDE	ELLIPSOID HEIGHT	DESCRIPTION
P041	39° 56' 58.15000" N	105° 11' 39.31685" W	5674.88	P041- MARSHALL FIELD CORS ARP PID-DG7429
PLTC	40° 10' 53.71231" N	104° 43' 33.33347" W	4933.49	PLTC - PLATTEVILLE CORS ARP PID-AF9517

* Published elevation not held see warning on the NGS data sheet
** Elevation established from differential levels, see note 5 on sheet 3.01
*** Not shown on sheet 3.04

PROJECT COORDINATE PARAMETERS

Geodetic coordinates are based on NAD 83(1992)
Orthometric Heights are shown in NAVD 88
State Plane coordinates are Colorado Central Zone (502)
Units are in US Survey Feet (sft)
Project (Ground) coordinates are Modified State Plane
Combined Project factor = 0.999707088
Combined Project Factor Reciprocal = 1.0002929980
Truncation applied to State Plane Coordinates
Northing Reduction = 1312326.66
Easting Reduction = 2952737.03

The reason for the odd truncation is in order to match previous establised project coordinates.

CONVERSION EXAMPLE OF STATE PLANE COORDINATES TO PROJECT COORDINATES

State Plane Northing x 1.0002929980 - 1312326.66 = Project Northing (sft)
State Plane Easting x 1.0002929980 - 2952737.03 = Project Easting (sft)

Colorado Department of Transportation
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REV 1

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Project Code:	Last Mod. Date	Subset	Sheet No.
14679	12-17-09	3 of 4	3.03

FOUND R.O.W. MONUMENT COORDINATE TABLE - PROJECT COORDINATES

POINT NO.	NORTHING (FT)	EASTING (FT)	DESCRIPTION
300	318236.75	179331.93	1.5" Alum. Cap, 0.1' below asphalt, illegible markings
301	318277.84	179360.89	1.5" CDOT Alum. Cap, 0.1' below asphalt, PLS 17477"
302	318166.72	179460.11	1.5" CDOT Alum. Cap, 0.0' below asphalt," PLS 17477"
303	318076.69	179396.47	1.5" CDOT Alum. Cap, 0.0' below ground, "PLS 17477"
304	318002.31	179654.81	1.5" CDOT Alum. Cap, 0.0' below ground," PLS 17477"
305	317573.09	178964.10	1.5" CDOT Alum. Cap, 0.0' below ground, "PLS 17477"
306	317403.14	178960.82	1.5" CDOT Alum. Cap, 0.0' below asphalt, "PLS 17477"
307	317998.17	179166.95	3.25" CDOT Alum. Cap, 0.0' below ground, "Proj. No. 12255 PLS No. 22103"
308	317751.78	179345.63	1.5" CDOT Alum. Cap, 0.0' below ground, "PLS 17477"
309	318073.31	179712.45	3" CDOH Brass Cap in concrete, 1.5' above ground, "ROW MARKER FAPN 130-2"
310	318376.44	179180.91	3.5" Brass Cap, 0.0' below ground, "Corps of Engineers 1990 PLS 28656"
311	318403.08	179138.82	3" CDOH Brass Cap in concrete, 0.2' below ground "ROW MARKER FAPN 130-2"
312	318749.30	179436.46	3.5" Brass Cap, 0.0' below ground, "Corps of Engineers 1995 PLS 28656"
316	320018.97	175834.82	3.5" Brass Cap, 0.0' below ground, "Corps of Engineers 1995 PLS 28656"
317	319699.95	177163.30	3.5" Brass Cap, 0.0' below ground, "Corps of Engineers 1995 PLS 28656"
318	319419.88	177561.43	3.5" Brass Cap, 0.0' below ground, "Corps of Engineers 1995 PLS 28656"
319	319244.42	177823.56	3.5" Brass Cap, 0.0' below ground, "Corps of Engineers 1995 PLS 28656"
320	319088.88	178199.71	3.5" Brass Cap, 0.0' below ground, "Corps of Engineers 1995 PLS 28656"
321	319027.96	178509.09	3.5" CDOT Alum. Cap, 0.4' below ground, "Proj. No 12255 PLS No. 22103"
322	319002.04	178666.91	3.5" Brass Cap, 0.0' below ground, "Corps of Engineers 1995 PLS 28656"
323	318822.05	178992.44	3.5" Brass Cap, 0.0' below ground, "Corps of Engineers 1995 PLS 28656"
324	319968.23	176525.11	3.5" Brass Cap, 0.0' below ground, "Corps of Engineers 1995 PLS 28656"
325	320317.72	175808.26	3.5" Brass Cap, 0.0' below ground, "Corps of Engineers 1995 PLS 28656"
326	320259.96	176595.33	3.5" Brass Cap, 0.0' below ground, "Corps of Engineers 1995 PLS 28656"
327	319953.94	177322.91	3.5" Brass Cap, 0.0' below ground, "Corps of Engineers 1995 PLS 28656"
328	319504.51	177972.99	3.5" Brass Cap , 0.0' below ground, "Corps of Engineers 1995 PLS 28656"
329	319378.49	178277.87	3.5" Brass Cap, 0.0' below ground, "Corps of Engineers 1995 PLS 28656"
330	319257.41	178961.78	3.5" Brass Cap, 0.0' below ground, "Corps of Engineers 1995 PLS 28656"
331	319305.70	179502.77	3.5" Brass Cap, 0.0' below ground, "Corps of Engineers 1995 PLS 28656"
332	319269.69	179724.82	3.5" Brass Cap, 0.0' below ground, "Corps of Engineers 1995 PLS 28656"
333	319598.83	179934.56	3.5" Brass Cap, 0.0' below ground, "Corps of Engineers" (no point number or pls no. on cap)
400	322806.21	181157.51	3.25" CDOT Alum. Cap, 2.0' above ground " PLS 27259 PROJ. NH 0853-038"
401	322549.97	181044.79	3.25" CDOT Alum. Cap , 0.0' below ground, "PLS 27259 PROJ. NH 0853-038"
402	322325.27	180960.78	3.25" CDOT Alum. Cap , 0.0' below ground, "PLS 27259 PROJ. NH 0853-038"
405	322144.95	180834.68	3.25" CDOT Alum. Cap, 0.5' below ground, "PLS 27259 PROJ. NH 0853-038"
406	322055.50	180845.83	3.25" CDOT Alum. Cap , 0.0' below ground, "PLS 27259 PROJ. NH 0853-038"
407	321915.45	180789.30	3.25" CDOT Alum. Cap, 0.0' below ground, "W.C. PLS 27259 PROJ. NH 0853-038"
408	321355.24	180572.56	3.25" CDOT Alum. Cap, 0.0' below ground, "PLS 27259 PROJ. NH 0853-038"
409	320944.60	180414.82	3.25" CDOT Alum. Cap, 0.0' below ground, "PLS 27259 PROJ. NH 0853-038"
410	320452.32	180235.80	3.25" CDOT Alum. Cap, 0.0' below ground, "PLS 27259 PROJ. NH 0853-038"
411	319670.05	179963.43	3.5" Brass Cap, 0.0' below ground, "Corps of Engineers PLS 28656"
1081	319268.25	179733.00	3.5" Brass Cap, 0.3' below ground, "Corps of Engineers PLS 28656"
1208	317909.46	186015.55	3.25" CDOT Alum. Cap, 0.0' above ground, "PLS 10734 ROW PROJECT NO 10305 PT 585"
1209	317860.56	186155.68	3.25" CDOT Alum. Cap, 0.1' below ground, "PLS 10734 ROW PROJECT NO 10305 PT 532"
1213	317799.52	186667.31	3.25" CDOT Alum. Cap, 0.1' below ground, "PLS 10734 ROW PROJECT NO 10305 PT 533"
1217	317720.70	187030.38	3.25" CDOT Alum. Cap, 0.1' below ground, "PLS 10734 ROW PROJECT NO 10305 PT 560"
1218	317741.70	187030.15	3.25" CDOT Alum. Cap, 0.1' below ground, "PLS 10734 ROW PROJECT NO 10305 PT 559"
1220	317693.95	187098.39	3.25" CDOT Alum. Cap, 0.1' below ground, "PLS 10734 ROW PROJECT NO 10305 PT 536"
1221	317675.94	187092.02	3.25" CDOT Alum. Cap, 0.1' below ground, "PLS 10734 ROW PROJECT NO 10305 PT 537"
1222	317638.07	187110.38	3.25" CDOT Alum. Cap, 0.1' below ground, "PLS 10734 ROW PROJECT NO 10305 PT 537"

FOUND R.O.W. MONUMENT COORDINATE TABLE - PROJECT COORDINATES

POINT NO.	NORTHING (FT)	EASTING (FT)	DESCRIPTION
1223	317539.59	187389.92	3.25" CDOT Alum. Cap, 0.1' below ground, "PLS 10734 ROW PROJECT NO 10305 PT 539"
1225*	317192.43	187980.75	3.25" CDOT Alum. Cap, 0.1' below ground, " PLS 10734 ROW Project #10305 PT #540"
1226*	317137.97	188157.95	3.25" CDOT Alum. Cap, 0.1' below ground, " PLS 10734 ROW Project #10305 PT #541"
1233	317954.40	185887.59	3.25" CDOT Alum. Cap, 0.1' below ground, " PLS 10734 ROW Project #10305 PT #582"
1236	318013.97	185908.39	3.25" CDOT Alum. Cap, 0.1' below ground, " PLS 10734 ROW Project #10305 PT #583"
1302	317972.73	184878.04	3.25" CDOT Alum. Cap, 0.1' below ground, " PLS 10734 ROW Project #10305 PT #527"
1303	317667.83	185475.54	3.25" CDOT Alum. Cap, 0.0' below ground, " PLS 10734 ROW Project #10305 PT #525"
1304	317656.43	185632.94	3.25" CDOT Alum. Cap, 0.0' below ground, " PLS 10734 ROW Project #10305 PT #524"
1305	317644.91	185656.67	3.25" CDOT Alum. Cap, 0.1' below ground, " PLS 10734 ROW Project #10305 PT #581 "
1306	317585.35	185627.52	3.25" CDOT Alum. Cap, 0.2' below ground, " PLS 10734 ROW Project #10305 PT #580 "
1307	317527.59	185745.19	3.25" CDOT Alum. Cap, 0.0' below ground, " PLS 10734 ROW Project #10305 PT #579"
1308	317587.04	185774.32	3.25" CDOT Alum. Cap, 0.0' below ground, " PLS 10734 ROW Project #10305 PT #578"
1309	317563.79	185821.66	3.25" CDOT Alum. Cap, 0.0' below ground, " PLS 10734 ROW Project #10305 PT #523"
1310	317470.61	185903.70	3.25" CDOT Alum. Cap, 0.0' below ground, " PLS 10734 ROW Project #10305 PT #522"
1311	317401.97	186037.83	3.25" CDOT Alum. Cap, 0.0' below ground, " PLS 10734 ROW Project #10305 PT #521"
1312	317031.99	186388.61	3.25" CDOT Alum. Cap, 0.0' below ground, " PLS 10734 ROW Project #10305 PT #519"
1313	316873.39	186757.84	3.25" CDOT Alum. Cap, 0.3' below ground, " PLS 10734 ROW Project #10305 PT #517"

* NOT SHOWN ON LAND SURVEY CONTROL DIAGRAM PLAN SHEET 3.04

FOUND ALIQUOT MONUMENT COORDINATE TABLE - PROJECT COORDINATES

POINT NO.	NORTHING (FT)	EASTING (FT)	LOCATION	DESCRIPTION
200	316660.76	178946.08	E 1/4 6, T.6 S. R. 68 W.	3.25" BLM Brass Cap, 0.25' above ground, See Sheet 3.04
201	316685.42	181631.46	C 1/4 5, T.6 S. R. 68 W.	3.25" BLM Brass Cap, 1.0' above ground, See Sheet 3.04
202	319604.83	181793.58	S 1/4 32, T.5 S. R. 68 W.	2.5" Alum. Cap, in range box, See Sheet 3.04
203	319596.14	179159.49	SE COR. 31 T.5 S. R. 68 W.	3.25" CDOT Alum. Cap, in range box, See Sheet 3.04
204	322247.46	181603.94	C 1/4 32, T.5 S. R. 68 W.	3" DWD Brass Cap, 0.1' below ground, See Sheet 3.04
205	324867.28	179188.66	NE COR. 31 T.5 S. R. 68 W.	3.25" CDOT Alum. Cap, in range box, See Sheet 3.04
206	319613.95	184242.64	NW COR. 4 T.5 S. R. 68 W.	1.5" Brass Cap, 0.20' above ground, No markings on cap
207	316708.79	184272.49	E 1/4 5, T.6 S. R. 68 W.	3.25" Alum. Cap, 0.35' below ground, See Sheet 3.04
208*	316724.25	186935.92	C 1/4 4, T.6 S. R. 68 W.	3.25" CDOT Alum. Cap, 0.60' below ground, "PLS 10734"
209*	324917.90	184452.20	NE COR. 32 T.5 S. R. 68 W.	3.25" Alum. Cap, 0.95' below ground, J.F. Sato & Assoc. "2003 PLS 35585"
210	324890.66	181814.75	N 1/4 32, T.5 S. R. 68 W.	2.5" Alum. Cap, 0.50' below ground, See Sheet 3.04

* NOT SHOWN ON LAND SURVEY CONTROL DIAGRAM PLAN SHEET 3.04

FOUND BOUNDARY EVIDENCE MONUMENT COORDINATE TABLE PROJECT COORDINATES

POINT NO.	NORTHING (FT)	EASTING (FT)	DESCRIPTION
314	319598.72	179934.31	1.25" Yellow Plastic Cap on #4 rebar, 0.0' above ground, "PLS 27011"
315	317988.26	178990.84	#5 Rebar, no cap, 0.1' above ground
333	319307.43	179488.18	1.25" Yellow Plastic Cap, 0.0' above ground, "Miller E & S PLS 27011
404	322288.81	180939.86	#4 rebar, no cap, 0.2' below the ground
412	319268.01	179732.39	1.25" Yellow Plastic Cap on #4 rebar, 0.0' above ground, "PLS 27011"
413	318643.37	180348.50	1.25" Yellow Plastic Cap on #4 rebar, 0.0' above ground, "PLS 19003"
414	319152.56	180481.80	1.25" Yellow Plastic Cap on #4 rebar, 0.1' above ground, "PLS 19003"
416	319006.09	181134.57	1" Brass tag & nail, on fence rail 3' above ground, "PLS 19003"
1301	318087.32	184576.62	1.5" Yellow Plastic Cap, 0.0' above ground, "LS 17650"

NOTE: COORDINATES OBTAINED BY GPS RTK DUAL BASE AND CONVENTIONAL SURVEY METHODS.

Colorado Department of Transportation
Region 6 Right of Way
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Survey Unit: SLK PLS II

Sheet Revisions		
Date	Description	Initials
01/11/12	Revise Control Point Data	JRT

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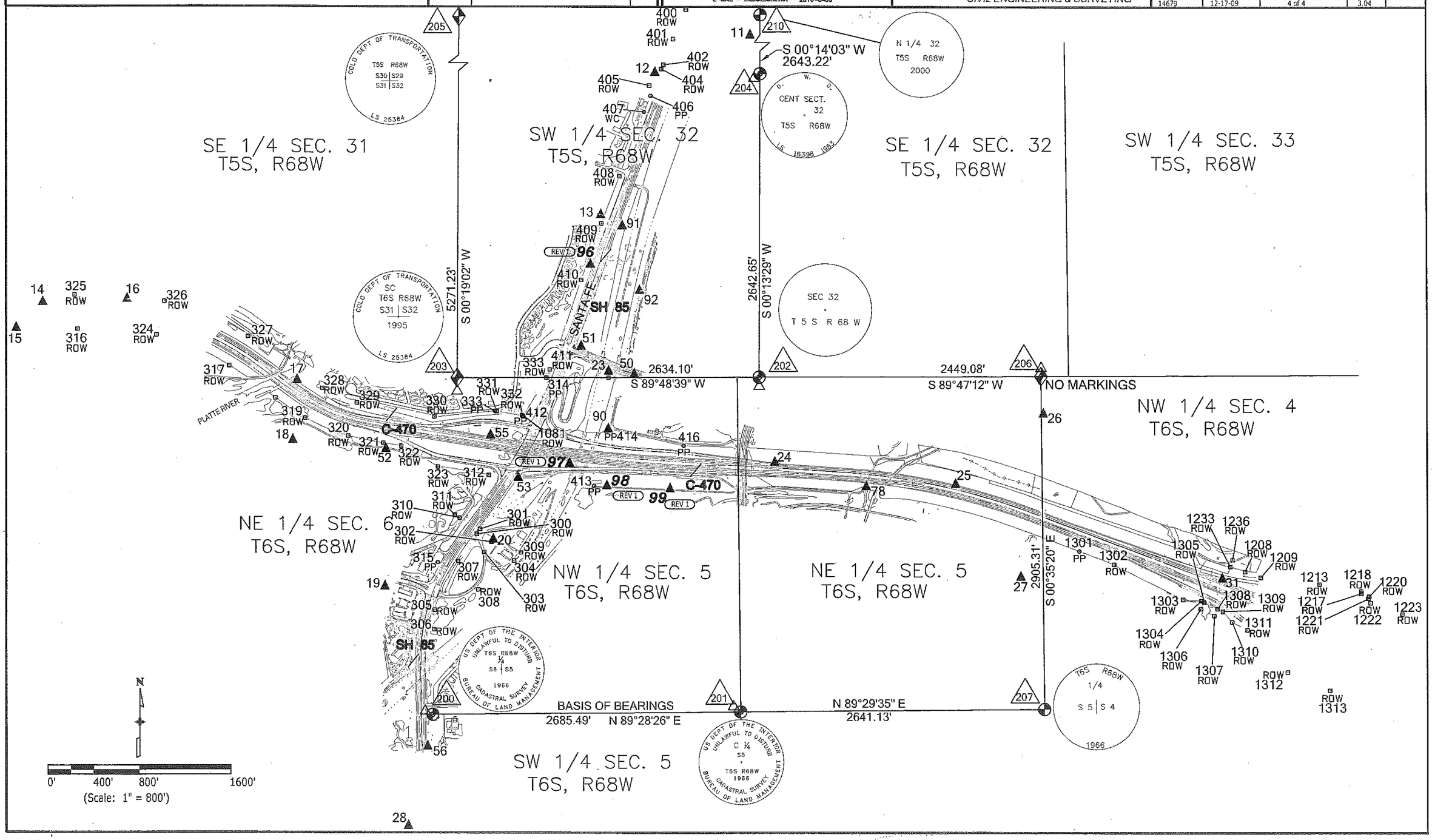
Land Survey Control Diagram			
Plan Sheet			
Project Number:	NCPD 0852-094		
Project Location:	C470 / US HIGHWAY 85 INTERCHANGE		
DOUGLAS & ARAPAHOE COUNTY, COLORADO			
Project Code:	Last Mod. Date	Subset	Sheet No.
14679	12-17-09	4 of 4	3.04