



Region 6
Address: 2000 South Holly Street
Denver, CO 80222
Phone: (303) 757-8963 FAX: (303) 757-9053

Right of Way Plans Unit:

Sheet Revisions		Sheet Revisions		Sheet Revisions	

Right of Way Plans				
Monumentation Sheet				
Project Number: IM 0761-180				
Project Location: I-76 - US 6 to US 85				
Project Location:				
Project Code	Last Mod. Date	Subst Sheets	Sheet No.	Total No. of Sheets
12967	10/3/00	1 of 2	3	2

DEPARTMENT OF TRANSPORTATION - STATE OF COLORADO
SURVEY CONTROL DIAGRAM
CDOT PROJECT IM 0761-180/PROJECT CODE 12967
I-76 - US 6 TO US 85
SECTIONS 16,17,20 & 21, TOWNSHIP 2 SOUTH, RANGE 67 WEST,
6th PRINCIPAL MERIDIAN, ADAMS COUNTY, COLORADO

SURVEY NOTES

- THE VERTICAL POSITIONS OF THE CONTROL POINTS WERE ESTABLISHED BY METHODS OF DIFFERENTIAL LEVELING PERFORMED BY ARROW LAND SURVEYING, INC. THIS SURVEY IS A COOPERATIVE EFFORT BETWEEN ZYLSTRA BAKER SURVEYING, INC AND ARROW LAND SURVEYING INC.
- THE HORIZONTAL POSITIONS SHOWN HEREON WERE ESTABLISHED BY METHODS OF A FAST STATIC GLOBAL POSITIONING SYSTEM REFERENCING CONTROL POINTS LISTED IN THE NATIONAL GEODETIC SURVEY BASE "J 260" AND "RIVERDALE". THE AFOREMENTIONED SURVEY CONTROL POINTS ARE RELATIVE TO THE NORTH AMERICAN DATUM OF 1983, 1992 ADJUSTMENT AS MAINTAINED BY NATIONAL GEODETIC SURVEY.
- NO GUARANTEE AS TO THE ACCURACY OF THE INFORMATION CONTAINED ON THE ATTACHED DRAWING IS EITHER STATED OR IMPLIED UNLESS THIS COPY BEARS AN ORIGINAL SIGNATURE OF THE PROFESSIONAL LAND SURVEYOR NAMED HEREON.
- 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.
- ALL CONTROL MONUMENTS, SET BY ARROW LAND SURVEYING, INC. ARE STANDARD CDOT TYPE 2 CONTROL MONUMENTS; 3 1/4" ALUMINUM CONTROL MONUMENT CAP ON A 3' x 3/4" DIAMETER FINNED ALUMINUM SECURITY ROD ON A 3' x 3/4" DIAMETER SMOOTH ALUMINUM ROD.
- BASIS OF ELEVATIONS: THE ELEVATIONS CONTAINED HEREIN ARE BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 TYING TO ADAMS COUNTY BENCHMARK "BM 95.0206", A 3 1/4" ALUMINUM BENCHMARK DISK IN A MONUMENT BOX LOCATED AT THE NORTHEAST CORNER OF THE 96TH STREET UNDERPASS OF INTERSTATE 76.
- BASIS OF COORDINATES: THE NORTH AMERICAN DATUM OF 1983, 1992 ADJUSTMENT COLORADO NORTH ZONE GRID COORDINATE VALUES WERE MODIFIED FROM THEIR SEA LEVEL VALUES TO GROUND VALUES WITH THE FOLLOWING PARAMETERS:

MEAN ELLIPSOID RADIUS= 6378137m
MEAN PROJECT ELLIPSOID HEIGHT= 1538.071m
GEOID99 HEIGHT AT CENTER OF PROJECT= -17.494m
MEAN PROJECT ELEVATION= 1555.565m
MEAN SEA LEVEL FACTOR= 0.999756169285
MEAN GRID FACTOR= 0.9999789909
COMBINED SCALE FACTOR= 0.999735165308
FINAL FACTOR(1/CSF)= 1.00026490485
FINAL FACTOR(CONVERSION TO FEET)= 3.28170244199
- BASIS OF BEARINGS: THE LINE BETWEEN CONTROL POINT NO. 1 (A 3 1/4" ALUMINUM CAP ON A TYPE 2 CDOT MONUMENT STAMPED "CP 1 2000 MILEPOST 1.09065") AND CONTROL POINT NO. 19 (A 3 1/4" ALUMINUM CAP ON A TYPE 2 CDOT MONUMENT STAMPED "CP 19 2000 MILEPOST 1.099075") WAS FOUND TO BEAR N 36°00'16" E BY GLOBAL POSITIONING SYSTEM (G.P.S.) SURVEY PERFORMED IN JANUARY, 2000 BY ZYLSTRA BAKER SURVEYING, INC.
- THIS SURVEY IS NOT A BOUNDARY SURVEY OR RIGHT-OF-WAY SURVEY AND IS PREPARED FOR CDOT PURPOSES ONLY.

SURVEYOR'S CERTIFICATE

THE CONTROL AND MONUMENTATION SHEETS WERE PREPARED AND THE CONTROL SURVEY AND MONUMENTATION WAS DONE UNDER MY SUPERVISION AND CHECKING.

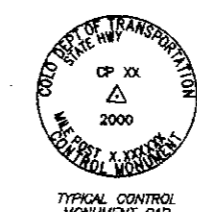
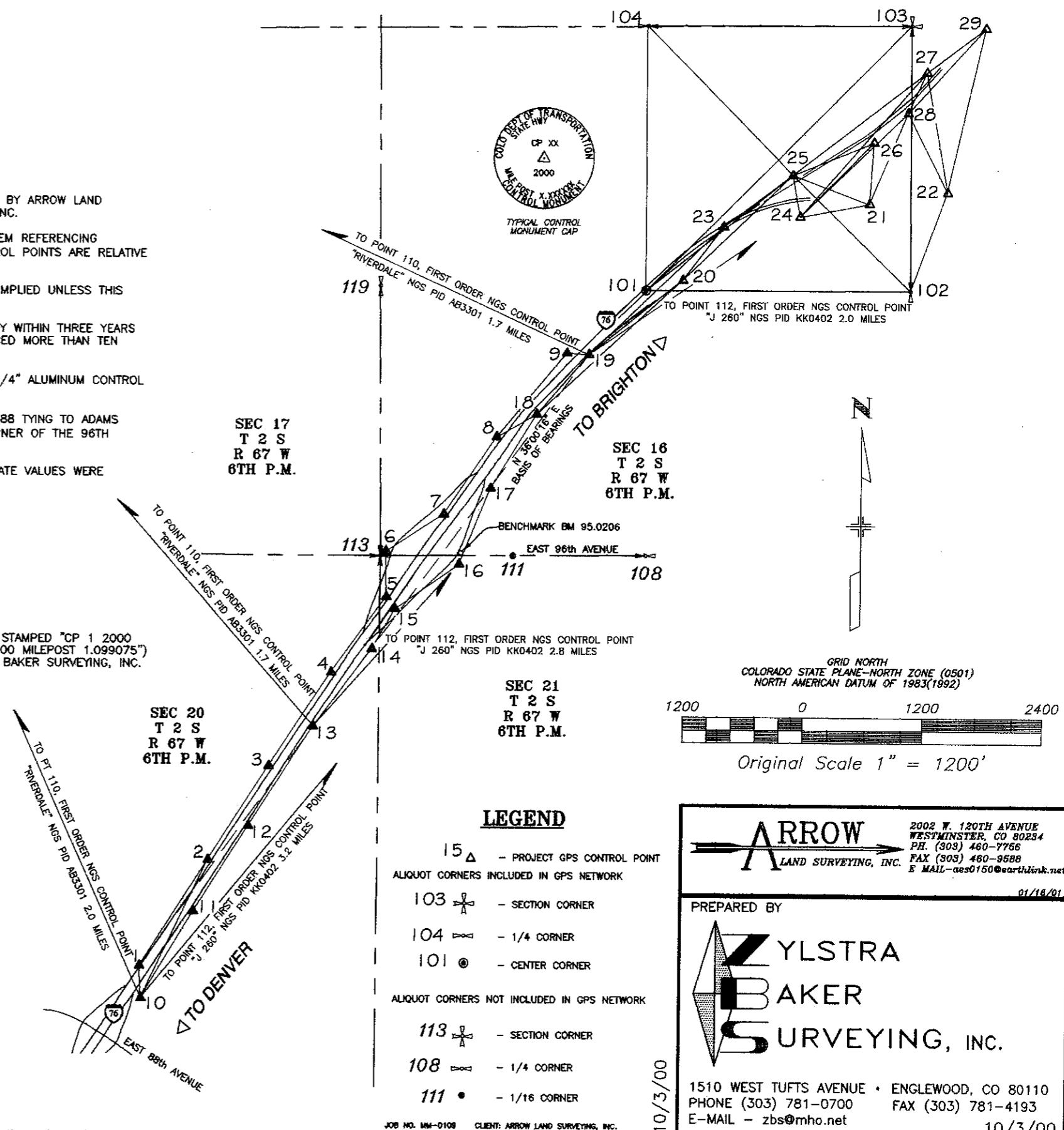
NAME John D. Kriesels, S. NO. 19109
DATE 07/12/01



CLERK AND RECORDER'S CERTIFICATE

ACCEPTED FOR FILING IN THE OFFICE OF THE CLERK AND RECORDER OF THE COUNTY OF ADAMS, STATE OF COLORADO, THIS DAY OF 20 AT FILE MAP RECEPTION NO.

CLERK AND RECORDER



LEGEND

- 15 Δ - PROJECT GPS CONTROL POINT
- ALIQUOT CORNERS INCLUDED IN GPS NETWORK
- 103 ⊕ - SECTION CORNER
- 104 ⊕ - 1/4 CORNER
- 101 ⊙ - CENTER CORNER
- ALIQUOT CORNERS NOT INCLUDED IN GPS NETWORK
- 113 ⊕ - SECTION CORNER
- 108 ⊕ - 1/4 CORNER
- 111 • - 1/16 CORNER

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PREPARED BY

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10/3/00



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12967	10/3/00	2 of 2	3A	2					

DEPARTMENT OF TRANSPORTATION - STATE OF COLORADO
SURVEY CONTROL TABULATION

CDOT PROJECT IM 0761-180/PROJECT CODE 12967

I-76 - US 6 TO US 85

SECTIONS 16,17,20 & 21, TOWNSHIP 2 SOUTH, RANGE 67 WEST,
6th PRINCIPAL MERIDIAN, ADAMS COUNTY, COLORADO

TABULATION OF PRIMARY NETWORK CONTROL POINTS

MARK ID	NAD 83/92 GEODETIC COORDINATES		COLORADO NORTH STATE PLANE		CONVERGENCE	SCALE	ELLIPSOID HEIGHT (m)	POINT	MODIFIED STATE PLANE COORDINATES			MONUMENT DESCRIPTION
	LATITUDE (N)	LONGITUDE (W)	NORTHING (m)	EASTING (m)					NORTHING (ft)	EASTING (ft)	ELEV (ft)	
1	39°51'34.48536"N	104°54'41.79793"W	363396.555	964748.087	0°22'48.6"	0.999980010	1539.969	1	1192559.36	3166016.09	5109.63	SET CDOT TYPE II MONUMENT WITH 3 1/4 INCH ALUMINUM CAP STAMPED "CP 1 2000 MILEPOST 1.090065"
2	39°51'44.85622"N	104°54'32.96846"W	363717.797	964955.795	0°22'54.3"	0.999979670	1539.077	2	1192613.58	3166697.79	5106.78	SET CDOT TYPE II MONUMENT WITH 3 1/4 INCH ALUMINUM CAP STAMPED "CP 2 2000 MILEPOST 1.091066"
3	39°51'54.06916"N	104°54'25.14905"W	364003.173	965139.739	0°22'59.4"	0.999979371	1538.444	3	1194550.10	3167301.44	5104.70	SET CDOT TYPE II MONUMENT WITH 3 1/4 INCH ALUMINUM CAP STAMPED "CP 3 2000 MILEPOST 1.093067"
4	39°52'03.26696"N	104°54'17.20360"W	364268.107	965326.867	0°23'04.5"	0.999979074	1537.802	4	1195485.17	3167914.88	5102.63	SET CDOT TYPE II MONUMENT WITH 3 1/4 INCH ALUMINUM CAP STAMPED "CP 4 2000 MILEPOST 1.094068"
5	39°52'10.67581"N	104°54'10.23056"W	364517.717	965490.844	0°23'09.0"	0.999978836	1541.227	5	1196238.68	3168453.66	5114.00	SET CDOT TYPE II MONUMENT WITH 3 1/4 INCH ALUMINUM CAP STAMPED "CP 5 2000 MILEPOST 1.095070"
6	39°52'15.18704"N	104°54'10.28818"W	364656.838	965488.538	0°23'09.0"	0.999978691	1535.454	6	1196895.24	3168446.09	5095.00	SET CDOT TYPE II MONUMENT WITH 3 1/4 INCH ALUMINUM CAP STAMPED "CP 6 2000 MILEPOST 1.096070"
7	39°52'18.84913"N	104°54'02.93914"W	364770.958	965662.418	0°23'13.7"	0.999978578	1541.216	7	1197089.74	3169016.72	5113.98	SET CDOT TYPE II MONUMENT WITH 3 1/4 INCH ALUMINUM CAP STAMPED "CP 7 2000 MILEPOST 1.097071"
8	39°52'26.48949"N	104°53'56.14436"W	365007.070	965822.294	0°23'18.1"	0.999978333	1536.370	8	1197844.59	3169541.38	5098.08	SET CDOT TYPE II MONUMENT WITH 3 1/4 INCH ALUMINUM CAP STAMPED "CP 8 2000 MILEPOST 1.098073"
9	39°52'34.74316"N	104°53'47.16678"W	365263.886	966033.892	0°23'23.9"	0.999978072	1534.492	9	1198686.73	3170235.78	5091.99	SET CDOT TYPE II MONUMENT WITH 3 1/4 INCH ALUMINUM CAP STAMPED "CP 9 2000 MILEPOST 1.099074"
10	39°51'31.34461"N	104°54'41.58502"W	363298.725	964753.770	0°22'48.8"	0.999980113	1541.604	10	1192241.80	3166034.80	5115.03	SET CDOT TYPE II MONUMENT WITH 3 1/4 INCH ALUMINUM CAP STAMPED "CP 10 2000 MILEPOST 1.089085"
11	39°51'39.78500"N	104°54'34.87812"W	363561.094	964911.449	0°22'53.1"	0.999979836	1539.716	11	1193099.33	3166552.26	5108.81	SET CDOT TYPE II MONUMENT WITH 3 1/4 INCH ALUMINUM CAP STAMPED "CP 11 2000 MILEPOST 1.090066"
12	39°51'48.16531"N	104°54'27.76759"W	363820.677	965076.722	0°22'57.7"	0.999979563	1539.228	12	1193951.20	3167101.20	5107.25	SET CDOT TYPE II MONUMENT WITH 3 1/4 INCH ALUMINUM CAP STAMPED "CP 12 2000 MILEPOST 1.092067"
13	39°51'57.94582"N	104°54'19.50071"W	364123.635	965273.176	0°23'03.0"	0.999979249	1538.660	13	1194945.42	3167739.34	5105.39	SET CDOT TYPE II MONUMENT WITH 3 1/4 INCH ALUMINUM CAP STAMPED "CP 13 2000 MILEPOST 1.093068"
14	39°52'05.56635"N	104°54'12.05184"W	364359.845	965448.823	0°23'07.9"	0.999979000	1537.775	14	1195720.59	3168315.10	5102.47	SET CDOT TYPE II MONUMENT WITH 3 1/4 INCH ALUMINUM CAP STAMPED "CP 14 2000 MILEPOST 1.094070"
15	39°52'09.48578"N	104°54'09.11827"W	364481.193	965517.525	0°23'09.8"	0.999978874	1540.945	15	1196118.82	3168541.22	5113.05	SET CDOT TYPE II MONUMENT WITH 3 1/4 INCH ALUMINUM CAP STAMPED "CP 15 2000 MILEPOST 1.095071"
16	39°52'13.88385"N	104°54'00.97081"W	364618.141	965710.229	0°23'15.0"	0.999978733	1535.957	16	1196588.24	3169173.62	5096.67	SET CDOT TYPE II MONUMENT WITH 3 1/4 INCH ALUMINUM CAP STAMPED "CP 16 2000 MILEPOST 1.096073"
17	39°52'21.39430"N	104°53'56.92161"W	364850.421	965804.885	0°23'17.6"	0.999978494	1536.002	17	1197330.52	3169484.25	5096.84	SET CDOT TYPE II MONUMENT WITH 3 1/4 INCH ALUMINUM CAP STAMPED "CP 17 2000 MILEPOST 1.097073"
18	39°52'28.70118"N	104°53'51.02102"W	365076.723	965943.573	0°23'21.4"	0.999978262	1535.459	18	1198073.17	3169939.38	5095.10	SET CDOT TYPE II MONUMENT WITH 3 1/4 INCH ALUMINUM CAP STAMPED "CP 18 2000 MILEPOST 1.098074"
19	39°52'34.59242"N	104°53'44.31069"W	365259.500	966101.790	0°23'25.8"	0.999978078	1533.949	19	1198672.99	3170458.60	5090.16	SET CDOT TYPE II MONUMENT WITH 3 1/4 INCH ALUMINUM CAP STAMPED "CP 19 2000 MILEPOST 1.099075"
20	39°52'41.93108"N	104°53'32.39615"W	365487.786	966383.355	0°23'33.5"	0.999977846	1531.226	20	1199422.09	3171382.62	5081.31	SET CDOT TYPE II MONUMENT WITH 3 1/4 INCH ALUMINUM CAP STAMPED "CP 20 2000 MILEPOST 1.100076"
21	39°52'49.41120"N	104°53'08.45024"W	365722.380	966950.747	0°23'49.0"	0.999977613	1536.502	21	1200192.03	3172244.63	5098.66	SET CDOT TYPE II MONUMENT WITH 3 1/4 INCH ALUMINUM CAP STAMPED "CP 21 2000 MILEPOST 1.101082"
22	39°52'50.49948"N	104°52'58.44685"W	365757.593	967188.202	0°23'55.4"	0.999977579	1539.320	22	1200307.59	3174023.88	5107.99	SET CDOT TYPE II MONUMENT WITH 3 1/4 INCH ALUMINUM CAP STAMPED "CP 22 2000 MILEPOST 1.101083"
23	39°52'47.18007"N	104°53'27.17337"W	365650.500	966506.344	0°23'36.9"	0.999977682	1531.540	23	1199956.14	3171786.23	5082.38	SET CDOT TYPE II MONUMENT WITH 3 1/4 INCH ALUMINUM CAP STAMPED "CP 23 2000 MILEPOST 1.101078"
24	39°52'48.14837"N	104°53'17.38582"W	365681.968	966739.175	0°23'43.2"	0.999977652	1530.458	24	1200059.41	3172550.31	5078.80	SET CDOT TYPE II MONUMENT WITH 3 1/4 INCH ALUMINUM CAP STAMPED "CP 24 2000 MILEPOST 1.101080"
25	39°52'52.24683"N	104°53'18.30674"W	365808.214	966715.946	0°23'42.6"	0.999977524	1530.916	25	1200473.71	3172474.08	5080.37	SET CDOT TYPE II MONUMENT WITH 3 1/4 INCH ALUMINUM CAP STAMPED "CP 25 2000 MILEPOST 1.102080"
26	39°52'55.45989"N	104°53'07.67646"W	365909.021	966863.088	0°23'49.3"	0.999977425	1529.582	26	1200804.53	3173285.13	5076.02	SET CDOT TYPE II MONUMENT WITH 3 1/4 INCH ALUMINUM CAP STAMPED "CP 26 2000 MILEPOST 1.102082"
27	39°53'02.33433"N	104°53'01.09065"W	366122.154	967122.846	0°23'53.7"	0.999977212	1528.585	27	1201503.97	3173809.41	5072.76	SET CDOT TYPE II MONUMENT WITH 3 1/4 INCH ALUMINUM CAP STAMPED "CP 27 2000 MILEPOST 1.104083"
28	39°52'58.35021"N	104°53'03.46589"W	365998.888	967067.265	0°23'52.2"	0.999977335	1528.552	28	1201099.44	3173627.01	5072.64	SET CDOT TYPE II MONUMENT WITH 3 1/4 INCH ALUMINUM CAP STAMPED "CP 28 2000 MILEPOST 1.103083"
29	39°53'06.65250"N	104°52'53.57618"W	366258.573	967300.458	0°23'58.6"	0.999977079	1528.964	29	1201945.09	3174392.28	5074.10	SET CDOT TYPE II MONUMENT WITH 3 1/4 INCH ALUMINUM CAP STAMPED "CP 29 2000 MILEPOST 1.104085"
101	39°52'40.84971"N	104°53'37.05155"W	365454.737	966272.957	0°23'30.5"	0.999977679	1532.097	101	1199313.70	3171020.32	*	FOUND 3 1/4 INCH ALUMINUM CAP STAMPED "R W BAYER ASSOC INC T2S R67W G1/4 S16 1996 PLS 6973"
102	39°52'40.79577"N	104°53'03.18114"W	365457.541	967077.790	0°23'52.4"	0.999977882	1529.369	102	1199322.90	3173661.55	*	FOUND 3 1/4 INCH ALUMINUM CAP STAMPED "R W BAYER ASSOC T2S R67W 1/4 S16 S15 1994 PLS 6973"
103	39°53'06.93183"N	104°53'03.07640"W	366263.617	967074.681	0°23'52.4"	0.999977071	1529.485	103	1201968.21	3173651.34	*	FOUND 3 1/4 INCH ALUMINUM CAP IN RANGE BOX STAMPED "T2S R67W S9 S10 S16 1993 PLS NO. 23516"
104	39°53'08.92702"N	104°53'36.93376"W	366257.925	966270.263	0°23'30.6"	0.999977071	1528.328	104	1201949.53	3171011.48	*	FOUND 3 1/4 INCH ALUMINUM CAP STAMPED "T2S R67W S9 S10 S16 1993 PLS 23516"
110	39°53'06.13680"N	104°55'36.31405"W	366214.681	963434.052	0°22'13.4"	0.999977095	1537.09	110	*	*	*	ADAMS COUNTY 3 1/4" BRASS SURVEY MARK DISK IN A ROUND CONCRETE BASE STAMPED "RIVERDALE 1995"
112	39°53'48.27245"N	104°52'11.55869"W	367547.197	968289.699	0°24'25.7"	0.999975821	1529.35	112	*	*	*	CGS BENCHMARK DISK IN A ROUND CONCRETE BASE STAMPED "J 260 1938"
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5115.58	ADAMS COUNTY 3 1/4" ALUMINUM BENCHMARK DISK IN MONUMENT BOX LOCATED AT THE NORTHEAST CORNER OF THE 96TH STREET OVERPASS STAMPED "BM 95.0206 1985"

- △ - INDICATES STATION WAS USED AS REFERENCE FOR THE PRIMARY HORIZONTAL CONTROL NETWORK
- - INDICATES STATION WAS USED AS REFERENCE FOR THE PRIMARY VERTICAL CONTROL NETWORK
- * - MODIFIED COORDINATES ARE NOT APPLICABLE TO OFF SITE HARN POINTS
- N/A - NOT APPLICABLE

TABULATION OF ALIQUOT CORNERS

POINT	NORTHING (ft)	EASTING (ft)	DESCRIPTION
101	1199313.703	3171020.323	C 1/4 COR SEC 16 FOUND 3 1/4" ALUMINUM CAP STAMPED "R W BAYER ASSOC INC T2S R67W G1/4 S16 1996 PLS 6973"
102	1199322.905	3173661.545	E 1/4 COR SEC 16 FOUND 3 1/4" ALUMINUM CAP STAMPED "R W BAYER ASSOC T2S R67W 1/4 S16 S15 1994 PLS 6973"
103	1201968.206	3173651.342	NE COR SEC 16 FOUND 3 1/4" ALUMINUM CAP IN RANGE BOX STAMPED "T2S R67W S9 S10 S16 1993 PLC NO. 23516"
104	1201949.527	3171011.482	N 1/4 COR SEC 16 FOUND 3 1/4" ALUMINUM CAP IN RANGE BOX STAMPED "T2S R67W 1/4 S9 S16 1993 PLS NO. 23516"
108	1196664.772	3171033.210	S 1/4 COR SEC 16 FOUND 3 1/4" ALUMINUM CAP STAMPED T2S R67W S21 1991 LS 17488" PER MONUMENT RECORD DATED 3/28/97 PREPARED BY DANIEL P. WILMETH, LS 25364
111	1196657.141	3189712.328	E 1/16 SEC 16 SEC 21 FOUND #4 REBAR IN PAVEMENT PER MONUMENT RECORD PREPARED DEC 7, 1973 BY EDWARD LING, JR.
113	1196649.521	3188391.589	SW COR SEC 16 FOUND 3 1/4" ALUMINUM CAP IN MONUMENT BOX STAMPED "T2S R67W S15 S16 S20 S21 1991 LS 17288" (LS NUMBER IS PARTIALLY ILLIGIBLE)
119	1199345.411	3168370.890	W 1/4 COR SEC 16 FOUND 3 1/4" ALUMINUM CAP STAMPED "R W BAYER ASSOC INC T2S R67W 1/4 S17 S16 1996 PLS 6973"

POINTS 101 - 104 WERE LOCATED BY GLOBAL POSITIONING SYSTEM SURVEY.
POINTS 108, 111, 113 AND 119 WERE LOCATED BY ARROW LAND SURVEYING USING CONVENTIONAL TOTAL STATION.

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