



Region 1
18500 East Colfax Avenue
Aurora, CO 80011
Phone: (303) 757-9117 FAX: (303) 757-9746

Right of Way Plans Unit: Kevin Williams

Sheet Revisions

mm/yy	XXXXX	XXX

Sheet Revisions

mm/yy	XXXXX	XXX

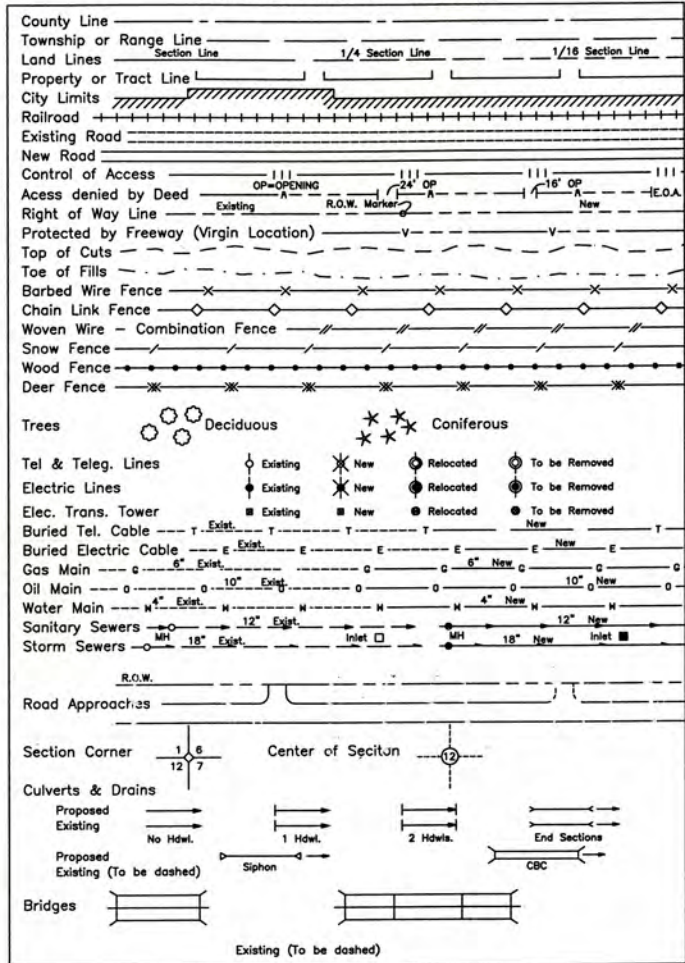
Sheet Revisions

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Right of Way Plans

Title Sheet				
Project Number: BR 086A-037				
Project Location: SH 86 - 5 Mi. E. of Castle Rock				
Project Location:				
Project Code:	Last Mod. Date:	Subset Sheets	Sheet No.	Total No. of Sheets
13380	07/26/01	1 of 1	1	7

CONVENTIONAL SIGNS



BASIS OF BEARINGS

Bearings used in the calculations of coordinates are based on a grid bearing of S 89°23'39" W along the South Line of the Southwest Quarter of Section 34, Township 7 South, Range 66 West as obtained from a Global Positioning System (GPS) survey based on the Colorado High Accuracy Reference Network (CHARN).

SW CORNER
FOUND 2-1/2" ALUMINUM CAP
SOUTH 1/4 CORNER
FOUND 3-1/4" ALUMINUM CAP
South Line of the Southwest Quarter of Sec. 34
S 89°23'39" W

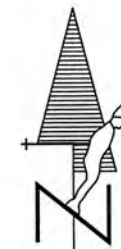
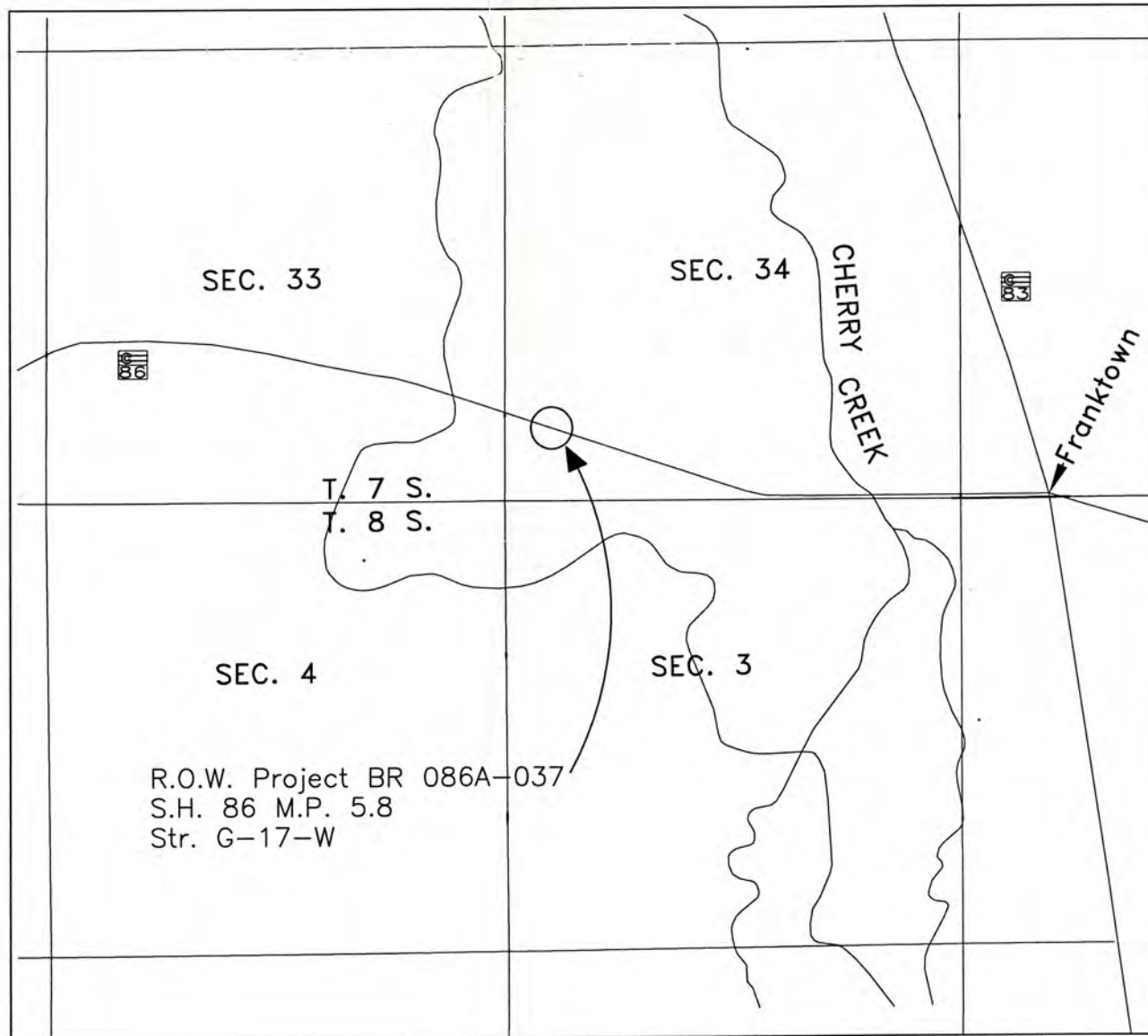
DEPARTMENT OF TRANSPORTATION
STATE OF COLORADO

RIGHT OF WAY PLAN OF PROPOSED
FEDERAL AID PROJECT NO. BR 086A-037
STATE HIGHWAY NO. 86
DOUGLAS COUNTY
RIGHT OF WAY

SCALES OF ORIGINAL DRAWINGS

PLAN SHEETS 1"=40'
OWNERSHIP MAP 1"=300'
R.O.W. LENGTH OF PROJECT 0.01 Miles

R. 66 W.



1000
2000
ORIGINAL SCALE 1"=2000'

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

AUTHORIZED: _____ DATE _____

DIVISION ADMINISTRATOR

DATE: July 26, 2001
SUBACCOUNT: 13380
REGION 1



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Right of Way Plans					
Tabulation of Properties Sheet					
Project Number: BR 086A-037					
Project Location: SH 86 – 5 Mi. E. of Castle Rock					
Project Location:					
13380	Last Mod. Date	Subset Sheets	Sheet No.	Total No. of Sheets	
	07/26/01	1 of 1	2	7	

R.O.W. TABULATION OF PROPERTIES IN DOUGLAS COUNTY

S.H. NO. 86

[illegible]



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Phone: (303) 757-9744 FAX: (303) 757-9746

Survey Unit: Joseph P. Conway

Sheet Revisions

Sheet Revisions

Sheet Revisions

Right of Way Plans

Control Sheet

Project Number: BR 086A-037

Project Location: SH 86 - 5 Mi. E. of Castle Rock

Project Location:

Project Code	Last Mod. Date	Subset Sheets	Sheet No.	Total No. of Sheets
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DEPARTMENT OF TRANSPORTATION - STATE OF COLORADO

SURVEY CONTROL DIAGRAM

CDOT PROJECT BR 086A-037/PROJECT CODE 13380

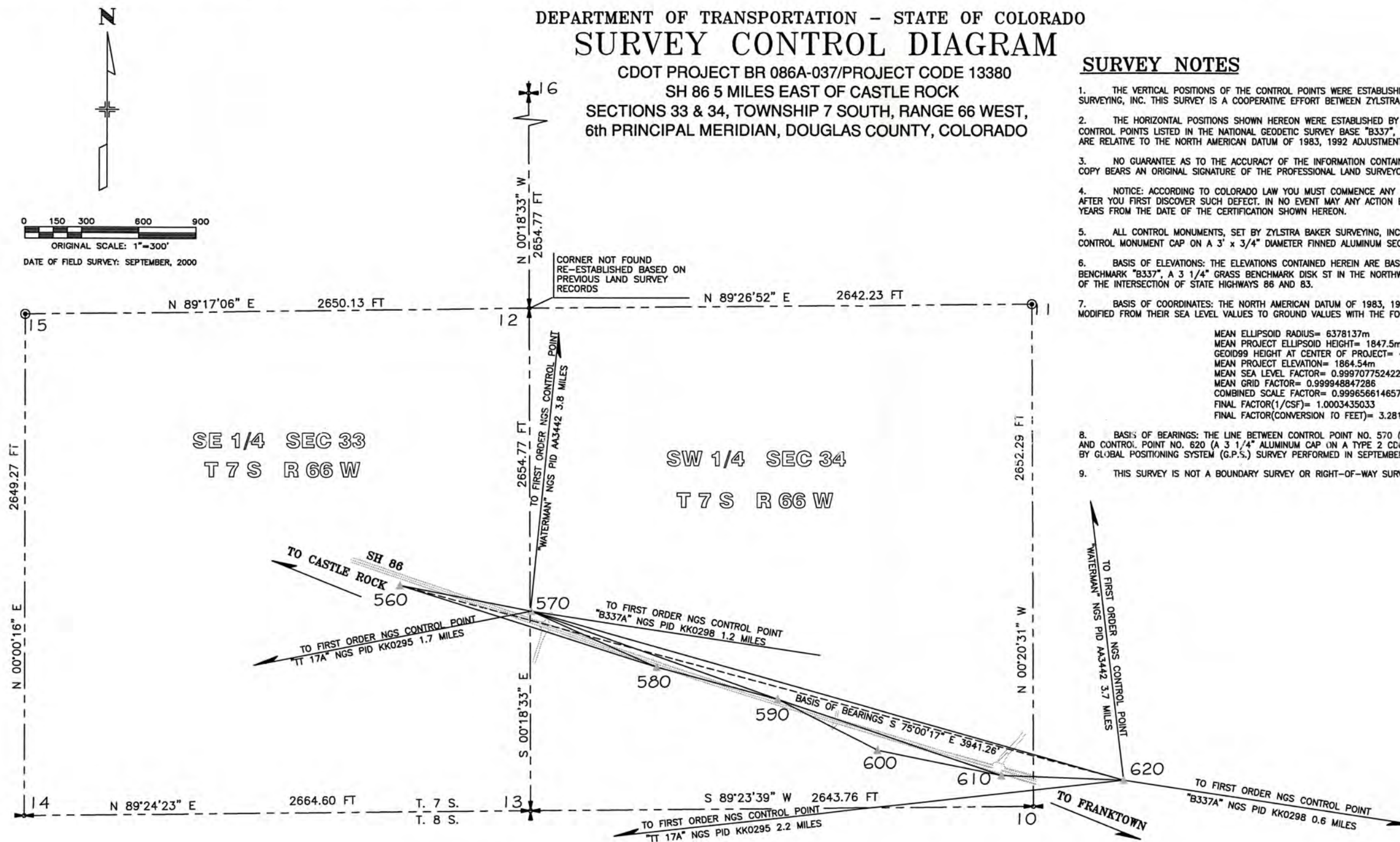
SH 86 5 MILES EAST OF CASTLE ROCK

SECTIONS 33 & 34, TOWNSHIP 7 SOUTH, RANGE 66 WEST,
6th PRINCIPAL MERIDIAN, DOUGLAS COUNTY, COLORADO

SURVEY NOTES

1. 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.
2. 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 "B337", "TT 17A" AND "WATERMAN". THE AFOREMENTIONED SURVEY CONTROL POINTS ARE RELATIVE TO THE NORTH AMERICAN DATUM OF 1983, 1992 ADJUSTMENT AS MAINTAINED BY NATIONAL GEODETIC SURVEY.
3. 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.
4. 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.
5. ALL CONTROL MONUMENTS, SET BY ZYLSTRA BAKER 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.
6. BASIS OF ELEVATIONS: THE ELEVATIONS CONTAINED HEREIN ARE BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 TYING TO NGS BENCHMARK "B337", A 3 1/4" GRASS BENCHMARK DISK ST IN THE NORTHWEST END OF THE NORTHEAST HEADWALL OF A 24" PIPE CULVERT NORTHEAST OF THE INTERSECTION OF STATE HIGHWAYS 86 AND 83.
7. BASIS OF COORDINATES: THE NORTH AMERICAN DATUM OF 1983, 1992 ADJUSTMENT COLORADO CENTRAL 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= 1847.5m
GEOID99 HEIGHT AT CENTER OF PROJECT= -17.04m
MEAN PROJECT ELEVATION= 1864.54m
MEAN SEA LEVEL FACTOR= 0.999707752422
MEAN GRID FACTOR= 0.999948847286
COMBINED SCALE FACTOR= 0.999656614657
FINAL FACTOR(1/CSF)= 1.0003435033
FINAL FACTOR(CONVERSION TO FEET)= 3.28196031041
8. BASIS OF BEARINGS: THE LINE BETWEEN CONTROL POINT NO. 570 (A 3 1/4" ALUMINUM CAP ON A TYPE 2 CDOT MONUMENT STAMPED "MP 5.7") AND CONTROL POINT NO. 620 (A 3 1/4" ALUMINUM CAP ON A TYPE 2 CDOT MONUMENT STAMPED "MP 5.2") WAS FOUND TO BEAR S 75°00'17" E BY GLOBAL POSITIONING SYSTEM (G.P.S.) SURVEY PERFORMED IN SEPTEMBER, 2000 BY ZYLSTRA BAKER SURVEYING, INC.
9. THIS SURVEY IS NOT A BOUNDARY SURVEY OR RIGHT-OF-WAY SURVEY AND IS PREPARED FOR CDOT PURPOSES ONLY.



LEGEND

- ▲ 570 - PROJECT GPS CONTROL POINT
13 + - SECTION CORNER
14 - 1/4 CORNER
15 ● - CENTER CORNER

SURVEYOR'S CERTIFICATE

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

NAME _____
DATE _____

P.L.S. NO. _____

CLERK AND RECORDER'S CERTIFICATE

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

CLERK AND RECORDER _____

PREPARED BY

ZYLSTRA
BAKER
SURVEYING, INC.

1510 WEST TUFTS AVENUE • ENGLEWOOD, CO 80110
PHONE (303) 781-0700 FAX (303) 781-4193
E-MAIL - zba@mho.net



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Phone: (303) 757-9744 FAX: (303) 757-9746

Survey Unit: Joseph P. Conway

Project Number: BR 086A-037

Project Location: SH 86 - 5 Mi. E. of Castle Rock

Project Location:

Project Code:	Last Mod. Date	Subset Sheets	Sheet No.	Total No. of Sheets
13380	7/26/01	2 of 2	3A	7

DEPARTMENT OF TRANSPORTATION - STATE OF COLORADO
SURVEY CONTROL TABULATION

CDOT PROJECT BR 086A-037

STATE HIGHWAY 86, 5 MILES EAST OF CASTLE ROCK
SECTIONS 33 & 34, TOWNSHIP 7 SOUTH, RANGE 66 WEST,
6th PRINCIPAL MERIDIAN, DOUGLAS 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		ELEV (ft)	MONUMENT DESCRIPTION
	LATITUDE (N)	LONGITUDE (W)	NORTHING (m)	EASTING (m)					NORTHING (ft)	EASTING (ft)		
560	39°23'40.1397033"N	104°46'39.0669002"W	478348.842	976634.952	0°27'20.4"	0.999948992	1854.032	560	1569921.914	3205277.150	6138.775	CDOT TYPE 2 MONUMENT: 3 1/4" ALUMINUM CAP ON ALUMINUM OR STAINLESS STEEL ROD (SEE DETAIL "A")
570	39°23'38.7419171"N	104°46'30.3007718"W	478307.410	976845.041	0°27'25.9"	0.999948957	1845.859	570	1569785.936	3205966.654	6111.936	CDOT TYPE 2 MONUMENT, INSCRIBED "MP 5.7"
580	39°23'35.7993327"N	104°46'21.9180315"W	478218.272	977046.340	0°27'31.2"	0.999948885	1843.380	580	1569493.388	3206627.309	6103.903	CDOT TYPE 2 MONUMENT, INSCRIBED "MP 5.8"
590	39°23'34.0919555"N	104°46'13.8602411"W	478167.167	977239.562	0°27'36.3"	0.999948842	1843.738	590	1569325.664	3207261.456	6105.070	CDOT TYPE 2 MONUMENT, INSCRIBED "MP 5.9"
600	39°23'31.4024720"N	104°46'07.1641774"W	478085.519	977400.449	0°27'40.5"	0.999948776	1855.212	600	1569057.698	3207789.481	6142.682	CDOT TYPE 2 MONUMENT, INSCRIBED "MP 6.0"
610	39°23'30.0485443"N	104°45'58.8913925"W	478045.364	977598.733	0°27'45.7"	0.999948743	1846.455	610	1568925.911	3208440.241	6113.612	CDOT TYPE 2 MONUMENT, INSCRIBED "MP 6.1"
620	39°23'29.7623937"N	104°45'50.6942021"W	478038.126	977794.944	0°27'50.9"	0.999948736	1843.990	620	1568902.156	3209084.198	6105.907	CDOT TYPE 2 MONUMENT, INSCRIBED "MP 6.2"
B337	39°23'28.6294900"N	104°45'09.8277800"W	478011.173	978773.070	0°28'16.7"	0.999948708	1859.330	B337	*	*	6156.350	BRASS BENCH MARK DISK, NORTHWEST END OF NORTHEAST HEADWALL FOR 24" PIPE CULVERT, INTERSECTION STATE HIGHWAYS 86 AND 83
TT 17A	39°23'24.7302700"N	104°48'20.0389500"W	477854.817	974222.651	0°26'16.7"	0.999948613	1959.300	TT 17A	*	*		3" BRASS CAP IN CONCRETE, INSCRIBED "TT 17A USGS"
WATERMAN	39°26'34.2565100"N	104°44'34.0432100"W	483742.494	979581.601	0°28'39.2"	0.999953664	1893.370	WATERMAN	*	*		DOUGLAS COUNTY GPS MONUMENT

- △ - 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 FOUND ALIQUOT CORNERS

POINT	NORTHING (ft)	EASTING (ft)	DESCRIPTION
10	1568764.137	3208609.755	S 1/4 COR SEC 34, T7S, R66W, FOUND 3 1/4 ALUM CAP MARKED "T7S R66W, 1/4 S34/S3,T8S R66W, LS8141. 1998"
11	1571416.382	3208593.922	C 1/4 COR SEC 34, T7S, R66W, FOUND 2 1/2" ALUM CAP MARKED "SURVEY MONUMENT, 1993, T7S R66W, C1/4 + S34, LS 6935, ARCHER & ACCOC."
13	1568736.184	3205966.142	SW COR SEC 34, T7S, R66W, FOUND 2 1/2" ALUM CAP MARKED "SURVEY MONUMENT, 1998, T7S, S33 S34, S4 S3 R66W, T8S, LS6935, ARCHER & ASSOC."
14	1568708.575	3203301.688	S 1/4 COR, SEC 33, T7S, R66W, FOUND 2 1/2" ALUM CAP MARKED, "SURVEY MONUMENT, 1993, T7S, 1/4 S33/S4, T8S, LS6935, ARCHER & ASSOC."
15	1571357.845	3203301.889	C 1/4 COR SEC 33, T7S, R66W, FOUND NO. 6 REBAR W/ PLASTIC INSERT, REMAINDER OF CAP MISSING. (TO BE REPLACED)
16	1574045.653	3205937.505	NW COR SEC 34, T7S,R66, FOUND 8" ROUNDED RED ROCK W/ CHISELED "+" ON TOP AND EMBEDDED IN GROUND

POINTS Z10 - Z16 WERE LOCATED BY GLOBAL POSITIONING SYSTEM SURVEY.

TABULATION OF FOUND MONUMENTS

POINT	NORTHING (ft)	EASTING (ft)	DESCRIPTION
1326	1569493.371	3206836.264	FOUND 3" BRASS CAP IN 6" CONCRETE MONUMENT - NO INSCRIPTION
7218	1569076.988	3208354.889	FOUND 3" BRASS CAP IN 6" CONCRETE MONUMENT - NO INSCRIPTION - CONCRETE CRACKED
7346	1568764.308	3208585.743	#6 REBAR

ALIQUOT CORNERS TO BE SET

POINT	NORTHING (ft)	EASTING (ft)	DESCRIPTION
12	1571390.918	3205951.817	E 1/4 COR SEC 33, T7S, R66W (REESTABLISHED BASED ON PREVIOUS LAND SURVEY RECORDS)
R15	1571357.845	3203301.889	C 1/4 COR SEC 33, T7S, R66W (TO BE UPGRADED)

PREPARED BY
KYLSTRA
BAKER
SURVEYING, INC.

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Sheet Revisions		
mm/yy	XXXXX	XXX

Sheet Revisions		
mm/yy	XXXXX	XXX

Sheet Revisions		
mm/yy	XXXXX	XXX

Right of Way Plans				
Monumentation Sheet				
Project Number: BR 086A-037				
Project Location: SH 86 - 5 Mi. E. of Castle Rock				
Project Location:				
Project Code:	Last Mod. Date	Subset Sheets	Sheet No.	Total No. of Sheets
13380	8/23/01	1 of 1	4	7

GENERAL NOTES

1. This Right of Way plan is not a complete boundary survey of all adjoining owners and is prepared for Transportation Department purposes Only.
2. Survey Control Points set with a higher degree of accuracy than ROW Markers.
3. 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.
4. All R.O.W. Markers set from survey control points.
5. All centerline and offset stationing is theoretical only and may not represent the centerline as constructed in the field. All stationing is approximate.
6. All coordinates listed are project coordinates only.
7. Field survey control precision computed to exceed 1/20,000.
8. No commitments for title insurance supplied by Colorado Department of Transportation.

TABULATION OF ROW MARKERS TO BE SET

POINT	NORTHING (ft)	EASTING (ft)
100	1569608.22	3206497.52
102	1569620.71	3206522.89
104	1569594.93	3206598.62
106	1569569.55	3206611.11
110	1569513.59	3206465.06
112	1569488.21	3206477.55
114	1569462.43	3206553.28
116	1569474.91	3206578.66

TABULATION OF TEMPORARY EASEMENT POINTS

POINT	NORTHING (ft)	EASTING (ft)
150	1569550.94	3206355.37
152	1569477.78	3206474.74
154	1569452.32	3206548.96
156	1569437.62	3206688.19

QUANTITY OF MONUMENTS TO BE SET

CAP TYPE	MONUMENT TYPE								
	1	1A	2	2A	3	3A	4	5	6
REFERENCE									
RIGHT OF WAY	8								
CONTROL									
ALIQUOT CORNER									
WITNESS POST									
PERM. EASE.									

SURVEYOR CERTIFICATE (FIELD)

Control Survey and Monumentation was done under my supervision and checking.

NAME _____ P.L.S. NO. _____

DATE _____

SURVEYOR CERTIFICATE (OFFICE)

R.O.W. Plans and Legal Descriptions were prepared under my supervision and checking.

NAME _____ P.L.S. NO. _____

DATE _____

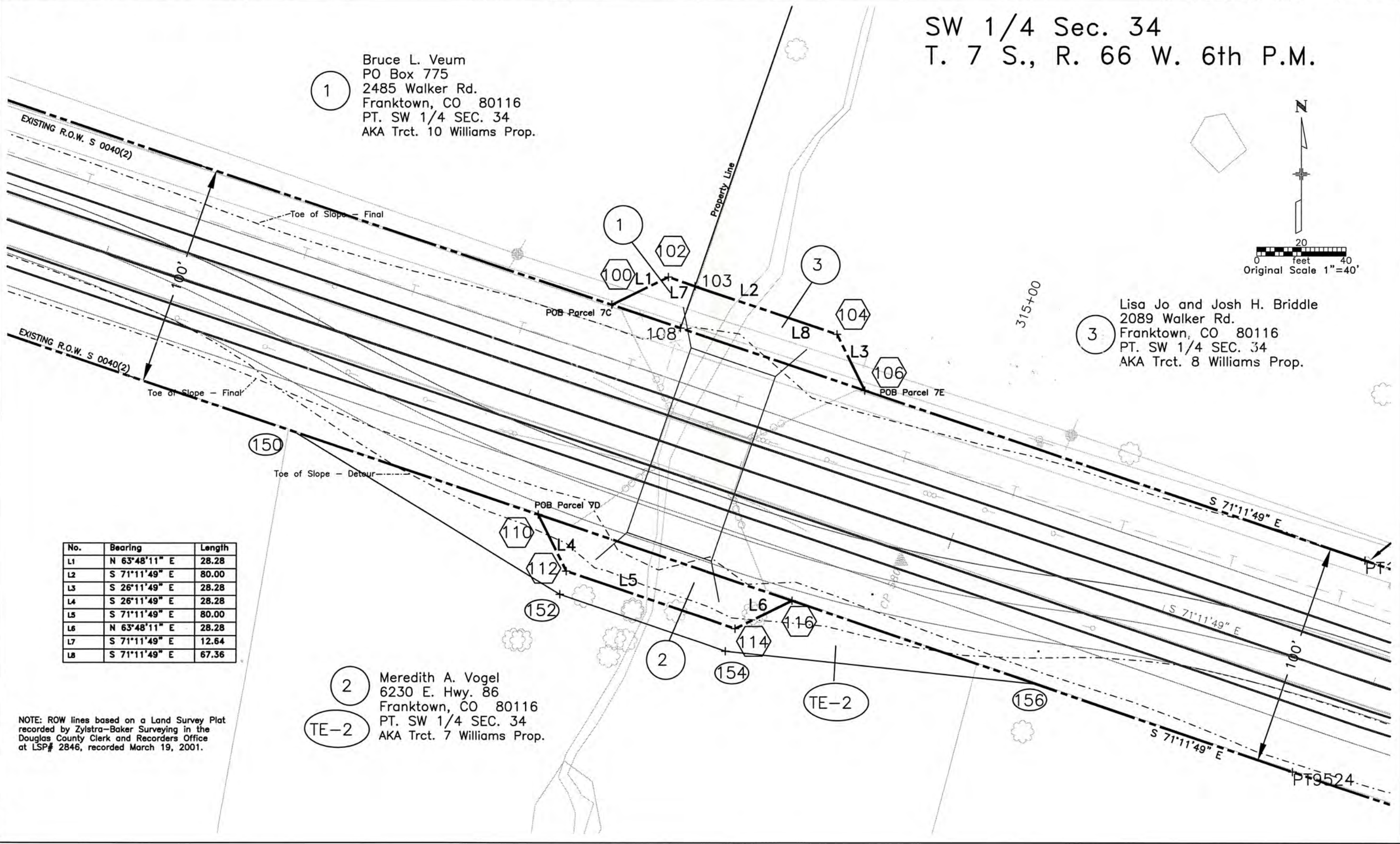


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Sheet Revisions			Sheet Revisions		
mm/yy	XXX		mm/yy	XXXXX	XXX

Right of Way Plans				
Plan Sheet				
Project Number: BR 086A-037				
Project Location: SH 86 - 5 Mi. E. of Castle Rock				
Project Location:				
Project Code: 13380	Last Mod. Date: 8/23/01	Subset Sheets: 1 of 1	Sheet No.: 5	Total No. of Sheets: 7





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Sheet Revisions			Sheet Revisions		
mm/yy	XXX		mm/yy	XXXXX	XXX

Right of Way Plans				
Ownership Map				
Project Number: BR 086A-037				
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