



Region I
18500 East Colfax Avenue
Aurora, Colorado 80022
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Survey Unit: Joesh P. Conway

Sheet Revisions		
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US Hwy. 285 MP 201.00 to MP 201.60

Located in
Sections 28 & 33,
Township 7 South, Range 75 West
of the 6th Principal Meridian
Park County
Colorado



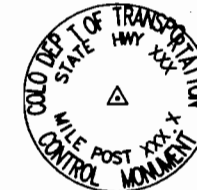
Survey Control Diagram				
Title Sheet				
Project Number: NH 2854-088				
Project Location: US Hwy. 285 @ MP-201.5				
Project Code: Last Mod. Date Subset Sheets Sheet No. Total No. of Sheets				
13384	00-00-00	1 of 2		

COLORADO DEPARTMENT OF TRANSPORTATION
SURVEY CONTROL DIAGRAM

**GEODETTIC COORDINATE SUMMARY TABLE
(ADJUSTED FIELD DATA)**

POINT NAME	GEODETTIC COORDINATES NAD-83(92) (CHARN)		ELLIP. HEIGHT	ELEV. (NAVD '88)m	MAPPING ANGLE	SCALE	NAD 83(92) ZONE 0502	
	LATITUDE(N)	LONGITUDE(W)					NORTHING (m)	EASTING (m)
US 285 CM-MP 201.0	39° 24' 08.65438" N	105° 46' 51.16143" W	■	2910.818	0° 10' 36.60517"	0.999949699	479006.365	890252.633
US 285 CM-MP 201.3	39° 24' 21.22883" N	105° 46' 35.42441" W	■	2929.610	0° 10' 27.64040"	0.999950033	479408.444	890593.932
US 285 CM-MP 201.6	39° 24' 21.88484" N	105° 46' 19.84622" W	■	2945.891	0° 10' 17.81532"	0.999950050	475427.548	890966.680
USCGS BM 'L 303 1951'	39° 22' 18" N	105° 48' 24" W	■	2895.475	■	■	■	■

■ - Not available from the survey done in April 1996 by CDOT.
NOTE - 'L 303' latitude and longitude are NGS published positions.



Typical Control Monument Cap
Not to Scale

NARRATIVE: This survey was done to provide CDOT the necessary field ties to write legal descriptions for proposed snow fences in the area. The original survey was performed by CDOT in April of 1996 under the supervision of PLS 25618. I noted on the Survey Control Diagram the existing control I was able to find in the area. The Geodetic Summary, Project Coordinate Summary in meters, topographic, and planimetric features are from the previous CDOT survey.

BASIS OF BEARINGS: Bearings used in the calculation of coordinates are based on a grid bearing of N 40°19'33" E from CM-MP 201.00 to CM-MP 201.30, as obtained from a Global Positioning System (GPS) survey based on the Colorado High Accuracy Reference Network (CHARN).

BASIS OF ELEVATIONS: Project is based on a U.S. Coast and Geodetic Survey (USCGS) benchmark L303 1951 a 3" Brass cap in a concrete post with a NAVD elevation of 2895.475m or 9499.57 ft.

COORDINATE DATUM: Project coordinates are modified Colorado State Plane Central Zone NAD '83 (92) coordinates. State Plane Coordinates are modified to a mean project elevation of 2919.978m. The combined elevation/scale correction factor used to modify the state plane coordinates was 1.000511318. Project Coordinates were truncated by 400,000m in the Northing and 800,000m in the Easting. The CHARN is based on the WGS '84 (92) datum.



CP - Control Point Monuments set by CDOT. They were CDOT type 2 monuments, a 3-1/4" dia. aluminum control monument cap (as shown) on a 3' X 3/4" dia. flined aluminum security rod on a 3' X 3/4" dia. smooth aluminum rod.

NOTE: Refer to M-629-1 Survey Monuments of the Standard Plans, Colorado Department of Transportation, M & S Standards November 1992 for survey monument descriptions. Refer to M-100-1 Standard Symbols of the Standard Plans, Colorado Department of Transportation, M & S Standards November 1992 for standard symbol definitions.

NOTE: This control survey is for the use of the Colorado Department of Transportation personnel. The survey is not a complete Boundary Survey. Title Policy, Title Commitment, and Title Research were not part of this control survey, therefore, easements, rights, and restrictions of record are not shown. The verification of the physical evidence with relation to easements, rights of way, property boundaries, and restriction, as described in the instruments of record, were not included in this control survey.

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: 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 hereon named.

**PROJECT COORDINATE SUMMARY TABLE
(ADJUSTED FIELD DATA IN METERS)**

POINT NAME	PROJECT COORDINATES		ELEV.(m)	DESCRIPTION
	NORTH (m)	EAST (m)		
US 285 CM-MP 201.0	79251.290	90707.836	2910.818	CDOT Type 2 Control Monument
US 285 CM-MP 201.3	79653.574	91049.309	2929.610	CDOT Type 2 Control Monument
US 285 CM-MP 201.6	79672.688	91422.248	2945.891	CDOT Type 2 Control Monument
USCGS BM 'L 303 1951'	75881.375	88413.666	2895.475	USGS Brass cap in concrete post

**PROJECT COORDINATE SUMMARY TABLE
(ADJUSTED FIELD DATA IN US FEET)**

POINT NAME	PROJECT COORDINATES		ELEV(usft)	DESCRIPTION
	NORTH (usft)	EAST (usft)		
US 285 CM-MP 201.0	260010.274	297597.292	9549.91	CDOT Type 2 Control Monument
US 285 CM-MP 201.3	261330.101	298717.608	9611.56	CDOT Type 2 Control Monument
US 285 CM-MP 201.6	261392.811	299941.159	9664.98	CDOT Type 2 Control Monument
USCGS BM 'L 303 1951'	248954.144	290070.502	9499.57	USGS Brass cap in concrete post

CONSTRUCTION SURVEYING AND MONUMENTATION REQUIREMENTS:

- This Control Survey Diagram represents the horizontal and vertical control for the project established by the Division. It is possible that some of the survey control monuments listed have been disturbed or obliterated. It is the Contractor's responsibility to verify the existence and stability of the control monuments before submitting a bid price.
- All Type 1 and Type 2 monuments shall be set flush with the ground. Witness posts shall be installed 1 foot from and facing all Type 1 and Type 2 monuments, or as directed by the Project Engineer.
- Installation of Type 3 and Type 3-A monuments shall be completed in the same day that installation is commenced. Under no circumstances shall holes in the roadway be left open overnight.
- When installing Type 3-A monuments, the aluminum monument box shall be positively secured in the roadway surface. The monument box shall be caulked with asphalt caulking between the monument box and the edges of the roadway surface to provide a positive moisture barrier around the monument box.
- Control survey procedures, statistical analysis, and accuracy obtained for horizontal and vertical control shall be documented in the field book.
- Legible copies of the field books shall be submitted to the Project Engineer for review on a monthly basis.
- It is ultimately the prime Contractor's responsibility to insure that these requirements, as well as any contained in the CDOT specifications, project special provisions, and CDOT Survey Manual are fulfilled under this contract.
- The minimum staking intervals for each item are described on the plans or in the CDOT Survey Manual. If the contractor wishes to reduce the minimum intervals, a Contract Modification Order must be negotiated and the cost of the item reduced accordingly.

SURVEYORS STATEMENT: I, David A. Stewart, a Professional Land Surveyor in the State of Colorado, hereby state that this Survey Control Diagram was prepared under my direct supervision this 14th day of December 2001, from a field survey performed from 11/28/01 to 12/05/01 under my supervision and checking for and on behalf of the Department of Transportation, State of Colorado, and is not a Land Survey Plat or Right-of-Way Survey Plat and to the best of my knowledge and belief this control survey, as shown, meets the minimum horizontal control tolerances of a Type B Survey as listed in the Colorado Department of Transportation Survey Manual Chapter Three (Revised 4/29/92). I am certifying only the positions of the corners that were obtained under my supervision and do not imply any liability for the positions of the corners obtained from the survey by CDOT in April of 1996 under the supervision of PLS 25618.

David A. Stewart, CO PLS 28664

Date

PLANS FOR INFORMATION
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 ONLY IN BOOK OF THE COUNTY LAND SURVEYS/RIGHT OF WAY
 SURVEYS AT PAGE RECEPTION NUMBER
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Region 1
 Address: 18500 East Colfax Ave.
 Aurora, CO 80011
 Phone: (303) 757-9744 FAX: (303) 757-9746

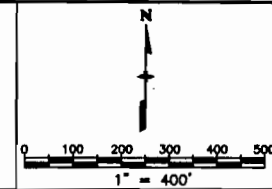
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13384	00-00-00	2 of 2		

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SIGNED DEPT.

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