



Region 1
Address: 18500 East Colfax Avenue
Aurora, CO 80011
Phone: (303) 757-9744 FAX: (303) 757-9746

Survey Unit: Joseph P. Conway

Sheet Revisions

mm/yy	xxxxx	xxx

U.S. Hwy. 285 MP 244.20 to MP 244.60

Part of the NW 1/4 Section 27, SW 1/4 Section 22, and SE 1/4 Section 21, Township 5 South, Range 70 West of the 6th Principal Meridian, County of Jefferson, State of Colorado



Survey Control Diagram

Title Sheet

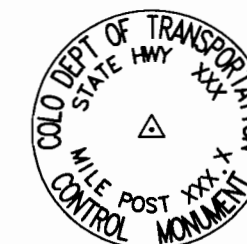
Project Number: NH 285-091				
Project Location: U.S. Hwy. 285 @ M.P. 244.30				
Project Location:				
Project Code:	Last Mod. Date	Subsect Sheets	Sheet No.	Total No. of Sh
13688		1 of 2		

PROJECT COORDINATE SUMMARY TABLE
(ADJUSTED FIELD DATA IN U.S. FEET)

POINT NAME	PROJECT COORDINATES		ELEV(ft.)	DESCRIPTION
	NORTH (ft.)	EAST (ft.)		
CM-MP 244.4	42019.60	78069.23	6981.43	Found CDOT Type II Control Monument
CM-MP 244.2	41449.00	78402.93	6970.27	Found CDOT Type II Control Monument
CM-MP 244.5	42632.95	77642.42	7012.19	Found CDOT Type II Control Monument
CM-MP 244.6	43001.08	77438.43		Found CDOT Type II Control Monument

PROJECT COORDINATE SUMMARY TABLE
(ADJUSTED FIELD DATA IN METERS)

POINT NAME	PROJECT COORDINATES		ELEV(m)	DESCRIPTION
	NORTH (m)	EAST (m)		
CM-MP 244.4	12807.599	23795.549	2127.944	Found CDOT Type II Control Monument
CM-MP 244.2	12633.681	23897.261	2124.543	Found CDOT Type II Control Monument
CM-MP 244.5	12994.549	23665.457	2137.320	Found CDOT Type II Control Monument
CM-MP 244.6	13106.757	23603.282		Found CDOT Type II Control Monument



Typical Control Monument Cap
Not to Scale



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

BASIS OF BEARINGS: Bearings used in the calculation of coordinates are based on a grid bearing of N 30° 19' 12" W from CM-MP 244.2 to CM-MP 244.4.

BASIS OF ELEVATIONS: Project is based on a found CDOT Type II monument designated CM-MP 244.2. CM-MP 244.2 has a project elevation of 6970.27 feet or 2124.543 meters.

COORDINATE DATUM: Project coordinates were supplied to me from our Lakewood Residency's Project Engineer, Ken McGhee. I believe these monuments were originally established by another CDOT employee, Bill Aldorfer. I did shoot the monuments through the course of my TMOSS survey and they all fit well, with the exception of the elevation of CM-MP 244.6. So I have left the elevation blank for CM-MP 244.6. The datum for these coordinates is unknown to me as of the date of this survey.

NOTE: This control survey is for the use of the Colorado Department of Transportation personnel. The survey is not a complete boundary survey and does not subdivide land. This is not a Land Survey Plat and/or a Rights of Way Plat. 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.

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.

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 statement shown hereon.

SURVEYORS STATEMENT: I, David A. Stewart, a Professional Land Surveyor in the State of Colorado, hereby state that this Control Survey Diagram was prepared under my direct supervision this 30th day of July, 2001, from a field survey performed under my supervision and checking from June 20, 2001 to June 21, 2001, 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 CDOT Type B Survey, as listed in Chapter Three of the Colorado Department of Transportation 1992 Survey Manual.

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.

David A. Stewart
Colorado PLS No. 28664

Date

13688SCD.dwg 30 JUL 2001 10:44:48.0 PLOT/EDIT by DAS

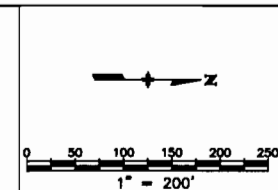


Region I
Address: 18500 East Cofax Avenue
Aurora, CO 80011
Phone: (303) 757-9744 FAX: (303) 9746

Survey Unit: Joseph P. Conway

Sheet Revisions		
mm/yy	Description	XXX
	XXXXX	XXX

U.S. Hwy. 285 MP 244.20 to MP 244.60
Part of the NW 1/4 Section 27, SW 1/4 Section 22, and SE 1/4 Section 21, Township 5 South, Range 70 West of the 6th Principal Meridian, County of Jefferson, State of Colorado

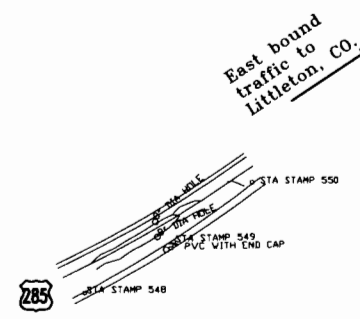


Survey Control Diagram				
Plan Sheet				
Project Number: NH 2854-091				
Project Location: U.S. Hwy. 285 @ M.P. 244.30				
Project Location:				
Project Code:	Last Mod. Date:	Subnet Sheets:	Sheet No.:	Total No. of Sheets:
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FOUND:
 CM-MP 244.6
 ▲ GPS PROJECT STATION
 N: 43001.08
 E: 77438.43
 EL: 7012.19

FOUND:
 CM-MP 244.5
 ▲ GPS PROJECT STATION
 N: 42632.95
 E: 77642.42
 EL: 7012.19

East bound traffic to Littleton, CO.
 FOUND:
 CM-MP 244.4
 ▲ GPS PROJECT STATION
 N: 42019.60
 E: 78069.23
 EL: 6981.43



FOUND:
 CM-MP 244.2
 ▲ GPS PROJECT STATION
 N: 41449.00
 E: 78402.93
 EL: 6970.27