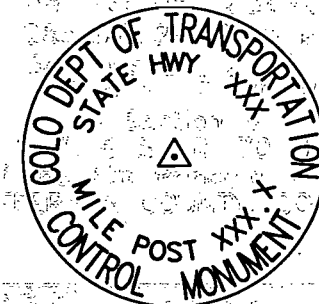




# DEPARTMENT OF TRANSPORTATION - STATE OF COLORADO CONTROL SURVEY DIAGRAM

Project NH 2854-061  
U.S. 285 MP 241.4 to MP 243.8  
Sections 27, 28 & 33  
T. 5 S., R. 70 W.  
Section 4  
T. 6 S., R. 70 W.,  
of the 6th Principal Meridian  
JEFFERSON COUNTY, COLORADO



### COORDINATE SUMMARY TABLE (ADJUSTED FIELD DATA)

POINT NAME	GEODETIC COORDINATES NAD-83(92) (CHARN)		ELEVATION (NGVD '29)ft	MAPPING ANGLE	SCALE	NAD 83(92) ZONE CENTRAL		DESCRIPTION
	LATITUDE(N)	LONGITUDE(W)				NORTHING (m)	EASTING (m)	
US 285 CM-MP 241.4	39° 33' 36.38572"	105° 14' 23.15922"	2306.807	0° 9' 50.85569"	0.999967951	496520.959	936765.367	CDOT Type 2 Control Monument
US 285 CM-MP 241.8	39° 33' 55.24435"	105° 14' 18.72573"	2287.861	0° 9' 53.65185"	0.999968687	497102.854	936869.526	CDOT Type 2 Control Monument
US 285 CM-MP 242.4	39° 34' 24.36279"	105° 14' 25.76358"	2236.078	0° 9' 49.21315"	0.999969841	498000.373	936698.971	CDOT Type 2 Control Monument
US 285 CM-MP 242.71	39° 34' 30.64039"	105° 14' 22.65326"	2220.689	0° 9' 51.17480"	0.999970092	498194.184	936772.649	CDOT Type 2 Control Monument
US 285 CM-MP 242.8	39° 34' 35.72817"	105° 14' 15.09958"	2208.195	0° 9' 55.93883"	0.999970296	496351.608	936952.472	CDOT Type 2 Control Monument
US 285 CM-MP 242.95	39° 34' 43.76128"	105° 14' 03.45262"	2196.561	0° 10' 03.28444"	0.999970620	498600.155	937229.709	CDOT Type 2 Control Monument
US 285 CM-MP 242.99	39° 34' 49.49451"	105° 13' 55.54766"	2185.634	0° 10' 08.27002"	0.999970852	498777.520	937417.838	CDOT Type 2 Control Monument
US 285 CM-MP 243.1	39° 34' 53.65112"	105° 13' 49.63550"	2178.044	0° 10' 11.99875"	0.999971021	498906.125	937558.547	CDOT Type 2 Control Monument
US 285 CM-MP 243.4	39° 35' 00.22700"	105° 13' 37.12725"	2166.767	0° 10' 19.88758"	0.999971289	499109.815	937856.433	CDOT Type 2 Control Monument
US 285 CM-MP 243.8	39° 35' 15.93649"	105° 13' 14.21691"	2157.824	0° 10' 34.33689"	0.999971932	499595.954	938401.658	CDOT Type 2 Control Monument

### CENTENNIAL ENGINEERING PROJECT COORDINATE SUMMARY TABLE (For information only) (ADJUSTED FIELD DATA)

POINT NAME	PROJECT COORDINATES		ELEV(Ft)	DESCRIPTION
	NORTH (ft)	EAST (ft)		
US 285 CM-MP 241.4	28986.53	73525.63	7568.25	CDOT Type 2 Control Monument
US 285 CM-MP 241.8	30896.32	73867.61	7506.09	CDOT Type 2 Control Monument
US 285 CM-MP 242.4	33842.03	73307.81	7336.20	CDOT Type 2 Control Monument
US 285 CM-MP 242.8	34994.79	74139.75	7244.72	CDOT Type 2 Control Monument
US 285 CM-MP 243.1	36814.74	76129.05	7145.80	CDOT Type 2 Control Monument
US 285 CM-MP 243.4	37483.23	77106.68	7108.80	CDOT Type 2 Control Monument
US 285 CM-MP 243.8	39078.71	78896.22	7079.46	CDOT Type 2 Control Monument

### CDOT PROJECT COORDINATE SUMMARY TABLE (ADJUSTED FIELD DATA)

POINT NAME	PROJECT COORDINATES		ELEV(Ft)	DESCRIPTION
	NORTH (ft)	EAST (ft)		
US 285 CM-MP 242.71	34478.10	73549.56	7285.71	CDOT Type 2 Control Monument
US 285 CM-MP 242.95	35810.49	75049.74	7206.55	CDOT Type 2 Control Monument
US 285 CM-MP 242.99	36392.64	75667.21	7170.70	CDOT Type 2 Control Monument

**TYPICAL:**  
 CM-MP. - Control Monuments were 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. finned aluminum security rod on a 3' X 3/4" dia. smooth aluminum rod.

Project Coordinates are for information only and are from a survey by Centennial Engineering.

**BASIS OF BEARINGS:** Bearings used in the calculation of geodetic and state plane coordinates are based on a grid bearing of N 48°16'52" E from US 285 CM-MP 243.4 to US 285 CM-MP 243.8 as obtained from a Global Positioning System (GPS) survey based on the Colorado High Accuracy Reference Network (CHARN).

**BASIS OF BEARINGS:** Bearings used in the calculation of project coordinates are based on a bearing of N 9°01'51" W from the National Geodetic Survey (NGS) station "Linda" to the Denver Police radio mast on Mount Morrison.

**NOTE:** This sheet corrects the basis of elevation statement of a previously recorded document on file in Reception # F0398634 at the Jefferson County Clerk and Recorder's Office

**BASIS OF ELEVATIONS:** Project is based on a U.S. Geological Survey (USGS) benchmark G 36 RESET 1965, a 3-1/4" inch aluminum cap set in southwest wingwall of a concrete bridge over South Turkey Creek with an NGVD '29 elevation of 7042.12 feet. G 36 RESET 1965 is part of Colorado line 3 of the USGS Denver SW Quad (#303), a third order line leveled in 1923.

**NOTE:** Refer to NEW-629-1 SURVEY MONUMENTS of the STANDARD PLANS, COLORADO DEPARTMENT OF TRANSPORTATION, M & S STANDARDS MARCH 15, 1996 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 Colorado Department of Transportation personnel. The survey is not a complete boundary survey and does not subdivide land. 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 restrictions, as described in the instruments of record, was not included in this control survey.

**NOTE:** 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.

**SURVEYORS STATEMENT:** I, Joseph P. Conway, a Professional Land Surveyor in the State of Colorado, hereby state that this Control Survey Diagram was prepared under my supervision this 3rd day of January 1997, from a field survey performed under my supervision from June 1995 to December 1996, 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.

Joseph P. Conway L.S. 25618

FILING CERTIFICATION: DAY OF 19 AT M., FOR INFORMATION DEPOSITED THIS DAY OF THE COUNTY LAND SURVEYS/RIGHT OF WAY SURVEYS AT PAGE RECEPTION NUMBER SIGNED DEPT.

#### CONSTRUCTION SURVEYING AND MONUMENTATION REQUIREMENTS:

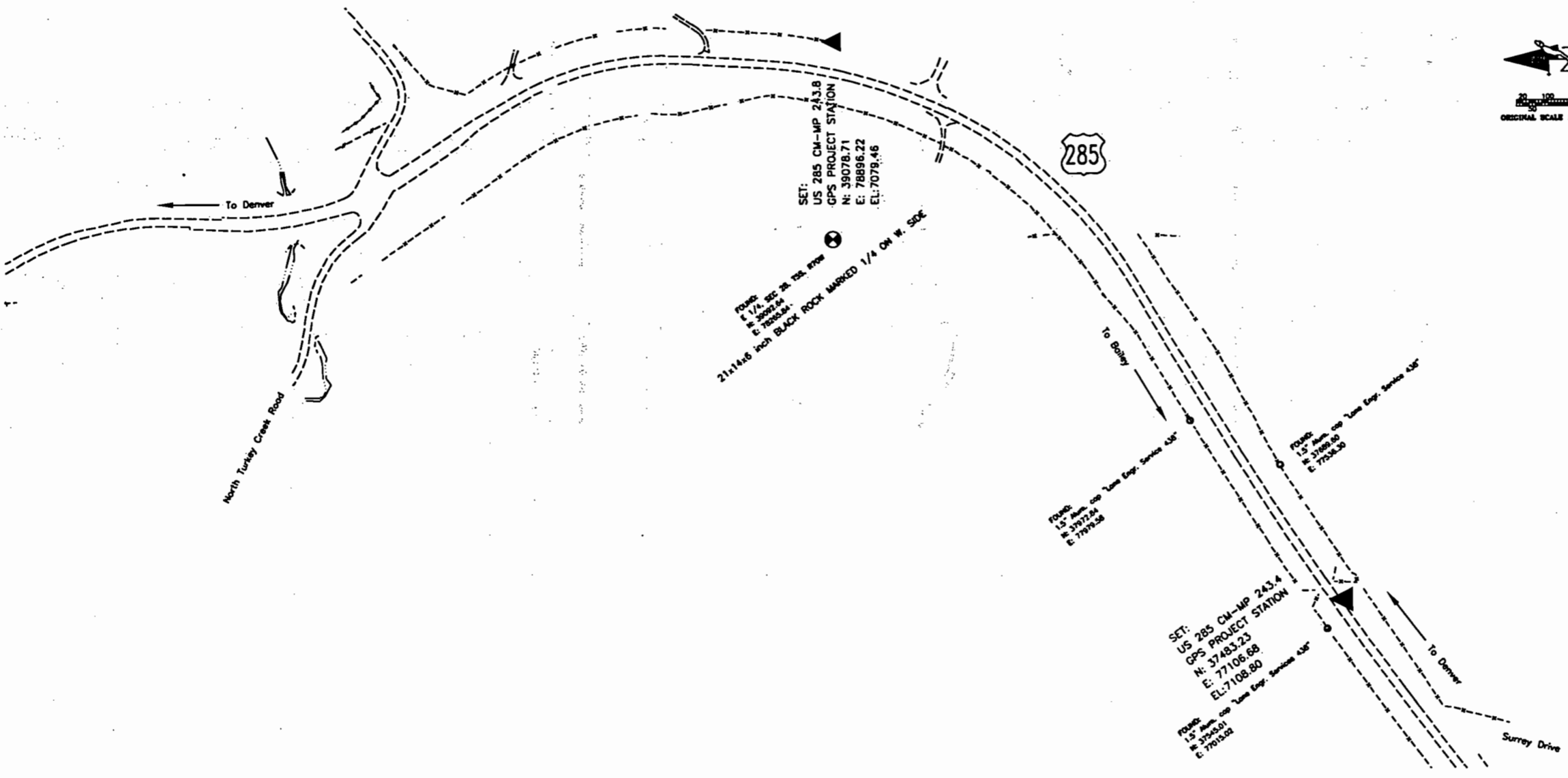
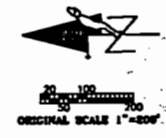
- This Control Survey Diagram represents the horizontal and vertical control for the project established by the Division. It is possible that some of the survey control monuments listed have been disturbed or obliterated. It is the Contractor's responsibility to verify the existence and stability of 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 access cover shall be positively secured to the PVC pipe with screws or glue. The access cover shall be caulked with asphalt caulking between the cover and the edges of the roadway surface to provide a positive moisture barrier around the access cover.
- 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 Contractors' 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.

Computer File Information		Sheet Revisions		Colorado Department of Transportation		As Constructed		Project NH 2854-061	
Creation Date:	11/1/96	Initials:	LJ	2/6/98	Basis of Elevations	Region 1 Construction 18500 E Colfax Avenue Aurora, Colorado 80011 Phone: 303-757-9744 FAX: 303-757-9746		SURVEY CONTROL DIAGRAM	
Last Modification Date:	3/10/98	Initials:	KAW	3/3/98	Elevations	Survey Coordinator JPC		CORRECTION	
Full Path:	d:\wrk\sk\92026			3/5/98	Coordinates	No Revisions:		11171	
Drawing File Name:	3csd285.dwg			3/10/98	Basis of Bearings	Revised:		Sheet Number 3 of 13	
Acad Ver.	R12	Scale:	1"=200'	Units:	FEET	Void:		Sheet Subset: Survey Subset Sheets: 1/4	



# DEPARTMENT OF TRANSPORTATION - STATE OF COLORADO CONTROL SURVEY DIAGRAM

Project NH 2854-061  
 U.S. 285 MP 241.4 to MP 243.8  
 Sections 27, 28 & 33  
 T. 5 S., R. 70 W.  
 Section 4  
 T. 6 S., R. 70 W.,  
 of the 6th Principal Meridian  
 JEFFERSON COUNTY, COLORADO



FILING CERTIFICATION: DAY OF 19 AT M. FOR INFORMATION  
 ONLY IN BOOK OF THE COUNTY LAND SURVEYS/RIGHT OF WAY  
 SURVEYS AT PAGE RECEPTION NUMBER  
 SIGNED DEPT.

Computer File Information	
Creation Date:	11/1/96 Initials: LJ
Last Modification Date:	12/13/96 Initials: LJ
Full Path:	d:\wrkask\92026
Drawing File Name:	3csd285.dwg
Acad Ver.	R12 Scale: 1"=200' Units: FEET

Sheet Revisions	

Colorado Department of Transportation

Region 1 Construction  
 18500 E. Colfax Avenue  
 Aurora, Colorado 80011  
 Phone: 303-757-9744 FAX: 303-757-9746

Survey Coordinator JPC

As Constructed
No Revisions:
Revised:
Void:

SURVEY CONTROL DIAGRAM	
Sheet Subset:	Survey
Subset Sheets:	2/4

Project NH 2854-061
GODDARD RANCH COURT TO SETTLERS DRIVE
11171
Sheet Number 3A of 13

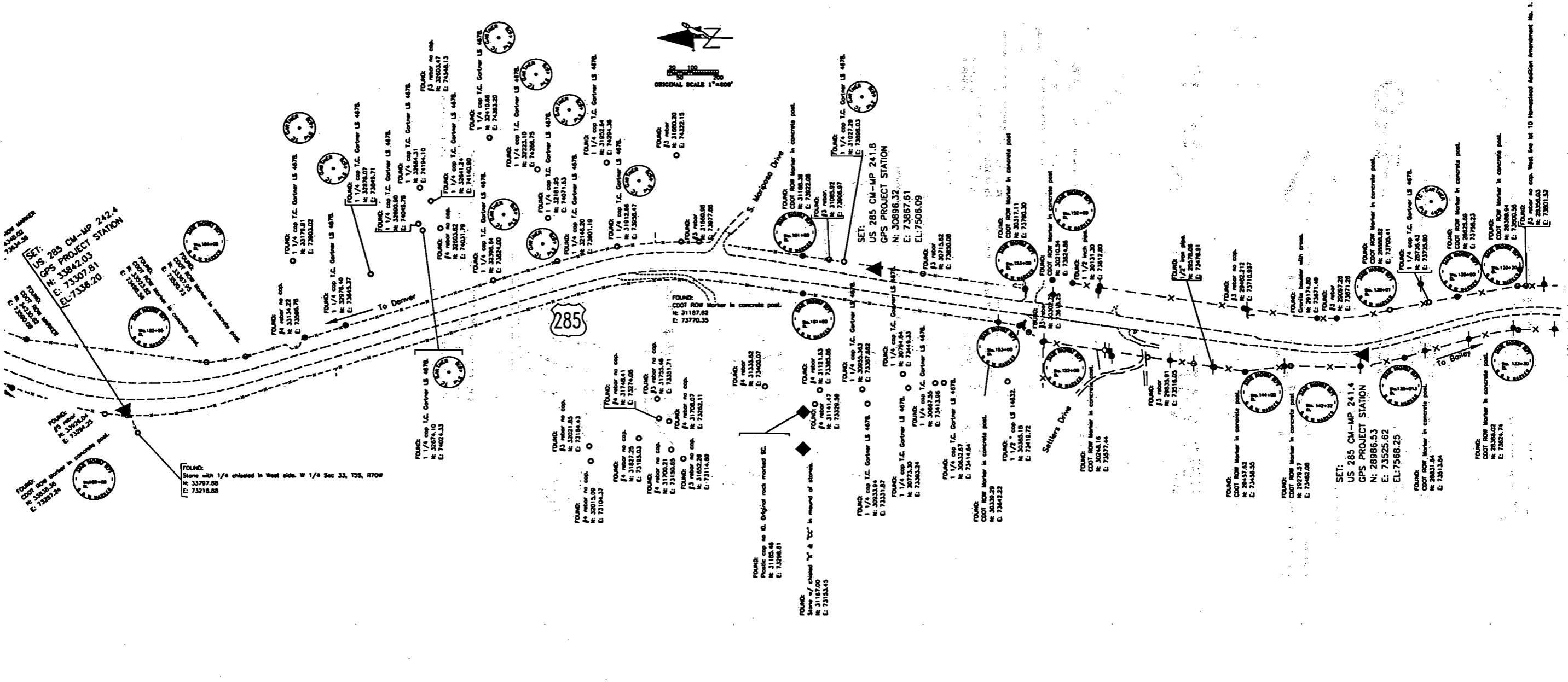
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# DEPARTMENT OF TRANSPORTATION - STATE OF COLORADO CONTROL SURVEY DIAGRAM

Project NH 2854-061  
U.S. 285 MP 241.4 to MP 243.8  
Sections 27, 28 & 33  
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FILING CERTIFICATION: DAY OF 19\_\_ AT \_\_ M., FOR INFORMATION DEPOSITED THIS OF THE COUNTY LAND SURVEYS/RIGHT OF WAY SURVEYS AT PAGE RECEPTION NUMBER

SIGNED DEPT.

Computer File Information	
Creation Date:	11/1/96 Initials: LJ
Last Modification Date:	3/5/98 Initials: KAW
Full Path:	d:\wrk\92026
Drawing File Name:	3csd285.dwg
Acad Ver.	R12 Scale: 1"=200' Units: FEET

Sheet Revisions	
3/5/98	Coords and elevs.

Colorado Department of Transportation  
Region 1 Construction  
18500 E. Colfax Avenue  
Aurora, Colorado 80011  
Phone: 303-757-9744 FAX: 303-757-9746

Survey Coordinator JPC

As Constructed
No Revisions:
Revised:
Void:

**SURVEY CONTROL DIAGRAM**  
**CORRECTION**

Sheet Subset: Survey Subset Sheets: 4/4

Project NH 2854-061
GODDARD RANCH COURT TO SETTLERS DRIVE
11171
Sheet Number 3C of 13