

Sheet Revisions			Sheet Revisions		
Date	Description	Initials	Date	Description	Initials

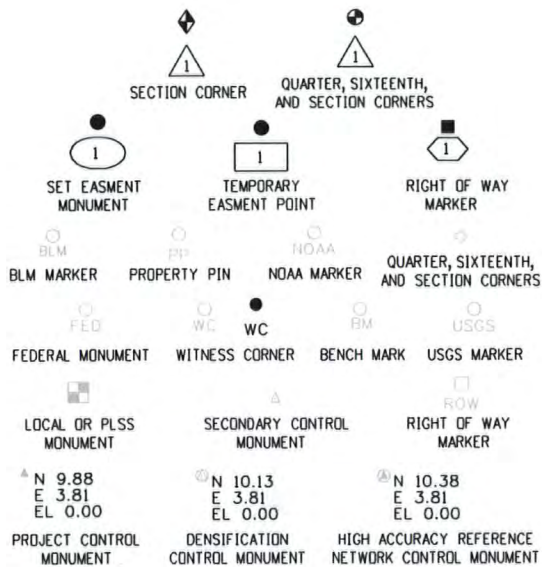
Final Land Survey Control Diagram			
Title Sheet			
Project Number: FBR 0362-032			
Project Location: SH 36 @ Comanche Creek			
Near Strasburg, CO			
Project Code:	Last Mod. Date	Subset	Sheet No.
18276	08-31-11	4.01 of 4.05	4.01

DEPARTMENT OF TRANSPORTATION
STATE OF COLORADO

FINAL LAND SURVEY CONTROL DIAGRAM AND RIGHT OF WAY PLAN

State Highway 36 MP 95.2 to 95.6
Sections 33 & 34, Township 3 South &
Sections 3 & 4, Township 4 South,
Range 62 West of the 6th Principal Meridian
Counties of Arapahoe & Adams

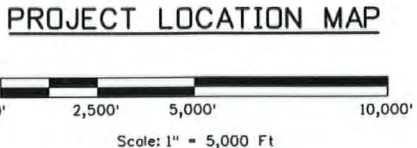
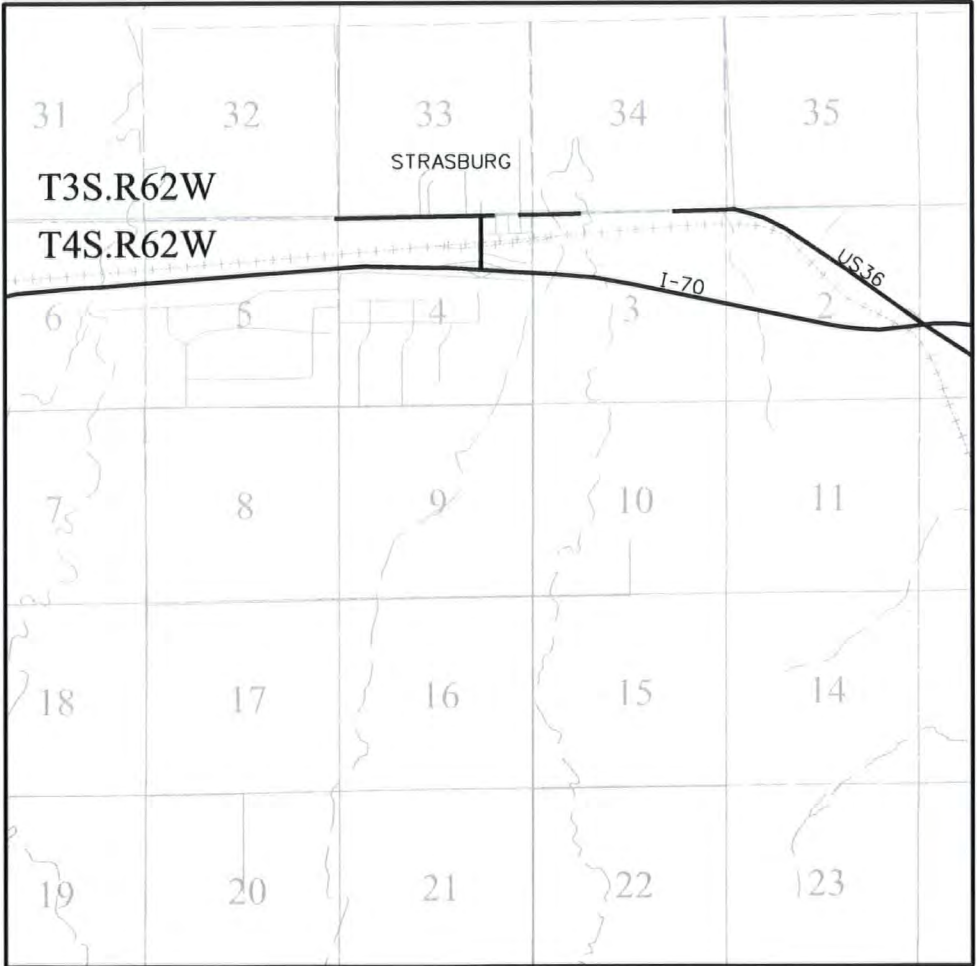
SHEET NO.	INDEX OF SHEETS
4.01	(1) Title Sheet
4.02-4.03	(2) Monument Coordinate Tables
4.04-4.05	(2) Plan Sheet
	(5) Total Sheets



Note: For a complete listing of symbolology used within this set of plans, please refer to the M-100-1 Standard Symbols of the Colorado Department of Transportation M&S Standards Publication dated July 2006. Existing features are shown as screened weight (gray scale). Proposed or new features are shown as full weight without screening.

General Notes:

1. This Preliminary Land Survey Control Diagram is an interim document for informational purposes only. This document will be superseded by the Land Survey Control Diagram included with the deposited right of way plans.
2. Title policy, title commitment, and title research are not part of this survey, therefore easements, rights, and restrictions of record were not researched and are not shown on this diagram. The verification of the physical evidence with relation to easements, rights of ways, property boundaries, and restrictions, as described in the instruments of record, were not included in this preliminary land survey control diagram.
3. This plan set is subject to change and may not be the most current set. It is the user's responsibility to verify with CDDT that this set is the most current. The information contained on the attached drawing is not valid unless this copy bears and original signature of the Professional Land Surveyor hereon named.
4. Refer to the M-629-1 Survey Monuments of the Standard Plans dated July, 2006 found in The Colorado Department of Transportation, M & S Standards for typical survey monument descriptions.



Basis of Bearings: Bearings used in the calculations of coordinates are based on a grid bearing of N88°36'28"W from CM-MP 95.30 to CM-MP 95.57. Both monuments are CDDT Type II, marked appropriately for their milepost location and control position. The survey data was obtained from a Global Positioning System (GPS) survey base on the Colorado High Accuracy Reference Network (CHARN).

Basis of Elevations: Project elevations are based on Bench Mark A259 1938, PID: KK0023, a standard bench mark disk set on top of a concrete monument, with a NAVD 88 elevation of 5395.29ft. A259 is a First order benchmark.

COORDINATE DATUM: Project coordinates are modified Colorado State Plane Central Zone NAD '83/(92) coordinates. The combined elevation/scale factor used to modify the coordinates from state plane to project coordinates is 1.00030129. The resulting project coordinates are truncated by 1,000,000ft in the Northing and 3,000,000ft in the Easting after converting from state plane coordinates to project coordinates. The CHARN is based on the NAD '83/(92) datum.
Project Coordinates Northing US Survey Feet = (State Plane Coordinate Northing * (3937/1200) * 1.00030129 - 1,000,000).
Project Coordinates Easting US Survey Feet = (State Plane Coordinate Easting * (3937/1200) * 1.00030129 - 3,000,000).

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.

SURVEYOR STATEMENT (LAND SURVEY CONTROL DIAGRAM)

I, Terry R. Maw, a professional land surveyor licensed in the State of Colorado, do hereby state to the Colorado Department of Transportation this Land Survey Control Diagram was prepared and the field survey it represents was performed under my responsible charge and, based upon my knowledge, information and belief is in accordance with applicable standards of practice defined by Colorado Department of Transportation publications. This statement is not a guaranty or warranty, either expressed or implied.

PLS No. 31161

18500 East Colfax Avenue
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Phone: 303-757-9648 FAX: 303-757-9746

Region 1

David A. Stewart

[illegible]

Farnsworth
GROUP

4755 FORGE ROAD, SUITE 150
COLORADO SPRINGS, COLORADO 80907
(719) 590-9194 / (917) 590-9111 Fax
www.f-w.com

Final Land Survey Control Diagram Monument Coordinate Tables

Project Number: FBR 0362-032

Project Location: SH 36 @ Comanche Creek

Near Strasburg, CO

Project Code:	Last Mod. Date	Subset	Sheet No.
18276	08-31-11	4.02 of 4.05	4.02

CHARN GEODETIC COORDINATE SUMMARY TABLE

CHARN GEODETIC COORDINATE SUMMARY TABLE							
Point No.	Geodetic Coordinates NAD-83(92) (CHARN)		Ellip Height (NAVD88)(m)	Ortho Height (m)	NAD 83(92) Zone 0502		Description
	Latitude(N)	Longitude(W)			SP Northing(m)	SP Easting(m)	
A259	39°44'13.82865"	104°17'54.40095"	1626.099	1644.488	516829.13	1017396.30	3.25" BRASS CAP IN CONC. - US COAST & GEODETIC
ASAY	39°46'55.04134"	104°19'13.97812"	1595.072	1613.52	521775.951	1015437.087	3.25" BRASS CAP IN CONC. - ADAMS COUNTY

GEODETIC COORDINATE TABLE

[illegible]

PROJECT COORDINATE TABLE

Point No.	Project Coordinates		Elev(ft) (NAVD88)	Description
	Northing(ft)	Easting(ft)		
A259	696141.10	338913.37	5395.290	3.25" Brass Cap in Conc - US Coast & Geodetic
P4-54	696549.01	333919.77	5372.630	3.25" Alum Cap - Arapahoe County
11	696554.32	332966.63	5364.043	#5 Rebar w/RPC "Farnsworth Control"
9530	696521.56	332390.09	5373.762	Set CDOT Type II for MP 95.30
9536	696480.34	332718.81	5372.843	Set CDOT Type II for MP 95.36
9547	696496.80	333302.07	5371.806	Set CDOT Type II for MP 95.47
9557	696556.96	333846.80	5371.497	Set CDOT Type II for MP 95.57





Sheet Revisions

Date	Description	Initials

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Date	Description	Initials

ENGINEERS
ARCHITECTS
SURVEYORS
SCIENTISTS

Farnsworth
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Final Land Survey Control Diagram

Monument Coordinate Tables

Project Number: FBR 0362-032			
Project Location: SH 36 @ Comanche Creek			
Near Strasburg, CO			
Project Code:	Last Mod. Date	Subset	Sheet No.
18276	08-31-11	4.03 of 4.05	4.03

FOUND ALIQUOT MONUMENT COORDINATE TABLE

Point No.	Northing(ft)	Easting(ft)	Description
1119	696516.35	332451.45	3.25" ALUM. CAP IN RANGE BOX - ILLEGIBLE
1120	696578.35	335095.62	3.25" ALUM. CAP - ILLEGIBLE
1153	696636.17	337736.46	SET 3.25" ALUM. CAP ON REBAR IN RANGE BOX

FOUND R.O.W. MONUMENT COORDINATE TABLE

Point No.	Northing(ft)	Easting(ft)	Description
20082	696545.45	332420.97	FOUND 4"x4" CONC. POST STAMPED ST. HWY ROW

FOUND EASEMENT MONUMENT COORDINATE TABLE

Point No.	Northing(ft)	Easting(ft)	Description

FOUND BOUNDARY MONUMENT COORDINATE TABLE

Point No.	Northing(ft)	Easting(ft)	Description
1000	696564.88	333242.90	YPC - LS 13487 FUTURA ENG.
1001	696571.64	333523.77	YPC - LS 13487 FUTURA ENG.
1002	696578.78	333836.82	YPC - LS 13487 FUTURA ENG.
1003	696592.78	334425.83	#3 REBAR - NO CAP
1004	696585.61	334126.30	RPC ON BENT #4 REBAR - LS 12330
1005	696582.94	334025.53	YPC - 23041
1006	696579.96	334026.22	1-1/2" ALUM. CAP - LS 28277 BSF
1007	696461.08	333071.32	YPC - 2438
1008	696231.40	333195.95	YPC - LS 18475 M. SCHEAR
1009	696717.99	332292.15	YPC - LS 28258 BASELINE ENG.
1010	696542.86	332295.39	YPC - LS 28258 BASELINE ENG.
1011	696554.00	332781.06	YPC - LS 13487 FUTURA ENG.
1013	696080.72	333244.61	1-1/2" ALUM. CAP - 24662
2000	696720.75	332418.13	#5 REBAR W/ YPC - PLS 28258 BASELINE
2001	696067.58	333245.91	#4 REBAR W/ YPC - LS 18475 M. SCHEAR



Colorado Department of Transportation



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Region 1

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Final Land Survey Control Diagram

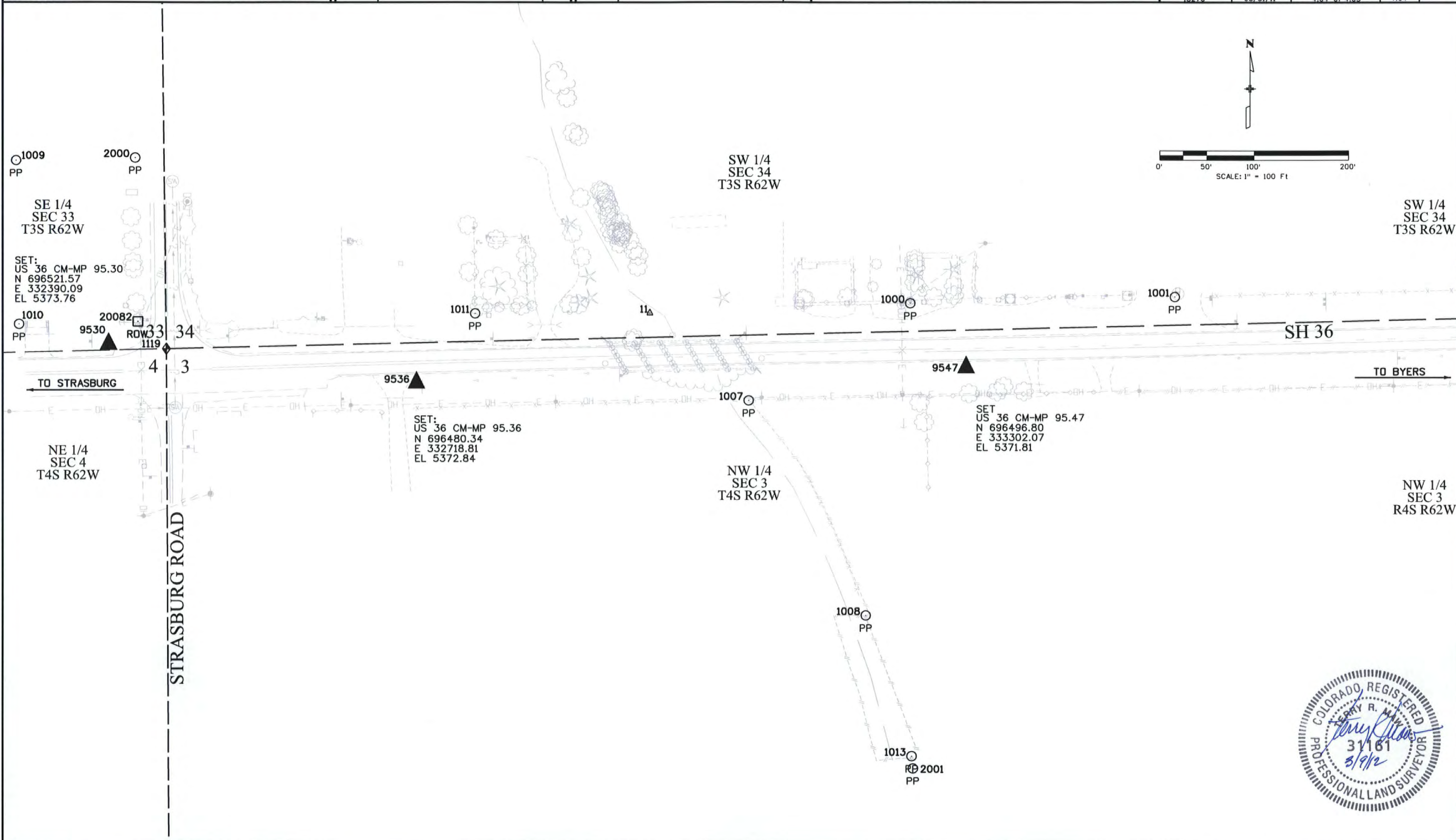
Plan Sheet

Project Number: FBR 0362-032

Project Location: SH 36 @ Comanche Creek

Near Strasburg, CO

Project Code:	Last Mod. Date	Subset	Sheet No.
18276	08/31/11	4.04 of 4.05	4.04



Colorado Department of Transportation



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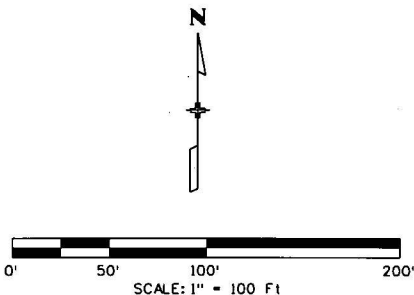
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Final Land Survey Control Diagram

Plan Sheet

Project Number: FBR 0362-032			
Project Location: SH 36 @ Comanche Creek			
Near Strasburg, CO			
Project Code:	Last Mod. Date	Subset	Sheet No.
18276	08-31-11	4.05 of 4.05	4.05



SW 1/4
SEC 34
T3S R62W

SE 1/4
SEC 34
T3S R62W

NE 1/4
SEC 3
T4S R62W

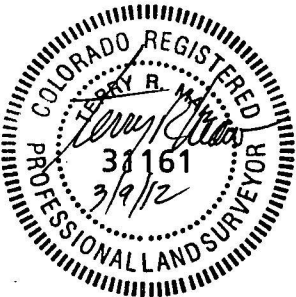
NW 1/4
SEC 3
T4S R62W

SET:
US 36 CM-MP 95.57
N 696556.97
E 333846.80
EL 5371.50

1002 PP 9557
1005 PP
1006 PP
1004 PP
1003 PP

500 BM
SH 36
TO BYERS

1120



Sheet Revisions			Sheet Revisions			Sheet Revisions		
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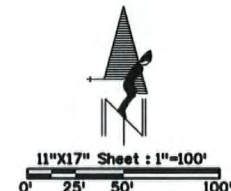
Retracement and Monumentation of Existing Right of Way Sheet			
Project Number: FBR 0362-032			
Project Location: SH 36 @ Comanche Creek			
Strasburg, CO.			
Project Code	Last Mod. Date	Subset	Sheet No.
18276	3-9-2012	1 of 1	5.01

TABULATION OF R.O.W. MONUMENTS TO BE SET					
Point No.	Northing(ft)	Easting(ft)	Description	Station	Offset
100	696453.39	332751.78	Set CDOT Type 1 ROW Monument	105+00.00	50.95'
101	696553.37	332749.66	Set CDOT Type 1 ROW Monument	105+00.00	-49.05'
103	696467.46	333351.61	Set CDOT Type 1 ROW Monument	111+00.00	49.57'
*104	696567.43	333349.50	*Set CDOT Type 1 ROW Monument	111+00.00	-50.43'

*Note: Pnt 104 is set with a 18" Finned Rod because of Utilities.

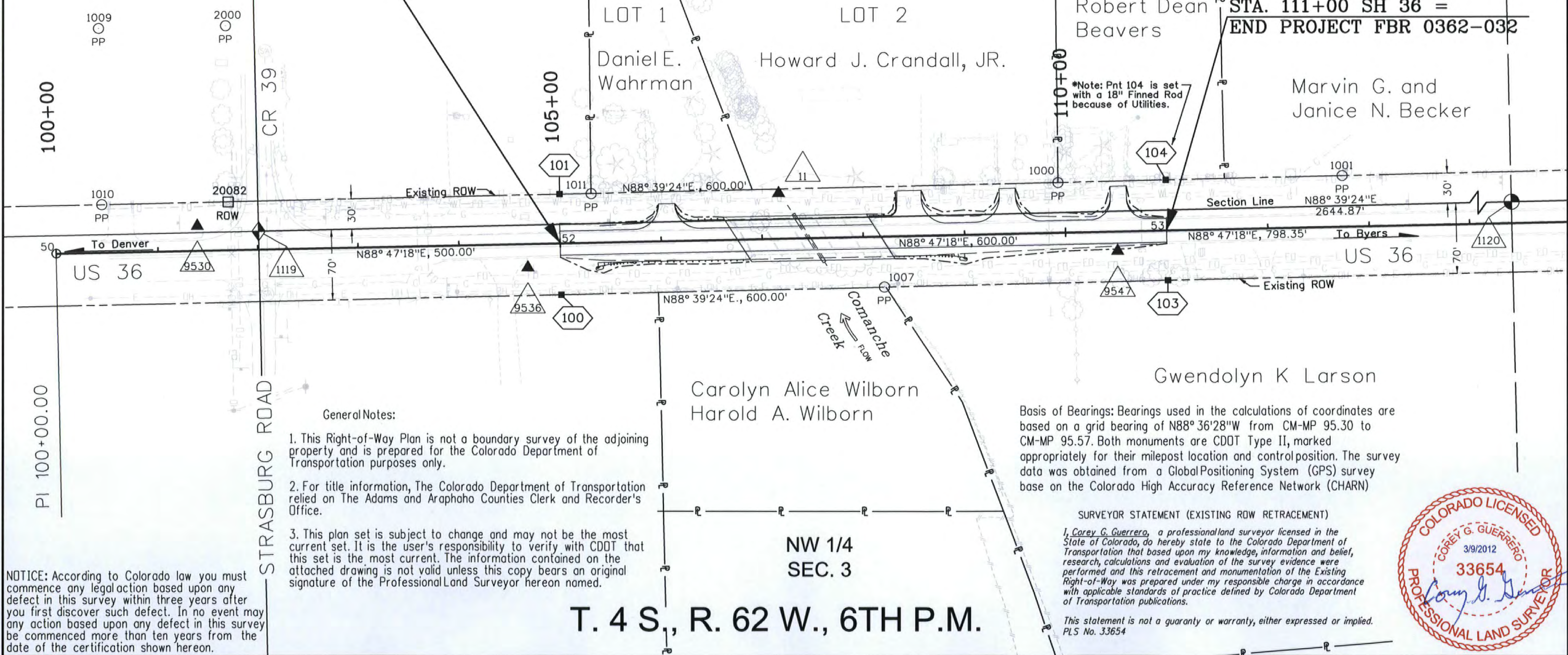
T. 3 S., R. 62 W., 6TH P.M.
SW 1/4
SEC. 34

TABULATION OF DESIGN CENTERLINE ALIGNMENT					
Point No.	Northing(ft)	Easting(ft)	Description	Station	Offset
50	696493.76	332250.81	Begin Design Centerline Alignment	100+00.00	0.00'
52	696504.33	332750.70	Design Centerline Alignment (PI)	105+00.00	0.00'
53	696517.02	333350.56	Design Centerline Alignment (PI)	111+00.00	0.00'
55	696533.90	334148.74	End Design Centerline Alignment	118+98.35	0.00'



STA. 105+00 SH 36 =
BEGIN PROJECT FBR 0362-032

STA. 111+00 SH 36 =
END PROJECT FBR 0362-032



General Notes:

1. This Right-of-Way Plan is not a boundary survey of the adjoining property and is prepared for the Colorado Department of Transportation purposes only.
2. For title information, The Colorado Department of Transportation relied on The Adams and Arapahoe Counties Clerk and Recorder's Office.
3. This plan set is subject to change and may not be the most current set. It is the user's responsibility to verify with CDOT that this set is the most current. The information contained on the attached drawing is not valid unless this copy bears an original signature of the Professional Land Surveyor hereon named.

Basis of Bearings: Bearings used in the calculations of coordinates are based on a grid bearing of N88° 36' 28" W from CM-MP 95.30 to CM-MP 95.57. Both monuments are CDOT Type II, marked appropriately for their milepost location and control position. The survey data was obtained from a Global Positioning System (GPS) survey base on the Colorado High Accuracy Reference Network (CHARN)

SURVEYOR STATEMENT (EXISTING ROW RETRACEMENT)

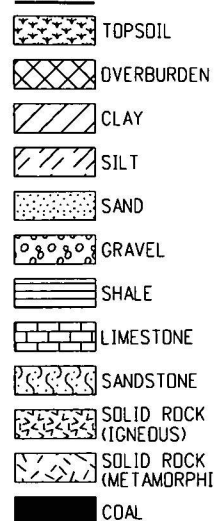
I, Corey G. Guerrero, a professional land surveyor licensed in the State of Colorado, do hereby state to the Colorado Department of Transportation that based upon my knowledge, information and belief, research, calculations and evaluation of the survey evidence were performed and this retracement and monumentation of the Existing Right-of-Way was prepared under my responsible charge in accordance with applicable standards of practice defined by Colorado Department of Transportation publications.

This statement is not a guaranty or warranty, either expressed or implied.
PLS No. 33654

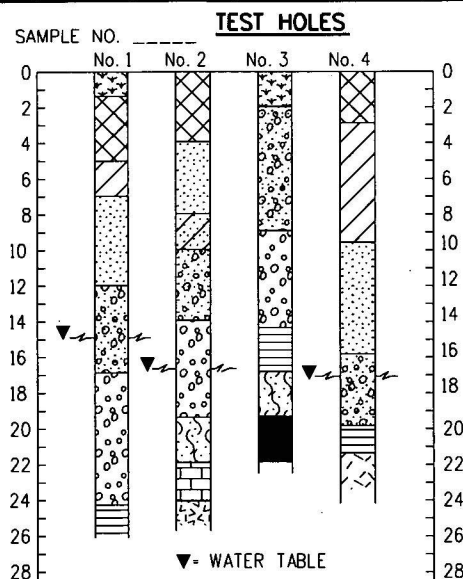


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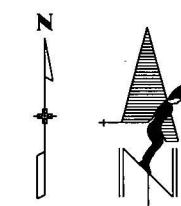
LEGEND



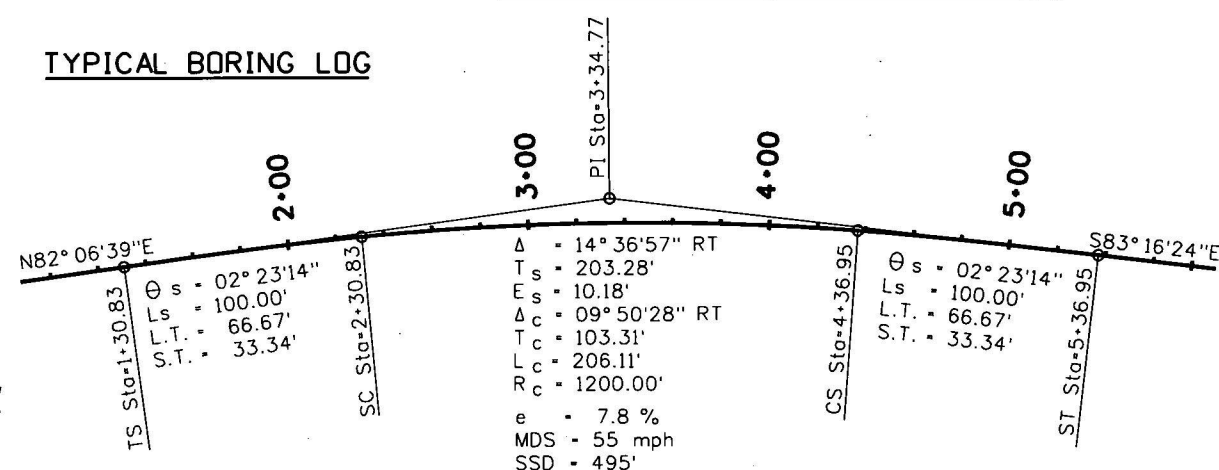
COMPOSITE MATERIALS ARE REPRESENTED BY COMBINATIONS OF THE ABOVE SYMBOLS, SUCH AS:



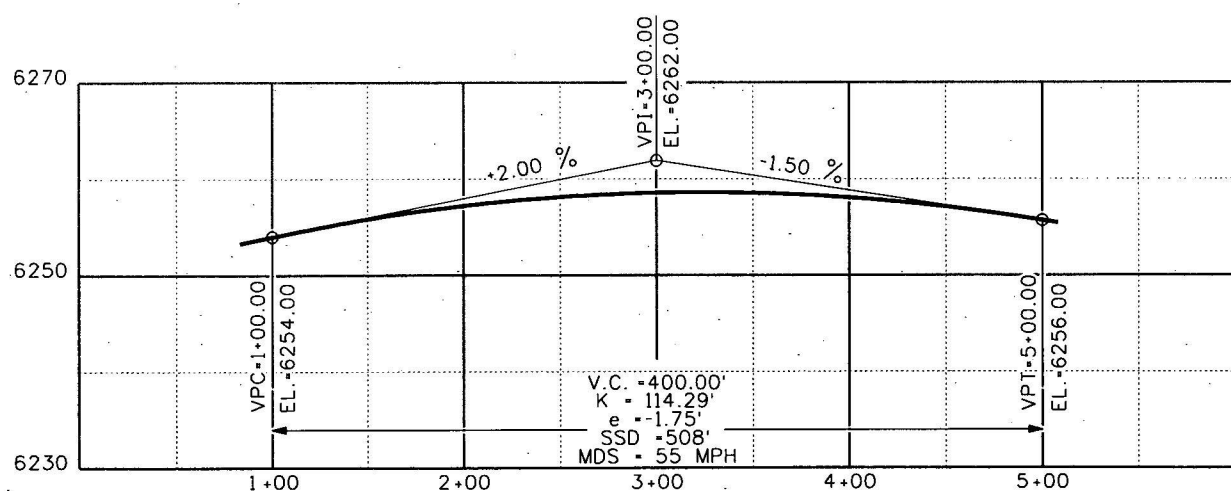
TYPICAL BORING LOG



NORTH ARROW

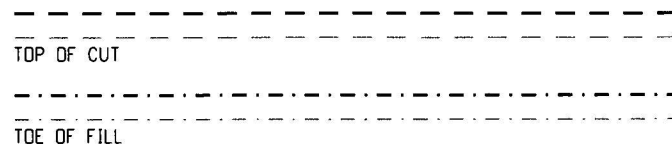


TYPICAL HORIZONTAL CURVE



TYPICAL VERTICAL CURVE

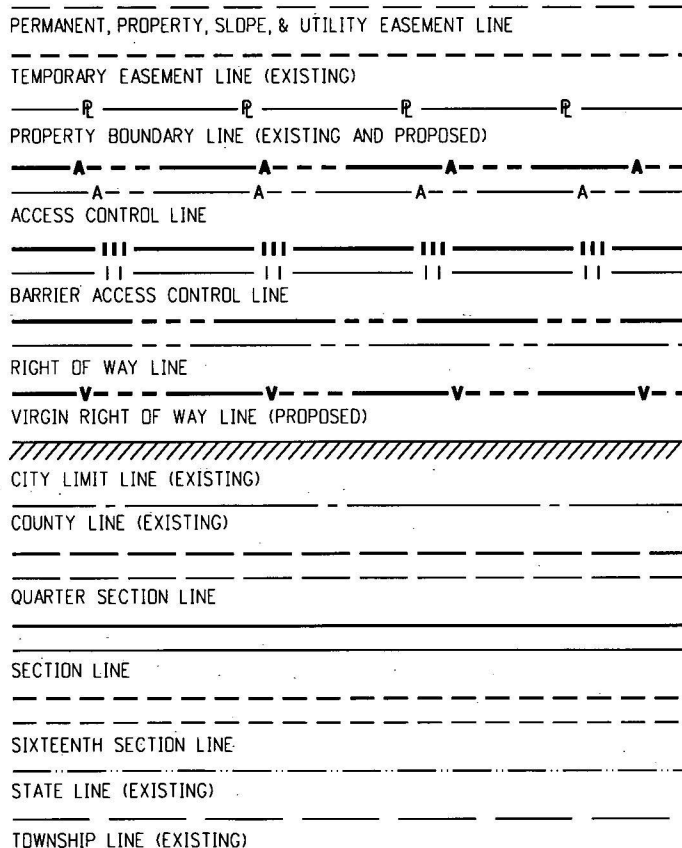
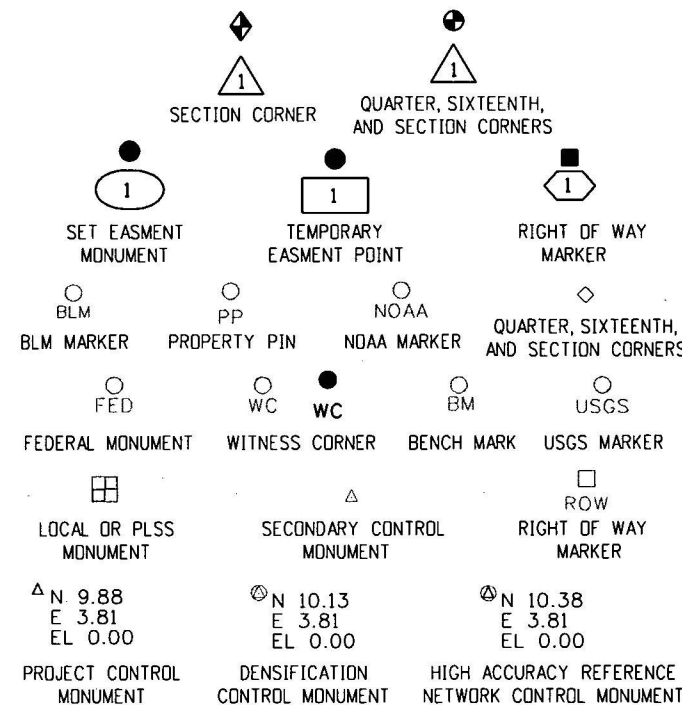
TERRAIN SINGLE SHOTS



TERRAIN



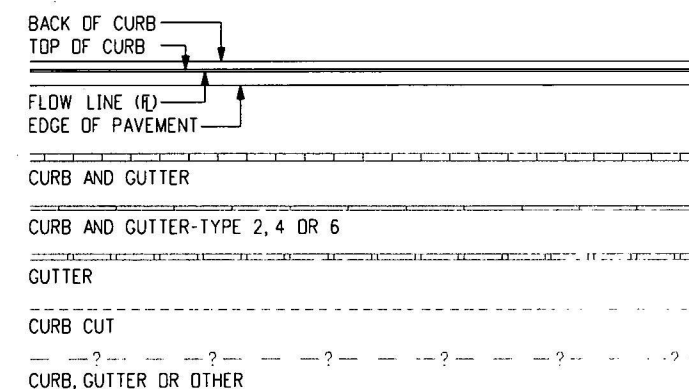
ROADWAY



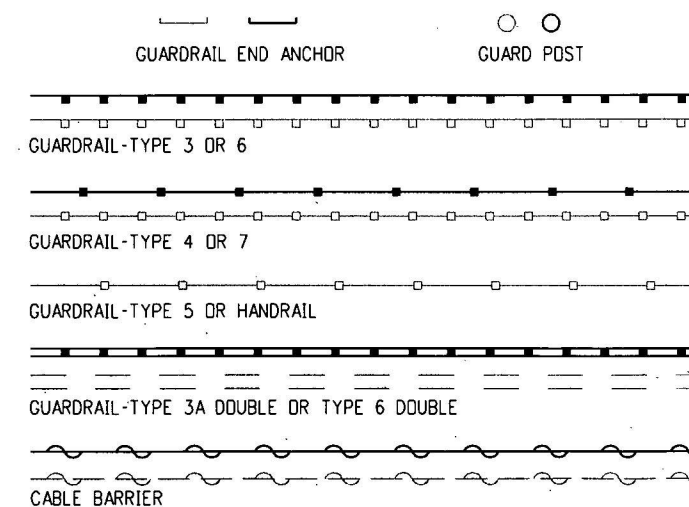
SURVEY/ROW

GENERAL NOTES

- EXISTING FEATURES SHOWN AS SCREENED WEIGHT (GRAY SCALE), EXCEPT AS NOTED WITH THE WORD (EXISTING). PROPOSED OR NEW FEATURES SHOWN AS FULL WEIGHT WITHOUT SCREENING, EXCEPT AS NOTED WITH THE WORD (PROPOSED).
- THESE SYMBOLS ARE INTENDED TO EXPLAIN THE VARIOUS TOPOGRAPHIC FEATURES INVOLVED ON THE DESIGN PLAN SHEETS WHICH ARE PREPARED AT VARIOUS SCALES. NOTES ARE ADDED WHERE NECESSARY TO CLARIFY THE SYMBOL. A LEGEND IS PROVIDED IN THE PLANS FOR SYMBOLS NOT SHOWN ON THE STANDARD SYMBOLS SHEETS.
- GUARDRAIL, CURB AND GUTTER, ETC., ARE REPRESENTED BY A SYMBOL WITH TYPE GIVEN BY NOTE.



CURB AND GUTTER



GUARDRAIL

Computer File Information

Creation Date: 07/04/06 Initials: SRJ
Last Modification Date: 07/04/06 Initials: LTA
Full Path: www.dot.state.co.us/DesignSupport/
Drawing File Name: 100010103.dgn
CAD Ver.: MicroStation V8 Scale: Not to Scale Units: English

Sheet Revisions

Date:	Comments
R-X	
R-X	
R-X	
R-X	

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Denver, Colorado 80222
Phone: (303) 757-9083
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Project Development Branch

SRJ/LTA

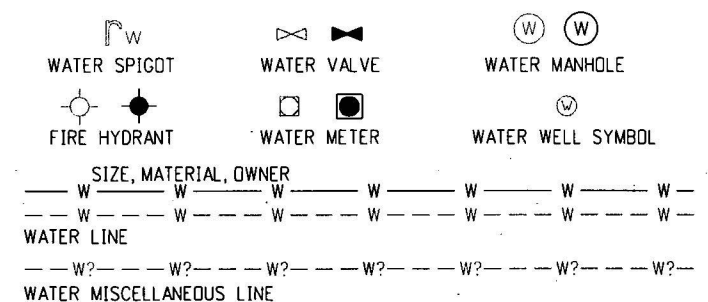
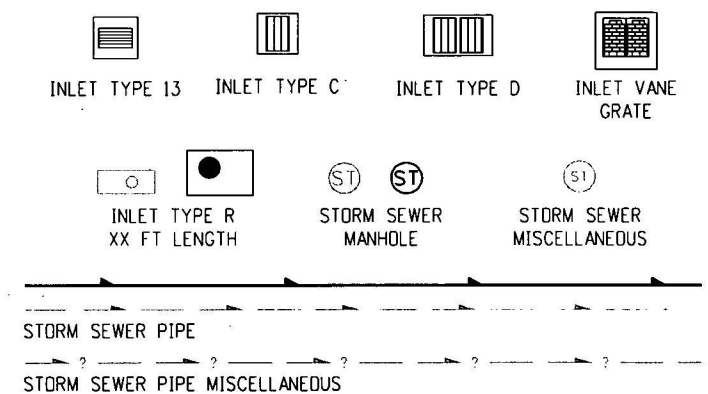
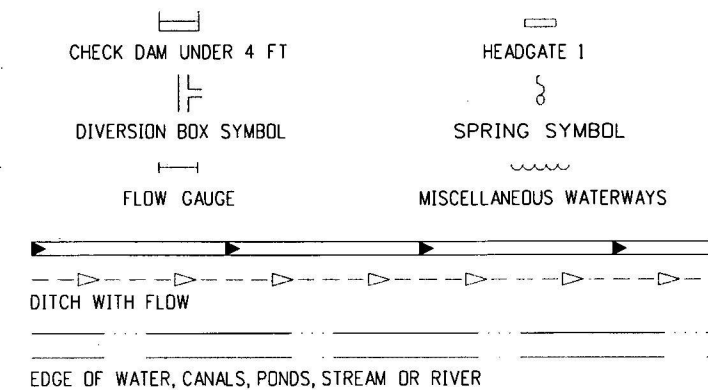
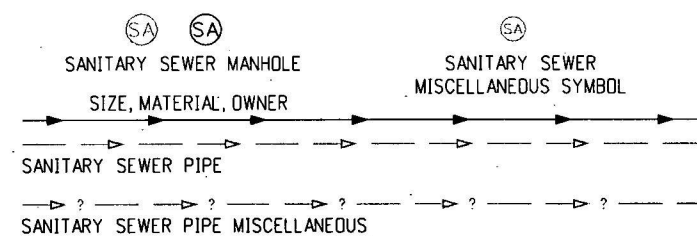
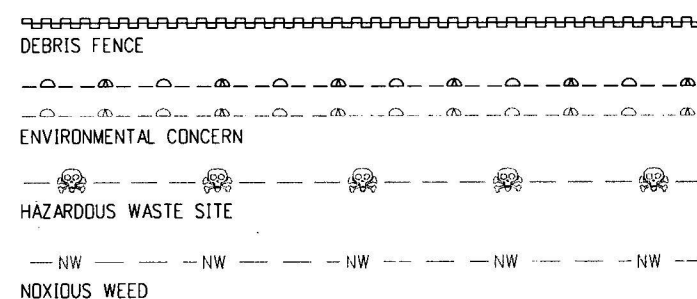
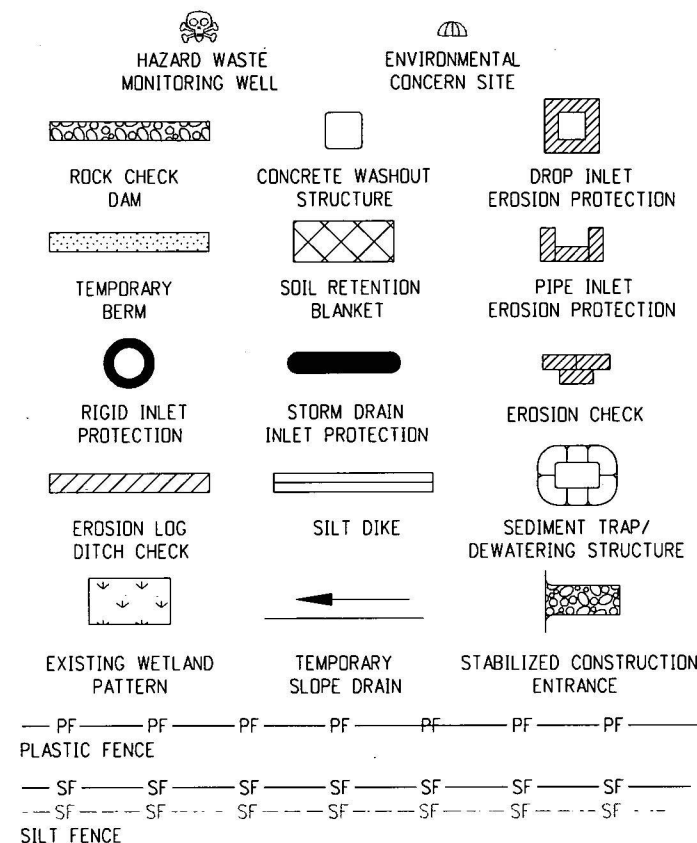
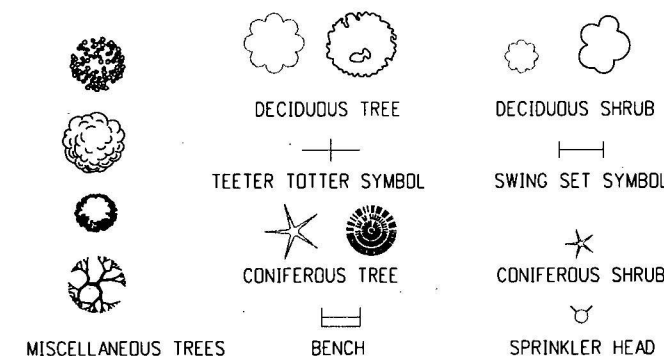
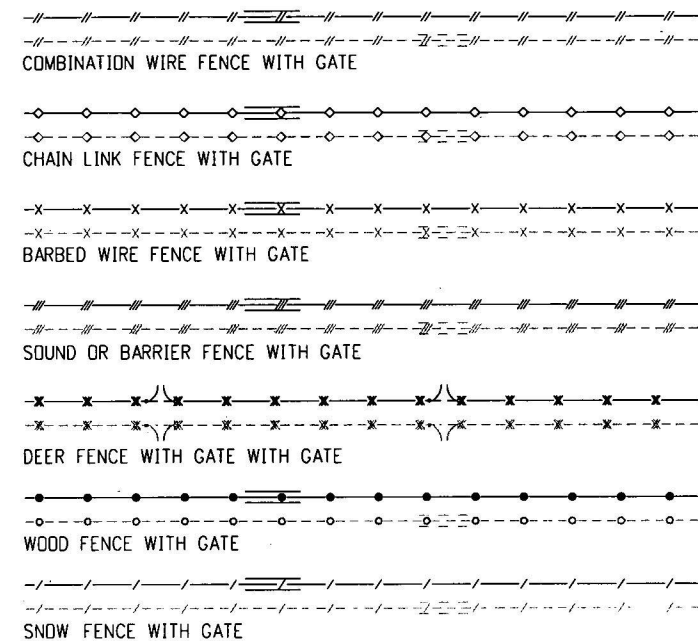
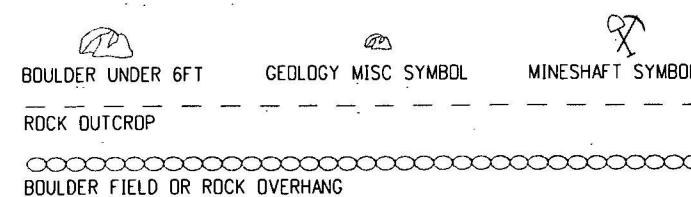
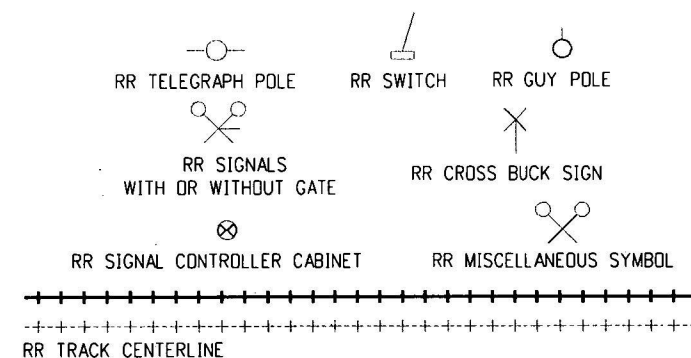
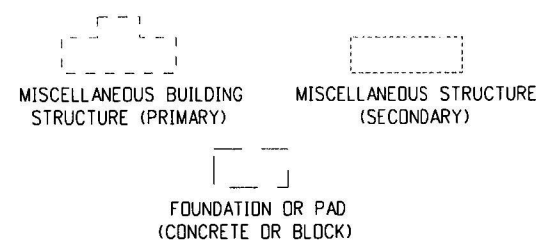
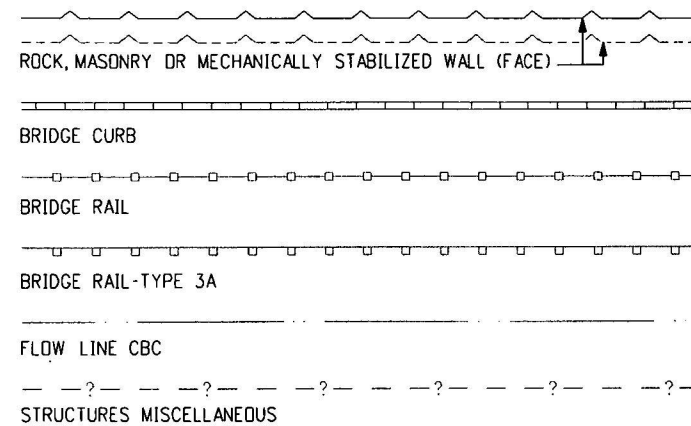
STANDARD SYMBOLS

Issued By: Project Development Branch on July 04, 2006

STANDARD PLAN NO.

M-100-1

Sheet No. 1 of 3



Computer File Information		
Creation Date: 07/04/06	Initials: SRJ	
Last Modification Date: 07/04/06	Initials: LTA	
Full Path: www.dot.state.co.us/DesignSupport/		
Drawing File Name: 100010203.dgn		
CAD Ver.: MicroStation V8	Scale: Not to Scale	Units: English

Sheet Revisions		
	Date:	Comments
(R-X)		
(R-X)		
(R-X)		
(R-X)		

Colorado Department of Transportation



Project Development Branch

rotation

STANDARD SYMBOLS

Issued By: Project Development Branch July 04, 2006

STANDARD PLAN NO.

M-100-1

Sheet No. 2 of 3

PROPANE TANK

GAS JUNCTION BOX

GAS VAULT

GAS LINE MARKER OR AIR VENT

GAS METER LOW PRESSURE

GAS METER HIGH PRESSURE

GAS MISCELLANEOUS

GAS LIGHT

GAS VALVE HIGH OR LOW PRESSURE

GAS LINE LOW PRESSURE

GAS LINE HIGH PRESSURE

PROPANE GAS LINE

GAS LINES MISCELLANEOUS

GAS

OIL METER HIGH AND LOW PRESSURE

OIL VALVE HIGH AND LOW PRESSURE

OIL MISCELLANEOUS

OIL LINE LOW OR HIGH PRESSURE

OIL MISCELLANEOUS LINE

OIL

GRAVE HEADSTONE SYMBOL

MAIL DROP BOX

FLAG POLE

TRASH BARREL POST

GRAVE SYMBOL

RADIO STATION ANTENNA

MISCELLANEOUS TOPOGRAPHY

MISCELLANEOUS TOPOGRAPHY

CAMPSITE MARKER

TRAILER ELECTRIC HOOKUP

TRAILER DUMP STATION

CAMPFIRE RING

TRAILER SEWER INLET

TRAILER WATER HOOKUP

CAMPSITE GRILL

CAMPSITE TABLE

CAMPING

LIGHT STANDARD

HIGH MAST LIGHT STANDARD

SPOT OR FLOOD LIGHT

LIGHTING

ELECTRICAL PEDESTAL OR PULL BOX

TRANSMISSION TOWER OR WIND POWERED GENERATOR

RELOCATED LIGHT STANDARD

DECORATIVE LIGHT STANDARD

CATENARY POLE FOUNDATION

ELECTRICAL MANHOLE

POWER POLE

TRANSFORMER ON POLE

ELECTRICAL OUTLET

ELECTRICAL MISCELLANEOUS

GUY WIRE

ELECTRICAL VAULT OR TRANSFORMER

GUY POST

FIRE ALARM BOX

ELECTRICAL UNDERGROUND LINE

ELECTRICAL OVERHEAD LINE

ELECTRICAL MISCELLANEOUS LINE

ELECTRICAL

TELEPHONE GUY POLE

FIBER OPTIC CABLE MARKER

TELEPHONE MANHOLE

COMBINATION POLE-POWER

TELEPHONE MISCELLANEOUS

COMBINATION GUY POLE-POWER

TELEPHONE UNDERGROUND CONDUIT OR CABLE

FIBER OPTICS UNDERGROUND CABLE

TELEPHONE OVERHEAD LINE

TELEPHONE MISCELLANEOUS LINE

TELEPHONE

FIBER MARKER DOME

FIBER MARKER SLATE

RWIS - REMOTE WEATHER SENSOR

VMS-BUTTERFLY

VMS-GROUND

VMS-CANTILEVER

VMS-SIGN BRIDGE

ITS CONDUIT

INTELLIGENT TRANSPORTATION SYSTEM

CENTER YELLOW SOLID DOUBLE

CENTER YELLOW SOLID BROKEN (NO PASS)

4 INCH WIDE

8 INCH WIDE

LANE LINE BROKEN

LANE DROP

CHANNELIZING OR EDGE LINE

4 INCH WIDE

8 INCH WIDE

DOTTED BROKEN

STOP LINE

TRAFFIC STRIPING

TRAVEL DIRECTION

BARRIER LIGHT

FLAGGER

DELINEATOR-TYPE I

SEQUENCING ARROW PANEL

FLASHING BEACON

DELINEATOR-TYPE II

DELINEATOR-TYPE III

BUTTERFLY SIGN

HALF BUTTERFLY SIGN

IMPACT ATTENUATOR

SIGN ASSEMBLY

SINGLE POST SIGN

DOUBLE POST SIGN

SIGN-WITH FLASHING BEACON

ROAD CLOSURE GATE BEACON SYMBOL

ROAD CLOSURE GATE SYMBOL

DEER REFLECTORS

TRAFFIC CONTROL MISCELLANEOUS DEVICE

TRAFFIC CONTROL DEVICE

TRAFFIC CONTROL

SIGNAL SPAN WIRE POLE

DOUBLE MAST ARM POLE

LUMINAIRE

SIGNAL FACE

SIGNAL POLE WITH MAST ARM

SIGNAL FACE WITH BACKPLATE

SIGNAL CONTROLLER AND CABINET (4 FT)

TELEMETRY ANTENNA

PULL BOX

MICRODETECTOR

VIDEO DETECTION CAMERA

FIRE PREEMPTION UNIT AND TIMER

PEDESTRIAN SIGNAL FACE

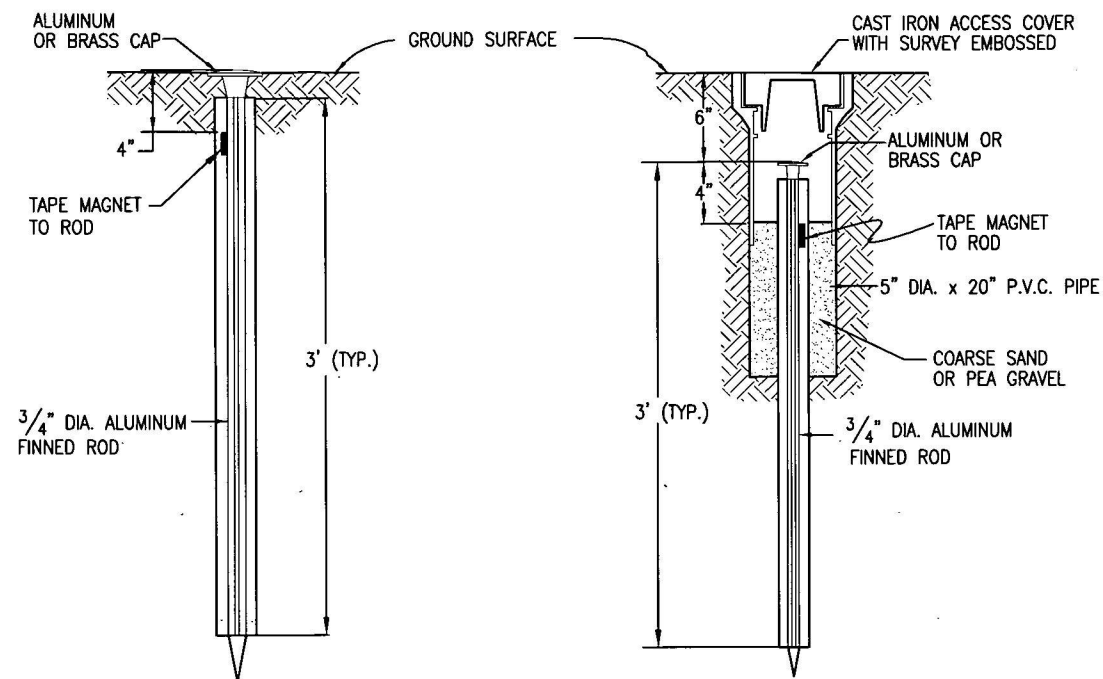
PEDESTRIAN PUSH BUTTON

PEDESTAL POLE

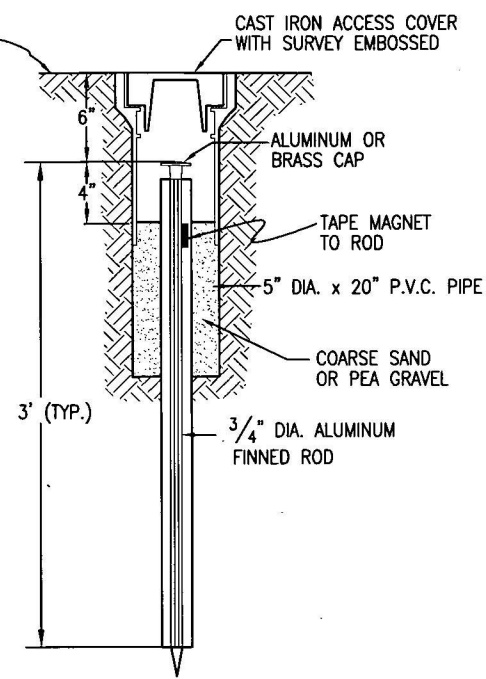
PULL BOX SPECIAL

TRAFFIC CONDUIT

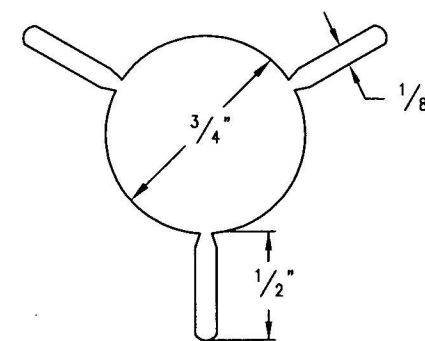
TRAFFIC SIGNAL



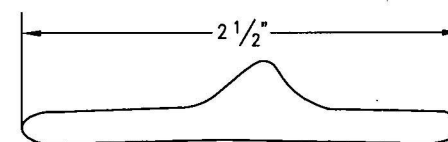
TYPE 1 MONUMENT



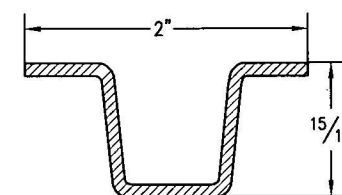
TYPE 1A MONUMENT
INCLUDES MONUMENT BOX



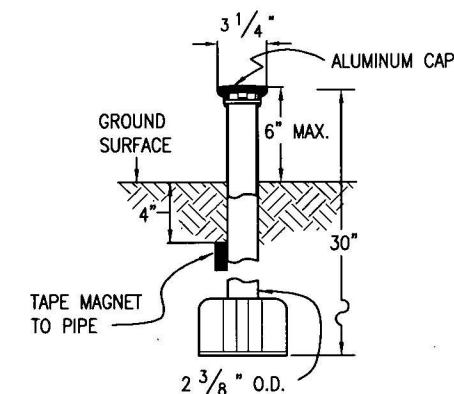
SECTION A-A



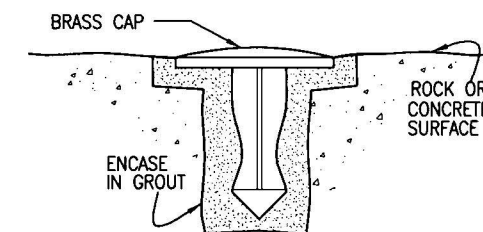
SECTION B-B



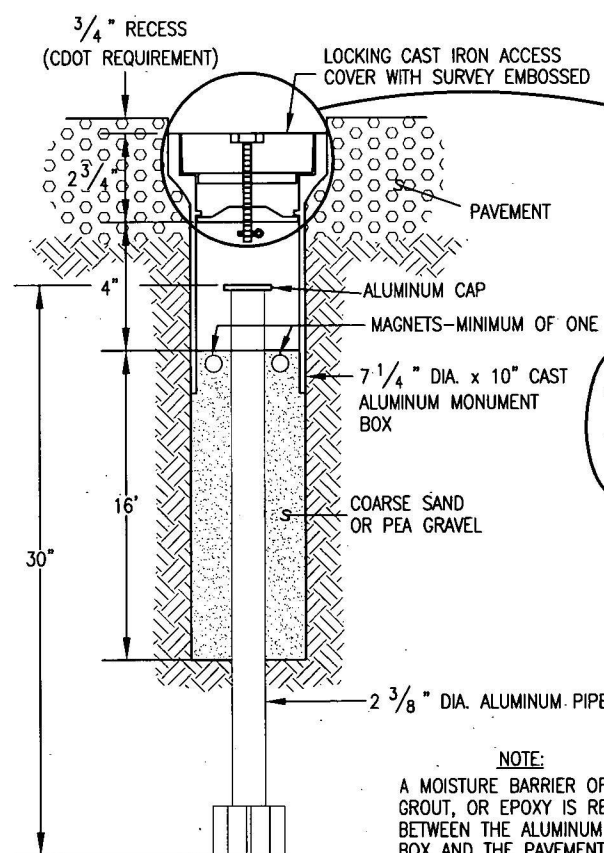
DELINEATOR POST
SECTION C-C



TYPE 3 MONUMENT



TYPE 5 MONUMENT
ALUMINUM CAP AND TYPE 5(S)
DETAILS SHOWN ON SHEET 2



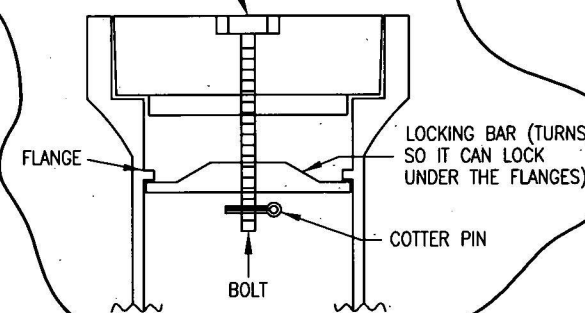
TYPE 3A MONUMENT

ROADWAY INSTALLATION
INCLUDES MONUMENT BOX

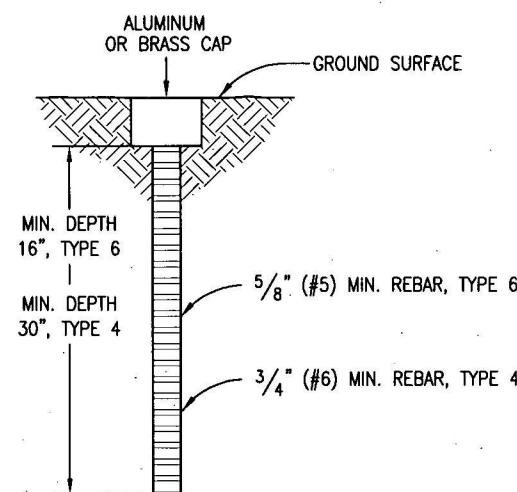
CUT IN FLANGE TO ALLOW THE LOCKING BAR PAST THE FLANGE. ONCE THE LID IS ON, THE NUT AND/OR LID IS ROTATED TO LOCK LID IN PLACE.

PLAN VIEW

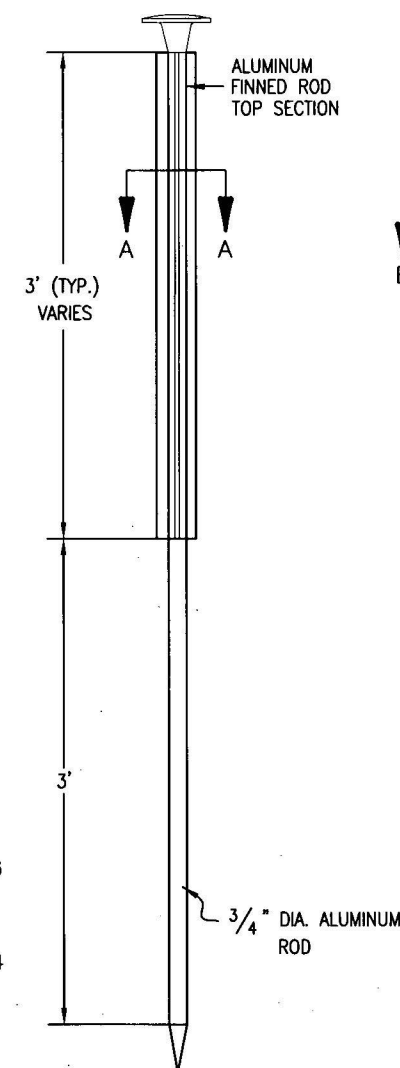
TAMPERPROOF LOCK NUT: REQUIRES PENTAGONAL (FIVE-SIDED) BOX WRENCH



LOCKING CAST IRON ACCESS COVER

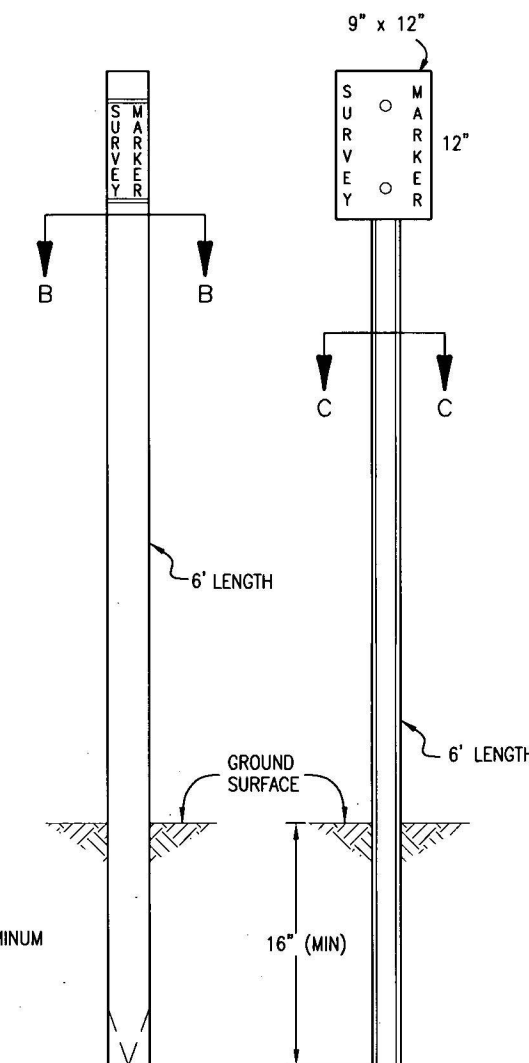


TYPE 4 AND TYPE 6 MONUMENT



TYPE 2 MONUMENT

TYPE 2A INCLUDES MONUMENT BOX



WITNESS POSTS

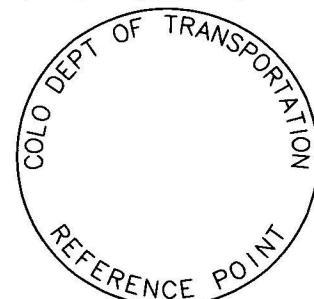
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Sheet Revisions	
Date:	Comments
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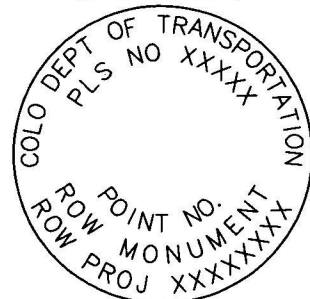
Colorado Department of Transportation	
4201 East Arkansas Avenue Denver, Colorado 80222 Phone: (303) 757-9083 Fax: (303) 757-9820	
Project Development Branch	SRJ/LTA

SURVEY MONUMENTS	
Issued By: Project Development Branch on July 04, 2006	

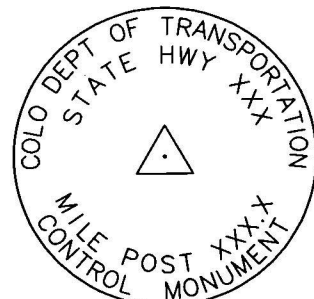
STANDARD PLAN NO.	
M-629-1	
Sheet No. 1 of 2	



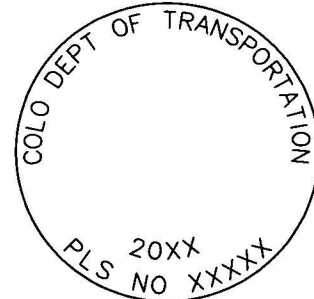
REFERENCE
MONUMENT CAP



ROW
MONUMENT CAP



CONTROL
MONUMENT CAP

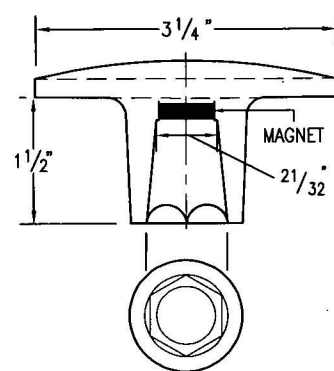


ALIQUT CORNER
MONUMENT CAP

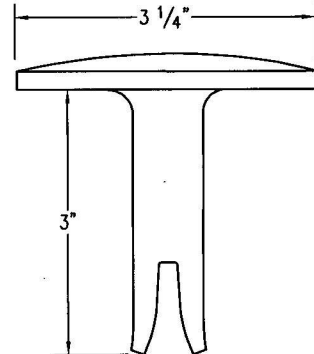


ALUMINUM CAP

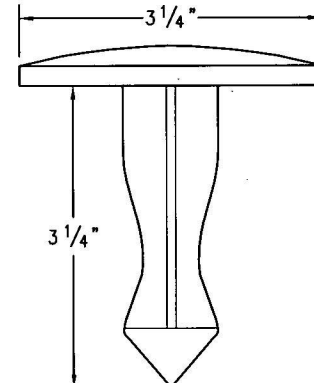
NOTE: A BLANK CAP MAY BE SUBSTITUTED IF THE APPROPRIATE CAP SHOWN ABOVE IS NOT AVAILABLE. IF A BLANK CAP IS USED, ALL INFORMATION NORMALLY INCLUDED ON THE APPROPRIATE STANDARD CAP, SHALL BE STAMPED ON THE BLANK CAP ALONG WITH SPECIFIC PROJECT INFORMATION SUCH AS PROJECT NO., DATE, POINT NO., ETC..



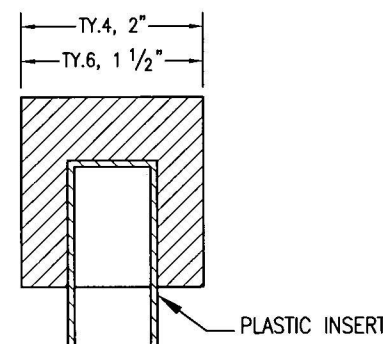
ALUMINUM CAP
USED WITH ALUMINUM ROD



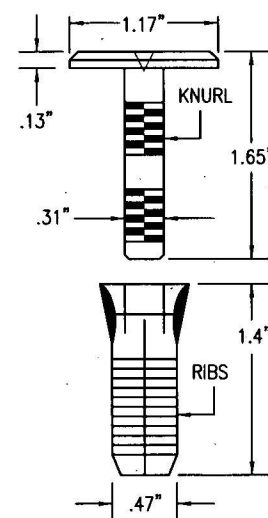
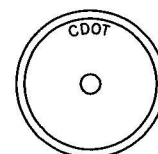
ALUMINUM CAP
TYPE 5
FOR PLACING IN EXISTING
CONCRETE OR ROCK



BRASS CAP
TYPE 5
FOR PLACING IN EXISTING
CONCRETE OR ROCK



ALUMINUM CAP



COPPER ALLOY CAP
TYPE 5(S)
FOR PLACING IN EXISTING
SIDEWALK, CURB, OR GUTTER

MONUMENT APPLICATION

CAP TYPE	MONUMENT TYPE									
	1	1A	2	2A	3	3A	4	5	5(S)	6
REFERENCE	X	X						X	X	X
ROW	X	X						X	X	
CONTROL			X	X				X	X	
ALIQUT CORNER	X	X			X	X	X	X		
PERMANENT EASEMENT								X	X	X
PROJECT POINTS								X	X	X
WITNESS POST * (REQUIRED)	X		X	X	X			X		

ALL MONUMENTATION MATERIALS WILL BE FURNISHED BY CDOT
THE MONUMENT TYPE SHALL MEET THE MINIMUM STANDARDS AS DETERMINED BY THE COLORADO STATE BOARD OF REGISTRATION FOR PROFESSIONAL LAND SURVEYORS RULES (STATE BOARD RULES).
THE CDOT SURVEY COORDINATOR SHALL APPROVE ALL EXCEPTIONS FOR STAMPING MONUMENTS DIFFERING FROM THE STANDARDS.

TYPE 1 AND TYPE 1A ALUMINUM FINNED ROD MONUMENTS

THIS MONUMENT SHALL BE USED FOR ROW OR REFERENCE MONUMENTS OR MAY BE USED FOR AN ALIQUOT CORNER MONUMENT. WHEN USED AS AN ALIQUOT CORNER MONUMENT, INSTALLATION AND RECORD FILING REQUIREMENTS SHALL BE AS STATED FOR TYPE 3 AND TYPE 3A MONUMENTS.

MONUMENTS SHALL BE INSTALLED BY ATTACHING THE PROPER SIZE TIP TO ONE END OF A SECTION OF FINNED ROD, AND A 3 IN. LONG X 3/4 IN. DIA. STAINLESS STEEL ADAPTER TO THE OTHER END. THE DRIVER IS THEN PLACED OVER THE STAINLESS STEEL ADAPTER FOR THE HAMMER TO CONTACT. TYPE 1 MONUMENTS SHALL USE A MINIMUM 3 FT. SECTION OF FINNED ROD. WHEN SUBSURFACE ROCK OR CONCRETE IS ENCOUNTERED LESS THAN 3 FT. BELOW THE GROUND SURFACE, THE ROD SHALL BE EMBEDDED IN THE ROCK OR IN CONCRETE AT LEAST 6 IN. AND GROUTED IN PLACE. THE ROD MAY BE SHORTENED TO ACCOMMODATE THE CONDITIONS.

WHEN UNSTABLE SOIL CONDITIONS ARE ENCOUNTERED, ADDITIONAL SECTIONS OF ROD SHALL BE ADDED TO ACHIEVE STABILITY. HORIZONTAL AND VERTICAL STABILITY ARE REQUIRED.

TYPE 1A MONUMENT INCLUDES MONUMENT BOX. A LOCKING CAST IRON ACCESS COVER SHALL BE INSTALLED WHEN THE MONUMENT IS LOCATED IN THE ROADWAY PAVEMENT.

TYPE 2 AND TYPE 2A ALUMINUM FINNED ROD MONUMENTS

THIS MONUMENT SHALL BE USED FOR HORIZONTAL AND VERTICAL CONTROL MONUMENTS. WHEN UNSTABLE SOIL CONDITIONS ARE ENCOUNTERED, ADDITIONAL SECTIONS OF ROD SHALL BE ADDED TO ACHIEVE STABILITY. HORIZONTAL AND VERTICAL STABILITY ARE REQUIRED. IN MOST SOIL CONDITIONS THE TYPE 2 MONUMENT IS EMBEDDED 6 FT. INTO THE GROUND.

THE MONUMENT SHALL BE INSTALLED BY FIRST ATTACHING THE PROPER SIZE TIP TO A 3 FT. LONG X 3/4 IN. DIA. ROD, THEN DRIVING THE ROD AT LEAST 30 IN. INTO THE GROUND. ADDITIONAL 3 FT. LONG X 3/4 IN. FINNED ROD SECTIONS SHALL BE ADDED AND DRIVEN FLUSH WITH THE GROUND UNTIL THE MONUMENT IS IN A STABLE POSITION. THE FINNED ROD SECTIONS ARE BENT OVER USING PLIERS TO ACCOMMODATE INSTALLING THE CAP. THE CAP IS FIRMLY SEATED ONTO THE LAST FINNED SECTION OF ROD USING A DEAD BLOW SLEDGE HAMMER.

TYPE 2A MONUMENT INCLUDES MONUMENT BOX. A LOCKING CAST IRON ACCESS COVER SHALL BE INSTALLED WHEN THE MONUMENT IS LOCATED IN THE ROADWAY PAVEMENT.

TYPE 3 AND TYPE 3A ALUMINUM PIPE MONUMENTS

THIS MONUMENT SHALL BE USED FOR AN ALIQUOT CORNER MONUMENT. THE INSTALLATION OF THIS MONUMENT AND RECORD FILING SHALL BE DONE IN ACCORDANCE WITH THE STATE BOARD RULES. ALSO REFER TO THE CDOT SURVEY MANUAL AND THE BUREAU OF LAND MANAGEMENT REQUIREMENTS FOR MONUMENT INSTALLATION. THE LAND SURVEYOR'S LICENSE NUMBER AND THE YEAR SHALL BE STAMPED ON THE CAP.

TYPE 3A MONUMENT INCLUDES MONUMENT BOX. A LOCKING CAST IRON ACCESS COVER SHALL BE INSTALLED WHEN THE MONUMENT IS LOCATED IN THE ROADWAY PAVEMENT.

TYPE 4 ALUMINUM MONUMENT

THIS MONUMENT MAY BE INSTALLED IN LIEU OF REPLACING THE ENTIRE MONUMENT WHEN REBAR IS IN PLACE AT AN ALIQUOT CORNER LOCATION. REFER TO THE STATE BOARD RULES. A MINIMUM 2 IN. DIA. CAP SHALL BE USED ON 3/4 IN. (#6) REBAR.

TYPE 5 BRASS/ALUMINUM CAP MONUMENT

THIS MONUMENT MAY BE INSTALLED IN LIEU OF ALL OTHER CDOT MONUMENTS, WHEN THE POSITION IS LOCATED IN CONCRETE OR STABLE ROCK FORMATION.

TYPE 5(S) COPPER ALLOY CAP MONUMENT - SMALL

THIS MONUMENT MAY BE INSTALLED IN LIEU OF A TYPE 5 MONUMENT, WHEN THE POSITION IS LOCATED IN A CONCRETE SIDEWALK, CURB OR GUTTER, OR WHEN SETTING A TYPE 5 WOULD COMPROMISE THE INTEGRITY OF THE RECEIVING STRUCTURE.

STAMPING REQUIREMENTS:

- "RP", WHEN THE APPLICATION IS A REFERENCE POINT.
- "ROW", POINT NUMBER, "LS", AND REGISTRATION NUMBER WHEN THE APPLICATION IS A ROW POINT.
- "CP" AND A UNIQUE IDENTIFIER PROVIDED BY THE REGION SURVEY COORDINATOR, WHEN THE APPLICATION IS A CONTROL POINT.
- "PE", POINT NUMBER, "LS", AND REGISTRATION NUMBER, WHEN THE APPLICATION IS A PERMANENT EASEMENT POINT.
- "PP" AND POINT NUMBER, WHEN THE APPLICATION IS A PROJECT POINT.

TYPE 6 ALUMINUM MONUMENT

THIS MONUMENT SHALL BE USED FOR PERMANENT EASEMENTS, PROJECT BENCH MARKS, PROJECT POINTS, AND REFERENCES. AN ALUMINUM CAP WITH A MINIMUM DIAMETER OF 1 1/2 IN., SHALL BE USED ON 5/8 IN. (#5) MINIMUM REBAR.

* WITNESS POSTS

THE WITNESS POST WILL BE SUPPLIED BY CDOT AND INSTALLATION SHALL BE INCLUDED IN THE WORK. IT SHALL BE DRIVEN WITHIN 1 FT. OF THE MONUMENT WHEN POSSIBLE. A DELINEATOR POST WITH A 9 IN. X 12 IN. METAL SIGN PANEL MAY BE USED IN LIEU OF THE PLASTIC POST. THIS POST SHALL CONFORM TO STANDARD PLAN S-612-1. A REQUIRED WITNESS POST MAY BE OMITTED WITH THE APPROVAL OF THE ENGINEER IF THE WITNESS POST LOCATION IS WITHIN A TRAVELED WAY, DRIVEWAY, OR ACCESS OPENING.

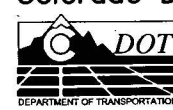
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Sheet Revisions

Date:	Comments
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(R-X)	
(R-X)	

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Project Development Branch

SRJ/LTA

SURVEY MONUMENTS

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