



COLORADO

Department of Transportation

Right of Way Manual

Chapter 2

Right of Way Plans

Policies, Procedures and Information

FHWA approval 10/2022

Amendments to:
Sections 2.6, 2.14, 2.16, 2.18, 2.25
Addition of 2.6.30 Right of Way
Easement

Table Of Contents

SUMMARY OF AMENDMENTS FHWA APPROVED 10/2022		8
Section 2.1 - General Information		9
2.1.1 - Acronyms Common to the Right of Way (ROW) Manual and CDOT		9
2.1.2 - Authorities		11
2.1.3 - Federal Authority (23 CFR 710.201), 49 CFR 24.1		11
2.1.4 - State Authority (CRS)		11
2.1.5 - Colorado State Board of Licensure Memorandum of Understanding.....		11
2.1.6 - FHWA Stewardship Agreement		12
2.1.7 - Purpose		12
SECTION 2.2 - HISTORY OF HIGHWAY ROW IN COLORADO		12
2.2.1 - History of Highway ROW Plans in Colorado		12
2.2.2 - Preparation of ROW Plans – CDOT Regional Responsibility.....		13
2.2.3 - Revised Statute (RS) 2477		13
2.2.4 - General Statutes of the State of Colorado 1883		14
2.2.5 - Emergency Relief Appropriation Act of Congress of 1935		14
2.2.6 - 1935 Colorado Statutes Annotated – Roads and Highways		15
2.2.7 - Public Highways or Roads (CRS 43-1-202).....		15
2.2.8 - Public Highways (CRS 43-2-201)		15
2.2.9 - Prescriptive ROW - Adverse Possession (CRS 43-2-201).....		15
SECTION 2.3 - PRELIMINARY DEVELOPMENT OF ROW PLANS		17
2.3.1 - Land Surveys.....		17
2.3.2 - Topography.....		17
2.3.3 - Improvements		17
2.3.4 - Utilities		18
2.3.5 - Aerial Photography and UAS		18
2.3.6 - Colorado Coordinate System (a.k.a. National Spatial Reference System) ..		18
2.3.7 - Original Data Files		18
SECTION 2.4 - CONTENTS OF ROW PLANS.....		19
2.4.1 - Federal Guidelines.....		19
2.4.2 - State Requirement (CRS 38-51-106).....		20
2.4.3 - Basis of Bearings Requirements (AE/PE/PLS State Board Rule 6.8.1)		21
2.4.4 - CDOT Plan Set Requirements		21
2.4.5 - ROW Plan Templates		22
2.4.6 - Title Sheet.....		22
2.4.7 - Federal Aid Projects.....		23
2.4.8 - Non-Federal Aid Projects		23
2.4.9 - Local Public Agency Projects.....		23
2.4.10 - Tabulation of Properties Sheet.....		23
2.4.11 - Project Control Diagram and Land Survey Control Diagram.....		24
2.4.12 - Monumentation Sheet.....		24
2.4.13 - Single Plan Sheet Projects.....		25

SECTION 2.5 - PLAN SHEET GENERAL NOTES AND SURVEYORS STATEMENTS.....	25
2.5.1 - General Notes.....	25
2.5.2 - Surveyor's Statements.....	26
SECTION 2.6 - THE PLAN SHEET.....	28
2.6.1 - General.....	28
2.6.2 - Centerline Alignment.....	28
2.6.3 - ROW Lines.....	29
2.6.4 - ROW Parcels (Amended 7/2022).....	29
2.6.5 - Parcel Designations (Amended 7/2022).....	31
2.6.6 - Right of Way Parcel (RW).....	31
2.6.7 - Permanent Easements (PE).....	32
2.6.8 - Slope Easements (SE).....	32
2.6.9 - Temporary Easements (TE).....	32
2.6.10 - Utility Easements (UE).....	32
2.6.11 - Railroad Crossing Easements (RE).....	32
2.6.12 - Excess Land Parcels (EX).....	33
2.6.13 - Remnant, Uneconomic Remnant, and Damaged Remnant Parcels (RM).....	33
2.6.14 - Mineral Estate (ME).....	34
2.6.15 - Scenic Vista (SV).....	34
2.6.16 - State Land Board (LB).....	34
2.6.17 - Highway Easement Deed (HE).....	34
2.6.18 - Conservation Parcels: Wildlife Habitat (WH) and Wetland Parcels (WL).....	35
2.6.19 - Conservation Easements (CE).....	35
2.6.20 - Conversion Parcels (XX).....	35
2.6.21 - Condominiums.....	35
2.6.22 - Improvements and Land Service Facilities.....	35
2.6.23 - Outer Lane Lines and Road Approaches.....	36
2.6.24 - Access (AC).....	36
2.6.25 - Control by Deed or Rule and Order.....	36
2.6.26 - Control by Law on Virgin Access.....	37
2.6.27 - Barrier Control Line.....	37
2.6.28 - Control of Access by Statute, Rule and Regulations CRS 43-2-147.....	37
2.6.29 - Unknown Parcels (UN).....	38
2.6.30 - Right of Way Easement (RWE) (Added with Amendment 7/2022).....	38
SECTION 2.7 - THE OWNERSHIP MAP.....	38
2.7.1 - Purpose.....	38
2.7.2 - Specifications for Ownership Map.....	39
2.7.3 - Content.....	39
2.7.4 - Total Ownership Maps.....	40
2.7.5 - Electronic Microstation dgn submittals.....	40
SECTION 2.8 - ROW PLANS PREPARATION PROCESS.....	40
2.8.1 - Preliminary Field Survey.....	40

2.8.2 - Electronic (ProjCode) ROW_Model.dgn	41
2.8.3 - ROW Plan Preparation	44
2.8.4 - ROW Plan Revisions	45
SECTION 2.9 - MEMORANDUMS OF OWNERSHIP & TITLES	45
2.9.1 - Purpose	45
2.9.2 - Title Commitments	45
2.9.3 - Memorandums of Ownership	45
2.9.4 - Instructions for completing Memorandum of Ownership Forms	47
2.9.5 - Preparing the Memorandums of Ownership Forms	47
2.9.6 - CDOT Form 242, Page 1A.....	48
2.9.7 - CDOT Form 242, Page 2 - Schedule 1: Ownership	48
2.9.8 - Certificates of Taxes Due.....	48
2.9.9 - CDOT Form No. 242, Page 3 - Schedule of Transfers	48
2.9.10 - Updating Memorandums of Ownership.....	49
2.9.11 - Title Research Cautions.....	49
SECTION 2.10 CALCULATION OF ROW	52
2.10.1 - General	52
2.10.2 - Notation of Given or Surveyed information	52
2.10.3 - Calculation of Alignment	52
SECTION 2.11 CALCULATION OF PROPERTY BOUNDARIES	52
2.11.1 - Analysis of Survey Information.....	52
2.11.2 - Calculation of Property Corners Not Found by Survey	53
2.11.3 - Adjustment of Deed Information to the Survey.....	53
SECTION 2.12 CALCULATION OF PARCELS	54
2.12.1 - General	54
2.12.2 - Calculation of Ties	54
2.12.3 - Area Computations	54
2.12.4 - Calculation of Remnants	54
2.12.5 - Length of ROW and Begin and End Stations.....	55
SECTION 2.13 TIES AND POINT OF BEGINNINGS	55
2.13.1 - Establishing Point of Beginning.....	55
2.13.2 - Direct and "Broken-Back" Ties	55
2.13.3 - Railroad Parcels – Required Ties	55
SECTION 2.14 DONATIONS AND DEDICATIONS.....	56
2.14.1 - Definitions	56
2.14.2 - Private Donations (23 CFR 710.505).....	56
2.14.3 - State and Local Government Donations (23 CFR 710.507).....	56
2.14.4 - State and Local Government Dedication Requirements (Amended 7/2022).....	56
SECTION 2.15 GENERAL LEDGER AND MAINTENANCE PARCELS	57
2.15.1 - Definitions	57
2.15.2 - General Ledger Parcels and Maintenance Site Plans.....	57
SECTION 2.16 EASEMENTS	58

2.16.1 - Permanent Easements, Slope Easements and Right of Way Easements (Amended 7/2022)	58
2.16.2 - Temporary Easements.....	58
2.16.3 - Temporary Easements for Construction	58
2.16.4 - Existing Utility Easements Crossing the ROW	58
SECTION 2.17 - PROPERTY DESCRIPTIONS	59
2.17.1 - General Format.....	59
2.17.2 - Compliance with the Memorandum of Understanding	59
2.17.3 - Basis of Bearings	59
2.17.4 - Standard Preamble to be use in all Property descriptions	59
SECTION 2.18 - METES AND BOUNDS PROPERTY DESCRIPTIONS OUTSIDE OF PLATTED SUBDIVISIONS	60
2.18.1 - Total Acquisitions.....	60
2.18.2 - Numbering of Courses	60
2.18.3 - Calls to Natural Monuments or Adjoiners	61
2.18.4 - Combining Parcels	61
2.18.5 - Splitting of Parcels	61
2.18.6 - Public Ways – When Excluded/Included (Amended 7/2022)	61
2.18.7 - Ownership Split by Existing Roadway.....	61
2.18.8 - Conflicting Former Surveys.....	62
2.18.9 - Rounding of Areas	62
2.18.10 - Centerline Descriptions	62
SECTION 2.19 PROPERTY DESCRIPTIONS WITHIN PLATTED SUBDIVISIONS	62
2.19.1 - General	62
2.19.2 - Lots – Blocks Split by ROW Line	62
2.19.3 - Metes and Bounds	62
SECTION 2.20 PROPERTY DESCRIPTIONS IN PATENTED MINING CLAIMS.....	62
2.20.1 - General	62
2.20.2 - Combining Parcels.....	64
2.20.3 - Strip Descriptions.....	64
SECTION 2.21 ACCESS PROPERTY DESCRIPTIONS	64
2.21.1 - General Requirements.....	64
2.21.2 - HQ Project Support requirements	65
2.21.3 - Degree of Control.....	65
2.21.4 - Access Description Along Property Lines	65
2.21.5 - Temporary Access Descriptions	66
SECTION 2.22 ACCESS PROPERTY DESCRIPTIONS WITH REMNANT PARCELS 66	
2.22.1 - General	66
2.22.2 - Parcels in Condemnation	66
2.22.3 - Access-Only Descriptions	66
2.22.4 - Exchange of Access Deeds Unsubdivided Ownership	67
2.22.5 - Subdivided Ownership	68
2.22.6 - Granting Additional Opening.....	68

2.22.7 - Closing Existing Openings	68
SECTION 2.23 - ACCESS PROPERTY DESCRIPTIONS UNDERPASSES AND PUBLIC WAYS	69
2.23.1 - Access Acquired by Deed	69
2.23.2 - Access Acquired by Rule and Order	69
SECTION 2.24 - DEEDS.....	69
2.24.1 - General (Amended 7/2022).....	69
2.24.2 - Written Instruments.....	69
2.24.3 - Written Instruments (CRS 38-35-106.5).....	69
2.24.4 - Corrective Deeds from CDOT to Owner	70
2.24.5 - Corrective Deeds to CDOT	70
2.24.6 - Duplicate Deeds.....	70
SECTION 2.25 - PROCESSING OF PLANS AND PROPERTY DESCRIPTIONS FOR ROW PLAN APPROVAL AND AUTHORIZATION.....	70
2.25.1 - Logic Check of Plans and Property descriptions.....	70
2.25.2 - ROW Plan Review (ROWPR)	72
2.25.3 - Environmental Category	72
2.25.4 - ROW Phase Funding and Authorization (Amended 7/2022).....	76
2.25.5 - ROW Plan Approval Signature Blocks	76
2.25.6 - Plan Authorization Region Transmittal of Data	78
2.25.7 - Requirements for Authorization of ROW Plans	79
2.25.8 - State Only Funded (Non-Participating) Projects	80
2.25.9 - Transportation Commission Approval	80
2.25.10 - Temporary Easement Only Projects	80
2.25.11 - Preparation of ROW Plans for Project Advertisement.....	81
2.25.12 - Plans for County Assessor.....	81
2.25.13 - Parcels Acquired in Advance of Plans – AP Parcels (CDOT Procedure). 81	
SECTION 2.26 - PROPERTY ACQUISITION ALTERNATIVES FOR ROW PLAN AUTHORIZATION.....	83
2.26.1 - Property Acquisition Alternatives Techniques.....	83
2.26.2 - Early Acquisition Parcels - EA Parcels (23 CFR 710.501)	83
2.26.3 - Protective Buying and Hardship Parcels (23 CFR 710.503 - PB and HS Parcels).....	84
SECTION 2.27 - PROCESSING OF PLAN REVISIONS FOR APPROVAL.....	86
2.27.1 - Revision Process – Major revisions;	86
Design Build Projects - new parcels, CMCG Projects - new parcels.....	86
2.27.2 - Revision Process – Minor Revisions of Previously Authorized Plans	87
2.27.3 - Title Sheet Signature Blocks for Approving Minor Plan revisions	88
2.27.4 - Addition or Disposals of Excess or Remnant ROW	89
2.27.5 - Addition or Disposals of Access Control	89
2.27.6 - Addition or Disposals of Air Space Leases	89
2.27.7 - Projects Without Any Federal Funding.....	89
2.27.8 - Revisions of Closed Projects for the Sale of Excess and Remnants	89

SECTION 2.28 - APPLICATION FOR STATE AND FEDERAL LANDS	89
2.28.1 - State of Colorado Lands	89
2.28.2 - U.S. Forest Service Land, BLM Land, and Other Federal Government Agencies	90
SECTION 2.29 - EMINENT DOMAIN (CONDEMNATION).....	91
2.29.1 - General	91
2.29.2 - Aerial Photos.....	91
2.29.3 - Revisions	91
SECTION 2.30 - RECORDING OF PLANS	91
2.30.1 - General	91
2.30.2 - Revisions	92
2.30.3 – PD 508.1 Requirements for Use of Electronic Seal.....	93
2.30.4. – PD 21.1 Requirements for the Retention of Records	93
REFERENCES	95

SUMMARY OF AMENDMENTS FHWA APPROVED 10/2022

CDOT ROW MANUAL CHAPTER 2 Right Of Way Plans Amedments 10-2022		Sections	Purpose of Amendment Detail
Section 2.6	The Plan Sheet	2.6.1 2.6.4 2.6.5 2.6.6 2.6.30	Change scale statement to reflect current standard Add clarification statement (7) for use of acronym RWE add RWE to Table of Parcel Designations Confirm the designation of RW for fee acquisition has not changed Add Right of Way Easement definition for use
Section 2.14	Donations and Dedications	2.14.4	Specify that CDOT will only accept Right of Way parcels or easements by recorded instrument of conveyance
Section 2.16	Easements	2.16.1	Add Right of Way Easement to the requirements of how Permanent Easements are to be shown on Right of Way Plans
Section 2.18	Metes and Bounds Property Descriptions outside of Platted Subdivisions	2.18.6 2.18.7	Include area of a ROW Easement with the parcel area as shown in the County assessors record; add reverter clause of area to revert to current owner of record if roadway is abandoned. add "RWE is not recommended in cases where Right of Way acquisition splits the parcel".
Section 2.24	Deeds	2.24.1	For Right of Way Easement Deeds, add a reversion statement clarifying the RWE property will revert to the current property owner if the roadway is abandoned.
Section 2.25	Processing of Plans and Property Descriptions for Row Plan Approval and Authorization	2.25.4	Change heading to Funding and Authorization- removed ROW Phase Add: If Federal Funding is in any phase of the project, CDOT must have oversight of the entire project, which includes pre-construction requirements for Right of Way plan authorization. This is for consistency with the 2019 FHWA Stewardship Agreement between CDOT and the FHWA. Clarify Authorization authority for Local Agency projects.

Section 2.1 - General Information

2.1.1 - Acronyms Common to the Right of Way (ROW) Manual and CDOT

BLM	Bureau of Land Management (Department of Interior)
BPR	Bureau of Public Roads (Predecessor to Federal Highway Administration)
BuRec	United States Bureau of Reclamation (Department of Interior)
CAD	Computer Aided Drafting
CE	Categorical Exclusion
CDPHE	Colorado Department of Public Health and Environment
CDOT	Colorado Department of Transportation
CFR	Code of Federal Regulations
CHARN	Colorado High Accuracy Reference Network
CJI-Civ. 4th	Colorado Jury Instructions, Civil 4th
CPA	Certified Public Accountant
CPW	Colorado Division of Parks and Wildlife (Colorado Department of Natural Resources)
CRS	Colorado Revised Statutes
DORA	Colorado Department of Regulatory Agencies
EA	Environmental Assessment
EEO	Equal Employment Opportunity
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
EPS	Extended Purchasing System
ESA	Environmental Site Assessment
FEIN	Federal Employer Identification Number
FEMA	Federal Emergency Management Agency (U.S. Department of Homeland Security)
FHA	Federal Housing Administration (United States Department of Housing and Urban Development)
FHWA	Federal Highway Administration
FIR	Field Inspection Review
FIRREA	Financial Institutions Reform, Recovery, and Enforcement Act of 1989 (a federal law enacted in the wake of the savings and loan crisis of the 1980's)
FLPMA	Federal Land Policy and Management Act of 1976 (Public Law 94-579) 94th Congress
FLTC	Federal Land Transfer Coordinator
FMV	Fair Market Value
FONSI	Finding Of No Significant Impact
FOR	Final Office Review
FS	Feasibility Study
GLO	General Land Office (US Dept. of Interior, Bureau of Land Mgmt.)
GPS	Global Positioning System
HB	House Bill
HBU	Highest and Best Use
HED	Highway Easement Deed
HLR	Housing of Last Resort

HUD	United States Office of Housing and Urban Development
IGA	Intergovernmental Agreement
ISA	Initial Site Assessment
LOC	Letter of Consent
LPA	Local Public Agency
LSCD	Land Survey Control Diagram
MAP-21	Moving Ahead for Progress in the 21st Century, P.L. 112-141
MESA	Modified Environmental Site Assessment
MIDP	Mortgage Interest Differential Payment
MOA	Memorandum of Agreement
MOO	Memorandum of Ownership
MOU	Memorandum of Understanding
NEPA	National Environmental Policy Act
NGS	National Geodetic Survey (National Oceanic and Atmospheric Administration - NOAA)
NHS	National Highway System
NRHP	National Register of Historic Places (National Parks Service, US Dept. of the Interior)
NSRS	National Spatial Reference System (National Oceanic and Atmospheric Administration - NOAA)
PBS	Primary Base Series (USGS Mapping Program)
PCD	Project Control Diagram
PL	Public Law
PLS	Professional Land Surveyor (Licensed in the State of Colorado by DORA)
PLSCD	Preliminary Land Survey Control Diagram
PS&E	Project Specifications and Estimates
PSI	Preliminary Site Investigation
QA	Quality Assurance
QAL	Qualified Appraisers List
QC	Quality Control
QRAL	Qualified Review Appraisers List
REPM	Regional Environmental Project Manager
RFP	Request for Proposal
RHP	Replacement Housing Payment
RI	Remedial Investigation
ROD	Record of Decision (US Environmental Protection Agency)
ROW	Right Of Way (fee simple)
RWE	Right Of Way Easement
ROWPR	Right Of Way Plan Review
RS	Revised Statute (Federal - first official codification of the Acts of Congress)
RTD	Regional Transportation Director
SPCC	Spill Prevention and Countermeasure Plans
SSN	Social Security Number
State Land Board	State Board of Land Commissioners (Department of Natural Resources)
STIP	Statewide Transportation Improvement Program (4 year transportation planning document required by FHWA)
STURRA	Surface Transportation and Uniform Relocation Assistance Act of 1987

SUP	Special Use Permit
TE	Transportation Enhancement (Moving Ahead for Progress in the 21st Century Act (MAP-21) replaced the TE Activities with the Transportation Alternatives Program (TAP)
TEA 21	Transportation Equity Act for the 21st Century (enacted June 9, 1998 as Public Law 105-178)
TMOSS	Terrain Modeling Survey System
Uniform Act	Uniform Relocation Assistance and Real Property Acquisition Policies of 1970, as amended (42 USC 4601 <i>et seq.</i>)
USC	United States Code
USCIS	United States Citizenship and Immigration Services (Homeland Security)
USDOT	United States Department of Transportation
USFS	United States Forest Service
USGS	United States Geological Survey
USPAP	Uniform Standards of Professional Appraisal Practice

2.1.2 - Authorities

U.S. Constitution, Fifth and Fourteenth Amendments

- Colorado Constitution, Article II, Section 15
- Uniform Relocation Assistance and Real Property Acquisition Policies of 1970, as amended (42 USC 4601 *et seq.*)
- 49 CFR Part 24
- 23 CFR Part 710
- Title VI of the 1964 Civil Rights Act
- National Environmental Policy Act
- Colorado Revised Statutes
- Memorandum of Understanding with the Colorado State Board of Licensure for Architects, Professional Engineers and Professional Land Surveyors
- FHWA Stewardship Guide

2.1.3 - Federal Authority (23 CFR 710.201), 49 CFR 24.1

Program Oversight. The State Transportation Department shall have overall responsibility for the acquisition, management, and disposal of real property on Federal-aid projects. This responsibility shall include assuring that acquisitions and disposals by a State agency are made in compliance with property requirements of State and Federal laws and regulations.

2.1.4 - State Authority (CRS)

The provisions of Articles 50, 51, 52 and 53 of Title 38, and Article 25, Part 2 of Title 12, of the Colorado Revised Statutes, as amended, apply to the Colorado Department of Transportation's practice of land surveying and ROW plans.

2.1.5 - Colorado State Board of Licensure Memorandum of Understanding

It is the intent of the Colorado Department of Transportation to comply fully with the laws of the State of Colorado as they relate to the practice of land surveying. On July 1, 1985, CDOT entered into a Memorandum of Understanding with what is now the Colorado State Board of

Licensure for Architects, Professional Engineers and Professional Land Surveyors (the Board), which addresses the legal aspects of surveying for ROW Plans and clarifies the responsibility of CDOT, consultant surveyors, and local public agencies when CDOT oversight is required. As of July 10, 2020, final revisions of the 2011 MOU were approved. The Board has revised the MOU to require review by the Board and CDOT every five years, and included a termination clause. Copies of the most updated MOU will be made available upon request and posted on the CDOT website

The MOU shall be adhered to at all times even though many highway surveys are performed primarily to ensure that roadway features, fences, and other appurtenances are constructed within CDOT easements or upon property belonging to CDOT.

2.1.6 - FHWA Stewardship Agreement

In 1994, the Federal Highway Administration (FHWA) and CDOT jointly established a Stewardship Agreement now called the Stewardship and Oversight Agreement (SOA), to define how they will work together to provide project and program oversight for federal, state, and local public agency projects. Under the current SOA, FHWA and CDOT will share the responsibility for oversight of projects using Federal-aid funds.

The SOA between FHWA and CDOT is intended to be a document that is under continual review. Each organization has the opportunity to make a change to the document when there is mutual agreement that the change is necessary. The document will also be modified to reflect changes in authorization and/or regulations.

2.1.7 - Purpose

The purpose of this chapter is to instruct the new employee and provide a review and reference for the experienced employee. It should also serve to promote uniformity and continuity of ROW Plans prepared by CDOT Regions, and consulting Engineering, Land Surveying companies. This ROW Manual should provide detailed information and guidance to both consulting firms and Local Public Agencies alike. Following the procedures outlined in this ROW Manual should result in preparation of ROW Plans in compliance with Federal and State laws and regulations.

SECTION 2.2 - HISTORY OF HIGHWAY ROW IN COLORADO

2.2.1 - History of Highway ROW Plans in Colorado

State Statutes created the State Highway Commission in 1910 and the State Highway Department in 1935 (although there are instances where documents preceding this date have been found with State Highway Department on them). A ROW Section was formed within Staff Design in 1943. With the exceptions of West Sixth Ave and parts of Santa Fe Drive in the Denver metropolitan area, ROW for State Highway projects were acquired by the Counties until the 1950's. In the 1950's the Department began to acquire ROW for highway projects in their name.

Because many State Highways were originally County Roads or because the Counties were the agencies that acquired the ROW (either in their name or in the States name), Project Development, Headquarters ROW and Regional ROW Sections may not have copies of acquisition documents or vesting deeds prior to the 1950's.

State ROW may have been acquired by purchase, dedication, donation or prescription. ROW research involves compiling information from many resources and thorough research of public records, ordinances, court rulings, and conveyance documents.

2.2.2 - Preparation of ROW Plans – CDOT Regional Responsibility

In 1982, the preparation of ROW Plans, deeds and condemnation exhibits was decentralized to the Regional offices. At that time, Headquarters ROW retained the responsibility of securing approvals, reviewing projects, preparing commission resolutions and the application for State and Federal lands, and the Federal oversight of the ROW process.

Currently, ROW Plans are prepared by both internal CDOT personnel and external consultants with contract management and review being handled by the Regional offices. ROW Plan authorization has been delegated by FHWA via the Stewardship Agreement to the Central Office Project Development Branch, Headquarters ROW.

ROW Plans and the Federal and State laws and regulations governing them are part of a specialized field. The Region ROW unit must take the responsibility of doing a thorough review of all consultant ROW Plans for format and compliance with this Manual.

2.2.3 - Revised Statute (RS) 2477

RS 2477 was enacted on July 26, 1866. Section 8 of the Act stated "The ROW for the construction of highways over public lands, not reserved for public use is hereby granted".

This standing offer to local municipalities to establish transportation corridors across public lands they deemed necessary, was one of the many early laws passed by the Federal government to promote settlement of the west. Since passage of the Act, thousands of public highways have been claimed by various state, county and local governments responsible for public roads. RS 2477 was repealed by the Federal Land Policy and Management Act of 1976.

Three conditions must have occurred before the date of repeal on 10/21/76 for the BLM to acknowledge the existence of an RS 2477 ROW:

- 1) The lands involved must have been unreserved public lands. This is determined by a review of the BLM's public land records.
- 2) Some form of construction of the highway must have occurred. A review of maps, BLM or county records and other data is made to determine whether a road or trail existed on or before 10/21/76. The definition of construction is very liberal and may include projects other than an actual construction project (e.g. an overlay project).

- 3) The road or trail constructed should be considered a public highway. This factor is determined by state law. The inclusion of a highway in a state, county, or municipal road system constitutes a public highway.

2.2.4 - General Statutes of the State of Colorado 1883

Section 1: “All roads and highways, except private roads heretofore established in pursuance of any law of this State or the Territory of Colorado, and roads dedicated to public use, that have not been vacated or abandoned, and such other roads as are now recognized and maintained by the corporate authorities of any county in the State, are hereby declared to be public highways.”

Section 4: “The board of county commissioners may alter, widen or change any established road, or lay out any new road in the respective counties, when petitioned by ten freeholders residing within two miles of the road sought to be altered, widened, changed or laid out. Said petition shall set forth a description of the road sought to be altered, widened or changed, and if the petition be for a new road it shall set forth the point where it is to commence, its general course, and place where it is to terminate.”

Section 12: “The viewers (road viewers) shall file a report of the view in the office of the county clerk and recorder of the county in which such view was made.”

Section 13: “The board of county commissioners, at their next regular meeting after the return of such report, shall proceed to consider the same and all objections that may be made thereto, and they shall determine whether or not such road shall be established and opened for travel.”

Section 14: “If the board of county commissioners determines to open any such road, they shall cause the full and final report of the viewers, including the plat and report of the surveyor, to be recorded in the office of the county clerk and recorder in a book kept for that purpose.”

Section 19: “All public highways hereafter laid out in this State shall be sixty feet in width, unless otherwise ordered by the board of county commissioners.”

2.2.5 - Emergency Relief Appropriation Act of Congress of 1935

On April 8, 1935, the United States Congress passed the Emergency Relief Appropriation Act of 1935. The Act created the Works Progress Administration (WPA). Many of the projects done under this government office are similar to ones sponsored by the Public Works Administration. The WPA remained in operation until June 30, 1943.

Today, many of Colorado’s state highways were originally acquired by the WPA through the states’ counties eminent domain authority. Records from these acquisitions are often difficult to find and may require additional research of county records to recover. WPA ties to aliquot corners may also exist in county records to aid in monument search and recovery efforts.

2.2.6 - 1935 Colorado Statutes Annotated – Roads and Highways

C. 143 § 93. Public highways or roads – All roads and highways which are, at the time of the passage of this article, by law open to public traffic shall be public highways, within the meaning of this article.

C. 143 § 94. Highway defined – The term “highway” as used in this article includes bridges on the roadway and culverts, sluices, drains, ditches, water-ways, embankments, retaining walls, trees, shrubs and fences along or upon the same and within the ROW.

C. 143 § 95. State highway – A “state highway” within the meaning of this article is a ROW or location, whether actually used as a highway or not, designated for the construction of a state highway upon it.

C. 143 § 97. State highways – County highways – Public highways are divided for the purpose of this article into two classes: “state highways” and “county highways”. State highways are those designated and accepted as such by the commission (highway commission) and are to be constructed and maintained by the state in accordance with the provisions of this article. County highways are those constructed and to be maintained by the counties.

2.2.7 - Public Highways or Roads (CRS 43-1-202)

All roads and highways which are, on May 4, 1921, by law open to public traffic shall be public highways within the meaning of this part 2.

2.2.8 - Public Highways (CRS 43-2-201)

- 1) The following are declared to be public highways:
 - a) All roads over private lands dedicated to the public use by deed to that effect, filed with the county clerk and recorder of the county in which such roads are situate, when such dedication has been accepted by the board of county commissioners. A certificate of the county clerk and recorder with whom such deed is filed, showing the date of the dedication and the lands so dedicated, shall be filed with the county assessor of the county in which such roads are situate.
 - b) All roads over private or other lands dedicated to public uses by due process of law and not heretofore vacated by an order of the board of county commissioners duly entered of record in the proceedings of said board;
 - c) All roads over private lands that have been used adversely without interruption or objection on the part of the owners of such lands for twenty consecutive years;
 - d) All toll roads or portions thereof which may be purchased by the board of county commissioners of any county from the incorporators or charter holders thereof and thrown open to the public;
 - e) All roads over the public domain, whether agricultural or mineral.

2.2.9 - Prescriptive ROW - Adverse Possession (CRS 43-2-201)

(c) All roads over private lands that have been used adversely without interruption or objection on the part of the owners of such lands for twenty consecutive years;

This section requires claimant to meet a three-part test for the establishment of a public road by prescription:

- (1) Members of the public must have used the road under a claim of right and in a manner adverse to the landowner's property interest;
- (2) The public must have used the road without interruption for the statutory period of 20 years; and
- (3) The landowner must have actual or implied knowledge of the public's use of the road and made no objection to such use. *McIntyre v. Bd. of County Comm'rs*, 86 P.3d 402 (Colo. 2004).

SECTION 2.3 - PRELIMINARY DEVELOPMENT OF ROW PLANS

2.3.1 - Land Surveys

As soon as the route of the proposed highway has been selected and approved by the Transportation Commission, a survey request is made by the Region Management and Engineering team to the Region Survey coordinator. Best practices for the survey is in accordance with the procedures as outlined in CDOT's Survey Manual, in accordance with the Memorandum of Understanding between the Colorado State Board of Licensure for Architects, Professional Engineers and Professional Land Surveyors and CDOT and in accordance the applicable laws of the State of Colorado. All land surveys shall be tied to or reference the National Geodetic Survey (NGS) National Spatial Reference Network (NSRS) and meet the minimal horizontal and vertical tolerances in accordance with the CDOT's Survey Manual. All primary control, secondary control, aliquot, ROW, property, and any other survey monuments within the influence of the project shall be tied into or included in the control network.

2.3.2 - Topography

Topographic and TMOSS terrain surveys are primarily conducted for design purposes but are also valuable in the ROW process. These surveys document the existing conditions and show the impacts that a proposed construction design would have on a particular parcel of land.

ROW Plans often require extensive research to determine ROW limits, property boundaries and easements. The location of topographic features provides further evidence of these and other property rights and is an important part of any ROW survey.

ROW Plans developed for appraisal and acquisition purposes may require a significant amount of detail outside of the construction limits.

2.3.3 - Improvements

All visible or known improvements (buildings, signs, and leaching fields) indicated in the Scope of Work within the proposed ROW and within project limits as specified during the pre-survey preliminary survey scope of work meeting. The proposed ROW boundary must be located and shown on the ROW Plans. An accurate field location is necessary when proximity damages may be present. The following are some examples where particular attention should be given:

- 1) Underground cables and conduits - location, size, owner, where they originate and terminate. The SUE (Subsurface Utility Engineering) quality level will determine the utility information required by the field Survey as outlined during the Pre-Survey Preliminary Survey Scope meeting and documented on form 1217.
- 2) Wells – Surface location, size, owner, area served.
- 3) Irrigation ditches and systems - location, size, owner, where they originate and terminate, party(ies) served.
- 4) Septic tanks, cesspools, and leaching fields – above ground visible location, size, whether in use or abandoned.

Underground storage tanks – Surface evidence regarding location, size, capacity, when installed, condition.

2.3.4 - Utilities

For the purpose of planning and allocating utility relocation and construction costs, it is necessary to know whether utilities must be moved and if they occupy their own ROW, easement or CDOT's. As of January 1, 2020, the State of Colorado enacted legislation requiring Subsurface Utility Engineering (SUE) Quality levels be Identified for all projects. Please see the most recent SUE requirements for this determination. In cases where subsurface utility information is required, and authorized SUE utility company will be responsible for conducting and locating all subsurface utilities and a map provided, stamped and sealed to the project manager by a licensed Professional Utility Engineer. Surveyors may be required to locate surface locations of visible utilities. During Pre-Survey-Preliminary Survey meetings, the SUE Quality Level should be discussed for delivery of the existing utility information as early in the Project development process as possible. Surveyors may note visible utility lines and irrigation canals indicated in the Scope of Work and lying within the proposed project limits and report the same to the Region ROW Team, Project Engineer and Utilities Manager. Subsurface utilities cannot be certified by any Surveyor. Certification can only be done by a licensed Professional Utilities Engineer.

2.3.5 - Aerial Photography and UAS

Aerial photography or the use of Unmanned Aerial Systems (UAS), may be used to collect topography to create 2D or 3D base maps for integration into the development of ROW maps. Close examination of these base maps should be done to determine fitness of use verify if the horizontal and vertical tolerances required for the project were met. These base maps are not a substitute for land surveying where field topography elevations are critical, but are useful to produce a comprehensive base map of existing conditions in order to supplement the collection of topography collected by TMOSS methods.

2.3.6 - Colorado Coordinate System (a.k.a. National Spatial Reference System)

When a primary control network is established it shall be tied to or reference the NGS's National Spatial Reference System (NSRS).

Where the Colorado Coordinate System (a.k.a. National Spatial Reference System) (NSRS) is used to establish a primary survey control network, it shall be done in accordance with Colorado State Law.

Horizontal and vertical control data standards of the various mapping and charting agencies of the Federal Government in the State of Colorado can be obtained from the agency directly.

2.3.7 - Original Data Files

Upon completion of the field survey the information (electronic and pdf) is transmitted to the CDOT Survey/Plans Supervisor and becomes the property of CDOT.

SECTION 2.4 - CONTENTS OF ROW PLANS

2.4.1 - Federal Guidelines

ROW Plans are a prerequisite to Federal participation in the cost of acquiring real property. 23 CFR 710.201 (e) requires that the real property interest acquired for all Federal-aid projects funded pursuant to title 23 of the U.S. code shall be adequate for the construction, operation, and maintenance of the resulting facility and for the protection of both the facility and the traveling public.

To help meet this requirement, CDOT has adopted the following list from the 1991 Federal Aid policy guide for its ROW plan requirements:

ROW Plans shall show:

- 1) ROW and access control line.
- 2) Width to be acquired.
- 3) Proposed slope limits.
- 4) Centerline alignment (Design, Survey and/or Existing) and stationing with appropriate lines and changes in ROW widths.
- 5) Any additional easement areas, either temporary or permanent, that are required to accommodate intersecting roads and streets, land service, access and temporary roads, drainage areas, material storage areas, slope widening, utilities, railroads, or any other special uses.
- 6) All pertinent data affecting the cost of the ROW such as structures, land service or access roads, improvements, drain fields, and fences.
- 7) All approved points of entry to or exit from the traffic lanes, even where the ROW lines and access control lines are coincident.
- 8) Disposition of improvements within the proposed ROW.
- 9) For each parcel to be acquired:
 - a. Parcel identification number.
 - b. The property ownership lines.
 - c. The name of the property owners.

- d. The area in acres or square feet of the part to be taken and of each remnant of a partial taking. (CDOT's standard of showing all distances in dual units has been suspended: units are only required to be shown in feet).
- 10) The size, form, and arrangement of ROW Plans should conform to the general requirements for highway plans and should contain sufficient dimensional and angular data to permit ready identification and correlation with the property descriptions of all parcels, easements and special use areas that are required by the associated highway project.

2.4.2 - State Requirement (CRS 38-51-106)

- 1) All land survey plats shall include but shall not be limited to the following:
 - a) A scale drawing of the boundaries of the land parcel;
 - b) (I) All recorded and apparent rights of way and easements, and, if research for recorded rights of way and easements is done by someone other than the professional land surveyor who prepares the plat, the source from which such recorded rights of way and easements were obtained; or

(II) If the client wishes not to show rights of way and easements on the land survey plat, a statement that such client did not want rights of way and easements shown;
 - c) All field-measured dimensions necessary to establish the boundaries on the ground and all dimensions for newly created parcels necessary to establish the boundaries on the ground;
 - d) A statement by the professional land surveyor that the survey was performed by such surveyor or under such surveyor's responsible charge;
 - e) A statement by the professional land surveyor explaining how bearings, if used, were determined;
 - f) A description of all monuments, both found and set, that mark the boundaries of the property and of all control monuments used in conducting the survey. If any such boundary monument or control monument marks the location of a lost or obliterated public land survey monument that was restored as a part of the survey on which the plat is based, the professional land surveyor shall briefly describe the evidence and the procedure used for such restoration. If any such boundary monument or control monument marks the location of a quarter section corner or sixteenth section corner that was established as a part of the survey, the professional land surveyor shall briefly describe the evidence and procedure used for such establishment, unless the corner location was established by the mathematical procedure as outlined in section 38-51-103.
 - g) A statement of the scale or representative fraction of the drawing, and a bar-type or graphical scale;
 - h) A north arrow;

- i) A written property description, which shall include but shall not be limited to a reference to the county and state together with the section, township, range, and principal meridian or established subdivision, block and lot number, or any other method of describing the land as established by the general land office or bureau of land management;
- j) The signature and seal of the professional land surveyor;
(See Section 2.30.4 of this Chapter; as of January 21, 2021 Electronic sealing will be required for all CDOT documents).
- k) Any conflicting boundary evidence; and
- l) A statement defining the lineal units used including but not limited to meters, chains, feet, and U.S. survey feet. If it is necessary to define conversion factors, the factors shall be a function of the meter as defined by the United States department of commerce, national institute of standards and technology.

2.4.3 - Basis of Bearings Requirements (AE/PE/PLS State Board Rule 6.8.1)

The purpose of a basis of bearing statement on a ROW Plan set is to enable another surveyor to retrace all or part of that survey in the future. Any basis of bearing statement that does not facilitate a retracement of the survey is inadequate. All ROW Plans shall show and/or state the graphic and mathematical relationship between the basis of bearing and the land parcel in accordance with Colorado State Law. All property descriptions must state the basis of bearings used, immediately after the metes and bounds portion of the description.

All bearings on the ROW Plans and property descriptions shall be related to a basis of bearing established from two monuments found in the field that are intervisible and described on either the Project Control Diagram (PCD) or the Land Survey Control Diagram (LSCD).

2.4.4 - CDOT Plan Set Requirements

ROW Plans shall be in accordance with the Memorandum of Understanding between the Colorado State Board of Licensure for Architects, Professional Engineers and Professional Land Surveyors and CDOT and in accordance the applicable laws of the State of Colorado. Because ROW Plans will be deposited with the respective counties per State Statutes, the dimensions and type of material used for the plan sheets must comply with the law.

- 1) A "**Title Sheet**", numbered sheet number 1.01.
- 2) One or more "**Tabulation of Properties**" sheets numbered numerically beginning with Sheet 2.01 followed by sheet numbers 2.02, 2.03, etc.
- 3) One or more "**Project Control Diagram**" sheets as determined by the Region Survey/Plans Supervisor, numbered numerically beginning with Sheet 3.01, followed by sheet numbers 3.02, 3.03, etc.

- 4) One or more "**Land Survey Control Diagram**" sheets as determined by the Region Survey/Plans Supervisor, numbered numerically beginning with Sheet 4.01, followed by sheet numbers 4.02, 4.03, etc.
- 5) One or more "**Monumentation Sheet**" sheets, numbered numerically beginning with Sheet 5.01 and followed by sheet numbers 5.02, 5.03 etc.
- 6) One or more "**Tabulation of Road Approach**" sheets numbered numerically beginning with Sheet No. 6.01 followed by sheet numbers 6.02, 6.03 etc. Tabulation of Road Approach Sheets are optional depending on the project type.
- 7) One or more "**Plan Sheet**" sheets numbered numerically beginning with sheet number 7.01 followed by sheets 7.02, 7.03 etc. Details too large or too complicated to be shown on a plan sheet, should be drawn on a separate plan sheet numbered numerically.
- 8) One or more "**Ownership Map**" sheets numbered numerically beginning with sheet number 8.01 followed by sheets 8.02, 8.03 etc.

Instances will arise when some of the above sheets are not necessary. In such cases, care should be taken to insure the above sheet numbering scheme is maintained through the complete plan set. If a particular sub-set is not used then its numbers shall not be used for the next sub-set, instead the numbers shall not be used and NA shall be listed on the index of sheets.

2.4.5 - ROW Plan Templates

The ROW Plan Templates for CDOT Survey and Right of Way Plans are based on federal and state statutes, rules, policies, and procedures. By these templates, CDOT strives to ensure the use of uniform procedures and the compliance with federal and state law to achieve an effective survey and plans program. It is the responsibility of the user to adhere to these templates.

The Library of Templates for CDOT Survey and Right of Way Plans is a living document. Any changes to these templates will be posted when available. It is the responsibility of the user to check for revisions.

The CDOT website link is <https://www.codot.gov/business/manuals/right-of-way-manual/rowplans-chapter2/templates>

2.4.6 - Title Sheet

Basically, there are three types of Title Sheets posted on the Library of Templates for CDOT Survey and Right of Way Plans:

- 1) Federal Aid Project
- 2) Non-Federal Aid Project (State)
- 3) Local Public Agency Project

2.4.7 - Federal Aid Projects

The Title Sheet of Federal Aid projects shall contain a CDOT Federal-aid project plan authorization signature block for the CDOT Chief Engineer to sign upon submittal of the plans for authorization. CDOT Chief Engineer Authorization of the plans indicates they have been approved for acquisitions to begin.

Final plan authorization does not occur until signed by the Chief Engineer or his/her delegate.

2.4.8 - Non-Federal Aid Projects

The Title Sheet of Non-Federal Aid (State funded) projects shall contain a CDOT State project plan authorization signature block for the CDOT Chief Engineer to sign before the plans are submitted for authorization. CDOT Chief Engineer Authorization of the plans indicates they have been approved for acquisitions to begin.

Final plan authorization does not occur until signed by the Chief Engineer or his/her delegate.

2.4.9 - Local Public Agency Projects

The Title Sheet of Local Public Agencies project shall contain either a:

1) Federal-aid project plan authorization signature block for the CDOT Chief Engineer to sign for projects requiring Federally funded reimbursement. Final plan authorization does not occur until the Authorization Package has been signed by the Chief Engineer or his/her delegate.

2) State project plan authorization signature block for the CDOT Chief Engineer to sign for projects requiring State funded reimbursement. Final plan authorization does not occur until authorized by the Chief Engineer or his/her delegate

3) No signature block is required if the local public agency is using their own funds for acquisition and/or relocation and no federal or state funds are requested for reimbursement. In these instances, a Chief Engineer block is required only if the local public agency plans to purchase, transfer or convey the property in CDOT's name.

See Chapter 8 – Local Public Agencies for additional information.

2.4.10 - Tabulation of Properties Sheet

All parcels, including permanent and temporary easements, shall be tabulated on the Tabulation of Properties sheet as follows:

- 1) Parcel number(s) with their appropriate designation to be acquired
- 2) Name of the owner(s) of each parcel

- 3) Owner('s) address
- 4) Site address
- 5) Location of the parcel by section, township, range, and principal meridian
- 6) Lot and block if subdivided
- 7) Area of the parcel being acquired
- 8) Area of the parcel being acquired within the existing ROW
- 9) Net area being acquired (total area of parcel less the area within existing ROW)
- 10) The area of the contiguous remnants, if any, on the right and left sides of the acquisition (proceeding along the centerline alignment in the direction of increasing stationing)
- 11) Areas of parcels, easements, and remnants (expressed in acres and rounded to the nearest thousandth of an acre in rural parts of the regions - In urban parts of the region or where the cost of acquisition could be great, parcels, easements, and remnant areas shall be expressed and rounded to the nearest square foot.)
- 12) Book and Page number and/or reception number of all permanent parcel acquisitions of private property purchased through the Project funding.
- 13) A "Purpose of Parcel" column is provided for the explanation of items in the tabulation and to justify the **purpose** for fee simple acquisition of Right of Way parcels, permanent and temporary easement acquisitions and to list other pertinent information that would be helpful in extraordinary situations.

2.4.11 - Project Control Diagram and Land Survey Control Diagram

The purpose of the Project Control Diagram and the Land Survey Control Diagram is to graphically show how the survey was performed in the field. Both of these diagrams shall be prepared in accordance with CDOT's Survey Manual, the Memorandum of Understanding between the Colorado State Board of Licensure for Architects, Professional Engineers and Professional Land Surveyors and CDOT and Colorado State Law.

See CDOT Survey Manual Chapter 5 – Preliminary Surveys for exact definitions and minimum requirements.

2.4.12 - Monumentation Sheet

The purpose of the Monumentation Sheet is to provide the final project coordinates of monuments to be set in the field. The monuments thus established, will serve to protect the adjoining landowners' property rights, the highway rights of way, the location of future land boundaries, and aid in the performance of construction surveying.

The tabulations shall include coordinates (stations are optional) of ROW monuments to be set as well as PE's, SE's, and TE's and miscellaneous points necessary to stake ROW.

2.4.13 - Single Plan Sheet Projects

Small projects or single parcel acquisitions may be compiled on a reduced number of plan sheets that meet all of the required minimum specifications for a full plan set.

Single sheet ROW plans are not recommended for projects requiring more than one Right of Way fee acquisition parcel.

A Title Block is required for all projects including projects with single or reduced plan sheets.

Plan sheets that have illegible text sizes or overlapping information due to space limitations are not acceptable. In these instances, more than one plan sheet is needed.

SECTION 2.5 - PLAN SHEET GENERAL NOTES AND SURVEYORS STATEMENTS

2.5.1 - General Notes

At minimum the following general notes shall be used for all ROW Plans:

Basis of Bearings: Bearings used in the calculations of coordinates are based on a grid bearing of $NXX^{\circ}XX'XX''W$ from CM-MP XX.XX and CM-MP XX.XX, or from NGS monuments or previous recorded, and verified, Control Network. CM-MP 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 based on the Colorado High Accuracy Reference Network (CHARN).

The ROW Plans Title Sheet shall at a minimum, contain the 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 (Title Policy), (Title Commitments), (Memorandums of Ownership) prepared by (Title Co. or individual) for (Title Insurance Co. or consultant).
- 3) This plan set is subject to change and the information contained on the attached drawing is not valid unless this copy bears an original signature of the Professional Land Surveyor hereon named.

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 certification shown hereon.

2.5.2 - Surveyor's Statements

The following Surveyor's Statements were accepted by the Colorado Dept. of Transportation Survey Advisory Committee, and the State Board of Licensure for Architects, Professional Engineers and Professional Land Surveyors as of November 13, 2020.

The statements shall be used by all CDOT and consultant Professional Land Surveyors, subject to the guidelines for electronic signatures set forth under DORA Code of Colorado Regulations 4 CCR 730-1 Board Rule 1.2 B (17b); 1.3 A (3) and 1.3 B (3); Board rule 1.6 sections A and B – Sealing Requirements for Professional Land Surveyors.

ROW PLAN TITLE SHEET 1.01

SURVEYOR STATEMENT (RIGHT OF WAY PLANS)

I, _____, 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, the research, calculations and evaluation of the survey evidence were performed and this Right-of-Way Plan 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.

xxxxxxx PLS No. xxxxx

Date

ROW PLAN PROJECT CONTROL DIAGRAM TITLE SHEET 3.01

SURVEYOR STATEMENT (PROJECT CONTROL DIAGRAM)

I, _____, a professional land surveyor licensed in the State of Colorado, do hereby state to the Colorado Department of Transportation this Project 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.

xxxxxxx PLS No. xxxxx

Date

ROW PLAN LAND SURVEY CONTROL DIAGRAM TITLE SHEET 4.01

SURVEYOR STATEMENT (LAND SURVEY CONTROL DIAGRAM)

I, _____, 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.

xxxxxxx PLS No. xxxxx

Date

ROW PLAN LAND MONUMENTATION TITLE SHEET 5.01

SURVEYOR STATEMENT FOR THE CALCULATED POSITIONS OF ROW MONUMENTS

I, _____, 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, the research and evaluation of the survey evidence were performed and the calculated positions of these R.O.W. monuments were 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.

xxxxxxx PLS No. xxxxx

Date

ROW PLAN LAND MONUMENTATION TITLE SHEET 5.01

SURVEYOR STATEMENT FOR SET R.O.W. MONUMENTS

I, _____, 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, adequate research and evaluation of survey evidence were performed by _____, PLS # _____ and the Right-of-Way monuments depicted on this Right-of-Way Plan WERE SET under my responsible charge and the field survey was performed 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.

xxxxxxx PLS No. xxxxx

Date

SECTION 2.6 - THE PLAN SHEET

2.6.1 - General

The primary purpose of the plan sheet is to depict to scale, in as complete detail as possible, the highway ROW and the parcels of which it is composed, their dimensions and the buildings, structures, and all other topography on or near the ROW.

There are certain items that are to appear on all plan sheets, for example, the title block mentioned in the Title Sheet section will be in the upper right hand corner of all plan sheets. Under the title block will be the words "ROW" and the geographical designation or location of the project. An effort should be made to put the revision block as close to the title block as possible. Each plan sheet should show the Township, Range, and Principal Meridian near the top of the sheet with sectional subdivision to 1/16th sections for projects that are within the PLSS, shown in appropriate locations. All plan sheets and detailed enlargements shall have a north arrow and graphic scale.

Throughout the discussion of plan sheets, the word "detail" appears again and again. Detail and Clarity cannot be overemphasized. The object should be to ensure that the 11"X17" prints, (CDOT's Full Size plan sheet is 11" x 17"), be as legible and uncluttered as possible. For this reason, the scale to be used should be governed by the amount of detail required and the complexity of the ownerships involved. The most generally used scale is 1:100, but 1:50, or even larger scale may be preferable to avoid crowding of details. Detailed enlargements or supplemental sheets can prove to be an effective method of showing particularly congested areas. The various kinds of lines drawn on the plan sheets that represent project centerline alignments, ROW lines, property lines, section, township and range lines, etc. must all be distinguishable one from the other. Conformity with the Legend on the Title Sheet shall be practiced. (Paragraph Amended 7/2022)

The beginning and end ROW stations will be marked and so noted on the centerline alignment on the appropriate plan sheets.

2.6.2 - Centerline Alignment

Bearings along the centerline alignment must be shown. All points of curve (P.C.), points of tangent (P.T.), and other points of transition, tangent to spiral (T.S.), spiral to tangent (S.T.) points of compound curve (P.C.C.), points of reverse curve (P.R.C.), and points of intersection (P.I.) shall be marked and designated by station.

In addition, other reference points, such as centerline intersections with section lines, 1/4 & 1/16 section lines, property lines, etc. will be marked and the station calculated and shown on the plan. Curve data on centerline for each curve shall be tabulated near the appropriate curve. If a large number of curves and curve data are to be placed on a sheet and it becomes difficult to identify which set of information goes with which curve, the P.I. stationing of each curve should be listed with the corresponding curve data to facilitate identification. Curve data shall include the delta angle left or right, the degree of curvature, the tangent, length of the arc, and the radius. If the curve along the centerline is spiraled, and the spiral in and spiral out are

identical, the spiral data will be tabulated above, below, or adjacent to the curve data. In the case of unequal spirals, the spiral data will be tabulated near the spiral to which it refers.

2.6.3 - ROW Lines

When ROW lines are parallel with centerlines or aliquot lines, widths shall be shown at each end of the sheet and at each change in width. Recovered monumentation along the existing ROW shall be shown and identified. All lines of ROW parcels shall be annotated. If measured courses differ significantly from record, both values shall be shown. If line and/or curve tables are needed, they shall be placed on the same sheet the lines or curves are shown. Each line and/or curve shall be labeled with a unique identifier.

ROW lines shall not contain spirals. Typically, when the centerline is spiraled, the centerline elements before and after the spiral are offset and then connected with a chord.

2.6.4 - ROW Parcels (Amended 7/2022)

All bearings and distances for parcels shall conform to the written property descriptions of those parcels. The point of beginning (P.O.B.) of each ROW parcel shall be marked and the bearing and distances of the primary tie shown, if practical. Every effort should be made to keep points of beginning on the outer ROW line and to use one point of beginning for as many parcels as possible.

ROW parcels shall be numbered consecutively from the beginning to the end of the project as follows:

- 1) When feasible, ownerships should be assigned a number prior to the start of plan development for the project. This number will be the ownership number used for all parcels and easements.
- 2) The appropriate parcel designation shall be used for each parcel and easement.
- 3) When numbering parcels or easements for a ROW project with more than one unit or phase, the use of numbers 1 to 199 for Unit 1, 200 to 299 for Unit 2, etc., should be used for filing purposes and the computer database.
- 4) In case of an ownership on both sides of the centerline they should be numbered alternately as they occur, an example of this would be 10, 11, 12, etc. Exceptions should be made when the ownership was conveyed by a single deed.
- 5) An ownership should have more than one parcel number where the parcels are not contiguous (example: 1, 2, 3, etc.). An example of such is the same owner but in different side of the highway with separate deeds

- 6) If an ownership is being divided into parcels for simple conveyances it should be described simply with its own unique parcel number, a parcel for CDOT ROW, a parcel for county ROW, and a parcel for city ROW, an example of this would be RW-10, RW-10A, and RW-10B, etc.
- 7) For Right of Way Easement parcels, the naming convention used to designate the recorded easement is the acronym RWE (Right of Way Easement).
- 8) Parcels shall not be numbered along one side from beginning to end and then numbered on the other side. Numbering adjacent parcels should be in order of when the properties will be affected by the project, alternately and on both sides of the Highway.
- 9) When feasible adherence to parcel numbering for projects having more than one phase or unit as outlined in the "Tabulation of Properties", should be followed.
- 10) In any case where an ownership is divided, officially subdivided and accepted by the county after preparation of plan sheets, requiring a plan revision to show the new parcel and its owner, the parcels (both the remaining portion of the original and the derived parcel) shall be numbered as follows:
 - 11) The parcel being acquired shall bear the number of the highest ownership on the unit or project plus one. An example of this would be: If a project had twenty existing parcels and Parcel No. 10 is divided into four new owner ships, the derived parcels shall be numbered 21, 22, and 23, and the remaining portion of the original parcel would be number 10 Rev.
 - 12) Do not revise a parcel for a name change only.
 - 13) Subsequent revisions to the same parcel will be designated as "Rev. 2" and "Rev. 3" etc.
 - 14) Where formerly dedicated streets, avenues, and alleys, now vacated, are within the ROW, they should be indicated and record of vacation noted.

2.6.5 - Parcel Designations (Amended 7/2022)

Parcel naming conventions are listed below:

Parcel Designation	Meaning	Example
AC	ACCESS	AC-1
AP	ADVANCE OF PLANS	AP-1
CE	CONSERVATION EASEMENT	1-CE
EA	EARLY ACQUISITION	EA-1
EX	EXCESS OR EXCHANGE	1-EX Use the "REMARKS" column of the ROW Tabulation of Properties sheet to describe the parcel as Excess or Exchange
HE	HIGHWAY EASEMENT DEED	HE-1
LB	STATE LAND BOARD	LB-1
MS	MAINTENANCE SITE	MS-1
ME	MINERAL ESTATE	ME-1
PB	PROTECTIVE BUY	PB-1
PE	PERMANENT EASEMENT	PE-1
RE	RAILROAD EASEMENT	RE-1
RM	REMNANT PARCEL	1-RM
RWE	RIGHT OF WAY EASEMENT	RWE-1
RW	RIGHT OF WAY	RW-1
SE	SLOPE EASEMENT	SE-1
SN	SIGN EASEMENT	SN-1
SV	SCENIC VISTA	1-SV
TE	TEMPORARY EASEMENT	TE-1
UE	UTILITY EASEMENT	UE-1
UN	UNKNOWN	1-UN
WH	WILDLIFE HABITAT	1-WH
WL	WETLAND	1-WL
XX	CONVERSION PURPOSES	1-XX

2.6.6 - Right of Way Parcel (RW)

Parcels conveyed to CDOT for Right of Way in fee simple shall be delineated on the ROW plan sheets and prefixed by the letters "RW".

2.6.7 - Permanent Easements (PE)

Permanent easements conveyed to CDOT are required in all cases where present and future accessibility is needed for maintenance or reconstruction. All permanent easements shall be delineated on the ROW Plan sheets and prefixed by the letters "PE".

The numbers assigned to Permanent Easements or other easements shall be derived from the ownership number of the parcel. For example, the permanent easement in the same ownership as Parcel 2 would be number PE-2. If there are multiple permanent easements under the same ownership, they would be numbered PE-2, PE-2A, PE-2B. etc.

A unique category of permanent easement is an aerial easement, or air rights easement. Such an easement is taken when property is spanned, as in the case of a bridge or viaduct.

2.6.8 - Slope Easements (SE)

Slope easements conveyed to CDOT are required for the purpose of constructing and maintaining a highway fill or cut slope. Slope easements are permanent in nature until such time as the Grantor shall cut or fill his adjacent land to a level where the slope would intersect the ROW line. Slope easements should not be used if there is little chance of the adjacent land being changed. All such easements shall be delineated on the ROW Plans and designated as "SE". Slope easements will be numbered in the same manner as permanent easements but prefixed by the letters "SE".

2.6.9 - Temporary Easements (TE)

Temporary easements conveyed to CDOT for construction are required for landscaping, work area, or drainage problems which CDOT does not intend to maintain on a permanent basis after the project is completed. Temporary easements shall be numbered in the same manner as permanent easements but prefixed by the letters "TE".

Additional letters may be added to the parcel designation to TE for geotechnical and/or environmental investigation. An example of this is TE-G.

See Easements in section 2.16 of this chapter for additional information.

2.6.10 - Utility Easements (UE)

Permanent easements conveyed to CDOT for the use of utilities, shall be delineated on the ROW Plan sheets and prefixed by the letters "UE". When the intent is to replace an existing easement in kind, the recording information of the easement to be replaced should be stated on the plans.

2.6.11 - Railroad Crossing Easements (RE)

Permanent easements conveyed to CDOT for the purpose of at-grade railroad crossings shall be delineated on the ROW Plan sheets and designated prefixed by the letters "RE". Railroad easements that are not for at-grade crossings shall be identified as permanent easements as previously discussed.

2.6.12 - Excess Land Parcels (EX)

Excess Parcel

Parcels of land which were acquired for roadway purposes may be recommended as excess by the Regional Transportation Director. If Federal funds were involved in the acquisition, Federal Highway Administration approval of the land disposal may be required. In cooperation with Region survey staff, Property Management prepares an Excess Land Finding and a Resolution for approval by the Transportation Commission.

The number of the excess parcel shall be the same as the number of the parcel originally purchased followed by the letters "EX". In the event the parcels are made excess by a new project, the parcels will be numbered in accordance with the new project followed by the letter "EX". All excess parcels shall be shown on the ROW Plan sheet and tabulation of properties sheet and labeled "to be conveyed, subject to Transportation Commission approval". Access rights and easements should also be considered when excess land is sold. As with "RE" parcels, these parcels shall also be described separately.

Exchange Parcels

Exchange parcels are usually identified by Region ROW staff during an active ROW phase of a project. Exchange parcels are usually remnant parcels or previously created Excess Parcels. Exchange Parcels may be used in accordance with the ROW Manual, section 2.2.11 Exchange of Property.

2.6.13 - Remnant, Uneconomic Remnant, and Damaged Remnant Parcels (RM)

It is the responsibility of the Region ROW personnel to identify obvious remnant parcels during preparation of the ROW Plans. Obvious remnant parcels include landlocked parcels and small, triangular or irregular shaped tracts with limited uneconomic remnant value in the after conditions. All remnant parcels shall be designated by the number of the original parcel followed by the letter RM. See ROW Manual, Chapter 7, Property Management, for details for selling remnant property.

The review appraiser, in accordance with ROW Manual Chapter 3, Appraisal Review, shall make the determination as to which remnants are damaged a sufficient amount to qualify as "uneconomic remnant". The Region ROW Manager may also make the determination that a parcel is a remnant due to factors (i.e. access) as a result of the project.

The review appraiser shall consult with the Region ROW Manager who will relay this to the Region Survey/Plans Supervisor for addition to the ROW Plans. The number of the remnant and damaged remnant parcels shall be the same as the parcel to be acquired for roadway purpose followed by the letter "RM". A separate legal description shall be prepared for the RM parcel and shall be shown as a parcel to be acquired on the tabulation of properties sheet. All

remnant parcels are assumed to be Federal participating unless otherwise noted on the plan sheets and in remarks on the tabulation sheet.

2.6.14 - Mineral Estate (ME)

A property owner may be in title to both the surface and mineral rights of a property. When the surface and mineral estates are severed by deed, it creates two ownerships (for example, Mr. Smith owns the surface estate; Mr. Jones owns the mineral estate). CDOT is not permitted to offer to purchase the mineral estate; however, when CDOT purchases the surface estate, access to the mineral estate is precluded. If there are damages to the mineral estate because of lack of access, a parcel should be created to address compensation for damages. These parcels will be delineated on the plans sheets and designated "Mineral Estate" or "ME". The number assigned to the Mineral Estate shall be derived from the parent number of the parcel. for example, if the surface rights owner is Parcel 5, then the Mineral Estate parcel would be ME-5.

2.6.15 - Scenic Vista (SV)

Scenic vista parcels conveyed to CDOT are primarily used to maintain, protect, and/or provide access to a scenic view. Scenic vista parcels are numbered accordingly; the parcel number is followed by the letters "SV".

2.6.16 - State Land Board (LB)

See detailed information Chapter 11 section 11.2.2

State Land Board (SDLB) Grants are similar to permanent easements with the exception that they contain reversionary clauses. In the event a SLB parcel is used for any purpose other than that specified in the grant or the Grantee abandons the parcel for 12 consecutive months the grant automatically reverts to the Grantor. ROW grants shall be numbered in the same manner as permanent easements but with the prefix "LB".

2.6.17 - Highway Easement Deed (HE)

Parcels acquired by Federal Land Transfer (BLM/USFS, etc.) unlike Permanent Easements, contain stipulations and reversionary clauses. Highway Easement Deed shall be numbered in the same manner as permanent easements but with the prefix "HE".

2.6.18 - Conservation Parcels: Wildlife Habitat (WH) and Wetland Parcels (WL)

Wildlife habitat parcels conveyed to CDOT are primarily used to maintain a natural habitat or environment. Wildlife habitat parcels are numbered accordingly; the parcel number is followed by the letters "WH".

Wetland parcels conveyed to CDOT from previously arid or semi-arid lands or designated to maintain a natural habitat or environment. This is done to compensate for the wetlands damaged or destroyed by construction. Wetland parcels are numbered accordingly; the parcel number is followed by the letters "WL".

2.6.19 - Conservation Easements (CE)

Conservation Easements that do not fit in to either the WH or WL category may be identified as CE. Conveyed to CDOT, CE's is a restriction limiting the future use of a piece of property to preservation and conservation of wildlife habitats and/or nature preservations. Conservation Easements are generally permanent in nature, but may not always be acquired in the normal way. Conservation easements are numbered accordingly; the parcel number is followed by the letters "CE".

2.6.20 - Conversion Parcels (XX)

When a Parcel is identified as "excess" to be conveyed or transferred from the State to a local agency for roadway purposes, or sold or exchanged to another owner to clear an encroachment from the ROW the suffix "XX" is assigned to the parcel to identify it as one that is no longer needed and whose ownership will be conveyed or transferred to another owner.

2.6.21 - Condominiums

Condominium ownership is a "system of separate ownership of individual units in a multiple unit building." Besides fee title to the unit itself, there may be an undivided interest in and to the common areas, based upon the total number of units, or a fractional interest based upon a proportionate division of the square footage of floor area or the price of a single unit proportionate to the total price. An additional requirement is a primary instrument of record covering the common areas, such that they can be referenced in the documents conveying title to the units themselves.

2.6.22 - Improvements and Land Service Facilities

All affected lands and improvements within the ROW, or within the zone of influence of the ROW, must be shown. They should be drawn to scale in their accurately determined locations and either labeled or designated by a number or a letter referring to a tabulation of improvements. This must also be observed whenever enlarged detail drawings (blowups) are made to supplement the plan sheets.

All other improvements must be shown in their actual location by sketches or by standard mapping symbols. Existing highway ROW, fences, electric transmission and distribution towers and poles, telephone and telegraph poles or underground conduits, sprinkler systems, water valves, pipe lines, ditches, canals, natural water courses, and signs shall be shown, together with all easements or rights of way on which such facilities are erected. If the book and page of the record of such easements and the project number of the existing ROW are known, or can be ascertained, such information should be included on the plan sheet.

The name and direction of flow should be shown on all water courses, including ditches and canals, and the primary use of ditches and canals, whether for irrigation or for drainage, shall be indicated.

Streets and avenues, designated by name, and alleys intersected by the ROW, or within the ROW limits, must be shown. Also, land service facilities such as frontage roads, county roads, road approaches, trails, bridle paths, and stock drives must be indicated on the plans. Bridges, culverts, overpasses, encasements, and other structures must be indicated on the plan sheet and briefly described. Show major improvements within ownerships as well as existing access to the street system. All land service facilities must be justified in accordance with CDOT Project Development Manual.

2.6.23 - Outer Lane Lines and Road Approaches

The ROW Plans should show all approved points of entry to or exit from the traffic lanes. To avoid cluttering the plans with extraneous lines, only the outer shoulder line or edge of traveled way need to be shown. Curb, gutter, sidewalk, and inner lane lines are not required.

2.6.24 - Access (AC)

(aka A-Line)

See Chapter 4 of the ROW Manual, Section 4.10 for more information regarding Access guidelines and regulations.

Access control (AC-Line) is a restriction of access to/from a transportation facility. Access control shall be indicated on all plan sheets prefixed by the letters "AC". Except for unusual circumstances, the access controls and symbols denoting said control will be on the ROW line.

2.6.25 - Control by Deed or Rule and Order

BOA ——— A ——— ——— ——— ——— ——— ——— ——— ——— A ——— ——— ——— EOA

A break in access control constitutes an access opening. Openings are indicated on the plans by showing a break in the access control line with the width and a stationing opposite the center of the opening. An example follows:

20' Opening
Station 78+35

BOA ——— A ——— ——— ——— ——— ——— ——— ——— ——— A ——— ——— ——— EOA

Access openings must conform to applicable requirements of State Highway Access Code. Openings must be accompanied by an approved CDOT access permit. An access permit pursuant to 2 CCR 601-1 (State Highway Access Code) is required to break any A-Line, regardless if the A-Line is shown on the plans or not.

Beginning and ending points of access control along shall be indicated by the words, or by appropriate symbols, such as "E.O.A." or "B.O.A." In addition, the distance through which access is to be controlled along interchange roads will be shown. It is advisable to use a different size and/or slant lettering, or the word "access" in parentheses, to distinguish an access distance from a parcel distance when the two are not the same.

2.6.26 - Control by Law on Virgin Access

When access is controlled by operation of freeway law, C.R.S. 43-3-102(2) the existence of a freeway resolution for that specific section must be verified. An example of this is a highway on a virgin location. In this case the property owner has no rights of access, and this fact is symbolized on the ROW Plans as follows:

BOA ————— V ——— ——— ——— ——— ——— ——— V ————— EOA

The existence of a freeway resolution may be verified on the Freeway Resolution Map, as distributed by the Division of Transportation Development.

2.6.27 - Barrier Control Line

When access is available to a frontage road and access between the frontage road and the arterial lanes is prohibited, the fact will be indicated by the barrier line symbol:

|—|—|—————|—|—|—————|—|—|

2.6.28 - Control of Access by Statute, Rule and Regulations CRS 43-2-147

CRS 43-2-147 authorizes CDOT and appropriate local governments to regulate vehicular access to and from the state highway. The State Highway Access Code, 2 CCR 601-1, is a rule and regulation that provides the detailed procedures, standards and specifications for the control of access.

Access authorization can only be obtained through the issuance of an access permit signed by specific authorized Department personnel. Openings in A-lines do not constitute authorization.

A permit defining the terms, conditions and design is also required by statute. The Transportation Commission has adopted the State Highway Access Category Assignment that classifies each and every segment of highway into an access category. Information regarding the category assignment for a specific roadway section can be obtained from the regional access manager.

The access category is not shown on ROW plans. Where access plans are developed, key elements will be put on ROW plans and construction plans. Access is an important element in appraisal and acquisition.

Access regulation and access control plans are not substitutes for freeway resolutions and control by deed. Control by deed is still and will remain the preferred method to control access.

2.6.29 - Unknown Parcels (UN)

Parcels conveyed to CDOT that are not identifiable by any other parcel designation may be designated as an unknown parcel followed by the letters "UN". This designation shall be used infrequently and only in rare cases where the parcel designation is not known.

2.6.30 - Right of Way Easement (RWE) (Added with Amendment 7/2022)

A Right of Way Easement is an acquisition for the use of private property for a public road and associated facilities. This designation is used if the Easement beneficiary will request reimbursement of the acquisition cost from a local, state or federal agency. This manual addresses CDOT's responsibility and oversight of public funding for any parcel acquisition of property for public transportation use. RWE will be followed by suffix ownership parcel number designation used for the project. Governing agencies should be consulted regarding the handling of setback and density requirements on private property when a RWE is used instead of the parcel being acquired in fee. Other special circumstances such as protecting an entity's ownership rights (i.e. ditch companies) may merit the use of a Right of Way Easement by CDOT or other governing agencies.

RWE designation does not replace the RW designation. This revision formalizes the addition of RWE as an *easement* purchased by CDOT or Local Public Agency, for any project having CDOT oversight. A RWE can be used for construction, access and maintenance of multiple transportation facilities. The designation of RW is to be used for all fee simple Right of Way acquisitions where CDOT will be the owner of the parcel.

The RWE designation is not to be used in place of Highway Easements, (Right of Way Plan designation: HE) which are required to use Highway Easement Deeds, (HED) for road easements across Federal Lands. The use of HED's is specific to US Forest, BLM (Bureau of Land Management) or other lands governed by the Federal Government. HE and RE (railroad easements) cannot be transferred to fee simple acquisitions. PE's (permanent easements) and RWE's can be transferred to fee acquisitions by recorded Deed, if desired, later in the project.

SECTION 2.7 - THE OWNERSHIP MAP

2.7.1 - Purpose

The purpose of the ownership map is to show certain plan sheet information as it relates to total contiguous ownership. The format for the ownership map is much the same as the plan sheet: i.e. Title Block, revision block, North arrow, graphic scale, sections, townships, range, Principal Meridian, and centerline alignment orientation. It is the intent of the ownership map to

identify conflicts in property boundaries and should be made in conjunction with the field survey.

2.7.2 - Specifications for Ownership Map

- 1) A scale drawing of the boundaries of all land ownerships affected by the highway improvement.
- 2) Must show all Existing and Proposed, recorded and apparent rights of way and easements.
- 3) Scale and north arrow.
- 4) Number ownerships alternately as they occur from centerline alignment to correspond with the plan sheets. Show the current names of owners and lessees.

2.7.3 - Content

Ownership maps are usually shown at the scale 1"=400' so that more of the ownership can be shown. It is obvious that, with this small a scale, ownership maps cannot and need not deal with as much detail as does the plan sheet. The centerline alignment must be shown to scale, but need not be dimensioned except for centerline bearings, important ties, and ROW widths. The curve data may be abbreviated to show the delta angle, Radius, and the arc length. Stationing shall be shown at least at 500 foot intervals.

Structures, fences, rivers, streams and drainage, and field roads and topography shall be included in the ownership maps because of their effect on access and access control.

When access is to be controlled, approved overpasses, underpasses, grade separations, interchanges, grade intersections, and public and private access points shall all be shown and labeled on the ownership maps as well as natural water courses, canals, lakes, large reservoirs, etc. Culverts, when not specifically requested in the survey scope, five feet and larger shall be shown primarily for drainage, and bridges must be shown and their size indicated, since they may possibly be used as passageways under the roadway.

Railroads, highway, jeep trails, utility easements and rights of way should also be indicated. It is important on Interstate projects, and others requiring total access control, especially with large ownerships, that all county roads, according to county highway records, within the scope of the map be shown, so that access to or land locking of ownership remnants, if any, can be determined. for the same reason, frontage or service roads, planned to be constructed should be shown.

When land within the scope of the ownership map is owned by the State, or is in the Public Domain, but is occupied under a lease, the name of the lessee and other pertinent lease data should be shown.

The owner's or lessee's system of cross fencing should also be indicated as an aid to understanding operating methods.

Beginning and ending stations of the ROW project must be indicated on the map.

2.7.4 - Total Ownership Maps

There may be times when a smaller scale might be necessary in order to include total ownerships; but such small scale maps should be avoided if possible, especially when some desirable details on the ownership map would have to be sacrificed. In such cases, it is recommended that small scale supplemental plats be included, solely to show the total ownerships. A plat similar to the sketch map on the title sheet might suffice.

2.7.5 - Electronic Microstation dgn submittals

Electronic MicroStation ROW_Models will be used for referencing into Right of Way, Engineering Ad and Construction plan sets. For this reason, they should be drawn at a scale of so they can be referenced into project plan sheets of any scale. The centerline alignment must be shown to scale, but need not be dimensioned except for centerline bearings, important ties, and ROW widths. The curve data may be abbreviated to show the delta angle, radius, and the arc length. Stationing shall be shown at 500 foot intervals or less.

All electronic submittals must be on the project datum and geographically reprojected to the correct State Plane projection.

SECTION 2.8 - ROW PLANS PREPARATION PROCESS

2.8.1 - Preliminary Field Survey

All survey work shall conform to the specifications as required in the current edition of the CDOT Survey Manual, including but not limited to the following:

- 1) Obtain written permission to enter private land for survey work (CDOT 730: Permission to Enter Property).
- 2) Establish horizontal and vertical control in accordance with CDOT Survey Manual.
- 3) Make field ties to aliquot corners, property pins, ROW markers and all found monuments in the area.

Request and secure all necessary survey data prior to conducting the preliminary survey such as preliminary design data, existing control points, and requirements for the design process (such as topography, profiles, TMOSS, and hydraulic survey data). The Project Manager and the Region Survey/Plans Supervisor will confer to complete the preliminary Survey Scope (Form 1217rev_2020) prior to commencing any preliminary survey work, and a pre-survey conference will be held. The consultant, their Professional Land Surveyor licensed in the State of Colorado who is in charge of field survey work and the CDOT Region Survey/Plans Supervisor for field and office will discuss CDOT requirements including method, equipment,

basis of bearings, and project coordinate basis and Geo-referencing. Any GPS or Total Stations and Terrestrial LiDAR scanners shall be checked for accuracy at an approved NGS Calibrated Base Line.

Obtain any maps and data that will aid in the survey such as:

1. State Plane and Geoid Model requirement
2. BLM Township Plat and Field Notes.
3. USGS Topographic Maps or Project Georeferenced Aerial Imagery.
4. Existing ROW Plans and Railroad Maps.
5. County Assessor Maps.
6. Monument Records.
7. NGS Horizontal & Vertical Control Points
8. Subdivision Plats.
9. Deposited Surveys.
 - a. BLM Township Plat and Field Notes
10. Utility location map services

2.8.2 - Electronic (ProjCode) ROW_Model.dgn

The following work must be done by or under the immediate supervision of a Professional Land Surveyor licensed in the State of Colorado:

- 1) Identification of Property Owners:
 - a. Identify affected ownership from preliminary Design Plans.
 - b. Obtain assessors map, encompassing limits of project.
 - c. Locate documents which transfer title.
 - d. Prepare chain of title.
 - e. Look for encumbrances, releases, etc.
 - f. Make physical inspection of property. Note any physical evidence of easements, wells, ditches, ingress and egress.

- g. Check with County Road Department or County Engineer for location of existing roads.
 - h. Check for latest subdivisions plats and vacations of streets.
- 2) Preparation of ROW Ownership Map (ROW-Model.dgn) (Prior to FIR) delivered electronically:
- a. Review preliminary design and field survey notebooks.
 - b. Prepare Electronic Project Control Diagram and Land Survey Control Diagram (ROW_PCD.dgn or ROW_LSCD.dgn). This will be the base file for all project files used in the project Survey and Design.
 - c. Establish basis of bearings and coordinate with CDOT Design and ROW Sections.
 - d. Import found monument coordinates from the PCD or LSCD from double based observations per accuracy standards listed in the CDOT Survey manual.
 - e. Review Title Commitments or Memorandums of Ownership and supporting plats supplied by either CDOT or title company.
 - f. Calculate coordinates of lost or obliterated corners using guidelines established by the Bureau of Land Management to be used by field surveyor in resetting the monuments.
 - g. Establish subdivision of sections using Bureau of Land Management Guidelines. Show all Section Lines and Aliquot Parts on the ownership map and ROW_Model.dgn.
 - h. Determine existing ROW limits from deeds of record. Previous ROW Plans, if available, will be provided by CDOT as an aid.
 - i. Determine and show all ownerships and existing easements of record, including Section B-2 Exceptions and physical evidence affecting or benefiting real property. Recording information of easements or rights of way on which facilities are erected, and the project number of the existing ROW should be included on the ROW_plan sheets.
 - j. Streets and avenues, designated by name, and alleys intersected by the ROW, or within the ROW limits, must be shown. Also, land service facilities such as frontage roads, county roads, road approaches, trails, bridle paths, and stock drives must be indicated on the topo and the ROW plans. Bridges, culverts, overpasses, encasements, and other structures must be indicated on the plan sheet and briefly described. Show major improvements within ownerships as well as existing access to the street system.

- 3) Secure additional property corner ties and additional topography where the highway improvement project may affect improvements adjacent to the ROW. This additional topography should include
 - a. Visible above ground evidence of underground cables and conduits.
 - b. Wells.
 - c. Irrigation ditches and systems.
 - d. Septic tanks, cesspools, and leaching fields.
 - e. Landscaping improvements including trees and other shrubbery.
- 4) Reconcile overlaps and gaps in ownerships, documenting the method used
- 5) Distribute an electronic ROW_Model.dgn that has been shared with the design team and Project Managers via electronic file sharing methods as agreed upon during the project Survey Conference meetings.
- 6) Plot OWNERSHIP MAP on a 11" by 17" sheet in accordance with specifications. Normal scale, 1"=400' in rural areas, 1"=200' or in urban areas. If entire ownership will not fit on the sheet at this scale, an additional abbreviated OWNERSHIP MAP may be used at a scale of 1"=5000', or other suitable scale, to show the configuration of large ownerships.
 - a. Monumentation tables: Label all recovered monuments with description of monument and coordinates.
 - b. Show improvements and topography within the ownerships as well as existing access to the street system.
 - c. Number ownerships alternately as they occur along the centerline alignment from south to north or west to east in the same direction as the stationing. Show current names of owners and lessees.
 - d. Calculate area of all ownerships affected, establishing bearings and distances on all ownership lines, including coordinates of all property corners. Deduct areas for existing road rights of way. Bearings, distances and coordinates do not need to be shown on Preliminary ROW_Plan.pdf's or ROW_Model.dgn.
 - e. Show areas of complex ownerships graphically by cross hatching different land uses.
 - f. Show seal, number, and name of Professional Land Surveyor licensed in the State of Colorado who is in responsible charge of the work, in the designated block for each sheet.

Transmit finished ROW_Model.dgn to CDOT along electronic files pertaining to calculations, field notes and supporting data to the CDOT Survey Coordinator or designee. The Preliminary ROW_Plan.pdf sheets will include a Project Control Diagram, and/or a Land Survey Control Diagram and monument sheet. Note that only the project control data needs to be completed at this time.

Plot ROW Model dgn on 11X17 pdf sheet layouts for meetings and discussions.

Survey topo (Survey-Model.dgn)

- 1) All property ownership evidence such as recovered property pins, brass tags or original boundary markers.
- 2) All affected lands and improvements within the ROW, or within the zone of influence of the project limits, must be shown.
- 3) Existing highway ROW, fences, electric transmission and distribution towers and poles, telephone poles and guy wires, fiber optic and cable boxes, sprinkler systems, ditches, canals, natural water courses, and signs shall be shown.
 - a. water valves, pipe lines and above ground evidences of underground conduits will be collected as outlined with form 1217 at the Pre-Survey Preliminary Survey Conference meeting.
- 4) The name and direction of flow should be shown on all water courses, including ditches and canals, and the primary use of ditches and canals, whether for irrigation or for drainage, shall be indicated.

2.8.3 - ROW Plan Preparation

Also see section 2.11

Verify toes of slope on base map from earthwork data.

Plot ownership lines and control from OWNERSHIP MAP.

- 1) Plot new ROW requirements and access control from design plans following the FIR on base map. Normal scale, 1"=50' in urban areas, 1"=100' in rural areas.
- 2) Determine areas of parcels, easements and remnants.
- 3) Draft ROW Plan Sheets including driving lanes, structures, pipes & boxes larger than five feet.
- 4) Prepare property descriptions of parcels, easements and remnants.
- 5) Prepare tabulation of properties sheets.

- 6) Reference Design (DES_Model.dgn) to check new access control, easements, frontage roads and lane lines to verify ownership numbers correspond to ROW acquisitions.
- 7) Prepare ROW title sheet.
- 8) Prepare monumentation sheet, including a complete list of ROW points to be set, section corners and control monuments. Determine coordinates for ROW angle points.
- 9) Prepare ROW tabulation of road approaches, if applicable. Show owner, milepost/station, rt. or lt. of centerline alignment, width of approach, skew angle and any pertinent remarks.
- 10) Transmit plans, memos, and property descriptions to the Region Survey/Plans Supervisor for cost estimate, letter of information to appraisers, and request for authorization. Transmit current, updated title work (Memorandums of Ownership and/or Title Commitments).

2.8.4 - ROW Plan Revisions

Review changes in design affecting the ROW limits as they occur after Plan Authorization.

- 1) Review changes brought about by the appraisers and negotiators.
- 2) Review changes brought about by updated Title commitments.
- 3) Draft plan revisions and prepare revised property descriptions and calculations.
- 4) Transmit the revision with a Memo to the HQ Project Support ROW/Surveyor for review.

REVISION DESIGNATIONS: PARCEL #
 PARCEL#REV, PARCEL#REV2, PARCEL#REV3 etc.

SECTION 2.9 - MEMORANDUMS OF OWNERSHIP & TITLES

2.9.1 - Purpose

From the information given in the Memorandum of Ownership, CDOT plans to buy property and clear it of all encumbrances. CDOT may use the memorandum in lieu of title commitments, insurance, or other ownership reports.

2.9.2 - Title Commitments

If title commitments are used in lieu of the Memorandum of Ownership process copies of all conveyances within the last five (5) years must be attached to the document in chronological order. Title policies are recommended on all acquisitions over \$5,000.00.

2.9.3 - Memorandums of Ownership

The memorandum of ownership may be used by CDOT in lieu of title commitments or insurance provided by private companies. The memorandum must provide an accurate and complete accounting of the ownership of an affected tract of land. The information provided by it is used

to identify parcels to be acquired, and is used by the appraisers and also determines to whom payments are made. Again, the information must be **accurate** and **complete**.

The following steps should be adhered to in compiling a Memorandum of Ownership:

- 1) From the centerline alignment of the project, locate the section, township, and range of the project. Approximate distances from the centerline alignment to the section corners is helpful in determining the quarter section. Once the location of the project is identified, locate the project on the county tax assessor's map in the appropriate county. These maps vary from county to county. However, the assessor's records should contain some type of plat depicting properties being assessed taxes. In some instances, subdivisions are indicated only by boundary and name, and separate maps or books contain information as to specific lots and blocks within those subdivisions.
- 2) Once the project is located on the assessor's map, identify those tracts affected by the project. Often, the tracts are numbered or keyed in some fashion to an index of owners. After the affected tract has been identified, determine the owner (the party that is being assessed property taxes for that particular tract). From the key number, or owner's name, obtain the date and/or recording information of the document whereby that party acquired title. This information may be contained with the map, in a separate book, or elsewhere, such as assessor's files, treasurer's records, etc. In some cases, no record of the transaction is noted by either the assessor or the treasurer. In this case, a search of the grantor-grantee index records in the Clerk and Recorder's office is necessary to find that conveyance. County personnel may be helpful in this instance by providing an approximate date or year of the transaction, i.e., "John Doe owned that since before the war," or: "He bought that about three years ago." In any case, attempt to get the information relative to the transaction whereby the party currently being assessed acquired title to the property.
- 3) In the records of the County Clerk and Recorder, locate the document that transfers title according to the assessor's records. In most cases, this document will be a deed of some type, however, it may be a last will and testament, a court decree, a death certificate (property held in joint tenancy), or some other document transferring ownership from one party to another. If the document is a deed, note the pertinent information, and, obtain a copy of it. If the legal description is fairly simple, i.e. "Lot 1, Block 2, Interstate Subdivision," or "the E 1/2 of the NW 1/4 of Section 32, Township 8 South, Range 70 West, of the Sixth Principal Meridian," it may be less time consuming to abstract the necessary information from the deed. Care must be taken to insure that any information is set forth exactly as it appears on the document, even if there are obvious errors, i.e. typos, numbers transposed, etc. Make note of any such errors separately.
- 4) Begin the chain of title from the date that the current owner acquired title. Search the grantor index under the name of the current owner from the date of the deed forward to the present. This search will reveal any portions conveyed out of the ownership, any liens or encumbrances made by the current owner, or a sale of the property not yet noted by the assessor. Then search the grantee index under the name of the current owner backward from the present to the entry whereby title was acquired. This search will reveal any releases of liens or encumbrances, any corrective deeds, or additions to the ownership.

- 5) If the current owner has held title for less than 20 years, continue the chain of title backward from the date title was acquired. This is done by searching the grantee index backward under the name of the party granting title to the current owner. This search will identify when and by what method that party acquired title. It will also reveal any releases of liens or encumbrances made by that party. After the entry is found whereby title was acquired by that party, search the grantor index forward under that name to the time when title was acquired by the current owner. This search will reveal any easements, encumbrances, liens, or sales made by that owner prior to conveying to the present owner.
- 6) Continue the process until a history for the preceding 20 years can be developed for the property.
- 7) Always search the current owner from the time title was acquired to the present, even if title has been held longer than 20 years.

2.9.4 - Instructions for completing Memorandum of Ownership Forms

CDOT will provide information on what land the memo should include. Depending on the circumstances and availability of base maps, this information may be in various forms:

- 1) A list of aliquot parts of a section or sections.
- 2) A list of lots and blocks in a subdivision.
- 3) Maps showing highway alignment and affected property needed for highway expansion.
- 4) A list of property owner's names in sections or aliquot parts of a section.
- 5) If the title company or employee has any questions as to including or excluding any property, they should contact the highway employee placing the order.

2.9.5 - Preparing the Memorandums of Ownership Forms

The Memorandum of Ownership has four sheets: CDOT Forms 242, Page 1; Page 1A; Page 2; and Page 3; Page 1 has several blocked spaces in the upper right corner. The only spaces concerning the title company are the ones TRACT, SECTION, TOWNSHIP, RANGE, AND PRINCIPAL MERIDIAN. The project, location and parcel spaces will be filled in by Department personnel. In the preamble of CDOT Form 242, Page 1, the county name should be filled in.

The main part of the page is for the description of the parcel of land; describing the parcel of land may be done in several ways: The description of the entire property may be typed as it appears in the deed; exceptions may be typed and noted by reference to the book and page of the county clerk's records, or simply noted by book and page of the records. On long complicated descriptions where there is the possibility of error or transposition, the property and exceptions may be described by listing both the book and page of the deed and the book and page of the exceptions "The land described in Book ____ on Page ____ of the _____ County Clerk and Recorder's records, except the property conveyed by Book _____ on Page

_____ of said records." In both cases please provide legible prints or photocopies of all instruments referred to. These instruments often contain additional useful information.

2.9.6 - CDOT Form 242, Page 1A

This sheet is for the continuation of lengthy descriptions from CDOT Form 242, Page 1. This sheet is used only when lengthy property descriptions warrant additional pages.

2.9.7 - CDOT Form 242, Page 2 - Schedule 1: Ownership

List the requested information from the deed of the current owner. The names of the Grantor and Grantee should be exactly as shown on the deed.

Where ownership was conveyed by several deeds, all instruments should be listed. Partial ownership may be shown in different ways: If there is one parent instrument that establishes several partial ownerships it can be covered in one memo. When partial ownerships have been conveyed multiple times, separate memos should follow each chain of title. When a property has several complete ownerships, (wild deeds), show this on separate memos.

In "Purpose of Parcel", should be shown any matters which may tend to clarify the status of the title, whether such matters are of record or not. For example, if the owner of record of the subject premises has died, and you know this to be true although no transcript of the Decree has been recorded, a statement to that effect should be noted. Any survivors should also be noted, if known. It often happens, too, that title is taken in the name of a corporation, sometimes a partnership, and occasionally a trade name. If a corporation, CDOT must be advised if the Articles of Incorporation are recorded; if a partnership or trade name, CDOT must know the names of the partners or the persons doing business under the trade name.

Under "SCHEDULE 2: ENCUMBRANCES" any liens or encumbrances of record affecting the subject premises must be shown. This should include deeds of trust, mortgages, judgments, mechanic's liens, leases, tax sale certificates, and all other such interests. If any leases affect the premises, please furnish a photocopy of the same for the information and use of the appraisers. Purpose of Parcel: "remarks" may prove most useful in clearing title. Information not a matter of record, will aid materially in securing the necessary releases.

2.9.8 - Certificates of Taxes Due

It is Department policy to secure "Certificates of Taxes Due" for each parcel CDOT acquires. Therefore, it will not be necessary for the abstractor to fill in the section pertaining to taxes provided on the Memorandum.

2.9.9 - CDOT Form No. 242, Page 3 - Schedule of Transfers

CDOT Form No. 242, Page 3. "Schedule of Transfers", is required by the Federal Highway Administration to obtain information regarding all transfers of title affecting the various parcels during a period of five years immediately preceding the date of Memorandum. The form provides space for this information and, as shown in the sample, may indicate not only the

frequency of transfer, but also any possible trend toward speculation. The amount of consideration will be shown for use by the Appraisers in their reports. DO NOT USE THIS FORM if the present owner has held title for more than five years.

The schedule or summary (CDOT Form No. 242, Page 3) must contain the name of the Grantor in each such transfer, the name of the Grantee, the kind of instrument, the date thereof, the date of recording, the book and page of record, the stated consideration, and the amount of documentary fee.

2.9.10 - Updating Memorandums of Ownership

Memorandums of Ownership must be current (less than 90 days from the date they were prepared) for appraisal and negotiation purposes. Consequently, Memos need to be updated periodically. If there are no changes in Ownership or Encumbrances, the memo can be updated by typing the sentence "No change in Ownership or Encumbrances from (date of the memo) to (current posting date)".

When there are changes in Ownership and/or Encumbrances, they should be added on Sheet 2. It may be necessary to prepare a new memo.

Fees. There is no fee schedule CDOT will pay for memos. We expect to pay title companies an hourly rate.

2.9.11 - Title Research Cautions

In some cases, the entries in the Grantor-Grantee indices may be abbreviated or possibly misspelled. This is particularly true in those counties where the entries are hand-written. (Example - searching the name John J. Jones, check any entry for J.Jones, J.J. Jones, John Jacob Jones, etc. Also, Schultz may appear Shultz, Shulz, etc.)

- 1) If a *lis pendens* is found court records need to be reviewed to determine the status of the case.
- 2) A judgment recorded with the Clerk and Recorder's office becomes a lien on all real property located in that county which the defendant owns at the time it is filed or may afterward acquire. This lien continues for a period of six years, and may be extended. Therefore, the name of the current owner should be searched back for at least six years, even if title has not been held that long.
- 3) Releases may be recorded in a separate index or as a margin note adjacent to the entry of the original lien. Also, the public trustee may have the release records in that office for deeds of trust.
- 4) Make a physical inspection of the properties affected by the project. Note any physical evidence of easements, rights of way, etc., including any indication of to whom granted, i.e. Public Service, water districts, ditch company, ingress and egress for adjacent owners, etc. If the 20-year search fails to reveal an obvious easement, it may be helpful to contact the party occupying the easement to determine by what right the area is being used.

- 5) When the deed contains an exception by reference to a book and page or reception number, furnish a copy of the applicable information contained on that document.
- 6) Be sure to note the terms of any deed of trust, mortgage, etc. Also, record the addresses of the lien holder and/or local agents.
- 7) If records indicate that an owner is deceased, and there has been no death certificate or will recorded, try to locate the probate records. This may be difficult, as the records may not necessarily be filed in the same county that the property is situated in. If an approximate date of death can be determined (deed from John Jones with signature dated 4/9/59) a copy of the death certificate may be obtained from the Bureau of Vital Statistics in Denver. This may be helpful in trying to locate the probate records. In any case, try to determine by what authority an executor or personal representative is transferring title.
- 8) If title is held in a trust, be sure to include the names of the trustees and the beneficiaries of the trust.
- 9) If title is held by a partnership, note the type (general, limited). If title is held by a corporation, record the jurisdiction of incorporation (a Colorado Corporation, A Delaware Corporation, etc.).
- 10) Articles of Incorporation or registration of businesses may be filed with the County. These may be entered in the grantor-grantee indices or in a separate index. If no registration of a corporation or partnership is found in the county records, check with the Secretary of State's office. In any case, record the place of business and the names of the principals, (registered agent, partners, etc.).
- 11) In some instances, such as a break in the chain of title or a substantial discrepancy between adjacent owners, it may become necessary to search a title forward from the original patent grant. The patent information is obtained from the Department of Interior, Bureau of Land Management, Colorado State Office. Using the date of the grant and the name of the party receiving the grant, locate the entry in the county records and start the chain of title forward from that entry. Be sure to search for this entry in the records of the county that had jurisdiction at the time the patent was recorded. Present county boundaries may be substantially different than those in effect at the time of recording. Also, handwritten styles in the older records tend to be difficult to decipher, so exercise care in this search.
- 12) When attempting to locate an existing road or highway ROW, check with the county engineer or road department. Often they have records of dedications or conveyances for roadway purposes.
- 13) Spend some time familiarizing yourself with the records of the county in which you are working. Ask the county personnel for assistance, but do not expect them to search for you. Ask for the location of records that you may search. Inquire as to plat books for roads or ditch rights of way. County personnel can be extremely helpful.

14) In the early years of Colorado history, Spanish surnames were often compound names. Jose Valdez y Romero received the Valdez name from his father, and the Romero name from his mother. As the years passed and customs changed, the mother's surname would be dropped. There are instances where Jose Valdez y Romero would buy property and this would be indexed in the "R" section of the grantee index book. Years later when the mother's surname had been dropped, the property would be sold by Jose Valdez, and this would be indexed in the "V" section of the grantor's index book. Both parts of compound names should be followed.

- a. In Spanish surnames, "B's" can be interchanged with "V's" and S can be interchanged with Z. Property purchased by Ballejos may be sold by Vallejos, and Sanchez may sell property owned by Sanches. Phonetically B is the same as V, and S is the same as Z.
- b. Given names of a compound nature can cross the borders of gender; Jesus y Maria is not uncommon among Spanish male surnames. Jesus often chooses to go by the name Jess or Jessie.
- c. When a title search in Spanish surnames appears to be at a dead end, it is time to consider possible variations.

SECTION 2.10 CALCULATION OF ROW

2.10.1 - General

The calculation of ROW involves knowledge of surveying principles including the Public Land Survey System in relation to some common trigonometric operations. These include traverses, a method of breaking down the distances and bearings or a series of courses into their northing and easting projections for the purpose of solving unknown elements and parcel areas. The northing projection is called the latitude and the easting projection is called the departure.

Error of closure should be calculated for all new ROW parcels as well as for all adjoining deeds. In addition to plotting the adjoining deeds on the plans, poor closures should be noted on the plans.

Bearings may be rounded to the nearest second for normal calculating operations. Simple horizontal curves are used extensively. All data should be given for each curve. This includes the delta angle, radius, arc length, chord and chord bearing or radial bearing for simple curves.

Spiral curves should not be used in calculating right-of-way parcels.

2.10.2 - Notation of Given or Surveyed information

Field measured ties to found land monuments should be noted on the plans. Where space and clarity permit, the tie should be shown as a dashed line, and labeled with course distance. All "found" monuments will be so designated and shown on the plans with a full description of the monument, its cap or disk and markings.

2.10.3 - Calculation of Alignment

Before any final calculation can be made, the survey control and project alignment must be completely checked. The coordinates of the survey control must not be adjusted in any manner without the permission of the Region Survey/Plans Supervisor. ROW and design alignments must be on the same horizontal (and vertical) datum.

SECTION 2.11 CALCULATION OF PROPERTY BOUNDARIES

2.11.1 - Analysis of Survey Information

To analyze the survey information, it may be necessary to plot the original ROW alignment, section corner information, and property lines using a CADD model for the purposes of calculating a closure of all section lines found and identifying problem areas. If there is any doubt in position, have the survey crew recheck the corner ties.

Using memorandums of ownership, title commitments, plats, boundary surveys and considering property rights with field evidence of ownership, calculate the boundary of each ownership within and adjacent to the project limits, identifying gaps and overlaps in the mathematical location of deed description. Review the deed calls to see if any of the hiatus can be resolved therein. Determine if there are areas where additional search for survey monuments might prove productive, CDOT does not resolve boundary conflicts or ambiguities in deeds of parcels adjoining a highway.

2.11.2 - Calculation of Property Corners Not Found by Survey

All property corners not found shall be calculated using proper land survey methods in accordance with Colorado law. It is the policy of CDOT not to perform boundary surveys of adjoining properties but to determine the coordinates of missing property corners using the most current title information and survey information of record. This work shall be supervised by a Licensed Professional Land Surveyor licensed in the State of Colorado.

2.11.3 - Adjustment of Deed Information to the Survey

If the owner's deed contains a statement that the property was surveyed when the deed was written or the deed contains calls to physical land monuments in each course, the actual distances and bearings between these found monuments in their original, undisturbed, location, will hold above all other information. Quite often the deed distances, when measured with more advanced equipment, will yield information different from previously recorded courses. In this case the actual distance and bearings will be used in the new computations.

If the owner's deed does not call out any monuments or no monuments can now be found, the Priority (Dignity) of Call for Evidence should be considered before a mathematical least squares adjustment is used to establish a best-fit of deed calls. If the deed bearings and distances do not close mathematically, only a weighted least squares adjustment or other acceptable adjustment will be used to adjust the corner locations to a best-fit of the deed calls. However, if there is an obvious error in the deed, such as a transposition of numbers or reversal of bearings which can be proved mathematically, it is permissible to correct these errors. Conflicting calls per the record should be noted on the plans.

Where various deeds in a given area overlap or have gaps between them, special consideration must be given to determine which deed has senior rights.

The Priority (Dignity) of Call for Evidence Compiled from State Courts, Statutes and textbooks¹ are listed below:

- 1) Lines actually run in the field and proven from evidence
- 2) Monuments and/or Boundaries set and called for the description
 - a. Natural Monuments
 - b. Artificial Monuments

¹ Evidence and Procedures for Boundary Location 3rd addition, Walter Robillard, Curtis Brown, Donald Wilson

- 3) Adjoiners (if Senior)
- 4) Courses
 - a. Bearing then Distances (Metes and Bounds States)
 - b. Distances then Bearings (GLO States)
- 5) Recitation of Area
 - a. May be controlling
 - b. May be evidentiary
- 6) Coordinates

SECTION 2.12 CALCULATION OF PARCELS

2.12.1 - General

After the new ROW and the property lines have been established, all parcel points can then be calculated. ROW lines are usually chorded when the alignment contains spiral curves, they are never spiraled. If there is a circular arc in the ROW line, it should be made concentric with the alignment.

2.12.2 - Calculation of Ties

Ties of parcels and access may be one distance - one bearing course to a found legal corner. Broken back ties, composed of a series of courses leading to a "true" point of beginning, are also acceptable. Ties should be along aliquot lines as often as possible.

2.12.3 - Area Computations

Areas of parcels, easements, and remnants are to be expressed in acres and rounded to the nearest thousandth of an acre in rural parts of the regions. In urban parts of the region or where the cost of acquisition could be great, parcels, easements, and remnant areas shall be expressed and rounded to the nearest square foot as outlined under "ROW Parcel Descriptions". Bearings for property descriptions must be related to the project survey control. It is permissible to use grid bearings for computational purposes as long as the basis of bearings is stated in the parcel descriptions as well as on the final plans.

2.12.4 - Calculation of Remnants

The areas to the left and right of the centerline alignment of the contiguous remnant properties must be calculated and tabulated along with the parcel areas. It is sometimes necessary to break down these remnant areas into the various land classifications involved. These areas should be expressed in acres and rounded to the nearest thousandth of an acre in rural parts of the regions. In urban parts of the region or where the cost of acquisition could be great, these areas shall be expressed and rounded to the nearest square foot. If the remnant parcel is large enough to go beyond the project survey control, no additional field work is performed.

The remnant is calculated from the best information on hand including assessor and GIS information.

2.12.5 - Length of ROW and Begin and End Stations

Length of the ROW project is determined by the length of the centerline at the extremities of the parcel at each end of the job. This is calculated by subtracting the begin station from the end station. If there are equations throughout the project, they must be taken into consideration. The beginning and ending ROW stations are determined by computing the centerline stationing of the furthestmost point of the end parcels. Mile posts shall be calculated to 3 decimal places.

In Urban areas, mile points are seldom marked on the ground and can and do have equation stations.

SECTION 2.13 TIES AND POINT OF BEGINNINGS

2.13.1 - Establishing Point of Beginning

The point of beginning for any ROW parcel shall be on the new ROW line rather than on the centerline alignment, or prior right of way line if possible.

2.13.2 - Direct and "Broken-Back" Ties

Generally, direct ties shall be calculated and used from the point of beginning (POB) to the monument of record (or Point of Commencement (POC) at the monument and then go to the point of beginning). However, "broken-back" ties (ties with more than one bearing and distance) may be permitted in some circumstances. If "broken-back" ties are used, all courses in the traverse, from the aliquot corner to the "point of beginning" start at the beginning of the body of the description and shall not be numbered.

2.13.3 - Railroad Parcels – Required Ties

Parcels to be acquired from a railroad shall include, in addition to the regular ties to land monuments, a tie to the nearest railroad milepost.

SECTION 2.14 DONATIONS AND DEDICATIONS

2.14.1 - Definitions

Donation - The voluntary transfer of real property for the benefit of a public transportation project.

Dedication – The transfer of land or an easement by the owner for the use of the public and accepted by or on behalf of the public.

See Chapter 4 – ROW Acquisition of the ROW Manual for additional information.

2.14.2 - Private Donations (23 CFR 710.505)

The donation of private land shall have ROW plans and property descriptions prepared in accordance with CDOT's specifications and procedures as required in the most recent edition of the Survey Manual and ROW Manual.

Donations of private land shall include a ROW plan authorization package to be submitted to the office of CDOT Headquarters Project Support-ROW/Surveyor for completion of plan authorization and filing purposes.

Donation of private land shall have a donation form completed in accordance with Chapter 4 – ROW Acquisition of the ROW Manual.

2.14.3 - State and Local Government Donations (23 CFR 710.507)

The donation of state or local government land shall have ROW plans and property descriptions prepared in accordance with CDOT's specifications and procedures as required in the most recent addition of the Survey Manual and ROW Manual.

Donations of state or local government land shall include a ROW plan authorization package to be submitted to the office of HQ Project Support-ROW Acquisition, for completion of plan authorization and filing purposes.

Donation state or local government land shall have a donation form completed in accordance with Chapter 4 – ROW Acquisition of the ROW Manual.

2.14.4 - State and Local Government Dedication Requirements (Amended 7/2022)

CDOT can only accept Right of Way, including Right of Way Easements, dedicated by recorded instrument, such as a Deed of Dedication or other instrument of conveyance.

The dedication of land by cities and/or counties by means of their respective platting review and approval process shall meet the requirements as set forth by the city and/or county. CDOT

cannot receive property via Plat Dedication. Property dedicated to a Local Agency via Plat with the intent that it be transferred to CDOT, must be done by recorded deed from the Local Agency to CDOT, preferably concurrently with the recording of the Plat.

Land which has been dedicated due to a CDOT project shall have copies of the subdivision and recorded deeds for which the dedication was made, submitted to the office of CDOT Headquarters Project Support-ROW/Survey Dept., for filing purposes.

See Chapter 4 – ROW Acquisition of the ROW Manual for additional information.

SECTION 2.15 GENERAL LEDGER AND MAINTENANCE PARCELS

2.15.1 - Definitions

General Ledger Parcels - General Ledger Property is that property paid for by CDOT funds not programmed for highway projects.

Maintenance sites - Maintenance sites are generally located on General Ledger Property and commonly contain facilities and storage areas that are needed for maintenance shops and material storage areas required to maintain the highway system.

2.15.2 - General Ledger Parcels and Maintenance Site Plans

All General Ledger and Maintenance Site plans must comply with Chapter 7 - Property Management, and contain the proper site designations. The development of these plans shall follow the same procedures outlined in above sections for right of way plans and comply with state statutes for a monumented improvement survey. Final plans shall be developed from current title work and depict all information required for right of way plans. The information shown on these plans shall include, but not limited to the following: all topography, structures, drainage features, utilities, etc. The plans must also show ownerships, easements and any conflicts that may impact title. Survey control diagrams and monumentation must also be depicted.

Any such site plans produced shall be recorded and or deposited by the Region Surveyor and a copy forwarded to the Property Management Section.

SECTION 2.16 EASEMENTS

2.16.1 - Permanent Easements, Slope Easements and Right of Way Easements (Amended 7/2022)

Permanent easements (PE), slope easements (SE) and Right of Way Easements (RWE) required by CDOT for any purpose shall be described in the same manner as any other ROW parcel and shall be numbered in accordance with this chapter. The purpose of the easement shall be clearly stated in the description. Areas of these easements are to be expressed in acres and rounded to the nearest thousandth of an acre in rural parts of the regions. In urban parts of the region or where the cost of acquisition could be great, these easement areas shall be expressed and rounded to the nearest square foot. The areas of these easements shall not be deducted from the owner's remnant since the parcel is not acquired in fee.

2.16.2 - Temporary Easements

Temporary easements shall be described in the same manner as any other ROW parcel on the Memorandum of Agreement by the agent at the time of negotiation. See ROW Manual, Chapter 4 – ROW Acquisition, for details. A purpose for the TE must also be stated in the description. As in the case of permanent easements, the areas of temporary easements shall not be deducted from the owner's remnant.

2.16.3 - Temporary Easements for Construction

Temporary easements for construction should not be used in areas where the slope of the land is significantly and permanently changed from the existing condition. This would require either a SE, PE, or ROW parcel.

All temporary easements become void (typically 30 days after construction is completed) as specified in the Memorandum of Agreement (MOA).

Temporary easements shall be numbered in the same manner as permanent easements but prefixed by the letters "TE".

2.16.4 - Existing Utility Easements Crossing the ROW

Generally, existing utility easements crossing the ROW are not described or purchased. They are usually handled by the Regional Utility Engineer's office as a construction item if the relocation of utilities becomes necessary. Existing utility easements are always included on the plans, together with the book and page of recording.

SECTION 2.17 - PROPERTY DESCRIPTIONS

2.17.1 - General Format

Parcels shall be numbered as previously discussed in this chapter. ROW parcel descriptions should be prepared using a Microsoft Word compatible word processor for editing descriptions.

2.17.2 - Compliance with the Memorandum of Understanding

In accordance with the Memorandum of Understanding with the State Board of Licensure for Architects, Professional Engineers and Professional Land Surveyors, any property description written for the acquisition of real property in CDOT's name from data collected by field surveyors shall be written by a Professional Land Surveyor licensed in the State of Colorado and shall bear the seal and signature of the surveyor in responsible charge of writing the property description.

Property descriptions are specified by the Professional Land Surveyor in responsible charge and may be either metes and bounds, or portions of lots and blocks.

2.17.3 - Basis of Bearings

The purpose of a basis of bearing statement on a ROW Plan set is to enable another surveyor to retrace all or part of that survey in the future. Any basis of bearing statement that does not facilitate a retracement of the survey is inadequate. All ROW Plans and property descriptions shall show and/or or state the graphic and mathematical relationship between the basis of bearing and the land parcel in accordance with Colorado State Law.

All bearings on the ROW Plans and property descriptions shall be related to a basis of bearing established from two monuments. If grid bearings are used in the preliminary development it shall be stated as such.

All property descriptions must state the Basis of Bearings used in the descriptions.

2.17.4 - Standard Preamble to be use in all Property descriptions

A tract or parcel of land no. _____ of the Department of Transportation, State of Colorado, Project No. containing _____ acres more or less in the _____ of Section __, Township _____, Range _____, of the _____ Principal Meridian, in _____ County, Colorado, Said tract or parcel being more particularly described as follows:

When describing easements, the terms "tract or parcel" will be replaced with the type of easement being acquired, i.e., permanent easement, slope easement, etc.

Please note that on descriptions on "Off System" projects not on the State Highway system, the words "Department of Transportation, State of Colorado" should be replaced by the name of the municipality to which the property is to be conveyed. The site address (where possible within the limits of a municipality) of the parcels to be acquired must be shown in the deed of conveyance. A space is provided in the description form for this purpose.

The name of the owner shall be shown on the appropriate line in accordance with the Memorandum of Ownership. However, if the signature of the spouse of the owner is required by law, that name should also appear. The area of each ROW parcel shall be shown in the preamble of the description and at the end of the description. Such area shall be the gross area, including areas within streets, alleys or roadways. The call for area at the end of the description shall include the following statement:

"The above described parcel contains a total of _____ acres (or "square feet") of which _____ acres (or "square feet") are in the ROW of the present road."

The wording of all points of beginning and courses in all the descriptions shall be uniform and consistent with the appended examples.

The purpose of the above described parcel is for.....

The purpose statement should be identical to the purpose listed in the Purpose of Parcel column of the Right of Way plan Tabulation of Properties sheet.

SECTION 2.18 - METES AND BOUNDS PROPERTY DESCRIPTIONS OUTSIDE OF PLATTED SUBDIVISIONS

2.18.1 - Total Acquisitions

When the acquisition is a total ownership, it is generally the policy of CDOT to describe the tract exactly as it was described on the original deed. The following clause shall be attached to the description:

"The above description contains all of the land conveyed to _____ by deed dated _____ and recorded _____ in Book _____. Page _____ of the records in the Clerk and Recorder's office in _____ County, Colorado".

In rare cases, however, deviation from this policy may be permitted if the deed of record is "grossly" in error. In this instance the above mentioned clause should also be appended to the description. Care should be taken to show both sets of bearings and distances on the plan sheets.

When entire lots or blocks are acquired, they may be described by number or other appropriate designation, according to the recorded plat, rather than by metes and bounds. The address must be included.

2.18.2 - Numbering of Courses

Each course in the traverse of the parcel shall be separately numbered and paragraphed. The last, or closing course, shall end with "more or less, to the point of beginning" or "more or less, to the true point of beginning" as the case may be.

2.18.3 - Calls to Natural Monuments or Adjoiners

When a course in a description follows a land line or a property line, or when the terminal point of a course falls on such a line, the fact must be stated in the description. Where property line bearings and distances are recorded, the book and page must also be stated. (e.g. Thence along that line described by deed recorded in Book 252, Page 128 of the Morgan County records, South, a distance of 365.0 feet to a point on the south line of Sec. 26, T. 3 N., R. 57 W., 6th P.M.). In certain cases, it is necessary to further define a line by adding to the call to the line, the month and year that the line actually existed at that location. Two such cases are when the line is a physical boundary line subject to change, such as the bank or centerline of a river, or an existing ROW line, not of record (e.g. Thence along the southerly bank of the Colorado River (Jan. 1975) S. 45° 00' W., a distance of 350.0 feet).

2.18.4 - Combining Parcels

When a ROW parcel extends into two or more sections, the portions in each section should be separately described by complete metes and bounds descriptions and connected as parts of the same parcel by the word "also". These parts, however, must have a common boundary. The call for the area at the end of each part shall include the following statement: "The above described portion of Parcel No. _____ contains _____ acres (or square feet). The call for total area at the end of the parcel description and in the preamble shall be the combined area of all parts.

2.18.5 - Splitting of Parcels

When an ownership and the derived ROW are split by a county line, the parts in each county must be separately described and numbered as separate parcels.

2.18.6 - Public Ways – When Excluded/Included (Amended 7/2022)

If the ROW for an existing road is deeded ROW, the deed being of record, or if the existing street or alley is dedicated on a duly recorded plat, such roadway, street, or alley *should not be included* in the ROW parcel description. However, if the ROW for an existing road has been acquired by an Easement deed or if the ROW is not a matter of record, the ROW parcel should include the portion which the owner is assessed for and would revert to the owner in the event of abandonment.

2.18.7 - Ownership Split by Existing Roadway

When the required ROW is to be taken from both sides of a deeded or dedicated ROW, the taking should be described as separate parcels, with consecutive parcel numbers. If the existing ROW is not recorded, or it is recorded but contains information that is doubtful, it shall be included in the parcel description and then excepted out as previously explained. Otherwise, the existing ROW shall be excluded from the parcel description.

2.18.8 - Conflicting Former Surveys

If the accuracy of a former survey is questionable and new survey data produces conflicting data, the area of conflict should be noted on the plans in an obvious manner.

2.18.9 - Rounding of Areas

Areas of parcels and easements are to be expressed in acres and rounded to the nearest thousandth of an acre in rural parts of the regions.

In urban parts of the region or where the cost of acquisition could be great, parcels and easement areas shall be expressed and rounded to the nearest square foot.

2.18.10 - Centerline Descriptions

Centerline descriptions may be used in describing regular shaped strips of land, such as easements, along the ROW. Care should be taken to insure that the shape of the parcel or easement readily lends itself to this type of description. Centerline descriptions are used only with the approval of the Region Survey/Plans Supervisor for special purposes.

SECTION 2.19 PROPERTY DESCRIPTIONS WITHIN PLATTED SUBDIVISIONS

2.19.1 - General

When land required for ROW is part of a subdivision, the plat of which is duly recorded, the description must state the numbers or letters of the lots, blocks, tracts, or plats affected in the subdivision, designated by its proper name as it appears on the recorded plat. The description must also contain the section, township, range, and principal meridian in which the subdivision is located.

2.19.2 - Lots – Blocks Split by ROW Line

Parts of lots and blocks required for ROW, lying on one side of a specific line, may be so described.

2.19.3 - Metes and Bounds

Metes and Bounds descriptions may be used to describe irregularly shaped parcels which fall inside a particular lot, block or tract. Care shall be taken to reference lot, block, and subdivision names in the appropriate calls and in the preamble.

SECTION 2.20 PROPERTY DESCRIPTIONS IN PATENTED MINING CLAIMS

2.20.1 - General

ROW parcels which are parts of patented lodes, placers, mill sites, or other mineral claims, must designate the claim by name, as patented, and the mineral survey number, and the mining district in which it is located

2.20.2 - Combining Parcels

When several adjacent patented mining claims, owned by the same owner, are traversed by ROW, the portions lying within separate claims should be separately described and connected with the word "also" under one parcel number in the same manner as parcels in two or more sections are described.

2.20.3 - Strip Descriptions

For linear features, such as roads, pipelines, canals, etc., strip descriptions are sometimes used in property conveyances. As implied, the description applies to a narrow strip of land. Such a description may take the form of "A strip of land 18 foot in width, being 9 feet on each side of the following described line:....."

Where two or more courses intersect at an angle, it may be preferable to use a metes and bounds description around the perimeter of the strip. This practice would eliminate the problem of added areas at the angle points, due to the shortening or lengthening of the side lines.

SECTION 2.21 ACCESS PROPERTY DESCRIPTIONS

2.21.1 - General Requirements

When the right of access is to be acquired, either by deed or by Rule and Order, it is necessary to describe the location of the contiguous remnant property encumbered and the line across which access will be limited or denied.

The following language is used when describing access rights which are being acquired:

EACH AND EVERY RIGHT OR RIGHTS OF ACCESS OF THE GRANTOR to and from any part of the right of way of Colorado State Highway No. ____, a freeway established according to the laws of the State of Colorado, and from and to any part of the real property of the Grantor in Section(s) ____, Township __ (South or North), Range __ West, , of the ____ Principal Meridian, in _____ County, Colorado, abutting upon said Highway, along or across the line or lines described as follows:

Project Code Project Number (Parcel Number) (Location of Line)

Please note that if the State Highway has not been declared a freeway by Transportation Commission and approved by the Governor, the phrase "a freeway established according to the laws of the State of Colorado" shall be deleted from the preamble of the access description. In the indicated spaces of the preamble, the location of the contiguous remnant property encumbered will be described. The access line is, in most cases, the ROW line indicating the property to be acquired for roadway purposes. This line will be described from a point of beginning tied to a found land monument in the same manner as a parcel description. Rules governing the writing of ROW parcels also apply to access descriptions. The courses shall be numbered and contain the bearings and distances of the line to the end of access

control in the ownership. The description shall include the project number, parcel number, and location of line as indicated on the form. The access parcel number shall be the same as the parcel to be acquired for roadway purposes. The "location of line" shall be the general direction from the centerline to the access line.

2.21.2 - HQ Project Support requirements

When modification of access becomes necessary, the Region Access Coordinator needs to submit the following information to the Acquisition Specialist within HQ office of ROW Project Support.

A memo from the Region ROW Manager or Region Property Management Specialist, stating the reason the requested change is needed. As a minimum, the existing access needs to be identified; the location of the proposed new access(es) or the location of the widened access. The reason for the changes may be related to safety issues; i.e., improved sight distances, or merely improved access to a site. This information is required when requesting Federal approval.

When the original ownership has been subdivided, or otherwise sold off piecemeal, it is necessary to supply a copy of the deed of the present owner. This allows the office of Headquarters Project Support-Permits department to determine the extent of the present owner's frontage along the highway. It is also necessary to supply the address of the present owner, as it is required by statute (C.R.S. 38-35-122) as well as to process the deed.

2.21.3 - Degree of Control

Access control may be (1) partial, characterized by allowance of a limited number of private access points, or (2) full, which permits no private access directly to the arterial lanes and provides for public access only at specified points - usually at interchanges.

In the case of partial access control, openings of specified width are usually provided; and these are described by the distances of their center points along the ROW line: ". . . . a distance of ____ feet to the center of a _____ foot opening which is being excepted from this access limitation". Such openings are to be tabulated at the end of the description. The width of each, whether on the right of left side, and the centerline alignment station directly opposite the center point shall be shown. If no access openings are allowed, the phrase "NO POINTS OF ACCESS" shall be added at the end of the description.

2.21.4 - Access Description Along Property Lines

When the ROW is to be acquired up to a property line, and access rights would then have to be obtained from an adjacent owner, the following procedure will be observed:

The deed for the ROW parcel, and the deed for the access rights (or the Rule and Order in Condemnation) shall then be obtained from the same owner. The line of access control shall be described along the revised line of taking, the same being the boundary line common to the ROW parcel and the adjacent remaining one-foot strip.

This procedure will alleviate the necessity of acquiring ROW from one owner, and access rights only from another owner whose property is then adjoining the new ROW.

2.21.5 - Temporary Access Descriptions

In all cases where a Memorandum of Agreement contains language similar to, or evidencing a similar point of agreement as, the following: "Temporary access will be permitted to arterial lanes until such time as service roads are constructed, when all access will be to service roads only", the following clause must be inserted in the deed to CDOT immediately after the description:

"Together with all right or rights of the Grantor or Grantors of direct access to or from the above described parcel of land, part of the ROW for State Highway No. _____ ; a freeway established according to law, from or to the remaining land of the Grantor or Grantors adjacent thereto; except such access as may be provided by means of local service roads, now or hereafter to be constructed on portions of said parcel or parcels. Any direct access heretofore agreed upon between the parties hereto, between land of the Grantor or Grantors and the arterial lanes of said highway, is understood by the Grantor or Grantors to be temporary only, and shall be denied immediately whenever a service road shall have been constructed."

SECTION 2.22 ACCESS PROPERTY DESCRIPTIONS WITH REMNANT PARCELS

2.22.1 - General

When an access line falls on the line between the parcel acquired for roadway purpose and the remnant parcel, the following procedure will be applied:

As previously covered under the section on descriptions, the parcels shall be described separately. The access line will then be described as the line common to both parcels. It is Department policy to then have the access deed and the deed of the property acquired for roadway purpose recorded. After this has been done, the deed for the remnant parcel shall be sent for recording.

2.22.2 - Parcels in Condemnation

For condemnation, if an access line falls between the ROW and a remnant parcel, the access description will not be included in the suit. If the remnant parcel is ever disposed of by CDOT, the access will be reserved at the time of the conveyance. The ROW Plans shall show the parcels described separately with the access line on the common line between the parcels with a note that access will be reserved by CDOT.

2.22.3 - Access-Only Descriptions

In the case where access rights only are to be acquired, they will be described in the same manner as previously discussed. However, if the land is encumbered by a lien, a release must be secured from the lien-holder when the access limitation affects the value of the remnant. The access-only description will be numbered in sequence with the parcel descriptions and prefixed by the letters "AC".

2.22.4 - Exchange of Access Deeds Unsubdivided Ownership

When an owner requests a change of location of an access opening, or an enlargement of an opening, after an access deed is recorded, the following procedure will be followed:

In the case of CDOT dealing with an original owner where the ownership boundaries have not changed or a new owner where the ownership was not subdivided, the original access deed may be reconveyed to that owner in exchange for a new deed which will change access openings as follows:

FROM CDOT TO GRANTEE - on Quitclaim Deed:

Each and every right or rights of access to and from any part of the ROW of Colorado State Highway No. _____, a freeway established according to the laws of the State of Colorado, along or across the access line or lines described as follows:

Project No. Parcel No. Line

DESCRIPTION

(Omit exceptions in description)

It is the intent of the Grantor herein to reconvey to the Grantee access rights along the _____ line heretofore conveyed by deed dated _____ and recorded _____, in Book _____, Page _____, in the records of the Clerk and Recorder's office in the County of _____, Colorado, in exchange for a new deed from the Grantee to the Grantor which will change a point of access opening.

FROM THE GRANTEE TO DEPARTMENT - on General Warranty Deed:

Project No. Parcel No. Line

DESCRIPTION

This conveyance is made to change the access opening described by deed dated _____ and recorded _____, in Book _____, Page _____, in _____ County, Colorado.

2.22.5 - Subdivided Ownership

If the original ownership is now subdivided into more than one ownership or only a portion of the original deed is to be changed, the openings may be exchanged in the same manner as above. However, the access-only description will contain only that portion of the access line in the new ownership or that portion of the original description affected and the clause at the end of the Quit Claim deed from CDOT to the Grantee will be amended to say the following:

"It is the intent of the Grantor herein to reconvey to the Grantee a portion of the access rights along the _____ line heretofore conveyed by deed dated _____ and recorded _____, in Book _____, Page _____, in the County of _____, Colorado, in exchange for a new deed from the Grantee to the Grantor which will change a point of access opening."

The access-only description will be designated by a parcel number prefixed by the letters "AC" with the exceptions omitted. The new description will have the same parcel number with the line location revised.

2.22.6 - Granting Additional Opening

If an additional opening is to be granted in an access line of record, this may be more easily done by writing an access-only description containing an access line the same length as the width of the opening to be granted. The preamble of the access-only description shall be modified as follows:

"Each and every right or rights of access to and from any part of the ROW of Colorado State Highway No. _____, a freeway established according to the laws of the State of Colorado, along or across the access line or lines described as follows":

The following clause shall be added at the end of the description:

"This conveyance is made to grant an access opening _____ of Station _____ in addition to that access deed dated _____ and recorded _____ in Book _____, Page _____, in _____ County, Colorado."

The access-only description will be designated by a parcel number prefixed by the letters "AC".

2.22.7 - Closing Existing Openings

If an existing opening is to be closed in an access line of record, this may be done in the same manner as above. An access-only description, containing an access line the same length as the width of the opening to be closed, will be required. The following clause will be added:

"This conveyance is made to close an access opening _____ of Station _____ as described by deed dated _____ and recorded _____ in Book _____, Page _____, in _____ County, Colorado."

The access-only description will be designated by a parcel numbered prefixed by the letters "AC".

SECTION 2.23 - ACCESS PROPERTY DESCRIPTIONS UNDERPASSES AND PUBLIC WAYS

2.23.1 - Access Acquired by Deed

When an underpass or box culvert is allowed under a highway for the purpose of access from one side of the road to the other, the access line does not need to be broken nor an opening allowed. The following clause is preprinted on the access deed form which allows access to and from such underpasses:

"Further excepting from this grant, the right of the Grantor or Grantors to have access across the aforesaid line or lines at those points where passageways under the roadway, and public openings in said line or lines, may be provided for that purpose by the Grantee."

2.23.2 - Access Acquired by Rule and Order

In the case where access rights are in condemnation, the above mentioned clause must be added to the access description, if it applies, before the filing of the suit.

SECTION 2.24 - DEEDS

2.24.1 - General (Amended 7/2022)

CDOT acquires ROW in fee unless stated otherwise in the deed. At the request of the Attorney General's office, CDOT is using a warranty deed as opposed to a special warranty deed. In special cases, a lesser deed may be used where title insurance is purchased or the risk is otherwise minimal. Please see ROW Manual Chapter 4.8 (Deeds) for more specific instruction. In the case of Right of Way Easements (RWE), the recorded instrument of conveyance should contain a clause stating that if the easement is abandoned, the RWE parcel will revert to the underlying parcel owner.

CDOT takes title in the name "Department of Transportation, State of Colorado." The address on the deed must be that of the CDOT Headquarters location at 2829 W. Howard Place, Denver, CO 80204. This becomes especially important when title companies or others prepare the deeds.

2.24.2 - Written Instruments

In accordance with the Memorandum of Understand with the State Board of Architects, Professional Engineers and Professional Land Surveyors, any property description written for the acquisition of real property in CDOT's name from data collected by field surveyors, shall be written by a Professional Land Surveyor licensed in the State of Colorado and shall bear the seal and signature of the surveyor in responsible charge of writing the property description.

2.24.3 - Written Instruments (CRS 38-35-106.5)

Except as otherwise provided in this article, any deed, power of attorney, agreement, or other instrument in writing executed and recorded on or after July 1, 1992, which contains a newly created property description of real property shall include the name and address of the person who created such

property description. Nothing in this section shall affect the validity or recordability of any instrument which is prepared in violation of this section. Nothing in this section shall confer liability upon a person who prepares any instrument which is in violation of this section.

2.24.4 - Corrective Deeds from CDOT to Owner

When it becomes necessary to correct a deed due to an unforeseen development, the description on the quit claim deed reconveying the property to the original owner must be exactly as originally described. The following clause shall be added to the quit claim deed:

"It is the intent of the Grantor herein to reconvey to the Grantee that right or interest heretofore conveyed by deed dated ____ and recorded ____ in Book ____, Page ____, in the County of _____, Colorado, in exchange for a new deed from the Grantee to the Grantor which will more definitely and correctly described said right or interest."

2.24.5 - Corrective Deeds to CDOT

When the corrective deed is written to CDOT, the following clause shall be added:

"This conveyance is made to more definitely and correctly describe the right or interest conveyed by deed dated ____ and recorded ____, in Book ____, Page ____, in the records of the County of _____, Colorado."

2.24.6 - Duplicate Deeds

When the original deed has been lost, or otherwise not recorded, a new deed may be prepared. At the head of the description, the words "DUPLICATE DEED" are inserted and the following clause is added, following the description to state the intent:

"It is the intent of this deed to replace the original document of conveyance to the above described property to _____ from the Department of Transportation which was signed on _____ by _____, as Chief Engineer. Said document was not recorded and cannot be located."

SECTION 2.25 - PROCESSING OF PLANS AND PROPERTY DESCRIPTIONS FOR ROW PLAN APPROVAL AND AUTHORIZATION

2.25.1 - Logic Check of Plans and Property descriptions

Prior to the submittal of ROW Plans for approval and/or authorization, the Region Office Surveyor in charge of the preparation of ROW Plans shall perform the following logic check of ROW Plans and property descriptions.

- 1) Check design alignment. Determine basis of bearings. Has basis of bearings of design plans been correlated with ownership data? Check the design alignment, basis of bearings and benchmark elevation datum. Confirm that the design plans are on the same coordinate base and

elevation datum as the Project Control Diagram and ROW Plans. If there is a difference in the coordinate base or elevation datum, identify possible solutions.

- 2) Check section and property corner ties. Compare recovered monuments to calculated positions. Has sufficient survey work been done or does more survey evidence need to be gathered? Are all found corners identified and described on the plans?
- 3) Check method used in calculating the aliquot parts of the section and methodology used in calculating the position of lost or obliterated PLSS corners.
- 4) Confirm the topography is current and matches existing conditions.
- 5) Check existing ROW from deeds and previous project plans. Are the previous projects noted on the plan sheets? Have abandonments or vacations been researched?
- 6) Have the Memorandums of Ownership or title work commitments been interpreted properly? Are they current within 90 days? Do owners' names appear correct and complete? Are the owners' names in agreement with title and tax documents? Have the Memorandums of Ownership been constructed properly?
- 7) Does deed information agree with survey data? If not, what rationale was used to resolve the conflict? Have the senior rights of the deeds been investigated? Have local survey plats surveyors been used? Have GLO plats and railroad plats been investigated?
- 8) Check method used in calculating property boundaries. Review sufficient calculations to verify that acceptable methodology was used in determining boundary locations. If there are discrepancies, do they affect CDOT's ability to obtain clear title? Has sufficient research back through a chain of title been performed to determine ownerships and title encumbrances?
- 9) Is the basis of bearings given in the parcel description the same as on the ROW Plans or relative to the accepted PLSS monuments of the parcels location?
- 10) Have calls to adjoiners and found monuments been correctly used?
- 11) Check property description acquisition areas and remnants with areas shown on plan sheets, tabulation of properties sheets, chief engineers cost estimate and appraisal reports.
- 12) Have the property rights which are to be acquired been sufficiently described?
- 13) Compare with design plans for structures, the beginning and end construction stations and mileposts. Are all structures over five feet in diameter/height/width shown?
- 14) Is the access plan shown? If required, are the widths and stationing of all road approaches shown? Do all ownerships have property access?

CDOT provides a ROW Plans check list to use when checking plans for required items and consistency at the following link:

<https://www.codot.gov/business/manuals/survey/survey-forms>

2.25.2 - ROW Plan Review (ROWPR)

- 1) On projects requiring ROW, the Region ROW Designer in coordination with the Region ROW Plans Supervisor or designee, shall hold a ROW Plans Review (ROWPR) with the Region ROW Manager and other Specialty unit representatives as deemed necessary, preceding authorization to appraise and acquire. The Region ROW Plans Surveyor shall determine if the ROW Plans are sufficiently complete and in accordance with this Manual and CDOT's ROW Plans Review Guidelines.
- 2) ROW Plans shall not be submitted to the CDOT Headquarters Project Support-ROW/Survey Dept. for authorization until after the ROWPR has been held and all parties agree as to the ROW properties and easements to be acquired.
- 3) Once a project has been authorized for acquisition, design revisions which affect ROW will not influence the design of the ROW until the revision has been justified by the office initiating the revision and concurrence by the Region ROW Plans Supervisor or the Region ROW Manager.
- 4) Once a parcel has been filed for condemnation with the Attorney General's Office, ROW Plan revisions will not be considered until they have been approved by the Chief Engineer. Unless the landowner agrees to the proposed revisions, a motion to amend the property description must be filed with the court. The granting of such a motion is discretionary with the court.

See <https://www.codot.gov/business/manuals/survey/survey-forms>

2.25.3 - Environmental Category

An integral part of the ROW plan authorization process is the National Environmental Policy Act of 1969 (NEPA) documentation, the typical process is to wait until NEPA has been completed prior to ROW plan authorization. However, CDOT has always been able to acquire ROW prior to the completion of NEPA as long as certain conditions are met. Recently, MAP-21 provided provisions that are designed to improve efficiency in project delivery by broadening the ability for States to acquire or preserve ROW for a transportation facility prior to completion of the review process required under NEPA. MAP-21 guidance is available on the FHWA website:

<https://www.fhwa.dot.gov/map21/>

As background, projects are environmentally categorized as follows (the chapters in the table reference the CDOT NEPA Manual):

<https://www.codot.gov/programs/environmental/nepa-program/nepa-manual>

Class I Environmental Impact Statement (EIS) – Chapter 4	Class II Categorical Exclusion (CatEx) – Chapter 5	Class III Environmental Assessment (EA) – Chapter 6
Required for actions likely to have significant environmental effects that cannot be mitigated.	Required for actions that do not individually or cumulatively have a significant environmental effect. Necessary environmental studies and compliance with all applicable requirements are still required for the project.	Required for actions that do not qualify as CatEx, but where there is insufficient information to determine whether the project’s impacts warrant an EIS. An EA may also be a useful tool in that it incorporates environmental considerations with project design and can aid in NEPA compliance when an EIS is not required.
Examples include: <ul style="list-style-type: none"> ▪ A new, controlled-access freeway ▪ A highway project of four or more lanes in a new location ▪ New construction or extension of fixed rail transit facilities 	Examples include: <ul style="list-style-type: none"> ▪ Pedestrian facilities ▪ Landscaping ▪ Routine maintenance, including resurfacing, bridge replacement and rehabilitation, and minor widening 	Examples include: <ul style="list-style-type: none"> ▪ Actions that are not clearly Class II (CatEx) ▪ Actions that are not clearly Class I (EIS) ▪ New construction of highway interchange
Upon completing the EIS, FHWA signs a Record of Decision (ROD) that presents the basis for the determination, summarizes any mitigation measures to be incorporated in the project, and documents any Section 4(f) approval.	CDOT or FHWA approval is required on all CatEx projects. In Colorado, FHWA has programmatically approved some CatExs.	In coordination with FHWA, CDOT determines whether a Finding of No Significant Impact (FONSI) is appropriate or if further study is required in an EIS.

For state-only funded projects (*i.e.* non-participating), CDOT follows a similar environmental process for projects in order to ensure that other state and federal regulations beyond NEPA, such as the Clean Water Act, the Endangered Species Act, and the State Register Act, are being followed.

There are several ways to accomplish project delivery for ROW acquisition as it relates to NEPA.

- A. Firstly, ROW plan authorization and ROW purchase/disposal typically occurs after NEPA has been completed for a project.
- B. Secondly, ROW can be acquired prior to completing an Environmental Assessment (EA) or Environmental Impact Statement (EIS) by either:
 - a) Acquiring the property using state funds (as long as the property is not a Section 4(f) property according to the Department of Transportation Act) and “The State determined, and the FHWA concurs, that the action taken did not influence the environmental assessment for the project including (i) the decision on need to construct the project, (ii) the consideration of alternatives; and (iii) the selection of the design or location (23CFR710.501 (b)(5); or

- b) Conducting this action under a Categorical Exclusion (CE) d12 for acquisition of land for hardship or protective purposes now allowed under MAP-21 which requires state funds up front but allows Federal reimbursement at a later date for the ROW parcel purchase. However, in order to get Federal participation, CDOT will need to follow guidelines laid out under 23 CFR 710.501 – “Early acquisition” and in (23 USC § 108 – “Advance Acquisition of Real Property”) for this use of federal funds that dictate how ROW plans are to be prepared, that this ROW acquisition “project” is in the STIP, etc. This CDOTs NEPA Manual
- c) Chapter 5, for Non-Programmatic CEs (Requiring both the RPEM and FHWA Area Engineer signature):

Hardship and protective buying will be permitted only for a particular parcel or a limited number of parcels. These types of land acquisition qualify for a CE only where the acquisition will not limit the evaluation of alternatives, including shifts in alignment for planned construction projects, which may be required in the NEPA process. No project development on such land may proceed until the NEPA process has been completed.

(i) Hardship acquisition is early acquisition of property by the applicant at the property owner’s request to alleviate particular hardship to the owner, in contrast to others, because of an inability to sell his property. This is justified when the property owner can document on the basis of health, safety or financial reasons that remaining in the property poses an undue hardship compared to others.

(ii) Protective acquisition is done to prevent imminent development of a parcel which may be needed for a proposed transportation corridor or site.

Documentation must clearly demonstrate that development of the land would preclude future transportation use and that such development is imminent.

Advance acquisition is not permitted for the sole purpose of reducing the cost of property for a proposed project.

- C. And finally, if the ROW is required for a project that is already a Categorical Exclusion type of project, the ROW plans can still be authorized prior to completing the entire Form 128 by either:
 - a) Once all resources have been inspected that could be impacted, and impacts have been assessed for the project, the RPEM (and FHWA Area Engineer, if applicable) approves the top of Form 128 (Parts A and B). Upon completion of Parts A and B of Form 128, funds for right-of-way acquisition can be obligated and negotiations for right-of-way acquisition can proceed, or
 - b) An environmental review of the project and the ROW parcels designated for acquisition has been completed but the top part of the Form 128 is not yet signed because of an outstanding project clearance but the environmental manager can state in an email or letter that:
 - 1) Environmental issues would not prevent the project from moving forward,
 - 2) The ROW parcel(s) to be acquired under early acquisition is common to all alternatives (if applicable),
 - 3) The ROW is being purchased with non-federal funds, and
 - 4) The ROW parcels identified for acquisition including temporary easements do not have any outstanding environmental issues (i.e., all clearances of environmental issues “on those parcel areas” for which early acquisition has been identified have been completed).

Other NEPA-related Considerations for ROW:

Section 4(f) of the Department of Transportation Act: Section 4(f) has been part of federal law since 1966 when it was enacted as Section 4(f) of the USDOT Act. It is codified in 23 USC Section 138 and 49 USC Section 303. Section 4(f) requires consideration of:

- Parks and recreational areas of national, state, or local significance that are both publicly owned and open to the public
- Publicly owned wildlife and waterfowl refuges of national, state, or local significance that are open to the public to the extent that public access does not interfere with the primary purpose of the refuge
- Historic sites of national, state, or local significance in public or private ownership regardless of whether they are open to the public

The law says that FHWA (and other DOT agencies) cannot approve the use of land from publically owned parks, recreation areas, wildlife refuges, or historic sites unless there is no feasible and prudent alternative to the use and the action includes all possible planning to minimize harm to the property. The substantive provisions of Section 4(f) apply only to agencies within the USDOT.

Section 6(f) of the Land and Water Conservation Fund Act: Section 6(f) properties are those that have been purchased or improved with grants from the Land and Water Conservation Fund (LWCF) Act. Importantly, Section 6(f) applies to all transportation projects involving possible conversions of those properties whether or not federal funding is being utilized for the project. The conversion of the Section 6(f) land to transportation right-of-way or permanent easement, and the acquisition of the replacement land occur during the normal right-of-way acquisition phase of a project. The Colorado Parks and Wildlife and National Parks Service will not permit the conversion of Section 6(f) land to occur until the replacement property has been fully acquired and is available to serve public outdoor recreational uses. For conversions of property purchased or improved utilizing Land and Water Conservation Funds (Section 6(f)), replacement with fair market value equivalence is required. Fair Market Value equivalence is determined using CDOT's standard ROW appraisal process. **Section 9.20 of the NEPA Manual** provides additional guidance on Section 6(f).

Hazardous Materials (Phase II or RI/FS): If recommended by the Initial Site Assessment (ISA), Modified Environmental Site Assessment (MESA), or Phase 1 Environmental Site Assessment, a Phase II subsurface soil and groundwater investigation or a Remedial Investigation/ Feasibility Study (RI/FS) for potential hazardous materials that present a liability issue during ROW acquisition, or require management during construction to protect worker health and safety and the environment or to properly dispose of the hazardous material, is required. This is mainly for fee-simple purchases where the liability of the purchase could be high for CDOT. **Section 9.25** provides additional information on when subsurface investigations is applicable depending on the size and type of project.

See CDOT's Environmental Stewardship Guide, Chapter IV – Project Development for additional information:

www.coloradodot.info/business/permits/accesspermits/references/stewardship-agreement.pdf

2.25.4 - ROW Phase Funding and Authorization (Amended 7/2022)

The processing of ROW Plan Authorization is done according to the Project funding type of either federal, state, or local public agency. In accordance with the 2019 FHWA Stewardship agreement, if Federal Funds or State funds are used in any Phase of the project, the Authorization must be signed by the Chief Engineer.

Local agency projects modifying the Right of Way of an On-system State or Federal transportation roadway, must be authorized by the CDOT Chief Engineer, or designee.

Local agency projects acquiring parcels abutting the Right of Way of an On-system State or Federal roadway, must be authorized by the CDOT Chief Engineer, or designee, regardless of funding source. The Local Agency is responsible for the monumentation of Local Agency fee acquired parcels per CRS 38-51-104.

If the LPA is NOT seeking reimbursement from FHWA or the State, nor acquiring parcels adjacent to the existing Right of Way of an On-system roadway, of a locally funded project off-system, then the ROW Manager can authorize the project.

The authorization process includes three important steps:

- 1) ROW Plan Approval
- 2) ROW Authorization
- 3) Accounting Functions

ROW Plan Approval: Occurs when either the federal or state signature block on the title sheet of the ROW plans is signed by CDOT Chief Engineer or their designees.

ROW Plan Authorization: Occurs when the following forms are signed:

Federal Approval: FHWA Form 462 and Right of Way Plan Signature Block is signed by the Chief Engineer or designee authorizing the acquisition(s).

State Approval: A non-participating memo and Right of Way Plan Signature Block is signed by the Chief Engineer or designee authorizing the acquisition(s).

Accounting Functions: Occurs whenever any SAP activities such as setting up WBS ownerships or exporting WBS numbers to accounting offices is being done.

2.25.5 - ROW Plan Approval Signature Blocks

There are three main types of ROW plan approval signature blocks used to approve the ROW Plans prior to submittal for authorization and signature by the Chief Engineer or designee for authorization of the acquisition(s).

- 1) Federal (FHWA)
- 2) State (non-participating)

- 3) Local Public Agency (LPA) using State or Federal funds for reimbursement of the project acquisitions

Federal ROW Plans Signature block.

<i>COLORADO DEPARTMENT OF TRANSPORTATION FEDERAL-AID HIGHWAY PROJECT</i>	
<i>ROW PLANS AUTHORIZATION</i>	_____ <i>DATE</i>
_____ <i>CDOT CHIEF ENGINEER</i>	

State ROW Plans Signature block

<i>COLORADO DEPARTMENT OF TRANSPORTATION STATE HIGHWAY PROJECT</i>	
<i>ROW PLANS AUTHORIZED:</i>	_____ <i>DATE</i>
_____ <i>CDOT CHIEF ENGINEER</i>	

Local Public Agency ROW Plans Signature Block: No signature block is necessary for Local Public Agency (LPA) projects when no federal or state funds are in *any* Phase of the project. LPA projects may use the state signature block for signature by the Region ROW Manager indicating CDOT’s approval of the LPA’s plan set.

Local Public Agency ROW Plans Signature Block not using Federal or State Funds:

Right of way Manager signature block

<i>COLORADO DEPARTMENT OF TRANSPORTATION LOCAL AGENCY PROJECT</i>	
<i>ROW PLANS AUTHORIZED</i>	_____ <i>DATE</i>
 <i>COOT REGION RIGHT OF WAY MANAGER</i>	

2.25.6 - Plan Authorization Region Transmittal of Data

See Chapter 4, section 4.2.2 for updated information regarding the authorization process.

The office of CDOT Headquarters Project Support-ROW/Survey Dept. requires the following package of materials from the Region ROW Plans Section before authorization of Right of Way plans can be completed. The package shall contain the following:

- 1) Memo listing individual ownerships requesting authorization of Functions 3111 and/or 3109; the type of funding the project will be using for Acquisition and Relocation: Federal, State or Local Public Agency.
The naming convention of the Memo pdf is (ProjCode)ROW_Memo
- 2) Chief Engineer's ROW Cost Estimate (Form 438), the naming convention of the cost estimate pdf is (ProjCode)ROW_Cost_Estimate
- 3) ROW Plan Review (ROWPR) Form. The naming convention of the pdf is (ProjCode)ROW_ROWPR
- 4) Project Level Environmental approval (Form 128) or copy of signature page for the approved NEPA clearance document (i.e. CE, FONSI, ROD) for the project. The naming convention of the pdf is (ProjCode)ROW_Environmental.
- 5) One colored .pdf set of 11" X 17" ROW Plans. The naming convention of the pdf is (ProjCode)ROW_Plans
- 6) One .pdf set of property descriptions. The naming convention of the pdf is (ProjCode)ROW_Descriptions.
- 7) One set of memorandums of ownership (CDOT Form #242) with deeds attached or one set of title commitments from a title insurance company with deeds attached, to insure ownership. Memorandums or commitments must be at least 90 days current. The naming convention of the pdf is (ProjCode)ROW_Titlework_Ownership##
- 8) Explanation of how conflicting property boundary evidence was addressed

Justification of these facilities is delegated by FHWA to CDOT. The construction of highways occasionally changes access conditions in a manner which may seriously inconvenience the general public as well as the private property owner. The purpose of Authorization by the CDOT Chief Engineer is for justification of federal participation in the costs to provide or restore access to properties affected by a highway facility.

The same transmittal Memo requesting review and Authorization for the Region ROW Plans shall transmit the following packages into Projectwise as follows:

- a. The .pdf transmittal memo
- b. The colored .pdf set of 11" X 17" ROW Plans

- c. The .pdf set of property descriptions
- d. The .pdf set of Title commitments for each owner
- e. Chief Engineer's ROW Cost Estimate (Form 438)
- f. Signed top of form 128 for Environmental clearance
- g. The ROWPR plans and completed ROWPR form

Transmittal email notice shall include: the Project Manager, Region ROW Manager, Region Appraiser Supervisor, Region Acquisition Agent Supervisor, Region Property Management Supervisor, Region Utilities manager and Region Environmental supervisor.

2.25.7 - Requirements for Authorization of ROW Plans

See Chapter 4, section 4.2.2 for updated information regarding the authorization process.

ALL Federal Aid project plans must be approved in accordance with the FHWA Stewardship Agreement and 23 CFR 710 Subpart B – Program Administration. The Region is responsible for the obligation of ROW funds and establishing the spending authority under Function 3114 for appraisal.

The following steps must be completed before authorization can proceed to the acquisition or relocation stage under Functions 3111 or 3109.

- 1) Obligation of funds and establishment of spending authority under function 3114 by Region.
- 2) Project Level Environmental approval (CE, FONSI, ROD).
- 3) Design public hearing and FIR held by Region.
- 4) Preparation of Project Level ROW Plans and Descriptions.
- 5) ROW Plan Review (ROWPR) held, ROWPR form completed.
- 6) Hardship and/or Protective buy parcels (designated as HS or PB on the ROW plans) approved in advance by FHWA.

After these conditions have been met, the CDOT Headquarters Project Support-ROW/Survey Dept. shall review and process the authorization package and issue a FHWA Form 462 authorizing the ownerships requested for Functions 3111 and/or Function 3109 as applicable, then send for signature and approval by the Chief Engineer or designee for authorization of the acquisition(s).

Once the Chief Engineer has Authorized the package, notification will be given to the following individuals:

- 1) Program Engineer and Region Project Manager
- 2) ROW Manager

- 3) Authorization Requestor
- 4) Financial Management and Budget Office
- 5) Center for Accounting - Projects and Grants
- 6) Headquarters ROW – Appraisal, File
- 7) FHWA

Notification through the Docu-sign process is automatically generated to all members of the Region project management team.

2.25.8 - State Only Funded (Non-Participating) Projects

State only funded (Non-Participating) projects submitted for plan authorization require the same plan authorization package processed in the same manner as Federal Aid projects with the exception of the federal signature block and FHWA Form 462 are both excluded from the process.

The State signature block shall be placed on the title sheet of the plan set prior to the plans being sent to the office of CDOT Headquarters Project Support-ROW/Survey Dept. for authorization processing. The Chief Engineer or designees signature authorizes property acquisition(s). Notification through Docu-sign process is automatically generated to all members of the Region project management team.

2.25.9 - Transportation Commission Approval

See Chapter 4, section 4.2.2 for updated information regarding the authorization process.

The following conditions must be met before the Land Acquisition Authorization Approval is processed for signature by the Chief Engineer or designee for authorization of the acquisition(s).

- 1) The project must be on the State Highway System.
- 2) The project must be in the budget previously approved by the Transportation Commission.
- 3) Acquisition must be permanent in nature

The Commission Package shall contain the following:

- a. ROW Cost Estimate (CDOT Form 438).

One set of ROW plans.

2.25.10 - Temporary Easement Only Projects

CDOT Headquarters Project Support-ROW/Survey Dept. does not require a full set of ROW Plans and property descriptions on projects which only have temporary easements and when no permanent acquisitions will occur (*i.e.* no permanent easements or parcels of any kind).

In this case, one set of Exhibits showing the following information are acceptable for plan authorization:

- 1) Temporary Easement number
- 2) Name of owner(s)
- 3) Vesting deed
- 4) Dimensions
- 5) Area
- 6) pdf of the Exhibit graphically representing the parcel and relative temporary impact area containing the square footage.

A monumented land survey is not typically required for temporary easement only projects. In rare cases permission to enter or to acquire may be denied, in such a case a monumented land survey and a ROW Plan may be needed for condemnation proceedings.

2.25.11 - Preparation of ROW Plans for Project Advertisement

Final ROW plan pdf's, which include revisions that occurred after initial Authorization by the Chief Engineer, will be placed on Projectwise as a part of the Ad and Construction plan sets.

2.25.12 - Plans for County Assessor

It is the responsibility of the Region offices to supply a copy of the final ROW plans to Property Management and/or to the County Assessor's Office for their use in removing properties acquired by the CDOT from county tax rolls.

2.25.13 - Parcels Acquired in Advance of Plans – AP Parcels (CDOT Procedure)

The ROW plan authorization process for Parcels Acquired in Advance of Plans require the submittal of an authorization package which includes an Advanced Acquisition Plan sheet (.pdf) meeting the minimum specifications as described in this chapter.

Individual parcels may be authorized in Advance of Project Level final ROW Plans (AP) as long as a Project or Parcel Level Environmental Document has been approved and funds are available to acquire the ROW parcel.

The office of CDOT Headquarters Project Support-ROW/Survey Dept. requires the following package of materials from the Region ROW Plans Section before authorization can be done. The package shall contain the following:

- 1) Memo listing the parcel being acquired in advance of plans requesting authorization of Functions 3111 and/or 3109 including a brief explanation indicating the need to acquire the parcel in advance of plans.
- 2) Chief Engineer's ROW Cost Estimate (Form 438) signed by the CDOT Chief Engineer or designee.
- 3) Project or Parcel Level Environmental document (Form 128, FHWA or CDOT approval).

- 4) One set of Advance Acquisition Exhibits and descriptions showing:
 - a. Federal or state signature block for the Chief Engineer's signature
 - b. Name of owner(s)
 - c. Number (prefixed by the letter "AP")
 - d. Recording information (e.g. reception number and/or book and page)
 - e. Deed dimensions (e.g. bearings and distances)
 - f. Acquisition area
 - g. Remnant
 - h. Aerial background or Graphics showing parcel proximity to the Project
 - i. North Arrow
 - j. Scale
 - k. Note: This is not a ROW Plan, Land Survey Plat or Improvement Survey Plat and was prepared for CDOT purposes only.
- 5) One set of deeds with property descriptions of the area to be acquired.
- 6) One set of memos of ownership (CDOT Form #242) or one set of commitments to insure from a title insurance company with deeds attached. Title Commitments must be at least 90 days current.

All parcels acquired in advance of plans shall be numbered consecutively in accordance with the projects numbering scheme and shall be prefixed by the letters "AP" which will remain with the parcel number when incorporated into the final plan set.

The following note must be added under conditions on the ROW Plan Approval form (CDOT Form 462a):

"Parcels acquired in Advance of Plans are authorized with the understanding that the parcels acquired will be incorporated within the final ROW Plans."

After these conditions have been met, the CDOT Headquarters Project Support-ROW/Survey Dept. shall process the authorization package to transmit to the Chief Engineer for signature and issue a CDOT Form 462a (ROW Plan Approval) authorizing acquisition of the ownerships requested for Functions 3111 and/or Function 3109 as applicable.

Once plan approval has been obtained the following individuals shall be notified:

- 1) Program Engineer and Project Manager
- 2) ROW Manager
- 3) Authorization Requestor
- 4) Financial Management and Budget Office
- 5) Center for Accounting - Projects and Grants
- 6) Headquarters ROW – Appraisal, File
- 7) FHWA

Notification through Docu-sign process is automatically generated to all members of the Region project management team.

SECTION 2.26 - PROPERTY ACQUISITION ALTERNATIVES FOR ROW PLAN AUTHORIZATION

2.26.1 - Property Acquisition Alternatives Techniques

Advanced Acquisition is the Acquisition of ROW for projects prior to the completion of Project Level NEPA under the following procedures:

- Early Acquisition: 23 CFR 710.501
- Protective Buying and Hardship Acquisition: 23 CFR 710.503

2.26.2 - Early Acquisition Parcels - EA Parcels (23 CFR 710.501)

The ROW plan authorization process for Early Acquisition Parcels require the submittal of an authorization package which includes an Early Acquisition Plan Exhibit meeting the minimum specifications as described in this chapter.

Individual parcels may be authorized under 23 CFR 710.501 Early Acquisition (EA) in advance of Project Level ROW plans for corridor preservation, access management, or other purposes as long as a Parcel Level Environmental Document has been approved and non-federal funds (non-participating) are available to acquire the ROW parcel.

The CDOT Headquarters Project Support-ROW/Survey Dept. requires the following package of materials from the Region ROW Plans Section before authorization can be done. The package shall contain the following:

- 1) Memo listing the parcel being acquired as Early Acquisition requesting authorization of Functions 3111 and/or 3109 including a brief explanation indicating the need to acquire the early acquisition parcel under the requirements of 23 CFR 710.501 and that the action taken did not influence the environmental assessment for the project.
- 2) Chief Engineer's ROW Cost Estimate (Form 438) signed by the CDOT Chief Engineer's or designee.
- 3) Parcel Level Environmental document (Form 128, DOT approval)
- 4) One Advance Acquisition Exhibit showing:
 - a. Federal or state signature block for the Chief Engineer
 - b. Name of owner(s)
 - c. Number (prefixed by the letter "EA")
 - d. Recording information (e.g. reception number and/or book and page)
 - e. Deed dimensions (e.g. bearings and distances)
 - f. Acquisition area
 - g. Remnant
 - h. Graphics or aerial (if available)
 - i. North Arrow
 - j. Scale
 - k. Note: This is not a ROW Plan, Land Survey Plat or Improvement Survey Plat and was prepared for CDOT purposes only.

- 5) One set of deeds and property descriptions of the area to be acquired.
- 6) One set memos of ownership (CDOT Form #242) or one set of commitments to insure from a title insurance company with deeds attached. Said Memorandums or commitments must be at least 90 days current.

All parcels acquired under early acquisition shall be numbered consecutively in accordance with the projects numbering scheme and shall be prefixed by the letter "EA" which will remain with the parcel number when incorporated into the final plan set.

The following note must be added under conditions on the ROW Plan Approval form (CDOT Form 462a):

"Early Acquisition Parcels are authorized with the understanding that ultimate use as an in-kind match of the property acquired is dependent upon incorporation of these parcels within the final ROW Plans per 23 CFR 710.501."

For additional information on In-Kind Match, See Chapter 4 – Acquisition.

After these conditions have been met, the Office of CDOT Headquarters Project Support-ROW/Survey Dept. shall process the authorization package and issue a CDOT Form 462a (ROW Plan Approval) authorizing the ownerships requested for Functions 3111 and/or Function 3109 as applicable. Approval shall then be prepared and processed for signature by the Chief Engineer or designee for authorization of the acquisition(s).

Once plan approval has been obtained the following individuals shall be notified:

- 1) Program Engineer
- 2) ROW Manager
- 3) Authorization Requestor
- 4) Financial Management and Budget Office
- 5) Center for Accounting - Projects and Grants
- 6) Headquarters ROW – Appraisal, File
- 7) FHWA

Notification through Docu-sign process is automatically generated to all members of the Region project management team.

If a Local Public Agency desires to pursue early acquisition of ROW in advance of project level NEPA clearance under 23 CFR 710.501, the LPA must discuss such acquisition activities with the Region ROW Manager and the FHWA Operations Engineer prior to proceeding.

See ROW Manual, Chapter 8 – Local Public Agencies for additional information.

2.26.3 - Protective Buying and Hardship Parcels (23 CFR 710.503 - PB and HS Parcels)

See Chapter 4 of the CDOT ROW Manual for more detailed information

The ROW plan authorization process for Protective Buy and Hardship Parcels require the submittal of an authorization package which includes an Early Acquisition Plan Exhibit meeting the minimum specifications as described in this chapter.

Individual parcels may be authorized under 23 CFR 710.503 Protective Buy (PB) or Hardship (HS) in advance of Project Level final ROW plans as long as a Parcel Level Environmental Document has been approved and federal funds (participating) are available to acquire the ROW parcel.

Protective Buy and Hardship parcels require advanced notification to the CDOT ROW Program Manager before plan approval may begin.

The Office of CDOT Headquarters Project Support-ROW/Survey Dept. requires the following package of materials from the Region ROW Plans Section before authorization can be done. The package shall contain the following:

- 1) Memo listing the parcel being acquired as Protective Buy or Hardship requesting authorization of Functions 3111 and/or 3109 including a brief explanation indicating the need to acquire the Protective Buy or Hardship parcel under the requirements of 23 CFR 710.503.
- 2) Chief Engineer's ROW Cost Estimate (Form 438) signed by the CDOT Chief Engineer or designee.
- 3) Parcel Level Environmental approval (Form 128).
- 4) One set of Advance Acquisition Plan Exhibits showing:
 - a. Federal or state signature block
 - b. Name of owner(s)
 - c. Number (prefixed by the letter "PB" for Protective or "HS" for Hardship)
 - d. Recording information (*e.g.* reception number and/or book and page)
 - e. Deed dimensions (*e.g.* bearings and distances)
 - f. Acquisition area
 - g. Remnant
 - h. Topography or aerial (if available)
 - i. North Arrow
 - j. Scale
 - k. Note: This is not a ROW Plan, Land Survey Plat or Improvement Survey Plat and was prepared for CDOT purposes only.
- 5) One set of deeds and property descriptions of the area to be acquired.
- 6) One set memos of ownership (CDOT Form #242) or one set of commitments to insure from a title insurance company with deeds attached. Said Memorandums or commitments must be at least 90 days current.

All parcels acquired under early acquisition shall be numbered consecutively in accordance with the projects numbering scheme and shall be prefixed by the letter "PB" for protective or "HS" for hardship which will remain with the parcel number when incorporated into the final plan set.

The following note must be added under conditions on the ROW Plan Approval form (CDOT Form 462a):

Protective Buy or Hardship Parcels are authorized with the understanding that the parcels acquired will be incorporated within the final ROW Plans."

After these conditions have been met, the office of CDOT Headquarters Project Support-ROW/Survey Dept. shall process the authorization package and issue a CDOT Form 462a (ROW Plan Approval) authorizing the ownerships requested for Functions 3111 and/or Function 3109 as applicable. Approval shall then be prepared and processed for signature by the Chief Engineer or designee for authorization of the acquisition(s).

Once plan approval has been obtained the following individuals shall be notified:

- 1) Program Engineer and Project Manager
- 2) ROW Manager
- 3) Authorization Requestor
- 4) Financial Management and Budget Office
- 5) Center for Accounting - Projects and Grants
- 6) Headquarters ROW – Appraisal, File
- 7) FHWA

Notification through Docu-sign process is automatically generated to all members of the Region project management team.

If a Local Public Agency desires to pursue early acquisition of ROW in advance of project level NEPA clearance under 23 CFR 710.503, the LPA must discuss such acquisition activities with the Region ROW Manager and the FHWA Operations Engineer prior to proceeding.

See ROW Manual, Chapter 8 – Local Public Agencies for additional information.

SECTION 2.27 - PROCESSING OF PLAN REVISIONS FOR APPROVAL

2.27.1 - Revision Process – Major revisions;

Design Build Projects - new parcels, CMCG Projects - new parcels

A plan revision occurs when changes to the plans are made after the plans have been approved and authorization of the acquisition(s) has been given.

Major revisions shall include any changes or alterations to the plans after plan authorization has been obtained under a previous authorization request for one or more of the following categories:

- 1) Any change in ROW geometry.
- 2) Any change in access control.
- 3) Revisions involving structures over five feet.

- 4) Revisions in topography affecting appraisals.
- 5) The addition of a parcel to the project

It is important to note that an ownership name change is not a major revision unless one or more of the above situations results.

Office of CDOT Headquarters Project Support-ROW/Survey Dept. requires the following package of material.

1. Submittals are formatted pdf's shared through email or Projectwise
 - a. ROW Memo for Authorization with justification stating the revisions and the purpose for the revisions.
 - b. Chief Engineers Cost Estimate, Form 438 with signature block for the Chief Engineer
 - c. CDOT Chief Engineer signature on either the federal or state signature block (in accordance with the project's ROW phase funding).
 - d. One colored .pdf set of 11" x 17" of revised ROW Plan sheets only, with revision blocks filled out for each sheet revised along with the title sheet revision block filled out and updated showing the last revision date and the page numbers revised. An updated tabulation of properties sheet with Parcel designation, address of owner, site address, area and purpose in the Purpose of Parcel column.
 - e. Parcel property descriptions
 - f. Title Commitment for the parcel within 90 days
 - g. Top part of the form 128 for Environmental clearance if outside the previously cleared.

2.27.2 - Revision Process – Minor Revisions of Previously Authorized Plans

In accordance with CDOT's guidelines for the ROW Plans Review (ROWPR), all plan revisions must be justified and approved by the Region ROW Manager.

Office of CDOT Headquarters Project Support-ROW/Survey Dept. requires the following package of material.

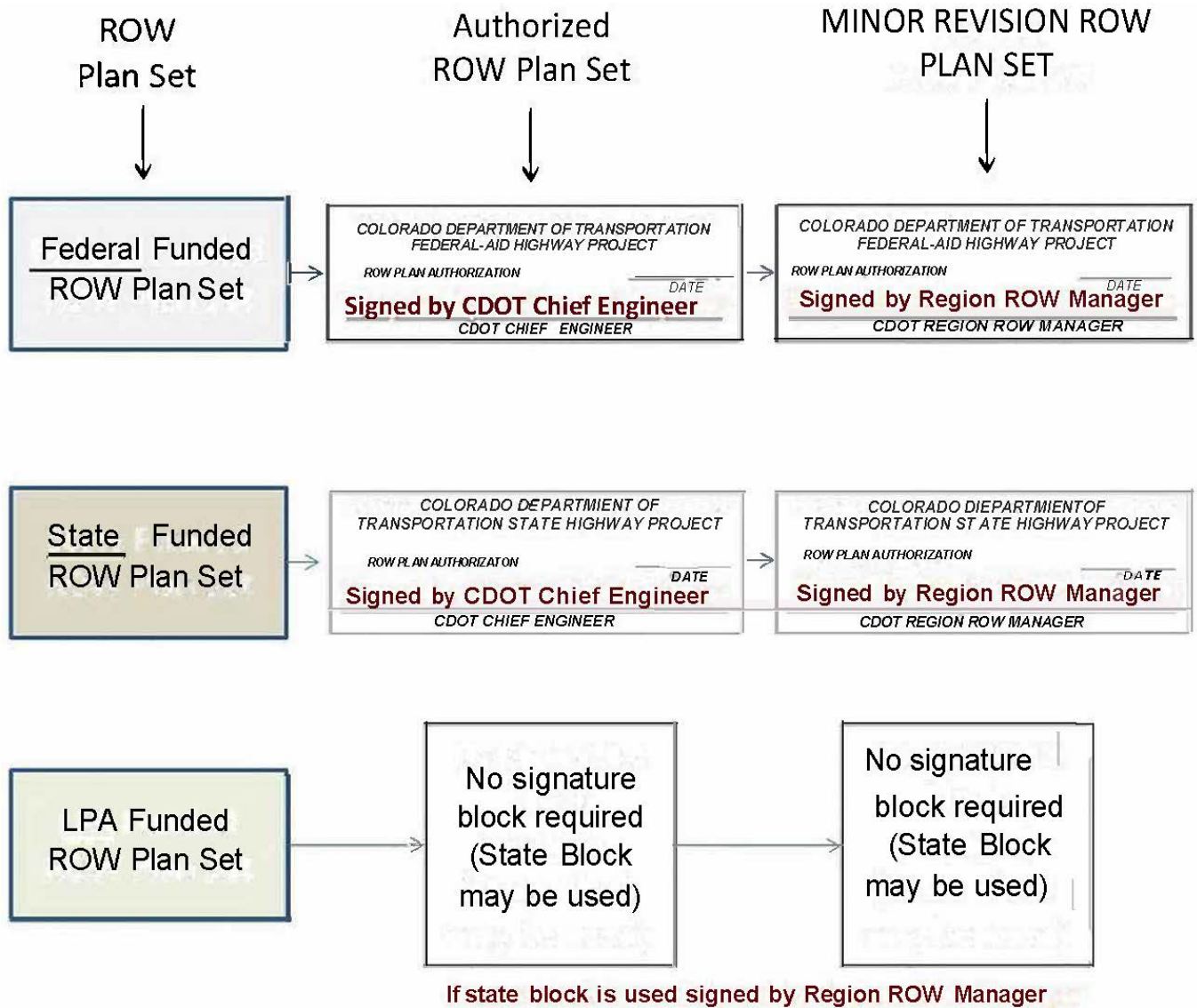
2. Plans and Survey Section. Submittals are formatted pdf's shared through email or Projectwise
 - a. ROW Memo for Authorization stating the revisions and the purpose for the revisions.
 - b. One colored .pdf set of 11" x 17" of revised ROW Plan sheets only, with revision blocks filled out for each sheet revised along with the title sheet revision block filled out and updated showing the last revision date and the page numbers revised.

- c. ROW Manager’s signature on either the federal or state signature block (in accordance with the project’s ROW phase funding). (Minor revisions only)
- d. A revised property description.
- e. Any newly revised memos of ownership with deeds attached.

2.27.3 - Title Sheet Signature Blocks for Approving Minor Plan revisions

[See Section 2.25.5](#)

When revised ROW plans are completed, checked and approved by the Region ROW Manager or designee by signing the appropriate federal or state signature block for the revisions made.



It is important to verify whether or not any new ownerships that were not previously authorized have been added to the ROW plans during the revision process. If any new ownerships have been added,

they will need to be submitted for authorization in accordance with the plan authorization process in Sections 2.27.1 and 2.27.2 above.

The revision of LPA plans with no federal or state funds in the ROW phase do not require authorization other than by the Region ROW Manager approval of the plans.

2.27.4 - Addition or Disposals of Excess or Remnant ROW

During Active Projects only:

Disposal of or remnant ROW shall be treated as a plan revision. These plans will be the basis for any ROW disposals or access control changes that require FHWA concurrence, which has been delegated to CDOT.

2.27.5 - Addition or Disposals of Access Control

Disposal of access control shall be treated as a plan revision. Approval shall be obtained on all NHS projects from FHWA. CDOT shall approve all non-NHS projects

2.27.6 - Addition or Disposals of Air Space Leases

Air space leases shall also be treated as a plan revision. Approval shall be the same as Disposal and Access changes.

2.27.7 - Projects Without Any Federal Funding

When plan revisions are completed, checked and approved by the Region, one plan set and one property description set is forwarded to the CDOT Headquarters Project Support-ROW/Survey Dept. and into Projectwise.

2.27.8 - Revisions of Closed Projects for the Sale of Excess and Remnants

Revisions of closed projects for the sale of excess and remnant property must be and approved by FHWA and the Transportation Commission.

SECTION 2.28 - APPLICATION FOR STATE AND FEDERAL LANDS

2.28.1 - State of Colorado Lands

Maps with State Land Board (LB) parcel designations in accordance with this chapter will be prepared in accordance with Chapter 11 – State and Federal Lands, by the Region ROW Office.

See the CDOT ROW Manual Chapter 11 – State and Federal Lands, for detailed information.

The Office of CDOT Headquarters Project Support-ROW/Survey Dept. shall be the only entity within CDOT to make application directly to the Colorado Board of Land Commissioners for an easement for

ROW purposes over State lands. The Region shall provide the following information to be used with this application:

- 1) State Land Board application (Form SLB-38).
- 2) One 11"X17" ROW plan sheets of state land parcel.
- 3) FMV and appraisal or waiver value.
- 4) State Land Board (SL) parcel description.
- 5) Text of the property description as per State Land Board format.

Parcels to be acquired from the State Land Board should have any "broken back" ties replaced with a direct radial tie or have the direct radial tie in parenthesis.

2.28.2 - U.S. Forest Service Land, BLM Land, and Other Federal Government Agencies

Maps with Highway Easement Deed (HE) parcel designations in accordance with this chapter will be prepared in accordance with Chapter 11 – State and Federal Lands, by the Region ROW Office are to be shown by hatching, all lands, which CDOT needs for new construction plus lands which are not covered by an easement deed in the vicinity. The parcels to be acquired shall be listed on the Highway Easement Deed. Timber to be removed must be approved and mutually agreed upon by USFS/BLM, CDOT and purchased or stockpiled in place shown on the plans.

See Chapter 11 – State and Federal Lands, for detailed information.

Where CDOT is acquiring Forest Service and BLM lands, a colored .pdf set of 11" X 17" maps are sent to FHWA for their use. With these plans, FHWA makes application to the appropriate agency for a Highway Easement Deed on behalf of CDOT.

For each project, there is a set of stipulations or grant/easement items mutually agreed upon by both parties for a specific construction project. Once agreed upon, a letter of consent which contains the conditions and stipulations is sent to the Office of CDOT Headquarters Project Support-ROW/Survey Dept. and a copy to the appropriate Region ROW Manager for review and concurrence for clearance of the construction project.

The Region will review the stipulations and advise the Office of Federal Land Transfer Coordinator at Project Development Branch, Headquarters ROW of their concurrence. Once the concurrence by the Region is received, the Highway Easement Deed which includes all the conditions and stipulations are sent to the Chief Engineer for signature if necessary. Chapter 11 of the ROW Manual should be consulted for specific directions regarding State and Federal Land Acquisitions, time frames and procedures.

SECTION 2.29 - EMINENT DOMAIN (CONDEMNATION)

2.29.1 - General

The Region ROW Unit assists the Attorney General's Office in the preparation of court maps, sales maps, graphs, charts, property descriptions, aerial photograph overlays, the condemnation package, and to take photographs of property in condemnation at the time of possession. The court map is a composite, scale drawing of the ROW parcels, permanent and temporary easements, survey data, topography, and other special features. Also shown are the affected ownerships or remnants, buildings, rivers, wells, leach fields, frontage roads, and other natural or man-made features that relate to the subject property.

See ROW Manual Chapter 4 - Acquisitions for detailed information.

2.29.2 - Aerial Photos

Aerial photos or aerial photo mosaics of the subject property are oftentimes used in condemnation cases. The subject property, ROW lines, parcel lines, remnant lines, and roads to be constructed are drawn on the photographs or overlays. The name of the person or company who took the aerial photo is marked on the photo along with the date of the flight. Roads, streets, and rivers are marked for orientation and/or identification. Special land use areas are highlighted to show areas of different land classifications.

2.29.3 - Revisions

Revisions to plans and property descriptions of parcels in condemnation will be coordinated with the region personnel. If applicable, the unit will work with the supervising appraiser to update the Appraisal and the Review Section to update the FMV. The Region will forward the amended exhibits, if applicable, and revised FMV's to the Attorney General's office and monitor to assure that additional amounts, if any, are deposited in court.

SECTION 2.30 - RECORDING OF PLANS

2.30.1 - General

Once the ROW Plans for a project are completed and monuments are set in the field, the final ROW Plans shall be signed and sealed by the Colorado Professional Land Surveyor(s) licensed in the State of Colorado who is (are) in responsible charge for the ROW Plans stating that the ROW Plans and property descriptions were prepared under his/her direct supervision and checking, and by the Professional Land Surveyor(s) licensed in the State of Colorado who is (are) in responsible charge for setting the monumentation stating that the monumentation was set under his/her direct supervision and checking.

Current CDOT drafting standards call for multiple plan sheets to be placed on the appropriate sized page (between 24"x36" max. and 18"x24" min.) depending on the county involved. The final signed and sealed ROW Plans shall be deposited in the appropriate County Office for public records within six months after the monumentation was set in the field in accordance with the Memorandum of

Understanding between the Colorado State Board of Architects, Professional Engineers and Professional Land Surveyors and CDOT, and Colorado State Law.

A complete, non-colored, 11"x17" Right of Way Plan Set, comprising all sheets contained in the deposited plans and bearing the Professional Land Surveyors' original signatures and seals and depositing information shall be sent to the Office of CDOT Headquarters Project Support-ROW/Survey Dept. along with a memo stating the following information:

- 1) Region
- 2) Project Code
- 3) Project Number
- 4) Project Location
- 5) Highway Route Number and Segment
- 6) Beginning and ending mile post
- 7) Counties
- 8) Sections, Townships, Ranges and Principal Meridian
- 9) Date deposited
- 10) Recording information for all counties deposited in (*i.e.* reception number, book page)
- 11) Total number of pages deposited

When a complete set of Right of Way Plans is deposited in more than one county, single sheets containing the depositing information for each additional county should be included in the Memo.

Once the memo is received by CDOT Headquarters Project Support-ROW/Survey Dept. the deposited plans shall be placed in the Projectwise folder:

CDOT\ActiveProjects\ProjectCode\ROW_Survey\ROW_Plans_PDF\ProjectCode\ROW_Plans_deposited

Following the permanent record standards for Record Retention per PD 21.1 (see section 2.30.4 of this chapter).

2.30.2 - Revisions

In the event that an amended ROW Plan set is needed to be deposited for the same project due to revisions after the final ROW Plans have been deposited, it shall be clearly stated on the title sheet of the amended ROW Plans that the plan set is an amended ROW Plan, and shall contain a note referencing the previously deposited ROW Plans recording information and date. The same procedures stated above shall be followed for amended ROW Plans as for final ROW Plans.

2.30.3 – PD 508.1 Requirements for Use of Electronic Seal

On or before January 2020, all CDOT, local agency and consulting Engineers are required to utilize electronic Sealing. Requests for exemptions must be submitted to the Chief Engineer prior to mechanical Seals being utilized with the reason why electronic Sealing cannot be used. Beginning January 2021, there will be no exemptions to the electronic Sealing requirement, except where stated in the Exclusions section of the PD.

2.30.4. – PD 21.1 Requirements for the Retention of Records

June 25, 2019 PD 21.1 was updated to formalize CDOT's move to a decentralized system whereby specified design, construction, engineering, and specialty group records with a short retention period (3.5 years or less) may be retained by the regions then destroyed.

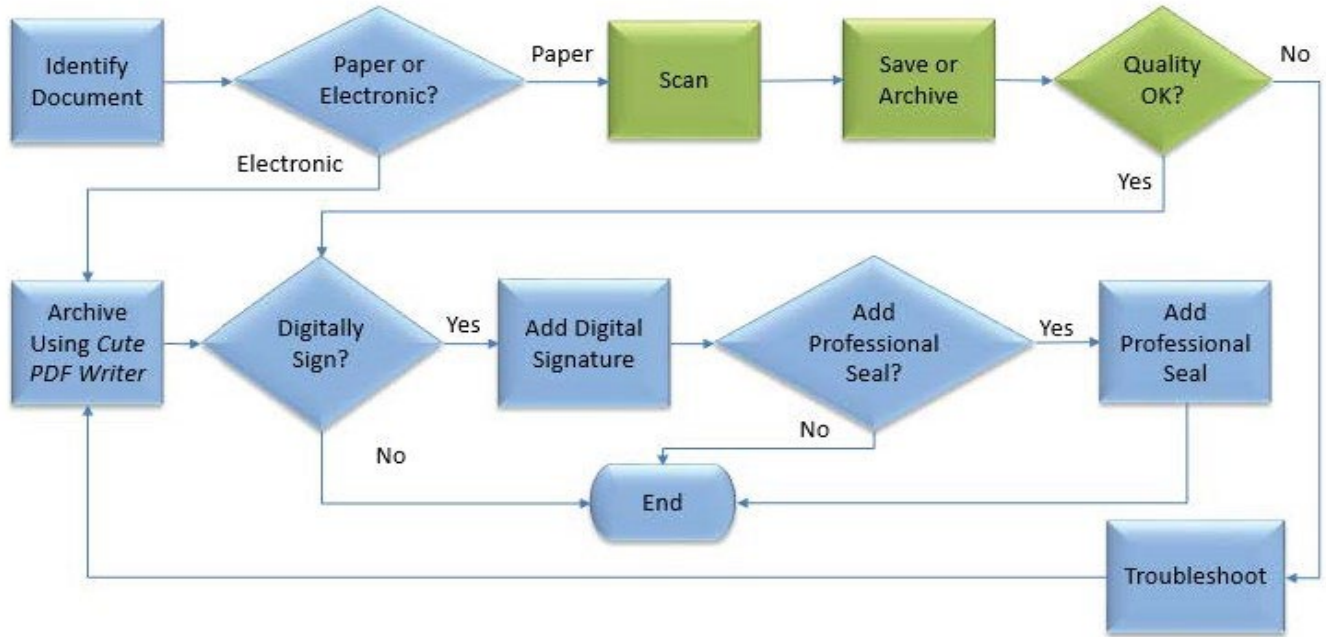
Updated PD 21.1 requires Smart Scanning of records with a retention period longer than 3.5 years. Smart Scanning preserves the record in digital format assuring the ability to read it regardless of the hardware or software, which was used to create the original files for decades to come. This method (Adobe PDF/A 1-b) replaces the use of microfilm, and is recognized world-wide by the International Standards Organization

("ISO") as being a reliable medium for document archiving. As directed by Chief Engineer Memos dated September 11, 2017, and May 17, 2019, CDOT "Project Records" (defined in the PD) must be stored in ProjectWise as CDOT's chosen Electronic Document Management System.

This Directive allows for the use of Adobe Sign for "Project Records" including Contract Modification Orders, given that Adobe Sign is fully integrated into ProjectWise and can be utilized with large construction records such as plan sets.

Below is a workflow summarizing these procedures as directed by PD 21.1:

Smart Scanning Process Flow



REFERENCES

- CDOT Survey Manual

<https://www.codot.gov/business/manuals/survey>

- FHWA / CDOT Stewardship Agreement:

<https://www.codot.gov/business/designsupport/cdot-fhwa-stewardship-agreement>

- Uniform Act & other Federal Highway Administration information:

http://www.fhwa.dot.gov/real_estate/

- National Geodetic Survey

<http://www.ngs.noaa.gov/>

- Search for LexisNexis or Colorado Revised Statutes:

<http://www.lexisnexis.com/hottopics/colorado/>

- Colorado State Statutes, Board Rules & Policies:

<https://www.sos.state.co.us/CCR/GenerateRulePdf.do?ruleVersionId=8267&fileName=4%20CCR%20730-1>

- CDOT Design Support:

<https://www.codot.gov/business/designsupport>