



T² Roads on the Range

Volume 23, Number 3

Phone: 800-231-2815

Fax: 307-766-6784

www.eng.uwyo.edu/wyt2

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WYOMING “YOU SHOW US” CONTEST WINNER

Submitted by Claude Craft, Bighorn County Road and Bridge

The “You Show Us” Contest is sponsored every year by the T² Center. The winner from Wyoming then goes on to compete in the regional contest held in Rapid City.

Project: Bighorn County’s Pull-Behind Steel-Drum Roller

Problem Statement: The Bighorn County Road and Bridge Department wanted a way to provide



a tighter surface after performing routine maintenance with a motor grader on some of their gravel roads. After normal maintenance, the surface was loose and tended to form ruts and washboards easily.

Solution: By attaching a steel drum to the back of a motor grader, the County was able to apply

sufficient surface compaction to provide a tighter top surface, thereby reducing washboards, loose aggregate and rutting on the top surface. The County has been developing this method for a number of years now, and the current version seems to be working well.

The tighter surface created by the steel drum improves surface drainage by reducing infiltration into the gravel. Using the ripper hydraulics to increase pressure on the drum, considerable weight is applied to the steel drum and a tight top surface results. The County is able to provide a better initial ride for the traveling public and slow the formation of surface distresses such as washboards, loose aggregate, rutting, and potholes.

Labor: 40 man-hours

Materials/Cost: The materials used were a steel drum, axle, 800 lb. bearings, mounts, frame, and a scraper bar for a total cost of \$3,000.



Savings/Benefits: The County is able to provide a better, more durable ride to the traveling public with only a slight increase in the time it takes to maintain the road. Fine grained materials are better compacted and form a tighter, more water resistant surface.

THE T² LIBRARY AT YOUR FINGERTIPS

The Center's library is full of useful information for your agency's personnel and training needs. The following is only a partial listing of the videos and DVDs, free publications and loan publications that we have available. Please visit our web site for a complete list of library materials: www.eng.uwyo.edu/wyt2. Please save this newsletter for future reference!

VIDEOS

Design & Construction

DC7201 800 Miles of Winter
DC7202 Shake Hands with Danger/
Operating Tips
DC7203 Operating Tips
DC7204 Concrete Pavement
DC7207 Testing of Asphalt Cement
DC7208 AASHTO Road Test
DC7209 Verglimit: Mixing and Laying
DC7210 Basics of the Local Road Engineer
DC7211 The Importance of Road Drainage
DC7212 Stabilization for Low Volume Roads
DC7213 Standard Soil Tests
DC7214 Design of Urban Streets, Part I
DC7215 Design of Urban Streets, Parts II and III
DC7216 Design of Urban Streets, Part III
DC7217 Design of Urban Streets, Part IV
DC7218 Asphalt Paving Inspection/Pothole Repair
DC7219 Tilt Bed Trailers/Mowers, etc.
DC7220 Motor Grader Operation
DC7221 The Importance of Roadway Drainage
DC7222 Retaining Wall Design Guides
DC7223 Concrete Bridge Deck Construction, etc.
DC7224 Introduction to Asphalt Materials
DC7225 Bituminous Concrete Paving
DC7226 Impact of Truck Size and Weights
DC7227 Urban/Rural Roads Width Standards
DC7228 How Pavements Are Affected by Axle Loads
DC7231 Specialty Maintenance Products
DC7232 Marshal Method for Hot Mix Paving Design
DC7233 Field Aggregate Sampling
DC7234 Snow and Ice Removal
DC7235 Highway Built on Sand
DC7236 Dirt Work in the Oil Patch
DC7238 City Streets: The Concrete Advantage
DC7239 The Highway and Its Environments
DC7245 Fundamentals of Proportioning Concrete
Mixtures
DC7246 Field Tests for Quality Control of Fresh Concrete
DC7248 Concrete Parking Lots
DC7249 Modern Timber Bridges
DC7250 Hydrated Lime



DC7251 Hardsurfacing a Gravel Road Using Pre-Mix
Asphalt
DC7252 Concrete Bridge Railings
DC7253 Introduction to Bridges
DC7256 Weather and Loads
DC7257 Railroad Grade Crossing Surface Installation
DC7258 Quality Control of Concrete Site
DC7263 Understanding Super-Pave Mix Design
DC7265 Utility Cuts in Paved Roads
DC7268 Building the Notched Wedge Joint
DC7269 Ultra-Thin White Topping
DC7270 Bridge Evaluation and Posting
DC7271 Scrub Seal
DC7272 Retrofitted Load Transfer Devices
DC7273 Backhoe Loader Safe Operating
Techniques
DC7274 Wheel Loader Operating
Techniques
DC7275 Hand Signals for Construction
Equipment
DC7276 Flagging You're the Director
DC7277 Backhoe Loader Pre-Start
Inspection
DC7278 Rigging and Lifting with Mobile Equip.
DC7279 Wheel Loader Walk-Around and Introduction
DC7280 Crawler Excavator Pre-Start Inspection
DC7281 Crawler Excavator Safe Operating Techniques
DC7282 Haul Truck Pre-Start Inspection
DC7283 Roller-Compacted Concrete
DC7284 Building Trades: Site Preparation
DC7285 Soil Erosion and Sediment Control
DC7286 Building Construction: Basic Site Evaluation
DC7287 Mounting and Dismounting Heavy Equipment
DC7289 Building Quality Concrete Driveways
DC7290 Inspecting Concrete (before)
DC7291 Inspecting Concrete (after)
DC7292 Stormwater Runoff
DC7293 Full Depth Recycling With Cement
DC7294 Soil
DC7295 Building Construction: Basic Surveying
DC7296 Concrete Field Tests
DC7297 Fundamentals of Quality Concrete
DC7298 The Top Ten Myths in Concrete Construction
DC7299 Working Safely With Hot Mix
DC7300 Handling Hot Mix Asphalt
DC7301 Understanding Superpave Mix Design
DC7302 Paving Practices for Quality
DC7303 Safe Handling of Hot Mix Asphalt

Maintenance

M7205 Upgrading Gravel Roads
M7206 Prestressed Concrete Bridge Inspection
M7207 Bridge Inspection (Timber/Steel)
M7208 Roadway Maint. Cost Analysis, Parts I & II
M7209 Roadway Maint. Cost Analysis, Parts III, IV, V
M7210 Maintenance of Highway Safety Hardware

M7211 Maintaining Granular Surfaced Roads
 M7212 Asphalt Maintainer
 M7213 Pavement Maint. and Rehab., Part I
 M7214 Pavement Maint. and Rehab., Part II
 M7215 Pavement Maint. and Rehab., Part III
 M7216 Pavement Maint. and Rehab., Part IV
 M7217 Winter Operations
 M7218 Pothole Causes, Cures, and Prevention
 M7219 Dump Truck Operation
 M7220 Sign Support and Barriers
 M7221 Crash Cushions
 M7222 Flexible Pavement Preservation
 M7224 Pothole Repair
 M7225 Resonant Pavement Breaker, etc
 M7226 Class 33 Trucks
 M7228 Equipment Maintenance Scheduling
 M7229 Crack Sealer/Tar Pot
 M7230 Schultz Automatic Snow Chain System
 M7231 Cathodic Bridge Protection
 M7233 Daily Maint. of Motor Graders
 M7234 Common Maint. Problems and Causes
 M7235 Cleaning Lined Ditches, Culverts, Catch Basins
 M7236 Maintenance of Crawler Tractors
 M7237 Maintenance of Front-end Loaders
 M7238 Maintenance of Light Vehicles
 M7239 Reshaping of Earth Gravel Roads
 M7240 Repair of Depressions, Rutting, and Corrugations
 M7241 Daily Maintenance of Rollers
 M7242 Daily Maintenance of Dump Trucks
 M7243 Mechanical Cleaning of Unlined Ditches
 M7244 Patching Unpaved Roads
 M7245 Pothole Repair in Surface Treatment Pavement
 M7246 Single and Multiple Surface Treatments
 M7247 Re-Graveling
 M7248 Crack Repair in Asphalt Pavement
 M7249 Pothole Repair in Asphalt Concrete Pavement
 M7250 Reshaping Earth and Gravel Shoulders
 M7251 Base and Sub-base Repair
 M7252 Cleaning and Clearing of Bridges
 M7253 Concrete Bridge Deck Repair
 M7254 Replenishing Earth and Gravel Shoulders
 M7255 Daily Maintenance of Asphalt Distributors
 M7256 Salt: The Sensible Deicer
 M7257 Asphalt Recycling
 M7258 Blading Unpaved Roads
 M7259 Potholes: Causes, Cures, and Prevention
 M7260 Scoop Operation and Preventative Maint.
 M7261 Recycling Roads with Asphalt Emulsions
 M7262 Maintenance Management Systems
 M7263 Equipment Management Systems
 M7264 Snow Plowing/Sanding
 M7265 Snow and Ice Control
 M7266 Pavement Maintenance, Parts I & II
 M7267 Pavement Maintenance, Parts III, IV, V
 M7268 Motor Grader Operation
 M7269 Dump Truck Operations



M7270 Crane, Winch, Forklift Operation
 M7271 Crack Sealer Operation
 M7272 Flagging
 M7273 Plow Snow and Apply Salt, etc.
 M7274 Pothole Patching, etc.
 M7275 Roller Operation
 M7276 Patching PCC
 M7277 Erosion and Sediment Control for Highway Construction
 M7278 Cold Bituminous Recycling
 M7281 Cold Planer Inlay Patching
 M7282 Dust Control of Gravel Roads with MgCl₂
 M7283 Wetted Salt
 M7284 Gravel Roads/Ditch Maintenance
 M7285 Shoulder Maint./Asphalt Chip Seals
 M7286 Backhoe/Mowing
 M7287 Geotextiles
 M7288 Unsurfaced Roads
 M7289 Inspection on Concrete Bridges
 M7290 Subsurface Utility Engineering
 M7292 Inspecting Work Zone Traffic Control
 M7293 Effective Snow Fences
 M7294 Maintenance Workers
 M7295 Dump Truck Preventative Maintenance
 M7296 Snowfighters from A to Z
 M7297 Detecting Flawed and Nonstandard Concrete
 M7299 Operator Daily Maintenance of Light Vehicles
 M7300 Motor Grader
 M7302 Testing and Inspection of Roadway Delineation
 M7303 Cost-Effective Pavement Repairs.
 M7304 Road Weather Information System
 M7305 In-Place Recycling
 M7306 Maintaining Asphalt Roads
 M7307 Blading Unpaved Roads
 M7308 Concrete Bridge Protection, etc.
 M7309 Tech. to Manage Snow & Ice Control (2 tapes)
 M7311 High Efficiency Snow Plow
 M7312 Road Repair
 M7313 Asphalt Crack Treatment
 M7314 Bridge Deck Overlays
 M7315 Asphalt Overlays
 M7317 Asphalt Road Rehabilitation
 M7318 Asphalt Paving Inspection
 M7319 Problems with Gravel Roads
 M7320 Sign Maintenance and Inspection
 M7321 Chip Seal Application
 M7322 What is Anti-Icing?
 M7324 Sign Maintenance and Installation
 M7325 Problems with Gravel Roads
 M7326 Utility Cut Repair
 M7327 Snowplow Safety
 M7328 Snowplow Safety: Parking Lots
 M7329 Maintenance for Low-Volume Roads
 M7330 Contract Maintenance
 M7331 Anti-icing and RWIS
 M7332 Pavement: Preventative Maintenance
 M7333 Spread the Load Spare the Road
 M7334 Snow Removal Techniques
 M7335 Snowfighters

M7336 SHRP Innovations: Snow and Ice Control
 M7337 Using Snow Plows on Motorgraders
 M7338 Maintenance of Gravel Roads
 M7339 Preventative Maint.: Project Selection
 M7340 Crawler Excavator Operator Maint. and Transport
 M7341 Backhoe Loader Maint. and Transport
 M7342 Forest Roads
 M7343 Rehab. of PCC Pavements
 M7344 Surface Defects in Formed Concrete
 M7345 Housekeeping: It Ain't Like the Movies
 M7346 Effective Pavement Preservation
 M7347 Asphalt Emulsions and Their Uses

Planning & Administration

PA7201 Subdivisions: A Local Dilemma
 PA7204 Corrugated Steel Pipe
 PA7206 Tort Liability
 PA7207 Project Monitoring System
 PA7208 Infrastructure and Pavement Mgmt.
 PA7209 Strategic Planning for Trans. Agencies
 PA7210 Changing Rural America
 PA7213 Construction Workzone Liability
 PA7214 Tort Liability
 PA7215 Timber Bridges
 PA7217 Title III
 PA7218 The Communication Circle
 PA7219 Emergency Relief
 PA7221 Sharing the Road
 PA7223 Transportation Information System
 PA7227 Pedestrian Safety
 PA7229 National Transportation Policy
 PA7231 Pavement Management Systems
 PA7232 Risk Management
 PA7233 Drugs at Work
 PA7234 Risk Management Training Seminar, Part I
 PA7235 Risk Management Training Seminar, Part II
 PA7237 Ice and Snow Control Chemicals
 PA7238 Passenger Assistance Techniques
 PA7239 Highway Capacity
 PA7240 Spring Highway Use Restrictions
 PA7241 Risk Management to Reduce Tort Liability
 PA7242 Negligence and Liability
 PA7243 Examples of Tort Related Lawsuits
 PA7244 High Risk Areas
 PA7245 Reducing Risk of Roadway Tort Liability
 PA7246 Methods of Reducing Risk of Roadway Tort Liability, and Data Collection
 PA7247 Accident Reduction Program
 PA7249 Planning in Advance to Deal with Crisis
 PA7250 Planning in Advance to Deal with Crisis, Part 3
 PA7254 Ash: A New Road to Lower Construction Cost?
 PA7256 Tort Liability: The Best Defense is a Good Road
 PA7259 Small Area Transportation Studies
 PA7261 A Look at Freeway Incident Management
 PA7264 Purchasing for Local Governments
 PA7270 Project Documentation



PA7271 Drug & Alcohol Training for Supervisors
 PA7272 Roadway Design: Balancing Safety, Environment & Cost
 PA7273 Alcohol and Drug Testing Requirements
 PA7275 Training: The Obscured Advantage
 PA7276 Inspecting Unsurfaced Roads
 PA7277 What is Anti-Icing?
 PA7281 Pavement Management Systems
 PA7282 Maintenance Management Systems
 PA7283 Construction Management Systems
 PA7284 Equipment Management Systems
 PA7285 Effective Technology Transfer
 PA7286 International Technology
 PA7287 Concrete Paving Inspection
 PA7288 Transportation Infrastructure
 PA7290 Access Management Overview
 PA7291 Equipment Management Systems (EMS)
 PA7292 Air Quality Conformity in Transportation Planning
 PA7295 Torts are Everybody's Business
 PA7296 How to Give and Receive Criticism
 PA7297 Every Employee's Public Relations Role
 PA7298 Don't Shoot the Messenger
 PA7299 Interviewing Techniques
 PA7300 Achieving Peak Performance on the Job
 PA7301 Managing Stress Before it Manages You
 PA7302 Traffic Signal Management
 PA7303 Reducing Utility Delays During Construction
 PA7304 How to Deal With Difficult People: Vol. 1
 PA7305 How to Deal With Difficult People: Vol. 2
 PA7306 Achieving Excellence

Safety & Traffic

ST7205 Traffic Control and Tort Liability
 ST7207 Driver Expectancy
 ST7209 Traffic Signals Systems
 ST7210 Booby Trap, Small Sign Supports, Guardrails
 ST7211 Highway Safety for Local Roads and Streets
 ST7213 Work Area Traffic Control
 ST7214 Positive Signs of Life
 ST7215 The Flagger
 ST7216 Traffic Control for Short Term Work Zones
 ST7217 Construction Workzone Liability
 ST7218 Advanced Concepts in Pavement Marking
 ST7219 Roadway Markings and Markers
 ST7220 Field Placement of Signs
 ST7222 Safety: Maintenance Shop
 ST7223 Highway Safety Program
 ST7224 First on the Scene
 ST7225 Maintenance and Utility Traffic Control
 ST7226 Defensive Driving Refresher Training
 ST7229 Basic Equip. Operation: Introduction
 ST7230 Basic Equip. Operation: Dump Truck
 ST7231 Basic Equip. Operation: Tractors and Mowers
 ST7232 War on Wet Weather Accidents
 ST7233 Signs and Lines
 ST7236 Nighttime Traffic Control in Work Zones
 ST7237 Safety by Association

ST7238 New Directions in Sign Management
 ST7239 Skid Steer Safety
 ST7240 Loader/Backhoe Safety
 ST7241 Articulated Loader Safety
 ST7242 Trencher Safety
 ST7243 Rough Terrain Fork Lift Safety
 ST7244 Crawler Safety
 ST7245 Traffic Management Misconceptions
 ST7249 Inspection of Bridges
 ST7250 Surveying Crew Orientation
 ST7251 Work Zone Traffic Control
 ST7252 Mailboxes May be Hazardous to Your Health
 ST7253 Recent Crash Tests of Roadside Safety Hardware
 ST7254 Chainsaw Safety
 ST7255 Energy Absorption System Engineering
 ST7256 John Deere: Consolidated Safety Video
 ST7258 Fire Fighting in the Mineral Industry
 ST7261 CDL Video Series, Parts 1, 2A,B
 ST7262 CDL Video Series, Parts 2C,D,
 3, & 4
 ST7263 CDL Video Series, Parts 5,
 6, & 7
 ST7264 Traffic Barriers
 ST7265 Crashing Cars: Testing for Safety
 ST7269 Shake Hands with Danger
 ST7270 Highway Safety Features
 ST7271 Work Zone Safety for Rural
 Local Agencies
 ST7276 The New Safety Profit
 ST7277 School Zone Safety
 ST7278 Getting Safely Past the Orange Barrels
 ST7279 Guardrail Installation and Repair
 ST7280 Chemical Safety
 ST7281 Snow Removal Guidelines
 ST7282 Breakaway Sign Program
 ST7283 Loader Backhoe Safety-Worker Safety
 ST7284 Loader Backhoe Safety-Operator Safety
 ST7285 Maintenance Workers
 ST7286 An Introduction to Flagging
 ST7287 Flagging Operations and Procedures
 ST7288 Partners in Winter Safety
 ST7289 Backhoe/Loader Safety
 ST7290 Mailbox Safety Support System
 ST7291 Winter Travel: WYDOT's Battle
 ST7292 Introduction to the Safety Management System
 ST7293 Recognizing Alcohol Abuse
 ST7294 Maintenance of Highway Safety Hardware
 ST7295 Transport Trailer Safety, etc.
 ST7296 A Campaign against Traffic Vandalism
 ST7298 Sharing the Road
 ST7299 Making Safer Roads
 ST7300 Traffic Control: What Works?
 ST7302 Safer Bicycling for Everyone
 ST7303 Unrestrained Motorists: The Cost to Your
 Community
 ST7305 Crash Course on Safety Belts
 ST7306 Zero Tolerance
 ST7307 Highway Safety Problems and Solutions
 ST7308 Danger Signs



ST7309 The Cost of Not Buckling Up
 ST7312 Road Crew Safety
 ST7313 Roller Compactor Safety Video
 ST7314 Hand-Held Power Tools
 ST7315 Hard Hat Safety
 ST7316 Head Protection
 ST7317 Heat Stress
 ST7318 Winter Safety
 ST7319 Working in the Cold
 ST7320 Working around Cranes
 ST7321 Power Line Hazard Awareness
 ST7322 Trenching & Shoring Safety
 ST7323 Highway Work Zone Safety
 ST7324 Emergency Response for Off-Road Heavy Haul
 Trucks
 ST7325 Disaster Preparedness
 ST7327 How Retroreflectivity Makes Our Roads Safer
 ST7328 Safely Regulating Traffic in Michigan
 ST7329 One-Call of Wyoming - Dig Safely
 ST7330 Thinking Ahead: Driver's Safety
 ST7331 Contractor Safety: General
 Requirements
 ST7332 Safety Orientation: Don't be a Zombie
 ST7333 Commercial Driver Certification
 ST7334 Winter Safety
 ST7335 Emergency Action Plan
 ST7336 Skin Safety With Cement and Concrete
 ST7337 Surviving the Cold
 ST7338 Highway Work Zone Safety
 ST7339 Survival!
 ST7340 Work Zone Tort Liability
 ST7341 The Keys to Winter Driving
 ST7342 Highway: One Step From Death
 ST7343 Highway: Traffic Control Safety
 ST7344 Highway: Professional Flagging
 ST7345 Highway: Plant Site Safety
 ST7346 Highway: Grading Safety
 ST7347 Highway: Structures Safety
 ST7348 Highway: Surveying Safety
 ST7349 Highway: Moving Operations/Maintenance
 Safety
 ST7350 Highway: Utility Safety in Work Zones
 ST7351 Highway: Unloading Heavy Equipment
 ST7352 Highway: Removal/Demolition Safety
 ST7353 Highway: Paving Safety
 ST7354 Trenching and Shoring Safety
 ST7355 Forklift Safety
 ST7356 Safely Exposing Buried Utilities
 ST7357 Materials Handling Safety

FREE PUBLICATIONS

Design & Construction

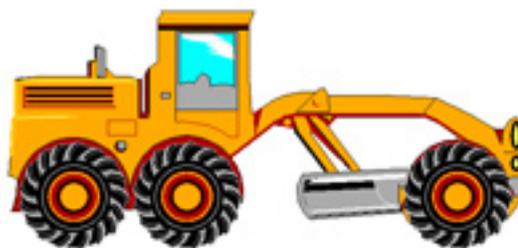
DC058 Inspector's Job Guide and Highway Maintenance
 Tables
 DC070 Public Works Inspection--Inspector's Workbook
 and Definitions

- DC072 A Twenty Year Study of Asphalt-Rubber Pavements in the City of Phoenix, Arizona
- DC075 State of the Practice--Design and Construction of Asphalt Paving Materials with Crumb Rubber Modifier
- DC077 Subsurface Soils Exploration
- DC079 Uses of Asphalt Rubber
- DC080 Temperature and Pressure Converter
- DC082 An Overview of Surface Rehabilitation Techniques for Asphalt Pavements
- DC088 Interim Selected Metric Values for Geometric Design: an Addendum to a Policy on Geometric Design of Highways and Streets
- DC089 A Study of the Use of Recycled Paving Material: A Report to Congress
- DC090 Highway/Utility Guide
- DC091 Patching Potholes the Right Way
- DC092 Development of a Procedure to Rate the Application of Pavement Maintenance Treatments
- DC093 Transportation Quality in Wyoming
- DC094 Timber Bridge Information Resource Center-- Publications List
- DC097 Guidelines for Competent Person
- DC098 Field Guide for Unpaved Rural Roads
- DC107 Use of Waste Glass in Highway Construction
- DC109 Flexibility in Highway Design
- DC111 Compaction Data Handbook
- DC112 The paving Manual: Guidelines for Paving Professionals
- DC113 Utility Cuts in Paved Roads - Field Guide
- DC114 One-Call of Wyoming Excavator's Handbook
- DC115 Full-Depth Asphalt Pavements for Parking Lots, Service Stations, and Driveways
- DC118 A Simplified Method for the Design of Asphalt Overlays For Light to Medium Traffic Pavements
- DC122 Concrete Information - Mixing Water for Concrete

Maintenance

- M097 A Pavement Rating System for Low-Volume Asphalt Roads
- M102 W-Beam Guardrail Repair and Maintenance
- M105 Stop the Pothole Dollar Drain
- M106 Maintenance of Small Traffic Signs
- M107 Safety Restoration During Snow Removal-- Guidelines
- M109 Maintenance Management
- M110 Road Surface Management
- M117 Salt and Highway Deicing Newsletter
- M118 Winter Maintenance Publications and Audio Visual Materials
- M121 Unsurfaced Road Maintenance Management
- M122 Draft Maintenance Guidance Manual for Unpaved Roads in the Rocky Mountain Region
- M123 Fixing Potholes the Right Way
- M126 Innovative Materials Development and Testing, Vol. 2: Pothole Repair
- M127 Chemical Treatments for Unpaved Roads

- M128 Controlling Non-point Source Runoff Pollution from Roads, Highways, and Bridges
- M129 Bridge Maintenance on Local Roads
- M130 Bridge Rehabilitation on Local Roads
- M131 Concrete Pavement Repair Manuals of Practice
- M132 Manual of Practice for an Effective Anti-icing Program: A Guide for Highway Winter Maintenance Personnel
- M160 Concrete Pavement Repair Update
- M161 Pavement Marking Materials
- M162 Introduction to Micro-Surfacing
- M163 Oregon Study Blasts Blade Patching
- M167 Let It Snow: Winter Road Maintenance Products and Technologies
- M168 HMA (Hot Mix Asphalt) Pavement Mix Type Selection Guide
- M169 Manual of Practice: Materials and Procedures for Sealing and Filling Cracks in Asphalt-Surfaced Pavements
- M170 Manual of Practice: Materials and Procedures for Repair of Potholes in Asphalt-Surfaced Pavements



- M171 Gravel Roads Maintenance and Design Manual
- M172 Maintenance of Signs and Sign Supports for Local Roads and Streets: A Guide for Street and Highway Maintenance Personnel
- M173 Introduction to Crack Sealing
- M174 Dust Control on Low Volume Roads
- M175 LTAP Asphalt Paving Inspection and Chip Seal Application Checklists
- M176 Culvert Management Systems (CMS)
- M177 Pavement Preservation Checklist Series: Crack Seal Application
- M178 Pavement Preservation Checklist Series: Chip Seal Application
- M179 Pavement Preservation Checklist Series: Thin Hot-Mix Asphalt Overlay
- M180 Pavement Preservation Checklist Series: Fog Seal Application
- M181 Pavement Preservation Checklist Series: Microsurfacing Application
- M182 Pavement Preservation Checklist Series: Joint Sealing Portland Cement Concrete Pavements
- M183 Dust Palliative Selection and Application Guide
- M185 Asphalt Roads-PASER Manual
- M186 Local Road Assessment and Improvement: Drainage Manual
- M187 Unimproved Roads-PASER Manual
- M188 Sealcoats-PASER Manual

- M189 Pavement Preservation Checklist Series - Diamond Grinding of Portland Cement Concrete Pavements
- M190 Pavement Preservation Checklist Series- Dowel-Bar Retrofit for Portland Cement Concrete Pavements Checklist
- M191 Pavement Preservation Checklist Series- Partial Depth Repair of Portland Cement Concrete Pavements
- M192 Pavement Preservation Checklist Series- Full-depth Repair of Portland Cement Concrete Pavements
- M193 Pavement Preservation Checklist Series- Hot In-place Asphalt Recycling Application Checklist
- M194 Pavement Preservation Checklist Series- Cold In-place Asphalt Recycling Application Checklist
- M195 Pavement Preservation Checklist Series- Slurry Seal Application Checklist

Planning & Administration

- PA079 Management and Supervisory Skills for Managers in Local Government
- PA081 Administration of Bridge Inspection
- PA082 Organization
- PA083 Personnel
- PA084 Financial Management
- PA085 Tort Liability
- PA086 Road Programming
- PA087 Caring for Our Nation's Waters
- PA089 Our Nation's Highways - Selected Facts and Figures
- PA090 A Summary: Transportation Programs and Provisions of the Clean Air Act Amendments of 1990
- PA091 Guidelines for Evaluating Fluorescent Strong Yellow Green Crossing Signs
- PA092 Implementation of Geographic Information Systems (GIS) in State DOTs
- PA093 Distress Identification Manual for the Long-Term Pavement Performance Project
- PA094 Effective Technical Writing
- PA095 Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities, Transportation Facilities, Transportation Vehicles
- PA096 Americans with Disabilities Act, Title II Technical Assistance Manual
- PA097 Americans with Disabilities Act Title III Technical Assistance Manual
- PA098 Local Low Volume Roads and Streets
- PA099 The Appraisal Guide
- PA101 Intermodal Surface Transportation Efficiency Act: A Guide to the Congestion Mitigation and Air Quality Improvement Program
- PA102 Searching for Solutions-Bond Financing and Transportation Infrastructure: Exploring Concepts and Roles



- PA103 '95 Asphalt Institute Catalog
- PA104 Transportation Quality in Wyoming Seminar Workbook
- PA105 '95 Statewide Long-Range Plan
- PA106 "You Show Us How" Contest Winners
- PA107 LTAP Resources Directory
- PA108 Purchasing Authority
- PA109 Public Awareness and Support
- PA110 Impact of Land Development on County and Local Transportation System Planning
- PA111 Rural Transportation Planning
- PA112 Solid Waste Management
- PA113 Traffic Operations
- PA114 LTAP News: 1993
- PA115 Traveling With Success: How Local Governments Use Intelligent Transportation Systems
- PA129 "You Show Us How" Contest Winners
- PA130 Primer: GASB 34
- PA131 Asset Management Primer
- PA132 Data Integration Primer
- PA133 Life-Cycle Cost Analysis Primer
- PA134 Successful Supervision for Local Road Supervisors

Safety & Traffic

- ST061 Work Zone Traffic Control Information Catalog
- ST062 A Users' Guide to Positive Guidance (3rd Ed.)
- ST064 Safety Features for Local Roads and Streets
- ST065 Utility Poles: A Highway Safety Concern
- ST066 Sign Fabrication, Installation, and Maintenance-- Innovative Practices
- ST067 Vegetation Control for Safety: a Guide for Street and Highway Maintenance Personnel
- ST069 Quality Standards for Work Zone Traffic Control Devices
- ST070 Breakaway Timber Utility Poles
- ST071 The Breakaway Timber Utility Pole: A Survivable Alternative
- ST072 Truck Escape Ramps
- ST074 A Guide to Mailbox Safety in Montana
- ST075 The Elimination or Mitigation of Hazards Associated with Pavement Edge Drop-Offs During Roadway Resurfacing
- ST076 Workshop on Field Inspection and Rehabilitation of Traffic Control Devices
- ST077 Guidelines for Traffic Control in Work Zones
- ST103 Traffic Safety Digest-A Compendium of Innovative State and Community Traffic Safety Projects
- ST104 Read Your Road
- ST105 Wyoming Winter Driving Book
- ST106 Roadway Safety Guide
- ST107 Signing for Local Roads
- ST108 Basic Traffic Control for Utility Operations
- ST109 Traffic Control Handbook for Mobile Operations at Night
- ST110 Traffic Signing Handbook

LOAN PUBLICATIONS

Design & Construction

- DCR100 Railroad-Highway Grade Crossing Handbook, Second Edition.
- DCR101 Railroad-Highway Grade Crossing Signal Visibility Improvement Program
- DCR102 Subsurface Utility Engineering
- DCR103 Earth Modification Using Geosynthetics
- DCR104 Geotextiles in Transportation Applications
- DCR105 Metric Guide for Federal Construction, 1st Ed.
- DCR106 Metric Conversion Manual
- DCR107 Differential GPS Explained
- DCR108 GPS--A Guide to the Next Utility
- DCR109 Standard Specifications for Public Works Construction, 1991 Edition
- DCR110 Construction Manual for Highway Construction
- DCR111 A Policy on Geometric Design of Highways and Streets
- DCR112 Economic Design of Low-Traffic Roads
- DCR113 Residential Street Design and Traffic Control
- DCR114 Amoco Professional Development Series: Geotextiles in Transportation
- DCR115 Timber Bridges: Design, Construction, Inspection, and Maintenance
- DCR116 Stormwater Management & Drainage
- DCR117 Proceedings - 7th International Conference on Low Volume Roads
- DCR118 Highway Design Handbook For Older Drivers and Pedestrians
- DCR119 Guidelines for Geometric Design of Very Low-Volume Local Roads
- DCR120 Standard Specifications for Transportation Materials and Methods of Sampling and Testing: Part 1 - Specifications
- DCR121 Standard Specifications for Transportation Materials and Methods of Sampling and Testing: Part 2 - Tests
- DCR122 Highway Safety Design and Operations Guide - 1997
- DCR123 Evaluation of the Geo-Con VERT Wall System
- DCR124 Evaluation of the TRICON Retained Soil Wall System
- DCR125 Evaluation of the Inter-Lok Retaining Wall System
- DCR126 Guide for the Planning, Design, and Operation of Pedestrian Facilities
- DCR127 Cross-Reference for Drainage Pipe Specifications for Waterways, Airports, Railroads, Transit and Highways
- DCR128 A Guide for Achieving Flexibility in Highway Design
- DCR129 Guide to Standardized Highway Drainage Products
- DCR130 The Use and State-of-the-Practice of Fiber Reinforced Concrete
- DCR131 Implementation Manual for Quality Assurance
- DCR132 Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals - 4th Edition
- DCR133 Quality Assurance Guide Specification
- DCR134 AASHTO LRFD Bridge Design Specifications
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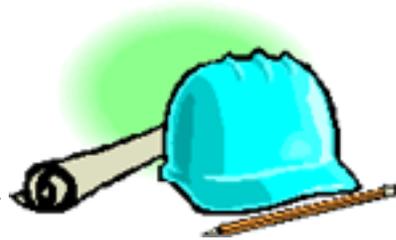
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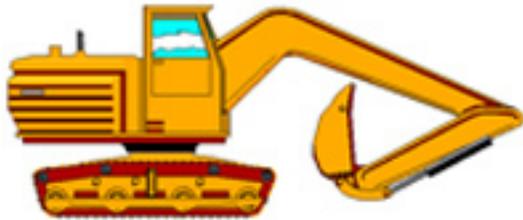


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George Huntington, P.E.
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