

MDT DETAILED DRAWINGS – SEPTEMBER 2014 EDITION SUPPLEMENTAL RELEASE (JULY 2016) SUMMARY

Note: All Detailed Drawings have an Effective Date of September 2014, unless there is an effective date noted in the Supplemental column of the table below.

For more detailed information on these drawings or any of the drawings not listed, please e-mail: mdtdetaileddrawings@mt.gov or contact the Construction Administration Services Bureau at (406) 444-0464. You may also contact the MDT/MSU Design Section at (406) 994-1859 for any inquiries or comments on the Detailed Drawings.

Detailed Drawing No.	Supplemental Release Date	Detailed Drawing Title	Remarks
TTL1	July 2016	Title Sheet	Update to reflect new supplemental release date.
TOC1		Table of Contents	
TOC2		Table of Contents	
TOC3	July 2016	Table of Contents	Update to reflect Dtl. Dwg's. changes.
TOC4	July 2016	Table of Contents	Update to reflect Dtl. Dwg's. changes.
TOC5	July 2016	Table of Contents	Update to reflect Dtl. Dwg's. changes.
TOC6	July 2016	Table of Contents	Update to reflect Dtl. Dwg's. changes.
TOC7	July 2016	Table of Contents	Update to reflect Dtl. Dwg's. changes.
101-05		Abbreviations	
101-06		Abbreviations	
101-07		Abbreviations	
101-08		Abbreviations	
101-10		Symbols	
203-05		Approaches	
203-20		Ditch Blocks	
208-00		Schedule of Best Management Practices	
208-04		Hydraulic Mulch (SS-3)	
208-08		Soil Binders (EC-5)	
208-10		Straw Mulch (EC-6)	
208-12		Rolled Erosion Control Products (EC-7)	
208-16		Earth Dikes/Drainage Swales & Lined Ditches (EC-9)	
208-18		Temporary Outlet and Velocity Dissipation Devices (EC-10)	
208-20		Temporary Slope Drains (EC-11)	
208-22		Slope Roughening (EC-12)	
208-26		Vegetated Buffer (EC-14)	
208-30		Silt Fence (SC-1)	
208-32		Design Basin (SC-2)	
208-34		Sediment Trap (SC-3)	
208-36		Check Dams (SC-4)	
208-38		Fiber Rolls (SC-5)	
208-40		Gravel Bag Berm (SC-6)	
208-42		Sand Bag Barriers (SC-8)	
208-44		Straw Bale Barriers (SC-9)	
208-46		Storm Drain Inlet Protection (SC-10)	
208-48		Dugout Ditch Basin (SC-11)	
208-56		Stabilized Construction Entrance/Exit (TC-1)	
208-58		Entrance/Exit Tire Wash (TC-3)	
208-60		Temporary Stream Crossings (NS-4)	
301-00		Roadway Embankment at Bridge End	
411-02		Shoulder Rumble Strips	
411-05		Centerline Rumble Strips	
501-00		PCCP Joints	
501-05		PCCP Isolation Joints	
501-10		PCCP Isolation Joints	
501-15		PCCP Repair	
501-20		Dowel Bar Retrofit for PCCP	
501-25		Dower Bar Retrofit for PCCP	
552-00		Concrete Cutoff Walls For Culverts	

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Detailed Drawing No.	Supplemental Release Date	Detailed Drawing Title	Remarks
552-04		Concrete, Riprap and Bedding Material Quantities For Sing. and Dbl. Culvert Installation	
552-06		Concrete, Riprap and Bedding Material Quantities For Sing. and Dbl. Culvert Installation	
552-08		Concrete, Riprap and Bedding Material Quantities For Sing. and Dbl. Culvert Installation	
603-02		CMP Flared End Terminal Section (FETS)	
603-08		Prefabricated RCP Flared End Terminal Section (FETS)	
603-08		Prefabricated RCP Flared End Terminal Section (FETS) (Metric)	
603-10		Prefabricated RCP Arch Flared End Terminal Section (FETS)	
603-12		RCP Road Approach Culvert End Treatment (RACET)	
603-14		CMP Road Approach Culvert End Treatment (RACET)	
603-17		Precast Median U-Turn Cross Drain and Conc. Beveled End	
603-18		Bedding for Mainline & Public Approach Culverts 48" (1200mm) Equivalent & Smaller	
603-19		Bedding for Culverts 54" (1350 mm) Equivalent or Larger	
603-20		Trench Bedding Detail	
603-22		Water Tight Joint For Reinforced Concrete Pipe	
603-24		Reinforced Concrete Pipe Joint	
603-26		Typical Field Cast Concrete Connections	
603-27		CTX Adapter	
603-28		Embankment Protector	
603-30		Vehicular Underpass and Backfill Retainer & Cutoff Wall Detail	
603-30		Vehicular Underpass and Backfill Retainer & Cutoff Wall Detail (Metric)	
603-31		Vehicular Underpass PCCP Transverse Joint & Backfill Retainer Detail	
603-32		Step Bevel For Circular Metal Culvert	
603-34	July 2016	Bevel on Arch Metal Culvert	Updated arch pipe areas.
603-36		Corrugated Steel Pipe Stockpass	
604-00		Median Inlet	
604-02		Concrete Manhole	
604-03		Curb Inlet Type II	
604-04		Drop Inlet Type IV	
604-06		Type IV Drop Inlet With Slotted Drain	
604-08		Type II Curb Inlet With Slotted Drain	
604-14		Drop Inlets type I and V	
604-16		Drop Inlets Type III and VI	
604-18		Type A and B Curb Inlets	
605-00	July 2016	Concrete Barrier Rail	New (July 2016) – Moved from 606-60
605-05	July 2016	Concrete Barrier Rail Anchors	New (July 2016) – Moved from 606-62
605-10	July 2016	Tall Concrete Barrier Rail	New (July 2016) – Moved from 606-64
605-15	July 2016	Concrete Barrier Rail Transition	New (July 2016) – Moved from 606-66
605-20	July 2016	Concrete Barrier Rail Terminal Section (One-Way Departure)	New (July 2016) – Moved from 606-68
606-05A		Metal Guardrail Standard - Wood Posts	
606-05B		Metal Guardrail Standard - Steel Posts	
606-07		Stiffened Guardrail Sections	
606-09		Nested W-Beam Guardrail	
606-11A		Metal Guardrail – Long Posts (Wood)	
606-11B		Metal Guardrail – Long Posts (Metal)	
606-13A	July 2016	Optional Terminal Section - ET-PLUS	Note 10 was added to use routed wood blocks or other NCHRP 350 approved blocks
606-13B	July 2016	Optional Terminal Section - SKT 350	Note 9 was added to use routed wood blocks or other NCHRP 350 approved blocks

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Detailed Drawing No.	Supplemental Release Date	Detailed Drawing Title	Remarks
606-18		One-Way Departure Terminal Section	
606-24A	July 2016	Bridge Approach Sections - Wood Posts	STD. BIT. CURB was replaced with STD. CONC. CURB
606-24B	July 2016	Bridge Approach Sections - Steel Posts	STD. BIT. CURB was replaced with STD. CONC. CURB
606-25A		Skewed Bridge Approach Sections - Wood Posts	
606-25B		Skewed Bridge Approach Sections - Steel Posts	
606-26		Tapered Concrete Curb Detail	
606-27	July 2016	Tapered Concrete Curb Detail	Revised Class General Concrete Note
606-30A		Impact Attenuator - Quadguard	
606-30B		Impact Attenuator - TRACC	
606-30B		Impact Attenuator – TRACC (Metric)	
606-30C		Impact Attenuator – Quest	
606-30C		Impact Attenuator – Quest (Metric)	
606-30D		Impact Attenuator - Quadguard II	
606-31A		Impact Attenuator – Quadguard Assembly Details	
606-31B		Impact Attenuator – TRACC Assembly Details	
606-31B		Impact Attenuator – TRACC Assembly Details (Metric)	
606-31C		Impact Attenuator – Quest Assembly Details	
606-31C		Impact Attenuator – Quest Assembly Details (Metric)	
606-31D		Impact Attenuator – Quadguard II Assembly Details	
606-40		Cable Guardrail	
606-41		Cable Guardrail Terminal Anchor Assembly	
606-46		Intersecting Roadway Terminal Section	
606-50		Box Beam Guardrail	
606-52		Box Beam One-Way Departure Terminal Section	
606-53		Box Beam Bridge Approach Section – Types 1 & 2	
606-53A		Box Beam Bridge Approach Section – Type 3	
606-54		Box Beam One-Way Bridge Departure Section	
606-55A		Optional Box Beam Terminal Section - WY-BET	
606-55B		Optional Box Beam Terminal Section - BEAT	
606-56A	July 2016	WY-BET Box Beam Terminal Section Details	Anchor assembly and section pay limits revised
606-56B		BEAT Box Beam Terminal Section Details	
606-58	July 2016	Box Beam to W-Beam Transition Section	Revised 6:1 SLOPE BREAK LINE 10' label
606-60		Concrete Barrier Rail	Rescinded (July 2016) – Moved to 605-00
606-62		Concrete Barrier Rail Anchors	Rescinded (July 2016) – Moved to 605-05
606-64		Tall Concrete Barrier Rail	Rescinded (July 2016) – Moved to 605-10
606-66		Concrete Barrier Rail Transition	Rescinded (July 2016) – Moved to 605-15
606-68		Concrete Barrier Rail Terminal Section (One-Way Departure)	Rescinded (July 2016) – Moved to 605-20
606-80		Schedule of Guardrail Hardware	
606-82		Guardrail Hardware	
606-84		W-Beam Metal Guardrail Hardware	
606-88		W-Beam Metal Guardrail Hardware	
606-92		Cable Guardrail Hardware	
606-94		Cable Guardrail Hardware	
606-95		Cable Guardrail Hardware	
606-97		Box Beam Guardrail Hardware	
606-98		Box Beam Guardrail Hardware	
606-99		Box Beam Guardrail Hardware	
607-00		Farm Fence	
607-01		Wildlife Friendly Fence	

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Detailed Drawing No.	Supplemental Release Date	Detailed Drawing Title	Remarks
607-02		Farm Entrance Gates	
607-05		Fence Details	
607-10		Fence Details	
607-15		Fence Details	
607-20	July 2016	Fencing at Right of Way Breaks	Revised treated 2x6's and added 3-inch exterior grade screws.
607-25	July 2016	Chain Link Fence	Tensioner and brace band removed lower tension wire.
607-30		8' (2.4 m) Wood Snow Fence W/ Anchor System #1	
607-35		12' (3.6 m) Wood Snow Fence W/ Anchor System #1	
607-40		Wood Snow Fence Anchor System #3 and #1 Details	
607-45		Wood Snow Fence Anchor System #2 Details	
607-50		Wildlife Fence	
607-55		Jackleg Wire Fence	
607-60		Jackleg Pole Fence	
608-05	July 2016	Concrete Sidewalk	Vehicle approach detail angle fillets in boulevard like one above
608-15		New Construction Public Sidewalk Curb Ramps	
608-20		Alterations to Existing Facilities - Public Sidewalk Curb Ramps	
608-25		Perpendicular Public Sidewalk Curb Ramps	
608-30		Parallel Public Sidewalk Curb Ramps	
608-35		Diagonal Perpendicular Public Sidewalk Curb Ramps	
608-40		Detectable Warning Devices	
609-00		Concrete Valley Gutter	Revised to show epoxy coated reinforcing bars.
609-05		Miscellaneous Curbs	
609-07		Drop Inlet Aprons	Revised to show epoxy coated reinforcing bars.
609-10		Median Concrete Curbs	
609-12		Concrete Median Caps	
610-00		Topsoil and Seeding	
610-05		Turf Reinforcement Mat (TRM) and Rolled Erosion Control (REC)	Renamed Drawing
	July 2016	Rolled Erosion Control (REC)	
611-00	July 2016	Heavy Duty Cattle Guard Cast-in-Place	Revised SECTION D and added "Heavy Duty" to title.
611-03	July 2016	Cattle Guard Hinged Grate	New (July 2016)
611-05		Cast-in-Place Cattle Guard Rebar Details	
611-10		Light Duty Cattle Guard Precast	
611-10		Light Duty Cattle Guard Precast (Metric)	
611-15		Heavy Duty Cattle Guard - Precast	
611-20		Precast Concrete Cattle Guard Base Details	
613-06		Concrete Edge Protection For Metal Culverts	
613-08		Concrete Edge Protection For Concrete Culverts	
613-10		Concrete Slope Protection	
613-12		Inlet and Outlet Headwalls For RCP and CMP Pipes	
613-14		Culvert Riprap	
613-16		Embankment Protection	Renamed Drawing
	July 2016	Riprap Slope Protection	
613-18		Drainage Chutes	
615-02		Trashguard For Concrete Irrigation Inlet and Outlet Transition Structures	
615-04		Standard Concrete Irrigation Division Boxes	
615-06		Concrete Irrigation Inlet and Outlet Transition For RCP and CSP Pipes	
618-00	July 2016	Channelizing Devices and Object Markers	Changed to 28-inch minimum for flexible guide post.
618-01		Construction Sign Details	
618-02		Portable Sign Support Assembly	

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Detailed Drawing No.	Supplemental Release Date	Detailed Drawing Title	Remarks
618-03		Barricades	
618-04		Two-Lane Construction Project	
618-08		Two-Lane Construction Project Work Zones	
618-10		Two-Lane Construction Project Seal Coat	
618-12		Two-Lane Construction Project Lane Closure – Flagger Controlled	
618-13		Two-Lane Construction Project Lane Closure – Signal Controlled	
618-14		Two-Lane Equipment Entrances	
618-16		Two-Lane Equipment Entrances	
618-18		Two-Lane Construction Project Diversion	
618-20		Divided Four-Lane Construction Project	
618-21		Temporary Entrance Ramp Median Crossing	
618-22		Temporary Exit Ramp Median Crossing	
618-24		Divided Four-Lane Construction Project Work Zones	
618-27		Divided Four-Lane Equipment Entrance	
618-28		Divided Four-Lane Median Crossings	
618-30	July 2016	Temporary Four-Lane to Two-Lane Median Crossing	Changed legend regarding raised rigid pavement markers.
618-32	July 2016	Temporary Two-Lane to Four-Lane Median Crossing	Changed legend regarding raised rigid pavement markers.
618-33	July 2016	Divided Four-Lane Single Lane Closure Lane Shift	New (July 2016)
618-34		Short Duration or Short-Term Stationary Crew Signing	
618-M1		Maintenance Guideline For Short-Term Two-Lane Crack Sealing Work Zone	
618-M2		Maintenance Guideline For Short-Term Two-Lane Chip Seal & Overlay (Piloted Traffic)	
618-M3		Maintenance Guideline For Short-Term Lane Closure on Interstate	
618-M4		Mobile Operations	
618-U01		Lane Closure- Flagger Controlled (Urban Two-Lane, Two-Way Road)	
618-U02		Work Zone Occupies one Half of the Road (Low Speed Urban, Two-Lane, Two-Way Road)	
618-U03		Work Zone in the Center of the Road(Urban Two-Lane, Two-Way Road)	
618-U05		Sidewalk Closures and Bypass Walkway	
618-U10		Crosswalk Closures and Pedestrian Detours	
618-U15		Lane Closure (Urban Two-Lane, Two-Way Road with Two-Way Left Turn Lane)	
618-U16		Turn Lane Closure (Urban Two-Lane, Two-Way Road with Two-way Left Turn Lane)	
618-U20		Right Lane Closure (Urban Multi-Lane, Undivided Road)	
618-U25		Left Lane Closure (Low Speed Urban Multi-Lane, Undivided Road)	
618-U30		Left Lane Closures (Low Speed Urban Multi-Lane, Undivided Road)	
618-U35		Double Lane Closure (Urban Multi-Lane, Undivided Road)	
618-U40		Right Lane Closure – Work Zone Beyond Intersection (Urban Multi-Lane, Undivided Road)	
618-U45		Left Lane Closure – Work Zone Beyond Intersection (Urban Multi-Lane, Undivided Road)	
618-U50		Double Lane Closure at Intersection (Urban Multi-Lane, Undivided Road)	
618-U60		Left Lane Closure (Urban Low Speed, Multi-Lane Undivided Road with Two-Way Left Turn Lane)	
619-00		Sign Clearances and Mounting Heights	
619-00		Sign Clearances and Mounting Heights (Metric)	
619-02		Typical Rural and Urban Approaches	
619-04		Aluminum Sheet Increment Sign Construction Details	
619-06		Plywood Sheet Increment Guide Sign Construction Details	

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Detailed Drawing No.	Supplemental Release Date	Detailed Drawing Title	Remarks
619-08		Guide Sign Clearance and Mounting Details	
619-10		Sheet Aluminum Overlay	
619-12		Tubular Sign Post Details	
619-13		Breakaway and Foundation Details For Multiple Guide Sign Supports	
619-13		Breakaway and Foundation Details For Multiple Guide Sign Supports (Metric)	
619-14	July 2014	Square Tubular Sign Post Breakaway Devices	Revised SUPPORT and CORRESPONDING ANCHOR table
619-16		Typical Steel Post Mounting Details	
619-18		Cantilever Type Sign Support Details For Sidewalk Areas	
619-19		Structural Steel Post Sign Mounting Details	
619-20		Treated Wood Pole Sign Mounting and Support Details	
619-21		Treated Wood Pole Sign Mounting Details	
619-22		Treated Wood Pole Optional Backbrace	
619-24		Chevron Mounting Details	
619-26		Special Design Route Marker Panels and Shields	
619-30		Sign Hinge Details	
619-32		Milepost (Reference Post) Details	
619-34		Delineator Details	
619-36		Delineator Placement Details	
619-38		Object Marker Design and Placement Details For Obstructions Adjacent to or Within Highways	
619-40		Flexible Delineators	
619-42		Permanent Barricade Design Details	
619-44		Installation Date Tags	
620-00		Pavement Markings (Letters)	
620-05		Pavement Markings (Numbers)	
620-10		Pavement Markings (Words)	
620-15		Pavement Markings (Arrows)	
620-20	July 2016	Pavement Markings (Symbols)	Revised accessibility parking space areas and added note to use standard symbol unless contract states otherwise.
620-25		Pavement Markings (Symbols)	
621-00		Manhole and Valve Box Adjustment Details	
621-05		Optional Manhole and Valve Box Adjustment Details	
623-10		Approach Mailbox Turnout	
623-15		Mailbox Turnout	
623-20		Mailbox Detail	
623-25		Optional Mailbox Detail	
623-30		Temporary Mailbox Support	
623-35		Temporary Mailbox Support Bracket Details	
900-00		U-Turn Median Openings on Controlled Access Highways	
900-15	July 2016	Adjustable Monument Box	Revised Note 3 regarding the requirements of a Montana Licensed Professional Land Surveyor.