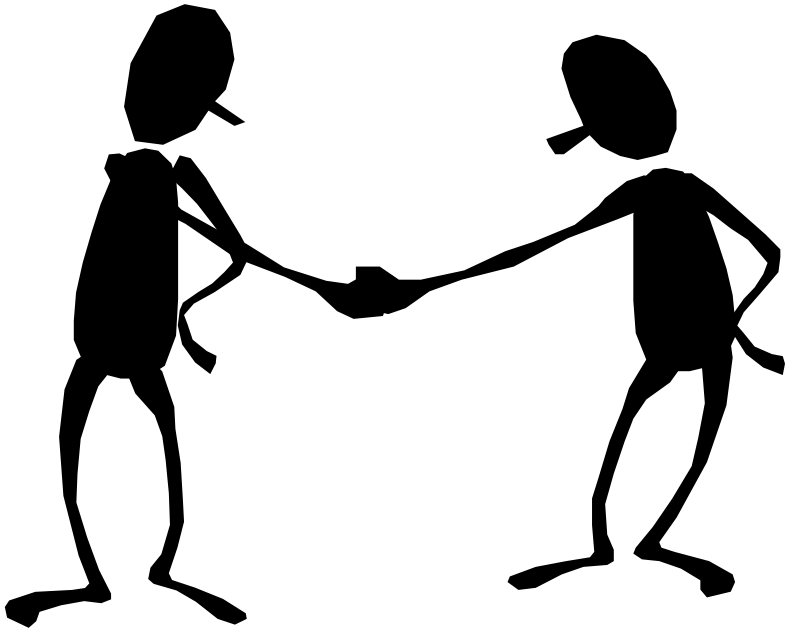
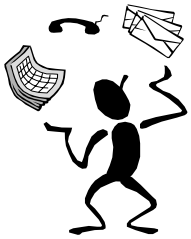
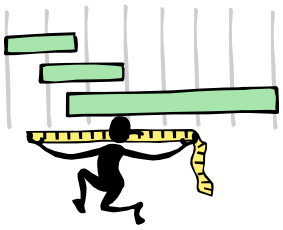
Guide to the System Impact Process







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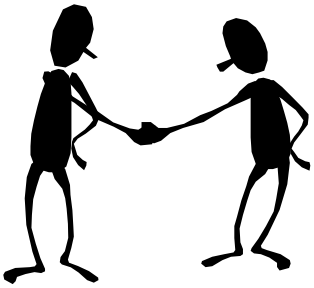
Working Together To Preserve Montana's Transportation System



The System Impact Action process is a coordinated review of projects initiated outside of MDT that may significantly and permanently impact the transportation system. The goals of this process include:

- Provide an avenue for private developers to request access to and from the state highway system.
- Facilitate a timely review of the developers request amongst a varied group of MDT Technical offices
- Identify reasonable accommodation of the developer's project needs
- Preserve the safety and efficiency of Montana's transportation system.
- Protect taxpayer investments by recovering costs from developers for their project's impacts to the transportation system.
- Ensure MDT permitting does not precede an environmental process (NEPA/ MEPA)

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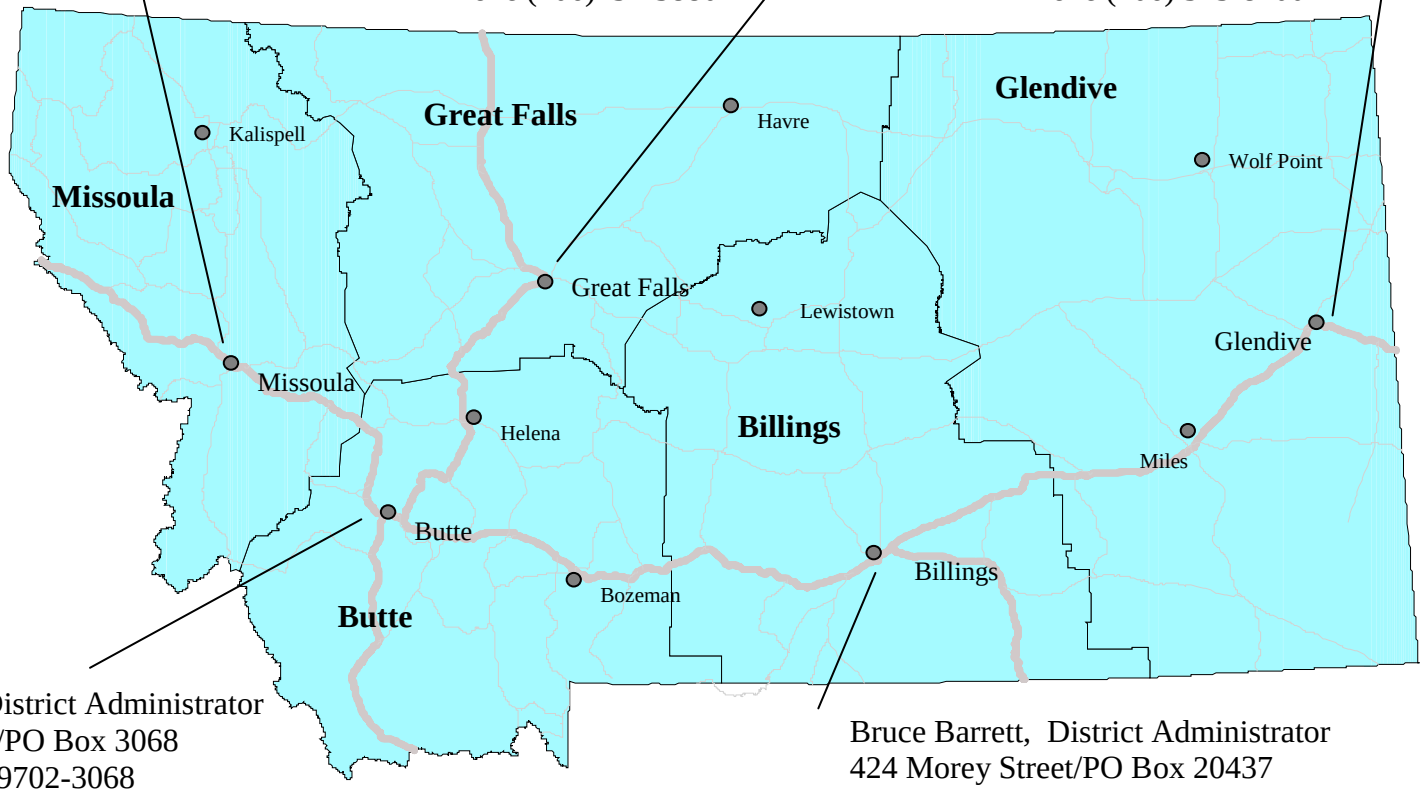

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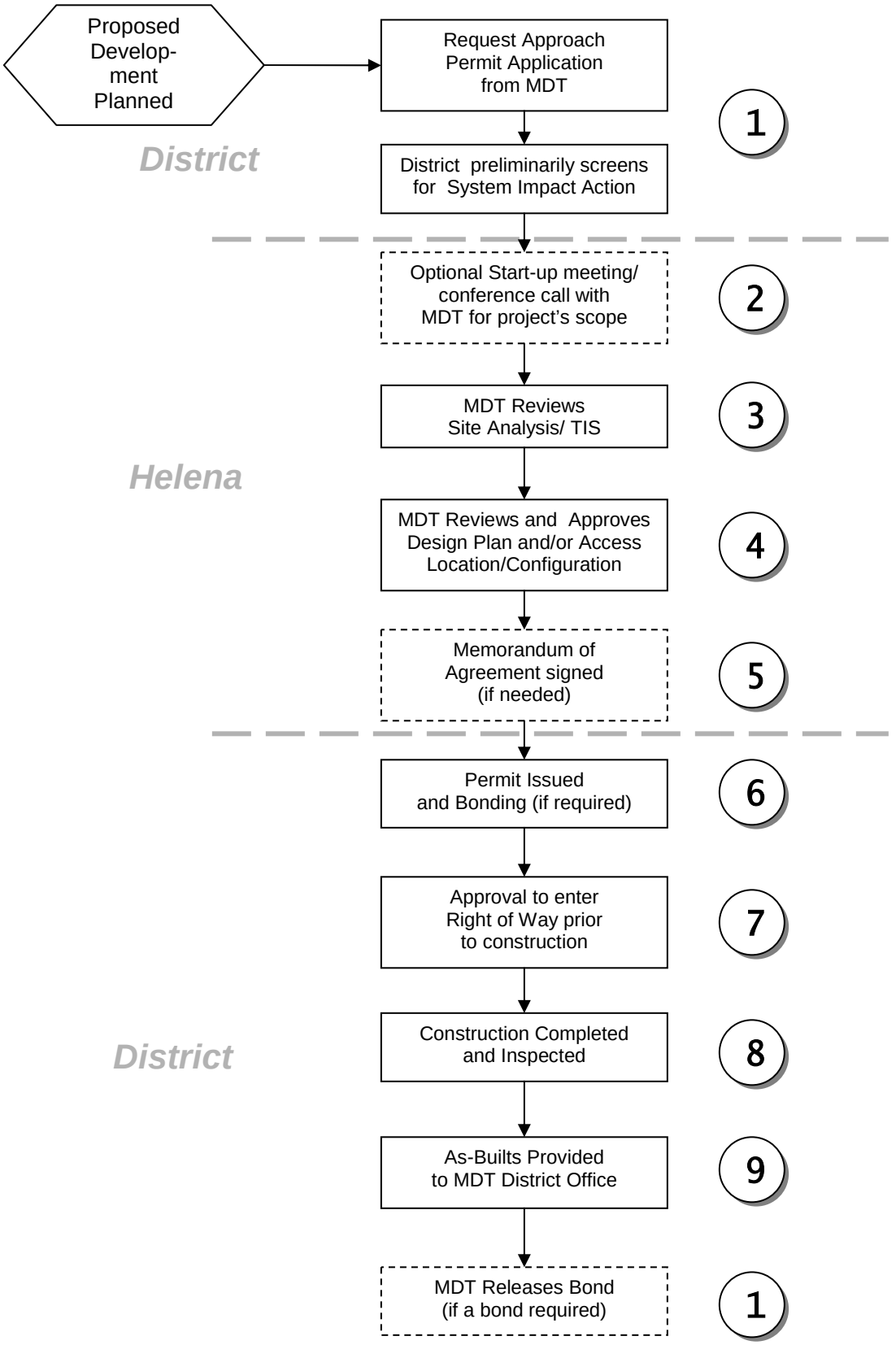
System Impact Action Process



See following process steps for defi-nition and submittal requirements

System Impact Action Process Steps

1. Developer submits an approach or utility permit application to MDT-District Office.

Permit Application

Environmental Checklist

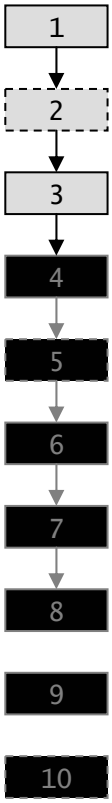
Completed By the District Office

2. The optional Start-up meeting with MDT is to scope new projects with the developer(s) and/or their consultants. This meeting is to determine the detail needed for system impact assessment, whether it is a high-level site analysis or an in-depth Traffic Impact Study. If you have worked with MDT on prior projects, you may opt to go directly to activity three.

3. MDT reviews the Site Analysis/Traffic Impact Study and identifies conditions for concurrence with the developments identified needs and the associated impacts and mitigation measures to be addressed.

The time required to review and approve the Study is directly related to the quality of the analysis and recommendations. If the study is sub-standard the Developer/Consultant must correct the document and resubmit.

Site Analysis
and/or
Traffic Impact



System Impact Action Process Steps

4. MDT approves Access Location and/or Design Plan provided by developer. The complexity of this activity is dependent on size and type of development, the location of the project site and the level of access control existing on the associated transportation facility.

Final Roadway Improvement Plans

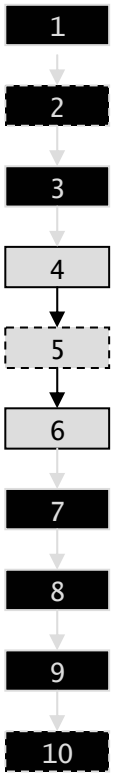
Final Signal Plans (if needed)

5. If determined in the previous activities that a Memorandum of Agreement (MOA) is needed for this project, both the developer and MDT must sign before proceeding on to the next activity. The MOA defines the agreement of responsibilities between MDT and the Developer. *The local government (City/County) participates in the mitigation decisions and concurs with the MOA.*

Review and Sign MOA

6. MDT District office issues the permit. If a bond is required, it must be in place prior to MDT issuing the permit.

Construction Bond (if req'd)



System Impact Action Process Steps (continued)

7. The developer must gain approval from MDT's District Office to enter the right-of-way prior to beginning construction. It is required that an approved Traffic Control Plan be submitted at this time.

Traffic Control Plan

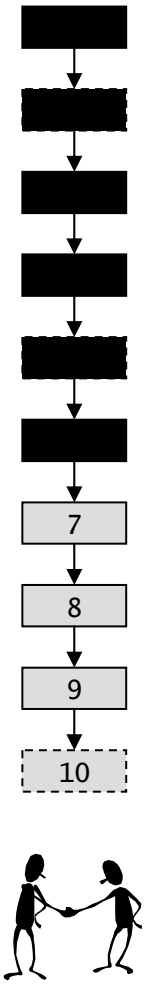
8. Construction is complete for the road system impacts. The district must inspect the project to the permit or MOA conditions. The developer/consultant must forward the inspection sign-off sheet to MDT Headquarters to be kept on file.

Construction Inspection Signoff

9. As-built plans must be provided to the MDT District Office to be kept on file.

As-Built Plans

10. As agreed with the terms of the bond, MDT releases the bond.



Timeline for System Impact Action Process

Step	Item	1	Project Dependent	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Construction
1	Project Identified as a System Impact Action																			
2	Study Scope Meeting or Conversation with Developer																			
2	Complete Traffic Impact Study or Site Analysis																			
2	Clear Other Agencies																			
2	Address Drainage/Hydraulics																			
2	Address R/W and Utilities																			
3	MDT Reviews and Comments			***	***		Per resubmittal													
3	Meeting to Discuss Comments																			
3	Negotiate Mitigations						as needed													
3	Draft MOA																			
4	Develop Preliminary Design Plans																			
4	Review Preliminary Design Plans													***		***				
4	Plan-in-Hand Meeting																			
5	Finalize MOA																			
6	MDT Concurs with Design																			
6	Issue Permit																			
7/8	Implementation and Oversight																			
9	Provide As-Builts to MDT																			
	MDT Actions																			
	Developer/Consultant Actions																			
	Combined Actions																			
	Project Specific																			
	Review time dependent upon the quality of submittal		***																	

Appendix

System Impact Action Criteria

New developments requiring off site improvements will be considered a System Impact Action. The Transportation Planning Division coordinates the review process. The following is a guideline for developments, which may require off site improvements and generally follow the System Impact Action process.

*Developments generating 150 trips per hour **

Type of Land-use Development	**Example**
Commercial	Single Outlet Retail Multi-Unit Retail Development Regional Shopping Center High turn over sit down restaurant Motel Convention Center or Arena
Residential	Single family, Multi Family, etc. (total dwellings may come in multiple phases)
Industrial	Heavy Industrial (generating C-70 or C-50 trucks)
Institutions	Schools adjacent to a State Highway
Offices	General Office Building
Multiple Developments	Commercial/Residential; Light Industrial/Commercial; etc.

** Trips per peak hour where the vehicular trip is defined as a one-way journey of a motorized vehicle*

Developments accessing an Access Control Facility

New Access	New Development
Existing Access	Change in property use: Change in zoning Construction of new buildings Increase in floor space of existing building Division or consolidation of property boundaries Change in the character of the traffic using the approach; or Change in internal circulation design Re-establishment of a property's use, that had been unused for two years

Other proposals/developments transmitted to Transportation Planning for initial evaluation:

- New access roadway request – has the potential to open up existing undeveloped land and would be dedicated public right of way.
- Operational/safety issues that may require engineering solutions such as turn lanes or signals. Includes at-grade or above grade railroad crossing.
- The access would serve a major mine greater than 5 acres
- In cases not meeting the System Impact Criteria, the district must confirm that other state and/or federal permits and environmental analysis are completed. MDT will not issue permits in advance of other permitting.

If it is determined an engineering solution is not needed, the development will NOT continue through the Systems Impact Action Process. Review/coordination reverts to the appropriate District. At anytime the District has uncertainties regarding any project; they may contact the Transportation Planning Division to determine if the project should go through this coordinated review process.

Summary of Submittals
Commonly Required for System Impact Action

Process Flow Step	Submittal	Point of Contact	Comments
1	Permit Application	MDT District Office	Forwards to Headquarters if a System Impact Action
	Physical Environment Checklist		Completes and forwards to Headquarters
3	Traffic Impact Study	MDT Headquarters - Transportation Planning	Determined in initial planning meeting or staff review
	Signal Warrant Analysis		as needed
	Preliminary Roadway Improvement Plans		Must depict location and design
	Preliminary Signal Plans		as needed
	Drainage Report		as needed
	Geologic Analysis		as needed
	Design Exception Request		as needed
	Other Agency Approvals		as needed - Confirmed prior to granting permit
4	Final Roadway Improvement Plans		All MDT Pre. Plan Comments Addressed
	Final Signal Plans		as needed
5	Review Memorandum of Agreement & Respond		as needed
6	Bonding for Construction		as needed
	Traffic Control Plan	MDT District Office	project specific
8	Construction Inspection Sign-Off		as needed
9	As-Built Plans		MDT keeps these on file
	Other items may be required	MDT Headquarters - Transportation Planning	project specific

Addresses and telephone numbers may be found on the introduction and district pages

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MDT Headquarters – Helena Point of Contact

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Definition of Terms

The following definitions are for clarification of terminology used in this handout:

As Built Drawings – The contract drawings which show the actual location, character and dimensions of the completed work, including layouts, profiles, cross sections and other details.

Capacity – The maximum hourly rate at which vehicles can reasonably be expected to traverse a point or uniform section of a lane or roadway during a given time period under prevailing roadway, traffic and control conditions.

Capture Traffic – Those trips which are internal to the site plan making multiple stops within the development.

Cultural Resource – properties that are protected as historic and/or archeological resources.

Department – The Montana Department of Transportation.

Developer - The landowner or otherwise bona-fide applicant of an approach permit or development proposal.

Level of Service (LOS) – A set of criteria that describes the degree to which intersections, roadway, weaving section or ramp can effectively serve peak-hour and/or daily traffic. Levels of service definitions are provided in the Highway Capacity Manual.

MDT – The Montana Department of Transportation.

MOA – Memorandum of Agreement.

MOU – Memorandum of Understanding.

On-Site Circulation – Vehicular network which primarily accommodates site-generated traffic within the site boundary and includes roadways, parking lots loading docks, parking garages and parking deck travelways.

Pass-by Trips – Those trips that are diverted from traffic already on the roadway system.

Site Access Plan - A scaled drawing that explicitly illustrates the location, configuration and geometrics of all site approaches in relation to the local highway system and other approaches. The site access plan should also illustrate the supporting internal circulation, parking and loading facilities of the development, the footprints of key building structures and any out-parcel locations, and the type and location of any required off-site improvements.

System Impact Action Process – An internal MDT process for the review and assessment of development projects that significantly and permanently impact the Sate transportation system.

Traffic Generation – The estimated number of origins from and destinations to a site resulting from the land-use activity on that site.

Traffic Impact – the effect of site traffic on highway operations and safety.

Traffic Impact Analysis – An engineering and traffic study that determines the potential traffic impacts of a proposed traffic generator. A complete analysis includes an estimation of future traffic with and without the proposed generator, analyses of the traffic impacts and recommended roadway improvements that are necessary to accommodate the additional site traffic.

Traffic Impact Mitigation – The reduction of traffic impacts on roadways and/or intersections to an acceptable level of service.

Vehicular Trip – A single or one-way vehicular trip with its origin (i.e. out bound), destination (i.e. inbound) or both trip ends made inside the study area.

Physical Environment Checklist

Resource		Yes	No
1	Does your project have an impact on any cultural resource? (Section 106)		
2	Does your project have an impact on air, noise or water quality?		
3	Does your project have impacts to wetlands?		
3a	If the answer to number 3 is yes, is a Clean Water Act ' 404 permit authorization required?		
4	Is there documented controversy on environmental grounds? (ex. Has the applicant received a letter or petition from an environmental org.?)		
5	Does the proposed project involve hazardous waste site(s)? (ex. Superfund, spills, underground storage tanks, etc.)		
6	Does the proposed project require other governmental permits, licenses, easements, etc.? If the answer is "yes" please describe in detail the full extent of the project and any other permits, licenses, easements, etc., which may be necessary for the utility to acquire.		
7	Does the propose project permanently impact the transportation network in terms of increased traffic volumes, increased weight or increased delays on state roadways?		
8	Does the proposed action have permanent impacts on other forms of transportation (rail, transit or air movements)?		
9	Does your proposed action alter drainage patterns or increase runoff to the highway facilities or Right of Way		

A. The applicant shall complete the checklist indicating a "Yes" or "No" for each item. The applicant shall complete the checklist indicating a "Yes" or "No" for each item.

B. When a "Yes" is indicated on any items, the applicant must explain the impacts. (Use When a "Yes" is indicated on any items, the applicant must explain the impacts. (Use attachments) If the applicant checks "No", and the District indicates there may be potential attachments) If the applicant checks "No", and the District indicates there may be potential attachments) If the applicant checks "No", and the District indicates there may be potential impacts, the item will be forwarded to Environmental Services.

C. These impacts must be mitigated with the proper Agencies prior to permit issuance.

C1. Section 106 impacts require coordination between MDT, FHWA, State Historic Preservation Office & Advisory Council on Historic Preservation #1.

C2. Montana Department of Environmental Quality approves mitigation measures for #2 and #5.

C3. Army Corp of Engineers approves of mitigation measures for #3.

C4. Montana Department of Transportation approves mitigation measures for #6, #7, #8 and #9.

C5. Montana Association of Conservation Districts publishes "A Guide to Stream Permitting in Montana". All permits regarding floodplains, wetlands, streambanks and streambeds are addressed in the pamphlet.

D. The applicant will obtain all necessary permits or authorizations from other entities with The applicant will obtain all necessary permits or authorizations from other entities with jurisdiction prior to beginning construction of the project.

Montana Department of Transportation
Traffic Impact Study Checklist

Report Item	Details	√
Project Description		
Site Plan	Development (scaled)	
	w/ Neighboring area (scaled)	
	Plans should include a "best estimate" of future development	
Development Phasing and Timing	Multiple Stages (?)	
Existing Traffic Volumes (Base)	Current Daily and Hourly Volumes	
	Recent Intersection Turning Movements	
Existing Traffic Conditions	Lane Configuration (Adjacent Roadways & Intersections)	
	Traffic Control devices	
	Transit Service	
	Level of Access Control	
Projected Traffic	Trip Generation per ITE	
	AM / PM peaks ADT (others as needed)	
	Pass-By and CaptureTraffic	
	Trip Distribution	
	Approach and Roadway Assignment	
	Full development (Projected base + site traffic)	
Traffic Analysis	Capacity Analysis and LOS	
	Existing (base non-site traffic)	
	Full development (Existing + site traffic)	
	Traffic Operation - Access Design	
	Traffic Operation - Lane Assignment	
	Site Circulation and Parking (Impact on accessibility)	
	Pedestrian Access Considerations	
Truck Access	Approach - delivery vehicles use (Identify)	
	Turning Movements - sufficient radius of turn	
Other Transit Considerations	Rail, Bus and Bicycle (Site Dependent)	
Improvement Analysis	Accommodate Site Access	
	Accommodate Adjacent Roadway and Intersection Function	
	Alternatives	
Conclusions and Recommendations	Including Mitigations Developer Commits to	
Appendices	Traffic Counts	
	Capacity Analyses Worksheets	
	Traffic Control Needs Studies	
	Traffic Signal Needs Studies	

MDT attempts to provide accommodations for any known disability that may interfere with a person participation in any service, program or activity of the Department. Alternative accessible formats of this information will be provided upon request. For further information call (406) 444-6111 or TDD (406) 444-7696.