



A Summary of Engineering Design Development Requirements

ISSUED 05/06/04

The following is a list of important design considerations that apply to all development projects in the City of Lewiston. The intent is to bullet the design standards by which projects are reviewed by the City's Engineering Division. This list should not be considered all-inclusive, nor represent the standard by which they are met. It is the developer's responsibility to be aware of and conform to the Code of Ordinances and Standard Specifications for the City of Lewiston as well as various State and Federal codes and regulations. This is a living document.

1. GENERAL PROVISIONS

- 1.1. Demonstration that all engineering standards have been met is incumbent on the developer.
- 1.2. All materials installed in an existing or proposed City Right of Way shall meet City standards.
- 1.3. Predesign meeting, attended by the developer's technical representative, will be held with the City's Engineering Division prior to the start of design to discuss, in depth, Stormwater Management, Traffic Analysis, Water, Sewer, and other issues that may arise.
- 1.4. Preconstruction meeting, attended by both the developer and the contractor, will be held with the City's Engineering Division prior to the start of construction on all projects within an existing or proposed City Right of Way.
- 1.5. Construction Erosion Control Plans are required for all projects. As a result of Stormwater Pollution Control Regulations implemented in June 2003, a Maine Construction General Permit (MCGP) will be required for projects disturbing 1 acre or more of surface area.
- 1.6. Excavation, Street Opening and Street Occupancy Permits are issued by the Department of Public Works. Other permits (Building, Sign, Occupancy, etc.) are issued by the Planning and Code Enforcement Division.
- 1.7. A traffic analysis to determine Passenger Car Equivalency (PCE) at peak hour shall be completed. Special M.D.O.T. provisions are triggered when developments generate 100 PCE or more. Additional M.D.O.T. provisions are triggered once the 200 PCE threshold is exceeded. A traffic engineer may be required to design parking lots, access roads, driveways, etc.

- 1.8. The City has the right to hire consultants, at the applicant's expense, to review submittals.
- 1.9. Easements for access and maintenance of Municipal Infrastructure (water, sewer, storm etc.) shall be provided to the City. The width of the easement will be based on type of system.

2. Storm Water Management

2.1. Street & Site Issues

- 2.1.1. A Storm Water Management plan, designed by a professional engineer, is required for all projects unless project is deemed by the City's Engineering Division to have a negligible impact on abutters and/or City systems.
- 2.1.2. Design storm frequencies are 2, 10 and 25 year, except where the receiving waters were designed for certain design storm. Examples of such receiving waters are Stetson Brook, Jepson Brook, Hart Brook and Androscoggin River and include developments at the Fairgrounds and South Park business parks.
- 2.1.3. Post development peak flows off the property must be less than or equal to predevelopment peak flows. An increase in storm water runoff may be allowed, on a case by case basis, in areas where the runoff is conveyed directly to the Androscoggin River or other tributary system, at the discretion of the City Engineer.
- 2.1.4. Additional storm flows are not permitted in Combined Sewer Overflow (CSO) areas.
- 2.1.5. "Maine Erosion and Sediment Control Handbook for Construction: Best Management Practices (BMP's) latest revision, shall be used to prevent erosion and storm water pollution during and after construction.
- 2.1.6. Upstream flows shall be included in the Storm Water Management Plan.
- 2.1.7. The developer shall demonstrate that storm water receiving systems, be they storm drains or roadside ditches, are capable of accepting any increase in flow.
- 2.1.8. Street underdrains are required for new streets. When storm or underdrains are installed, storm water services shall be installed to the property line for each lot. As built GPS coordinates shall be provided for each service at its intersection with the property line.

2.2. Site Issues

- 2.2.1. Redevelopment of existing sites where storm water is conveyed into a sanitary sewer must be separated.
- 2.2.2. Runoff shall not be discharged directly onto a City street.
- 2.2.3. Runoff from roof drains and building perimeter drains are considered storm water.
- 2.2.4. Development meeting any of the following criteria is required to

meet Stormwater Quality Standards:

- 20,000 sq. ft. or more of impervious area
- Located in direct watershed of No Name Pond
- 1 ac or more of impervious area or 5 ac or more of disturbed area that discharge directly 10+ ac wetlands listed on the City of Lewiston Fresh-Water Wetland Maps prepared by the MDEP. Refer to MDEP stormwater regulations.

3. Sanitary Sewer

3.1. New and Existing Sites

- 3.1.1. Determine whether the site will utilize public or private disposal?
- 3.1.2. Determine volume/flow that will be generated.
- 3.1.3. Size disposal or conveying system to meet engineering or code requirements,
- 3.1.4. Sewer service is privately owned to the public sewer main or manhole.
- 3.1.5. Impact fees are assessed for sanitary sewer connections.

3.2. Existing Streets

- 3.2.1. Existing streets without sewer service are subject to the Sewer Extension Policy, proposed streets and developments are not.
- 3.2.2. Onsite disposal is not allowed if a City sewer main is within 100 feet of the property line.

3.3. New Streets

- 3.3.1. The new sewer main shall service all lots.
- 3.3.2. Determine the capacity of the receiving system to handle additional flow.
- 3.3.3. Sewer services shall be installed to the property line for each lot by the developer. As built GPS coordinates shall be provided for each service at its intersection with the property line.

4. Water Main

4.1. Site Issues

- 4.1.1. Determine fire protection requirements.
- 4.1.2. Determine domestic service requirements.
- 4.1.3. All water service connections are metered and a usage fee is assessed.

4.2. Street Issues

- 4.2.1. Installations of new water mains (8" min.) are subject to PUC Water Main Extension Rules.
- 4.2.2. Size and configuration need to be determined.
- 4.2.3. All water main materials in the City's ROW shall be in accordance with City standards and are purchased from the City.
- 4.2.4. The street configuration should limit dead end water mains.
- 4.2.5. Dead end water mains, if necessary, shall extend to the centerline of the last lot or 40' past the last service, whichever is further.

- 4.2.6. All lots shall be serviced to the property line. All water services are the property of the City from main to the property line. As built GPS coordinates shall be provided for each service at its intersection with the property line.
- 4.2.7. Services shall be perpendicular to the main and intersect the center of the lot.

5. Streets

- 5.1. Street sections shall be designed and detailed in accordance with City Ordinances and standards.
- 5.2. In addition to the preconstruction meeting, a prepaving meeting shall be held with the City's Engineering Division prior to the start of any paving operations.
- 5.3. Inspections and Materials Testing Requirements
 - 5.3.1. Subgrade materials shall meet City specifications for gradation prior to placement.
 - 5.3.2. Subgrade materials shall meet City specifications for density prior to any paving operations.
 - 5.3.3. Only DOT approved pavement mixes will be allowed.
 - 5.3.4. Each layer of pavement shall have cores cut in order to measure thickness and test density, unless a densometer is used.
 - 5.3.5. Manholes and catch basins shall meet City standards.
 - 5.3.6. Underground utilities and piping shall meet City and/or utility company standards.
- 5.4. The developer shall pay the City's Highway Division for the cost of furnishing and installing street signs.
- 5.5. Street Acceptance Requirements
 - 5.5.1. The City is petitioned to accept the street thru a letter to the Department of Public Works Director.
 - 5.5.2. The City's Engineering Division conducts a final inspection.
 - 5.5.3. As built drawings of the street are provided to the City Engineer.
 - 5.5.4. The City determines that all conditions and standards have been met.
 - 5.5.5. Easements and Covenants for maintenance of public infrastructure and utilities located on private property are reviewed and accepted by the City Engineer.
 - 5.5.6. Individual legal descriptions of street/streets is/are reviewed and accepted by the City Engineer.
 - 5.5.7. Individual Quit claim deed/deeds conveying the street/streets to the City is/are reviewed by the City Engineer.
 - 5.5.8. The City Clerk carries out the remaining activities.

6. Final Documents and files for Engineering Division records.

- 6.1. One hard copy of approved street and/or site plans from Planning and Code Enforcement Department.
- 6.2. As Built digital version of Site and/or Subdivision Plans delivered on

Compact Disk as required.

7. The Engineering Division Phone: 784-5753 ext. 205

It is the developer's responsibility to be aware of and conform to the Code of Ordinances and Standard Specifications for the City of Lewiston as well as various State and Federal codes and regulations. This is a living document. These Design Development Requirements will become part of the "SITE PLAN REVIEW & DESIGN GUIDELINES" which is currently being updated by the Planning Division.