

## Chapter 1. GENERAL REQUIREMENTS

---

### 1.1 Authority & Purpose

#### 1.1.1 Title

These regulations, together with all future amendments, shall be known as the City of Northglenn PUBLIC RIGHT OF WAY STANDARDS AND SPECIFICATIONS, Latest Edition, and may be cited as such and will be referred to herein as the STANDARDS AND SPECIFICATIONS.

#### 1.1.2 Applicability

These STANDARDS AND SPECIFICATIONS shall apply to construction, enlargement, alteration, relocation, removal, conversion, demolition, repair, and excavation of any public improvements or private improvements of common ownership specifically regulated herein. The provision of these STANDARDS AND SPECIFICATIONS applies to City contracts as well as to contracts made for the development of property in the City and other construction within the Right of Way. In the case of City capital improvement contracts, the project specifications may supersede or modify these STANDARDS AND SPECIFICATIONS.

The City's review and acceptance of any plans, reports or drawings or the City's inspection and approval of any improvement constructed by the Developer or by City contracted Designers and Contractors in accordance to these Standards, does not constitute a representation, warranty, or guarantee by the City that such improvements are free from defects or will operate adequately for the purpose intended.

Alterations, additions, or repairs to existing improvements shall comply with all requirements of these STANDARDS AND SPECIFICATIONS unless specifically exempted, in writing, by the City. The City retains the right to require additional information, criteria, or requirements as conditions may warrant.

The chapters and appendices that make up these standards pertain to planning, design, review and acceptance, construction, inspection, testing and documentation of infrastructure improvements. The intent of this manual is to establish the minimum acceptable standards for the design of infrastructure public improvements in the City.

#### 1.1.3 Resource Standards

The following Resource Standards (the latest editions unless otherwise stated) may be used as reference material when certain design or construction methods and materials are not specifically addressed in these STANDARDS AND SPECIFICATIONS and require approval of the Engineering Division.

##### List of Resource Standards for References

- Colorado Department of Transportation, Standard Specifications for Road and Bridge Construction.
- Colorado Department of Transportation, Standard Plans (M & S Standards).
- Colorado Department of Transportation, Roadway Design Manual.
- American Public Works Association, Standard Plans.
- American Association of State Highway and Transportation Officials, A Policy on Geometric Design of Highways and Streets.
- Institute of Traffic Engineers (ITE), Trip Generation Volumes 1 through 3.

- National Cooperative Highway Research Program (NCHRP) Report 279, Intersection Channelization Design Guide, 1985.
- Institute of Traffic Engineering, Highway Capacity Manual.
- ASTM, American Society for Testing and Materials.
- The American with Disabilities Act, (A.D.A.) Regulations.
- US Department of Transportation, Manual on Uniform Traffic Control Devices (M.U.T.C.D.)
- Federal Highway Administration, Roundabouts: An Informational Guide.
- American Association of State Highway and Transportation Officials, Guide for the Development of Bicycle Facilities.
- Urban Drainage and Flood Control District, Standards.
- EPA Drinking Water Standards
- NSF Standards for Water Treatment Systems
- ANSI Standard, Wastewater Treatment Systems
- Clean Water Act
- Denver Water Board, Engineering Standards of the Board of Water Commissioners

#### **1.1.4 Authority**

These STANDARDS AND SPECIFICATIONS have been enacted pursuant to the City of Northglenn Municipal Code (Municipal Code) and Title 31 of Article 16 of the Colorado Revised Statutes and shall have the same force and effect as all other ordinances of the City.

It shall be the duty of the Engineering Division to implement and enforce the provisions of these STANDARDS AND SPECIFICATIONS.

#### **1.1.5 Purpose**

The purpose of these STANDARDS AND SPECIFICATIONS is to provide MINIMUM standards to safeguard life, health, property, and public welfare by regulating and controlling the design, construction, quality of materials, use, location, and maintenance of all public improvements and private improvements of common ownership including, but not limited to, sanitary sewer systems, water supply systems, storm drainage systems, streets, open space, parking lots, and appurtenances thereto.

The purpose of these STANDARDS AND SPECIFICATIONS is also to ensure that the City receives public facilities which are constructed with the care and materials such that the facility meets or exceeds the normal service life requirements for similar installations and to ensure that when said facilities are transferred to the City's ownership that they will be free from all defects and in suitable working order to provide the service capabilities anticipated with such a facility.

#### **1.1.6 Interpretation**

In the interpretation of the provisions of these STANDARDS AND SPECIFICATIONS the following shall govern:

- In its interpretation, the provisions of these STANDARDS AND SPECIFICATIONS shall be regarded as the minimum requirements for the protection of the public health, safety, comfort, convenience, prosperity, and welfare of the residents of the CITY.
- Whenever a provision of these STANDARDS AND SPECIFICATIONS or any provision in any law, ordinance, resolution, rule, or regulation of any kind, contain any restrictions covering any of the same subject matter, whichever standards produce higher quality shall govern.
- These STANDARDS AND SPECIFICATIONS shall not abrogate or annul any permits or accepted drainage reports and construction plans issued or any easement or covenant granted before the effective date of these STANDARDS AND SPECIFICATIONS. However, if the review and acceptance of construction plans, specifications, and associated engineering reports by the City has occurred more than twelve (12) months prior to execution of the Public Improvements Agreement/or commencement of construction activities, the City shall have the right to require another review process for the plans, specifications, and reports to ensure compliance with these STANDARDS AND SPECIFICATIONS.

#### 1.1.7 Violations

No person, firm, or corporation shall construct, enlarge, alter, repair, relocate, improve, remove, excavate, convert, or demolish any public improvements or private improvements in common ownership or permit the same to be done in violation of these STANDARDS AND SPECIFICATIONS. Whenever any work is being done contrary to the provisions of these STANDARDS AND SPECIFICATIONS, the Engineering Division may order the work stopped by a written notice in accordance with **Chapter 3 - Permits**, of these STANDARDS AND SPECIFICATIONS.

#### 1.1.8 Variances

The provisions of these STANDARDS AND SPECIFICATIONS are not intended to prevent the use of any material or method of construction not specifically prescribed by these standards, provided any alternate has been previously approved and its use authorized in writing by the City. Whenever there are practical difficulties involved in carrying out the provisions of these procedures, the City may grant a variance for individual cases, provided that the City shall first find that a unique reason makes these standards impractical and that the modification is in conformity with the intent and purpose of these standards, and providing that such variance does not lessen any design requirements or any degree of structural or operational integrity. The City shall require that sufficient specifications, evidence, justification and/or proof be submitted to substantiate any claims that may be made regarding the alternate material, detail, or technique. The City, in its sole discretion, will decide upon the acceptability of any proposed variance.

#### 1.1.9 Amendments & Revisions

These STANDARDS AND SPECIFICATIONS may be amended as new technology is developed and/or if experience gained in the use of these STANDARDS AND SPECIFICATIONS indicate a need for revision. The City shall have full power and authority to promulgate rules, regulations or new standards of a technical nature, which rules, regulations or standards shall be effective immediately upon their approval and certification by the Engineering Division. It is the responsibility of the Consultant/Contractor/Developer to obtain all revisions to these STANDARDS AND SPECIFICATIONS.

#### 1.1.10 Severability

If any section or article of these STANDARDS OR SPECIFICATIONS is found to be unconstitutional or illegal by any court, the said section or article shall have no bearing on the effectiveness of the rest of these STANDARDS OR SPECIFICATIONS.

## **1.2 General Conditions**

### **1.2.1 Responsibility for Design & Construction**

The City shall have full authority to review and accept all submittals and construction for compliance with these STANDARDS AND SPECIFICATIONS. An approval or acceptance by the City does not relieve the Owner, Designer or Contractor from responsibility for ensuring that the calculations, plans, specifications, construction, and record drawings are in compliance with these STANDARDS AND SPECIFICATIONS. Any approval or acceptance by the City shall not result in any liability to the City or its employees for any claim, suit, loss, damage, or injury resulting from the use or implementation of the accepted documents. Nothing in these STANDARDS AND SPECIFICATIONS shall be construed to circumvent the Municipal Code pertaining to responsibility for reports, studies, designs, and construction.

### **1.2.2 Pre-Design Meetings – Capital Improvement Projects**

Prior to the Designer beginning design of the construction documents, the City may require a pre-design meeting to discuss any potential design or construction issues on the specific project. This meeting shall be attended by the Designer, the Designer's subconsultants and the City.

### **1.2.3 Pre-Application Meetings – Development Projects**

Prior to the Designer beginning design of the construction documents, the City shall require a pre-application meeting to discuss any potential design or construction issues on the specific project. This meeting shall be organized by the Planning Department when requested by the Developer or Designer.

### **1.2.4 Pre-Construction Meetings**

In conjunction with the "Notice to Proceed" for a development or City Capital Improvement Project, the Contractor shall arrange a "pre-construction meeting" which shall be attended by the Owner/Developer/Designer, all of the Developer's/Contractor's subcontractors, affected utility companies and the appropriate City representatives. This meeting shall be held before any construction related activities can commence on said development and its purpose is to introduce all of the "parties" involved in the development as well as establish guidelines that the City feels are appropriate for the development.

### **1.2.5 Work Conditions**

#### **Pre-Design & Investigative Work**

Contractor shall coordinate with the City prior to the commencement of all pre-design work inside the City Right of Way. Contractor shall be responsible for the cost of all City locates including but not limited to water, sewer and traffic signals for all pre-design and investigative work. Contractor will be required to pull all applicable permits for pre-design and investigative work inside City Right of Way. Contractor shall remove all utility locate marks at the sole discretion of the Engineering Division.

#### **Emergency Work**

When, in the opinion of the City, the Contractor has not taken sufficient precautions for the safety of the public or the protection of the work to be constructed or if adjacent structures or property which may be damaged by processes of construction on account of such neglect and an emergency arises and immediate action is considered necessary in order to protect private or public interests, the City, WITH OR WITHOUT NOTICE to the Contractor or the Developer, may provide suitable protection by causing work to be done and material to be furnished and placed as the City may consider necessary and adequate. The cost and expense of such work and material so furnished will be borne by the Contractor or Developer and will be paid within 30 days of presentation of the bills. The City may also draw from the Developer's surety to cover any non-payment, including accrued interest and applicable overhead costs. The performance or non-performance of such emergency work under the direction of the City will in no way relieve the Contractor of responsibility for damages which may occur during or after such precaution has been taken.



The Contractor is required to apply for a Right of Way permit within 72 hours of the emergency.

### **Final Clean Up**

Upon completion of the work and prior to any inspection by the City, the Contractor shall remove from the project area all surplus and discarded material, rubbish and temporary structures and leave the project area in a neat and presentable condition. The Contractor shall restore all work which has been damaged by his operations to general conformity with the specifications for the item(s) involved. The Contractor shall inspect the interior of all manholes and catch basins within the construction limits for construction materials, dirt, stones or other debris and remove same prior to any inspection by the City. The Contractor shall remove all utility locate marks at the sole discretion of the Engineering Division. Additional street sweeping may be required at the sole discretion of the Engineering Division. All final clean up and restoration work to be completed in a timely fashion as determined by the Engineering Division.

### **1.2.6 Control of Work & Materials**

#### **Authority of City**

The City will have the authority to stop work whenever such stoppage may be deemed necessary. The Engineering Division will resolve all questions which arise as to the quality and acceptability of materials furnished, work performed, interpretation of the plans and specifications and acceptable fulfillment of the requirements of these STANDARDS AND SPECIFICATIONS.

City inspectors are authorized to inspect all work and all material furnished. Inspections may extend to all or any part of the work and to the preparation, fabrication or manufacture of the materials to be used. The inspector is not authorized to revoke, alter or waive any requirements of these STANDARDS AND SPECIFICATIONS. They are authorized to call the attention of the Contractor to any failure of the work or materials to conform to these STANDARDS AND SPECIFICATIONS. The Inspector will have the authority to reject materials until any questions at issue can be resolved by the City.

The Inspector will, in no case, act as foreman or perform other duties for the Contractor nor interfere with the management of the work done by the Contractor. Any "advice" or "opinion" which the inspector may give the Contractor will not be construed as binding upon the Engineering Division or the City in any way or release the Contractor from fulfilling all of the terms of these STANDARDS AND SPECIFICATIONS. The presence or absence of the inspector will not relieve, in any degree, the responsibility or the obligation of the Contractor, Owner or Developer.

The Engineering Division will, at all times, have reasonable and safe access to the work as it progresses, and the Contractor will provide proper facilities for such access and inspection.

#### **Responsibilities of the Contractor**

In case of suspension of work for any cause, the Contractor, before leaving the job site, will take such precautions as may be necessary to prevent damage to the project, provide for public safety, normal drainage and erect any necessary barricades, signs or other facilities at his expense as directed by the City and required by these STANDARDS AND SPECIFICATIONS. The Contractor is responsible for ensuring that all construction and construction activities and materials are in compliance with these STANDARDS AND SPECIFICATIONS. The Contractor shall be solely responsible for all construction means, methods, techniques, sequences, and procedures. The Contractor shall be responsible for the acts and omissions of his employees, subcontractors and their agents and employees. The Contractor shall be solely responsible for locating all existing underground installations, including service connections, in advance of excavating. City utility maps are intended to be used for general information only and the location of any utilities or property lines as shown on the utility maps are not necessarily accurate.



### **Unauthorized &/or Unacceptable Work**

Work which does not conform to the accepted construction plans and these STANDARDS AND SPECIFICATIONS and results in an inferior or unsatisfactory product will be considered unacceptable work. Unacceptable work, whether the result of poor workmanship, poor design, use of defective materials, damage through carelessness or any other cause which is found to exist prior to the final acceptance of the work will be immediately removed and replaced or otherwise satisfactorily corrected by and at the expense of the Developer or Contractor. This expense includes total and complete restoration of any disturbed land or surface to original or better condition that existed before the repairs or replacement.

### **Samples & Tests**

To ascertain that materials and procedures comply with contract requirements, testing will be taken at the source or at the job destination at the discretion of the City and as often as the City deems it advisable or necessary. Taking of samples will be in accordance with standard practices except where methods and procedures for sampling materials are otherwise set forth in these STANDARDS AND SPECIFICATIONS.

The Contractor will furnish, without charge, all samples and test results required by the City and will afford such facilities as may be necessary for collecting and forwarding them. The Contractor may be required to furnish, when requested by the City, a written statement giving the origin, composition, and process of manufacture of a material.

Whenever any of the provisions of these STANDARDS AND SPECIFICATIONS or evidence that any material or construction does not conform to the requirements herein, the City may require that the Contractor have tests performed, at his expense, which will be used as proof of compliance. Test methods will be as referenced by these STANDARDS AND SPECIFICATIONS. If there are no recognized and accepted test methods for the proposed alternate, the City will determine the test procedures. All tests will be made by an agency approved by the City. Reports and results of such tests will be retained by the City.

### **Storage of Materials**

Materials will be stored so as to ensure the preservation of their quality and suitability for the work. Stored materials, even though approved prior to storage, will be subject to inspection prior to their use in the work and will meet all requirements of these STANDARDS AND SPECIFICATIONS at the time they are used. Stored materials will be located so as to facilitate inspection. With the prior written approval of the City, portions of the Right of Way not required for public travel may be used for storage purposes and for the placing of the Contractor's plants and equipment, but any additional space required will be provided by the Contractor at his expense.

### **Defective Materials**

Materials not in conformance with requirements of these STANDARDS AND SPECIFICATIONS will be considered defective and will be rejected. Rejected materials will be removed from the work site at the Contractor's expense, unless otherwise permitted by the City.

### **1.2.7 Protection of Public Interest**

#### **Public Convenience & Safety**

Unless otherwise specified, the Contractor will give written notice, to the proper authorities in charge of streets, gas and water pipes, electric service, cable television and other conduits, railroads, poles, manholes, catch basins and all other property that may be affected by the Contractor's operations at least 72 hours prior to any construction. The Contractor will not hinder or interfere with any person in the protection of such property or with the operation of utilities at any time. The Contractor must obtain all necessary information in regard to existing utilities, protect such utilities from injury and avoid unnecessary exposure so that they will not cause injury to the public.

The Contractor will obtain all necessary information in regard to the planned installation of new utilities and cables, conduits and transformers, make proper provision and give proper notification so that new utilities and appurtenances can be installed at the proper time and location without delay to the Developer or Contractor, nor cause unnecessary inconvenience to the Owner or the public. New underground utilities and appurtenances will not be covered with pavement prior to the City's inspection of such facilities. When the work involves excavation adjacent to any building or wall along the work, the Contractor will give property owners due and sufficient written notice thereof, with a copy to the City.

### **Protection of Property & Monuments**

The Developer and Contractor will use every reasonable precaution to prevent the damage or destruction of public or private property such as, but not limited to poles, trees, shrubbery, crops, fences, monuments, and all overhead structures such as, but not limited to wires or cables which are either within or outside of the Right of Way. The Contractor will protect and support all water, gas, sanitary sewer, storm drainage, electrical pipes, conduits and all railway tracks, buildings, walls, fences, or other properties which are liable to be damaged during the execution of his work. The Contractor will take all reasonable and proper precautions to protect persons, animals and vehicles from injury or damage and wherever necessary or as directed by the City, will erect, and maintain a fence or railing around any excavation and place a sufficient number of amber lights about the work and keep them operational from twilight until sunrise. The Contractor will employ one or more watchmen as additional security whenever they are needed or required by the City. The Contractor will not prevent the flow of water in the gutters of the street and will use proper means to permit the flow of surface water along the gutters while the work is in progress.

The Contractor will protect and carefully preserve all land boundary and City survey control monuments until the Owner's authorized registered land surveyor has referenced their location for replacement. All monuments disturbed or removed by the Contractor through negligence or carelessness on his part or on the part of his employees or subcontractors will be replaced by a land surveyor registered in the State of Colorado, at the Contractor's expense. The Developer and Contractor will be responsible for the repair of any damage or destruction of property resulting from neglect, misconduct or omission in a manner or method of execution or non-execution of the work, defective work, or the use of unsatisfactory materials. The Contractor will restore such property to a condition equal to or better than that existing before such damage or injury was done by repairing, rebuilding, or replacing it as may be directed by the City or they will otherwise make amends for damage or destruction in a manner acceptable to the City. The Developer and Contractor will be responsible for the repair of underground pipes, wires or conduits damaged by them or their subcontractors.

The Developer and Contractor will be liable for all damage caused by storms and fire until the work is accepted into warranty.

### **Installation of Survey Monuments**

Permanent survey monuments and lot pins shall be set at locations approved by the City provided that such monuments shall be set not more than 1,400 feet apart along any straight boundary line; at all angle points; and at the beginning, end, and points of change of direction or change of radius of any curved boundary. In addition, 5/8-inch steel pins, or larger, shall be set at all lot corners. Affixed securely to the top of each monument shall be an aluminum cap marked with the Colorado registration number of the land surveyor responsible for the establishment of the monument.

The Professional Land Surveyor will assure that the monuments he/she establishes or re-establishes conform both in location and physical character with the specifications called for in Section 38-51-104, Colorado Revised Statutes. Each found monument verified in location shall be restored or rehabilitated as necessary so as to have it readily identifiable and reasonably durable.



**Protection of Streams, Lakes, and Reservoirs**

The Developer and Contractor will take all necessary precautions to prevent pollution of streams, lakes and reservoirs by sediment, fuels, oils, bitumen, calcium chloride, fertilizers, insecticides, or other harmful materials. They will conduct and schedule their operations to avoid or minimize siltation of streams, lakes and reservoirs. A plan for erosion protection shall be submitted and accepted by the City. All required erosion control measures shall be in place before starting work. All work must conform to all applicable local, state, and federal regulations.