

## 14. CONSTRUCTION CONTROL AND INSPECTION

### 14.1 Control of Work

Work performed in the construction or improvement of public or private roads and utilities shall be done to the satisfaction of the City and in accordance with these Standards, the approved plans, and any other Specifications or guidelines for the project.

It is emphasized that no work may be started until such plans are approved. Any revision to such plans shall be approved by the Public Works Director before being implemented. Failure to receive the City's approval can result in removal or modification of construction improvements at the contractor or developer's expense to bring it into conformance with the approved plans.

The Public Works Director is authorized to enforce these Standards as well as other referenced or pertinent specifications or guidelines. They may appoint project engineers, assistants, and inspectors as necessary to inspect the work.

Provisions of Section 1-05 of the WSDOT/APWA Standard Specifications shall apply, with the term "Engineer" therein construed to be the Public Works Director as defined in Section 1.12.

### 14.2 Control of Materials

The contractor shall notify the City for all materials to be furnished. The Public Works Director shall approve the source of supply of each of the materials before the delivery is started. Representative preliminary samples or test data of the character and quality prescribed may be required to be submitted by the contractor or producer for examination.

Only materials conforming to the requirements of the WSDOT/APWA Standard Specifications or these Standards shall be used in the work, unless otherwise approved. Any of the materials proposed to be used may be inspected or tested at any time during their preparation and use. If after testing it is found that sources of supply that were previously approved do not furnish a uniform product, or if the product from any approved source proved unacceptable at any time, the contractor shall furnish approved materials from other approved sources.

The contractor shall, at any time requested, submit to the City properly authenticated documents or other satisfactory proofs as to their compliance with the contract requirements.

If the examination of the above documents reveals any defects in the work, such defects should be repaired or replaced as the Public Works Director may direct before final acceptance. The cost of all such repairs and replacements shall be borne by the developer.

### 14.3 Samples and Tests

At the direction of the Public Works Director, the applicant/developer shall direct a certified testing laboratory to conduct necessary field and/or lab tests of materials or methods.

All testing shall be in accordance with ASTM and/or AASHTO standards, WSDOT Standards, or other common industry standards approved by the Public Works Director.

The field tests of materials shall be made as deemed necessary by the Public Works Director at no cost to the City. In general, tests shall be made at the frequency as outlined by the applicable sections of the Standard Specifications.

The developer shall furnish, without charge, samples of all materials as requested. Materials shall not be used until approved.

The testing laboratory should be present during all field tests. Regardless, certified copies of the complete test reports direct from the testing lab shall be provided to the City.

Materials shall be delivered on the work in advance in such quantities as to afford the Public Works Director an opportunity to make tests before the materials are to be used.

## 14.4 Maintenance of Work After Acceptance

The developer shall be responsible for the entire improvement and maintain said improvements until the City has accepted it. The City reserves the right to utilize any portion of the improvements prior to final acceptance and in such event the City will assume responsibility for its use in case of damage caused by normal use.

Following acceptance of all public improvements, the developer shall be held responsible to guarantee materials and workmanship for a period of 1 year of satisfactory performance and operation. Any defects that appear during this period shall be corrected by the developer at no cost to the City under the terms of the maintenance bond.

## 14.5 Bonding

Bonds or other allowable securities will be required by the City to guarantee the performance or maintenance of required civil-related work. The type and amount of security will be determined by the Public Works Director. Types of securities include, but are not limited to, binding a surety or an assigned savings account. Typically, the City will select an assignment of funds.

## 14.6 Protection of Public and Private Utilities

The contractor shall be responsible for locating all existing underground utilities and protecting the same against damage whether shown on the plans or not. Refer to Section 14.15 for further information. The contractor shall support and protect all pipes, curbs, conduits, poles, wires or other apparatus which may be in any way affected by the work, and do everything to support, sustain, and protect the same, under, over, along, or across said work. In case any of said public or private utilities should be damaged, they shall be repaired by the contractor whenever feasible on the private/public utility having control of same, and the expense of such repairs, shall be the responsibility of the developer or contractor.

The contractor shall further be responsible for any damage done to any street or other public property, or to any private property by reason of the breaking of any water pipe, sewer, or gas pipe, electric conduit or other utility by or through his/her negligence.

## 14.7 Damage to Private Property and Improvements

The developer's/contractors work shall be confined to the job site premises and necessary off-site easements and they shall not enter upon or place materials on other private premises except by written

consent of the individual owners, and shall hold harmless the City from all suits and actions of every kind that might result from the use of private property.

The contractor shall take adequate precautions to protect existing lawns, trees and shrubs outside public right of way, sidewalks, curbs, pavements, utilities, adjoining property, structures, and to avoid damage thereto, and shall at their own expense completely repair any damage thereto caused by their operations to the satisfaction of the Public Works Director. All impacted property owners must be notified in advance of said work.

## 14.8 Construction Inspection

The Public Works Director may appoint project engineers, assistants, and inspectors as necessary to inspect the work and materials. Such inspection may extend to any or all parts of the work and to the preparation and/or manufacture of the materials to be used. The inspector will not be authorized to revise or alter the provisions of these Standards.

All work performed within the public right-of-way or easements, or as described in these standards, whether by or for a private developer, will be done to the satisfaction of the City and in accordance with the WSDOT/APWA Standard Specifications, any approved plans and these Standards. Public Works Director must approve any revision to construction plans before being implemented.

Generally, on all privately developed infrastructure road and drainage facility construction proposed or in progress by a private developer, control and inspection will be done by the City's Engineering Inspector.

The applicant is ultimately responsible for quality control of construction and the assurance of meeting the standards. The Inspectors will monitor these activities with enforcement authority when requirements are not met.

All materials provided by the contractor shall be subject to inspection and approval by the Inspectors at any time during the progress of work until final acceptance. The contractor's construction schedule shall include sufficient time for materials testing and any required verification by the Inspector.

All roadway and drainage infrastructures must be inspected. Subgrade inspection will not commence until density tests confirm that the compaction is in accordance with the Specifications.

## 14.9 Authority and Duties of Inspectors

The Inspectors will have the authority to reject defective material and suspend work that is being done improperly. The Inspector may advise the applicant or contractor of any faulty work or materials; however, failure of the inspector to advise the applicant or contractor does not constitute acceptance or approval.

The City's right to conduct inspections is to determine if acceptable construction practices are followed. The inspection process does not make the City an insurer or guarantor of contractor compliance or competence. Responsibility for any failures to follow these Standards rests solely with the developer and its agents.

At the Inspector's order, the applicant/contractor shall immediately remedy, remove, replace, or dispose of unauthorized or defective work or materials and bear all the costs of doing so.

The Inspectors will have the authority to require revisions to approved engineering plans when necessary due to conflicting field conditions.

Failure to comply with the provisions of these Standards may result in stop work orders, removal of work accomplished, or other penalties as established by ordinance.

All work conducted on electrical and communications systems shall be inspected by the City of Des Moines Electrical Inspector.

## 14.10 Inspection Scheduling

Prior to any critical task being started the applicant/developer must schedule an inspection in advance by request on the City's permitting portal (website).

At a minimum, the following critical tasks require advance notification:

### 14.10.1 Preconstruction Conference

Three working days prior notice. Preconstruction conference must precede the beginning of construction and include the applicant, contractor, design engineer, utilities, and other applicable participants. Plan approvals and permits must be in hand prior to the conference.

### 14.10.2 Clearing and Temporary Erosion/Sedimentation Control

One working day notice prior to initial site work involving drainage and installation of temporary erosion/sediment control.

### 14.10.3 Utility and Storm-Drainage Installation

One working day notice prior to trenching and placing of storm sewers and underground utilities such as sanitary, water, gas, power, telephone, and TV lines.

### 14.10.4 Utility and Storm-Drainage Backfill and Compaction

One working day notice before backfill and compaction of storm sewers and underground utilities.

### 14.10.5 Subgrade Completion

One working day notice at stage that underground utilities and roadway grading are complete; to include placement of gravel base if required.

### 14.10.6 Curb and Sidewalk Forming

One working day notice to verify proper forming and preparation prior to pouring concrete.

### 14.10.7 Curb and Sidewalk Placement

Two working days' notice to check placement of concrete.

### 14.10.8 Crushed Surfacing Placement

One working day notice to check placement and compaction of crushed surfacing base course and top course.

### 14.10.9 Paving

Three working days' notice in advance of paving with asphalt or Portland cement concrete.

### 14.10.10 Signing, Striping, and Pavement Markings

Three working days' notice in advance of final application, and after layout work has been completed.

### 14.10.11 Structural

Three working days' notice prior to each critical stage such as placement of foundation piling or footings, placement and assembly of major components, and completion of structure and approaches. Structural tests and certification requirements will be as directed by the Public Works Director.

### 14.10.12 Punchlist Inspection

Fifteen working days prior to overall check of road or drainage project site, to include completion of paving and associated appurtenances and improvements, cleaning of drainage system, and all necessary clean-up.

### 14.10.13 Final Inspection

Prior to final approval of construction work, acceptance and release of construction performance financial guarantees, the applicant/contractor shall pay any required fees, submit any required maintenance and defect financial guarantees, provide a certificate of monumentation and submit required record drawings reflecting all minor and design plan changes of the road and drainage systems.

### 14.10.14 Final Maintenance Inspection

The final maintenance inspection is performed by the City 45 days prior to the end of the maintenance period. Prior to release of the maintenance financial guarantee, there shall be successful completion of the maintenance period as described in Section 1.10 and 14.5, replacement/repair of any failed facilities, and the payment of any outstanding fees.

## 14.11 Penalties for Failure to Notify and Obtain Approval

Notification by the applicant or the applicant's contractor, at the necessary time frames noted in Section 14.11, is essential for the City to verify, through inspection, that the work meets the Standards. Failure to notify and obtain approval will result in the City requiring sampling and testing with certification by a private laboratory. Costs of such testing and certification shall be borne by the applicant. If the test results conclude that the unauthorized work does not meet the Standards, the applicant will be required to remove the unauthorized material and replace it with materials that meet the Standards at his/her own expense. At the time that such action is directed by the Public Works Director, further work on the development may be limited or prohibited until all directed tests have been completed, approved, and all corrections identified by the City have been made to the satisfaction of the Public Works Director. If necessary, the City may take further action as set forth in Chapter 12 of the DMMC.

## 14.12 Final Cleanup, Restoration of Surface Drainage, and Erosion/Sedimentation Control

In addition to restoration of the road as described above, the responsible applicant, utility, contractor, etc., shall care for adjacent areas in compliance with Sections 1-04.11 “Final Cleanup” and 8-02 “Roadside Restoration” in the WSDOT/APWA Standard Specifications. In particular:

- A. Streets and roads shall be cleaned and swept both during and after the installation work.
- B. Disturbed soils shall be final graded, seeded and mulched after installation of utility. In limited areas seeding and mulching by hand, using approved methods, will be acceptable.
- C. Ditch lines with erodible soil and subject to rapid flows may require seeding, matting, netting, or rock lining to control erosion.
- D. Any silting of downstream drainage facilities, whether ditches or pipe and catch basins, which results from the construction activity shall be cleaned out and the work site restored to a stable condition as part of site cleanup.
- E. Remove all temporary erosion and sediment control materials and fencing and dispose of properly.

## 14.13 City Forces and City Contract Road Inspection

Road construction performed by City forces or by contract for the City will be inspected under the supervision of the Public Works Director.

## 14.14 Call Before You Dig

All developers/contractors are responsible for timely notification of all utilities in advance of any construction in right-of-way or utility easements. The utility One-Call Underground Location Center phone number 1-800-424-5555. This number should be prominently displayed on the work site. A minimum of two working days advanced notice is required.

## 14.15 Emergency Work

Should the work of a developer/contractor result in an emergency street or utility shutdown during non-working hours, the direct overtime costs of responding City personnel and any responding utility personnel will be billed to the responsible party.