

Public Improvement Construction Plans for Subdivisions Submittal Requirements

(Does not apply to City initiated projects)

Effective February 1, 2018



Engineering Services Department
4200 Mills Civic Parkway, Suite 2E
West Des Moines, IA 50265-0320
515-222-3475 (phone)
515-273-0602 (fax)
www.wdm.iowa.gov

Additional copies of this application can be found on the City's website.

Public Improvement Construction Plans for Subdivisions Submittal Requirements

Required with the submittal of ANY PUBLIC IMPROVEMENT associated with private development
(does not apply to City initiated projects)

The following are minimum requirements for City of West Des Moines Construction Plan review. Submittal must include all information provided in this checklist. A copy of this checklist with each item checked or marked “not applicable” must be provided with the submittal. Any omissions will be noted and the licensed engineer of record will be notified via email. Construction Plans will not be reviewed until all items in the checklist are provided.

Once a complete submittal is received, an email will be sent to the licensed engineer or record verifying the submittal is complete and when to expect a comment email. Typically, the first submittal of construction plans takes 2 weeks to review. Applications are normally processed on a first come basis in the following priority:

1. Final drawings for approval
2. Resubmittal, complete package
3. Initial submittal, complete package

Complete submittals include all drawings and supporting reports. When plans are returned to the Engineer for lack of adequate information, or in the event of re-platting or major site plan revisions after the initial review, the re-submittal may be considered a new submittal rather than a return. A thorough technical review will begin when all required information is provided.

Licensed Engineer Name: _____

Licensed Engineer Email Address: _____

Licensed Engineer Phone Number: _____

Construction Plan submittals **must** include the following:

- Copy of this checklist with each item checked or marked “not-applicable”
- Geotechnical Report
- Storm Water Management Plan
- Iowa DNR/U.S. Army Corps of Engineers Section 404 Authorization
- IDNR Sanitary Sewer Forms
- Calculations that verify the sanitary sewer design meets minimum velocity requirements. (If sanitary sewer pipe grades are less than the minimum per the design standards)
- Easements for offsite grading or other improvements
- Copies as required by West Des Moines Water Works for review. These must be sent to WDM Water Works – ATTN: William Mabuca
- DRAFT** construction plans for review: plans in PDF format labeled as “Draft” or “Not for Construction”. **Do not** certify.

FINAL construction plans for approval:

1. Minimum of four (4) half-sized (11”x 17”) copies of the final plans certified in accordance with Chapter 6, 193C-6.1(542B) of the Iowa Code. Provide any additional copies requiring approved stamps for developer use.
2. Final plans in PDF format on a disk, flash drive, through email or FTP/cloud storage.
3. CADD or text file containing coordinates of all sanitary and storm sewer structures referenced to the WDM horizontal datum.

Title Block (on each sheet):

- Name of project
- Date
- Sheet number and total number of sheets. Sheet number in lower right hand corner.
- Space denoting revisions

Title Sheet:

- Project Name (Typically the subdivision name, include street name or phasing in title if there are multiple sets of construction plans for the subdivision)
- Sheet Index
- Vicinity Map
- Name, Address and Phone Number of Engineering Firm
- Name, Address, Phone Number and contact name of Owner/Developer
- Engineer's Professional Certification (final copies signed in contrasting ink)
- Email address of certifying engineer
- Two (2) white spaces a minimum of 3½" x 1½" for City and WDMWW approval stamps, upper right corner of title sheet preferred

General:

- Prepare drawings and lettering of such a scale as to be reproducible to 1/2 scale:
 - Minimum vertical scale: 1" = 5'
 - Minimum horizontal scale: 1" = 20' for plan and profile drawings
 - Minimum horizontal scale: 1" = 10' for detail drawings
- Legend of all symbols used in the plans
- Typical cross-sections of all roadways, trails, sidewalks, mailbox pads, swales, and ditches
- Identify type and location of subgrade treatments as recommended in soils report, minimum two (2) 6" lifts of subgrade preparation
- Details of any storm or sanitary sewer structure modified from standard
- Quantities
- Provide the following general notes (use only those that apply):
 1. All connections to existing public structures shall be core drilled.
 2. All public sewers constructed as part of these plans will be televised by the City of West Des Moines as part of the final inspection. Notify West Des Moines Public Services (Ron Wiese 515-222-3480) 48-hours in advance of inspection.
 3. If additional pavement removal is required other than a standard box out, full panel removal will be required. No half panel removal will be allowed.
 4. For mainline paving, the contractor shall submit the PCC mix source(s) to the West Des Moines Engineering Services Department (Ben McAlister 222-3475) a minimum of 24 hours prior to placement. The contractor shall use the same PCC mix source for a minimum of 500 square yards of continuous paving.
 5. At least one week prior to any construction within public R.O.W./easements and/or any connection to public sewers and streets, the Contractor shall contact the West Des Moines Engineering Services Department (Ben McAlister 222-3475) to obtain applicable City permits that may be necessary.
 6. All construction within public right-of-way or easements, and/or any connection to public sewers and streets, shall comply with the West Des Moines Standard Construction Specifications for Subdivisions and the Des Moines Metropolitan Design Standards Manual with West Des Moines Addenda.
 7. Coordinate staging and traffic control with WDM emergency services.
 8. Lane closure notices must be submitted to West Des Moines Public Services for approval a minimum of 48 hours in advance of closure.
 9. Comply with all requirements of the Wastewater Reclamation Authority (WRA) for any connection to WRA facilities.
- For larger projects with multiple plan sheets, provide a graphical sheet index showing location of each plan sheet on the site layout
- A minimum two West Des Moines benchmarks with location description and ties to the WDM horizontal control network
- Site grading plan or cross sections of proposed paving
- Traffic control plan for any temporary street/lane closures on any public street affected by construction. Traffic control must comply with the Manual on Uniform Traffic Control Devices.

Sanitary & Storm Sewer:

Plan

- Bar scale and north arrow on each sheet. North arrow up or to the right
- Street names and lot numbers
- Existing features, utilities, and existing/proposed right-of-way
- Structure number, stationing, offset, type, and size of all manholes, intakes, or other structures. Structure types must comply with current standard drawings
- Manhole casting types in accordance with the current standard drawings
- Rotate manhole such that casting will not be located in sidewalks and driveways
- Locate intakes away from future driveways where possible
- Verify structure clearances and depths are in accordance with standard drawings
- Verify dimension of pipe along structure walls are in accordance with standard drawings. No pipes allowed in corners of rectangular structures
- Core drill connections to existing structures. Show modifications to existing invert if necessary
- Clearly define work required for adjustment of existing structures to grade
- Dimension services from property line or provide station location.
- Label locations where apron guards will be installed
- Show outlet protection dimensions and quantities
- Label sanitary, storm sewer, and overland flowage easements. Said easements must provide adequate width to excavate a 1:1 trench and provide space for stockpiled excavation. Sanitary sewer easements must be a minimum of 30 feet in width
- Label any private pipes

Profile

- Stationing and elevation labels
- Plan and profiles of all sewer lines and existing/proposed ground line above sewer
- Label size, length, and grade of sewers in profile
- Label type of pipe materials and strengths, if different from the Standard Specifications, or if specific materials are required
- Label structure number, rim, and invert elevations at all intakes, manholes, and other structures in profile
- Location of drop manholes, if required
- Crossings of all existing and proposed utilities. Maintain minimum separation from water as required
- Label any private pipes
- Check minimum pipe cover under paving and in grassed areas

Paving:

Plan:

- Bar scale and north arrow on each sheet. North arrow up or to the right.
- Street names and lot numbers
- Existing features, utilities, and existing/proposed right-of-way
- Stationing at minimum 100 feet station intervals
- Label station of the centerline at beginning and end of paving and at all intersecting streets.
- Horizontal curve data including centerline PC, PT, PI, delta angle, arc length, degree of curve, tangent length, and radius
- Label right-of-way and paving width back-to-back of curb
- Label removal of any existing headers. Removals must be to the nearest existing joint
- Plan and profile of any trail not contracted adjacent to the proposed roadway paving
- Locations of depressed and other sidewalks to be constructed with the public improvements
- Locations of sidewalk turning spaces in accordance with ADA and PROWAG requirements
- Location of Cluster-Style Mailboxes on plan sheets with construction details
- Pavement marking plan, if required

Paving (continued):

Profile:

- Stationing and elevation labels
- Proposed street profile and existing ground
- Profile elevations at a minimum of 50 feet intervals on tangents and 25 feet intervals on vertical curves
- Label tangent grades on each sheet and station and elevation of all grade breaks
- Vertical curve data including: station and elevation of VPI, VPC, VPT, K-value, low point, and length of curve
- Label station and elevation at beginning and end of paving and at all tie-in locations

Jointing & Intersection Geometrics:

- Bar scale and north arrow on each sheet. North arrow up or to the right
- Street names
- Station and offset of end of return, center of return radius, and beginning and end of all tapers
- Label all radii at returns (may be specified in general note if all radii are same)
- Elevations at quarter points of returns
- Label cross slope transitions and special shaping areas. Provide station and elevation at beginning and end of all cross slope transitions
- Label elevations at pavement breaklines on both sides of accessible pedestrian route
- Label length and type of all joint locations in accordance with the standard drawings

Sidewalk Ramps:

- Bar scale and north arrow on each sheet. North arrow up or to the right
- Street names
- Sidewalk ramp design must comply with all ADA and PROWAG requirements
- Delineation of ramp components including ramp, turning space, transitions, passing space, detectable warnings, and special shaping areas.
- Elevations at top and bottom of ramps, corners of turning spaces and transition areas, and all grade breaks including both sides of truncated domes at the bottom of a ramp
- Table similar to Iowa DOT tabulation 113-10 showing slope and distance between all critical points

As-built plans are required for all public improvements. As-built plans for sidewalk ramps within the public right-of-way and any stormwater management facility are required for all subdivisions and site plans. As-built drawings shall clearly show any changes or variations from the approved design. Horizontal variations greater than 1.0 foot must be shown dimensionally or by stationing. Horizontal variations greater than 10.0 feet must show the graphic relocation of the object.

As-Built Plan submittals **must** include the following:

General:

- DRAFT as-built plans for review: PDF format labeled as "Draft".
FINAL construction plans for approval: PDF format certified in accordance with Chapter 6, 193C-6.1(542B) of the Iowa Code.
- Final quantities
- Date of as-built survey
- Design elevations crossed out with the as-built elevation above or next to said design elevation

Sanitary & Storm Sewer:

- Invert elevations of all pipes at manholes, structures, inlets, and outlets
- Rim elevation of all manholes, structures, and inlets
- Length, type, and size of all pipes
- Structure ID, stationing, location, and type of all structures, cleanouts, and plugs
- Location dimensioned from property line or station of all wyes, tees, or stubs with riser height
- Location and elevation of any drainage tiles or other utilities encountered

Stormwater Management Facilities:

- Outlet configuration(s) including location and elevation
- Verify restriction or outlet is constructed per the approved SWMP
- Restriction size and location on the plans and clearly labeled with sizes as detailed in the approved SWMP
- Tabulation of design volume vs. as-built volume
- As-built 100-year ponding elevation
- Overflows labeled with location and elevation including depressed sidewalk locations with elevations

Paving:

- Pavement width and all radii at returns
- Stationing from beginning to end of construction and at centerline of intersecting streets
- Stationing at centerline of access points

Sidewalk Ramps:

- Delineation of ramp components including ramp, turning space, transitions, passing space, detectable warnings, and special shaping areas
- Table similar to Iowa DOT tabulation 113-10 showing as-constructed slope and distance between all critical points
- Method used to determine as-constructed slopes (i.e. smart level, GPS, total station. level and rod, etc.)
- Engineer's certification stating the following: I hereby certify that all sidewalk ramps conform to the Americans with Disabilities Act (ADA) and Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way (PROWAG) requirements.

Send all submittals to:

City of West Des Moines
Engineering Services
Attn: Ben McAlister, P.E.
4200 Mills Civic Parkway - Suite 2E
West Des Moines, IA 50265
ben.mcalister@wdm.iowa.gov

As of the writing of these guidelines (February 2018), the City of West Des Moines utilizes the **1993 Des Moines Metropolitan Design Standards Manual** with **West Des Moines Addenda**. Please contact West Des Moines Engineering Services to confirm the current adopted design standards.