

CHAPTER 2 GENERAL PUBLIC WORKS REQUIREMENTS

2.1 RESPONSIBILITY OF OWNER/DEVELOPER

The Owner/Developer is responsible for completing all work and improvements in full compliance with the approved plans and specifications. The developer shall furnish all labor, materials, tools, equipment, transportation, necessary supplies and incidentals required to make each and every item complete as documented by said plans and specifications. The Design Engineer and/or Director must approve any deviation from these requirements in writing.

2.1.1 Standard Specifications

Design detail, workmanship, and materials will be in accordance with the current edition of the “Standard Specifications for Road, Bridge and Municipal Construction,” the “APWA Supplement to Division One,” and the “Standard Plans for Road, Bridge and Municipal Construction,” all written and promulgated by the Washington State Chapter of the APWA and WSDOT, except where these standards provide otherwise.

The following referred materials will be applicable when pertinent, when specifically cited in the standards, or when required by an outside funding authority.

- A. Rules and regulations as adopted in the SWMC.
- B. 1992 Department of Ecology Stormwater Management Manual for the Puget Sound Basin as amended by the City of Sedro-Woolley.
- C. Sedro-Woolley Road Standards (SWRS). (under construction)
- D. 2001 Department of Ecology Stormwater Management Manual for Western Washington.
- E. City of Sedro-Woolley Comprehensive Plan.
- F. Conditions and standards as set forth in the WSDOT Design Manual as amended and approved by WSDOT.
- G. U.S. Department of Transportation Manual on Uniform Traffic Control Devices (MUTCD), as amended and approved by WSDOT.
- H. Conditions and standards as set forth by the State of Washington, Department of Labor and Industries.
- I. Design criteria of federal agencies including Department of Housing and Urban Development and the Federal Housing Administration.
- J. Other specifications not listed above as may apply when required by the City of Sedro-Woolley.

2.1.2 Shortened Designation

The City of Sedro-Woolley Public Works Department Standards will be cited routinely in the text as the “Standards”.

2.1.3 Applicability

These standards will govern all new construction and upgrading of facilities both in the right-of-way and on-site for transportation and transportation related facilities; storm drainage facilities; and park, recreation, and open-space facilities.

2.1.4 Design Standards

- A. Detailed plans, prepared by a professional engineer licensed in the state of Washington, must be submitted to the City for plan review and approval prior to the commencement of any construction. All plans must be signed and stamped by the applicant's engineer prior to submittal for plan review. The Public Works Director / City Engineer, prior to the start of construction, will approve final plans.
- B. Materials proposed for use in construction of publicly owned or publicly maintained facilities must be in conformance to approved material standards in place at the time of submittal. Unapproved materials cannot be adequately evaluated within the plan review period.
- C. Plans as required by the Standards are required to be submitted along with a completed Building Permit Application Form. All drawings will be on 22" x 34" sheet size. Approved plan sheets will be good quality reproducible ink on mylar, and shall bear a title showing the name of the project, the name of the owner, the name, address, seal, date, and signature of the design engineer. The cover sheet and all plan sheets shall include the same general title block including consecutive sheet numbers. An approval block shall generally be located in the lower right hand corner of the drawing. Sedro-Woolley standard notes (as contained in this chapter), applicable details (as contained in these standards), vicinity map and legend of symbols shall also be included in the plan set.
- D. Profile drawings shall have a horizontal scale of not more than fifty feet (50') to the inch or a vertical scale of not more than ten feet (10') to the inch. Plan views shall be of a corresponding horizontal scale.
- E. Specifications will be required and submitted with the plans if General Notes do not adequately cover the project requirements.

2.1.5 Minimum Plan Elements

See the Engineering Review Checklist and others included in the Appendix.

The following items must be incorporated into all engineering plans:

Plan View (Horizontal) Plans

- A. Roadway or proposed utility alignments, reading from left to right, showing stationing of points of curvature, tangency, intersection angle points, and with ties to existing monuments, including all necessary curvature data.
- B. Bearings on roadway centerline or utility centerline, referenced to the *City of Sedro-Woolley Datum* as well as location, description, and elevation of the

nearest City benchmark. Verify current Datum with the Public Works / Engineering Department prior to plan submittal. All projects must be submitted utilizing the correct and current datum(s).

- C. Right-of-way and easement lines for existing and proposed improvements, including identification of all roadways, easements (including auditors file numbers), adjacent lot and tax lot numbers, and subdivision identifications.
- D. All topographic features within and adjacent to proposed improvements and within sufficient area (usually 100') to assess impacts of slopes, drainage, access, future extensions, availability of service connections, etc.
- E. Proposed contours for entire site if grading is involved. Finish grade contours on the roadway only is not acceptable. All building sites should have a finish floor elevation to the nearest tenth of a foot shown on the plan.
- F. All existing and proposed (if known) public and private utilities, including telephone, electrical power, cable television, natural gas, water and/or sewer districts and any other known utilities that may affect the proposed construction.
- G. Existing and proposed drainage facilities, including culverts, catch basins, ditches, etc., indicating direction of flow, size, type of pipe, invert and rim elevations.
- H. Identification of adjacent roads, subdivisions, building addresses, or any other information to facilitate locations and future reference.
- I. Curb return elevations shall be shown at 'quarter delta' points at all intersections at a minimum (larger radii should have more points), to verify drainage and a smooth transition.

Profile Plans

- A. Profile drawings shall be prepared with all storm drain and street design plans, and with any other plans where vertical control is deemed to be important.
- B. In general, the existing centerline profile shall be plotted, denoting grade breaks, topographic features, and any other information important to the design.
- C. The finish grade roadway and/or utility profile shall be shown with the same stationing as the horizontal plan.
- D. Roadway profiles shall include existing and proposed centerline elevations at least at fifty foot (50') stations; centerline grades and vertical curves, including station and elevations at PVC's, PVI's, PVT's, top of crest vertical curve, bottom of sag curve, flow grade of 0.50% within fifty feet (50') of the level point for a sag vertical curve.
- E. Storm drain profiles shall include pipe slopes, diameters, lengths, rim and invert elevations, manhole and/or catch basin locations, type and numbers, and any other information relevant to the design.

Detail Plans

- A. Where special construction procedures or structures are required, special detail drawings are required. Standard details can be referenced to the Standard Specifications or the Standard Details as contained in the Appendix.
- B. Special Detail Drawings shall contain adequate dimensions, sections, views, notes, and call outs to construct the structure, or permit preparation of detailed shop drawings by the fabricator when necessary.

2.1.6 Drafting Standards

- A. All plans submitted for either design approval or permanent record will be free of photographs, stick-ons, or pen/pencil shading. Hatching may be acceptable if the pattern is not excessively dense.
- B. Design drawings will be submitted on clean, legible blue or black format.
- C. As-built drawings shall be submitted on static free 4-mil mylar with permanent image, and two sets of blue-line copies. Sheet sizes will be 22" x 34" for engineering drawings and 18" x 24" for survey drawings. No sepia will be accepted.
- D. Plans will be prepared with the understanding that each will be microfilmed. Minimum text height will be at least 0.08 times the scale factor (i.e., 1" = 20' scale minimum text will be $20 (0.08) = 1.6$ units). Minimum nominal text size will be 1/8".
- E. No engineering plans will be accepted with architect's scale.
- F. Plans will show all existing and proposed monuments. All Monumentation will be described using current City of Sedro-Woolley Datum coordinates. Centerline of roadways, easements (with type and dimensions), and other pertinent data will be referenced to existing monuments.
- G. All existing features (pipes, curbs, power poles, etc.) are to be produced with a small pen or half tones. Proposed features will be distinguished by a larger or bolder line weight.

2.1.7 Plan Review

All plans and reports are to be submitted to the Public Works Department. Any necessary easements, dedications, contracts, agreements, bonds, or variance requests will be submitted for review along with the plans. City staff will make a completeness check of the plans against the Engineering Review Checklist in the Appendix. If the plans meet the minimum checklist requirements as to context, they will be routed to the appropriate City staff, and the plan review process begins.

Applications for which no permit is issued within one hundred eighty (180) days following the date of application will expire by limitation, and plans and other data

submitted for review may thereafter be returned to the applicant or destroyed by the Development Services Manager. The Building Official may extend the time for action by the applicant for a period not exceeding one hundred eighty (180) days upon request of the applicant showing circumstances beyond the control of the applicant have prevented action from being taken. No application will be extended more than once. In order to renew action on an application after expiration, the applicant will resubmit plans and pay a new Plan Review Fee.

2.1.8 Pre-construction Meeting

Once the plans have been approved, bonding is in place, and applicable fees have been paid, the developer, contractor, or their agents must schedule a Pre-construction Meeting with the Public Works Inspector. The owner, general contractor, engineer, architect, and subcontractor should attend. No work shall commence prior to the Pre-construction Meeting.

2.1.9 Construction Control

Work performed for the construction or improvement of City roads and utilities whether by or for a private developer will be done to the satisfaction of the City and in accordance with approved plans. No work will be started until plans are approved. The City will approve any revision to such plans 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.

2.1.10 Inspection

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. The City must approve any revision to construction plans before being implemented.

The City will have authority to enforce these standards as well as other referenced or pertinent specifications. The City will appoint project engineers, assistants, and inspectors as necessary to inspect the work and they will exercise such approved authority as the City may delegate.

All specific inspections, test measurements or actions required of all work and materials are set forth in their respective chapters herein. Tests will be performed at the developer or contractor's expense.

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.

A project is considered final when as-built drawings, easements, bonds, and maintenance agreements have been submitted to and approved by the City, and the City issues a letter of acceptance to the party responsible for the project.

The contractor will pay for work beyond the normal working hours of the inspector at time and one half according to the overtime rates determined by the City.

2.1.11 Protection of Public and Private Utilities

The contractor shall be responsible under RCW for locating all existing underground utilities and protecting the same against damage whether shown on the plans or not. 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.

2.1.12 Damage to Private Property and Improvements

The developer's 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 Director. All impacted property owners must be notified in advance of said work.

2.1.13 Final Inspection

Following acceptance of all public improvements, the developer shall be held responsible to guarantee materials and workmanship for a period of two (2) years 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.

The inspector will not make the final inspection until the work required by the contract, including final cleanup has been completed.

The contractor shall, at any time requested, submit to the Director 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 Director may direct before final

acceptance. The cost of all such repairs and replacements shall be borne by the developer.

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.

2.1.14 Final Acceptance

Final acceptance of improvements requires the following:

- A. The correction of all defects as noted on the final punchlist.
- B. As-Built Plans - the original construction drawings or a photo mylar copy shall be revised to reflect actual constructed improvements. See As-Built Checklist for specific requirements on as-built procedures and documents. A professional land surveyor or engineer registered in the State of Washington shall certify the field surveyed as-built plans as actual field construction.
- C. Statutory Warranty Deed - The developer shall submit a completed statutory warranty deed for all rights-of-way and other lands to be dedicated to the public.

2.1.15 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.

2.1.16 Samples and Tests

At the direction of the Director, the 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 commonly recognized standards of the appropriate national organizations, WSDOT or common industry standards.

The field tests of materials shall be made as deemed necessary by the 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 by the Director. Materials shall not be used until approved. The Director shall be furnished certified copies of the complete test reports direct from the testing lab.

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

2.2 FEES

Fees, charges or bonding requirements will be as established by the City Council adopting a fee, charge, and bonding requirement schedule except where specifically set forth in the SWMC.

The basic plan check fee for ten (10) hours of review time is due when plans are submitted for review. Supplemental Plan Review Fees will be charged on an hourly basis for reviews in excess of ten (10) hours. These fees will be due prior to Building Permit issuance.

All inspection deposit fees are due prior to Pre-construction Meeting.

2.3 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 per SWPWDS. Types of securities include, but are not limited to, binding a surety or an assigned savings account.

- A. Performance bonds will be valid for one (1) year.
- B. Maintenance bonds will be valid for two (2) years following completion of work and/or acceptance, whichever is later.
- C. Bond Quantities Worksheets are available in the Appendix.

2.4 EASEMENTS

Where public utilities and/or their conveyance systems cross private lands, an easement must be granted to the City. The Public Works Engineering Department will generally process, record, and file all easements. If the property is platted, the easement may be conveyed when the short plat or final plat is filed. An attorney, licensed land surveyor, or engineering firm capable of performing such work must prepare all easements not shown on a plat.

Easement widths will be centered on the utility and be a minimum of twenty feet (20') wide, unless adjacent to public right-of-way, when a minimum of ten feet (10') is adequate. The reason for minimum twenty foot (20') easements is that current City Code does not have setbacks from easements. Temporary and/or permanent construction and/or slope easements will be required when appropriate, with widths as necessary to encompass work area. When trench depths dictate, or where pipe diameter or vault widths exceed four feet (4'), a wider easement may be required by the Public Works Director / City Engineer. For stormwater conveyance systems and facilities, easement widths and building setbacks shall be as established by the DOE Manual.

Easements are required to be submitted in draft, unsigned form for review and approval prior to plan approval. Any change in design that places an amenity (i.e. water, sewer, sidewalk, etc.) outside of the easement may necessitate stopping construction until plans and easements can be resubmitted and approved. The City, upon satisfactory completion of the work, will file easements.

The building setback requirement from an easement is five feet (5') or the width of eaves or other building overhang, (roof line) whichever is greater.

2.5 TRAFFIC CONTROL

The developer/contractor will be responsible for interim traffic control during construction on or along traveled roadways. Traffic control will follow the guidelines of the WSDOT/APWA Standard Specifications. All barricades, signs, coning, and flagging will conform to the requirements of the MUTCD. The Traffic Control Plan will be submitted to and approved by the City prior to the start of construction.

Signs must be legible and visible, and will be removed at the end of each work day if not applicable after construction hours.

All necessary and/or required traffic control devices will be in place prior to the beginning of the project construction, or on a daily basis during project construction.

When road closures and detours cannot be avoided, the contractor/developer will notify the Department of Public Works Construction Inspectors within a minimum of 48 hours (2 working days). The City will require a detour plan to be prepared, submitted, and approved prior to closing any portion of a City roadway.

Work can occur in the right-of-way generally between the hours of 7:00 a.m. to 6:00 p.m. except on Cook Road and State Routes 9 and 20, which shall have work hours of 8:30 a.m. to 3:00 p.m. Monday through Friday, except holidays. The Public Works Director / City Engineer may grant exceptions to these work hours on a case-by-case basis.

A Right-of-way Permit will be required before work in the right-of-way can commence.

2.6 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 utilities one-call Underground Location Center phone number is 1-800-424-5555; the Public Works Storm Drainage Locate number is 360-856-0151. A minimum of two (2) working days advanced notice is required.

2.7 EMERGENCY WORK POLICY FOR PRIVATE UTILITIES

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, including call-out, will be billed to the responsible party. The Sedro-Woolley Public Works 24-hour emergency telephone number is 9-1-1.