

Chapter 3

GENERAL PUBLIC WORKS CONSIDERATIONS

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3.000 GENERAL PUBLIC WORKS CONSIDERATIONS

3.010 Standard Specifications

Design detail, workmanship, and materials will be in accordance with the current edition of the *Washington State Department of Transportation (WSDOT) Standard Specifications for Road, Bridge, and Municipal Construction* (WSDOT Standard Specifications), except where these standards provide otherwise. (OMC 12.08.010)

The following referred materials will be applicable when pertinent, when specifically cited in the standards, or when required by a higher funding authority:

- A. Conditions and standards as set forth in the *City of Olympia Water System Plan*, most current edition.
- B. Conditions and standards as set forth in the *City of Olympia Wastewater Management Plan*, most current edition.
- C. Conditions and Standards as set forth in the *City of Olympia Storm and Surface Water Plan*, most current edition.
- D. *City of Olympia Unified Development Code*, most current edition.
- E. *City of Olympia Comprehensive Plan*, City of Olympia Community Planning and Development Department, Olympia, WA.
- F. Rules and regulations as adopted in the *Olympia Municipal Code*.
- G. Conditions and standards as set forth in the *Thurston County Coordinated Water System Plan*, most current edition.

- H. Conditions and Standards as set forth in the *Drainage Design and Erosion Control Manual for Olympia (Drainage Manual)*, most current edition.
- I. Criteria set forth in the Local Agency Guidelines as amended and approved by Washington State Department of Transportation.
- J. *U.S. Department of Transportation Manual on Uniform Traffic Control Devices (MUTCD)*, as amended and approved by Washington State Department of Transportation.
- K. Rules and regulations of the State Board of Health regarding public water supplies, as published by the Washington State Department of Health.
- L. Conditions and standards as set forth in the State of Washington State Department of Ecology *Criteria for Sewage Works Design*, most current edition.
- M. *Washington State Department of Transportation (WSDOT) Standard Plans*, most current version.
- N. *City of Olympia Parks, Arts and Recreation Plan*, most current edition.
- O. *City of Olympia's Urban Forestry Manual*, most current edition.
- P. Conditions and standards as set forth in the *State of Washington Department of Ecology and Department of Health Pipeline Separation Design and Installation Reference Guide*, Version 9 or most current edition.
- Q. Conditions and standards as set forth in the *State of Washington Department of Health Water System Design Manual 2020* or most current edition.
- R. *City of Olympia's Transportation Master Plan (TMP)*, most current edition.
- S. *City of Olympia's Street Safety Plan (SSP)*, most current edition.

3.015 Shortened Designation

These *City of Olympia Engineering Design and Development Standards* will be cited routinely in the text as the Standards.

3.020 Applicability

See Section 1.030 of the EDDS.

3.030 Design Standards

- A. Detailed plans, prepared by a licensed engineer, must be submitted to the City for plan review and approval prior to the commencement of any construction. Applicant's engineer will be a Professional Engineer, registered as such in the State of Washington. All plans must be stamped, signed and dated by the applicant's engineer, consistent with the requirements of Chapter 196-23 WAC, Stamping and Seals, prior to submittal for plan review. The City will review all submittals for general compliance with these specific Standards. An acceptance by the City does not relieve the applicant or the applicant's engineer from responsibility for ensuring that all facilities are safe and that calculations, plans, specifications, construction, and Record Drawings comply with normal engineering standards, these Standards (see for example section 3.065), and applicable federal, state, and local laws and codes. Final plans will be approved by the Director of Community Planning and Development prior to the start of construction.
- B. Materials proposed for use in construction of publicly owned or publicly maintained utilities must be in conformance to approved City of Olympia 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 Community Planning and Development (CP&D) are required to be submitted electronically. All drawings must be submitted in a portable document format (".pdf") meeting the requirements of ISO 32000-1, Document management – Portable document format – Part 1: PDF 1.7. In addition, all drawings associated with an approved Engineering Permit and sealed by a Professional Engineer shall be submitted through

the City's Smartgov portal in an AutoCAD compatible file with all associated files (xref, etc.) prior to the Pre-Construction Conference.

D. Plans and profile drawings are required for all proposed improvements, street illumination, traffic signalization, stormwater facilities, and sewer and water improvements. For specific minimum requirements, see the Plan Checklist on the following pages. On occasion, the scope of a project may not require engineered plans and can instead be handled via a Right-of-Way Obstruction and/or Excavation/Restoration Permit. This option will be decided by the City Engineer.

E. Olympia's Standard Drawings may be incorporated into plans submitted for approval. If a drawing remains unchanged from that included in these EDDS, the drawing is to retain the block border which includes the date of the drawing, title and Standard Drawing number. If the Standard Drawing is revised in any way, the border, date and Standard Drawing number are to be removed.

F. Specifications will be required and submitted with the plans if General Notes and Construction Notes do not adequately cover the project requirements.

3.040 Drafting Standards

A. All plans submitted for either design approval or permanent record ~~will shall be fully legible;~~ being free of photographs, stick-ons, or shading. Hatching may be acceptable if the pattern is not excessively dense ~~and doesn't obscure any information.~~

B. Design drawings will be submitted on clean, legible ~~blue or~~ black line format.

C. Record Drawings will conform to section 3.065 of these Standards.

D. Plans will be prepared with the understanding that ~~each will be microfilmed~~ all information shall be fully legible when reproduced. Minimum text height will be at least 0.08 times the scale factor (i.e., 1-inch = 20-foot scale; minimum text will be 20(0.08) = 1.6 units). Minimum nominal text size will be 1/8-inch.

E. No engineering plans will be accepted with architect's scale.

F. Street drawings will be either 1-inch = 5 feet, 1-inch = 10 feet, 1-inch = 20 feet, or 1-inch = 30 feet horizontal with vertical not to exceed 1-inch = 10 feet. Utility drawings may be accepted at 1-inch = 50 feet or 1-inch = 40 feet if they are legible and microfilmable.

G. Plans will show all existing and proposed monuments. All monumentation will be described using current City of Olympia coordinates. Centerline of roadways, easements (with type and dimensions), and other pertinent data will be referenced to existing monuments.

H. All existing features (pipes, curbs, power poles, etc.) are to be produced with a fine (0.5mm) pen or half tones. Proposed features will be distinguished by a larger or bolder line weight.

I. Different line types will be used to distinguish different features. For example, centerline and right-of-way will have different line types.

J. General Notes and work-specific notes shall be included in all Plans submitted for approval. All of the General Notes listed on Standard Drawing 3-1 shall be included in each set of engineering plans. In addition, as applicable to the type of work shown on the plans, all other notes on Standard Drawing 3-1 shall be included in the engineering plans submitted for approval.

K. If topographical information is included on a drawing, all topographic elements required by WAC 332-130-145 shall be included on the drawing.

3.045 PLAN CHECKLIST

STANDARD ITEMS, SANITARY SEWER, RECLAIMED WATER, WATER, STORMWATER, STREET, TRAFFIC SIGNALS, ILLUMINATION, SOLID WASTE, AND PRIVATE UTILITIES

Following are criteria to be followed when developing project plans.

Vicinity map (showing project location and the surrounding street network for 0.25 miles on each edge of the development boundary):

- ☐ Legend (APWA Standard Symbols or approved alternatives)
- ☐ North arrow with current City of Olympia meridian
- ☐ Scale bar
- ☐ Current City of Olympia datum-bench mark # elevation (MSL) and location; vertical datum used shall be NAVD 88
- ☐ Title block:
 - ☐ Title:
 - ☐ Date:
 - ☐ Design by:
 - ☐ Drawn by:
 - ☐ Checked by:
 - ☐ Signature Approval block
 - ☐ Sheet number of total sheets (e.g., 2 of 5)
 - ☐ Revisions and revision dates
- ☐ Engineer's/Land Surveyor's stamp signed and dated
- ☐ Plans submitted on 22" x 34" or 24" x 36" sheet size
- ☐ Detail sheet(s) describing applicable work
- ☐ "Call Before You Dig" note
- ☐ General notes and construction notes
- ☐ Sheet index
- ☐ "Drain to Stream, Dump No Waste" note
- ☐ Cover sheet (can include vicinity map, legend, general notes, construction details[s])

Minimum text height of 1/4"

REQUIRED PLAN PORTION ITEMS

Construction centerline stations with origin based on existing monumentation

- ☐ Right-of-way dimensions and right-of-way lines labeled

- ☐ Match lines with station and see page notation
- ☐ Edge of pavement, width, and pavement type
- ☐ Roadway and restoration sections (if applicable)
- ☐ Existing utilities (above and below ground)
- ☐ Adjacent property lines and addresses
- ☐ Note when matching existing features and utilities
- ☐ Easements-existing, proposed, type, and dimensioning (if applicable)
- ☐ Define survey baseline vs. construction baseline (if applicable)
- ☐ Street names with quadrant suffix
- ☐ Profile grades (decimal FT/FT)
- ☐ Existing ground profile (on construction baseline for street or over utility installation when roadway section not included)
- ☐ Scale (horizontal and vertical)
- ☐ Vertical elevation increments 25' stations on vertical curves and 50' on all tangents

SANITARY SEWER

Plan View:

Station and offset shown at each proposed manhole

- ☐ Manholes numbered
- ☐ Manhole type designation
- ☐ Flow direction (with arrow on pipe)
- ☐ Distance from water lines (if applicable)
- ☐ Type of pipe
- ☐ Size of pipe
- ☐ Length of pipe from center of manhole to center of manhole
- ☐ Depth at property line
- ☐ Station for side sewers at property line
- ☐ S.T.E.P. System and appurtenances with station and offset
- ☐ Force main and appurtenances with station and offset

- ☐ Invert elevations

Profile View:

Station and offset shown at each manhole

- ☐ Manholes numbered
- ☐ Invert elevation showing direction in and out
- ☐ Rim elevation
- ☐ Grades shown (decimal form FT/FT)
- ☐ Type of pipe
- ☐ Size of pipe
- ☐ Length of pipe from center of manhole to center of manhole (in L.F.)
- ☐ Existing utility crossings
- ☐ S.T.E.P. system valves, pigg ports, pressure-sustaining devices, aeration vaults, air relief valves
- ☐ Force main and appurtenances with stations and offsets

WATER

Plan View:

Existing utility crossings

- ☐ Show fixtures with stations
- ☐ Fire hydrants
- ☐ Blow-off (at dead end of line)
- ☐ Vacuum and air release valves when required
- ☐ Tees, crosses, elbows, adapters, and valves; meter station and offset
- ☐ Size of pipe
- ☐ Type and brand of fixtures
- ☐ Length of water main in L.F. between fixtures
- ☐ Distance from sanitary sewer or stormwater (if applicable)

Profile View:

Existing utility crossings

- ☐ Show fixtures with stations and elevation

- ☐ Show valves and stations and elevations
- ☐ Size and material of water main
- ☐ Length of water main in L.F.
- ☐ Grades

RECLAIMED WATER

Plan View:

Existing utility crossings

- ☐ Show fixtures with stations
- ☐ Blow-off (at dead end of line)
- ☐ Vacuum and air release valves when required
- ☐ Tees, crosses, elbows, adapters, and valves; meter station and offset
- ☐ Size of pipe
- ☐ Type and brand of fixtures
- ☐ Length of water main in L.F. between fixtures
- ☐ Distance from sanitary sewer or stormwater (if applicable)

Profile View:

Existing utility crossings

- ☐ Show fixtures with stations and elevation
- ☐ Show valves and stations and elevations
- ☐ Size and material of water main
- ☐ Length of water main in L.F.
- ☐ Grades

STORMWATER

Plan View:

- ☐ Station and offset at each manhole catch basin
- ☐ Manholes/catch basins numbered
- ☐ Manhole/catch basin type designation
- ☐ Manholes/catch basin rim elevation

- ☐ Flow direction (with arrow on pipe)
- ☐ Type of pipe
- ☐ Size of pipe
- ☐ Length of pipe
- ☐ Stormwater detention facility (pond dimensions with elevations)
- ☐ Stormwater treatment facility (dimensions with elevations)
- ☐ Control structure with orifice size and elevation
- ☐ Emergency overflow location and elevation
- ☐ Design high water elevation

Profile View:

- ☐ Station and offset at each manhole/catch basin
- ☐ Invert elevations on manholes/catch basins showing direction of flow
- ☐ Manhole/catch basin type designation
- ☐ Rim elevation
- ☐ Type of pipe
- ☐ Size of pipe
- ☐ Length of pipe (shown in L.F.) center structure to center structure
- ☐ Grades shown (decimal form FT/FT)
- ☐ Existing utility crossings
- ☐ Stormwater detention facility
- ☐ Stormwater treatment facility
- ☐ Control structure

STREET

Plan View:

Identify property lines and addresses

- ☐ Spot elevations on curb returns (PC, PT, 1/2)
- ☐ PI, PC, PT stationing of horizontal curves
- ☐ Curve information delta, radius, and length for all curves

- ☐ Horizontal angle points and curb return elevations
- ☐ Identify field design situations by notes
- ☐ Match existing features noted by station with elevation
- ☐ Typical roadway sections and pavement types
- ☐ Pavement markings noted by station and offset
- ☐ Sidewalks
- ☐ Driveway entrances

Station at center

- ☐ Width, type (AC, PCC) note applicable City Standard Drawing

Curb access ramps pursuant to applicable City Standard Drawing

- ☐ Intersection detail if applicable
- ☐ Existing transit stops and shelters
- ☐ Street trees with stations

Profile View:

Vertical information PVC, PVI, PVT, AP

- ☐ Show grades in decimal (FT/FT) for with (+ and -) slope
- ☐ Super elevated roadway segments
- ☐ Detail (length of transition in, length of full super, length of transition out)
- ☐ Existing edge of pavement profile*
- ☐ New and existing centerline profile
- ☐ New gutter edge of pavement profile*
- ☐ Pavement cross section supported by pavement design

*Not required for new standard street section construction. Required for retrofit and variable gutter

TRAFFIC SIGNALS

Signal Standard Detail Sheet:

Cabinet wire terminations

Loops

- ☐ Service panel

- ☐ Pedestrian pushbuttons
- ☐ Vehicle display
- ☐ Emergency vehicle preemption
- ☐ Interconnect
- ☐ Pedestrian displays

Signal standard detail chart (available from Transportation Division)

Signal Drawing Sheet:

Service cabinet breaker schedule

- ☐ Legend for signal equipment/notes
- ☐ Scale (1" = 10') and north arrow
- ☐ One-line diagram for streetlight circuit(s)
- ☐ Pole notes
- ☐ Construction note
- ☐ Wiring schedule table (available from Transportation Division)
- ☐ Pedestrian head diagram

Head numbers

- ☐ Type of pedestrian signal head

Vehicle head diagram

Head numbers

- ☐ Type of vehicle signal head
- ☐ Lens configuration
- ☐ Back plates

Phase sequence diagram

- ☐ Loop size
- ☐ Loop number
- ☐ Loop location
- ☐ Bicycle loop size, number and location (see drawing 4-27D)

Traffic signal poles

Pole number

- ☐ Mast arm(s)
- ☐ Streetlights
- ☐ Vehicle heads with head number
- ☐ Preempt detector
- ☐ Preempt indicator
- ☐ Spare tenon locations (if applicable)
- ☐ Pedestrian heads with head number

Streetlight poles (if applicable)

- ☐ Pedestrian head signal poles (if applicable)
- ☐ Junction boxes
- ☐ Conduit runs
- ☐ Electrical service cabinet
- ☐ Power source
- ☐ Controller cabinet
- ☐ Pavement markings
 - ☐ Crosswalks
 - ☐ Stop bars
 - ☐ Arrows and onlys
 - ☐ Bicycle symbols

ILLUMINATION

J-boxes

- ☐ Conduit runs
- ☐ Streetlight pole and number
- ☐ Construction notes
- ☐ Service panels
- ☐ Power source
- ☐ Wire notes

- ☐ Wiring schedule table (available from Transportation Division)
- ☐ One-line diagram for streetlight circuit(s)
- ☐ Scale (1" = 30') and north arrow
- ☐ Legend for streetlight equipment/notes
- ☐ Streetlight schedule (available from Transportation Division)

Streetlight number

- ☐ Circuit number
- ☐ Luminaire type/watts/distribution
- ☐ Mounting height
- ☐ Mast arm length
- ☐ Station and offset
- ☐ Sheet number
- ☐ Comments

SOLID WASTE

Identify solid waste enclosure site location on street and site plans

Show container type(s) and size(s)

Containers

- ☐ Dumpsters
- ☐ Compactors
- ☐ Drop Boxes

Show solid waste enclosure and concrete pad sizes with provisions for recycle collection

- ☐ Show spot elevations at corners of concrete pad
- ☐ Identify concrete pad cross slope (not steeper than 0.005 ft/ft)
- ☐ Show entrance and exit for collection vehicle and crews
- ☐ Minimum turning radius of 42 feet for turnaround and positioning for backing up
- ☐ Minimum access width of 12 feet
- ☐ Hard surface access entrance to solid waste enclosure site with maximum slope of 0.03 ft/ft

SOIL AND VEGETATION PROTECTION PLAN

Plan:

- ☐ Soil and Vegetation Protection Area, and related details (as applicable, per OMC 16.60)

PRIVATE UTILITIES

Plan:

- ☐ Location and route of all facilities to be installed on existing utility poles.
- ☐ Location, route, and configuration of all facilities to be located underground, including the line and grade proposed for the burial at all points along the route that are within the public ways.
- ☐ Location of all existing underground utilities, conduits, ducts, pipes, mains, and installations that are within the public ways along the underground route proposed by the applicant.
- ☐ The construction methods to be employed for protection of existing structures, fixtures, and facilities within or adjacent to the public ways.
- ☐ The location, dimension, and type of all trees within or adjacent to the public ways along the route proposed by the applicant together with a landscape plan for protecting, trimming, removing, replacing, and restoring any trees or areas to be disturbed during construction.
- ☐ The location of all survey monuments that may be disturbed or displaced by the proposed construction.
- ☐ All applicable requirements under the Street checklist for street restoration.

Profile:

- ☐ Location, route, and configuration of all facilities to be located underground, including the line and grade proposed for the burial at all points along the route that are within the public ways.
- ☐ Location of all existing underground utilities, conduits, ducts, pipes, mains, and installations that are within the public ways along the underground route proposed by the applicant.
- ☐ All applicable requirements under the Streets checklist for street restoration.

3.050 Plan Review

All plans and reports are to be submitted to the Community Planning and Development Department. Any necessary easements, dedications, contracts, agreements, bonds, deviation or variance requests will be submitted for review along with the plans. A completeness check of the plans against the plan checklists on the preceding pages will be made by Community Planning and Development staff. 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.

If plans require a third submittal for review prior to issuing a permit, additional fees will be levied as established by resolution of the City Council. "Third submittal" will mean the third and any subsequent submittal of construction drawings, specifications, stormwater calculations, and/or other information that requires additional plan checking pertaining to the construction of City facilities.

Applications for which no permit is issued within 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 Engineering Plans Examiner. The Engineering Plans Examiner may extend the time for action by the applicant for a period not exceeding 180 days upon request of the applicant showing the 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.

3.055 Construction Control

Work performed for the construction or improvement of City roads and utilities, whether by or for a private developer, by City forces, or by a City contractor, will be done to the requirements established by the City and in accordance with approved plans. No work will be started until plans are approved. Any revision to such plans will be approved by the City before being implemented. Failure to receive the City's approval may result in removal or modification of construction at the contractor's or developer's expense to bring it into conformance with approved plans.

3.056 Construction Survey and Staking

For all private development and/or improvement projects, the contractor/developer is responsible for completing all applicable construction survey and staking, as required in this section. All surveying and staking shall be performed under the direct supervision of a Professional Land Surveyor, licensed in the State of Washington.

A preconstruction meeting will be held with the City prior to commencing staking. All construction staking will be inspected by the City prior to construction.

The meaning of words and terms used in this section shall be as listed in "Definitions of Surveying and Associated Terms" current edition, published by the American Congress on Surveying and Mapping and the American Society of Civil Engineers.

Minimum staking requirements are as follows:

1. **Primary Control:** Establish intermediate elevation benchmarks, and/or control points throughout the project, with a minimum spacing of 500 lineal feet, to check work throughout the project.
2. **Clearing Limits:** Clearing limits will be marked at all major angle points and at intermediate points at approximately 100 foot intervals. Clearing limits will not be marked if they are defined by existing features (i.e. fence, edge of pavement) shown on the Plans and which will not be removed during construction. The clearing and grubbing limits shall generally be located 5 feet beyond the toe of the fill and 10 feet beyond the top of the cut unless otherwise shown on the Plans.
3. **Roadway Centerline – Rough Staking:** Roadway centerline will be staked at 100 foot stations on tangents and 50 foot stations on curves. Curves will be staked with a minimum of three points per curve. Roadway Centerline - Rough Staking will be performed if determined necessary by the City Engineer or designee.
4. **Grading Limits (Slope Stakes):** Grading limits will be staked at 50 foot intervals where cut/fill slopes exceed three (3) vertical feet. Offset reference to all slope stakes will be established as necessary.
5. **Sanitary Sewer and Stormwater Structures:** Sanitary sewer manholes and stormwater manholes and catchbasins will be staked with two offset stakes each. Gravity sanitary sewer and stormwater pipe will be staked as follows: one stake at 25-foot and one stake at 100 foot stations, as measured upstream from structures. Service stubs will be staked with two inline offsets.
6. **Water and Force Mains:** Water mains and force mains will be staked at major fitting (angle points) and valves, and at approximately 200 foot intervals. Fire hydrants, service meters, and other appurtenances will be staked with two inline offsets.
7. **Culvert Pipes:** Culvert pipes will be staked at each end of the culvert and at horizontal and vertical angle points.
8. **Utility Vaults and Joint Trench:** Joint trench (power, gas, communication) will be staked with one set of stakes for all utilities. The staking will be at 100 foot intervals and at angle points. Two corners of each utility vault will be staked with one offset stake each.
9. **Curb:** Top back of curb offsets (typically 3 feet from back or face of curb) will be staked referencing grade breaks, center of curb ramps, center of driveway approaches, horizontal intervals at approximately 50 foot intervals on tangents, and approximately 25 foot intervals in vertical and horizontal curves. All horizontal

and vertical curves will have a minimum of three points staked (PC, midpoint, and PT). If curb is not installed, the above staking offsets will apply to edge of pavement. All grading will be consistent with the controlling grade indicated on the plans.

10. Subgrade and Top of Leveling Course: Subgrade and leveling course staking will be set at horizontal intervals not greater than 50 feet in tangent sections and 25 feet in curve sections with a radius less than 300 feet, and at 10-foot intervals in intersection radii with a radius of less than 10 feet. Staking will be on the centerline/crown of roadway and roadway edges.

11. Illumination and Traffic Signals: Illumination poles, traffic signal standards will be staked with two offset stakes each. Induction loops will be staked with one stake.

12. Concrete Retaining, Rock, and Block Walls: Walls will be staked with a single offset line to the bottom face of wall; at the beginning and end of the wall, horizontal angle points/curves, points of bottom and top of wall changes in elevations, and at approximately 50-foot intervals.

13. Guardrail: Guardrail will be staked at face of guardrail at the beginning and end of all parallel guardrail sections, transition guardrail sections and terminal sections. Intermediate points shall be placed every 100 feet on tangent sections, every 25 feet on horizontal and vertical curves and every 10 feet on curves of less than 50-foot radius.

14. Channelization: Pavement markings will be staked at 50 foot intervals on tangent lines, angle points, stop/start points, beginning of turn symbols.

15. Miscellaneous: Establish horizontal locations of additional project items only if the City Engineer or designee determines such locations cannot be readily determined from other project features and details in the Plans, including but not limited to the following: fencing and railings (including gates), signing, control cabinets/service cabinets, junction boxes, landscaping, irrigation facilities and sawcuts.

These stakes and marks shall govern the contractor's work. The contractor shall furnish all additional survey deemed necessary. The contractor shall take full responsibility for detailed dimensions, elevations, and slopes measured from the survey stakes. The contractor shall provide the City copies of any calculations and staking data performed by the contractor or its surveyor when requested by the City.

All work performed shall be in conformity with the lines, grade, slopes, cross sections, super elevation data and dimensions as shown in the Plans or as staked. If the Plans, Special Provisions or Standard Specifications state specific tolerances, then the work shall be performed within those limits. The Contractor shall not deviate from the approved Plans unless the City Engineer approves it in writing.

The Contractor shall work to preserve stakes, marks, and monuments. The Surveyor and Engineer of record are responsible for locating and referencing those monuments shown on the Plans, of being removed or destroyed during construction, and preparing the required permit forms with the Department of Natural Resources (DNR) for those monuments. See Section 4H.050 for additional Monument Protection and Replacement requirements.

The Surveyor of record shall maintain a complete and accurate reference record of all survey markers, monuments, and property corners on the project. The Contractor shall inform the Surveyor of record and the City when monuments are discovered that were not identified in the Plans and construction activity may disturb or damage the monuments. All monuments noted on the plans "DO NOT DISTURB" shall be protected throughout the length of the project or be replaced at the Developer's expense. In the event the monument(s) are disturbed or destroyed during the course of construction, and not indicated to be removed/replaced on the Plans, the Developer shall bear all costs of survey, resetting, legal claims, and filing state forms.

3.060 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, by City forces, or by a City contractor, will be done to established requirements outlined by the City and in accordance with the WSDOT Standard Specifications, any approved plans, and these standards. Any revision to construction plans must be approved by the City before being implemented.

It is the responsibility of the developer, contractor, or their agents to notify the City in advance of the commencement of any authorized work. A preconstruction meeting and/or field review will be required before the commencement of work. All applicable fees will be paid prior to the preconstruction meeting. Any required easements or offers of dedications are required before plan approval.

It is the responsibility of the developer, contractor, or their agents to have an approved set of plans and any necessary permits on the job site whenever work is being accomplished.

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's 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 record drawings, bills of sale, easements, bonds, and maintenance agreements have been submitted to and approved by the City and a letter of acceptance is issued by the City to the party responsible for the project.

No water meters will be released for any lot or building served by a project until final acceptance has been granted.

3.065 Record Drawings

An approved final revision of design drawings or plans, updated to include information showing the true condition or configuration of what has been built shall be submitted to the City for approval. **Only electronic versions of Record Drawings are to be submitted to the City for review.** Each Record Drawing (sometimes referred to as an "As-Built Drawing") or plan is to be designated "Record Drawing" by stamp or lettering on the drawing and sealed by a licensed Professional Engineer. Record Drawings submitted with any disclaimer or caveats which state that the Professional Engineer is not in responsible charge of the information shown, or does not attest to the warranty of such, written on the face of them (for example, stating that "...to the best of my knowledge, the project was constructed substantially in accordance with these drawings...") are not acceptable and will be rejected. Record drawing submittals will be reviewed for completeness of submission. Errors, omissions, or technical issues with submitted files identified after Record Drawing acceptance, such as during the City's mapping of the as-built features, may require a return for correction.

Record Drawings shall conform to sections 3.030, 3.040, and 3.045 of these Standards. Electronic copies of final, approved Record Drawings shall also be submitted to the City in two formats: (1) 300 dpi TIF or PDF^a (high resolution), and (2) AutoCAD compatible file with all associated files (xref, etc.).

3.070 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 Olympia Municipal Code (OMC). The City Council will further set the dollar penalty for failure to pay said fee or charge in a timely manner.

All plan check fees are due when plans are submitted for review.

All inspection fees are due at the time of the permit application.

In addition, there are various miscellaneous service and connection fees and charges.

3.080 Permits

Before any person, firm, or corporation will commence or permit any other person, firm, or corporation to commence any work to grade, pave, level, alter, construct, repair, remove, excavate, or place any pavement, sidewalk, crosswalk, curb, driveway, drain, sewer, water, conduit, tank, vault, street banner or any other structure, utility or improvement located over, under or upon any public right of way or easement in the City of Olympia, or place any structure, building, barricade, material, earth, gravel, rock, debris or any other material or thing tending to

obstruct, damage, disturb, occupy, or interfere with the free use thereof or any improvement situate therein, or cause a dangerous condition, an appropriate permit will be obtained from the Community Planning and Development Department. A separate permit will be obtained for each separate project.

A. Validity of Permit

The issuance or granting of a permit or approval of plans, specifications, and computations will not be construed to be a permit for, or an approval of, any violation of any of the provisions of this code or of any other ordinance of the jurisdiction. Permits appearing to give authority to violate or cancel the provisions of this code or other ordinances of the jurisdiction will not be valid.

The issuance of a permit based upon plans, specifications, and other data will not prevent the Engineering Plans Examiner from thereafter requiring the correction of errors in said plans, specifications, and other data, or from preventing operations being carried on there under when in violation of this code or of any other ordinances of this jurisdiction.

B. Expiration

Every permit issued by the Engineering Plans Examiner under the provisions of this code will expire by limitation and become null and void if the work authorized by such permit is not commenced within 180 days from the date of such permit, or if the work authorized by such permit is suspended or abandoned at any time after the work is commenced for a period of 180 days. Before such work can be recommenced, a new permit will be first obtained to do so, and the fee therefore will be one-half the amount required for a new permit for such work, provided no changes have been made or will be made in the original plans and specifications for such work and provided further that such suspension or abandonment has not exceeded one year. In order to renew action on a permit after expiration, the permittee will pay a new full permit fee.

Any permittee holding an unexpired permit may apply for an extension of the time within which the permittee may commence work under that permit when the permittee is unable to commence work within the time required by this section for good and satisfactory reasons. The Engineering Plans Examiner may extend the time for action by the permittee for a period not exceeding 180 days upon written request by the permittee showing that circumstances beyond the control of the permittee have prevented action from being taken. No permit will be extended more than once.

C. Suspense or Revocation

The Engineering Plans Examiner may, in writing, suspend or revoke a permit issued under the provisions of this code whenever the permit is issued in error or on the basis of incorrect information supplied or in violation of any ordinance or regulation or any of the provisions of this code.

D. Expiration of Plan Review

Applications for which no permit is issued within 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 Engineering Plans Examiner. The Engineering Plans Examiner may extend the time for action by the applicant for a period not exceeding 180 days upon request by the applicant showing that 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.

In the case of work contracted for by the Department of Public Works, the signing of the contract will constitute a Right-of-Way Obstruction Permit.

Much of the work covered under these standards will require multiple permit authority review and approvals. Several types of permits and approvals require prior approval from the authority before a building or other permit can be issued. Any questions regarding information about permits, approvals, and agreements should be directed to the Engineering Plans Examiner in the Community Planning and Development Department.

E. Approvals and other Permits

There are several other permits or approvals that may be required and referred to in these Standards. Applicants should contact the Planning and Building Departments of Community Planning and Development for a list of other permits and approvals.

In addition, there are several other City approvals (land use) that may have to be obtained prior to the above-listed permits and that may affect the Standards as contained in this document: Change of Use; Conditional Use; Planned Residential Development; Planned Unit Development; and Shoreline Substantial Development Permit.

3.090 Utility Locations

A. Utilities within a right-of-way or easement on new roads or in roadways where existing utilities are not in conflict will be located as shown in typical sections. Where existing utilities are in place, new utilities will conform to these standards as nearly as practical and yet be compatible with the existing installations. Deviations of location will be approved by the City Engineer. Existing utilities will be shown using the best information available. This verification may require exploration/ excavation (potholing) if utilities are in conflict with proposed design.

The contractor/developer will be responsible for utility locates in conjunction with their project until final Public Works approval is given.

B. All new utilities, other than those located on private property, will be installed underground by the utility owning said facility, as set forth in these standards and the provisions set forth in franchise agreements between the City and the utility.

Utilities converted from overhead to underground on existing roadways may be located within the right of way.

C. A right-of-way obstruction and/or excavation/restoration permit is required of any utility, except City-owned facilities and utilities, who hold a franchise agreement with the City for any work done within the right-of-way and will comply with all provisions as set forth in OMC 12.24.090 to 12.24.150 and Section 3.080 of these standards.

3.100 Easements

A. Where public utilities such as water, stormwater and sanitary sewer facilities, their conveyance systems, or groundwater monitoring wells requiring City water quality monitoring cross or are located on private property, an easement must be granted to the City. The Public Works Engineering Line of Business will 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. All easements not shown on a plat must be prepared by an attorney or a licensed land surveyor or engineering firm capable of performing such work.

B. Easement widths will be centered on the utility and be 20 feet for a single utility and 30 feet for dual utilities, ensuring 10 feet of clear space on both sides of each pipe. Construction/slope easements will be required when appropriate with widths as necessary to encompass work area. An all-weather access road may be required to be constructed as part of the initial construction of the public facilities in order to facilitate future maintenance. A wider easement may be required by the City Engineer, to enable installation, access and/or maintenance of the utility(ies), particularly for larger pipe diameters, depth of pipe, manholes or vaults larger than a nominal 4 feet in width, or location of the easement in an undeveloped area of the parcel(s).

C. Easements are required to be submitted in draft, unsigned form for review and approval prior to plan approval. Signed copies are required prior to final approval. Any change in design that places an amenity, i.e., water, sewer, sidewalk, etc., outside of the easement may necessitate stopping of construction until plans and easements can be resubmitted and approved. Plan review fee will be based on the rate as established for third submittal fee. Easements will be filed by the City upon satisfactory completion of the work.

A copy of the standard easement form may be obtained from the City's Land Surveyor. Standard Easement language requires that Grantor of the easement "shall not excavate within or otherwise change the ground surface grade of the Easement Area or construct, or maintain any buildings or structures within the Easement Area without prior written consent of Grantee (City)".

3.110 Utility Extension

A. Anyone who wishes to extend any City utility should contact the Community Planning and Development Department for an extension/connection fee estimate.

B. Water utility mains shall be extended across the frontage of and through the extremes of the property being developed for loop closures and/or future development as, unless waived as follows:

1. If it can be demonstrated that the construction of a water main extension along any a given frontage will neither (a) provide a water pressure or fire flow benefit to current properties, nor (b) potentially provide future benefit to adjacent or nearby properties, the requirement to construct the water main along that frontage will be waived.

C. Connection to the sewer utility shall be required of any development with plumbing, unless an onsite sewage system can serve the property consistent with OMC 13.08.090:

To be permitted to connect to the sewer utility, a property owner is required to extend the sewer infrastructure to the property and along each frontage of the property or along alternative routes to the boundaries of adjoining properties as needed to serve adjoining properties, unless waived as described below.

1. If it can be demonstrated that the construction of a sewer along a given frontage will not potentially provide future benefit to other properties, the requirement to construct the sewer along that frontage will be waived, or
2. If an existing sewer line is not available within 200 feet for extension along a second frontage, and it is a non-contiguous frontage (i.e., the second frontage is along the opposite side of the lot(s) as the primary frontage or the frontage that has an existing sewer line), the requirement to construct the sewer along that frontage will be waived, or
3. For a single property abandoning an onsite septic system and making one connection to the public sewer, the sewer extension will only be required on one frontage to a point even with the mid-point of the house, unless additional sewer extension is required to accommodate the side sewer connection location for said house. This waiver only applies if the number of ERUs on the property is not being increased.

D. For all sewer main extensions for which there is a Latecomer Agreement proposed, the developer shall extend a side sewer from the sewer main to each benefitting property. Each side sewer stubout shall be capped at the right-of-way or easement line and ~~have a marker installed at surface indicating the location and depth of the side-sewer cap~~ and a cleanout installed as shown on Standard Drawing 7-19.

3.120 Annexation Requirement

Owners of properties lying outside of the City must legally commit their property to eventual annexation prior to being served by the City's utility system and may be required to enter into a utility extension contract agreement.

These annexation requirements will be applied to all extensions of the City's utility to areas outside the city limits. Anyone who desires to extend the City's utility system should contact the Community Planning and Development Department for specific annexation requirements.

3.130 Traffic Control

A. 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 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.

City utilities constructed within Thurston County right-of-way will follow all traffic control requirements as set forth by Thurston County Department of Public Works and MUTCD.

Signs must be legible and visible and will be removed at the end of each workday 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.

B. When road closures and detours cannot be avoided the contractor/ developer will notify the Community Planning and Development Department Construction Inspectors within a minimum of 48 hours. The City may require a detour plan to be prepared, submitted, and approved prior to closing any portion of a City roadway.

C. A Right-of-Way Obstruction and Excavation/Restoration Permit may be required before work in the road can commence. See requirements in Sections 3.080 and 3.100 and contact the City for specific permit information.

3.140 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. A minimum of two working days' advance notice is required.

3.150 Emergency Work Policy for Private Utilities

Should the work of a developer/contractor result in an emergency street or utility shut down during nonworking hours, the direct overtime costs of responding City personnel will be billed to the responsible party. The Olympia Public Works 24-hour emergency telephone number is 753-8333.

Appendix 1: List of Standard Drawings

Title	Drawing No.	File Type (DWG includes all drawings in chapter)	File Type
General Notes	3-1	PDF DWG	PDF DWG