

# Preliminary Civil Plans – Transportation Requirements

Show all proposed improvements in accordance with the [Transportation Design Manual and Complete Streets Guide | City of Bellevue](#).

All transportation related civil plans shall be prepared by a professional engineer, licensed in Washington State, with relevant roadway design experience.

The Design engineer is responsible for verifying and accurately depicting all locations and dimensions of property lines; setback distances; and the location and width of streets, right-of-way and easements, and to verify all proposed improvements are within right-of-way or easements.

All construction and general notes, and details must be included on the plan sheets described below.

## Typical Roadway Cross Sections and Details

- Separate roadway sections shall be provided for each differing section of roadway for the entire length of the project.
- Show all relevant details that are not included in city standard drawings.
- Show existing and proposed right-of-way and easement locations, with dimensions.
- Show cross-section details for integration of elements such as pavement section, curb and gutter, planter, sidewalk, retaining walls, pedestrian rails, etc.
- Depict proposed garage below grade (annotate garage elevation and vertical clearance below the proposed sidewalk).
- Depict proposed building above grade, annotate vertical clearance from the top of the garage.
- At traffic signal pole locations, include signal pole foundation depth relative to proposed garage below grade (annotate garage elevation).
- Provide curb ramp details.

## Roadway Plan and Profile

Plan information shall include but not limited to the following:

- Show the existing property lines and the right-of-way centerline.

- Provide construction centerline and stationing information for staking. A separate centerline and alignment drawing may be used for projects that will have lots of information or are very detailed. The construction centerline shall be tied to the alignment survey.
- Show and label width of existing and proposed right-of-way.
- Show and label width of existing and proposed easements (motorized and non-motorized).
- Except for plats, show street names. For plats, designate proposed roads as "Road A," "Road B," etc. Designate proposed tracts as "Tract A," "Tract B," etc.
- Show and label the outline of the below grade garage (Show multiple garage outlines if varying based on garage level).
- Show and label the width of the existing and proposed pavement, bicycle facility (if required) curb and gutter, sidewalk, planters strip, street trees, etc.
- Show existing driveways on both sides of the street to 100 feet from the proposed access. Show streets parallel to the proposed access, if any, up to 150 feet from the proposed access.
- Label proposed driveway width and distance from the property line.
- Show limits of driveway restoration. For gravel driveways, hard surfacing for approaches shall extend to the right of way.
- Show the sidewalk transition information from the new to existing width for a minimum of 15 feet beyond the development property line.
- Depict paving information.
- All utility features adjustments by other utilities shall be noted on the plans.
- Show all existing aerial and underground utilities.

Profile information shall include but not be limited to:

- Depict and label the existing roadway centerline ground profile.
- Depict and label the finished roadway centerline profile grade.
- For new construction and modified roadway profile, depict vertical alignment data of the roadway centerline (Vertical curve length, K value, Beginning and Ending

points stations and elevations, grade breaks station and elevation, tangent lengths and percent grade).

- Depict and label the proposed top of curb profile.
- Annotate existing or proposed centerline elevations and proposed top of curb elevations along the development frontage.

### **Driveway Plan and Profiles**

- Annotate driveway approach width and reference proposed city standard drawing for applicable driveway option.
- Driveway approach grades should be designed to accommodate adjacent sidewalks and minimize change in grade for pedestrians.
- Driveway plans should consider sight distance conflicts with other existing and proposed features.
- Driveway profiles shall be scaled 1 to 1.
- Driveway profiles shall show the existing and proposed elevations. Also indicate right of way limits relative to driveway.
- Label driveway profile grade 20 to 30-ft from the back of sidewalk depending on the access type.
- Driveway profiles at garage entrances shall depict the vertical clearance.
- Driveways shall be designed in such a way that minimizes the slope of the driveway.

### **Sight Distance Exhibits**

- Demonstrate adequate sight distance at each driveway and adjacent intersections by showing the vehicle and pedestrian, and bicycle (if applicable) sight distance in accordance with the [Transportation Design Manual](#).
- Label the sight distance setback lines.
- Provide a profile for the vehicle, bicycle, and pedestrian vertical sight distance.
- Show the stopping sight distance lines on the profile for both directions of traffic for all crosswalks.

### **Design vehicle turning exhibits**

- Provide turning movement simulation for garbage trucks and design vehicles entering and exiting the site, using AutoTurn vehicle simulation software.
- Show vehicle template dimensions.
- Show a vehicle simulation legend, including vehicle body envelope, front tire path and rear tire path.
- Provide vehicle simulation in color.

### **Right-of-Way and Easements Exhibit**

- Show the existing property lines and right-of-way.
- Show the roadway and right-of-way centerlines along with centerline alignment stationing.
- Show the existing easements on the property.
- Identify all existing easements to be amended, modified or relinquished, with a corresponding table.
- Clearly identify any easements which are shared between adjacent properties.
- Show the existing easements on other properties for required frontage improvements (transition areas beyond the property line, receiving curb ramps, signals, etc.)
- Show the proposed right-of-way areas, labeling the dimensions.
- Show the proposed easements areas, labeling the dimensions.
- Provide a color-coded legend for the existing and proposed areas.
- Depict the building outline at ground level.
- Depict and label the below grade garage outer wall.
- Depict and label any proposed buildings overhang.

## **Preliminary Traffic Plans Requirements**

Show all proposed improvements in accordance with the [Transportation Design Manual and Complete Streets Guide | City of Bellevue](#).

All traffic plans shall be prepared by a professional engineer, licensed in Washington State, with relevant roadway, street lighting and traffic signals design experience.

The Design engineer is responsible for verifying and accurately depicting all locations and dimensions of property lines; setback distances; and the location and width of streets, right-of-way and easements, and to verify that all proposed improvements are within right-of-way or easements.

All construction and general notes, and details must be included on the plan sheets described below.

### **Channelization and Signing Plans**

- Show all proposed channelization for motorized and non-motorized facilities.
- Show proposed sign removals, new signs, sign relocations and replacements.
- Show median barriers, C-curbs, traffic islands and guardrails on channelization plans.
- Label dimensions of proposed channelization.

### **Traffic Signal Plans**

- Include existing traffic signal plan overlaying proposed improvements – Show ADA and MUTCD compliance.
- Include preliminary traffic signal design with proposed signal pole foundation depth.
- If applicable, include proposed design of Rectangular Rapid Flashing Beacon (RRFB) system.

### **Preliminary Street Lighting, Fiber Optic, and Small Wireless Facilities (SWF) Plans**

#### Street Lighting

- For Street Lighting requirements, refer the [COB Design Manual Appendix A\[RK1\]](#) – Street Lighting Design Guide.
- Show the location(s) and type of pole and fixture for all lights included in the analysis. Also include all relevant features on this plan sheet, including but not limited to above and below ground utilities, building awnings/overhangs, below grade garage limits, street trees, crosswalks, driveways, etc.
- Show the preliminary street lighting proposed design including an illumination pole schedule.

- Where the city owns or will own the street lighting system (generally on arterial streets or downtown), the Preliminary Street Lighting Plan must be submitted by a Washington State-registered civil or electrical engineer experienced in street lighting design, at the developer's request and expense.
- Where Puget Sound Energy (PSE) owns or will own the street lighting system (generally on local streets), the Preliminary Street Lighting Plan must be submitted to the city by PSE at the developer's request and expense.

#### Fiber Optic

- For Fiber Optic Design requirements, refer to [COB Design Manual Appendix C](#).

#### Small Wireless Facilities

- Identify existing Small Wireless Facilities along the project frontage. Refer to the SWF Applications Filed and Reservations at [Small Wireless Facility Permit | City of Bellevue](#).

#### **Photometric Calculations Plan**

- Provide a street light level analysis using AGi32 software to determine optimal street light locations that meet the city's standards.
- Submit a digital AGi32 file for review. Email the file to the assigned transportation development review engineer.
- Include illumination design criteria, and a calculation summary table showing the target and actual minimum average maintained light levels and maximum uniformity ratio for each calculation area.