

## **1.0 GENERAL CONDITIONS AND REQUIREMENTS**

### **1.1 GENERAL**

These Standards are the general conditions and requirements for all improvements to or extensions of the City of Kent's street, storm drainage and utility systems. The conditions as stated herein, and in the current City of Kent Surface Water Design Manual, apply to all improvements made by public agencies, utilities, and private developers.

For the sake of efficiency, the term "Developer" means any person or entity designated or named in writing by the property or easement owner to be the applicant, or a public agency or utility which owns a right-of-way or easement in a permit application or approval for a development proposal or capital improvement project. Developer also includes a permit applicant, one who has already been granted a permit, and the City itself for those situations where City construction activities are subject to approval under the particular standard. While the City will be guided by the standards as noted herein, the City does not grant or require permits or financial guarantees for its own work.

### **1.2 APPLICABILITY**

These Standards shall apply to all newly constructed street, utility, and right-of-way facilities and improvements, public and private, within the City of Kent.

The Standards apply to modifications of street features or existing facilities which are within the scope of reconstruction, widening or narrowing, required off-site street improvements for land developments, or capital improvement projects when so required by the City, or to the extent they are expressly referred to in the Kent Comprehensive Plan and associated subarea plans.

The Standards shall apply to every new placement and every planned, non-emergency replacement of existing utility poles, underground facilities, and other utility system structures within the City right-of-way. Every effort shall be made to meet the Standards during emergency replacements.

### **1.3 SEVERABILITY**

If any part of these Standards as adopted by ordinance shall be found invalid, all other parts shall remain in effect.

### **1.4 CHANGES TO THIS MANUAL**

The Engineer may incorporate minor changes to these Standards as they become necessary. Major, substantive changes shall include an opportunity for public review and comments and adoption by ordinance.

With a publication of this complexity there may be errors that must be corrected, and periodic updates required due to changing standards. The City strives for accuracy and consistency in these standards. Any errors, omissions or recommended changes may

be submitted to the City utilizing the "Request for Change to Design and Construction Standards" form at the front of this document.

## **1.5 RESPONSIBILITY TO PROVIDE STREET IMPROVEMENTS**

Developers for projects meeting one or more of the thresholds listed below shall construct street improvements, including pedestrian and bicycle facilities, in accordance with these Standards:

### **1.5.A Land Development Impacts**

Any land development, which will impact the service level, safety, or operational efficiency of any City streets serving such land development or is required by other City code or ordinance to improve such streets. Off-site street improvements shall be based on an assessment of the impacts of the proposed land development by the Engineer.

### **1.5.B Land Development Abutting Existing Streets**

Any land development abutting existing public streets. The extent of improvements shall be based on an assessment of the impacts of the proposed land development by the Engineer.

### **1.5.C Land Development Containing Internal Streets**

Any land development that contains internal streets. Unless otherwise approved by the Engineer, the internal streets shall be constructed in compliance with these Standards.

## **1.6 REFERENCES**

All references herein shall be to the editions or versions in effect at the time a complete application for the required Permit is accepted by the City, unless a Developer is otherwise vested by applicable law.

### **1.6.A General References**

The Standards are intended to be consistent with the following Codes, Plans, Programs, Manuals, Guidelines, Laws and regulations.

1. Kent City Code, as amended, including:
  - a. Title 6: Public Works
  - b. Title 7: Utilities
  - c. Title 8: Health and Sanitation
  - d. Title 11: Environmental Management
  - e. Title 12: Planning and Land Development

- f. Title 13: Fire Prevention and Protection
  - g. Title 14: Buildings and Construction
  - h. Title 15: Zoning
2. City of Kent Comprehensive Plan
  3. City of Kent Subarea Plans
  4. The State Shoreline Management Act and regulations adopted thereunder, RCW 90.58 and WAC 173-26
  5. City of Kent Shoreline Management Master Program, Kent City Code 11.04
  6. City of Kent Capital Improvement Program City of Kent Transportation Improvement Plan
  7. City of Kent Comprehensive Sanitary Sewer Plan
  8. City of Kent Comprehensive Water Plan
  9. City of Kent Storm Water Master Plan
  10. City of Kent Transportation Master Plan
  11. City of Kent Surface Water Design Manual
  12. City of Kent Downtown Design Review Guidelines
  13. City of Kent Meeker Streetscape Design and Construction Standards
  14. International Building and Fire Codes
  15. King County Flood Hazard Management Plan
  16. Americans with Disabilities Act (ADA) and rules adopted thereunder
  17. King County Surface Water Design Manual (KCSWD) – as amended by the City of Kent Surface Water Design Manual

### **1.6.B Primary Design and Construction References**

Except where these Standards provide otherwise, the design detail, construction workmanship, and materials shall comply with the current editions or versions of the following publications, as amended by the City of Kent.

1. Washington State Department of Transportation (WSDOT), Standard Specifications for Road, Bridge, and Municipal Construction, as amended by the City of Kent. These will be referred to as the “WSDOT Standard Specifications.”
2. WSDOT Standard Plans for Road and Bridge Construction, will be referred to as the “WSDOT Standard Plans.”
3. WSDOT Design Manual
4. WSDOT Construction Manual
5. WSDOT Local Programs Environmental Classification Summary Guidebook
6. City and County Design Standards, adopted in accordance with RCW 35.78.030 and RCW 43.32.020 as published in WSDOT’s Local Agency Guidelines.
7. Washington State Department of Health, Water System Design Manual
8. United States Environmental Protection Agency (EPA), Cross-Connection Control Manual
9. United States Federal Highway Administration (FHWA), Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD), as adopted and supplemented by the State of Washington.

### **1.6.C Other Specifications and Guidelines**

The following specifications and guidelines shall be applicable when specifically cited in these Standards, when required as a Development condition, and/or when required by state or federal funding authority.

1. WSDOT Local Agency Guidelines (LAG)
2. Design criteria adopted by federal agencies, including, but not limited to, the United States Federal Housing Administration (FHA), United States Department of Housing and Urban Development (HUD), United States FHWA, and United States Department of Transportation (USDOT)
3. American Association of State Highway and Transportation Officials (AASHTO), A Policy on Geometric Design of Highways and Streets.
4. AASHTO Standard Specifications for Highway Bridges
5. AASHTO Guide for the Development of Bicycle Facilities
6. American Society for Testing and Materials (ASTM), applicable standards

and specifications as determined by the Engineer

7. King County Metro Transit Facilities Guidelines
8. FHWA Roundabouts: An Informational Guide
9. AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals
10. Section 106 of the National Historic Preservation Act and 36 CFR 800
11. Section 4(f) of the Department of Transportation Act of 1966, 49 U.S.C. 303
12. Washington State High Occupancy Vehicle (HOV) Policy
13. FHWA Guidance on HOV Lanes
14. Washington State Department of Ecology, Criteria for Sewage Works
15. American Water Works Association, American Water Works Standards
16. WSDOT Understanding Flexibility in Transportation Design-Washington
17. Institute of Transportation Engineers (ITE), Context Sensitive Solutions in Designing Major Urban Thoroughfares for Walkable Communities
18. Recommended Practice for Design and Maintenance of Roadway and Parking Facility Lighting, ASSI/IES RP-8-00.

## **1.7 ENGINEERING PLANS SUBMITTAL REQUIREMENTS**

Engineering Plans for all public and private projects shall be prepared and submitted through the City of Kent Permit Center as part of a civil construction permit application or other applicable permit. The anticipated order of events is: submittal of Engineering Plans and permit application(s); acceptance of Engineering Plans as complete; approval of Engineering Plans; submittal of associated documents such as financial guarantees and certificate of insurance; and issuance of permit(s). Projects may be constructed in phases provided that all public and private infrastructure needed to serve the phase being accepted has met the conditions of these Standards. At a minimum, the Engineering Plans shall meet the following requirements:

### **1.7.A General Plan Requirements**

1. A Professional Engineer licensed and in good standing with the State of Washington shall prepare the Engineering Plans. The Engineering Plans must be signed and stamped by the responsible Professional Engineer.

2. A cover sheet shall be provided. All engineering plan sheets shall include the same general title block including consecutive sheet numbers. The vicinity map and legend of symbols shall also be included on the cover sheet.
3. The engineering plan sheets shall be 22"x34" or 24"x36" in size on good quality white paper and in reproducible black ink. Engineer scale and scale bar shall be required with horizontal 1"=20' and vertical 1"=5' for the street frontage/ public improvements. Site work plans may use an engineering scale of 1"=50' for horizontal and 1"=5' for vertical. Channelization plans for intersections shall be provided at a 1"=20' scale. Blue lines/blueprints will not be accepted.
4. All final Engineering Plans submitted to the City shall be bond drawings and shall be clear, legible, contain a north arrow, and be drawn to scale. Electronic and hard copies of the final Engineering Plans shall be submitted in conformance with the requirements of the Permit Center. Where modifications to existing streets and utilities are to be constructed, existing features shall be "screened or ghost lined". New construction and/or improvements shall be indicated with heavy bold lines using APWA standard CAD symbols and layers. Final real property documents shall be submitted in hard copy and an electronic copy which is non-alterable.
5. The Engineering Plans must include existing and proposed survey monuments. The street centerline, easements, and other pertinent data shall be referenced to existing monuments.
6. When applicable, the Engineering Plans shall incorporate the engineering plan requirements of the current Kent Surface Water Design Manual.
7. A land survey stamped and signed by a Professional Land Surveyor registered and in good standing with the State of Washington is required for all preliminary subdivisions, short subdivisions and commercial/ industrial Developments.
8. The Engineer may require other plan elements in addition to those described above.

### **1.7.B Requirements in All Plans**

The following items must be incorporated into all Engineering Plans:

1. Horizontal Plan
  - a. Street or proposed utility system alignments, reading from left to right, showing stationing of points of curvature, tangency, intersection angle points, and with ties to section or quarter corners, also including all necessary curvature data.
  - b. Identification of all existing and proposed improvements, such as the right-of-way and/or easement lines, the streets, sidewalks, shoulders, utilities, drainage

facilities, rock facings, retaining walls, guard rails, bridges, fences and driveways. Existing and proposed driveway cross-sections are required.

- c. All topographic features within and adjacent to proposed improvement, and impacts of slopes, drainage, access, future extensions, area and so forth, shall be incorporated into the Engineering Plans.
- d. All existing and proposed public and private utilities, including water, sewer, telephone, power, gas, cable, and any other utilities within the project area shall be shown on the Engineering Plans. All utility system stubs shall be shown on the Engineering Plans with stationing provided. All existing wells and associated pipes and pump facilities within the property and 100' outside the property lines shall be shown.
- e. In the event that off-site street and/or utility system extensions are to be included as part of the construction of the project then the civil design shall include the information identified herein in the engineered drawings of the off-site utilities.
- f. Existing and proposed drainage facilities, including culverts, catch basins, ditches, etc., indicating direction of flow, size, type of pipe, invert and rim elevations.
- g. Identification of adjacent streets, subdivisions, building addresses, parcel numbers, or any other available information to identify locations and future reference (such as property owner and mailing address, if required) shall be shown. All intersections and driveways within 200' of the proposed development shall be shown.
- h. At a minimum, curb return elevations shall be shown at quarter points at all intersections to verify drainage and a smooth transition. Larger radii will require more points.
- i. The vertical and horizontal survey controls for all Infrastructure Improvements shall be based on the State Plane coordinates; an assumed coordinate system is not permitted. The State Plane coordinates shall be on the NAD 83/91 datum and must relate to at least two (2) City of Kent control points within one half mile of the proposed Development. In addition, the project shall be tied into at least two (2) City of Kent NAVD 88 vertical benchmarks and two (2) additional permanent benchmarks shall be established within the project. The locations, descriptions and elevations of these benchmarks will be reported at the time Record Drawings are submitted, along with field notes sufficient to verify the required

precision.

j. Include on the cover sheet calculations in square feet (per parcel) of total parcel area, added or removed pervious area and total impervious area.

k. These two approval blocks are to be shown on the plans.

1) City of Kent approved block (4"x2") provided in lower right corner of each sheet, including permit number above the approval block. Approval block area to be printed with the following:

PERMIT NO. _____	
BASED ON THE SUBMITTED DRAWINGS AND SPECIFICATIONS PROVIDED BY THE APPLICANT'S LICENSED ENGINEERS, SURVEYORS AND ARCHITECTS AND OTHER CERTIFIED PROFESSIONALS, THESE PLANS ARE APPROVED FOR CONFORMANCE WITH THE CITY OF KENT ENGINEERING DIVISION'S REQUIREMENTS	
_____ Development Engineering Manager	_____ Date
_____ City Engineer	_____ Date

2) Sign-off block provided for Record Drawing certification and printed as follows on each plan sheet, generally in the lower right hand corner:

THESE RECORD PLANS AND THE INFORMATION SHOWN ACCURATELY REFLECT EXISTING FIELD CONDITION AS OF _____ (DATE SIGNED).
BY: _____

2. Profile Plan

a. Profile drawings shall be prepared with all sanitary sewer, storm drain,

domestic water, and street design plans, whether public or private, and with any other plans where vertical control is deemed to be important.

- b. The existing centerline profile shall be plotted, denoting grade breaks, topographic features and any other information important to the design.
- c. The street and/or utility system profile shall be shown with the same stationing as the horizontal plan.
- d. Street profiles shall include existing and proposed centerline elevations at 50-foot stations or less for all centerline grades and vertical curves, including stations and elevations at point of vertical curvature (PVCs), point of vertical intersection (PVIs), and point of vertical tangency (PVTs). When existing or proposed street includes sections where stopping sight distance or intersection/driveway sight triangle may be deficient, a sight distance diagram shall be included.
- e. Sanitary sewer, domestic water, and storm drain profiles shall include pipe slopes, pipe type, diameters, lengths, rim and invert elevations, manhole and/or catch basin locations, type and numbers, and any other information relevant to the design.
- f. The Storm Drainage Plans shall contain the following table which will be utilized for calculation of system development charges and monthly stormwater utility billing:

**DRAINAGE UTILITY SUMMARY TABLE**

<b>Parcel No.</b>	<b>Total Area of Parcel (sf)<sup>1</sup></b>	<b>Exist. Impervious Area (sf)</b>	<b>New Impervious Area (sf)</b>	<b>Total Impervious Area (sf)</b>	<b>Percent Impervious Area (%)</b>

Note: The purpose of this table is to assist in the calculation of system development charges and adjustments in monthly utility billing.

- 3. Detail Plans
  - a. Detail drawings shall contain adequate dimensions, sections, non-standard details, views, notes, and call outs to construct the structure, or allow preparation of detailed shop drawings by the fabricator when necessary. Use of very light gray shading and very light hatching is acceptable, provided they do not obscure data and other pertinent

information at full and reduced scale.

- b. Where special construction procedures or structures are required, special detail drawings are required. Standard plans can be referenced to the WSDOT Standard Plans or the standard plan as contained at the end of each chapter of these Standards and need not to be shown on the Engineering Plans.
  - c. Detail drawings for facilities such as buildings, water wells, sewage, pump stations, etc. shall be prepared under the supervision of a Professional Engineer licensed and in good standing with the State of Washington.
  - d. Scaled plan view and cross-section of the storm water outlet control structure shall be provided at a scale of 1"=2'.
4. Illumination Plans
- a. Illumination plans shall be labeled as street light plans and shall be prepared and stamped by a licensed engineer qualified to design street light systems.
  - b. Illumination plans shall be provided on separate sheets that do not show unrelated street, utilities, or on-site improvements.
  - c. Illumination plans may be combined with the landscaping plans.
  - d. The minimum requirement for Illumination plans are as follows:
    - 1) The light standard (pole) used (material, make and model), the mounting height in feet, and the bracket or arm length in feet.
    - 2) The overhang from the curb to the luminaire in feet.
    - 3) The luminaire, light distribution pattern (type of optics and distribution type), lamp type (LED required) and wattage, rated lamp life, and initial lumens.
    - 4) The design spacing and design spacing less 10 percent.
    - 5) The locations of all street lights by station, and the offset to center of pole in feet.
    - 6) All conduit runs, their diameter, material, length between j-boxes, and purpose (street lighting, traffic signal interconnect, spares, etc.).
    - 7) On all Collector Arterials and higher classification streets one extra

4" diameter Schedule 80 PVC conduit run is required at all non-signalized intersections for the later installation of traffic signal interconnects, these conduit runs shall terminate within a new junction box unless otherwise determined by the Engineer.

- 8) The locations of all new and/or existing service points (the PSE connection or service location), and the new or existing contact service cabinets (the City service location).
- 9) The locations of all junction boxes, existing and proposed, shall be shown including their type and size (Type 1, Type 2, etc.), and purpose (lighting, fiber optics or traffic signal).
- 10) The locations and specifications (mounting height, luminaire and lamps, curb overhangs, etc.) of all existing street lights for a distance of 300' in each direction from the limits of the project site, including both sides of the street(s) and in medians where appropriate.
- 11) Proposed right-of-way improvements including the street curb and gutter, sidewalk and planter strips.

### **1.7.C Exemptions from Engineering Plan Requirements**

One or more of the foregoing engineering plan requirements may be omitted or the terms of the applicable requirement may be modified by the Engineer upon the following criteria. The determination of the Engineer shall be final.

1. No more than 2,000 square feet will be cleared and graded within the right-of-way or easement; and
2. The existing grade in the street right-of-way or easement does not exceed 8 percent; and
3. The work will not impact a critical area, or critical area buffer, or otherwise impact critical areas and/or natural surface drainage as set forth in Kent City Code 11.06 or the current Kent Surface Water Design Manual; and
4. Work does not require a full drainage review; and
5. The work is a condition of a street use or utility permit, and involves less than 100 lineal feet of existing public street improvement; and
6. Standard Plans submitted with required permits are sufficient to describe the improvement to be constructed; and

7. Routine maintenance and minor extensions consisting of less than 300' of existing public or utility owned infrastructure and associated appurtenances and service connections.

## **1.8 ERRORS AND OMISSIONS**

At the discretion of the Engineer, any significant errors or omissions in the Engineering Plans or information used as a basis for permit approvals will constitute grounds for withdrawal of the permits and the issuance of an order to stop any work commenced under the withdrawn permits. Work may not continue unless and until the appropriate professional makes such changes as required by the Engineer to bring the Engineering Plans into conformance with these Standards and any non-conforming work is removed or corrected.

## **1.9 CONSEQUENCES OF FAILURE TO COMPLY WITH STANDARDS**

Failure to comply with these Standards will be cause for denial or revocation of engineering plan approvals and permits; withholding of release of financial guarantees; delay of final inspection; delay or denial of final approval; denial of occupancy certificates (temporary and permanent); notice to surety or other financial institution and/or legal action for forfeiture of financial guarantees; code enforcement; and/or other penalties as provided by law.

## **1.10 TRANSFER OF OWNERSHIP OF REAL PROPERTY**

All real property and interests therein shall be conveyed to the City by statutory warranty deed (individual, partnership or corporate) or by dedication pursuant to RCW 58.17.165 on final short plats and subdivision plats. All exceptions and encumbrances shall be cleared prior to conveyance. Interests to be conveyed include, but are not limited to, rights-of-way, storm drainage easements, slope easements and utility easements. See Appendix C: Real Estate Documents.

## **1.11 TRANSFER OF OWNERSHIP OF IMPROVEMENTS**

All improvements, including but not limited to pavement, utilities and storm water facilities, shall be conveyed to the City by an itemized Bill of Sale. Under no circumstances will a Bill of Sale be placed on the City Council agenda for action until all easements have been approved by the Engineer and recorded, and all infrastructure improvements set forth in the Engineering Plans or otherwise required by the City have been completed and finally accepted by the City. See Appendix B: Sample Forms.

## **1.12 FINANCIAL GUARANTEES**

All financial guarantees shall be on forms provided by the City and with sureties registered with the Washington State Insurance Commissioner or other financial institutions acceptable to the City. See Appendix B: Sample Forms.

### **1.12.A Plat Guarantees**

All work shown on the approved Engineering Plans should be completed

prior to plat recording. However, the Engineer may allow recording prior to the completion of all work so long as such completion is guaranteed by performance bond in amount equal to one hundred and fifty percent (150%) of the Engineer's estimate for the completion of the work. Recordation will not be allowed, in any event, unless all surveying and monumentation is complete.

#### **1.12.B Performance Guarantees for Work in Right-of-Way**

As a condition of the applicable permit, the timely, complete and faithful performance of all construction work on City right-of-way (either maintained or unmaintained) or stormwater tracts shall be guaranteed in an amount to be calculated at one hundred and twenty five percent (125%) of the Engineer's Cost Estimate (see Appendix B: Sample Forms). Fifteen percent (15%) of the guarantee or five thousand dollars (\$5,000), whichever is greater, shall be in the form of an assignment of funds. The balance may be by performance bond, irrevocable letter of credit or, in the alternative; the entire guarantee may be in the form of an assignment of funds. Developers with a history of corrections or defaults must provide the full guarantee by assignment of funds.

The minimum bond for a Grade and Fill Permit shall be one thousand dollars (\$1,000). The minimum bond for a Civil Permit shall be five thousand dollars (\$5,000).

#### **1.12.C Maintenance Guarantees**

Maintenance and the successful operation of the right-of-way improvements or related drainage facilities shall be warranted for a period of at least two years (or other period as required by Kent City Code) from the date of final construction approval. The warranty shall be guaranteed in an amount to be determined by the Engineer. The minimum maintenance guarantee shall be five thousand dollars (\$5,000.00) or twenty percent (20%) of the original performance guarantee, whichever is greater. The forms of the guarantee shall be as set forth in Subsection 1.12.B herein. The City will inspect the improvements and identify to the Developer any noted deficiencies. The Developer will have 30 days to correct any deficiencies as set forth in subsections 2.2.A.11 and 12. The satisfactory correction of the work may commence a new 2-year maintenance period for the improvements as corrected as determined by the Engineer. The City will initiate collection against the financial guarantee if deficiencies are not satisfactorily addressed by the end of the 30-day response period.

#### **1.12.D Site Restoration Guarantees**

For grade and fill permits, the completion and performance of all stormwater and erosion control measures shall be guaranteed prior to commencing work and for a period of at least one year (or other period as required by Kent City Code) from the date of final construction approval. The amount of the site restoration guarantees shall be determined by the Engineer. The forms of site restoration guarantee shall be as set forth in Subsection 1.12.B herein. In addition to foreclosure for failure to perform the terms of the permits, the City

retains the right to foreclose on the financial guarantee and utilize the funds to reduce drainage impacts and permanently stabilize the site in the event that the City determines that the site has been abandoned. The City will consider a site to be abandoned based on the absence of response by the Developer to correct noted deficiencies or failure to complete improvements prior to permit expiration. Permanent stabilization includes, but is not limited to, reclamation of the site if a project is abandoned after construction or excavation has commenced.

#### **1.12.E Reduction/Release of Financial Guarantees**

Original financial guarantee amounts may be reduced one time only prior to the maintenance period, at the discretion of the Engineer. If an extension to the associated permit is granted, the financial guarantees may be increased based on an updated engineer's cost estimate or as determined by the Engineer. Financial guarantees will be fully released only after all final punchlist items are accomplished, final construction approval, and the elapse of the 2-year maintenance guarantee period with all corrective actions complete and accepted by the City. In no event will the required 15 percent assignment of funds, pursuant to Section 1.12.B, be released prior to the completion of the 2-year maintenance guarantee period.

### **1.13 RESPONSIBILITY OF DEVELOPER**

The Developer is responsible for completing all work and infrastructure improvements in full compliance with the approved Engineering Plans. 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 Engineering Plans. All financial guarantees shall show the Developer as the Obligor and the City as Obligee. Developer shall be held responsible for the actions or omissions of any agents, heirs, assigns or contractors.

### **1.14 REVISIONS OR ADDITIONS AFTER APPROVALS**

A Developer may seek revisions or additions to the Engineering Plans after approvals for good cause shown, at the discretion of the Engineer. The Engineer may require revisions or additions to Engineering Plans upon his or her initiative. Revisions must be presented through revised plans to be reviewed and approved by the Engineer before work under the plans is undertaken. Revisions in the Engineering Plans and other associated documents shall have the same force and effect as if contained in the original approved Engineering Plans and documents. Associated permits will be amended and/or conditioned accordingly. The decision of the Engineer in this regard shall be final.

### **1.15 CONTROL OF WORK**

#### **1.15.A Authority of Engineer**

Work included in the Engineering Plans and related documents are to be done to the complete satisfaction of the Engineer. The decisions of the Engineer as to the construction and intent of the approved Engineering Plans and

estimates and as to all questions arising as to proper performance of the work shall be final.

The Engineer shall decide any and all questions which may arise as to the quality or acceptability of materials furnished and work performed. Nothing contained in this chapter shall be construed as requiring the Engineer to direct the method or manner of performing any work under this chapter. However, the work in progress shall be open to inspection by the Engineer at all times. The Engineer may appoint staff engineers and inspectors to review engineering plans, inspect the materials used and the work performed, and may otherwise delegate authority as is appropriate.

#### **1.15.B Authority and Duties of Inspectors**

The Engineer will assign inspectors to inspect all materials used and all work performed. Such inspection may extend to any or all parts of the work and to the preparation and/or manufacture of the materials to be used. The Inspector will not be authorized to revise, alter, increase or relax the provisions of these Standards or conditions attached to approved Engineering Plans or permits.

An inspector is assigned to the site to keep the Engineer informed as to the progress of the work and the manner in which it is being done, as well as to call the attention of the Developer to any unapproved deviations from the approved Engineering Plans. Failure of the Inspector or the Engineer to call the attention of the Developer to faulty work or deviations from the approved Engineering Plans shall not constitute acceptance of said work.

The Engineer may approve any portion of the work or require revisions to the Engineering Plans prepared by the Developer's Professional Engineer when necessary, due to conflicting or unanticipated field conditions. The Inspector will have authority to reject defective material and to suspend any work that is being improperly done, subject to the final decision of the Engineer. The Inspector will exercise such additional authority as may be specifically delegated to him/her by the Engineer.

#### **1.15.C Inspector Overtime**

If the Developer wishes to extend daily working time beyond the established working hours of the assigned inspector and if such extension of time is not contrary to law or regulation and arrangements are made with the Engineer, the Developer will compensate the City for the Inspector's time at an overtime rate of time and a half plus actual applicable overhead costs, such costs to be determined by the Engineer. The Developer will be invoiced monthly for such costs and Developer will pay such invoice within thirty (30) days of mailing by delivering a check or money order to the City of Kent.

#### **1.15.D Cooperation by Developer**

A set of approved Engineering Plans, permits and any variances and/or

revisions must be kept available on the site at all times. The Developer or designated representative shall be at the site at all times during the progress of work. The Developer must be available to receive explanations as necessary from the Engineer to allow the satisfactory performance and completion of the work. The Developer may not cause any unnecessary delay or hindrance to other City workers, utility workers, or other parties performing work on the same City rights of way or on adjacent real property and will coordinate and cooperate with such other workers to the fullest extent possible.

#### **1.15.E Conformity with Engineering Plans**

The work shall be done in strict conformity with the approved Engineering Plans and according to such necessary instructions as may be given by the Engineer or designated representative. The Developer shall protect and preserve all survey stakes, points, or marks in their original position that were set for the work in order to allow proper inspection.

Any revision from the approved Engineering Plans, approved conditions of development, or instructions must be approved by the Engineer prior to proceeding with the work per Subsection 1.14 herein.

#### **1.15.F Prosecution of Work**

The Developer shall begin work within ten (10) calendar days from the pre-construction conference, unless otherwise approved by the Engineer. The Developer shall diligently pursue the work to the physical completion within twelve (12) months from the date of issuance of the relevant permit unless an extension is granted by the Engineer. Regardless of the status of construction, the civil construction permit will expire automatically with the expiration of an associated commercial building permit or with the passing of deadlines for the underlying land use actions. If the work is not commenced or completed as required, the permit will expire, and a stop work order will be issued by the Public Works Department. The Developer shall be required to apply for new permits and be reviewed according to the regulations in place at the time when the new application is deemed complete.

#### **1.15.G Removal of Defective or Unauthorized Work**

Defective work or materials may be rejected by the Engineer at any time before the Final Acceptance of the work. Notice of such rejection will be given in writing by the Engineer. Such rejected work shall be immediately removed or disposed of to the satisfaction of the Engineer. The Engineer will act in the public interest to the extent possible, but has no affirmative duty to discover non-conforming or inferior work or material. Inspection by the City will in no way release the Developer from responsibility, liability or penalties, nor shall it be construed as acceptance of such work. Neither inspection nor Final Acceptance will bar the City from recovering damages and otherwise foreclosing on financial guarantees for damages for latent or undiscovered defects. It will be a condition of the applicable permit that the Developer save,

defend and hold harmless the City for claims for damages due to any and all defective work and/or materials.

See also Section 2 of the Design Standards manual, 2.3.D Defective Materials, for additional explanation.

#### **1.15.H Protection of Public and Private Utilities**

The Developer shall be responsible for locating all existing underground and above ground utility system facilities, including traffic loops, in rights-of-way and protecting them against damage from Developer's activities. Such utilities must be located by Developer and shown on the Engineering Plans whether they are shown on available City Record Drawings or not. The Developer shall support and protect all pipes, conduits, loops, poles, wires or other apparatuses 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 the right-of-way. If Developer damages any public or private utility system facilities in City right-of-way, Developer shall arrange for repairs or payment for repairs with the utility, franchisee, or licensee owning the facilities. It will be a condition of the applicable permit that Developer save, defend and hold harmless the City from any and all claims for damages to utility system facilities in the City's rights-of-way. This condition will include damages asserted by the utility, its customers or other third parties.

#### **1.15.I Damage to Public and Private Property and Persons**

The Developer's work shall be confined to rights-of-way and property owned by Developer as designated in the Engineering Plans or to property for which the Developer otherwise has license or property rights as designated in the Engineering Plans. Developer shall not enter upon or place materials on other public or private property. It shall be a condition of the permit that Developer will save, defend and hold harmless the City from all claims for damages to public or private property or to persons upon such property.

#### **1.15.J Final Inspection and Final Acceptance of Public Improvements**

A Final inspection is a prerequisite to any Final Acceptance event. The Engineer will not make or direct the final inspection until all work, including final cleanup, has been completed in compliance with the approved Engineering Plans and permits and to the satisfaction of the Inspector; and the Bill of Sale and approved Record Drawings have been submitted to the Public Works Department. In addition, the Developer shall, at any time requested, submit to the Engineer properly authenticated documents or other satisfactory proof as to compliance with the approved Engineering Plans and permits.

1. Following the correction of all defects as noted on the final inspection, the respective improvements shall be considered ready for acceptance within thirty (30) days. See Section 2.2.A.11 Final Inspection, for scheduling

notification requirements with the City. Final acceptance of improvements requires the following:

2. Record drawings – The approved Engineering Plans, technical reports and electronic CAD files shall be revised by the Developer to reflect actual constructed improvements. The field surveyed record drawings shall be certified by a Professional Land Surveyor licensed and in good standing by the State of Washington as to actual field construction.
3. Bill of Sale – The Developer shall submit a completed Bill of Sale to the Engineer itemizing the respective improvements to be accepted by the City. The Bill of Sale shall include an affidavit stating that all debts sustained during the construction and acceptance of this project have been paid, and by said acceptance of the infrastructure improvements identified in the Bill of Sale, all debts prior to acceptance of the infrastructure improvements by the City are the sole responsibility of the Developer. The property and improvements shall be unencumbered.
4. Certified Final Inspection Punchlist - A completed final inspection punchlist, certified by the Engineer or the Engineer's representative as having been completed, shall be provided.
5. Close-out Review – If the examination of the item described and submitted in steps 1 – 3 above, or of the work reveals any defects, such defects shall be repaired or replaced as the Engineer may direct before further inspection and proceeding to Final Acceptance. The cost of such repairs and replacements shall be borne solely by the Developer.
6. Final Acceptance/City Council Consideration – Following approval of the Record Drawings, the certified inspection list, and the Bill of Sale, the Engineer will cause formal City Council action for Final Acceptance to be placed on the appropriate agenda. If Final Acceptance is approved by the City Council, ownership, operation and maintenance of the Public Works infrastructure identified on the Bill of Sale will thereafter be undertaken by the City. Provided, however, that Developer will continue to be bound to the maintenance and restoration guarantees required herein.

#### **1.15.K Maintenance Period of all Public Improvements**

Following Final Acceptance of all public improvements, the Developer shall guarantee satisfactory performance of design, materials, workmanship and operation for a period of two (2) years and provide the financial guarantees required in Section 1.12. Any defects arising or becoming apparent during the first 2-year period shall be corrected by the Developer, at no cost to the City, at which time a new 2-year guarantee period will commence. Failure to correct defects within thirty (30) days, or sooner if directed by the Engineer, will result in foreclosure by the City on the financial guarantee as needed for the City to perform the correction as public work.

### **1.15.L Maintenance of Facilities and Public Use**

A maintenance and defect agreement shall be signed by the Developer prior to engineering plan approval. The Developer shall be responsible for all the improvements to City infrastructure and shall warrant from defects said improvements until they have been accepted by the City and for two years thereafter, as described in previous sections. This agreement shall also consider the plant establishment period for landscaping defined in Section 6.13. In the event that any portion of the public improvements come into public use prior to formal City Council Action for Final Acceptance, the City will assume responsibility for routine cleaning and/or any damage caused by normal public use.

### **1.16 LATECOMERS AGREEMENTS**

Any Developer utilizing private funds to install domestic water, storm drainage, sanitary sewer and/or street improvements, including signalization and street lighting, to the City owned systems in accordance with these Standards may apply to the City to recover a prorated share of the cost of constructing said improvements from other properties that will later derive a benefit.

The Developer may apply for a latecomer agreement with the City pursuant to RCW 35.72, RCW 35.91 RCW and Kent City Code 6.05 by following the procedures set forth in these provisions.

### **1.17 DESIGN VARIANCES**

The Engineer may approve variances from these Standards under the criteria set forth in this subsection. See also, Section 1.14 Revisions or Additions After Approvals. Variance requests for short plats and subdivisions should be proposed at the preliminary application and prior to any public hearing. All known variances must be approved prior to approval of the Engineering Plans for construction.

#### **1.17.A Minimum Criteria for Variances**

Variances from these Standards may be granted by the Engineer upon the following minimum criteria which must be shown by the Developer to be based on sound engineering principles:

1. An application for variance that indicates those sections of the Standards which are relevant to the proposed alternative and explanation of how the variance meets the essential elements of these Standards.
2. An application for variance that includes a specific description of the proposed alternative to the Standards along with supporting documentation. Documentation may include, but is not be limited to, a record of successful use by other agencies, or evidence of meeting criteria for quality such as the American Association of State Highway and Transportation Officials (AASHTO) and American Society for Testing and

Materials (ASTM) standards.

3. Verification that such variances are not contrary to the public interest.
4. Verification that compliance with the standards from which the variances are sought is, under the circumstances, not feasible.
5. Verification that the activity as permitted under the variance will require no compromise from these Standards with respect to safety, function, fire protection, transit needs, appearance and maintainability.
6. Verification that all requirements of the International Fire Code and any other applicable codes are met.

### **1.17.B Application for Variance**

1. Variance application forms are available at the Permit Center or online at the City's website at [www.kentwa.gov](http://www.kentwa.gov).
2. All variance applications must be signed and sealed by a licensed professional Engineer certifying that the design features that do not meet design standards are acceptable based on engineering principles and professional judgment.
3. Variance applications for location of utilities by an entity allowed by franchise or permit must be prepared and submitted by that entity.
4. Variance requests shall be directed to the Engineer on forms prescribed by the Public Works Department.

## **1.18 DEFINITIONS AND ABBREVIATIONS**

When referring to these Standards the following definitions shall apply:

**Average Daily Traffic (ADT)** – The total volume during a given time period (in whole days), greater than one (1) day and less than one (1) year, divided by the number of days in that time period. ADT is typically used in quantifying the combined number of vehicles traveling in both directions on a particular street.

**Alley** – A public or privately maintained thoroughfare, tract, or easement, usually narrower than a street, which provides access to the rear boundary of one or more lots and is not intended for general traffic circulation.

**Applicant** – For the purposes of these Standards, Applicant shall be considered the same as Developer, and may be used interchangeably.

**Appurtenance** – Equipment and/or accessories that are part of an operating system or

subsystem.

**Arterial Streets** – A street classification which includes principal, minor, industrial collector and residential collector arterials and residential collectors. Those streets so designated by the City of Kent Transportation Master Plan, and described in more detail in Section 6.2 Street Types and Geometrics, and following the guidelines contained in the Federal Function Classification System.

**Auxiliary Lane** – That portion of the street adjoining the traveled way for speed change, turning, storage for turning, weaving, truck climbing, or other purposes supplementary to through-traffic movement.

**Backfill** – Replacement of excavated material with suitable material compacted as specified.

**Best Management Practices (BMPs)** – A schedule of activities, prohibitions of practices, physical structures, maintenance procedures, and other management practices undertaken to reduce or prevent increases in runoff quantity and pollution.

**Bike Lane** – A travel lane, located within the paved area of a street, which is provided for the exclusive use of bicycles designated by lane use signs and pavement markings.

**Bill of Sale** – The transfer of ownership document that Developer must provide before the City will agree to accept, operate and maintain public improvements. The Bill of Sale will contain an itemized list and associated costs of all improvements to be conveyed to and subsequently owned and operated by the City.

**Bollard** – A fixed or removable post designed to prevent vehicular access, or to prevent damage to an adjacent above-ground structure.

**Breakaway Structure** – A structure that has been crash tested in accordance with National Cooperative Highway Research Program procedures – NCHRP 230.

**Buffer** – The zone contiguous to a critical area as defined in Kent City Code 11.06 that is required for the continued maintenance, function, and/or structural stability of the critical area.

**Boring** – Grade and alignment controlled mechanical method of installing a pipe or casing under a street without disturbing the surrounding medium.

**Bus-40** – This is the designation for a particular class of bus with a wheelbase (WB) measurement of 40'. This is used by the City as the design vehicle for garbage, fire and stormwater maintenance trucks.

**Caliper** – The unit of measurement for a tree trunk measured at 6' above ground level

for trees up to 4" in diameter, and at 12" above the ground for trees larger in diameter.

**Certificate of Materials** – An approved list of materials certified by the manufacturer or supplier as meeting the minimum requirements of these Standards.

**Channelization** – The separation or regulation of conflicting traffic movements into definite paths of travel by the use of pavement markings, raised islands or other suitable means to facilitate the safe and orderly movement of both vehicles and pedestrians.

**Charge In Lieu of Assessment** – The fee charged to a Developer when their development of a parcel of land is contingent upon use of public facilities to be built under a City Local Improvement District or Utility Local Improvement District, when the Developer of the subject parcel was not included within the original Local Improvement District or Utility Local Improvement District boundaries.

**City** – The City of Kent, acting through its legally constituted elected officials, employees or agents.

**Clear Zone** – The total roadside border area starting at the edge of the traveled way available for use by errant vehicles. This area may consist of a shoulder, a recoverable slope, a non-recoverable slope, and/or a clear run-out area in accordance with AASHTO guidelines.

**Clearing** – The act of destroying, trimming, altering, or removing vegetation by any means.

**Collector Streets** – A street classification which includes industrial collector arterial, residential collector arterial, and residential collector.

**Commercial Development** – Includes multi-family residential, and commercial, office or industrial buildings.

**Compaction** – The densification of fill by mechanical means.

**Construction Manager** - The Construction Management Section Manager or his/her designee authorized by the Engineer to oversee the inspection and acceptance of street, storm drainage, and/or utility system improvement projects constructed pursuant to private development permits and the City's capital improvements administered by the Department.

**Contractor** – The individual, partnership, firm, corporation or joint venture contracted with the owner to perform prescribed work.

**Cost** – The cost to make all improvements including, but not limited to, grading, paving, utility extensions, building additions, alterations or repairs on site for the purpose of determining whether or not a project is exempt from the requirements of

these Standards as allowed in Kent City Code 6.02.040. This cost shall be based on a construction cost estimate prepared by a licensed contractor, professional engineer or Architect.

**Critical Areas** – Areas within the City that include wetlands, streams, wildlife and fisheries habitat, geologic hazard areas, frequently flooded areas and aquifer recharge areas.

**Cross-Connection Control Program** – refers to administrative and technical procedures the city implements to protect the public water system from contamination via cross-connections as required in WAC 246-290-490.

**Cross-Connection Control Program staff** – is an individual certified in Washington State to develop, implement, and maintain a cross-connection control program per WAC 246-292-033.

**Cubing** – The process of inserting foam cubes (pigs) into and pushed through a new water or sanitary sewer main to remove any residue, dirt, debris, obstruction or foreign material from the pipe. This process is also referred to as “pigging.”

**Cul-de-sac** – A short street having one end open to traffic and the other temporarily or permanently terminated by a vehicle turnaround at or near the terminus.

**Culvert** – Pipe, pipe arch or concrete box structure which drains open channels, swales or ditches under a street or embankment; typically with no catch basins along its length.

**Cut** – See Excavation.

**Dead End** – A street with a single location for ingress and egress for vehicles.

**Director/City Engineer** – The Public Works Director/City Engineer, hereinafter referred to as “Engineer”, including authorized representatives.

**Design Capacity** – The traffic volume at which a particular class of street will operate at an established acceptable level-of-service. Typically, the design capacity of a street is the number of vehicles, in a 24-hour period at which that street would operate at a level-of-service “E” or “F”, as defined in the City of Kent Transportation Master Plan.

**Design Variance** – The process and resulting documentation associated with a geometric feature created or perpetuated by a Public Works improvement that does not conform to the minimum criteria set forth in these Standards and policies, but does provide the same safety elements to the public. This includes what some may refer to as a design exception, deviation or exemption. See Section 1-17.

**Design Speed** – The vehicle speed approved by the Engineer which is used to determine the design elements of a street, including but not limited to, intersection/driveway sight triangle, stopping sight distance, super-elevations, curve radii, etc. for

residential and industrial streets, or equal to 5 mph above the posted speed for streets designated as arterials and equal to the posted speed limit for collectors and local streets unless otherwise determined by the Engineer.

**Design Vehicle** – The FHWA classification of vehicle (such as “WB-62”, BUS, or SU) that is used to establish the design of a particular street, intersection, or driveway; or the on-site maneuvering area required in the parking/loading area of a private business or public facility.

**Developer** – For the purposes of these Standards, the Developer means any person or entity designated or named in writing by the property or easement owner to be the Applicant, or a public agency or utility which owns a right-of-way or easement in a permit application or approval for a development proposal or capital improvement project. Developer also includes a permit applicant, one who has already been granted a permit, and the City itself for those situations where City construction activities are subject to approval under the particular standard.

**Development** – Land disturbing activities; structural development (including construction or installation of a building or other structure); creation of impervious surfaces; and subdivision, short subdivision and binding site plans, as defined in RCW 58.17.

**Director** – The City of Kent’s Public Works Director hereinafter referred to as “Director,” and his or her authorized representatives.

**Downtown Overlay** – A special planning district within the City of Kent shown on Standard Plan 6-8a. The Downtown Overlay implements the guidance related to streets and sidewalks in the City of Kent Downtown Design Review Guidelines. The Downtown Overlay standards are superseded by the Meet Me on Meeker Street Standards for that portion of the Downtown Overlay area fronting Meeker Street, whose crosswalks, medians, and streetscape features shall comply with the Meet Me on Meeker Street Standards. Additional design criteria are required for streets, developments, properties and projects within this area. See Section 6.4.C Downtown Overlay and Naden Avenue South Design Standards.

**Drainage Master Plan** – The City of Kent Comprehensive Drainage Plan prepared as part of the City of Kent Surface Drainage Utility Ordinance.

**Drip Line** – The circle that would exist if you drew a line below the tips of the outer most branches of a tree or plant.

**Driveway** – A privately maintained access to residential, commercial or industrial properties.

**Dry Season** – In the application of these Standards: April 1 to September 30 of each year.

**Easement** - Means a legal encumbrance that is placed against a property's title to reserve specified privileges for the users and beneficiaries, both public and private, within the boundaries of the easement

**Engineer** – See Director/City Engineer.

**Engineer Cost Estimate** – The estimated cost of construction of all improvements included in the approved Engineering Plans. The estimate is based on the Engineer Cost Estimate Form provided in these Standards in Appendix D. All fees referencing a percentage of the construction cost shall be based on this Engineer Cost Estimate.

**Engineering Plans** – The official drawings, plans, profiles, typical cross-sections and supplemental drawings, and specifications, technical reports, or reproductions thereof, approved by the Engineer, which show the location, character, dimensions and details of work to be performed. The engineering plan shall be prepared, dated, stamped and signed by a Professional Engineer licensed in the State of Washington. All such documents are to be considered as a part of the plans whether attached to or separate. An engineering plan may be supplemented with reports which contain detailed calculations, structural calculations, or other supporting documents needed to assess the total plan.

**Engineering Review** – An evaluation by the Public Works Department of a proposed project's compliance with these Standards and other applicable City, State, and Federal regulations, ordinances, and policies.

**Erosion** – The wearing away of the ground surface as a result of the movement of wind, water, or ice.

**Eyebrow** – A partial cul-de-sac bulb located adjacent to the serving street that provides access to lots and serves as a vehicle turnaround.

**Excavation** – The removal of earth material by artificial means also referred to as cut.

**Filling** – Deposition of earth materials by artificial means.

**Final Acceptance** – Acceptance by City Council action of the infrastructure improvements constructed by the Developer and the point at which the City assumes ownership, operation and maintenance based on the Bill of Sale.

**Final Construction Approval** – The approval granted by the Engineer of all infrastructure improvements constructed by the Developer as required by the approved Engineering Plans. All items on the final inspection punchlist must be completed prior to receiving this approval.

**Final Cleanup** – As defined in the WSDOT Standard Specification Section 1-04.11.

**Final Inspection** – This is the last inspection of the physical infrastructure improvements by the Inspector and Public Works Department staff resulting in the list of correction items shown in the final inspection punchlist.

**Final Inspection Punchlist** – The list prepared by the Inspector of missing or defective work that must be completed in accordance with the approved Engineering Plans and any revisions.

**Financial Guarantee** – A surety bond, assignment of funds, irrevocable letter of credit, or other means acceptable to or required by the Engineer to guarantee that work is completed in compliance with the project's approved plans, and in compliance with City of Kent requirements.

**Footcandle (fc)** – This is a unit of measurement for illumination. A footcandle equals one lumen per square foot.

**Fire Authority** – Either the Puget Sound Regional Fire Authority or Valley Regional Fire Authority based on their jurisdictional boundaries.

**Fire Code Official** – The fire chief or other designated authority charged with the administration and enforcement of the code, or a duly authorized representative.

**Geometrics** – The physical arrangement of the visible elements of a street such as alignment, grade, curvature, width and side slopes.

**Grade** – The vertical location of the ground surface.

**Grade, Existing** – The grade prior to grading.

**Grade, Finished** – The grade of the site at the conclusion of all grading and/or construction activities.

**Grading** – An excavation or fill, or combination thereof.

**H-20** – A design load consisting of a two-axle loading specified by the AASHTO Standard Specifications for Highway Bridges.

**HS-20** – A design load consisting of a three-axle loading specified by the AASHTO Standard Specifications for Highway Bridges.

**Half-Street** – An interim street section built adjacent to the property line which eventually will be completed to a full width street section when the adjacent property is developed.

**Hammerhead** – A type of street feature used to provide a place for vehicles to turn around at the end of a private "dead-end" street. The turnaround is shaped like a hammer or the letter "T".

**Improved City Street** – A term referring to a public street typically paved with asphalt concrete, and having such features as sidewalks, landscaping, a paved area for parked vehicles, curbs and gutters, street lights, traffic signs, pavement markings, etc. This is in contrast to an “unimproved” street with no physical improvements or which might be built with only an unmaintained gravel surface.

**Infrastructure Improvements** - Street improvements, street lighting, traffic control devices and signage, water, sewer, street and storm drainage systems, and conduit for fiber optics systems.

**Ingress/Egress** – Points of access to and from a property or parcel.

**Inspector** – The City’s authorized representative assigned to make all necessary inspections of work performed, or of materials furnished or being furnished by the Developer.

**Intersection/Driveway Sight Triangle** – The specified areas along intersection and driveway approach legs, and across their included corners, that are clear of obstructions that might block a driver’s view of potentially conflicting vehicles. The dimensions of the legs of the sight triangles depend on the design speed and the type of traffic control used at the intersection.

**Intersection** – The area embraced within the prolongation or connection of the lateral curb lines, or, if none, then the lateral boundary lines of the roadways of two or more highways which join one another at, or approximately at, right angles; or the area within which vehicles traveling upon different highways joining at any other angle may come in conflict.

**Joint-Use Driveway** - A private driveway jointly owned and maintained driveway serving two properties.

**KC/DNRP-IWP** – The King County Department of Natural Resources and Parks Industrial Waste Program, acting through its legally constituted elected officials, employees or agents.

**Keyway** – A compacted fill placed in a trench excavated in earth material beneath the toe of a slope.

**Landing** – A street or driveway approach area to any public or private street. Also, this refers to the level area at the back of the sidewalk ramp, typically 5’ wide.

**Land Disturbing Activity** – Any activity that result in movement of earth, or a change in the existing soil cover (both vegetative and non-vegetative) and/or the existing soil topography. Land disturbing activities include, but are not limited to, clearing, grading, filling, and excavation. Compaction that is associated with stabilization of structures and street construction shall also be considered land disturbing activity.

**Latecomers Agreements** – Those agreements which identify costs for constructed public improvements that will be shared by other developers when they develop parcels within the specific time period specified by those agreements. See RCW 35.91.020 and 35.72.

**Local Improvement District** – A method provided by RCW 35.43 by which a group of property owners can share in the cost of transportation or utility system infrastructure improvements. This may involve improving the street, building sidewalks, installing water and sanitary sewer service, and providing a stormwater management system. Local Improvement Districts may be used to finance new improvements or improvements on existing streets that previously have been accepted for maintenance by the City.

**Local Access Streets** – A street classification which includes industrial/commercial local access and residential local access streets. These streets are designed in the Transportation Master Plan and described in more detail in Chapter 6.2 – Street Types and Geometrics, following the guidelines contained in the Federal Functional Classification System.

**Lot** – A physically separate and distinct parcel of property that has been created pursuant to the provisions Kent City Code 12.04, or pursuant to any previous laws governing the subdivision, short subdivision or segregation of land. For the purposes of these Standards, Lot shall be considered the same as Property or Parcel and may be used interchangeably.

**Low Impact Development (LID)** - An innovative ecosystem-based approach to land Development and storm water management that results in fewer environmental impacts.

**Lumen** – The unit of measurement for lighting levels.

**Luminance** – The reflected light from street lights or other light sources from the pavement surface that is visible to the motorist’s eye.

**Mainline Extension** – The extension or expansion of the system of watermains, sanitary sewer mains, storm drainage systems, streets, and all related appurtenances to be constructed in whole or in part as required by the conditions of approval. Generally mainline extension refers only to improvements that, following City Council acceptance, become part of the City utility or street systems.

**Materials Testing Laboratory** – A materials testing laboratory adhering to ASTM and AASHTO accepted standards and all reports shall be stamped and signed by a Professional Engineer.

**Meeker Street Corridor** – The Meeker Street Corridor runs the length of Meeker Street from Kent-Des Moines Road on the west and Central Avenue on the east.

**Meet Me on Meeker Street Standards** – Streetscape design standards that apply to those properties that front the Meeker Street Corridor and titled “Meeker Street Streetscape Design and Construction Standards,” and adopted by Council through

Ordinance No. 4262. The Meet Me on Meeker Street Standards provide distinct design criteria that are required for the streetscape, including streets, sidewalks, medians, and crosswalks, along the Meeker Street Corridor.

**Monitoring** – The collection of data by various methods for the purposes of understanding natural systems and features, evaluating the impacts of development proposals on such systems, and assessing the performance of mitigation measures imposed as conditions of development approval.

**National Pollutant Discharge Elimination System (NPDES)** – This is the part of the federal Clean Water Act which requires point source dischargers to obtain permits. These permits are referred to as NPDES Permits and are administered by the Washington State Department of Ecology.

**Owner** – For the purposes of these Standards, Owner shall be considered the same as Developer, and may be used interchangeably.

**Pathway** – A facility designated for pedestrian and non-motorized traffic. Pathways are typically constructed of asphalt and may be part of the paved shoulder. Separation from vehicle traffic may be provided by pavement striping, curbing, planter strip, a ditch or open space.

**Pavement Widening** – Pavement widening projects are expansion of the street surface for vehicular use and may involve earthwork, drainage and paving elements. These projects are considered alterations of the street and must address ADA accessibility for pedestrians.

**Permit** - Any land use or environmental approval or license required from the City of Kent for a project action, including but not limited to building permits, site development permits, land use preparation permits, subdivisions, binding site plans, planned unit developments, conditional uses, shoreline substantial development permits, and engineering plan review.

**Plan Approval** – The approval of the Engineering Plans by Public Works staff for the appropriate permit application. This approval is a prerequisite for being able to have the permit issued. Also required from the Developer for permit issuance are the appropriate financial guarantees, certificate of insurance, and payment of all applicable fees and charges.

**Plans** – See the definition for Engineering Plan.

**Posted Speed** – The speed limit as established by City and State codes and posted on official signing.

**Pre-Construction Conference** – Meeting held by the Engineer with the Developer, utilities, contractors and staff to convey information regarding the expectations of the City.

**Pre-Developed Condition** – The native vegetation and soils that existed at a site prior to the influence of Euro-American settlement. The pre-developed condition shall be assumed to be a forested land cover unless reasonable, historic information is provided that indicates the site was prairie prior to settlement.

**Private Access Tract** - A privately owned and maintained tract that provides vehicular access to nine (9) or fewer single-family residential properties.

**Private Street** – Any private street that serves nine (9) or fewer single-family residential lots, or certain streets within a planned unit development (PUD).

**Professional Engineer** – A person who, by reason of his or her special knowledge of the mathematical and physical sciences and the principles and methods of engineering analysis and design, acquired by professional education and practical experience, is qualified to practice engineering as defined in RCW 18.43, as attested by his or her legal registration as a Professional Engineer

**Professional Land Surveyor** – A person who, by reason of his or her special knowledge of the mathematical and physical sciences and principles and practices of land surveying, which is acquired by professional education and practical experience, is qualified to practice land surveying as defined in RCW 18.43, as attested to by his or her legal registration as a Professional Land Surveyor.

**Profile Grade** – Rate or percentage of change in elevation measured along the centerline of any infrastructure as defined herein, either ascending or descending from or along the said Infrastructure.

**Project** – The proposed action by a Developer requiring improvements to the street, water, storm drainage, sewer and utility systems within the City.

**Protected Driveway Throat** – That portion of an industrial/commercial Driveway from the back of sidewalk into the property where no turning movements or parking stalls are allowed

**Public Street** - Publicly owned facility-providing for the movement of vehicles, bicycles, and pedestrians and/or access to adjacent properties, including the street and all other improvements, within the right-of-way.

**Public Works** – All work, construction, alteration, repair, or improvement other than ordinary maintenance, executed at the cost of the state or of any municipality, or which is by law a lien or charge on any property therein. All Public Works, including maintenance when performed by contract shall comply with RCW 39.12.

**Record Drawings Certification** – Certification by Professional Land Surveyor registered in the State of Washington.

**Record Drawing** – This is the record of all changes to the intended physical product of approved Engineering Plans. Plans shall show all changes that occurred during construction, including changes in materials, distances, lengths, locations, elevations, volumes, etc. and shall contain a record drawings certification conforming to these Standards.

**Redevelopment** – On a site that is substantially developed (i.e., has 35% or more existing impervious surface coverage), the creation or addition of impervious surfaces; the expansion of a building footprint or addition or replacement of a structure; structural development including construction, installation or expansion of a building or structure; replacement of impervious surface that is not a part of a routine maintenance activity; and land disturbing activities.

**Road** – For the purposes of these Standards, Road shall be considered the same as Street, and may be used interchangeably.

**Right-of-way** – Land, property, or property interests, usually in a strip, acquired for or devoted to transportation purposes.

**Rock Facing** – Slope protection which are constructed of graded rocks, but without cement or grout to hold the rocks together, and which are designed to resist adjacent soil pressures primarily by resistance of their weight and mass only.

**SEPA Mitigation** – Any of the following actions based on SEPA rules, WAC 197-11-768:

Avoiding the impact altogether by not taking a certain action or parts of an action; or

Minimizing impacts by limiting the degree or magnitude of the action and its implementation by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts; or

Rectifying the impact by repairing, rehabilitating, or restoring the affected environment; or

Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; or

Compensating for the impact by replacing, enhancing, or providing substitute resources or environment; and/or

Monitoring the impact and taking appropriate corrective measures

**Shared Use Trail** – A path or trail reserved for exclusive use by bicycles and pedestrians and physically separated from motorized vehicle traffic by an open space or barrier.

**Site** – The area defined by the legal boundaries of a parcel, or parcels of land, subject to new development or redevelopment. For street projects, the length of the project and

the right-of-way boundaries define the site.

**Shoulder** – The paved or unpaved portion of the street outside the traveled way that is available for emergency parking or non-motorized use.

**Slope** – An inclined surface, the inclination of which is expressed as a ratio of horizontal distance to vertical distance.

**Standards** – These 2020 City of Kent Design and Construction Standards as adopted by the City Council.

**Standard Plans** - Those plans included in the back of Chapter 3 through Chapter 6 of these Standards.

**Stream** – Critical area as defined in Kent City Code 11.06.485.

**Street** – A facility serving three lots or more and providing public or private access including the street and all other improvements inside the right-of-way.

**Street Frontage** – Any portion of a lot or combination of lots that directly abuts a public right-of-way or private access tract.

**Stop Work Order** – A notice to stop work on a project or property in violation of City Codes per Kent City Code 1.04.

**Stopping Sight Distance** – The length of the street ahead that is visible to the driver.

**Stormwater Pollution Prevention Plan (SWPPP)** – A pollution prevention plan required by the NPDES stormwater permit requirements. The purpose of the SWPPP is to describe the proposed construction activities and all temporary and permanent erosion and sediment control (TESC) measures, pollution prevention measures, inspection/monitoring activities, and record keeping that will be implemented during the proposed construction project.

**Superelevation** – The change of the street from a cross-section where the elevation of the edge of the paved area, in a curve in the street, is either higher or lower than normal. Superelevation of the street has been commonly referred to as “banking the curve”, and is used to allow a sharper (smaller radius) curve to be used.

**Surety** – A bonding company that is bound with the Developer to ensure performance of the work shown in the approved plans and specifications, payment of all obligations pertaining to the work, and fulfillment of other such conditions as are specified in the permit, contract, contract bond, or otherwise required by law.

**Test Tee** – That tee installed at the end of the sanitary sewer stub-out for the purpose of air testing the integrity of the sanitary sewer installation.

**Traffic Calming Measures** – Techniques of design and physical treatments located to encourage a reduction in traffic speeds and the creation of opportunities for streetscape to change the character of Street.

**Traveled Way** – That portion of the street made for vehicle travel excluding shoulders and auxiliary lanes.

**Thermoplastic** – A type of plastic, bonded to the street surface with a heat source, which is used for marking the channelization.

**Tract** – A legally created parcel of property designated for special non-residential and non-commercial uses. Common tracts include stormwater drainage tracts, sensitive area tracts, native growth protection tracts, private access tracts, and tracts for ingress/egress, and utilities that may serve more than one lot.

**Type IV Landscaping** – Landscaping for areas in the right-of-way per Kent City Code 15.07.050.

**Uniformity Ratio** – This is the ratio of the average light level on a section to the minimum light level of the same section.

**Utility** – A privately, publicly, or cooperatively owned line, facility, or system for producing, transmitting, or distributing communications, cable television, power, electricity, light, heat, gas, oil, crude products, water, steam, waste, or any other similar commodity which directly or indirectly serves the public. Additionally, the privately, publicly, or cooperatively owned company that owns the line, facility, or system.

**Utility Easement** – Means a legal encumbrance that is placed against a property's title to reserve specified privileges for the users and beneficiaries of utility system facilities, both public and private, within the boundaries of the Easement.

**Wetlands** – Critical area as defined in Kent City Code 11.06.530.

**Wet Season** – In the application of these Standards, October 1 to March 31 of each year.

**Work** – The provision of all labor, materials, tools, equipment, and everything else needed to successfully complete the required infrastructure improvements based on approved Engineering Plans.

**WSDOT Standard Specifications** – The Standard Specifications for Road, Bridge, and Municipal Construction prepared by the Washington State Chapter, American Public Works Association and Washington State Department of Transportation; latest edition with latest revisions, hereinafter referred to as the WSDOT Standard Specifications.

## ABBREVIATIONS

Abbreviations can be found in the WSDOT Standard Specifications, latest edition, the King County Surface Water Design Manual and the current City of Kent Surface Water Design Manual. These additional abbreviations are used in the Standards and are defined as follows:

<b>AASHTO</b>	American Association of State Highway and Transportation Officials
<b>ADA</b>	Americans with Disabilities Act
<b>APWA</b>	American Public Works Association
<b>ASTM</b>	American Society for Testing and Materials
<b>ATB</b>	Asphalt Treated Base
<b>AWWA</b>	American Water Works Association
<b>CATV</b>	Cable Television
<b>CB</b>	Catch Basin
<b>CDF</b>	Controlled Density Fill
<b>CMP</b>	Corrugated Metal Pipe
<b>CSBC</b>	Crushed surfacing base course
<b>CSTC</b>	Crushed surfacing top course
<b>DCVA</b>	Double Check Valve Assembly
<b>Diam.</b>	Diameter
<b>DOE</b>	Department of Ecology
<b>fps</b>	Feet per second
<b>GVW</b>	Gross Vehicle Weight
<b>HMA</b>	Hot Mix Asphalt
<b>KCC</b>	Kent City Code
<b>KC/DNRP</b>	King County Department of Natural Resources
<b>KCSWDM</b>	King County Surface Water Design Manual
<b>KDCS</b>	Kent Design and Construction Standards
<b>KSWDM</b>	Kent Surface Water Design Manual
<b>LID</b>	Low Impact Development
<b>MH</b>	Manhole

<b>MPH</b>	Miles Per Hour
<b>MUTCD</b>	The Manual on Uniform Traffic Control Devices
<b>NPDES</b>	National Pollutant Discharge Elimination System
<b>NST</b>	National Standard Threads
<b>OCI</b>	Overall Condition Index
<b>PC</b>	Point of Curvature
<b>PCP</b>	Plain Concrete Pipe
<b>PI</b>	Point of Intersection
<b>PCC</b>	Portland Cement Concrete
<b>PLS</b>	Professional Land Surveyor
<b>PT</b>	Point of Tangency
<b>PVC</b>	Polyvinyl Chloride <u>or</u> Point of Vertical Curvature
<b>PVI</b>	Point of Vertical Intersection
<b>RCP</b>	Reinforced Concrete Pipe
<b>RCW</b>	Revised Code of Washington
<b>ROW</b>	Right-of-Way
<b>RPBA</b>	Reduced Pressure Backflow Assembly
<b>RPDA</b>	Reduced Pressure Detector Assembly
<b>SEPA</b>	State Environmental Policy Act
<b>SWPE</b>	Solid Wall Polyethylene
<b>SWPPP</b>	Storm Water Pollution Prevention Plan
<b>TESCP</b>	Temporary Erosion/Sedimentation Control Plan
<b>VMD</b>	Vehicle Maneuvering Diagrams
<b>WAC</b>	Washington Administrative Code
<b>WSDOH</b>	Washington State Department of Health
<b>WSDOT</b>	Washington State Department of Transportation
<b>WSP</b>	Water System Plan