

CITY OF SEATTLE

ORDINANCE _____

COUNCIL BILL _____

..title

AN ORDINANCE relating to The City of Seattle’s datum point; updating the vertical and horizontal reference datum for City of Seattle departments and outside entities as a standard elevation reference plane; requiring certain measurements for preliminary plats to be based on the updated vertical and horizontal datum; amending Chapter 1.20 of the Seattle Municipal Code; and amending Sections 23.22.020, 23.75.100, 25.06.030, 25.06.070, and 25.06.090 of the Seattle Municipal Code.

..body

WHEREAS, the local vertical datum, known as the City of Seattle Datum, was established in 1883 by Ordinance 383 and amended in 1891 by Ordinance 1836; and

WHEREAS, it is in the interest of The City of Seattle (City) to have a standard, regional, and consistent vertical and horizontal reference system; and

WHEREAS, it is in the interest of the public safety, health, and welfare that elements of the City’s infrastructure share a common vertical and horizontal reference system; and

WHEREAS, chapter 58.20 RCW establishes the "Washington coordinate system of 1983," based on the North American Datum of 1983, as determined by the National Geodetic Survey of the United States Department of Commerce, as a system for expressing positions or locations of points on the surface of the earth; and

WHEREAS, state, local, and regional entities adopted the Washington Coordinate System as a standard for expressing positions and locations of utilities, transportation elements, and other infrastructure in Geographic Information Systems, engineering records, mapping and land records; and

WHEREAS, published coordinates for the National Geodetic Survey geodetic control monuments, that provide the physical constraints for establishing coordinate values in the Washington Coordinate System, represent the most current adjustment of the North

1 American Datum of 1983, and the City of Seattle's primary control network monuments
2 have been constrained to said monuments and adjusted to the North American Datum of
3 1983 most current per WAC 332-130-060; and

4 WHEREAS, present surveying, engineering, and Geographic Information Systems methods and
5 technologies provide for and make practicable the establishment and adherence to a
6 common horizontal reference system; and

7 WHEREAS, the Central Geographic Data Base of the City of Seattle Geographic Information
8 System was developed in and maintained in the North American Datum of 1983 (most
9 current adjustment), and a longstanding goal of the City of Seattle Geographic
10 Information Systems is to include elements from engineering design projects and other
11 sources of horizontally reference spatial features; and

12 WHEREAS, the Washington State Department of Natural Resources, in advance of federal
13 changes to [horizontal and](#) vertical datum measurement standards in 2022, is pursuing
14 legislation to amend chapter 58.20 RCW to refer to the new standards and future
15 standards, and Seattle has the same need to amend its code to refer to the new standards;

16 NOW, THEREFORE,

17 **BE IT ORDAINED BY THE CITY OF SEATTLE AS FOLLOWS:**

18 Section 1. Chapter 1.20 of the Seattle Municipal Code, last amended by Ordinance
19 121291, is amended as follows:

20 **CHAPTER 1.20 DATUM POINT**

21 **1.20.010 (~~(Datum point established.)~~) Historical datum point**

22 ~~((A-Original))~~ Historical datum point. A base or datum point or line is established on the lower
23 step at the entrance to the Pioneer Block in The City of Seattle, at the southwest corner thereof,

1 the point or datum line being ~~((19.79))~~ 18.79 feet below the top of the step, the point or datum
2 line being in correspondence with the datum point or line heretofore fixed by Ordinance No. 383.

3 To distinguish between the historical and current vertical datum, when it is necessary to refer to
4 both, this historical datum point shall be known as the "City of Seattle Datum."

5 ~~((B. New datum point. The North American Vertical Datum of 1988 (NAVD88) and the~~
6 ~~North American Datum of 1983 (1991 adjustment) [NAD83 (1991)] are adopted as the new~~
7 ~~official vertical and horizontal datums of the City of Seattle; said datums being defined by a~~
8 ~~series of stable, monumented points and reference stations established and maintained by the~~
9 ~~United States National Geodetic Survey.))~~

10 **1.20.020 Current datums**

11 The official geodetic datums to which geodetic coordinates, including, but not limited to,
12 latitude, longitude, ellipsoid height, orthometric height, or dynamic height, are referenced within
13 Seattle city limits shall be as defined for the National Spatial Reference System (or its
14 successor).

15 Section 2. Work that constitutes the "practice of engineering" or the "practice of land
16 surveying", chapter 18.43 RCW, including but not limited to, land survey maps, plans, records of
17 surveys, plats, short plats, descriptions of real property, and boundary line adjustments, which
18 are performed by or for The City of Seattle, or on properties and/or infrastructures owned,
19 funded, or maintained by The City of Seattle, shall reference the current datums for Seattle
20 whenever there is a reference to a horizontal datum (any reference to bearings, azimuths, or
21 geographical or state plane coordinates) or a vertical component of the work, or an elevation is
22 noted.

1 Section 3. All land survey maps and plans, records of surveys, plats, short plats, boundary
2 line adjustments, and legal descriptions submitted to the City for its approval, and all plans,
3 elevations, maps, drawings, and legal descriptions submitted to obtain permits for construction
4 and development of private improvements, shall reference the current datums for Seattle
5 whenever there is a reference to a horizontal datum (any reference to bearings, azimuths, or
6 geographical or state plane coordinates) or a vertical component of the work, or an elevation is
7 noted.

8 Section 4. The City of Seattle Standard Specifications for Road, Bridge, and Municipal
9 Construction, Standard Specification 1-05.5, shall be revised to require the horizontal and
10 vertical datums for Seattle current at the time this ordinance takes effect for all work referenced
11 in Section 2 of this ordinance.

12 Section 5. Subsection 23.22.020.A of the Seattle Municipal Code, which section was last
13 amended by Ordinance 123963, is amended as follows:

14 **23.22.020 Content of preliminary plat application**

15 A. Every preliminary plat application shall consist of one (~~((4))~~) or more maps together
16 with written data including the following:

- 17 1. The name of the proposed subdivision;
- 18 2. North arrow and scale; the location of existing property lines; streets, building,
19 if any; watercourses and all general features;
- 20 3. The legal description of the land contained within the subdivision;
- 21 4. The names and addresses of all persons, firms, and corporations holding
22 interest in the lands, including easement rights and interest;

1 5. The proposed names, locations, widths, dimensions, and bearings of proposed
2 streets, alleys, easements, parks, lots, building lines, if any, and all other information necessary
3 to interpret the plat, including the location of existing utility and access easements (~~(which)~~) that
4 are to remain, all horizontal references (any reference to bearings, azimuths, or geographical or
5 state plane coordinates) shall reference the (~~(North American Datum of 1983 (1991 adjustment))~~)
6 current horizontal datum for Seattle under Section 1.20.020;

7 6. The location of streets in adjoining plats and the approximate locations of
8 adjoining utilities and proposed extensions into the plat;

9 7. The names of adjoining plats;

10 8. The name, address, (~~and~~) telephone number, and seal of the registered land
11 surveyor who made the survey or under whose supervision it was made;

12 9. The date of the survey;

13 10. All existing monuments and markers located by the survey;

14 11. The zoning classification applicable to the land within the subdivision;

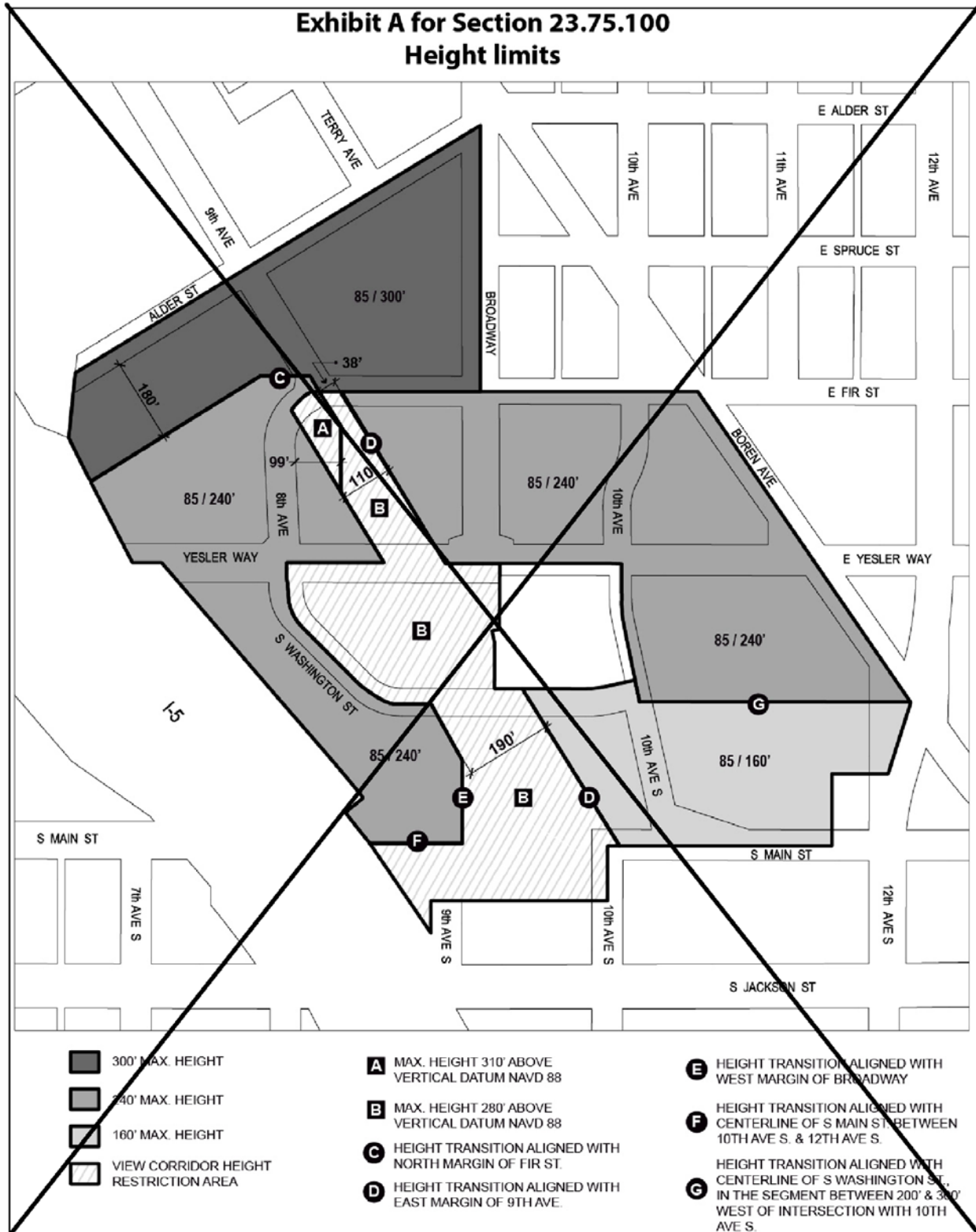
15 12. The conditions of or the limitations on dedications, if any, including slope
16 rights;

17 13. Contour intervals as required, based upon (~~the ((North American Vertical~~
18 ~~Datum of 1988))~~ current horizontal~~vertical~~ datum for Seattle under Section 1.20.020;

19 14. Property information including, but not limited to, address, legal description,
20 and Assessor's Parcel number;

21 15. Evidence of ownership or authorization from the property owner to make the
22 application;

1 D. If a structure is within more than one of the areas designated on Exhibit A for
 2 23.75.100, the height limits apply separately to the portions of the structure in each area.



3

Exhibit A for Section 23.75.100 Height limits



- 300' MAX. HEIGHT
- 240' MAX. HEIGHT
- 160' MAX. HEIGHT
- VIEW CORRIDOR HEIGHT RESTRICTION AREA

- A** MAX. HEIGHT 310' ABOVE VERTICAL DATUM
- B** MAX. HEIGHT 280' ABOVE VERTICAL DATUM
- C** HEIGHT TRANSITION ALIGNED WITH NORTH MARGIN OF FIR ST.
- D** HEIGHT TRANSITION ALIGNED WITH EAST MARGIN OF 9TH AVE.

- E** HEIGHT TRANSITION ALIGNED WITH WEST MARGIN OF BROADWAY
- F** HEIGHT TRANSITION ALIGNED WITH CENTERLINE OF S MAIN ST. BETWEEN 10TH AVE S. & 12TH AVE S.
- G** HEIGHT TRANSITION ALIGNED WITH CENTERLINE OF S WASHINGTON ST., IN THE SEGMENT BETWEEN 200' & 300' WEST OF INTERSECTION WITH 10TH AVE S.

1 Section 7. Subsection 25.06.030.C of the Seattle Municipal Code, which section was last
2 amended by Ordinance 124919, is amended as follows:

3 **25.06.030 Definitions**

4 * * *

5 C. "Base flood level" and "base flood elevation" both mean the level or elevation above
6 mean sea level, as calculated by reference to the ~~((National Geodetic Vertical Datum (NGVD)))~~
7 National Spatial Reference System vertical datum for Seattle under Section 1.20.020, of
8 floodwaters in a particular area during flood having a one ~~((+))~~ percent chance of occurring in
9 any given year.

10 * * *

11 Section 8. Section 25.06.070 of the Seattle Municipal Code, enacted by Ordinance
12 114395, is amended as follows:

13 **25.06.070 Application for floodplain development approval or license~~((:))~~**

14 Application for a floodplain development license or for floodplain development approval shall be
15 made on forms furnished by the Administrators. The application shall include, but shall not be
16 limited to, the following information:

17 A. Elevation prepared by a licensed surveyor or a registered professional civil engineer in
18 relation to mean sea level, as calculated based on the ~~((National Geodetic Vertical Datum~~
19 ~~(NGVD)))~~ National Spatial Reference System vertical datum for Seattle under Section 1.20.020,
20 of the lowest floor (including basement) of all structures;

21 B. Elevation prepared by a licensed surveyor or a registered professional civil engineer in
22 relation to mean sea level, as calculated based on the ~~((National Geodetic Vertical Datum~~

1 ~~(NGVD))~~ National Spatial Reference System vertical datum for Seattle under Section 1.20.020,
2 to which any structure has been or will be floodproofed;

3 C. Certification by a registered professional civil engineer that the floodproofing methods
4 for any nonresidential structure meet the floodproofing criteria in Section 25.06.110; and

5 D. Description of the extent to which any watercourse will be altered or relocated as a
6 result of the proposed development.

7 Section 9. Section 25.06.090 of the Seattle Municipal Code, last amended by Ordinance
8 121115, is amended as follows:

9 **25.06.090 Functions of the Administrators((:))**

10 Functions of the Administrators under this ~~((chapter))~~ Chapter 25.06 shall include the following:

11 * * *

12 D. Where base flood elevation data is provided through the Flood Insurance Study or
13 required and obtained through subsection 25.06.090.C above, obtain and record the actual (as-
14 built) elevation (in relation to mean sea level as calculated based on the ~~((National Geodetic
15 Vertical Datum))~~ National Spatial Reference System vertical datum for Seattle under Section
16 1.20.020) of the lowest floor, including basement, of all new or substantially improved
17 structures, and indicate whether or not the structure contains a basement;

18 * * *

1 Section 10. This ordinance shall take effect and be in force 30 days after its approval by
2 the Mayor, but if not approved and returned by the Mayor within ten days after presentation, it
3 shall take effect as provided by Seattle Municipal Code Section 1.04.020.

4 Passed by the City Council the _____ day of _____, 20198,
5 and signed by me in open session in authentication of its passage this _____ day of
6 _____, 20198.

7 _____
8 President _____ of the City Council

9 Approved by me this _____ day of _____, 20198.

10 _____
11 Jenny A. Durkan, Mayor

12 Filed by me this _____ day of _____, 20198.

13 _____
14 Monica Martinez Simmons, City Clerk

15 (Seal)