

## **Appendix E**

---

### *Totem Center Shade and Shadow Analysis*

## **Totem Center Study Area Shade and Shadow Analysis Development Assumptions**

In order to prepare the shade and shadow analysis for the Totem Center Study Area described in the Aesthetics section of this EIS, the City identified three potential development sites and a potential development envelope for each site. Sites selected for this analysis were those with potential for redevelopment and with the potential to create shade and shadow impacts within and surrounding the study area.

It should be noted that the shadow analysis depicts one of the “worst case” scenarios because the assumed development envelope is larger than allowed under the development standards proposed for the study area. This is because the shade and shadow analysis was completed before the development regulations were finalized. Specifically, the proposed development standards differ from these assumptions as follows:

- **Building height:** The proposed development standards would allow a maximum of 160 feet; shadow analysis assumed 180 feet in building height. For sites adjacent to NE 132<sup>nd</sup> Street, the proposed development standards would limit height for buildings within 100 feet of the NE 132<sup>nd</sup> Street centerline to 30 feet above the elevation of the centerline; no limitation was assumed in the shadow analysis.
- **Floor plate:** The proposed development standards would limit the floor plate above 75 feet in height to 10,000 square feet; the shadow analysis assumed a limitation of 12,000 square feet above 80 feet in height.
- **Setbacks:** The proposed development standards would require a 20-foot setback from NE 132<sup>nd</sup> Street; the shadow analysis assumed a 10-foot setback.

Development sites and assumptions for each site are as listed below.

Site A: Totem Lake Apartments (site south of NE 132<sup>nd</sup>, west of 120<sup>th</sup> Avenue NE) – TL 1B

- Size: 11 acres
- Setbacks: 10’ from front property line (no side yard or rear setbacks)
- Use to simulate: Residential
- Special site issues; Stream and hillside. Concentration of development within southern half of property. Due to size of site, multiple buildings will be necessary to accommodate total floor area on the property).
- Height limit: 180 feet
  - 1<sup>st</sup> two floors - townhouses, orienting to new road grid on south – approximately 200,000 square feet - approx. 30’ in height
  - Upper floors to 80’ in height: floor plates of 20,000 sq. ft.
  - Above 80’ (to 180’): floor plates of 12,000 sq. ft.

Site B: Evergreen Medical and Dental (site at NW corner of NE 128<sup>th</sup> Street/120<sup>th</sup> Ave NE) – TL 1A

- Size: 1.85 acres
- Setbacks: 10' from front property line (property is on corner, so 2 front setbacks)
- Use to simulate: Medical office
- Height limit: 180'
  - First floor: 30,000 sq. ft.
  - Upper floors to 80' in height: Floor plates of 20,000 sq. ft.
  - Above 80' (to 180'): Floor plates of 12,000 sq. ft.

Site C: Medical office building (existing) (Site south of NE 132<sup>nd</sup> Street, east of 120<sup>th</sup> Avenue NE) – TL 1B

- Size: 1.69 acres
- Setbacks: 10' from front property line
- Use to simulate: Residential
- Height limit: 180'
  - 1<sup>st</sup> two floors - townhouses orienting to NE 132<sup>nd</sup> Street or to internal access road (driveway). Approx. 30' in height (See Assessor's map)
  - Upper floors to 80' in height: Floor plates of 20,000 sq. ft.
  - Above 80' (to 180'): Floor plates of 12,000 sq. ft

Site locations and shadow analyses at these locations at different times of day and seasons of the year are shown on the following pages.