

KING ROAD EXTENSION

LOCATION

King Road is located at 79th and King Road in Clackamas County. Its specific location is east of Milwaukie in the SE 1/4 Section 29, Township 1 South, Range 2 East, WM (Figure 1). The Site, about 32 acres on the terrace between the drainages of Johnson and Mt. Scott Creeks, is directly north of King Road, some 2,000 feet west of SE 82nd (State Highway 213) (Figure 2).

ZONING

The pit is zoned MAE.

CURRENT SITE USE

The Site is a former demolition landfill.

ADJACENT LAND USE

Surrounding land use is predominately residential with some industrial uses.

NATURAL SCREENING

The Site is poorly screened.

REGIONAL GEOLOGIC SETTING

The proposed LaVelle II Landfill Site is surrounded by Quaternary alluvial deposits. Immediately east of the site the sandstones and conglomerates of the Pliocene Troutdale formation are exposed at land surface. Pyroclastic rocks and basaltic flows of the Pliocene-Pleistocene Boring lava overlie the Troutdale formation on Mt. Scott in the extreme eastern portion of the study area.

The alluvial deposits in the Portland area have been differentiated on the basis of geomorphic and/or altitude differences (Treasher, 1942) and variations in the degree of weathering and topographic position by Trimble (1963). Many of the units are given relative ages on the basis of severity of weathering and relative topographic position.

Trimble (1963) has proposed a mechanism for the deposition of the various alluvial deposits observed in the study area. His hypothesis is based on the damming of the Columbia River during the Missoula Floods of Bretz (1930). The volume of water flowing through the Columbia River channel was supposedly more than could escape through the restricted channel and the formation of a wide spread but short-lived lake resulted. Near the Columbia River Gorge, in the eastern portion of the lake, coarser materials were formed as deltaic

deposits labeled (Qlg) on the accompanying geologic sketch map, Figure 3. The finer materials were carried farther west. As the lake level subsided, some scouring took place and finer materials (Qs) were deposited over the lacustrine (lake) deposits. Following the disappearance of the lake recent terrace deposits (Qt) were formed. In the valleys of some streams, such as Johnson Creek, a veneer of recent alluvial deposits was laid down (Qal).

SITE GEOLOGY

The Portland Roads and Driveways pit has been excavated from the previously described lake gravels. These bedded gravels are exposed in the walls of the pit. Particle sizes range from boulders and cobbles to sands, silts and clays. The floor of the pit is very nearly coincident with the contact between the terrace gravels and the Sandy River mudstone of the underlying Troutdale formation. More than 300,000 cubic yards of material has been removed from the northern pond.

GROUNDWATER

The regional flow of groundwater is from Mt. Scott to the lower elevations, discharging in Johnson Creek, Mt. Scott Creek, the Willamette River and/or local springs. Assuming that the subsurface flow is unconfined, over a uniform gradient, through a homogenous aquifer and that an approximate coefficient of permeability is reflected by the drawdown at a known discharge from the city and the Cartasegna wells, the rate of movement of groundwater away from the proposed site has been estimated.

Estimated transmissibility and permeability values at the Cartasegna well are markedly lower than those at the city wells. Examination of the well log for the Cartasegna well indicates that water was first encountered at 90 feet during boring and that the final static water level was 66 feet. This indicates that the Cartasegna well is located in a groundwater discharge area. This type of information is not available for the city wells, but an analogous situation probably exists.

Ponded water at the proposed site, previously described, is also a potential source of water for refuse wetting. Since the surface of this ponded water and the pit floor are congruent with the water table surface, only inert materials should be placed in these ponds and on the immediate pit floor. This will protect any leachate producing refuse from becoming saturated should a groundwater mound develop in the landfill at some future date. Included is not only the aforementioned LaVelle Pond, but also the shallow ponds in the southern portion of the Site. Seepage from the Portland Road and Driveways wash water settling pond is also a potential source of refuse wetting. No putrescible refuse should be deposited below the water table. The water in the settling pond should be effectively segregated from any putrescible refuse.

Calculated groundwater flow rates based on estimated permeability ($K = 1.1 \times 10^2$ gal./day) and gradient ($f = 98$ ff./III.) 86 ft./mi.) from the pit area range from 0.3 ft./day in the direction of the Cartasegna well to nearly 1.3 ft./day in the direction of the Milwaukie city wells.

SOIL

Soil on-site consists of associations with 50 percent or more Class III soils, or 50 percent or more Classes II and III combined.

SURFACE WATER

The nearest surface waterway is Johnson Creek which is 3,000 feet north of the Site. On-site are two large groundwater lakes at the bottom of the proposed expansion area.

SLOPE

Slope varies due to sand excavations periodically occurring at the Site.

COVER

Cover material must be imported to the Site.

CAPACITY

Capacity is estimated at 1,900,000 tons.

ACCESS

The Site is less than one mile from I-205 and is 7 miles from Rossmans Landfill.

CLIMATE

Annual rainfall is 48 inches.

TA:bk
7347/103
Prepared by Metro Staff

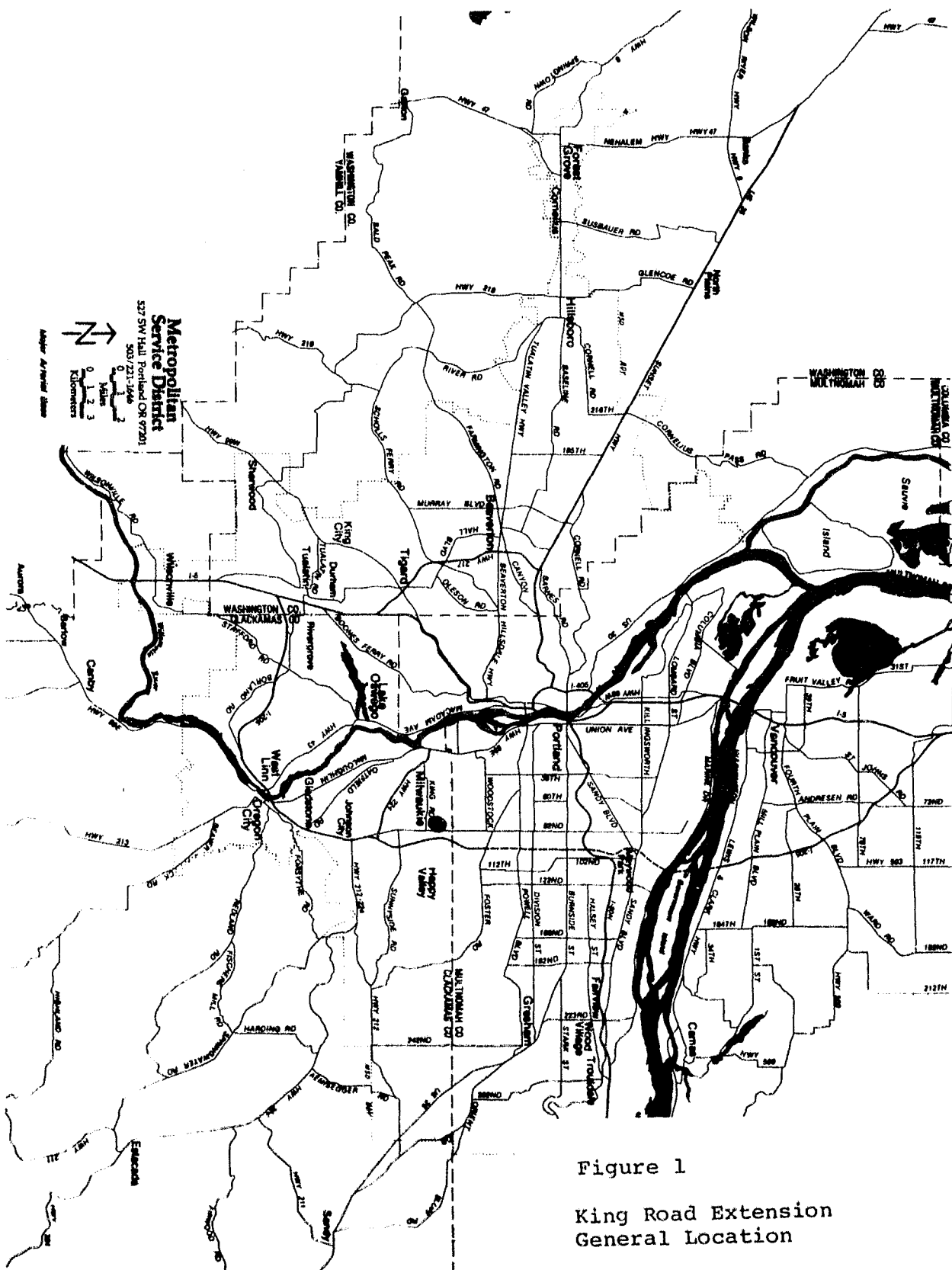


Figure 1
 King Road Extension
 General Location

15/2 E
KING RD EXTENSION

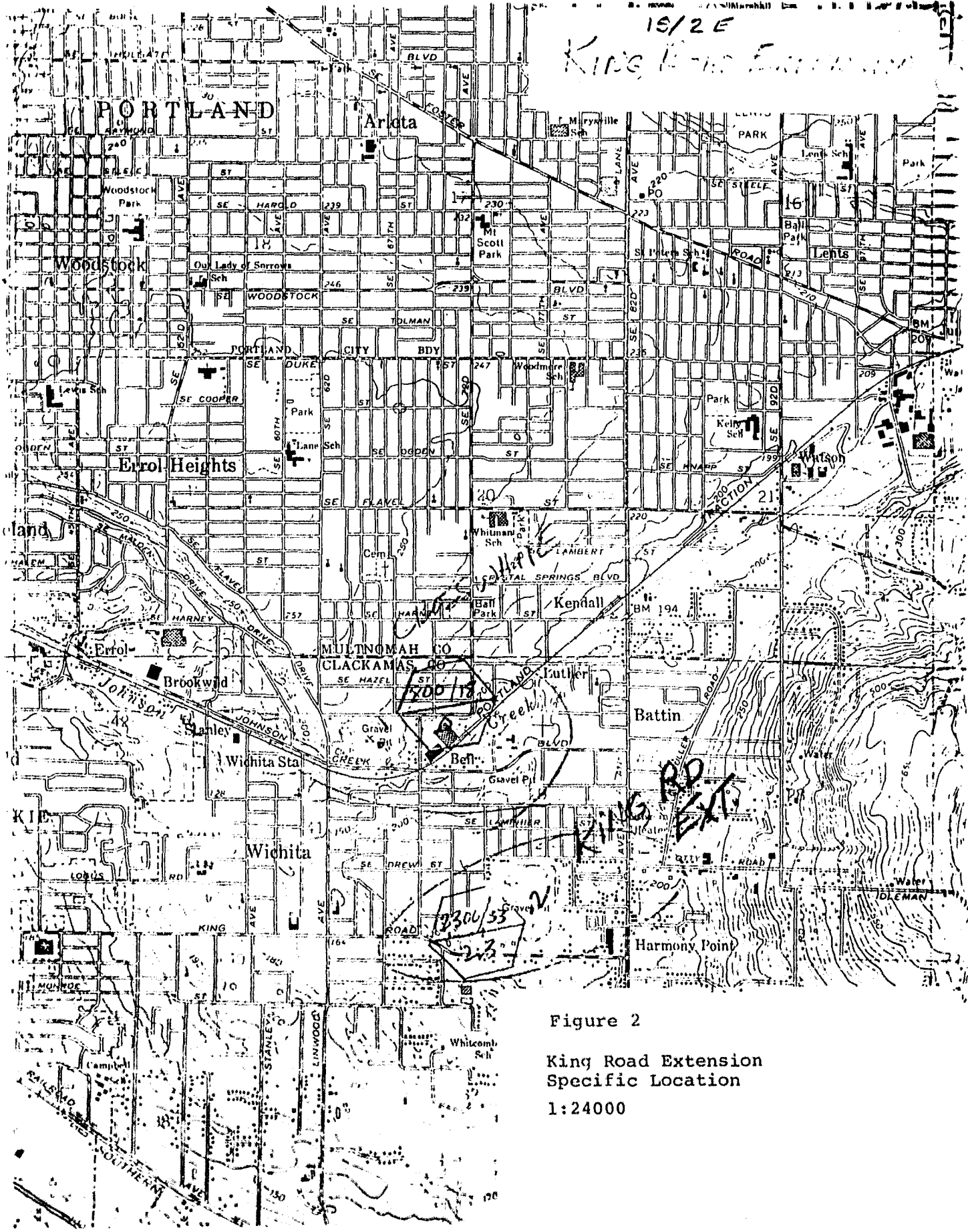


Figure 2
King Road Extension
Specific Location
1:24000

Figure 3
King Road

- Qal ALLUVIUM: Sand, silt, and gravel...commonly less than 50 feet thick.
- Qt TERRACE DEPOSITS: Sand, silt, and gravel...
- Qs SAND AND SILT DEPOSITS: Unconsolidated sand and silt, mostly stratified and locally crossbedded; maximum thickness about 100 feet
- Qlg LACUSTRINE DEPOSITS: Gravelly phase--coarse gravel with sandy matrix; mostly of mafic volcanic rocks.
- Qtb BORING LAVA: Light-gray open-textured olivine basalt; finely porphyritic..... in places contains pebbles from the Troutdale formation; commonly of limited extent, close to source conduit; late Pliocene to late(?) Pleistocene in age
- Tt TROUTDALE FORMATION: Sandstone and conglomerate, minor amounts of siltstone and claystone,.... thickness probably more than 1,000 feet

Scale 1:24,000
Contour interval 10 feet

