

ABSTRAK

Judul : TINJAUAN PERENCANAAN SISTEM DRAINASE SUMUR RESAPAN ARKADIA OFFICE TOWER JAKARTA SELATAN, Nama : Umam Dwi Nugroho, Nim : 41115110081, Dosen Pembimbing : Ika Sari Damayanthi, ST,MT,

Pembangunan gedung-gedung tinggi di Jakarta semakin pesat sehingga berdampak pada lingkungan sekitar. Semakin banyak lahan yang digunakan untuk pembangunan gedung bertingkat memengaruhi pula kualitas dan kuantitas air tanah di dalamnya. Pembangunan gedung bertingkat harus disertai dengan pembangunan drainase dan sumur resapan yang sesuai dengan standar peraturan daerah dan pemerintah, karena apabila drainase dan sumur resapan tidak diperhatikan akan berdampak banjir. Lokasi penelitian Tugas Akhir ini adalah Arkadia Office Tower di mana gedung ini terletak di wilayah selatan Jakarta di daerah Jalan TB Simatupang yang merupakan kawasan metropolitan yang mempunyai nilai strategis, dan juga terletak di kawasan perkantoran yang berdekatan dengan kawasan padat penduduk kemudian dikelilingi oleh gedung-gedung tinggi sehingga sistem drainase dan sumur resapan menjadi hal yang penting untuk diperhatikan agar tidak berdampak buruk pada wilayah sekitar. Tujuan utama Tugas Akhir ini adalah untuk mengetahui apakah sistem drainase dan sumur resapan pada gedung Arkadia Office Tower sesuai dengan standar Peraturan Daerah DKI 2010, Peraturan Menteri Pekerjaan Umum 2014 dan Peraturan Badan Standardisasi Nasional 2017, sehingga dapat berfungsi dengan baik dan tidak menyalahi aturan terkait peraturan yang sudah ditetapkan. Data sekunder berupa data curah hujan harian maksimum didapat dari Badan Meteorologi dan Geofisika Pondok Betung Jakarta, perhitungan curah hujan rencana memakai metode log normal sedangkan untuk perhitungan intensitas curah hujan menggunakan metode Mononobe. Selanjutnya, perencanaan sumur resapan yang direncanakan untuk menampung limpasan air hujan yang masuk berbentuk persegi dengan ukuran panjang 2 m, lebar 2 m, dan tinggi 3 m berjumlah 9 buah dan dapat menampung 108m³ limpasan air hujan.

Kata Kunci : Drainase, Sumur Resapan, Banjir, Perda DKI 2010, Permen PU 2014, Peraturan Badan Standardisasi Nasional 2017.

ABSTRACT

Rubric : REVIEW OF THE PLANNING DRAINAGE SYSTEM INFILTRATION WELL ARKADIA OFFICE TOWER SOUTH JAKARTA, Name : Umam Dwi Nugroho, Nim : 41115110081, Mentor : Ika Sari Damayanthi, ST, MT,

The construction of high-rise buildings in Jakarta is increasing rapidly so that effects on the surrounding environment. The use of more land for the construction of multi-storey buildings also effects the quality and quantity of groundwater in it. The multi-storey buildings construction must be accompanied by the construction of drainage and infiltration wells which are in accordance with the standards of regional and government regulations, due to the unconsidered drainage and infiltration could resulting flood. The research location of this Final Project was Arkadia Office Tower located in the southern area of Jakarta in Jalan TB Simatupang which is a strategic metropolitan area and is also located in an office area adjacent to a densely populated area and surrounded by high-rise buildings; therefore, drainage and infiltration wells systems are important to consider for not having bad impact on the surrounding area. The main objective of this Final Project is to find out whether the drainage and infiltration wells systems in the Arkadia Office Tower are in accordance with the standards of Regional Regulation of the Province of Jakarta Capital Special Regions of 2010, Regulation of the Minister of Public Works of 2014 and Regulation of National Standardization Agency of 2017 or not, so as to be able to function properly and do not violate any rules related to the stipulated regulations. Secondary data of maximum daily rainfall data was obtained from the Meteorological, Climatological and Geophysical Agency of Pondok Betung Jakarta. The calculation of rainfall used the normal log method while the calculation of rainfall intensity used the Mononobe method. Furthermore, the planned infiltration wells designated for accommodating incoming rainwater runoff is square with 2 m in length, 2 m in width, and 3 m in height with 9 units in total and able to accommodate 108m³ rainwater runoff.

Keywords: Drainage, Infiltration Wells, Flood, Regional Regulation of the Province of Jakarta Capital Special Regions of 2010, Regulation of the Minister of Public Works of 2014, Regulation of National Standardization Agency of 2017.