



Professional Engineers, Planners & Land Surveyors

AVIDA (fka OASIS COVE)
JUSTIFICATION FOR DEVIATIONS

We are requesting an administrative deviation from LDC Section 10-384(c)(2) for Avida.

LDC Section 10-384(c)(2) states, *"Watermains for all commercial buildings and for residential buildings with more than six dwelling units per building or more than two stories in height must be no less than ten inches in diameter, and constructed in an external loop system with intersecting watermains installed every 2,000 feet."*

The proposed 12" watermain distribution system for Avida will be connected to an existing 16" watermain with an external loop exceeding 2,000 feet.

This administrative deviation request represents the minimum necessary deviation to provide adequate water for fire protection and to provide the greatest possible habitat quality. The Avida project site configuration sets the development limits of the project and made watermain looping the viable solution.

Despite the need for this Administrative Deviation, the submitted hydraulic calculations, prepared and signed and sealed by a registered Professional Engineer, prove that the proposed water distribution system is capable of providing water service and fire protection to the project greater than the minimum required 750 GPM at 20 psi. These calculations show that the proposed water distribution system is capable of delivering 2,028 GPM at 33.5 psi. Even if additional loops and intersecting mains were available, it would not significantly alter the onsite pressure. The expected flow is adequate for the proposed development and does not require fire sprinkling systems.

The approved MCP is attached as reference to this request. This request does not require a graphic depiction, please note that no changes are approved to the MCP as approved under ADD2016-00011.

LDC Section 10-104(b) outlines the criteria for administrative deviations as follows:

1. *The alternative proposed to the standards contained herein is based on sound engineering practices (not applicable to sections 10-352, 10-353 and division 7 of article III of this chapter);*

One of the primary intents of watermain looping and intersecting mains is to provide adequate fire flow. The submitted fire flow calculations, prepared and signed and sealed by a registered Professional Engineer, specifically state, "The proposed water system at Avida is based on sound engineering practices and provides equivalent service and is capable of providing 2,028 GPM (total fire and domestic demand) at a pressure of 33.5 psi (20 psi minimum required by LDC). This equivalent service is consistent with LDC criteria to allow the

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approval of the deviation and does not jeopardize the health, safety, and welfare of the public." Please note that the 847.5 GPM exceeds the LDC minimum of 750 GPM as well.

2. *The alternative is no less consistent with the health, safety and welfare of abutting landowners and the general public than the standard from which the deviation is being requested;*

The proposed water system for Avida is no less consistent with health, safety, and welfare of abutting landowners and the general public, than the standard from which the deviation is requested. The submitted fire flow calculations, prepared and signed and sealed by a registered Professional Engineer, specifically state, "The proposed water system at Avida is based on sound engineering practices and provides equivalent service and is capable of providing 2,028 GPM (total fire and domestic demand) at a pressure of 33.5 psi (20 psi minimum required by LDC). This equivalent service is consistent with LDC criteria to allow the approval of the deviation and does not jeopardize the health, safety, and welfare of the public." Please note that the 2,028 GPM exceeds the LDC minimum of 750 GPM as well. Equivalent potable water supply and fire protection are provided by the proposed on-site water system.

3. *For Division 7 of Article III of this Chapter, the required facility would unnecessarily duplicate existing facilities.*

N/A

4. *The granting of the deviation is not inconsistent with any specific policy directive of the Board of County Commissioners, any other ordinance or any Lee Plan provision.*

The granting of this deviation is not inconsistent with any specific policy directive of the Board of County Commissioners, any other ordinance or any Lee Plan provision. The ability to grant Administrative Deviations for the design standards for water main installation requirements are specifically allowed in the LDC.

5. *For Section 10-352 and 10-353, the utility that would otherwise serve the development cannot provide the service at the adopted level of service standard, due to an inadequate central facility.*

N/A