

CARSON CITY STORM DRAINAGE ADVISORY COMMITTEE
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A regular meeting of the Carson City Storm Drainage Advisory Committee was held at 5:30 p.m. on Monday, October 11, 1999 in the City Hall Capitol Conference Room, 201 North Carson Street, Carson City, Nevada.

PRESENT: Chairperson Jay Aldean
Vice Chairperson Howard Anderson
Delacy Perry
Russell Plume

STAFF: Andrew Burnham, Capital Projects Manager
Kathleen King, Recording Secretary
(SDAC 10/11/99; Tape 1-0001)

NOTE: Unless indicated otherwise, each item was introduced by Chairperson Aldean. A tape recording of these proceedings is on file in the Clerk-Recorder's Office and is available for review and inspection during regular business hours.

A. ROLL CALL AND DETERMINATION OF A QUORUM (1-0001) - Chairperson Aldean called the meeting to order at 5:43 p.m. Roll call was taken; a quorum was present. Members Bawden, Hildebrand, and Oakwood were absent. Discussion ensued with regard to Member Bawden's car accident and subsequent injuries, Member Oakwood's recent surgery, and the possibility of replacing Member Hildebrand. Chairperson Aldean requested that a letter be sent to Member Hildebrand by Deputy City Manager St. John requesting a re-affirmation of his commitment to the Committee or, in the alternative, permission to seek a replacement for his position.

B. APPROVAL OF MINUTES (1-0138) - With regard to the minutes of the September 13, 1999 meeting, Vice Chairperson Anderson moved to approve. Member Plume seconded the motion. Motion carried 4-0-3-0.

C. MODIFICATION OF AGENDA (1-0144) - None.

D. PUBLIC COMMENT (1-0145) - None.

E. DISCLOSURES (1-0146) - None.

F. PUBLIC MEETING ITEM

F-1. PRESENTATION AND DISCUSSION BY ANDY BURNHAM, CAPITAL PROJECTS MANAGER, ON POSSIBLE DEVELOPMENT STANDARDS FOR STORM DRAINAGE IMPROVEMENTS (1-0147) - Mr. Burnham distributed draft Development Standards and explained that Chapter 10, Storm Drainage, is one chapter of approximately 17 covering development standards for the entire City. These include architectural, parks, water, sewer, drainage, and transportation standards. Although many of the standards exist in other formats and locations, City staff is developing one standards document encompassing all development areas for submission to, and adoption by, the Board of Supervisors. The basis of the storm drainage standards began with Mr. Aldean's staff and have since been updated, utilizing the Washoe County standards, and revised to conform to Carson City's interests and practices. Chairperson Aldean advised of the request made at the last meeting to convert the draft development standards into an executive summary and/or graphic representations which can be attached to a letter from the Committee to the Board of Supervisors, advising of the Committee's approval and the basis for such approval. Mr. Burnham agreed that this would be done. He went on to explain that the development standards will be used as a guideline to staff for designing storm drain facilities within the City, as well as a checklist to communicate standards to developers. He referred the Committee members to the memorandum previously distributed and discussed the workshop scheduled for October 28, 1999, to review and revise the technical aspects of the storm drainage development standards with the engineering community and City

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staff. Review of the revised standards will then be agendaized for a Storm Drainage Advisory Committee meeting. Chairperson Aldean advised that as Mr. Burnham reviewed the draft standards, he would develop a list of items to be included in the executive summary. With regard to five-year storm design versus ten-year storm design, Chairperson Aldean suggested using terminology which delineates the two different storms without reference to the frequency of design of that storm, i.e., critical storm versus design storm, or low flow versus high flow. The technical aspects can be decided upon at the workshop. Chairperson Aldean strongly urged all individuals listed in Mr. Burnham's memorandum to attend the workshop, with the goal that the draft standards be revised into a final draft version. Mr. Burnham advised that Mark Rotter, of Capital Engineering, has volunteered to contact all individuals, other than City staff, to encourage them to attend. Mr. Burnham and the Committee members then reviewed the development standards. Workshop-type discussion ensued regarding the following topics: Reasonable Use of Drainage (10.1.2); Water Rights (10.1.1); Increase in Rate of Flow (10.1.3); Change in Manner of Flow (10.1.4); Diversion of Drainage (10.1.5) and holding a public hearing when plans to divert drainage are pending; and Water Quality (10.1.6). Mr. Burnham advised that when Carson City becomes a metropolitan planning organization, additional drainage discharge requirements will be imposed. With regard to Drainage Improvements (10.1.7), Committee consensus was to defer discussion of curb, gutter and sidewalk requirements. Further review and discussion included Floodplain Management (10.1.8); and Storm Runoff Detention (10.1.9). Chairperson Aldean referred back to section 10.1.3 and discussed conditions for allowing an increase in the rate of flow. Committee consensus was to include a design standard for draining water from beneath houses in the form of a positive outflow created by grading, or by providing connections to the storm drainage facilities. With regard to Drainage Facilities Maintenance (10.1.12), Chairperson Aldean suggested adding Homeowners/Property Owners Associations to the list of responsible parties, and clarifying that the City has the responsibility to mitigate additions to private property which prohibit free drainage. Discussion regarding Streets (10.2.1.3) included how much water should be allowed on private property in a critical flood event. Mr. Burnham referred the Committee to page 11, Table 10.2. Chairperson Aldean diagramed certain portions of the City which are included in the 100-year flood plain. Discussion followed regarding the requirements necessary for FEMA to recognize a 100-year flood zone, and the maximum limits of street inundation indicated in Table 10.2. Vice Chairperson Anderson pointed out that ditches have never been required for the rural areas, and that this should be remedied. Discussion regarding altering the flow of flood waters followed. Chairperson Aldean pointed out that the detention facility in Vicee Canyon is designed to accommodate the 100-year storm, and that the 1997 flood was more catastrophic than a 100-year storm. Damage will occur with frequencies of greater magnitude than a 100-year storm. FEMA recognizes the 100-year event and, thus, most engineering practices and criteria manuals address the 100-year event. Carson City is unique, however, because of its geographic characteristics. Consensus was that storm flows should not inundate any structure, including garages. Discussion ensued with regard to Q10 storm limits and revisions to requirements for rural areas. Vice Chairperson Anderson suggested either including ditches or building up property, and that these requirements should be part of the permit process. Further discussion ensued regarding local streets and collector streets as depicted in Table 10.2, and Committee consensus was to ensure that emergency standards are maintained for both. Review of the design standards continued and discussion included: Sand/Oil Interceptor (10.3.2.10), and Chairperson Aldean suggested Mr. Burnham ensure that best management practice conflicts are worked out; Storm Drain Hydraulic Analysis (10.3.4); Temporary Crossings (10.3.5.6); Culverts, Bridges, Valley Gutter, and Dip Sections (10.2.1.4) and whether or not an all-weather access should be required for subdivisions. Chairperson Aldean suggested that "all-weather access" should be defined, and consensus was to use the Riverview subdivision as an example. Discussion regarding Spillways (10.4.5) included diverting flows from their historic drainage patterns, probable maximum floods ("PMF") as pertaining to dam designs, the amount of volume to contain to provide for the 100-year storm, how the water can spill out of the detention facility during catastrophic storms without causing the dam to break, as well as providing a place for the water to go. Further discussion included Sizing Requirements (10.4.6) and ensuring that spillways are designed for the PMF. Chairperson Aldean diagramed the difference between a dam and a hole in the ground and discussion ensued with regard to the characteristics of each. A spillway has to be sized by virtue of dam requirements and should be sized to accommodate PMF flows. Discussion ensued with regard to the earthen dam at Vicee Canyon, requirements for construction of the spillway, and flow routes during the 1997 flood. Chairperson Aldean will prepare the design standards, which the Committee would like to have translated, in a bullet format for

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the October 28, 1999 workshop. He asked that the workshop participants be able to justify to the Committee where they have deviated from the standards.

G. INTERNAL COMMUNICATIONS AND ADMINISTRATIVE MATTERS

G-1. FUTURE AGENDA ITEMS (1-0058) - Vice Chairperson Anderson advised he would be in Hawaii on November 8, and requested that the meeting be rescheduled to November 4 or 5. Discussion ensued with regard to the location, the time, and the possibility of a quorum. Committee consensus was to schedule the meeting for November 4 or 5. Mr. Burnham will schedule a meeting room and notice the meeting.

H. ADJOURNMENT (1-1675) - Vice Chairperson Anderson moved to adjourn the meeting at 7:15 p.m. Member Perry seconded the motion. Motion carried 4-0-3-0.

The Minutes of the October 11, 1999 meeting of the Carson City Storm Drainage Advisory Committee are so approved this _____ day of November, 1999.

JAY ALDEAN, Chairperson