FLIGHT TRAINING CENTER ADDITION

DRAINAGE PLAN

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Proposed Storm Sewer Extension

It appears Area I will discharge approx. 93 CFS per barrel assuming adequate inlet capacity and head can supply this. Other extraneous drains or taps would raise the flo per barrel to around 103 CFS. The newly constructed storm sewer from Area II increases the south barrel to approx. 133.

From previous design studies, each 54" barrel has a flo capacity of 145 CFS assuming S = 0.50% or greater. Therefore, the north barrel should have available capacity of approx. 42 CFS. The north pipe is adequate for the proposed storm sewer extension to connect to.

It may become necessary in the future to relocate the dual 54" pipes around the existing building or possible building additions. The proposed sewer extension (2 inlet manholes and single 54" pipe) will provide drainage necessary for the improvements planned for Lot 1 (Area C & D) and also alignment and pipe size for re-routing in the future, should the need arise. Manholes would be constructed at both locations with grate inlet tops for covers. Grade of the 54" pipe would be to future required design.

Conclusion

The only drainage conditions changing for the plat are on Lot 1. The C Value will change from 0.3 to 0.85. Increased runoff due to improvements will be $Q = (.85-.30)(8.98)(2.8) = 14$ CFS, for the major storm. The additional storm sewer extension will drain the minor storm portion of this runoff with the rest bypassing the inlets to Central. There would be no considerable damaging runoff contributions to other areas of this plat or to Central.

Preliminary plat is scheduled for subdivision on Thursday, February 11, 1982.

Refer to Exhibit A (aerial photo). Area I (95 AC.) presently drains to the inlet location at the S.W. Corner just east of Byrd and north of Central. Runoff discharges via parking lot into the inlet to be conveyed west via 2 - 54" RCP.

Composite C for the 95 acres = 0.43. At TC of 50 Min., I100 = 4.56 in. Q = 186 CFS. or approx. 93 CFS per 54" pipe.

Area II (south of Central) drains to a S.W.S. at the N.W. Corner. This system discharges into the south 54" barrel with a 36" RCP. Q from this pipe = 30 CFS·Max.

Area III (13 AC.) (See Exhibit B) is broken down by parcels according to exhisting conditions and proposed improvements.

Refer to 'Exhibit B'

Area A (2.2 AC.) will drain west to an 18" S.W.S. pipe entrance. The area presently is not utilized for any use, so it is capable to store any excess runoff for short times. Q = 0.4 (8.98)(2.2) = 8 CFS for the major storm.

Area B (6.0 AC.) will drain west to an open conveyance area at the outfall of the 2 - 54" pipes. The majority of this runoff is via parking lot flo. Q = 0.85 (8.98)(6.0) = 45 CFS for the major storm runoff.

Area C (2.0 AC.) & Area D (1.9 AC.) will drain southwesterly as per proposed building and parking lot construction. New storm sewer extension indicated will provide drop inlets to drain runoff from these areas. Q = 0.85 (4.06)(3.9) = 13 CFS for the minor storm runoff with the major runoff bypassing on to Central Ave.

Area E (1.2 AC.) will drain south as it does today to one of 4 drop inlets.

Other areas adjacent to Webb & Central will continue to drain to the street as they do presently.