

**SAN IGNACIO SUBDIVISION
DRAINAGE AND GRADING PLAN**

**1500 Edith Blvd., N.E.
in Albuquerque, New Mexico
July, 1996**

J-14/D115

**For: Greater Albuquerque Housing Partnership
c/o Mr. Chris Vigil
5101 Copper Ave., N.E.
Albuquerque, New Mexico 87108**

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GENERAL DISCUSSION:

THIS 13 LOT SUBDIVISION IS COMPRISED OF 2.2725 ACRES, AND IS LOCATED ON THE WEST SIDE OF EDITH BLVD., N.E., SOUTH OF ODELIA, N.E. THE TOPOGRAPHY OF THE TRACT SLOPES WESTWARD, AWAY FROM EDITH, AND IT CURRENTLY DRAINS TO THE ALBUQUERQUE/BERNALILLO COUNTY VEHICLE POLLUTION MANAGEMENT PROGRAM HEADQUARTERS SITE. THE CHANGE IN ELEVATION FROM EDITH BLVD. TO THE WEST PROPERTY LINE IS APPROXIMATELY 13 FEET. THE EDITH FRONTAGE HAS FOUR CURB CUTS. THE SITE IS HARD PACKED (TREATMENT C) SOIL FROM YEARS OF AUTOMOBILES DRIVING ACROSS THE PROPERTY.

THE LOTS ARE TO BE DEVELOPED FOR AFFORDABLE HOUSING, WITH SOME PARTICIPATION BY THE CITY OF ALBUQUERQUE, AND ARE TO BE DEVELOPED AND SOLD BY THE GREATER ALBUQUERQUE HOUSING PARTNERSHIP.

EXISTING DRAINAGE CONDITION:

THE SITE AS IT EXISTS DRAINS TO THE ALBUQUERQUE/BERNALILLO COUNTY VEHICLE POLLUTION MANAGEMENT PROGRAM HEADQUARTERS SITE. IT EXITS THIS PROPERTY TO A 4:1 DROP OF SIX FEET IN THE CITY/COUNTY PROPERTY. IT THEN CROSSES A PAVED CIRCULAR DRIVE INTO A RETENTION POND, WHICH IS DRAINED INTO BROADWAY, N.E. BY AN 18 INCH DRAIN PIPE. THE DRAINAGE AND GRADING PLAN FOR THE CITY/COUNTY FACILITY IS J-14/D021. THE EXISTING TREATMENT IS "C" AND IS IN RAINFALL ZONE 2. THE EXISTING MAX. Q_{100} IS $(2.2725)(3.14) = 7.14$ C.F.S.

PROPOSED DRAINAGE

THE PLAT, AS PROPOSED, CONTAINS 13 LOTS COMPRISED OF 1.7109 ACRES, AND A CUL-DE-SAC CONTAINING 0.5616 ACRES, FOR A TOTAL AREA OF 2.2725 ACRES. THE DWELLING UNITS AS DESIGNED BY THE ARCHITECT ARE ZERO LOT LINE WITH A ONE CAR GARAGE ON A MINIMUM 5000 S.F. LOT.

THE LOTS AS DESIGNED, WITH THE EXCEPTION OF LOT 8, CAN ACCOMMODATE EITHER A 3 BEDROOM OR 4 BEDROOM DWELLING UNIT. THE DIFFERENCE IN IMPERVIOUS AREA BETWEEN THE TWO DESIGNS IS AN ADDITIONAL 85 S.F. FOR THE 4 BEDROOM UNIT. THE CALCULATIONS WERE BASED ON THE 4 BEDROOM UNITS, EXCEPT FOR LOT 8, IN ORDER TO BE ON THE CONSERVATIVE SIDE.

NINE OF THE 13 LOTS DO NOT BORDER ON THE WEST PROPERTY LINE AND HAVE THEIR ZERO LOT LINE ON THE DOWNHILL SIDE OF THE LOT. ALL OF THE STRUCTURE ROOF DRAINS ARE TO THE STREET, AND NO LOT IS PERMITTED CROSS-LOT DRAINAGE. ON THE NINE LOTS (1-6 AND 11-13) THE PRECIPITATION WHICH FALLS IN THE BACK YARD IS RETAINED AND PERCOLATED INTO THE WATER TABLE. IN ORDER TO PREVENT CROSS-LOT DRAINAGE AND MAINTAIN A MAXIMUM SIDE SLOPE OF 3:1 RETAINING WALLS ARE REQUIRED ON SOME OF THE LOTS. THESE LOT LINES ARE INDICATED WITH A T.W. SPOT ELEVATION, LOCATED AT EACH POINT OF THE LOT WHICH REQUIRES A RETAINING WALL FROM ONE T.W. SPOT ELEVATION TO THE NEXT.

THE RUNOFF IS BASED UPON TWO LAND TREATMENTS, THE PERVIOUS BEING LANDSCAPED TREATMENT B AND THE IMPERVIOUS BEING ROOF, PAVING, AND CONCRETE (TREATMENT D). THE RESPECTIVE RUNOFF IS IN C.F.S./ACRE FOR B AND D RESPECTIVELY, IN RAINFALL ZONE 2 IS 2.28 AND 4.70. THE R-O-W CONTAINS 0.5616 ACRES , OF WHICH 0.5248 AC. IS IMPERVIOUS AND 0.0368 AC. IS PERVIOUS LANDSCAPE AREA

THE TOTAL AREA WITHIN THE PLATTED LOTS IS 1.7109 ACRES. OF THIS AREA, THE IMPERVIOUS AREA IS 0.6424 ACRES AND THE IMPERVIOUS AREA IS 1.0685 ACRES. USING THESE AREAS THE TOTAL AFTER LOT DEVELOPMENT FOR THE 100 YEAR MAX Q STORM WILL BE:

$$(0.0368 + 1.0685) (2.28) + (0.5248 + 0.6424) (4.7) = 2.52 + 5.49 = 8.01 \text{ CFS.}$$

THIS COMPARES WITH THE EXISTING RUNOFF OF 7.14 CFS, OR AN INCREASE OF ~ 1 CFS.

THE DRAINAGE AT THE WESTERN END (DOWNHILL) OF THE CUL-DE-SAC WILL DISCHARGE INTO A DROP INLET. THE DROP INLET WILL BE CONNECTED TO A STORM SEWER SYSTEM WHICH WILL CONVEY THE STORM WATERS THROUGH THE CITY OF ALBUQUERQUE VEHICLE POLLUTION MANAGEMENT PROPERTY TO EITHER AN EXISTING 36" RCP STORM SEWER IN BROADWAY, N.E. OR FRANCISCAN, N.E., IF CITY OWNER SHIP CAN BE SHOWN FOR TRACT 69A; IT WILL ALSO BE NECESSARY TO DEMONSTRATE THAT FRANCISCAN AND KINLEY CAN CARRY THIS ADDITIONAL FLOW. EASEMENTS WILL BE OBTAINED FROM THE CITY OF ALBUQUERQUE AND THE STORM SEWER SYSTEM WILL BE PRESENTED AS A DRC CITY OF ALBUQUERQUE DRAWING. IT APPEARS DOUBTFUL THAT ACCESS CAN BE GAINED THROUGH LOT 69A TO THE NORTH END OF FRANCISCAN.

LOTS 7, 8, AND 9 ADJOINING THE CITY PROPERTY HAVE A TOTAL OF 0.82 CFS FOR THE 100 YEAR Q. THIS FLOW WILL CONTINUE TO ENTER THE CITY PROPERTY EASTERN BOUNDARY IN A SHEET FLOW FASHION. THE DESIGN Q INTO THE DROP INLET WILL BE $8.01 - 0.82 = 7.19$ CFS.

FLOOD PLAIN STATUS:

NO PORTION OF THIS TRACT IS WITHIN A FEMA DESIGNATED FLOOD PLAIN.

EXISTING DRAINAGE FROM OFFSITE:

THIS SITE HAS NO DRAINAGE FROM OFFSITE, EXCEPT FOR AN OCCUPIED DWELLING AT THE SOUTHWEST CORNER, WHICH IS NOT A PART OF THIS SUBDIVISION. THIS DRAINAGE IS UNAFFECTED, AND WILL CONTINUE AS IT NOW FLOWS.

THE EDITH BLVD. DRAINAGE SPLITS FLOW DIRECTION APPROXIMATELY 30 FEET NORTH OF THE CUL-DE-SAC ENTRY TO EDITH. THE FLOWS IN EDITH TO THE NORTH AND SOUTH ARE SMALL. NONE OF THE PROPERTY ON THE WEST SIDE OF EDITH IN THIS REACH FLOWS INTO EDITH. ALL OF THE DRAINAGE IS WESTWARD ACROSS THE ADJACENT LOTS AND TO BROADWAY.