L-20/0006

DRAINAGE PLAN FOR WYOMING TERRACE/PLAZA MOBILE HOME COMMUNITY
TRACT A & B, O.B. VAN CLEAVE
9000 ZUNI ROAD SE
SE CORNER WYOMING BOULEVARD SE
AND ZUNI ROAD SE
ALBUQEURQUE, NEW MEXICO

DRAINAGE NOTES:

1. EXISTING ASPHALT RUNDOWN, CONVEYS OFFSITE FLOWS ONTO SUBJECT PROPERTY.
2. EXISTING DRAINAGE POND, PIPE OUTFALLS TO STORM DRAIN IN CENTRAL BLVD.
3. EXISTING CATTLE GUARD DRAIN.
4. EXISTING CONCRETE RUNDOWN.
5. EXISTING 2 – 20" WIDE SIDEWALK CULVERTS WITH WALL OPENINGS FOR DRAINAGE.
6. EXISTING CONCRETE RUNDOWN.
7. EXISTING 4 – 20" WIDE SIDEWALK CULVERTS WITH WALL OPENINGS FOR DRAINAGE.
8. EXISTING 2 FOOT HIGH DIRT BERM TO DIVERT DRAINAGE TO NORTH ZUNI ROAD NE.
9. EXISTING WALL OPENINGS FOR DRAINAGE.

100 yr floodplain appears to intrude on the SW corner of the site

ZUNI RD.
TRUMBULL RD.
WYOMING BLVD.
100-YEAR FLOODPLAIN
EXISTING STORM DRAIN SYSTEM
42" SD
6' HIGH BLOCK WALL
4' HIGH BLOCK WALL
SHOPPING CENTER
BLDG
OFFICE
POOL
MOBILE HOMES
POND
ADJACENT LOT MOBILE HOME COMMUNITY
OFFSITE BASIN "1"
BASIN "A"
BASIN "B"
BASIN "C"
BASIN "D"
BASIN "E"
BASIN "F"
BASIN "G"
Q= 7.12 cfs
Q= 37.71 cfs
Q= 29.76 cfs
Q= 17.86 cfs
Q= 46.43 cfs
5400
5410
5408
5402
5404
5406
5408
5410
5420
20" wide sidewalk culvert
2-20" wide sidewalk culverts

DRAINAGE PLAN

GRAPHIC SCALE
40 0 20 40 80 120
(IN FEET)
1 inch = 80 ft.

LEGEND
- 5362 — EXISTING CONTOUR GRADE
- DRAINAGE FLOW DIRECTION
- EXISTING FLOOD ZONES
- EXISTING FLOW LINE
- DRAINAGE BASIN BOUNDARY
- HIGH POINT

TOPOGRAPHIC SURVEY INFORMATION
THE TOPOGRAPHIC SURVEY INFORMATION SHOWN ON THIS DRAWING WAS OBTAINED FROM CITY OF ALBUQUERQUE AERIAL TOPOGRAPHY, NO FIELD SURVEYING WAS PERFORMED FOR THIS SITE

PURPOSE OF THIS DRAINAGE PLAN
THE OWNER HAS REQUESTED REMOVAL AND REPLACEMENT OF ASPHALT PAVING. THE NEW GRADES OF ASPHALT WILL MATCH EXISTING GRADES IN ORDER TO MAINTAIN EXISTING DRAINAGE PATTERNS

FILE: 030101 – WYOMING TERRACE.dwg

GILBERT ALDAZ NEW MEXICO REGISTERED PROFESSIONAL ENGINEER

DRAINAGE PLAN FOR WYOMING TERRACE MOBILE HOME PARK

Applied Engineering & Suveying, Inc.
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DATE/REVISIONS:

SHEET NUMBER: 1

L-20/D006

DRAINAGE CALCULATIONS

THE FOLLOWING ITEMS CONCERNING TRACT A AND B, O.B. VAN CLEAVE, WYOMING TERRACE/PLAZA MOBILE HOME COMMUNITY, 9000 ZUNI ROAD SE NE, ALBUQUERQUE, NEW MEXICO, GRADING AND DRAINAGE PLAN ARE CONTAINED HEREON:

1. DRAINAGE BASIN MAP
2. DRAINAGE CALCULATIONS
3. VICINITY MAP (L-12)
4. FIRM MAP 35001C0333 D

EXITING CONDITIONS

AS SHOWN BY THE VICINITY MAP, THE SITE CONTAINS APPROXIMATELY 38.27 ACRES (SEE ATTACHED VICINITY MAP L-12). THE ~~EXISTING SITE IS CURRENTLY FULLY DEVELOPED WITH A MOBILE HOME COMMUNITY, EXISTING ASPHALT ROADWAYS, PARKING, WALKWAYS, CLUBHOUSE AND LANDSCAPING IMPROVEMEMENTS.~~

PROPOSED CONDITIONS

AS SHOWN BY THE DRAINAGE PLAN, THE IMPROVEMENTS PROPOSED IS TO PERFORM ~~RESTORATION OF THE ASPHALT PAVING ROADWAYS THAT SERVE THE MOBILE HOME COMMUNITY AND NOT CHANGE THE CURRENT GRADING CONCEPT AS IT CURRENTLY EXIST IN ORDER TO MAINTAIN EXISTING DRAINAGE PATTERNS.~~

THE CALCULATIONS THAT APPEAR HEREON, ANALYZE BOTH THE EXISTING AND DEVELOPED CONDITIONS FOR THE 100-YEAR, 6-HOUR RAINFALL RUNOFF FOR PEAK FLOWS AND STORM DURATION FOR VOLUME REQUIREMENTS. THE PROCEDURE FOR 40 ACRE AND SMALLER BASINS AS SET FORTH IN THE REVISION OF SECTION 22.7 HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL, VOLUME 2, DESIGN CRITERIA, DATED JANUARY 1993. THIS D.P.M. PROCEDURE IS USED FOR ANALYZING ONSITE FLOWS.

DOWNSTREAM CAPACITY

SINCE THIS SITE IS ALREADY FULLY DEVELOPED AND THE SURROUNDING AREA IS FULLY DEVELOPED IT WOULD BE CONSERVATIVE TO SAY THAT THE DEVELOPED DISCHARGE FROM THE REPLACEMENT OF EXISTING ASPHALT PAVING WILL HAVE MINIMAL IMPACT TO THE SURROUNDING AREA, SINCE THERE IS NO INCREASE IN FLOW RATES; THEREFORE, IT APPEARS THAT FREE DISCHARGE IS APPROPRIATE.

THE DRAINAGE BASIN MAP IDENTIFIES POINTS OF DISCHARGE ALONG WYOMING BOULEVARD AND ZUNI ROAD SE. THE POINTS OF DISCHARGE CONSIST OF VARIOUS TYPES OF OUTFALL STRUCTURES SUCH AS BLOCK OPENINGS WITHIN THE BLOCK WALLS AND CONNECTIONS INTO SIDEWALK CULVERTS. THERE IS AN EXISTING STORM DRAIN SYSTEM ALONG WYOMING BOULEVARD SE AND ZUNI ROAD SE THAT ACCEPTS FLOWS FROM THIS SITE.

EROSION CONTROL

TEMPORARY EROSION CONTROL WILL BE REQUIRED DURING THE CONSTRUCTION PHASE TO PROTECT DOWNSTREAM PROPERY AND IMPROVEMENTS FROM SEDIMENT AND UNCONTROLLED RUNOFF. THE CONTRACTOR SHALL INCLUDE TEMPORARY SILT FENCES ALONG THE WEST SIDE OF THE PROJECT BOUNDARIES DURING CONSTRUTION TO MITIGATE SOIL RUNOFF. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROPERLY MAINTAIN THESE FACILITIES DURING THE CONSTRUCTION PHASE OF THE PROJECT.

OFFSITE FLOWS

BASED ON A FIELD VISIT OF THE SITE IT APPEARS THAT ~~OFFSITE FLOWS DO ENTER THE PROPERTY FROM THE CENTER OF THE EAST PROPERTY LINE OF THIS SITE.~~ THIS OFFSITE BASIN "H" IS FROM AN ADJACENT MOBILE HOME COMMUNITY AND DRAINS INTO THIS SITE THROUGH ~~AN ASPHALT RUNDOWN INTO~~ ONSITE BASIN "D". SEE ATTACHED DRAINAGE PLAN. ~~THIS PROPERTY WILL CONTINUE TO ACCEPT THESE FLOWS AS PART OF THIS REPAVING PROJECT.~~

DRAINAGE CALCULATIONS

1. PRECIPITATION ZONE = 3
2. DESIGN STORM = DEPTH (INCHES) AT 100-YEAR STORM
   - 6-HOUR = 2.60 INCHES
   - 24-HOUR = 3.10 INCHES
   - 10 DAY = 4.90 INCHES
3. PEAK DISCHARGE (CFS/ACRE) FOR 100-YEAR, ZONE 2, TABLE A-9:
   - Q = 1.87 CFS/ACRE SOIL UNCOMPACTED "A"
   - Q = 2.60 CFS/ACRE LANDSCAPED "B"
   - Q = 3.45 CFS/AC COMPACTED SOIL "C"
   - Q = 5.02 CFS/ACRE IMPERVIOUS AREA "D"
   - FOR WATERSHEDS LESS THAN OR EQUAL TO 40 ACRES
4. EXCESS PRECIPITATION, E (INCHES), 6 HOUR STORM, ZONE 2, TABLE A-8:
   - E = 0.66 INCHES SOIL UNCOMPACTED "A"
   - E = 0.92 INCHES LANDSCAPED "B"
   - E = 1.29 INCHES COMPACTED SOIL "C"
   - E = 2.36 INCHES IMPERVIOUS AREA "D"
5. EXISTING EQUALS PROPOSED CONDITIONS (SINCE NO INCREASE IN LAND TREATMENT "D" PROPOSED WITH THESE PAVING IMPROVEMENTS:

THE PERCENT TREATMENT "D" LAND USE WILL BE BASED ON TABLE A-5. OF DPM SECTION 22.2, PAGE A-5, FOR MULTIPLE UNIT RESIDENTIAL "ATTACHED". THE PERCENT TREATMENT IS ESTIMATED TO BE 70 % TREATMENT "D" WITH THE BALANCE 30% TREATMENT "B" LANDSCAPED.

ONSITE DRAINAGE BASIN "A"

THIS DRAINAGE BASIN CURRENTLY DRAINS INTO ZUNI ROAD AT A DRIVEWAY. THE TOTAL AREA FOR THIS BASIN IS 1.66ACRES

TREATMENT AREA(ACRES)

- A 0
- B 0.30 X 1.66 = 0.50AC(LANDSCAPED)
- C 0
- D 0.70 X 1.66 = 1.16AC(PAVEMENT & ROOFS)

Q = (2.60 X 0.50) + (5.02 X 1.16)
= 7.12CFS (6HR) ONSITE EXISTING FLOW
V = ((0.92 X 0.50) + (2.36 X 1.16))/ 12)
= 0.27AC-FT = 11,607CF ONSITE EXISTING VOLUME

ONSITE DRAINAGE BASIN "B"

THIS DRAINAGE BASIN CURRENTLY DRAINS INTO ZUNI ROAD AT A DRIVEWAY. THE TOTAL AREA FOR THIS BASIN IS 8.78ACRES

TREATMENT AREA(ACRES)

- A 0
- B 0.30 X 8.78 = 2.63AC(LANDSCAPED)
- C 0
- D 0.70 X 8.78 = 6.15AC(PAVEMENT & ROOFS)

Q = (2.60 X 2.63) + (5.02 X 6.15)
= 37.71CFS (6HR) ONSITE EXISTING FLOW
V = ((0.92 X 2.63) + (2.36 X 6.15))/ 12)
= 1.41AC-FT = 61,469CF ONSITE EXISTING VOLUME

ONSITE DRAINAGE BASIN "C"

THIS DRAINAGE BASIN CURRENTLY DRAINS INTO WYOMING BOULEVARD THROUGH WALL OPENING AND THROUGH SIDEWALK CULVERTS. THE TOTAL AREA FOR THIS BASIN IS 6.93ACRES

Appears to drain to Zuni Rd

TREATMENT AREA(ACRES)

- A 0
- B 0.30 X 7.32 = 2.20AC(LANDSCAPED)
- C 0
- D 0.70 X 7.32 = 5.12AC(PAVEMENT & ROOFS)

Q = (2.60 X 2.20) + (5.02 X 5.12)
= 31.42CFS (6HR) ONSITE EXISTING FLOW
V = ((0.92 X 2.20) + (2.36 X 5.12))/ 12)
= 1.17AC-FT = 51,209CF ONSITE EXISTING VOLUME

ONSITE DRAINAGE BASIN "D"

THIS DRAINAGE BASIN CURRENTLY DRAINS INTO WYOMING BOULEVARD THROUGH WALL OPENING AND THROUGH SIDEWALK CULVERTS. THE TOTAL AREA FOR THIS BASIN IS 6.95ACRES

TREATMENT AREA(ACRES)

- A 0
- B 0.30 X 6.95 = 2.09AC(LANDSCAPED)
- C 0
- D 0.70 X 6.95= 4.87AC(PAVEMENT & ROOFS)

Q = (2.60 X 2.09) + (5.02 X 4.87)
= 29.76CFS (6HR) ONSITE EXISTING FLOW
V = ((0.92 X 2.09) + (2.36 X 4.87))/ 12)
= 1.12AC-FT = 48,700CF ONSITE EXISTING VOLUME

ONSITE DRAINAGE BASIN "E"

THIS DRAINAGE BASIN CURRENTLY DRAINS INTO WYOMING BOULEVARD THROUGH WALL OPENING AND THROUGH SIDEWALK CULVERTS. THE TOTAL AREA FOR THIS BASIN IS 4.16ACRES

TREATMENT AREA(ACRES)

- A 0
- B 0.30 X 4.16 = 1.25AC(LANDSCAPED)
- C 0
- D 0.70 X 4.16 = 2.91AC(PAVEMENT & ROOFS)

Q = (2.60 X 1.25) + (5.02 X 2.91)
= 17.86CFS (6HR) ONSITE EXISTING FLOW
V = ((0.92 X 1.25) + (2.36 X 2.91))/ 12)
= 0.67AC-FT = 29,104CF ONSITE EXISTING VOLUME

ONSITE DRAINAGE BASIN "F"

THIS DRAINAGE BASIN CURRENTLY DRAINS INTO WYOMING BOULEVARD THROUGH ~~WALL OPENING AND THROUGH SIDEWALK CULVERTS~~. THE TOTAL AREA FOR THIS BASIN IS 4.46ACRES

Concrete Rundown

TREATMENT AREA(ACRES)

- A 0
- B 0.30 X 4.46 = 1.34AC(LANDSCAPED)
- C 0
- D 0.70 X 4.46 = 3.12AC(PAVEMENT & ROOFS)

Q = (2.60 X 1.34) + (5.02 X 3.12)
= 19.15CFS (6HR) ONSITE EXISTING FLOW
V = ((0.92 X 1.34) + (2.36 X 3.12))/ 12)
= 0.72AC-FT = 31,203CF ONSITE EXISTING VOLUME

ONSITE DRAINAGE BASIN "G"

THIS DRAINAGE BASIN CURRENTLY DRAINS INTO THIS SITE ~~ALONG THE EAST PROPERTY LINE~~. THE TOTAL AREA FOR THIS BASIN IS 4.87ACRES

~~D~~ drains to Wyoming through the concrete rundown and into the 2-20"wide sidewalk culverts

TREATMENT AREA(ACRES)

- A 0
- B 0.30 X 4.87 = 1.46AC(LANDSCAPED)
- C 0
- D 0.70 X 4.87 = 3.41AC(PAVEMENT & ROOFS)

Q = (2.60 X 1.46) + (5.02 X 3.41)
= 19.56CFS (6HR) ONSITE EXISTING FLOW
V = ((0.92 X 1.34) + (2.36 X 3.12))/ 12)
= 0.72AC-FT = 31,203CF ONSITE EXISTING VOLUME

OFFSITE DRAINAGE BASIN "H"

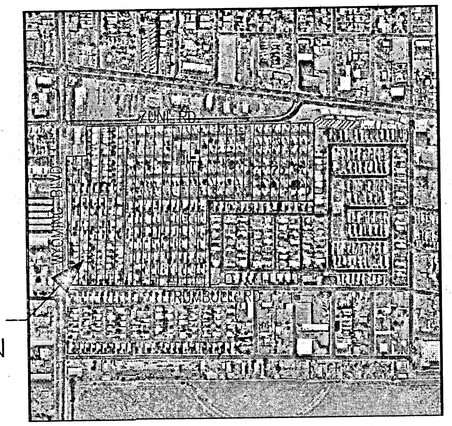
~~THIS DRAINAGE BASIN CURRENTLY DRAINS INTO THIS SITE ALONG THE EAST PROPERTY LINE THROUGH AND ASPHALT RUNDOWN AND DRAINS INTO ONSITE BASIN "D".~~ THE TOTAL AREA FOR THIS BASIN IS 10.81ACRES

TREATMENT AREA(ACRES)

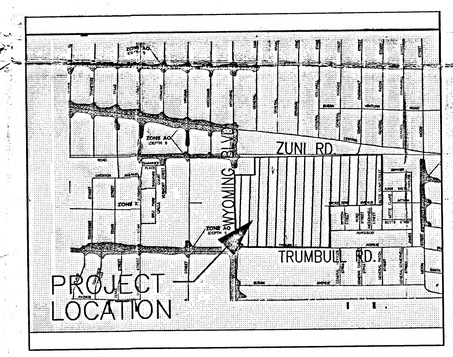
- A 0
- B 0.30 X 10.81 = 3.24AC(LANDSCAPED)
- C 0
- D 0.70 X 0.99 = 7.57AC(PAVEMENT & ROOFS)

Q = (2.60 X 3.24) + (5.02 X 7.57)
~~= 46.43CFS (6HR) OFFSITE EXISTING FLOW~~
V = ((0.92 X 3.24) + (2.36 X 7.57))/ 12)
= 1.746AC-FT = 75,671CF OFFSITE EXISTING VOLUME

DRAINAGE PLAN FOR WYOMING TERRACE/PLAZA MOBILE HOME COMMUNITY TRACT A & B, O.B. VAN CLEAVE 9000 ZUNI ROAD SE SE CORNER WYOMING BOULEVARD SE AND ZUNI ROAD SE ALBUQEURQUE, NEW MEXICO



VICINITY MAP (L – 11/92) 20



FIRM MAP 35001C0333 D

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DRAINAGE CALCULATIONS FOR WYOMING TERRACE MOBILE HOME PARK

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