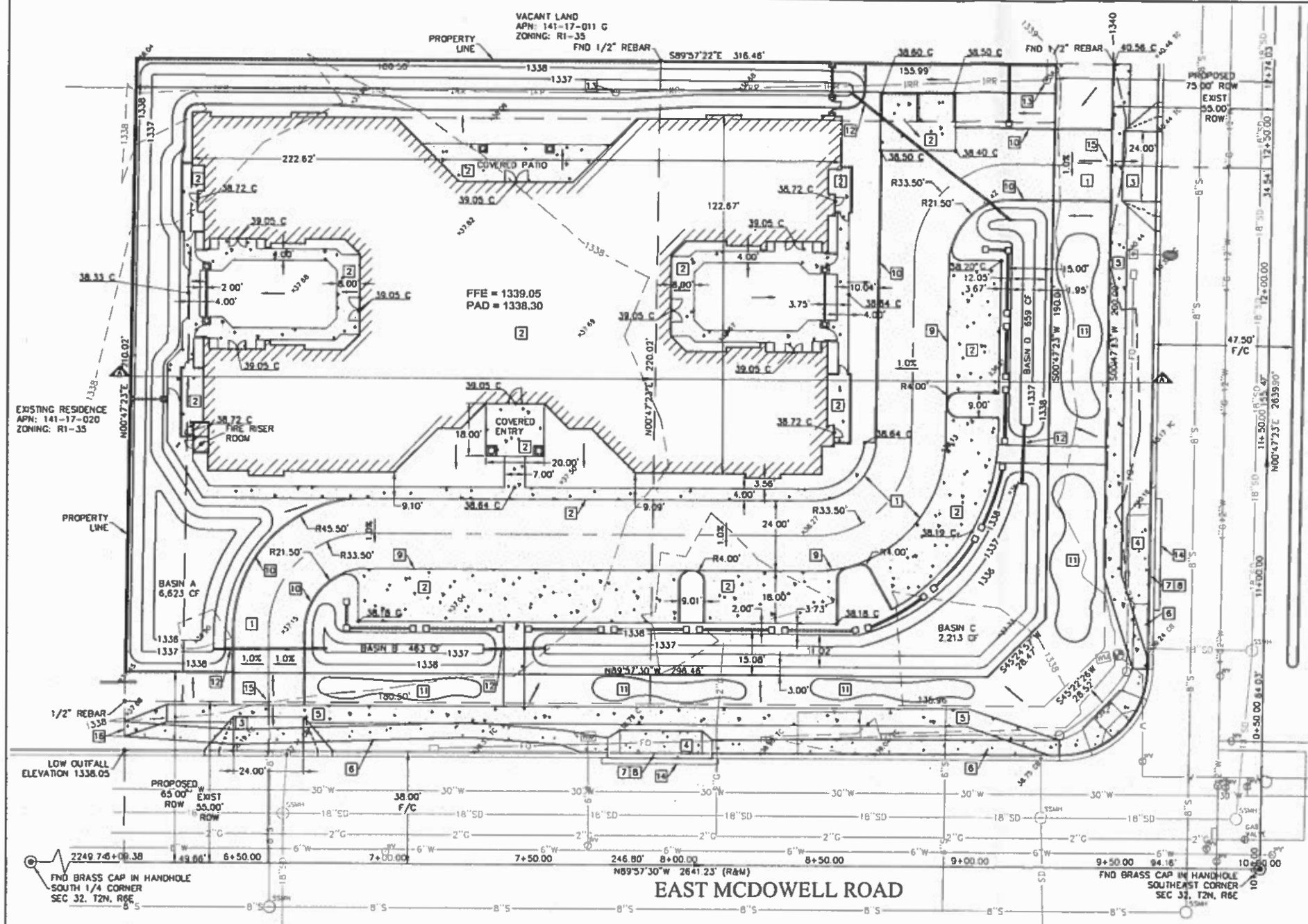




CONSTRUCTION NOTES

1. INSTALL 2-1/2" AC ON 5" ABC WITH 12" COMPACTED SUBGRADE TO 95% MIN OR PER LATEST SOILS REPORT.
2. INSTALL 5" 3,000 PSI MIN. STRENGTH CONCRETE ON 6" ABC WITH 12" COMPACTED SUBGRADE TO 95% MIN OR PER LATEST SOILS REPORT.
3. INSTALL 2 EACH, 24" CONCRETE DRIVEWAY PER COM STD DTL M-42.
4. SAWCUT, REMOVE, AND DISPOSE OF EXISTING CONCRETE DRIVEWAY.
5. INSTALL 5.33 LF OF 8" CONCRETE SIDEWALK PER COM STD DTL M-43 AND MAG STD DTL 230.
6. SAWCUT, REMOVE, AND DISPOSE OF EXISTING CONCRETE SIDEWALK.
7. INSTALL 70 LF OF CONCRETE VERTICAL CURB AND GUTTER PER MAG STD DTL 220-A.
8. SAWCUT, REMOVE, AND DISPOSE OF EXISTING CONCRETE VERTICAL CURB AND GUTTER.
9. TURNDOWN CONCRETE 2" FOR 12" WIDE ADJACENT TO ASPHALT.
10. INSTALL 6" VERTICAL SINGLE CURB PER MAG STD DTL 222 TYPE "B" MODIFIED TO 12" TOTAL DEPTH, AND THE TOP TO MATCH ASPHALT GRADE WITH A SQUARE EDGE ADJACENT TO ASPHALT.
11. INSTALL VARYING HEIGHT DIRT MOUNDS FROM 6" TO 12" HIGH.
12. INSTALL 8" SCH 80 PVC EQUALIZATION PIPE.
13. EXISTING 12" IRRIGATION BUBBLER.
14. SAWCUT 2" OF EXISTING ASPHALT AND REPLACE PER COM STD DTL M-19.1.
15. INSTALL VERTICAL CURVE AT GRADE BREAK TRANSITION.
16. MATCH EXISTING GRADE.

REQUIRED RETENTION

CITY OF MESA REQUIRES RETENTION FOR STORMWATER RUNOFF CONTRIBUTED BY RAINFALL UP TO THE 100 YEAR 2 HOUR STORM:
 $V = 0.112 \times (C1 \times A1 + C2 \times A2)$
 WHERE:
 V = VOLUME OF RETENTION REQUIRED IN CUBIC FEET
 C = COEFFICIENT OF RAINFALL TO RUNOFF
 D = DEPTH OF RAINFALL FROM THE 100 YEAR 2 HOUR STORM IN INCHES
 A = AREA IN CONSIDERATION IN SQUARE FEET
 D = 2.7"

LOT AREA = 66,255 SF
 ASPHALT C = 0.85, A = 9,865 SF
 ROOF C = 0.95, A = 19,850 SF
 CONCRETE C = 0.95, A = 11,063 SF
 GRANITE C = 0.50, A = 8,111 SF
 GRASS C = 0.15, A = 17,366 SF
 AVERAGE C COEFFICIENT FOR THE SITE = 0.67

DESIGN REQUIRED RETENTION VOLUME V = 9,984 CF (370 CY)

AS-BUILT RETENTION VOLUMES

BASIN A =
 BASIN B =
 BASIN C =
 BASIN D =

CALCULATED RETENTION

FORMULA VOLUME = $(1+2)/2 \times (3-4)$
 BASIN A CALCULATIONS
 1. AREA TOP = 7,268 SF
 2. AREA BOTTOM = 847 SF
 3. TOP ELEVATION = 1,338 FEET
 4. BOTTOM ELEVATION = 1,336 FEET
 VOLUME = 7,994 CF

BASIN B CALCULATIONS
 1. AREA TOP = 747 SF
 2. AREA BOTTOM = 176 SF
 3. TOP ELEVATION = 1,338 FEET
 4. BOTTOM ELEVATION = 1,337 FEET
 VOLUME = 463 CF

BASIN C CALCULATIONS
 1. AREA TOP = 1,053 SF
 2. AREA BOTTOM = 482 SF
 3. TOP ELEVATION = 1,338 FEET
 4. BOTTOM ELEVATION = 1,336 FEET
 VOLUME = 3,202 CF

BASIN D CALCULATIONS
 1. AREA TOP = 1,053 SF
 2. AREA BOTTOM = 317 SF
 3. TOP ELEVATION = 1,338 FEET
 4. BOTTOM ELEVATION = 1,337 FEET
 VOLUME = 685 CF

TOTAL REQUIRED RETENTION VOLUME = 11,943 CF

QUANTITIES

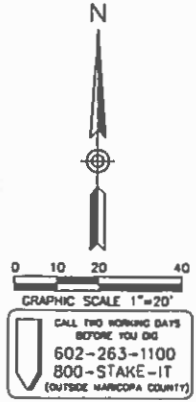
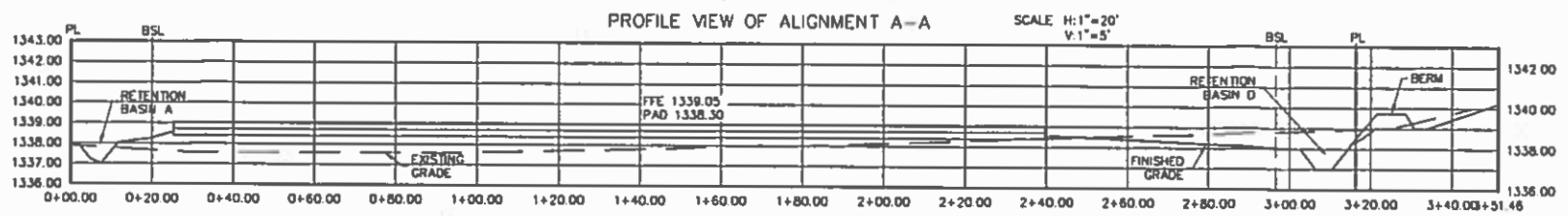
CUT = 260 CY, FILL = 450 CY, NET = 190 CY FILL

FLOODPLAIN INFORMATION

ACCORDING TO FEMA FIRM 04013C2185G, THIS PROPERTY IS LOCATED IN OTHER FLOOD AREAS ZONE X WHERE: "AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD."

FINISHED FLOOR ELEVATION STATEMENT

ENGINEER'S CERTIFICATION: ALL FINISHED FLOORS SHOWN ON THIS PLAN ARE FREE FROM INUNDATION DURING A 100-YEAR PEAK RUNOFF EVENT, AND ARE IN ACCORDANCE WITH CITY OF MESA, REVISED CODE, CHAPTER 37- FLOODWAYS AND FLOODPLAINS ORDINANCE.



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 MESA, AZ 85213
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 DEED #: 100453918
 SEC. 32, T2N, R6E

DRAW DATE: 7 JANUARY 2011
 REV. 1 DATE:
 DATES:

PROJECT NAME:
 EMERALD GROVES WEST
 SHEET DESCRIPTION:
 GRADING AND DRAINAGE PLAN

SHEET
 C3 OF 8