PRELIMINARY GRADING & DRAINAGE PLAN FOR LONGBOW BUSINESS PARK LOT 7

PROJECT INFORMATION:

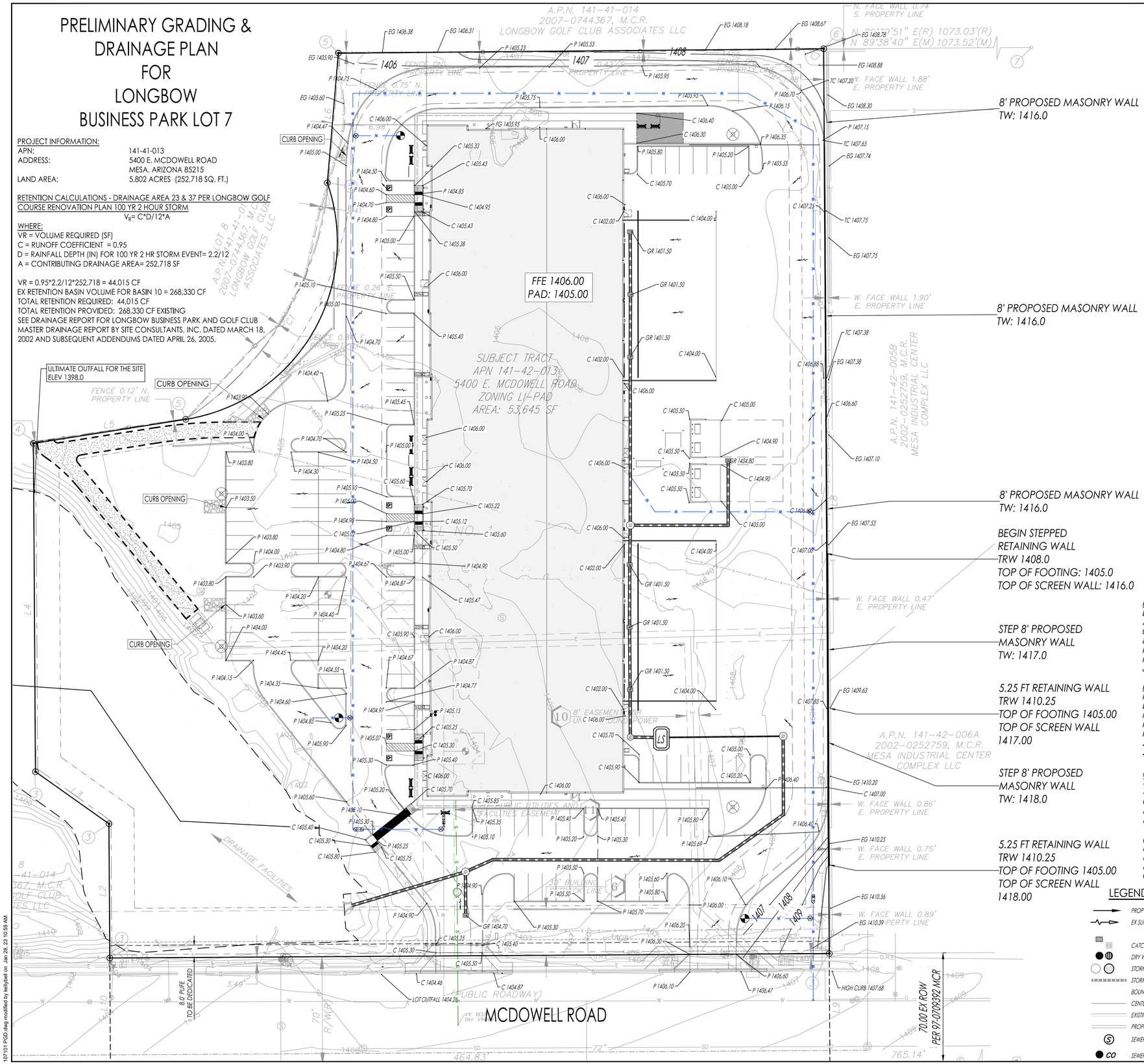
APN:	141-41-013
ADDRESS:	5400 E. MCDOWELL ROAD MESA, ARIZONA 85215
LAND AREA:	5.802 ACRES (252,718 SQ. FT.)

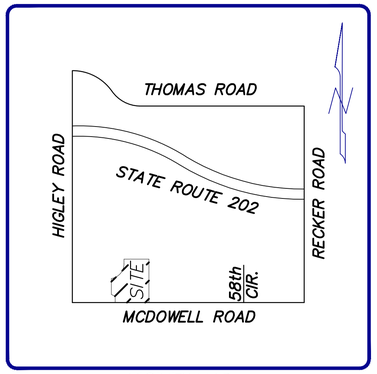
RETENTION CALCULATIONS - DRAINAGE AREA 23 & 37 PER LONGBOW GOLF COURSE RENOVATION PLAN 100 YR 2 HOUR STORM

$V_R = C*D/12*A$

WHERE:
VR = VOLUME REQUIRED (SF)
C = RUNOFF COEFFICIENT = 0.95
D = RAINFALL DEPTH (IN) FOR 100 YR 2 HR STORM EVENT= 2.2/12
A = CONTRIBUTING DRAINAGE AREA= 252,718 SF

VR = 0.95*2.2/12*252,718 = 44,015 CF
EX RETENTION BASIN VOLUME FOR BASIN 10 = 268,330 CF
TOTAL RETENTION REQUIRED: 44,015 CF
TOTAL RETENTION PROVIDED: 268,330 CF EXISTING
SEE DRAINAGE REPORT FOR LONGBOW BUSINESS PARK AND GOLF CLUB MASTER DRAINAGE REPORT BY SITE CONSULTANTS, INC. DATED MARCH 18, 2002 AND SUBSEQUENT ADDENDUMS DATED APRIL 26, 2005.





VICINITY MAP
NTS

NOTES:
1. REGIONAL RETENTION PROVIDED VIA THE LONGBOW GOLF COURSE PER THE DRAINAGE STUDY FOR THE LONGBOW PARKWAY IMPROVEMENTS

DEVELOPER	SUNSTATE BUILDERS 1050 W. WASHINGTON STREET, SUITE 214 TEMPE, ARIZONA 85281 PH: 480.894.1286 CONTACT: MIKE FORST EMAIL: MFORST@SUNSTATEBUILDERS.COM
ARCHITECT	COTTON ARCHITECTURE + DESIGN 502 S. 2ND STREET SUITE 3 PHOENIX, AZ 85004 PH: 602.529.1386 CONTACT: STEVE GOODMAN EMAIL: SGOODMAN@COTTONARCHITECTURE.COM
ENGINEER	KBELL ENGINEERING LLC 1355 N 86TH PLACE MESA, AZ 85207 PH: 602.980.8246 CONTACT: KELLY BELL, P.E. EMAIL: KBELL@KBELLENG.COM

PARCEL NO. 1:
LOT 7, OF LONGBOW BUSINESS PARK AND GOLF CLUB, ACCORDING TO THE PLAT OF RECORD IN THE OFFICE OF THE COUNTY RECORDER OF MARICOPA COUNTY, ARIZONA IN BOOK 829 OF MAPS, PAGE 44, THEREAFTER PLAT RATIFICATION RECORDED JULY 06, 2006 AS 2006-0905661 OF OFFICIAL RECORDS AND PLAT CORRECTION RECORDED JULY 06, 2006 AS 2006-0905662 OF OFFICIAL RECORDS.

PARCEL NO. 2:
NONEXCLUSIVE EASEMENT FOR GOLF COURSE DRAINAGE EASEMENT, AS MORE PARTICULARLY DESCRIBED IN THE MASTER DECLARATION OF COVENANTS, CONDITIONS, RESTRICTIONS AND EASEMENTS FOR LONGBOW BUSINESS PARK AND GOLF CLUB RECORDED IN DOCUMENT 2012-1042149, CERTIFICATE OF AMENDMENT RECORDED AS 2015-0710635 AND TRACT DECLARATION.

BASIS OF BEARING:
THE MONUMENT LINE OF MCDOWELL ROAD, ALSO BEING THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SECTION 35, USING A BEARING OF SOUTH 89° 38' 58" WEST, PER THE PLAT OF LONGBOW BUSINESS PARK AND GOLF CLUB, RECORDED IN BOOK 829, PAGE 44 M.C.R.

BENCHMARK:
BRASS TAG T.C. SE CORNER OF HIGLEY AND MCDOWELL ROAD HAVING AN ELEVATION OF 1393.83, NAVD 88 DATUM, PER THE 2012 CITY OF MESA BENCHMARKS LIST AVAILABLE ONLINE.

LEGEND

PROP. SURFACE FLOW DIRECTION
EX. SURFACE FLOW DIRECTION
CATCH BASIN
DRY WELL
STORM DRAIN MANHOLE
STORM DRAIN PIPE
BOUNDARY LINE
CENTER LINE
EXISTING CONTOURS
PROPOSED CONTOURS
SEWER MANHOLE
SEWER CLEANOUT

ABBREVIATIONS

C	CONCRETE	(W)	WEST
FFE	FINISHED FLOOR ELEVATION	AC	ACRES
FG	FINISH GRADE	CFS	CUBIC FEET PER SECOND
G	GUTTER	DA	DRAINAGE AREA
GR	GRATE	EX	EXISTING
(N)	NORTH	PROP	PROPOSED
(S)	SOUTH	Q_{10}	10 YEAR FLOW
(E)	EAST	Q_{25}	25 YEAR FLOW
Tc	TIME OF CONCENTRATION	Q_{100}	100 YEAR FLOW
TD	TRENCH DRAIN	SD	STORM DRAIN
P	PAVEMENT		
EG	EXISTING GRADE		

SCALE: 1"=30'

KBELL ENGINEERING
1355 N 86TH PLACE MESA, ARIZONA 85207
PH: 602.980.8246 Copyright © 2023

Registered Professional Engineer (Civil) CERTIFICATE NO. 57116 KELLY J. BELL Date Signed 1-30-2023 ARIZONA U.S.A.

FOR REVIEW ONLY- NOT FOR CONSTRUCTION

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ISSUES AND REVISIONS:

NO.	DATE	ISSUES

CLIENT:
SUNSTATE BUILDERS
PROJECT NAME& ADDRESS:
LONGBOW BUSINESS PARK LOT 7 DEVELOPMENT
5400 EAST MCDOWELL ROAD MESA, ARIZONA
SHEET NAME:
PRELIMINARY GRADING AND DRAINAGE PLAN

PROJECT NO.: 1071-01
DESIGNED BY: JB/KJB
DRAWN BY: JB/KJB

SHEET C-1 OF 1

107101 PGD.dwg modified by kellybell on Jan 28, 23 10:59 AM