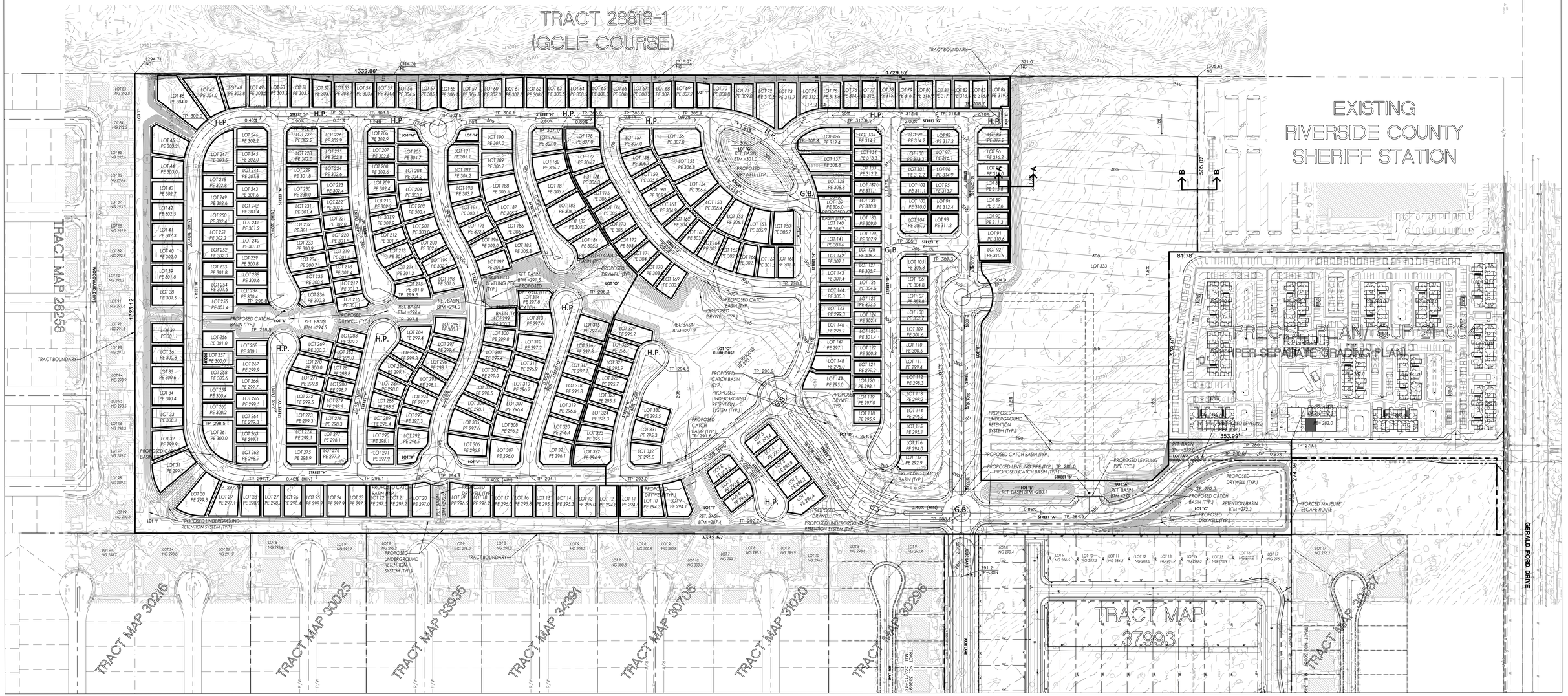


ESTIMATED EARTHWORK QUANTITIES

	CUT (CY)	FILL (CY)
RAW QUANTITIES	422,937	223,337
SUBSIDENCE	17,217	13,019
RAW ADJUSTED	405,720	236,356
SHRINKAGE		41,710
OVER-EX (PADS)	450,120	450,120
OVER-EX (PADS) SHRINKAGE		79,433
SUBTOTAL	855,840	807,619
LOSS FROM BORROW PIT	–	25,000
EXPORT	–	23,221
TOTAL EARTHWORK	855,840	855,840

ESTIMATED EARTHWORK BALANCE

ADJUST GRADING DESIGN ELEVATIONS 0.1' TO BALANCE EARTHWORK

BENCH MARK

BENCH MARK: 101

DESCRIPTION: 2" BRASS DISK STAMPED C.O.P.D. BM 101

LOCATION: SOUTHWEST CORNER OF PORTOLA AVENUE AND GERALD FORD DRIVE.
NORTHWEST CORNER OF CATCH BASIN. SOUTH OF SOUTHERLY PCR, FLUSH

ELEVATION: 231.83' (NAVD88 DATUM)

EARTHWORK NOTE: ASSUMED EARTHWORK ANALYSIS FACTORS:

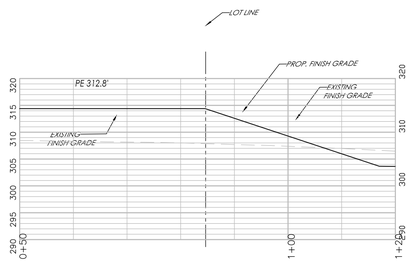
THE FOLLOWING FACTORS WERE USED IN THE PREPARATION OF THE EARTHWORK ANALYSIS:

SHRINKAGE:	15%
SUBSIDENCE:	0.20'
OVEREXCAVATION	3'
DISTURBED AREA	9.3 ACRES

ALL OF THE FACTORS WERE OBTAINED FROM PETRA GEOSCIENCES, INC PROJECT No. 20-446 , DATED MARCH 4, 2021.

SHRINKAGE:	20% – 22%
SUBSIDENCE:	0.2' – 0.22'
OVER EXCAVATION	4.0'

EXISTING TOPOGRAPHY WAS PROVIDED BY INLAND AERIAL SURVEYS, INC., DATED NOVEMBER 26, 2016.

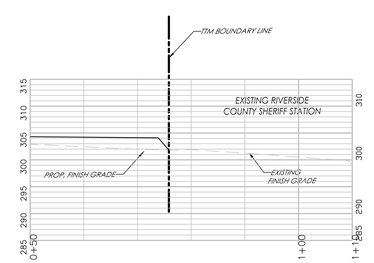


SECTION A-A

SCALE 1"=10'

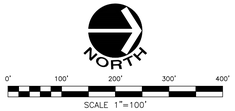
SECTION NOTE:

SEE LANDSCAPE PLAN FOR ALL OTHER SECTIONS.



SECTION B-B

SCALE 1"=10'



PROJECT NAME:	REFUGE - PALM DESERT - TTM 38434
PREPARED FOR:	PULTE HOME COMPANY, LLC
PLAN:	PRELIMINARY GRADING AND DRAINAGE EXHIBIT
EXHIBIT DATE:	AUGUST 17, 2023

MSA CONSULTING, INC.
Civil Engineering • Land Surveying • Landscape Architecture
Planning • Environmental Services • Dry Utility Coordination • GIS
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DESIGN BY	FS/RB
DRAWN BY	FS/RB
CHECK BY	MSR

R:\2530\Acad\Grading\Preliminary\2634 PREM GRADING EXHIBIT.REV1 8.17.23.dwg, 8/18/2023 9:33:35 AM, Author, MSA Consulting Inc.