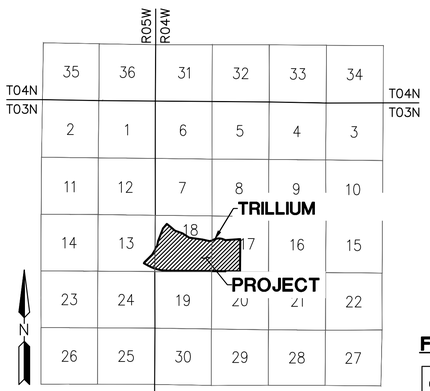
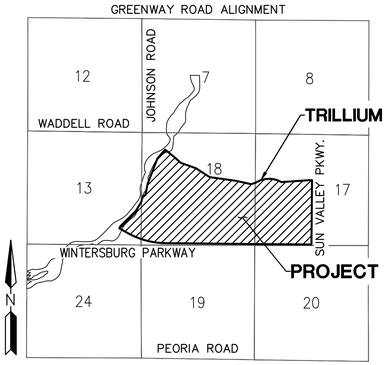
TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN
BUCKEYE, ARIZONA

A PORTION OF LAND BEING SITUATED WITHIN THE WEST HALF OF SECTION 17 AND ALL OF SECTION 18, TOWNSHIP 3 NORTH, RANGE 4 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA



VICINITY MAP
NTS



LOCATION MAP
NTS

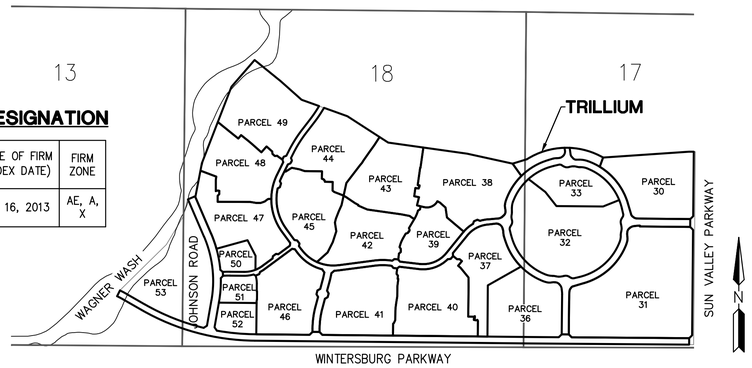
GENERAL PERMITTING NOTES

1. ALL CONSTRUCTION IN THE PUBLIC RIGHTS-OF-WAY OR IN EASEMENTS GRANTED FOR PUBLIC USE MUST CONFORM TO THE LATEST MARICOPA ASSOCIATION OF GOVERNMENTS (MAG) UNIFORM STANDARD SPECIFICATIONS AND UNIFORM STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION AS AMENDED BY THE LATEST VERSION OF THE CITY OF BUCKEYE DESIGN STANDARDS. IF THERE IS A CONFLICT, THE CITY OF BUCKEYE STANDARDS WILL GOVERN.
2. THE APPROVAL OF THE PLANS IS VALID FOR ONE (1) YEAR FROM THE DATE OF THE CITY ENGINEER'S SIGNATURE. IF AN ENCROACHMENT PERMIT FOR THE CONSTRUCTION HAS NOT BEEN ISSUED WITHIN ONE (1) YEAR, THE PLANS MUST BE RESUBMITTED TO THE CITY FOR REAPPROVAL.
3. A CITY OF BUCKEYE INSPECTOR WILL INSPECT ALL WORKS WITHIN THE CITY OF BUCKEYE RIGHTS-OF-WAY AND IN EASEMENTS. NOTIFY THE CITY 24 HOURS PRIOR TO THE INSPECTION BY CALLING (623) 349-6248.
4. CITY PERMITS ARE REQUIRED FOR ALL WORK IN PUBLIC RIGHTS-OF-WAY AND EASEMENTS GRANTED FOR PUBLIC PURPOSES. A CITY PERMIT WILL BE ISSUED BY THE CITY ONLY AFTER ALL FEES HAVE BEEN PAID AND THE PERMIT HAS AN APPROVED MARICOPA COUNTY ENVIRONMENTAL SERVICES DUST PERMIT AND AN APPROVED STORM WATER POLLUTION PREVENTION PLAN ATTACHED. THE SWPPP SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS.
5. COPIES OF ALL PERMITS AND MOST RECENT APPROVED PLANS MUST BE RETAINED ON-SITE AND BE AVAILABLE FOR INSPECTION AT ALL TIMES. FAILURE TO PRODUCE THE REQUIRED PERMITS AND PLANS WILL RESULT IN IMMEDIATE SUSPENSION OF ALL WORK UNTIL PROPER PERMIT DOCUMENTATION AND/OR PLANS ARE OBTAINED. ALL OF THESE REQUIREMENTS APPLY TO ONSITE GRADING AND IMPROVEMENT PLANS.

UTILITY COMPANIES		DATE SUBMITTED
ELECTRIC	ARIZONA PUBLIC SERVICE	8/16/2021
TELEPHONE	COX COMMUNICATIONS	8/16/2021
CATV	COX COMMUNICATIONS	8/16/2021
WATER	CITY OF BUCKEYE	8/16/2021
SEWER	CITY OF BUCKEYE	8/16/2021
GAS	SOUTHWEST GAS	8/16/2021

FEMA FLOOD ZONE DESIGNATION

COMMUNITY NUMBER	PANEL # PANEL DATE	SUFFIX	DATE OF FIRM (INDEX DATE)	FIRM ZONE
040039	1605 10/16/2013	L	OCT 16, 2013	AE, A, X



OVERALL DEVELOPMENT
NTS

GRADING CONSTRUCTION

1 CONSTRUCT TWO CHAMBER DRYWELL; DETAIL PER COB STD DTL B-501. RIM ELEVATION 0.3 FT ABOVE BASIN BOTTOM. A MINIMUM OF 20' FROM HEADWALL, LOCATION NOTED IS TO CENTER OF INTERCEPTOR.

STORM DRAIN CONSTRUCTION

83 INSTALL LOOSE ANGULAR RIP-RAP PER MAG SPEC SEC. 220; D50=6", 12" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET# DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY. COLOR PER DEVELOPER. — 11986 SY (1) (2)

84 INSTALL GABIONS ON MACCAFERRI GEOTEXTILE MACTEX N47.1. PER DETAILS SEE SHEET# DC21. — 3269 SY (1) (2)

89 INSTALL 2" OF SHOTCRETE ON TOP OF GABION BASKET WITH D50=6" EMBEDDED IN SHOTCRETE. — 1886 SY (1) (2)

90 INSTALL LOOSE ANGULAR RIP-RAP PER MAG SPEC SEC. 220; D50=9", 18" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET# DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY. COLOR PER DEVELOPER. — 1393 SY (1) (2)

91 INSTALL ANGULAR LOOSE RIP-RAP PER MAG SPEC SECTION 220 D50=4" 6" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 gal/min/ft AND WOVEN. SPECIFIC WEIGHT = 165 lb/ft3. GRADATION PER TABLE 6.4 OF 2013 DRAINAGE DESIGN MANUAL FOR MARICOPA COUNTY, ARIZONA (HYDRAULICS). — 163224 SY (1) (2)

92 PLACE LOOSE ANGULAR LAUNCHABLE RIP-RAP PER MAG SPEC SECTION 220; D50=12", ON 6" THICK GRANULAR, ANGULAR, CRUSHED STONE BEDDING. SEE DETAIL A ON MG02 — 1097 SY (1) (2)

93 INSTALL LOOSE ANGULAR RIP-RAP PER MAG SPEC SEC. 220; D50=9", 24" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET# DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY. COLOR PER DEVELOPER. — 1129 SY (2)

94 INSTALL LOOSE ANGULAR RIP-RAP PER MAG SPEC SEC. 220; D50=9", 13.5" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET# DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY. COLOR PER DEVELOPER. — 1560 SY

95 INSTALL ANGULAR LOOSE RIP-RAP PER MAG SPEC SEC. 220; D50=6", 9" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILES OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 gal/min/ft AND WOVEN. SPECIFIC WEIGHT = 165 lb/ft3. GRADATION PER TABLE 6.4 OF 2013 DRAINAGE DESIGN MANUAL FOR MARICOPA COUNTY, ARIZONA (HYDRAULICS). — 711 SY (1) (2)

97 EA (1)

96 INSTALL SOIL CEMENT PER MAG SPEC 311; SEE DETAIL 1 ON SHEET DC21. — 70750 SY (2)

97 PLACE GROUTED RIP-RAP D50=15", THICKNESS 30" ON FILTER FABRIC, MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. COLOR PER DEVELOPER'S REPRESENTATIVE. — 3666 SY

TOPOGRAPHIC SOURCE

ORIGINAL EXISTING TOPO WAS FLOWN AUG 2016 BY AERO TECH MAPPING AND THEN RE FLOWN NOV 2021 AND THEN A TOPO VERIFICATION WAS DONE BY HILGARTWILSON DEC 2021.

ENGINEER'S ESTIMATED QUANTITIES

ENGINEER'S QUANTITIES ARE FOR ESTIMATING PURPOSES ONLY, NOT FOR BIDDING PURPOSES. CONTRACTOR SHALL BASE THEIR BID ON THEIR OWN QUANTITY TAKEOFFS. ENGINEER MAKES NO GUARANTEE OF ACCURACY.

STORM WATER DRAINAGE CERTIFICATE

1. THE DEVELOPMENT WILL PROVIDE FOR ON-SITE RETENTION FOR THE RUNOFF FROM A 100-YEAR 2-HOUR STORM.
2. ALL FLOWS FROM THE 10-YEAR STORM WILL BE CONTAINED WITHIN THE STREET (FROM CURB TO CURB).
3. ALL STORM WATER RETENTION WILL BE DRAINED WITHIN 36-HOURS. IF BASINS DO NOT DRAIN WITHIN 36-HOURS, DEVELOPER/OWNER SHALL ENACT MEASURES TO CORRECT.
4. ALL DRAINAGE DESIGN WILL COMPLY WITH THE CITY OF BUCKEYE CURRENT GRADING AND DRAINAGE DESIGN STANDARDS.
5. FINISH FLOOR ELEVATIONS MUST BE A MINIMUM OF 14-INCHES ABOVE THE OUTFALL TOP OF CURB ELEVATION AND 12-INCHES ABOVE THE COMPUTED 100-YEAR WATER ELEVATIONS AND 1-FOOT ABOVE THE EMERGENCY OUTFALL ELEVATIONS AT ANY ADJACENT RETENTION BASIN, WHICH EVER IS GREATER.
6. ALL RETENTION BASINS SHALL HAVE A MINIMUM OF 1-FOOT OF FREEBOARD.

BY: _____ 5/10/2022
REGISTERED CIVIL ENGINEER — DATE

NET ACREAGE AND TOTAL DISTURBED AREA

TOTAL DISTURBED AREA	573.08 AC
NET AREA	565.75 AC

ENGINEER'S ESTIMATED EARTHWORK QUANTITIES

GROSS CUT	2,136,561 C.Y.
GROSS FILL	1,700,013 C.Y.
SHRINKAGE LOSS (ASSUME 15%)	-320,484 C.Y.
ADJUSTED NET EARTHWORK QUANTITY (EXPORT)	**116,064 C.Y.**

1. EARTHWORK QUANTITIES ARE ESTIMATED VOLUMES BASED ON RAW VOLUMES. THE CONTRACTOR SHALL PREPARE THEIR OWN EARTHWORK ANALYSIS FOR BIDDING PURPOSES.
2. EARTHWORK QUANTITIES DO NOT INCLUDE TEMPORARY RETENTION BASINS.

ENGINEER

HILGARTWILSON, LLC
2141 E. HIGHLAND AVENUE SUITE 250
PHOENIX, AZ 85016
PHONE: (602) 490-0535
FAX: (602) 368-2436
CONTACT: DAVID GEORGE
EMAIL: DGEORGE@HILGARTWILSON.COM

LANDSCAPE ARCHITECT

ABLA
310 E RIO SALADO PARKWAY
TEMPE, AZ 85281
PHONE: (480) 530-0387
CONTACT: BRIAN ROGERS
EMAIL: BRIAN.ROGERS@ABLASTUDIO.COM

PHASE NOTE

TRILLIUM VILLAGE 3-UNIT 1 & 2
INCLUDES PARCELS 37 - 49
AND OFFSITE INFRASTRUCTURE
WILL BE BUILT CONCURRENTLY.

NOTE:

TYPICAL SECTIONS WERE ADDED
TO DT01, DT02 AND MG36

OWNER/DEVELOPER

TRILLIUM LAND COMPANY, LLC
4150 N. DRINKWATER BLVD, SUITE 100
SCOTTSDALE, AZ 85251
CONTACT: HEATH MELTON
PHONE: (602) 834-9115
EMAIL: HEATH.MELTON@HOWARDHUGHES.COM
CONTACT: BRAD HINTON
PHONE: (602) 955-2424
EMAIL: BHINTON@ELDORADOHOLDINGS.NET

BASIS OF BEARING

N89°24'50"W ALONG THE SOUTH LINE OF THE SOUTHEAST QUARTER OF SECTION 18, TOWNSHIP 3 NORTH, RANGE 4 WEST OF THE GILA AND SALT RIVER BASE AND MERIDIAN, MARICOPA COUNTY, ARIZONA.

BENCHMARK

FOUND 1/2" STEEL ROD STAMPED "NGS 4FH3"
ELEVATION: 1565.486
VERTICAL DATUM: NAVD88
HORIZONTAL DATUM: BEARINGS ARE BASED UPON NAD83 ARIZONA STATE PLANE COORDINATE SYSTEM
DISTANCES ARE INTERNATIONAL FEET MEASURED AT GROUND ELEVATION.

(1)

SHEET INDEX

SHT 1	CV01	COVER SHEET
SHT 2	DT01	KEY MAP & LEGEND
SHT 3-5	DT02-04	NOTES & DETAILS
SHT 6-56	MG01-52	MASS GRADING
SHT 57-68	SW01-12	STORM WATER POLLUTION PREVENTION PLAN
SHT 69	SW13	STORM WATER POLLUTION PREVENTION NOTES AND DETAILS
SHT 70-89	DC01-20	CHANNEL PLAN & PROFILE
SHT 90	DC21	CHANNEL PROFILES, SECTIONS AND DETAILS

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE "AS - BUILT" INFORMATION SHOWN HEREON WAS OBTAINED UNDER MY DIRECT SUPERVISION AND IS CORRECT AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

ARIZONA REGISTERED LAND SURVEYOR/P.E. — DATE

ARIZONA REGISTRATION NUMBER

TELEPHONE NUMBER

APPROVAL

DISCLAIMER:

THE CITY APPROVES THESE PLANS FOR CONCEPT ONLY AND ACCEPTS NO LIABILITY FOR ERRORS AND OMISSIONS.

BY: _____ 06/22/2022
BUCKEYE CITY ENGINEER — DATE

(1)

REVISED APPROVAL

DISCLAIMER:

THE CITY APPROVES THESE PLANS FOR CONCEPT ONLY AND ACCEPTS NO LIABILITY FOR ERRORS AND OMISSIONS.

BY: _____
BUCKEYE CITY ENGINEER — DATE

(2)

REVISED APPROVAL

DISCLAIMER:

THE CITY APPROVES THESE PLANS FOR CONCEPT ONLY AND ACCEPTS NO LIABILITY FOR ERRORS AND OMISSIONS.

BY: _____
BUCKEYE CITY ENGINEER — DATE

(1) (2)

RECEIVED
5/16/2022
CITY OF BUCKEYE by: RR
ENGINEERING

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA 811 BLUE STAKE, INC.
CALL 811 or click Arizona811.COM

MANAGING ENGINEERING / SURVEYOR: HILGARTWILSON
PROJECT COORDINATOR: SANDY HAYDEN
DESIGN LAYOUT: DVW/RVW — DRAFTED: RVW/AM — CHECKED: DWG
FIELD SURVEY — DRAFTED — CHECKED
DRAWING SCALES: AS SHOWN

PLAN TYPE: MASS GRADING PLAN

ENGINEER INFORMATION:
HILGARTWILSON
ENGINEER | PLAN | SURVEY | MANAGE
2141 E. HIGHLAND AVE. STE. 250 | P: 602.490.0535 / F: 602.368.2436
PHOENIX, AZ 85016 | WWW.HILGARTWILSON.COM

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
N.W.C. OF SUN VALLEY PARKWAY & WINTERSBURB PARKWAY
BUCKEYE, ARIZONA

COB PROJECT PLAN STICKER

REVISIONS:
1 12/27/2022 – ROSEWOOD AVENUE GOT EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION ADDED. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.
2 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

COB PERMITTING APPROVED SEAL

COB ENGINEERING APPROVED SEAL
APPROVED
6/22/2022
CITY OF BUCKEYE ENGINEERING

SUBMITTAL: 3R Submittal

AS-BUILT SEAL

DESIGN SEAL
REGISTERED PROFESSIONAL ENGINEER
23227
DAVID W. GEORGE
ARIZONA U.S.A.
EXPIRES: 12/31/23

ORIGINAL PLAN DATE: MAY 2022
LATEST REVISION DATE: JULY 2023

PROJECT NUMBER: 1175
SHEET NUMBER: CV01 SHT. 1 OF 90

COB PLAN TRACKING #: ENG-21-0220
COB PERMIT #: ENG-21-0220

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U:\1100\1175\ENGR\VILLAGE 3\MASS GRADING\1175-CV01.dwg 7/19/2023 2:57 PM

LEGEND

	PARCEL BOUNDARY	1600	EXISTING CONTOURS
	CENTERLINE	1600	PROPOSED CONTOURS
	RIGHT-OF-WAY		DRYWELL
	PROPERTY LINE	XX.XX	TOP OF CURB
	EASEMENT LINE		SLOPE
EX CATV	EX CABLE TELEVISION	EOE=XXXX	EMERGENCY OUTFALL ELEVATION
EX COMM	EX COMMUNICATIONS		RETAINING WALLS
EX ELEC	EX ELECTRIC		GRADE BREAK
S/W	SIDEWALK		PHASE LINE
B/C	BACK OF CURB		4" ROLL CURB
PUE	PUBLIC UTILITY EASEMENT		6" ROLL CURB
TYP	TYPICAL		6" VERTICAL CURB
R/W	RIGHT-OF-WAY		MONUMENT
	HEADWALL	1	DRAINAGE CONSTRUCTION NOTE
	CATCH BASIN	1	GRADING CONSTRUCTION NOTE
	STORM DRAIN MANHOLE		EFFECTIVE FLOODWAY
	SCOUR WALL		EFFECTIVE FLOODPLAIN
			PROPOSED FLOODWAY
			PROPOSED FLOODPLAIN

ABBREVIATIONS

ABC	AGGREGATE BASE COURSE	NTS	NOT TO SCALE
AC	ASPHALTIC CEMENT OR CONCRETE	P	PAVEMENT
AHD	AHEAD SEWER STATION	PAE	PEDESTRIAN ACCESS EASEMENT
B/C	BACK OF CURB	PC	POINT OF CURVE
BCR	BEGIN CURB RETURN	PCC	POINT OF COMPOUND CURVE
BK	BACK SEWER STATION	PH	PHASE
BLVD	BOULEVARD	PI	POINT OF INTERSECTION
BOT	BOTTOM OF BASIN	PRC	POINT OF REVERSE CURVE
BW	BOTTOM OF WALL AT FINISH GRADE	PT	POINT OF TANGENCY
C&G	CURB AND GUTTER	PUE	PUBLIC UTILITY EASEMENT
C/L or CL	CENTERLINE	PVC	POLYVINYL CHLORIDE
CB	CATCH BASIN	PVI	POINT OF VERTICAL INTERSECTION
COVER	CLEAR COVER OVER PIPE	PVMT	PAVEMENT
CR	CURB RETURN	R/W OR ROW	RIGHT OF WAY
CTR	CENTER	RGRCP	RUBBER GASKET REINFORCED CONCRETE PIPE
DE	DRAINAGE EASEMENT	RSB	REAR SETBACK
DIP	DUCTILE IRON PIPE	RT or R	RIGHT
DTL	DETAIL	RW	RECLAIMED WATER
E	EAST OR EASTING	RY	REAR YARD ELEVATION
EA	EACH	S	SOUTH, SLOPE OR SEWER LINE
ECR	END CURB RETURN	SE	SIDEWALK EASEMENT
EOE	EMERGENCY OUTFALL ELEVATION	S/W or SW	SIDEWALK
EOP	EDGE OF PAVEMENT	SD	STORM DRAIN
ESMT	EASEMENT	SDMH	STORM DRAIN MANHOLE
FF	FINISH FLOOR	SHLD	SHOULDER OF ROAD
FG	FINISH GRADE	SL	SEWER LINE
FL	FLOW LINE GRADE	SMH	SEWER MANHOLE
FP	FINISH PAD	SPEC	SPECIFICATIONS
FS	FINISH SURFACE	STA	STATION
FSB	FRONT SETBACK	STD	STANDARD
FT	FOOT OR FEET	SWR	SEWER
G	GUTTER	TC	TOP OF CURB
GA	GUAGE	TOH	TOP OF HEADWALL ELEVATION
GB	GRADE BREAK	TRANS	TRANSMISSION OR TRANSITION
GFF	GARAGE FINISH FLOOR	TF	TOP OF FOOTING
HDPE	HIGH DENSITY POLYETHYLENE	TG	TOP OF GRATE
HGL	HYDRAULIC GRADE LINE	TL	TRUE LENGTH
HORIZ	HORIZONTAL	TRW	TOP OF RETAINING WALL
HP	HIGH POINT	TS	TRUE SLOPE
HW	HIGH WATER ELEVATION (100yr EVENT)	TW	TOP OF WALL
ID	INSIDE DIAMETER	TYP	TYPICAL
INV	INVERT OR INVERSE	VC	VERTICAL CURVE
IR	IRRIGATION	VCP	VITRIFIED CLAY PIPE
LF	LINEAR FEET	VERT	VERTICAL
L/S	LANDSCAPE	VG	VALLEY GUTTER
L.E.	LANDSCAPE EASEMENT	VNAE	VEHICULAR NON-ACCESS EASEMENT
LT or L	LEFT	Vprov	VOLUME PROVIDED
M	MIDDLE	VR	VERTICAL REALIGNMENT
MAG	MARICOPA ASSOCIATION OF GOVERNMENTS	Vreq	VOLUME REQUIRED
MH	MANHOLE	V.T.	VISIBILITY TRIANGLE
ML or M/L	MONUMENT LINE	W	WEST OR WATER LINE
MIN	MINIMUM	WE	WATER EASEMENT
MUTE	MULTI-USE TRAIL EASEMENT	W/L	WATERLINE
N	NORTH OR NORTHING	WSE	WATER SURFACE ELEVATION
NPI	NON-PAYABLE ITEM	WT	WELL TRANSMISSION LINE
		WTR	WATER

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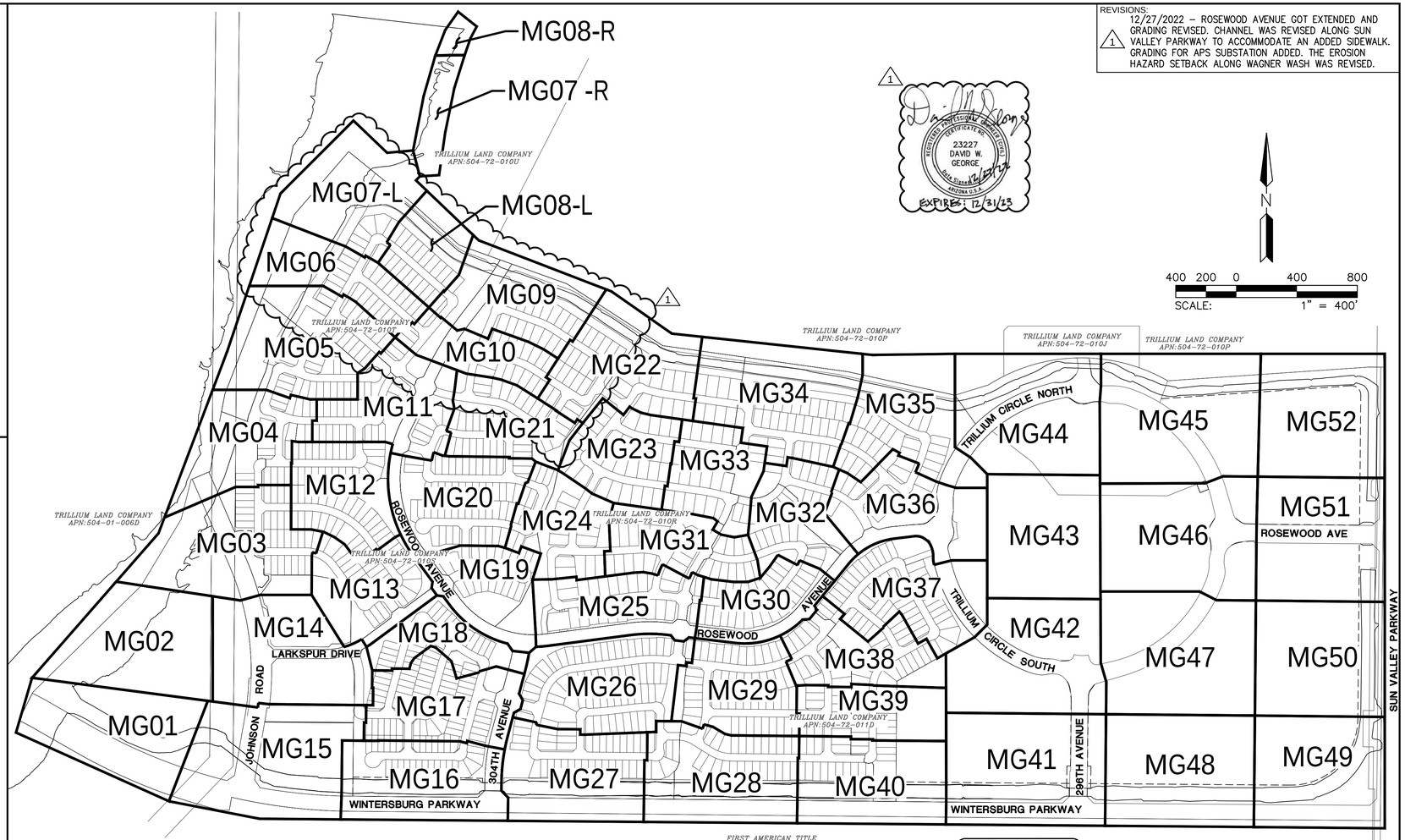
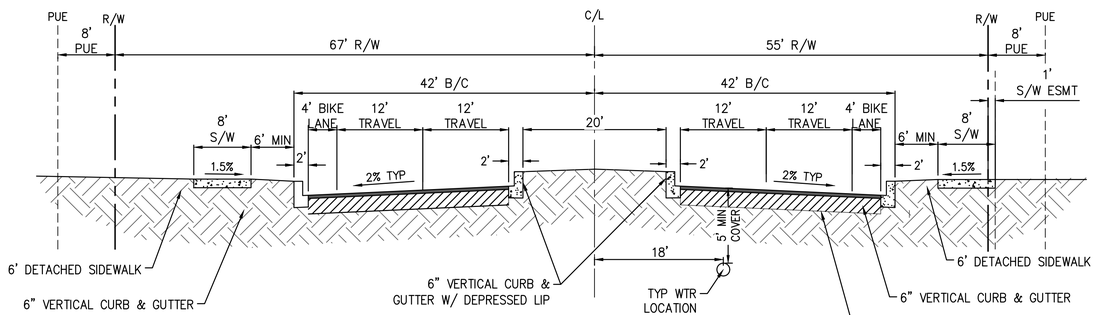
REVISIONS:
1 12/27/2022 – ROSEWOOD AVENUE GOT EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION ADDED. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.



KEY MAP



MAJOR COLLECTOR SECTION

PER COB STD DTL 63140
ROSEWOOD AVENUE (EAST OF FLOREO CIRCLE)
DESIGN SPEED: 45 MPH
(LOOKING WEST)
SCALE: NTS

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811 CALL 811 or click Arizona811.COM

PLAN NAME
TRILLIUM VILLAGE 3 - UNITS 1 & 2 MASS GRADING PLAN

ENGINEER INFORMATION
HILGARTWILSON

COB PERMITTING APPROVED SEAL

COB ENGINEERING APPROVED SEAL
APPROVED
6/22/2022
CITY OF BUCKEYE ENGINEERING

AS-BUILT SEAL

DESIGN SEAL
REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. 23227 DAVID W. GEORGE STATE OF ARIZONA U.S.A.
EXPIRES: 12/31/23

SUBMITTAL: 3R Submittal

ORIGINAL PLAN DATE: MAY 2022
LATEST REVISION DATE: JULY 2023
PROJECT NUMBER: 1175
SHEET NUMBER SHT.: DT01 2 OF 90
COB PLAN TRACKING #: ENG-21-0220
COB PERMIT #: ENG-21-0220

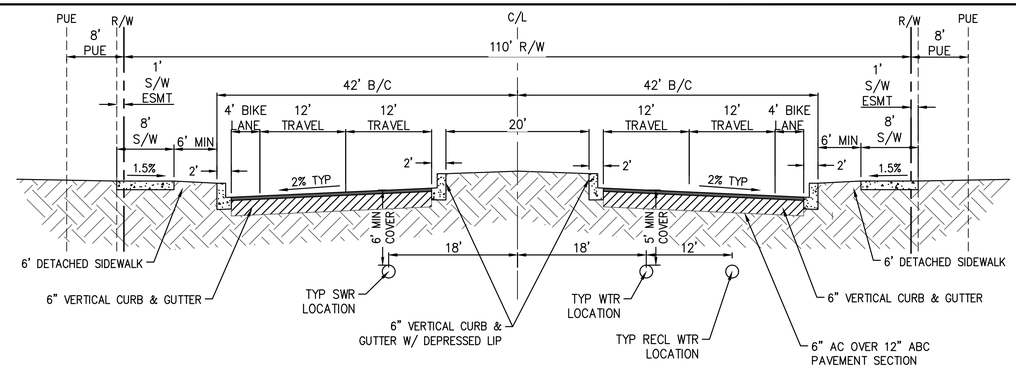
U:\1100\1175\ENGR\VILLAGE 3\MASS GRADING\1175-DT01.dwg 7/19/2023 2:57 PM

CITY OF BUCKEYE GENERAL CONSTRUCTION NOTES

1. CITY OF BUCKEYE BUILDING DEPARTMENT SHALL BE NOTIFIED 24 HOURS IN ADVANCE OF ANY ON-SITE OR OFF-SITE CONSTRUCTION. PHONE 623-349-6248 FOR THE HOTLINE. ALL OTHERS FAX THE INSPECTION REQUEST FORM TO 623-349-6221, OR USE THE WEB BASED PERMIT PORTHOLE ACCESS TO SCHEDULE AN INSPECTION (WWW.BUCKEYEAZ.GOV).
2. ALL WORK AND MATERIALS MUST CONFORM WITH THESE SPECIFICATIONS, THE CURRENT UNIFORM STANDARD SPECIFICATIONS AND DETAILS FOR PUBLIC WORKS CONSTRUCTION AS SPONSORED AND DISTRIBUTED BY THE MARICOPA ASSOCIATION OF GOVERNMENTS (M.A.G.) AND AS AMENDED BY THE CITY OF BUCKEYE (COB).
3. A PERMIT IS REQUIRED FROM THE COB FOR ALL CONSTRUCTION WITHIN THE RIGHTS-OF-WAY (ROW).
4. THE CONTRACTOR WILL EXPOSE ALL EXISTING UTILITY LINES BEING TIED IN TO VERIFY THEIR LOCATION.
5. THE CONTRACTOR WILL LOCATE, OR HAVE LOCATED, ALL EXISTING UNDERGROUND UTILITIES (ELECTRIC, TELEPHONE, PIPELINE, ETC.) AND STRUCTURES IN ADVANCE OF CONSTRUCTION AND WILL ELIMINATE ALL CONFLICTS PRIOR TO START OF CONSTRUCTION.
6. THE CONTRACTOR IS RESPONSIBLE TO CALL BLUE STAKE PRIOR TO STARTING ANY CONSTRUCTION. NO WORK SHALL BEGIN UNTIL BLUE STAKE IS COMPLETED. BLUE STAKE TELEPHONE NUMBER 602-263-1100 OR 1-800-STAKE-IT.
7. A PRE-CONSTRUCTION MEETING IS REQUIRED PRIOR TO STARTING ANY WORK OR NEW PHASE OF WORK. THE CONTRACTOR, KEY SUB-CONTRACTORS. COB INSPECTOR AND REPRESENTATIVE OF THE CITY ENGINEER SHALL ATTEND THIS MEETING.
8. ANY WORK PERFORMED WITHOUT THE APPROVAL OF THE COB AND/OR ALL WORK AND MATERIAL NOT IN CONFORMANCE WITH THE SPECIFICATIONS IS SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.
9. DISPOSAL OF EXCESS MATERIAL WITHOUT A PERMIT WITHIN THE COB LIMITS IS PROHIBITED. A USE PERMIT IS REQUIRED FOR DISPOSAL OR STOCKPILING OF MATERIALS WITHIN A RESIDENTIAL AREA. STOCKPILING OF EXCAVATED MATERIAL SHALL NOT EXCEED A HEIGHT OF 6 FEET ABOVE THE NATURAL GROUND ELEVATION. THE SLOPES ON ALL SIDES OF THE STOCKPILED EXCAVATED MATERIAL SHALL NOT EXCEED A 4:1 RATIO OF LENGTH TO HEIGHT.
10. EXCAVATION CONTRACTORS MUST IDENTIFY LOCATION FOR DISPOSING OF EXCESS EXCAVATION MATERIAL ALONG WITH A LETTER FROM THE LAND OWNER,GIVING PERMISSION FOR DUMPING PRIOR TO STARTING ANY CONSTRUCTION.
11. TRAFFIC CONTROL SHALL BE PROVIDED AND MAINTAINED IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND THE CITY OF PHOENIX BARRICADING MANUAL,MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION, M.AG.UNIFORM STANDARD DETAIL401, AND COB REQUIREMENTS.THE CONTRACTOR IS REQUIRED TO SUBMIT A TRAFFIC CONTROL PLAN AND BARRICADE PLAN TO THE COB FOR APPROVAL WHERE THE CONSTRUCTION OF THE NEW IMPROVEMENTS ARE ADJACENT TO OR CONNECTING TO ANY EXISTING ROADWAY OR PEDESTRIAN FACILITIES.THE TRAFFIC CONTROL PLAN AND BARRICADE PLAN SHALL BE APPROVED BEFORE A PERMIT FOR THE WORK WILL BE ISSUED.THE CONTRACTOR SHALL INSTALL APPROVED BARRICADING AND TRAFFIC CONTROL, AS APPROVED BY THE COB, BEFORE WORK CAN TAKE PLACE. ALL OVERNIGHT BARRICADES SHALL BE LIT AND FUNCTIONING,
12. A HAUL PLAN FOR MATERIAL IMPORT OR EXPORT SHALL BE REQUIRED FOR COB REVIEW AND APPROVAL PRIOR TO THE START OF HAULING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY AND FINAL CLEAN-UP OPERATION OF ADJACENT, EXISTING PAVED STREETS USED BY CONSTRUCTION TRAFFIC. THIS WORK INCLUDES STREET SWEEPING, POWER BROOM AND WATER AS NEEDED OR DIRECTED BY THE COB.
13. ENVIRONMENTAL REQUIREMENTS
    a. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL RELATED TO THE PROJECT CONSTRUCTION AND SHALL TAKE WHATEVER MEANS NECESSARY TO CONTROL ANY ABNORMAL CONDITIONS.
    b. THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS FOR CLEANING TRUCKS AND/OR OTHER EQUIPMENT OF MUD PRIOR TO ENTERING PUBLIC STREETS. AND TAKE WHATEVER MEASURES ARE NECESSARY TO INSURE THAT ALL ROADS ARE MAINTAINED IN A CLEAN, MUD AND DUST FREE CONDITION AT ALL TIMES.
    c. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY AND FINAL CLEAN-UP OPERATIONS OF ADJACENT,EXISTING PAVED STREETS USED BY CONSTRUCTION TRAFFIC.
    d. TEMPORARY DRAINAGE CONTROL MEASURES MAY BE REQUIRED DURING AND AFTER CONSTRUCTION UNTIL FINAL PROJECT BUILD-OUT IN ACCORDANCE WITH THE APPROVED PLANS AND IN ACCORDANCE WITH ANY ESTABLISHED OR REQUIRED BEST MANAGEMENT PRACTICES (BMP) AS PART OF THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT REQUIREMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MEET ALL REQUIREMENTS.
    e. THE CONTRACTOR IS RESPONSIBLE TO OBTAIN ALL AIR QUALITY PERMITS.
    f. THE CONTRACTOR SHALL SUBMIT TO THE COB A COPY OF THEIR APPROVED COUNTY (AIR QUALITY) DUST CONTROL PLAN, EROSION CONTROL PLAN (SWPPP),AND PERMIT PRIOR TO THE START OF WORK.
14. STREET CUTS: APPLICATIONS FOR STREET CUT PERMITS MUST BE APPROVED BY THE CITY ENGINEER PRIOR TO APPROVAL OF IMPROVEMENT PLANS. THE PAVEMENT REPLACEMENT SECTION FOR ALL LONGITUDINAL AND TRANSVERSE TRENCHES LOCATED IN AN EXISTING PAVED STREET SHALL BE CONSTRUCTED IN ACCORDANCE M.A.G. UNIFORM. STANDARD DETAIL NO.200 "T"-TOP, BACKFILL, PAVEMENT SURFACE REPLACEMENT, MODIFIED AS FOLLOWS: THE WIDTH OF THE REPLACED PAVEMENT SECTION EXTEND 1 FOOT BEYOND THE TRENCH SIDE EDGE LINE, ON EITHER SIDE OF THE TRENCH. THE DEPTH OF THE PERMANENT SURFACE REPLACEMENT SHALL BE A MINIMUM OF 3 INCHES OR MATCH THE EXISTING THICKNESS OF THE PAVEMENT, WHICHEVER IS GREATER. SAWCUT OR CONSTRUCTION JOINTS SHALL BE ADEQUATELY TACK. OILED WITH A MINIMUM OF 95% COVERAGE. ASPHALT MATERIAL SHALL BE A COB APPROVED MIX DESIGN WITH COMPACTED LIFTS NO GREATER THAN 3 INCHES. SLURRY BACKFILLED OR OPEN TRENCHES EXISTING ROADWAYS MUST BE PROPERLY STEEL PLATED AND BARRICADED OVER NIGHT. STEEL PLATES TO BE MILLED -FLUSH WITH ROADWAY SURFACE PER NOTE 24. "COLD MIX" TEMPORARY ASPHALT PATCHES MUST BE REPLACED AS SOON AS POSSIBLE AND CANNOT REMAIN FOR MORE THAN 5 DAYS TIME OR AS REQUIRED BY THE COB. DURING THE 5 DAY PERIOD THE CONTRACTOR IS REQUIRED TO MAINTAIN THE PATCH TO WITHIN MAG STD SPEC 321.5.3. ASPHALT IN PLACE FOR LESS THAN 5 YEARS SHALL BE MILLED AND OVERLAYED A MINIMUM OF 20 FEET PAST TRENCH WALLS, AND IN THE CASE OF MULTIPLE STREET CUTS, THE CONTINUOUS MILL AND OVERLAY SHALL EXTEND A MINIMUM OF 2 FEET PAST END OF THE FURTHEST TRENCH WALLS.
15. POTHOLING: NO POTHOLING SHALL BE DONE ON ANY STREET NEWER THAN 2 YEARS OLD ALL POTHOLING IN EXISTING STREETS SHALL BE DONE USING WATER/AIR/VACUUM TYPE METHOD. POTHOLE SIZE SHALL BE LIMITED TO A 12 INCH BY 12 INCH SQUARE HOLE. REMOVAL MATERIAL CANNOT BE USED FOR BACK FILL THE CONTRACTOR SHALL USE SLURRY PER MAG SEC.728. PAVEMENT REPLACEMENT SHALL BE BY APPROVED HOT MIX ASPHALT ONLY. A 3 FOOT BY 3 FOOT PAVEMENT SLURRY SEAL SHALL BE APPLIED AFTER THE ASPHALT IS PLACED
16. AN APPROVED, UP-TO-DATE SET OF PLANS AND A RIGHT-OF-WAY PERMIT SHALL BE MAINTAINED ON THE JOB SITE AT ALL TIMES WHILE WORK IS IN PROGRESS. IF THE PLANS AND PERMITS ARE NOT ON SITE, THE WORK SHALL BE STOPPED UNTIL THE APPROVED PLANS ARE PROVIDED. DEVIATION FROM THE PLANS SHALL NOT BE ALLOWED WITHOUT THE COB'S APPROVAL.
17. DAMAGE TO ANY AND ALL ITEMS CAUSED BY CONSTRUCTION OR CONSTRUCTION RELATED WORK SHALL BE REPLACED OR REPAIRED TO THE SAME OR BETTER CONDITION AT THE CONTRACTOR'S EXPENSE.
18. ALL PARCEL CONSTRUCTION ACCESS LOCATIONS ARE SUBJECT TO THE CITY ENGINEER'S APPROVAL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING PROPER AND ADEQUATE ACCESS ROADS INSIDE AND THROUGHOUT THE PARCEL ALLOWING FOR INSPECTION ACCESSIBILITY. THIS INCLUDES GRADING, GRAVEL FILL AND/OR TRENCH PLATES AS REQUIRED.
19. THE CONTRACTOR AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND, INDEMNITY AND HOLD THE COB AND THE COB CONSULTANT & HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE COB.
20. THE COB SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES UTILIZED IN CONNECTION WITH THE WORK. THE COB WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS COMPLYING WITH MAG OR COB REQUIREMENTS.
21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING CERTIFIED AS-BUILT RECORD DOCUMENTS & TO THE COB FOR REVIEW AND APPROVAL. NO FINAL ACCEPTANCE SHALL BE ISSUED UNTIL"AS-BUILT" PLANS CERTIFIED BY THE PROJECT ENGINEER/LAND SURVEYOR HAVE BEEN SUBMITTED AND ACCEPTED BY THE COB. FINAL CONSTRUCTION ACCEPTANCE OR THE RELEASE OF CERTIFICATE OF OCCUPANCIES SHALL NOT BE ISSUED UNTIL ALL AS-BUILT DRAWINGS AND OTHER REQUIRED DOCUMENTS PER THE COB'S FINAL PROJECT SUBMITTAL CHECKLIST HAVE BEEN REVIEWED AND APPROVED BY THE CITY ENGINEER.
22. ARRANGEMENTS FOR CONSTRUCTION WATER CAN BE MADE BY CALLING THE WATER RESOURCE DEPARTMENT AT (623) 349-6800.
23. THE COB IS NOT RESPONSIBLE FOR LIABILITY ACCRUED DUE TO DELAYS AND/OR DAMAGES TO UTILITIES IN CONJUNCTION WITH THIS CONSTRUCTION.ALSO,THE CITY WILL NOT PARTICIPATE IN THE COST OF CONSTRUCTION OR RELOCATION OF UTILITIES.
24. ALL CONTRACTORS SHALL CONTRACT FOR TRASH PICKUP THROUGH A LICENSED CITY OF BUCKEYE SOLID WASTE HAULER (602-237-2078) AND DISPOSED OF AT THE SOUTHWEST REGIONAL LANDFILL IN BUCKEYE.
25. OPEN TRENCHES ACROSS DRIVEWAYS, STREETS AND CROSS-STREETS SHALL BE PLATED FOR OVERNIGHT, WEEKEND OR EXTENDED PERIODS, PER M.A.G. UNIFORM STANDARD DETAIL 211.
26. ALL ABC SHALL BE FROM AN ARIZONA DEPARTMENT OF TRANSPORTATION (ADOT) APPROVED SOURCE LIST.
27. LONGITUDINAL TRENCH BACKFILL IN EXISTING ARTERIAL, COLLECTOR, OR LOCAL ROADWAYS OR ADJACENT TO EXISTING ROADWAY (WHEN THE TRENCH EXCAVATION FALLS WITHIN 2 FEET OF EDGE OF PAVEMENT) SHALL REQUIRE ¾ SACK CLSM PER MAG SPEC 728 FULL DEPTH OR ABC FULL DEPTH AS DIRECTED BY THE COB. ABC BACKFILL COMPACTION SHALL BE BY AN APPROVED MECHANICAL METHOD (NO WATER SETTLING) WITH BACKFILL MATERIAL LIST AS FOLLOWS:
    - 12 INCH LIFTS (LOOSE) TO BE USED IN THE TOP 4 FEET OF THE TRENCH
    - 24 INCH LIFTS (LOOSE) TO BE USED FROM 1 FOOT OVER THE PIPE TO 4 FEET FROM THE TOP OF THE TRENCH PER MAG SEC.601.4.
28. ALL BACKFILL WITHIN OR ADJACENT TO EXISTING ROADWAYS SHALL BE MECHANICALLY COMPACTED.
29. TRANSVERSE TRENCH BACKFILL IN ALL EXISTING ROADWAYS SHALL REQUIRE 100% FULL DEPTH HALF SACK CLSM PER MAG SPEC 728.
30. ALL MATERIAL SUBMITTALS INCORPORATED IN THE PROJECT SHALL BE SUBMITTED AT OR BEFORE THE PRE-CONSTRUCTION MEETING FOR REVIEW AND APPROVAL BY THE CITY ENGINEER.

CITY OF BUCKEYE GRADING CONSTRUCTION NOTES

1. ALL DESIGN AND CONSTRUCTION MUST BE IN ACCORDANCE WITH THE UNIFORM STANDARD SPECIFICATIONS AND DETAILS FOR PUBLIC WORKS CONSTRUCTION PUBLISHED BY THE MARICOPA ASSOCIATION OF GOVERNMENTS (MAG) EXCEPT AS AMENDED BY THE CITY OF BUCKEYE STANDARD CONSTRUCTION DETAILS. ALL IMPROVEMENTS WITHIN THE DEVELOPMENT INCLUDING OFFSITE IMPROVEMENTS SHALL BE IN ACCORDANCE WITH THE LATEST CITY OF BUCKEYE ENGINEERING DESIGN STANDARDS.
2. NO GRADING SHALL BEGIN WITHOUT A PERMIT FROM THE CITY OF BUCKEYE.
3. OFFSITE CONSTRUCTION REQUIRES A SEPARATE PERMIT BY THE CITY OF BUCKEYE.
4. CONTRACTOR SHALL NOTIFY THE CITY OF BUCKEYE PUBLIC WORKS DEPARTMENT ASSIGNED INSPECTOR AT LEAST TWENTY-FOUR (24) HOURS IN ADVANCE OF ANY REQUIRED CONSTRUCTION INSPECTION.
5. CONTRACTOR MUST CALL THE ARIZONA BLUE STAKE CENTER (602) 263-1100, FORTY-EIGHT (48) HOURS BEFORE DIGGING OR EXCAVATING FOR LOCATION OF ALL UNDERGROUND UTILITIES.
6. IT IS THE RESPONSIBILITY OF THE DEVELOPER AND HIS/HER AGENT IN COORDINATING THE RELOCATION OF POWER POLES FROM THE APPLICABLE UTILITY COMPANY.
7. NO MINIMUM FINISHED FLOOR ELEVATION SHALL BE ALTERED, UNLESS APPROVED BY PUBLIC WORKS AND THE DEVELOPER'S CIVIL ENGINEER.
8. ALL STAKING INCLUDING FINISHED FLOOR ELEVATIONS IS THE SOLE RESPONSIBILITY OF THE DEVELOPER'S REGISTERED CIVIL ENGINEER AND LAND SURVEYOR. SUBMISSION OF CERTIFIED PAD ELEVATIONS IS REQUIRED PRIOR TO FINAL ACCEPTANCE.
9. CONTRACTOR SHALL PROVIDE GRADING FOR POSITIVE DRAINAGE IN ALL RETENTION BASINS AT ELEVATIONS AS ABUTTING PUBLIC RIGHT OF WAY.
10. DRYWELL INLET GRATE SHALL BE 0.30 FEET ABOVE FINISH GRADE AT BOTTOM ELEVATION OF THE RETENTION BASIN.
11. DRILLING LOGS FOR DRYWELLS AT 5.0 FOOT INTERVALS INCLUDING LITHOLOGY CHANGES WILL BE FURNISHED TO THE CITY OF BUCKEYE PUBLIC WORKS DEPARTMENT PRIOR TO FINAL ACCEPTANCE.
12. PERCOLATION TESTS WILL BE REQUIRED OF COMPLETED DRYWELLS PRIOR TO ACCEPTANCE. SHOULD EXISTING SOIL CONDITIONS BE ENCOUNTERED WHICH LACK SUFFICIENT PERCOLATION RATES, ADDITIONAL DRYWELLS OR AN ALTERNATE METHOD OF STORM WATER RUN-OFF DISPOSAL WILL BE REQUIRED. FINAL CERTIFIED PERCOLATION TEST RATES FROM ASTM D 3385 SHALL BE SUBMITTED AT THE TIME OF AS-BUILTS, WITH THE REQUIRED 50% REDUCTION FACTOR.
13. DRYWELL CONSTRUCTION SHALL BE DONE ONLY BY A CONTRACTOR LICENSED BY THE ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY WITH THE APPROVED REGISTRATION FOR EACH DRYWELL.
14. THE APPROVED DRYWELL REGISTRATION SHALL BE SUBMITTED TO THE CITY BY THE DEVELOPER OR HIS/HER CIVIL ENGINEER AT THE TIME AS-BUILTS ARE SUBMITTED.
15. CONTRACTOR SHALL COMPLY WITH THE PROVISIONS FOR WORK ZONE SAFETY AND TRAFFIC CONTROL PROTECTION AS INDICATED IN PART IV OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD 2003 EDITION) AND WHERE APPLICABLE ACROSS JURISDICTIONAL AUTHORITIES BUT WITHIN THE CITY OF BUCKEYE, MCDOT, AND ADOT'S TRAFFIC CONTROL MANUAL FOR HIGHWAY CONSTRUCTION AND MAINTENANCE (MOST CURRENT EDITION).
16. ALL RETENTION BASINS MUST DRAIN ANY STORM EVENT UP TO AND INCLUDING THE 100 YEAR 2 HOUR STORM WITHIN THIRTY-SIX (36) HOURS OF POST DEVELOPMENT CONSTRUCTION. OWNER(S) OF ANY BASIN FAILING TO MEET THIS REQUIREMENT MUST TAKE CORRECTIVE ACTION TO BRING THE BASIN INTO COMPLIANCE.
17. THE CONTRACTOR SHALL NOT DISTURB EXISTING SURVEY MONUMENTS OR BENCHMARKS NOTED ON THE PLANS. REMOVAL AND REPLACEMENT SHALL BE DONE BY AN ARIZONA REGISTERED LAND SURVEYOR ONLY.
18. THE CONTRACTOR SHALL HAVE SUFFICIENT MEANS TO PROVIDE DUST CONTROL. DUST SHALL BE CONTROLLED IN ACCORDANCE WITH THE MARICOPA COUNTY ENVIRONMENTAL SERVICES.
19. PERIMETER WALL FENCES ARE REQUIRED TO BE COMPACTED NO LESS THAN 90% BY THE CONTRACTOR.
20. ARRANGEMENTS FOR CONSTRUCTION WATER CAN BE MADE BY CALLING THE CITY OF BUCKEYE PUBLIC WORKS DEPARTMENT AT 623-349-6800.
21. THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS FOR THE ELIMINATION OF MUD AND DUST ACCUMULATION IN PUBLIC STREETS BY TRUCKS LEAVING THE SITE (TRACK OUT DEVICES). PUBLIC RIGHT OF WAYS SHALL BE KEPT CLEAN AND FREE OF DEBRIS FROM CONSTRUCTION SITES.
22. DISPOSAL OF EXCESS MATERIAL WITHIN THE CITY'S LIMITS IS PROHIBITED. A USE PERMIT IS REQUIRED FOR DISPOSAL AND/OR STOCKPILING MATERIALS WITHIN A RESIDENTIAL AREA.
23. APPROVED CONSTRUCTION PLANS SHALL BE KEPT ON THE JOBSITE AT ALL TIMES. DEVIATION FROM THE PLANS IS NOT ACCEPTABLE UNLESS AN APPROVED PLAN REVISION HAS BEEN GRANTED BY PUBLIC WORKS DEPARTMENT.



MAJOR COLLECTOR SECTION

PER COB STD DTL 63140
296TH AVENUE (SOUTH OF FLOREO CIRCLE SOUTH)
DESIGN SPEED: 45 MPH
(LOOKING NORTH)
SCALE: NTS

HILGARTWILSON STANDARD ENGINEERING NOTES

1. THESE PLANS ARE SUBJECT TO THE INTERPRETATION OF INTENT BY THE ENGINEER. ALL QUESTIONS REGARDING THESE PLANS SHALL BE PRESENTED TO THE ENGINEER. ANYONE WHO TAKES IT UPON THEMSELF THE INTERPRETATION OF THE DRAWINGS OR MAKES REVISIONS TO THE SAME WITHOUT CONFERRING WITH THE DESIGN ENGINEER SHALL BE RESPONSIBLE FOR THE CONSEQUENCES THEREOF.
2. THE ESTIMATED QUANTITIES SHOWN ARE FOR INFORMATION PURPOSES ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETENESS AND ACCURACY OF A DETAILED ESTIMATE BASED ON THESE PLANS, CURRENT CODES, AND SITE VISITATION.
3. ALL EARTHWORK CONSTRUCTION SHALL CONFORM TO THE LATEST MARICOPA ASSOCIATION OF GOVERNMENTS STANDARD DETAILS AND/OR SPECIFICATIONS INCLUDING ANY SUPPLEMENTS THERETO, AND ALL ADDENDA. THE CONTRACTOR IS TO FOLLOW THE RECOMMENDATION OF GEOTECH REPORT AS PREPARED BY ALPHA GEOTECHNICAL & MATERIAL, INC., PHONE NO. 602-453-3267, PROJECT NO. 20-G-11044, DATED FEBRUARY 9, 2021.
4. PRIOR TO BIDDING THE WORK, THE CONTRACTOR SHALL THOROUGHLY SATISFY HIMSELF AS TO THE ACTUAL CONDITIONS, REQUIREMENTS OF THE WORK AND EXCESS OR DEFICIENCY IN QUANTITIES. NO CLAIMS SHALL BE MADE AGAINST THE OWNER/DEVELOPER OR ENGINEER FOR ANY EXCESS OR DEFICIENCY THEREIN, ACTUAL OR RELATIVE.
5. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES OR SAFETY PRECAUTIONS OR PROGRAMS UTILIZED IN CONNECTION WITH THE WORK, AND WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
6. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR COORDINATING THE RELOCATION OF UTILITIES, POWER POLES, ETC.
7. THE CONTRACTOR SHALL MAKE NO CLAIM AGAINST THE OWNER OR THE SURVEYOR REGARDING ALLEGED INACCURACY OF CONSTRUCTION STAKES SET BY THE SURVEYOR UNLESS ALL SURVEY STAKES SET BY THE ENGINEER ARE MAINTAINED INTACT AND CAN BE VERIFIED AS TO THEIR ORIGIN. IF, IN THE OPINION OF THE SURVEYOR, THE STAKES ARE NOT MAINTAINED INTACT AND CANNOT BE VERIFIED AS TO THEIR ORIGIN, ANY REMEDIAL WORK REQUIRED TO CORRECT ANY ITEM OF IMPROPER CONSTRUCTION WORK SHALL BE PERFORMED AT THE SOLE EXPENSE OF THE RESPONSIBLE CONTRACTOR OR SUBCONTRACTOR.
8. THE SURVEYOR WILL MAKE FIELD AS-BUILT MEASUREMENTS OF THE WORK UPON NOTIFICATION BY THE CLIENT OR HIS REPRESENTATIVE THAT THE WORK IS COMPLETE AND READY FOR AS-BUILT SURVEY. FOR PIPE WORK, THE CONTRACTOR IS RESPONSIBLE FOR LEAVING TRENCHES OPEN SO THAT AS-BUILTS CAN BE PERFORMED TO COMPLY WITH THE AGENCY'S REQUIREMENTS. (IF THE TRENCHES ARE BACKFILLED AND OBSCURED TO THE POINT THAT AS-BUILT MEASUREMENTS CANNOT BE PERFORMED, IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO POTHOLE UTILITY TRENCHES AS NECESSARY TO COMPLETE AN AS-BUILT SURVEY.)
9. THE CONTRACTOR IS TO VERIFY THE LOCATION, ELEVATION, CONDITION, AND PAVEMENT CROSS-SLOPE OF ALL EXISTING SURFACES AT POINTS OF TIE-IN AND MATCHING, PRIOR TO COMMENCEMENT OF GRADING, PAVING, CURB AND GUTTER OR OTHER SURFACE CONSTRUCTION. SHOULD EXISTING LOCATIONS, ELEVATIONS, CONDITIONS, OR PAVEMENT CROSS-SLOPES DIFFER FROM THAT SHOWN ON THESE PLANS, RESULTING IN THE DESIGN INTENT REFLECTED ON THESE PLANS NOT BEING ABLE TO BE CONSTRUCTED, THE CONTRACTOR SHALL NOTIFY THE OWNER'S AGENT IMMEDIATELY FOR DIRECTION ON HOW TO PROCEED PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR ACCEPTS RESPONSIBILITY FOR ALL COSTS ASSOCIATED WITH CORRECTIVE ACTION IF THESE PROCEDURES ARE NOT FOLLOWED.
10. EXISTING UTILITIES SHOWN ON THESE PLANS HAVE BEEN LOCATED ACCORDING TO INFORMATION PROVIDED BY THE AGENCY OPERATING EACH UTILITY. LOCATIONS SHOWN ARE APPROXIMATE ONLY, AND ARE NOT RELIABLE FOR CONSTRUCTION PURPOSES. CALL BLUE STAKE FOR FIELD LOCATION AT (602) 263-1100. THE CONTRACTOR SHALL PROTECT AND MAINTAIN ALL EXISTING UTILITIES ON THE SITE. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN OR NOT ON THE DRAWING, SHALL BE REPAIRED/REPLACED AT THE CONTRACTOR'S EXPENSE. EXISTING SURFACE FEATURES AND FENCING SHALL BE REPLACED IN LIKE KIND.
11. PRIOR TO CONSTRUCTION, THE ENGINEER AND APPLICABLE AGENCY MUST APPROVE ANY ALTERATION, OR VARIANCE FROM THESE PLANS. ANY VARIATIONS FROM THESE PLANS SHALL BE PROPOSED ON CONSTRUCTION FIELD PRINTS AND TRANSMITTED TO THE ENGINEER.
12. ANY INSPECTION BY THE CITY, COUNTY, ENGINEER, OR OTHER JURISDICTIONAL AGENCY, SHALL NOT, IN ANY WAY, RELIEVE THE CONTRACTOR FROM ANY OBLIGATION TO PERFORM THE WORK IN STRICT COMPLIANCE WITH APPLICABLE CODES AND AGENCY REQUIREMENTS.
13. CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL STORM DRAIN PIPES. STORM WATER RETENTION PIPES AND DRAINAGE FACILITIES FROM DAMAGE DURING ALL STAGES OF CONSTRUCTION. THE DEPTH OF COVER ON THE STORM DRAIN PIPE IS DESIGNED FOR FINAL GRADE. THEREFORE, EXTRA CARE SUCH AS BERMING OVER PIPES, FLAGGING OR SIGNAGE SHOULD BE USED DURING CONSTRUCTION TO MAINTAIN COVER OR PROTECT THE PIPES.
14. THE ENGINEER MAKES NO REPRESENTATION OR GUARANTEE REGARDING EARTHWORK QUANTITIES OR THAT THE EARTHWORK FOR THIS PROJECT WILL BALANCE DUE TO THE VARYING FIELD CONDITIONS, CHANGING SOIL TYPES, ALLOWABLE CONSTRUCTION TOLERANCES AND CONSTRUCTION METHODS THAT ARE BEYOND THE CONTROL OF THE ENGINEER.
15. IF PAD CERTIFICATIONS ARE PERFORMED, IT IS UNDERSTOOD THAT THE CERTIFICATION PROVIDES ONLY A REPRESENTATIVE ELEVATION OF THE AVERAGE GRADE OF EACH LOT, BUILDINGS OR UNIT PAD, AND SHALL NOT BE CONSTRUED TO INCLUDE YARD AND STREET SUB-GRADE CERTIFICATION OR CERTIFICATION THAT THE ENTIRE PAD IS LEVEL, THAT IT WAS CONSTRUCTED IN THE DESIGNED LOCATION OR WAS GRADED TO THE CROSS-SECTION SET FORTH ON THE PLANS OR AS DESIGNATED IN THE SOILS REPORT.
16. FINISH GRADES SHOWN ON THESE PLANS ARE THE FINAL FINISH GRADES. CONTRACTOR IS RESPONSIBLE FOR OVER-EXCAVATING LANDSCAPE AREAS TO ALLOW FOR PLANTING AND UTILITY TRENCHING SPOILS AND FOR THE FINAL LANDSCAPE TREATMENT (DECOMPOSED GRANITE, LAWN, ETC.).
17. UNDERGROUND UTILITIES SHALL BE MARKED IN ACCORDANCE WITH SECTION 40-360 OF THE ARIZONA REVISED STATUTES AND LOCAL MUNICIPALITY REQUIREMENTS.
18. SEWER SERVICES SHALL BE INSTALLED TO 5 FEET OF COVER AT 2 FEET BEHIND THE PUE, WHERE POSSIBLE.
19. CURB RAMPS ON ACCESSIBLE ROUTES SHALL COMPLY WITH ADA 406, 405.2 THROUGH 405.5 AND 405.10, ADA 406.1.
20. THE RUNNING SLOPE OF WALKING SURFACES SHALL NOT BE STEEPER THAN 1:20. THE CROSS SLOPE OF WALKING SURFACES SHALL NOT BE STEEPER THAN 1:48, 2010 ADA 403.3.
21. INDIVIDUAL WATER SERVICE CONNECTIONS WHERE PRESSURES EXCEED 80 PSI WILL REQUIRE INDIVIDUAL PRESSURE REDUCING VALVES (PRV'S).

CITY OF BUCKEYE NOTES

ALL CITY OF BUCKEYE GENERAL NOTES AND UTILITY NOTES ARE ACCESSIBLE ON THE CITY'S WEBSITE AT www.buckeyeaz.gov, UNLESS OTHERWISE ATTACHED.

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
CALL 811 or click Arizona811.COM

PLAN NAME
TRILLIUM VILLAGE 3 - UNITS 1 & 2 MASS GRADING PLAN

ENGINEER INFORMATION
HILGARTWILSON

COB PERMITTING APPROVED SEAL	COB ENGINEERING APPROVED SEAL
	APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING
AS-BUILT SEAL	DESIGN SEAL: REGISTERED PROFESSIONAL ENGINEER, CERTIFICATE NO. 23227, DAVID W. GEORGE, ARIZONA U.S.A. EXPIRES: 12/31/23
ORIGINAL PLAN DATE: MAY 2022	LATEST REVISION DATE: JULY 2023
PROJECT NUMBER: 1175	SHEET NUMBER: DT02 SHT. 3 OF 90

SUBMITTAL: 3R Submittal
COB PLAN TRACKING #: ENG-21-0220
COB PERMIT #: ENG-21-0220

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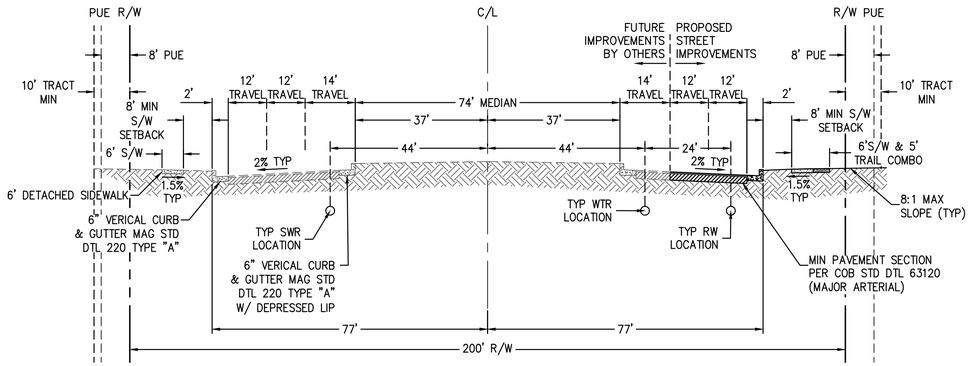
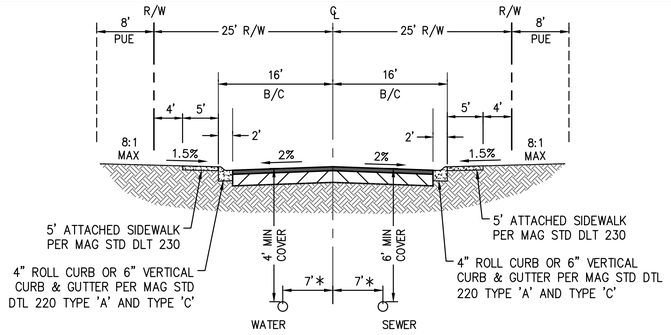


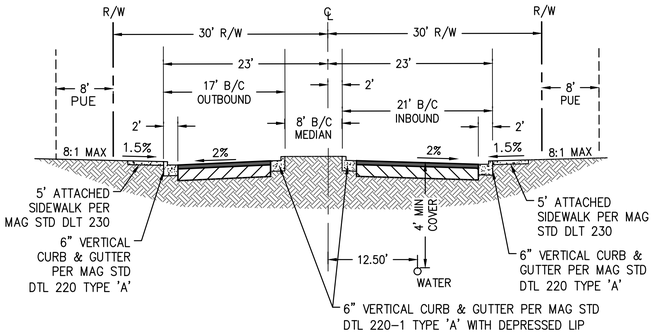
TYPICAL PARKWAY SECTION



* NOTE:
7' OFFSET UNLESS OTHERWISE NOTED ON PLANS.

TYPICAL LOCAL STREET

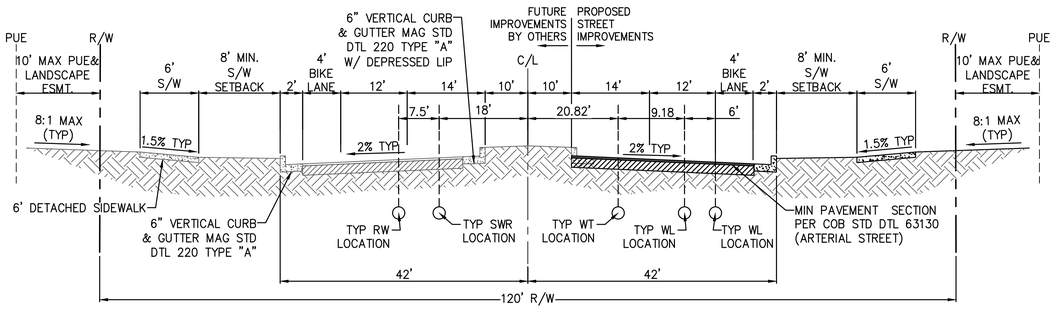
NTS
PER COB STD DTL 63170
LOOKING EAST OR SOUTH



RESIDENTIAL ENTRANCE STREET

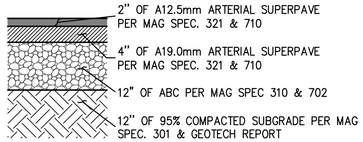
NTS
PER COB STD DTL 63190
LOOKING NORTH

TERAVALIS PARKWAY
(LOOKING WEST)
SCALE: NTS



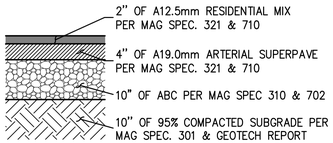
TYPICAL ARTERIAL SECTION

PER COB STD DTL 63130
JOHNSON ROAD
(LOOKING NORTH)
N.T.S.



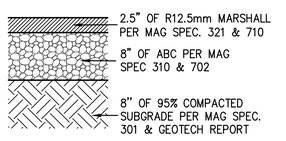
MAJOR ARTERIAL/ PARKWAY

PAVEMENT SECTION
(PER C.O.B. STD DTL 63120 & 63130)
NTS



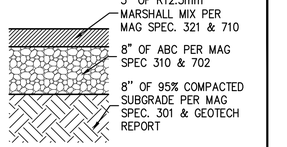
COLLECTOR

PAVEMENT SECTION
(PER C.O.B. STD DTL 63150)
NTS



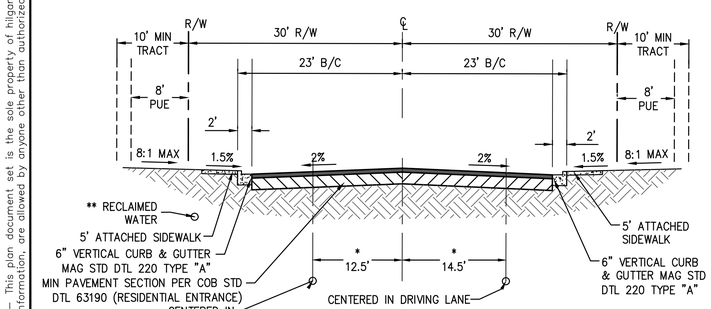
LOCAL STREET

PAVEMENT SECTION
(PER COB STD DTL 63170)
NTS



RESIDENTIAL ENTRANCE

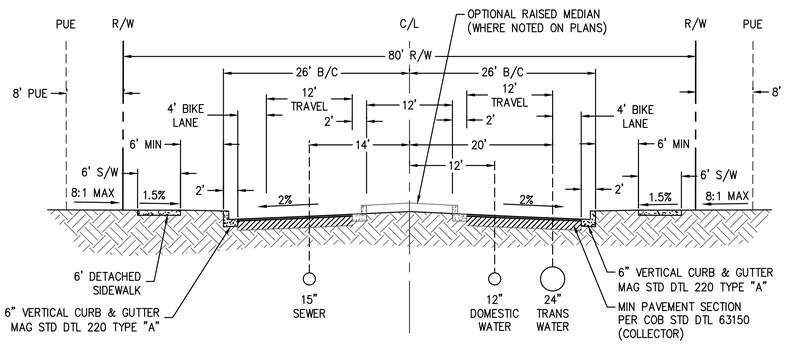
PAVEMENT SECTION
(PER COB STD DTL 63190)
NTS



REDISENTIAL ENTRANCE SECTION

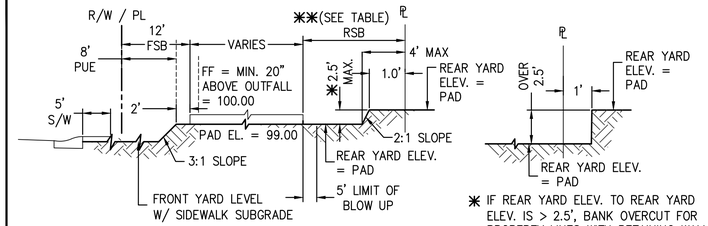
PER COB STD DTL 63190
LARKSPUR DRIVE
FROM STA:11+71.25 TO STA:23+91.06
(LOOKING EAST)
SCALE: N.T.S.
* WATER IF ON NORTH OR EAST SIDE OF STREET.
SEWER IF ON SOUTH OR WEST SIDE OF STREET.

** RECLAIMED WATER TO BE 1' OFFSET FROM BACK OF SIDEWALK ON THE SAME SIDE OF THE STREET AS WATER



TYPICAL COLLECTOR SECTION

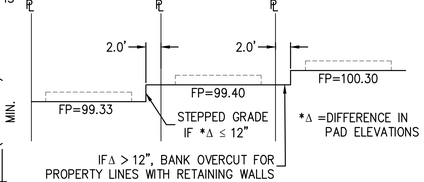
PER COB STD DTL 63150
ROSEWOOD AVE (WEST OF FLOREO CIRCLE)
(LOOKING NORTH & WEST)
SCALE: NTS



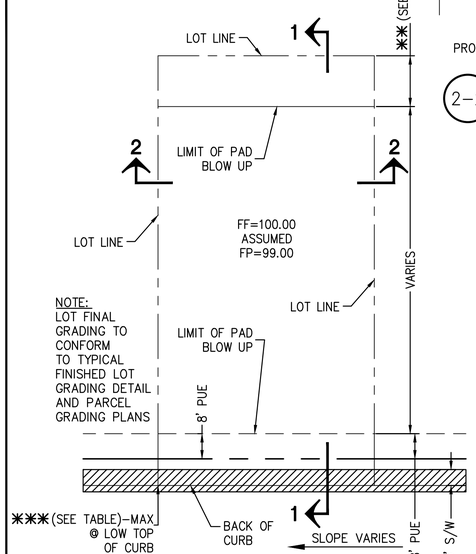
1-1 TYPICAL ROUGH GRADING SECTION THRU LOT
NTS

* IF REAR YARD ELEV. TO REAR YARD ELEV. IS > 2.5', BANK OVERCUT FOR PROPERTY LINES WITH RETAINING WALLS. IF THERE IS A 10' RY SETBACK THEN SLOPING/EMBANKMENT IN THE RY IS NOT ALLOWED.

PARCEL NO.	REAR YARD SETBACK (FT) **	LOW TOP OF CURB (FT) ***
PARCEL 37	10	98.38
PARCEL 38	20	98.40
PARCEL 39	20	98.40
PARCEL 40	20	98.40
PARCEL 41	10	98.38
PARCEL 42	20	98.38
PARCEL 43	20	98.38
PARCEL 44	20	98.40
PARCEL 45	20	98.35
PARCEL 46	10	98.50
PARCEL 47	20	98.35
PARCEL 48	10	98.38
PARCEL 49	20	98.40



2-2 TYPICAL ROUGH GRADING SIDE YARD TO SIDE YARD
NTS



TYPICAL LOT ROUGH GRADING DETAIL
NTS

PLAN NAME
TRILLIUM VILLAGE 3 - UNITS 1 & 2 MASS GRADING PLAN

ENGINEER INFORMATION
HILGARTWILSON

COB PERMITTING APPROVED SEAL	COB ENGINEERING APPROVED SEAL
	APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING
AS-BUILT SEAL	DESIGN SEAL (REGISTERED PROFESSIONAL ENGINEER, DAVID W. GEORGE, 23227, ARIZONA U.S.A., EXPIRES: 12/31/23)

SUBMITTAL: 3R Submittal

ORIGINAL PLAN DATE	LATEST REVISION DATE
MAY 2022	JULY 2023
PROJECT NUMBER 1175	SHEET NUMBER DT03 SHT. 4 OF 90

COB PLAN TRACKING # ENG-21-0220
COB PERMIT # ENG-21-0220

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811 CALL 811 or click Arizona811.COM

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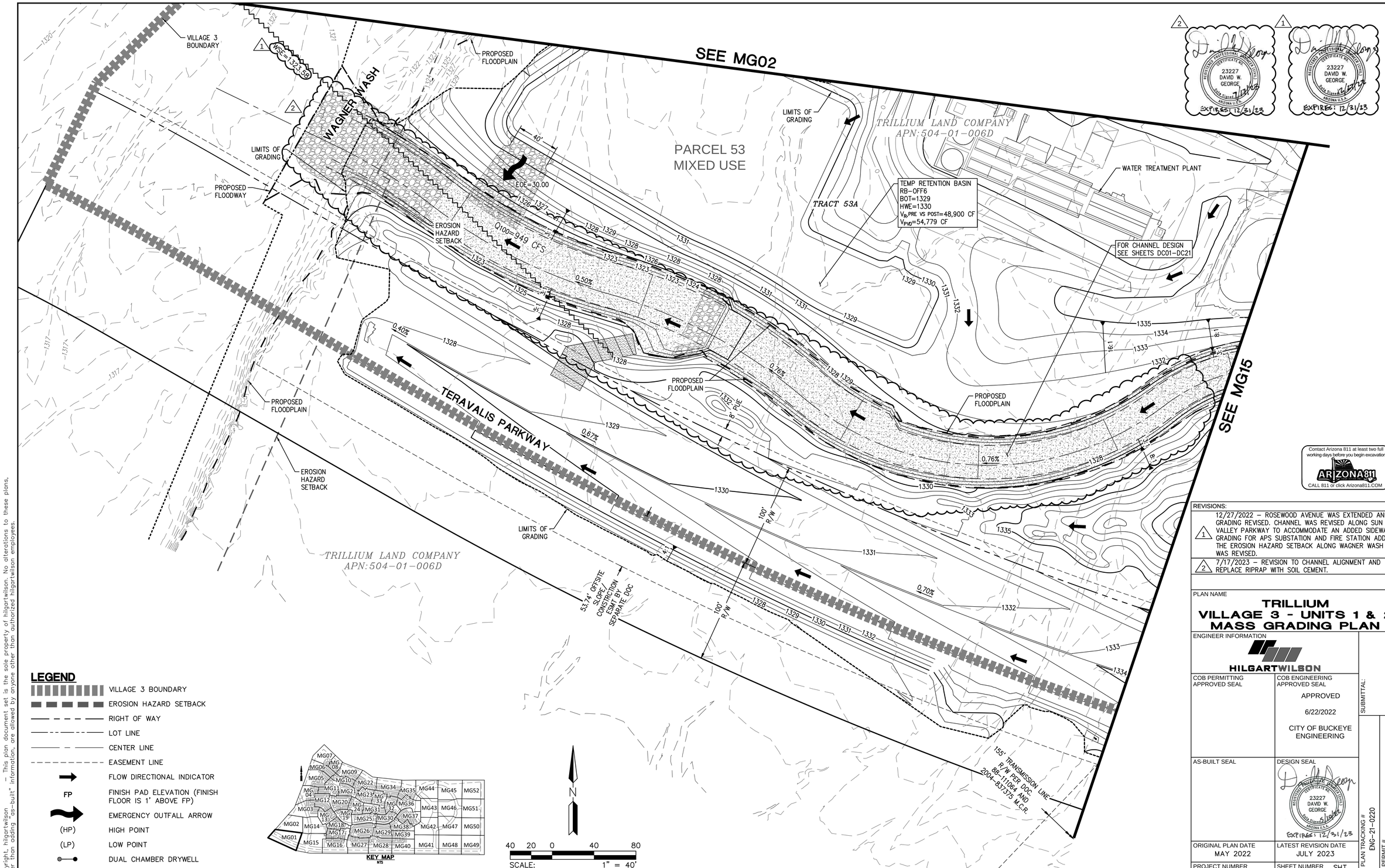

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) HIGH POINT
- (LP) LOW POINT
- DUAL CHAMBER DRYWELL

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Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
CALL 811 or click Arizona811.COM

REVISIONS:

1 — 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION AND FIRE STATION ADDED. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 — 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM VILLAGE 3 - UNITS 1 & 2 MASS GRADING PLAN

ENGINEER INFORMATION

HILGARTWILSON

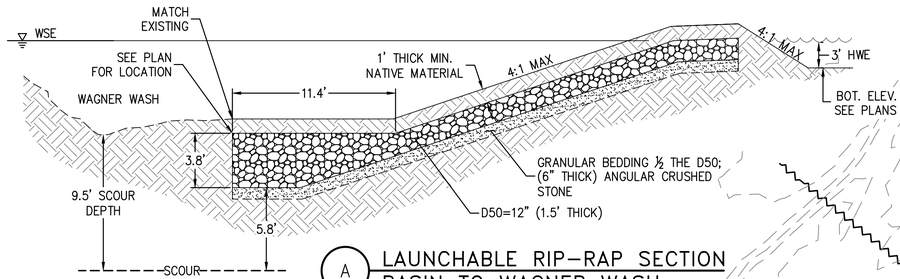
COB PERMITTING APPROVED SEAL	COB ENGINEERING APPROVED SEAL: APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING
AS-BUILT SEAL	DESIGN SEAL: 23227 DAVID W. GEORGE REGISTERED PROFESSIONAL ENGINEER ARIZONA U.S. EXPIRES: 12/31/23
ORIGINAL PLAN DATE: MAY 2022	LATEST REVISION DATE: JULY 2023
PROJECT NUMBER: 1175	SHEET NUMBER: MG01 SHT. 5 OF 90

SUBMITTAL: 3R Submittal

COB PLAN TRACKING #: ENG-21-0220

COB PERMIT #: ENG-21-0220

U:\1100\1175\ENGR\VILLAGE 3\MASS GRADING\1175-MG01.dwg 7/19/2023 2:31 PM



A LAUNCHABLE RIP-RAP SECTION BASIN TO WAGNER WASH
SCALE = N.T.S.

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
CALL 811 or click Arizona811.COM

GRADING CONSTRUCTION

1 CONSTRUCT TWO CHAMBER DRYWELL; DETAIL PER COB STD DTL B-501. RIM ELEVATION 0.3 FT ABOVE BASIN BOTTOM. A MINIMUM OF 20' FROM HEADWALL, LOCATION NOTED IS TO CENTER OF INTERCEPTOR. (1) EA

1

REGISTERED PROFESSIONAL ENGINEER
CERTIFICATE NO.
23227
DAVID W. GEORGE
SCALE SIGNATURE
ARIZONA U.S.A.
12/27/22
EXPIRES: 12/31/23

SEE MG03

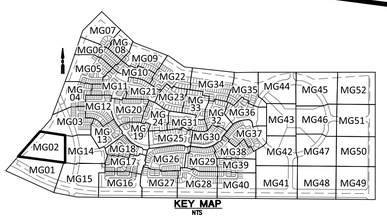
LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) HIGH POINT
- (LP) LOW POINT
- DUAL CHAMBER DRYWELL

WSE=1332.80
LIMITS OF GRADING
PROPOSED FLOODPLAIN
WSE=1330.39
VILLAGE 3 BOUNDARY
PROPOSED FLOODWAY
EROSION HAZARD SETBACK
FIRE STATION
WSE=1328.49
WAGNER WASH
RETENTION BASIN
RB-OFF9
BOT=1330
HWE=1333
V_{fb} 100-YR, 2-HR=26,148 CF
V_{PVD}=30,297 CF
RIM=1330.30
N: 946276.88
E: 457736.35
PARCEL 53
MIXED USE
TRACT 53A
TRILLIUM LAND COMPANY
APN:504-01-006D
WSE=1324.93
TEMP RETENTION BASIN
RB-OFF6
BOT=1329
HWE=1330
V_{fb} PRE VS POST=48,900 CF
V_{PVD}=54,779 CF
LIMITS OF GRADING
155' TRANSMISSION LINE R/W PER DOC. 88-111064 AND 2004-837375 M.C.R.
SEE MG01
SEE MG14

N

SCALE: 1" = 40'



KEY MAP
NTS

REVISIONS:

1 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION AND FIRE STATION ADDED. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM VILLAGE 3 - UNITS 1 & 2 MASS GRADING PLAN

ENGINEER INFORMATION
HILGARTWILSON

COB PERMITTING APPROVED SEAL

COB ENGINEERING APPROVED SEAL
APPROVED
6/22/2022
CITY OF BUCKEYE ENGINEERING

SUBMITTAL: 3R Submittal

AS-BUILT SEAL

DESIGN SEAL
REGISTERED PROFESSIONAL ENGINEER
CERTIFICATE NO.
23227
DAVID W. GEORGE
SCALE SIGNATURE
ARIZONA U.S.A.
EXPIRES: 12/31/23

ORIGINAL PLAN DATE: MAY 2022
LATEST REVISION DATE: JULY 2023
PROJECT NUMBER: 1175
SHEET NUMBER: MG02 SHT. 6 OF 90
COB PLAN TRACKING #: ENG-21-0220
COB PERMIT #: ENG-21-0220

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LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) — HIGH POINT
- (LP) — LOW POINT
- DUAL CHAMBER DRYWELL

SEE MG04

SEE MG12

SEE MG13

SEE MG14

SEE MG02

WAGNER WASH

JOHNSON ROAD

306TH DRIVE

VALLEY VISTA DRIVE

WINDROSE DRIVE

TRACT 47A

TRACT 47E

TRACT 47F

TRACT 53A

50' SWR ESMT

40' SWR ESMT

25' R/W

60' R/W

8' PUE

1' VNAE

30 FP=45.40

31 FP=45.00

32 FP=44.70

33 FP=44.40

34 FP=44.20

35 FP=44.20

27 FP=45.60

26 FP=46.90

25 FP=47.90

24 FP=49.30

36 FP=45.70

37 FP=46.70

38 FP=48.10

39 FP=49.10

PARCEL 47

71 FP=43.70

70 FP=44.70

69 FP=46.10

68 FP=47.50

67 FP=48.90

66 FP=50.50

65 FP=51.50

64 FP=52.30

72 FP=43.80

73 FP=44.80

74 FP=46.20

75 FP=47.60

76 FP=49.00

77 FP=50.40

78 FP=52.10

TRILLIUM LAND COMPANY
APN:504-72-010S

TRILLIUM LAND COMPANY
APN:504-01-006D

PARCEL 53
MIXED USED

PARCEL 50
WATER CAMPUS

PROPOSED FLOODWAY

PROPOSED FLOODPLAIN

EXTREME CAUTION WHILE GRADING IN THIS AREA DUE TO POWER LINES

RIM=1338.30
N: 946882.26
E: 457839.42

EOE=41.00

RB-21
187 SY

WSE=1339.30

WSE=1334.27

WSE=1332.80

537 SY

560 SY

RETENTION BASIN
RB-21
BOT=1338
HWE=1341
V_{R}PRE VS POST=78,348 CF
VOL_{PVD}=86,652 CF

VILLAGE 3 BOUNDARY

LIMITS OF GRADING

EROSION HAZARD SETBACK

WAPA ELECTRICAL TOWER 0-4

RIM=1333.30
N: 946618.56
E: 457742.37

155' TRANSMISSION LINE R/W PER DOC. 88-111064 AND 2004-837375 M.C.R.

RETENTION BASIN
RB-OFF8
BOT=1333
HWE=1336
V_{R}100-YR,2-HR=9,350 CF
VOL_{PVD}=14,015 CF

RIM=1338.30
N: 946919.49
E: 458068.02

RIM=1338.30
N: 946757.69
E: 458152.57

EOE=42.00

RIM=1338.30
N: 946642.39
E: 458178.69

RIM=1339.30
N: 946660.50
E: 458282.64

RIM=1339.30
N: 946582.23
E: 458214.62

PARCEL BOUNDARY

RETENTION BASIN
RB-OFF3
BOT=1339
HWE=1342
V_{R}PRE VS POST=54,031 CF
VOL_{PVD}=22,031 CF

BASIN INCLUDES 2' OF EXTRA DEPTH TO PROVIDE EXTRA VOLUME FOR WATER TANKS AS NEEDED.

KEY MAP
NTS

MG01 MG02 MG03 MG04 MG05 MG06 MG07 MG08 MG09 MG10 MG11 MG12 MG13 MG14 MG15 MG16 MG17 MG18 MG19 MG20 MG21 MG22 MG23 MG24 MG25 MG26 MG27 MG28 MG29 MG30 MG31 MG32 MG33 MG34 MG35 MG36 MG37 MG38 MG39 MG40 MG41 MG42 MG43 MG44 MG45 MG46 MG47 MG48 MG49 MG50 MG51 MG52

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ARIZONA811
CALL 811 or click Arizona811.COM

GRADING CONSTRUCTION

1 — CONSTRUCT TWO CHAMBER DRYWELL; DETAIL PER COB STD DTL B-501. RIM ELEVATION 0.3 FT ABOVE BASIN BOTTOM. A MINIMUM OF 20' FROM HEADWALL. LOCATION NOTED IS TO CENTER OF INTERCEPTOR. — 7 EA

STORM DRAIN CONSTRUCTION

83 — INSTALL LOOSE ANGULAR RIP-RAP PER MAG SPEC SEC. 220; D50=6", 12" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUAL. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET# DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY, COLOR PER DEVELOPER. — 187 SY

92 — PLACE LOOSE ANGULAR LAUNCHABLE RIP-RAP PER MAG SPEC SECTION 220; D50=12", ON 6" THICK GRANULAR, ANGULAR, CRUSHED STONE BEDDING. SEE DETAIL A ON MG02. — 1097 SY

N

40 20 0 40 80

SCALE: 1" = 40'

REVISIONS:

1 — 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION AND FIRE STATION ADDED. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 — 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL

COB ENGINEERING APPROVED SEAL

APPROVED
6/22/2022
CITY OF BUCKEYE ENGINEERING

SUBMITTAL: 3R Submittal

AS-BUILT SEAL

DESIGN SEAL

COB PLAN TRACKING # ENG-21-0220

COB PERMIT # ENG-21-0220

ORIGINAL PLAN DATE: MAY 2022

LATEST REVISION DATE: JULY 2023

PROJECT NUMBER: 1175

SHEET NUMBER: MG03 SHT. 7 OF 90

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U:\1100\1175\ENGR\VILLAGE 3\MASS GRADING\1175-MG03.dwg 7/19/2023 3:00 PM

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ARIZONA811
CALL 811 or click Arizona811.COM

GRADING CONSTRUCTION

1 CONSTRUCT TWO CHAMBER DRYWELL; DETAIL PER COB STD DTL B-501. RIM ELEVATION 0.3 FT ABOVE BASIN BOTTOM. A MINIMUM OF 20' FROM HEADWALL. LOCATION NOTED IS TO CENTER OF INTERCEPTOR. 3 EA

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) HIGH POINT
- (LP) LOW POINT
- DUAL CHAMBER DRYWELL

SEE MG05

SEE MG11

SEE MG12

SEE MG03

306TH DRIVE

WINDSOR DRIVE

OPEN SKY DRIVE

306TH AVENUE

TRACT 48F

TRACT 48H

TRACT 48G

TRACT 47A

TRACT 48I

155' TRANSMISSION LINE R/W PER DOC. 88-111064 AND 2004-837375 M.C.R.

WAPA ELECTRICAL TOWER 0-5

EROSION HAZARD SETBACK

PROPOSED FLOODWAY

LIMITS OF GRADING

PARCEL BOUNDARY

PROPOSED FLOODPLAIN

VILLAGE 3 BOUNDARY

50' SWR ESMT

EXTREME CAUTION WHILE GRADING IN THIS AREA DUE TO POWER LINES

RETENTION BASIN
RB-17B
BOT=1340
1 HWE=1343
$V_{R,PRE\ VS\ POST}$=62,610 CF
VOL_{PVD}=58,246 CF

WSE=1345.00

WSE=1342.98

WSE=1341.15

WSE=1339.30

WSE=1338.21

RIM=1340.30
N: 947567.37
E: 458117.10

RIM=1340.30
N: 947467.44
E: 458097.99

RIM=1340.30
N: 947402.74
E: 458058.01

EOE=43.00

WAGNER WASH

LIMITS OF GRADING

PROPOSED FLOODWAY

PROPOSED FLOODPLAIN

TRILLIUM LAND COMPANY
APN:504-01-006D

TRILLIUM LAND COMPANY
APN:504-72-010T

TRILLIUM LAND COMPANY
APN:504-72-010S

PARCEL 48

PARCEL 47

76	FP=49.90	
75	FP=49.80	
52	FP=49.30	
53	FP=49.90	
54	FP=51.40	
55	FP=52.40	
32	FP=47.90	
31	FP=47.60	
30	FP=47.40	
29	FP=47.20	
28	FP=47.00	
51	FP=49.50	
50	FP=50.50	
49	FP=52.10	
33	FP=47.52	
28	FP=45.90	
29	FP=45.70	
27	FP=46.20	
26	FP=46.40	
25	FP=47.00	
24	FP=48.00	

1' VNAE

8' PUE

25' R/W

0.50%
0.84%
0.61%
0.67%
2.68%
2.51%
1.40%
0.44%
0.64%
1.54%
(LP) 0.97%
0.73%
0.40%

4:1
6:1

1 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION AND FIRE STATION ADDED. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

1

REGISTERED PROFESSIONAL ENGINEER
CERTIFICATE NO.
23227
DAVID W. GEORGE
SAN CARLOS, ARIZONA, U.S.A.
EXPIRES: 12/31/23

N

40 20 0 40 80
SCALE: 1" = 40'

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

ENGINEER INFORMATION
HILGARTWILSON

COB PERMITTING APPROVED SEAL

COB ENGINEERING APPROVED SEAL
APPROVED
6/22/2022
CITY OF BUCKEYE ENGINEERING

AS-BUILT SEAL

DESIGN SEAL
REGISTERED PROFESSIONAL ENGINEER
CERTIFICATE NO.
23227
DAVID W. GEORGE
SAN CARLOS, ARIZONA, U.S.A.
EXPIRES: 12/31/23

SUBMITTAL: 3R Submittal

ORIGINAL PLAN DATE: MAY 2022

LATEST REVISION DATE: JULY 2023

PROJECT NUMBER: 1175

SHEET NUMBER: MG04 SHT. 8 OF 90

COB PLAN TRACKING # ENG-21-0220

COB PERMIT # ENG-21-0220

KEY MAP
NTS

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U:\1100\1175\ENGR\VILLAGE 3\MASS GRADING\1175-MG04.dwg 7/19/2023 3:01 PM

SEE MG06

TRACT 49A

TRILLIUM LAND COMPANY
APN:504-01-006D

WSE=1352.12

65' SWR/WTR ESMT

SWR ESMT

50' SWR/WTR ESMT

RETENTION BASIN RB-16.2
BOT=1350
HWE=1353
V_{R}PRE VS POST=43,498 CF
VOL$_{PVD}$=50,358 CF

EOE=53.00

RIM=1350.30
N: 948415.60
E: 458509.48

RIM=1350.30
N: 948310.02
E: 458482.80

LIMITS OF GRADING

PROPOSED FLOODWAY

EROSION HAZARD SETBACK

PROPOSED FLOODPLAIN

EXTREME CAUTION WHILE GRADING IN THIS AREA DUE TO POWER LINES

155' TRANSMISSION LINE R/W PER DOC. 88-111064 AND 2004-837375 M.C.R.

WSE=1348.56

TRACT 48A

VILLAGE 3 BOUNDARY

WSE=1347.77

WAGNER WASH

306TH AVENUE

TRACT 49B

TRACT 49E

ASTER DRIVE

OAKMONT DRIVE

306TH DRIVE

TRACT 48J

TRACT 48K

TRACT 48B

RETENTION BASIN
RB-16.1
BOT=1350.50
HWE=1353.50
V_{R}100-YR, 2-HR=16,487 CF
VOL$_{PVD}$=16,529 CF

PARCEL 49

PARCEL 48

PARCEL BOUNDARY

71 FP=56.70	72 FP=56.30	14 FP=57.10	13 FP=58.10
12 FP=59.30	11 FP=60.50	1 FP=56.80	2 FP=58.40
10 FP=61.80	9 FP=62.60	3 FP=59.40	4 FP=60.70
8 FP=62.70	5 FP=61.70	6 FP=62.50	7 FP=62.70
84 FP=55.00	83 FP=54.70	82 FP=53.70	85 FP=55.00
81 FP=52.80	86 FP=54.80	80 FP=52.20	87 FP=53.80
88 FP=52.80	89 FP=56.40	90 FP=56.60	79 FP=50.70
78 FP=50.30	77 FP=50.10	74 FP=52.60	73 FP=53.60
72 FP=54.60	71 FP=55.75	70 FP=56.50	69 FP=56.50
68 FP=56.50	67 FP=56.70	66 FP=57.40	

SEE MG04

SEE MG11

SEE MG06

SEE MG11

KEY MAP
NTS

GRADING CONSTRUCTION

1 CONSTRUCT TWO CHAMBER DRYWELL; DETAIL PER COB STD DTL B-501. RIM ELEVATION 0.3 FT ABOVE BASIN BOTTOM. A MINIMUM OF 20' FROM HEADWALL. LOCATION NOTED IS TO CENTER OF INTERCEPTOR. 3 EA

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) — HIGH POINT
- (LP) — LOW POINT
- DUAL CHAMBER DRYWELL

SCALE: 1" = 40'

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ARIZONA811
CALL 811 or click Arizona811.COM

REVISIONS:

1 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION AND FIRE STATION ADDED. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

ENGINEER INFORMATION
HILGARTWILSON

COB PERMITTING APPROVED SEAL

COB ENGINEERING APPROVED SEAL
APPROVED
6/22/2022
CITY OF BUCKEYE ENGINEERING

SUBMITTAL: 3R Submittal

AS-BUILT SEAL

DESIGN SEAL
REGISTERED PROFESSIONAL ARCHITECT
CERTIFICATE NO.
23227
DAVID W. GEORGE
STATE OF ARIZONA U.S.A.
EXPIRES: 12/31/23

COB PLAN TRACKING # ENG-21-0220

COB PERMIT # ENG-21-0220

ORIGINAL PLAN DATE: MAY 2022

LATEST REVISION DATE: JULY 2023

PROJECT NUMBER: 1175

SHEET NUMBER: MG05 SHT. 9 OF 90

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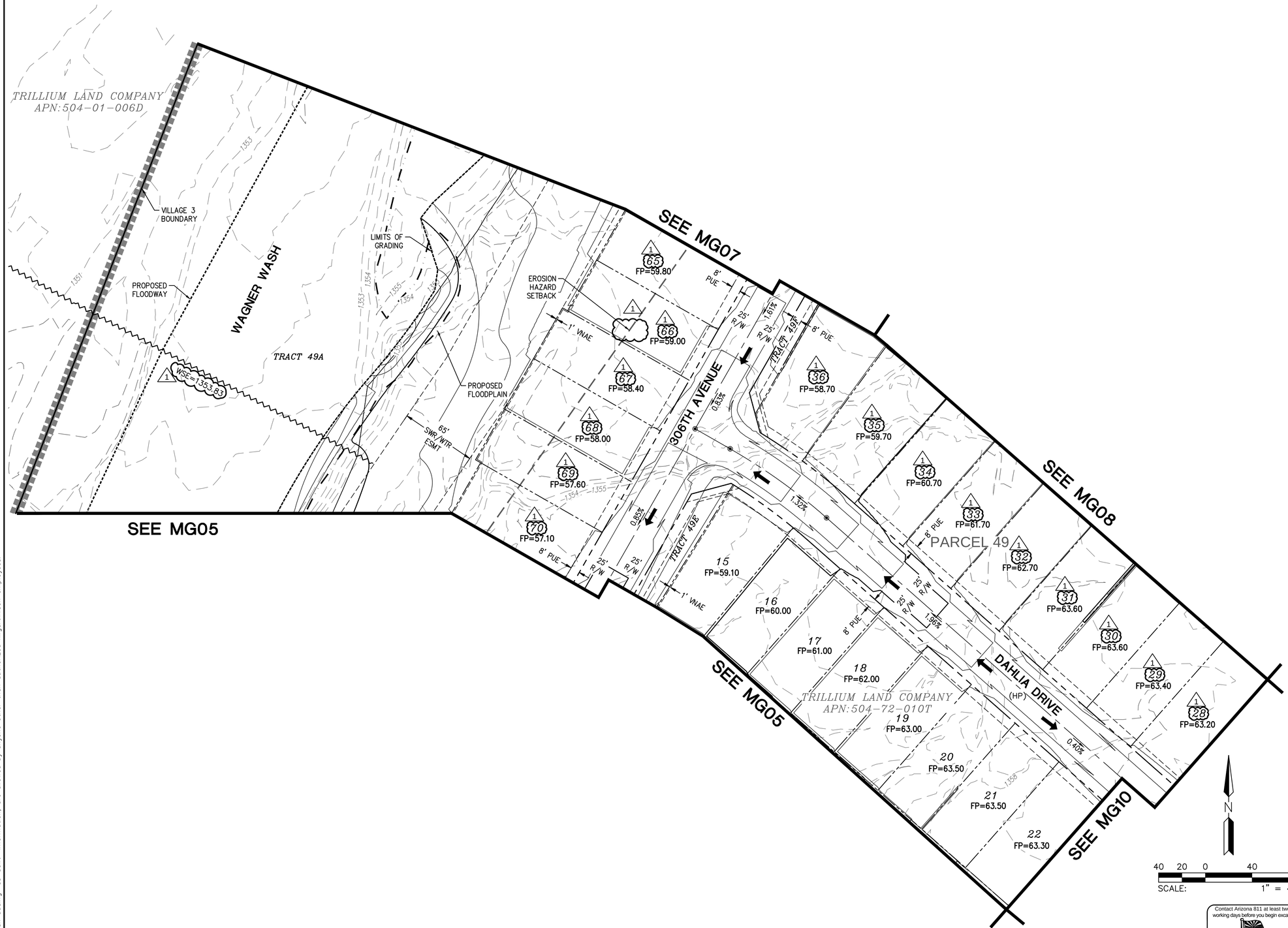
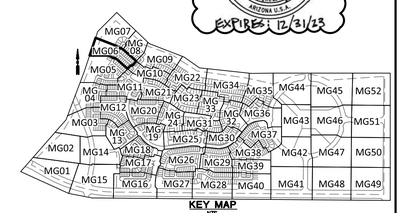


LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) — HIGH POINT
- (LP) — LOW POINT
- DUAL CHAMBER DRYWELL

1

REGISTERED PROFESSIONAL ENGINEER (CIVIL) CERTIFICATE NO. 23227 DAVID W. GEORGE SAN DIEGO, CA U.S.A. ARIZONA U.S.A.
EXPIRES: 12/31/23



KEY MAP
NTS

REVISIONS:

1 — 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION AND FIRE STATION ADDED. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 — 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL

COB ENGINEERING APPROVED SEAL

APPROVED
6/22/2022
CITY OF BUCKEYE ENGINEERING

AS-BUILT SEAL

DESIGN SEAL

REGISTERED PROFESSIONAL ENGINEER (CIVIL) CERTIFICATE NO. 23227 DAVID W. GEORGE SAN DIEGO, CA U.S.A. ARIZONA U.S.A.
EXPIRES: 12/31/23

SUBMITTAL: 3R Submittal

ORIGINAL PLAN DATE: MAY 2022

LATEST REVISION DATE: JULY 2023

PROJECT NUMBER: 1175

SHEET NUMBER: MG06 SHT. 10 OF 90

COB PLAN TRACKING # ENG-21-0220

COB PERMIT # ENG-21-0220

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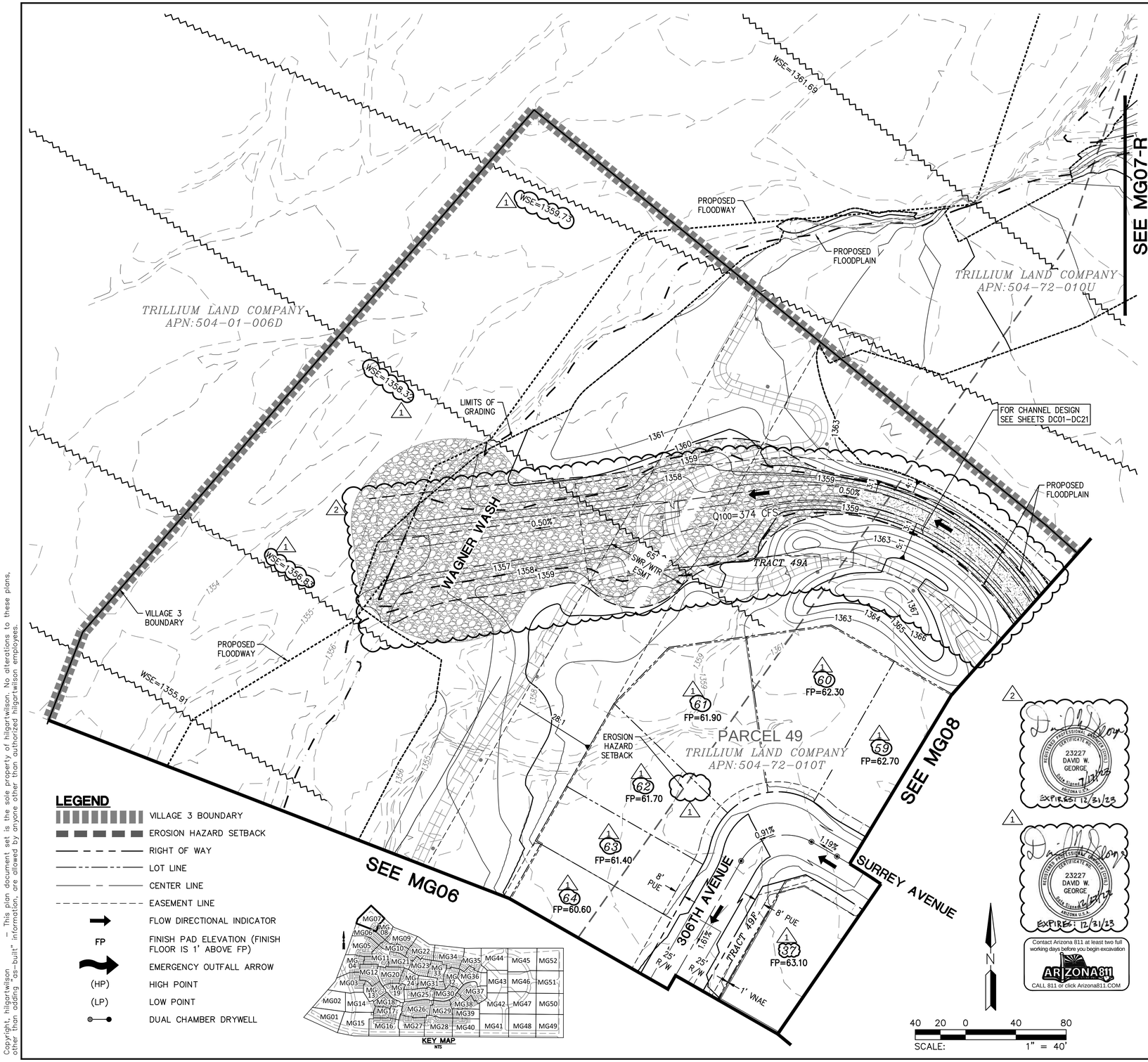

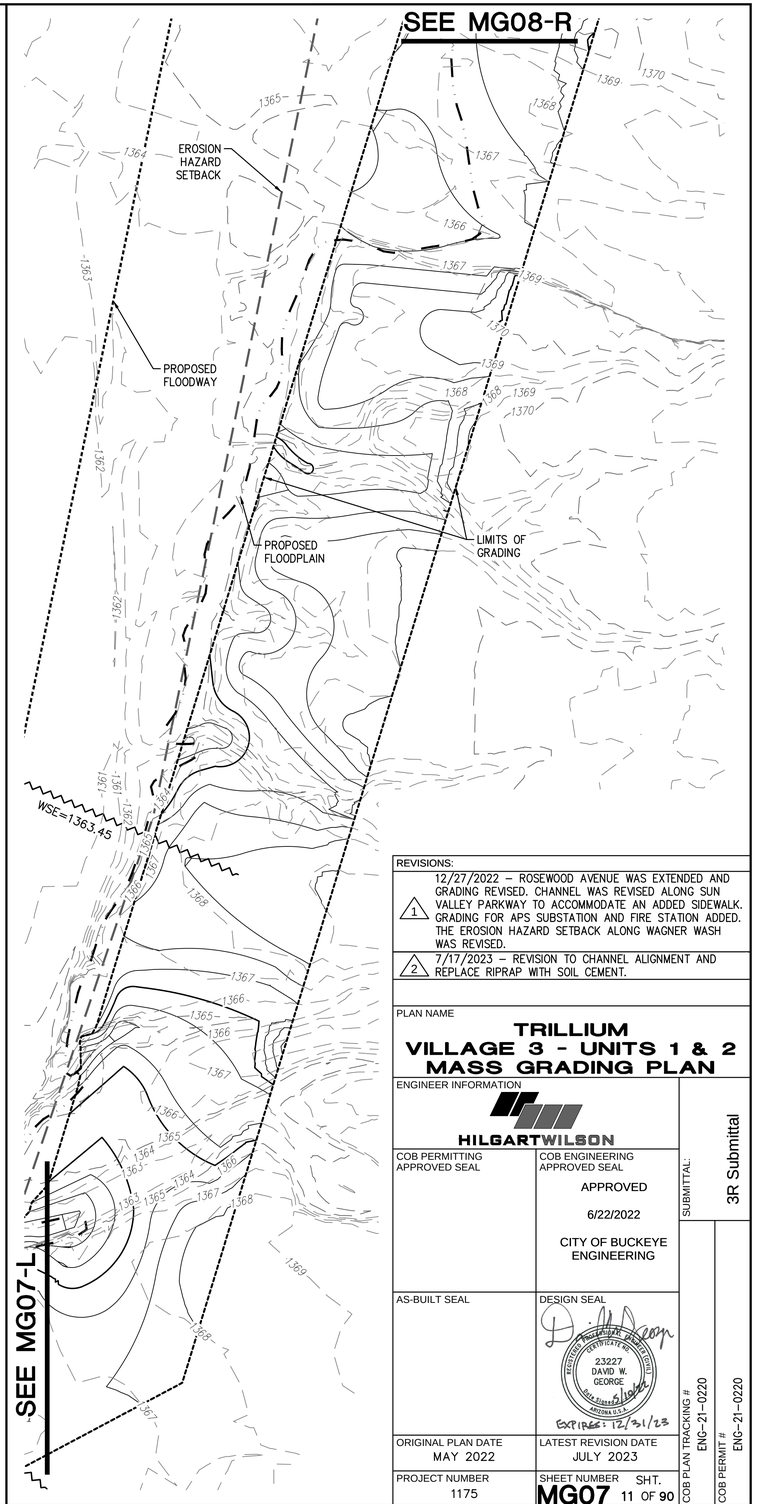

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CALL 811 or click Arizona811.COM

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2 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM VILLAGE 3 - UNITS 1 & 2 MASS GRADING PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL

COB ENGINEERING APPROVED SEAL

APPROVED

6/22/2022

CITY OF BUCKEYE ENGINEERING

SUBMITTAL: 3R Submittal

AS-BUILT SEAL

DESIGN SEAL

23227 DAVID W. GEORGE REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. ARIZONA U.S.A. EXPIRES: 12/31/23

COB PLAN TRACKING # ENG-21-0220

COB PERMIT # ENG-21-0220

ORIGINAL PLAN DATE	LATEST REVISION DATE
MAY 2022	JULY 2023

PROJECT NUMBER	SHEET NUMBER
1175	MG07 SHT. 11 OF 90

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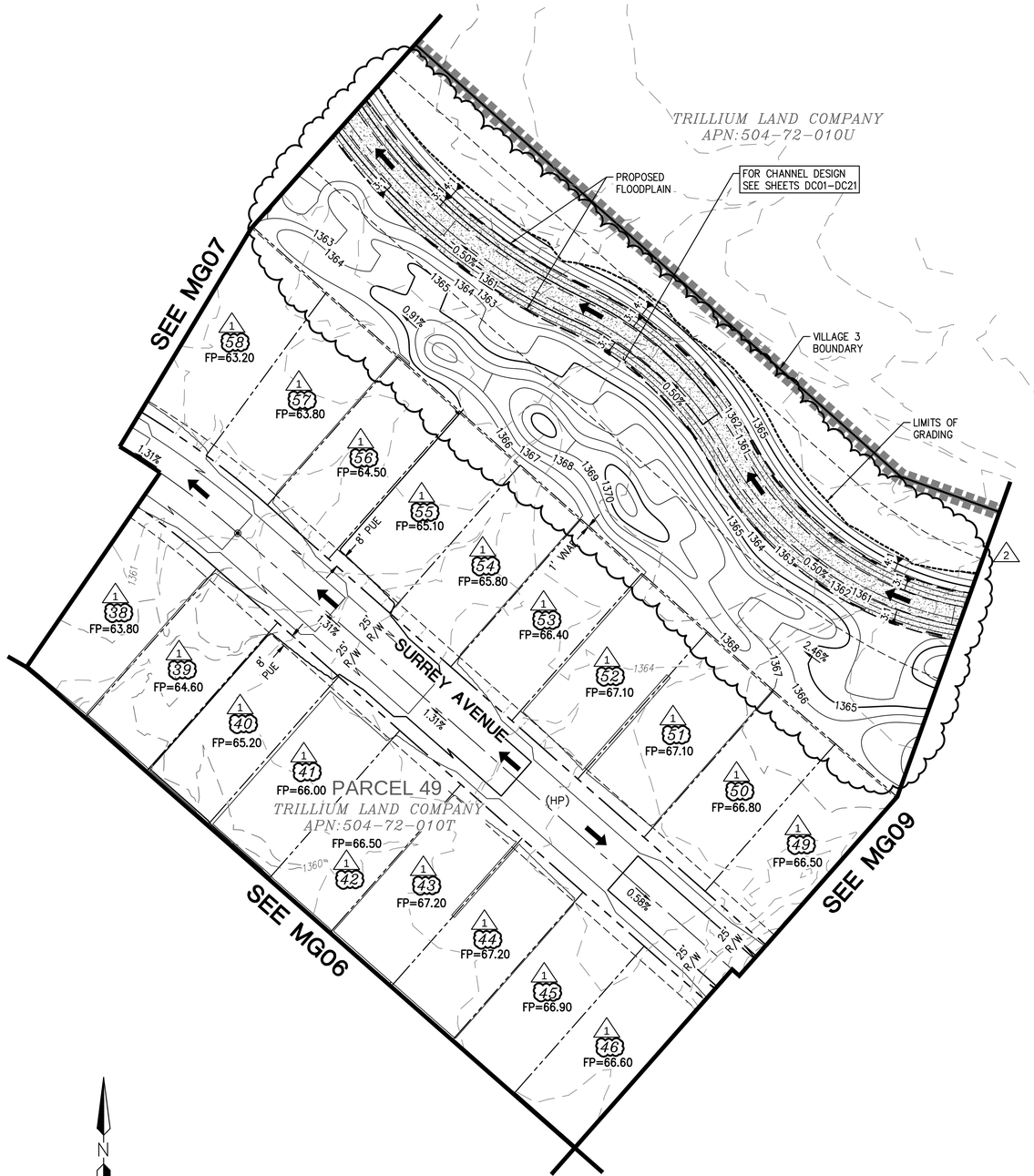

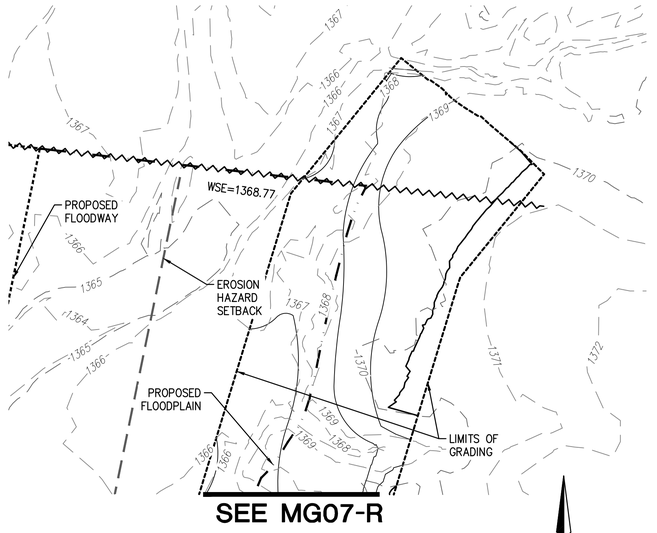

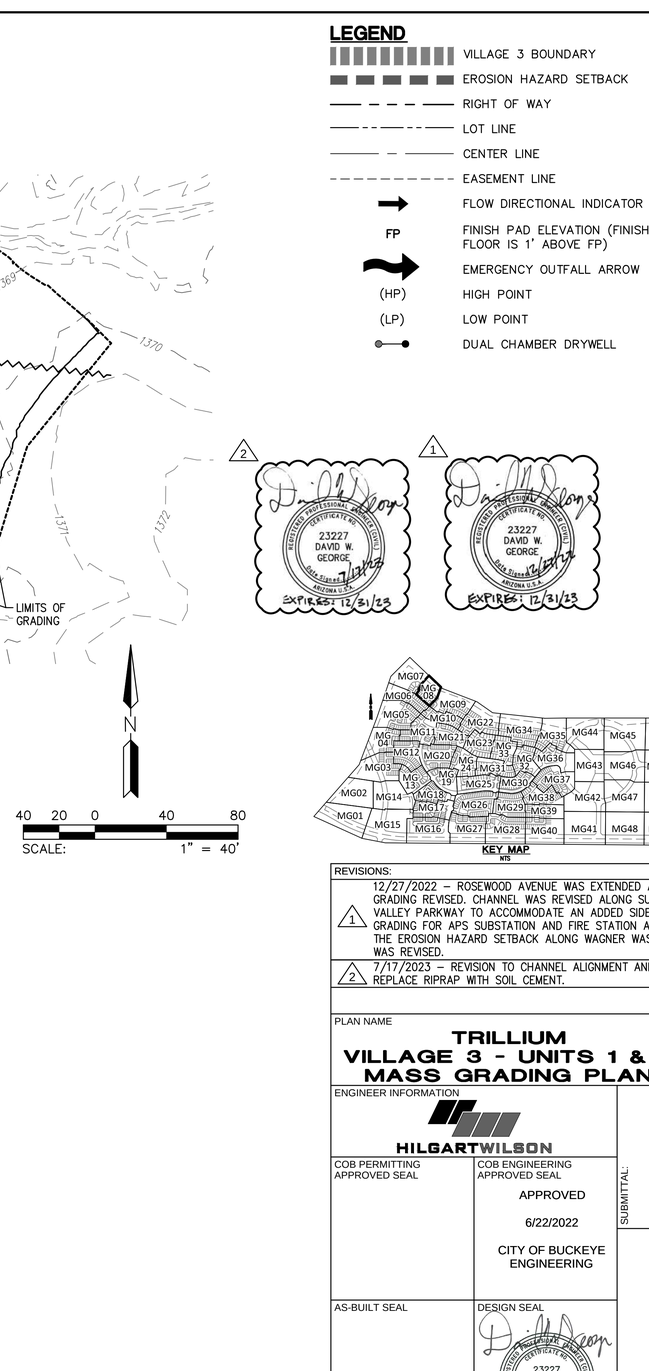

REVISIONS:

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2 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM VILLAGE 3 - UNITS 1 & 2 MASS GRADING PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL	COB ENGINEERING APPROVED SEAL
	APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING
AS-BUILT SEAL	DESIGN SEAL
	23227 DAVID W. GEORGE EXPIRES: 12/31/23
ORIGINAL PLAN DATE: MAY 2022	LATEST REVISION DATE: JULY 2023
PROJECT NUMBER: 1175	SHEET NUMBER: MG08 SHT. 12 OF 90

SUBMITTAL: 3R Submittal

COB PLAN TRACKING #: ENG-21-0220

COB PERMIT #: ENG-21-0220

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GRADING CONSTRUCTION

1 CONSTRUCT TWO CHAMBER DRYWELL; DETAIL PER COB STD DTL B-501. RIM ELEVATION 0.3 FT ABOVE BASIN BOTTOM. A MINIMUM OF 20' FROM HEADWALL. LOCATION NOTED IS TO CENTER OF INTERCEPTOR. 1 EA

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) HIGH POINT
- (LP) LOW POINT
- DUAL CHAMBER DRYWELL

2 DAVID W. GEORGE 23227 REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. STATE OF ARIZONA U.S.A. 7/17/23 EXPIRES: 12/31/23

1 DAVID W. GEORGE 23227 REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. STATE OF ARIZONA U.S.A. 12/27/22 EXPIRES: 12/31/23

REVISIONS:

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2 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL	COB ENGINEERING APPROVED SEAL
	APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING
AS-BUILT SEAL	DESIGN SEAL
	DAVID W. GEORGE 23227 REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. STATE OF ARIZONA U.S.A. 5/10/22 EXPIRES: 12/31/23

SUBMITTAL: 3R Submittal

ORIGINAL PLAN DATE	LATEST REVISION DATE
MAY 2022	JULY 2023
PROJECT NUMBER 1175	SHEET NUMBER SHT. MG09 13 OF 90

COB PLAN TRACKING # ENG-21-0220

COB PERMIT # ENG-21-0220

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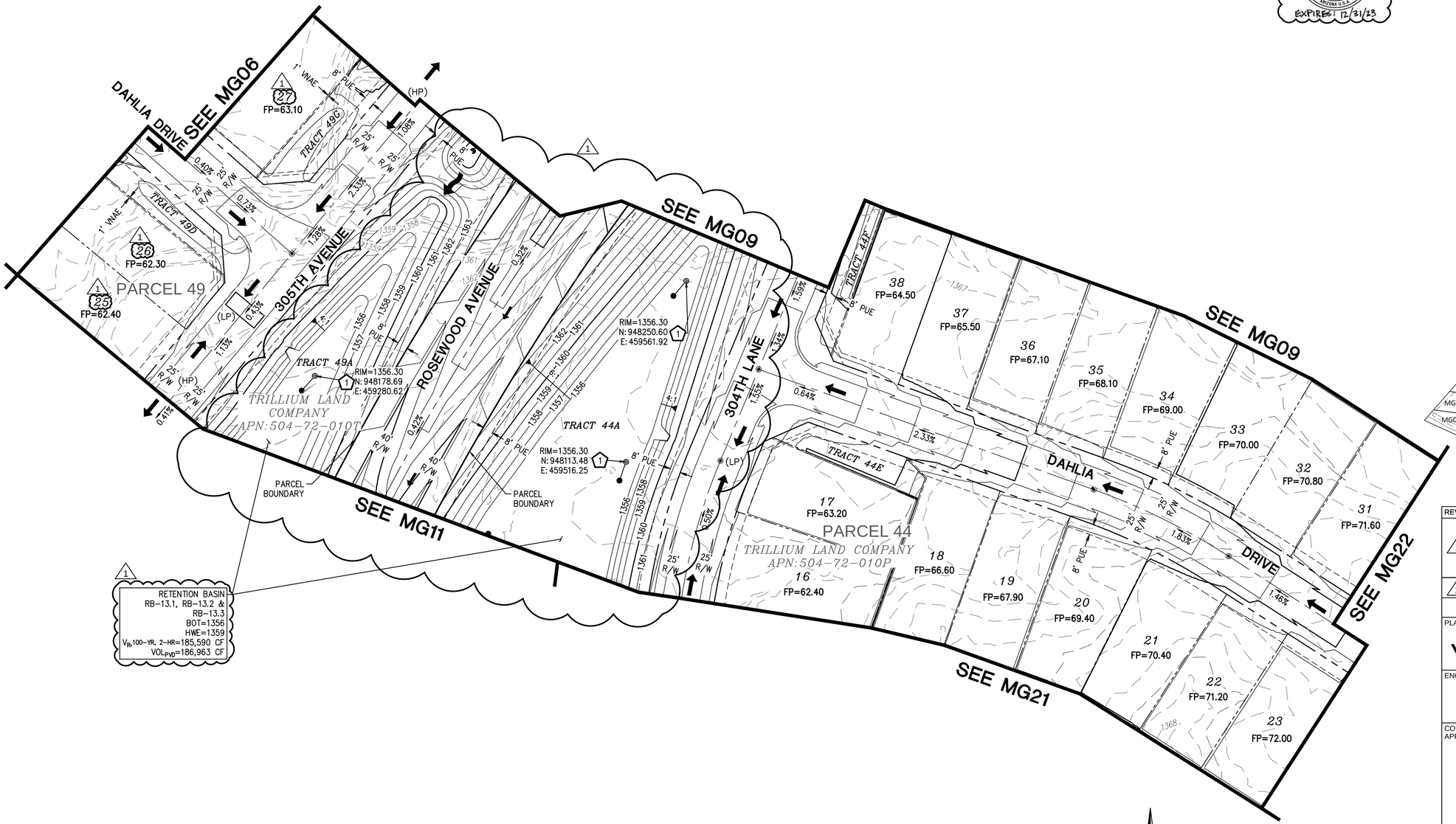

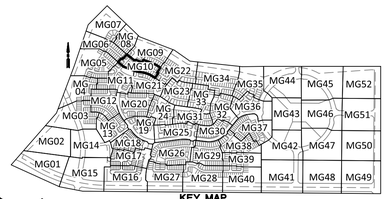

GRADING CONSTRUCTION

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LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
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- (HP) HIGH POINT
- (LP) LOW POINT
- DUAL CHAMBER DRYWELL

REGISTERED PROFESSIONAL ENGINEER (CIVIL) CERTIFICATE NO. 23227 DAVID W. GEORGE DATE SIGNED 12/31/23 ARIZONA U.S.A. EXPIRES: 12/31/23

REVISIONS:

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2 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM VILLAGE 3 - UNITS 1 & 2 MASS GRADING PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL	COB ENGINEERING APPROVED SEAL
	APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING
AS-BUILT SEAL	DESIGN SEAL (REGISTERED PROFESSIONAL ENGINEER (CIVIL) CERTIFICATE NO. 23227 DAVID W. GEORGE DATE SIGNED 12/31/23 ARIZONA U.S.A. EXPIRES: 12/31/23)
ORIGINAL PLAN DATE: MAY 2022	LATEST REVISION DATE: JULY 2023
PROJECT NUMBER: 1175	SHEET NUMBER SHT.: MG10 14 OF 90

SUBMITTAL: 3R Submittal

COB PLAN TRACKING #: ENG-21-0220

COB PERMIT #: ENG-21-0220

SCALE: 1" = 40' (40 20 0 40 80)

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SEE MG05

SEE MG10

SEE MG04

SEE MG12

SEE MG20

SEE MG21

OAKMONT DRIVE

305TH AVENUE

WINDSOR DRIVE

ROSEWOOD AVENUE

305TH DRIVE

304TH LANE

PARCEL 48
TRILLIUM LAND COMPANY
APN:504-72-010T

PARCEL 49

PARCEL 44

PARCEL 45
TRILLIUM LAND COMPANY
APN:504-72-010P

TRILLIUM LAND COMPANY
APN:504-72-010S

TRACT 48B

TRACT 49C

TRACT 49A

TRACT 44D

TRACT 44B

TRACT 48C

TRACT 48D

TRACT 48E

TRACT 45C

TRACT 45B

PARCEL BOUNDARY

1 VNAE

8' PUE

25' R/W

1 — RIM=1356.30, N: 948045.53, E: 459187.86; EOE=60.63

1 — RIM=1356.30, N: 948046.33, E: 459403.95

1 — RIM=1356.30, N: 947952.67, E: 459354.47; EOE=60.33

1 — RIM=1356.30, N: 947837.01, E: 459305.06; EOE=60.00

1 — RIM=1354.30, N: 947686.82, E: 459037.10; EOE=58.00

1 RETENTION BASIN RB-13.1, RB-13.2 & RB-13.3
BOT=1356
HWE=1359
$V_{Rb100-YR, 2-HR}$=185,590 CF
VOL_{PVD}=186,963 CF

1 RETENTION BASIN RB-17A
BOT=1354
HWE=1357
$V_{Rb100-YR, 2-HR}$=20,350 CF
VOL_{PVD}=20,603 CF

24	FP=62.40	23	FP=62.30
1	FP=62.00	2	FP=61.70
3	FP=60.70	4	FP=59.70
5	FP=58.80	65	FP=57.90
64	FP=58.90	56	FP=53.90
57	FP=54.90	58	FP=56.40
59	FP=57.40	60	FP=58.40
61	FP=58.80	62	FP=59.00
63	FP=59.10	48	FP=53.10
47	FP=54.04	46	FP=55.70
45	FP=56.70	44	FP=57.70
43	FP=58.70	8	FP=59.10
7	FP=58.70	6	FP=59.00
44	FP=61.00	45	FP=60.70
46	FP=60.20	47	FP=62.10
43	FP=61.20	42	FP=61.80

OAKMONT DRIVE 1.50% 0.87%
305TH AVENUE 1.69%
WINDSOR DRIVE 2.68% 0.48% 0.28%
ROSEWOOD AVENUE 2.39% 0.45% 0.50% 1.40%
305TH DRIVE 0.59% 0.78%
304TH LANE 1.55% 0.55%
WINDSOR DRIVE 1.15% 2.13%
WINDSOR DRIVE 1.20% 0.83%
0.30% 0.66% 0.47% 0.41% 0.70% 0.57% 0.85% 0.40% 0.50% 1.02% 0.82% 0.63% 0.50% 1.34% 0.60% 0.65% 1.19% 0.57%

(HP) (LP)

6:1 5:1 4:1 7:1

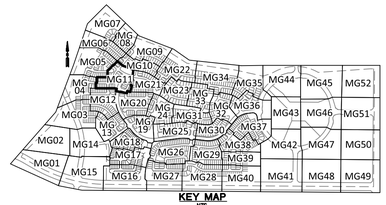
1351 1350 1349 1352 1358 1356 1357 1359 1355 1354 1362 1361

GRADING CONSTRUCTION

1 CONSTRUCT TWO CHAMBER DRYWELL; DETAIL PER COB STD DTL B-501. RIM ELEVATION 0.3 FT ABOVE BASIN BOTTOM. A MINIMUM OF 20' FROM HEADWALL. LOCATION NOTED IS TO CENTER OF INTERCEPTOR. 5 EA

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) HIGH POINT
- (LP) LOW POINT
- DUAL CHAMBER DRYWELL



KEY MAP
NTS

REVISIONS:

1 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION AND FIRE STATION ADDED. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

ENGINEER INFORMATION
HILGARTWILSON

COB PERMITTING APPROVED SEAL

COB ENGINEERING APPROVED SEAL
APPROVED
6/22/2022
CITY OF BUCKEYE ENGINEERING

AS-BUILT SEAL

DESIGN SEAL
23227 DAVID W. GEORGE
REGISTERED PROFESSIONAL ENGINEER (CIVIL) CERTIFICATE NO.
DATE SIGNED 12/27/22
ARIZONA U.S.A.
EXPIRES: 12/31/23

SUBMITTAL: 3R Submittal

ORIGINAL PLAN DATE	LATEST REVISION DATE
MAY 2022	JULY 2023
PROJECT NUMBER	SHEET NUMBER
1175	MG11 15 OF 90

COB PLAN TRACKING # ENG-21-0220
COB PERMIT # ENG-21-0220

SCALE: 1" = 40'

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CALL 811 or click Arizona811.COM

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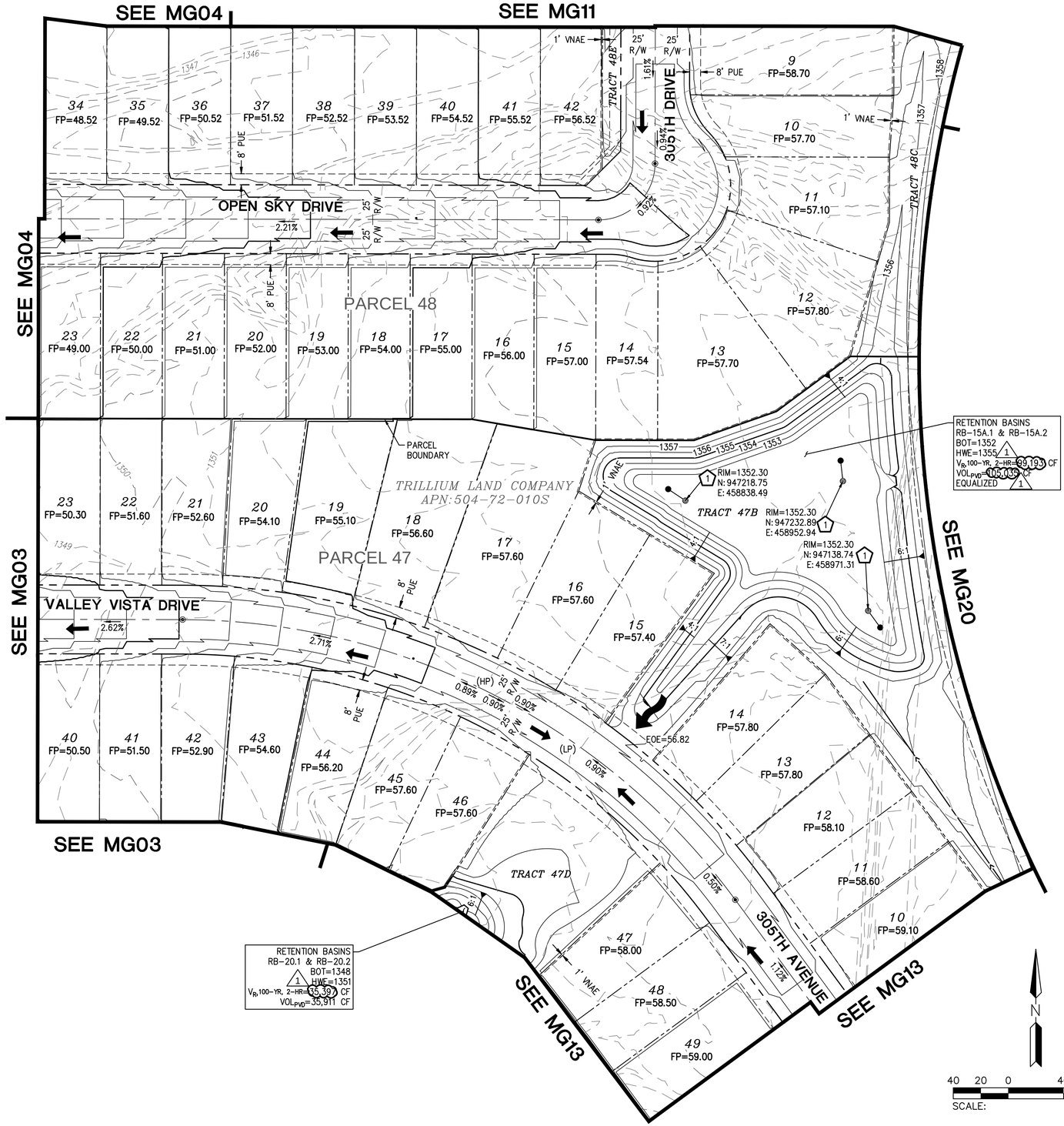

KEY MAP
NTS

1 — 12/27/2022 — ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION AND FIRE STATION ADDED. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 — 7/17/2023 — REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

1

REGISTERED PROFESSIONAL ENGINEER
CERTIFICATE NO.
23227
DAVID W. GEORGE
STATE OF ARIZONA U.S.A.
EXPIRES: 12/31/23

GRADING CONSTRUCTION

1 CONSTRUCT TWO CHAMBER DRYWELL; DETAIL PER COB STD DTL B-501. RIM ELEVATION 0.3 FT ABOVE BASIN BOTTOM. A MINIMUM OF 20' FROM HEADWALL. LOCATION NOTED IS TO CENTER OF INTERCEPTOR. 3 EA

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) HIGH POINT
- (LP) LOW POINT
- DUAL CHAMBER DRYWELL

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL	COB ENGINEERING APPROVED SEAL
	APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING
AS-BUILT SEAL	DESIGN SEAL
	REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. 23227 DAVID W. GEORGE STATE OF ARIZONA U.S.A. EXPIRES: 12/31/23

SUBMITTAL: 3R Submittal

ORIGINAL PLAN DATE	LATEST REVISION DATE
MAY 2022	JULY 2023
PROJECT NUMBER 1175	SHEET NUMBER MG12 SHT. 16 OF 90

COB PLAN TRACKING # ENG-21-0220
COB PERMIT # ENG-21-0220

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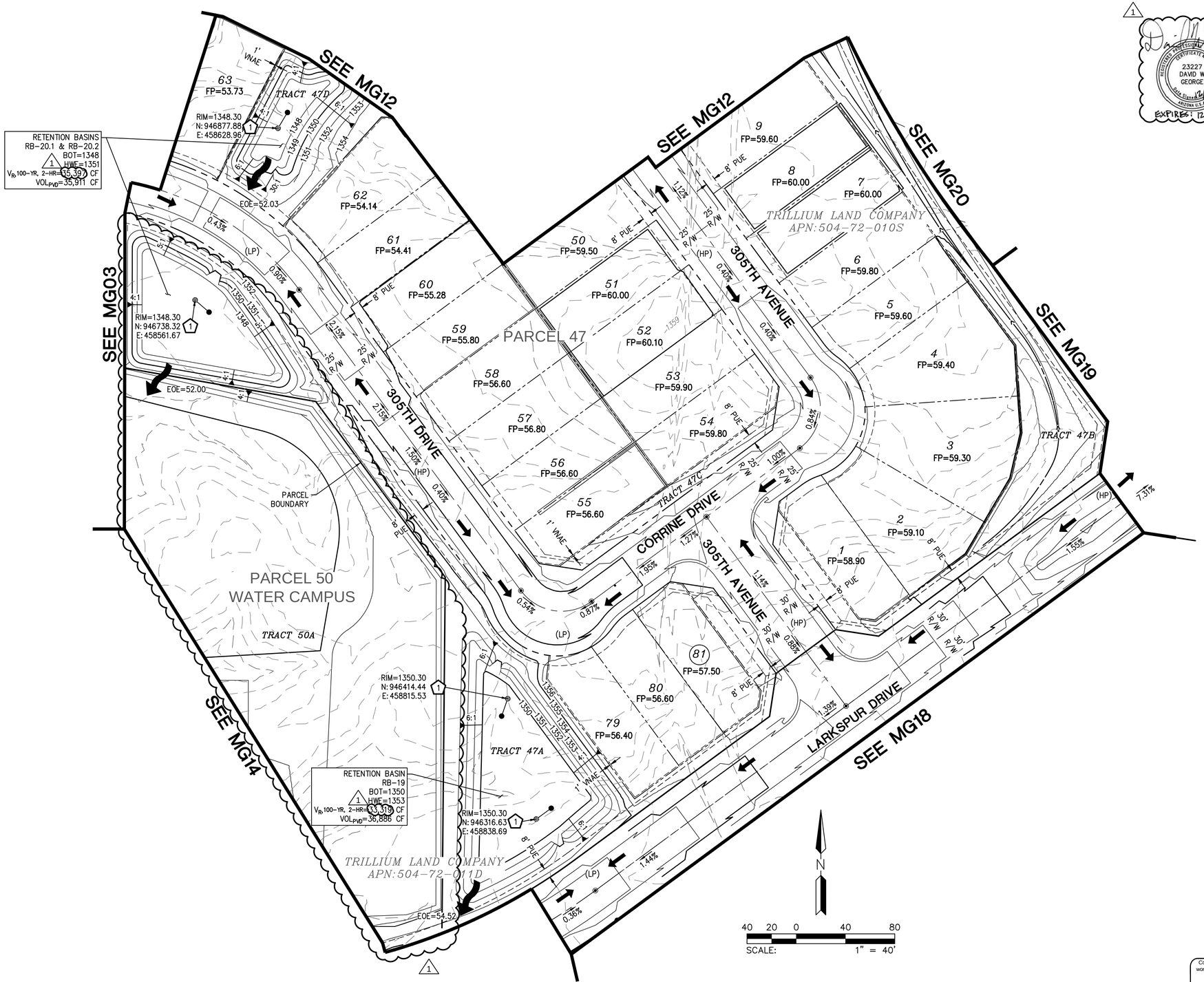

GRADING CONSTRUCTION

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1

REGISTERED PROFESSIONAL ENGINEER (CIVIL) CERTIFICATE NO. 23227 DAVID W. GEORGE STATE OF ARIZONA U.S.A. 12/27/22
EXPIRES: 12/31/23

LEGEND

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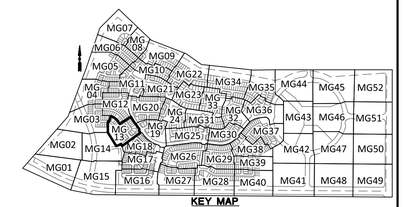
- DUAL CHAMBER DRYWELL



KEY MAP
NTS

REVISIONS:

1	12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION AND FIRE STATION ADDED. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.
2	7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL	COB ENGINEERING APPROVED SEAL: APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING
AS-BUILT SEAL	DESIGN SEAL: REGISTERED PROFESSIONAL ENGINEER (CIVIL) CERTIFICATE NO. 23227 DAVID W. GEORGE STATE OF ARIZONA U.S.A. EXPIRES: 12/31/23
ORIGINAL PLAN DATE: MAY 2022	LATEST REVISION DATE: JULY 2023
PROJECT NUMBER: 1175	SHEET NUMBER SHT.: MG13 17 OF 90

SUBMITTAL: 3R Submittal

COB PLAN TRACKING #: ENG-21-0220

COB PERMIT #: ENG-21-0220

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SEE MG03

SEE MG02

SEE MG13

SEE MG18

SEE MG17

SEE MG15

TRILLIUM LAND COMPANY
APN:504-72-010S

PARCEL 50
WATER CAMPUS

TRACT 50A

PARCEL 53
MIXED USE

TRACT 53A

PARCEL 51
APS SUBSTATION

TRACT 51A

TRILLIUM LAND COMPANY
APN:504-72-011D

PARCEL 46

TRACT 46B

JOHNSON ROAD

LARKSPUR DRIVE

305TH DRIVE

PARCEL BOUNDARY

LIMITS OF GRADING

EXTREME CAUTION WHILE GRADING IN THIS AREA DUE TO POWER LINES

155' TRANSMISSION LINE
R/W PER DOC.
88-111064 AND
2004-837375 M.C.R.

8' PUE

60' R/W

75' R/W

30' R/W

50' R/W

25' R/W

2.57%

0.89%

0.33%

0.76%

2.68%

2.13%

1.38%

0.63%

0.54%

0.90%

1.51%

3.30%

0.67%

1.56%

(HP)

(LP)

RIM=1344.30
N: 946016.70
E: 458323.90

RETENTION BASIN
RB-0FF7
BOT=1344
HWE=1347
$V_{R\,100\text{-}YR,\ 2\text{-}HR}$=19,921 CF
VOL_{PVD}=34,542 CF

RETENTION BASIN
RB-22
BOT=1350
HWE=1353 1
$V_{R\,100\text{-}YR,\ 2\text{-}HR}$=40,069 CF
VOL_{PVD}=42,184 CF
1

EOE=54.52

GRADING CONSTRUCTION

1 CONSTRUCT TWO CHAMBER DRYWELL; DETAIL PER COB STD DTL B-501. RIM ELEVATION 0.3 FT ABOVE BASIN BOTTOM. A MINIMUM OF 20' FROM HEADWALL. LOCATION NOTED IS TO CENTER OF INTERCEPTOR. 1 EA

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
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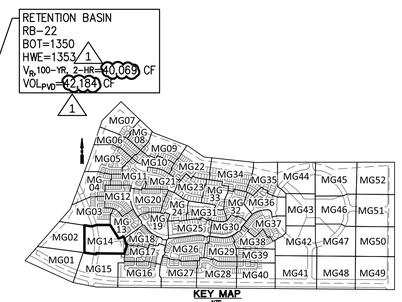
- (HP) — HIGH POINT
- (LP) — LOW POINT
- DUAL CHAMBER DRYWELL

N

40 20 0 40 80

SCALE: 1" = 40'



KEY MAP
NTS

REVISIONS:

1 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION AND FIRE STATION ADDED. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

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PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL

COB ENGINEERING APPROVED SEAL

APPROVED
6/22/2022
CITY OF BUCKEYE
ENGINEERING

AS-BUILT SEAL

DESIGN SEAL

23227
DAVID W.
GEORGE
REGISTERED PROFESSIONAL ENGINEER
CERTIFICATE NO.
STATE OF ARIZONA U.S.A.
EXPIRES: 12/31/23

SUBMITTAL: 3R Submittal

COB PLAN TRACKING # ENG-21-0220

COB PERMIT # ENG-21-0220

ORIGINAL PLAN DATE: MAY 2022

LATEST REVISION DATE: JULY 2023

PROJECT NUMBER: 1175

SHEET NUMBER: MG14 SHT. 18 OF 90

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LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
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- EMERGENCY OUTFALL ARROW
- (HP) HIGH POINT
- (LP) LOW POINT
- DUAL CHAMBER DRYWELL

SEE MG14

SEE MG01

SEE MG16

SEE MG17

PARCEL 53
MIXED USE

PARCEL 51
APS SUBSTATION

TRACT 51A

TRACT 53A

TRACT 46A

PARCEL 52
NEIGHBORHOOD
COMMERCIAL

TRILLIUM LAND COMPANY
APN:504-72-011D

TRACT 52A

TRILLIUM LAND COMPANY
APN:504-01-006D

FIRST AMERICAN TITLE
INSURANCE COMPANY TR 8436
APN:504-72-011C

JOHNSON ROAD

TERAVALIS PARKWAY

305TH DRIVE

WHITE THORN ACACIA

PARCEL BOUNDARY

VILLAGE 3 BOUNDARY

LIMITS OF GRADING

155' TRANSMISSION LINE R/W PER DOC. 88-111064 AND 2004-837375 M.C.R.

WAPA ELECTRICAL TOWER 0-3

FOR CHANNEL DESIGN SEE SHEETS DC01-DC21

PROPOSED FLOODPLAIN

8' PUE

75' R/W

60' R/W

100' R/W

25' R/W

RETENTION BASIN
RB-OFF7
BOT=1344
HWE=1347
$V_{R\,100-YR,\ 2-HR}$=19,921 CF
VOL_{PVD}=34,542 CF
EOE=47.00
1 RIM=1344.30 N: 945815.26 E: 458323.71

RETENTION BASIN
RB-OFF4
BOT=1334
HWE=1337
V_{R}PRE VS POST=32,342 CF
VOL_{PVD}=33,492 CF
EOE=37.00
1 RIM=1334.30 N: 945515.97 E: 458218.85
1 RIM=1334.30 N: 945465.18 E: 458215.52

STORM WATER CULVERT

RIP-RAP AND BOX CULVERTS TO BE INSTALLED WITH COLLECTOR ROAD

54.51' OFFSITE SLOPE CONSTRUCTION ESMT BY SEPARATE DOC

0.89% 0.65% 1.48% 0.58% 0.76% 1.04% 2.15% 3.36% 0.75%

N

SCALE: 1" = 40'
40 20 0 40 80

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ARIZONA811
CALL 811 or click Arizona811.COM

GRADING CONSTRUCTION

1 CONSTRUCT TWO CHAMBER DRYWELL; DETAIL PER COB STD DTL B-501. RIM ELEVATION 0.3 FT ABOVE BASIN BOTTOM. A MINIMUM OF 20' FROM HEADWALL, LOCATION NOTED IS TO CENTER OF INTERCEPTOR. (3 EA)

KEY MAP
NTS

MG07	MG08	MG09										
MG05	MG06	MG10	MG22	MG34	MG35	MG44	MG45	MG52				
MG04	MG11	MG21	MG23	MG33								
MG03	MG12	MG20	MG24	MG31	MG36	MG43	MG46	MG51				
MG02	MG13	MG19	MG25	MG30	MG37							
MG01	MG14	MG18	MG26	MG29	MG38	MG42	MG47	MG50				
	MG15	MG17	MG27	MG28	MG39							
		MG16		MG40	MG41	MG48	MG49					

REVISIONS:

1 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION AND FIRE STATION ADDED. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

ENGINEER INFORMATION
HILGARTWILSON

COB PERMITTING APPROVED SEAL

COB ENGINEERING APPROVED SEAL
APPROVED
6/22/2022
CITY OF BUCKEYE ENGINEERING

SUBMITTAL: 3R Submittal

AS-BUILT SEAL

DESIGN SEAL
23227 DAVID W. GEORGE
REGISTERED PROFESSIONAL ENGINEER
CERTIFICATE NO.
STATE OF ARIZONA U.S.A.
EXPIRES: 12/31/23

COB PLAN TRACKING # ENG-21-0220

COB PERMIT # ENG-21-0220

ORIGINAL PLAN DATE: MAY 2022

LATEST REVISION DATE: JULY 2023

PROJECT NUMBER: 1175

SHEET NUMBER: MG15 SHT. 19 OF 90

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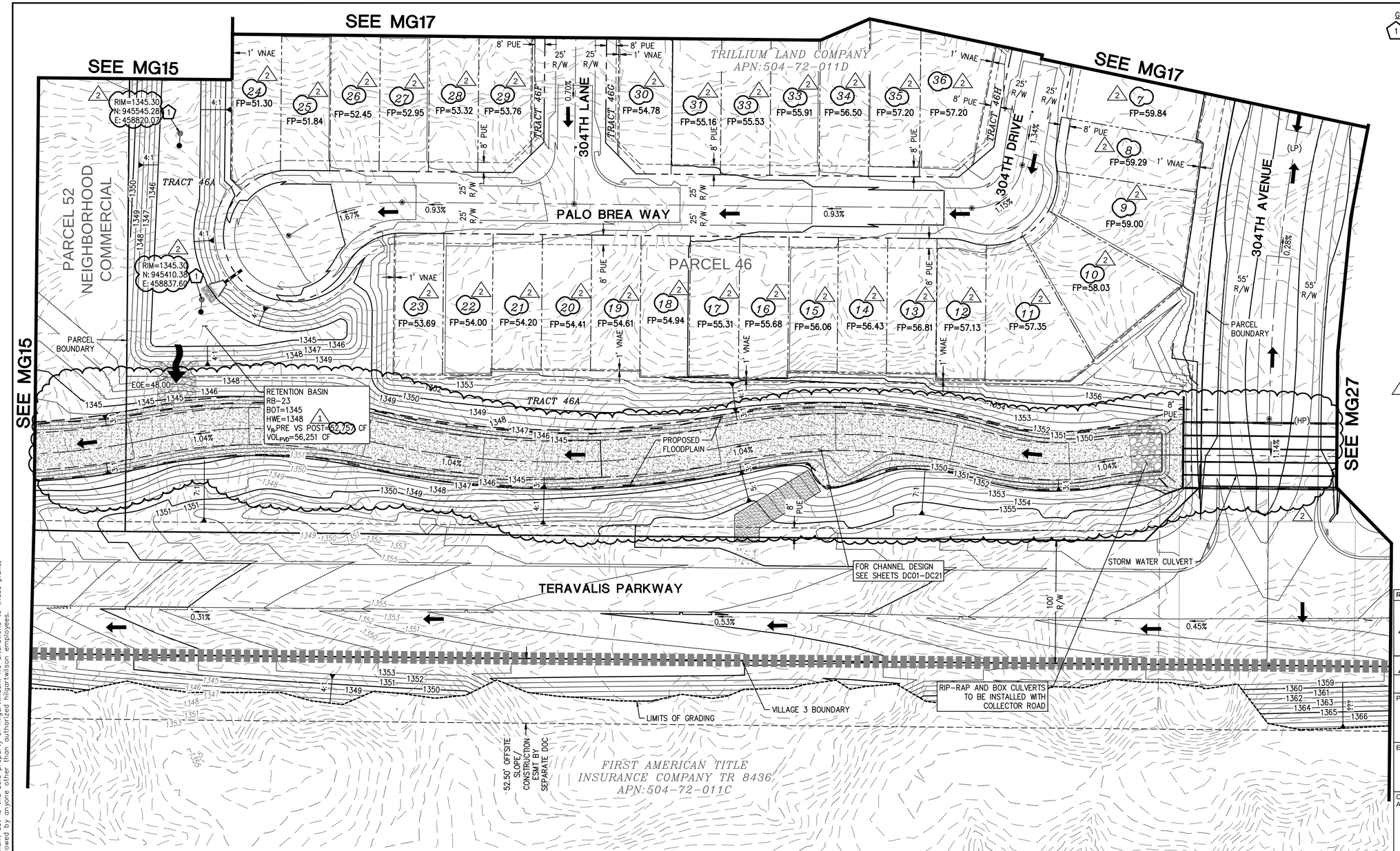

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LEGEND

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- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) — HIGH POINT
- (LP) — LOW POINT
- DUAL CHAMBER DRYWELL

1

REGISTERED PROFESSIONAL ENGINEER (CIVIL) CERTIFICATE NO. 23227 DAVID W. GEORGE STATE OF ARIZONA U.S.A. EXPIRES: 12/31/23

N

40 20 0 40 80

SCALE: 1" = 40'

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PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

ENGINEER INFORMATION

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	APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING
AS-BUILT SEAL	DESIGN SEAL

2

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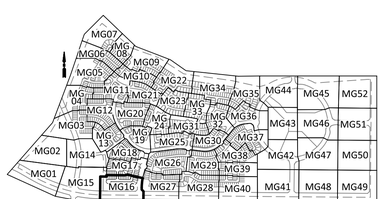
SUBMITTAL: 3R Submittal

COB PLAN TRACKING # ENG-21-0220

COB PERMIT # ENG-21-0220



KEY MAP
NTS

ORIGINAL PLAN DATE	LATEST REVISION DATE
MAY 2022	JULY 2023
PROJECT NUMBER	SHEET NUMBER
1175	MG16 20 OF 90

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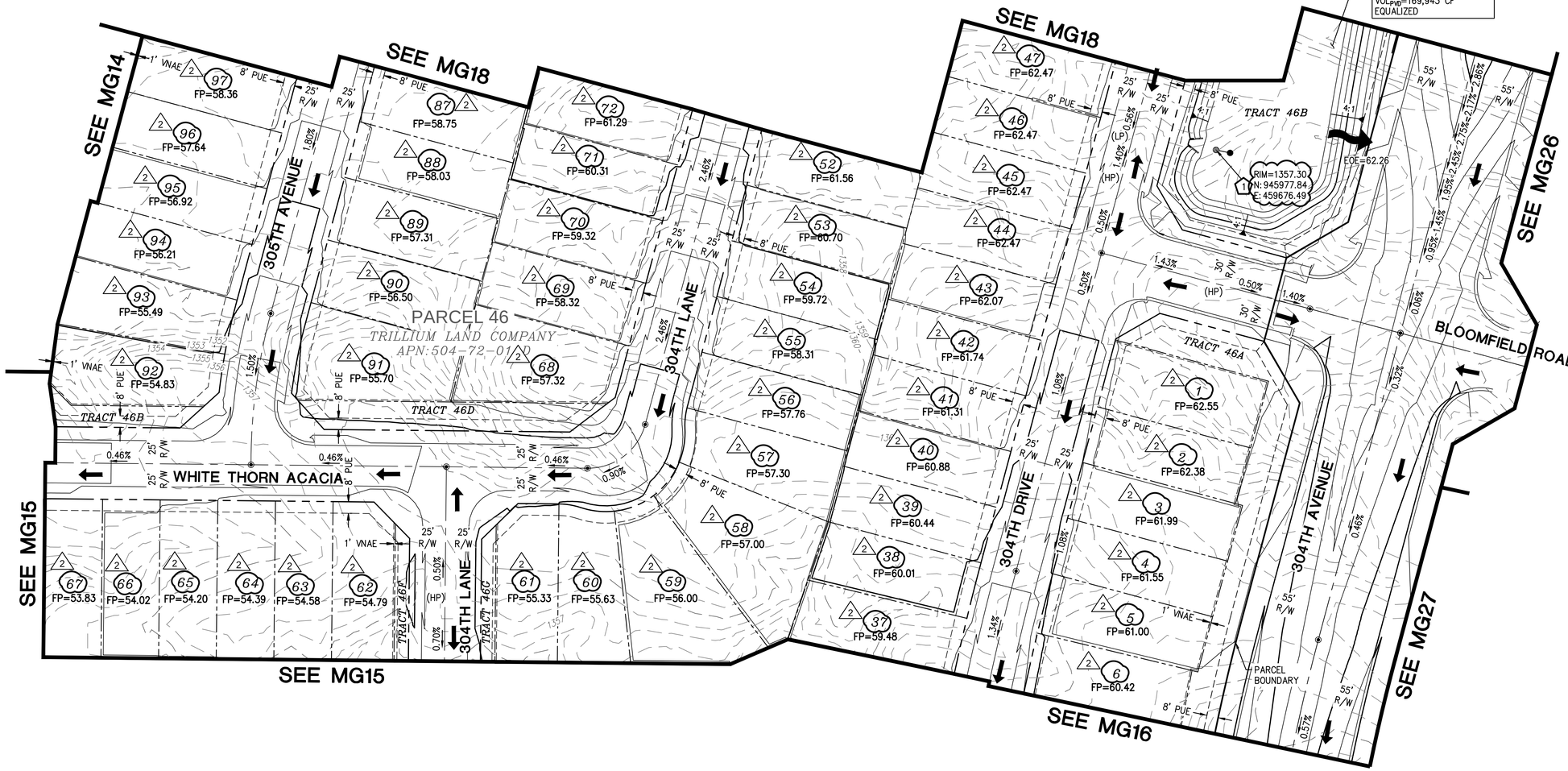
RETENTION BASINS
RB-3.1 & RB-3.2
BOT=1357
HWE=1360 (1)
V_R PRE VS POST=78,514 CF
VOL_{PND}=169,943 CF
EQUALIZED



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N

40 20 0 40 80

SCALE: 1" = 40'

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VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

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	APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING
AS-BUILT SEAL	DESIGN SEAL
	23227 DAVID W. GEORGE EXPIRES: 12/31/23
ORIGINAL PLAN DATE: MAY 2022	LATEST REVISION DATE: JULY 2023
PROJECT NUMBER: 1175	SHEET NUMBER: MG17 SHT. 21 OF 90

SUBMITTAL: 3R Submittal

COB PLAN TRACKING # ENG-21-0220

COB PERMIT # ENG-21-0220

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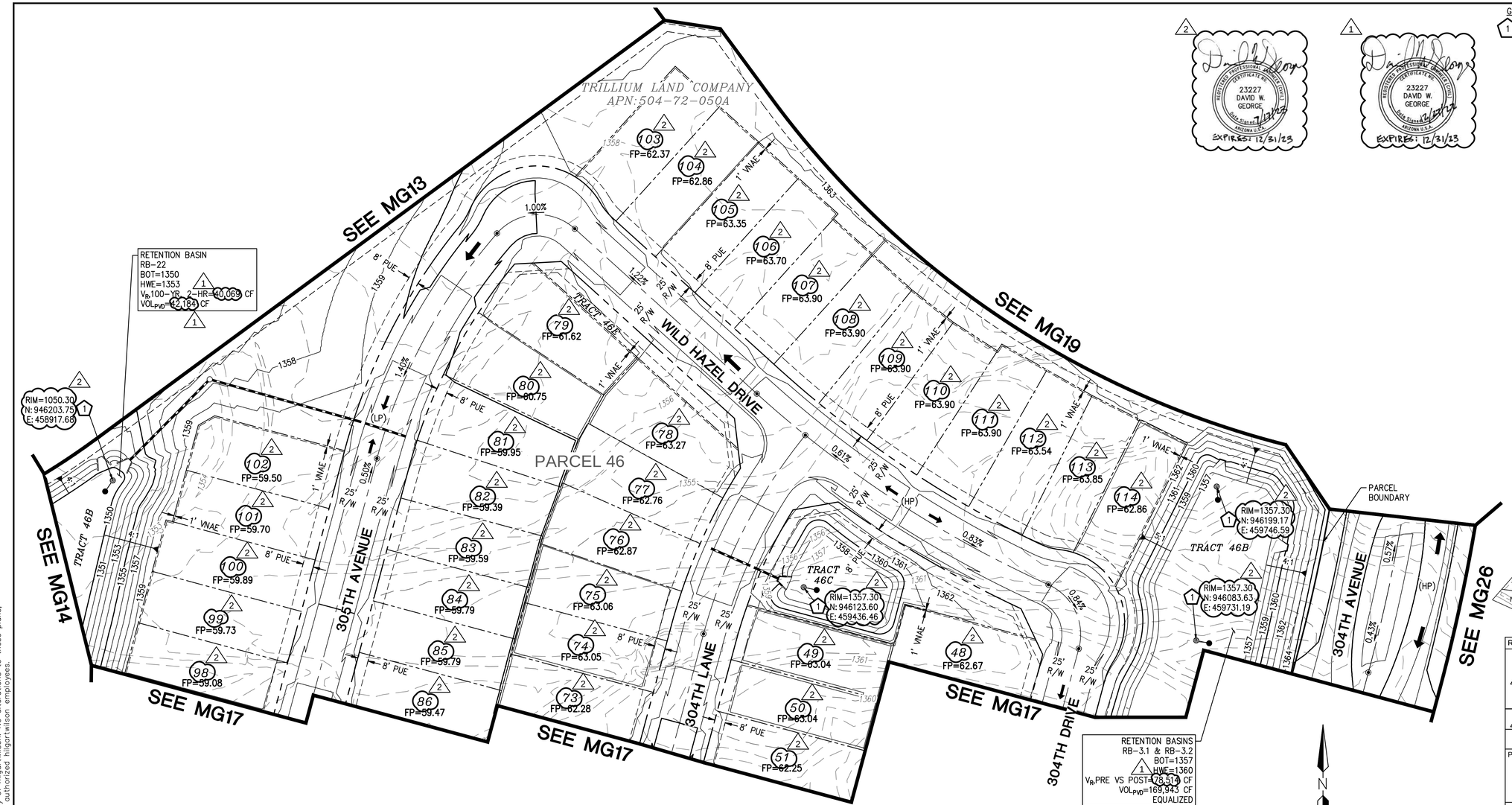

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LEGEND

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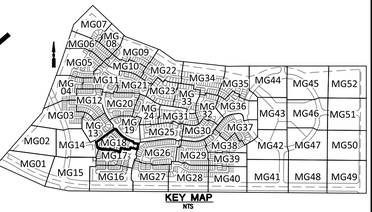

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VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

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AS-BUILT SEAL	DESIGN SEAL

REGISTERED PROFESSIONAL ENGINEER — CERTIFICATE NO. 23227 — DAVID W. GEORGE — ARIZONA U.S.A. — EXPIRES: 12/31/23

ORIGINAL PLAN DATE	LATEST REVISION DATE
MAY 2022	JULY 2023
PROJECT NUMBER 1175	SHEET NUMBER MG18 SHT. 22 OF 90

SUBMITTAL: 3R Submittal

COB PLAN TRACKING # ENG-21-0220

COB PERMIT # ENG-21-0220

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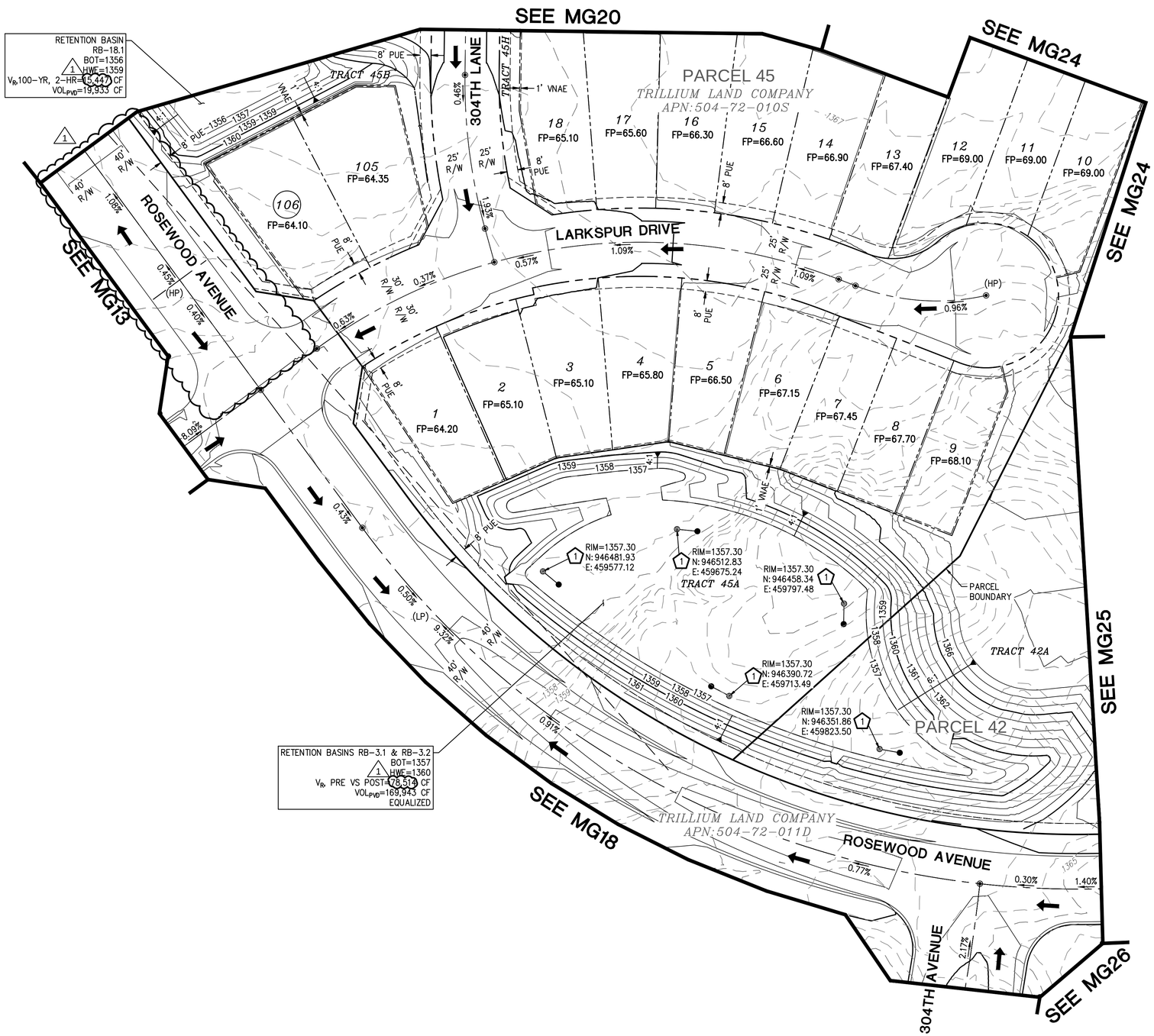


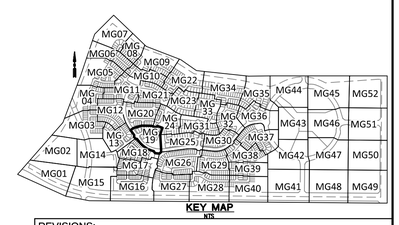
GRADING CONSTRUCTION

1 CONSTRUCT TWO CHAMBER DRYWELL; DETAIL PER COB STD DTL B-501. RIM ELEVATION 0.3 FT ABOVE BASIN BOTTOM. A MINIMUM OF 20' FROM HEADWALL. LOCATION NOTED IS TO CENTER OF INTERCEPTOR. — 5 EA

REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. 23227 DAVID W. GEORGE STATE OF ARIZONA U.S.A. — EXPIRES: 12/31/23

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) — HIGH POINT
- (LP) — LOW POINT
- DUAL CHAMBER DRYWELL



KEY MAP
NTS

REVISIONS:

1 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION AND FIRE STATION ADDED. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL	COB ENGINEERING APPROVED SEAL
	APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING
AS-BUILT SEAL	DESIGN SEAL
	REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. 23227 DAVID W. GEORGE STATE OF ARIZONA U.S.A. EXPIRES: 12/31/23

SUBMITTAL: 3R Submittal

COB PLAN TRACKING # ENG-21-0220

COB PERMIT # ENG-21-0220

ORIGINAL PLAN DATE	LATEST REVISION DATE
MAY 2022	JULY 2023
PROJECT NUMBER 1175	SHEET NUMBER MG19 SHT. 23 OF 90

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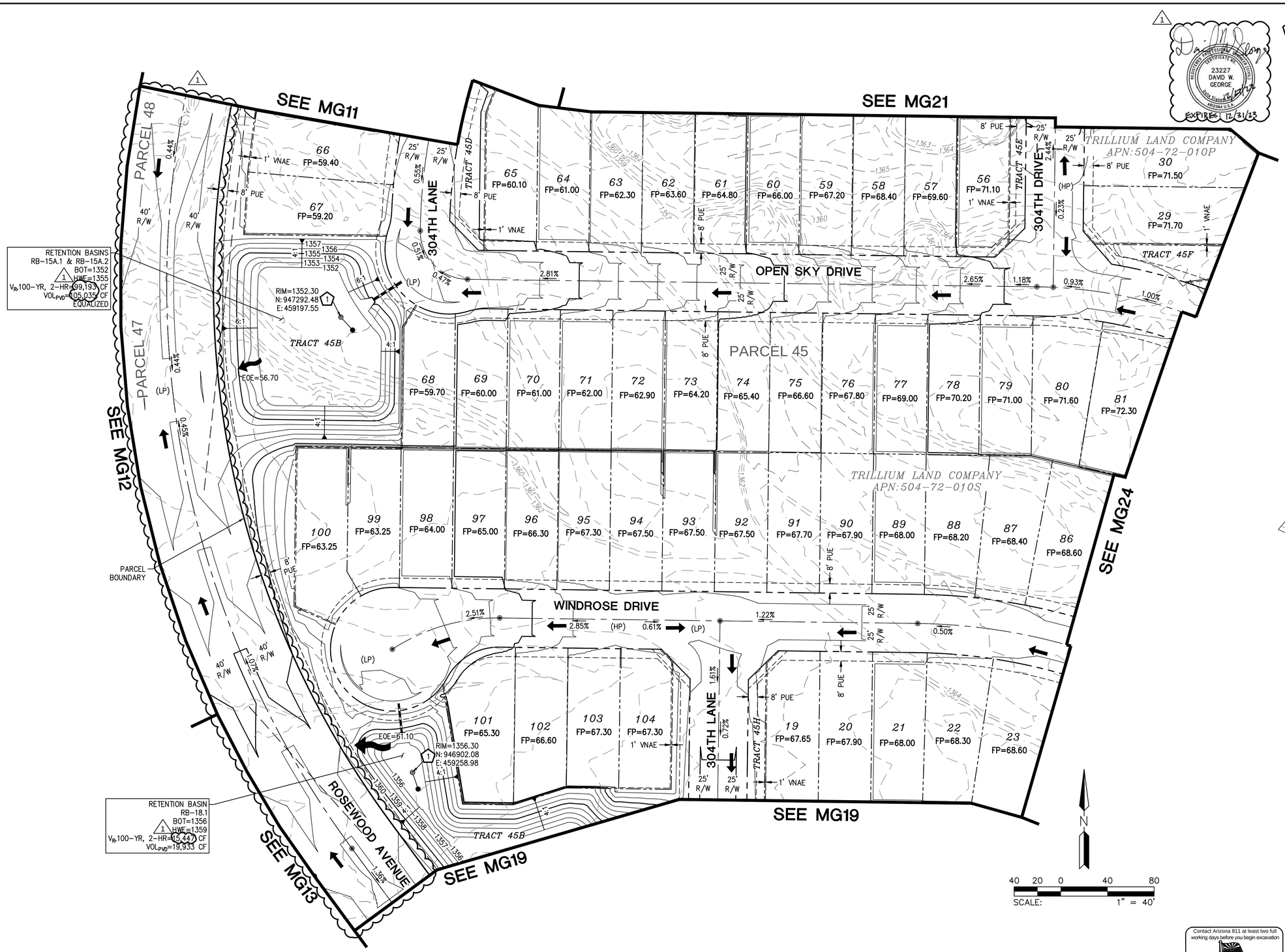
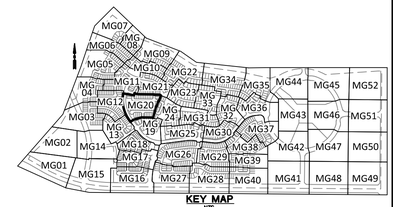


GRADING CONSTRUCTION

1 CONSTRUCT TWO CHAMBER DRYWELL; DETAIL PER COB STD DTL B-501. RIM ELEVATION 0.3 FT ABOVE BASIN BOTTOM. A MINIMUM OF 20' FROM HEADWALL, LOCATION NOTED IS TO CENTER OF INTERCEPTOR. 2 EA

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) HIGH POINT
- (LP) LOW POINT
- DUAL CHAMBER DRYWELL



KEY MAP
NTS

REVISIONS:

1 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION AND FIRE STATION ADDED. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL	COB ENGINEERING APPROVED SEAL: APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING
AS-BUILT SEAL	DESIGN SEAL: REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. 23227 DAVID W. GEORGE ARIZONA U.S.A. EXPIRES: 12/31/23
ORIGINAL PLAN DATE: MAY 2022	LATEST REVISION DATE: JULY 2023
PROJECT NUMBER: 1175	SHEET NUMBER: MG20 SHT. 24 OF 90

SUBMITTAL: 3R Submittal

COB PLAN TRACKING # ENG-21-0220

COB PERMIT # ENG-21-0220

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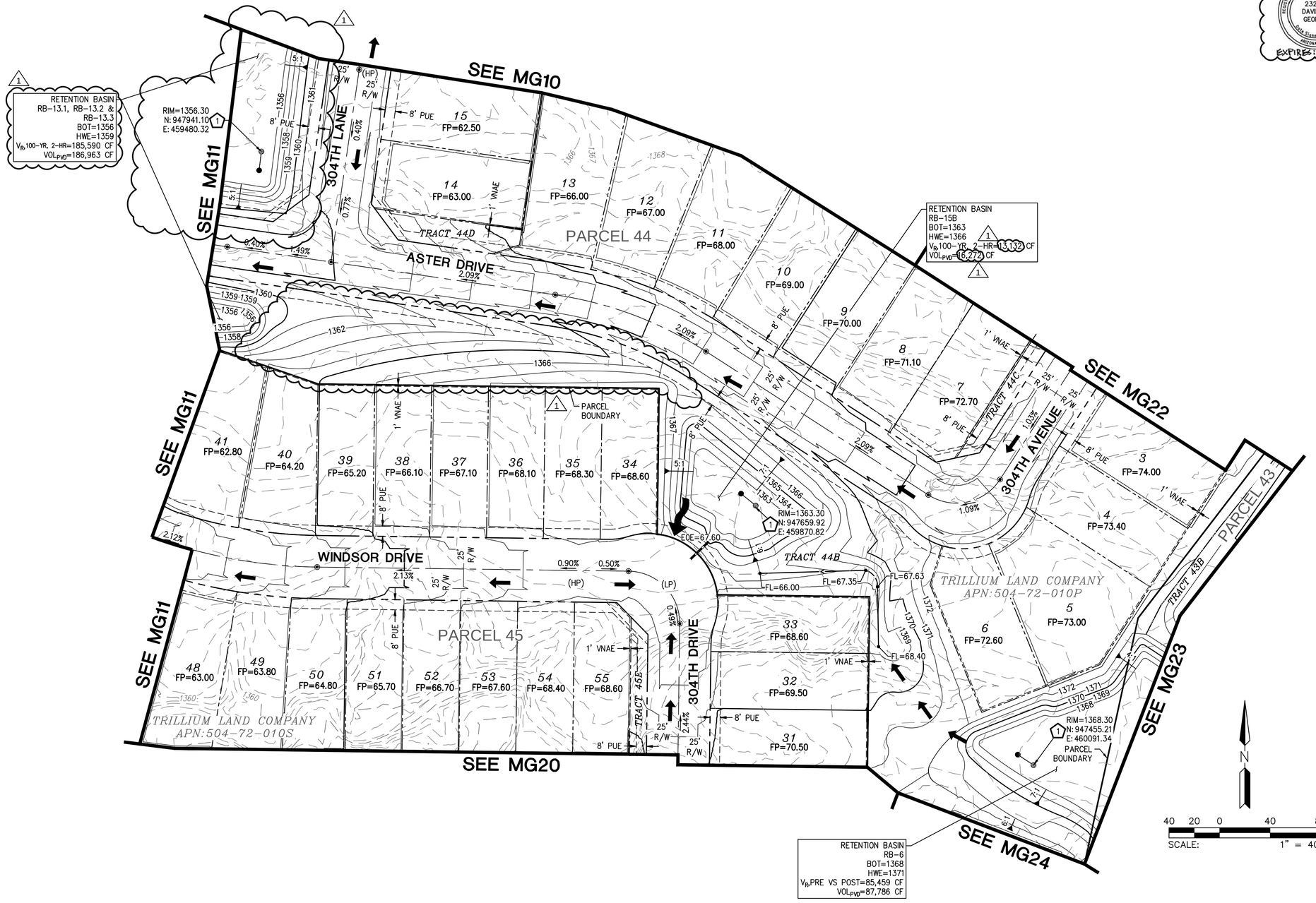


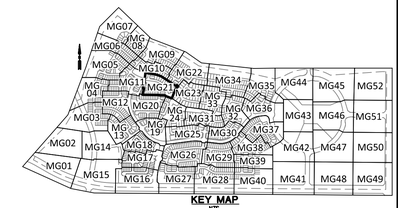
GRADING CONSTRUCTION

1 CONSTRUCT TWO CHAMBER DRYWELL; DETAIL PER COB STD DTL B-501. RIM ELEVATION 0.3 FT ABOVE BASIN BOTTOM. A MINIMUM OF 20' FROM HEADWALL LOCATION NOTED IS TO CENTER OF INTERCEPTOR. 3 EA

REGISTERED PROFESSIONAL ENGINEER
CERTIFICATE NO.
23227
DAVID W.
GEORGE
State Standard
ARIZONA U.S.A.
12/27/22
EXPIRES: 12/31/23

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) HIGH POINT
- (LP) LOW POINT
- DUAL CHAMBER DRYWELL



KEY MAP
NTS

REVISIONS:

1 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION AND FIRE STATION ADDED. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL	COB ENGINEERING APPROVED SEAL
	APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING
AS-BUILT SEAL	DESIGN SEAL
	REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. 23227 DAVID W. GEORGE State Standard ARIZONA U.S.A. EXPIRES: 12/31/23
ORIGINAL PLAN DATE: MAY 2022	LATEST REVISION DATE: JULY 2023
PROJECT NUMBER: 1175	SHEET NUMBER: MG21 SHT. 25 OF 90

SUBMITTAL: 3R Submittal

COB PLAN TRACKING # ENG-21-0220

COB PERMIT # ENG-21-0220

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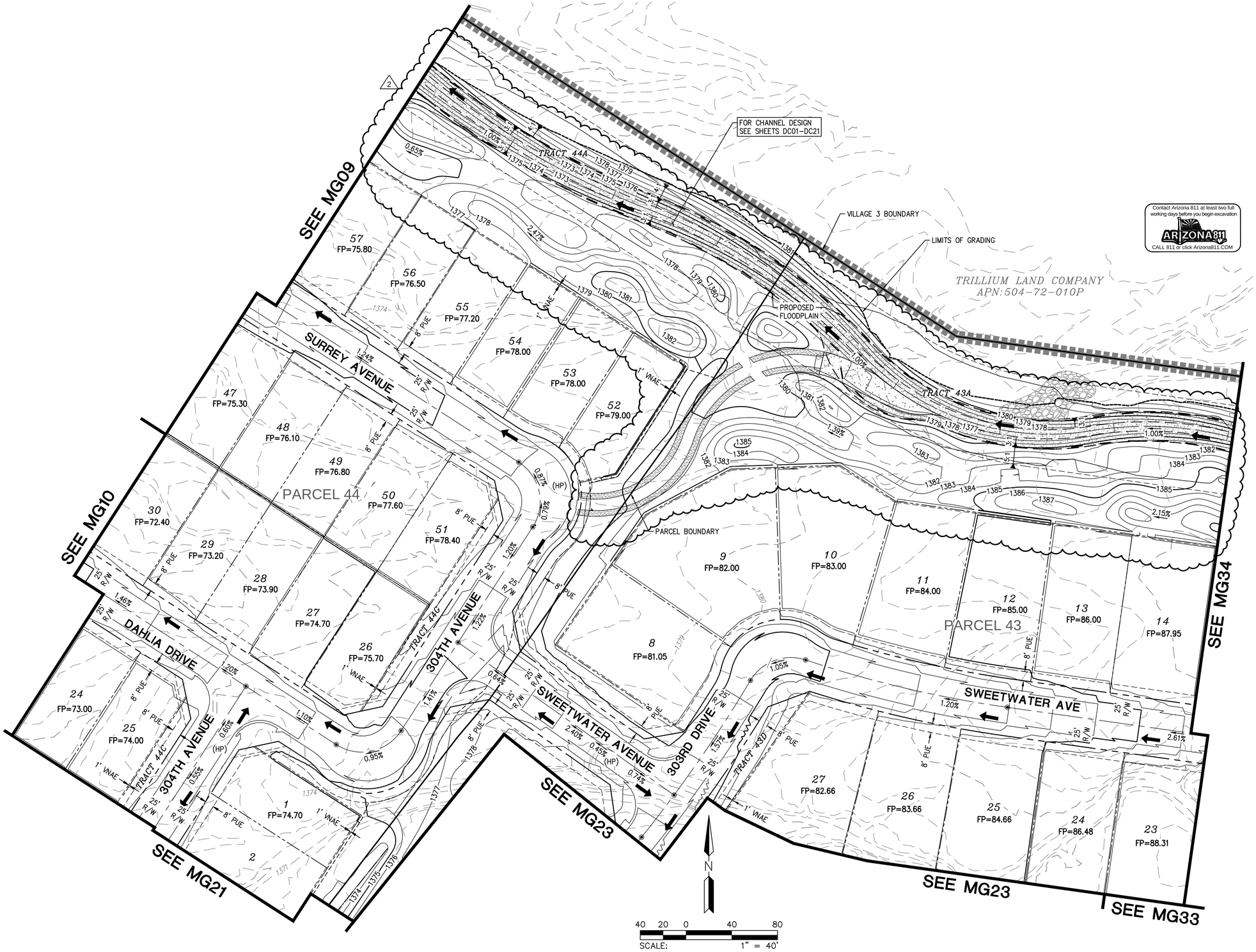

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
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- EMERGENCY OUTFALL ARROW
- (HP) — HIGH POINT
- (LP) — LOW POINT
- DUAL CHAMBER DRYWELL

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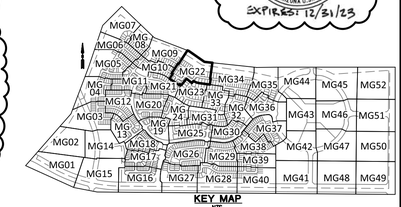
2

REGISTERED PROFESSIONAL ENGINEER
CERTIFICATE NO.
23227
DAVID W. GEORGE
STATE OF ARIZONA U.S.A.
EXPIRES 12/31/23



KEY MAP
NTS

REVISIONS:	
1	12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION AND FIRE STATION ADDED. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.
2	7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

ENGINEER INFORMATION
HILGARTWILSON

COB PERMITTING APPROVED SEAL	COB ENGINEERING APPROVED SEAL: APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING
AS-BUILT SEAL	DESIGN SEAL: REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. 23227 DAVID W. GEORGE STATE OF ARIZONA U.S.A. EXPIRES: 12/31/23
ORIGINAL PLAN DATE: MAY 2022	LATEST REVISION DATE: JULY 2023
PROJECT NUMBER: 1175	SHEET NUMBER SHT.: MG22 26 OF 90

SUBMITTAL: 3R Submittal
COB PLAN TRACKING #: ENG-21-0220
COB PERMIT #: ENG-21-0220

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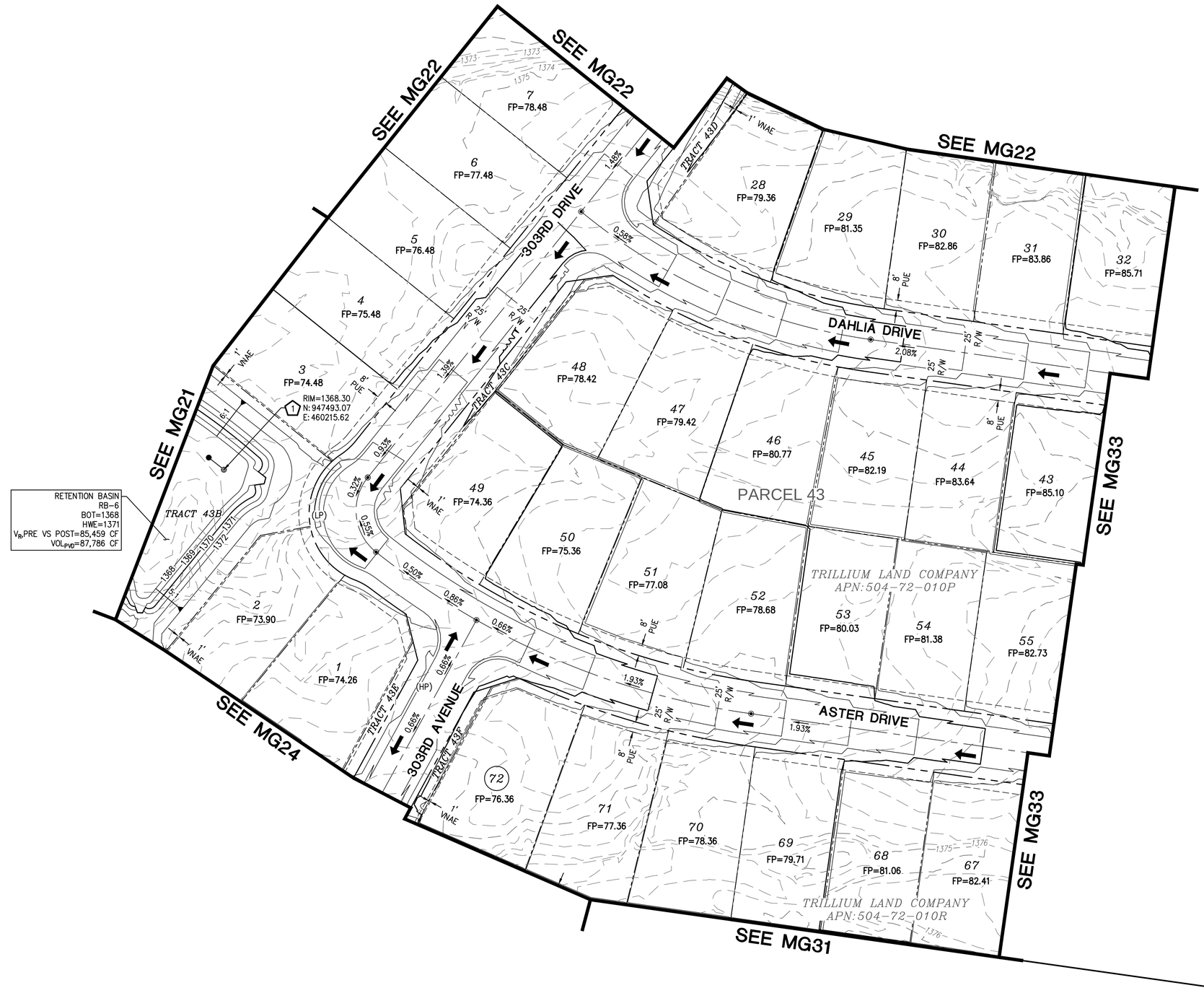
GRADING CONSTRUCTION

1	CONSTRUCT TWO CHAMBER DRYWELL; DETAIL PER COB STD DTL B-501. RIM ELEVATION 0.3 FT ABOVE BASIN BOTTOM. A MINIMUM OF 20' FROM HEADWALL. LOCATION NOTED IS TO CENTER OF INTERCEPTOR.	1	EA



LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
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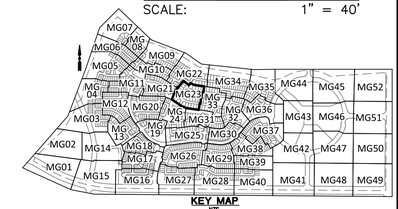
N

40 20 0 40 80
SCALE: 1" = 40'



KEY MAP
NTS

PLAN NAME
TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

ENGINEER INFORMATION
HILGARTWILSON

COB PERMITTING APPROVED SEAL	COB ENGINEERING APPROVED SEAL: APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING
AS-BUILT SEAL	DESIGN SEAL: REGISTERED PROFESSIONAL ENGINEER, CERTIFICATE NO. 23227, DAVID W. GEORGE, ARIZONA U.S.A., EXPIRES: 12/31/23
ORIGINAL PLAN DATE: MAY 2022	LATEST REVISION DATE: JULY 2023
PROJECT NUMBER: 1175	SHEET NUMBER SHT.: MG23 27 OF 90

SUBMITTAL: 3R Submittal
COB PLAN TRACKING #: ENG-21-0220
COB PERMIT #: ENG-21-0220

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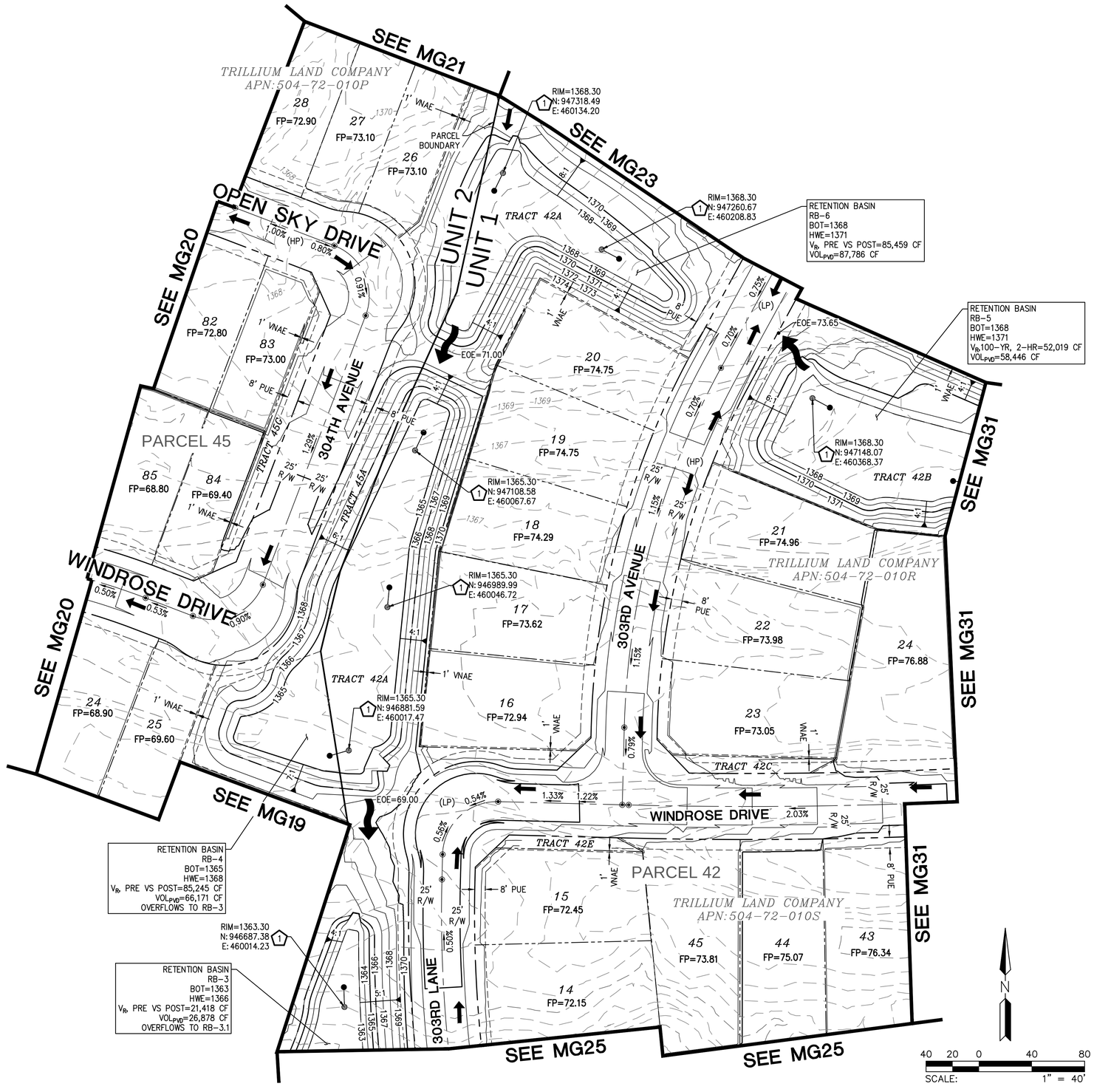

GRADING CONSTRUCTION

1	CONSTRUCT TWO CHAMBER DRYWELL; DETAIL PER COB STD DTL B-501. RIM ELEVATION 0.3 FT ABOVE BASIN BOTTOM. A MINIMUM OF 20' FROM HEADWALL, LOCATION NOTED IS TO CENTER OF INTERCEPTOR.	7	EA

LEGEND

- VILLAGE 3 BOUNDARY
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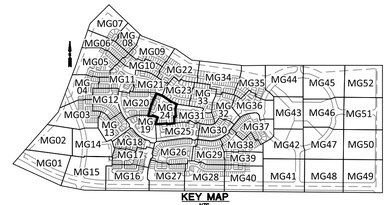

KEY MAP
NTS

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL

COB ENGINEERING APPROVED SEAL

APPROVED
6/22/2022
CITY OF BUCKEYE ENGINEERING

AS-BUILT SEAL

DESIGN SEAL

REGISTERED PROFESSIONAL ENGINEER (CIVIL)
CERTIFICATE NO.
23227
DAVID W. GEORGE
ARIZONA U.S.A.
EXPIRES: 12/31/23

SUBMITTAL: 3R Submittal

ORIGINAL PLAN DATE	LATEST REVISION DATE
MAY 2022	JULY 2023

PROJECT NUMBER	SHEET NUMBER SHT.
1175	MG24 28 OF 90

COB PLAN TRACKING # ENG-21-0220

COB PERMIT # ENG-21-0220

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RETENTION BASIN RB-3
BOT=1363.00
HW=1366.00
V_R, PRE VS POST=21,418 CF
VP=26,878 CF
OVERFLOWS TO RB-3.1

1 RIM=1363.30
N: 946592.04
E: 460009.39

EOE=67.00

SEE MG24

SEE MG31

SEE MG19

SEE MG26

SEE MG30

PARCEL 42

PARCEL 39

303RD LANE

302ND DRIVE

302ND AVENUE

CORRINE DRIVE

ROSEWOOD AVE

TRACT 42A

TRACT 42B

TRACT 42C

TRACT 42F

TRACT 42H

TRACT 39C

TRILLIUM LAND COMPANY
APN:504-72-010S

TRILLIUM LAND COMPANY
APN:504-72-011D

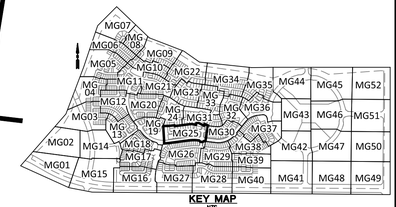
35' SEWER EASEMENT

PARCEL BOUNDARY

13 FP=72.55
12 FP=73.02
46 FP=75.30
47 FP=76.25
48 FP=77.20
49 FP=78.07
50 FP=79.20
51 FP=80.07
52 FP=81.45
36 FP=82.70
37 FP=82.59
24 FP=86.42
56 FP=85.24
1 FP=83.88
2 FP=82.88
3 FP=81.96
4 FP=81.15
5 FP=79.75
6 FP=78.75
7 FP=77.75
8 FP=76.75
9 FP=75.85
10 FP=74.95
11 FP=74.40

GRADING CONSTRUCTION

1 CONSTRUCT TWO CHAMBER DRYWELL; DETAIL PER COB STD DTL B-501. RIM ELEVATION 0.3 FT ABOVE BASIN BOTTOM. A MINIMUM OF 20' FROM HEADWALL, LOCATION NOTED IS TO CENTER OF INTERCEPTOR. 1 EA



KEY MAP
NTS

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
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- EMERGENCY OUTFALL ARROW
- (HP) HIGH POINT
- (LP) LOW POINT
- DUAL CHAMBER DRYWELL

N

40 20 0 40 80
SCALE: 1" = 40'

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ARIZONA811
CALL 811 or click Arizona811.COM

PLAN NAME
TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

ENGINEER INFORMATION
HILGARTWILSON

COB PERMITTING APPROVED SEAL

COB ENGINEERING APPROVED SEAL
APPROVED
6/22/2022
CITY OF BUCKEYE ENGINEERING

AS-BUILT SEAL

DESIGN SEAL
REGISTERED PROFESSIONAL ENGINEER
23227
DAVID W. GEORGE
CERTIFICATE NO.
ARIZONA U.S.A.
EXPIRES: 12/31/23

ORIGINAL PLAN DATE: MAY 2022
LATEST REVISION DATE: JULY 2023
PROJECT NUMBER: 1175
SHEET NUMBER: MG25 SHT. 29 OF 90

SUBMITTAL: 3R Submittal
COB PLAN TRACKING #: ENG-21-0220
COB PERMIT #: ENG-21-0220

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SEE MG25

SEE MG19

SEE MG18

SEE MG17

SEE MG29

SEE MG28

SEE MG27

RETENTION BASIN
RB-10
BOT=1360
HW=1363
V_{ft}PRE VS POST=21,195 CF
VP=25,533 CF

TRACT 41A

RIM=1360.30
N: 946163.02
E: 460002.93

EOE=63.00

COLUMBINE DRIVE

PARCEL 40

PARCEL BOUNDARY

TRACT 40A

302ND AVENUE

PARCEL 41

TRILLIUM LAND COMPANY
APN:504-72-011D

TRACT 41B

RETENTION BASIN
RB-9.1
BOT=1373
HW=1376
V_{ft} PRE VS POST=47,755 CF
VP=77,039 CF
OVERFLOWS TO 9.2

RIM=1373.30
N: 945815.21
E: 460872.81

BLOOMFIELD ROAD

TRACT 41C

RIM=1357.30
N: 945751.58
E: 460177.64

EOE=60.00

303RD LANE

CHARTER OAK ROAD

303RD AVENUE

TRACT 41E

TRACT 41F

302ND DRIVE

RETENTION BASIN
RB-11
BOT=1357
HW=1360
V_{ft}PRE VS POST=20,139 CF
VP=21,321 CF

GRADING CONSTRUCTION

1. CONSTRUCT TWO CHAMBER DRYWELL; DETAIL PER COB STD DTL B-501. RIM ELEVATION 0.3 FT ABOVE BASIN BOTTOM. A MINIMUM OF 20' FROM HEADWALL, LOCATION NOTED IS TO CENTER OF INTERCEPTOR. 3 EA

SCALE: 1" = 40'

KEY MAP
NTS

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
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- EASEMENT LINE
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- EMERGENCY OUTFALL ARROW
- (HP) — HIGH POINT
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- DUAL CHAMBER DRYWELL

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PLAN NAME
TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

ENGINEER INFORMATION
HILGARTWILSON

COB PERMITTING APPROVED SEAL

COB ENGINEERING APPROVED SEAL
APPROVED
6/22/2022
CITY OF BUCKEYE ENGINEERING

AS-BUILT SEAL

DESIGN SEAL
REGISTERED PROFESSIONAL ENGINEER
23227
DAVID W. GEORGE
ARIZONA U.S.A.
EXPIRES: 12/31/23

SUBMITTAL: 3R Submittal

ORIGINAL PLAN DATE: MAY 2022
LATEST REVISION DATE: JULY 2023
PROJECT NUMBER: 1175
SHEET NUMBER SHT.: MG26 30 OF 90

COB PLAN TRACKING # ENG-21-0220
COB PERMIT # ENG-21-0220

U:\1100\1175\ENGR\VILLAGE 3\MASS GRADING\1175-MG26.dwg 7/19/2023 3:21 PM

SEE MG26

SEE MG17

SEE MG16

SEE MG28

303RD LANE

303RD AVENUE

WETHERSFIELD ROAD

TERAVALIS PARKWAY

TRACT 41D

TRACT 41E

TRACT 41H

PARCEL 41

104 FP=61.40

103 FP=61.20

102 FP=61.00

101 FP=60.70

41 FP=62.40

42 FP=62.62

43 FP=62.62

46 FP=67.30

45 FP=67.95

44 FP=67.95

70 FP=68.70

71 FP=69.00

72 FP=69.40

73 FP=69.75

74 FP=70.20

75 FP=70.60

76 FP=71.20

77 FP=72.20

78 FP=73.40

100 FP=61.60

99 FP=61.80

98 FP=62.50

97 FP=64.00

96 FP=65.50

95 FP=66.90

94 FP=67.70

93 FP=68.60

92 FP=68.90

91 FP=69.20

90 FP=69.60

89 FP=69.90

88 FP=70.30

87 FP=70.70

86 FP=71.70

85 FP=72.80

RIM=1354.30
N: 945477.43
E: 459863.57

RIM=1354.30
N: 945397.70
E: 459916.54

EOE=57.00

PROPOSED FLOODPLAIN

LIMITS OF GRADING

VILLAGE 3 BOUNDARY

FOR CHANNEL DESIGN
SEE SHEETS DC01-DC21

52.50' OFFSITE SLOPE/ CONSTRUCTION ESMT BY SEPARATE DOC

FIRST AMERICAN TITLE INSURANCE COMPANY TR 8436
APN:504-72-011C

TRILLIUM LAND COMPANY
APN:504-72-011D

RETENTION BASIN
RB-12
BOT=1354
HW=1357
V_R, PRE VS POST=46,529 CF
VP=46,867 CF

GRADING CONSTRUCTION

1 CONSTRUCT TWO CHAMBER DRYWELL; DETAIL PER COB STD DTL B-501. RIM ELEVATION 0.3 FT ABOVE BASIN BOTTOM. A MINIMUM OF 20' FROM HEADWALL, LOCATION NOTED IS TO CENTER OF INTERCEPTOR. 2 EA

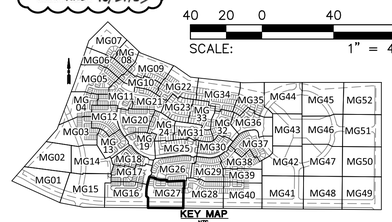
LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) — HIGH POINT
- (LP) — LOW POINT
- DUAL CHAMBER DRYWELL

RECORDED PROFESSIONAL ENGINEER CERTIFICATE NO. 23227 DAVID W. GEORGE STATE OF ARIZONA U.S. 7/17/23 EXPIRES: 12/31/23

N

SCALE: 1" = 40'



KEY MAP
NTS

REVISIONS:

1 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION AND FIRE STATION ADDED. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL

COB ENGINEERING APPROVED SEAL

APPROVED

6/22/2022

CITY OF BUCKEYE ENGINEERING

AS-BUILT SEAL

DESIGN SEAL

RECORDED PROFESSIONAL ENGINEER CERTIFICATE NO. 23227 DAVID W. GEORGE STATE OF ARIZONA U.S. EXPIRES: 12/31/23

ORIGINAL PLAN DATE	LATEST REVISION DATE
MAY 2022	JULY 2023

PROJECT NUMBER	SHEET NUMBER
1175	MG27 SHT. 31 OF 90

SUBMITTAL: 3R Submittal

COB PLAN TRACKING # ENG-21-0220

COB PERMIT # ENG-21-0220

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ARIZONA 811
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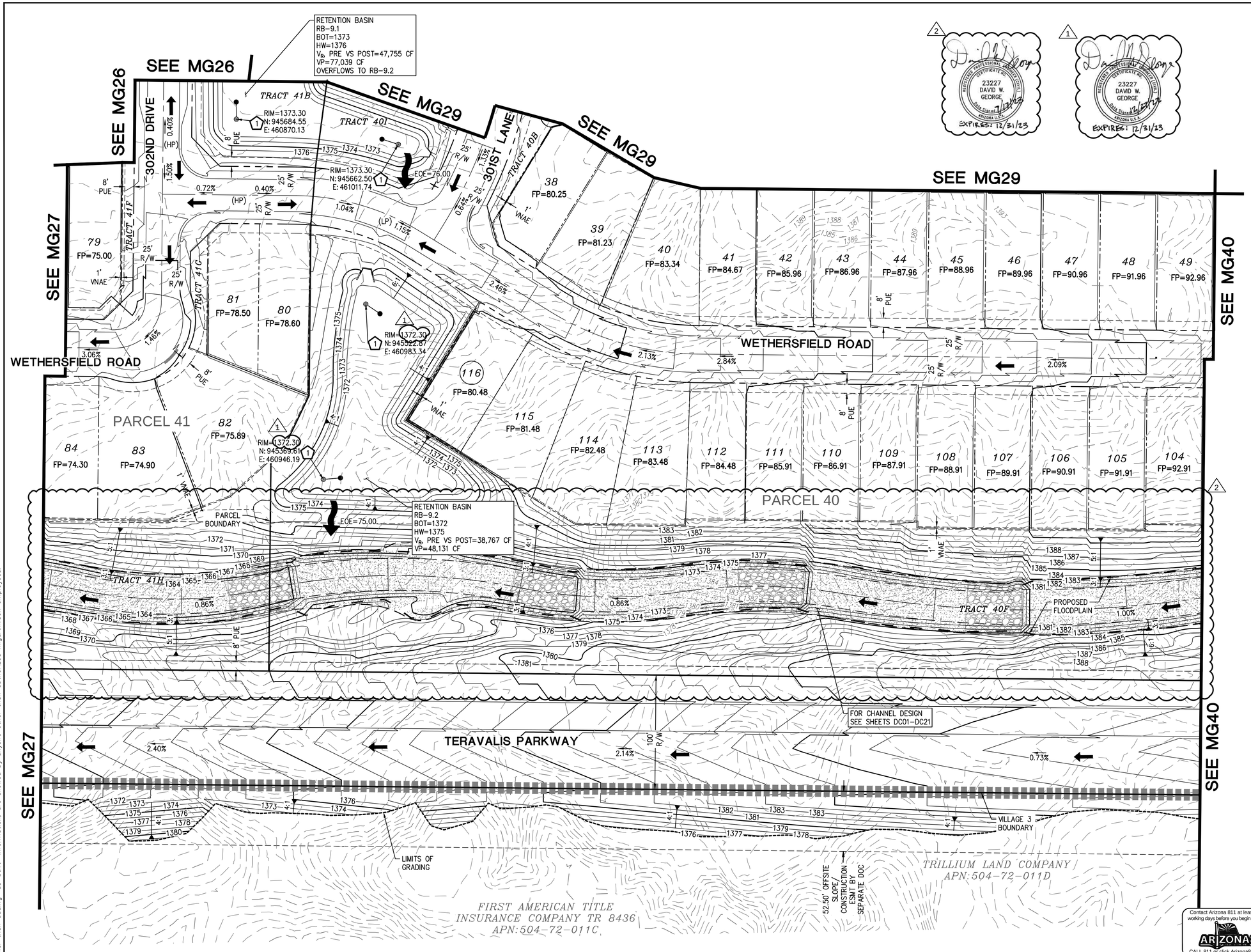


GRADING CONSTRUCTION

1 CONSTRUCT TWO CHAMBER DRYWELL; DETAIL PER COB STD DTL B-501. RIM ELEVATION 0.3 FT ABOVE BASIN BOTTOM. A MINIMUM OF 20' FROM HEADWALL, LOCATION NOTED IS TO CENTER OF INTERCEPTOR. — 4 EA

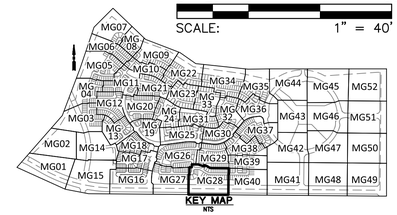
LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) HIGH POINT
- (LP) LOW POINT
- DUAL CHAMBER DRYWELL

N

40 20 0 40 80

SCALE: 1" = 40'



KEY MAP NTS

REVISIONS:

1 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION AND FIRE STATION ADDED. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL	COB ENGINEERING APPROVED SEAL
	APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING
AS-BUILT SEAL	DESIGN SEAL

REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. 23227 DAVID W. GEORGE ARIZONA U.S.A. EXPIRES: 12/31/23

SUBMITTAL: 3R Submittal

COB PLAN TRACKING # ENG-21-0220

COB PERMIT # ENG-21-0220

ORIGINAL PLAN DATE	LATEST REVISION DATE
MAY 2022	JULY 2023
PROJECT NUMBER	SHEET NUMBER SHT.
1175	MG28 32 OF 90

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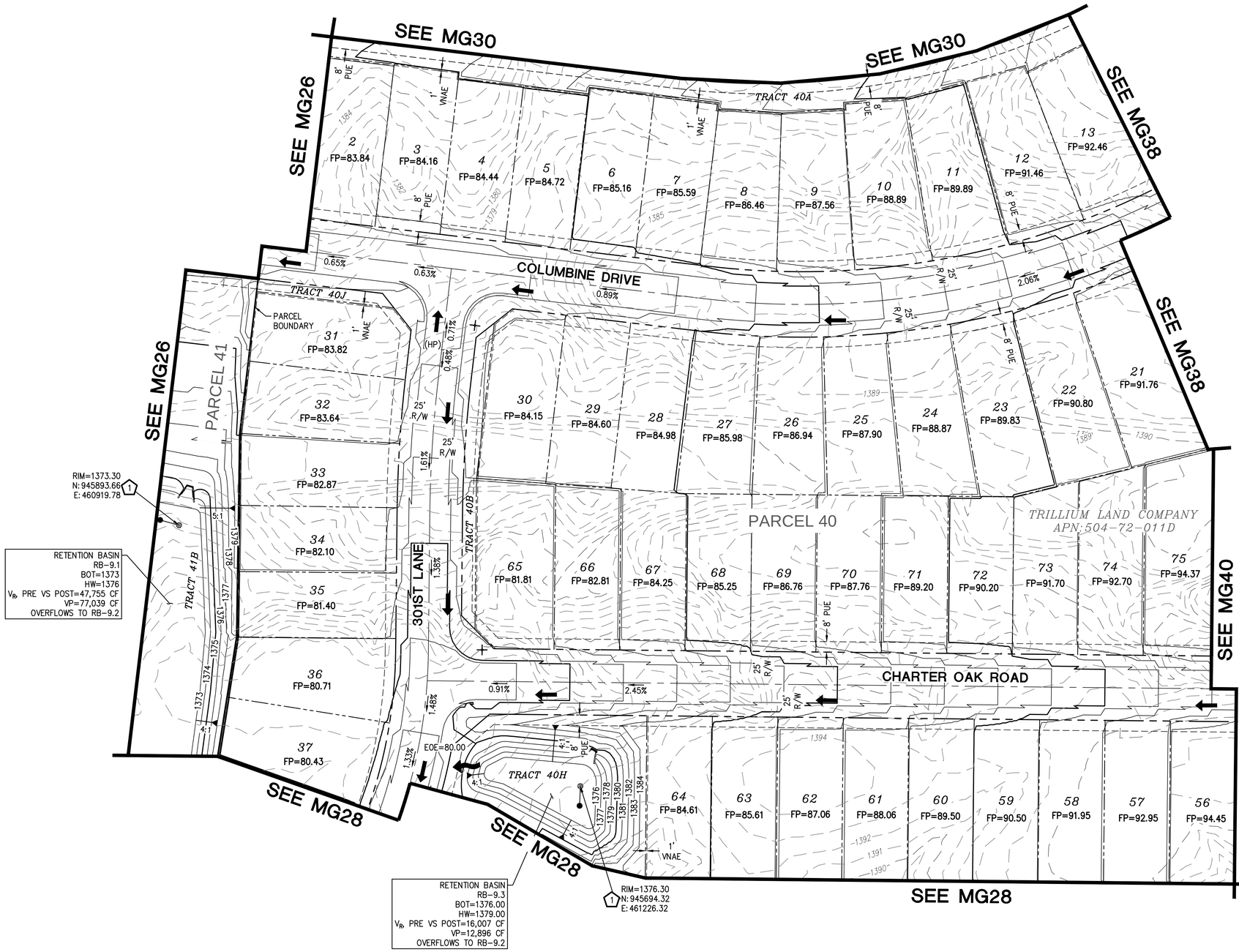


GRADING CONSTRUCTION

1	CONSTRUCT TWO CHAMBER DRYWELL; DETAIL PER COB STD DTL B-501. RIM ELEVATION 0.3 FT ABOVE BASIN BOTTOM. A MINIMUM OF 20' FROM HEADWALL, LOCATION NOTED IS TO CENTER OF INTERCEPTOR.	2	EA

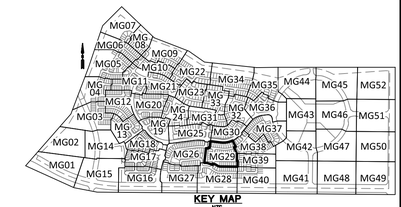
LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) — HIGH POINT
- (LP) — LOW POINT
- DUAL CHAMBER DRYWELL

N

40 20 0 40 80

SCALE: 1" = 40'



KEY MAP
NTS

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL	COB ENGINEERING APPROVED SEAL
	APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING
AS-BUILT SEAL	DESIGN SEAL
	REGISTERED PROFESSIONAL ENGINEER 23227 DAVID W. GEORGE ARIZONA U.S.A. EXPIRES: 12/31/23
ORIGINAL PLAN DATE: MAY 2022	LATEST REVISION DATE: JULY 2023
PROJECT NUMBER: 1175	SHEET NUMBER: MG29 SHT. 33 OF 90

SUBMITTAL: 3R Submittal

COB PLAN TRACKING #: ENG-21-0220

COB PERMIT #: ENG-21-0220

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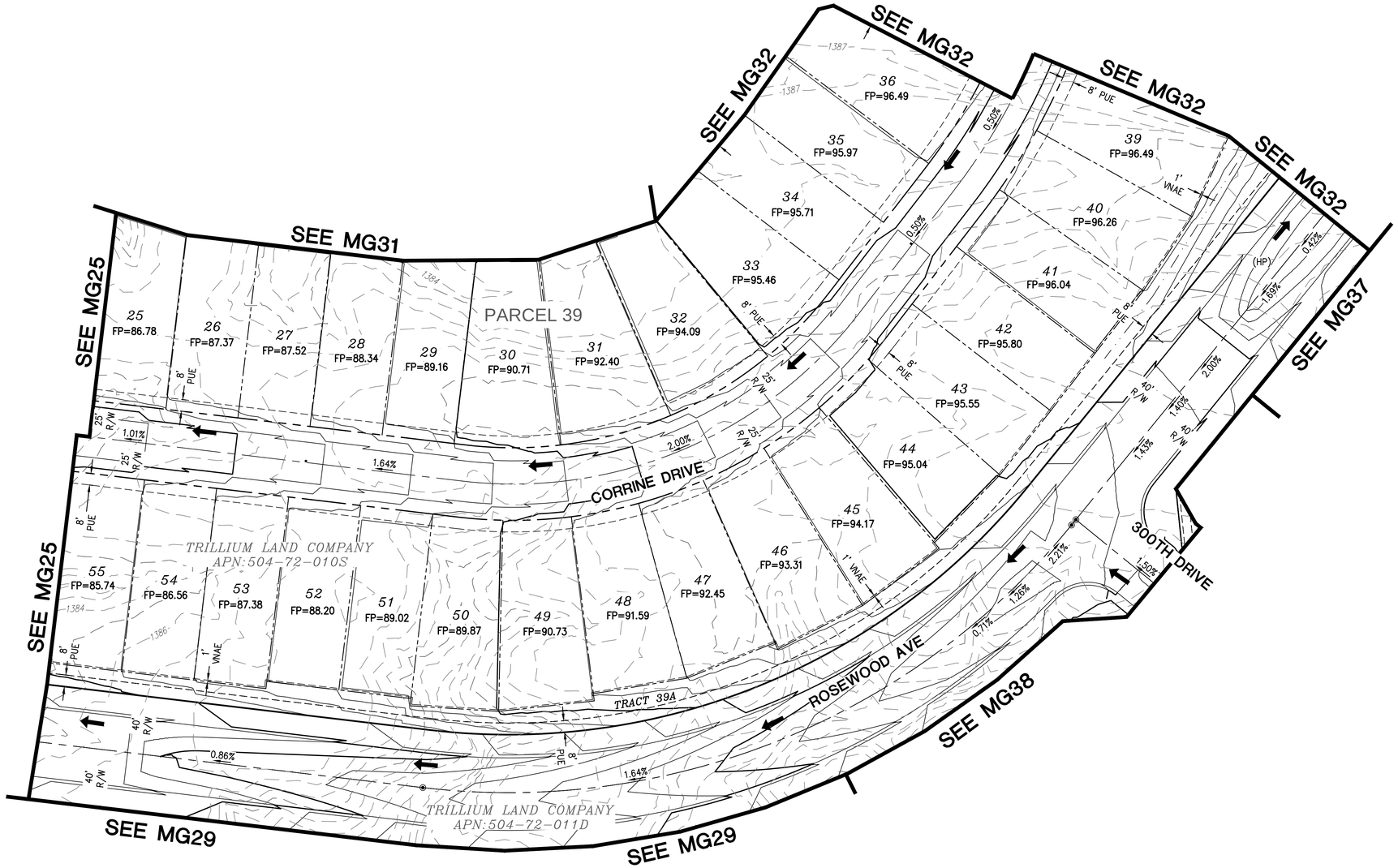


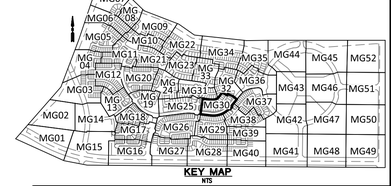
LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) — HIGH POINT
- (LP) — LOW POINT
- DUAL CHAMBER DRYWELL

N

40 20 0 40 80

SCALE: 1" = 40'



KEY MAP
NTS

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL	COB ENGINEERING APPROVED SEAL
	APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING
AS-BUILT SEAL	DESIGN SEAL
	REGISTERED PROFESSIONAL ENGINEER 23227 DAVID W. GEORGE ARIZONA U.S.A. EXPIRES: 12/31/23
ORIGINAL PLAN DATE MAY 2022	LATEST REVISION DATE JULY 2023
PROJECT NUMBER 1175	SHEET NUMBER SHT. MG30 34 OF 90

SUBMITTAL: 3R Submittal

COB PLAN TRACKING # ENG-21-0220

COB PERMIT # ENG-21-0220

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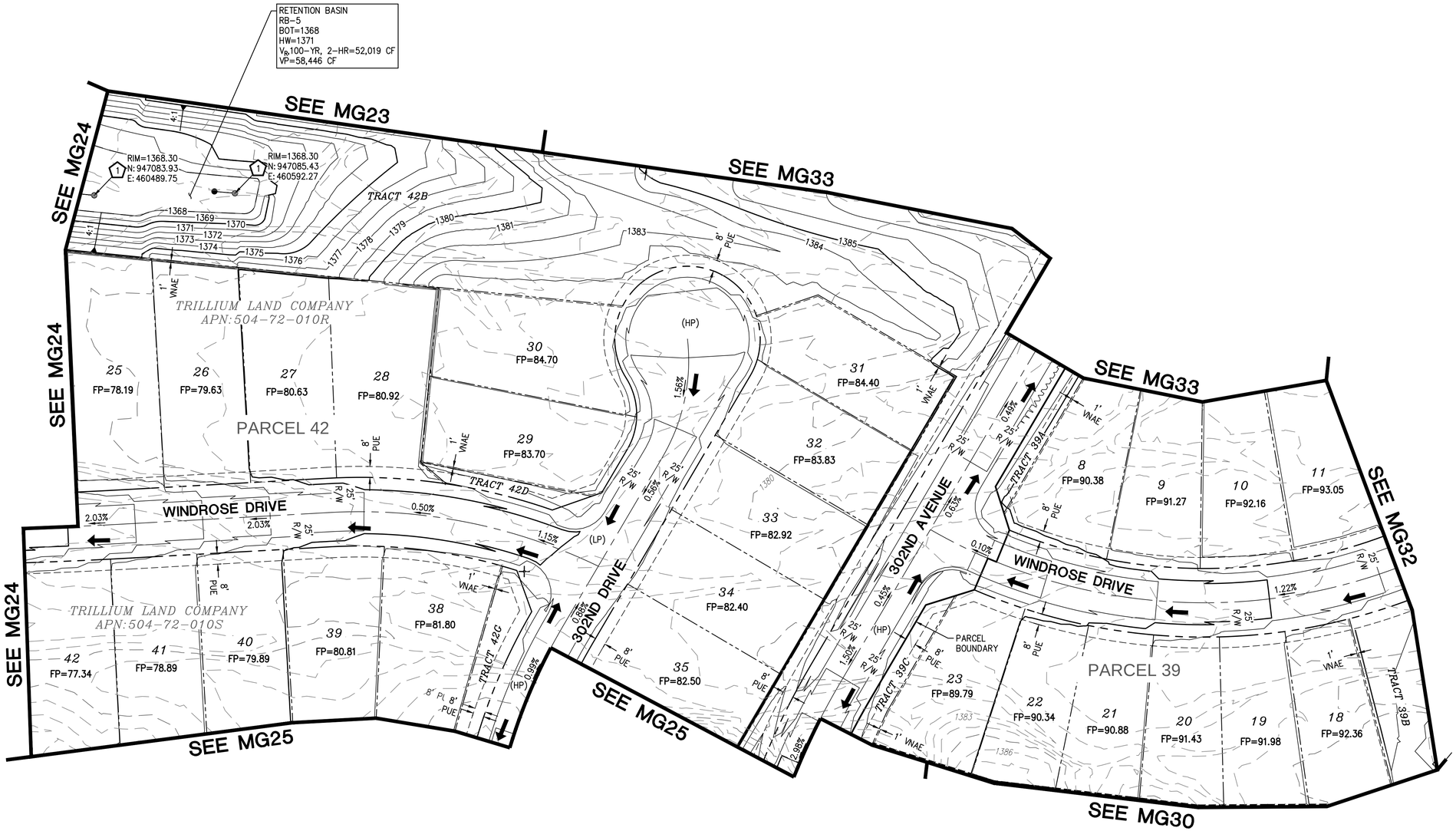


GRADING CONSTRUCTION

1	CONSTRUCT TWO CHAMBER DRYWELL; DETAIL PER COB STD DTL B-501. RIM ELEVATION 0.3 FT ABOVE BASIN BOTTOM. A MINIMUM OF 20' FROM HEADWALL, LOCATION NOTED IS TO CENTER OF INTERCEPTOR.	2 EA

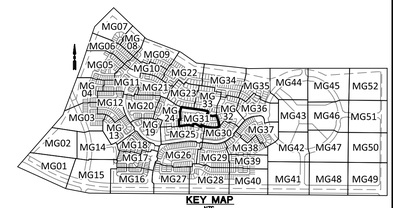
LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) — HIGH POINT
- (LP) — LOW POINT
- DUAL CHAMBER DRYWELL

N

40 20 0 40 80

SCALE: 1" = 40'



KEY MAP
NTS

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL	COB ENGINEERING APPROVED SEAL
	APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING
AS-BUILT SEAL	DESIGN SEAL 23227 DAVID W. GEORGE REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. Signature EXPIRES: 12/31/23
ORIGINAL PLAN DATE MAY 2022	LATEST REVISION DATE JULY 2023
PROJECT NUMBER 1175	SHEET NUMBER SHT. MG31 35 OF 90

SUBMITTAL: 3R Submittal

COB PLAN TRACKING # ENG-21-0220

COB PERMIT # ENG-21-0220

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GRADING CONSTRUCTION

1	CONSTRUCT TWO CHAMBER DRYWELL; DETAIL PER COB STD DTL B-501. RIM ELEVATION 0.3 FT ABOVE BASIN BOTTOM. A MINIMUM OF 20' FROM HEADWALL, LOCATION NOTED IS TO CENTER OF INTERCEPTOR.	4	EA

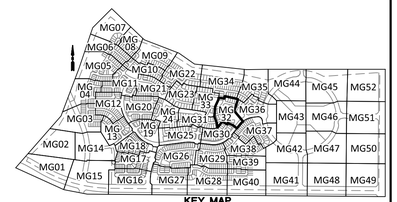
LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) — HIGH POINT
- (LP) — LOW POINT
- DUAL CHAMBER DRYWELL

N

40 20 0 40 80

SCALE: 1" = 40'



KEY MAP
NTS

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL	COB ENGINEERING APPROVED SEAL APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING
AS-BUILT SEAL	DESIGN SEAL 23227 DAVID W. GEORGE REGISTERED PROFESSIONAL ENGINEER EXPIRES: 12/31/23
ORIGINAL PLAN DATE MAY 2022	LATEST REVISION DATE JULY 2023
PROJECT NUMBER 1175	SHEET NUMBER SHT. MG32 36 OF 90

SUBMITTAL: 3R Submittal

COB PLAN TRACKING # ENG-21-0220

COB PERMIT # ENG-21-0220

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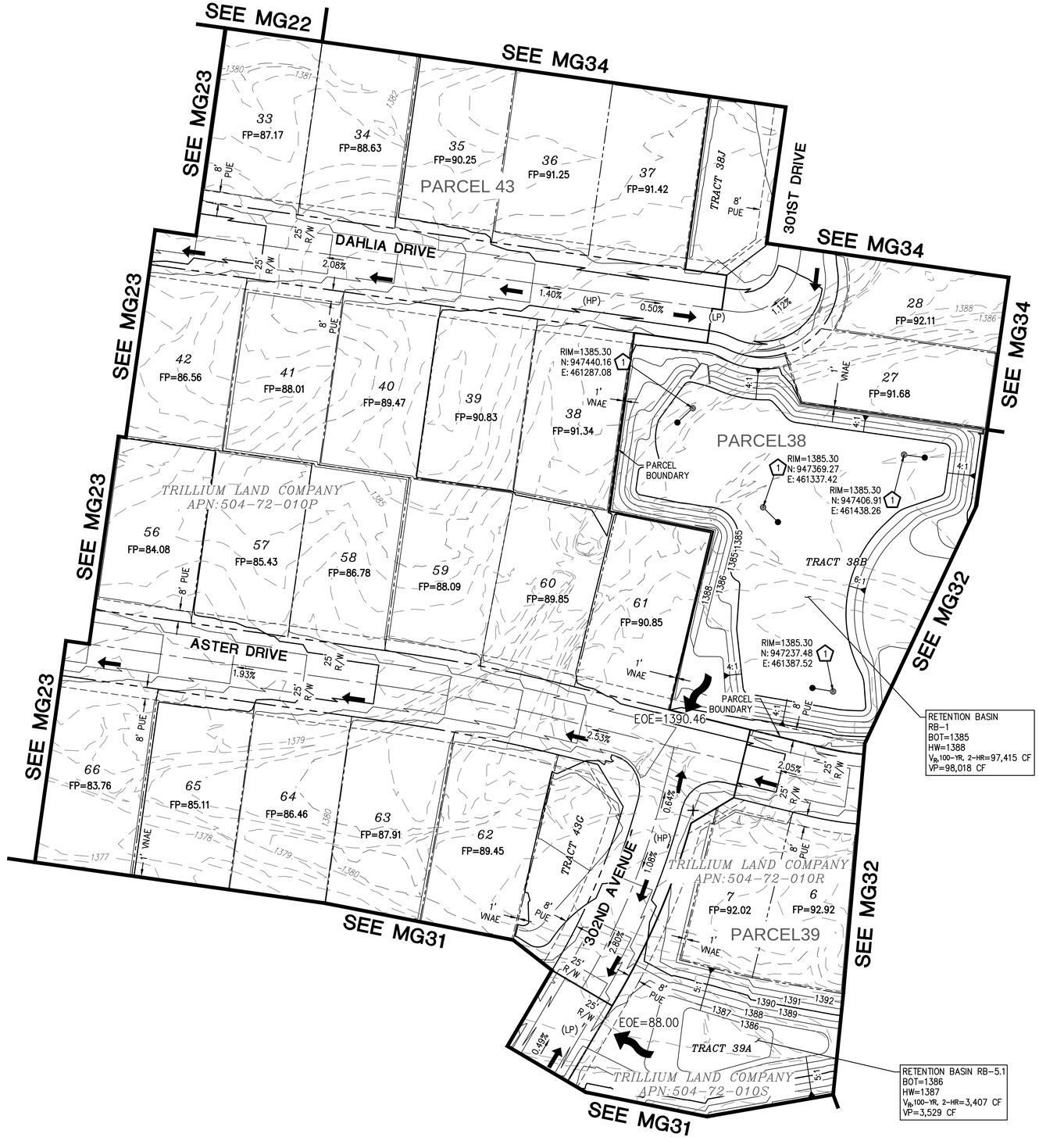


GRADING CONSTRUCTION

1	CONSTRUCT TWO CHAMBER DRYWELL; DETAIL PER COB STD DTL B-501. RIM ELEVATION 0.3 FT ABOVE BASIN BOTTOM. A MINIMUM OF 20' FROM HEADWALL, LOCATION NOTED IS TO CENTER OF INTERCEPTOR.	4 EA

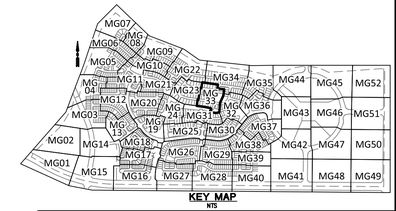
LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) HIGH POINT
- (LP) LOW POINT
- DUAL CHAMBER DRYWELL

N

40 20 0 40 80

SCALE: 1" = 40'



KEY MAP
NTS

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL	COB ENGINEERING APPROVED SEAL
	APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING
AS-BUILT SEAL	DESIGN SEAL
	REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. 23227 DAVID W. GEORGE ARIZONA U.S.A. EXPIRES: 12/31/23
ORIGINAL PLAN DATE MAY 2022	LATEST REVISION DATE JULY 2023
PROJECT NUMBER 1175	SHEET NUMBER SHT. MG33 37 OF 90

SUBMITTAL: 3R Submittal

COB PLAN TRACKING # ENG-21-0220

COB PERMIT # ENG-21-0220

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TRILLIUM VILLAGE 2
TRILLIUM LAND COMPANY
APN:504-72-010P

VILLAGE 3 BOUNDARY

FOR CHANNEL DESIGN SEE SHEETS DC01-DC21

LIMITS OF GRADING

PROPOSED FLOODPLAIN

TRACT 43A

TRACT 38F

SEE MG22

SEE MG35

SEE MG33

SEE MG32

SWEETWATER AVE

DAHLIA DRIVE

301ST DRIVE

301ST AVENUE

TRACT 38I

TRACT 38C

TRACT 38D

PARCEL 43

PARCEL38

PARCEL BOUNDARY

15 FP=90.00
16 FP=92.00
17 FP=93.90
18 FP=94.90
22 FP=90.14
21 FP=91.97
20 FP=93.79
19 FP=94.68
67 FP=95.62
66 FP=95.90
65 FP=96.20
64 FP=96.50
63 FP=96.80
62 FP=97.10
61 FP=97.40
60 FP=97.67
59 FP=97.95
58 FP=98.72
57 FP=99.72
30 FP=93.95
31 FP=94.34
32 FP=94.72
33 FP=95.11
34 FP=95.49
35 FP=96.23
36 FP=97.21
37 FP=98.19
38 FP=99.08
39 FP=99.76
40 FP=00.45
29 FP=92.89
23 FP=95.67
24 FP=95.67
25 FP=95.42
22 FP=96.58
21 FP=97.56
20 FP=98.54
19 FP=99.49
18 FP=00.41

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) HIGH POINT
- (LP) LOW POINT
- DUAL CHAMBER DRYWELL

N

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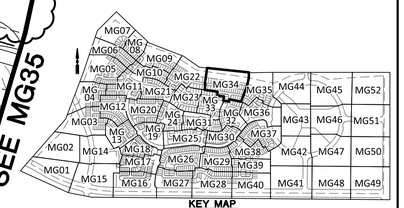
SCALE: 1" = 40'



KEY MAP
NTS

REVISIONS:

1 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION AND FIRE STATION ADDED. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM VILLAGE 3 - UNITS 1 & 2 MASS GRADING PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL

COB ENGINEERING APPROVED SEAL

APPROVED
6/22/2022
CITY OF BUCKEYE ENGINEERING

AS-BUILT SEAL

DESIGN SEAL

REGISTERED PROFESSIONAL ENGINEER (CIVIL)
CERTIFICATE NO.
23227
DAVID W. GEORGE
ARIZONA U.S.A.
EXPIRES: 12/31/23

SUBMITTAL: 3R Submittal

COB PLAN TRACKING # ENG-21-0220

COB PERMIT # ENG-21-0220

ORIGINAL PLAN DATE: MAY 2022

LATEST REVISION DATE: JULY 2023

PROJECT NUMBER: 1175

SHEET NUMBER SHT. MG34 38 OF 90

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U:\1100\1175\ENGR\VILLAGE 3\MASS GRADING\1175-MG34.dwg 7/19/2023 2:48 PM

FOR CHANNEL DESIGN SEE SHEETS DC01–DC21

LIMITS OF GRADING

TRILLIUM VILLAGE 2
TRILLIUM LAND COMPANY
APN:504-72-010P

VILLAGE 3 BOUNDARY

PROPOSED FLOODPLAIN

TRACT 38F

SWEETWATER AVE

DAHLIA DRIVE

299TH LANE

TRILLIUM CIRCLE NORTH

TRACT 38H

PARCEL38

PARCEL 34

SEE MG34

SEE MG36

SEE MG44

SEE MG43

SEE MG32

RETENTION BASIN
RB–OFF1
BOT=1397
HW=1400
V_R PRE VS POST=34,736 CF
VP=40,578 CF

BASIN RB–CC4
BOT=1408.50
HW=1409.50
V_R 100–YR, 2–HR=6,075 CF
VP=8,702 CF

RIM=1395.30
N: 947723.14
E: 462733.15

EOE=98.00

EOE=10.50

56 FP=00.72
55 FP=01.72
54 FP=02.72
53 FP=04.34
52 FP=05.93
51 FP=06.35
50 FP=05.28
49 FP=04.71
68 FP=06.53
69 FP=05.99
70 FP=05.48
71 FP=05.12
72 FP=04.81
73 FP=04.54
74 FP=04.28
41 FP=01.18
42 FP=01.92
43 FP=02.65
44 FP=03.12
45 FP=03.12
17 FP=01.34
16 FP=02.27
15 FP=03.19
14 FP=03.19

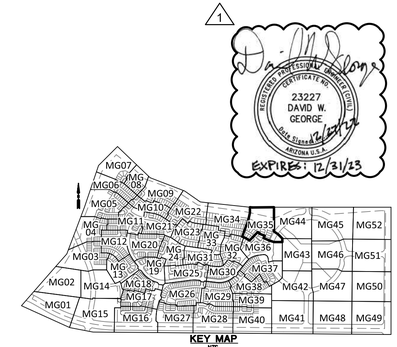
GRADING CONSTRUCTION

1 CONSTRUCT TWO CHAMBER DRYWELL; DETAIL PER COB STD DTL B–501. RIM ELEVATION 0.3 FT ABOVE BASIN BOTTOM. A MINIMUM OF 20' FROM HEADWALL, LOCATION NOTED IS TO CENTER OF INTERCEPTOR. 1 EA

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) HIGH POINT
- (LP) LOW POINT
- DUAL CHAMBER DRYWELL

40 20 0 40 80
SCALE: 1" = 40'



KEY MAP
NTS

REVISIONS:

1 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION AND FIRE STATION ADDED. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM VILLAGE 3 – UNITS 1 & 2 MASS GRADING PLAN

ENGINEER INFORMATION
HILGARTWILSON

COB PERMITTING APPROVED SEAL

COB ENGINEERING APPROVED SEAL
APPROVED
6/22/2022
CITY OF BUCKEYE ENGINEERING

AS-BUILT SEAL

DESIGN SEAL
REGISTERED PROFESSIONAL ENGINEER
CERTIFICATE NO.
23227
DAVID W. GEORGE
Date Signed 12/27/22
ARIZONA U.S.A.
EXPIRES: 12/31/23

SUBMITTAL: 3R Submittal

ORIGINAL PLAN DATE: MAY 2022
LATEST REVISION DATE: JULY 2023
PROJECT NUMBER: 1175
SHEET NUMBER: MG35 SHT. 39 OF 90

COB PLAN TRACKING # ENG–21–0220
COB PERMIT # ENG–21–0220

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CALL 811 or click Arizona811.COM

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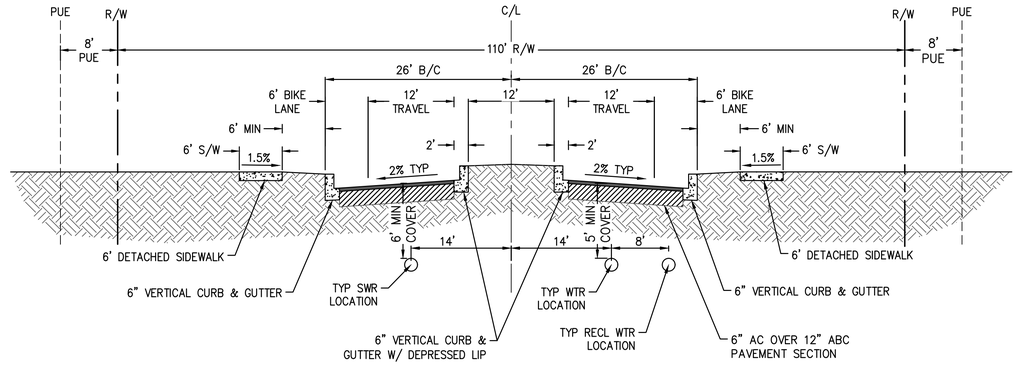
U: \1100\1175\ENGR\VILLAGE 3\MASS GRADING\1175–MG35.dwg 7/19/2023 4:58 PM

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) — HIGH POINT
- (LP) — LOW POINT
- DUAL CHAMBER DRYWELL

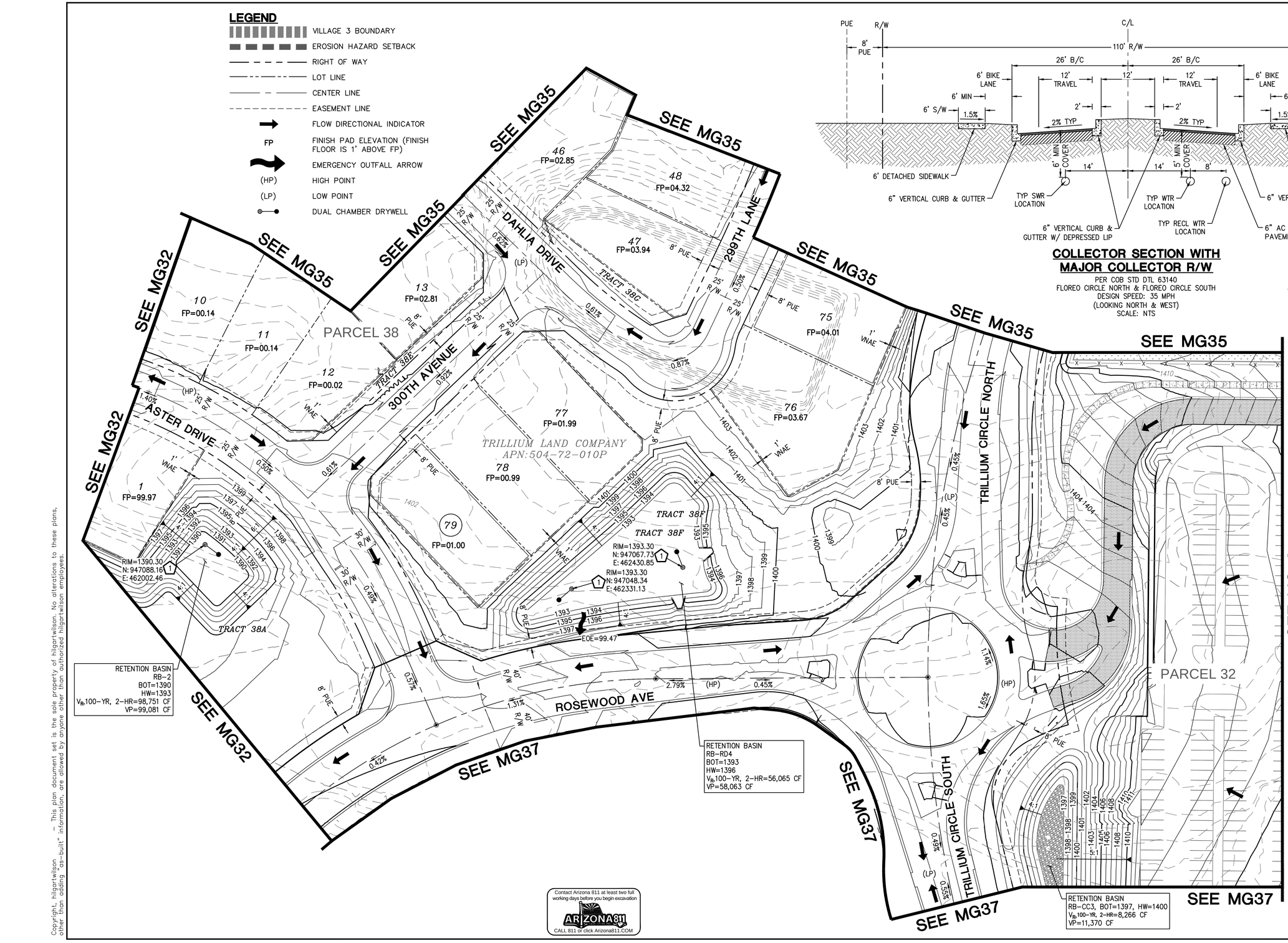


COLLECTOR SECTION WITH MAJOR COLLECTOR R/W

PER COB STD DTL 63140
FLOREO CIRCLE NORTH & FLOREO CIRCLE SOUTH
DESIGN SPEED: 35 MPH
(LOOKING NORTH & WEST)
SCALE: NTS

GRADING CONSTRUCTION

1 CONSTRUCT TWO CHAMBER DRYWELL; DETAIL PER COB STD DTL B-501. RIM ELEVATION 0.3 FT ABOVE BASIN BOTTOM. A MINIMUM OF 20' FROM HEADWALL; LOCATION NOTED IS TO CENTER OF INTERCEPTOR. — 3 EA



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ARIZONA811
CALL 811 or click Arizona811.COM

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

ENGINEER INFORMATION
HILGARTWILSON

COB PERMITTING APPROVED SEAL	COB ENGINEERING APPROVED SEAL
	APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING
AS-BUILT SEAL	DESIGN SEAL: 23227 DAVID W. GEORGE REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. ARIZONA U.S.A. EXPIRES: 12/31/23
ORIGINAL PLAN DATE: MAY 2022	LATEST REVISION DATE: JULY 2023
PROJECT NUMBER: 1175	SHEET NUMBER SHT.: MG36 40 OF 90

SUBMITTAL: 3R Submittal
COB PLAN TRACKING #: ENG-21-0220
COB PERMIT #: ENG-21-0220

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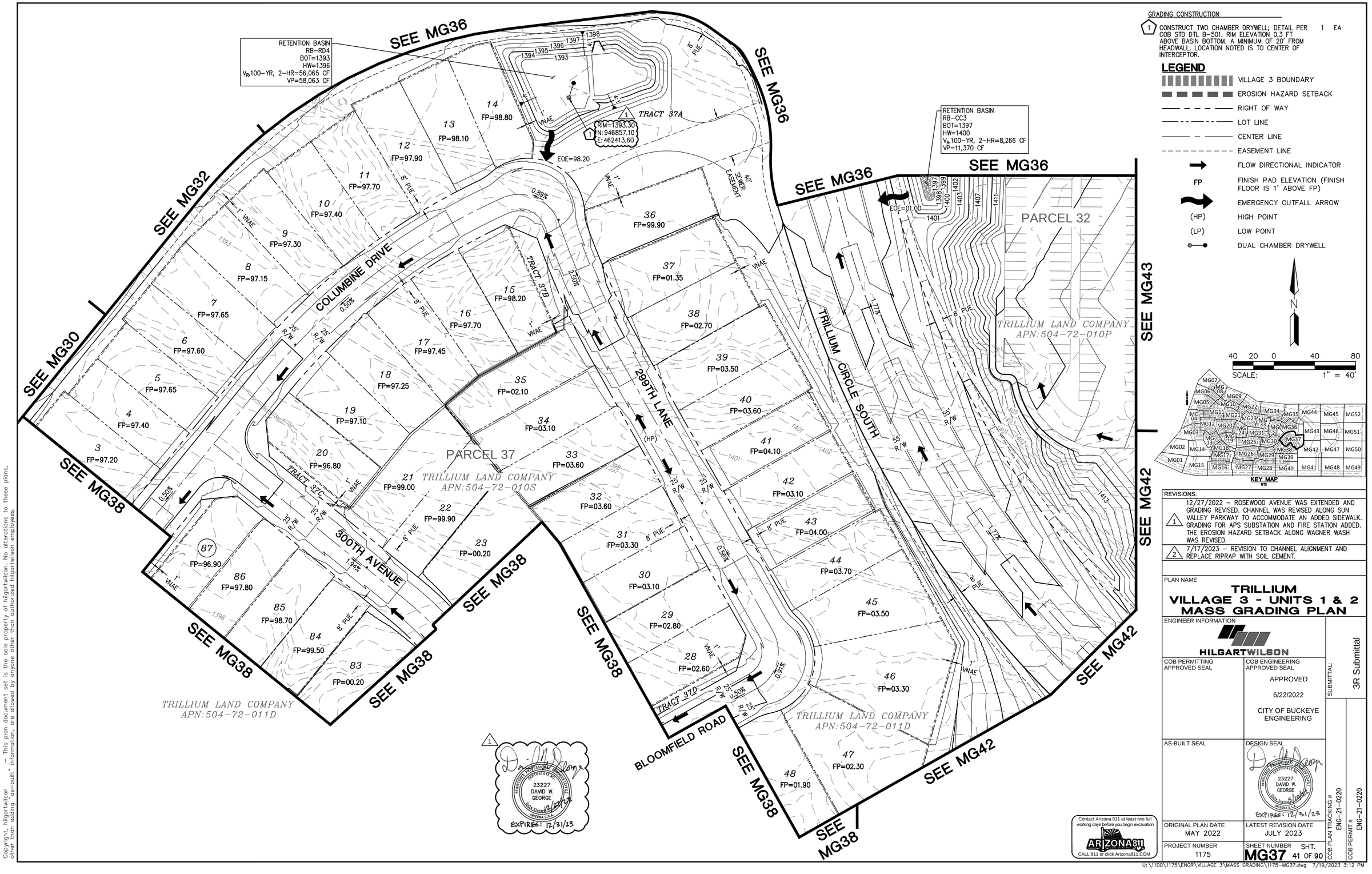

GRADING CONSTRUCTION

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LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
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- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
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- (HP) HIGH POINT
- (LP) LOW POINT
- DUAL CHAMBER DRYWELL

KEY MAP
NTS

REVISIONS:

1	12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION AND FIRE STATION ADDED. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.
2	7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL

COB ENGINEERING APPROVED SEAL

APPROVED
6/22/2022
CITY OF BUCKEYE ENGINEERING

AS-BUILT SEAL

DESIGN SEAL

REGISTERED PROFESSIONAL ENGINEER
CERTIFICATE NO.
23227
DAVID W. GEORGE
STATE OF ARIZONA U.S.A.
12/27/22
EXPIRES: 12/31/23

SUBMITTAL: 3R Submittal

COB PLAN TRACKING # ENG-21-0220

COB PERMIT # ENG-21-0220

ORIGINAL PLAN DATE: MAY 2022	LATEST REVISION DATE: JULY 2023
PROJECT NUMBER: 1175	SHEET NUMBER: MG37 SHT. 41 OF 90

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GRADING CONSTRUCTION

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LEGEND

- VILLAGE 3 BOUNDARY
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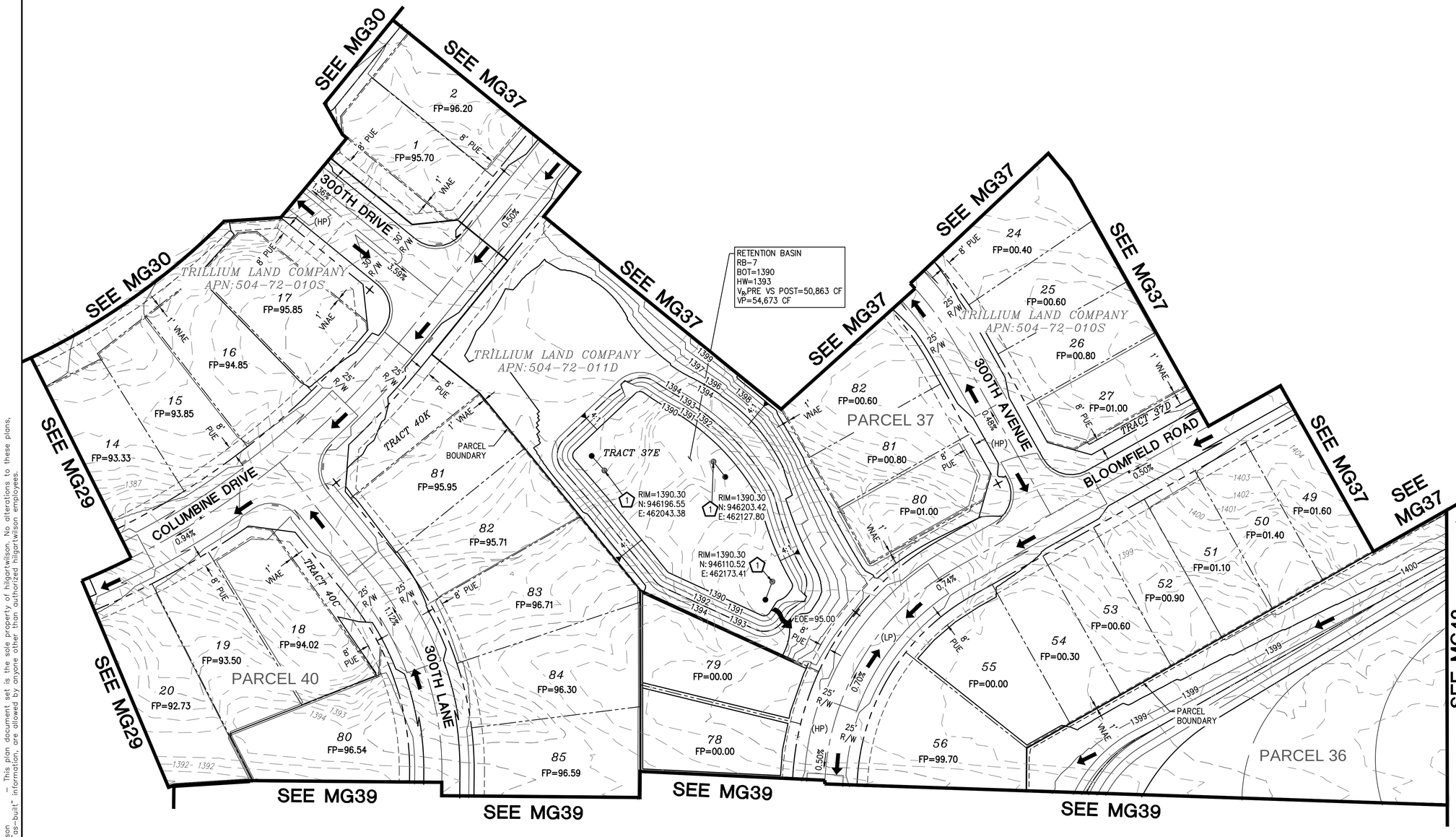
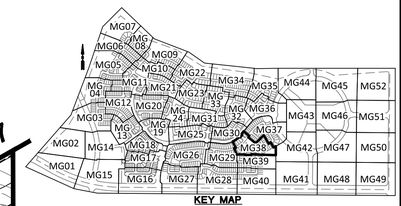
- EMERGENCY OUTFALL ARROW
- (HP) — HIGH POINT
- (LP) — LOW POINT
- DUAL CHAMBER DRYWELL





SCALE: 1" = 40'

PLAN NAME

TRILLIUM VILLAGE 3 - UNITS 1 & 2 MASS GRADING PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL	COB ENGINEERING APPROVED SEAL
	APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING
AS-BUILT SEAL	DESIGN SEAL: 23227 DAVID W. GEORGE, REGISTERED PROFESSIONAL ENGINEER, CERTIFICATE NO., ARIZONA U.S.A., EXPIRES: 12/31/23
ORIGINAL PLAN DATE: MAY 2022	LATEST REVISION DATE: JULY 2023
PROJECT NUMBER: 1175	SHEET NUMBER: MG38 42 OF 90 SHT.

SUBMITTAL: 3R Submittal

COB PLAN TRACKING # ENG-21-0220

COB PERMIT # ENG-21-0220

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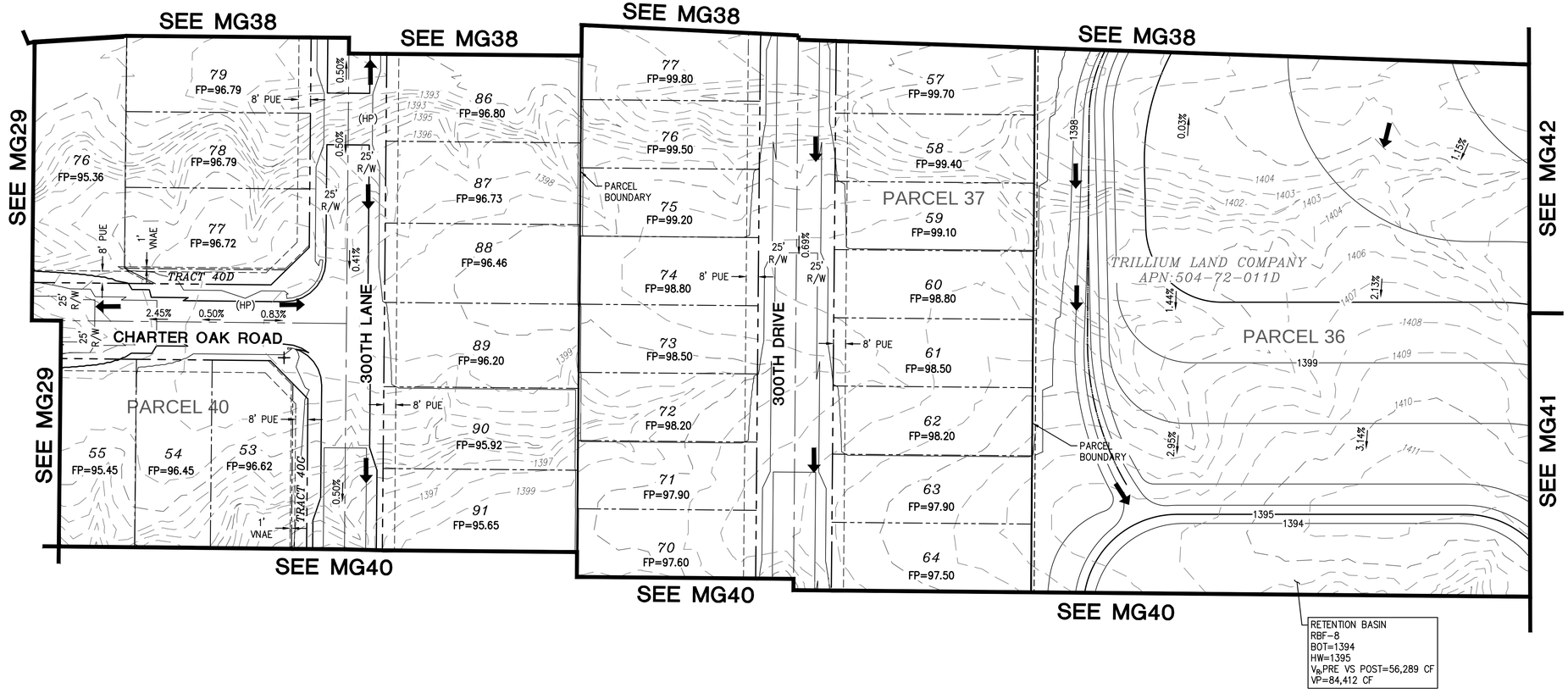


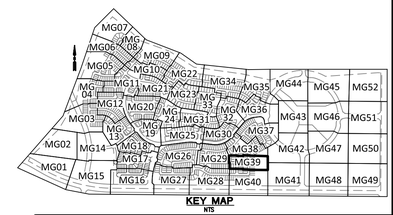
LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) — HIGH POINT
- (LP) — LOW POINT
- DUAL CHAMBER DRYWELL

N

40 20 0 40 80

SCALE: 1" = 40'



KEY MAP
NTS

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL	COB ENGINEERING APPROVED SEAL
	APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING
AS-BUILT SEAL	DESIGN SEAL REGISTERED PROFESSIONAL ENGINEER 23227 DAVID W. GEORGE EXPIRES: 12/31/23
ORIGINAL PLAN DATE MAY 2022	LATEST REVISION DATE JULY 2023
PROJECT NUMBER 1175	SHEET NUMBER SHT. MG39 43 OF 90

SUBMITTAL: 3R Submittal

COB PLAN TRACKING # ENG-21-0220

COB PERMIT # ENG-21-0220

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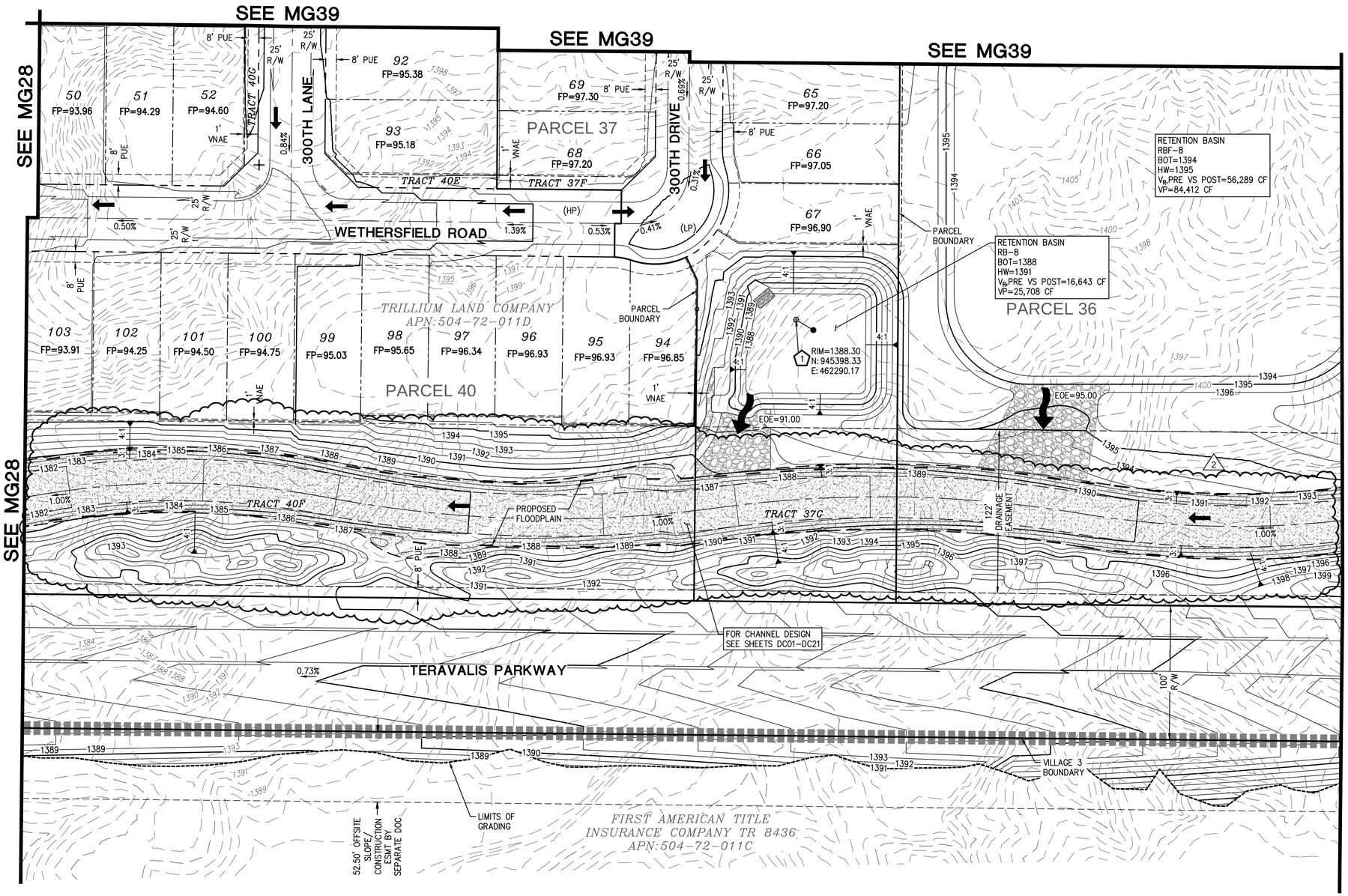

GRADING CONSTRUCTION

1 CONSTRUCT TWO CHAMBER DRYWELL; DETAIL PER COB STD DTL B-501. RIM ELEVATION 0.3 FT ABOVE BASIN BOTTOM. A MINIMUM OF 20' FROM HEADWALL, LOCATION NOTED IS TO CENTER OF INTERCEPTOR. 1 EA

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
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- EMERGENCY OUTFALL ARROW
- (HP) — HIGH POINT
- (LP) — LOW POINT
- DUAL CHAMBER DRYWELL

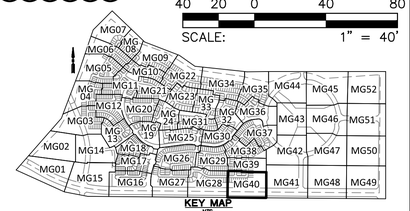
2

D. W. George 7/17/23

REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. 23227 DAVID W. GEORGE ARIZONA U.S.A. EXPIRES: 12/31/23

N

40 20 0 40 80
SCALE: 1" = 40'



KEY MAP
NTS

REVISIONS:

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2 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL	COB ENGINEERING APPROVED SEAL
	APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING
AS-BUILT SEAL	DESIGN SEAL
	D. W. George 7/17/23 REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. 23227 DAVID W. GEORGE ARIZONA U.S.A. EXPIRES: 12/31/23
ORIGINAL PLAN DATE: MAY 2022	LATEST REVISION DATE: JULY 2023
PROJECT NUMBER: 1175	SHEET NUMBER: MG40 SHT. 44 OF 90

SUBMITTAL: 3R Submittal

COB PLAN TRACKING # ENG-21-0220

COB PERMIT # ENG-21-0220

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SEE MG42

SEE MG40

SEE MG48

PARCEL 36

TRILLIUM LAND COMPANY
APN:504-72-011D

PARCEL 31

RETENTION BASIN
RBF-8
BOT=1394
HW=1395
V_RPRE VS POST=56,289 CF
VP=84,412 CF

296TH AVENUE

55' R/W

55' R/W

8' PUE

8' PUE

BOX CULVERTS TO BE INSTALLED WITH COLLECTOR ROAD

PROPOSED FLOODPLAIN

STORM WATER CULVERT

FOR CHANNEL DESIGN SEE SHEETS DC01-DC21

122' DRAINAGE EASEMENT

100' R/W

TERAVALIS PARKWAY

LIMITS OF GRADING

VILLAGE 3 BOUNDARY

52.50' OFFSITE SLOPE/ CONSTRUCTION ESMT BY SEPARATE DOC

FIRST AMERICAN TITLE
INSURANCE COMPANY TR 8436
APN:504-72-011C

SCALE: 1" = 40'

40 20 0 40 80

N

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ARIZONA811

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LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
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KEY MAP
NTS

REVISIONS:

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2 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL

COB ENGINEERING APPROVED SEAL

APPROVED

6/22/2022

CITY OF BUCKEYE ENGINEERING

AS-BUILT SEAL

DESIGN SEAL

REGISTERED PROFESSIONAL ENGINEER
CERTIFICATE NO.
23227
DAVID W. GEORGE
STATE OF ARIZONA U.S.A.
EXPIRES: 12/31/23

SUBMITTAL: 3R Submittal

COB PLAN TRACKING # ENG-21-0220

COB PERMIT # ENG-21-0220

ORIGINAL PLAN DATE: MAY 2022

LATEST REVISION DATE: JULY 2023

PROJECT NUMBER: 1175

SHEET NUMBER SHT.: MG41 45 OF 90

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SEE MG43

SEE MG37

SEE MG37

SEE MG37

SEE MG47

SEE MG38

SEE MG39

SEE MG41

1 — 23227 DAVID W. GEORGE — REGISTERED PROFESSIONAL ENGINEER — CERTIFICATE NO. — ARIZONA U.S.A. — EXPIRES: 12/31/23

TRILLIUM LAND COMPANY
APN:504-72-010P

PARCEL 32

TRILLIUM LAND COMPANY
APN:504-72-010S

TRILLIUM LAND COMPANY
APN:504-72-011D

PARCEL 36

PARCEL 31

FLOREO CIRCLE SOUTH

296TH AVENUE

RETENTION BASIN
RB-CC2
BOT=1414
HW=1415
V_R100-YR, 2-HR=10,374 CF
VP=10,456 CF

RETENTION BASIN
RB-CC1
BOT=1416
HW=1417
V_R100-YR, 2-HR=6,068 CF
VP=6,852 CF

RETENTION BASIN
RB-RD6
BOT=1411
HW=1414
V_RPRE VS POST=6,003 CF
VP=11,752 CF

RETENTION BASIN
RB-RD1
BOT=1410.50
HW=1413.50
V_R100-YR, 2-HR=44,578 CF
VP=45,185 CF

1 RIM=1411.30
N:945987.81
E:463410.95

EOE=16.00 · EOE=17.00 · EOE=14.00 · EOE=16.28

2.34% · 2.5% · 2.1% · 2.2% · 1.9% · 0.71% · 0.94% · 1.73% · 0.48% · 3.4%

(HP) · (LP)

55' R/W

8' PUE

5:1 · 4:1

GRADING CONSTRUCTION

1 CONSTRUCT TWO CHAMBER DRYWELL; DETAIL PER COB STD DTL B-501. RIM ELEVATION 0.3 FT ABOVE BASIN BOTTOM. A MINIMUM OF 20' FROM HEADWALL, LOCATION NOTED IS TO CENTER OF INTERCEPTOR. — 1 EA

LEGEND

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- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) HIGH POINT
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N

40 20 0 40 80
SCALE: 1" = 40'

KEY MAP
NTS

MG01 MG02 MG03 MG04 MG05 MG06 MG07 MG08 MG09 MG10 MG11 MG12 MG13 MG14 MG15 MG16 MG17 MG18 MG19 MG20 MG21 MG22 MG23 MG24 MG25 MG26 MG27 MG28 MG29 MG30 MG31 MG32 MG33 MG34 MG35 MG36 MG37 MG38 MG39 MG40 MG41 MG42 MG43 MG44 MG45 MG46 MG47 MG48 MG49 MG50 MG51 MG52

REVISIONS:

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PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

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COB ENGINEERING APPROVED SEAL

APPROVED

6/22/2022

CITY OF BUCKEYE ENGINEERING

AS-BUILT SEAL

DESIGN SEAL

1 — 23227 DAVID W. GEORGE — REGISTERED PROFESSIONAL ENGINEER — CERTIFICATE NO. — ARIZONA U.S.A. — EXPIRES: 12/31/23

SUBMITTAL: 3R Submittal

ORIGINAL PLAN DATE: MAY 2022

LATEST REVISION DATE: JULY 2023

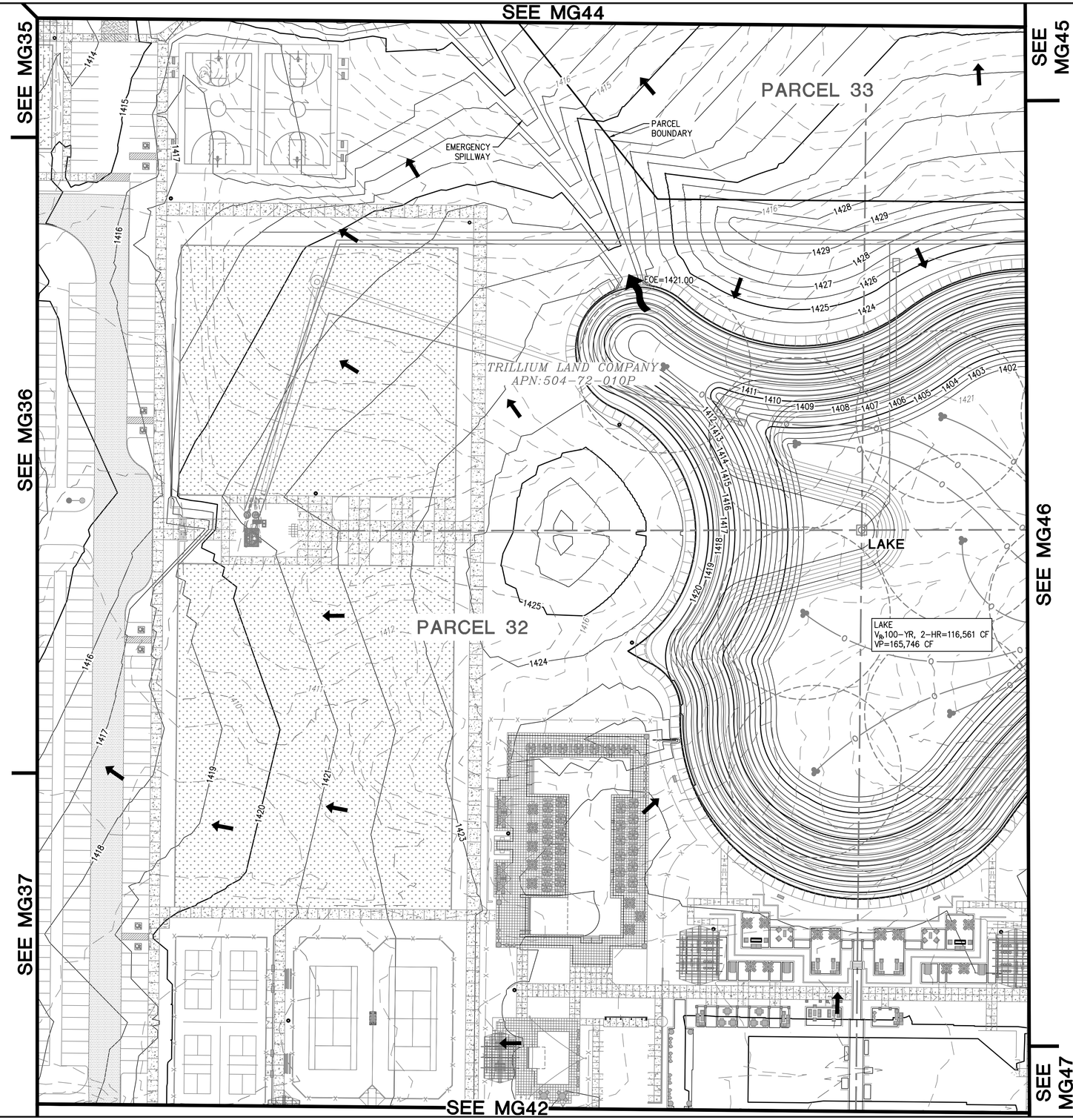
PROJECT NUMBER: 1175

SHEET NUMBER: MG42 SHT. 46 OF 90

COB PLAN TRACKING # ENG-21-0220

COB PERMIT # ENG-21-0220

U:\1100\1175\ENGR\VILLAGE 3\MASS GRADING\1175-MG42.dwg 7/19/2023 5:04 PM



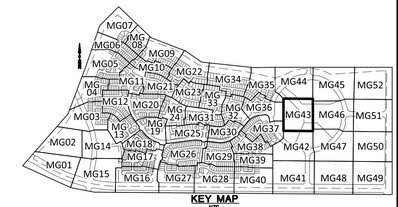
LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) — HIGH POINT
- (LP) — LOW POINT
- DUAL CHAMBER DRYWELL

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
CALL 811 or click Arizona811.COM

N

40 20 0 40 80
SCALE: 1" = 40'



KEY MAP
NTS

PLAN NAME
TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

ENGINEER INFORMATION
HILGARTWILSON

COB PERMITTING APPROVED SEAL

COB ENGINEERING APPROVED SEAL
APPROVED
6/22/2022
CITY OF BUCKEYE ENGINEERING

SUBMITTAL: 3R Submittal

AS-BUILT SEAL

DESIGN SEAL
REGISTERED PROFESSIONAL ENGINEER
23227
DAVID W. GEORGE
EXPIRES: 12/31/23

ORIGINAL PLAN DATE: MAY 2022
LATEST REVISION DATE: JULY 2023
PROJECT NUMBER: 1175
SHEET NUMBER: MG43 SHT. 47 OF 90
COB PLAN TRACKING #: ENG-21-0220
COB PERMIT #: ENG-21-0220

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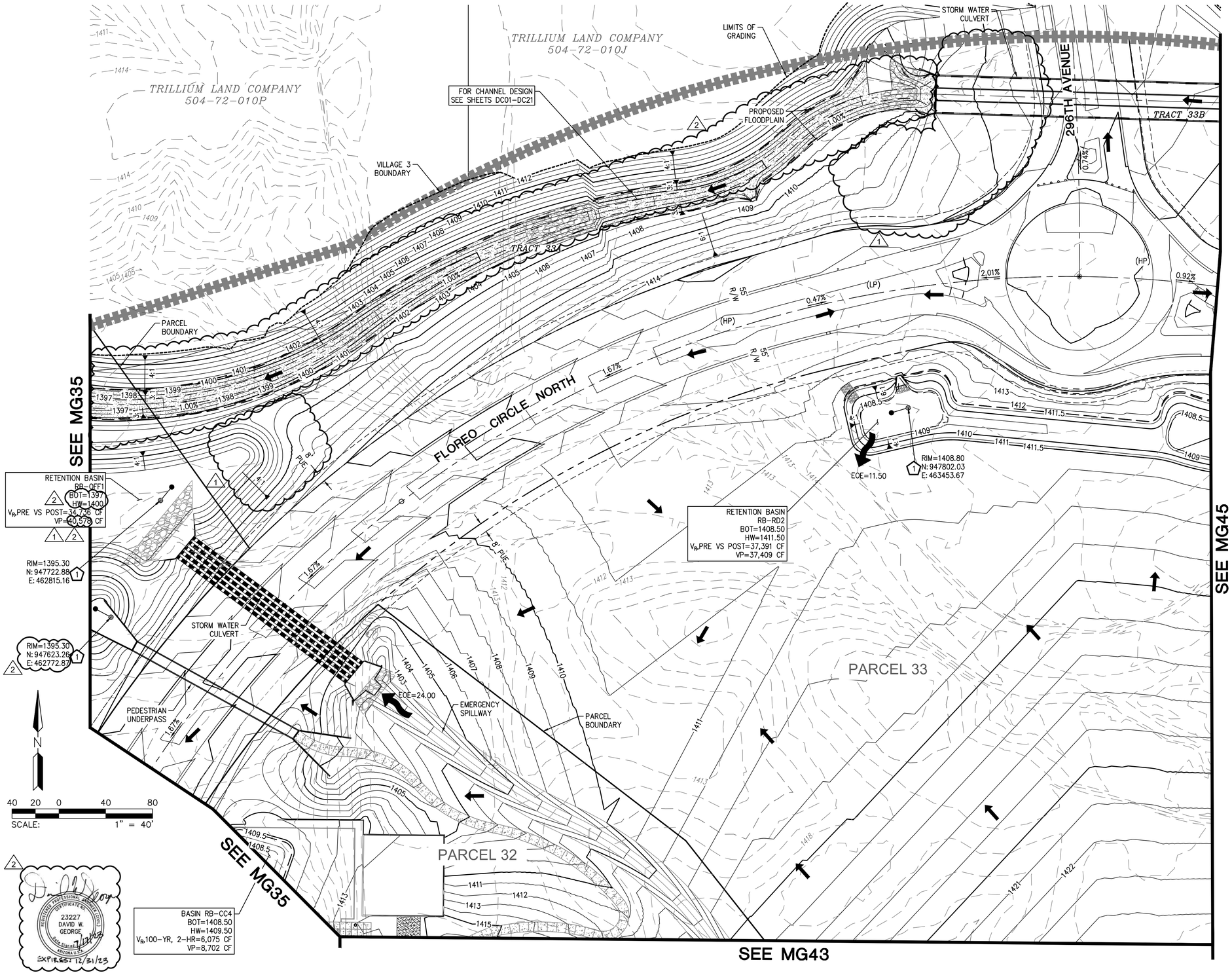


GRADING CONSTRUCTION

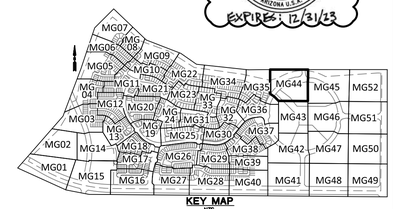
1 CONSTRUCT TWO CHAMBER DRYWELL; DETAIL PER COB STD DTL B-501. RIM ELEVATION 0.3 FT ABOVE BASIN BOTTOM. A MINIMUM OF 20' FROM HEADWALL, LOCATION NOTED IS TO CENTER OF INTERCEPTOR. 3 EA

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) — HIGH POINT
- (LP) — LOW POINT
- DUAL CHAMBER DRYWELL

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
CALL 811 or click Arizona811.COM

1 REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. 23227 DAVID W. GEORGE STATE OF ARIZONA U.S.A. 12/31/23 EXPIRES: 12/31/23



KEY MAP
NTS

REVISIONS:

1 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION AND FIRE STATION ADDED. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM VILLAGE 3 - UNITS 1 & 2 MASS GRADING PLAN

ENGINEER INFORMATION
HILGARTWILSON

COB PERMITTING APPROVED SEAL

COB ENGINEERING APPROVED SEAL
APPROVED
6/22/2022
CITY OF BUCKEYE ENGINEERING

AS-BUILT SEAL

DESIGN SEAL
REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. 23227 DAVID W. GEORGE STATE OF ARIZONA U.S.A. EXPIRES: 12/31/23

ORIGINAL PLAN DATE: MAY 2022
LATEST REVISION DATE: JULY 2023
PROJECT NUMBER: 1175
SHEET NUMBER: MG44 SHT. 48 OF 90

SUBMITTAL: 3R Submittal
COB PLAN TRACKING # ENG-21-0220
COB PERMIT # ENG-21-0220

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SEE MG44

SEE MG44

SEE MG52

SEE MG43

SEE MG46

SEE MG46

LIMITS OF GRADING

TRILLIUM VILLAGE 2
504-72-010P

TRILLIUM VILLAGE 2
504-72-010J

TRACT 33B

FOR CHANNEL DESIGN
SEE SHEETS DC01-DC21

VILLAGE 3 BOUNDARY

LIMITS OF GRADING

DRAINAGE EASEMENT

FLOREO CIRCLE NORTH

PROPOSED FLOODPLAIN

EOE=21.00

Q=374 CFS

RIM=1408.80
N: 947776.33
E: 463769.84

RETENTION BASIN
RB-RD2
BOT=1408.50
HW=1411.50
V_RPRE VS POST=37,391 CF
VP=37,409 CF

RETENTION BASIN
RBF-6
BOT=1420
HW=1421
V_RPRE VS POST=57,068 CF
VP=97,550 CF

PARCEL 30

PARCEL 33

PARCEL BOUNDARY

8' PUE

55' R/W

GRADING CONSTRUCTION

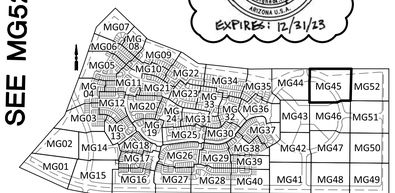
1 CONSTRUCT TWO CHAMBER DRYWELL; DETAIL PER COB STD DTL B-501. RIM ELEVATION 0.3 FT ABOVE BASIN BOTTOM. A MINIMUM OF 20' FROM HEADWALL, LOCATION NOTED IS TO CENTER OF INTERCEPTOR. 1 EA

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) HIGH POINT
- (LP) LOW POINT
- DUAL CHAMBER DRYWELL

REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. 23227 DAVID W. GEORGE Date Signed 7/17/23 ARIZONA U.S.A. EXPIRES: 12/31/23

REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. 23227 DAVID W. GEORGE Date Signed 7/17/23 ARIZONA U.S.A. EXPIRES: 12/31/23



KEY MAP
NTS

REVISIONS:
1 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION AND FIRE STATION ADDED. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.
2 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM VILLAGE 3 - UNITS 1 & 2 MASS GRADING PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL	COB ENGINEERING APPROVED SEAL
	APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING
AS-BUILT SEAL	DESIGN SEAL

SUBMITTAL: 3R Submittal

COB PLAN TRACKING # ENG-21-0220

COB PERMIT # ENG-21-0220

ORIGINAL PLAN DATE	LATEST REVISION DATE
MAY 2022	JULY 2023
PROJECT NUMBER	SHEET NUMBER SHT.
1175	MG45 49 OF 90

SCALE: 1" = 40'

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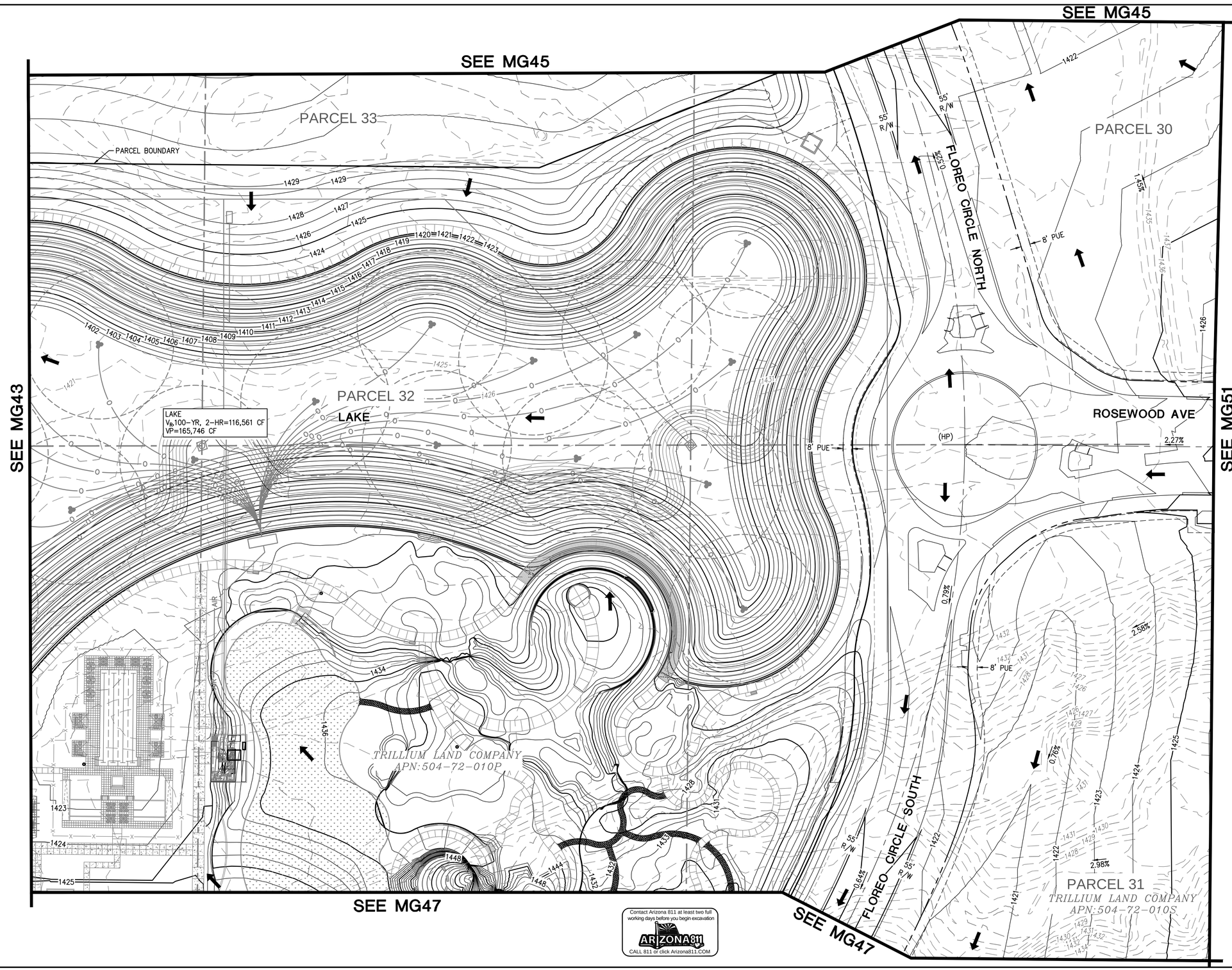


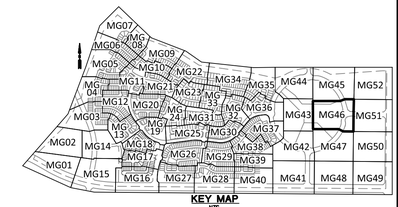
LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) — HIGH POINT
- (LP) — LOW POINT
- DUAL CHAMBER DRYWELL

N

40 20 0 40 80

SCALE: 1" = 40'



KEY MAP
NTS

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL	COB ENGINEERING APPROVED SEAL: APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING
AS-BUILT SEAL	DESIGN SEAL: REGISTERED PROFESSIONAL ENGINEER, CERTIFICATE NO. 23227, DAVID W. GEORGE, ARIZONA U.S.A. — EXPIRES: 12/31/23
ORIGINAL PLAN DATE: MAY 2022	LATEST REVISION DATE: JULY 2023
PROJECT NUMBER: 1175	SHEET NUMBER: MG46 SHT. 50 OF 90

SUBMITTAL: 3R Submittal

COB PLAN TRACKING #: ENG-21-0220

COB PERMIT #: ENG-21-0220

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SEE MG46

SEE MG43

SEE MG42

SEE MG46

SEE MG50

SEE MG42

SEE MG48

TRILLIUM LAND COMPANY
APN:504-72-010P

TRILLIUM LAND COMPANY
APN:504-72-010S

TRILLIUM LAND COMPANY
APN:504-72-011D

PARCEL 32

PARCEL 31

RETENTION BASIN
RB-CC1
BOT=1416
HW=1417
V_{fb}100-YR, 2-HR=6,068 CF
VP=6,852 CF

RETENTION BASIN
RB-RD1
BOT=1410.50
HW=1413.50
V_{fb}100-YR, 2-HR=44,578 CF
VP=45,185 CF

RETENTION BASIN
RBF-7
BOT=1416
HW=1417
V_{fb}PRE VS POST=132,628 CF
VP=161,025 CF

RIM=1410.80
N: 945948.50
E: 463879.83

RIM=1410.80
N: 945948.89
E: 463785.01

FLOREO CIRCLE SOUTH

8' PUE

55' R/W

0.64%

2.84%

1.63%

3.97%

0.57%

0.47%

(LP)

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ARIZONA 811
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GRADING CONSTRUCTION

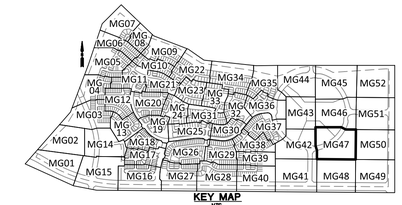
1 CONSTRUCT TWO CHAMBER DRYWELL; DETAIL PER COB STD DTL B-501. RIM ELEVATION 0.3 FT ABOVE BASIN BOTTOM. A MINIMUM OF 20' FROM HEADWALL. LOCATION NOTED IS TO CENTER OF INTERCEPTOR. 2 EA

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) HIGH POINT
- (LP) LOW POINT
- DUAL CHAMBER DRYWELL

N

40 20 0 40 80
SCALE: 1" = 40'



KEY MAP
NTS

REVISIONS:

1 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION AND FIRE STATION ADDED. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

ENGINEER INFORMATION
HILGARTWILSON

COB PERMITTING APPROVED SEAL

COB ENGINEERING APPROVED SEAL
APPROVED
6/22/2022
CITY OF BUCKEYE ENGINEERING

AS-BUILT SEAL

DESIGN SEAL
REGISTERED PROFESSIONAL ARCHITECT
CERTIFICATE NO.
23227
DAVID W. GEORGE
STATE OF ARIZONA U.S.A.
EXPIRES: 12/31/23

SUBMITTAL: 3R Submittal

COB PLAN TRACKING # ENG-21-0220

COB PERMIT # ENG-21-0220

ORIGINAL PLAN DATE	LATEST REVISION DATE
MAY 2022	JULY 2023
PROJECT NUMBER	SHEET NUMBER SHT.
1175	MG47 51 OF 90

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U:\1100\1175\ENGR\VILLAGE 3\MASS GRADING\1175-MG47.dwg 7/19/2023 5:05 PM

SEE MG47

SEE MG41

SEE MG49

RETENTION BASIN
RBF-7
BOT=1416
HW=1417
V_{R} PRE-VS-POST=132,628 CF
VP=163,418 CF

PARCEL 31

TRILLIUM LAND COMPANY
APN:504-72-011D

EOE=17.00

PROPOSED FLOODPLAIN

FOR CHANNEL DESIGN
SEE SHEETS DC01-DC21

TERAVALIS PARKWAY

100' R/W

122' DRAINAGE EASEMENT

16' PUE

LIMITS OF GRADING

VILLAGE 3 BOUNDARY

52.50' OFFSITE SLOPE/ CONSTRUCTION ESMT BY SEPARATE DOC

FIRST AMERICAN TITLE
INSURANCE COMPANY TR 8436
APN:504-72-011C

SCALE: 1" = 40'

N

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ARIZONA811
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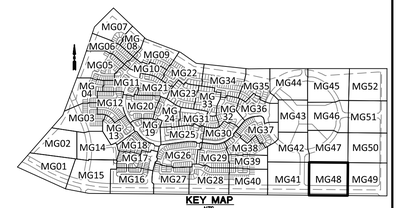
2 1

REGISTERED PROFESSIONAL ENGINEER
CERTIFICATE NO.
23227
DAVID W. GEORGE
STATE OF ARIZONA U.S.A.
EXPIRES: 12/31/23

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) HIGH POINT
- (LP) LOW POINT
- DUAL CHAMBER DRYWELL



KEY MAP
NTS

REVISIONS:

1 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION AND FIRE STATION ADDED. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

ENGINEER INFORMATION
HILGARTWILSON

COB PERMITTING APPROVED SEAL	COB ENGINEERING APPROVED SEAL
	APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING
AS-BUILT SEAL	DESIGN SEAL
	REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. 23227 DAVID W. GEORGE STATE OF ARIZONA U.S.A. EXPIRES: 12/31/23
ORIGINAL PLAN DATE: MAY 2022	LATEST REVISION DATE: JULY 2023
PROJECT NUMBER: 1175	SHEET NUMBER: MG48 SHT. 52 OF 90

SUBMITTAL: 3R Submittal
COB PLAN TRACKING #: ENG-21-0220
COB PERMIT #: ENG-21-0220

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SEE MG50

SEE MG48

PARCEL 31

TRILLIUM LAND COMPANY
APN:504-72-011D

FOR CHANNEL DESIGN
SEE SHEETS DC01-DC21

PROPOSED FLOODPLAIN

122' DRAINAGE EASEMENT

TRACT A

Q100=1,026 CFS

TERAVALIS PARKWAY

100' R/W

SUN VALLEY PARKWAY

PROPOSED 100' R/W

75' EX MCDOT R/W

MCDOT 75' R/W

BUCKEYE 25' R/W

VILLAGE 3 BOUNDARY

LIMITS OF GRADING

8' PUE

FIRST AMERICAN TITLE INSURANCE COMPANY TR 8436
APN:504-72-011C

FIRST AMERICAN TITLE INSURANCE COMPANY TR 8436
504-72-013L

52.50' OFFSITE SLOPE/ CONSTRUCTION ESMT BY SEPARATE DOC

2.0% 2.1% 1.2% 1.00% 1.54% 1.45% 1.50%

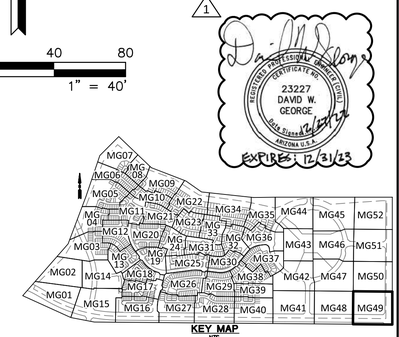
3:1 4:1 6:1 18:1

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) HIGH POINT
- (LP) LOW POINT
- DUAL CHAMBER DRYWELL

N

40 20 0 40 80
SCALE: 1" = 40'



KEY MAP
NTS

1 — 23227 DAVID W. GEORGE — EXPIRES: 12/31/23

2 — 23227 DAVID W. GEORGE — 7/17/23 — EXPIRES: 12/31/23

REVISIONS:

1 — 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION AND FIRE STATION ADDED. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 — 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL

COB ENGINEERING APPROVED SEAL

APPROVED
6/22/2022
CITY OF BUCKEYE ENGINEERING

SUBMITTAL: 3R Submittal

AS-BUILT SEAL

DESIGN SEAL

23227 DAVID W. GEORGE — 5/10/23 — EXPIRES: 12/31/23

ORIGINAL PLAN DATE: MAY 2022

LATEST REVISION DATE: JULY 2023

PROJECT NUMBER: 1175

SHEET NUMBER: MG49 SHT. 53 OF 90

COB PLAN TRACKING #: ENG-21-0220

COB PERMIT #: ENG-21-0220

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U:\1100\1175\ENGR\VILLAGE 3\MASS GRADING\1175-MG49.dwg 7/19/2023 3:00 PM

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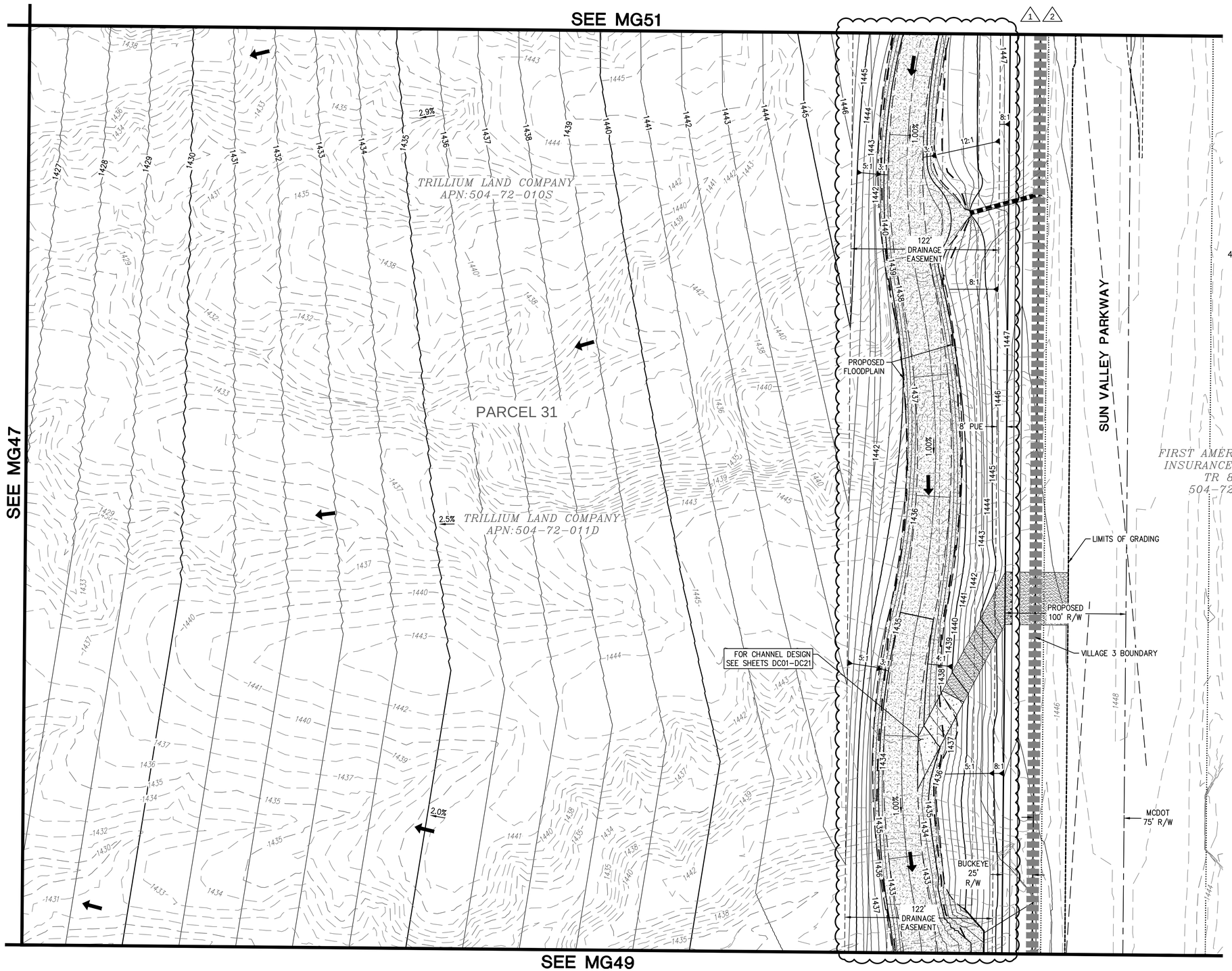

LEGEND

- VILLAGE 3 BOUNDARY
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- RIGHT OF WAY
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- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
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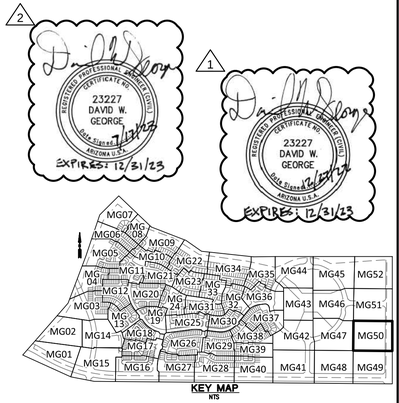
- (HP) HIGH POINT
- (LP) LOW POINT
- DUAL CHAMBER DRYWELL

N

40 20 0 40 80
SCALE: 1" = 40'



KEY MAP
NTS

REVISIONS:

1 — 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION AND FIRE STATION ADDED. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 — 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM VILLAGE 3 - UNITS 1 & 2 MASS GRADING PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL

COB ENGINEERING APPROVED SEAL

APPROVED

6/22/2022

CITY OF BUCKEYE ENGINEERING

SUBMITTAL: 3R Submittal

AS-BUILT SEAL

DESIGN SEAL

REGISTERED PROFESSIONAL ENGINEER (CERTIFICATE NO.) 23227 DAVID W. GEORGE STATE OF ARIZONA U.S.A. EXPIRES: 12/31/23

ORIGINAL PLAN DATE: MAY 2022

LATEST REVISION DATE: JULY 2023

PROJECT NUMBER: 1175

SHEET NUMBER SHT.: MG50 54 OF 90

COB PLAN TRACKING #: ENG-21-0220

COB PERMIT #: ENG-21-0220

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SEE MG52

SEE MG46

SEE MG50

PARCEL 30

PARCEL 31

TRILLIUM LAND COMPANY
504-72-010P

TRILLIUM LAND COMPANY
504-72-010S

ROSEWOOD AVE

55' R/W

67' R/W

SUN VALLEY PARKWAY

LIMITS OF GRADING

PROPOSED FLOODPLAIN

FOR CHANNEL DESIGN SEE SHEETS DC01-DC21

Q100=324 CFS

Q100=949 CFS

122' DRAINAGE EASEMENT

BUCKEYE 25' R/W

VILLAGE 3 BOUNDARY

MCDOT 75' R/W

8' PUE

9:1

60:1

75:1

13:1

8:1

1.1%

3.7%

1.67%

3.76%

(HP)

0.90%

3.6%

3.2%

2.00%

1.00%

FIRST AMERICAN TITLE
INSURANCE COMPANY TR 8436
APN:504-72-008A

FIRST AMERICAN TITLE
INSURANCE COMPANY
TR 8436
504-72-013L

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) — HIGH POINT
- (LP) — LOW POINT
- DUAL CHAMBER DRYWELL

N

40 20 0 40 80
SCALE: 1" = 40'

1

2

KEY MAP
NTS

REVISIONS:

1 — 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION AND FIRE STATION ADDED. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 — 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL	COB ENGINEERING APPROVED SEAL
	APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING
AS-BUILT SEAL	DESIGN SEAL

REGISTERED PROFESSIONAL ENGINEER — CERTIFICATE NO. 23227 — DAVID W. GEORGE — ARIZONA U.S. — EXPIRES: 12/31/23

ORIGINAL PLAN DATE	LATEST REVISION DATE
MAY 2022	JULY 2023
PROJECT NUMBER 1175	SHEET NUMBER MG51 SHT. 55 OF 90

SUBMITTAL: 3R Submittal

COB PLAN TRACKING # ENG-21-0220

COB PERMIT # ENG-21-0220

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U:\1100\1175\ENGR\VILLAGE 3\MASS GRADING\1175-MG51.dwg 7/19/2023 3:04 PM

TRILLIUM VILLAGE 2
TRILLIUM LAND COMPANY
504-72-010P

VILLAGE 3 BOUNDARY

LIMITS OF GRADING

DRAINAGE EASEMENT 115'

PROPOSED FLOODPLAIN

Q100= 374 CFS

FOR CHANNEL DESIGN
SEE SHEETS DC01-DC21

SEE MG45

PARCEL 30

Q100= 188 CFS

BUCKEYE 25' R/W

PROPOSED 100' R/W

MCDOT 75' R/W

8' PUE

5' DRAINAGE EASEMENT

122' DRAINAGE EASEMENT

LIMITS OF GRADING

VILLAGE 3 BOUNDARY

SUN VALLEY PARKWAY

FIRST AMERICAN TITLE
INSURANCE COMPANY
TR 8436
504-72-008A

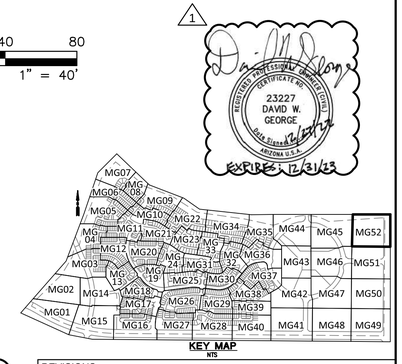
SEE MG51

N

SCALE: 1" = 40'
40 20 0 40 80

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) HIGH POINT
- (LP) LOW POINT
- DUAL CHAMBER DRYWELL



KEY MAP
NTS

1 — 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION AND FIRE STATION ADDED. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 — 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
MASS GRADING PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL	COB ENGINEERING APPROVED SEAL
	APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING
AS-BUILT SEAL	DESIGN SEAL
ORIGINAL PLAN DATE: MAY 2022	LATEST REVISION DATE: JULY 2023
PROJECT NUMBER: 1175	SHEET NUMBER: MG52 56 OF 90

SUBMITTAL: 3R Submittal

COB PLAN TRACKING # ENG-21-0220

COB PERMIT # ENG-21-0220

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CALL 811 or click Arizona811.COM

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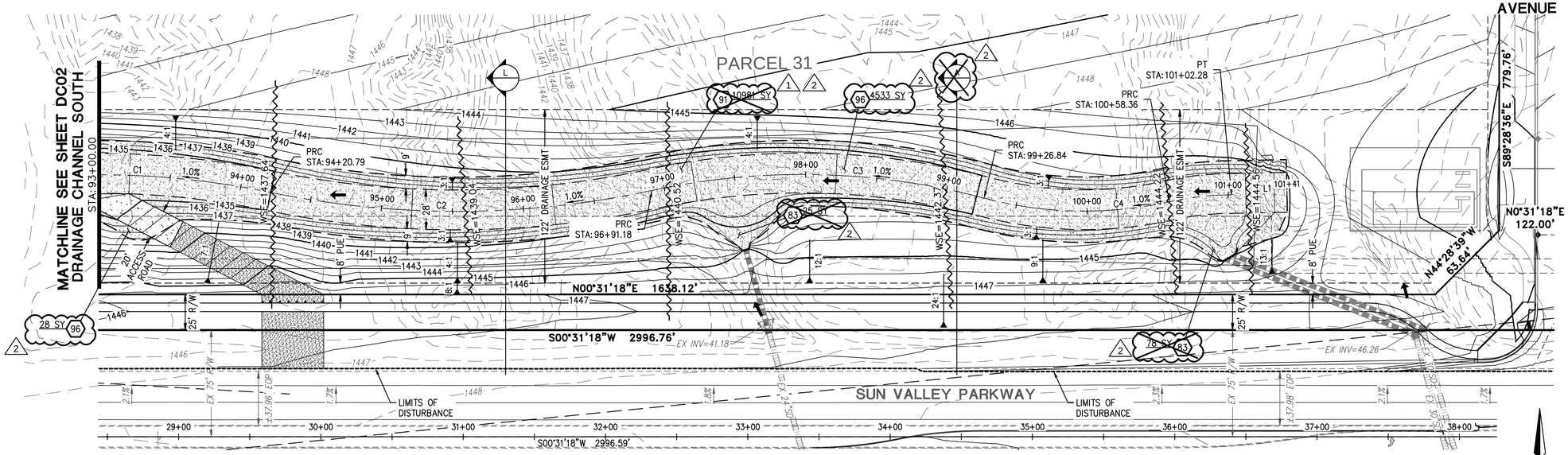
U:\1100\1175\ENGR\VILLAGE 3\MASS GRADING\1175-MG52.dwg 7/19/2023 3:06 PM



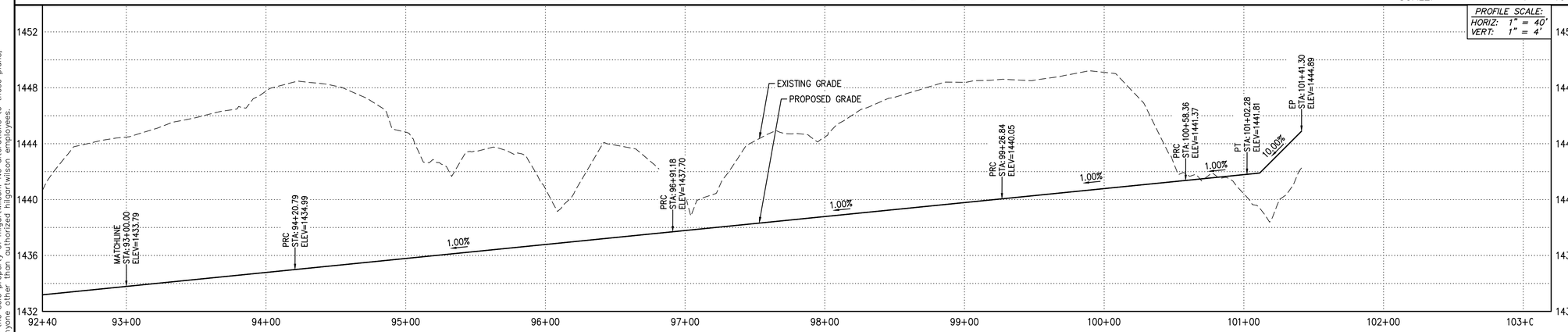
LINE TABLE		
NO.	DIRECTION	LENGTH
L1	N00°37'54"W	39.02'

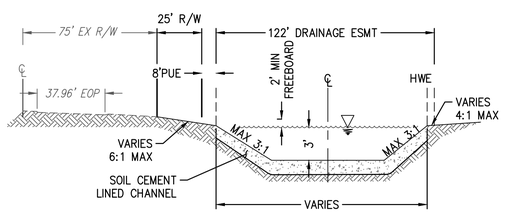
CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C1	600.00'	023°20'31"	244.44'	123.94
C2	650.00'	023°50'03"	270.39'	137.18

CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C3	500.00'	027°00'20"	235.67'	120.07
C4	275.00'	027°24'05"	131.52'	67.04

DRAINAGE CHANNEL SOUTH

40 20 0 40 80
SCALE: 1" = 40'





TYPICAL DRAINAGE SECTION - SUN VALLEY PARKWAY
(L)
NTS

2 NOTE: SECTION A HAS BEEN DELETED DUE TO CHANNEL CHANGES.

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) HIGH POINT
- (LP) LOW POINT
- DUAL CHAMBER DRYWELL

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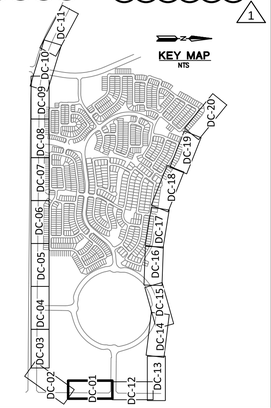
STORM DRAIN CONSTRUCTION

83 INSTALL LOOSE ANGULAR RIP-RAP PER MAG SPEC SEC. 220; D50=6", 12" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET# DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY. COLOR PER DEVELOPER. — 103 SY (1, 2)

91 INSTALL ANGULAR LOOSE RIP-RAP PER MAG SPEC SECTION 220 D50=1' 6" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 gal/min/ft AND WOVEN. SPECIFIC WEIGHT = 165 #S/ft3. GRADATION PER TABLE 6.4 OF 2013 DRAINAGE DESIGN MANUAL FOR MARICOPA COUNTY, ARIZONA (HYDRAULICS). — 10981 SY

96 INSTALL SOIL CEMENT PER MAG SPEC 311; SEE DETAIL 1 ON SHEET DC21. — 4561 SY (2)



REVISIONS:

1 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION ADDED & FIRE STATION. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
DRAINAGE CHANNEL PLAN

ENGINEER INFORMATION
HILGARTWILSON

COB PERMITTING APPROVED SEAL

COB ENGINEERING APPROVED SEAL
APPROVED
6/22/2022
CITY OF BUCKEYE ENGINEERING

SUBMITTAL: 3R Submittal

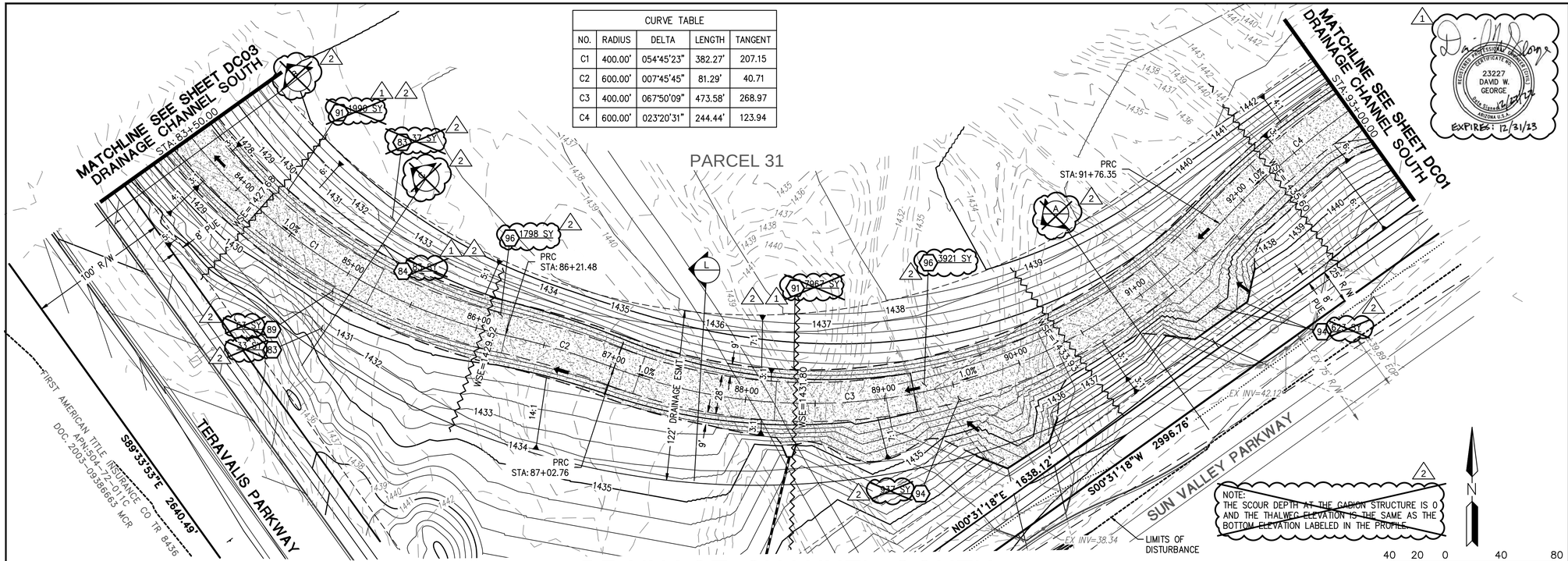
AS-BUILT SEAL

DESIGN SEAL
23227
DAVID W.
GEORGE
ARIZONA U.S.A.
EXPIRES: 12/31/23

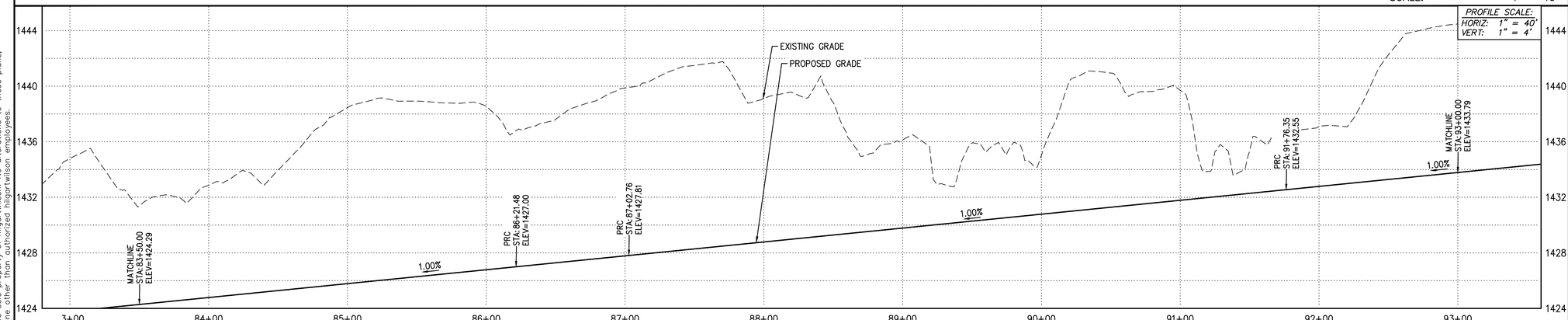
ORIGINAL PLAN DATE: MAY 2022
LATEST REVISION DATE: JULY 2023
PROJECT NUMBER: 1175
SHEET NUMBER: DC01 (2) SHT. 70 OF 90
COB PLAN TRACKING #: ENG-21-0220
COB PERMIT #:

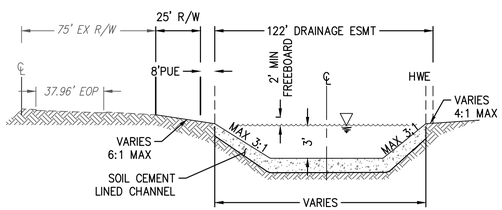
U:\1100\1175\ENGR\VILLAGE 3\MASS GRADING\CHANNEL\1175_DC01.dwg 7/19/2023 1:58 PM

CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C1	400.00'	054°45'23"	382.27'	207.15
C2	600.00'	007°45'45"	81.29'	40.71
C3	400.00'	067°50'09"	473.58'	268.97
C4	600.00'	023°20'31"	244.44'	123.94



DRAINAGE CHANNEL SOUTH





TYPICAL DRAINAGE SECTION - SUN VALLEY PARKWAY

L

NTS

2 NOTE:
SECTION A, B & C HAVE BEEN DELETED DUE TO CHANNEL CHANGES.

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) — HIGH POINT
- (LP) — LOW POINT
- DUAL CHAMBER DRYWELL

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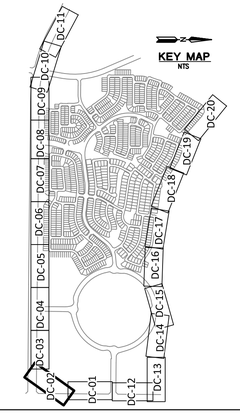
1 REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. 23227 DAVID W. GEORGE STATE OF ARIZONA U.S.A. EXPIRES: 12/31/23

2 REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. 23227 DAVID W. GEORGE STATE OF ARIZONA U.S.A. EXPIRES: 12/31/23

STORM DRAIN CONSTRUCTION

83	INSTALL LOOSE ANGULAR RIP-RAP PER MAG SPEC SEC. 220; D50=6", 12" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET# DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY. COLOR PER DEVELOPER.	70	SY
84	INSTALL GABIONS ON MACCAFERRI GEOTEXTILE MACTEX N47.1. PER DETAILS SEE SHEET# DC21.	83	SY
89	INSTALL 2" OF SHOTCRETE ON TOP OF GABION BASKET WITH D50=6" EMBEDDED IN SHOTCRETE.	63	SY
91	INSTALL ANGULAR LOOSE RIP-RAP PER MAG SPEC SECTION 220-D50=4" 6" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 gal/min/ft AND WOVEN. SPECIFIC WEIGHT = 165 lb/ft3. GRADATION PER TABLE 6.4 OF 2013 DRAINAGE DESIGN MANUAL FOR MARICOPA COUNTY, ARIZONA (HYDRAULICS).	9957	SY
94	INSTALL LOOSE ANGULAR RIP-RAP PER MAG SPEC SEC. 220; D50=9", 13.5" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET# DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY. COLOR PER DEVELOPER.	1560	SY
96	INSTALL SOIL CEMENT PER MAG SPEC 311; SEE DETAIL 1 ON SHEET DC21.	5719	SY



REVISIONS:

1 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION ADDED & FIRE STATION. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
DRAINAGE CHANNEL PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL	COB ENGINEERING APPROVED SEAL: APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING
AS-BUILT SEAL	DESIGN SEAL
ORIGINAL PLAN DATE: MAY 2022	LATEST REVISION DATE: JULY 2023
PROJECT NUMBER: 1175	SHEET NUMBER: DC02 SHT. 21 OF 90

SUBMITTAL: 3R Submittal

COB PLAN TRACKING #: ENG-21-0220

COB PERMIT #

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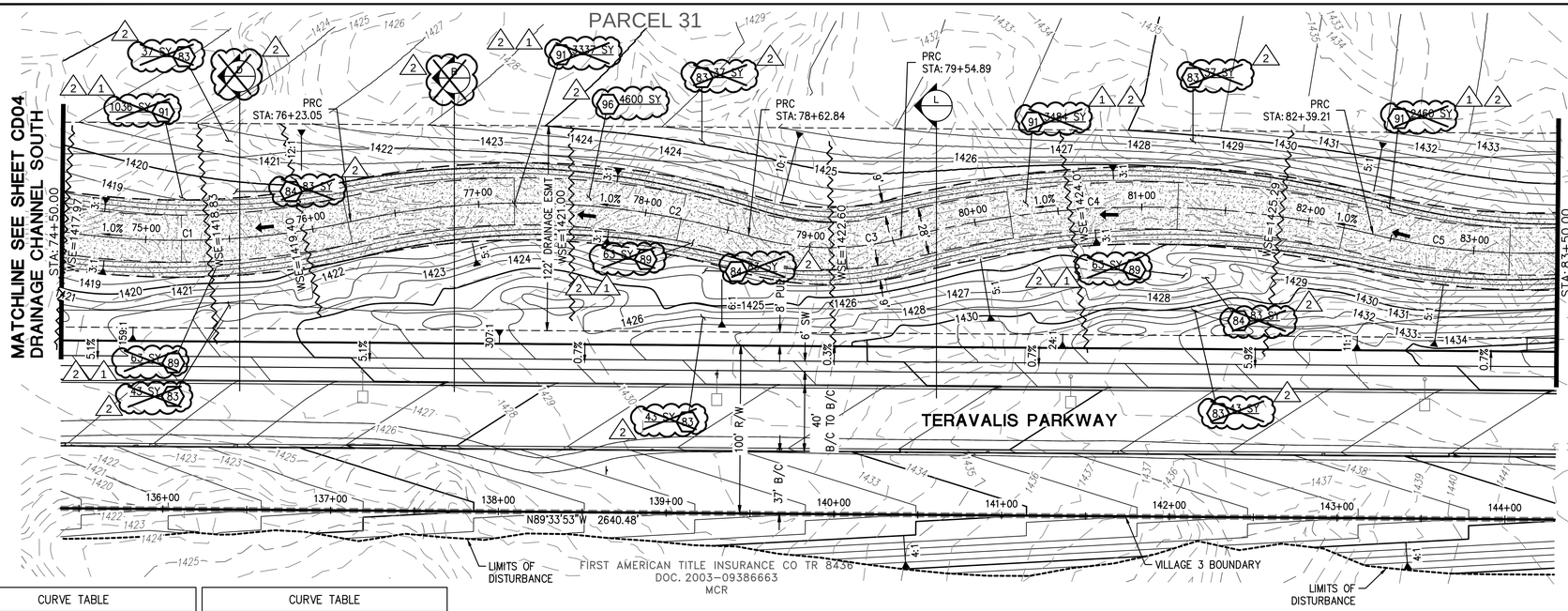
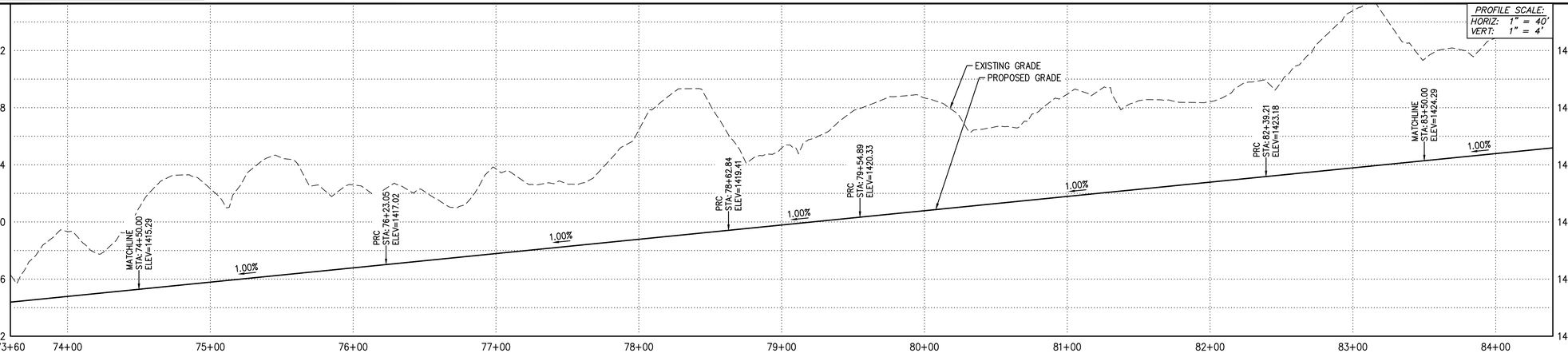


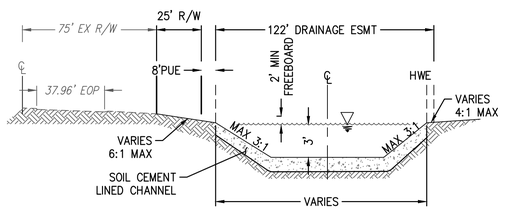
CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C1	475.00'	027°32'18"	228.30'	116.40
C2	475.00'	028°55'25"	239.79'	122.51
C3	170.01'	031°01'21"	92.05'	47.18

CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C4	575.00'	028°19'51"	284.32'	145.13
C5	400.00'	054°45'23"	382.27'	207.15

DRAINAGE CHANNEL SOUTH

SCALE: 1" = 40'





TYPICAL DRAINAGE SECTION - SUN VALLEY PARKWAY

(L)

NTS

2

NOTE:
SECTION B & C HAVE BEEN DELETED DUE TO CHANNEL CHANGES.

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) HIGH POINT
- (LP) LOW POINT
- DUAL CHAMBER DRYWELL

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ARIZONA811
CALL 811 or click Arizona811.COM

1

D. W. George
REGISTERED PROFESSIONAL ENGINEER
CERTIFICATE NO.
23227
DAVID W. GEORGE
STATE OF ARIZONA U.S.A.
EXPIRES: 12/31/23

2

D. W. George
REGISTERED PROFESSIONAL ENGINEER
CERTIFICATE NO.
23227
DAVID W. GEORGE
STATE OF ARIZONA U.S.A.
EXPIRES: 12/31/23

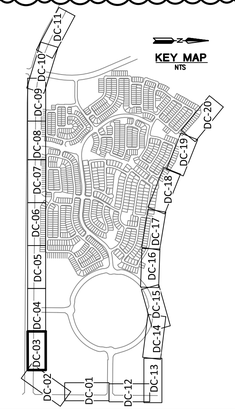
STORM DRAIN CONSTRUCTION

83	INSTALL LOOSE ANGULAR RIP-RAP PER MAG SPEC SEC. 220; D50=6", 12" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET# DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY. COLOR PER DEVELOPER.	240	SY
84	INSTALL GABIONS ON MACCAFERRI GEOTEXTILE MACTEX N47.1. PER DETAILS SEE SHEET# DC21.	249	SY
89	INSTALL 2" OF SHOTCRETE ON TOP OF GABION BASKET WITH D50=6" EMBEDDED IN SHOTCRETE.	189	SY
91	INSTALL ANGULAR LOOSE RIP-RAP PER MAG SPEC SECTION 220-D50=4" 6" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 gal/min/ft AND WOVEN. SPECIFIC WEIGHT = 165 lb/ft3. GRADATION PER TABLE 6.4 OF 2018 DRAINAGE DESIGN MANUAL FOR MARICOPA COUNTY, ARIZONA (HYDRAULICS).	10317	SY
96	INSTALL SOIL CEMENT PER MAG SPEC 311; SEE DETAIL 1 ON SHEET DC21.	4600	SY

2

NOTE:
THE SCOUR DEPTH AT THE GABION STRUCTURE IS 0 AND THE THALWEG ELEVATION IS THE SAME AS THE BOTTOM ELEVATION LABELED IN THE PROFILE.

KEY MAP
NTS



REVISIONS:

1 — 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION ADDED & FIRE STATION. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 — 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
DRAINAGE CHANNEL PLAN

ENGINEER INFORMATION
HILGARTWILSON

COB PERMITTING APPROVED SEAL

COB ENGINEERING APPROVED SEAL
APPROVED
6/22/2022
CITY OF BUCKEYE ENGINEERING

SUBMITTAL: 3R Submittal

AS-BUILT SEAL

DESIGN SEAL
D. W. George
REGISTERED PROFESSIONAL ENGINEER
CERTIFICATE NO.
23227
DAVID W. GEORGE
STATE OF ARIZONA U.S.A.
EXPIRES: 12/31/23

COB PLAN TRACKING # ENG-21-0220

COB PERMIT #

ORIGINAL PLAN DATE: MAY 2022

LATEST REVISION DATE: JULY 2023

PROJECT NUMBER: 1175

2 SHEET NUMBER: DC03 SHT. 72 OF 90

U: \1100\1175\ENGR\VILLAGE 3\MASS GRADING\CHANNEL\1175_DC03.dwg 7/19/2023 2:08 PM

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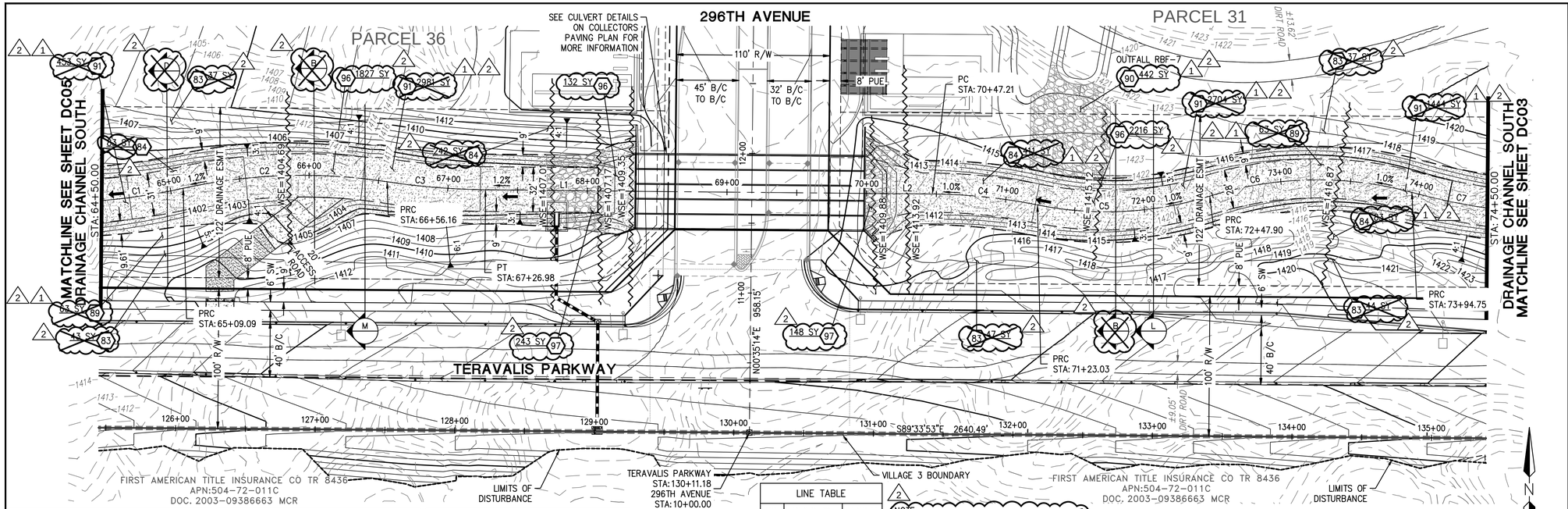
DRAINAGE CHANNEL SOUTH



CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C1	450.00'	023°34'08"	185.11'	93.88
C2	400.00'	021°04'00"	147.07'	74.38

CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C3	500.00'	008°06'53"	70.82'	35.47
C4	400.00'	010°51'36"	75.82'	38.02

CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C5	250.00'	028°37'08"	124.87'	63.77
C6	260.00'	032°21'38"	146.85'	75.44

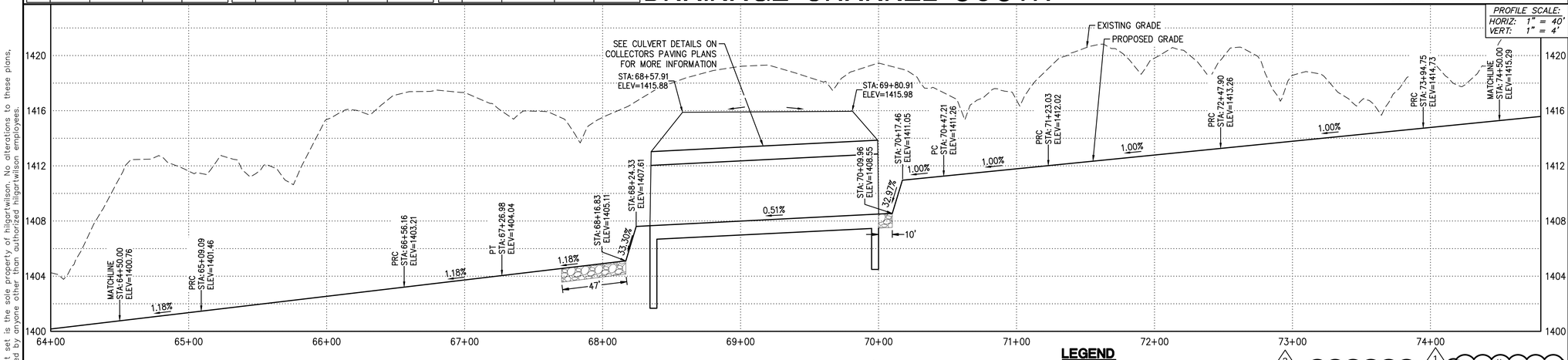
LINE TABLE		
NO.	DIRECTION	LENGTH
L1	S89°24'50"E	107.35'
L2	S89°28'58"E	47.59'

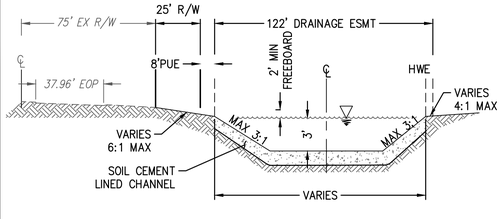
2 NOTE: THE SCOUR DEPTH AT THE GABION STRUCTURE IS 0 AND THE THALWEG ELEVATION IS THE SAME AS THE BOTTOM ELEVATION LABELED IN THE PROFILE.

CONSTRUCTION NOTES CONTINUED

97 PLACE GROUTED RIP-RAP D50=15", THICKNESS 30" ON FILTER FABRIC, MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. COLOR PER DEVELOPER'S REPRESENTATIVE. 391 SY 2

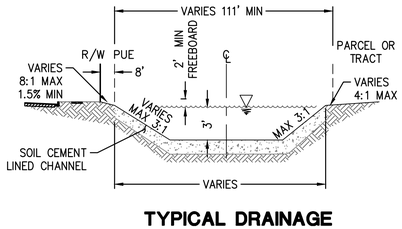
SCALE: 1" = 40'





TYPICAL DRAINAGE SECTION - SUN VALLEY PARKWAY

L NTS



TYPICAL DRAINAGE SECTION SOUTH

M NTS

2 NOTE: SECTION B & D HAVE BEEN DELETED DUE TO CHANNEL CHANGES.

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) — HIGH POINT
- (LP) — LOW POINT
- DUAL CHAMBER DRYWELL

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811 CALL 811 or click Arizona811.COM

STORM DRAIN CONSTRUCTION

83 INSTALL LOOSE ANGULAR RIP-RAP PER MAG SPEC SEC. 220; D50=6", 12" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET# DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY. COLOR PER DEVELOPER. 208 SY 1 2

84 INSTALL GABIONS ON MACCAFERRI GEOTEXTILE MACTEX M477.1. PER DETAILS SEE SHEET# DC21. 819 SY

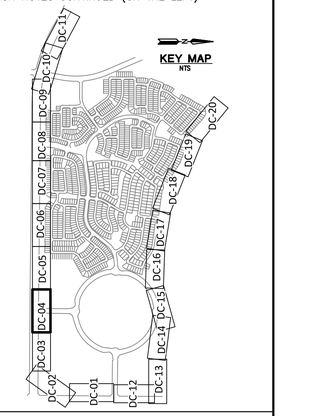
89 INSTALL 2" OF SHOTCRETE ON TOP OF GABION BASKET WITH D50=6" EMBEDDED IN SHOTCRETE. 126 SY

90 INSTALL LOOSE ANGULAR RIP-RAP PER MAG SPEC SEC. 220; D50=9", 18" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET# DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY. COLOR PER DEVELOPER. 442 SY 1 2

91 INSTALL ANGULAR LOOSE RIP-RAP PER MAG SPEC SECTION 220 D50=4" 6" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 gal/min/ft AND WOVEN. SPECIFIC WEIGHT = 165 lb/ft3. GRADATION PER TABLE 6.4 OF 2013 DRAINAGE DESIGN MANUAL FOR MARICOPA COUNTY, ARIZONA (HYDRAULICS). 7582 SY 1 2

96 INSTALL SOIL CEMENT PER MAG SPEC 311; SEE DETAIL 1 ON SHEET DC21. 4175 SY 2

* CONSTRUCTION NOTES CONTINUED (ON THE LEFT)



REVISIONS:

1 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION ADDED & FIRE STATION. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
DRAINAGE CHANNEL PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL

COB ENGINEERING APPROVED SEAL

APPROVED
6/22/2022
CITY OF BUCKEYE ENGINEERING

SUBMITTAL: 3R Submittal

AS-BUILT SEAL

DESIGN SEAL

23227 DAVID W. GEORGE REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. ARIZONA U.S.A. EXPIRES: 12/31/23

ORIGINAL PLAN DATE	LATEST REVISION DATE
MAY 2022	JULY 2023
PROJECT NUMBER	SHEET NUMBER
1175	DC04 73 OF 90

COB PLAN TRACKING # ENG-21-0220

COB PERMIT #

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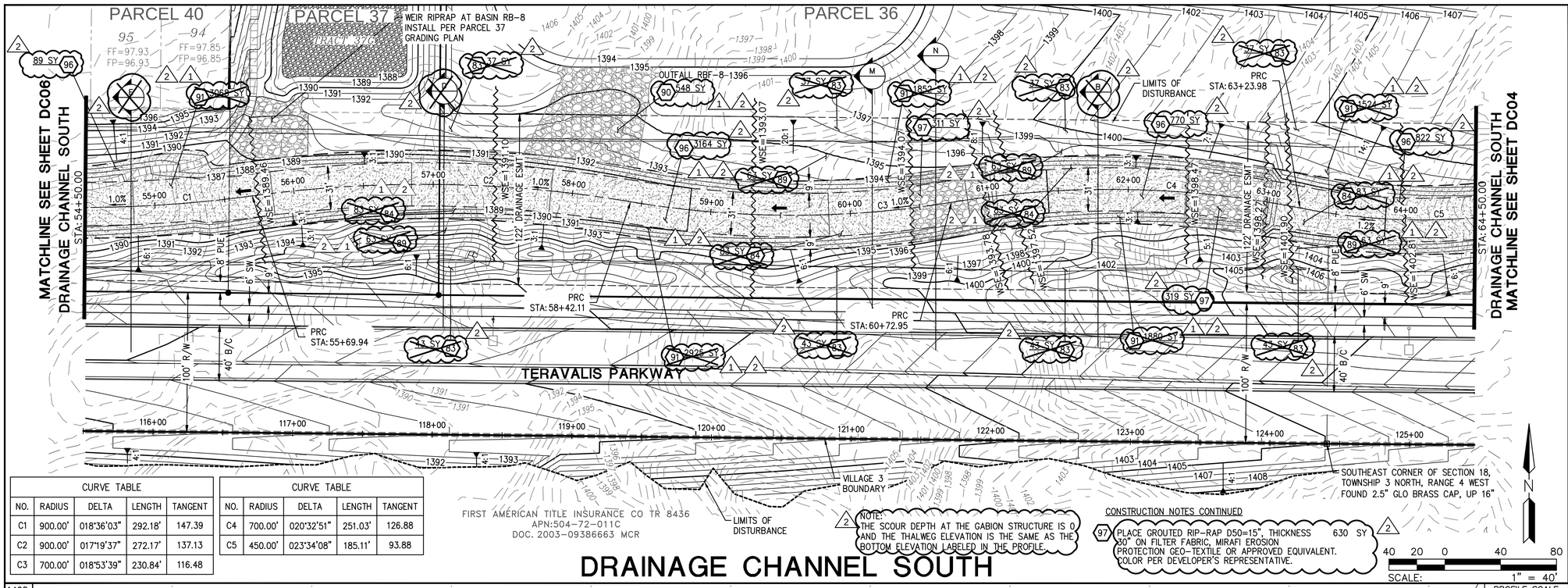


CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C1	900.00'	018°36'03"	292.18'	147.39
C2	900.00'	017°19'37"	272.17'	137.13
C3	700.00'	018°53'39"	230.84'	116.48

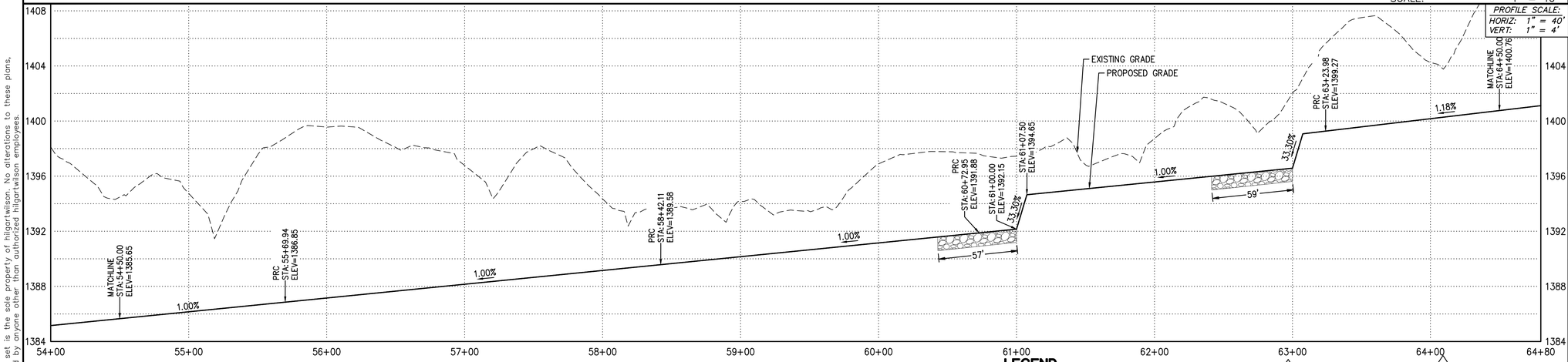
CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C4	700.00'	020°32'51"	251.03'	126.88
C5	450.00'	023°34'08"	185.11'	93.88

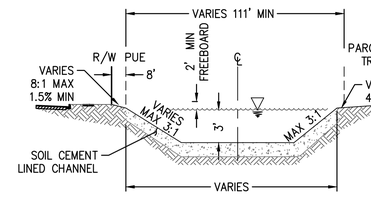
NOTE:
THE SCOUR DEPTH AT THE GABION STRUCTURE IS 0 AND THE THALWEG ELEVATION IS THE SAME AS THE BOTTOM ELEVATION LABELED IN THE PROFILE.

CONSTRUCTION NOTES CONTINUED

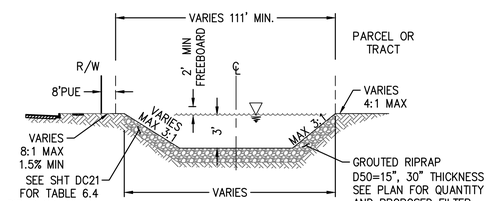
97 PLACE GROUTED RIP-RAP D50=15", THICKNESS 30" ON FILTER FABRIC, MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. COLOR PER DEVELOPER'S REPRESENTATIVE. 630 SY

DRAINAGE CHANNEL SOUTH





TYPICAL DRAINAGE SECTION SOUTH
(M)
NTS



TYPICAL DRAINAGE SECTION SOUTH
(N)
NTS

NOTE:
SECTION B, D & E HAVE BEEN DELETED DUE TO CHANNEL CHANGES.

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) HIGH POINT
- (LP) LOW POINT
- DUAL CHAMBER DRYWELL

STORM DRAIN CONSTRUCTION

83 INSTALL LOOSE ANGULAR RIP-RAP PER MAG SPEC SEC. 220; D50=6", 12" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET# DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY. COLOR PER DEVELOPER. 320 SY

84 INSTALL GABIONS ON MACCAFERRI GEOTEXTILE MACTEX N47.1. PER DETAILS SEE SHEET# DC21. 332 SY

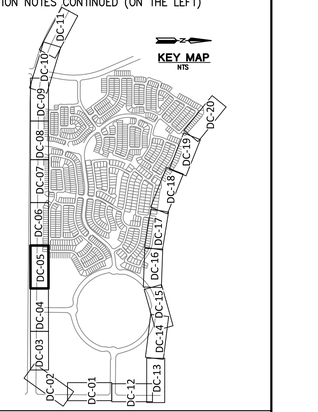
89 INSTALL 2" OF SHOTCRETE ON TOP OF GABION BASKET WITH D50=6" EMBEDDED IN SHOTCRETE. 252 SY

90 INSTALL LOOSE ANGULAR RIP-RAP PER MAG SPEC SEC. 220; D50=9", 18" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET# DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY. COLOR PER DEVELOPER. 548 SY

91 INSTALL ANGULAR LOOSE RIP-RAP PER MAG SPEC SECTION 220 D50=4" 6" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 gal/min/ft AND WOVEN. SPECIFIC WEIGHT = 165 lb/ft3. GRADATION PER TABLE 6.4 OF 2013 DRAINAGE DESIGN MANUAL FOR MARICOPA COUNTY, ARIZONA (HYDRAULICS). 11249 SY

96 INSTALL SOIL CEMENT PER MAG SPEC 311; PER DETAIL ON SHEET DC21 4845 SY

* CONSTRUCTION NOTES CONTINUED (ON THE LEFT)



REVISIONS:

1 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION ADDED & FIRE STATION. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
DRAINAGE CHANNEL PLAN

ENGINEER INFORMATION
HILGARTWILSON

COB PERMITTING APPROVED SEAL

COB ENGINEERING APPROVED SEAL
APPROVED
6/22/2022
CITY OF BUCKEYE ENGINEERING

SUBMITTAL: 3R Submittal

AS-BUILT SEAL

DESIGN SEAL
23227 DAVID W. GEORGE
REGISTERED PROFESSIONAL ENGINEER
CERTIFICATE NO.
STATE OF ARIZONA U.S.A.
7/17/23
EXPIRES: 12/31/23

ORIGINAL PLAN DATE: MAY 2022
LATEST REVISION DATE: JULY 2023
PROJECT NUMBER: 1175
SHEET NUMBER: DC05 SHT. 74 OF 90
COB PLAN TRACKING #: ENG-21-0220
COB PERMIT #:

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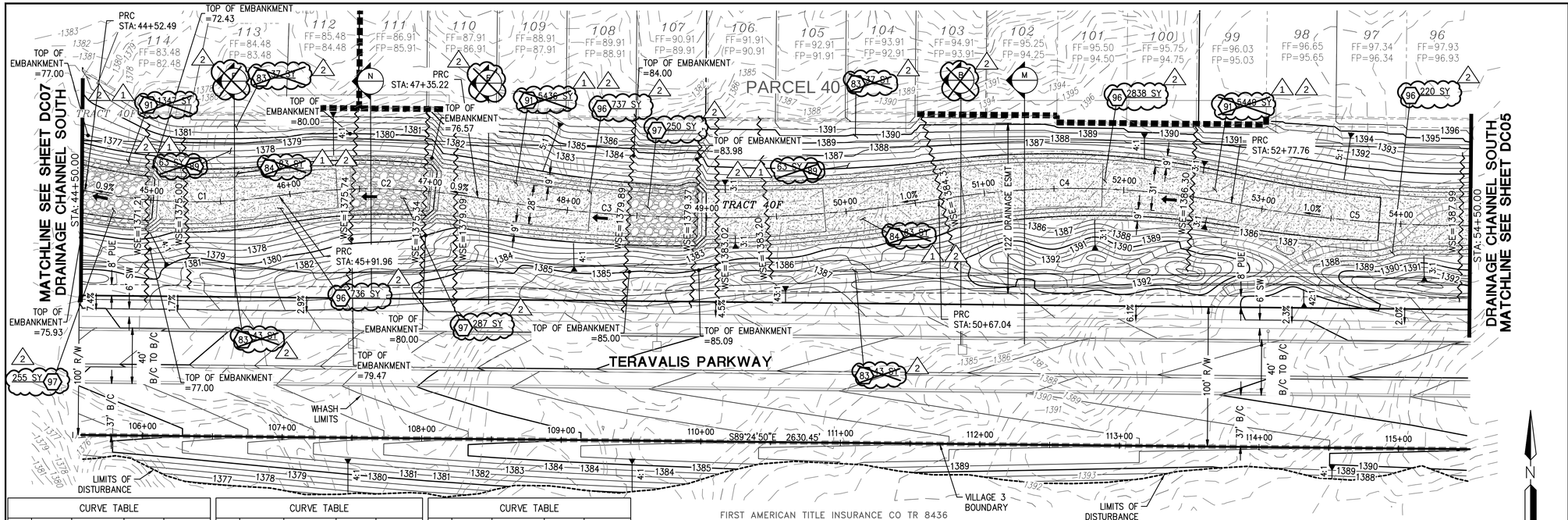


CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C1	400.00'	019°58'35"	139.46'	70.45
C2	450.00'	018°14'27"	143.26'	72.24

CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C3	1000.00'	019°00'42"	331.81'	167.45
C4	600.00'	020°07'21"	210.72'	106.46

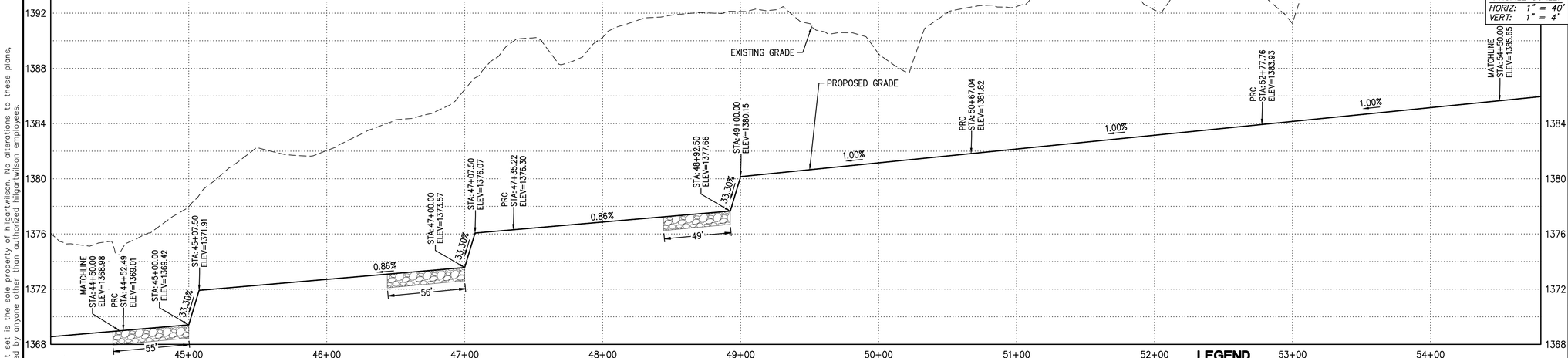
CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C5	900.00'	018°36'03"	292.18'	147.39

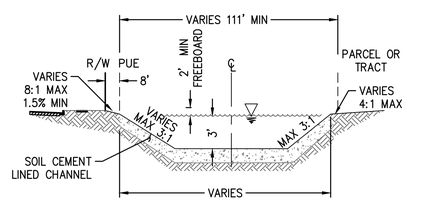
FIRST AMERICAN TITLE INSURANCE CO TR 8436
APN:504-72-011C
DOC. 2003-09386663 MCR

DRAINAGE CHANNEL SOUTH

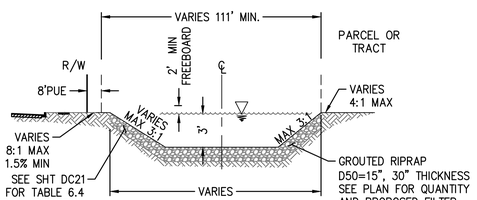
NOTE:
THE SCOUR DEPTH AT THE GABION STRUCTURE IS 0 AND THE THALWEG ELEVATION IS THE SAME AS THE BOTTOM ELEVATION LABELED IN THE PROFILE.

SCALE: 1" = 40'





TYPICAL DRAINAGE SECTION SOUTH
M
NTS



TYPICAL DRAINAGE SECTION SOUTH
N
NTS

2 NOTE:
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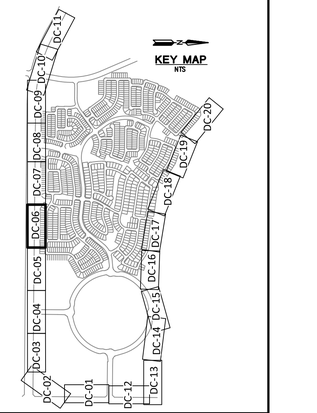
LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) — HIGH POINT
- (LP) — LOW POINT
- DUAL CHAMBER DRYWELL

STORM DRAIN CONSTRUCTION

83	INSTALL LOOSE ANGULAR RIP-RAP PER MAG SPEC SEC. 220; D50=6", 12" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET# DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY. COLOR PER DEVELOPER.	160	SY
84	INSTALL GABIONS ON MACCAFERRI GEOTEXTILE MACTEX N47.1. PER DETAILS SEE SHEET# DC21.	166	SY
89	INSTALL 2" OF SHOTCRETE ON TOP OF GABION BASKET WITH D50=6" EMBEDDED IN SHOTCRETE.	126	SY
91	INSTALL ANGULAR LOOSE RIP-RAP PER MAG SPEC SECTION 220 D50=4" 6" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 gal/min/ft AND WOVEN. SPECIFIC WEIGHT = 185 lb/ft3. GRADATION PER TABLE 6.4 OF 2013 DRAINAGE DESIGN MANUAL FOR MARICOPA COUNTY, ARIZONA (HYDRAULICS).	12232	SY
96	INSTALL SOIL CEMENT PER MAG SPEC 311; SEE DETAIL 1 ON SHEET DC21.	4531	SY
97	PLACE GROUTED RIP-RAP D50=15", THICKNESS 30" ON FILTER FABRIC, MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. COLOR PER DEVELOPER'S REPRESENTATIVE.	792	SY



REVISIONS:

1 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION ADDED & FIRE STATION. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
DRAINAGE CHANNEL PLAN

ENGINEER INFORMATION
HILGARTWILSON

COB PERMITTING APPROVED SEAL	COB ENGINEERING APPROVED SEAL: APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING
AS-BUILT SEAL	DESIGN SEAL: 23227 DAVID W. GEORGE REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. ARIZONA U.S.A. EXPIRES: 12/31/23
ORIGINAL PLAN DATE: MAY 2022	LATEST REVISION DATE: JULY 2023
PROJECT NUMBER: 1175	SHEET NUMBER: DC06 SHT. 75 OF 90

SUBMITTAL: 3R Submittal
COB PLAN TRACKING #: ENG-21-0220
COB PERMIT #:

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811 CALL 811 or click Arizona811.COM

U: \1100\1175\ENGR\VILLAGE 3\MASS GRADING\CHANNEL\1175_DC06.dwg 7/19/2023 2:18 PM

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DRAINAGE CHANNEL SOUTH

MATCHLINE SEE SHEET DC08
DRAINAGE CHANNEL SOUTH
STA: 34+50.00

MATCHLINE SEE SHEET DC06
DRAINAGE CHANNEL SOUTH
STA: 44+50.00

PARCEL 41

TRACT 41H

TRACT 40F

TERAVALIS PARKWAY

PRC STA: 34+94.77

PRC STA: 36+48.58

PRC STA: 38+65.33

PRC STA: 40+60.92

PRC STA: 42+27.39

WEIR RIPRAP FOR RBF-9.2 INSTALLATION PER PARCEL 40 GRADING PLAN

TOP OF EMBANKMENT =73.00

TOP OF EMBANKMENT =74.85

TOP OF EMBANKMENT =72.02

TOP OF EMBANKMENT =75.00

DRAINAGE ESMT

8' PUE

6' SW

100' R/W

40' B/C TO B/C

37' B/C

LIMITS OF DISTURBANCE

VILLAGE 3 BOUNDARY

SOUTH QUARTER CORNER OF SECTION 18 TOWNSHIP 3 NORTH, RANGE 4 WEST FOUND 2.5" GLO BRASS CAP ON A 1" IRON ROAD, UP 10" **P.O.B.**

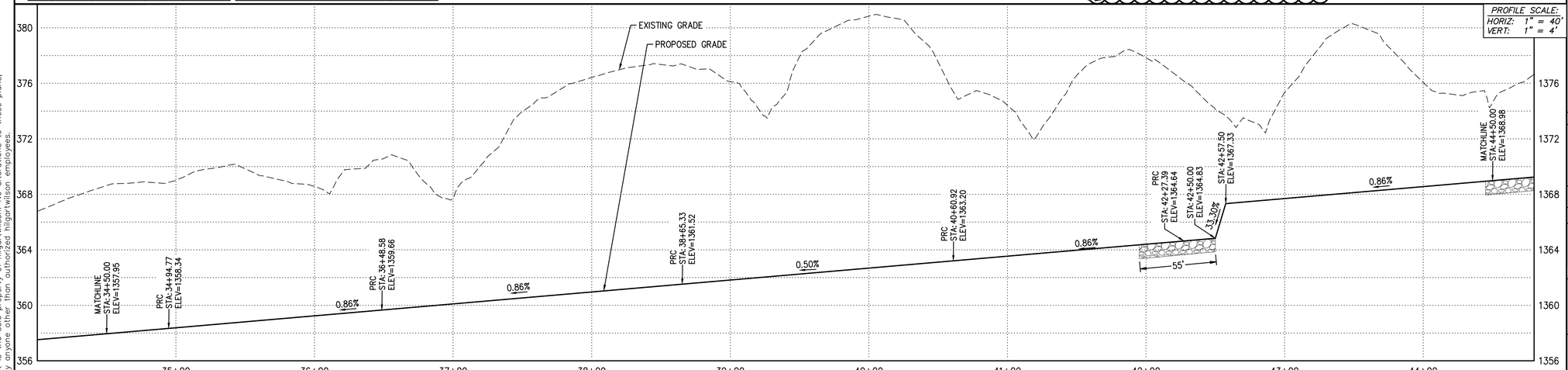
FIRST AMERICAN TITLE INSURANCE CO TR 8436-
APN:504-72-011C
DOC. 2003-09386663 MCR

NOTE:
THE SCOUR DEPTH AT THE GABION STRUCTURE IS 0 AND THE THALWEG ELEVATION IS THE SAME AS THE BOTTOM ELEVATION LABELED IN THE PROFILE.

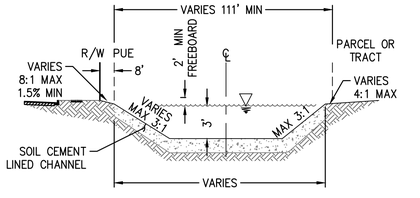
40 20 0 40 80
SCALE: 1" = 40'

CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C1	350.00'	031°00'38"	189.43'	97.10
C2	300.00'	029°22'32"	153.81'	78.64
C3	500.00'	024°50'14"	216.75'	110.10

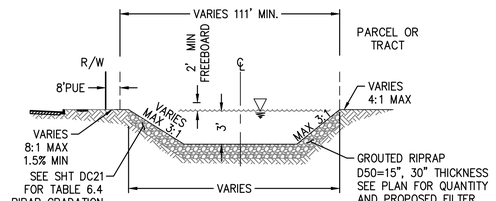
CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C4	500.00'	022°24'46"	195.59'	99.06
C5	400.00'	023°50'41"	166.47'	84.46
C6	550.00'	023°27'02"	225.11'	114.15



PROFILE SCALE:
HORIZ: 1" = 40'
VERT: 1" = 4'



TYPICAL DRAINAGE SECTION SOUTH
M
NTS



TYPICAL DRAINAGE SECTION SOUTH
N
NTS

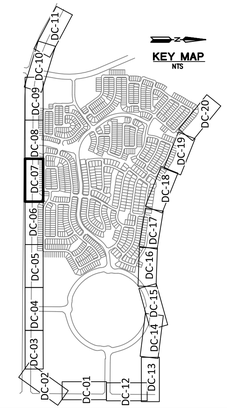
2 NOTE:
SECTION E & F HAVE BEEN DELETED DUE TO CHANNEL CHANGES.

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) — HIGH POINT
- (LP) — LOW POINT
- DUAL CHAMBER DRYWELL

STORM DRAIN CONSTRUCTION

83	INSTALL LOOSE ANGULAR RIP-RAP PER MAG SPEC SEC. 220; D50=6", 12" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET# DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY. COLOR PER DEVELOPER.	320	SY
84	INSTALL GABIONS ON MACCAFERRI GEOTEXTILE MACTEX N47.1. PER DETAILS SEE SHEET# DC21.	332	SY
89	INSTALL 2" OF SHOTCRETE ON TOP OF GABION BASKET WITH D50=6" EMBEDDED IN SHOTCRETE.	252	SY
91	INSTALL ANGULAR LOOSE RIP-RAP PER MAG SPEC SECTION 220 D50=4" 6" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 gal/min/ft AND WOVEN. SPECIFIC WEIGHT = 165 lb/ft3. GRADATION PER TABLE 6.4 OF 2015 DRAINAGE DESIGN MANUAL FOR MARICOPA COUNTY, ARIZONA (HYDRAULICS).	11768	SY
96	INSTALL SOIL CEMENT PER MAG SPEC 311; SEE DETAIL 1 ON SHEET DC21.	4840	SY
97	PLACE GROUTED RIP-RAP D50=15", THICKNESS 30" ON FILTER FABRIC, MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. COLOR PER DEVELOPER'S REPRESENTATIVE.	268	SY



REVISIONS:

1 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION ADDED & FIRE STATION. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
DRAINAGE CHANNEL PLAN

ENGINEER INFORMATION
HILGARTWILSON

COB PERMITTING APPROVED SEAL

COB ENGINEERING APPROVED SEAL
APPROVED
6/22/2022
CITY OF BUCKEYE ENGINEERING

SUBMITTAL: 3R Submittal

AS-BUILT SEAL

DESIGN SEAL
REGISTERED PROFESSIONAL ENGINEER (CIVIL) CERTIFICATE NO. 23227 DAVID W. GEORGE ARIZONA U.S.A.
7/19/23
EXPIRES: 12/31/23

COB PLAN TRACKING # ENG-21-0220

COB PERMIT #

ORIGINAL PLAN DATE: MAY 2022

LATEST REVISION DATE: JULY 2023

PROJECT NUMBER: 1175

SHEET NUMBER: DC07 SHT. 76 OF 90

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
CALL 811 or click Arizona811.COM

U:\1100\1175\ENGR\VILLAGE 3\MASS GRADING\CHANNEL\1175_DC07.dwg 7/19/2023 2:20 PM

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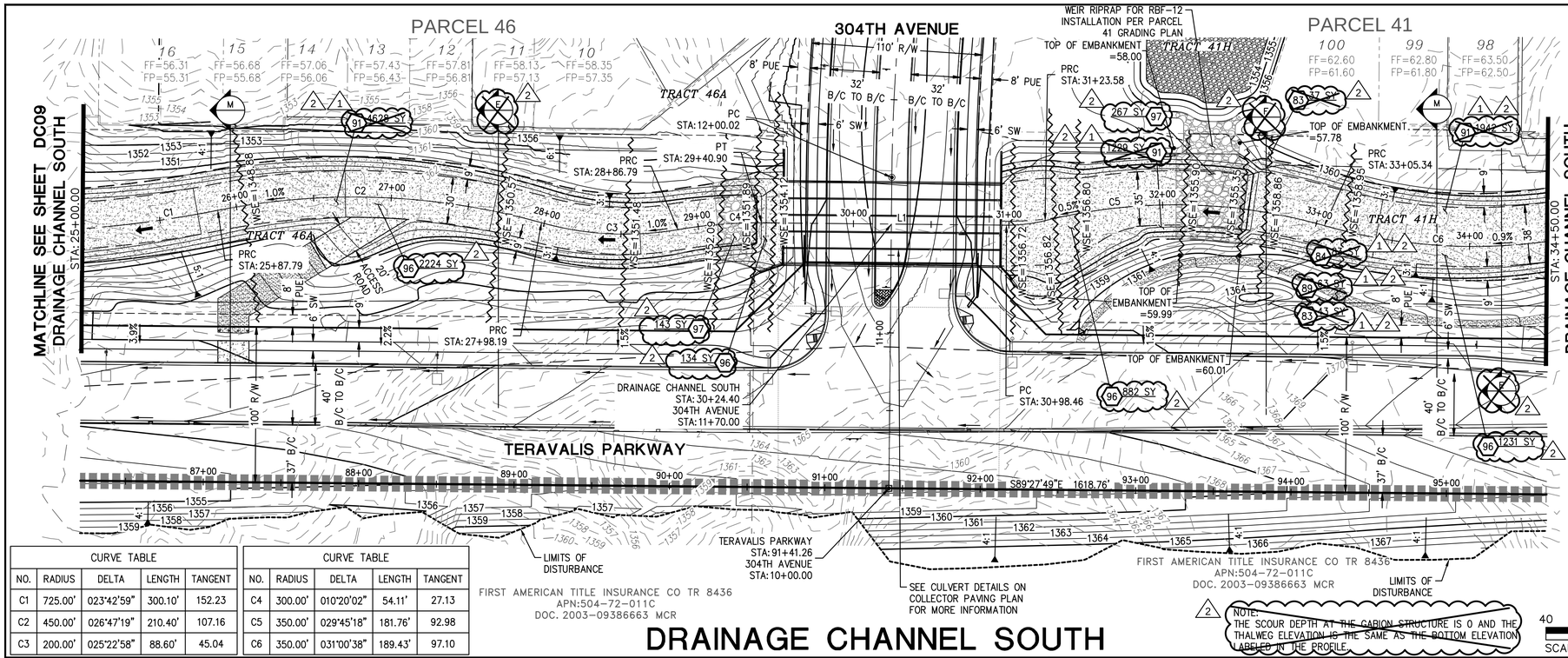


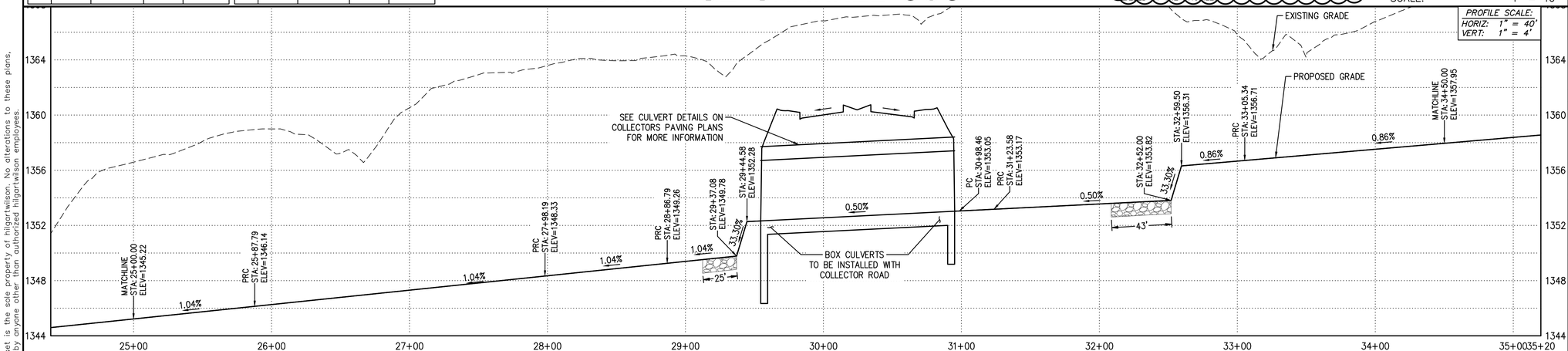
CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C1	725.00'	023°42'59"	300.10'	152.23
C2	450.00'	026°47'19"	210.40'	107.16
C3	200.00'	025°22'58"	88.60'	45.04

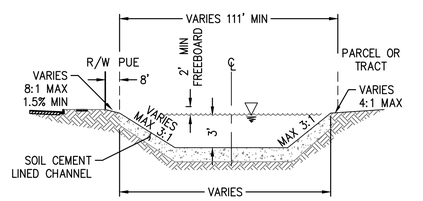
CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C4	300.00'	010°20'02"	54.11'	27.13
C5	350.00'	029°45'18"	181.76'	92.98
C6	350.00'	031°00'38"	189.43'	97.10

NOTE:
THE SCOUR DEPTH AT THE GABION STRUCTURE IS 0 AND THE THALWEG ELEVATION IS THE SAME AS THE BOTTOM ELEVATION LABELED IN THE PROFILE.

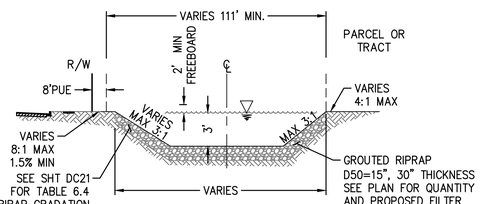
SCALE: 1" = 40'

DRAINAGE CHANNEL SOUTH





TYPICAL DRAINAGE SECTION SOUTH
M
NTS



TYPICAL DRAINAGE SECTION SOUTH
N
NTS

2 NOTE:
SECTION E & F HAVE BEEN DELETED DUE TO CHANNEL CHANGES.

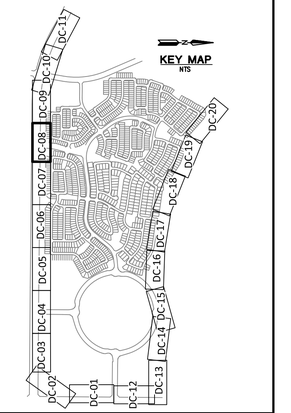
LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) HIGH POINT
- (LP) LOW POINT
- DUAL CHAMBER DRYWELL

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
CALL 811 or click Arizona811.COM

STORM DRAIN CONSTRUCTION

83	INSTALL LOOSE ANGULAR RIP-RAP PER MAG SPEC SEC. 220; D50=6", 12" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET# DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY. COLOR PER DEVELOPER.	80	SY
84	INSTALL GABIONS ON MACCAFERRI GEOTEXTILE MACTEX N47.1. PER DETAILS SEE SHEET# DC21.	83	SY
89	INSTALL 2" OF SHOTCRETE ON TOP OF GABION BASKET WITH D50=6" EMBEDDED IN SHOTCRETE.	63	SY
91	INSTALL ANGULAR LOOSE RIP-RAP PER MAG SPEC SECTION 220 D50=4" 6" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 gal/min/ft AND WOVEN. SPECIFIC WEIGHT = 185 lb/ft3. GRADATION PER TABLE 6.4 OF 2013 DRAINAGE DESIGN MANUAL FOR MARICOPA COUNTY, ARIZONA (HYDRAULICS).	7799	SY
96	INSTALL SOIL CEMENT PER MAG SPEC 311; SEE DETAIL 1 ON SHEET DC21.	4471	SY
97	PLACE GROUTED RIP-RAP D50=15", THICKNESS 30" ON FILTER FABRIC, MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. COLOR PER DEVELOPER'S REPRESENTATIVE.	410	SY



REVISIONS:

1 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION ADDED & FIRE STATION. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
DRAINAGE CHANNEL PLAN

ENGINEER INFORMATION
HILGARTWILSON

COB PERMITTING APPROVED SEAL

COB ENGINEERING APPROVED SEAL
APPROVED
6/22/2022
CITY OF BUCKEYE ENGINEERING

SUBMITTAL: 3R Submittal

AS-BUILT SEAL

DESIGN SEAL
23227 DAVID W. GEORGE REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. Arizona U.S.A.
EXPIRES: 12/31/23

ORIGINAL PLAN DATE: MAY 2022
LATEST REVISION DATE: JULY 2023
COB PLAN TRACKING #: ENG-21-0220
COB PERMIT #:
PROJECT NUMBER: 1175
SHEET NUMBER: DC08 SHT. 77 OF 90

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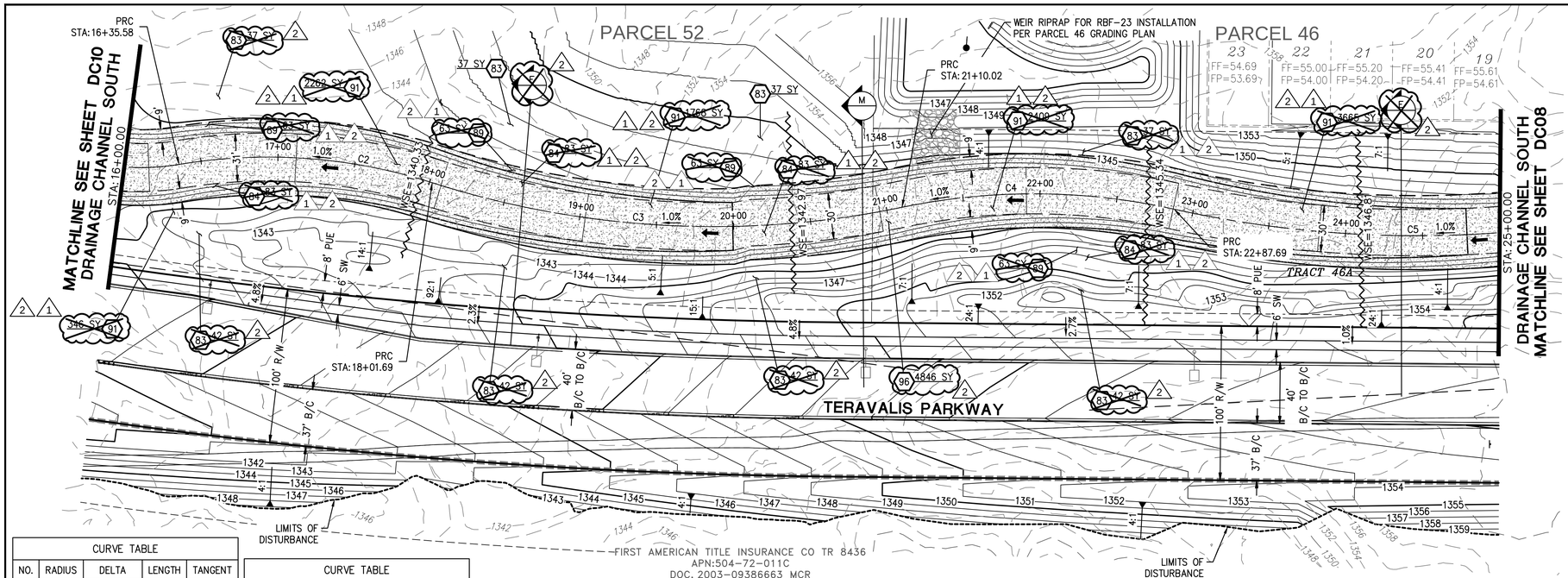
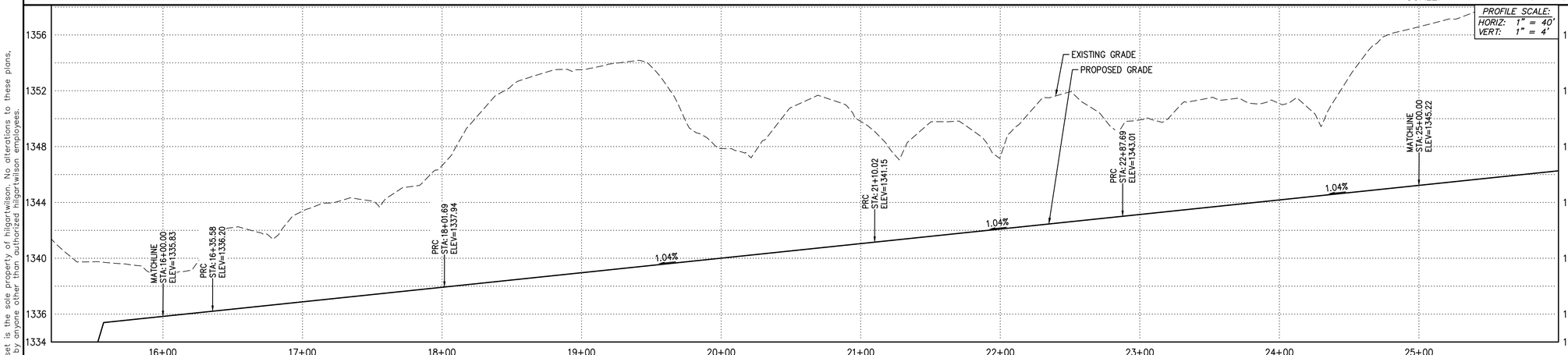


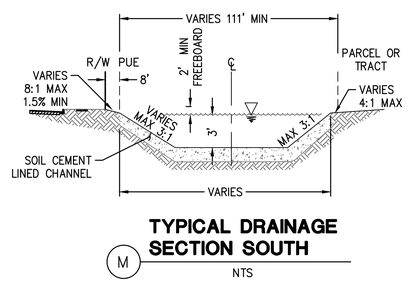
CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C2	350.00'	027°11'29"	166.10'	84.65
C3	600.00'	029°26'38"	308.33'	157.65
C4	420.00'	024°14'14"	177.67'	90.18

CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C5	725.00'	023°42'59"	300.10'	152.23

DRAINAGE CHANNEL SOUTH

SCALE: 1" = 40'





TYPICAL DRAINAGE SECTION SOUTH

M NTS

2 NOTE: SECTION E & F HAVE BEEN DELETED DUE TO CHANNEL CHANGES.

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) — HIGH POINT
- (LP) — LOW POINT
- DUAL CHAMBER DRYWELL

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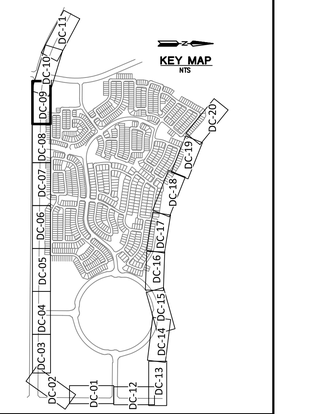
1 2

STORM DRAIN CONSTRUCTION

83	INSTALL LOOSE ANGULAR RIP-RAP PER MAG SPEC SEC. 220; D50=6", 12" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET# DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY. COLOR PER DEVELOPER.	316	SY
84	INSTALL GABIONS ON MACCAFERRI GEOTEXTILE MACTEX N47.1. PER DETAILS SEE SHEET# DC21.	332	SY
89	INSTALL 2" OF SHOTCRETE ON TOP OF GABION BASKET WITH D50=6" EMBEDDED IN SHOTCRETE.	252	SY
91	INSTALL ANGULAR LOOSE RIP-RAP PER MAG SPEC SECTION 220 D50=4" 6" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 gal/min/ft AND WOVEN. SPECIFIC WEIGHT = 185 lb/ft3. GRADATION PER TABLE 6.4 OF 2013 DRAINAGE DESIGN MANUAL FOR MARICOPA COUNTY, ARIZONA (HYDRAULICS).	10450	SY
96	INSTALL SOIL CEMENT PER MAG SPEC 311; SEE DETAIL 1 ON SHEET DC21.	4846	SY



REVISIONS:

1 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION ADDED & FIRE STATION. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM VILLAGE 3 - UNITS 1 & 2 DRAINAGE CHANNEL PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL

COB ENGINEERING APPROVED SEAL

APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING

SUBMITTAL: 3R Submittal

AS-BUILT SEAL

DESIGN SEAL

23227 DAVID W. GEORGE REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. 23227 STATE OF ARIZONA U.S.A. EXPIRES: 12/31/23

ORIGINAL PLAN DATE	LATEST REVISION DATE
MAY 2022	JULY 2023

PROJECT NUMBER	SHEET NUMBER	SHT.
1175	DC09	78 OF 90

COB PLAN TRACKING # ENG-21-0220

COB PERMIT #

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DRAINAGE CHANNEL SOUTH

CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C1	275.00'	078°05'15"	374.79'	223.04
C2	175.00'	075°45'50"	231.41'	136.15
C3	150.00'	047°38'45"	124.74'	66.23

LINE TABLE		
NO.	DIRECTION	LENGTH
L1	S51°49'35"E	398.61'

STORM DRAIN CONSTRUCTION

83 INSTALL LOOSE ANGULAR RIP-RAP PER MAG SPEC SEC. 220; D50=6", 12" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET# DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY. COLOR PER DEVELOPER. — 1608 SY

91 INSTALL ANGULAR LOOSE RIP-RAP PER MAG SPEC SECTION 220 D50=4" 6" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 gal/min/ft AND WOVEN. SPECIFIC WEIGHT = 165 lb/ft3. GRADATION PER TABLE 6.4 OF 2013 DRAINAGE DESIGN MANUAL FOR MARICOPA COUNTY, ARIZONA (HYDRAULICS). — 4445 SY

96 INSTALL SOIL CEMENT PER MAG SPEC 311; SEE DETAIL 1 ON SHEET DC21. — 2610 SY

97 PLACE GROUTED RIP-RAP D50=15", THICKNESS 30" ON FILTER FABRIC, MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. COLOR PER DEVELOPER'S REPRESENTATIVE. — 271 SY

SCALE: 1" = 40'

PROFILE SCALE: HORIZ: 1" = 40' VERT: 1" = 4'

NOTE: SECTION E & F HAVE BEEN DELETED DUE TO CHANNEL CHANGES.

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) HIGH POINT
- (LP) LOW POINT
- DUAL CHAMBER DRYWELL

TYPICAL DRAINAGE SECTION SOUTH (M) — NTS

KEY MAP NTS

REVISIONS:

1 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION ADDED & FIRE STATION. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM VILLAGE 3 - UNITS 1 & 2 DRAINAGE CHANNEL PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL	COB ENGINEERING APPROVED SEAL
	APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING
AS-BUILT SEAL	DESIGN SEAL

SUBMITTAL: 3R Submittal

COB PLAN TRACKING # ENG-21-0220

COB PERMIT #

ORIGINAL PLAN DATE	LATEST REVISION DATE
MAY 2022	JULY 2023
PROJECT NUMBER 1175	SHEET NUMBER DC10 SHT. 79 OF 90

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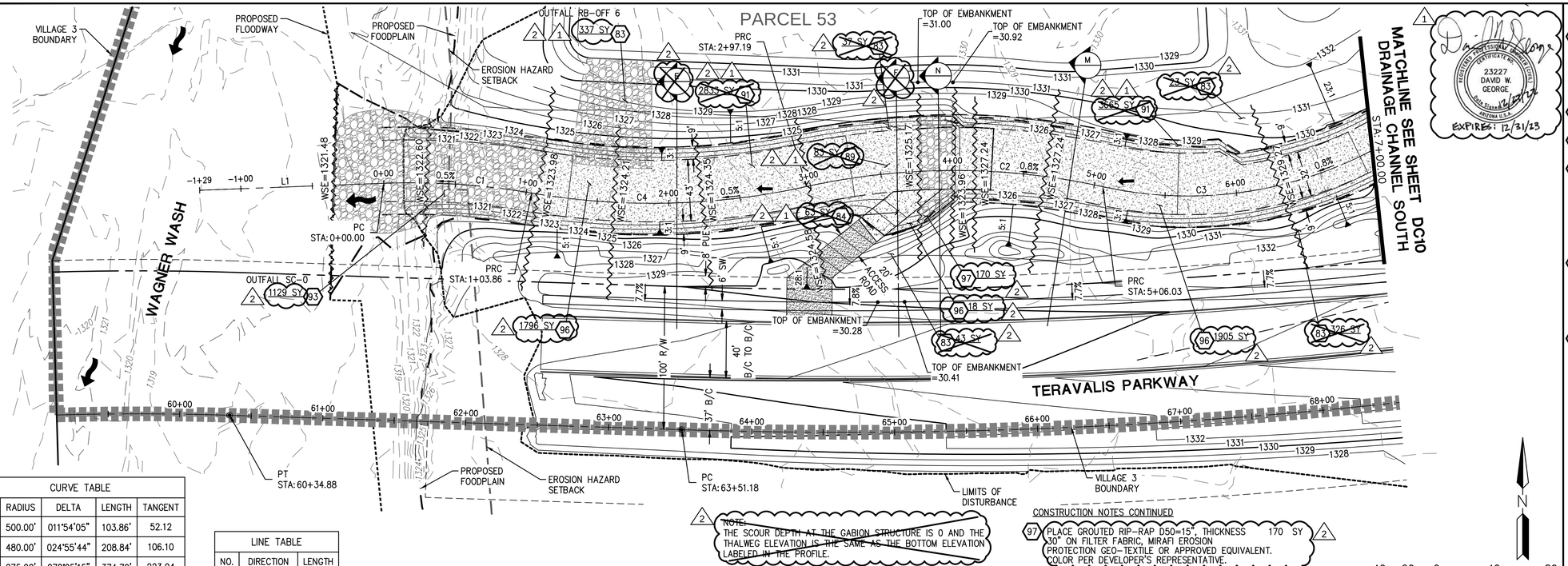


CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C1	500.00'	011°54'05"	103.86'	52.12
C2	480.00'	024°55'44"	208.84'	106.10
C3	275.00'	078°05'15"	374.79'	223.04
C4	500.00'	022°09'15"	193.33'	97.89

LINE TABLE		
NO.	DIRECTION	LENGTH
L1	S64°10'42"E	128.82'

2 NOTE: THE SCOUR DEPTH AT THE GABION STRUCTURE IS 0 AND THE THALWEG ELEVATION IS THE SAME AS THE BOTTOM ELEVATION LABELED IN THE PROFILE.

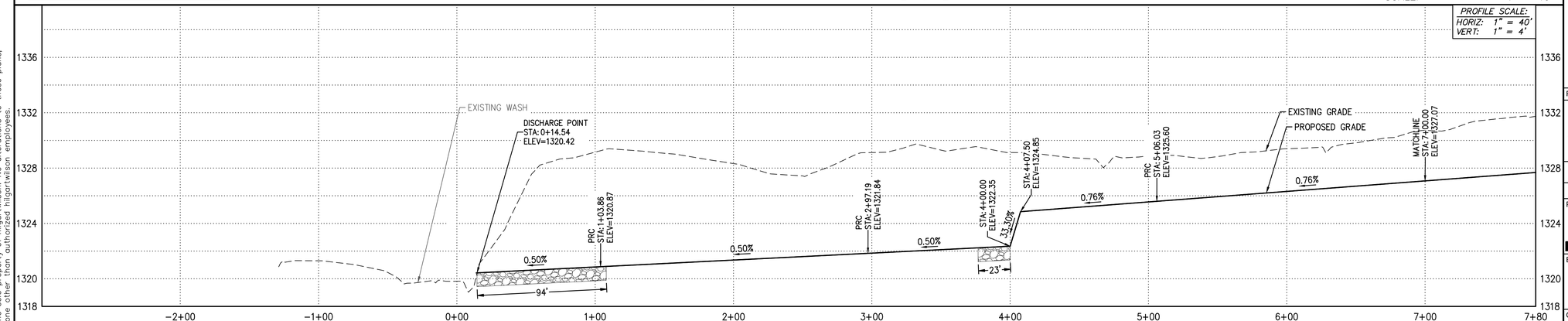
CONSTRUCTION NOTES CONTINUED

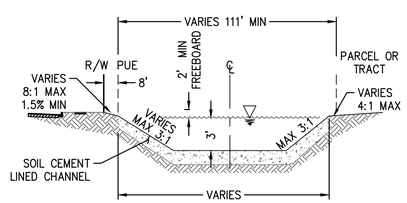
97 PLACE GROUTED RIP-RAP D50=15", THICKNESS 170 SY 30" ON FILTER FABRIC, MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. COLOR PER DEVELOPER'S REPRESENTATIVE. 2

DRAINAGE CHANNEL SOUTH

N

SCALE: 1" = 40'

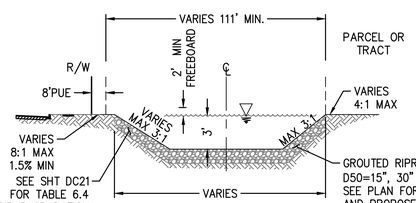




M

TYPICAL DRAINAGE SECTION SOUTH

NTS



N

TYPICAL DRAINAGE SECTION SOUTH

NTS

2 NOTE: SECTION E & F HAVE BEEN DELETED DUE TO CHANNEL CHANGES.

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) — HIGH POINT
- (LP) — LOW POINT
- DUAL CHAMBER DRYWELL

2 Daniel W. George, REGISTERED PROFESSIONAL ENGINEER, CERTIFICATE NO. 23227, DAVID W. GEORGE, State of ARIZONA U.S.A., 12/27/22, EXPIRES: 12/31/23

Contact Arizona 811 at least two full working days before you begin excavation. ARIZONA811 CALL 811 or click Arizona811.COM

STORM DRAIN CONSTRUCTION

83 INSTALL LOOSE ANGULAR RIP-RAP PER MAG SPEC SEC. 220; D50=6", 12" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET# DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY. COLOR PER DEVELOPER. — 766 SY — 1 2

84 INSTALL GABIONS ON MACCAFERRI GEOTEXTILE MACTEX N47.1. PER DETAILS SEE SHEET# DC21. — 63 SY — 1 2

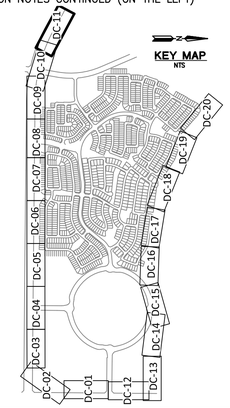
89 INSTALL 2" OF SHOTCRETE ON TOP OF GABION BASKET WITH D50=6" EMBEDDED IN SHOTCRETE. — 83 SY

91 INSTALL ANGULAR LOOSE RIP-RAP PER MAG SPEC SECTION 220 D50=4" 8" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 gal/min/ft AND WOVEN. SPECIFIC WEIGHT = 165 LB/FT3. GRADATION PER TABLE 6.4 OF 2013 DRAINAGE DESIGN MANUAL FOR MARICOPA COUNTY, ARIZONA (HYDRAULICS). — 6498 SY

93 INSTALL LOOSE ANGULAR RIP-RAP PER MAG SPEC SEC. 220; D50=9", 24" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET# DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY. COLOR PER DEVELOPER. — 1129 SY — 2

96 INSTALL SOIL CEMENT PER MAG SPEC 311; SEE DETAIL 1 ON SHEET DC21. — 3719 SY — 2

* CONSTRUCTION NOTES CONTINUED (ON THE LEFT)



REVISIONS:

1 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION ADDED & FIRE STATION. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
DRAINAGE CHANNEL PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL

COB ENGINEERING APPROVED SEAL: APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING

AS-BUILT SEAL

DESIGN SEAL: Daniel W. George, REGISTERED PROFESSIONAL ENGINEER, CERTIFICATE NO. 23227, DAVID W. GEORGE, State of ARIZONA U.S.A., EXPIRES: 12/31/23

SUBMITTAL: 3R Submittal

ORIGINAL PLAN DATE: MAY 2022

LATEST REVISION DATE: JULY 2023

PROJECT NUMBER: 1175

SHEET NUMBER: DC11 SHT. 80 OF 90

COB PLAN TRACKING #: ENG-21-0220

COB PERMIT #

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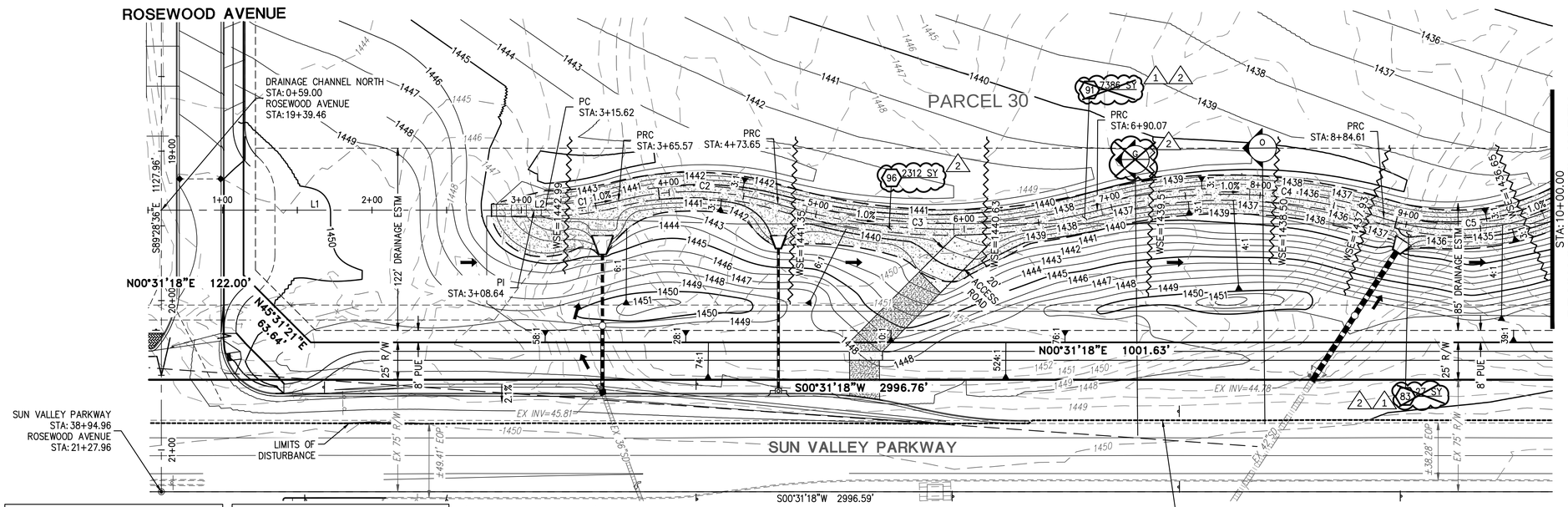


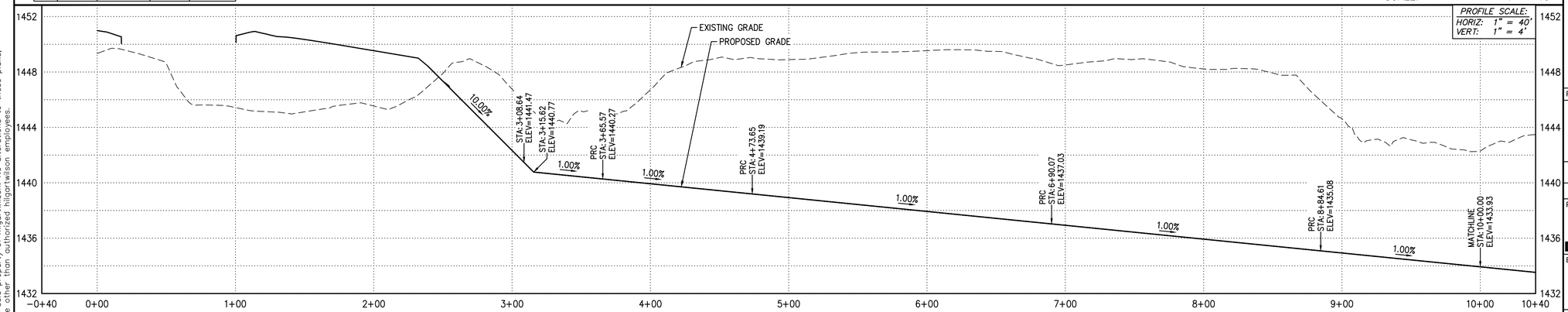
CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C1	200.00'	014°18'30"	49.95'	25.10
C2	200.00'	030°57'50"	108.08'	55.40
C3	400.00'	030°59'57"	216.41'	110.93

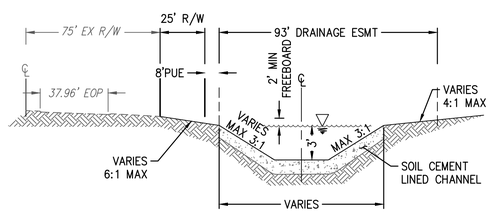
CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C4	350.00'	031°50'50"	194.54'	99.86
C5	160.00'	129°31'58"	361.72'	339.50

LINE TABLE		
NO.	DIRECTION	LENGTH
L1	N00°31'18"E	308.64'
L2	N00°31'18"E	6.98'

DRAINAGE CHANNEL NORTH

SCALE: 1" = 40'





TYPICAL DRAINAGE SECTION - SUN VALLEY PARKWAY

(0) NTS

(2) NOTE: SECTION G HAVE BEEN DELETED DUE TO CHANNEL CHANGES.

LEGEND

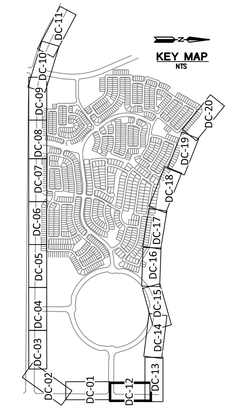
- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) HIGH POINT
- (LP) LOW POINT
- DUAL CHAMBER DRYWELL

STORM DRAIN CONSTRUCTION

(83) INSTALL LOOSE ANGULAR RIP-RAP PER MAG SPEC SEC. 220; D50=6", 12" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY. COLOR PER DEVELOPER. — 27 SY (1, 2)

(91) INSTALL ANGULAR LOOSE RIP-RAP PER MAG SPEC SECTION 220 D50=4" 6" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 gal/min/ft AND WOVEN. SPECIFIC WEIGHT = 165-15/113. GRADATION PER TABLE 6.4 OF 2015 DRAINAGE DESIGN MANUAL FOR MARICOPA COUNTY, ARIZONA (HYDRAULICS). — 7386 SY

(96) INSTALL SOIL CEMENT PER MAG SPEC 311; SEE DETAIL 1 ON SHEET DC21. — 2312 SY (2)



REVISIONS:

1 — 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION ADDED & FIRE STATION. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 — 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
DRAINAGE CHANNEL PLAN

ENGINEER INFORMATION
HILGARTWILSON

COB PERMITTING APPROVED SEAL

COB ENGINEERING APPROVED SEAL
APPROVED
6/22/2022
CITY OF BUCKEYE ENGINEERING

SUBMITTAL: 3R Submittal

AS-BUILT SEAL

DESIGN SEAL
23227 DAVID W. GEORGE
REGISTERED PROFESSIONAL ENGINEER — CERTIFICATE NO. — ARIZONA U.S.A.
EXPIRES: 12/31/23

ORIGINAL PLAN DATE: MAY 2022
LATEST REVISION DATE: JULY 2023
PROJECT NUMBER: 1175
SHEET NUMBER: DC12 SHT. 81 OF 90
COB PLAN TRACKING #: ENG-21-0220
COB PERMIT #:

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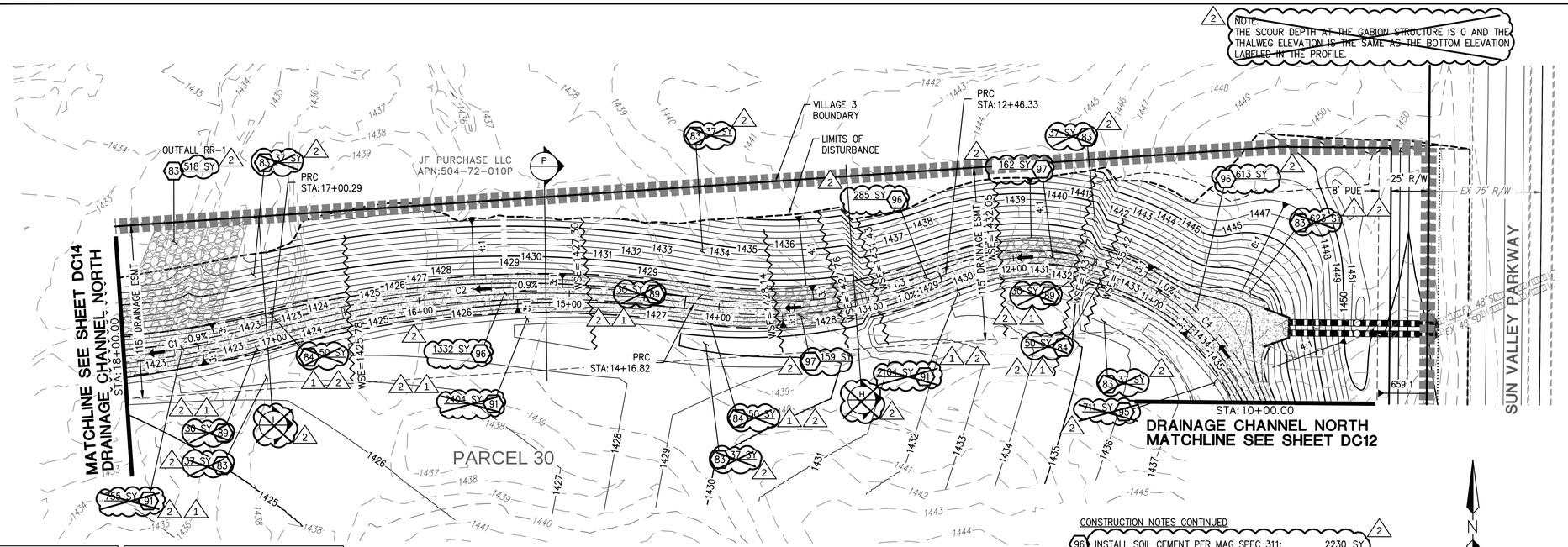


CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C1	600.00'	023°14'05"	243.31'	123.35
C2	700.00'	023°12'09"	283.47'	143.71

CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C3	330.00'	029°35'59"	170.48'	87.19
C4	160.00'	129°31'58"	361.72'	339.50

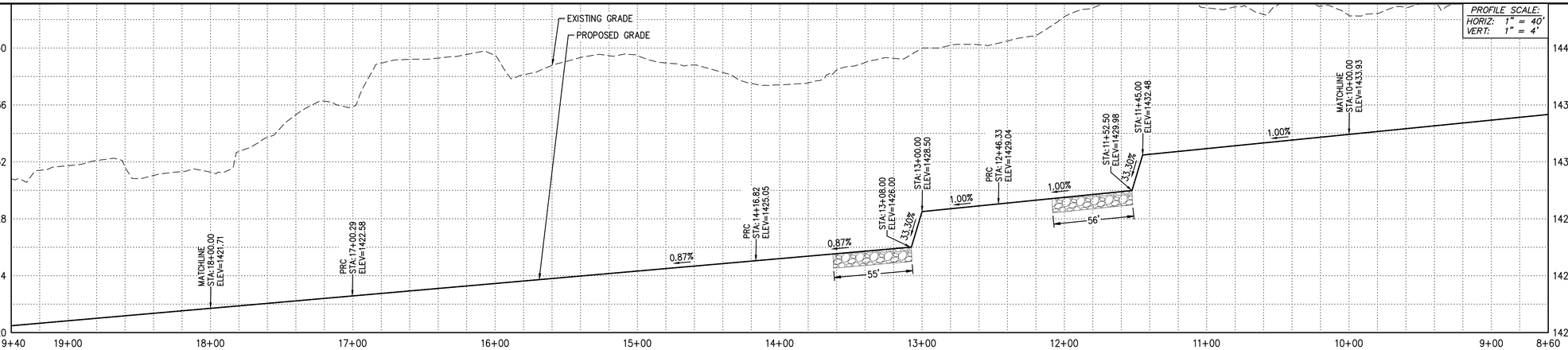
CONSTRUCTION NOTES CONTINUED

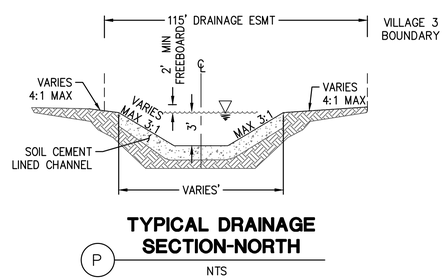
96 INSTALL SOIL CEMENT PER MAG SPEC 311; SEE DETAIL 1 ON SHEET DC21. 2230 SY

97 PLACE GROUTED RIP-RAP D50=15", THICKNESS 30" ON FILTER FABRIC, MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. COLOR PER DEVELOPER'S REPRESENTATIVE. 321 SY

SCALE: 1" = 40'

DRAINAGE CHANNEL NORTH





TYPICAL DRAINAGE SECTION-NORTH

P NTS

NOTE:
SECTION H AND I HAVE BEEN DELETED DUE TO CHANNEL CHANGES.

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) — HIGH POINT
- (LP) — LOW POINT
- DUAL CHAMBER DRYWELL

STORM DRAIN CONSTRUCTION

83 INSTALL LOOSE ANGULAR RIP-RAP PER MAG SPEC SEC. 220; D50=6", 12" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET# DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY. COLOR PER DEVELOPER. ~~1363~~ 518 SY

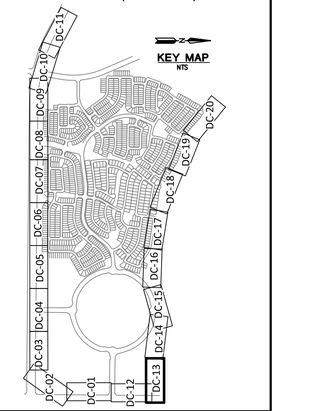
84 INSTALL GABIONS ON MACCAFERRI GEOTEXILE MACTEX N47.1. PER DETAILS SEE SHEET# DC21. 150 SY

89 INSTALL 2" OF SHOTCRETE ON TOP OF GABION BASKET WITH D50=6" EMBEDDED IN SHOTCRETE. 90 SY

91 INSTALL ANGULAR LOOSE RIP-RAP PER MAG SPEC SECTION 220 D50=4" 6" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 gal/min/ft AND WOVEN. SPECIFIC WEIGHT = 165 lb/ft3. GRADATION PER TABLE 6.4 OF 2013 DRAINAGE DESIGN MANUAL FOR MARICOPA COUNTY, ARIZONA (HYDRAULICS). 5263 SY

95 INSTALL ANGULAR LOOSE RIP-RAP PER MAG SPEC SEC. 220; D50=6", 9" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 gal/min/ft AND WOVEN. SPECIFIC WEIGHT = 165 lb/ft3. GRADATION PER TABLE 6.4 OF 2013 DRAINAGE DESIGN MANUAL FOR MARICOPA COUNTY, ARIZONA (HYDRAULICS). 711 SY

* CONSTRUCTION NOTES CONTINUED (ON THE LEFT)



REVISIONS:

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2 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
DRAINAGE CHANNEL PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL

COB ENGINEERING APPROVED SEAL

APPROVED
6/22/2022
CITY OF BUCKEYE ENGINEERING

SUBMITTAL: 3R Submittal

AS-BUILT SEAL

DESIGN SEAL

REGISTERED PROFESSIONAL ENGINEER — CERTIFICATE NO. 23227 — DAVID W. GEORGE — STATE OF ARIZONA U.S.A. — EXPIRES: 12/31/23

ORIGINAL PLAN DATE: MAY 2022

LATEST REVISION DATE: JULY 2023

PROJECT NUMBER: 1175

SHEET NUMBER: DC13 SHT. 82 OF 90

COB PLAN TRACKING #: ENG-21-0220

COB PERMIT #

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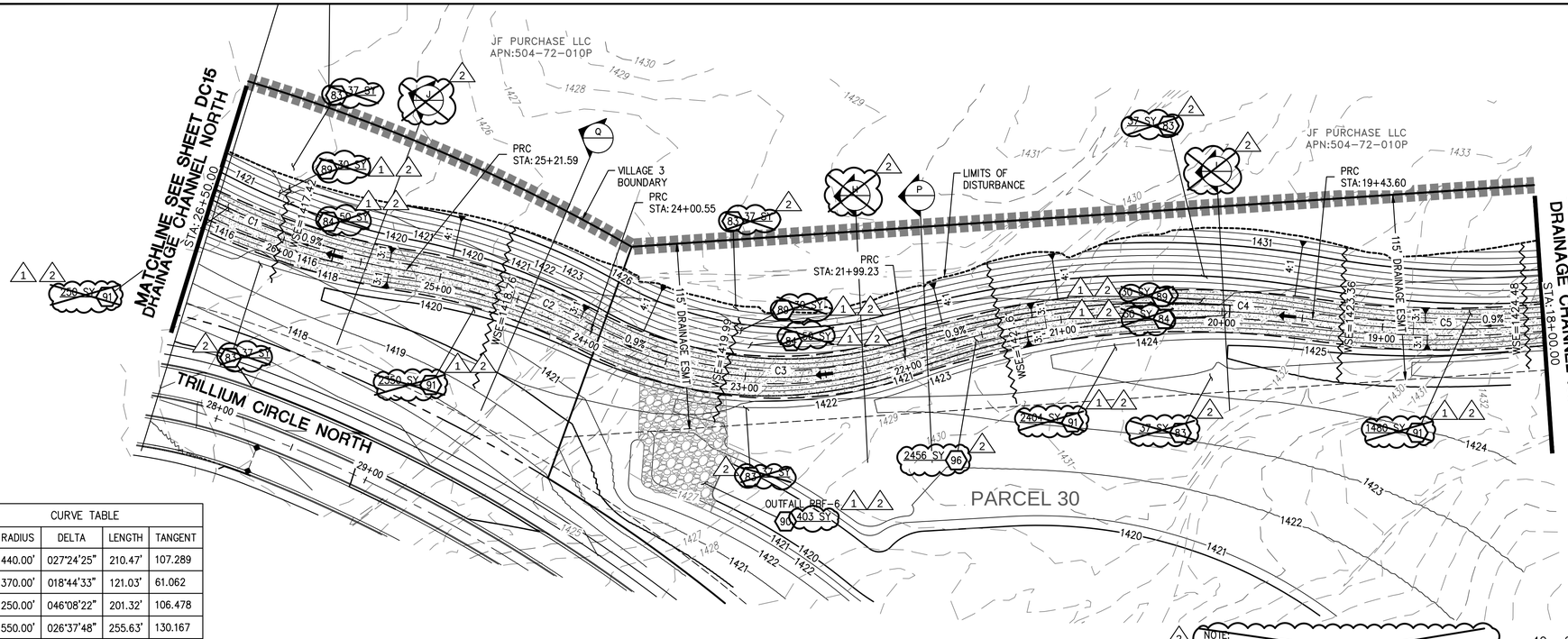
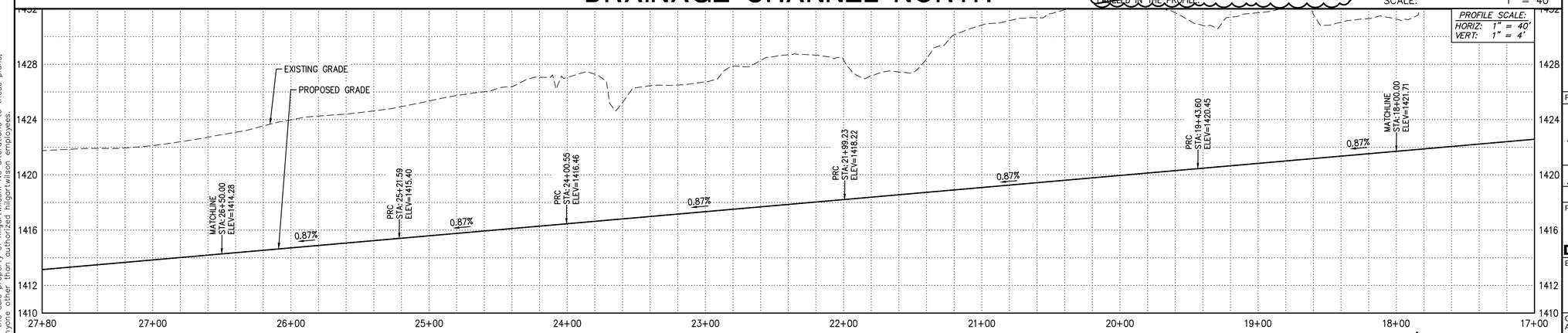


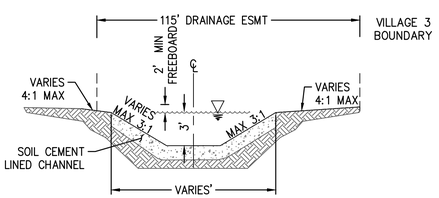
CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C1	440.00'	027°24'25"	210.47'	107.289
C2	370.00'	018°44'33"	121.03'	61.062
C3	250.00'	046°08'22"	201.32'	106.478
C4	550.00'	026°37'48"	255.63'	130.167
C5	600.00'	023°14'05"	243.31'	123.352

DRAINAGE CHANNEL NORTH

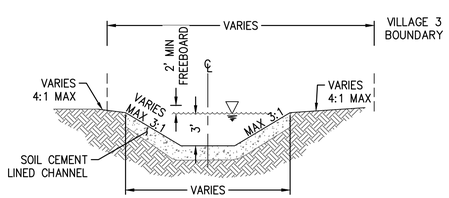
NOTE:
THE SCOUR DEPTH AT THE GABION STRUCTURE IS 0 AND THE THALWEG ELEVATION IS THE SAME AS THE BOTTOM ELEVATION LABELED IN THE PROFILE.

40 20 0 40 80
SCALE: 1" = 40'





TYPICAL DRAINAGE SECTION-NORTH
(P) NTS



TYPICAL DRAINAGE SECTION-NORTH
(Q) NTS

2 NOTE:
SECTION H, I & J HAVE BEEN DELETED DUE TO CHANNEL CHANGES.

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
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- (LP) LOW POINT
- DUAL CHAMBER DRYWELL

1 Daniel W. George — REGISTERED PROFESSIONAL ENGINEER — CERTIFICATE NO. 23227 — DAVID W. GEORGE — ARIZONA U.S.A. — EXPIRES: 12/31/23

2 Daniel W. George — REGISTERED PROFESSIONAL ENGINEER — CERTIFICATE NO. 23227 — DAVID W. GEORGE — ARIZONA U.S.A. — EXPIRES: 12/31/23

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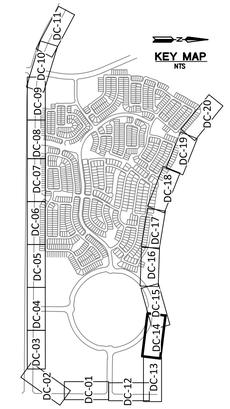
STORM DRAIN CONSTRUCTION

83	INSTALL LOOSE ANGULAR RIP-RAP PER MAG SPEC SEC. 220; D50=6", 12" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET# DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY. COLOR PER DEVELOPER.	232 SY	1 2
84	INSTALL GABIONS ON MACCAFERRI GEOTEXTILE MACTEX N47-1. PER DETAILS SEE SHEET# DC21.	150 SY	
89	INSTALL 2" OF SHOTCRETE ON TOP OF GABION BASKET WITH D50=6" EMBEDDED IN SHOTCRETE.	90 SY	
90	INSTALL LOOSE ANGULAR RIP-RAP PER MAG SPEC SEC. 220; D50=9", 18" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET# DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY. COLOR PER DEVELOPER.	403 SY	1 2
91	INSTALL ANGULAR LOOSE RIP-RAP PER MAG SPEC SECTION 220 D50=4" 6" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 gal/min/ft AND WOVEN. SPECIFIC WEIGHT = 165 lb/ft3. GRADATION PER TABLE 6.4 OF 2013 DRAINAGE DESIGN MANUAL FOR MARICOPA COUNTY, ARIZONA (HYDRAULICS).	6484 SY	1 2
96	INSTALL SOIL CEMENT PER MAG SPEC 311; SEE DETAIL 1 ON SHEET DC21.	2456 SY	2



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PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
DRAINAGE CHANNEL PLAN

ENGINEER INFORMATION
HILGARTWILSON

COB PERMITTING APPROVED SEAL	COB ENGINEERING APPROVED SEAL: APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING
AS-BUILT SEAL	DESIGN SEAL: Daniel W. George — REGISTERED PROFESSIONAL ENGINEER — CERTIFICATE NO. 23227 — DAVID W. GEORGE — ARIZONA U.S.A. — EXPIRES: 12/31/23
ORIGINAL PLAN DATE: MAY 2022	LATEST REVISION DATE: JULY 2023
PROJECT NUMBER: 1175	SHEET NUMBER: DC14 SHT. 83 OF 90

SUBMITTAL: 3R Submittal
COB PLAN TRACKING #: ENG-21-0220
COB PERMIT #:

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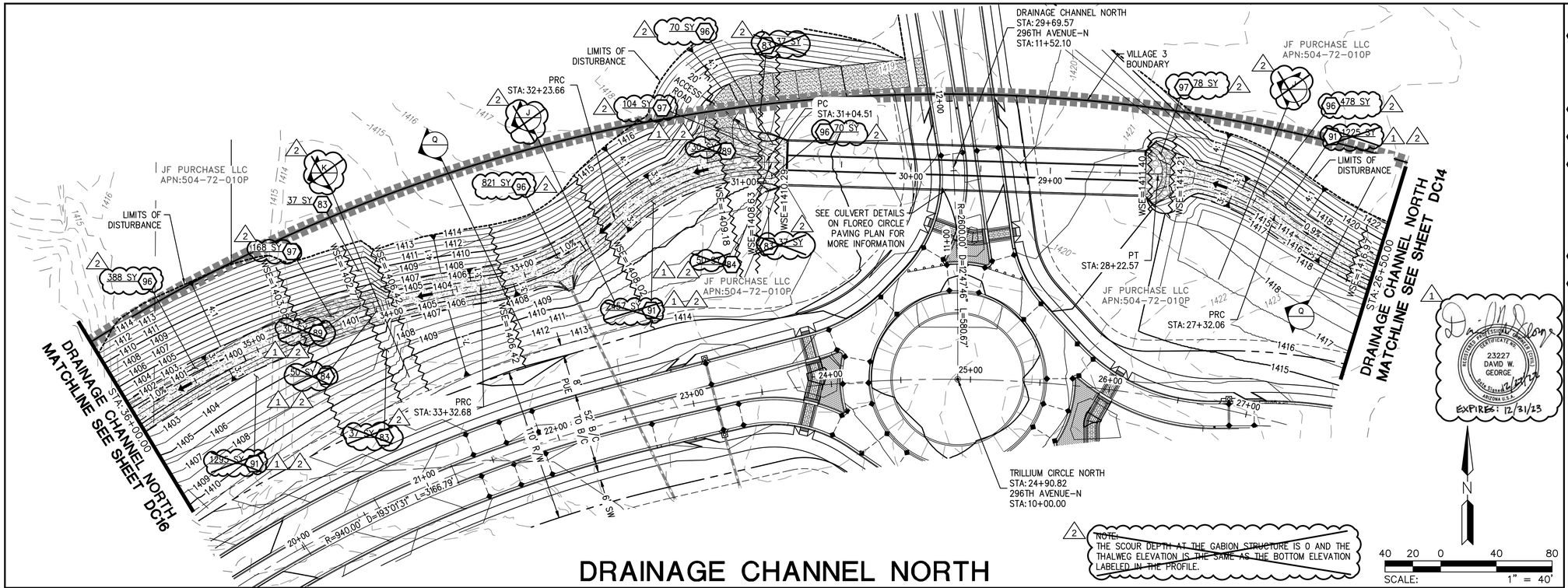
DRAINAGE CHANNEL NORTH



NOTE:
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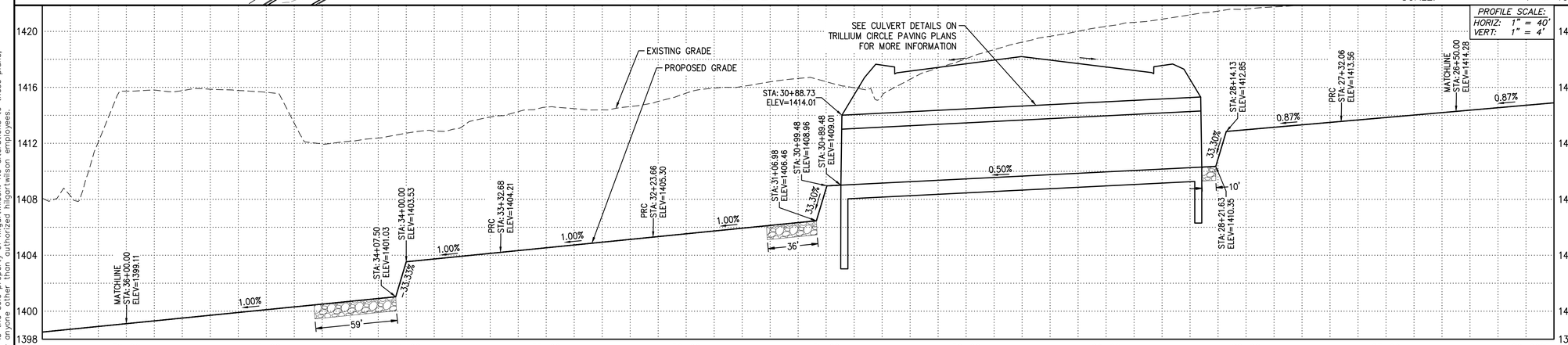

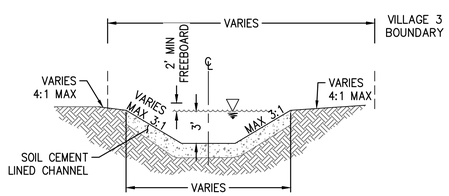

TYPICAL DRAINAGE SECTION-NORTH
Q
NTS

NOTE:
SECTION J & K HAVE BEEN DELETED DUE TO CHANNEL CHANGES.

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
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STORM DRAIN CONSTRUCTION

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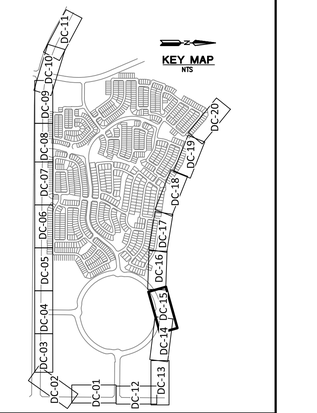
84	INSTALL GABIONS ON MACCAFERRI GEOTEXTILE MACTEX N47.1. PER DETAILS SEE SHEET# DC21.	100	SY
89	INSTALL 2" OF SHOTCRETE ON TOP OF GABION BASKET WITH D50=6" EMBEDDED IN SHOTCRETE.	60	SY
91	INSTALL ANGULAR LOOSE RIP-RAP PER MAG SPEC SECTION 220 D50=4" 6" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 gal/min/ft AND WOVEN. SPECIFIC WEIGHT = 135 lb/ft3. GRADATION PER TABLE 6.4 OF 2013 DRAINAGE DESIGN MANUAL FOR MARICOPA COUNTY, ARIZONA (HYDRAULICS).	4977	SY
96	INSTALL SOIL CEMENT PER MAG SPEC 311; SEE DETAIL 1 ON SHEET DC21.	1827	SY
97	PLACE GROUTED RIP-RAP D50=15", THICKNESS 30" ON FILTER FABRIC, MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. COLOR PER DEVELOPER'S REPRESENTATIVE.	350	SY



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PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
DRAINAGE CHANNEL PLAN

ENGINEER INFORMATION
HILGARTWILSON

COB PERMITTING APPROVED SEAL

COB ENGINEERING APPROVED SEAL
APPROVED
6/22/2022
CITY OF BUCKEYE ENGINEERING

SUBMITTAL: 3R Submittal

AS-BUILT SEAL

DESIGN SEAL
23227 DAVID W. GEORGE
REGISTERED PROFESSIONAL ENGINEER (CIVIL)
CERTIFICATE NO.
Date Signed 5/19/23
ARIZONA U.S.A.
EXPIRES: 12/31/23

ORIGINAL PLAN DATE: MAY 2022
LATEST REVISION DATE: JULY 2023
PROJECT NUMBER: 1175
SHEET NUMBER: DC15
SHT. 34 OF 90
COB PLAN TRACKING #: ENG-21-0220
COB PERMIT #

23227 DAVID W. GEORGE
REGISTERED PROFESSIONAL ENGINEER (CIVIL)
CERTIFICATE NO.
Date Signed 7/19/23
ARIZONA U.S.A.
EXPIRES: 12/31/23

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ARIZONA811
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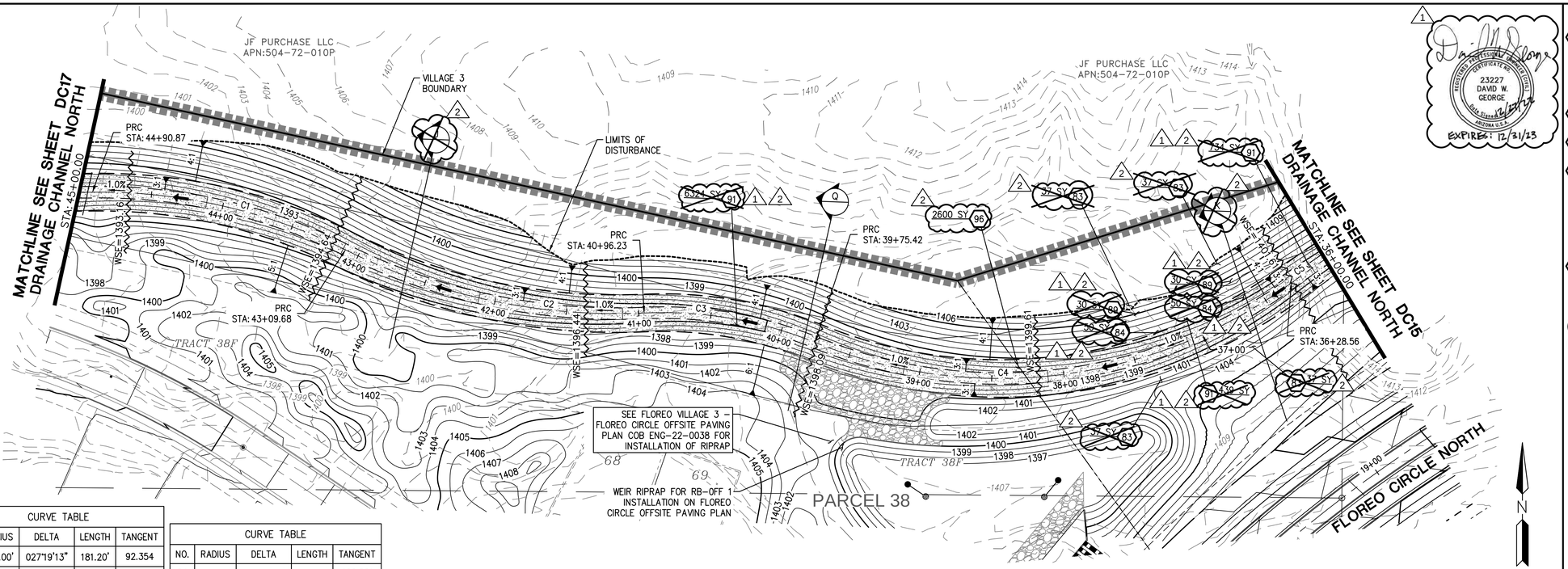
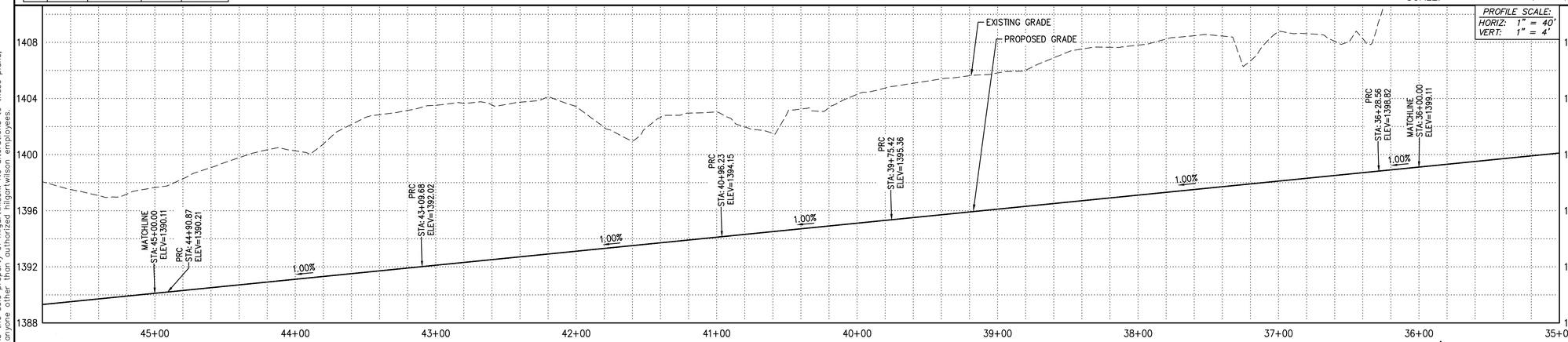


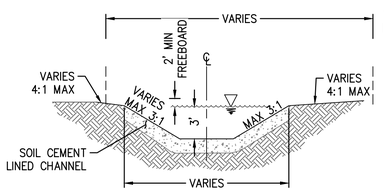
CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C1	380.00'	027°19'13"	181.20'	92.354
C2	420.00'	029°07'05"	213.45'	109.081
C3	280.00'	024°43'19"	120.81'	61.362

CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C4	340.00'	058°27'06"	346.86'	190.221
C5	600.00'	028°15'17"	295.88'	151.014

DRAINAGE CHANNEL NORTH

SCALE: 1" = 40'





TYPICAL DRAINAGE SECTION-NORTH

Q

NTS

2 NOTE: SECTION J & K HAVE BEEN DELETED DUE TO CHANNEL CHANGES.

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) HIGH POINT
- (LP) LOW POINT
- DUAL CHAMBER DRYWELL

1 — David W. George, Registered Professional Engineering Certificate No. 23227, David W. George, State of Arizona U.S.A., Arizona U.S.A., EXPIRES: 12/31/23

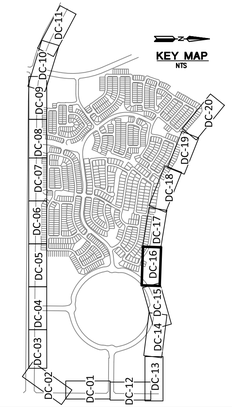
2 — David W. George, Registered Professional Engineering Certificate No. 23227, David W. George, State of Arizona U.S.A., Arizona U.S.A., EXPIRES: 12/31/23

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
CALL 811 or click Arizona811.COM

STORM DRAIN CONSTRUCTION

83	INSTALL LOOSE ANGULAR RIP-RAP PER MAG SPEC SEC. 220; D50=6", 12" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET# DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY. COLOR PER DEVELOPER.	148	SY
84	INSTALL GABIONS ON MACCAFERRI GEOTEXTILE MACTEX N47.1. PER DETAILS SEE SHEET# DC21.	100	SY
89	INSTALL 2" OF SHOTCRETE ON TOP OF GABION BASKET WITH D50=6" EMBEDDED IN SHOTCRETE.	60	SY
91	INSTALL ANGULAR LOOSE RIP-RAP PER MAG SPEC SECTION 220 D50=4" 6" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 gal/min/ft AND WOVEN. SPECIFIC WEIGHT = 194 lb/ft3. GRADATION PER TABLE 6.4 OF 2013 DRAINAGE DESIGN MANUAL FOR MARICOPA COUNTY, ARIZONA (HYDRAULICS).	7497	SY
96	INSTALL SOIL CEMENT PER MAG SPEC 311; SEE DETAIL 1 ON SHEET DC21.	2600	SY

2 NOTE: THE SCOUR DEPTH AT THE GABION STRUCTURE IS 0 AND THE THALWEG ELEVATION IS THE SAME AS THE BOTTOM ELEVATION LABELED IN THE PROFILE.



REVISIONS:

1 — 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION ADDED & FIRE STATION. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 — 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
DRAINAGE CHANNEL PLAN

ENGINEER INFORMATION
HILGARTWILSON

COB PERMITTING APPROVED SEAL

COB ENGINEERING APPROVED SEAL
APPROVED
6/22/2022
CITY OF BUCKEYE ENGINEERING

SUBMITTAL: 3R Submittal

AS-BUILT SEAL

DESIGN SEAL
David W. George, Registered Professional Engineering Certificate No. 23227, David W. George, State of Arizona U.S.A., Arizona U.S.A., EXPIRES: 12/31/23

COB PLAN TRACKING # ENG-21-0220

COB PERMIT #

ORIGINAL PLAN DATE: MAY 2022

LATEST REVISION DATE: JULY 2023

PROJECT NUMBER: 1175

SHEET NUMBER: DC16 SHT. 85 OF 90

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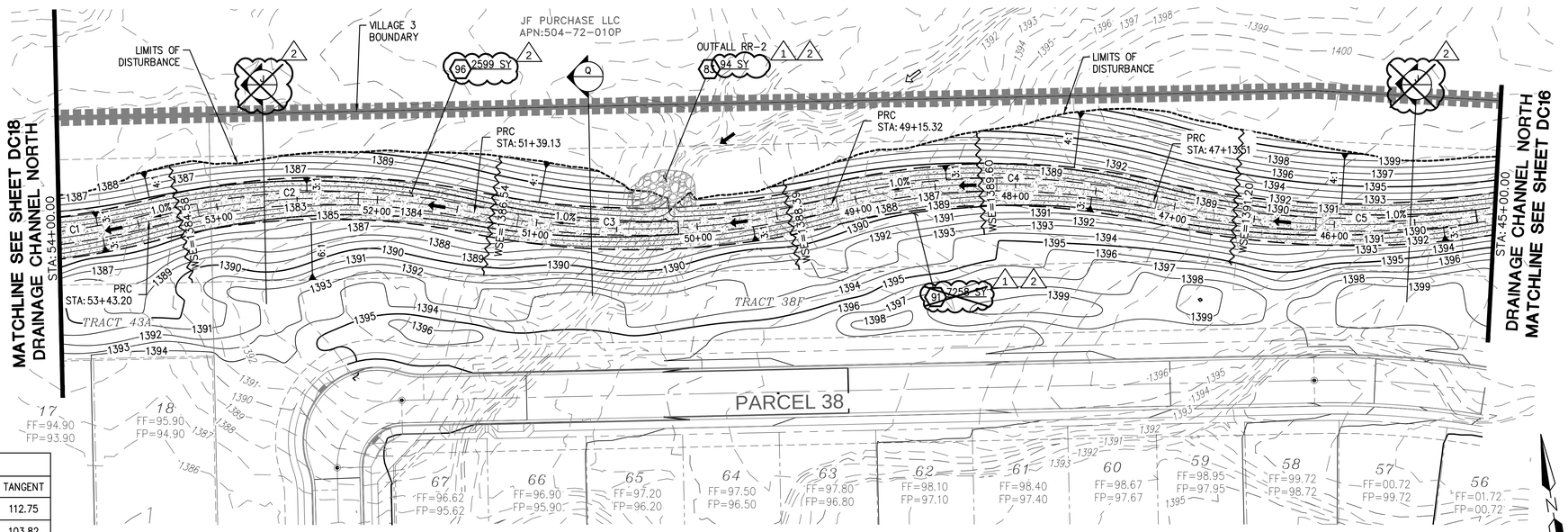
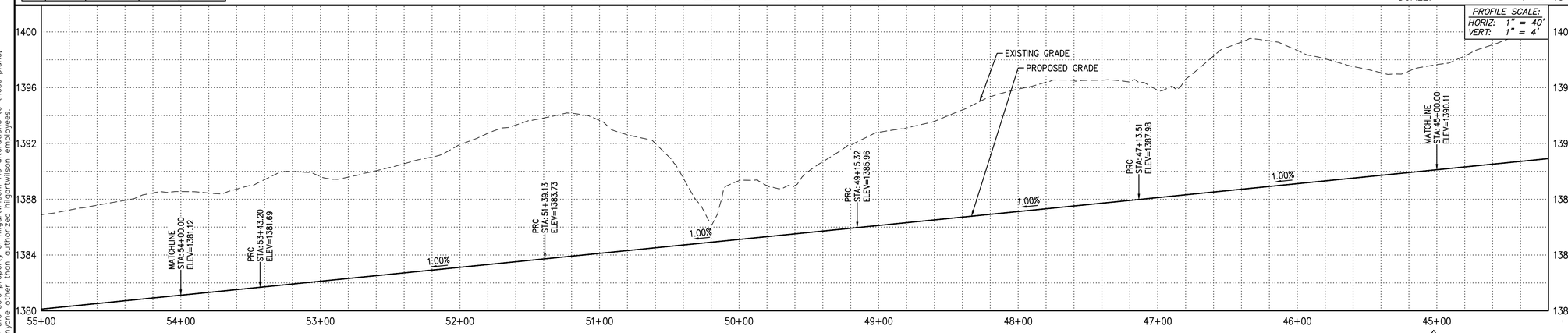
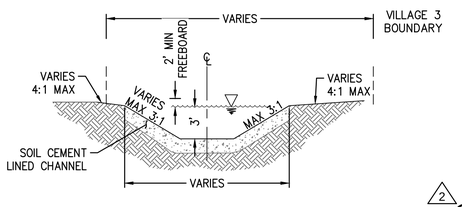


DRAINAGE CHANNEL NORTH

SCALE: 1" = 40'

CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C1	450.00'	028°07'59"	220.96'	112.75
C2	450.00'	025°59'02"	204.08'	103.82
C3	500.00'	025°38'48"	223.81'	113.81
C4	438.05'	026°23'44"	201.81'	102.73
C5	550.00'	023°11'35"	222.64'	112.86





TYPICAL DRAINAGE SECTION-NORTH

Q

NTS

2 NOTE: SECTION J HAS BEEN DELETED DUE TO CHANNEL CHANGES.

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) HIGH POINT
- (LP) LOW POINT
- DUAL CHAMBER DRYWELL

2

REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. 23227 DAVID W. GEORGE Date Signed 7/17/23 ARIZONA U.S.A. EXPIRES: 12/31/23

Contact Arizona 811 at least two full working days before you begin excavation
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STORM DRAIN CONSTRUCTION

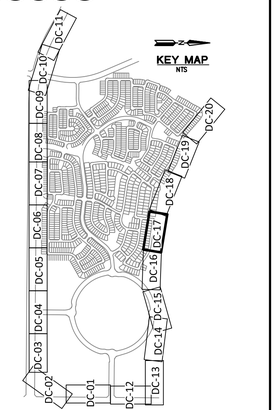
83 INSTALL LOOSE ANGULAR RIP-RAP PER MAG SPEC SEC. 220; D50=6", 12" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET# DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY. COLOR PER DEVELOPER. — 94 SY — 1 2

91 INSTALL ANGULAR LOOSE RIP-RAP PER MAG SPEC SECTION 220 D50=4" 6" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 gal/min/ft AND WOVEN. SPECIFIC WEIGHT = 165 lb/ft3. GRADATION PER TABLE 6.4 OF 2013 DRAINAGE DESIGN MANUAL FOR MARICOPA COUNTY, ARIZONA (HYDRAULICS). — 7258 SY — 2

96 INSTALL SOIL CEMENT PER MAG SPEC 311; SEE DETAIL 1 ON SHEET DC21. — 2599 SY — 2

1

REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. 23227 DAVID W. GEORGE Date Signed 12/19/22 ARIZONA U.S.A. EXPIRES: 12/31/23



REVISIONS:

1 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION ADDED & FIRE STATION. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
DRAINAGE CHANNEL PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL

COB ENGINEERING APPROVED SEAL

APPROVED
6/22/2022
CITY OF BUCKEYE ENGINEERING

SUBMITTAL: 3R Submittal

AS-BUILT SEAL

DESIGN SEAL

REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. 23227 DAVID W. GEORGE Date Signed 7/17/23 ARIZONA U.S.A. EXPIRES: 12/31/23

ORIGINAL PLAN DATE	LATEST REVISION DATE	COB PLAN TRACKING #	COB PERMIT #
MAY 2022	JULY 2023	ENG-21-0220	

PROJECT NUMBER	SHEET NUMBER	SHT.
1175	DC17	86 OF 90

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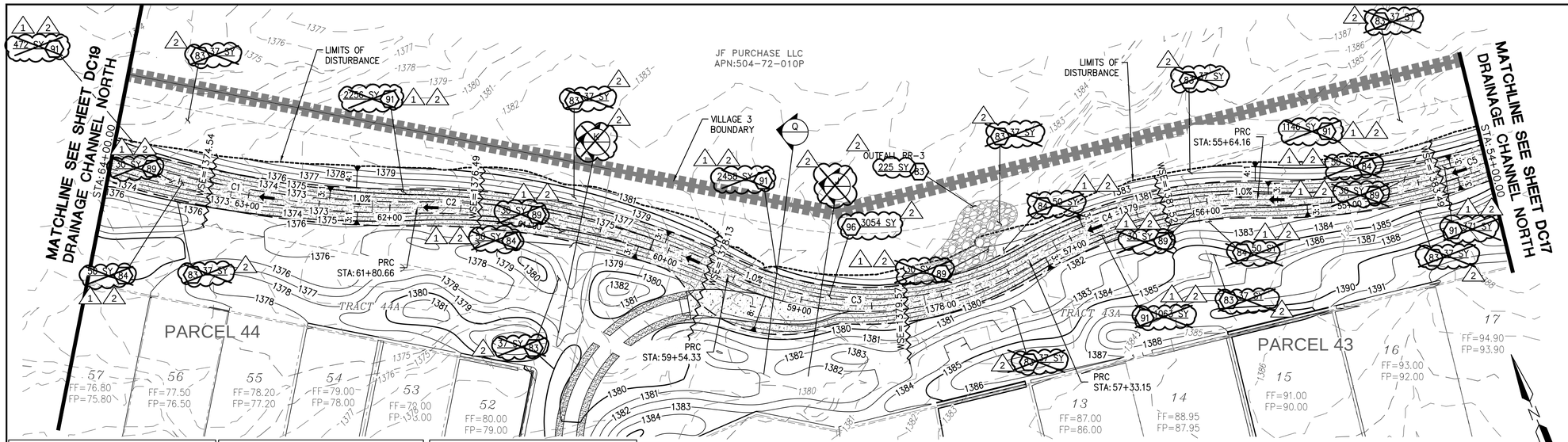


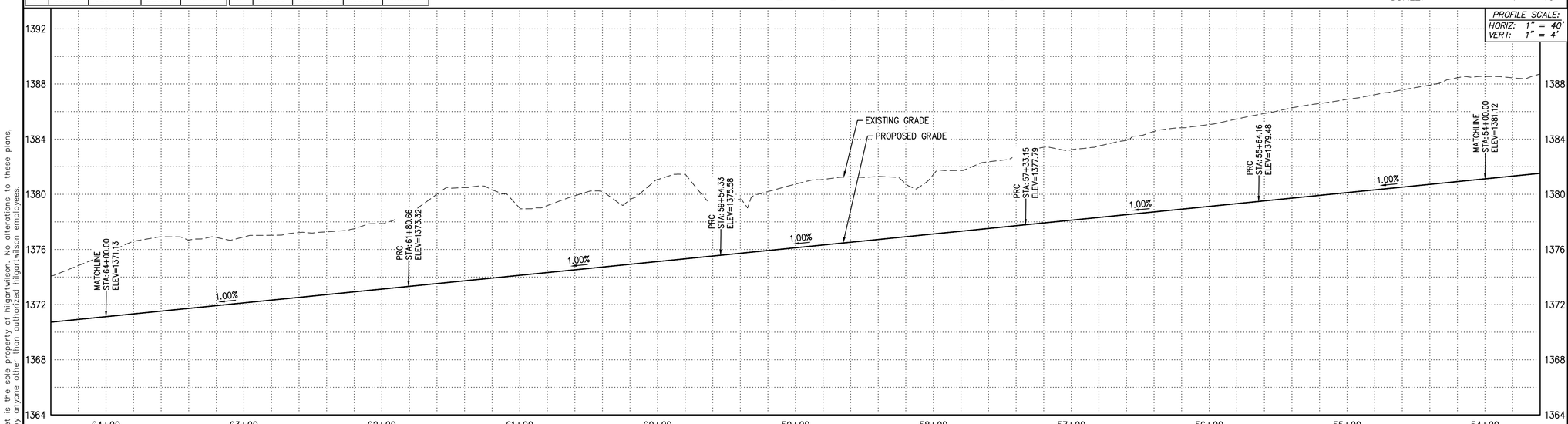
CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C1	700.00'	024°26'05"	298.53'	151.57
C2	500.00'	025°56'11"	226.34'	115.14

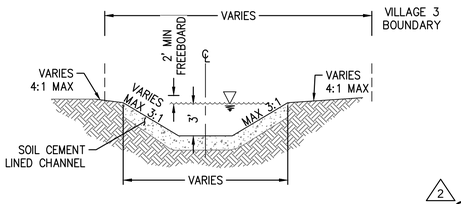
CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C3	225.00'	056°19'16"	221.17'	120.44
C4	300.00'	032°16'31"	168.99'	86.80

CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C5	450.00'	028°07'59"	220.96'	112.75

DRAINAGE CHANNEL NORTH

SCALE: 1" = 40'





TYPICAL DRAINAGE SECTION-NORTH

Q

NTS

2 NOTE:
SECTION J & K HAVE BEEN DELETED DUE TO CHANNEL CHANGES.

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
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- EMERGENCY OUTFALL ARROW
- (HP) — HIGH POINT
- (LP) — LOW POINT
- DUAL CHAMBER DRYWELL

STORM DRAIN CONSTRUCTION

83 INSTALL LOOSE ANGULAR RIP-RAP PER MAG SPEC SEC. 220; D50=6", 12" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET# DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY. COLOR PER DEVELOPER. — 595 SY — 2

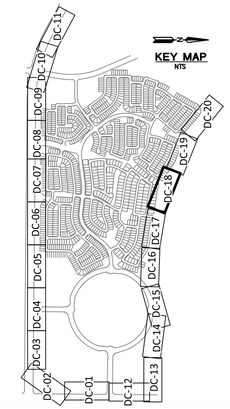
84 INSTALL GABIONS ON MACCAFERRI GEOTEXTILE MACTEX N47.1. PER DETAILS SEE SHEET# DC21. — 250 SY — 1 2

89 INSTALL 2" OF SHOTCRETE ON TOP OF GABION BASKET WITH D50=6" EMBEDDED IN SHOTCRETE. — 150 SY

91 INSTALL ANGULAR LOOSE RIP-RAP PER MAG SPEC SECTION 220 D50=4" 8" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 gal/min/ft AND WOVEN. SPECIFIC WEIGHT = 165 kg/M3. GRADATION PER TABLE 6.4 OF 2013 DRAINAGE DESIGN MANUAL FOR MARICOPA COUNTY, ARIZONA (HYDRAULICS). — 7766 SY

96 INSTALL SOIL CEMENT PER MAG SPEC 311; SEE DETAIL 1 ON SHEET DC21. — 3054 SY — 2

2 NOTE:
THE SCOUR DEPTH AT THE GABION STRUCTURE IS 0 AND THE THALWEG ELEVATION IS THE SAME AS THE BOTTOM ELEVATION LABELED IN THE PROFILE.



REVISIONS:

1 — 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION ADDED & FIRE STATION. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 — 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
DRAINAGE CHANNEL PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL

COB ENGINEERING APPROVED SEAL

APPROVED
6/22/2022
CITY OF BUCKEYE ENGINEERING

SUBMITTAL: 3R Submittal

AS-BUILT SEAL

DESIGN SEAL

23227 DAVID W. GEORGE — REGISTERED PROFESSIONAL ENGINEER — CERTIFICATE NO. — ARIZONA U.S.A. — EXPIRES: 12/31/23

ORIGINAL PLAN DATE: MAY 2022

LATEST REVISION DATE: JULY 2023

PROJECT NUMBER: 1175

SHEET NUMBER: DC18 SHT. 87 OF 90

COB PLAN TRACKING #: ENG-21-0220

COB PERMIT #

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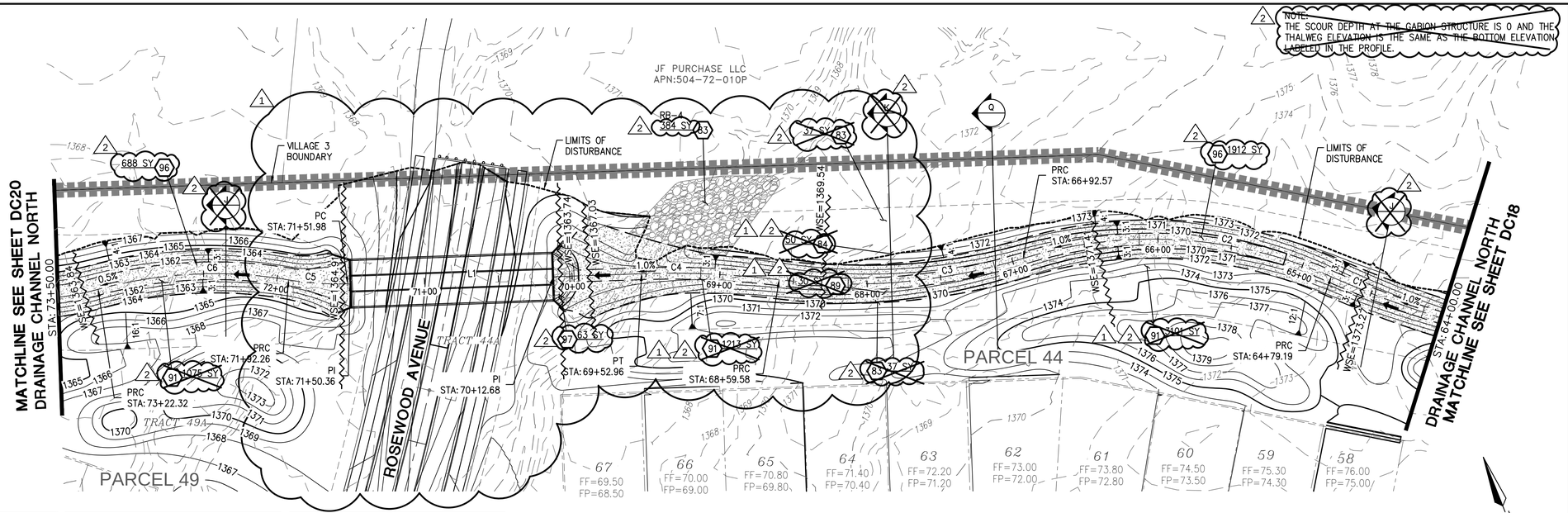


NOTE:
THE SCOUR DEPTH AT THE GABION STRUCTURE IS 0 AND THE THALWEG ELEVATION IS THE SAME AS THE BOTTOM ELEVATION LABELED IN THE PROFILE.

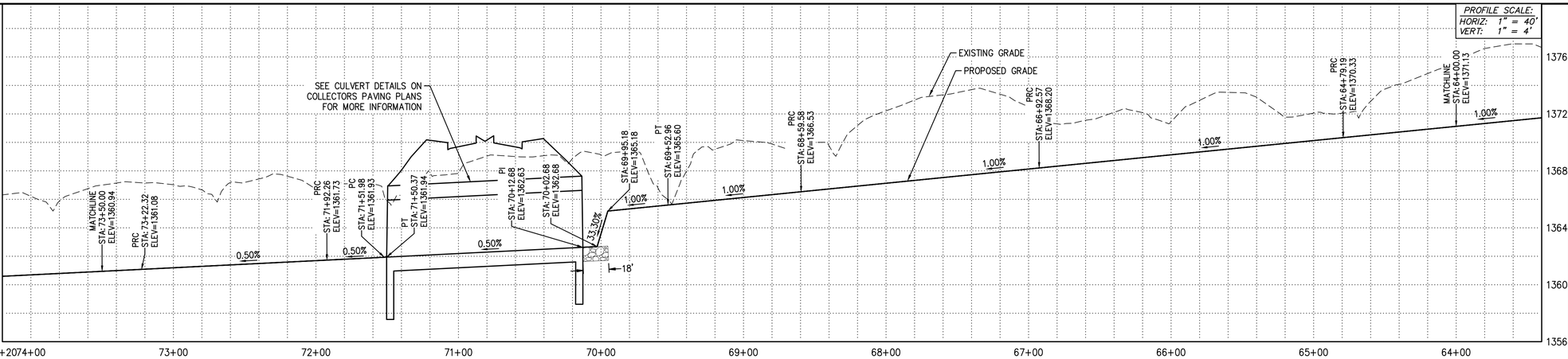
LINE TABLE		
NO.	DIRECTION	LENGTH
L1	N70°15'07"W	137.68'

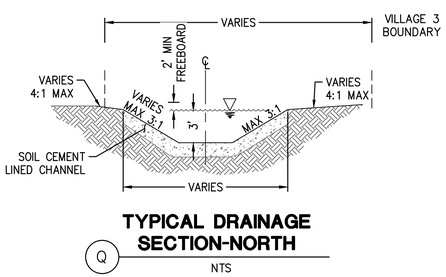
CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C1	700.00'	024°26'05"	298.53'	151.57
C2	300.00'	040°45'06"	213.38'	111.43
C3	400.00'	023°55'22"	167.01'	84.74

CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C4	600.00'	008°55'01"	93.38'	46.78
C5	200.00'	011°32'20"	40.28'	20.21
C6	300.00'	024°50'25"	130.06'	66.07

DRAINAGE CHANNEL NORTH

SCALE: 1" = 40'





TYPICAL DRAINAGE SECTION-NORTH

Q

NTS

NOTE:
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LEGEND

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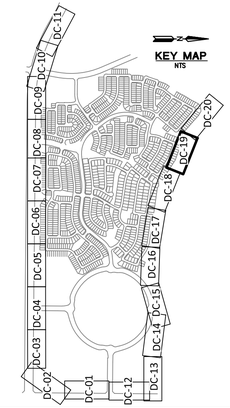
STORM DRAIN CONSTRUCTION

83	INSTALL LOOSE ANGULAR RIP-RAP PER MAG SPEC SEC. 220; D50=6", 12" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET# DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY. COLOR PER DEVELOPER.	384 ~~458~~	SY
84	INSTALL GABIONS ON MACCAFERRI GEOTEXTILE MASTEX N47.1. PER DETAILS SEE SHEET# DC21.	50	SY
89	INSTALL 2" OF SHOTCRETE ON TOP OF GABION BASKET WITH D50=6" EMBEDDED IN SHOTCRETE.	30	SY
91	INSTALL ANGULAR LOOSE RIP-RAP PER MAG SPEC SECTION 220 D50=4" 8" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 gal/min/ft AND WOVEN. SPECIFIC WEIGHT ≤ 165 lb/ft3. GRADATION PER TABLE 6.4 OF 2013 DRAINAGE DESIGN MANUAL FOR MARICOPA COUNTY, ARIZONA (HYDRAULICS).	5389	SY
96	INSTALL SOIL CEMENT PER MAG SPEC 311; SEE DETAIL 1 ON SHEET DC21.	2600	SY
97	PLACE GROUTED RIP-RAP D50=15", THICKNESS 30" ON FILTER FABRIC, MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. COLOR PER DEVELOPER'S REPRESENTATIVE.	63	SY

KEY MAP
NTS



REVISIONS:

1 — 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION ADDED & FIRE STATION. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 — 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
DRAINAGE CHANNEL PLAN

ENGINEER INFORMATION
HILGARTWILSON

COB PERMITTING APPROVED SEAL

COB ENGINEERING APPROVED SEAL
APPROVED
6/22/2022
CITY OF BUCKEYE ENGINEERING

SUBMITTAL: 3R Submittal

AS-BUILT SEAL

DESIGN SEAL
REGISTERED PROFESSIONAL ENGINEER
CERTIFICATE NO. 23227
DAVID W. GEORGE
ARIZONA U.S.A.
EXPIRES: 12/31/23

ORIGINAL PLAN DATE: MAY 2022
LATEST REVISION DATE: JULY 2023
PROJECT NUMBER: 1175
SHEET NUMBER: DC19 SHT. 38 OF 90
COB PLAN TRACKING #: ENG-21-0220
COB PERMIT #

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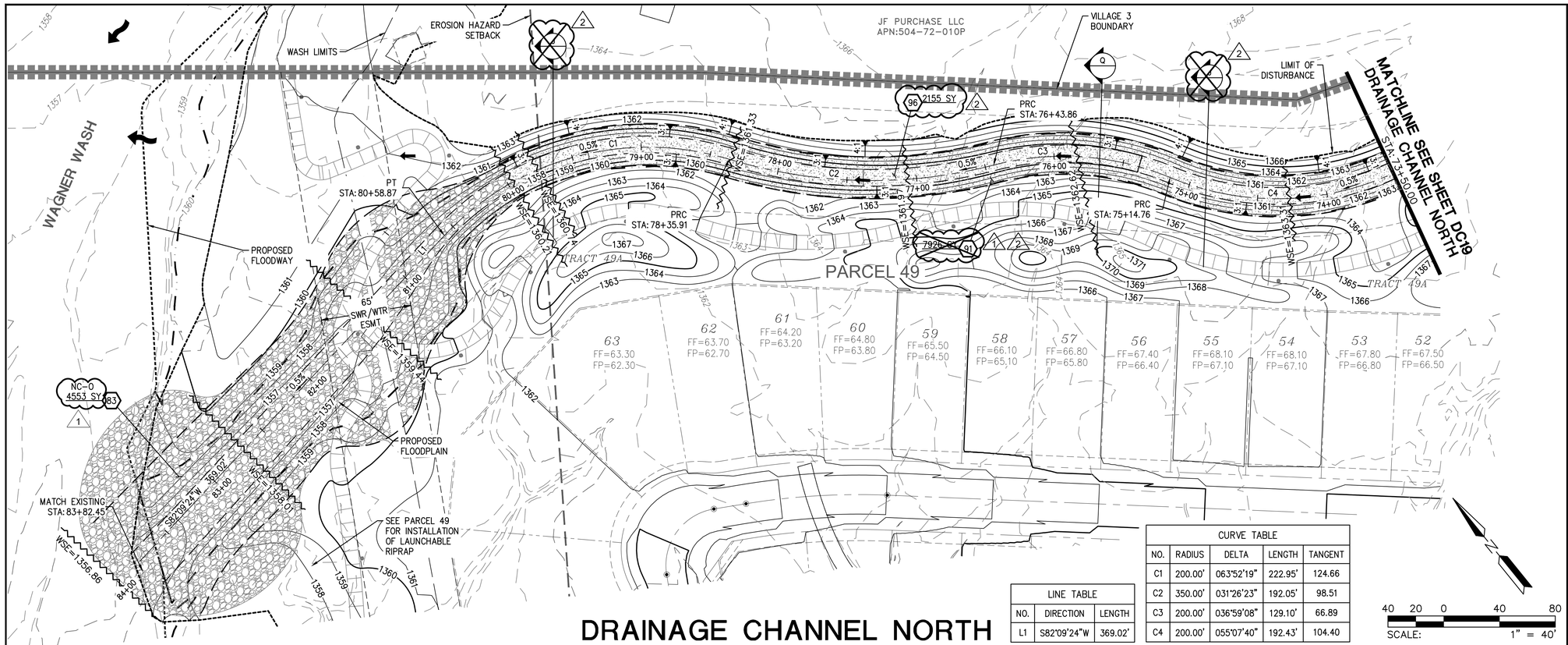
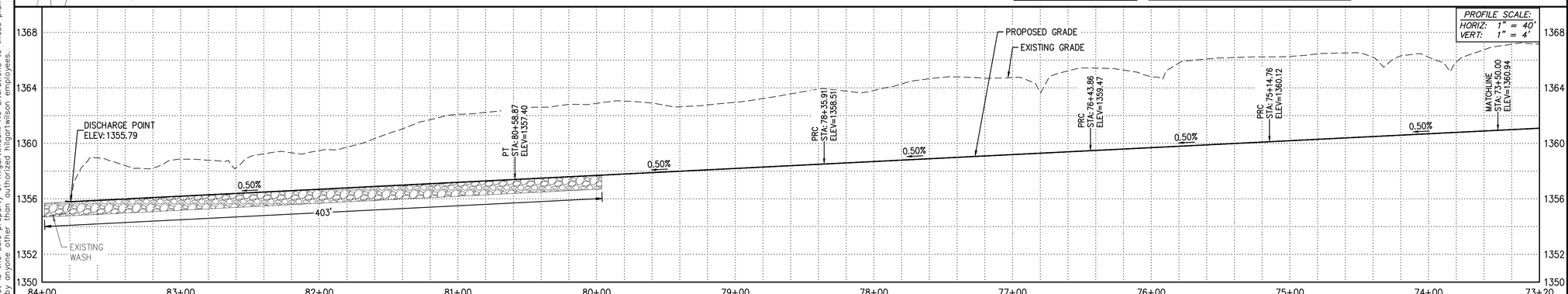


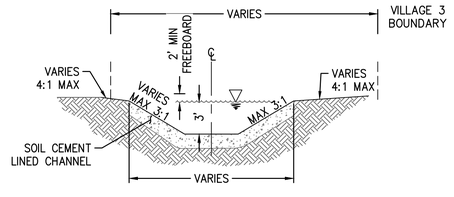
DRAINAGE CHANNEL NORTH

LINE TABLE		
NO.	DIRECTION	LENGTH
L1	S82°09'24"W	369.02'

CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C1	200.00'	063°52'19"	222.95'	124.66
C2	350.00'	031°26'23"	192.05'	98.51
C3	200.00'	036°59'08"	129.10'	66.89
C4	200.00'	055°07'40"	192.43'	104.40

SCALE: 1" = 40'





TYPICAL DRAINAGE SECTION-NORTH

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2 NOTE: SECTION J HAS BEEN DELETED DUE TO CHANNEL CHANGES.

LEGEND

- VILLAGE 3 BOUNDARY
- EROSION HAZARD SETBACK
- RIGHT OF WAY
- LOT LINE
- CENTER LINE
- EASEMENT LINE
- FLOW DIRECTIONAL INDICATOR
- FP — FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
- EMERGENCY OUTFALL ARROW
- (HP) — HIGH POINT
- (LP) — LOW POINT
- DUAL CHAMBER DRYWELL

2

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STORM DRAIN CONSTRUCTION

83 INSTALL LOOSE ANGULAR RIP-RAP PER MAG SPEC SEC. 220; D50=6", 12" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET# DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY. COLOR PER DEVELOPER. — 4553 SY — 1 2

91 INSTALL ANGULAR LOOSE RIP-RAP PER MAG SPEC SECTION 220 D50=4" 6" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 gal/min/ft AND WOVEN. SPECIFIC WEIGHT = 165 lb/ft3. GRADATION PER TABLE 6.4 OF 2013 DRAINAGE DESIGN MANUAL FOR MARICOPA COUNTY, ARIZONA (HYDRAULICS). — 7926 SY

96 INSTALL SOIL CEMENT PER MAG SPEC 311; SEE DETAIL 1 ON SHEET DC21 — 2155 SY — 2

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KEY MAP
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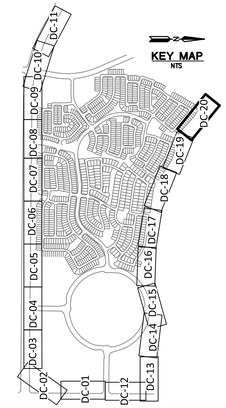

REVISIONS:

1 12/27/2022 – ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION ADDED & FIRE STATION. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.

2 7/17/2023 – REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME

TRILLIUM
VILLAGE 3 - UNITS 1 & 2
DRAINAGE CHANNEL PLAN

ENGINEER INFORMATION

HILGARTWILSON

COB PERMITTING APPROVED SEAL	COB ENGINEERING APPROVED SEAL
	APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING
AS-BUILT SEAL	DESIGN SEAL
	DAVID W. GEORGE 23227 REGISTERED PROFESSIONAL ENGINEER CERTIFICATE NO. ARIZONA U.S.A. EXPIRES: 12/31/23

SUBMITTAL: 3R Submittal

ORIGINAL PLAN DATE	LATEST REVISION DATE
MAY 2022	JULY 2023
PROJECT NUMBER	SHEET NUMBER
1175	DC20 89 OF 90

COB PLAN TRACKING # ENG-21-0220

COB PERMIT #

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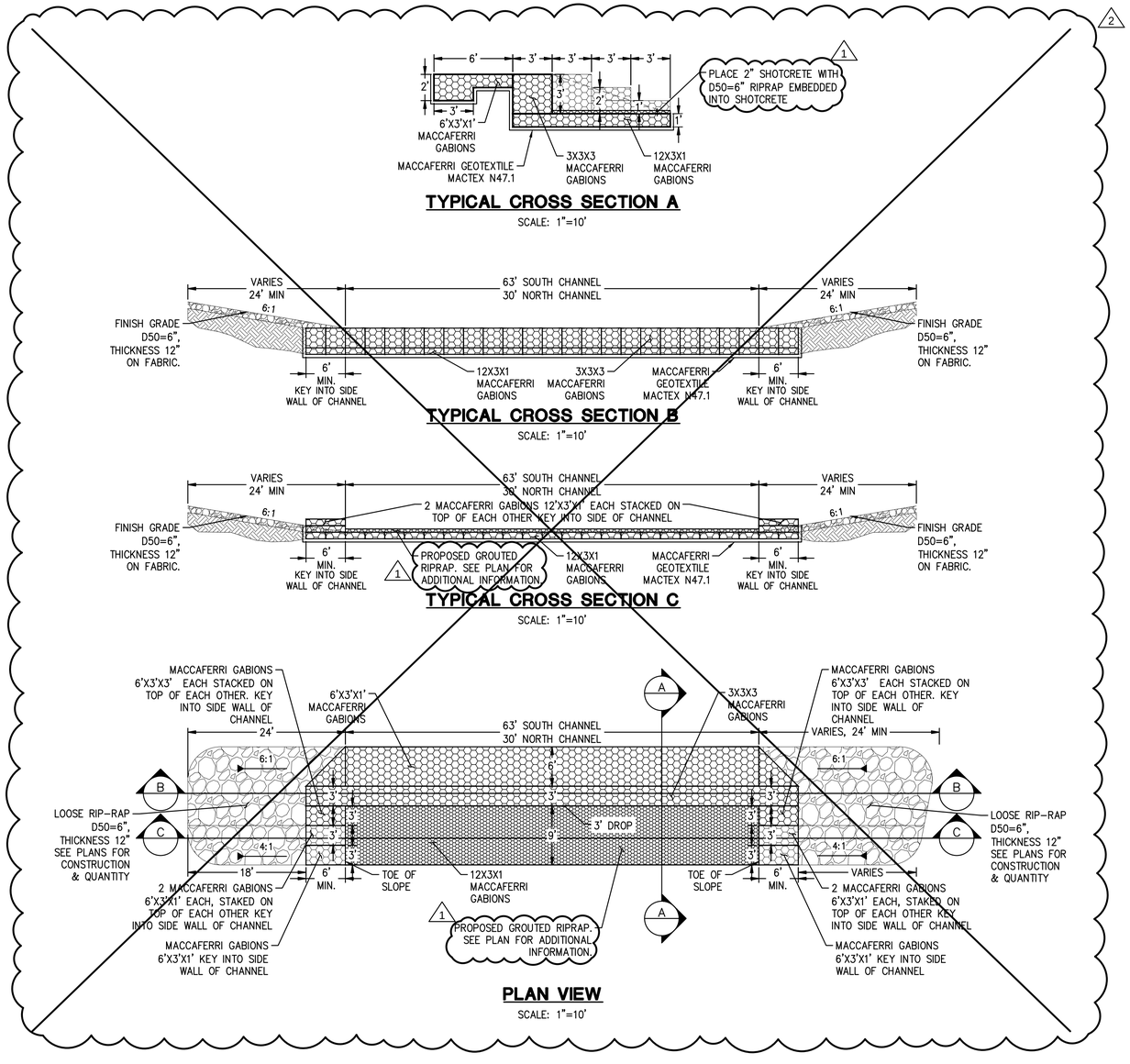
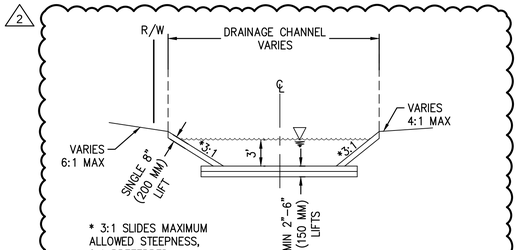


1

TABLE 6.4
RIPRAP GRADATION LIMITS

STONE SIZE RANGE (FT)	STONE WEIGHT RANGE (LB)	PERCENT OF GRADATION SMALLER THAN
1.5 d50 TO 1.7 d50	3.0 W50 to 5.0 W50	100
1.2 d50 TO 1.4 d50	2.0 W50 TO 2.75 W50	85
1.0 d50 TO 1.15 d50	1.0 W50 TO 1.5 W 50	50
0.4 d50 TO 0.6 d50	0.1 W50 TO 0.2 W50	15

2



1 **SOIL CEMENT LINED CHANNEL**
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2
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7/17/23
EXPIRES: 12/31/23

1
REGISTERED PROFESSIONAL ENGINEER (CIVIL) CERTIFICATE NO. 23227 DAVID W. GEORGE STATE OF ARIZONA U.S.A.
12/27/22
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COB ENGINEERING APPROVED SEAL
APPROVED
6/22/2022
CITY OF BUCKEYE ENGINEERING

SUBMITTAL: 3R Submittal

AS-BUILT SEAL

DESIGN SEAL
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7/17/23
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COB PLAN TRACKING # ENG-21-0220

COB PERMIT #

ORIGINAL PLAN DATE: MAY 2022
LATEST REVISION DATE: JULY 2023
PROJECT NUMBER: 1175
SHEET NUMBER: DC21 SHT. 90 OF 90

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