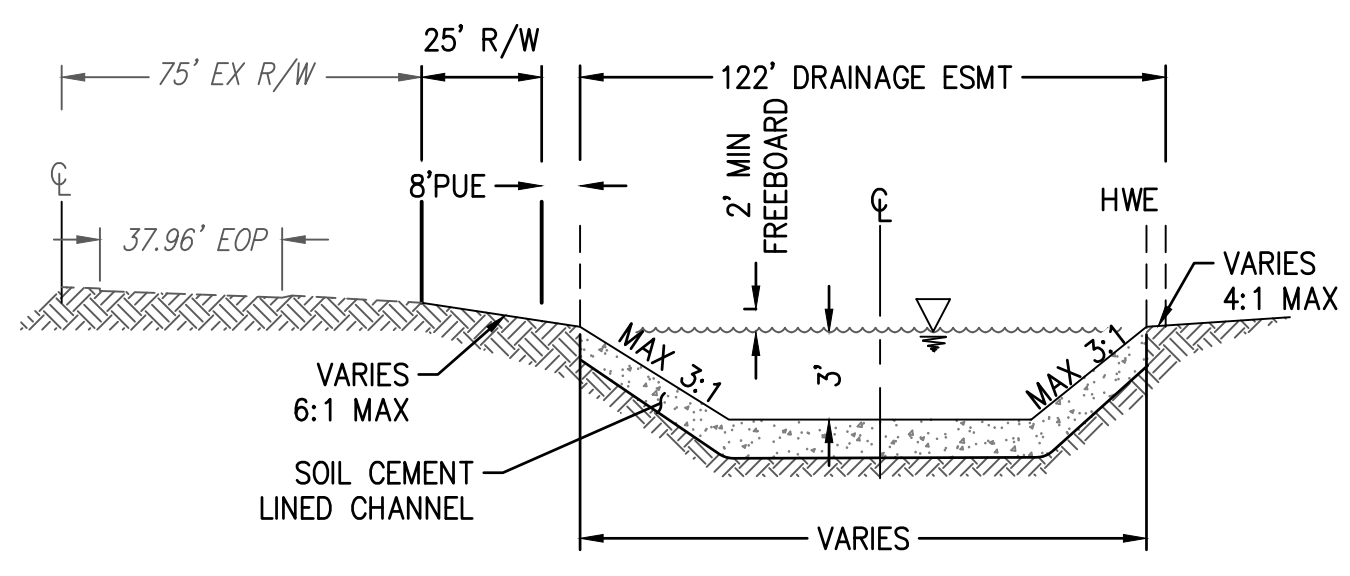
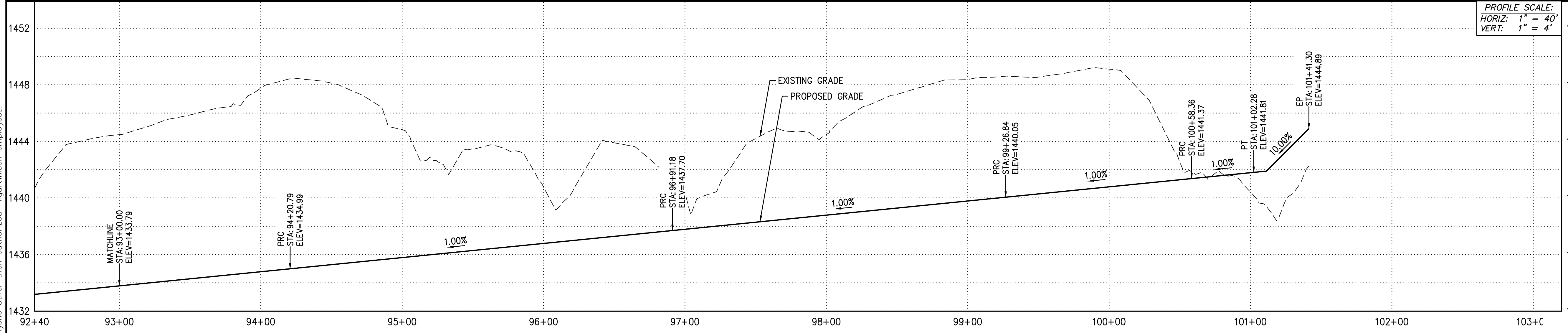


LINE TABLE			CURVE TABLE				CURVE TABLE					
NO.	DIRECTION	LENGTH	NO.	RADIUS	DELTA	LENGTH	TANGENT	NO.	RADIUS	DELTA	LENGTH	TANGENT
L1	N00°37'54"W	39.02'	C1	600.00'	023°20'31"	244.44'	123.94	C3	500.00'	027°00'20"	235.67'	120.07
			C2	650.00'	023°50'03"	270.39'	137.18	C4	275.00'	027°24'05"	131.52'	67.04

DRAINAGE CHANNEL SOUTH



TYPICAL DRAINAGE SECTION - SUN VALLEY PARKWAY
NTS

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
 - FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
 - EMERGENCY OUTFALL ARROW
 - HIGH POINT
 - 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, PERMITIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY. COLOR PER DEVELOPER. 103 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, PERMITIVITY 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). 10981 SY
- 96 INSTALL SOIL CEMENT PER MAG SPEC 311; SEE DETAIL 1 ON SHEET DC21. 4561 SY

Professional Engineer seals for David W. George, License No. 23227, State of Arizona, expires 12/31/23.

KEY MAP

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

Professional Engineer seal for David W. George, License No. 23227, State of Arizona, expires 12/31/23.

ORIGINAL PLAN DATE: MAY 2022

LATEST REVISION DATE: JULY 2023

PROJECT NUMBER: 1175

SHEET NUMBER: **DC01** OF 90

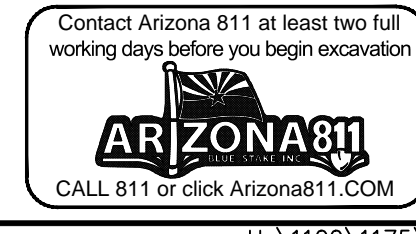
COB PLAN TRACKING #

ENG-21-0220

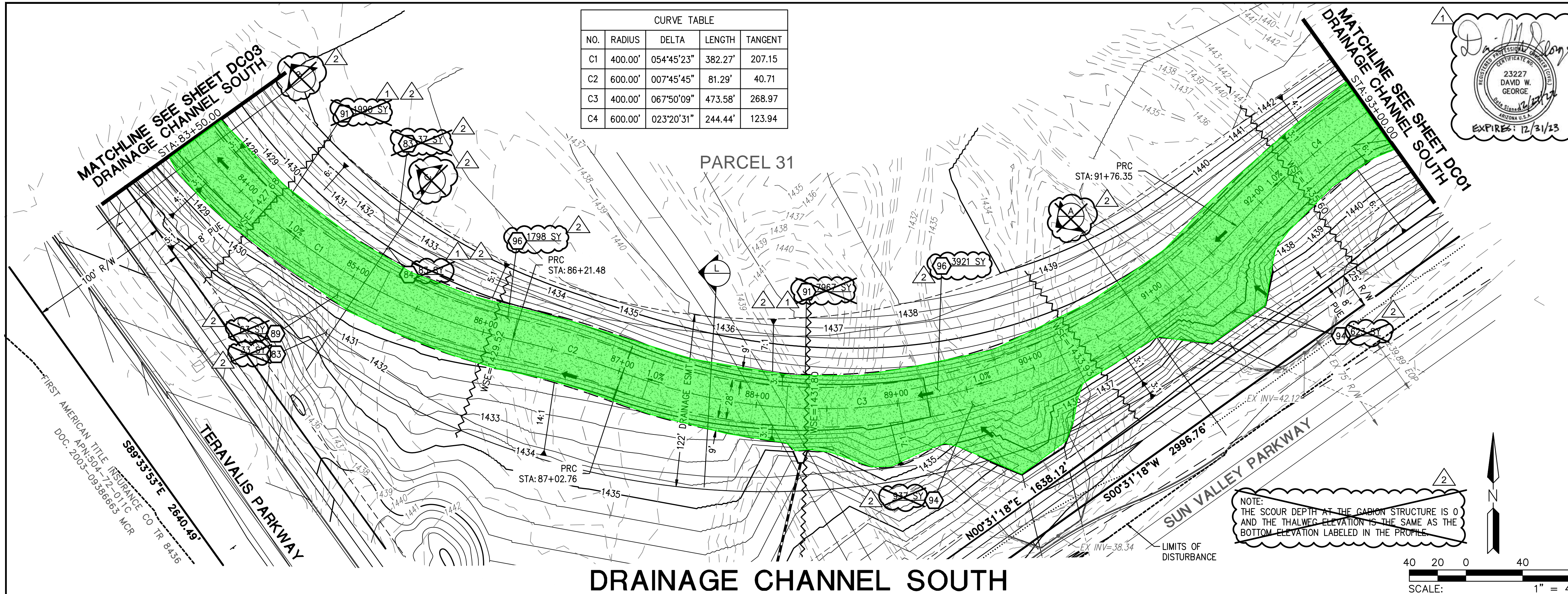
COB PERMIT #

3R Submittal

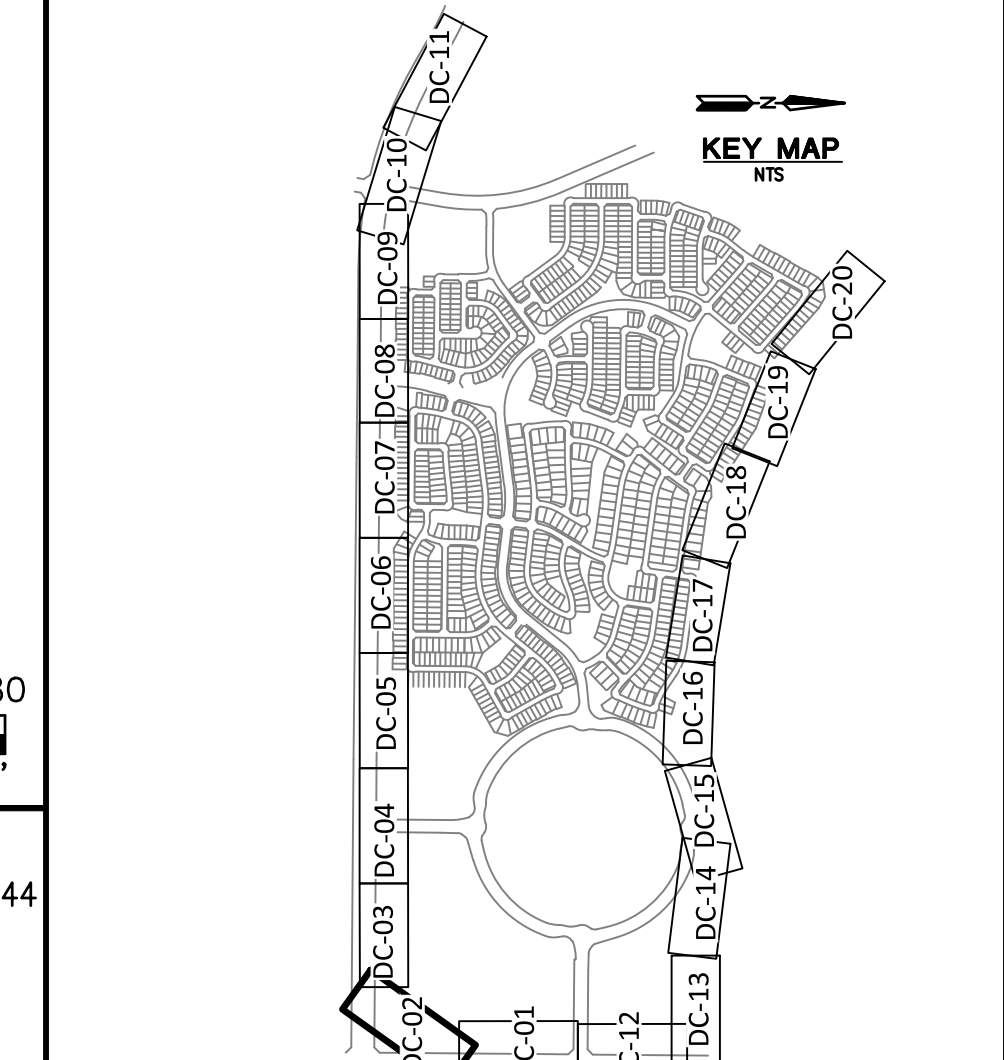
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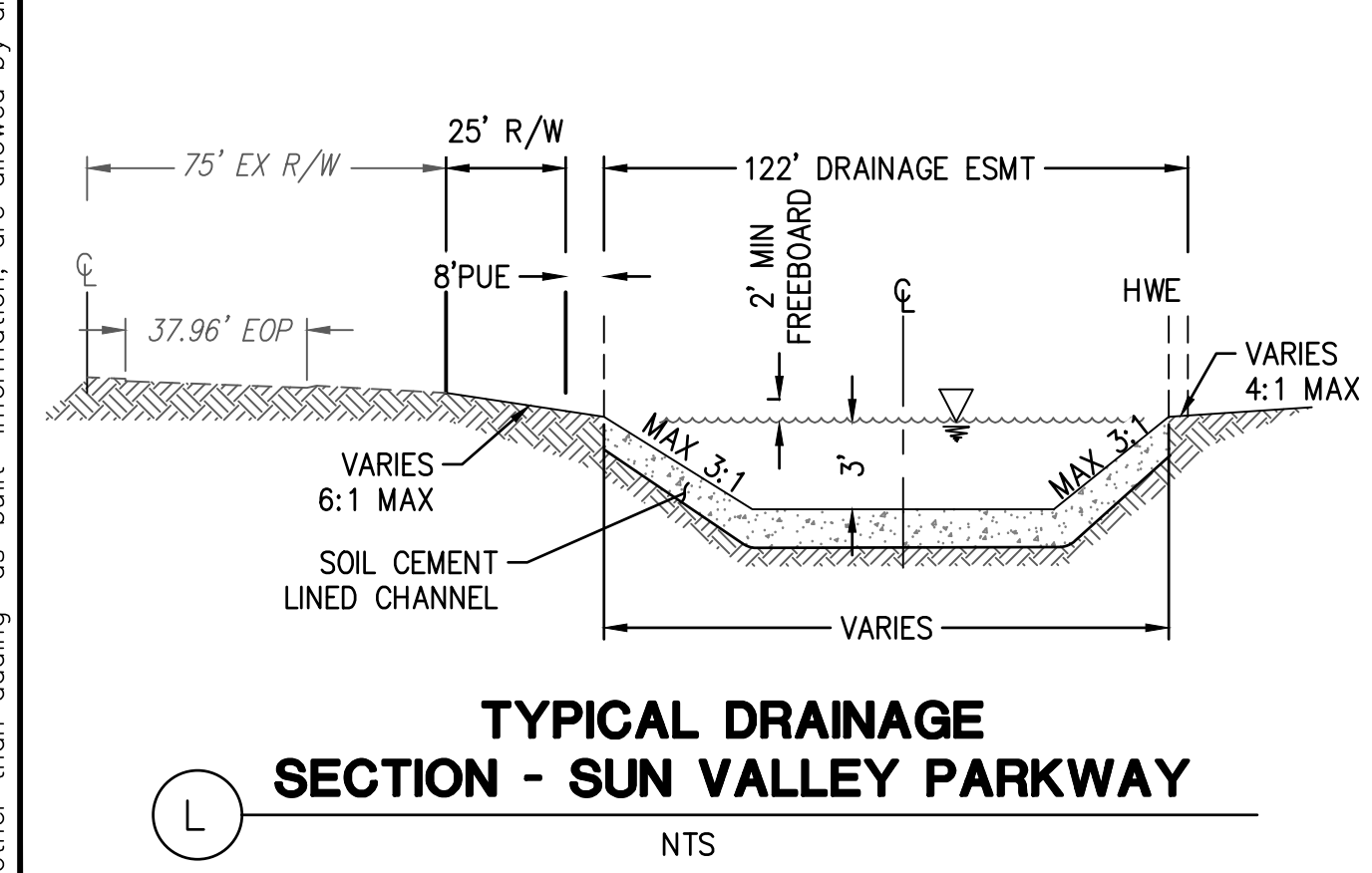
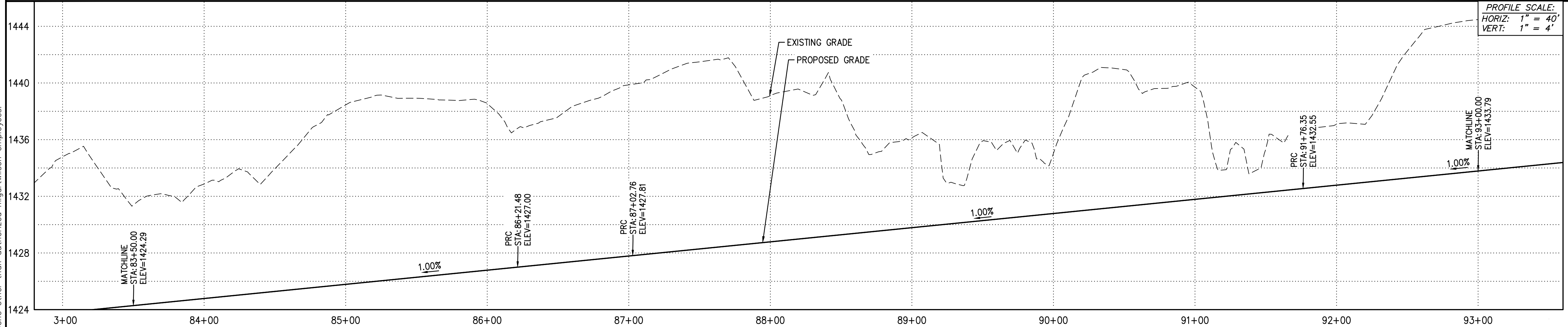
CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C1	400.00'	054°45'23"	382.27'	207.15'
C2	600.00'	007°45'45"	81.29'	40.71'
C3	400.00'	067°50'09"	473.58'	268.97'
C4	600.00'	023°20'31"	244.44'	123.94'



- 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 2015 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. 1569 SY
 - 96. INSTALL SOIL CEMENT PER MAG SPEC 311; SEE DETAIL 1 ON SHEET DC21. 5719 SY

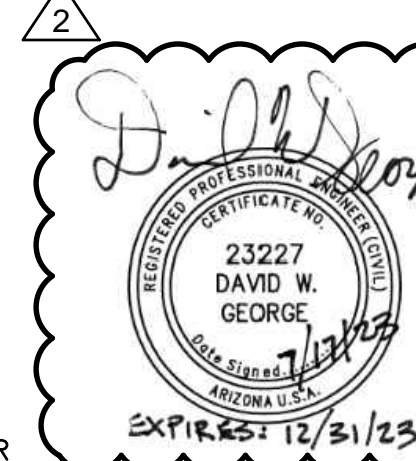


NOTE: THE SCOUR DEPTH AT THE GABION STRUCTURE IS 0 AND THE THALWEG ELEVATION IS THE SAME AS THE BOTTOM ELEVATION LABELED IN THE PROFILE.



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



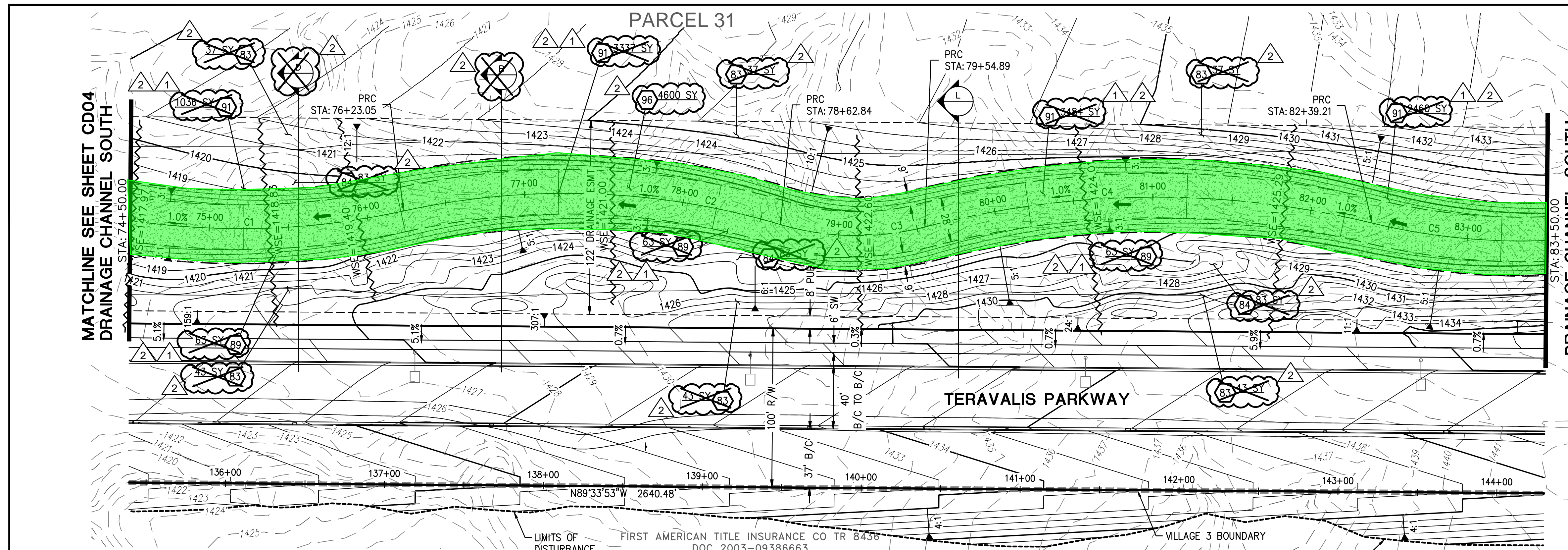
- REVISIONS:**
- 12/27/2022 - ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION ADDED & FIRE STATION. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.
 - 7/17/2023 - REVISION TO CHANNEL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

PLAN NAME
TRILLIUM VILLAGE 3 - UNITS 1 & 2 DRAINAGE CHANNEL PLAN

ENGINEER INFORMATION		SUBMITTAL: 3R Submittal
 HILGARTWILSON COB PERMITTING APPROVED SEAL COB ENGINEERING APPROVED SEAL APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING		
AS-BUILT SEAL	DESIGN SEAL	SHEET NUMBER: DC02 OF 90 SHEET TRACKING # ENG-21-0220 COB PERMIT #
ORIGINAL PLAN DATE MAY 2022 PROJECT NUMBER 1175	LATEST REVISION DATE JULY 2023 SHEET NUMBER DC02 OF 90	

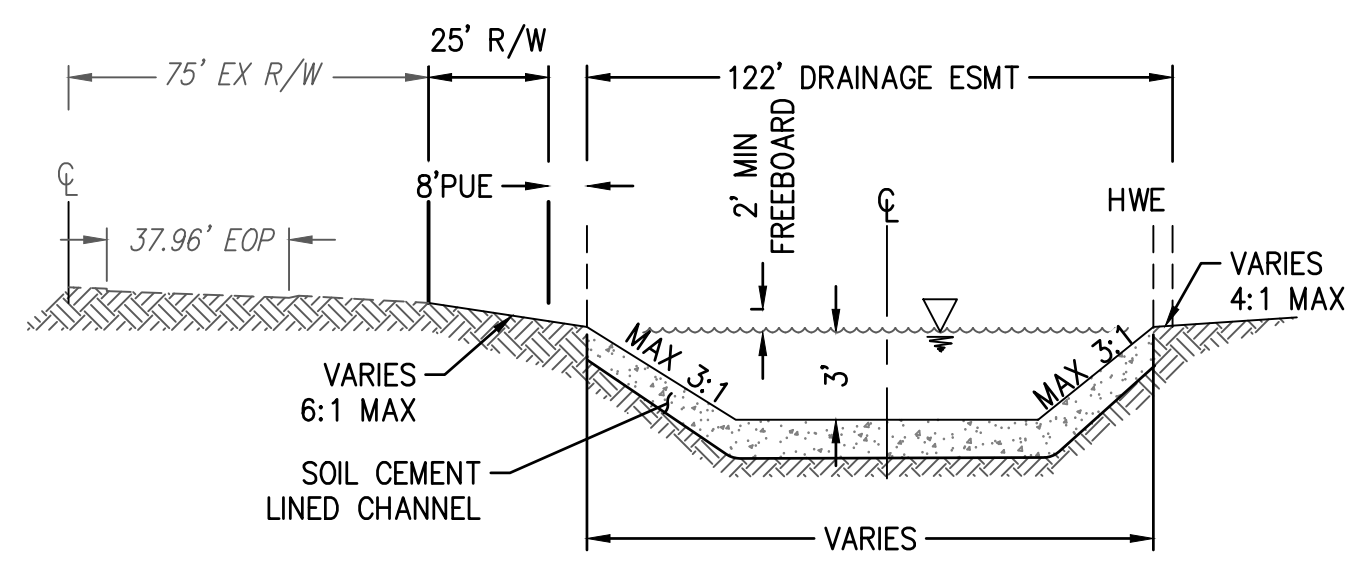
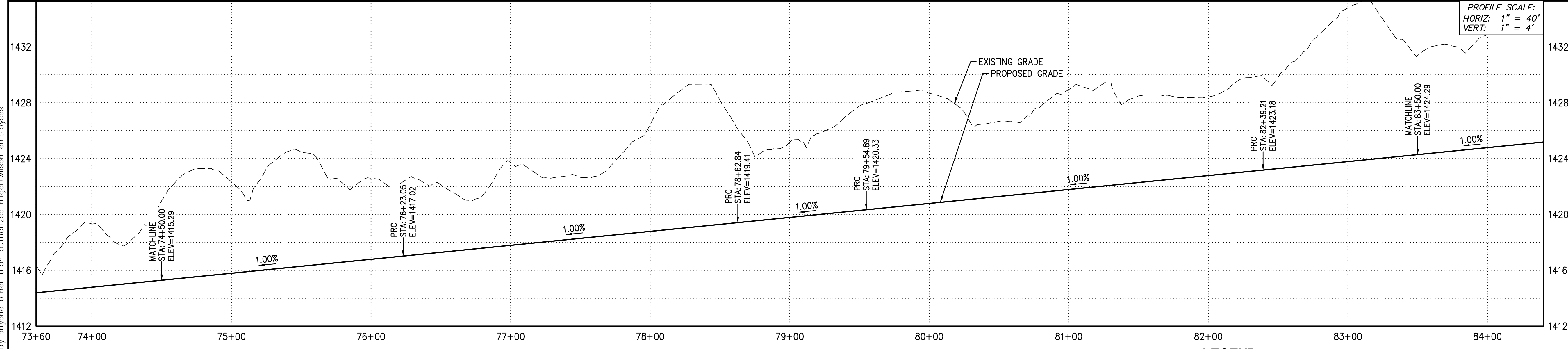
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CURVE TABLE				CURVE TABLE					
NO.	RADIUS	DELTA	LENGTH	TANGENT	NO.	RADIUS	DELTA	LENGTH	TANGENT
C1	475.00'	027°32'18"	228.30'	116.40	C4	575.00'	028°19'51"	284.32'	145.13
C2	475.00'	028°55'25"	239.79'	122.51	C5	400.00'	054°45'23"	382.27'	207.15
C3	170.01'	031°01'21"	92.05'	47.18					

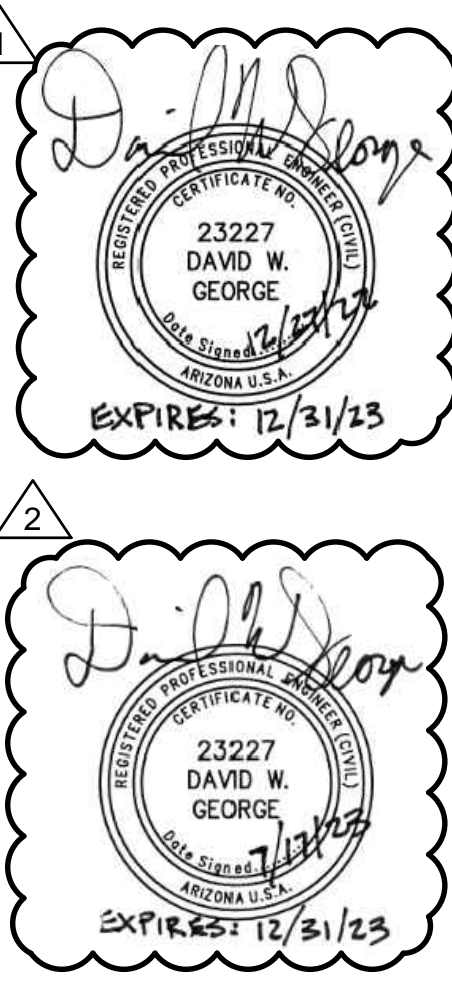
DRAINAGE CHANNEL SOUTH



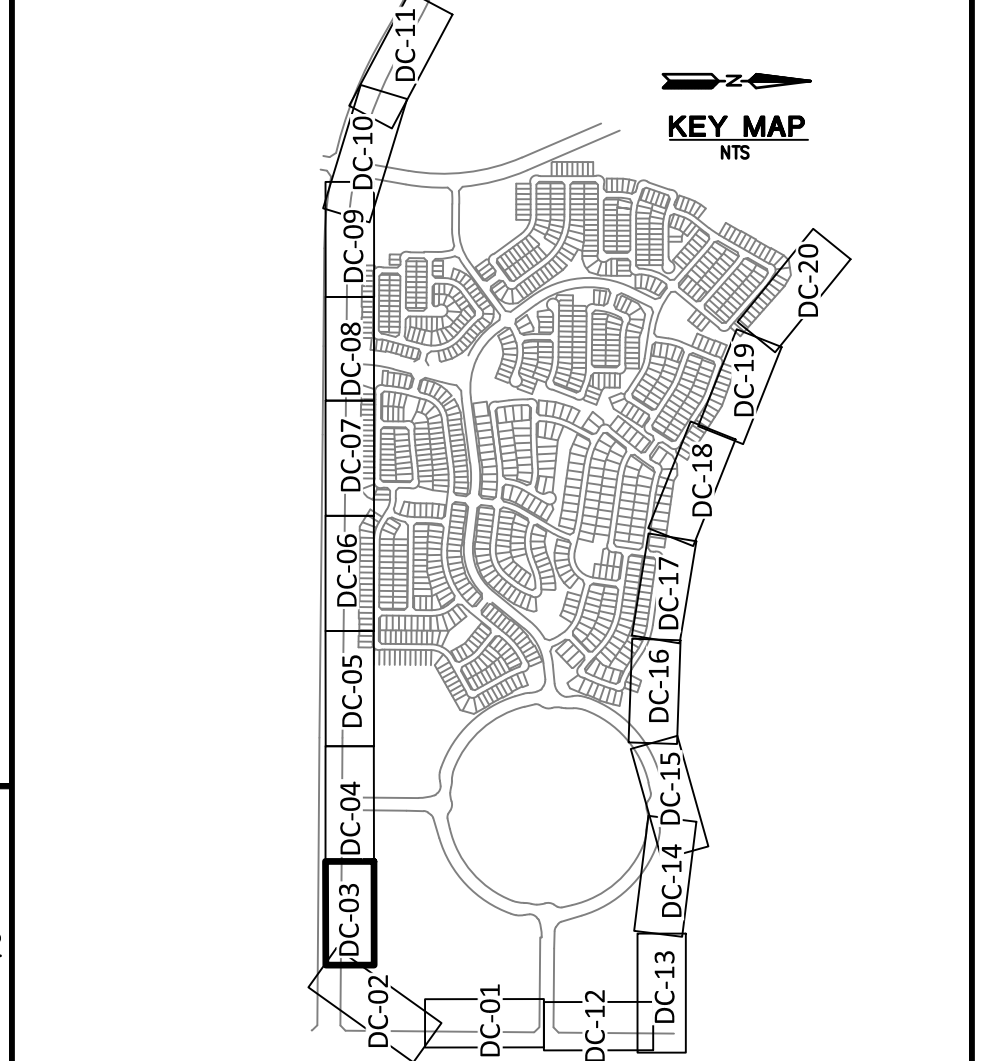
TYPICAL DRAINAGE SECTION - SUN VALLEY PARKWAY
NTS

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
 - FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
 - EMERGENCY OUTFALL ARROW
 - HIGH POINT
 - 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. 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
- NOTE: THE SCOUR DEPTH AT THE GABION STRUCTURE IS 0 AND THE THALWEG ELEVATION IS THE SAME AS THE BOTTOM ELEVATION SHOWN IN THE PROFILE.



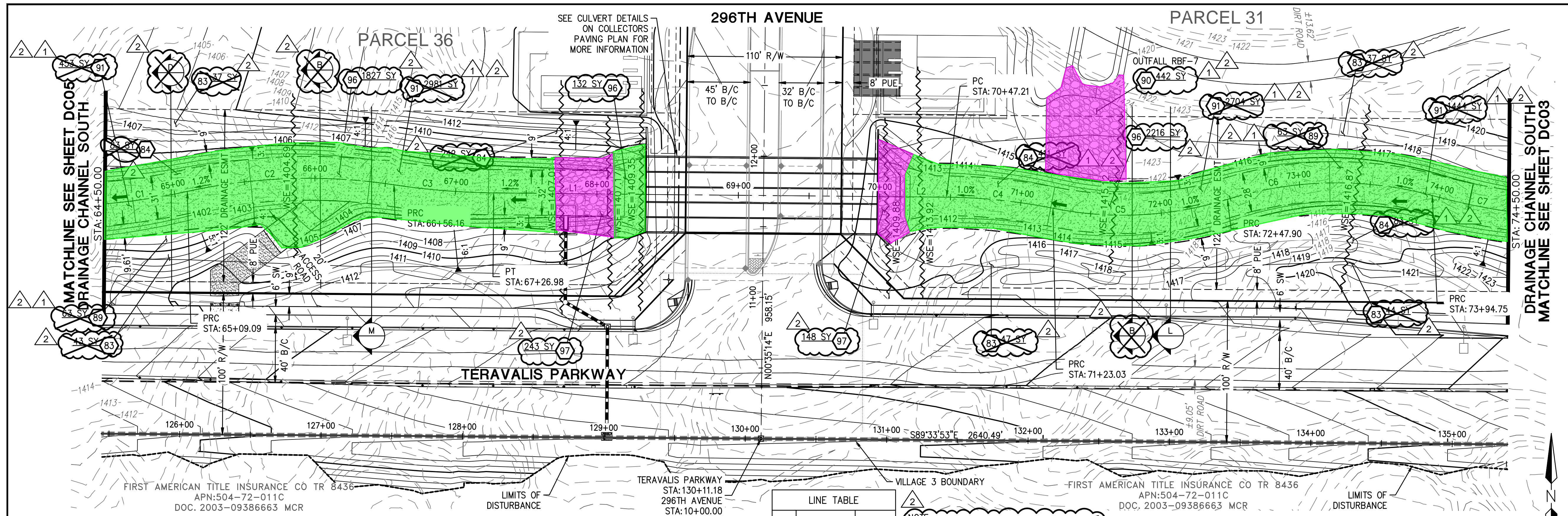
- REVISIONS:**
- 1. 12/27/2022 - ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION ADDED & FIRE STATION. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.
 - 2. 7/17/2023 - REVISION TO CHANNEL 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	SUBMITTAL: 3R Submittal
	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 72 OF 90	

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



- 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, PERMITIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET# DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY. COLOR PER DEVELOPER. 208 SY
 - 84 INSTALL GABIONS ON MACCAFERRI GEOTEXTILE MACTEX 147.1". 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, PERMITIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET# DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY. COLOR PER DEVELOPER. 442 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, PERMITIVITY 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
 - 96 INSTALL SOIL CEMENT PER MAG SPEC 311; SEE DETAIL 1 ON SHEET DC01. 4175 SY
- * CONSTRUCTION NOTES CONTINUED (ON THE LEFT)

CURVE TABLE					CURVE TABLE					CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT	NO.	RADIUS	DELTA	LENGTH	TANGENT	NO.	RADIUS	DELTA	LENGTH	TANGENT
C1	450.00'	023°34'08"	185.11'	93.88	C3	500.00'	008°06'53"	70.82'	35.47	C5	250.00'	028°37'08"	124.87'	63.77
C2	400.00'	021°04'00"	147.07'	74.38	C4	400.00'	010°51'36"	75.82'	38.02	C6	260.00'	032°21'38"	146.85'	75.44

LINE TABLE

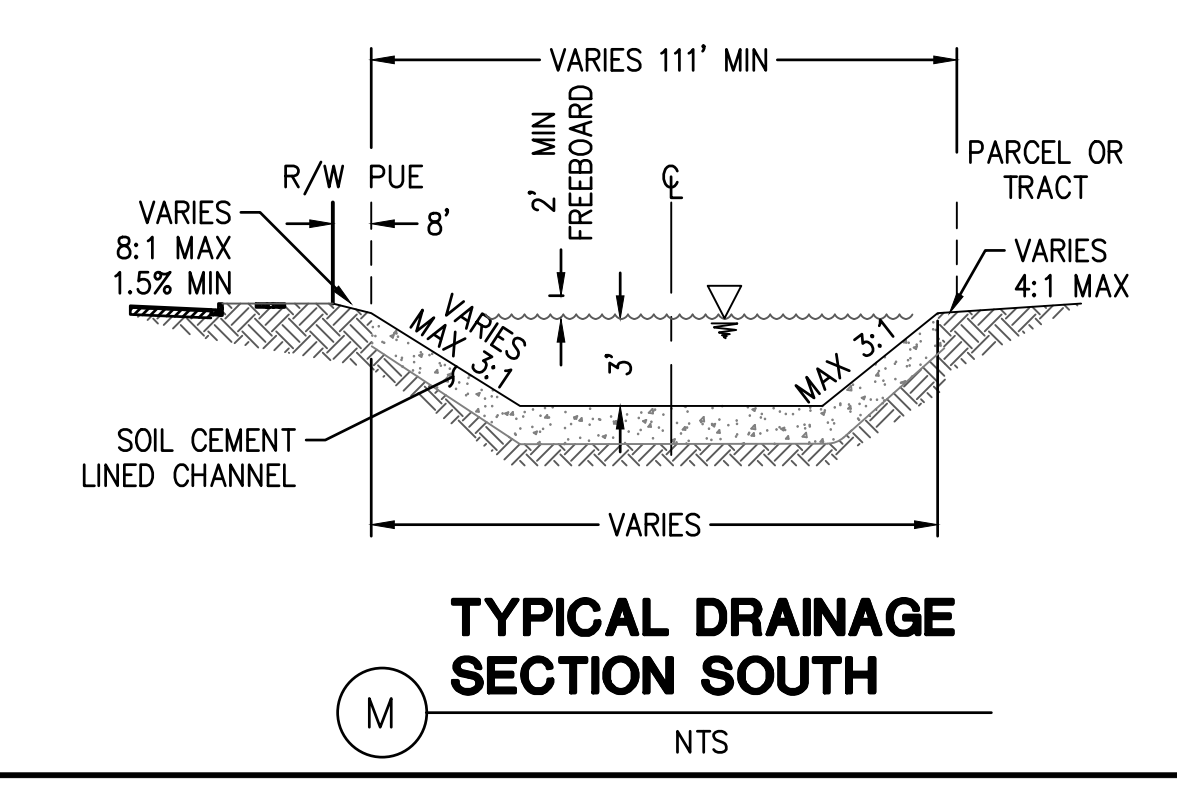
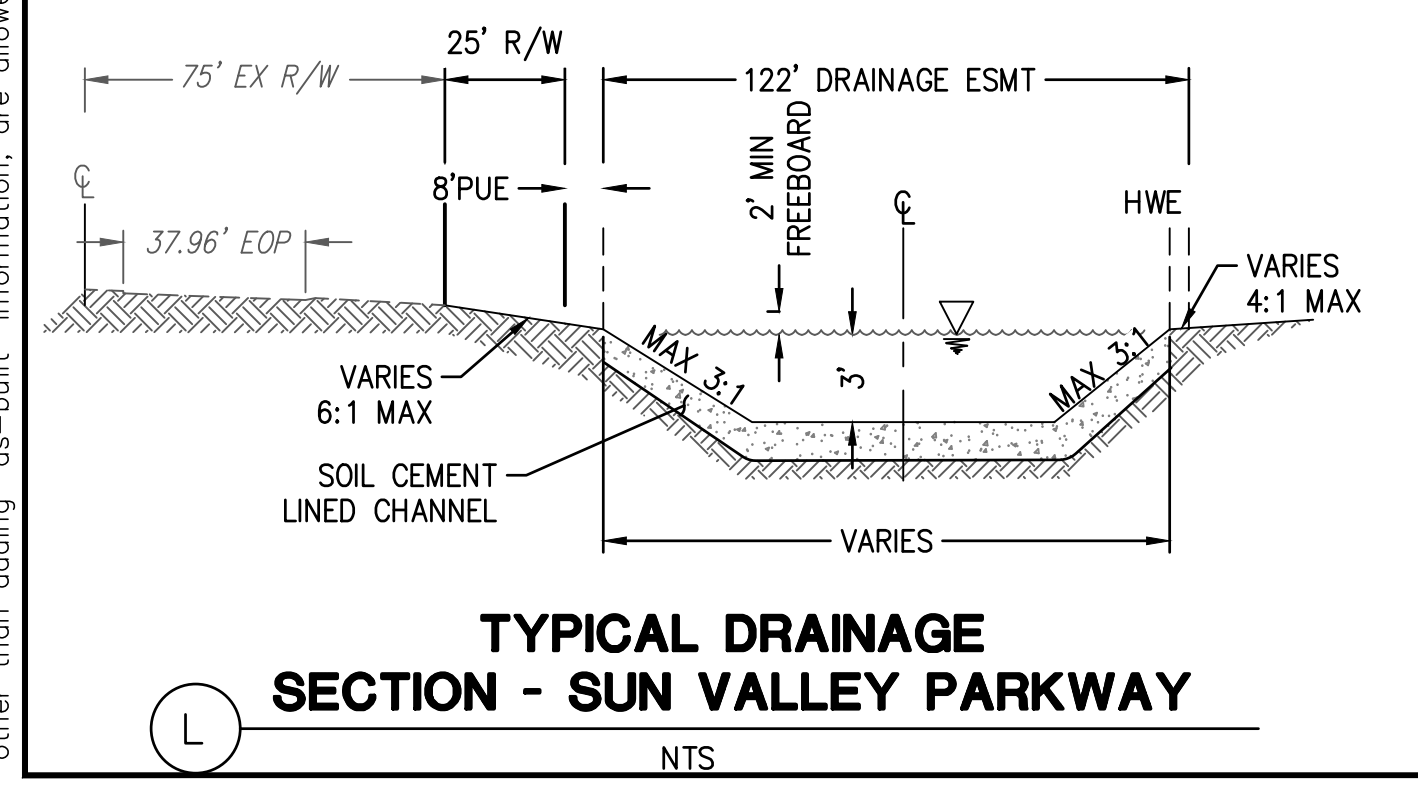
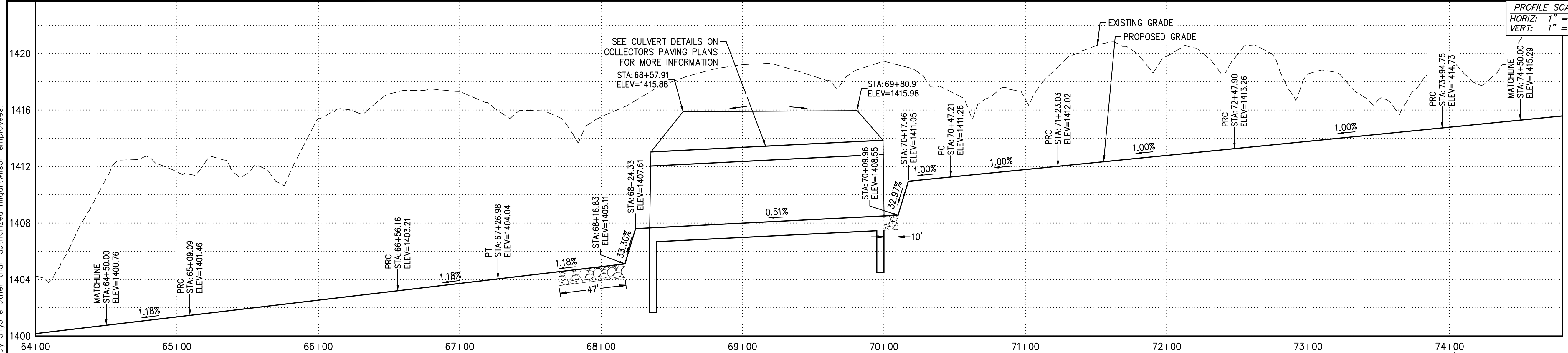
NO.	DIRECTION	LENGTH
L1	S89°24'50"E	107.35'
L2	S89°28'58"E	47.59'

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

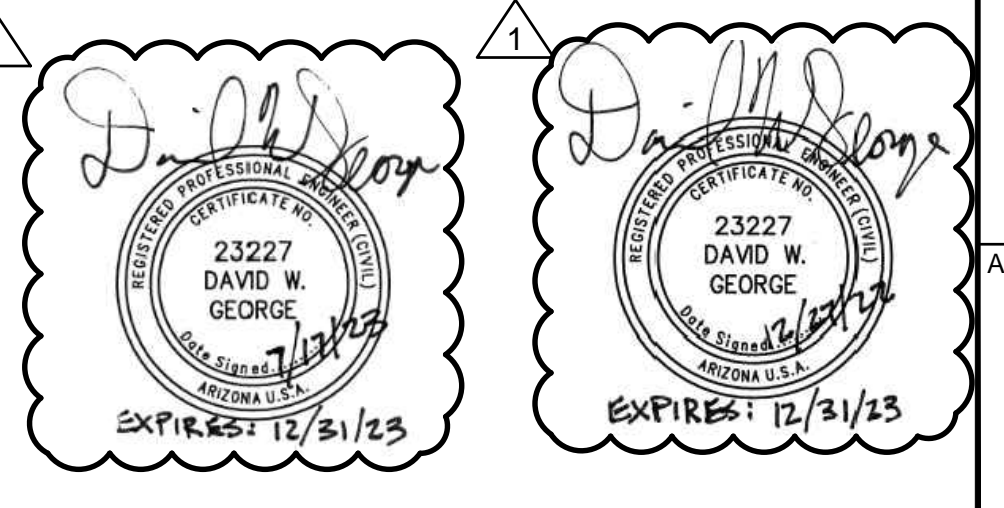
97 PLACE GROUTED RIP-RAP D50=15", THICKNESS 30" ON FILTER FABRIC, MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. COLOR PER DEVELOPER'S REPRESENTATIVE. 391 SY

DRAINAGE CHANNEL SOUTH



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)
 - ↑ (HP) HIGH POINT
 - ↓ (LP) LOW POINT
 - DUAL CHAMBER DRYWELL



- 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: APPROVED 6/22/2022
 CITY OF BUCKEYE ENGINEERING

AS-BUILT SEAL: DESIGN SEAL
 23227 DAVID W. GEORGE
 EXPIRES: 12/31/23

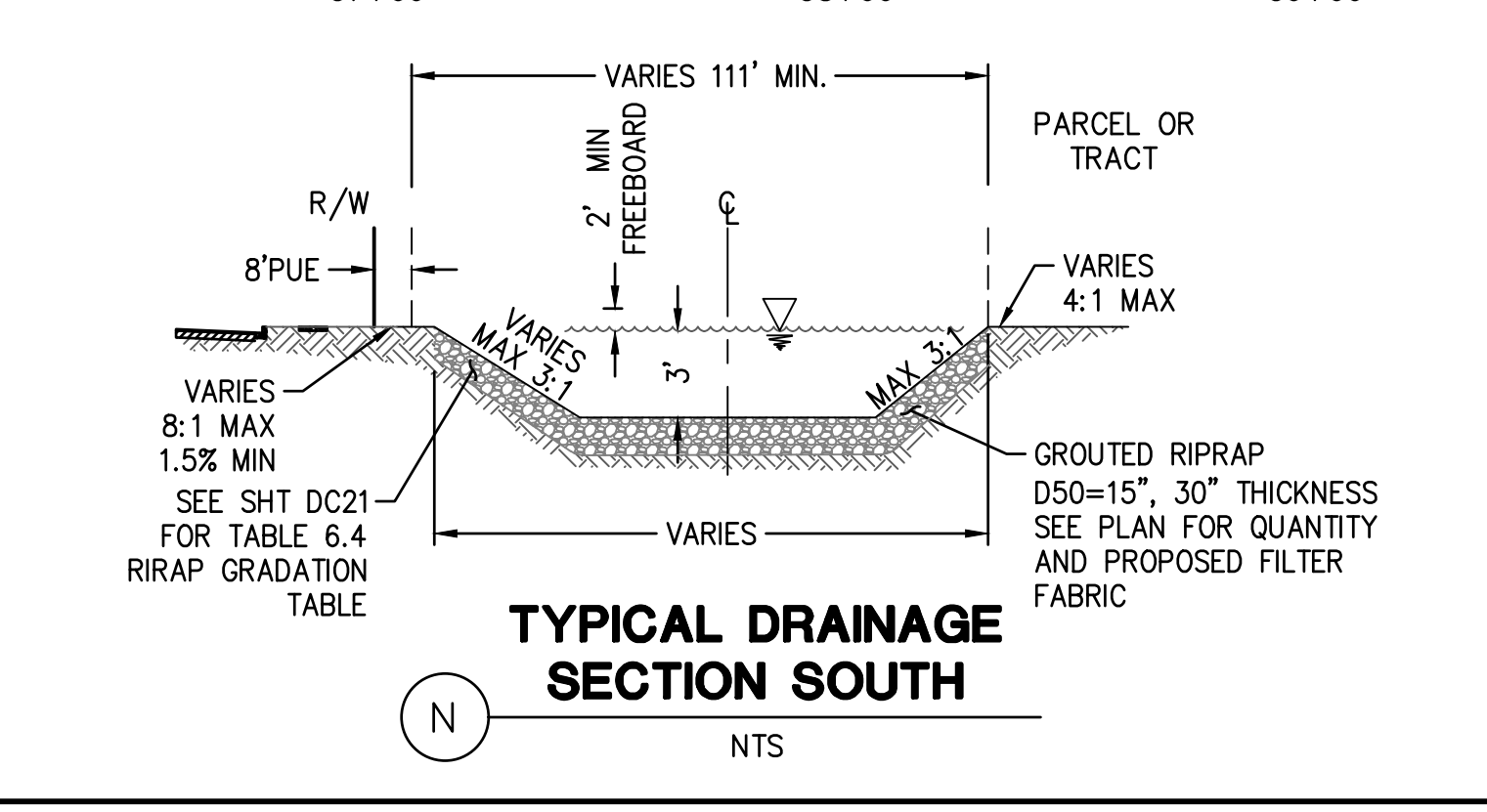
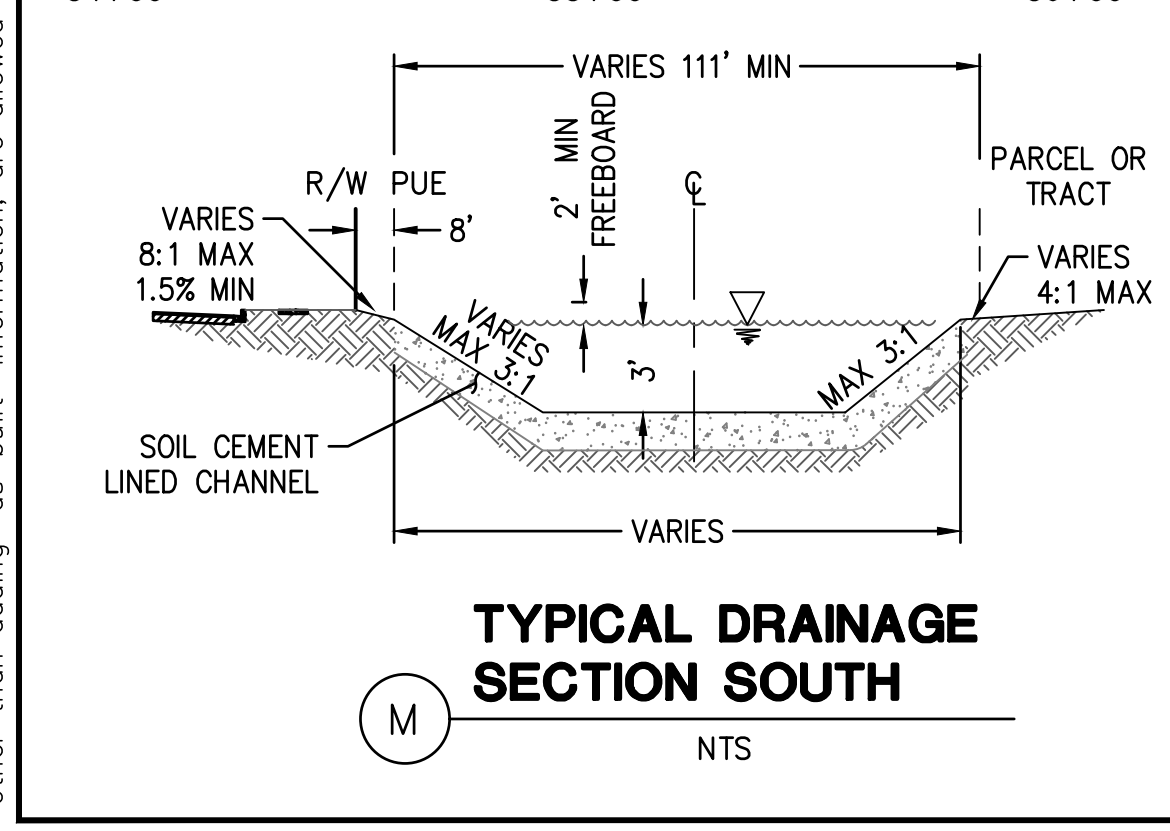
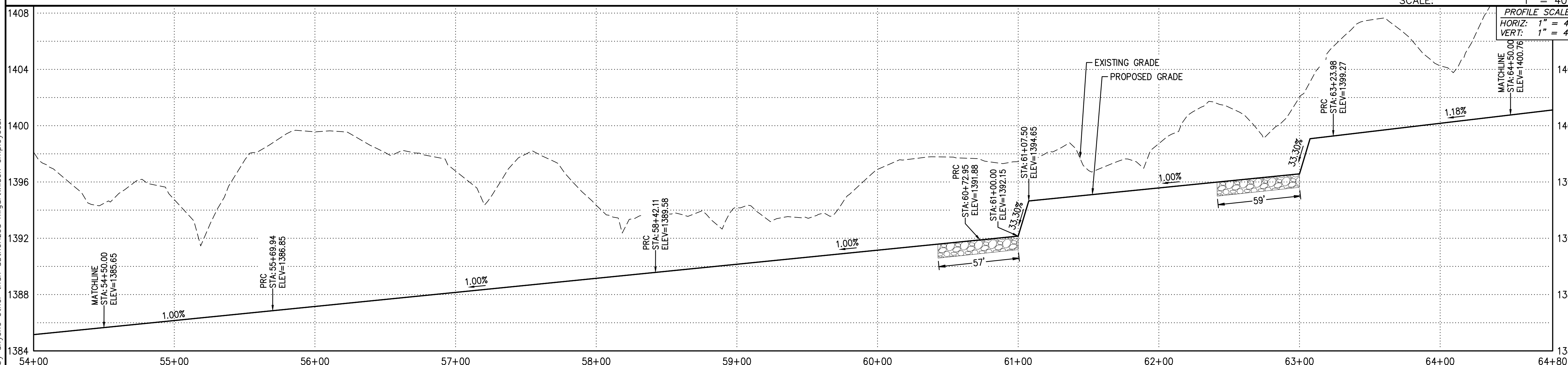
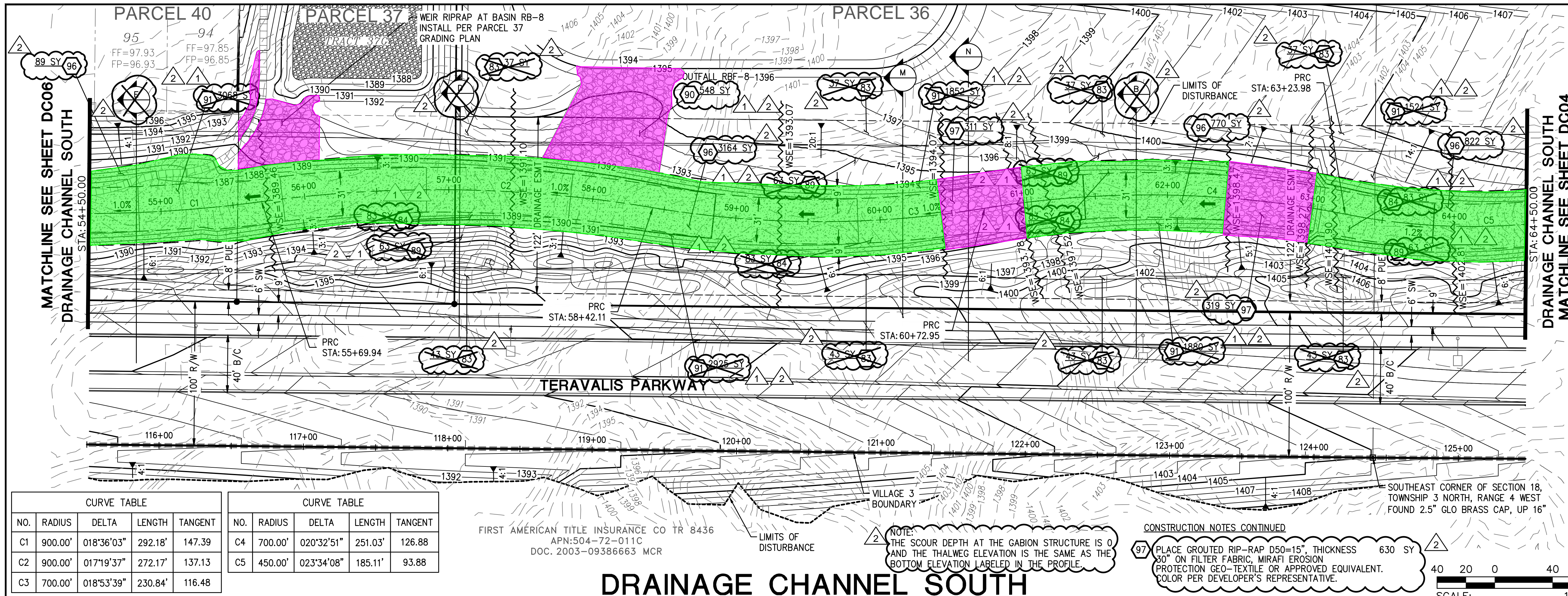
ORIGINAL PLAN DATE: MAY 2022
 LATEST REVISION DATE: JULY 2023

PROJECT NUMBER: 1175
 SHEET NUMBER: DC04 OF 90

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

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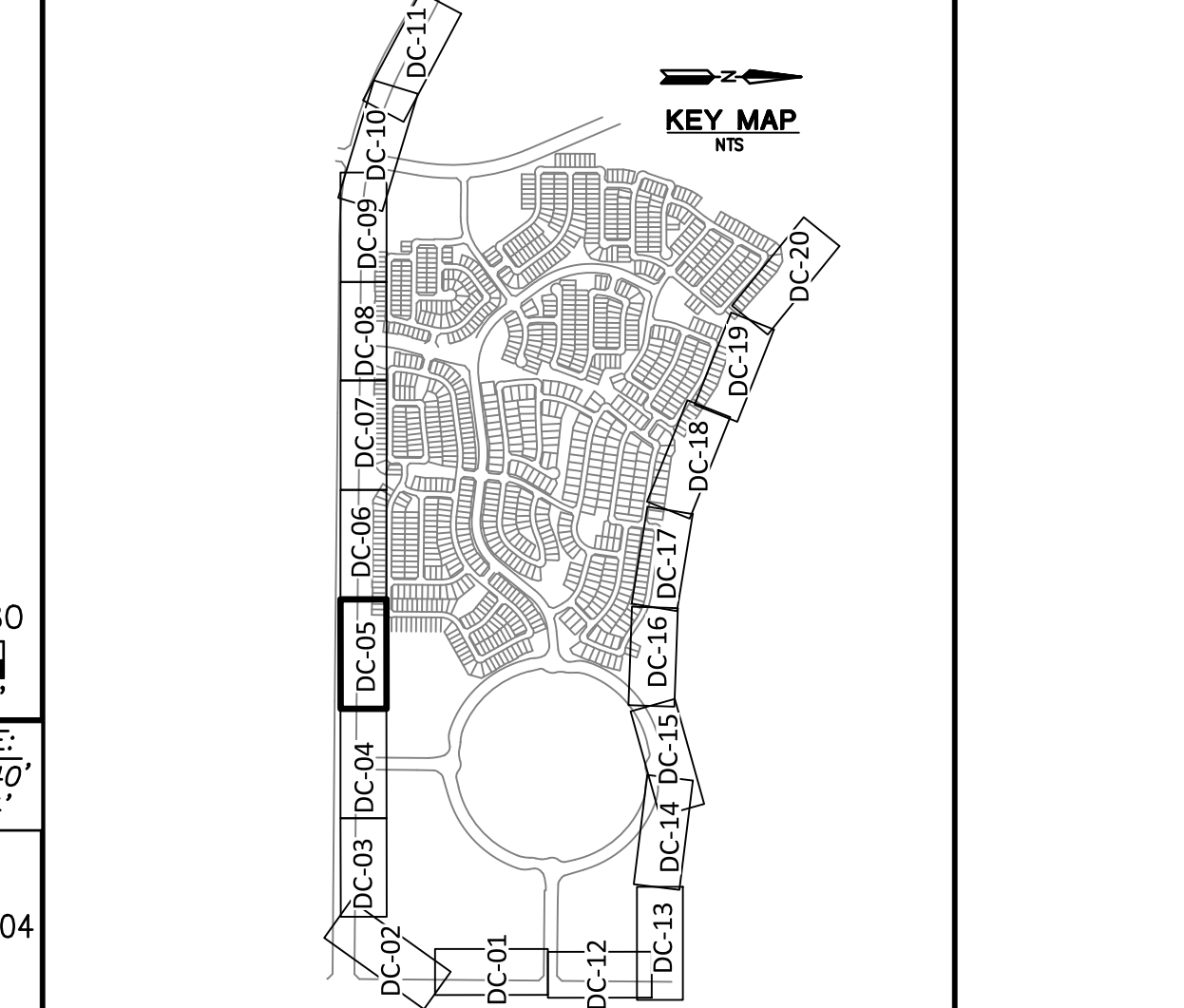


LEGEND

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

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

- 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, PERMITIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET# DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY. COLOR PER DEVELOPER. 328 SY
 - 84 INSTALL GABIONS ON MACCAFERRI GEOTEXTILE MACTEX N47.1 PER DETAILS SEE SHEET# DC21. 332 SY
 - 85 INSTALL 2" OF SHOTCRETE ON TOP OF GABION BASKET WITH D50=6" EMBEDDED IN SHOTCRETE. 252 SY
 - 86 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, PERMITIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET# DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY. COLOR PER DEVELOPER. 548 SY
 - 87 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, PERMITIVITY 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
 - 88 INSTALL SOIL CEMENT PER MAG SPEC 311; SEE DETAIL 1 ON SHEET DC21. 4845 SY
- * CONSTRUCTION NOTES CONTINUED (ON THE LEFT)



REVISIONS:

- 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.
- 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

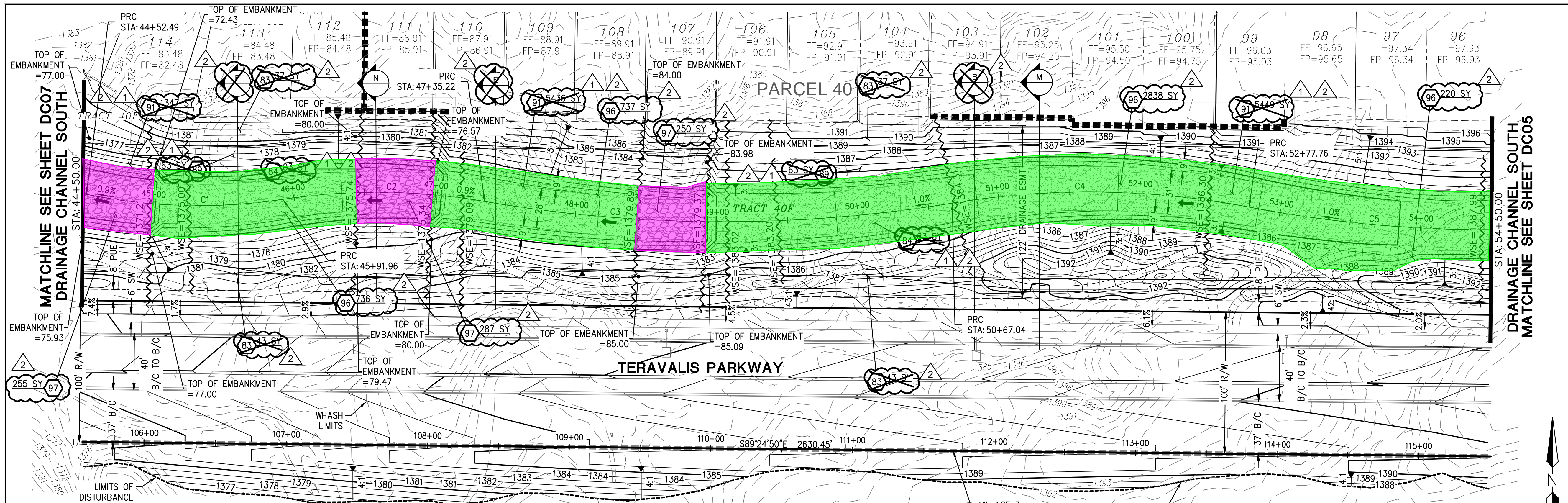
23227 DAVID W. GEORGE
23227 DAVID W. GEORGE
EXPIRES: 12/31/23
EXPIRES: 12/31/23

ORIGINAL PLAN DATE MAY 2022
LATEST REVISION DATE JULY 2023

PROJECT NUMBER 1175
SHEET NUMBER 74 OF 90
DC05

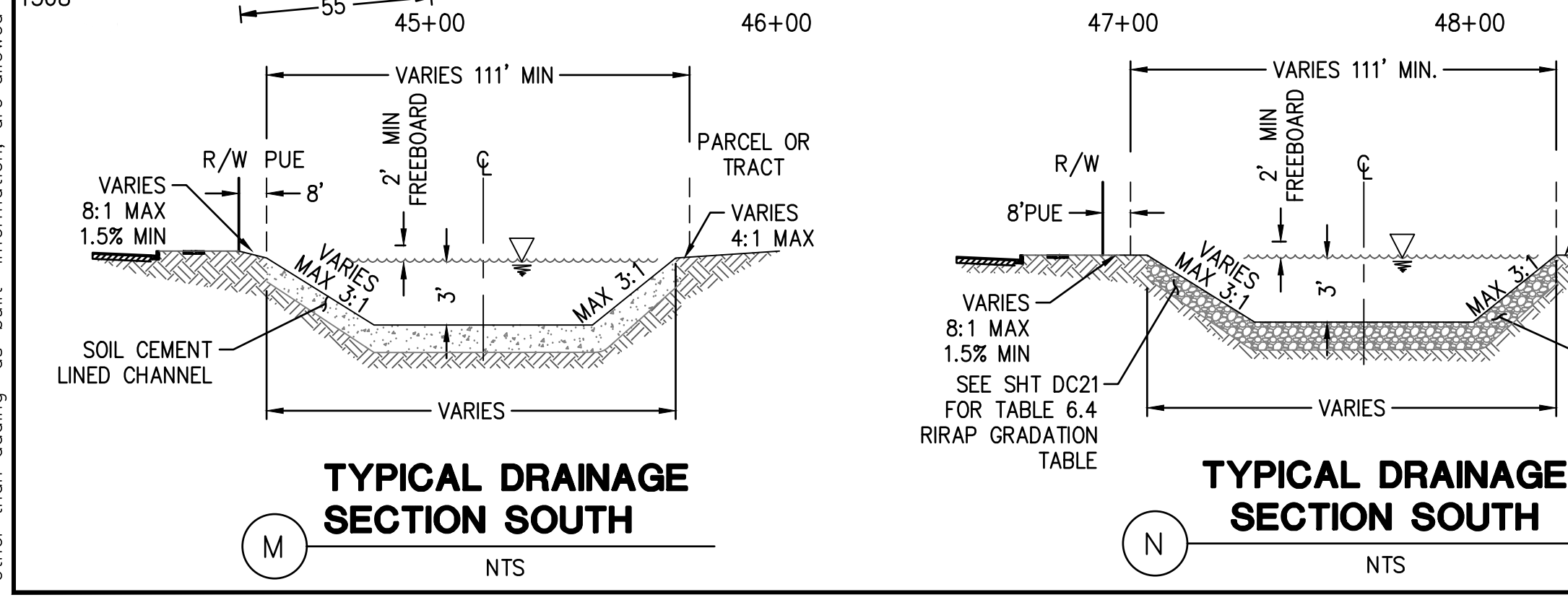
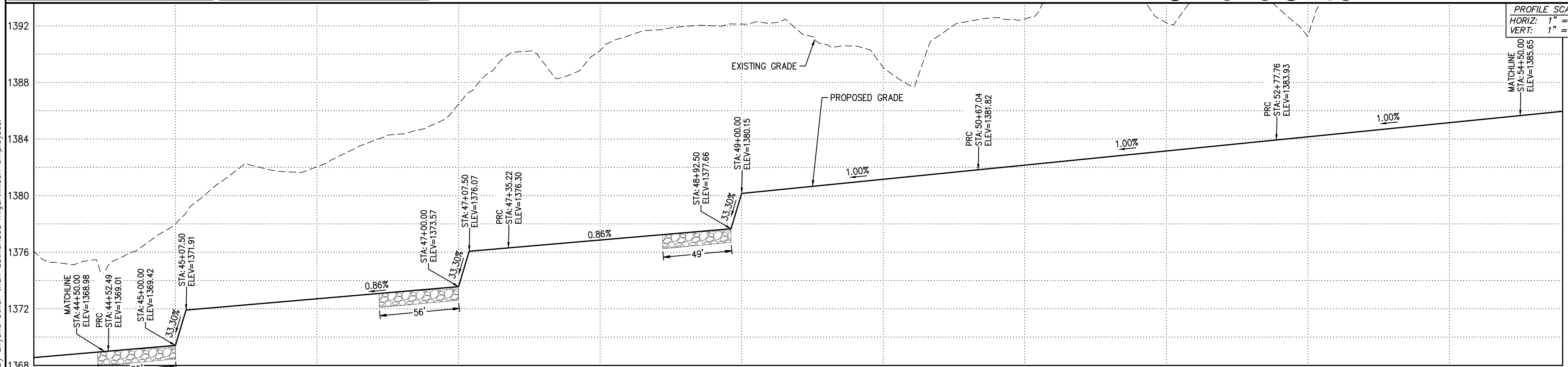
COB PLAN TRACKING # ENG-21-0220
COB PERMIT # 3R Submittal

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CURVE TABLE					CURVE TABLE					CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT	NO.	RADIUS	DELTA	LENGTH	TANGENT	NO.	RADIUS	DELTA	LENGTH	TANGENT
C1	400.00'	019°58'35"	139.46'	70.45'	C3	1000.00'	019°00'42"	331.81'	167.45'	C5	900.00'	018°36'03"	292.18'	147.39'
C2	450.00'	018°14'27"	143.26'	72.24'	C4	600.00'	020°07'21"	210.72'	106.46'					

DRAINAGE CHANNEL SOUTH



LEGEND

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

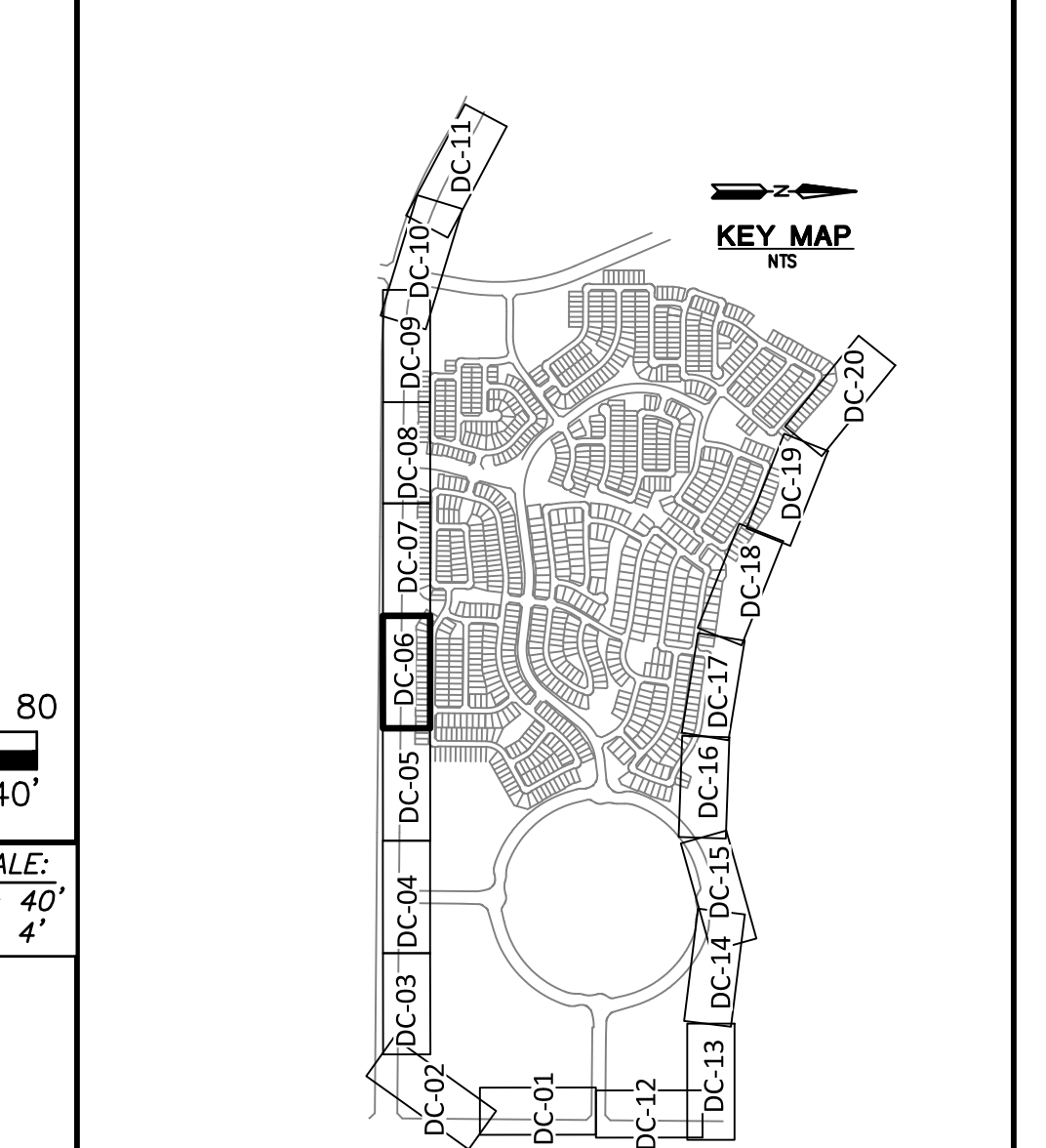
NOTES:

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

PROFILES:

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

- 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 = 165 LB/FT³. GRADATION PER TABLE 6.4 OF 2016 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:**
- 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.
 - 7/17/2023 - REVISION TO CHANNEL ALIGNMENT AND REPLACE RIPRAP WITH SOIL CEMENT.

PLAN NAME
TRILLIUM VILLAGE 3 - UNITS 1 & 2 DRAINAGE CHANNEL PLAN

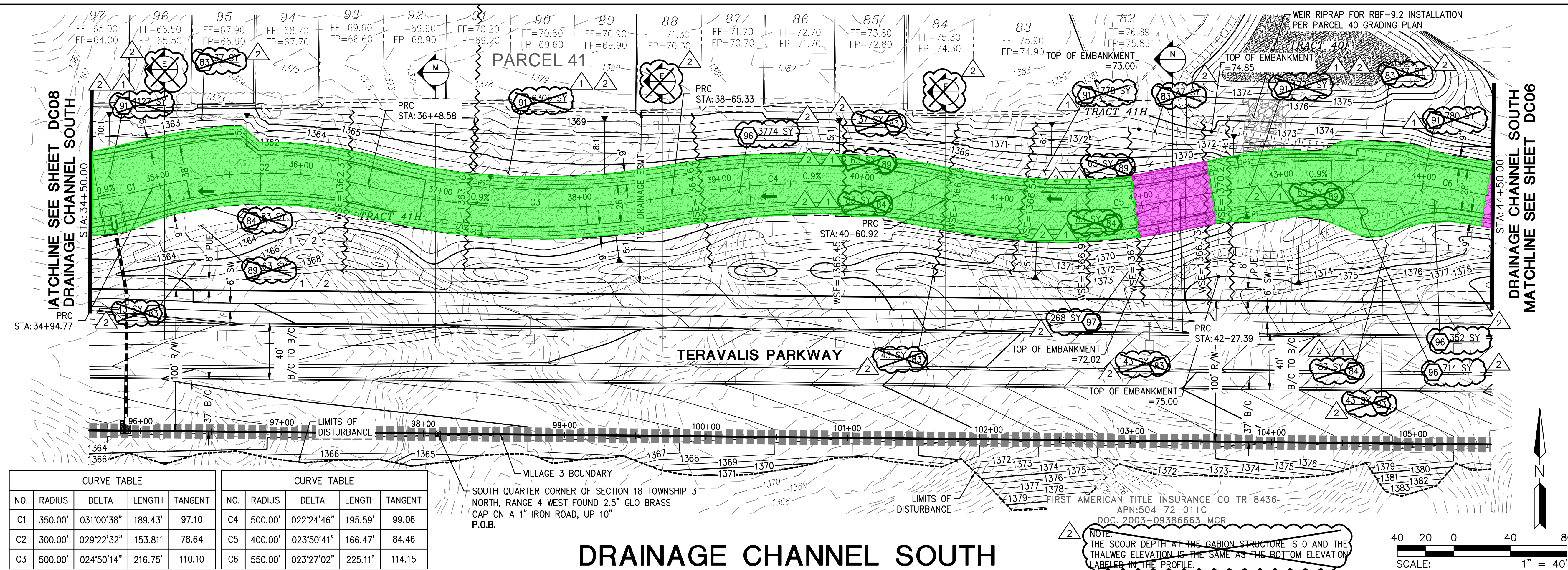
ENGINEER INFORMATION
HILGARTWILSON

COB PERMITTING APPROVED SEAL	COB ENGINEERING APPROVED SEAL	SUBMITTAL: 3R
	APPROVED	
	6/22/2022	
	CITY OF BUCKEYE ENGINEERING	
AS-BUILT SEAL	DESIGN SEAL	
ORIGINAL PLAN DATE	LATEST REVISION DATE	
MAY 2022	JULY 2023	
PROJECT NUMBER	SHEET NUMBER	
1175	75 OF 90	

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

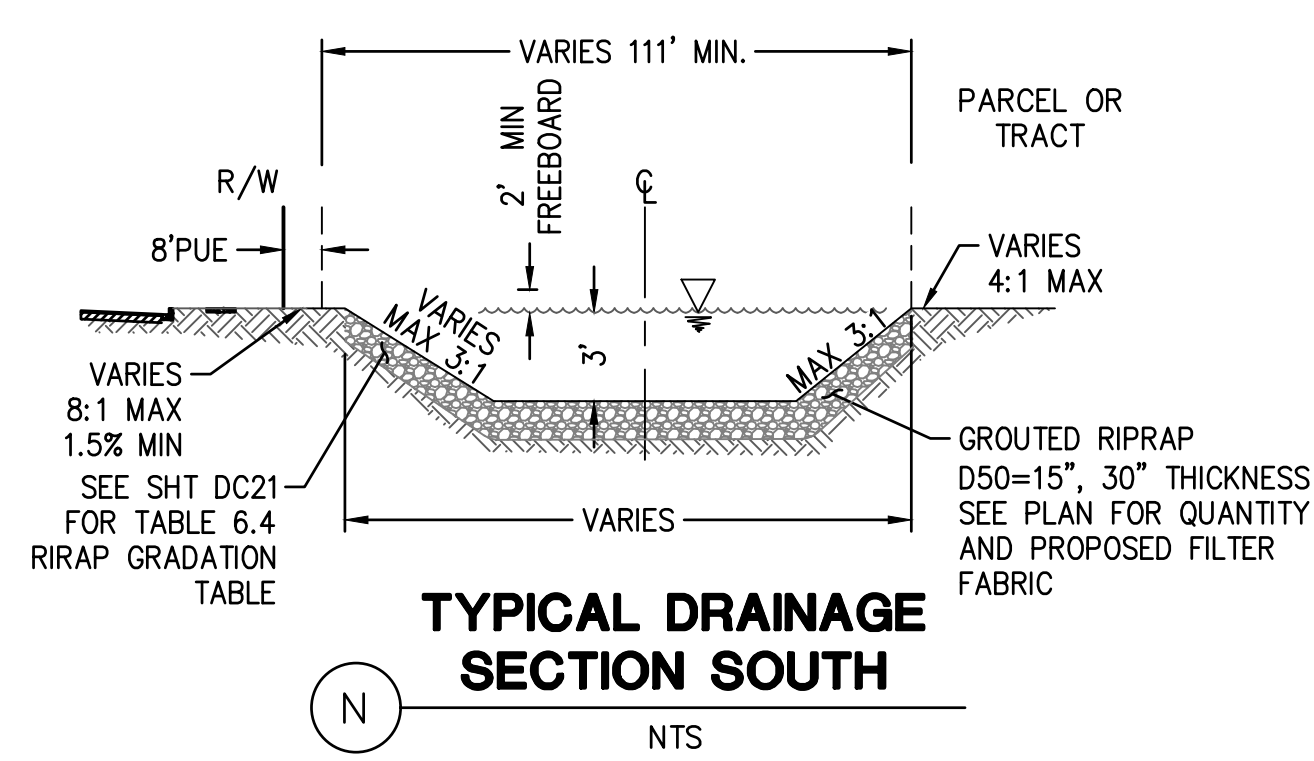
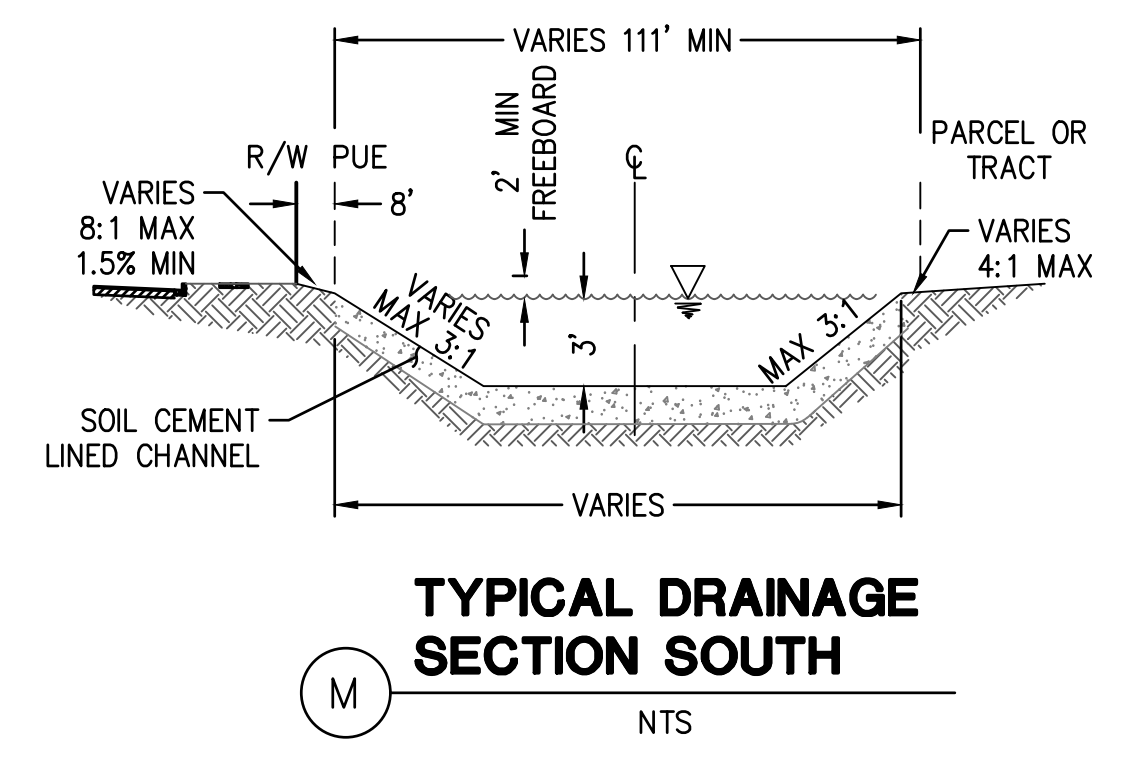
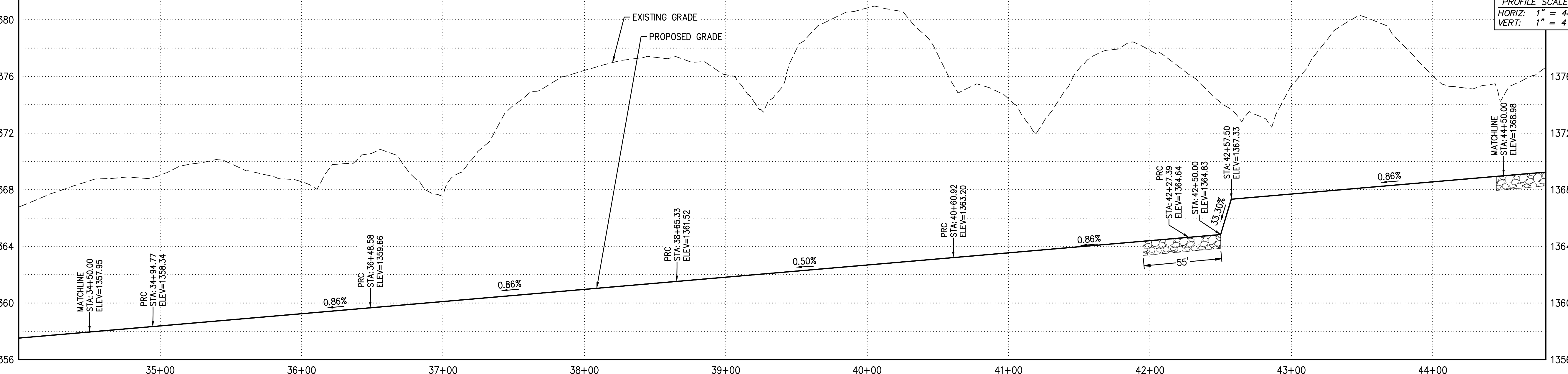
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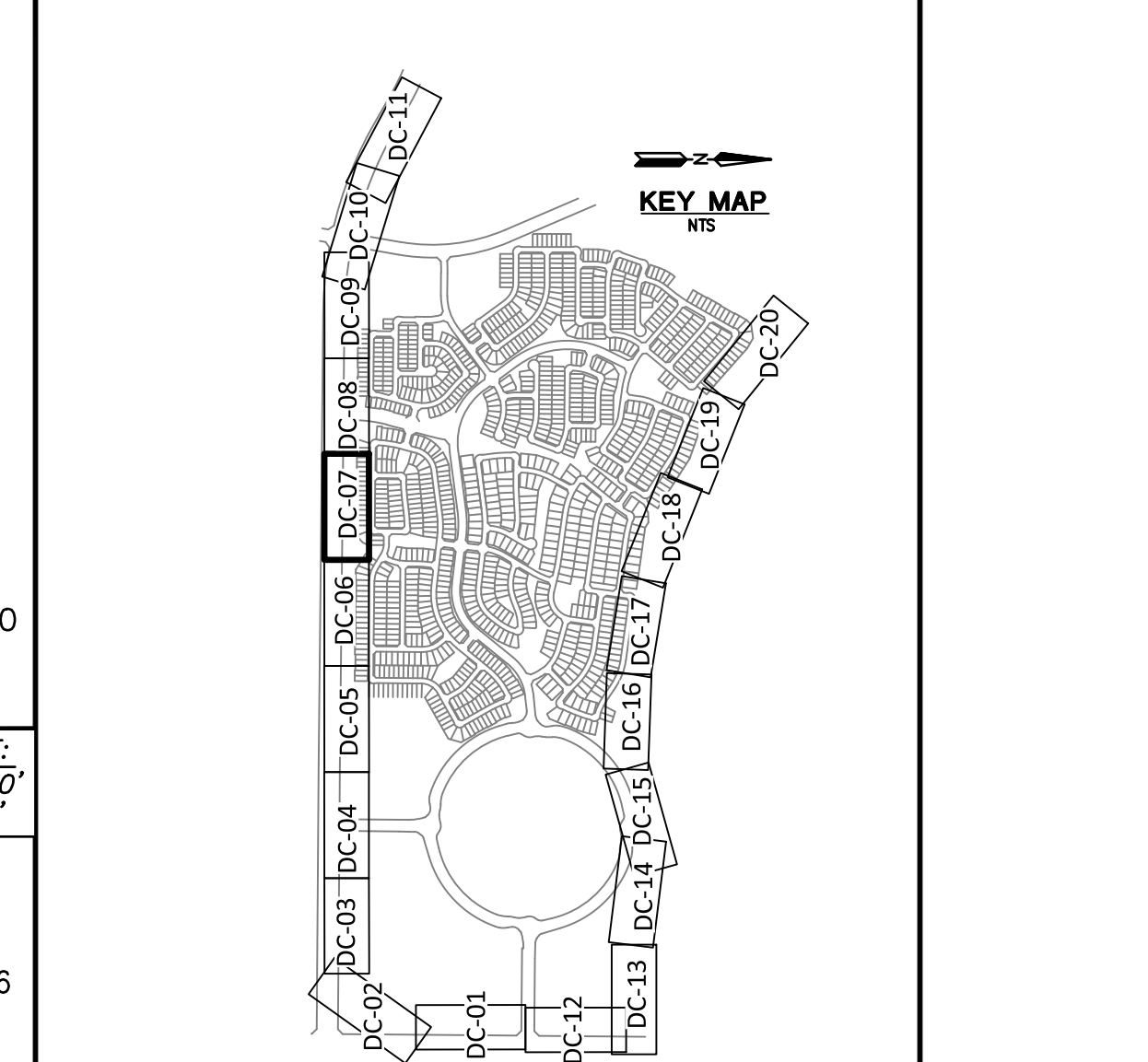
CURVE TABLE					CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT	NO.	RADIUS	DELTA	LENGTH	TANGENT
C1	350.00'	031°00'38"	189.43'	97.10	C4	500.00'	022°24'46"	195.59'	99.06
C2	300.00'	029°22'32"	153.81'	78.64	C5	400.00'	023°50'41"	166.47'	84.46
C3	500.00'	024°50'14"	216.75'	110.10	C6	550.00'	023°27'02"	225.11'	114.15

DRAINAGE CHANNEL SOUTH



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

- 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/H3. GRADATION PER TABLE 6.4 OF 2018 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 GROUDED 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:**
- 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.
 - 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
 23227 DAVID W. GEORGE
 EXPIRES: 12/31/23
 EXPIRES: 12/31/23

ORIGINAL PLAN DATE MAY 2022
LATEST REVISION DATE JULY 2023

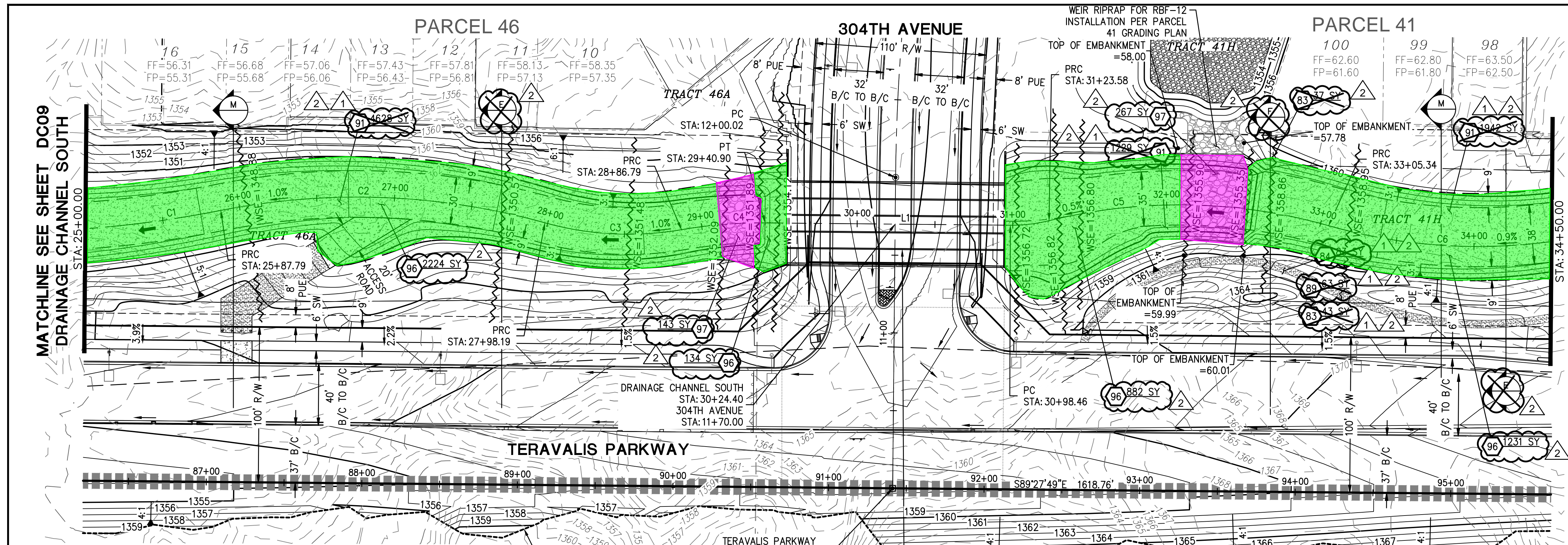
PROJECT NUMBER 1175
SHEET NUMBER DC07
SHT. 76 OF 90

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

3R Submittal

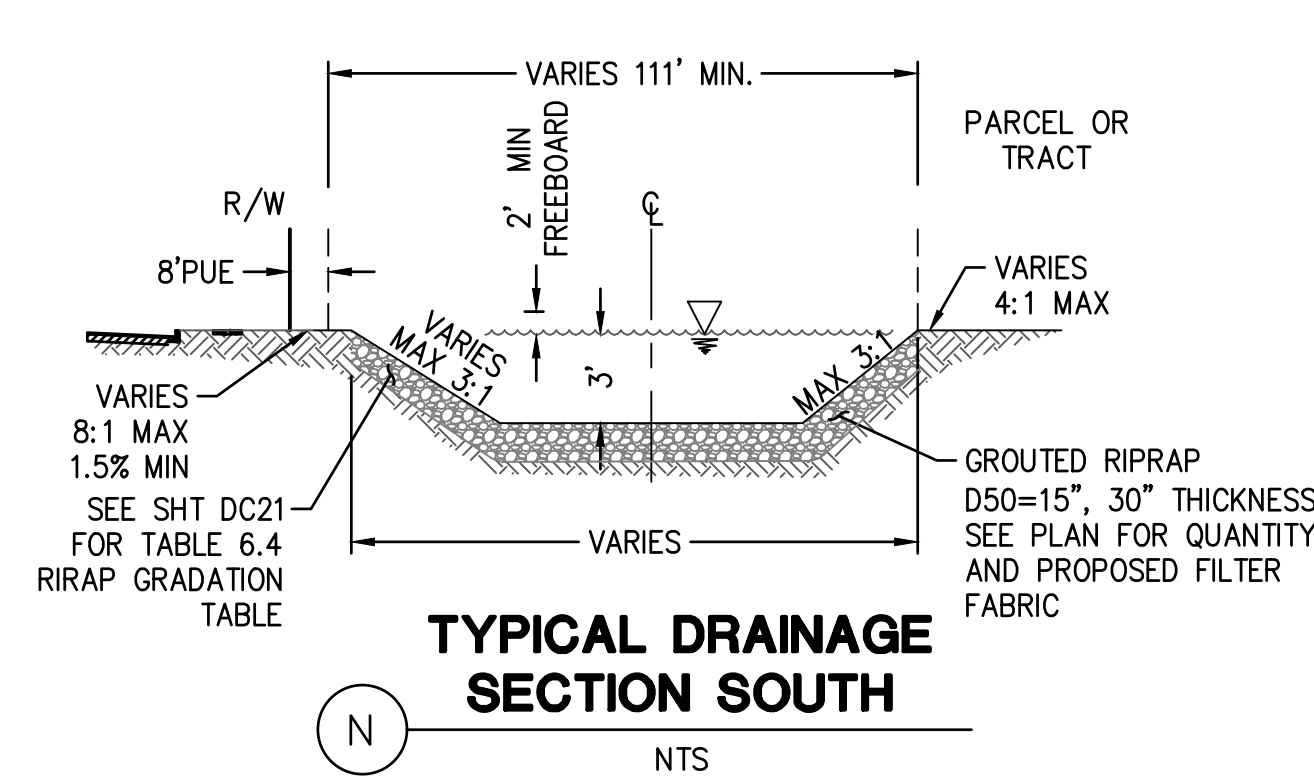
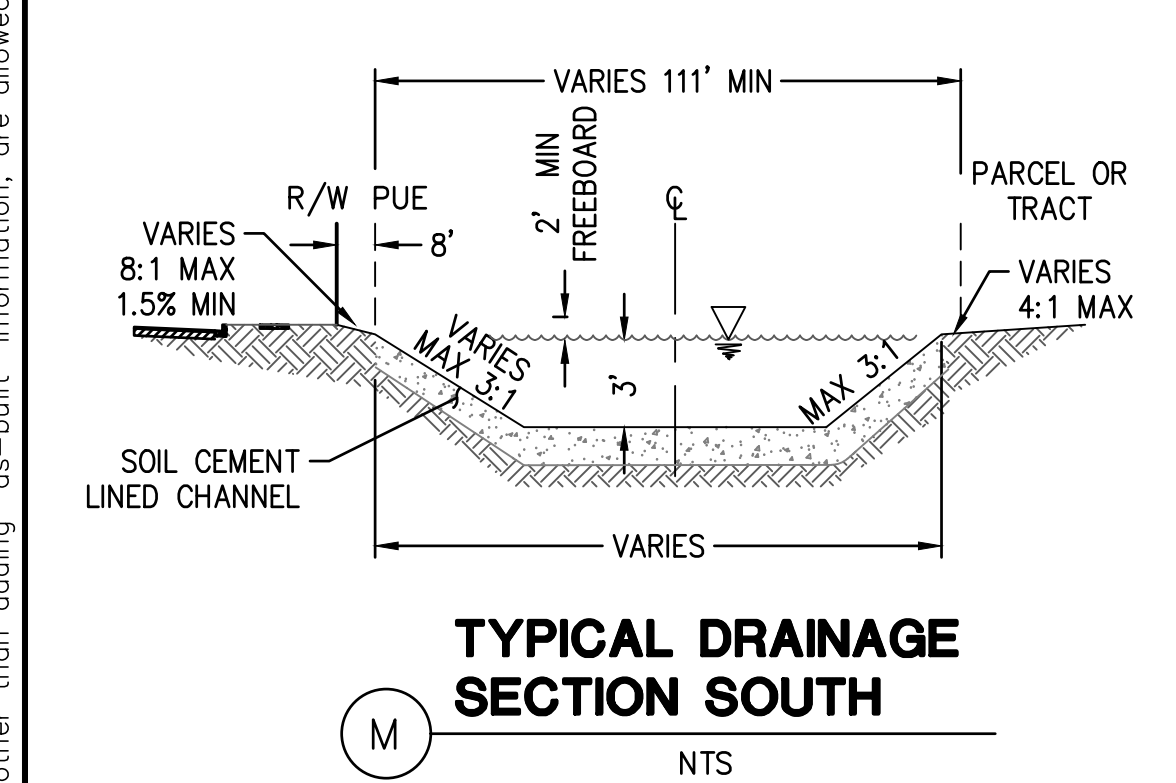
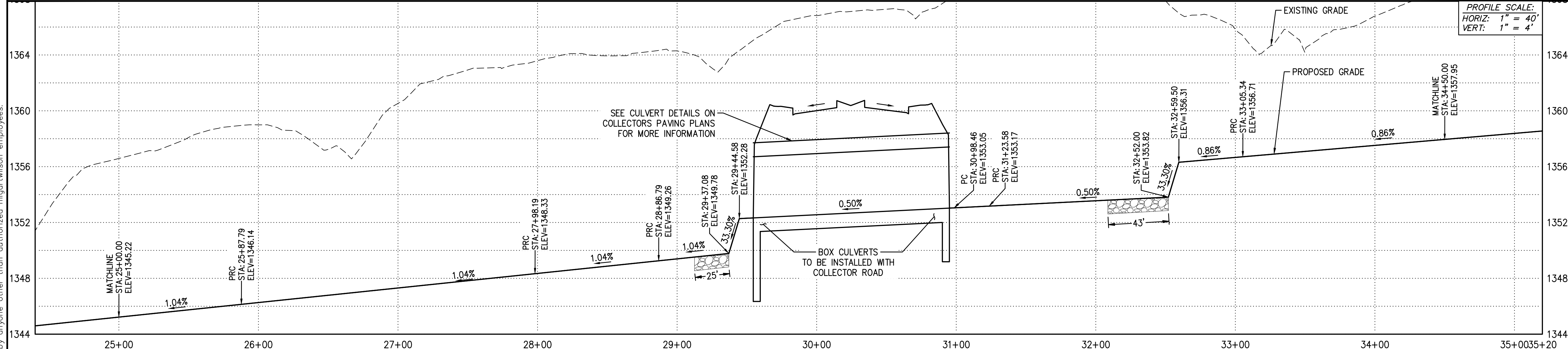


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CURVE TABLE				CURVE TABLE					
NO.	RADIUS	DELTA	LENGTH	TANGENT	NO.	RADIUS	DELTA	LENGTH	TANGENT
C1	725.00'	023°42'59"	300.10'	152.23	C4	300.00'	010°20'02"	54.11'	27.13
C2	450.00'	026°47'19"	210.40'	107.16	C5	350.00'	029°45'18"	181.76'	92.98
C3	200.00'	025°22'58"	88.60'	45.04	C6	350.00'	031°00'38"	189.43'	97.10

DRAINAGE CHANNEL SOUTH

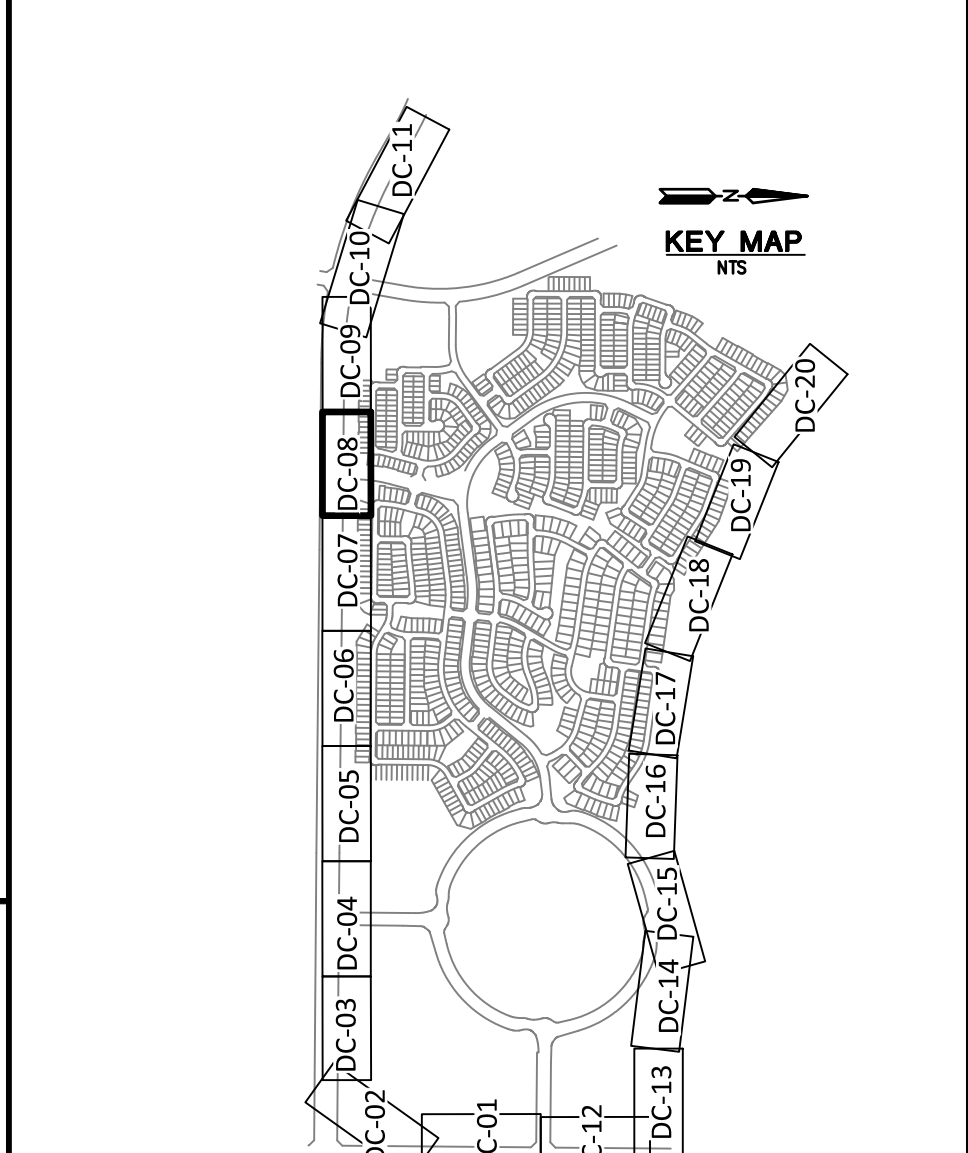


NOTE: SECTION E & F HAVE BEEN DELETED DUE TO CHANNEL CHANGES.

- LEGEND**
- VILLAGE 3 BOUNDARY
 - EROSION HAZARD SETBACK
 - RIGHT OF WAY
 - LOT LINE
 - CENTER LINE
 - EASEMENT LINE
 - FLOW DIRECTIONAL INDICATOR
 - 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/IN/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/in/ft AND WOVEN. SPECIFIC WEIGHT = 165 lb/ft³. GRADATION PER TABLE 6.4 OF 2016 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



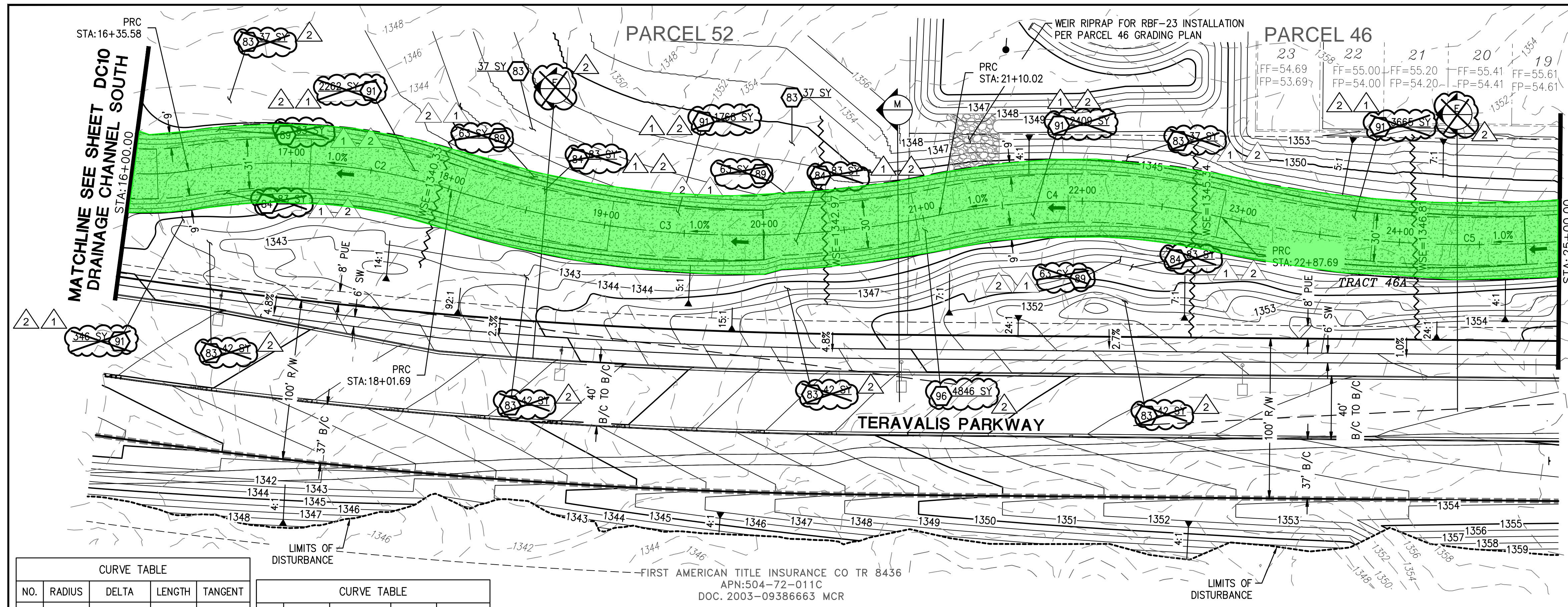
- REVISIONS:**
- 1 12/27/2022 - ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION ADDED & FIRE STATION. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.
 - 2 7/17/2023 - REVISION TO CHANNEL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

PLAN NAME
TRILLIUM VILLAGE 3 - UNITS 1 & 2 DRAINAGE CHANNEL PLAN

ENGINEER INFORMATION
HILGARTWILSON

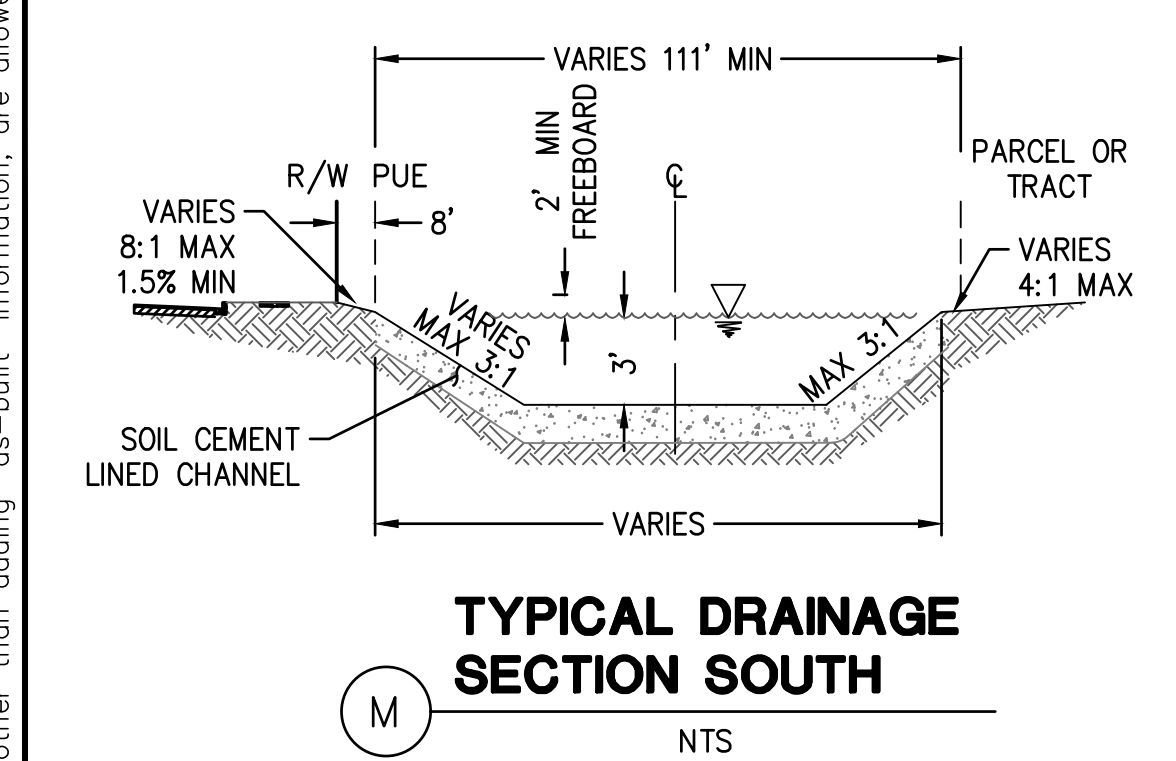
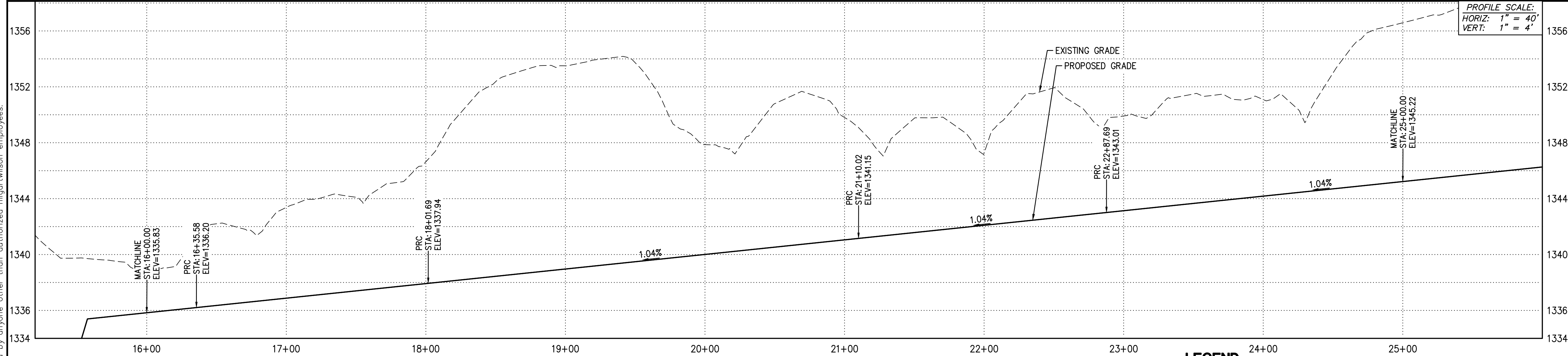
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	APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING	
AS-BUILT SEAL	DESIGN SEAL	COB PLAN TRACKING # ENG-21-0220 COB PERMIT #
	 EXP. 12/31/23	
ORIGINAL PLAN DATE MAY 2022	LATEST REVISION DATE JULY 2023	
PROJECT NUMBER 1175	SHEET NUMBER DC08 OF 90	

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CURVE TABLE				CURVE TABLE					
NO.	RADIUS	DELTA	LENGTH	TANGENT	NO.	RADIUS	DELTA	LENGTH	TANGENT
C2	350.00'	027°11'29"	166.10'	84.65	C5	725.00'	023°42'59"	300.10'	152.23
C3	600.00'	029°26'38"	308.33'	157.65					
C4	420.00'	024°14'14"	177.67'	90.18					

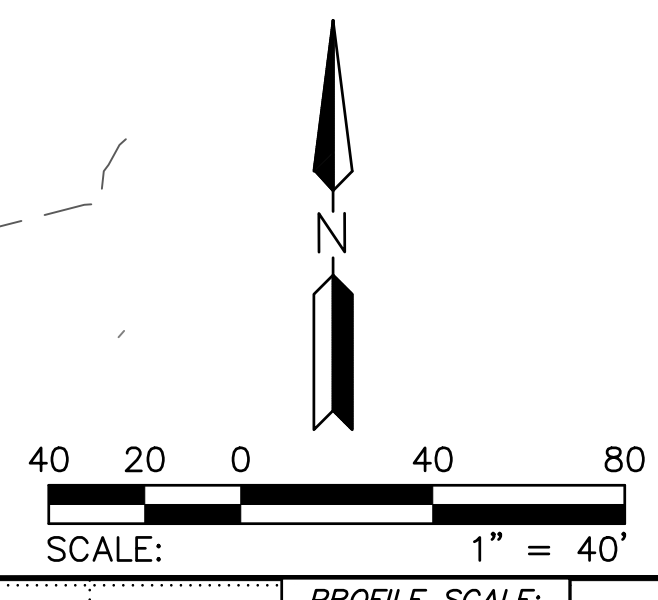
DRAINAGE CHANNEL SOUTH



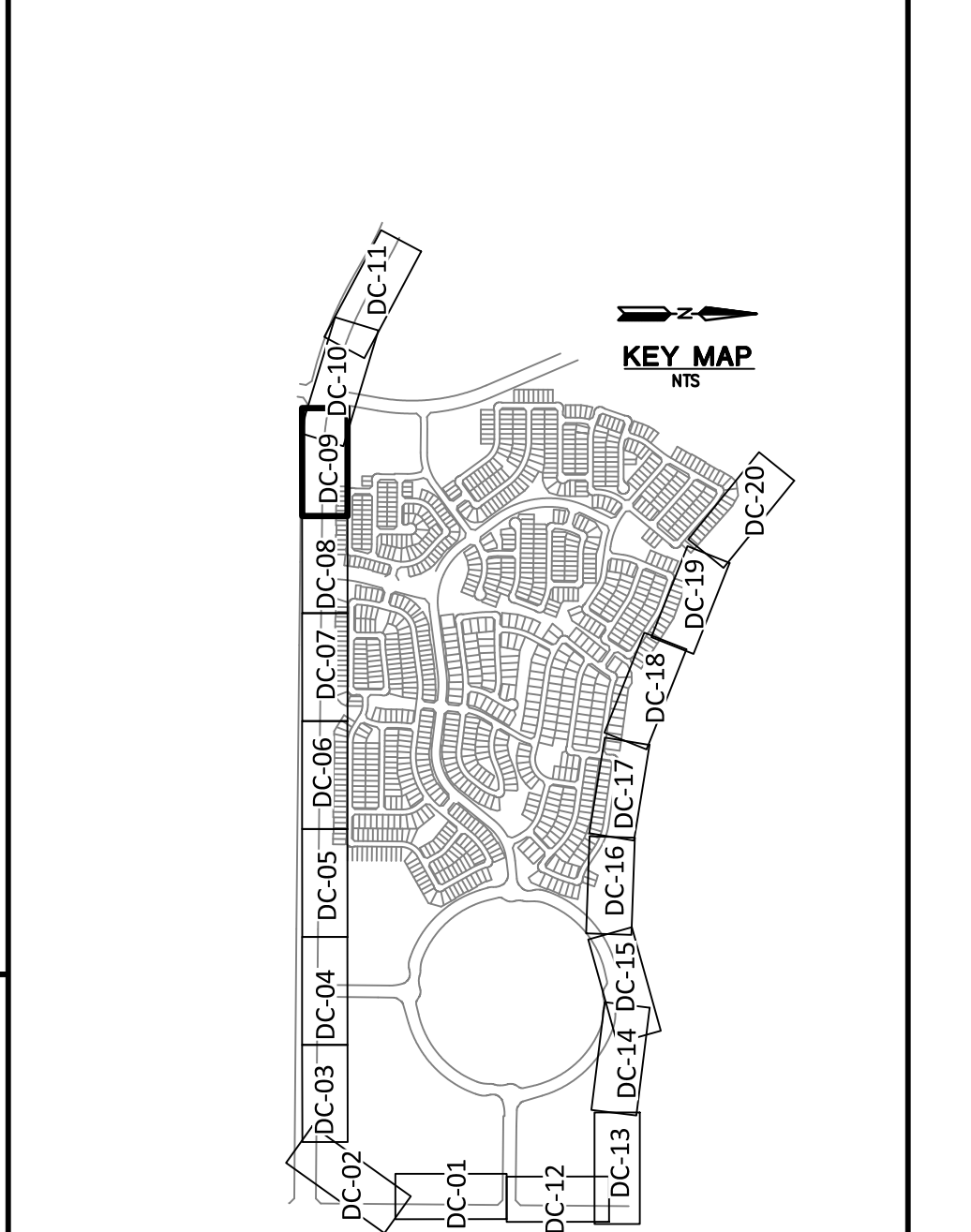
NOTE:
 SECTION E & F HAVE BEEN DELETED
 DUE TO CHANNEL CHANGES.

- 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

Professional Engineer Seal for David W. George, License No. 23227, State of Arizona. 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. 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 = 165 lb/ft³. GRADATION PER TABLE 6.4 OF 2016 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.

TRILLIUM VILLAGE 3 - UNITS 1 & 2 DRAINAGE CHANNEL PLAN

ENGINEER INFORMATION

HILGARTWILSON

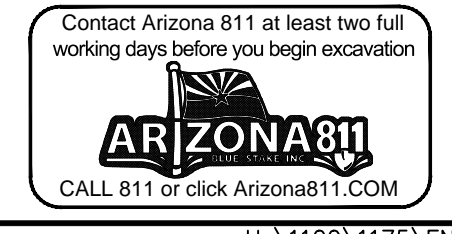
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 CITY OF BUCKEYE ENGINEERING

AS-BUILT SEAL: DESIGN SEAL (Signature of David W. George)

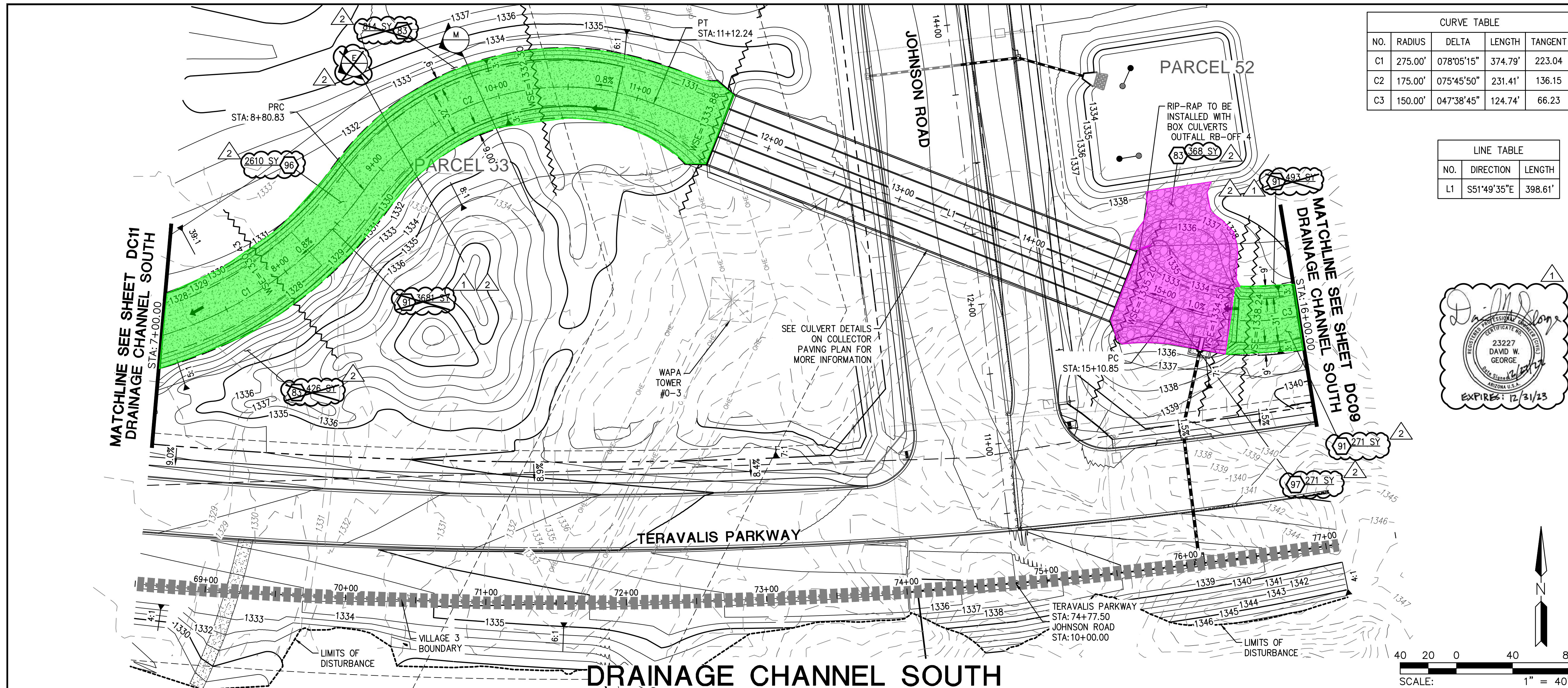
ORIGINAL PLAN DATE: MAY 2022
 LATEST REVISION DATE: JULY 2023

PROJECT NUMBER: 1175
 SHEET NUMBER: 78 OF 90

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



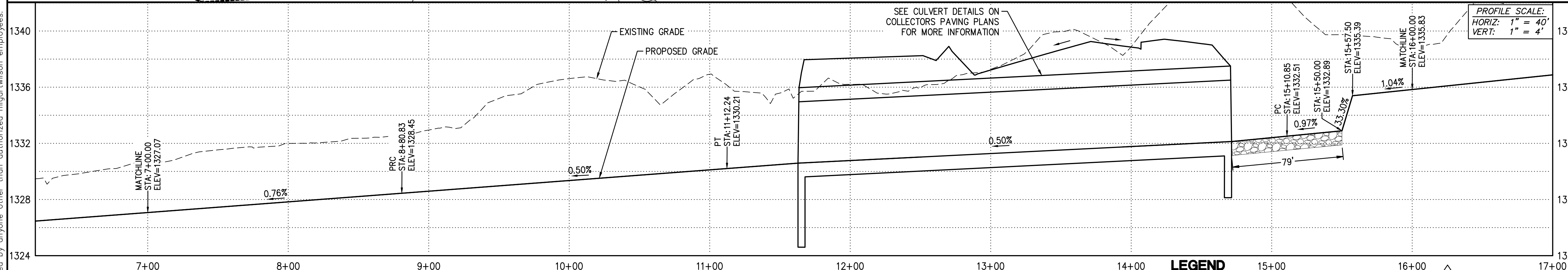
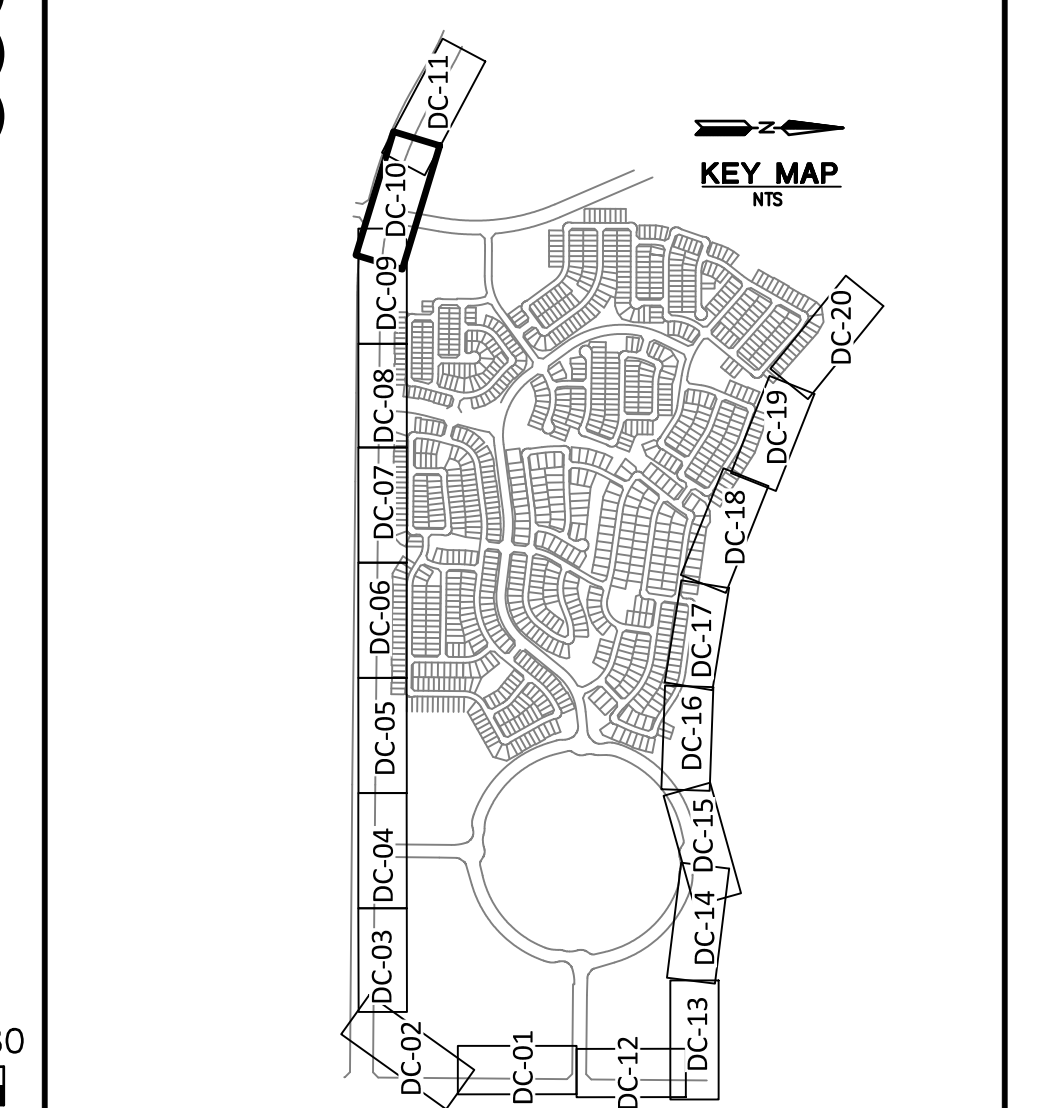
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CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C1	275.00'	078°05'15"	374.79'	223.04
C2	175.00'	075°45'50"	231.41'	136.15
C3	150.00'	047°38'45"	124.74'	66.23

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, PERMITIVITY 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, PERMITIVITY OF 50 gal/min/ft AND WOVEN. SPECIFIC WEIGHT = 165 lb/H3 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

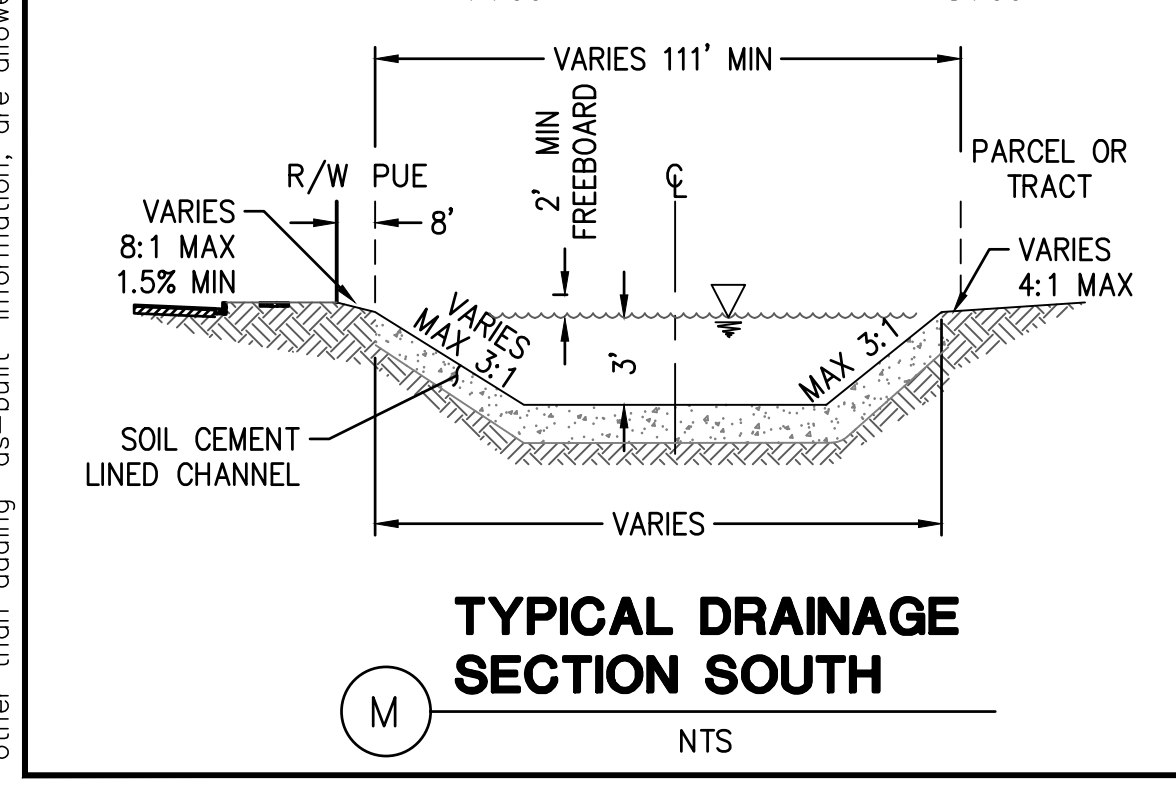


- REVISIONS:**
- 1 12/27/2022 - ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION ADDED & FIRE STATION. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.
 - 2 7/17/2023 - REVISION TO CHANNEL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

PLAN NAME
TRILLIUM VILLAGE 3 - UNITS 1 & 2 DRAINAGE CHANNEL PLAN

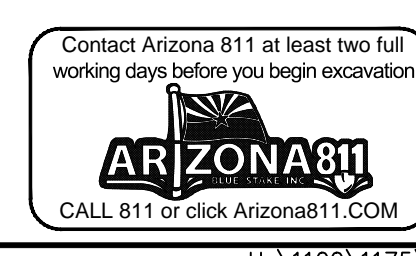
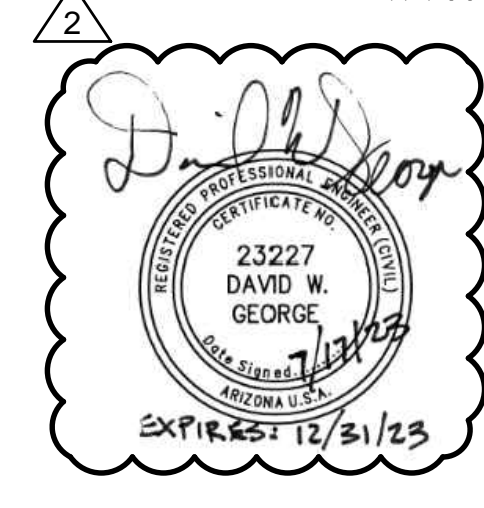
ENGINEER INFORMATION
HILGARTWILSON

COB PERMITTING APPROVED SEAL	COB ENGINEERING APPROVED SEAL	SUBMITTAL: 3R Submittal
	APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING	
AS-BUILT SEAL	DESIGN SEAL	COB PLAN TRACKING # ENG-21-0220 COB PERMIT #
	23227 DAVID W. GEORGE EXPIRES: 12/31/23	
ORIGINAL PLAN DATE MAY 2022	LATEST REVISION DATE JULY 2023	
PROJECT NUMBER 1175	SHEET NUMBER 79 OF 90	

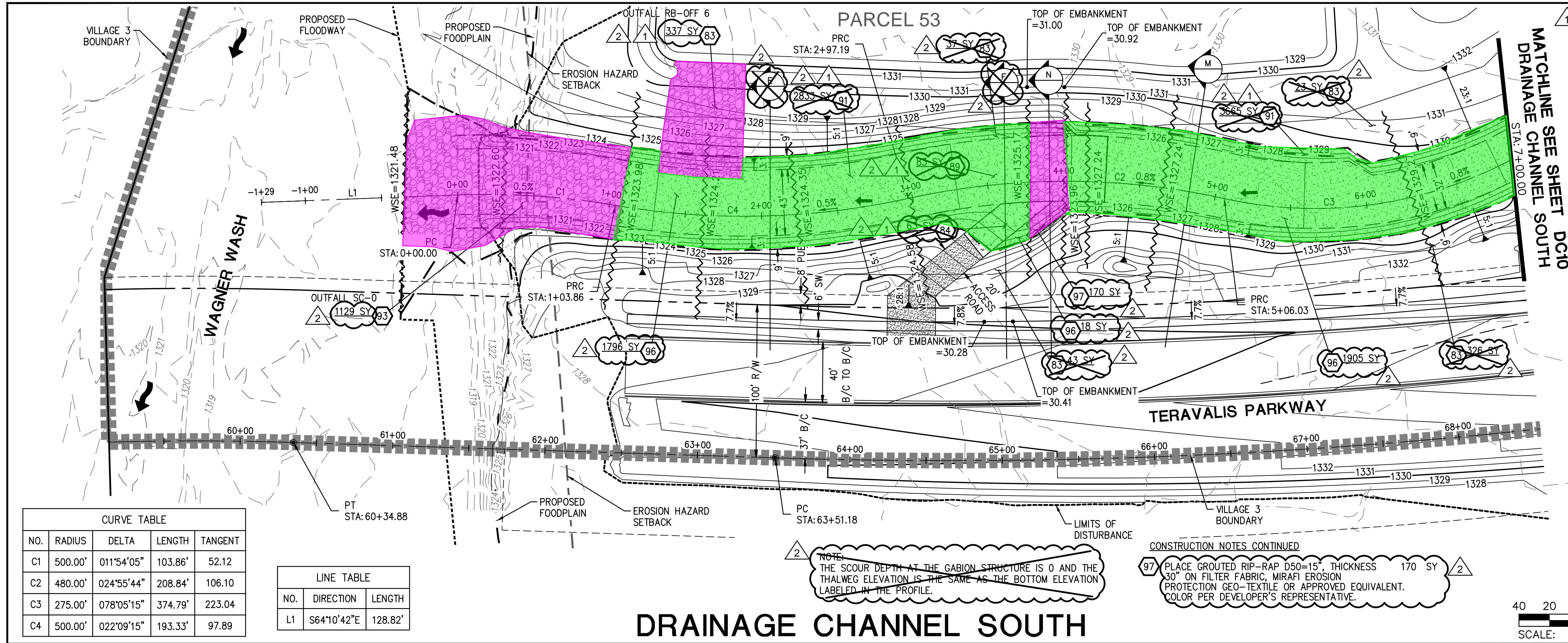


NOTE: SECTION E & F HAVE BEEN DELETED DUE TO CHANNEL CHANGES.

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



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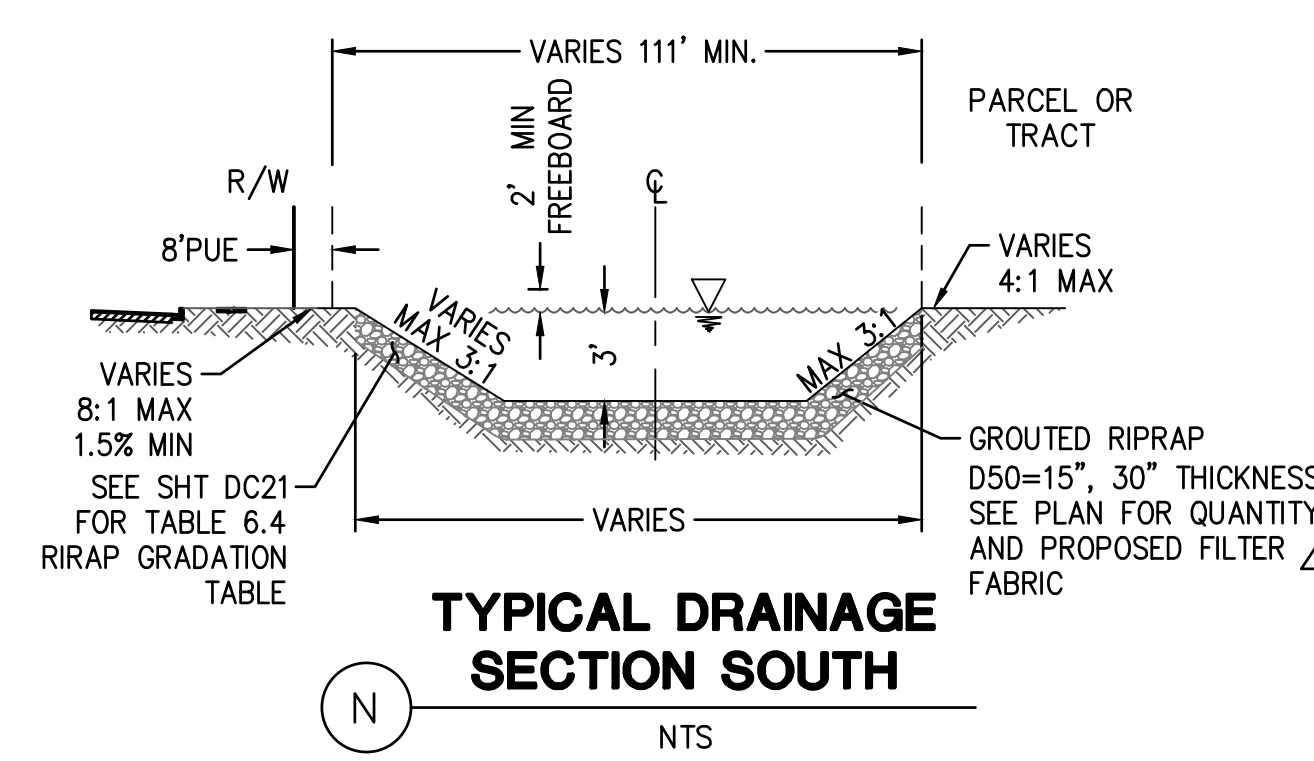
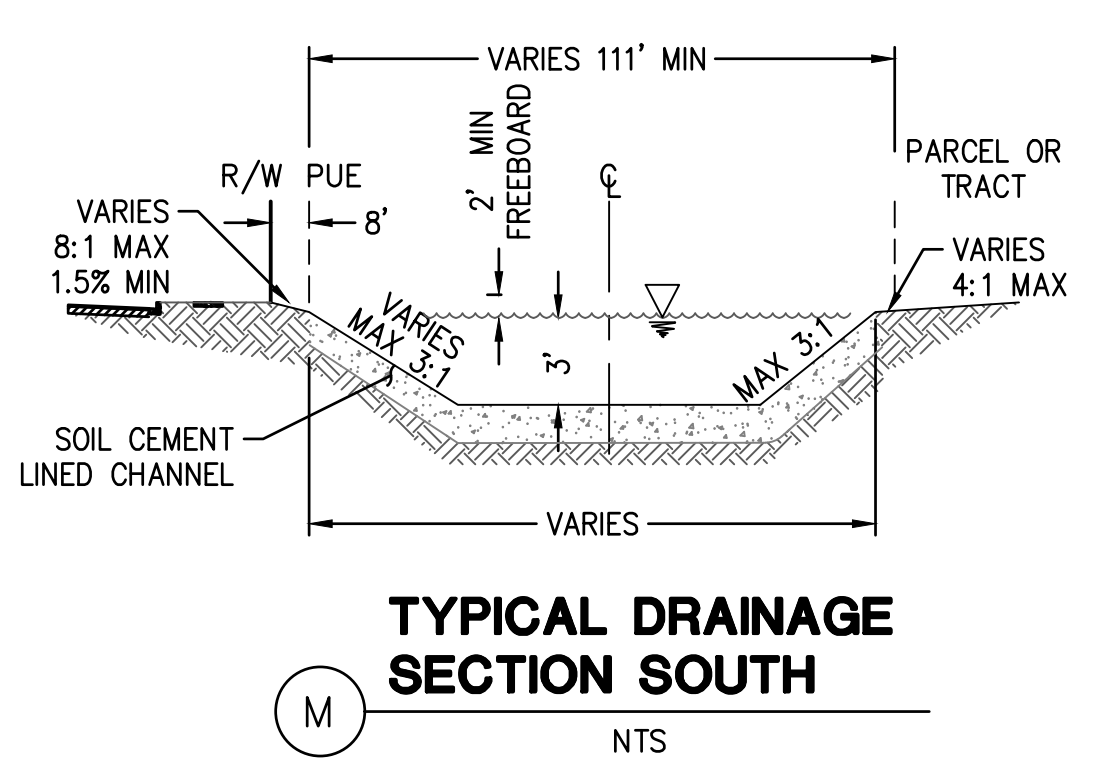
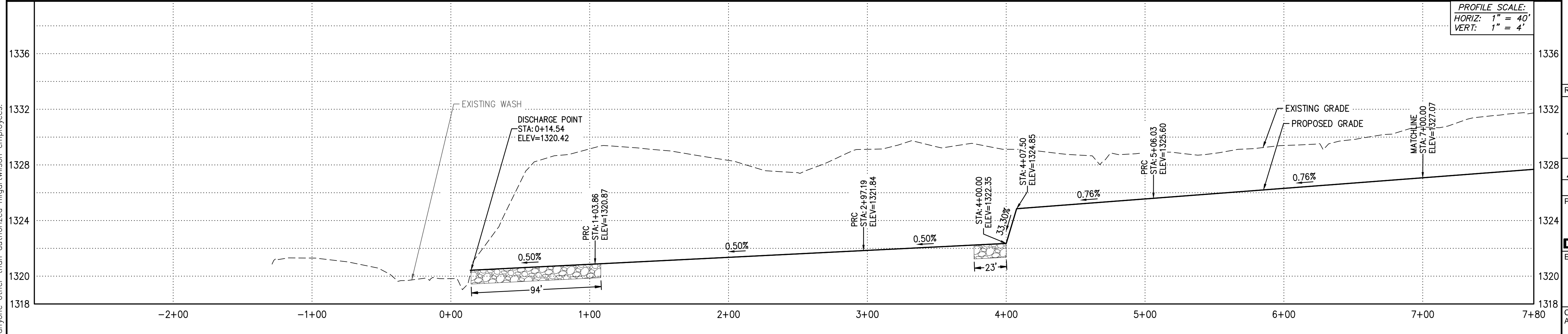
CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT
C1	500.00'	011°54'05"	103.86'	52.12
C2	480.00'	024°55'44"	208.84'	106.10
C3	275.00'	078°05'15"	374.79'	223.04
C4	500.00'	022°09'15"	193.33'	97.89

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

DRAINAGE CHANNEL SOUTH

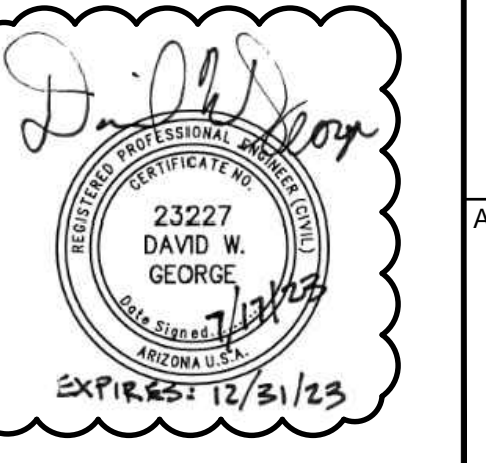
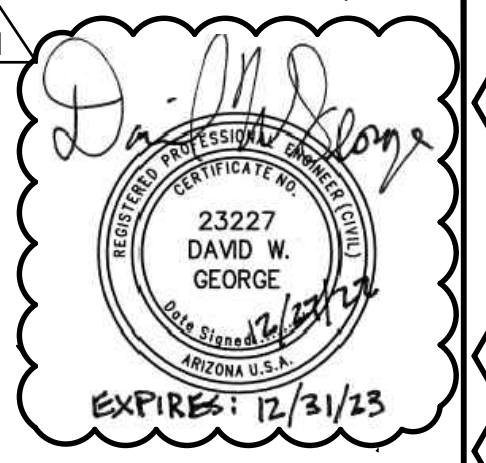
NOTE: THE SCOUR DEPTH AT THE GABION STRUCTURE IS 0 AND THE THALWEG ELEVATION IS THE SAME AS THE BOTTOM ELEVATION LABELED IN THE PROFILE.

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.

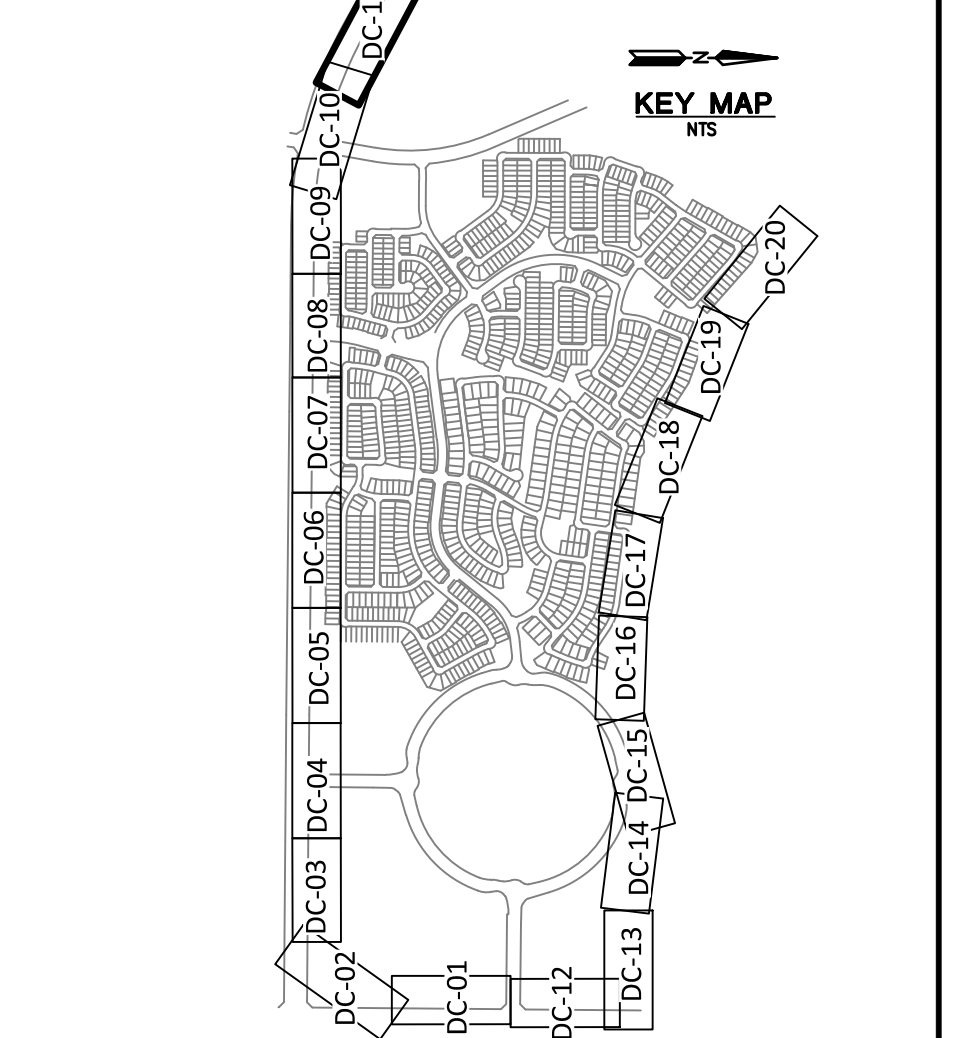


NOTE: SECTION E & F HAVE BEEN DELETED DUE TO CHANNEL CHANGES.

- 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)
 - (HP) EMERGENCY OUTFALL ARROW
 - (LP) 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. 766 SY
 - 84 INSTALL GABIONS ON MACCAFERRI GEOTEXTILE MACTEX N47.1. PER DETAILS SEE SHEET# DC21. 63 SY
 - 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" 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). 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
 - 96 INSTALL SOIL CEMENT PER MAG SPEC 311; SEE DETAIL 1 ON SHEET DC21. 3719 SY
- * CONSTRUCTION NOTES CONTINUED (ON THE LEFT)

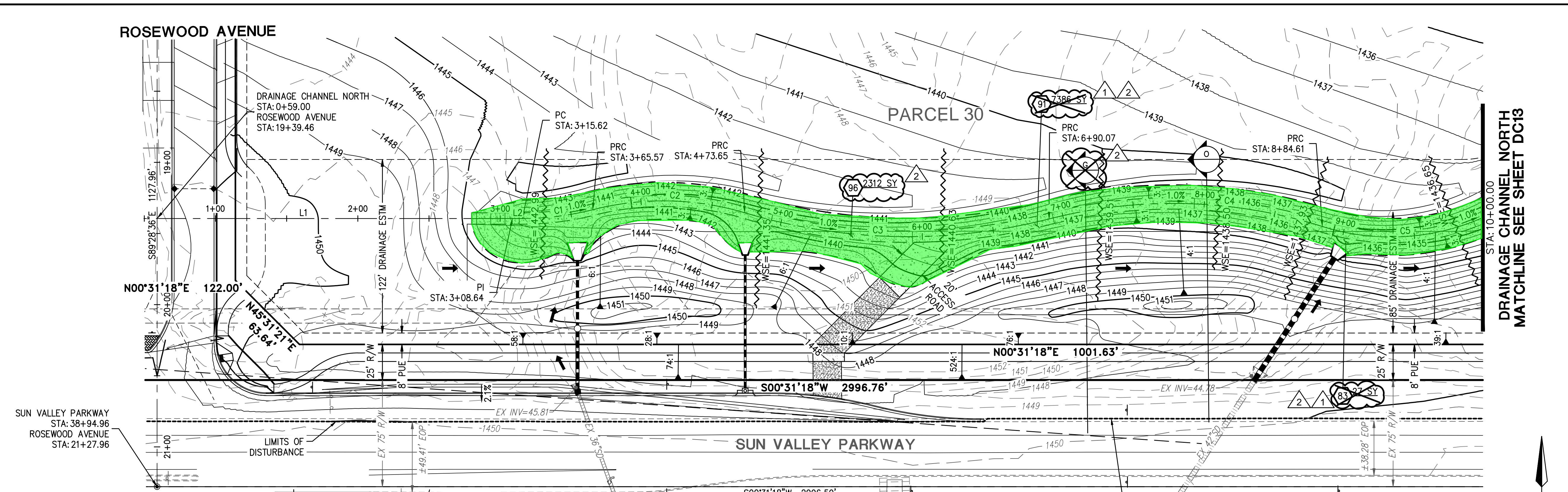


- REVISIONS:**
- 1 12/27/2022 - ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION ADDED & FIRE STATION. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.
 - 2 7/17/2023 - REVISION TO CHANNEL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

PLAN NAME
TRILLIUM VILLAGE 3 - UNITS 1 & 2 DRAINAGE CHANNEL PLAN

ENGINEER INFORMATION		SUBMITTAL: 3R Submittal
<p>HILGARTWILSON</p> <p>COB PERMITTING APPROVED SEAL</p> <p>COB ENGINEERING APPROVED SEAL</p> <p>APPROVED</p> <p>6/22/2022</p> <p>CITY OF BUCKEYE ENGINEERING</p>		
AS-BUILT SEAL	DESIGN SEAL	SHEET NUMBER: DC11 OF 90
<p>ORIGINAL PLAN DATE</p> <p>MAY 2022</p> <p>PROJECT NUMBER</p> <p>1175</p>	<p>DESIGN SEAL</p> <p>23227 DAVID W. GEORGE</p> <p>EXPIRES: 12/31/23</p> <p>LATEST REVISION DATE</p> <p>JULY 2023</p> <p>SHEET NUMBER</p> <p>1175</p>	

ROSEWOOD AVENUE



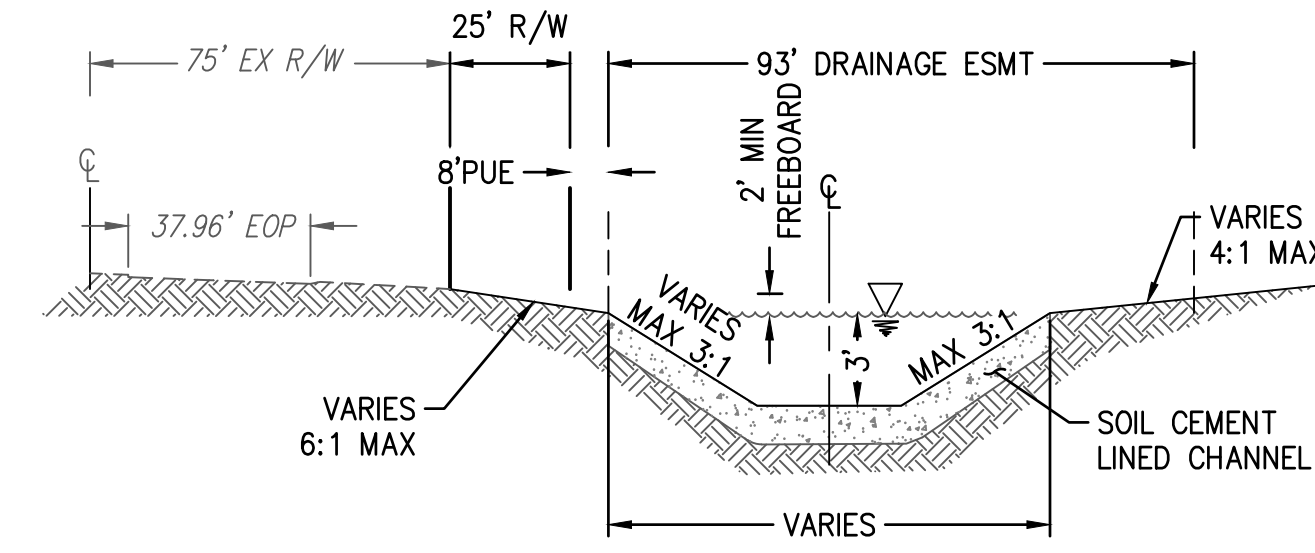
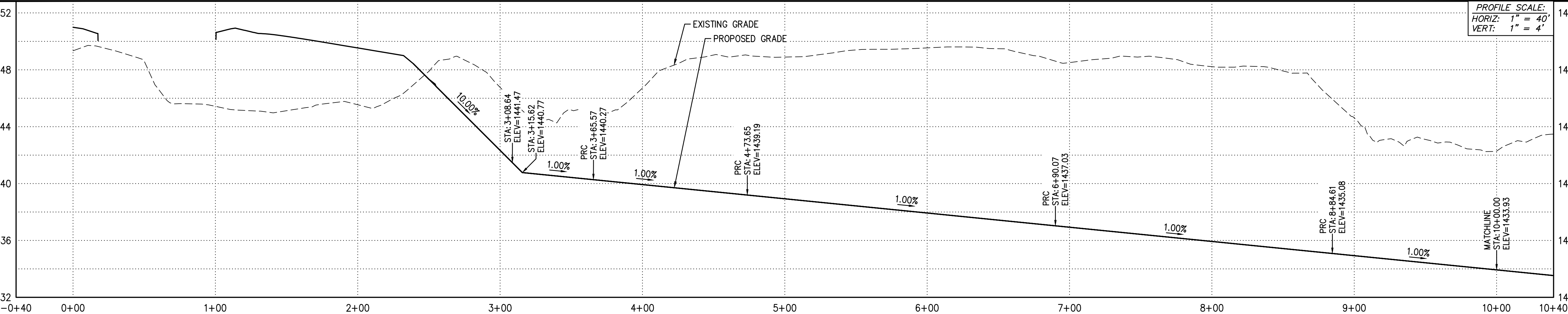
DRAINAGE CHANNEL NORTH
MATCHLINE SEE SHEET DC13

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



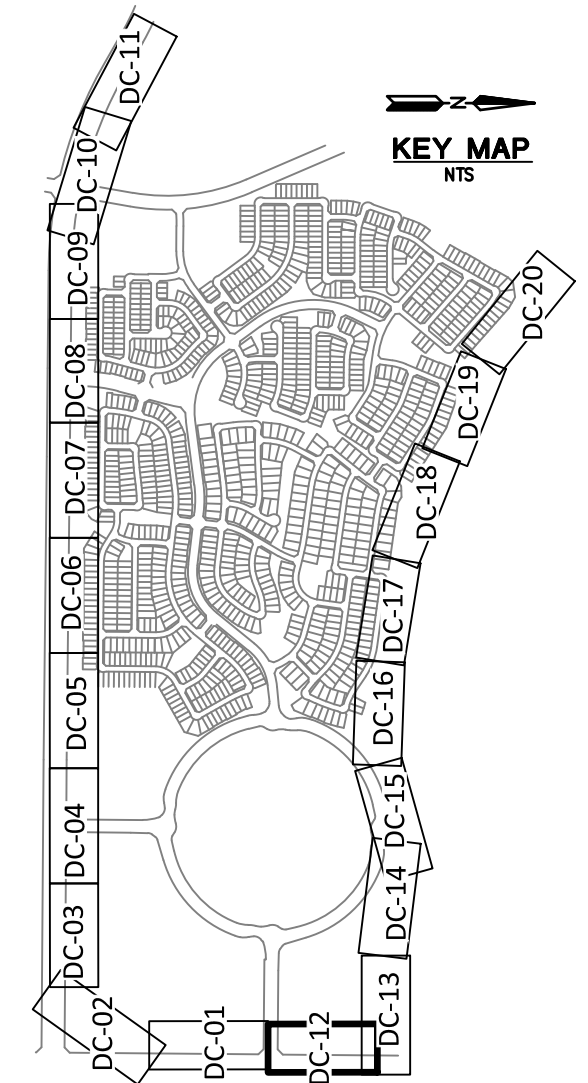
TYPICAL DRAINAGE SECTION - SUN VALLEY PARKWAY
NTS

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



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

- 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, PERMITIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY. COLOR PER DEVELOPER. 27 SY
 - 91. INSTALL ANGULAR LOOSE RIP-RAP PER MAG SPEC SECTION 220 D50=6", 6" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITIVITY OF 50 GAL/MIN/FT AND WOVEN. SPECIFIC WEIGHT = 165 LB/H3. 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



- 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

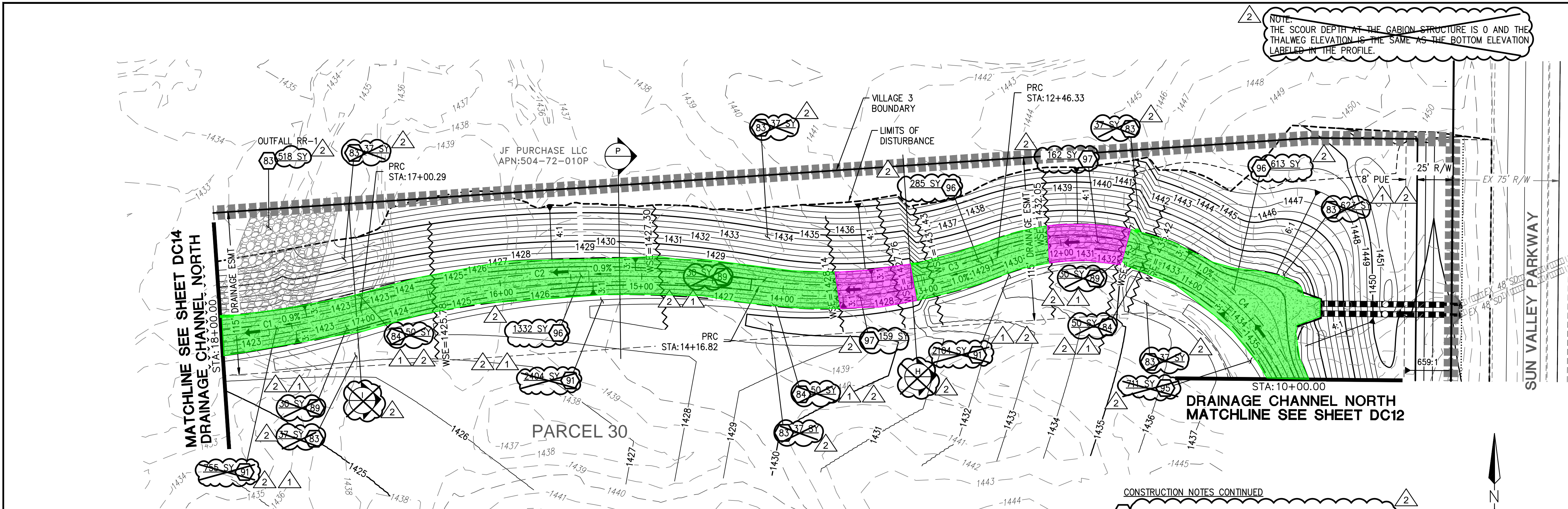
ENGINEER INFORMATION
HILGARTWILSON

COB PERMITTING APPROVED SEAL	COB ENGINEERING APPROVED SEAL	SUBMITTAL: 3R Submittal
	APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING	
AS-BUILT SEAL	DESIGN SEAL 	EXP. DATE: 12/31/23
ORIGINAL PLAN DATE MAY 2022	LATEST REVISION DATE JULY 2023	
PROJECT NUMBER 1175	SHEET NUMBER DC12 81 OF 90	ENG-21-0220 COB PERMIT #



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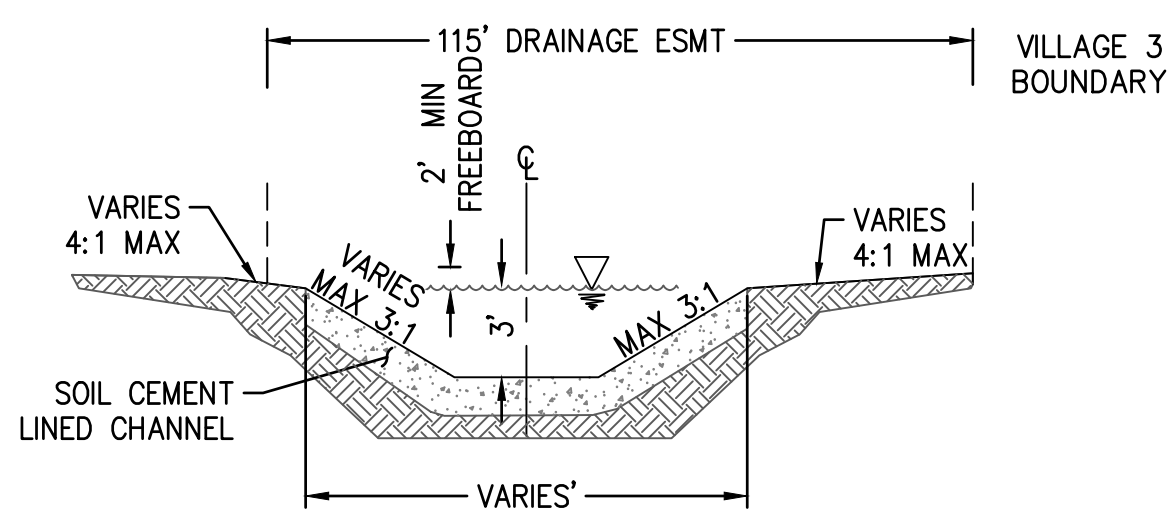
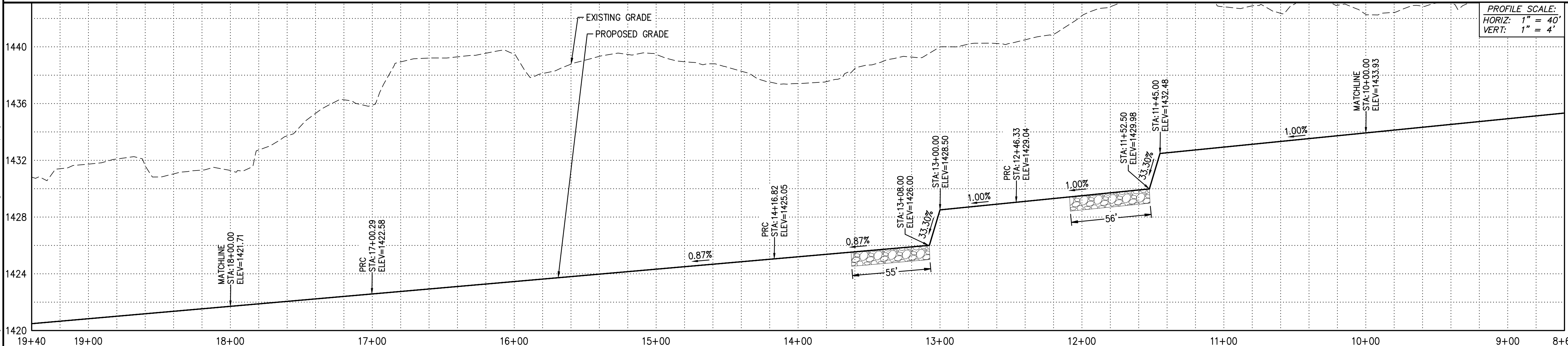
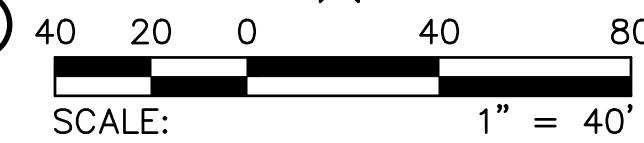
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CURVE TABLE				CURVE TABLE					
NO.	RADIUS	DELTA	LENGTH	TANGENT	NO.	RADIUS	DELTA	LENGTH	TANGENT
C1	600.00'	023°14'05"	243.31'	123.35'	C3	330.00'	029°35'59"	170.48'	87.19'
C2	700.00'	023°12'09"	283.47'	143.71'	C4	160.00'	129°31'58"	361.72'	339.50'

DRAINAGE CHANNEL NORTH

- 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



TYPICAL DRAINAGE SECTION-NORTH

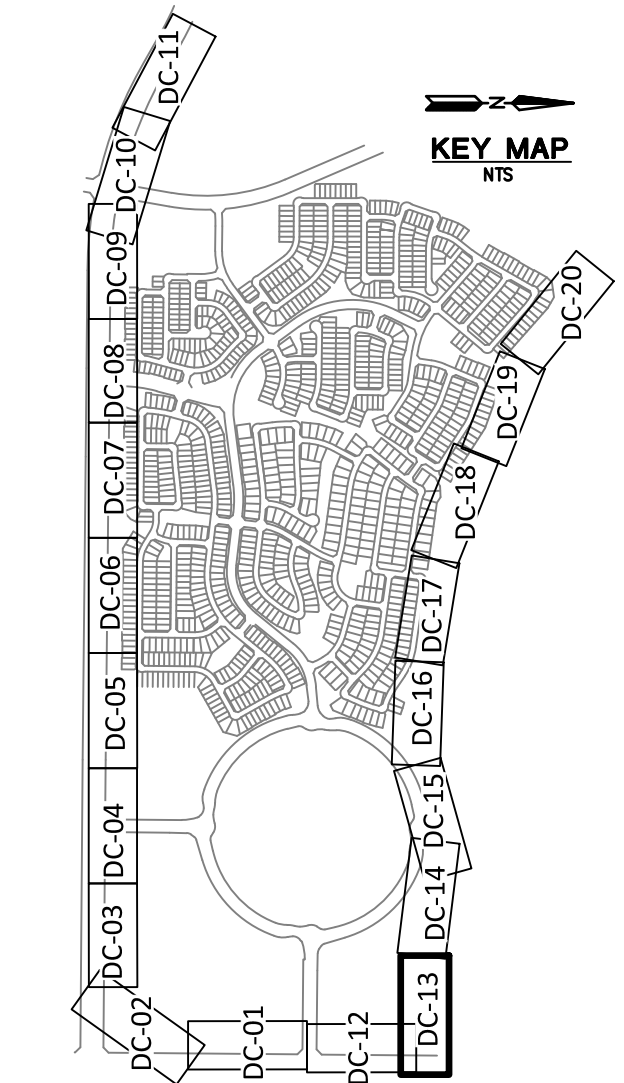
NTS

LEGEND

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

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

- 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 SY
 - 84 INSTALL GABIONS ON MACCAFERRI GEOTEXTILE MACTEX 147.1. 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" 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:**
- 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: [Signature]

COB ENGINEERING APPROVED SEAL: [Signature]

APPROVED: 6/22/2022

CITY OF BUCKEYE ENGINEERING

AS-BUILT SEAL: [Signature]

DESIGN SEAL: [Signature]

ORIGINAL PLAN DATE: MAY 2022

LATEST REVISION DATE: JULY 2023

PROJECT NUMBER: 1175

SHEET NUMBER: DC13

SHT. OF 90

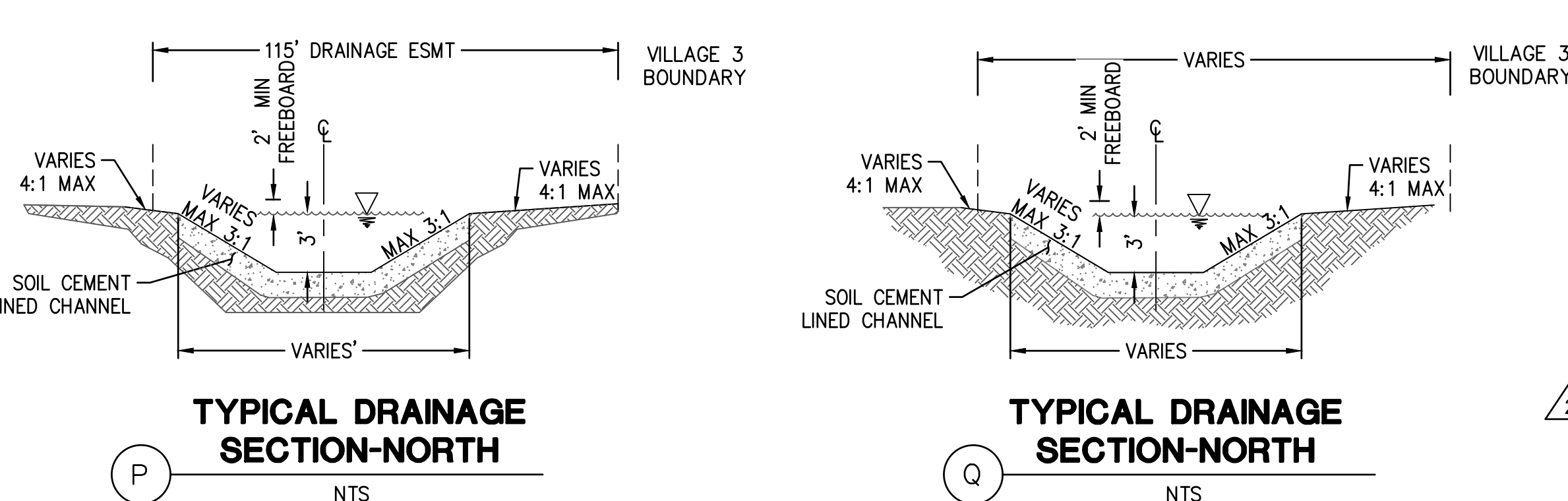
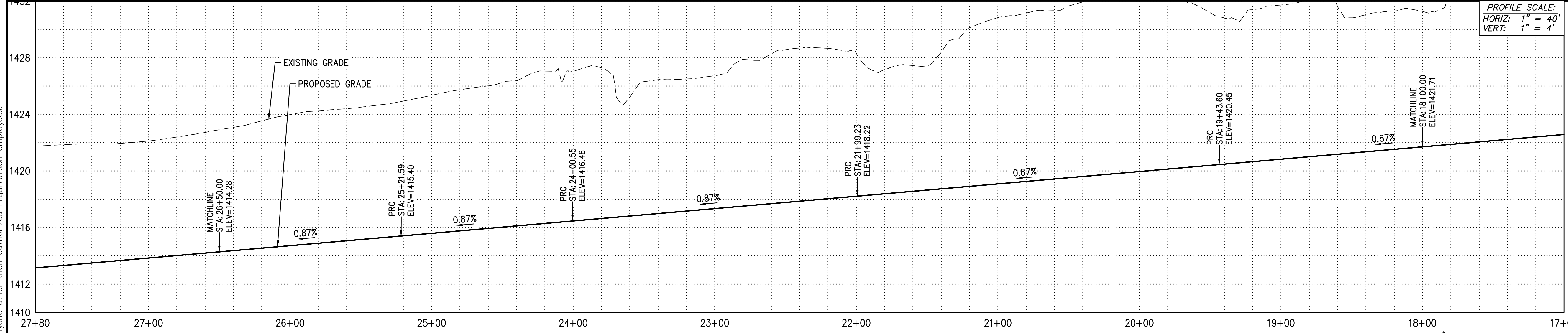
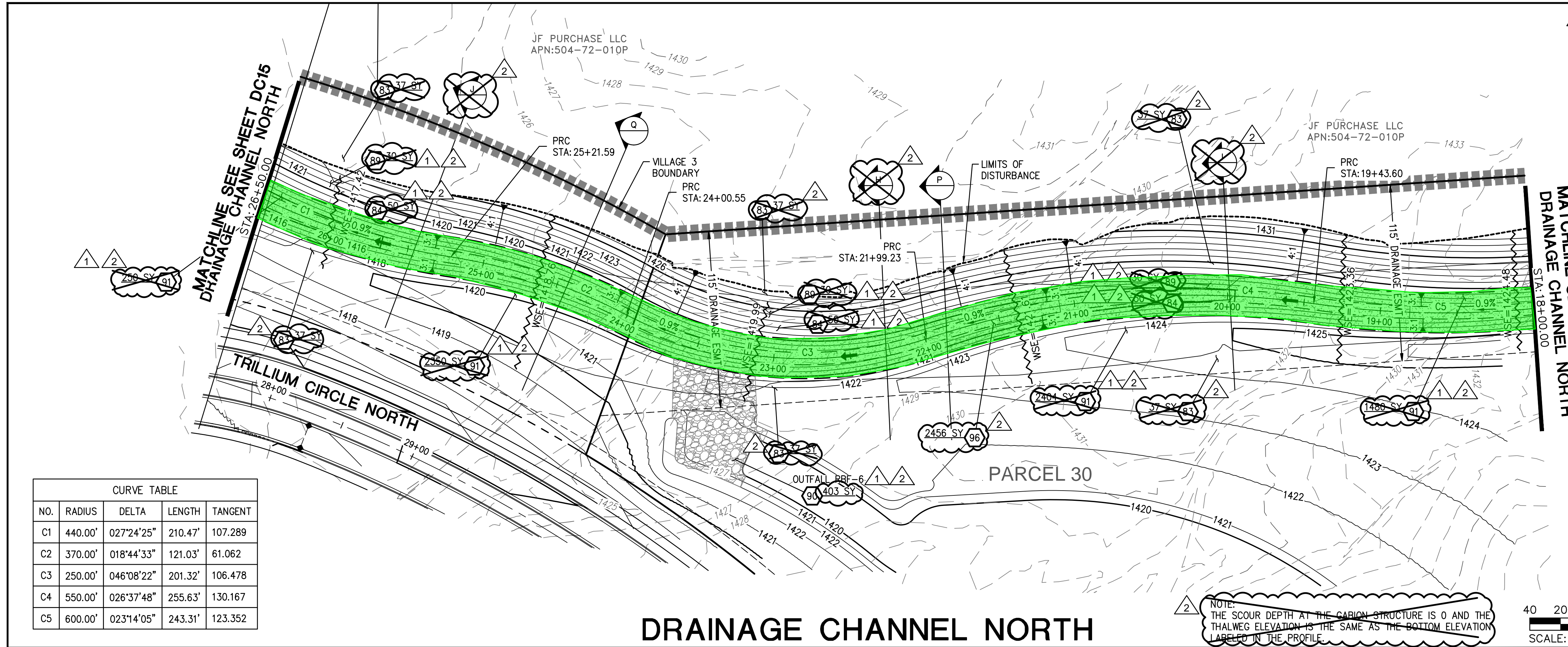
3R Submittal

ENG-21-0220

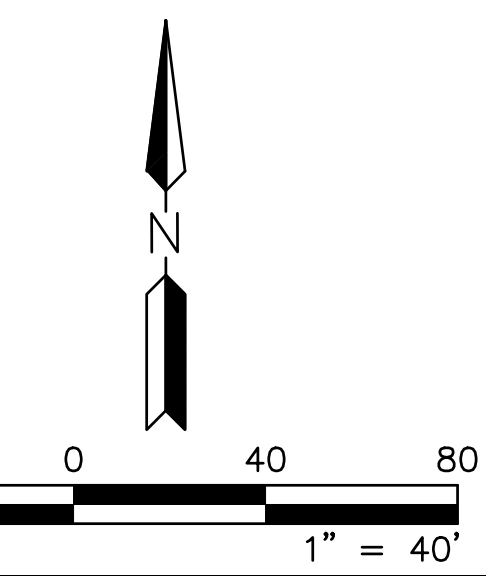
COB PERMIT #



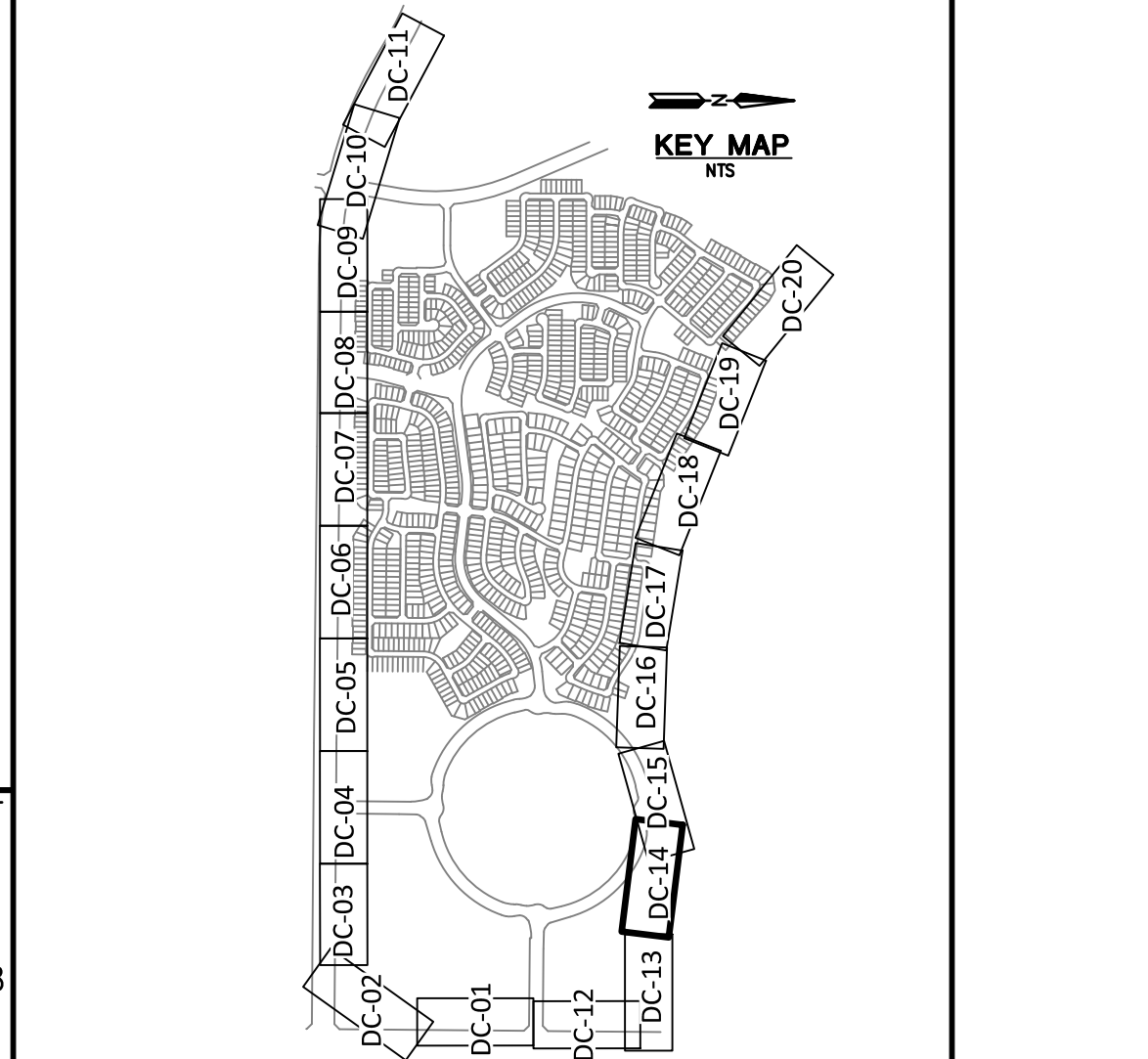
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NOTE: SECTION H, I & J HAVE BEEN DELETED DUE TO CHANNEL CHANGES.



- 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, PERMITIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET# DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY. COLOR PER DEVELOPER. 222 SY
 - 84. INSTALL GABIONS ON MACCAFERRI GEO-TEXTILE MACTEX N47.2". 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, PERMITIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET# DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY. COLOR PER DEVELOPER. 403 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, PERMITIVITY 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
 - 96. INSTALL SOIL CEMENT PER MAG SPEC 311; SEE DETAIL 1 ON SHEET DC21. 2456 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

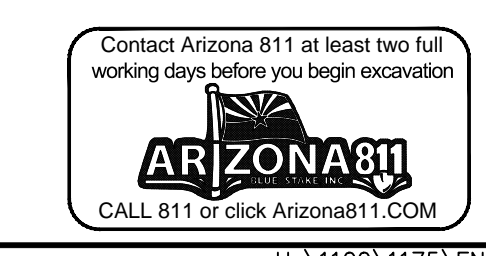
ENGINEER INFORMATION
HILGARTWILSON

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
	EXPIRES: 12/31/23

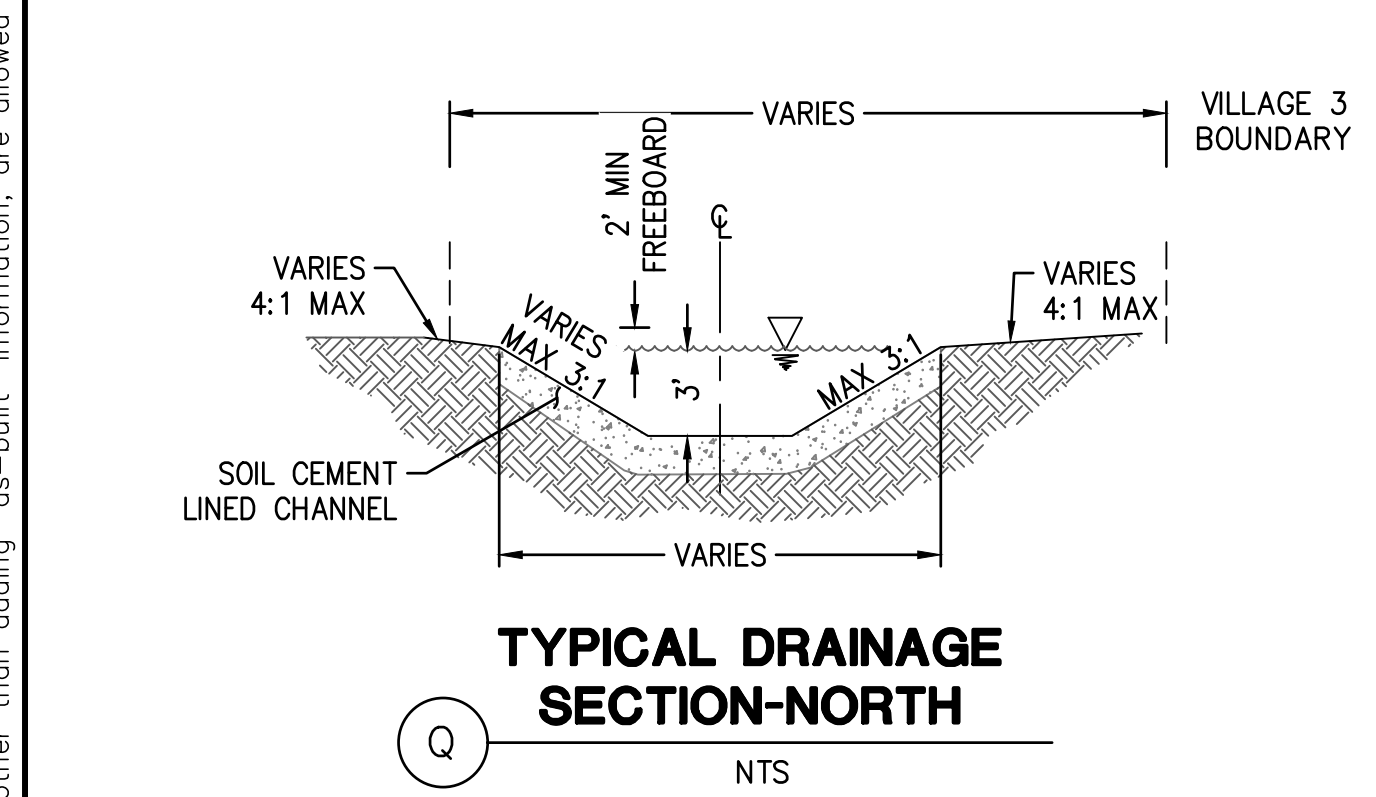
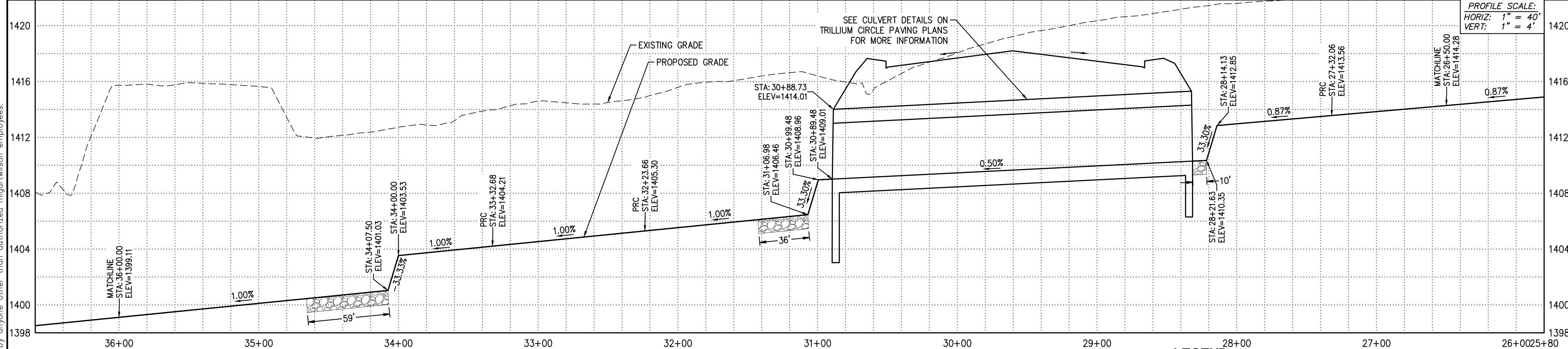
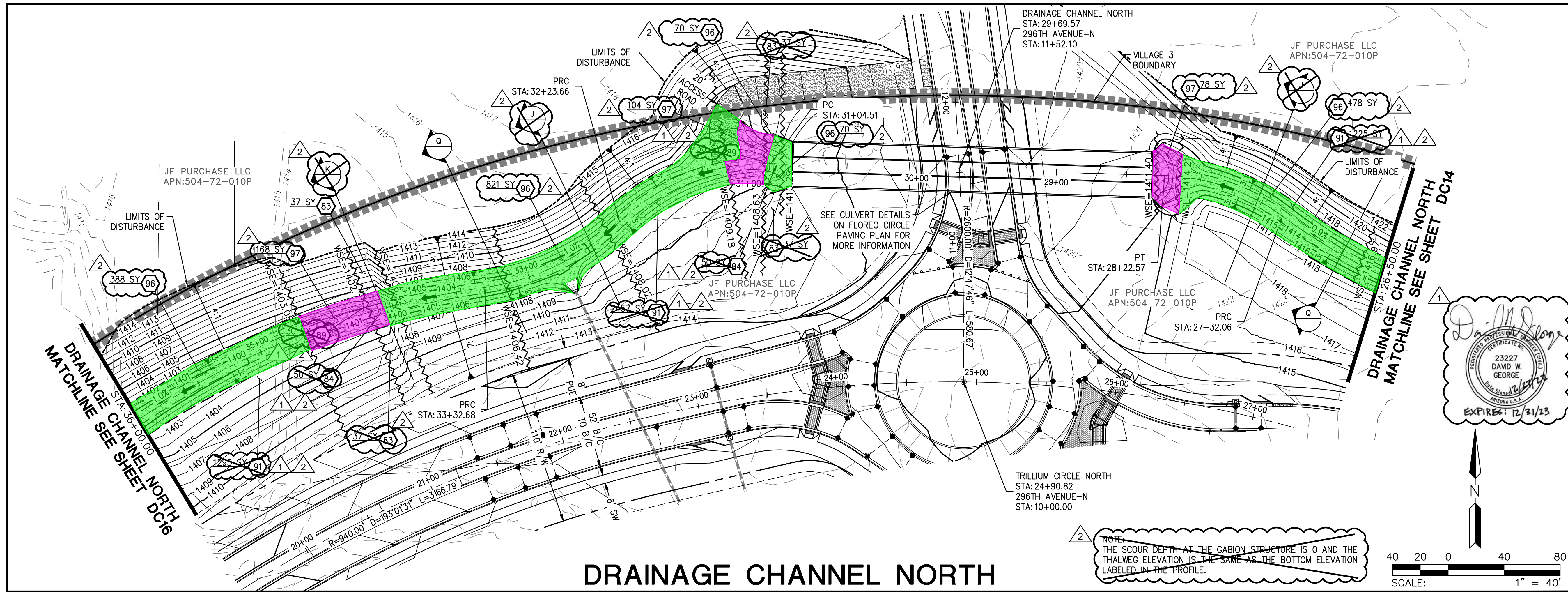
ORIGINAL PLAN DATE: MAY 2022
 LATEST REVISION DATE: JULY 2023

PROJECT NUMBER: 1175
 SHEET NUMBER: DC14 OF 90

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

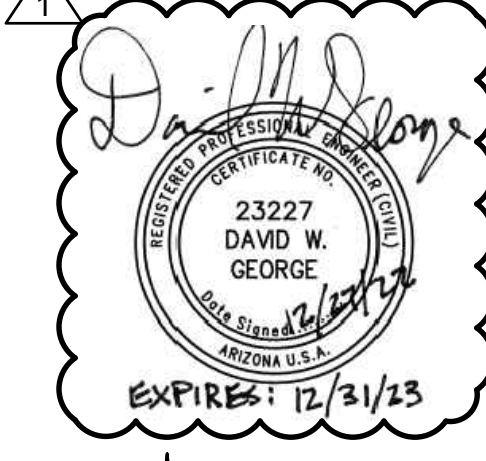
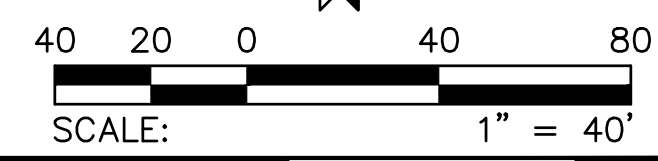


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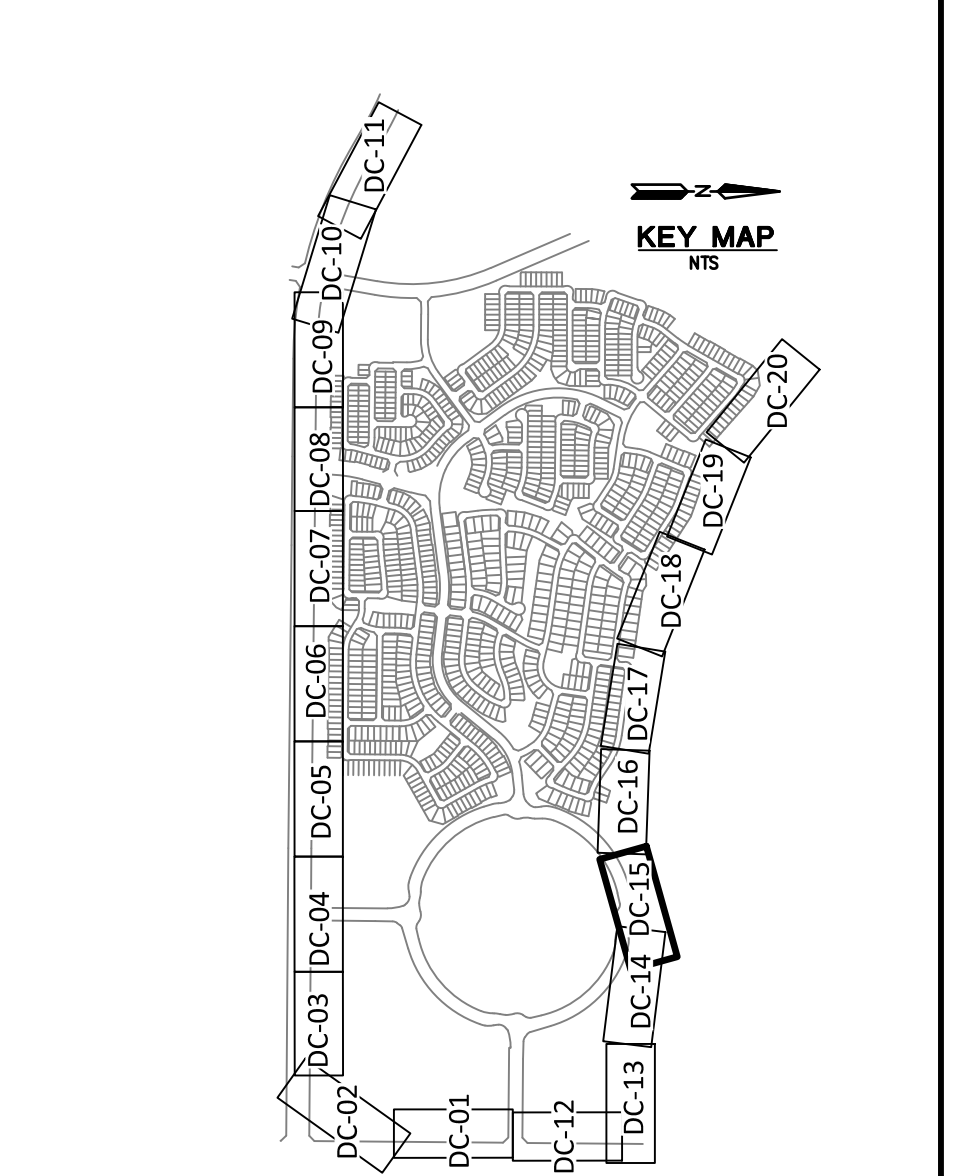


NOTE: SECTION J & K HAVE BEEN DELETED DUE TO CHANNEL CHANGES.

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.

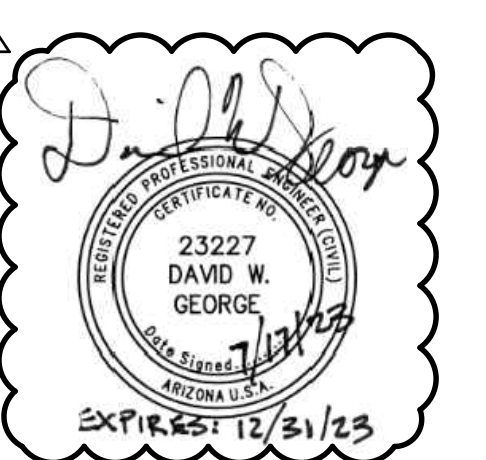


- STORM DRAIN CONSTRUCTION**
- 83 INSTALL LOOSE ANGULAR RIP-RAP PER MAG SPEC SEC. 220; D50=6", 12" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 GAL/MIN/FT² AND WOVEN. SEE SHEET# DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY. COLOR PER DEVELOPER. 149 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/ft² AND WOVEN. SPECIFIC WEIGHT = 165 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



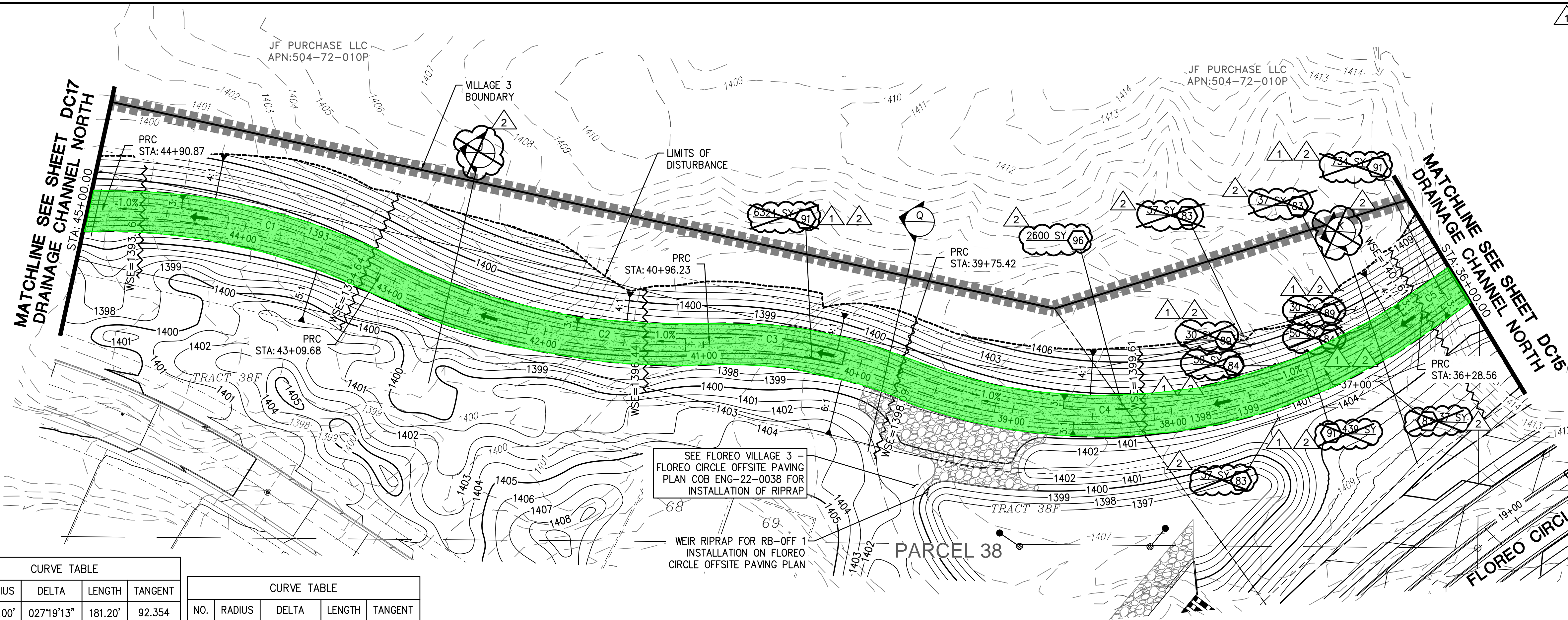
- REVISIONS:**
- 1 12/27/2022 - ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION ADDED & FIRE STATION. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.
 - 2 7/17/2023 - REVISION TO CHANNEL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

PLAN NAME TRILLIUM VILLAGE 3 - UNITS 1 & 2 DRAINAGE CHANNEL PLAN		SUBMITTAL: 3R Submittal
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 DC15 84 OF 90		



1 2

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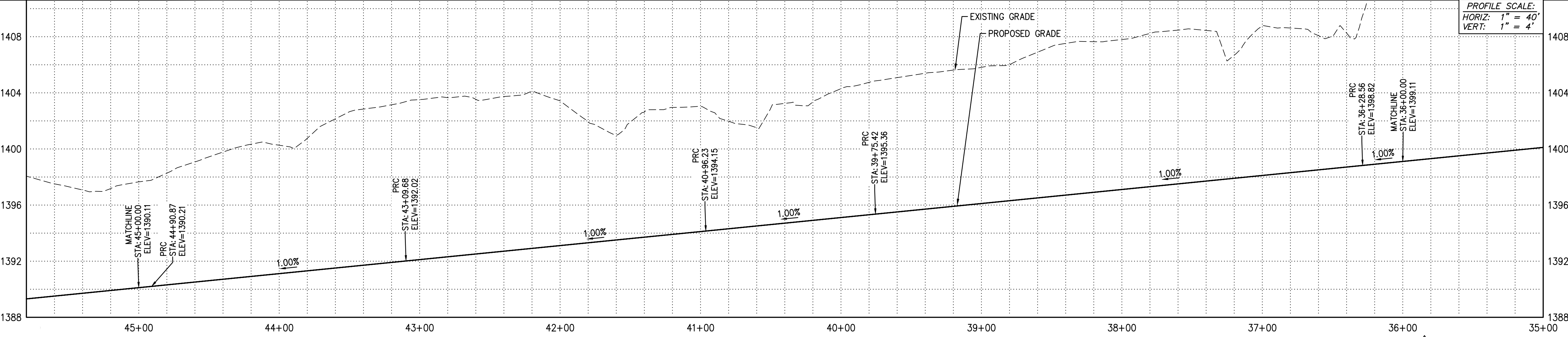
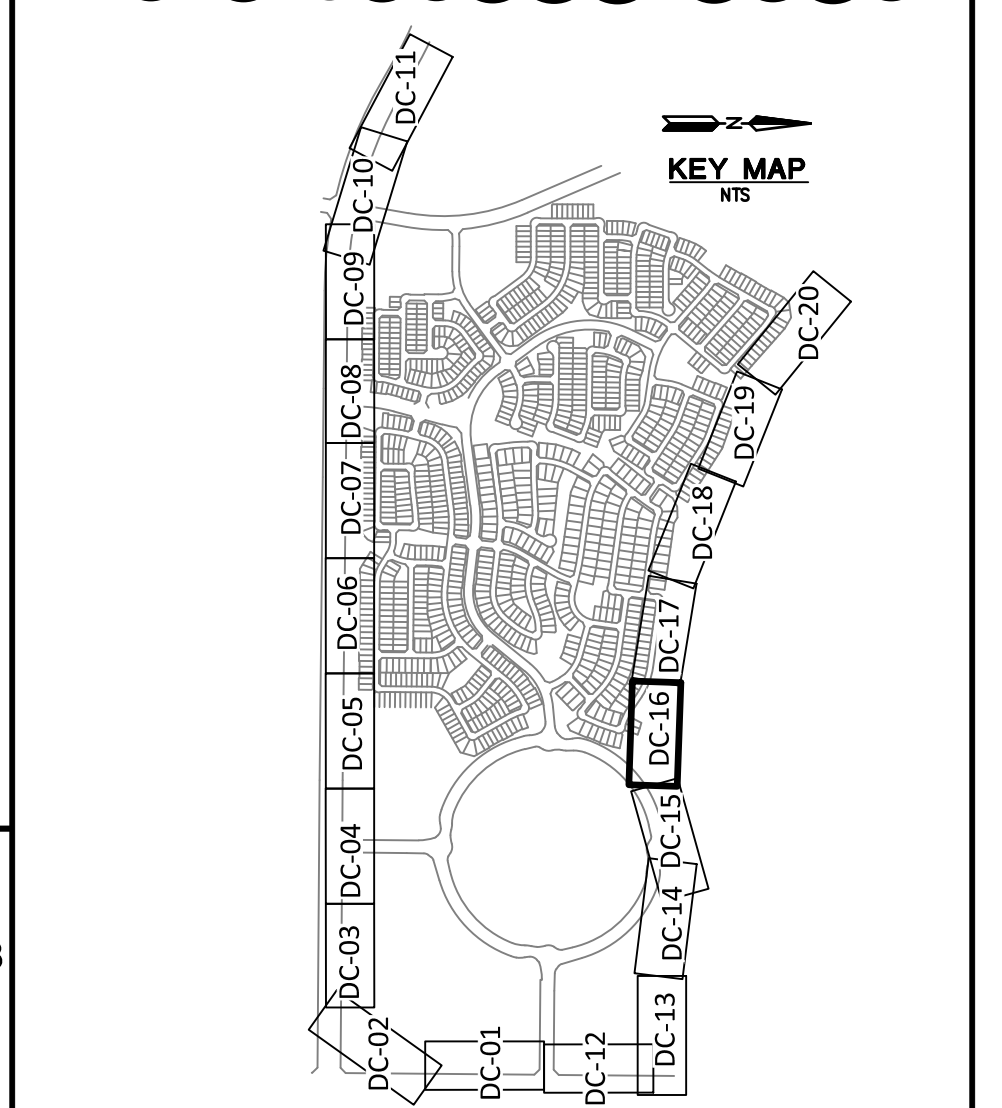
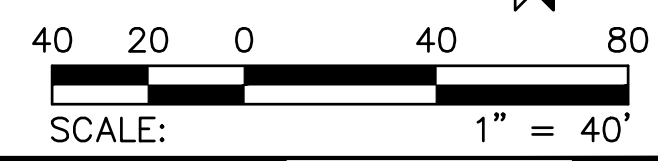


- STORM DRAIN CONSTRUCTION**
- 83. INSTALL LOOSE ANGULAR RIP-RAP PER MAG SPEC. SEC. 220; D50=6", 12" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITTIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET# DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY. COLOR PER DEVELOPER. 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 = 160 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
- 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.

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



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

- 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

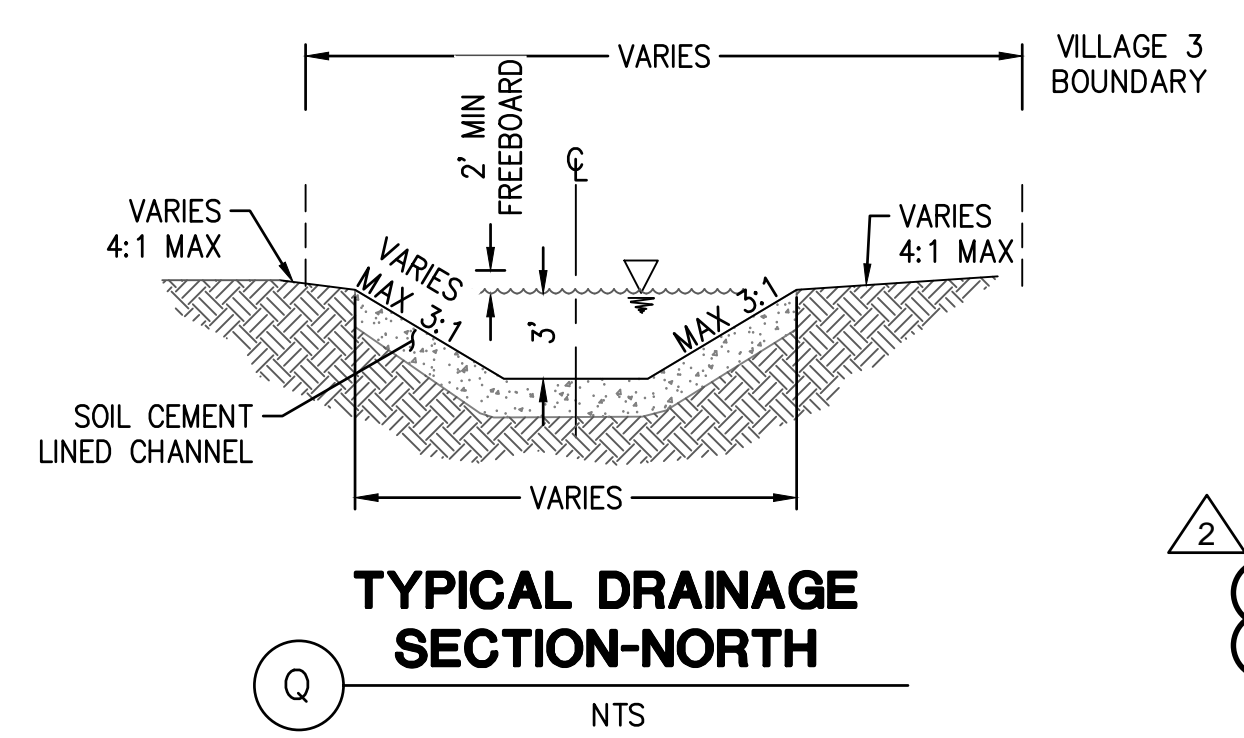
ENGINEER INFORMATION
HILGARTWILSON

COB PERMITTING APPROVED SEAL
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: DC16 OF 90

- 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)
 - (HP) HIGH POINT
 - (LP) LOW POINT
 - DUAL CHAMBER DRYWELL



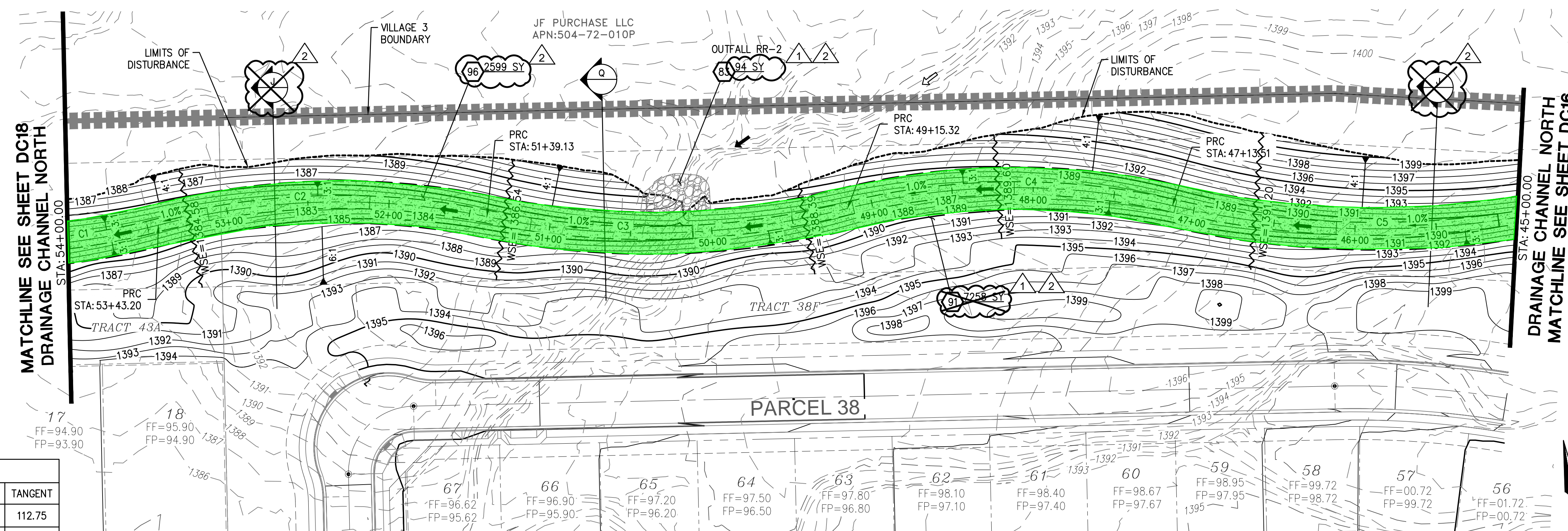
NOTE:
SECTION J & K HAVE BEEN DELETED DUE TO CHANNEL CHANGES.

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

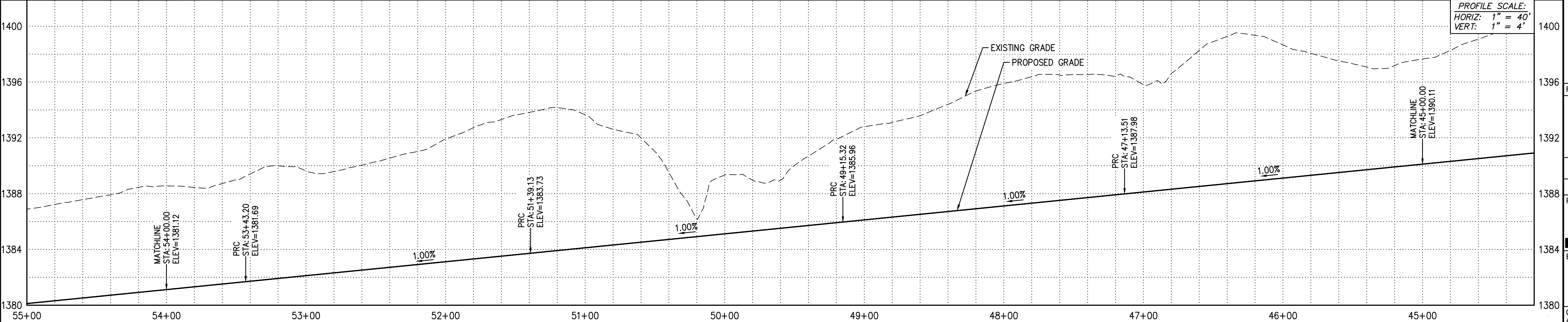
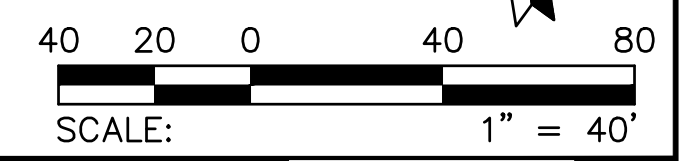
MATCHLINE SEE SHEET DC18
DRAINAGE CHANNEL NORTH
STA: 54+00.00

DRAINAGE CHANNEL NORTH
MATCHLINE SEE SHEET DC16
STA: 45+00.00

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'

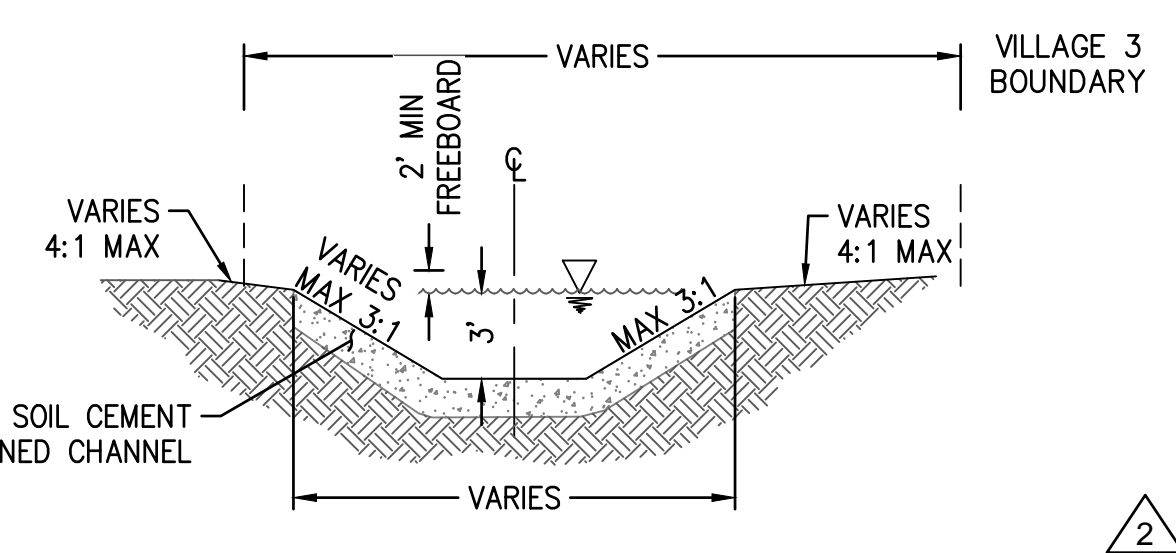


DRAINAGE CHANNEL NORTH



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

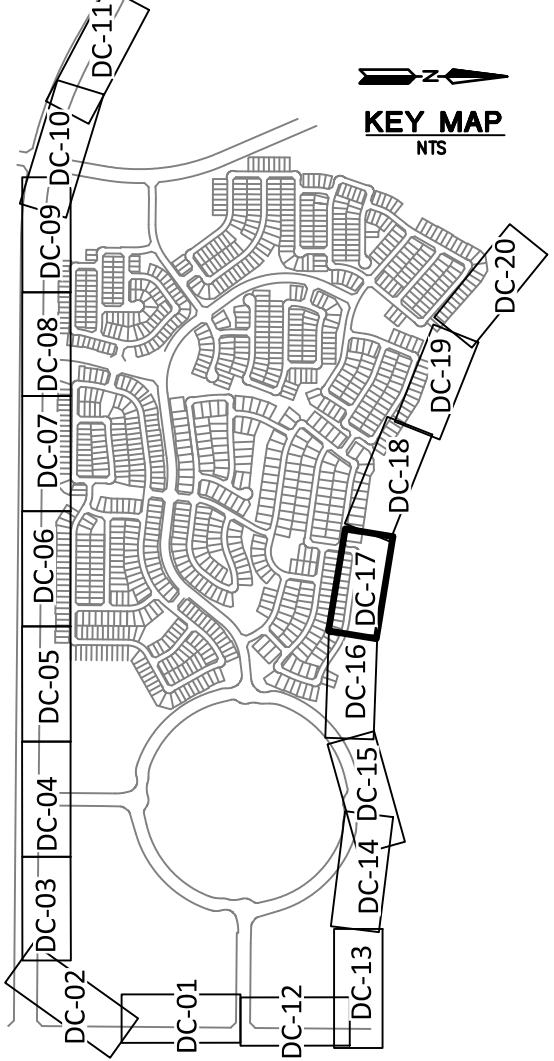
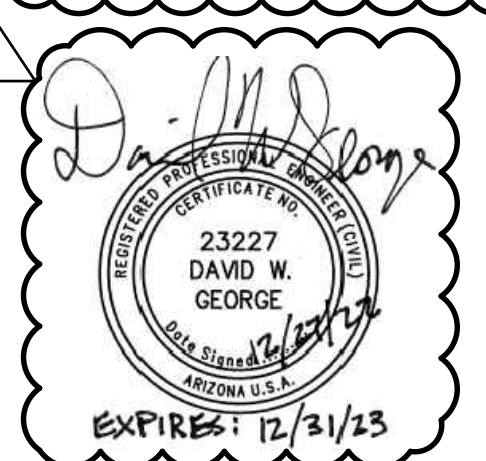
- LEGEND**
- VILLAGE 3 BOUNDARY
 - EROSION HAZARD SETBACK
 - RIGHT OF WAY
 - LOT LINE
 - CENTER LINE
 - EASEMENT LINE
 - FLOW DIRECTIONAL INDICATOR
 - FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
 - HIGH POINT
 - LOW POINT
 - DUAL CHAMBER DRYWELL



TYPICAL DRAINAGE SECTION-NORTH
NTS

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

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

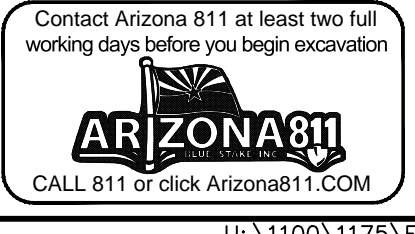
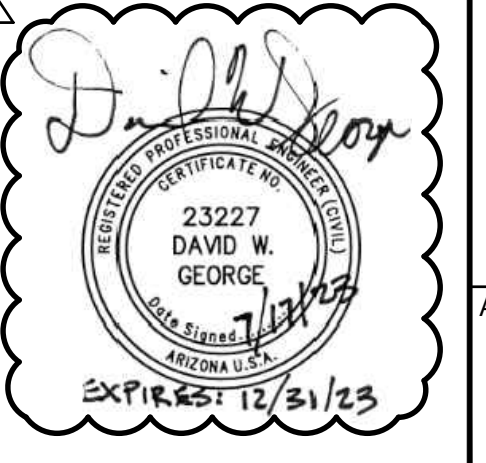
PLAN NAME
TRILLIUM VILLAGE 3 - UNITS 1 & 2 DRAINAGE CHANNEL PLAN

ENGINEER INFORMATION
HILGARTWILSON

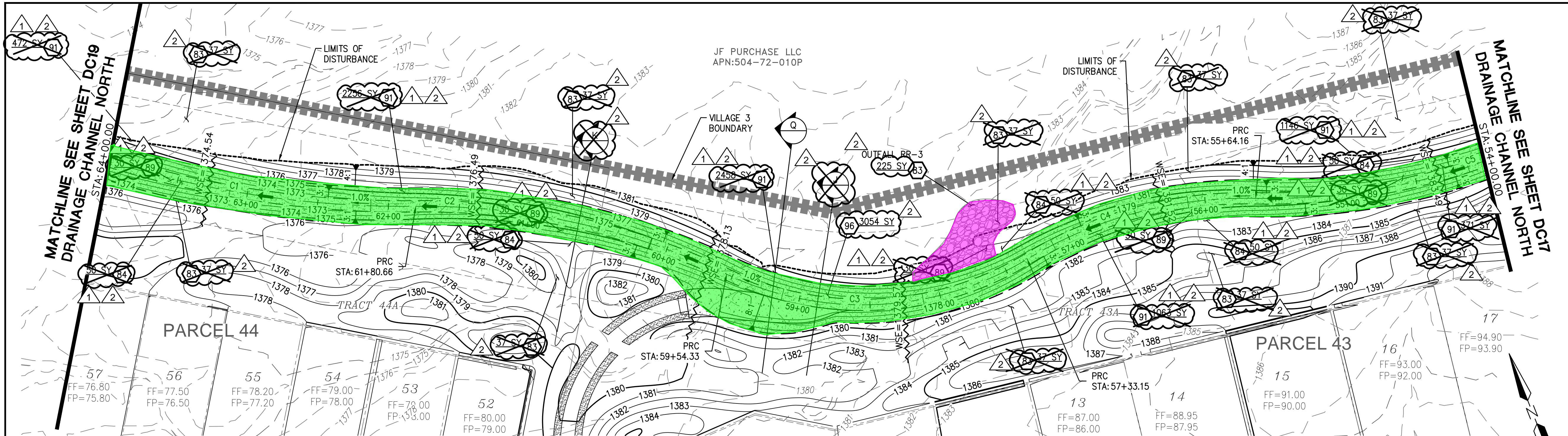
COB PERMITTING APPROVED SEAL
APPROVED
6/22/2022
CITY OF BUCKEYE ENGINEERING

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: DC17
SHT. 86 OF 90

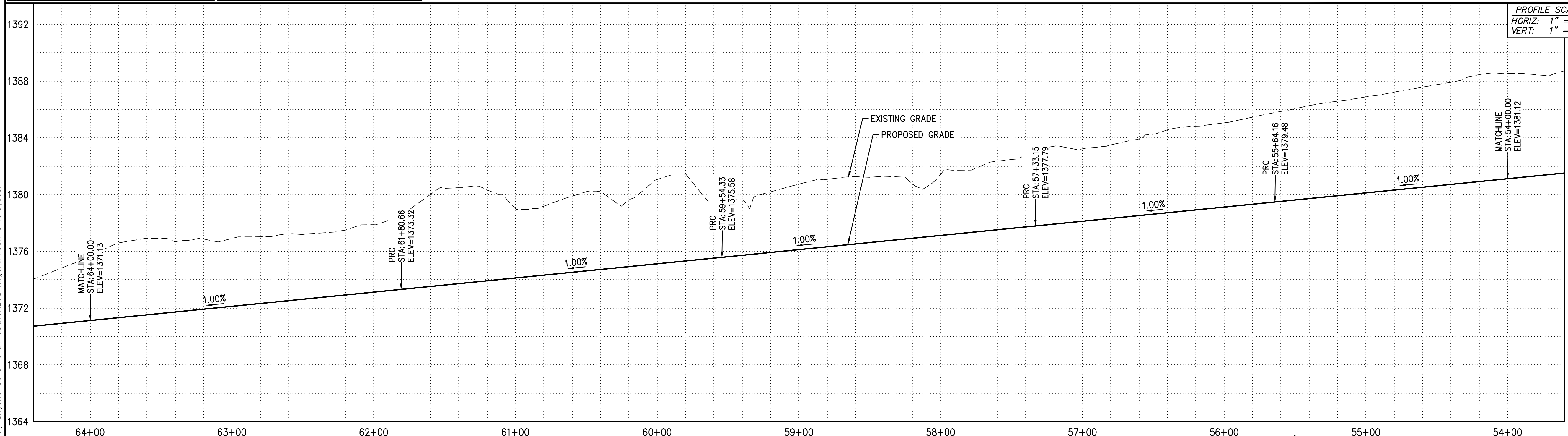
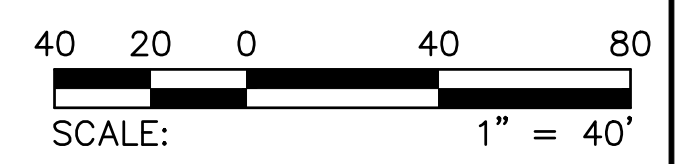


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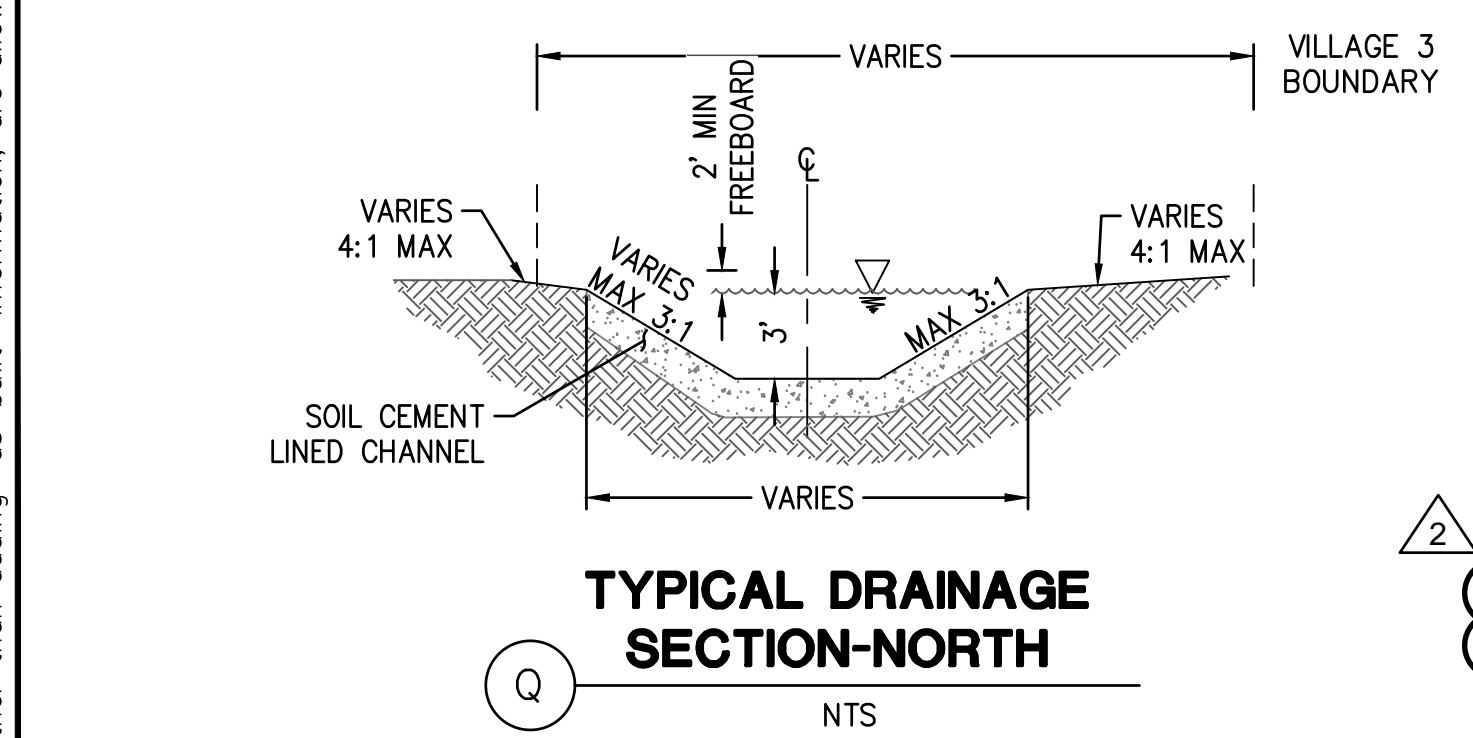


CURVE TABLE					CURVE TABLE					CURVE TABLE				
NO.	RADIUS	DELTA	LENGTH	TANGENT	NO.	RADIUS	DELTA	LENGTH	TANGENT	NO.	RADIUS	DELTA	LENGTH	TANGENT
C1	700.00'	024°26'05"	298.53'	151.57'	C3	225.00'	056°19'16"	221.17'	120.44'	C5	450.00'	028°07'59"	220.96'	112.75'
C2	500.00'	025°56'11"	226.34'	115.14'	C4	300.00'	032°16'31"	168.99'	86.80'					

DRAINAGE CHANNEL NORTH

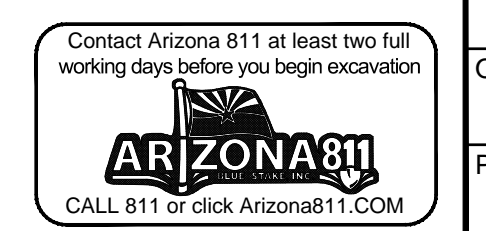


PROFILE SCALE:
HORIZ: 1" = 40'
VERT: 1" = 4'

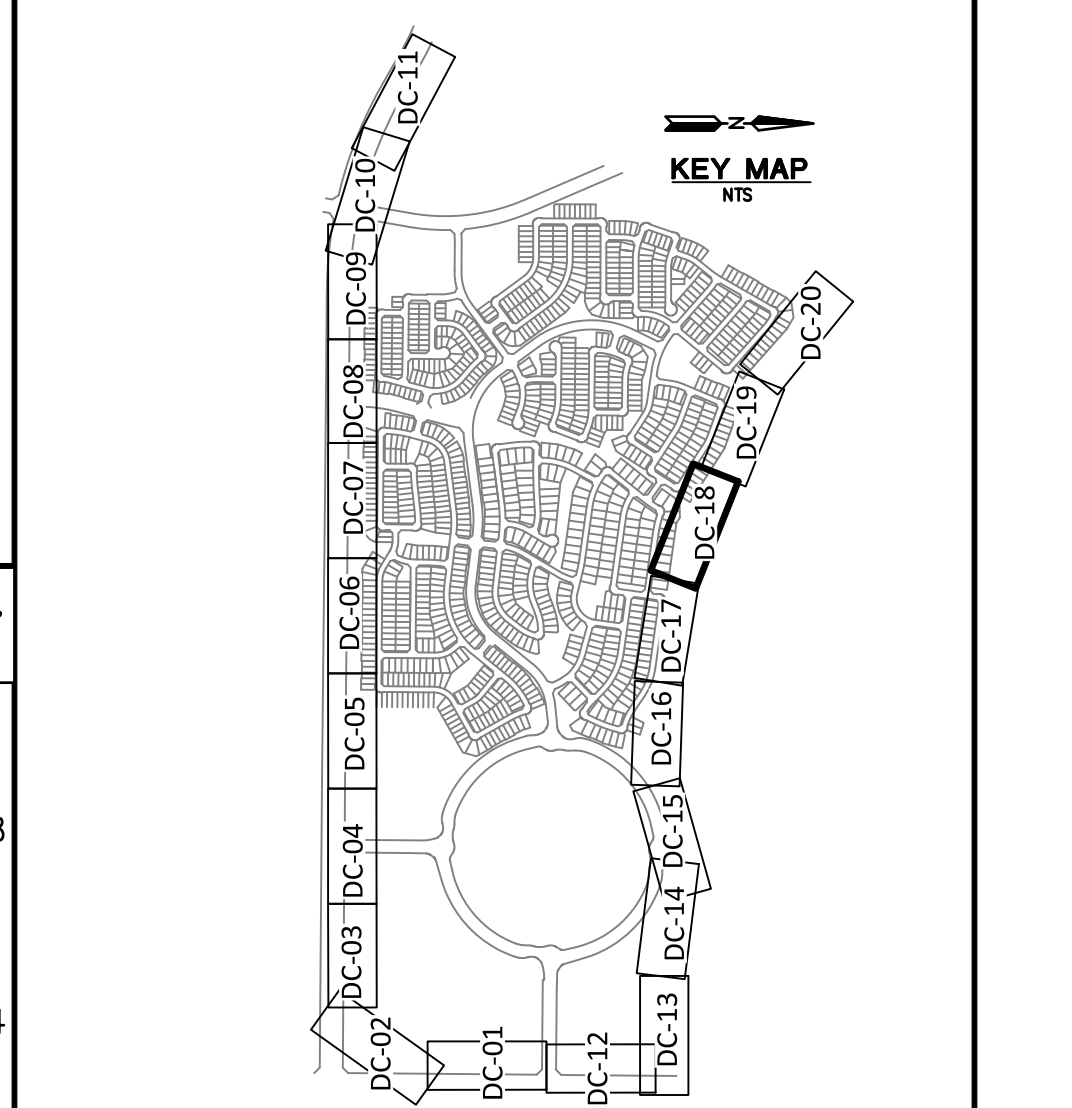


NOTE:
SECTION J & K HAVE BEEN DELETED
DUE TO CHANNEL CHANGES.

- LEGEND**
- VILLAGE 3 BOUNDARY
 - EROSION HAZARD SETBACK
 - RIGHT OF WAY
 - LOT LINE
 - CENTER LINE
 - EASEMENT LINE
 - FLOW DIRECTIONAL INDICATOR
 - 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, PERMITIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET# DC21 FOR DETAIL AND PLAN SHEET FOR QUANTITY. COLOR PER DEVELOPER. 595 SY
 - 84 INSTALL GABIONS ON MACCAFERRI GEOTEXTILE MACTEX N47.1. PER DETAILS SEE SHEET# DC21. 250 SY
 - 89 INSTALL 2" OF SHOTCRETE ON TOP OF GABION BASKET WITH D50=4" EMBEDDED IN SHOTCRETE. 150 SY
 - 91 INSTALL ANGULAR LOOSE RIP-RAP PER MAG SPEC SECTION 220 D50=4" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITIVITY 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). 7766 SY
 - 96 INSTALL SOIL CEMENT PER MAG SPEC 311; SEE DETAIL 1 ON SHEET DC21. 3054 SY
- 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		

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

PROJECT NUMBER: 1175
SHEET NUMBER: DC18 OF 90

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

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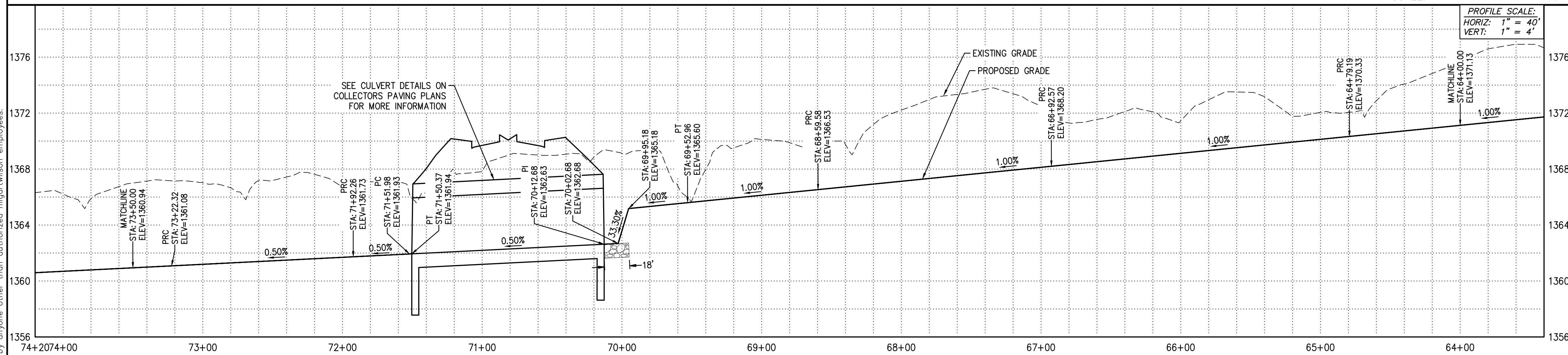
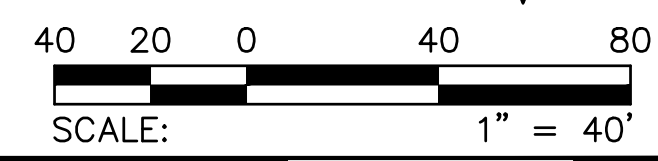
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MATCHLINE SEE SHEET DC20
DRAINAGE CHANNEL NORTH

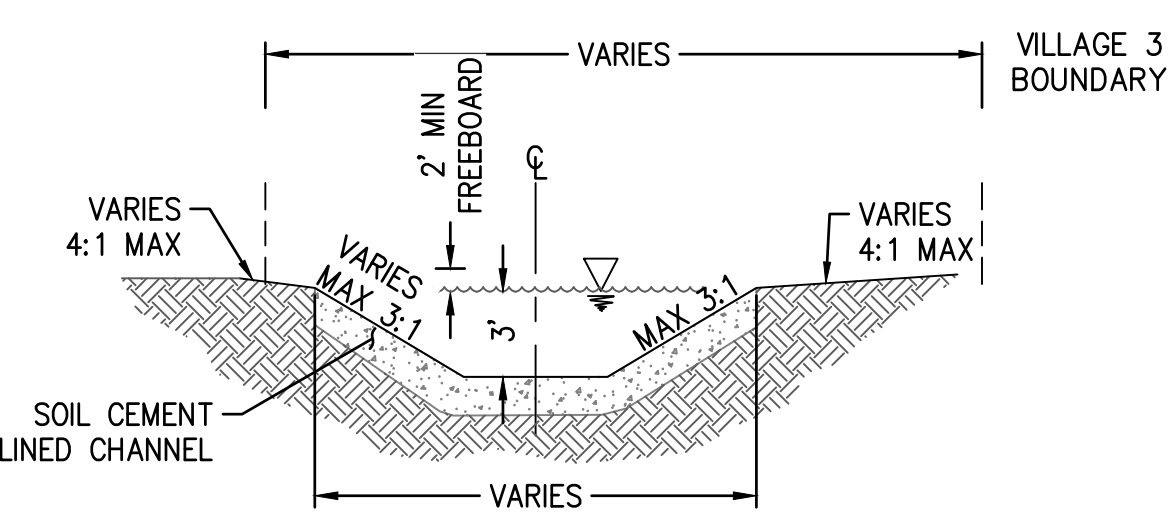
DRAINAGE CHANNEL NORTH
MATCHLINE SEE SHEET DC18

DRAINAGE CHANNEL NORTH

LINE TABLE			CURVE TABLE				CURVE TABLE					
NO.	DIRECTION	LENGTH	NO.	RADIUS	DELTA	LENGTH	TANGENT	NO.	RADIUS	DELTA	LENGTH	TANGENT
L1	N70°15'07"W	137.68'	C1	700.00'	024°26'05"	298.53'	151.57'	C4	600.00'	008°55'01"	93.38'	46.78'
			C2	300.00'	040°45'06"	213.38'	111.43'	C5	200.00'	011°32'20"	40.28'	20.21'
			C3	400.00'	023°55'22"	167.01'	84.74'	C6	300.00'	024°50'25"	130.06'	66.07'

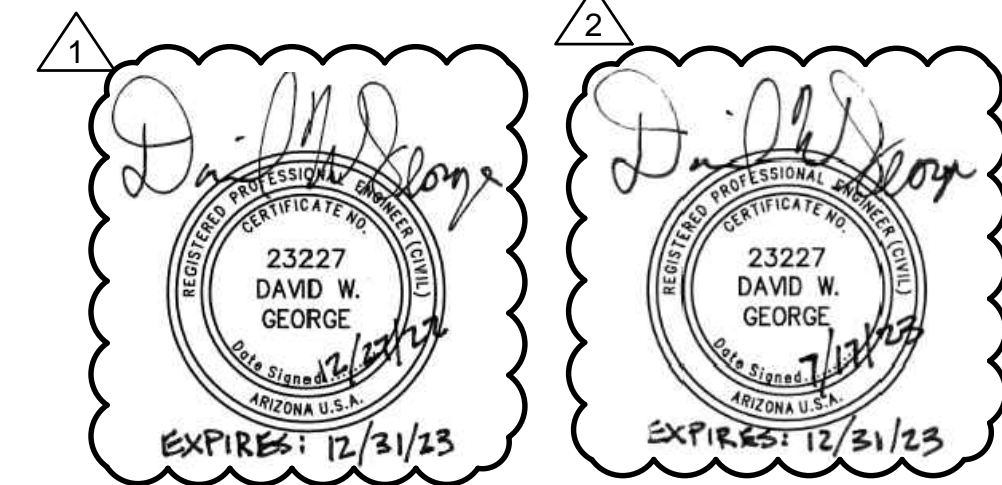


- LEGEND**
- VILLAGE 3 BOUNDARY
 - EROSION HAZARD SETBACK
 - RIGHT OF WAY
 - LOT LINE
 - CENTER LINE
 - EASEMENT LINE
 - FLOW DIRECTIONAL INDICATOR
 - FINISH PAD ELEVATION (FINISH FLOOR IS 1' ABOVE FP)
 - EMERGENCY OUTFALL ARROW
 - HIGH POINT
 - LOW POINT
 - DUAL CHAMBER DRYWELL



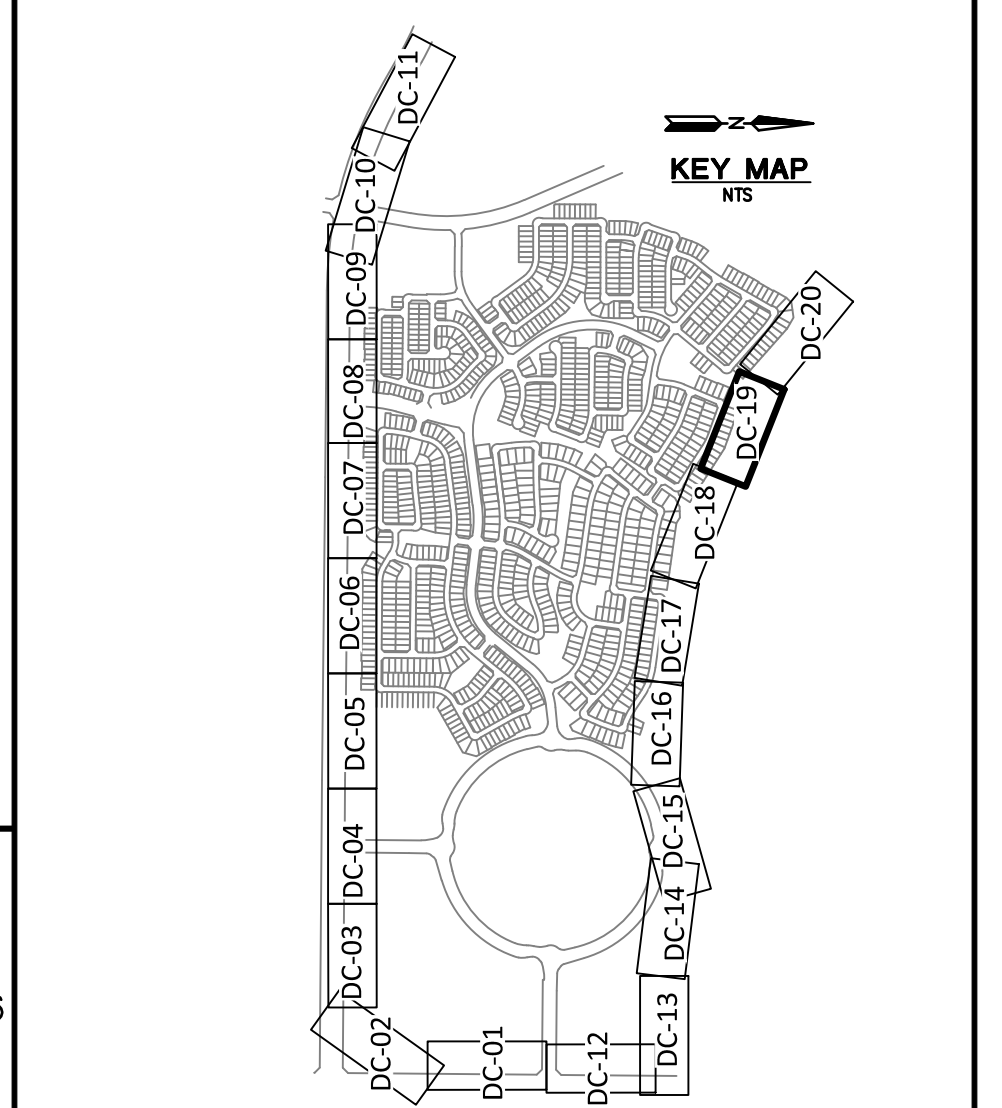
TYPICAL DRAINAGE SECTION-NORTH

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



Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA 811
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. 384 468 SY
 - 84. INSTALL GABIONS ON MACCAFERRI GEOTEXTILE MASTEX N47.1. PER DETAILS SEE SHEET# DC21. 50 SY
 - 89. INSTALL 2" 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

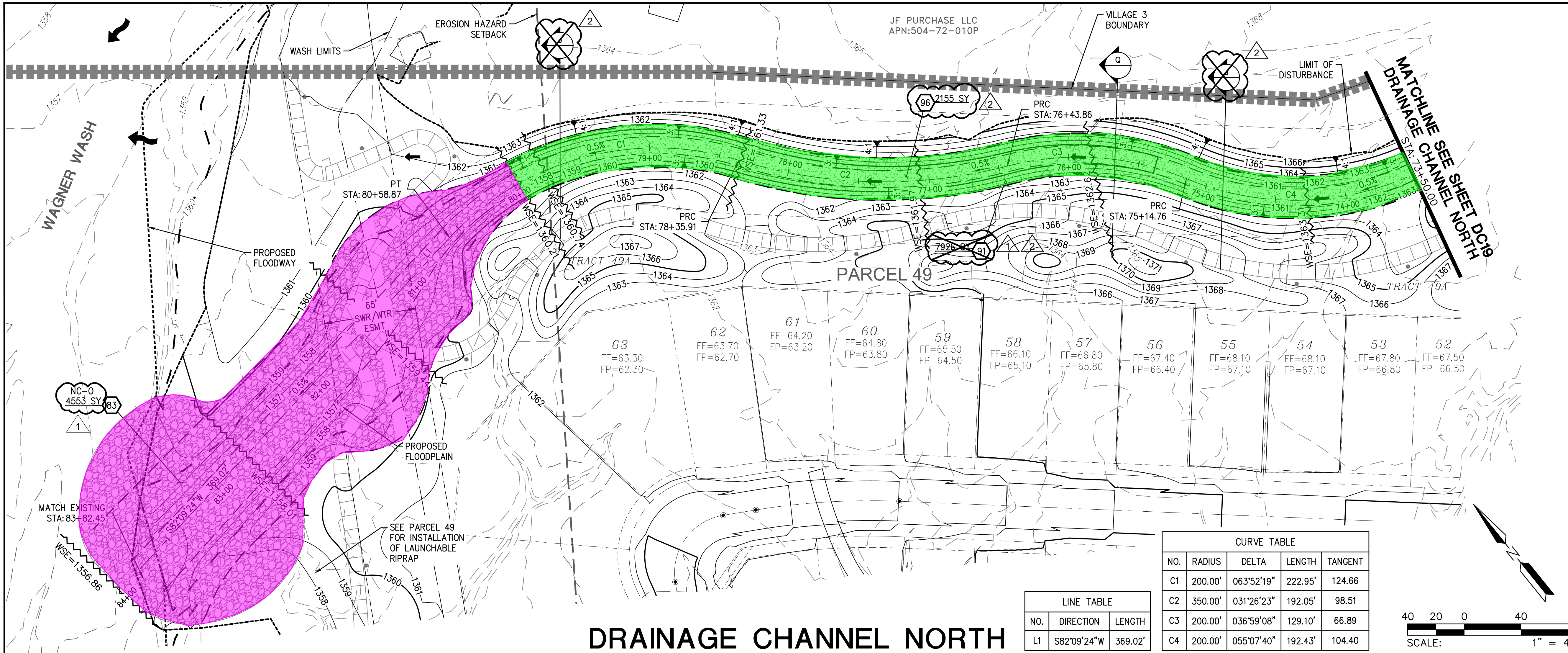


- REVISIONS:**
- 1. 12/27/2022 - ROSEWOOD AVENUE WAS EXTENDED AND GRADING REVISED. CHANNEL WAS REVISED ALONG SUN VALLEY PARKWAY TO ACCOMMODATE AN ADDED SIDEWALK. GRADING FOR APS SUBSTATION ADDED & FIRE STATION. THE EROSION HAZARD SETBACK ALONG WAGNER WASH WAS REVISED.
 - 2. 7/17/2023 - REVISION TO CHANNEL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

PLAN NAME
TRILLIUM VILLAGE 3 - UNITS 1 & 2 DRAINAGE CHANNEL PLAN

ENGINEER INFORMATION
HILGARTWILSON

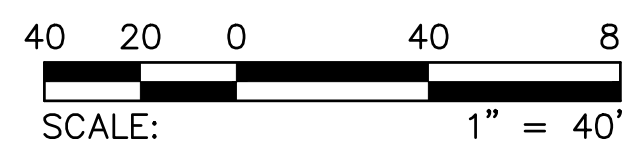
COB PERMITTING APPROVED SEAL	COB ENGINEERING APPROVED SEAL	SUBMITTAL: 3R Submittal
APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING		
AS-BUILT SEAL	DESIGN SEAL	SUBMITTING # ENG-21-0220 COB PERMIT #
ORIGINAL PLAN DATE MAY 2022	LATEST REVISION DATE JULY 2023	
PROJECT NUMBER 1175	SHEET NUMBER 88 OF 90	



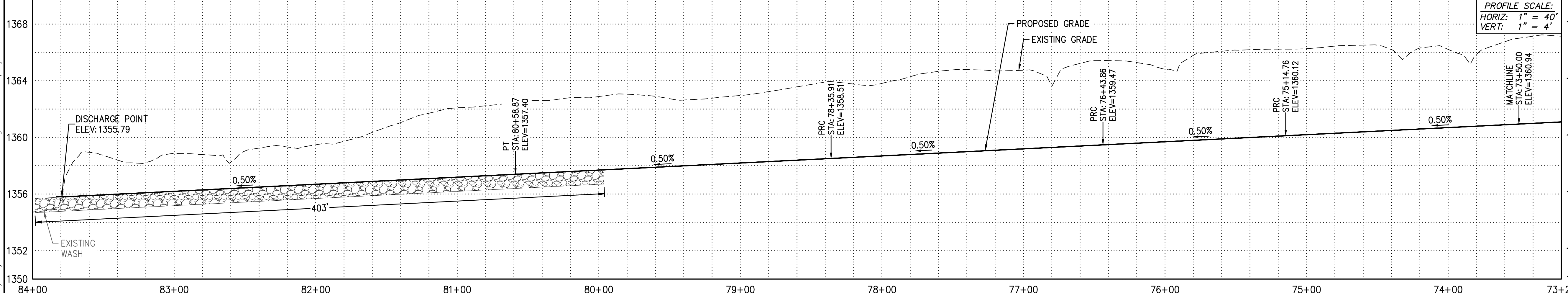
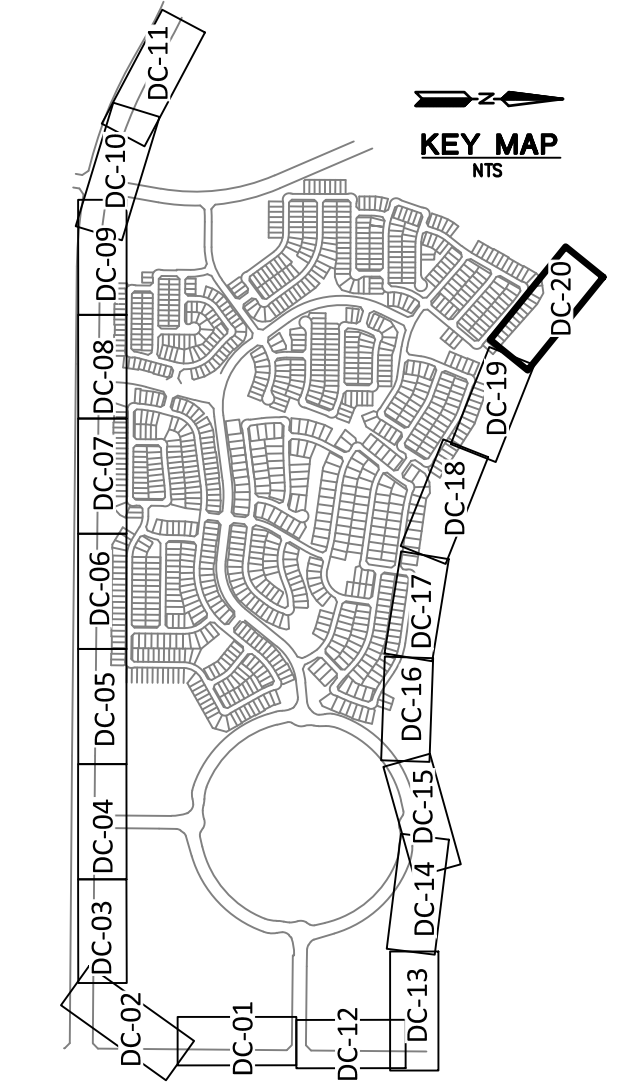
DRAINAGE CHANNEL NORTH

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

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



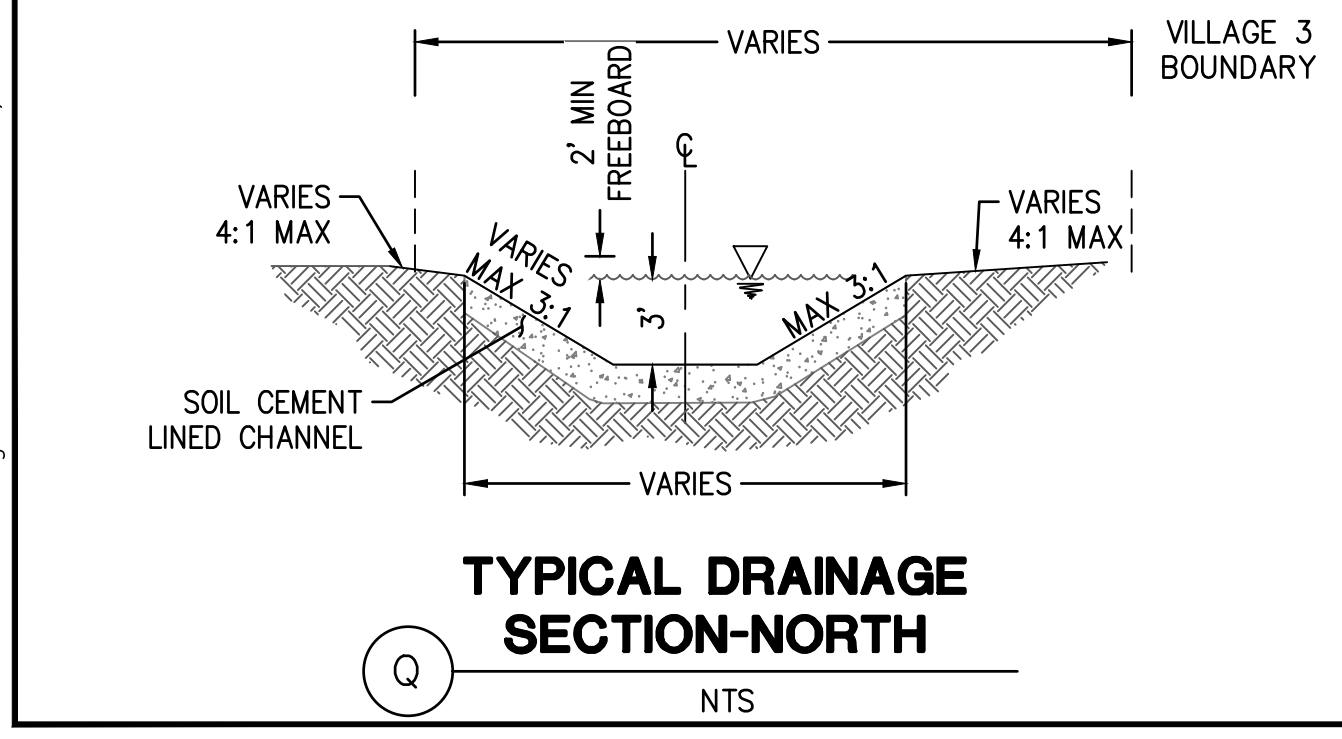
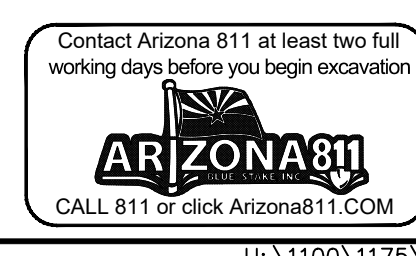
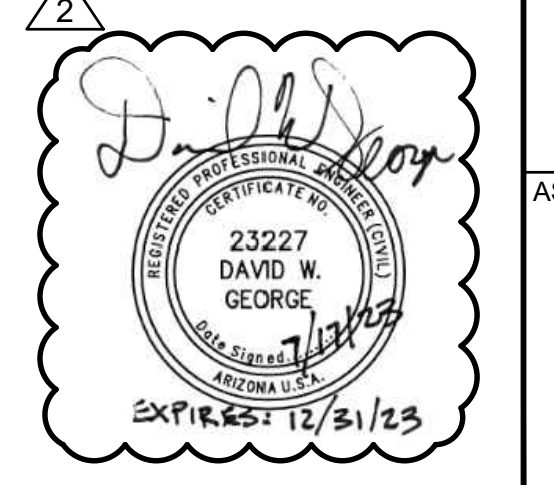
- STORM DRAIN CONSTRUCTION**
- 83 INSTALL LOOSE ANGULAR RIP-RAP PER MAG SPEC SEC. 220; D50=6", 12" THICK ON MIRAFI EROSION PROTECTION GEO-TEXTILE OR APPROVED EQUIVALENT. FABRIC TO HAVE APPARENT OPENING SIZE OF 0.425MM, PERMITIVITY OF 50 GAL/MIN/FT AND WOVEN. SEE SHEET# DC21 FOR DETAIL AND PLAN SHEET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



- 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		SUBMITTAL 3R
 HILGARTWILSON COB PERMITTING APPROVED SEAL COB ENGINEERING APPROVED SEAL APPROVED 6/22/2022 CITY OF BUCKEYE ENGINEERING		
AS-BUILT SEAL	DESIGN SEAL	SUBMITTAL # ENG-21-0220 COB PERMIT #
ORIGINAL PLAN DATE MAY 2022	LATEST REVISION DATE JULY 2023	
PROJECT NUMBER 1175	SHEET NUMBER DC20	OF 90



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

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