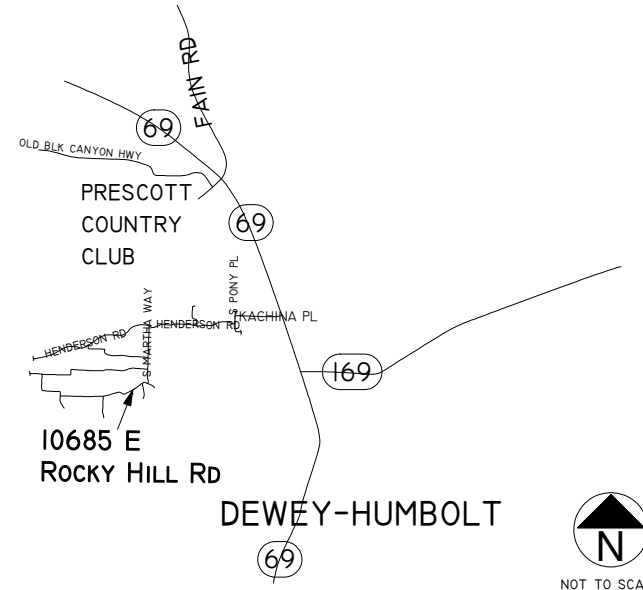


# VICINITY MAP

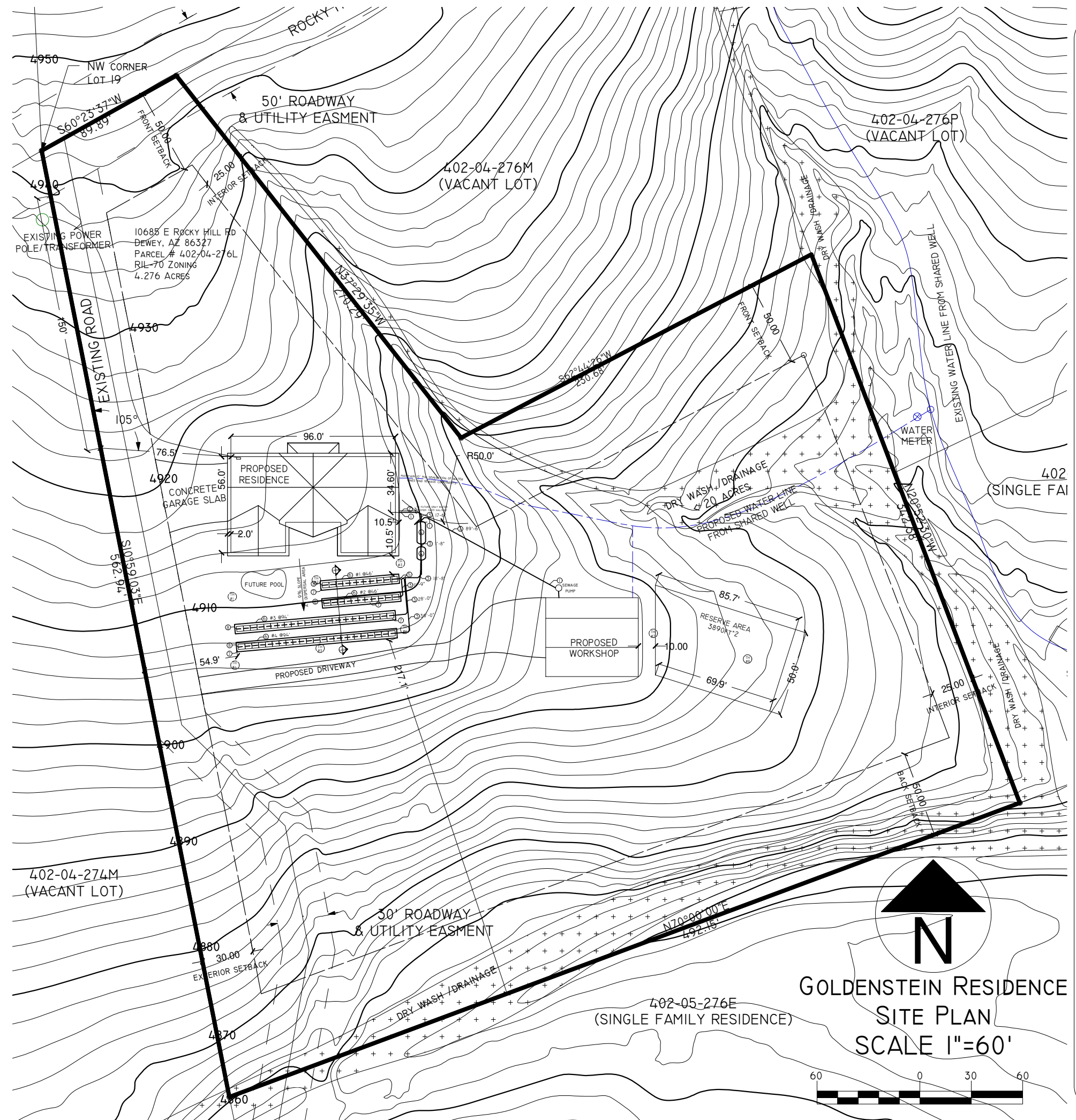


## GENERAL NOTES

1. SYSTEM DESIGN AND INSTALLATION SHALL COMPLY WITH ARIZONA ADMINISTRATIVE CODE R18-9-A314 AND ELJEN GSF ARIZONA DESIGN & INSTALLATION MANUAL SEPTEMBER 2010, WWW.ELJEN.COM
2. HOMEOWNERS MANUAL AND RECOMMENDED MAINTENANCE AVAILABLE FROM HTTP://WWW.ELJEN.COM/LITERATURE

## SITE PLAN NOTES

1. THERE IS NO PUBLIC SEWER WITHIN 400' OF THE PROPERTY.
2. THERE ARE NO WELLS WITHIN 100' OF THE SEPTIC.
3. WATER TO BE PROVIDED BY SHARED WELL LOCATED ON ADJACENT PARCEL 402-05-276Q.
4. THERE ARE NO WATER LINES WITHIN 10' OF THE SEPTIC.
5. ALL SETBACKS ARE MAINTAINED AS SPECIFIED IN TABLE OF R-18-9-A312C.
6. SETBACK LIMITATIONS CLOSER THAN 200' AS SPECIFIED IN ARE INDICATED ON SITE MAP R18-9-A312C
7. SURFACE LIMITING CONDITION IDENTIFIED IN R18-9-A310(C)(2): WASHES TO THE EAST AND SOUTH.
8. SUBSURFACE LIMITING CONDITION IDENTIFIED IN R18-9-A310(D)(2): 5-12' DEEP TEST HOLES.
9. CLEAN OUTS SHALL BE PROVIDED IN THE 4" SEWER SERVICE 2' FROM THE HOUSE AND WORKSHOP.
10. ALL EASEMENTS AND RIGHT OF WAYS ARE SHOWN ON SITE PLAN.
11. DRAINAGE FROM ROOFTOPS OF STRUCTURES SHALL BE DIVERTED FROM THE ABSORPTION AREA
12. TRENCHES SHALL BE COVERED WITH A MINIMUM OF 12" OF SOIL BACKFILL.
13. PROPERTY CORNERS ARE MARKED WITH STEAKS AND SURVEY TAPE BY A RECENT SURVEY.
14. ALL CC&R REQUIREMENTS ARE MET.

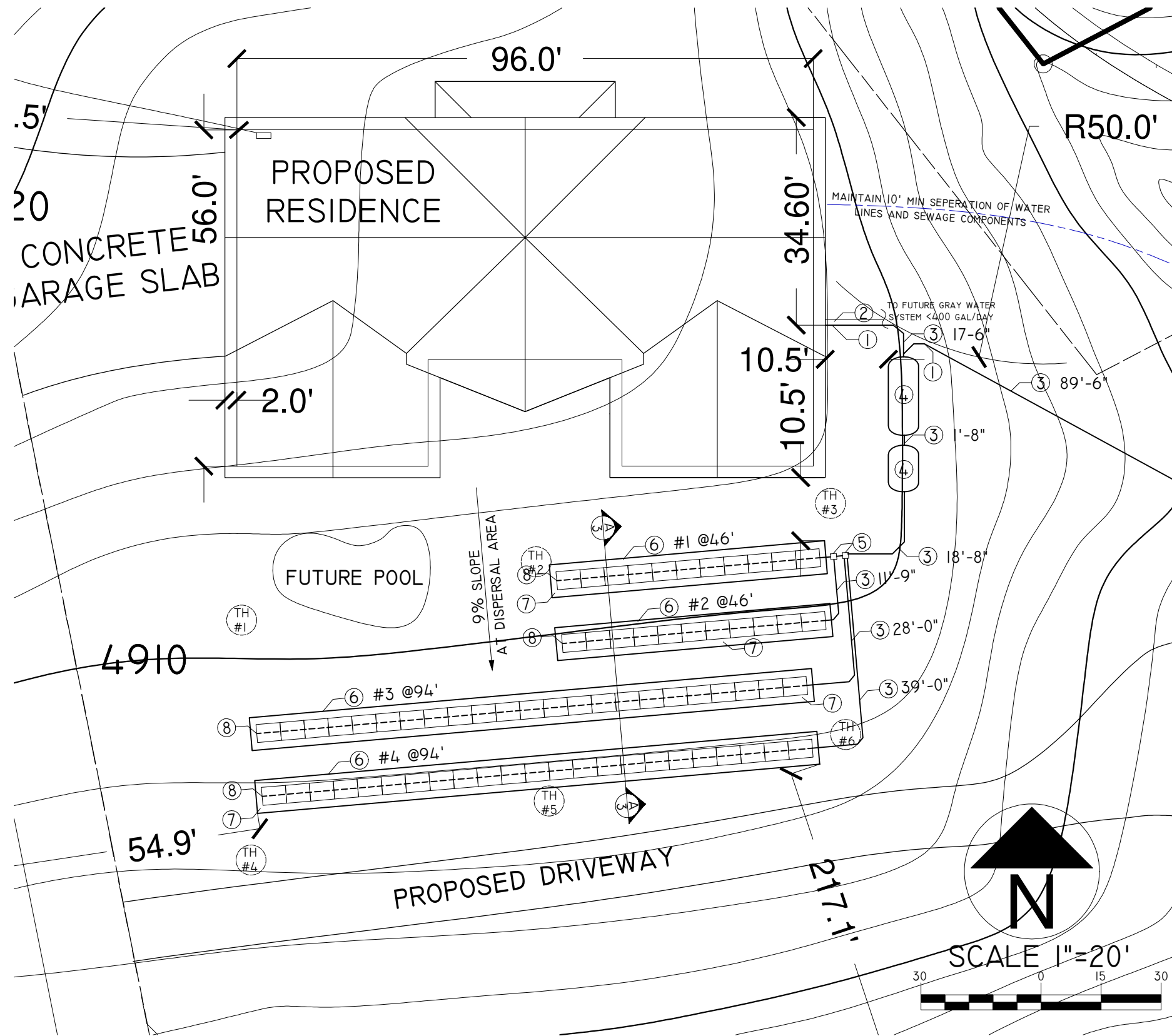


General Notes		
REV 1 ADD MILESTONES EDITED LINE DIAGRAM ADD HYDRAULIC ANALYSIS CHANGE TANKS CHANGE DESIGN FLOW & TRENCH LENGTH		
REV 2 BILL OF MATERIALS: EFFLUENT FILTER FOR SECOND TANK VS FIRST		
No.	Revision/Issue	Date

## SITE PLAN AND COMPONENT LOCATIONS

## SEPTIC PLANS FOR GOLDENSTEIN RESIDENCE 10685 E ROCKY HILL RD DEWEY, AZ 86327

Drawn By ADAM GOLDENSTEIN	Sheet 1 OF 3
Date 2/15/18	
Scale 1"=60'	



## SEPTIC COMPONENT KEYNOTES

- 2-WAY CLEANOUT
- GRAY WATER VALVE
- 4" SDR-35 OR SCHD-40\* SEWER PIPE
- 1500 / 750 GAL SINGLE COMPARTMENT SEPTIC TANKS\*\* MEETING ALL REQUIREMENTS OF RI8-9-A314
- DISTRIBUTION BOX SET ON LEVELED MASONRY SURFACE
- ELJEN ENGINEERED PAD TRENCH PER TRENCH DRAWINGS
- INSPECTION PIPES
- 4" VENT PIPE AT END OF EACH TRENCH

\*SDR-35 "HIGH STRENGTH" PIPE SHALL BE USED WHEN PIPE IS GREATER THAN 2' BELOW GRADE.  
\*\*POLYTANK SHOWN: SNYDER NEXGEN D2 1500 / 750 ONE COMPARTMENT TANK

## DESIGN CALCS

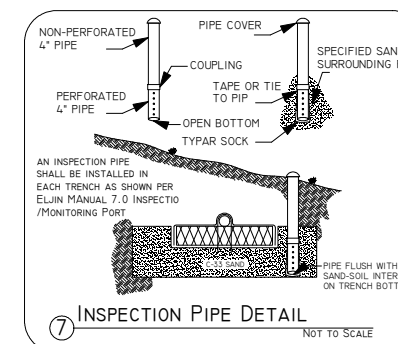
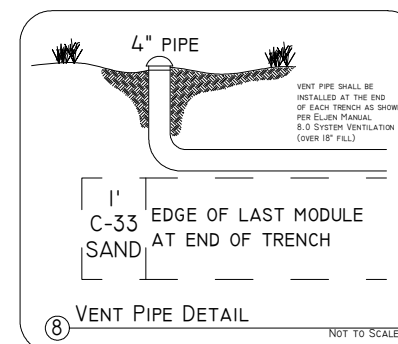
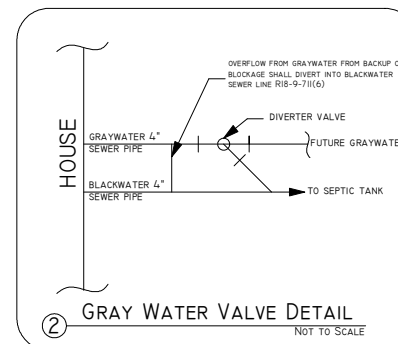
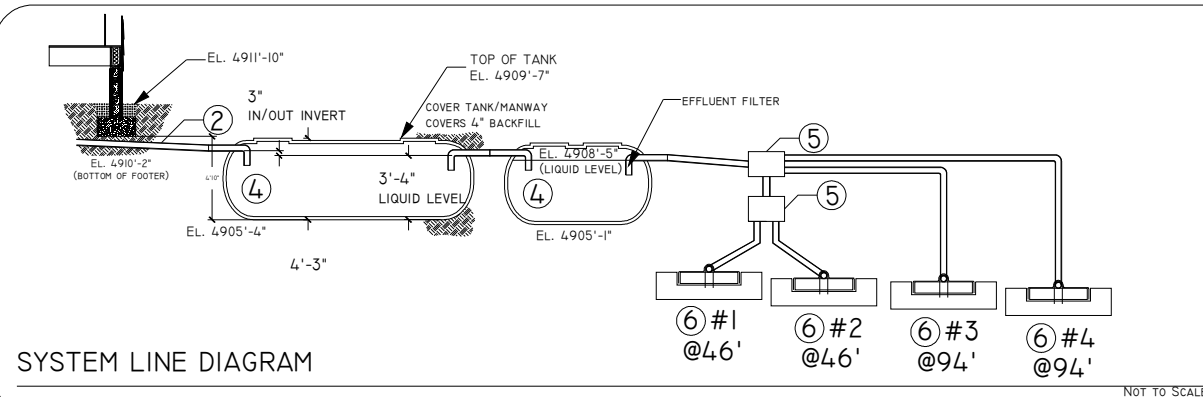
SAR (SITE INVESTIGATION)	0.4
DESIGN TSS/BOD	5/5
SARA (RI8-9-A312.D.3)	0.885
DAILY DESIGN FLOW (GAL)	900
MIN DESIGN LIQ CAP (GAL)	2000
REQ. ABSORPTION AREA (FT^2)*	1016.6
B43 AREA PER EACH (FT^2)*	20
B43 UNITS NEEDED CALC.*	50.8
B43 UNITS USED	68
TRENCH LENGTH CALC. (FT)*	203.3
TRENCH LENGTH USED (FT)	280
SAND CS AREA (FT^2)	8.02
SAND VOLUME (FT^3)	2246
SAND DENSITY (LB/FT^3)	100
SAND (TON)	112

\*DESIGN CALCULATIONS BASED ON ELJEN GSF ARIZONA DESIGN & INSTALLATION MANUAL SEPTEMBER 2010, WWW.ELJEN.COM

## TEST HOLES

TH	DEPTH*	GRADE EL.*	BOTTOM EL.	NOTES
#1	12'	4909.0'	4897.0'	TH#1-8 SIMILAR BUT VARY TO ROCK REFUSAL. 0-1' TOPSOIL, 1-8' 70% ROCK WITH SCL IN MATRIX EVIDENCE OF MOTTLING PRESENT THROUGHOUT INDICATING SEASONAL SATURATION
#2	12'	4909.5'	4897.5'	
#3	9'	4907.5'	4898.5'	
#4	5'	4904.5'	4899.5'	
#5	6'	4903.5'	4897.5'	
#6	12'	4903.5'	4891.5'	
#7	12'	4890.0'	4878.0'	
#8	8'	4884.5'	4876.5'	

\*TEST HOLE DEPTH IS FROM ORIGINAL GRADE BEFORE FINAL GRADING.



General Notes

REV 1  
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EDITED LINE DIAGRAM  
ADD HYDRAULIC ANALYSIS  
CHANGE TANKS  
CHANGE DESIGN FLOW & TRENCH LENGTH  
REV 2  
BILL OF MATERIALS: EFFLUENT FILTER FOR SECOND TANK VS FIRST

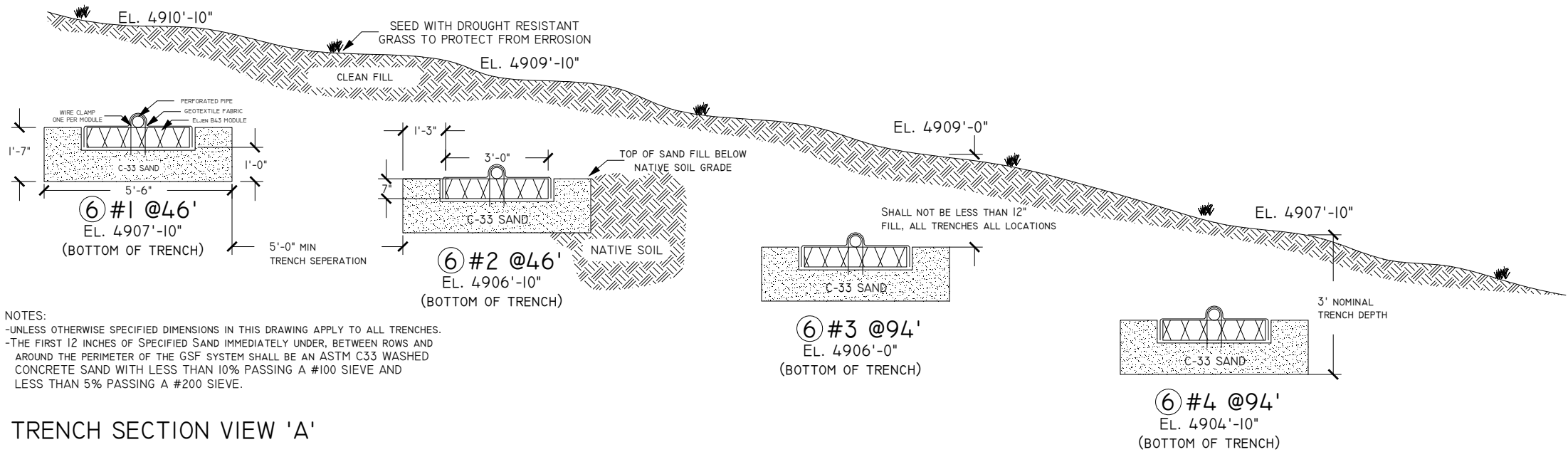
No. Revision/Issue Date

SEPTIC PLANS FOR  
GOLDENSTEIN RESIDENCE  
10685 E ROCKY HILL RD  
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Drawn By  
ADAM GOLDENSTEIN  
Date  
2/15/18  
Scale  
1"=20'

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NOTES:  
-UNLESS OTHERWISE SPECIFIED DIMENSIONS IN THIS DRAWING APPLY TO ALL TRENCHES.  
-THE FIRST 12 INCHES OF SPECIFIED SAND IMMEDIATELY UNDER, BETWEEN ROWS AND AROUND THE PERIMETER OF THE GSF SYSTEM SHALL BE AN ASTM C33 WASHED CONCRETE SAND WITH LESS THAN 10% PASSING A #100 SIEVE AND LESS THAN 5% PASSING A #200 SIEVE.

### TRENCH SECTION VIEW 'A'

#### HYDRAULIC ANALYSIS METHOD

THE FOLLOWING HYDRAULIC ANALYSIS USED THE METHODOLOGY PRESENTED IN:  
"ON-SITE WASTEWATER TREATMENT PROCEEDINGS OF THE NINTH NATIONAL SYMPOSIUM ON INDIVIDUAL AND SMALL COMMUNITY SEWAGE SYSTEMS"  
MARCH 11-14, 2001, EDITED BY: KAREN MANCL, PUBLISHED BY: AMERICAN SOCIETY OF AGRICULTURAL ENGINEERS 2950 NILES ROAD, ST JOSEPH, MICHIGAN 49085-8659 USA

#### SITE SOIL CHARACTERISTICS

TEXTURE: SCL, STRUCTURE: BK, GRADE: 2, BOD<30 MG/L, SLOPE: 6-9%, INFILTRATION DISTANCE: 24-48"

ACCORDING TO TABLE 1 OF REFERENCED MATERIAL: INFILTRATION LOADING RATE: 0.6 GAL/DAY/FT\*2 AND HYDRAULIC LINEAR LOADING RATE: 3.3 GAL/DAY/FT

#### TRENCH LENGTH

DIVIDE WASTEWATER VOLUME (900GPD) BY THE HYDRAULIC LINEAR LOADING RATE (3.3 GPD/FT) TO OBTAIN THE LENGTH OF THE DISPERSAL TRENCH:  
900GPD / 3.3 GPD/FT\*2 = 272.7FT

#### TRENCH WIDTH

DIVIDE WASTEWATER HYDRAULIC LINEAR LOADING RATE (3.3GAL/DAY/FT) BY THE INFILTRATION LOADING RATE (0.6GAL/DAY/FT\*2):  
3.3GAL/DAY/FT / 0.6GAL/DAY/FT\*2 = 5.5FT

#### CONCLUSION

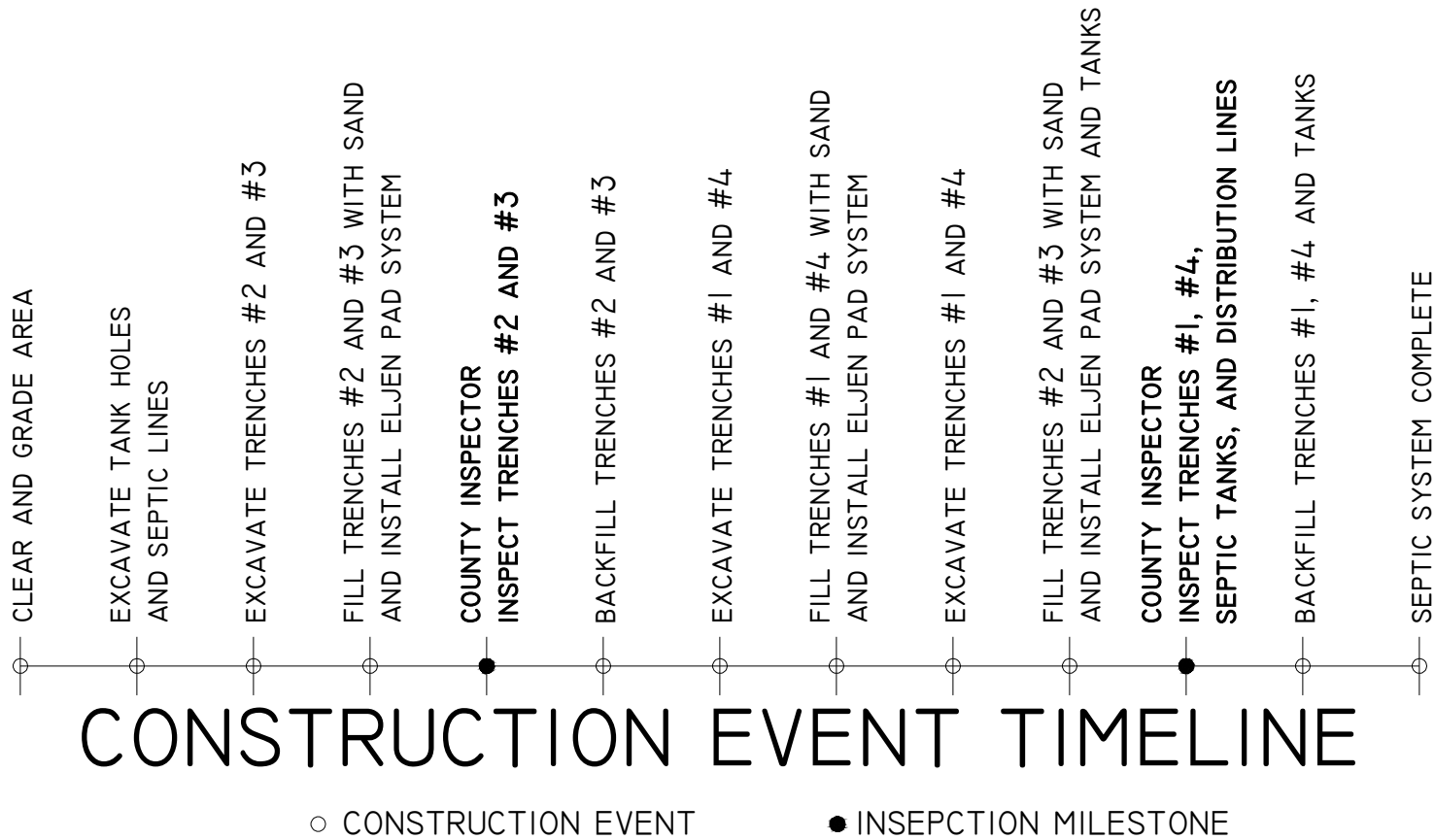
LIMITING TRENCH LENGTH OF HYDRAULIC ANALYSIS (272.7FT) < TRENCH LENGTH USED (280FT)  
LIMITING TRENCH WIDTH OF HYDRAULIC ANALYSIS (5.5FT) = TRENCH WIDTH USED (5.5FT)  
THEREFORE IT IS RECOMMENDED THE SITE CONDITIONS ARE SUFFICIENT TO SUPPORT THE PROPOSED DESIGN FOR RELIABLE OPERATION

### HYDRAULIC ANALYSIS

## LIST OF MATERIALS

1 EA	1500 GAL SEPTIC TANK: SNYDER NEXGEN D2 SINGLE COMPARTMENT
1 EA	750 GAL SEPTIC TANK: SNYDER NEXGEN D2 SINGLE COMPARTMENT
1 EA	EFFLUENT FILTER FOR SECOND SEPTIC TANK
3 YD^3	PEA GRAVEL FOR SEPTIC BEDDING
83 YD^3	ASTM C33 WASHED CONCRETE SAND
252 FT	4" DISTRIBUTION PIPE SDR-35 OR SCHD-40*
272 FT	4" PERFORATED PIPE
1 EA	2-OUTLET DISTRIBUTION BOX WITH SEALS
1 EA	3-OUTLET DISTRIBUTION BOX WITH SEALS
68 EA	B43 ELJEN PAD UNITS WITH GEOTEXTILE COVER AND WIRE CLAMPS
4 EA	TYPAR SOCK AND TAPE
8 EA	4" PIPE CAPS
_ EA	4" PIPE SDR-35 OR SCHD-40* FITTINGS AND CLEANOUTS AS NEEDED
_ EA	PIPE CEMENT GLUE AS NEEDED

\*SDR-35 "HIGH STRENGTH" PIPE SHALL BE USED WHEN PIPE IS GREATER THAN 2' BELOW GRADE.



#### General Notes

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REV 2  
BILL OF MATERIALS: EFFLUENT FILTER FOR SECOND TANK VS FIRST

No. Revision/Issue Date

## HYDRAULIC ANALYSIS MATERIAL LIST INSPECTION MILESTONES

Project Name and Address

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GOLDENSTEIN RESIDENCE  
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Drawn By  
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