

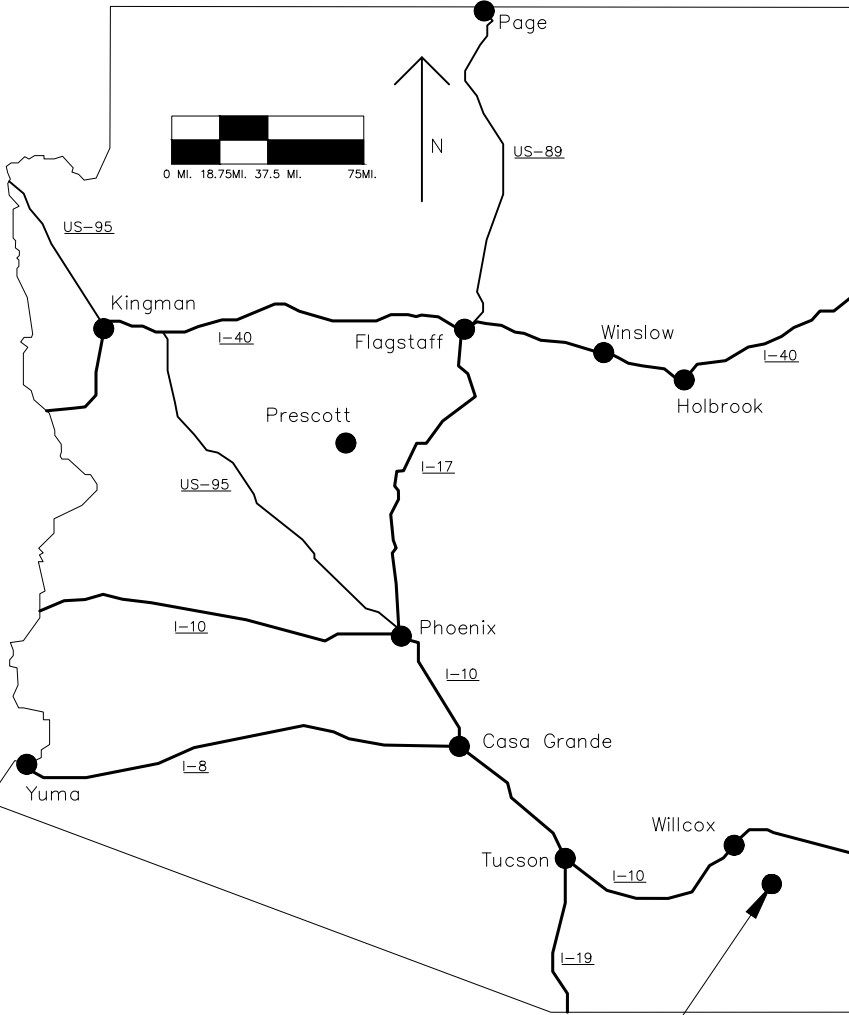
Chiricahua National Monument Septic and Potable Design

Chiricahua Wastewater Wizards

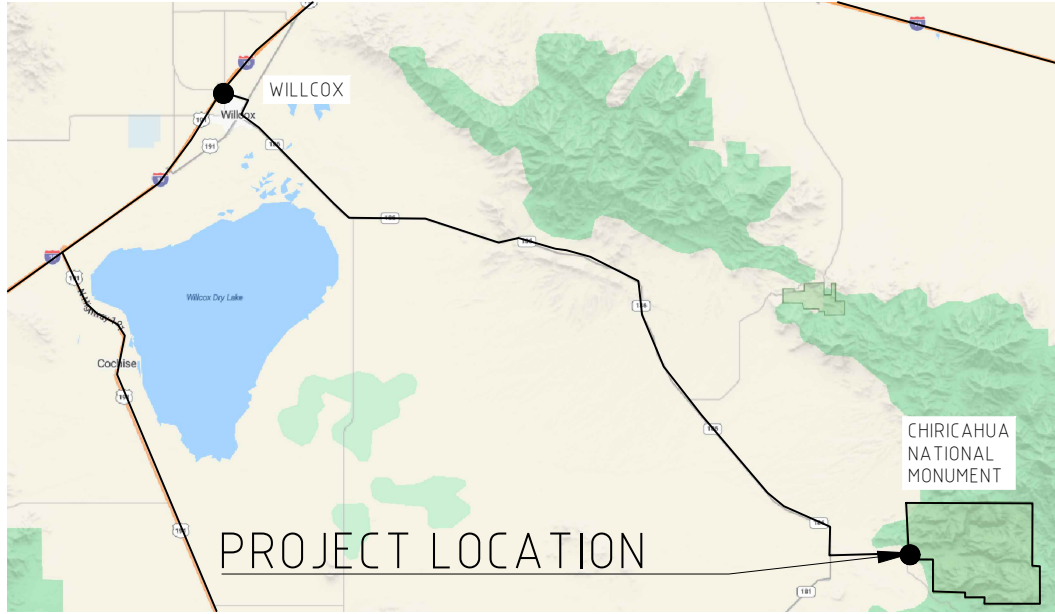


Chiricahua Wastewater Wizards
2112 S. Huffer Ln.
Flagstaff, AZ
86011

GENERAL NOTES:

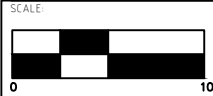


PROJECT LOCATION



PROJECT LOCATION

DATE DRWN:	4/23/25
DRWN BY:	NHW
CHECKED BY:	JKG
PRINT NO:	1



SHEET TITLE:
GENERAL

PROJECT INFO:
Pinery Canyon Road
Chiricahua National Monument
Willcox, Arizona
85643

SHEET NUMBER:
GEN-01

INDEX OF SHEETS:

- POT: POTABLE PLAN VIEW
PAGES 3-9, SHEETS POT-01 TO POT-07
- POTDT: POTABLE DETAIL SHEETS
PAGES 10-15, SHEETS POTDT-01 TO POTDT-06
- SEP: SEPTIC PLAN VIEW
PAGES 16-20, SHEETS SEP-01 TO SEP-05
- SEPDT: SEPTIC DETAIL SHEETS
PAGES 21-29, SHEETS SEPDT-01 TO SEPDT-09

NOTE: THIS DESIGN IS NOT FOR CONSTRUCTION. IT WAS CREATED FOR THE CENE486C CAPSTONE COURSE AT NORTHERN ARIZONA UNIVERSITY.

GENERAL NOTES:

- ARROWS INDICATE DIRECTION OF FLOW
- IF NO DETAIL DRAWING IS PROVIDED, USE STANDARD FITTING FOR PIPE
- IN ALL CASES, SEPTIC PIPES SHOULD RUN UNDER POTABLE PIPES, IF DURING CONSTRUCTION THIS BECOMES AN ISSUE, CONTACT ENGINEER.
- MINIMUM VERTICAL DISTANCE BETWEEN SEPTIC AND POTABLE IS 1.5 FEET.
- ALL CONCRETE SHOULD HAVE A PH BETWEEN 6 AND 8
- A 50 FOOT DISTANCE BETWEEN LEACH FIELD AND CENTERLINE OF DRAINAGE MUST BE MAINTAINED
- ALL CONSTRUCTION SHOULD BE IN COMPLIANCE WITH MOST RECENT STANDARDS OF THE NATIONAL PARK SERVICE, COCHISE COUNTY, AND THE STATE OF ARIZONA
- ALL DISTANCES AND DATA SHALL BE CHECKED BY CONTRACTOR PRIOR TO START OF CONSTRUCTION. SHOULD A CONFLICT ARISE, NOTIFY ENGINEER IMMEDIATELY.
- ALL DIMENSIONS FOR PIPES ARE TO THEIR CENTERLINE
- ELEVATIONS ARE TO PIPE INVERT UNLESS NOTED OTHERWISE
- CONTRACTOR SHALL RETAIN AND PROTECT OR REMOVE AND REPLACE ALL LANDSCAPING, TREES, UTILITIES, DITCHES, CULVERTS, FENCES, MAILBOXES, SIGNS, LIGHT POLES, HEAD GATES, AND ANY MISC. ITEMS. CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE
- CONTRACTOR IS RESPONSIBLE FOR WATER COSTS RELATED TO COMPACTION OR TESTING.
- CONTRACTOR IS RESPONSIBLE FOR SECURING ALL GRANULAR MATERIAL, WATER FOR CONSTRUCTION, WASTE, AND ADDITIONAL MATERIALS.
- CONTRACTOR MUST COMPLY WITH OSHA STANDARDS.

WATER

- ALL WATER PIPES ARE TO USE SCHEDULE 40 POLYVINYL CHLORIDE (PVC) COMPLIANT WITH ASTM D1784, D1785, D2665, NSF STD. 14 AND NSF STD. 61
- SEE ENGINEER IF FITTING IS NOT SPECIFIED FOR GUIDANCE.

SEPTIC:

- ALL PIPES SHALL USE 4" INNER DIAMETER HIGH DENSITY POLYETHYLENE (HDPE), COMPLIANT WITH ASTM D3350



Chiricahua Wastewater Wizards
2112 S. Huffer Ln.
Flagstaff, AZ
86011

GENERAL NOTES:

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PRINT NO:	1



SHEET TITLE:

GENERAL

PROJECT INFO:

Pinery Canyon Road
Chiricahua National Monument
Willcox, Arizona
85643

SHEET NUMBER:

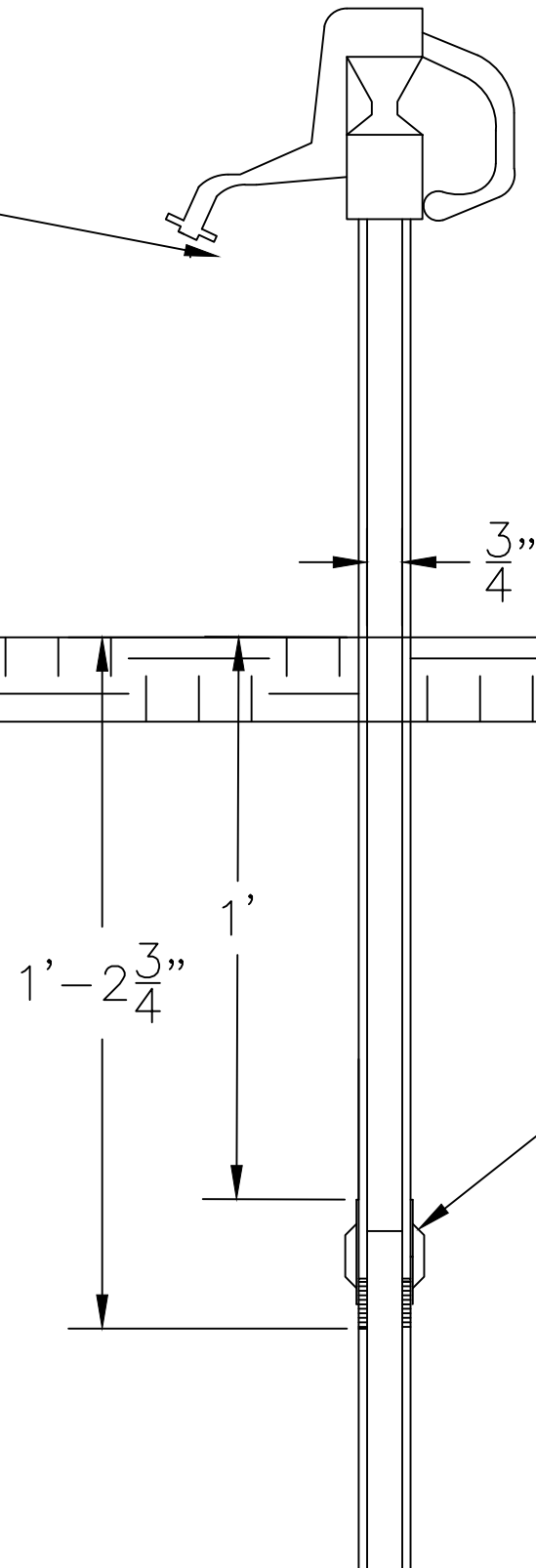
GEN-02



Chiricahua Wastewater Wizards
2112 S. Huffer Ln.
Flagstaff, AZ
86011

GENERAL NOTES:

SPIGOT DRAWING EXISTS ONLY FOR REF.
MERRIL FROST PROOF HYDRANT AFNL7502
SEE MANUFACTURER SPECIFIC DRAWINGS



TOP OF CONNECTION TO POTABLE
MUST EXIST MINIMUM 12" BELOW GROUND
SURFACE

DATE DRWN: 4/22/25

DRWN BY: NHW

CHECKED BY: JKG

PRINT NO: 1

SCALE:



SHEET TITLE:

PTBLE DETAIL

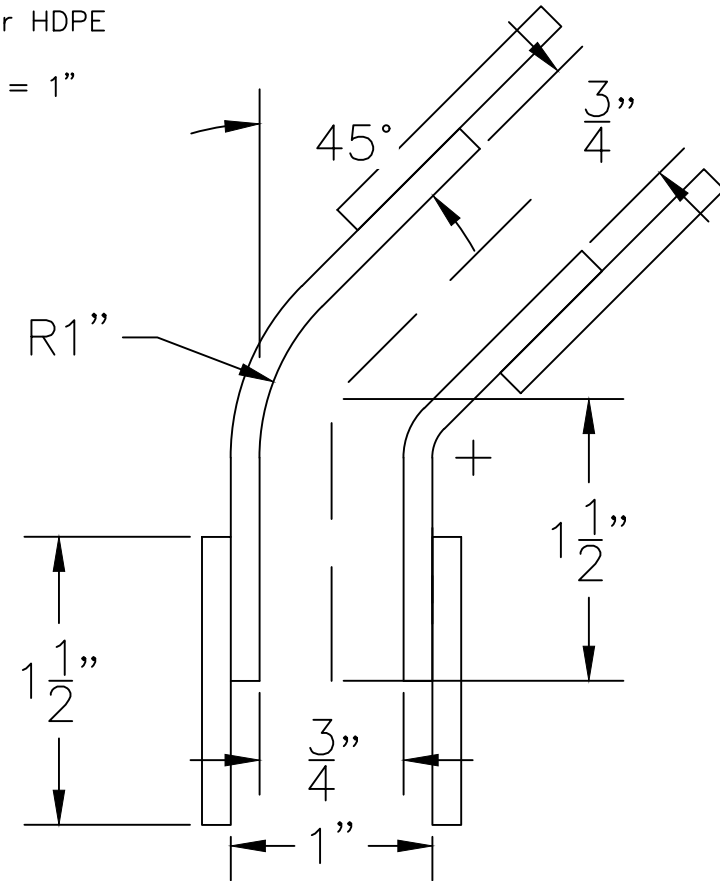
PROJECT INFO:

Pinery Canyon Road
Chiricahua National Monument
Willcox, Arizona
85643

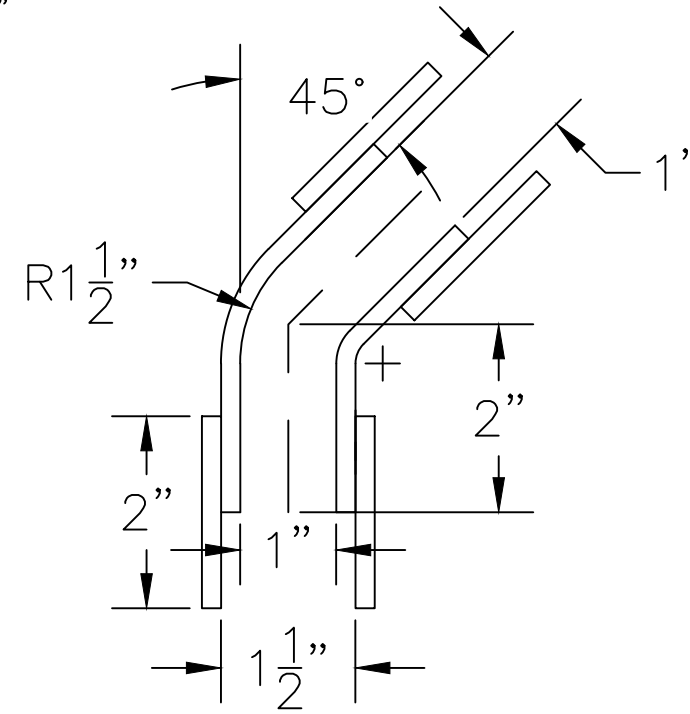
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POTDT-01

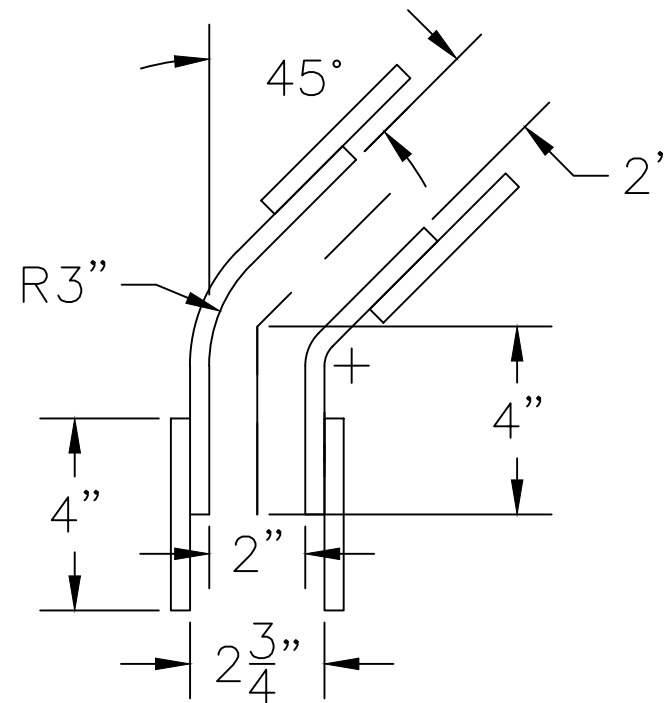
$\frac{3}{4}$ " Diameter HDPE
45° Bend
SCALE: 1" = 1"



1" Diameter HDPE
45° Bend
SCALE: 1" = 2"



2" Diameter HDPE
45° Bend
SCALE: 1" = 4"



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2112 S. Huffer Ln.
Flagstaff, AZ
86011

GENERAL NOTES:

DATE DRWN: 4/22/25

DRWN BY: NHW

CHECKED BY: JKG

PRINT NO: 1

SCALE:



SHEET TITLE:

PTBLE DETAIL

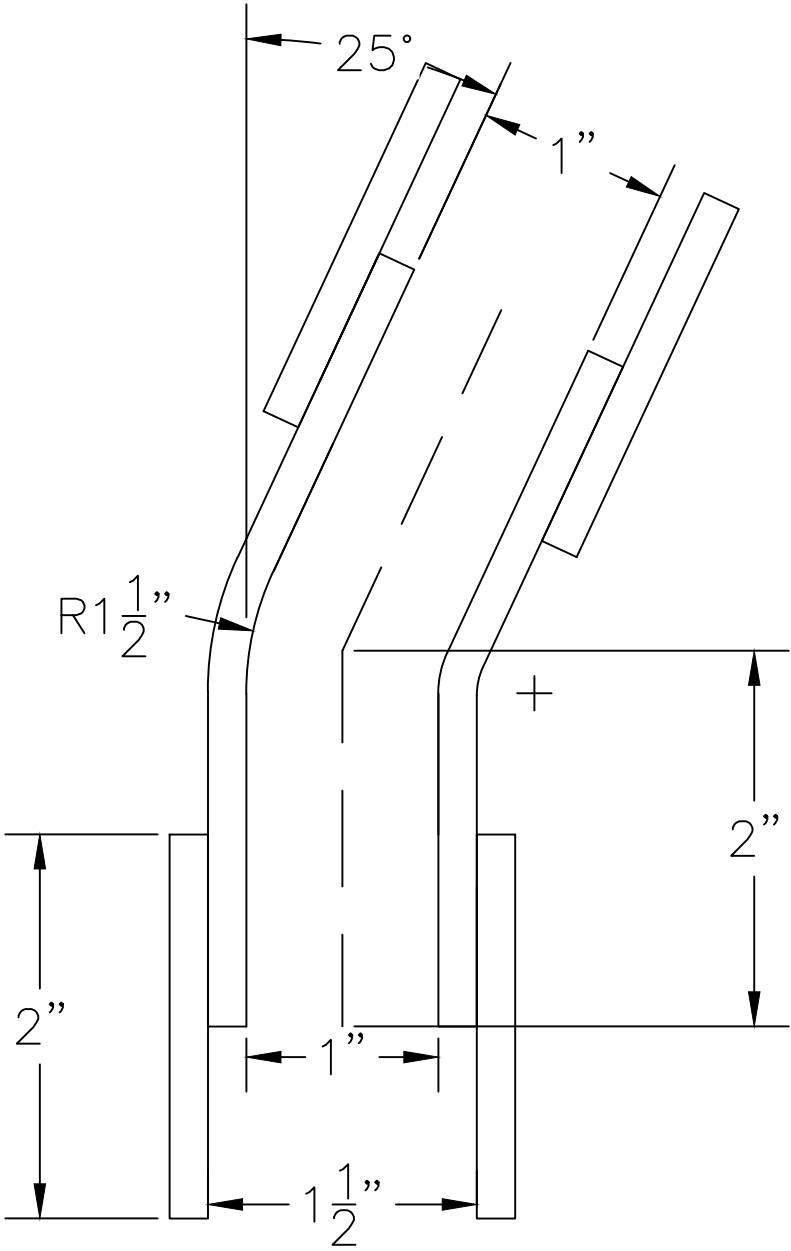
PROJECT INFO:

Pinery Canyon Road
Chiricahua National Monument
Willcox, Arizona
85643

SHEET NUMBER:

POTDT-02

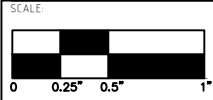
1" Diameter HDPE
25° Bend



Chiricahua Wastewater Wizards
2112 S. Huffer Ln.
Flagstaff, AZ
86011

GENERAL NOTES:

DATE DRWN: 4/22/25
DRWN BY: NHW
CHECKED BY: JKG
PRINT NO: 1



SHEET TITLE:

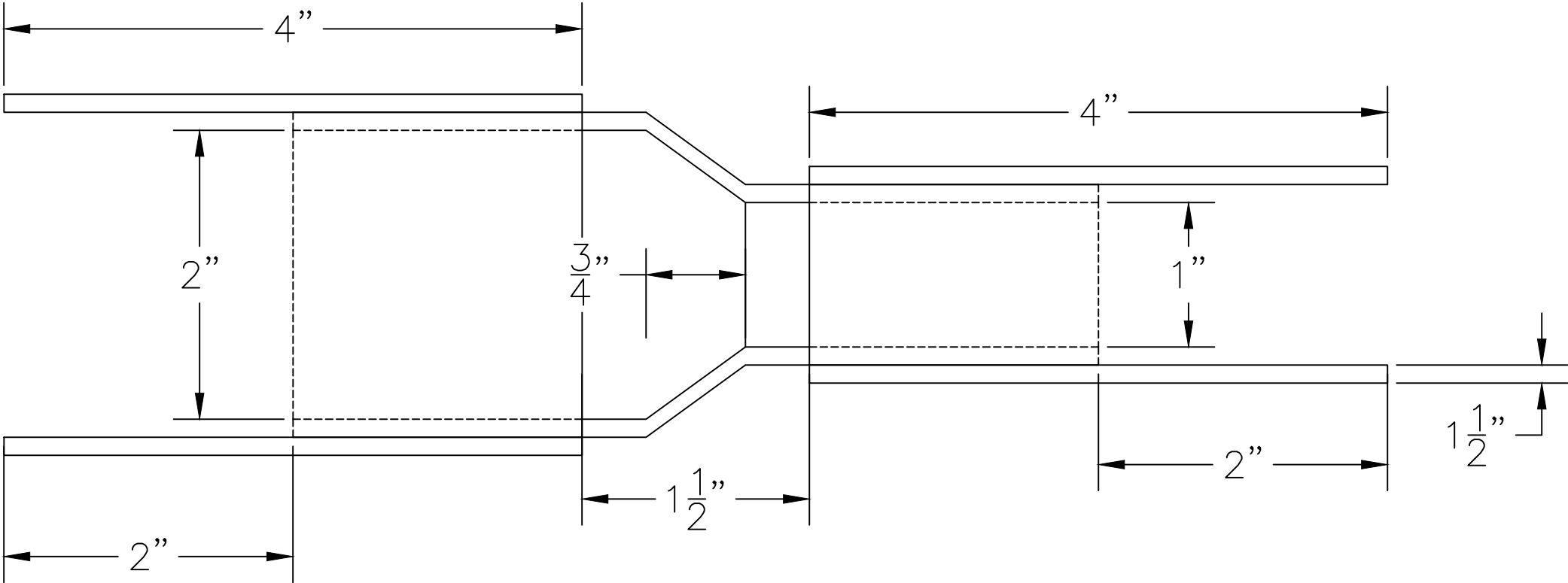
PTBLE DETAIL

PROJECT INFO:
Pinery Canyon Road
Chiricahua National Monument
Willcox, Arizona
85643

SHEET NUMBER:

POTDT-03

2" to 1" Diameter HDPE
REDUCER



Chiricahua Wastewater Wizards
2112 S. Huffer Ln.
Flagstaff, AZ
86011

GENERAL NOTES:

DATE DRWN: 4/22/25

DRWN BY: NHW

CHECKED BY: JKG

PRINT NO: 1

SCALE:



SHEET TITLE:

PTBLE DETAIL

PROJECT INFO:

Pinery Canyon Road
Chiricahua National Monument
Willcox, Arizona
85643

SHEET NUMBER:

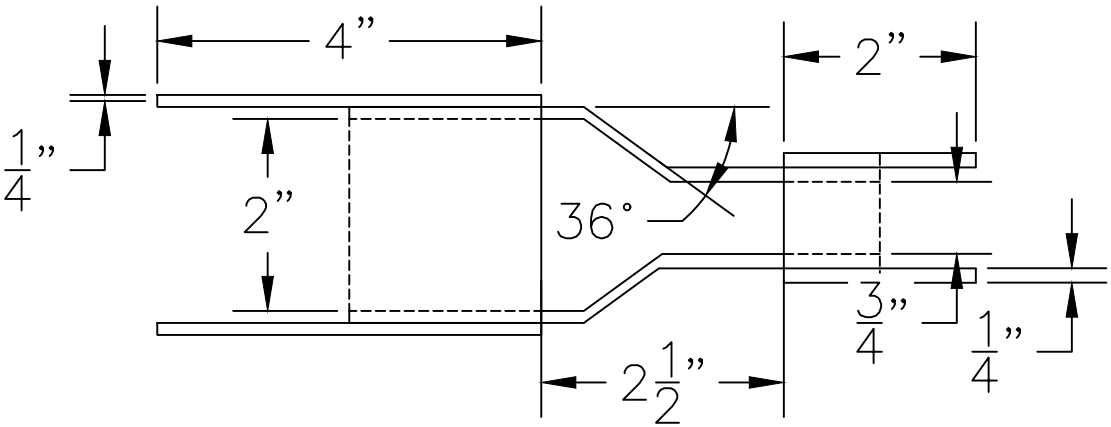
POTDT-04



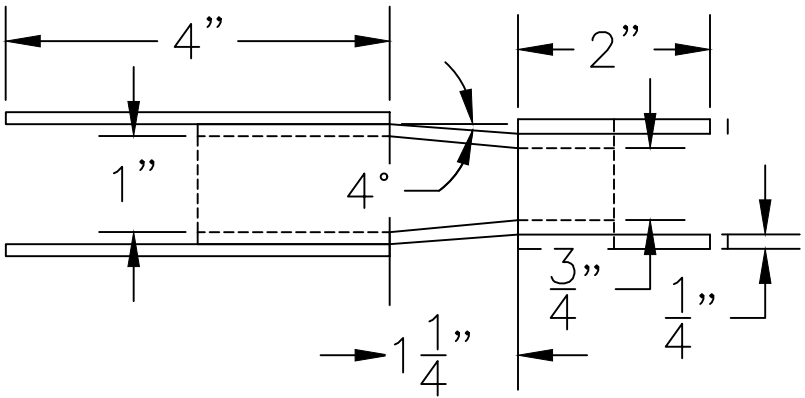
Chiricahua Wastewater Wizards
2112 S. Huffer Ln.
Flagstaff, AZ
86011

GENERAL NOTES:

2" Diameter to $\frac{3}{4}$ " Diameter HDPE
Reducer (for use to trailer only)
SCALE: 1" = 2"



1" Diameter to $\frac{3}{4}$ " Diameter HDPE
Reducer (for use to trailer only)
SCALE: 1" = 2"



DATE DRWN: 4/22/25

DRWN BY: NHW

CHECKED BY: JKG

PRINT NO: 1

SCALE:



SHEET TITLE:

PTBLE DETAIL

PROJECT INFO:

Pinery Canyon Road
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85643

SHEET NUMBER:

POTDT-05



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GENERAL NOTES:

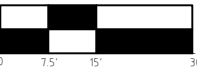
DATE DRWN: 4/22/25

DRWN BY: NHW

CHECKED BY: JKG

PRINT NO: 1

SCALE:



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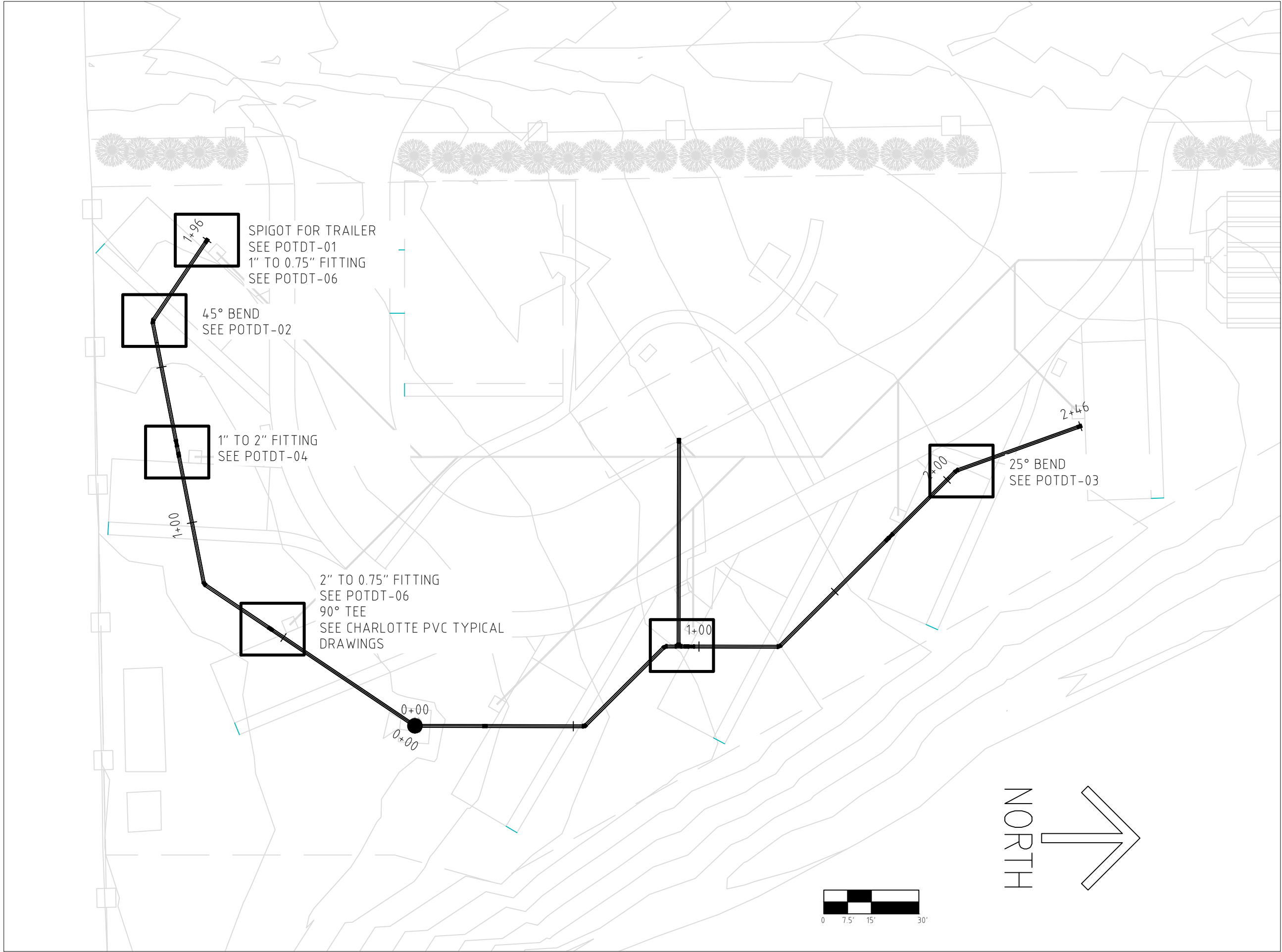
POTABLE SYS

PROJECT INFO:

Pinery Canyon Road
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Willcox, Arizona
85643

SHEET NUMBER:

POT-01





Chiricahua Wastewater Wizards
2112 S. Huffer Ln.
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86011

GENERAL NOTES:

POT-03

SHEET

STA S00+50.00

MATCHLINE

DATE DRWN: 4/22/25

DRWN BY: NHW

CHECKED BY: JKG

PRINT NO: 1

SCALE:



SHEET TITLE:

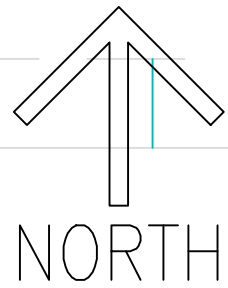
POTABLE SYS

PROJECT INFO:

Pinery Canyon Road
Chiricahua National Monument
Willcox, Arizona
85643

SHEET NUMBER:

POT-02



TRAILER 1

INVERT ELEV: 5142.90'
TOP ELEV: 5144.68'

1+96

1" PVC

90 DEGREE BEND
TO TRAILER

TRAILER 2

45 DEGREE BEND
SEE POTDT-02

1" PVC

2" TO 1" FITTING

INVERT ELEV: 5144.34'
TOP ELEV: 5145.92'

2" DIA 90 DEGREE TEE AND 0.75" DIA TRANSITION
TO TRAILER

2" PVC

1+00

45 DEGREE BEND
SEE POTDT-02

TRAILER 3

INVERT ELEV: 5144.50'
TOP ELEV: 5145.36'

2" 90 DEGREE TEE AND 0.75" DIA TRANSITION
TO TRAILER

2" PVC



Chiricahua Wastewater Wizards
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86011

GENERAL NOTES:

DATE DRWN: 4/22/25

DRWN BY: NHW

CHECKED BY: JKG

PRINT NO: 1

SCALE:



SHEET TITLE:

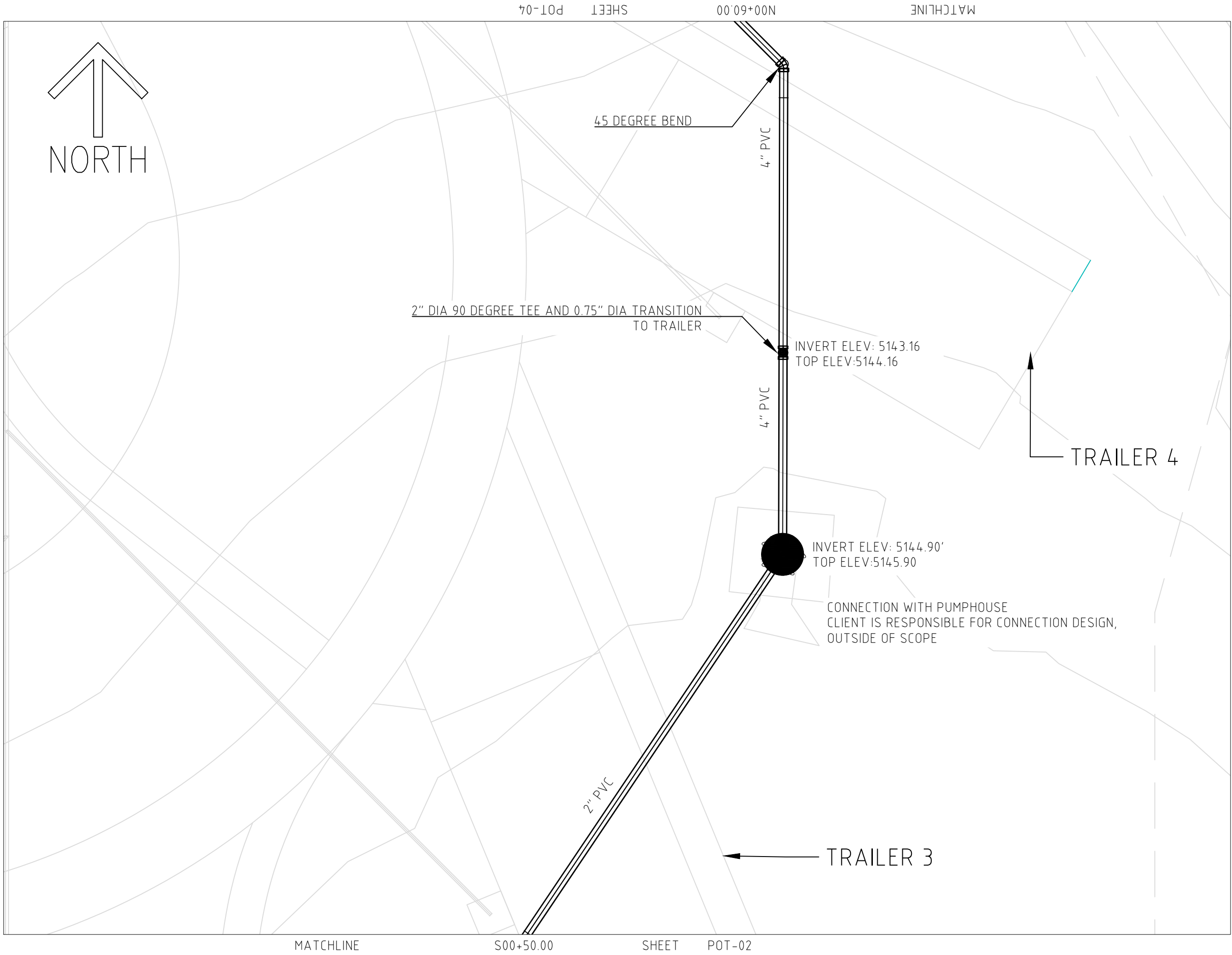
POTABLE SYS

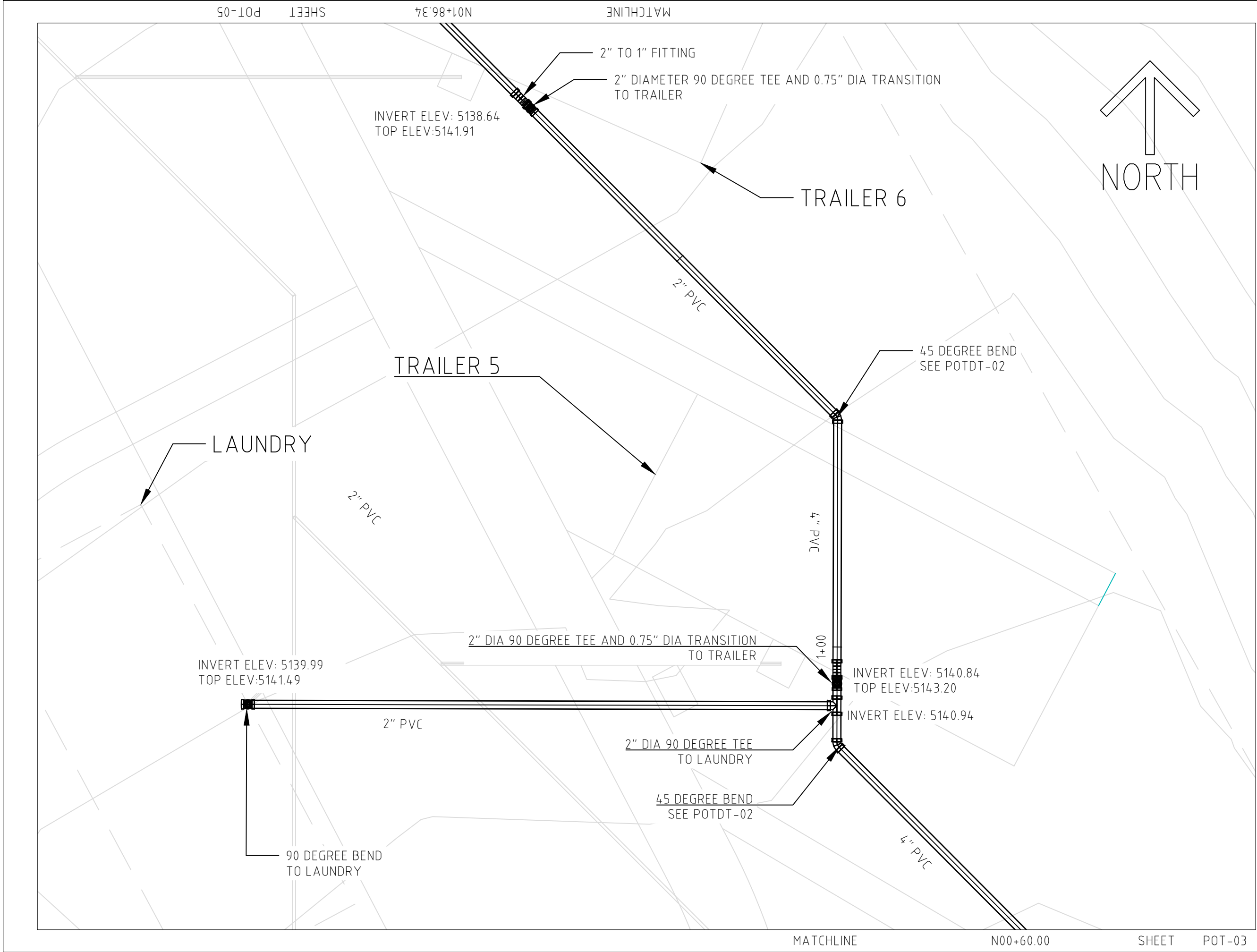
PROJECT INFO:

Pinery Canyon Road
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SHEET NUMBER:

POT-03





Chiricahua Wastewater Wizards
2112 S. Huffer Ln.
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86011

GENERAL NOTES:

DATE DRWN: 4/22/25

DRWN BY: NHW

CHECKED BY: JKG

PRINT NO: 1

SCALE:



SHEET TITLE:

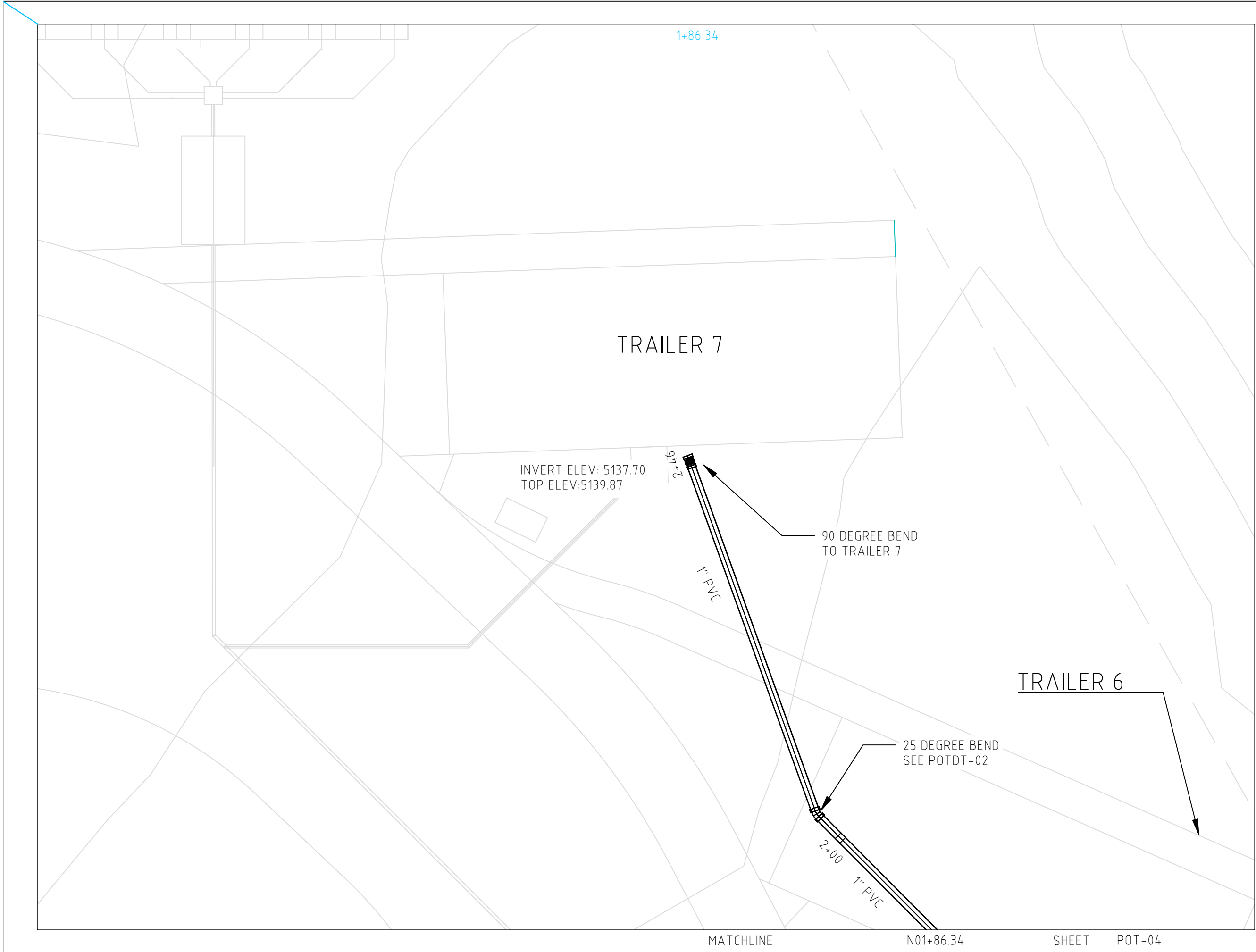
POTABLE SYS

PROJECT INFO:

Pinery Canyon Road
Chiricahua National Monument
Willcox, Arizona
85643

SHEET NUMBER:

POT-04



Chiricahua Wastewater Wizards
2112 S. Huffer Ln.
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86011

GENERAL NOTES:

DATE DRWN: 4/22/25

DRWN BY: NHW

CHECKED BY: JKG

PRINT NO: 1

SCALE:



SHEET TITLE:

POTABLE SYS

PROJECT INFO:

Pinery Canyon Road
Chiricahua National Monument
Willcox, Arizona
85643

SHEET NUMBER:

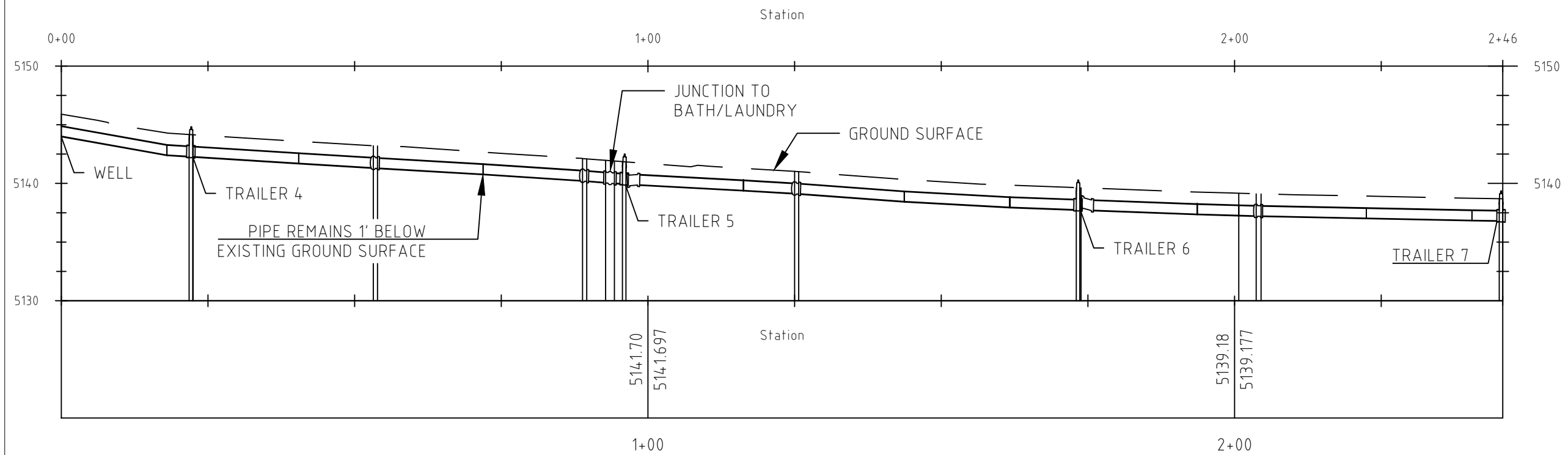
POT-05



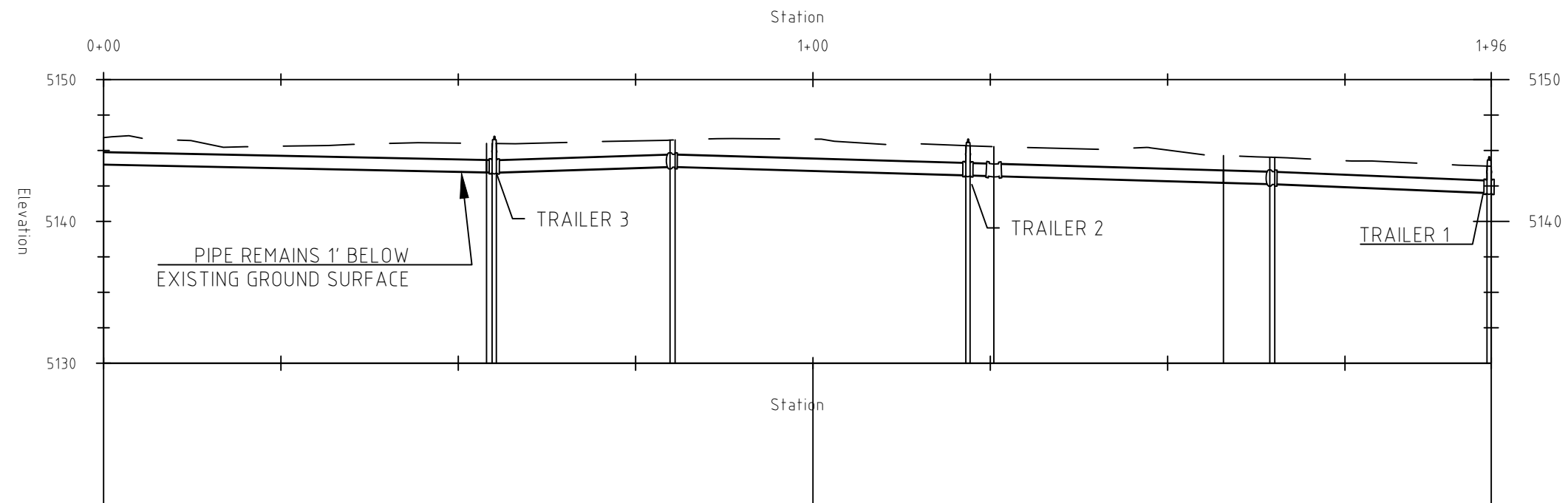
Chiricahua Wastewater Wizards
2112 S. Huffer Ln.
Flagstaff, AZ
86011

GENERAL NOTES:

NORTH POTABLE MAIN PROFILE



SOUTH POTABLE MAIN PROFILE



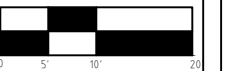
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DRWN BY: NHW

CHECKED BY: JKG

PRINT NO: 1

SCALE:



SHEET TITLE:

PTBLE PLN PRF

PROJECT INFO:

Pinery Canyon Road
Chiricahua National Monument
Willcox, Arizona
85643

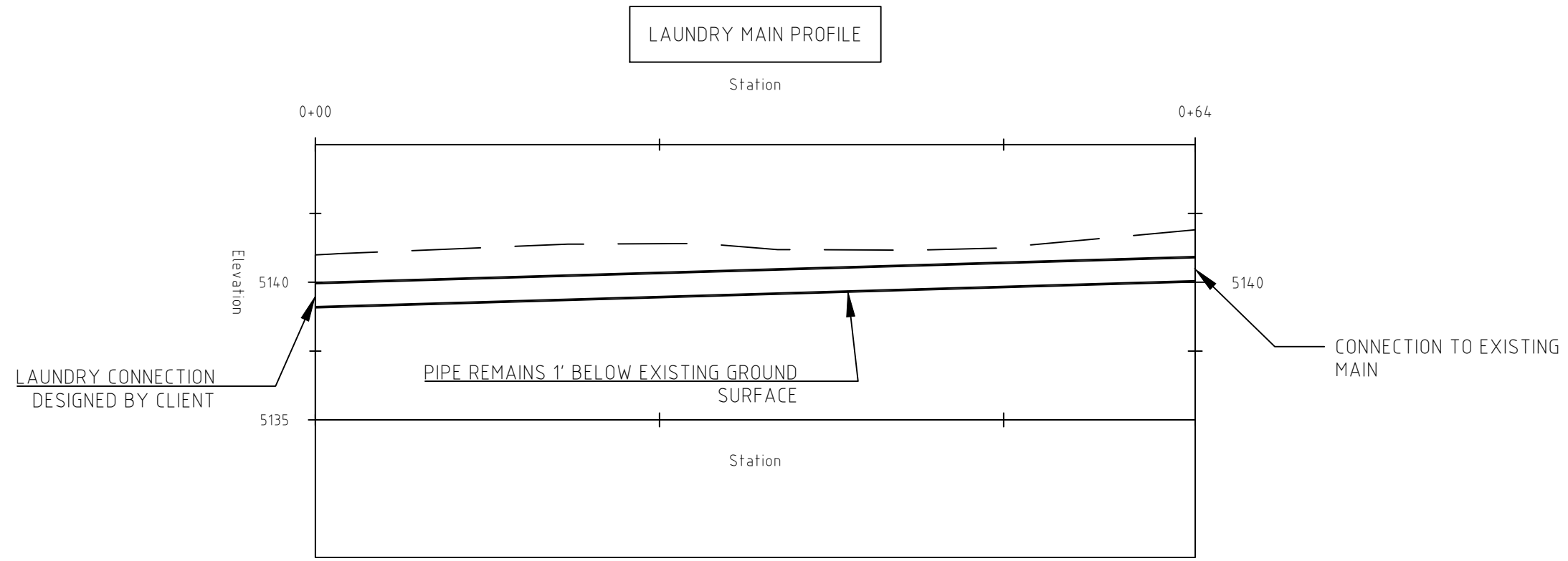
SHEET NUMBER:

POT-06

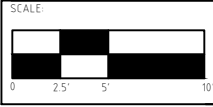


Chiricahua Wastewater Wizards
2112 S. Huffer Ln.
Flagstaff, AZ
86011

GENERAL NOTES:



DATE DRWN:	4/22/25
DRWN BY:	NHW
CHECKED BY:	JKG
PRINT NO:	1



SHEET TITLE:

PTBLE PLN PRF

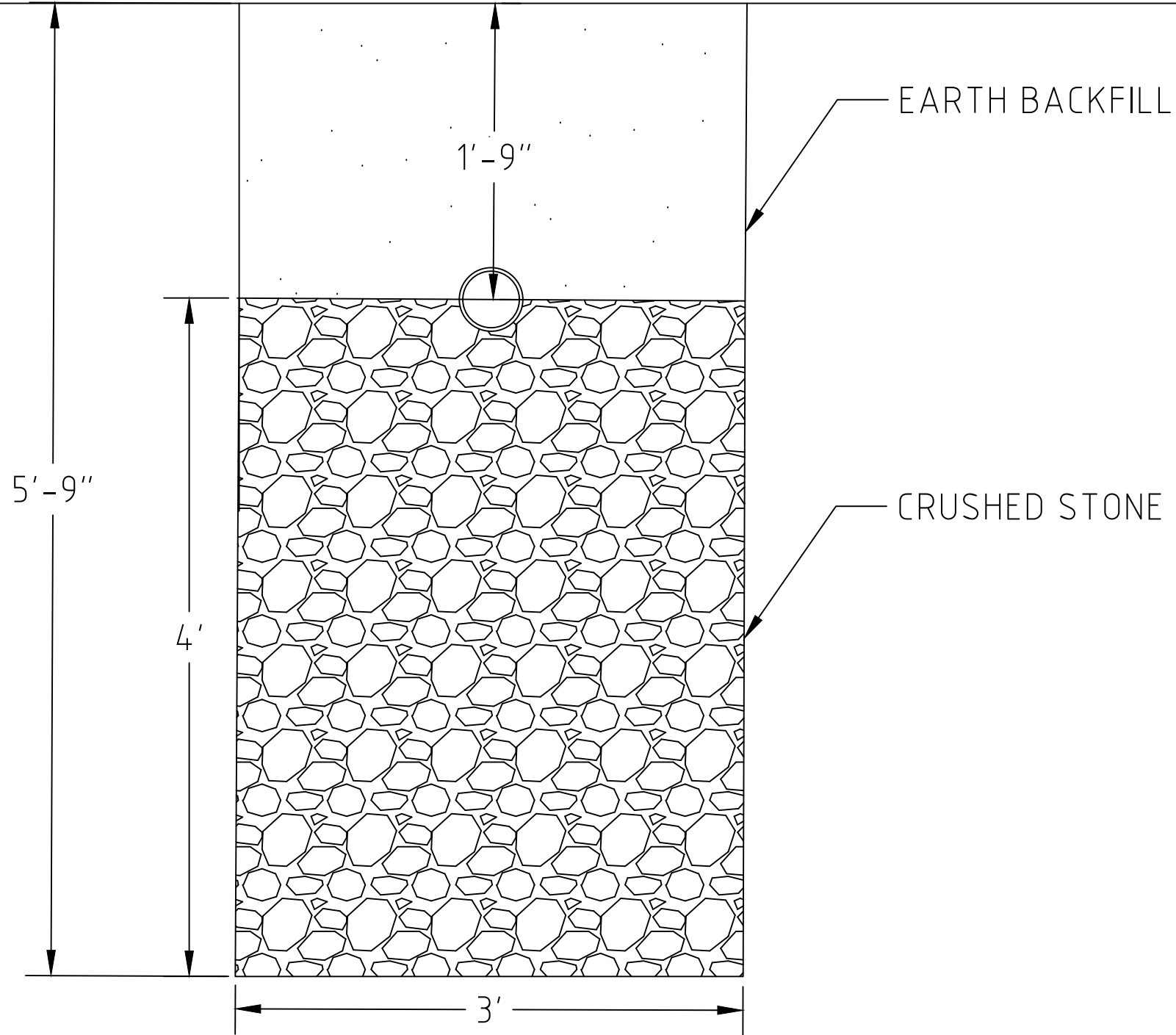
PROJECT INFO:

Pinery Canyon Road
Chiricahua National Monument
Willcox, Arizona
85643

SHEET NUMBER:

POT-07

Leech Field Trench Cross-Section



Chiricahua Wastewater Wizards
2112 S. Huffer Ln.
Flagstaff, AZ
86011

- GENERAL NOTES:
1. All dimensions are typical for all leech fields, only a typical of one trench is shown here.
 2. For cross-section view, see SEPDT-02.
 3. For top view, see SEPDT-06.

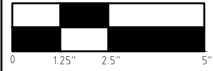
DATE DRWN: 4/16/25

DRWN BY: NHW

CHECKED BY: JPL

PRINT NO: 1

SCALE:



SHEET TITLE:

TRENCH DETAIL

PROJECT INFO:

Pinery Canyon Road
Chiricahua National Monument
Willcox, Arizona
85643

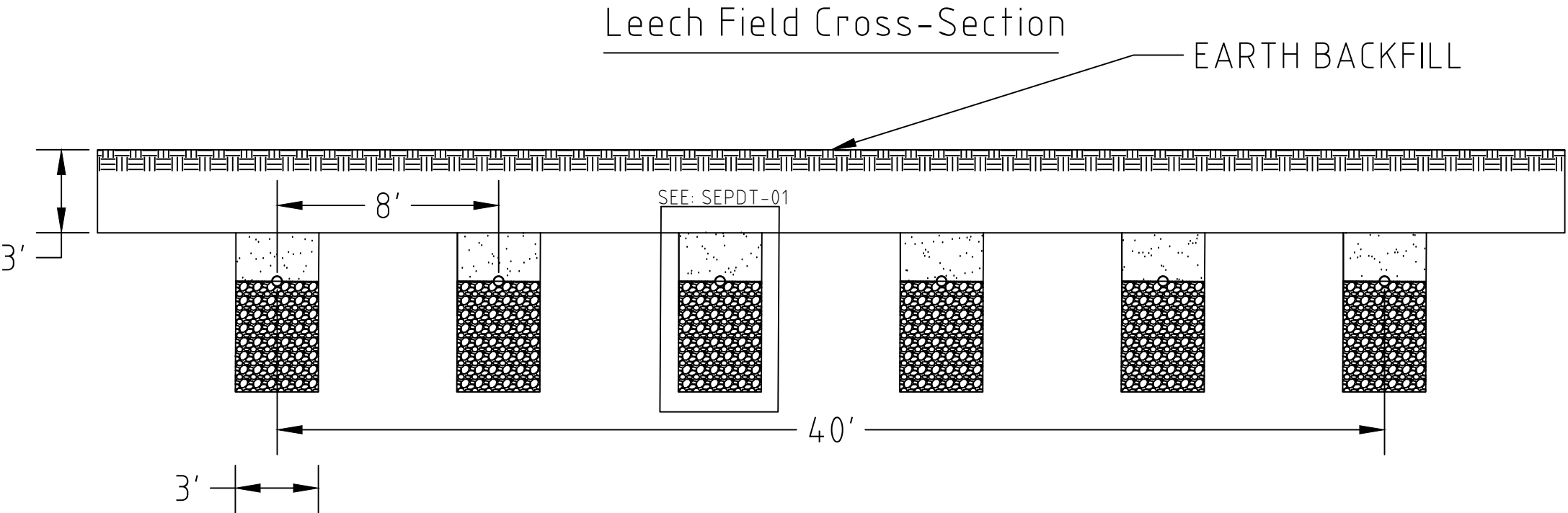
SHEET NUMBER:

SEPDT-01



Chiricahua Wastewater Wizards
2112 S. Huffer Ln.
Flagstaff, AZ
86011

- GENERAL NOTES:
1. All dimensions are typical.
 2. For individual trench dimensions, see SEPDT-01.
 3. For top view, see SEPDT-03.



DATE DRWN: 4/16/25

DRWN BY: NHW

CHECKED BY: JPL

PRINT NO: 1

SCALE:



SHEET TITLE:

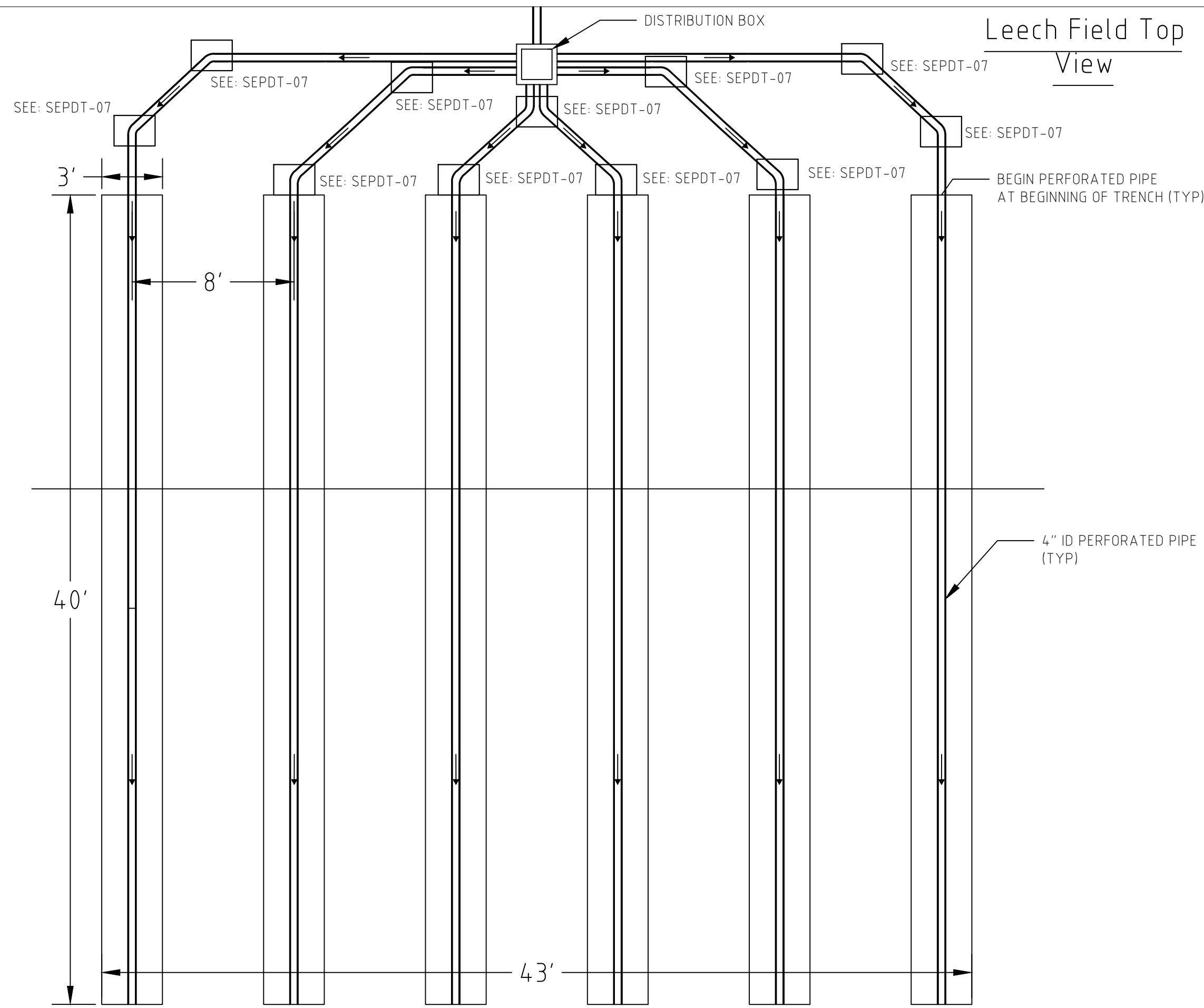
LEACH FIELD XS

PROJECT INFO:

Pinery Canyon Road
Chiricahua National Monument
Willcox, Arizona
85643

SHEET NUMBER:

SEPDT-02



Chiricahua Wastewater Wizards
2112 S. Huffer Ln.
Flagstaff, AZ
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- GENERAL NOTES:
1. All dimensions are typical.
 2. For individual trench cross-section, see SEPDT-01.
 3. For entire trench cross-section, see SEPDT-02.
 4. For 45 degree corner details, see sheet SEPDT-07.
 5. All pipes 4" HDPE unless otherwise noted.
 6. All pipes within trenches are 4" perforated distribution pipes.

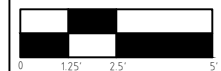
DATE DRWN: 4/16/25

DRWN BY: NHW

CHECKED BY: JPL

PRINT NO:

SCALE:



SHEET TITLE:

LEACH FLD TOP

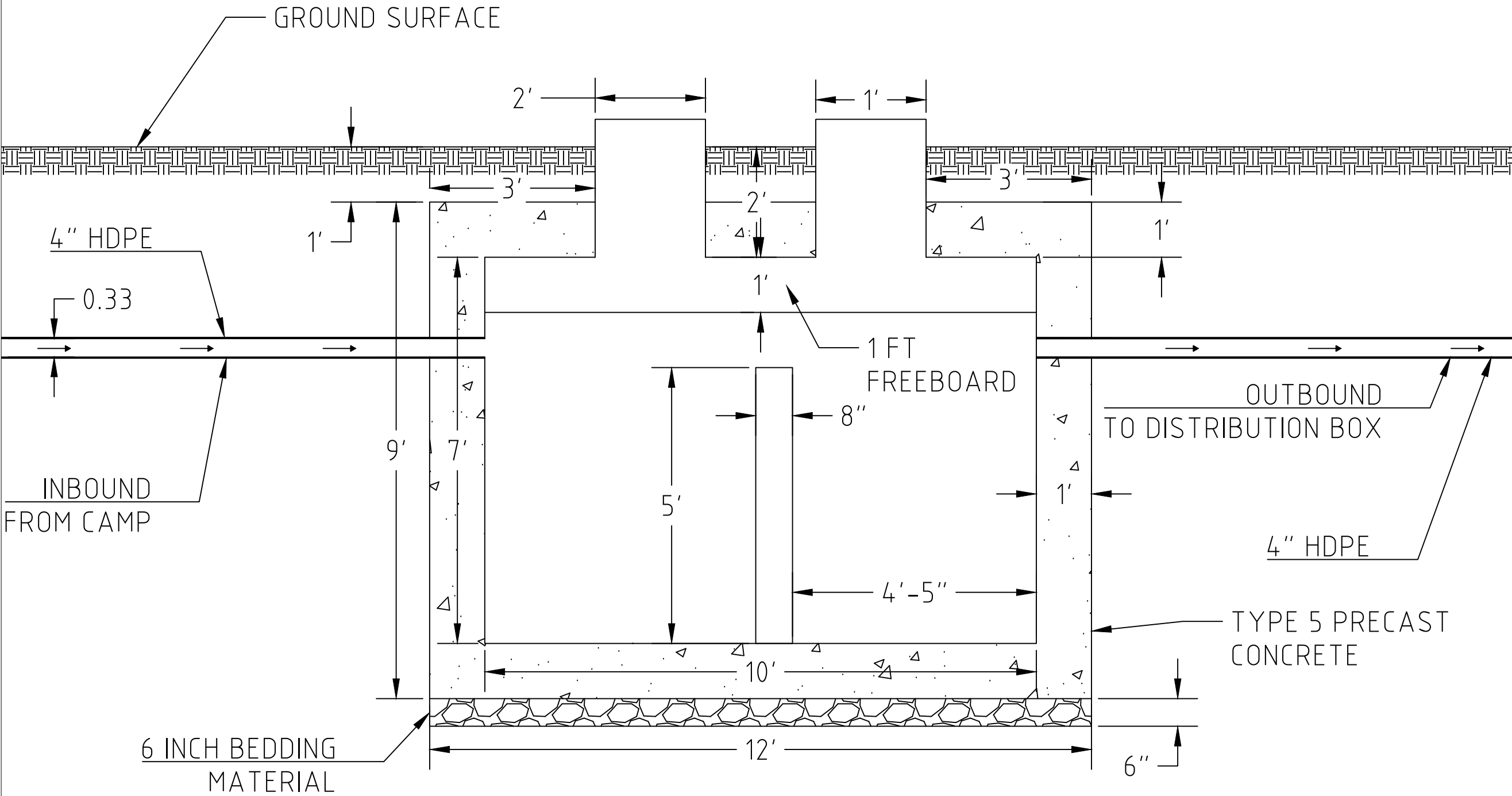
PROJECT INFO:

Pinery Canyon Road
Chiricahua National Monument
Willcox, Arizona
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SHEET NUMBER:

SEPDT-03

SEPTIC TANK CROSS SECTION



Chiricahua Wastewater Wizards
2112 S. Huffer Ln.
Flagstaff, AZ
86011

- GENERAL NOTES:
1. All dimensions are typical.
 2. For top view, see SEPDT-05.

DATE DRWN: 4/16/25

DRWN BY: NHW

CHECKED BY: JPL

PRINT NO: 1

SCALE:



SHEET TITLE:

SEPTIC TANK XS

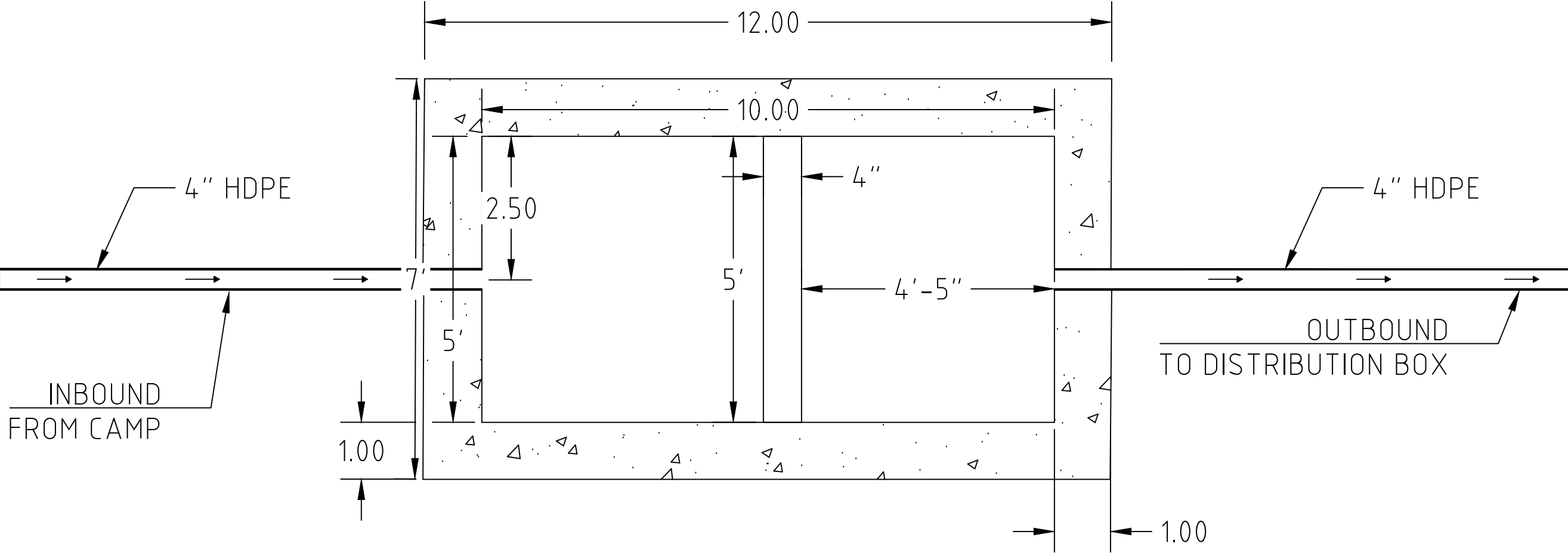
PROJECT INFO:

Pinery Canyon Road
Chiricahua National Monument
Willcox, Arizona
85643

SHEET NUMBER:

SEPDT-04

SEPTIC TANK TOP VIEW



Chiricahua Wastewater Wizards
2112 S. Huffer Ln.
Flagstaff, AZ
86011

- GENERAL NOTES:
1. All dimensions are typical.
 2. For cross-sectional view, see SEPDT-04.

DATE DRWN:	4/14/25
DRWN BY:	NHW
CHECKED BY:	JPL
PRINT NO:	1



SHEET TITLE:

SEPTIC TOP

PROJECT INFO:

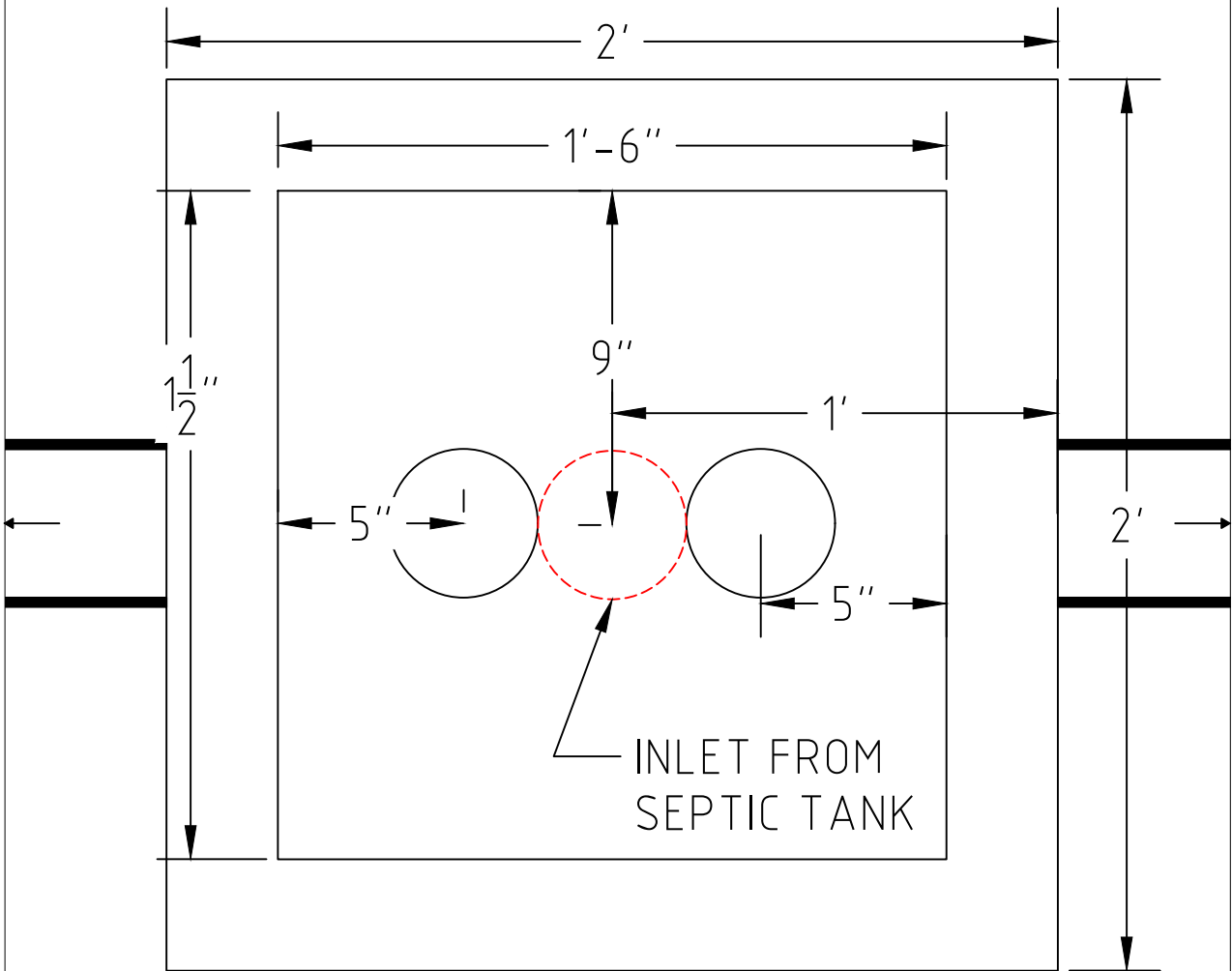
Pinery Canyon Road
Chiricahua National Monument
Willcox, Arizona
85643

SHEET NUMBER:

SEPDT-05

DISTRIBUTION TANK SIDE VIEW

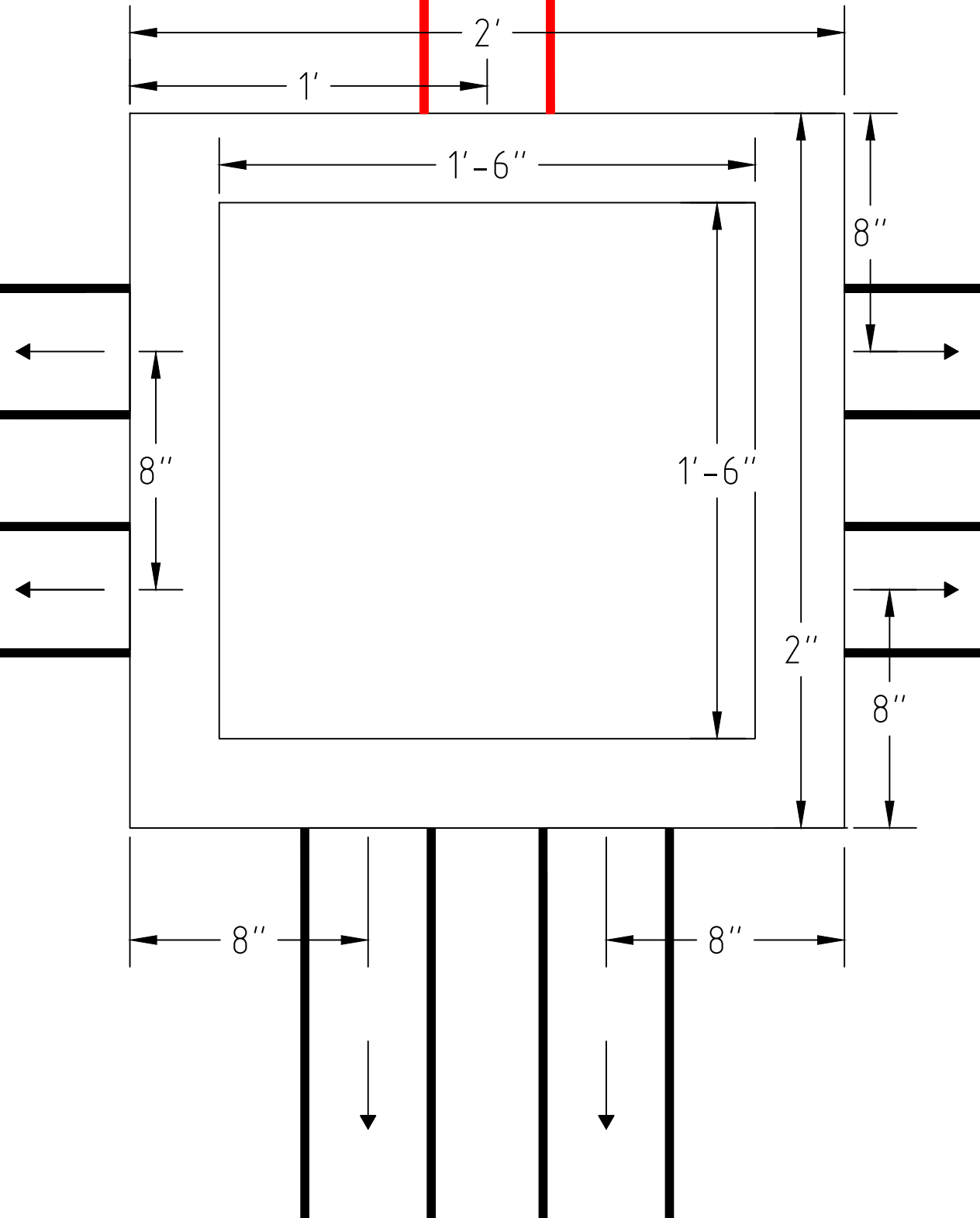
ALL PIPES ARE 4" HDPE



DISTRIBUTION TANK TOP VIEW

ALL PIPES ARE 4" HDPE

SEPTIC TANK



Chiricahua Wastewater Wizards
2112 S. Huffer Ln.
Flagstaff, AZ
86011

- GENERAL NOTES:
1. All dimensions are typical.
 2. Unless noted otherwise, all pipes connect to individual trenches in the leach field.
 3. All pipes are 4" HDPE.

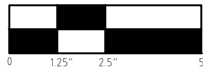
DATE DRWN: 4/14/25

DRWN BY: NHW

CHECKED BY: JPL

PRINT NO: 1

SCALE:



SHEET TITLE:

DISTRIB TANK

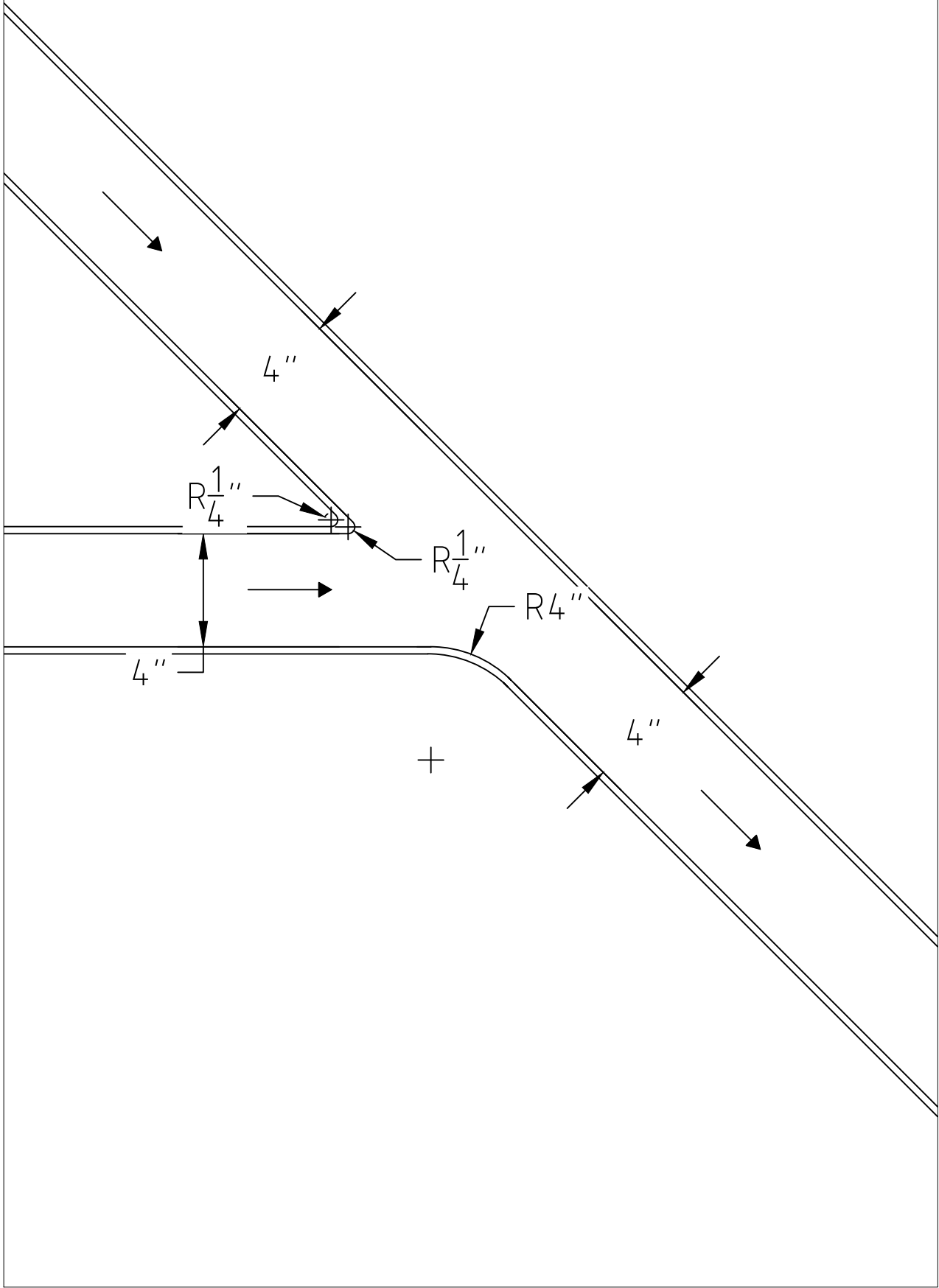
PROJECT INFO:

Pinery Canyon Road
Chiricahua National Monument
Willcox, Arizona
85643

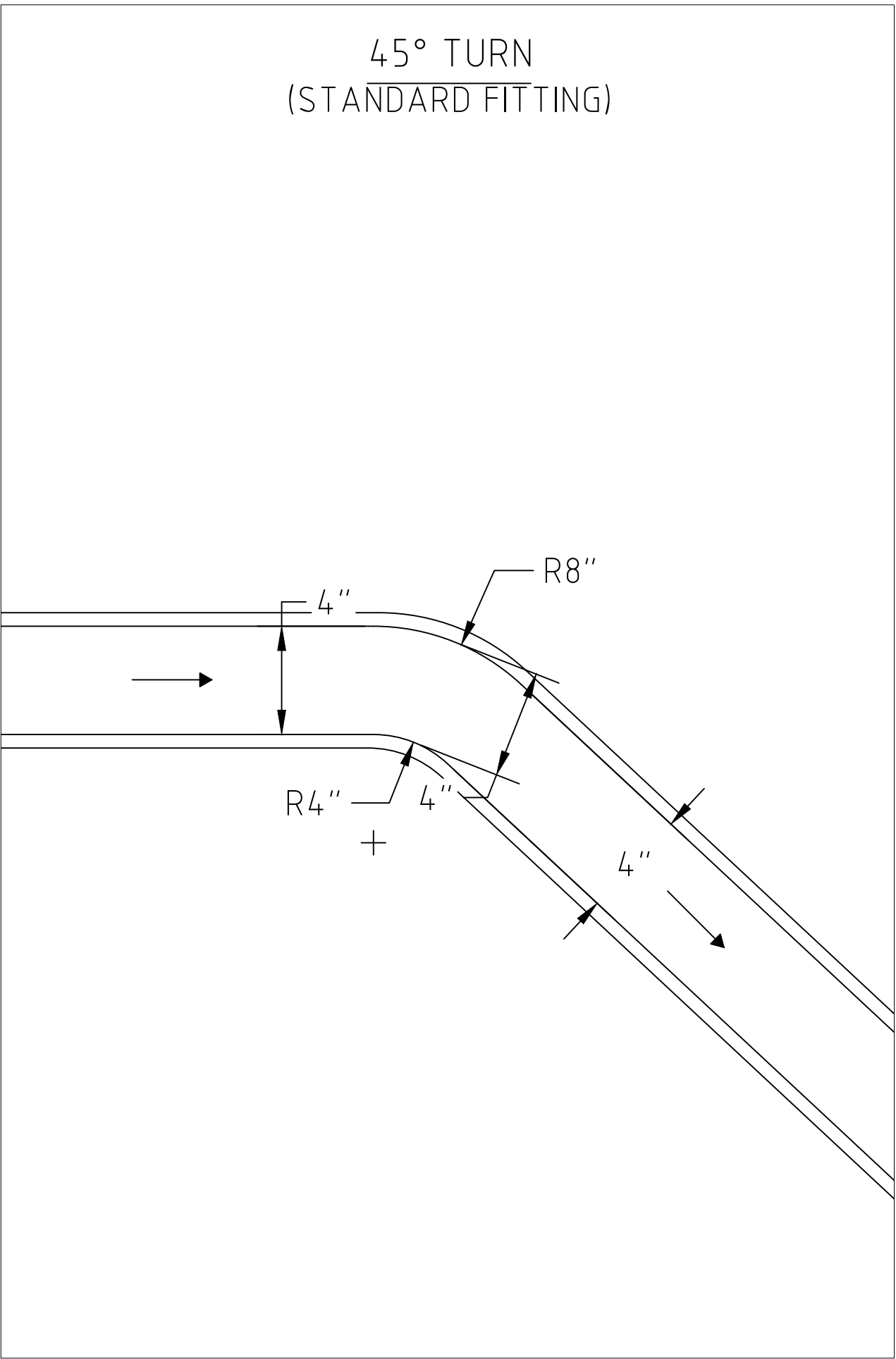
SHEET NUMBER:

SEPDT-06

45° WYE JUNCTION
(STANDARD FITTING)



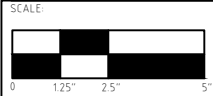
45° TURN
(STANDARD FITTING)



Chiricahua Wastewater Wizards
2112 S. Huffer Ln.
Flagstaff, AZ
86011

GENERAL NOTES:

DATE DRWN:	4/16/25
DRWN BY:	NHW
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PRINT NO:	1

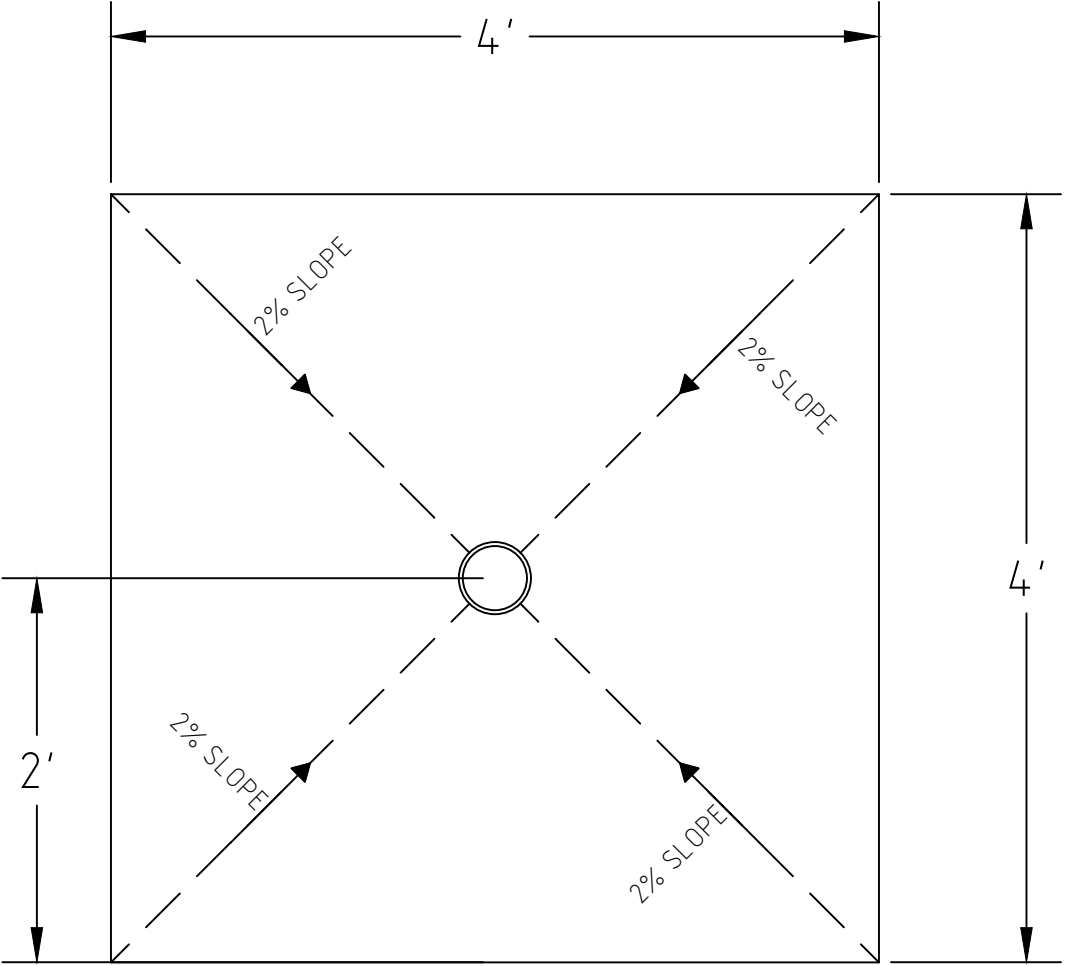


SHEET TITLE:
PIPE DETAILS

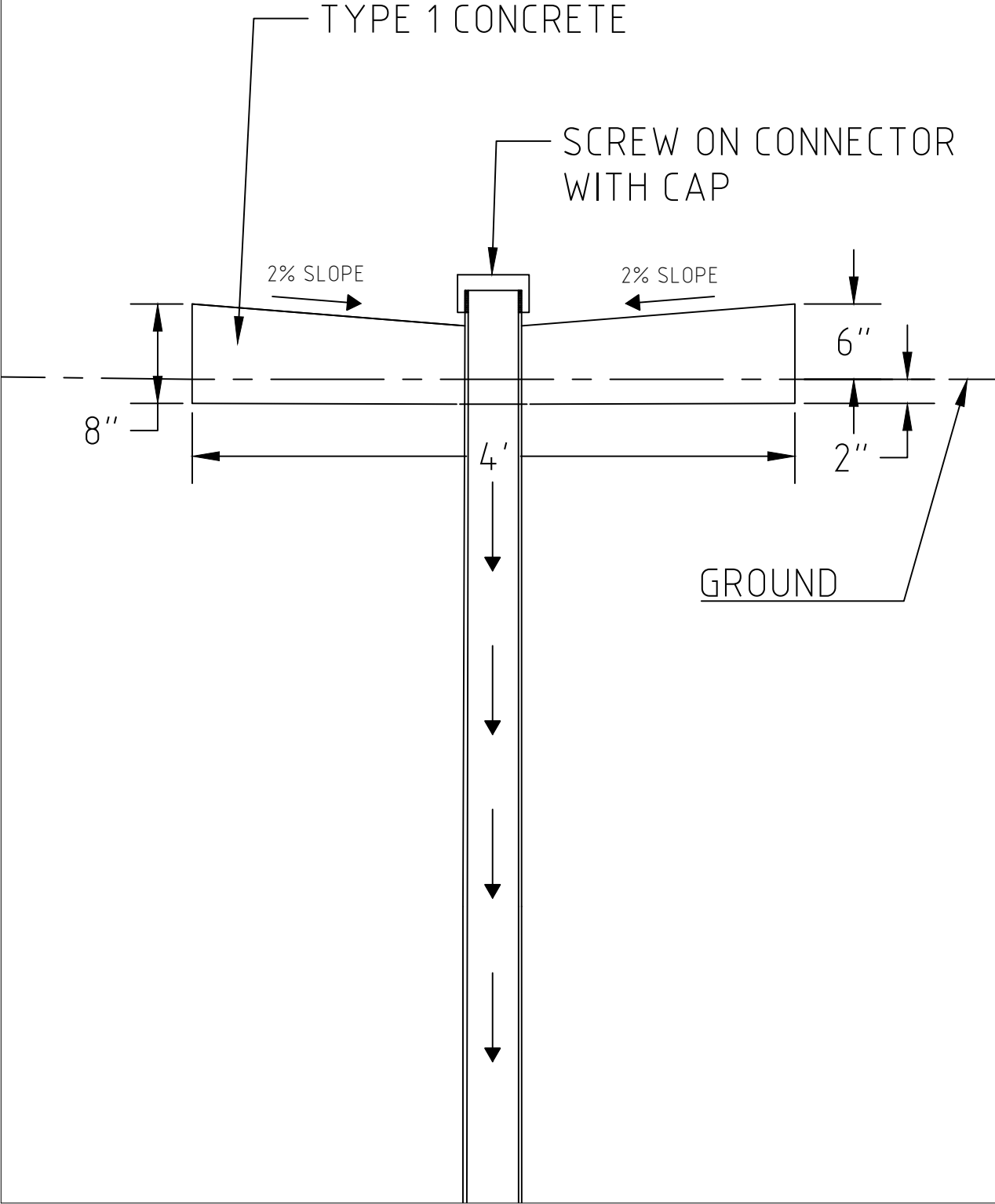
PROJECT INFO:
Pinery Canyon Road
Chiricahua National Monument
Willcox, Arizona
85643

SHEET NUMBER:
SEPDT-07

SEPTIC HOOKUP - TOP



SEPTIC HOOKUP - SIDE



Chiricahua Wastewater Wizards
2112 S. Huffer Ln.
Flagstaff, AZ
86011

GENERAL NOTES:

DATE DRWN:	4/16/25
DRWN BY:	NHW
CHECKED BY:	JPL
PRINT NO:	1

SCALE:
0 0.25' 0.5' 1'

SHEET TITLE:
HOOKUP DETAIL

PROJECT INFO:
Pinery Canyon Road
Chiricahua National Monument
Willcox, Arizona
85643

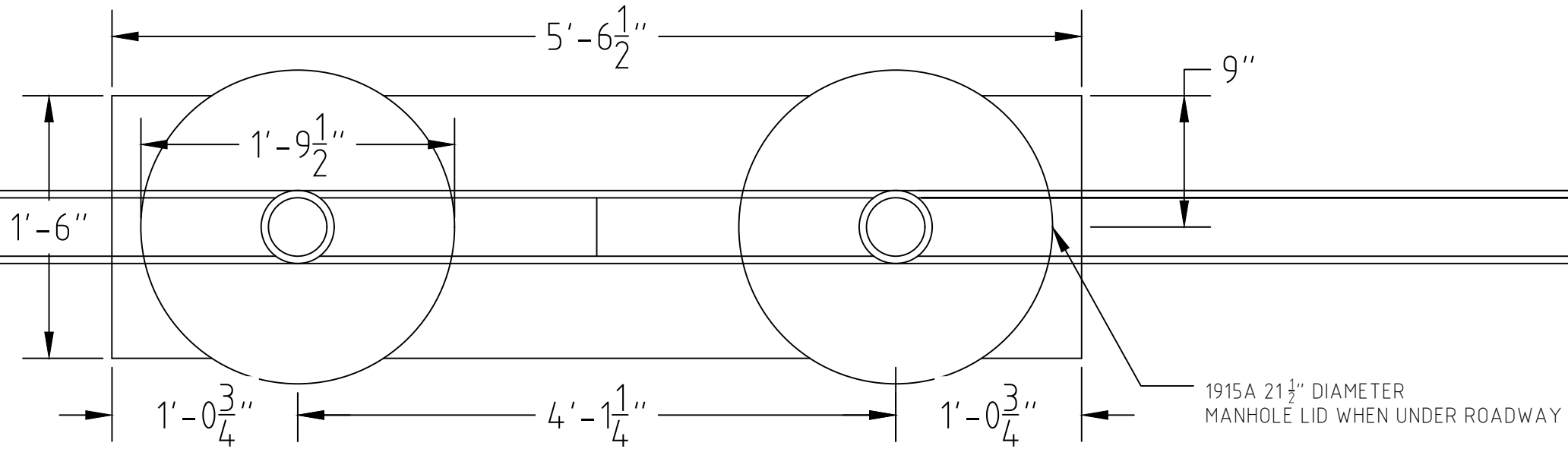
SHEET NUMBER:
SEPDT-08



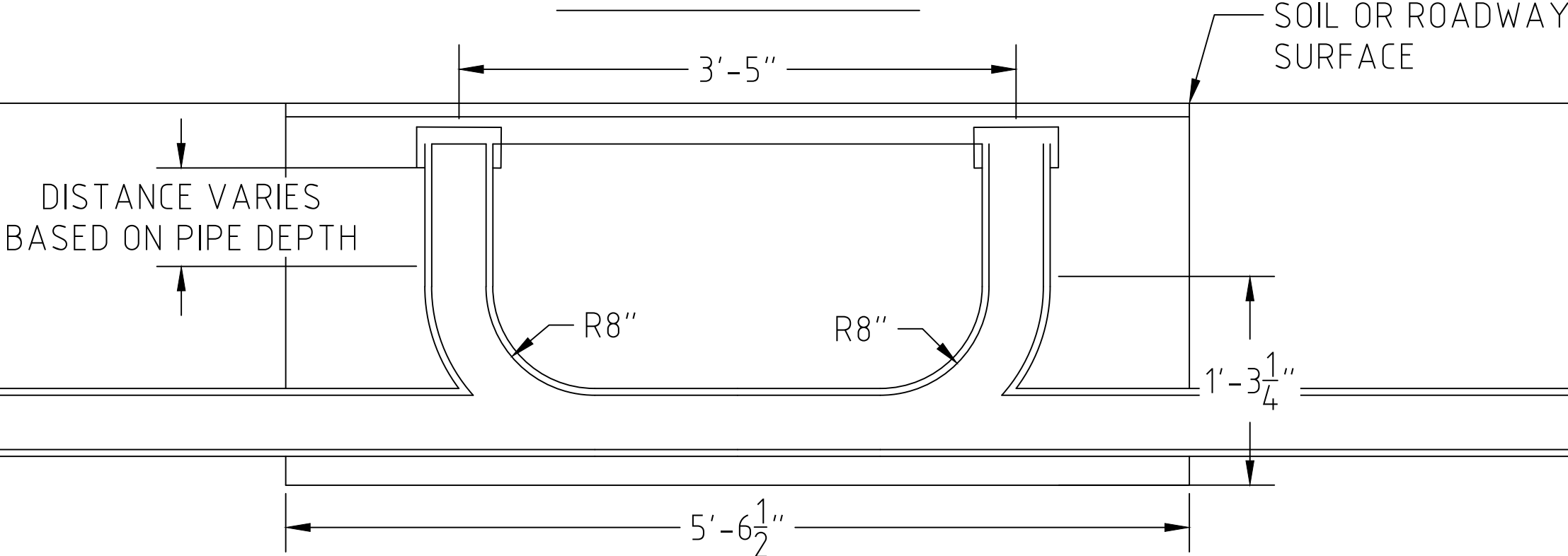
Chiricahua Wastewater Wizards
2112 S. Huffer Ln.
Flagstaff, AZ
86011

GENERAL NOTES:

CLEANOUT TOP VIEW



CLEANOUT SIDE VIEW



DATE DRWN: 4/16/25

DRWN BY: NHW

CHECKED BY: JPL

PRINT NO: 1

SCALE:



SHEET TITLE:

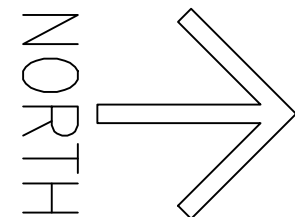
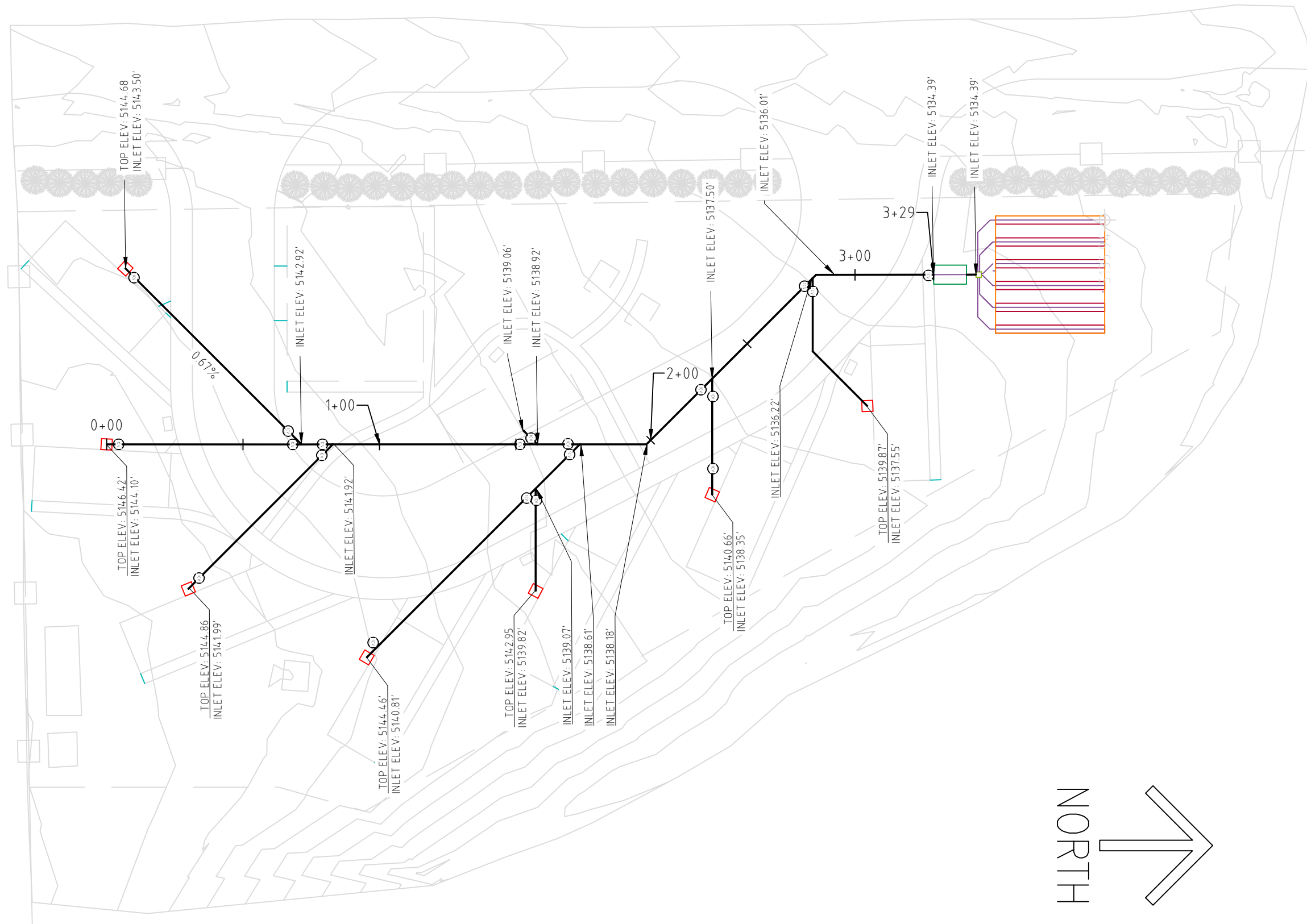
CLNOUT DETAIL

PROJECT INFO:

Pinery Canyon Road
Chiricahua National Monument
Willcox, Arizona
85643

SHEET NUMBER:

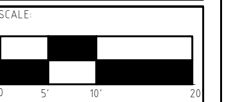
SEPDT-09



Chiricahua Wastewater Wizards
2112 S. Huffer Ln.
Flagstaff, AZ
86011

GENERAL NOTES:

DATE DRWN:	4/15/25
DRWN BY:	NHW
CHECKED BY:	JPL
PRINT NO:	1



SHEET TITLE:
SEPTIC SYS

PROJECT INFO:
Pinery Canyon Road
Chiricahua National Monument
Willcox, Arizona
85643

SHEET NUMBER:
SEP-01



Chiricahua Wastewater Wizards
2112 S. Huffer Ln.
Flagstaff, AZ
86011

GENERAL NOTES:

SEP-03
SHEET
STA 2+00.00
MATCHLINE

DATE DRWN: 4/15/25

DRWN BY: NHW

CHECKED BY: JPL

PRINT NO: 1

SCALE:



SHEET TITLE:

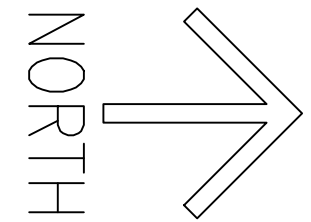
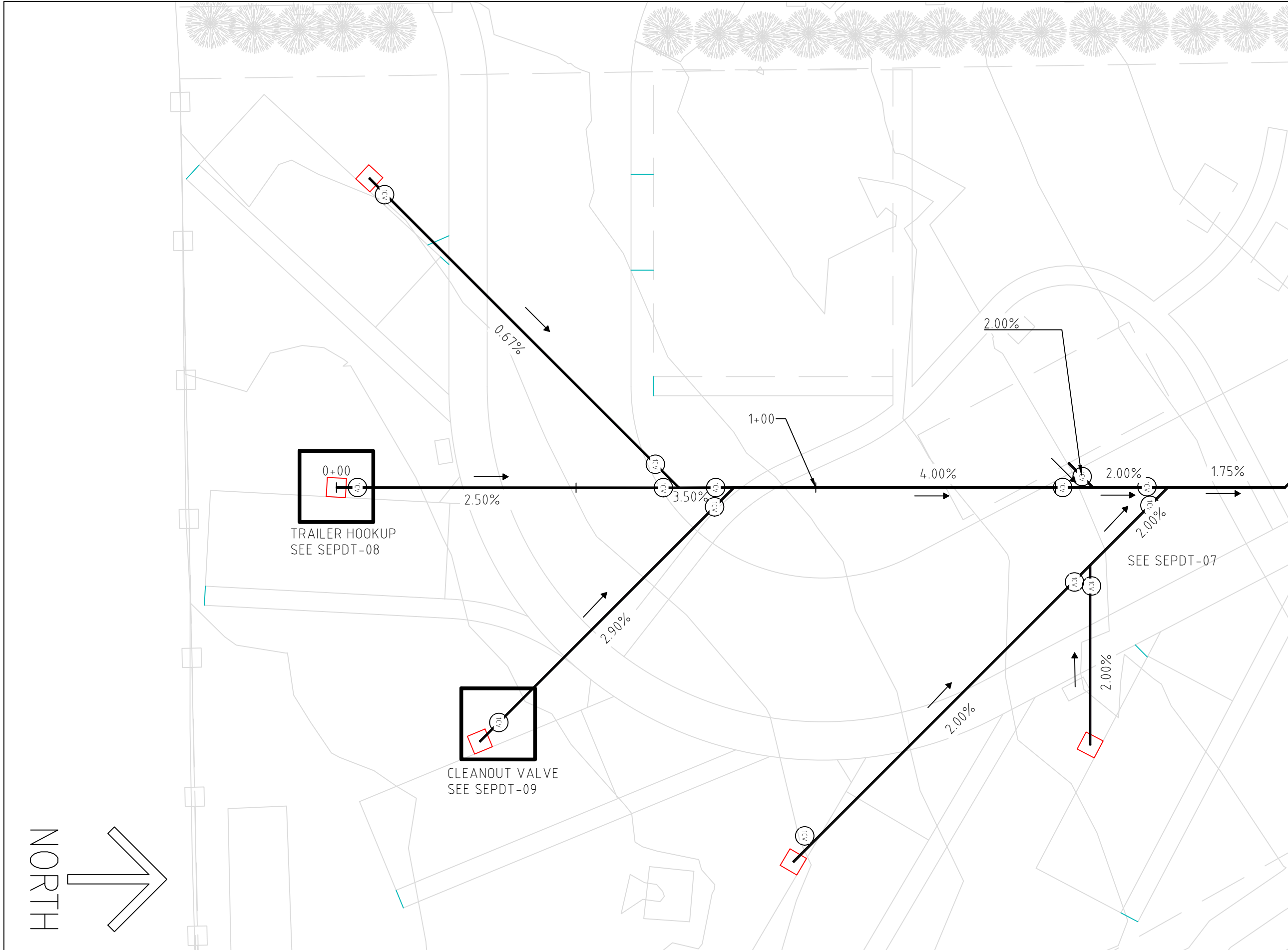
SEPTIC SYS

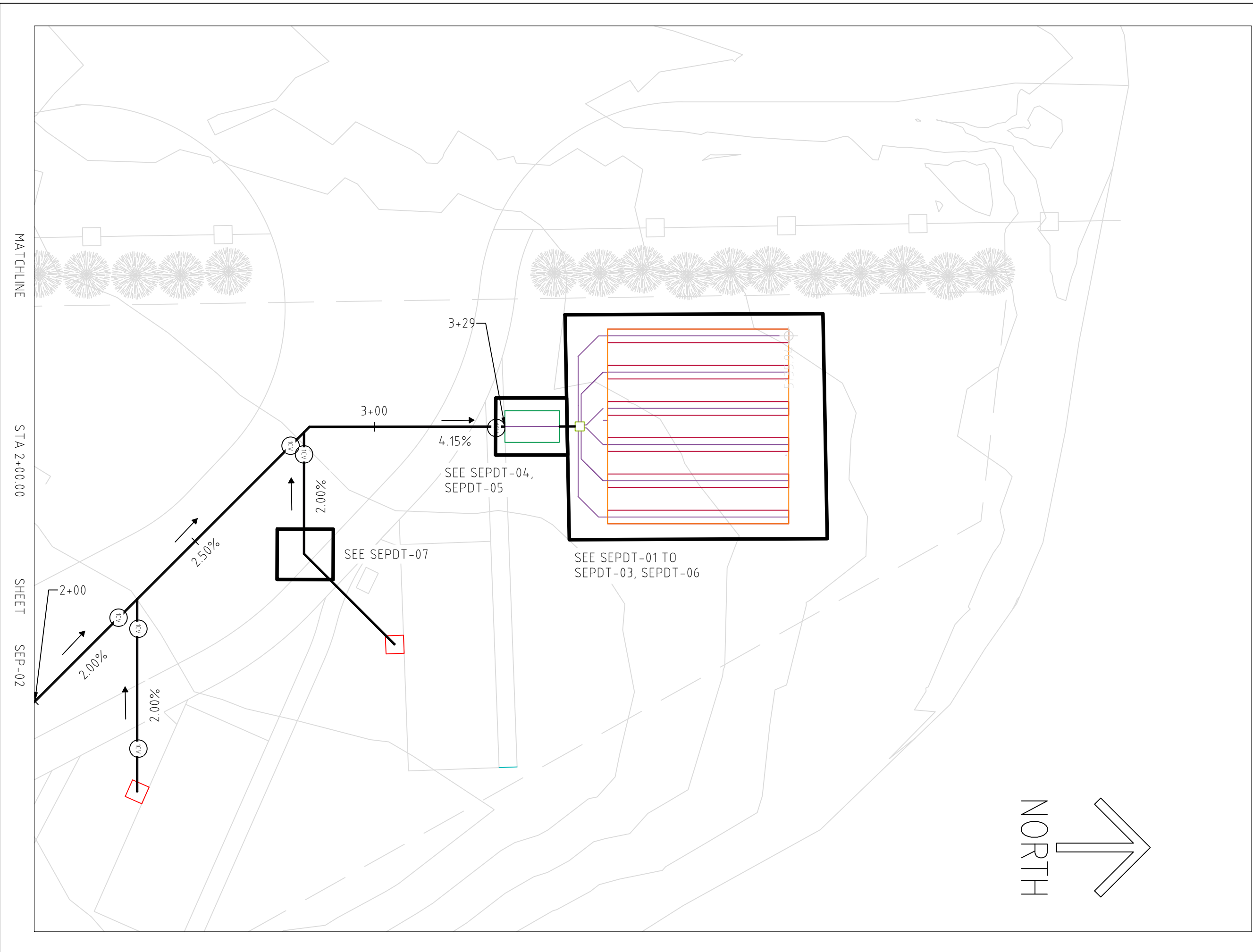
PROJECT INFO:

Pinery Canyon Road
Chiricahua National Monument
Willcox, Arizona
85643

SHEET NUMBER:

SEP-02





Chiricahua Wastewater Wizards
2112 S. Huffer Ln.
Flagstaff, AZ
86011

GENERAL NOTES:

DATE DRWN:	4/15/25
DRWN BY:	NHW
CHECKED BY:	JPL
PRINT NO:	1



SHEET TITLE:

SEPTIC SYS

PROJECT INFO:

Pinery Canyon Road
Chiricahua National Monument
Willcox, Arizona
85643

SHEET NUMBER:

SEP-03



Chiricahua Wastewater Wizards
2112 S. Huffer Ln.
Flagstaff, AZ
86011

GENERAL NOTES:

DATE DRWN: 4/15/25

DRWN BY: NHW

CHECKED BY: JPL

PRINT NO: 1

SCALE:



SHEET TITLE:

SEPTIC PLN PRF

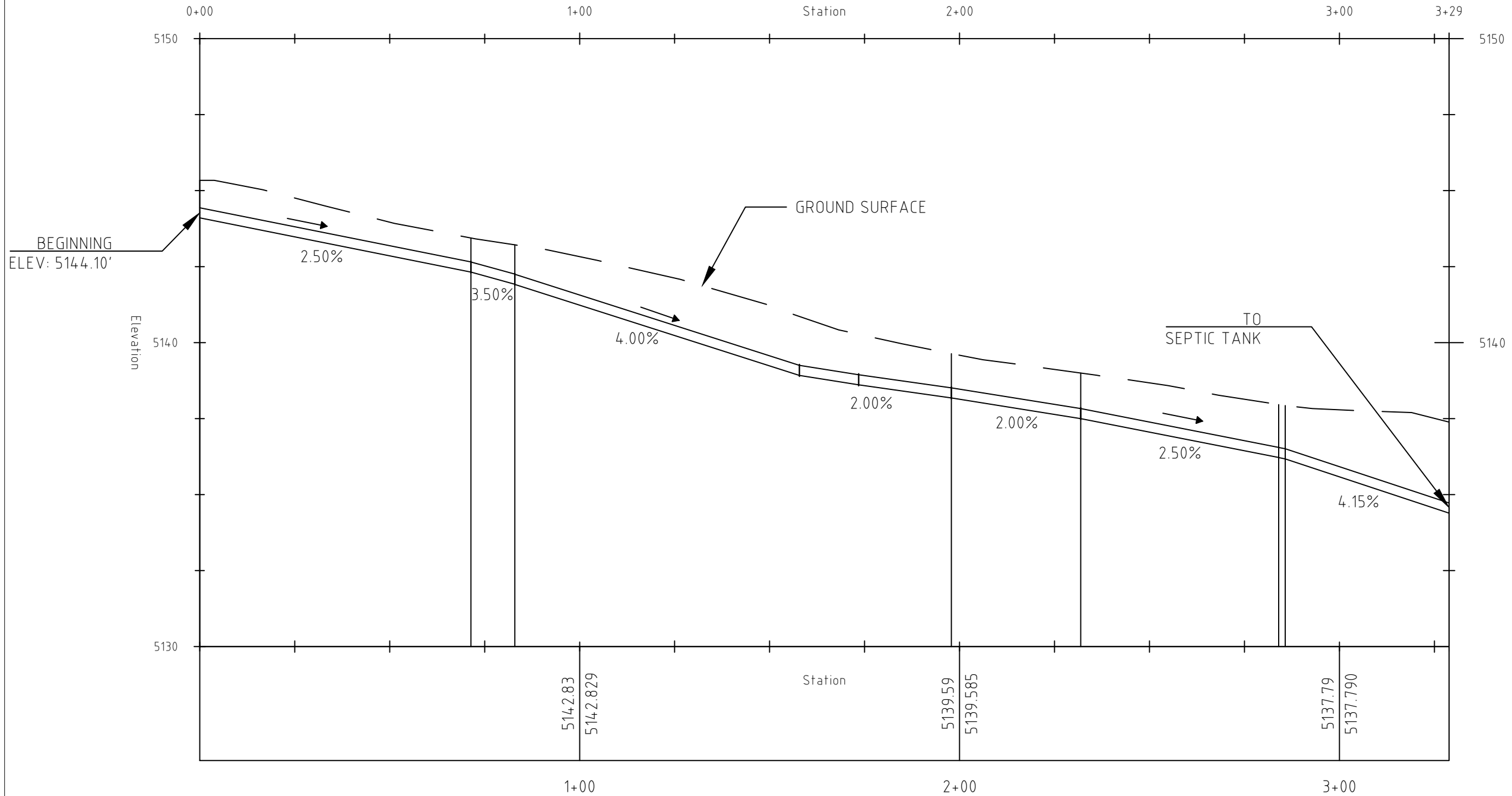
PROJECT INFO:

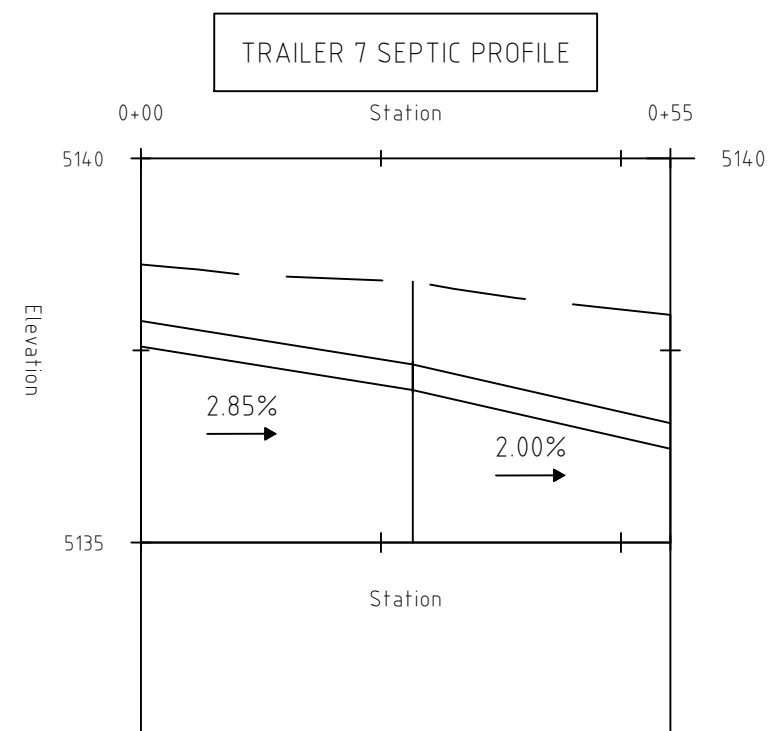
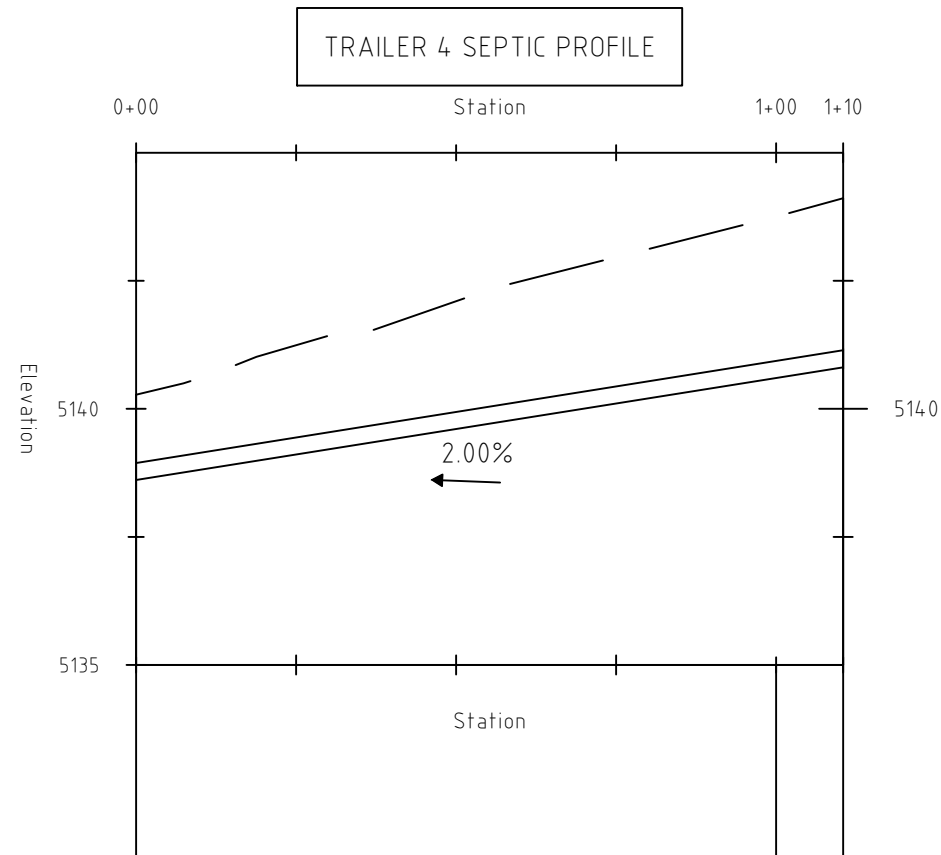
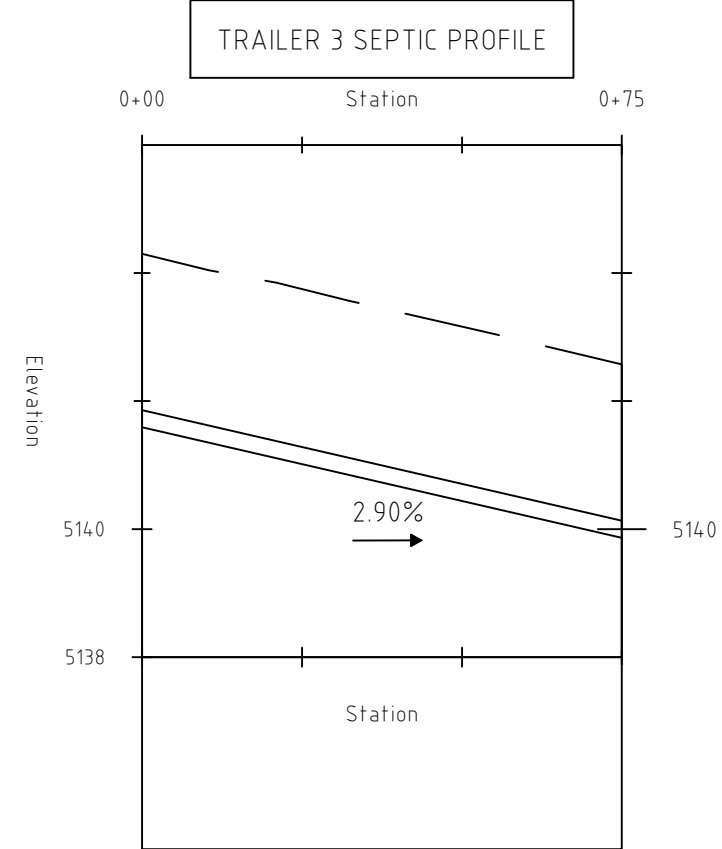
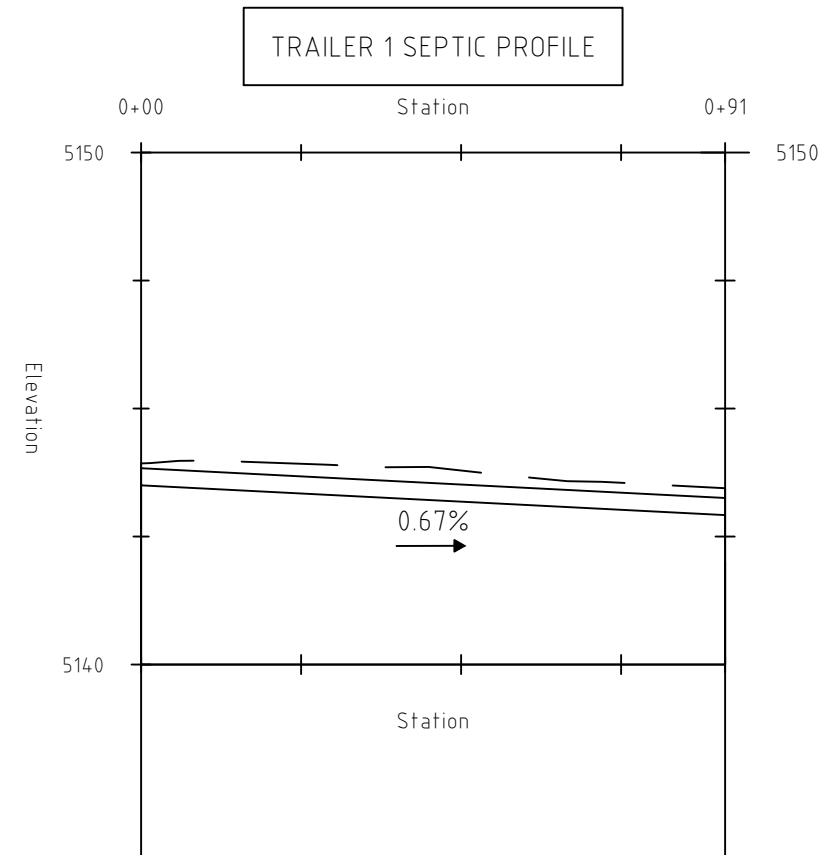
Pinery Canyon Road
Chiricahua National Monument
Willcox, Arizona
85643

SHEET NUMBER:

SEP-04

MAIN LINE SEPTIC PROFILE

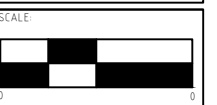




Chiricahua Wastewater Wizards
2112 S. Huffer Ln.
Flagstaff, AZ
86011

GENERAL NOTES:
1. TRAILERS 4 AND 5, AND
THE LAUNDRY DO NOT
HAVE PROFILES AS THEY
ARE LESS THAN 50' IN
LENGTH

DATE DRWN:	4/15/25
DRWN BY:	NHW
CHECKED BY:	JPL
PRINT NO:	1



SHEET TITLE:

SEPTIC PLN PRF

PROJECT INFO:

Pinery Canyon Road
Chiricahua National Monument
Willcox, Arizona
85643

SHEET NUMBER:

SEP-05