CITY OF TONTITOWN PLANNING OFFICE

201 E. Henri de Tonti Blvd.
479-361-2700
planning@tontitownar.gov

Meeting: **September 24, 2019**
Project: **NAPA Subdivision, Phase III**
Planner: Rick Barry

AGENDA ITEM

G

PRELIMINARY LARGE-SCALE DEVELOPMENT PLAN APPROVAL REQUEST

Northeast Intersection of Ardemagni & Liberty Avenue

Parcel # 830-37795-000, 830-37795-001

SUMMARY: NorRho, LLC is requesting Preliminary Subdivision is requesting Preliminary Large-Scale Development (LSD) approval for 56 lots, 1 detention pond, and 2 roads to be constructed on 2 parcels, amounting to approx. 19.70 acres.

CURRENT ZONING: **R-3** Single Family Residential

CITY WARD: 2 – Arthur Penzo, Larry Ardemagni

FLOODPLAIN: No

INFRASTRUCTURE SERVICE AREAS (not a guarantee of service availability)**:**

Water: Tontitown Water, existing 8" line
Electric: Ozarks Electric
Sewer/Septic: Tontitown Sewer
Phone: Century Tel & AT&T
Natural Gas: SourceGas
Cable: Cox Communications
School District: Springdale

PROJECT SYNOPSIS:

NorRho, LLC is requesting Preliminary Subdivision is requesting Preliminary Large-Scale Development (LSD) approval for 56 lots, 1 detention pond, and 2 roads to be constructed on 2 parcels, amounting to approx. 19.70 acres.

TECHNICAL INFORMATION:

Utilities:

Water: Tontitown Water-According to the Water System information, there is an existing 6-inch water line along W. Henri de Tonti.
Electric: Ozarks Electric-No comments were received from OECC.
Sewer/Septic: Sewer- this project proposes to connect to the City of Tontitown sewer system. The connection must be approved prior to construction.
Phone: AT&T- No comments were received from ATT.
Natural Gas: SourceGas- No comments were received from SG.
Cable: Cox Communications- No comments were received from Cox.

It is the applicant's responsibility to coordinate any additional utility easements or connections as needed to service their property.

School District: Springdale school district was notified of this project, but submitted no comments.

Stormwater Pollution Prevention Plan (SWPPP):
The applicant has provided a grading a drainage plan. A SWPPP must be completed and posted on site prior to construction.

Police:
The Tontitown Chief of Police has no concerns with this project.

Fire:
There are six fire hydrants shown on the plans. The nearest offsite hydrant is on the West side of Ardemagni Drive, approximately 230 feet away from the proposed north entrance to the subdivision, with a fire flow of 1,313 gpm.

Each of the proposed roads, Brunello Avenue and Soldera Drive, have a 50' right-of-way and will be required to meet the compaction rating necessary to support emergency vehicles.

Drainage:
There is a detention pond proposed for this site. The applicant's engineer has submitted a drainage report for review.

The City Engineer has submitted comments addressing the resubmitted plans and drainage report. He is concerned about ensuring that the FFE of the lots on either side of the detention pond are included, as well as alterations to the gutters and inlets. Additional comments are noted and have been provided to the applicant's engineer. All remaining comments from the City Engineer must be addressed prior to Construction Plan approval.

Roads:
This project has access at two points on Ardemagni Drive, both of which are by way of the proposed road named Brunello Avenue. Additionally, there is a proposed road named Soldera Drive that runs parallel with Ardemagni Drive.

Site visibility appears to be adequate from both proposed access locations.

All interior drives must meet the required compaction rating to support emergency vehicles.

STAFF RECOMMENDATION: There are some details that remain to be addressed at the Construction Plan phase of plan review, but nothing that should significantly impact the overall design.

Therefore, staff recommends approval of NAPA Subdivision, Phase III Preliminary Large-Scale Development with conditions.

CONDITIONS RECOMMENDED FOR APPROVAL:

1. It is the applicant's responsibility to coordinate any additional utility easements or connections as needed to service their property.
2. The SWPPP must be completed and posted on site prior to construction.
3. All interior drives must meet the required compaction rating to support emergency vehicles.
4. Correct all comments from the City Engineer prior to Construction Plan approval.
5. Correct all comments from the City Public Works Director prior to Construction Plan approval.
6. The applicant must apply for all required permits prior to construction.

SURVEYORS NOTES:

1. BASIS OF BEARING FOR THIS SURVEY: ARKANSAS STATE PLANE NAD83 NORTH GRID
2. VERTICAL DATUM: NAVD88 COMPUTED USING GEOID12B WITH THE OPUS NETWORK
3. THE LOCATIONS OF THE UTILITY LINES ON THIS SURVEY WERE DERIVED FROM EVIDENCE ON THE SURFACE OF THE PROPERTY. UTILITY LOCATIONS ON THIS MAP ARE FOR GENERAL REFERENCE THE EXACT LOCATION MAY VERY. THE PRESENCE OF ADDITIONAL UTILITY LINES ON THE PROPERTY IS A POSSIBILITY. THEREFORE THIS FIRM ADVISES TO HAVE ANY AND ALL UTILITY LOCATIONS CONFIRMED AND/OR LOCATED IN THE EVENT THEIR EXACT LOCATION IS NEEDED.
4. WITNESS INFORMATION:
   N 9°48'37" W 27.1' – 60D NAIL IN 10" POST
   N 62°38'50" E 35.0' – INSIDE CORNER CONCRETE RETAINING WALL

TITLE NOTE:

A TITLE SEARCH WAS NOT CONDUCTED BY THIS SURVEYOR, ALL DOCUMENTS ARE PROVIDED BY THE CLIENT AND/OR CLIENTS AND IS SUBJECT TO RECORDED AND/OR UNRECORDED EASEMENTS, ROAD RIGHTS OF WAY, COVENANTS, BUILDING SET BACK LINES, SUBDIVISION RESTRICTIONS, ZONING OR OTHER LAND USE REGULATIONS AND OTHER FACTS PROVIDED BY AN ACCURATE AND CURRENT TITLE SEARCH MAY ENCLOSE.

IT IS MY PROFESSIONAL OPINION THAT THIS PLAT REPRESENTS A SURVEY CONDUCTED BY ME OR UNDER MY DIRECT SUPERVISION. ALL MONUMENTS SHOWN HEREON ACTUALLY EXIST AND THEIR LOCATION, SIZE, TYPE, AND MATERIAL ARE CORRECTLY SHOWN. THIS SURVEY IS IN ACCORDANCE TO ARKANSAS STANDARDS OF PRACTICE AS SET FORTH BY THE ARKANSAS AGRICULTURE DEPARTMENT, LAND SURVEY DIVISION.

REGISTERED
STATE OF ARKANSAS
NO. 1546
SIGNATURE
CURTIS M. NALLEY JR.
PROFESSIONAL LAND SURVEYOR

LEGAL DESCRIPTION

WEST HALF OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 36, TOWNSHIP 18 NORTH, RANGE 31 WEST, WASHINGTON COUNTY, ARKANSAS

STREET ADDRESS

LIBERTY AVENUE & ADEMAGNI DRIVE
TONTITOWN, ARKANSAS

FILING CODE

500 –18N–31W–0–36–330–72–1546

FLOOD CLAUSE

ACCORDING TO THE FLOOD INSURANCE RATE MAP, PANEL NUMBER 05119C0316G CITY OF TONTITOWN, ARKANSAS COMMUNITY, DATED MAY 16, 2008. THIS PROPERTY LIES WHOLLY WITHIN ZONE "X", NOT IN THE 100 YEAR FLOOD PLAIN.

LEGEND

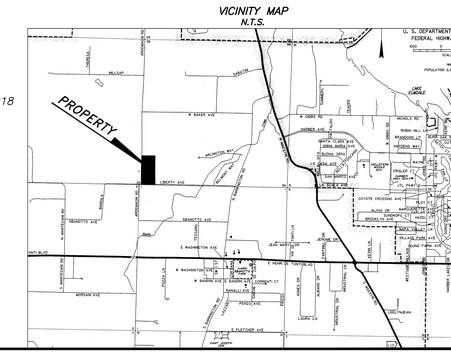
- PROPERTY BOUNDARY
- SURVEYED LINES
- T — T — TELEPHONE
- ROAD CENTER LINE
- X — X — WIRE / CHAINLINK FENCE
- W — W — WATER LINE
- P — P — OVERHEAD POWERLINE
- T TELEPHONE PEDISTAL
- COMPUTED CORNER
- GUY WIRE
- FOUND MONUMENT (LABELED)
- POWER POLE
- FIRE HYDRANT

GRAPHIC SCALE

60 0 60 120 180

(IN FEET)
1 inch = 60 ft.

VICINITY MAP
N.T.S.



CMN AND ASSOCIATES LLC
PROFESSIONAL SURVEYING
BOUNDARY • TOPOGRAPHICAL MAPPING
CONSTRUCTION DRAFTING & LAYOUT
542 McGEE ROAD
BENTON, AR 72018
PHONE: (501) 860-5051

CERTIFICATE OF AUTHORIZATION
CMN & ASSOC. LLC
No. 5992
ARKANSAS

BOUNDARY & TOPOGRAPHIC SURVEY

W ½ OF THE SW 1/4 OF THE SW 1/4,
SECTION 36, T-18-N, R-31-W

Prepared For:
NORRHO LLC
4825 N. SHILOH DRIVE
FAYETTEVILLE, AR 72703

No.	Revisions	Date

Date: 08/26/19

Scale: 1" = 60'

Sheet: 1 of 1

DETAILED PLANS:

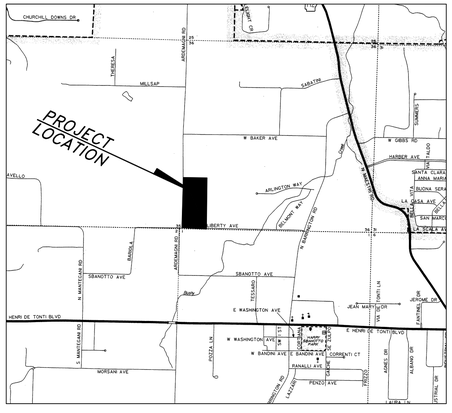
NAPA SUBDIVISION

PHASE 3

PART OF THE SW $\frac{1}{4}$ OF THE
SW $\frac{1}{4}$, SECTION 36, T-18-N, R-31-W
WASHINGTON COUNTY, ARKANSAS

08/30/19
REV: 09/16/19

VICINITY MAP
1" = 2000'



Prepared By:

RICHARDSON ENGINEERING
Planning • Engineering • Development Consulting

210 W. SEVIER STREET, BENTON, AR 72015 (501)315-7225

PREPARED FOR:

NORRHO LLC
4285 N. SHILOH DRIVE
FAYETTEVILLE, AR 72703

REGISTERED STATE OF ARKANSAS NO. 1546 SIGNATURE CURTIS M. NALLEY JR. PROFESSIONAL LAND SURVEYOR

STATE OF ARKANSAS LICENSED PROFESSIONAL ENGINEER No. 14266 ERIC RYAN RICHARDSON

CERTIFICATE OF AUTHORIZATION Richardson Engineering, PLLC No. 2519 ARKANSAS

PLANNING PERMITS

PLANNING & ZONING DEPARTMENT
235 E. HENRI DE TONI BLVD.
TONTITOWN, AR 72270
CONTACT: COURTNEY McNAIR
PH. 479-361-2700

BUILDING DEPARTMENT
235 E. HENRI DE TONI BLVD.
TONTITOWN, AR 72270
CONTACT: JAMES CLARK
PH. 479-361-2700

UTILITIES

WATER & SEWER
TONTITOWN UTILITIES
201 E. HENRI DE TONI BLVD.
TONTITOWN, AR 72270
PH. 479-361-2700

TELEPHONE
AT&T
PH. 479-442-1963

GAS
BLACK HILLS ENERGY
PH. 888-890-5554

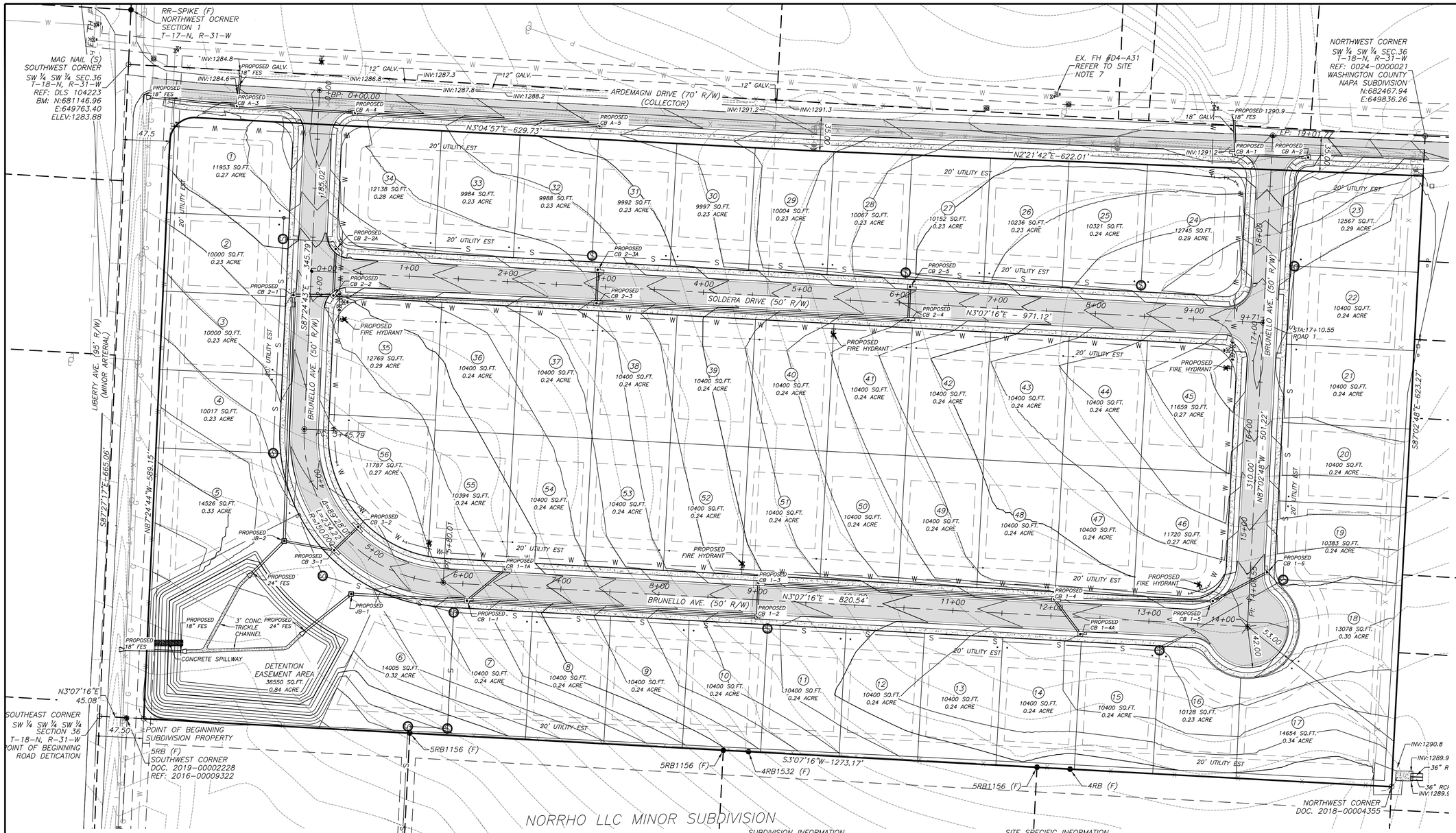
ELECTRIC
OZARKS ELECTRIC
PH.479-684-4949

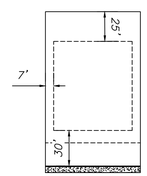
CABLE COMPANY
COX COMMUNICATION
4901 SOUTH 48TH STREET
SPRINGDALE, AR 72762
PH. 479-717-3730

NOT FOR CONSTRUCTION
PRE-CONSTRUCTION COPY -

PLANS FOR BIDDING PURPOSES. QUANTITIES TO BE VERIFIED PRIOR TO CONSTRUCTION. CONTRACTOR TO VERIFY GRADES WITH ENGINEER PRIOR TO CONSTRUCTION.

811 Know what's below. Call before you dig.





TYPICAL LOT SETBACKS

LEGEND

- PROPERTY BOUNDARY
- SURVEYED LINES
- T — T — TELEPHONE
- ROAD CENTER LINE
- X — X — WIRE / CHAINLINK FENCE
- W — W — WATER LINE
- P — P — OVERHEAD POWERLINE
- EXISTING CONTOUR
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- T TELEPHONE PEDISTAL
- GUY WIRE
- POWER POLE
- PROPOSED SANITARY SEWER MANHOLE
- COMPUTED CORNER
- FOUND MONUMENT (LABELED)
- PROPOSED FIRE HYDRANT
- PROPOSED CATCH BASIN

NORRHO LLC MINOR SUBDIVISION

STREET ADDRESS

LIBERTY AVENUE & ADEMAGNI DRIVE
TONTITOWN, ARKANSAS

FILING CODE

500 -18N-31W-0-36-330-72-1546

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GENERAL NOTES:

1. BASIS OF BEARING FOR THIS SURVEY: ARKANSAS STATE PLANE NAD83 NORTH GRID BASIS OF BEARING FOR THIS SURVEY: ARKANSAS STATE PLANE NAD83 NORTH ZONE 0301 GRID CONVERGENCE ANGLE: -01°18'22" COMBINED SCALED FACTOR: 0.9999336 N: 681343.70 E: 649945.89

2. VERTICAL DATUM: NAVD88 COMPUTED USING ESTABLISHED BENCHMARK FOR NAPA SUBDIVISION, PHASE 1, TOP NUT OF FIRE HYDRANT LOCATED ON THE NOUTH SIDE AND ON THE MUTUAL PROPERTY LINE OF LOTS 58 AND 59. 1302.00' (NAVD 88)

3. THE LOCATIONS OF THE UTILITY LINES ON THIS SURVEY WERE DERIVED FROM EVIDENCE ON THE SURFACE OF THE PROPERTY. UTILITY LOCATIONS ON THIS MAP ARE FOR GENERAL REFERENCE THE EXACT LOCATION MAY VERY. THE PRESENCE OF ADDITIONAL UTILITY LINES ON THE PROPERTY IS A POSSIBILITY. THEREFORE THIS FIRM ADVISES TO HAVE ANY AND ALL UTILITY LOCATIONS CONFIRMED AND/OR LOCATED IN THE EVENT THEIR EXACT LOCATION IS NEEDED.

4. WITNESS INFORMATION FOR SECTION 36 SW CORNER:
N 9°48'37" W 27.1' - 60D NAIL IN 10" POST.
N 62°38'50" E 35.0' - INSIDE CORNER CONCRETE RETAINING WALL

SUBDIVISION INFORMATION

1. PROJECT IS ZONED R-3

2. SETBACK:
FRONT - 30'
SIDE - 7'
REAR - 25'

EASEMENTS:
FRONT - 20'
SIDE - 5'
REAR - 20'

3. PROPOSED USE: SINGLE FAMILY RESIDENTIAL

4. LIGHT POLES SHALL BE PLACED AT ALL INTERSECTIONS AND SPACED 300' MAXIMUM THROUGHOUT THE DEVELOPMENT OR AS PER TONTITOWN REQUIREMENTS. ALL STREET LIGHTING SHALL MEET CITY OF TONTITOWN SPECIFICATIONS.

5. LOT CORNER RADI ARE TYPICAL 36' UNLESS OTHERWISE NOTED.

6. STORM DRAINAGE PIPES UNDER PROPOSED STREETS TO BE R.C.P.. STORM DRAINAGE OUTSIDE STREET LIMITS SHALL BE ADS-N12

7. ALL HOUSE SLABS MINIMUM FLOOR ELEVATIONS SHALL BE MINIMUM OF 6" ABOVE THE TOP OF CURB ON THE HIGH SIDE OF THE LOT.

BASIS OF BEARING FOR THIS SURVEY:
ARKANSAS STATE PLANE NAD83 NORTH ZONE 0301 GRID CONVERGENCE ANGLE: -01°18'22" COMBINED SCALED FACTOR: 0.9999336 N: 681343.70 E: 649945.89

SITE SPECIFIC INFORMATION

1. THERE IS NO VISUAL SURFACE EVIDENCE OF ABANDONED WATER WELLS, SUMPS, CESSPOOLS, SPRINGS, WATER IMPOUNDMENTS, AND UNDERGROUND STRUCTURES ON THIS PROJECT.

2. ACCORDING TO THE NATIONAL WETLANDS INVENTORY WEB SITE MAPPER, THERE ARE NO WETLANDS ON THIS PROPERTY.

3.THERE ARE NO KNOWN POTENTIALLY DANGEROUS AREAS WITHIN THE PROJECT.

4.THERE ARE NO KNOWN GROUND LEASES OR ACCESS AGREEMENTS.

5. THERE ARE NO EXISTING EROSION PROBLEMS FOR THIS PROJECT.

6. DRIVEWAY LOCATIONS TO BE DETERMINED. CURB CUTS WILL NOT BE NECESSARY WITH MODIFIED CURB.

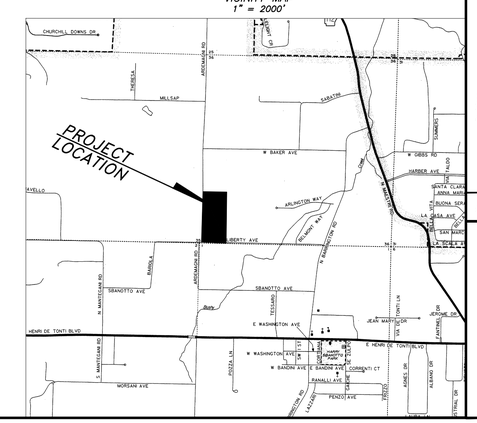
7.HYDRANT #D4-A31: STATIC PSI=70, RESIDUAL=50, NOZZLE SIZE=2.5", GALLON PER MINUTE (GPM)= 1173

GRAPHIC SCALE

50 0 50 100 150

(IN FEET)
1 inch = 50 ft.

VICINITY MAP
1" = 2000'



RICHARDSON ENGINEERING
Planning • Engineering • Development Consulting
210 W. SEVIER STREET, BENTON, AR 72015 (501)315-7225

OWNER / DEVELOPER
NORRHO LLC
4285 SHILOH DRIVE
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DUANE RHODES 479-263-6243

CONTACT: KEVIN NALLEY
KINAXOFFICE@GMAIL.COM
479-200-2399

ENGINEER / SURVEYOR
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210 W. SEVIER STREET
BENTON, AR 72015
ENGINEER:
ERIC RICHARDSON PE#14266
501-249-3141
SURVEYOR:
MATT NALLEY PS#1546
501-860-5051

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 14266
ERIC RYAN RICHARDSON

CERTIFICATE OF AUTHORIZATION
Richardson Engineering, PLLC
No. 2519
ARKANSAS

REGISTERED
STATE OF ARKANSAS
NO. 1546
SIGNATURE
CURTIS M. NALLEY JR.
PROFESSIONAL LAND SURVEYOR

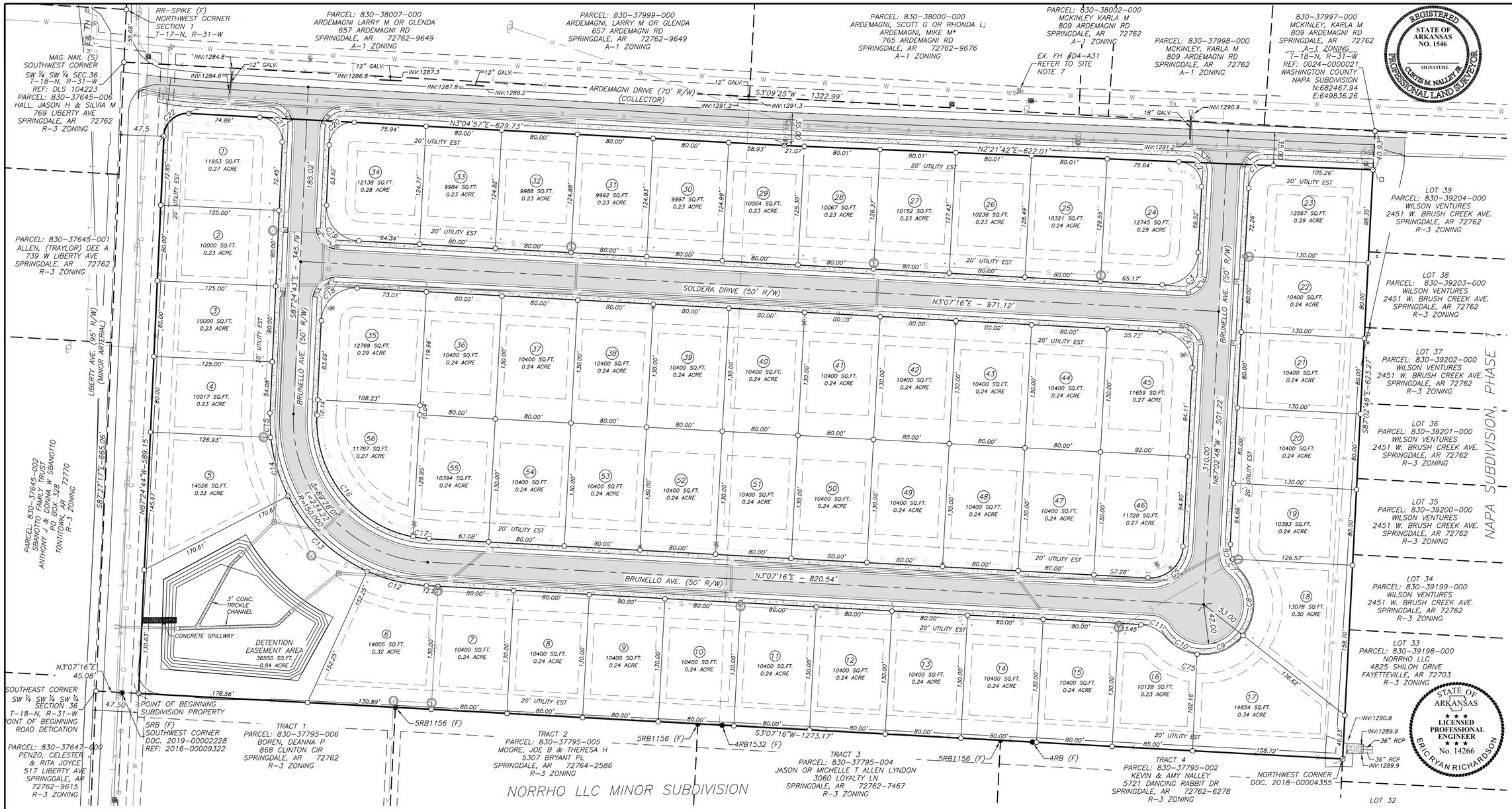
PRELIMINARY PLAT
NAPA SUBDIVISION, PHASE 3

TO THE CITY OF TONITOWN,
WASHINGTON COUNTY, ARKANSAS
PART OF THE SW 1/4 OF THE SW 1/4, SECTION 36,
T-18-N, R-31-W

Prepared For:
NORRHO LLC
4285 N. SHILOH DRIVE
FAYETTEVILLE, AR 72703

No.	Revisions	Date
1	AS PER CITY COMMENTS 09/10/19	9/16/19

Scale: 1" = 50'
Date: 08/30/19 REV:9/16/19
Sheet: 2 of 31



Curve Table				
Curve #	Length	Radius	Chord Direction	Chord Length
C1	39.01	25.00	N42° 20' 33"W	35.17
C2	39.53	25.00	N47° 39' 27"E	35.54
C3	56.65	36.00	S41° 57' 46"E	50.99
C4	56.44	36.00	N48° 02' 14"E	50.84
C5	55.08	35.00	S41° 57' 46"E	49.57
C6	15.84	36.00	S80° 20' 43"W	15.72
C7	13.52	36.00	S56° 58' 43"W	13.44
C8	75.76	53.00	S87° 10' 21"W	69.48
C9	54.91	53.00	N22° 11' 47"W	52.48
C10	39.20	53.00	N28° 40' 06"E	38.31
C11	29.36	36.00	N26° 29' 16"E	28.56
C12	64.91	175.00	N13° 44' 48"E	64.54
C13	117.43	175.00	N43° 35' 46"E	115.24

Curve Table				
Curve #	Length	Radius	Chord Direction	Chord Length
C14	64.90	175.00	N73° 26' 42"E	1285.51
C15	26.02	175.00	N88° 19' 45"E	1284.16
C16	178.22	125.00	S51° 44' 39"W	163.50
C17	16.97	125.00	S7° 00' 39"W	16.96
C18	56.88	36.00	N42° 08' 43"W	51.15
C19	56.21	36.00	S47° 51' 17"W	50.67
C20	39.50	25.00	N42° 09' 04"W	35.52
C21	39.04	25.00	N47° 50' 56"E	35.19
C22	39.90	25.00	N42° 15' 48"W	35.79

GRAPHIC SCALE

50 0 50 100 150

(IN FEET)
1 inch = 50 ft.

SUBDIVISION DESCRIPTION

THAT PART OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 36, TOWNSHIP 18 NORTH, RANGE 31 WEST, WASHINGTON COUNTY, ARKANSAS MORE FULLY DESCIRBED AS FOLLOWS: COMMENCING AT THE SOUTHWEST CORNER OF THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 36 AND RUN THENCE NORTH 87°27'17" WEST ALONG THE SOUTH LINE OF SAID SW ¼ SW ¼ A DISTANCE OF 665.07 FEET TO THE SOUTHEAST CORNER OF THE WEST HALF OF SAID SW ¼ SW ¼; THENCE NORTH ALONG THE EAST LINE OF SAID W ½ SW ¼ SW ¼ A DISTANCE OF 45.08 FEET TO A POINT ON THE NORTH RIGHT OF WAY LINE OF LIBERTY AVE, BEING 47.5' NORTH OF THE CENTER LINE THEREOF, SAID POINT BEING THE POINT OF BEGINNING OF PROPERTY HERE IN DESCIRBED; THENCE NORTH 87°24'44" WEST ALONG THE NORTH RIGHT OF WAY OF SAID LIBERTY AVENUE A DISTANCE OF 589.15 FEET TO THE BEGINNING OF A CURVE TO THE RIGHT; THENCE ALONG THE ARC OF A CURVE TO THE RIGHT A DISTANCE OF 39.90 FEET, SAID CURVE HAVING A CHORD BEARING OF NORTH 42°15'48" WEST, A CHORD DISTANCE OF 35.79 FEET, AND A RADIUS OF 25.0 FEET, TO A POINT ON THE EAST RIGHT OF WAY OF ARDEMAGI DRIVE, SAID POINT BEING 35.0' EAST OF THE CENTERLINE THEREOF; THENCE NORTH 3°04'57" EAST ALONG THE RIGHT OF WAY OF SAID ARDEMAGNI DRIVE A DISTANCE OF 629.73 FEET; THENCE NORTH 2°21'42" EAST ALONG THE RIGHT OF WAY OF SAID ARDEMAGNI DRIVE A DISTANCE OF 622.01 FEET TO A POINT ON THE NORTH LINE OF SAID SW ¼ SW ¼; THENCE SOUTH 87°02'48" EAST ALONG THE NORTH LINE OF SAID SW ¼ SW ¼ A DISTANCE OF 623.27 FEET TO THE NORTHWEST CORNER OF PROPERTY DESCRIBED IN DOCUMENT 2018-00004355 OF THE WASHINGTON COUNTY, CIRCUIT CLERK OFFICE; THENCE SOUTH 3°07'16" WEST A DISTANCE OF 1273.17 FEET TO THE POINT OF BEGINNING, CONTAINING 18.06 ACRES MORE OR LESS.

RIGHT OF WAY DEDICATION DESCRIPTION FOR LIBERTY AVE. AND ARDEMAGNI DR.

THAT PART OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 36, TOWNSHIP 18 NORTH, RANGE 31 WEST, WASHINGTON COUNTY, ARKANSAS MORE FULLY DESCIRBED AS FOLLOWS: COMMENCING AT THE SOUTHWEST CORNER OF THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 36 AND RUN THENCE NORTH 87°27'17" WEST ALONG THE SOUTH LINE OF SAID SW ¼ SW ¼ A DISTANCE OF 665.07 FEET TO THE SOUTHEAST CORNER OF THE WEST HALF OF SAID SW ¼ SW ¼; THENCE NORTH ALONG THE EAST LINE OF SAID W ½ SW ¼ SW ¼ A DISTANCE OF 45.08 FEET TO A POINT ON THE NORTH RIGHT OF WAY LINE OF LIBERTY AVE, BEING 47.5' NORTH OF THE CENTER LINE THEREOF, SAID POINT BEING THE POINT OF BEGINNING OF PROPERTY HERE IN DESCIRBED; THENCE NORTH 87°24'44" WEST ALONG THE NORTH RIGHT OF WAY OF SAID LIBERTY AVENUE A DISTANCE OF 589.15 FEET TO THE BEGINNING OF A CURVE TO THE RIGHT; THENCE ALONG THE ARC OF A CURVE TO THE RIGHT A DISTANCE OF 39.90 FEET, SAID CURVE HAVING A CHORD BEARING OF NORTH 42°15'48" WEST, A CHORD DISTANCE OF 35.79 FEET, AND A RADIUS OF 25.0 FEET, TO A POINT ON THE EAST RIGHT OF WAY OF ARDEMAGI DRIVE, SAID POINT BEING 35.0' EAST OF THE CENTERLINE THEREOF; THENCE NORTH 3°04'57" EAST ALONG THE RIGHT OF WAY OF SAID ARDEMAGNI DRIVE A DISTANCE OF 629.73 FEET; THENCE NORTH 2°21'42" EAST ALONG THE RIGHT OF WAY OF SAID ARDEMAGNI DRIVE A DISTANCE OF 622.01 FEET TO A POINT ON THE NORTH LINE OF SAID SW ¼ SW ¼; THENCE NORTH 87°02'48" WEST ALONG THE NORTH LINE OF SAID SW ¼ SW ¼ A DISTANCE OF 40.93 FEET TO THE NORTHWEST CORNER OF SAID SW ¼ SW ¼; THENCE SOUTH 3°09'25" WEST ALONG THE WEST LINE OF SAID SW ¼ SW ¼ A DISTANCE OF 1322.99 FEET TO THE SOUTHWEST CORNER OF SAID SW ¼ SW ¼; THENCE SOUTH 87°27'17" EAST ALONG THE SOUTH LINE OF SAID SW ¼ SW ¼ A DISTANCE OF 665.05 FEET TO THE POINT OF BEGINNING, CONTAINING 2.09 ACRES

BASIS OF BEARING FOR THIS SURVEY:
ARKANSAS STATE PLANE NAD83
NORTH ZONE 0301 GRID
CONVERGENCE ANGLE: -01°18'22"
COMBINED SCALED FACTOR: 0.9999336
N: 681343.70 E: 649945.89

SOURCE OF TITLE FOR NORRHO LLC:
WASHINGTON COUNTY PUBLIC RECORDS, CIRCUIT CLERK:
TRUSTEE'S DEED DOC. 2019-00022538
TRUSTEE'S DEED DOC. 2019-00025248

LEGEND

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- SURVEYED LINES
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- ROAD CENTER LINE
- X — X — WIRE / CHAINLINK FENCE
- W — W — WATER LINE
- P — P — OVERHEAD POWERLINE
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- FIRE HYDRANT

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CERTIFICATE OF AUTHORIZATION Richardson Engineering, PLLC No. 2519 ARKANSAS

PRELIMINARY PLAT LOT LAYOUT
NAPA SUBDIVISION, PHASE 3
TO THE CITY OF TONITOWN,
WASHINGTON COUNTY, ARKANSAS
PART OF THE SW 1/4 OF THE SW 1/4, SECTION 36,
T-18-N, R-31-W

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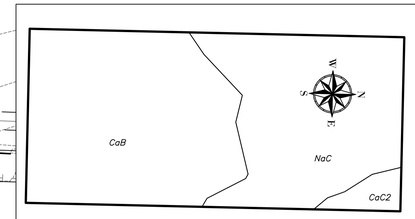
Sheet: 3 of 31



SOIL SURVEY MAP INSET: SOURCE USDA

WASHINGTON COUNTY, ARKANSAS (AR143)

MAP UNIT SYMBOL	MAP UNIT NAME	ACRES IN AOI	PERCENT OF AOI
CaB	CAPTINA SILT LOAM TO 3 PERCENT SLOPES	9.9	53.8%
CaC2	CAPTINA SILT LOAM 3 TO 6 PERCENT SLOPES, ERODED	0.7	3.9%
NaC	NIXA VERY GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES	7.8	42.3%
	TOTAL ACRES	18.4	

CERTIFICATE OF PRELIMINARY SURVEY ACCURACY

I, CURTIS MATHEW NALLEY JR. HEREBY CERTIFY THAT THIS PLAT CORRECTLY REPRESENTS A BOUNDARY SURVEY MADE MY ME AND ALL MONUMENTS SHOWN HEREON ACTUALLY EXIST AND THEIR LOCATION, SIZE, TYPE AND MATERIAL ARE CORRECTLY SHOWN.

DATE OF EXECUTION: 08/30/2019

CURTIS MATHEW NALLEY JR, PLS

STATE OF ARKANSAS REGISTRATION NO. 1546

REGISTERED STATE OF ARKANSAS NO. 1546 SIGNATURE CURTIS M. NALLEY JR. PROFESSIONAL LAND SURVEYOR

CERTIFICATE OF PRELIMINARY ENGINEERING ACCURACY

EACH SET OF STREET AND DRAINAGE PLANS MUST BE SUBMITTED IN ACCORDANCE WITH APPLICABLE STATE STATUTES AND ANY PLANS AND SPECIFICATIONS REQUIRED.

I, ERIC RYAN RICHARDSON, HEREBY CERTIFY THAT THIS PLAN CORRECTLY REPRESENTS A PLAN MADE UNDER MY DIRECTION AND ENGINEERING REQUIREMENTS OF THE TONTITOWN SUBDIVISION REGULATIONS HAVE BEEN COMPLIED WITH

DATE OF EXECUTION: 08/30/2019

ERIC RYAN RICHARDSON, PE

STATE OF ARKANSAS REGISTRATION NO. 14266

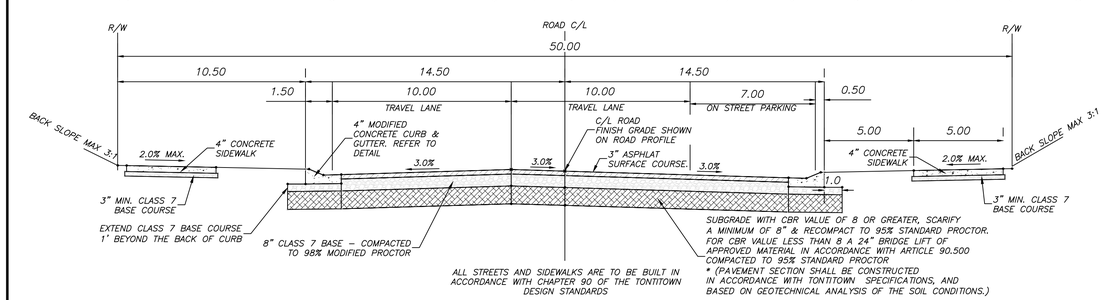
STATE OF ARKANSAS ★★★ LICENSED PROFESSIONAL ENGINEER ★★★ No. 14266 ERIC RYAN RICHARDSON

THIS PLAT HAS BEEN GIVEN PRELIMINARY PLAT APPROVAL ONLY AND HAS NOT BEEN APPROVED FOR RECORDING PURPOSES AS A PUBLIC RECORD. THIS CERTIFICATE SHALL EXPIRE ON _____

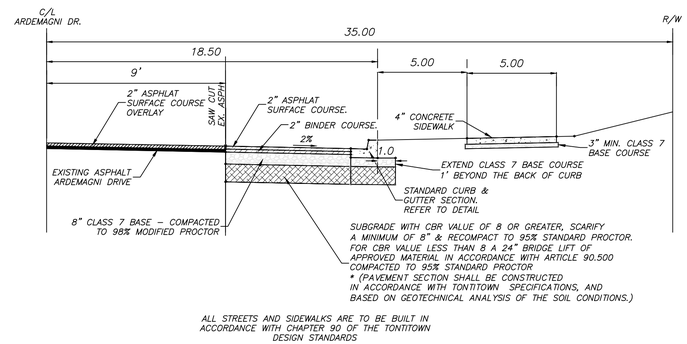
DATE OF EXECUTION:_____

SIGNED:_____

TONTITOWN PLANNING COMMISSION CHAIRMAN



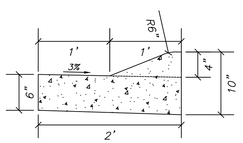
TYPICAL STREET SECTION
BRUNELLO AVE. & SOLDERS DRIVE



TYPICAL STREET IMPROVEMENT SECTION
ARDEMAGNI DRIVE 70' R/W COLLECTOR

LEGEND

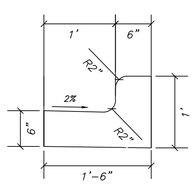
- PROPERTY BOUNDARY
- SURVEYED LINES
- TELEPHONE
- ROAD CENTER LINE
- WIRE / CHAINLINK FENCE
- WATER LINE
- OVERHEAD POWERLINE
- GUY WIRE
- POWER POLE
- PROPOSED FIRE HYDRANT
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED CATCH BASIN
- STOP SIGN
- TRAFFIC SIGN
- STREET NAME SIGN
- STREET LIGHT
- ADA APPROVED HANDICAP RAMP



MODIFIED CURB & GUTTER SECTION

SUBDIVISION INFORMATION

1. PROJECT IS ZONED R-3
2. SETBACK: FRONT - 30' SIDE - 7' REAR - 25'; EASEMENTS: FRONT - 20' SIDE - 5' REAR - 20'
3. PROPOSED USE: SINGLE FAMILY RESIDENTIAL
4. LIGHT POLES SHALL BE PLACED AT ALL INTERSECTIONS AND SPACED 300' MAXIMUM THROUGHOUT THE DEVELOPMENT OR AS PER TONTITOWN REQUIREMENTS. ALL STREET LIGHTING SHALL MEET CITY OF TONTITOWN SPECIFICATIONS.
5. LOT CORNER RADI ARE TYPICAL 36' UNLESS OTHERWISE NOTED.
6. STORM DRAINAGE PIPES UNDER PROPOSED STREETS TO BE R.C.P.. STORM DRAINAGE OUTSIDE STREET LIMITS SHALL BE ADS-N12
7. ALL HOUSE SLABS MINIMUM FLOOR ELEVATIONS SHALL BE MINIMUM OF 6" ABOVE THE TOP OF CURB ON THE HIGH SIDE OF THE LOT.



STANDARD CURB & GUTTER SECTION

GRAPHIC SCALE

50 0 50 100 150

(IN FEET)
1 inch = 60 ft.

BASIS OF BEARING FOR THIS SURVEY: ARKANSAS STATE PLANE NAD83 NORTH ZONE 0301 GRID CONVERGENCE ANGLE: -01°18'22" COMBINED SCALED FACTOR: 0.9999336 N: 681343.70 E: 649945.89

RICHARDSON ENGINEERING
Planning • Engineering • Development Consulting
210 W. SEVIER STREET, BENTON, AR 72015 (501)315-7225

CERTIFICATE OF AUTHORIZATION Richardson Engineering, PLLC No. 2519 ARKANSAS

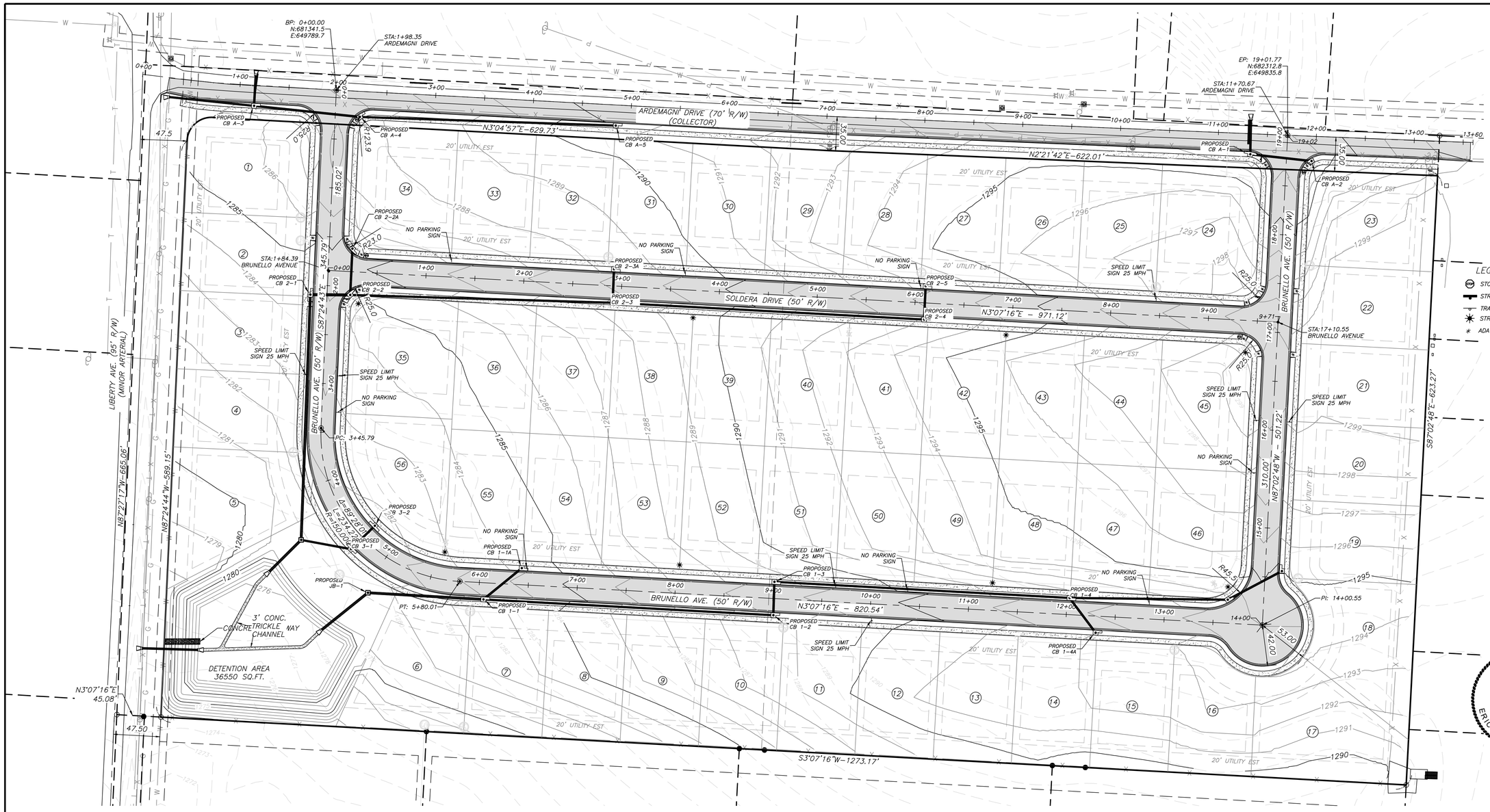
PRELIMINARY PLAT STREET
NAPA SUBDIVISION, PHASE 3

TO THE CITY OF TONITOWN,
WASHINGTON COUNTY, ARKANSAS
PART OF THE SW 1/4 OF THE SW 1/4, SECTION 36,
T-18-N, R-31-W

Prepared For:
NORRHO LLC
4285 N. SHILOH DRIVE
FAYETTEVILLE, AR 72703

No.	Revisions	Date
1	AS PER CITY COMMENTS 09/10/19	9/16/19

Scale: 1" = 60'
Date: 08/30/19 REV:9/16/19
Sheet: 4 of 31



GRAPHIC SCALE

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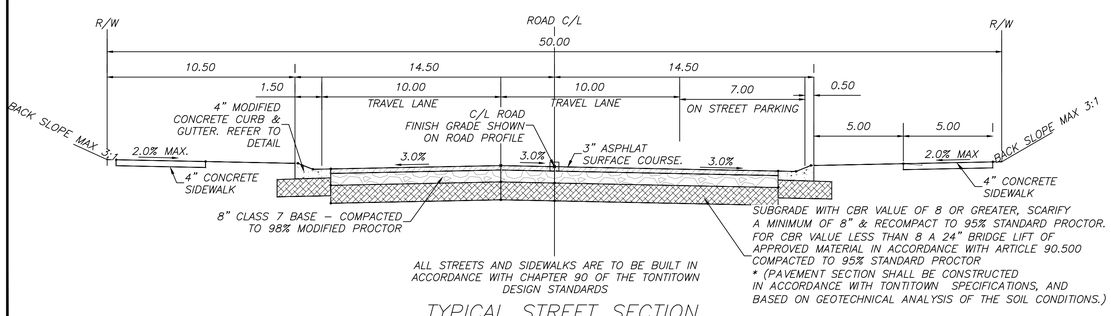
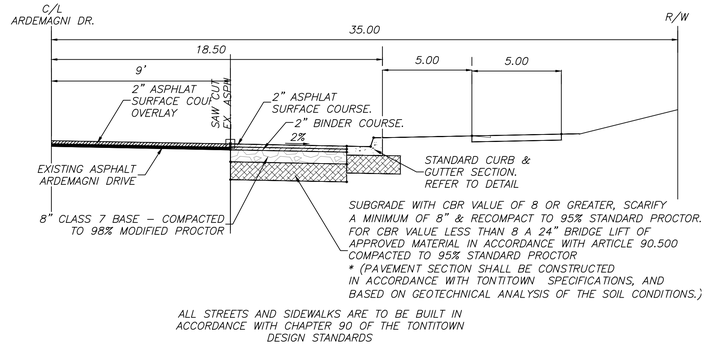


TYPICAL STREET SECTION
BRUNELLO AVE. & SOLDERS DRIVE



TYPICAL STREET IMPROVEMENT SECTION
ARDEMAGNI DRIVE 70' R/W COLLECTOR

GENERAL NOTES

1.) TONTITOWN SPECIFICATIONS REFERS TO CHAPTER 90 OF THE DESIGN STANDARDS FOR THE CITY OF TONITOWN, ARKANSAS.
2.) PROPOSED LOCATIONS OF TRAFFIC CONTROL MARKERS ARE APPROXIMATE. ACTUAL LOCATION AND INSTALLATION MUST MEET MUTCD AND CITY OF TONTITOWN SPECS.
3.) PAVEMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH TONITOWN SPECIFICATIONS, AND BASED ON GEOTECHNICAL ANALYSIS OF THE SOIL CONDITIONS..
4.) CONTRACTOR SHALL INCLUDE IN BID THE COST FOR COMPACTION TESTS ON SUBGRADE & BASE. TEST TO BE CONDUCTED AS PER TONTITOWN SPECIFICATIONS.
5.) LIGHT POLES SHALL BE PLACED AT ALL INTERSECTIONS AND SPACED 300' MAXIMUM THROUGHOUT THE DEVELOPMENT OR AS PER CITY OF TONTITOWN SPECIFICATIONS
6.) ALL STOP SIGNS SHALL BE 30" X 30"
7.) BACK OF CURB RADIUS AT ALL INTERSECTIONS SHALL BE 25'.
8.) CURB INLETS CONSTRUCTED SO THAT POOLING OF WATER DOES NOT OCCUR AT INTERSECTIONS.
9.) ALL STORM SEWER LIDS SHALL BE PER CITY OF TONTITOWN SPECIFICATIONS.
10.) ALL SIDEWALKS AND CURB/GUTTER TO BE CONSTRUCTED PER TONTITOWN SPECIFICATIONS.
11.) SIDEWALK TO BE CONSTRUCTED ALONG WITH INDIVIDUAL DRIVEWAYS. ALL SIDEWALKS TO MEET ADA REQUIREMENTS.
12.) * - INDICATES ADA APPROVED HANDICAP RAMP.
13.) DEVELOPMENT SHALL ADHERE TO CITY OF TONTITOWN STORMWATER REQUIREMENTS.
14.) THE APPROXIMATE LOCATION OF KNOWN SURFACE AND SUBSURFACE STRUCTURES, PIPES, POWER, GAS, PHONE, ETC. ARE SHOWN ON THE DESIGN DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF THE AFOREMENTIONED ITEMS, SHOWN AND NOT SHOWN. ALL REPAIRS OR RELOCATIONS NECESSARY SHALL BE MADE AS REQUIRED BY THE UTILITY OR OWNER OF THE STRUCTURE. THE COST OF SAID REPAIRS OR RELOCATIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 14266
ERIC RYAN RICHARDSON

RICHARDSON ENGINEERING
Planning • Engineering • Development Consulting
210 W. SEVIER STREET, BENTON, AR 72015 (501)315-7225

CERTIFICATE OF AUTHORIZATION
Richardson Engineering, PLLC
No. 2519
ARKANSAS

OVERALL STREET & DRAINAGE PLAN
NAPA SUBDIVISION PHASE 3
PART OF THE SW 1/4 OF THE SW 1/4, SECTION 36, T-18-N, R-31-W

Prepared For:
NORRHO LLC
4285 N. SHILOH DRIVE
FAYETTEVILLE, AR 72703

No.	Revisions	Date
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Scale: 1" = 50'
Date: 08/30/19
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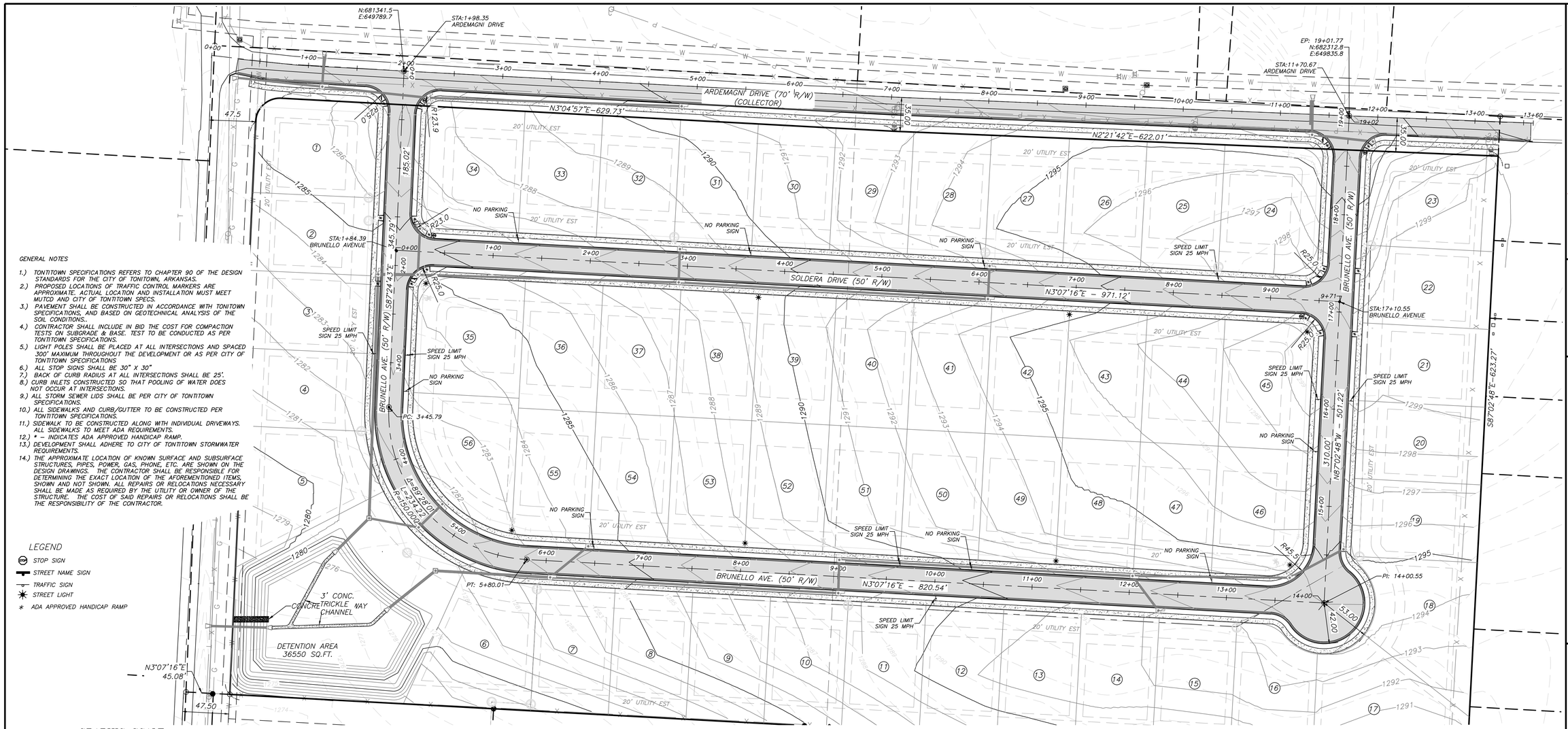
Sheet: 5 of 31



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LEGEND

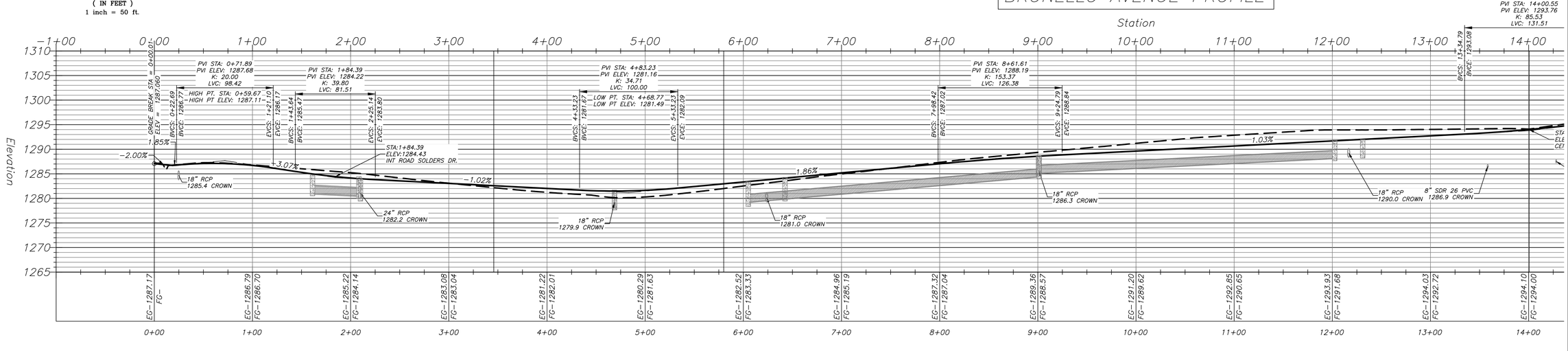
- STOP SIGN
- STREET NAME SIGN
- TRAFFIC SIGN
- STREET LIGHT
- ADA APPROVED HANDICAP RAMP

GRAPHIC SCALE

50 0 50 100 150

(IN FEET)
1 inch = 50 ft.

BRUNELLO AVENUE PROFILE



RICHARDSON ENGINEERING
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210 W. SEVIER STREET, BENTON, AR 72015 (501)315-7225

Richardson Engineering, PLLC No. 2519 CERTIFICATE OF AUTHORIZATION ARKANSAS

BRUNELLO AVE. PLAN & PROFILE
0+00 – 13+00
NAPA SUBDIVISION PHASE 3
PART OF THE SW 1/4 OF THE
SW 1/4, SECTION 36, T-18-N, R-31-W

Prepared For:
NORRHO LLC
4285 N. SHILOH DRIVE
FAYETTEVILLE, AR 72703

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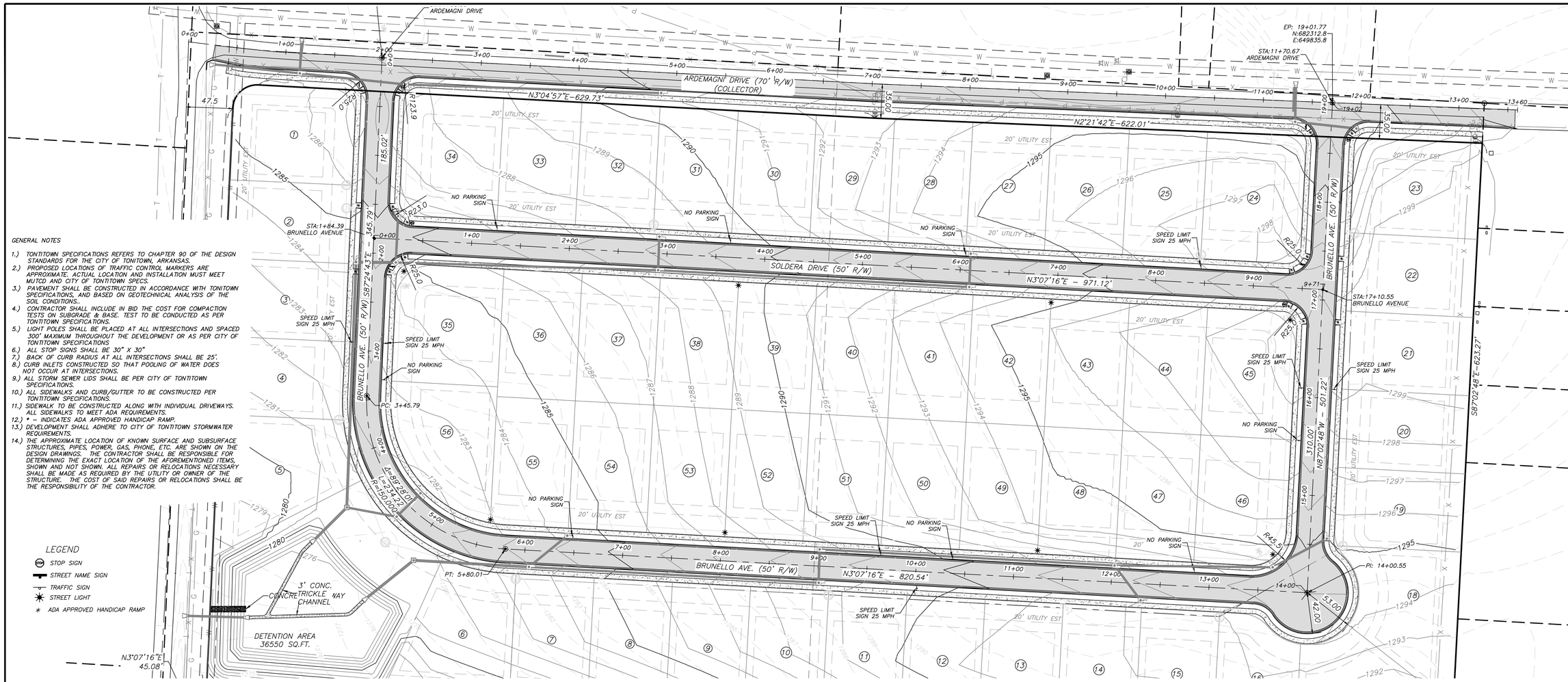

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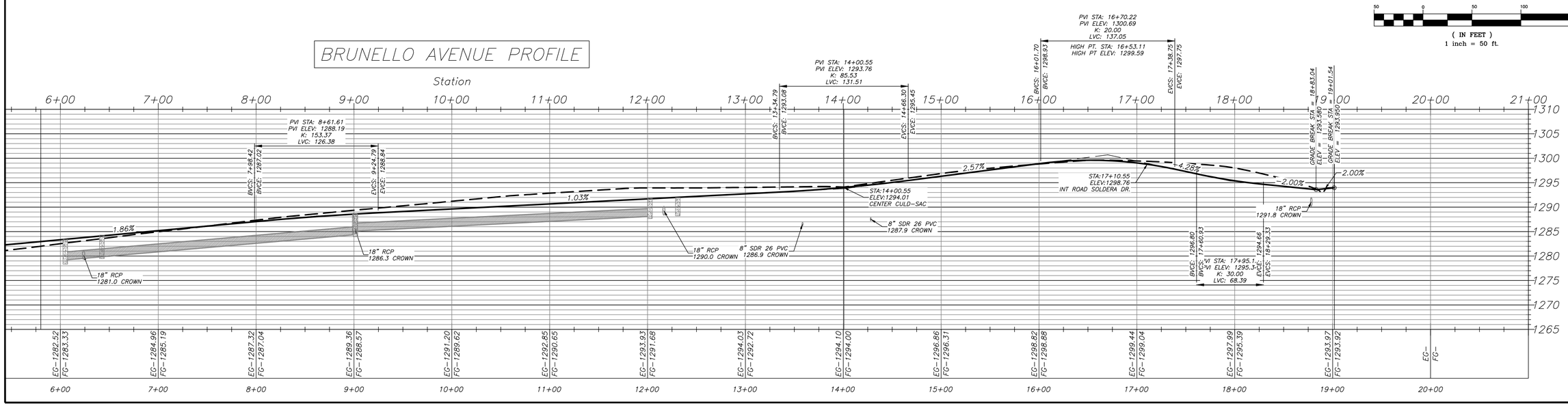

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CERTIFICATE OF AUTHORIZATION
Richardson Engineering, PLLC
No. 2519
ARKANSAS

BRUNELLO AVE. PLAN & PROFILE
13+00 – 19+01.77 (END)
NAPA SUBDIVISION PHASE 3
PART OF THE SW 1/4 OF THE
SW 1/4, SECTION 36, T-18-N, R-31-W

Prepared For:
NORRHO LLC
4285 N. SHILOH DRIVE
FAYETTEVILLE, AR 72703

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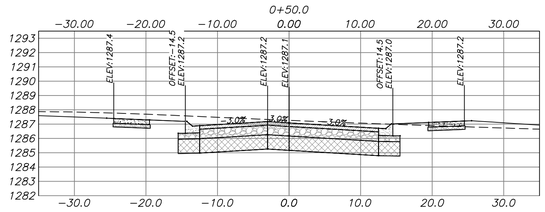

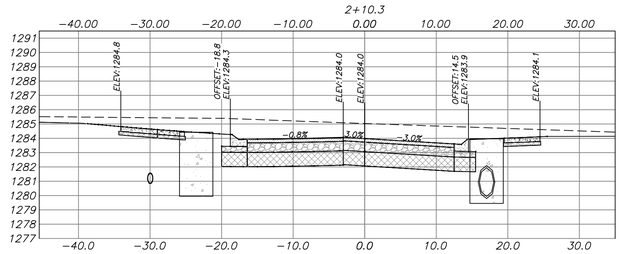

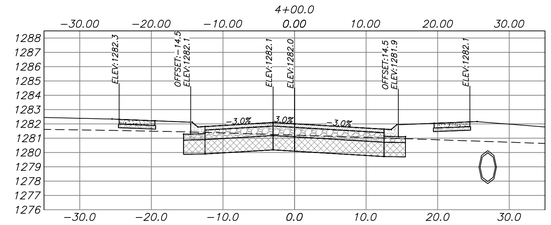

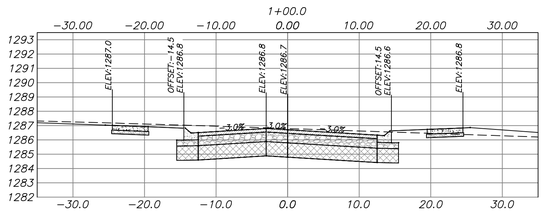

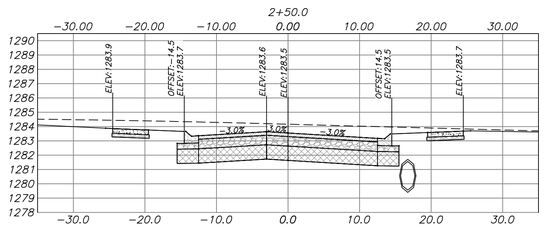

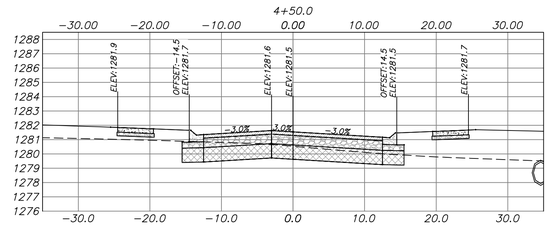

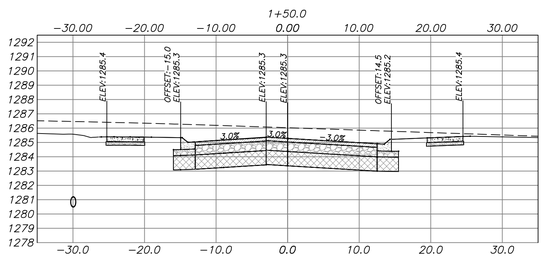

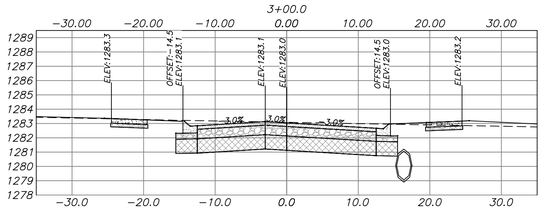

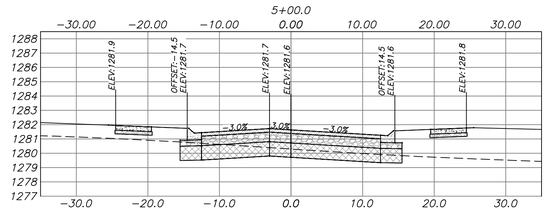

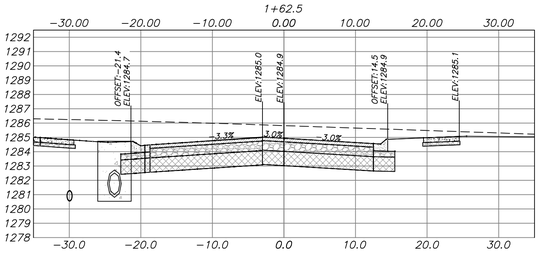

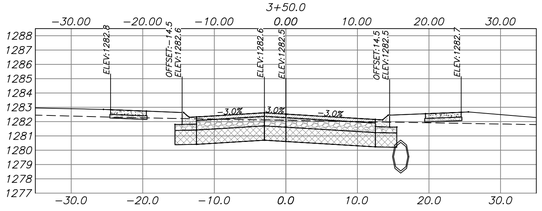

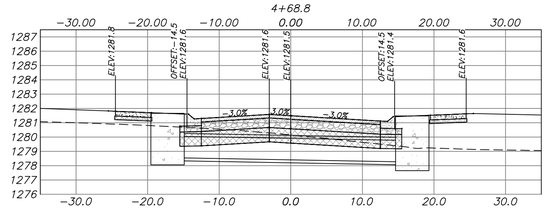

GRAPHIC SCALE

10 0 10 20 30

(IN FEET)
1 inch = 10 ft. HORIZONTAL
1 inch = 5 ft. VERTICAL

RICHARDSON ENGINEERING
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No. 2519
ARKANSAS

BRUNELLO AVE. CROSS SECTIONS
0+00 – 4+81.3
NAPA SUBDIVISION PHASE 3
PART OF THE SW 1/4 OF THE
SW 1/4, SECTION 36, T-18-N, R-31-W

Proposed For:
NORRHO LLC
4285 N. SHILOH DRIVE
FAYETTEVILLE, AR 72703

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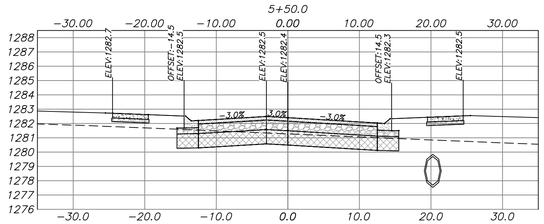

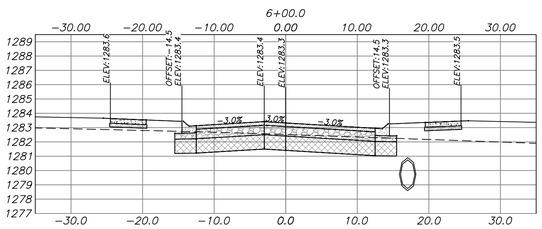

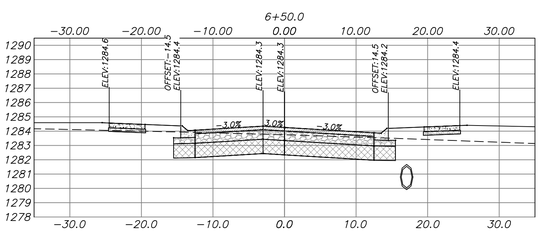

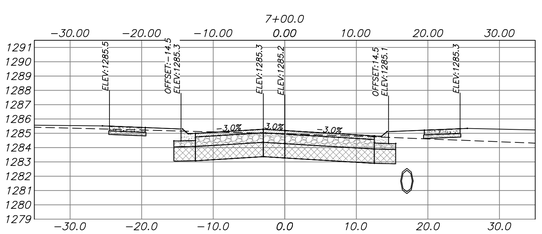

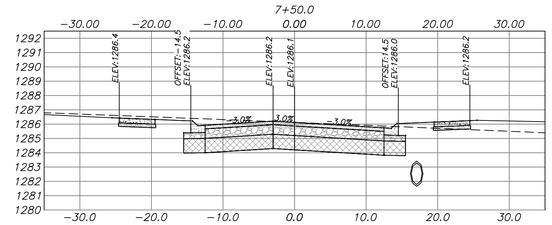

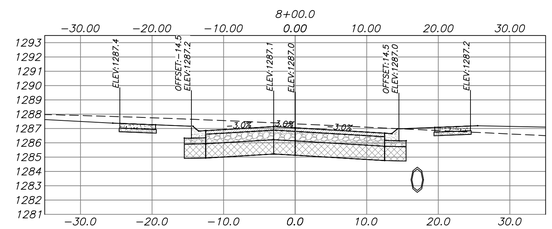

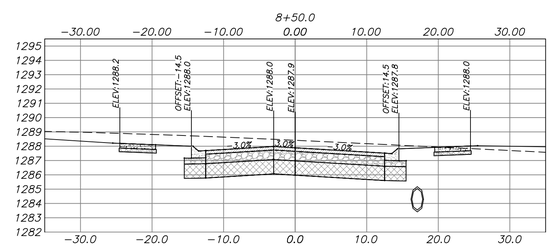

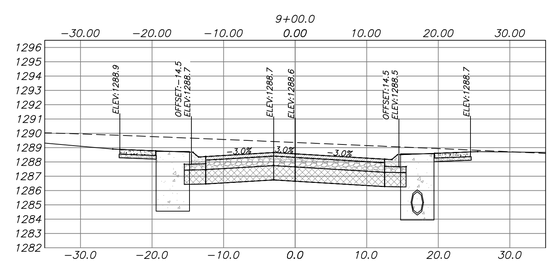

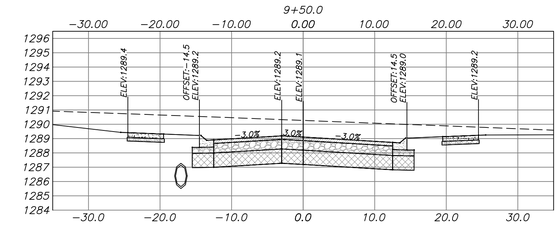

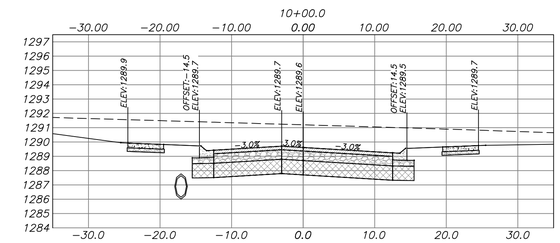

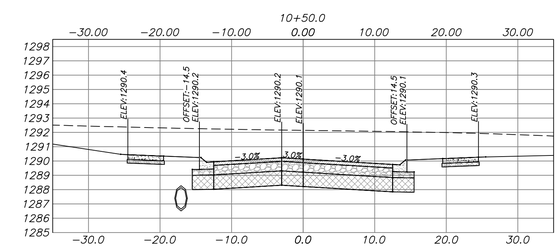

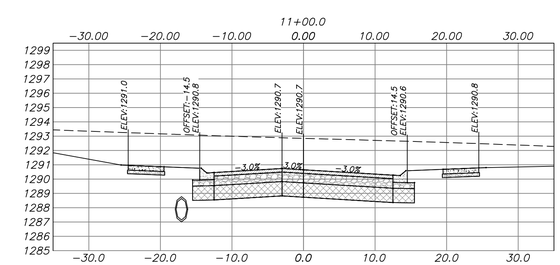

GRAPHIC SCALE

(IN FEET)
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1 inch = 5 ft. VERTICAL

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5+50 – 11+00
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PART OF THE SW 1/4 OF THE
SW 1/4, SECTION 36, T-18-N, R-31-W

Prepared For:
NORRHO LLC
4285 N. SHILOH DRIVE
FAYETTEVILLE, AR 72703

No.	Revisions	Date
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REV:09/16/19

Scale: AS SHOWN

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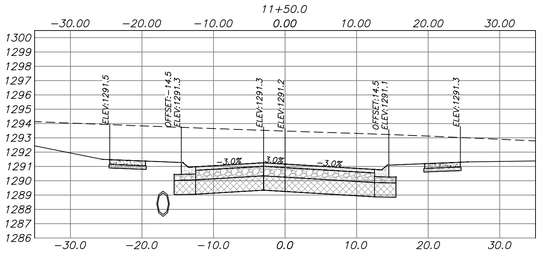

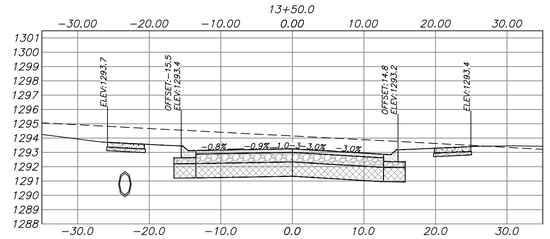

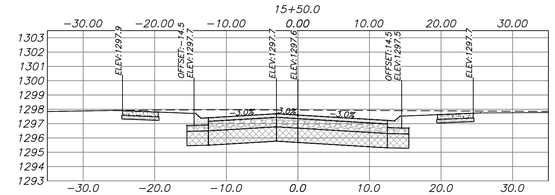

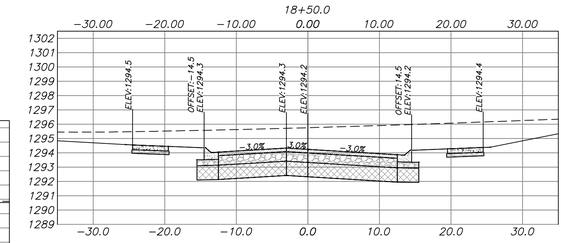

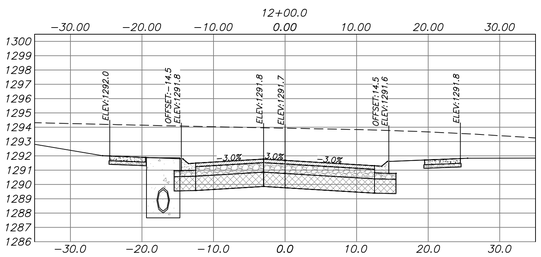

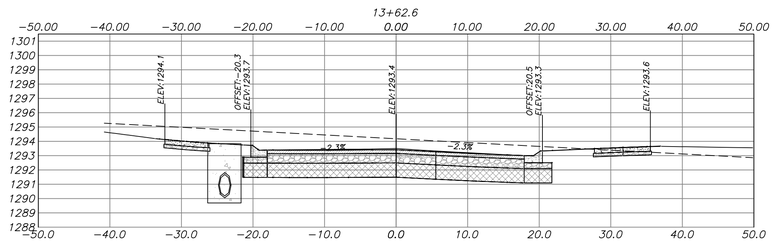

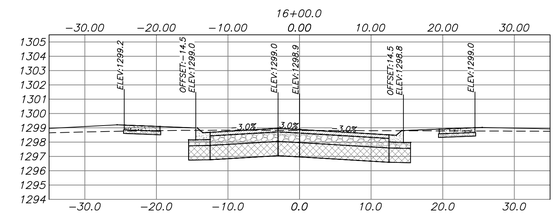

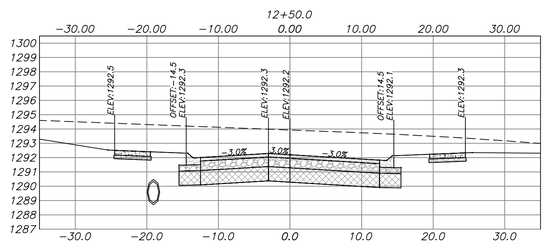

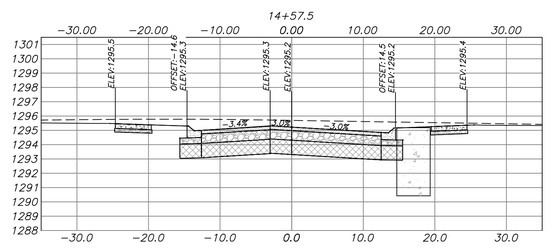

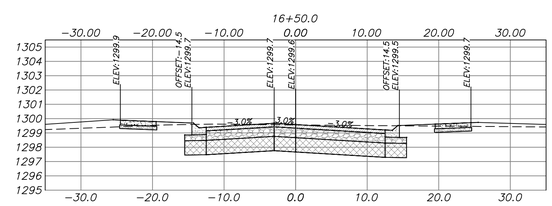

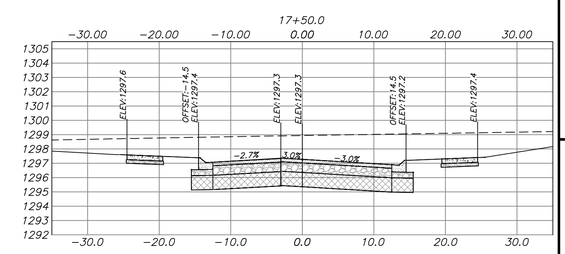

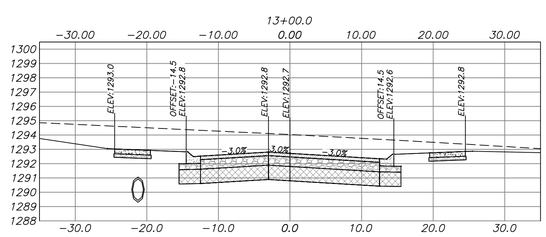

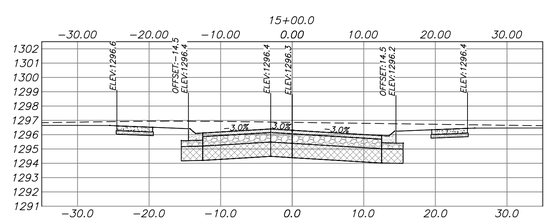

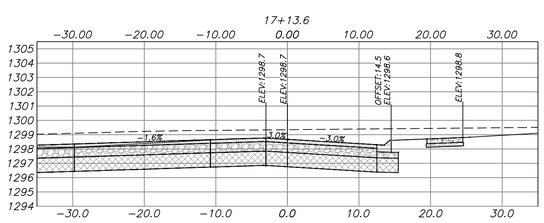

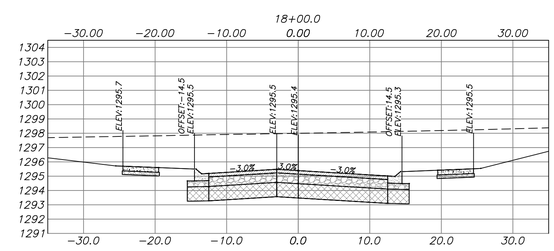

GRAPHIC SCALE

10 0 10 20 30

(IN FEET)
1 inch = 10 ft. HORIZONTAL
1 inch = 5 ft. VERTICAL

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BRUNELLO AVE. CROSS SECTIONS
11+50 – 18+00
NAPA SUBDIVISION PHASE 3

PART OF THE SW 1/4 OF THE
SW 1/4, SECTION 36, T-18-N, R-31-W

Prepared For:
NORRHO LLC
4285 N. SHILOH DRIVE
FAYETTEVILLE, AR 72703

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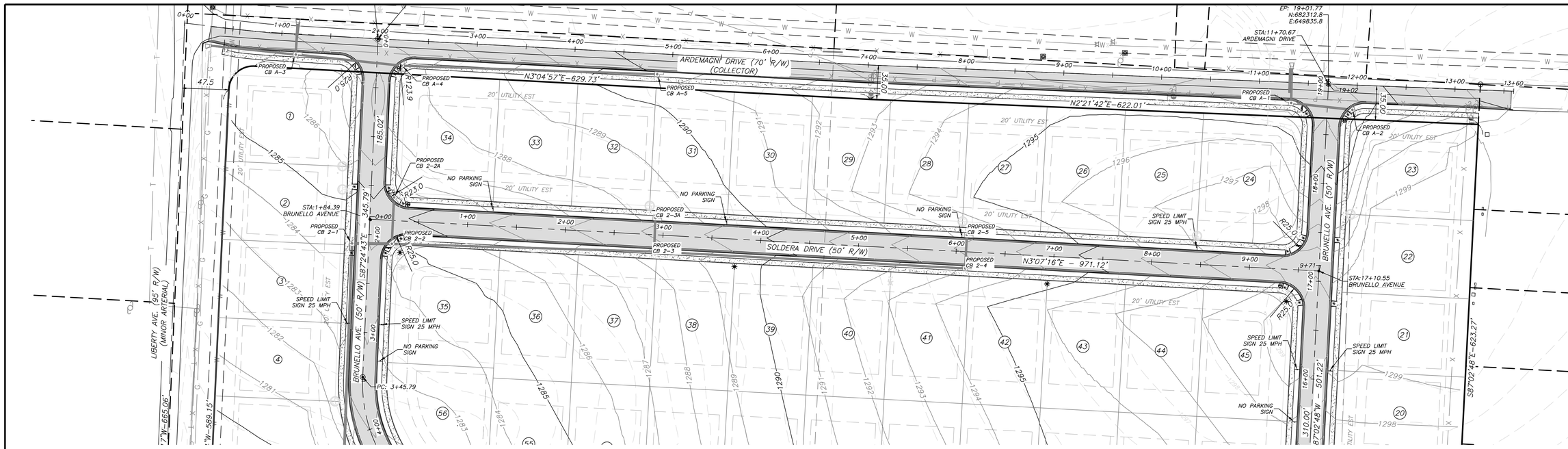
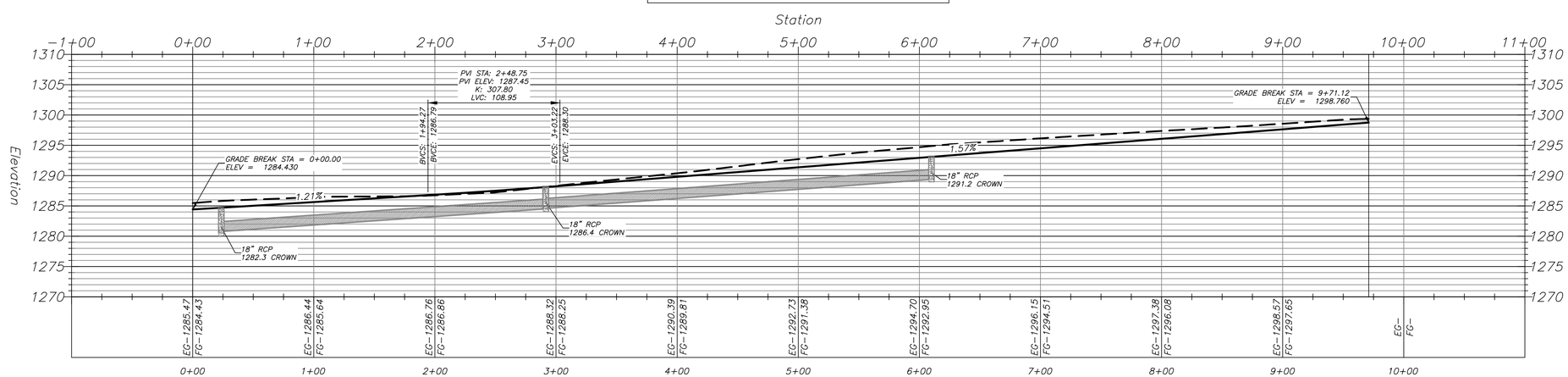


SOLDERA DRIVE PROFILE



GRAPHIC SCALE

50 0 50 100 150

(IN FEET)
1 inch = 50 ft.

LEGEND

- STOP SIGN
- STREET NAME SIGN
- TRAFFIC SIGN
- STREET LIGHT
- ADA APPROVED HANDICAP RAMP

GENERAL NOTES

1.) TONTITOWN SPECIFICATIONS REFERS TO CHAPTER 90 OF THE DESIGN STANDARDS FOR THE CITY OF TONITOWN, ARKANSAS.
2.) PROPOSED LOCATIONS OF TRAFFIC CONTROL MARKERS ARE APPROXIMATE. ACTUAL LOCATION AND INSTALLATION MUST MEET MUTCD AND CITY OF TONTITOWN SPECS.
3.) PAVEMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH TONITOWN SPECIFICATIONS, AND BASED ON GEOTECHNICAL ANALYSIS OF THE SOIL CONDITIONS..
4.) CONTRACTOR SHALL INCLUDE IN BID THE COST FOR COMPACTION TESTS ON SUBGRADE & BASE. TEST TO BE CONDUCTED AS PER TONTITOWN SPECIFICATIONS.
5.) LIGHT POLES SHALL BE PLACED AT ALL INTERSECTIONS AND SPACED 300' MAXIMUM THROUGHOUT THE DEVELOPMENT OR AS PER CITY OF TONTITOWN SPECIFICATIONS
6.) ALL STOP SIGNS SHALL BE 30" X 30"
7.) BACK OF CURB RADIUS AT ALL INTERSECTIONS SHALL BE 25'.
8.) CURB INLETS CONSTRUCTED SO THAT POOLING OF WATER DOES NOT OCCUR AT INTERSECTIONS.
9.) ALL STORM SEWER LIDS SHALL BE PER CITY OF TONTITOWN SPECIFICATIONS.
10.) ALL SIDEWALKS AND CURB/GUTTER TO BE CONSTRUCTED PER TONTITOWN SPECIFICATIONS.
11.) SIDEWALK TO BE CONSTRUCTED ALONG WITH INDIVIDUAL DRIVEWAYS. ALL SIDEWALKS TO MEET ADA REQUIREMENTS.
12.) * - INDICATES ADA APPROVED HANDICAP RAMP.
13.) DEVELOPMENT SHALL ADHERE TO CITY OF TONTITOWN STORMWATER REQUIREMENTS.
14.) THE APPROXIMATE LOCATION OF KNOWN SURFACE AND SUBSURFACE STRUCTURES, PIPES, POWER, GAS, PHONE, ETC. ARE SHOWN ON THE DESIGN DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF THE AFOREMENTIONED ITEMS, SHOWN AND NOT SHOWN. ALL REPAIRS OR RELOCATIONS NECESSARY SHALL BE MADE AS REQUIRED BY THE UTILITY OR OWNER OF THE STRUCTURE. THE COST OF SAID REPAIRS OR RELOCATIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

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SOLDERA DRIVE PLAN & PROFILE
NAPA SUBDIVISION PHASE 3
PART OF THE SW 1/4 OF THE
SW 1/4, SECTION 36, T-18-N, R-31-W

Prepared For:
NORRHO LLC
4285 N. SHILOH DRIVE
FAYETTEVILLE, AR 72703

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Scale: 1" = 50' HOR. 1" = 10' VERT.
Date: 08/30/19 REV09/16/19
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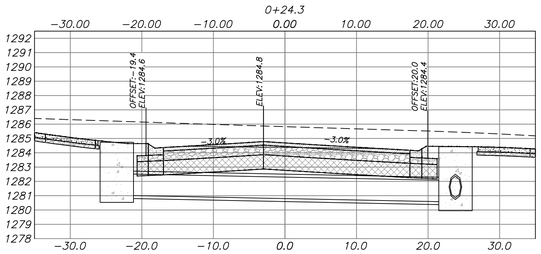
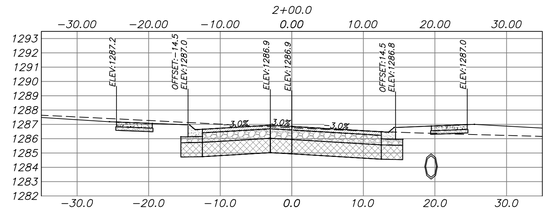
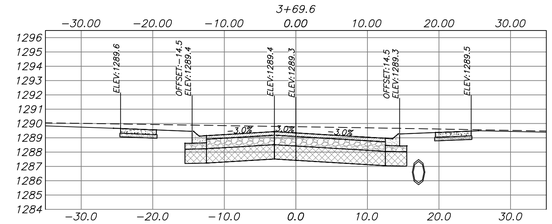
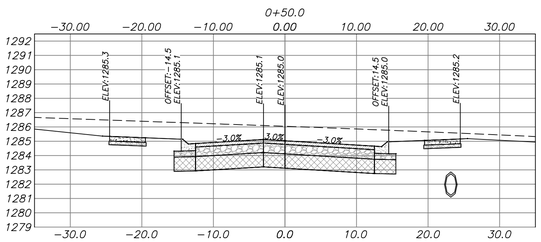
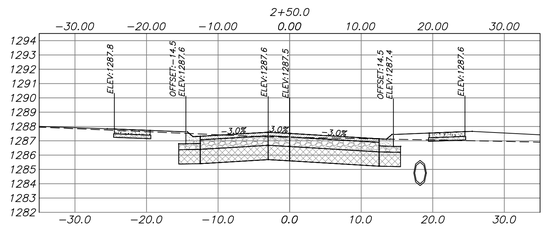
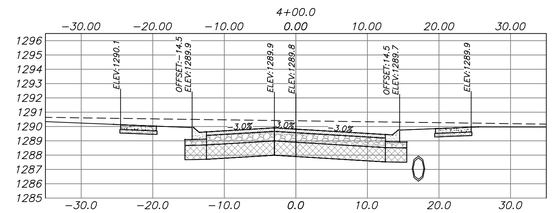


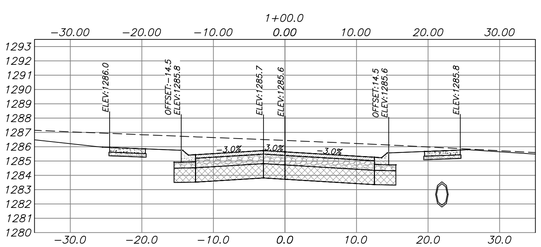


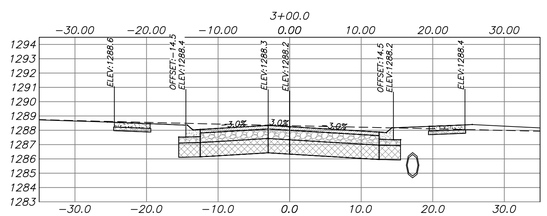


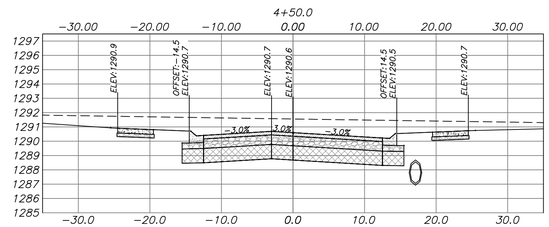


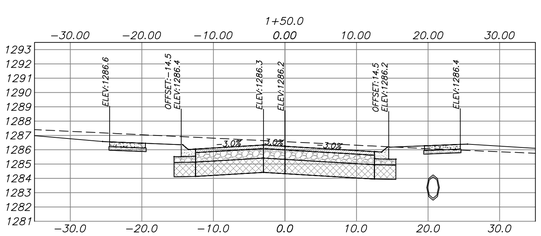


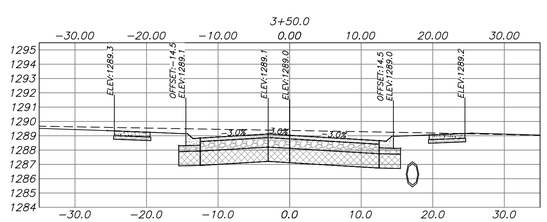


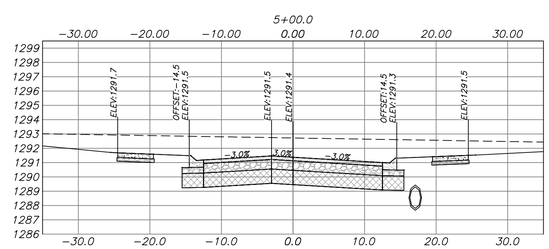




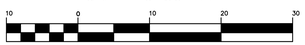








GRAPHIC SCALE



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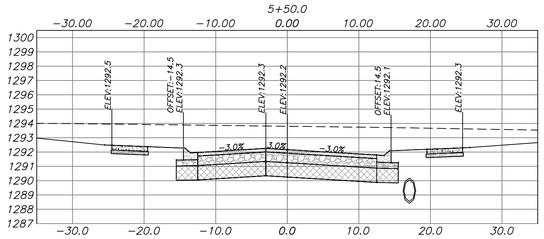

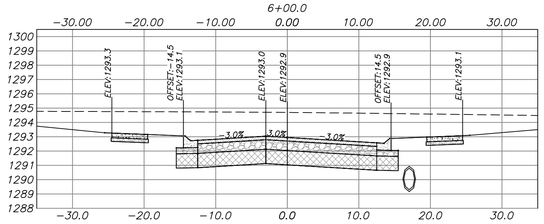

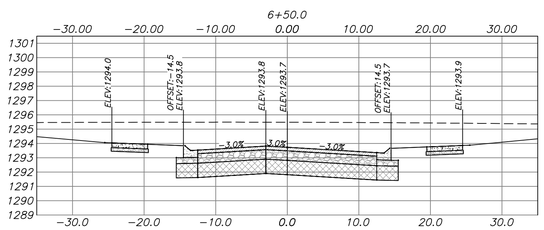

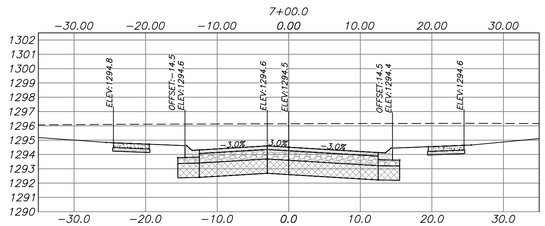

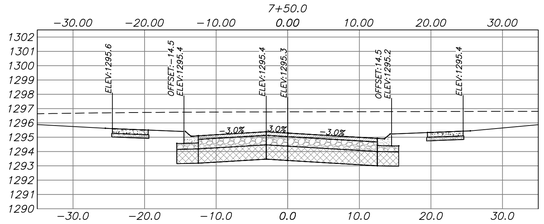

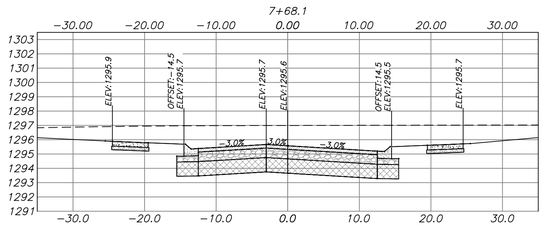

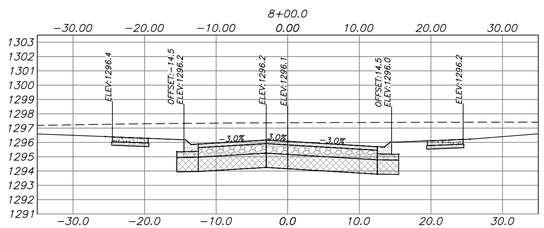

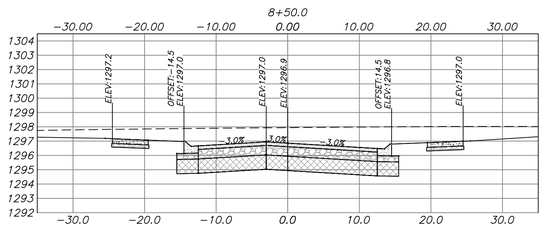

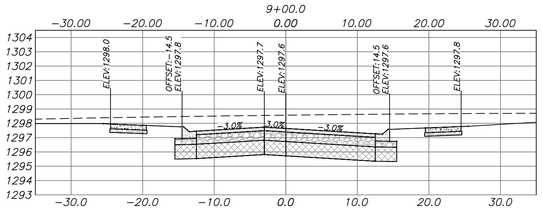

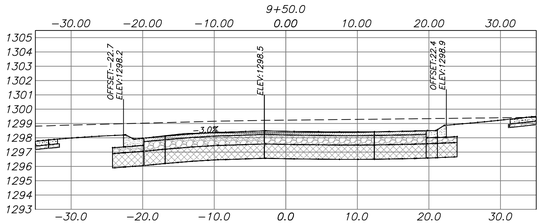

GRAPHIC SCALE

(IN FEET)
1 inch = 10 ft. HORIZONTAL
1 inch = 5 ft. VERTICAL

RICHARDSON ENGINEERING
Planning • Engineering • Development Consulting
210 W. SEVIER STREET, BENTON, AR 72015 (501)315-7225

CERTIFICATE OF AUTHORIZATION
Richardson Engineering, PLLC
No. 2519
ARKANSAS

SOLDERA DRIVE CROSS SECTIONS
5+50 – 9+50
NAPA SUBDIVISION PHASE 3
PART OF THE SW 1/4 OF THE
SW 1/4, SECTION 36, T-18-N, R-31-W

Prepared For:
NORRHO LLC
4285 N. SHILOH DRIVE
FAYETTEVILLE, AR 72703

No.	Revisions	Date
1	AS PER CITY COMMENTS 9/10/19	9/16/19

Scale: AS SHOWN
Date: 08/30/19
REV:09/16/19
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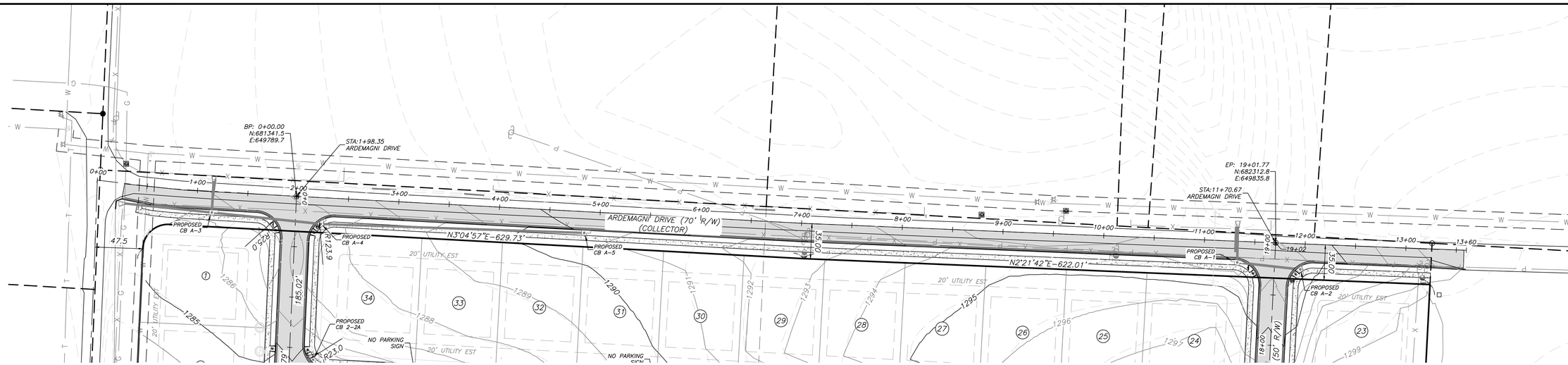
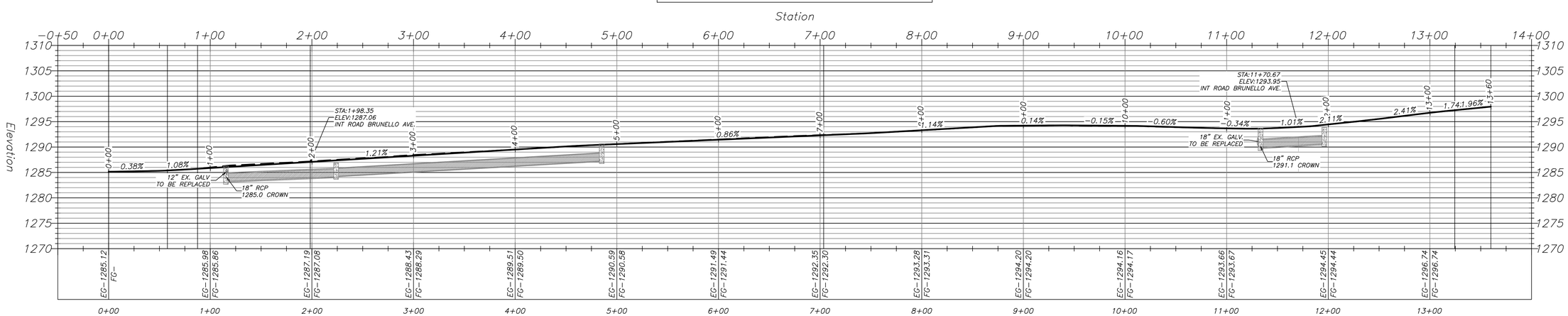


ARDEMAGNI DRIVE PROFILE



LEGEND

- STOP SIGN
- STREET NAME SIGN
- TRAFFIC SIGN
- STREET LIGHT
- ADA APPROVED HANDICAP RAMP

GENERAL NOTES

1.) TONTITOWN SPECIFICATIONS REFERS TO CHAPTER 90 OF THE DESIGN STANDARDS FOR THE CITY OF TONITOWN, ARKANSAS.
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GRAPHIC SCALE

50 0 50 100 150

(IN FEET)
1 inch = 50 ft.

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ARDEMAGNI DR. PLAN & PROFILE
NAPA SUBDIVISION PHASE 3
PART OF THE SW 1/4 OF THE
SW 1/4, SECTION 36, T-18-N, R-31-W

Prepared For:
NORRHO LLC
4285 N. SHILOH DRIVE
FAYETTEVILLE, AR 72703

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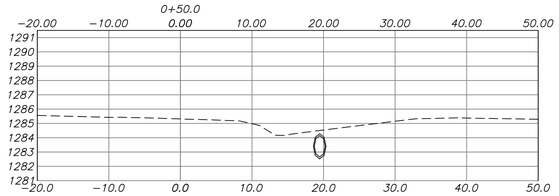
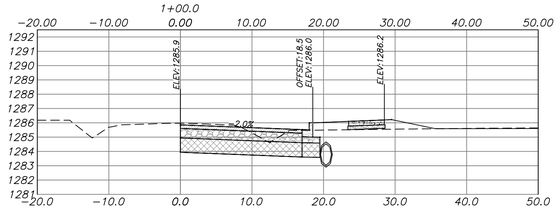
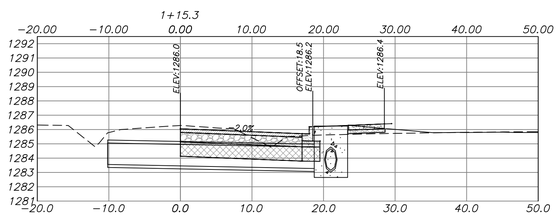
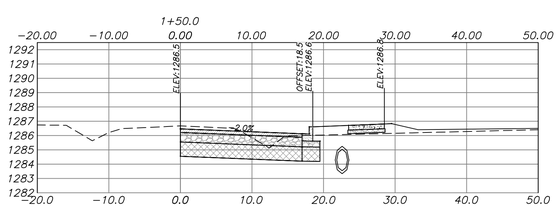
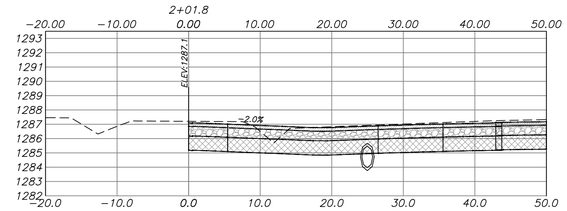
Scale: 1" = 50' HOR. 1" = 50' VERT.
Date: 08/30/19 REV:09/16/19
Sheet: 14 of 31

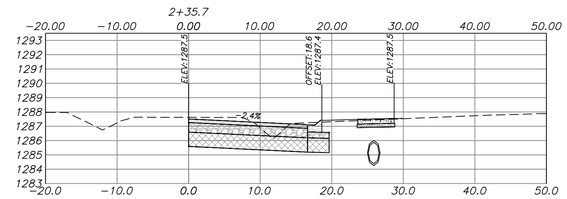


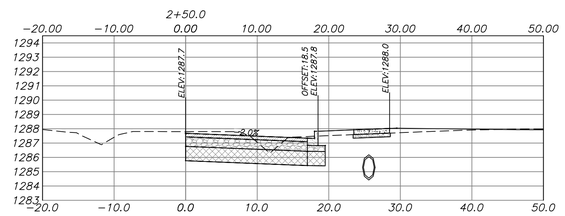


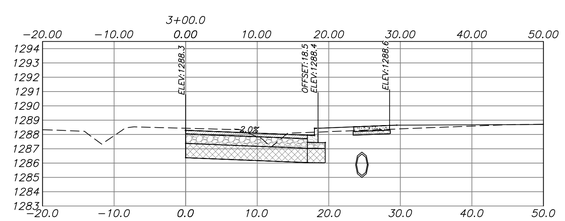


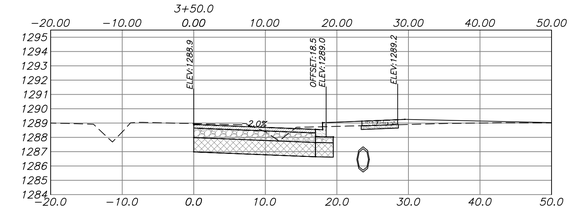


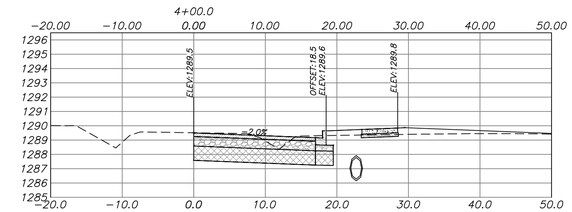


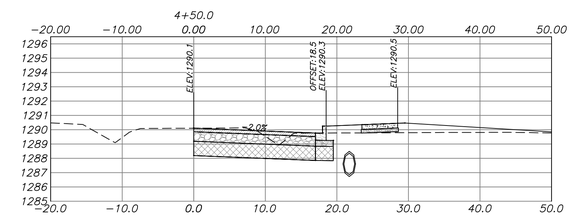


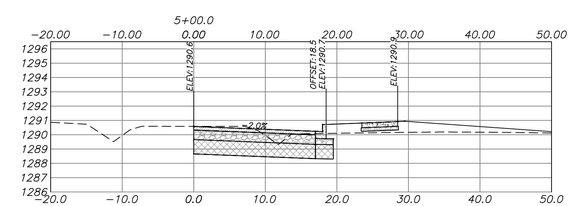




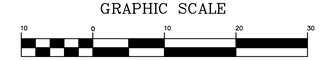








GRAPHIC SCALE



(IN FEET)
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RICHARDSON ENGINEERING
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210 W. SEVIER STREET, BENTON, AR 72015 (501)315-7225

CERTIFICATE OF AUTHORIZATION
Richardson Engineering, PLLC
No. 2519
ARKANSAS

ARDEMAGNI HALF STREET
CROSS SECTIONS 0+00–5+00
NAPA SUBDIVISION PHASE 3
PART OF THE SW 1/4 OF THE
SW 1/4, SECTION 36, T-18-N, R-31-W

Prepared For:
NORRHO LLC
4285 N. SHILOH DRIVE
FAYETTEVILLE, AR 72703

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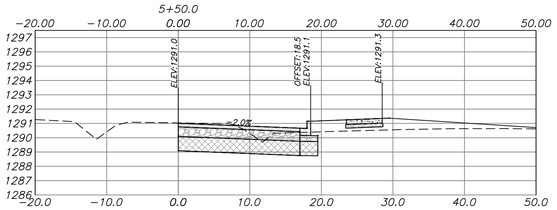

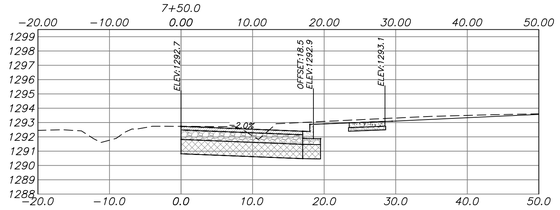

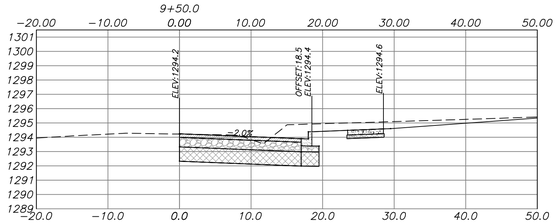

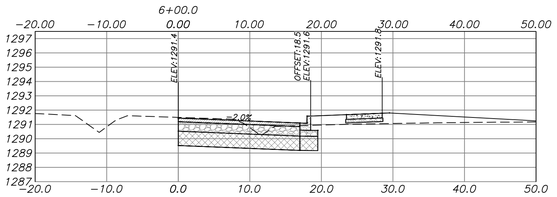

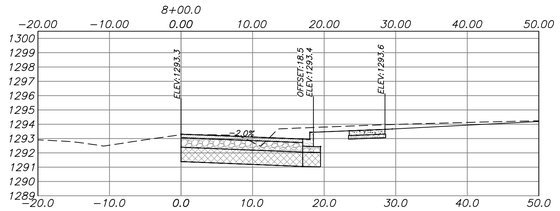

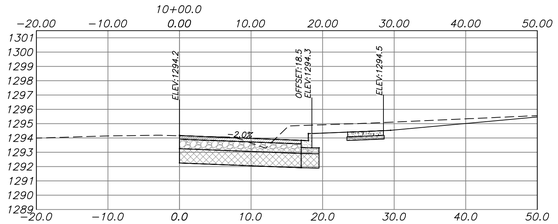

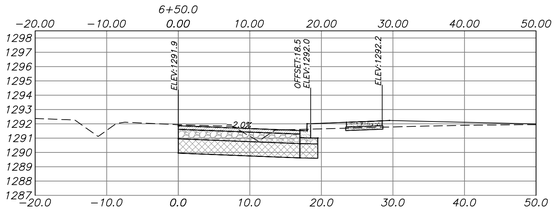

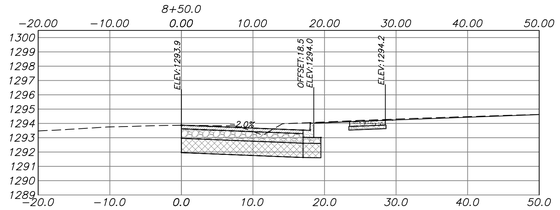

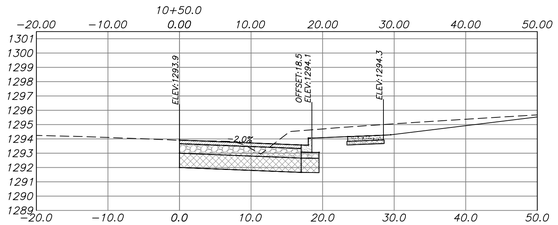

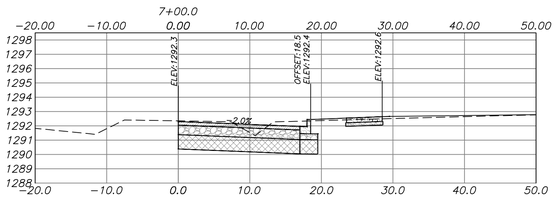

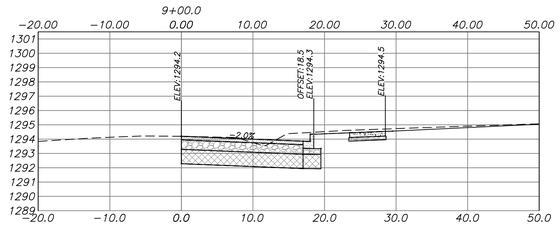

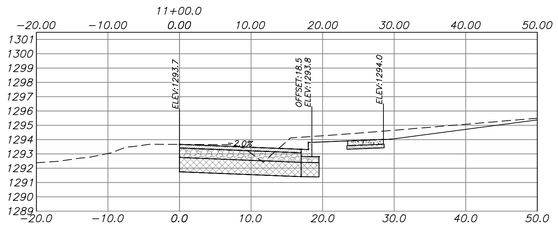

GRAPHIC SCALE

(IN FEET)
1 inch = 10 ft. HORIZONTAL
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RICHARDSON ENGINEERING
Planning • Engineering • Development Consulting
210 W. SEVIER STREET, BENTON, AR 72015 (501)315-7225

CERTIFICATE OF AUTHORIZATION
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No. 2519
ARKANSAS

ARDEMAGNI HALF STREET
CROSS SECTIONS 5+00–11+00
NAPA SUBDIVISION PHASE 3
PART OF THE SW 1/4 OF THE
SW 1/4, SECTION 36, T-18-N, R-31-W

Prepared For:
NORRHO LLC
4285 N. SHILOH DRIVE
FAYETTEVILLE, AR 72703

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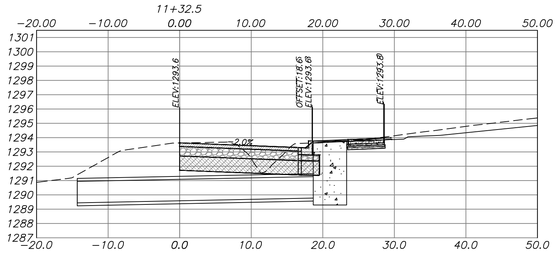
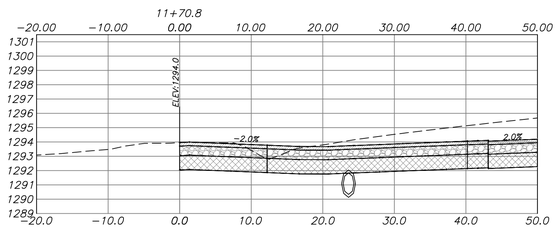
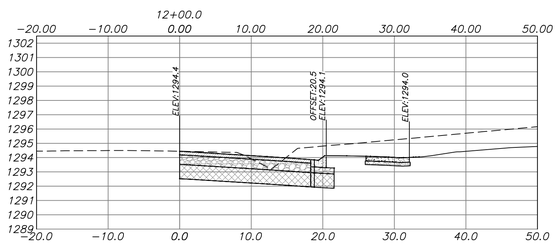
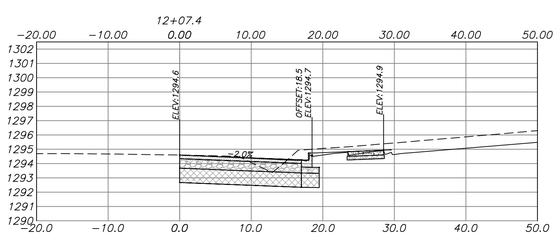
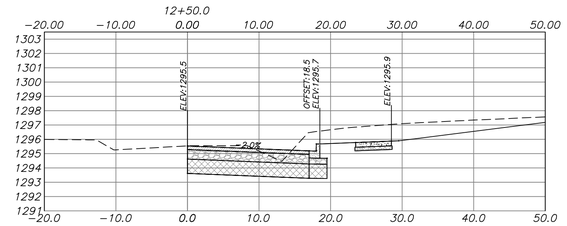
Sheet: 16 of 31

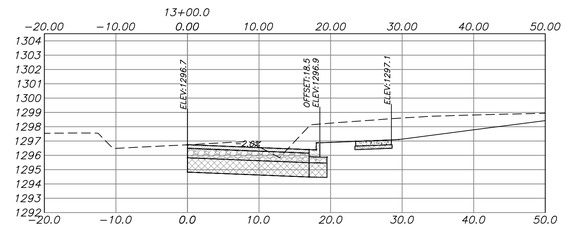


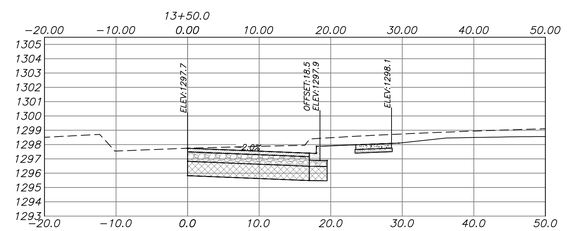












GRAPHIC SCALE

10 0 10 20 30

(IN FEET)
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CROSS SECTIONS 11+50–13+50
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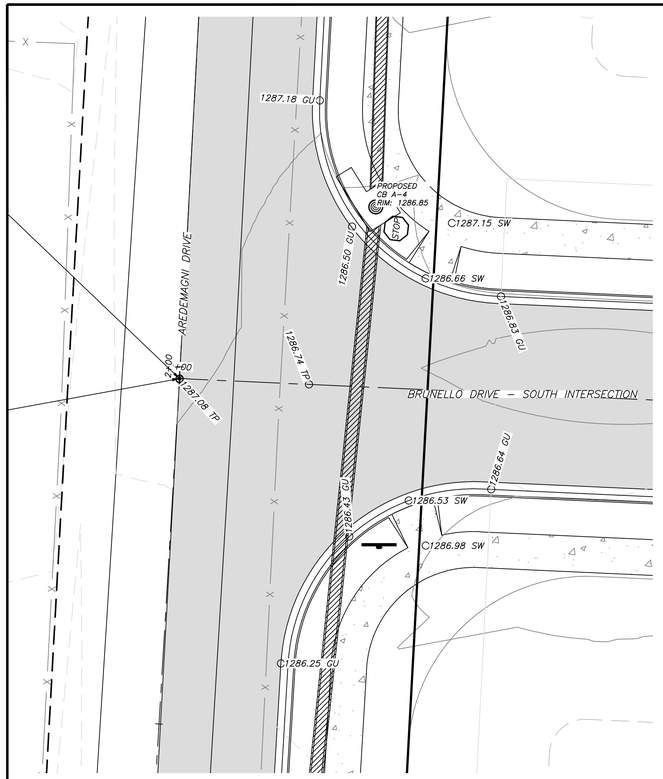

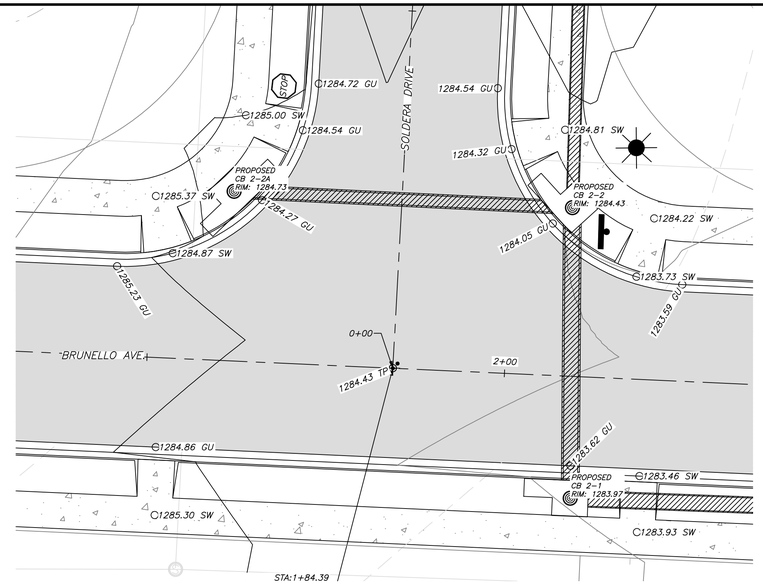

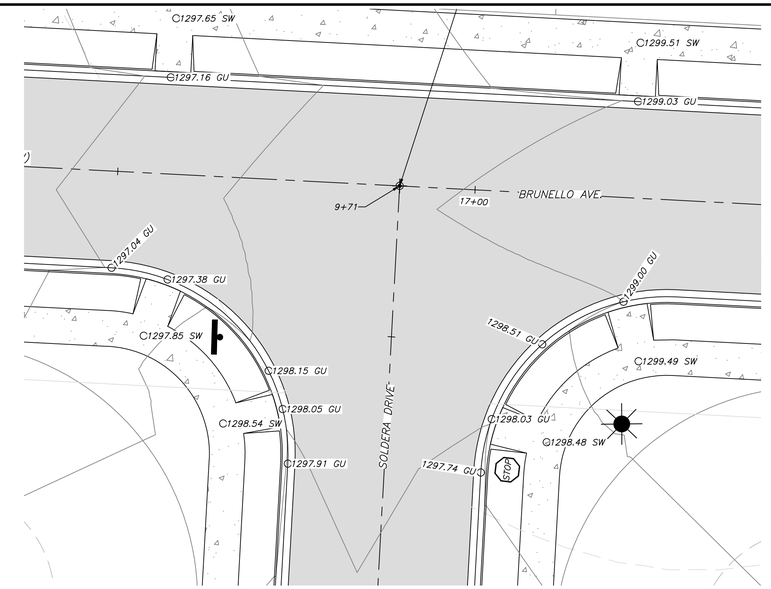

LEGEND

- STOP SIGN
- STREET NAME SIGN
- TRAFFIC SIGN
- STREET LIGHT
- ADA APPROVED HANDICAP RAMP

GRAPHIC SCALE

10 0 10 20 30

(IN FEET)
1 inch = 10 ft.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 14266
ERIC RYAN RICHARDSON

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7.) BACK OF CURB RADIUS AT ALL INTERSECTIONS SHALL BE 25'.
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ARKANSAS

GRADING PLANS AT INTERSECTIONS
NAPA SUBDIVISION PHASE 3
PART OF THE SW 1/4 OF THE SW 1/4, SECTION 36, T-18-N, R-31-W

Prepared For:
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4285 N. SHILOH DRIVE
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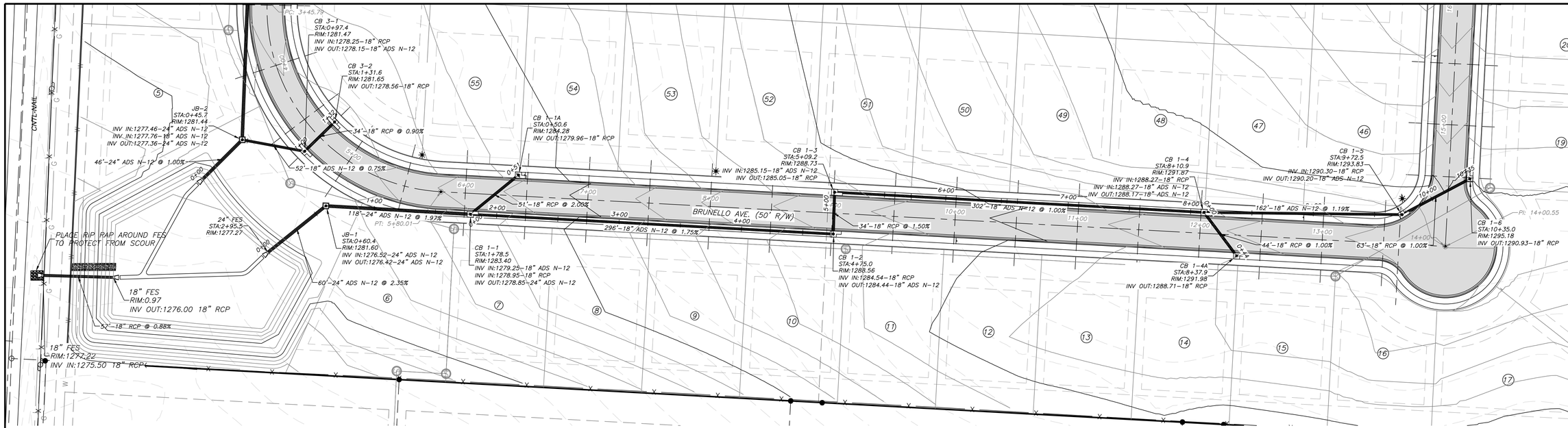

LEGEND

- S — SANITARY SEWER
- SEWER FORCEMAIN
- W — WATER LINE
- STORM DRAIN
- DITCH OR SWALE
- E — POWER LINE (OVERHEAD)
- PROPOSED WATER METER BOX
- EXISTING MANHOLE
- PROPOSED MANHOLE
- GATE VALVE
- BLOW-OFF
- FIRE HYDRANT
- CURB INLET
- FES
- POWER POLE

GRAPHIC SCALE

40 0 40 80 120

(IN FEET)
1 inch = 40 ft.

GENERAL NOTES:

1.) TONTITOWN SPECIFICATIONS REFERS TO CHAPTER 90 OF THE DESIGN STANDARDS FOR THE CITY OF TONITOWN, ARKANSAS. ALL CONSTRUCTION AND MATERIALS TO MEET OR EXCEED CITY OF TONTITOWN SPECIFICATIONS.
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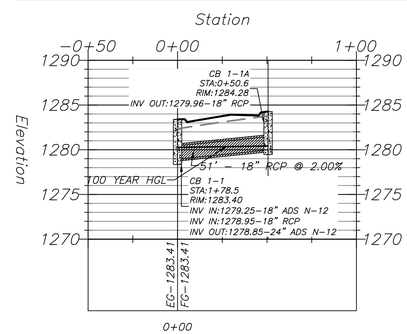
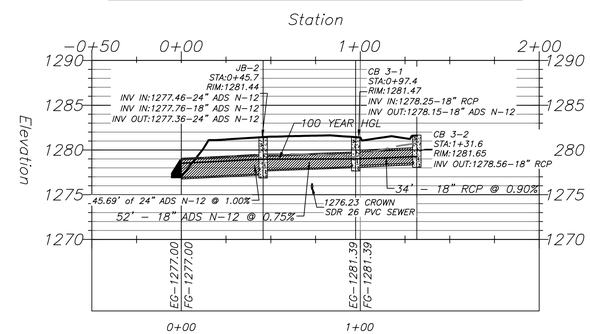
STORM SEWER 1-2 PROFILE



STORM SEWER 1-3 PROFILE



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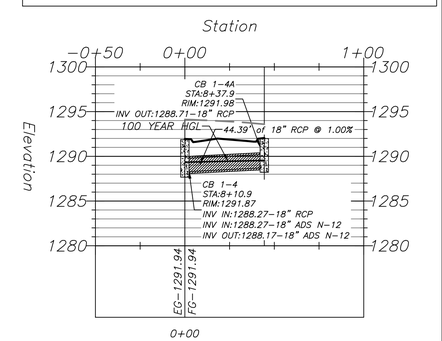
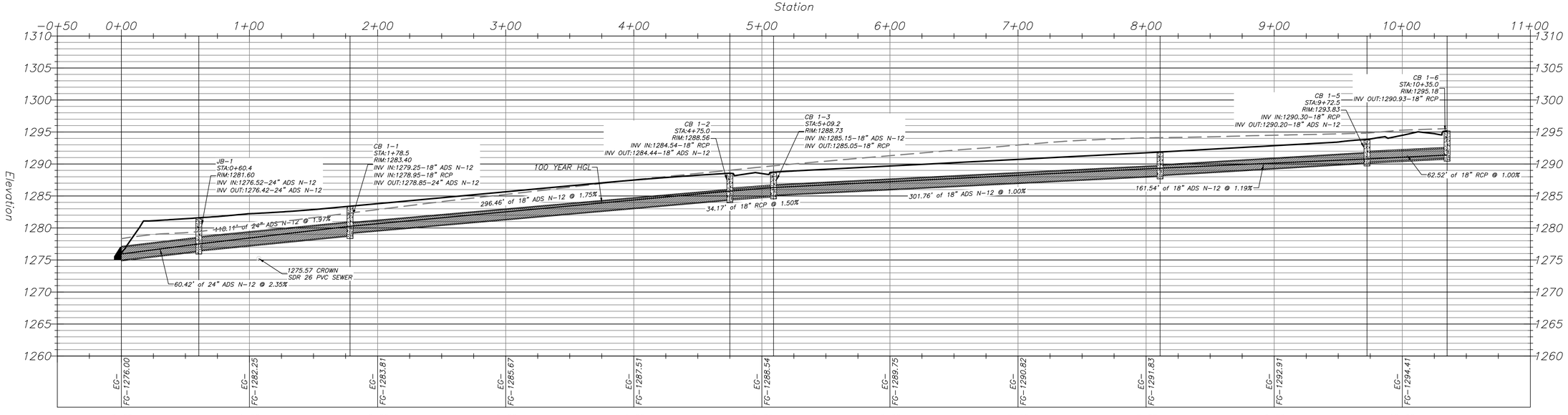




RICHARDSON ENGINEERING
Planning • Engineering • Development Consulting
210 W. SEVIER STREET, BENTON, AR 72015 (501)315-7225

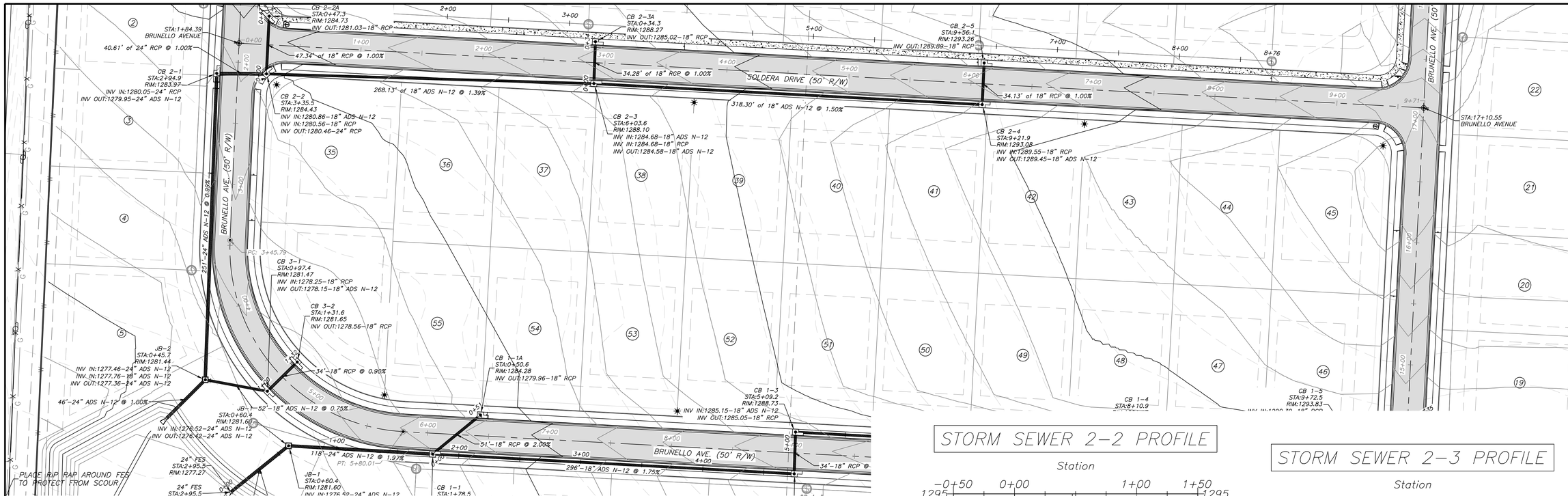
CERTIFICATE OF AUTHORIZATION
Richardson Engineering, PLLC
No. 2519
ARKANSAS

STORM SEWER 1 PLAN & PROFILE
NAPA SUBDIVISION PHASE 3
PART OF THE SW 1/4 OF THE SW 1/4, SECTION 36, T-18-N, R-31-W

Prepared For:
NORRHO LLC
4285 N. SHILOH DRIVE
FAYETTEVILLE, AR 72703

No.	Revisions	Date
1	AS PER CITY COMMENTS 09/10/19	9/16/19

Scale: 1" = 40'
Date: 08/30/19
REV09/16/19
Sheet: 18 of 31



LEGEND

- S — SANITARY SEWER
- SEWER FORCEMAIN
- W — WATER LINE
- STORM DRAIN
- DITCH OR SWALE
- E — POWER LINE (OVERHEAD)
- WMS PROPOSED WATER METER BOX
- EXISTING MANHOLE
- PROPOSED MANHOLE
- GATE VALVE
- BLOW-OFF
- FIRE HYDRANT
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GRAPHIC SCALE

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(IN FEET)
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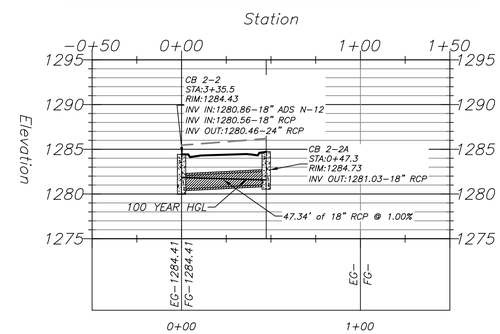
STORM SEWER 2-2 PROFILE



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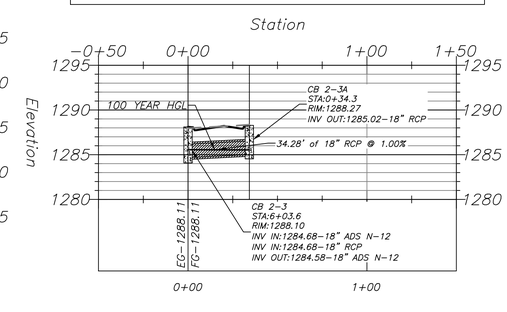
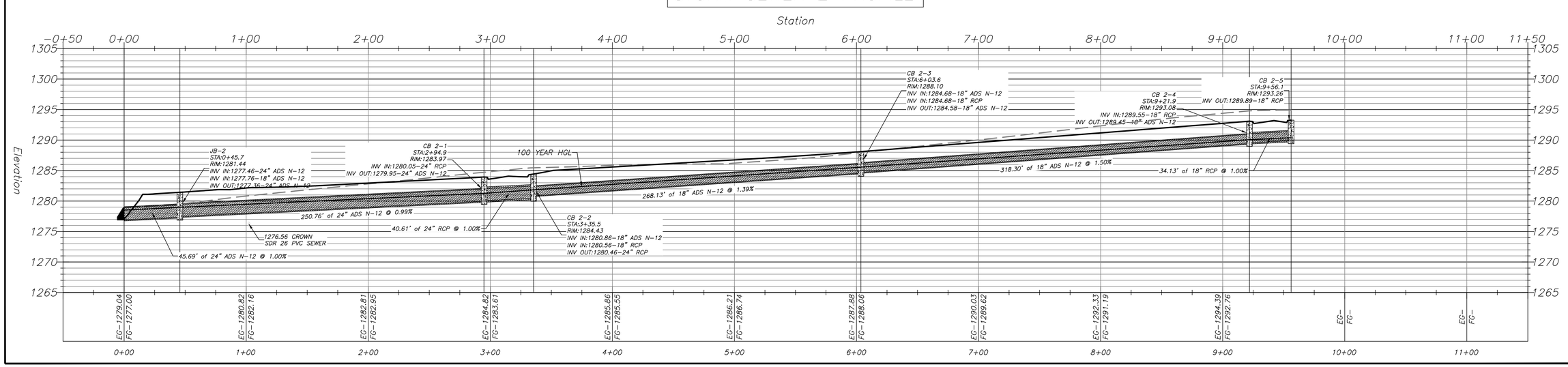


STORM SEWER 2 PROFILE



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STORM SEWER 2 PLAN & PROFILE
NAPA SUBDIVISION PHASE 3
PART OF THE SW 1/4 OF THE SW 1/4, SECTION 36, T-18-N, R-31-W

Prepared For:
NORRHO LLC
4285 N. SHILOH DRIVE
FAYETTEVILLE, AR 72703

No.	Revisions	Date
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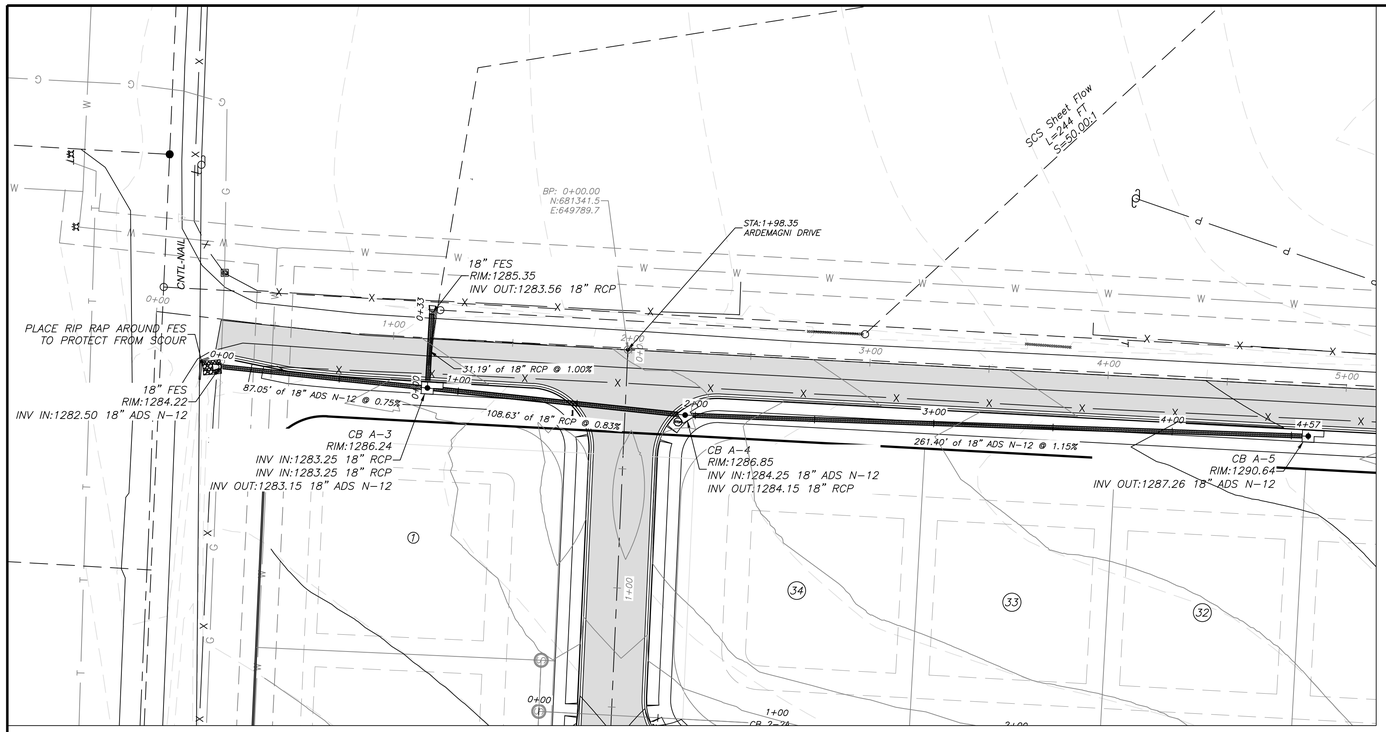

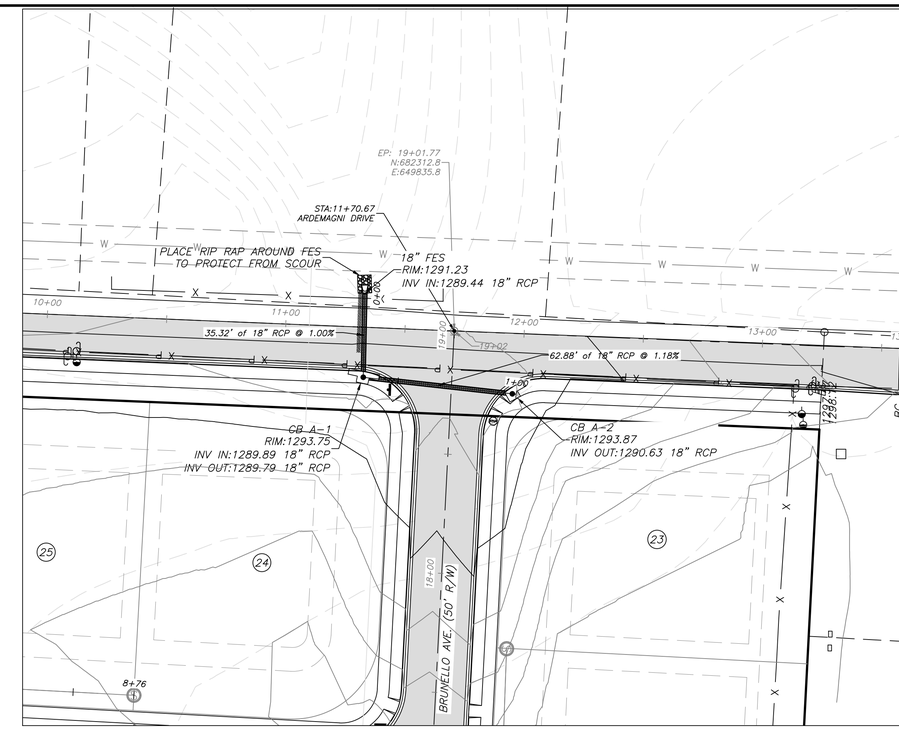

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30 0 30 60 90

(IN FEET)
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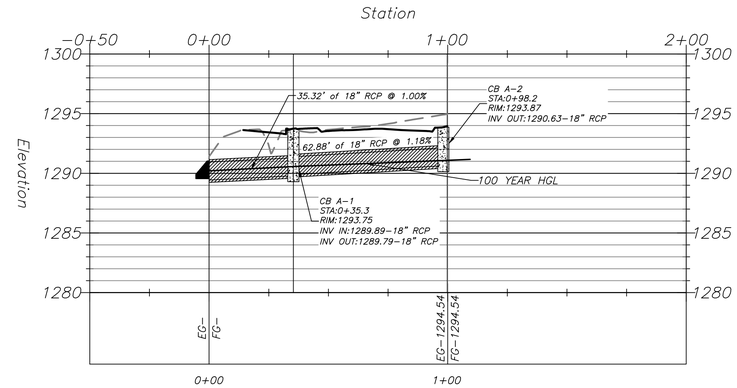
STORM SEWER A-1 PROFILE



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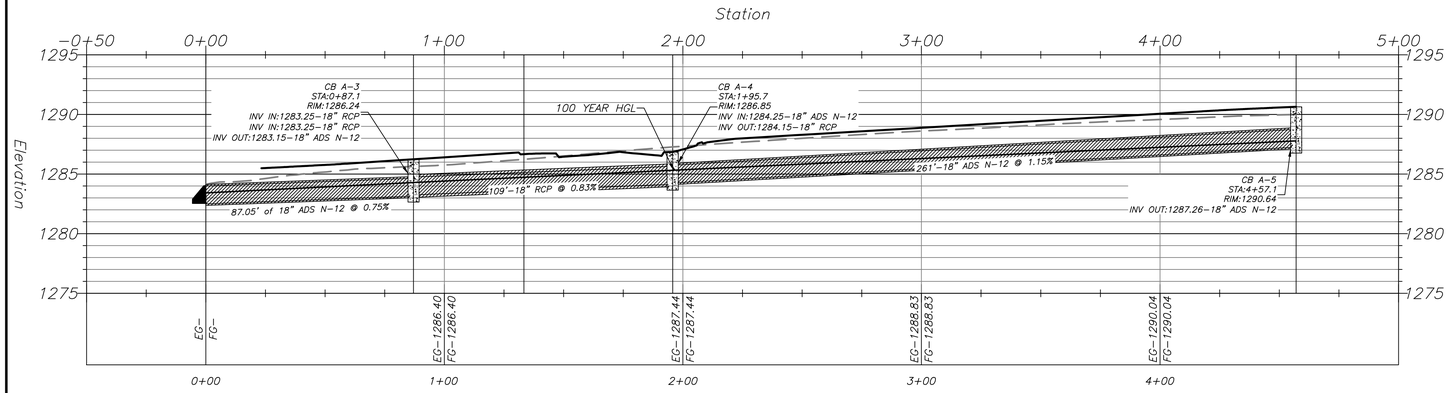

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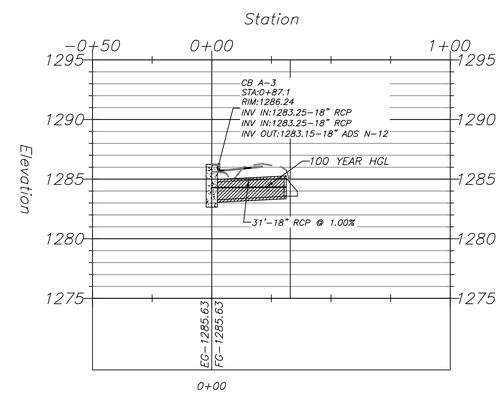

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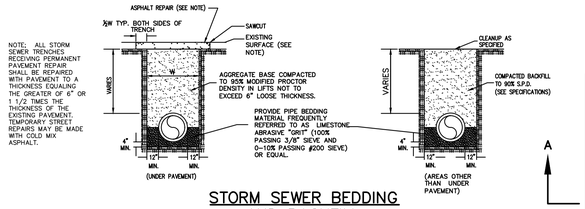
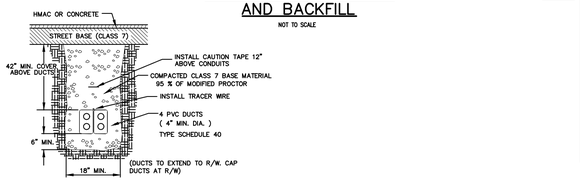


STORM SEWER BEDDING AND BACKFILL

NOT TO SCALE



TYPICAL SECTION 4–4" UTILITY DUCTS

NOT TO SCALE

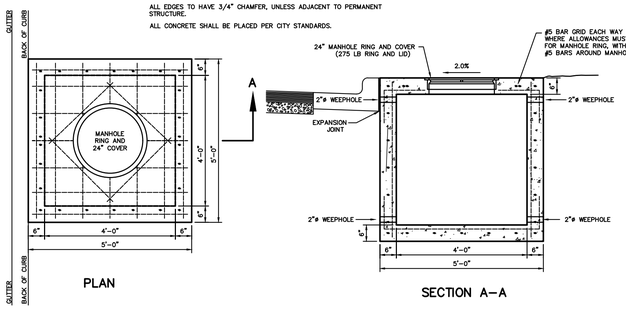
NOTES:

ALL REINFORCING TO BE #5 BAR GRID @ 10" O.C., E.W. EXCEPT WHERE ALLOWANCES MUST BE MADE FOR PIPES, OPENING, OR MANHOLE RING.

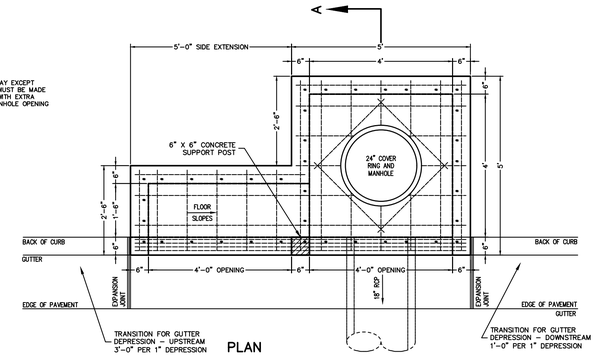
NEOPRENE-COATED STEEL STEPS ARE TO BE INSTALLED IN ALL DROP INLETS AND JUNCTION BOXES WITH A DEPTH OF 4'-0" OR GREATER. STEP SPACING TO BE 12".

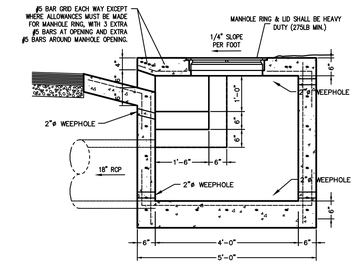
ALL EDGES TO HAVE 3/4" CHAMFER, UNLESS ADJACENT TO PERMANENT STRUCTURE.

ALL CONCRETE SHALL BE PLACED PER CITY STANDARDS.

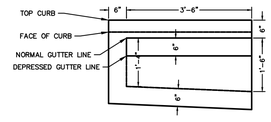


TYPICAL JUNCTION BOX

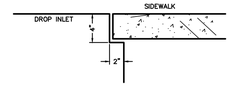




SECTION A–A



4'–0" EXTENSION



NOTCH FOR SIDEWALKS

TYPICAL DROP INLET

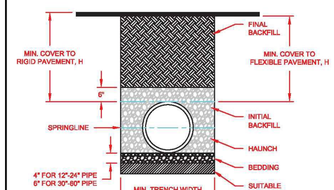
NOT TO SCALE

NOTES:

1. ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER.
2. ALL REINFORCEMENT BARS SHALL BE GRADE 60 AND SHALL HAVE A MINIMUM 1-1/2" COVER UNLESS OTHERWISE NOTED.
3. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3500 p.s.i.
   –TOP 18" SHALL BE CAST-IN-PLACE.
4. CURB INLET BACK OPENING LOCATIONS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
5. WHEN AN INLET IS PLACED ADJACENT TO CONCRETE PAVEMENT, THE GUTTER DEPRESSION SHALL BE FORMED IN CONCRETE PAVEMENT.
6. PIPES MAY ENTER BOX FROM ANY ANGLE OF ELEVATION AS DIRECTED BY THE ENGINEER. REINFORCING BARS SHALL BE CUT TO CLEAR PIPE BY 1-1/2".
7. THE EXPANSION JOINT SHALL HAVE A THICKNESS OF 1-1/2" AND CONFORM TO AASHTO M213.
8. REFER TO CURB AND GUTTER DETAILS FOR APPROPRIATE CURB CONFIGURATION AND GUTTER DIMMENSIONS.
9. REFER TO PLAN AND PROFILE SHEETS TO DETERMINE EXTENSIONS AND SIZE (IF ANY) ACCOMPANYING DROP INLETS.
10. PRIOR TO AND DURING PLACEMENT OF PAVEMENT IN FRONT OF INLETS, THE CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE AT ALL TIMES. THE METHODS USED FOR THIS WORK SHALL BE APPROVED BY THE ENGINEER.
11. LIMIT DEFLECTION TO 60 DEGREES. IF GREATER, USE NEXT LARGER MANHOLE DIAMETER/SIZE.
12. EXTENSIONS WITH LENGTHS DESIGNATED ON THE PLANS EXCEEDING 8'-0" SHALL HAVE THE SAME INSIDE DEPTH DIMENSIONS AS STATED ON DETAILS UNLESS OTHERWISE NOTED.
13. CONCRETE FOR RECTANGULAR DROP INLETS SHALL BE CLASS A, 3000 PSI, 5.5 BAG MIX WITH 4–7% AIR ENTRAINMENT.
14. ALL REINFORCING TO BE #5 BAR GRID @ 10" O.C., E.W. EXCEPT WHERE ALLOWANCES MUST BE MADE FOR PIPES, OPENING, OR MANHOLE RING.
15. NEOPRENE–COATED STEEL STEPS ARE TO BE INSTALLED IN ALL DROP INLETS AND JUNCTION BOXES WITH A DEPTH OF 4'–0" OR GREATER. STEP SPACING TO BE 12".
16. BOTTOM OF DRAINAGE BOX TO BE AT 0.5% MINIMUM SLOPE FROM INLET TO OUTLET.

RECOMMENDED MINIMUM TRENCH WIDTHS

PIPE DIAM.	MIN. TRENCH WIDTH
4" (100mm)	21" (533mm)
6" (150mm)	23" (584mm)
8" (200mm)	26" (660mm)
10" (250mm)	28" (711mm)
12" (300mm)	30" (762mm)
15" (375mm)	34" (864mm)
18" (450mm)	38" (991mm)
24" (600mm)	48" (1219mm)
30" (750mm)	56" (1422mm)
36" (900mm)	64" (1626mm)
42" (1050mm)	72" (1829mm)
48" (1200mm)	80" (2032mm)
60" (1500mm)	96" (2438mm)



NOTES:

1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST ADDITION

2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.

3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.

4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 4" (100mm) FOR 4"-24" (100mm-600mm); 6" (150mm) FOR 30"-60" (750mm-1500mm).

5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.

6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOTATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 60" DIAMETER PIPE, MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT. FOR TRAFFIC APPLICATIONS WITH LESS THAN FOUR FEET OF COVER, EMBEDMENT OF THE PIPE SHALL BE USING ONLY A CLASS I OR CLASS II BACKFILL.

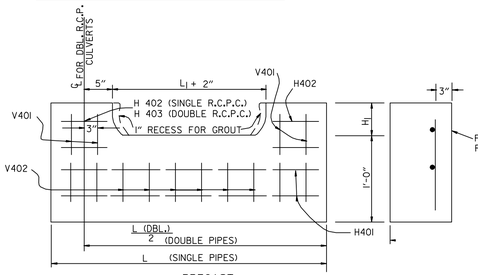
REV.	DESCRIPTION	BY	MM/DD/YY	CH'KD
4	ADDED CLASS 3 MAX COVER COLUMN	RJS	01/27/17	

TRENCH INSTALLATION DETAIL (ASTM F9946)

DRAWING NUMBER: STD-101A

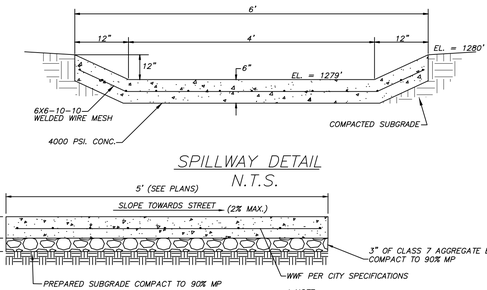
ADS — ADVANCED DRAINAGE SYSTEMS, INC. 4640 TRUEMAN BLVD HILLIARD, OHIO 43026

DRAWN BY: JLR | DATE: 8/19/13 | SHEET SIZE: NTS | SHEET: 1 OF 1



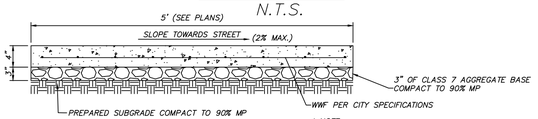
PRECAST

NOTE: THE PRECAST CURTAIN WALL WILL BE SET AND BACKFILLED WITH COMPACTED MATERIAL. THE FLARED END SECTION SHALL THEN BE SET IN PLACE AND THE 1" RECESS FILLED WITH GROUT. WHERE "L" EXCEEDS 11' THE CURTAIN WALL MAY BE CAST IN TWO (2) OR MORE SECTIONS. THE METHOD OF JOINING THE SECTIONS FOR INSTALLATION SHALL BE APPROVED BY THE ENGINEER.



SPILLWAY DETAIL
N.T.S.

STRUCTURE SIZE TABLE	
INSIDE DIMENSION OF INLET	PIPE DIAMETER
4 FEET	18" – 24"
5 FEET	30" TO 42"
6 FEET	60" OR GREATER



TYPICAL – CONC. SIDEWALK
NTS

* NOTE:
1. PORTLAND CEMENT CONCRETE CLASS S 3500 PSI. MIN.
2. DETECTABLE WARNING DEVICES TO BE INSTALLED AT RAMPS PER ADA REQUIREMENTS.
3. CONTRACTION & CONTROL JOINTS INSTALLED PER GEOTECHNICAL RECOMMENDATIONS.
4. CONSTRUCTION JOINTS SHALL BE PLACED EVERY 5" AND EVERY 50" (MAX). EXPANSION JOINT SHALL BE THE DEPTH OF THE SIDEWALK AND CONFORM TO ASSHTO M213

REINFORCING STEEL SCHEDULE

PIPE DIA.	SINGLE R.C. PIPE CULVERT H401 L	NO.	H402 L	NO.	V401 L	NO.	V402 L	NO.	DOUBLE R.C. PIPE CULVERT H401 L	NO.	H402 L	NO.	H403 L	NO.	V401 L	NO.	V402 L	NO.
18"	7'-8"	2	1'-11½"	4	1'-7½"	8	8"	8	12'-2"	2	1'-11½"	4	8"	2	1'-7½"	10	8"	14
24"	9'-2"	2	2'-2"	4	1'-8½"	10	8"	9	14'-8"	2	2'-2"	4	8"	2	1'-8½"	12	8"	18
30"	10'-8"	2	2'-4½"	4	1'-11½"	10	8"	12	17'-8"	2	2'-4½"	4	8"	2	1'-11½"	14	8"	22
36"	12'-8"	2	2'-10"	6	2'-3"	12	8"	14	20'-8"	2	2'-10"	6	8"	3	2'-3"	14	8"	28
42"	15'-2"	2	3'-9½"	8	2'-9½"	16	8"	15	23'-8"	2	3'-9½"	8	8"	4	2'-9½"	18	8"	30
48"	16'-8"	2	4'-3"	10	3'-1"	18	8"	16	25'-8"	2	4'-3"	10	8"	5	3'-1"	20	8"	32
54"	18'-2"	2	4'-8½"	12	3'-5½"	20	8"	17	27'-8"	2	4'-9"	12	8"	6	3'-5½"	22	8"	34
60"	20'-2"	2	5'-5"	14	4'-0"	24	8"	18	30'-8"	2	5'-5"	14	8"	7	4'-0"	26	8"	36
72"	25'-2"	2	7'-4"	18	5'-1"	30	8"	20	36'-8"	2	7'-4"	18	8"	9	5'-1"	33	8"	40

ALL REINFORCING STEEL #4 BARS @ 6" O.C.

MINIMUM RECOMMENDED COVER BASED ON VEHICLE LOADING CONDITIONS*

PIPE DIAM.	SURFACE LIVE LOADING CONDITION H-25	HEAVY CONSTRUCTION (757 AXLE LAOD) *
12" - 48" (300mm - 1200mm)	12" (305mm)	48" (1219mm)
60" (1500mm)	24" (610mm)	60" (1524mm)

* VEHICLES IN EXCESS OF 757 MAY REQUIRE ADDITIONAL COVER
**SEE BACKFILL REQUIREMENTS IN NOTE 6.

MAXIMUM RECOMMENDED COVER BASED ON VECHICLE LOADING CONDITIONS

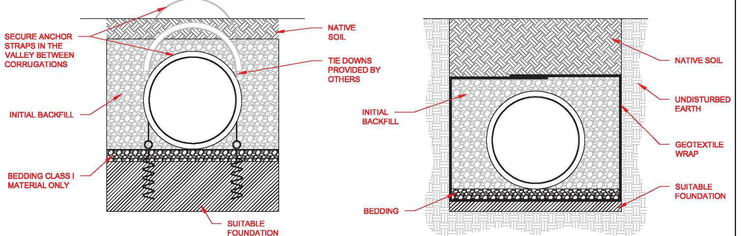
PIPE DIAM.	CLASS I COMPACTED	CLASS I DUMPED	CLASS II 85%	CLASS II 90%	CLASS III 95%
4" (100mm)	34 (10.4m)	16 (4.9m)	23 (7.0m)	16 (4.9m)	17 (5.2m)
6" (150mm)	40 (12.2m)	19 (5.8m)	27 (8.2m)	19 (5.8m)	20 (6.1m)
8" (200mm)	30 (9.1m)	14 (4.3m)	21 (6.4m)	14 (4.3m)	15 (4.6m)
10" (250mm)	34 (10.4m)	16 (4.9m)	23 (7.0m)	16 (4.9m)	17 (5.2m)
12" (300mm)	36 (10.7m)	17 (5.2m)	24 (7.3m)	17 (5.2m)	18 (5.5m)
15" (375mm)	37 (11.3m)	18 (5.5m)	25 (7.8m)	18 (5.5m)	19 (5.8m)
18" (450mm)	32 (9.8m)	15 (4.6m)	22 (6.7m)	15 (4.6m)	16 (4.9m)
24" (600mm)	27 (8.2m)	13 (4.0m)	19 (5.8m)	13 (4.0m)	14 (4.3m)
30" (750mm)	22 (6.7m)	11 (3.4m)	16 (4.9m)	11 (3.4m)	11 (3.4m)
36" (900mm)	26 (7.9m)	12 (3.7m)	18 (5.5m)	12 (3.7m)	13 (4.0m)
42" (1050mm)	24 (7.3m)	11 (3.4m)	17 (5.2m)	11 (3.4m)	12 (3.7m)
48" (1200mm)	23 (7.0m)	11 (3.4m)	16 (4.9m)	11 (3.4m)	12 (3.7m)
60" (1500mm)	26 (7.9m)	12 (3.7m)	18 (5.5m)	12 (3.7m)	14 (4.0m)

FILL HEIGHT TABLE GENERATED USING AASHTO SECTION 12, LOAD RESISTANCE FACTOR DESIGN (LRFD) PROCEDURE WITH THE FOLLOWING ASSUMPTIONS:
NO HYDROSTATIC PRESSURE,
UNIT WEIGHT OF SOIL (γ_s) = 120 PCF

NOTES:

1. ANCHORING METHOD, DESIGN AND PLACEMENT TO BE DETERMINED BY THE PROJECT DESIGN ENGINEER

2. SEE STANDARD DETAIL 101 FOR PIPE INSTALLATION RECOMMENDATIONS



REV.	DESCRIPTION	BY	MM/DD/YY	CH'KD
1	REV. DRAWING NAME OR NUMBER	TJR	01/28/16	

PIPE ANCHORING DETAIL

DRAWING NUMBER: STD–104

ADS — ADVANCED DRAINAGE SYSTEMS, INC. 4640 TRUEMAN BLVD HILLIARD, OHIO 43026

DRAWN BY: TJR/CKS | DATE: 10/18/06 | SHEET SIZE: NTS | SHEET: 1 OF 1

CLASSES OF EMBEDMENT AND BACKFILL MATERIALS

ASTM D2321 [1] [2] CLASS DESCRIPTION		NOTATION	ASTM D2487 DESCRIPTION	AASHTO M145 NOTATION	AASHTO M43 NOTATION	SHG 2006	ASTM D2321 [1] [2] (CSA B182.11) PERCENTAGE PASSING SIEVE SIZES 1 1/2 IN. (40mm)	3/8" (9.5mm)	No. 4 (4.75mm)	NO. 200 (0.075mm)	ATTERBERG LIMITS LL	PI	COEFFICIENTS Cu	Cc
I [3]	CRUSHED ROCK, ANGULAR [4]	N/A	ANGULAR CRUSHED STONE OR ROCK, CRUSHED GRAVEL, CRUSHED SLAG LARGE VOIDS WITH LITTLE OR NO FINES	5, 56, 6, 67 [5]	N/A		100%	>35%	<15%	<12%	NON PLASTIC		N/A	
II	CLEAN, COARSE-GRAINED SOILS	GW	WELL-GRADED GRAVEL, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES	5, 6	A1, A3	CG-14, SW-30	100%	>50% of "COARSE FRACTION"	<8%	NON PLASTIC	>4	1 to 3		
		GP	GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES	56, 57, 67							4	<1 or >3		
		SW	WELL-GRADED SAND, GRAVELLY SANDS, LITTLE OR NO FINES					>50% of "COARSE FRACTION"			>6	1 to 3		
		SP [4]	POORLY GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES								<6	<1 or >3		
	COARSE-GRAINED SOILS, BOORLINE CLEAN TO WITH(E)	GW-GC, SW-SM	SANDS AND GRAVELS WHICH ARE BORDERLINE BETWEEN CLEAN AND WITH(E) FINES	N/A			100%	VARIES	5% TO 12%	NON PLASTIC			SAME AS FOR GW, GP, SW AND SP	
III	COURSE-GRAINED SOILS WITH FINES	GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES	GRAVEL & SAND WITH >10% FINES	A-2-4, A-2-5, A-2-6, A-2-7, A-4 OR A-6 SOILS WITH MORE THAN 50% RETAINED ON #200 SIEVE.		100%	>50% of "COARSE FRACTION"	12% TO 50%	N/A	>4 OR >"A" LINE		N/A	
		GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES								>7 & >"A" LINE			
		SM	SILTY SANDS, SAND-CLAY MIXTURES					>50% of "COARSE FRACTION"			>4 OR >"A" LINE			
		SC	CLAYEY SANDS, SAND-CLAY MIXTURES								>7 & >"A" LINE			
	INORGANIC FINE-GRAINED SOILS	ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS, SILTS WITH SLIGHT PLASTICITY					100%	> 30% (RETAINED)	<50	>4 OR >"A" LINE			
		CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY, SANDY, OR SILTY CLAYS, LEAN CLAYS								>7 & >"A" LINE			
IV [6]	INORGANIC FINE-GRAINED SOILS	ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS, SILTS WITH SLIGHT PLASTICITY	N/A	A-2-7 OR A-4 OR A-6 SOILS WITH 50% OR LESS RETAINED ON #200 SIEVE.		100%	100%	< 30% (Retained)	<50	>4 or >"A" LINE		N/A	
		CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY, SANDY, OR SILTY CLAYS, LEAN CLAYS	N/A							>7 & >"A" LINE			
V [6]	INORGANIC FINE-GRAINED SOILS	MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOIL, ELASTIC SILTS	N/A	A5, A7		100%	100%	>50%	>50	>"A" LINE		N/A	
		CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS	N/A							>"A" LINE			
	ORGANIC SOILS OR MEDIUM ORGANIC SOILS	OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY	N/A			100%	100%	>50%	<50	>4 OR >"A" LINE		N/A	
		CH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS	N/A						>50	>"A" LINE			
		PT	PEAT AND OTHER HIGH ORGANIC SOILS	N/A										

NOTES:
1. REFER TO ASTM D2321 / CSA B182.11 / SHG 2006 FOR MORE COMPLETE SOIL DESCRIPTIONS.
2. CLASS I MATERIALS ALLOW FOR A BROADER RANGE OF FINES THAN PREVIOUS VERSIONS OF D2321 / B182.11. WHEN SPECIFYING CLASS I MATERIAL FOR INFILTRATION SYSTEMS, THE ENGINEERING SHALL INCLUDE A REQUIREMENT FOR AN ACCEPTABLE LEVEL OF FINES.
3. CLASS I MATERIALS ARE NOT RECOMMENDED.
4. AASHTO LESS THAN 20% PASSING THE 200 SIEVE.
5. CLASS IV MATERIALS REQUIRE A GEOTECHNICAL EVALUATION PRIOR TO USE AND SHOULD ONLY BE USED AS BACKFILL UNDER THE GUIDANCE OF A QUALIFIED ENGINEER.
6. UNIFORM FINE SANDS (SP) WITH MORE THAN 50% PASSING A 100 SIEVE (80-PAVING) LIKE SILTS AND SHOULD BE TREATED AS CLASS III SOILS IF ALLOWED.
7. CLASS V MATERIALS SHALL NOT BE PERMITTED AS BEDDING AND BACKFILL MATERIAL.

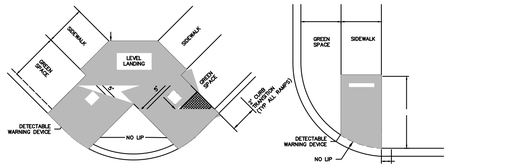
REV.	DESCRIPTION	BY	MM/DD/YY	CH'KD
2	REV. DRAWING NAME OR NUMBER	TJR	01/28/16	

CLASSES OF EMBEDMENT AND BACKFILL MATERIALS

DRAWING NUMBER: STD-109

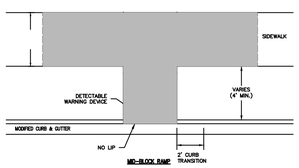
ADS — ADVANCED DRAINAGE SYSTEMS, INC. 4640 TRUEMAN BLVD HILLIARD, OHIO 43026

DRAWN BY: TJR | DATE: 05/01/15 | SHEET SIZE: NTS | SHEET: 1 OF 1



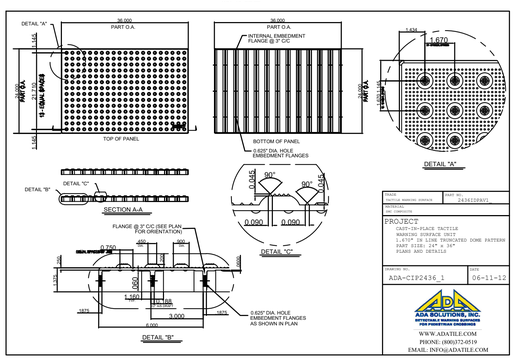
TYPE 1 RAMP — TYPE 2 RAMP

NOTES:
1) THE LENGTH OF THE RAMP SHALL BE SUCH THAT THE SLOPE DOES NOT EXCEED 12:1.
2) THE NORMAL GUTTER SHALL BE MAINTAINED THROUGH THE AREA OF THE RAMP.
3) WHEN THE GUTTER SLOPE OF THE RAMP, SHALL BE A LANDING SHALL BE 48".
4) DETECTABLE WARNING DEVICES SHALL BE PLACED AT THE LOCATIONS WHERE RAMPS CROSS A CURB.



HANDICAP RAMP DETAILS

NOT TO SCALE



RICHARDSON ENGINEERING
Planning • Development Consulting
210 W. SEVIER STREET, BENTON, AR 72015 (501)315-7225

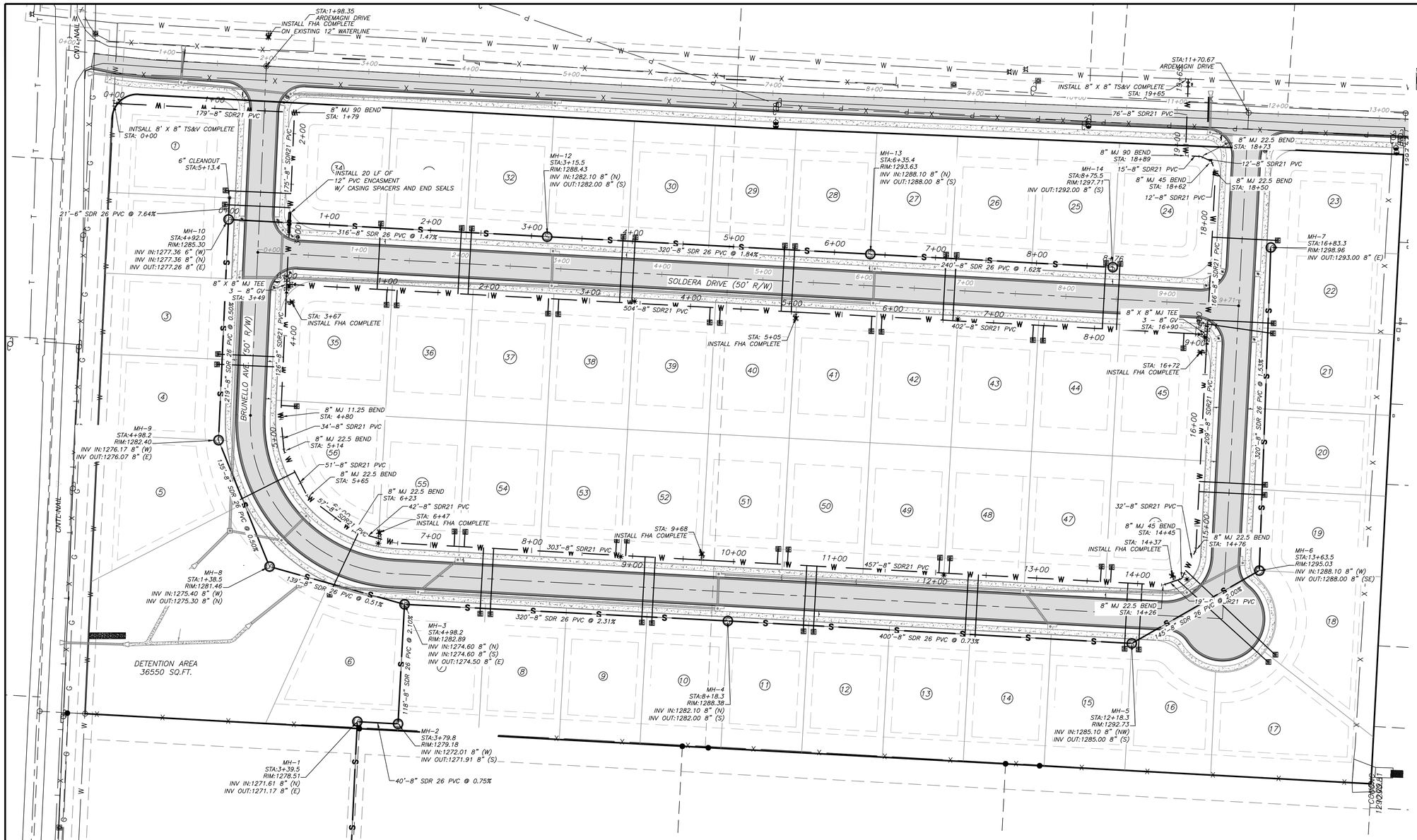
CERTIFICATE OF AUTHORIZATION — Richardson Engineering, PLLC — No. 2519 — ARKANSAS

STREET AND DRAINAGE DETAILS
NAPA SUBDIVISION PHASE 3
PART OF THE SW 1/4 OF THE SW 1/4, SECTION 36, T-18-N, R-31-W

Prepared For:
NORRHO LLC
4285 N. SHILOH DRIVE
FAYETTEVILLE, AR 72703

No.	Revisions	Date
1	AS PER CITY COMMENTS 09/10/19 REV:09/16/19	9/16/19

Date: 08/30/19
Scale: AS SHOWN



GRAPHIC SCALE

(IN FEET)
1 inch = 50 ft.

STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 14266
ERIC RYAN RICHARDSON

GENERAL NOTES:

1.) ALL CONSTRUCTION AND MATERIALS TO MEET OR EXCEED CITY OF TONTITOWN SPECIFICATIONS.
2.) ALL GRAVITY SEWER MAINS SHALL BE SDR-26 PVC, UNLESS OTHERWISE SHOWN ON PLAN.
3.) ALL WATER MAINS SHALL BE SDR-21 PVC UNLESS OTHERWISE SHOWN ON PLAN.
4.) ALL STORM DRAINAGE SHALL BE AS SHOWN ON THE PLAN.
5.) ATTENTION IS CALLED TO WATER, SEWER, AND STREET LAYOUT FOR ADDITIONAL INFORMATION.
6.) ATTENTION IS CALLED TO CONSTRUCTION DETAILS FOR ADDITIONAL INFORMATION.
7.) ALL UTILITIES TO BE LOCATED PRIOR TO CONSTRUCTION (ONE CALL, CITY, ETC.)
8.) MINIMUM HORIZONTAL SEPARATION BETWEEN WATERLINES AND SEWERLINES SHALL BE 10'.
9.) MINIMUM VERTICAL SEPARATION BETWEEN WATERLINES AND SEWERLINES SHALL BE 18" (WATER ON TOP).
10.) CONTRACTOR TO ADHERE TO CURRENT OSHA EXCAVATION & TRENCH SAFETY REGULATIONS.
11.) BACKFILL MATERIAL FOR STREET CROSSINGS SHALL BE ACCORDING TO TONTITOWN STREET DEPT SPECS AND COMPACTED TO 95% S.P. UNLESS OTHERWISE APPROVED IN WRITING BY THE ENGINEER AND UTILITY OWNER.
12.) THIS SHEET IS INTENDED TO SHOW ONLY THE GENERAL LOCATION OF THE PROPOSED UTILITIES AND ASSIST IN COORDINATING UTILITY CROSSINGS. CONTRACTOR SHALL USE WATER, SEWER, AND STREET LAYOUT SHEETS FOR DETERMINING ACTUAL LOCATION OF INLETS, JUNCTION BOXES, VALVES, FIRE HYDRANTS, MANHOLES, ETC.
13.) THE APPROXIMATE LOCATION OF KNOWN SURFACE AND SUBSURFACE STRUCTURES, PIPES, POWER GAS, PHONE, ETC. ARE SHOWN ON THE DESIGN DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF THE AFOREMENTIONED ITEMS, SHOWN AND NOT SHOWN.

WATER NOTES:

1.) ALL CONSTRUCTION AND MATERIALS TO MEET OR EXCEED TONTITOWN UTILITIES SPECIFICATIONS.
2.) ALL WATER MAINS SHALL BE AS NOTED ON PLANS.
3.) ALL SERVICE LINES AND METER SETTINGS SHALL BE AS PER TONTITOWN UTILITIES SPECS.
4.) 14ga BLUE COATED COPPER TRACING WIRE TO BE INSTALLED WITH ALL WATERLINES (MAINS & SERVICES).
5.) ALL FITTINGS SHALL BE DUCTILE IRON M.J.
6.) ATTENTION IS CALLED TO CONSTRUCTION DETAILS FOR ADDITIONAL INFORMATION.
7.) MINIMUM SEPARATION BETWEEN WATERLINES & SEWERLINES SHALL BE 10'
8.) MINIMUM VERTICAL SEPARATION BETWEEN WATERLINE & SEWERLINE CROSSINGS SHALL BE 18" (WATER ON TOP).
9.) CONTRACTOR SHALL ADHERE TO CURRENT OSHA REGULATIONS FOR EXCAVATION & TRENCH SAFETY.
10.) STREET CROSSINGS TO MEET CITY OF TONTITOWN STREET SPECIFICATIONS.
11.) VALVES SHALL NOT BE PLACED UNDER HARD SURFACES (PAVEMENT, CURB, ETC.). VALVES SHALL BE PLACED A MINIMUM OF 2' BEHIND THE BACK OF CURB.
12.) METER SERVICES TO BE PLACED WITHIN 5' OF LOT LINES.
13.) CONTRACTOR TO ADHERE TO AWWA SPECS FOR BLOCKING AND ANCHORING.
14.) ALL VALVES SHALL HAVE A 2" OPERATING NUT.
15.) ALL WATER METER BOXES & VALVE BOXES SHALL BE PLACED 2" ABOVE FINAL EARTHWORK GRADE.

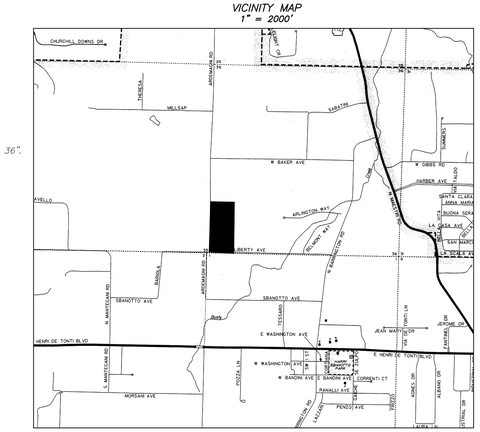
SEWER NOTES

1.) ALL CONSTRUCTION AND MATERIALS TO MEET OR EXCEED TONTITOWN UTILITES SPECIFICATIONS.
2.) ALL SEWER GRAVITY MAINS SHALL BE SDR-26 PVC, UNLESS OTHERWISE SHOWN.
3.) ALL SERVICE LINES SHALL BE 4" SDR-21 PVC OR SCH40 PVC.
4.) CONTRACTOR TO VERIFY METHOD OF CONNECTION WITH THE UTILITY OWNER PRIOR TO CONSTRUCTION
5.) ATTENTION IS CALLED TO CONSTRUCTION DETAILS FOR ADDITIONAL INFORMATION.
6.) ALL UTILITIES TO BE LOCATED PRIOR TO CONSTRUCTION (ONE CALL, CITY, ETC.)
7.) MINIMUM HORIZONTAL SEPARATION BETWEEN WATERLINES AND SEWERLINES SHALL BE 10'.
8.) MINIMUM VERTICAL SEPARATION BETWEEN WATERLINES AND SEWERLINES SHALL BE 18".
9.) CONTRACTOR TO ADHERE TO CURRENT OSHA EXCAVATION & TRENCH SAFETY REGULATIONS.
10.) BACKFILL FOR ALL DISTURBED (EXCAVATED) AREAS TO BE COMPACTED TO 95% S.P.
11.) DUCTILE IRON (PER BENTON UTILITIES SPECS.) TO BE USED IF COVER OVER SEWERLINE IS LESS THAN 36".
12.) ALL STREET CROSSINGS TO MEET CITY OF TONTITOWN STREET SPECIFICATIONS.
13.) TRENCH SHALL BE EXCAVATED BELOW GRADE REQUIRED TO PROVIDE A MINIMUM OF 36" PIPE COVER.
14.) NO MANHOLES SHALL BE CONSTRUCTED IN SIDEWALKS. SEWER STUB-OUTS SHALL EXTEND AT LEAST 5' OUTSIDE OF THE UTILITY EASEMENT. MANHOLE RIMS TO BE AT LEAST 2' ABOVE FINISH GRADE

LEGEND

S	SANITARY SEWER
	SEWER FORCEMAIN
W	WATER LINE
	STORM DRAIN
	DITCH OR SWALE
E	POWER LINE (OVERHEAD)
WM PROPOSED WATER METER BOX	
EXISTING MANHOLE	WV GATE VALVE
PROPOSED MANHOLE	BLOW-OFF
PROPOSED CLEANOUT	FIRE HYDRANT
CURB INLET	
FES	
POWER POLE	

VICINITY MAP
1" = 2000'



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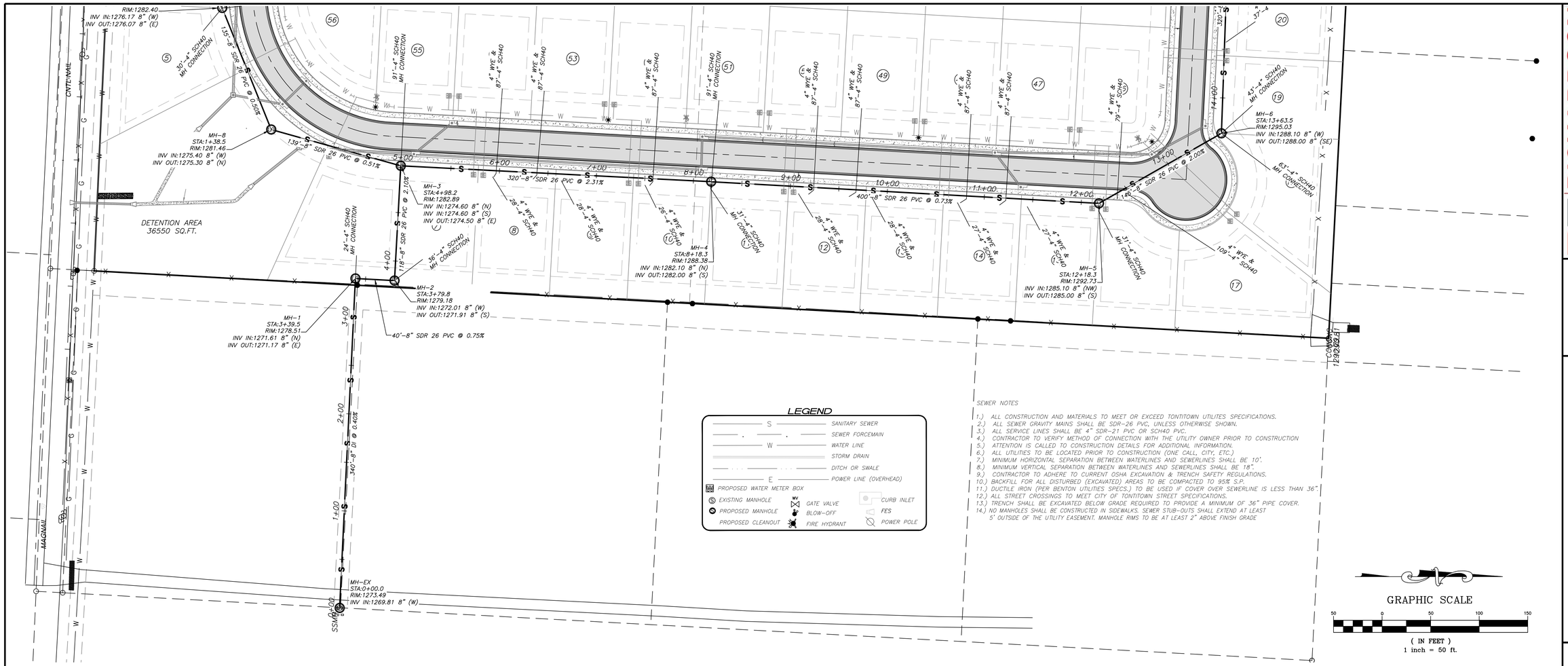
Richardson Engineering, PLLC
No. 2519
CERTIFICATE OF AUTHORIZATION
ARKANSAS

UTILITY PLAN
NAPA SUBDIVISION PHASE 3
PART OF THE SW 1/4 OF THE
SW 1/4, SECTION 36, T-18-N, R-31-W

Prepared For:
NORRHO LLC
4285 N. SHILOH DRIVE
FAYETTEVILLE, AR 72703

No.	Revisions	Date
1	AS PER CITY COMMENTS 09/10/19	9/16/19

Scale: 1" = 50'
Date: 08/30/19
REV:09/16/19
Sheet: 22 of 31



LEGEND

- S — SANITARY SEWER
- SEWER FORCEMAIN
- W — WATER LINE
- STORM DRAIN
- DITCH OR SWALE
- E — POWER LINE (OVERHEAD)
- PROPOSED WATER METER BOX
- EXISTING MANHOLE
- PROPOSED MANHOLE
- PROPOSED CLEANOUT
- WV GATE VALVE
- BLOW-OFF
- FIRE HYDRANT
- CURB INLET
- FES
- POWER POLE

SEWER NOTES

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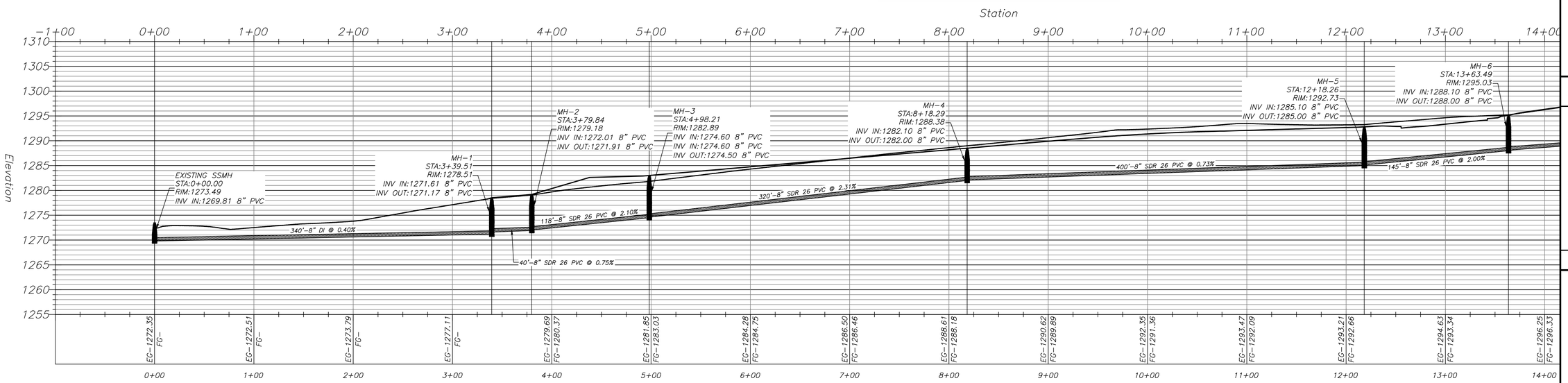
14.) NO MANHOLES SHALL BE CONSTRUCTED IN SIDEWALKS. SEWER STUB-OUTS SHALL EXTEND AT LEAST 5' OUTSIDE OF THE UTILITY EASEMENT. MANHOLE RIMS TO BE AT LEAST 2" ABOVE FINISH GRADE

SEWER MAIN 1 PROFILE



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CERTIFICATE OF AUTHORIZATION
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ARKANSAS

SEWER MAIN 1 PLAN & PROFILE
NAPA SUBDIVISION PHASE 3

PART OF THE SW 1/4 OF THE
SW 1/4, SECTION 36, T-18-N, R-31-W

Prepared For:
NORRHO LLC
4285 N. SHILOH DRIVE
FAYETTEVILLE, AR 72703

No.	Revisions	Date
1	AS PER CITY COMMENTS 09/10/19	9/16/19

Scale: 1" = 50'
Date: 08/30/19
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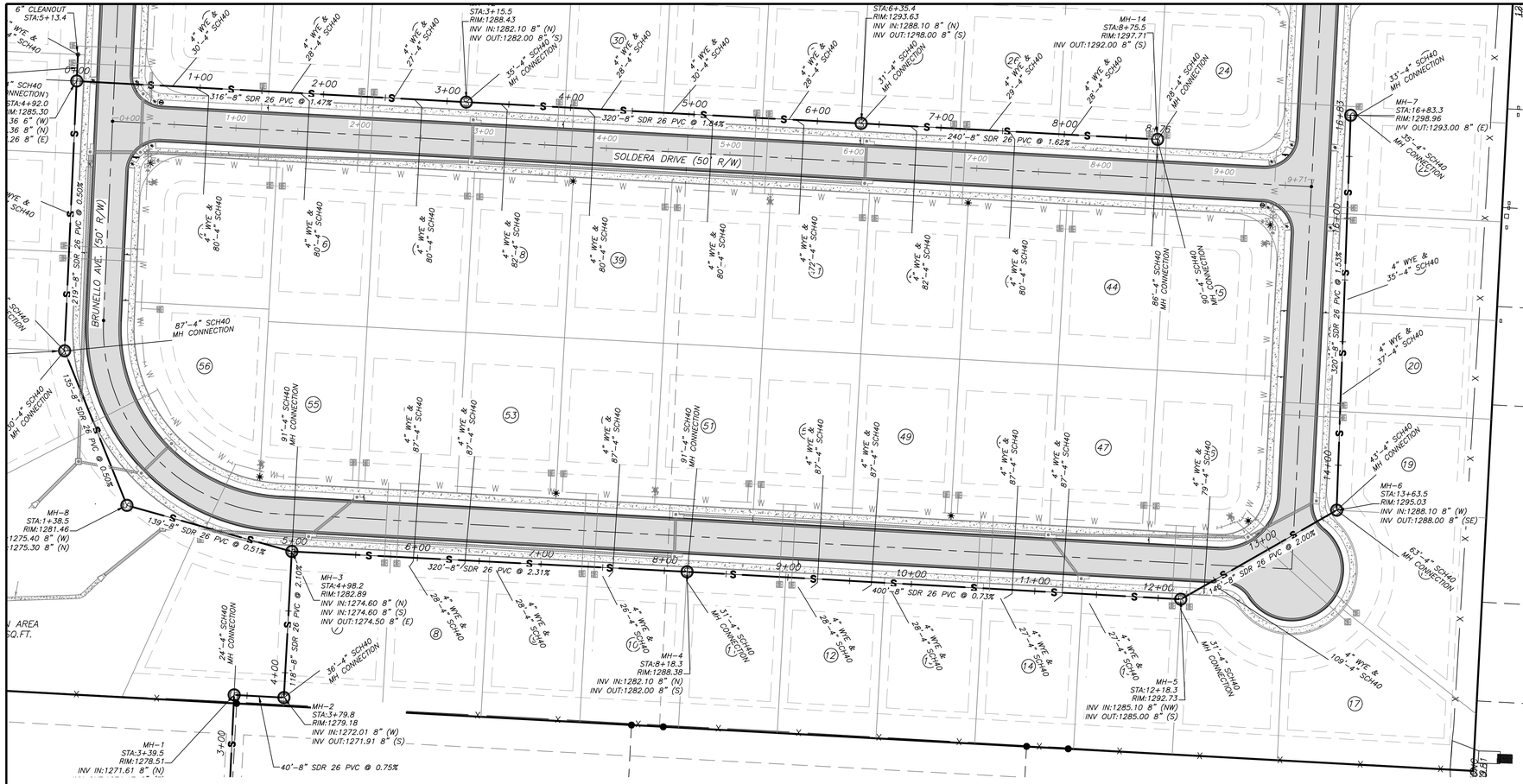
Sheet: 23 of 31



LEGEND

- S — SANITARY SEWER
- SEWER FORCEMAIN
- W — WATER LINE
- STORM DRAIN
- DITCH OR SWALE
- E — POWER LINE (OVERHEAD)
- PROPOSED WATER METER BOX
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- PROPOSED MANHOLE
- PROPOSED CLEANOUT
- GATE VALVE
- BLOW-OFF
- FIRE HYDRANT
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- FES
- POWER POLE

SEWER NOTES

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2.) ALL SEWER GRAVITY MAINS SHALL BE SDR-26 PVC, UNLESS OTHERWISE SHOWN.
3.) ALL SERVICE LINES SHALL BE 4" SDR-21 PVC OR SCH40 PVC.
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5.) ATTENTION IS CALLED TO CONSTRUCTION DETAILS FOR ADDITIONAL INFORMATION.
6.) ALL UTILITIES TO BE LOCATED PRIOR TO CONSTRUCTION (ONE CALL, CITY, ETC.)
7.) MINIMUM HORIZONTAL SEPARATION BETWEEN WATERLINES AND SEWERLINES SHALL BE 10'.
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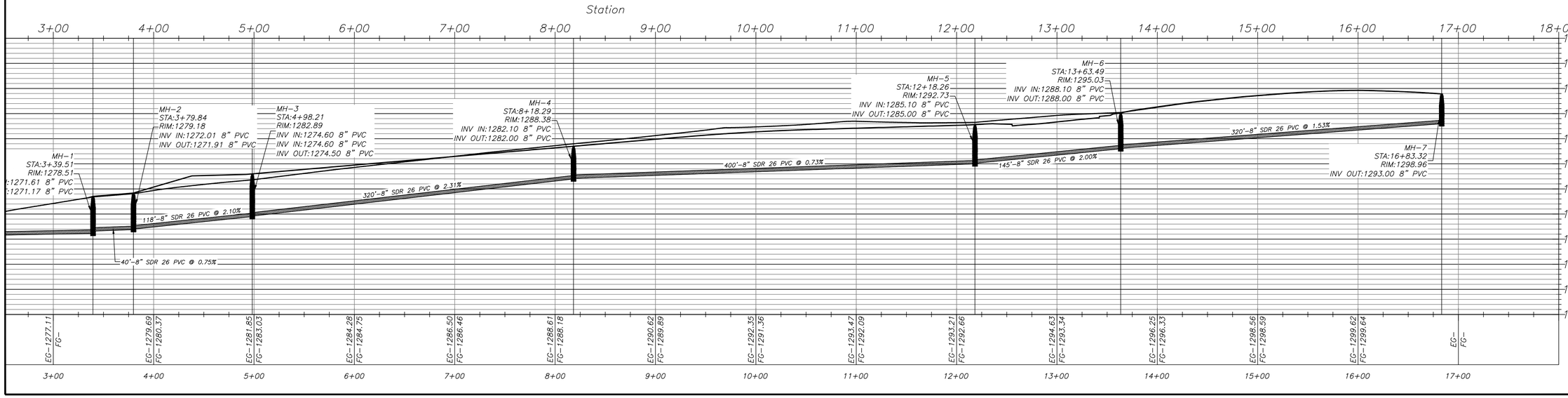
9.) CONTRACTOR TO ADHERE TO CURRENT OSHA EXCAVATION & TRENCH SAFETY REGULATIONS.
10.) BACKFILL FOR ALL DISTURBED (EXCAVATED) AREAS TO BE COMPACTED TO 95% S.P.
11.) DUCTILE IRON (PER BENTON UTILITIES SPECS.) TO BE USED IF COVER OVER SEWERLINE IS LESS THAN 36".
12.) ALL STREET CROSSINGS TO MEET CITY OF TONTITOWN STREET SPECIFICATIONS.
13.) TRENCH SHALL BE EXCAVATED BELOW GRADE REQUIRED TO PROVIDE A MINIMUM OF 36" PIPE COVER.
14.) NO MANHOLES SHALL BE CONSTRUCTED IN SIDEWALKS. SEWER STUB-OUTS SHALL EXTEND AT LEAST 5' OUTSIDE OF THE UTILITY EASEMENT. MANHOLE RIMS TO BE AT LEAST 2" ABOVE FINISH GRADE

GRAPHIC SCALE

50 0 50 100 150

(IN FEET)
1 inch = 50 ft.

SEWER MAIN 1 PROFILE



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Planning • Engineering • Development Consulting
210 W. SEVIER STREET, BENTON, AR 72015 (501)315-7225

CERTIFICATE OF AUTHORIZATION
Richardson Engineering, PLLC
No. 2519
ARKANSAS

SEWER MAIN 1 PLAN & PROFILE
NAPA SUBDIVISION PHASE 3

PART OF THE SW 1/4 OF THE
SW 1/4, SECTION 36, T-18-N, R-31-W

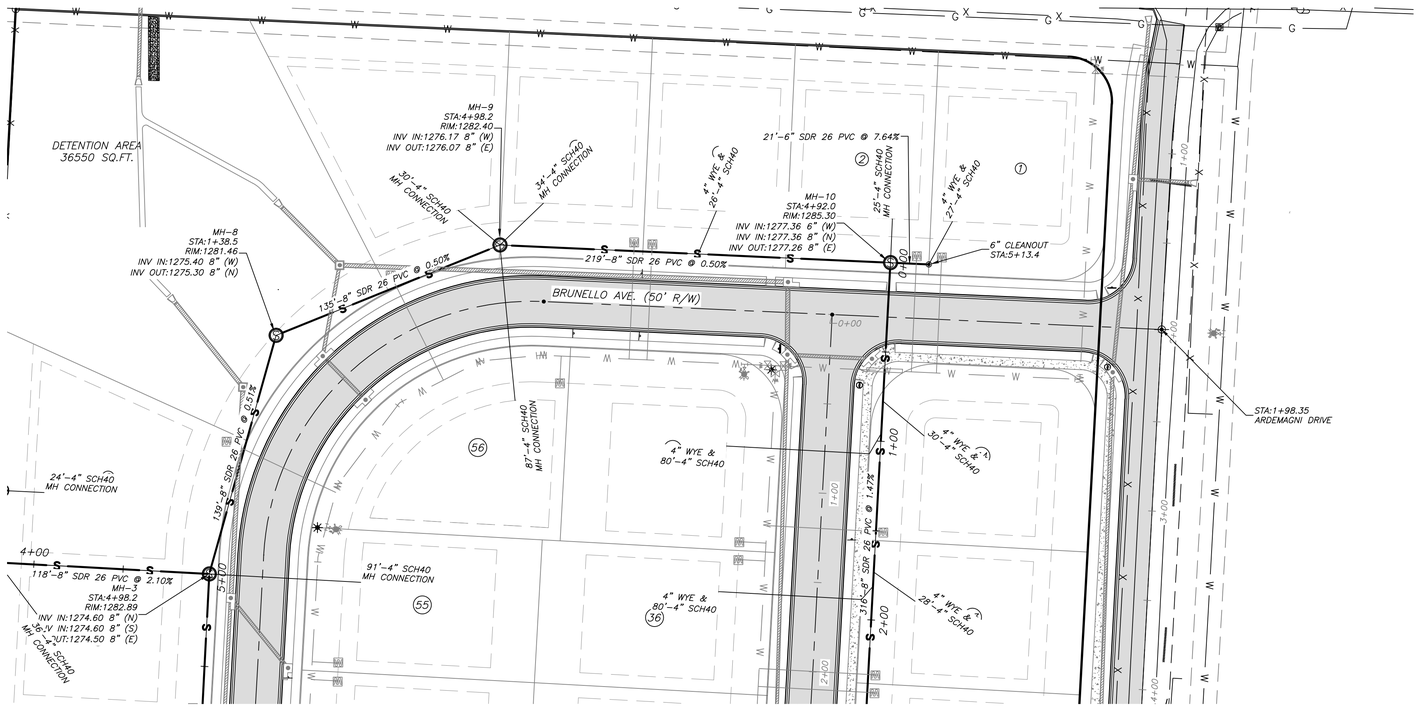
Prepared For:
NORRHO LLC
4285 N. SHILOH DRIVE
FAYETTEVILLE, AR 72703

No.	Revisions	Date
1	AS PER CITY COMMENTS 09/10/19	9/16/19

Scale: 1" = 50'

Date: 08/30/19
REV09/16/19

Sheet: 24 of 31



LEGEND

- S — SANITARY SEWER
- SEWER FORCEMAIN
- W — WATER LINE
- STORM DRAIN
- DITCH OR SWALE
- E — POWER LINE (OVERHEAD)
- PROPOSED WATER METER BOX
- EXISTING MANHOLE
- PROPOSED MANHOLE
- PROPOSED CLEANOUT
- GATE VALVE
- BLOW-OFF
- FIRE HYDRANT
- CURB INLET
- FES
- POWER POLE

GRAPHIC SCALE

40 0 40 80 120

(IN FEET)
1 inch = 40 ft.

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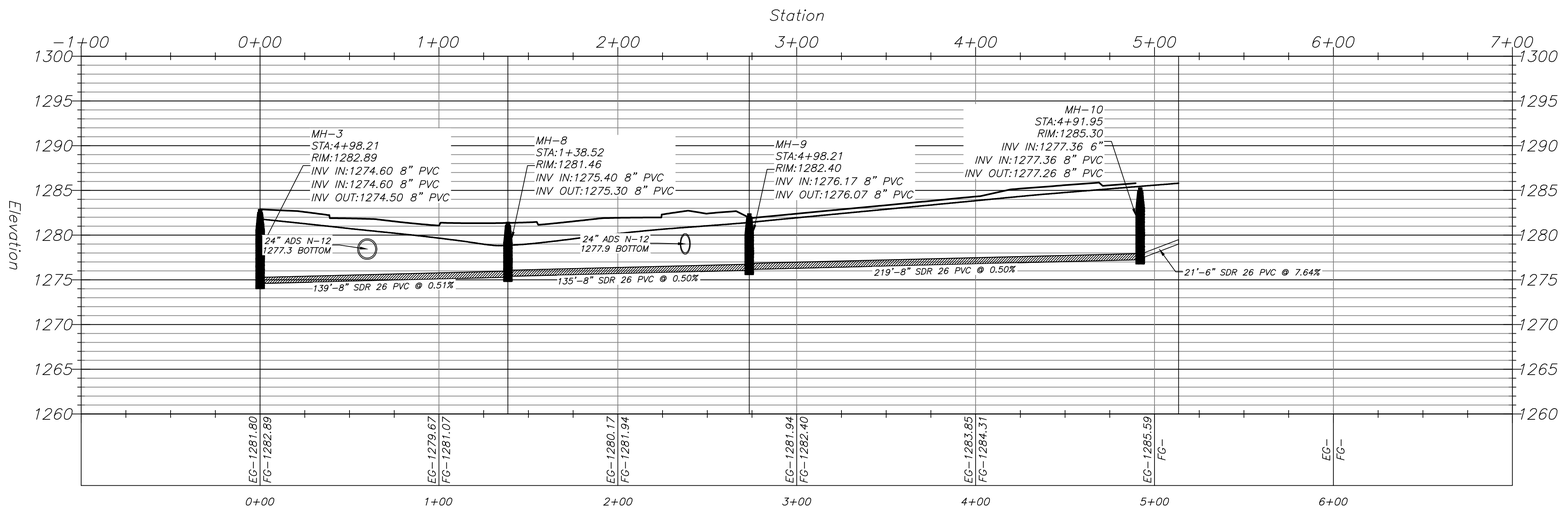
SEWER MAIN 2 PROFILE



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REV:09/16/19
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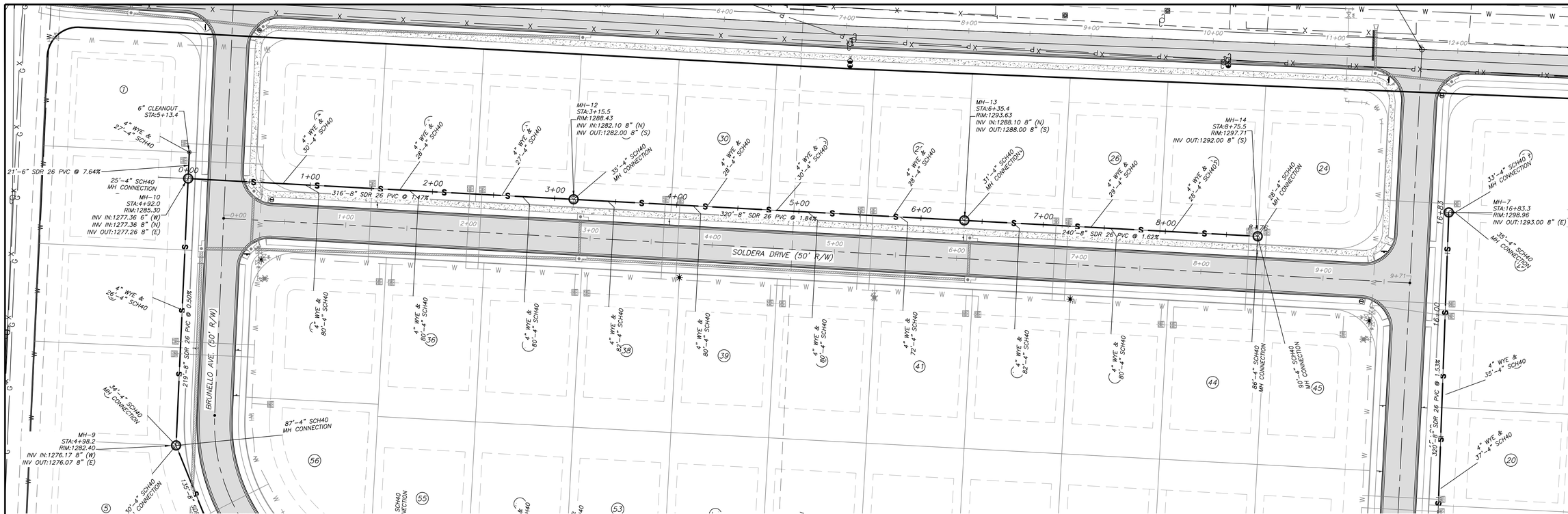

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(IN FEET)
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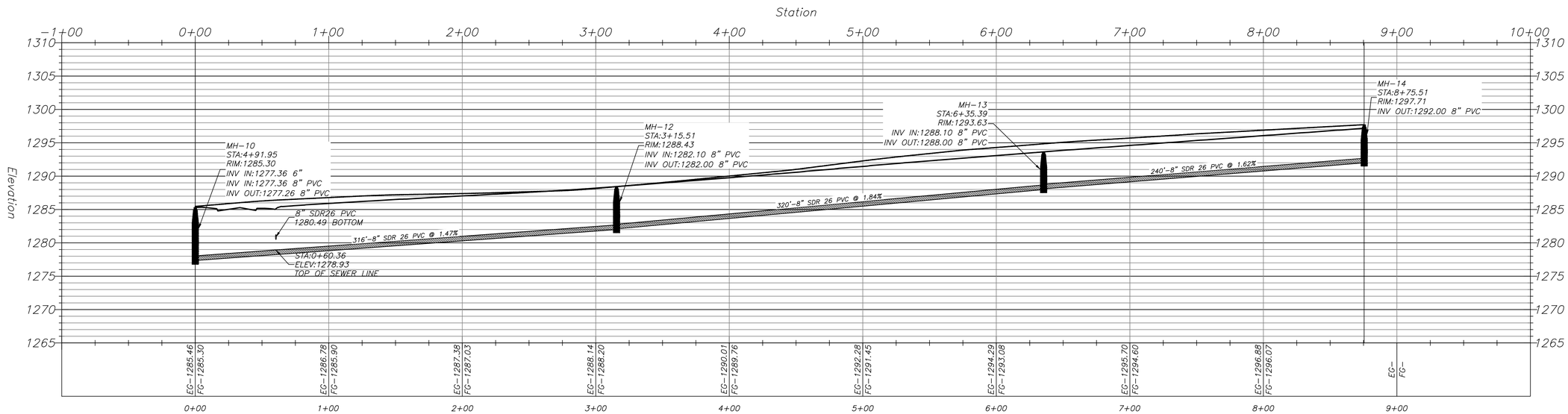
SEWER MAIN 3 PROFILE



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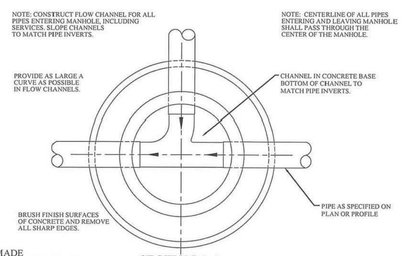
Sheet: 26 of 31

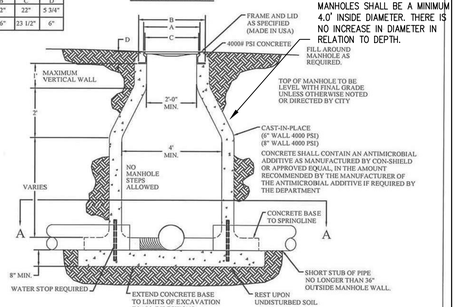
SANITARY SEWER MANHOLE CAST-IN-PLACE



USA MADE

MANHOLE COVER DIMENSION				
WEIGHT	A	B	C	D
STANDARD 356	23"	32"	22"	5 3/4"
WATER TIGHT 385	26 1/2"	36"	23 1/2"	6"

SECTION A-A

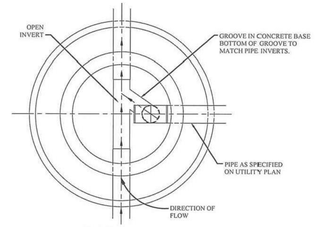


DIAMETER OF CAST-IN-PLACE MANHOLES SHALL BE A MINIMUM 4.0' INSIDE DIAMETER. THERE IS NO INCREASE IN DIAMETER IN RELATION TO DEPTH.

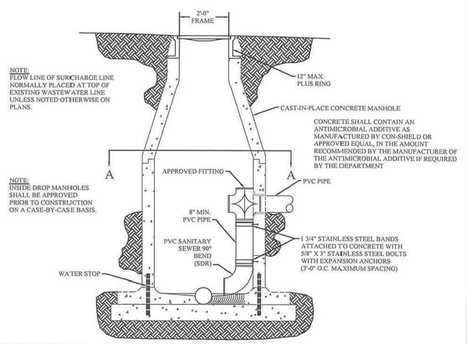
ALL MANHOLES CONSTRUCTED SHALL BE CAST-IN-PLACE IN ACCORDANCE WITH THE METHODS OUTLINED IN SECTION 17. THE USE OF PRE-CAST MANHOLES IS EXPRESSLY PROHIBITED UNLESS APPROVED ON A CASE BY CASE BASIS BY THE DEPARTMENT.

CITY OF TONTITOWN		SANITARY SEWER DETAIL: SS01	
		LAST REVISION DATE: 03/18/16	
DRAWN BY: FCN	CHECKED BY: TWC	APPROVED: ___	DATE: 09/01/05

SANITARY SEWER INTERIOR DROP MANHOLE



SECTION A-A



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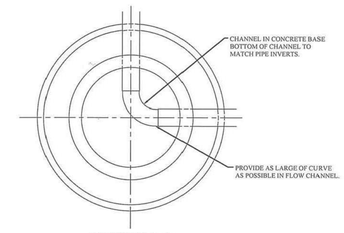
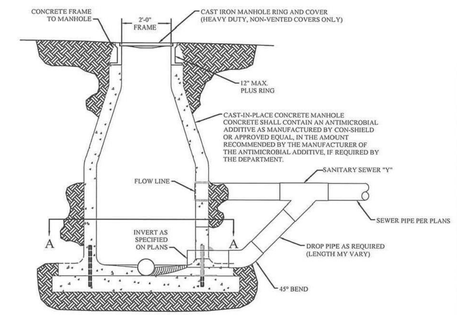
CITY OF TONTITOWN		SANITARY SEWER DETAIL: SS02	
		LAST REVISION DATE: 03/18/16	
DRAWN BY: CRB	CHECKED BY: TWC	APPROVED: ___	DATE: 09/01/05

SANITARY SEWER EXTERIOR DROP MANHOLE



SECTION A-A



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CITY OF TONTITOWN		SANITARY SEWER DETAIL: SS03	
		LAST REVISION DATE: 03/18/16	
DRAWN BY: CRB	CHECKED BY: TWC	APPROVED: ___	DATE: 09/01/05

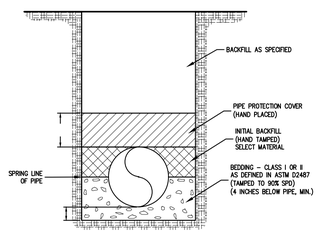
REACTION BACKING TABLE

SIZE	REQUIRED SQ. FT. OF UNDISTURBED EARTHWALL FOR REACTION BACKING					
	TYPE OF FITTINGS					
	TEE	90°	45°	22 1/2°	11 1/4°	PLUG
2"	1	1	1	1	1	1
3"	1	1	1	1	1	1
4"	1	2	1	1	1	2
6"	3	3	2	1	1	3
8"	4	6	3	2	1	4
10"	6	8	5	3	1	6
12"	8	12	6	3	2	8
14"	11	16	9	4	2	11
16"	14	20	11	6	3	14
18"	18	25	14	7	4	18
20"	22	31	17	9	4	22
24"	32	45	24	12	6	32
30"	48	68	37	19	10	48
36"	69	98	53	27	14	69

NOTES:

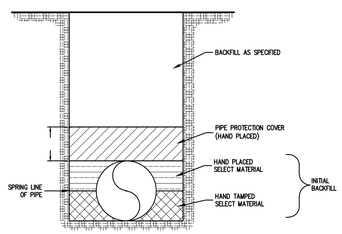
1. ALL FITTINGS SHALL BE MECHANICAL JOINTS.
2. DO NOT COVER BELLS OR FLANGES WITH CONCRETE.
3. WRAP ALL FITTINGS WITH POLY WRAP.
4. BACK ALL TEES ACCORDING TO SIZE OF BRANCH.
5. BACKING FUTURE LINE EXTENSIONS SHALL BE SUCH THAT LATER REMOVAL IS POSSIBLE.
6. ALL BENDS WHERE FITTINGS ARE USED, BOTH HORIZONTAL OR VERTICAL, SHALL BE BACKED.
7. REACTION BACKING TABLE IS BASED ON 150 PSI AND SOIL BEARING PRESSURE OF 2,000 LB/SQ. FT. ADDITIONAL BACKING MAY BE REQUIRED IN SOME AREAS AS REQUIRED BY CITY WATER DEPARTMENT.

CITY OF TONTITOWN		GEN. WATER/SEWER DETAIL: GWS10	
		LAST REVISION DATE: 08/29/02	
DRAWN BY: CRB	CHECKED BY: ___	APPROVED: ___	DATE: 09/01/05



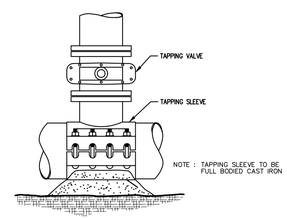
PVC SEWER PIPE BEDDING DETAIL

NOT TO SCALE



TYPICAL DUCTILE IRON PRESSURE PIPE BEDDING DETAIL

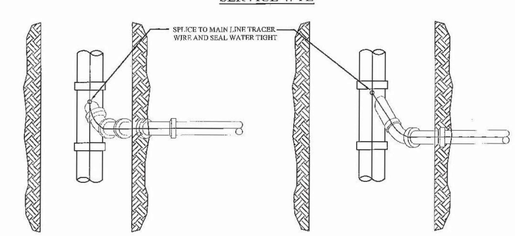
NOT TO SCALE



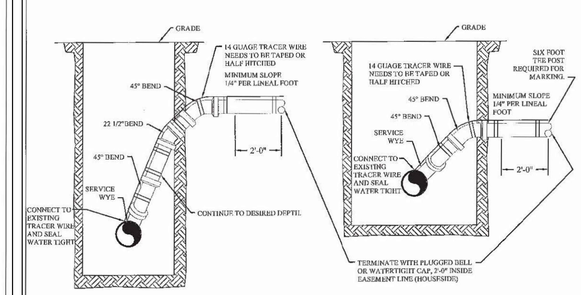
TYPICAL DETAIL OF TAPPING VALVE AND SLEEVE

NOT TO SCALE

SANITARY SEWER SERVICE WYE



NOTE: SEE BACKFILL DETAIL FOR BEDDING AND BACKFILL INSTRUCTIONS.



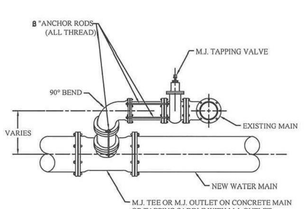
RISER FROM DEEP MAIN

NORMAL DEPTH

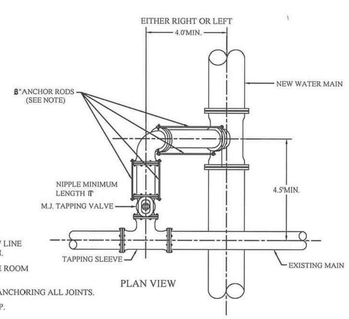
NOTE: SEE PLANS FOR PIPE SIZES

CITY OF TONTITOWN		SANITARY SEWER DETAIL: SS06	
		LAST REVISION DATE: 09/01/05	
DRAWN BY: FCN	CHECKED BY: ___	APPROVED: ___	DATE: 09/21/07

SWING CONNECTION - NEW MAIN TO EXISTING MAIN



SECTION VIEW



PLAN VIEW

NOTES:

1. CONTRACTOR SHALL LOCATE EXISTING MAIN IN ADVANCE OF LAYING NEW LINE IN ORDER TO ASSURE ADEQUATE LENGTH TO ADJUST DEPTH OF NEW MAIN.
2. DIMENSIONS SHOWN ARE RECOMENDED MINIMUNS TO PROVIDE ADEQUATE ROOM FOR TIGHTENING BOLTS ON JOINTS. (OTHER DIMENSIONS MAY BE USED)
3. PROVIDE STAINLESS STEEL "ALL THREAD" TIE RODS WITH EYE BOLTS FOR ANCHORING ALL JOINTS.
4. RODS SHALL BE FIELD CUT TO FIT & SHALL BE PROTECTED WITH POLYWRAP.
5. ROTATE TEE UP & ELBOW DOWN AS REQUIRED TO MATCH.
6. USE TYPICAL CONCRETE BLOCKING REQUIRED.
7. SINGLE #14 GAUGE TYPE INSULATED COPPER TRACER WIRE IS REQUIRED ON ALL MAINS, PE WATER SERVICES OR OTHER APPURTENANCES

PIPE SIZE	6"	8"	12"
RODS PER NIPPLE	2	2	4

THRUST BLOCKING REQUIRED AT TEES AND ELBOWS.

CITY OF TONTITOWN		WATER DETAIL: W13	
		LAST REVISION DATE: 08/29/02	
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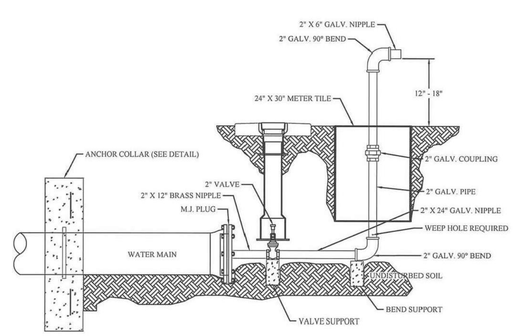
2" END BLOW OFF ASSEMBLY



NOTES:
1. END BLOW OFF'S TO BE INSTALLED AS REQUIRED BY THE PLANS.
2. ALL THREADED OUTLETS SHALL HAVE A DOUBLE WRAP OF TEFLON TAPE ON THREADS.
3. VALVE BOXES SHALL BE INSTALLED ON ALL BLOW OFF VALVES.
4. SINGLE #14 GAUGE TYPE INSULATED COPPER TRACER WIRE IS REQUIRED ON ALL MAINS, PE WATER SERVICES, OR OTHER APPURTENANCES.

CITY OF TONTITOWN		WATER DETAIL: W08	
		LAST REVISION DATE: 08/29/02	
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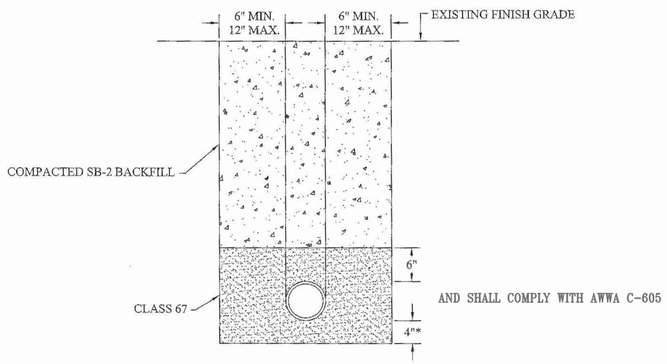
Sheet: 27 of 31

UNIMPROVED ROADS & DRIVEWAYS-PRIVATE DRIVEWAYS & PARKING AREAS



* IF IN ROCK 6" MIN. CLASS #67 STONE REQUIRED.
** IMPROVED PRIVATE DRIVEWAYS AND PARKING AREAS BACKFILLED AS SHOWN ABOVE.
SUBSURFACE MATERIAL TO EQUAL OR EXCEED EXISTING SURFACE.
ASPHALTIC CONCRETE WALKS - MINIMUM THICKNESS 4"
CONCRETE DRIVES OR PARKING AREAS - MINIMUM THICKNESS 6".

NOTE: PRIVATE PARKING AREAS, DRIVEWAYS & WALKS-SEE UNIMPROVED ROADS

CITY OF TONTITOWN		GEN. WATER/SEWER DETAIL: GWS09	
		LAST REVISION DATE: 08/29/02	
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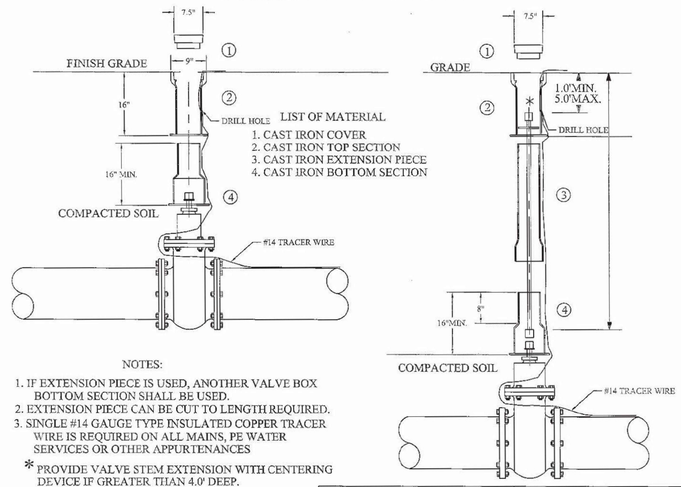
VALVE BOX INSTALLATION



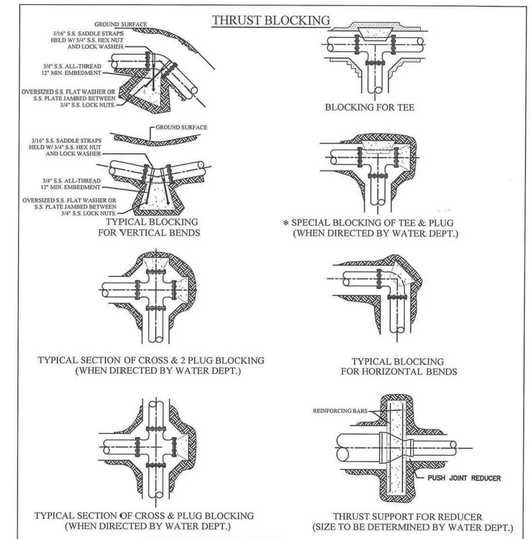
LIST OF MATERIAL
1. CAST IRON COVER
2. CAST IRON TOP SECTION
3. CAST IRON EXTENSION PIECE
4. CAST IRON BOTTOM SECTION

NOTES:
1. IF EXTENSION PIECE IS USED, ANOTHER VALVE BOX BOTTOM SECTION SHALL BE USED.
2. EXTENSION PIECE CAN BE CUT TO LENGTH REQUIRED.
3. SINGLE #14 GAUGE TYPE INSULATED COPPER TRACER WIRE IS REQUIRED ON ALL MAINS, PE WATER SERVICES OR OTHER APPURTENANCES

* PROVIDE VALVE STEM EXTENSION WITH CENTERING DEVICE IF GREATER THAN 4.0' DEEP.

CITY OF TONTITOWN		WATER DETAIL: W07	
		LAST REVISION DATE: 08/29/02	
DRAWN BY: CRB	CHECKED BY: ___	APPROVED: ___	DATE: 09/01/05

THRUST BLOCKING

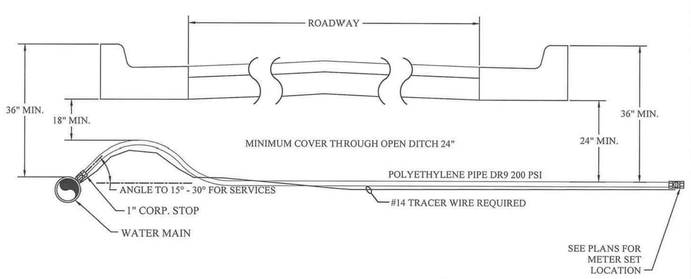


NOTES ON THRUST BLOCKING

1. ALL BLOCKING SHALL BE AGAINST UNDISTURBED SOIL USING 3,000 PSI CONCRETE.
2. WHERE SOIL CONDITIONS MAKE IT NECESSARY TO POUR CONCRETE OVER JOINTS, THE ENDS OF THE ADJACENT PIPES MUST HAVE A THRUST BLOCK TO RESIST MOVEMENT OF THESE JOINTS.
3. WEIGHT CALCULATIONS TO BE BASED ON REACTION BACKING TABLE (SEE GWS10).
4. WHEN BLOCKING AGAINST FITTINGS, FITTINGS SHALL BE COVERED WITH POLYETHYLENE TUBING TO PREVENT BONDING OF CONCRETE.
5. WHERE SHEAR BECOMES A PROBLEM PROPER REINFORCING MUST BE INSTALLED INTO THE BLOCKING.
6. CLEARANCE SHALL BE A MINIMUM OF 6" BETWEEN PIPE AND OBSTRUCTIONS.
7. CLEARANCE ON PIPES BELONGING TO OIL/GAS COMPANIES SHALL BE 18" UNLESS SPECIAL PERMISSION IS GIVEN BY THESE COMPANIES.

CITY OF TONTITOWN		GEN. WATER/SEWER DETAIL: GWS02	
		LAST REVISION DATE: 08/29/02	
DRAWN BY: CRB	CHECKED BY: ___	APPROVED: ___	DATE: 09/01/05

1" SERVICE CONNECTIONS

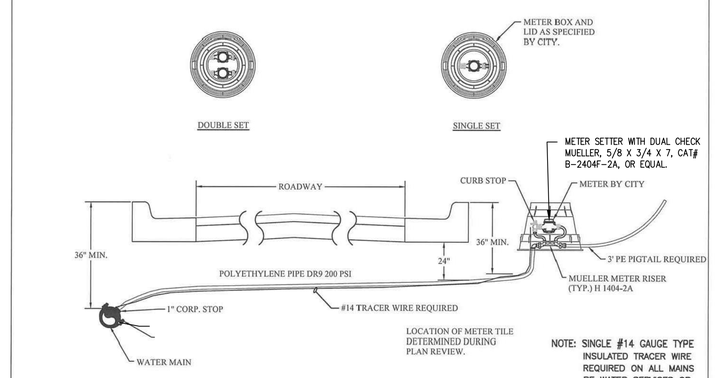


NOTE: SERVICE CROSSINGS UNDER STREETS AND ROADWAYS MUST BE ENCASED IN A 2" PVC OR PE PIPE.

NOTE: SINGLE #14 GAUGE TYPE INSULATED TRACER WIRE REQUIRED ON ALL MAINS PE WATER SERVICES OR OTHER APPURTENANCES

CITY OF TONTITOWN		WATER DETAIL: W03	
		LAST REVISION DATE: 03/18/16	
DRAWN BY: CRB	CHECKED BY: ___	APPROVED: ___	DATE: 09/01/05

WATER SERVICE DETAIL 1"

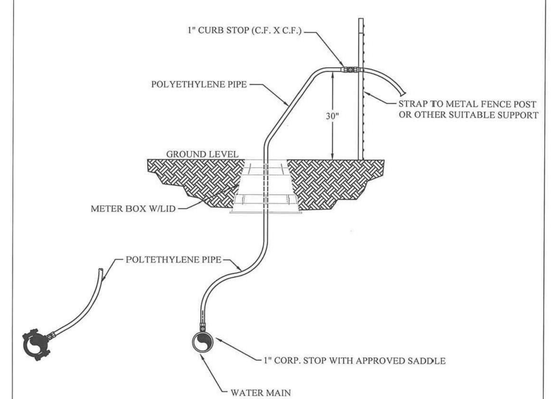


NOTE: SERVICE CROSSINGS UNDER STREETS AND ROADWAYS MUST BE ENCASED IN A 2" PVC OR PE PIPE.

NOTE: SINGLE #14 GAUGE TYPE INSULATED TRACER WIRE REQUIRED ON ALL MAINS PE WATER SERVICES OR OTHER APPURTENANCES

CITY OF TONTITOWN		WATER DETAIL: W02	
		LAST REVISION DATE: 03/18/16	
DRAWN BY: CRB	CHECKED BY: ___	APPROVED: ___	DATE: 09/01/05

TEMPORARY 1" BLOW OFF ASSEMBLY / SAMPLE POINTS



CITY OF TONTITOWN		WATER DETAIL: W01	
		LAST REVISION DATE: 08/29/02	
DRAWN BY: CRB	CHECKED BY: ___	APPROVED: ___	DATE: 09/01/05

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CERTIFICATE OF AUTHORIZATION
Richardson Engineering, PLLC
No. 2519
ARKANSAS

WATER & SANITARY SEWER DEATILS
NAPA SUBDIVISION PHASE 3
PART OF THE SW 1/4 OF THE
SW 1/4, SECTION 36, T-18-N, R-31-W

Prepared For:
NORRHO LLC
4285 N. SHILOH DRIVE
FAYETTEVILLE, AR 72703

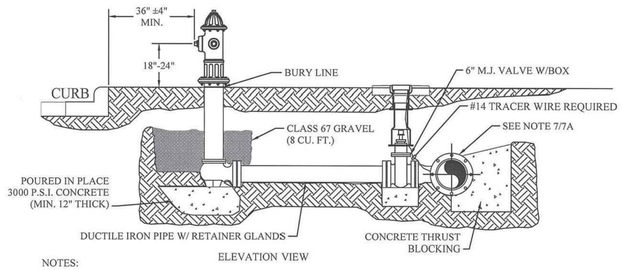
No.	Revisions	Date
1	AS PER CITY COMMENTS 09/10/19	9/16/19

Date: 08/30/19
REV:09/16/19

Scale: N.T.S.

Sheet: 28 of 31

FIRE HYDRANT DETAIL W/DUCTILE IRON PIPE AND RETAINER GLANDS

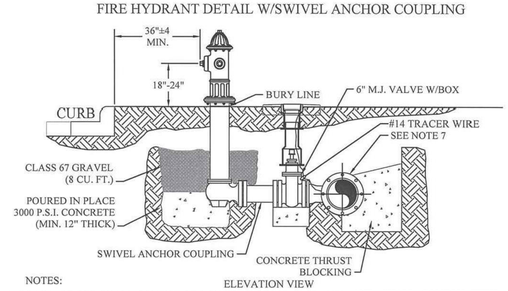


NOTES:

1. DRAINAGE BED SHALL CONSIST OF 8 CU FT OF CLASS 67 GRAVEL. AND SHALL COMPLY WITH AWWA C-605
2. USE 6" D.I. NIPPLE WITH M.J. RETAINER GLANDS IF DISTANCE BETWEEN VALVE AND HYDRANT MUST BE GREATER THAN 13" SWIVEL ADAPTER.
3. FIRE HYDRANT TO BE BLOCKED AGAINST FIRM SOIL AS SHOWN.
4. ALL HYDRANTS SHALL BE INSTALLED PLUMB.
5. LARGE NOZZLE SHALL FACE CURB UNLESS OTHER-WISE NOTED. ROTATE BARREL AS REQUIRED.
6. HYDRANT SHOULD NOT BE SET CLOSER THAN 4.0' TO OBSTRUCTIONS THAT ARE IN LINE WITH NOZZLE.
7. M.J. ANCHOR TEE, TAPPING SLEEVE OR TAPPING SADDLE MAY BE USED (SEE MATERIAL SPECIFICATIONS)
8. HYDRANTS TO BE SET AT DEPTHS GREATER THAN 6.0' SHALL BE SET WITH A MODIFIED FIRE HYDRANT SETTING. (CONTACT TONTITOWN WATER DEPT. FOR DETAILED DRAWING FOR DEEP DEPTH FIRE HYDRANT SETTINGS).
9. POLYWRAP ENTIRE HYDRANT ASSEMBLY. DO NOT COVER WEEP HOLE DRAIN.
10. HYDRANTS WILL BE SET AT A MINIMUM OF 36" ±4" BACK OF CURB, BUT NOT IN SIDEWALK, OR AS DIRECTED BY CITY.
11. SINGLE #14 GAUGE TYPE INSULATED TRACER WIRE IS REQUIRED ON ALL MAINS, PE WATER SERVICES OR OTHER APPURTENANCES.

CITY OF TONTITOWN		WATER DETAIL: W04	
		LAST REVISION DATE: 08/29/02	
DRAWN BY: CRB	CHECKED BY: ___	APPROVED: ___	DATE: 09/01/05

FIRE HYDRANT DETAIL W/SWIVEL ANCHOR COUPLING



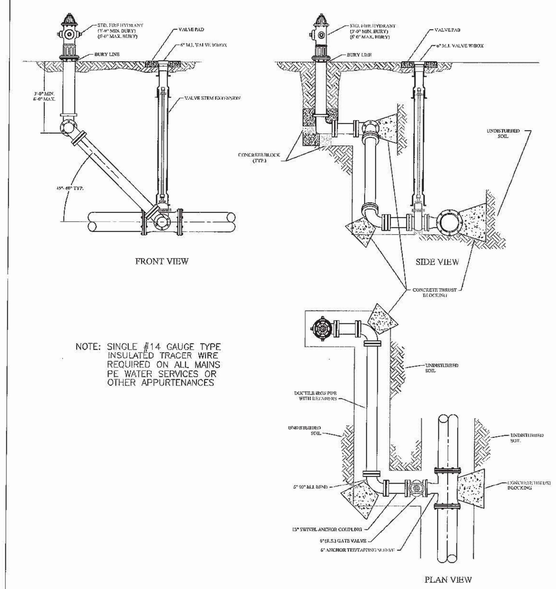
NOTES:

1. DRAINAGE BED SHALL CONSIST OF 8 CU FT OF CLASS 67 GRAVEL. AND SHALL COMPLY WITH AWWA C-605
2. USE 6" D.I. NIPPLE WITH M.J. RETAINER GLANDS IF DISTANCE BETWEEN VALVE AND HYDRANT MUST BE GREATER THAN 13" SWIVEL ADAPTER.
3. FIRE HYDRANT TO BE BLOCKED AGAINST FIRM SOIL AS SHOWN.
4. ALL HYDRANTS SHALL BE INSTALLED PLUMB.
5. LARGE NOZZLE SHALL FACE CURB UNLESS OTHER-WISE NOTED. ROTATE BARREL AS REQUIRED.
6. HYDRANT SHOULD NOT BE SET CLOSER THAN 4.0' TO OBSTRUCTIONS THAT ARE IN LINE WITH NOZZLE.
7. M.J. ANCHOR TEE, TAPPING SLEEVE OR TAPPING SADDLE MAY BE USED (SEE MATERIAL SPECIFICATIONS)
8. HYDRANTS TO BE SET AT DEPTHS GREATER THAN 6.0' SHALL BE SET WITH A MODIFIED FIRE HYDRANT SETTING. (CONTACT TONTITOWN WATER DEPT. FOR DETAILED DRAWING FOR DEEP DEPTH FIRE HYDRANT SETTINGS).
9. POLYWRAP ENTIRE HYDRANT ASSEMBLY. DO NOT COVER WEEP HOLE DRAIN.
10. HYDRANTS WILL BE SET AT A MINIMUM OF 36" ±4 BACK OF CURB, BUT NOT IN SIDEWALK, OR AS DIRECTED BY CITY.
11. SINGLE #14 GAUGE TYPE INSULATED TRACER WIRE IS REQUIRED ON ALL MAINS, PE WATER SERVICES OR OTHER APPURTENANCES.

CITY OF TONTITOWN		WATER DETAIL: W05	
		LAST REVISION DATE: 08/29/02	
DRAWN BY: CRB	CHECKED BY: ___	APPROVED: ___	DATE: 09/01/05

DEEP BURY FIRE HYDRANTS

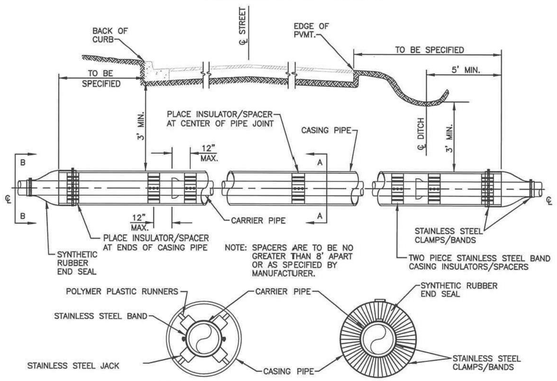
(BURY DEEPER THAN 5'-0")



NOTE: SINGLE #14 GAUGE TYPE INSULATED TRACER WIRE REQUIRED ON ALL MAINS PE WATER SERVICES OR OTHER APPURTENANCES

CITY OF TONTITOWN		WATER DETAIL: W06	
		LAST REVISION DATE: 08/29/02	
DRAWN BY: CRB	CHECKED BY: ___	APPROVED: ___	DATE: 09/01/05

ENCASEMENT DETAIL



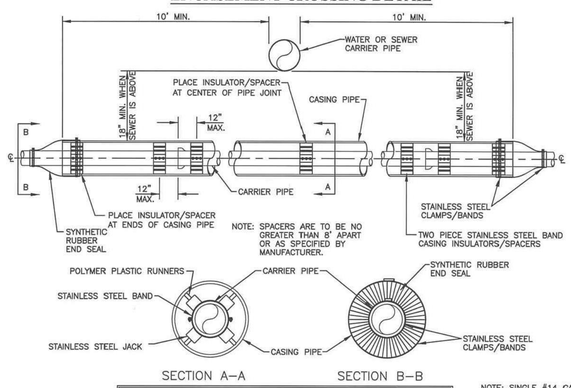
CARRIER & CASING SIZES									
CARRIER	4"	6"	8"	10"	12"	14"	16"	18"	20"
CASING	16"	16"	16"	18"	20"	24"	30"	30"	36"
CASING/WALL THICKNESS	.219	.219	.219	.250	.281	.344	.406	.406	.500

NOTE: SINGLE #14 GAUGE TYPE INSULATED TRACER WIRE REQUIRED ON ALL MAINS PE WATER SERVICES OR OTHER APPURTENANCES

NOTE: DUCTILE IRON, OR PVC PIPE REQUIRED FOR WATER, OR SEWER.

CITY OF TONTITOWN		GEN. WATER/SEWER DETAIL: GWS01	
		LAST REVISION DATE: 08/29/02	
DRAWN BY: CRB	CHECKED BY: ___	APPROVED: ___	DATE: 09/01/05

ENCASEMENT CROSSING DETAIL



CARRIER & CASING SIZES									
CARRIER	4"	6"	8"	10"	12"	14"	16"	18"	20"
CASING	16"	16"	16"	18"	20"	24"	30"	30"	36"
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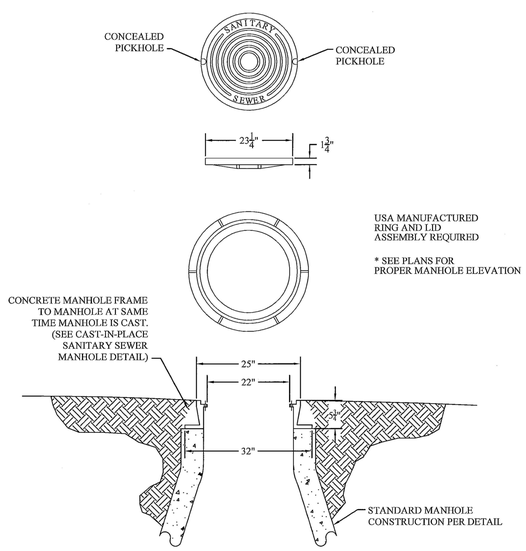
NOTE: SINGLE #14 GAUGE TYPE INSULATED TRACER WIRE REQUIRED ON ALL MAINS PE WATER SERVICES OR OTHER APPURTENANCES

NOTE: DUCTILE IRON, OR PVC PIPE REQUIRED FOR WATER, OR SEWER.

CITY OF TONTITOWN		GEN. WATER/SEWER DETAIL: GWS04	
		LAST REVISION DATE: 08/29/02	
DRAWN BY: CRB	CHECKED BY: ___	APPROVED: ___	DATE: 09/01/05

HEAVY DUTY MANHOLE LID & FRAME



CITY OF TONTITOWN		SANITARY SEWER DETAIL: SS04	
		LAST REVISION DATE: 03/27/13	
DRAWN BY: FCN	CHECKED BY: TWC	APPROVED: ___	DATE: 09/01/05

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WATER & SANITARY SEWER DETAILS
NAPA SUBDIVISION PHASE 3
PART OF THE SW 1/4 OF THE SW 1/4, SECTION 36, T-18-N, R-31-W

Prepared For:
NORRHO LLC
4285 N. SHILOH DRIVE
FAYETTEVILLE, AR 72703

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1	AS PER CITY COMMENTS 09/10/19	9/16/19

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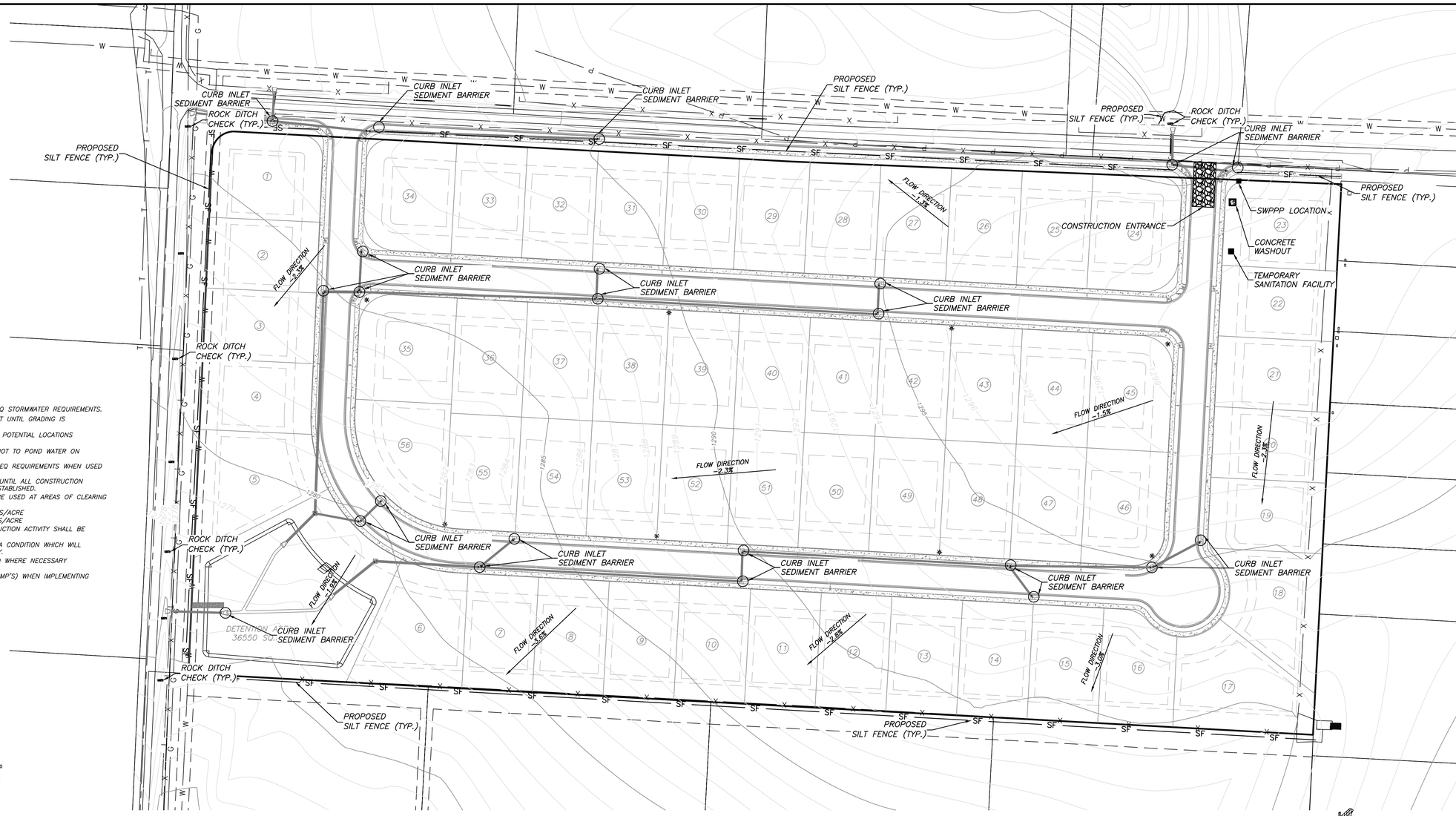


GENERAL NOTES:

1.) DEVELOPMENT SHALL ADHERE TO CITY OF BENTON AND ADEQ STORMWATER REQUIREMENTS.
2.) SEDIMENT BARRIERS SHALL BE CONSTRUCTED AT EACH INLET UNTIL GRADING IS COMPLETE AND TOP SOIL IS STABILIZED.
3.) A SILT FENCE AND STRAW BALE DIKE SHALL BE PLACED AT POTENTIAL LOCATIONS OF HEAVY EROSION.
4.) TEMPORARY STRAW BALE DIKES ARE TO BE CONSTRUCTED NOT TO POND WATER ON ADJACENT PROPERTY.
5.) ROCK DIKE CHECK DAMS TO BE CONSTRUCTED TO MEET ADEQ REQUIREMENTS WHEN USED IN LIEU OF STRAW BALE DIKES.
6.) ALL TEMPORARY EROSION CONTROLS SHALL BE MAINTAINED UNTIL ALL CONSTRUCTION IS COMPLETE & PERMANENT GROUND COVER HAS BEEN ESTABLISHED.
7.) ONE OF THE FOLLOWING GROUND COVER METHODS SHALL BE USED AT AREAS OF CLEARING OTHER THAN FUTURE PAVEMENT SURFACES.

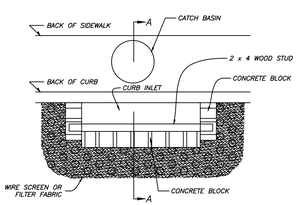
STRAW OR HAY–LOOSE	2.0 TONS/ACRE
STRAW OR HAY–TIED, ANCHORED, OR TACKED	1.5 TONS/ACRE

8.) SOIL EXPOSED FOR MORE THAN 21 DAYS WITH NO CONSTRUCTION ACTIVITY SHALL BE SEEDED OR REMITTED.
9.) CONSTRUCTION ENTRANCES/EXITS SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF MUD ON TO PUBLIC RIGHT–OF–WAY.
10.) ADDITIONAL EROSION CONTROL MEASURES TO BE EMPLOYED WHERE NECESSARY BY SITE CONDITIONS.
11.) CONTRACTOR SHALL USE "BEST MANAGEMENT PRACTICES" (BMP'S) WHEN IMPLEMENTING & MAINTAINING SEDIMENT & RUN–OFF CONTROLS.

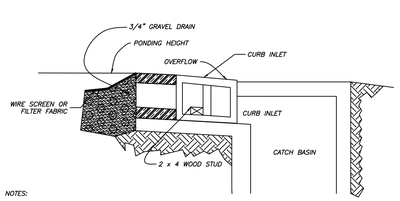
GRAPHIC SCALE

60 0 60 120 180

(IN FEET)
1 inch = 60 ft.



PLAN VIEW



NOTES:

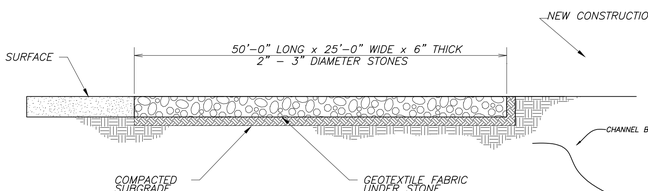
1.) USE BLOCK AND GRAVEL TYPE SEDIMENT BARRIER WHEN CURB INLET IS LOCATED IN GENTLY SLOPING STREET SEGMENT, WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE FROM RUNOFF.

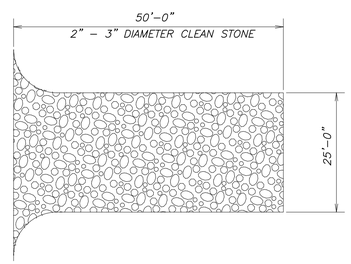
2.) BARRIER SHALL ALLOW FOR OVERFLOW FROM SEVERE STORM EVENT.

3.) INSPECT BARRIERS AND REMOVE SEDIMENT AFTER EACH STORM EVENT. SEDIMENT AND GRAVEL MUST BE REMOVED FROM THE TRAVELED WAY IMMEDIATELY.

SECTION A – A

CURB INLET SEDIMENT BARRIER



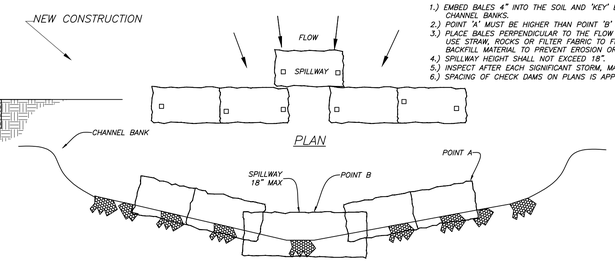


CONSTRUCTION ENTRANCE

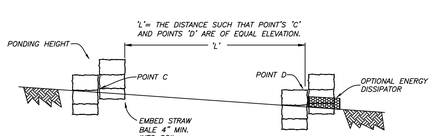
NOT TO SCALE

NOTES:

1.) EMBED BALES 4" INTO THE SOIL AND 'KEY' BALES INTO THE CHANNEL BANKS.
2.) POINT 'A' MUST BE HIGHER THAN POINT 'B' (SPILLWAY HEIGHT)
3.) PLACE BALES PERPENDICULAR TO THE FLOW WITH ENDS TIGHTLY ABUTTING. USE STRAW, ROCKS OR FILTER FABRIC TO FILL ANY GAPS AND TAMP BACKFILL MATERIAL TO PREVENT EROSION OR FLOW AROUND THE BALES.
4.) SPILLWAY HEIGHT SHALL NOT EXCEED 18".
5.) INSPECT AFTER EACH SIGNIFICANT STORM, MAINTAIN AND REPAIR PROMPTLY.
6.) SPACING OF CHECK DAMS ON PLANS IS APPROXIMATE.

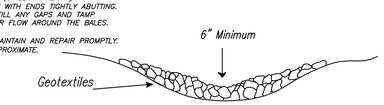


VIEW LOOKING UPSTREAM

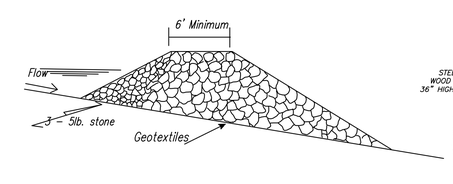


SECTION A–A
SPACING BETWEEN CHECK DAMS

STRAW BALE CHECK DAM



NOTE: Sediment Trap is to be cleaned out when volume becomes half full.

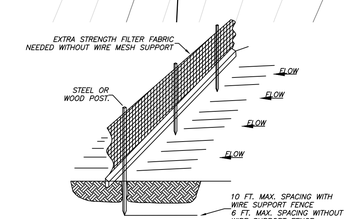


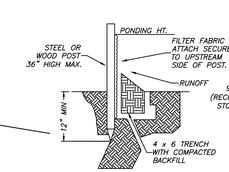
NOTES:

1. FOR USE IN SMALL CHANNELS WITH DRAINAGE AREAS OF 50 ACRES OR LESS.
2. MUST BE USED IN CONJUNCTION WITH OTHER APPROPRIATE SEDIMENT CONTROL MEASURES.
3. USE BELOW CULVERT INSTALLATIONS, DAM CONSTRUCTION, OR ANY PROJECT THAT MAY INVOLVE GRADING ACTIVITY DIRECTLY IN A STREAM.
4. NOT INTENDED TO SUBSTANTIALLY IMPOUND WATER.
5. USE AT THE UPSTREAM END OF PONDS OR LAKES.
6. EDGES SHOULD NOT BE HIGHER THAN THE CHANNEL BANKS.
7. CENTER SHOULD BE AT LEAST 6 INCHES LOWER THAN THE OUTER EDGES OF THE DAM AT THE CHANNEL BANKS.
8. HEIGHT SHOULD NOT EXCEED ELEVATION OF UPSTREAM PROPERTY LINE.
9. SIDE SLOPES SHOULD BE 2:1 OR FLATTER.
10. THE WIDTH SHOULD BE GREATER THAN 6 FEET.
11. EXTEND COMPLETELY ACROSS THE CHANNEL AND SECURELY TIE INTO BOTH CHANNEL BANKS
12. REQUIRES PERIODIC INSPECTION AND MAINTENANCE.
13. SEDIMENT REMOVED WHEN IT REACHES ONE–HALF OF THE ORIGINAL DAM HEIGHT

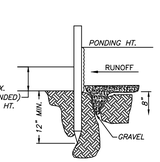
ROCK DAM

NOT TO SCALE





STANDARD DETAIL
TRENCH WITH NATIVE BACKFILL



ALTERNATE DETAIL
TRENCH WITH GRAVEL

NOTE:

1.) INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.

2.) REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF–SITE AND CAN BE PERMANENTLY STABILIZED.

3.) SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.

SILT FENCE

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No. 2519
ARKANSAS

EROSION CONTROL PLAN & SWPPP MAP
NAPA SUBDIVISION PHASE 3

PART OF THE SW 1/4 OF THE
SW 1/4, SECTION 36, T–18–N, R–31–4

Prepared For:
NORRHO LLC
4285 N. SHILOH DRIVE
FAYETTEVILLE, AR 72703

No.	Revisions	Date

Scale: 1" = 60'
Date: 08/31/19
Sheet: 30 of 31

GENERAL NOTES:
1) ALL STREET TREES WILL BE APPROVED BY THE CITY OF TONTITOWN AND SHALL BE SPACES AT 30' MAXIMUM.
2) REFER TO TONTITOWN LANDSCAPE ORDINANCE FOR SPECIES TYPE AND APPROVED PLANTING METHODS.
3) REFER TO SHEET 2 FOR LIGHTING NOTES

GRAPHIC SCALE
50 0 50 100 150
(IN FEET)
1 inch = 50 ft.

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ARKANSAS

LANDSCAPING & LIGHTING PLAN
NAPA SUBDIVISION PHASE 3
PART OF THE SW 1/4 OF THE
SW 1/4, SECTION 36, T-18-N, R-31-W

Prepared For:
NORRHO LLC
4285 N. SHILOH DRIVE
FAYETTEVILLE, AR 72703

No.	Revisions	Date

Date: 08/31/19
Scale: 1" = 50'
Sheet: 31 of 31

Rick Barry

From: Philip Arends
Sent: Friday, September 13, 2019 10:04 AM
To: Rick Barry
Subject: NAPA Phase III

Follow Up Flag: Follow up
Flag Status: Flagged

Rick, What concerns me is MORE traffic on an already overloaded collector street. Is the developer willing to ad resources to upgrade the street at some point?
Dump trucks and cement trucks are destroying Ardemagni.
Philip Arends - PW Foreman

Sent from my iPhone