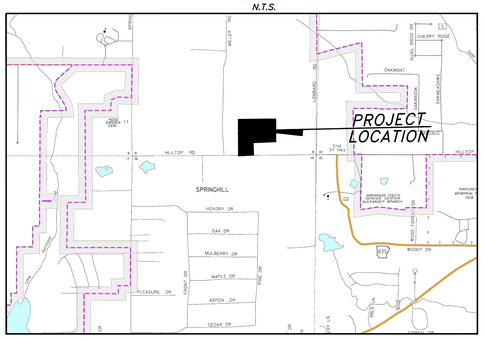
DETAILED PLANS:

ZYAIR ESTATES SUBDIVISION

PART OF THE SOUTHWEST $\frac{1}{4}$ OF THE SOUTHEAST $\frac{1}{4}$, SECTION 9, T-1-S, R-14-W
SALINE COUNTY, ARKANSAS

3/3/2026
REV: 4/7/2026

VICINITY MAP
N.T.S.



Prepared By:

RICHARDSON ENGINEERING
Planning ▪ Engineering ▪ Development Consulting
325 W. SOUTH STREET, BENTON, AR 72015 (501)315-7225

PREPARED FOR:

EMINENT CONSTRUCTION
1100 HILLFARM ROAD
BRYANT, AR 72022

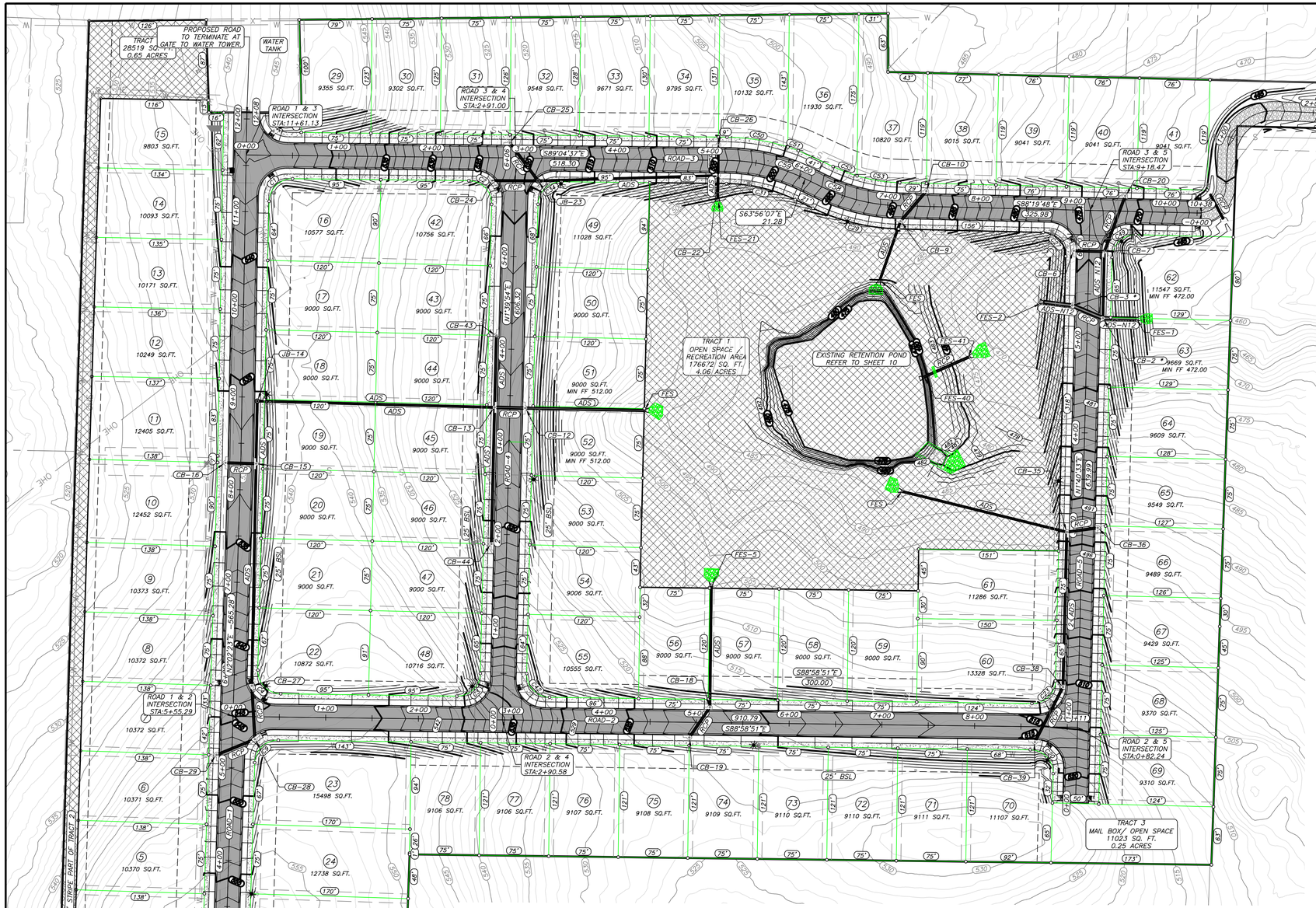
STATE OF ARKANSAS
LICENSED PROFESSIONAL ENGINEER
No. 14266
ERIC RYAN RICHARDSON

PRE-CONSTRUCTION COPY -

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

INDEX OF SHEETS

Cover Sheet	1
Street & Drainage Plan	2
Street Plan/Profile	3-9
Detention Pond Grading	10
Utility Plan	11
Sewer Plan/Profile	12-18
Erosion Control	19
Misc. Details	20-24
Street signs & lights plan	25



Curve Table				
Curve #	Length	Radius	Chord Direction	Chord Length
C1	38.95	25.00	N46° 17' 39"E	35.13
C2	39.59	25.00	S43° 42' 21"E	35.58
C3	38.99	25.00	S46° 20' 32"W	35.16
C4	39.55	25.00	N43° 39' 28"W	35.55
C5	29.22	25.00	N54° 51' 34"W	552.73
C6	9.97	25.00	N9° 57' 03"W	552.13
C7	43.89	175.00	N8° 39' 24"E	43.78
C8	54.20	225.00	N8° 56' 27"E	54.07
C9	38.82	25.00	N46° 31' 46"E	35.04
C20	39.56	25.00	S43° 39' 09"E	35.56
C23	38.98	25.00	N46° 20' 51"E	35.15
C27	39.27	25.00	N43° 19' 38"W	35.36
C29	95.80	225.00	N76° 07' 58"W	95.08
C31	76.79	175.00	N76° 30' 22"W	76.18
C34	38.95	25.00	S46° 17' 39"W	35.13
C42	39.55	25.00	S43° 39' 28"E	35.55
C49	39.27	25.00	N46° 40' 22"E	35.35
C50	66.72	225.00	S80° 33' 00"E	66.48
C51	11.82	225.00	S70° 32' 58"E	11.82
C52	27.81	175.00	S68° 29' 17"E	27.78

Curve Table				
Curve #	Length	Radius	Chord Direction	Chord Length
C53	46.70	175.00	S80° 41' 07"E	46.56
C54	42.16	175.00	S8° 56' 27"W	42.06
C55	56.44	225.00	S8° 39' 24"W	56.29
C56	38.28	25.00	S45° 20' 12"W	34.65
C58	85.15	200.00	S76° 07' 58"E	84.51
C59	87.76	200.00	S76° 30' 22"E	87.06
C64	50.17	200.00	S8° 39' 24"W	50.03
C65	48.18	200.00	S8° 56' 27"W	48.06

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501-837-2342

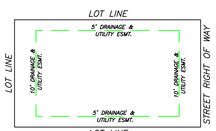
DEVELOPERS
EMINENT CONSTRUCTION
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TYPICAL LOT EASEMENTS

LEGEND

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

LEGEND

- G — GAS LINE
- T — TELEPHONE LINE
- S — SANITARY SEWER
- X — FENCE
- W — WATER LINE
- STORM DRAIN
- DITCH OR SWALE
- OHE — POWER LINE (OVERHEAD)
- PROPOSED WATER METER BOX
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- BLOW-OFF
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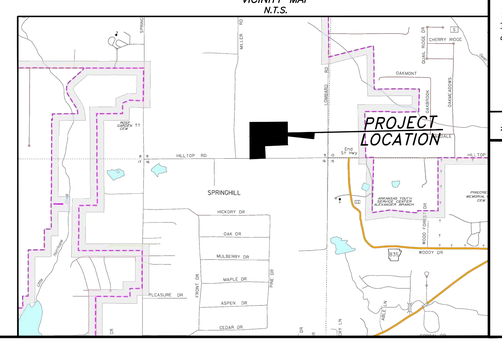
STATE OF ARKANSAS
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ERIC RYAN RICHARDSON

GRAPHIC SCALE

60 0 60 120 180

(IN FEET)
1 inch = 60 ft.

VICINITY MAP
N.T.S.



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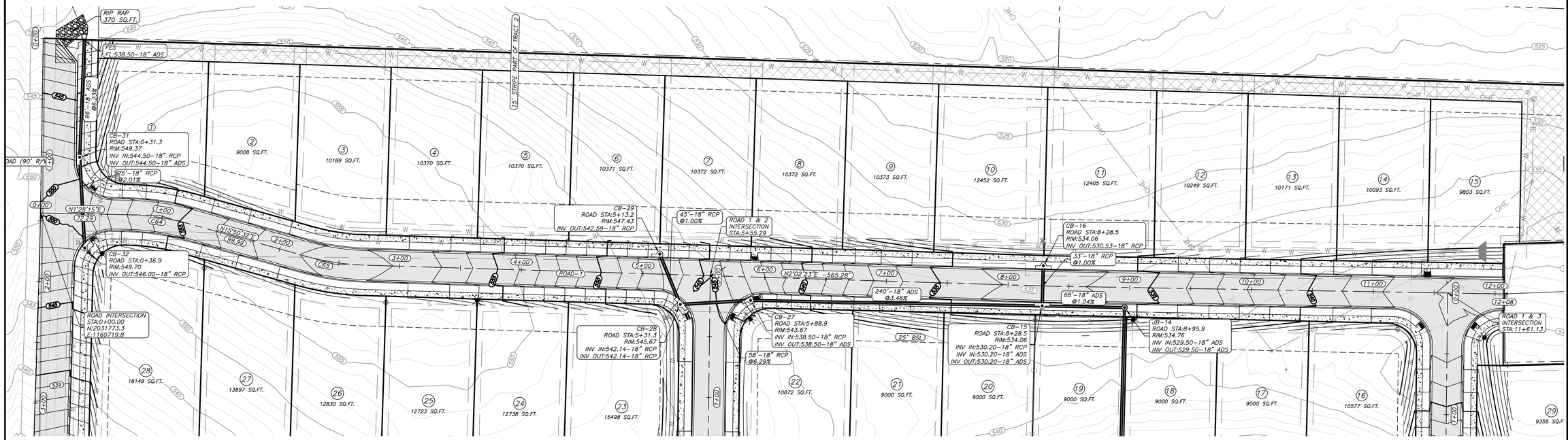
CERTIFICATE OF AUTHORIZATION
Richardson Engineering, PLLC
No. 2519
ARKANSAS

OVERALL STREET AND DRAINAGE PLAN
ZYAIR ESTATES SUBDIVISION
HILLTOP ROAD
BRYANT, ARKANSAS

Prepared For:
EMINENT CONSTRUCTIONS

No.	Revisions	Date
1	AS PER CITY COMMENTS	4/7/2026

PROJECT NO.: 024-034
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Scale: 1" = 60'
Sheet: 2 of 25



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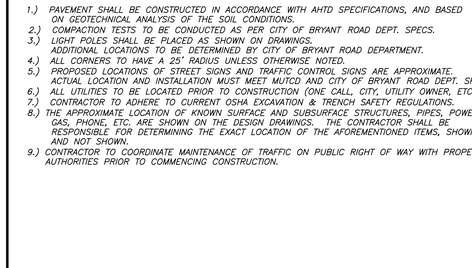
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SOUTHPOINT SURVEYING
P.O. BOX 400
SHERIDAN, AR
501–837–2342

DEVELOPERS
EMINENT CONSTRUCTION
1100 HILLFARM ROAD
BRYANT, AR 72022



TYPICAL LOT EASEMENTS

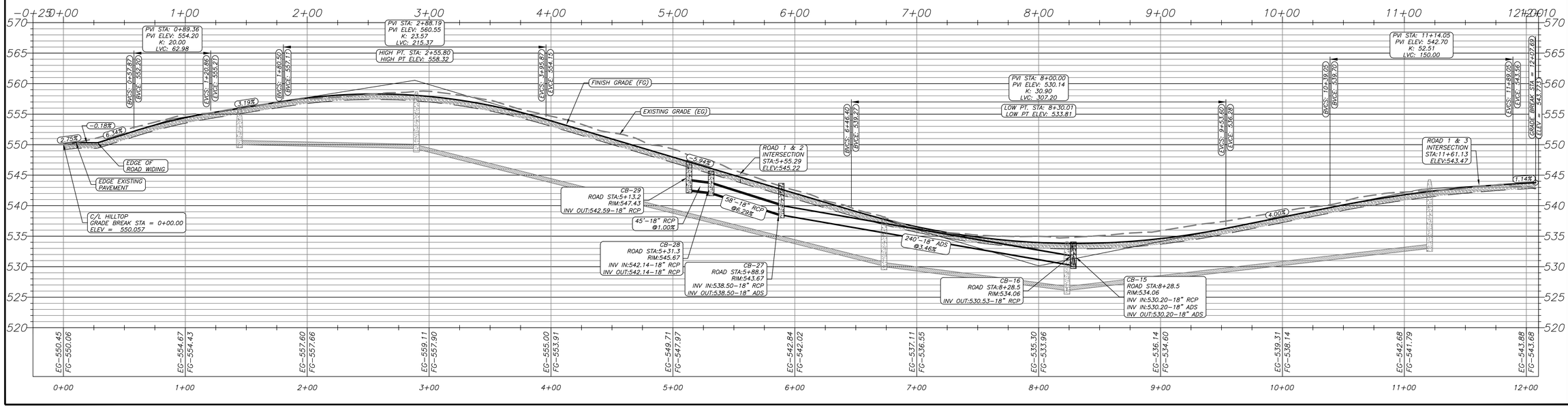
LEGEND
STOP SIGN
STREET NAME SIGN
TRAFFIC SIGN
STREET LIGHT
ADA APPROVED HANDICAP RAMP

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EXISTING MANHOLE
PROPOSED MANHOLE
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WV GATE VALVE
BLOW–OFF
FIRE HYDRANT
* ADA RAMP
CURB INLET
FES
POWER POLE

GRAPHIC SCALE
40 0 40 80 120
(IN FEET)
1 inch = 40 ft.

ROAD–1 PROFILE

Station



ROAD 1 PLAN & PROFILE
ZYAIR ESTATES
SUBDIVISION
HILLTOP ROAD
BRYANT, ARKANSAS

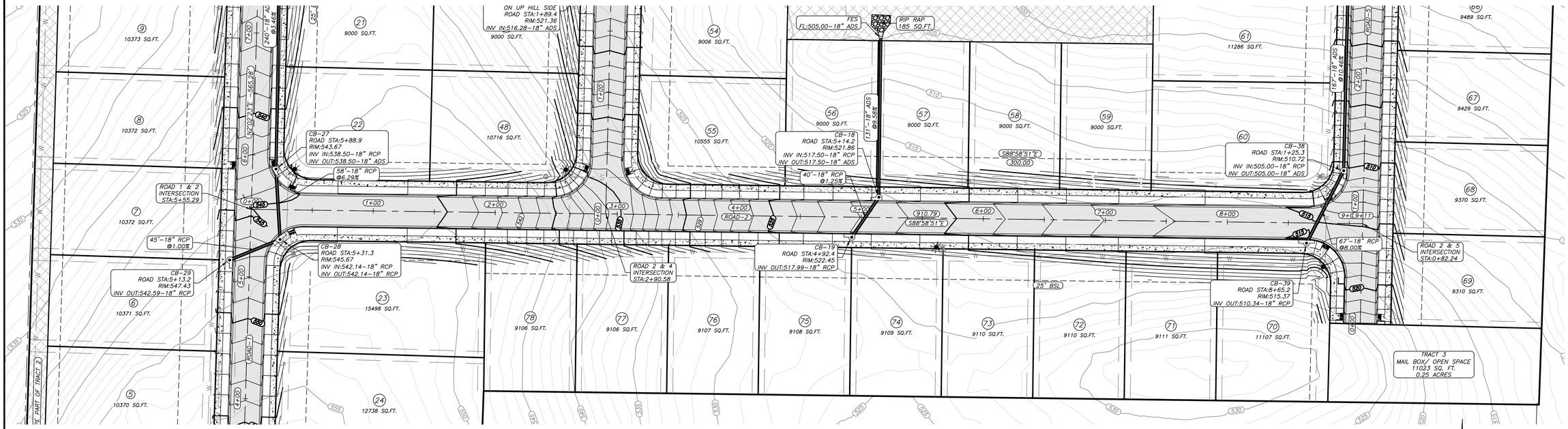
RICHARDSON ENGINEERING
Planning • Engineering • Development Consulting
325 W. SOUTH STREET, BENTON, AR 72015 (501)315-7225

CERTIFICATE OF AUTHORIZATION
Richardson Engineering, PLLC
No. 2519
ARKANSAS

EMINENT CONSTRUCTIONS
Prepared For:

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PROJECT NO.: 024–034
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Scale: 1" = 40'
Sheet: 3 of 25



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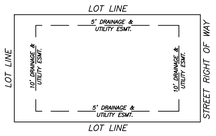
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SOUTHPOINT SURVEYING
P.O. BOX 400
SHERIDAN, AR
501-837-2342

DEVELOPERS
EMINENT CONSTRUCTION
1100 HILLFARM ROAD
BRYANT, AR 72022

LEGEND

- G — GAS LINE
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TYPICAL LOT EASEMENTS

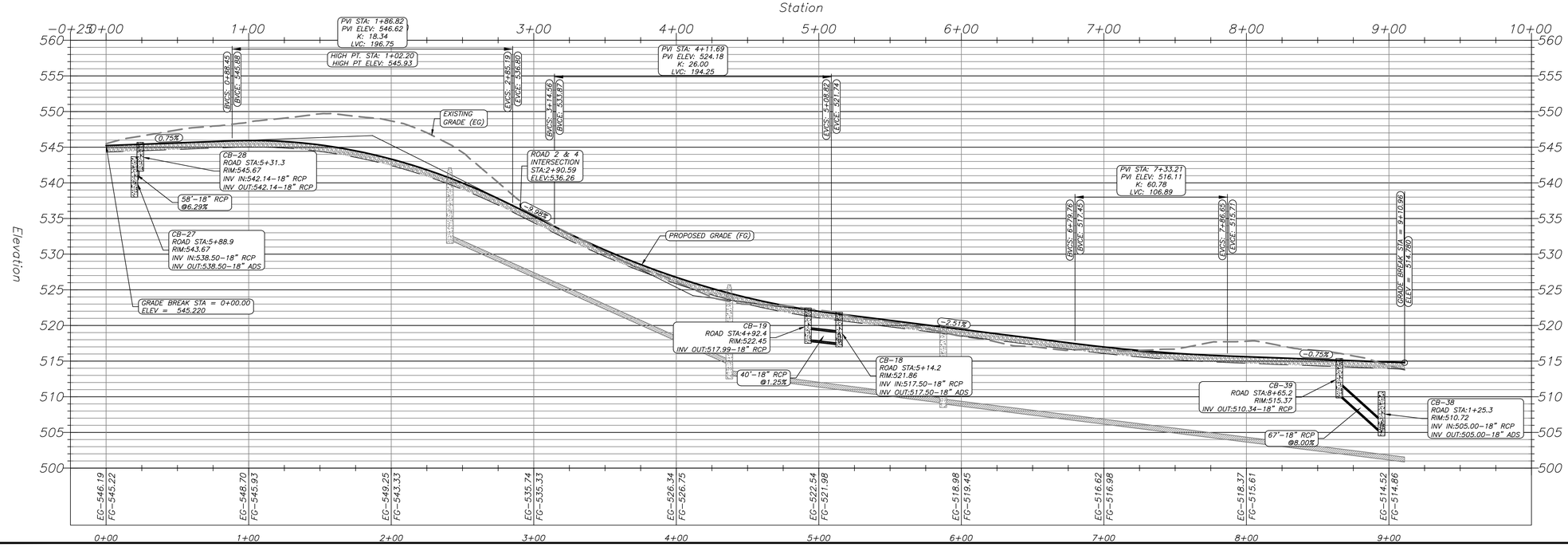
LEGEND

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- STREET NAME SIGN
- TRAFFIC SIGN
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GRAPHIC SCALE

40 0 40 80 120
(IN FEET)
1 inch = 40 ft.

ROAD-2 PROFILE



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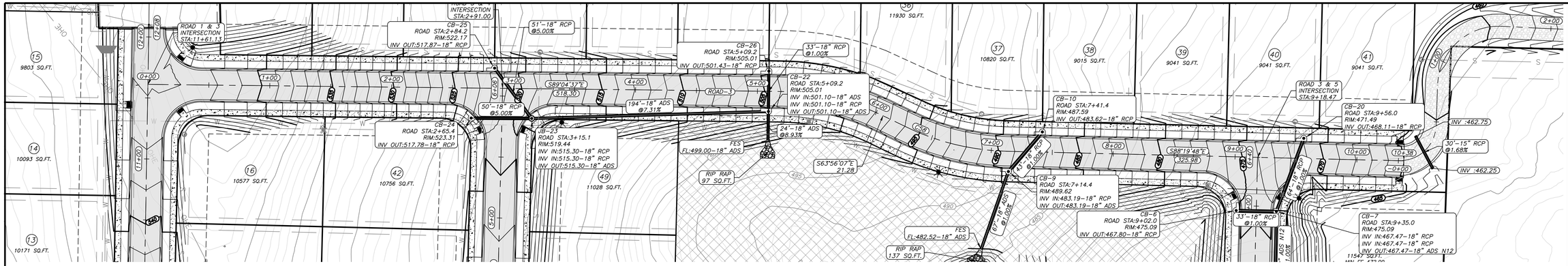
CERTIFICATE OF AUTHORIZATION
Richardson Engineering, PLLC
No. 2519
ARKANSAS

ROAD 2 PLAN & PROFILE
ZYAIR ESTATES
SUBDIVISION
HILLTOP ROAD
BRYANT, ARKANSAS

Prepared For: EMINENT CONSTRUCTIONS

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PROJECT NO.: 024-034
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Scale: 1" = 40'
Sheet: 4 of 25



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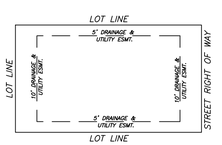
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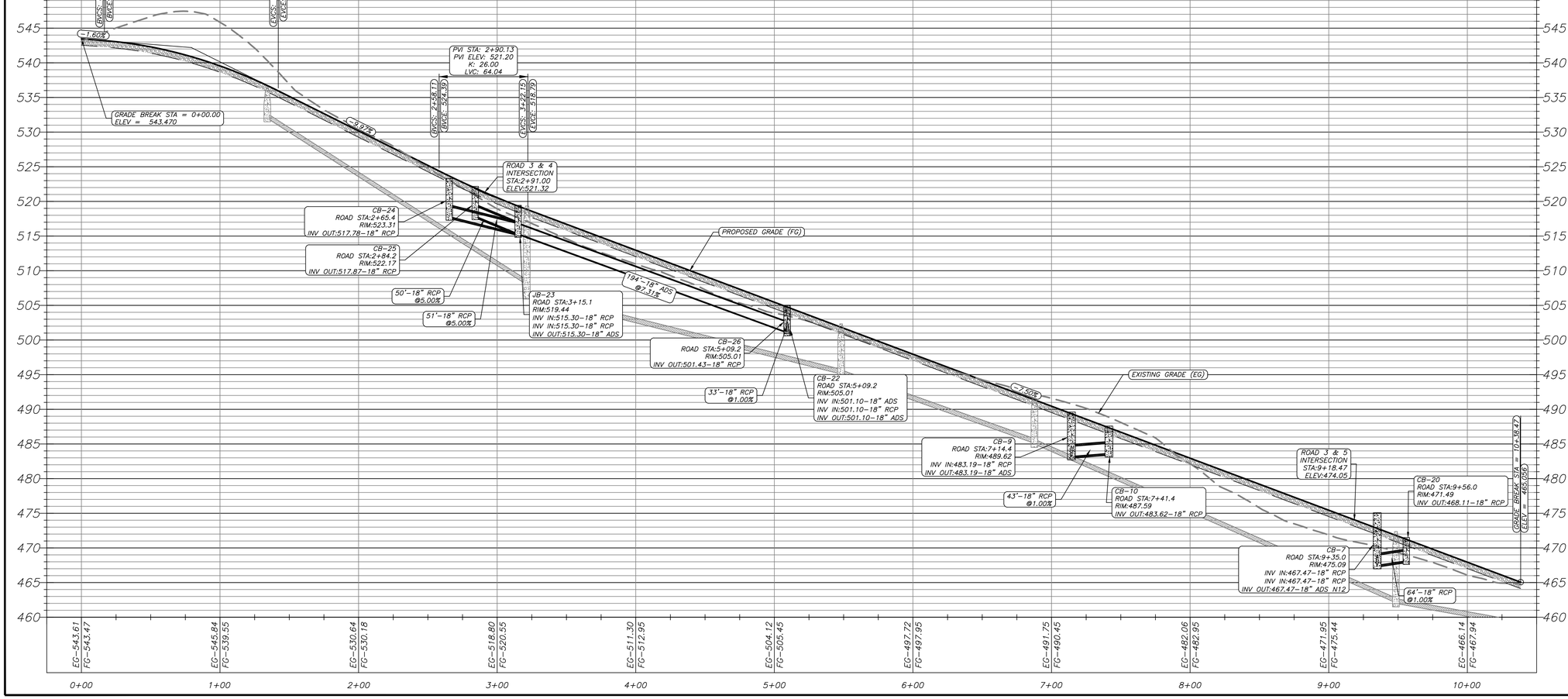
GRAPHIC SCALE
40 0 40 80 120
(IN FEET)
1 inch = 40 ft.



TYPICAL LOT EASEMENTS

ROAD-3 PROFILE

Station



LEGEND

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

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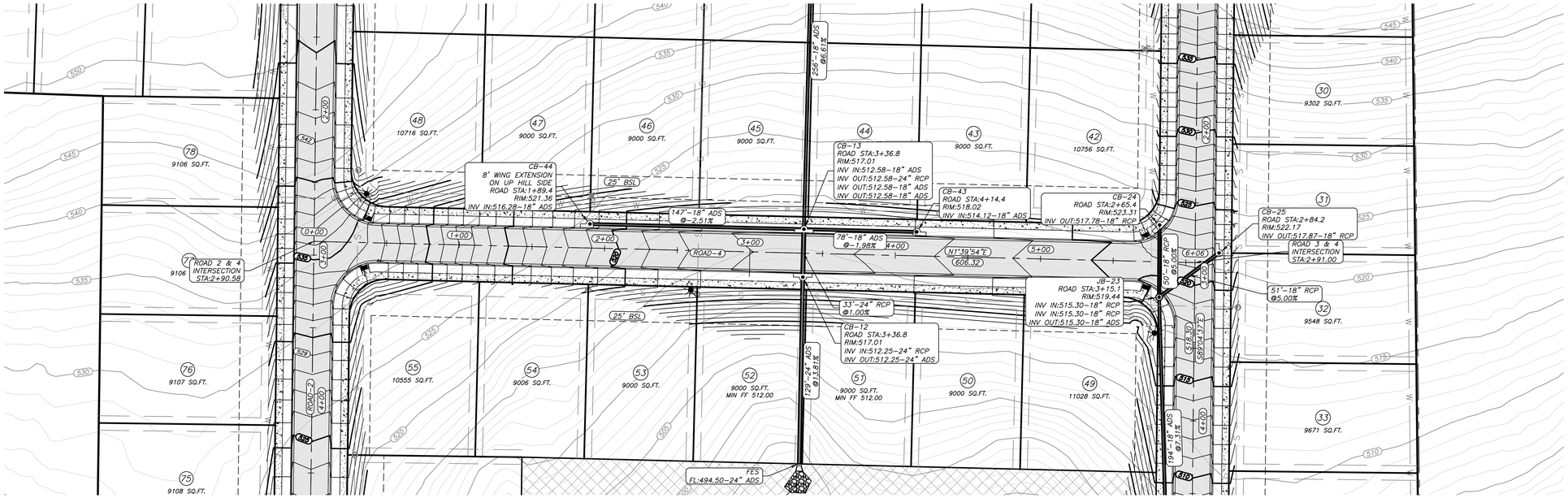
CERTIFICATE OF AUTHORIZATION — Richardson Engineering, PLLC — No. 2519 — STATE OF ARKANSAS

ROAD 3 PLAN & PROFILE
ZYAIR ESTATES
SUBDIVISION
HILLTOP ROAD
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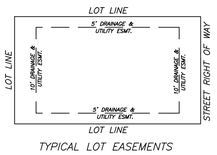


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* ALL DRAINAGE EASEMENTS SHALL CONVEY FLOWS FROM THE 100-YEAR RAIN EVENT.
* (*) DENOTES 5' INNER DIAMETER BARREL, (**) DENOTES 6' INNER DIAMETER BARREL, AND ALL OTHERS ARE 4' INSIDE DIAMETER FOR CURB INLETS AND JUNCTION BOXES.
* ALL DRAINAGE EASEMENTS BETWEEN LOTS ARE 10' UNLESS OTHERWISE NOTED.



TYPICAL LOT EASEMENTS

ENGINEER
RICHARDSON ENGINEERING, PLLC
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BENTON, AR. 72015
PHONE NO. (501) 315-7225
PROJECT REPRESENTATIVE:
ERIC RICHARDSON, P.E.

SURVEYOR
SOUTHPOINT SURVEYING
P.O. BOX 400
SHERIDAN, AR
501-837-2342

DEVELOPERS
EMINENT CONSTRUCTION
1100 HILLFARM ROAD
BRYANT, AR 72022

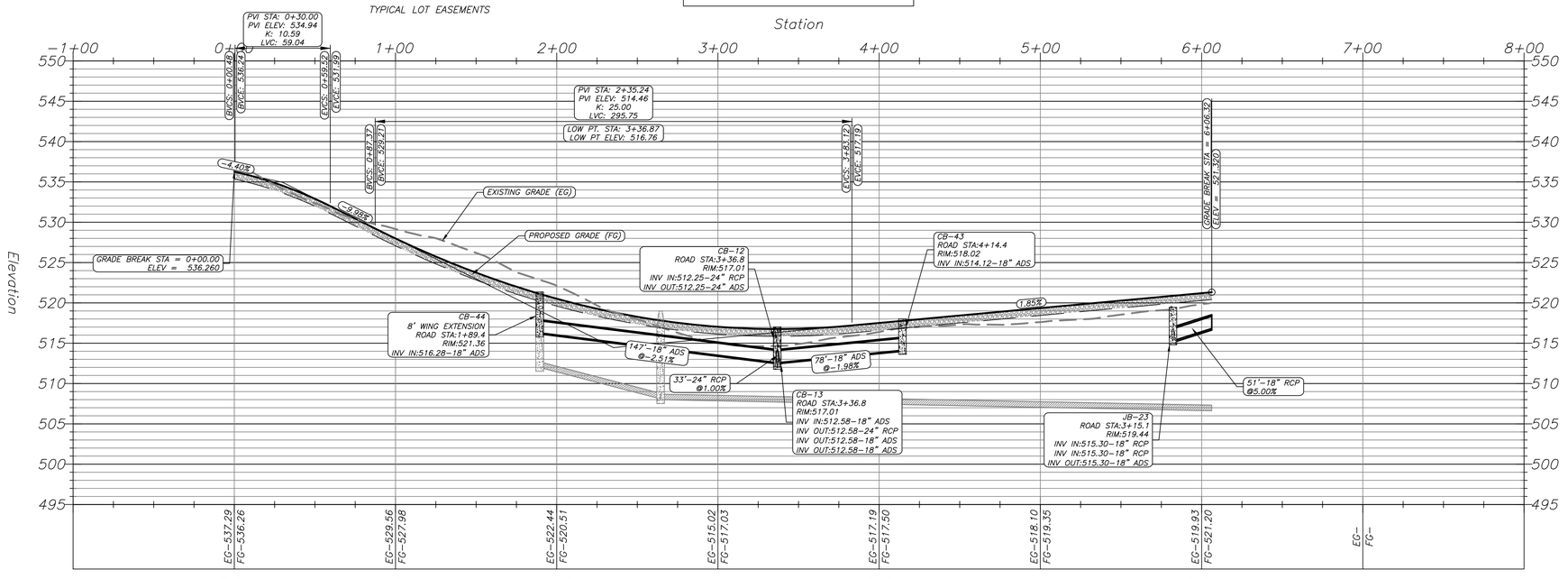
LEGEND

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

LEGEND

- G — GAS LINE
- T — TELEPHONE LINE
- S — SANITARY SEWER
- X — FENCE
- W — WATER LINE
- STORM DRAIN
- DITCH OR SWALE
- OHE — POWER LINE (OVERHEAD)
- PROPOSED WATER METER BOX
- EXISTING MANHOLE
- PROPOSED MANHOLE
- LIGHT POLE
- GATE VALVE
- BLOW-OFF
- FIRE HYDRANT
- CURB INLET
- FES
- POWER POLE

ROAD-4 PROFILE



GRAPHIC SCALE

40 0 40 80 120

(IN FEET)
1 inch = 40 ft.

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

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

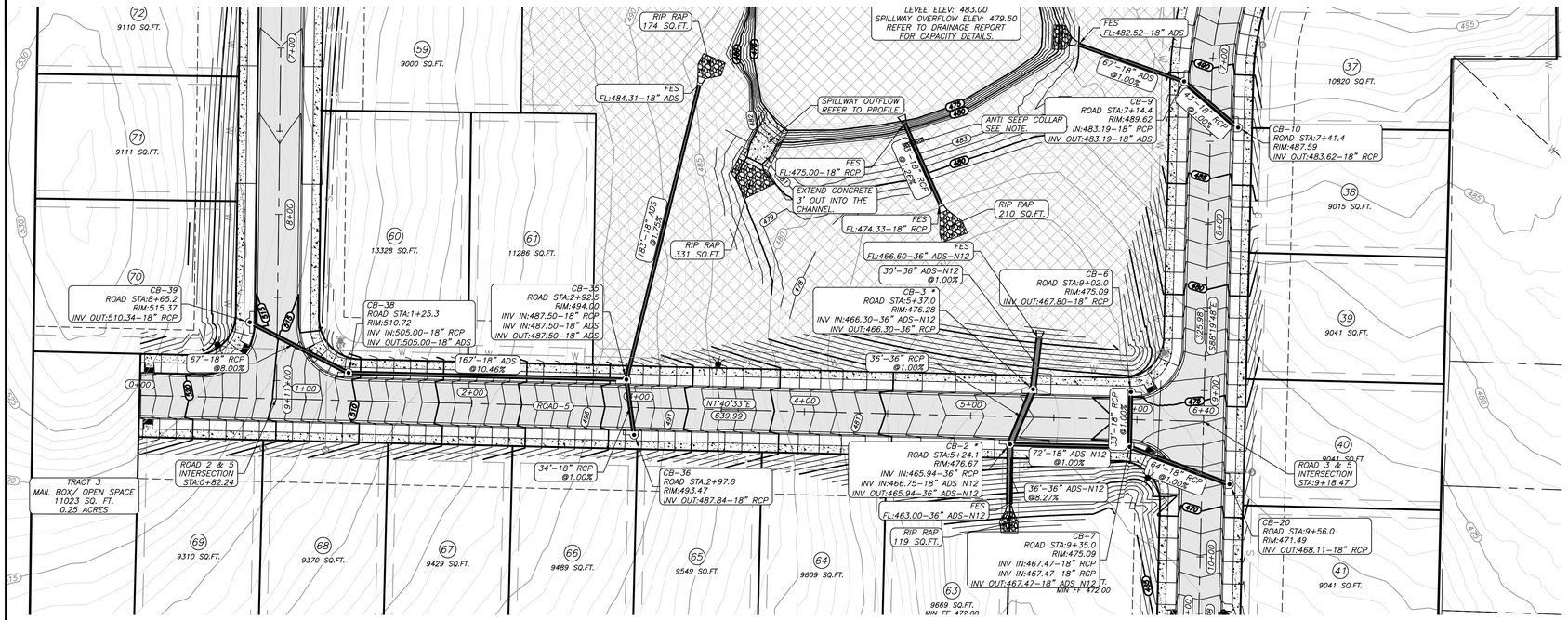
ROAD 4 PLAN & PROFILE
ZYAIR ESTATES
SUBDIVISION
HILLTOP ROAD
BRYANT, ARKANSAS

EMINENT CONSTRUCTIONS

Prepared For:

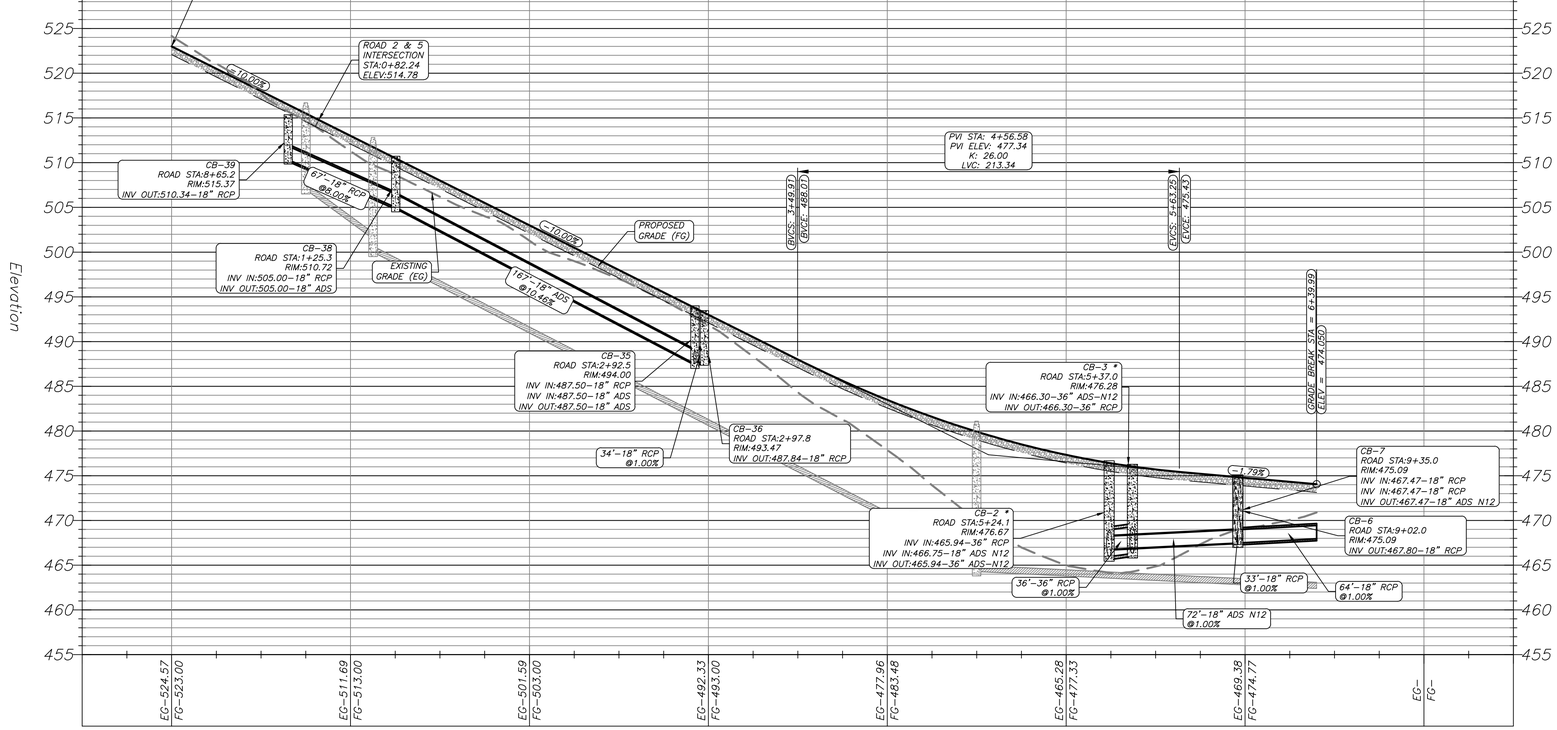
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Scale: 1" = 40'
Sheet: 6 of 25



ROAD–5 PROFILE

Station



GENERAL NOTES

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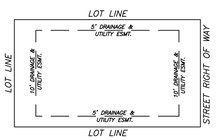
SURVEYOR
SOUTHPOINT SURVEYING
P.O. BOX 400
SHERIDAN, AR
501–837–2342

DEVELOPERS
EMINENT CONSTRUCTION
1100 HILLFARM ROAD
BRYANT, AR 72022

GRAPHIC SCALE

40 0 40 80 120

(IN FEET)
1 inch = 40 ft.



TYPICAL LOT EASEMENTS

LEGEND

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

LEGEND

G GAS LINE
T TELEPHONE LINE
S SANITARY SEWER
X FENCE
W WATER LINE
STORM DRAIN
DITCH OR SWALE
OHE POWER LINE (OVERHEAD)
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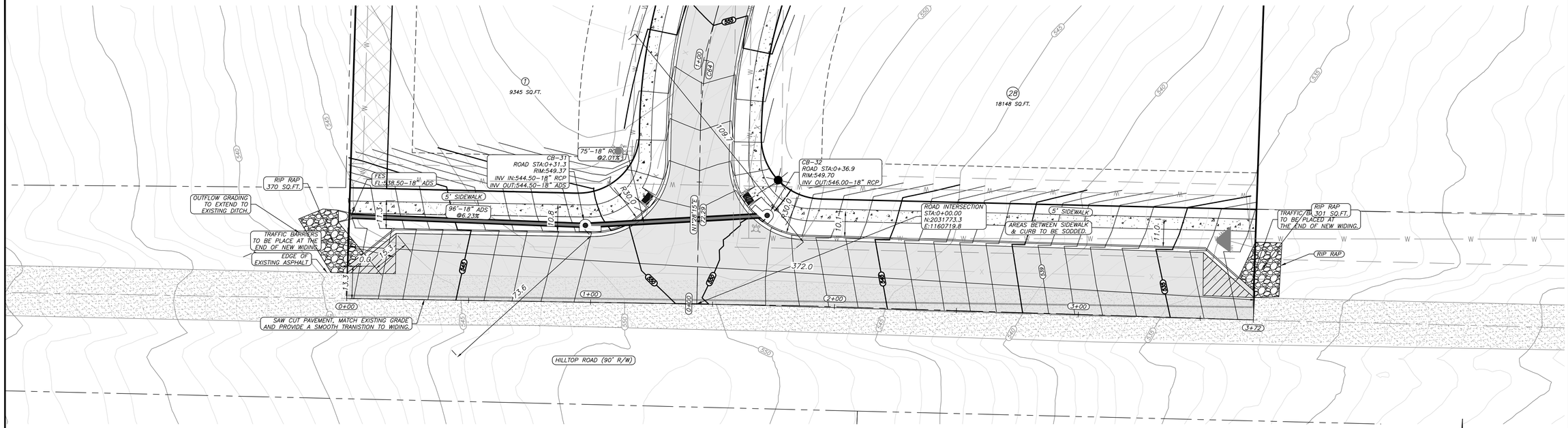
CERTIFICATE OF AUTHORIZATION Richardson Engineering, PLLC No. 2519 ARKANSAS

ROAD 5 PLAN & PROFILE
ZYAIR ESTATES
SUBDIVISION
HILLTOP ROAD
BRYANT, ARKANSAS

Prepared For: EMINENT CONSTRUCTIONS

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SHERIDAN, AR
501-837-2342

DEVELOPERS
EMINENT CONSTRUCTION
1100 HILLFARM ROAD
BRYANT, AR 72022

GRAPHIC SCALE

20 0 20 40 60

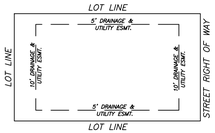
(IN FEET)
1 inch = 20 ft.

LEGEND

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

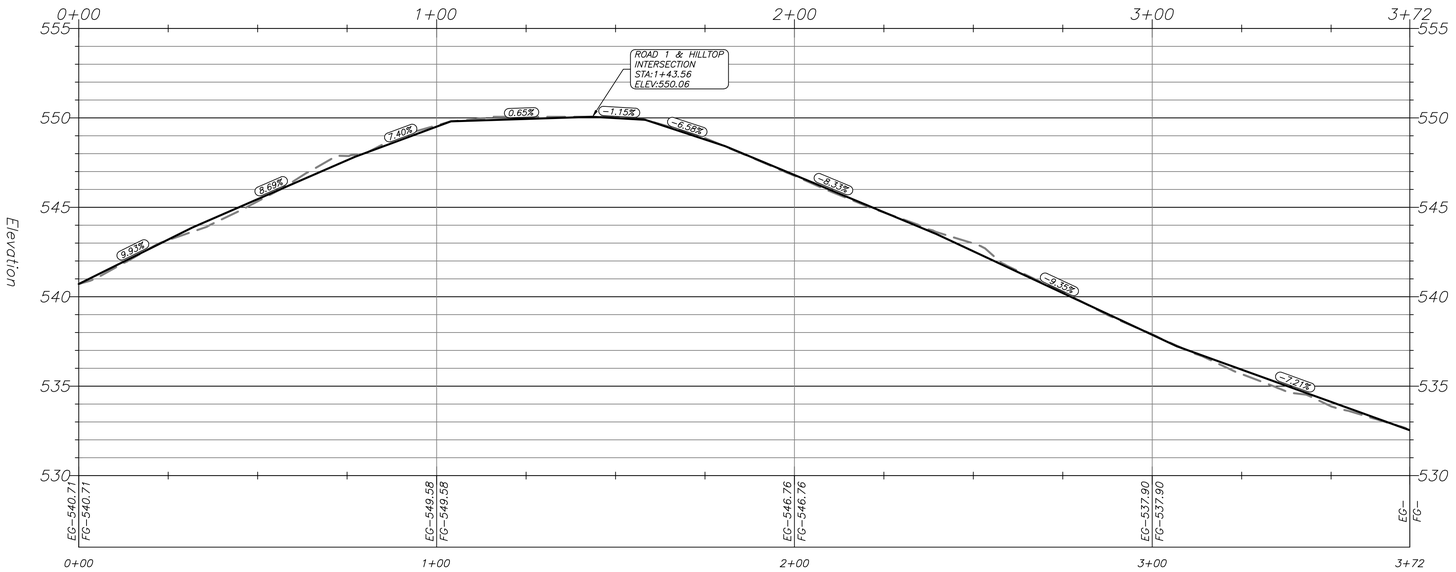
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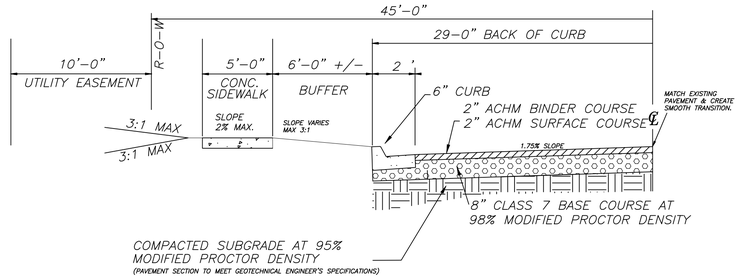
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- CURB INLET
- FES
- POWER POLE



TYPICAL LOT EASEMENTS

HIOLLTOP ROAD PROFILE





TYPICAL ROAD CROSS SECTION (HALF STREET)
N.T.S.

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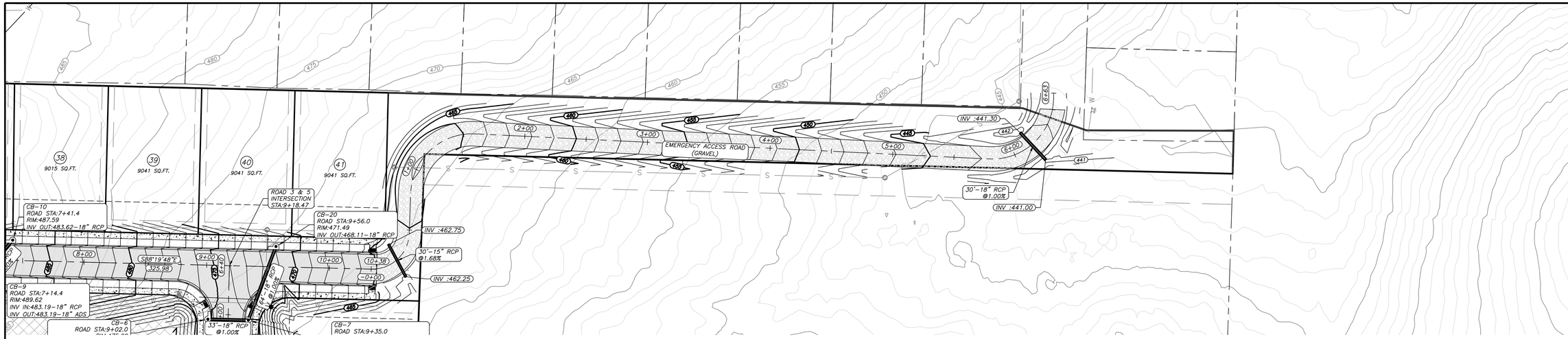
CERTIFICATE OF AUTHORIZATION
Richardson Engineering, PLLC
No. 2519
ARKANSAS

HILLTOP RD WIDING PLAN & PROFILE
ZYAIR ESTATES
SUBDIVISION
HILLTOP ROAD
BRYANT, ARKANSAS

Prepared For:
EMINENT CONSTRUCTIONS

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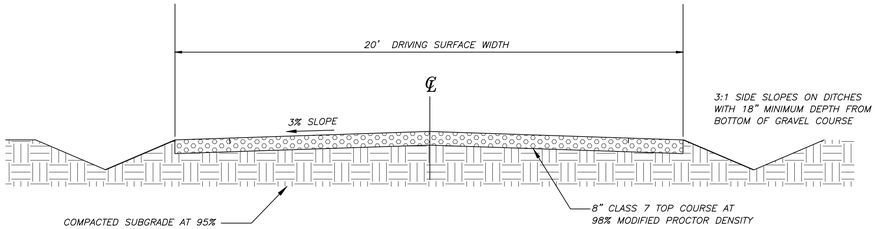


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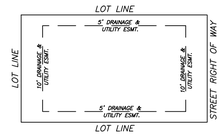
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TYPICAL ACCESS ROAD CROSS SECTION
N.T.S.

NOTE:
1. ROADWAY SHALL MEET CITY OF BRYANT SPECIFICATIONS
2. STREETS AND DRAINAGE TO BE MAINTAINED BY BRYANT ROAD DEPARTMENT
3. ROAD SHALL MEET STATE FIRE CODE REQUIREMENTS.

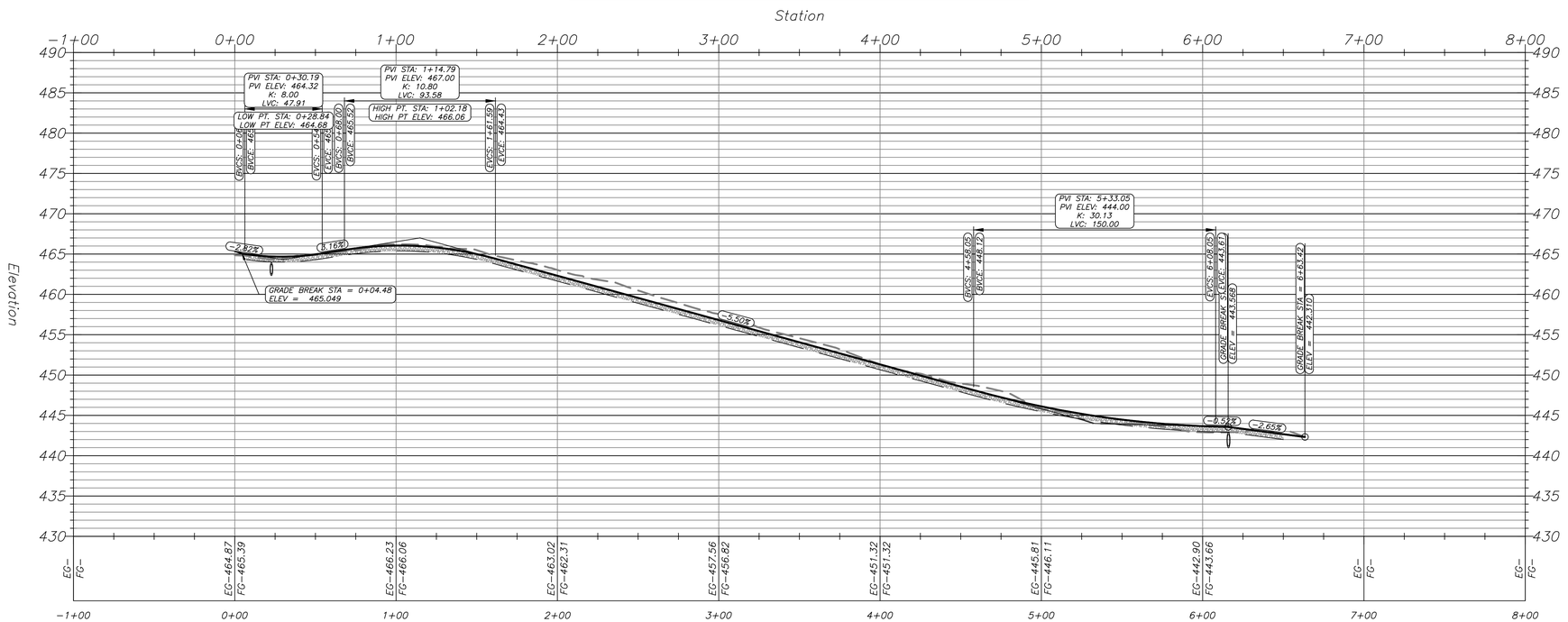


TYPICAL LOT EASEMENTS

LEGEND

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

EMERGENCY ACCESS ROAD PROFILE



GRAPHIC SCALE

40 0 40 80 120

(IN FEET)
1 inch = 40 ft.

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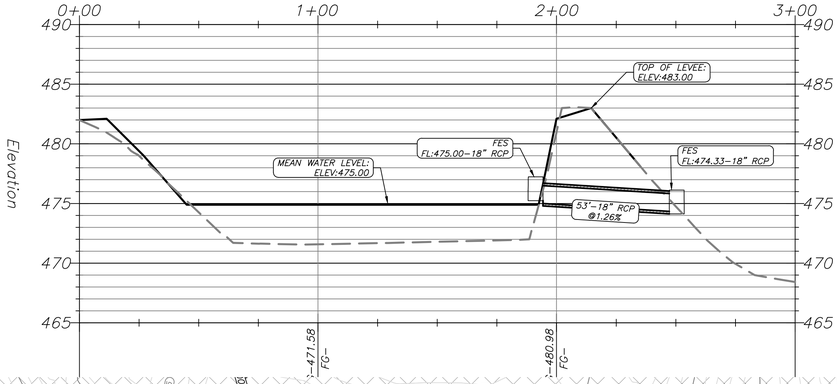
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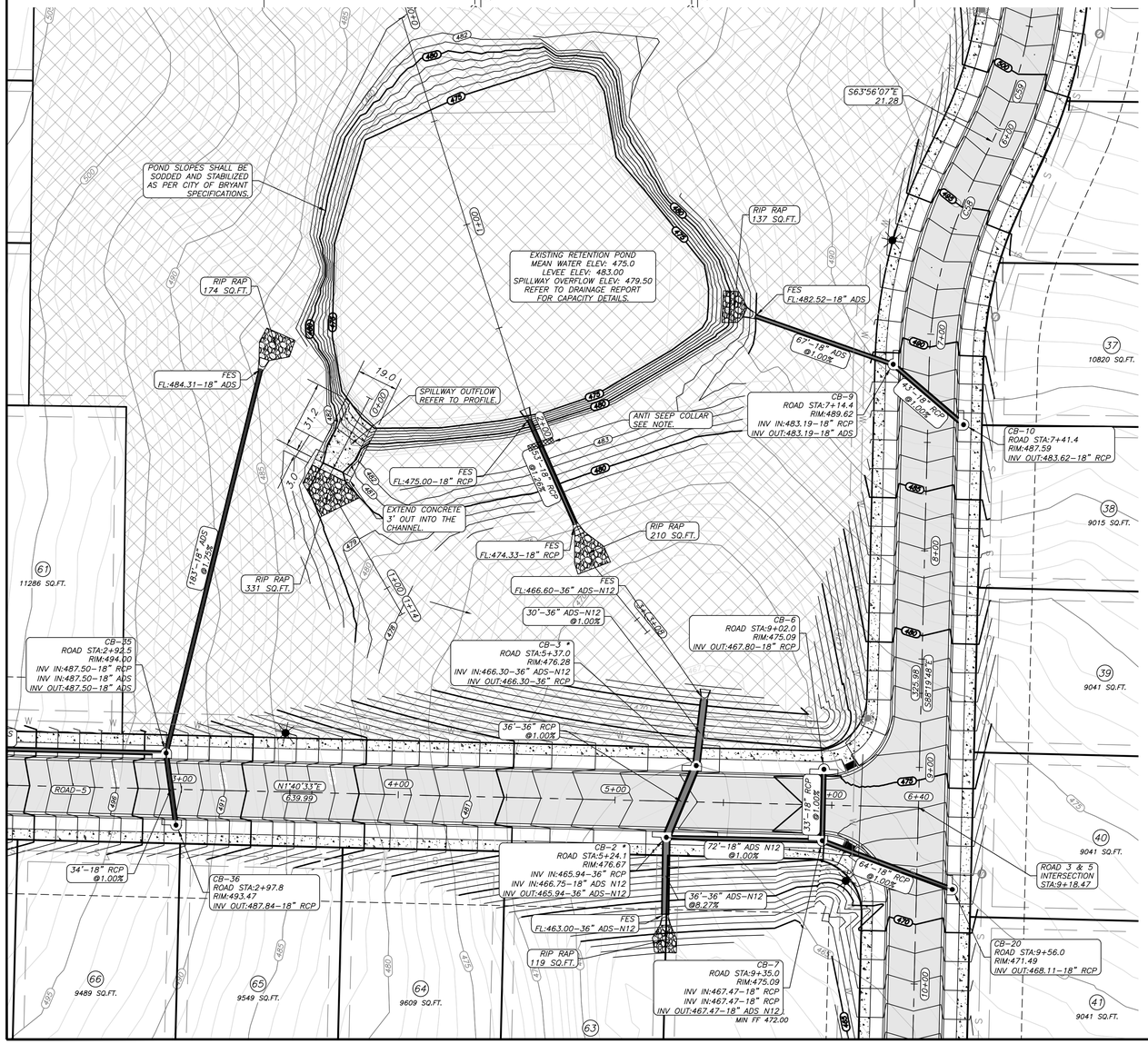
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RETENTION POND PROFILE





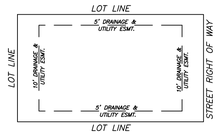
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40 0 40 80 120

(IN FEET)
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TYPICAL LOT EASEMENTS

ANTI SEEP COLLAR NOTE:
ANTI SEEP COLLAR SHALL CONSIST OF QUALIFIED CLAY MATERIAL PACKED AROUND THE PIPE TO CREATE A BARRIER TO PREVENT WATER PASSING ON THE OUTSIDE OF PIPE. CLAY TO EXTEND 4' BEYOND THE PIPE IN ALL DIRECTIONS AND 2' THICK MIN.

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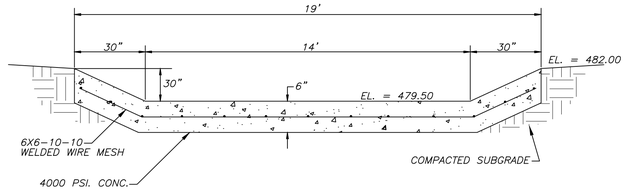
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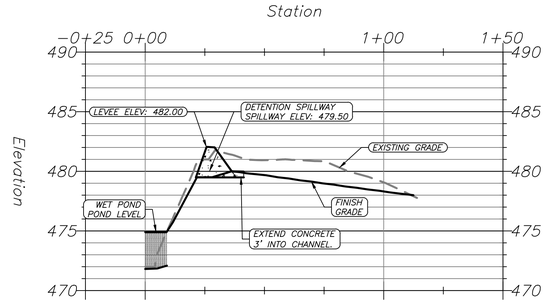
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SPILLWAY DETAIL
N.T.S.

SPILLWAY OUTFLOW PROFILE



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

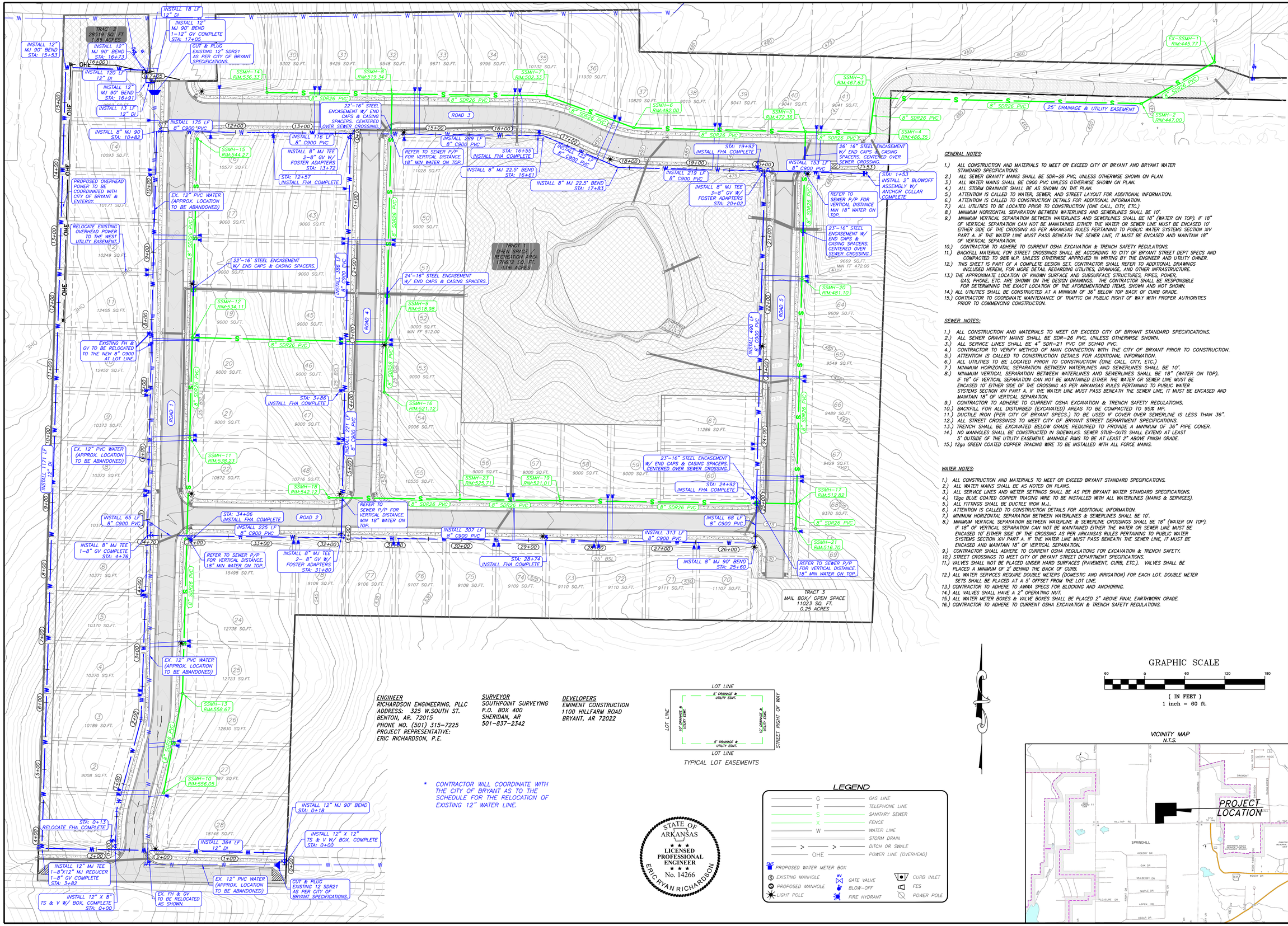
CERTIFICATE OF AUTHORIZATION
Richardson Engineering, PLLC
No. 2519
ARKANSAS

DETENTION OUTFLOW PLAN & PROFILE
ZYAIR ESTATES
SUBDIVISION
HILLTOP ROAD
BRYANT, ARKANSAS

Prepared For:
EMINENT CONSTRUCTIONS

No.	Revisions	Date
1	AS PER CITY COMMENTS	4/7/2026

PROJECT NO.: 024-034
Date: 3/3/2026 REV: 4/7/2026
Scale: 1" = 40'
Sheet: 10 of 25



ENGINEER
RICHARDSON ENGINEERING, PLLC
ADDRESS: 325 W.SOUTH ST.
BENTON, AR. 72015
PHONE NO. (501) 315-7225
PROJECT REPRESENTATIVE:
ERIC RICHARDSON, P.E.

SURVEYOR
SOUTHPOINT SURVEYING
P.O. BOX 400
SHERIDAN, AR
501-837-2342

DEVELOPERS
EMINENT CONSTRUCTION
1100 HILLFARM ROAD
BRYANT, AR 72022

TYPICAL LOT EASEMENTS

* CONTRACTOR WILL COORDINATE WITH THE CITY OF BRYANT AS TO THE SCHEDULE FOR THE RELOCATION OF EXISTING 12" WATER LINE.

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

LEGEND

G	GAS LINE
T	TELEPHONE LINE
S	SANITARY SEWER
X	FENCE
W	WATER LINE
	STORM DRAIN
> >	DITCH OR SWALE
OHE	POWER LINE (OVERHEAD)
SMS	PROPOSED WATER METER BOX
S	EXISTING MANHOLE
S	PROPOSED MANHOLE
	LIGHT POLE
GV	GATE VALVE
BO	BLOW-OFF
FH	FIRE HYDRANT
	CURB INLET
FES	FES
	POWER POLE

GENERAL NOTES:

1.) ALL CONSTRUCTION AND MATERIALS TO MEET OR EXCEED CITY OF BRYANT AND BRYANT WATER STANDARD SPECIFICATIONS.
2.) ALL SEWER GRAVITY MAINS SHALL BE SDR-26 PVC, UNLESS OTHERWISE SHOWN ON PLAN.
3.) ALL WATER MAINS SHALL BE C900 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). IF 18" OF VERTICAL SEPARATION CAN NOT BE MAINTAINED EITHER THE WATER OR SEWER LINE MUST BE ENCASED 10' EITHER SIDE OF THE CROSSING AS PER ARKANSAS RULES PERTAINING TO PUBLIC WATER SYSTEMS SECTION XIV PART A. IF THE WATER LINE MUST PASS BENEATH THE SEWER LINE, IT MUST BE ENCASED AND MAINTAIN 18" OF VERTICAL SEPARATION.
10.) CONTRACTOR TO ADHERE TO CURRENT OSHA EXCAVATION & TRENCH SAFETY REGULATIONS.
11.) BACKFILL MATERIAL FOR STREET CROSSINGS SHALL BE ACCORDING TO CITY OF BRYANT STREET DEPT SPECS AND COMPACTED TO 98% M.P. UNLESS OTHERWISE APPROVED IN WRITING BY THE ENGINEER AND UTILITY OWNER.
12.) THIS SHEET IS PART OF A COMPLETE DESIGN SET. CONTRACTOR SHALL REFER TO ADDITIONAL DRAWINGS INCLUDED HEREIN, FOR MORE DETAIL REGARDING UTILITIES, DRAINAGE, AND OTHER INFRASTRUCTURE.
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.
14.) ALL UTILITIES SHALL BE CONSTRUCTED AT A MINIMUM OF 36" BELOW TOP BACK OF CURB GRADE.
15.) CONTRACTOR TO COORDINATE MAINTENANCE OF TRAFFIC ON PUBLIC RIGHT OF WAY WITH PROPER AUTHORITIES PRIOR TO COMMENCING CONSTRUCTION.

SEWER NOTES:

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4.) CONTRACTOR TO VERIFY METHOD OF MAIN CONNECTION WITH THE CITY OF BRYANT PRIOR TO CONSTRUCTION.
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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% MP.
11.) DUCTILE IRON (PER CITY OF BRYANT SPECS.) TO BE USED IF COVER OVER SEWERLINE IS LESS THAN 36".
12.) ALL STREET CROSSINGS TO MEET CITY OF BRYANT STREET DEPARTMENT 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.
15.) 12ga GREEN COATED COPPER TRACING WIRE TO BE INSTALLED WITH ALL FORCE MAINS.

WATER NOTES:

1.) ALL CONSTRUCTION AND MATERIALS TO MEET OR EXCEED BRYANT STANDARD SPECIFICATIONS.
2.) ALL WATER MAINS SHALL BE AS NOTED ON PLANS.
3.) ALL SERVICE LINES AND METER SETTINGS SHALL BE AS PER BRYANT WATER STANDARD SPECIFICATIONS.
4.) 12ga 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 HORIZONTAL SEPARATION BETWEEN WATERLINES & SEWERLINES SHALL BE 10'.
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9.) CONTRACTOR SHALL ADHERE TO CURRENT OSHA REGULATIONS FOR EXCAVATION & TRENCH SAFETY.
10.) STREET CROSSINGS TO MEET CITY OF BRYANT STREET DEPARTMENT 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.) ALL WATER SERVICES REQUIRE DOUBLE METERS (DOMESTIC AND IRRIGATION) FOR EACH LOT. DOUBLE METER SETS SHALL BE PLACED AT A 5' OFFSET FROM THE LOT LINE.
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.
16.) CONTRACTOR TO ADHERE TO CURRENT OSHA EXCAVATION & TRENCH SAFETY REGULATIONS.

GRAPHIC SCALE
60 0 60 120 180
(IN FEET)
1 inch = 60 ft.

VICINITY MAP
N.T.S.

RICHARDSON ENGINEERING
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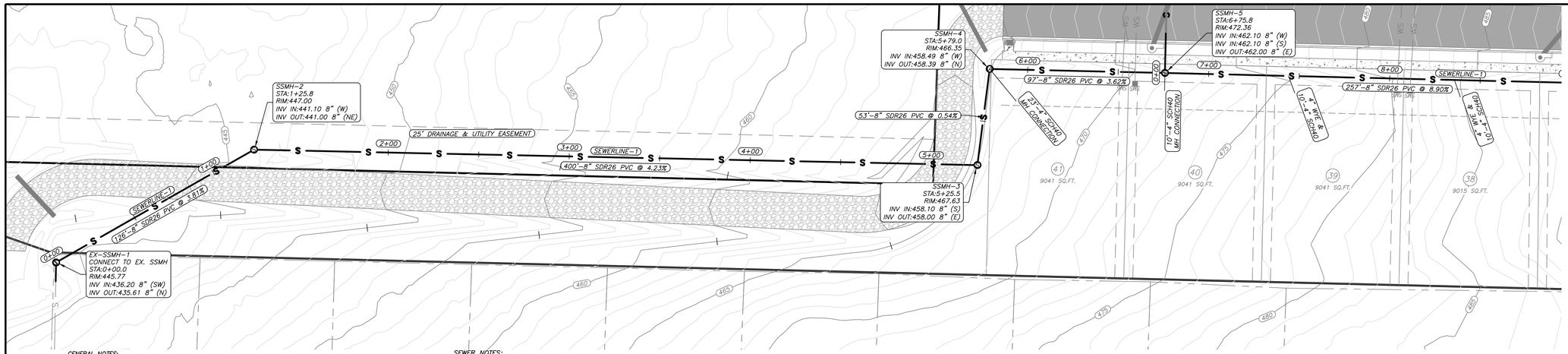
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ARKANSAS

OVERALL UTILITY PLAN
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HILLTOP ROAD
BRYANT, ARKANSAS

Prepared For:
EMINENT CONSTRUCTIONS

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Sheet: 11 of 25



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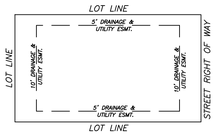
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501-837-2342

DEVELOPERS
EMINENT CONSTRUCTION
1100 HILLFARM ROAD
BRYANT, AR 72022



TYPICAL LOT EASEMENTS

LEGEND

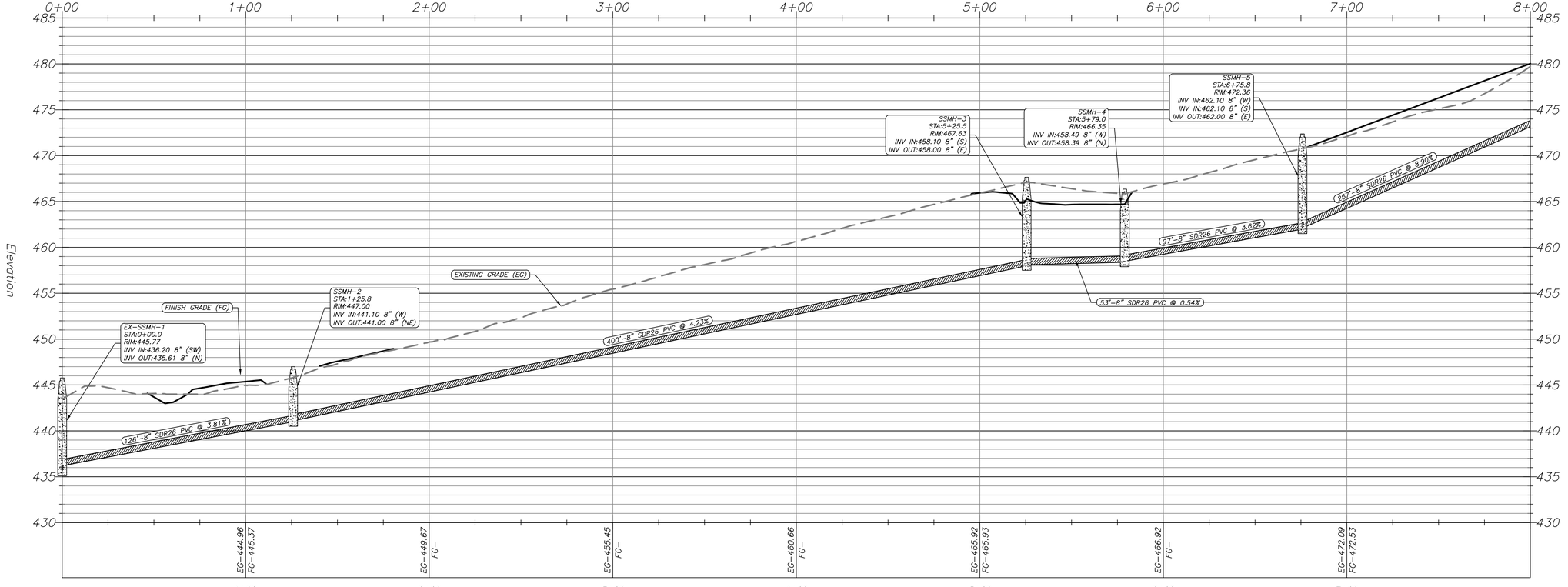
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EXISTING MANHOLE	GATE VALVE
PROPOSED MANHOLE	BLOW-OFF
LIGHT POLE	FIRE HYDRANT
	CURB INLET
	FES
	POWER POLE

GRAPHIC SCALE

30 0 30 60 90

(IN FEET)
1 inch = 30 ft.

SEWERLINE-1 PROFILE



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

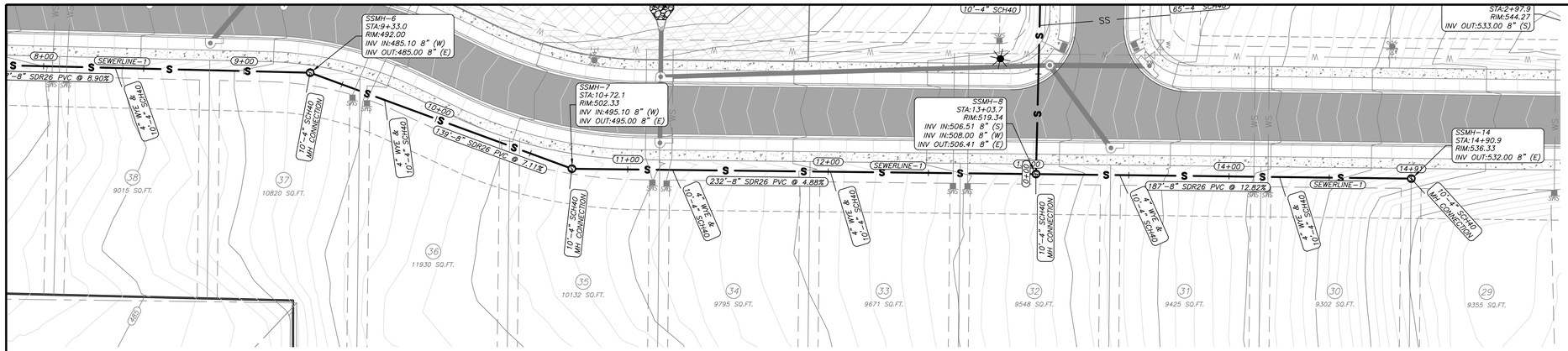
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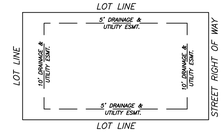
SEWER 1 P/P 0+00-8+00
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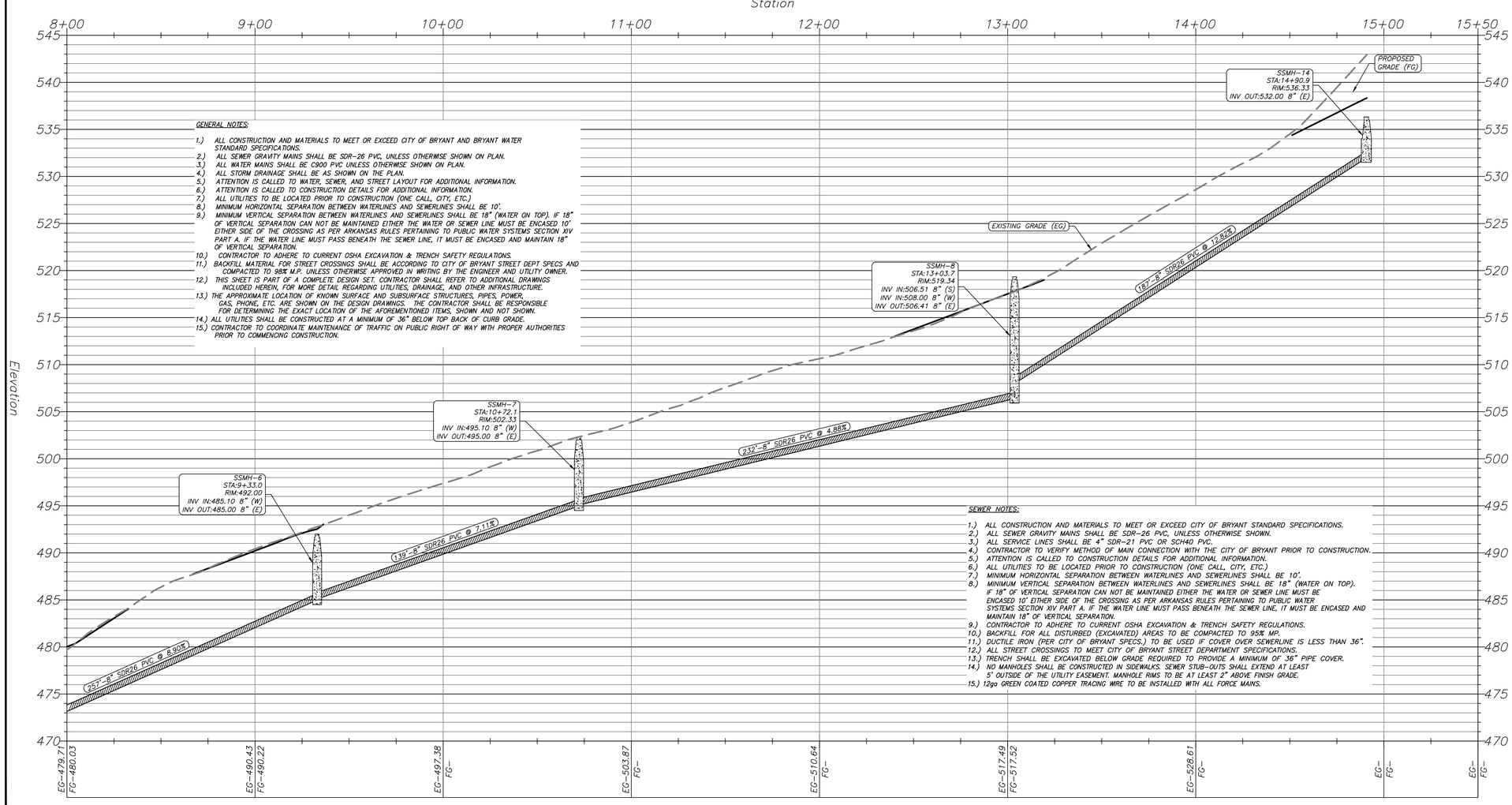
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Sheet: 12 of 25





TYPICAL LOT EASEMENTS

SEWERLINE-1 PROFILE



GENERAL NOTES:

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LEGEND

G	GAS LINE
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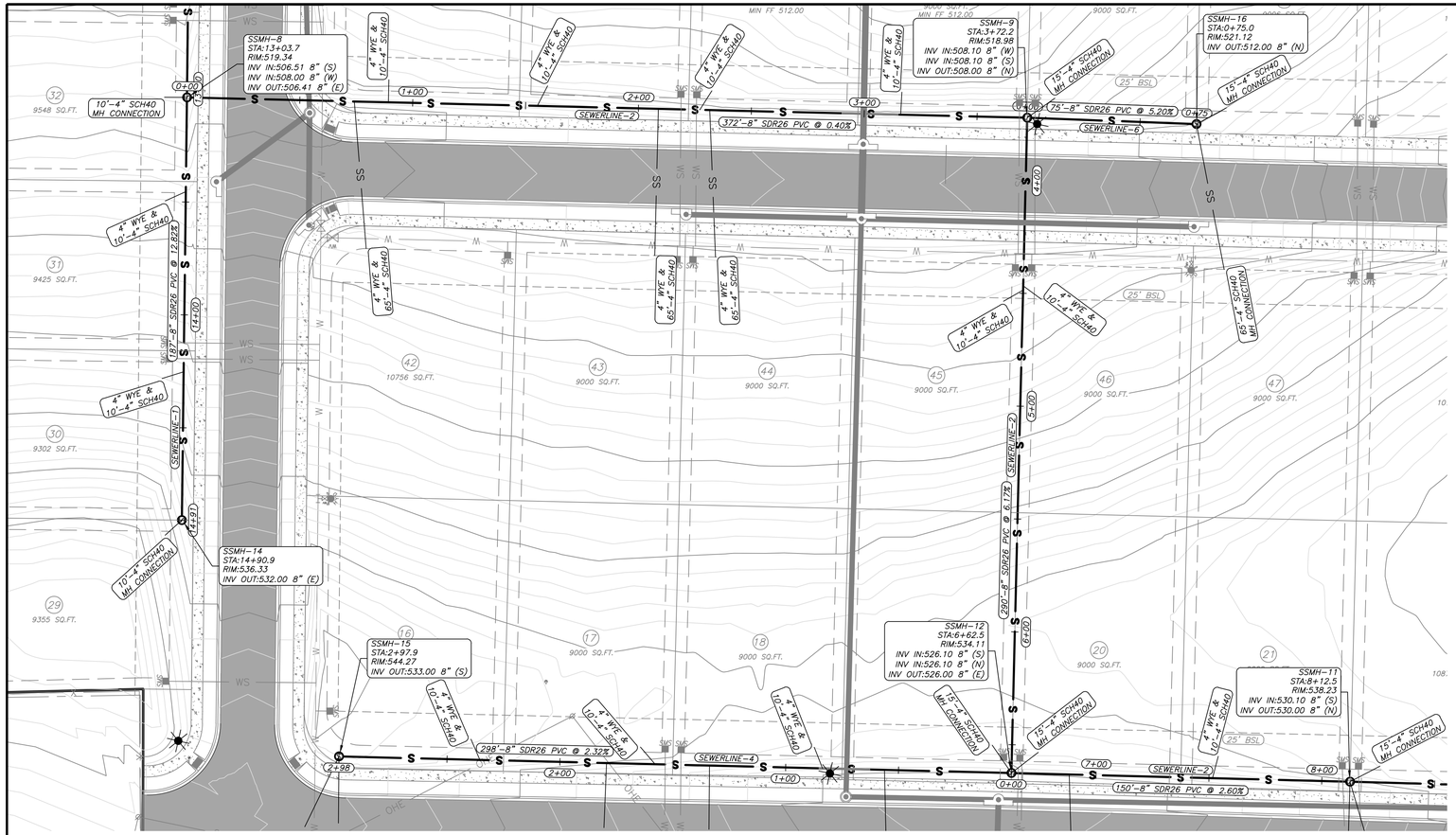
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SEWER 1 P/P 8+00-END
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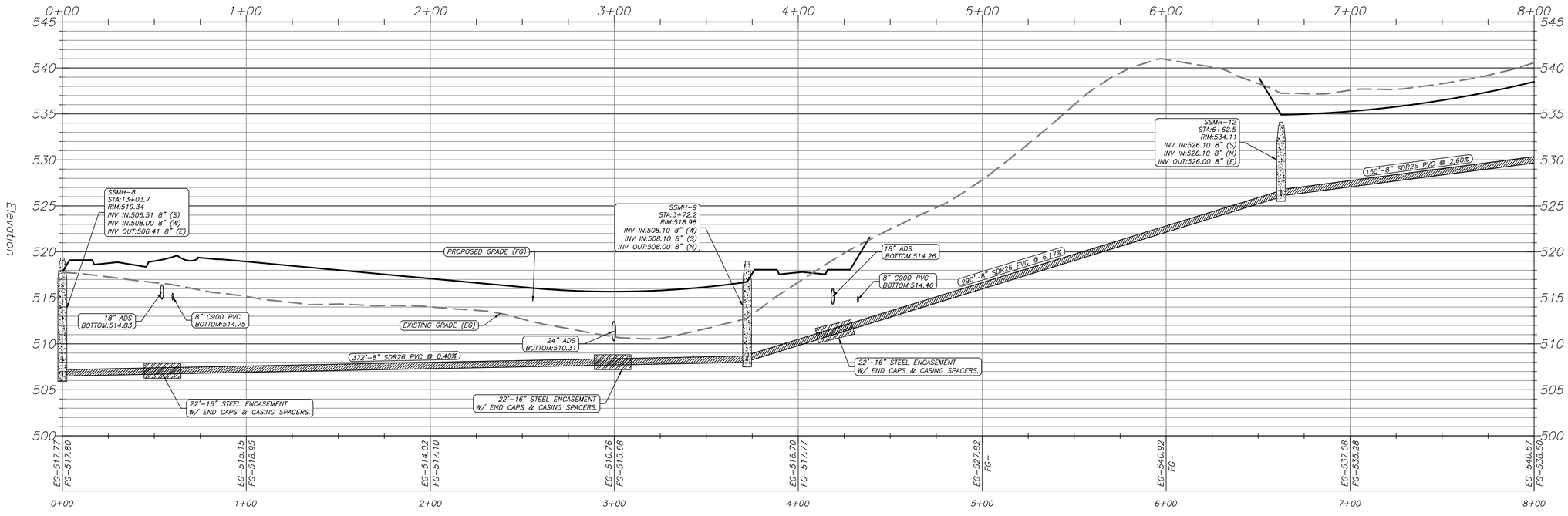
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PROJECT NO.: 024-034
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SEWERLINE-2 PROFILE



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GRAPHIC SCALE

30 0 30 60 90

(IN FEET)
1 inch = 30 ft.

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SOUTHPOINT SURVEYING
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SHERIDAN, AR
501-837-2342

DEVELOPERS
EMINENT CONSTRUCTION
1100 HILLFARM ROAD
BRYANT, AR 72022

LOT LINE
5' DRAINAGE & UTILITY ESMT.
10' DRAINAGE & UTILITY ESMT.
STREET RIGHT OF WAY
LOT LINE

TYPICAL LOT EASEMENTS

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Planning • Engineering • Development Consulting
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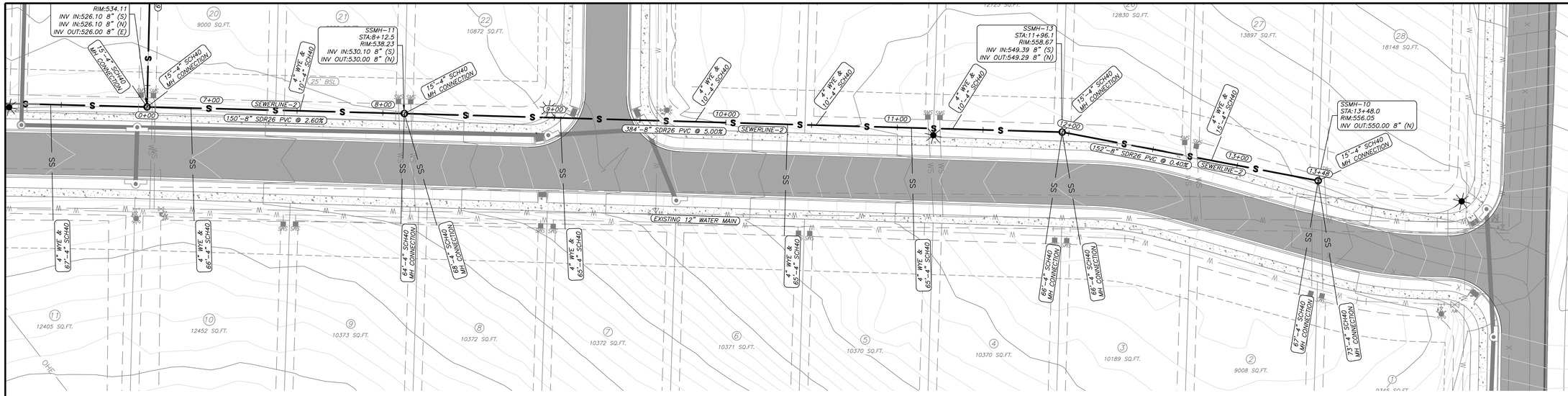
CERTIFICATE OF AUTHORIZATION — Richardson Engineering, PLLC No. 2519 — ARKANSAS

SEWER 2 P/P 0+00-8+00
ZYAIR ESTATES
SUBDIVISION
HILLTOP ROAD
BRYANT, ARKANSAS

Prepared For: EMINENT CONSTRUCTIONS

No.	Revisions	Date
1	AS PER CITY COMMENTS	4/7/2026

PROJECT NO.: 024-034
Date: 3/3/2026 REV: 4/7/2026
Scale: 1" = 30'
Sheet: 14 of 25



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GRAPHIC SCALE

30 0 30 60 90

(IN FEET)
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LEGEND

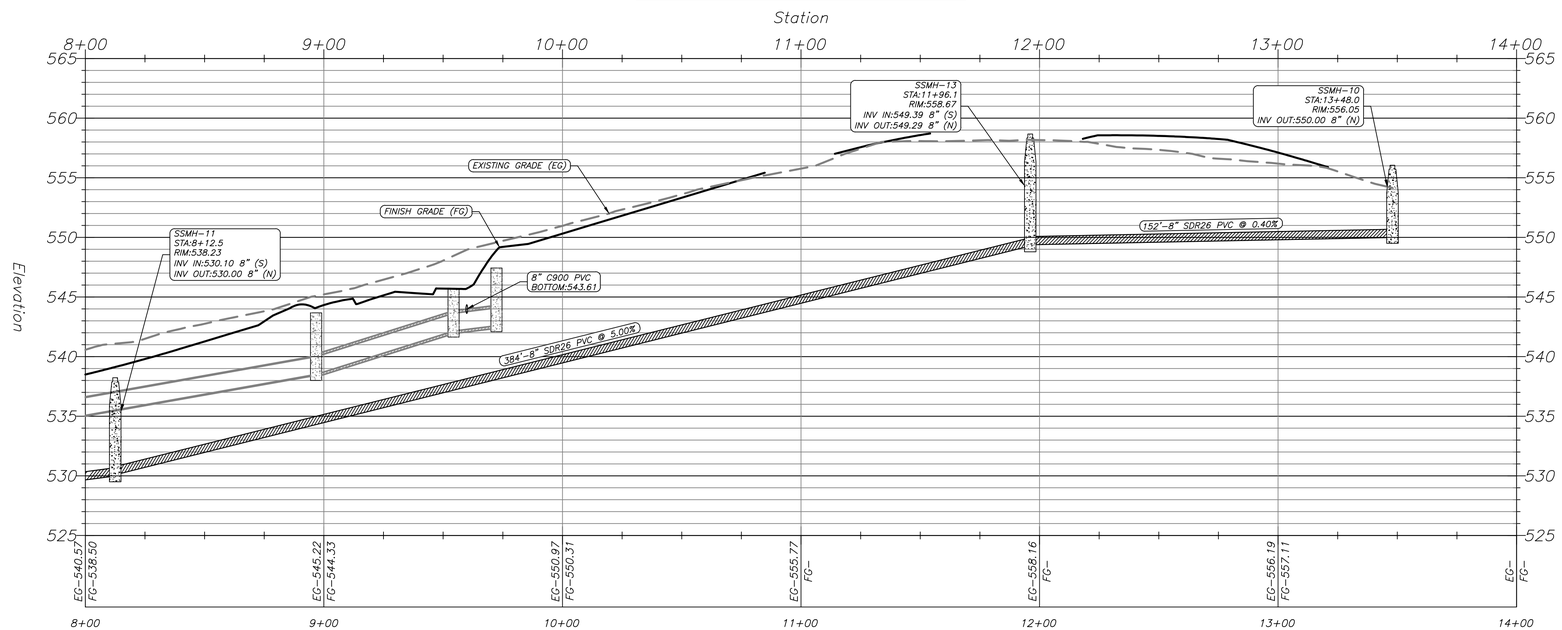
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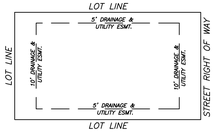
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DEVELOPERS
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BRYANT, AR 72022

SEWERLINE-2 PROFILE





TYPICAL LOT EASEMENTS

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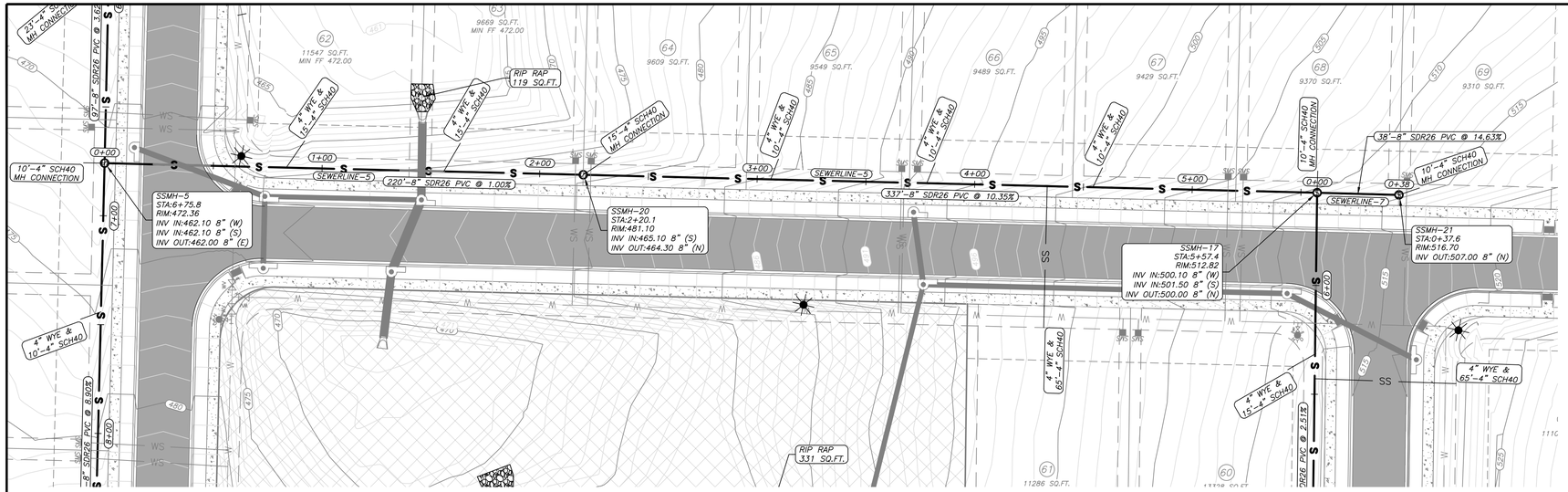
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ARKANSAS

SEWER 2 P/P 8+00-END
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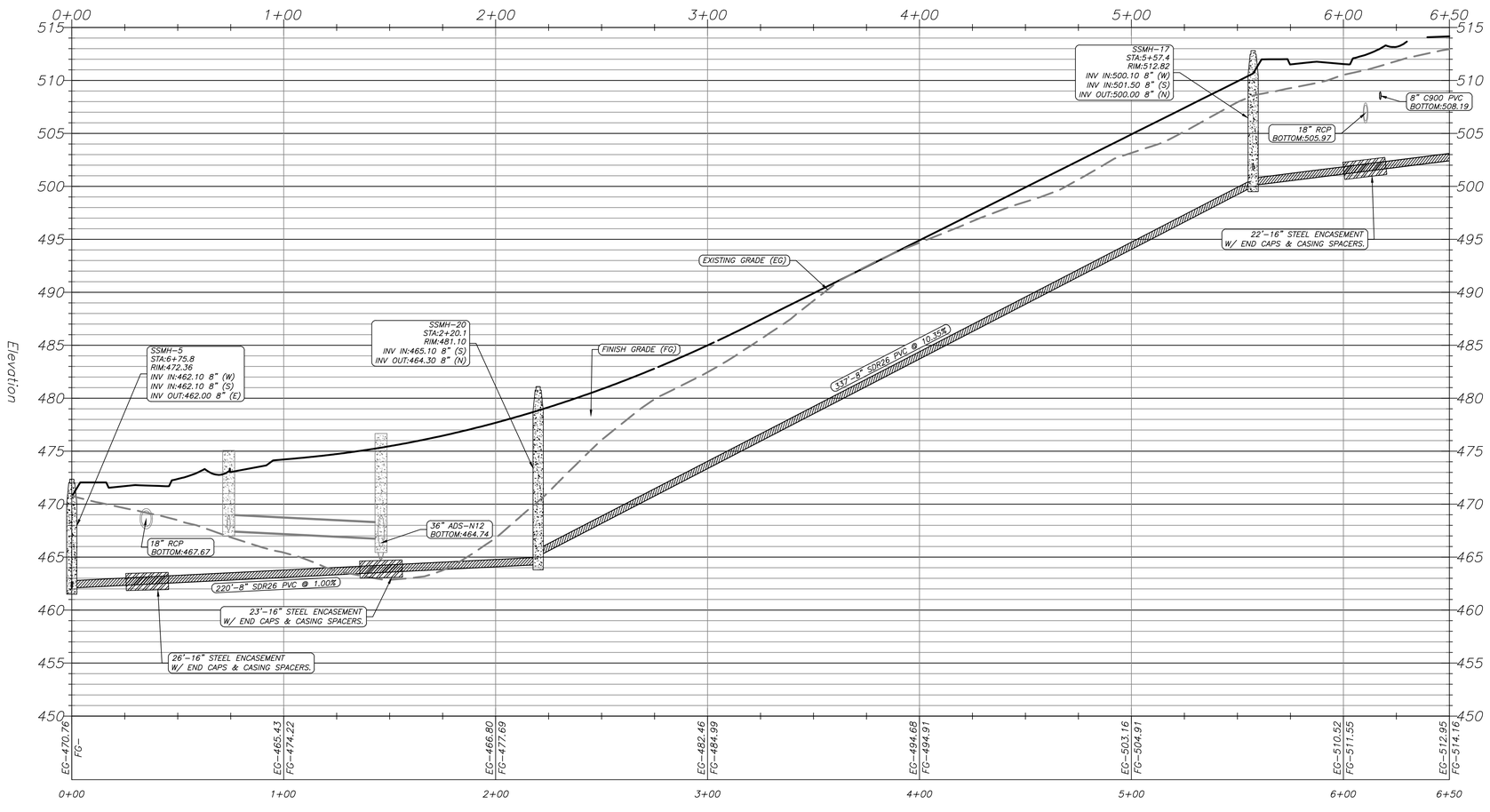
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SEWERLINE-5 PROFILE



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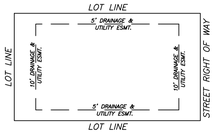
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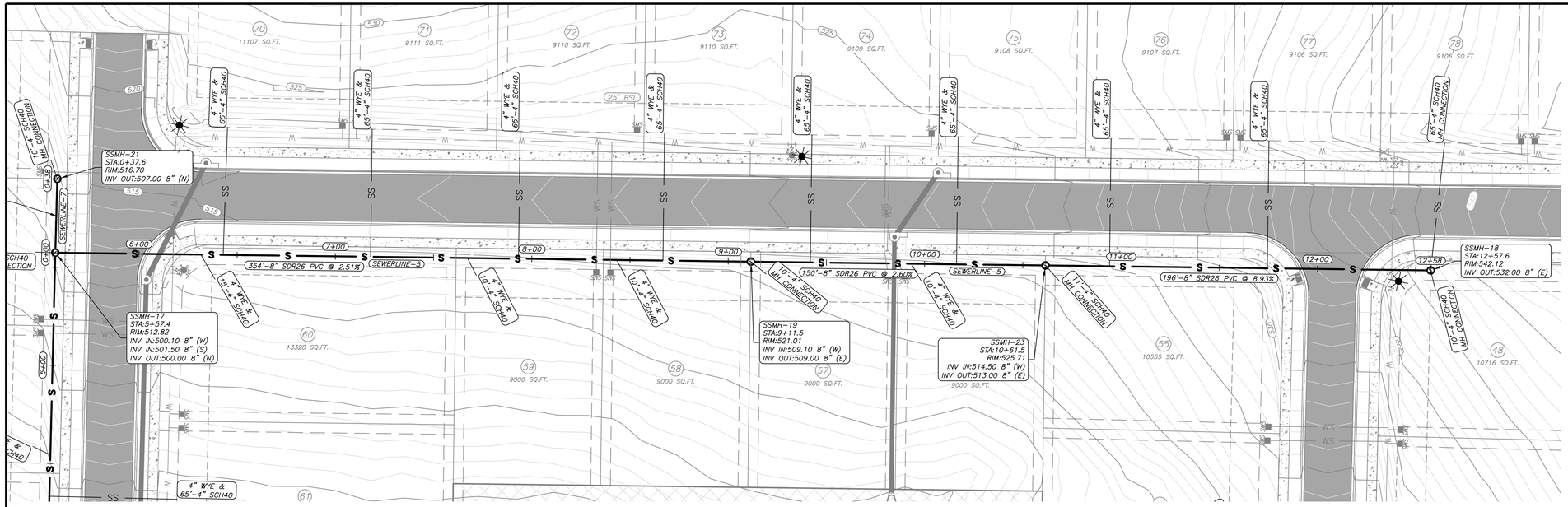
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SEWER 5 P/P 0+00-6+50
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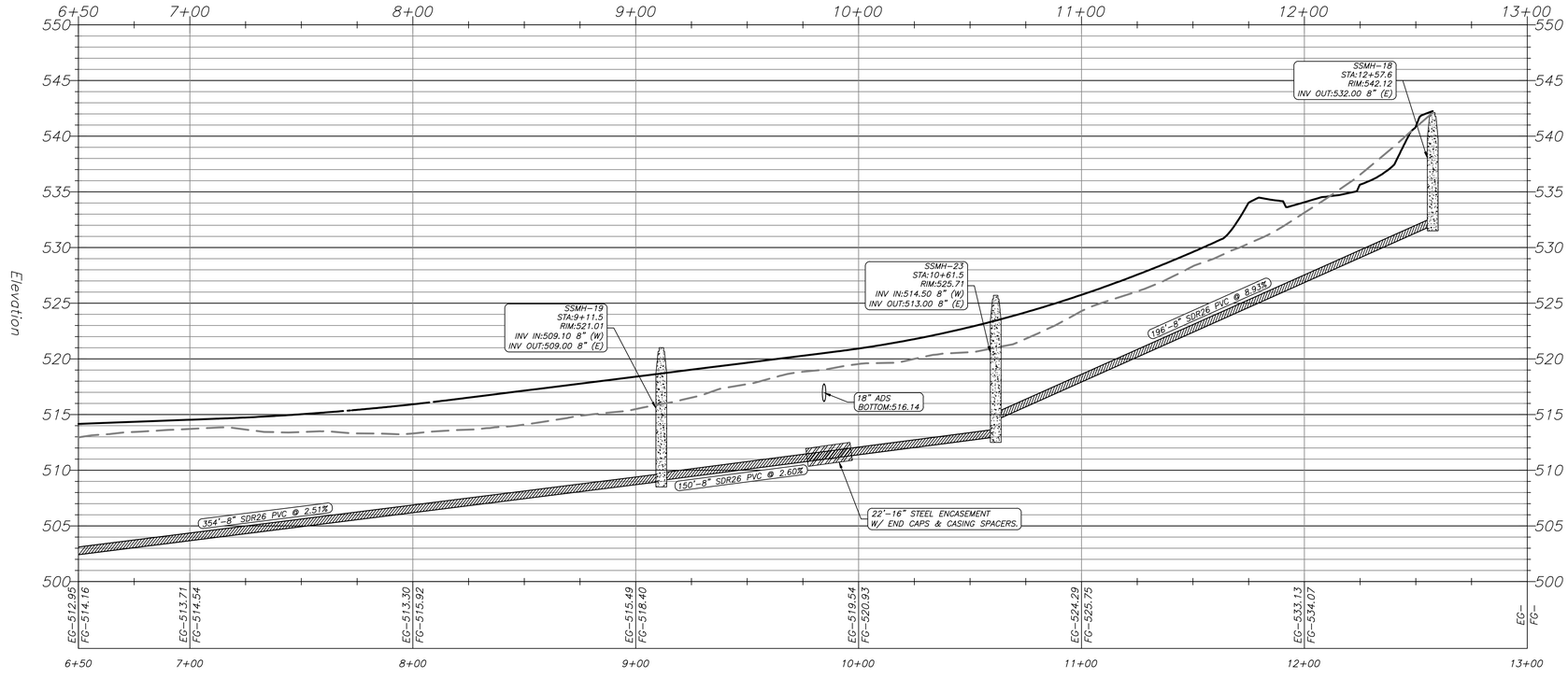
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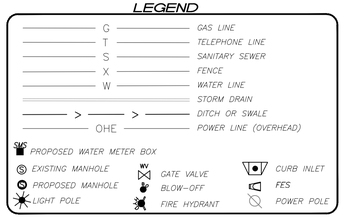
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Sheet: 16 of 25



SEWERLINE-5 PROFILE





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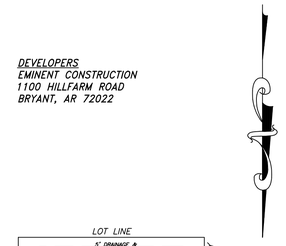
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8.) MINIMUM VERTICAL SEPARATION BETWEEN WATERLINES AND SEWERLINES SHALL BE 18" (WATER ON TOP). IF 18" OF VERTICAL SEPARATION CAN NOT BE MAINTAINED EITHER THE WATER OR SEWER LINE MUST BE ENCASED 10' EITHER SIDE OF THE CROSSING AS PER ARKANSAS RULES PERTAINING TO PUBLIC WATER SYSTEMS SECTION XIV PART A. IF THE WATER LINE MUST PASS BENEATH THE SEWER LINE, IT MUST BE ENCASED AND MAINTAIN 18" OF VERTICAL SEPARATION.
9.) CONTRACTOR TO ADHERE TO CURRENT OSHA EXCAVATION & TRENCH SAFETY REGULATIONS.
10.) BACKFILL FOR ALL DISTURBED (EXCAVATED) AREAS TO BE COMPACTED TO 95% MP.
11.) DUCTILE IRON (PER CITY OF BRYANT SPECS.) TO BE USED IF COVER OVER SEWERLINE IS LESS THAN 36".
12.) ALL STREET CROSSINGS TO MEET CITY OF BRYANT STREET DEPARTMENT 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.
15.) 12ga GREEN COATED COPPER TRACING WIRE TO BE INSTALLED WITH ALL FORCE MAINS.

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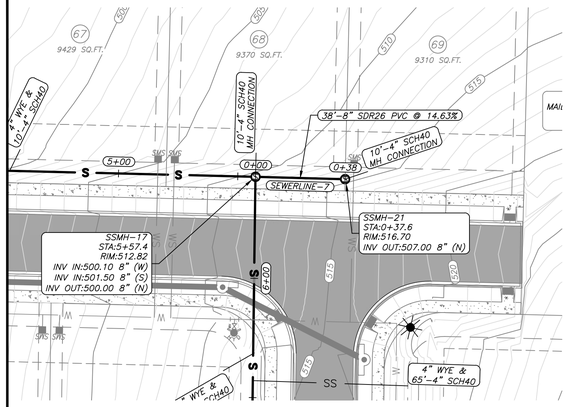
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Richardson Engineering, PLLC
No. 2519
ARKANSAS

SEWER 5 P/P 0+00-6+50
ZYAIR ESTATES SUBDIVISION
HILLTOP ROAD
BRYANT, ARKANSAS

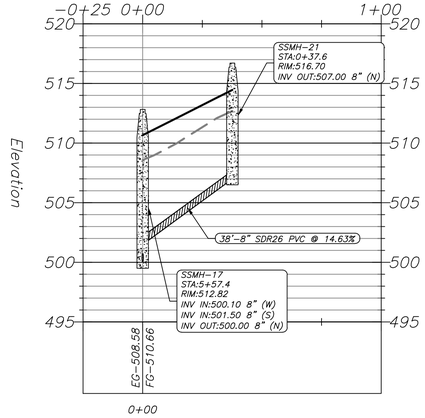
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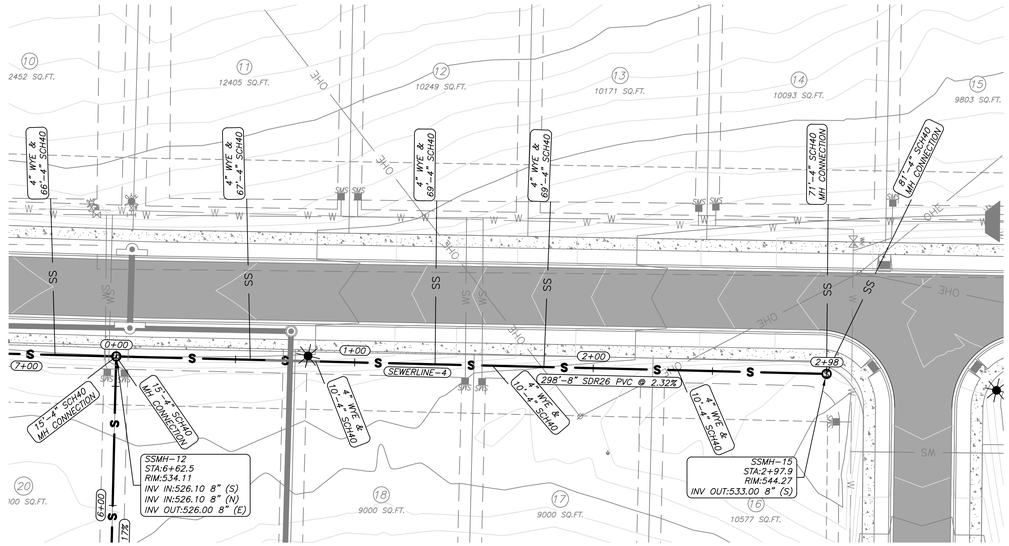
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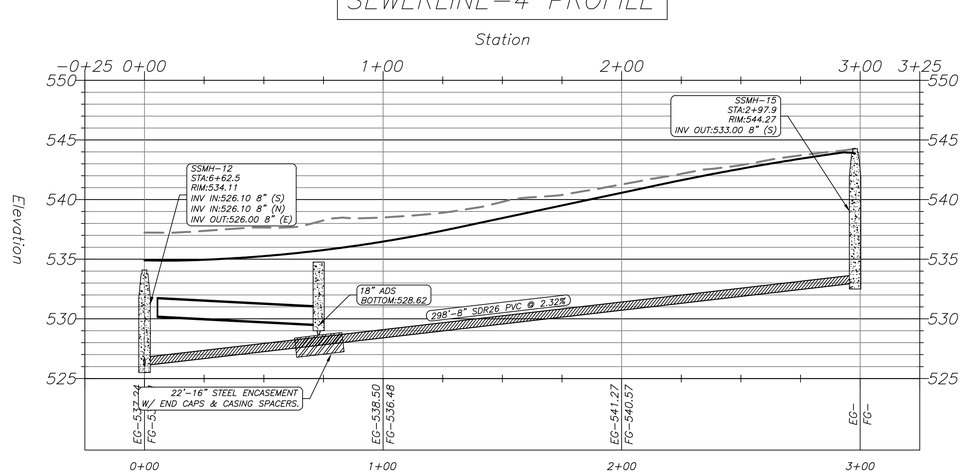


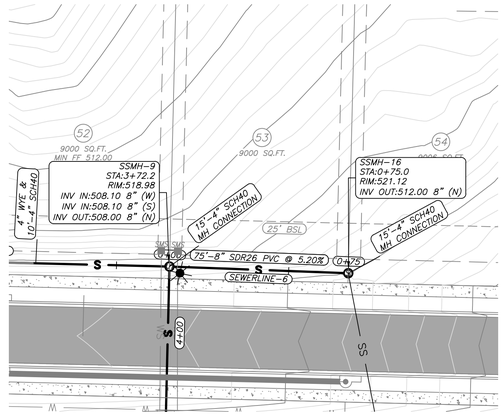
SEWERLINE-7 PROFILE



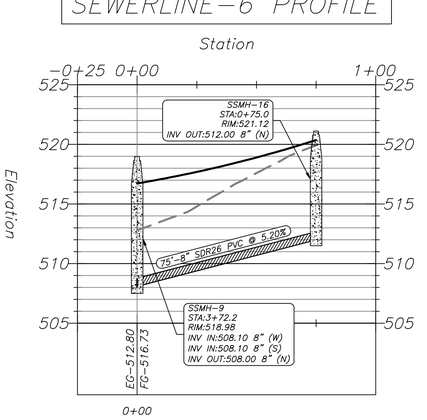


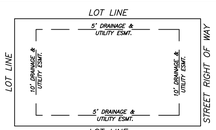
SEWERLINE-4 PROFILE





SEWERLINE-6 PROFILE





TYPICAL LOT EASEMENTS

LEGEND

- G — GAS LINE
- T — TELEPHONE LINE
- S — SANITARY SEWER
- X — FENCE
- W — WATER LINE
- STORM DRAIN
- > > — DITCH OR SWALE
- OHE — POWER LINE (OVERHEAD)
- PROPOSED WATER METER BOX
- EXISTING MANHOLE
- PROPOSED MANHOLE
- LIGHT POLE
- GATE VALVE
- BLOW-OFF
- FIRE HYDRANT
- CURB INLET
- FES
- POWER POLE

GENERAL NOTES:

1.) ALL CONSTRUCTION AND MATERIALS TO MEET OR EXCEED CITY OF BRYANT AND BRYANT WATER STANDARD SPECIFICATIONS.
2.) ALL SEWER GRAVITY MAINS SHALL BE SDR-26 PVC, UNLESS OTHERWISE SHOWN ON PLAN.
3.) ALL WATER MAINS SHALL BE C900 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). IF 18" OF VERTICAL SEPARATION CAN NOT BE MAINTAINED EITHER THE WATER OR SEWER LINE MUST BE ENCASED 10' EITHER SIDE OF THE CROSSING AS PER ARKANSAS RULES PERTAINING TO PUBLIC WATER SYSTEMS SECTION XIV PART A. IF THE WATER LINE MUST PASS BENEATH THE SEWER LINE, IT MUST BE ENCASED AND MAINTAIN 18" OF VERTICAL SEPARATION.
10.) CONTRACTOR TO ADHERE TO CURRENT OSHA EXCAVATION & TRENCH SAFETY REGULATIONS.
11.) BACKFILL MATERIAL FOR STREET CROSSINGS SHALL BE ACCORDING TO CITY OF BRYANT STREET DEPT SPECS AND COMPACTED TO 98% M.P. UNLESS OTHERWISE APPROVED IN WRITING BY THE ENGINEER AND UTILITY OWNER.
12.) THIS SHEET IS PART OF A COMPLETE DESIGN SET. CONTRACTOR SHALL REFER TO ADDITIONAL DRAWINGS INCLUDED HEREIN, FOR MORE DETAIL REGARDING UTILITIES, DRAINAGE, AND OTHER INFRASTRUCTURE.
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.
14.) ALL UTILITIES SHALL BE CONSTRUCTED AT A MINIMUM OF 36" BELOW TOP BACK OF CURB GRADE.
15.) CONTRACTOR TO COORDINATE MAINTENANCE OF TRAFFIC ON PUBLIC RIGHT OF WAY WITH PROPER AUTHORITIES PRIOR TO COMMENCING CONSTRUCTION.

SEWER NOTES:

1.) ALL CONSTRUCTION AND MATERIALS TO MEET OR EXCEED CITY OF BRYANT STANDARD 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 MAIN CONNECTION WITH THE CITY OF BRYANT 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" (WATER ON TOP). IF 18" OF VERTICAL SEPARATION CAN NOT BE MAINTAINED EITHER THE WATER OR SEWER LINE MUST BE ENCASED 10' EITHER SIDE OF THE CROSSING AS PER ARKANSAS RULES PERTAINING TO PUBLIC WATER SYSTEMS SECTION XIV PART A. IF THE WATER LINE MUST PASS BENEATH THE SEWER LINE, IT MUST BE ENCASED AND MAINTAIN 18" OF VERTICAL SEPARATION.
9.) CONTRACTOR TO ADHERE TO CURRENT OSHA EXCAVATION & TRENCH SAFETY REGULATIONS.
10.) BACKFILL FOR ALL DISTURBED (EXCAVATED) AREAS TO BE COMPACTED TO 95% MP.
11.) DUCTILE IRON (PER CITY OF BRYANT SPECS.) TO BE USED IF COVER OVER SEWERLINE IS LESS THAN 36".
12.) ALL STREET CROSSINGS TO MEET CITY OF BRYANT STREET DEPARTMENT 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.
15.) 12ga GREEN COATED COPPER TRACING WIRE TO BE INSTALLED WITH ALL FORCE MAINS.

ENGINEER
RICHARDSON ENGINEERING, PLLC
ADDRESS: 325 W.SOUTH ST.
BENTON, AR. 72015
PHONE NO. (501) 315-7225
PROJECT REPRESENTATIVE:
ERIC RICHARDSON, P.E.

SURVEYOR
SOUTHPOINT SURVEYING
P.O. BOX 400
SHERIDAN, AR
501-837-2342

DEVELOPERS
EMINENT CONSTRUCTION
1100 HILLFARM ROAD
BRYANT, AR 72022

GRAPHIC SCALE

30 0 30 60 90

(IN FEET)
1 inch = 30 ft.

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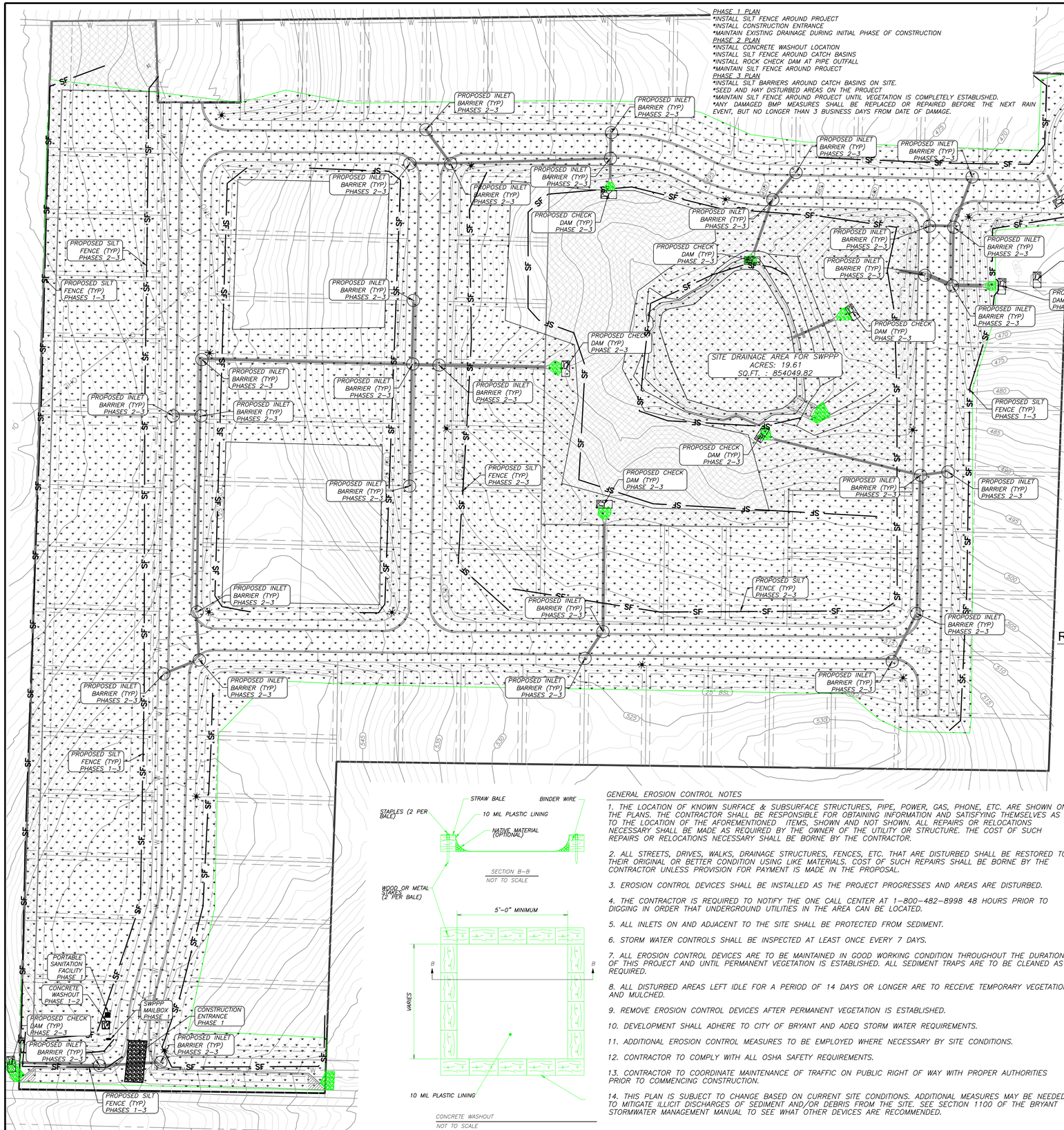
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SEWER 4,6 & 7 P/P
ZYAIR ESTATES
SUBDIVISION
HILLTOP ROAD
BRYANT, ARKANSAS

Prepared For: EMINENT CONSTRUCTIONS

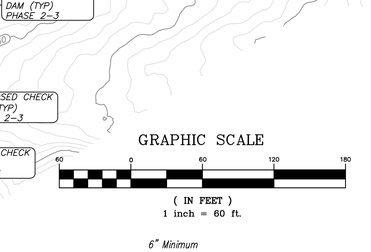
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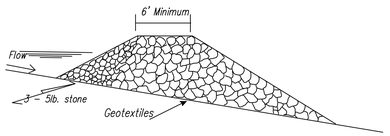


PHASE 1 PLAN
*INSTALL SILT FENCE AROUND PROJECT
*INSTALL CONSTRUCTION ENTRANCE
*MAINTAIN EXISTING DRAINAGE DURING INITIAL PHASE OF CONSTRUCTION
PHASE 2 PLAN
*INSTALL CONCRETE WASHOUT LOCATION
*INSTALL SILT FENCE AROUND CATCH BASINS
*INSTALL ROCK CHECK DAM AT PIPE OUTFALL
*MAINTAIN SILT FENCE AROUND PROJECT
PHASE 3 PLAN
*INSTALL SILT BARRIERS AROUND CATCH BASINS ON SITE.
*SEED AND HAY DISTURBED AREAS ON THE PROJECT
*MAINTAIN SILT FENCE AROUND PROJECT UNTIL VEGETATION IS COMPLETELY ESTABLISHED.
*ANY DAMAGED BMP MEASURES SHALL BE REPLACED OR REPAIRED BEFORE THE NEXT RAIN EVENT, BUT NO LONGER THAN 3 BUSINESS DAYS FROM DATE OF DAMAGE.

GRAPHIC SCALE
60 0 60 120 180
(IN FEET)
1 inch = 60 ft.



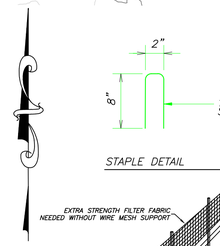
NOTE: Sediment Trap is to be cleaned out when volume becomes half full.



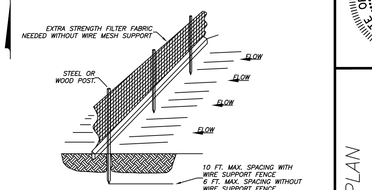
NOTES:
1. FOR USE IN SMALL CHANNELS WITH DRAINAGE AREAS OF 50 ACRES OR LESS.
2. MUST BE USED IN CONJUNCTION WITH OTHER APPROPRIATE SEDIMENT CONTROL MEASURES.
3. USE BELOW CULVERT INSTALLATIONS, DAM CONSTRUCTION, OR ANY PROJECT THAT MAY INVOLVE GRADING ACTIVITY DIRECTLY IN A STREAM.
4. NOT INTENDED TO 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. TOP 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

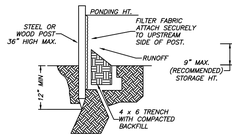
ROCK DAM

NOT TO SCALE

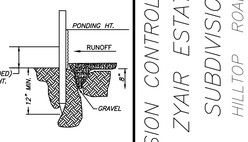


STAPLE DETAIL





STANDARD DETAIL
TRENCH WITH NATIVE BACKFILL

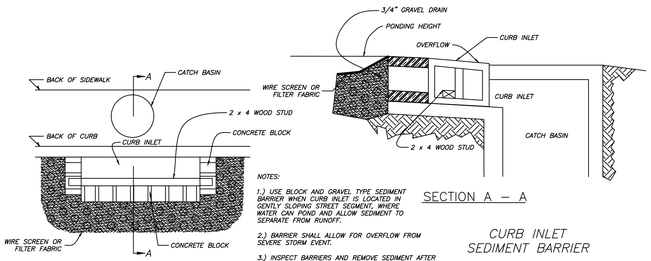


ALTERNATE DETAIL
TRENCH WITH GRAVEL

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

* **ALL SILT FENCE SHALL BE WIRE MESH REINFORCED. AS PER CITY OF BRYANT SPECS.**



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

SECTION B-B
NOT TO SCALE

CONCRETE WASHOUT
NOT TO SCALE

GENERAL EROSION CONTROL NOTES

1. THE LOCATION OF KNOWN SURFACE & SUBSURFACE STRUCTURES, PIPE, POWER, GAS, PHONE, ETC. ARE SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING INFORMATION AND SATISFYING THEMSELVES AS TO THE LOCATION OF THE AFOREMENTIONED ITEMS, SHOWN AND NOT SHOWN. ALL REPAIRS OR RELOCATIONS NECESSARY SHALL BE MADE AS REQUIRED BY THE OWNER OF THE UTILITY OR STRUCTURE. THE COST OF SUCH REPAIRS OR RELOCATIONS NECESSARY SHALL BE BORNE BY THE CONTRACTOR.
2. ALL STREETS, DRIVES, WALKS, DRAINAGE STRUCTURES, FENCES, ETC. THAT ARE DISTURBED SHALL BE RESTORED TO THEIR ORIGINAL OR BETTER CONDITION USING LIKE MATERIALS. COST OF SUCH REPAIRS SHALL BE BORNE BY THE CONTRACTOR UNLESS PROVISION FOR PAYMENT IS MADE IN THE PROPOSAL.
3. EROSION CONTROL DEVICES SHALL BE INSTALLED AS THE PROJECT PROGRESSES AND AREAS ARE DISTURBED.
4. THE CONTRACTOR IS REQUIRED TO NOTIFY THE ONE CALL CENTER AT 1-800-482-8998 48 HOURS PRIOR TO DIGGING IN ORDER THAT UNDERGROUND UTILITIES IN THE AREA CAN BE LOCATED.
5. ALL INLETS ON AND ADJACENT TO THE SITE SHALL BE PROTECTED FROM SEDIMENT.
6. STORM WATER CONTROLS SHALL BE INSPECTED AT LEAST ONCE EVERY 7 DAYS.
7. ALL EROSION CONTROL DEVICES ARE TO BE MAINTAINED IN GOOD WORKING CONDITION THROUGHOUT THE DURATION OF THIS PROJECT AND UNTIL PERMANENT VEGETATION IS ESTABLISHED. ALL SEDIMENT TRAPS ARE TO BE CLEANED AS REQUIRED.
8. ALL DISTURBED AREAS LEFT IDLE FOR A PERIOD OF 14 DAYS OR LONGER ARE TO RECEIVE TEMPORARY VEGETATION AND MULCHED.
9. REMOVE EROSION CONTROL DEVICES AFTER PERMANENT VEGETATION IS ESTABLISHED.
10. DEVELOPMENT SHALL ADHERE TO CITY OF BRYANT AND ADEQ STORM WATER REQUIREMENTS.
11. ADDITIONAL EROSION CONTROL MEASURES TO BE EMPLOYED WHERE NECESSARY BY SITE CONDITIONS.
12. CONTRACTOR TO COMPLY WITH ALL OSHA SAFETY REQUIREMENTS.
13. CONTRACTOR TO COORDINATE MAINTENANCE OF TRAFFIC ON PUBLIC RIGHT OF WAY WITH PROPER AUTHORITIES PRIOR TO COMMENCING CONSTRUCTION.
14. THIS PLAN IS SUBJECT TO CHANGE BASED ON CURRENT SITE CONDITIONS. ADDITIONAL MEASURES MAY BE NEEDED TO MITIGATE ILLICIT DISCHARGES OF SEDIMENT AND/OR DEBRIS FROM THE SITE. SEE SECTION 1100 OF THE BRYANT STORMWATER MANAGEMENT MANUAL TO SEE WHAT OTHER DEVICES ARE RECOMMENDED.

SWPPP NOTES:

1.) DEVELOPMENT SHALL ADHERE TO CITY OF BRYANT 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 AND 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 14 DAYS WITH NO CONSTRUCTION ACTIVITY SHALL BE SEEDED OR REEMITTED.
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 AND MAINTAINING SEDIMENT AND RUN-OFF CONTROLS.

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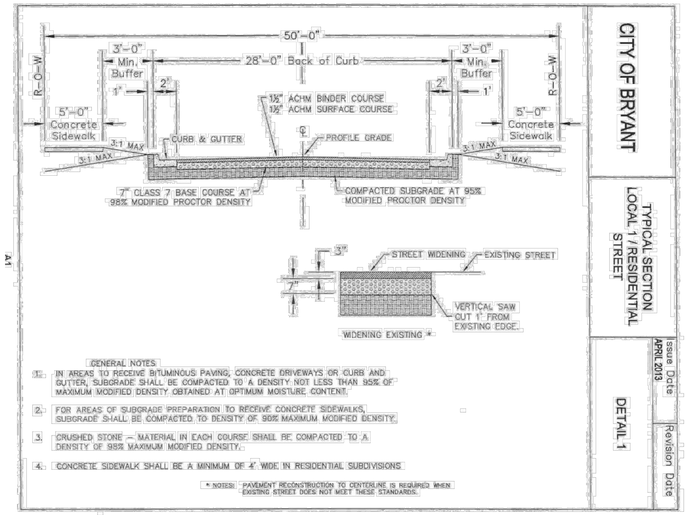
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EROSION CONTROL PLAN
2YAIR ESTATES SUBDIVISION
HILLTOP ROAD
BRYANT, ARKANSAS

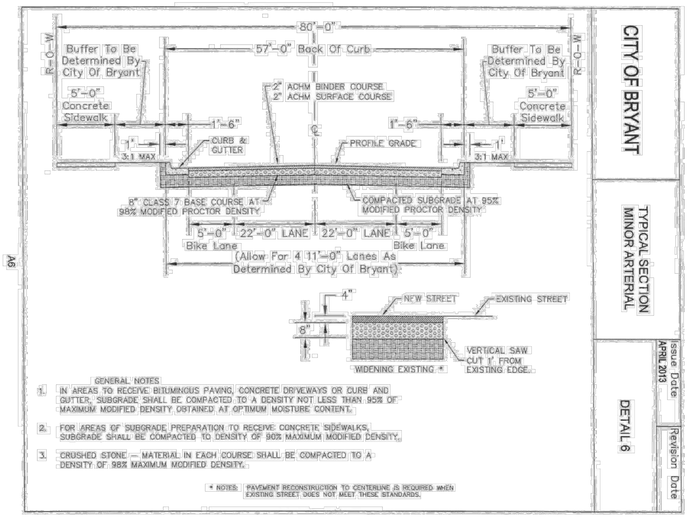
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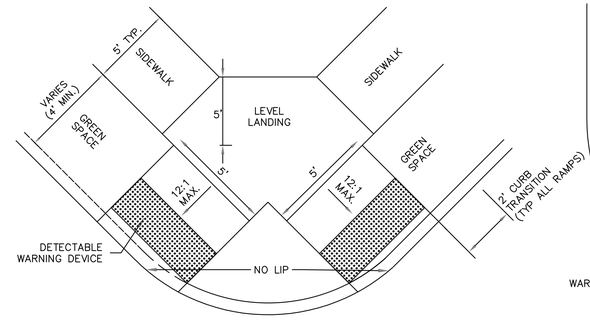
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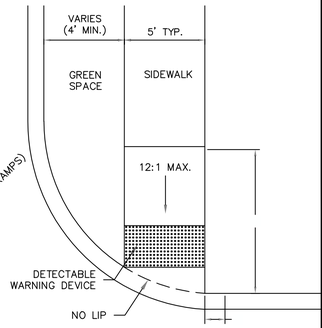
CITY OF BRYANT | TYPICAL SECTION LOCAL / RESIDENTIAL STREET | Issue Date APRIL 2013 | Revision Date | DETAIL 1



CITY OF BRYANT | TYPICAL SECTION MINOR ARTERIAL | Issue Date APRIL 2013 | Revision Date | DETAIL 6



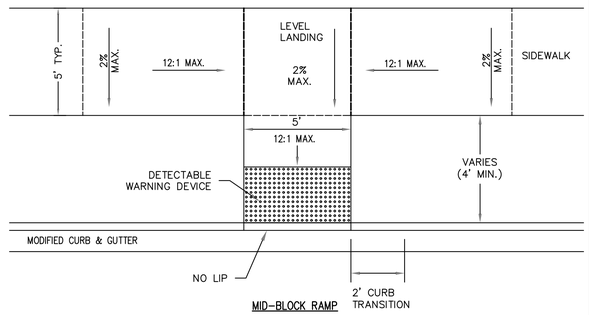
TYPE 1 RAMP



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) THE MINIMUM THICKNESS FOR THE RAMP, WALK, & LANDING SHALL BE 4".
4) DETECTABLE WARNING DEVICES SHALL BE PLACED AT THE LOCATIONS WHERE RAMPS CROSS A CURB.

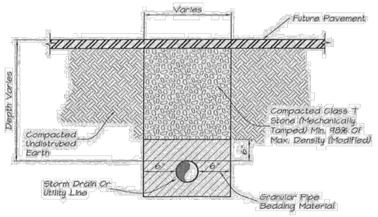


MID-BLOCK RAMP

HANDICAP RAMP DETAILS

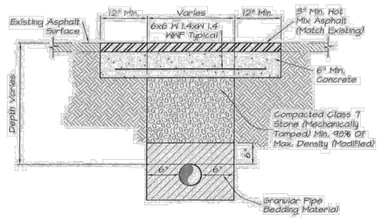
NOT TO SCALE

CITY OF BRYANT | TYPICAL SECTION DRAINAGE AND UTILITY CUT BACKFILL ON STREET UNDER CONSTRUCTION | Issue Date APRIL 2013 | Revision Date | DETAIL 8



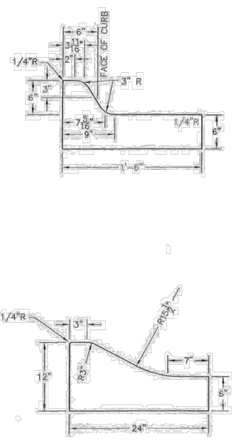
A8

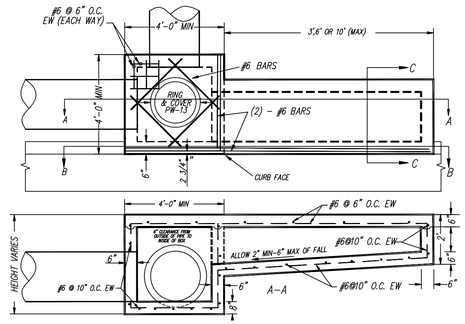
CITY OF BRYANT | TYPICAL SECTION ASPHALT PAVEMENT REPAIR ON EXISTING STREET | Issue Date APRIL 2013 | Revision Date | DETAIL 9



A9

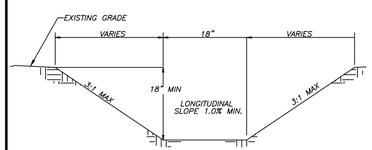
CITY OF BRYANT | CURB & GUTTER SECTIONS | Issue Date APRIL 2013 | Revision Date | DETAIL 7



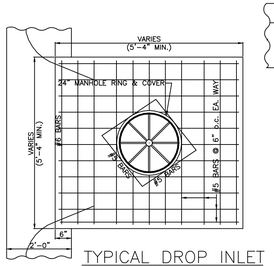


CURB INLET W/ THROAT EXTENSIONS

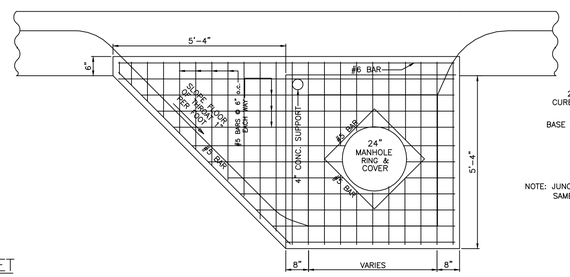
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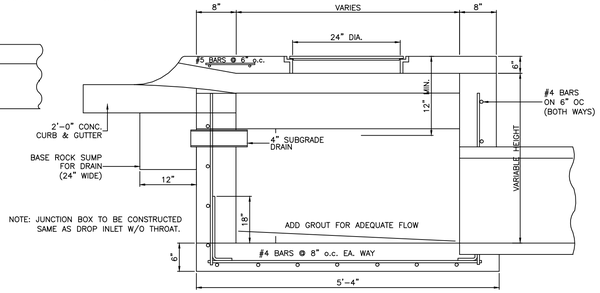
DRAINAGE SWALE
N.T.S.



TYPICAL DROP INLET
PLAN



DETAIL – DROP INLET
WITH EXTENDED THROAT



NOTE: JUNCTION BOX TO BE CONSTRUCTED SAME AS DROP INLET W/O THROAT.

TYPICAL DROP INLET – POURED IN PLACE
ELEVATION

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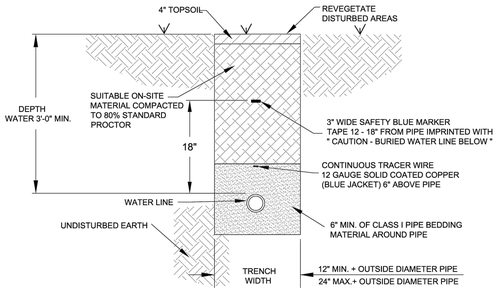
CERTIFICATE OF AUTHORIZATION
Richardson Engineering, PLLC
No. 2519
ARKANSAS

MISC. DETAILS
ZYAIR ESTATES
SUBDIVISION
HILLTOP ROAD
BRYANT, ARKANSAS

EMINENT CONSTRUCTIONS
Prepared For:

No.	Revisions	Date
1	AS PER CITY COMMENTS	4/7/2026

PROJECT NO.: 024-034
Date: 3/3/2026
4/7/2026
Scale: NTS
Sheet: 20 of 25



NOTES:

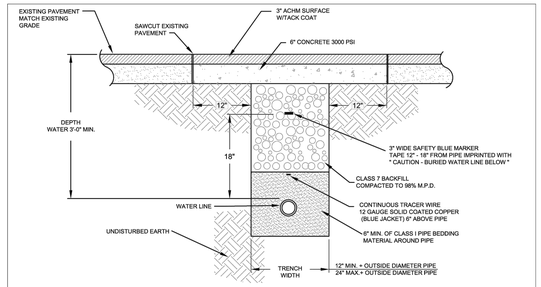
1. ALL VALVES, BENDS, ETC. SHALL BE RESTRAINED.
2. THE CONTRACTOR SHALL PROVIDE ALL ITEMS NECESSARY TO CONNECT WITH ANY PART OF THE EXISTING WATER SYSTEM THAT WILL REMAIN IN ORDER TO ESTABLISH A SATISFACTORY AND ACCEPTABLE WATER SYSTEM.
3. CONTRACTOR TO CONSTRUCT ALL TRENCH EXCAVATION IN ACCORDANCE WITH ALL OSHA REGULATIONS (29 CFR CH.XVII, SUBPART B)
4. TRENCH SHALL BE EXCAVATED BELOW GRADE REQUIRED TO PROVIDE A MINIMUM 36" OF PIPE COVER.
5. MAXIMUM PIPE COVER SHALL BE 60" UNDER NORMAL CONDITIONS. COVER GREATER THAN 60" MAY BE ALLOWED FOR SHORT DISTANCES WHERE REQUIRED BY FIELD CONDITIONS. NO HYDRANT SHALL BE ALLOWED WHERE LINES ARE GREATER THAN 60" DEEP.

WATER MAIN TRENCH

(NON-PAVED AREA)

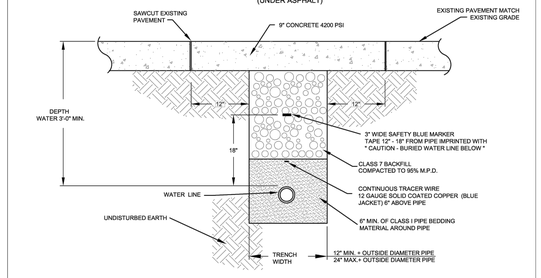
CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0468

TITLE: **WATER DETAILS** | DATE: APRIL 2015 REVISED | SHEET: W1
DESCRIPTION: **WATER MAIN TRENCH (NON-PAVED AREA)**
DRAWN BY: | CHECKED BY: | FILE: W1-Water Trench (Non-Paved Area).dwg



WATER MAIN TRENCH

(UNDER ASPHALT)



WATER MAIN TRENCH

(UNDER CONCRETE)

NOTES:

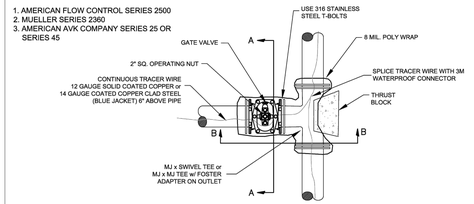
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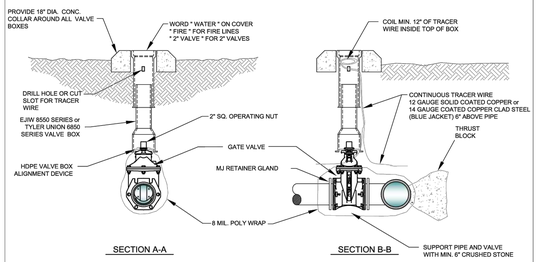
TITLE: **WATER DETAILS** | DATE: APRIL 2015 REVISED | SHEET: W2
DESCRIPTION: **WATER MAIN TRENCH (UNDER PAVEMENT)**
DRAWN BY: | CHECKED BY: | FILE: W2-Water Trench (Under Pavement).dwg

PERMITTED VALVES

1. AMERICAN FLOW CONTROL SERIES 2500
2. MUELLER SERIES 2360
3. AMERICAN AVK COMPANY SERIES 25 OR SERIES 45



PLAN



NOTES:

1. ALL VALVES SHALL BE SECURELY ANCHORED TO THE TEE.
2. ALL HARDWARE SHALL BE 316 STAINLESS STEEL.
3. IF DEPTH OF BURY EXCEEDS 4 FT., A VALVE STEM EXTENSION SHALL BE REQUIRED. THE VALVE STEM EXTENSION NUT SHALL BE WITHIN 24-INCHES TO 12-INCHES OF THE FINISHED SURFACE.

GATE VALVE DETAIL

2" - 12"

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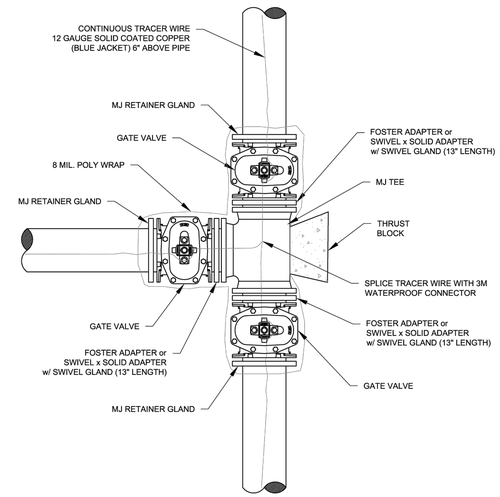
TITLE: **WATER DETAILS** | DATE: APRIL 2015 REVISED | SHEET: W4
DESCRIPTION: **GATE VALVE**
DRAWN BY: | CHECKED BY: | FILE: W4-Gate Valve.dwg

PERMITTED VALVES

1. AMERICAN FLOW CONTROL SERIES 2500
2. MUELLER SERIES 2360
3. AMERICAN AVK COMPANY SERIES 25 OR SERIES 45

NOTES:

1. ALL VALVES SHALL BE SECURELY ANCHORED TO THE TEE.
2. ALL HARDWARE SHALL BE 316 STAINLESS STEEL.
3. IF DEPTH OF BURY EXCEEDS 4 FT., A VALVE STEM EXTENSION SHALL BE REQUIRED. THE VALVE STEM EXTENSION NUT SHALL BE WITHIN 24-INCHES TO 12-INCHES OF THE FINISHED SURFACE.



3-WAY GATE VALVE DETAIL

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TITLE: **WATER DETAILS** | DATE: APRIL 2015 REVISED | SHEET: W5
DESCRIPTION: **3-WAY GATE VALVES**
DRAWN BY: | CHECKED BY: | FILE: W5-3-Way Gate Valves.dwg

NOTES:

1. FACTORY APPLIED PAINT WHITE WITH REFLECTIVE GLASS BEADS
2. FIRE HYDRANT ASSEMBLY WATEROUS PACER WB67-250, MUELLER SUPER CENTURION 250, or M&H VALVE COMPANY - STYLE 129 STANDARD 48-INCH BURY
3. WORD " WATER " ON COVER
4. COIL MIN. 12" OF TRACER WIRE INSIDE TOP OF BOX
5. PROVIDE 18" DIA. CONC. COLLAR AROUND ALL VALVE BOXES
6. BREAKABLE FLANGE w/ INTERNAL BREAKABLE STEM COUPLING
7. 18" MIN. 24" MAX.
8. NON-PAVED AREA CONCRETE COLLAR 2'x2'x1' REINFORCED w/ TWO LAYERS #5's
9. EJIW 8550 SERIES or TYLER UNION 6850 SERIES VALVE BOX
10. CONTINUOUS TRACER WIRE 12 GAUGE SOLID COATED COPPER (BLUE JACKET) 6" ABOVE PIPE
11. 8 MIL. POLY WRAP
12. BURY DEPTH 48-INCHES
13. 6 CUBIC FOOT #67 GRAVEL DRAIN BED
14. HDPE VALVE BOX ALIGNMENT DEVICE
15. THRUST BLOCK
16. THRUST BLOCK
17. WATER MAIN
18. 4" THICK CONCRETE LEVELING BLOCK
19. MJ x SWIVEL TEE or MJ x MJ TEE w/ FOSTER ADAPTER
20. SWIVEL x SOLID ADAPTER w/ SWIVEL GLAND (13", 18", 24", 36" or 48" LENGTH)
21. SUPPORT PIPE AND VALVE WITH MIN. 6" CRUSHED STONE

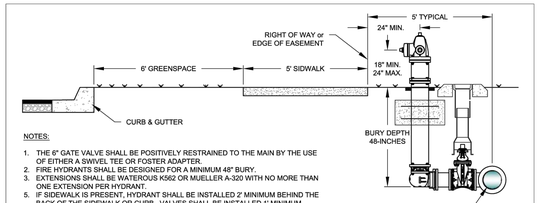
1. THE 6" GATE VALVE SHALL BE POSITIVELY RESTRAINED TO THE MAIN BY THE USE OF EITHER A SWIVEL TEE OR FOSTER ADAPTER.
2. FIRE HYDRANTS SHALL BE DESIGNED FOR A MINIMUM 48" BURY.
3. BURY LINE OF HYDRANT SHALL BE NO LESS THAN THE PROPOSED FINISHED ELEVATION OF BACK OF CURB, OR SIDEWALK, WHICHEVER IS GREATER.
4. EXTENSIONS SHALL BE WATEROUS K562 OR MUELLER A-320 WITH NO MORE THAN ONE EXTENSION PER HYDRANT.
5. IF SIDEWALK IS PRESENT, HYDRANT SHALL BE INSTALLED 2' MINIMUM BEHIND THE BACK OF THE SIDEWALK OR CURB. VALVES SHALL BE INSTALLED 1' MINIMUM BEHIND THE BACK OF THE SIDEWALK OR CURB.
6. DO NOT COVER UP WEEP HOLE WITH CONCRETE.
7. MJ RETAINER GLANDS ARE REQUIRED FOR ALL FITTINGS.
8. 6" DUCTILE IRON PIPE IS REQUIRED FOR ALL FIRE HYDRANT LEADS GREATER THAN 48-INCHES FROM THE MAIN VALVE.
9. AN ADDITIONAL GUARDIAN VALVE IS REQUIRED FOR ALL FIRE HYDRANT LEADS GREATER THAN 30 FEET IN LENGTH.

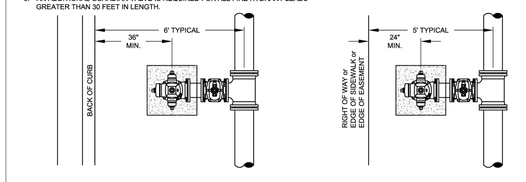
FIRE HYDRANT & VALVE CONNECTION

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WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
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TITLE: **WATER DETAILS** | DATE: APRIL 2015 REVISED | SHEET: W8
DESCRIPTION: **FIRE HYDRANT AND VALVE CONNECTION**
DRAWN BY: | CHECKED BY: | FILE: W8-Fire Hydrant and Valve.dwg

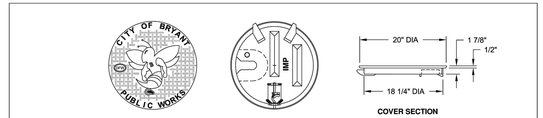
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8. AN ADDITIONAL GUARDIAN VALVE IS REQUIRED FOR ALL FIRE HYDRANT LEADS GREATER THAN 30 FEET IN LENGTH.



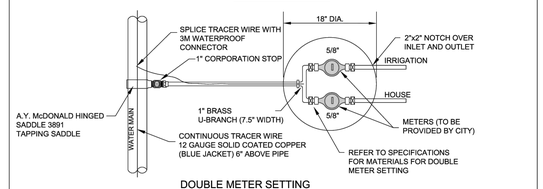


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BRYANT, AR
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TITLE: **WATER DETAILS** | DATE: APRIL 2015 REVISED | SHEET: W9
DESCRIPTION: **FIRE HYDRANT PLACEMENT**
DRAWN BY: | CHECKED BY: | FILE: W9-Fire Hydrant Placement.dwg

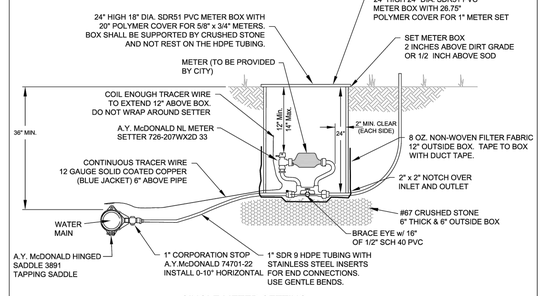


WATER METER LID



DOUBLE METER SETTING

ONLY FOR 1 LOT



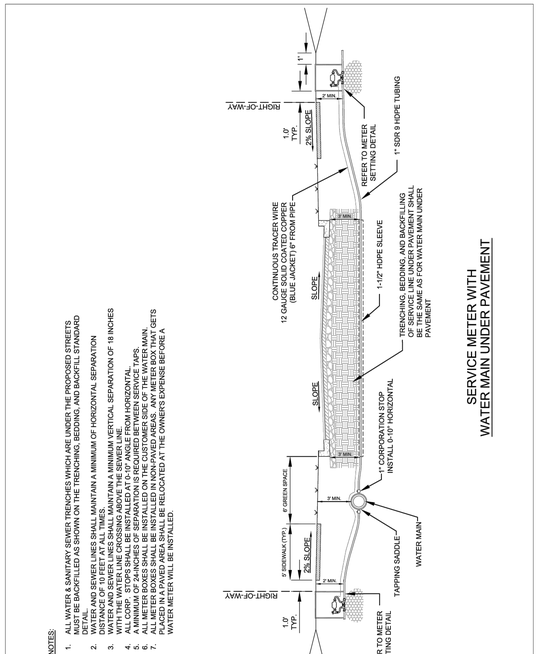
SINGLE METER SETTING

CITY OF BRYANT, AR
WATER UTILITIES
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BRYANT, AR
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TITLE: **WATER DETAILS** | DATE: APRIL 2015 REVISED | SHEET: W10
DESCRIPTION: **METER SETTINGS**
DRAWN BY: | CHECKED BY: | FILE: W10-Meter Settings.dwg

NOTES:

1. ALL WATER & SANITARY SEWER TRENCHES WHICH ARE UNDER THE PROPOSED STREETS SHALL BE BACKFILLED AS SHOWN ON THE TRENCHING, BEDDING, AND BACKFILL STANDARD DETAIL.
2. WATER AND SEWER LINES SHALL MAINTAIN A MINIMUM OF HORIZONTAL SEPARATION OF 18 INCHES WITH THE WATER LINE CROSSING ABOVE THE SEWER LINE.
3. WATER AND SEWER LINES SHALL MAINTAIN A MINIMUM VERTICAL SEPARATION OF 18 INCHES WITH THE WATER LINE CROSSING ABOVE THE SEWER LINE.
4. A MINIMUM OF 24-INCHES OF SEPARATION IS REQUIRED BETWEEN SERVICE TAPS.
5. ALL SERVICE LINES SHALL BE INSTALLED PERPENDICULAR TO THE WATER MAIN.
6. ALL METER BOXES SHALL BE INSTALLED IN NON-PAVED AREAS. ANY METER BOX THAT GETS PLACED IN A PAVED AREA SHALL BE RELOCATED AT THE OWNER'S EXPENSE BEFORE A WATER METER WILL BE INSTALLED.



SERVICE METER WITH WATER MAIN UNDER PAVEMENT

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WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
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TITLE: **WATER DETAILS** | DATE: APRIL 2015 REVISED | SHEET: W11
DESCRIPTION: **METER SERVICE LINE UNDER PAVEMENT**
DRAWN BY: | CHECKED BY: | FILE: W11-Meter Service Line Under Pavement.dwg

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

CERTIFICATE OF AUTHORIZATION
Richardson Engineering, PLLC
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MISC. DETAILS
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HILLTOP ROAD
BRYANT, ARKANSAS

EMINENT CONSTRUCTIONS

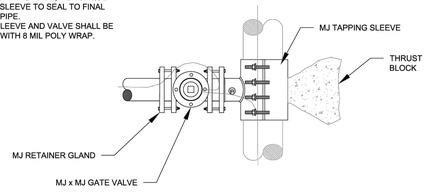
No.	Revisions	Date
1	AS PER CITY COMMENTS	4/7/2026

Prepared For:

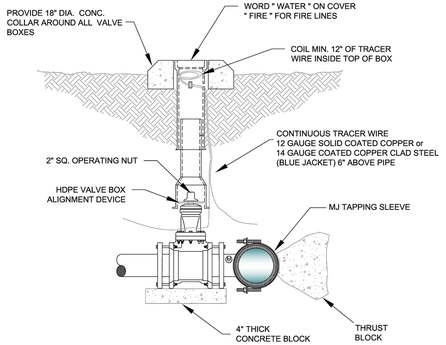
PROJECT NO.: 024-034
Scale: NTS
Date: 3/3/2026 4/7/2026
Sheet: 21 of 25

NOTES:

1. TAPPING SLEEVE SHALL BE SMITH-BLAIR 662 OR FORD FAST.
2. AFTER THE TAP IS MADE, RE-TORQUE BOLTS ON SLEEVE TO SEAL TO FINAL SHAPE OF PIPE.
3. TAPPING SLEEVE AND VALVE SHALL BE WRAPPED WITH 8 MIL POLY WRAP.



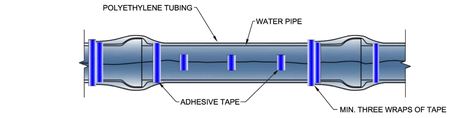
PLAN VIEW



PROFILE VIEW

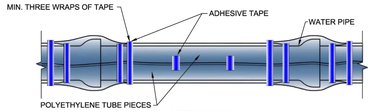
CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0468

TITLE: **WATER DETAILS**
DESCRIPTION: **TAPPING SLEEVE AND VALVE**
DRAWN BY: CHECKED BY: FILE: W13-Tapping Sleeve and Valve.dwg
DATE: APRIL 2015 REVISED
SHEET: **W13**



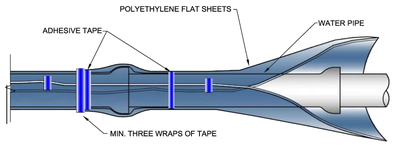
METHOD 'A'

METHOD 'A' USES ONE LENGTH OF POLYETHYLENE TUBE, OVERLAPPED AT THE JOINTS A MINIMUM OF 2 FEET.



METHOD 'B'

METHOD 'B' USES SEPARATE PIECES OF POLYETHYLENE TUBE FOR THE BARREL OF THE PIPE AND THE JOINTS. SHORT PIECES SHALL BE APPROXIMATELY 6' LONG AND OVERLAP BARREL SECTION BY A MINIMUM OF 2 FEET.



METHOD 'C'

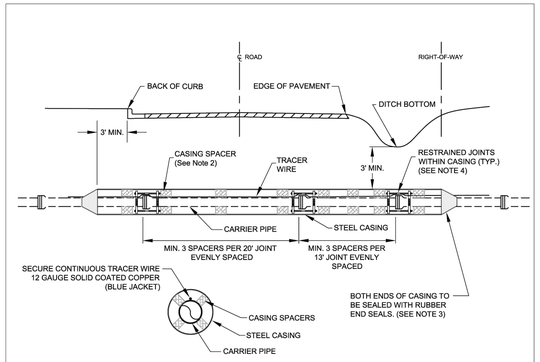
METHOD 'C' - USED FOR PIPE-SHAPED AND ODD- SHAPED APPURTENANCES SUCH AS BENDS, REDUCERS, OFFSETS, VALVES, TEES, ETC.

ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE POLY WRAPPED.

THE ANSI/AWWA C105/A21.5 STANDARD OUTLINES THREE METHODS OF INSTALLING POLYETHYLENE ENCASEMENT/ SLEEVING.

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PHONE: (501) 943-0468

TITLE: **WATER DETAILS**
DESCRIPTION: **POLYETHYLENE PROTECTION MATERIAL**
DRAWN BY: CHECKED BY: FILE: W14-Poly Wrap.dwg
DATE: APRIL 2015 REVISED
SHEET: **W14**



NOTES:

1. STEEL CASING SHALL BE CONSTRUCTED OF SPIRAL OR STRAIGHT WELDED STEEL WITH A MINIMUM DIAMETER AND THICKNESS AS SHOWN BELOW (SEE TABLE).
2. PROVIDE CASING SPACERS BY CASCADE MODEL CCS AS MANUFACTURED BY CASCADE WATERWORKS MFG. CO., OR APPROVED EQUAL.
3. PROVIDE END SEALS BY CASCADE MODEL CCES AS MANUFACTURED BY CASCADE WATERWORKS MFG. CO., OR APPROVED EQUAL.
4. WHERE ENCASEMENTS ARE GREATER THAN 25 FEET IN LENGTH, SELF-RESTRAINING GASKETS OR BELL RESTRAINTS SHALL BE USED FOR ALL JOINTS INSIDE THE ENCASEMENT PIPE AND FOR THE FIRST JOINT IN EACH DIRECTION OUTSIDE THE ENCASEMENT PIPE.
5. BELL RESTRAINTS FOR PVC SHALL BE SERIES1900 RESTRAINT HARNESS AND BELL RESTRAINTS FOR DIP SHALL BE SERIES 1700 RESTRAINT HARNESS BY EBAA IRON INC., OR APPROVED EQUAL.
6. DIRECT BURY STEEL ENCASEMENT SHALL BE POLY WRAPPED.
7. JACK AND BORE STEEL ENCASEMENT SHALL HAVE 178 HP MAGNESIUM ANODES CAD WELDED TO THE END OF THE ENCASEMENT PIPE.

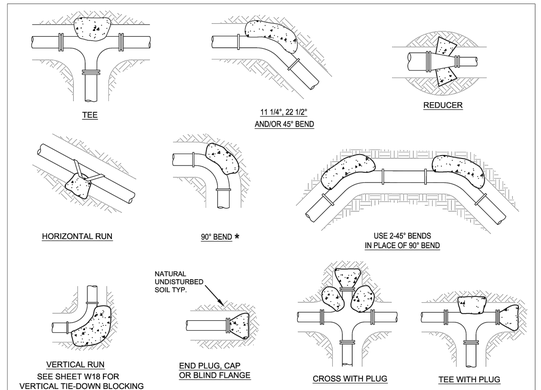
CARRIER AND CASING SIZES

CARRIER (ID)	2"	3"	4"	6"	8	10"	12"
CASING (ID)	5"	6"	8"	12"	16"	20"	24"
CASING WALL THICKNESS	0.250	0.250	0.250	0.250	0.250	0.250	0.375
CARRIER (ID)	14" - 16"	18" - 20"	24"	30"	36"	42"	48"
CASING (ID)	30"	36"	42"	48"	54"	60"	72"
CASING WALL THICKNESS	0.375	0.500	0.625	0.625	0.625	0.625	0.750

STEEL ENCASEMENT

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0468

TITLE: **WATER DETAILS**
DESCRIPTION: **STEEL ENCASEMENT**
DRAWN BY: CHECKED BY: FILE: W15-Steel Encasement.dwg
DATE: APRIL 2015 REVISED
SHEET: **W15**



THRUST BLOCK SCHEDULE

(2000 PSF SOIL, 200 PSI WATER PRESSURE, 100 PSI WATER HAMMER)

FITTING SIZE	BEARING AREA OF THRUST BLOCKS IN SQ. FT. (HORIZONTAL BENDS) PLUG / TEE OR CAP	BEND ANGLE 90° *	45°	22 1/2°	11 1/4°	FITTING SIZE	VOLUME OF THRUST BLOCK IN CU. FEET (VERTICAL BENDS) BEND ANGLE 90° *	45°	22 1/2°	11 1/4°	W/O DIAM.	EMBED-MENT
2, 3, & 4	1.9	2.7	1.4	0.7	0.4	2, 3, & 4	35.5	19.2	9.8	4.9	50"	30"
6	5.6	7.9	4.3	2.2	1.1	6	105.8	57.2	29.2	14.7	70"	30"
8	9.6	13.5	7.4	3.8	1.9	8	181.9	98.5	50.2	25.2	75"	30"
12	20.5	29.0	15.7	8.0	4.0	12	387.1	209.5	106.8	53.7	1.0"	30"
16	35.7	50.4	27.3	13.9	7.0	16	672.8	364.0	185.6	93.2	1.0"	36"
18	44.5	63.4	34.3	17.5	18.8	18	844.7	457.2	233.1	117.1	1.0"	36"
24	78.4	110.9	60.0	30.6	15.4	24	1478.7	800.3	408.0	205.0	1.5"	36"

* 90 DEGREE BENDS SHALL ONLY BE USED ON A BY-EXCEPTION BASIS, AND MUST EACH BE SPECIFICALLY APPROVED BY CITY.

THRUST BLOCK NOTES:

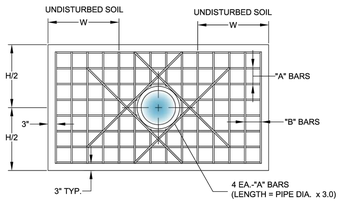
1. CONCRETE FOR THRUST BLOCKS - CLASS A CONCRETE SHALL DEVELOP NOT LESS THAN 3000 P.S.I. COMPRESSIVE STRENGTH AT 28 DAYS AND BE PLACED AGAINST UNDISTURBED SOIL.
2. ALL BENDS, BOTH HORIZONTAL AND VERTICAL, SHALL BE BACKED WITH CONCRETE. VERTICAL BENDS SHALL BE PLACED ON CONCRETE PADS WHERE BENDS TURN UP, OR LOADED WHERE BENDS TURN DOWN.
3. WRAP PIPE JOINTS IN 8 MIL "POLYETHLENE" BEFORE PLACING CONCRETE.
4. BEARING AREA SHOWN IN TABLE, IS BASED UPON A 2000 LB/SF. SOIL BEARING, AND UPON A PIPELINE PRESSURE OF 200 psi. PLUS 100 psi. WATER HAMMER. AREAS SHOWN SHALL BE ADJUSTED, SHOULD FIELD CONDITIONS VARY.
5. MJ RESTRAINTS ARE REQUIRED FOR ALL FITTINGS.
6. USE LONG-RADIUS FITTINGS WHEREVER POSSIBLE.
7. ALL BOLTS FOR FITTINGS SHALL BE 316 STAINLESS STEEL.
8. ALL DUCTILE IRON FITTINGS SHALL BE FUSION-BONDED EPOXY COATED INSIDE AND OUTSIDE IN ACCORDANCE WITH ANSI/AWWA C116/A21.16.
9. UNIT WEIGHT OF CONCRETE FOR VERTICAL THRUST BLOCKS IS 150 LBS/CU. FT.

THRUST BLOCKING

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0468

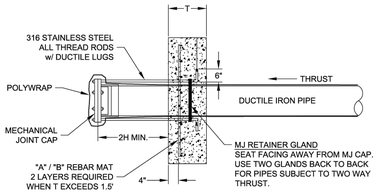
TITLE: **WATER DETAILS**
DESCRIPTION: **THRUST BLOCKING**
DRAWN BY: CHECKED BY: FILE: W16-Thrust Blocking.dwg
DATE: APRIL 2015 REVISED
SHEET: **W16**

ANCHOR COLLAR SCHEDULE					
PIPE SIZE	* MINIMUM DIMENSIONS * W	H	T	REINFORCING BARS "A" BARS	"B" BARS
6"	1.5'	2.0'	1.0'	#5 @ 6"	#6 @ 6"
8"	2.0'	2.5'	1.0'	#5 @ 6"	#6 @ 6"
12"	2.5'	4.0'	1.5'	#6 @ 6"	#6 @ 6"
16"	3.5'	5.0'	1.5'	#5 @ 6"	#6 @ 6"
20"	5.0'	5.5'	2.0'	#6 @ 6"	#6 @ 6"
24"	6.5'	6.0'	2.0'	#7 @ 6"	#7 @ 10"



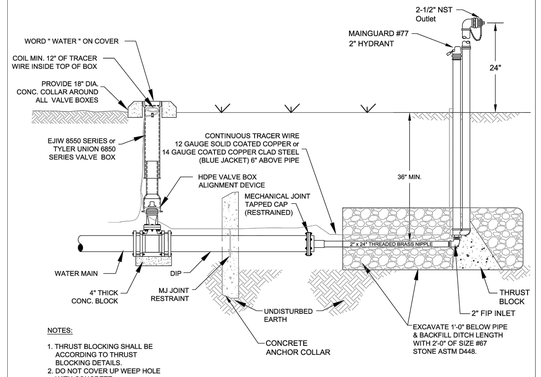
NOTES:

1. DESIGN PRESSURE IS 200 PSI PLUS 100 PSI SURGE AND 2,000 PSI SOIL BEARING.
2. ALL DIMENSIONS ARE MINIMUM REQUIREMENTS. ACTUAL FIELD CONDITIONS MAY REQUIRE LARGER DIMENSIONS.
3. ALL RETAINER GLANDS SHALL BE MEGA-LUG BY EBAA IRON.



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TITLE: **WATER DETAILS**
DESCRIPTION: **ANCHOR COLLAR**
DRAWN BY: CHECKED BY: FILE: W18-Anchor Collar.dwg
DATE: APRIL 2015 REVISED
SHEET: **W18**



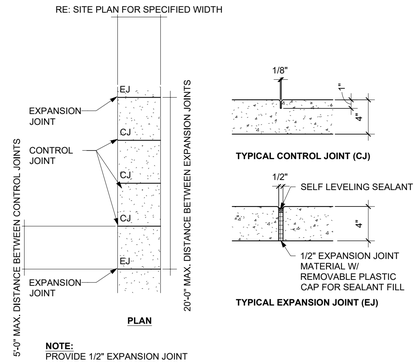
NOTES:

1. THRUST BLOCKING SHALL BE ACCORDING TO THRUST BLOCKING DETAILS.
2. DO NOT COVER UP WEEP HOLE WITH CONCRETE.

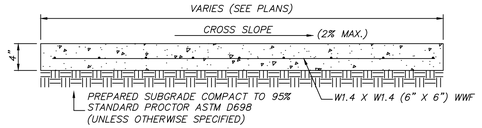
BLOW-OFF ASSEMBLY

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0468

TITLE: **WATER DETAILS**
DESCRIPTION: **BLOW-OFF ASSEMBLY**
DRAWN BY: CHECKED BY: FILE: W19-Blow-off Assembly.dwg
DATE: APRIL 2015 REVISED
SHEET: **W19**



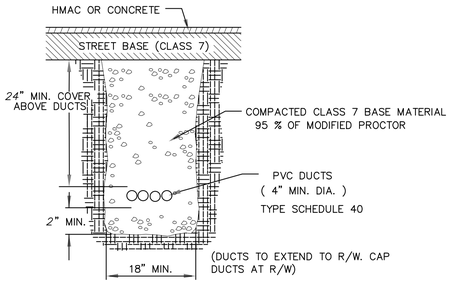
NOTE:
PROVIDE 1/2" EXPANSION JOINT AND SEALANT AS NOTED AND WHERE SIDEWALK ABUTS STRUCTURES OR OTHER SIDEWALKS.



CONCRETE SIDEWALK SPECIFICATIONS

NTS

* NOTES:
1. PORTLAND CEMENT CONCRETE 3000 PSI. MIN.
2. USE W1.4 X W1.4 (6" X 6") WWF SHEET REINFORCEMENT. CUT ½ THE WIRES AT CONTROL JOINTS.
3. CONCRETE TO CONTAIN 3-5% AIR ENTRAINMENT.
4. FINISH TO BE LIGHT BROOM FINISH.
5. DETECTABLE WARNING DEVICES TO BE INSTALLED AT RAMPS PER ADA REQUIREMENTS.
6. MAX CROSS SLOPE 2%. MAX LONGITUDINAL SLOPE 1:12.
7. CONTROL JOINTS PER CONC. WALK CONTROL JOINT DETAIL.



TYPICAL SECTION
4" UTILITY DUCTS

NOT TO SCALE

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

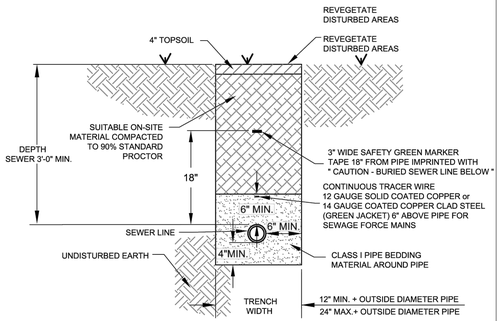
Richardson Engineering, PLLC No. 2519 CERTIFICATE OF AUTHORIZATION ARKANSAS

MISC. DETAILS
ZYAIR ESTATES
SUBDIVISION
HILLTOP ROAD
BRYANT, ARKANSAS

Prepared For: EMINENT CONSTRUCTIONS

No.	Revisions	Date
1	AS PER CITY COMMENTS	4/7/2026

PROJECT NO.: 024-034
Date: 3/3/2026
Scale: NTS
4/7/2026
Sheet: 22 of 25



NOTES:

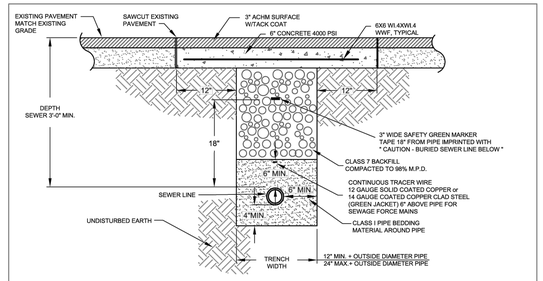
1. THE CONTRACTOR SHALL PROVIDE ALL ITEMS NECESSARY TO CONNECT WITH ANY PART OF THE EXISTING SEWER SYSTEM THAT WILL REMAIN IN ORDER TO ESTABLISH A SATISFACTORY AND ACCEPTABLE SEWER SYSTEM.
2. CONTRACTOR TO CONSTRUCT ALL TRENCH EXCAVATION IN ACCORDANCE WITH ALL OSHA REGULATIONS (29 CFR CH.XVII, SUBPART B)
3. TRENCH SHALL BE EXCAVATED BELOW GRADE REQUIRED TO PROVIDE A MINIMUM 36" OF PIPE COVER.

SEWER TRENCH

(NON-PAVED AREA)

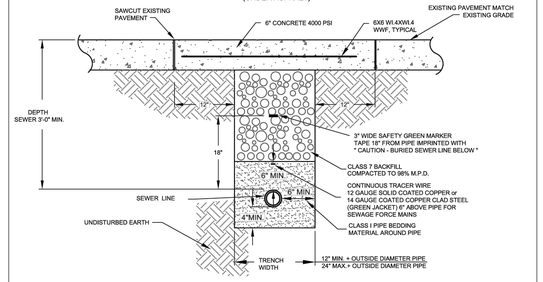
CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0488

TITLE: **SEWER DETAILS** | DATE: APRIL 2015 | SHEET: S1
DESCRIPTION: **SEWER TRENCH (NON-PAVED AREA)** | REVISED: -----
DRAWN BY: | CHECKED BY: | FILE: S1-Sewer Trench (Non-Paved Area).dwg



SEWER TRENCH

(UNDER ASPHALT)



SEWER TRENCH

(UNDER CONCRETE)

NOTES:

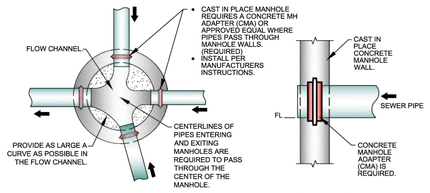
1. THE CONTRACTOR SHALL PROVIDE ALL ITEMS NECESSARY TO CONNECT WITH ANY PART OF THE EXISTING SEWER SYSTEM THAT WILL REMAIN IN ORDER TO ESTABLISH A SATISFACTORY AND ACCEPTABLE SEWER SYSTEM.
2. CONTRACTOR TO CONSTRUCT ALL TRENCH EXCAVATION IN ACCORDANCE WITH ALL OSHA REGULATIONS (29 CFR CH.XVII, SUBPART B)
3. TRENCH SHALL BE EXCAVATED BELOW GRADE REQUIRED TO PROVIDE A MINIMUM 36" OF PIPE COVER.

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0488

TITLE: **SEWER DETAILS** | DATE: APRIL 2015 | SHEET: S2
DESCRIPTION: **SEWER TRENCH (UNDER PAVEMENT)** | REVISED: -----
DRAWN BY: | CHECKED BY: | FILE: S2-Sewer Trench (Under Pavement).dwg

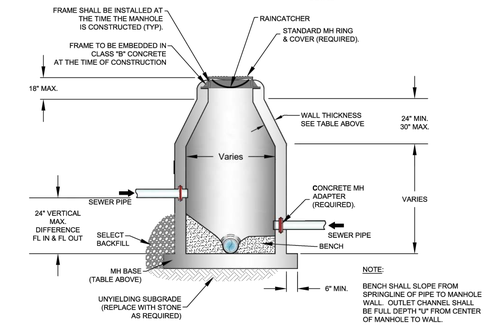
Inside Diameter of Manhole	Minimum Wall Thickness	Base Thickness	Minimum Ring & Cover Size
4' DIA	6"	6"	24" (< or Equal to 24" Pipes)
5' DIA	8"	8"	
6' DIA	8"	12"	36" (> 24" Pipes)

MANHOLE INFORMATION TABLE



MANHOLE FLOW CHANNEL

CONCRETE MANHOLE ADAPTER (CMA) DETAIL



NOTE:
BENCH SHALL SLOPE FROM SPRINGLINE OF PIPE TO MANHOLE WALL. OUTLET CHANNEL SHALL BE FULL DEPTH "U" FROM CENTER OF MANHOLE TO WALL.

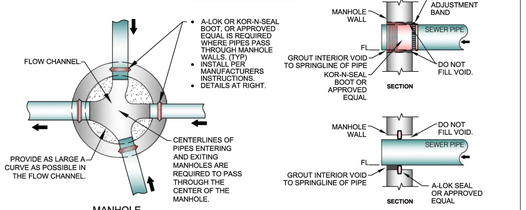
CAST-IN-PLACE MANHOLE

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0488

TITLE: **SEWER DETAILS** | DATE: APRIL 2015 | SHEET: S4
DESCRIPTION: **CAST-IN-PLACE MANHOLE** | REVISED: -----
DRAWN BY: | CHECKED BY: | FILE: S4-Cast In Place Manhole.dwg

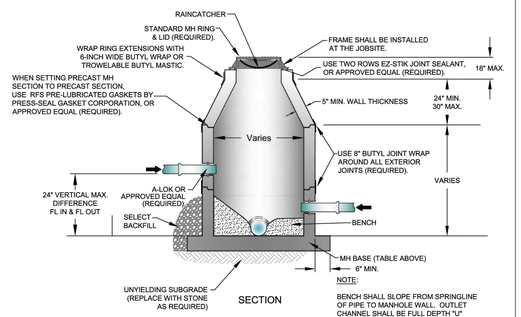
Inside Diameter of Manhole	Minimum Wall Thickness	Base Thickness	Minimum Ring & Cover Size
4' DIA	5"	6"	24" (< or Equal to 24" Pipes)
5' DIA	7"	8"	
6' DIA	7"	8"	36" (> 24" Pipes)

MANHOLE INFORMATION TABLE



MANHOLE FLOW CHANNEL

CONNECTION DETAILS



SECTION

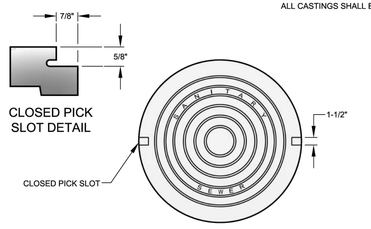
NOTE:
BENCH SHALL SLOPE FROM SPRINGLINE OF PIPE TO MANHOLE WALL. OUTLET CHANNEL SHALL BE FULL DEPTH "U" FROM CENTER OF MANHOLE TO WALL.

PRECAST MANHOLE

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0488

TITLE: **SEWER DETAILS** | DATE: APRIL 2015 | SHEET: S5
DESCRIPTION: **PRECAST MANHOLE** | REVISED: -----
DRAWN BY: | CHECKED BY: | FILE: S5-Precast Manhole.dwg

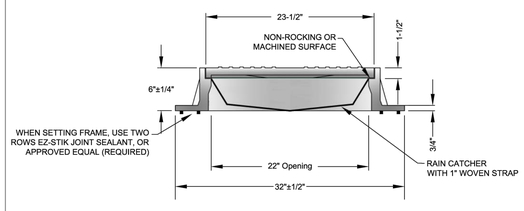
ALL CASTINGS SHALL BE "MADE IN USA"



COVER DETAIL

1. MINIMUM WEIGHT OF RING: 100 POUNDS
2. MINIMUM WEIGHT OF COVER: 110 POUNDS
3. COVERS ARE FURNISHED WITH TWO CLOSED PICK SLOTS.
4. CASTINGS SHALL BE "MADE IN USA"

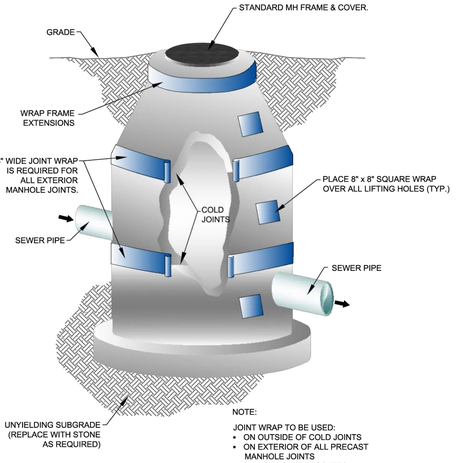
* DIMENSIONAL TOLERANCES SHALL NOT EXCEED 1/16 INCH PER FOOT



FRAME AND COVER DETAIL

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0488

TITLE: **SEWER DETAILS** | DATE: APRIL 2015 | SHEET: S6
DESCRIPTION: **MANHOLE FRAME AND COVER** | REVISED: -----
DRAWN BY: | CHECKED BY: | FILE: S6-Manhole Frame and Cover.dwg

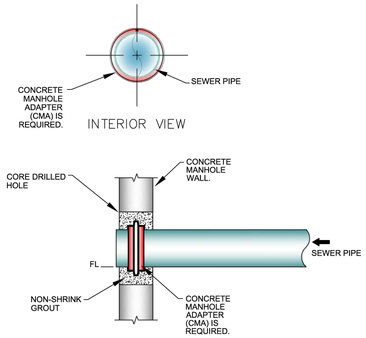


NOTE:
JOINT WRAP TO BE USED:
- ON OUTSIDE OF COLD JOINTS
- ON EXTERIOR OF ALL PRECAST MANHOLE JOINTS
- ON LIFT HOLES / SOCKETS

MANHOLE JOINT WRAP

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0488

TITLE: **SEWER DETAILS** | DATE: APRIL 2015 | SHEET: S9
DESCRIPTION: **MANHOLE JOINT WRAP** | REVISED: -----
DRAWN BY: | CHECKED BY: | FILE: S9-Manhole Joint Wrap.dwg



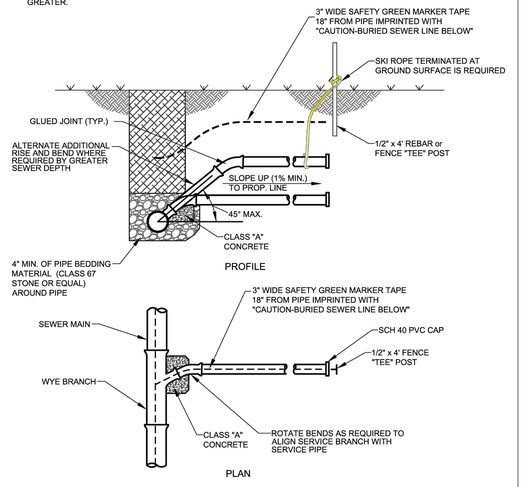
MANHOLE CORING DETAILS

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0488

TITLE: **SEWER DETAILS** | DATE: APRIL 2015 | SHEET: S11
DESCRIPTION: **MANHOLE CORING** | REVISED: -----
DRAWN BY: | CHECKED BY: | FILE: S11-Manhole Coring.dwg

NOTES:

1. MODIFIED RISER LATERAL SHALL BE USED WHEN DEPTH OF COVER EXCEEDS 7'-0"
2. PLACE CLASS "A" CONCRETE UNDER EACH WYE BRANCH TO PREVENT CRACKING OR TWISTING UNDER EARTH LOADS.
3. SERVICE LATERAL STUBS SHALL TERMINATE AT LEAST 2 FEET INSIDE THE PROPERTY LINE BUT IN NO CASE SHALL THE SERVICE LATERAL STUB TERMINATE AT A DISTANCE LESS THAN 8 FEET FROM THE SANITARY SEWER MAIN.
4. BURY A 1/2" x 4' STEEL TEE FENCE POST AT END OF SERVICE LATERAL STUB AND BACKFILL TO FINISHED GRADE OF PROPERTY.
5. 4" DUCTILE IRON PIPE, LINED FOR SANITARY SEWER AND 4" DUCTILE IRON M.J. FITTINGS, LINED FOR SANITARY SEWER, SHALL BE INSTALLED FOR SERVICES BURIED AT DEPTHS OF 14 FEET AND GREATER.



SEWER SERVICE LATERAL

CITY OF BRYANT, AR
WATER UTILITIES
210 S.W. 3rd. STREET
BRYANT, AR
PHONE: (501) 943-0488

TITLE: **SEWER DETAILS** | DATE: APRIL 2015 | SHEET: S15
DESCRIPTION: **SEWER SERVICE LATERAL** | REVISED: -----
DRAWN BY: | CHECKED BY: | FILE: S15-Sewer Service Lateral.dwg

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

CERTIFICATE OF AUTHORIZATION
Richardson Engineering, PLLC
No. 2519
ARKANSAS

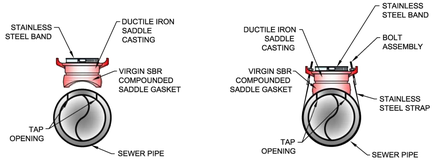
MISC. DETAILS
ZYAIR ESTATES
SUBDIVISION
HILLTOP ROAD
BRYANT, ARKANSAS

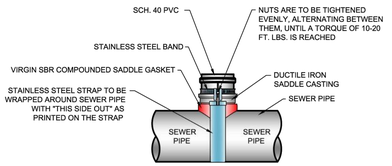
EMINENT CONSTRUCTIONS

Prepared For:

No.	Revisions	Date
1	AS PER CITY COMMENTS	4/7/2026

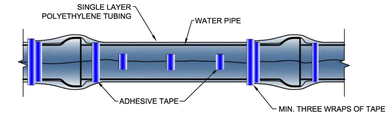
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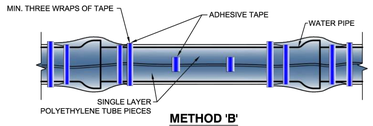
SEWER SERVICE SADDLE

CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	TITLE: **SEWER DETAILS**	DATE: APRIL 2015 REVISED --- --- --- --- ---	SHEET: **S17**
	DESCRIPTION: **SEWER SERVICE SADDLE**		
	DRAWN BY: CHECKED BY: FILE: S17-Sewer Service Saddle.dwg		



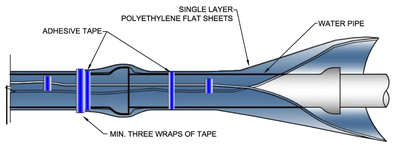
METHOD 'A'

METHOD 'A' USES ONE LENGTH OF POLYETHYLENE TUBE, OVERLAPPED AT THE JOINTS A MINIMUM OF 2 FEET.



METHOD 'B'

METHOD 'B' USES SEPARATE PIECES OF POLYETHYLENE TUBE FOR THE BARREL OF THE PIPE AND THE JOINTS. SHORT PIECES SHALL BE APPROXIMATELY 6" LONG AND OVERLAP BARREL SECTION BY A MINIMUM OF 2 FEET.



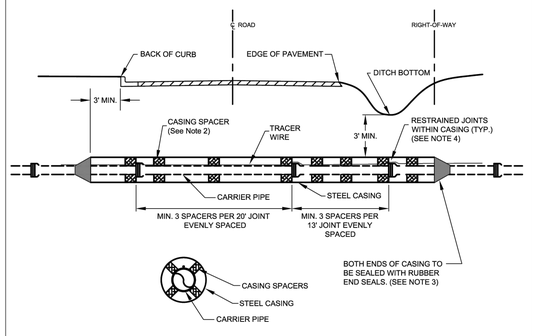
METHOD 'C'

METHOD 'C' - USED FOR PIPE-SHAPED AND ODD- SHAPED APPURTENANCES SUCH AS BENDS, REDUCERS, OFFSETS, VALVES, TEES, ETC.

ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE POLY WRAPPED.

THE ANSI/AWWA C105/A21.5 STANDARD OUTLINES THREE METHODS OF INSTALLING POLYETHYLENE ENCASEMENT/ SLEEVING.

CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	TITLE: **SEWER DETAILS**	DATE: APRIL 2015 REVISED --- --- --- --- ---	SHEET: **S20**
	DESCRIPTION: **POLYETHYLENE PROTECTION MATERIAL**		
	DRAWN BY: CHECKED BY: FILE: S20-Poly Wrap.dwg		



NOTES:

1. STEEL CASING SHALL BE CONSTRUCTED OF SPIRAL OR STRAIGHT WELDED STEEL WITH A MINIMUM DIAMETER AND THICKNESS AS SHOWN BELOW (SEE TABLE).
2. PROVIDE CASING SPACERS BY CASCADE MODEL CCS AS MANUFACTURED BY CASCADE WATERWORKS MFG. CO., OR APPROVED EQUAL, MINIMUM 12-INCHES WIDE.
3. PROVIDE END SEALS BY CASCADE MODEL CCES AS MANUFACTURED BY CASCADE WATERWORKS MFG. CO., OR APPROVED EQUAL.
4. ONE CASING SPACER SHALL BE PLACED AT THE INSERTION STOP LINE TO RESIST OVER INSERTION.
5. ALL FORCE MAINS SHALL BE FULLY RESTRAINED WHERE ENCASEMENTS ARE GREATER THAN 25 FEET IN LENGTH, SELF-RESTRAINING GASKETS OR BELL RESTRAINTS SHALL BE USED FOR ALL JOINTS INSIDE THE ENCASEMENT PIPE AND FOR THE FIRST JOINT IN EACH DIRECTION OUTSIDE THE ENCASEMENT PIPE.
6. DIRECT BURY STEEL ENCASEMENT SHALL BE POLY WRAPPED.

CARRIER AND CASING SIZES

CARRIER (ID)	2"	3"	4"	6"	8	10"	12"
CASING (ID)	5"	6"	8"	12"	16"	20"	24"
CASING WALL THICKNESS	0.250	0.250	0.250	0.250	0.250	0.250	0.375
CARRIER (ID)	14" - 16"	18" - 20"	24"	30"	36"	42"	48"
CASING (ID)	30"	36"	42"	48"	54"	60"	72"
CASING WALL THICKNESS	0.375	0.500	0.625	0.625	0.625	0.625	0.750

STEEL ENCASEMENT

CITY OF BRYANT, AR WATER UTILITIES 210 S.W. 3rd. STREET BRYANT, AR PHONE: (501) 943-0468	TITLE: **SEWER DETAILS**	DATE: APRIL 2015 REVISED --- --- --- --- ---	SHEET: **S21**
	DESCRIPTION: **STEEL ENCASEMENT**		
	DRAWN BY: CHECKED BY: FILE: S21-Steel Encasement.dwg		

RICHARDSON ENGINEERING
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325 W. SOUTH STREET, BENTON, AR 72015 (501)315-7225

CERTIFICATE OF AUTHORIZATION
Richardson Engineering, PLLC
No. 2519
ARKANSAS

MISC. DETAILS
ZYAIR ESTATES
SUBDIVISION
HILLTOP ROAD
BRYANT, ARKANSAS

Prepared For:
EMINENT CONSTRUCTIONS

No.	Revisions	Date
1	AS PER CITY COMMENTS	4/7/2026

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TRACT 2
28519 SQ. FT.
0.65 ACRES

TRACT 1
OPEN SPACE
RECREATION AREA
176672 SQ. FT.
4.06 ACRES

TRACT 3
MAIL BOX/ OPEN SPACE
11023 SQ. FT.
0.25 ACRES

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