PLANS FOR A

LARGE SCALE DEVELOPMENT

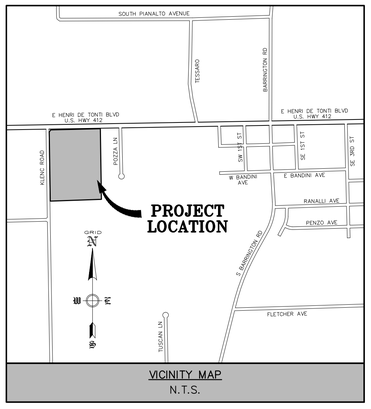
TO SERVE

THE RESERVE

IN THE CITY OF

TONTITOWN, ARKANSAS

CABLE COMPANY:	COX COMMUNICATION CONTACT: MICHAEL MOORE 4901 SOUTH 48TH STREET SPRINGDALE, AR 72762 PH: 479-717-3730 FAX: 479-872-0174 EMAIL: MICHAEL.MOORE3@COX.COM
TELEPHONE COMPANY:	AT&T CONTACT: JOHN HILL PH. 479-442-1963 EMAIL: JH7313@ATT.COM
GAS COMPANY:	BLACK HILLS ENERGY CONTACT: BRANDON STOKES PH. 479-225-3726
ELECTRIC COMPANY:	OZARKS ELECTRIC CONTACT: WES MAHAFFEY PH. 479-684-4949 EMAIL: WMAHAFFEY@OZARKSECC.COM
WATER /SEWER DEPARTMENT:	TONTITOWN WATER UTILITIES 201 E HENRI DE TONTI BLVD TONTITOWN, AR 72770 PH. 479-361-2996 FAX: 501-421-8774
PLANNING DEPARTMENT:	PLANNING AND ZONING DEPARTMENT 235 E. HENRI DE TONTI TONTITOWN, AR 72770 PH. 479-361-9702 FAX 501-421-0012
BUILDING DEPARTMENT:	CITY OF TONTITOWN'S BUILDING DEPT. 235 E. HENRI DE TONTI TONTITOWN, AR 72770 PH. 479-361-9702 FAX 501-421-0012



VICINITY MAP
N.T.S.

REVIEW OF THESE PLANS IS LIMITED TO COMPLIANCE WITH CITY CODES AND REGULATIONS. BY REVIEWING AND APPROVING THESE PLANS THE REVIEWER AND THE CITY OF TONTITOWN ASSUME NO RESPONSIBILITY FOR ANY ERRORS OR OMISSIONS IN THE PLANS. THE ADEQUACY OF THE PLANS IS THE SOLE RESPONSIBILITY OF THE DESIGN ENGINEER HOWEVER, THE CITY OF TONTITOWN RESERVES THE RIGHT TO REQUIRE CORRECTIVE ACTION, IF ANY INADEQUACIES ARE FOUND AFTER THE IMPROVEMENTS ARE CONSTRUCTED.

May 21, 2019

BY

ENGINEERING SERVICES INC.

CONSULTING ENGINEERS
SPRINGDALE, ARKANSAS
PHONE: 479-751-8733
FAX: 479-751-8746
WWW.ENGINEERINGSERVICES.COM

ARKANSAS ONE CALL SYSTEM, INC.
1-800-482-8998
STOP - CALL BEFORE YOU DIG

INDEX OF SHEETS	
SHEET No.	DESCRIPTION
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20	LIGHTING PLAN
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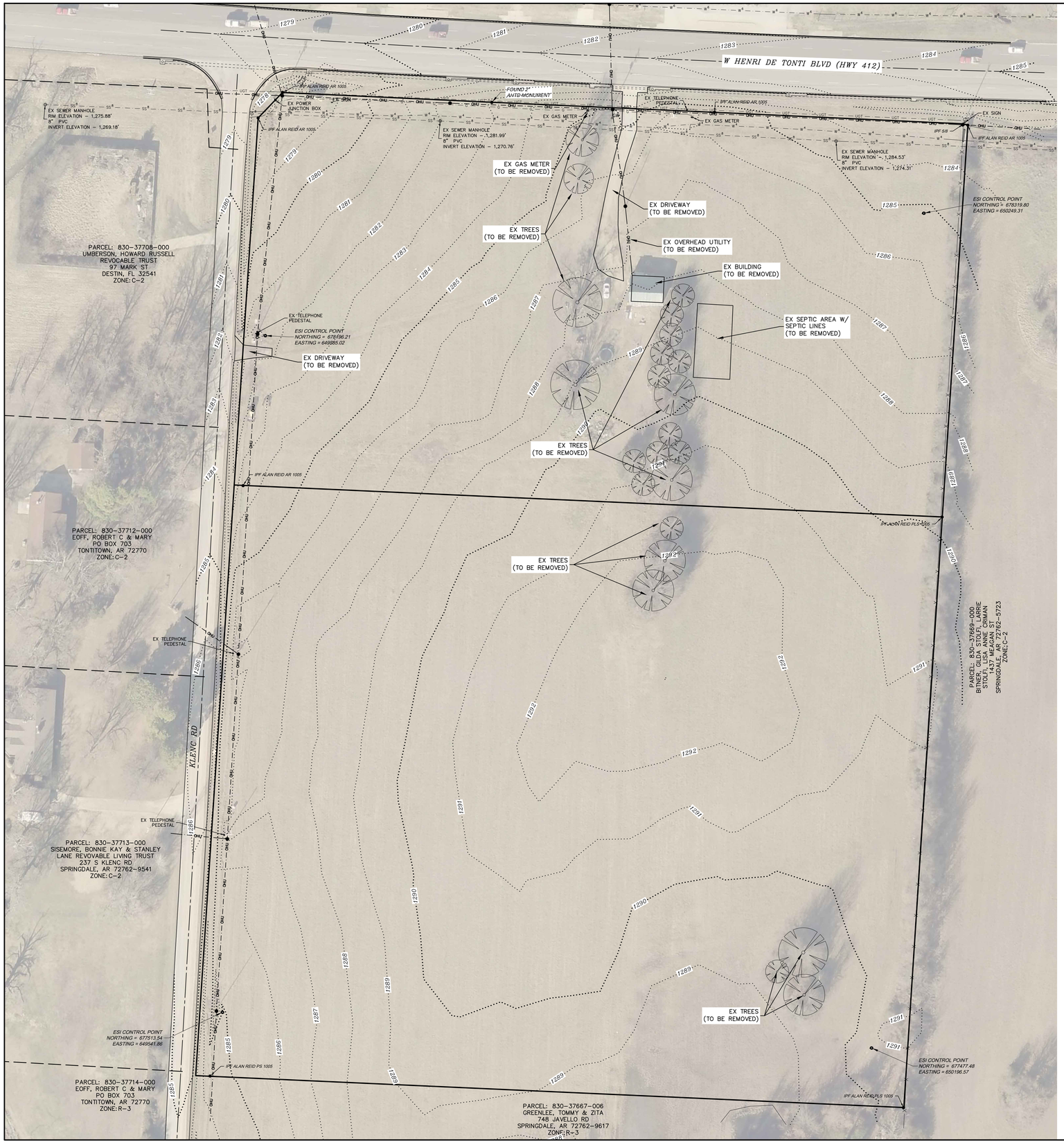
THOMAS J. APPEL, P.E. No. 13828
ENGINEERING SERVICES, INC.

NOTES:

1) ALL STREET AND DRAINAGE CONSTRUCTION MUST COMPLY WITH THE REQUIREMENTS OF THE CITY OF TONTITOWN, ARKANSAS.
2) ALL WATER AND SEWER CONSTRUCTION MUST COMPLY WITH THE SPECIFICATION REQUIREMENTS (ORDINANCE 2013-06-429, ADOPTED JUNE 4, 2013, REVISED APRIL 5, 2016) FOR THE CONSTRUCTION OF WATER AND SEWER FACILITIES OF THE CITY OF TONTITOWN WATER UTILITIES.
3) ALL SANITARY SEWER CONSTRUCTION MUST COMPLY WITH THE REQUIREMENTS OF THE CITY OF TONTITOWN, ARKANSAS.
4) TRAFFIC SAFETY CONTROL FEATURES ARE TO BE PROVIDED BY THE CONTRACTOR.
5) ANY STREET CLOSURES ARE TO BE COORDINATED WITH THE CITY OF TONTITOWN 48 HOURS PRIOR TO WORK.
6) THERE ARE NO KNOWN WETLANDS ON THIS PROPERTY.
7) NO KNOWN EROSION PROBLEMS EXIST ON THIS SITE.
8) THERE ARE NO KNOW EXISTING OR ABANDONED WATER WELLS, SUMPS, CESSPOOLS, SPRINGS, WATER IMPOUNDMENTS, OR UNDERGROUND STRUCTURES ON THIS PROPERTY.
9) THERE ARE NO KNOWN POTENTIALLY DANGEROUS AREAS.
10) THERE ARE NO KNOWN EXISTING OR PROPOSED GROUND LEASES OR ACCESS AGREEMENTS.
11) THIS PROPERTY IS WITHIN THE FLOOD PLAIN ZONE 'X', (NO SHADING) DESIGNATED AS AN AREA DETERMINED TO BE OUTSIDE OF 0.2% ANNUAL CHANCE FLOODPLAIN, AS SHOWN ON THE F.I.R.M. MAP #05143C0065 F, PANEL 65 OF 575, WASHINGTON COUNTY, ARKANSAS & INCORPORATED AREAS. EFFECTIVE DATE: MAY 16, 2008.



GRAPHIC REPRESENTATION ONLY
SCALE 1" = 50'
0 25' 50' 100'

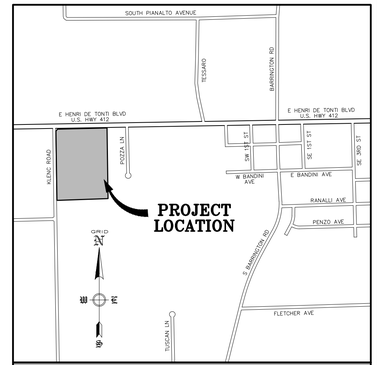
LEGEND

- SET IRON PIN
- IRON PIN FOUND
- MAG NAIL FOUND
- C. PROPERTY LINE
- SAW-CUT LINE
- EX. EASEMENT LINE
- EX. BUILDING SETBACK LINE
- EX. ROAD CENTERLINE
- EX. CURB & GUTTER
- EX. CONTOUR
- PROPOSED CONTOUR
- EX. OVERHEAD POWER LINE
- EX. GAS LINE
- EX. UNDERGROUND TELEPHONE LINE
- EX. 8" SEWER LINE
- EX. STORM DRAIN LINE
- EX. WATER LINE
- EX. FIBER OPTIC LINE
- EX. WATER METER
- EX. FIRE HYDRANT
- EX. SEWER MANHOLE
- EX. POWER POLE
- EX. WATER VALVE
- EX. LIGHT POLE
- EX. SIGN
- EX. WATER METER
- EX. TRAFFIC POLE
- EX. GAS MANHOLE
- EX. ELECTRIC MANHOLE
- EX. TELEPHONE MANHOLE
- EX. TREES
- EX. SEWER VALVE
- EX. WATER MANHOLE
- EX. FIBER OPTIC VAULT
- EX. TELEPHONE BOX
- EX. MAILBOX
- EX. GAS METER
- EX. GAS VALVE

NOTE;

1) ALL EXISTING TREES ON-SITE ARE TO BE REMOVED WITHIN LIMITS OF DISTURBANCE SHOWN ON SWPPP, UNLESS OTHERWISE SPECIFIED ON PLANS.

2) EROSION CONTROL BEST MANAGEMENT PRACTICES SHALL BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE OR DEMOLITION.



VICINITY MAP
N.T.S.

OWNER: MANTEGANI, EILEEN A LIVING TRUST
PO BOX 25
TONTITOWN, AR 72770-0025

ENGINEER: ENGINEERING SERVICES, INC.
1207 S. OLD MISSOURI ROAD
P.O. BOX 282
SPRINGDALE, AR 72762

CITY ZONING: C-2 GENERAL COMMERCIAL

SETBACKS: FRONT – 25'
STREET SIDE – 25'
INTERIOR SIDE – 10'
REAR – 25'

GROSS AREA: 16.32 ACRES±
NET AREA: 16.32 ACRES±

PARCEL NUMBER: *830-37667-000*
830-37667-007

SURVEY DESCRIPTION TRACT 'D'
A PART OF THE WEST HALF (W 1/2) OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION ONE (1), TOWNSHIP SEVENTEEN (17) NORTH, RANGE THIRTY-ONE (31) WEST, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS; COMMENCING AT THE NORTHWEST CORNER OF SAID 80 ACRE TRACT; THENCE S03°44'22"W 468.80 FEET ALONG THE WEST LINE OF SAID 80 ACRE TRACT TO THE TRUE POINT OF BEGINNING, SAID POINT BEING IN KLENC ROAD AND FROM WHICH A 1/2" REFERENCE IRON SET ON THE EAST RIGHT-OF-WAY LINE OF SAID ROAD BEARS S87°25'01"E 9.22 FEET; THENCE LEAVING THE WEST LINE OF SAID 80 ACRE TRACT, S87°25'01"E 715.00 FEET TO A SET 1/2" IRON REBAR; THENCE S03°44'22"W 597. 17 FEET TO A SET 1/2" IRON REBAR; THENCE N87°25'01"W 715.00 FEET TO A POINT ON THE WEST LINE OF SAID 80 ACRE TRACT, SAID POINT BEING IN KLENC ROAD AND FROM WHICH AN EXISTING REFERENCE IRON ON THE EAST RIGHT-OF-WAY LINE OF SAID ROAD BEARS S87°25 '01"E 15.08 FEET; THENCE N03°44'22"E 597.17 FEET ALONG THE WEST LINE OF SAID 80 ACRE TRACT TO THE POINT OF BEGINNING, CONTAINING 9.80 ACRES, MORE OR LESS, TONTITOWN , WASHINGTON COUNTY, ARKANSAS. THE ABOVE DESCRIBED 9.80 ACRE TRACT BEING SUBJECT TO THE RIGHT-OF-WAY OF KLENC ROAD AND ANY OTHER EASEMENTS AND/OR RIGHTS-OF-WAY WHETHER OR NOT OF RECORD.

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N43°44'00"E 35.67 FEET TO AN EXISTING R-O-W MONUMENT;
S87°20'32"E 211.24 FEET TO AN EXISTING R-O-W MONUMENT;
S87°24'11"E 224.96 FEET TO AN EXISTING R-O-W MONUMENT;
S87°20'55"E 251.19 FEET TO AN EXISTING R-O-W MONUMENT;
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SURVEY DESCRIPTION – TOTAL AREA REQUESTING CONDITIONAL USE PERMIT A PART OF THE WEST HALF (W 1/2) OF THE SOUTHWEST QUARTER (SW 1/4) OF SECTION ONE (1), TOWNSHIP SEVENTEEN (17) NORTH, RANGE THIRTY-ONE (31) WEST, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHWEST CORNER OF SAID 80 ACRE TRACT; THENCE S03°44'22"W 97.77 FEET ALONG THE WEST LINE OF SAID 80 ACRE TRACT TO THE TRUE POINT OF BEGINNING, SAID POINT BEING AN EXISTING IRON REBAR ON THE SOUTH RIGHT-OF-WAY LINE OF U.S. HIGHWAY 412 (HENRI DE TONTI BOULEVARD); THENCE ALONG SAID RIGHT-OF-WAY LINE, THE FOLLOWING BEARINGS AND DISTANCES:
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ENGINEERING SERVICES INC.
1207 SOUTH OLD MISSOURI RD.
SPRINGDALE, ARKANSAS 72764

EXISTING CONDITIONS
THE RESERVE
TONTITOWN, ARKANSAS

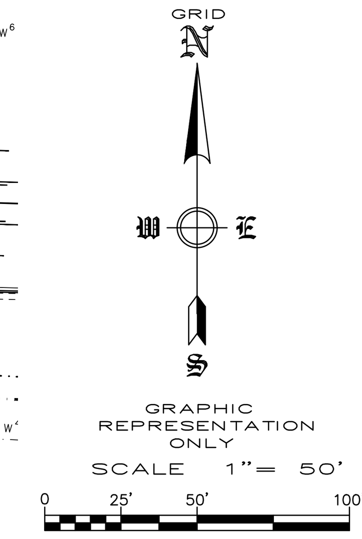
REVISION	DATE	DESCRIPTION

© COPYRIGHT 2019, ENGINEERING SERVICES, INC. 5:21:2019 9:16 PM

SCALE: 1"=50'
DATE: May 21, 2019
ENGINEER: TJA
DRAWN BY: JGA
W.O. #: 19922

C:\ESI\19922 - THE RESERVE TONTITOWN\19922 EXISTING CONDITIONS.DWG

1



(1) CERTIFICATE OF PRELIMINARY SURVEY ACCURACY.

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

DATE OF EXECUTION: ______________

____
REGISTERED LAND SURVEYOR

STATE OF ARKANSAS REGISTRATION NO. ___________

(2) 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,____________________, 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: ______________

____
REGISTERED ENGINEER

STATE OF ARKANSAS REGISTRATION NO. ___________

(3) 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).

DATE OF EXECUTION: ______________

SIGNED: ______________________
TONTITOWN PLANNING COMMISSION CHAIRMAN

LEGEND

- SET IRON PIN
- IRON PIN FOUND
- MAG NAIL FOUND
- C. PROPERTY LINE
- SAW–CUT LINE
- EX. EASEMENT LINE
- EX. BUILDING SETBACK LINE
- EX. ROAD CENTERLINE
- EX. CURB & GUTTER
- EX. CONTOUR (1369)
- PROPOSED CONTOUR (1368)
- EX. OVERHEAD POWER LINE (OHP/T)
- EX. GAS LINE (G)
- EX. UNDERGROUND TELEPHONE LINE (UGT)
- EX. 8" SEWER LINE (SS)
- EX. STORM DRAIN LINE
- EX. WATER LINE (W)
- EX. FIBER OPTIC LINE (F.O.)
- EX. WATER METER
- EX. FIRE HYDRANT
- EX. SEWER MANHOLE
- EX. POWER POLE
- EX. WATER VALVE
- EX. LIGHT POLE
- EX. SIGN
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- EX. SEWER VALVE
- EX. WATER MANHOLE
- EX. FIBER OPTIC VAULT
- EX. TELEPHONE BOX
- EX. MAILBOX
- EX. GAS METER
- EX. GAS VALVE
- PROPOSED FENCE
- PROPOSED EASEMENT LINE
- PROPOSED SIDEWALK
- PROPOSED GAS LINE (G)
- PROPOSED ELECTRIC LINE (UGP)
- PROPOSED WATERLINE (W)
- PROPOSED HADICAP RAMP (HR)
- PROPOSED STORM BOX & PIPE
- PROPOSED SEWER MANHOLE & PIPE

PROPOSED BUILDINGS

BUILDING TYPE	TOTAL UNITS
4 BUILDINGS – 1 BEDROOM UNITS	12 UNITS/BUILDING = 48 UNITS
7 BUILDINGS – 2 BEDROOM UNITS	12 UNITS/BUILDING = 84 UNITS
CLUBHOUSE	2,500 FT.^{2}
POOL	930 FT.^{2}
CABANA	1,000 FT.^{2}

PARCEL NUMBER: 830–37667–000
830–37667–007

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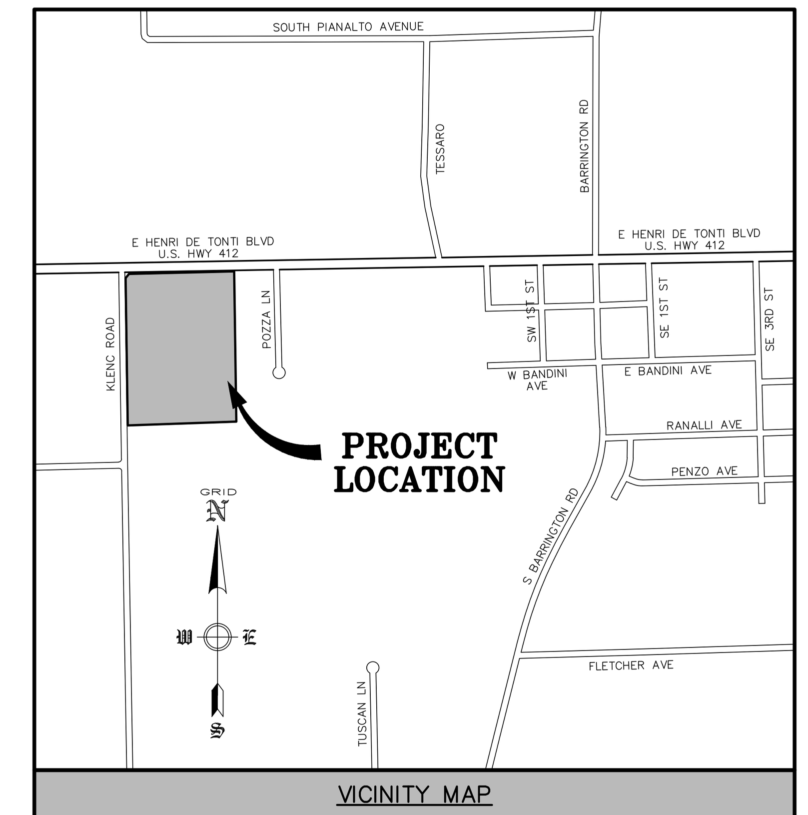

VICINITY MAP
N.T.S.

OWNER:	MANTEGANI, EILEEN A LIVING TRUST P.O. BOX 25 TONTITOWN, AR 72770–0025
DEVELOPER:	THE RESERVE AT TONTITOWN, LLC P.O. BOX 10386 FORT SMITH, AR 72917
ENGINEER:	ENGINEERING SERVICES, INC. 1207 S. OLD MISSOURI ROAD P.O. BOX 282 SPRINGDALE, AR 72762
CITY ZONING:	C–2 GENERAL COMMERCIAL
PROPOSED USE:	MIXED USE CENTER WITH COMMERCIAL AND MULTI–FAMILY RESIDENTIAL (FUTURE LAND USE CATEGORY RC–C) CONDITIONAL USE PERMIT APPROVED FOR MULTI–FAMILY USE.
SETBACKS:	FRONT – 25' STREET SIDE – 25' INTERIOR SIDE – 10' REAR – 25'
GROSS AREA:	16.32 ACRES±
NET AREA:	15.97 ACRES±
PARKING REQUIRED PHASE 1:	2 1/4 SPACES PER 2 BEDROOM UNIT (36 UNITS) = 81 SPACES 1 3/4 SPACES PER 1 BEDROOM UNIT (24 UNITS) = 42 SPACES 1 SPACE PER 250 FT.^{2} (2,562 FT.^{2}) = 10 SPACES
PARKING PROVIDED PHASE 1:	156 SPACES (ADA 6 SPACES)
PARKING REQUIRED PHASE 2:	2 SPACES PER UNIT (DUPLEX) (30 UNITS) = 60 SPACES
PARKING PROVIDED PHASE 2:	60 SPACES
PARKING REQUIRED PHASE 3:	2 1/4 SPACES PER 2 BEDROOM UNIT (48 UNITS) = 108 SPACES 1 3/4 SPACES PER 1 BEDROOM UNIT (24 UNITS) = 42 SPACES
PARKING PROVIDED PHASE 3:	93 SPACES (ADA 4 SPACES)

TOTAL REQUIRED (PH 1 & 3) = 283 SPACES
TOTAL PROVIDED (PH 1 & 3) = 249 SPACES

NOTES:

1) ANY COST OF ADJUSTMENTS, RELOCATION OR DAMAGE OF EXISTING UTILITIES WILL BE THE RESPONSIBILITY OF THE OWNERS/DEVELOPERS.
2) ALL PROPOSED UTILITY WIRES, LINES, AND/OR CABLE UTILIZED BY ELECTRIC AND/OR TELECOMMUNICATIONS COMPANIES SHALL BE PLACED UNDERGROUND. EXCLUDING 12Kv AND ABOVE.
3) OUTDOOR STORAGE, TRASH COLLECTION, AND LOADING AREAS MUST BE LANDSCAPED, SO THAT THEIR FUNCTIONS ARE FULLY CONTAINED AND OUT OF VIEW OF THE ADJACENT PROPERTY AND THE PUBLIC RIGHT–OF–WAY.
4) EXTERIOR GROUND–MOUNTED OR BUILDING–MOUNTED EQUIPMENT INCLUDING, BUT NOT LIMITED TO, MECHANICAL EQUIPMENT, UTILITIES AND BANKS OF METER SHALL BE SCREENED FROM PUBLIC VIEW WITH LANDSCAPING OR WITH AN ARCHITECTURAL TREATMENT COMPATIBLE WITH THE BUILDING ARCHITECTURE.
5) ALL ROOFTOP EQUIPMENT SHALL BE SCREENED FROM PUBLIC VIEW WITH AN ARCHITECTURAL TREATMENT THAT IS COMPATIBLE WITH THE BUILDING ARCHITECTURE.
6) THE GLOBAL POSITIONING SYSTEM (GPS) AND CONVENTIONAL TERRESTRIAL SURVEYING EQUIPMENT PROVIDED THE RELATIVE POSITIONING FOR THE TOPOGRAPHIC, PLANIMETRIC AND BOUNDARY LOCATIONS SHOWN HEREON.
7) THE MAP PROJECTION IS REFERENCED TO THE HORIZONTAL CONTROL DATUM OF NAD83 (NORTH AMERICAN DATUM OF 1983), STATE PLANE COORDINATE SYSTEM, ARKANSAS NORTH ZONE (0301). THE BASIS OF BEARINGS FOR THIS PLAT ARE STATE PLANE GRID BEARING. THE VERTICAL DATUM IS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). TWO TEMPORARY BENCHMARKS UTILIZING THIS DATUM ARE SHOWN HEREON.
8) NO NEW SIGNAGE REQUESTED IN THIS PLATTING.
9) ALL IMPROVED SURFACES SHALL BE UNREINFORCED CONCRETE.
10) MODIFIED CURB REQUIRED ON ALL DRIVES.
11) PRIOR TO CONSTRUCTION, A PRE–CONSTRUCTION MEETING WITH ALL FRANCHISE UTILITIES WILL BE REQUIRED.
12) THE DETENTION POND MUST BE SODDED TO THE 100 YEAR FLOOD POOL.
13) CONTRACTOR SHALL USE EXTREME CAUTION WHEN CONSTRUCTING ALONG HWY 412 AND KLENC ROAD DUE TO OVERHEAD POWER LINES AND UTILITIES.

ENGINEERING SERVICES INC.
1207 SOUTH OLD MISSOURI RD.
SPRINGDALE, ARKANSAS 72764

LARGE SCALE DEVELOPMENT
THE RESERVE
TONTITOWN, ARKANSAS

REVISION	DATE	DESCRIPTION

SCALE: 1"=50'
DATE: May 21, 2019
ENGINEER: TJA
DRAWN BY: JGA
W.O. #: 19922

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W HENRI DE TONTI BLVD (HWY 412)

PHASE III
PHASE I

COMMERCIAL TRACT 1 (2.28 ACRES)

COMMERCIAL TRACT 2 (2.46 ACRES)

DETENTION POND 100 YEAR WSE = 1286.80

BUILDING #7: (12 UNITS) FFE = 1289.00

BUILDING #8: (12 UNITS) FFE = 1291.50

CLUB HOUSE FFE = 1291.50

POOL

CABANA

BUILDING #11: (12 UNITS) FFE = 1291.75

DETENTION POND 100 YEAR WSE = 1289.30

BUILDING #5: (12 UNITS)

BUILDING #6: (12 UNITS) FFE = 1292.50

BUILDING #9: (12 UNITS) FFE = 1292.00

BUILDING #10: (12 UNITS) FFE = 1291.50

EX SEWER MANHOLE
RIM ELEVATION = 1,281.99'
8" PVC
INVERT ELEVATION = 1,270.76'

EX SEWER MANHOLE
RIM ELEVATION = 1,284.53'
8" PVC
INVERT ELEVATION = 1,274.31'

FOUND 2" AHTD MONUMENT

IPF ALAN REID AR 1605

IPF ALAN REID AR 1005

EX POWER JUNCTION BOX

EX TELEPHONE PEDESTAL

EX GAS METER

EX SIGN

ESI CONTROL POINT
NORTHING = 678196.22
EASTING = 649585.06

ESI CONTROL POINT
NORTHING = 678319.80
EASTING = 650249.31

GRID N

GRAPHIC REPRESENTATION ONLY
SCALE 1" = 30'
0 15' 30' 60'

PARCEL: 830-37669-000
BITNER, GILDA STOLFI, LARRIE
STOLFI, LISA ANNE CRIMAN
1437 MEAGAN ST
SPRINGDALE, AR 72762-5723
ZONE: C-2

PARCEL: 830-37708-000
ERSON, HOWARD RUSSELL
REVOCABLE TRUST
97 MARK ST
DESTIN, FL 32541
ZONE: C-2

830-37712-000
OBERT C & MARY
O BOX 703
OWN, AR 72770
ZONE: C-2

ENGINEERING SERVICES INC.
1207 SOUTH OLD MISSOURI RD.
SPRINGDALE, ARKANSAS 72764

GRADING PLAN
THE RESERVE
TONTITOWN, ARKANSAS

REVISION	DATE	DESCRIPTION

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SCALE: 1"=30'
DATE: May 21, 2019
ENGINEER: TJA
DRAWN BY: JGA
W.O. #: 19922

REVISION	DATE	DESCRIPTION

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SCALE: 1"=30'
DATE: May 21, 2019
DRAWN BY: JA
CHECKED BY: JA
W.O. # 19922

4

GRADING PLAN
THE RESERVE
TONTITOWN, ARKANSAS

ENGINEERING SERVICES INC.
1207 SOUTH OLD MISSOURI RD.
SPRINGDALE, ARKANSAS 72764

ESI
ENGINEERING SERVICES INC.
1207 SOUTH OLD MISSOURI RD.
SPRINGDALE, ARKANSAS 72764

STORM DRAINAGE PLAN
THE RESERVE
TONTITOWN, ARKANSAS

W HENRI DE TONTI BLVD (HWY 412)

IPF ALAN REID AR 1605

FOUND 2" AHTD MONUMENT

PHASE III

PHASE I

COMMERCIAL TRACT 1 (2.28 ACRES)

COMMERCIAL TRACT 2 (2.46 ACRES)

DETENTION POND 100 YEAR WSE = 1286.80

BUILDING #7: (12 UNITS) FFE = 1289.00

BUILDING #8: (12 UNITS) FFE = 1291.50

CLUB HOUSE FFE = 1291.50

BUILDING #11: (12 UNITS) FFE = 1291.50

DETENTION POND 2 100 YEAR WSE = 1288.00

POOL

CABANA

BUILDING #5: (12 UNITS)

BUILDING #6: (12 UNITS) FFE = 1292.50

BUILDING #9: (12 UNITS) FFE = 1292.00

BUILDING #10: (12 UNITS) FFE = 1291.50

GRID N

GRAPHIC REPRESENTATION ONLY
SCALE 1" = 30'
0 15' 30' 60'

Sta. 1+16.52, LINE 9
INSTALL FES 9-4
INV: 1278.00, SEG. 9C

Sta. 1+11.72, LINE 9
INSTALL JB 9-3
RIM EL: 1281.75
INV IN: 1278.02, SEG. 9B
INV OUT: 1278.02, SEG. 9C

Sta. 0+52.30, LINE 9
INSTALL DI 9-2
RIM EL: 1284.34
INV IN: 1279.46, SEG. 9A
INV OUT: 1279.46, SEG. 9B

Sta. 0+52.76, LINE 1
INSTALL JB 1-2
RIM EL: 1290.00
INV IN: 1286.05, SEG. 1A
INV OUT: 1286.05, SEG. 1B

Sta. 0+89.72, LINE 1
INSTALL DI 1-3
RIM EL: 1290.60
INV IN: 1285.87, SEG. 1B
INV OUT: 1285.04, SEG. 1C

Sta. 0+37.76, LINE 4
INSTALL JB 4-2
RIM EL: 1290.50
INV IN: 1287.16, SEG. 4A
INV OUT: 1287.16, SEG. 4B

Sta. 1+83.91, LINE 4
INSTALL DI 4-3
RIM EL: 1289.50
INV IN: 1286.43, SEG. 4B
INV OUT: 1285.26, SEG. 4C

Sta. 0+88.76, LINE 6
INSTALL FES 6-3
INV: 1284.12, SEG. 6B

Sta. 0+51.12, LINE 6
INSTALL DI 6-2
RIM EL: 1289.00
INV IN: 1284.30, SEG. 6A
INV OUT: 1284.30, SEG. 6B

Sta. 0+12.47, LINE 9
INSTALL AI 9-1
RIM EL: 1288.00
INV OUT: 1280.01, SEG. 9A

Sta. 2+96.81, LINE 1
INSTALL FES 1-6
INV: 1284.00, SEG. 1E

Sta. 1+92.89, LINE 1
INSTALL DI 1-4
RIM EL: 1287.83
INV IN: 1284.52, SEG. 1C
INV OUT: 1284.52, SEG. 1D
INV IN: 1284.52, SEG. 3A

Sta. 0+00.00, LINE 1
INSTALL DI 1-3
RIM EL: 1291.00
INV OUT: 1286.32, SEG. 1A

Sta. 0+00.00, LINE 4
INSTALL DI 4-1
RIM EL: 1290.50
INV OUT: 1287.35, SEG. 4A

Sta. 2+12.91, LINE 4
INSTALL DI 4-4
RIM EL: 1289.50
INV IN: 1285.11, SEG. 4C
INV OUT: 1285.11, SEG. 4D

Sta. 0+00.00, LINE 6
INSTALL AI 6-1
RIM EL: 1290.00
INV OUT: 1285.00, SEG. 6A

Sta. 2+35.28, LINE 4
INSTALL FES 4-5
INV: 1285.00, SEG. 4D

Sta. 2+47.98, LINE 5
INSTALL FES 5-4
INV: 1285.00, SEG. 5C

Sta. 2+85.21, LINE 1
INSTALL DI 1-5
RIM EL: 1287.35
INV IN: 1284.06, SEG. 1D
INV OUT: 1284.06, SEG. 1E
INV IN: 1284.06, SEG. 2A

Sta. 0+00.00, LINE 3
INSTALL DI 3-1
RIM EL: 1288.82
INV OUT: 1284.80, SEG. 3A

Sta. 1+65.49, LINE 5
INSTALL 5-3
RIM EL: 1290.42
INV IN: 1285.41, SEG. 5B
INV OUT: 1285.41, SEG. 5C

Sta. 0+00.00, LINE 5
INSTALL DI 5-1
RIM EL: 1290.75
INV OUT: 1286.24, SEG. 5A

Sta. 0+61.49, LINE 5
INSTALL DI 5-2
RIM EL: 1290.88
INV IN: 1285.93, SEG. 5A
INV OUT: 1285.93, SEG. 5B

24" RCP
30" RCP
18" RCP
15" RCP

REVISION	DATE	DESCRIPTION

SCALE: 1"=30'
DATE: May 21, 2019
ENGINEER: TJA
DRAWN BY: JGA
W.O. #: 19922

5

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6

W.O. # 19922

DRAWN BY: SA

CHECKED BY: SA

DATE: May 21, 2019

SCALE: 1"=30'

REVISION	DATE	DESCRIPTION

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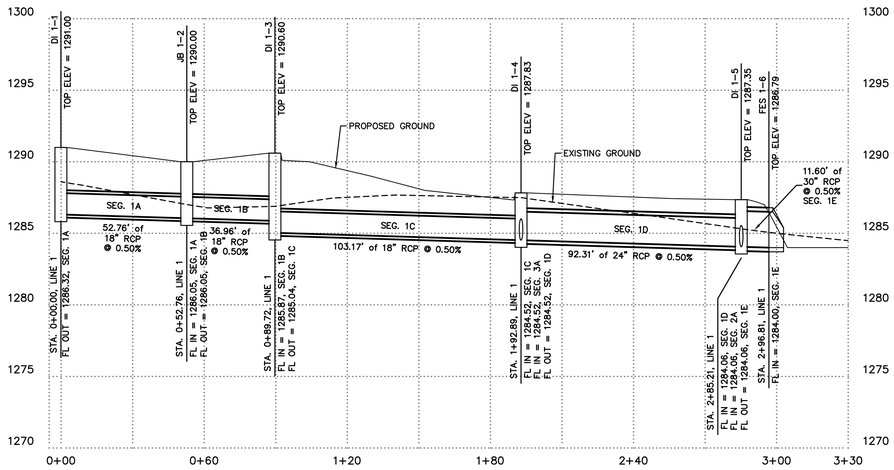
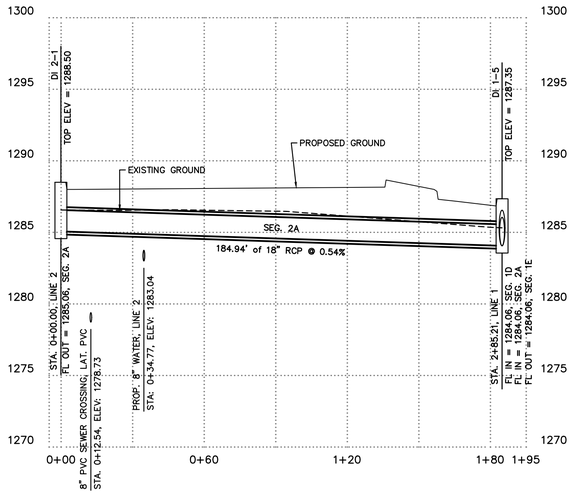
STORM DRAINAGE PLAN
THE RESERVE
TONTITOWN, ARKANSAS

ENGINEERING SERVICES INC.
1207 SOUTH OLD MISSOURI RD.
SPRINGDALE, ARKANSAS 72764

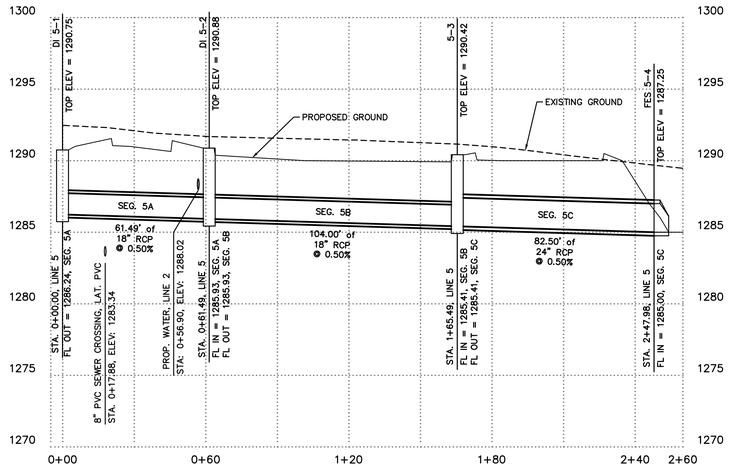
LINE 1



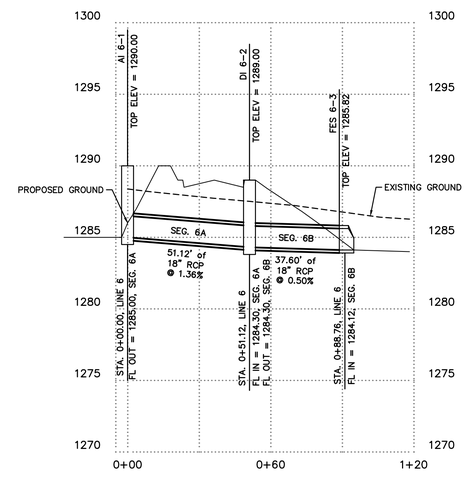
LINE 2



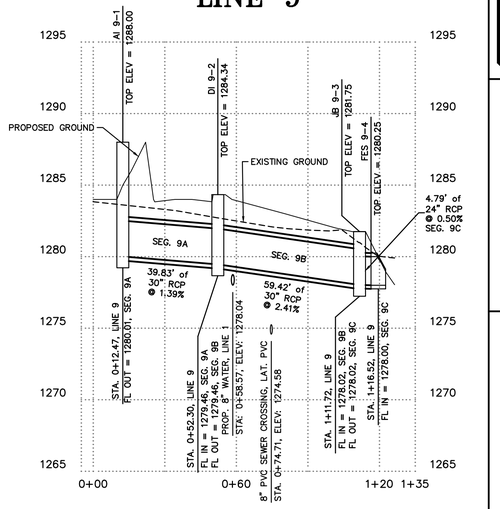
LINE 5



LINE 6



LINE 9



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ENGINEERING SERVICES INC.
1207 SOUTH OLD MISSOURI RD.
SPRINGDALE, ARKANSAS 72764

STORM DRAINAGE PROFILES
THE RESERVE
TONTITOWN, ARKANSAS

REVISION	DATE	DESCRIPTION

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J:\2019\19922 - THE RESERVE TONTITOWN\19922 - STORM DRAINAGE AND PAVING

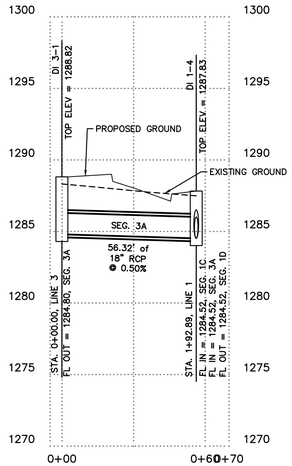
SCALE: 1"=30'

DATE: May 21, 2019

ENGINEER: TJA
DRAWN BY: JGA

W.O. #: 19922

LINE 3



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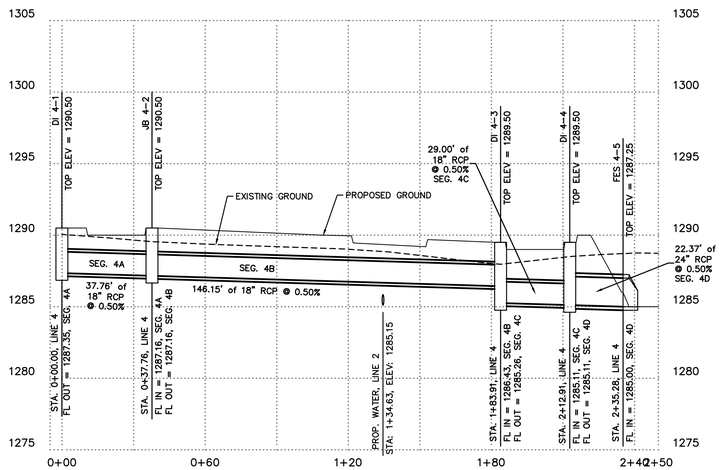

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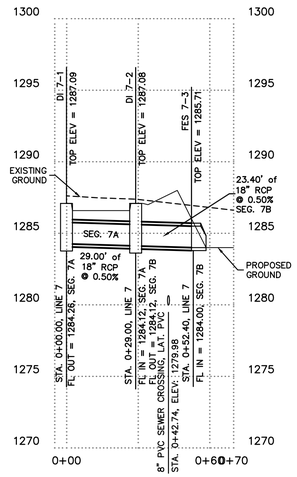

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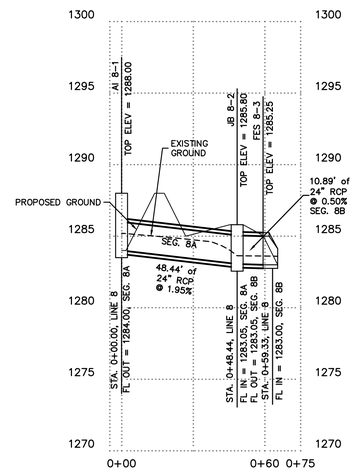
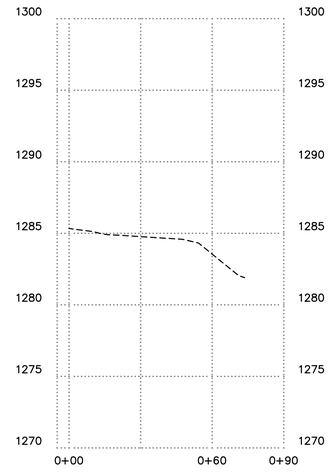
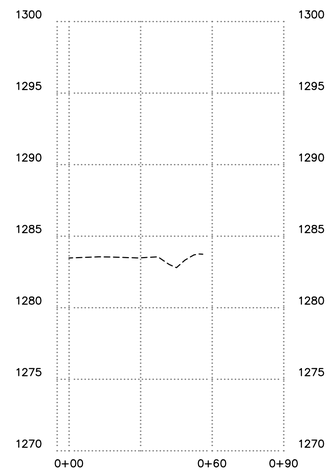


LINE 10



LINE 11



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ENGINEERING SERVICES INC.
1207 SOUTH OLD MISSOURI RD.
SPRINGDALE, ARKANSAS 72764

STORM DRAINGE PROFILES
THE RESERVE
TONTITOWN, ARKANSAS

REVISION	DATE	DESCRIPTION

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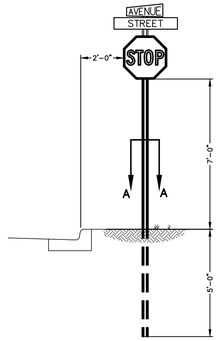
SCALE: 1"=30'

DATE: May 21, 2019

ENGINEER: TJA
DRAWN BY: JCA

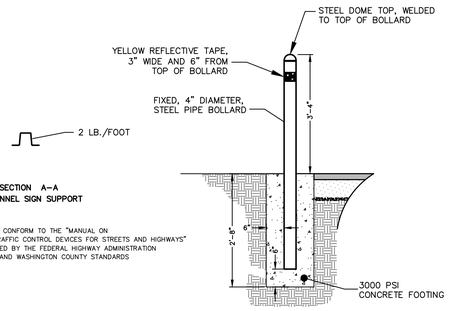
W.O. #: 19922



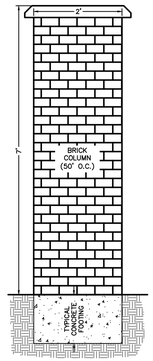
SECTION A-A
U-CHANNEL SIGN SUPPORT

NOTE : SIGN SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION AND AHTD AND WASHINGTON COUNTY STANDARDS

STOP SIGN DETAIL
NOT TO SCALE



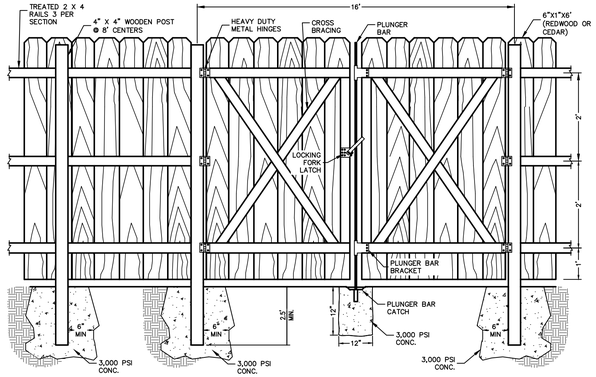
FRONT VIEW



REMOVABLE BOLLARD:
ALIGN BOLLARD PIPE & GROUND INSERT SO EYES ARE LOCATED AT BACK & FRONT OF BOLLARD, NOT STICKING OUT INTO TRAVEL WAY.

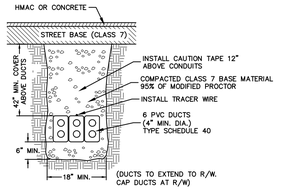
NOTE:
ALL METAL SHALL BE GALVANIZED PAINT, ONE COAT METAL PRIMER AND TWO COATS BENJAMIN MOORE HUNTER GREEN METAL ENAMEL.

STANDARD BOLLARD
NOT TO SCALE

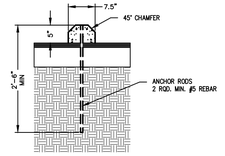


USE 6 GALV. NAILS PER BOARD.
SOLID BOARD SIDE TO FACE STREET.

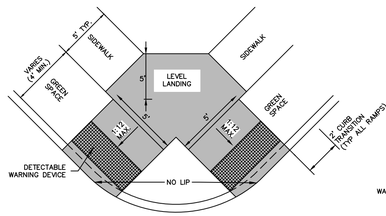
SCREENING FENCE DETAIL
NOT TO SCALE



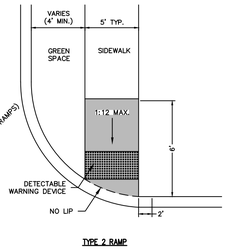
TYPICAL SECTION 6-4" UTILITY DUCTS
NOT TO SCALE



WHEEL STOP DETAIL
NOT TO SCALE

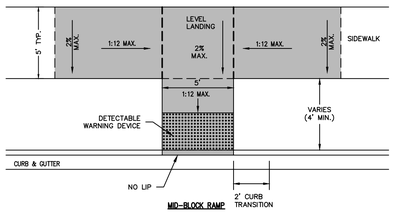


TYPE 1 RAMP



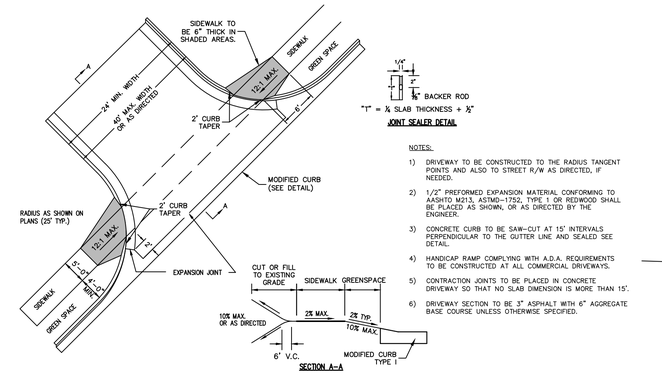
TYPE 2 RAMP

NOTES:
1) THE LENGTH OF THE RAMP SHALL BE SUCH THAT THE SLOPE DOES NOT EXCEED 1:12.
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

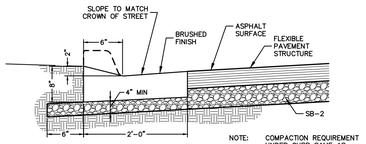
HANDICAP RAMP DETAILS
NOT TO SCALE



DRIVEWAY DETAIL
NOT TO SCALE

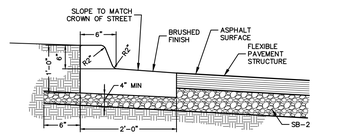
JOINT SEALER DETAIL

NOTES:
1) DRIVEWAY TO BE CONSTRUCTED TO THE RADIUS TANGENT POINTS AND ALSO TO STREET R/W AS DIRECTED, IF NEEDED.
2) 1/2" PREFORMED EXPANSION MATERIAL CONFORMING TO AASHTO M213, ASTMD-1752, TYPE 1 OR REDWOOD SHALL BE PLACED AS SHOWN, OR AS DIRECTED BY THE ENGINEER.
3) CONCRETE CURB TO BE SAW-CUT AT 15' INTERVALS PERPENDICULAR TO THE GUTTER LINE AND SEALED SEE DETAIL.
4) HANDICAP RAMP COMPLYING WITH A.D.A. REQUIREMENTS TO BE CONSTRUCTED AT ALL COMMERCIAL DRIVEWAYS.
5) CONTRACTION JOINTS TO BE PLACED IN CONCRETE DRIVEWAY SO THAT NO SLAB DIMENSION IS MORE THAN 15'.
6) DRIVEWAY SECTION TO BE 3" ASPHALT WITH 6" AGGREGATE BASE COURSE UNLESS OTHERWISE SPECIFIED.



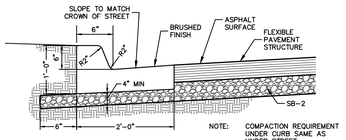
NOTE: COMPACTION REQUIREMENT UNDER CURB SAME AS UNDER STREET.

MODIFIED CONCRETE CURB & GUTTER
NOT TO SCALE



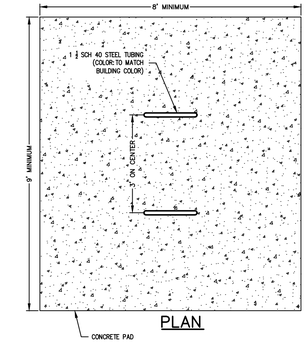
NOTE: COMPACTION REQUIREMENT UNDER CURB SAME AS UNDER STREET.

STANDARD 6" CONCRETE SPILL CURB & GUTTER
NOT TO SCALE

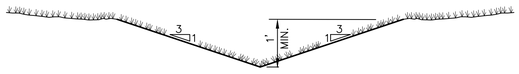


NOTE: COMPACTION REQUIREMENT UNDER CURB SAME AS UNDER STREET.

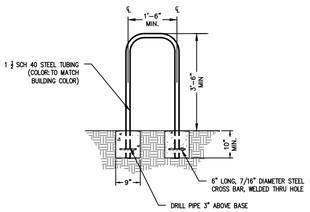
STANDARD 6" CONCRETE CURB & GUTTER
NOT TO SCALE



PLAN

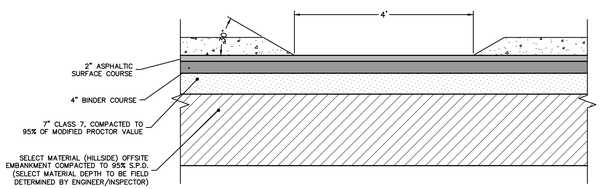


TYPICAL SWALE SECTION
NOTE : SWALE TO BE SODDED.

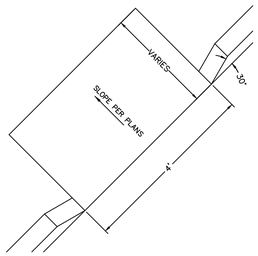


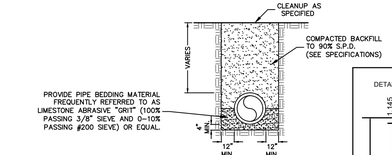
BICYCLE RACK DETAIL
NOT TO SCALE

LEGEND – GREEN (RETROREFL). WHITE SYMBOL ON BLUE (RETROREFL)
BACKGROUND – WHITE (RETROREFL)

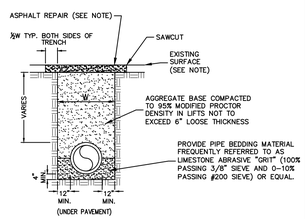


TYPICAL CURB CUT

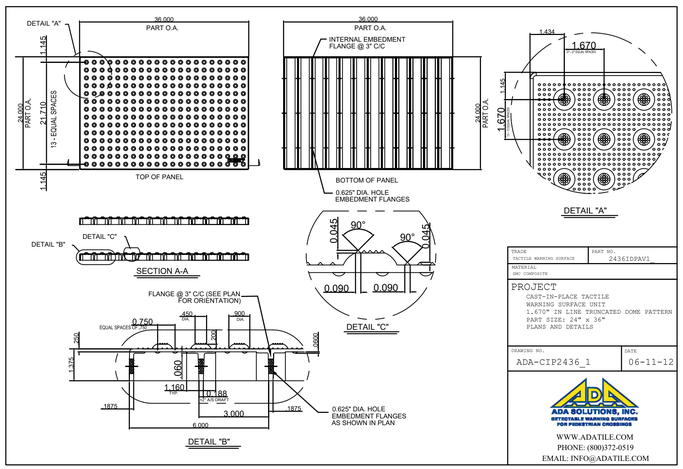




NOTE: ALL STORM SEWER TRENCHES RECEIVING PERMANENT PAVEMENT REPAIR SHALL BE REPAIRED WITH PAVEMENT TO A THICKNESS EQUALING THE GREATER OF 6" OR 1 1/2 TIMES THE THICKNESS OF THE EXISTING PAVEMENT. TEMPORARY STREET REPAIRS MAY BE MADE WITH COLD MIX ASPHALT.



STORM SEWER BEDDING AND BACKFILL
NOT TO SCALE



TRADE	PART NO.
TACTILE WARNING SURFACE	2436IDPAV1
MATERIAL	
CAST IN PLACE TACTILE	

PROJECT
CAST-IN-PLACE TACTILE WARNING SURFACE UNIT
1.670" IN LINE TRUNCATED DOME PATTERN
PART SIZE: 24" X 36"
PLANS AND DETAILS

DRAWING NO.	DATE
ADA-CIP2436_1	06-11-12

ADA SOLUTIONS, INC.
DETECTABLE WARNING SURFACES FOR PEDESTRIAN CROSSINGS
WWW.ADATILE.COM
PHONE: (800)372-0519
EMAIL: INFO@ADATILE.COM

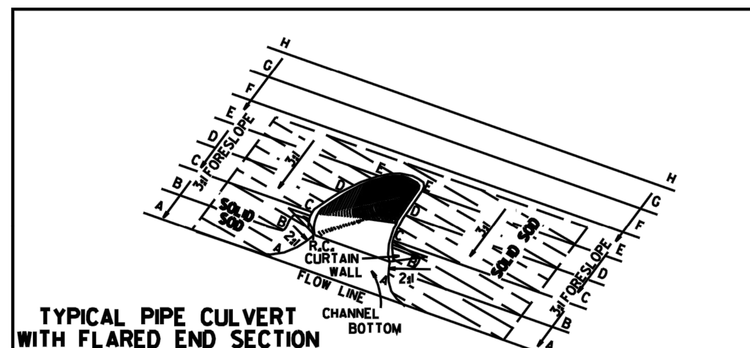
ESI
ENGINEERING SERVICES INC.
1207S EDITH BLVD MISSOURI RD.
SPRINGDALE, ARKANSAS 72764

TYPICAL DETAILS
THE RESERVE
TONTITOWN, ARKANSAS

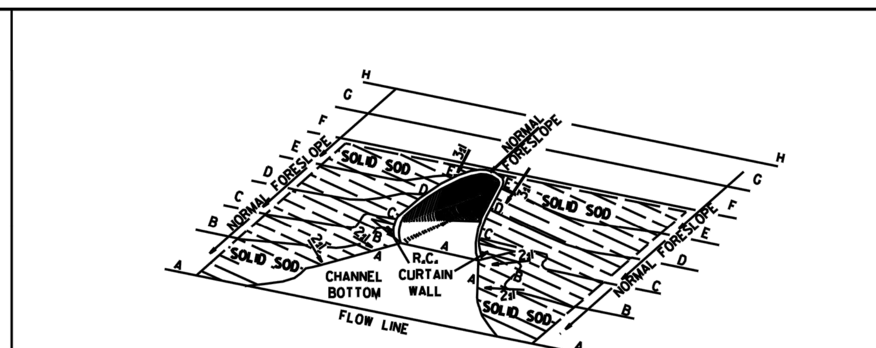
REVISION	DATE	DESCRIPTION

© COPYRIGHT 2019, ENGINEERING SERVICES, INC. 5:47:2021 4:43 PM

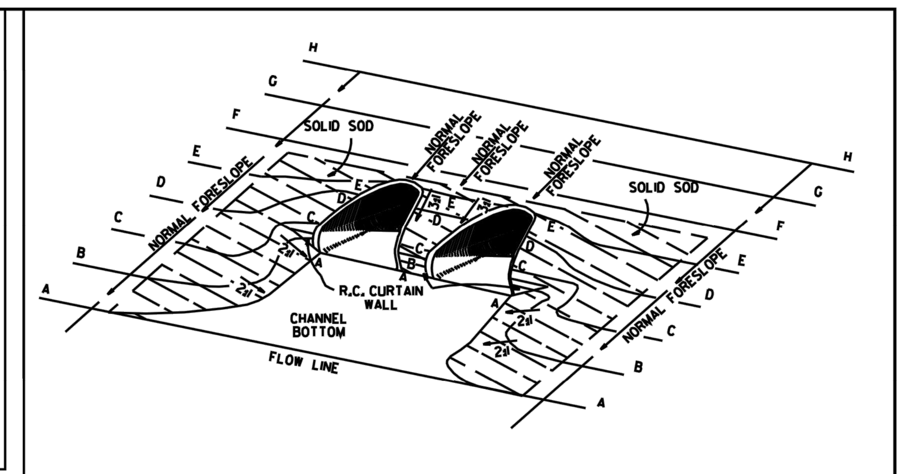
SCALE: N.T.S.
DATE: May 21, 2019
ENGINEER: TJA
DRAWN BY: JGA
W.O. #: 19922



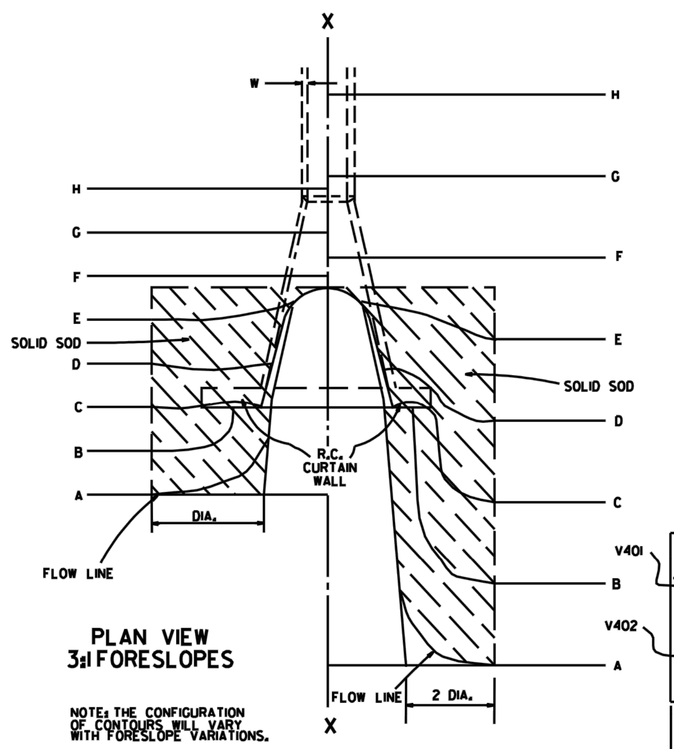
TYPICAL PIPE CULVERT WITH FLARED END SECTION & 3:1 FORESLOPE



TYPICAL PIPE CULVERT WITH FLARED END SECTION & FLATTENED ADJACENT SLOPES



TYPICAL MULTIPLE PIPE CULVERT WITH FLARED END SECTIONS & FLATTENED ADJACENT SLOPES



PLAN VIEW 3:1 FORESLOPES

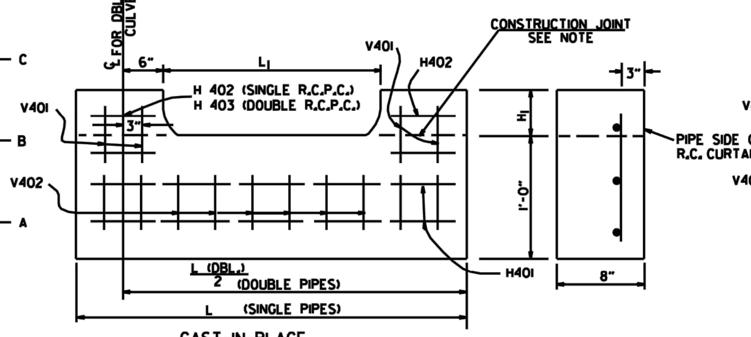
NOTE: THE CONFIGURATION OF CONTOURS WILL VARY WITH FORESLOPE VARIATIONS.

PLAN VIEW FLATTENED FORESLOPES

R.C. CURTAIN WALL DIMENSIONS & QUANTITIES

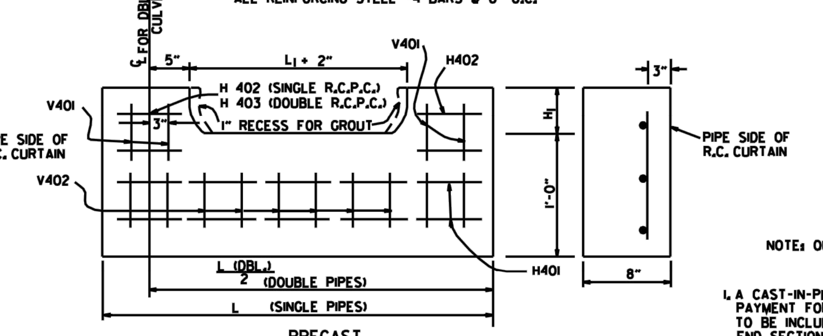
PIPE DIA.	H_1	L_1	L	L (DBL.)/2	SINGLE R.C.P.C. CONC.	SINGLE R.C.P.C. REINF. STEEL	DOUBLE R.C.P.C. CONC.	DOUBLE R.C.P.C. REINF. STEEL
					CU. YDS.	LBS.	CU. YDS.	LBS.
18"	11½"	3'-5"	8'-0"	6'-3"	0.31	27.7	0.45	39.5
24"	1'-0½"	4'-6"	9'-6"	7'-6"	0.37	33.4	0.53	48.0
30"	1'-3½"	5'-7"	11'-0"	9'-0"	0.45	39.0	0.67	59.0
36"	1'-7"	6'-8"	13'-0"	10'-6"	0.58	52.6	0.83	73.9
42"	2'-1½"	7'-3"	15'-6"	12'-0"	0.82	77.1	1.10	100.7
48"	2'-5"	7'-10"	17'-0"	13'-0"	0.98	94.9	1.27	120.4
54"	2'-9½"	8'-5"	18'-6"	14'-0"	1.16	115.8	1.47	143.7
60"	3'-4"	9'-0"	20'-6"	15'-6"	1.47	149.7	1.84	180.3
72"	4'-5"	10'-2"	25'-6"	18'-6"	2.31	232.6	2.73	271.0

NOTE: QUANTITIES SHOWN ARE FOR ONE (1) CURTAIN WALL.



CAST-IN-PLACE

NOTE: THE PORTION OF THE R.C. CURTAIN WALL BENEATH THE FLARED END SECTION (LOWER 1'-0") SHALL BE PLACED MONOLITHICALLY. THE FLARED END SECTION SHALL THEN BE SET IN PLACE & THE REMAINING PORTIONS OF THE R.C. CURTAIN WALL PLACED.



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.

R.C. CURTAIN WALL DETAILS

REINFORCING STEEL SCHEDULE

PIPE DIA.	SINGLE H401 L	NO.	SINGLE H402 L	NO.	SINGLE V401 L	NO.	SINGLE V402 L	NO.	DOUBLE H401 L	NO.	DOUBLE H402 L	NO.	DOUBLE H403 L	NO.	DOUBLE V401 L	NO.	DOUBLE 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.

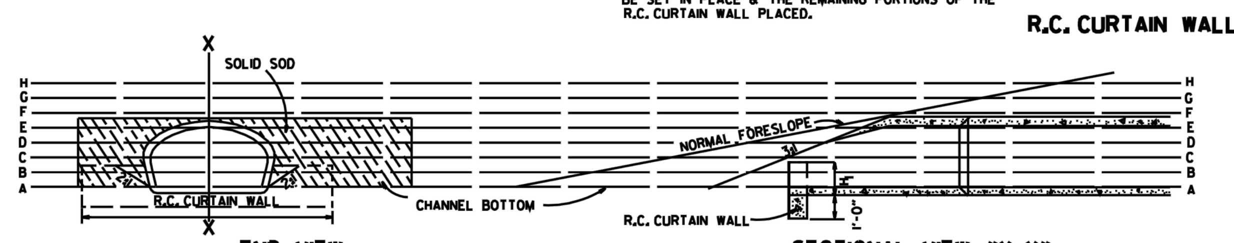
SOLID SODDING

PIPE DIA.	SINGLE R.C.P.C. 3:1	SINGLE R.C.P.C. 4:1	SINGLE R.C.P.C. 6:1	DOUBLE R.C.P.C. 3:1	DOUBLE R.C.P.C. 4:1	DOUBLE R.C.P.C. 6:1
	SQ. YDS.			SQ. YDS.		
18"	5	7	12	6	8	13
24"	8	12	19	9	13	20
30"	13	18	29	14	19	30
36"	17	26	41	18	28	43
42"	23	35	55	25	37	57
48"	29	46	68	31	48	70
54"	35	57	85	37	59	87
60"	45	62	104	48	65	107
72"	64	92	156	67	95	159

NOTE: QUANTITIES SHOWN ABOVE ARE FOR ONE (1) END OF F.E.S.

GENERAL NOTES

1. A CAST-IN-PLACE OR PRECAST CURTAIN WALL MAY BE USED. PAYMENT FOR THE CURTAIN WALL SHALL BE CONSIDERED TO BE INCLUDED IN THE UNIT PRICE BID EACH FOR FLARED END SECTIONS OF THE SEVERAL SIZES, WHICH PRICE SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIALS INCLUDING REINFORCING STEEL AND CONCRETE; FOR FORMS, MIXING AND PLACING; FOR EXCAVATION AND BACKFILL, AND FOR ALL LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE WORK.
2. ALL EXPOSED EDGES SHALL BE CHAMFERED ¾".
3. CONCRETE FOR CURTAIN WALL SHALL MEET THE REQUIREMENTS FOR CLASS A OR S CONCRETE AS PROVIDED IN SECTION 802 OF THE STANDARD SPECIFICATIONS OR FOR PAVING CONCRETE AS PROVIDED IN SECTION 501 OF THE STANDARD SPECIFICATIONS.
4. WELDED WIRE MESH 3 x 3 W/10 x W10 MAY BE USED IN LIEU OF REINFORCING BARS.



END VIEW

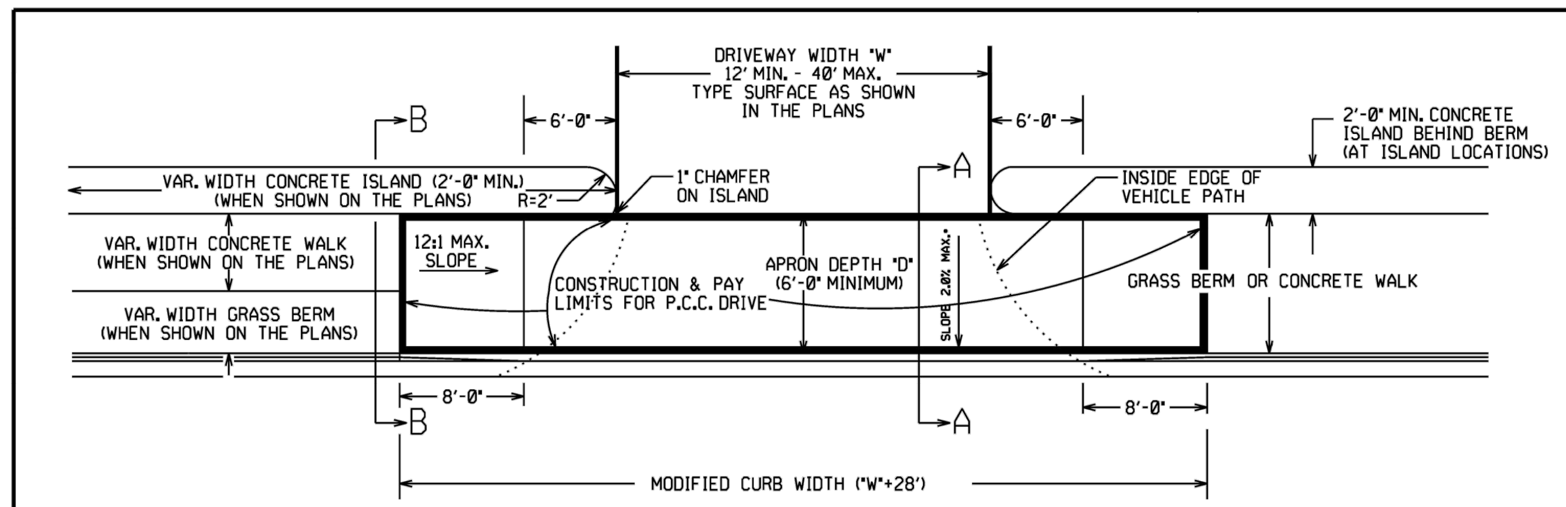
SECTIONAL VIEW "X-X"

DATE	REVISION	FILMED
10-18-96	ADDED NOTE TO SOLID SODDING	
10-12-95	CORRECTED SPELLING	
11-3-94	ADDED GENERAL NOTE NO. 4	
8-15-91	REV. CURTAIN WALL QUANT. STEEL SCH. & SOLID SOD QUANT.	
3-2-81	ALLOW PRECAST IN 2 OR MORE PIECES CHAMFER EDGES	
5-15-80	ADDED PRECAST WALL & GENERAL NOTES	
10-2-72	REVISED AND REDRAWN	

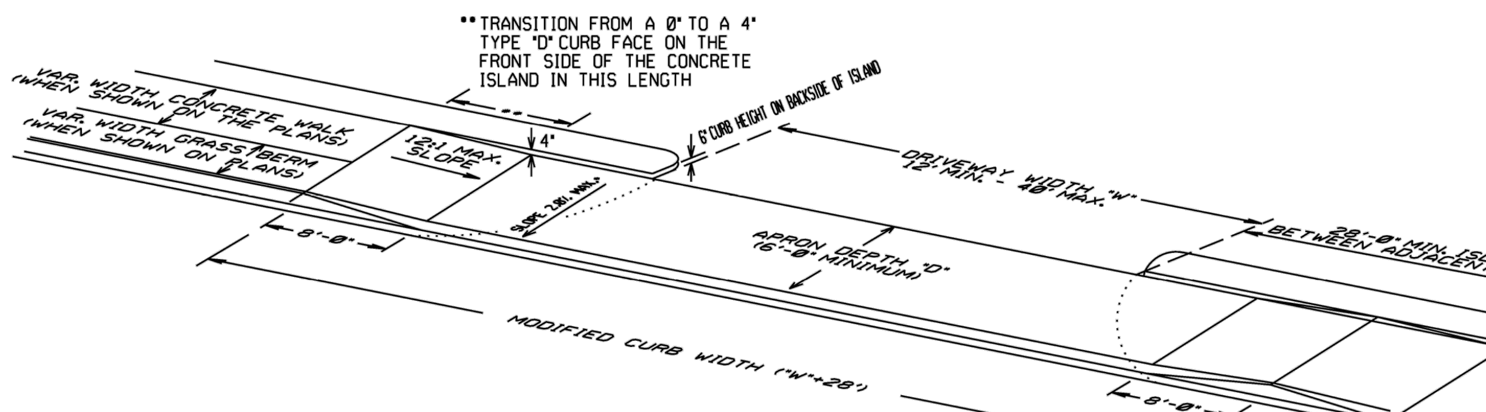
ARKANSAS STATE HIGHWAY COMMISSION

FLARED END SECTION

STANDARD DRAWING FES-1

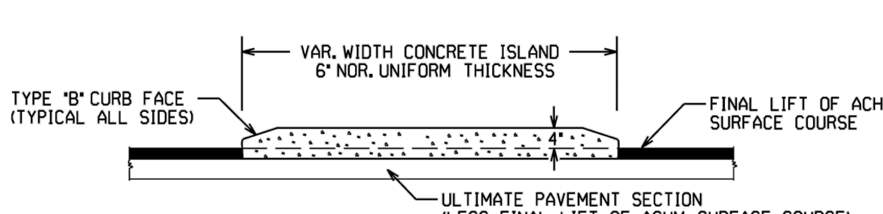


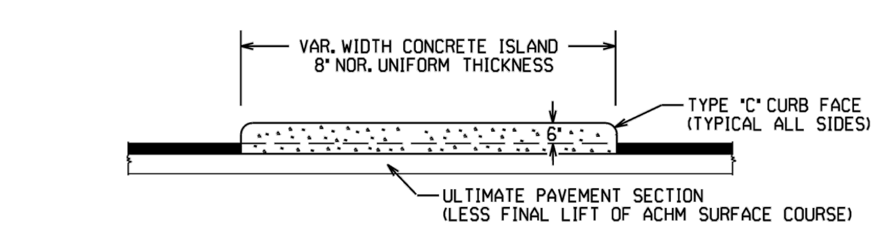
PLAN VIEW



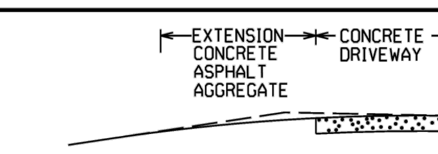
ISOMETRIC VIEW

REFER TO PLANS FOR TYPE OF CURB FACE TO BE USED. NO DIRECT PAYMENT WILL BE MADE FOR THE CURB FACES SHOWN ON THE ISLAND DETAILS. PAYMENT FOR THE CURB FACE WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE ITEM "CONCRETE ISLAND".





CURBED ISLANDS FOR CHANNELIZATION



EXTENSION TYPICAL SECTIONS

1: CONCRETE - 6" P.C. CONCRETE DRIVEWAY

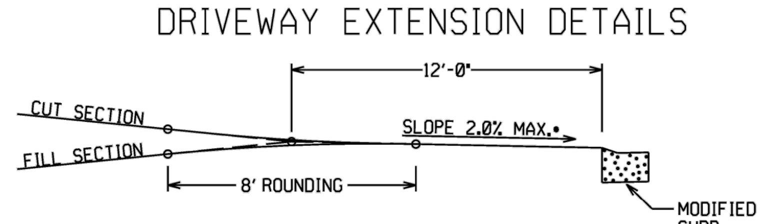
2: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
4" ACHM BINDER COURSE (1") OR
4" ACHM BASE COURSE (1-1/2")

3: ASPHALT - 2" ACHM SURFACE COURSE (1/2")
7" AGGREGATE BASE COURSE

4: AGGREGATE - 6" AGGREGATE BASE COURSE

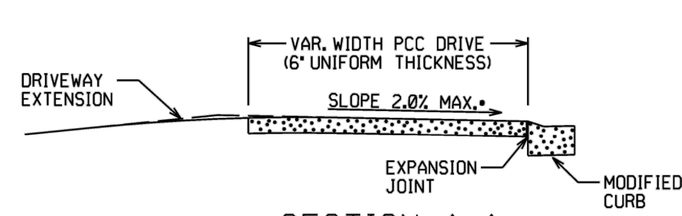
THE TYPE OF EXTENSION SHALL BE AS SHOWN IN THE PLANS. THE CONTRACTOR MAY, WITH THE APPROVAL OF THE ENGINEER, SUBSTITUTE A LOWER NUMBERED TYPE OF EXTENSION IN LIEU OF THE TYPE SPECIFIED IN THE PLANS, BUT AT NO ADDITIONAL COST TO THE DEPARTMENT.

DRIVEWAY EXTENSION DETAILS

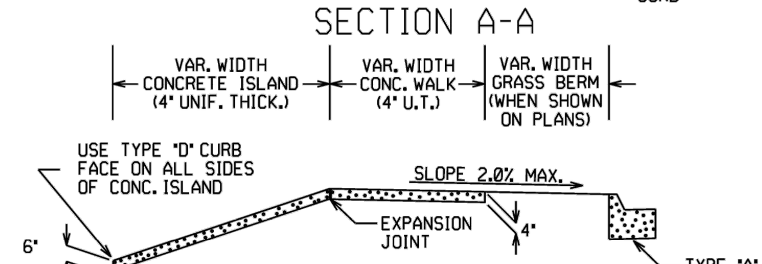


DRIVEWAY VERTICAL ALIGNMENT DETAILS

* NOTE: DRIVEWAYS MAY NOT BE SLOPED AWAY FROM THE ROADWAY UNLESS APPROVED BY THE ENGINEER.



SECTION A-A



SECTION B-B

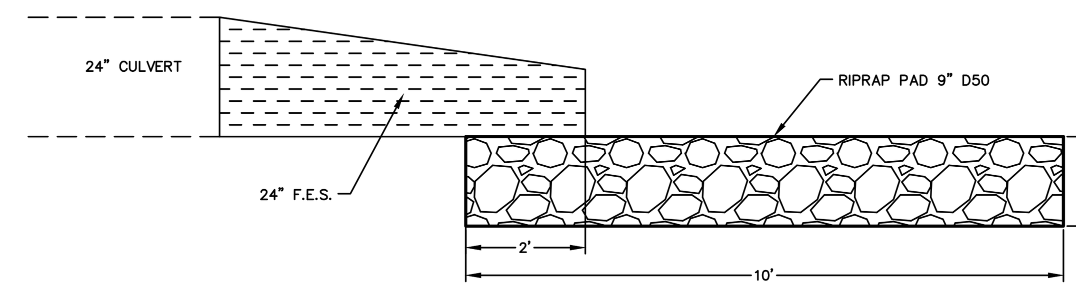
CURBED ISLAND BEHIND WALK

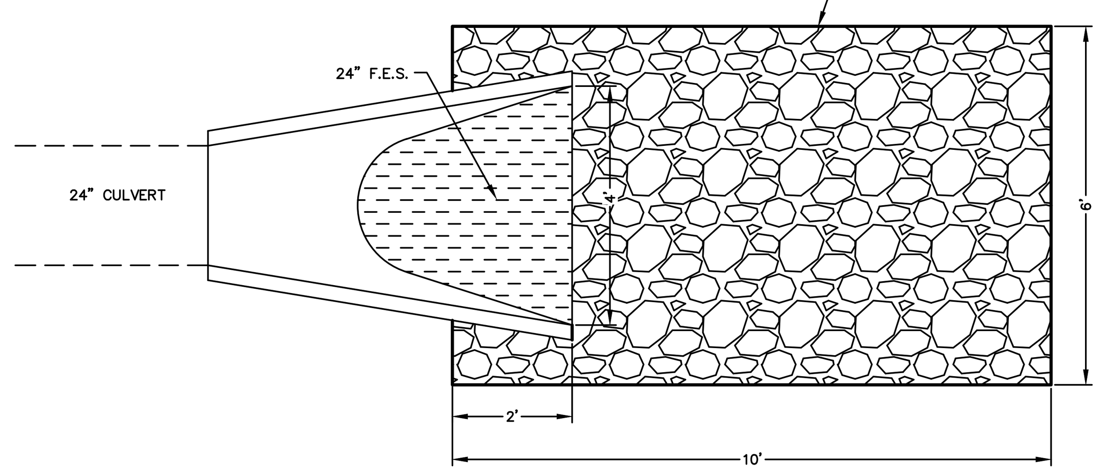
DATE REV	DATE FILMED	DESCRIPTION
2-27-14		REVISED PLAN & ISOMETRIC VIEW
11-29-07		ADDED CHANNELIZATION ISLAND WITH TYPE C CURB FACE & REVISED DRIVEWAY SLOPE NOTE & VERTICAL ALIGNMENT DETAIL
11-10-05		REV. APRON SLOPE & DEPTH OF AGG. BASE.
8-22-02		ADDED ISLAND DETAILS & NOTES
3-30-00		REV. MOD. CURB WIDTH & TRANS. NOTE
11-19-98		REVISED NOTES
11-18-98		REDRAWN AND REISSUED

ARKANSAS STATE HIGHWAY COMMISSION

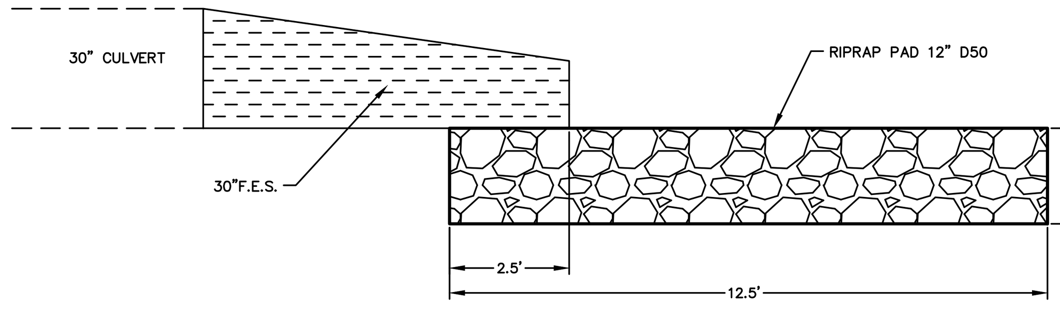
DETAILS OF DRIVEWAYS & ISLANDS

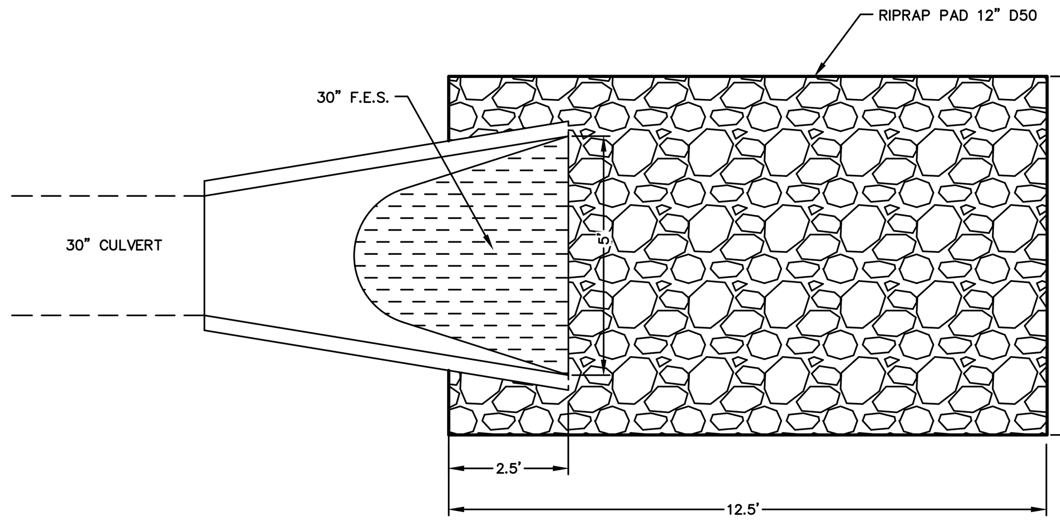
STANDARD DRAWING DR-1





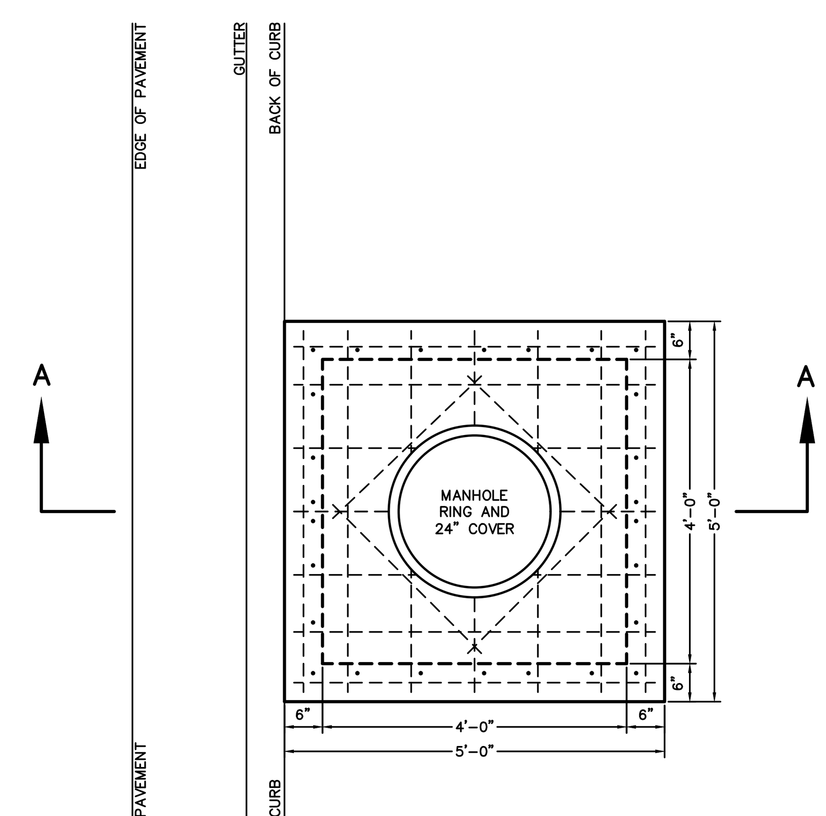
24" CULVERT





30" CULVERT

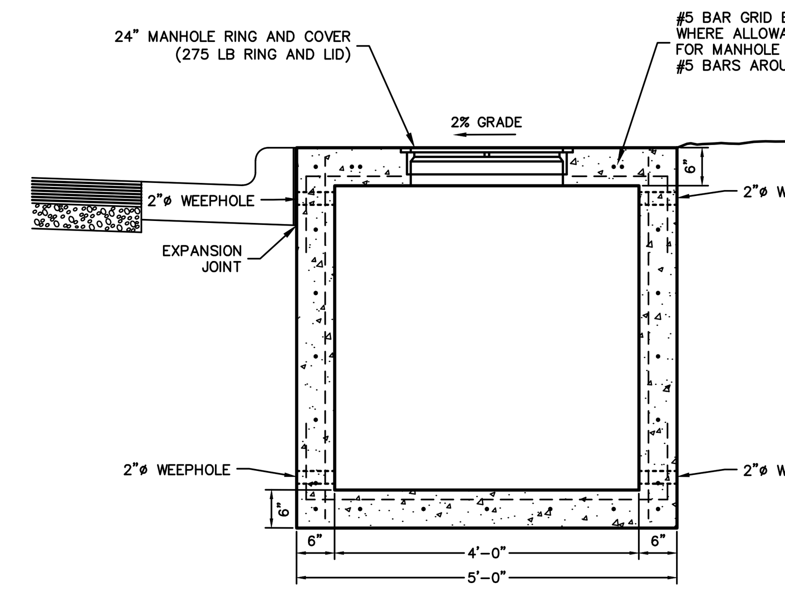
NOT TO SCALE



PLAN

NOTES:

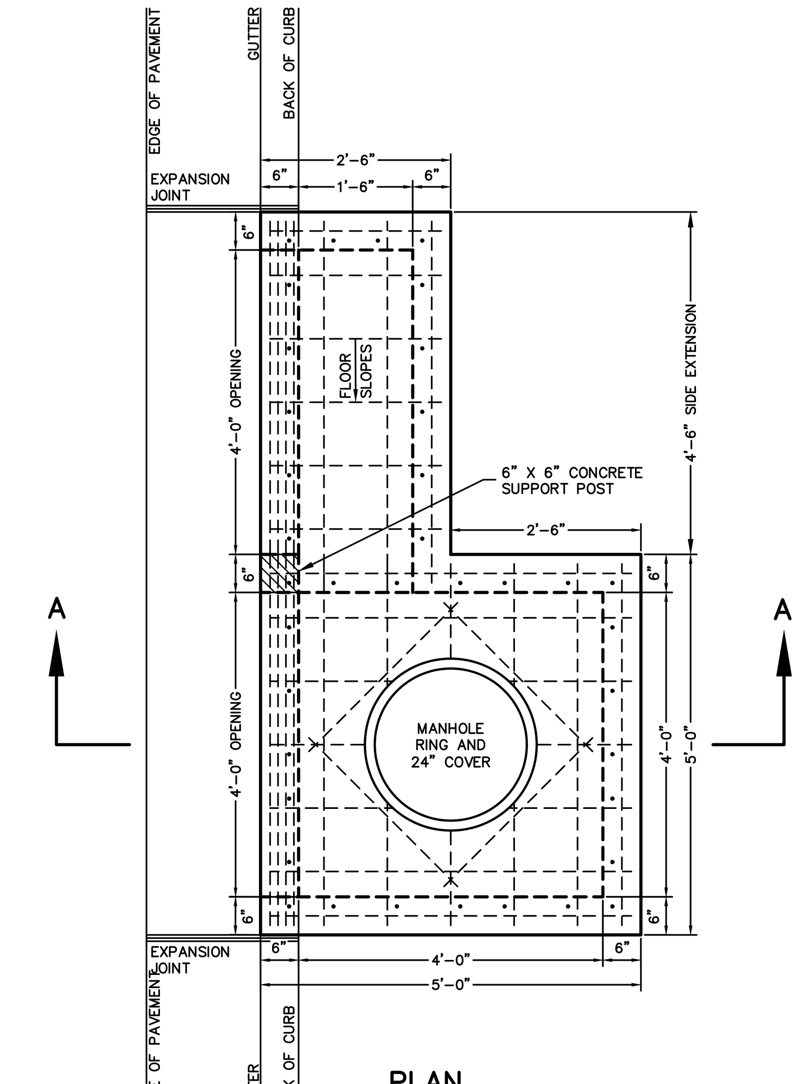
1. ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER.
2. ALL REINFORCEMENT BARS SHALL BE GRADE 60 AND SHALL HAVE A MINIMUM 1-1/2" COVER UNLESS OTHERWISE NOTED.
3. CURB INLET BACK OPENING LOCATIONS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
4. WHEN AN INLET IS PLACED ADJACENT TO CONCRETE PAVEMENT, THE GUTTER DEPRESSION SHALL BE FORMED IN CONCRETE PAVEMENT.
5. 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".
6. THE EXPANSION JOINT SHALL HAVE A THICKNESS OF 1-1/2" AND CONFORM TO AASHTO M213.
7. REFER TO PLAN AND PROFILE SHEETS TO DETERMINE EXTENSIONS AND SIZE (IF ANY) ACCOMPANYING DROP INLETS.
8. EXTENSIONS WITH LENGTHS DESIGNATED ON THE PLANS EXCEEDING 8'-0" SHALL HAVE THE SAME INSIDE DEPTH DIMENSIONS AS STATED ON DETAILS UNLESS OTHERWISE NOTED.
9. CONCRETE FOR RECTANGULAR DROP INLETS SHALL BE CLASS A, 3000 PSI, 5.5 BAG MIX WITH 4-7% AIR ENTRAINMENT.
10. ALL REINFORCING TO BE #5 BAR GRID @ 10" O.C., E.W. EXCEPT WHERE ALLOWANCES MUST BE MADE FOR PIPES, OPENING, OR MANHOLE RING.
11. 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".
12. BOTTOM OF DRAINAGE BOX TO DROP 0.10' MINIMUM FROM INLET TO OUTLET.



SECTION A-A

TYPICAL JUNCTION BOX

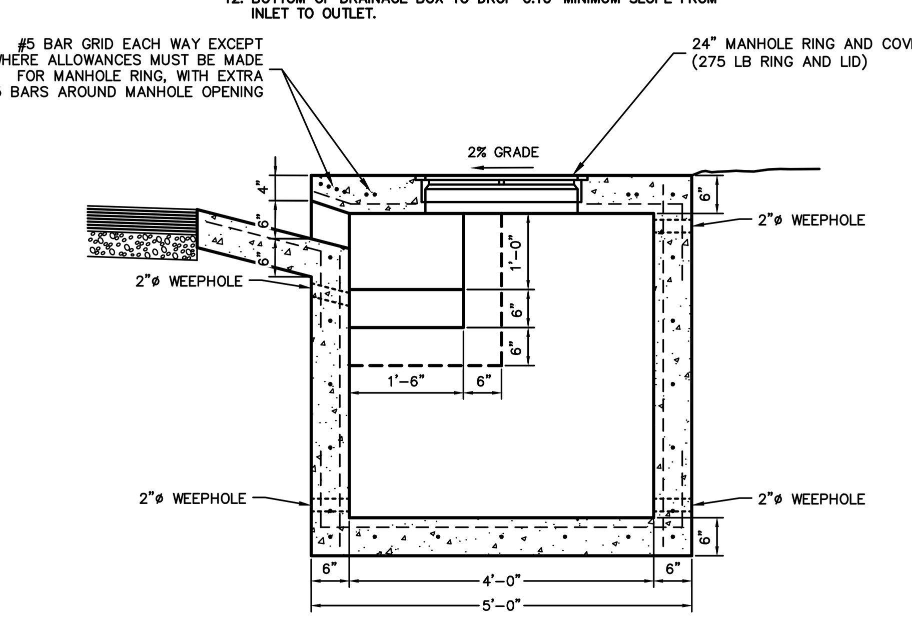
NOT TO SCALE



PLAN

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. CURB INLET BACK OPENING LOCATIONS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.
4. WHEN AN INLET IS PLACED ADJACENT TO CONCRETE PAVEMENT, THE GUTTER DEPRESSION SHALL BE FORMED IN CONCRETE PAVEMENT.
5. 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".
6. THE EXPANSION JOINT SHALL HAVE A THICKNESS OF 1-1/2" AND CONFORM TO AASHTO M213.
7. REFER TO PLAN AND PROFILE SHEETS TO DETERMINE EXTENSIONS AND SIZE (IF ANY) ACCOMPANYING DROP INLETS.
8. EXTENSIONS WITH LENGTHS DESIGNATED ON THE PLANS EXCEEDING 8'-0" SHALL HAVE THE SAME INSIDE DEPTH DIMENSIONS AS STATED ON DETAILS UNLESS OTHERWISE NOTED.
9. CONCRETE FOR RECTANGULAR DROP INLETS SHALL BE CLASS A, 3000 PSI, 5.5 BAG MIX WITH 4-7% AIR ENTRAINMENT.
10. ALL REINFORCING TO BE #5 BAR GRID @ 10" O.C., E.W. EXCEPT WHERE ALLOWANCES MUST BE MADE FOR PIPES, OPENING, OR MANHOLE RING.
11. 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".
12. BOTTOM OF DRAINAGE BOX TO DROP 0.10' MINIMUM SLOPE FROM INLET TO OUTLET.



SECTION A-A

TYPICAL DROP INLET

NOT TO SCALE

ENGINEERING SERVICES INC.
1207 SOUTH OLD MISSOURI RD.
SPRINGDALE, ARKANSAS 72764

TYPICAL DETAILS
THE RESERVE
TONTITOWN, ARKANSAS

REVISION	DATE	DESCRIPTION

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Z:\LSD\19922 - The Reserve Tontitown\19922 - TYPICAL DETAIL.DWG

SCALE: N.T.S.

DATE: May 21, 2019

ENGINEER: TJA
DRAWN BY: JGA

W.O. #: 19922

W HENRI DE TONTI BLVD (HWY 412)

POZZA LN

FOUND 2" AHTD MONUMENT

EX TELEPHONE PEDESTAL

IPF ALAN REID AR 1005

EX GAS METER

EX SIGN

STA. 2+93.61, LINE 1
INSTAL 8"-90° BEND

STA. 0+00.00, LINE 1
INSTALL 8" TAPPING SLEEVE AND VALVE, BEGIN LINE 1

PROPOSED 8" WATER MAIN

EX SEWER MANHOLE
RIM ELEVATION = 1,284.53'
8" PVC
INVERT ELEVATION = 1,274.31'

EX SEWER MANHOLE
RIM ELEVATION = 1,287.33'
8" PVC
INVERT ELEVATION = 1,276.38'

ESI CONTROL POINT
NORTHING = 678319.80
EASTING = 650249.31

COMMERCIAL
TRACT 2
(2.46 ACRES)

STA. 8+80.13, LINE 1
STA. 0+00.00, LINE 6
8" TEE,
3-8" GATE VALVES,
BEGIN LINE 6

STA. 9+28.82, LINE 1
INSTALL 8"-11.25° BEND

STA. 8+67.25, LINE 1
INSTALL 8"-45° BEND

STA. 8+75.73, LINE 1
INSTALL 8"-45° BEND

PROPOSED 8" WATER MAIN

STA. 6+48.85, LINE 1
STA. 0+00.00, LINE 2
8" TEE,
3-8" GATE VALVES,
BEGIN LINE 2

STA. 5+40.59, LINE 1
8"-90° BEND

STA. 0+39.59, LINE 6
INSTALL 8"X6" TEE,
8" GATE VALVE,
6" FIRE HYDRANT ASSEMBLY
N: 678124.75
E: 649910.81

FDC

1" DOMESTIC METER

WATER SERVICE LINE

FIRE LINE

STA. 0+84.49, LINE 6
INSTALL 8"X4"TEE AND DEMARCATION VALVE

STA. 1+01.77, LINE 6
INSTALL 8"X4"TEE AND DEMARCATION VALVE

STA. 0+39.35, LINE 2
INSTALL 8"X6" TEE,
8" GATE VALVE,
6" FIRE HYDRANT ASSEMBLY
N: 678120.23
E: 650150.77

STA. 0+85.93, LINE 2
INSTALL 8"X4" TEE AND DEMARCATION VALVE

Sta. 7+09.43, LATERAL 2
INSTALL MANHOLE No. 2-3
INV. 1283.933

STA. 1+29.33, LINE 2
INSTALL 8"-11.25° BEND

Sta. 1+75.27, LATERAL 3
INSTALL MANHOLE No. 3-1
INV. 1283.833

PROP. 8" SANITARY SEWER MAIN

STA. 1+59.66, LINE 2
INSTALL 8"-11.25° BEND

8" PVC

POOL

CABANA

DETENTION POND
100 YEAR
WSE = 1289.30

BUILDING #11
(12 UNITS)
FFE = 1291.7

BUILDING #10
(12 UNITS)
FFE = 1292.50

BUILDING #9
(12 UNITS)
FFE = 1293.50

GRID N

GRAPHIC REPRESENTATION ONLY
SCALE 1" = 30'
0 15' 30' 60'

ENGINEERING SERVICES INC.
1207 SOUTH OLD MISSOURI RD.
SPRINGDALE, ARKANSAS 72764

OFFSITE UTILITY PLAN
THE RESERVE
TONTITOWN, ARKANSAS

REVISION	DATE	DESCRIPTION

© COPYRIGHT 2019 ENGINEERING SERVICES, INC. 5-21-2019 4:40:1 PM
C:\ESI\19922 - The Reserve\Tontitown\19922 - Utility.dwg

SCALE: 1"=30'

DATE: May 21, 2019

ENGINEER: TJA
DRAWN BY: JGA

W.O. #: 19922

11

W HENRI DE TONTI BLVD (HWY 412)

COMMERCIAL TRACT 1 (2.28 ACRES)

COMMERCIAL TRACT 2 (2.46 ACRES)

Sta. 0+00.00, LATERAL 1
INSTALL MANHOLE No. 1-1
INV. 1270.153

EX POWER JUNCTION BOX

EX SEWER MANHOLE
RIM ELEVATION = 1,281.99'
8" PVC
INVERT ELEVATION = 1,270.76'

EX SEWER MANHOLE
RIM ELEVATION = 1,284.53'
8" PVC
INVERT ELEVATION = 1,274.31'

EX TELEPHONE PEDESTAL

EX GAS METER

EX SIGN

FOUND 2" AHTD MONUMENT

1/2" IPF ALAN REID AR 1005

STA. 2+93.61, LINE 1
INSTAL 8"-90° BEND

PROPOSED

ESI CONTROL POINT
NORTHING = 678319.80
EASTING = 650249.31

PROPOSED 8" WATER MAIN

GRID N

GRAPHIC REPRESENTATION ONLY
SCALE 1" = 30'
0 15' 30' 60'

STA. 5+40.59, LINE 1
8"-90° BEND

STA. 6+48.85, LINE 1
STA. 0+00.00, LINE 2
8" TEE,
3-8" GATE VALVES,
BEGIN LINE 2

STA. 8+80.13, LINE 1
STA. 0+00.00, LINE 6
8" TEE,
3-8" GATE VALVES,
BEGIN LINE 6

STA. 8+67.25, LINE 1
INSTALL 8"-45° BEND

STA. 8+75.73, LINE 1
INSTALL 8"-45° BEND

STA. 9+28.82, LINE 1
INSTALL 8"-11.25° BEND

STA. 10+21.00, LINE 1
INSTALL 8"-11.25° BEND

STA. 10+63.97, LINE 1
INSTALL 8"X4" TEE AND
DEMARCATION VALVE

STA. 10+77.14, LINE 1
INSTALL 8" TEE,
8" GATE VALVE

STA. 10+77.14, LINE 1
INSTALL 8"X6" REDUCER &
6" FIRE HYDRANT ASSEMBLY
N: 678121.01
E: 649720.77

STA. 12+19.36, LINE 1
INSTALL 8"-TEE,
8" GATE VALVE
AND 8" CAP

EX TELEPHONE PEDESTAL

ESI CONTROL POINT
NORTHING = 678196.27
EASTING = 649585.02

8" PVC

R/W

STA. 0+39.59, LINE 6
INSTALL 8"X6" TEE,
8" GATE VALVE,
6" FIRE HYDRANT ASSEMBLY
N: 678124.75
E: 649910.81

STA. 0+39.35, LINE 2
INSTALL 8"X6" TEE,
8" GATE VALVE,
6" FIRE HYDRANT ASSEMBLY
N: 678120.23
E: 650150.77

STA. 0+84.49, LINE 6
INSTALL 8"X4"TEE AND
DEMARCATION VALVE

STA. 1+01.77, LINE 6
INSTALL 8"X4"TEE AND
DEMARCATION VALVE

STA. 0+85.93, LINE 2
INSTALL 8"X4" TEE AND
DEMARCATION VALVE

STA. 1+29.33, LINE 2
INSTALL 8"-11.25° BEND

STA. 1+59.66, LINE 2
INSTALL 8"-11.25° BEND

STA. 2+32.34, LINE 2
INSTALL 8"X4" 4-WAY,
2-8" GATE VALVES,
2-4" DEMARCATION VALVES

STA. 3+08.41, LINE 2
8"-90° BEND

STA. 3+16.28, LINE 2
8"X6" TEE,
8" GATE VALVE,
6" GATE VALVE

STA. 3+58.95, LINE 2
INSTAL 8" TEE,
8" GATE VALVE,
8"X6" REDUCER,
6" FIRE HYDRANT ASSEMBLY
N: 677867.84
E: 650077.35

STA. 3+71.17, LINE 2
STA. 0+00.00, LINE 3
INSTALL 8" TEE,
2-8" GATE VALVES,
BEGIN LINE 3

STA. 4+40.13, LINE 2
INSTALL 8"X4" TEE AND
DEMARCATION VALVE

STA. 5+31.29, LINE 2
STA. 3+01.83, LINE 6
INSTALL 8" TEE,
3-8" GATE VALVES,
END LINE 6

STA. 5+91.65, LINE 2
INSTALL 8"X4" TEE AND
DEMARCATION VALVE

STA. 6+70.38, LINE 2
INSTALL 8"X4" TEE,
8" GATE VALVE AND
DEMARCATIONVALVE

STA. 6+78.59, LINE 2
INSTALL 8" TEE,
8" GATE VALVE,
8"X6" REDUCER
6" FIRE HYDRANT ASSEMBLY
N: 677882.12
E: 649758.03

STA. 7+30.32, LINE 2
INSTALL 8"X4" TEE,
8" GATE VALVE AND
DEMARCATION VALVE

STA. 7+43.18, LINE 2
INSTALL 8"X4" TEE,
8" GATE VALVE AND
DEMARCATION VALVE

STA. 15+03.23, LINE 1
STA. 8+72.14, LINE 2
INSTALL 8" TEE,
3-8" GATE VALVES,
END LINE 2

Sta. 2+92.67, LATERAL 1
INSTALL MANHOLE No. 1-2
INV. 1275.332

Sta. 5+64.84, LATERAL 1
INSTALL MANHOLE No. 1-3
INV. 1278.359

Sta. 1+75.27, LATERAL 3
INSTALL MANHOLE No. 3-1
INV. 1283.833

Sta. 2+86.89, LATERAL 2
INSTALL MANHOLE No. 2-1
INV. 1282.043

Sta. 7+09.43, LATERAL 2
INSTALL MANHOLE No. 2-3
INV. 1283.933

Sta. 5+14.99, LATERAL 2
INSTALL MANHOLE No. 2-2
INV. 1283.056

PROPOSED 8" WATER MAIN

PROP. 8" SANITARY SEWER MAIN

FIRE LINE

WATER SERVICE LINE

1" DOMESTIC METER

FDC

POOL

CABANA

BUILDING #1: (12 UNITS) FFE = 1291.70

BUILDING #2: (12 UNITS) FFE = 1291.50

BUILDING #3: (12 UNITS) FFE = 1293.50

BUILDING #4: (12 UNITS) FFE = 1289.50

BUILDING #5: (12 UNITS) FFE = 1290.50

BUILDING #6: (12 UNITS) FFE = 1289.50

BUILDING #7: (12 UNITS) FFE = 1289.00

DETENTION POND 100 YEAR WSE = 1286.50

DETENTION POND 100 YEAR WSE = 1289.30

ENGINEERING SERVICES INC.
1207 SOUTH OLD MISSOURI RD.
SPRINGDALE, ARKANSAS 72764

UTILITY PLAN
THE RESERVE
TONTITOWN, ARKANSAS

REVISION	DATE	DESCRIPTION

© COPYRIGHT 2019, ENGINEERING SERVICES, INC. 5-9-2019 4:40 PM

SCALE: 1"=30'

DATE: May 21, 2019

ENGINEER: TJA
DRAWN BY: JRC

W.O. #: 19922

ESI
ENGINEERING SERVICES INC.
1207 SOUTH OLD MISSOURI RD.
SPRINGDALE, ARKANSAS 72764

UTILITY PLAN
THE RESERVE
TONTITOWN, ARKANSAS

REVISION	DATE	DESCRIPTION

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Z:\LSD\19922 - The Reserve Tontitown\19922 - UTILITY.dwg

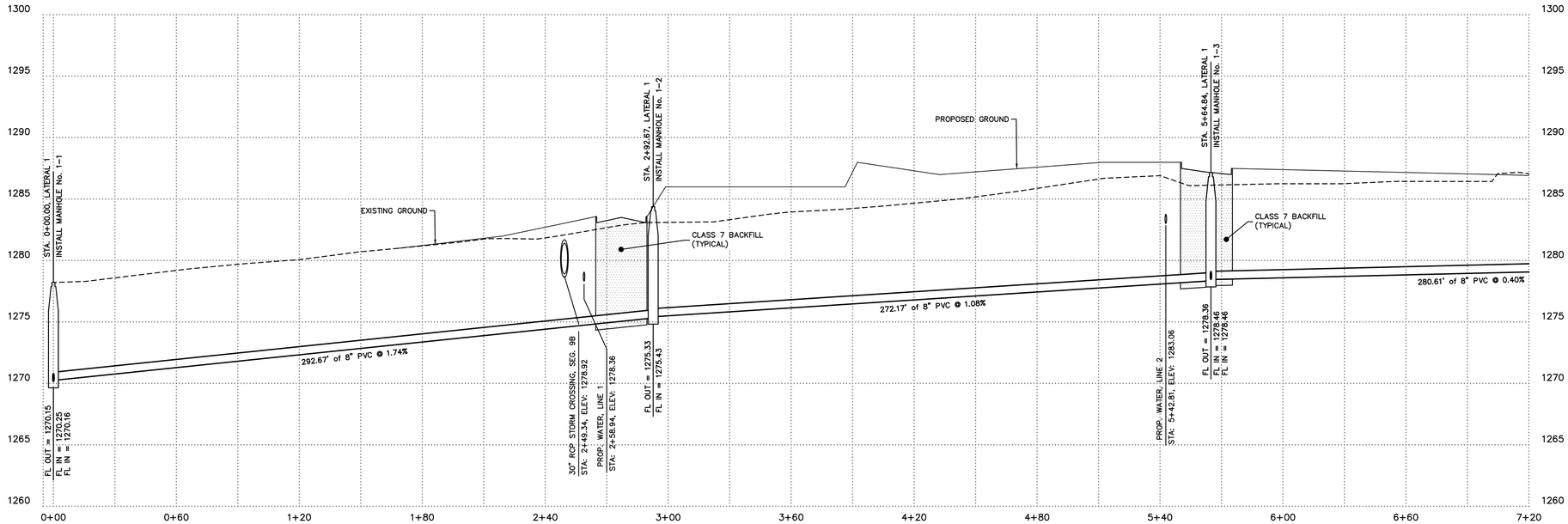
SCALE: 1"=50'

DATE: May 21, 2019

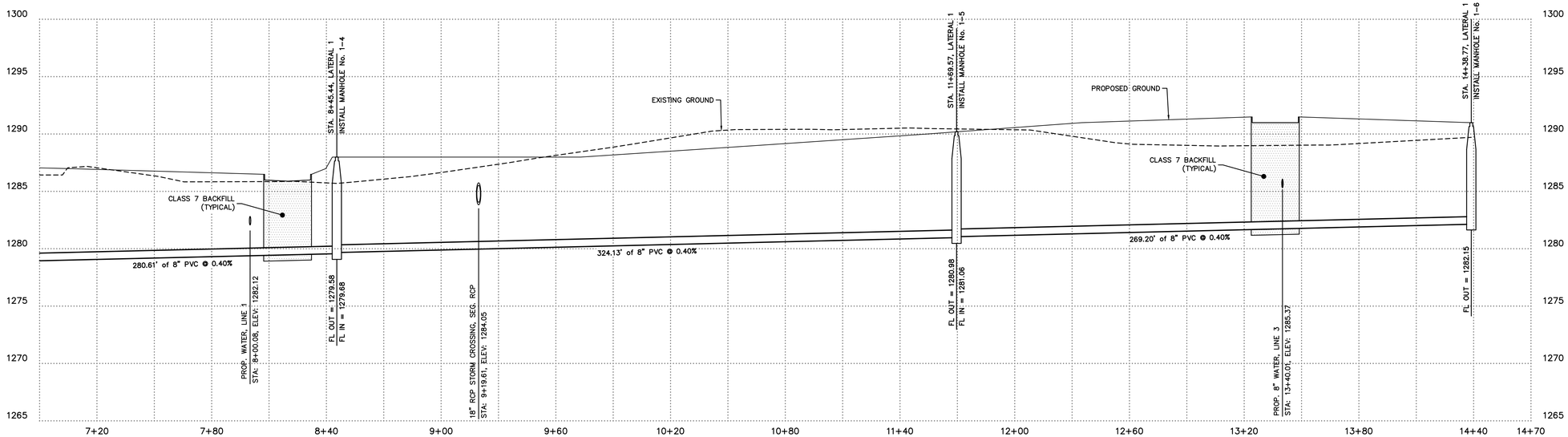
ENGINEER: TJA
DRAWN BY: JRC

W.O. #: 19922

LATERAL 1



LATERAL 1



ENGINEERING SERVICES INC.
1207 SOUTH OLD MISSOURI RD.
SPRINGDALE, ARKANSAS 72764

UTILITY PROFILE
THE RESERVE
TONTITOWN, ARKANSAS

REVISION	DATE	DESCRIPTION

SCALE: 1"=50'
DATE: May 21, 2019
ENGINEER: TJA
DRAWN BY: JRC
W.O. #: 19922

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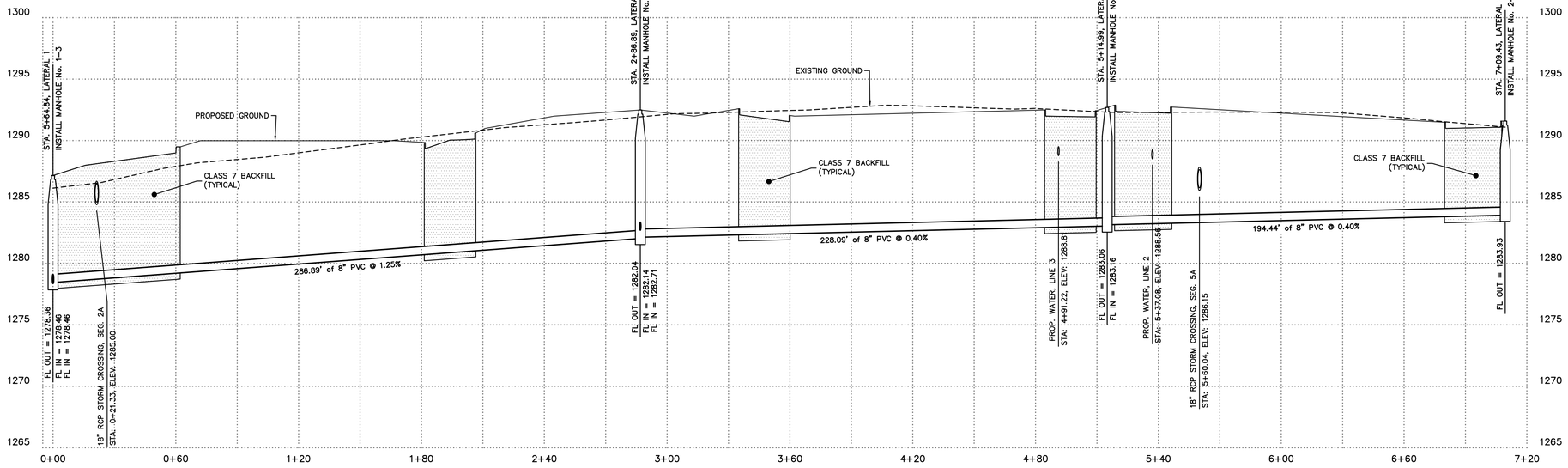
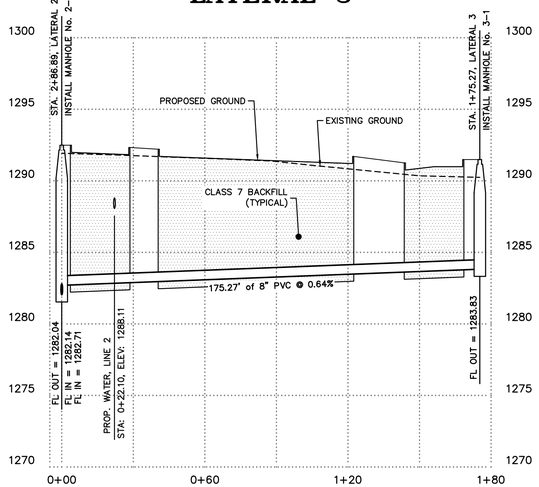
LATERAL 2



LATERAL 3



ENGINEERING SERVICES INC.
1207 SOUTH OLD MISSOURI RD.
SPRINGDALE, ARKANSAS 72764

UTILITY PROFILE
THE RESERVE
TONTITOWN, ARKANSAS

REVISION	DATE	DESCRIPTION

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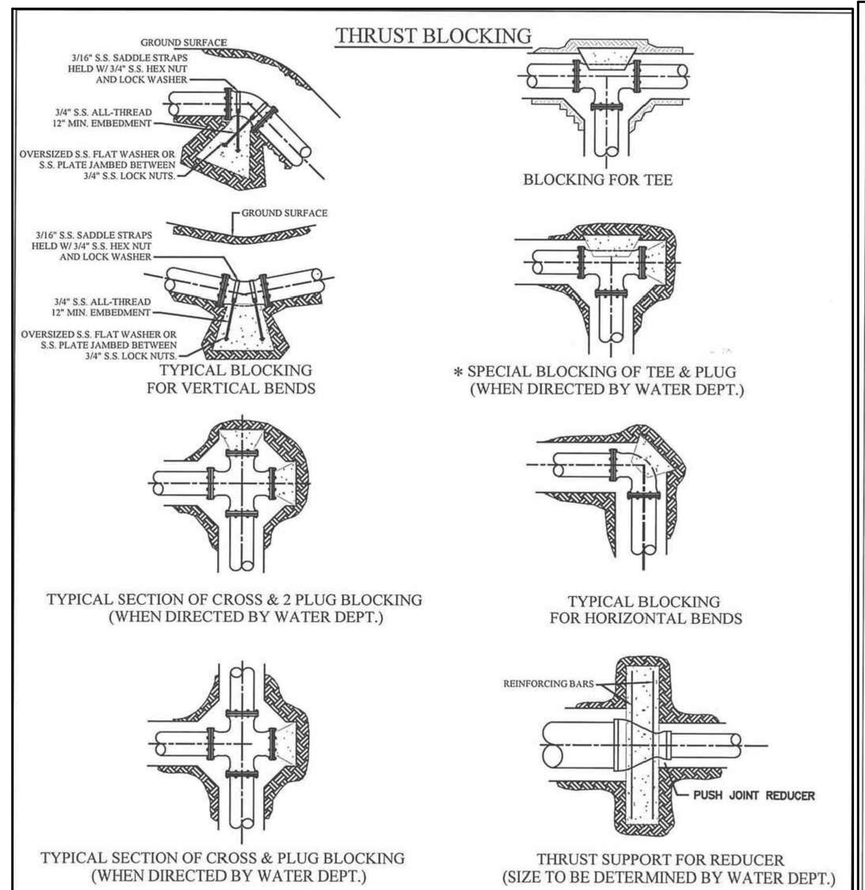
SCALE: 1"=50'

DATE: May 21, 2019

ENGINEER: TJA
DRAWN BY: JRC

W.O. #: 19922

THRUST BLOCKING

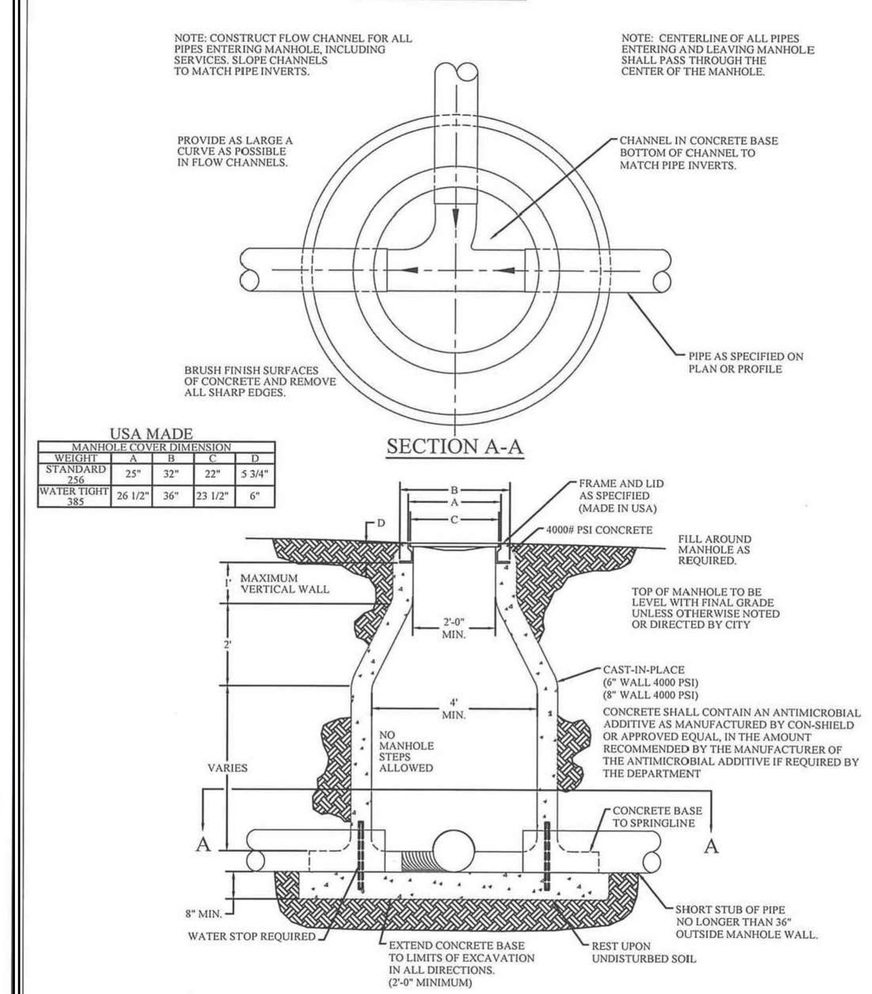


NOTES ON THRUST BLOCKING

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

SANITARY SEWER MANHOLE CAST-IN-PLACE



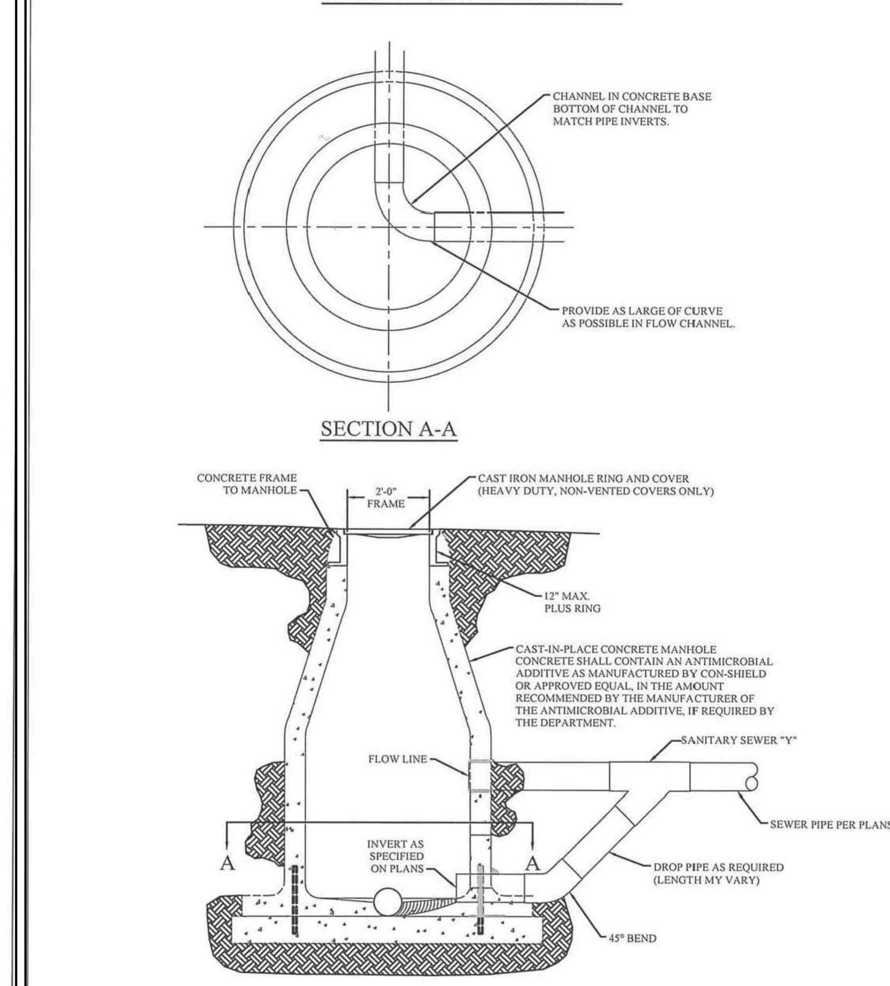
USA MADE

MANHOLE COVER DIMENSION				
WEIGHT	A	B	C	D
STANDARD 256	25"	32"	22"	5 3/4"
WATER TIGHT 385	26 1/2"	36"	23 1/2"	6"

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

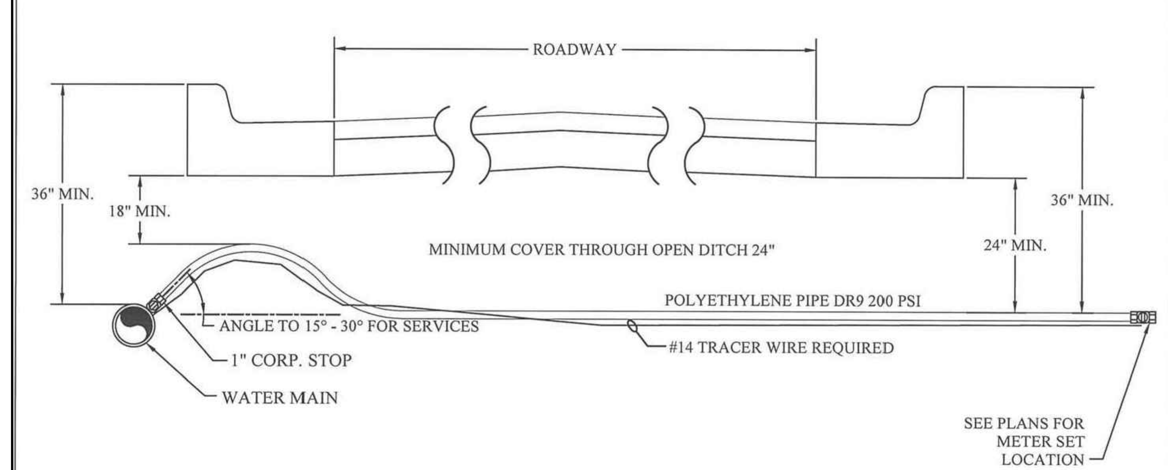
SANITARY SEWER EXTERIOR DROP MANHOLE



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: SS03	
		LAST REVISION DATE: 03/18/16	
DRAWN BY: CRB	CHECKED BY: TWC	APPROVED: ___	DATE: 09/01/05

1" SERVICE CONNECTIONS

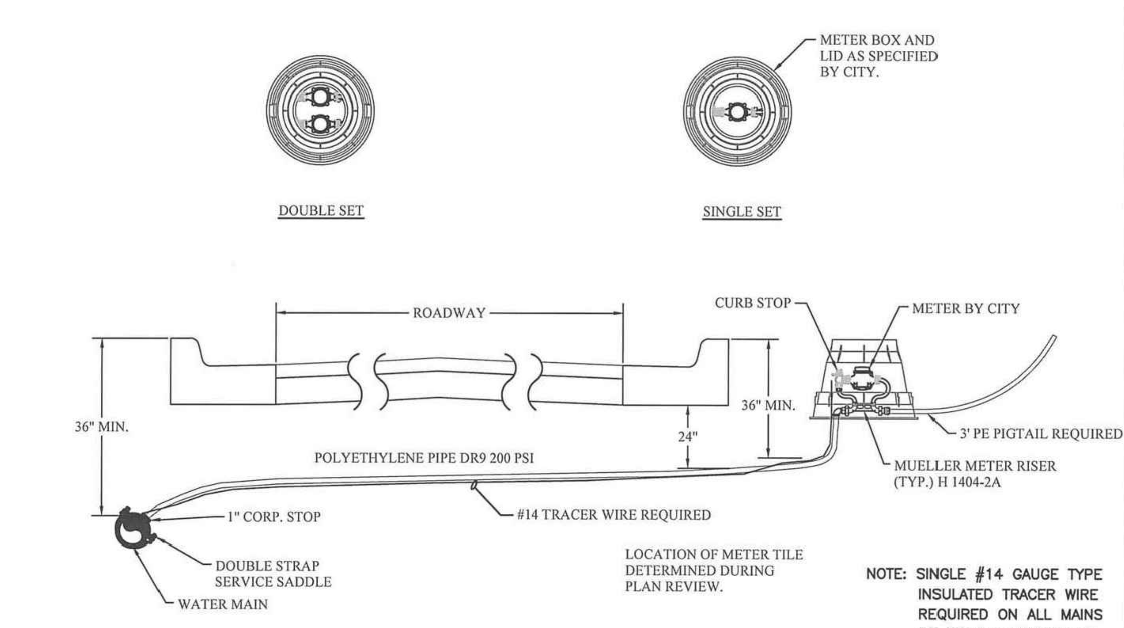


NOTE: SERVICE CROSSINGS UNDER STREETS AND ROADWAYS MUST BE ENCASED IN A 2" PVC OR PE PIPE.

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"

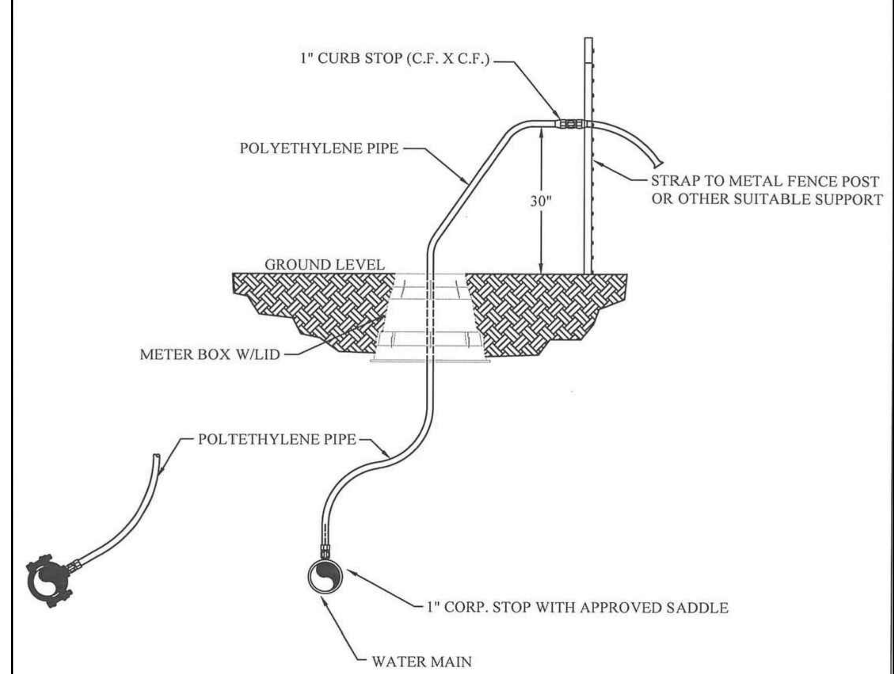


NOTE: SERVICE CROSSINGS UNDER STREETS AND ROADWAYS MUST BE ENCASED IN A 2" PVC OR PE PIPE.

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

REACTION BACKING TABLE

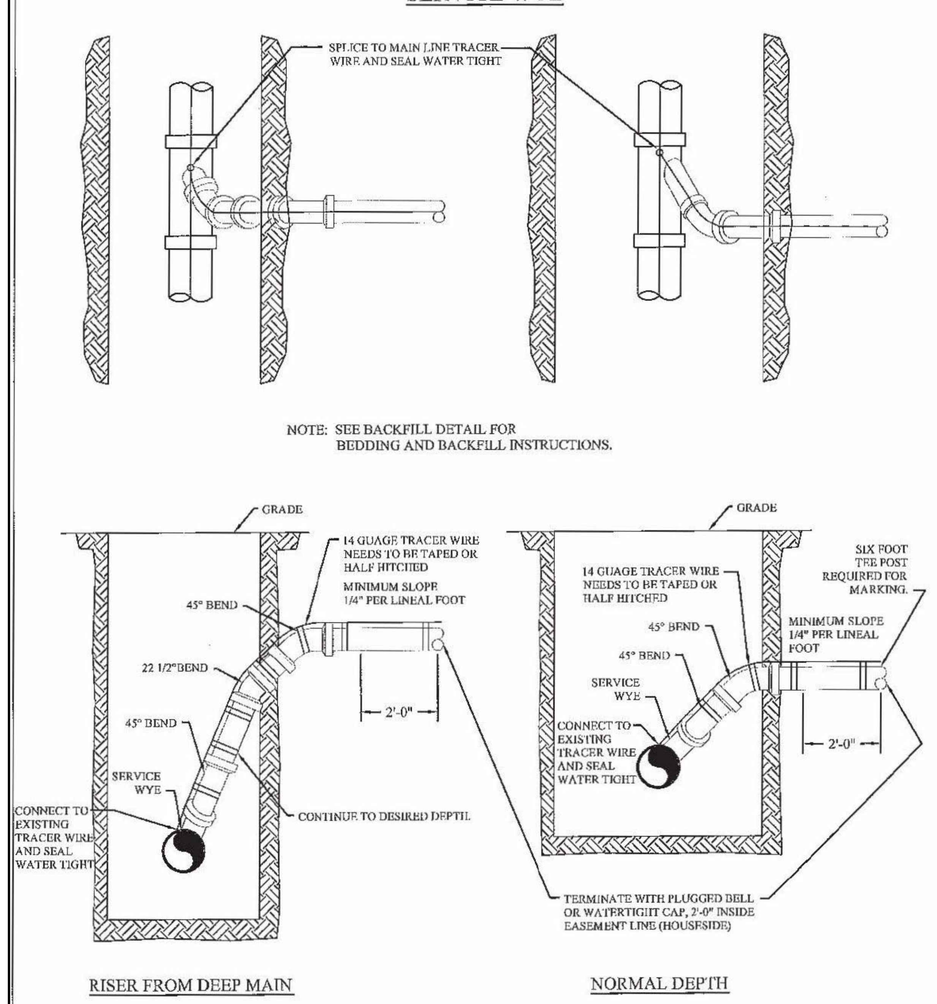
SIZE	REQUIRED SQ. FT. OF UNDISTURBED EARTHWALL FOR REACTION BACKING					
	TYPE OF FITTINGS					
	TEE	90°	45°	22 1/2°	11 1/4°	PLUG
2"	1	1	1	1	1	1
3"	1	1	1	1	1	1
4"	1	2	1	1	1	2
6"	3	3	2	1	1	3
8"	4	6	3	2	1	4
10"	6	8	5	3	1	6
12"	8	12	6	3	2	8
14"	11	16	9	4	2	11
16"	14	20	11	6	3	14
18"	18	25	14	7	4	18
20"	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

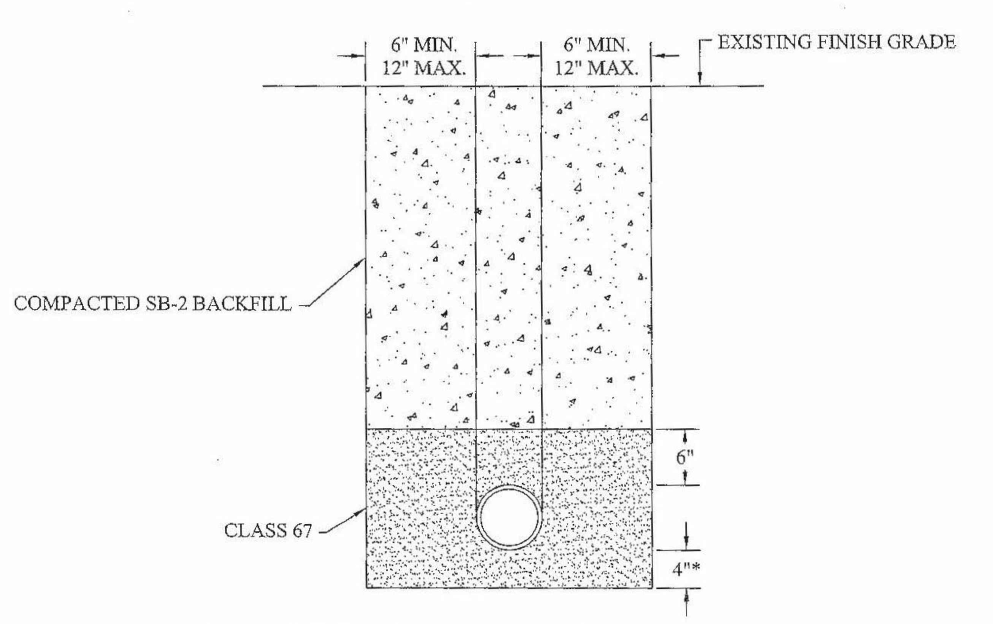
SANITARY SEWER SERVICE WYE



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

UNIMPROVED ROADS & DRIVEWAYS-PRIVATE DRIVEWAYS & PARKING AREAS

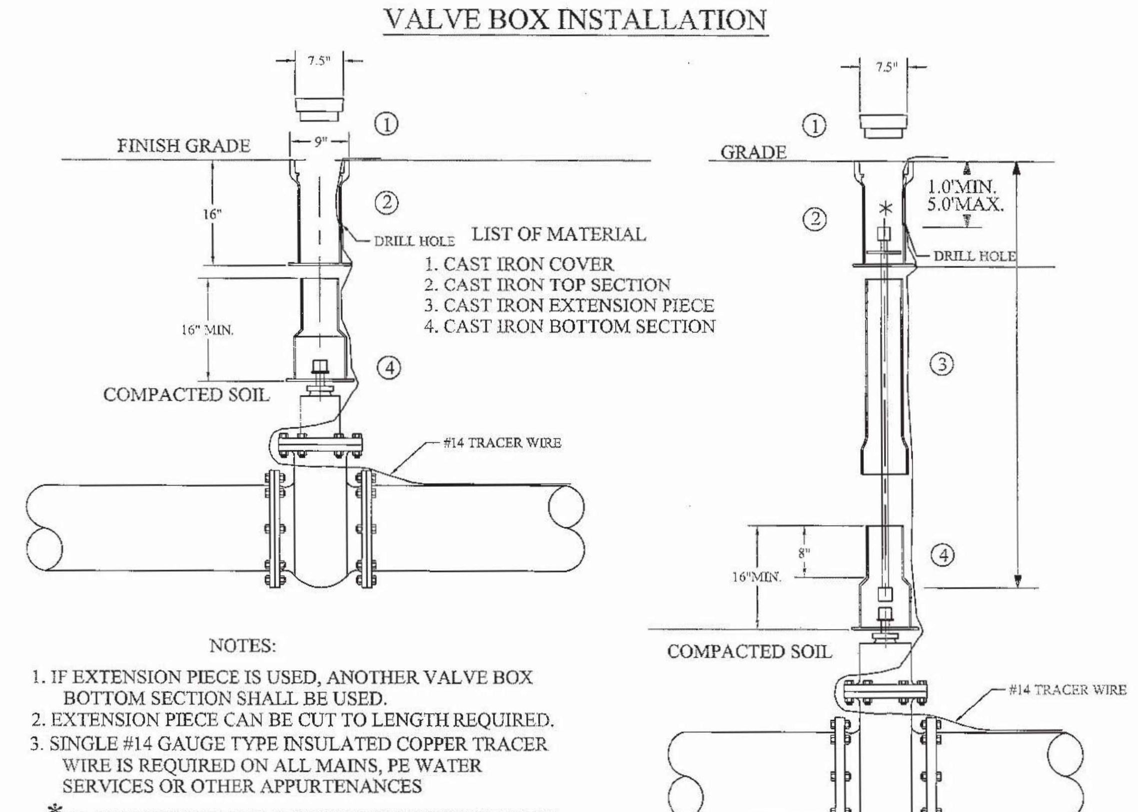


* IF IN ROCK 6" MIN. CLASS #67 STONE REQUIRED. **AND SHALL COMPLY WITH AWWA C–605**
** IMPROVED PRIVATE DRIVEWAYS AND PARKING AREAS BACKFILLED AS SHOWN ABOVE. SUBSURFACE MATERIAL TO EQUAL OR EXCEED EXISTING SURFACE. ASPHALTIC CONCRETE WALKS - MINIMUM THICKNESS 4" CONCRETE DRIVES OR PARKING AREAS - MINIMUM 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	
DRAWN BY: CRB	CHECKED BY: ___	APPROVED: ___	DATE: 09/01/05

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

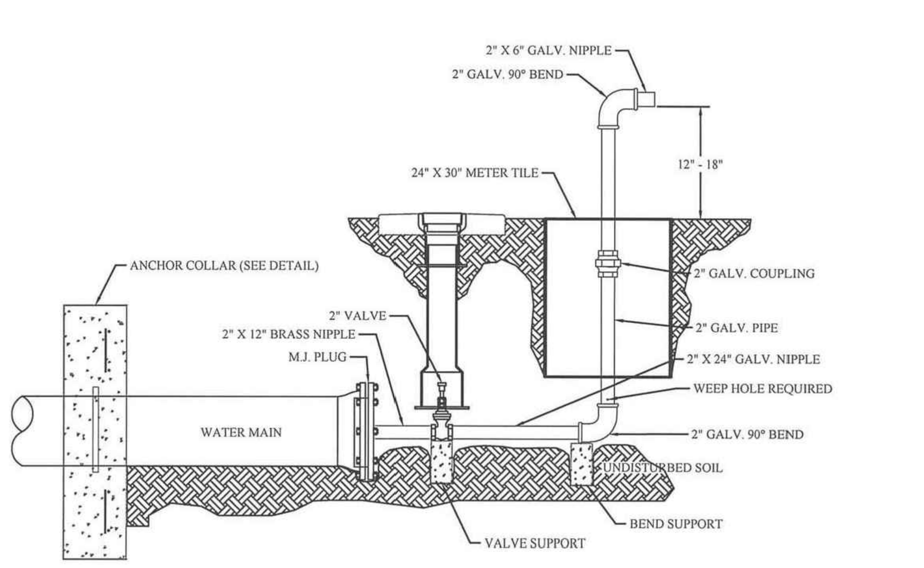
NOTES:

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

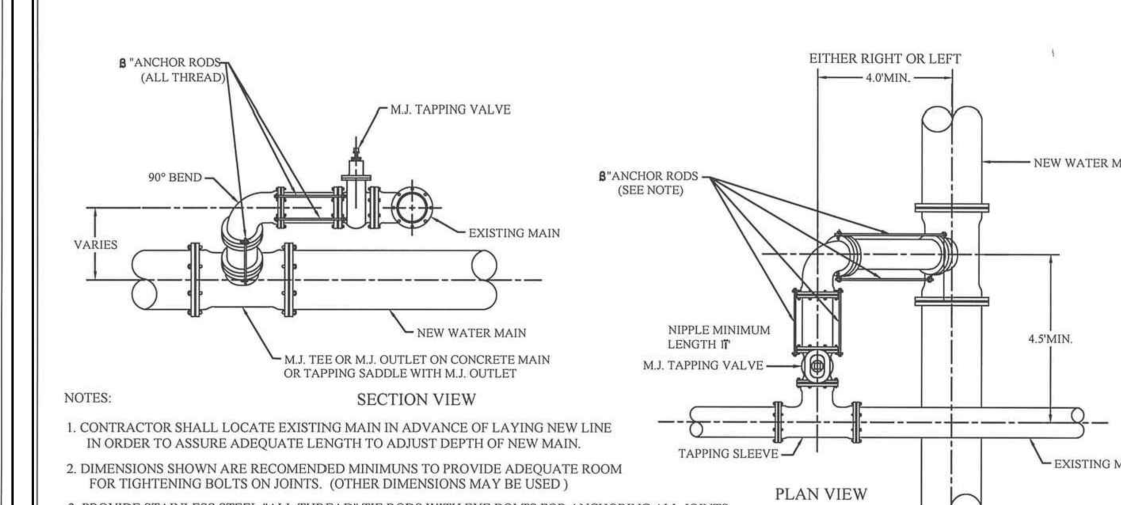
2" END BLOW OFF ASSEMBLY



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	
DRAWN BY: CRB	CHECKED BY: ___	APPROVED: ___	DATE: 09/01/05

SWING CONNECTION - NEW MAIN TO EXISTING MAIN



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

THRUST BLOCKING REQUIRED AT TEES AND ELBOWS.

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

CITY OF TONTITOWN		WATER DETAIL: W13	
		LAST REVISION DATE: 08/29/02	
DRAWN BY: CRB	CHECKED BY: ___	APPROVED: ___	DATE: 09/01/05

ENGINEERING SERVICES INC.
1207 SOUTH OLD MISSOURI RD.
SPRINGDALE, ARKANSAS 72764

WATER & SANITARY SEWER DETAILS
THE RESERVE
TONTITOWN, ARKANSAS

REVISION	DATE	DESCRIPTION

SCALE: N.T.S.

DATE: May 21, 2019

ENGINEER: TJA
DRAWN BY: JGA

W.O. #: 19922

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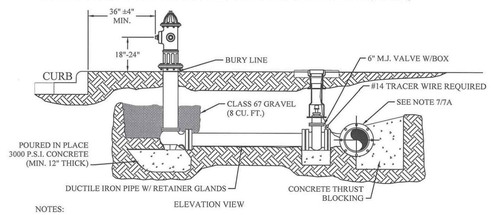
FIRE HYDRANT DETAIL W/DUCTILE IRON PIPE AND RETAINER GLANDS



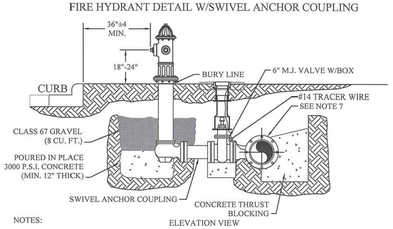
ELEVATION VIEW

NOTES:

1. DRAINAGE BED SHALL CONSIST OF 8 CU FT OF CLASS 67 GRAVEL.
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



ELEVATION VIEW

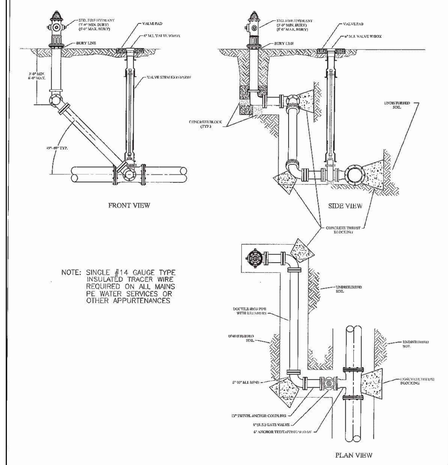
NOTES:

1. DRAINAGE BED SHALL CONSIST OF 8 CU FT OF CLASS 67 GRAVEL.
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

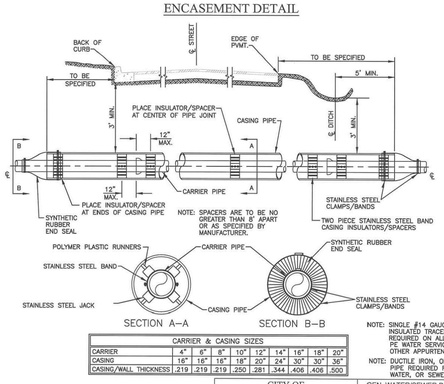
(BURY DEEPER THAN 5'-0")



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



NOTE: SPACERS ARE TO BE NO GREATER THAN 8' APART OR AS SPECIFIED BY MANUFACTURER.

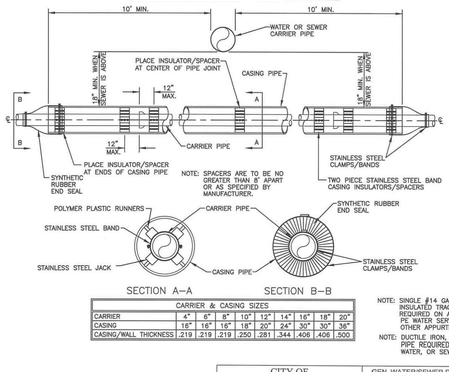
NOTE: SINGLE #14 GAUGE TYPE INSULATED TRACER WIRE REQUIRED ON ALL MAINS PE WATER SERVICES OR OTHER APPURTENANCES

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

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

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



NOTE: SPACERS ARE TO BE NO GREATER THAN 8' APART OR AS SPECIFIED BY MANUFACTURER.

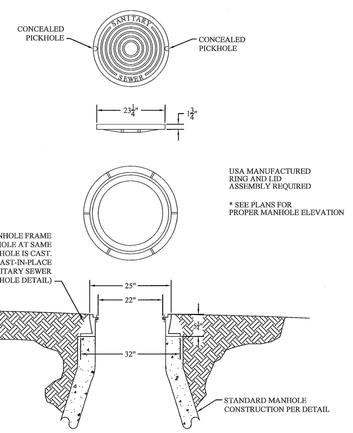
NOTE: SINGLE #14 GAUGE TYPE INSULATED TRACER WIRE REQUIRED ON ALL MAINS PE WATER SERVICES OR OTHER APPURTENANCES

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

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

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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1217 SOUTH OLD MISSOURI RD.
SPRINGDALE, ARKANSAS 72764

WATER & SANITARY SEWER DETAILS
THE RESERVE
TONTITOWN, ARKANSAS

REVISION	DATE	DESCRIPTION

SCALE: N.T.S.

DATE: May 21, 2019

ENGINEER: TJA
DRAWN BY: JGA

W.O. #: 19922

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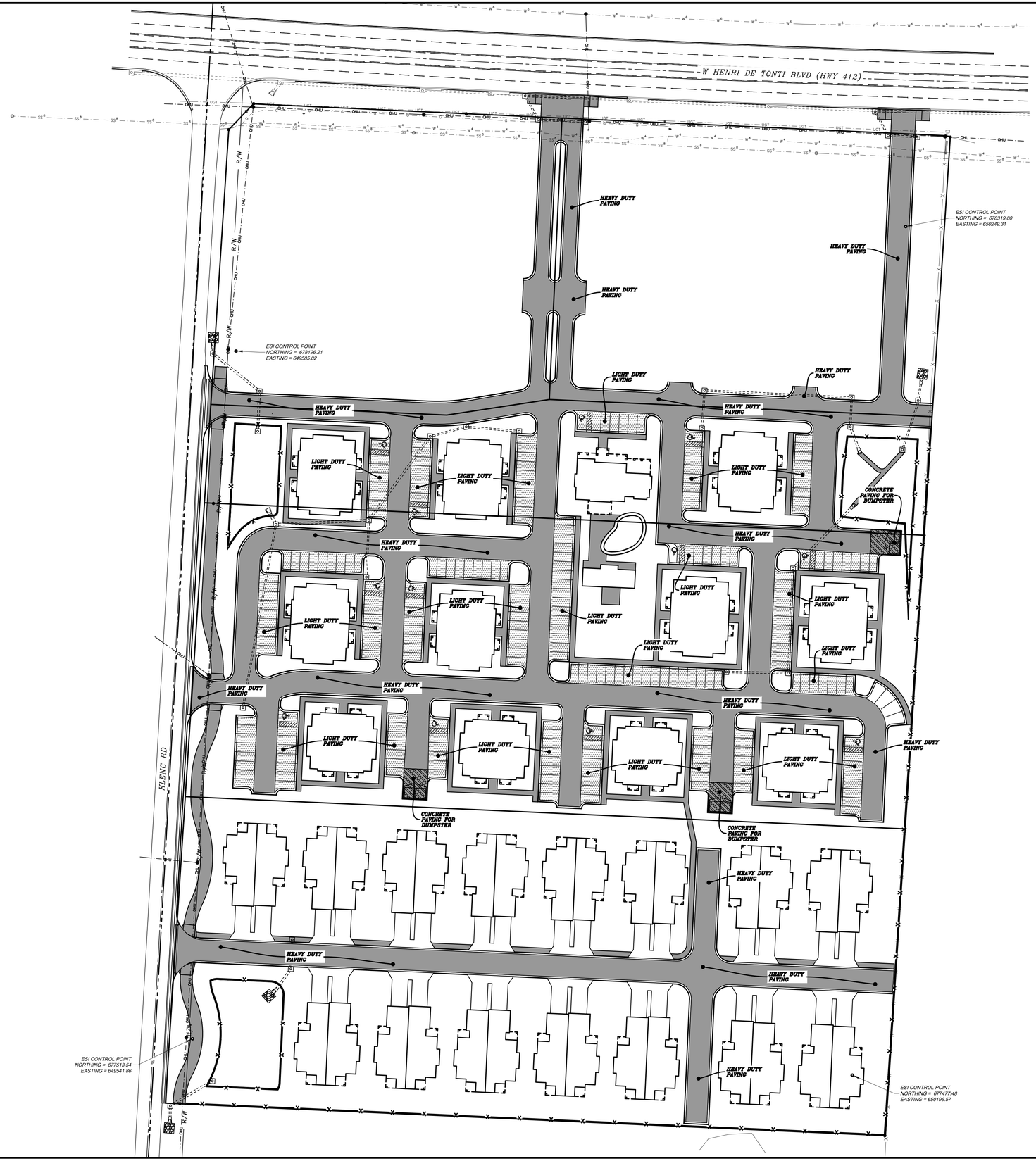
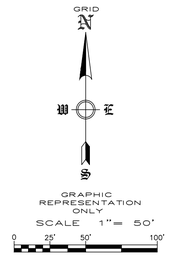
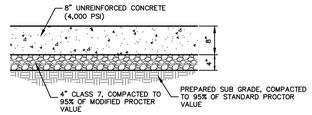
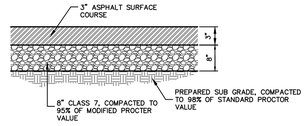






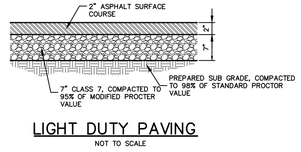
CONCRETE PAD FOR DUMPSTER

NOT TO SCALE



HEAVY DUTY PAVING

NOT TO SCALE



LIGHT DUTY PAVING

NOT TO SCALE

PERCENT OF COVERAGE = 32.20%

LIGHT DUTY PAVING: CLASS 7 BASE 7" THICK
SURFACE COURSE, 2" THICK

HEAVY DUTY PAVING: CLASS 7 BASE 8" THICK
SURFACE COURSE, 3" THICK

DUMPSTER PAD: CLASS 7 BASE 4" THICK
UNREINFORCED CONCRETE (4,000 PSI), 8" THICK

**NOTE:*

1) *PAVING SECTIONS ARE TO BE DETERMINED BY A GEOTECHNICAL ENGINEER. SECTIONS SHOWN SHALL BE MODIFIED TO THE GEOTECHNICAL ENGINEER RECOMMENDATION.*

2) *ALL STRIPING AND SYMBOLS SHALL BE COORDINATED WITH OWNER PRIOR TO INSTALLATION.*

3) *CONTRACTOR IS TO SUBMIT A PLAN SHOWING JOINTS FOR OWNER APPROVAL AS PART OF THE PAVING SUBMITTAL.*

ENGINEERING SERVICES INC.
1207 SOUTH OLD MISSOURI RD.
SPRINGDALE, ARKANSAS 72764

PAVING PLAN
THE RESERVE
TONTITOWN, ARKANSAS

REVISION	DATE	DESCRIPTION

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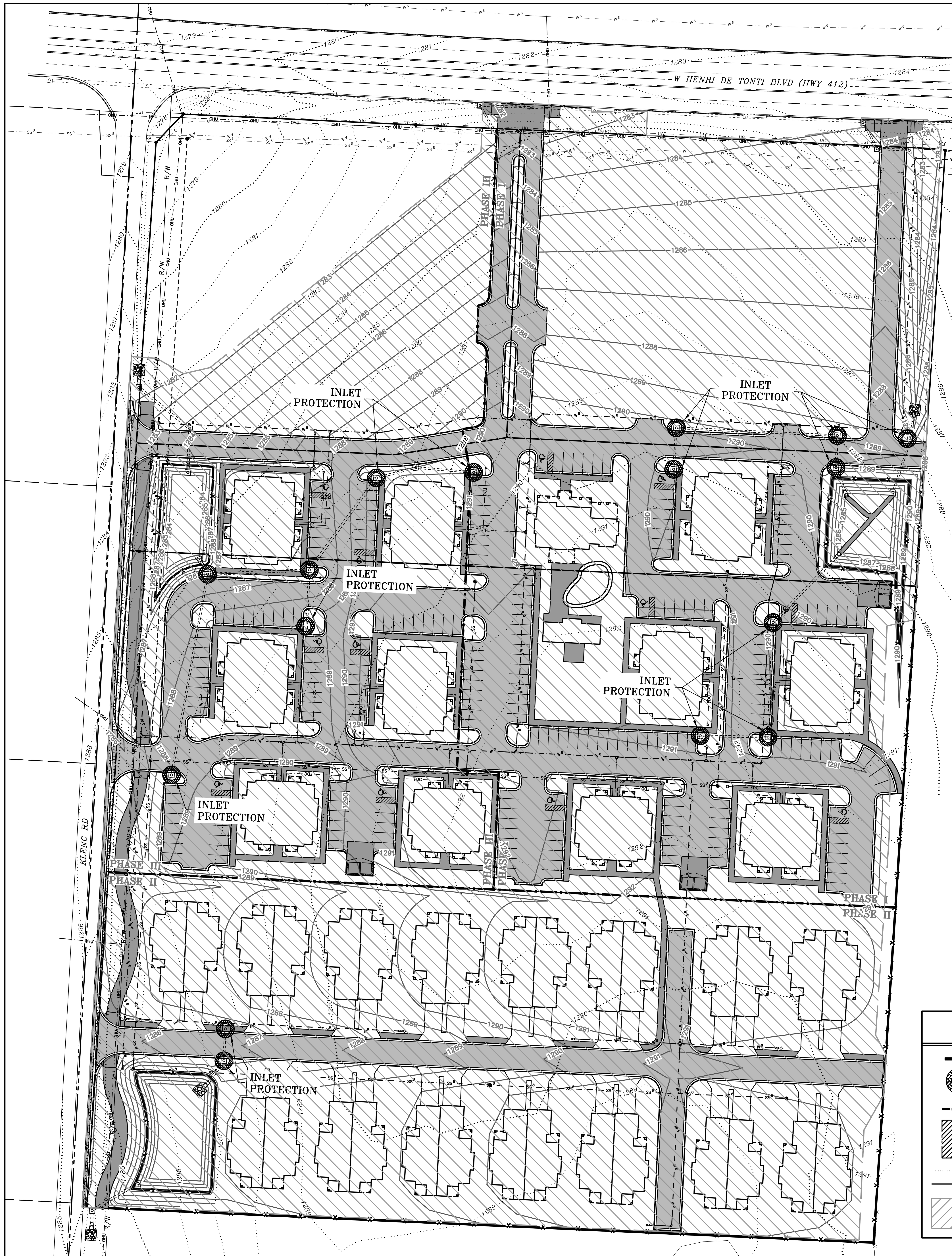
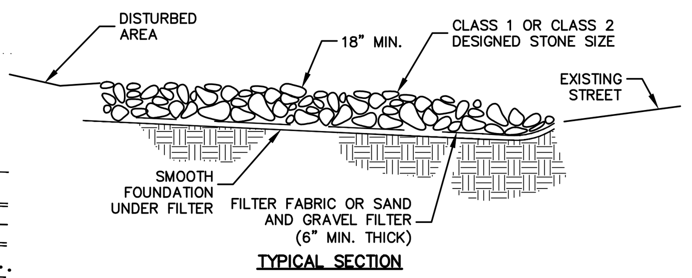
C:\ESI\19922 - THE RESERVE TONTITOWN\19922 PAVING PLAN.DWG

SCALE: 1"=50'
DATE: May 21, 2019
ENGINEER: TJA
DRAWN BY: JGA
W.O. #: 19922





NOTES:

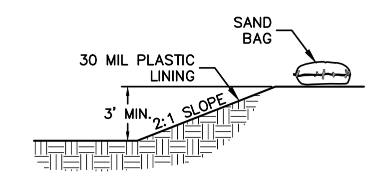
1) MINIMUM THICKNESS SHALL BE 18". THE STONE DIAMETER, NEVER LESS THAN 6".
2) MINIMUM LENGTH SHALL BE 50'

MUD ABATEMENT ENTRANCE

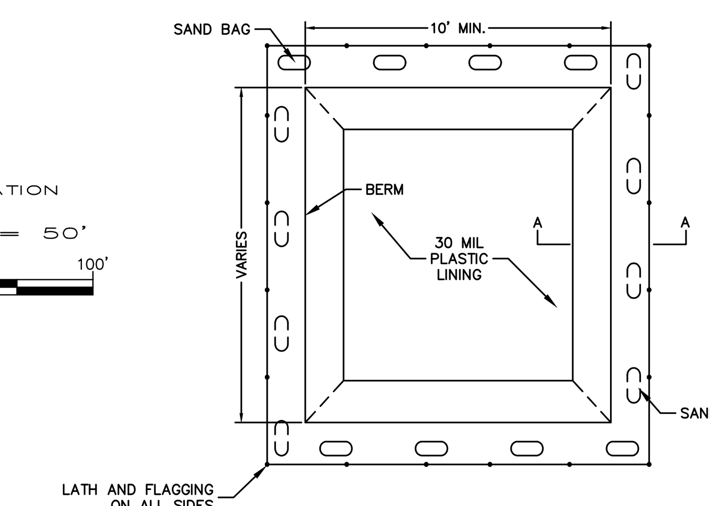
NOT TO SCALE

GRID N

GRAPHIC REPRESENTATION ONLY
SCALE 1" = 50'
0 25' 50' 100'



SECTION A – A



PLAN

NOTES:

1) LATH AND FLAGGING SHOULD BE COMMERCIAL TYPE.
2) PLASTIC LINING MATERIAL SHOULD BE A MINIMUM OF 30 MIL POLYETHYLENE SHEETING AND SHOULD BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.

CONCRETE WASH-OUT AREA

NOT TO SCALE

NOTES:

1) NATURAL VEGETATION SHALL BE RETAINED WHEREVER POSSIBLE.
2) SEED AND MULCH SHALL BE PLACED (BY OWNER) IN ALL AREAS WHERE VEGETATION IS DISTURBED.
3) STRAW AND WOOD CHIPS SHALL BE PLACED TO PROVIDE TEMPORARY PROTECTION WHILE FINAL GRADING IS BEING COMPLETED.
4) PLACE WATTLES ON ALL CURB INLETS.

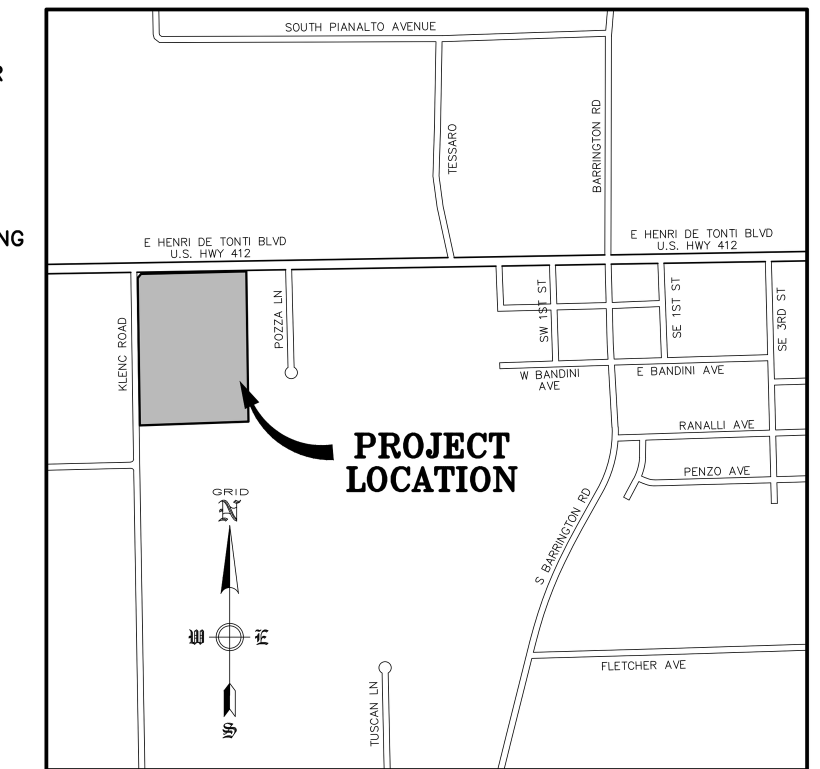
*SILT FENCE IS USED AS AN ENERGY DISSIPATION DEVICE

*SILT FENCE IS USED TO CONTROL POLLUTANTS DURING STORM WATER DISCHARGE

*SILT FENCE MUST BE MAINTAINED UNTIL SITE IS PERMANENTLY STABILIZED

AREA OF SOIL DISTURBANCE: 15.37 ACRES

* PHASE 1–2 – FOR INITIAL GRADING OPERATIONS. ALL OTHER EROSION CONTROL DEVICES WILL BE INSTALLED AFTER SITE GRADING IS COMPLETE.



VICINITY MAP
N.T.S.

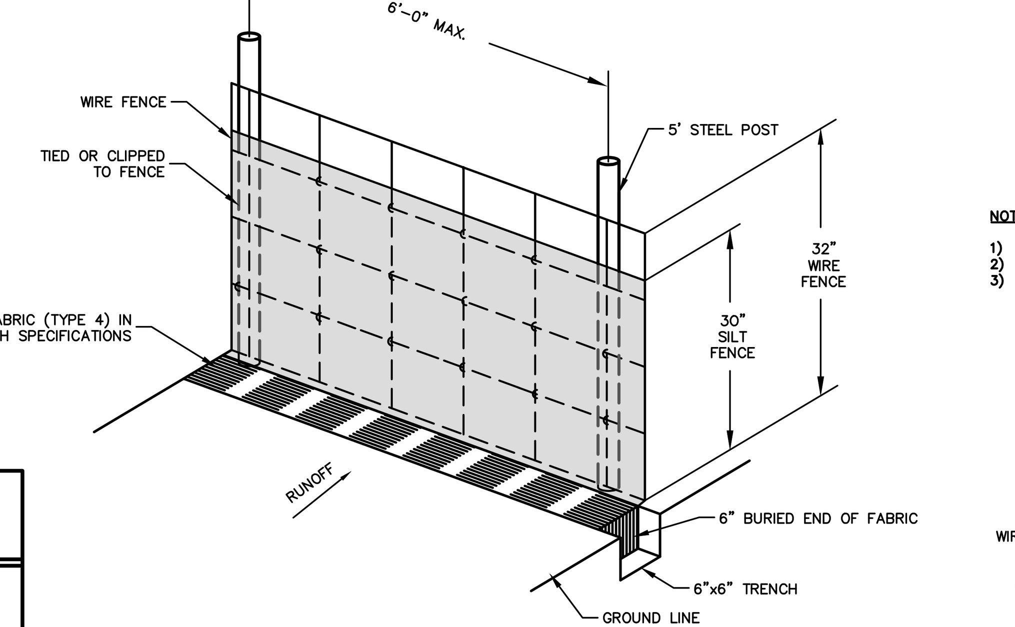
NOTES:

1.) ALL DISTURBED AREAS SHALL RECEIVE 4 INCHES OF TOP SOIL AND RE-VEGETATED PER SECTION 169.06 OF THE UDC. VEGETATION MUST BE ESTABLISHED TO MINIMIZE EROSION PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY.
2.) WHEN SILT FENCE IS NOT PLACED AT A CONSTANT ELEVATION FOLLOWING CONTOURS ON STEEP SLOPES, THE "J" HOOP METHOD SHOULD BE USED (AT 50 FT INTERVALS) TO CREATE PONDING AND PREVENT EROSION OF THE TRENCH BACKFILL OF SILT FENCE INSTALLATION.
3.) ALL GRADED AND OTHERWISE DISTURBED AREAS SHALL BE STABILIZED WITHIN 15 DAYS IMMEDIATELY AFTER GRADING OR DISTURBANCE HAS CEASED.
4.) PERMANENT IMPROVEMENTS SUCH AS STREETS, STORM SEWERS, CURB AND GUTTERS, AND OTHER FEATURES FOR CONTROL OF RUNOFF SHALL BE SCHEDULED COINCIDENTAL TO REMOVING VEGETATIVE COVER FROM THE AREA SO THAT LARGE AREAS ARE NOT LEFT EXPOSED BEYOND THE CAPACITY OF TEMPORARY CONTROL MEASURES.
5.) TOP SOIL OR OTHER SOIL IS TO BE STOCKPILED FOR MORE THAN 30 DAYS, A TEMPORARY COVER OF ANNUAL RYE OR OTHER SUITABLE GRASS SHALL BE PLANTED.
6.) RE-VEGETATION. RE-VEGETATION SHALL BE REQUIRED TO MEET THE FOLLOWING PERFORMANCE STANDARDS (SEDIMENT CONTROLS SHALL REMAIN IN PLACE UNTIL RE-VEGETATION IS ESTABLISHED) UNLESS OTHERWISE ALLOWED BY THE CITY ENGINEER:
   - TOPSOIL. A MINIMUM OF 4 INCHES OF TOPSOIL SHALL BE REQUIRED TO BE EITHER EXISTING OR INSTALLED IN AREAS TO BE REVEGETATED AS SET FORTH IN§169.06(F)(6) BELOW. ANY APPLICATION OF TOPSOIL AND SEEDING UNDER THE DRIP LINE OF A TREE SHOULD BE MINIMIZED TO 3 INCHES SO AS NOT TO DAMAGE THE TREES ROOT SYSTEM.
   - ZERO TO 10% GRADE: RE-VEGETATION SHALL BE A MINIMUM OF SEEDING AND MULCHING. SAID SEEDING SHALL PROVIDE COMPLETE AND UNIFORM COVERAGE THAT MINIMIZES EROSION AND RUNOFF.
   - 10:1 UP TO 4:1 GRADE: RE-VEGETATION SHALL BE A MINIMUM OF HYDRO-SEEDING WITH MULCH AND FERTILIZER, SOD, OR GROUNDCOVER. SAID PLANTING SHALL PROVIDE COMPLETE AND UNIFORM COVERAGE THAT MINIMIZES EROSION AND RUNOFF.
   - 4:1 TO 3:1 GRADE: THE SLOPE SHALL BE COVERED WITH LANDSCAPE FABRIC AND HYDRO-SEEDED WITH MULCH AND FERTILIZER, OR STAKED SOD, OR GROUNDCOVER. SAID PLANTING SHALL PROVIDE COMPLETE AND UNIFORM COVERAGE THAT MINIMIZES EROSION AND RUNOFF
   - MORE THAN 3:1 GRADE: ANY FINISH GRADE OVER 3:1 SHALL BE STABILIZED WITH ONE OR MORE OF THE FOLLOWING:
     - RETAINING WALLS; CRIBBING WITH LANDSCAPE FABRIC; TERRACING WITH GROUNDCOVER; RIPRAP; STAKED SOD (UP TO 2:1 SLOPE)
     - IF CRIBBING, TERRACING, OR RIPRAP IS USED, THE SLOPE'S STABILITY AND ERODIBILITY MUST BE EQUIVALENT TO OR BETTER THAN ITS PREDEVELOPMENT STATE.
7.) PERMANENT EROSION CONTROL. THE DEVELOPER SHALL INCORPORATE PERMANENT EROSION CONTROL FEATURES AT THE EARLIEST PRACTICAL TIME. TEMPORARY EROSION CONTROL MEASURES WILL BE USED TO CORRECT CONDITIONS THAT DEVELOP DURING CONSTRUCTION THAT WERE UNFORESEEN DURING THE DESIGN STAGE, THAT ARE NEEDED PRIOR TO INSTALLATION OF PERMANENT EROSION CONTROL FEATURES, OR THAT ARE NEEDED TEMPORARILY TO CONTROL EROSION THAT DEVELOPS DURING NORMAL CONSTRUCTION PROJECTS, BUT ARE NOT ASSOCIATED WITH PERMANENT CONTROL FEATURES ON THE PROJECT.
8.) DUST. WHERE EXCESSIVE DUST MAY BECOME A PROBLEM, A PLAN FOR SPRAYING WATER ON HEAVILY TRAVELED DIRT AREAS SHALL BE ADDRESSED.
9.) CONSTRUCTION EXITS. A STABILIZED ROCK EXIT IS REQUIRED ON CONSTRUCTION SITES. ROCK EXITS MUST BE AT LEAST 20' WIDE BY 50' LONG BY 6 THICK STABILIZED ROCK HAVING A MINIMUM AVERAGE DIAMETER OF 3 . IF THERE IS AN EXISTING CURB, LOOSE MATERIAL SUCH AS FILL DIRT OR GRAVEL SHALL NOT BE USED TO RAMP UP TO IT FROM THE STREET. TEMPORARY WOODEN RAMPS IN FRONT OF CURBS ARE ACCEPTABLE.
10.) DEBRIS, MUD, AND SOIL IN PUBLIC STREETS. DEBRIS, MUD AND SOIL SHALL NOT BE ALLOWED ON PUBLIC STREETS BUT IF ANY DEBRIS, MUD, OR SOIL FROM DEVELOPMENT SITES REACHES THE PUBLIC STREET IT SHALL BE IMMEDIATELY REMOVED VIA SWEEPING OR OTHER METHODS OF PHYSICAL REMOVAL. DEBRIS, MUD, OR SOIL IN THE STREET MAY NOT BE WASHED OFF THE STREET OR WASHED INTO THE STORM DRAINAGE SYSTEM. STORM DRAINAGE SYSTEMS DOWNSTREAM OF A DEVELOPMENT SITE SHOULD BE PROTECTED FROM DEBRIS, MUD, OR SOIL IN THE EVENT THAT DEBRIS, MUD, OR SOIL REACHES THE DRAINAGE SYSTEM.
11.) FRANCHISE AND PRIVATE UTILITIES. THE PROPERTY OWNER OR MAIN CONTRACTOR ONSITE WILL BE RESPONSIBLE FOR RESTORING ALL EROSION AND SEDIMENT CONTROL SYSTEMS AND PUBLIC INFRASTRUCTURE DAMAGED OR DISTURBED BY UNDERGROUND PRIVATE OR FRANCHISE UTILITY CONSTRUCTION SUCH AS WATER AND SEWER SERVICE LEADS, TELEPHONE, GAS, CABLE, ETC. EROSION AND SEDIMENT CONTROL SYSTEMS MUST BE IMMEDIATELY RESTORED AFTER EACH UTILITY CONSTRUCTION.

Maximum Slope Length for Silt Fence		
Slope – Percent	Maximum Slope Length (ft) Above Fence: Standard (18" High) Silt Fence	Maximum Slope Length (ft) Above Fence: Reinforced (30" High) Silt Fence
2 (or less)	150	250
5	100	250
10	50	150
15	35	100
20	25	70
25	20	55
30	15	45
35	15	40
40	15	35
45	10	30
50	10	25

NOTES:

1. THE SLOPE LENGTH SHOWN IS THE DISTANCE FROM THE FENCE TO THE DRAINAGE DIVIDE OR THE NEAREST UPSLOPE CHANNEL.
2. SLOPE LENGTH CANNOT BE ADDRESSED BY USE OF MULTIPLE ROWS OF SILT FENCE.



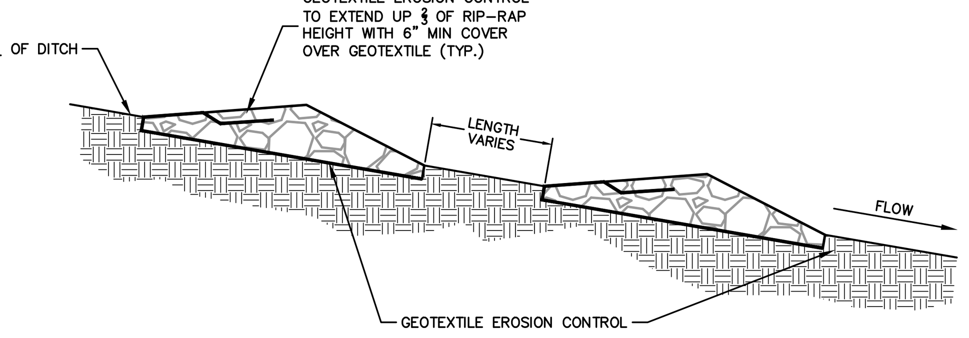
LEGEND	
(arrow)	PROPOSED FLOWLINE DIRECTION
(symbol)	INLET PROTECTION
(line)	WIRED REINFORCED BURIED EDGE SILT FENCE
(hatch)	MUD ABATEMENT ENTRANCE
·······1390·······	EXISTING CONTOURS
—— 1388 ——	PROPOSED CONTOURS
(hatch)	AREA OF SOIL DISTURBANCE

SILT FENCE NOTES

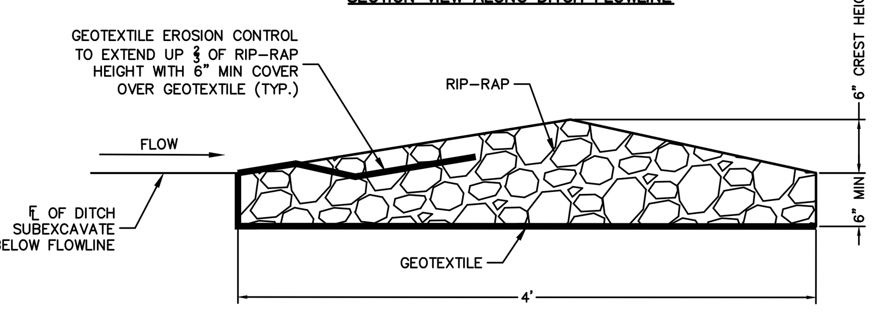
1. POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. HERE FENCE CANNOT BE TRENCHED IN (e.g.PAVEMENT), WEIGHT FABRIC FLAP WITH ROCK ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.
3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH SUPPORT POST OR TO WOVEN WIRE, WHICH IN TURN IS ATTACHED TO THE FENCE POST. THERE SHALL BE A 3 FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.
5. REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF HALF THE HEIGHT OF THE FENCE. THE SILT SHALL BE DISPOSED OF AT AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.

WIRED REINFORCED BURIED EDGE SILT FENCE

NOT TO SCALE



SECTION VIEW ALONG DITCH FLOWLINE



NOTES:

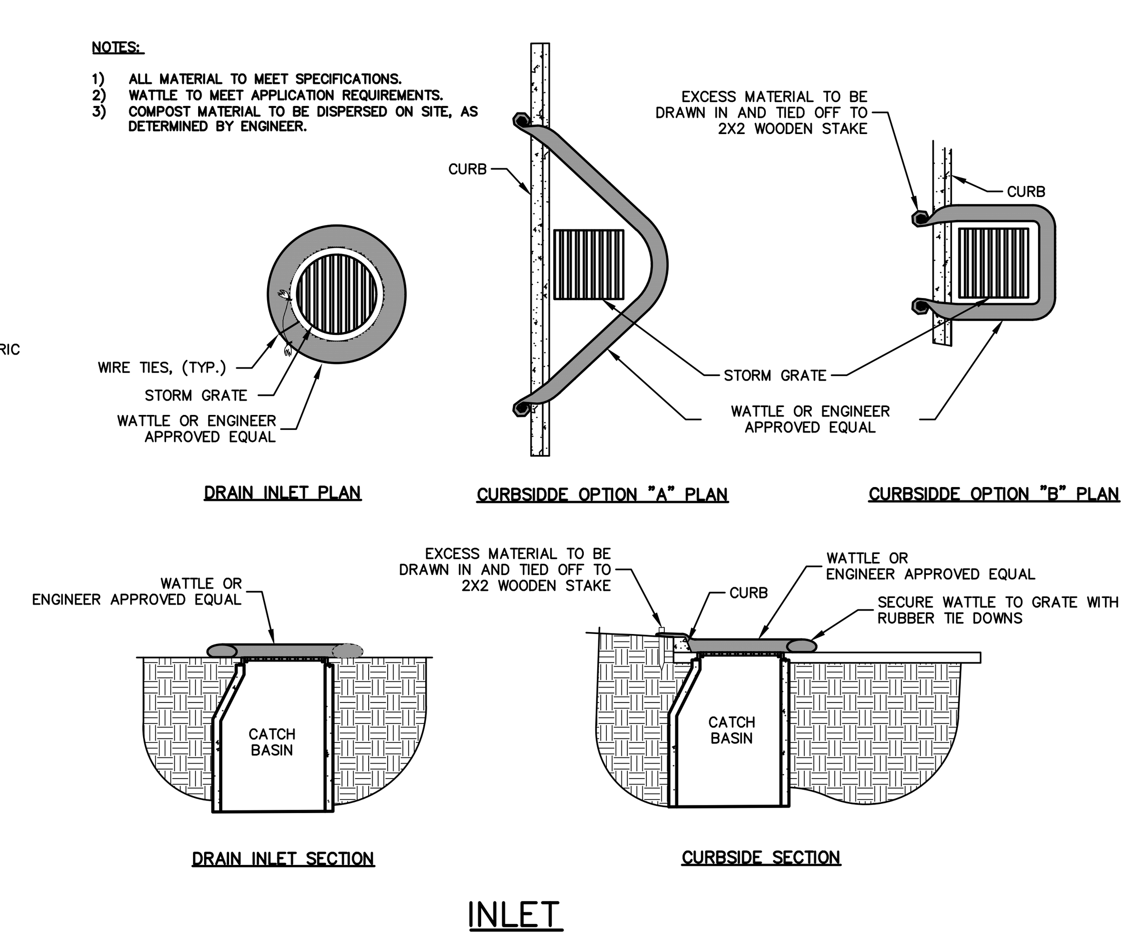
1. RIP-RAP SIZE D50 = 6" OR AS SHOWN ON THE PLANS.

SECTION VIEW OF CHECK DAM

ROCK CHECK DAM

NOTES:

1) ALL MATERIAL TO MEET SPECIFICATIONS.
2) WATTLE TO MEET APPLICATION REQUIREMENTS.
3) COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.



INLET PROTECTION

NOT TO SCALE

ENGINEERING SERVICES INC.
1207 SOUTH OLD MISSOURI RD.
SPRINGDALE, ARKANSAS 72764

STORM WATER POLLUTION PREVENTION PLAN
THE RESERVE
TONTITOWN, ARKANSAS

REVISION	DATE	DESCRIPTION

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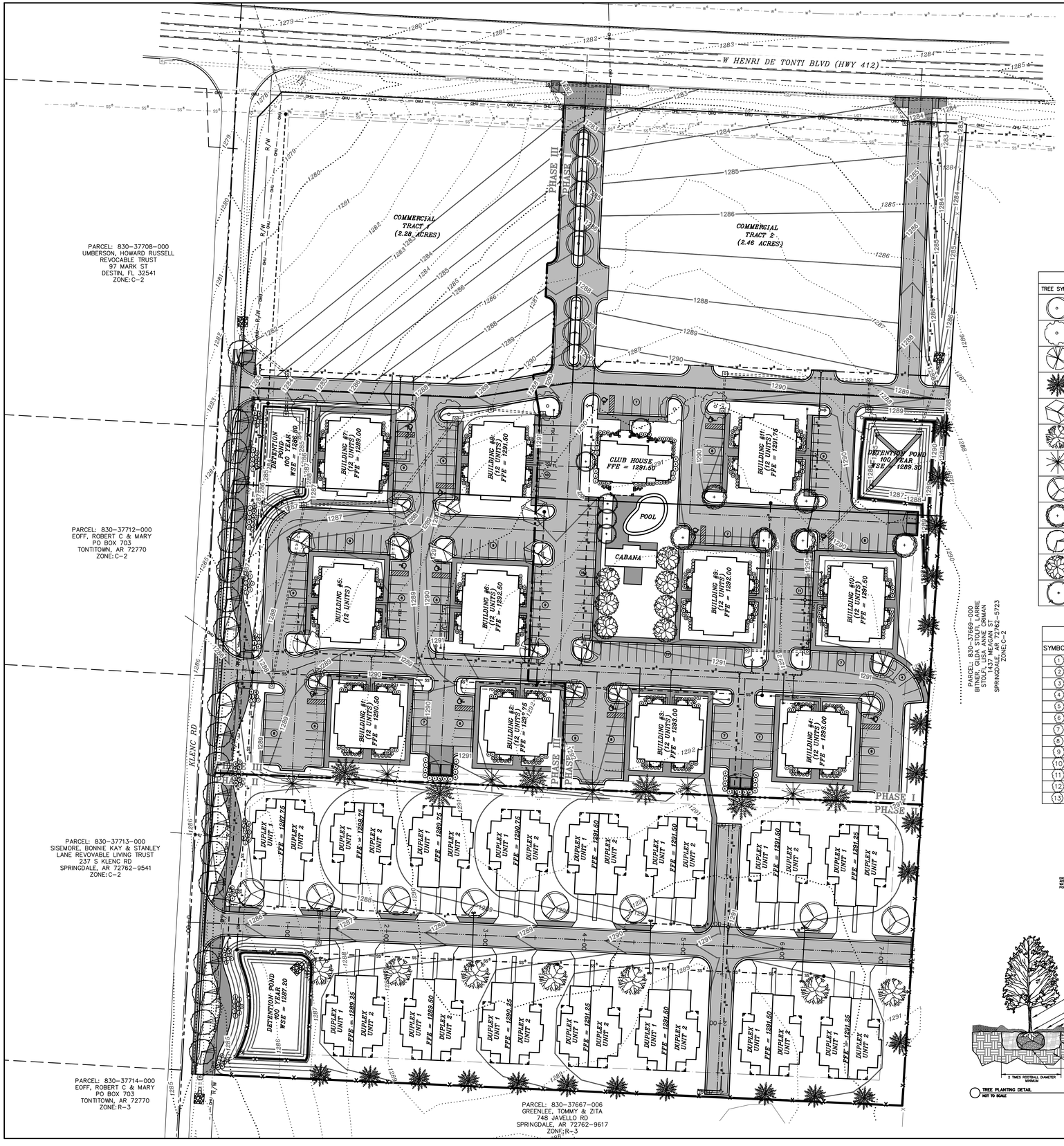
Z:\LSD\19922 - The Reserve Tontitown\19922 - SWPPP.dwg

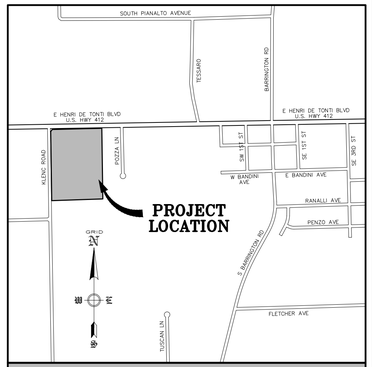
SCALE: 1"=50'
DATE: May 21, 2019
ENGINEER: TJA
DRAWN BY: DBB
W.O. #: 19922



PARCEL NUMBER: 830-37667-002
830-37667-000
830-37667-007

GRID N

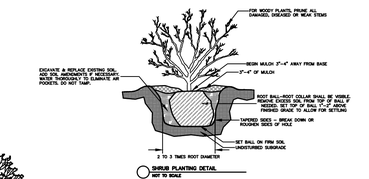
GRAPHIC REPRESENTATION ONLY
SCALE 1" = 50'
0 25' 50' 100'



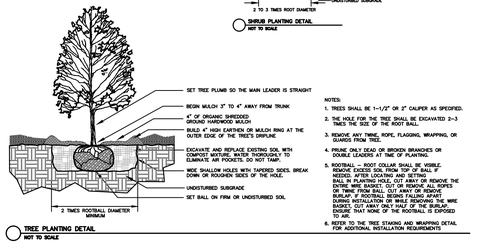
VICINITY MAP
N.T.S.

INDEX OF TREES				
TREE SYMBOL	COMMON NAME	BOTANICAL NAME	TOTAL # TREES	SIZE
	LITTLELEAF LINDEN	Tilia Cordata	8	3" Cal B & B
	CHINESE PISTACHE	Pistachia chinensis	6	3" Cal B & B
	WILLOW OAK	Quercus phellos	8	3" Cal B & B
	SHORT LEAF PINE	Pinus echinata	28	8' H, MIN B & B
	LACEBARK ELM	Ulmus parvifolia	8	3" Cal B & B
	RED MAPLE	Acer rubrum	7	3" Cal B & B
	EASTERN WHITE PINE	Pinus strobus	6	8' H, MIN B & B
	SUGAR MAPLE	Acer saccharum	8	3" Cal B & B
	NORTHERN RED OAK	Quercus rubra	6	3" Cal B & B
	BLACK GUM	Nyssa sylvatica	20	3" Cal B & B
	DURA-HEAT RIVER BIRCH	Betula nigra 'Dura-heat'	7	3" Cal B & B
	EASTERN REDBUD	Cercis canadensis	5	1.5" Cal B & B

INDEX OF SHRUBS				
SYMBOL	COMMON NAME	BOTANICAL NAME	TOTAL # PLANTS	SIZE
1	RED TIPPED PHOTINIA	Photinia x fraserii	58	3 GAL.
2	ENGLISH LAUREL	Prunus lauroceraus	48	3 GAL.
3	LEATHER LEAF MAHONIA	Mahonia bealei	24	3 GAL.
4	SEA GREEN JUNIPER	Juniperus x pfitzeriana 'Sea Green'	24	3 GAL.
5	WINTERGEM BOXWOOD	Buxus microphylla 'Winter Gem'	68	3 GAL.
6	COMPACT INKBERRY HOLLY	Ilex glabra 'Compacta'	124	3 GAL.
7	DWARF MUGO PINE	Pinus mugo var. pumilio	42	3 GAL.
8	VIRGINIA SWEETSPIRE	Itea virginica	55	3 GAL.
9	ROSE CREEK ABELIA	Abelia x 'Rose Creek'	40	3 GAL.
10	JAPANESE SPIREA	Spiraea japonica	84	3 GAL.
11	CRIMSON PYGMY BARBERRY	Berberis thunbergii 'Crimson pygmy'	48	3 GAL.
12	BIGLEAF HYDRANGEA	Hydrangea macrophylla	8	3 GAL.
13	DAYLILLY VARIETIES	Hemerocallis varieties	94	1 GAL.



SHRUB PLANTING DETAIL
NOT TO SCALE



TREE PLANTING DETAIL
NOT TO SCALE

NOTES:
1. TREES SHALL BE 1-1/2" OR 2" CALIPER AS SPECIFIED.
2. THE HOLE FOR THE TREE SHALL BE EXCAVATED 2-3 TIMES THE SIZE OF THE ROOT BALL.
3. REMOVE ANY TWINE, ROPE, FLAGGING, WRAPPING, OR GUARDS FROM TREE.
4. PRUNE ONLY DEAD OR BROKEN BRANCHES OR DOUBLE LEADERS AT TIME OF PLANTING.
5. ROOTBALL – ROOT COLLAR SHALL BE VISIBLE. REMOVE EXCESS SOIL FROM TOP OF BALL IF NEEDED. AFTER LOCATING AND SETTING BALL IN PLANTING HOLE, CUT AWAY OR REMOVE THE TOP ONE-THIRD OF BURLAP, WIRE BASKETS, OR TWINE FROM BALL. CUT AWAY OR REMOVE BURLAP IF FOOTBALL BEGINS FALLING APART. AFTER REMOVING THE TOP ONE-THIRD OF THE WIRE BASKETS, CUT AWAY ONLY HALF OF THE BURLAP. ENSURE THAT NONE OF THE ROOTBALL IS EXPOSED TO AIR.
6. REFER TO THE TREE STAKING AND WRAPPING DETAIL FOR ADDITIONAL INSTALLATION REQUIREMENTS

OWNER:	MANTEGANI, EILEEN A LIVING TRUST P.O. BOX 25 TONTITOWN, AR 72770-0025
DEVELOPER:	THE RESERVE AT TONTITOWN, LLC P.O. BOX 10386 FORT SMITH, AR 72917
ENGINEER:	ENGINEERING SERVICES, INC. 1207 S. OLD MISSOURI ROAD P.O. BOX 282 SPRINGDALE, AR 72762
CITY ZONING:	C-2 GENERAL COMMERCIAL
SETBACKS:	FRONT – 25' STREET SIDE – 25' INTERIOR SIDE – 10' REAR – 25'
GROSS AREA: NET AREA:	16.32 ACRES± 15.97 ACRES±
PARKING REQUIRED PHASE 1:	2 1/4 SPACES PER 2 BEDROOM UNIT (36 UNITS) = 81 SPACES 1 3/4 SPACES PER 1 BEDROOM UNIT (24 UNITS) = 42 SPACES 1 SPACE PER 250 FT.^{2} (2,562 FT.^{2}) = 10 SPACES
PARKING PROVIDED PHASE 1:	152 SPACES (ADA 6 SPACES)
PARKING REQUIRED PHASE 2:	2 SPACES PER UNIT (DUPLEX) (30 UNITS) = 60 SPACES
PARKING PROVIDED PHASE 2:	60 SPACES
PARKING REQUIRED PHASE 3:	2 1/4 SPACES PER 2 BEDROOM UNIT (48 UNITS) = 108 SPACES 1 3/4 SPACES PER 1 BEDROOM UNIT (24 UNITS) = 42 SPACES
PARKING PROVIDED PHASE 3:	93 SPACES (ADA 4 SPACES)

TOTAL REQUIRED (PH 1 & 3) = 283 SPACES
TOTAL PROVIDED (PH 1 & 3) = 245 SPACES

LANDSCAPE NOTES:

1. AUTOMATIC IRRIGATION SYSTEM OR HOSE BIBS WILL BE PROVIDED FOR ALL LANDSCAPED AREAS
2. SOIL SHALL BE AMENDED AND ALL ROCKS AND FOREIGN MATERIAL SHALL BE REMOVED PRIOR TO ANY LANDSCAPE INSTALLATION
3. NOTE THE SIZE OF LANDSCAPE TREES AND MATERIALS AT TIME OF PLANTING
4. WIRE BASKETS AND BURLAP TO BE REMOVED DURING TREE PLANTING.
5. ALL PLANTING BEDS SHALL RECIEVE 6" OF TOPSOIL FREE OF ROCKS/WEEDS/DEBRIS PRIOR TO INSTALLATION OF PLANT MATERIAL
6. ALL PLANTING BEDS SHALL RECEIVE RIVER ROCK OR ORGANIC MULCH AT TIME OF INSTALLATION
7. ALL PLANTING BEDS SHALL BE CONTAINED BY EDGING OR MATERIAL OTHER THAN VEGETATION/SOD.
8. SHADE TREES SHALL HAVE A MIN. CALIPER OF 3" AND A HEIGHT OF 8'
9. ORNAMENTAL TREES SHALL HAVE A MIN. CALIPER OF 1.5" AND A HEIGHT OF 4'
10. ONCE INSTALLED LANDSCAPING SHALL BE MAINTAINED IN A HEALTHY LIVING CONDITION, AND IF PLANT MATERIAL DIES IT SHALL BE REPLACED WITHIN THE NEXT APPROPRIATE GROWING SEASON.
11. IF CONFLICTS WITH PROPOSED LIGHTS, FIRE HYDRANTS, OR OTHER SITE FEATURES EXIST, TREES OR SHRUBS SHALL BE MOVED AND SHALL NOT INTERFERE WITH PROPOSED FEATURES.
12. TREES SHALL BE STAKED AS NECESSARY TO PREVENT LEANING OR FALLING OVER.
13. TREES SHALL BE AT LEAST 5 FEET FROM ANY UTILITY MAIN LINES.
14. PLANT MATERIAL TO BE GUARANTEED FOR A MINIMUM PERIOD OF THREE (3) YEARS FROM DATE OF INSTALLATION.

ENGINEERING SERVICES INC.
1207 SOUTH OLD MISSOURI RD.
SPRINGDALE, ARKANSAS 72764

LANDSCAPE PLAN
THE RESERVE
TONTITOWN, ARKANSAS

REVISION	DATE	DESCRIPTION

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SCALE: 1"=50'
DATE: May 21, 2019
ENGINEER: TJA
DRAWN BY: JGA
W.O. #: 19922