

SECTION 23, TOWNSHIP 47 N., RANGE 32 W.
IN LEE'S SUMMIT, JACKSON COUNTY, MO



BENCHMARK

INTERSECTION OF S.W. LADDERBACK DRIVE AND S.W. OLD PORT ROAD, N.E. QUADRANT FIRE HYDRANT TOP FLANGE BOLT EASTERN MOST WITH "X"
CHISEL ON TOP.
ELEV = 982.73

ACCEPTED:

NICHOLAS D. HEISER, P.E.
CIVIL ENGINEER
MO#2015000555
1301 BURLINGTON, SUITE 100
NORTH KANSAS CITY, MO 64116
PHONE: 816.587.4320
FAX: 816.587.1393

DATE _____

REVIEW BY:

CITY OF LEE'S SUMMIT, MISSOURI

DATE _____

SHEET
C301

ESTIMATE OF QUANTITIES				
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	AS-BUILT
1	8" C900 PLASTIC PIPE	L.F.	1061	
2	6" C900 PLASTIC PIPE	L.F.	445	
3	6" CLASS 52 D.I.P.	L.F.	22.41	
4	FIRE HYDRANT ASSEMBLY	E.A.	3	
5	STRADDLE BLOCK	E.A.	1	
6	BENDS	E.A.	10	



GENERAL NOTES:
1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE MOST RECENT VERSION OF THE STANDARDS AND SPECIFICATIONS FOR WATER MAIN EXTENSIONS OF THE LEE'S SUMMIT, MISSOURI WATER SERVICES DEPARTMENT. WHERE DISCREPANCIES EXIST BETWEEN THESE PLANS AND THE DESIGN AND CONSTRUCTION MANUAL, THE DESIGN AND CONSTRUCTION MANUAL SHALL PREVAIL.
2. AREAS WITH LESS THAN 4 FEET OF DEPTH FROM EXISTING GRADE TO PROPOSED TOP OF PIPE SHALL BE FILLED TO AN ELEVATION OF 4 FEET ABOVE THE PROPOSED TOP OF PIPE, COMPACTED 95% OF STANDARD PROCTOR DENSITY AS DETERMINED BY ASTM D698 PRIOR TO TRENCHING FOR PIPE INSTALLATION.

WATER MAINS

FIRE HYDRANTS ASSEMBLY

STRAIGHT SET HYDRANT ASSEMBLY

STRADDLE BLOCK

VALVES

PROPERTY LINE

STOP SIGN

END OF ROAD TREATMENT

LEGEND

NEW

EXISTING

OTHERS

OTHERS

OTHERS

OTHERS

OTHERS

OTHERS

OTHERS

OTHERS

OTHERS

OTHERS

OTHERS

OTHERS

OTHERS

OTHERS

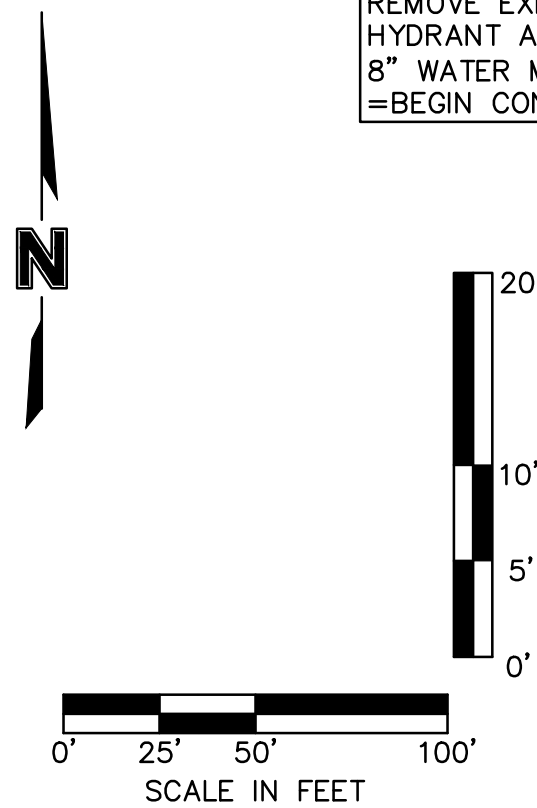
OTHERS

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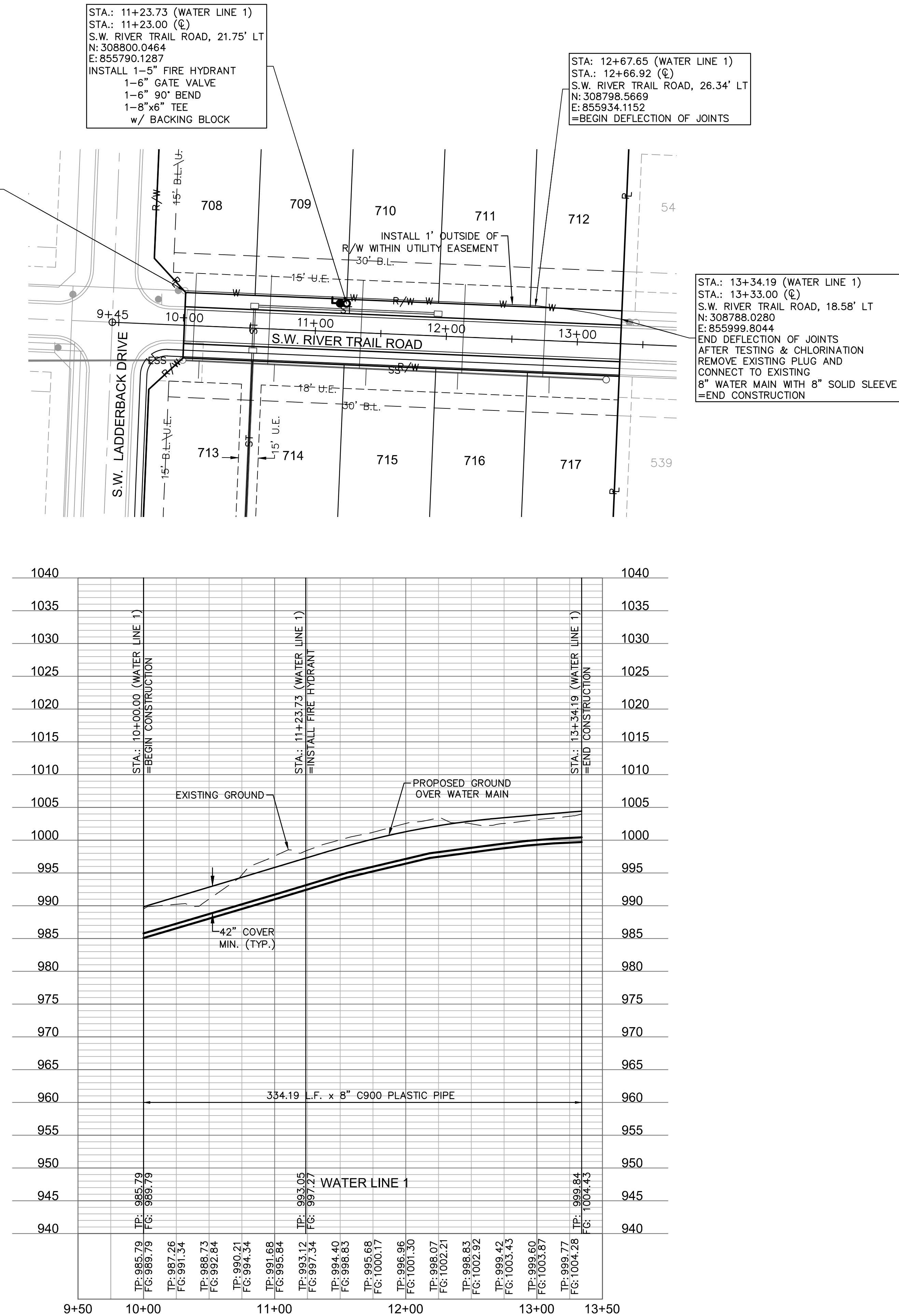
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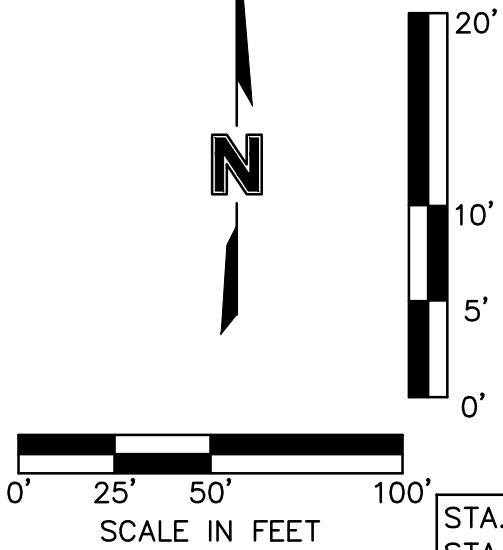
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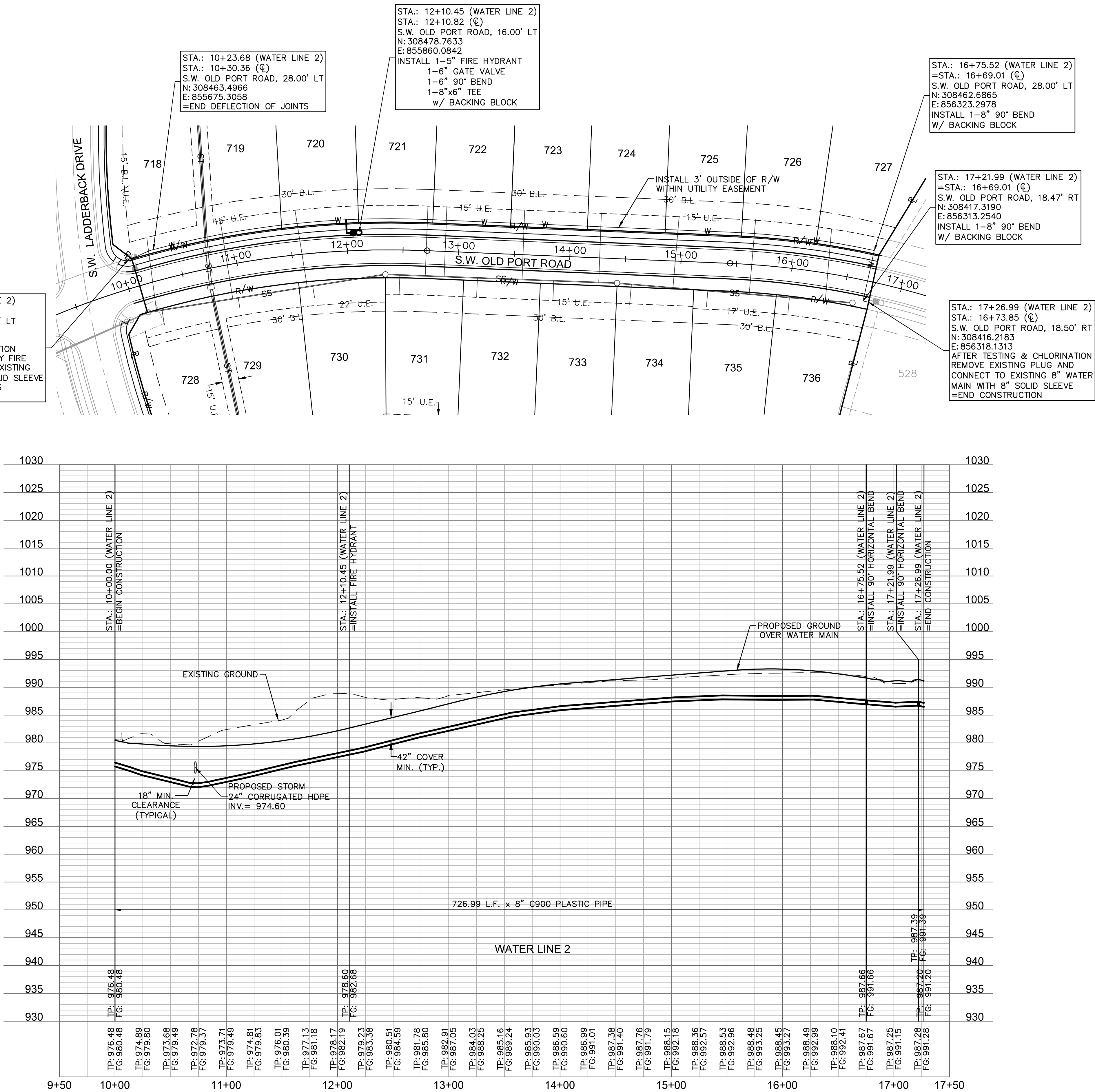
NOTES:

1. CONTRACTOR TO VERIFY EXISTING CONDITIONS AND COMMUNICATE WITH ENGINEER IF DIFFERENT THAN PLANS.
2. CONTRACTOR SHALL FILL AND COMPACT TO 95% STANDARD DENSITY TO A POINT 18" MINIMUM ABOVE THE TOP OF PIPE PRIOR TO EXCAVATION FOR THE PIPE.



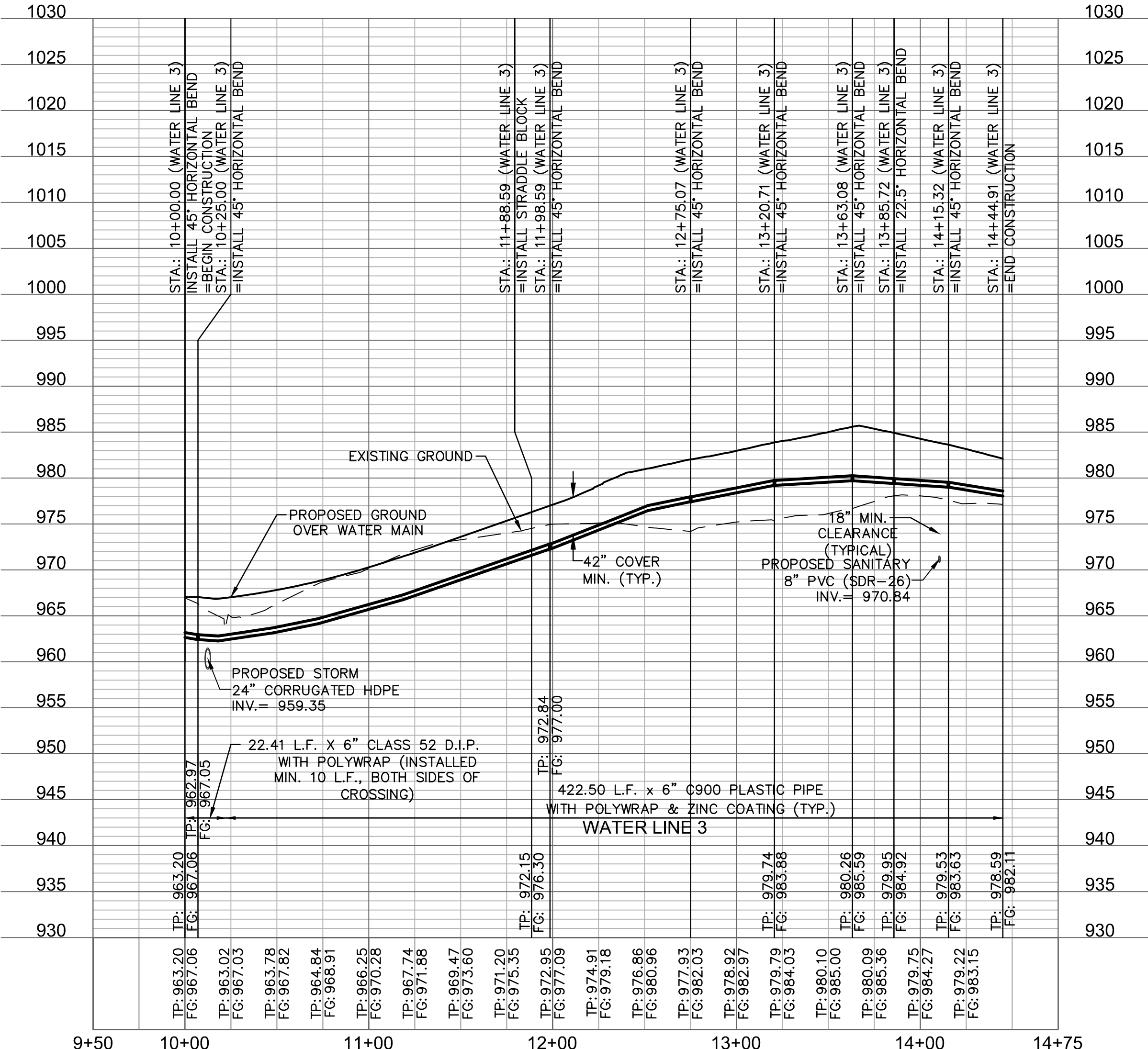
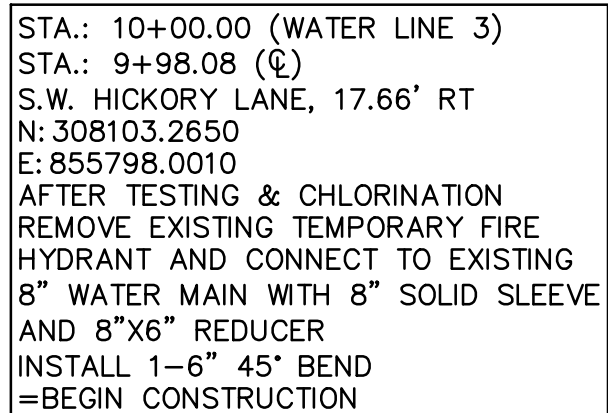


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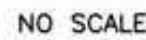


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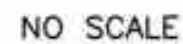
Working Pressure	150	psi
Surge Allowance	100	psi
Design Pressure	250	psi
Soil Bearing Capacity	1500	psf
Safety Factor	1.0	
Min. Bearing Area	4.0	sf
Max. Bearing Area	50.0	sf

ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT. MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE THRUST BLOCKING.



Working Pressure	150	psi
Surge Allowance	100	psi
Design Pressure	250	psi
Conc. Unit Weight	140	pcf
Safety Factor	1.0	
Min. Block Size	4.0	cf
Max. Block Size	216.0	cf

ALL BENDS WITHOUT RESTRAINED JOINTS SHALL
HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT.
MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE
THRUST BLOCKING.



N.T.S.



1. A MINIMUM OF 42 INCHES OF COVER SHALL BE OVER THE TOP OF THE PIPE. THIS MINIMUM OF COVER SHALL BE FROM THE TOP OF PIPE TO THE FINISHED GRADE. A MAXIMUM COVER OF 7' SHALL BE ALLOWED.
2. BEDDING AGGREGATE SHALL BE PLACES FROM A LEVEL 6 INCHES BELOW THE BOTTOM OF THE PIPE TO A LEVEL 6 INCHES ABOVE THE TOP OF THE PIPE.
3. TRENCH BACKFILL IN PAVED AREAS WITHIN STREET OR ALLEY RIGHT OF WAY:
 - a. NARROW TRENCH: SUITABLE BACKFILL MATERIAL FOR TRENCHES 24 INCHES OR LESS IN WIDTH AND SHALL BE TYPE A FLOWABLE FILL.
 - b. STANDARD TRENCH: SUITABLE BACKFILL MATERIAL FOR TRENCHES BETWEEN 24 TO 48 INCHES WIDE SHALL BE EITHER TYPE A FLOWABLE FILL OR DENSE, WELL GRADED AGGREGATE BASE MATERIAL. AGGREGATE BASE MATERIAL SHALL MEET THE REQUIREMENTS FOR KDOT AB-3; MODOT TYPES 1 OR 5; OR APWA 2202.2.
 - c. WIDE TRENCH: SUITABLE BACKFILL MATERIAL FOR TRENCHES BETWEEN GREATER THAN 48 INCHES WIDE SHALL BE SUITABLE MATERIAL AS SPECIFIED FOR EARTH EMBANKMENT IN APWA STANDARD SPECIFICATIONS, SECTION 2102.2.C.
 - d. SUITABLE BACKFILL MATERIAL OUTSIDE OF PAVED AREAS WITHIN RIGHT OF WAY, AND ALL AREAS OUTSIDE RIGHT OF WAY, MAY BE SUITABLE MATERIAL AS SPECIFIED FOR EARTH EMBANKMENT IN APWA STANDARD SPECIFICATIONS, SECTION 2102.2.C. SUITABLE BACKFILL MATERIAL MAY ALSO BE OTHER TRENCH BACKFILL MATERIAL (FLOWABLE FILL OR AGGREGATE BASE) DEPENDING ON SITE CONDITIONS, TRENCH WIDTHS OR AT THE DIRECTION OF THE CITY'S ON SITE INSPECTOR.



N.T.S.



PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MD 64063

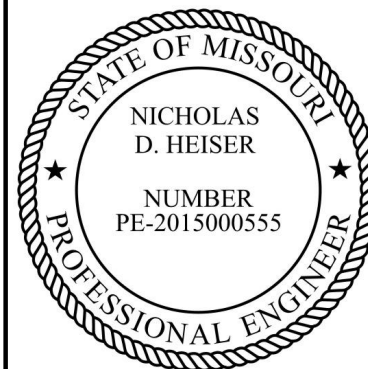
VALVE STEM EXTENSION AND VALVE BOX

Date: 02/13
Drawn By: JN
Checked By: DL
FILE: WAT-9
Rev: 1/14
Drawn

LEE'S SUMMIT, MO

drawn by: B.P.K
checked by: N.D.H.
designed by: B.P.K.
QA/QC by: M.G.D.
project no.: 018-0847
date: 2018.04.20

SHEET
C306



BY _____

REVISIONS DESCRIPTION

DATE

NC
RE

REVISIONS

2018

LEE'S SUMMIT, MO

WOLSSON®
ASSOCIATES

NO Certificate of Authority #0000000000
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