

# STANDARD ADDITION WATER MAIN REPLACEMENT - PHASE II

## CITY OF CARLINVILLE MACOUPIN COUNTY, ILLINOIS

FACILITY NUMBER: IL1170150  
IEPA PERMIT NUMBER: 1209-FY2015  
DCEO/CDAP GRANT NUMBER: 16-242003

MAYOR  
DEANNA DEMUZIO

CITY COUNCIL  
KIM HEIGART  
ANDY CAMPBELL  
ELAINE BROCKMEIER  
RANDY BILBRUCK  
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CARLA BROCKMEIER - CITY CLERK



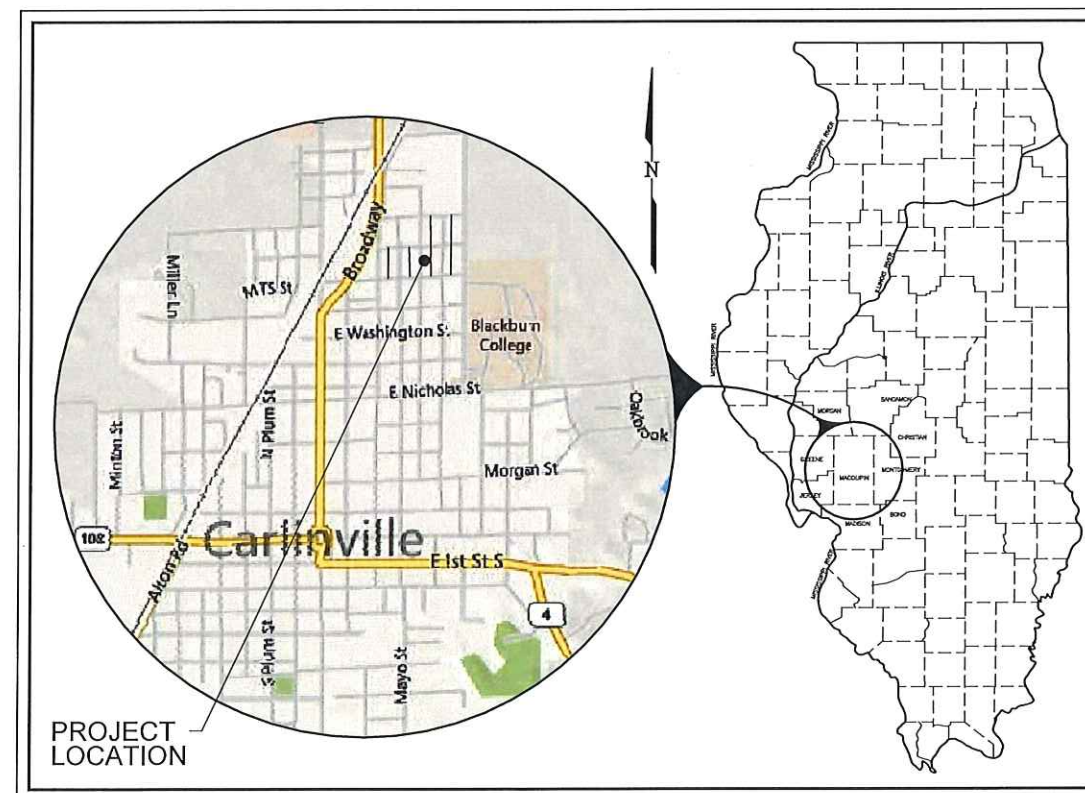
Contractor to contact J.U.L.I.E. prior to any excavation or demolition for the location of any pipes, cables, lines, mains, etc. The contractor shall also coordinate any disconnection required with the various utility companies and/or governmental agencies serving the site.

DIG LOG# \_\_\_\_\_

DATE: January 11, 2018

### INDEX OF SHEETS

- 1 COVER SHEET
- 2 LEGEND AND NOTES
- 3 SHEET LAYOUT AND SAMPLE PLAN
- 4 PLAN SHEET
- 5 PLAN SHEET
- 6 PLAN SHEET
- 7 WATER DETAILS



LOCATION MAP



*Ronald M. Paul*  
RONALD M. PAUL  
REG. ILLINOIS P.E. #56307  
EXP. NOVEMBER 30, 2019



**HENEGHAN AND ASSOCIATES, P.C.**  
**ENGINEERS-SURVEYORS**  
www.haengr.com

DESIGN FIRM NUMBER 184-002692, EXPIRES APRIL 30, 2019

1004 STATE HWY. 16  
JERSEYVILLE, ILLINOIS 62052  
PHONE NO. (618) 498-8418  
FAX NO. (618) 498-8410

838 EAST McCORD STREET  
CENTRALIA, ILLINOIS 62801  
PHONE NO. (618) 533-6525  
FAX NO. (618) 533-6552

310A VISION DRIVE  
COLUMBIA, ILLINOIS 62236  
PHONE NO. (618) 281-8133  
FAX NO. (618) 281-8290

5213 MAE DRIVE, SUITE D  
GODFREY, ILLINOIS 62035  
PHONE NO. (618) 466-8076  
FAX NO. (618) 466-8078
















































## SYMBOLS

EXISTING		PROPOSED
	AXLE	
	BOLT	
	BRASS MONUMENT	
	CLENCHED PIPE	
	CONCRETE MONUMENT	
	CUT "X"	
	DRILL ROD	
	IRON PIN/PIPE	
	R.O.W. MONUMENT	
	RAILROAD SPIKE	
	STONE	
	TRAVERSE NAIL	
	PROPERTY LINE	
	AIR CONDITIONING UNIT	
	BENCHMARK	
	BOLLARD	
	BUSH	
	CABLE TV PEDESTAL	
	DEADMAN	
	DOUBLE POST SIGN	
	FENCE POST	
	MAILBOX	
	SOIL BORING NO. 1	
	SIGN	
	SIGNAL	
	AREA INLET (IDOT)	
	CATCH BASIN (IDOT)	
	CURB INLET (IDOT)	
	INLET (TYPE A-B)	
	INLET (TYPE F)	
	INLET (TYPE G)	
	INLET (OPEN)	
	INLET (BEHIVE)	
	INLINE INLET	

## ABBREVIATIONS

ADD	ADDITION
ATG	ADJUST TO GRADE
AI	AREA INLET
AVE	AVENUE
BC	BACK OF CURB
BM	BENCHMARK
BK	BOOK
BLVD	BOULEVARD
BLDG	BUILDING
CL	CENTERLINE
CJ	CONSTRUCTION JOINT
CONC.	CONCRETE
CMP	CORRUGATED METAL PIPE
CF	CUBIC FEET
CY	CUBIC YARDS
CI	CURB INLET
DR	DRIVE
DI	DUCTILE IRON
ESMT	EASEMENT
EOA	EDGE ASPHALT
EOC	EDGE OF CONCRETE
ELEV./EL.	ELEVATION
EXIST./EX.	EXISTING
EJ	EXPANSION JOINT
FO	FIBEROPTIC LINE
FT	FEET
F&L	FRAME AND LID
FES	FLARED END SECTION
FB	FLAT BOTTOM
FL	FLOWLINE
GI	GRATED INLET

## SYMBOLS

PROPOSED	EXISTING	
		STORM MANHOLE
		FLOW ARROW
		SANITARY MANHOLE
		CLEANOUT
		FLARED END SECTION
		TREE (DECIDUOUS)
		TREE (CONIFEROUS)
		STUMP
		STUMP (TBR)
		FIRE HYDRANT
		WATER VALVE
		
		WATER METER
		MONITORING WELL
		SPRINKLER
		
		WATER SPIGOT
		ELECTRIC PEDESTAL
		ELECTRIC TRANSFORMER
		LIGHT POLE
		POWER POLE
		GUY WIRE
		ELECTRIC METER
		ELECTRIC MANHOLE
		VAULT
		TELEPHONE PEDESTAL
		TELEPHONE MANHOLE
		TELEPHONE POLE
		FIBEROPTICS VAULT
		FIBEROPTICS WARNING SIGN

## ABBREVIATIONS

HDPE	HIGH-DENSITY POLYETHYLENE PIPE
IN	INCHES
INF	INFLOW
INV	INVERT
LA	LANE
LF	LINEAL FOOT
MAX	MAXIMUM
MH	MANHOLE
MJ	MECHANICAL JOINT
MIN	MINIMUM
N/F	NOW AND FORMER
NO	NUMBER
O/C	OIL AND CHIP
OE	OVERHEAD ELECTRIC LINE
PG	PAGE
PVMT	PAVEMENT
POC	POINT OF COMMENCEMENT
POB	POINT OF BEGINNING
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PROP./PR.	PROPOSED
PT	POINT OF TANGENT
PVC	POLYVINYL CHLORIDE
PE	PRIVATE ENTRANCE
ℙ	PROPERTY LINE
RR	RAILROAD
RCA	REINFORCED CONCRETE ELLIPTICAL ARCH PIPE
RCE	REINFORCED CONCRETE ELLIPTICAL PIPE
RCP	REINFORCED CONCRETE PIPE
ROW	RIGHT OF WAY
SAN	SANITARY

## SYMBOLS

PROPOSED	EXISTING		PROPOSED
		GAS METER	
		GAS VALVE	
		RAILROAD CROSS BUCK (IDOT)	
		RAILROAD FLASHING SIGNAL (IDOT)	
		RAILROAD LIGHTS AND ARM	
		RAILROAD LIGHTS	
		RAILROAD MASTING ARM (IDOT)	
		RAILROAD SIGNAL W/MASTING ARM (IDOT)	
		RECONNECT SERVICE	
		CURB STOP	

## ABBREVIATIONS

SF	SQUARE FEET
SY	SQUARE YARDS
STA	STATION
SWPP	STORM WATER POLLUTION PREVENTION
TBM	TEMPORARY BENCHMARK
TYP	TYPICAL
TOC	TOP OF CURB
TOA	TOP OF ASPHALT
TBA	TO BE ABANDONED
TBA&F	TO BE ABANDONED AND FILLED
TBR	TO BE REMOVED
TBR&R	TO BE REMOVED AND REPLACED
UIP	USE IN PLACE
VCP	VITREOUS CLAY PIPE

## LINETYPES

EXISTING		PROPOSED
	CENTERLINE	
	CONCRETE ROADS & DRIVES	
	CONTOUR LINE	
	CULVERT (SIZE & MATERIAL)	
	EASEMENT	
	ELECTRIC	
	OVERHEAD ELECTRIC	
	ASPHALT ROADS & DRIVES	
	FENCE	
	DITCH FLOWLINE	
	FLAG (GUTTER)	
	GAS	
	GRAVEL ROADS & DRIVES	
	GUARD RAIL	
	RIGHT OF WAY	
	SIDEWALK	
	SANITARY SEWER MAIN	
	SANITARY SEWER LATERAL	
	SANITARY FORCEMAIN	
	SANITARY SERVICE	
	EXISTING PROPERTY LINE	
	SECTION LINE	
	SECTION LINE (QUARTER)	
	SETBACK	
	GRADING LIMITS	
	PERMANENT SEWER EASEMENT	
	TEMPORARY CONSTRUCTION EASEMENT	
	SILT FENCE	
	STORM SEWER	
	TELEPHONE	
	OVERHEAD TELEPHONE	
	FIBEROPTIC LINE	
	TREE LINE	
	WATER MAIN	
	WATER SERVICE	
	12" WATER MAIN	
	10" WATER MAIN	
	8" WATER MAIN	
	6" WATER MAIN	
	4" WATER MAIN	
	3" WATER MAIN	
	2" WATER MAIN	

## HATCHING

EXISTING		PROPOSED
	BUILDINGS/STRUCTURES	
	CONCRETE	
	ASPHALT	
	GRAVEL	
	RIPRAP	
	PAVEMENT (TBR)	

**HENEGHAN &  
ASSOCIATES, P.C.**



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EXPIRES APRIL 30, 2019

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 F: (618) 533-6652

☐ 310A VISION DRIVE  
COLUMBIA, IL 62236  
P: (618) 281-8133  
F: (618) 281-8290

☐ 5213 MAE DRIVE, SUITE D  
 GODFREY, IL 62035  
 P: (618) 466-8076  
 F: (618) 466-8078

NO.	DATE	REVISIONS

## LEGEND AND NOTES

## STANDARD ADDITION WATER MAIN REPLACEMENT - PHASE II

CITY OF CARLINVILLE  
MACOUPIN COUNTY, ILLINOIS

DRAWN BY:	RDS
CHECKED BY:	RMP
APPROVED BY:	RMP

HORIZONTAL SCALE  
N/A

VERTICAL SCALE:  
N/A

PROJECT NO.  
02159-405

DATE: 12/11/17

SHEET NO.

2

2 OF 7 SHEETS



☐ 1004 STATE HWY. 16  
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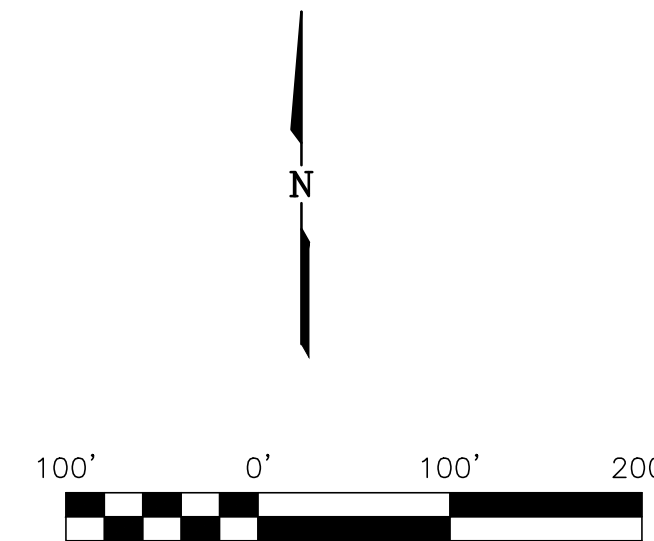
CITY OF CARLINVILLE  
MACOUPIN COUNTY, ILLINOIS

HORIZONTAL SCALE:  
1"=100'

PROJECT NO.  
02159-405

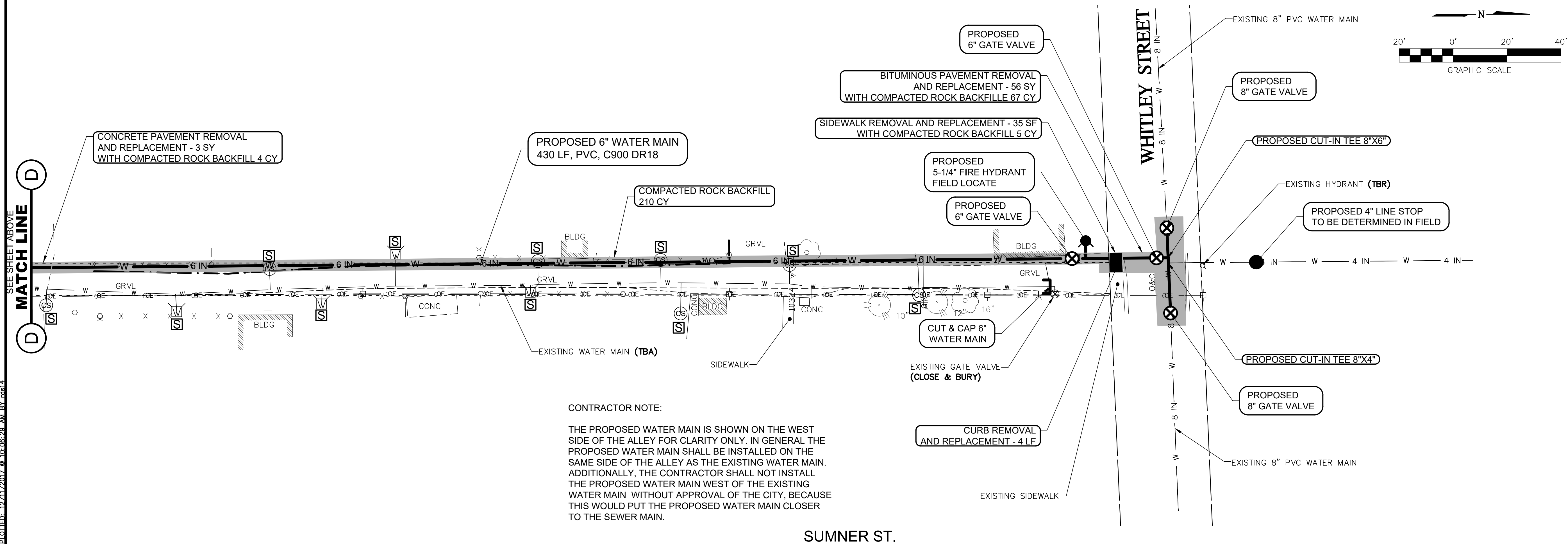
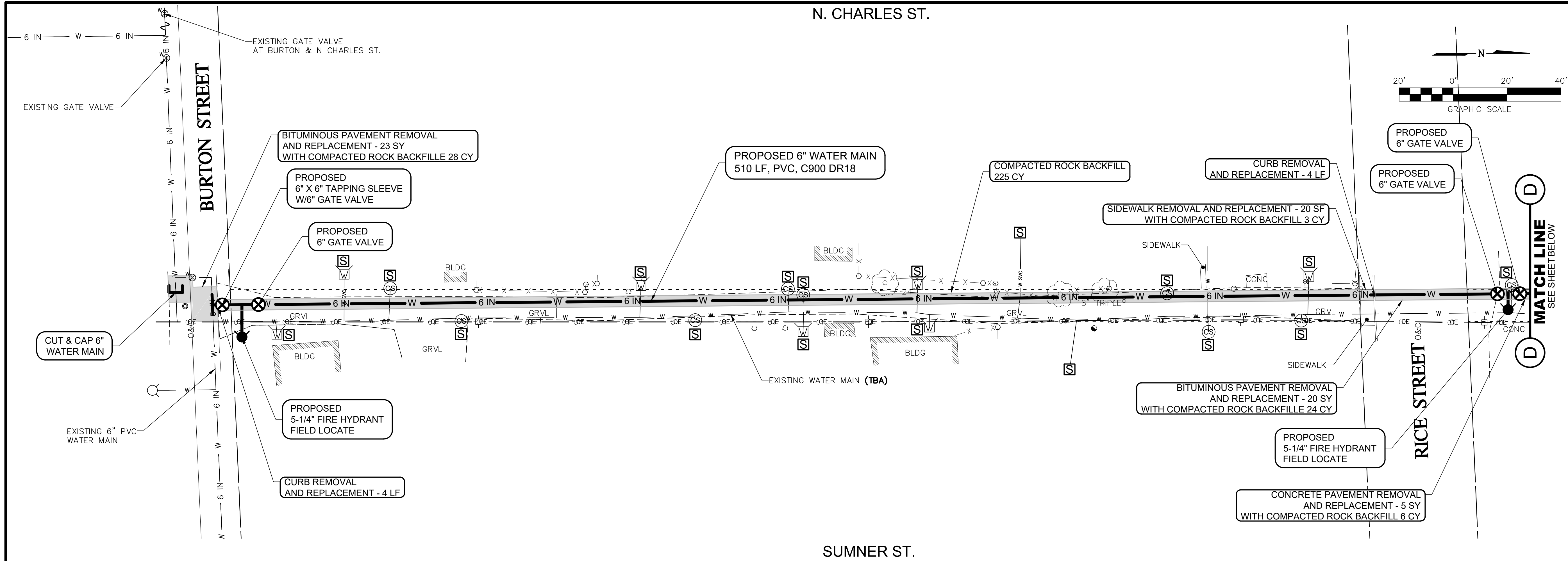
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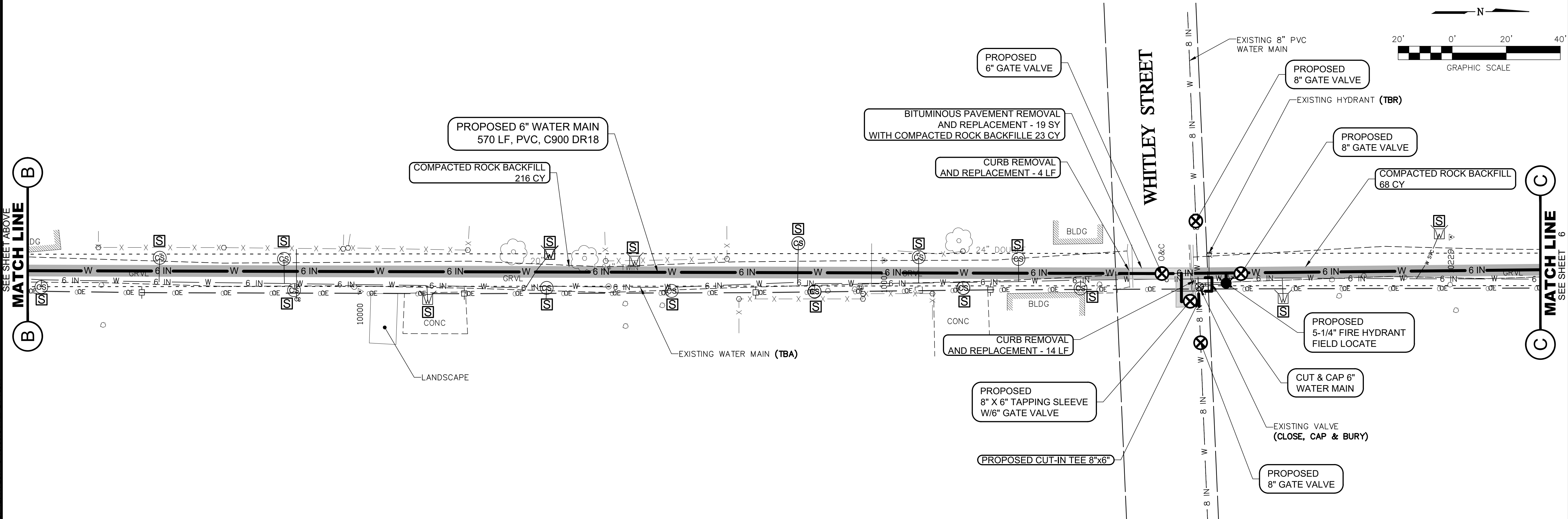
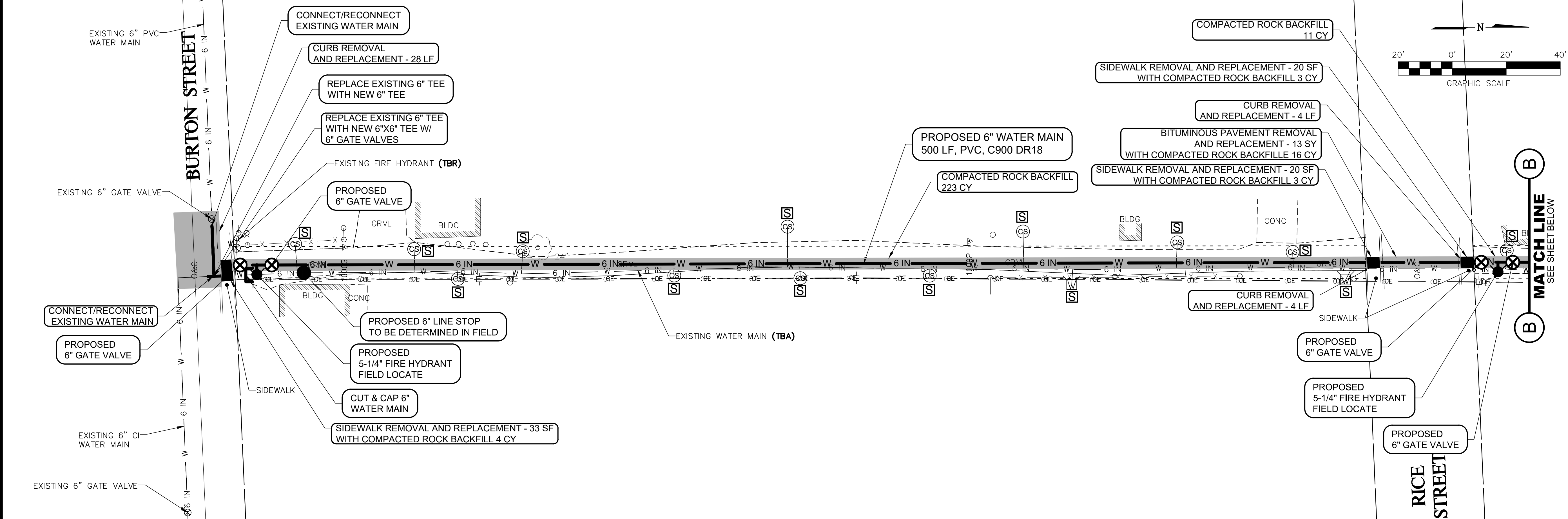
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NO.	DATE	REVISIONS

PLAN SHEET

STANDARD ADDITION WATER MAIN  
REPLACEMENT - PHASE II

CITY OF CARLINVILLE  
MACOUPIN COUNTY, ILLINOIS

DRAWN BY: RDS

CHECKED BY: RMP

APPROVED BY: RMP

HORIZONTAL SCALE:  
1"=20'

VERTICAL SCALE:  
N/A

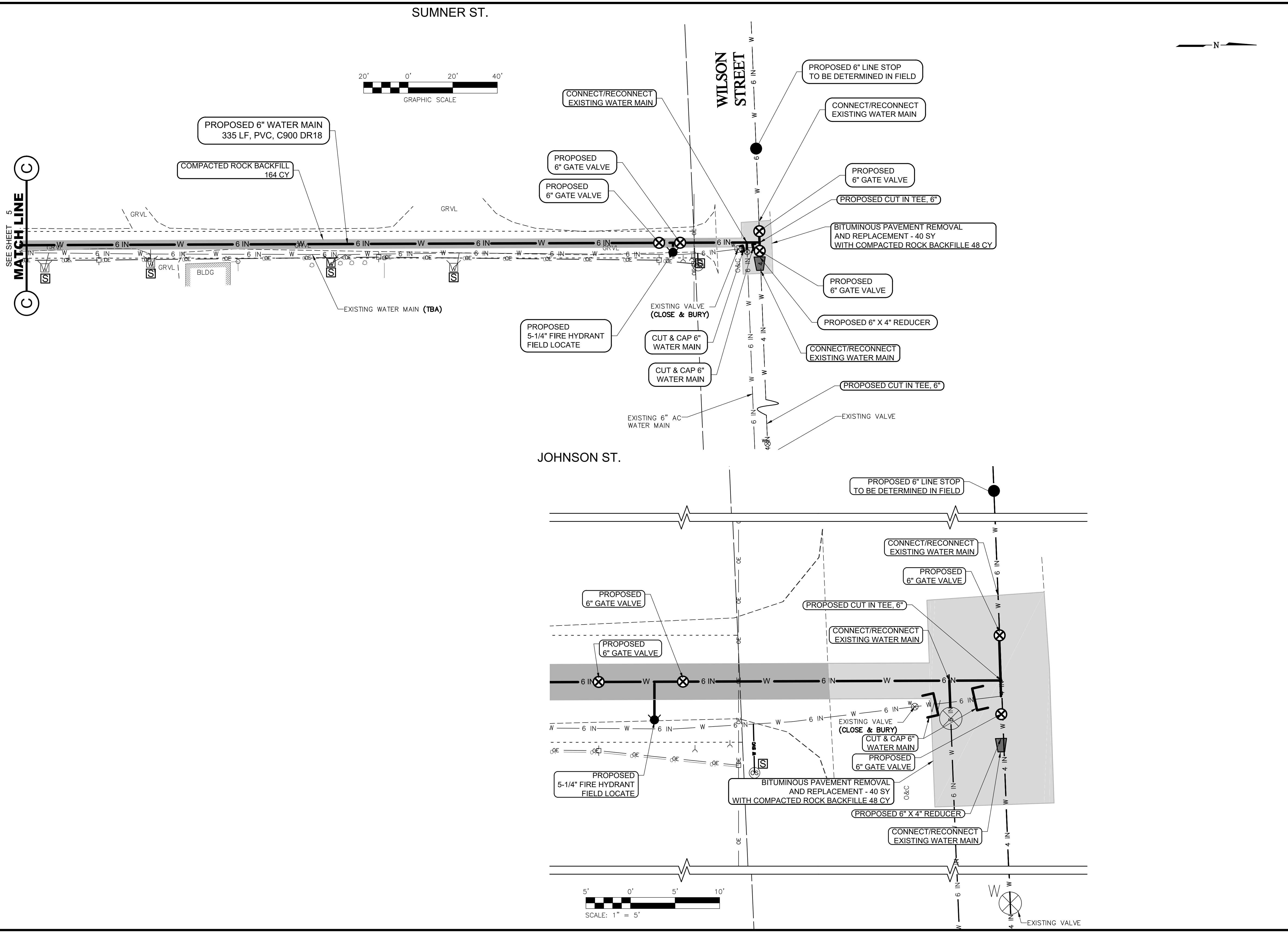
PROJECT NO.  
02159-405


DATE:  
12/11/17

SHEET NO.  
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5 OF 7 SHEETS

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REVISIONS	DATE	NO.

**PLAN SHEET**

**STANDARD ADDITION WATER MAIN  
REPLACEMENT - PHASE II**

CITY OF CARLINVILLE  
MACOUPIN COUNTY, ILLINOIS

DRAWN BY: RDS

CHECKED BY: RMP

APPROVED BY: RMP

HORIZONTAL SCALE:  
1" = 20'

VERTICAL SCALE:  
N/A

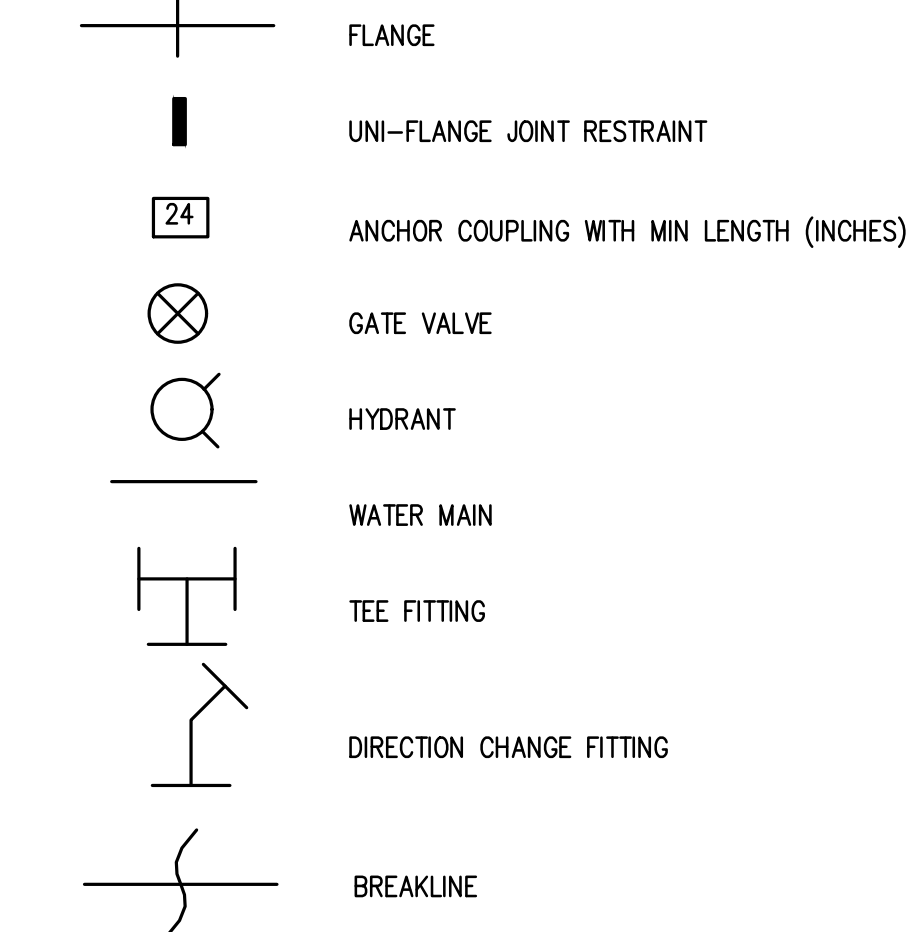
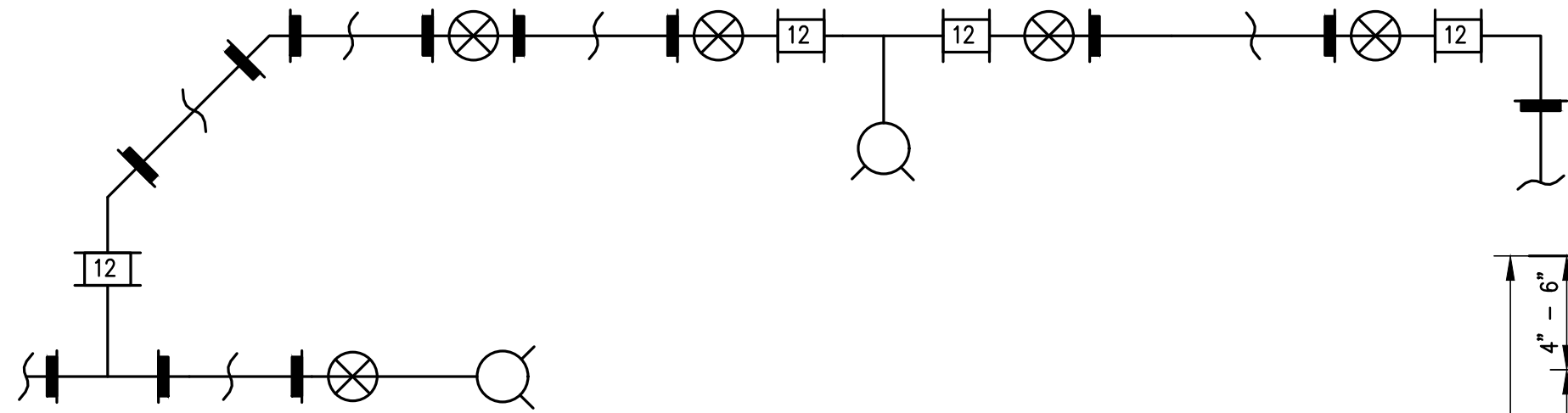
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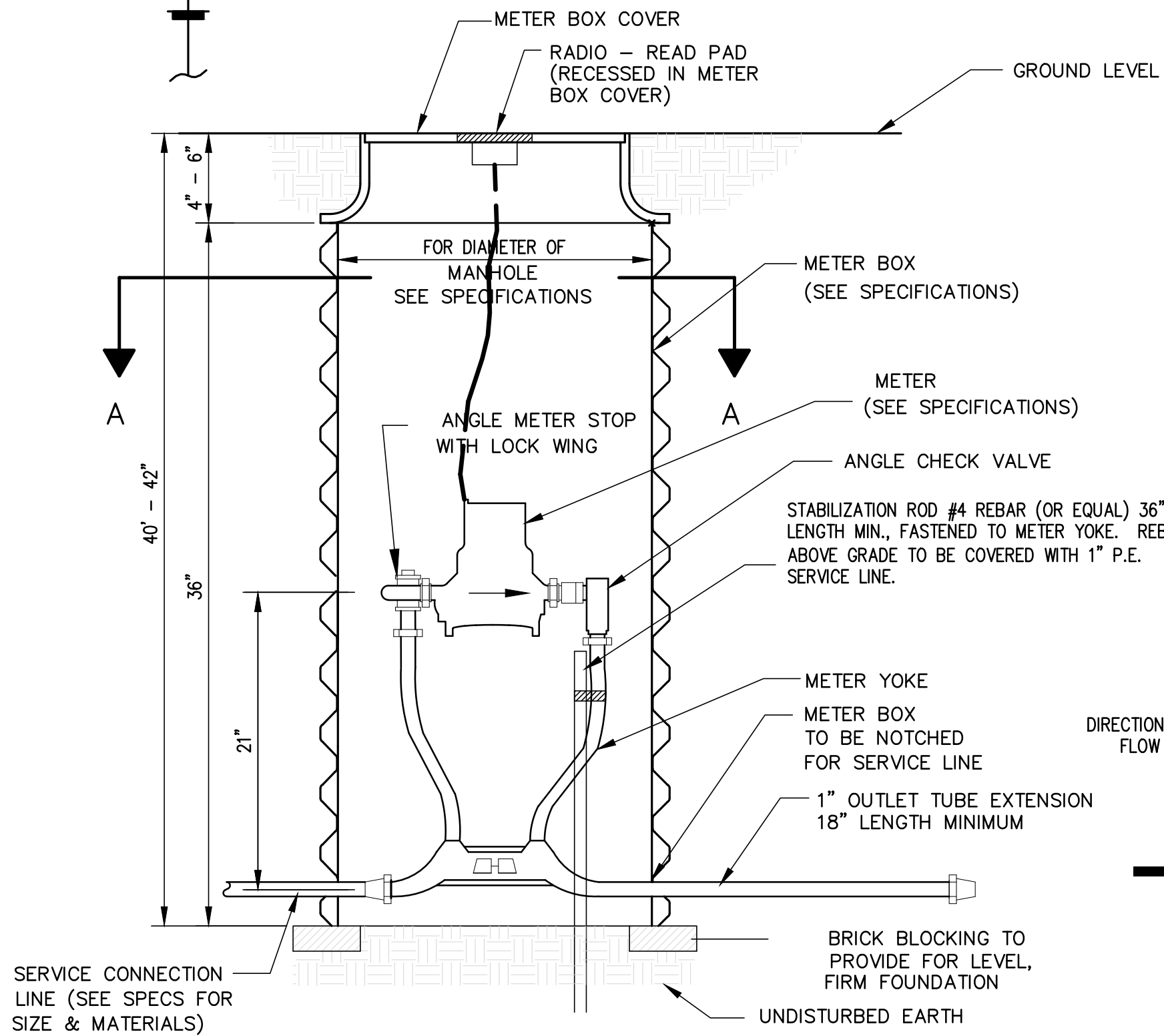
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6 OF 7 SHEETS

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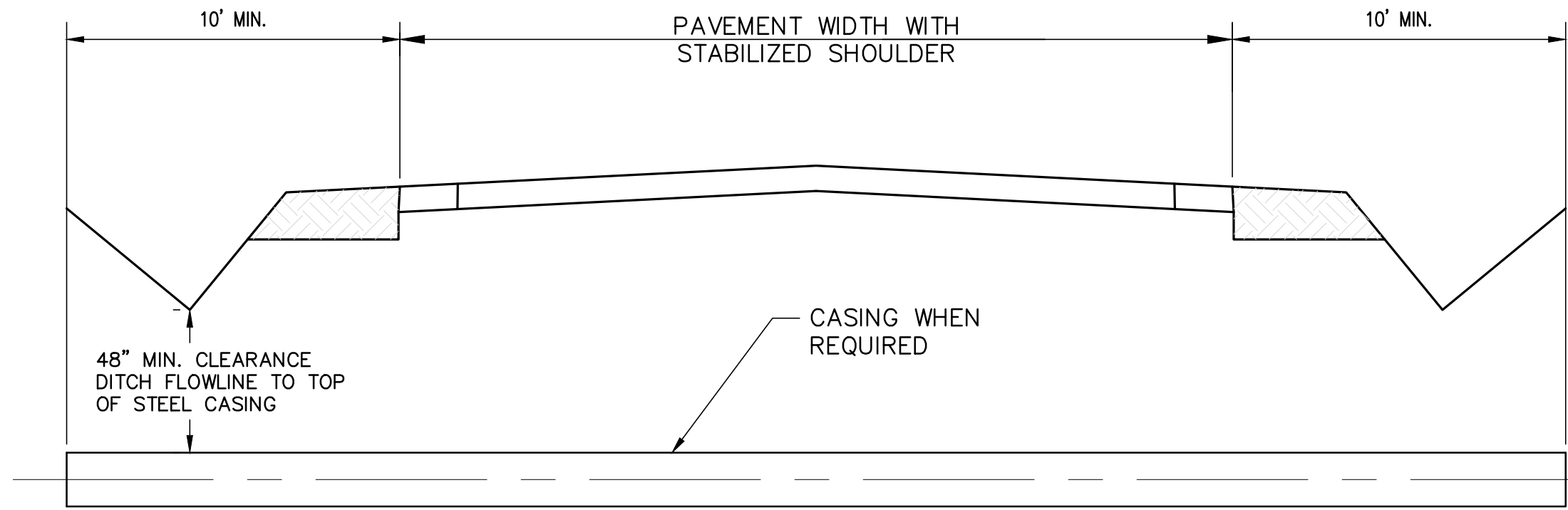


### GENERAL FITTING INSTALLATION



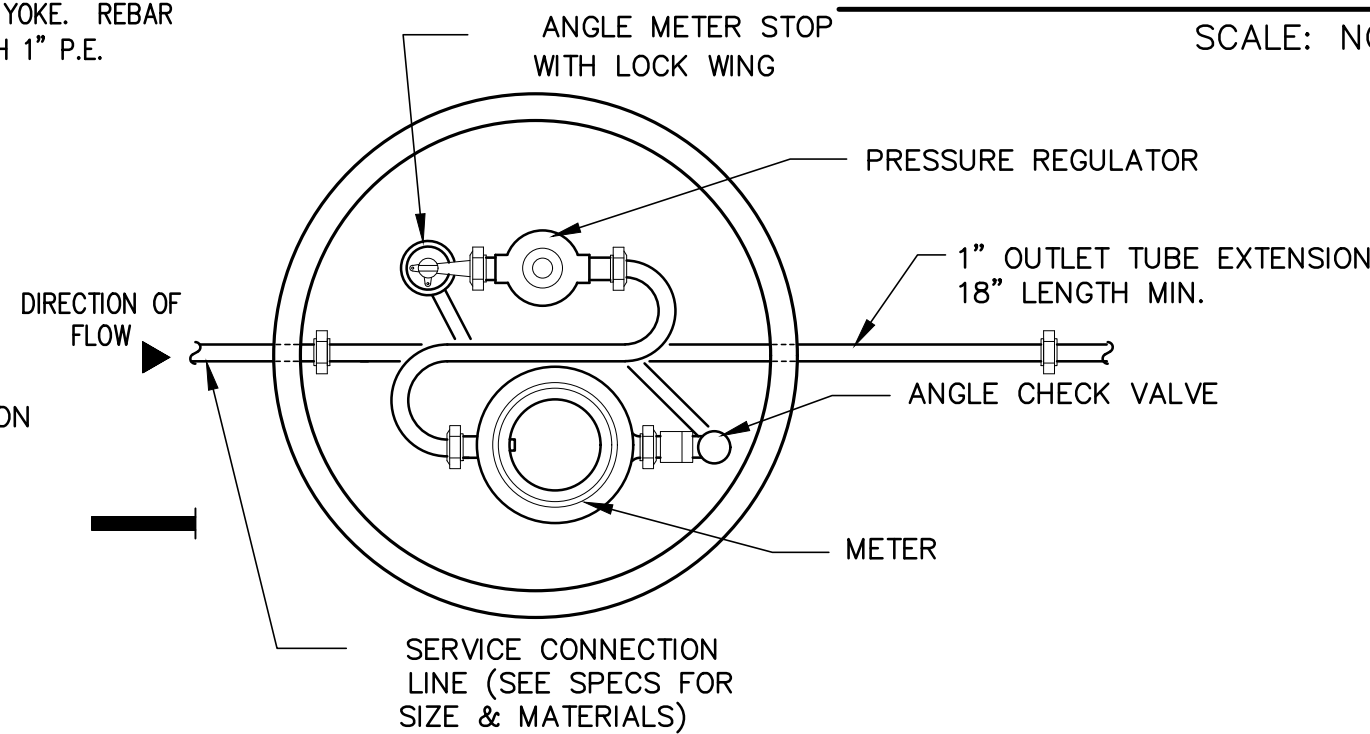
### TYPICAL FOR 5/8" X 3/4" SERVICE CONNECTION

SCALE: NONE



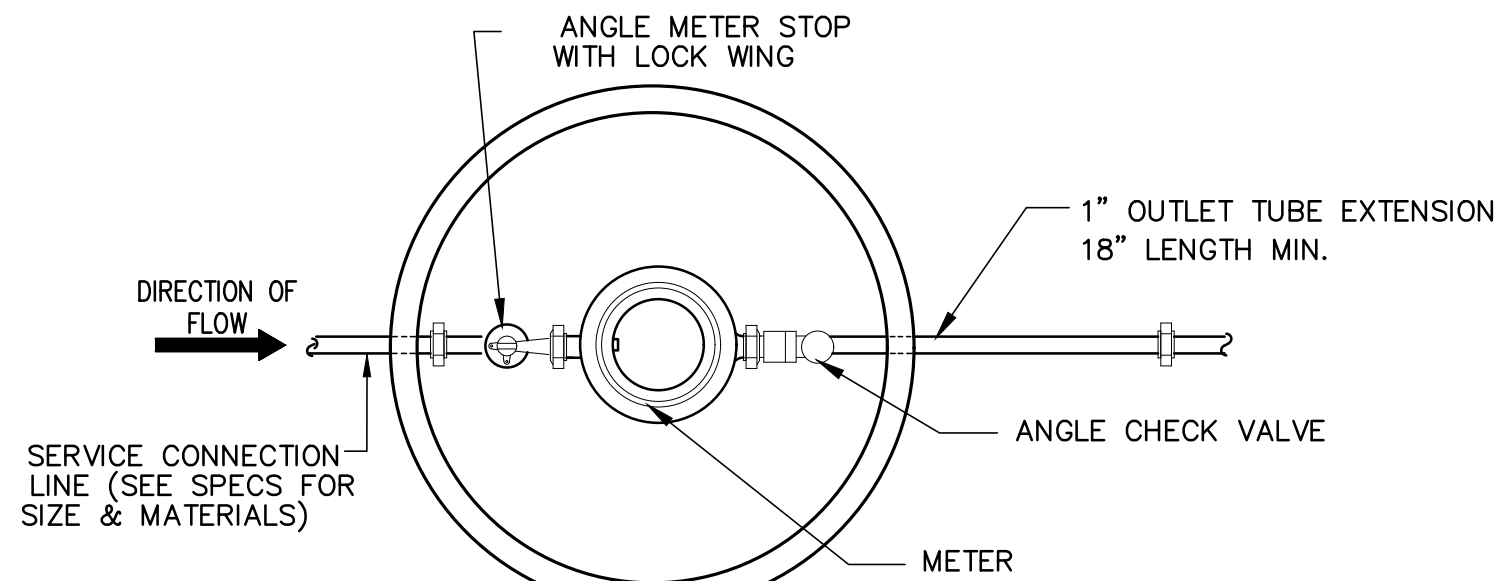
### TYPICAL DETAIL OF ROAD CROSSINGS FOR WATER MAINS AND SERVICE LINES

SCALE: NONE



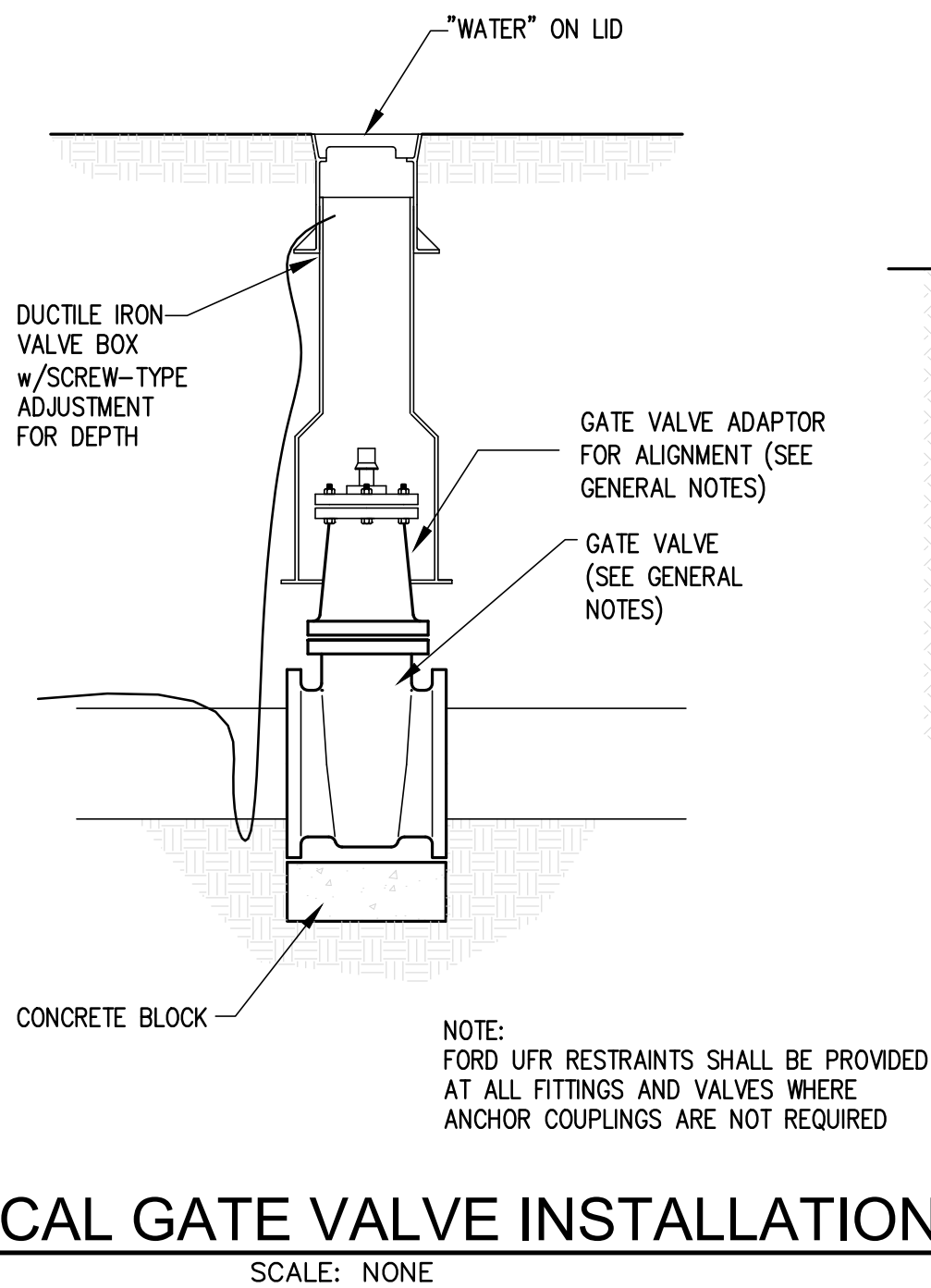
### METER W/ REGULATOR SECTION A - A

SCALE: NONE



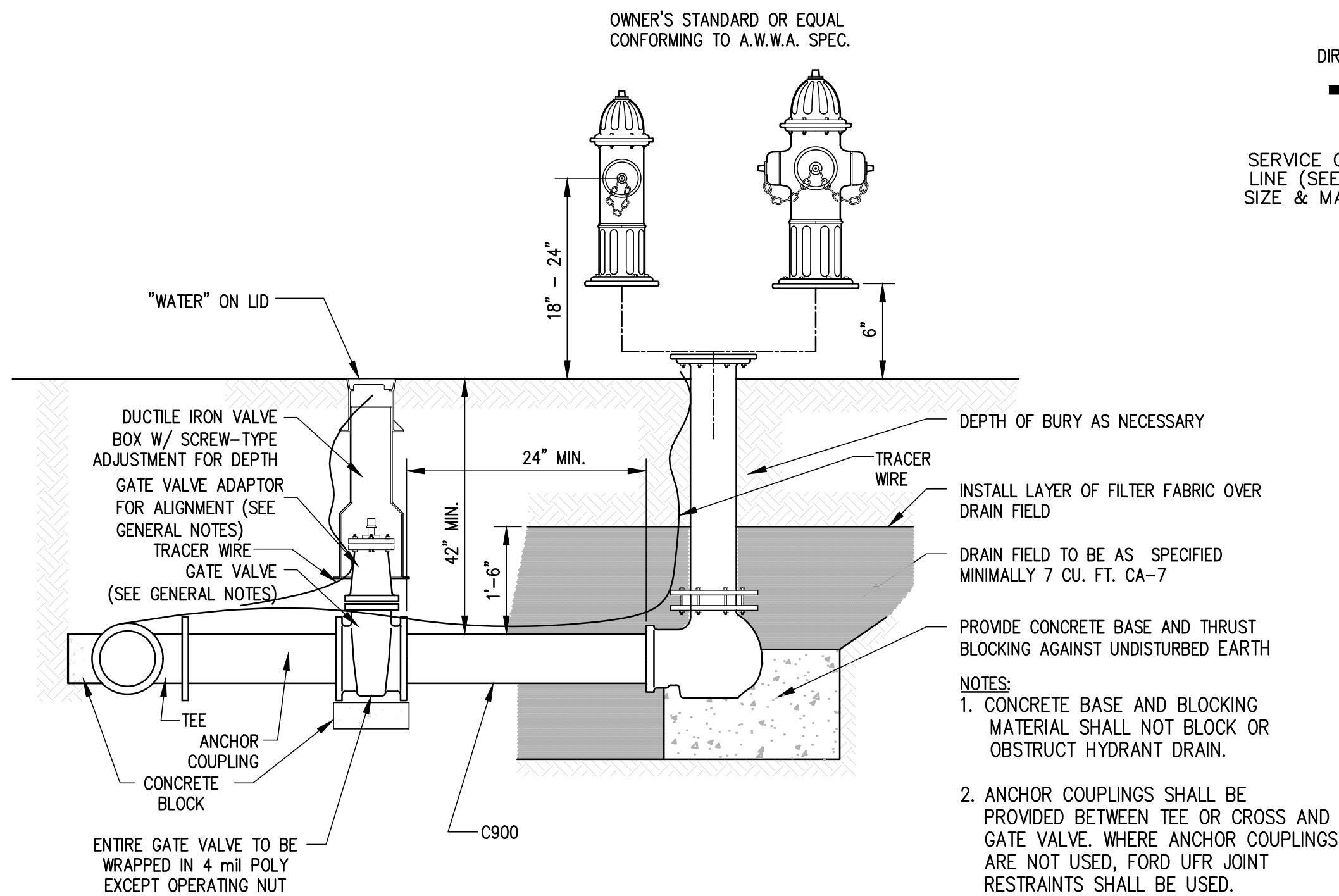
### METER ONLY SECTION A - A

- NOTES:
1. ALL DRIVEWAYS AND ROADWAYS OPEN-CUT SHALL BE PROMPTLY BACKFILLED WITH FULL WIDTH AND DEPTH OF COMPACTED CA-6 TRENCH BACKFILL.
  2. ALL ROADWAYS AND PRIVATE ENTRANCES SHALL HAVE TEMPORARY SURFACE IN PLACE BY END OF WORKDAY.
  3. CONTRACTOR SHALL RECONNECT ALL EXISTING WATER MAIN SERVICES, WHETHER SHOWN OR NOT SHOWN, OR MATCH EXISTING IF LARGER THAN 1 INCH TO PROPOSED 6" WATER MAIN. SERVICE TAPS SHALL BE 1".
  4. WATER MAIN AND SERVICE LOCATIONS ARE NOT KNOWN OR SHOWN EVERYWHERE.



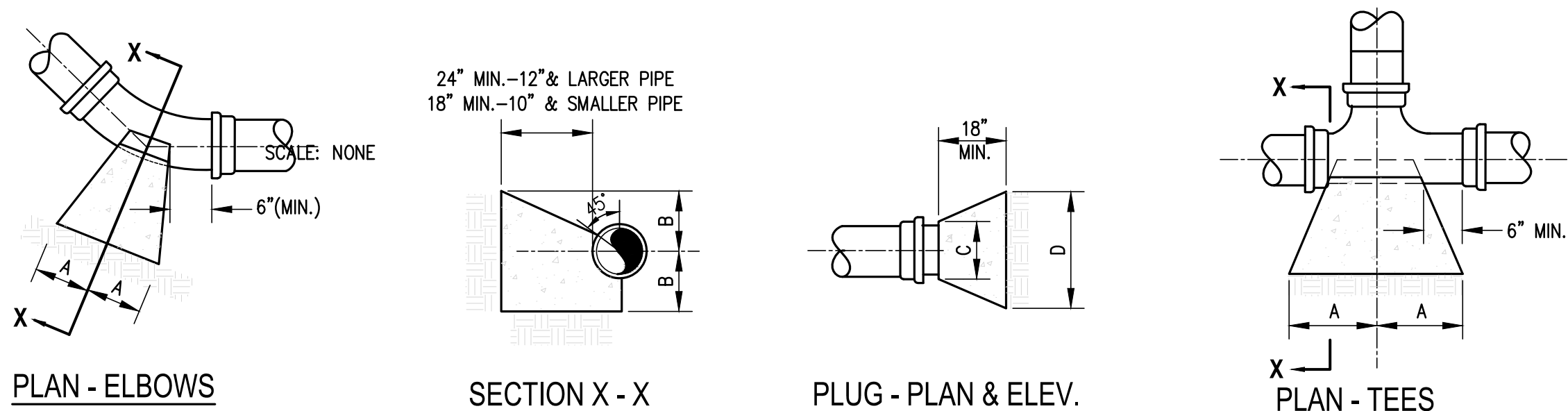
### TYPICAL GATE VALVE INSTALLATION

SCALE: NONE



### OFFSET HYDRANT & GATE VALVE DETAIL

SCALE: NONE



TYPE	SIZE	1/4 BENDS		1/8 BENDS		1/16 BENDS		TEES		PLUGS	
		A	B	A	B	A	B	A	B	C	D
TYPE I 2000 PSF SOIL	4"	12"	8"	8"	8"	6"	8"	8"	10"	8"	18"
	6"	16"	10"	9"	10"	6"	8"	10"	12"	10"	21"
	8"	22"	13"	12"	13"	8"	10"	13"	16"	12"	29"
	10"	26"	17"	14"	17"	10"	13"	16"	20"	14"	36"
	12"	29"	21"	16"	21"	11"	16"	18"	24"	16"	41"
	14"	35"	24"	19"	24"	12"	20"	22"	27"	18"	48"
	16"	38"	27"	21"	27"	12"	24"	24"	30"	20"	54"

NOTE: BASED ON 100 PSI STATIC PRESSURE PLUS A.W.W.A. WATER HAMMER. ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED GROUND.

### WATER MAIN THRUST BLOCK DETAILS

SCALE: NONE

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MACOUPIN COUNTY, ILLINOIS

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APPROVED BY: RMP

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AS NOTED

VERTICAL SCALE:  
N/A

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SHEET NO.  
7

7 OF 7 SHEETS