

CITY OF JOLIET
WILL COUNTY, ILLINOIS

2016

BETHEL/DOUGLAS/KUNGS/WALSH
WATERMAIN IMPROVEMENT PROJECT

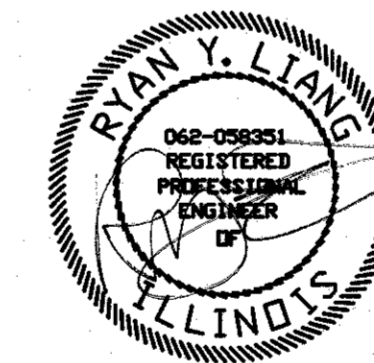
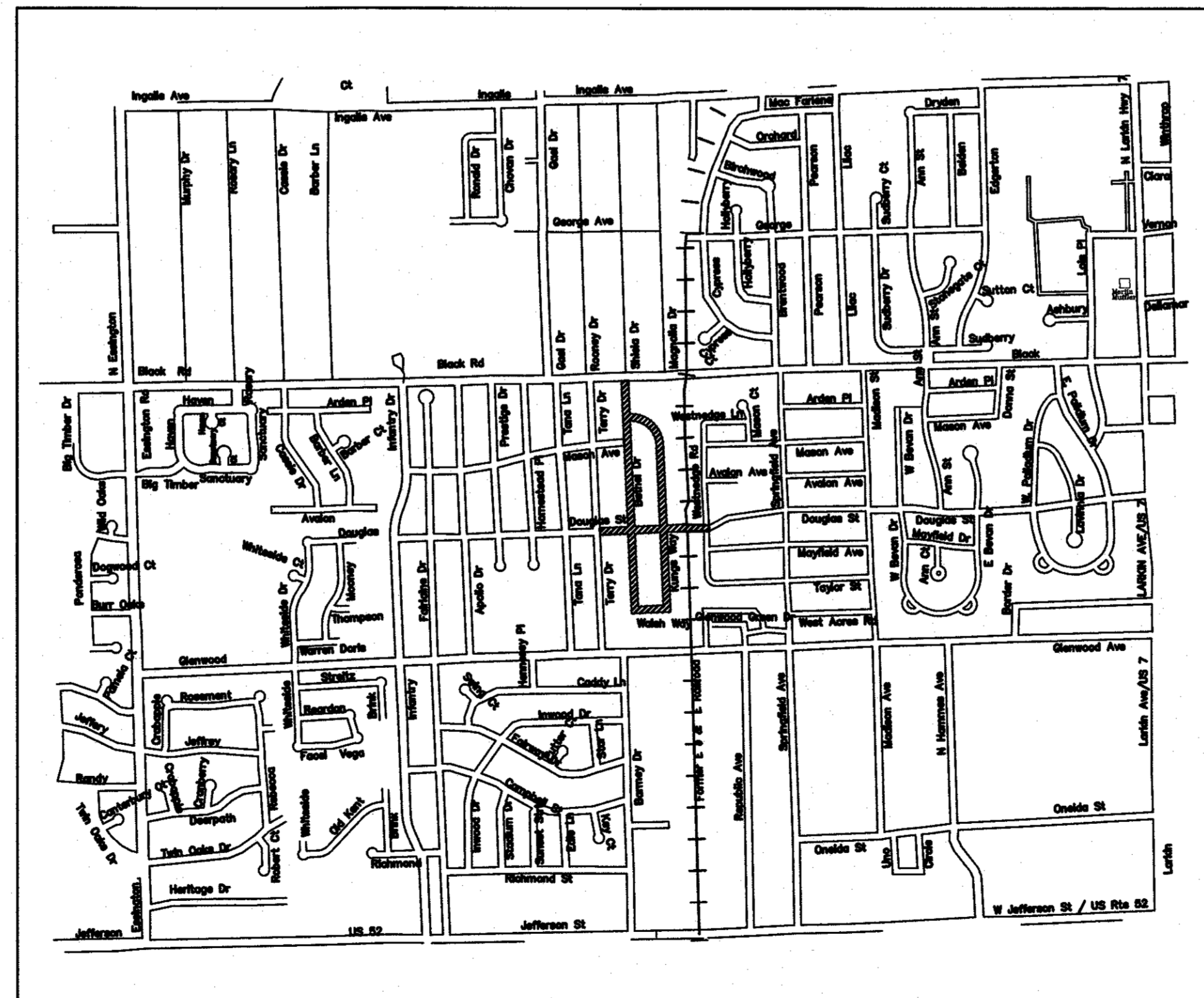
BETHEL/DOUGLAS/KUNGS/WALSH
WATERMAIN IMPROVEMENT PROJECT - 2016
COVER SHEET

SCALE: NONE
SHEET 1 OF 14
DATE: DEC 2015

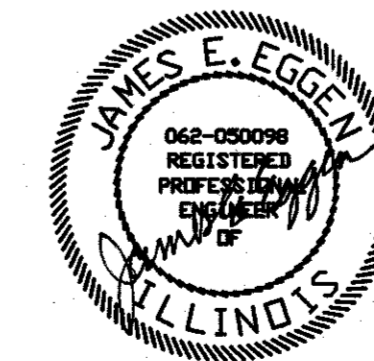
DESIGNED BY: RYL
CHECKED BY: JEE
DRAWN BY: RYL



TROY TOWNSHIP, E. 1/2, N.E. 1/4, SECTION 12



Date Sealed 1/13/16
Date Expired 1/30/17



Date Sealed 1-27-2016
Date Expired 11-30-2017

DESIGNED & PREPARED BY:

RYAN Y. LIANG, P.E.

CIVIL ENGINEER II

APPROVED BY:

CITY OF JOLIET
DEPT OF PUBLIC WORKS & UTILITIES
JAMES E. EGGEN, P.E.

DIRECTOR OF PUBLIC UTILITIES

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2. QUANTITIES / DETAILS
- 3-14. PLANS & PROFILE

WARNING !!!

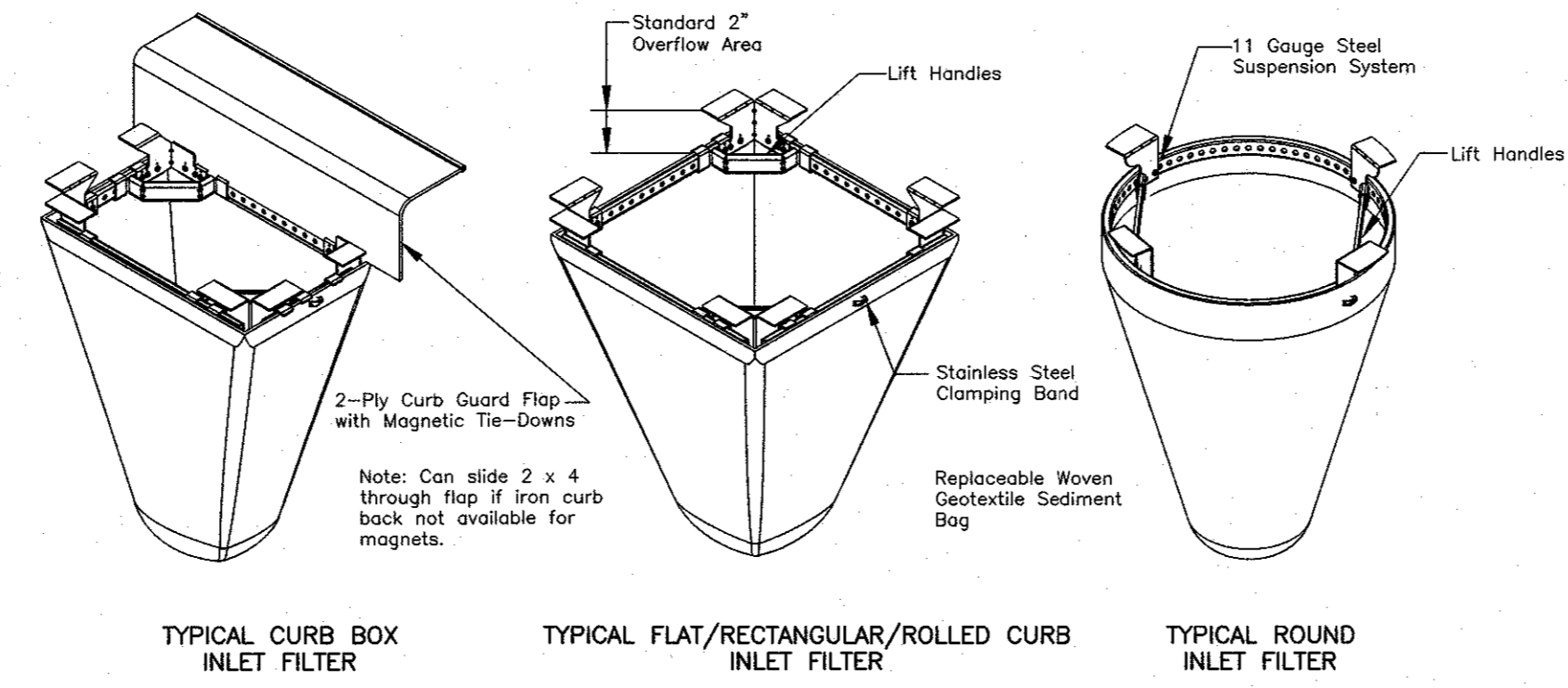


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UTILITY INFORMATION
724-4220

CITY OF JOLIET DEPARTMENT OF PUBLIC WORKS
150 W. JEFFERSON STREET, JOLIET, ILLINOIS 60432

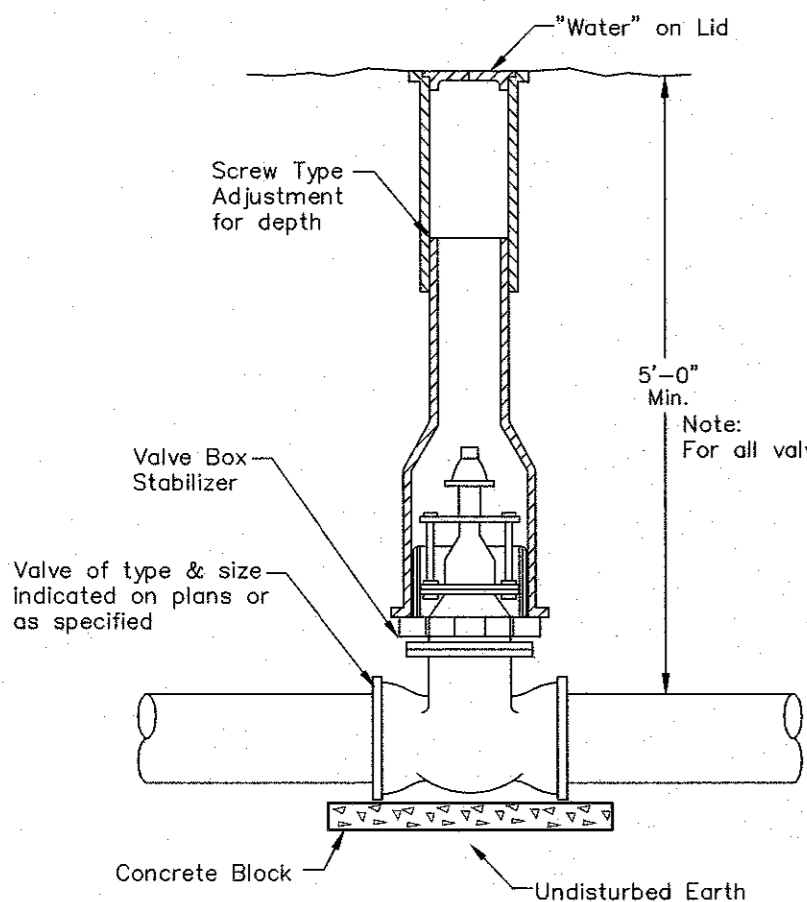
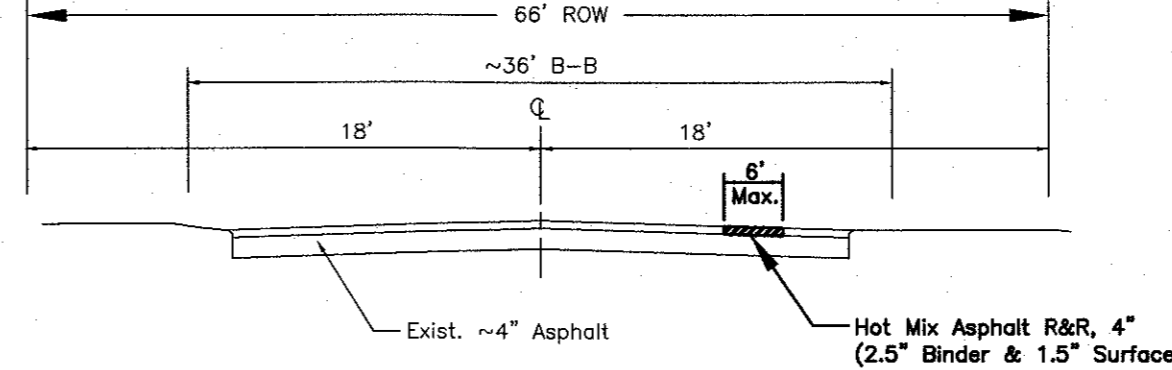
SUMMARY OF QUANTITIES				
SEQUENCE	CODE	ITEM DESCRIPTION	QUANTITIES	UNITS
		PROJECT LENGTH		LIN FT
1	10	TRENCH BACKFILL	6500	CU YD
2	45	STORM SEWER REMOVAL & REPLACEMENT, 12"	100	LIN FT
3	49	8" X 8" TAPPING SLEEVE & VALVE IN 4" DIA. VALVE VAULT	1	EACH
4	50	DUCTILE IRON WATER MAIN 10", CLASS 52	1100	LIN FT
5	50A	DUCTILE IRON WATER MAIN 8", CLASS 52	4700	LIN FT
6	50B	DUCTILE IRON WATER MAIN 6", CLASS 52	250	LIN FT
7	51	10" GATE VALVE COMPLETE WITH VALVE BOX	7	EACH
8	51A	8" GATE VALVE COMPLETE WITH VALVE BOX	25	EACH
9	51B	6" GATE VALVE IN 4" DIA. VALVE VAULT, TYPE A W/ FRAME & LID	1	EACH
10	52	WATER SERVICE CONNECTION	90	EACH
11	53	WATER SERVICE LINE, COPPER TYPE K - 1"	1500	LIN FT
12	53A	WATER SERVICE LINE, COPPER TYPE K - 1.5"	100	LIN FT
13	53B	WATER SERVICE LINE, COPPER TYPE K - 2"	1500	LIN FT
14	54	MISCELLANEOUS FITTINGS	7500	POUND
15	61	10" X 8" TEE (TYLER 5-635 OR EQUIVALENT)	2	EACH
16	61A	10" X 6" TEE (TYLER 5-635 OR EQUIVALENT)	2	EACH
17	61B	8" X 8" TEE (TYLER 5-635 OR EQUIVALENT)	1	EACH
18	61C	8" X 6" TEE (TYLER 5-635 OR EQUIVALENT)	14	EACH
19	122	COMBINATION CONCRETE CURB & GUTTER REMOVAL & REPLACEMENT	500	LIN FT
20	124	SIDEWALK REMOVAL & REPLACEMENT	2500	SQ FT
21	125	DRIVEWAY PAVEMENT REMOVAL & REPLACEMENT, 4"	250	SQ YD
22	128	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT R&R, 8"	250	SQ YD
23	128A	PORTLAND CEMENT CONCRETE DRIVEWAY PAVEMENT R&R, 6"	250	SQ YD
24	134	FIRE HYDRANT COMPLETE WITH AUXILIARY VALVE	15	EACH
25	140	FURNISHING AND PLACING TOPSOIL	1500	SQ YD
26	141	SEEDING, TYPE A W/MULCH, METHOD A	1500	SQ YD
27	145	TRAFFIC CONTROL AND PROTECTION	1	L SUM
28	153	SAWCUT ASPHALT SURFACE	12500	LIN FT
29	154	SAWCUT CONCRETE SURFACE	750	LIN FT
30	159	HOT MIX ASPHALT REMOVAL & REPLACEMENT, 4"	4550	SQ YD
31	X	CONNECT TO EXISTING 6" WATERMAIN W/ SLEEVE & FITTINGS	3	EACH
32	X	DUCTILE IRON WATER MAIN 10", CLASS 52, BORED IN PLACE W/ SNAP-LOCK JOINTS	70	LIN FT
33	X	6" M.J. PLUG	2	EACH
34	X	10" X 6" REDUCER	2	EACH
35	X	8" X 6" REDUCER	1	EACH
36	X	VALVE BOX TO BE REMOVED	1	EACH
37	X	VALVE VAULT TO BE REMOVED	14	EACH
38	X	SANITARY SEWER SERVICE R&R, SDR 35, 6"	150	LIN FT
39	X	STRIPING	1	L SUM
40	X	REMOVE AND REPLACE RCP STORM SEWER, 12"	50	LIN FT



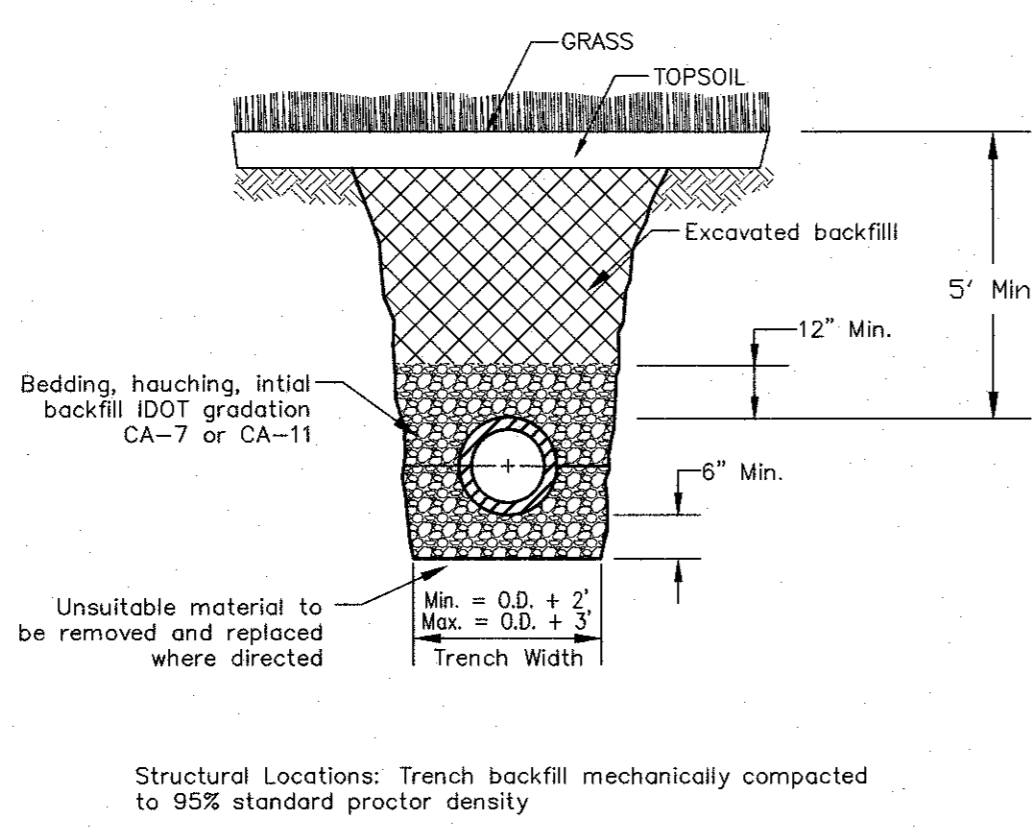
Materials:
 1. Framing - 11 gauge steel, corrosion resistant
 2. Sediment Bag - Woven Geotextile (Type FF or approved alternate); 2 cubic ft typ volume; Stainless Steel locking band securing bag to frame
Installation:
 1. Remove grate
 2. Drop Inlet Filter onto load bearing lip of coating or concrete structure
 3. Replace grate

STORM DRAIN INLET PROTECTION
No Scale

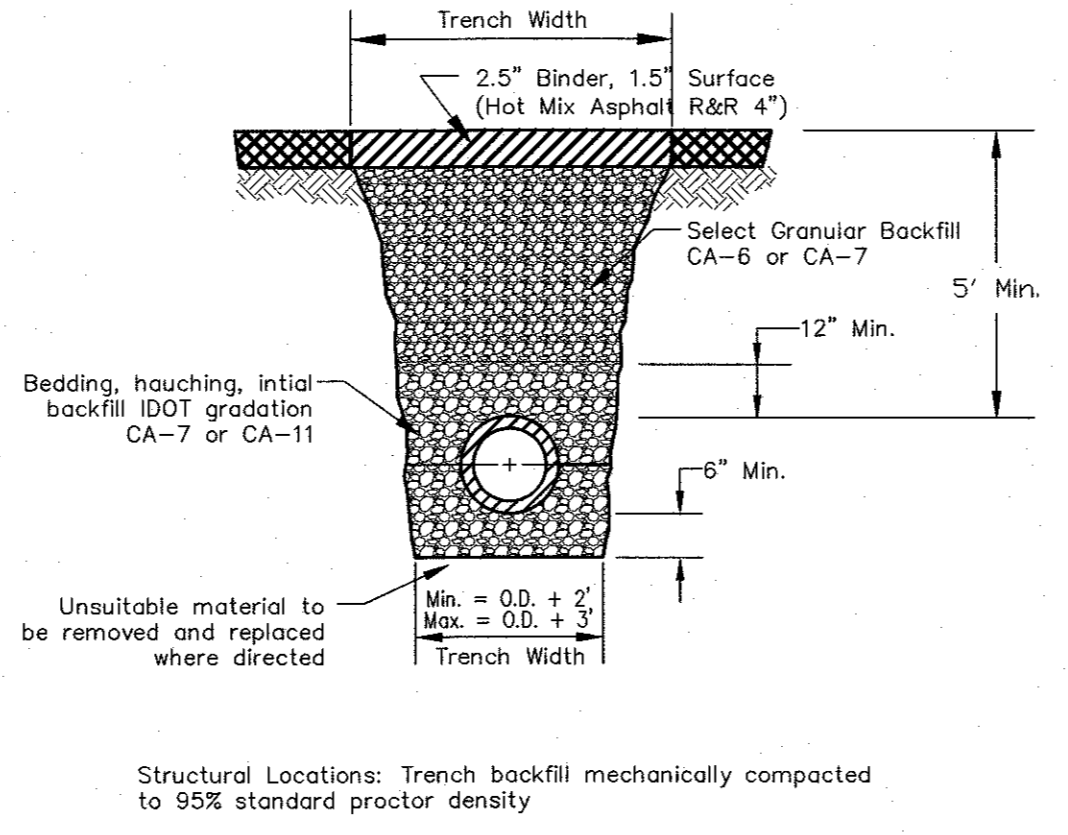
State Standards	
000001-05	Symbols & Abbreviations
424001-05	Curb Ramps for Sidewalks
602401-03	Manhole Type A
602601-02	Precast Reinforced Concrete Flat Slab Top
602701-02	Manhole Steps
606001-04	Conc. Curb T-B & Comb Curb & Gutter
701501-05	Urban Lane Closure, 2L, 2W, Undivided
701801-04	Lane Closure, Multilane Crosswalk
701901-01	Traffic Control Devices
780001-02	Typical Pavement Markings



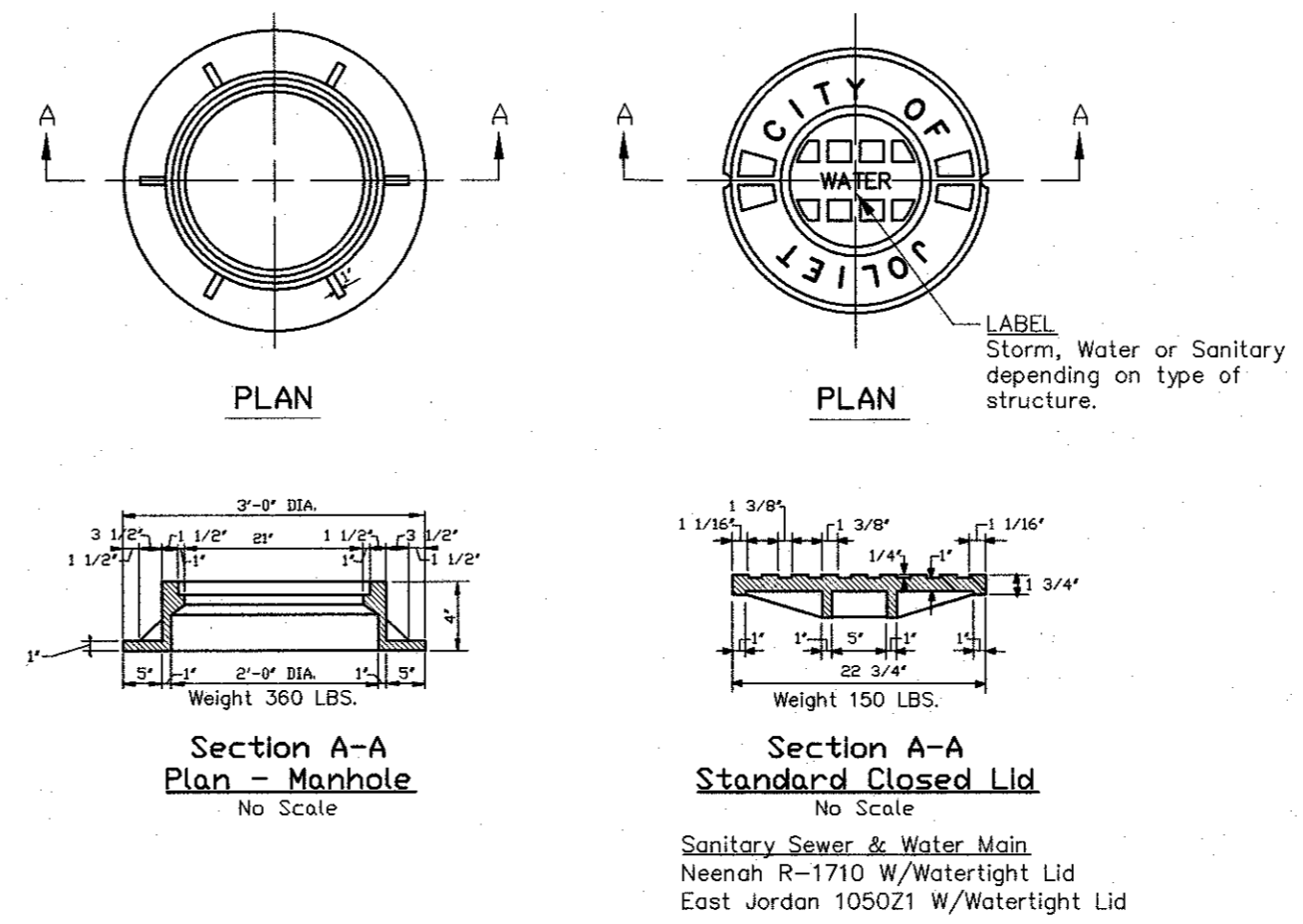
VALVE AND VALVE BOX
No Scale



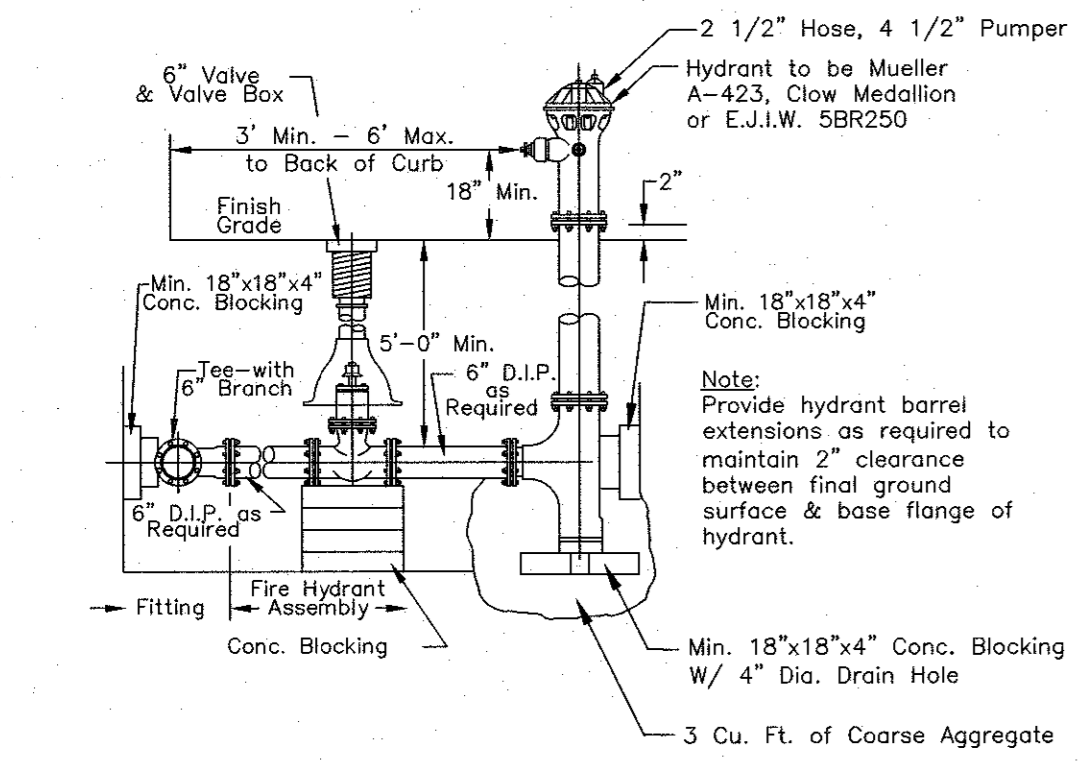
TRENCH DETAIL GRASS AREAS
WATER MAIN
No Scale



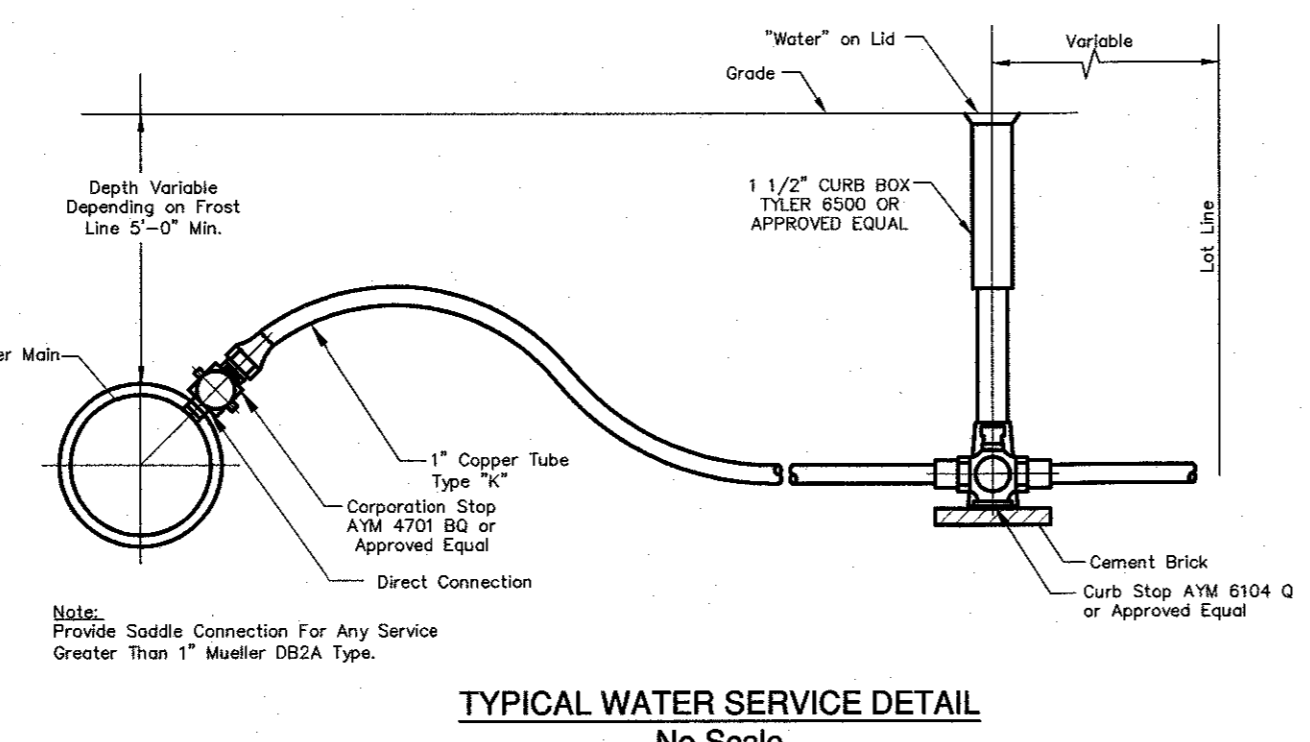
TRENCH DETAIL PAVED AREAS
WATER MAIN
No Scale



FRAME AND LIDS TYPE 1
No Scale



HYDRANT ASSEMBLY
No Scale



TYPICAL WATER SERVICE DETAIL
No Scale

HOT-MIX ASPHALT MIXTURE REQUIREMENTS	
MIXTURE TYPE	AIR VOIDS @ Ndes
ROADWAY	
HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50 (IL 9.5 mm)	4% @ 50 Gyr.
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	4% @ 50 Gyr.
HOT-MIX ASPHALT DRIVEWAY PAVEMENT	4% @ 50 Gyr.

see 1 ==> THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE MIXTURE QUANTITIES IS 112 LBS/SQ YD/IN.

see 2 ==> THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 70-22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64-22" UNLESS MODIFIED BY DISTRICT ONE SPECIAL PROVISIONS. FOR "PERCENT OF RAP" SEE DISTRICT ONE SPECIAL PROVISIONS.

1. THIS NOTE must always be present under the Mixture Table when including a pay item for Surface Course that is measured in Tons. Use 135 Lbs/SqYd/in. If using an SMA Surface Course

2. THIS NOTE Refers to the following District One Special Provisions:
 Use of RAP (Dist 1) (USE_OF_RAP(D1).docx)
 HMA Mixture IL-4.75 (Dist 1) (HMA IL 4.75 D-1.docx)
 Stone Matrix Asphalt (SMA) (SMA_D-1.doc)

SANITARY / WATER MAIN
GENERAL NOTES

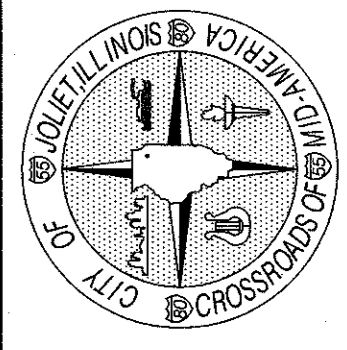
- Division II, III and IV, and the applicable standard drawings of the "Standard Specifications for Water and Sewer Main Construction in Illinois" Dated July, 2009, shall govern the construction of the proposed improvements, except as modified or revised, and/or amended as shown on the plans, or called for on the contract document, and/or as ordered by the engineer.
- All the references in Division II, III and IV to Division I of the Standard Specifications shall be deleted and reference made to the applicable sections of the contract documents.
- paving improvements shall be constructed in conformance with standard Specifications for Road and Bridge Construction Adopted January 1, 2012 BY Illinois Department of Transportation.
- The maximum allowable rate of infiltration shall not exceed 200 gallons per 24 hours per inch-diameter per mile of sewer pipe.
- Sanitary sewer pipe shall be PVC-DSR26, unless stated otherwise, in accordance with ASTM D-3034 with flexible electronic seals for ASTM D-3212.
- Where ductile iron pipe is used for sanitary sewer, the pipe shall be in accordance with ANSI A-21.51 And the joints in accordance with A-21.11.
- All sanitary sewer shall be constructed on a minimum bedding of 4" embedment material Class II per ASTM D-2321.
- All proposed sanitary sewer, water main and services under and within 2' of pavement or sidewalk shall be backfilled with trench backfill which shall be crushed stone, gradation CA-7 or CA-6.
- 'Band Seal' or similar flexible type coupling shall be used at all points of change in sanitary sewer pipe material.
- When connecting to the existing sanitary sewer, if no wye, tee or manhole is existing, one of the following methods shall be used:
 - Circular saw-cut sewer main by proper tools ("Sewer-Tap" machine or similar) and proper installation of hub-wye or hub-tee saddle.
 - With pipe cutter, neatly and accurately cut out desired length of pipe for insertion of proper fitting, using 'BAND-SEAL' or similar coupling to hold it firmly in place.
- Horizontal and vertical separation of water mains and sewer lines shall be done in accordance with Section 41-2.01B and Section 41-2.01C of the "Standard Specification for Water and Sewer Main Construction in Illinois" Adopted July 2009.
- The locations of existing underground utilities, such as water mains, sewer, gas lines, etc., shown on the plans have been determined from the best available information and is given for the convenience of the contractor. However, the engineer and owner do not assume responsibility for the accuracy of the locations shown. It shall be the contractor's responsibility to contact all utility companies and their facilities shall be located prior to any work.
- Wherever obstructions not shown on the plans are encountered during the progress of the work and interfere to such an extent that an alteration in the plans is required, the engineer shall be notified prior to any changes.
- As-Built drawings shall be prepared by the contractor and submitted to the engineer as soon as the project is completed. Any change in the length, location or alignment shall be shown in red.
- The City of Joliet must be notified at least two working days prior to commencement of work.
- All water main shall be ductile iron cement lined Class 52 with rubber gasket push-on joints and 8 MIL polywrap in accordance with ANSI A-21.51 unless specified otherwise.
- All fire hydrants shall be designed for a working pressure of 150 pounds per square inch and shall conform to workmanship, design and material to AWWA Standard C-502. Hydrant hose nozzle, pumper nozzle and type shall conform to the City of Joliet Standard.
- Gate valves shall be resilient wedge with non-rising stem designed for not less than 150 psi working pressure and shall be tested for leakage and distortion under a hydraulic pressure of not less than 300 PSI. The minimum requirements for all gate valves shall, in design, material and workmanship, conform to the standards of AWWA C-500. All materials used in the manufacture of gate valves be equal to the City of Joliet Standards with ends as required for specified joints.
- All fittings shall be ductile iron C110 Full Body mechanical joint to be provided with set screw type retainer glands and rubber gaskets in accordance with ANSI/AWWA C153/A21.53 and ANSI/AWWA C111/A21.11. Retainer glands are required on all elbows, tees, crosses, valves, hydrants and auxiliary valves. No concrete thrust blocks shall be allowed.
- Connections to existing manholes to be made by coring a hole through the manhole sidewall and installing an A-LDC DR KDR-N-SEAL type boot.
- Leakage testing and deflection testing shall be performed in accordance with Section 31-1.11B (3 & 4) of the "Standard Specifications for Sewer and Watermain Construction in Illinois", Latest Edition. Vacuum testing of the manholes shall be performed in accordance with ASTM C-1244.
- Disinfection and pressure testing shall be prepared per the standard specifications for sewer and water.
- Erosion control will be constructed in accordance with standard specifications for soil erosion and sediment control as contained in IEPA/WPC/87-012 or Current Edition.
- It shall be the Contractor's duty and responsibility to ascertain and execute the means, methods and sequence of construction in accordance with the plans, specifications and other contract documents. This shall include, but shall not be limited to, the exclusive duty and responsibility to provide for workplace safety and worker supervision. It shall exclusively be the Contractor's duty and responsibility to investigate and ascertain the current physical state and operational status of the City's water supply system and the City's sanitary sewer system, including whether a water main or other vessel is operational, contains water, is pressurized or is otherwise safe to alter. Any information provided by the City, or its employees and consultants, regarding the state of its water supply and sanitary sewer systems is provided as a courtesy to the Contractor but is not warranted to be true and may not be relied on by the Contractor in satisfaction of, or to diminish, its exclusive duty to ascertain and execute the means, methods and sequence of construction in accordance with the plans, specifications and other contract documents and its exclusive responsibility to provide for workplace safety and worker supervision.

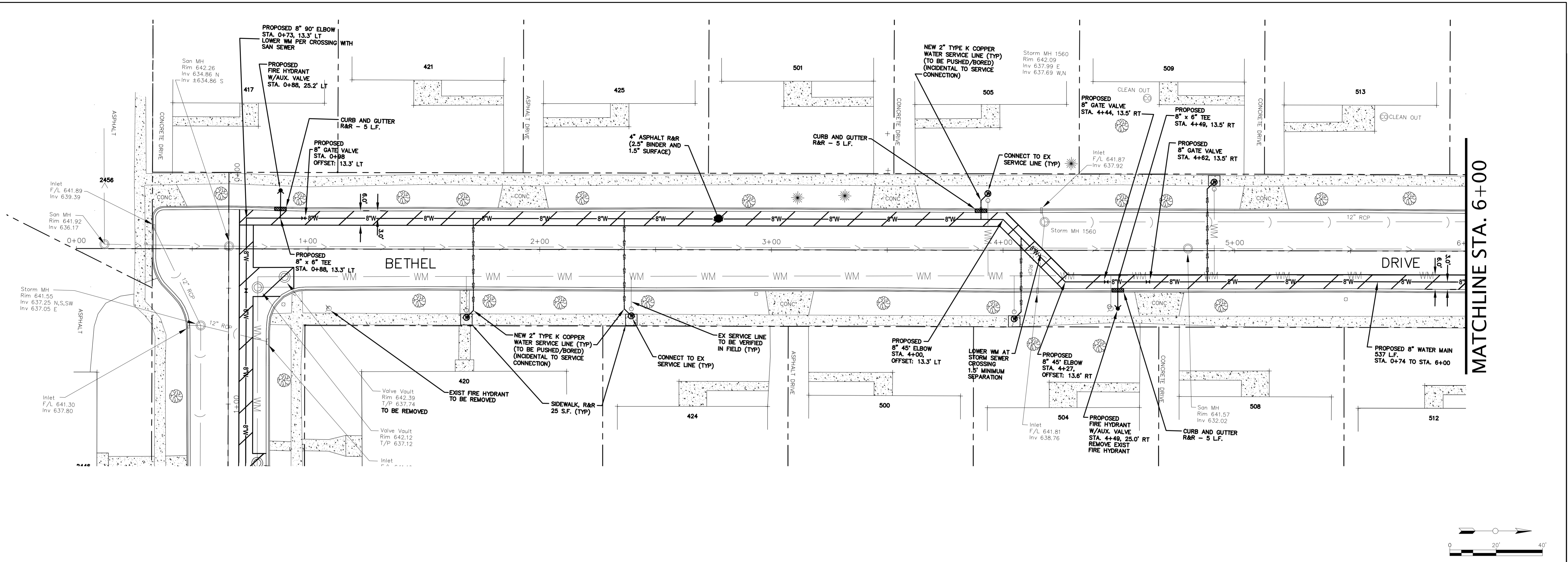
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WATER MAIN IMPROVEMENT PROJECT - 2016

CHECKED BY: JEE
DESIGNED BY: RYL
DRAWN BY: RYL

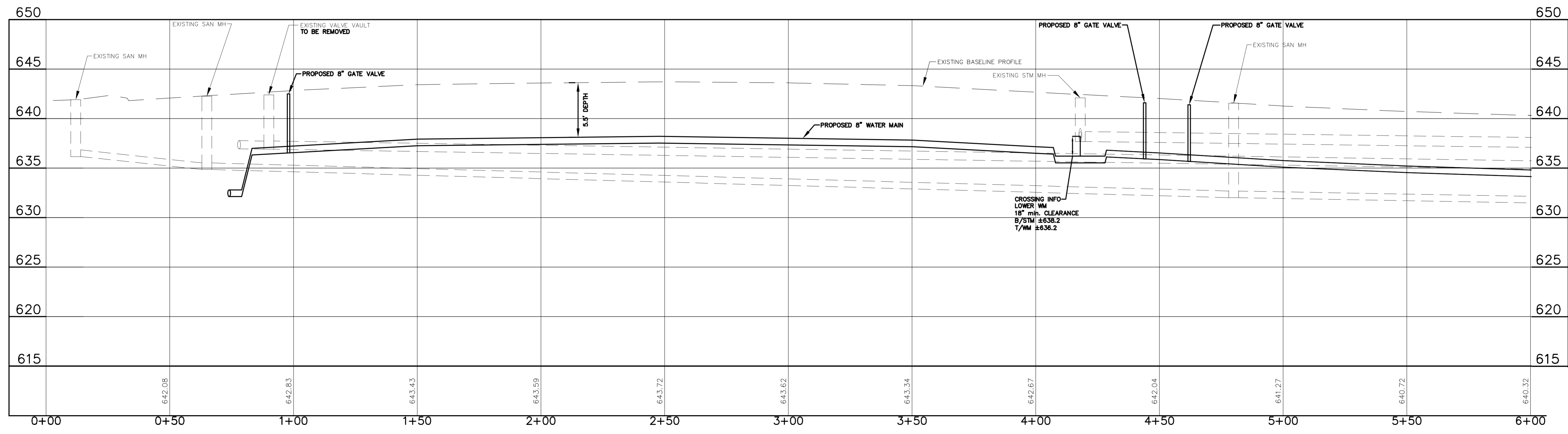
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SHEET 2
DATE: 12/2015

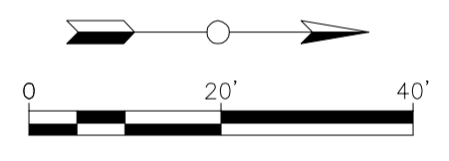
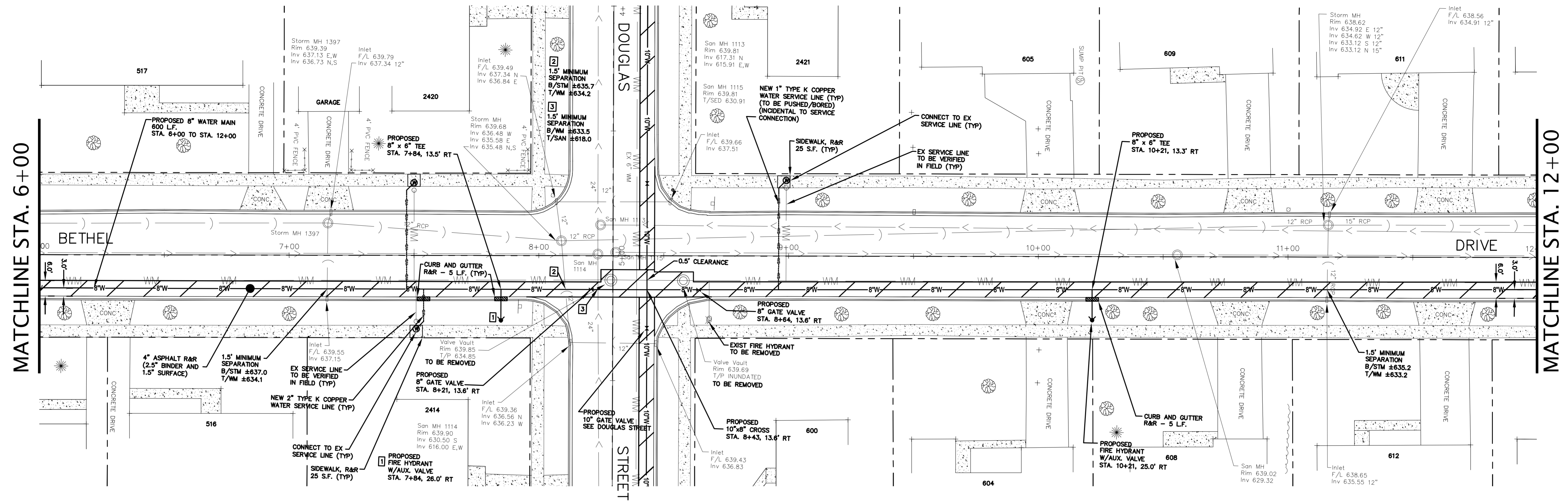
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CITY OF JOLIET
150 W. JEFFERSON STREET, JOLIET, ILLINOIS 60432
(815)-724-4200



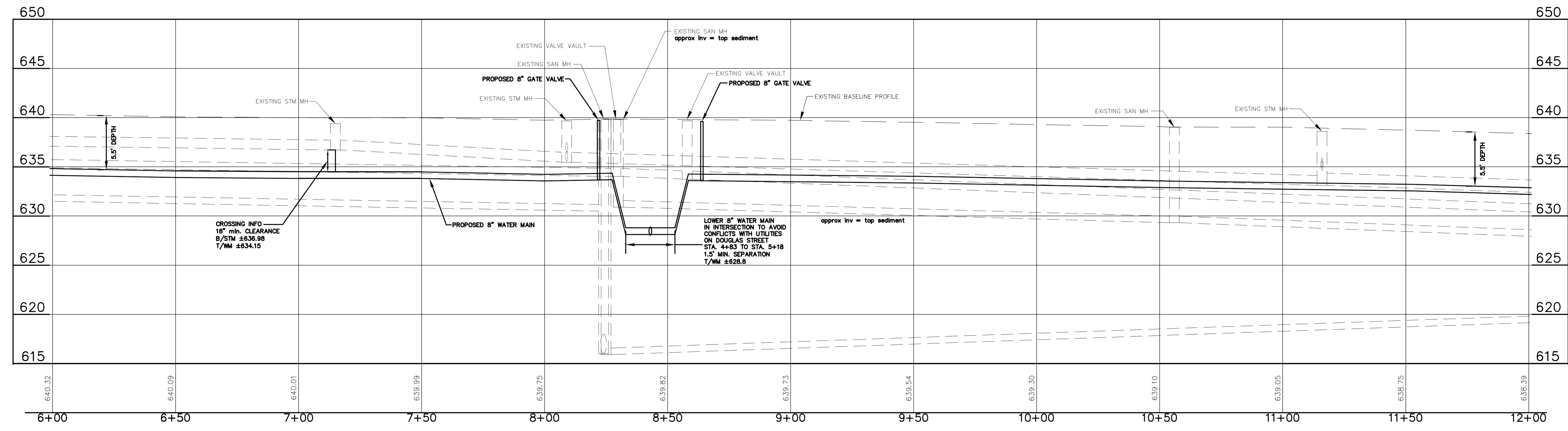


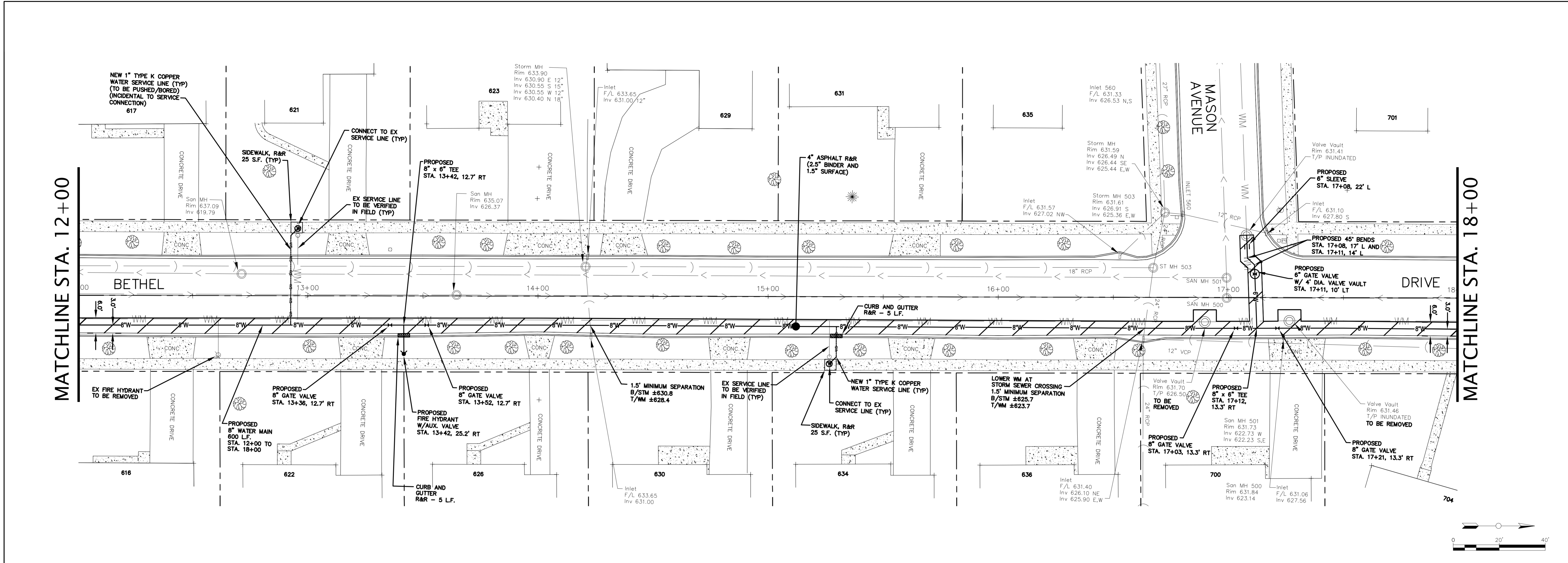
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 DATE: 4-15-2015



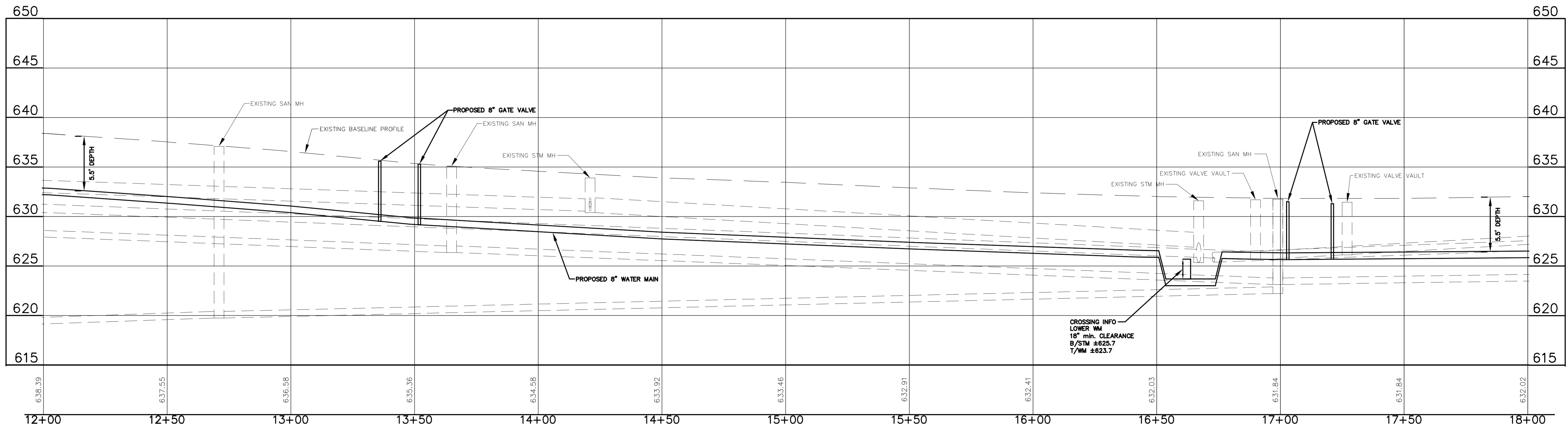


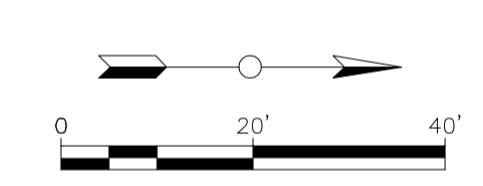
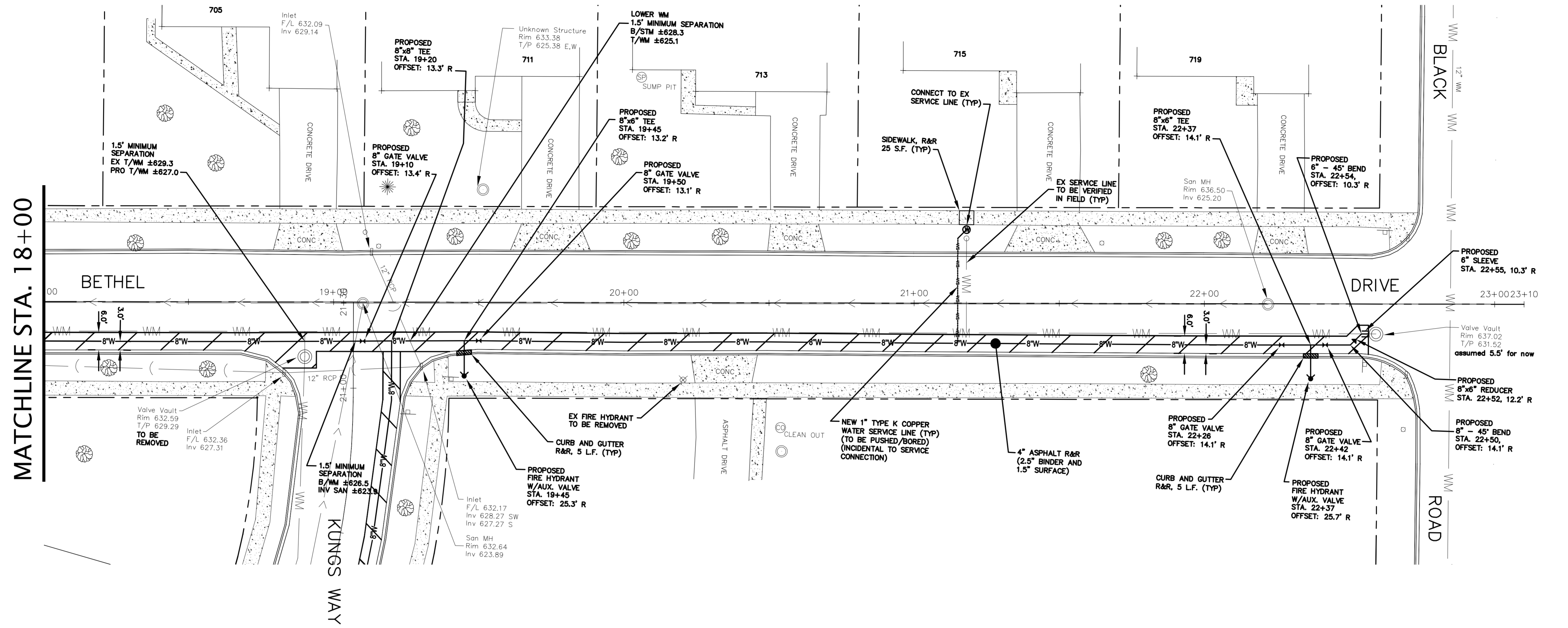
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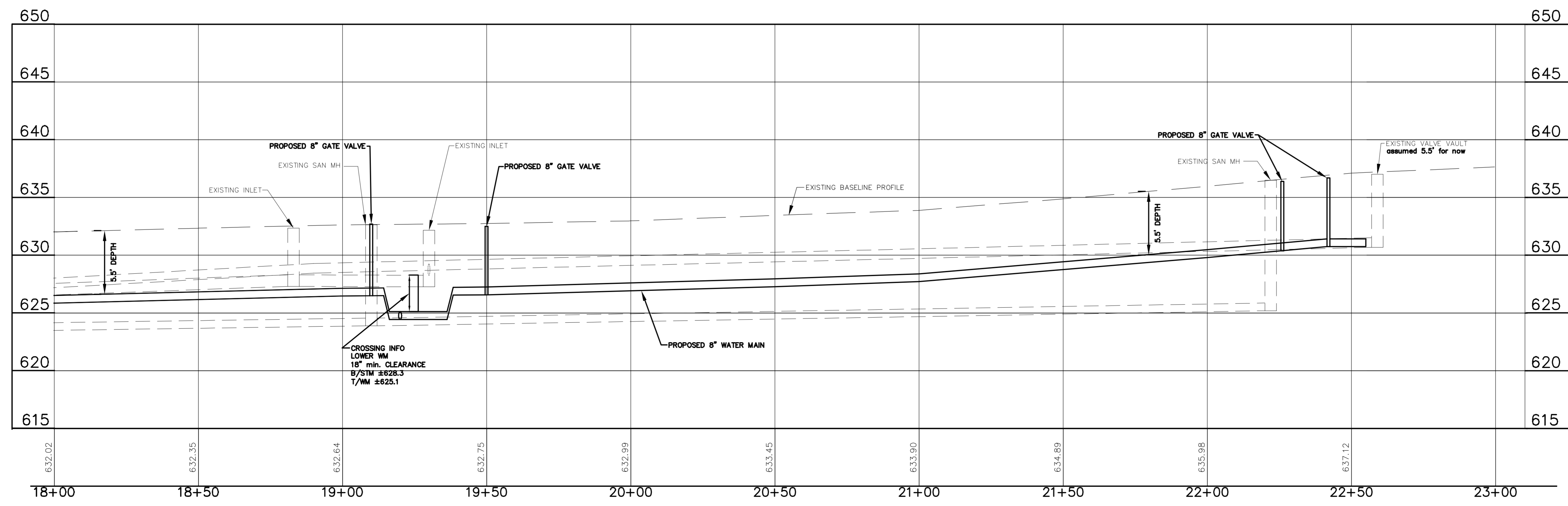


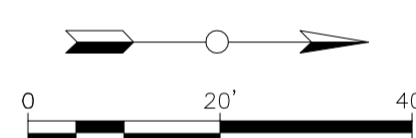
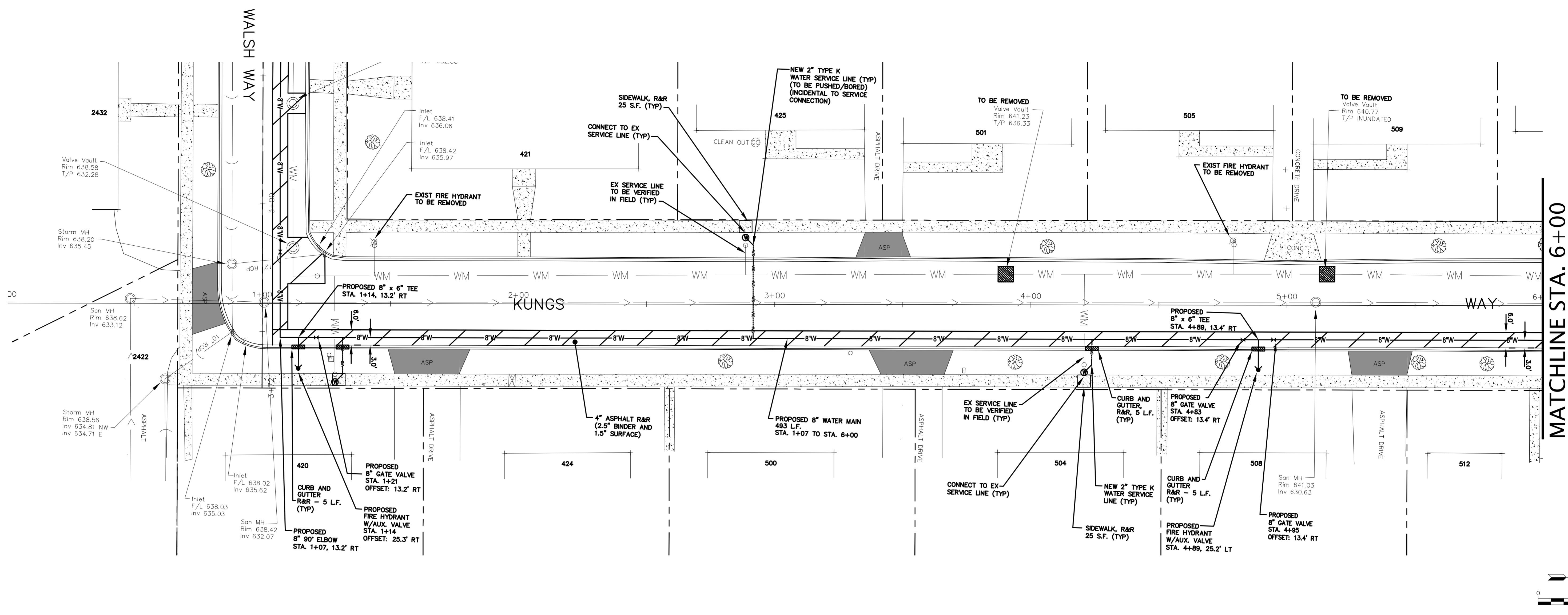
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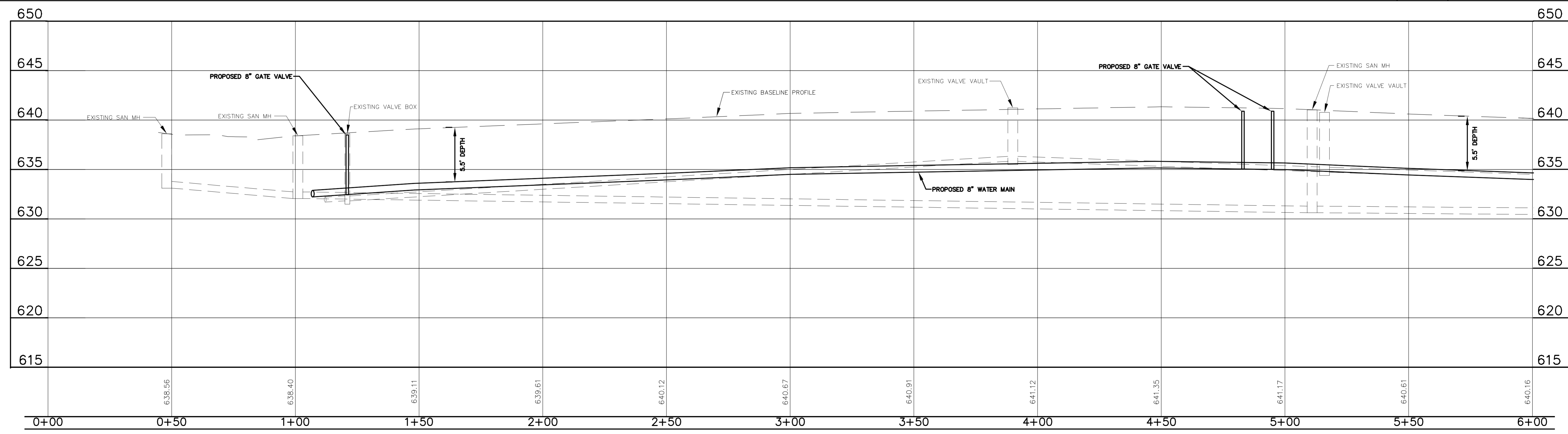


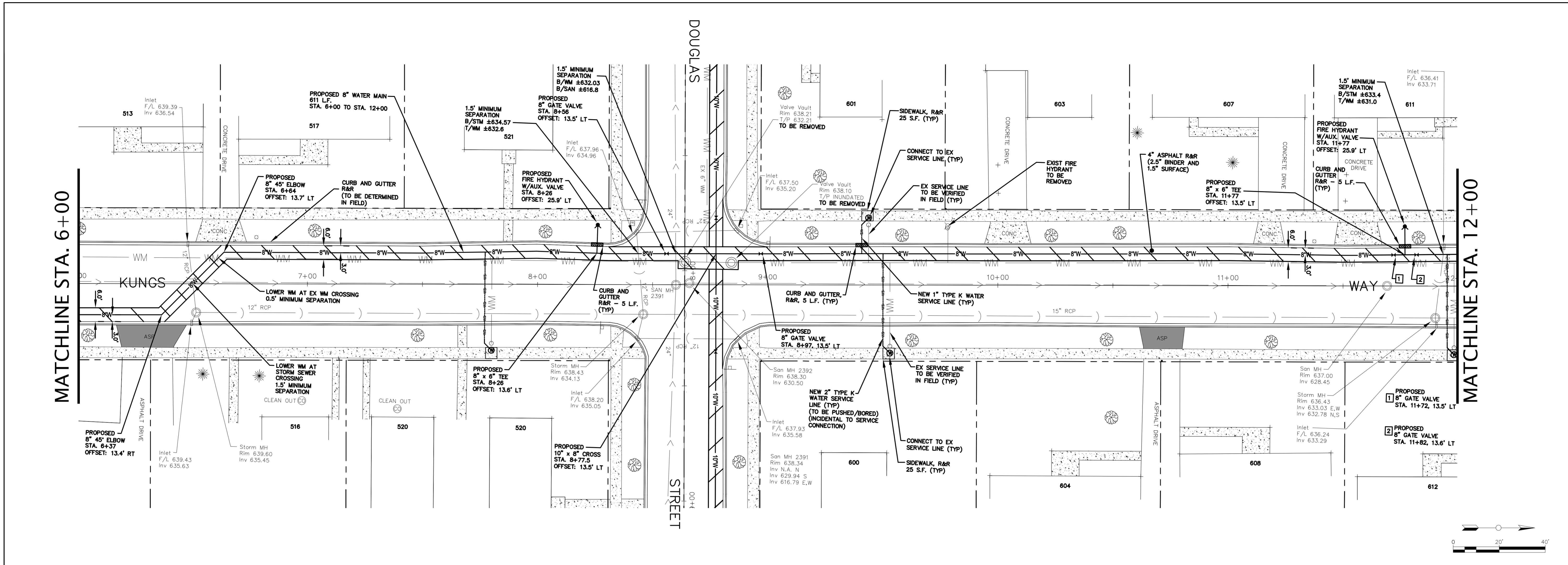
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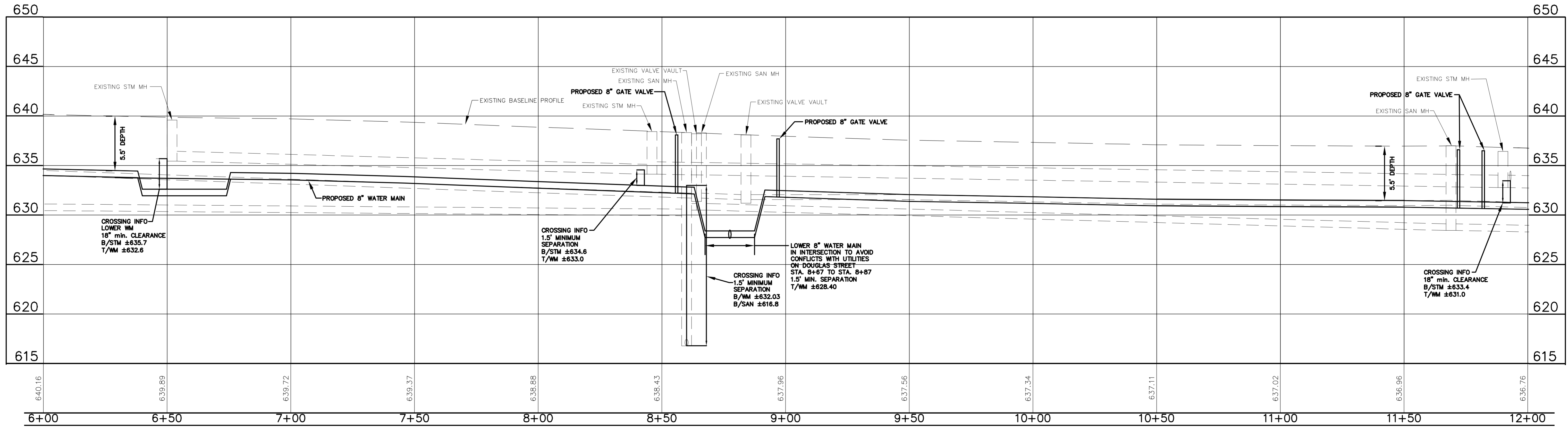


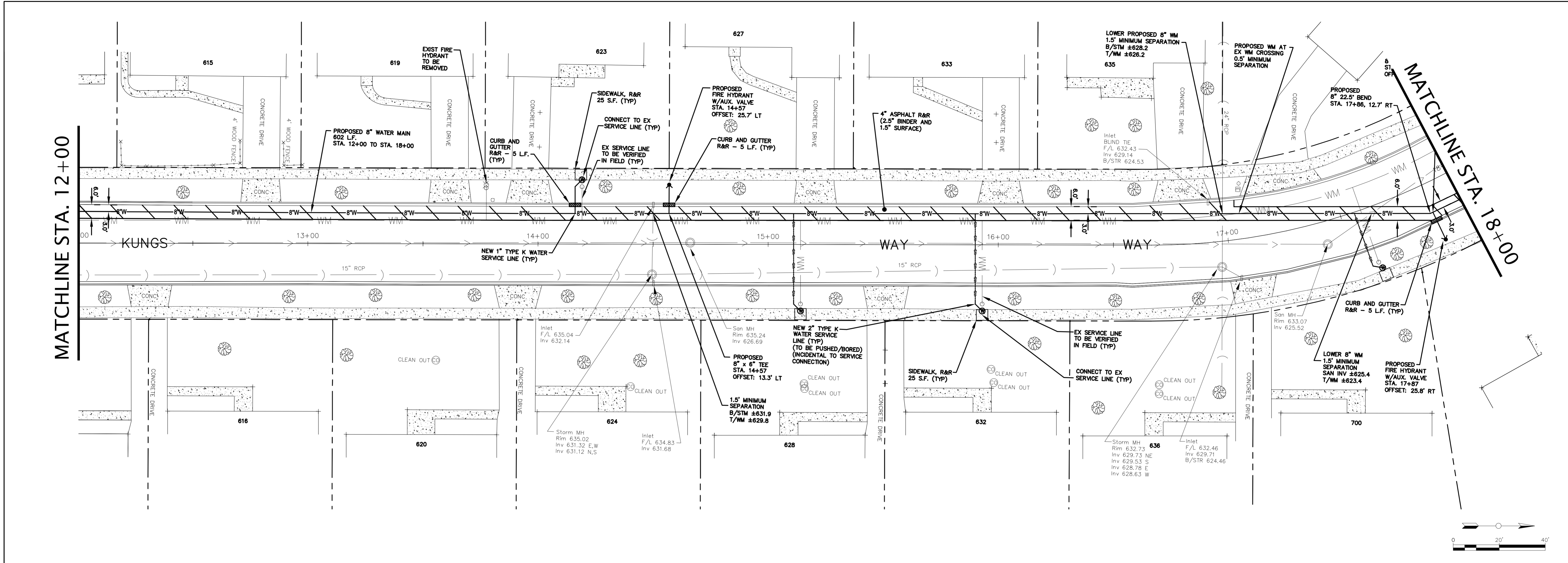
CITY OF JOLIET ENG: ENG
DATE: 4-15-2015 **KUNGS WAY**



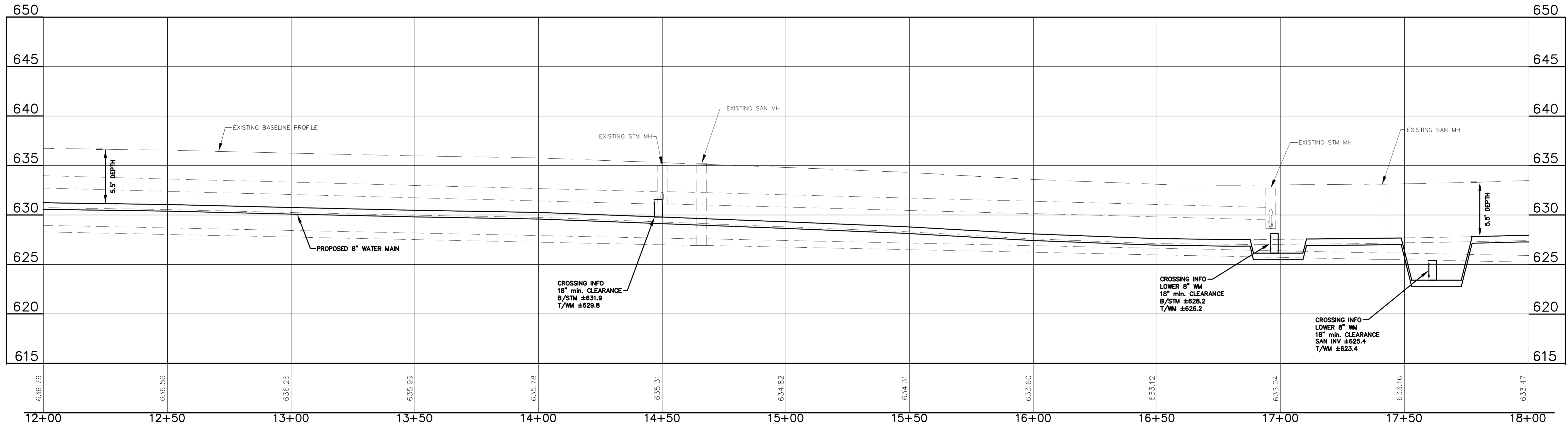


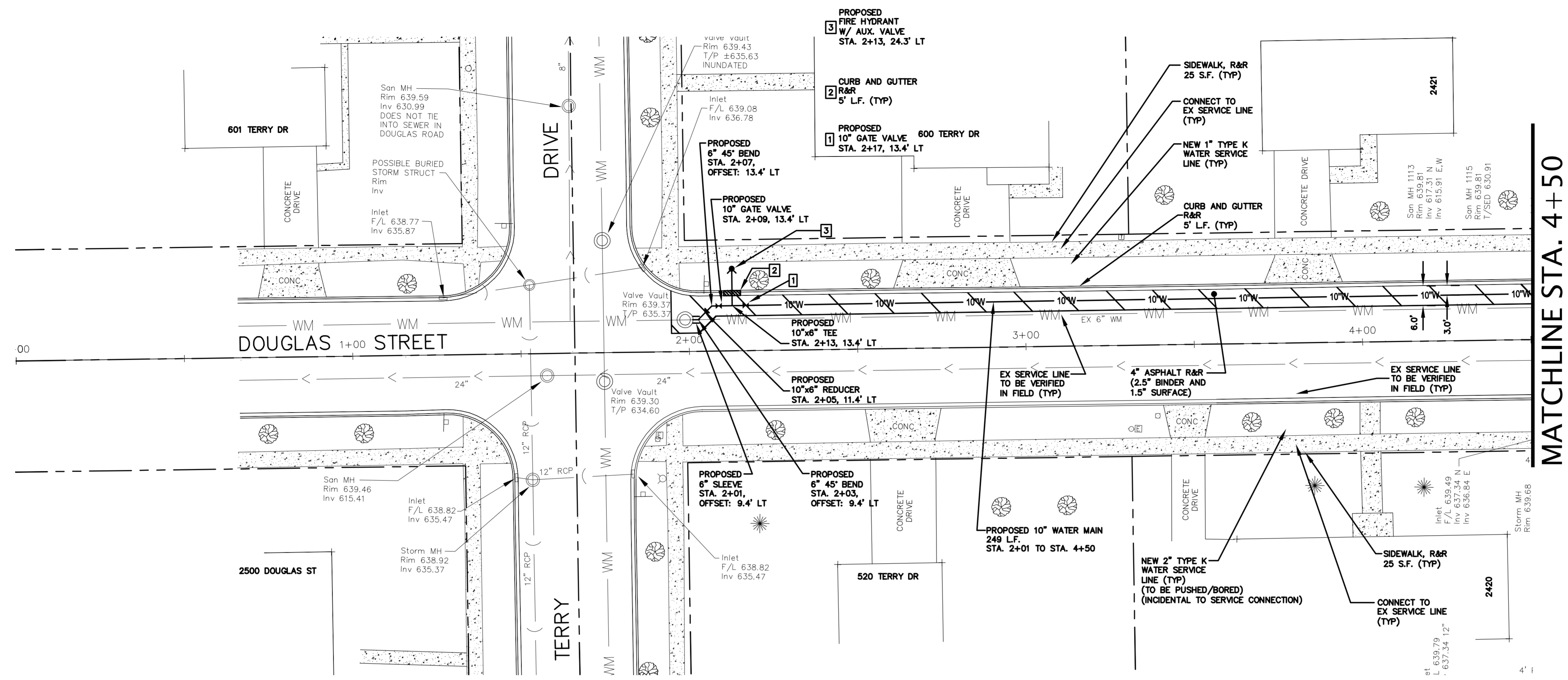
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CITY OF JOLIET ENG: ENG DATE: 4-15-2015 KUNGS WAY





MATCHLINE STA. 4+50

