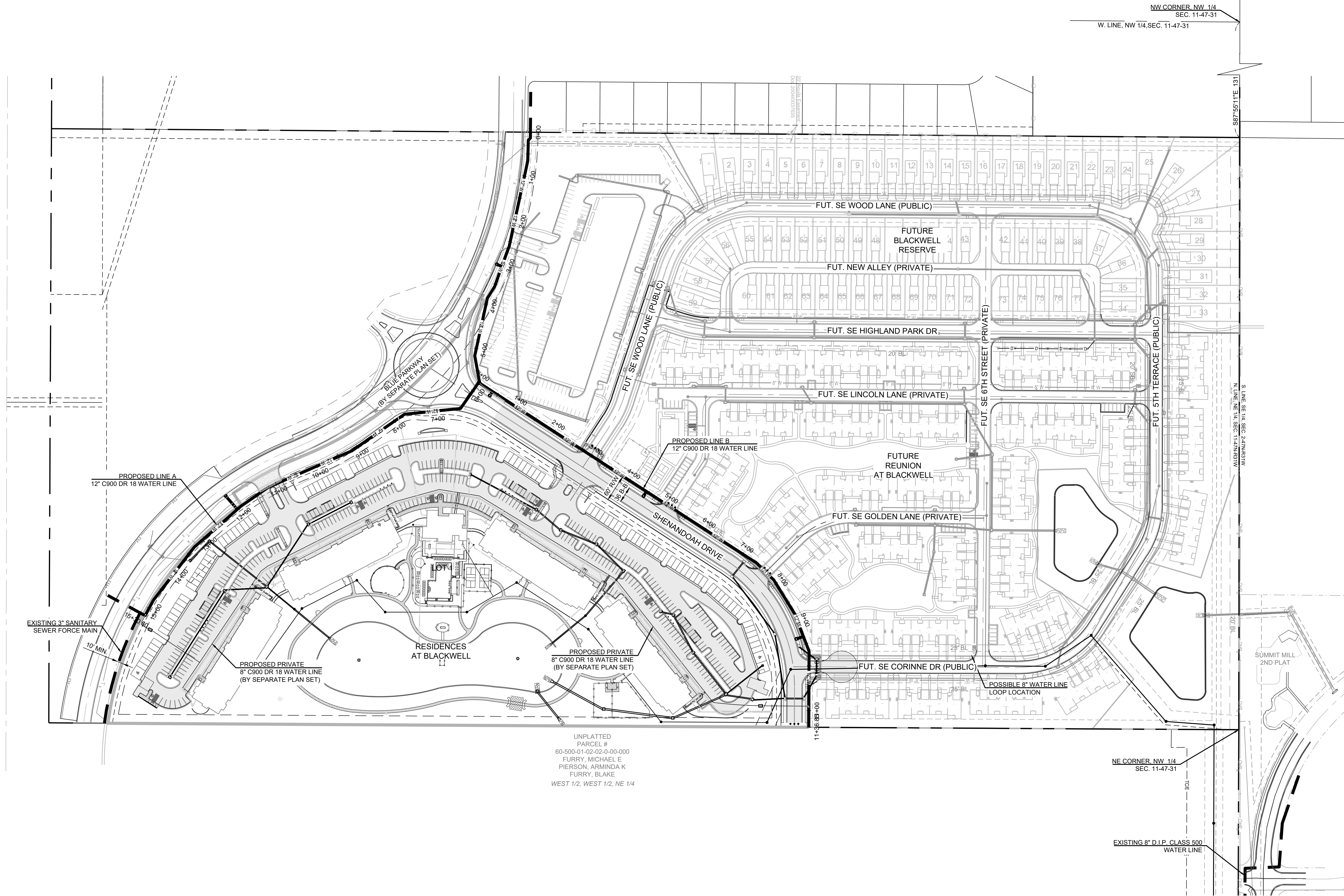


RESIDENCES AT BLACKWELL
PUBLIC WATER MAIN PLANS
HERITAGE STREET LEE'S SUMMIT, MO

REVISION DATE	DESCRIPTION
01/23/2023	PER CITY COMMENTS
03/24/2023	PER CITY COMMENTS
05/05/2023	PER CITY COMMENTS
06/08/2023	PER CITY COMMENTS
07/07/2023	PER CITY COMMENTS
07/14/2023	PER CITY COMMENTS

DRAWN BY: ###	11/30/2022
CHECKED BY: ###	22-102
DATE PREPARED: 11/30/2022	
PROJ. NUMBER: 22-102	

GENERAL
LAYOUT



MO GRS BENCHMARK:

STATION NAME - JA-90

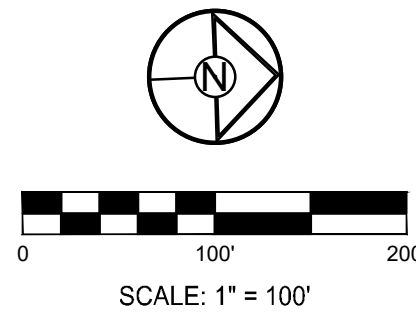
KC METRO ALUMINUM GRS DISK SET IN CONCRETE STAMPED "JA-90, 1988"
LOCATED NEAR THE INTERSECTION OF LANGSFORD ROAD AND OLD
LANGSFORD ROAD, 43 FEET SOUTHEAST OF THE CENTER OF LANGSFORD
ROAD AND 32 FEET NORTH OF THE CENTER OF OLD LANGSFORD ROAD.
N:1001052.8503, E:2845604.8272

ELEV. 997.045

PROJECT BENCHMARK:

"SQUARE" CUT IN TOP OF CONCRETE STORM MANHOLE
STORM MANHOLE IS LOCATED APPROX. 130 FEET EAST OF THE
INTERSECTION OF SE JOEL AVE & BLUE PARKWAY AND 26 FEET SOUTH
OF THE CENTERLINE OF BLUE PARKWAY.
N:996874.9690, E:2840937.1365

ELEV. 1005.719



MO GRS BENCHMARK:

STATION NAME - JA-90

KC METRO ALUMINUM GRS DISK SET IN CONCRETE STAMPED "JA-90, 1988"
LOCATED NEAR THE INTERSECTION OF LANGSFORD ROAD AND OLD
LANGSFORD ROAD, 43 FEET SOUTHEAST OF THE CENTER OF LANGSFORD
ROAD AND 32 FEET NORTH OF THE CENTER OF OLD LANGSFORD ROAD.
N:1001052.8503, E:2845604.8272

ELEV. 997.045

PROJECT BENCHMARK:

"SQUARE" CUT IN TOP OF CONCRETE STORM MANHOLE
STORM MANHOLE IS LOCATED APPROX. 130 FEET EAST OF THE
INTERSECTION OF SE JOEL AVE & BLUE PARKWAY AND 26 FEET SOUTH
OF THE CENTERLINE OF BLUE PARKWAY.
N:996874.9690, E:2840937.1365

ELEV. 1005.719

NOTES:

- ALL CONSTRUCTION ON THIS PROJECT SHALL CONFORM TO THE CITY OF LEE'S SUMMIT TECHNICAL SPECIFICATIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATION.

PREPARED BY:



SCHLAGEL & ASSOCIATES, P.A.

RESIDENCES AT BLACKWELL
PUBLIC WATER MAIN PLANS

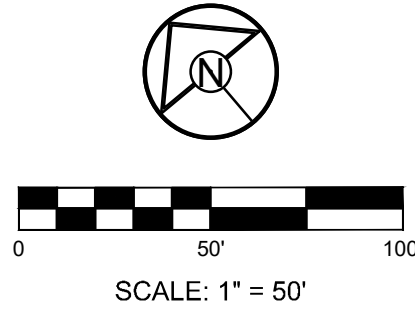
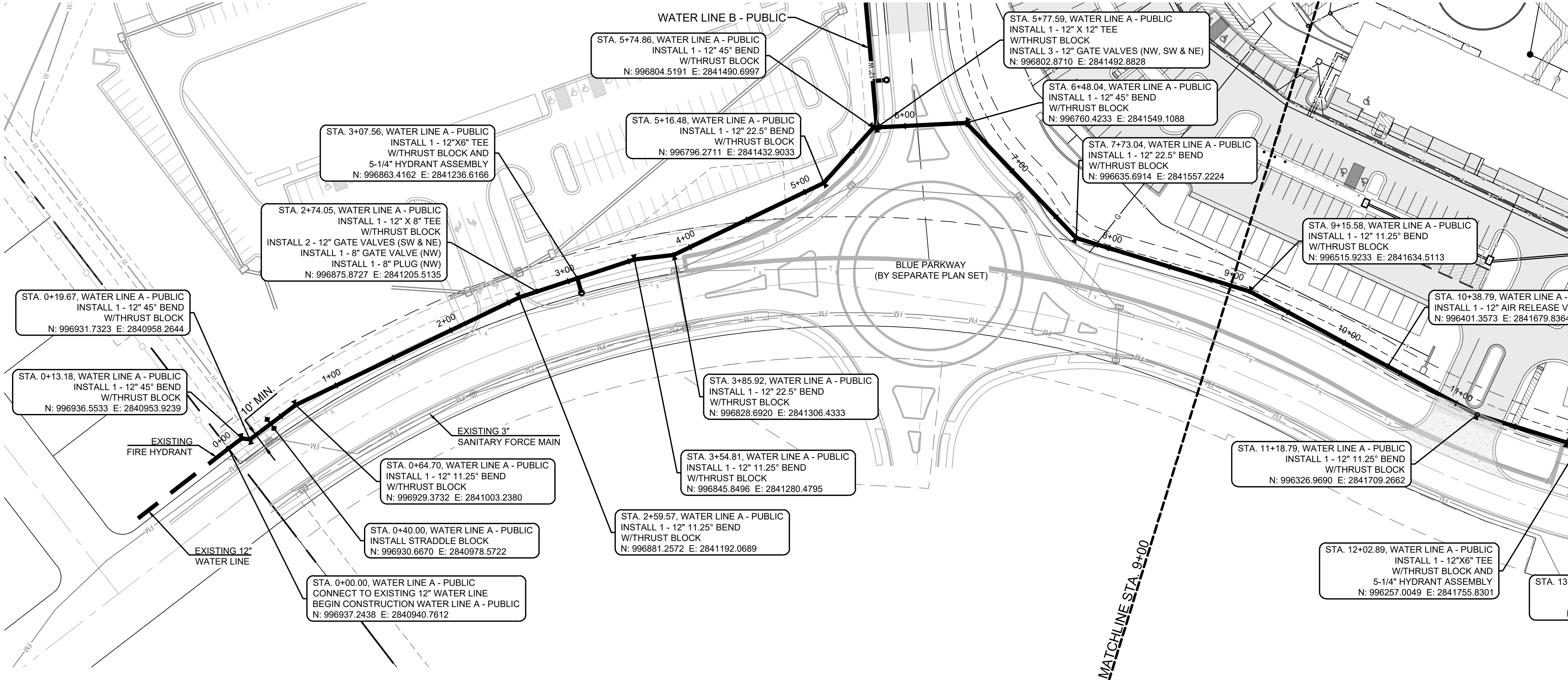
HERITAGE STREET LEE'S SUMMIT, MO

REVISION DATE	DESCRIPTION
01/23/2023	PER CITY COMMENTS
03/24/2023	PER CITY COMMENTS
05/05/2023	PER CITY COMMENTS
06/08/2023	PER CITY COMMENTS
07/07/2023	PER CITY COMMENTS
07/14/2023	PER CITY COMMENTS

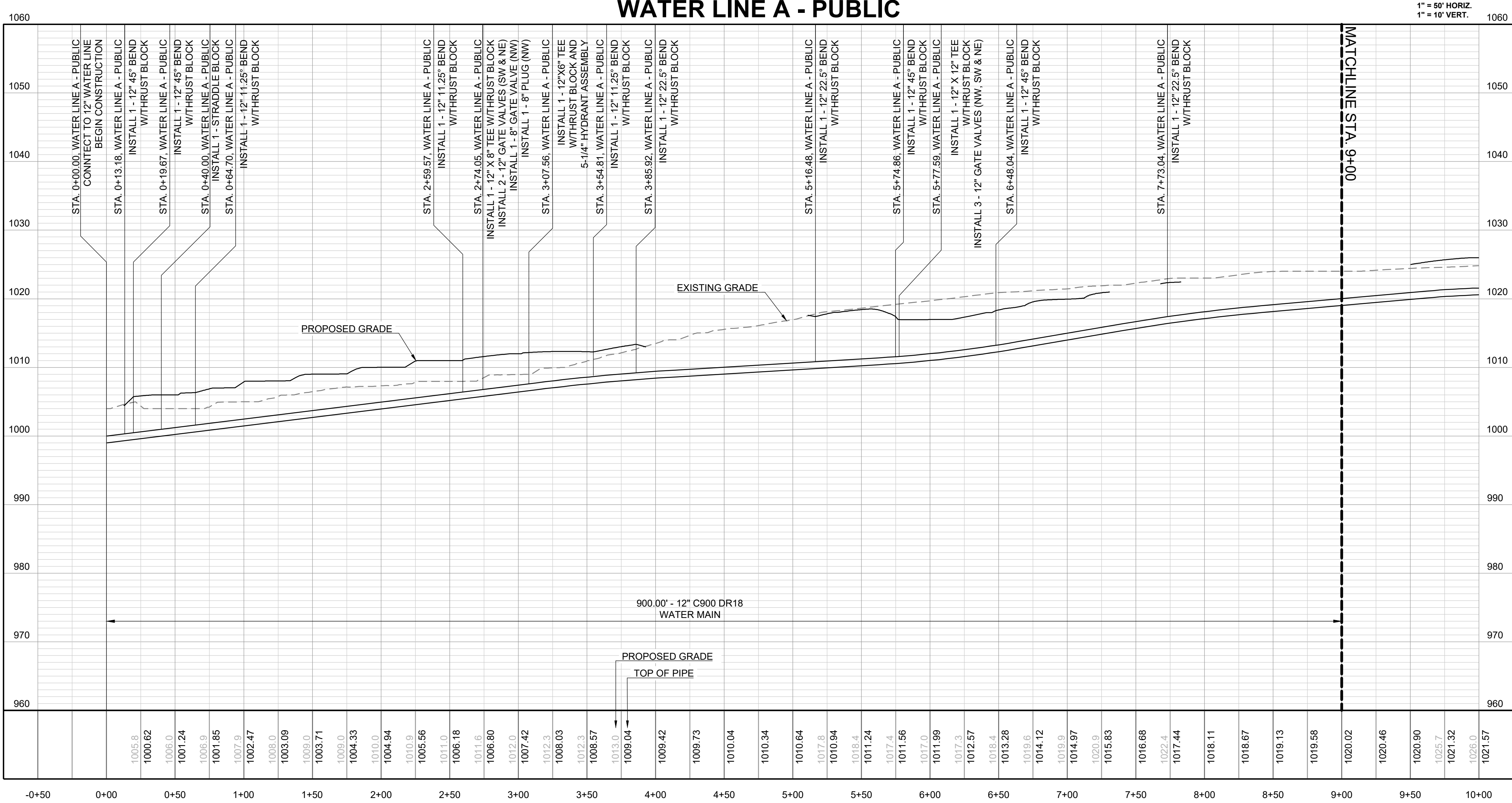
DRAWN BY:	TRC
CHECKED BY:	MAB
DATE PREPARED:	11/30/2022
PROJ. NUMBER:	22-102

WATER LINE A - PUBLIC

SHEET
3



WATER LINE A - PUBLIC



STA. 5+77.59, WATER LINE A - PUBLIC
INSTALL 1 - 12" X 12" TEE
W/THRUST BLOCK
INSTALL 3 - 12" GATE VALVES (NW, SW & NE)
N: 996802.8710 E: 2841492.8828

STA. 6+48.04, WATER LINE A - PUBLIC
INSTALL 1 - 12" 45° BEND
W/THRUST BLOCK
N: 996760.4233 E: 2841549.1088

STA. 7+73.04, WATER LINE A - PUBLIC
INSTALL 1 - 12" 22.5° BEND
W/THRUST BLOCK
N: 996635.6914 E: 2841557.2224

STA. 9+15.58, WATER LINE A - PUBLIC
INSTALL 1 - 12" 11.25° BEND
W/THRUST BLOCK
N: 996515.9233 E: 2841634.5113

STA. 10+38.79, WATER LINE A - PUBLIC
INSTALL 1 - 12" AIR RELEASE VALVE ASSEMBLY
N: 996401.3573 E: 2841679.8364

STA. 15+00.00, WATER LINE A - PUBLIC
INSTALL STRADDLE BLOCK
N: 996052.6183 E: 2841968.9960

STA. 15+18.06, WATER LINE A - PUBLIC
INSTALL 1 - 12" X 12" X 12" TEE
W/THRUST BLOCK
INSTALL 2 - 12" GATE VALVES (NW & S)
INSTALL 1 - 16" X 12" REDUCER (S)
INSTALL 1 - 12" X 8" REDUCER (E)
INSTALL 1 - 8" GATE VALVE (E)
INSTALL 1 - 8" PLUG (E)
N: 996043.7035 E: 2841984.5828

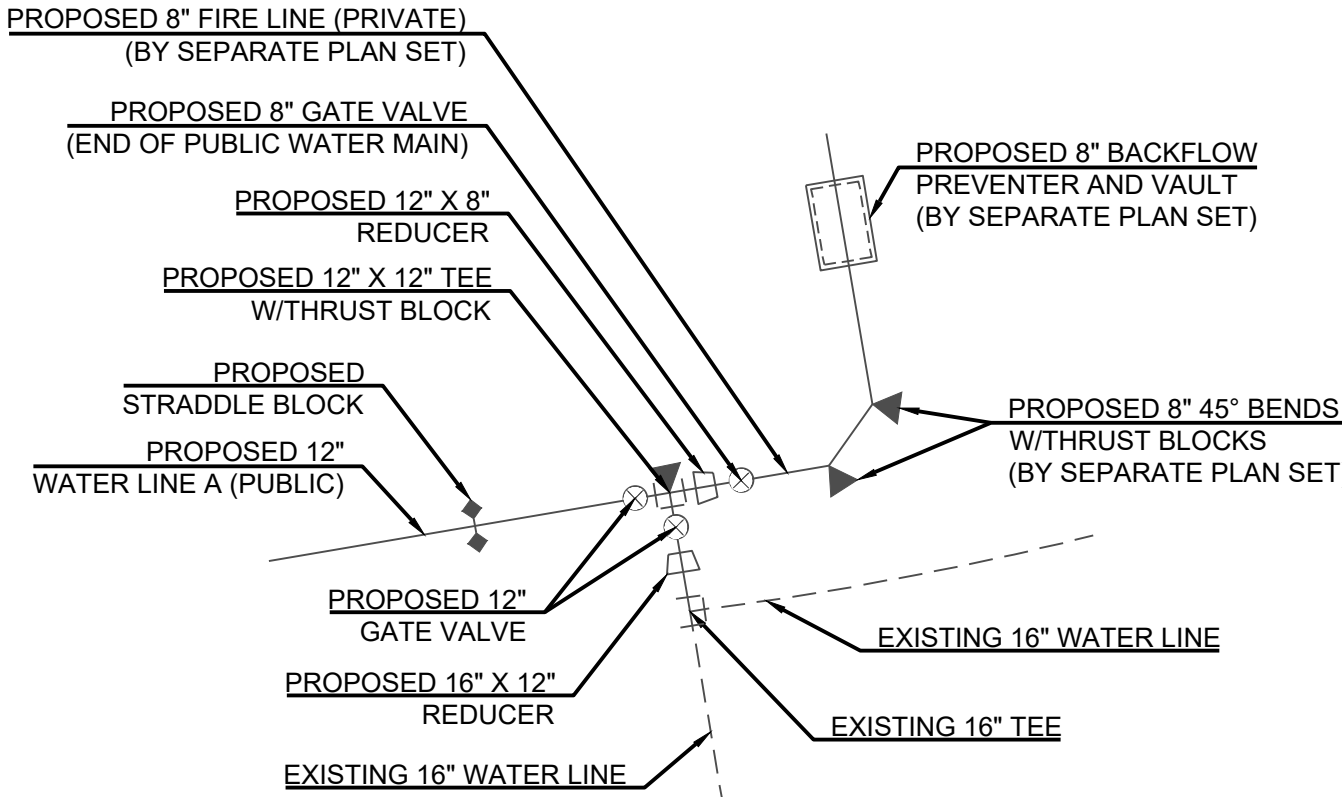
STA. 11+92.12, WATER LINE A - PUBLIC
INSTALL 1 - 12" 11.25° BEND
W/THRUST BLOCK
N: 996265.3474 E: 2841749.0319

STA. 11+18.79, WATER LINE A - PUBLIC
INSTALL 1 - 12" 11.25° BEND
W/THRUST BLOCK
N: 996326.9690 E: 2841709.2662

STA. 12+02.89, WATER LINE A - PUBLIC
INSTALL 1 - 12" X 6" TEE
W/THRUST BLOCK AND
5-1/4" HYDRANT ASSEMBLY
N: 996257.0049 E: 2841755.8301

STA. 13+30.61, WATER LINE A - PUBLIC
INSTALL 1 - 12" 11.25° BEND
W/THRUST BLOCK
N: 996157.9941 E: 2841836.5127

STA. 14+79.29, WATER LINE A - PUBLIC
INSTALL 1 - 12" 11.25° BEND
W/THRUST BLOCK
N: 996063.2742 E: 2841951.1159



RESTRAINED JOINT NOTES:

- ALL JOINTS BETWEEN THE PROPOSED 8" GATE VALVE AND THE PROPOSED STRADDLE BLOCK SHALL BE RESTRAINED.
- ALL JOINTS BETWEEN THE PROPOSED 12" X 12" TEE AND THE EXISTING 16" TEE SHALL BE RESTRAINED.

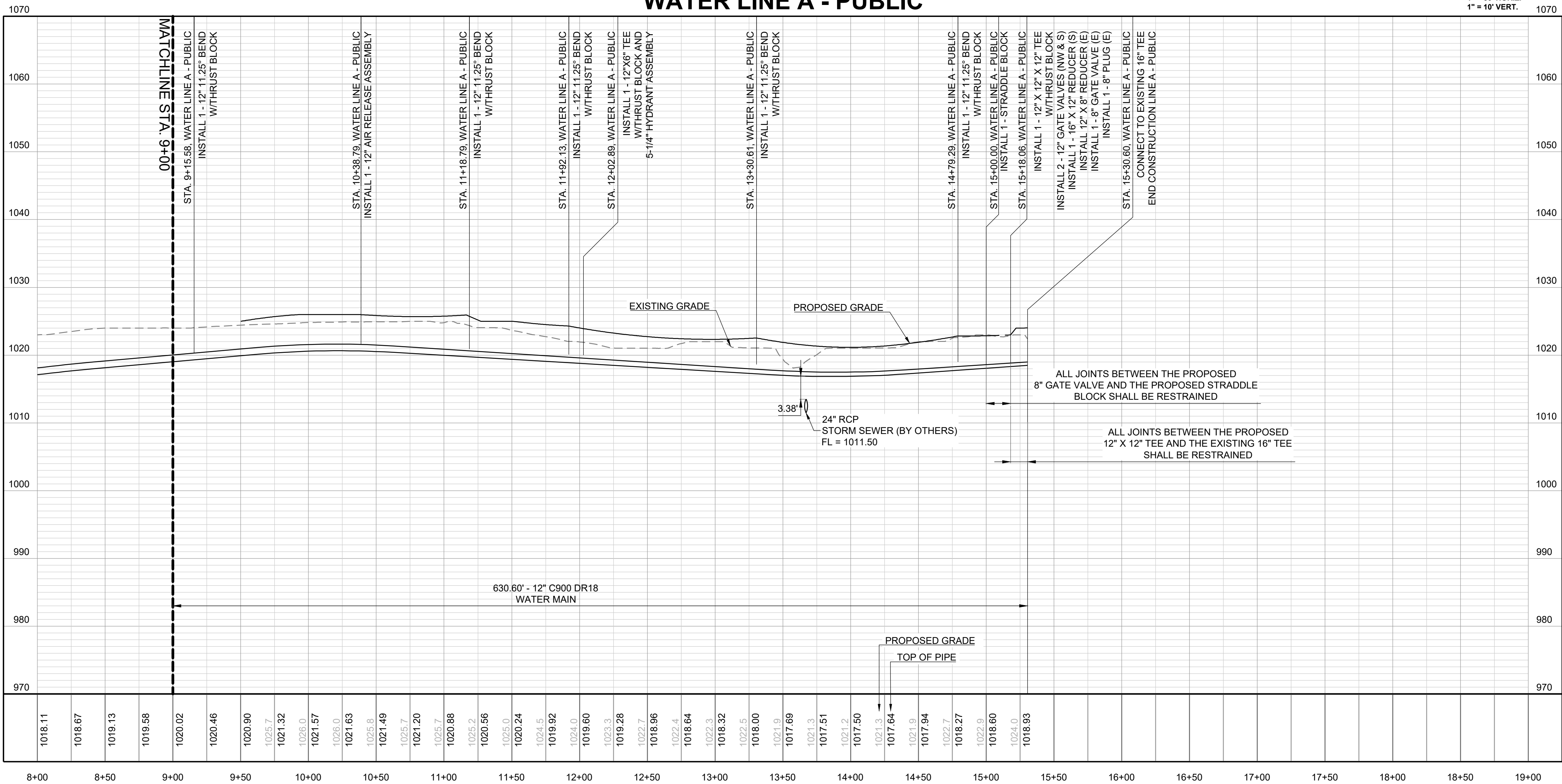
CONNECTION DETAIL
EXISTING 16" WATER LINE AND 8" PRIVATE FIRE LINE
N.T.S.

NOTES:

- ALL CONSTRUCTION ON THIS PROJECT SHALL CONFORM TO THE CITY OF LEE'S SUMMIT TECHNICAL SPECIFICATIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATION.



WATER LINE A - PUBLIC



SCHLAGEL
ENGINEERS, PLANNERS, SURVEYORS, LANDSCAPE ARCHITECTS
14920 West 107th Street • Lenexa, Kansas 66215
(913) 492-5158 • Fax: (913) 492-8400
WWW.SCHLAGELASSOCIATES.COM
Missouri State Certificates of Authority
#E2002003600-F #LAC200100237 #LS200200859-F

PREPARED BY:

07.24.2023

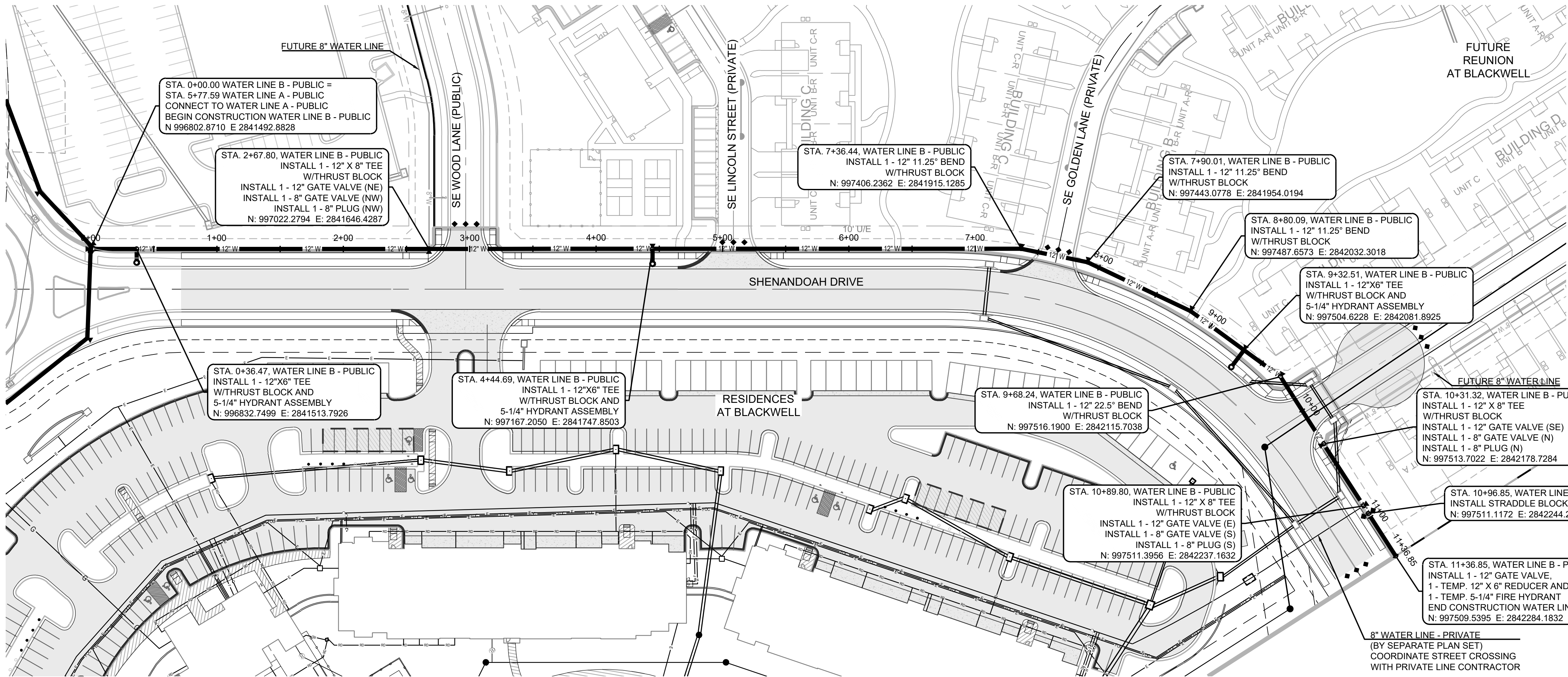
SCHLAGEL & ASSOCIATES, P.A.

RESIDENCES AT BLACKWELL
PUBLIC WATER MAIN PLANS
HERITAGE STREET LEE'S SUMMIT, MO

REVISION	DATE	DESCRIPTION
1	01/23/2023	PER CITY COMMENTS
2	03/24/2023	PER CITY COMMENTS
3	05/05/2023	PER CITY COMMENTS
4	06/08/2023	PER CITY COMMENTS
5	07/07/2023	PER CITY COMMENTS
6	07/14/2023	PER CITY COMMENTS
7	11/30/2022	PER CITY COMMENTS
8		PER CITY COMMENTS

DRAWN BY: TRC
CHECKED BY: MAB
DATE PREPARED: 11/30/2022
PROJ. NUMBER: 22-102

WATER LINE A - PUBLIC



MO GRS BENCHMARK:

STATION NAME - JA-90
KC METRO ALUMINUM GRS DISK SET IN CONCRETE STAMPED "JA-90, 1988"
LOCATED NEAR THE INTERSECTION OF LANGSFORD ROAD AND OLD
LANGSFORD ROAD, 43 FEET SOUTHEAST OF THE CENTER OF LANGSFORD
ROAD AND 32 FEET NORTH OF THE CENTER OF OLD LANGSFORD ROAD.
N:1001052.8503, E:2845604.8272
ELEV. 997.045

PROJECT BENCHMARK:

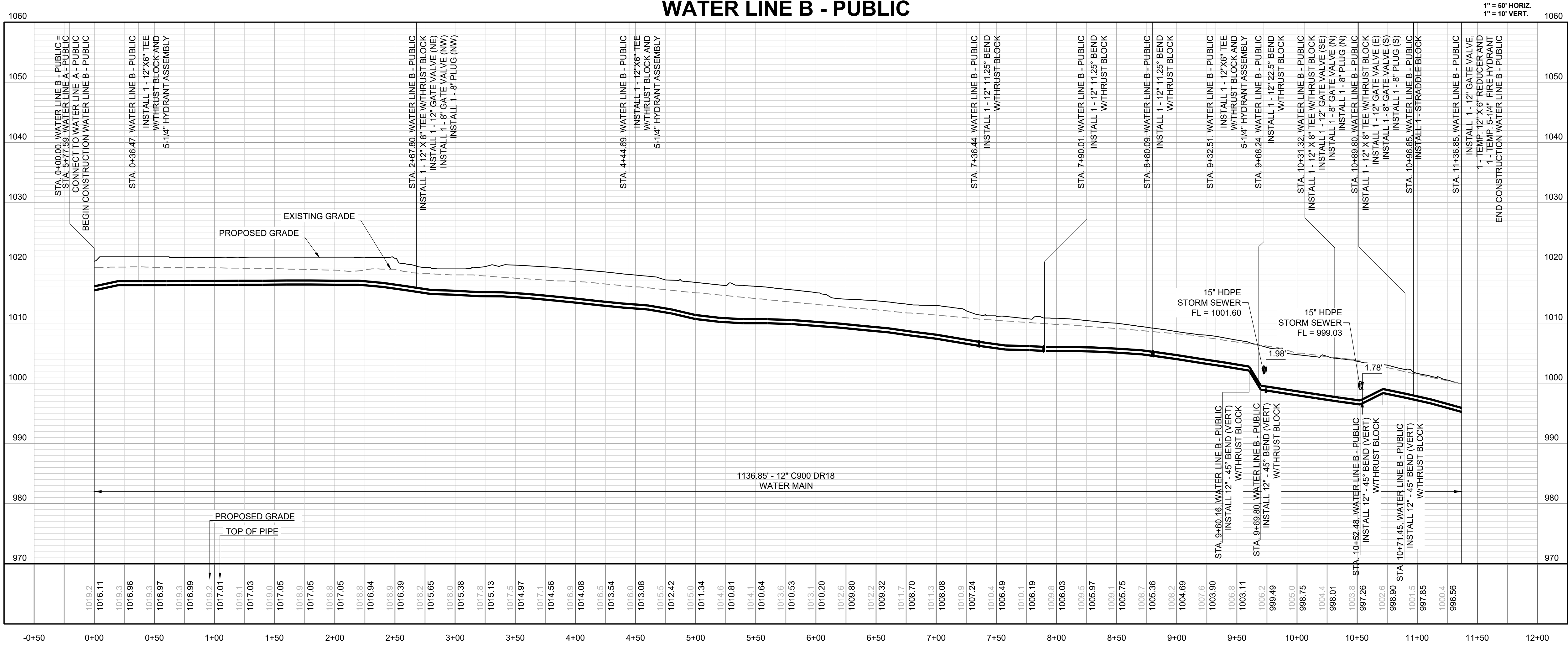
"SQUARE" CUT IN TOP OF CONCRETE STORM MANHOLE
STORM MANHOLE IS LOCATED APPROX. 130 FEET EAST OF THE
INTERSECTION OF SE JOEL AVE & BLUE PARKWAY AND 26 FEET SOUTH
OF THE CENTERLINE OF BLUE PARKWAY.
N:996874.9690, E:2840937.1365
ELEV. 1005.719

NOTES:

- ALL CONSTRUCTION ON THIS PROJECT SHALL CONFORM TO THE CITY OF LEE'S SUMMIT TECHNICAL SPECIFICATIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATION.



WATER LINE B - PUBLIC



PREPARED BY:



SCHLAGEL & ASSOCIATES, P.A.

RESIDENCES AT BLACKWELL
PUBLIC WATER MAIN PLANS

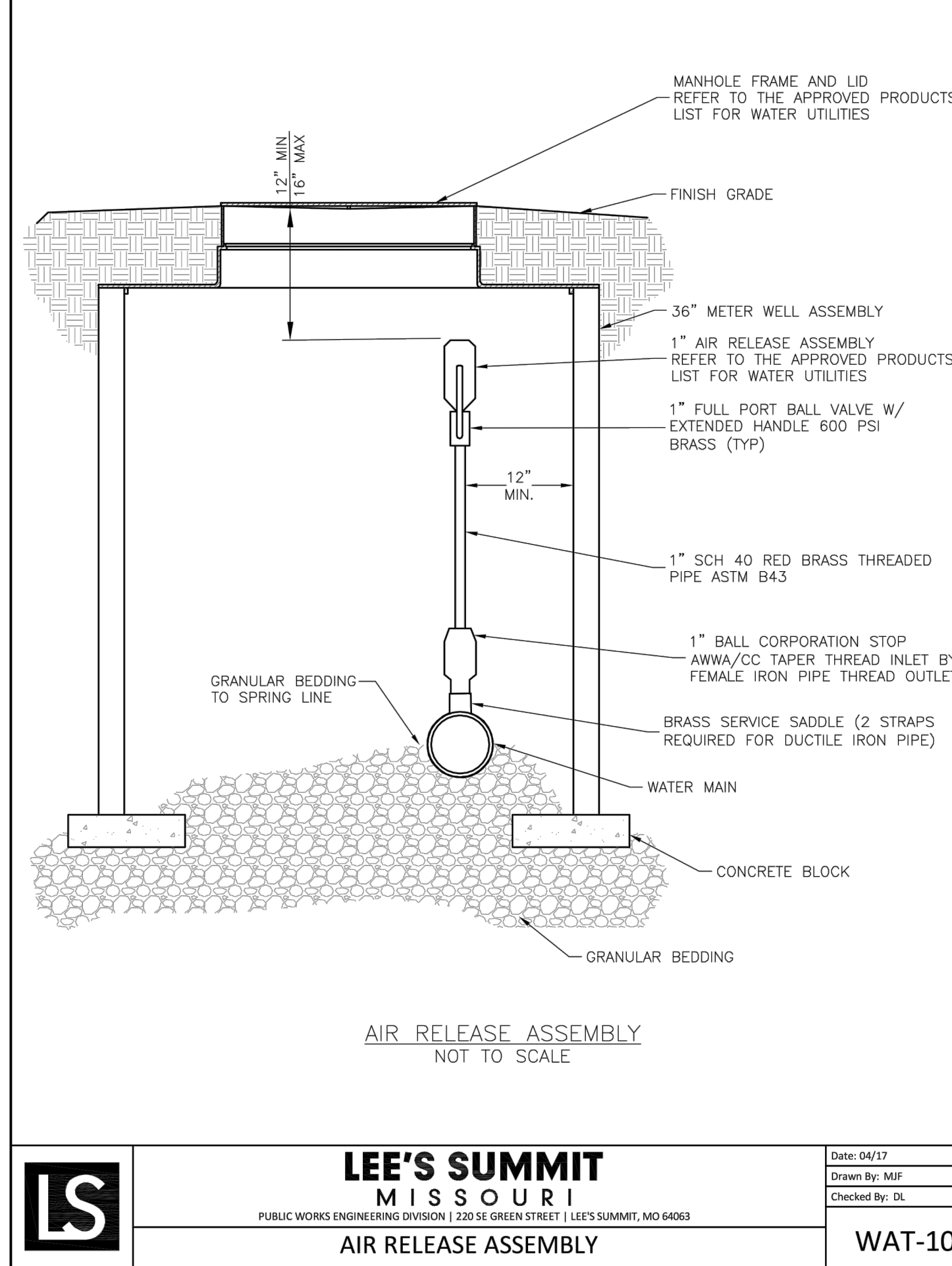
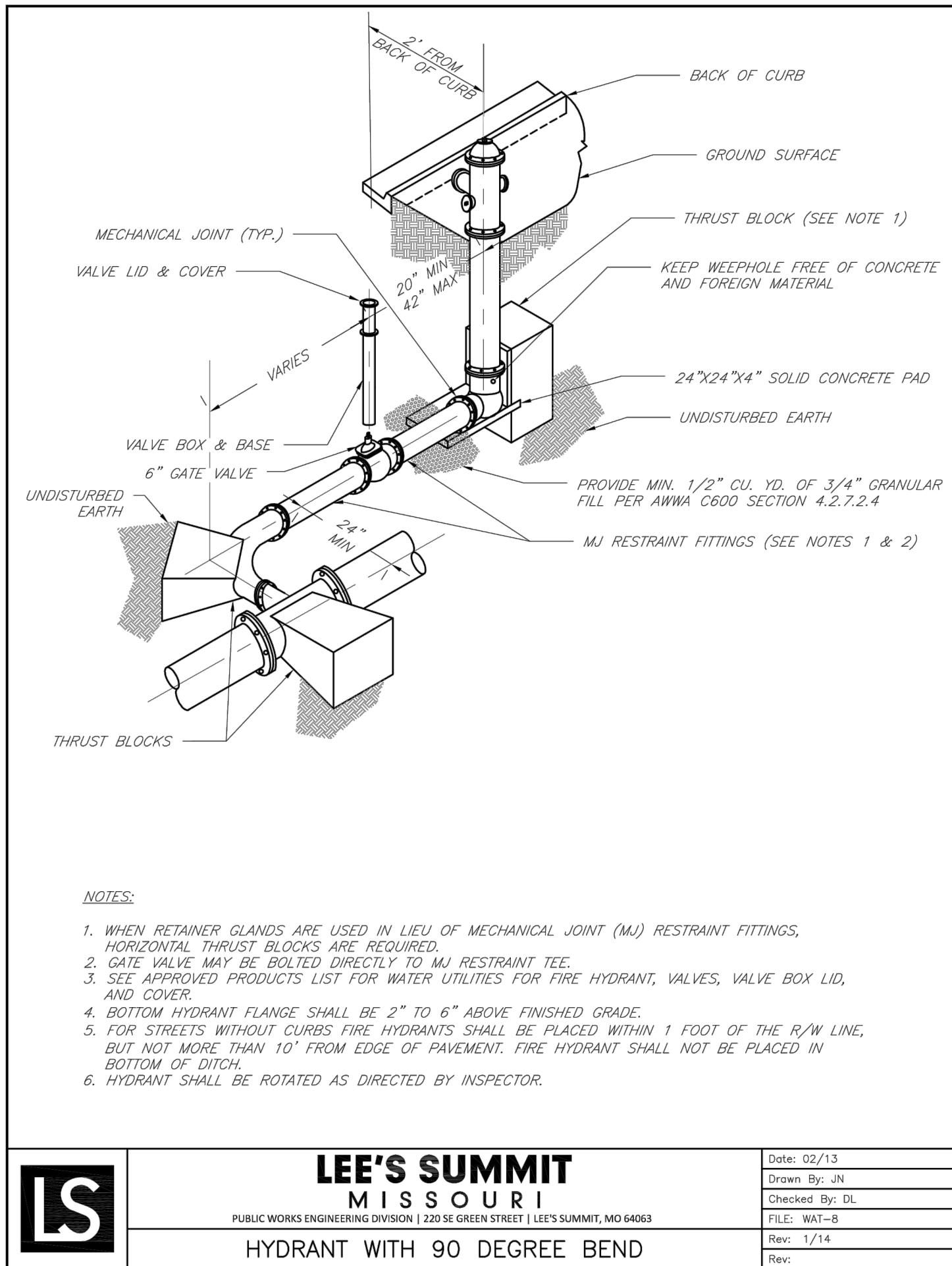
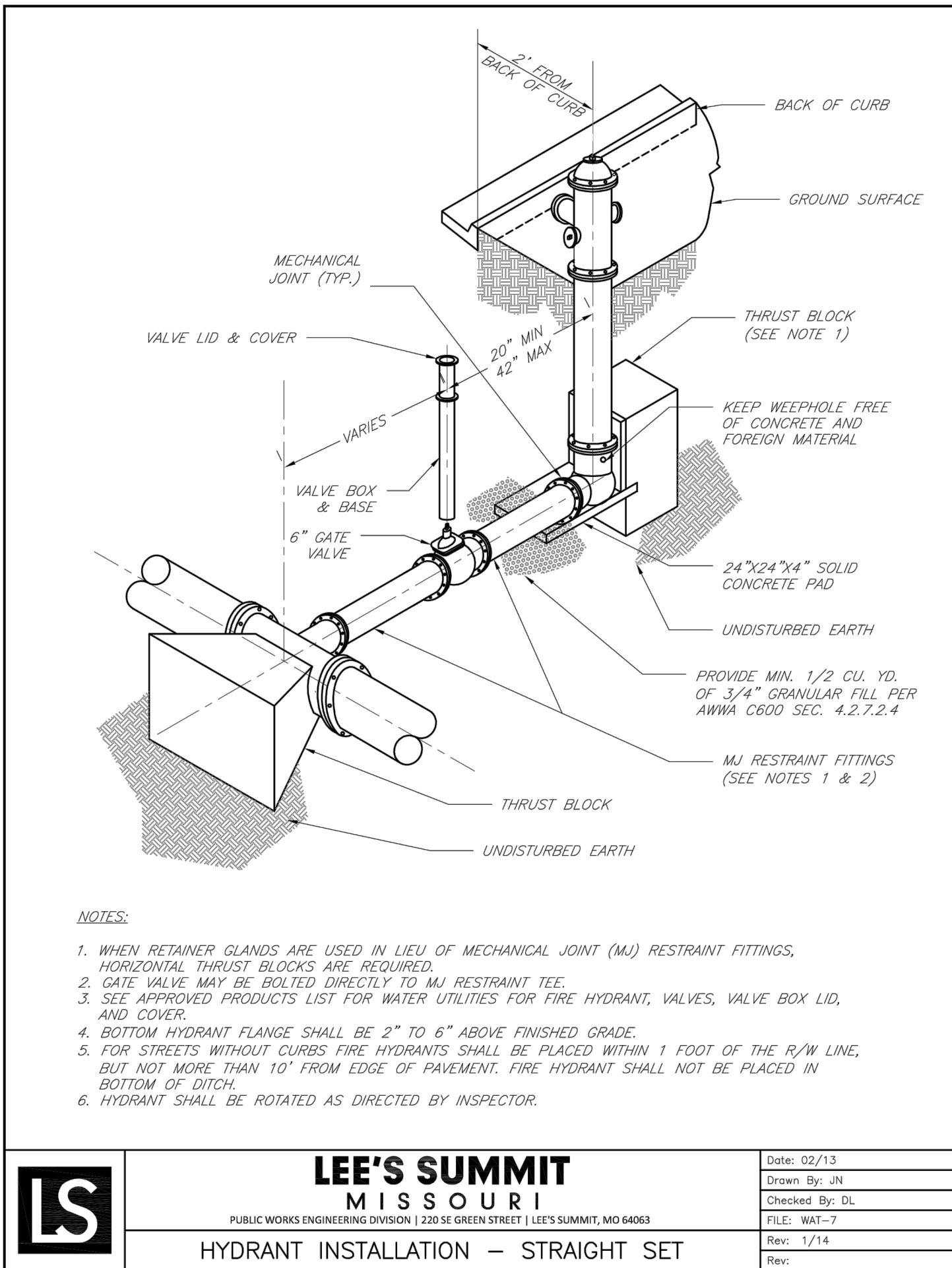
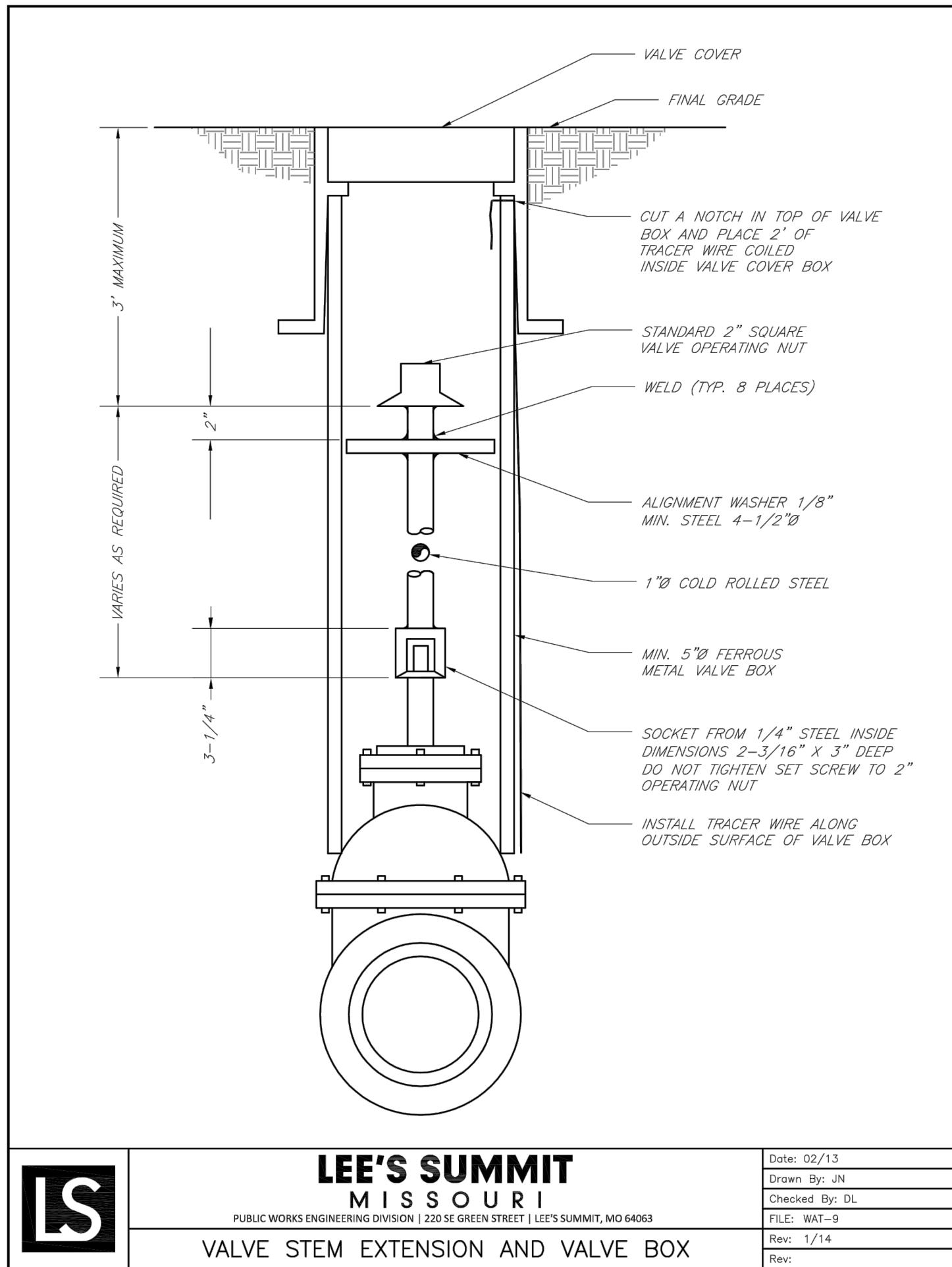
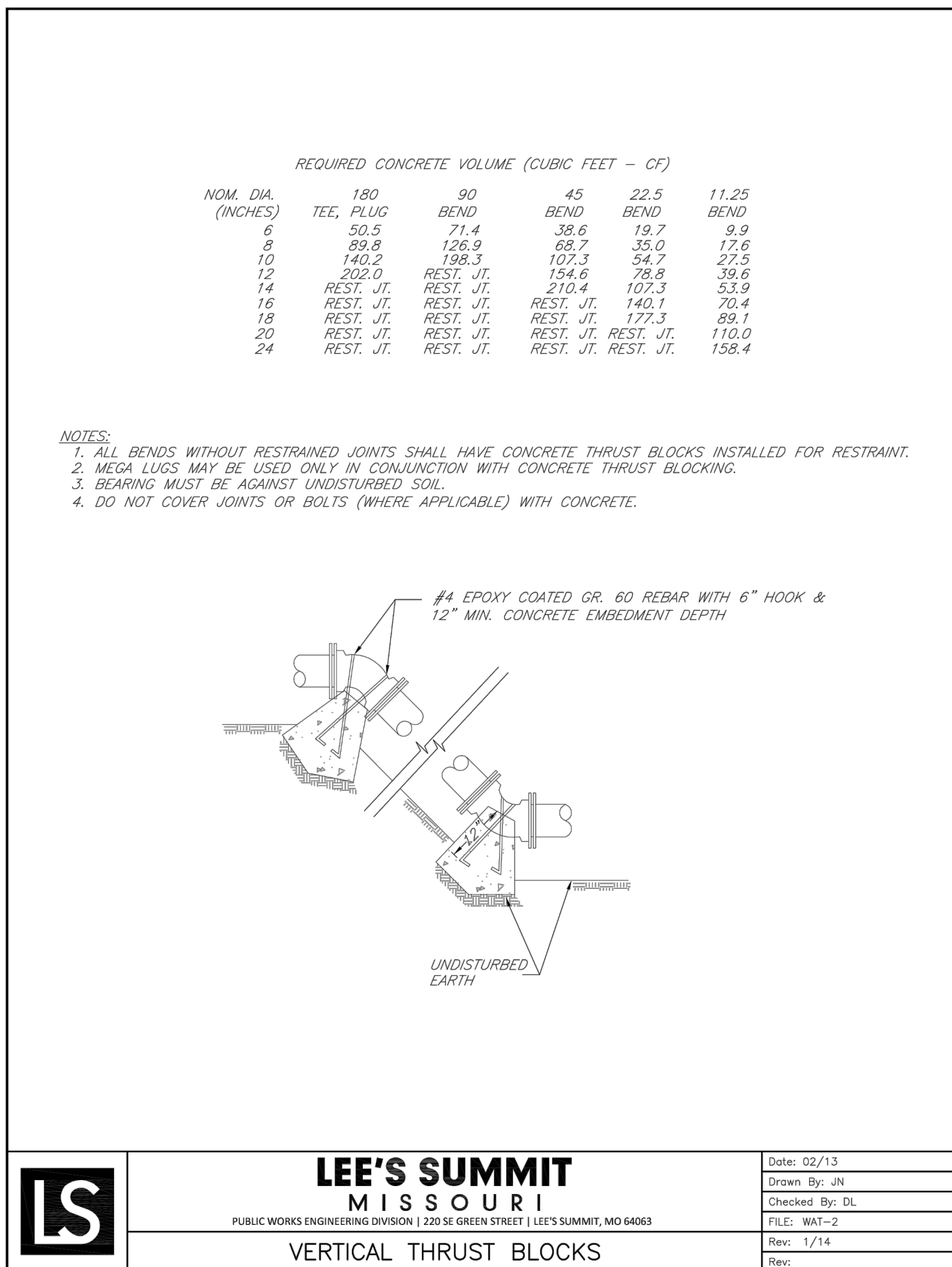
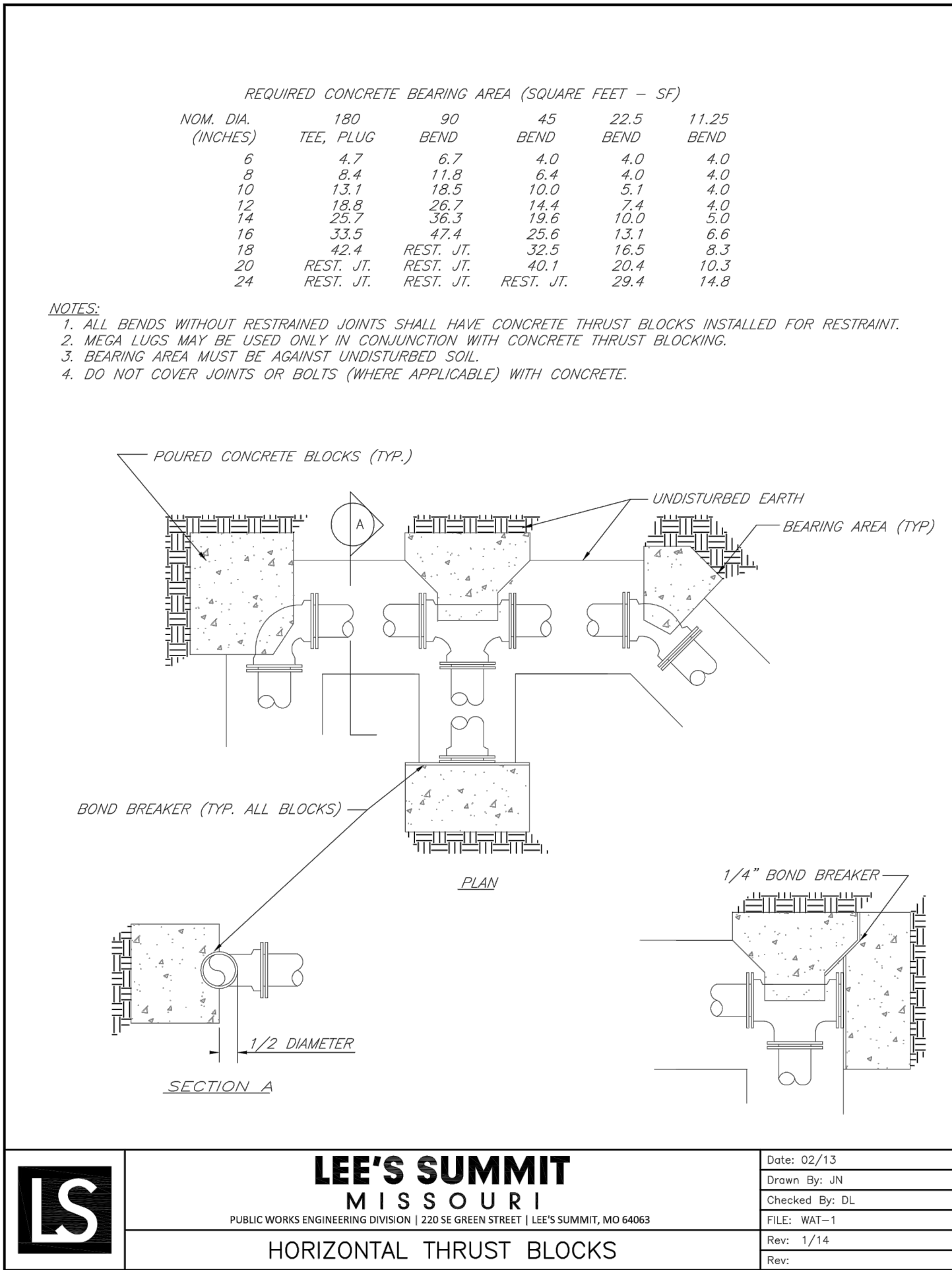
HERITAGE STREET LEE'S SUMMIT, MO

DRAWN BY:	REVISION DATE	DESCRIPTION	
		PER CITY COMMENTS	PER CITY COMMENTS
TRC MAB DATE PREPARED 11/30/2022 PROJ. NUMBER: 22-102	01/23/2023	PER CITY COMMENTS	
	03/24/2023	PER CITY COMMENTS	
	05/05/2023	PER CITY COMMENTS	
	06/08/2023	PER CITY COMMENTS	
	07/07/2023	PER CITY COMMENTS	
	07/14/2023	PER CITY COMMENTS	

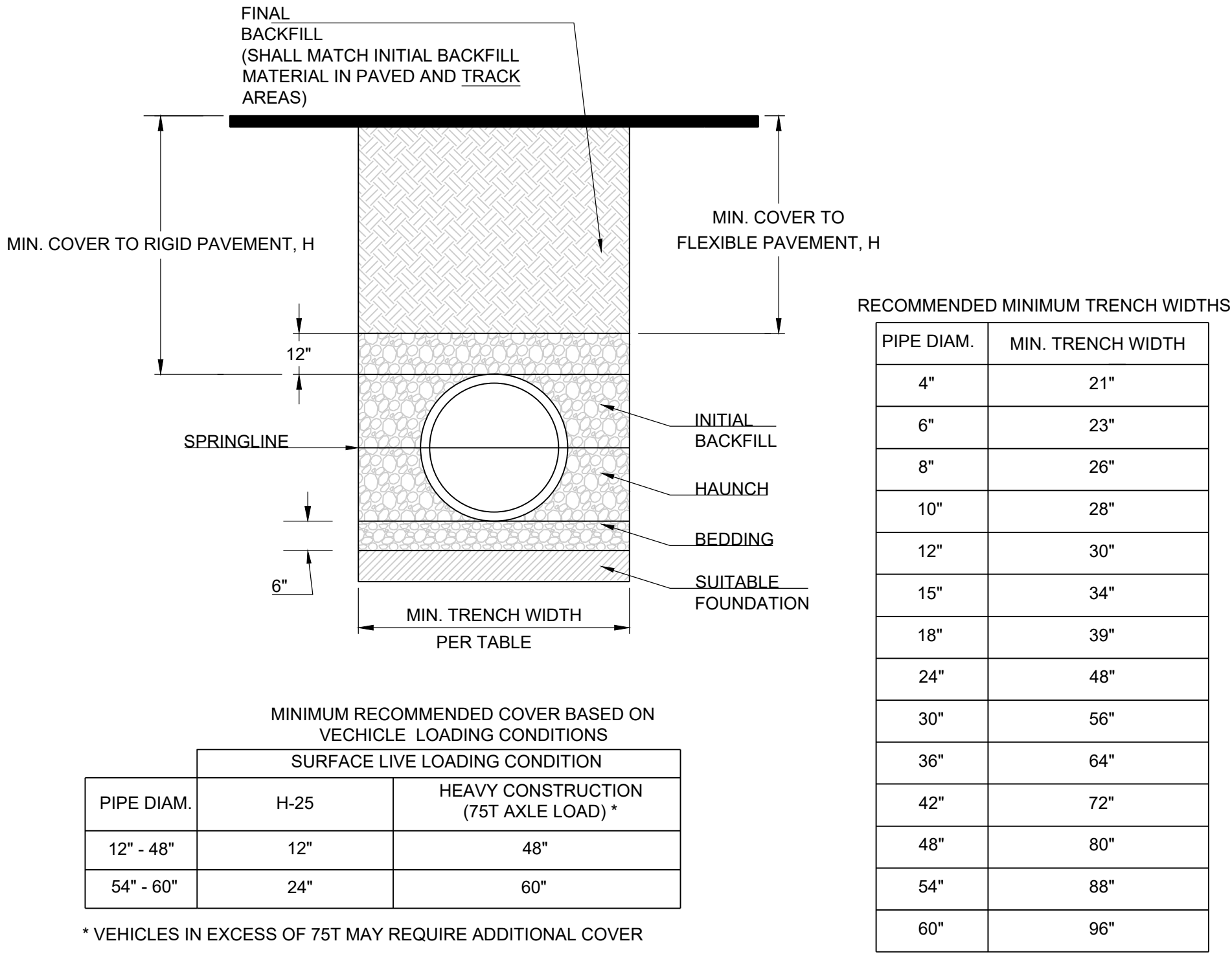
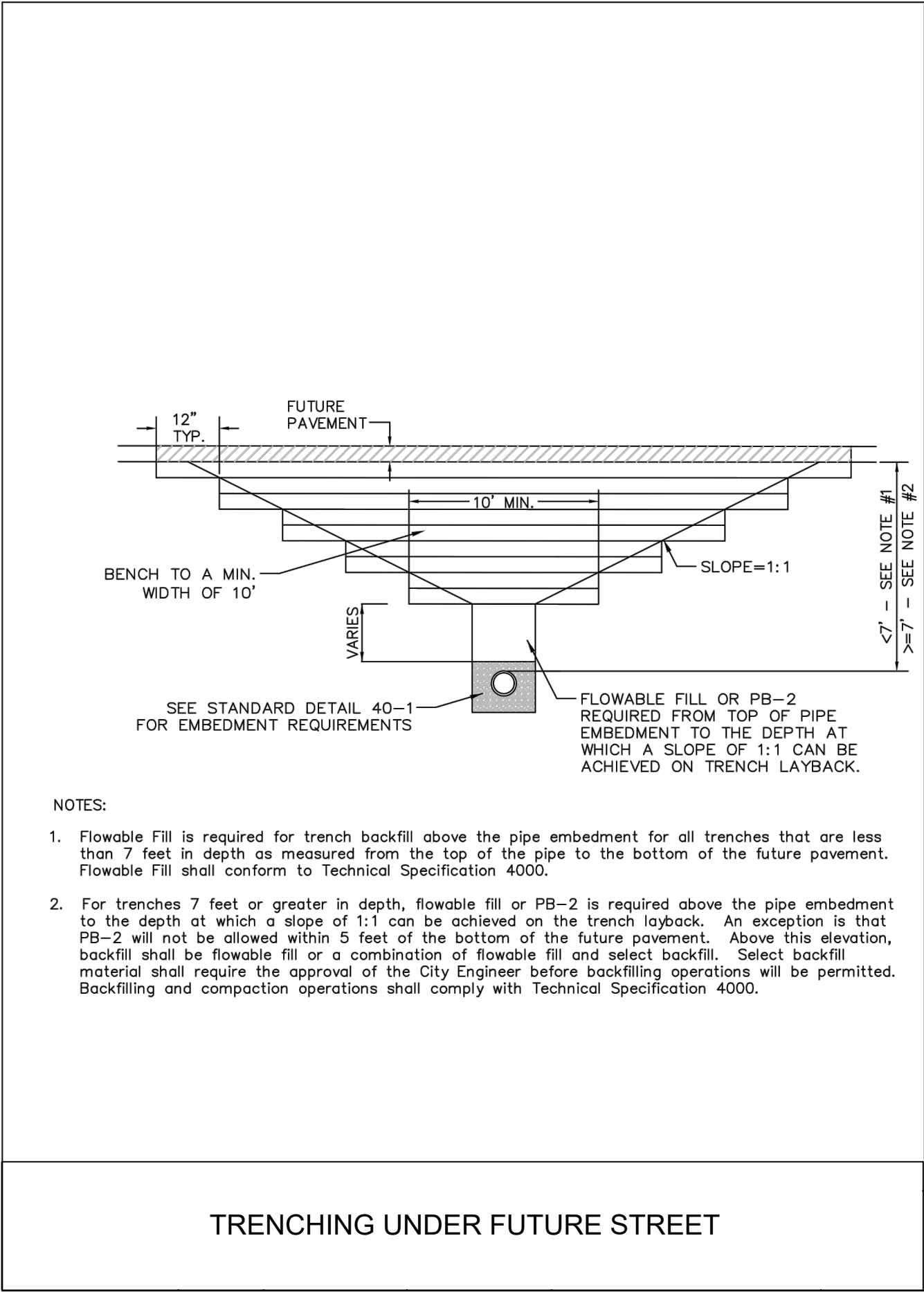
WATER LINE B - PUBLIC

SHEET

5



REVISION	DATE	DESCRIPTION
1	01/23/2023	PER CITY COMMENTS
2	03/24/2023	PER CITY COMMENTS
3	05/05/2023	PER CITY COMMENTS
4	06/08/2023	PER CITY COMMENTS
5	07/07/2023	PER CITY COMMENTS
6	07/14/2023	PER CITY COMMENTS
7	11/30/2022	PROJ. NUMBER:
8	22-102	



- NOTES:
1. ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION
 2. MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL, WHEN REQUIRED.
 3. FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE ENGINEER. AS AN ALTERNATIVE AND AT THE DISCRETION OF THE DESIGN ENGINEER, THE TRENCH BOTTOM MAY BE STABILIZED USING A GEOTEXTILE MATERIAL.
 4. BEDDING: SUITABLE MATERIAL SHALL BE CLASS I, II OR III. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. UNLESS OTHERWISE NOTED BY THE ENGINEER, MINIMUM BEDDING THICKNESS SHALL BE 6" (100mm) .
 5. INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS I, II OR III IN THE PIPE ZONE EXTENDING NOT LESS THAN 6" ABOVE CROWN OF PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION.
 6. MINIMUM COVER: MINIMUM COVER, H, IN NON-TRAFFIC APPLICATIONS (GRASS OR LANDSCAPE AREAS) IS 12" FROM THE TOP OF PIPE TO GROUND SURFACE. ADDITIONAL COVER MAY BE REQUIRED TO PREVENT FLOATATION. FOR TRAFFIC APPLICATIONS, MINIMUM COVER, H, IS 12" UP TO 48" DIAMETER PIPE AND 24" OF COVER FOR 54"-60" DIAMETER PIPE. MEASURED FROM TOP OF PIPE TO BOTTOM OF FLEXIBLE PAVEMENT OR TO TOP OF RIGID PAVEMENT.

REVISION DATE	DESCRIPTION
1 01/23/2023	PER CITY COMMENTS
2 03/24/2023	PER CITY COMMENTS
3 05/05/2023	PER CITY COMMENTS
4 06/08/2023	PER CITY COMMENTS
5 07/07/2023	PER CITY COMMENTS
6 07/14/2023	PER CITY COMMENTS
7 11/30/2022	
8 22-102	