

- NOTES:
1. DIMENSIONS ARE IN mm.
 2. ELEVATIONS ARE RELATIVE ONLY AND ARE NOT REPRESENTATIVE FROM THE BASELINE.
 3. CONTRACTOR HAS THE OPTION TO REPLACE CUTBACK ELBOWS LESS THAN 45 DEGREES WITH PIPE BENDS

SPOOL LIST	
04-02	

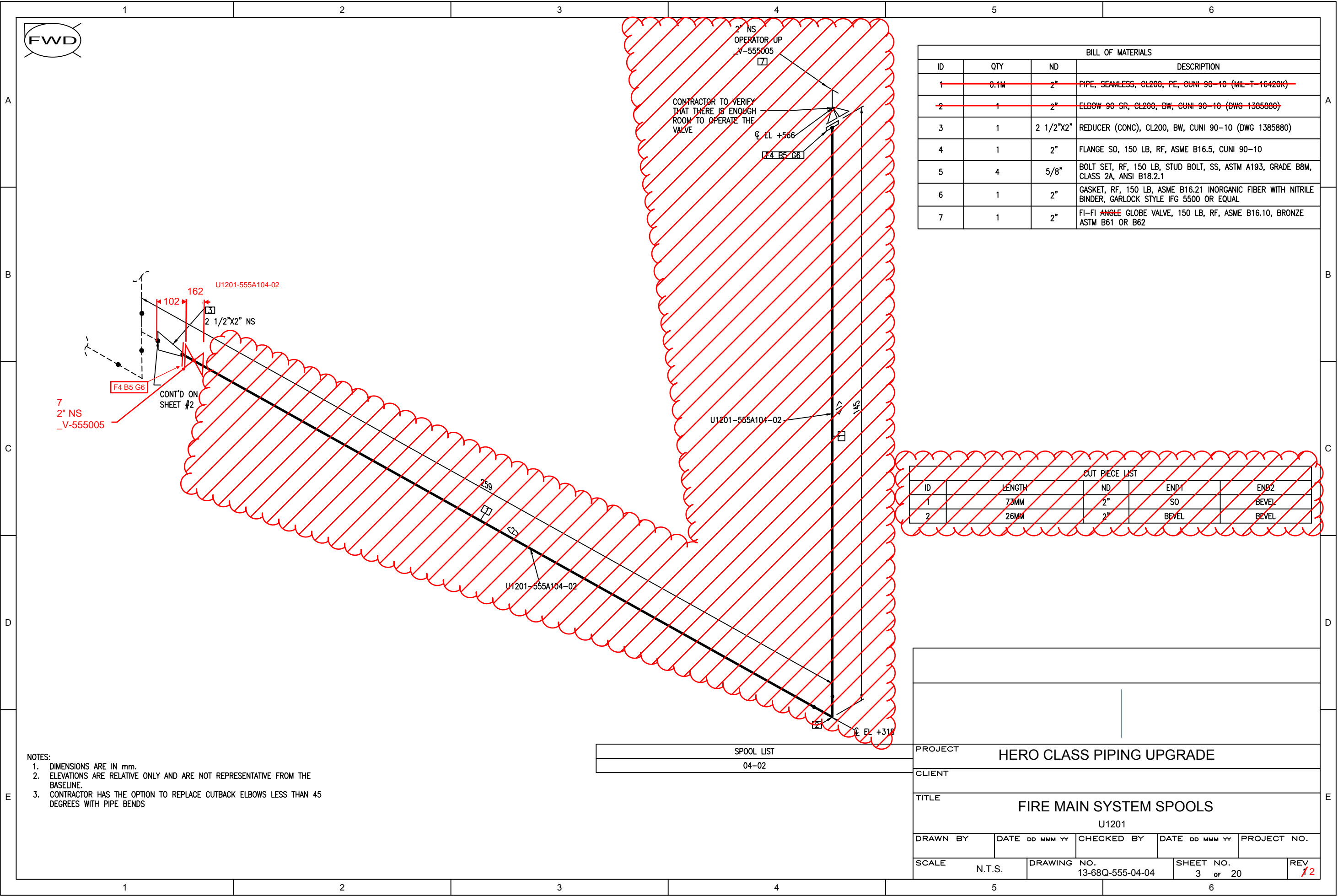
AS-BUILT
01/02/2017

BILL OF MATERIALS			
ID	QTY	ND	DESCRIPTION
1	0.1M	2"	PIPE, SEAMLESS, CL200, PE, CUNI 90-10 (MIL-T-16420K)
2	0.5M	2 1/2"	PIPE, SEAMLESS, CL200, PE, CUNI 90-10 (MIL-T-16420K)
3	1	2 1/2"	ELBOW 90 SR, CL200, BW, CUNI 90-10 (DWG 1385880)
4	1	2 1/2"x2"	REDUCER (CONC), CL200, BW, CUNI 90-10 (DWG 1385880)
5	2	2 1/2"	TEE, CL200, BW, CUNI 90-10 (DWG 1385880)
6	1	2"	FLANGE SO, 150 LB, RF, ASME B16.5, CUNI 90-10
7	1	2 1/2"	FLANGE SO, 150 LB, RF, ASME B16.5, CUNI 90-10
8	4	5/8"	BOLT SET, RF, 150 LB, STUD BOLT, SS, ASTM A193, GRADE B8M, CLASS 2A, ANSI B18.2.1
9	4	5/8"	BOLT SET, RF, 150 LB, STUD BOLT, SS, ASTM A193, GRADE B8M, CLASS 2A, ANSI B18.2.1
10	1	2"	GASKET, RF, 150 LB, ASME B16.21 INORGANIC FIBER WITH NITRILE BINDER, GARLOCK STYLE IFG 5500 OR EQUAL
11	1	2 1/2"	GASKET, RF, 150 LB, ASME B16.21 INORGANIC FIBER WITH NITRILE BINDER, GARLOCK STYLE IFG 5500 OR EQUAL
12	1	2 1/2"	BUTTERFLY VALVE, NARROW, 150 LB, LUG, RF, ASME B16.10, BRONZE ASTM B61 OR 62

	3/8"	PIPE, SEAMLESS, CL200, PE, CUNI 90-10 (MIL-T-16420K)
1	3/8"	THREDOLET, 3000LB, BW X FPT, 1/2" LG., MSS SP-97, CUNI 90-10
1	3/8"	ELBOW, 90 SR, CL200, FPT X FPT, CU-NI 90-10
1	3/8"	BALL VALVE, REDUCED BORE, 150 LB, FPT, ASME B16.10, BRONZE ASTM B61 OR 62

CUT PIECE LIST				
ID	LENGTH	ND	END1	END2
1	72MM	2"	BEVEL	SO
2	246MM	2 1/2"	BEVEL	BEVEL
3	242MM	2 1/2"	SO	BEVEL

PROJECT					HERO CLASS PIPING UPGRADE				
CLIENT									
TITLE					FIRE MAIN SYSTEM SPOOLS				
U1201									
DRAWN BY	DATE DD MMM YY	CHECKED BY	DATE DD MMM YY	PROJECT NO.					
SCALE	N.T.S.	DRAWING NO.	13-68Q-555-04-04	SHEET NO.	2	of	20	REV	12

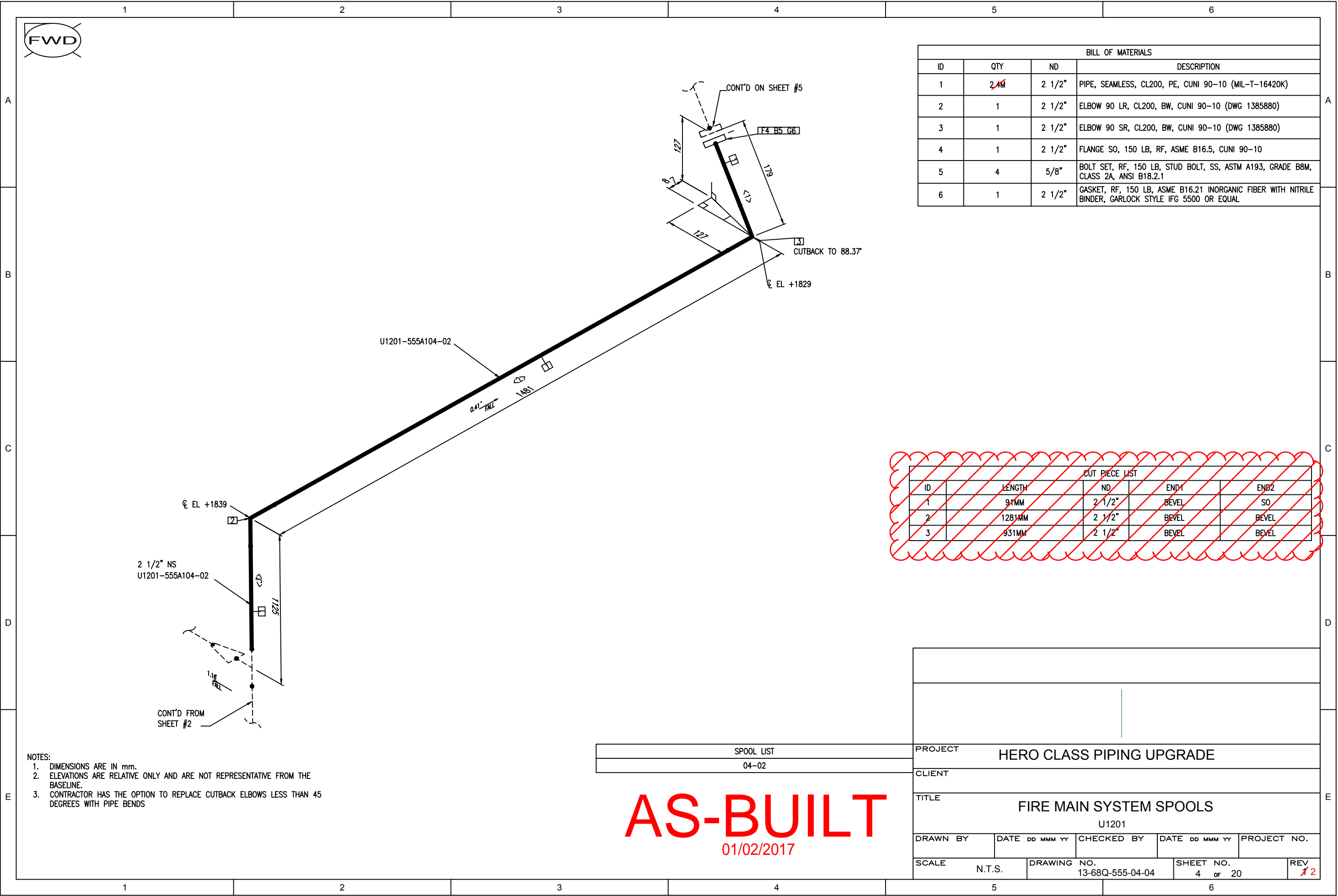


BILL OF MATERIALS				
ID	QTY	ND	DESCRIPTION	
1	0.1M	2"	PIPE, SEAMLESS, CL200, PE, CUNI 90-10 (MIL-T-16420K)	
2	1	2"	ELBOW 90 SR, CL200, BW, CUNI 90-10 (DWG 1385880)	
3	1	2 1/2"x2"	REDUCER (CONC), CL200, BW, CUNI 90-10 (DWG 1385880)	
4	1	2"	FLANGE SO, 150 LB, RF, ASME B16.5, CUNI 90-10	
5	4	5/8"	BOLT SET, RF, 150 LB, STUD BOLT, SS, ASTM A193, GRADE B8M, CLASS 2A, ANSI B18.2.1	
6	1	2"	GASKET, RF, 150 LB, ASME B16.21 INORGANIC FIBER WITH NITRILE BINDER, GARLOCK STYLE IFG 5500 OR EQUAL	
7	1	2"	FI-FI ANGLE GLOBE VALVE, 150 LB, RF, ASME B16.10, BRONZE ASTM B61 OR B62	

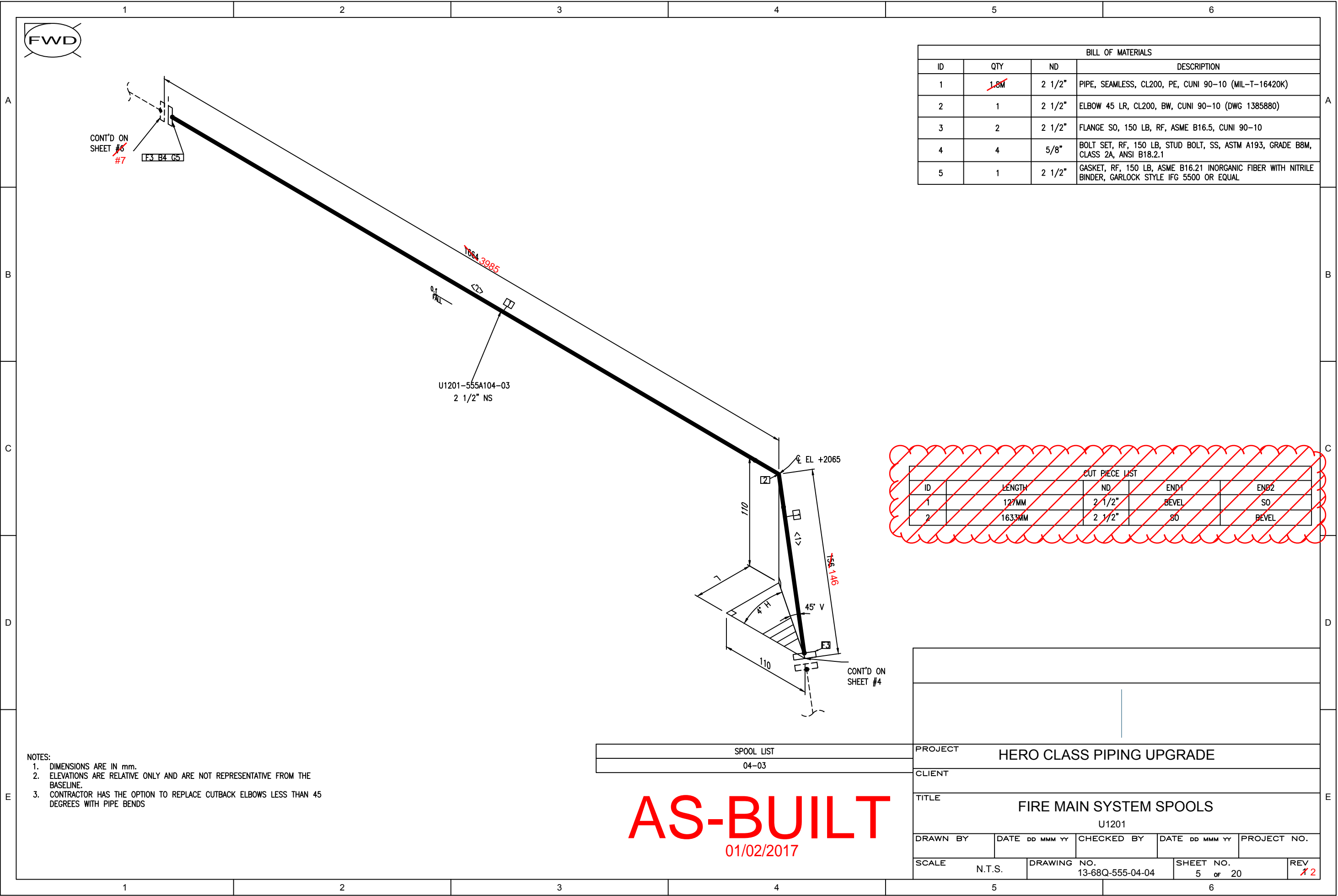
CUT PIECE LIST					
ID	LENGTH	ND	END1	END2	
1	73MM	2"	SO	BEVEL	
2	26MM	2"	BEVEL	BEVEL	

PROJECT					HERO CLASS PIPING UPGRADE																		
CLIENT																							
TITLE										FIRE MAIN SYSTEM SPOOLS													
										U1201													
DRAWN BY			DATE DD MMM YY			CHECKED BY			DATE DD MMM YY			PROJECT NO.											
SCALE			N.T.S.			DRAWING NO.			13-68Q-555-04-04			SHEET NO.			3 OF 20			REV			12		

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BILL OF MATERIALS			
ID	QTY	ND	DESCRIPTION
1	1.8M	2 1/2"	PIPE, SEAMLESS, CL200, PE, CUNI 90-10 (MIL-T-16420K)
2	1	2 1/2"	ELBOW 45 LR, CL200, BW, CUNI 90-10 (DWG 1385880)
3	2	2 1/2"	FLANGE SO, 150 LB, RF, ASME B16.5, CUNI 90-10
4	4	5/8"	BOLT SET, RF, 150 LB, STUD BOLT, SS, ASTM A193, GRADE B8M, CLASS 2A, ANSI B18.2.1
5	1	2 1/2"	GASKET, RF, 150 LB, ASME B16.21 INORGANIC FIBER WITH NITRILE BINDER, GARLOCK STYLE IFG 5500 OR EQUAL

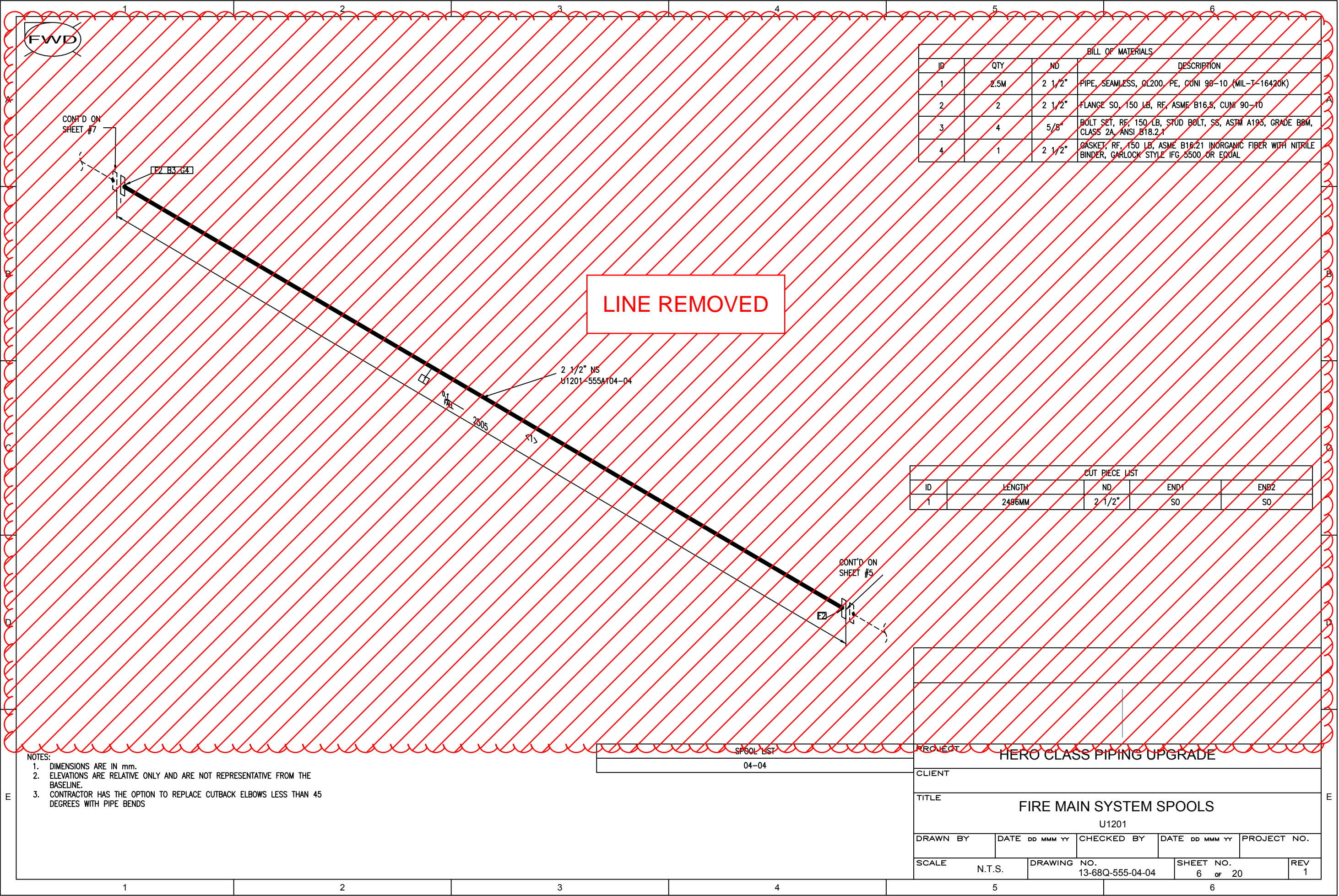
CUT PIECE LIST				
ID	LENGTH	ND	END1	END2
1	127MM	2 1/2"	BEVEL	SO
2	1633MM	2 1/2"	SO	BEVEL

- NOTES:
- DIMENSIONS ARE IN mm.
 - ELEVATIONS ARE RELATIVE ONLY AND ARE NOT REPRESENTATIVE FROM THE BASELINE.
 - CONTRACTOR HAS THE OPTION TO REPLACE CUTBACK ELBOWS LESS THAN 45 DEGREES WITH PIPE BENDS

SPPOOL LIST
04-03

AS-BUILT
01/02/2017

PROJECT					HERO CLASS PIPING UPGRADE										
CLIENT															
TITLE										FIRE MAIN SYSTEM SPOOLS					
U1201															
DRAWN BY		DATE DD MMM YY		CHECKED BY		DATE DD MMM YY		PROJECT NO.							
SCALE		N.T.S.		DRAWING NO.		13-68Q-555-04-04		SHEET NO.		5 OF 20		REV		2	



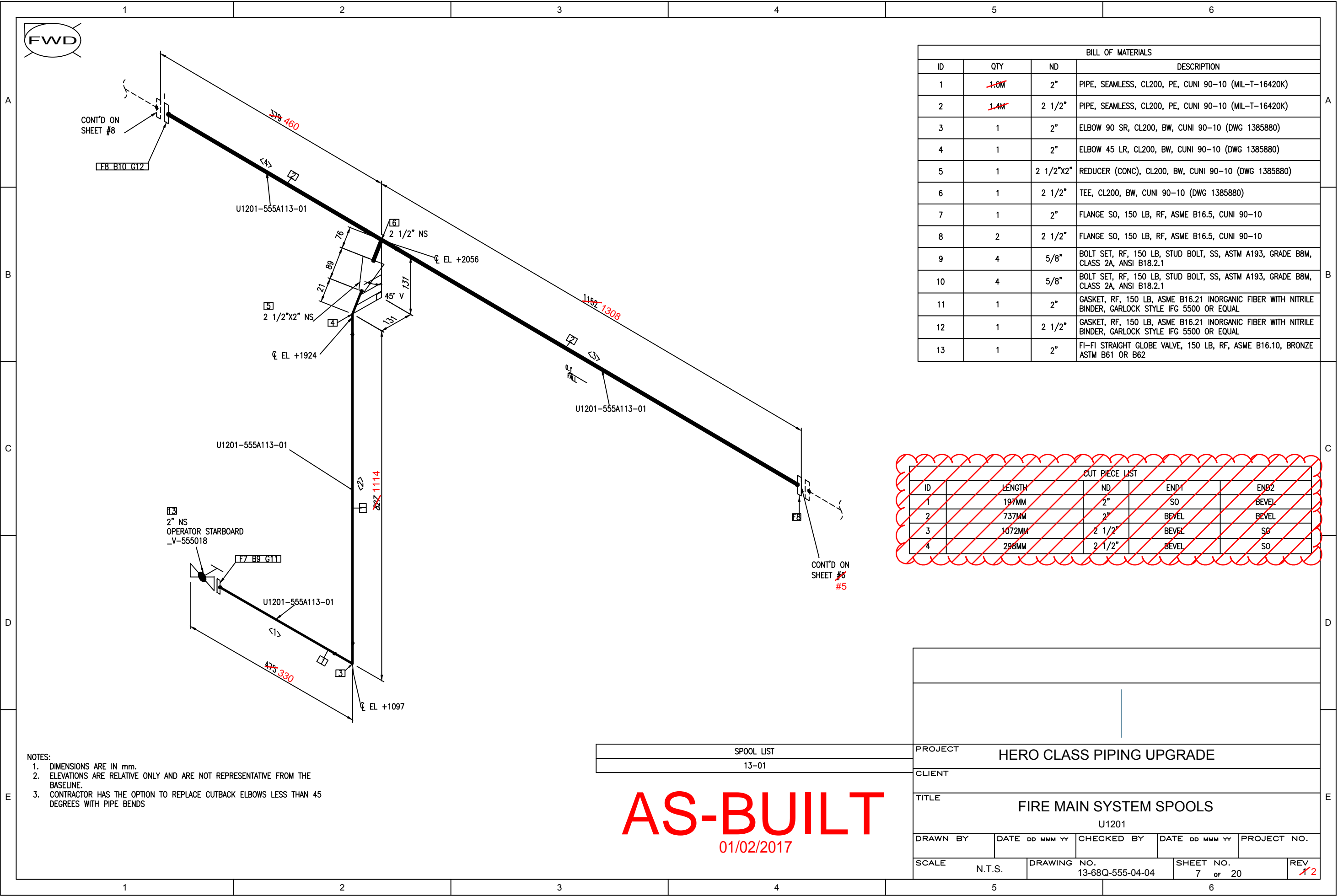
BILL OF MATERIALS			
ID	QTY	ND	DESCRIPTION
1	2.5M	2 1/2"	PIPE, SEAMLESS, CL200, PE, CUNI 90-10 (MIL-T-16420K)
2	2	2 1/2"	FLANGE SO, 150 LB, RF, ASME B16.5, CUNI 90-10
3	4	5/8"	BOLT SET, RF, 150 LB, STUD BOLT, SS, ASTM A193, GRADE B8M, CLASS 2A, ANSI B18.2.1
4	1	2 1/2"	GASKET, RF, 150 LB, ASME B16.21 INORGANIC FIBER WITH NITRILE BINDER, GARLOCK STYLE IFG 5500 OR EQUAL

CUT PIECE LIST				
ID	LENGTH	ND	END1	END2
1	2496MM	2 1/2"	SO	SO

SPPOOL LIST
04-04

PROJECT				
HERO CLASS PIPING UPGRADE				
CLIENT				
TITLE				
FIRE MAIN SYSTEM SPOOLS				
U1201				
DRAWN BY	DATE DD MMM YY	CHECKED BY	DATE DD MMM YY	PROJECT NO.
SCALE	N.T.S.	DRAWING NO.	SHEET NO.	REV
		13-68Q-555-04-04	6 of 20	1

- NOTES:
- DIMENSIONS ARE IN mm.
 - ELEVATIONS ARE RELATIVE ONLY AND ARE NOT REPRESENTATIVE FROM THE BASELINE.
 - CONTRACTOR HAS THE OPTION TO REPLACE CUTBACK ELBOWS LESS THAN 45 DEGREES WITH PIPE BENDS



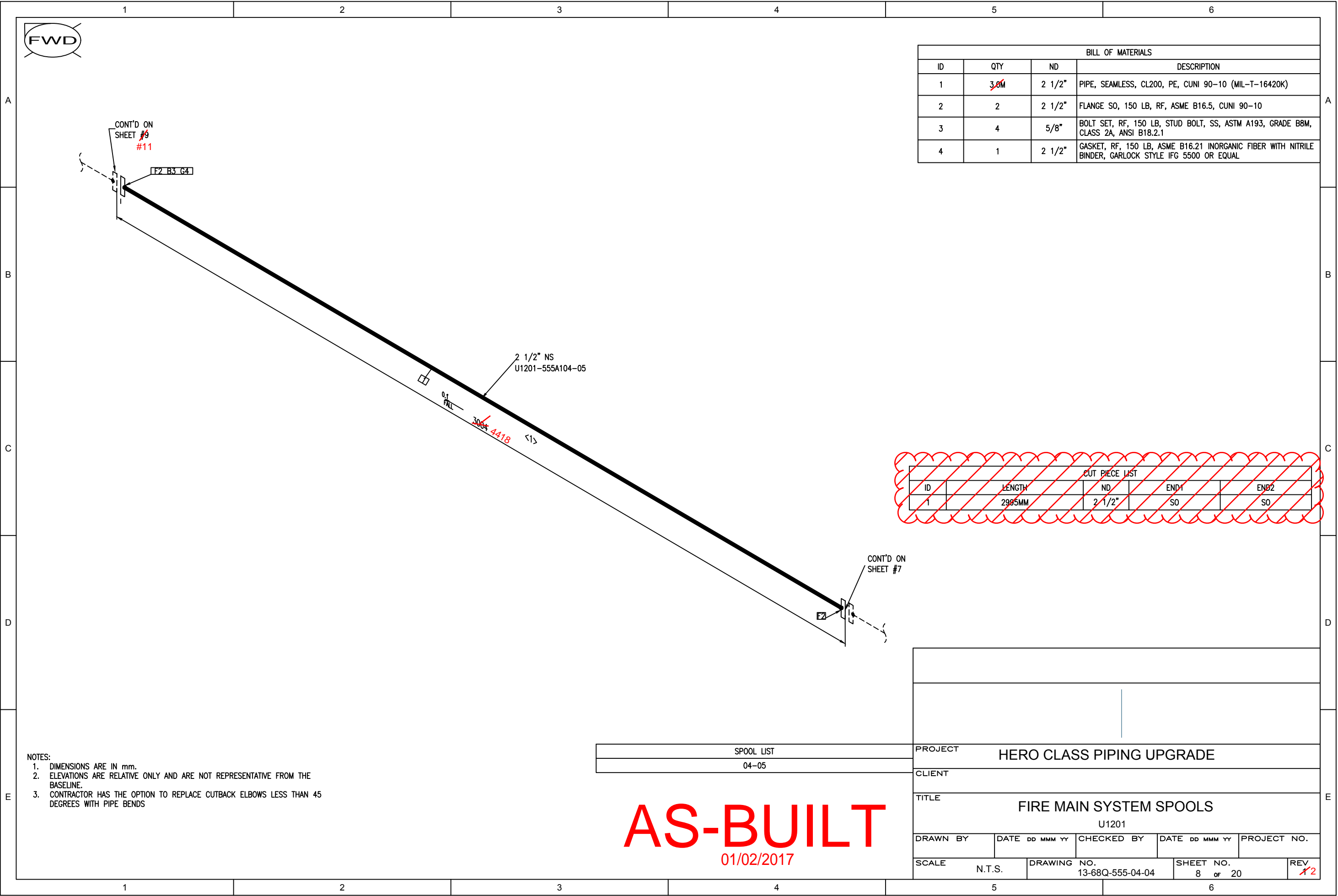
BILL OF MATERIALS			
ID	QTY	ND	DESCRIPTION
1	1.0M	2"	PIPE, SEAMLESS, CL200, PE, CUNI 90-10 (MIL-T-16420K)
2	1.4M	2 1/2"	PIPE, SEAMLESS, CL200, PE, CUNI 90-10 (MIL-T-16420K)
3	1	2"	ELBOW 90 SR, CL200, BW, CUNI 90-10 (DWG 1385880)
4	1	2"	ELBOW 45 LR, CL200, BW, CUNI 90-10 (DWG 1385880)
5	1	2 1/2"x2"	REDUCER (CONC), CL200, BW, CUNI 90-10 (DWG 1385880)
6	1	2 1/2"	TEE, CL200, BW, CUNI 90-10 (DWG 1385880)
7	1	2"	FLANGE SO, 150 LB, RF, ASME B16.5, CUNI 90-10
8	2	2 1/2"	FLANGE SO, 150 LB, RF, ASME B16.5, CUNI 90-10
9	4	5/8"	BOLT SET, RF, 150 LB, STUD BOLT, SS, ASTM A193, GRADE B8M, CLASS 2A, ANSI B18.2.1
10	4	5/8"	BOLT SET, RF, 150 LB, STUD BOLT, SS, ASTM A193, GRADE B8M, CLASS 2A, ANSI B18.2.1
11	1	2"	GASKET, RF, 150 LB, ASME B16.21 INORGANIC FIBER WITH NITRILE BINDER, GARLOCK STYLE IFG 5500 OR EQUAL
12	1	2 1/2"	GASKET, RF, 150 LB, ASME B16.21 INORGANIC FIBER WITH NITRILE BINDER, GARLOCK STYLE IFG 5500 OR EQUAL
13	1	2"	FI-FI STRAIGHT GLOBE VALVE, 150 LB, RF, ASME B16.10, BRONZE ASTM B61 OR B62

CUT PIECE LIST					
ID	LENGTH	ND	END1	END2	
1	197MM	2"	SO	BEVEL	
2	737MM	2"	BEVEL	BEVEL	
3	1072MM	2 1/2"	BEVEL	SO	
4	298MM	2 1/2"	BEVEL	SO	

SPPOOL LIST
13-01

PROJECT				
HERO CLASS PIPING UPGRADE				
CLIENT				
TITLE				
FIRE MAIN SYSTEM SPOOLS				
U1201				
DRAWN BY	DATE DD MMM YY	CHECKED BY	DATE DD MMM YY	PROJECT NO.
SCALE	N.T.S.	DRAWING NO.	13-68Q-555-04-04	SHEET NO.
		7 OF 20		REV
				2

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BILL OF MATERIALS			
ID	QTY	ND	DESCRIPTION
1	3.0M	2 1/2"	PIPE, SEAMLESS, CL200, PE, CUNI 90-10 (MIL-T-16420K)
2	2	2 1/2"	FLANGE SO, 150 LB, RF, ASME B16.5, CUNI 90-10
3	4	5/8"	BOLT SET, RF, 150 LB, STUD BOLT, SS, ASTM A193, GRADE B8M, CLASS 2A, ANSI B18.2.1
4	1	2 1/2"	GASKET, RF, 150 LB, ASME B16.21 INORGANIC FIBER WITH NITRILE BINDER, GARLOCK STYLE IFG 5500 OR EQUAL

CUT PIECE LIST					
ID	LENGTH	ND	END1	END2	
1	2995MM	2 1/2"	SO	SO	

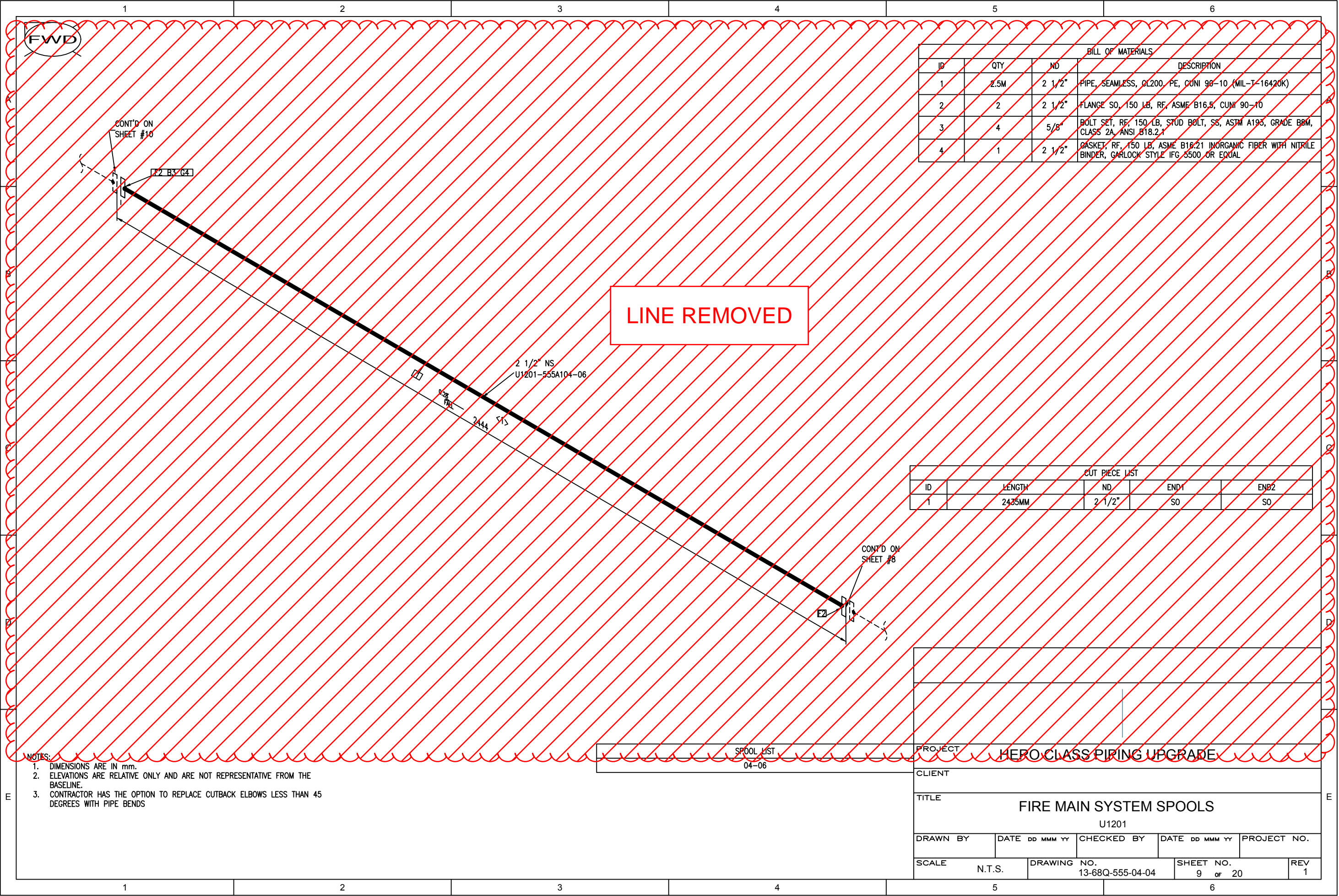
SPPOOL LIST
04-05

PROJECT					HERO CLASS PIPING UPGRADE										
CLIENT															
TITLE										FIRE MAIN SYSTEM SPOOLS					
										U1201					
DRAWN BY		DATE DD MMM YY		CHECKED BY		DATE DD MMM YY		PROJECT NO.							
SCALE		N.T.S.		DRAWING NO.		13-68Q-555-04-04		SHEET NO.		8 OF 20		REV		2	

- NOTES:
- DIMENSIONS ARE IN mm.
 - ELEVATIONS ARE RELATIVE ONLY AND ARE NOT REPRESENTATIVE FROM THE BASELINE.
 - CONTRACTOR HAS THE OPTION TO REPLACE CUTBACK ELBOWS LESS THAN 45 DEGREES WITH PIPE BENDS

AS-BUILT

01/02/2017



FWD

CONT'D ON
SHEET #10

2 1/2" B3 G4

LINE REMOVED

2 1/2" NS
U1201-555A104-06

5/8" WT

2444

CONT'D ON
SHEET #8

- NOTES:
1. DIMENSIONS ARE IN mm.
 2. ELEVATIONS ARE RELATIVE ONLY AND ARE NOT REPRESENTATIVE FROM THE BASELINE.
 3. CONTRACTOR HAS THE OPTION TO REPLACE CUTBACK ELBOWS LESS THAN 45 DEGREES WITH PIPE BENDS

SPOOL LIST
04-06

PROJECT: HERO CLASS PIPING UPGRADE

CLIENT:

TITLE: FIRE MAIN SYSTEM SPOOLS

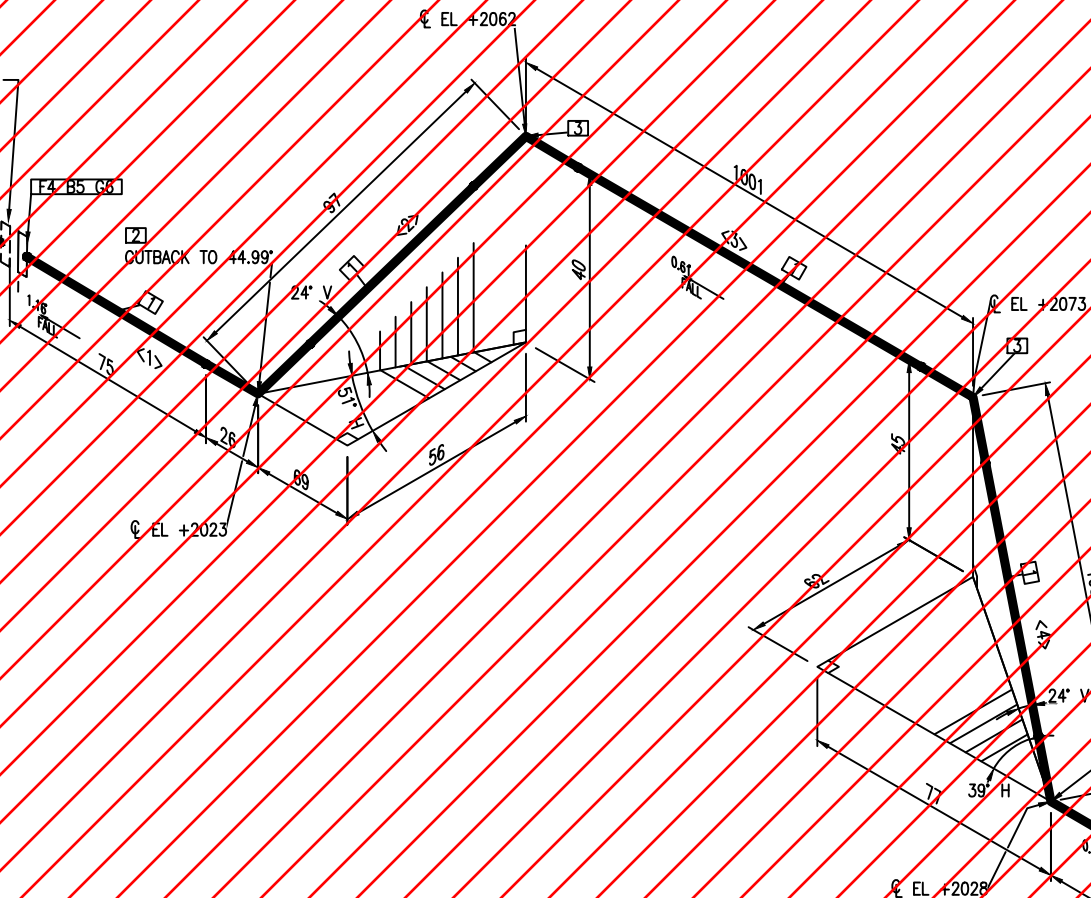
U1201

DRAWN BY: DATE DD MMM YY: CHECKED BY: DATE DD MMM YY: PROJECT NO.:

SCALE: N.T.S. DRAWING NO. 13-68Q-555-04-04 SHEET NO. 9 OF 20 REV 1

FWD

CONT'D ON
SHEET #11



LINE REMOVED

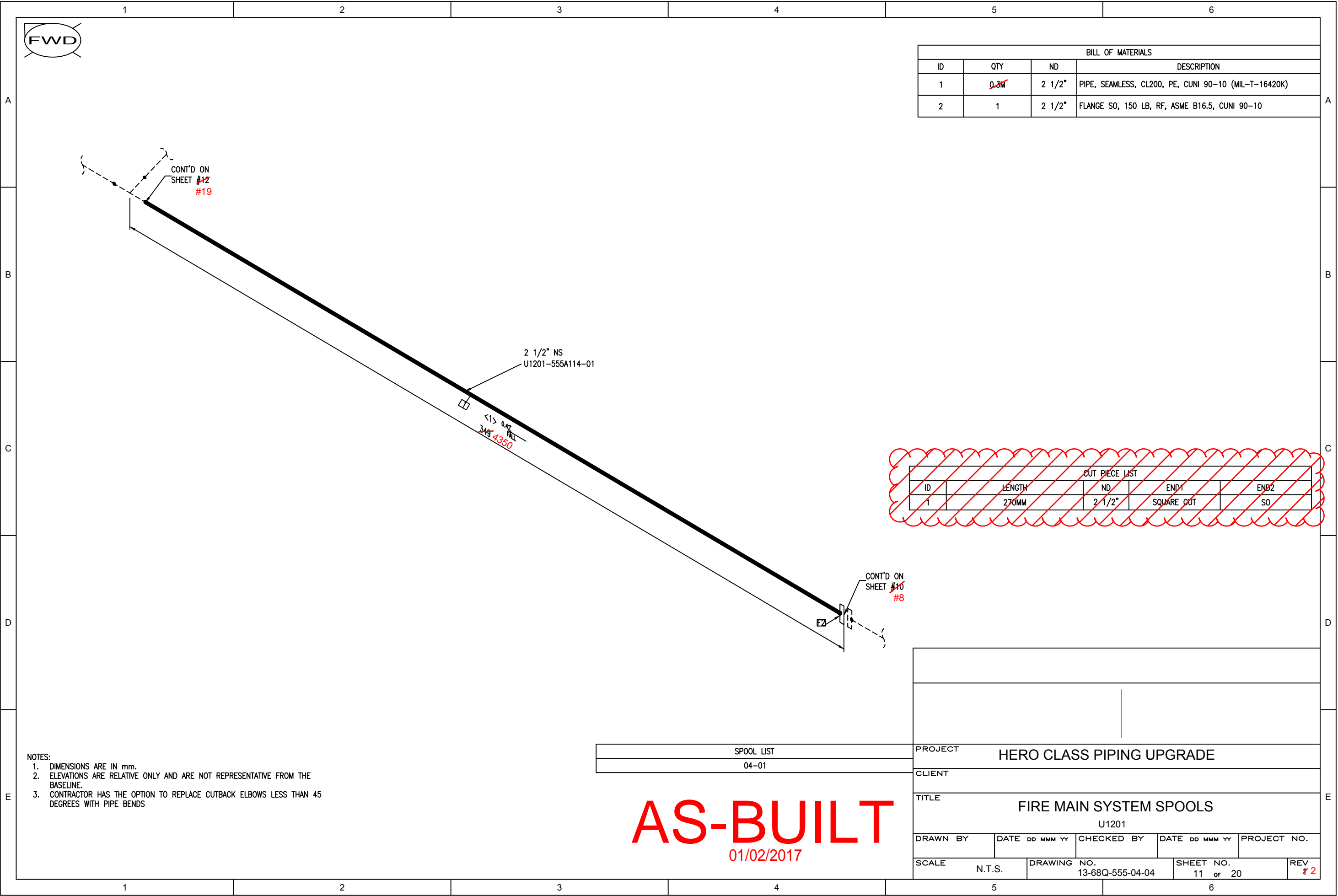
BILL OF MATERIALS			
ID	QTY	ND	DESCRIPTION
1	3.0M	2 1/2"	PIPE, SEAMLESS, CL200, PE, CUNI 90-10 (MIL-T-16420K)
2	2	2 1/2"	ELBOW 45 LR, CL200, BW, CUNI 90-10 (DWG 1385880)
3	2	2 1/2"	ELBOW 45 LR, CL200, BW, CUNI 90-10 (DWG 1385880)
4	2	2 1/2"	FLANGE SO, 150 LB, RF, ASME B16.5, CUNI 90-10
5	4	5/8"	BOLT SET, RF, 150 LB, STUD BOLT, SS, ASTM A193, GRADE B8M, CLASS 2A, ANSI B18.2.1
6	1	2 1/2"	GASKET, RF, 150 LB, ASME B16.21 INORGANIC FIBER WITH NITRILE BINDER, GARLOCK STYLE IFG 5500 OR EQUAL

CUT PIECE LIST				
ID	LENGTH	ND	END1	END2
1	70MM	2 1/2"	BEVEL	SO
2	46MM	2 1/2"	BEVEL	BEVEL
3	950MM	2 1/2"	BEVEL	BEVEL
4	58MM	2 1/2"	BEVEL	BEVEL
5	1833MM	2 1/2"	SO	BEVEL

- NOTES:
- DIMENSIONS ARE IN mm.
 - ELEVATIONS ARE RELATIVE ONLY AND ARE NOT REPRESENTATIVE FROM THE BASELINE.
 - CONTRACTOR HAS THE OPTION TO REPLACE CUTBACK ELBOWS LESS THAN 45 DEGREES WITH PIPE BENDS

SPOOL LIST	
04-07	

PROJECT				
HERO CLASS PIPING UPGRADE				
CLIENT				
TITLE				
FIRE MAIN SYSTEM SPOOLS				
U1201				
DRAWN BY	DATE DD MMM YY	CHECKED BY	DATE DD MMM YY	PROJECT NO.
SCALE	N.T.S.	DRAWING NO.	13-68Q-555-04-04	SHEET NO. 10 OF 20
				REV 1



FWD

BILL OF MATERIALS			
ID	QTY	ND	DESCRIPTION
1	0.3M	2 1/2"	PIPE, SEAMLESS, CL200, PE, CUNI 90-10 (MIL-T-16420K)
2	1	2 1/2"	FLANGE SO, 150 LB, RF, ASME B16.5, CUNI 90-10

CUT PIECE LIST				
ID	LENGTH	ND	END1	END2
1	270MM	2 1/2"	SQUARE CUT	SO

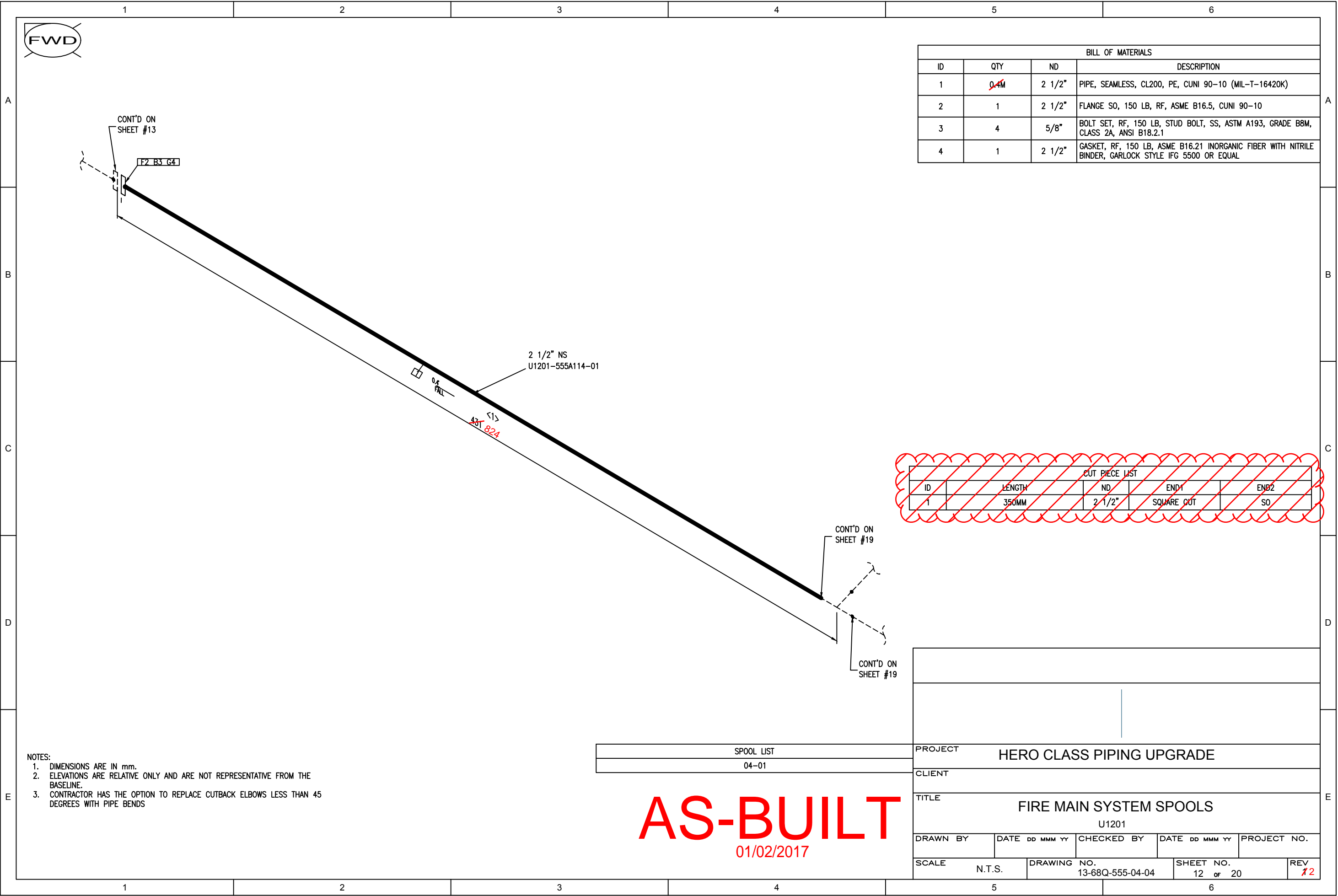
SPPOOL LIST
04-01

PROJECT				
HERO CLASS PIPING UPGRADE				
CLIENT				
TITLE				
FIRE MAIN SYSTEM SPOOLS				
U1201				
DRAWN BY	DATE DD MMM YY	CHECKED BY	DATE DD MMM YY	PROJECT NO.
SCALE	N.T.S.	DRAWING NO.	13-68Q-555-04-04	SHEET NO. 11 OF 20
REV				1 2

- NOTES:
- DIMENSIONS ARE IN mm.
 - ELEVATIONS ARE RELATIVE ONLY AND ARE NOT REPRESENTATIVE FROM THE BASELINE.
 - CONTRACTOR HAS THE OPTION TO REPLACE CUTBACK ELBOWS LESS THAN 45 DEGREES WITH PIPE BENDS

AS-BUILT

01/02/2017



- NOTES:
1. DIMENSIONS ARE IN mm.
 2. ELEVATIONS ARE RELATIVE ONLY AND ARE NOT REPRESENTATIVE FROM THE BASELINE.
 3. CONTRACTOR HAS THE OPTION TO REPLACE CUTBACK ELBOWS LESS THAN 45 DEGREES WITH PIPE BENDS

SPPOOL LIST
04-01

AS-BUILT

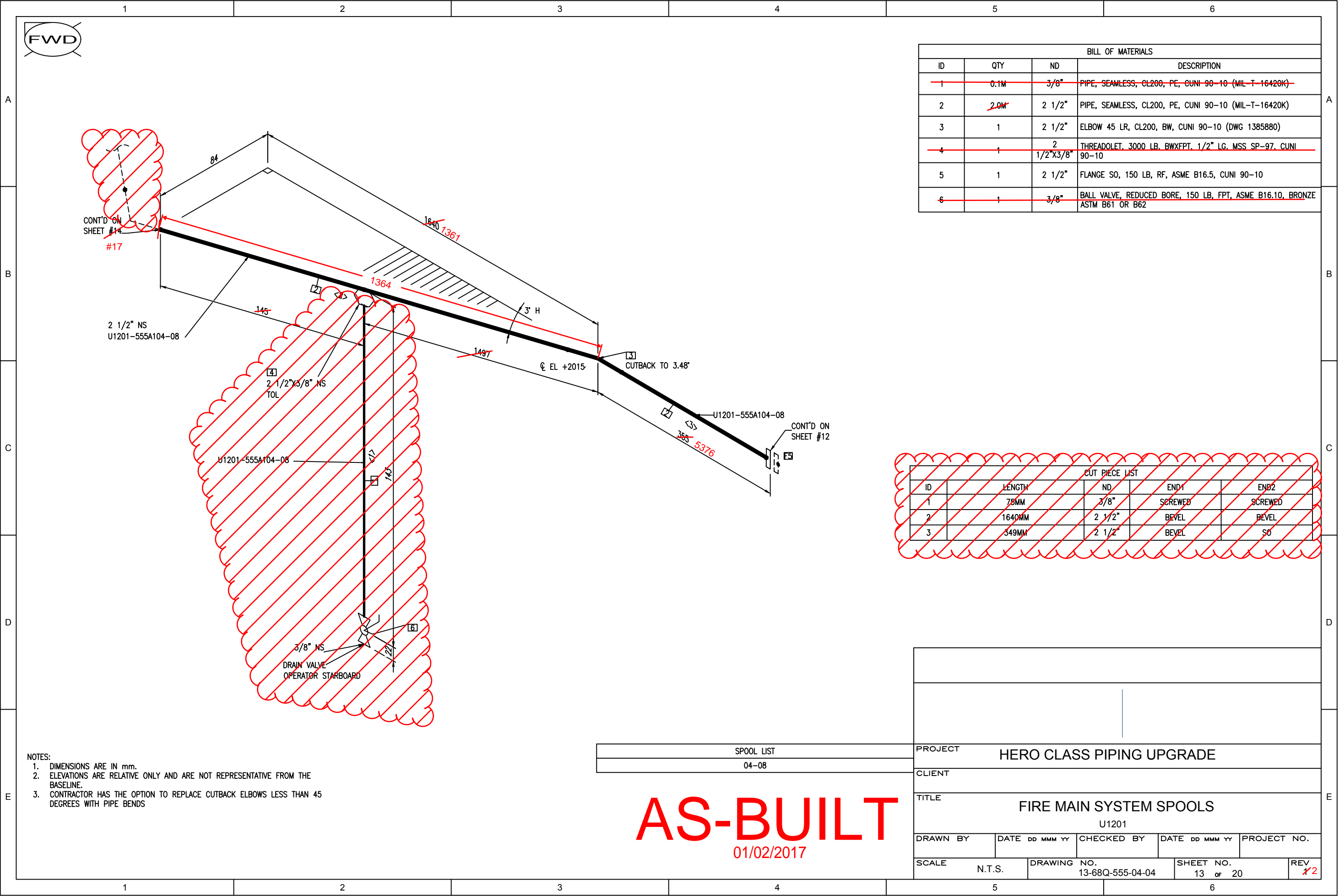
01/02/2017

BILL OF MATERIALS			
ID	QTY	ND	DESCRIPTION
1	0.4M	2 1/2"	PIPE, SEAMLESS, CL200, PE, CUNI 90-10 (MIL-T-16420K)
2	1	2 1/2"	FLANGE SO, 150 LB, RF, ASME B16.5, CUNI 90-10
3	4	5/8"	BOLT SET, RF, 150 LB, STUD BOLT, SS, ASTM A193, GRADE B8M, CLASS 2A, ANSI B18.2.1
4	1	2 1/2"	GASKET, RF, 150 LB, ASME B16.21 INORGANIC FIBER WITH NITRILE BINDER, GARLOCK STYLE IFG 5500 OR EQUAL

CUT PIECE LIST				
ID	LENGTH	ND	END1	END2
1	350MM	2 1/2"	SQUARE CUT	SO

PROJECT					HERO CLASS PIPING UPGRADE				
CLIENT									
TITLE					FIRE MAIN SYSTEM SPOOLS				
					U1201				
DRAWN BY		DATE DD MMM YY		CHECKED BY		DATE DD MMM YY		PROJECT NO.	
SCALE		N.T.S.		DRAWING NO.		13-68Q-555-04-04		SHEET NO.	
								12 OF 20	
								REV	
								12	

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BILL OF MATERIALS				
ID	QTY	ND	DESCRIPTION	
1	0.1M	3/8"	PIPE, SEAMLESS, CL200, PE, CUNI 90-10 (MIL-T-16420K)	
2	2.0M	2 1/2"	PIPE, SEAMLESS, CL200, PE, CUNI 90-10 (MIL-T-16420K)	
3	1	2 1/2"	ELBOW 45 LR, CL200, BW, CUNI 90-10 (DWG 1385880)	
4	1	2 1/2"X3/8"	THREADOLET, 3000 LB. BWXFPT, 1/2" LG. MSS SP-97, CUNI 90-10	
5	1	2 1/2"	FLANGE SO, 150 LB, RF, ASME B16.5, CUNI 90-10	
6	1	3/8"	BALL VALVE, REDUCED BORE, 150 LB, FPT, ASME B16.10, BRONZE ASTM B61 OR B62	

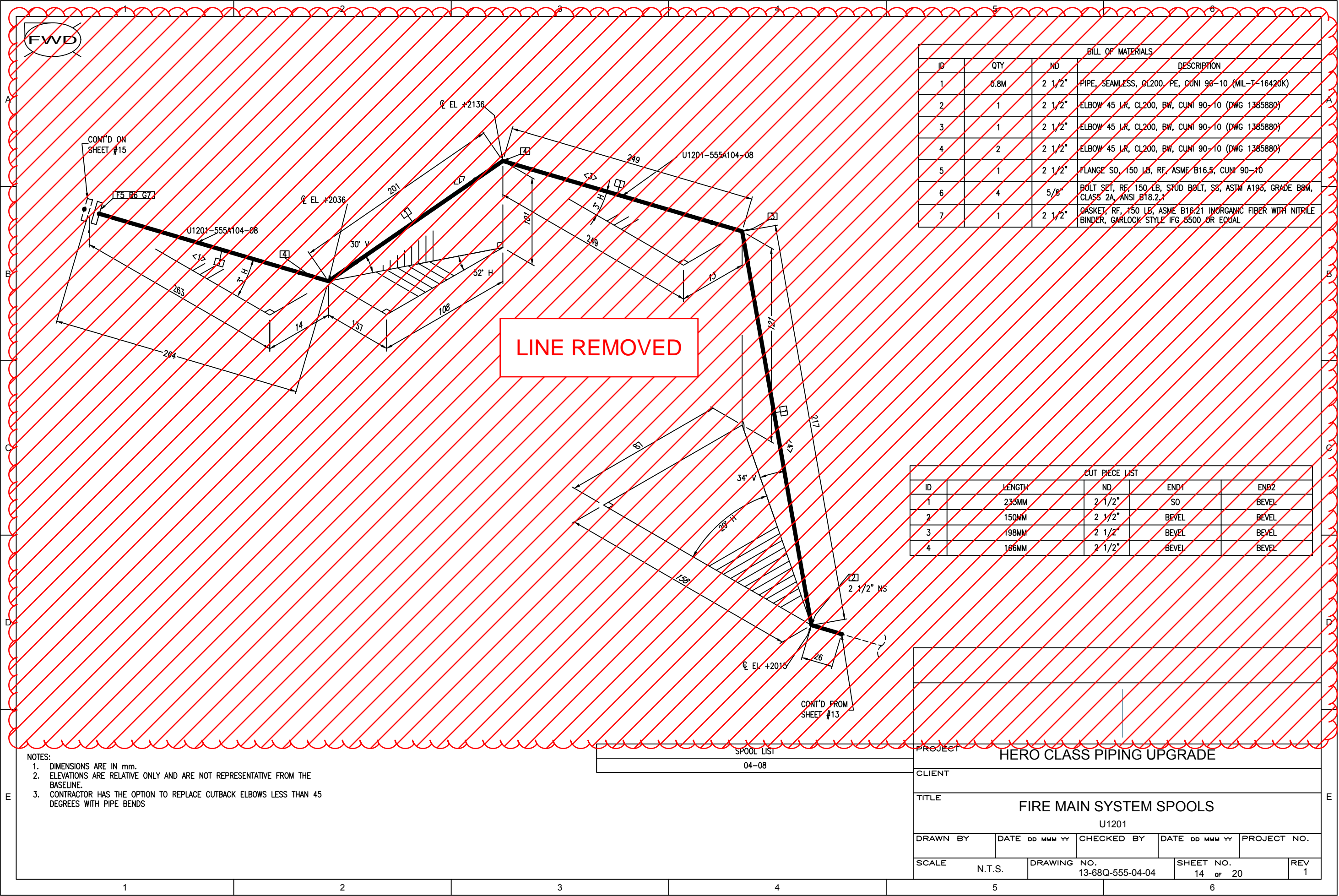
CUT PIECE LIST				
ID	LENGTH	ND	END1	END2
1	75MM	3/8"	SCREWED	SCREWED
2	1640MM	2 1/2"	BEVEL	BEVEL
3	349MM	2 1/2"	BEVEL	SO

PROJECT				
HERO CLASS PIPING UPGRADE				
CLIENT				
TITLE				
FIRE MAIN SYSTEM SPOOLS				
U1201				
DRAWN BY	DATE DD MMM YY	CHECKED BY	DATE DD MMM YY	PROJECT NO.
SCALE	N.T.S.	DRAWING NO.	13-68Q-555-04-04	SHEET NO. 13 OF 20
REV				2

SPOOL LIST
04-08

AS-BUILT
01/02/2017

- NOTES:
- DIMENSIONS ARE IN mm.
 - ELEVATIONS ARE RELATIVE ONLY AND ARE NOT REPRESENTATIVE FROM THE BASELINE.
 - CONTRACTOR HAS THE OPTION TO REPLACE CUTBACK ELBOWS LESS THAN 45 DEGREES WITH PIPE BENDS

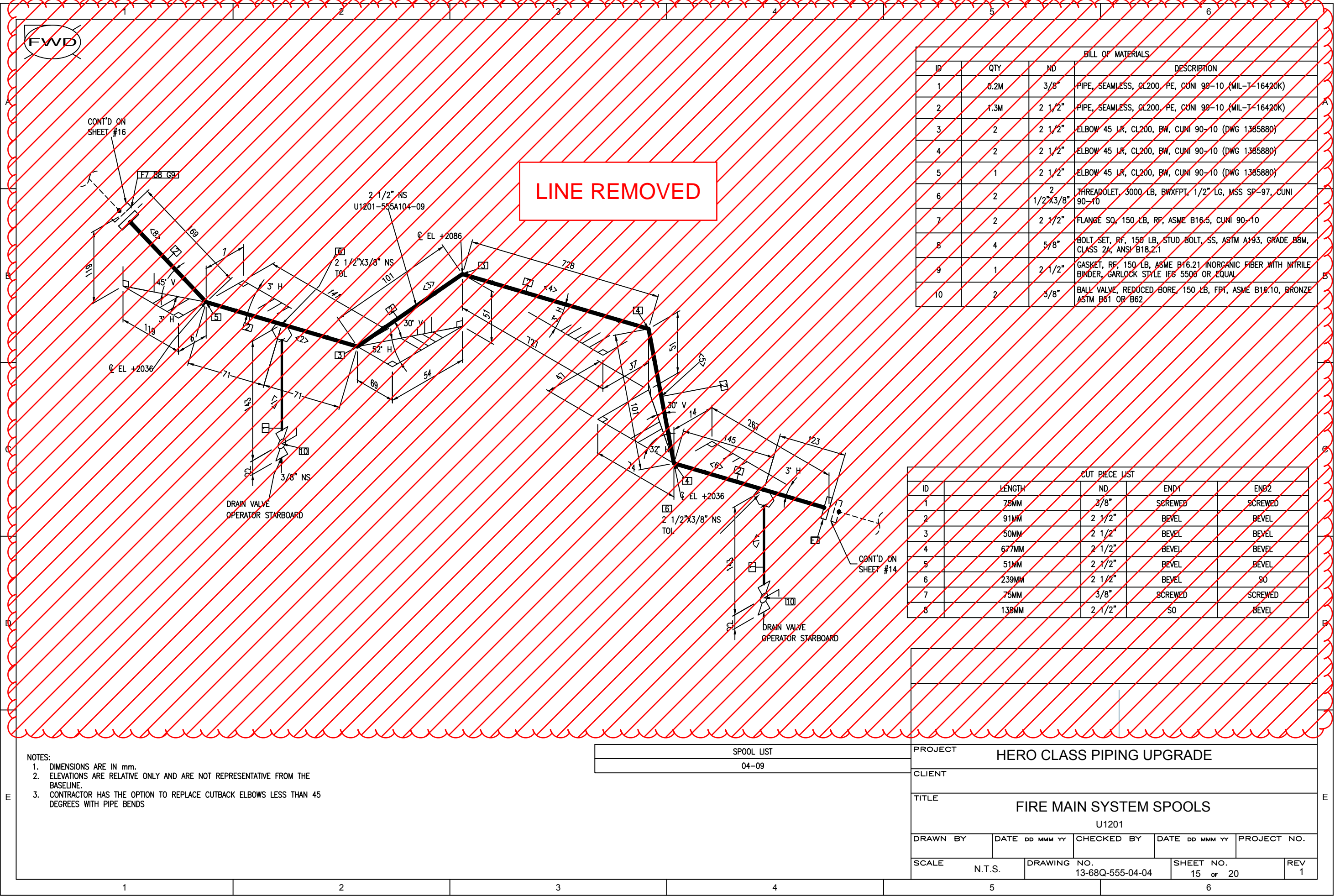


BILL OF MATERIALS				
ID	QTY	ND	DESCRIPTION	
1	0.8M	2 1/2"	PIPE, SEAMLESS, CL200, PE, CUNI 90-10 (MIL-T-16420K)	
2	1	2 1/2"	ELBOW 45 LR, CL200, BW, CUNI 90-10 (DWG 1385880)	
3	1	2 1/2"	ELBOW 45 LR, CL200, BW, CUNI 90-10 (DWG 1385880)	
4	2	2 1/2"	ELBOW 45 LR, CL200, BW, CUNI 90-10 (DWG 1385880)	
5	1	2 1/2"	FLANGE SO, 150 LB, RF, ASME B16.5, CUNI 90-10	
6	4	5/8"	BOLT SET, RF, 150 LB, STUD BOLT, SS, ASTM A193, GRADE B8M, CLASS 2A, ANSI B18.2.1	
7	1	2 1/2"	GASKET, RF, 150 LB, ASME B16.21 INORGANIC FIBER WITH NITRILE BINDER, GARLOCK STYLE IFC 5500 OR EQUAL	

CUT PIECE LIST				
ID	LENGTH	ND	END1	END2
1	233MM	2 1/2"	SO	BEVEL
2	150MM	2 1/2"	BEVEL	BEVEL
3	198MM	2 1/2"	BEVEL	BEVEL
4	186MM	2 1/2"	BEVEL	BEVEL

PROJECT				
HERO CLASS PIPING UPGRADE				
CLIENT				
TITLE				
FIRE MAIN SYSTEM SPOOLS				
U1201				
DRAWN BY	DATE DD MMM YY	CHECKED BY	DATE DD MMM YY	PROJECT NO.
SCALE	N.T.S.	DRAWING NO.	13-68Q-555-04-04	SHEET NO. 14 OF 20
				REV 1

- NOTES:
1. DIMENSIONS ARE IN mm.
 2. ELEVATIONS ARE RELATIVE ONLY AND ARE NOT REPRESENTATIVE FROM THE BASELINE.
 3. CONTRACTOR HAS THE OPTION TO REPLACE CUTBACK ELBOWS LESS THAN 45 DEGREES WITH PIPE BENDS



BILL OF MATERIALS				
ID	QTY	ND	DESCRIPTION	
1	0.2M	3/8"	PIPE, SEAMLESS, CL200, PE, CUNI 90-10 (MIL-T-16420K)	
2	1.3M	2 1/2"	PIPE, SEAMLESS, CL200, PE, CUNI 90-10 (MIL-T-16420K)	
3	2	2 1/2"	ELBOW 45 LR, CL200, BW, CUNI 90-10 (DWG 1385880)	
4	2	2 1/2"	ELBOW 45 LR, CL200, BW, CUNI 90-10 (DWG 1385880)	
5	1	2 1/2"	ELBOW 45 LR, CL200, BW, CUNI 90-10 (DWG 1385880)	
6	2	2 1/2"x3/8"	THREDOLET, 3000 LB, BWNFPT, 1/2" LG, MSS SP-97, CUNI 90-10	
7	2	2 1/2"	FLANGE SQ, 150 LB, RF, ASME B16.5, CUNI 90-10	
8	4	5/8"	BOLT SET, RF, 150 LB, STUD BOLT, SS, ASTM A193, GRADE B8M, CLASS 2A, ANSI B18.2.1	
9	1	2 1/2"	GASKET, RF, 150 LB, ASME B16.21 INORGANIC FIBER WITH NITRILE BINDER, GARLOCK STYLE IF6 5500 OR EQUAL	
10	2	3/8"	BALL VALVE, REDUCED BORE, 150 LB, FPT, ASME B16.10, BRONZE ASTM B61 OR B62	

CUT PIECE LIST				
ID	LENGTH	ND	END1	END2
1	75MM	3/8"	SCREWED	SCREWED
2	91MM	2 1/2"	BEVEL	BEVEL
3	50MM	2 1/2"	BEVEL	BEVEL
4	677MM	2 1/2"	BEVEL	BEVEL
5	51MM	2 1/2"	BEVEL	BEVEL
6	239MM	2 1/2"	BEVEL	SO
7	75MM	3/8"	SCREWED	SCREWED
8	138MM	2 1/2"	SO	BEVEL

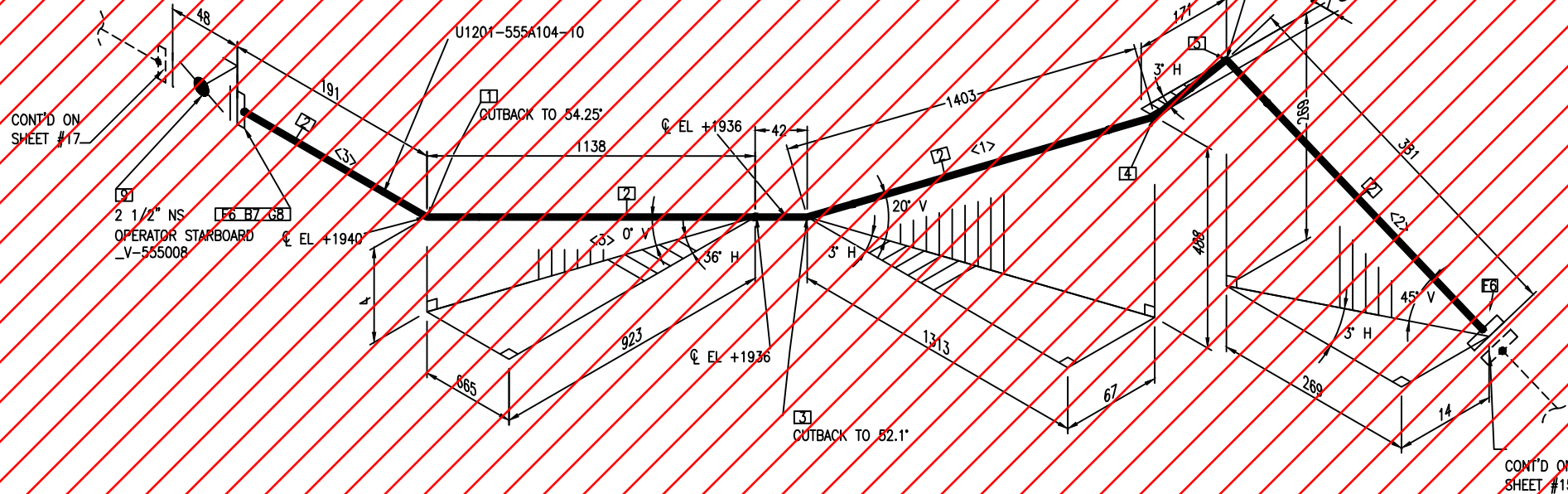
SPOOL LIST	
04-09	

PROJECT		HERO CLASS PIPING UPGRADE							
CLIENT									
TITLE		FIRE MAIN SYSTEM SPOOLS							
U1201									
DRAWN BY		DATE DD MMM YY		CHECKED BY		DATE DD MMM YY		PROJECT NO.	
SCALE		N.T.S.		DRAWING NO.		SHEET NO.		REV	
				13-68Q-555-04-04		15 of 20		1	

- NOTES:
- DIMENSIONS ARE IN mm.
 - ELEVATIONS ARE RELATIVE ONLY AND ARE NOT REPRESENTATIVE FROM THE BASELINE.
 - CONTRACTOR HAS THE OPTION TO REPLACE CUTBACK ELBOWS LESS THAN 45 DEGREES WITH PIPE BENDS

FWD

LINE REMOVED



- NOTES:
1. DIMENSIONS ARE IN mm.
 2. ELEVATIONS ARE RELATIVE ONLY AND ARE NOT REPRESENTATIVE FROM THE BASELINE.
 3. CONTRACTOR HAS THE OPTION TO REPLACE CUTBACK ELBOWS LESS THAN 45 DEGREES WITH PIPE BENDS

SPOOL LIST
04-10

PROJECT: HERO CLASS PIPING UPGRADE

CLIENT:

TITLE: FIRE MAIN SYSTEM SPOOLS

U1201

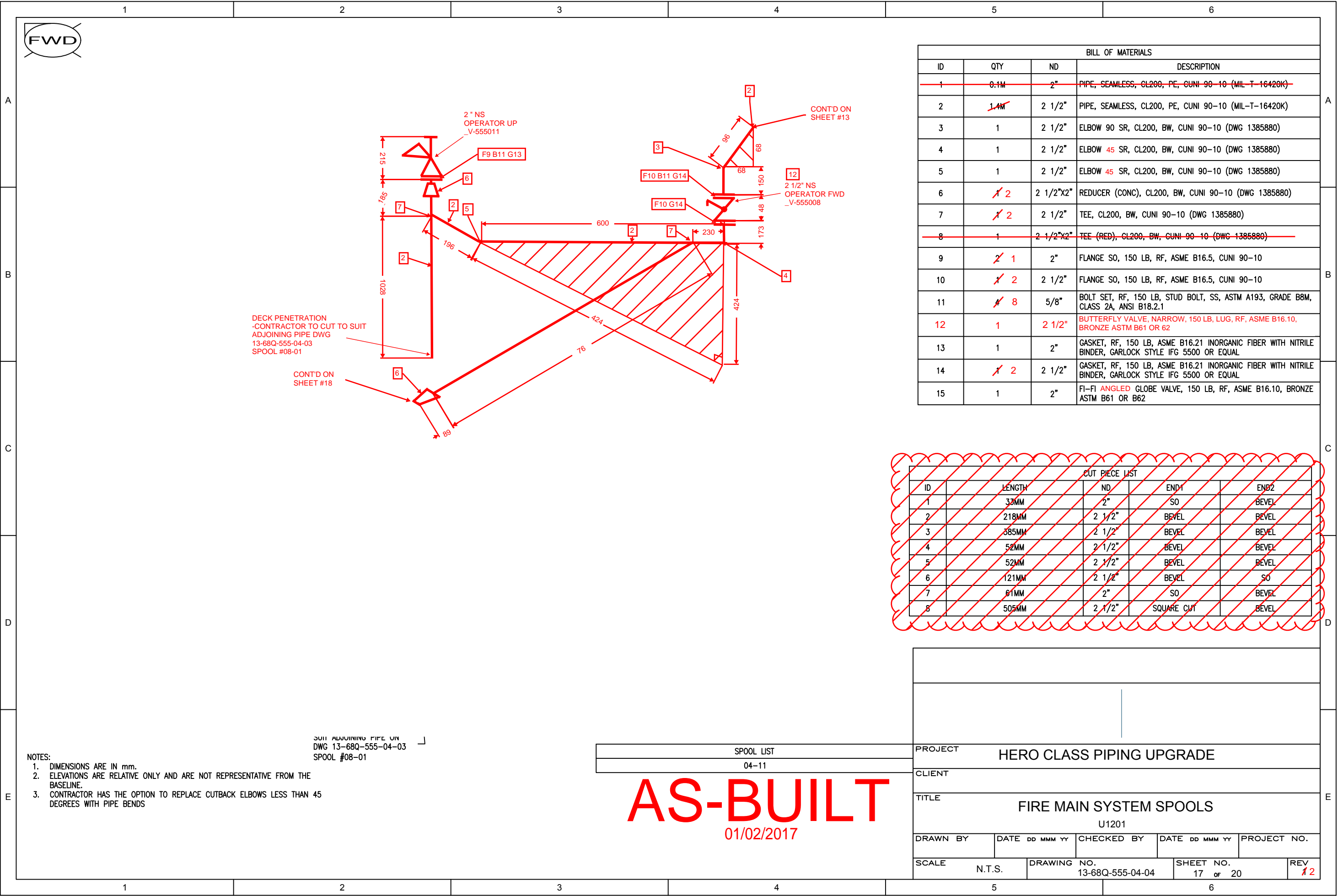
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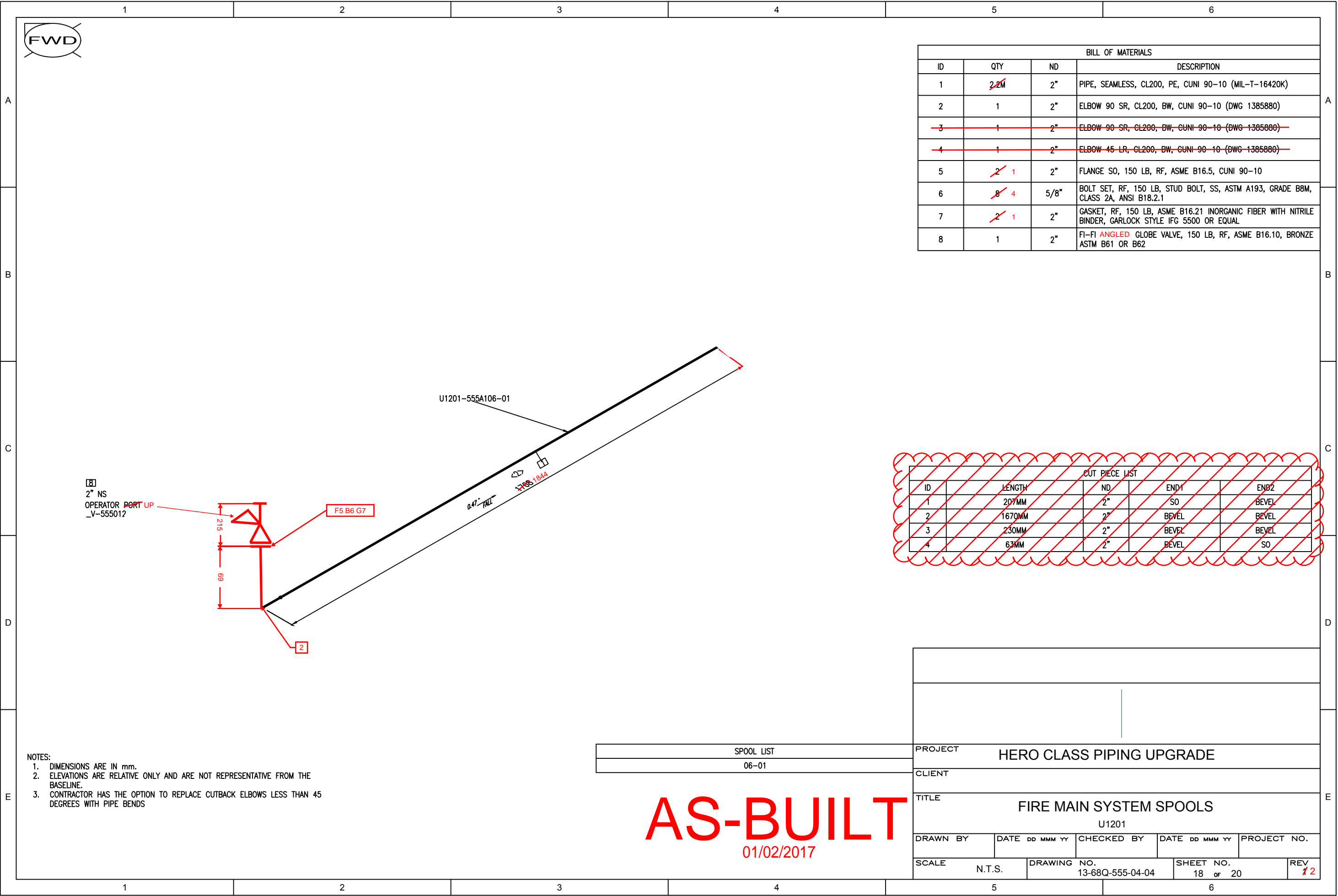
SCALE: N.T.S. DRAWING NO. 13-68Q-555-04-04 SHEET NO. 16 OF 20 REV 1

BILL OF MATERIALS				
ID	QTY	ND	DESCRIPTION	
1	123.0893454969	2 1/2"	PIPE BEND, PIPE, SEAMLESS, CL200, PE, CUNI 90-10 (MIL-T-16420K)	
2	2.8M	2 1/2"	PIPE SEAMLESS, CL200, PE, CUNI 90-10 (MIL-T-16420K)	
3	1	2 1/2"	ELBOW 90 SR, CL200, BW, CUNI 90-10 (DWG 1385880)	
4	1	2 1/2"	ELBOW 90 SR, CL200, BW, CUNI 90-10 (DWG 1385880)	
5	1	2 1/2"	ELBOW 90 SR, CL200, BW, CUNI 90-10 (DWG 1385880)	
6	2	2 1/2"	FLANGE SO, 150 LB, RF, ASME B16.5, CUNI 90-10	
7	4	5/8"	BOLT SET, RF, 150 LB, STUD BOLT, SS, ASTM A193, GRADE B8M, CLASS 2A, ANSI B18.2.1	
8	1	2 1/2"	GASKET, RF, 150 LB, ASME B16.21 INORGANIC FIBER WITH NITRILE BINDER, GARLOCK STYLE IFG 5500 OR EQUAL	
9	1	2 1/2"	BUTTERFLY VALVE, NARROW, 150 LB, LUG, RF, ASME B16.10, BRONZE ASTM B61 OR 62	

CUT PIECE LIST				
ID	LENGTH	ND	END1	END2
1	1276MM	2 1/2"	BEVEL	BEVEL
2	292MM	2 1/2"	BEVEL	SO
3	1315MM	2 1/2"	SO	BEVEL

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BILL OF MATERIALS			
ID	QTY	ND	DESCRIPTION
1	2 2M	2"	PIPE, SEAMLESS, CL200, PE, CUNI 90-10 (MIL-T-16420K)
2	1	2"	ELBOW 90 SR, CL200, BW, CUNI 90-10 (DWG 1385880)
3	1	2"	ELBOW 90 SR, CL200, BW, CUNI 90-10 (DWG 1385880)
4	1	2"	ELBOW 45 LR, CL200, BW, CUNI 90-10 (DWG 1385880)
5	2 1	2"	FLANGE SO, 150 LB, RF, ASME B16.5, CUNI 90-10
6	8 4	5/8"	BOLT SET, RF, 150 LB, STUD BOLT, SS, ASTM A193, GRADE B8M, CLASS 2A, ANSI B18.2.1
7	2 1	2"	GASKET, RF, 150 LB, ASME B16.21 INORGANIC FIBER WITH NITRILE BINDER, GARLOCK STYLE IFG 5500 OR EQUAL
8	1	2"	FI-FI ANGLED GLOBE VALVE, 150 LB, RF, ASME B16.10, BRONZE ASTM B61 OR B62

CUT PIECE LIST				
ID	LENGTH	ND	END1	END2
1	207MM	2"	SO	BEVEL
2	1670MM	2"	BEVEL	BEVEL
3	230MM	2"	BEVEL	BEVEL
4	63MM	2"	BEVEL	SO

SP00L LIST
06-01

AS-BUILT

PROJECT									
HERO CLASS PIPING UPGRADE									
CLIENT									
TITLE									
FIRE MAIN SYSTEM SPOOLS									
U1201									
DRAWN BY		DATE DD MMM YY		CHECKED BY		DATE DD MMM YY		PROJECT NO.	
SCALE		DRAWING NO.		SHEET NO.		REV			
N.T.S.		13-68Q-555-04-04		18 OF 20		12			

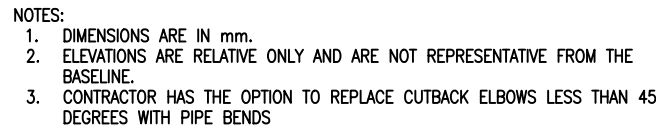


B

C

D

E



AS-BUILT

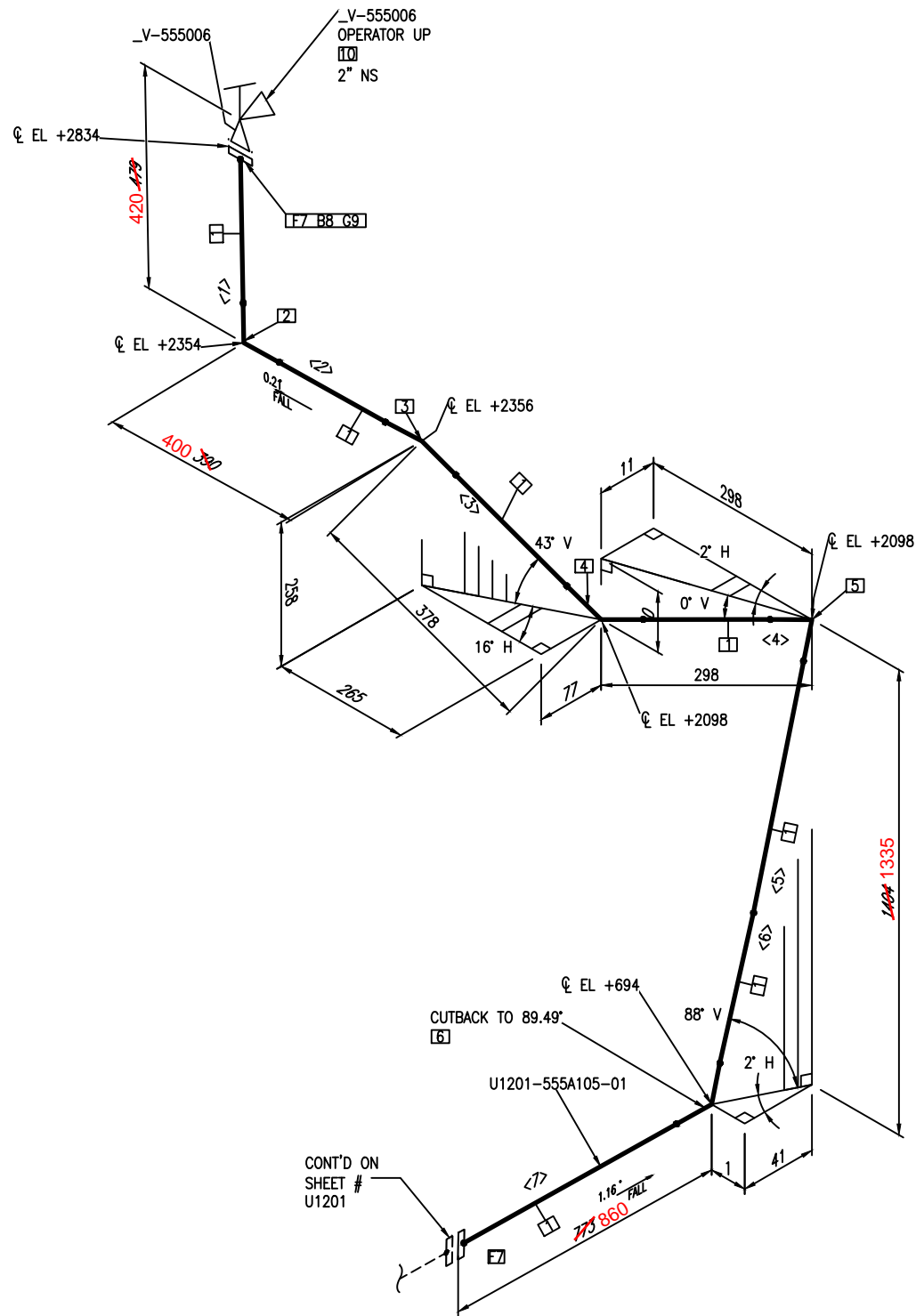
A

B

C

D

E



- NOTES:
1. DIMENSIONS ARE IN mm.
 2. ELEVATIONS ARE RELATIVE ONLY AND ARE NOT REPRESENTATIVE FROM THE BASELINE.
 3. CONTRACTOR HAS THE OPTION TO REPLACE CUTBACK ELBOWS LESS THAN 45 DEGREES WITH PIPE BENDS

SPOOL LIST	
05-01	

AS-BUILT
01/02/2017

BILL OF MATERIALS			
ID	QTY	ND	DESCRIPTION
1	3.1M	2"	PIPE, SEAMLESS, CL200, PE, CUNI 90-10 (MIL-T-16420K)
2	1	2"	ELBOW 90 LR, CL200, BW, CUNI 90-10 (DWG 1385880)
3	1	2"	ELBOW 45 LR, CL200, BW, CUNI 90-10 (DWG 1385880)
4	1	2"	ELBOW 45 LR, CL200, BW, CUNI 90-10 (DWG 1385880)
5	1	2"	ELBOW 90 LR, CL200, BW, CUNI 90-10 (DWG 1385880)
6	1	2"	ELBOW 90 SR, CL200, BW, CUNI 90-10 (DWG 1385880)
7	2	2"	FLANGE SO, 150 LB, RF, ASME B16.5, CUNI 90-10
8	4	5/8"	BOLT SET, RF, 150 LB, STUD BOLT, SS, ASTM A193, GRADE B8M, CLASS 2A, ANSI B18.2.1
9	1	2"	GASKET, RF, 150 LB, ASME B16.21 INORGANIC FIBER WITH NITRILE BINDER, GARLOCK STYLE IFG 5500 OR EQUAL
10	1	2"	FI-FI ANGLE GLOBE VALVE, 150 LB, RF, ASME B16.10, BRONZE ASTM B61 OR B62

CUT PIECE LIST					
ID	LENGTH	ND	END1	END2	
1	278MM	2"	SO	BEVEL	
2	275MM	2"	BEVEL	BEVEL	
3	337MM	2"	BEVEL	BEVEL	
4	184MM	2"	BEVEL	BEVEL	
5	1045MM	2"	BEVEL	BEVEL	
6	195MM	2"	BEVEL	BEVEL	
7	701MM	2"	BEVEL	SO	

PROJECT					
HERO CLASS PIPING UPGRADE					
CLIENT					
TITLE					
FIRE MAIN SYSTEM SPOOLS					
U1201					
DRAWN BY	DATE DD MMM YY	CHECKED BY	DATE DD MMM YY	PROJECT NO.	
SCALE	N.T.S.	DRAWING NO.	13-68Q-555-04-04	SHEET NO.	20 of 20
				REV	1 2