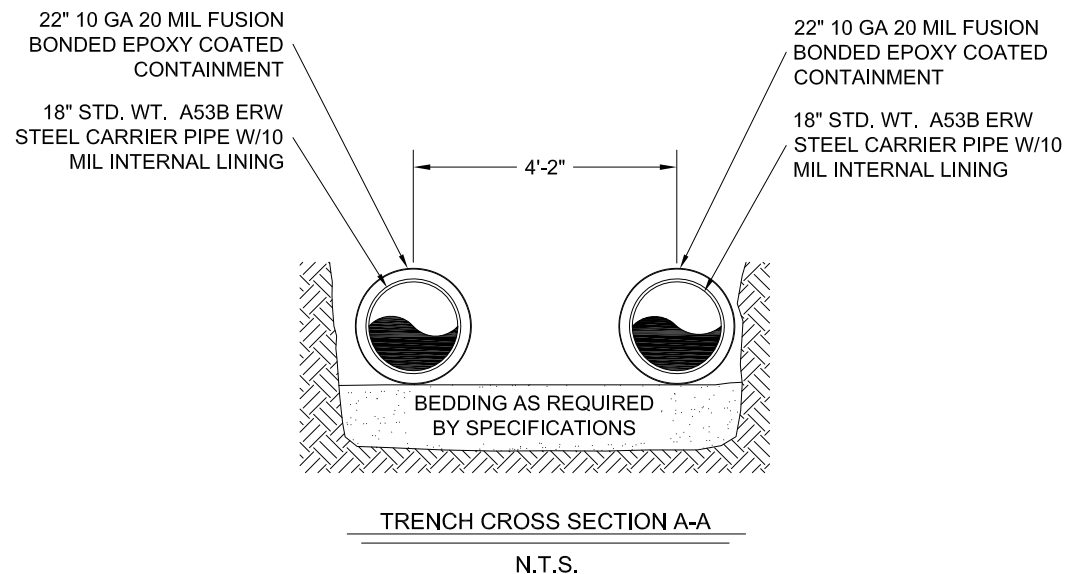
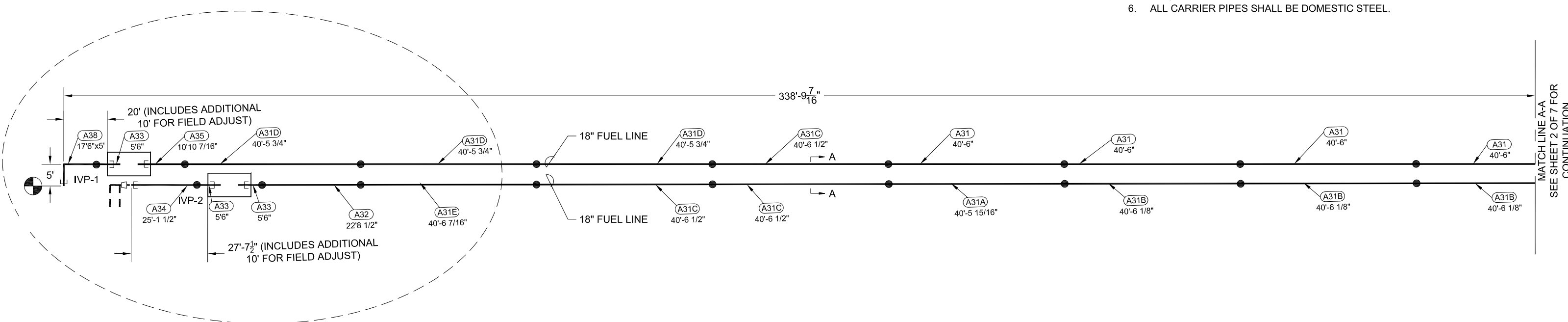


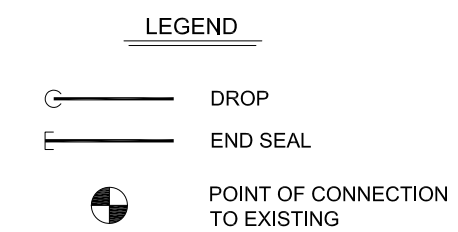
**JET FUEL LINES NOTES**



1. ALL UNDERGROUND **JET FUEL** LINES ARE AN INSUL-8 CONTAINMENT SYSTEM AS MANUFACTURED BY ROVANCO PIPING SYSTEMS INC., JOLIET, ILLINOIS.
  - 1.1. JET FUEL CARRIER PIPE IS STD. WT. A53B ERW STEEL PIPE WITH THE FOLLOWING LINER:
    - 1.1.1. AN INTERNAL LINER OF TWO PART EPOXY COATING SYSTEM, AMERCOAT 395 FD, AT LEAST 10 MIL DFT. THE DFT OF THE FIRST COAT SHALL BE 5 MILS. THE DFT OF THE SECOND COAT SHALL BE 5 MILS. THE SECOND COAT SHALL BE WHITE.
  - 1.2. THE OUTER CONTAINMENT IS 10 GA. WELDED STEEL CONFORMING TO ASTM A-139. THE CONDUIT HAS THE FOLLOWING CORROSION PROTECTION:
    - 1.2.1. AN EXTERIOR COATING OF FUSION BONDED EPOXY APPLIED TO A THICKNESS OF 20 MILS.
  - 1.3. ALL CONTAINMENT UNITS WILL BE SHIPPED WITH SHIPPING BARS AND WOODEN SHIPPING BLOCKS IN PLACE, SECURING THE CARRIER PIPES TO THE CONDUIT. THESE SHIPPING BARS MUST BE REMOVED IN THE FIELD PRIOR TO CLOSING OF THE FIELD JOINT. DETAILED INSTALLATION INSTRUCTIONS WILL BE PROVIDED WITH SHIPMENT.
2. ALL DIMENSIONS ARE CENTER LINE OF CARRIER PIPE TO CENTER LINE OF CARRIER PIPE OR FROM CENTER LINE OF CARRIER PIPE TO END OF CARRIER PIPE.
3. FACTORY CARRIER PIPE WELDS SHALL BE 100% RADIOGRAPHICALLY TESTED PER ANSI B31.3.
4. FACTORY CONTAINMENT WELDS SHALL BE 100% MAGNETIC PARTICLE TESTED PER ANSI B31.3.
5. ALL STEEL CARRIER PIPE AND FITTINGD SHALL BE SUPPLIED WITH MIL CERTS REQUIRED.
6. ALL CARRIER PIPES SHALL BE DOMESTIC STEEL.



SEE BLOW UP OF THIS AREA ON SHEET 6 OF 7 SOUTH CONNECTION DIAGRAM



ENGINEER DRAWING APPROVAL		
THIS DRAWING HAS BEEN REVIEWED FOR DESIGN CONFORMANCE TO APPLICABLE STANDARDS AND SPECIFICATIONS AND DETAILS REVIEWED FOR ACCURACY.		
ENGINEER / OWNER DESIGN APPROVAL		
BY: _____	DATE: _____	
CONTRACTOR CERTIFICATION OF FIELD DIMENSIONS		
THIS DRAWING HAS BEEN REVIEWED FOR CONFORMANCE TO SITE CONDITIONS. THE DIMENSIONS AND DETAILS SHOWN HAVE BEEN VERIFIED AND CERTIFIED FOR FABRICATION.		
CONTRACTOR FIELD DIMENSION APPROVAL		
BY: _____	DATE: _____	
WRITTEN APPROVAL MUST BE RECEIVED BY ROVANCO BEFORE PROJECT IS RELEASED FOR FABRICATION AFTER APPROVAL DRAWINGS WILL BE ISSUED AND PROJECT SCHEDULED FOR PRODUCTION.		

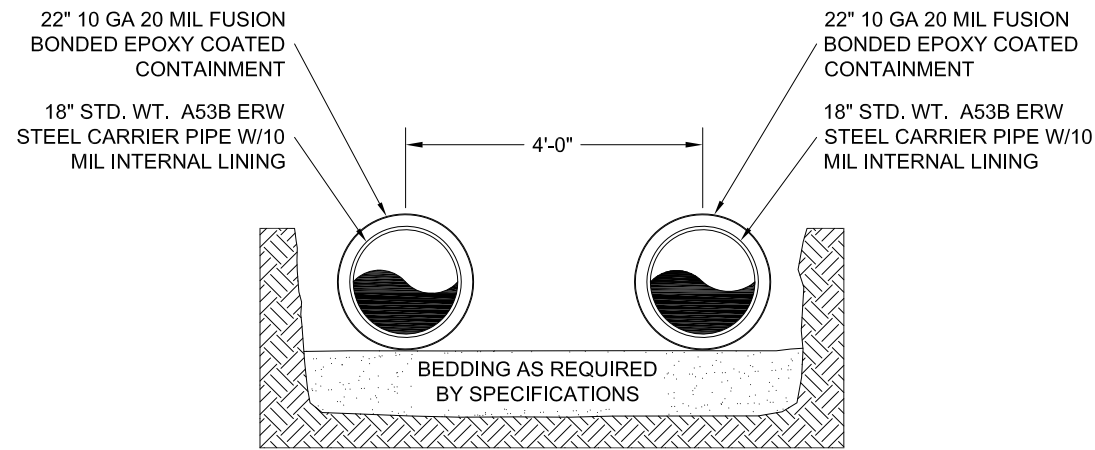
ENGINEERED PIPING SYSTEM BY  
**ROVANCO** PIPING SYSTEMS  
 20535 SE FRONTAGE RD. - JOLIET, ILLINOIS 60431  
 PH. (815) 741-6700 - FAX: (815) 741-4229  
 E-MAIL: MARKETING@ROVANCO.COM WEB: WWW.ROVANCO.COM

CUSTOMER	FOR <b>AIRPORT</b>
ENGINEER	TITLE <b>JET FUEL PIPING PLAN</b>
OWNER	

REV	DATE	DESCRIPTION	BY	CK
D	12/16/2009	ADDED SPOOL NO AND SIZES	AD	DK
B	11/10/09	REV PER CONT. - INC. FIELD ADJ. LENGTHS	DK	DK
A	11/09/09	REV PER ENG INSTRUCTIONS DATED 10/22/09	RMT	DK

JOB NO.:	37726	DRAWN BY:	AD	SHT NO	1 OF 7
P.O. NUMBER	**	CHECKED BY:	DK	SCALE	NONE
DATE:	09/18/2009	APPROVED BY:	DK	DRAWING NO.:	7425

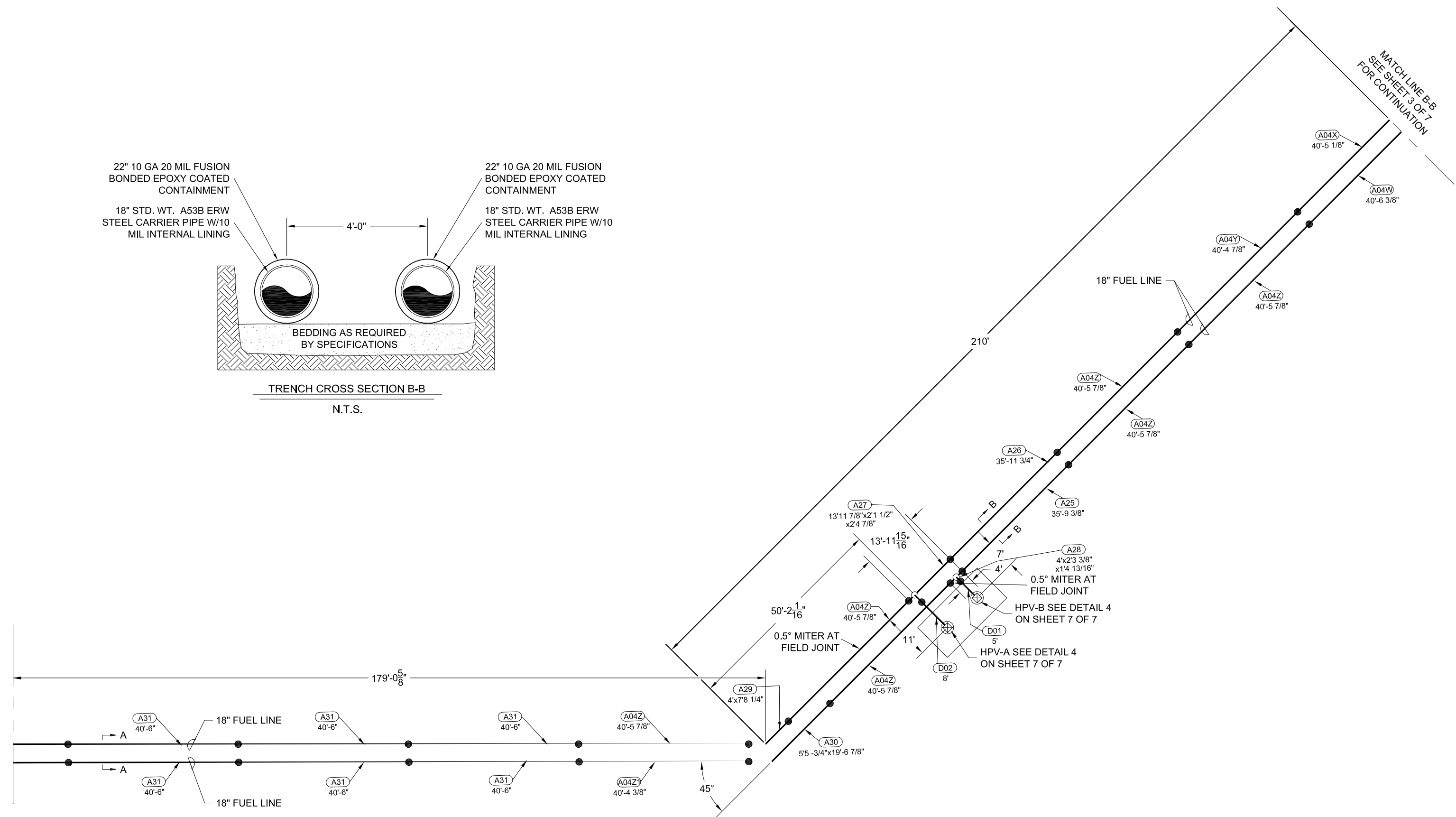
MATCH LINE B-B  
SEE SHEET 3 OF 7  
FOR CONTINUATION



TRENCH CROSS SECTION B-B

N.T.S.

MATCH LINE A-A  
SEE SHEET 1 OF 7 FOR  
CONTINUATION



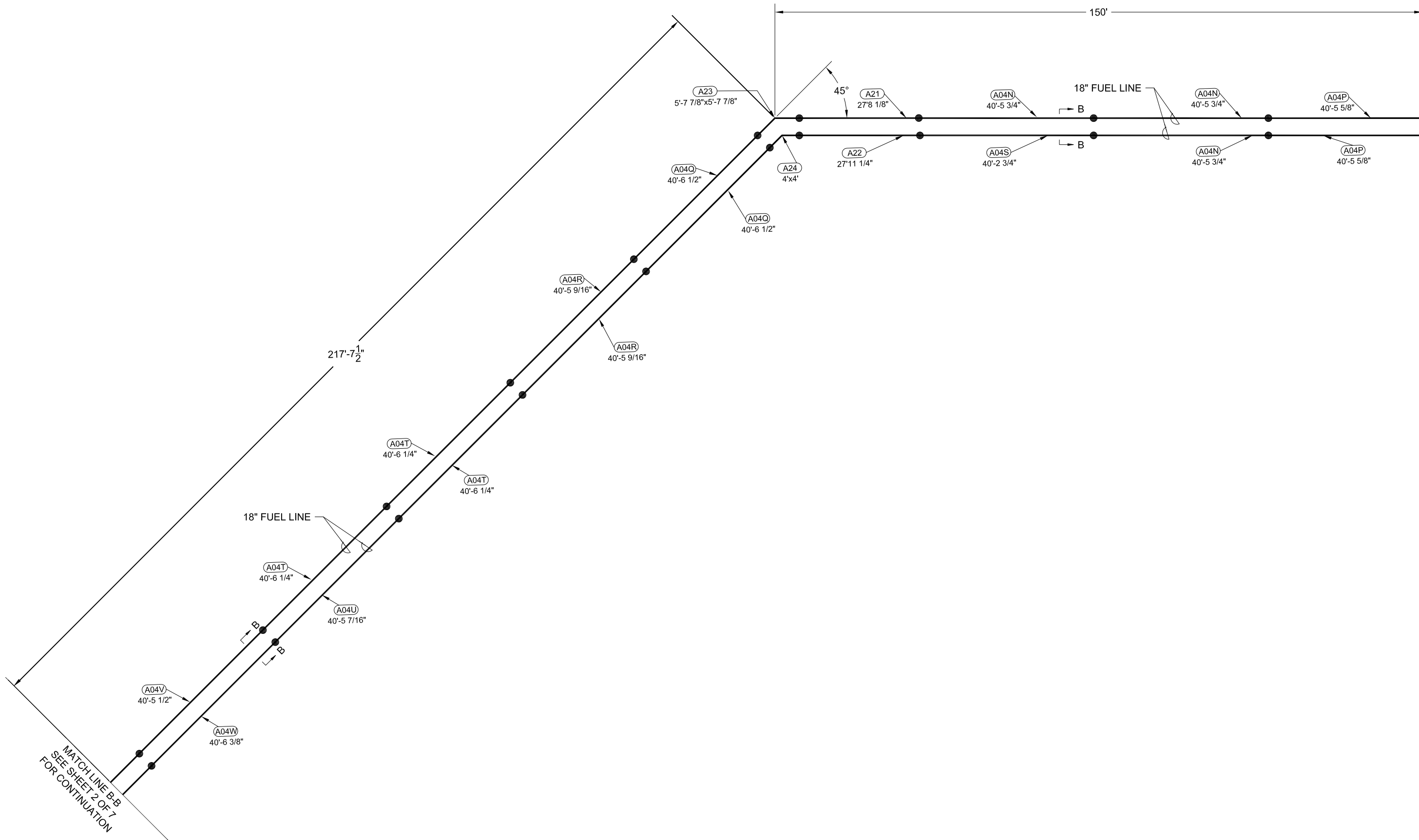
ENGINEERED PIPING SYSTEM BY  
**ROVANCO** PIPING SYSTEMS  
20535 SE FRONTAGE RD. - JOLIET, ILLINOIS 60431  
PH. (815) 741-6700 - FAX: (815) 741-4229  
E-MAIL: MARKETING@ROVANCO.COM WEB: WWW.ROVANCO.COM

CUSTOMER  
ENGINEER  
OWNER

FOR  
**AIRPORT**  
TITLE  
**JET FUEL PIPING PLAN**

REV	DATE	DESCRIPTION	BY	CK
H	01/29/2010	REV HPV PER 100% DWGS	DK	DK
D	12/16/2009	ADDED SPOOL NO AND SIZES	AD	DK
C	12/15/09	REV SHEET CALL OUTS	DK	DK
B	11/10/09	REV PER CONT. - INC. FIELD ADJ. LENGTHS	DK	DK
A	11/09/09	REV PER ENG INSTRUCTIONS DATED 10/22/09	RMT	DK

JOB NO.:	37726	DRAWN BY:	AD	SHT NO	2 OF 7
P.O. NUMBER	**	CHECKED BY:	DK	SCALE	NONE
DATE:	09/18/2009	APPROVED BY:	DK	DRAWING NO.:	7425



MATCH LINE C-C  
SEE SHEET 4 OF 7  
FOR CONTINUATION

MATCH LINE B-B  
SEE SHEET 2 OF 7  
FOR CONTINUATION

ENGINEERED PIPING SYSTEM BY  
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 20535 SE FRONTAGE RD. - JOLIET, ILLINOIS 60431  
 PH. (815) 741-6700 - FAX: (815) 741-4229  
 E-MAIL: MARKETING@ROVANCO.COM WEB: WWW.ROVANCO.COM

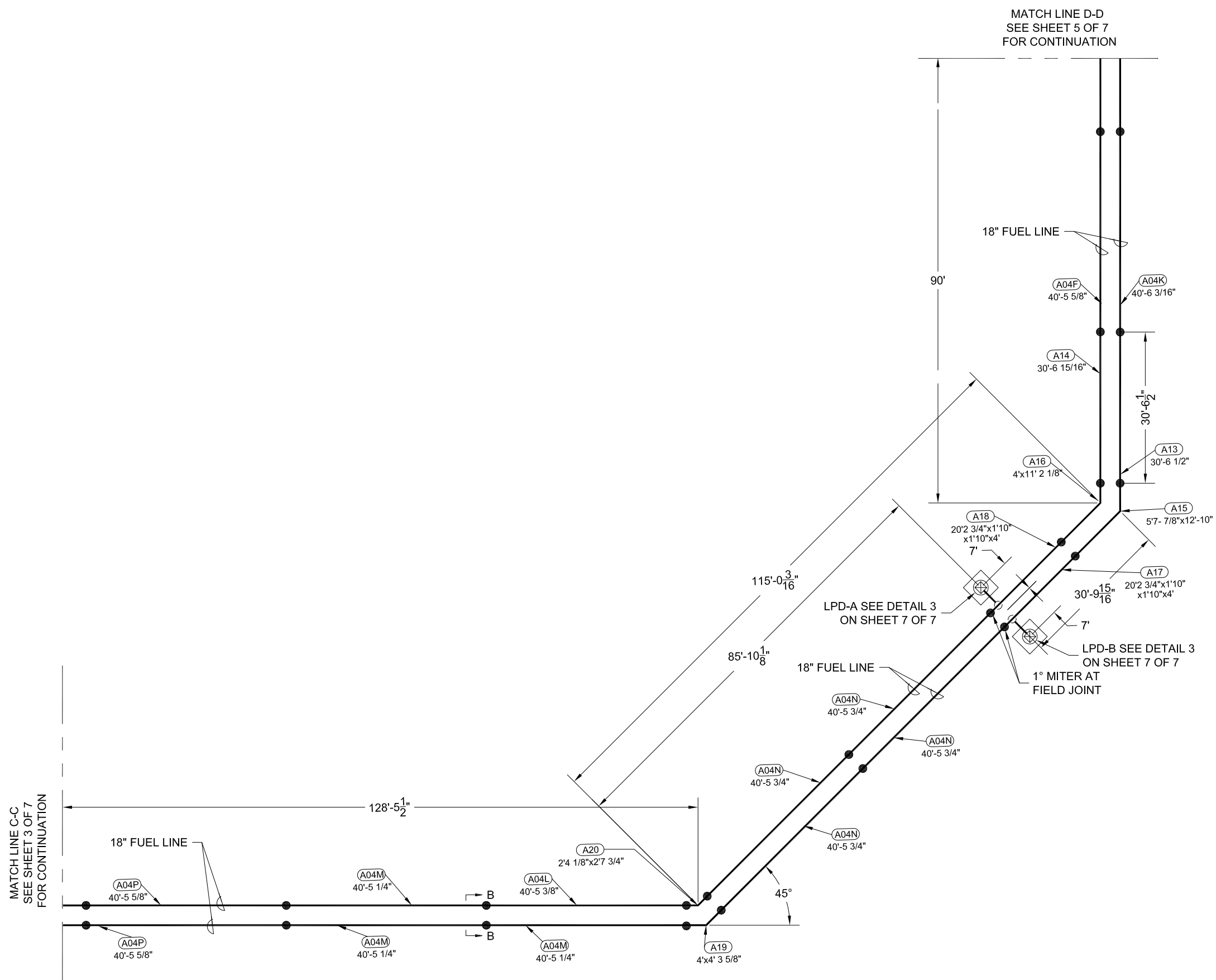
CUSTOMER  
 ENGINEER  
 OWNER

FOR  
**AIRPORT**  
 TITLE  
**JET FUEL  
 PIPING PLAN**

REV	DATE	DESCRIPTION	BY	CK
D	12/16/2009	ADDED SPOOL NO AND SIZES	AD	DK
B	11/10/09	REV PER CONT. - INC. FIELD ADJ. LENGTHS	DK	DK
A	11/09/09	REV PER ENG INSTRUCTIONS DATED 10/22/09	RMT	DK

JOB NO.:	37726	DRAWN BY:	AD	SHT NO	3 OF 7
P.O. NUMBER	**	CHECKED BY:	DK	SCALE	NONE
DATE:	09/18/2009	APPROVED BY:	DK	DRAWING NO.:	7425

DATE:	09/18/2009	APPROVED BY:	DK	DRAWING NO.:	7425
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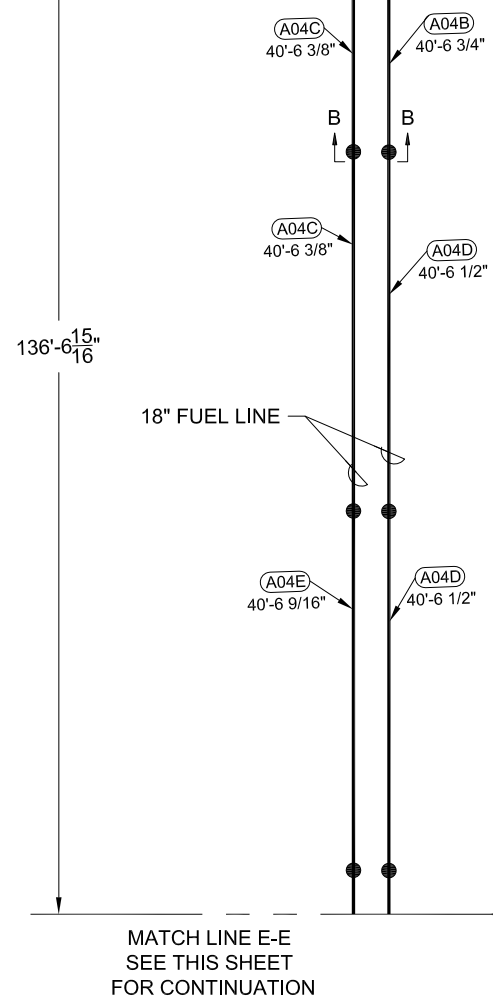
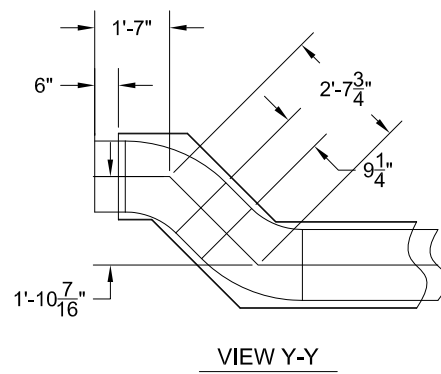
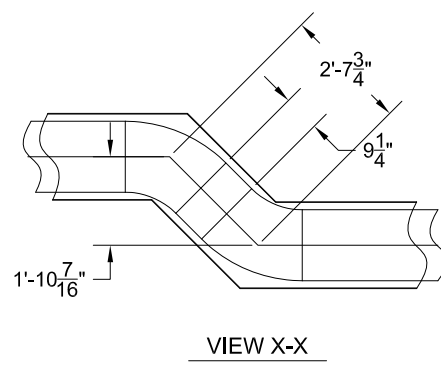
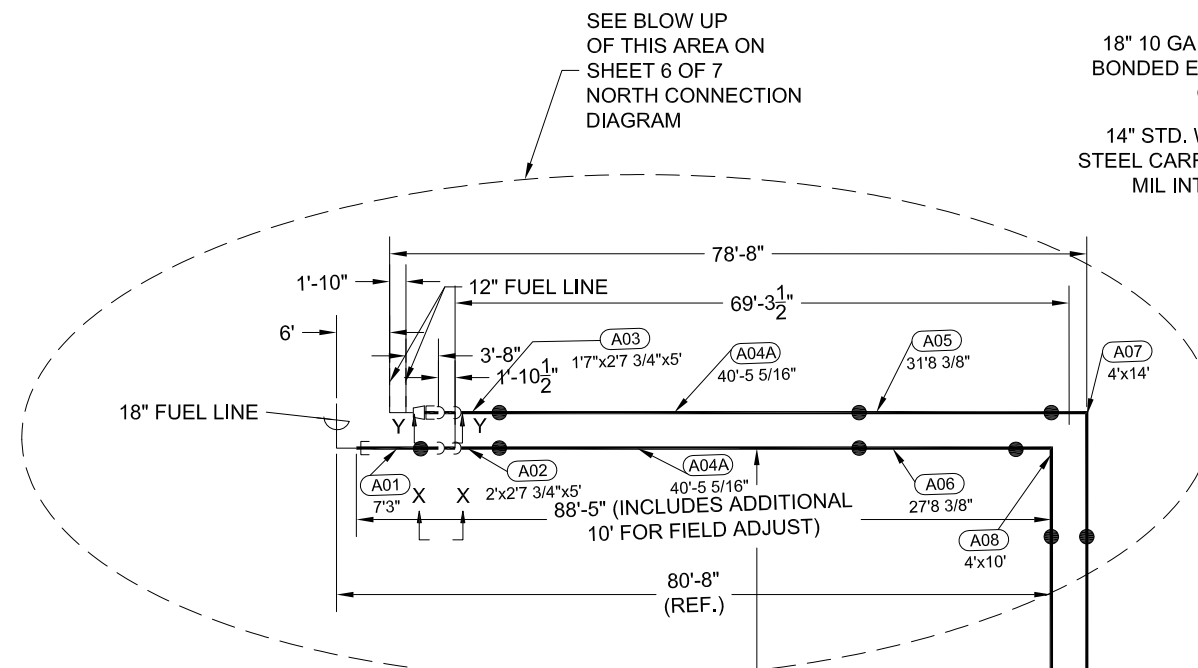
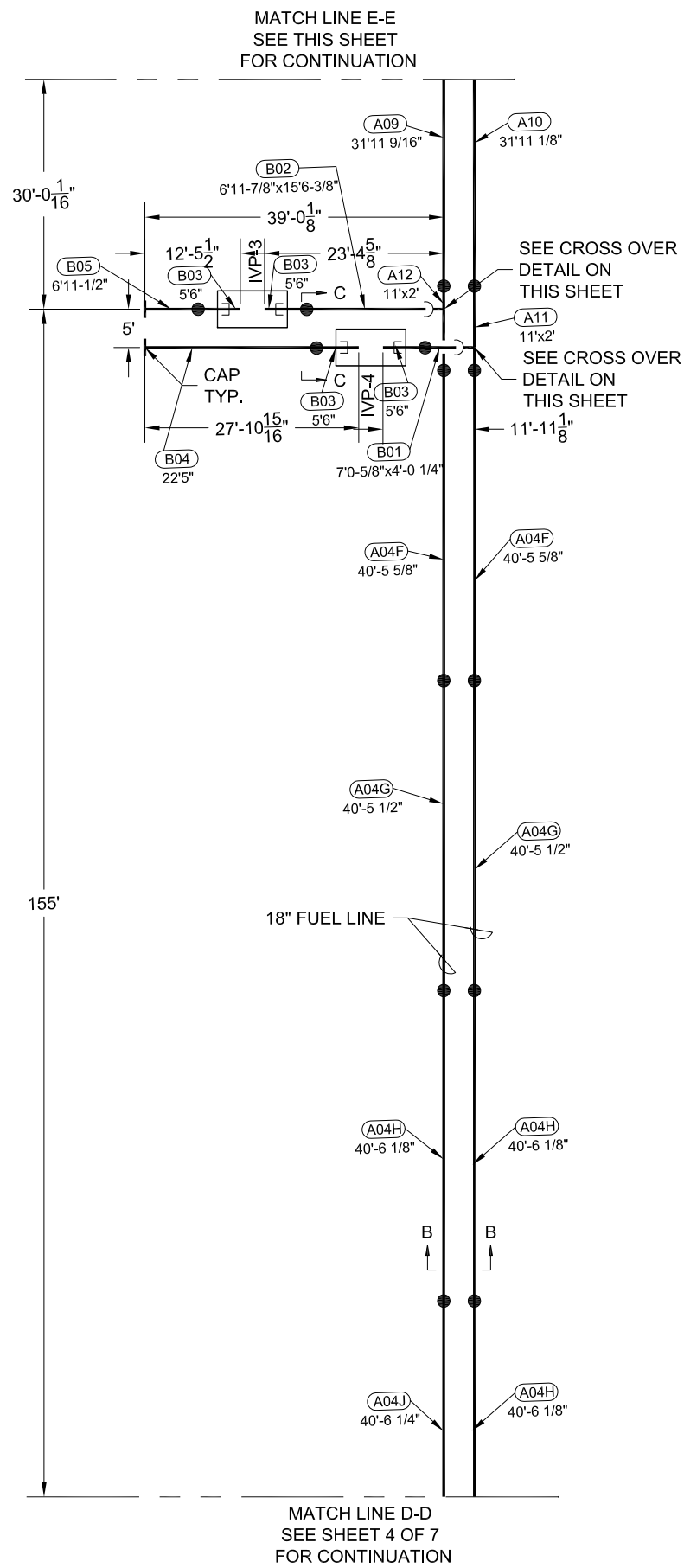
ENGINEERED PIPING SYSTEM BY  
**ROVANCO** PIPING SYSTEMS  
 20535 SE FRONTAGE RD. - JOLIET, ILLINOIS 60431  
 PH. (815) 741-6700 - FAX: (815) 741-4229  
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CUSTOMER	
ENGINEER	
OWNER	

FOR	AIRPORT
TITLE	JET FUEL PIPING PLAN

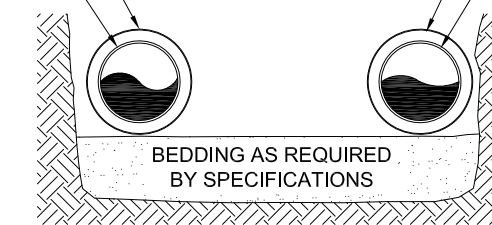
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E	01/19/10	REVISED PER SPOOL LENGTH	RMT	DK
D	12/16/2009	ADDED SPOOL NO AND SIZES	AD	DK
C	12/15/09	REV SHEET CALL OUTS	DK	DK
B	11/10/09	REV PER CONT. - INC. FIELD ADJ. LENGTHS	DK	DK

JOB NO.:	37726	DRAWN BY:	K	SHT NO	4 OF 7
P.O. NUMBER	**	CHECKED BY:	DK	SCALE	NONE
DATE:	09/18/2009	APPROVED BY:	KK	DRAWING NO.:	7425



18" 10 GA 20 MIL FUSION  
BONDED EPOXY COATED  
CONTAINMENT

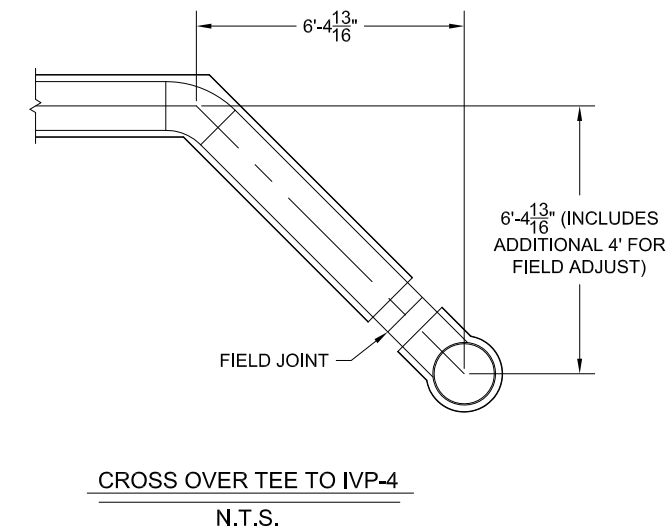
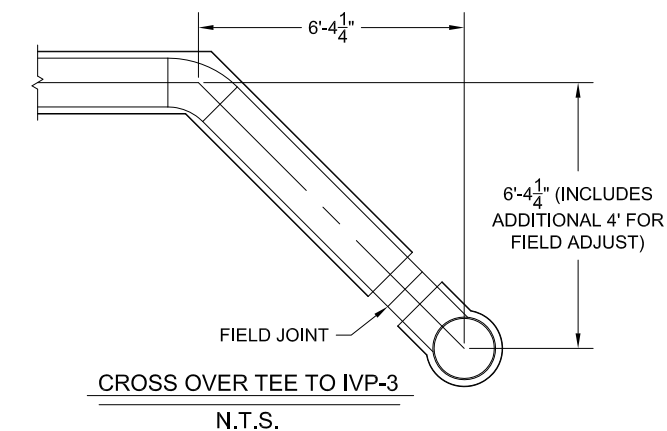
14" STD. WT. A53B ERW  
STEEL CARRIER PIPE W/10  
MIL INTERNAL LINING



18" 10 GA 20 MIL FUSION  
BONDED EPOXY COATED  
CONTAINMENT

14" STD. WT. A53B ERW  
STEEL CARRIER PIPE W/10  
MIL INTERNAL LINING

TRENCH CROSS SECTION C-C  
N.T.S.



ENGINEERED PIPING SYSTEM BY  
**ROVANCO** PIPING SYSTEMS  
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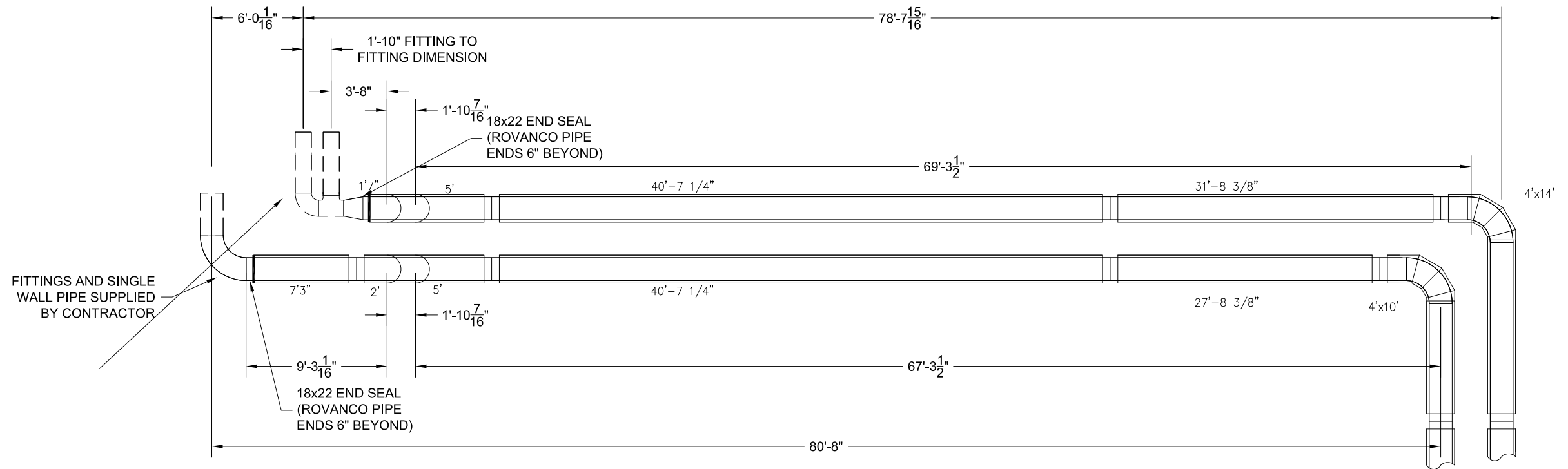
CUSTOMER  
ENGINEER  
OWNER

FOR  
**AIRPORT**

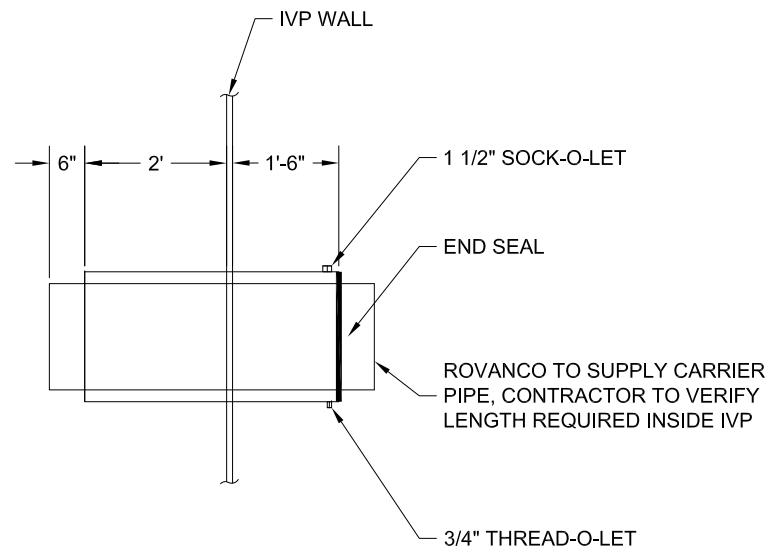
TITLE  
**JET FUEL  
PIPING PLAN**

REV	DATE	DESCRIPTION	BY	CK
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D	12/16/2009	ADDED SPOOL NO AND SIZES	AD	DK
B	11/10/09	REV PER CONT. - INC. FIELD ADJ. LENGTHS	DK	DK
A	11/09/09	REV PER ENG INSTRUCTIONS DATED 10/22/09	RMT	DK

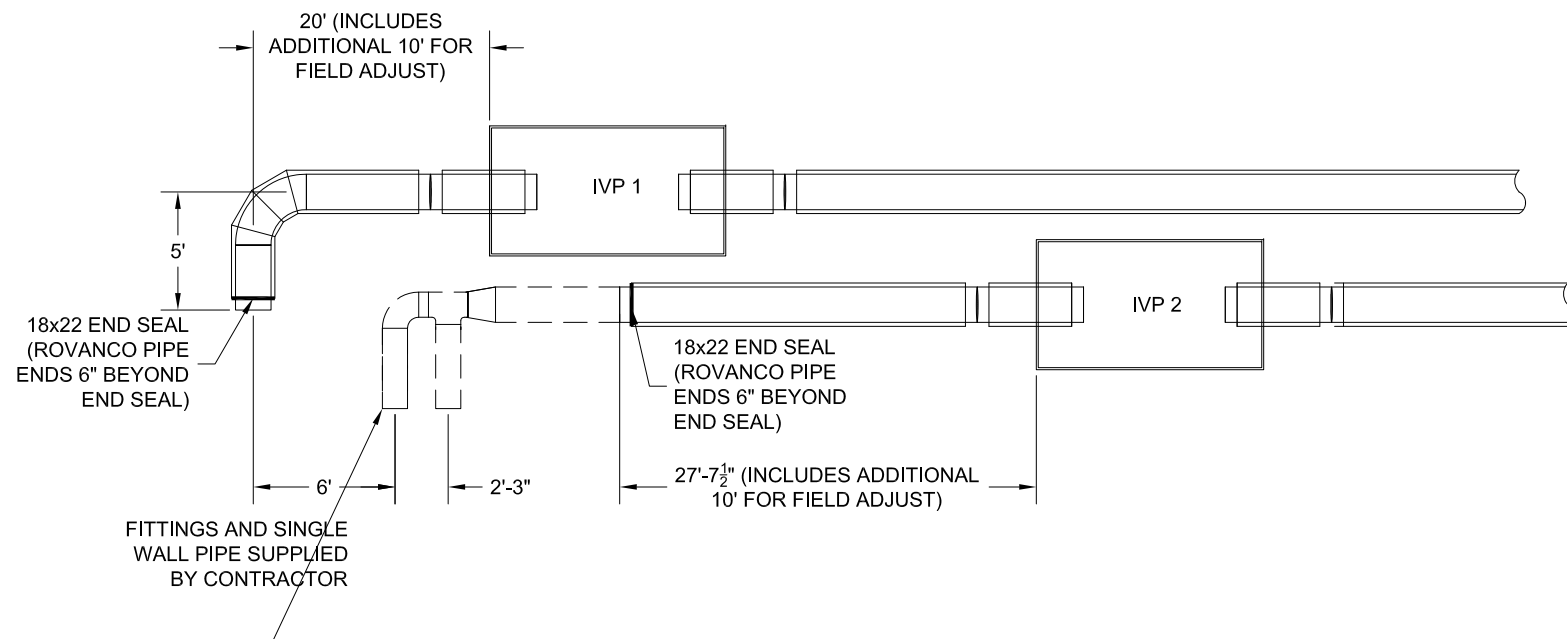
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P.O. NUMBER	**	CHECKED BY:	DK	SCALE	NONE
DATE:	09/18/2009	APPROVED BY:	DK	DRAWING NO.:	7425



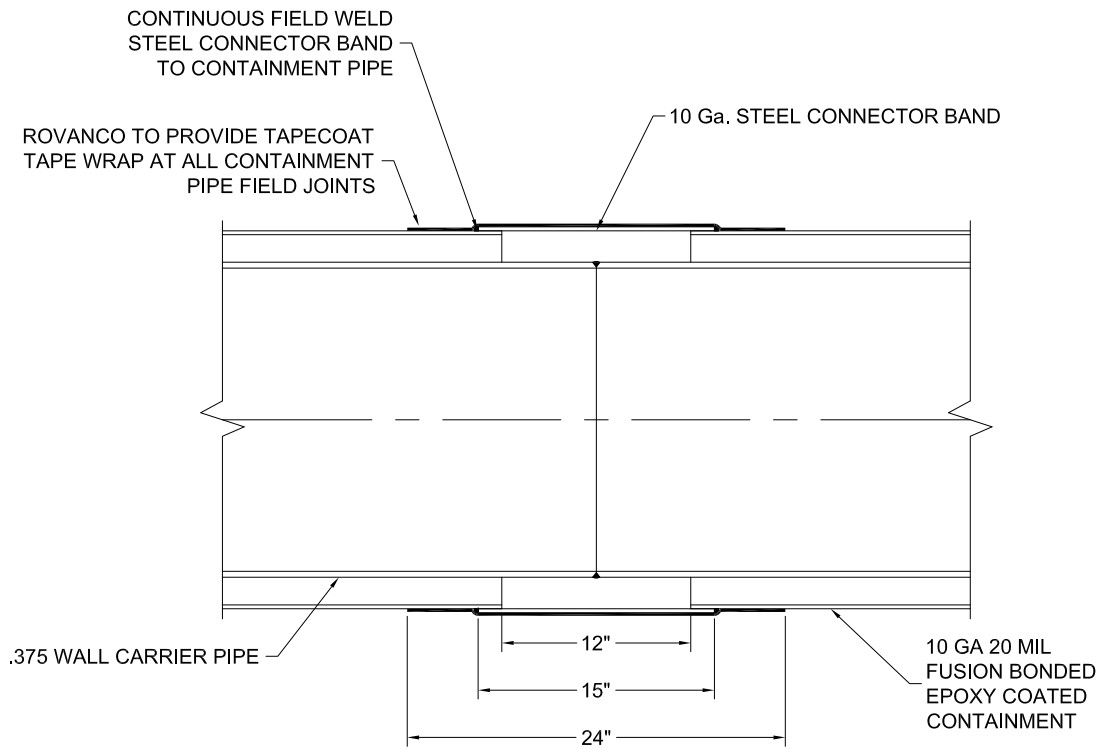
FUEL SYSTEM NORTH CONNECTION DIAGRAM



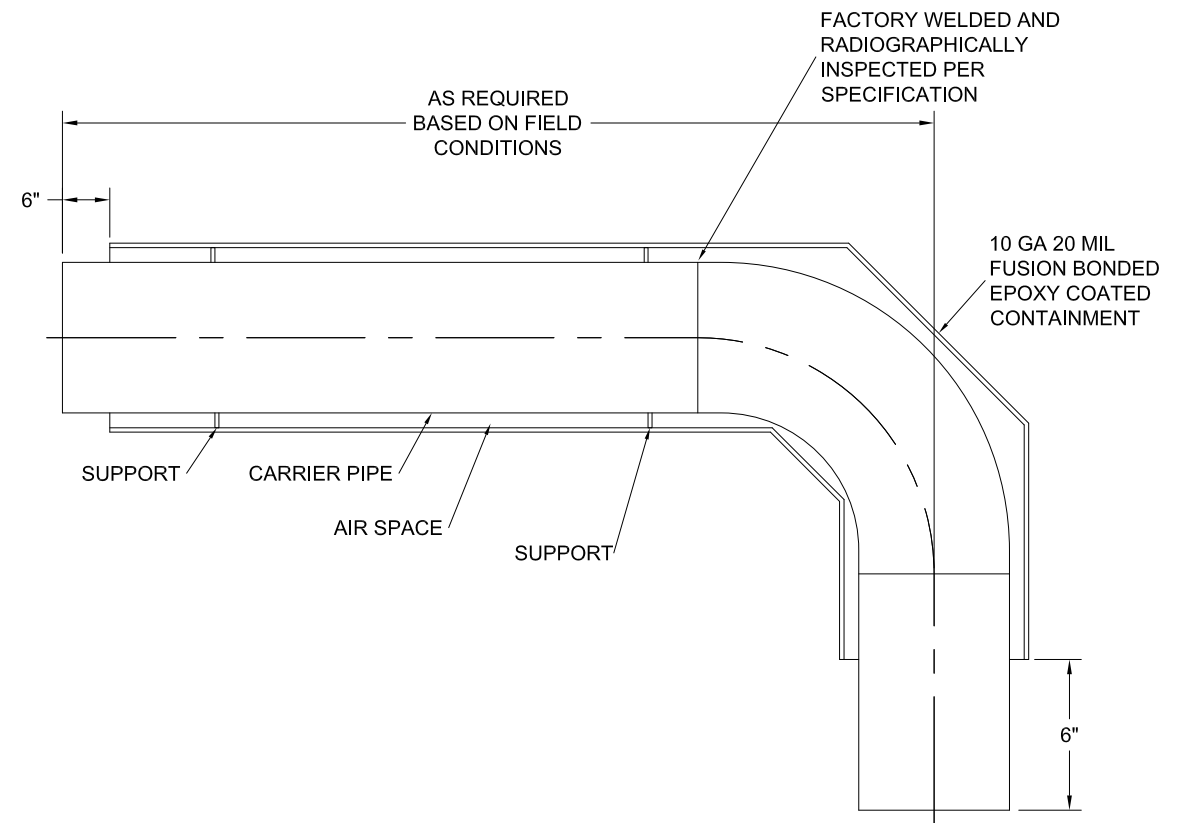
TYPICAL IVP PENETRATION SPOOL



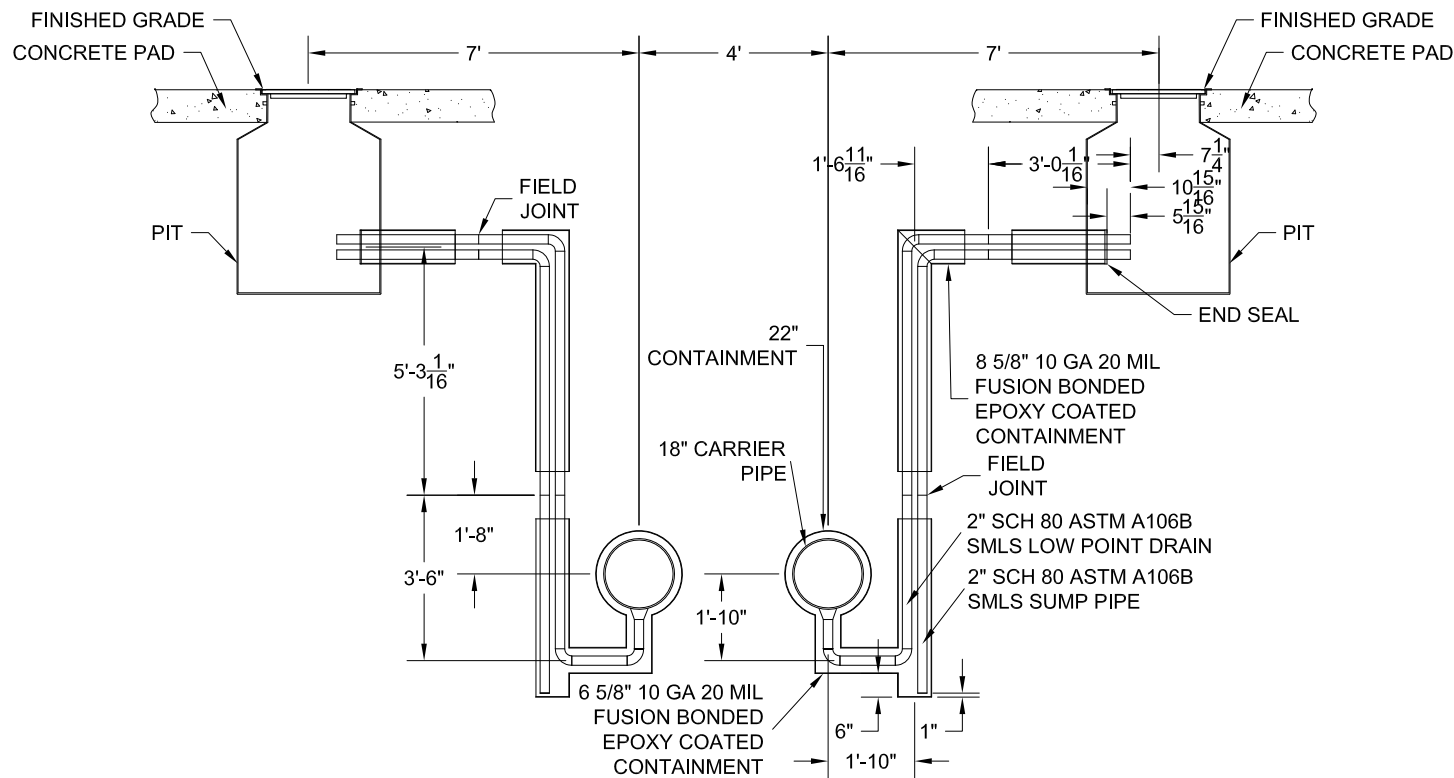
FUEL SYSTEM SOUTH CONNECTION DIAGRAM



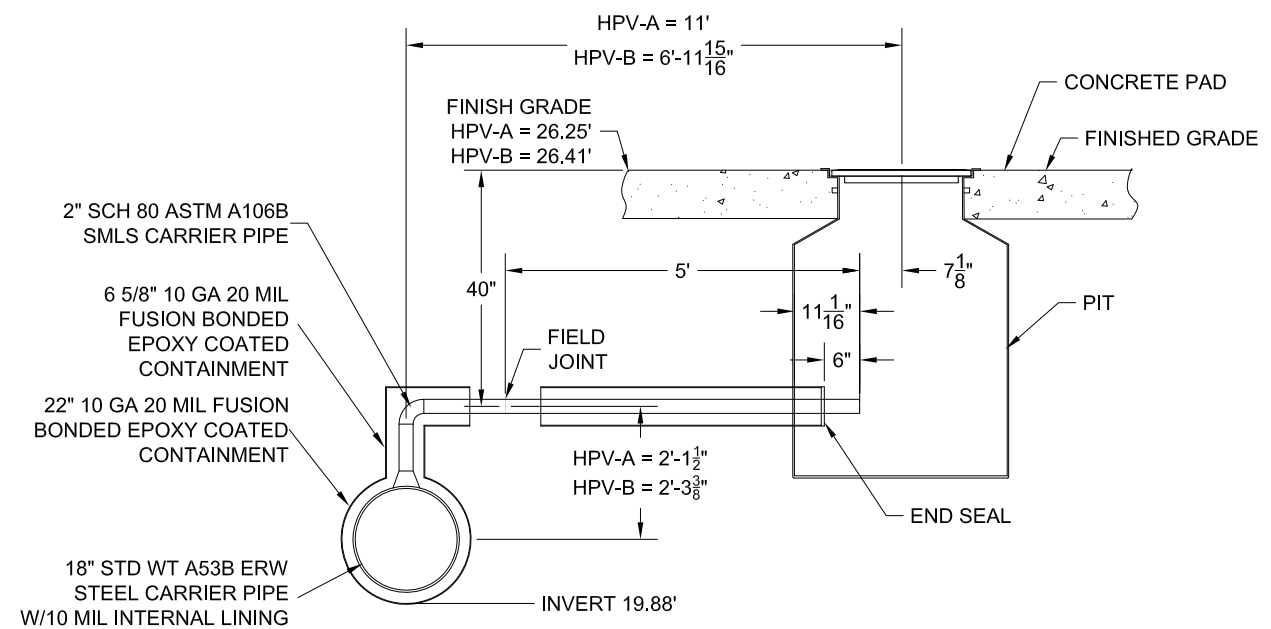
1 CONTAINMENT FIELD JOINT DETAIL  
N.T.S.



2 STEEL CONTAINMENT ELBOW DETAIL  
N.T.S.



3 CONTAINMENT LOW POINT DRAIN DETAIL  
N.T.S.



4 CONTAINMENT HIGH POINT VENT DETAIL  
N.T.S.