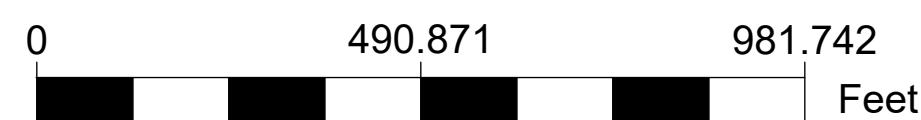


PROJECT LOCATION (NTS)



--- DELIVERY PIPELINES
 - - - FENCE LINE (PROJECT BOUNDARY)

Martin Bouliane Irrigation Project
 711 Meadows Circle
 Ridgway, CO 81432
 Sec4, T45N, R8W

AGREEMENT

I REALIZE THAT AS A LANDOWNER, I AND/OR THE CONTRACTOR I HIRE, MAY BE LIABLE FOR DAMAGE TO UTILITIES DURING CONSTRUCTION. MORALES ENGINEERING MAKES NO REPRESENTATION THAT UTILITIES SHOWN ON THE PLANS ARE EXACTLY LOCATED OR THAT THEY MAY BE PRESENT ARE SHOWN.

I WILL PROVIDE MORALES ENGINEERING WITH THE COLORADO UTILITY NOTIFICATION TICKET NUMBER MY CONTRACTOR HAS ACQUIRED PRIOR TO START OF CONSTRUCTION.

CALL COLORADO UTILITIES LOCATE AT 811 TWO (2) BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

I AGREE, AS LANDOWNER AND/OR GROUP REPRESENTATIVE, TO CONSTRUCT THIS PROJECT ACCORDING TO THESE PLANS AND SPECIFICATIONS. INSTALLATION ACTIVITIES WILL BE IN ACCORDANCE TO ALL APPLICABLE O.S.H.A. GUIDELINES. LAND AND WATER RIGHTS, PERMITS, EASEMENTS AND RIGHT-OF-WAYS HAVE BEEN OBTAINED FROM ALL LANDOWNERS AND PROPERTIES INVOLVED. NO CHANGES WILL BE MADE IN THE PROJECT OR LOCATION WITHOUT PRIOR APPROVAL OF AN ENGINEERING REPRESENTATIVE.

ALL ARCHAEOLOGICAL CLEARANCES HAVE BEEN COMPLETED. IF HISTORICAL RESOURCES ARE ENCOUNTERED DURING CONSTRUCTION, ALL ACTIVITY SHALL HALT AND NRCS SHALL BE CONTACTED IMMEDIATELY.

I AM RESPONSIBLE FOR THE PROPER OPERATION OF THIS IRRIGATION SYSTEM ACCORDING TO THIS DESIGN AND THE OPERATION AND MANAGEMENT PLAN IN THE NRCS CONTRACT. I WILL CALL FOR ASSISTANCE AT START-UP OF SYSTEM TO REVIEW O&M PLAN.

LANDOWNER SIGNATURE _____ DATE _____

APPLICABLE SPECIFICATIONS

METAL FABRICATION AND STRUCTURES	587
EARTH WORK	587
CONCRETE	587
PIPELINE	430
GATED PIPE	443

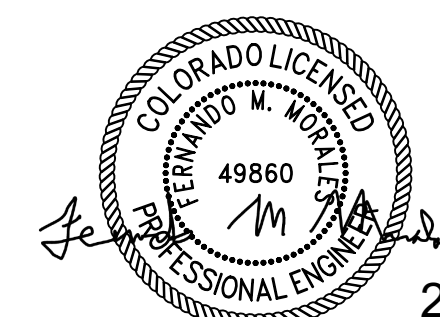
Max. System Design Flowrate

6.4 CFS
 2.6 CFS (south pipeline)
 3.76 CFS (north pipeline)

COL UTILITY NOTIFICATION _____

ticket # _____ date _____

COPY



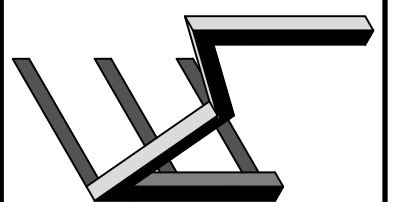
2/8/24

I CERTIFY TO THE BEST OF MY KNOWLEDGE THIS PLAN COMPLIES WITH NRCS STANDARDS AND SPECIFICATIONS AS OF THE DATE OF THIS PLAN.

Designed	frmm	Date	12/11/23
Drawn	frmm		12/11/23
Checked	rm		12/11/23
Approved	frmm		12/11/23

Martin Bouliane Irrigation Project
 Martin Bouliane
 C/N 2-6
 Ouray County
 Ridgway, CO

Morales Engineering
 & Consulting, LLC



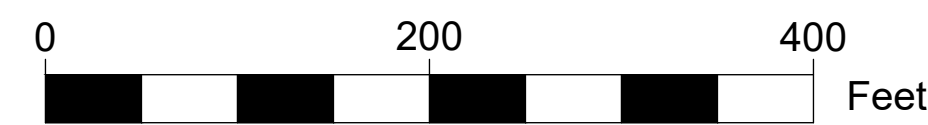
File No.
 748B0523096

Drawing No.
 2

Sheet 1 of 5



PROJECT MAP



DRAWING SHEET INDEX

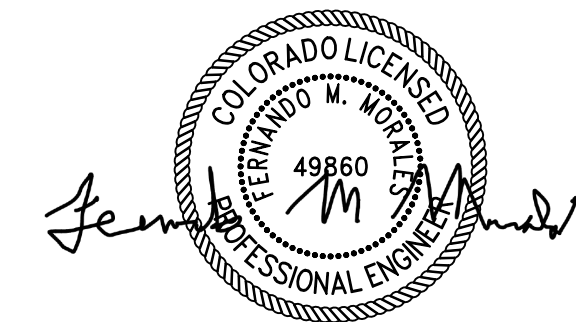
- 1 COVER SHEET
 - 2 PROJECT MAP
 - 3 SOUTH PIPELINE PLAN AND PROFILE
 - 4 NORTH PIPELINE PLAN AND PROFILE
 - 5 NORTH PIPELINE SPUR PLAN AND PROFILE
- GATED PIPE, PROFILES
INLET STRUCTURE

PIPELINE MATERIALS ESTIMATE

18" 80psi PVC PIP	1234 FT
15" 80psi PVC PIP	1016 FT
12" 80psi PVC PIP	1530 FT
10" 80psi PVC PIP	100 FT
8" 80psi PVC PIP	668 FT
2" SCH 40 PVC	20 FT
10" GATED PIPE	3930 FT
10" DOUBLE-SIDED GATED PIPE	480 FT
18" 90DEG ELBOW	1
18" 45DEG ELBOW	2
18"x15" TEE	1
18"x10" TEE (riser)	7
18"x4" TEE (riser)	1
18"x2" TEE	1
18"x15" REDUCER	1
15" 90DEG ELBOW	3
15" 45 DEG ELBOW	2
15"x12" TEE	1
15"x10" TEE (riser)	8
15"x4" TEE (riser)	3
15"x2" TEE	1
15"x12" REDUCER	1
12" 90DEG ELBOW	2
12" 45DEG ELBOW	2
12"x10" TEE (riser)	13
12"x8" TEE	1
12"x2" TEE	3
10"x2" TEE	1
8" 45DEG ELBOW	1
8" 90DEG ELBOW	2
8"x2" TEE	2
15" INLINE GATE VALVE	1
12" INLINE GATE VALVE	1
2" GATE VALVE (drain)	3
10" ALFALFA/STUB VALVE AND BONNET	28
8" STUB VALVE VALVE AND BONNET	1
3" AIR/VACUUM RELIEF VALVE	2
2" AIR/VACUUM RELIEF VALVE	1
2" CONTINUOUS ACTING AIR RELIEF VALVE	1
18" CANAL GATE (STRUCTURE)	1
15" CANAL GATE (STRUCTURE)	1
2FT PARSHALL FLUME	1
1/4" CRUSHED GRAVEL	3 CY

- 10" ALFALFA VALVE
- ▲ 15" GATE VALVE (SOUTH PIPELINE), 12" GATE VALVE (NORTH PIPELINE)
- DELIVERY PIPELINES
- 10" GATED PIPELINE

COPY

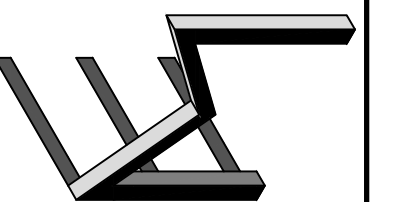


2/8/24

Date	Designed	Drawn	Checked	Approved
12/11/23	frmm	frmm	rr	frmm
12/11/23				
12/11/23				
12/11/23				

Martin Bouliane Irrigation Project
Project Map
C/N 2-6
Ouray County
Ridgway, CO

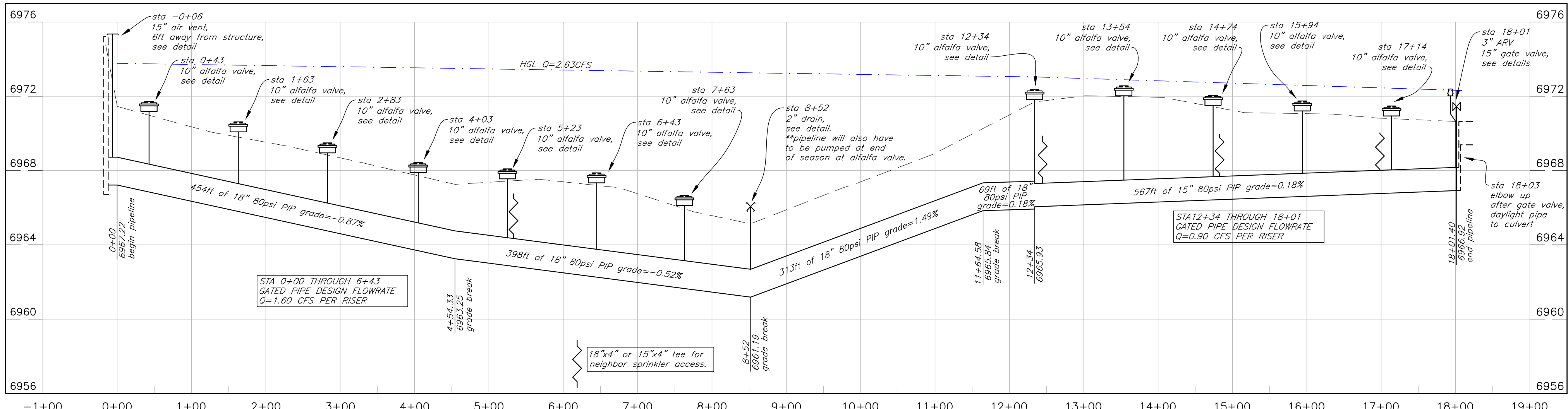
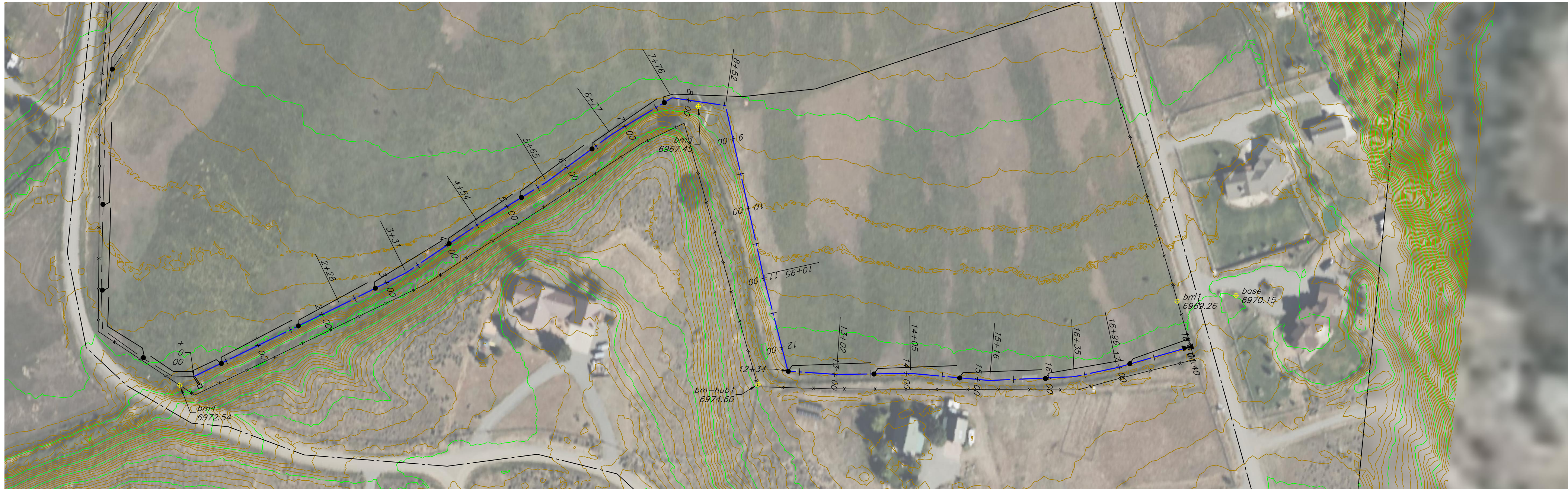
Morales Engineering
& Consulting, LLC



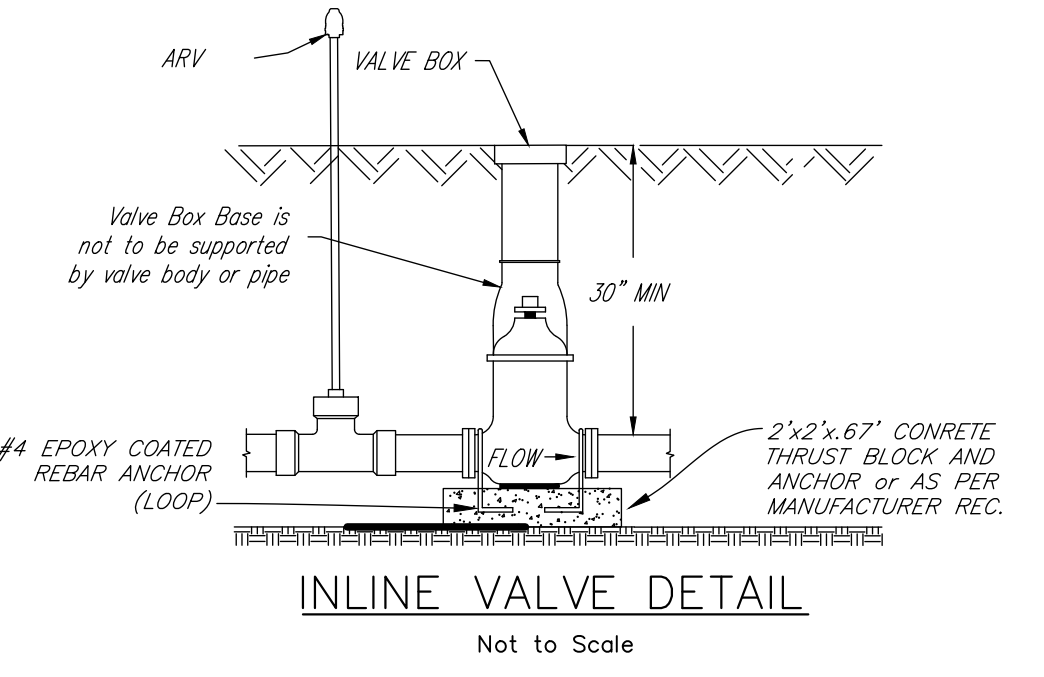
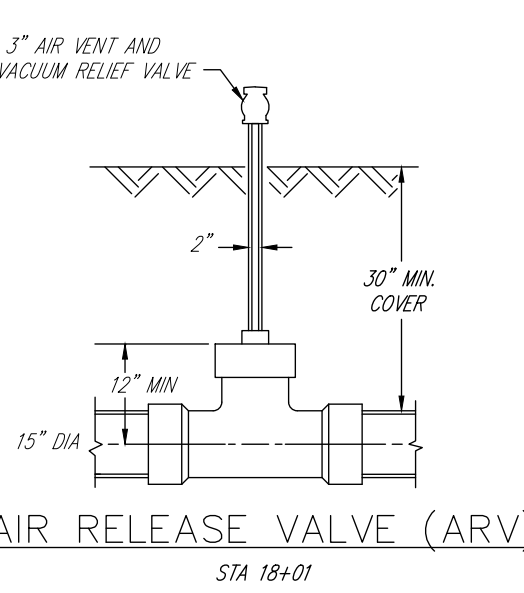
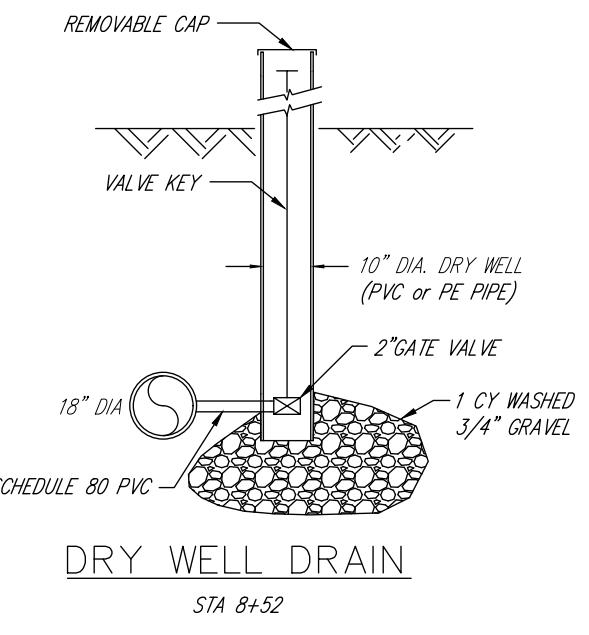
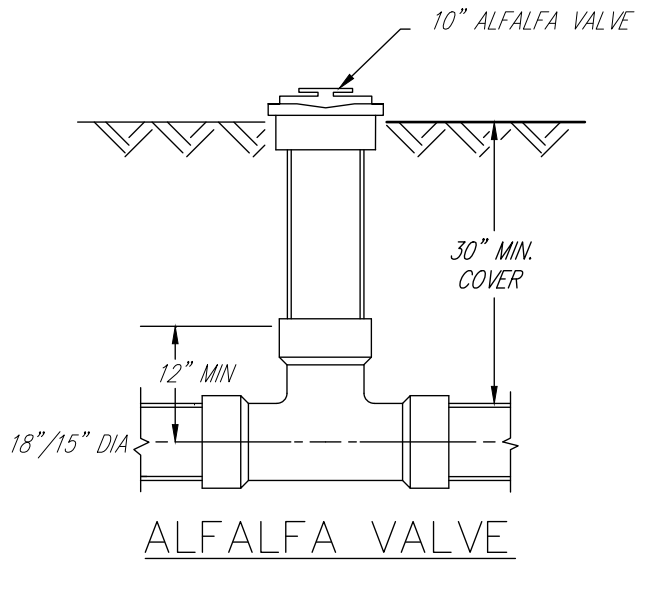
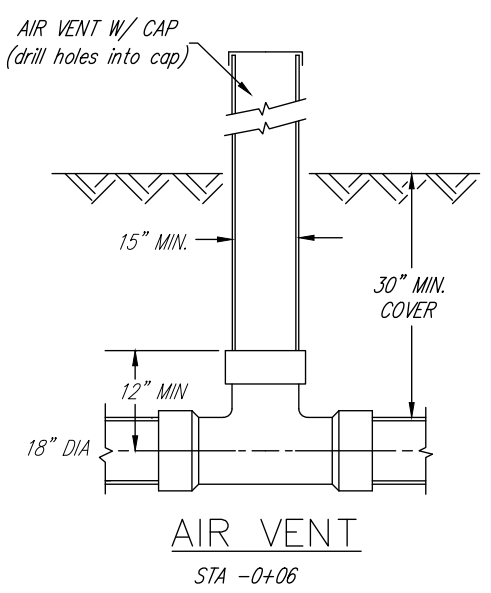
File No.
748B0523096

Drawing No.
2

Sheet 2 of 5



Alignment - South Pipeline PROFILE



COPY



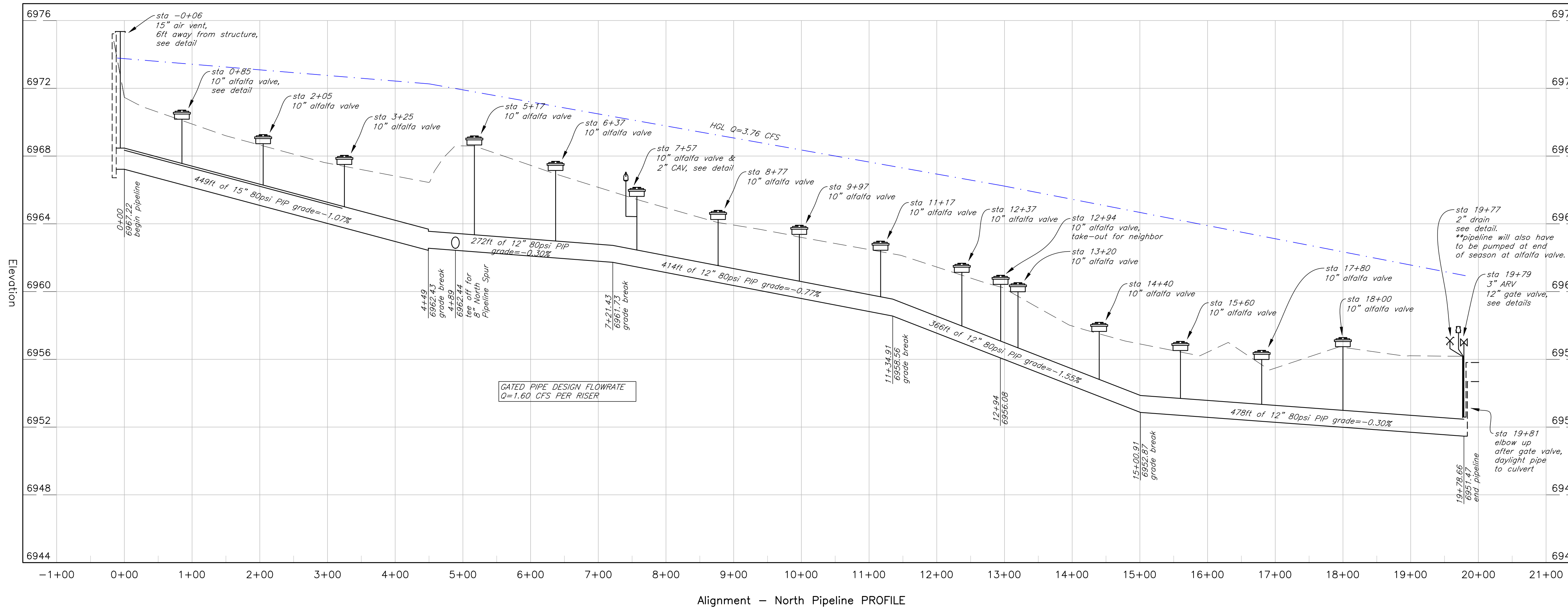
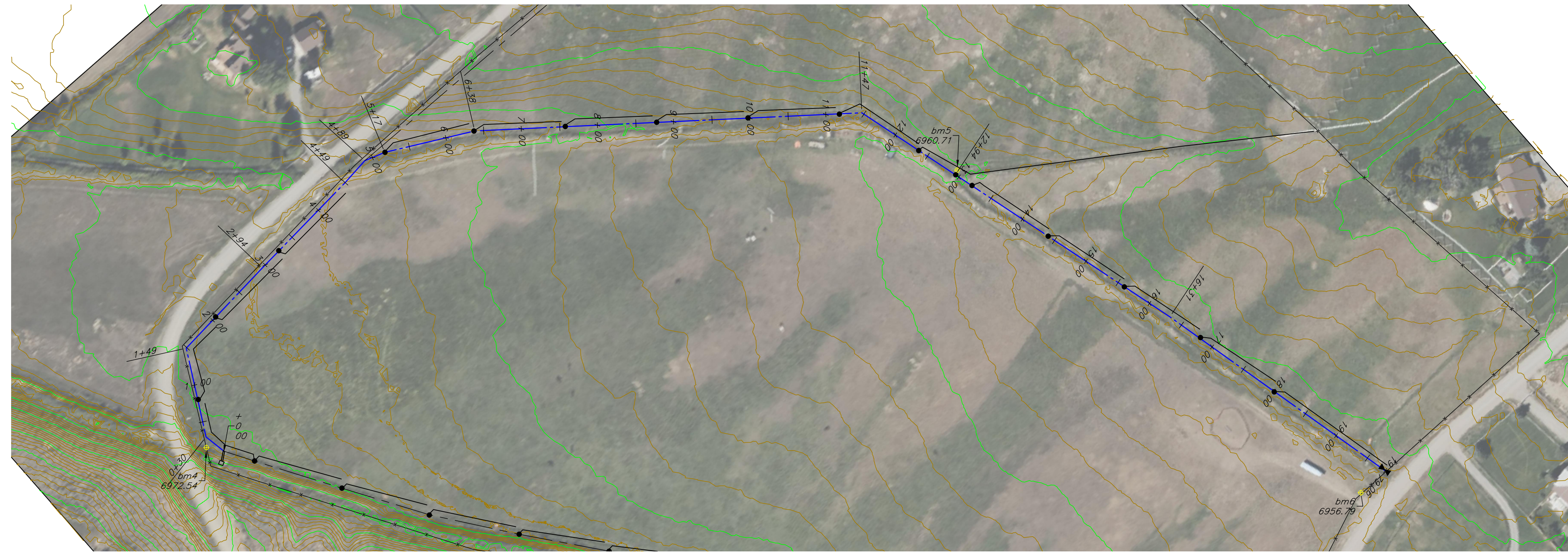
Date	12/11/23
Designed	frmm
Drawn	frmm
Checked	rm
Approved	frmm

Martin Bouliane Irrigation Project
South Pipeline Plan and Profile
C/N 2-6

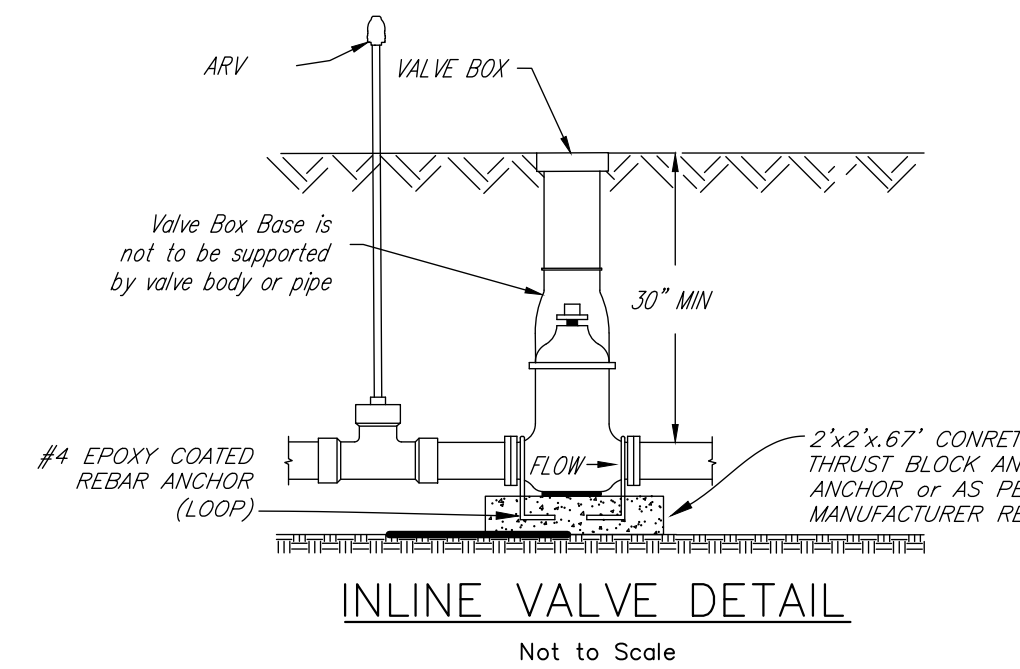
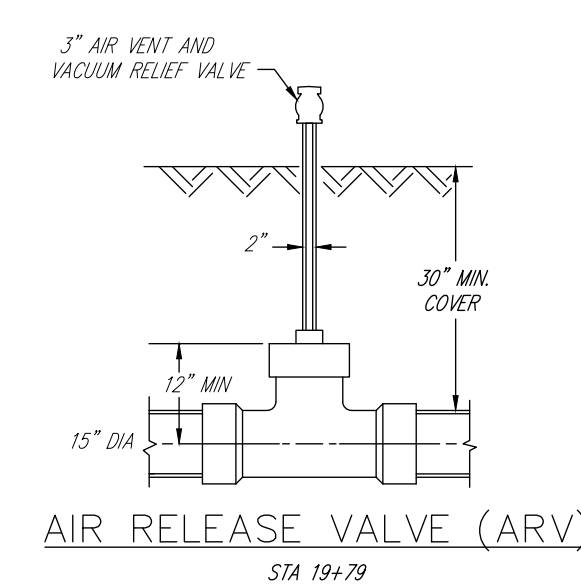
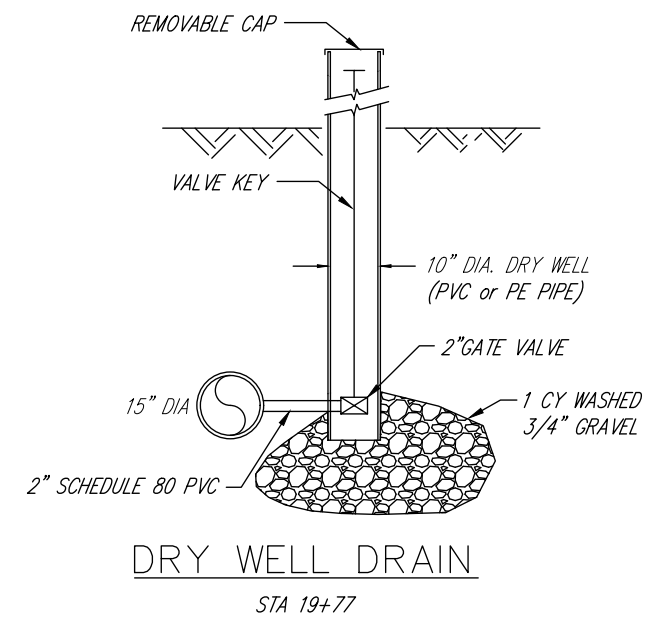
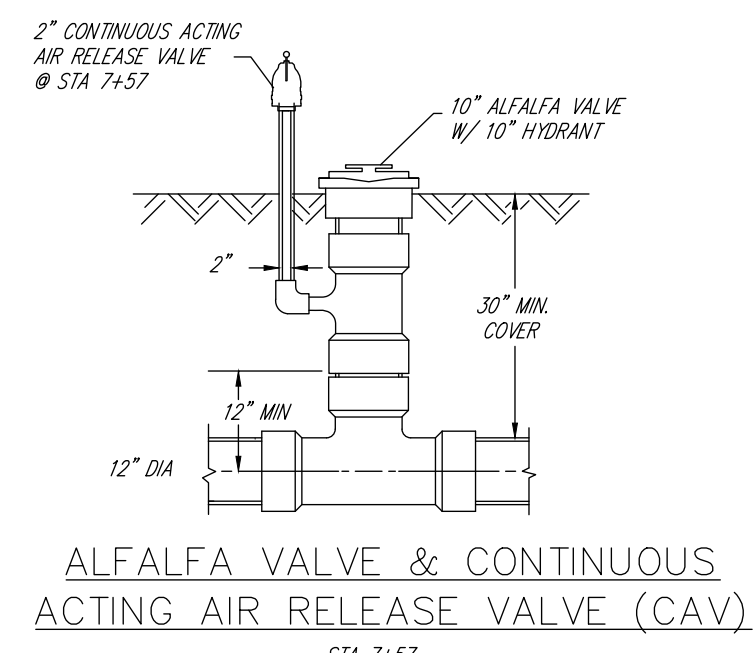
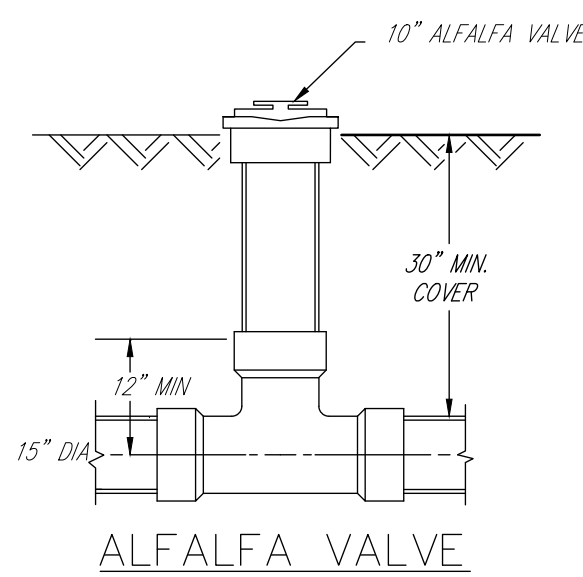
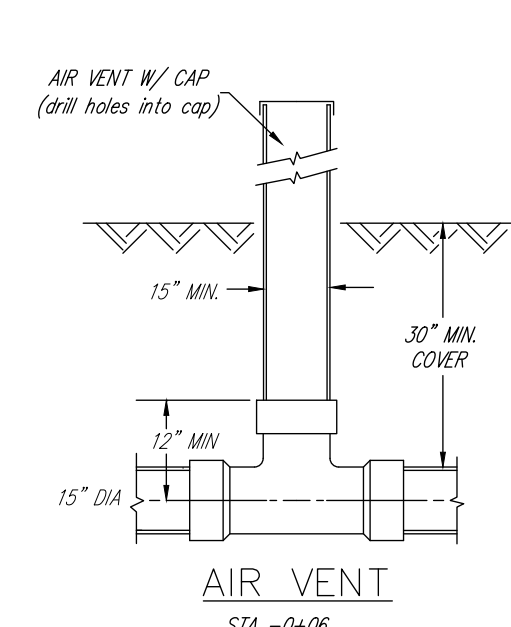
Morales Engineering & Consulting, LLC

File No. 748B0523096

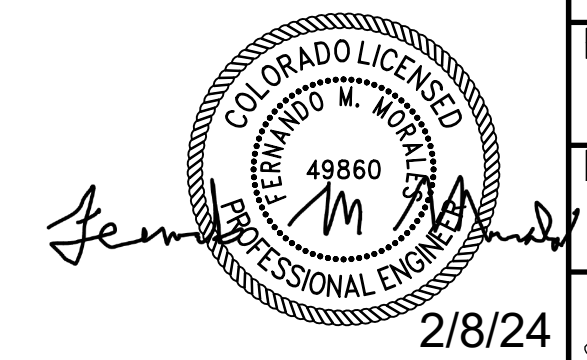
Drawing No. 2



Alignment - North Pipeline PROFILE



COPY



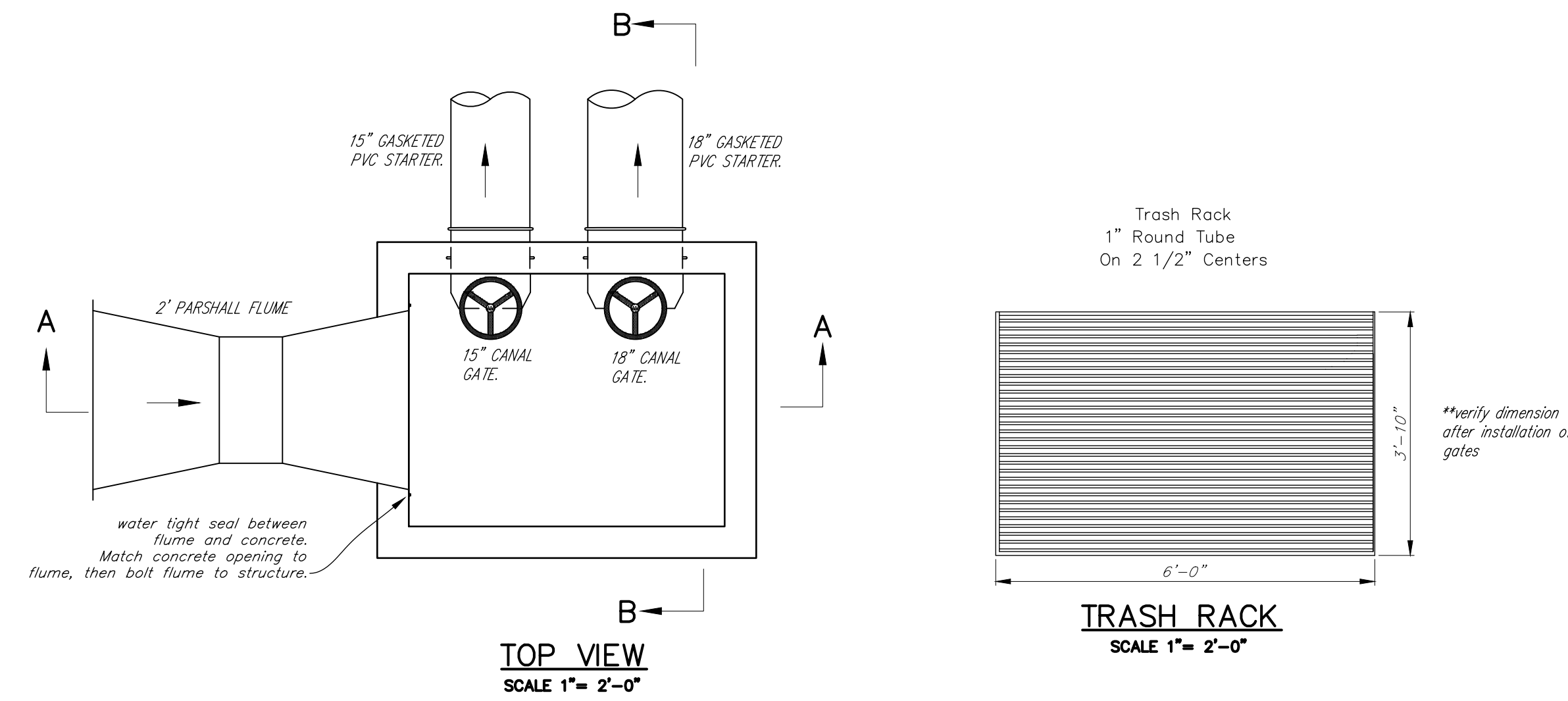
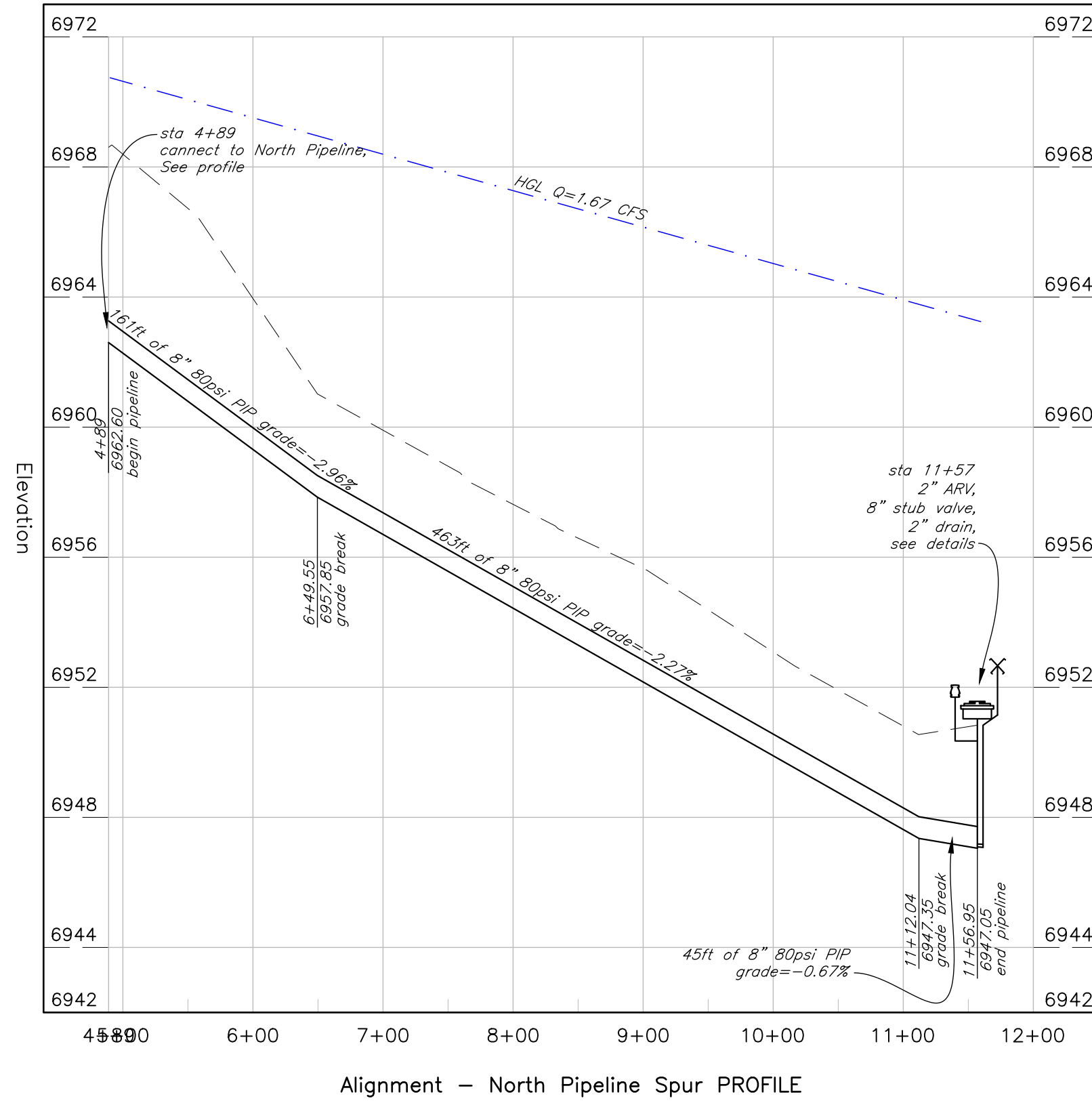
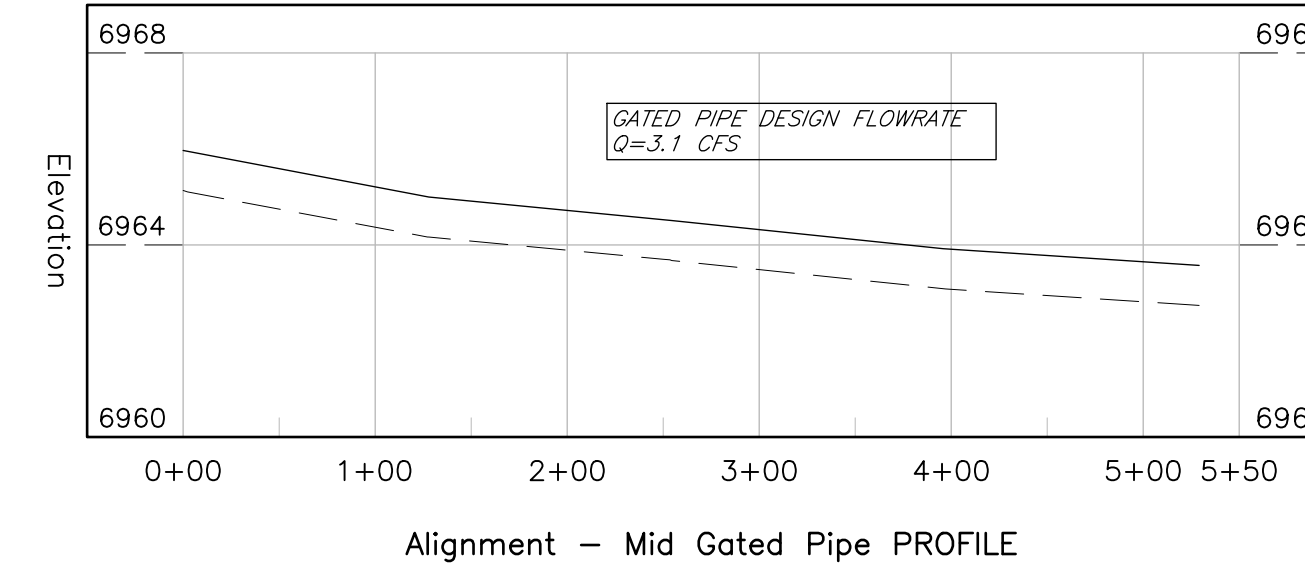
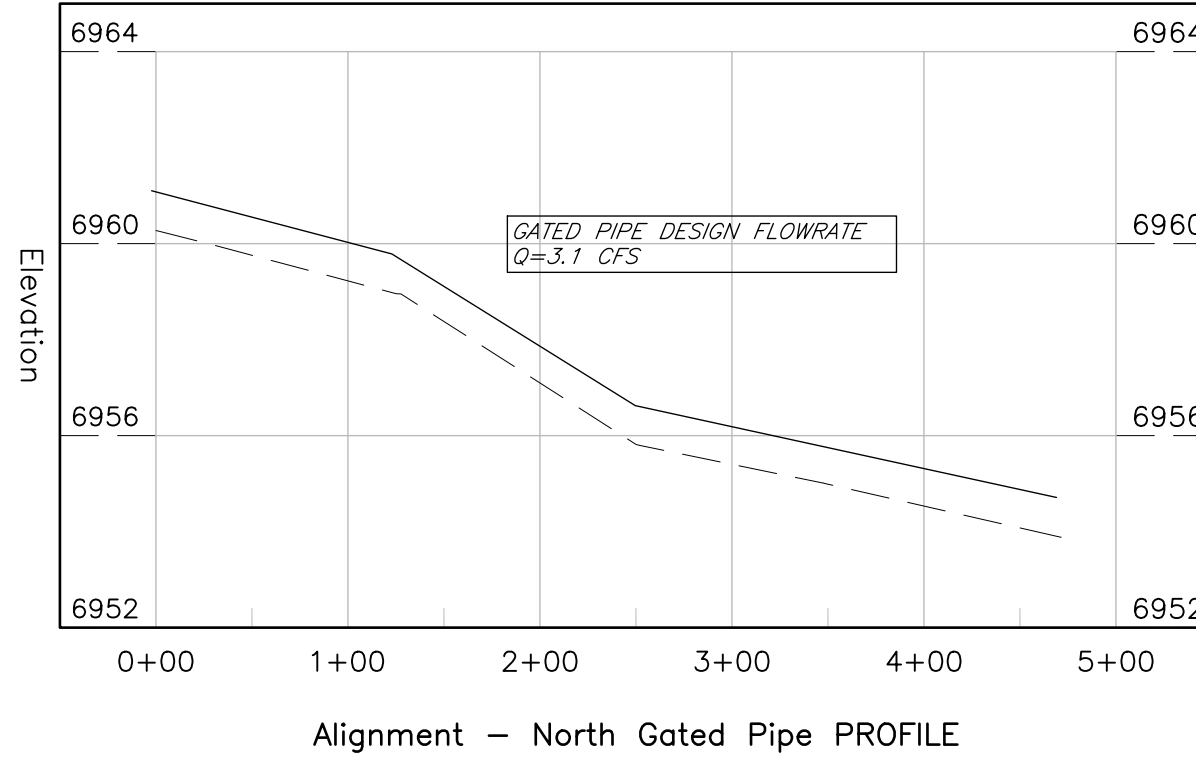
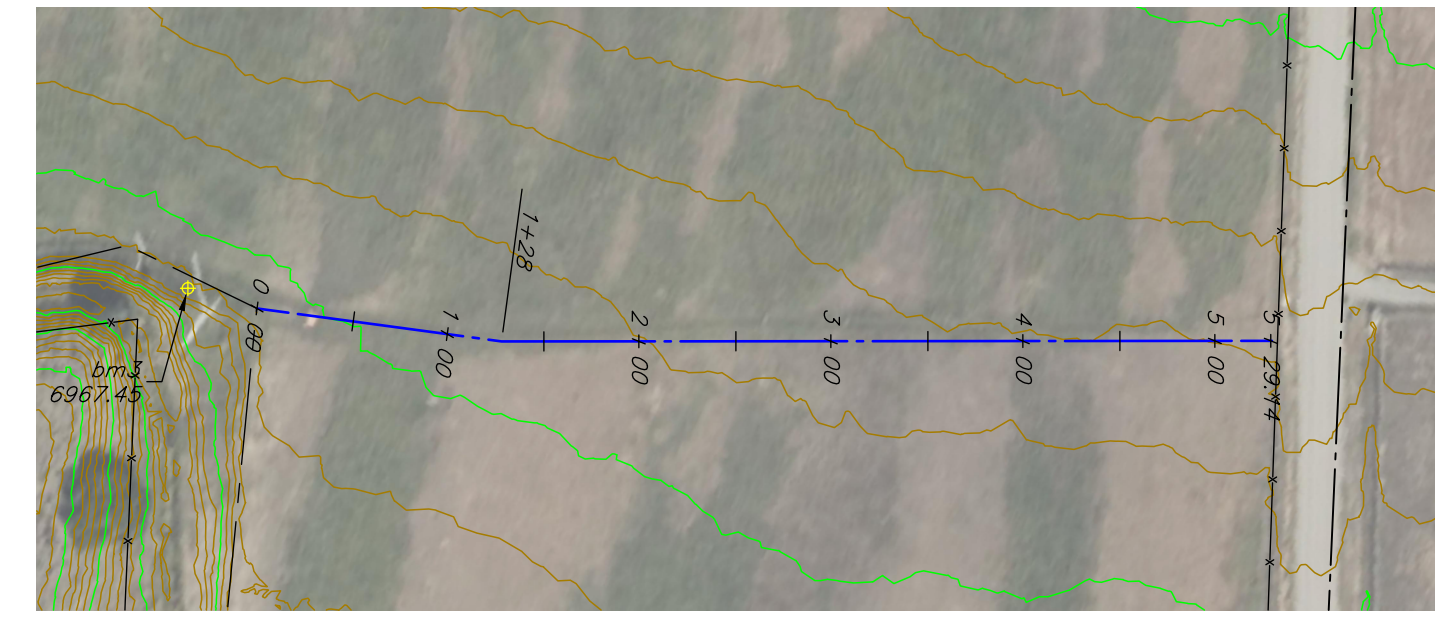
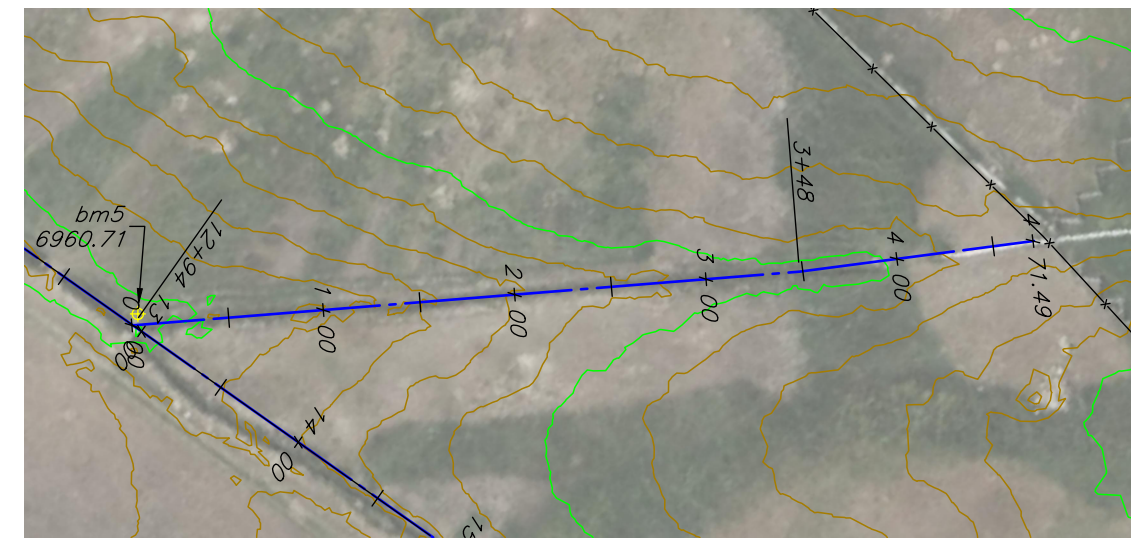
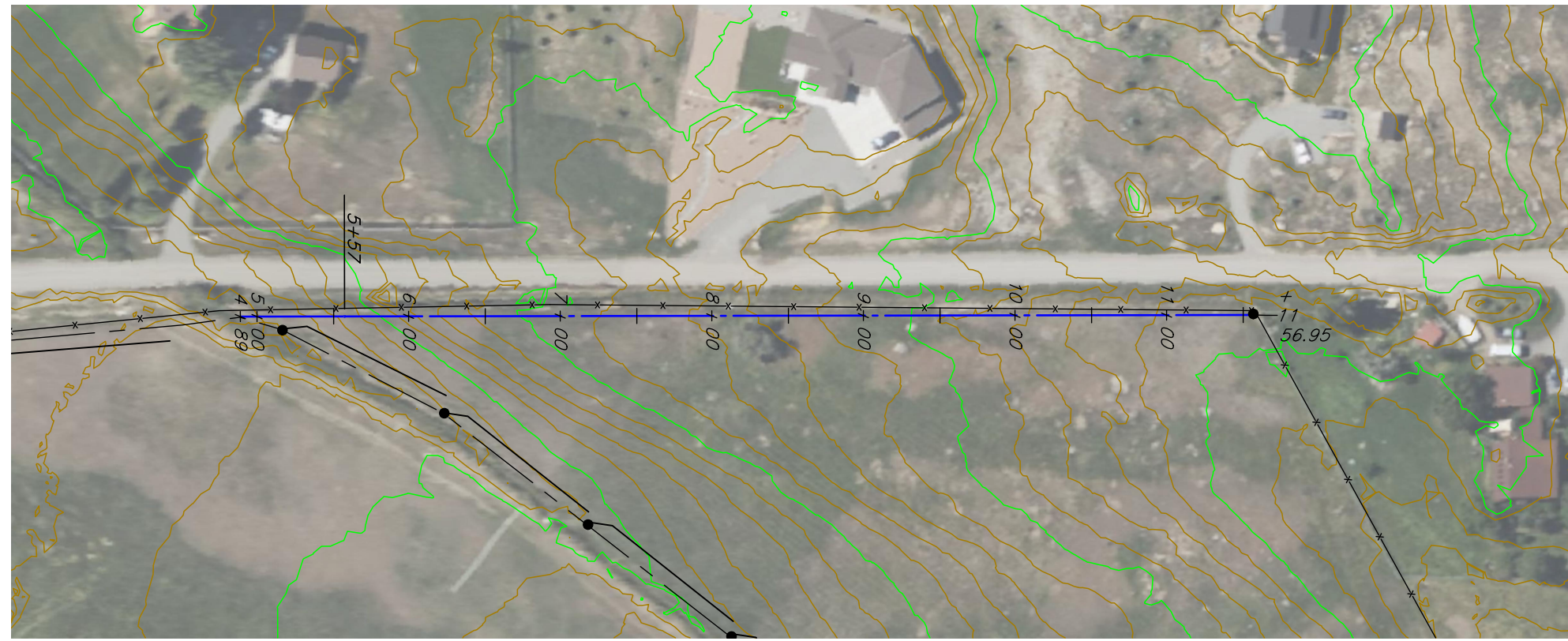
Date	12/11/23
Designed	frmm
Drawn	frmm
Checked	rm
Approved	frmm

Martin Bouliane Irrigation Project
North Pipeline Plan and Profile
C/N 2-6

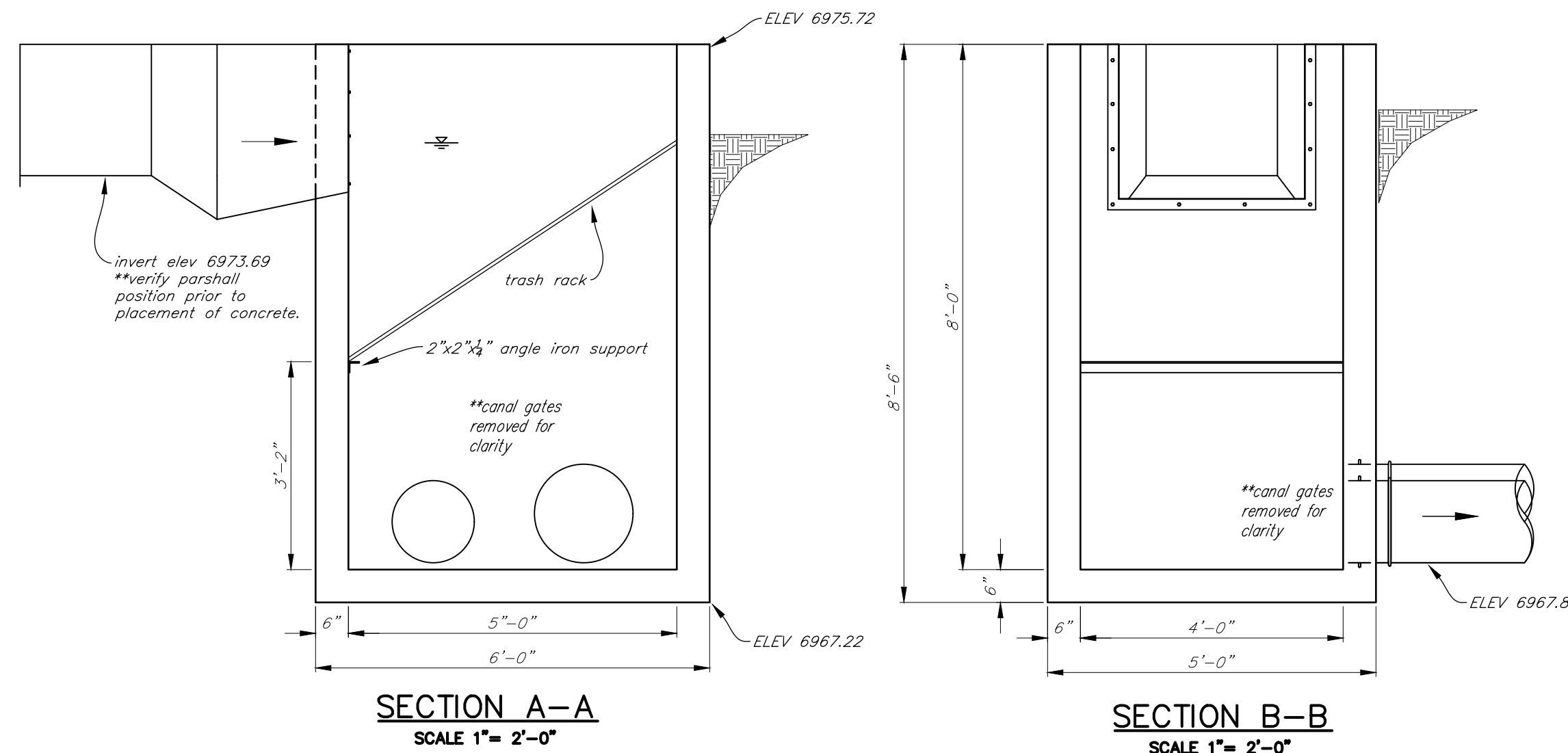
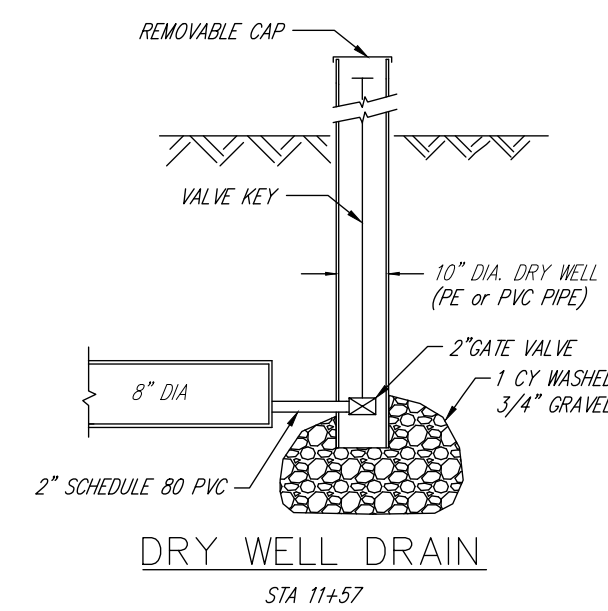
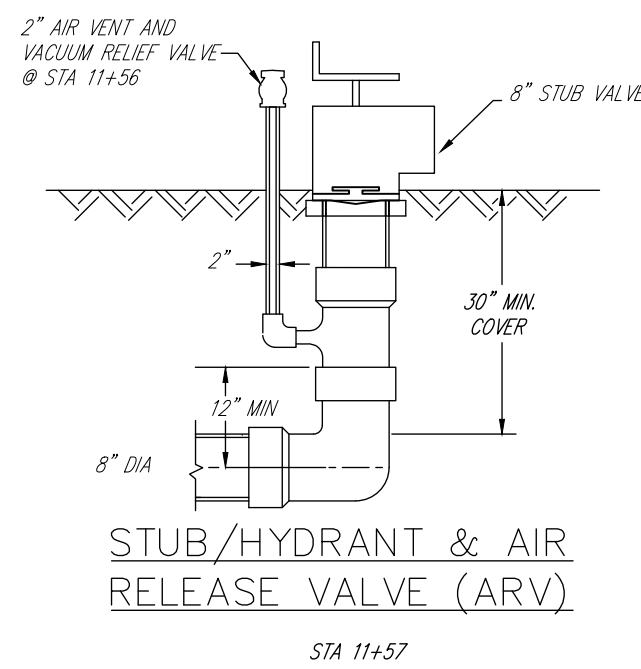
Morales Engineering & Consulting, LLC

File No. 748B0523096

Drawing No. 2

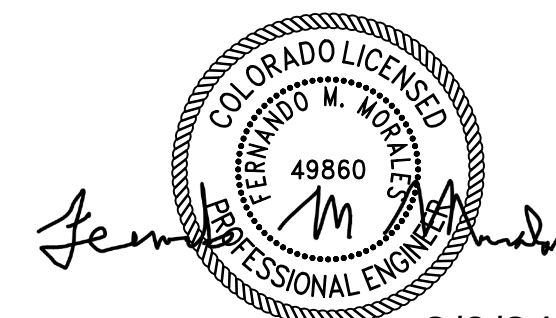


- CONCRETE STRUCTURES**
1. ALL WORK SHALL BE DONE ACCORDING TO PLANS, STANDARDS AND SPECIFICATIONS #587(STRUCTURE FOR WATER CONTROL).
 2. CONCRETE SHALL BE 4000 PSI (MIN), TYPE II CEMENT, SIZE #67 (3/4") AGGREGATE, AN AIR ENTRAINING ADMIXTURE OF 4-7% AND A SLUMP BETWEEN 3-5 INCHES.
 3. ALL CONCRETE SHALL BE CONSOLIDATED WITH A MECHANICAL VIBRATOR.
 4. ALL EXPOSED EDGES SHALL BE CHAMFERED. ALL SURFACES SHALL BE FINISHED CLEAN, SMOOTH AND NEAT.
 5. FORM TIES SHALL BE 3/4" SNAP CONES.
 6. THE STRUCTURE SHALL BE COATED WITH WHITE CURING COMPOUND AND PROTECTED FROM FREEZING FOR ENTIRE CURING PERIOD OF 5 DAYS. CONCRETE SHALL BE ALLOWED 5 DAYS TO CURE BEFORE BACKFILL IS PLACED.
 7. REPAIRS AND CONES FILLED IMMEDIATELY AFTER THE FORMS ARE STRIPPED. ANY MAJOR REPAIRS SHALL BE ACCOMPLISHED 48 HOURS AFTER THE POUR.
 8. MINIMUM REINFORCING SHALL BE #4 REBAR ON 10" CENTERS, OR EQUAL, OR OTHERWISE SHOWN. REINFORCING BARS FOR SINGLE MATS SHALL BE PLACED IN THE CENTER OF THE SECTION. THE BARS SHALL BE COLD BENT AND CONTINUOUS OR SPLICED AROUND CORNERS AND BETWEEN WALLS AND FLOOR. STEEL SPLICES SHALL BE 16" FOR #4 BAR.
 9. ANY DISCREPANCIES BETWEEN THE SPECIFICATIONS AND DRAWINGS SHALL BE REFERRED TO THE APPROVING ENGINEER FOR CLARIFICATION.



Material Requirements:
 $[(8.5 \times 5 \times 6') - (8 \times 4 \times 5') - (2.81 \times 2.33 \times 5)] / 27 = 3.4 \text{ cy reinforced concrete}$

COPY



Date	12/11/23
Designed	frmm
Drawn	frmm
Checked	rm
Approved	frmm

Martin Bouliane Irrigation Project
 North Spur Pipe & Inlet Structure
 CIN 2-6
 Ouray County
 Ridgway, CO

Morales Engineering & Consulting, LLC

File No. 748B0523096
 Drawing No. 2
 Sheet 5 of 5

2/8/24