

VILLAGE DISTRICT OF EIDELWEISS - CONTRACT 2 PWS 1461010 - REINACH 120,000 GALLON TANK AND WATER SYSTEM IMPROVEMENTS

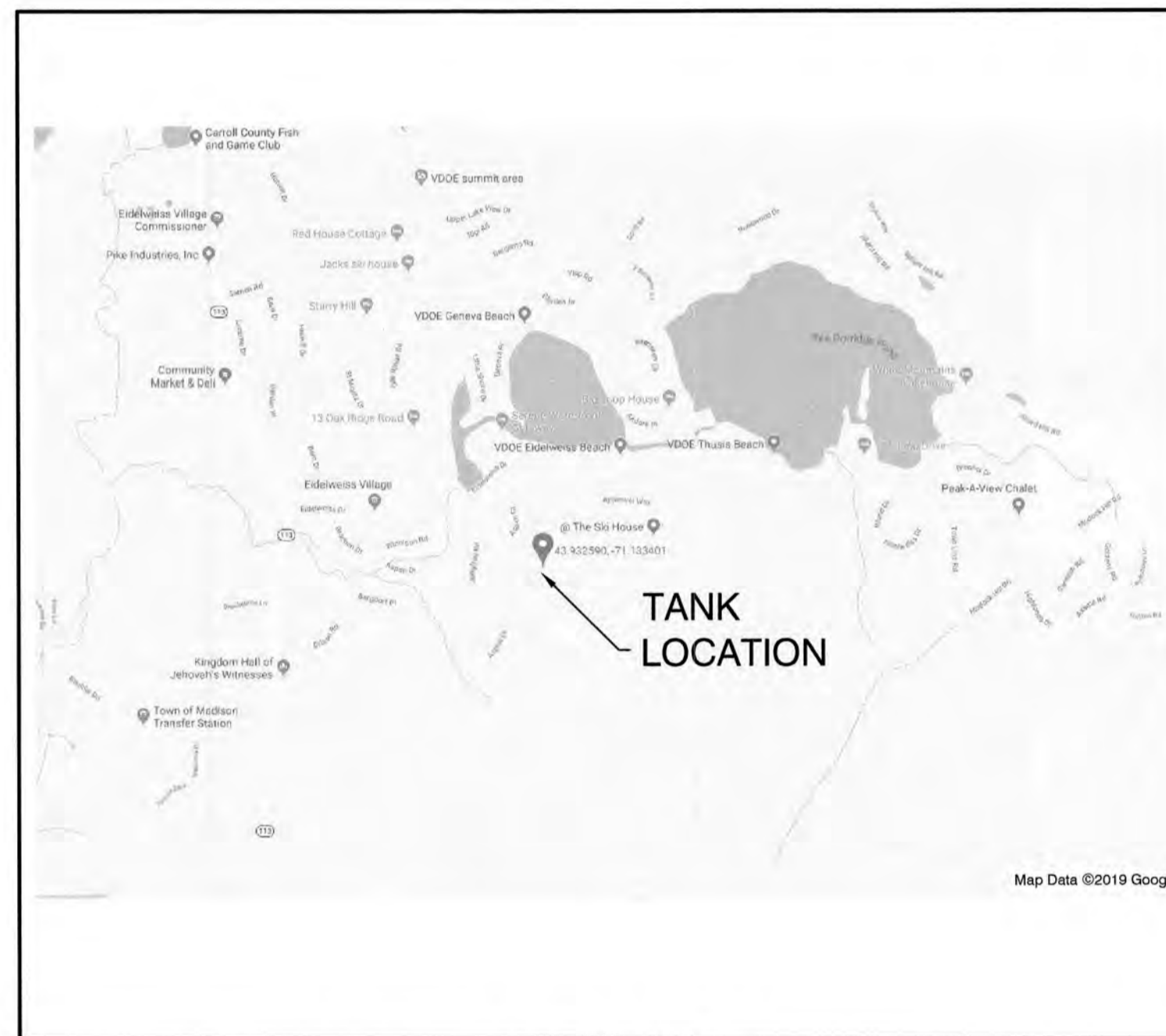


Know what's below
811 before you dig

TAX MAP 102, LOT 14
1680 CONWAY ROAD, MADISON, NH

GENERAL LEGEND

EXISTING	PROPOSED	DESCRIPTION
---	---	PROPERTY LINES
~	~	FRESHWATER WETLANDS LINE
---	---	TREE LINE
100	100	MAJOR CONTOUR
98	98	MINOR CONTOUR
---	---	EDGE OF PAVEMENT
X	X	SILT FENCE
D	D	DRAINAGE LINE
W	W	WATER LINE
WS	WS	WATER SERVICE
OHE	OHE	OVERHEAD ELECTRIC
UGE	UGE	UNDERGROUND ELECTRIC
100x0	100x0	THRUST BLOCK
TP-1	TP-1	SPOT GRADE
⊕	⊕	BENCHMARK (TBM)
⊕	⊕	WELL
⊕	⊕	TEST PIT
⊕	⊕	UTILITY POLE
⊕	⊕	HYDRANT
⊕	⊕	WATER GATE
⊕	⊕	WATER SHUT OFF
⊕	⊕	REDUCER
→	→	DRAINAGE FLOW DIRECTION
▨	▨	FRESHWATER WETLANDS
▨	▨	STABILIZED CONSTRUCTION ENTRANCE
▨	▨	GRAVEL



LOCUS MAP
SCALE 1" = 2000'

SHEET INDEX

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D1-D3	DETAIL SHEETS
E1	ELECTRICAL DETAILS
E2	EROSION & SEDIMENT CONTROL DETAILS

CIVIL ENGINEER / SURVEYOR
JONES & BEACH ENGINEERS, INC.
85 PORTSMOUTH AVENUE
PO BOX 219
STRATHAM, NH 03885
(603) 772-4746
CONTACT: CHRISTOPHER ALBERT
EMAIL: CALBERT@JONESANDBEACH.COM

ELECTRICAL ENGINEER
LEE F. CARROLL, PE
ELECTRICAL CONSULTANTS
1 MADISON AVE. P.O. BOX 357
GORHAM NH 03581-0357
603-466-5065
EMAIL: LCARROLL@NE.RR.COM

ELECTRIC
EVERSOURCE ENERGY
74 OLD DOVER ROAD
ROCHESTER, NH 03867
(603) 555-5334
CONTACT: LINDA FARRAR

WATER SYSTEM OPERATOR
SIMPLY WATER
ATTN: IAN HAYES
PO BOX 972
GLEN, NH 03838
(603) 986-5346
EMAIL: IAN@SIMPLYWATERNH.COM

OWNER
VILLAGE DISTRICT OF EIDELWEISS
ATTN: ADAM LEISER, COMMISSIONER
1680 CONWAY ROAD, PO BOX 1027
MADISON, NH 03849
(603) 367-9022
EMAIL: OFFICE@VDOE-NH.ORG

PLC-TELEMETRY SUPPLIER
ELECTRICAL INSTALLATIONS
ATTN: TOM THERLAN
397 WHITTIER HWY
MOULTONBOROUGH, NH
(603) 520-0516
EMAIL: TOM.THERLAN@EII-HQ.COM

TANK MANUFACTURER
DN TANKS
ATTN: COREY MYERS, NEW ENGLAND
REGIONAL MANAGER
11 TEAL ROAD
WAKEFIELD, MA 01880
(781) 224-5119
COREY.MYERS@DNTANKS.COM

PUBLIC WORKS DEPARTMENT
VILLAGE DISTRICT OF EIDELWEISS
ATTN: KELLY ROBITAIL
1680 CONWAY ROAD, PO BOX 1027
MADISON, NH 03849
(603) 651-6070
DPW@VDOE-NH.ORG

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0	2/3/20	ISSUED CONTRACT 2	PSL

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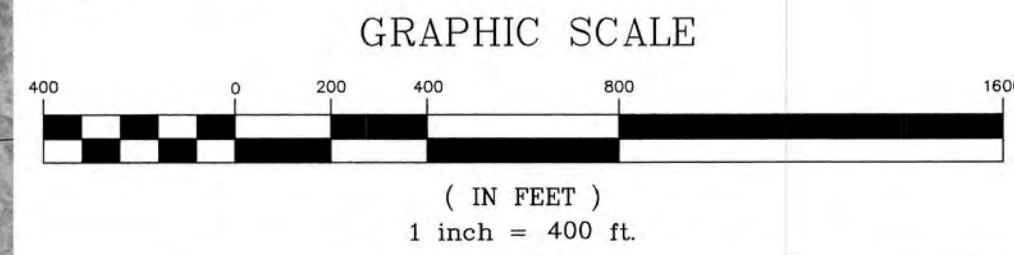
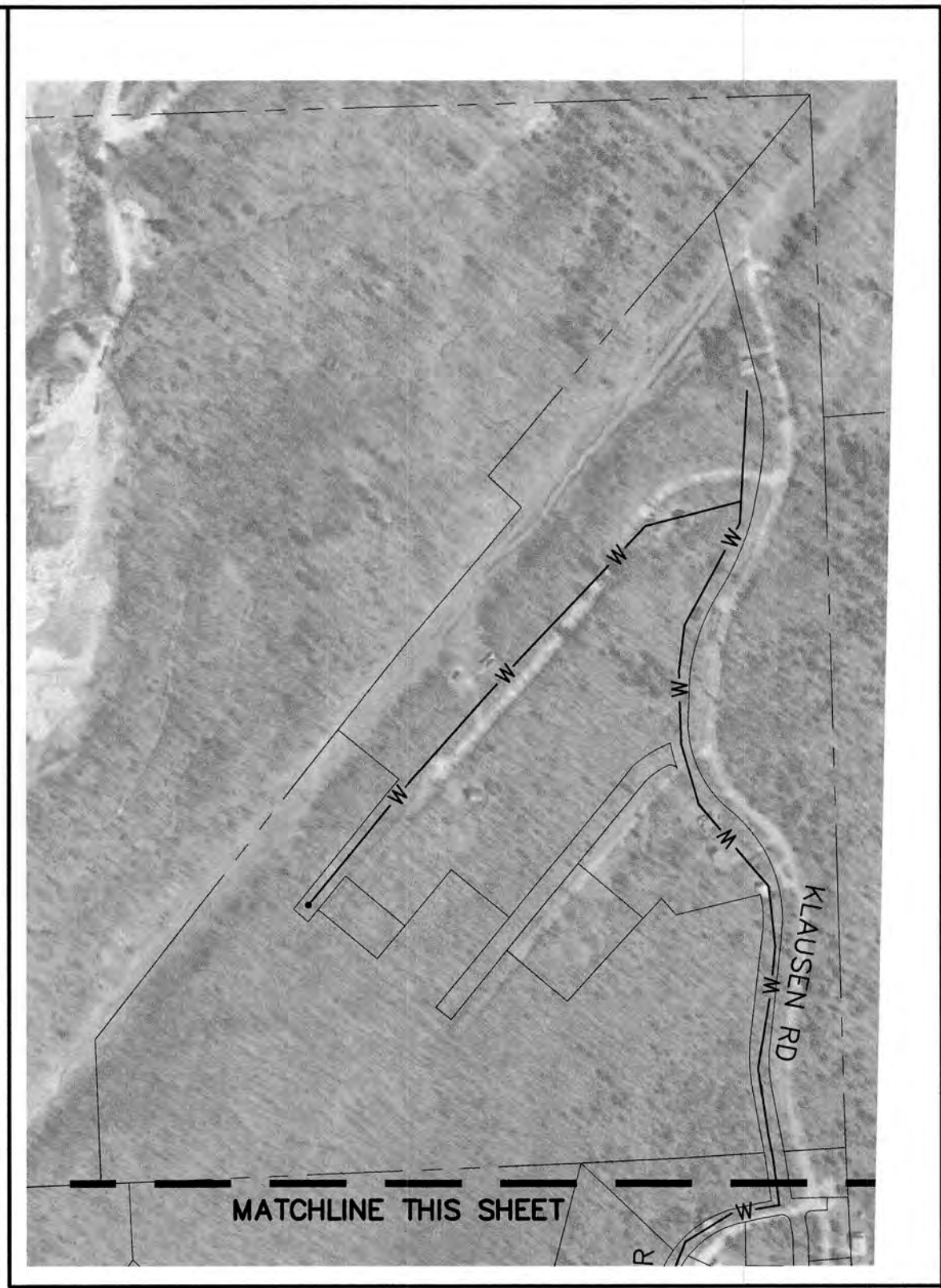
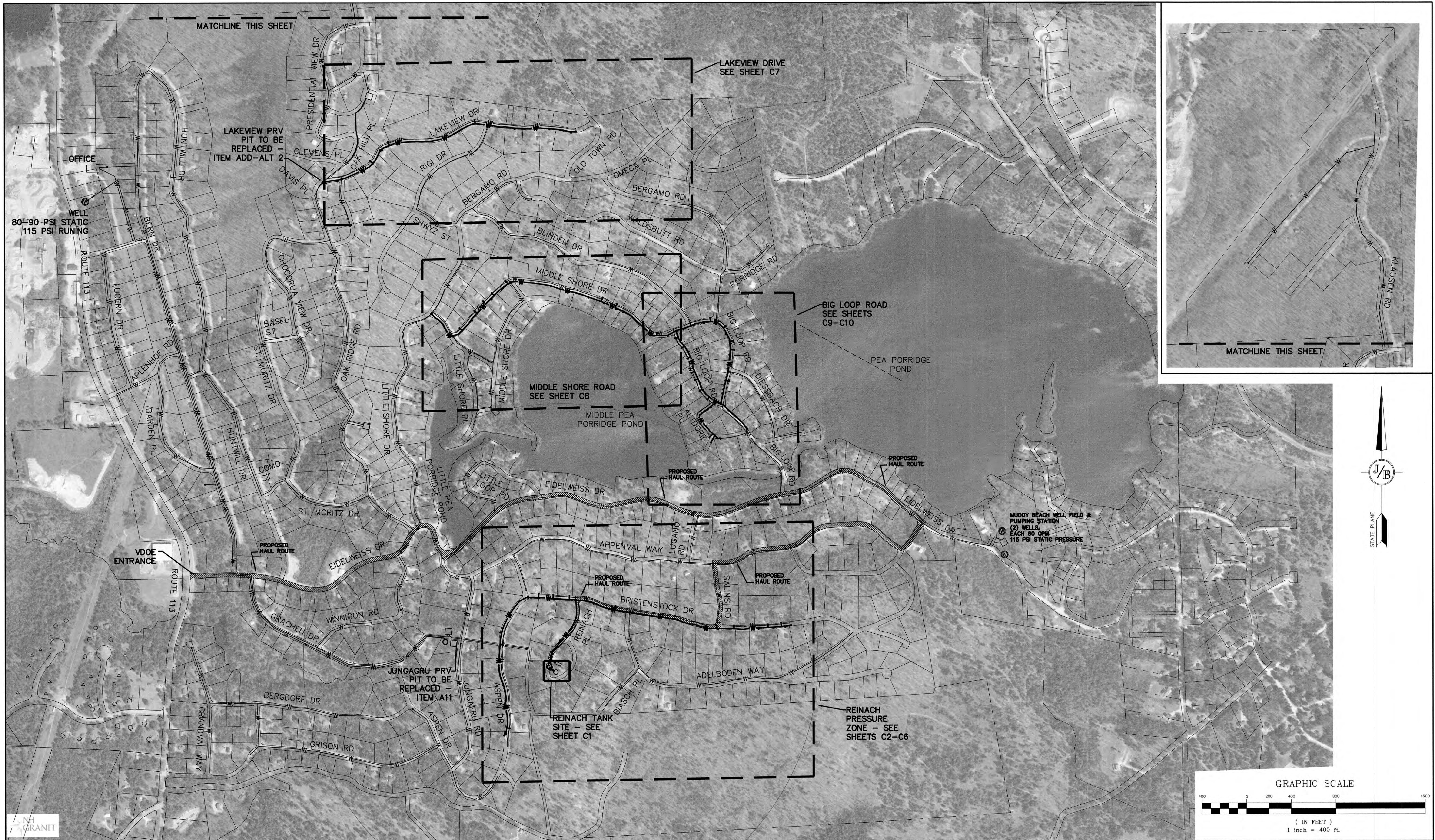
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Civil Engineering Services

603-772-4746
FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

Plan Name:	COVER SHEET
Project:	VILLAGE DISTRICT OF EIDELWEISS CONTRACT 2 - WATER SYSTEM UPGRADES
Owner of Record:	ADAM LEISER, COMMISSIONER 1680 CONWAY ROAD, PO BOX 1027, MADISON, NH 03849

DRAWING No.	CS
SHEET 1 OF 18	JBE PROJECT NO. 19078



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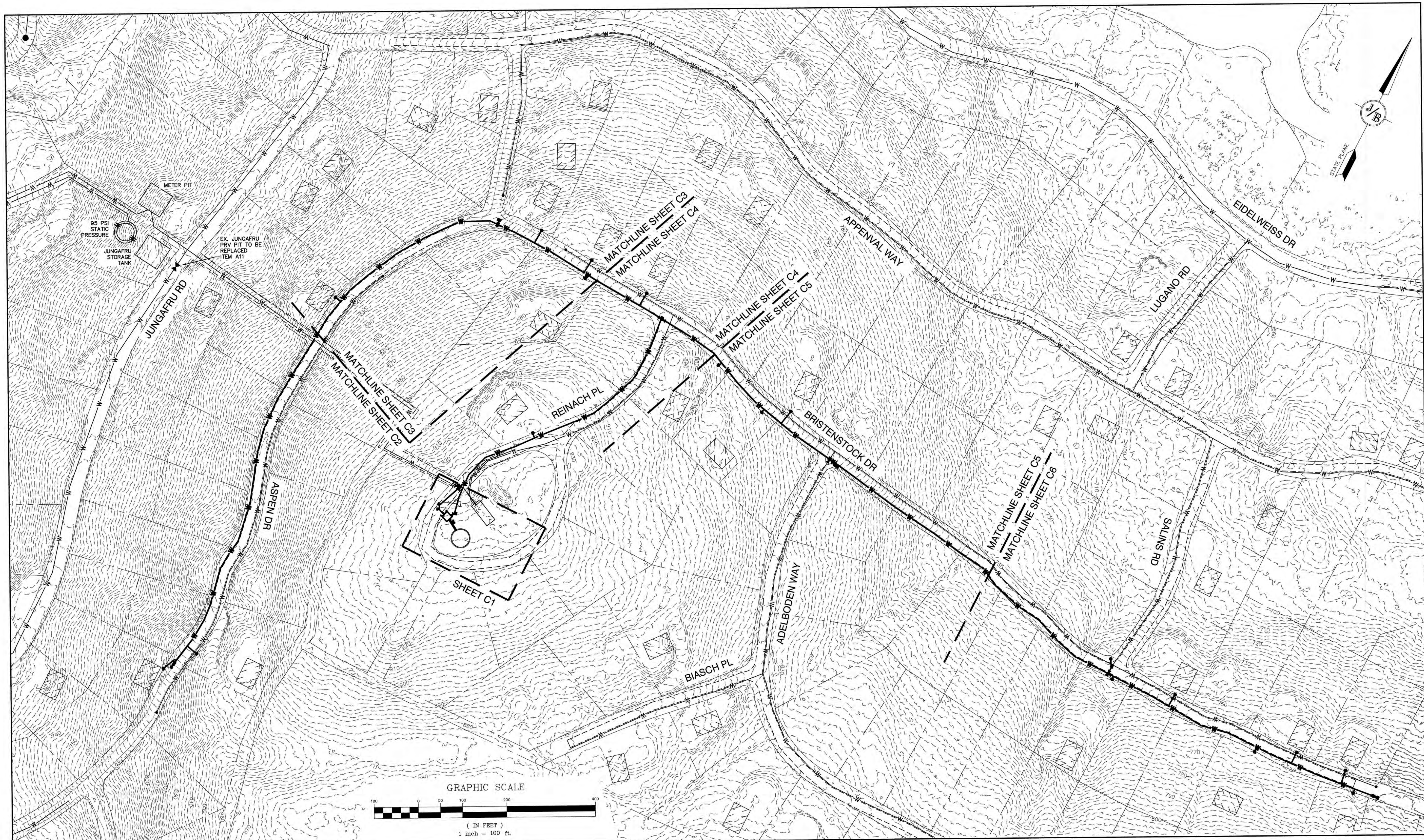


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 603-772-4746 FAX: 603-772-0227
 E-MAIL: JBE@JONESANDBEACH.COM

Plan Name: **OVERVIEW PLAN**
 Project: **VILLAGE DISTRICT OF IDELWEISS CONTRACT 2 - WATER SYSTEM UPGRADES**
 Owner of Record: **ADAM LEISER, COMMISSIONER**
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DRAWING No. **OV1**
 SHEET 2 OF 18
 JBE PROJECT NO. 19078



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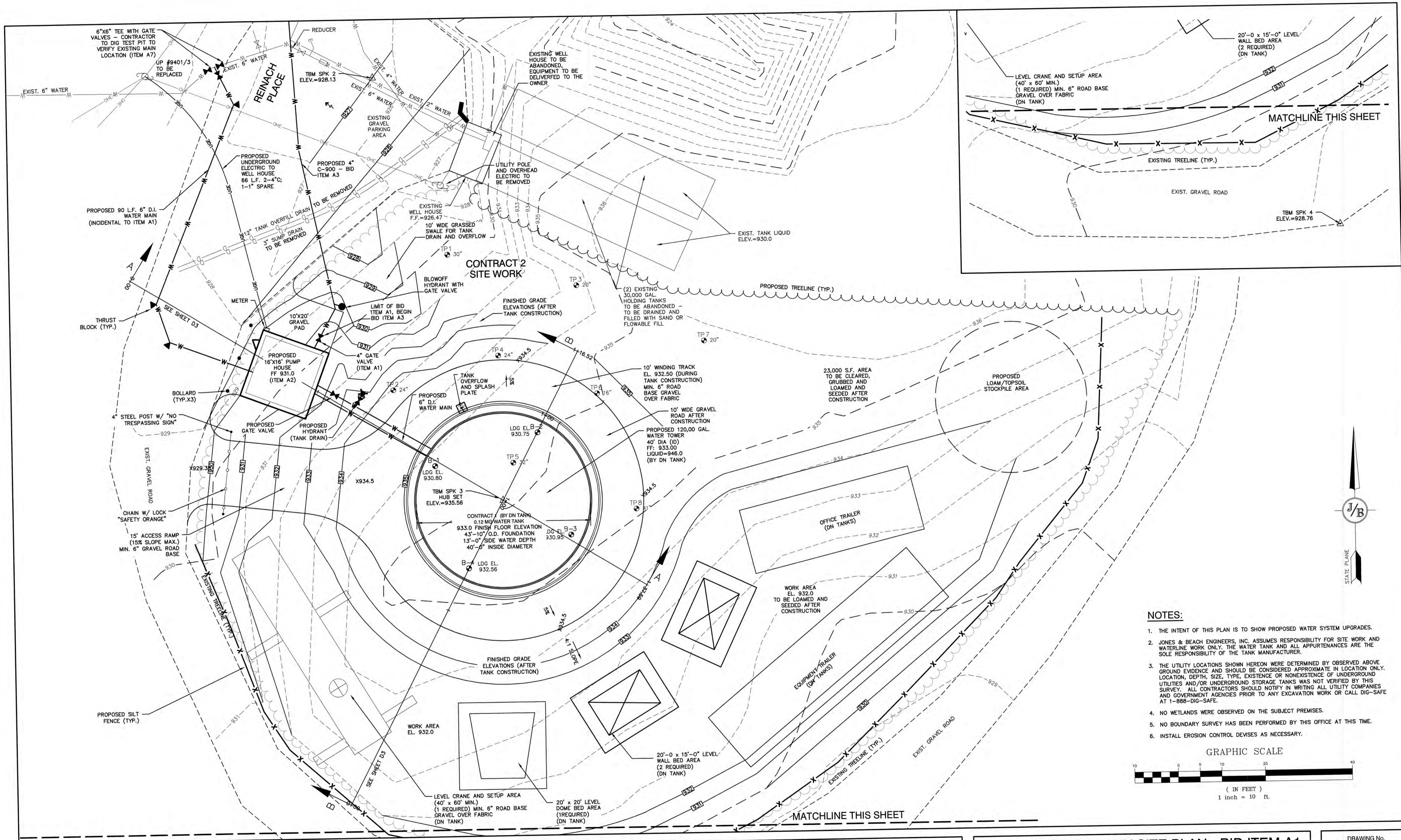
Plan Name: **REINACH PRESSURE ZONE OVERVIEW**

Project: **VILLAGE DISTRICT OF EIDELWEISS
 CONTRACT 2 - WATER SYSTEM UPGRADES**

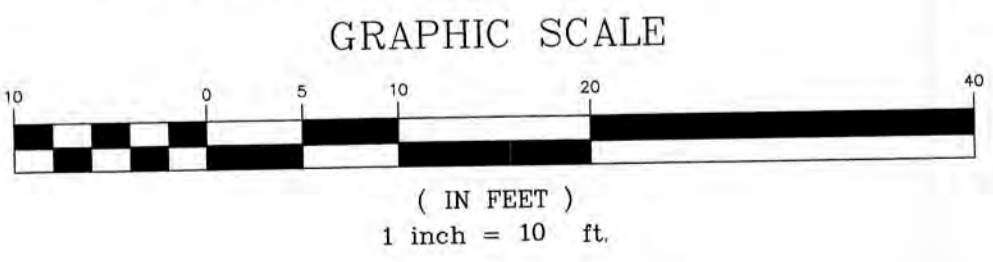
Owner of Record: **ADAM LEISER, COMMISSIONER
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DRAWING No.
OV2

SHEET 3 OF 18
 JBE PROJECT NO. 19078



- NOTES:**
1. THE INTENT OF THIS PLAN IS TO SHOW PROPOSED WATER SYSTEM UPGRADES.
 2. JONES & BEACH ENGINEERS, INC. ASSUMES RESPONSIBILITY FOR SITE WORK AND WATERLINE WORK ONLY. THE WATER TANK AND ALL APPURTENANCES ARE THE SOLE RESPONSIBILITY OF THE TANK MANUFACTURER.
 3. THE UTILITY LOCATIONS SHOWN HEREON WERE DETERMINED BY OBSERVED ABOVE GROUND EVIDENCE AND SHOULD BE CONSIDERED APPROXIMATE IN LOCATION ONLY. LOCATION, DEPTH, SIZE, TYPE, EXISTENCE OR NONEXISTENCE OF UNDERGROUND UTILITIES AND/OR UNDERGROUND STORAGE TANKS WAS NOT VERIFIED BY THIS SURVEY. ALL CONTRACTORS SHOULD NOTIFY IN WRITING ALL UTILITY COMPANIES AND GOVERNMENT AGENCIES PRIOR TO ANY EXCAVATION WORK OR CALL DIG-SAFE AT 1-888-DIG-SAFE.
 4. NO WETLANDS WERE OBSERVED ON THE SUBJECT PREMISES.
 5. NO BOUNDARY SURVEY HAS BEEN PERFORMED BY THIS OFFICE AT THIS TIME.
 6. INSTALL EROSION CONTROL DEVICES AS NECESSARY.



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Plan Name: **REINACH TANK SITE PLAN - BID ITEM A1**

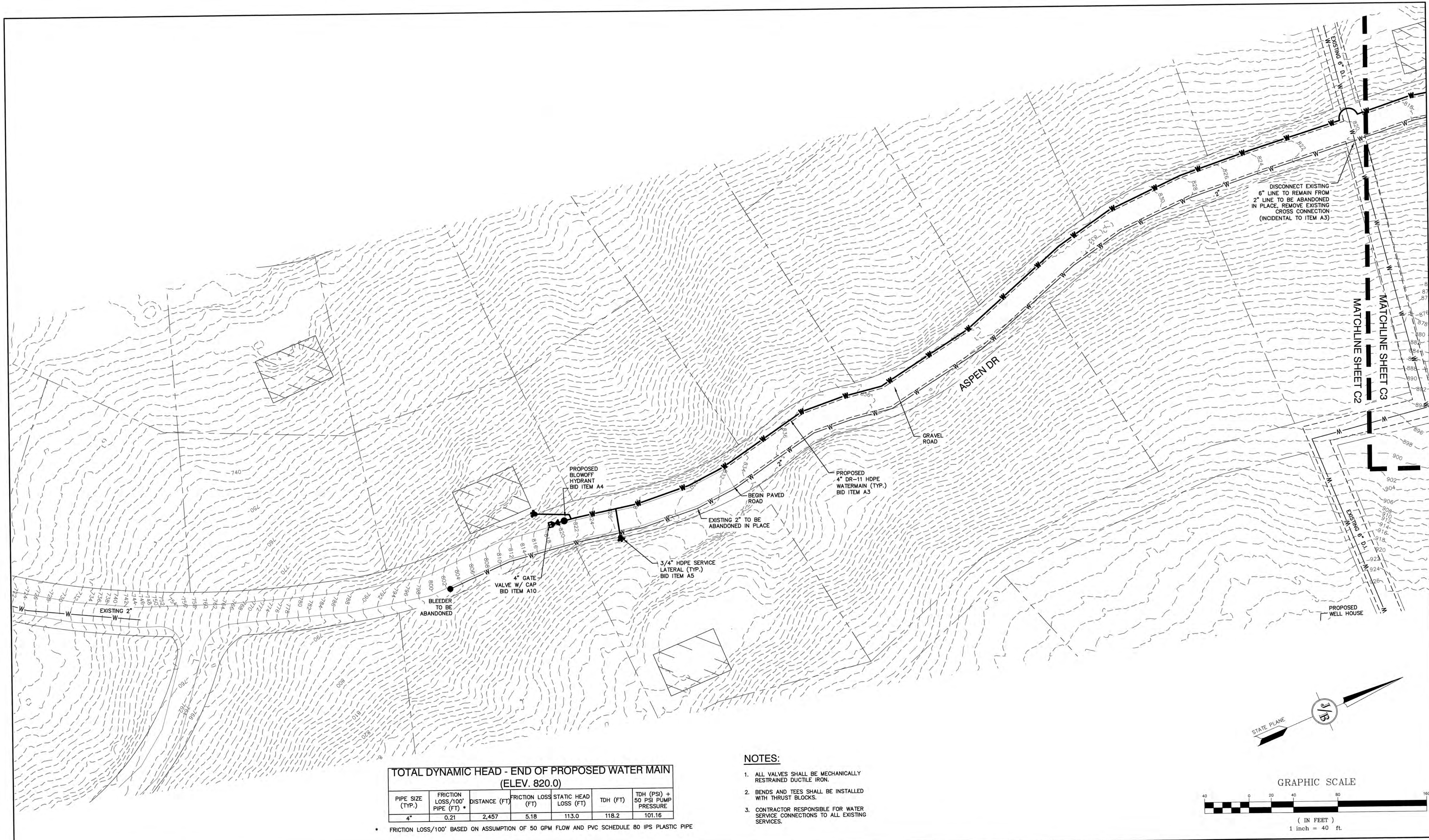
Project: **VILLAGE DISTRICT OF EIDELWEISS CONTRACT 2 - WATER SYSTEM UPGRADES**

Owner of Record: **ADAM LEISER, COMMISSIONER**
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DRAWING No.

C1

SHEET 4 OF 18
 JBE PROJECT NO. 19078



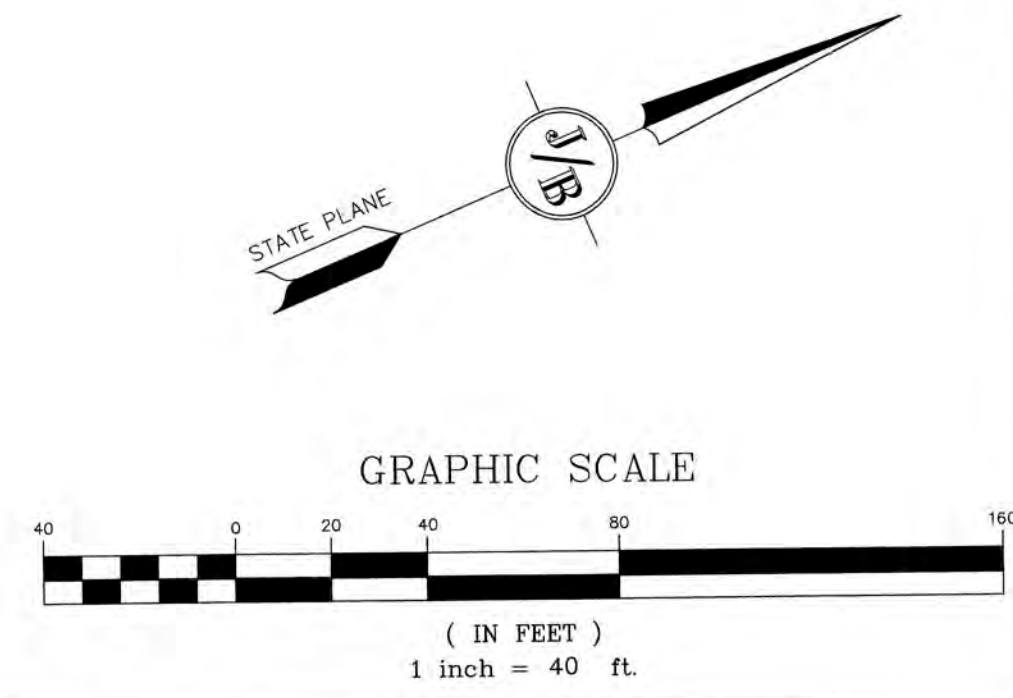
TOTAL DYNAMIC HEAD - END OF PROPOSED WATER MAIN (ELEV. 820.0)

PIPE SIZE (TYP.)	FRICTION LOSS/100' PIPE (FT) *	DISTANCE (FT)	FRICTION LOSS (FT)	STATIC HEAD LOSS (FT)	TDH (FT)	TDH (PSI) + 50 PSI PUMP PRESSURE
4"	0.21	2,457	5.18	113.0	118.2	101.16

* FRICTION LOSS/100' BASED ON ASSUMPTION OF 50 GPM FLOW AND PVC SCHEDULE 80 IPS PLASTIC PIPE

NOTES:

1. ALL VALVES SHALL BE MECHANICALLY RESTRAINED DUCTILE IRON.
2. BENDS AND TEES SHALL BE INSTALLED WITH THRUST BLOCKS.
3. CONTRACTOR RESPONSIBLE FOR WATER SERVICE CONNECTIONS TO ALL EXISTING SERVICES.



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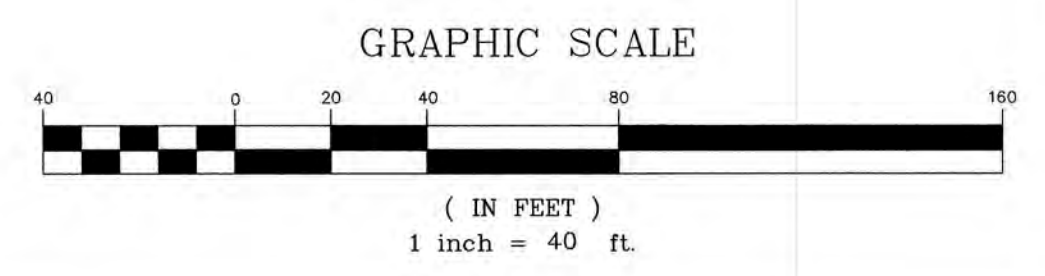
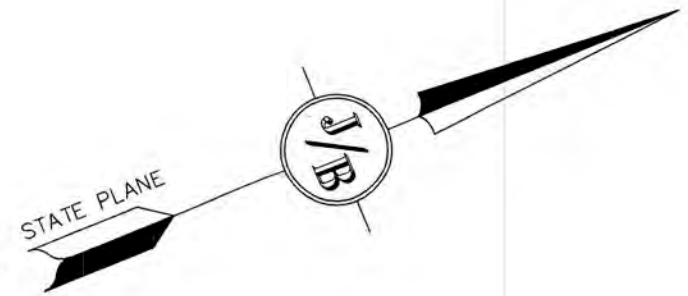
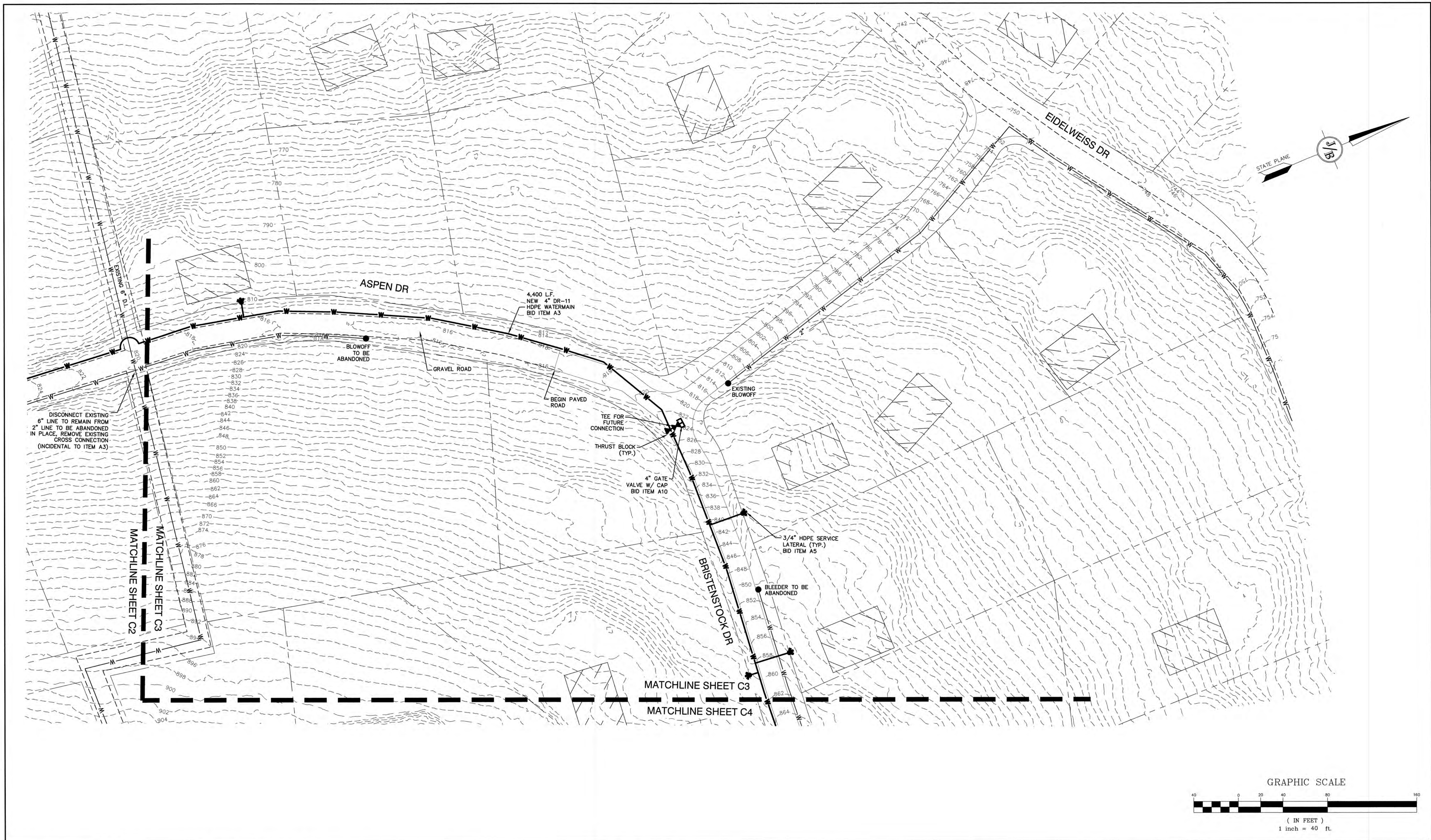


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 603-772-4746 FAX: 603-772-0227
 E-MAIL: JBE@JONESANDBEACH.COM

Plan Name: **REINACH PRESSURE ZONE**
 Project: **VILLAGE DISTRICT OF EIDELWEISS CONTRACT 2 - WATER SYSTEM UPGRADES**
 Owner of Record: **ADAM LEISER, COMMISSIONER 1680 CONWAY ROAD, PO BOX 1027, MADISON, NH 03849**

DRAWING No. **C2**
 SHEET 5 OF 18
 JBE PROJECT NO. 19078



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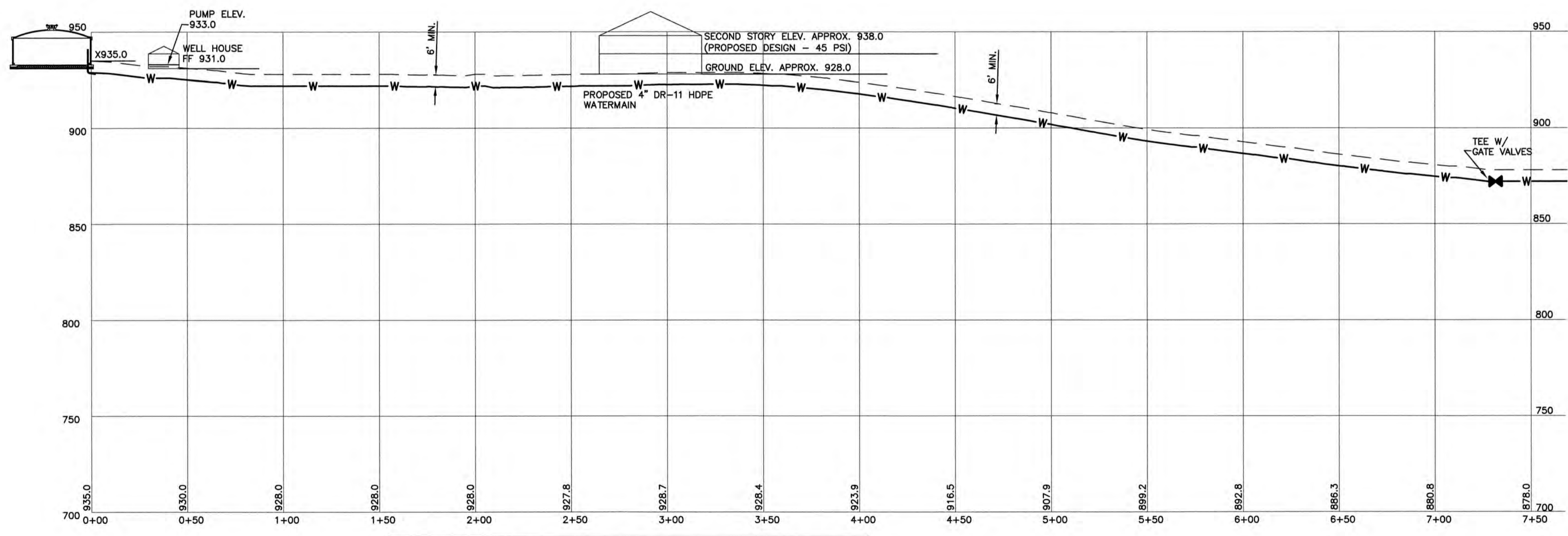
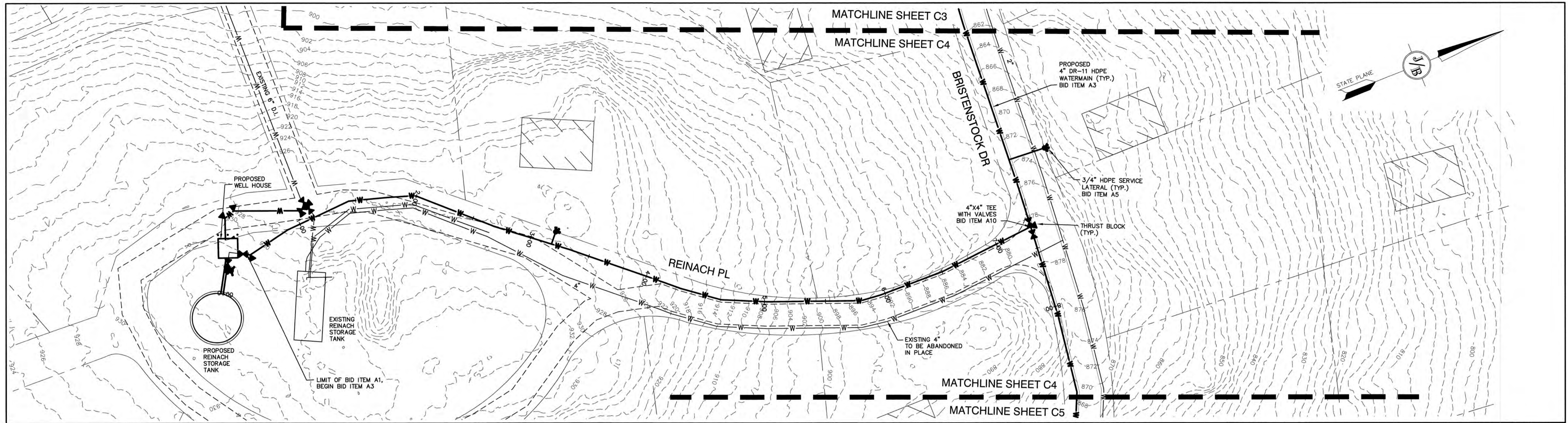
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Plan Name: **REINACH PRESSURE ZONE - BID ITEM A3**
 Project: **VILLAGE DISTRICT OF EIDELWEISS CONTRACT 2 - WATER SYSTEM UPGRADES**
 Owner of Record: **ADAM LEISER, COMMISSIONER**
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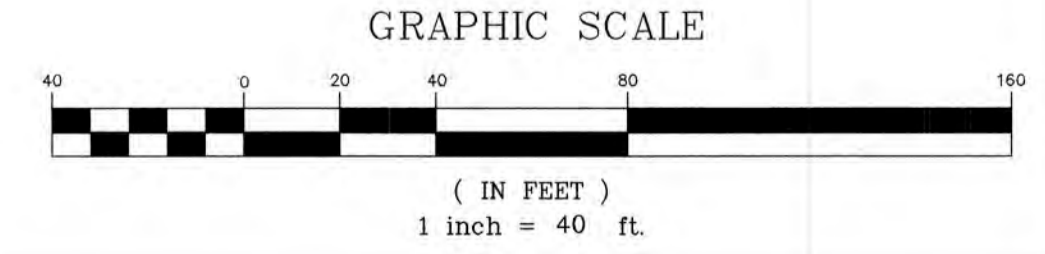
DRAWING No. **C3**
 SHEET 6 OF 18
 JBE PROJECT NO. 19078



TOTAL DYNAMIC HEAD - WELL HOUSE TO HIGHEST HOUSE

PIPE SIZE (TYP.)	FRICTION LOSS/100' PIPE (FT)	DISTANCE (FT)	FRICTION LOSS (FT)	STATIC HEAD LOSS (FT)	TDH (FT)	TDH (PSI)
4"	0.21	264.16	2.43	5.0	7.43	3.22

* FRICTION LOSS/100' BASED ON ASSUMPTION OF 50 GPM FLOW



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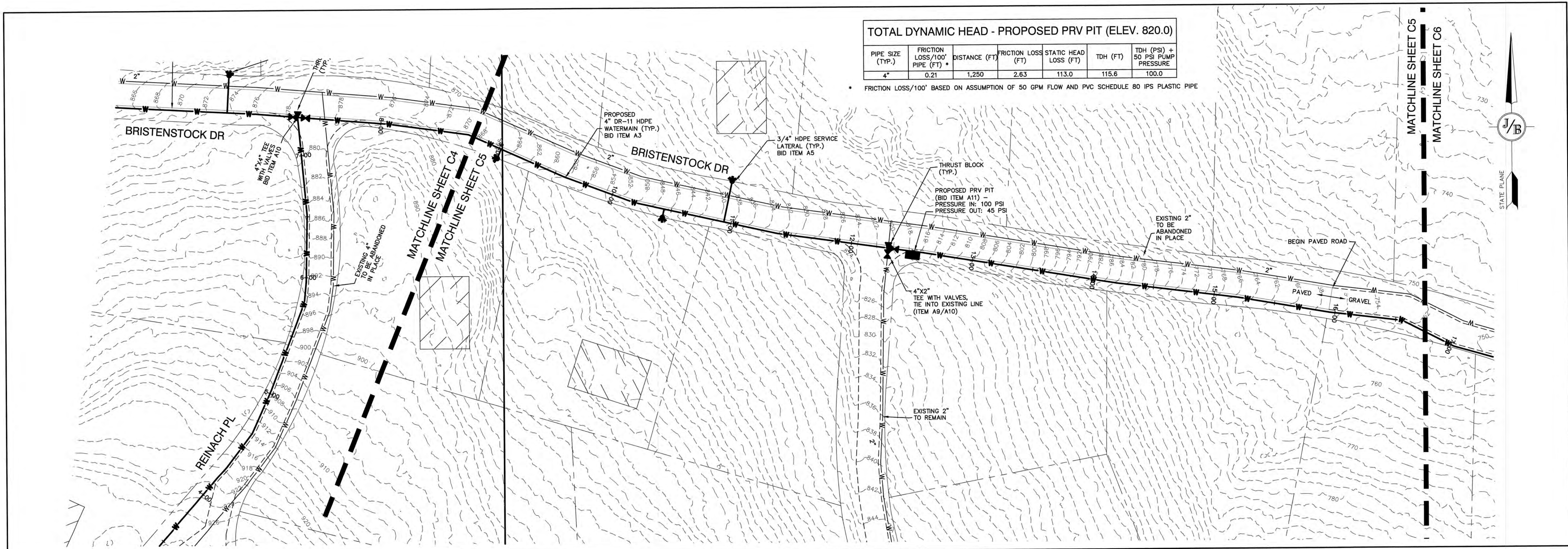


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Plan Name: **REINACH PRESSURE ZONE - BID ITEM A3**
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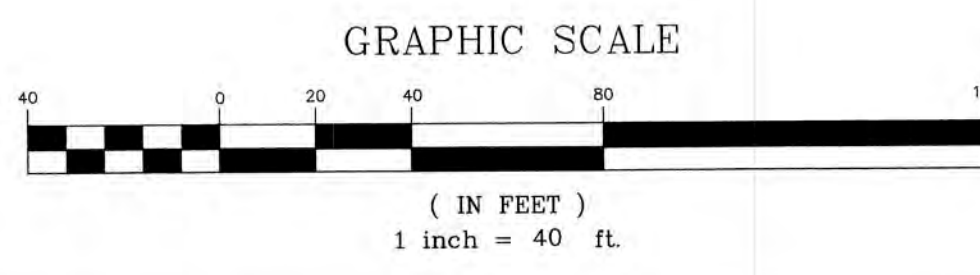
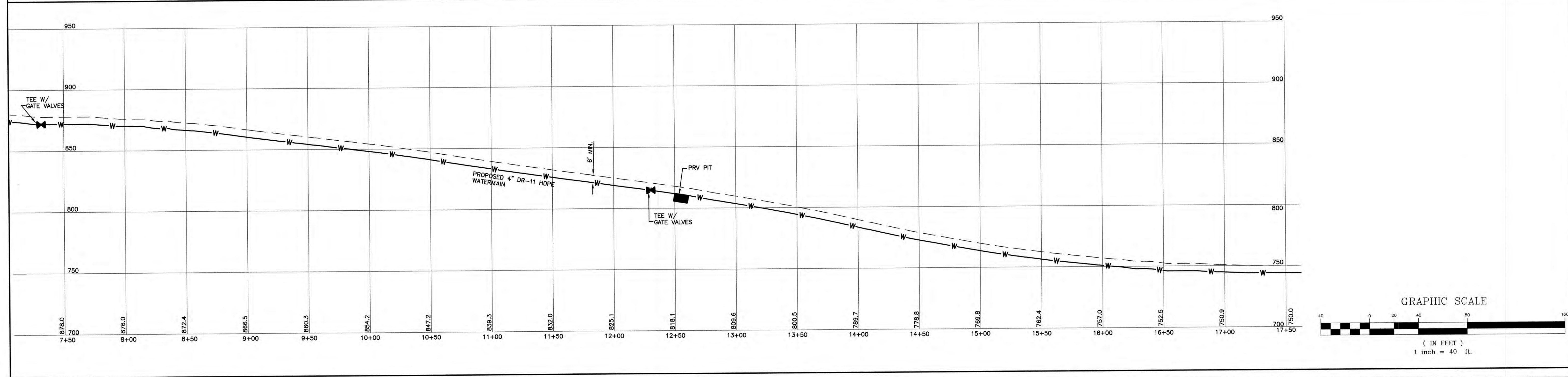
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 SHEET 7 OF 18
 JBE PROJECT NO. 19078



TOTAL DYNAMIC HEAD - PROPOSED PRV PIT (ELEV. 820.0)

PIPE SIZE (TYP.)	FRICTION LOSS/100' PIPE (FT) *	DISTANCE (FT)	FRICTION LOSS (FT)	STATIC HEAD LOSS (FT)	TDH (FT)	TDH (PSI) + 50 PSI PUMP PRESSURE
4"	0.21	1,250	2.63	113.0	115.6	100.0

* FRICTION LOSS/100' BASED ON ASSUMPTION OF 50 GPM FLOW AND PVC SCHEDULE 80 IPS PLASTIC PIPE



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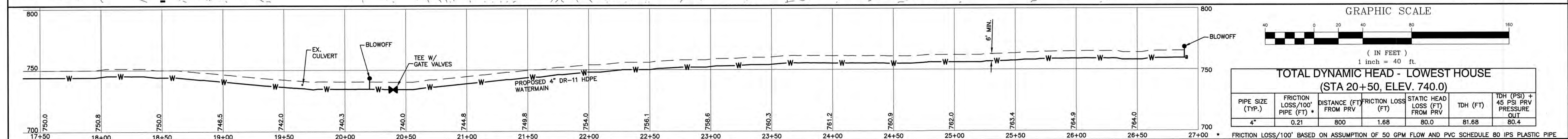
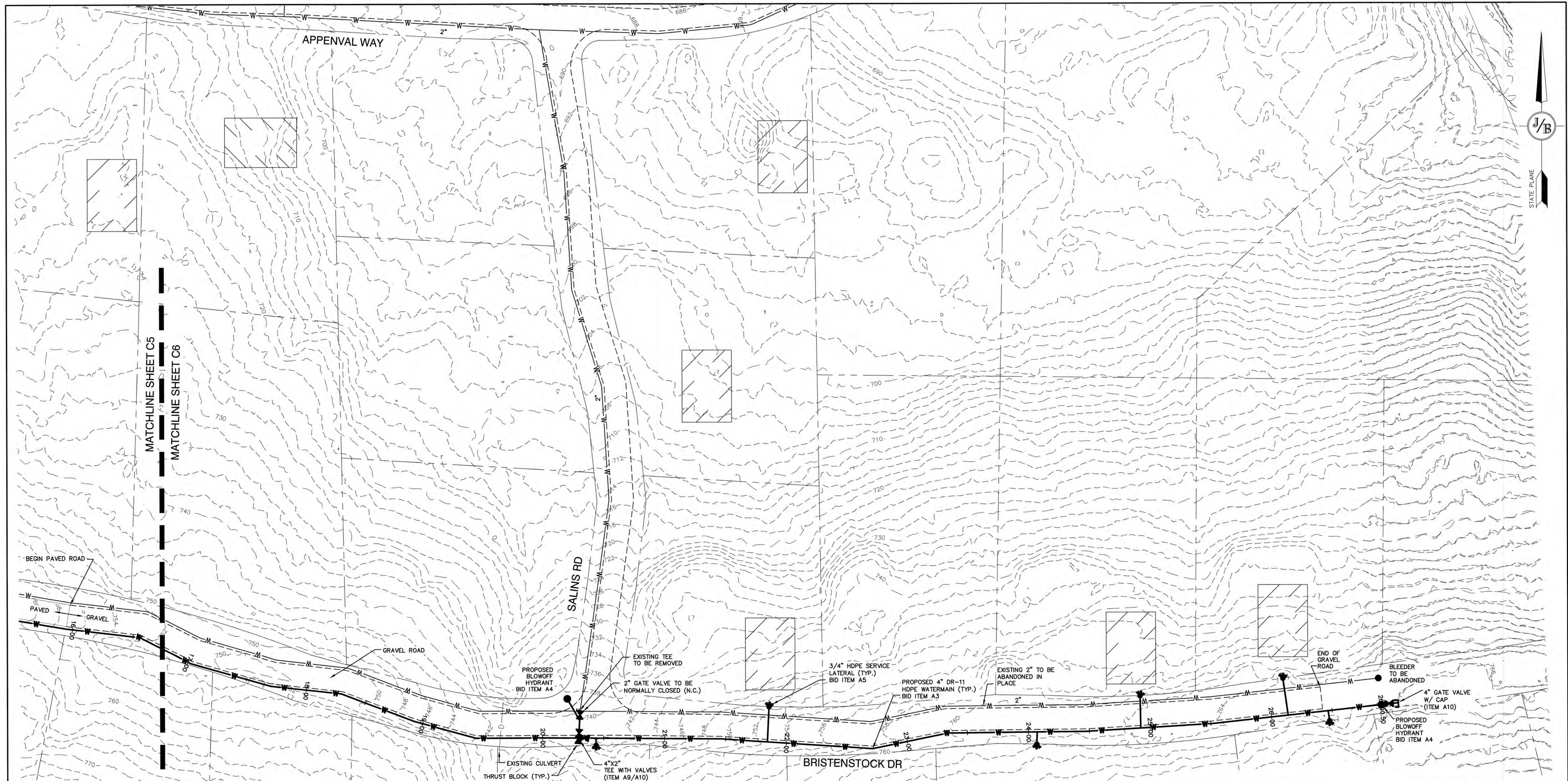
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Plan Name: **REINACH PRESSURE ZONE - BID ITEM A3**
 Project: **VILLAGE DISTRICT OF EIDELWEISS CONTRACT 2 - WATER SYSTEM UPGRADES**
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DRAWING No. **C5**
 SHEET 8 OF 18
 JBE PROJECT NO. 19078



GRAPHIC SCALE
(IN FEET)
1 inch = 40 ft

TOTAL DYNAMIC HEAD - LOWEST HOUSE (STA 20+50, ELEV. 740.0)						
PIPE SIZE (TYP.)	FRICION LOSS/100' PIPE (FT) *	DISTANCE (FT) FROM PRV	FRICION LOSS (FT)	STATIC HEAD LOSS (FT) FROM PRV	TDH (FT)	TDH (PSI) + 45 PSI PRV PRESSURE OUT
4"	0.21	800	1.68	80.0	81.68	80.4

* FRICTION LOSS/100' BASED ON ASSUMPTION OF 50 GPM FLOW AND PVC SCHEDULE 80 IPS PLASTIC PIPE.

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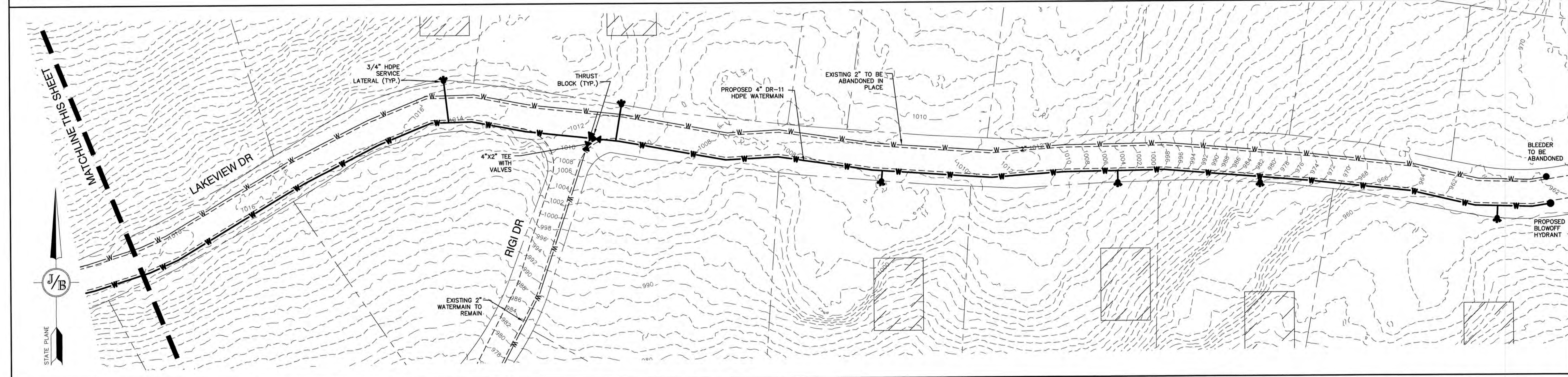
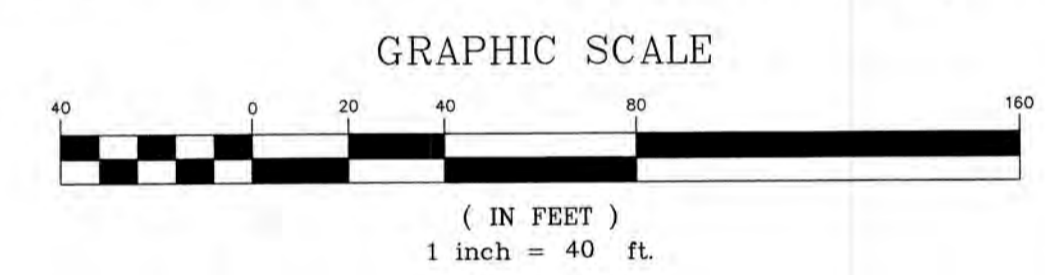
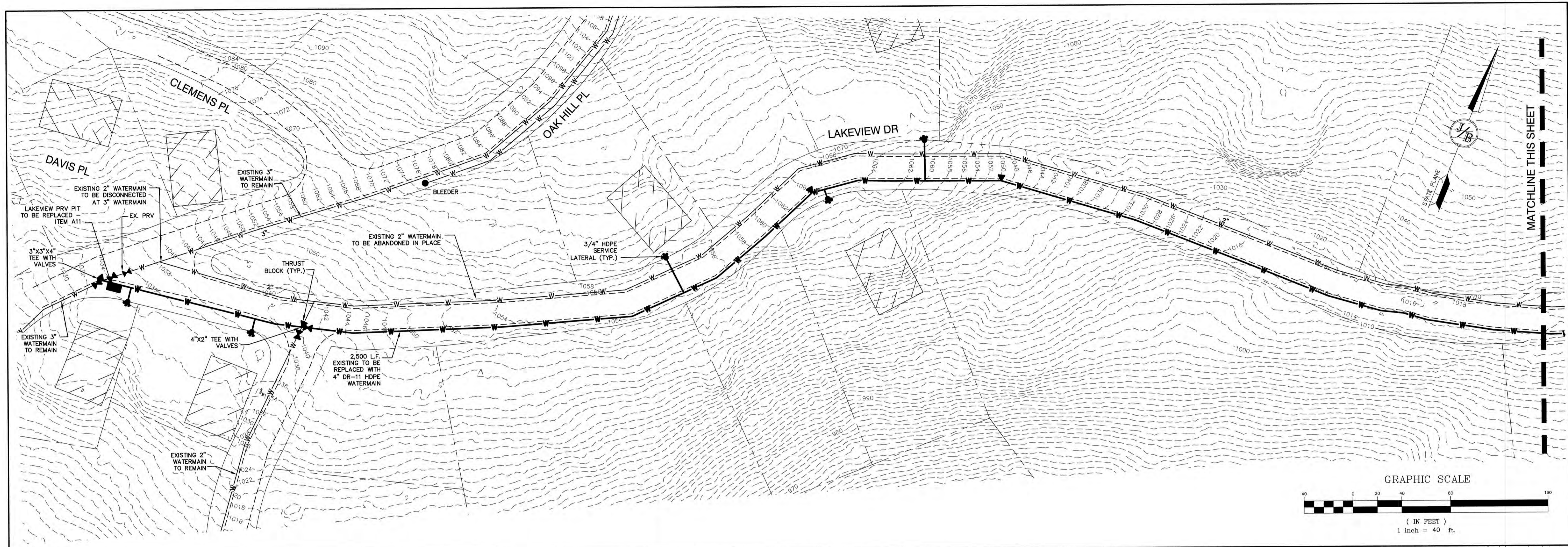
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Plan Name: **REINACH PRESSURE ZONE - BID ITEM A3**
 Project: **VILLAGE DISTRICT OF EIDELWEISS CONTRACT 2 - WATER SYSTEM UPGRADES**
 Owner of Record: **ADAM LEISER, COMMISSIONER**
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DRAWING No. **C6**
 SHEET 9 OF 18
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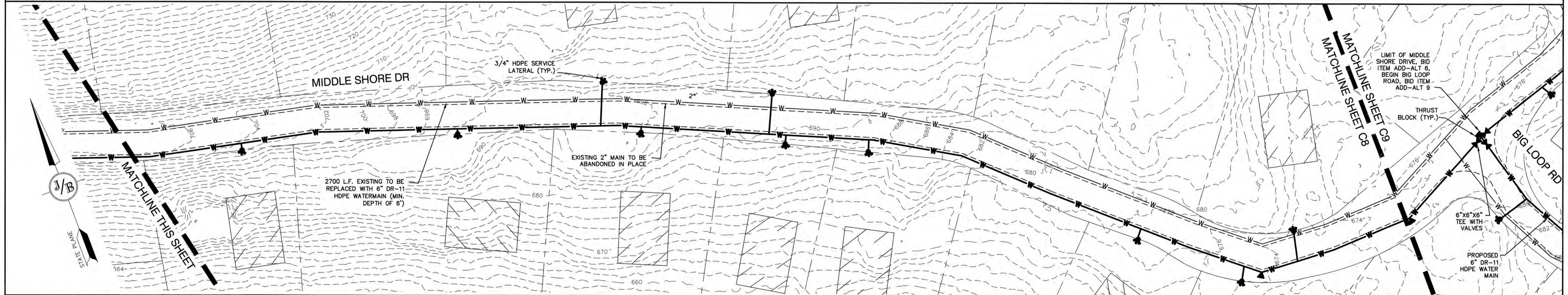
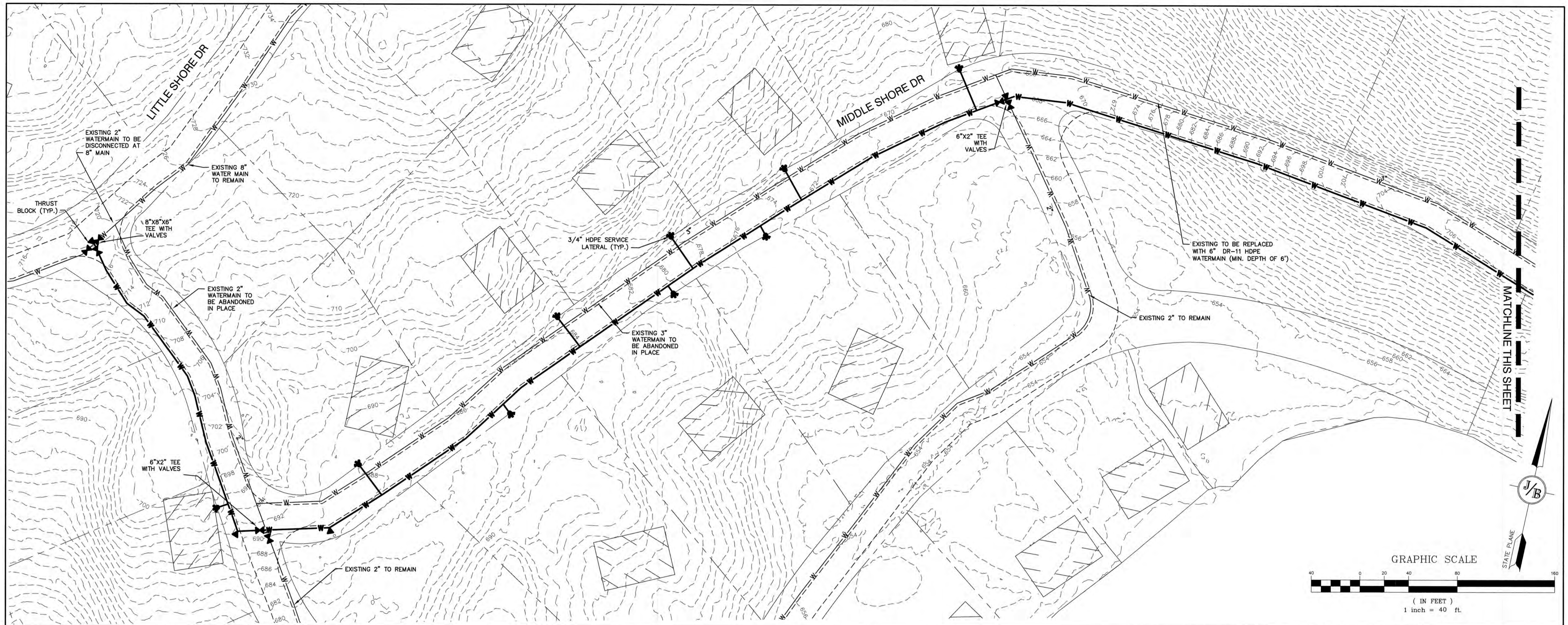
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Civil Engineering Services

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 603-772-4746 FAX: 603-772-0227 E-MAIL: JBE@JONESANDBEACH.COM

Plan Name: **LAKEVIEW DRIVE - BID ITEM ADD-ALT 1**
 Project: **VILLAGE DISTRICT OF EIDELWEISS CONTRACT 2 - WATER SYSTEM UPGRADES**
 Owner of Record: **ADAM LEISER, COMMISSIONER**
 1680 CONWAY ROAD, PO BOX 1027, MADISON, NH 03849

DRAWING No.
C7
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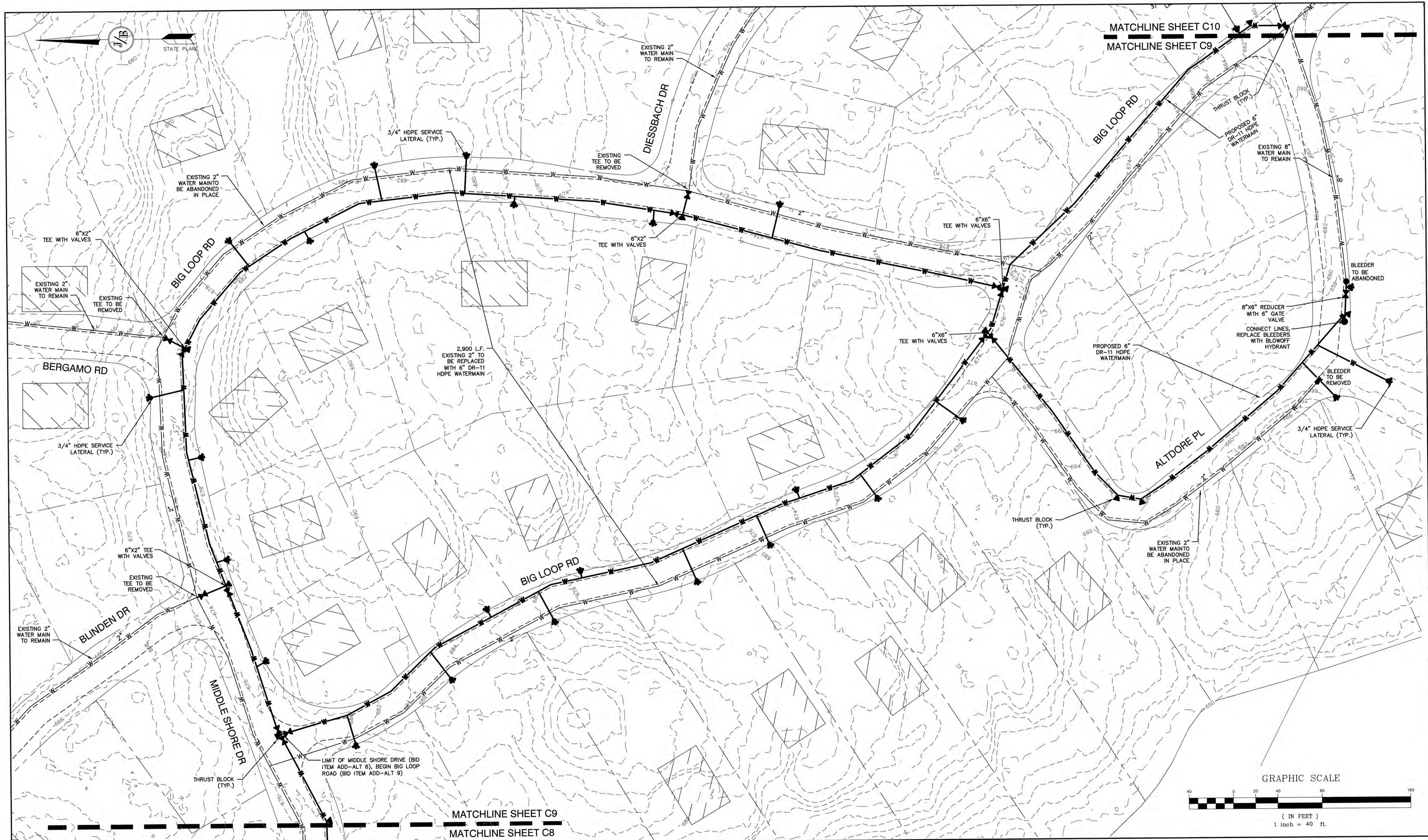


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0	2/3/20	ISSUED CONTRACT 2	PSL

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 Civil Engineering Services
 85 Portsmouth Ave. PO Box 219 Stratham, NH 03885
 603-772-4746 FAX: 603-772-0227
 E-MAIL: JBE@JONESANDBEACH.COM

Plan Name: MIDDLE SHORE DRIVE - BID ITEM ADD-ALT 2
 Project: VILLAGE DISTRICT OF EIDELWEISS CONTRACT 2 - WATER SYSTEM UPGRADES
 Owner of Record: ADAM LEISER, COMMISSIONER
 1680 CONWAY ROAD, PO BOX 1027, MADISON, NH 03849

DRAWING No.
C8
 SHEET 11 OF 18
 JBE PROJECT NO. 19078



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 Checked: CSA | Scale: AS SHOWN | Project No.: 19078
 Drawing Name: 19078-PLAN.dwg
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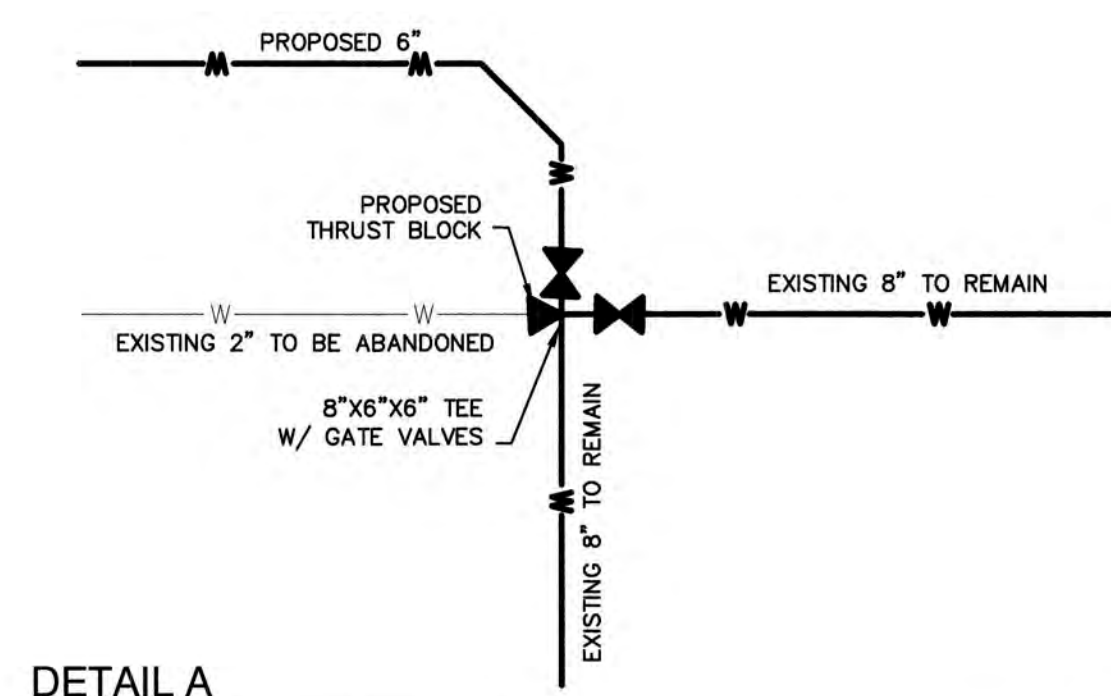
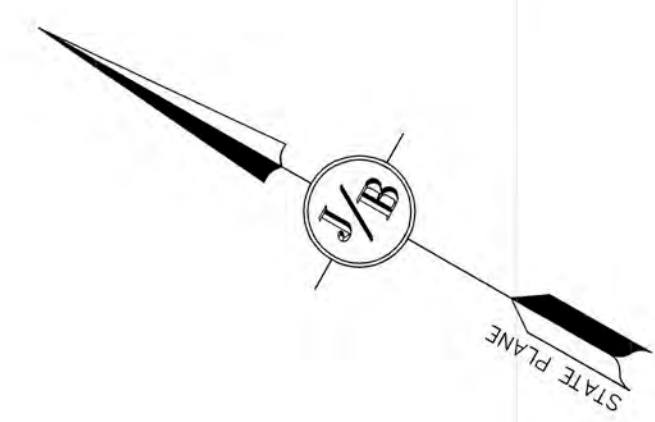
REV.	DATE	REVISION	BY
1	2/28/20	REVISED PER COMMENTS	PSL
0	2/3/20	ISSUED CONTRACT 2	PSL

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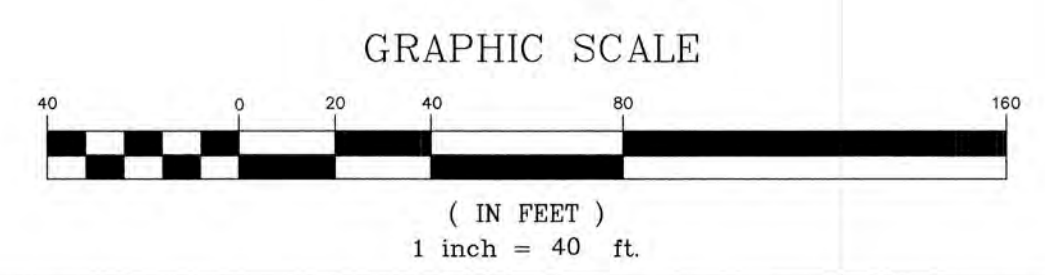
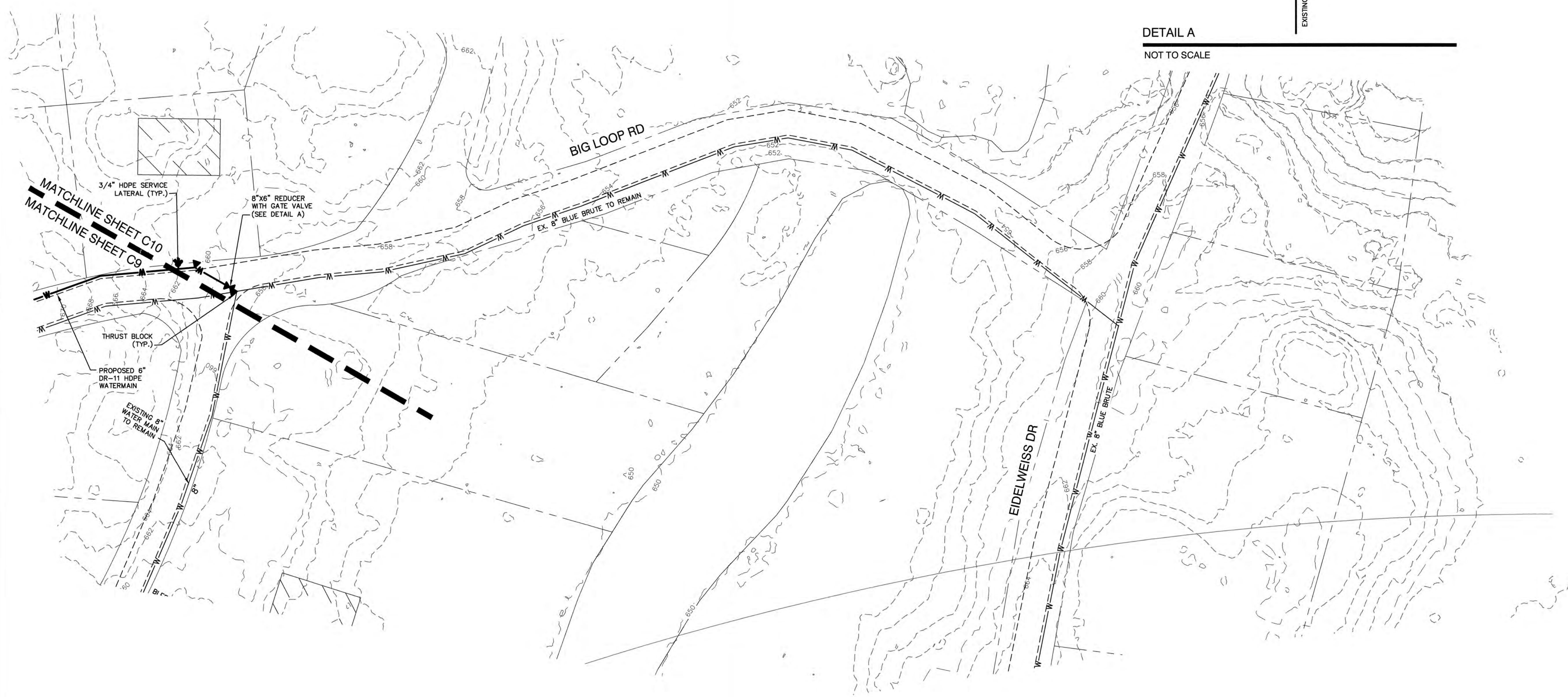
J/B Jones & Beach Engineers, Inc.
 Civil Engineering Services
 85 Portsmouth Ave. | 603-772-4746
 PO Box 219 | FAX: 603-772-0227
 Stratham, NH 03885 | E-MAIL: JBE@JONESANDBEACH.COM

Plan Name: **BIG LOOP ROAD - BID ITEM ADD-ALT 9**
 Project: **VILLAGE DISTRICT OF EIDELWEISS CONTRACT 2 - WATER SYSTEM UPGRADES**
 Owner of Record: **ADAM LEISER, COMMISSIONER**
 1680 CONWAY ROAD, PO BOX 1027, MADISON, NH 03849

DRAWING No.
C9
 SHEET 12 OF 18
 JBE PROJECT NO. 19078



DETAIL A
NOT TO SCALE



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 Checked: CSA | Scale: AS SHOWN | Project No.: 19078
 Drawing Name: 19078-PLAN.dwg
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0	2/3/20	ISSUED CONTRACT 2	PSL

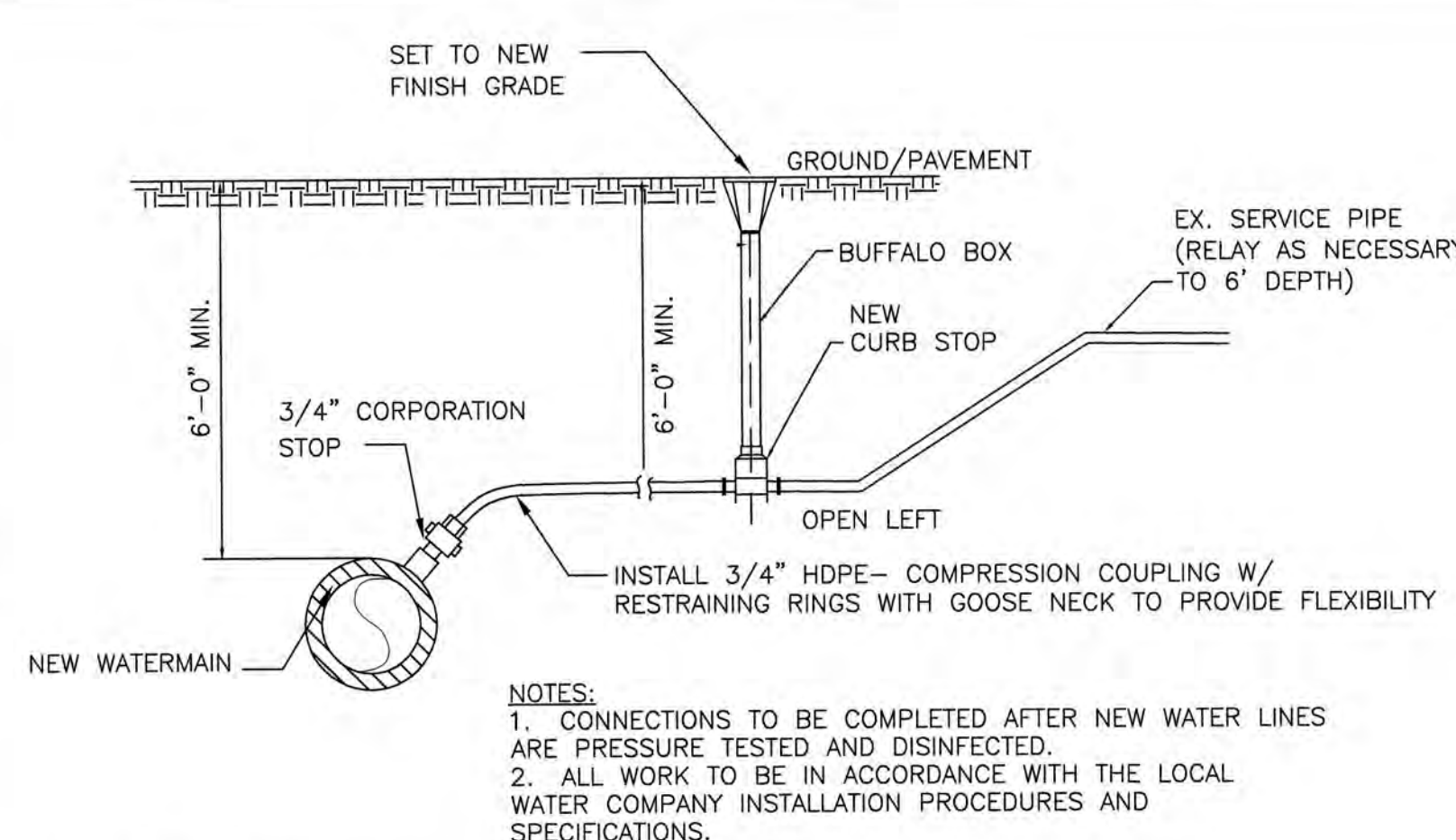
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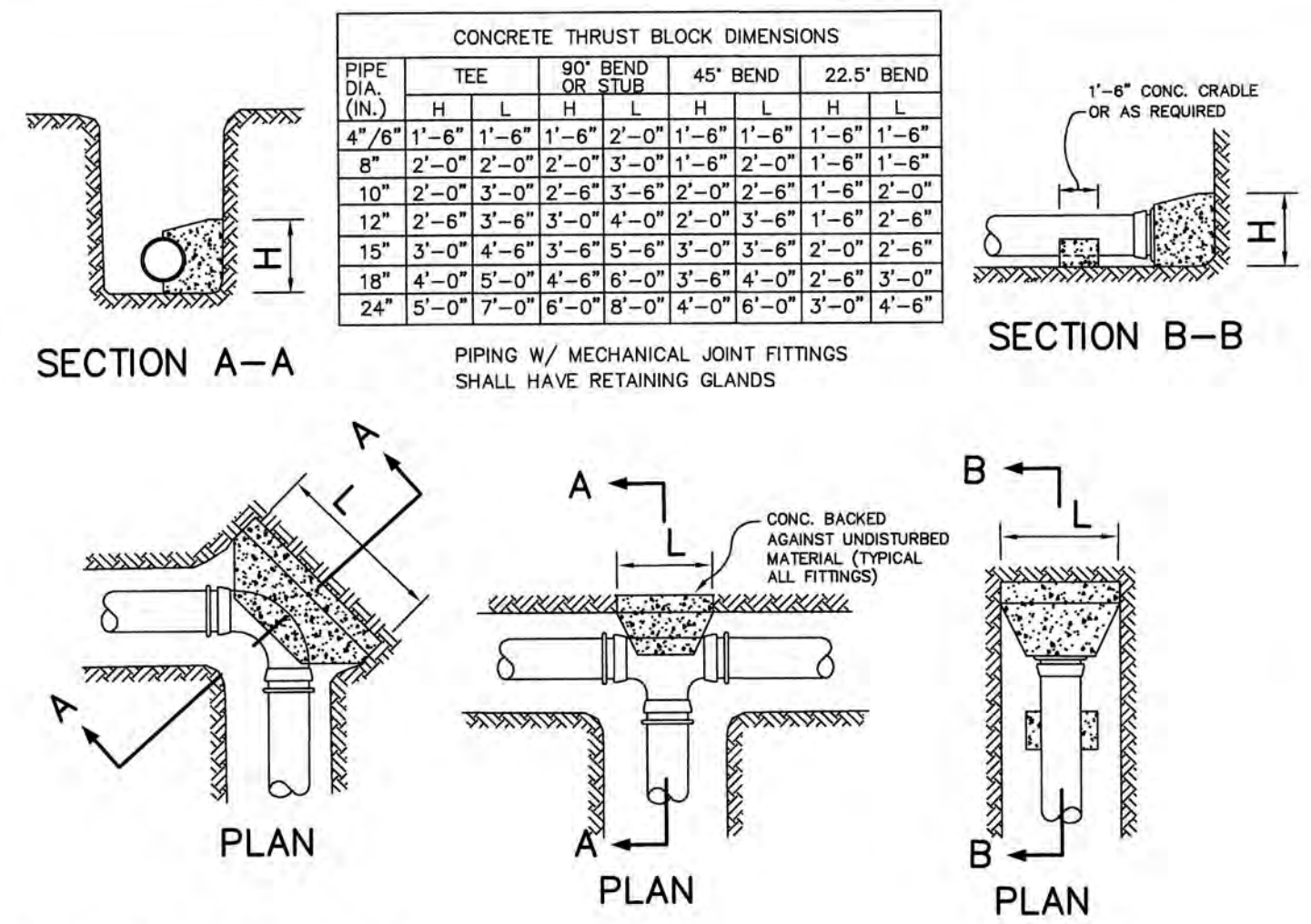
85 Portsmouth Ave. PO Box 219 Stratham, NH 03885
 603-772-4746 FAX: 603-772-0227
 E-MAIL: JBE@JONESANDBEACH.COM

Plan Name: **BIG LOOP ROAD - BID ITEM ADD-ALT 9**
 Project: **VILLAGE DISTRICT OF EDELWEISS CONTRACT 2 - WATER SYSTEM UPGRADES**
 Owner of Record: **ADAM LEISER, COMMISSIONER**
 1680 CONWAY ROAD, PO BOX 1027, MADISON, NH 03849

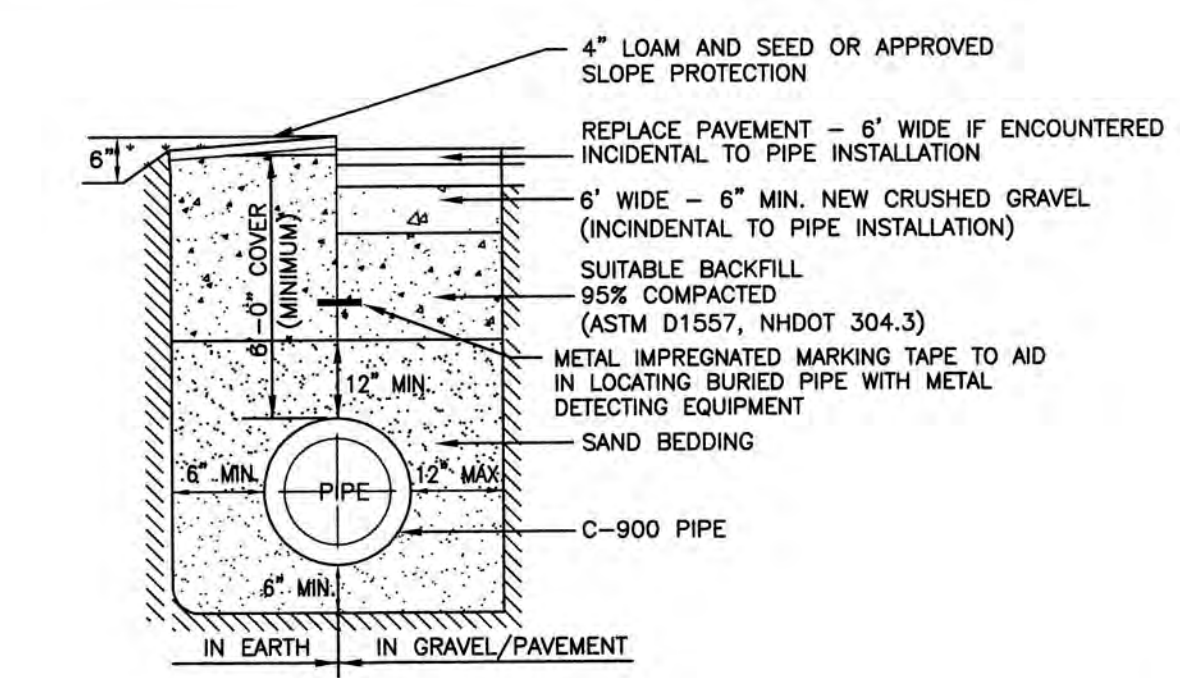
DRAWING No. **C10**
 SHEET 13 OF 18
 JBE PROJECT NO. 19078



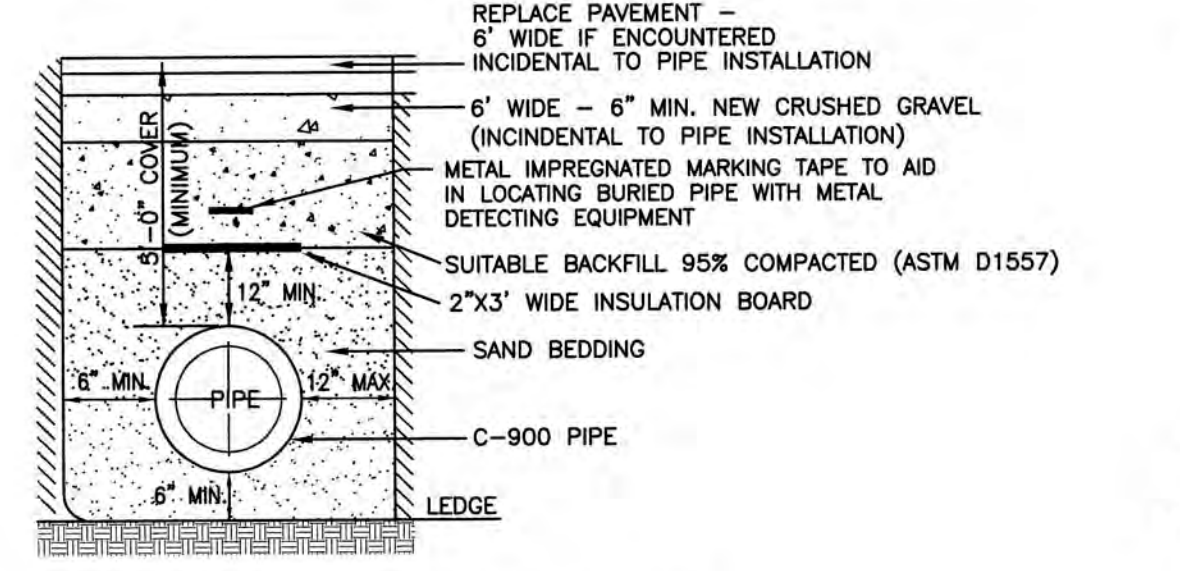
TYPICAL WATER SERVICE CONNECTION TO EXISTING SERVICES
 NOT TO SCALE



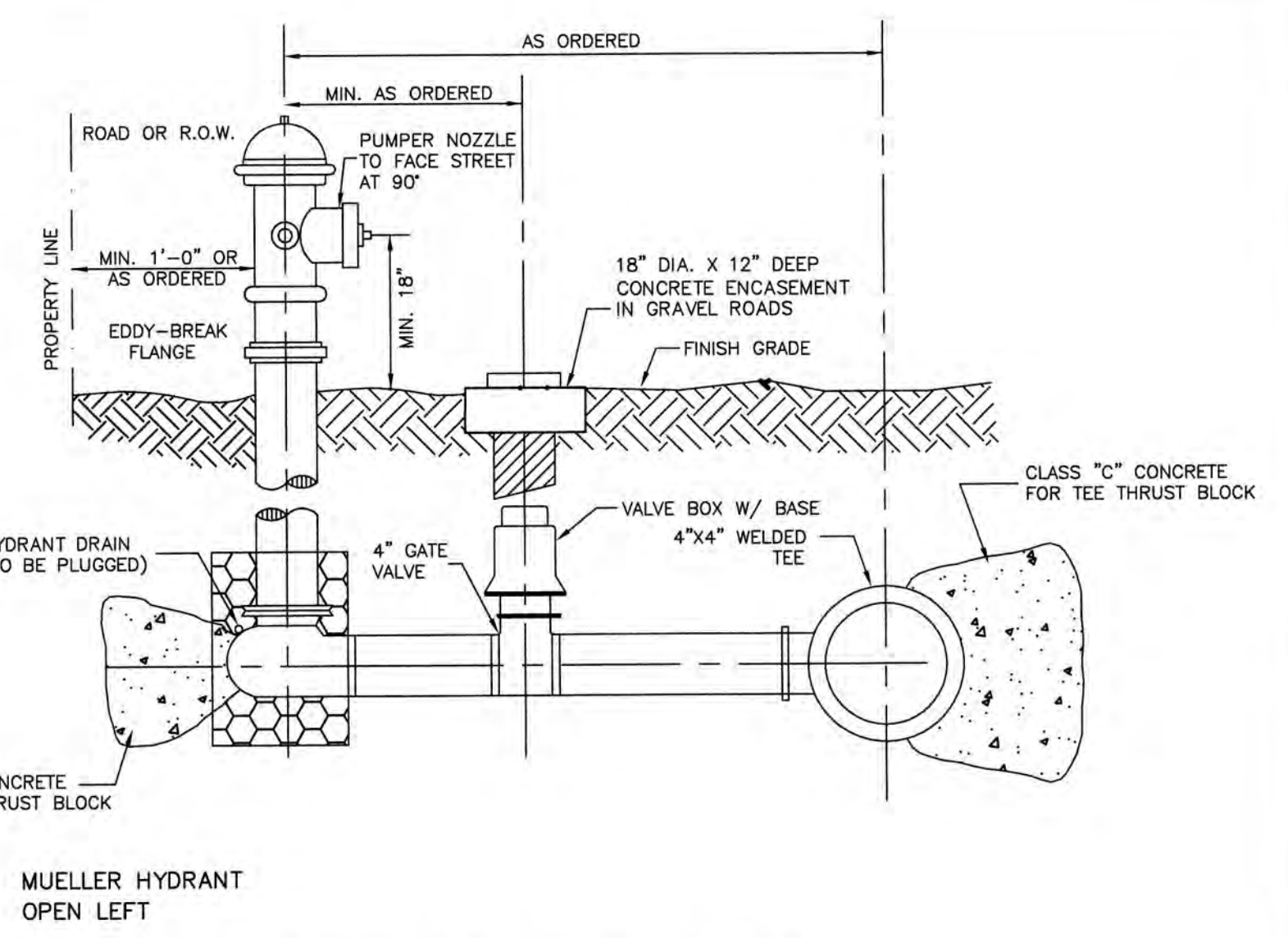
THRUST BLOCK DETAILS
 NOT TO SCALE



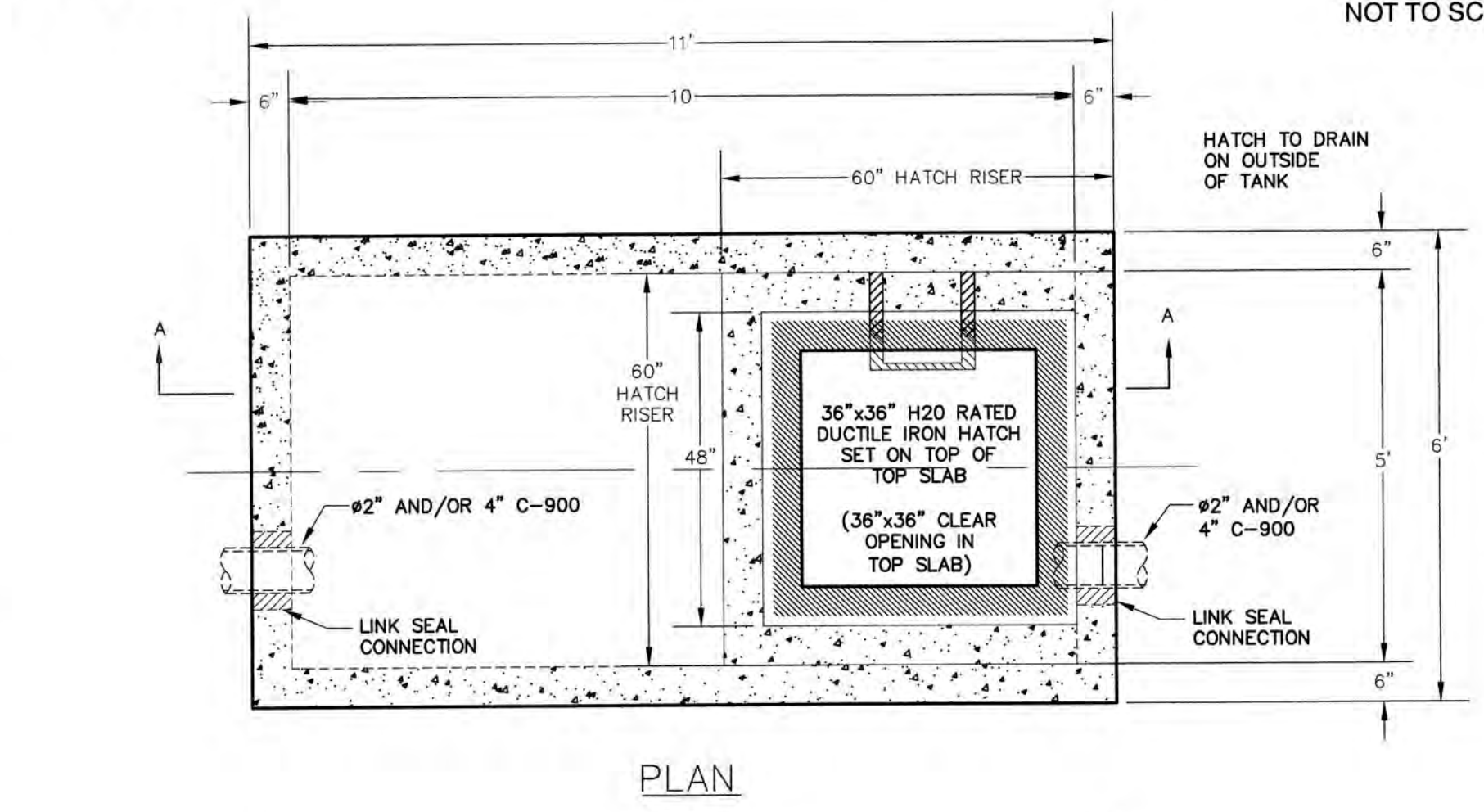
WATER SYSTEM TRENCH
 NOT TO SCALE



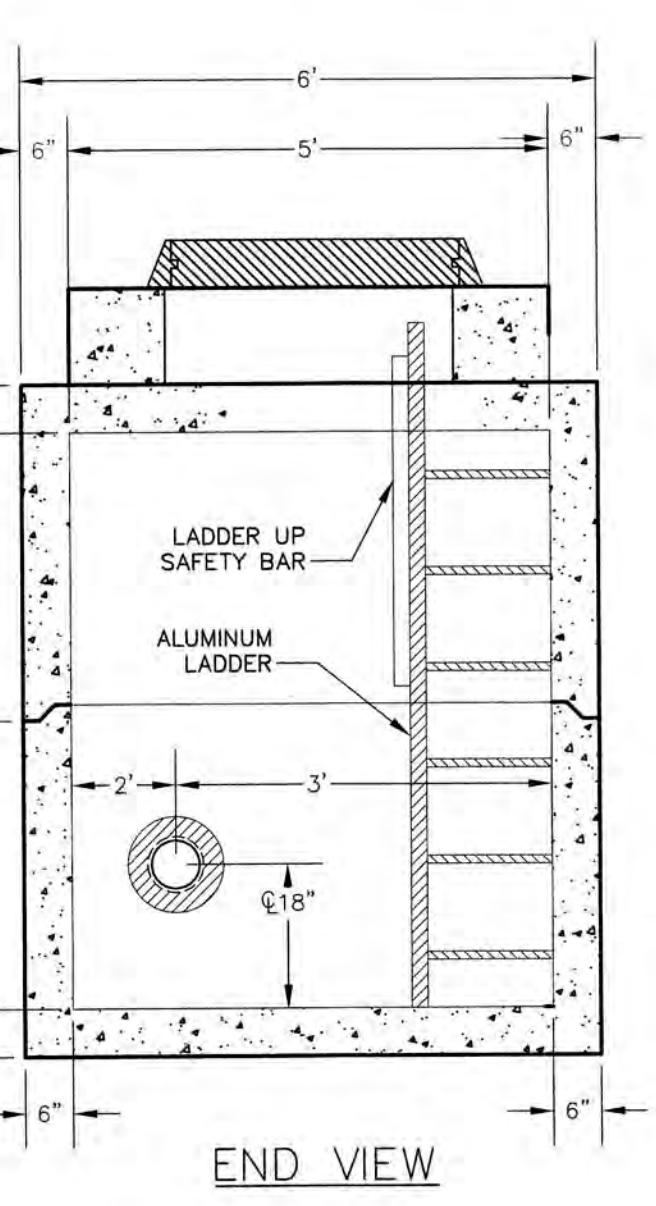
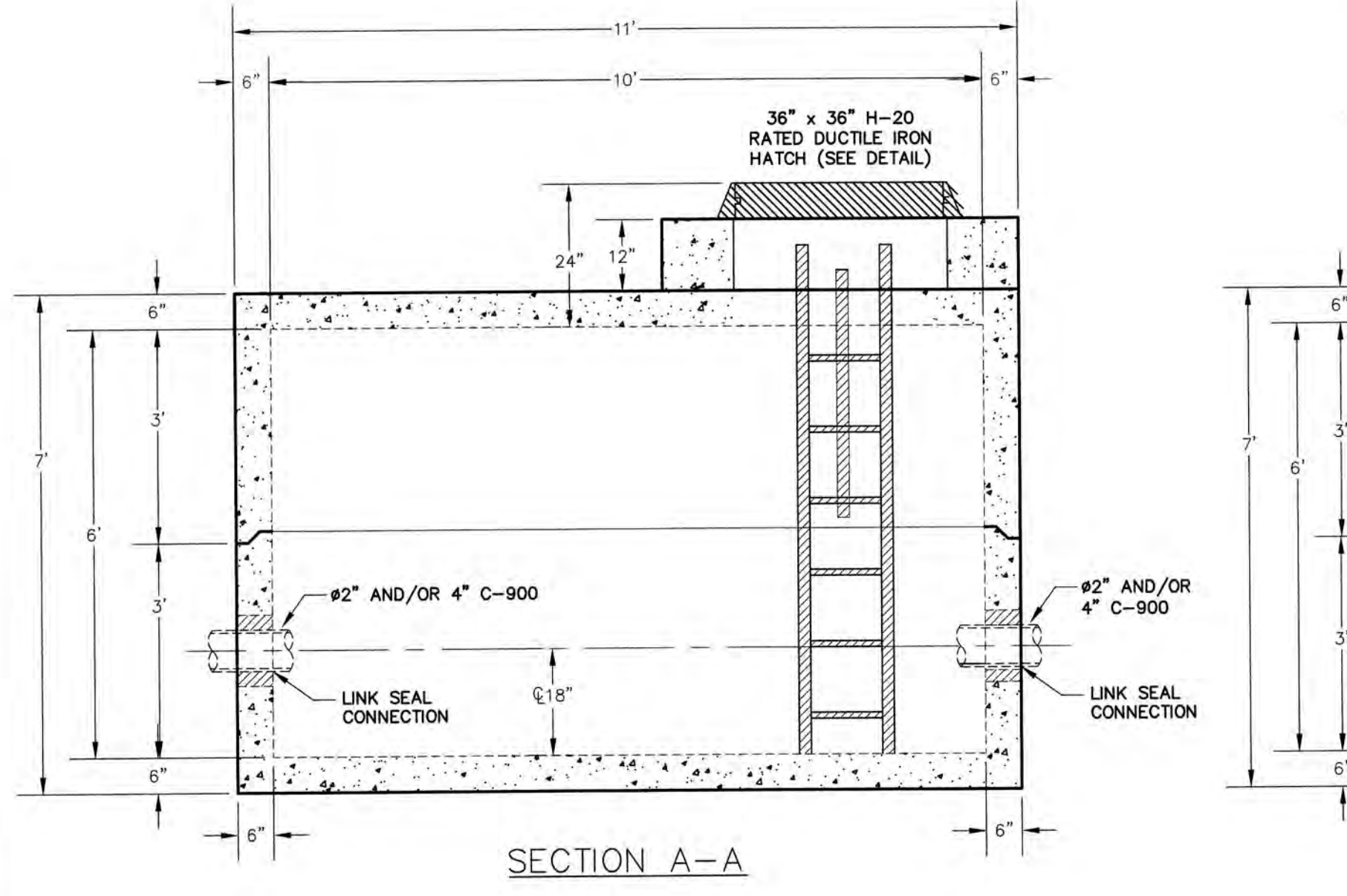
WATER SYSTEM TRENCH - IN LEDGE (BID ITEMS A3 & ADD-ALT 1)
 NOT TO SCALE



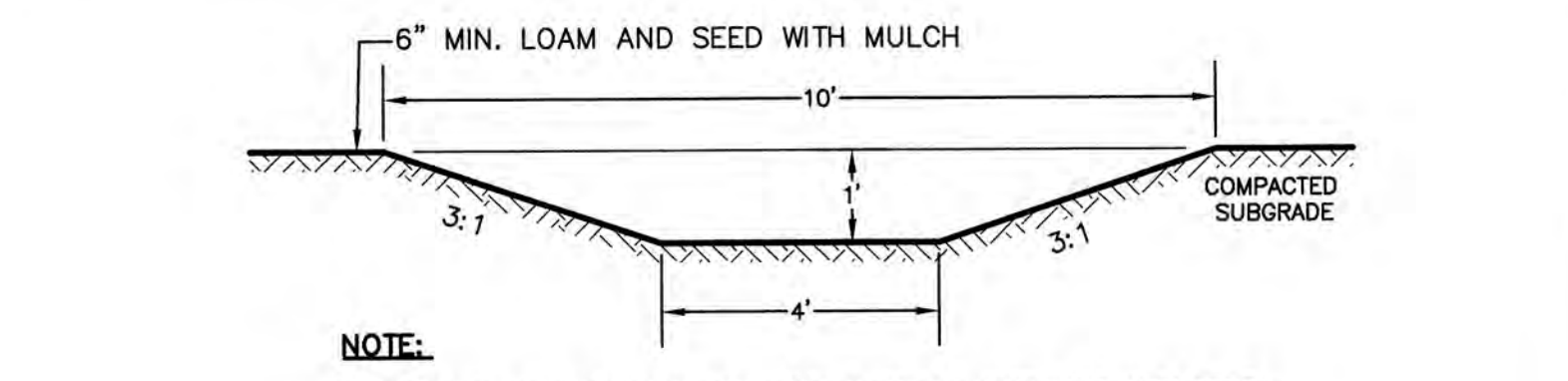
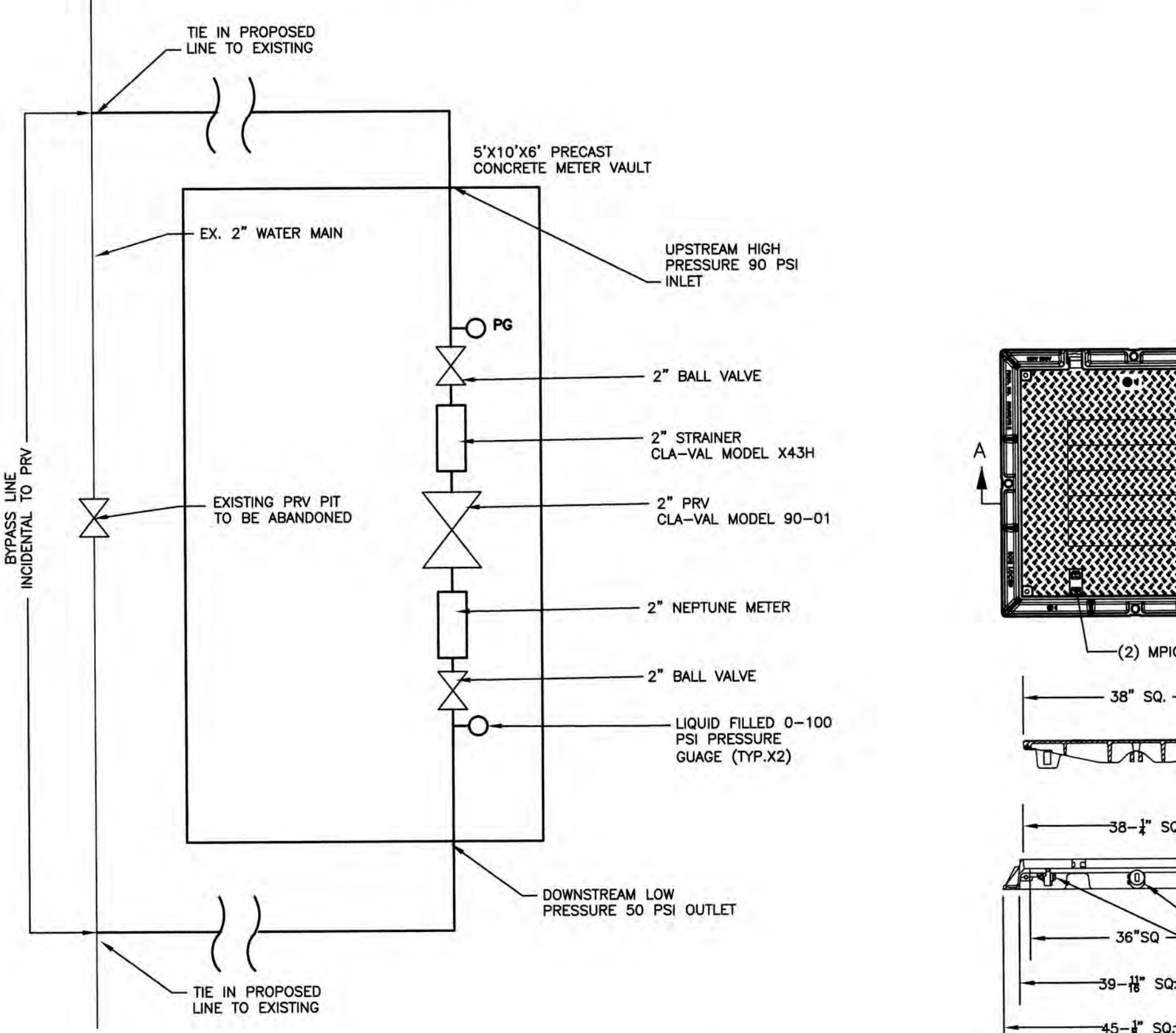
HYDRANT INSTALLATION
 NOT TO SCALE



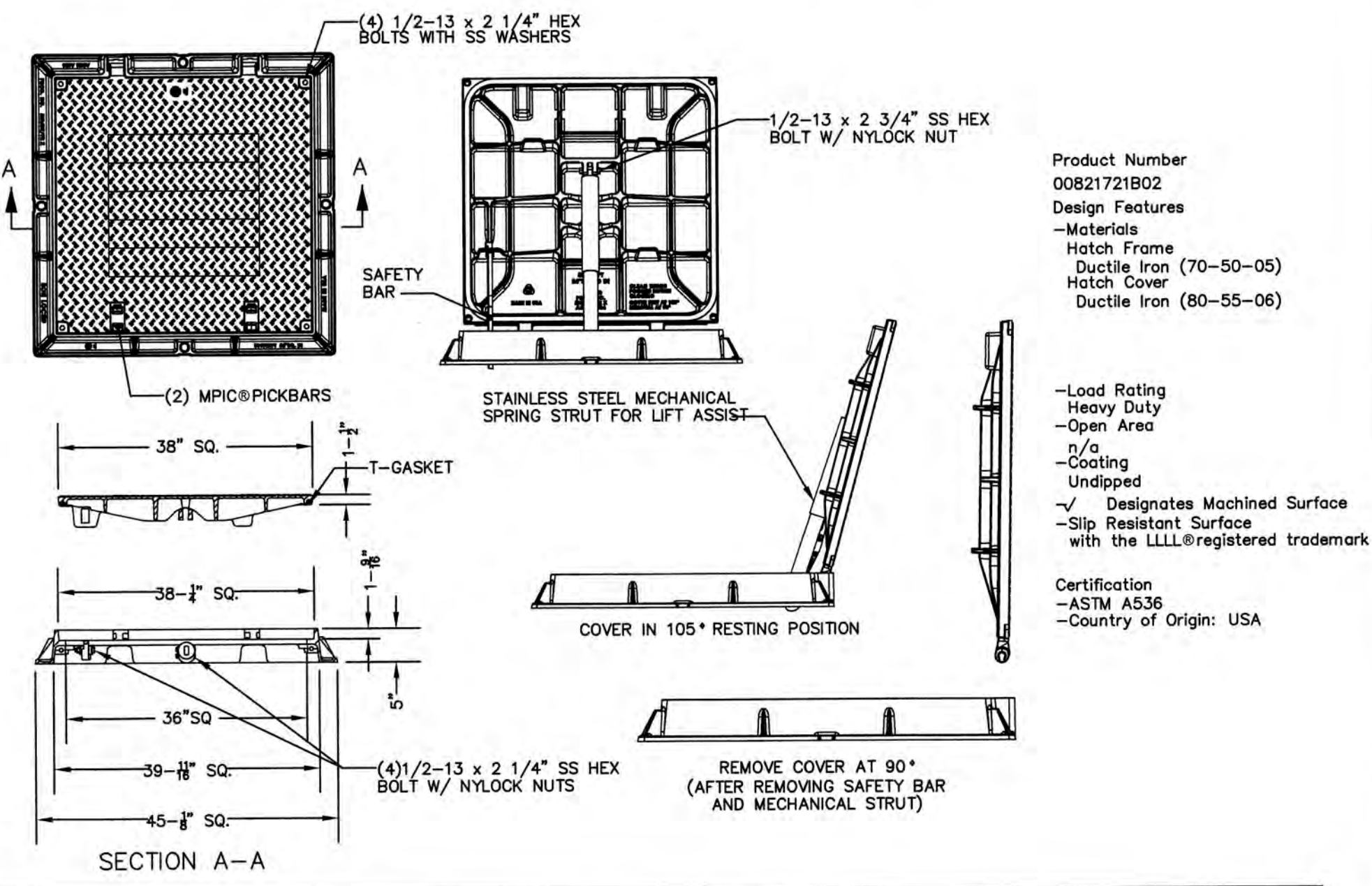
- NOTES:
 1. CONCRETE: 5,000 PSI MINIMUM AFTER 28 DAYS.
 2. ALL REINFORCEMENT PER ASTM A615, GRADE 60, 1" MIN COVER.
 3. DESIGNED FOR HS20-44 LOADING.
 4. TONGUE AND GROOVE JOINT SEALED WITH BUTYL RESIN LINK SEAL CONNECTION FOR #6" CL53 DIPCL.
 5. STRUCTURE TO BE PROVIDED BY EF SHEA CONCRETE OR APPROVED EQUIVALENT



PRESSURE REDUCER VALVE SCHEMATIC JUNGAFRU AND LAKEVIEW PRV PITS (BID ITEM A11)
 NOT TO SCALE



VEGETATED SWALE
 NOT TO SCALE



Design: CSA	Draft: AMJ	Date: 06/20/2019
Checked: CSA	Scale: AS SHOWN	Project No.: 19078
Drawing Name: 19078-PLAN.dwg		
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Civil Engineering Services

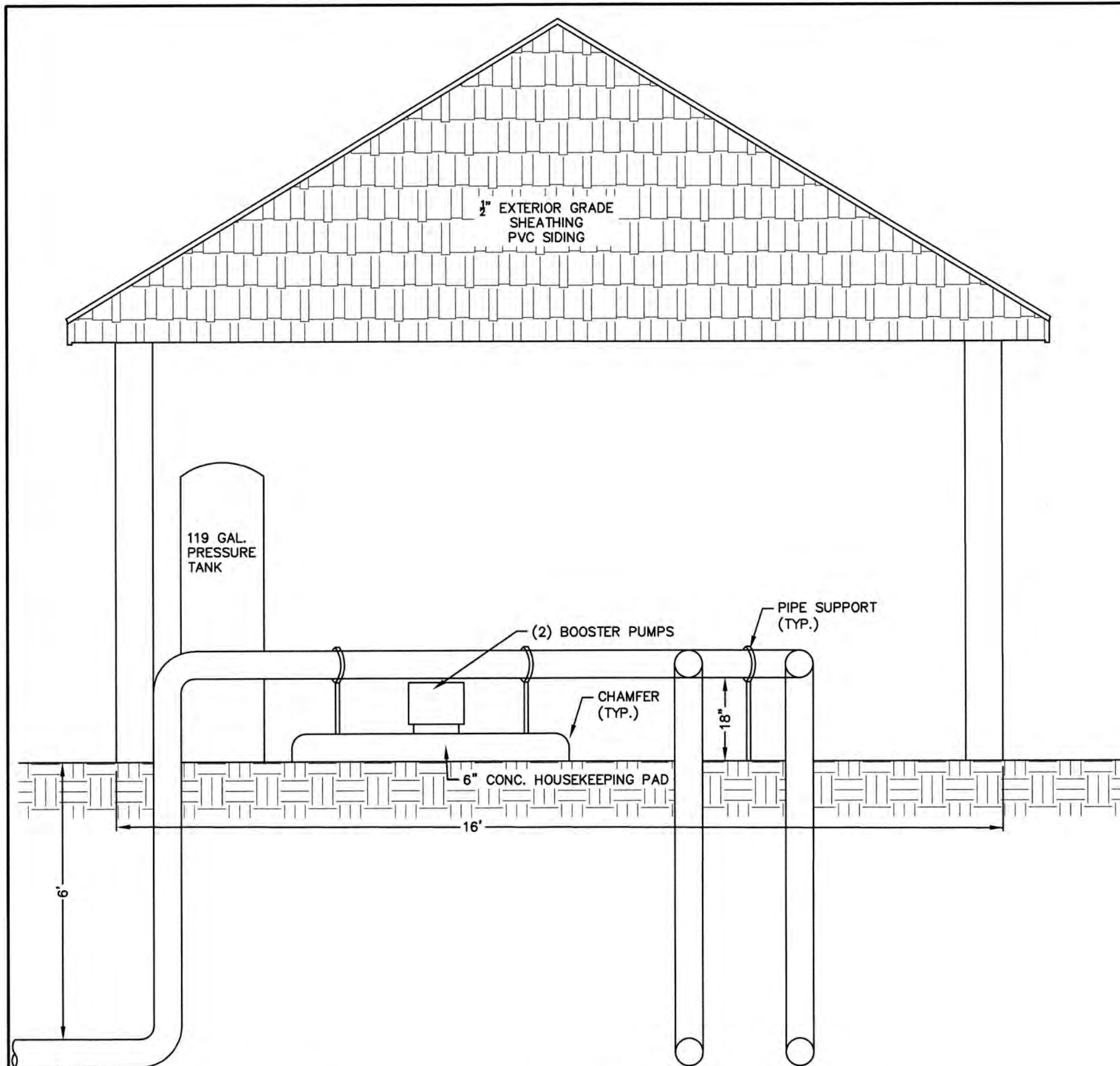
603-772-4746
 FAX: 603-772-0227
 E-MAIL: JBE@JONESANDBEACH.COM

Plan Name:	DETAIL SHEET
Project:	VILLAGE DISTRICT OF EIDELWEISS CONTRACT 2 - WATER SYSTEM UPGRADES
Owner of Record:	ADAM LEISER, COMMISSIONER 1680 CONWAY ROAD, PO BOX 1027, MADISON, NH 03849

DRAWING No.

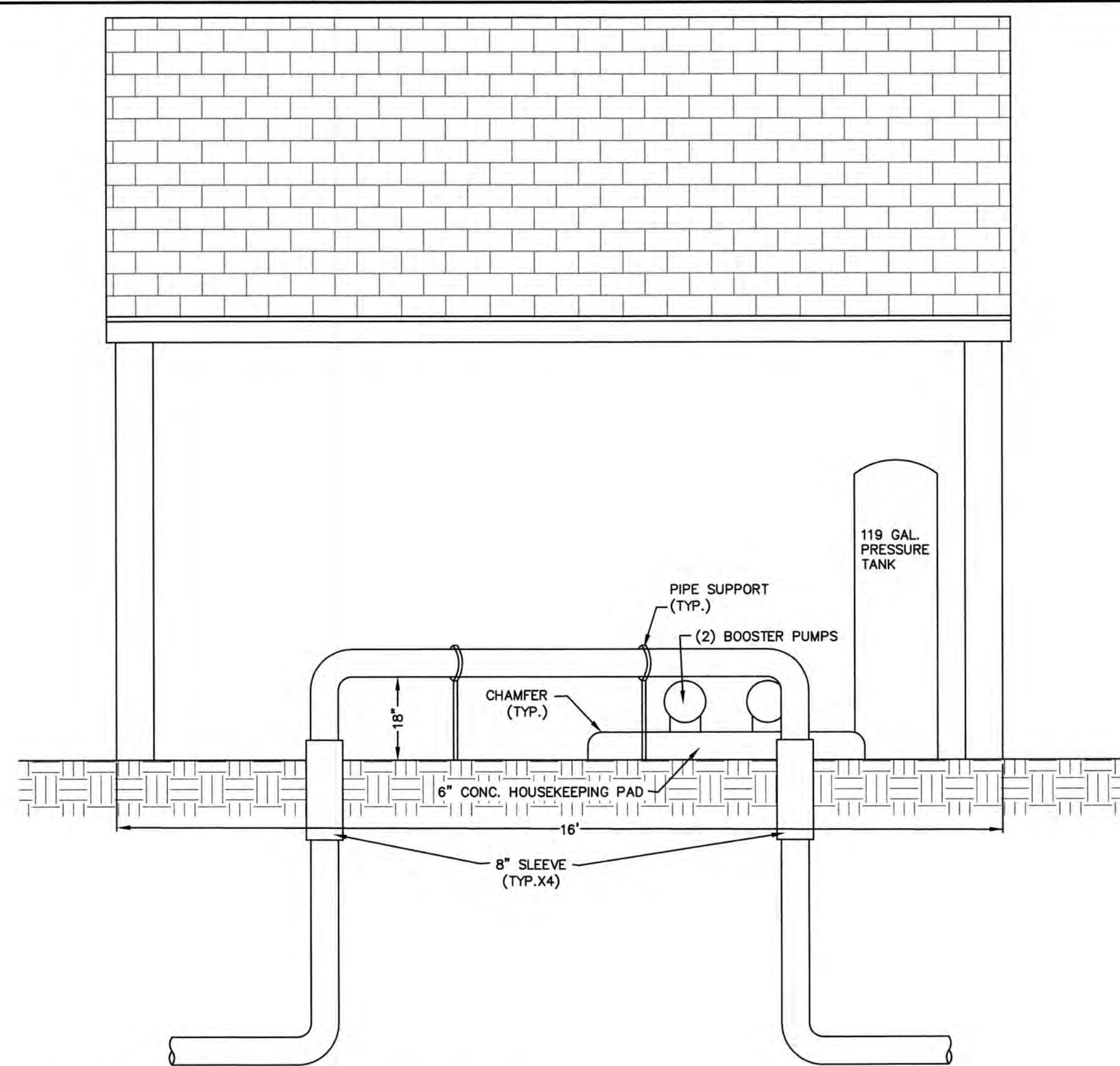
D1

SHEET 14 OF 18
 JBE PROJECT NO. 19078



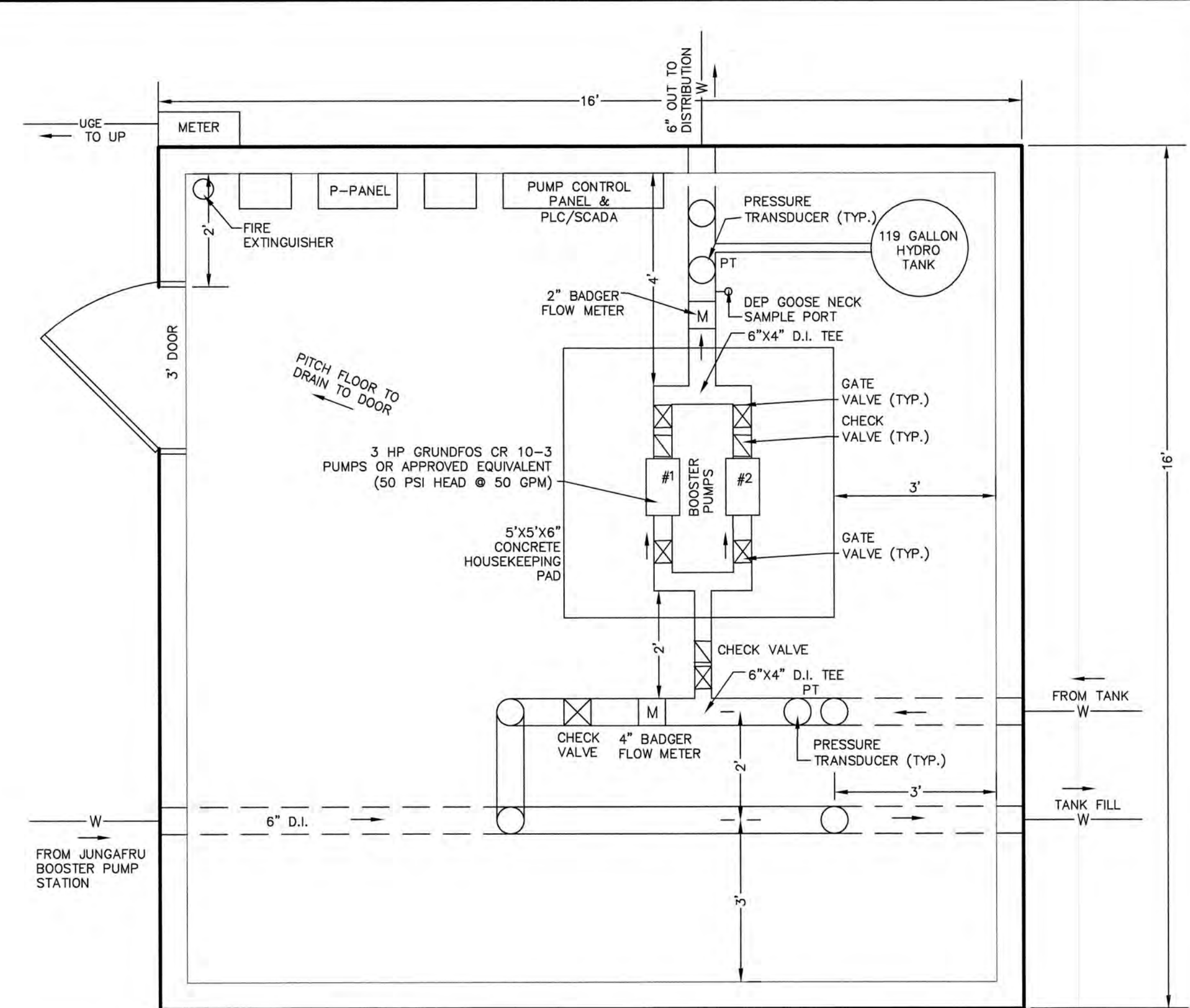
PUMP HOUSE INTERIOR ELEVATION - WEST

SCALE: 1"=2'



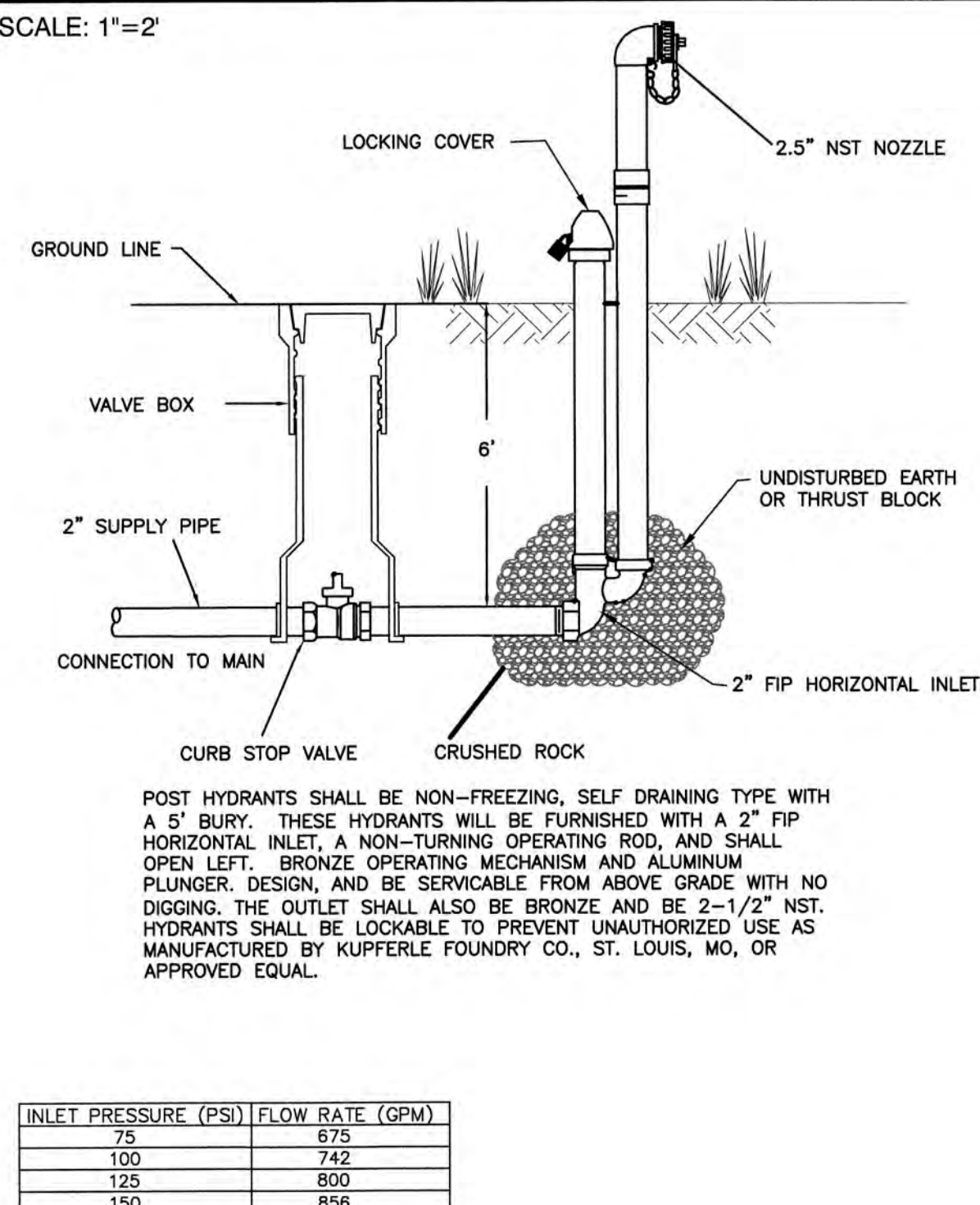
PUMP HOUSE INTERIOR ELEVATION - SOUTH

SCALE: 1"=2'



INTERIOR BUILDING PLAN

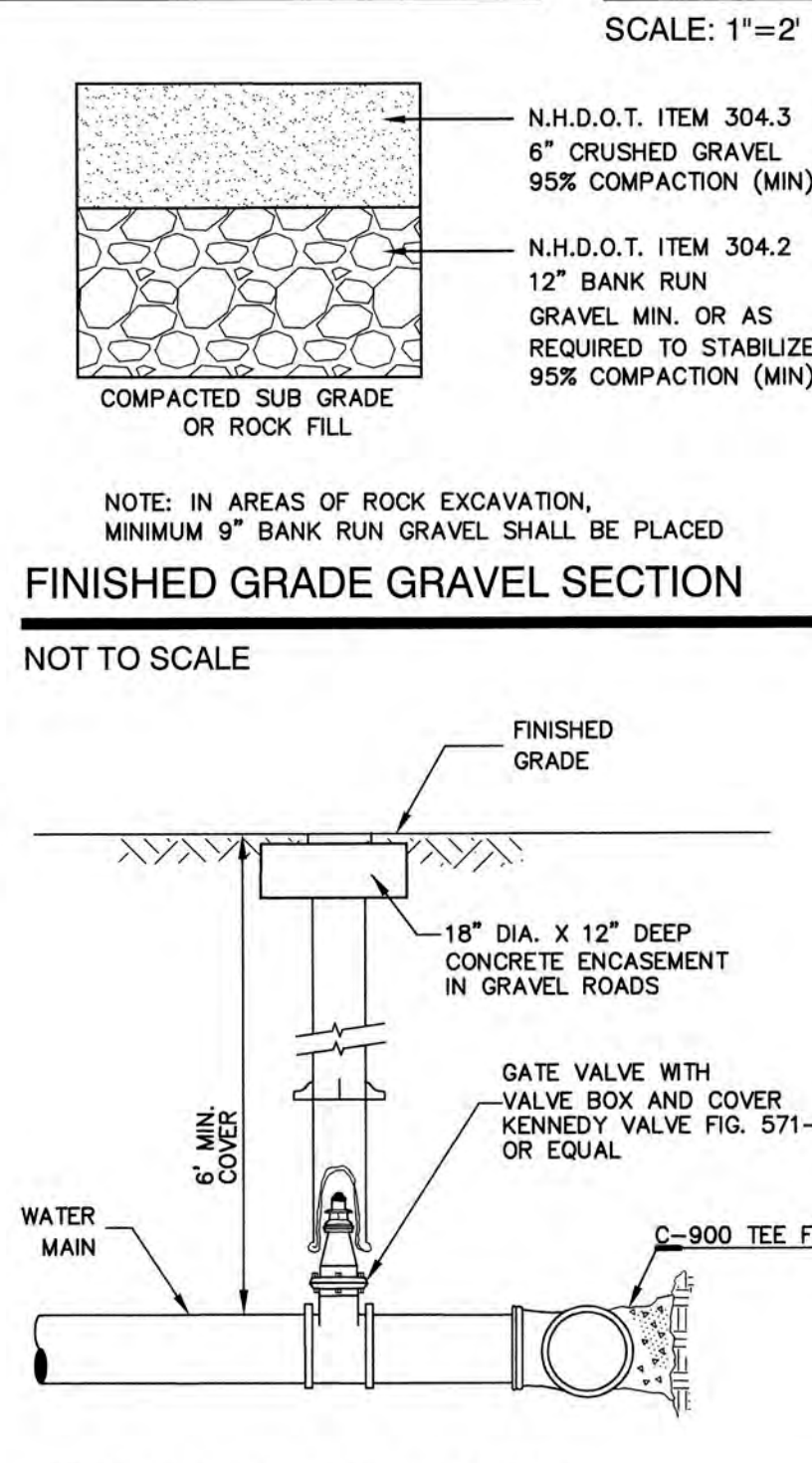
SCALE: 1"=2'



BLOW-OFF HYDRANT DETAIL

NOT TO SCALE

INLET PRESSURE (PSI)	FLOW RATE (GPM)
75	675
100	742
125	800
150	856

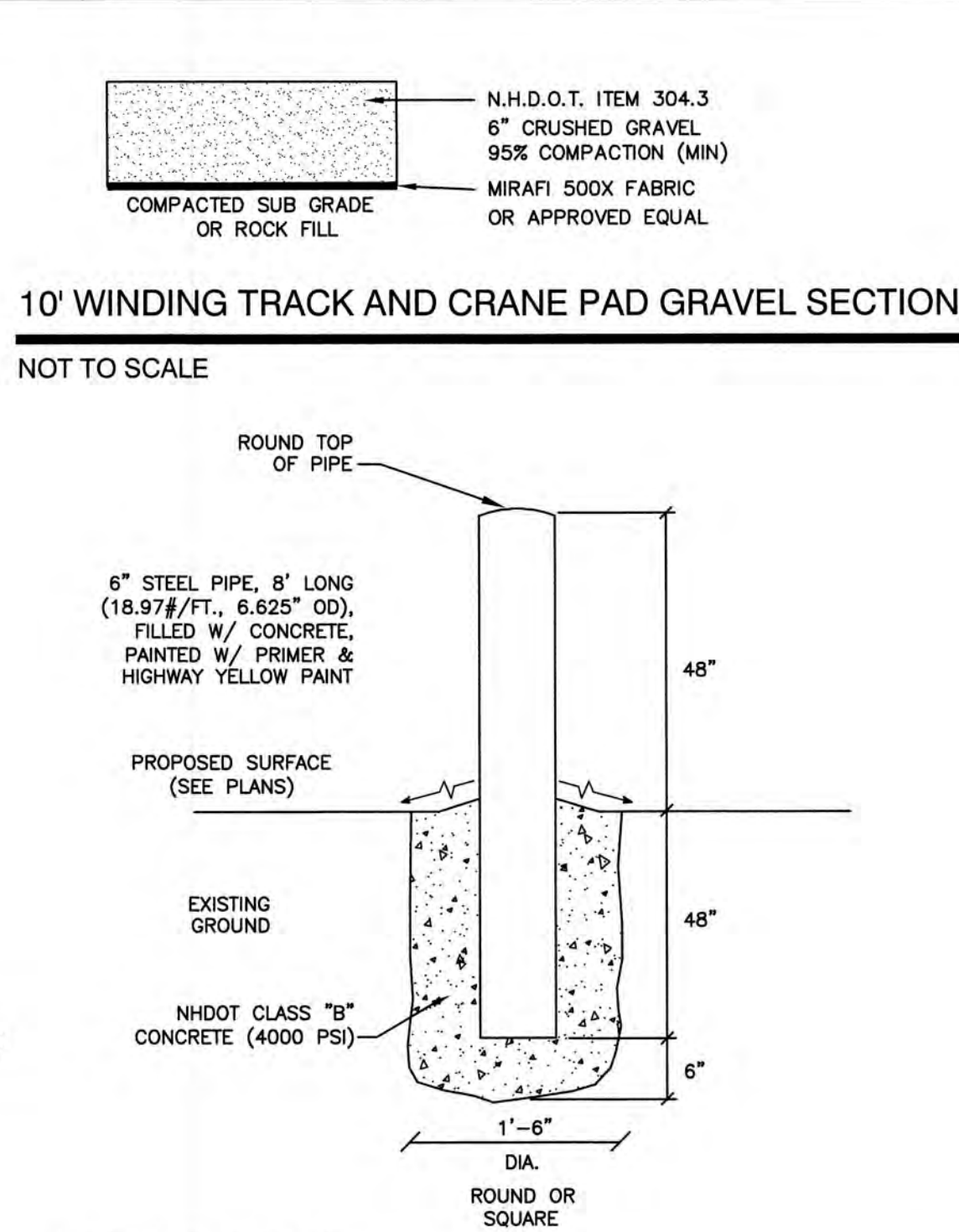


FINISHED GRADE GRAVEL SECTION

NOT TO SCALE

BURIED GATE VALVE DETAIL

NOT TO SCALE

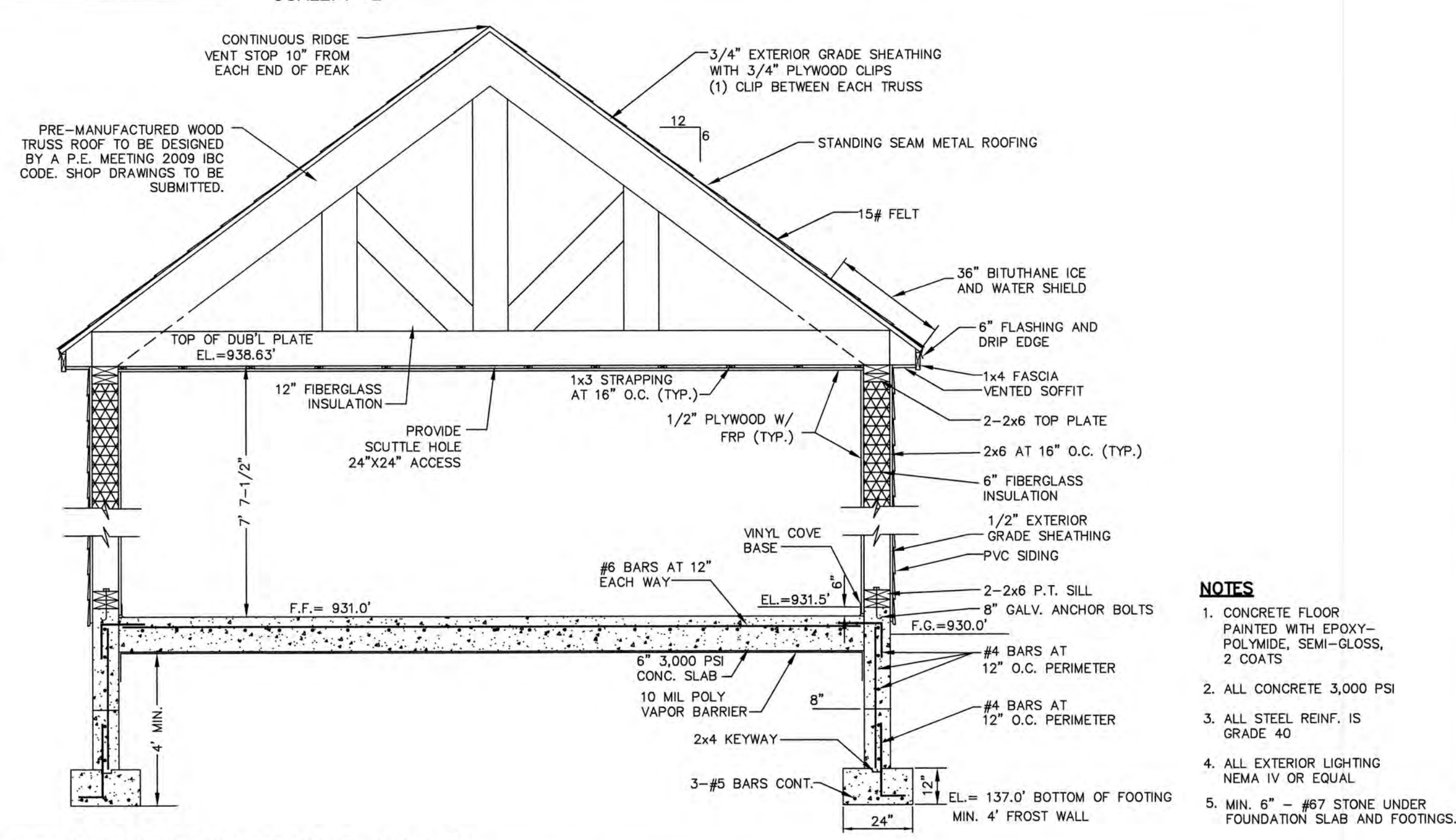


10' WINDING TRACK AND CRANE PAD GRAVEL SECTION

NOT TO SCALE

BOLLARD DETAIL

NOT TO SCALE



PUMP STATION TYPICAL WALL SECTION

NOT TO SCALE

- NOTES**
1. CONCRETE FLOOR PAINTED WITH EPOXY-POLYIMIDE, SEMI-GLOSS, 2 COATS
 2. ALL CONCRETE 3,000 PSI
 3. ALL STEEL REINF. IS GRADE 40
 4. ALL EXTERIOR LIGHTING NEMA IV OR EQUAL
 5. MIN. 6" - #7 STONE UNDER FOUNDATION SLAB AND FOOTINGS.

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 Drawing Name: 19078-PLAN.dwg
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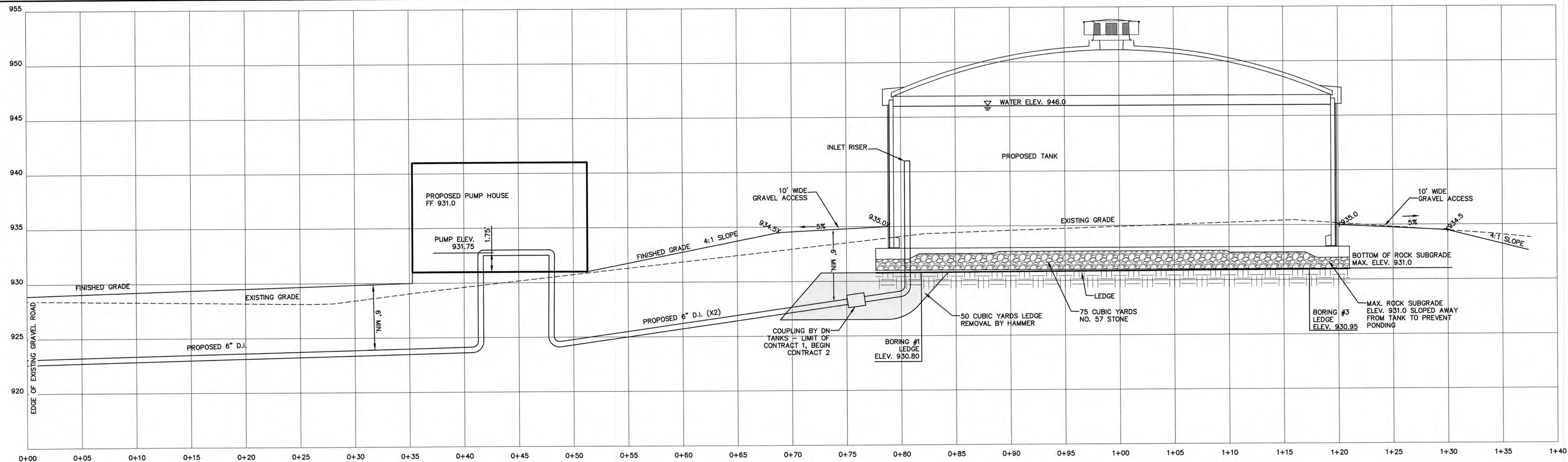


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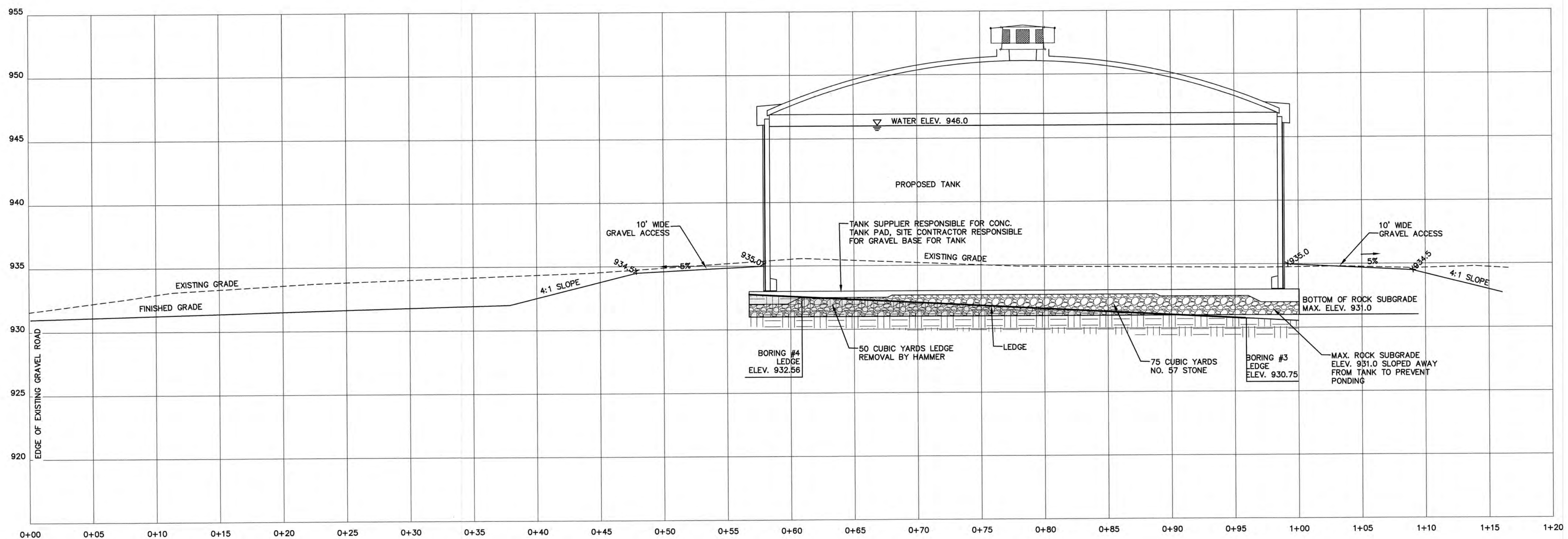
Plan Name: **DETAIL SHEET**
 Project: **VILLAGE DISTRICT OF EIDELWEISS CONTRACT 2 - WATER SYSTEM UPGRADES**
 Owner of Record: **ADAM LEISER, COMMISSIONER**
 1680 CONWAY ROAD, PO BOX 1027, MADISON, NH 03849

DRAWING No. **D2**
 SHEET 15 OF 18
 JBE PROJECT NO. 19078



CROSS SECTION AA

SCALE: 1"=5'

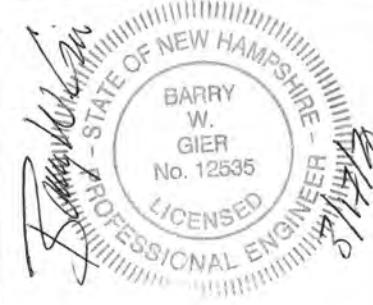


CROSS SECTION BB

SCALE: 1"=5'

Design: CSA Draft: AMJ Date: 06/20/2019
 Checked: CSA Scale: AS SHOWN Project No.: 19078
 Drawing Name: 19078-PLAN.dwg

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 PO Box 219 Stratham, NH 03885 FAX: 603-772-0227
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Plan Name:	DETAIL SHEET
Project:	VILLAGE DISTRICT OF EIDELWEISS CONTRACT 2 - WATER SYSTEM UPGRADES
Owner of Record:	ADAM LEISER, COMMISSIONER 1680 CONWAY ROAD, PO BOX 1027, MADISON, NH 03849

DRAWING No.
D3
 SHEET 16 OF 18
 JBE PROJECT NO. 19078

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
EUH	ELECTRIC UNIT HEATER
GFI	GROUND FAULT INDICATOR
PCP	PUMP CONTROL PANEL
H-O-A	HAND-OFF-AUTO
WP	WATER PROOF
FM	FLOW METER
HP	HORSE POWER
PT	PRESSURE TRANSMITTER
FBO	FURNISHED BY OTHERS
A/V	AUDIBLE/VISIBLE
NO	NORMALLY OPEN
NC	NORMALLY CLOSED
SP	SAMPLE PORT

LEGEND

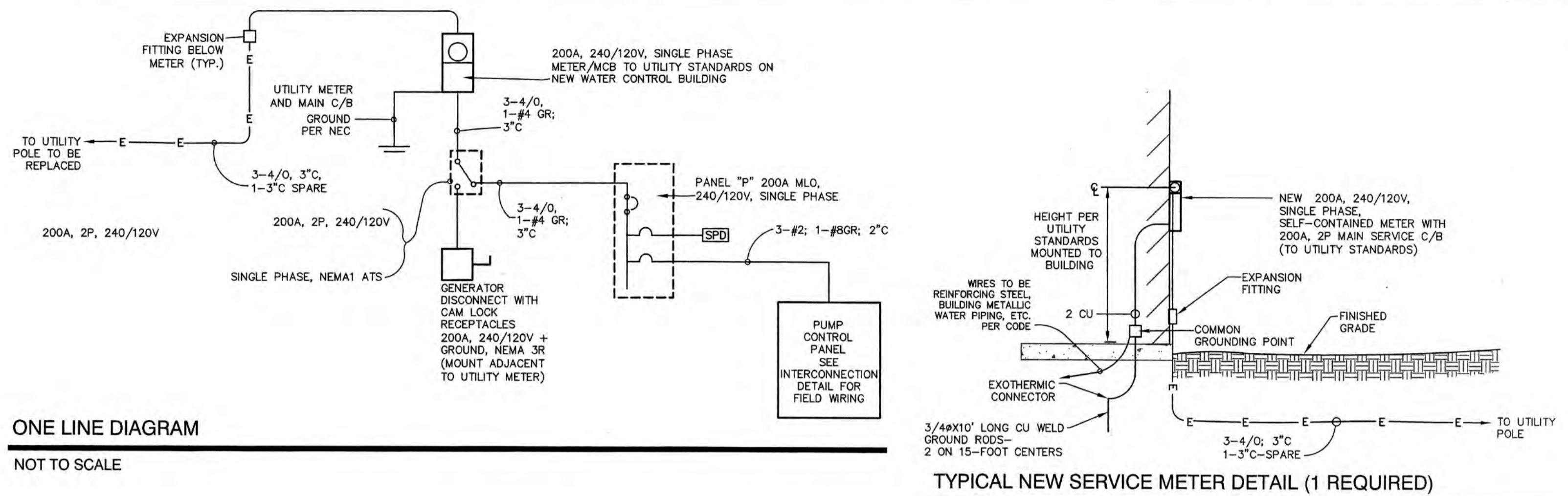
SYMBOL	DESCRIPTION
(Light Fixture)	LED LIGHT FIXTURE
(Light Fixture)	LED LIGHT FIXTURE
(Light Fixture)	EMERGENCY LIGHT FIXTURE
(Thermostat)	BUILDING LOW TEMPERATURE ALARM THERMOSTAT; 54" AFF
(Switch)	CONNECTION TO FIXED EQUIPMENT
(Switch)	SINGLE POLE SWITCH; 48" AFF
(Receptacle)	DUPLEX RECEPTACLE; 36" AFF
(Breaker)	DISCONNECT OR ENCLOSED CIRCUIT BREAKER
(Motor)	MOTOR; NUMBER INDICATES HORSE POWER
(Box)	JUNCTION BOX
(Switch)	DOOR SECURITY SWITCH

ELECTRIC UNIT HEATER SCHEDULE

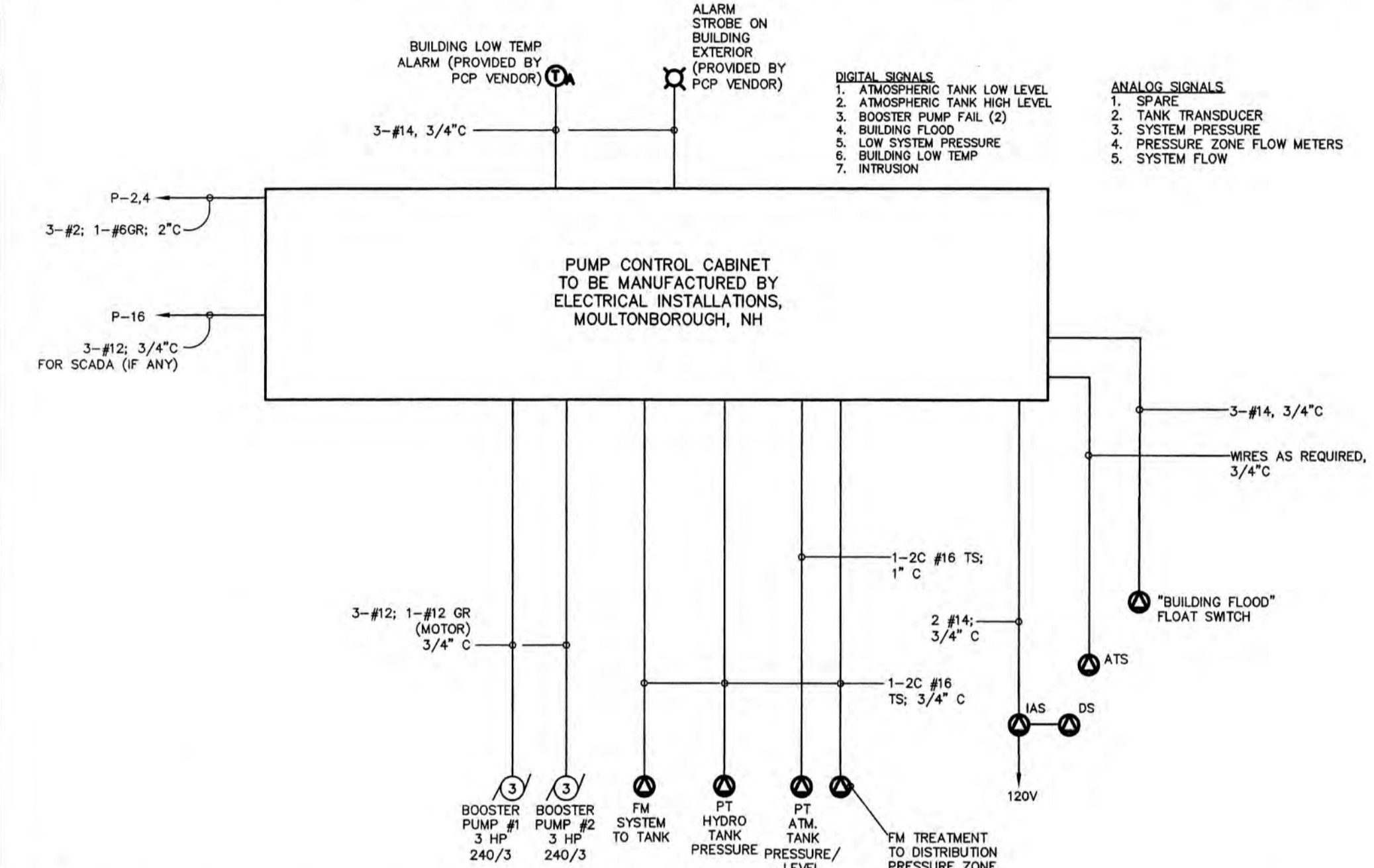
BERKO HUH-524TA, SINGLE PHASE, 60HZ, 240/208VOLTS, 5 KW, WITH DS-30 BUILT-IN DISCONNECT AND WB-1A WALL BRACKET. COORDINATE FINAL POSITION IN FIELD WITH ENGINEER.

FIXTURE SCHEDULE

TYPE	MAKE/MODEL	MOUNTING
A	LITHONIA ZLIN L48 5000LM FST MVDIT 30K 80CRI WH	CEILING SURFACE
B	RAB WPLD 10 Y WITH MOTION SENSOR	WALL ABOVE DOOR
AA	LITHONIA ELM4-TT-H	WALL 12" BELOW CEILING
BB	LITHONIA ELA H0812 WITH VANDAL SHIELD	WALL BELOW EAVE



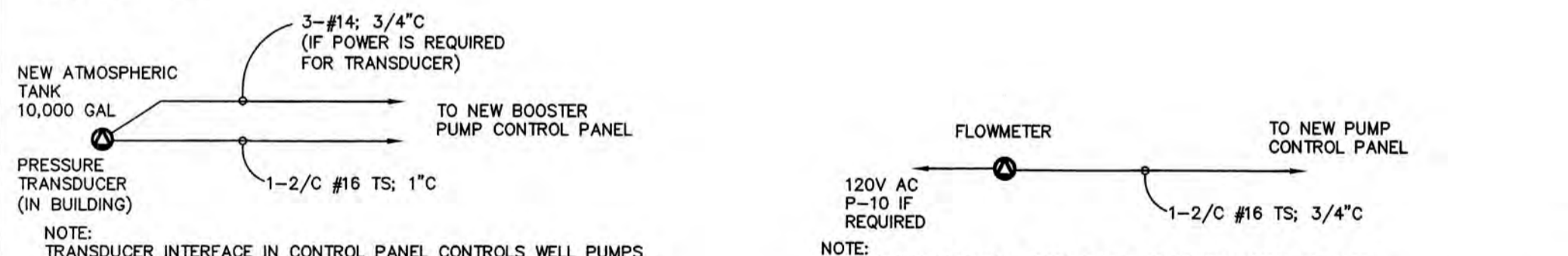
TYPICAL NEW SERVICE METER DETAIL (1 REQUIRED)
NOT TO SCALE



NOTE: PCP CONTAINS VFD/PHASE CONNECTERS FOR BOOSTER PUMPS, AND CONTROLS, BREAKERS FOR EACH PUMP, AND CONTROLS, ETC.

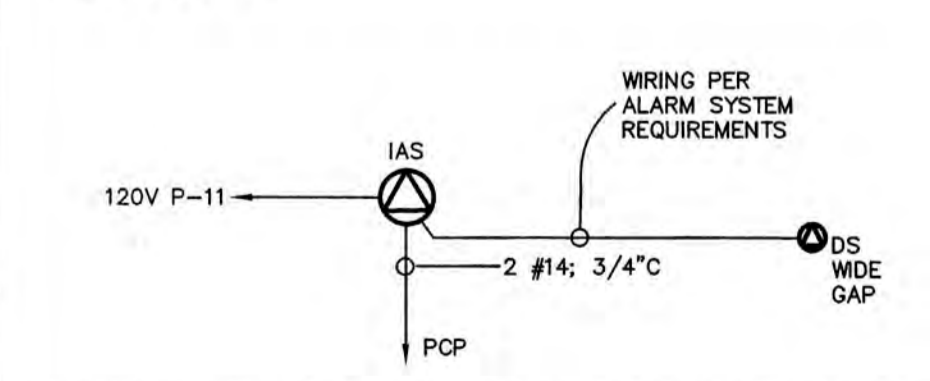
TYPICAL INTERCONNECTION DIAGRAM - PUMP CONTROL PANEL

NOT TO SCALE



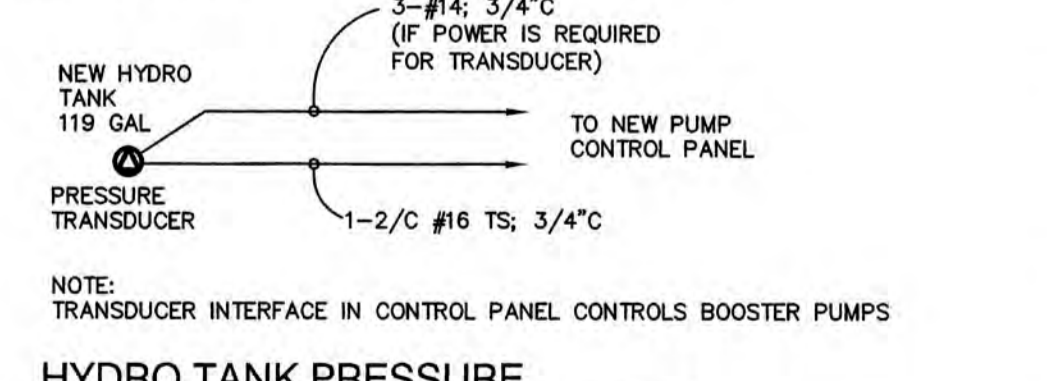
INTRUSION SYSTEM INTERCONNECTION DIAGRAM

NOT TO SCALE



HYDRO TANK PRESSURE TRANSDUCER INTERCONNECTION

NOT TO SCALE

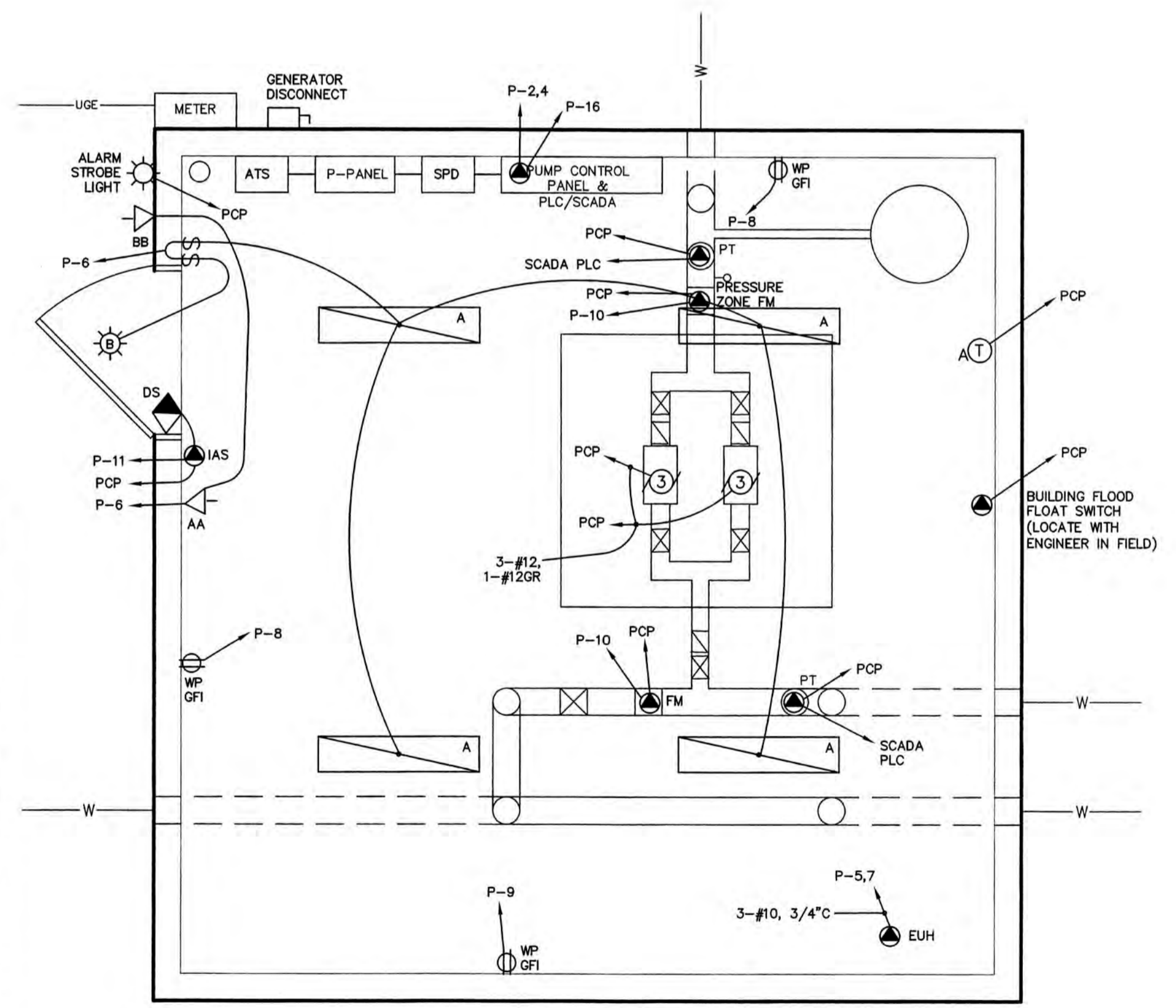


PANEL SCHEDULE PANELBOARD 'P'

200 AMP, MCB, 240/120 VOLT, SINGLE PHASE, 3 WIRE, 60 HERTZ SURFACE MOUNTED

CIRCUIT #	NO. POLES	RATING	CIRCUIT DESCRIPTION	LOAD
1,3	2	***	SPD	-
2,4	2	100*	PUMP CONTROL PANEL	10.0
5,7	2	30	EUH	5.0
6	1	20*	LIGHTING	0.5
8	1	20	SERVICE RECEPT.	0.8
9	1	20	DEHUMIDIFIER RECEPT.	1.5
10	1	15*	FLOW METER	0.5
11	1	20*	SECURITY	0.7
12	1	20*	PROCESS RECEPT.	0.7
13	1	20	GENERATOR ENGINE HEATER (FUTURE)	1.5
14	1	20	GENERATOR SERVICE RECEPT. (FUTURE)	1.5
15	2	20*	GENERATOR BATTERY CHARGER (FUTURE)	0.5
16	1	20	SCADA	0.7
17	20	20	SPARE	-
18	20	20	SPARE	-
19-42	-	-	SPACE FOR FUTURE	-

* PROVIDE HANDLE LOCK ON CIRCUITS
** RATING PER SPD MANUFACTURER RECOMMENDATION



ELECTRICAL DESIGN BY:
LEE F. CARROLL, PE
ELECTRICAL CONSULTANTS
1 Madison ave, P.O. Box 357
Gorham NH 03581-0357
603-466-5065
lcarroll@ne.r.com

Design: CSA | Draft: AMJ | Date: 06/20/2019
Checked: CSA | Scale: AS SHOWN | Project No.: 19078
Drawing Name: 19078-PLAN.dwg
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Civil Engineering Services

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603-772-4746
FAX: 603-772-0227
E-MAIL: JBE@JONESANDBEACH.COM

Plan Name: **ELECTRICAL DETAIL SHEET**

Project: **VILLAGE DISTRICT OF EIDELWEISS CONTRACT 2 - WATER SYSTEM UPGRADES**

Owner of Record: **ADAM LEISER, COMMISSIONER 1680 CONWAY ROAD, PO BOX 1027, MADISON, NH 03849**

DRAWING No. **E1**

SHEET 17 OF 18
JBE PROJECT NO. 19078

TEMPORARY EROSION CONTROL NOTES

- EROSION, SEDIMENT AND DETENTION MEASURES SHALL BE INSTALLED AS NEEDED OR AS DIRECTED BY THE ENGINEER.
- ALL DISTURBED AREAS SHALL BE RETURNED TO PROPOSED GRADES AND ELEVATIONS. DISTURBED AREAS SHALL BE LOAMED WITH A MINIMUM OF 6" OF SCREENED ORGANIC LOAM AND SEEDED WITH SEED MIXTURE 'C' AT A RATE NOT LESS THAN 1.10 POUNDS OF SEED PER 1,000 S.F. OF AREA (48 LBS. / ACRE).
- SILT FENCES AND OTHER BARRIERS SHALL BE INSPECTED EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF A RAINFALL OF 0.25" OR GREATER. ALL DAMAGED AREAS SHALL BE REPAIRED, AND SEDIMENT DEPOSITS SHALL PERIODICALLY BE REMOVED AND DISPOSED OF.
- AFTER ALL DISTURBED AREAS HAVE BEEN STABILIZED, THE TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED AND THE AREA DISTURBED BY THE REMOVAL SMOOTHED AND RE-VEGETATED.
- AREAS MUST BE SEEDED AND MULCHED OR OTHERWISE PERMANENTLY STABILIZED WITHIN 3 DAYS OF FINAL GRADING, OR TEMPORARILY STABILIZED WITHIN 14 DAYS OF THE INITIAL DISTURBANCE OF SOIL. ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.
- ALL PROPOSED VEGETATED AREAS THAT DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED BY SEEDING AND INSTALLING NORTH AMERICAN GREEN S75 EROSION CONTROL BLANKETS (OR AN EQUIVALENT APPROVED IN WRITING BY THE ENGINEER) ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.
- ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.
- AFTER NOVEMBER 15th WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3" OF CRUSHED GRAVEL PER NHDOT ITEM 304.3.
- AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
 - BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
 - A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
 - A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH STONE OR RIPRAP HAS BEEN INSTALLED; OR
 - EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
- FUGITIVE DUST CONTROL IS REQUIRED TO BE CONTROLLED IN ACCORDANCE WITH ENV-A 1000, AND THE PROJECT IS TO MEET THE REQUIREMENTS AND INTENT OF RSA 430:53 AND AGR 3800 RELATIVE TO INVASIVE SPECIES.
- PRIOR TO CONSTRUCTION, A PHASING PLAN THAT DELINEATES EACH PHASE OF THE PROJECT SHALL BE SUBMITTED. ALL TEMPORARY SEDIMENT BASINS THAT WILL BE NEEDED FOR DEWATERING WORK AREAS SHALL BE LOCATED AND IDENTIFIED ON THIS PLAN.

SEEDING SPECIFICATIONS

- GRADING AND SHAPING**
 - SLOPES SHALL NOT BE STEEPER THAN 2:1 WITHOUT APPROPRIATE EROSION CONTROL MEASURES AS SPECIFIED ON THE PLANS (3:1 SLOPES OR FLATTER ARE PREFERRED).
 - WHERE MOWING WILL BE DONE, 3:1 SLOPES OR FLATTER ARE RECOMMENDED.
- SEEDBED PREPARATION**
 - SURFACE AND SEEPAGE WATER SHOULD BE DRAINED OR DIVERTED FROM THE SITE TO PREVENT DROWNING OR WINTER KILLING OF THE PLANTS.
 - STONES LARGER THAN 4 INCHES AND TRASH SHOULD BE REMOVED BECAUSE THEY INTERFERE WITH SEEDING AND FUTURE MAINTENANCE OF THE AREA. WHERE FEASIBLE, THE SOIL SHOULD BE TILLED TO A DEPTH OF ABOUT 4 INCHES TO PREPARE A SEEDBED AND FERTILIZER AND LIME MIXED INTO THE SOIL. THE SEEDBED SHOULD BE LEFT IN A REASONABLY FIRM AND SMOOTH CONDITION. THE LAST TILLAGE OPERATION SHOULD BE PERFORMED ACROSS THE SLOPE WHEREVER PRACTICAL.
- ESTABLISHING A STAND**
 - LIME AND FERTILIZER SHOULD BE APPLIED PRIOR TO OR AT THE TIME OF SEEDING AND INCORPORATED INTO THE SOIL. TYPES AND AMOUNTS OF LIME AND FERTILIZER SHOULD BE BASED ON AN EVALUATION OF SOIL TESTS. WHEN A SOIL TEST IS NOT AVAILABLE, THE FOLLOWING MINIMUM AMOUNTS SHOULD BE APPLIED:
 - AGRICULTURAL LIMESTONE, 2 TONS PER ACRE OR 100 LBS. PER 1,000 SQ.FT.
 - NITROGEN(N), 50 LBS. PER ACRE OR 1.1 LBS. PER 1,000 SQ.FT.
 - PHOSPHATE(P2O5), 100 LBS. PER ACRE OR 2.2 LBS. PER 1,000 SQ.FT.
 - POTASH(K2O), 100 LBS. PER ACRE OR 2.2 LBS. PER 1,000 SQ.FT.
 (NOTE: THIS IS THE EQUIVALENT OF 500 LBS. PER ACRE OF 10-20-20 FERTILIZER OR 1,000 LBS. PER ACRE OF 5-10-10.)
 - SEED SHOULD BE SPREAD UNIFORMLY BY THE METHOD MOST APPROPRIATE FOR THE SITE. METHODS INCLUDE BROADCASTING, DRILLING AND HYDROSEEDING. WHERE BROADCASTING IS USED, COVER SEED WITH .25 INCH OF SOIL OR LESS, BY CULTIPACKING OR RAKING.
 - REFER TO THE "SEEDING GUIDE" AND "SEEDING RATES" TABLES ON THIS SHEET FOR APPROPRIATE SEED MIXTURES AND RATES OF SEEDING. ALL LEGUMES (CROWN VETCH, BIRDSFOOT, TREFLOIL AND FLATPEA) MUST BE INOCULATED WITH THEIR SPECIFIC INOCULANT PRIOR TO THEIR INTRODUCTION TO THE SITE.
 - WHEN SEEDING AREAS ARE MULCHED, PLANTINGS MAY BE MADE FROM EARLY SPRING TO EARLY OCTOBER. WHEN SEEDING AREAS ARE NOT MULCHED, PLANTINGS SHOULD BE MADE FROM EARLY SPRING TO MAY 20th OR FROM AUGUST 10th TO SEPTEMBER 1st.
- MULCH**
 - HAY, STRAW, OR OTHER MULCH, WHEN NEEDED, SHOULD BE APPLIED IMMEDIATELY AFTER SEEDING.
 - MULCH WILL BE HELD IN PLACE USING APPROPRIATE TECHNIQUES FROM THE BEST MANAGEMENT PRACTICE FOR MULCHING. HAY OR STRAW MULCH SHALL BE PLACED AT A RATE OF 90 LBS PER 1000 S.F.
- MAINTENANCE TO ESTABLISH A STAND**
 - PLANTED AREAS SHOULD BE PROTECTED FROM DAMAGE BY FIRE, GRAZING, TRAFFIC, AND DENSE WEED GROWTH.
 - FERTILIZATION NEEDS SHOULD BE DETERMINED BY ONSITE INSPECTIONS. SUPPLEMENTAL FERTILIZER IS USUALLY THE KEY TO FULLY COMPLETE THE ESTABLISHMENT OF THE STAND BECAUSE MOST PERENNIALS TAKE 2 TO 3 YEARS TO BECOME FULLY ESTABLISHED.
 - IN WATERWAYS, CHANNELS, OR SWALES WHERE UNIFORM FLOW CONDITIONS ARE ANTICIPATED, ANNUAL MOWING MAY BE NECESSARY TO CONTROL GROWTH OF WOODY VEGETATION.

CONSTRUCTION SEQUENCE

- A PRE-CONSTRUCTION MEETING IS TO BE HELD WITH THE SITE CONTRACTOR, OWNER'S REPRESENTATIVE, WATER SYSTEM OPERATOR, DN TANK, STATE OFFICIALS AND THE ENGINEER PRIOR TO THE START OF CONSTRUCTION.
- THE CONTRACTOR SHALL SUBMIT TO THE OWNER AND ENGINEER FOR REVIEW AND ACCEPTANCE A COMPLETE SCHEDULE OF HIS PROPOSED SEQUENCE OF CONSTRUCTION OPERATIONS PRIOR TO COMMENCING ANY WORK.
- CLEAR, GRUB AND PREPARE THE REINACH TANK SITE FOR THE CONSTRUCTION OF THE NEW TANK.
- LEDGE TO BE HAMMERED AS REQUIRED.
- COORDINATE WITH AND VERIFY THE PLACEMENT OF THE FINAL GRAVEL LAYERS WITH DN TANK.
- INSTALL 6" DI DRAIN AND INTAKE PER PLAN, ONE FOOT OUTSIDE THE TANK.
- INSTALL GRAVELS AND FABRIC FOR THE CRANE AND WINDING TRACK.
- CONSTRUCTION BOOSTER PUMP STATION.
- AFTER TANK COMPLETION CONSTRUCT FINAL GRADES.

USE	SEEDING MIXTURE 1/	DROUGHTY	WELL DRAINED	MODERATELY WELL DRAINED	POORLY DRAINED
STEEP CUTS AND FILLS, BORROW AND DISPOSAL AREAS	A	FAIR	GOOD	GOOD	FAIR
	B	POOR	GOOD	FAIR	FAIR
	C	POOR	GOOD	EXCELLENT	GOOD
	D	FAIR	EXCELLENT	EXCELLENT	POOR
WATERWAYS, EMERGENCY SPILLWAYS, AND OTHER CHANNELS WITH FLOWING WATER.	A	GOOD	GOOD	GOOD	FAIR
	C	GOOD	EXCELLENT	EXCELLENT	FAIR
LIGHTLY USED PARKING LOTS, ODD AREAS, UNUSED LANDS, AND LOW INTENSITY USE RECREATION SITES.	A	GOOD	GOOD	GOOD	FAIR
	B	GOOD	EXCELLENT	EXCELLENT	POOR
	C	GOOD	EXCELLENT	EXCELLENT	FAIR
PLAY AREAS AND ATHLETIC FIELDS. (TOPSOIL IS ESSENTIAL FOR GOOD TURF.)	E	FAIR	EXCELLENT	EXCELLENT	2/
	F	FAIR	EXCELLENT	EXCELLENT	2/

GRAVEL PIT, SEE NH-PM-24 IN APPENDIX FOR RECOMMENDATION REGARDING RECLAMATION OF SAND AND GRAVEL PITS.

1/ REFER TO SEEDING MIXTURES AND RATES IN TABLE BELOW.
2/ POORLY DRAINED SOILS ARE NOT DESIRABLE FOR USE AS PLAYING AREA AND ATHLETIC FIELDS.

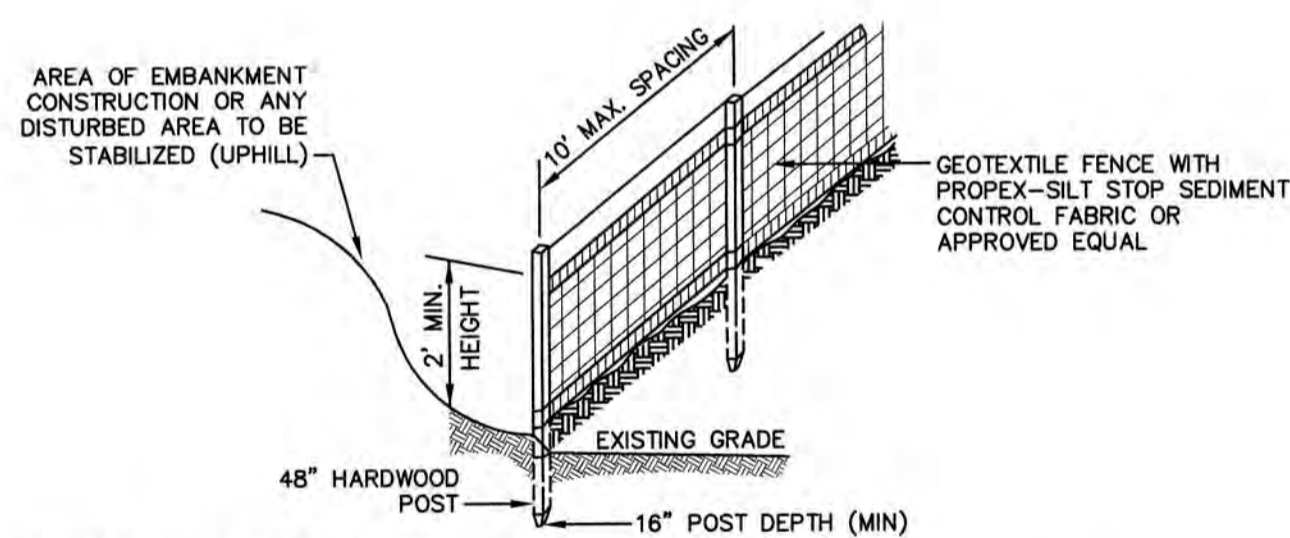
NOTE: TEMPORARY SEED MIX FOR STABILIZATION OF TURF SHALL BE WINTER RYE OR OATS AT A RATE OF 2.5 LBS. PER 1000 S.F. AND SHALL BE PLACED PRIOR TO OCTOBER 15th, IF PERMANENT SEEDING NOT YET COMPLETE.

SEEDING GUIDE

MIXTURE	POUNDS PER ACRE	POUNDS PER 1,000 Sq. Ft.
A. TALL FESCUE	20	0.45
CREeping RED FESCUE	20	0.45
RED TOP	2	0.05
TOTAL	42	0.95
B. TALL FESCUE	15	0.35
CREeping RED FESCUE	10	0.25
CROWN VETCH OR FLAT PEA	30	0.75
TOTAL	40 OR 55	0.95 OR 1.35
C. TALL FESCUE	20	0.45
CREeping RED FESCUE	20	0.45
BIRDS FOOT TREFLOIL	8	0.20
TOTAL	48	1.10
D. TALL FESCUE	20	0.45
FLAT PEA	30	0.75
TOTAL	50	1.20
E. CREeping RED FESCUE 1/	50	1.15
KENTUCKY BLUEGRASS 1/	50	1.15
TOTAL	100	2.30
F. TALL FESCUE 1	150	3.60

1/ FOR HEAVY USE ATHLETIC FIELDS CONSULT THE UNIVERSITY OF NEW HAMPSHIRE COOPERATIVE EXTENSION TURF SPECIALIST FOR CURRENT VARIETIES AND SEEDING RATES.

SEEDING RATES

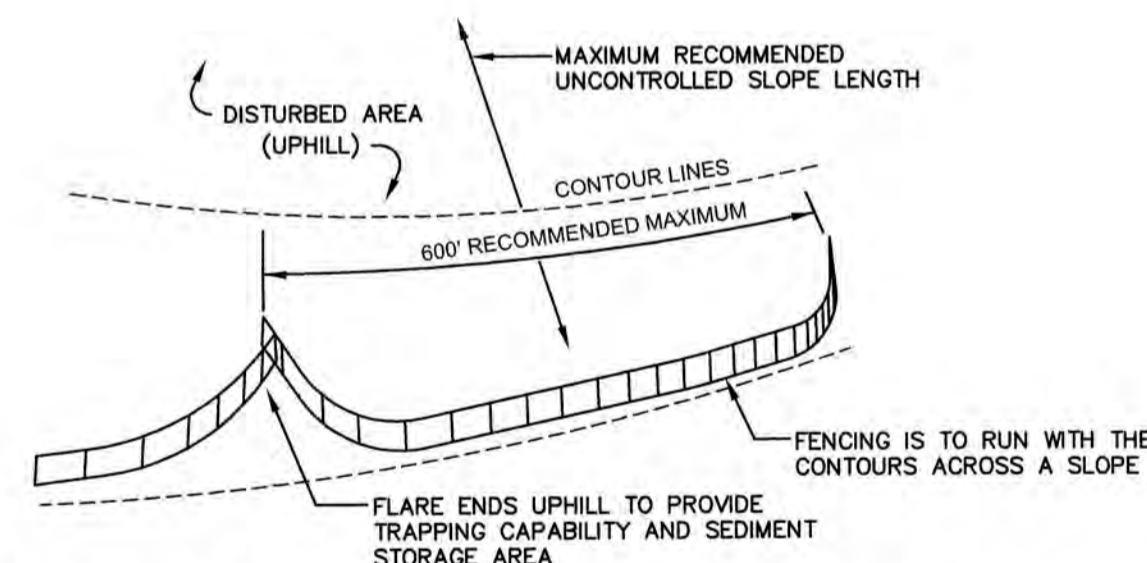


CONSTRUCTION SPECIFICATIONS:

- WOVEN FABRIC FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. FILTER CLOTH SHALL BE FASTENED TO WOVEN WIRE EVERY 24" AT TOP, MID AND BOTTOM AND EMBEDDED IN THE GROUND A MINIMUM OF 8" AND THEN COVERED WITH SOIL.
- THE FENCE POSTS SHALL BE A MINIMUM OF 48" LONG, SPACED A MAXIMUM 10' APART, AND DRIVEN A MINIMUM OF 16" INTO THE GROUND.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THE ENDS OF THE FABRIC SHALL BE OVERLAPPED 6", FOLDED AND STAPLED TO PREVENT SEEDING FROM BY-PASSING.
- MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SEDIMENT REMOVED AND PROPERLY DISPOSED OF WHEN IT IS 6" DEEP OR VISIBLE "BULGES" DEVELOP IN THE SILT FENCE.
- PLACE THE ENDS OF THE SILT FENCE UP CONTOUR TO PROVIDE FOR SEDIMENT STORAGE.

SILT FENCE

NOT TO SCALE



- SILT FENCES SHALL BE REMOVED WHEN NO LONGER NEEDED AND THE SEDIMENT COLLECTED SHALL BE DISPOSED AS DIRECTED BY THE ENGINEER. THE AREA DISTURBED BY THE REMOVAL SHALL BE SMOOTHED AND REVEGETATED.

MAINTENANCE:

- SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS THAT ARE REQUIRED SHALL BE DONE IMMEDIATELY.
- IF THE FABRIC ON A SILT FENCE SHOULD DECOMPOSE OR BECOME INEFFECTIVE DURING THE EXPECTED LIFE OF THE FENCE, THE FABRIC SHALL BE REPLACED PROMPTLY.
- SEDIMENT DEPOSITS SHOULD BE INSPECTED AFTER EVERY STORM EVENT. THE DEPOSITS SHOULD BE REMOVED WHEN THEY REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER.
- SEDIMENT DEPOSITS THAT ARE REMOVED, OR LEFT IN PLACE AFTER THE FABRIC HAS BEEN REMOVED, SHALL BE GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATED.

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Drawing Name: 19078-PLAN.dwg		
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REV.	DATE	REVISION	BY
1	2/28/20	REVISED PER COMMENTS	PSL
0	2/3/20	ISSUED CONTRACT 2	PSL

Designed and Produced in NH

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Plan Name:	EROSION AND SEDIMENT CONTROL DETAILS
Project:	VILLAGE DISTRICT OF EIDELWEISS CONTRACT 2 - WATER SYSTEM UPGRADES
Owner of Record:	ADAM LEISER, COMMISSIONER 1680 CONWAY ROAD, PO BOX 1027, MADISON, NH 03849

DRAWING No.	E2
SHEET 18 OF 18	JBE PROJECT NO. 19078