



IOWA DEPARTMENT OF NATURAL RESOURCES  
CONSTRUCTION DOCUMENTS  
FOR  
DAM PIPE GROUTING  
AT  
BEEDS LAKE STATE PARK  
FRANKLIN COUNTY, IOWA

PROJECT #21-02-35-01  
PLANS PREPARED BY  
LAND AND WATERS BUREAU  
CONSERVATION AND RECREATION DIVISION

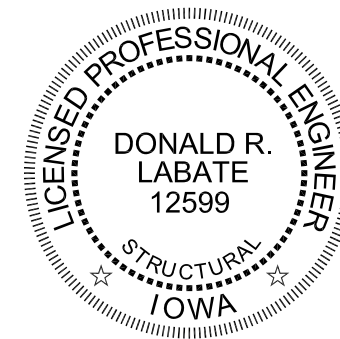
AUTHORIZATION TO BID

			
	10/30/2020		10/30/20
BUREAU CHIEF - LAND AND WATERS	DATE	PARKS   WILDLIFE   FISHERIES   LAW ENFORCEMENT	DATE

DIRECTORY

ARCHITECT		DNR INSPECTOR	
COMPANY	IOWA DEPARTMENT OF NATURAL RESOURCES	COMPANY	IOWA DEPARTMENT OF NATURAL RESOURCES
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THIS PROJECT WILL COFFER DAM A PORTION OF THE LAKE TO DRAW WATER BELOW THE FISH POND PIPE, WHICH HAS BEEN FOUND TO BE LEAKING DOWN-STREAM OF THE DAM. THIS CAST IRON PIPE WILL BE TELEVISED BY THE CONTRACTOR TO SEE WHERE THE LEAK IS OCCURRING. AFTER DRAWING DOWN THE COFFER DAM AREA, THE CONTRACTOR SHALL REMOVE THE EXISTING VALVE IN THE DAM CONTROL VAULT, BOLT/WELD NEW CAP PLATES ON BOTH END OF THE PIPES, PUT A BIRDS-MOUTH ON BOTH ENDS AND FILL THE PIPE SECTION WITH NON-SHRINK GROUT.



I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

*Donald R. Labate*

11-1-2020

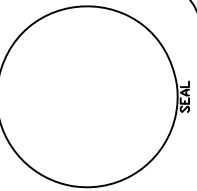
Donald R. Labate

Date

My license renewal date is December 31, 2020.

Pages or sheets covered by this seal:

A-001 - A-101



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DAM PIPE GROUTING FOR:  
BEEDS LAKE STATE PARK

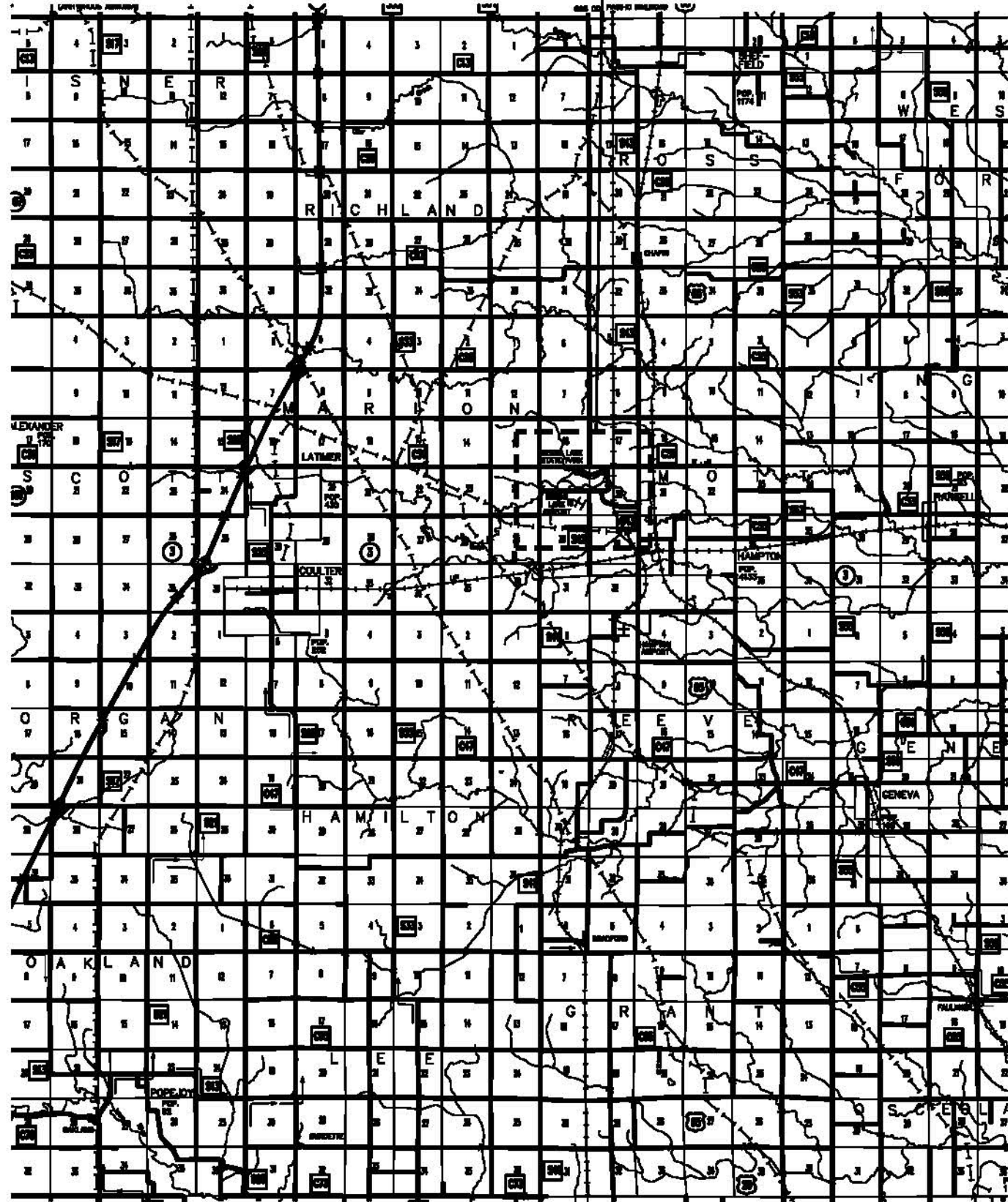
HAMPTON, IA 50441

1422 165TH AVE.

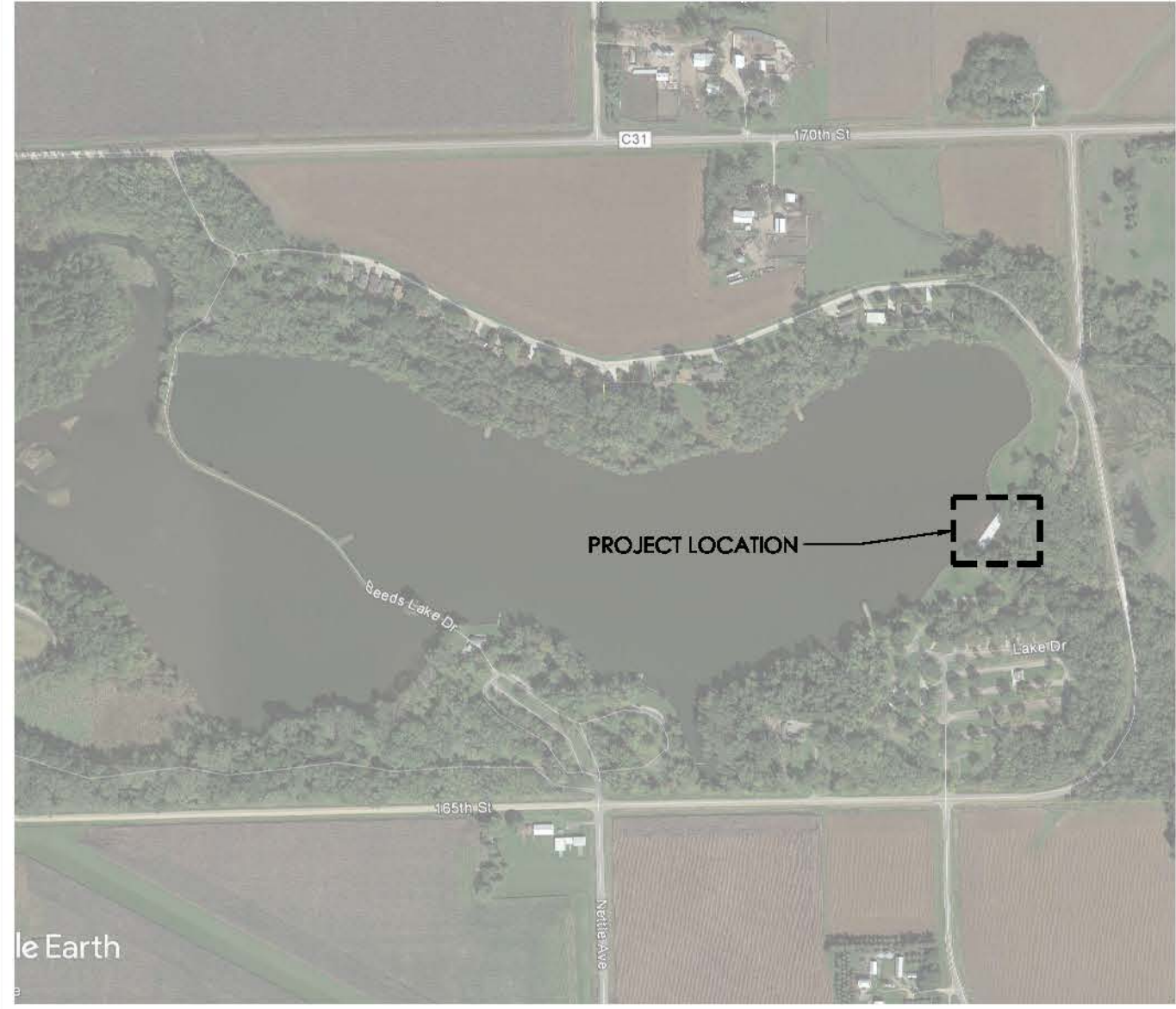
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DRAWN BY	PROJECT NUMBER
	21-02-35-01
CHECKED BY	DATE
	11.18.2020
SHEET No.	
<b>A-001</b>	

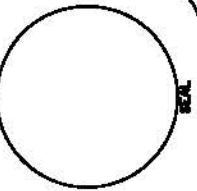
BEEDS LAKE STATE PARK



FRANKLIN COUNTY, IOWA



BEEDS LAKE STATE PARK



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PROJECT NUMBER	21-02-35-01
DATE	11.18.2020
PROJECT	A-002

# GENERAL CONSTRUCTION NOTES

VERIFY ACTUAL LOCATIONS AND ELEVATIONS WITH DNR ENGINEER.

ALL WORK SHALL CONFORM TO AND BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE CODES AND ORDINANCES.

THE CONTRACTOR SHALL VISIT THE SITE AND INSPECT THE PROJECT AREA AND THOROUGHLY FAMILIARIZE THEMSELVES WITH THE ACTUAL JOB CONDITIONS PRIOR TO BIDDING AND THE START OF WORK. FAILURE TO VISIT THE PROJECT SITE SHALL NOT RELIEVE THE CONTRACTOR FROM PERFORMING THE WORK IN ACCORDANCE TO THE PLANS, SPECIFICATION, SPECIAL PROVISIONS AND CONTRACT.

THE CONTRACTOR SHALL VERIFY, AT THE SITE, ALL DIMENSIONS AND CONDITIONS SHOWN ON THE PLANS AND SHALL NOTIFY THE DNR ENGINEER OF ANY DISCREPANCIES, OMISSIONS, AND/OR CONFLICTS PRIOR TO PROCEEDING WITH THE WORK.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE WASTE AREAS OR DISPOSAL SITES FOR EXCESS MATERIAL (EXCAVATED MATERIAL OR BROKEN CONCRETE) WHICH IS NOT DESIRABLE TO BE INCORPORATED INTO THE WORK INVOLVED ON THIS PROJECT. NO PAYMENT FOR OVERHAUL WILL BE ALLOWED FOR MATERIAL HAULED TO THESE SITES. NO MATERIAL SHALL BE PLACED WITHIN THE RIGHT-OF-WAY, UNLESS SPECIFICALLY STATED IN THE PLANS OR APPROVED BY THE DNR ENGINEER.

THE CONTRACTOR SHALL NOT DISTURB DESIRABLE GRASS AREAS AND DESIRABLE TREES OUTSIDE THE CONSTRUCTION LIMITS. THE CONTRACTOR WILL NOT BE PERMITTED TO PARK OR SERVICE VEHICLES AND EQUIPMENT OR USE THESE AREAS FOR STORAGE OF MATERIALS. STORAGE, PARKING AND SERVICE AREAS WILL BE SUBJECT TO THE APPROVAL OF THE DNR ENGINEER.

WHERE UTILITIES AND FIXTURES ARE SHOWN AS EXISTING ON THE PLANS OR ENCOUNTERED WITHIN THE CONSTRUCTION AREA, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE DNR ENGINEER OF THOSE UTILITIES PRIOR TO THE BEGINNING OF ANY CONSTRUCTION. THE CONTRACTOR SHALL BE AFFORDED ACCESS TO THESE FACILITIES FOR NECESSARY MODIFICATION OF SERVICES. UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS AND THEREFORE THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. IT IS POSSIBLE THERE MAY BE OTHERS, THE EXISTENCE OF WHICH IS PRESENTLY NOT KNOWN OR SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THEIR EXISTENCE AND EXACT LOCATION AND TO AVOID DAMAGE THERETO. NO CLAIMS FOR ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR FOR ANY INTERFERENCE OR DELAY CAUSED BY SUCH WORK.

THE CONTRACTOR SHALL SHAPE GRADED AREA TO MAINTAIN SURFACE DRAINAGE. ALL ELEVATIONS ARE TO FINISH GRADE.

THE CONTRACTOR IS EXPECTED TO HAVE MATERIALS, EQUIPMENT, AND LABOR AVAILABLE ON A DAILY BASIS TO INSTALL AND MAINTAIN EROSION CONTROL FEATURES ON THE PROJECT. THIS MAY INVOLVE SEEDING, SILT FENCE, ROCK DITCH CHECKS, SILT BASINS OR SILT DIKES.

# PROJECT NARRATIVE

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL ITEMS WITHIN THIS NARRATIVE, THE DRAWINGS, AND PROJECT MANUAL UNLESS SPECIFICALLY NOTED OTHERWISE. THIS NARRATIVE IS NOT MEANT TO BE A COMPREHENSIVE ACCOUNT OF ALL ITEMS TO BE COVERED BY THE CONTRACT, REVIEW ALL DOCUMENTS. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND QUANTITIES PRIOR TO CONSTRUCTION.

CONTRACTOR SHALL DEWATER THE AREA DIRECTLY AROUND THE INTAKE PIPE FOR THE FISH PONDS VIA COFFER DAM OR PORTABLE DAM OF THE CONTRACTOR'S CHOICE. CONTRACTOR SHALL SUBMIT PLANS FOR COFFER OR PORTABLE DAM TO THE IOWA DNR FOR APPROVAL. CONTRACTOR SHALL THEN REMOVE THE EXISTING VALVE IN THE DAM VAULT EXPOSING THE PIPE WITHIN THE VAULT. THE CONTRACTOR SHALL TELEWISE THE LOWER LENGTH OF PIPE TO LOCATE EXISTING LEAK FOR IOWA DNR'S REVIEW. THE CONTRACTOR SHALL BOLT/WELD NEW 1/2" A36 STEEL END PLATES ON BOTH SIDES OF THE CAST IRON PIPE SECTION THAT PENETRATES THE DAM WALL WITH 2" DIAMETER BIRD'S MOUTH ELBOW ENDS. CONTRACTOR TO ENSURE WATER-TIGHT SEAL ON THE PLATES OF THE PIPE AND PERIMETER OF THE PENETRATION. THE CONTRACTOR SHALL PUMP NON-SHRINK CEMENTIOUS GROUT INTO THE PIPE UNTIL IT FLOWS FREELY FROM BOTH ENDS. THE CONTRACTOR SHALL ALSO SEAL THE PERIMETER OF THE PENETRATION ON BOTH SIDES WITH EPOXY HYDROPHILIC SEALER TO ACHIEVE A COMPLETE WATER SEAL. ONCE THE GROUT HAS ACHIEVED REQUIRED STRENGTH, THE CONTRACTOR SHALL REMOVE THE COFFER/PORTABLE DAM.

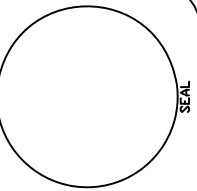
THE CONTRACTOR SHALL ALSO FILL AN UNDERMINED AREA OF THE DAM WALL WITH 3" CLEAN STONE, TOPPED WITH 3/4" STONE AND DIRT. THE CONTRACTOR SHALL SEED AND RESTORE THAT AREA ONCE COMPLETE.

# COFFERDAM NOTES

THE CONTRACTOR SHALL CONSTRUCT A COFFERDAM OR PORTABLE DAM STRUCTURE INTO BEEDS LAKE DAM, IN AREA SHOWN, TO ALLOW FOR DEWATERING THE AREA AND INSPECTING THE EXISTING FISH-POND WATER PIPE. THE CONTRACTOR SHALL CONSTRUCT A COFFERDAM OF THEIR PREFERENCE FOLLOWING APPROVAL BY THE IOWA DNR INSPECTOR, ALLOWING THE COMPLETE DEWATERING IN THE AREA OF CONSTRUCTION. THE COFFERDAM SHALL ALLOW ADEQUATE CLEARANCE FOR THE CONSTRUCTION REQUIRED IN THIS CONTRACT AND SHALL BE REMOVED IN ITS ENTIRETY AFTER THE COMPLETION OF THE PROJECT.

# BID ITEMS

ITEM NUMBER	ITEM DESCRIPTION	ESTIMATED QUANTITY
1	COFFER/PORTABLE DAM	LUMP SUM
2	PIPE TELEVISION	LUMP SUM
3	VALVE REMOVAL & PIPE GROUTING	LUMP SUM
4	3" ROCK	6 TONS
5	3/4" ROCK	1 TON
6	DIRT AND SEEDING	LUMP SUM
7	MOBILIZATION	LUMP SUM



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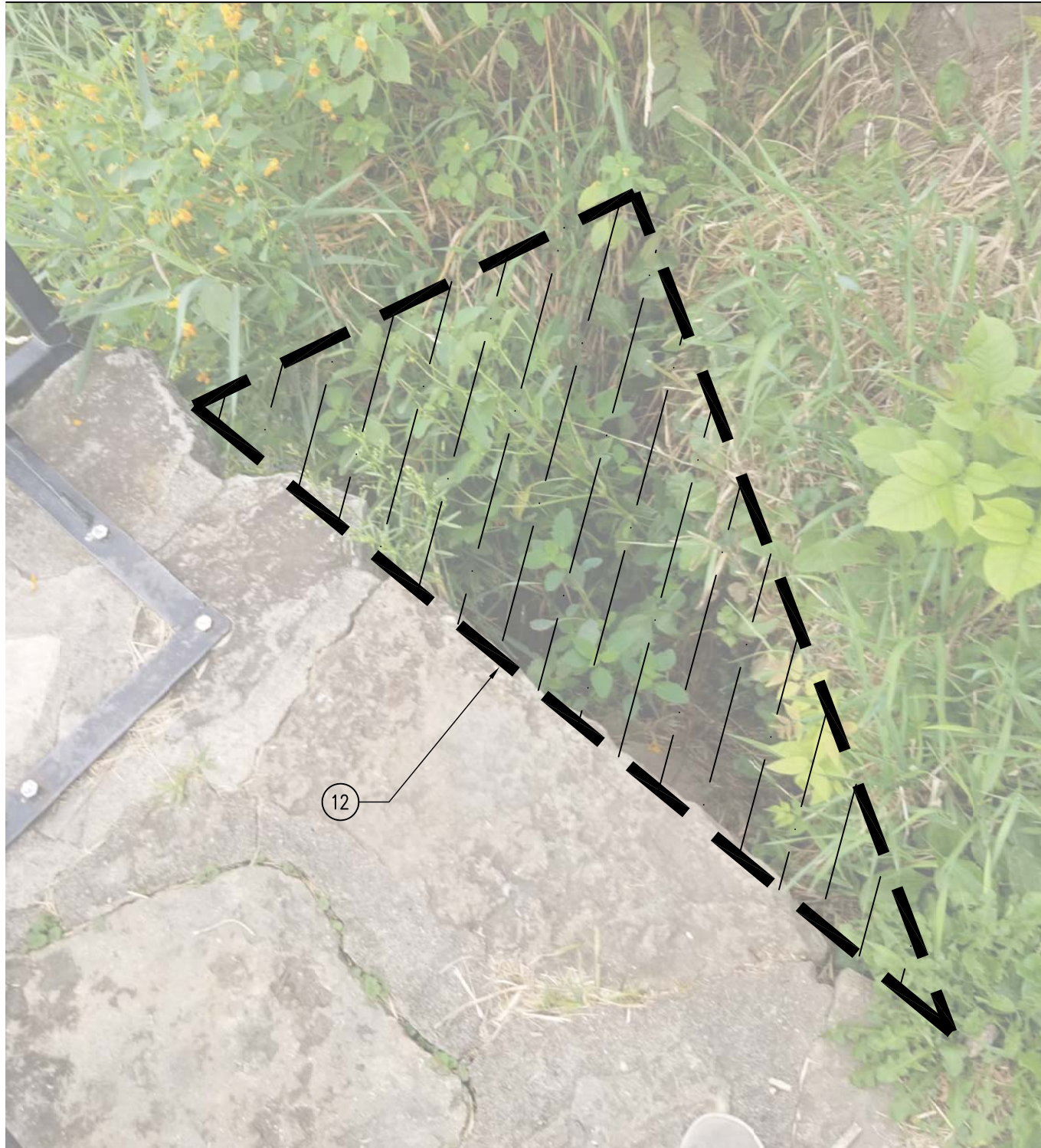
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21-02-35-01

DATE: 11.18.2020

SHEET No: **A-003**

# KEYNOTES

1. EXISTING 8" CAST IRON PIPE TO BE ABANDON IN PLACE. CONTRACTOR SHALL TELEWISE THIS SECTION AND FIND THE LEAK IN THE PIPE FOR DNR RECORDS.
2. EXISTING LAKE POOL.
3. EXISTING LAKE SPILLWAY TO REMAIN.
4. EXISTING FISH POND SHUT-OFF VALVE TO BE REMOVED.
5. EXISTING SPILLWAY CONTROL VAULT TO REMAIN.
6. COFFERDAM/PORTABLE DAM AREA TO BE DEWATERED TO GAIN ACCESS TO FISH POND WATER INTAKE. CONTRACTOR TO VERIFY SIZE OF COFFERDAM NEEDED AND TYPE OF DAM TO BE USED SHALL BE REVIEWED AND APPROVED BY DNR INSPECTOR.
7. EXISTING SPILLWAY HEADWALL TO REMAIN.
8. EXISTING 8" CAST IRON PIPE THROUGH THE HEADWALL TO REMAIN. CONTRACTOR TO INSPECT AND VERIFY THE PIPE IS STRUCTURALLY SOUND AND SOLID. CONTRACTOR TO CLEAN AND PREP ENDS FOR NEW CAP AND BIRD'S MOUTH.
9. NEW 1/2" A36 STEEL CAP WELDED TO EXISTING CAST IRON PIPE WITH NEW 2" ELBOW (BIRD'S MOUTH).
10. CONTRACTOR SHALL THEN POUR SIKA 428FS CEMENTIOUS GROUT, OR APPROVED EQUAL, INTO THE SECTION OF PIPE UNTIL COMPLETELY FILLED AND FLOWING THROUGH THE ELBOW ON THE DOWN-STREAM END.
11. TWO-COMPONENT, 100% SOLID EPOXY GEL SEALANT WITH MINIMUM 70% ELONGATION FOR SEALING PERIMETER OF PIPE IN HEAD-WALL BOTH SIDES.
12. UNDERMINING OF EXISTING EARTHEN BANK NEXT TO HEAD-WALL, FILL WITH 3" ROCK, TOP WITH 3/4" ROCK AND DIRT, THEN HYDRO-MULCH SEED ON BANK. SEE DETAIL 01/A-004 FOR MORE INFORMATION.

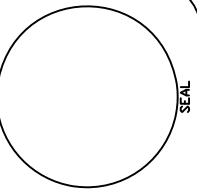


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PHOTO — EMBANKMENT EROSION  
SCALE: NTS

# GENERAL NOTES

- A. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION.
- B. ALL TRADES SHALL COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES AND PERFORMED BY CERTIFIED AND/OR LICENSED PROFESSIONALS.
- C. CONTRACTOR TO VERIFY SOURCE OF POWER AND PROVIDE ALL NECESSARY MATERIALS, EQUIPMENT, AND LABOR TO RUN POWER TO SITE FOR CONTRACTOR'S USE.



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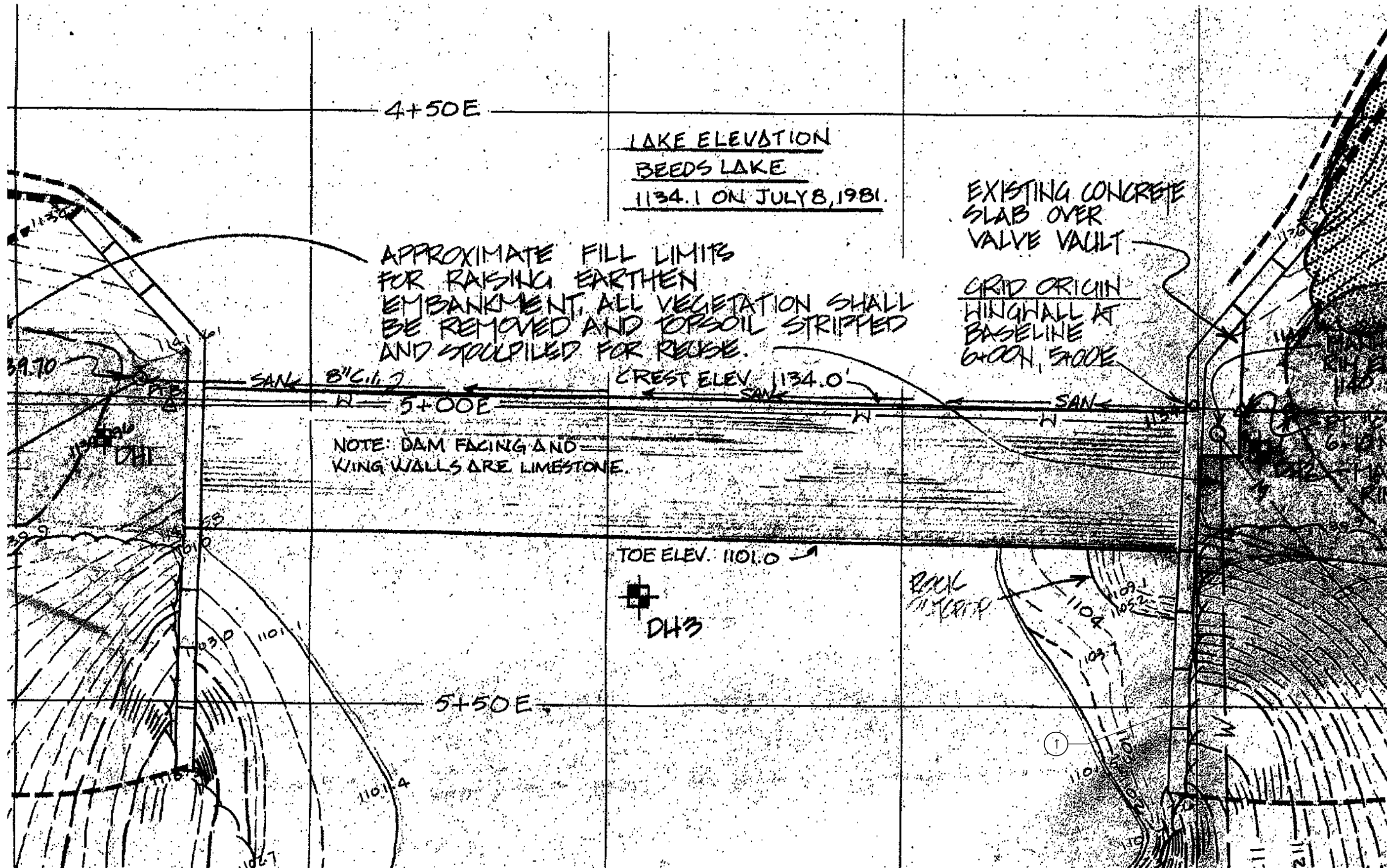


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SHEET No:  
**A-004**



LAKE ELEVATION  
BEEDS LAKE  
1134.1 ON JULY 8, 1981.

APPROXIMATE FILL LIMITS  
 FOR RAISING EARTHEN  
 EMBANKMENT. ALL VEGETATION SHALL  
 BE REMOVED AND TOPSOIL STRIPPED  
 AND STOCKPILED FOR REUSE.

EXISTING CONCRETE  
 SLAB OVER  
 VALVE VAULT

GRID ORIGIN  
 HINGHALL AT  
 BASELINE  
 6+00N, 5+00E

NOTE: DAM FACING AND  
 WING WALLS ARE LIMESTONE.

TOE ELEV. 1101.0

D43

 01 EXISTING DAM PLAN  
 NTS

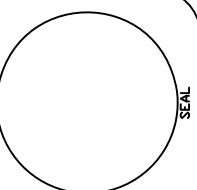
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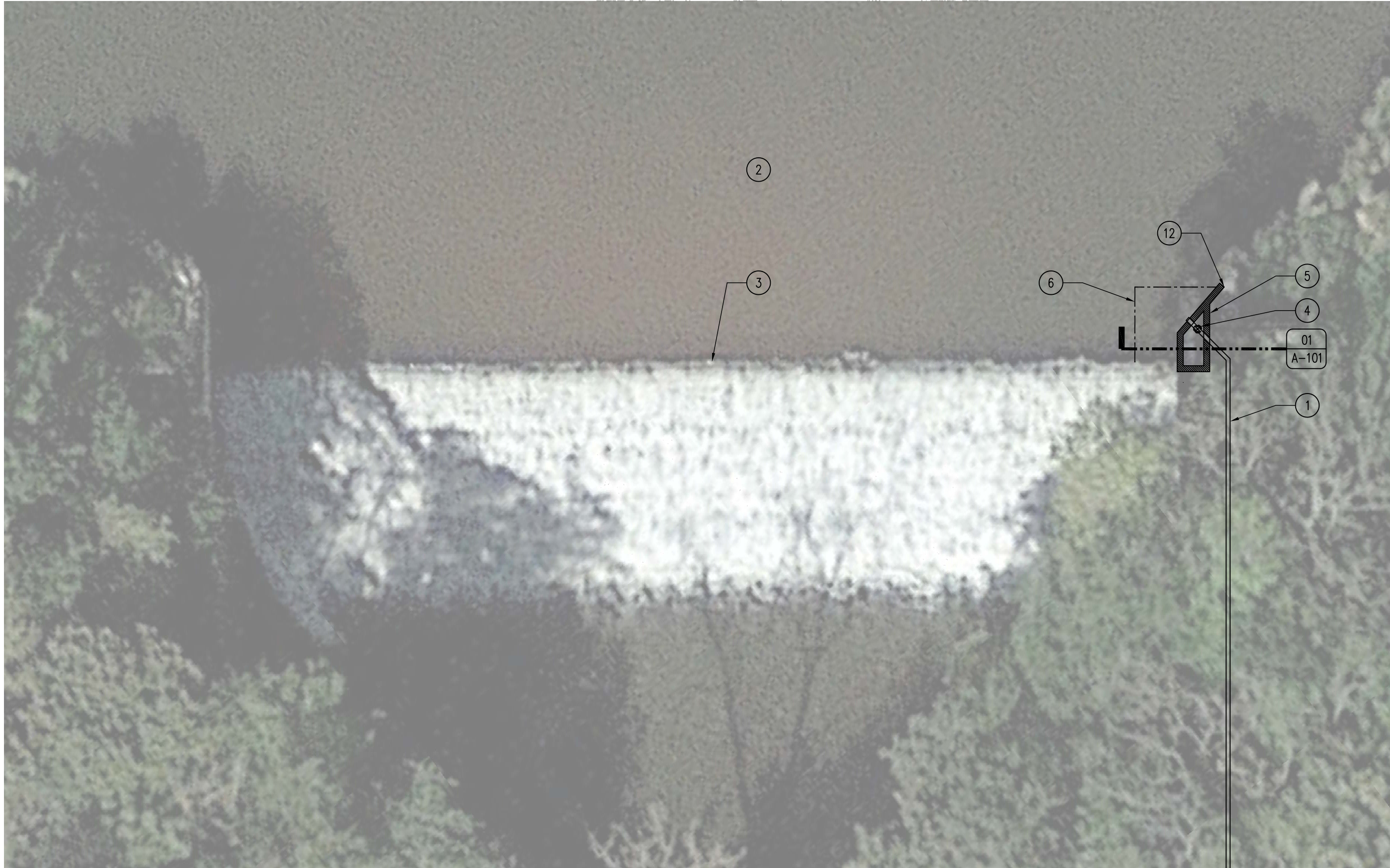


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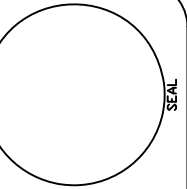
A-010





01

AERIAL IMAGE – COFFERDAM LOCATION  
SCALE: NTS



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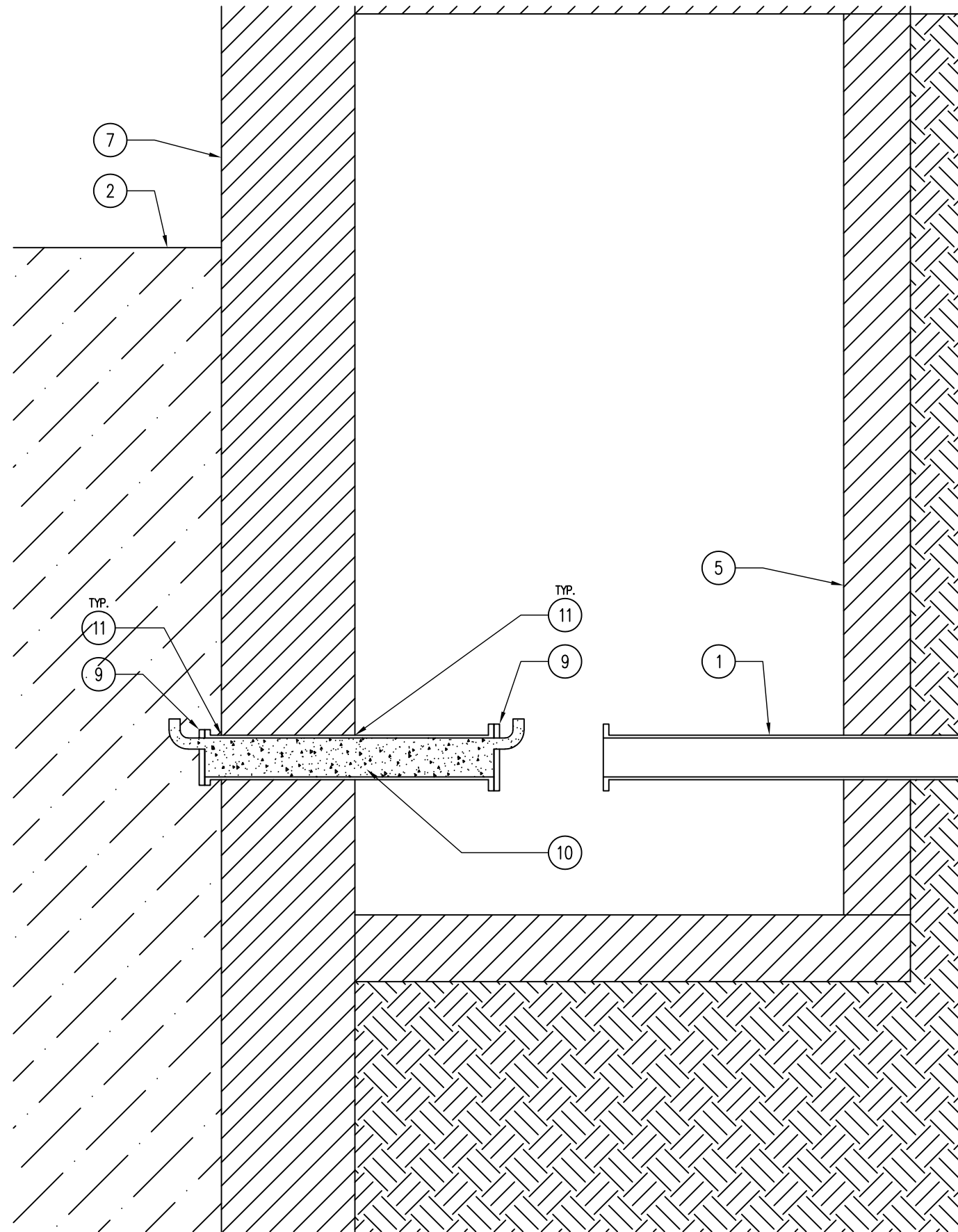
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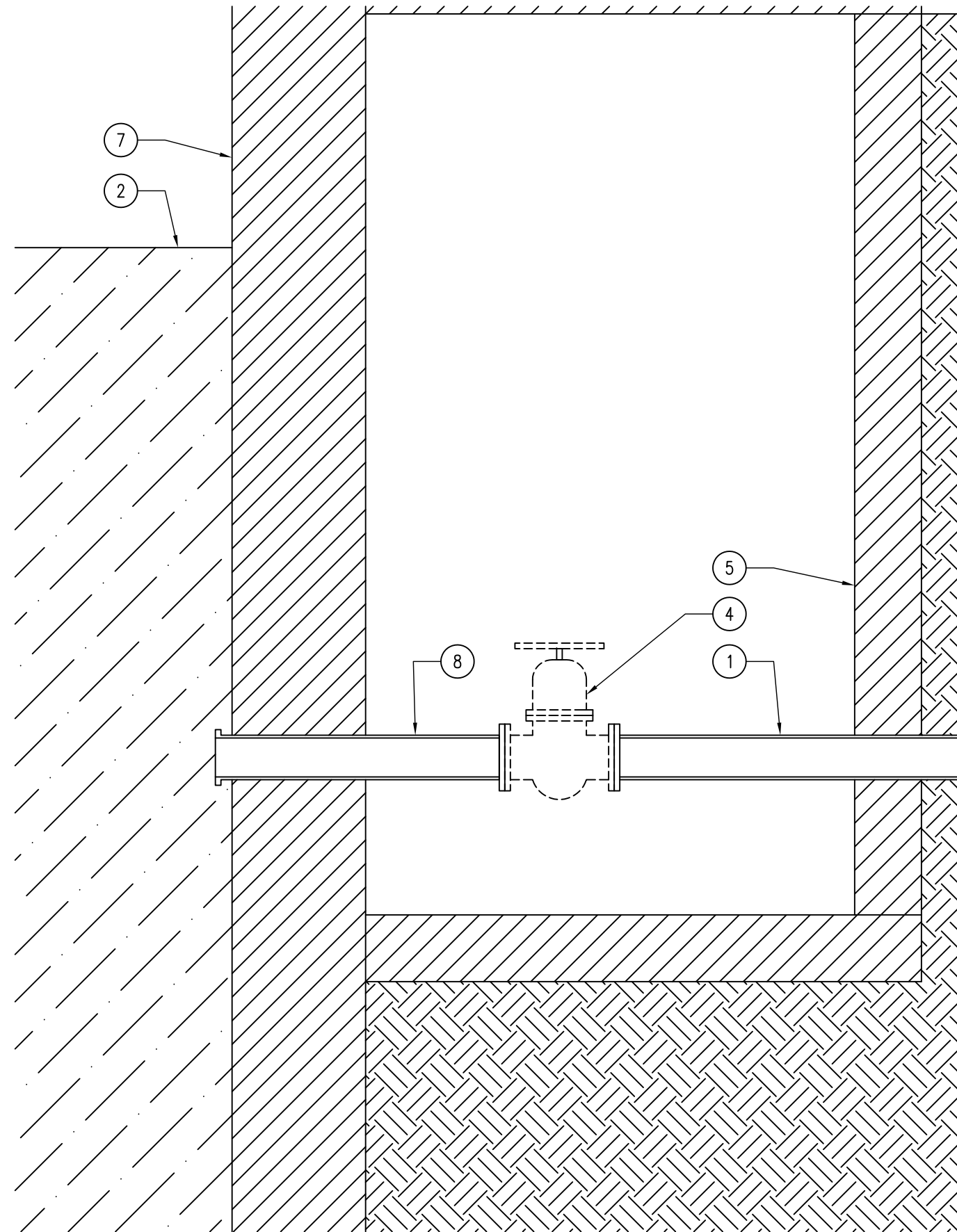
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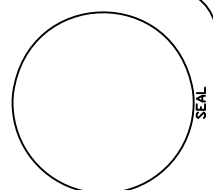
**A-100**



**02** SECTION — PIPE GROUTING  
SCALE: 1/2" = 1'-0"



**01** SECTION — VALVE REMOVAL  
SCALE: 1/2" = 1'-0"



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**A-101**