

WEST LAKE COMPLEX - CANYADA DAM REHABILITATION

ENGINEER'S SEAL

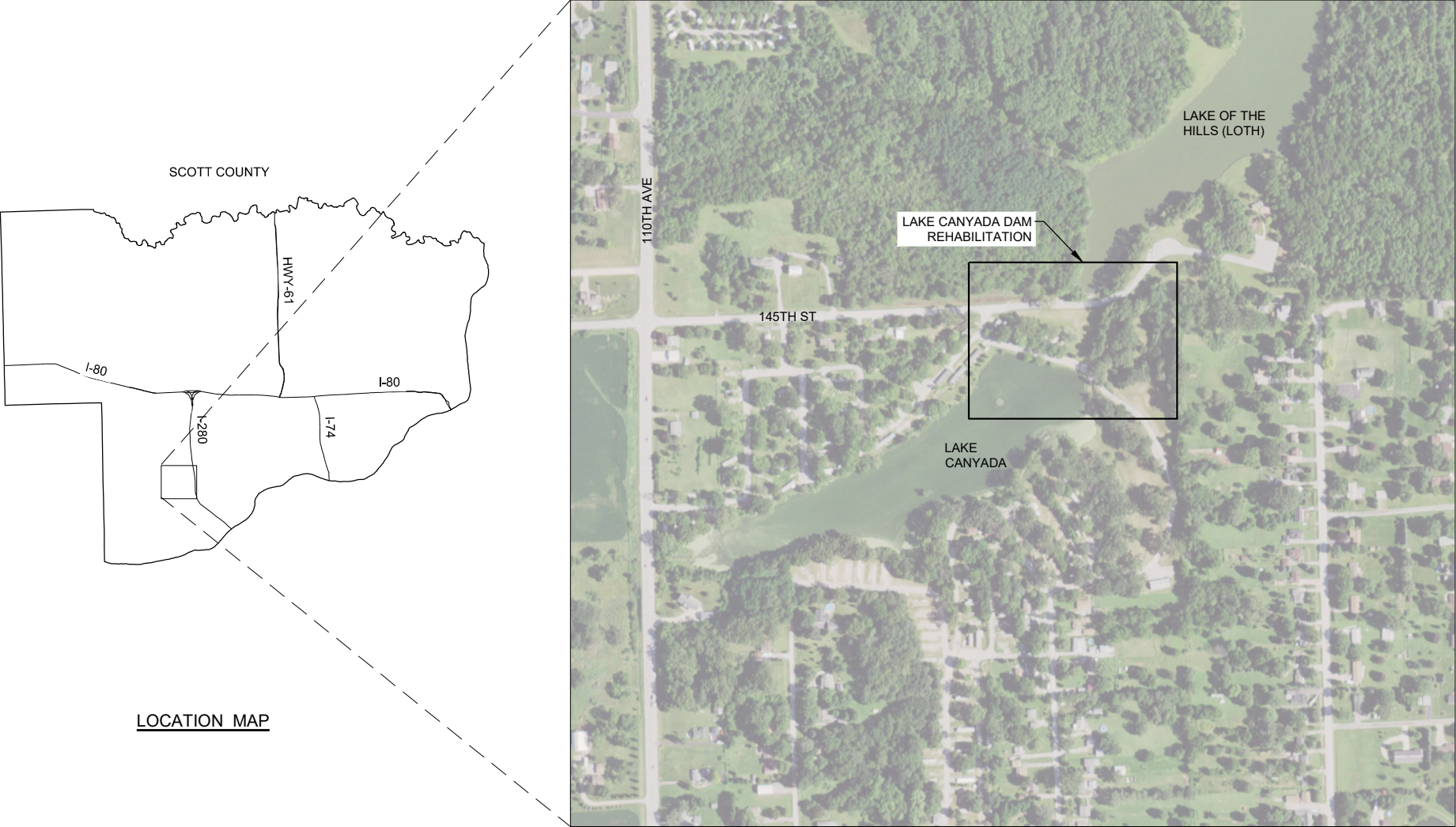
REVISIONS

NO.	DATE

DESIGNED BY: CDI
DRAWN BY: BJH
QA / QC BY: MKS
PROJECT NO.: 074-17-01
DATE: OCTOBER 09, 2020

TITLE
COVER SHEET

SHEET
A.1




SHEET INDEX

- A.1 COVER SHEET
- A.2 NOTE SHEET
- A.3 SITE MAP

- B.1 PLAN VIEW PHASE 1
- B.2 PLAN VIEW PHASE 2

- B.100 EMBANKMENT PROFILES
- B.101 OTHER DETAILS
- B.102 RISER DETAILS
- B.103 TRASH RACK DETAILS
- B.104 ROADWAY DETAILS

- C.1 SWPPP SITE MAP
- C.100 SWPPP DETAILS (1 OF 2)
- C.101 SWPPP DETAILS (2 OF 2)



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.

Michael K. Sotak 10/09/2020
MICHAEL SOTAK DATE

LICENSE NO: 16681
MY LICENSE RENEWAL DATE IS: 12/31/20
PAGES OR SHEETS COVERED BY THIS SEAL:
All Sheets

GENERAL NOTES:

1. THE LOCATIONS OF ALL AERIAL AND UNDERGROUND UTILITY FACILITIES ARE APPROXIMATE OR MAY NOT BE INDICATED ON THESE PLANS. UNDERGROUND FACILITIES, WHETHER INDICATED OR NOT, SHALL BE LOCATED AND FLAGGED BY THE CONTRACTOR AND UTILITY COMPANIES 48 HOURS BEFORE WORK IS STARTED. VERIFY UTILITY LOCATIONS BY CONTACTING THE IOWA ONE CALL (ONLINE AT WWW.IOWONECALL.COM AND/OR CALL 811). THE CONTRACTOR SHALL BE REQUIRED TO NOTIFY AND COORDINATE ALL NECESSARY UTILITY SERVICE INTERRUPTIONS WITH THE OWNERS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL EXISTING UTILITIES, PAVEMENT, STRUCTURES, FENCES, POLES, SIGNS, TREES, IRRIGATION LINES, SPRINKLER HEADS, SUB- DRAINS AND OTHER IMPROVEMENTS NOT DESIGNATED FOR REMOVAL. ANY DAMAGE CAUSED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
2. CONTOURS SHOWN ON THE PLANS ARE 2 FT CONTOURS FROM LIDAR. ELEVATIONS CALLED OUT ON THE PLANS, ARE REFERENCED TO NAVD 88 VERTICAL DATUM. HORIZONTAL CONTROL IS NAD83 IOWA STATE PLANE SOUTH.
3. NO TREE CLEARING PERMITTED BETWEEN APRIL 1 AND SEPTEMBER 30.
4. THE CONTRACTOR SHALL CONDUCT ALL OPERATIONS AND MAINTAIN CONSTRUCTION WORK AREA IN A SAFE MANNER IN ACCORDANCE WITH OSHA COMPLIANCE.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ALL TEMPORARY MARKERS, LIGHTS, SIGNS, FLAGMEN, BARRICADES AND OTHER PROTECTIVE DEVICES TO PROVIDE ADEQUATE TRAFFIC CONTROL. THIS SHALL INCLUDE ANY BARRICADES OR SIGNS NECESSARY FOR PEDESTRIAN TRAIL CLOSURE.
6. ELECTRONIC GRADING FILES AND EXISTING UTILITIES AND WETLANDS CAN BE PROVIDED BY ENGINEER UPON REQUEST.
7. DELINEATED WETLANDS ARE SHOWN ON THE PLANS. CONTRACTOR SHALL LIMIT ALL CONSTRUCTION ACTIVITIES FROM ENCROACHING UPON WETLAND AREAS AVOIDING ALL WETLANDS.
8. CONTRACTOR IS RESPONSIBLE FOR REPAIRING DAMAGE TO ROADS. CONDITIONS PRIOR TO CONSTRUCTION TO BE DOCUMENTED BY THE CONTRACTOR AND MUST BE RESTORED TO ORIGINAL CONDITIONS.
9. CONTRACTOR MUST ENSURE THAT ALL WORK IS PERFORMED IN ACCORDANCE WITH CONDITIONS OF USACE NATIONWIDE PERMIT (NWP) 3 MAINTENANCE, INCLUDING ALL GENERAL AND REGIONAL CONDITIONS. THESE CONDITIONS AND OTHER INFORMATION RELATED TO NATIONWIDE PERMITS CAN BE FOUND ON THE USACE REGULATORY WEBSITE: <https://www.mvr.usace.army.mil/Portals/48/docs/regulatory/Permits/NW-IA/FACT81A.pdf?ver=2017-05-19-110202-443>. THIS INFORMATION WILL ALSO BE PROVIDED BY REQUEST.

CONSTRUCTION NOTES

1. ACCESS ROUTES IDENTIFIED TO SITE MUST BE STRICTLY ABIDED TO.
2. ALL DISTURBED AREAS SHALL BE RESTORED TO ORIGINAL CONDITIONS BY SMOOTHING COMPACTED SOILS PRIOR TO FINISHED GRADING AND SEEDING WITH SPECIFIED MIX AND METHODS.
3. THE QUANTITIES SHOWN FOR SEEDING INCLUDE ALL NON-PAVED AREAS WITHIN THE LIMITS OF DISTURBANCE INCLUDING SPOILS, STAGING, PIPE INSTALLATION, AND BORROW AREA. IT DOES NOT ACCOUNT FOR ANY AREA THAT IS DISTURBED OUTSIDE THE LIMITS OF CONSTRUCTION. DISTURBED AREAS OUTSIDE THE LIMITS OF CONSTRUCTION MUST BE RESTORED, SEEDING, AND MULCHED AND WILL BE CONSIDERED INCIDENTAL TO THE PROJECT.
4. CLEARING AND GRUBBING TO BE PERFORMED ONLY IN LOCATIONS NECESSARY TO CONSTRUCT/BORROW AND ACCESS THE SITE. CONTRACTOR SHALL LIMIT CONSTRUCTION OPERATIONS TO MINIMIZE CLEARING AND GRUBBING EXTENTS.

ABBREVIATIONS

- AC - ACRES
- CL - CENTERLINE
- CY - CUBIC YARD
- EL - ELEVATION
- WSE - WATER SURFACE ELEVATION
- FT - FEET
- MAX - MAXIMUM
- MIN - MINIMUM
- SY - SQUARE YARD
- SWPPP - STORM WATER POLLUTION PREVENTION PLAN
- TYP - TYPICAL
- EA - EACH
- TN - TON
- LS - LUMP SUM
- DIA - DIAMETER
- FES - FLARED END SECTION
- MFG - MANUFACTURER
- LOC - LIMITS OF CONSTRUCTION

LEGEND

- EXISTING CONTOUR MINOR
- EXISTING CONTOUR MAJOR
- LIMITS OF CONSTRUCTION
- SANITARY SEWER LINE
- OVERHEAD POWER UTILITY LINE
- SILT FENCE
- TREE EXTENTS
- FILTER SOCK
- ROCK RIP RAP
- EXISTING WETLANDS
- SLOPE LINE
- STAGING AREA
- EARTH STOCKPILE ZONE
- TRENCH
- POTENTIAL BORROW AREA

CONTACT INFORMATION

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 DAVENPORT, IOWA 52804

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 100 COURT AVE, SUITE 202
 DES MOINES, IOWA 50309

TABLE OF QUANTITIES

BID ITEM	BASE BID ITEM DESCRIPTION	UNIT	QUANTITY
1	MOBILIZATION	LS	1
2	SWPPP MEASURES	LS	1
3	CLEARING & GRUBBING	LS	1
4	WATER HANDLING	LS	1
5	STRIP, STOCKPILE AND REPLACE 6" TOPSOIL	SY	1247
6	EXCAVATE, STOCKPILE AND REPLACE PIPE TRENCH	CY	843
7	GENERAL EXCAVATION	CY	146
8	PAVEMENT REMOVAL	SY	157
9	REMOVE AND PLUG EXISTING SEWER PIPES	CF	6.2
10	48" DR 32.5 HDPE PIPE	LF	321
11	DIAPHRAGM FILTER AGGREGATE	TN	43
12	6" SOLID WALL PVC DIAPHRAGM FILTER DRAIN PIPE	LF	213
13	6" SLOTTED WALL PVC DIAPHRAGM FILTER DRAIN PIPE WITH SOCK	LF	32
14	72" ID RSC 250 PROFILE WALL PIPE VERTICAL RISER	EA	1
15	FORMED CONCRETE RISER BASE	CY	2.2
16	DEBRIS RACK FOR 72" INSIDE DIAMETER RISER WITH ANTI-VORTEX PLATE	EA	1
17	12" KNIFE GATE VALVE & APPERTUNANCE	EA	1
18	12" DR 32.5 HDPE DRAWDOWN PIPE	LF	20
19	12" DR 32.5 FLANGE ADAPTER	EA	1
20	12" DI BACKUP RING	EA	1
21	12" DRAWDOWN PIPE TRASHRACK	EA	1
22	EARTHEN EMBANKMENT	CY	994
23	GROUTED CLASS 'E' ROCK RIPRAP	TN	13
24	CLASS 'E' ROCK RIPRAP	TN	300
25	PLUG AND FILL EXISTING 30" PIPE	CY	64
26	PORTLAND CEMENT CONCRETE DYKE DR REPLACEMENT	SY	108
27	12" REINFORCED PORTLAND CEMENT CONCRETE 145TH ST REPLACEMENT	SY	51
28	SEEDING - GRASS SEED MX	AC	0.5
29	STRAW MULCH	AC	0.5

CANYADA WATER SURFACE ELEVATIONS

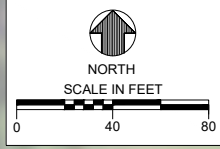
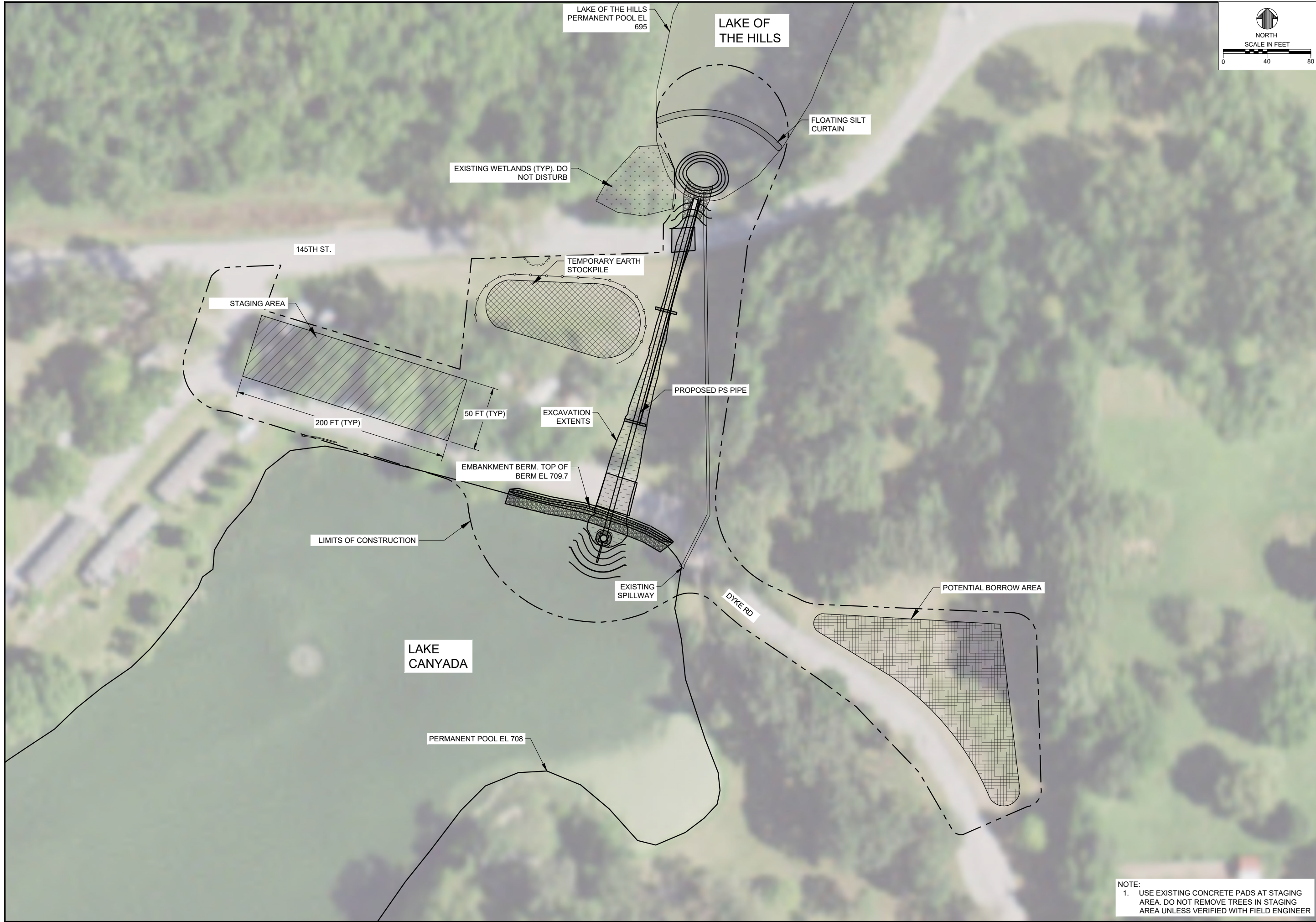
Top of Dam	Auxiliary Spillway	Permanent Pool	Water Surface Elevations				
			2-year	10-year	25-year	50-year	100-year
711.8	709.7	708.0	710.0	710.9	711.3	711.7	712.0

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TITLE
NOTE SHEET



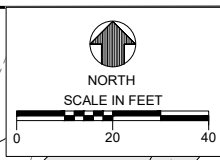
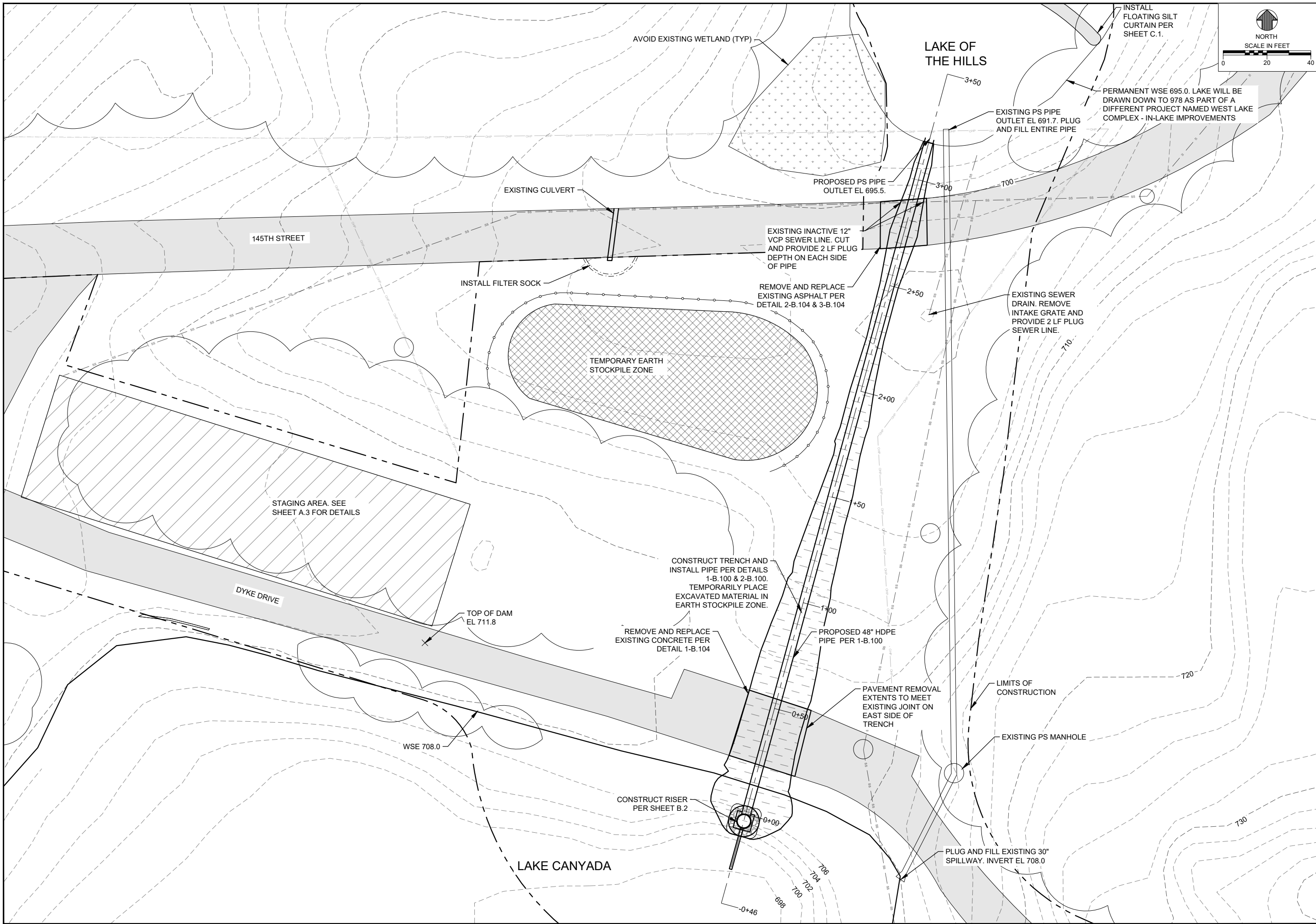
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TITLE
SITE MAP

NOTE:
1. USE EXISTING CONCRETE PADS AT STAGING AREA. DO NOT REMOVE TREES IN STAGING AREA UNLESS VERIFIED WITH FIELD ENGINEER

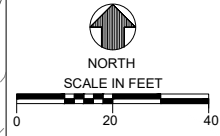
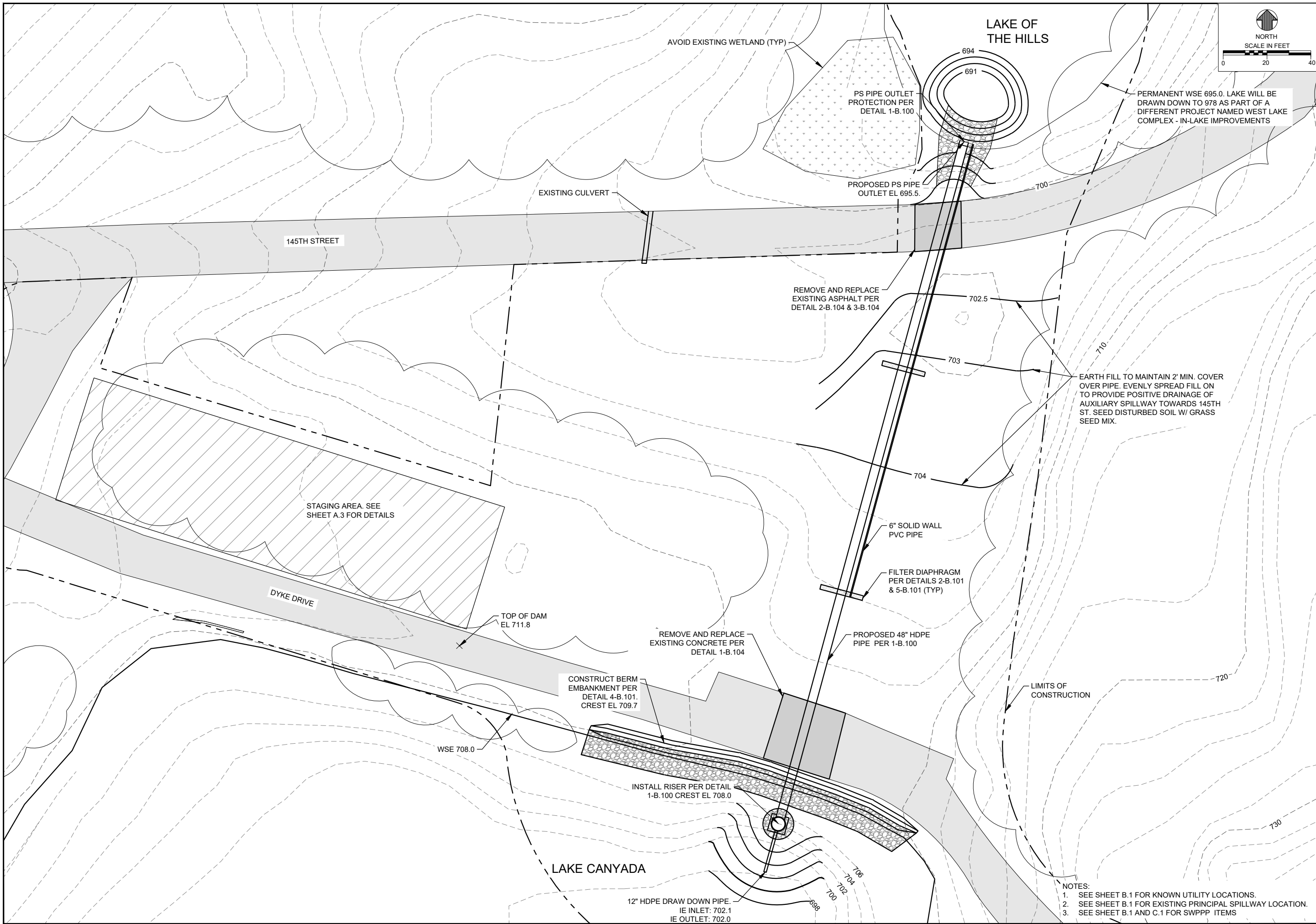


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TITLE
**PLAN VIEW
PHASE 1**



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TITLE
**PLAN VIEW
PHASE 2**

SHEET
B.2

LAKE OF THE HILLS

AVOID EXISTING WETLAND (TYP)

PS PIPE OUTLET PROTECTION PER DETAIL 1-B.100

PERMANENT WSE 695.0. LAKE WILL BE DRAWN DOWN TO 978 AS PART OF A DIFFERENT PROJECT NAMED WEST LAKE COMPLEX - IN-LAKE IMPROVEMENTS

EXISTING CULVERT

PROPOSED PS PIPE OUTLET EL 695.5

145TH STREET

REMOVE AND REPLACE EXISTING ASPHALT PER DETAIL 2-B.104 & 3-B.104

EARTH FILL TO MAINTAIN 2' MIN. COVER OVER PIPE. EVENLY SPREAD FILL ON TO PROVIDE POSITIVE DRAINAGE OF AUXILIARY SPILLWAY TOWARDS 145TH ST. SEED DISTURBED SOIL W/ GRASS SEED MIX.

STAGING AREA. SEE SHEET A.3 FOR DETAILS

DYKE DRIVE

TOP OF DAM EL 711.8

REMOVE AND REPLACE EXISTING CONCRETE PER DETAIL 1-B.104

CONSTRUCT BERM EMBANKMENT PER DETAIL 4-B.101. CREST EL 709.7

6" SOLID WALL PVC PIPE

FILTER DIAPHRAGM PER DETAILS 2-B.101 & 5-B.101 (TYP)

PROPOSED 48" HDPE PIPE PER 1-B.100

LIMITS OF CONSTRUCTION

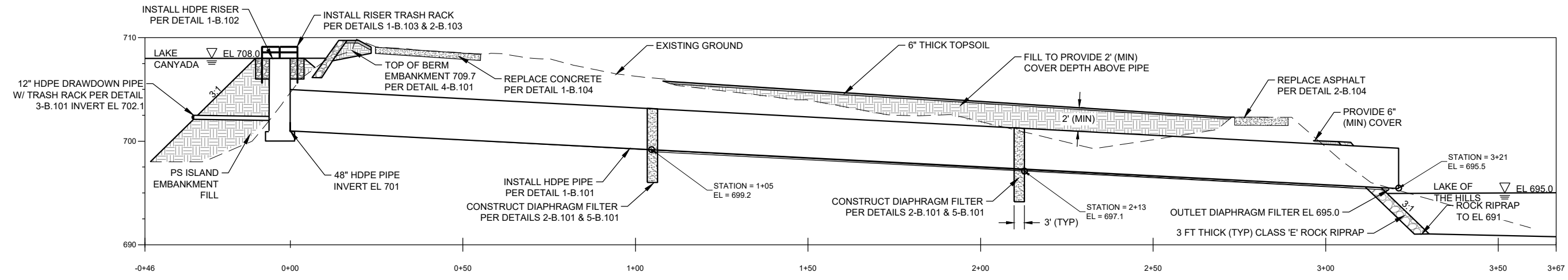
WSE 708.0

INSTALL RISER PER DETAIL 1-B.100 CREST EL 708.0

LAKE CANYADA

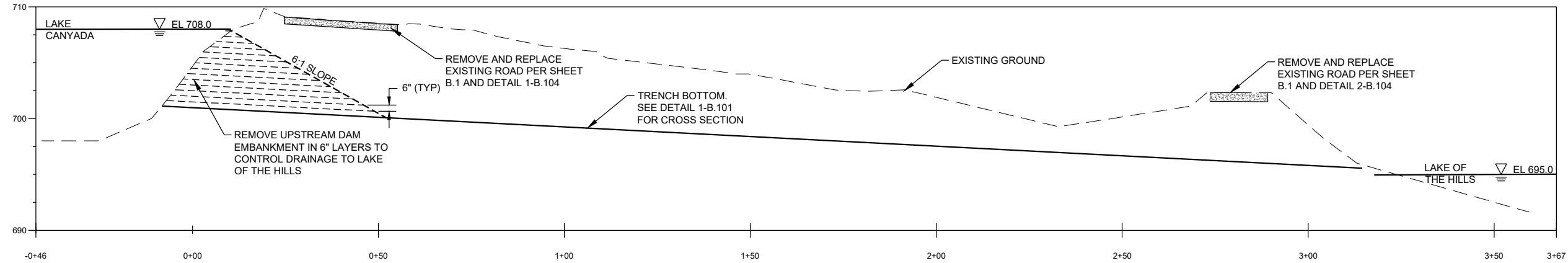
12" HDPE DRAW DOWN PIPE. IE INLET: 702.1 IE OUTLET: 702.0

- NOTES:
- SEE SHEET B.1 FOR KNOWN UTILITY LOCATIONS.
 - SEE SHEET B.1 FOR EXISTING PRINCIPAL SPILLWAY LOCATION.
 - SEE SHEET B.1 AND C.1 FOR SWPPP ITEMS



PROPOSED PRINCIPAL SPILLWAY PROFILE 1
B.100

NOTE: TRENCH BACKFILL TO FOLLOW BACKFILLING REQUIREMENTS IN PROJECT SPECIFICATIONS (SECTION 02223). SOIL PROCTORS WILL BE PRODUCED FROM THE TESTING OF IN-SITU SOILS AFTER THE EXCAVATION/REMOVAL OF THE EXISTING PIPE IS COMPLETED TO MATCH THE EXISTING SOIL ENVELOPE AROUND THE NEW SPILLWAY CONDUIT. MOISTURE-DENSITY TESTS ARE THE CONTRACTOR'S RESPONSIBILITIES AND SHOULD BE PERFORMED BY A QUALIFIED THIRD PARTY AS PER PROJECT SPECIFICATIONS.



TRENCH PROFILE 2
B.100

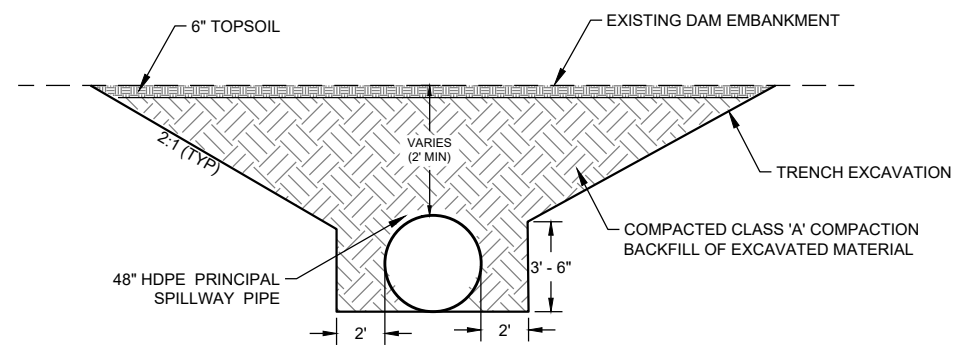
NOTES:
1) EXCAVATE PIPE TRENCH STARTING FROM LAKE OF THE HILLS WORKING TOWARDS LAKE CANYADA. INSTALL 48" HDPE PIPE INSIDE TRENCH PRIOR TO BREACHING LAKE CANYADA'S DAM EMBANKMENT. ENSURE ALL FLOW FROM LAKE CANYADA'S DEWATERING PHASE IS DIRECTED TO THE PROPOSED 48" HDPE PIPE.
2) TRENCH SHALL MEET MOISTURE-DENSITY AS SPECIFIED IN SPECS AND ANY DEWATERING NECESSARY TO MEET REQUIREMENTS IS INCIDENTAL TO THE DEWATERING PAY ITEM.
3) LAKE OF THE HILLS' PERMANENT WSE IS 695.0. LAKE OF THE HILLS WILL BE DRAWN DOWN TO 978 AS PART OF A DIFFERENT PROJECT NAMED WEST LAKE COMPLEX - IN-LAKE IMPROVEMENTS. TRENCH WILL BE CONSTRUCTED WITH LAKE OF THE HILLS DRAWN DOWN.

ENGINEER'S SEAL

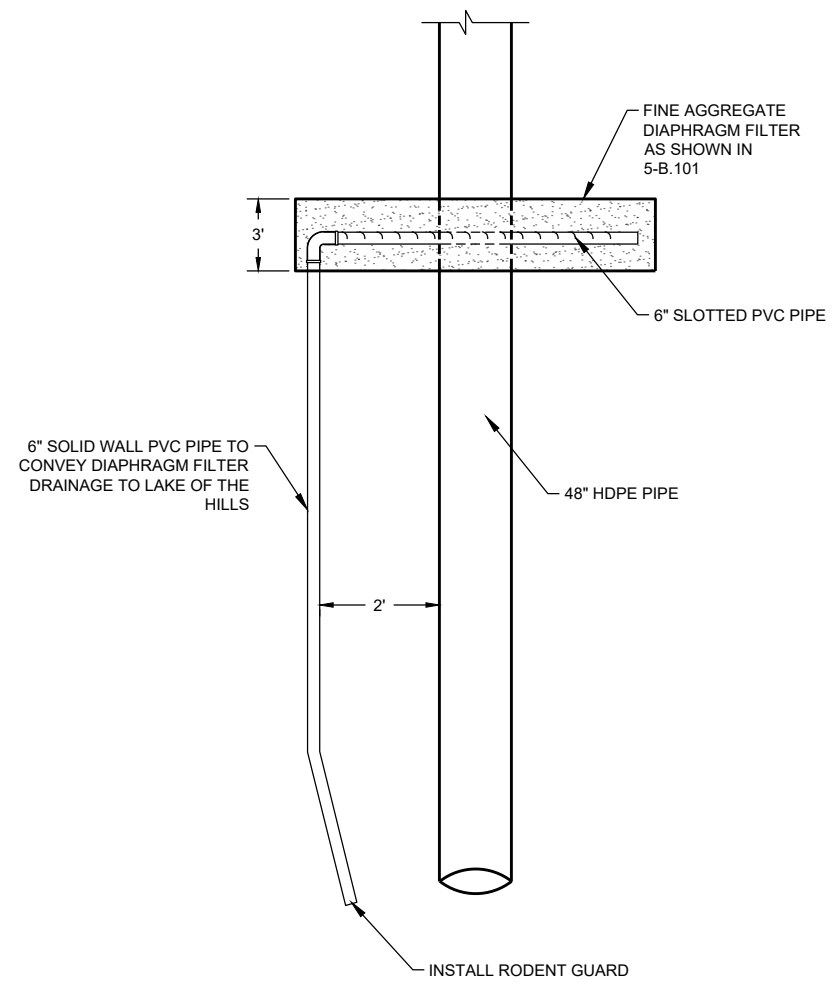
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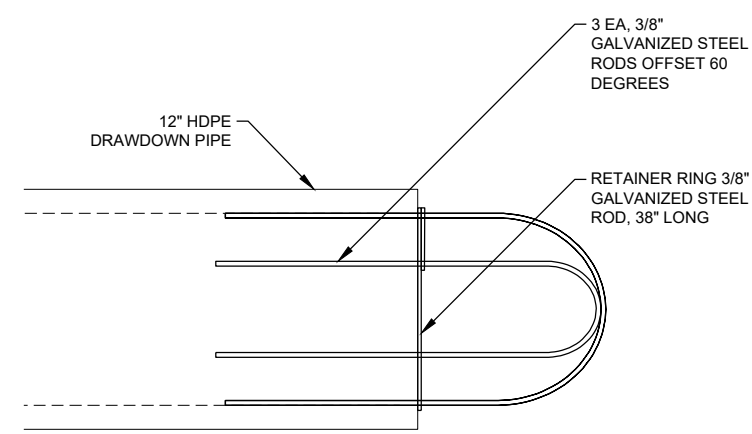
TITLE
EMBANKMENT PROFILES



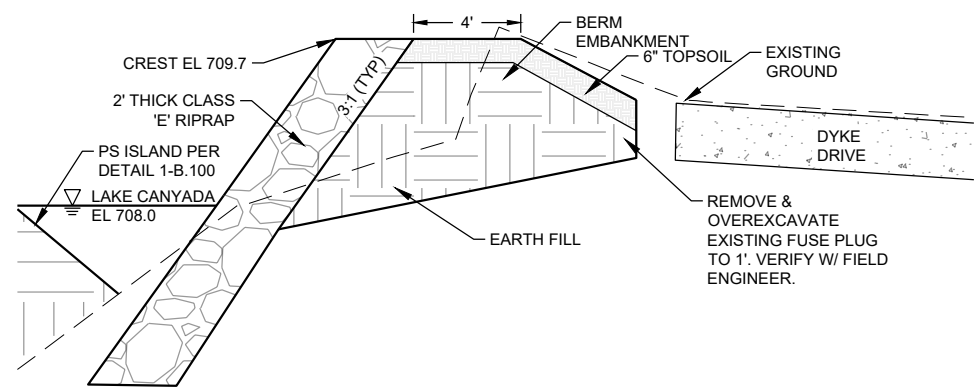
CROSS SECTION OF HDPE PRINCIPAL SPILLWAY CUT AND COVER 1
NOT TO SCALE B.101



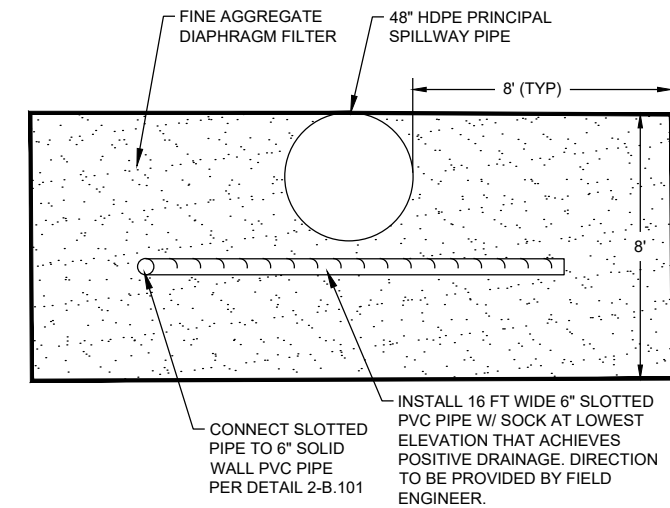
DIAPHRAGM FILTER (TYP) PLAN VIEW 2
NOT TO SCALE B.101



DRAWDOWN PIPE TRASH RACK 3
NOT TO SCALE B.101



PROPOSED BERM EMBANKMENT 4
NOT TO SCALE B.101



DIAPHRAGM FILTER (TYP) DETAIL 5
NOT TO SCALE B.101

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TITLE
OTHER DETAILS

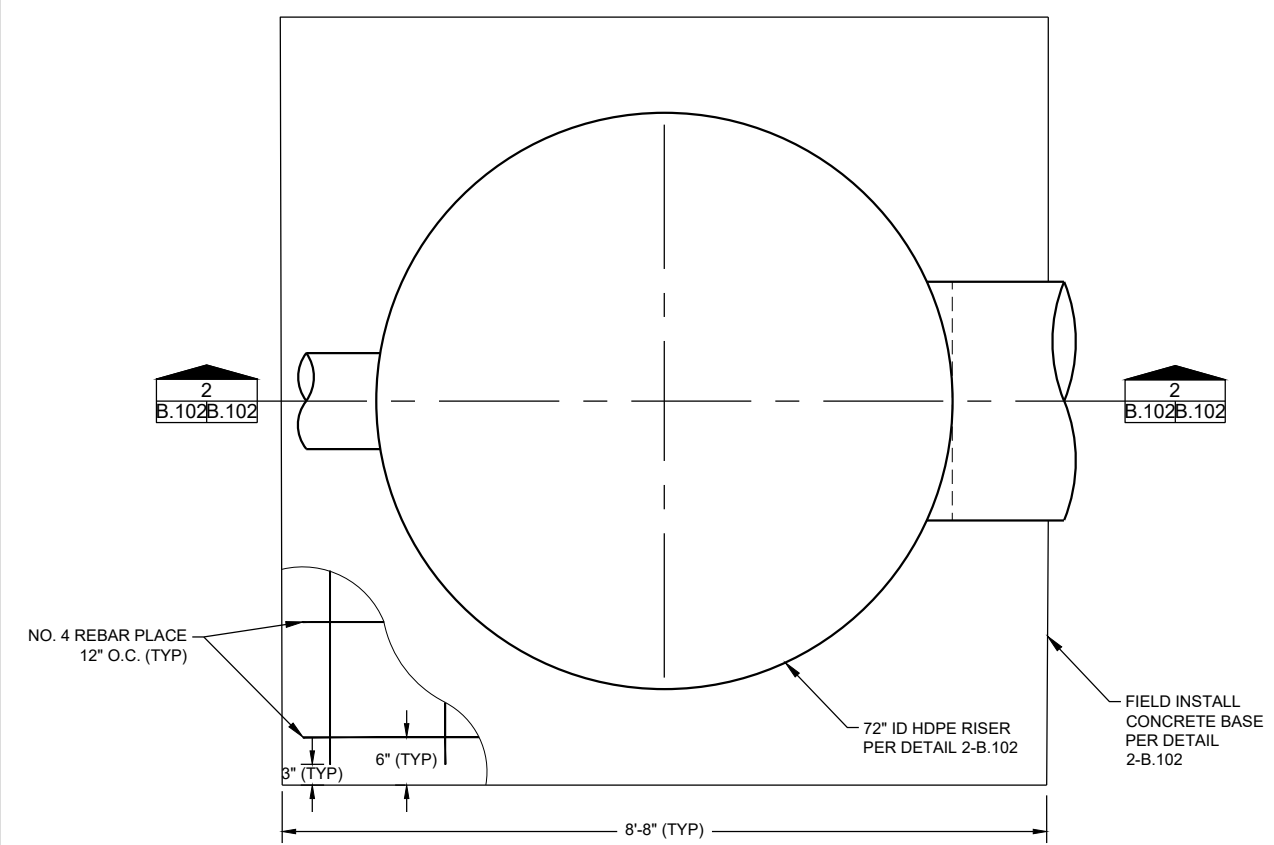
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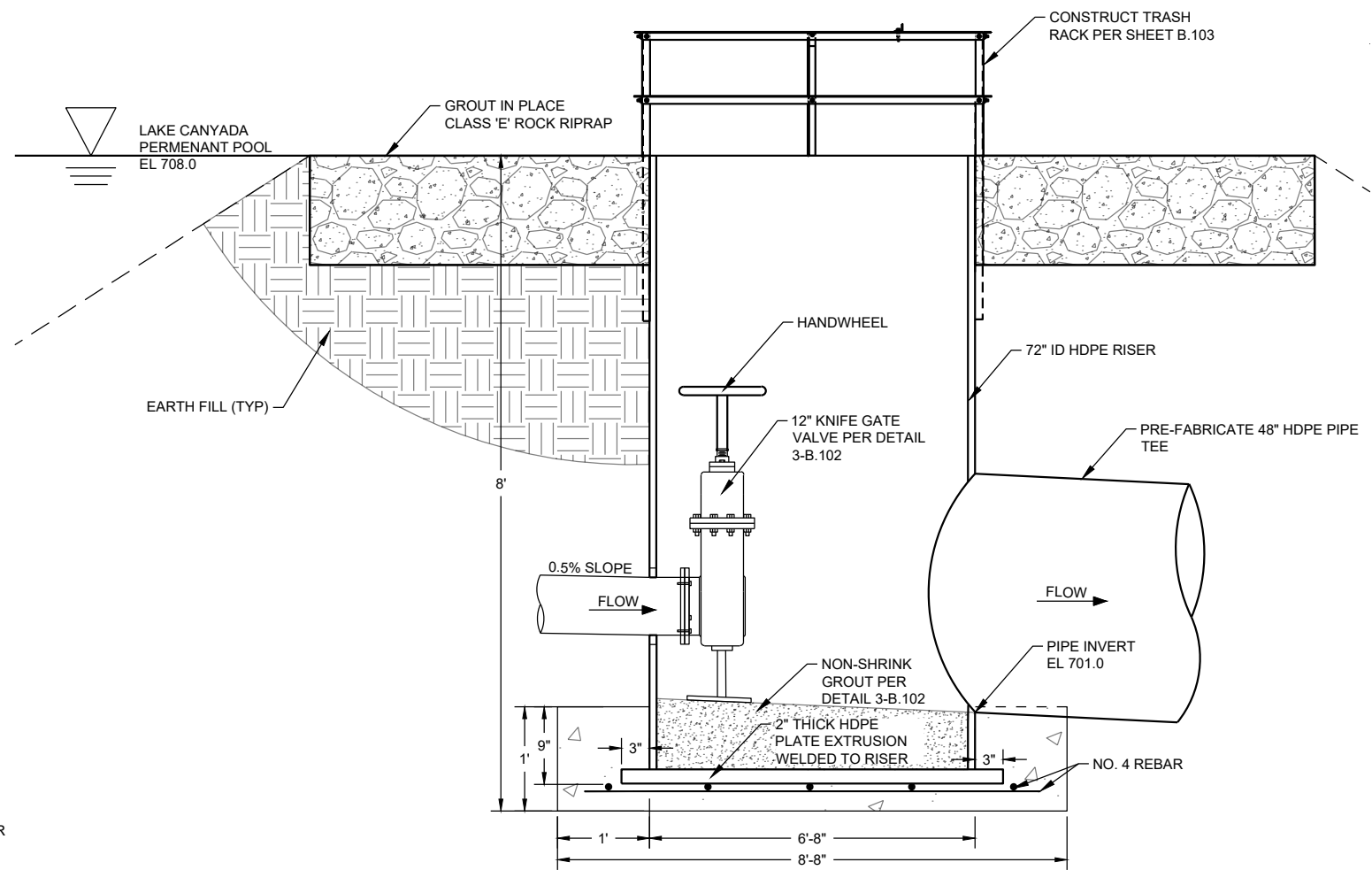
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TITLE
RISER DETAILS

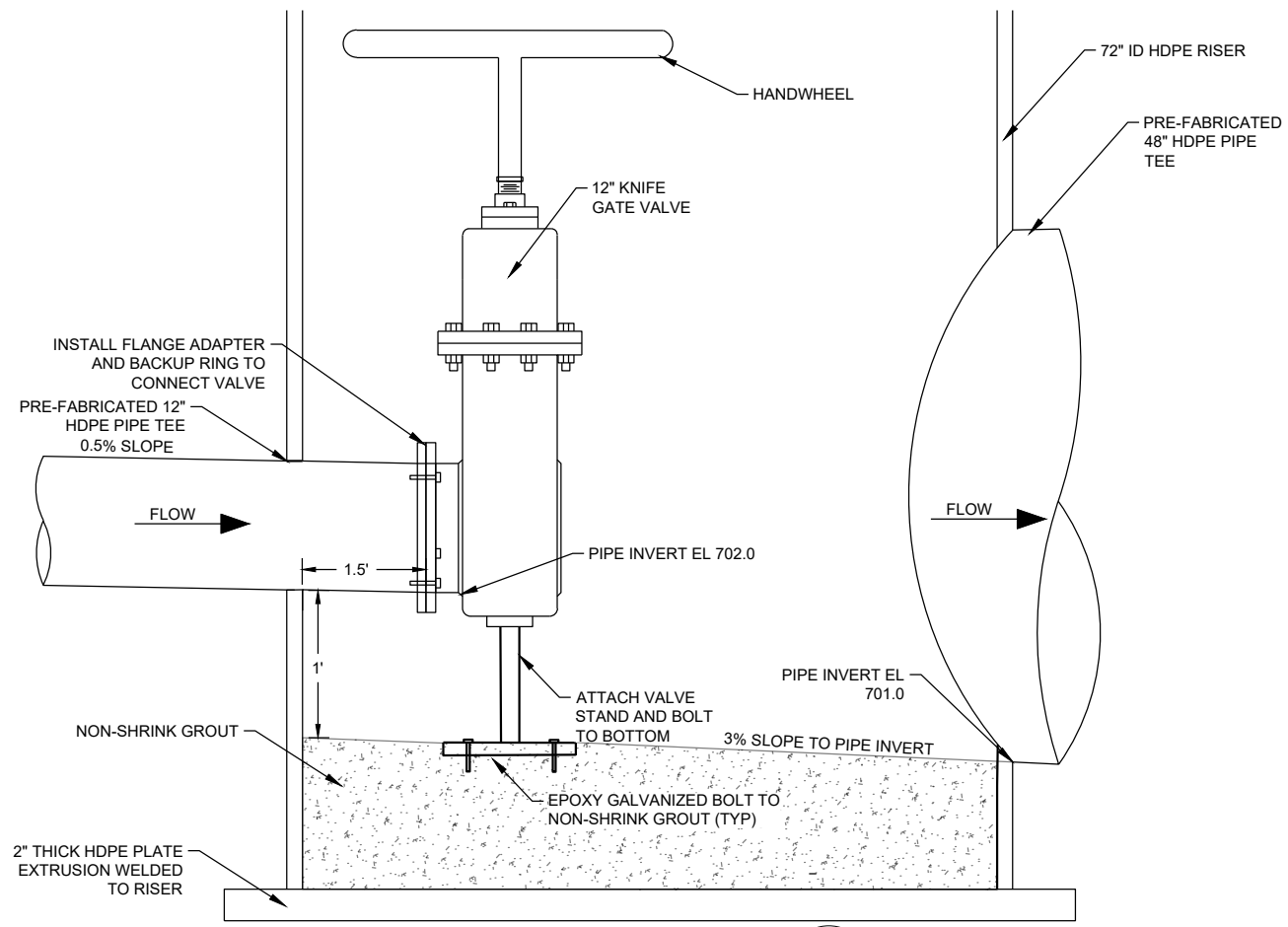
SHEET
B.102



CONCRETE RISER PAD PLAN VIEW 1
NOT TO SCALE
B.102



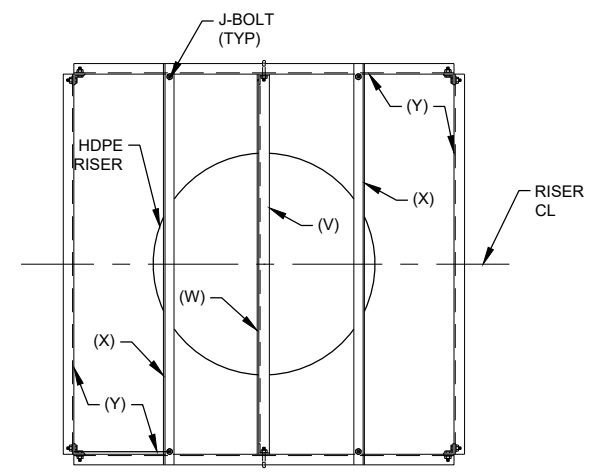
CONCRETE BASE CROSS SECTION 2
NOT TO SCALE
B.102 B.102



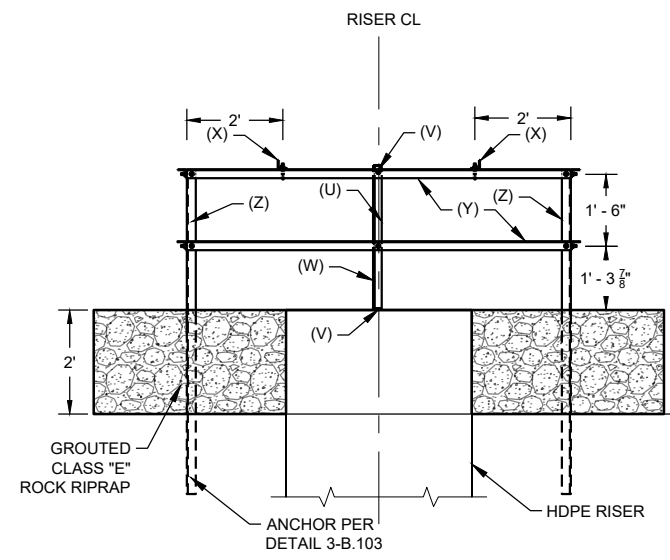
LOW WATER DRAW DOWN VALVE 3
NOT TO SCALE
B.102

- NOTES:**
- CONCRETE SHALL NOT BE ALLOWED TO FREE FALL MORE THAN SIX (6) FEET DURING CONSTRUCTION OF RISER BASE
 - MATERIAL COST FOR ROCK RIPRAP IS TO BE INCLUDED IN THE PAY ITEM FOR GROUTED ROCK RIPRAP.

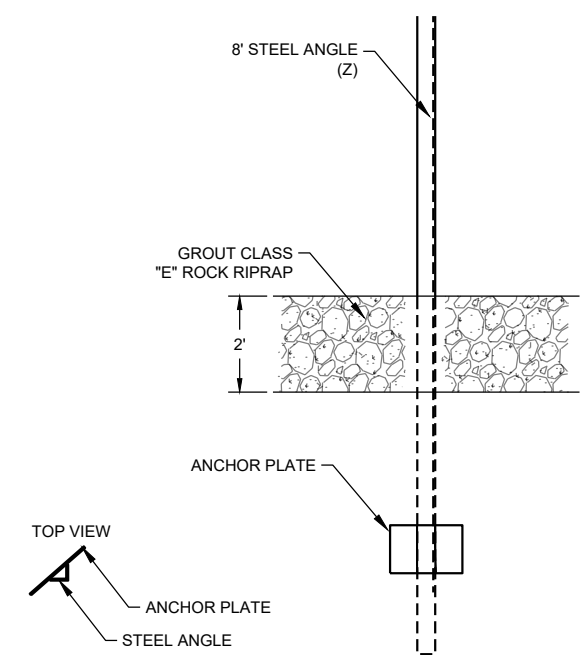
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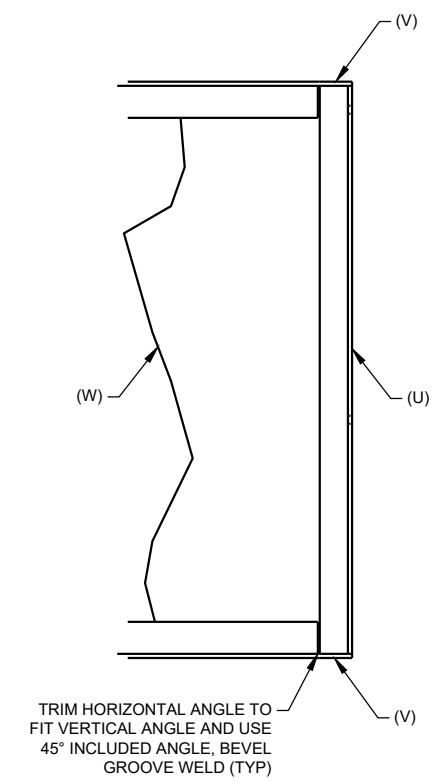
RISER DEBRIS RACK PLAN VIEW 1
NOT TO SCALE B.103



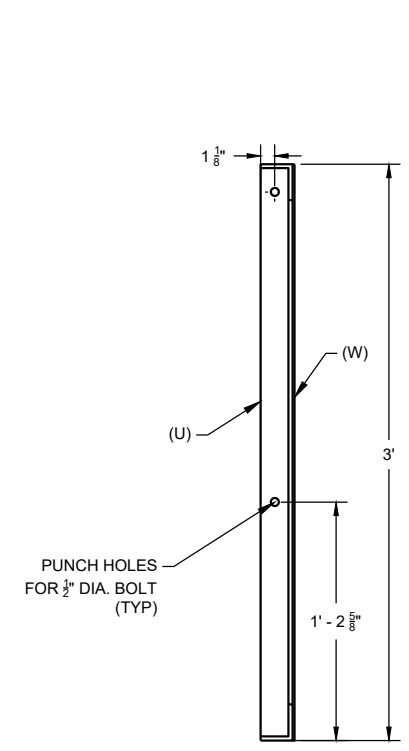
RISER DEBRIS RACK CROSS SECTION 2
NOT TO SCALE B.103



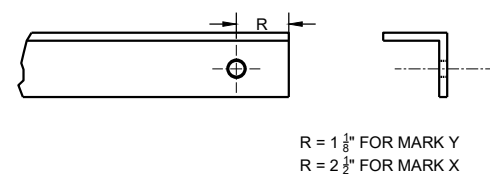
DEBRIS RACK ANCHOR DETAIL 3
NOT TO SCALE B.103



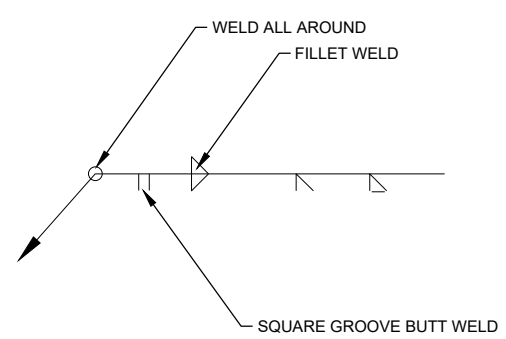
ANTI-VORTEX WALL DETAILS 4
NOT TO SCALE B.103



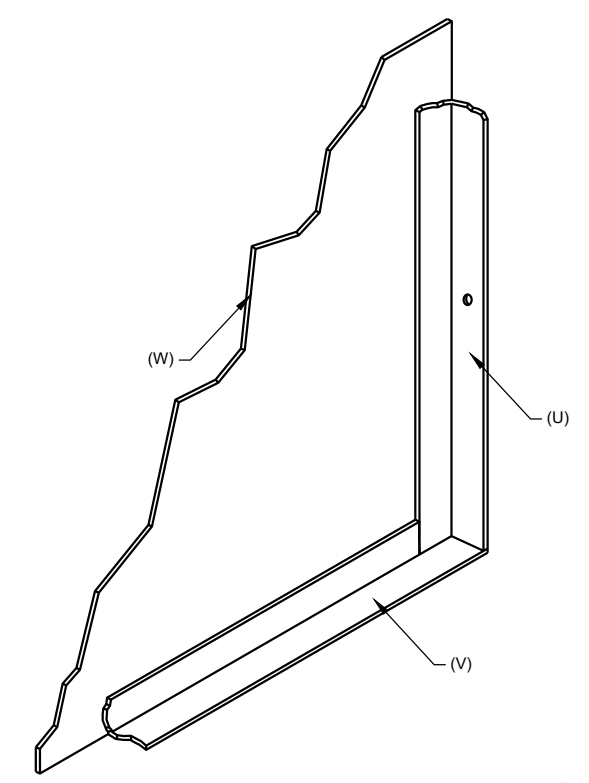
ANTI-VORTEX WALL DETAILS 5
NOT TO SCALE B.103



DRILL HOLE DETAIL 6
NOT TO SCALE B.103



WELD SYMBOLS 7
NOT TO SCALE B.103



ANTI-VORTEX CORNER DETAIL 8
NOT TO SCALE B.103

MATERIAL LIST

U	2" X 2" X 1/4" X 2' - 11 1/2" ANGLES	2
V	2" X 2" X 1/4" X 9' - 0" ANGLES	2
X	2" X 2" X 1/4" X 9' - 4" ANGLES	2
Y	2" X 2" X 1/4" X 9' - 0" ANGLES	8
Z	2" X 2" X 1/4" X 8' - 0" ANGLES (POST)	4
P	9" X 6" X 1/4" ANCHOR PLATES	4
W	14 GA. STEEL SHEET, 3' - 0" X 9' - 0"	1
	1/2" X 1 1/2" HEX BOLTS (INCLUDING NUTS)	18
	1/2" X 3" LENGTH "J" BOLTS (INCLUDING NUTS)	6
	1/2" DIA. LOCK WASHERS (FOR ABOVE BOLTS)	24

ITEM	WEIGHT IN POUNDS (STEEL)
2" X 2" X 1/4" ANGLES (18)	442
ANTI-VORTEX STEEL SHEET (1)	84
STEEL BOLTS, NUTS AND LOCK WASHERS (24)	6
STEEL POST	709

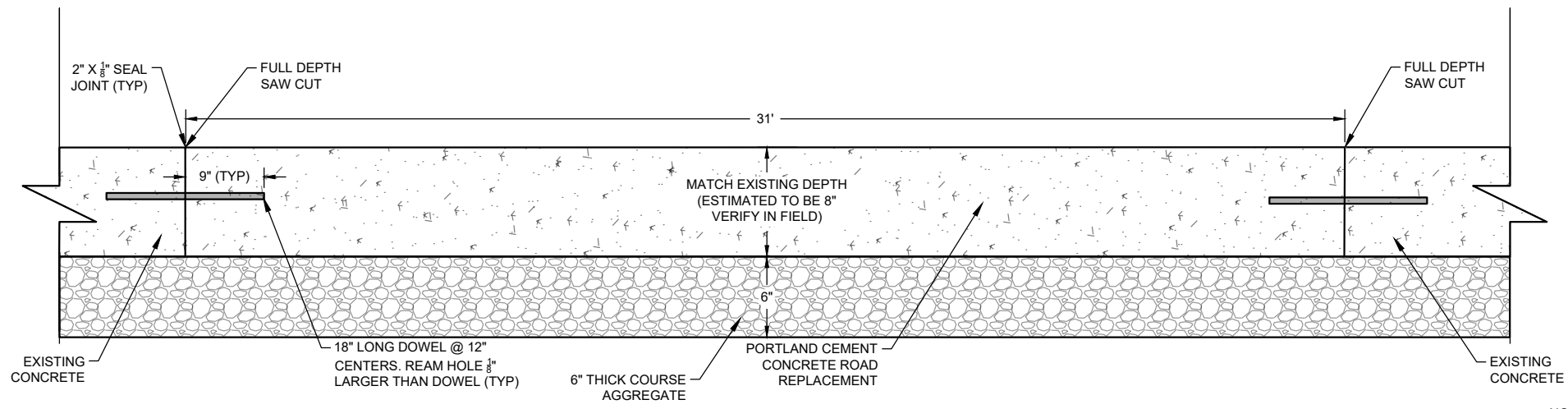
- FABRICATION NOTES**
1. ALL ANGLES, SHEETS AND PLATES TO BE SECURELY WELDED AND/OR BOLTED AS SHOWN ON THIS DRAWING, IN ACCORDANCE WITH SPECIFICATIONS.
 2. ALL WELDS AND HEAT AFFECTED AREAS, ON GALVANIZED METAL SHALL BE TREATED IN ACCORDANCE WITH CONSTRUCTION SPECIFICATIONS.
 3. WHEN MATERIALS USED ARE NOT GALVANIZED, ALL PARTS SHALL BE PAINTED ACCORDING TO MANUFACTURERS RECOMMENDATIONS.
 4. INSTALL METAL ANTI-VORTEX WALL AT 90° TO CENTERLINE OF STRUCTURE.

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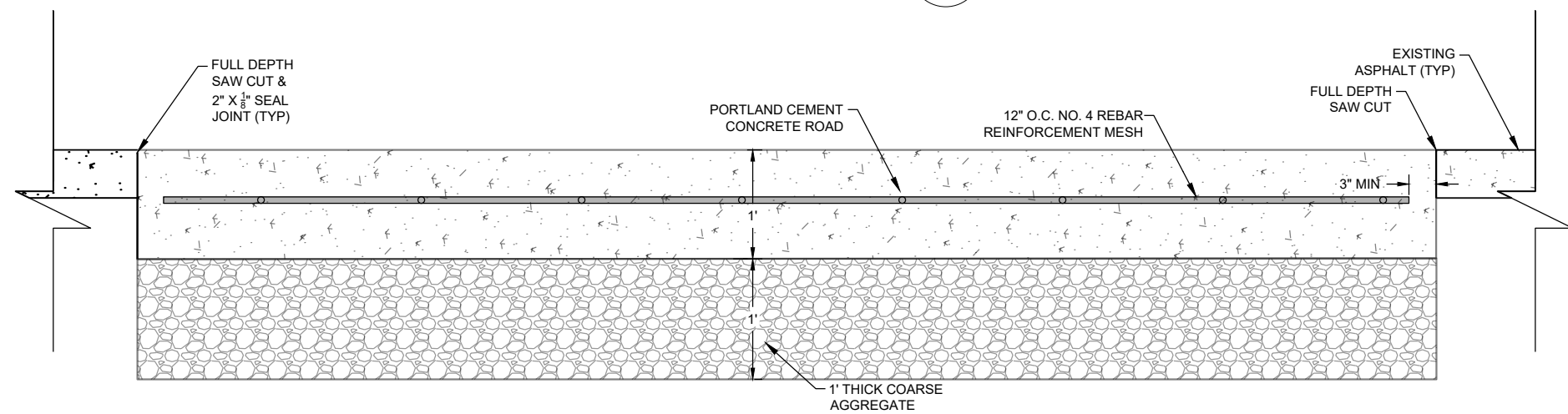
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TITLE
TRASH RACK DETAILS

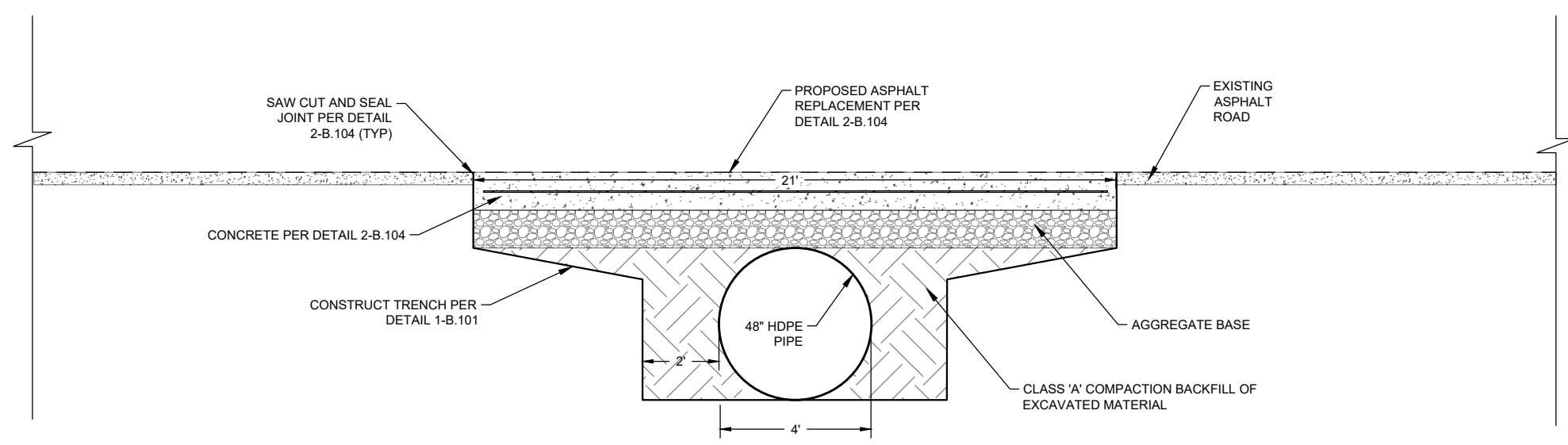


DYKE DR ROADWAY REPLACEMENT DETAIL 1
NOT TO SCALE NOT TO SCALE
B.104

NOTE: DYKE DR CONCRETE REPLACEMENT SHALL BE AT LEAST AS THICK AS THE EXISTING PAVEMENT BUT IN NO CASE LESS THAN 6"



145TH ST ROAD REPLACEMENT DETAIL 2
NOT TO SCALE
B.104



145TH ST PIPE & ROAD DETAIL 3
NOT TO SCALE
B.104

NOTE: TRANSVERSE JOINTS SHALL MATCH ADJACENT EXISTING JOINTS. NO MORE THAN 4 FEET OF THE EXISTING PANEL SHALL REMAIN AFTER STREET CUT REPAIR.

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ROADWAY DETAILS

STORM WATER PREVENTION POLLUTION PLAN (SWPPP)

ALL CONTRACTORS/SUBCONTRACTORS SHALL CONDUCT THEIR OPERATIONS IN A MANNER THAT MINIMIZES EROSION AND PREVENTS SEDIMENTS FROM LEAVING THE PROJECT SITE OR ENTERING NEW OR EXISTING STORM WATER SYSTEMS. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE AND IMPLEMENTATION OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) FOR THEIR ENTIRE CONTRACT. THIS RESPONSIBILITY SHALL BE FURTHER SHARED WITH SUBCONTRACTORS WHOSE WORK IS A SOURCE OF POTENTIAL POLLUTION AS DEFINED IN THIS SWPPP.

1. SITE DESCRIPTION

THIS SWPPP IS FOR THE CONSTRUCTION OF LAKE CANYADA DAM REHABILITATION. THIS PROJECT CONSISTS OF THE CONSTRUCTION OF A TRENCH TO CONSTRUCT A NEW PRINCIPAL SPILLWAY AND INCIDENTAL WORK AS REQUIRED BY THE PLANS AND/OR THE CONSTRUCTION INSPECTOR.

POTENTIAL SOURCES OF POLLUTION:

SITE SOURCES OF POLLUTION GENERATED AS A RESULT OF THIS WORK RELATE TO SILTS AND SEDIMENT WHICH MAY BE TRANSPORTED AS A RESULT OF A STORM EVENT. HOWEVER, THIS SWPPP PROVIDES CONVEYANCE FOR OTHER (NON-PROJECT RELATED) OPERATIONS. THESE OTHER OPERATIONS HAVE STORM WATER RUNOFF, THE REGULATION OF WHICH IS BEYOND THE CONTROL OF THIS SWPPP. POTENTIALLY THIS RUNOFF CAN CONTAIN VARIOUS POLLUTANTS RELATED TO SITE-SPECIFIC LAND USES. EXAMPLES ARE:

RURAL AGRICULTURAL ACTIVITIES:

RUNOFF FROM AGRICULTURAL LAND USE CAN POTENTIALLY CONTAIN CHEMICALS INCLUDING HERBICIDES, PESTICIDES, FUNGICIDES AND FERTILIZERS.

2. CONTROLS

AT DOWNGRADIENT LOCATIONS WHERE RUNOFF CAN MOVE FROM EACH CONSTRUCTION SITE, CONTROLS SHALL BE PLACED ALONG THE PERIMETER OF THE AREAS TO BE DISTURBED PRIOR TO BEGINNING GRADING, EXCAVATION OR CLEARING AND GRUBBING OPERATIONS. CONTROLS INCLUDE SILT FENCE, STRAW BALES, WATTLES, CONSTRUCTION ENTRANCES (OR APPROVED EQUIVALENTS BY FIELD ENGINEER) AS LAID OUT ON THE SITE PLAN SHEETS. VEGETATION IN AREAS NOT NEEDED FOR CONSTRUCTION SHALL BE PRESERVED.

TEMPORARY STABILIZING SEEDING SHALL BE COMPLETED AS THE DISTURBED AREAS ARE CONSTRUCTED. IF CONSTRUCTION ACTIVITY IS NOT PLANNED TO OCCUR IN A DISTURBED AREA FOR AT LEAST 21 DAYS, THE AREA SHALL BE STABILIZED BY TEMPORARY SEEDING OR MULCHING WITHIN 14 DAYS. OTHER STABILIZING METHODS SHALL BE USED OUTSIDE THE SEEDING TIME PERIOD. TEMPORARY SEEDING AND MULCHING SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT. UPON REACHING FINAL GRADES, EROSION CONTROL MATTING WILL BE PLACED ON SLOPES AS INDICATED ON PLANS.

AS THE WORK PROGRESSES, ADDITIONAL EROSION CONTROL ITEMS MAY BE REQUIRED AS DETERMINED BY THE CONTRACTOR AFTER FIELD INVESTIGATION. THE CONTRACTOR WILL COMPLETE THE CONSTRUCTION WITH THE ESTABLISHMENT OF PERMANENT PERENNIAL VEGETATION OF ALL DISTURBED AREAS AND EROSION CONTROL MATTING IN SPECIFIED LOCATIONS.

OTHER CONTROLS:

CONTRACTOR DISPOSAL OF UNUSED CONSTRUCTION MATERIALS AND CONSTRUCTION MATERIAL WASTES SHALL COMPLY WITH APPLICABLE STATE AND LOCAL WASTE DISPOSAL, SANITARY SEWER, OR SEPTIC SYSTEM REGULATIONS. IN THE EVENT OF A CONFLICT WITH OTHER GOVERNMENTAL LAWS, RULES AND REGULATIONS, THE MORE RESTRICTIVE LAWS, RULES OR REGULATIONS SHALL APPLY.

APPROVED STATE OR LOCAL PLANS:

DURING THE COURSE OF THIS CONSTRUCTION, IT IS POSSIBLE THAT SITUATIONS WILL ARISE WHERE UNKNOWN MATERIALS WILL BE ENCOUNTERED. WHEN SUCH SITUATIONS ARE ENCOUNTERED, THEY WILL BE HANDLED ACCORDING TO ALL FEDERAL, STATE, AND LOCAL REGULATIONS IN EFFECT AT THE TIME.

3. MAINTENANCE

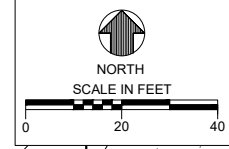
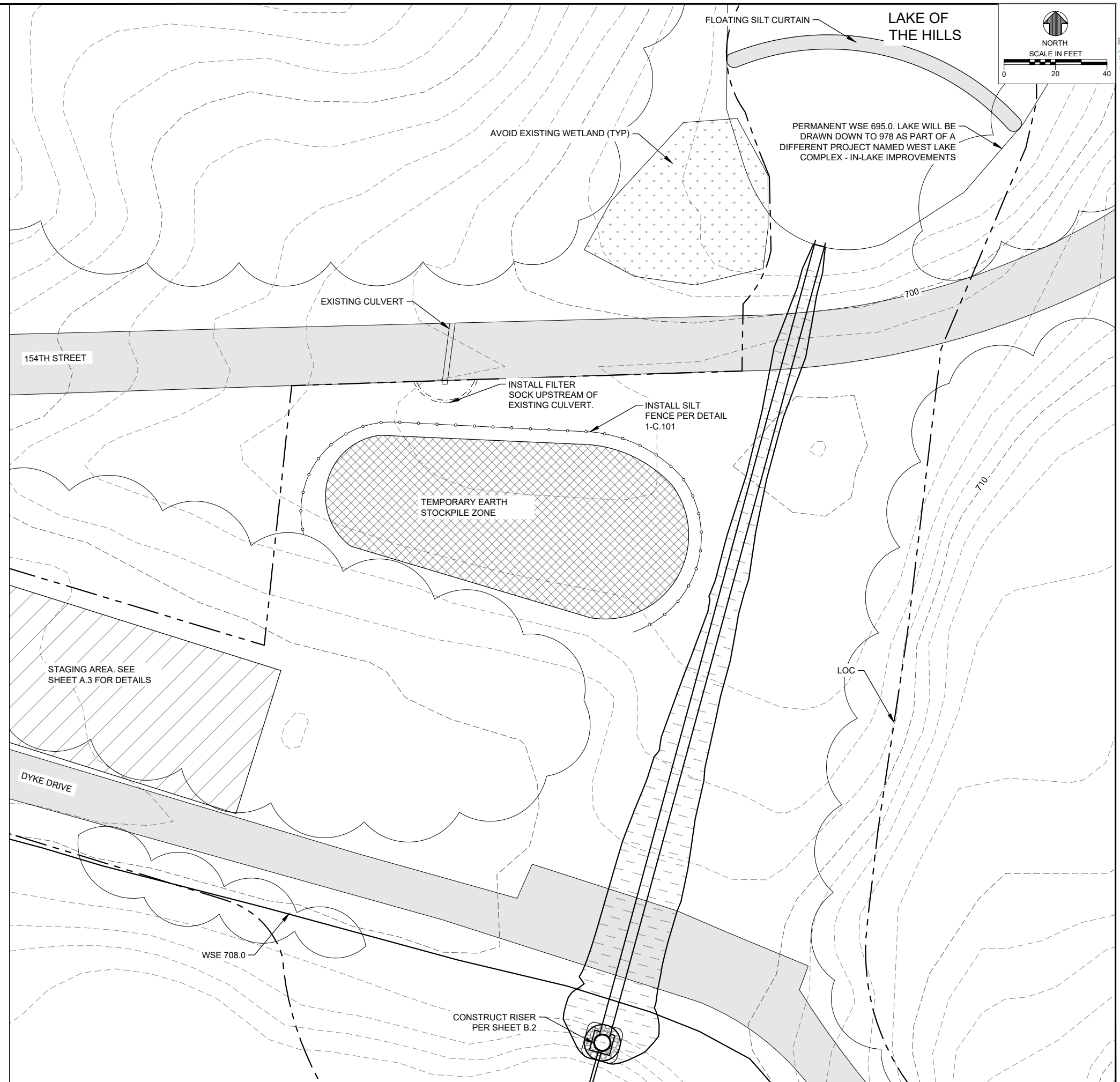
THE CONTRACTOR IS REQUIRED TO MAINTAIN ALL TEMPORARY EROSION CONTROL MEASURES IN PROPER WORKING ORDER, INCLUDING CLEANING, REPAIRING, OR REPLACING THEM THROUGHOUT THE CONTRACT PERIOD. CLEANING OF SILT CONTROL DEVICES SHALL BEGIN WHEN THE FEATURES HAVE LOST 50% OF THEIR CAPACITY.

4. INSPECTIONS

INSPECTIONS SHALL BE MADE JOINTLY BY THE CONTRACTOR AND THE CONTRACTING AUTHORITY EVERY SEVEN CALENDAR DAYS AND AFTER EACH RAIN EVENT THAT IS 1/2" OR GREATER. THE CONTRACTOR SHALL IMMEDIATELY BEGIN CORRECTIVE ACTION ON ALL DEFICIENCIES FOUND. THE FINDINGS OF THIS INSPECTION SHALL BE RECORDED IN THE PROJECT DIARY. THIS SWPPP MAY BE REVISED BASED ON THE FINDINGS OF THE INSPECTION. THE CONTRACTOR SHALL IMPLEMENT ALL REVISIONS. ALL CORRECTIVE ACTIONS SHALL BE COMPLETED WITHIN 3 CALENDAR DAYS OF THE INSPECTION.

5. NON-STORM DISCHARGES

THIS INCLUDES SUBSURFACE DRAINS (I.E. LONGITUDINAL AND STANDARD SUBDRAINS), SLOPE DRAINS AND BRIDGE END DRAINS. THE VELOCITY OF THE DISCHARGE FROM THESE FEATURES MAY BE CONTROLLED BY THE USE OF ROLLED EROSION CONTROL, OR RIPRAP.



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WEST LAKE COMPLEX - CANYADA DAM REHABILITATION
SCOTT COUNTY CONSERVATION BOARD
SCOTT COUNTY, IOWA
2020

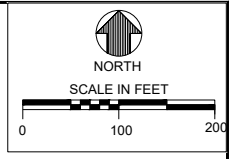
ENGINEER'S SEAL

REVISIONS	
NO.	DATE

DESIGNED BY: CDI
DRAWN BY: BJH
QA / QC BY: MKS
PROJECT NO.: 074-17-01
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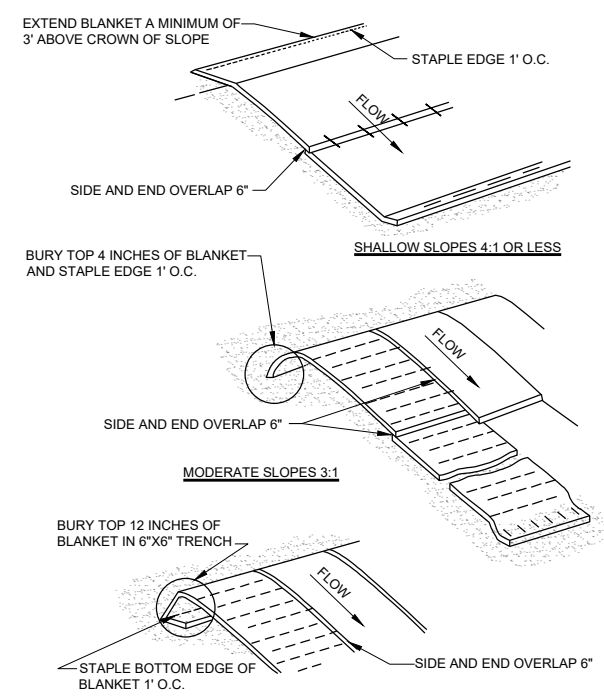
TITLE
SWPPP SITE
MAP

SHEET
C.1



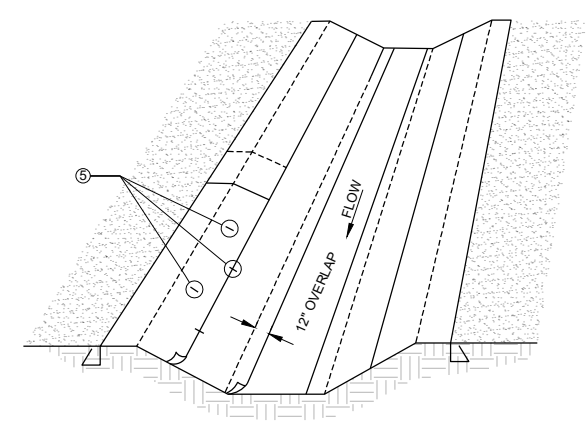
MATting NOTES:

1. SURFACE MUST BE GRADED SMOOTH TO REMOVE ALL DEBRIS AND UNDULATIONS LARGER THAN 1 1/2" IN ANY DIRECTION.
2. APPLY SEED AND FERTILIZER PRIOR TO MATting. INSTALL SO THAT MATting IS IN COMPLETE CONTACT WITH SOIL SURFACE.
3. STAPLES ARE TO BE INSTALLED PER MANUFACTURES SPECIFICATIONS.
4. CHANNEL OR SWALE APPLICATIONS: LENGTHWISE OVERLAP MATting A MINIMUM OF 12"; CROSSWISE OVERLAP A MINIMUM OF 6", AND AVOID JOINING MATERIAL IN CENTER OF DITCH OR SWALE.
5. SLOPE APPLICATION: LENGTHWISE OVERLAP MATting A MINIMUM OF 6"; CROSSWISE OVERLAP A MINIMUM OF 6"; AT TOP OF SLOPE, ENTRENCH MATERIAL IN A 6"x6" TRENCH AND STAPLE AT 12" INTERVAL; AT BOTTOM OF SLOPE, EXTEND MAT 2 FEET BEYOND THE TOE OF THE SLOPE, TURN MATERIAL UNDER 4" AND STAPLE AT 12" INTERVAL; ON 4:1 SLOPES, ROLLS MAY BE PLACED IN HORIZONTAL STRIPS; MATS MUST BE STAPLED IN PLACE AS THEY ARE INSTALLED DOWN THE SLOPE FACE EVERY 4' UNTIL THE BOTTOM.
6. INSPECT ONCE PER WEEK ON ACTIVE SITES, ONCE EVERY TWO WEEKS ON INACTIVE SITES, AND WITHIN 24 HOURS FOLLOWING A 0.5 INCH RAIN EVENT.
7. REPAIR ANY DAMAGED AREAS OF THE NET OR BLANKET AND STAPLE INTO THE GROUND ANY AREAS NOT IN CLOSE CONTACT WITH THE GROUND SURFACE.
8. IF EROSION OCCURS, REPAIR AND PROTECT THE ERODED AREA.



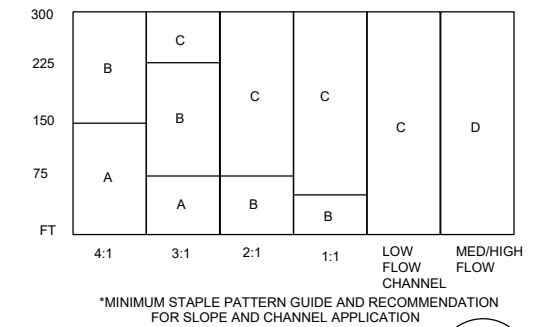
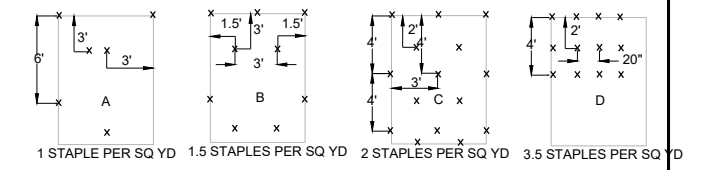
- NOTES:**
1. ON 4:1 OR LESS SLOPES BLANKETS MAY BE APPLIED ACROSS THE SLOPE.
 2. ALL BLANKET INSTALLED AND STAPLED PER MANUFACTURERS SPECIFICATIONS.

EROSION CONTROL MATTING 1
NO SCALE C.100

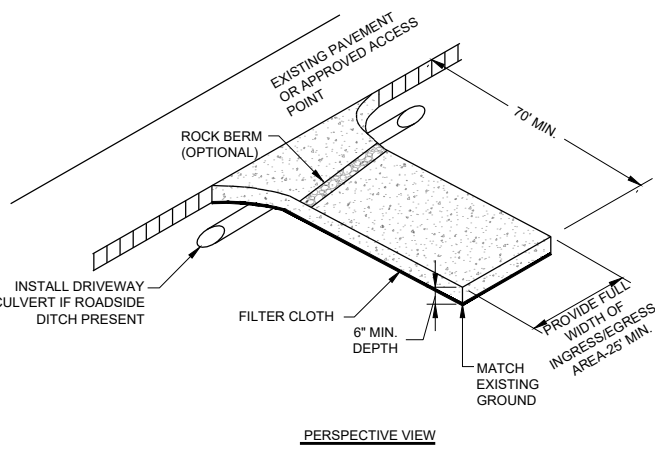
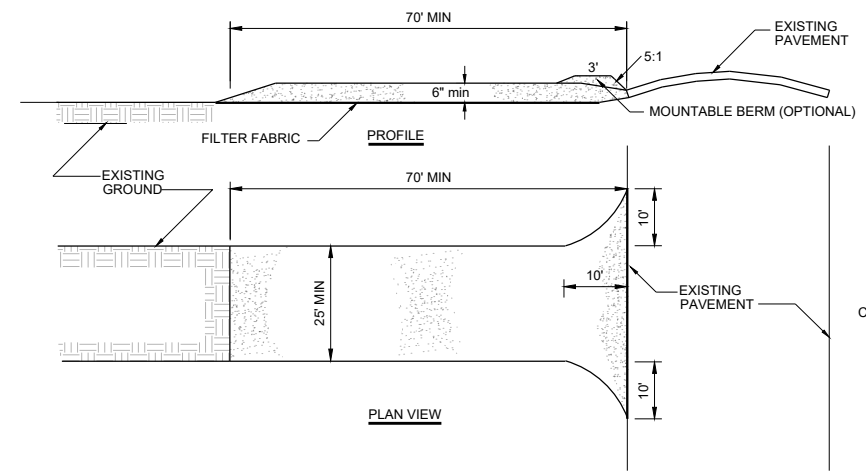


EROSION CONTROL MATTING CHANNEL INSTALLATION 2
NO SCALE C.100

- NOTES:**
1. INFORMATION PROVIDED IS MINIMUM REQUIREMENTS. MANUFACTURERS REQUIREMENTS WHICH ARE MORE STRINGENT SHALL BE USED.
 2. INSTALL MAT PARALLEL IN CENTER OF CHANNEL IN THE DIRECTION OF FLOW. FOR CULVERT OUTFALLS, PLACE MAT UNDER CULVERT OR RIP RAP A MIN. OF 12".
 3. IN CHANNEL BOTTOM, OVERLAP LENGTH ENDS A MINIMUM OF 12 INCHES.
 4. STAPLE PER MANUFACTURERS SPECIFICATIONS.
 5. LENGTH OF STAPLES SHALL BE DETERMINED BY SOIL TYPE- COHESIVE SOIL USE 6 INCH, NON-COHESIVE SOILS 8-12 INCH.



MATting STAPLE PATTERN 3
NO SCALE C.100



STABILIZED CONSTRUCTION ENTRANCE 4
NOT TO SCALE C.100

FILTER FABRIC SPECIFICATIONS

PROPERTY	TEST PROCEDURE	ENTRANCE	
		LIGHT DUTY	HEAVY DUTY
		MIN. FABRIC VALUE	MIN. FABRIC VALUE
GRAB TENSILE STRENGTH	ASTM D-4832	180 LBS.	250 LBS.
GRAB ELONGATION@ FAILURE	ASTM D-4832	50%	60%
MULLEN BURST STRENGTH	ASTM D-3786	250 PSI.	380 PSI.
PUNCTURE STRENGTH	ASTM D-4833	90 LBS.	125 LBS.
APPARENT OPENING SIZE	ASTM D-4751	0.2 MM	0.2 MM
AGGREGATE DEPTH		6 IN.	10 IN.

LIGHT DUTY ENTRANCE SHALL BE DEFINED AS SITES THAT HAVE BEEN GRADED TO SUBGRADE AND WHERE MOST TRAVEL WOULD BE SINGLE AXLE VEHICLES AND AN OCCASIONAL MULTI-AXLE TRUCK.
HEAVY DUTY ENTRANCE SHALL BE DEFINED AS SITES WITH ONLY ROUGH GRADING AND WHERE MOST TRAVEL WOULD BE MULTIAXLE VEHICLES.

CONSTRUCTION SPECIFICATIONS

1. STONE SIZE - USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT
2. LENGTH - AS REQUIRED, BUT NOT LESS THAN 70 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - TWENTY FIVE (25) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
5. FILTER FABRIC - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE. FILTER WILL NOT BE REQUIRED ON A SINGLE FAMILY RESIDENCE LOT.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5H:1V SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

WEST LAKE COMPLEX - CANYADA DAM REHABILITATION
SCOTT COUNTY CONSERVATION BOARD
 SCOTT COUNTY, IOWA
 2020

ENGINEER'S SEAL

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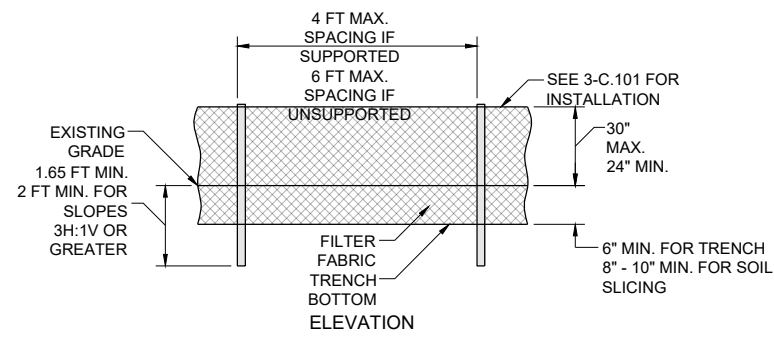
DESIGNED BY: CDI
 DRAWN BY: BJH
 QA / QC BY: MKS
 PROJECT NO.: 074-19-01
 DATE: OCTOBER 09, 2020

TITLE
SWPPP
DETAILS (1
OF 2)

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TITLE
SWPPP
DETAILS (2
OF 2)

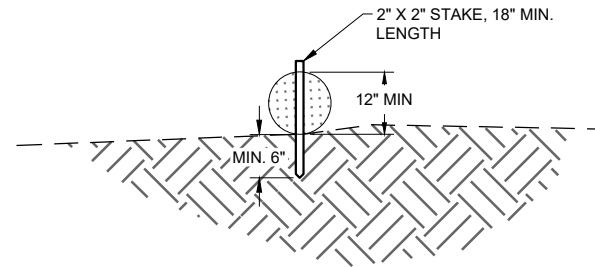
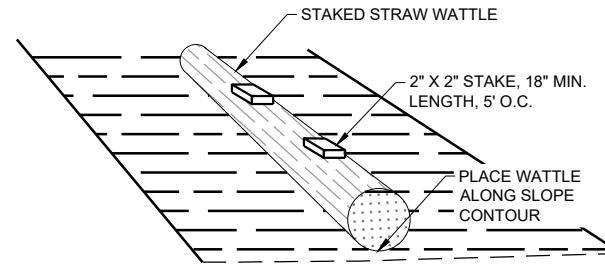


SILT FENCE FABRIC SPECIFICATIONS

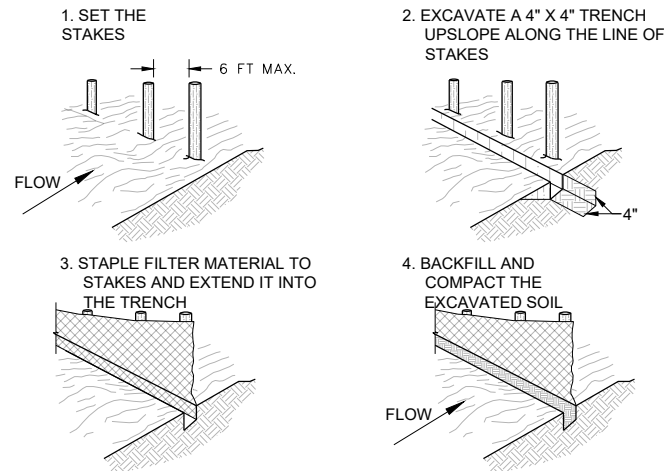
PROPERTY	TEST PROCEDURE	MIN. FABRIC VALUE
GRAB TENSILE STRENGTH	ASTM D-4632	100 LBS.
GRAB ELONGATION@ FAILURE	ASTM D-4632	15%
TRAPEZOID TEAR	ASTM D-4533	70 LBS.
MULLEN BURST STRENGTH	ASTM D-3786	250 PSI.
PUNCTURE STRENGTH	ASTM D-4833	50 LBS.
PERMITTIVITY	ASTM D-4491	0.07 SEC-1 MIN.
PERMEABILITY	ASTM D-4491	.005 CM/SEC
APPARENT OPENING SIZE	ASTM D-4751	0.90 MM
UV RESISTANCE(500 HRS)	ASTM D-4355	90%

INSTALL PARALLEL ALONG CONTOURS AS FOLLOWS		
% SLOPE	SLOPE	MAX. SPACING ON SLOPE
10% FLATTER	10:1 OR FLATTER	300 ft.
10>%<15	10:1>x<7.5:1	150 ft.
15>%<20	7.5:1>x<5:1	100 ft.
20>%<30	5:1>x<3.5:1	50 ft.
30>%<50	3.5:1>x<2:1	25 ft.

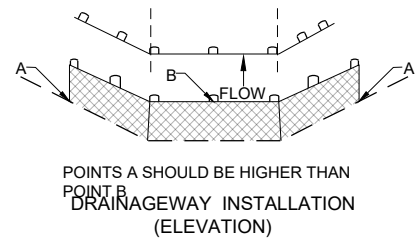
SILT FENCE BARRIER 1
NOT TO SCALE C.101



STRAW WATTLE DETAIL 2
NOT TO SCALE C.101



SHEET FLOW INSTALLATION
(PERSPECTIVE VIEW)



SILT FENCE INSTALLATION 3
NOT TO SCALE C.101

NOTE:
STEEL FENCE POSTS SHOULD BE
USED AS STAKES FOR ALL
INSTALLATIONS