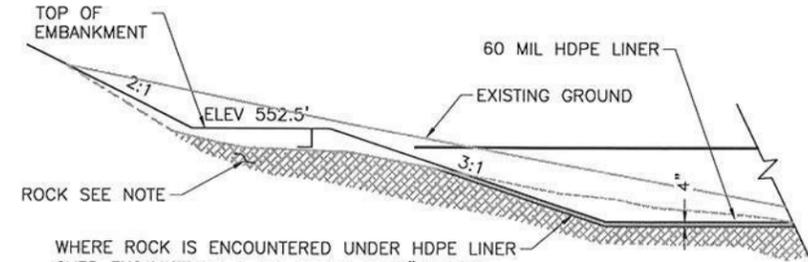
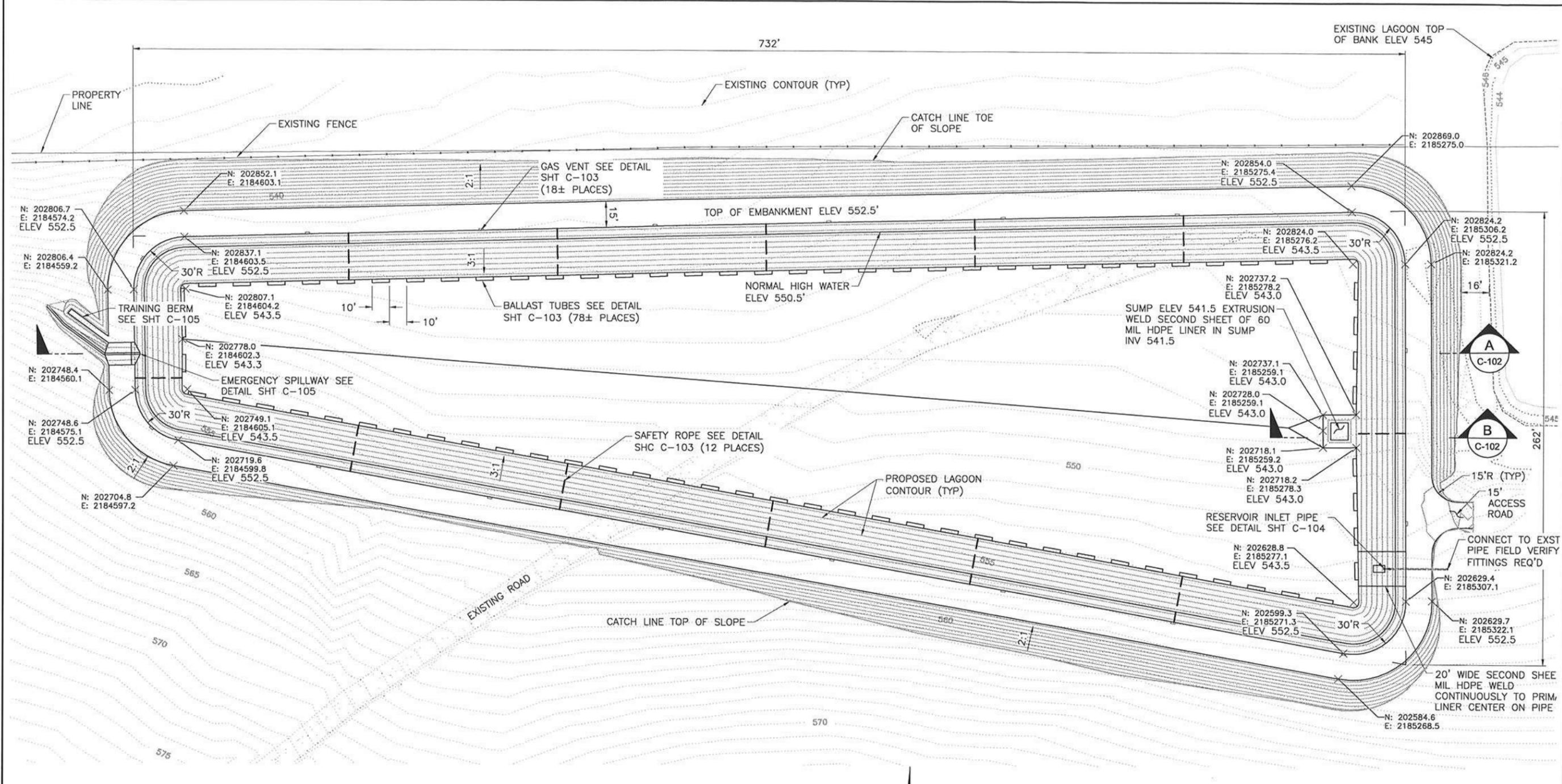


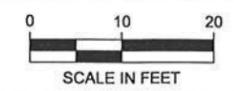
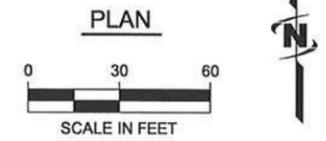
NO.	REVISION	DESCRIPTION	BY	DATE

**EVAPORATION LAGOON
 CANOE RIDGE WINERY**
 SITE PLAN



WHERE ROCK IS ENCOUNTERED UNDER HDPE LINER OVER EXCAVATE TO A MIN DEPTH OF 6" BELOW LAGOON FINISH GRADE. PLACE 6" SUITABLE NATIVE MATERIAL FREE OF ROCK, ORGANIC MATERIAL AND DEBRIS. COMPACT SUFFICIENT TO PRECLUDE SETTLEMENT

ROCK NOTE:
 ROCK IS ANTICIPATED ALONG THE SOUTH SIDE OF THE LAGOON. ROCK EXCAVATION SHALL CONTINUE TO THE DIMENSIONS SHOWN UNLESS BED ROCK IS ENCOUNTERED. BED ROCK SHALL BE DEFINED AS ROCK THAT CANNOT BE DUG USING A CATERPILLAR 350 EXCAVATOR, OR EQUIVALENT SIZE MACHINE, EQUIPPED WITH ROCK TEETH AND/OR RIPPED USING A CATERPILLAR DB, OR EQUIVALENT SIZE MACHINE, WITH RIPPER.



EARTHWORK
 ± 20,200 YDS CUT (INCLUDING GRUBBING)
 ± 12,500 YDS FILL (WITHOUT COMPACTION)

LAGOON SURFACE AREA
 ±119,600 SQFT W/ 2' FREEBOARD

LAGOON CAPACITY
 ±5.7 MILLION GALLONS W/ 2' FREEBOARD

60 MIL HDPE LINER
 ±14,900 SQYD'S

NOTE
 THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES IS SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
CALL 2 WORKING DAYS BEFORE YOU DIG
 1-800-424-5555

ELEVATION DATUM
 N.G.V.D. 29

BASIS OF BEARING
 RS#1-1584
 WASHINGTON STATE GRID
 SOUTH ZONE DERIVED
 FROM U.S.C.&G.S. TRI-STA
 CANOE AND U.S.C.&G.S. TRI-STA
 COYOTE

ROCK EXCAVATION UNDER HDPE LINER

Plot Date: 10/10/2011 12:20 PM Plotted By: Roger D. Willard
 Date Created: 02/24/2011 File Path: C:\PROJECTS\MUR3011\3081_CANOE_RIDGE_LAGOON\CANOE_RIDGE_LAGOON\CANOE_RIDGE_LAGOON_SHEET\NO.11-2011_C-101.DWG

FILE: 30-11-028 C-101
 JUB PROJ #: 30-11-028-010
 DRAWN BY: RDW
 DESIGN BY: GJW
 CHECKED BY: BWV

ONE INCH
 AT FULL SIZE, IF NOT ONE
 INCH SCALE ACCORDINGLY
 LAST UPDATED: 10/10/2011

SHEET NUMBER:
C-101

NO.	REVISION	DESCRIPTION	BY	DATE

EVAPORATION LAGOON
 CANOE RIDGE WINERY

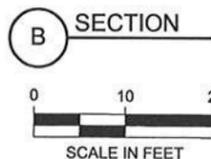
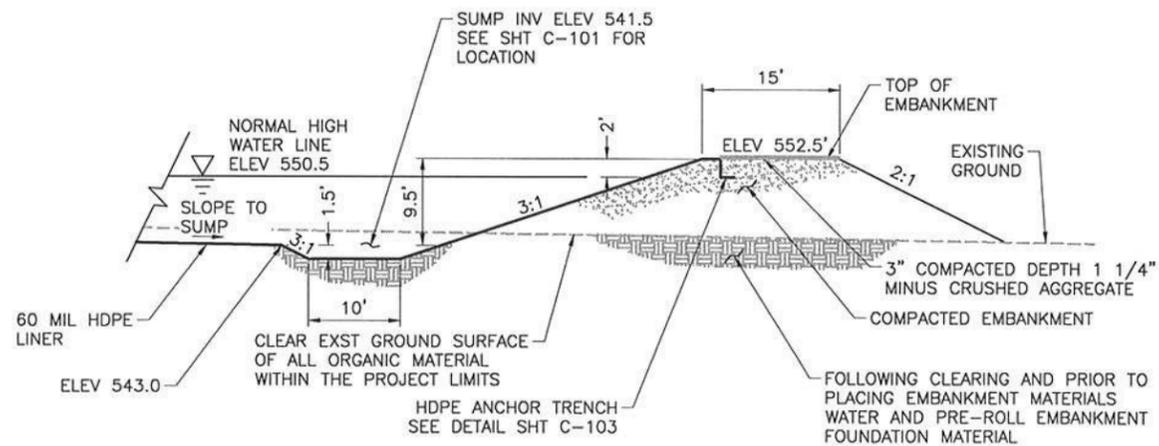
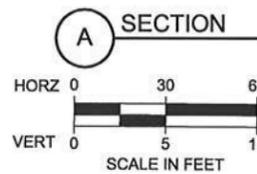
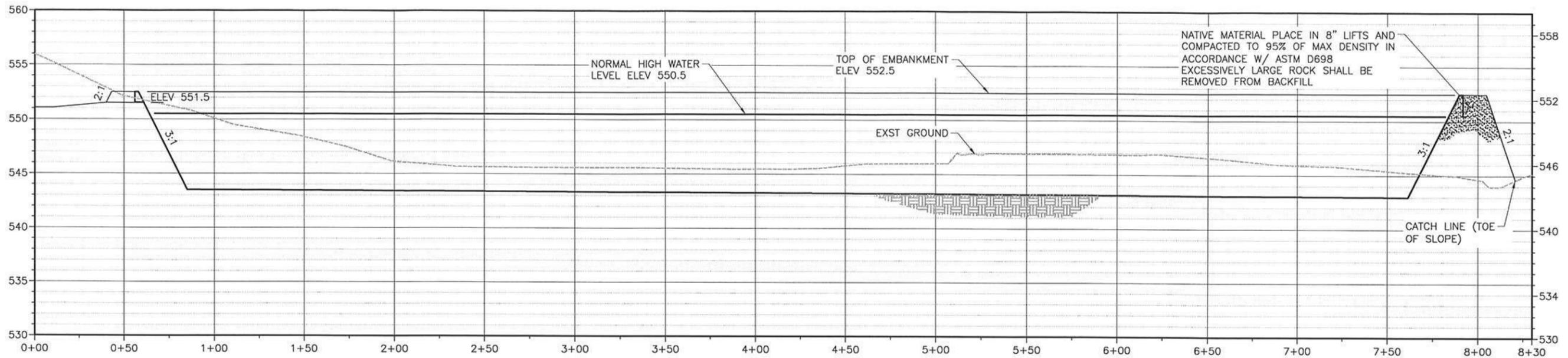
RESERVOIR SECTIN AND LINER NOTES

FILE: 30-11-028 C-102
 JUB PROJ #: 30-11-028-010
 DRAWN BY: RDW
 DESIGN BY: GJW
 CHECKED BY: BWV

ONE INCH = 10 FEET
 AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY

LAST UPDATED: 10/10/2011

SHEET NUMBER:
C-102



ELEVATION DATUM
 N.G.V.D. 29

BASIS OF BEARING

RS#1-1584
 WASHINGTON STATE GRID
 SOUTH ZONE DERIVED
 FROM U.S.C.&G.S. TRI-STA.
 CANOE AND U.S.C.&G.S. TRI-STA.
 COYOTE

NOTE

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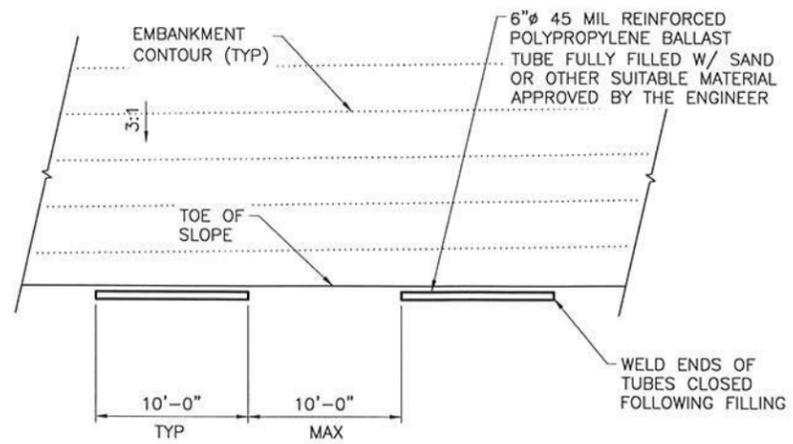
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DRAWING

NO.	DESCRIPTION	BY	DATE

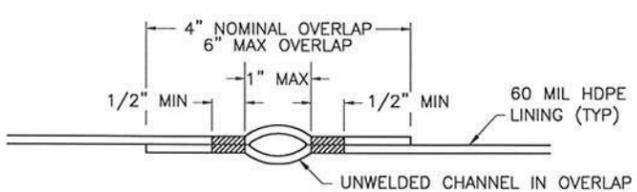
EVAPORATION LAGOON
 CANOE RIDGE WINERY
 MISCELLANEOUS DETAILS

FILE: 30-11-028 C-103
 JUB PROJ #: 30-09-011
 DRAWN BY: ##
 DESIGN BY: ##
 CHECKED BY: ##
 SCALE: 1" = 10'-0"
 AT FULL SIZE IF NOT ONE INCH SCALE ACCORDINGLY
 LAST UPDATED: 10/10/2011
 SHEET NUMBER:
C-103



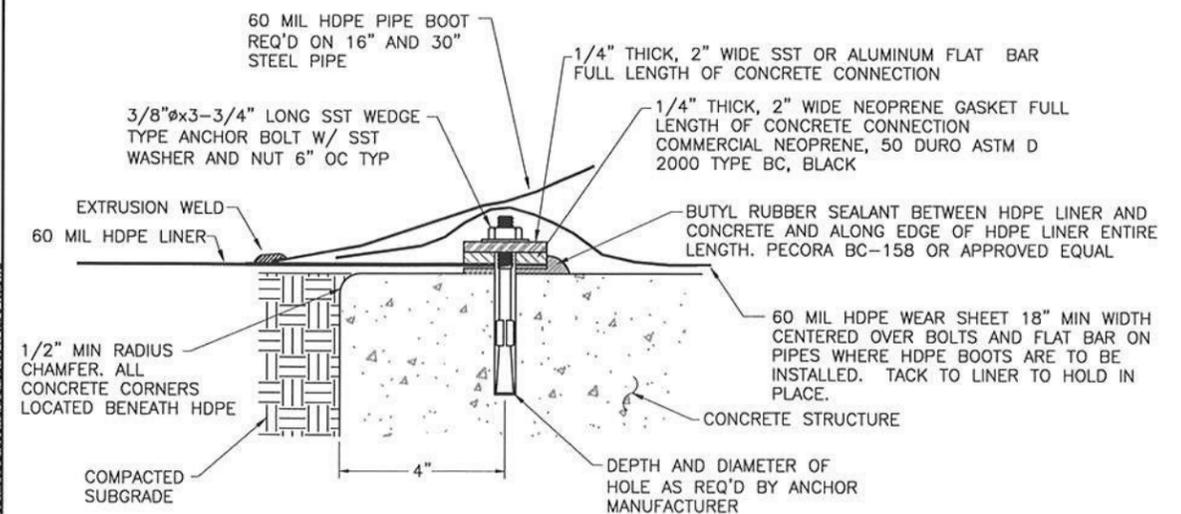
NOTE:
 BALLAST TUBES REQUIRED WHERE SHOWN ON DRAWING C-101 (39 PLACES)

BALLAST TUBE - DETAIL
 SCALE: NTS



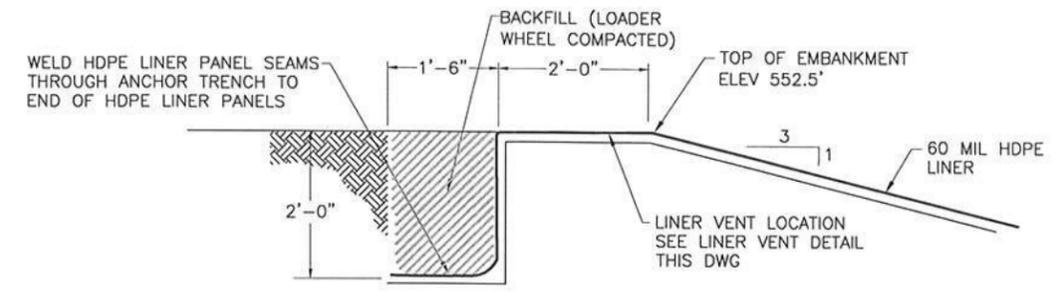
NOTE: AIR PRESSURE TESTING IS THE PRIMARY METHOD FOR TESTING FUSION WELDING

FUSION WELD - DETAIL
 SCALE: NTS

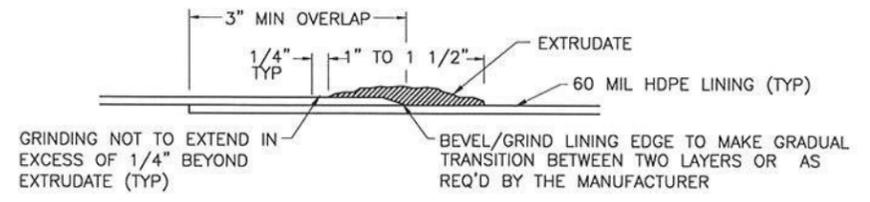


NOTE:
 CLEAN, BLOW-OUT AND DUST CONCRETE WASTE FROM HOLE PRIOR TO INSERTING WEDGE TYPE ANCHOR BOLTS
 CONCRETE SURFACES AT ATTACHMENT LOCATIONS TO BE STEEL TROWEL FINISHED OR GROUND SMOOTH PRIOR TO FASTENING HDPE LINER
 SST - STAINLESS STEEL TYPE 304L

HDPE LINER TO CONCRETE ATTACHMENT - DETAIL
 SCALE: NTS

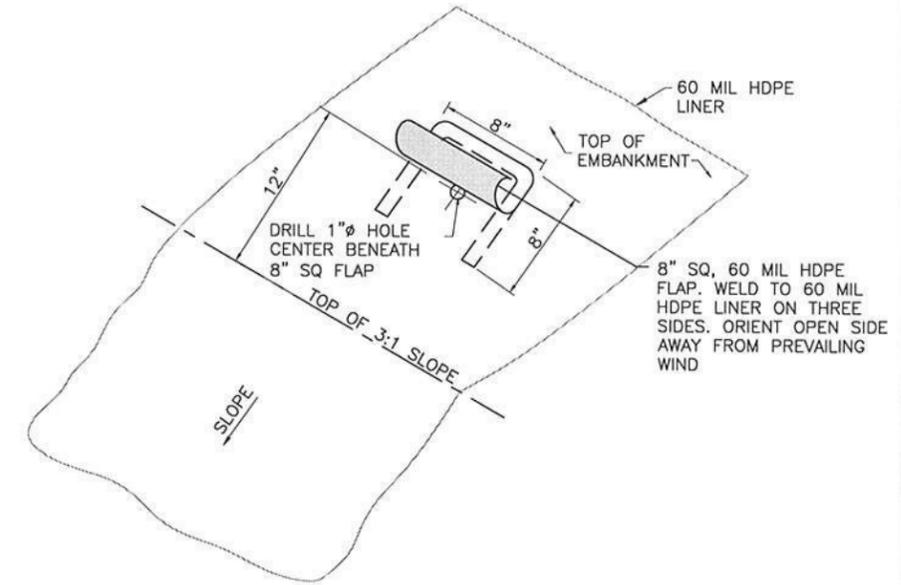


ANCHOR TRENCH - DETAIL
 SCALE: NTS



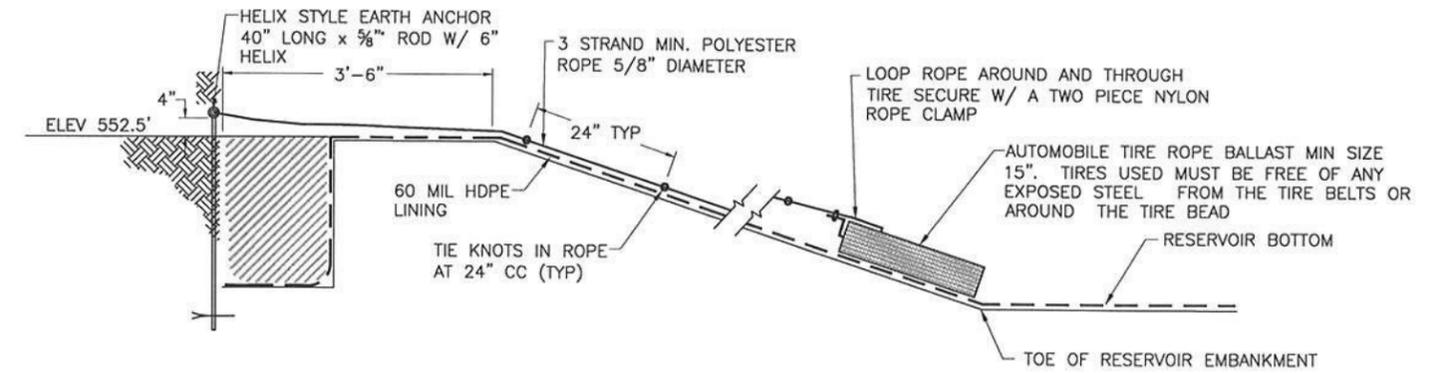
NOTE:
 LINER SHEETS TO BE TACK WELDED TOGETHER AT OVERLAP TO FORM TEMPORARY BOND PRIOR TO WELDING
 GRINDING NOT TO EXCEED 1/4" PAST "SQUEEZE-OUT" ON EITHER SIDE. PROPER CARE MUST BE TAKEN TO ENSURE TOO MUCH MATERIAL IS NOT REMOVED DURING GRINDING
 VACUUM TESTING WILL BE THE NON-DESTRUCTIVE TEST METHOD FOR EXTRUSION WELDS

EXTRUSION WELD - DETAIL
 SCALE: NTS



NOTE:
 INSTALL VENTS @ 100± FT SPACING AROUND LINER PERIMETER (18 PLACES)

GAS VENT - DETAIL
 SCALE: NTS



NOTE:
 INSTALL SAFETY ROPES AT LOCATIONS SHOWN ON DWG C1 (12 PLACES)

SAFETY ROPE - DETAIL
 SCALE: NTS

NOTE
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Plot Date: 10/10/2011 11:19 AM Plotted By: Roger D. Willard
 Date Created: 02/20/11 File Path: C:\PROJECTS\JUB\30-11-028 - CANOE RIDGE LAGOON\CAD\DWG\C-103.CAD

NO.	DESCRIPTION	BY	DATE

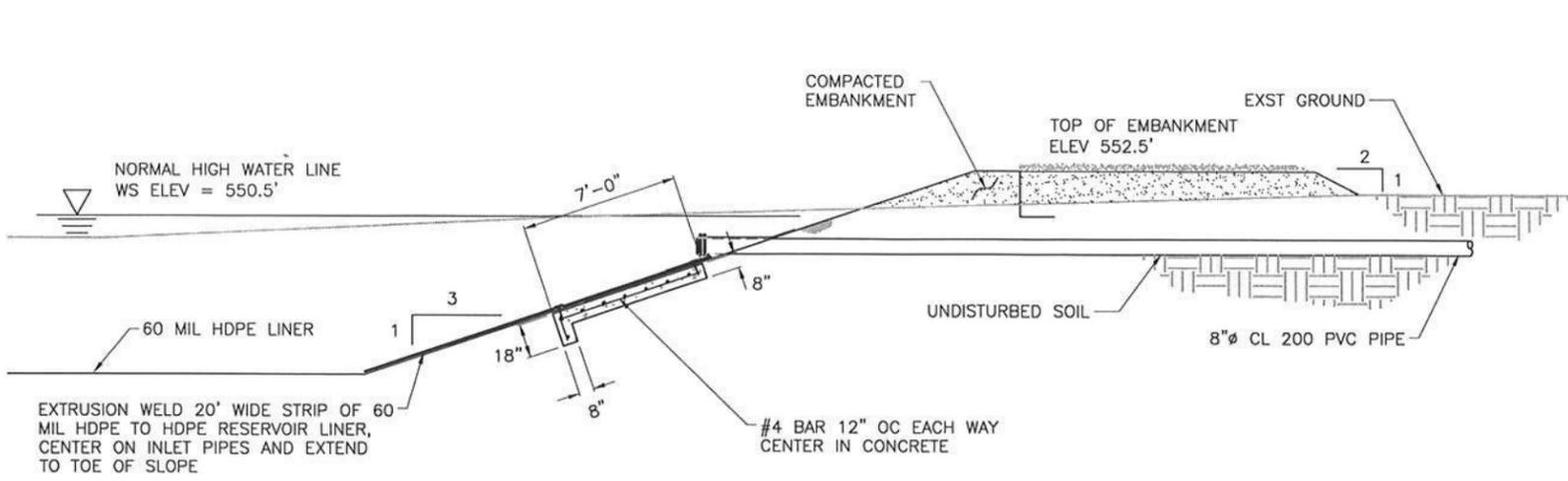
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EVAPORATION LAGOON
 CANOE RIDGE WINERY

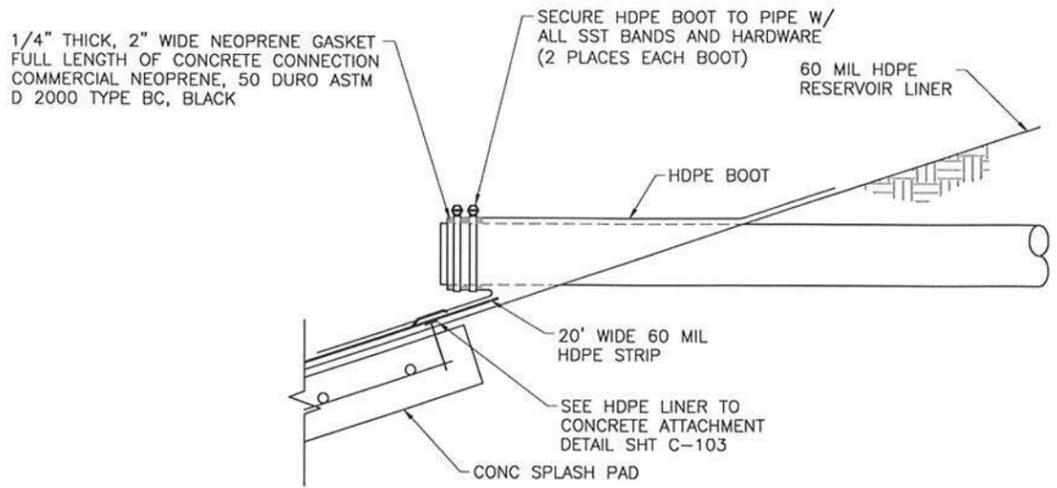
INLET SECTION AND CONTRUCTION NOTES

FILE: 30-11-028 C-104
JUB PROJ #: 30-11-028 C-102
DRAWN BY: RDW
DESIGN BY: GJW
CHECKED BY: GJW
DATE: 10/7/2011

SHEET NUMBER:
C-104



NOTE: SEE SHT C-101 FOR LOCATION
RESERVOIR INLET SECTION



HDPE BOOT DETAIL



NOTES

- THE ENTIRE RESERVOIR SITE SHALL BE PRE-WETTED TO OPTIMUM MOISTURE (FOR COMPACTION) PRIOR TO BEGINNING EARTHWORK. THE ENTIRE RESERVOIR SITE SHALL BE CLEARED OF ALL ORGANIC MATERIAL BEFORE BEGINNING EARTHWORK.
- THE FOUNDATION FOR THE EARTH EMBANKMENT SHALL BE PREPARED BY LEVELING, MOISTENING, AND ROLLING SO THE SURFACE MATERIAL OF THE FOUNDATION WILL BE COMPACT AND WILL PROVIDE A SATISFACTORY BONDING SURFACE WITH THE FIRST LAYER OF FILL. IMMEDIATELY PRIOR TO PLACING THE FIRST LAYER OF FILL ALL SURFACES UPON OR AGAINST WHICH THE EARTH FILL PORTIONS OF THE EMBANKMENT ARE TO BE PLACED SHALL BE CLEANED OF ALL LOOSE AND OBJECTIONABLE MATERIALS. THE FOUNDATION SURFACE SHALL HAVE ALL WATER REMOVED FROM DEPRESSIONS. THE SUITABILITY OF EACH PART OF THE FOUNDATION FOR PLACING EMBANKMENT MATERIAL THEREON WILL BE DETERMINED BY THE ENGINEER.
- THE EMBANKMENT MATERIAL WILL COME FROM THE ON-SITE SOILS EXCAVATED FOR CONSTRUCTION OF THE RESERVOIR. THE SUITABILITY OF THE EMBANKMENT MATERIAL SHALL BE DETERMINED BY THE ENGINEER. NO BRUSH, ROOTS, SOD OR OTHER ORGANIC MATERIALS SHALL BE PLACED IN THE EMBANKMENT. NO EMBANKMENT MATERIALS SHALL BE PLACED WHEN EITHER THE MATERIAL OR THE FOUNDATION IS FROZEN. EXCESSIVELY LARGE ROCK SHALL BE REMOVED FROM EMBANKMENT MATERIALS.
- AS FAR AS PRACTICAL ALL EARTH FILL MATERIAL SHALL BE BROUGHT TO PROPER MOISTURE CONTENT BEFORE EXCAVATION. SUPPLEMENTARY WATER, IF REQUIRED, SHALL BE ADDED TO THE MATERIAL BY SPRINKLING AND EACH LAYER OF EARTH FILL SHALL BE CONDITIONED SO THAT THE MOISTURE IS UNIFORM THROUGHOUT THE LAYER. THE MOISTURE CONTENT OF THE EMBANKMENT MATERIAL SHALL BE MAINTAINED AT OPTIMUM, PLUS OR MINUS THREE PERCENT, AS DETERMINED BY ASTM D698.
- IN EXCAVATING THE EMBANKMENT MATERIAL DO NOT OVER CUT THE EXISTING MATERIAL.
- THE EMBANKMENT MATERIAL SHALL BE PLACED IN UNIFORM HORIZONTAL LIFTS NO THICKER THAN EIGHT INCHES IN LOOSE MEASUREMENT. EACH EMBANKMENT LAYER SHALL BE CONSTRUCTED CONTINUOUSLY FOR ITS ENTIRE LENGTH. EACH LIFT SHALL BE COMPACTED TO A MINIMUM OF 95 PERCENT OF MAXIMUM DENSITY AS MEASURED BY ASTM D698. THE EMBANKMENT SHALL BE COMPACTED WITH SMOOTH OR SHEEP-FOOT TYPE ROLLERS, FREE VIBRATORY STEEL DRUM COMPACTION EQUIPMENT.
- MATERIALS NOT MEETING THE SPECIFIED MOISTURE CONTENT AND DRY DENSITY REQUIREMENTS SHALL BE REMOVED, REWORKED AND REINSTALLED AS DIRECTED BY THE ENGINEER.
- THE HDPE LINER USED FOR THIS PROJECT SHALL BE A 60 MIL HIGH DENSITY POLYETHYLENE MEMBRANE CONSISTING OF A SINGLE PLY OF SHEETING UNLESS OTHERWISE NOTED ON THE DWG'S. THE HDPE LINING MATERIAL SHALL BE MANUFACTURED SPECIFICALLY FOR THIS TYPE OF APPLICATION AND SO THAT IT CAN BE INSTALLED WITH A MINIMUM NUMBER OF FIELD SEAMS. ALL FIELD SEAMS SHALL BE CONSTRUCTED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. A MANUFACTURER'S REPRESENTATIVE WILL BE REQUIRED TO BE ON-SITE DURING INSTALLATION OF THE LINER. THE MANUFACTURER'S REPRESENTATIVE WILL BE REQUIRED TO PROVIDE WRITTEN APPROVAL OF THE LINING SUBGRADE AND OVER SEE INSTALLATION OF THE LINING MATERIAL. FIELD SEAMS OF LINING PANELS SHALL BE MADE USING FUSION WELDS COMPLETED USING A HOT WEDGE WELDER. WELDS SHALL BE COMPLETED AS SHOWN ON SHT C-103. THE WEDGE WELDER USED SHALL HAVE AUTOMATIC TEMPERATURE, TRAVEL SPEED AND PRESSURE ADJUSTMENTS. HOT WEDGE WELDERS SHALL BE DUAL (SPLIT) TRACK TYPE AND THE WELDS SHALL BE TESTED IN ACCORDANCE W/ GRI TEST METHOD GM6. FAILED SEAMS SHALL BE TESTED USING THE VACUUM TEST METHOD. THE LINER SHALL BE WARRANTED, ON A PRO-RATA BASIS, AGAINST MANUFACTURER'S DEFECTS FOR A PERIOD OF 5 YEARS. INSTALLATION SHALL BE WARRANTED AGAINST DEFECTS IN WORKMANSHIP FOR A PERIOD OF 1 YEAR. THE ENGINEER WILL FURNISH THE LINING INSTALLER ADDITIONAL DETAILED MATERIAL SPECIFICATIONS, SUBMITTAL REQUIREMENTS, INSTALLATION REQUIREMENTS AND TESTING REQUIREMENTS PRIOR TO THE INSTALLATION WORK BEGINNING.
- THE SUBGRADE WHEN COMPLETED SHALL BE FREE OF ALL FOREIGN MATERIALS. ALL SHARP OBJECTS, SUCH AS STICKS AND STONES, SHALL BE REMOVED. ROUND LOOSE ROCK LESS THAN 1" IN SIZE AND ROUND ROCK PROTRUDING 1" OR LESS FROM THE SUBGRADE SURFACE MAY BE LEFT IN PLACE. ALL ANGULAR ROCK SHALL BE REMOVED. THE SUBGRADE SHALL BE FIRM AND RELATIVELY SMOOTH, UNIFORM AND CONSTRUCTED TO THE LINES AND GRADES SHOWN ON THE DRAWING SHEETS. WHERE ROCK IS PRESENT OVER EXCAVATE A MIN OF 6" AND BACKFILL WITH NATIVE MATERIAL FREE OF ALL ROCK AND OTHER UNDESIRABLE MATERIAL.
- PRIOR TO PLACING THE HDPE LINER, ALL PIPE PENETRATIONS AND CONCRETE STRUCTURES SHALL BE INSTALLED AT THE LOCATIONS SHOWN.
- ALL CONCRETE STRUCTURES SHALL BE CONSTRUCTED USING A STANDARD 3000 PSI CONCRETE MIX DESIGN PROVIDED BY A LOCAL READY-MIX CONCRETE SUPPLIER. THE CONCRETE SHALL BE MANUFACTURED USING 3/4-INCH MAX SIZE AGGREGATE, 0.50 MAX WATER CEMENT RATIO, 5 PERCENT PLUS OR MINUS 1 PERCENT AIR CONTENT, AND HAVE A 4-INCH MAXIMUM SLUMP AT TIME OF PLACEMENT.
- PRIOR TO PLACING ANY CONCRETE THE FORMS AND REINFORCING SHALL HAVE BEEN INSPECTED AND APPROVED BY THE ENGINEER. BACKFILL PLACED AROUND CONCRETE STRUCTURES FOLLOWING FORM REMOVAL SHALL BE COMPACTED TO 95% OF MAX DENSITY PER ASTM D698.
- THE MINIMUM CLEARANCE FROM ANY CONCRETE SURFACE, EXPOSED TO GROUND OR TO THE WEATHER, TO METAL REINFORCEMENT WILL NOT BE LESS THAN 3" OF CONCRETE.
- CONCRETE EDGES ADJACENT TO THE HDPE LINER SHALL BE CHAMFERED USING A STANDARD EDGING TOOL. ANY REMAINING ROUGH OR ANGULAR EDGES SHALL BE GROUND SMOOTH. ALL CONCRETE SURFACES IN CONTACT WITH THE HDPE LINER SHALL HAVE A SMOOTH STEEL TROWEL FINISH.
- THE LINER WILL BE CONNECTED TO THE PIPE PENETRATIONS USING AN HDPE BOOT.
- ALL FIELD SEAMS OF THE HDPE LINING AND CONNECTIONS OF THE HDPE LINING TO PIPE PROTRUSIONS AND CONCRETE STRUCTURES SHALL BE WATERTIGHT AND MUST BE BOTH INSPECTED BY THE ENGINEER AND TESTED.
- IF THE WORK TAKES PLACE WHEN FREEZING WEATHER MAY BE ENCOUNTERED. CONCRETE PLACED OR CURING WHEN THE AMBIENT TEMPERATURE IS BELOW 32° F SHALL BE PROTECTED FROM FREEZING WITH PLASTIC, STRAW, EARTH, BLANKETS OR OTHER SUITABLE INSULATING MATERIAL. NO FROZEN MATERIAL SHALL BE INCORPORATED INTO THE RESERVOIR EMBANKMENTS. IF WORK TAKES PLACE DURING FREEZING WEATHER ALL FROZEN MATERIALS SHALL BE REMOVED FROM THE SITE WHERE FILL IS TO BE PLACED AND THOSE AREAS WHERE FILL MATERIAL WILL BE EXCAVATED PRIOR TO UNDERTAKING ANY WORK. HDPE LINING SHALL BE PLACED ONLY WHEN THE AMBIENT TEMPERATURE IS ABOVE 32° F. THE LINER SHALL NOT BE INSTALLED ON A FROZEN SUBGRADE. FIELD SEAMING OF THE LINER SHALL TAKE PLACE ONLY WHEN THE AMBIENT TEMPERATURE IS ABOVE 50° F. IF THE TEMPERATURE REQUIREMENTS FOR LINER INSTALLATION AND FIELD SEAMING CANNOT BE MET THE INSTALLER SHALL SUBMIT A COLD WEATHER INSTALLATION AND SEAMING PLAN FOR APPROVAL BY THE ENGINEER.

NOTE

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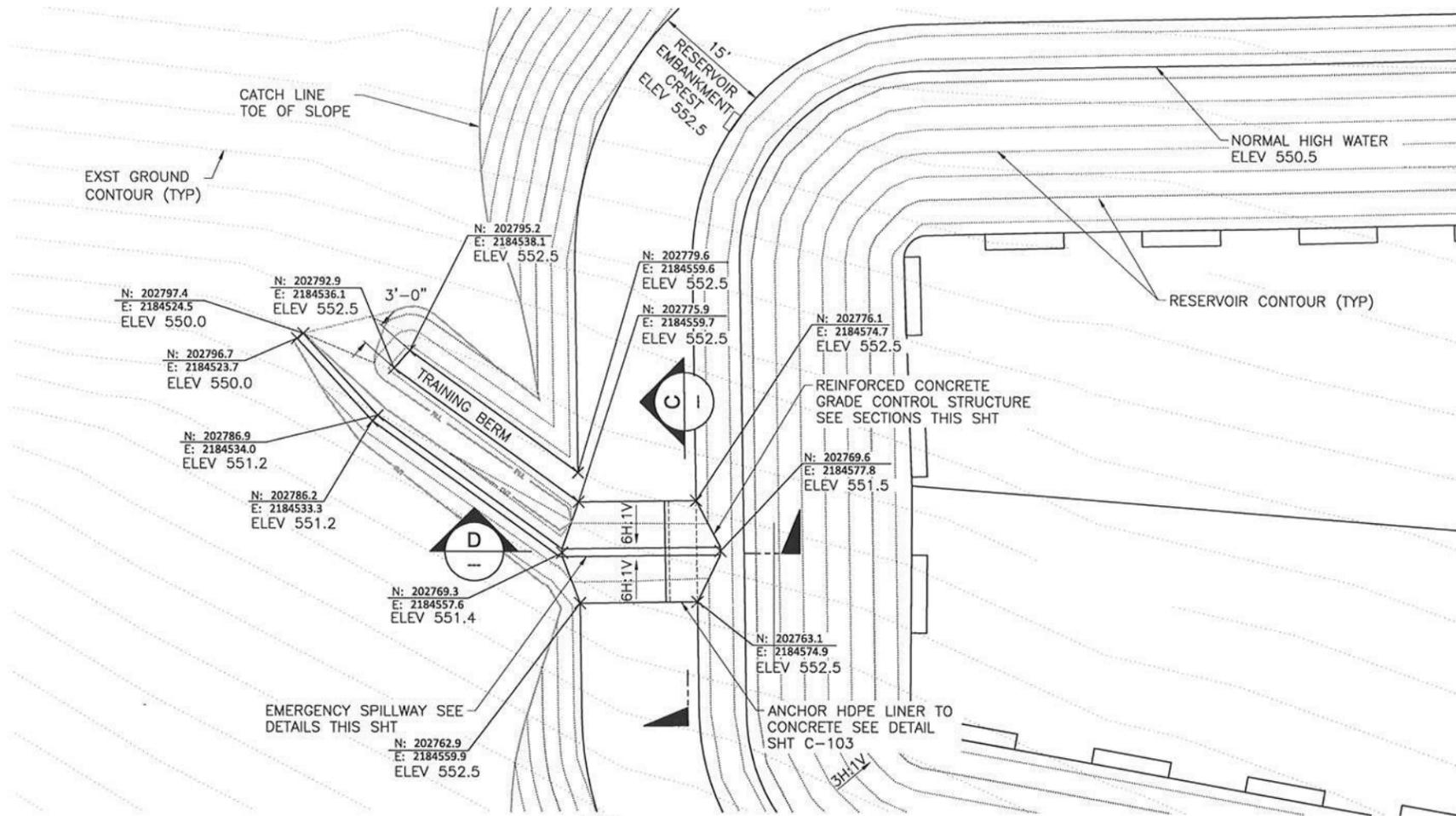
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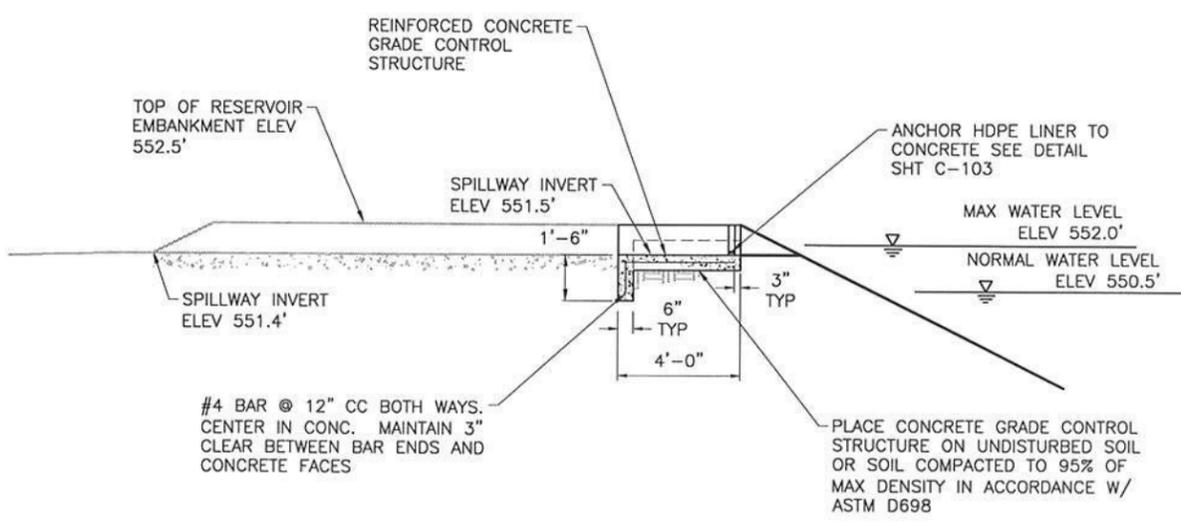
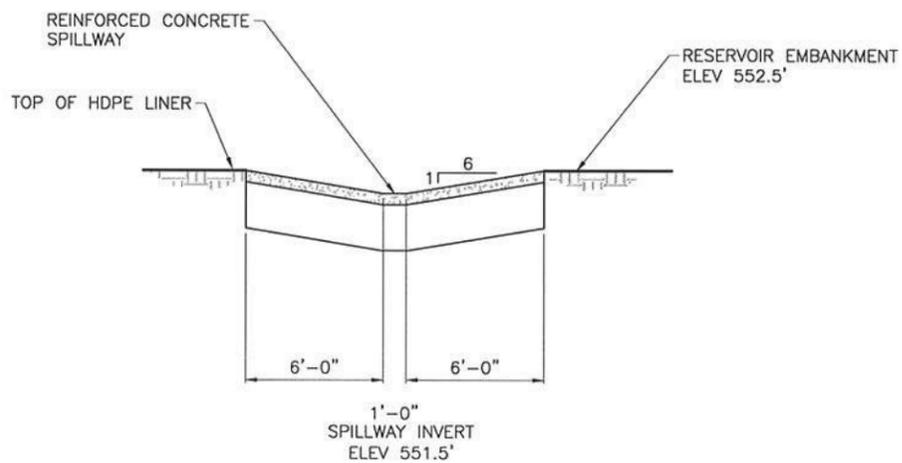
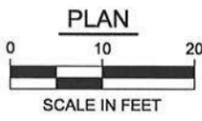
EVAPORATION LAGOON
 CANOE RIDGE WINERY
 EMERGENCY SPILLWAY

FILE: 30-11-028 C-105
JUB PROJ #: 30-11-028
DRAWN BY: RDW
DESIGN BY: GJW
CHECKED BY: GJW
ONE INCH = AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY
LAST UPDATED: 10/19/2011
SHEET NUMBER:

C-105



NOTE:
 SEE SHT C-101 FOR LOCATION



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