

Att 1 - Project Description: Mill Pond Dam Stabilization & Remediation Project

The Division of Safety of Dams (DSOD) has determined that the Mill Pond dam would be structurally unsound in a maximum credible earthquake (8.0). The Dam is within DSOD's jurisdiction and DSOD requires the completion of a structural stabilization of the dam. The applicant has developed a conceptual structural stabilization plan (Attachment 2). However this conceptual design may be revised through additional engineering or in response to further analysis by DSOD, DTSC, the City of Fort Bragg and/or the Coastal Commission.

The Mill Pond Dam stabilization project will be subject to the requirements of the City's Certified Local Coastal Program or the Coastal Act, as the facility is located within the Coastal Zone. Fort Bragg's Certified Local Coastal program (composed of the Coastal General Plan and the Coastal Land Use and Development Code) includes many policies and regulations that will influence the final design of the Dam Stabilization project.

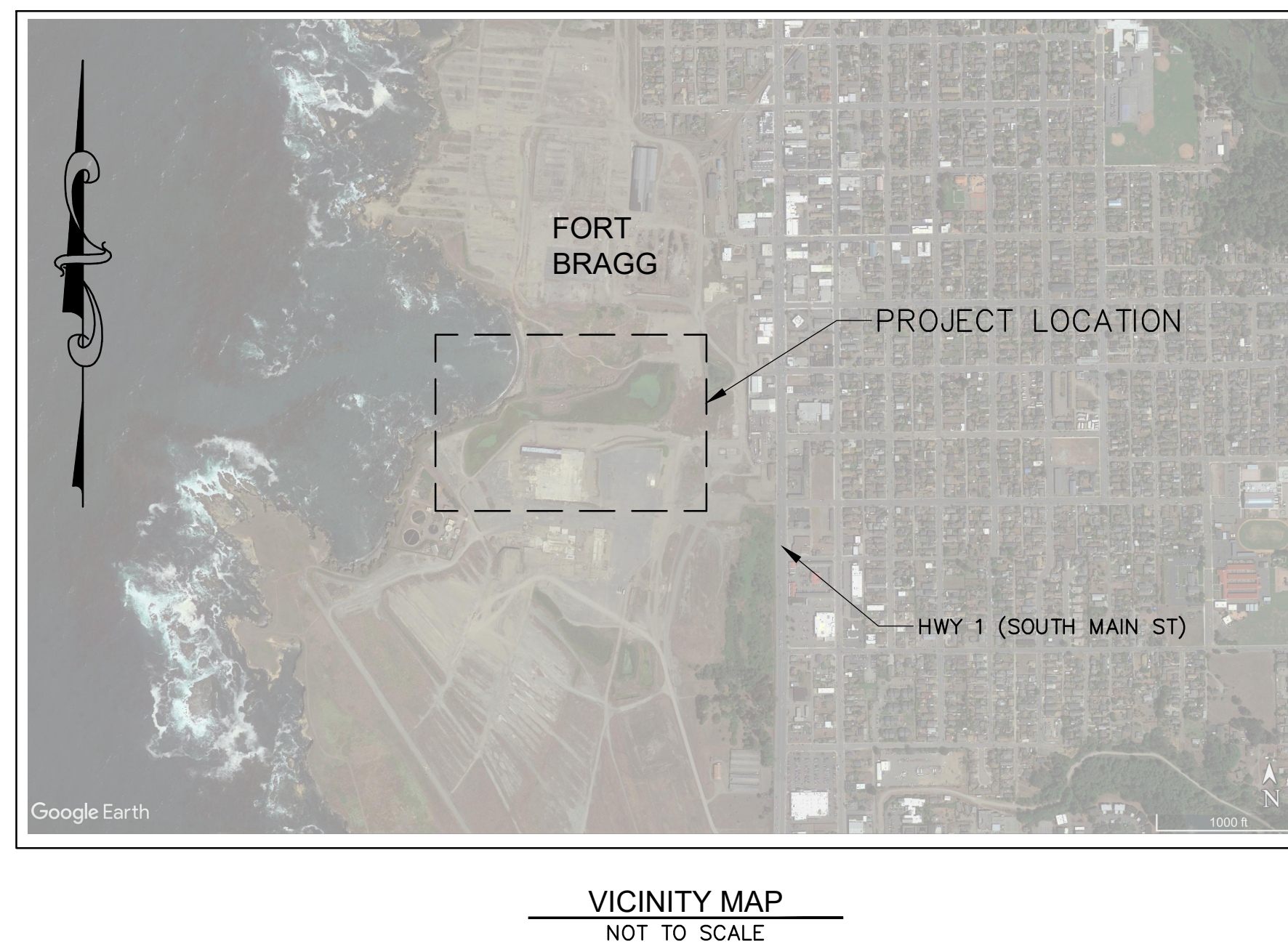
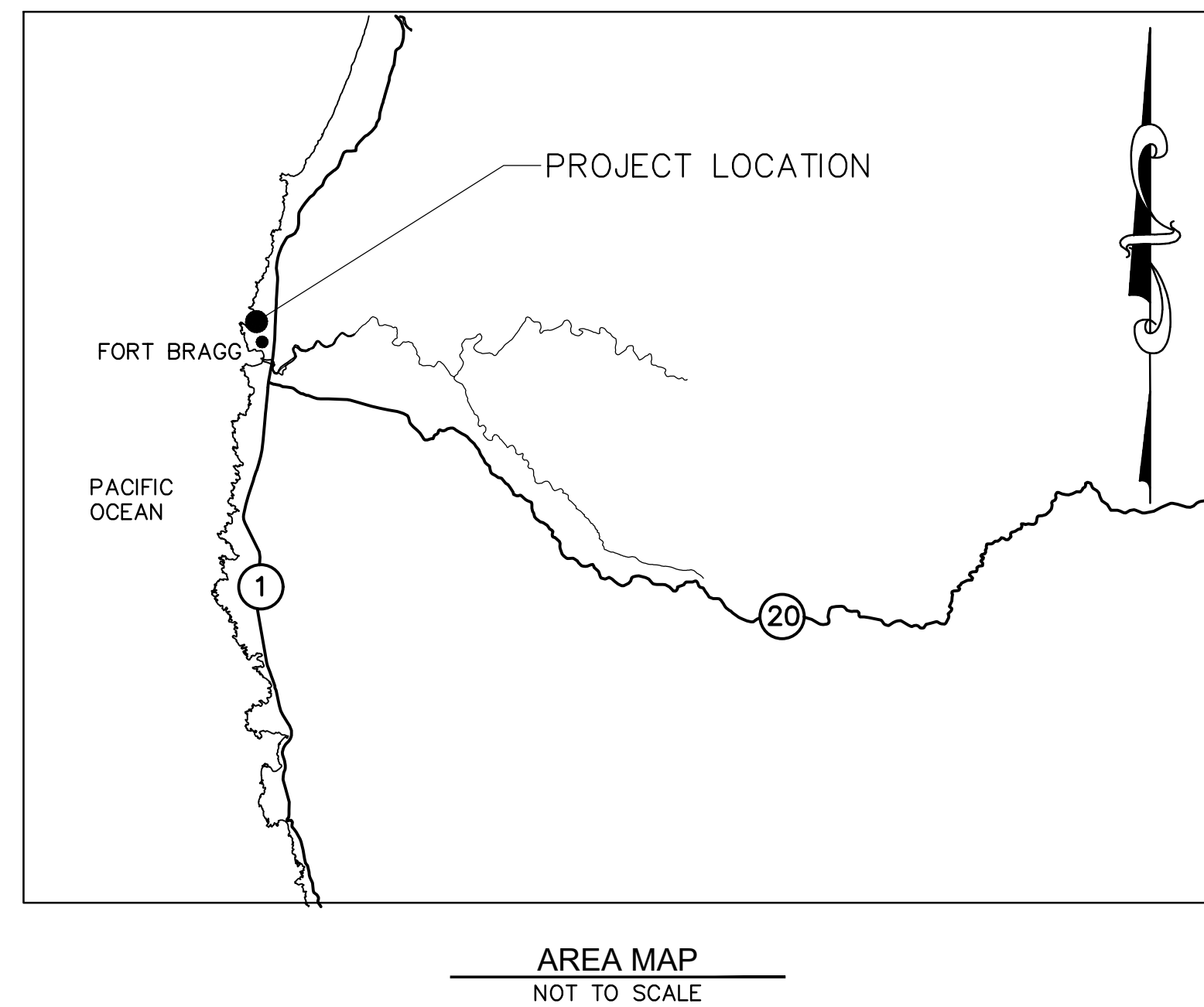
Georgia-Pacific is subject to a clean-up order from the Department of Toxic Substances Control (DTSC) to address contamination on the site. Mill Site contamination has been investigated and characterized. Over 98 percent of the Mill Site has been fully remediated. Various ponds at the site are impacted by contaminations which include petrochemicals arsenic and dioxin and only these ponds still require remediation. Kennedy/Jenks Consultants is the current lead consultant for this work and they have completed the site characterization, risk assessment and Feasibility Study (FS) for the project. The Feasibility Study analyzed a variety of remediation alternatives for OUE and recommends the preferred remedial alternative for further analysis in the Remedial Action Plan (RAP). The DTSC has determined that the contaminants that remain in the ponds may be left in place as they represent a very low risk. If the sediment is retained in the ponds, the risk to public health for a person who gets in the ponds and ingests sediment 50 times a year for thirty years is less than 2 in a million chance of contacting cancer. In other words the risk is extremely low even with very unlikely assumptions about human behavior, as the possibility of someone eating sediment from the pond 50 times a year for 30 years is extremely low. Based on the risk assessment and analysis of remedial alternatives the DSTC approved the Feasibility Study for the remediation of Operable Unit E (OUE) which includes the preferred remedial strategy for all Mill Site ponds as follows:

- Pond 8: Remedial solution includes: 1) implementation of Land Use Controls; 2) restriction of site use to open space/recreational; 3) establishment of effective containment through retention and repair of the Mill Pond Dam and the Beach Berm; 4) implementation of Dam repair required by CA Division of Safety of Dams; 5) ongoing operation and maintenance; 6) implementation of a Sediment Management Plan; 7) ongoing Inspection and maintenance and repair of Mill Pond dam and beach berm; and 8) Annual Reporting and Five Year Reviews by DTSC.
- Ponds 6, 7, and the North Pond Sediment: Remedial solution includes: 1) implementation of Land Use Controls; 2) restriction of site use to open space/recreational; 3) establishment of effective containment through retention of the Beach Berm; 4) ongoing operation and maintenance; 5) implementation of a Sediment Management Plan; 6) ongoing Inspection and maintenance and repair of beach berm; and 7) Annual Reporting and Five Year Reviews by DTSC.
- Ponds 1-4: Remedial solution includes: 1) implementation of Land Use Controls; 2) restriction of site use to open space/recreational; 3) ongoing operation and maintenance; 4) implementation of a Sediment Management Plan; and 4) Annual Reporting and Five Year Reviews by DTSC.

The Remedial Action Plan (RAP) is currently being prepared and it will include detailed implementation requirements regarding the selected preferred remedial alternative from the Feasibility Study (FS).

FORMER GEORGIA-PACIFIC WOOD PRODUCTS FACILITY

PROJECT PLANS FOR RETROFIT OF MILL POND DAM LOCATED AT MILL POND FORT BRAGG, CA



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NOTES:

1. VERTICAL DATUM IS NAV88
2. HORIZONTAL DATUM IS NAD83
3. COORDINATES ARE SHOWN IN CALIFORNIA STATE PLANES, ZONE 2, U.S. SURVEY FEET, (CA83-IIIF)

ABBREVIATIONS

AC	ACRE
BFE	BASE FLOOD ELEVATION
CDSM	CEMENT DEEP SOIL MIXING
CIP	CAST IRON PIPE
CMP	CORRUGATED METAL PIPE
CPT	CONE PENETRATION TESTING
DWL	DESIGN WATER LEVEL
(E)	EXISTING
EL.	ELEVATION
(M)	MODIFIED
MAX	MAXIMUM
MHW	MEAN HIGH WATER
MIN	MINIMUM
NAD83	NORTH AMERICAN DATUM OF 1983
NAV88	NORTH AMERICAN VERTICAL DATUM OF 1988
NIC	NOT IN CONTRACT
RSP	ROCK SLOPE PROTECTION
S.F.	SQUARE FOOT (FEET)
TBD	TO BE DETERMINED
TYP	TYPICAL
WSEL	WATER SURFACE ELEVATION

REV	BY	DATE	DESCRIPTION

CALIFORNIA
MENDOCINO COUNTY
FORT BRAGG

TITLE SHEET
MILL POND DAM



DATE: 08/04/17
SCALE: NTS
DESIGNED BY: J. LEATHAM
DRAFTED BY: J. LEATHAM
CHECKED BY: D. MACK
JOB NO.: 17-031.02
FILE: 17-031.02 TITLE.dwg

60% NOT FOR CONSTRUCTION

PLOT DATE: Friday, August 04, 2017 TIME: 12:39:58 PM BY: JASHUA LEATHAM CTB: -----
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GENERAL NOTES

- ALL WORK SHALL BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS
- THE NOTES PROVIDED ON THESE DRAWINGS DO NOT REPRESENT A COMPLETE DESCRIPTION OF THE WORK TO BE PERFORMED AND ARE INTENDED TO COMPLEMENT THE SPECIFICATIONS. TECHNICAL SPECIFICATIONS ASSOCIATED WITH THIS WORK ARE AS FOLLOWS:
 - [CALTRANS 2015 STANDARD SPECIFICATIONS SECTION 19 EARTH WORK.
 - CALIFORNIA BANK AND SHORE ROCK SLOPE PROTECTION DESIGN.
- SPECIFICATIONS AND NOTES MAY BE PRESENTED SEPARATELY, BUT SUCH SEPARATION SHALL NOT BE CONSIDERED TO LIMIT THE WORK REQUIRED OF ANY PARTICULAR TRADE.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION MEANS AND METHODS.
- LOCATIONS AND DIMENSIONS OF EXISTING STRUCTURES AND FEATURES HAVE NOT BEEN VERIFIED. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL CONTROLLING DIMENSIONS OF NEW AND EXISTING FEATURES PRIOR TO ORDERING OR FABRICATING MATERIAL OR CONSTRUCTING PROPOSED IMPROVEMENTS. REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION OF THE FEATURE IN QUESTION.
- PRIOR TO THE START OF CONSTRUCTION, LOCATE ALL EXISTING AND UNDERGROUND UTILITIES IN AND AROUND THE AREAS OF NEW CONSTRUCTION. VERIFY THAT THE PROPOSED CONSTRUCTION DOES NOT CONFLICT WITH EXISTING OR PROPOSED UTILITIES OR THAT APPROPRIATE MEANS ARE PROVIDED FOR REROUTING, SUPPORTING, PROTECTING, OR OTHERWISE INCORPORATING THE UTILITIES INTO THE CONSTRUCTION.
- NOTIFY THE OWNER AND/OR ENGINEER WHERE A CONFLICT OR DISCREPANCY OCCURS BETWEEN THESE DRAWINGS AND ANY OTHER PORTION OF THE CONTRACT DOCUMENTS OR EXISTING FIELD CONDITIONS.
- PRODUCTS REFERENCED ON THE DRAWINGS SHALL BE CONSTRUCTED, INSTALLED, AND/OR APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN RECOMMENDATIONS UNLESS OTHERWISE NOTED.
- DO NOT SCALE DRAWINGS. CONTACT THE ENGINEER FOR ANY DIMENSIONS OR SPECIFIC DETAIL NOT SHOWN.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING RECORDS SUITABLE FOR DEVELOPING "AS-BUILT" DRAWINGS THROUGHOUT THE COURSE OF CONSTRUCTION, INCLUDING, BUT NOT LIMITED TO, THE LOCATIONS AND GRADES OF ALL UNDERGROUND AND SURFACE IMPROVEMENTS. THESE RECORDS SHALL BE DELIVERED TO THE OWNER PRIOR TO THE ACCEPTANCE OF WORK.

SURVEY

- HORIZONTAL COORDINATE SYSTEM: NAD83 CALIFORNIA STATE PLANE, ZONE 2
- VERTICAL DATUM: NAVD88

EXCAVATION

- NOTIFY UNDERGROUND SERVICE ALERT (USA NORTH) TO IDENTIFY THE LOCATION OF EXISTING UTILITIES AT LEAST 48 HOURS (TWO WORKING DAYS) PRIOR TO ANY EXCAVATION WORK: (800)-227-2600 OR WWW.USANORTH.ORG.
- THE CONTRACTOR IS RESPONSIBLE FOR STABILITY AND SHORING OF TEMPORARY CUT SLOPES AND TRENCHES, AND SHALL CONFORM TO THE REQUIREMENTS OF CAL-OSHA.
- EXCAVATIONS SHALL BE KEPT CLEAN AND DRY FOR THE DURATION OF THE WORK PERFORMED.

DEMOLITION

- PROTECT EXISTING FEATURES THAT ARE TO REMAIN IN PLACE FROM DAMAGE UNLESS OTHERWISE NOTED.

EARTHWORK

- PREPARE DESIGNATED FILL AREAS BY GRUBBING AND STRIPPING VEGETATION, REMOVING DEBRIS, AND SCARIFYING TO A MINIMUM DEPTH OF 8 INCHES PRIOR TO MATERIAL PLACEMENT.
- UNLESS OTHERWISE NOTED, COMPACT FILL MATERIAL IN 8-INCH LOOSE LIFTS AND COMPACT TO AT LEAST 90% RELATIVE COMPACTION (RC) AT AN OVER OPTIMUM MOISTURE CONTENT PER ASTM D1557.
- FILL MATERIAL SHALL BE FREE OF ORGANIC MATERIAL AND SHALL CONSIST OF:
 - ENGINEERED ROCKFILL: LESS THAN 20% FINE, 8" SCREENED OUT, 93% COMPACTION MIN.
 - PRIMARY ARMOR STONE: 4T GRADATION (CALTRANS) HAND PLACED.
 - SECONDARY ARMOR STONE; 1/2T GRADATION (CALTRANS).
 - BACKING NO. 1 (CALTRANS).
 - BACKING NO. 3 (CALTRANS).
 - ASTM C33 FINE AGGREGATE, LESS THAN 20% FINE, 8" SCREENED OUT, 93% COMPACTION MIN.
- PERFORM GRADING TO THE LINES AND GRADES SHOWN. FINISHED SURFACES SHALL PROVIDE POSITIVE SURFACE DRAINAGE TO PREVENT PONDING.

CEMENT DEEP SOIL MIX (CDSM)

- CEMENT DEEP SOIL MIX (CDSM) [NOTE: ADDITIONAL DETAILED SPECS REGARDING REPORTING AND POST PRODUCTION TESTING WILL BE PROVIDED IN FINAL PLANS AND SPECS]
 - CONTRACTOR TO DESIGN CDSM SECTIONS TO MEET THE FOLLOWING PERFORMANCE CRITERIA
 - MINIMUM 28-DAY COMPRESSIVE STRENGTH = 110 PSI
 - MINIMUM AREA REPLACEMENT RATIO IN TREATMENT AREAS = 0.26
 - MIN EMBEDMENT INTO ROCK = 1 FT
 - MINIMUM COLUMN DIAMETER = 2 FT
 - MINIMUM RATIO OF OVERLAP DISTANCE TO COLUMN CENTERLINE = 0.30
 - CONTRACTOR TO PROVIDE DESIGN CALCULATIONS DETAILING MEANS AND METHODS FOR REVIEW AND APPROVAL BY ENGINEER.
 - CONTRACTOR TO PERFORM PILOT FIELD TEST PROGRAM PRIOR TO PRODUCTION INSTALLATION
 - PILOT PROGRAM TO INCLUDE INSTALLATION OF AT LEAST ONE CDSM TEST CELL (40 FT BY 40 FT)
 - TEST CELL MAY BE CONSTRUCTED IN THE LOCATION OF A FINAL PRODUCTION CELL, HOWEVER IF THE TEST CELL DOES NOT MEET THE PROJECT REQUIREMENTS, IT WILL BE THE CONTRACTORS RESPONSIBILITY TO MODIFY THE TEST CELL TO MEET THE PROJECT REQUIREMENTS, INCLUDING ANY REVISIONS TO THE DESIGN OF THE CDSM.
 - CONTRACTOR SHALL PERFORMING CORING THROUGH THE TEST CELL COLUMNS AT LEAST 3 LOCATIONS TO OBTAIN SAMPLES FOR STRENGTH TESTING.
 - AFTER RECEIVING APPROVAL FROM THE ENGINEER, PRODUCTION INSTALLATION MAY BEGIN.
 - CONTRACTOR SHALL PROVIDE DETAILED RECORDS OF THE INSTALLATION PROCESS [NOTE: DETAILS WILL BE PROVIDED IN FINAL DESIGN SUBMITTAL]
 - QA/QC
 - THE CONTRACTOR SHOULD PERFORM ALL CORING OPERATIONS IN THE PRESENCE OF THE ENGINEER. THE CONTRACTOR SHOULD NOTIFY THE ENGINEER AT LEAST 1 BUSINESS DAY IN ADVANCE OF BEGINNING SAMPLING OPERATIONS.
 - THE CONTRACTOR SHOULD DETERMINE THE TIME INTERVAL BETWEEN ELEMENT INSTALLATION AND CORING EXCEPT THAT THE INTERVAL SHOULD BE NO LONGER THAN REQUIRED TO CONDUCT 28-DAY STRENGTH TESTING.
 - THE FULL-DEPTH SAMPLES SHOULD BE OBTAINED ALONG A VERTICAL ALIGNMENT LOCATED ONE-FOURTH OF A COLUMN DIAMETER FROM THE COLUMN CENTER. IF IT IS DIFFICULT TO AVOID DRILLING OUT OF THE COLUMN AT THIS CORING LOCATION, THE CONTRACTOR MAY DRILL ONE-FOURTH OF A COLUMN DIAMETER ALONG THE CENTERLINE OF AN ELEMENT OR SHEAR WALL SO THE CORE ENTERS THE ADJACENT COLUMN IN THE SAME ELEMENT.
 - CORE SAMPLES SHOULD BE RETRIEVED USING STANDARD TRIPLE-TUBE OR EQUIVALENT CONTINUOUS CORING TECHNIQUES.
 - SAMPLES SHOULD HAVE A DIAMETER OF AT LEAST 2.5 INCHES (65 MM), AND EACH CORE RUN SHOULD BE AT LEAST 3 FT IN LENGTH.
 - FOR EACH FIELD VALIDATION TEST SECTION, THE CONTRACTOR SHOULD COLLECT AT LEAST ONE FULL-DEPTH CORE FOR EACH MIX DESIGN AT LOCATIONS DEFINED BY THE OWNER/ENGINEER.
 - THE CONTRACTOR SHOULD COLLECT ONE FULL-DEPTH CORE FROM 3 PERCENT OF ELEMENTS OR 860 FT2 OF TREATED AREA, WHICHEVER PRODUCES A LARGER NUMBER OF CORED ELEMENTS. THE CORES SHOULD BE DRILLED AT LOCATIONS DEFINED BY THE OWNER/ENGINEER. AN ELEMENT IS DEFINED AS THE TREATED SOIL PRODUCED BY ONE SETUP OF EITHER A SINGLE- OR MULTIPLE-AXIS MACHINE.
 - THE CONTRACTOR SHOULD PHOTOGRAPH EACH CORE RUN.
 - UPON RETRIEVAL, THE CONTRACTOR SHOULD PROVIDE THE CORES TO THE ENGINEER FOR LOGGING AND TEST SPECIMEN SELECTION.
 - FOLLOWING LOGGING, THE ENGINEER WILL SELECT AT LEAST THREE SPECIMENS FROM EACH FULL-DEPTH CONTINUOUS CORE FOR STRENGTH TESTING. EACH TEST SPECIMEN SHOULD HAVE A LENGTH-TO-DIAMETER RATIO OF 2 OR GREATER.
 - IMMEDIATELY FOLLOWING LOGGING AND TEST SPECIMEN SELECTION BY THE ENGINEER, THE CONTRACTOR SHOULD SEAL THE ENTIRE FULL-DEPTH SAMPLE, INCLUDING THE DESIGNATED TEST SPECIMENS, IN PLASTIC WRAP TO PREVENT DRYING AND TRANSPORT THE SEALED SAMPLE TO THE LABORATORY. THE SAMPLES SHOULD BE PROTECTED AGAINST DRYING AND MECHANICAL DAMAGE PRIOR TO AND DURING TRANSPORT.
 - THE CONTRACTOR SHOULD RETAIN PORTIONS OF THE SAMPLES THAT ARE NOT TESTED UNTIL COMPLETION AND ACCEPTANCE OF ALL WORK FOR POSSIBLE FUTURE INSPECTION AND CONFIRMATION TESTING BY THE ENGINEER.
 - ALL CORE HOLES SHOULD BE FILLED WITH CEMENT GROUT THAT WILL OBTAIN A 28-DAY UNCONFINED COMPRESSIVE STRENGTH EQUAL TO OR GREATER THAN THE 28-DAY UNCONFINED COMPRESSIVE STRENGTH OF THE DEEP MIXED MATERIAL.

SOLDIER PILE WALL

- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT A WORK PLAN DEPICTING PROPOSED SHEET PILE INSTALLATION METHODOLOGY, SEQUENCING, AND EQUIPMENT.
- CONTRACTOR SHALL SURVEY TOPS OF INSTALLED SHEET PILES TO CONFIRM TOP AND TIP ELEVATIONS AND SHALL SUBMIT REPORT TO CONSTRUCTION ADMINISTRATOR.
- WHERE SHIMMING OR OTHER DEVIATIONS FROM THE PLANS ARE REQUIRED, CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL.
- CONTRACTOR RESPONSIBLE FOR CONSTRUCTING A TEMPLATE TO MAINTAIN ALIGNMENT OF THE SOLDIER PILE WALL.

STRUCTURAL STEEL

- SHEET PILES SHALL HAVE A MINIMUM SECTION MODULUS OF 34.9 IN³/FT.
- SOLDIER PILES SHALL HAVE A MINIMUM SECTION MODULUS OF 237.1 IN³.
- STRUCTURAL STEEL ELEMENTS SHALL BE DELIVERED AND MAINTAINED IN GOOD WORKING CONDITION, AND SHALL BE FREE OF DAMAGE, DEFORMATION, OR DEGRADATION DUE TO IMPACT, HEAT, CORROSION, AND ALL OTHER CHEMICAL OR PHYSICAL ATTACK.
- ALL FABRICATION SHALL COMPLY WITH THE CURRENT AISC "MANUAL OF STEEL CONSTRUCTION".
- ALL WELDING SHALL CONFORM TO THE REQUIREMENTS OF THE "STRUCTURAL WELDING CODE - STEEL" ANSI/AWS D1.1 - LATEST EDITION EXCEPT AS AMENDED IN CBC CHAPTER 22, DIVISION II AND IV.
- ALL WELDERS SHALL BE QUALIFIED BY THE APPLICABLE TEST DESCRIBED IN THE CURRENT ANSI/AWS D1.1.
- USE CLASS E70 SERIES WELDING ELECTRODES.

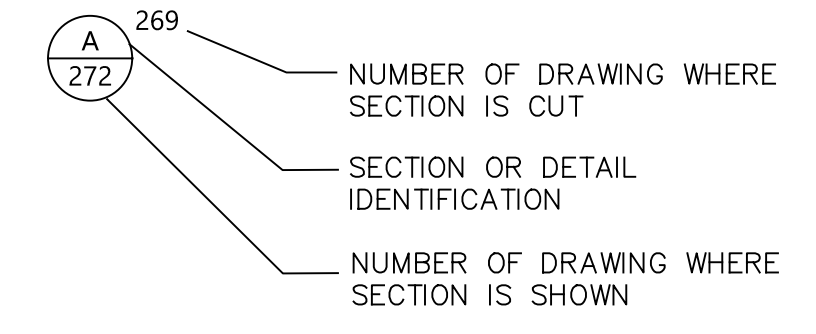
INSPECTION AND OBSERVATION

- CONSTRUCTION OBSERVATION BY AN INSPECTOR AND/OR THE ENGINEER IS REQUIRED AT THE FOLLOWING STAGES OF CONSTRUCTION:
 - ...
 - ...
 - ...
- REFER TO THE SPECIFICATIONS AND CONTRACT DOCUMENTS FOR ADDITIONAL QUALITY CONTROL/INSPECTION REQUIREMENTS.
- NOTIFY THE INSPECTOR/ENGINEER AT LEAST 48 HOURS BEFORE INSPECTION OR OBSERVATION IS NEEDED.

SUBMITTAL	SPECIFICATION	WHEN DUE

LEGEND & ABBREVIATIONS

(E)	— 3500 —	MAJOR CONTOUR
(E)	— — —	MINOR CONTOUR
(N)	— 3500 —	MAJOR CONTOUR
(N)	— — —	MINOR CONTOUR
AB		AGGREGATE BASE
APPROX		APPROXIMATE
CJ		CONSTRUCTION JOINT
€		CENTER LINE
CLR		CLEAR
CMP		CORRUGATED METAL PIPE
CONC		CONCRETE
CSP		CORRUGATED STEEL PIPE
D/S		DOWNSTREAM
D		DIAMETER OR PIPE DIAMETER
DEMO		DEMOLISH
DI		DRAINAGE INLET
DWG		DRAWING
(E)		EXISTING FEATURE
EG		EXISTING GRADE
EJ		EXPANSION JOINT
ER		EDGE OF ROAD
FG		FINISH GRADE
FL		FLOWLINE
HDPE		HIGH-DENSITY POLYETHYLENE
HWY		HIGHWAY
INV		INVERT
LF		LINEAR FEET
MAX		MAXIMUM
MIN		MINIMUM
(N)		NEW FEATURE
OAE		OR APPROVED EQUIVALENT
OC		ON CENTER
PERF		PERFORATED
PVC		POLYVINYL CHLORIDE
R		RADIUS
RC		RELATIVE COMPACTION
S		SLOPE
SBS		SIDE BOTTOM SIDE
SCH		SCHEDULE
SD		STORM DRAIN
SDR		STANDARD DIMENSION RATIO
SPEC		SPECIFICATION
SST		STAINLESS STEEL
STA		STATION
STD		STANDARD
T		TRANSVERSE CUTOFF
TOS		TOP OF SHOTCRETE
TOT		TOTAL
TYP		TYPICAL
TW		TOP OF WALL
U/S		UPSTREAM
UV		ULTRAVIOLET
WWR		WELDED WIRE REINFORCEMENT



PLOT DATE: Friday, August 04, 2017 TIME: 12:40:22 PM BY: JASHUA LEATHAM FILE: N:\1-PROJECTS\2017\17-031.02_Georgia_Mill_Pond Dam_Design\CAD\17-031.02.dwg



DESCRIPTION	DATE	BY	REV

NOTES & ABBREVIATIONS
MILL POND DAM
CALIFORNIA
MENDOCINO COUNTY
FORT BRAGG



DATE: 08/04/17
SCALE: NTS
DESIGNED BY: J. LEATHAM
DRAFTED BY: J. LEATHAM
CHECKED BY: M. RYAN
JOB NO.: 17-031.02
FILE: 17-031.02.dwg

60% NOT FOR CONSTRUCTION

LEGEND

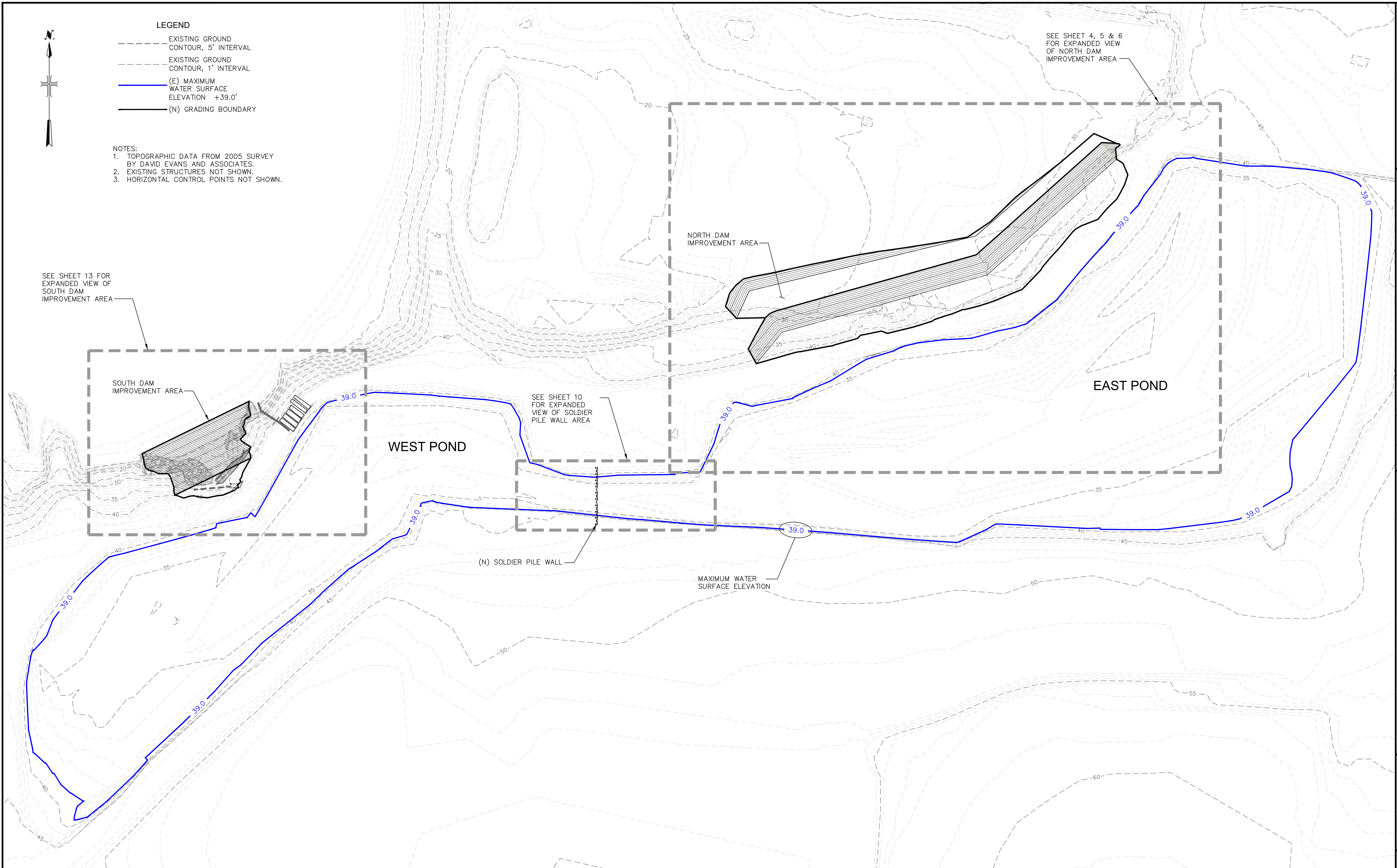
- - - - - EXISTING GROUND CONTOUR, 5' INTERVAL
- - - - - EXISTING GROUND CONTOUR, 1' INTERVAL
- (E) MAXIMUM WATER SURFACE ELEVATION +39.0'
- (N) GRADING BOUNDARY

NOTES:

1. TOPOGRAPHIC DATA FROM 2005 SURVEY BY DAVID EVANS AND ASSOCIATES.
2. EXISTING STRUCTURES NOT SHOWN.
3. HORIZONTAL CONTROL POINTS NOT SHOWN.

SEE SHEET 13 FOR EXPANDED VIEW OF SOUTH DAM IMPROVEMENT AREA

SEE SHEET 4, 5 & 6 FOR EXPANDED VIEW OF NORTH DAM IMPROVEMENT AREA



REV	BY	DATE	DESCRIPTION
	ASD		

**SITE IMPROVEMENT PLAN
MILL POND DAM**

FORT BRAGG MENDOCINO COUNTY CALIFORNIA



DATE: 08/04/17
SCALE: 1"=50'
DESIGNED BY: J. LEATHAM
DRAFTED BY: J. LEATHAM
CHECKED BY: M. RYAN
JOB NO.: 17-031.02
FILE: 17-031.02.dwg

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PLAN
SCALE: 1" = 50'

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LEGEND

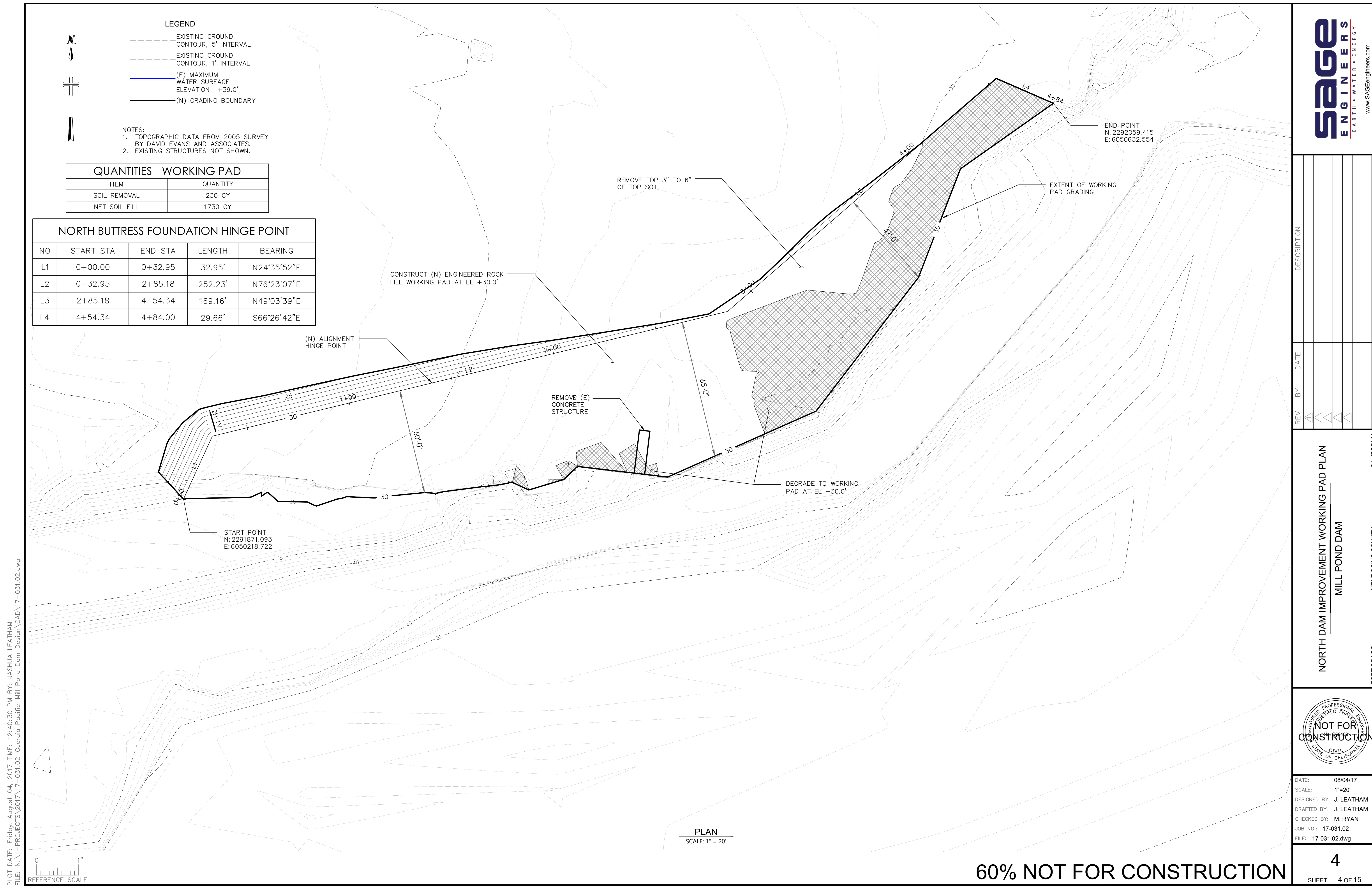
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- NOTES:**
1. TOPOGRAPHIC DATA FROM 2005 SURVEY BY DAVID EVANS AND ASSOCIATES.
 2. EXISTING STRUCTURES NOT SHOWN.

QUANTITIES - WORKING PAD	
ITEM	QUANTITY
SOIL REMOVAL	230 CY
NET SOIL FILL	1730 CY

NORTH BUTTRESS FOUNDATION HINGE POINT

NO	START STA	END STA	LENGTH	BEARING
L1	0+00.00	0+32.95	32.95'	N24°35'52"E
L2	0+32.95	2+85.18	252.23'	N76°23'07"E
L3	2+85.18	4+54.34	169.16'	N49°03'39"E
L4	4+54.34	4+84.00	29.66'	S66°26'42"E



REV	BY	DATE	DESCRIPTION
1			
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9			
10			

NORTH DAM IMPROVEMENT WORKING PAD PLAN
MILL POND DAM
FORT BRAGG
MENDOCINO COUNTY
CALIFORNIA



DATE: 08/04/17
SCALE: 1"=20'
DESIGNED BY: J. LEATHAM
DRAFTED BY: J. LEATHAM
CHECKED BY: M. RYAN
JOB NO.: 17-031.02
FILE: 17-031.02.dwg

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PLAN
SCALE: 1" = 20'

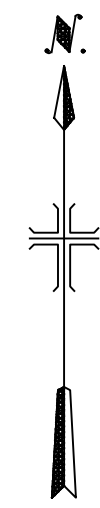
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LEGEND

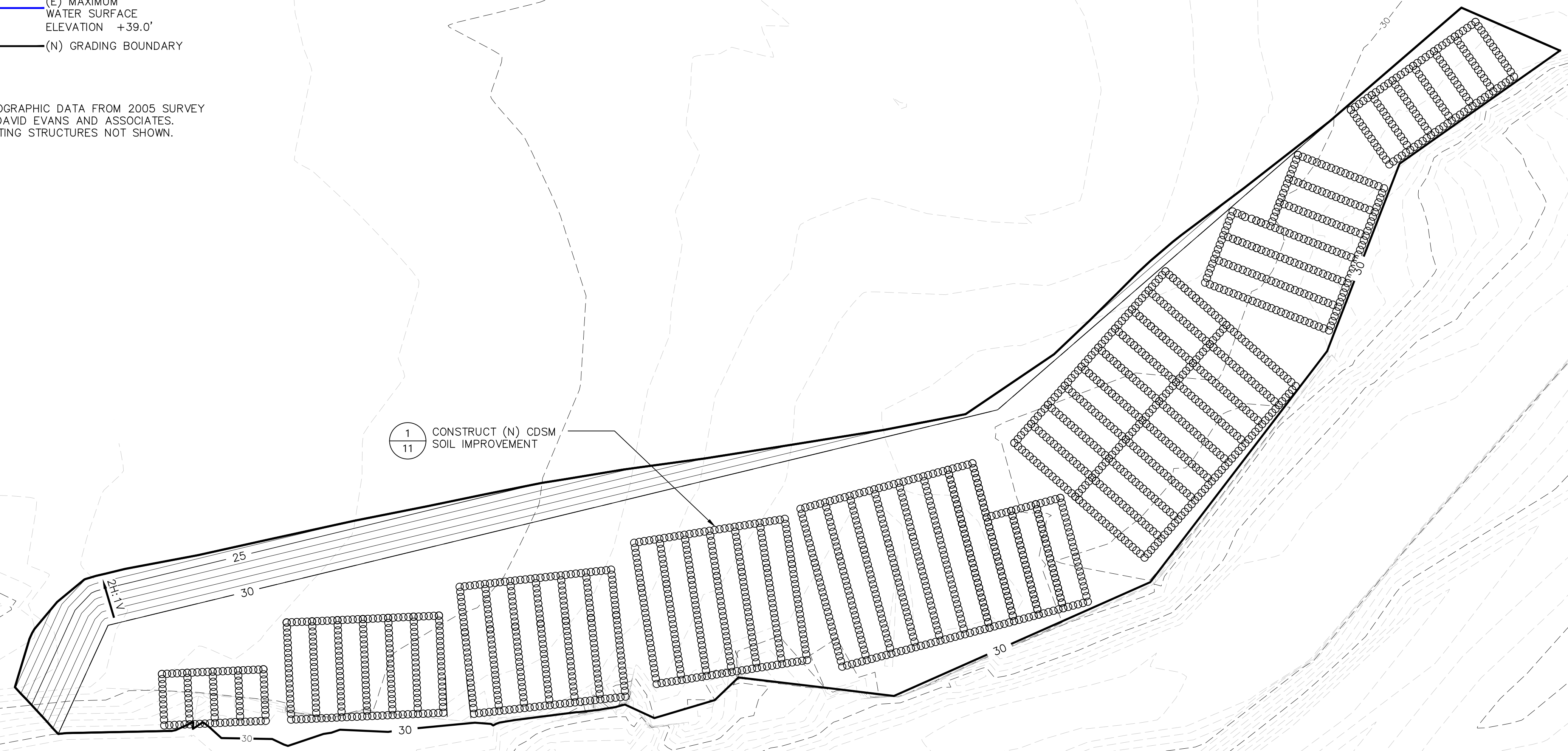
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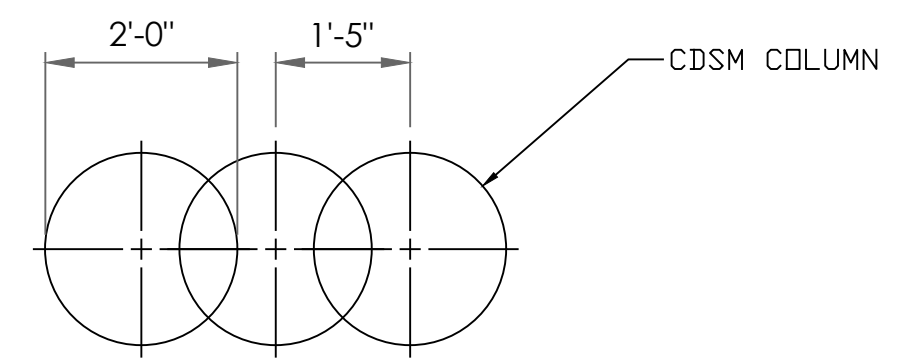
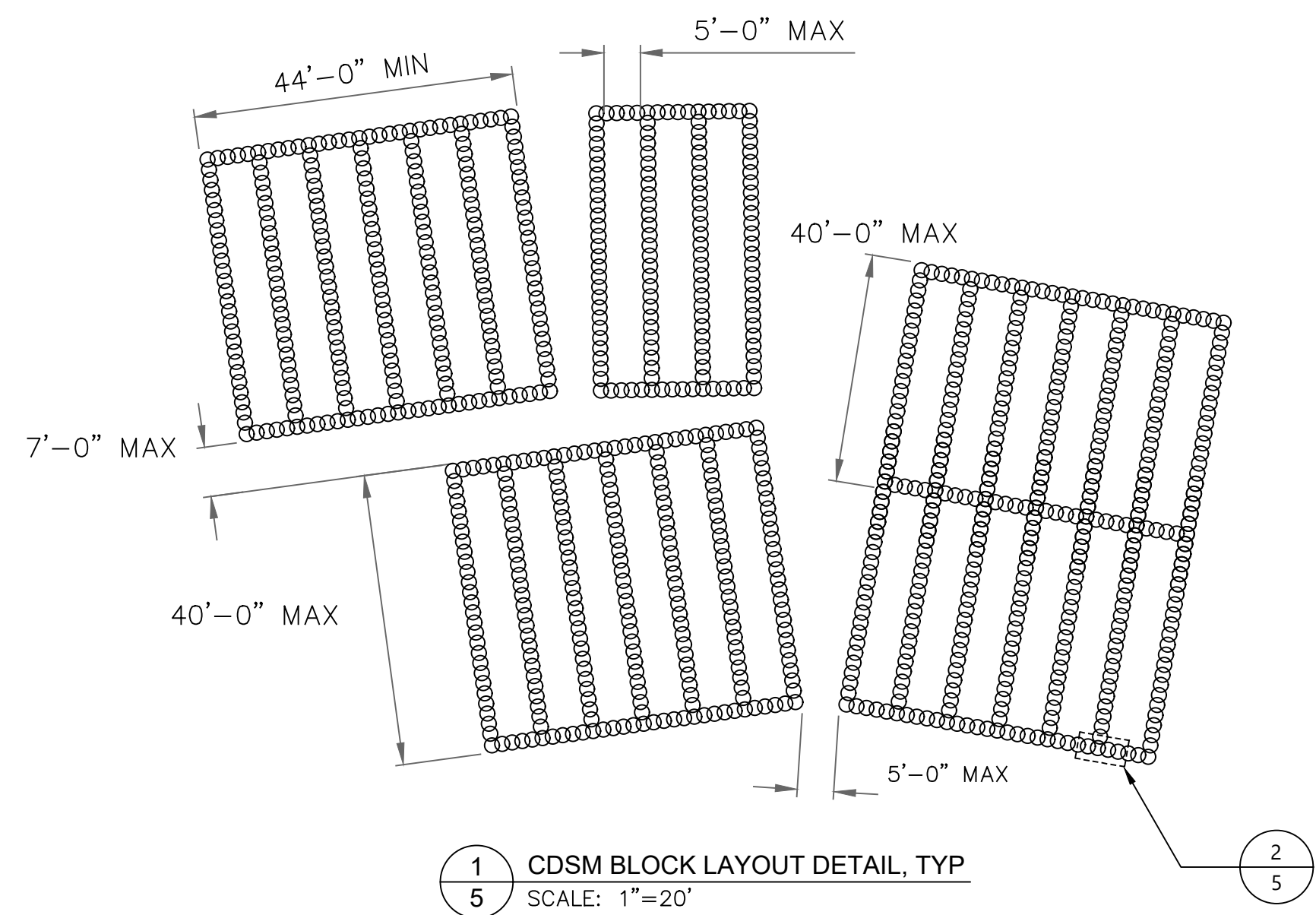
1. TOPOGRAPHIC DATA FROM 2005 SURVEY BY DAVID EVANS AND ASSOCIATES.
2. EXISTING STRUCTURES NOT SHOWN.



1
11 CONSTRUCT (N) CDSM SOIL IMPROVEMENT

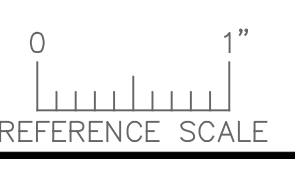


PLAN
SCALE: 1" = 20'



2
5 CDSM COLUMN DIAMETER & SPACING DETAIL, TYP
SCALE: 1"=2'

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REV	BY	DATE	DESCRIPTION
1			
2			
3			
4			
5			

NORTH DAM IMPROVEMENT CDSM LAYOUT & DETAIL
MILL POND DAM

CALIFORNIA
MENDOCINO COUNTY
FORT BRAGG



DATE: 08/04/17
SCALE: 1"=20'
DESIGNED BY: J. LEATHAM
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LEGEND

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QUANTITIES - NORTH BUTTRESS	
ITEM	QUANTITY
ENGINEERED ROCK FILL	5704 CY

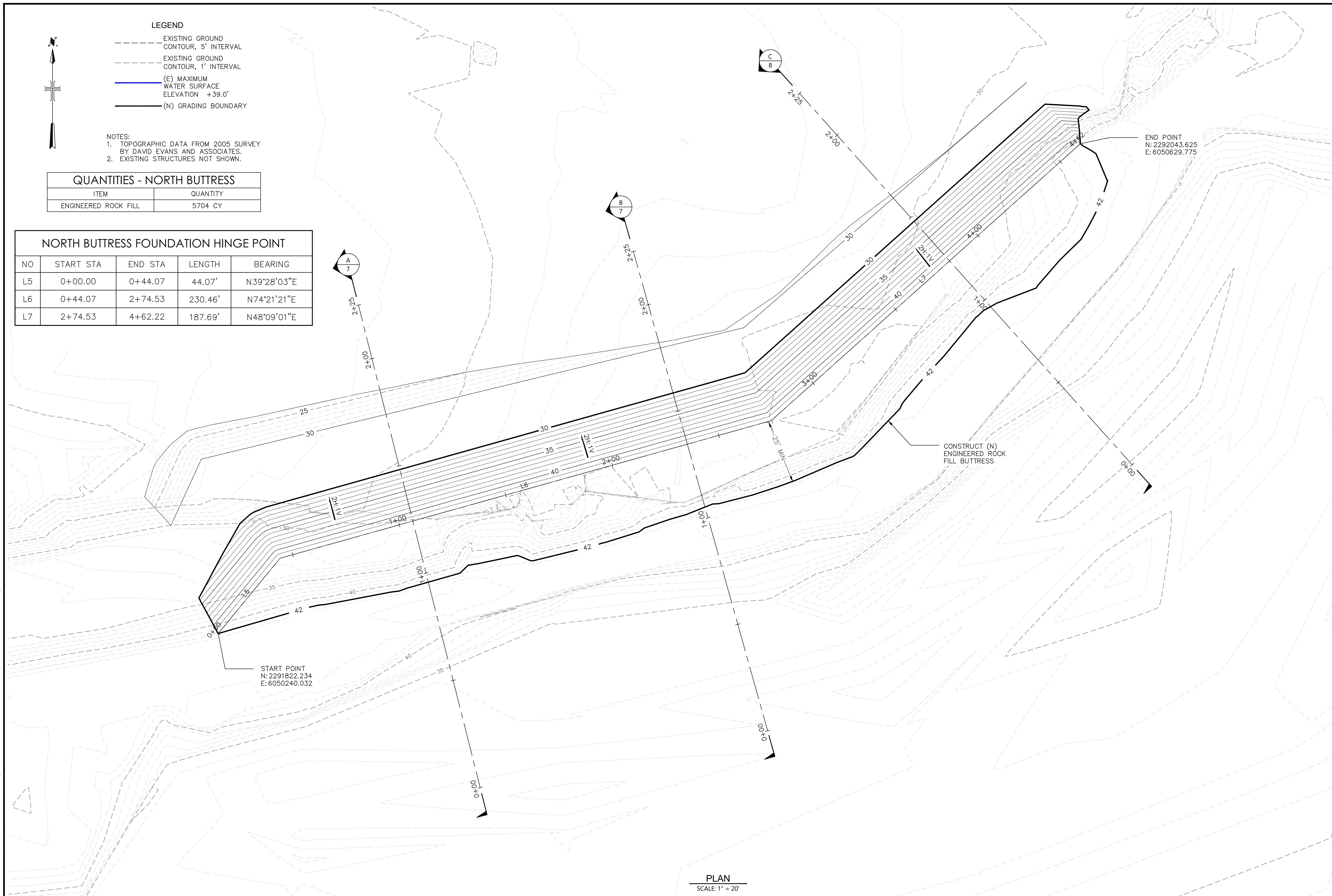
NORTH BUTTRESS FOUNDATION HINGE POINT

NO	START STA	END STA	LENGTH	BEARING
L5	0+00.00	0+44.07	44.07'	N39°28'03"E
L6	0+44.07	2+74.53	230.46'	N74°21'21"E
L7	2+74.53	4+62.22	187.69'	N48°09'01"E

PLOT DATE: Friday, August 04, 2017 TIME: 12:40:46 PM BY: JASHUA LEATHAM
FILE: N:\1-PROJECTS\2017\17-031.02_Georgia Pacific_Mill Pond Dam Design\CAD\17-031.02.dwg



PLAN
SCALE: 1" = 20'



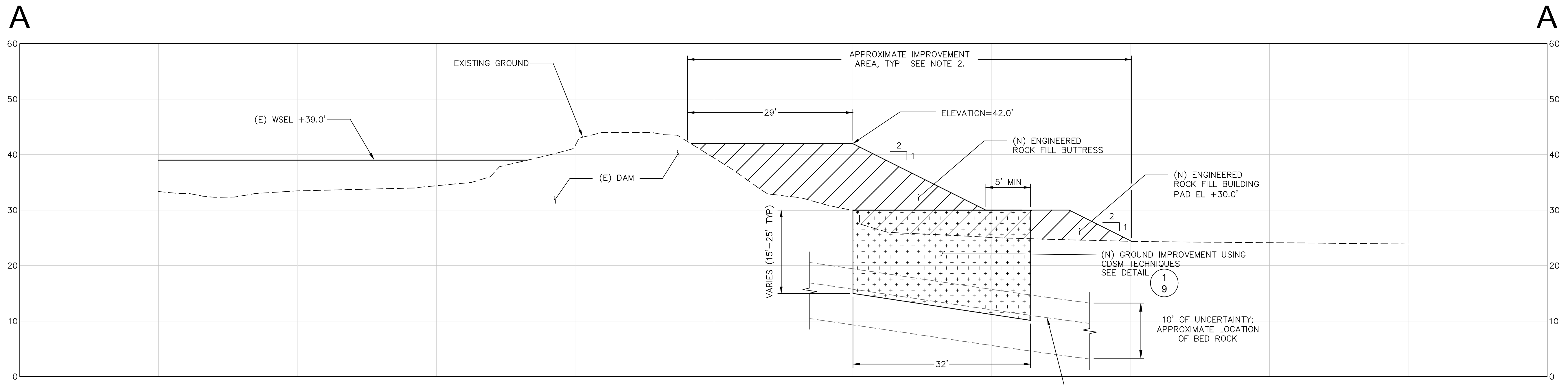
REV	BY	DATE	DESCRIPTION
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NORTH BUTTRESS IMPROVEMENT PLAN
MILL POND DAM
FORT BRAGG
MENDOCINO COUNTY
CALIFORNIA

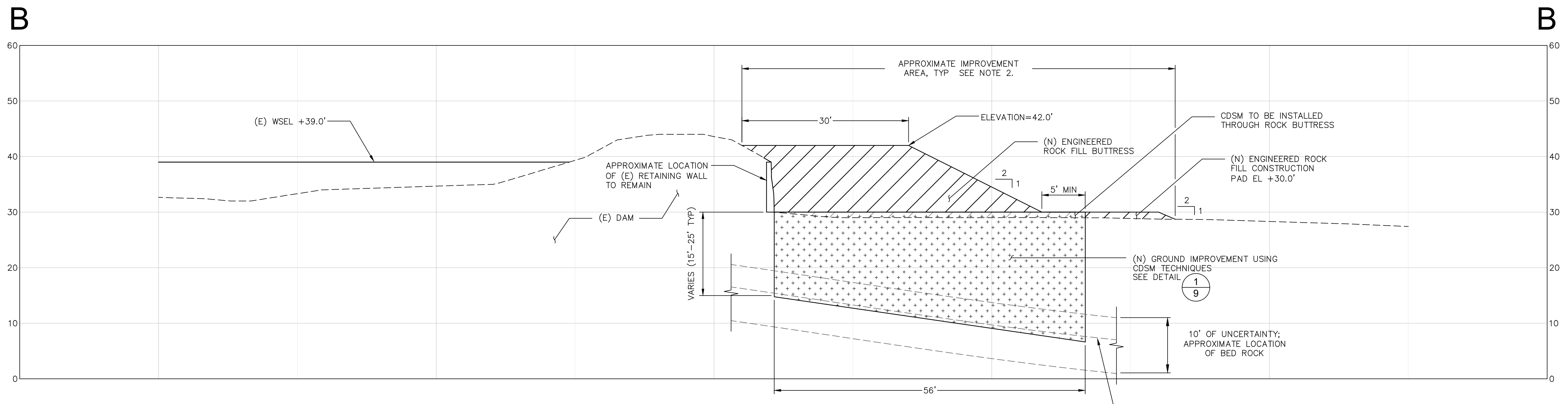


DATE: 08/04/17
SCALE: 1"=20'
DESIGNED BY: J. LEATHAM
DRAFTED BY: J. LEATHAM
CHECKED BY: M. RYAN
JOB NO.: 17-031.02
FILE: 17-031.02.dwg

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A SECTION (THRU NORTH DAM)
SCALE: 1"=10'



B SECTION (THRU NORTH DAM)
SCALE: 1"=10'

- NOTES:
1. EXISTING STRUCTURES NOT SHOWN ON PLAN.
2. LENGTH, WIDTH AND DEPTH OF IMPROVEMENT AREA TO BE CONFIRMED DURING CONSTRUCTION.

REV	BY	DATE	DESCRIPTION
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NORTH DAM IMPROVEMENT SECTIONS A & B
MILL POND DAM

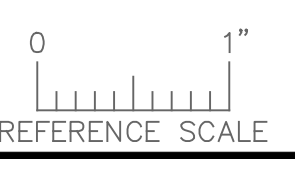
FORT BRAGG MENDOCINO COUNTY CALIFORNIA



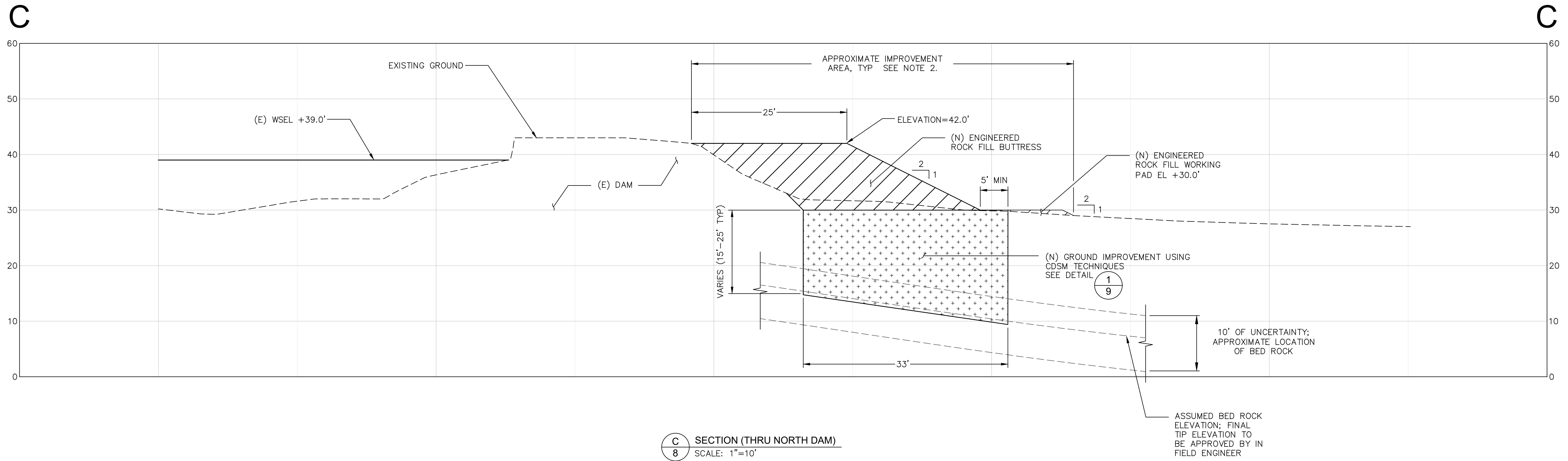
DATE: 08/04/17
SCALE: 1"=10'
DESIGNED BY: J. LEATHAM
DRAFTED BY: J. LEATHAM
CHECKED BY: M. RYAN
JOB NO.: 17-031.02
FILE: 17-031.02.dwg

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PLOT DATE: Friday, August 04, 2017 TIME: 12:40:55 PM BY: JASHUA LEATHAM
 FILE: N:\1-PROJECTS\2017\17-031.02_Georgia Pacific_Mill Pond Dam Design\CAD\17-031.02.dwg



- NOTES:
 1. EXISTING STRUCTURES NOT SHOWN ON PLAN.
 2. LENGTH, WIDTH AND DEPTH OF IMPROVEMENT AREA TO BE CONFIRMED DURING CONSTRUCTION.

REV	BY	DATE	DESCRIPTION
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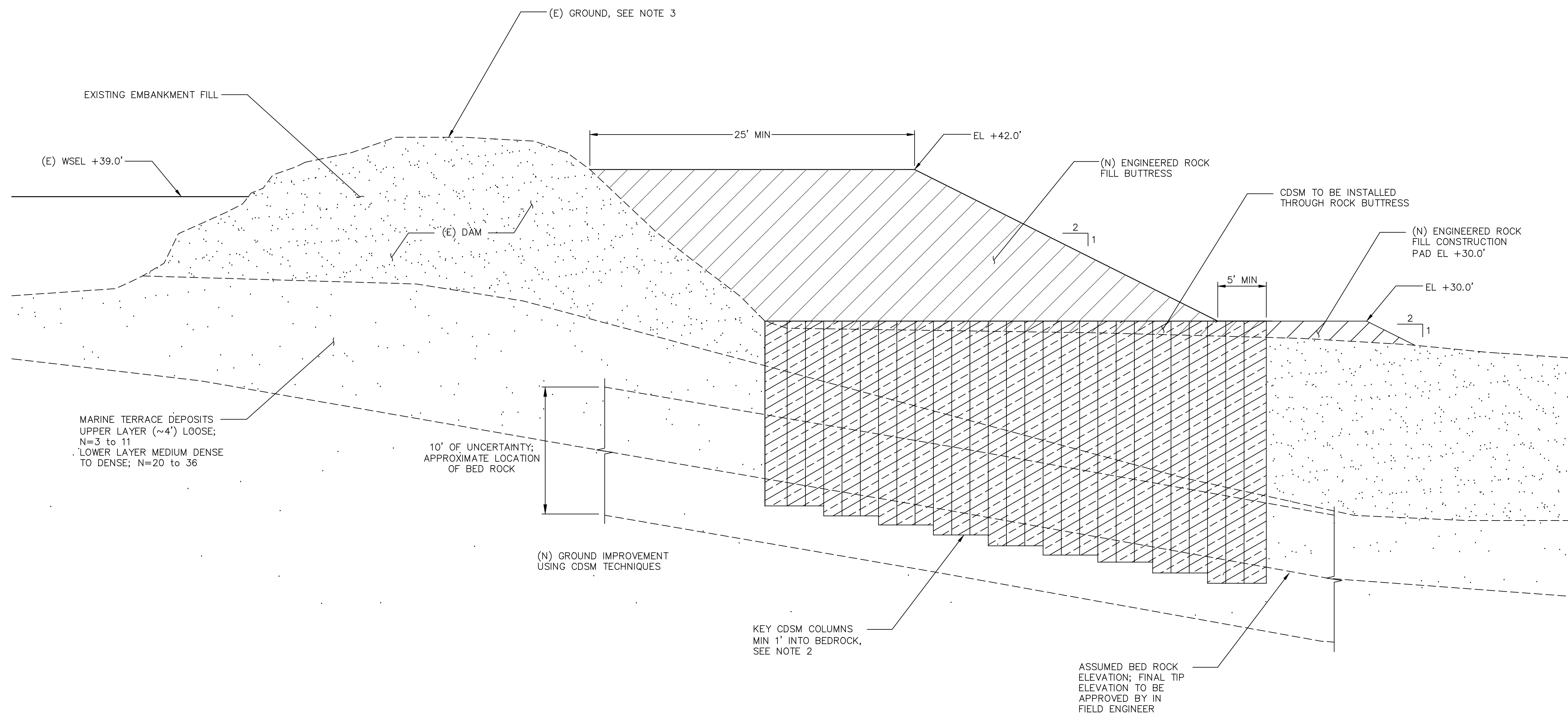
NORTH DAM IMPROVEMENT SECTION C
 MILL POND DAM

FORT BRAGG MENDOCINO COUNTY CALIFORNIA



DATE: 08/04/17
 SCALE: 1"=10'
 DESIGNED BY: J. LEATHAM
 DRAFTED BY: J. LEATHAM
 CHECKED BY: M. RYAN
 JOB NO.: 17-031.02
 FILE: 17-031.02.dwg

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1 IMPROVEMENT AREA DETAIL, TYP
9 SCALE: NOT TO SCALE

- NOTES:
- SEE SECTIONS FOR ELEVATION DATA.
 - LENGTH, WIDTH AND DEPTH OF IMPROVEMENT AREA TO BE CONFIRMED DURING CONSTRUCTION.
 - STRIP ALL VEGETATION AND ORGANICS FROM SLOPE PRIOR TO PLACING ENGINEERED ROCK FILL BUTTRESS.

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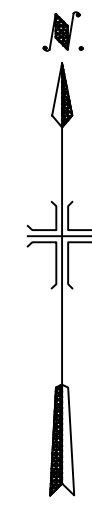
NORTH DAM IMPROVEMENT SECTION DETAIL
MILL POND DAM

FORT BRAGG MENOCINGO COUNTY CALIFORNIA



DATE: 08/04/17
SCALE: NTS
DESIGNED BY: J. LEATHAM
DRAFTED BY: J. LEATHAM
CHECKED BY: M. RYAN
JOB NO.: 17-031.02
FILE: 17-031.02.dwg





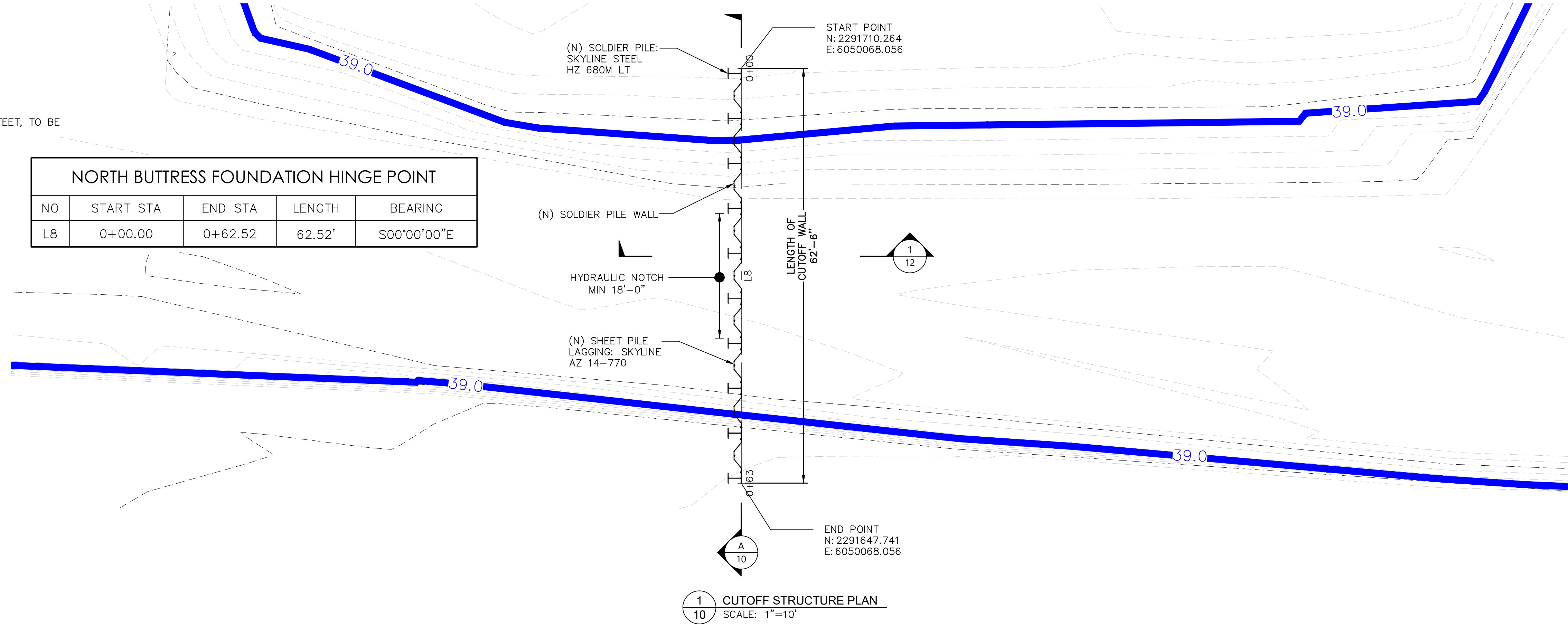
LEGEND

- - - - - EXISTING GROUND CONTOUR, 5' INTERVAL
- - - - - EXISTING GROUND CONTOUR, 1' INTERVAL
- (E) WSEL +39.0'

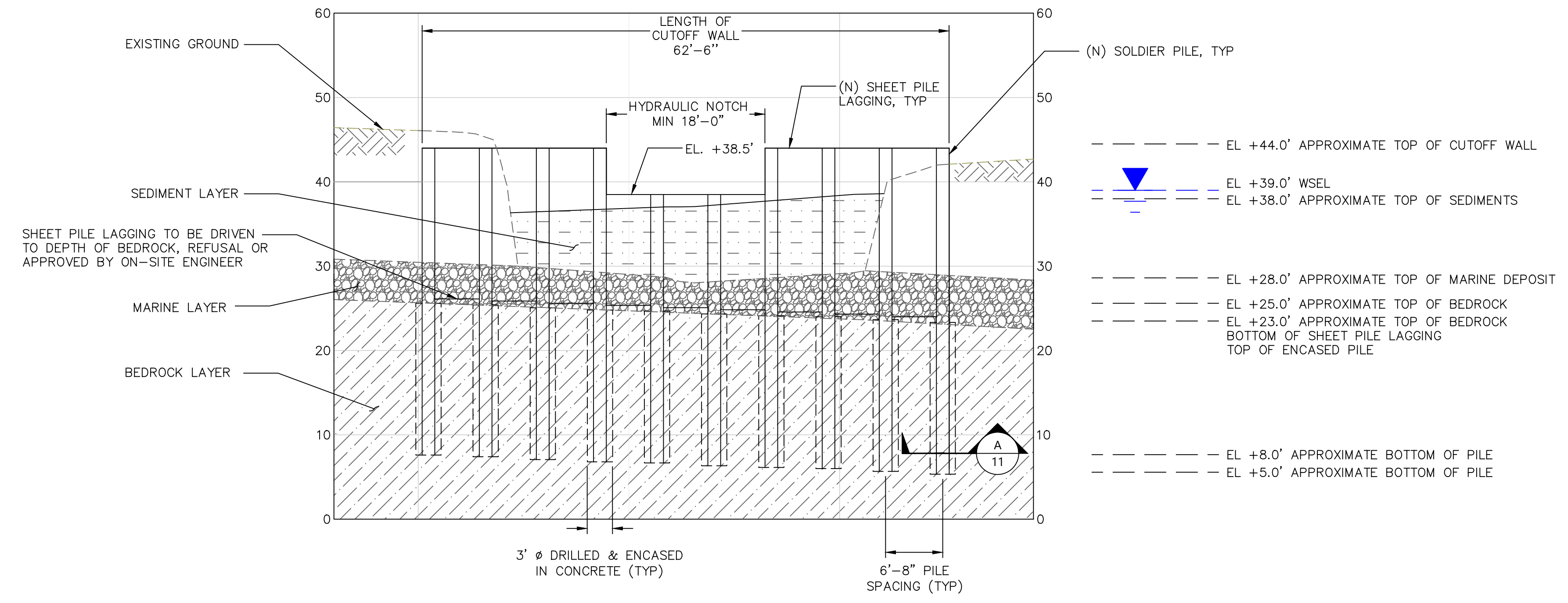
NOTES:

1. ESTIMATED LENGTH OF SHEET PILE WALL IS 62.5 FEET, TO BE CONFIRMED IN THE FIELD.

NORTH BUTRESS FOUNDATION HINGE POINT				
NO	START STA	END STA	LENGTH	BEARING
L8	0+00.00	0+62.52	62.52'	S00°00'00"E



1
10 CUTOFF STRUCTURE PLAN
SCALE: 1"=10'



A
10 CUTOFF WALL SECTION
SCALE: 1"=10'

REV	BY	DATE	DESCRIPTION
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SOLDIER PILE WALL PLAN & SECTION
MILL POND DAM

CALIFORNIA
MENDOCINO COUNTY
FORT BRAGG



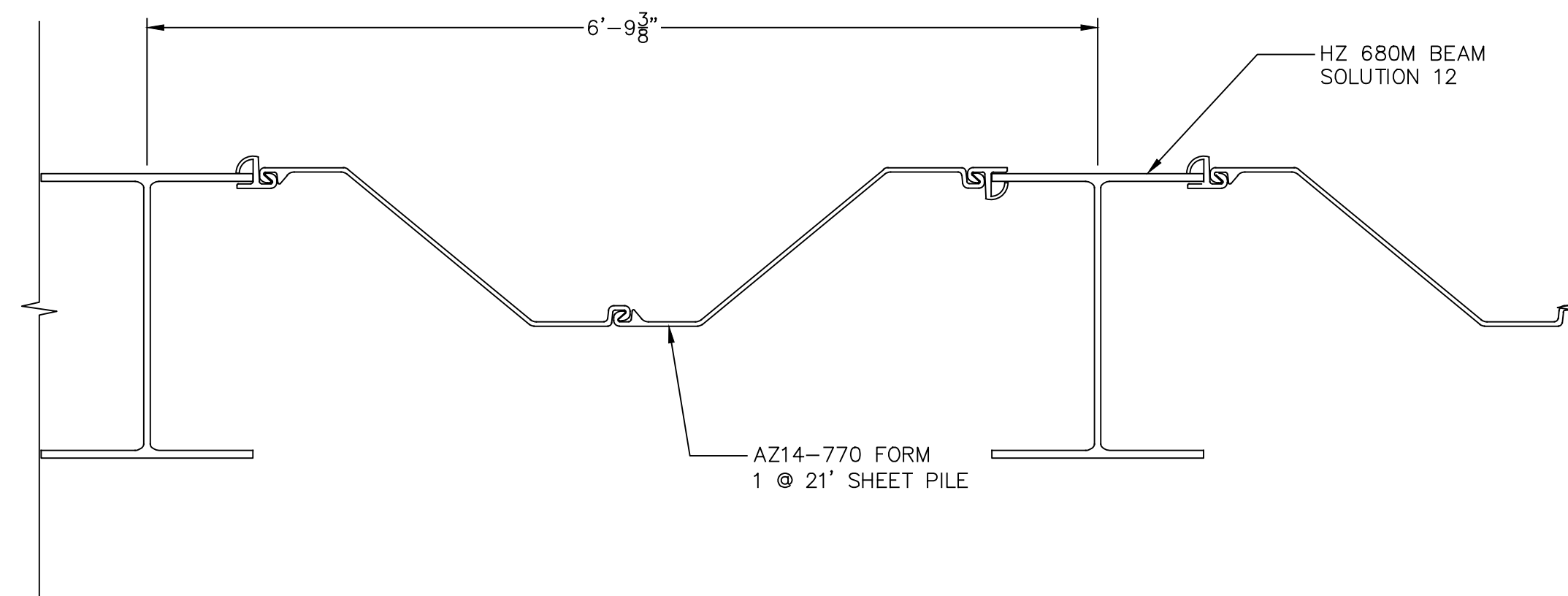
DATE: 08/04/17
SCALE: NTS
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CHECKED BY: M. RYAN
JOB NO.: 17-031.02
FILE: 17-031.02.dwg

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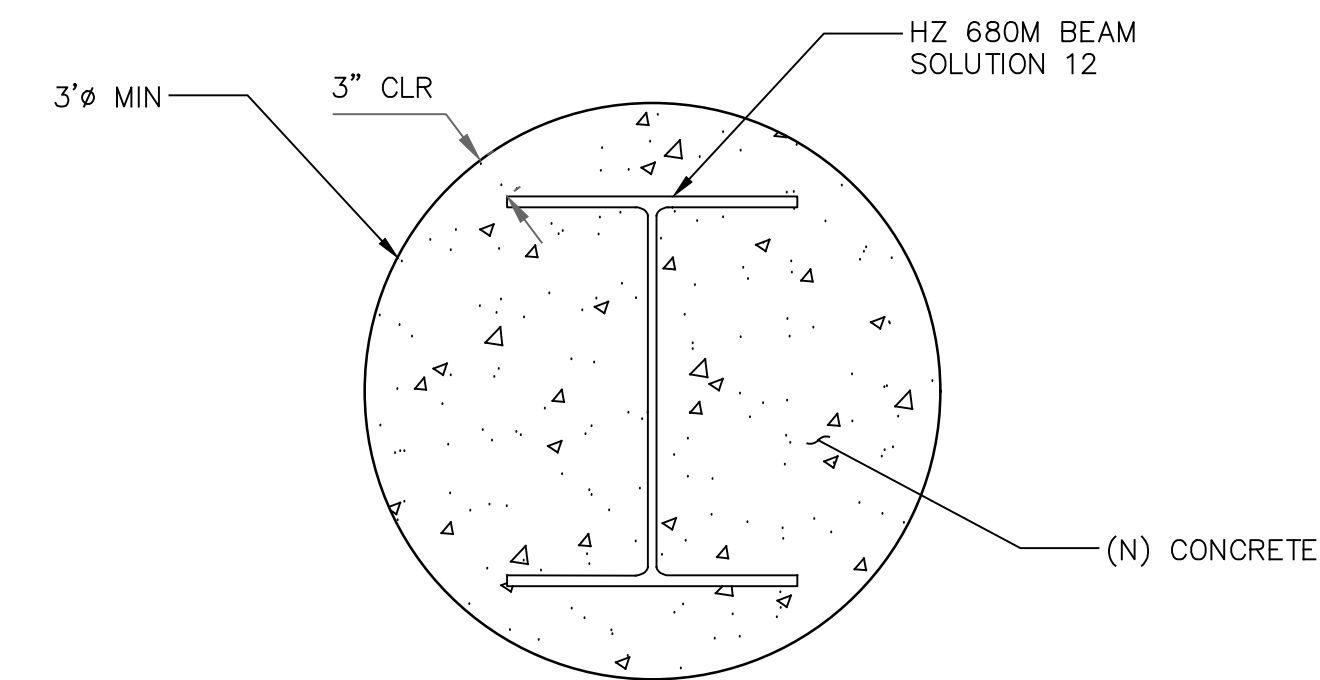
PLOT DATE: Friday, August 04, 2017 TIME: 12:41:06 PM BY: JASHUA LEATHAM
FILE: N:\1-PROJECTS\2017\17-031.02_Georgia Pacific_Mill Pond Dam Design\CAD\17-031.02.dwg



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1 CUTOFF WALL SECTION
 11 SCALE: 1"=10'



A SECTION
 11 SCALE: 1"=10'

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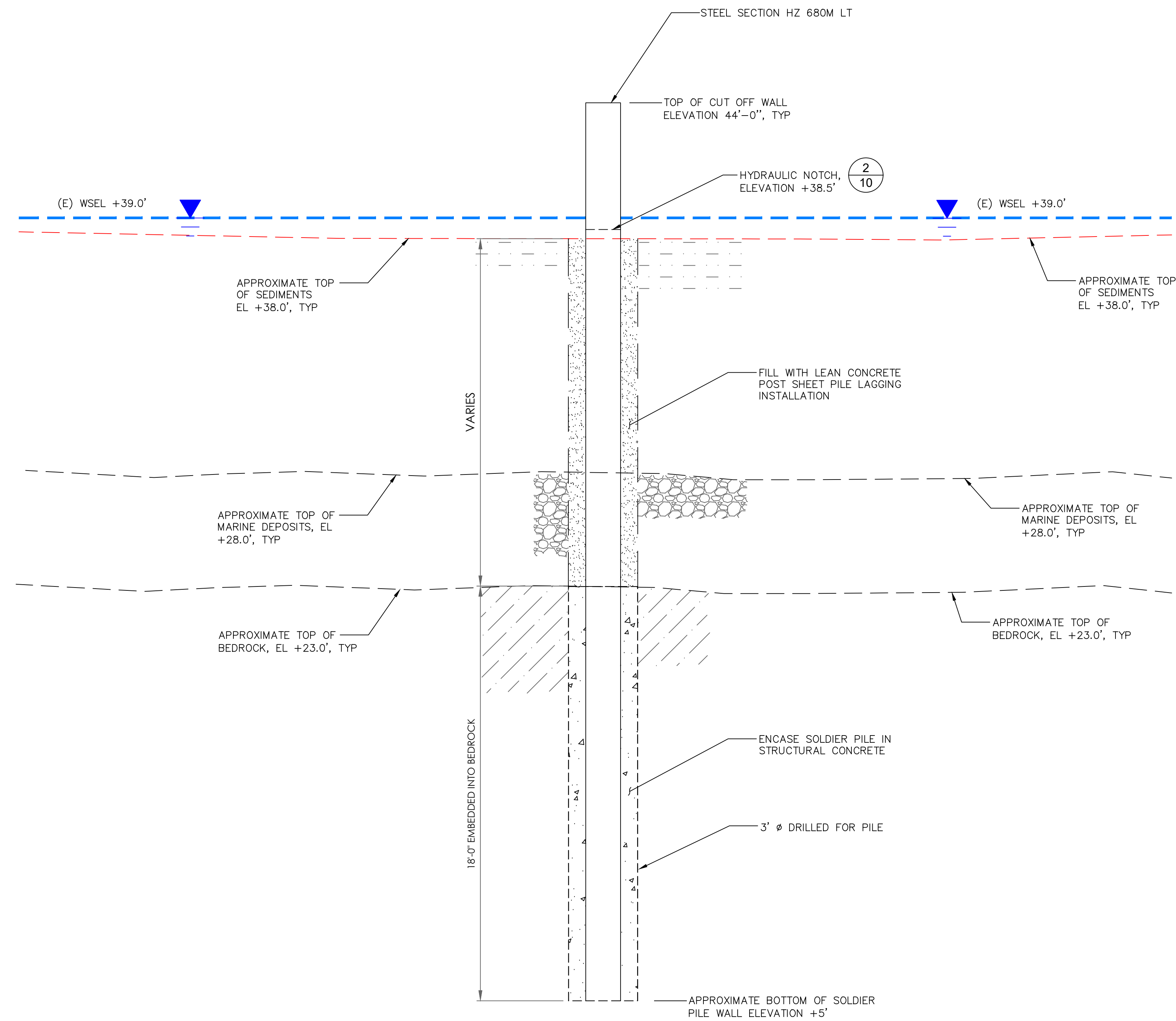
DETAILS
 MILL POND DAM
 FORT BRAGG
 MENDOCINO COUNTY
 CALIFORNIA



DATE: 08/04/17
 SCALE: 1"=50'
 DESIGNED BY: J. LEATHAM
 DRAFTED BY: J. LEATHAM
 CHECKED BY: M. RYAN
 JOB NO.: 17-031.02
 FILE: 17-031.02.dwg

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1
12 SOLDIER PILE WALL SECTION
 SCALE: 1" = 3'

- NOTES:
 1. SEDIMENT ELEVATION AT TYPICAL DEPTH.
 2. NOTCH DIMENSIONS MIN 18 FT WIDTH,
 WITH LOWER INVERT ELEVATION OF 38.5'

REV	BY	DATE	DESCRIPTION
1			

SOLDIER PILE WALL SECTION
 MILL POND DAM
 FORT BRAGG
 MENDOCINO COUNTY
 CALIFORNIA



DATE: 08/04/17
 SCALE: NTS
 DESIGNED BY: J. LEATHAM
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 CHECKED BY: M. RYAN
 JOB NO.: 17-031.02
 FILE: 17-031.02.dwg

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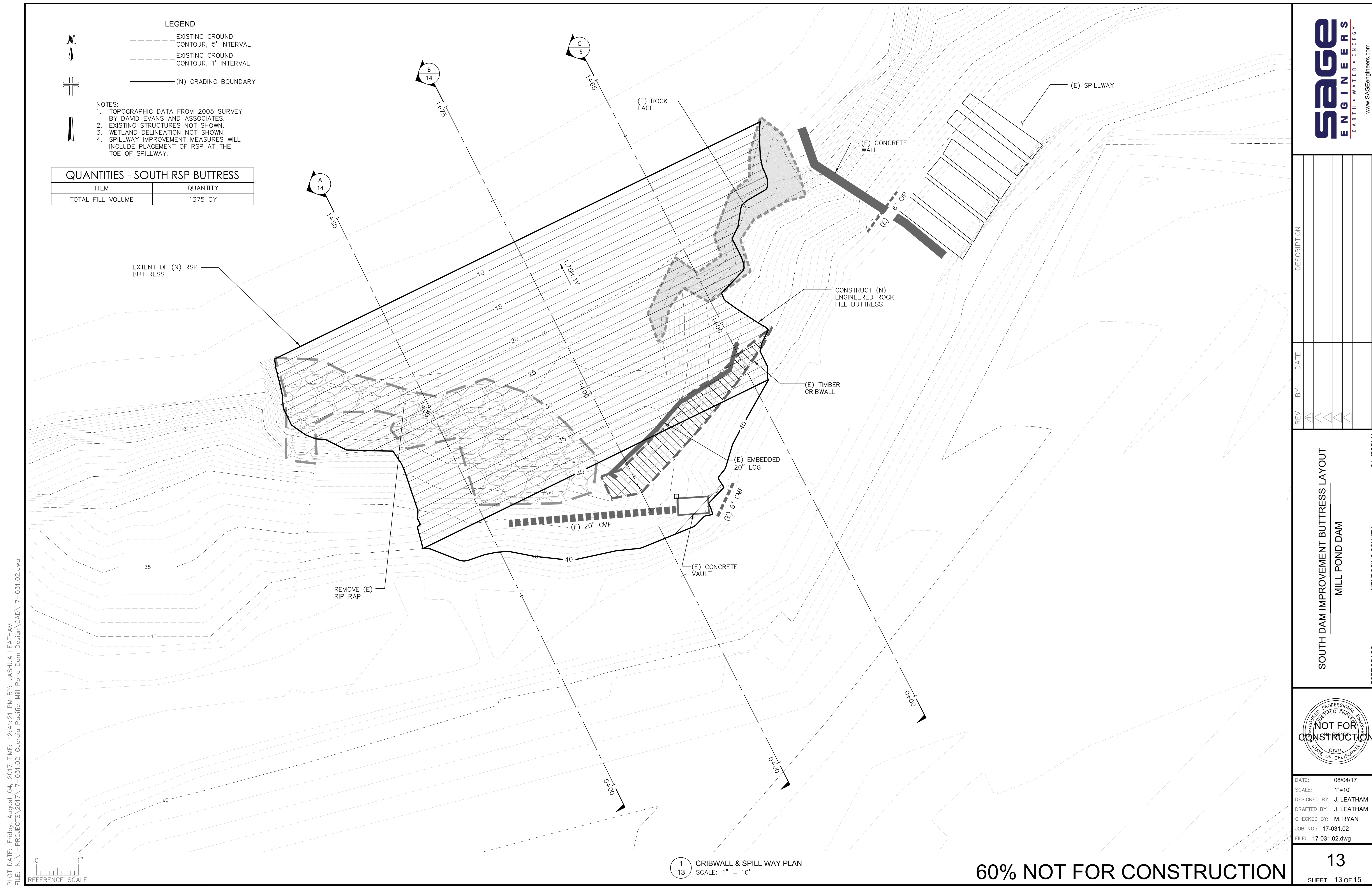
LEGEND

- - - - - EXISTING GROUND CONTOUR, 5' INTERVAL
- - - - - EXISTING GROUND CONTOUR, 1' INTERVAL
- (N) GRADING BOUNDARY

- NOTES:**
1. TOPOGRAPHIC DATA FROM 2005 SURVEY BY DAVID EVANS AND ASSOCIATES.
 2. EXISTING STRUCTURES NOT SHOWN.
 3. WETLAND DELINEATION NOT SHOWN.
 4. SPILLWAY IMPROVEMENT MEASURES WILL INCLUDE PLACEMENT OF RSP AT THE TOE OF SPILLWAY.

QUANTITIES - SOUTH RSP BUTTRESS

ITEM	QUANTITY
TOTAL FILL VOLUME	1375 CY



REV	BY	DATE	DESCRIPTION

SOUTH DAM IMPROVEMENT BUTTRESS LAYOUT
MILL POND DAM
FORT BRAGG
MENDOCINO COUNTY
CALIFORNIA



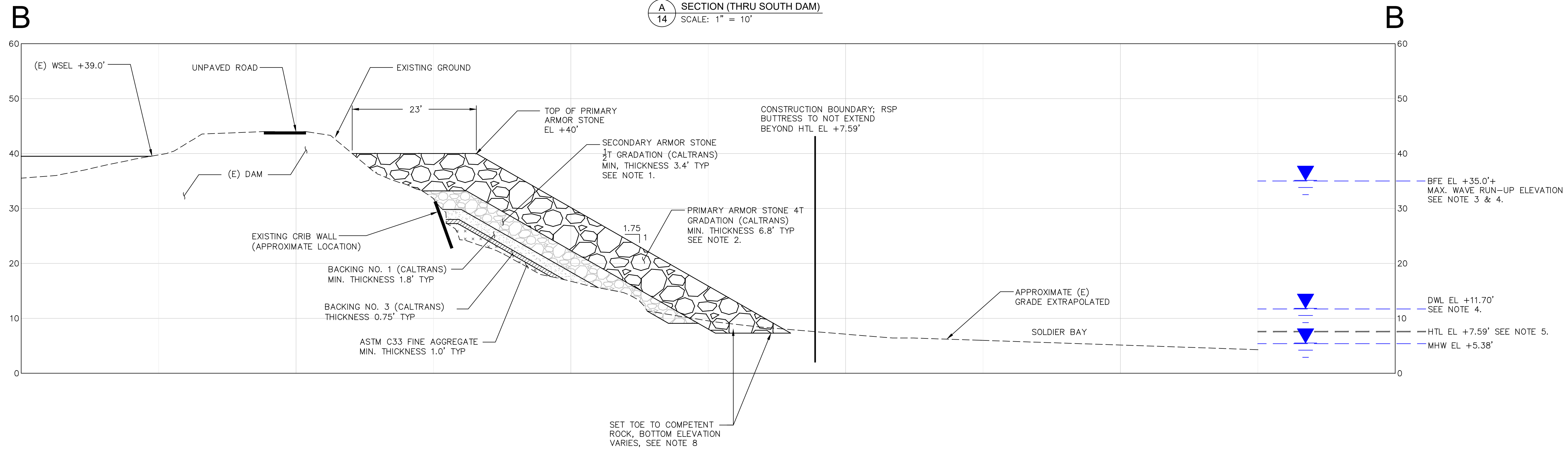
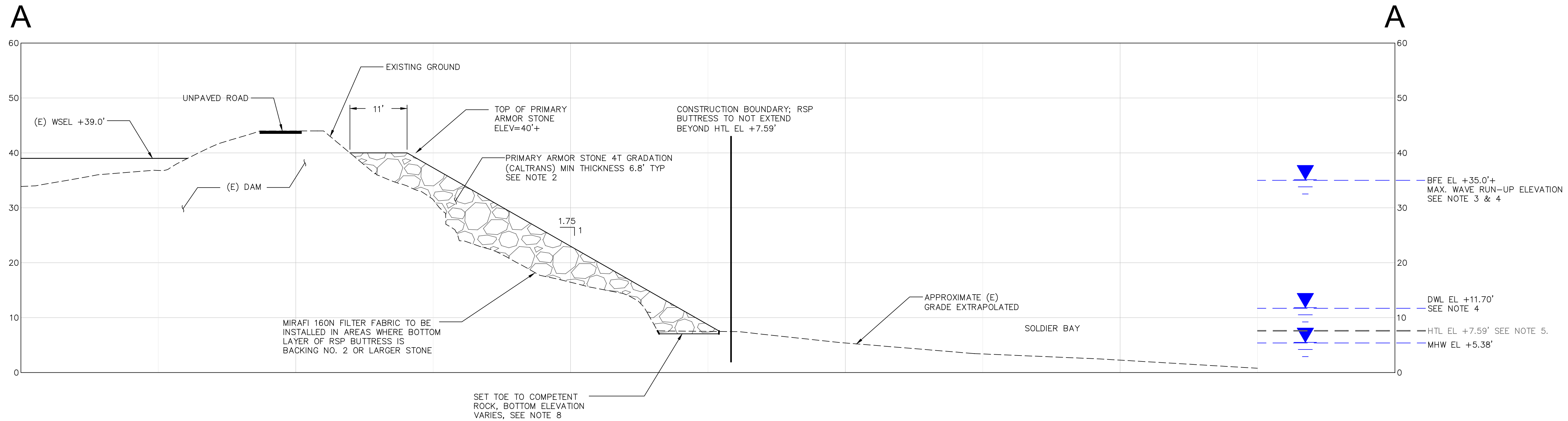
DATE: 08/04/17
SCALE: 1"=10'
DESIGNED BY: J. LEATHAM
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CHECKED BY: M. RYAN
JOB NO.: 17-031.02
FILE: 17-031.02.dwg

PLOT DATE: Friday, August 04, 2017 TIME: 12:41:21 PM BY: JASHUA LEATHAM
FILE: N:\1-PROJECTS\2017\17-031.02_Georgia Pacific_Mill Pond Dam Design\CAD\17-031.02.dwg



1
13 CRIBWALL & SPILL WAY PLAN
SCALE: 1" = 10'

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NOTES:

- 1/4 T GRADATION PER CALTRANS HIGHWAY DESIGN MANUAL: PLACED PER METHOD B.
- 2 T GRADATION PER CALTRANS HIGHWAY DESIGN MANUAL: PLACED PER METHOD A.
- BFE = BASE FLOOD ELEVATION, PER FEMA FIRM PANEL 06045C1005G EFFECTIVE 09/04/2015.
- DWL = DESIGN WATER LEVEL, BFE +3 FEET EXTRA CAPACITY FOR COASTAL CLIMATE VARIABILITY. DOES NOT INCLUDE WAVE CONTRIBUTION OR RUN-UP.
- HTL = HIGH TIDE LINE DEFINED PER 33 CFR PART 328 AND IS HIGHEST ASTRONOMICAL TIDE AT ARENA COVE, CA NOAA STATION 9416841.
- STRIP ALL VEGETATION AND ORGANICS FROM SLOPE PRIOR TO PLACING ROCK SLOPE PROTECTION. TYPICAL ORGANIC LAYER THICKNESS IS 12 TO 18 INCHES (VARIES).
- BEACH SURVEY NOT COMPLETED. GRADES AND ELEVATIONS SHOWN ARE APPROXIMATE.
- ON-SITE OBSERVATIONS INDICATE THAT BEDROCK ELEVATION IS APPROXIMATELY 12 TO 18 INCHES BELOW TOP OF SAND AT APPROXIMATE LOCATION OF HTL.
- SLOPE REVETMENT SHOULD CONTINUE BELOW EXISTING GRADE UNTIL TOE OF RSP SITS ON THE SURFACE OF BEDROCK.



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SOUTH DAM IMPROVEMENT SECTIONS A & B
MILL POND DAM

CALIFORNIA
MENDOCINO COUNTY
FORT BRAGG

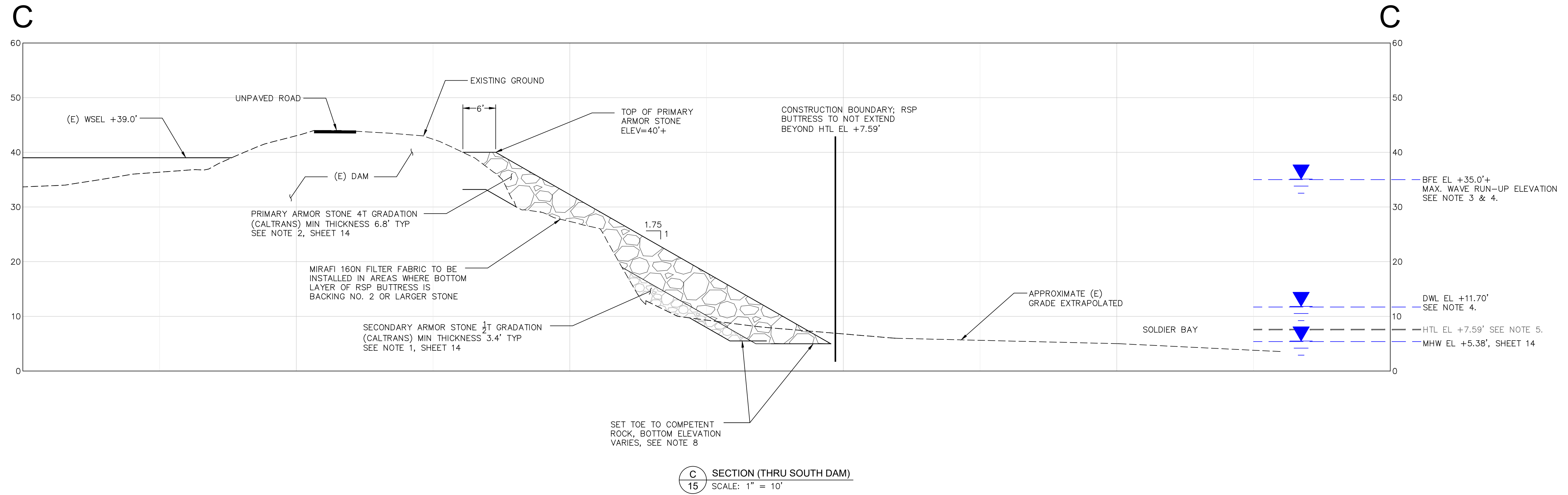


DATE: 08/04/17
 SCALE: 1"=10'
 DESIGNED BY: J. LEATHAM
 DRAFTED BY: J. LEATHAM
 CHECKED BY: M. RYAN
 JOB NO.: 17-031.02
 FILE: 17-031.02.dwg

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 FILE: N:\1-PROJECTS\2017\17-031.02_Georgia Pacific_Mill Pond Dam Design\CAD\17-031.02.dwg

PLOT DATE: Friday, August 04, 2017 TIME: 12:41:30 PM BY: JASHUA LEATHAM
 FILE: N:\1-PROJECTS\2017\17-031.02_Georgia Pacific_Mill Pond Dam Design\CAD\17-031.02.dwg



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SOUTH DAM IMPROVEMENT SECTION C
 MILL POND DAM

FORT BRAGG MENDOCINO COUNTY CALIFORNIA



DATE: 08/04/17
 SCALE: 1"=10'
 DESIGNED BY: J. LEATHAM
 DRAFTED BY: J. LEATHAM
 CHECKED BY: M. RYAN
 JOB NO.: 17-031.02
 FILE: 17-031.02.dwg

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