

DAM REPAIR PLANS

FOR

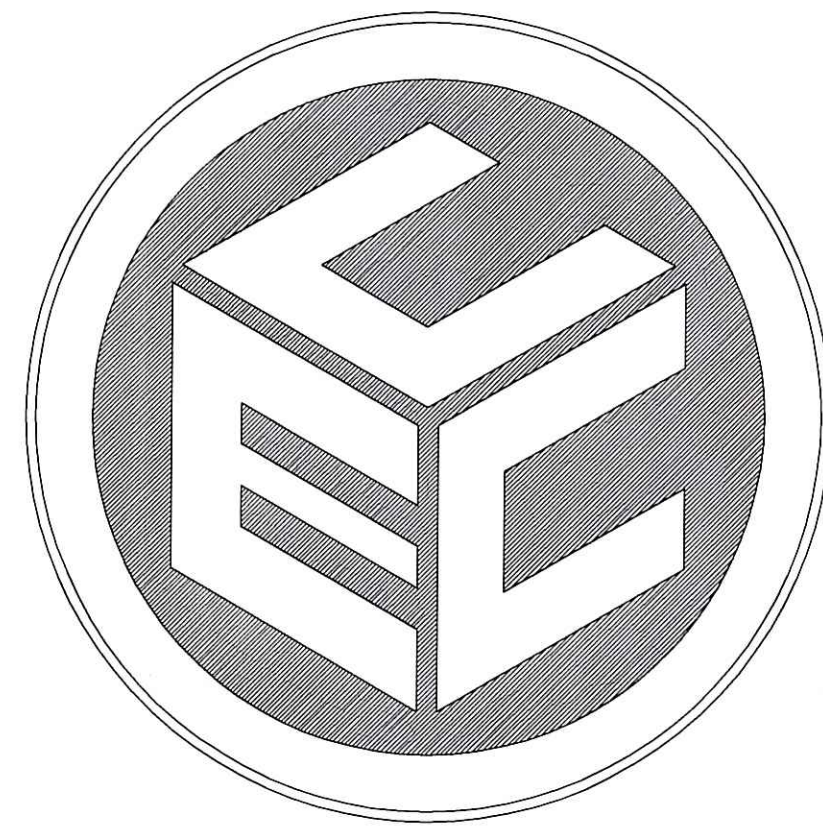
AP 3E LOT 12

CAMELOT ESTATES PHASE B

in

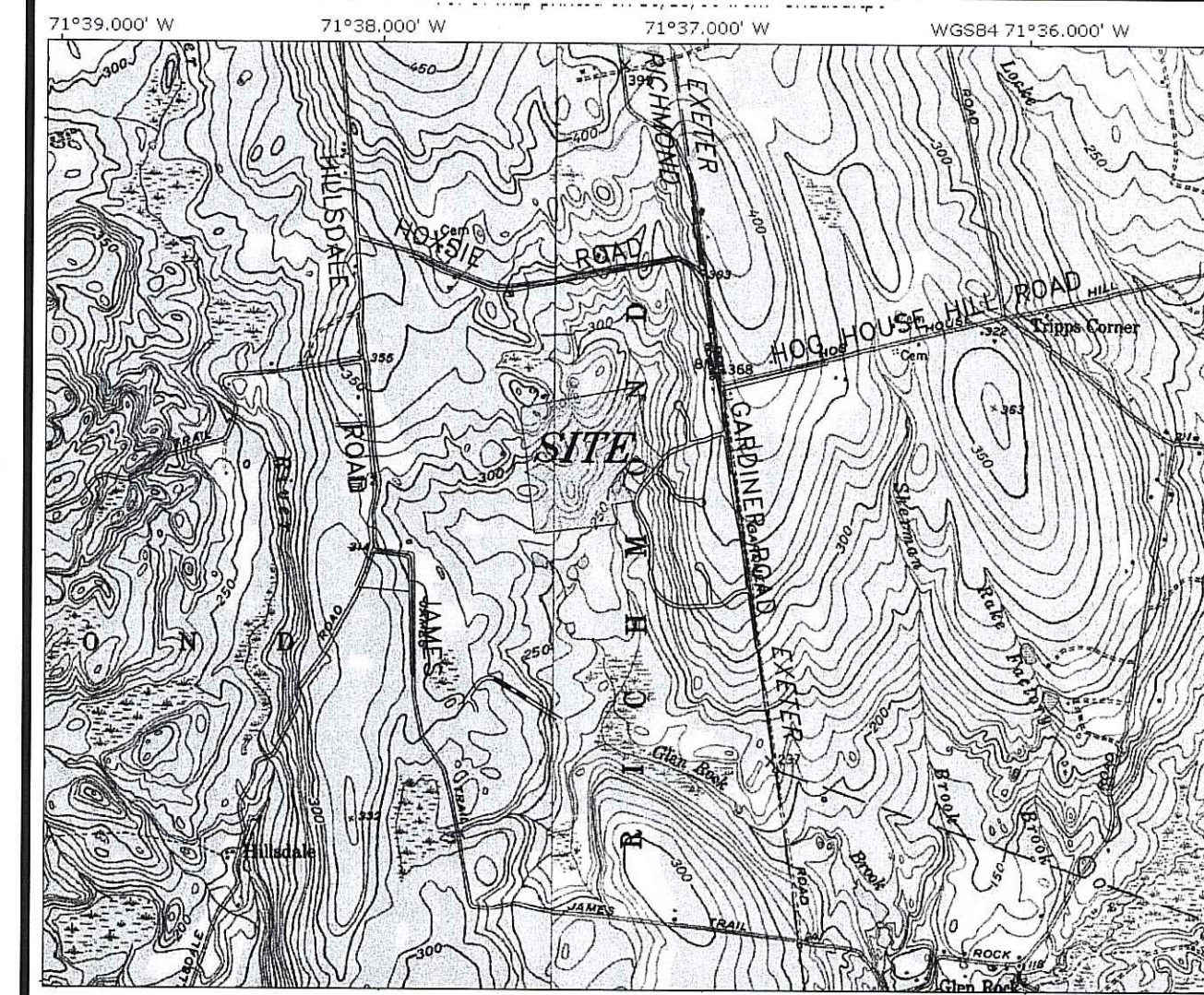
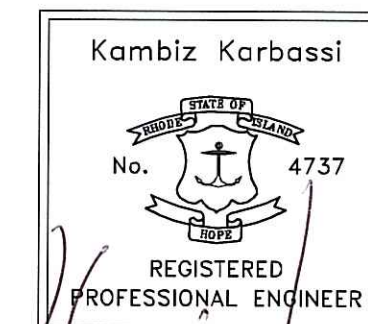
RICHMOND, RHODE ISLAND

OWNER / APPLICANT :
ALAN-BRIAN REALTY CO.
 33 COLLEGE HILL ROAD
 SUITE 29 D
 WARWICK, RI 02886



PREPARED BY:
COMMONWEALTH
 ENGINEERS & CONSULTANTS, INC.

400 SMITH STREET
 PROVIDENCE, RHODE ISLAND 02908
 (401) 273-6600
 MARCH 20, 2009
 REVISED JULY 2, 2009



LOCUS MAP SCALE: 1"=2,500'

LIST OF DRAWINGS

1. TITLE SHEET
2. CONSTRUCTION PLAN
3. CONSTRUCTION DETAILS
4. CONSTRUCTION DETAILS

ASSESSORS REFERENCE:
 A.P. 3E LOT 12

PARCEL DATA:
 AREA=2,816,700 S.F. (64.66 ACRES)

ZONING REFERENCE:
 R-2

PLAN REFERENCE :
 TOPOGRAPHIC PLAN AND ELECTRONIC DATA OF
 CAMELOT ESTATES-PHASE 'B' PROPOSED SITE PLAN
 ASSESSOR'S PLAT 3E/LOT 12 RICHMOND, RHODE ISLAND
 PREPARED FOR : ALAN-BRIAN REALTY
 DATE: SEPT. 22, 2003 REVISION: APRIL 1, 2004 SCALE: 1"=100'
 PREPARED BY: OCEAN STATE PLANNERS, INC.

FLOOD PLAIN NOTE:

THIS LOT FALLS WITHIN FLOOD ZONE C - AREAS OF MINIMAL FLOODING, AS SHOWN ON "FLOOD INSURANCE RATE MAP (FIRM), TOWN OF RICHMOND, RHODE ISLAND, WASHINGTON COUNTY PANEL 10 OF 20, COMMUNITY PANEL NUMBER 440031 0010 B, EFFECTIVE DATE: NOVEMBER 5, 1980".

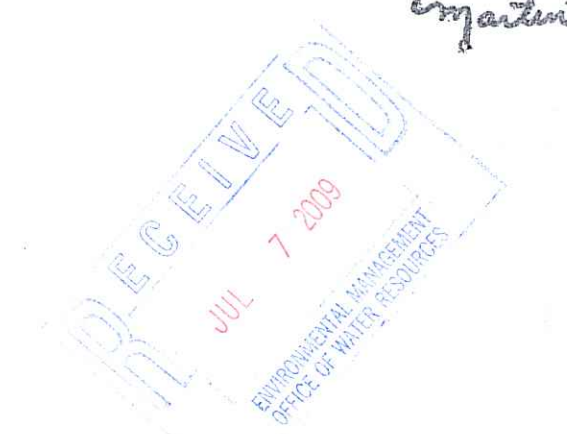
PARCEL NOTES:

1. THIS PROPERTY IS LOCATED WITHIN A NATURAL HERITAGE AREA AS DEFINED BY RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT AND SHOWN ON THE RIDEM WEBSITE THROUGH THE STATE ENVIRONMENTAL RESOURCE MAP.
2. THIS PROPERTY IS NOT LOCATED WITHIN ANY TOWN OF RICHMOND ZONING OVERLAY DISTRICT.

Flood Plain Note per DEM: The 100 Year flood plain has been established at elevation 83.67 feet Mean Sea Level.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
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Martin D. Wenzel



GLEN ROCK BROOK POND

REGRADE HEEL SLOPE:
INSTALL POLYETHYLENE
LINER & RIPRAP

LIMIT OF DISTURBANCE
FOR DAM REHABILITATION

WATER EL. 84.0±
(SEPT. 20, 2007)

147' ± APPROX.
LIMITS OF DAM
REHABILITATION

R&D EXIST.
WOODEN
WALKWAY

TOP OF WEIR
ELEV.=82.26

TOP OF FLASH
BOARD EL.=84.47

HUB & TACK SET
ELEV.=86.38

1'± ANCHOR
TRENCH FOR
LINER

DEWATERING
BASIN
Note per DEM: Revised New Limit of Disturbance

- LEGEND**
- 85 PROP. DAM CONTOUR
 - 85 EXIST. CONTOUR
 - 85 PROP. CONTOUR (01-0215)
 - SHORE LINE
 - B20 B19 LIMITS OF FLAGGED WETLAND
 - ROADWAY BASELINE
 - 50' PERIMETER WETLAND
 - 100' RIVERBANK WETLAND
 - x 85.5 PROP. SPOT GRADE
 - NEW LIMIT OF DISTURBANCE
 - OLD LIMIT OF DISTURBANCE (APPROVED UNDER RIDEM FILE NO. 01-0215)

HUB & TACK SET
ELEV.=85.79

BENCH MARK - NAIL
SET IN 10" OAK TREE
ELEV. = 87.75

CLEAR & GRUB
EXIST. DAM CREST
AND TOE SLOPE

EXIST. STONE
WALLS TO
REMAIN (TYP.)

DEWATERING
BASIN

6'± EARTHEN
DAM CREST

STREAM

GUINEVERE DRIVE

Note per DEM: Trees with a diameter breast height (DBH) greater than or equal to six (6') inches in this cross-hatched area must NOT be cleared / cut, and must receive armament protection (depicted on sheet 3 of 4). The type of tree and approximate location of the trees to be protected have been noted.

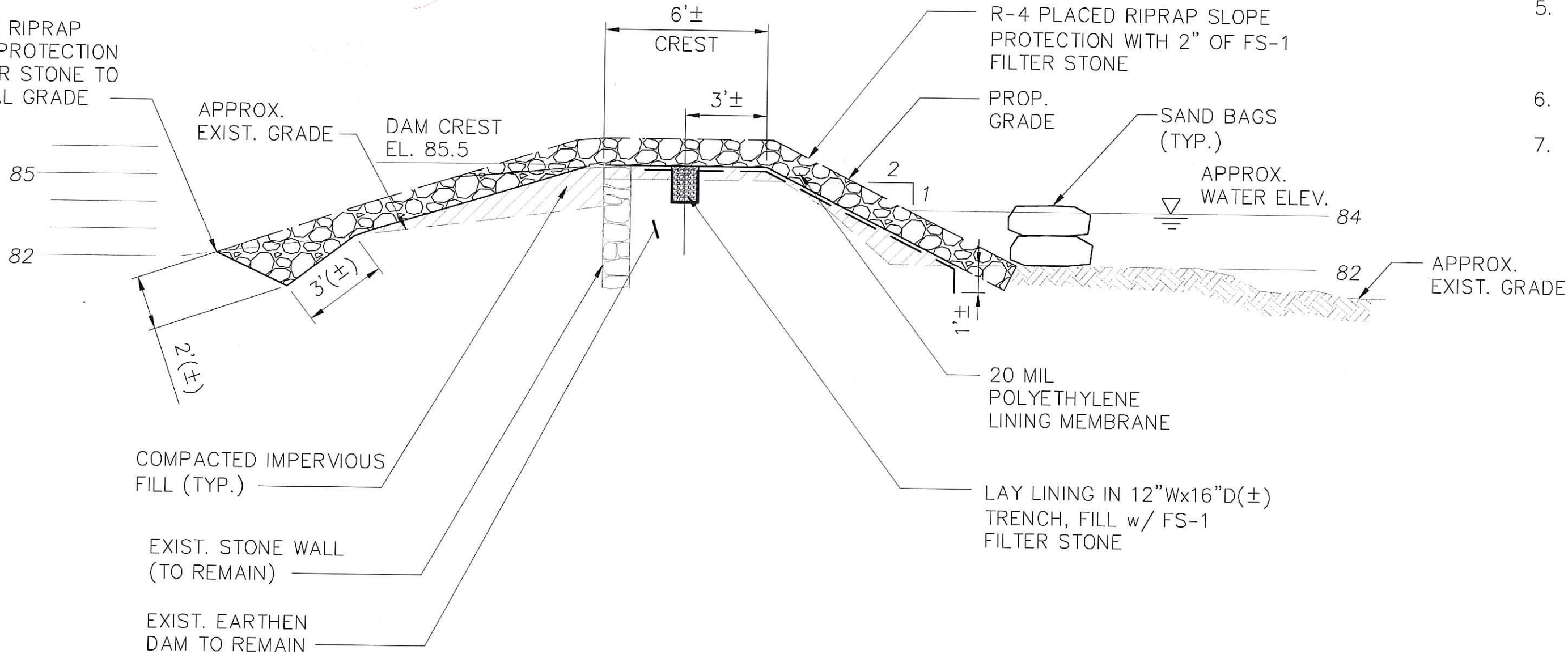
PROP. PRECAST CULVERTS
(SEE RIDEM FILE 01-0215)

EXIST. STONE TRAINING
WALLS & SPILLWAY
(TO REMAIN)

NOTE: EXISTING TOP OF FLASHBOARD ELEVATION TO BE RAISED TO APPROXIMATE 85' TO ALLOW FISH LADDER TO FUNCTION DURING LOW FLOW PERIODS.

OMIT. DO NOT RAISE FLASHBOARD ELE.

EXTEND RIPRAP
SLOPE PROTECTION
& FILTER STONE TO
ORIGINAL GRADE



DAM REHABILITATION SEQUENCE OF CONSTRUCTION

1. REMOVE & DISPOSE EXISTING WOOD WALKWAY.
2. INSTALL EROSION CONTROLS (HAY BALES & SAND BAGS).
3. REGRADE & FILL DAM HEEL (WATER SIDE) AS SHOWN ON THESE DRAWINGS. IMPERVIOUS FILL SHALL BE FINE GRAINED SOILS WITH >50% PASSING NO. 200 SIEVE, ASTM D 2487 SOIL CLASSIFICATION SC, CL, CH. GRANULAR SOIL, SUCH AS SANDS AND GRAVELS SHOULD NOT BE USED FOR DAM FILL MATERIAL.
4. LAY 20 MIL. POLYETHYLENE LINING MEMBRANE IN STRICT CONFORMANCE WITH THE MANUFACTURER'S REQUIREMENTS.
5. CLEAR & GRUB DAM TOE (LAND SIDE) AFTER MEMBRANE HAS BEEN INSTALLED. CONTINUE FILLING TOE SLOPE AND INSTALL PLACED RIPRAP AND FILTER STONE TO LIMITS INDICATED.
6. REMOVE & DISPOSE EROSION CONTROLS.
7. ALL WORK SHALL TAKE PLACE BETWEEN JULY 1-OCTOBER 1.

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LOCATION PLAN
SCALE: 1"=10'

SECTION
SCALE: 1/4"=1'-0"

Kambiz Korbassi
No. 4737
REGISTERED PROFESSIONAL ENGINEER

COMMONWEALTH
ENGINEERS & CONSULTANTS, INC.
400 SMITH STREET
PROVIDENCE, RHODE ISLAND 02908
401-273-6600

REVISIONS

No.	DATE	DRWN	CHKD
1.	07/02/09	KAB	KK

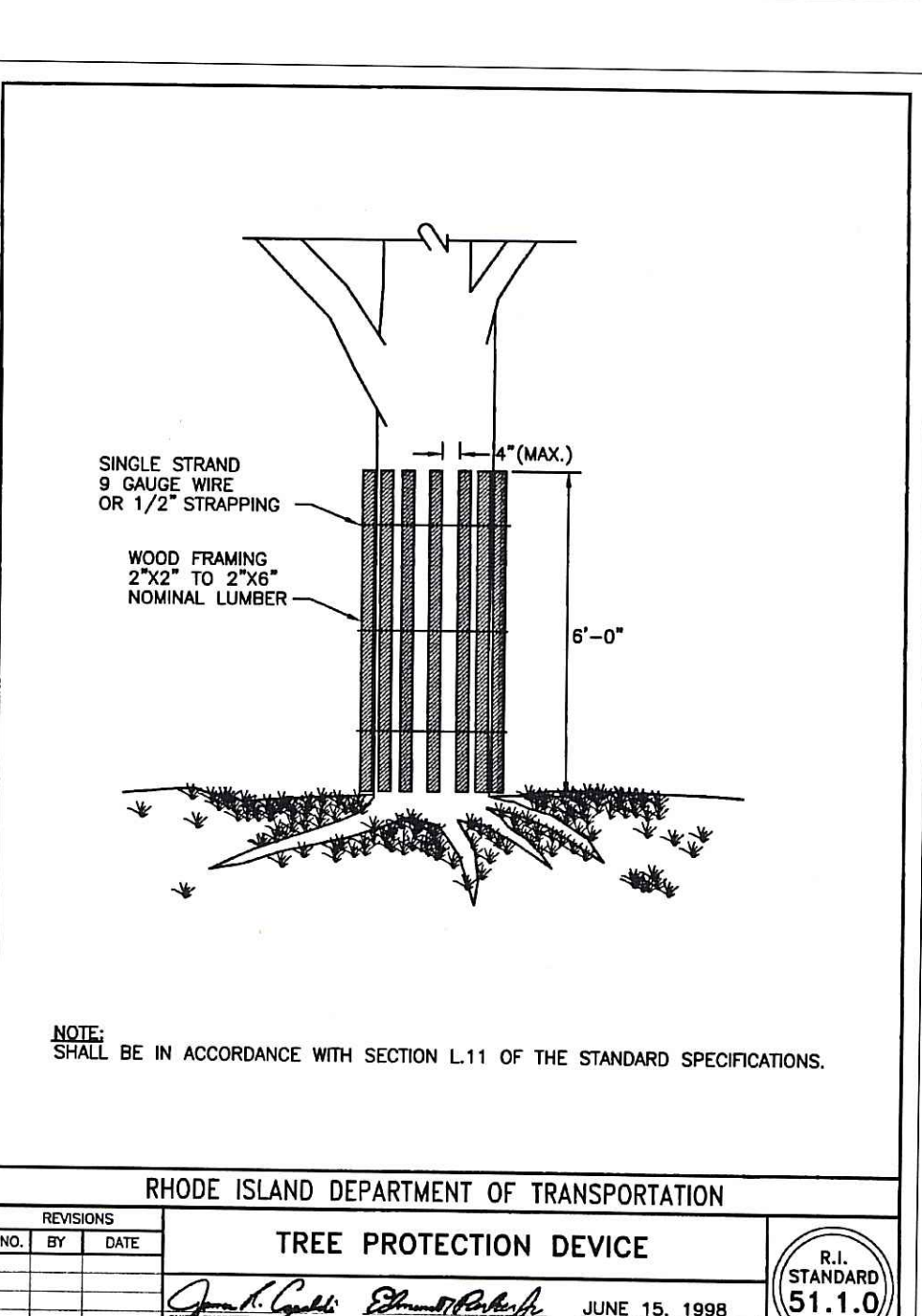
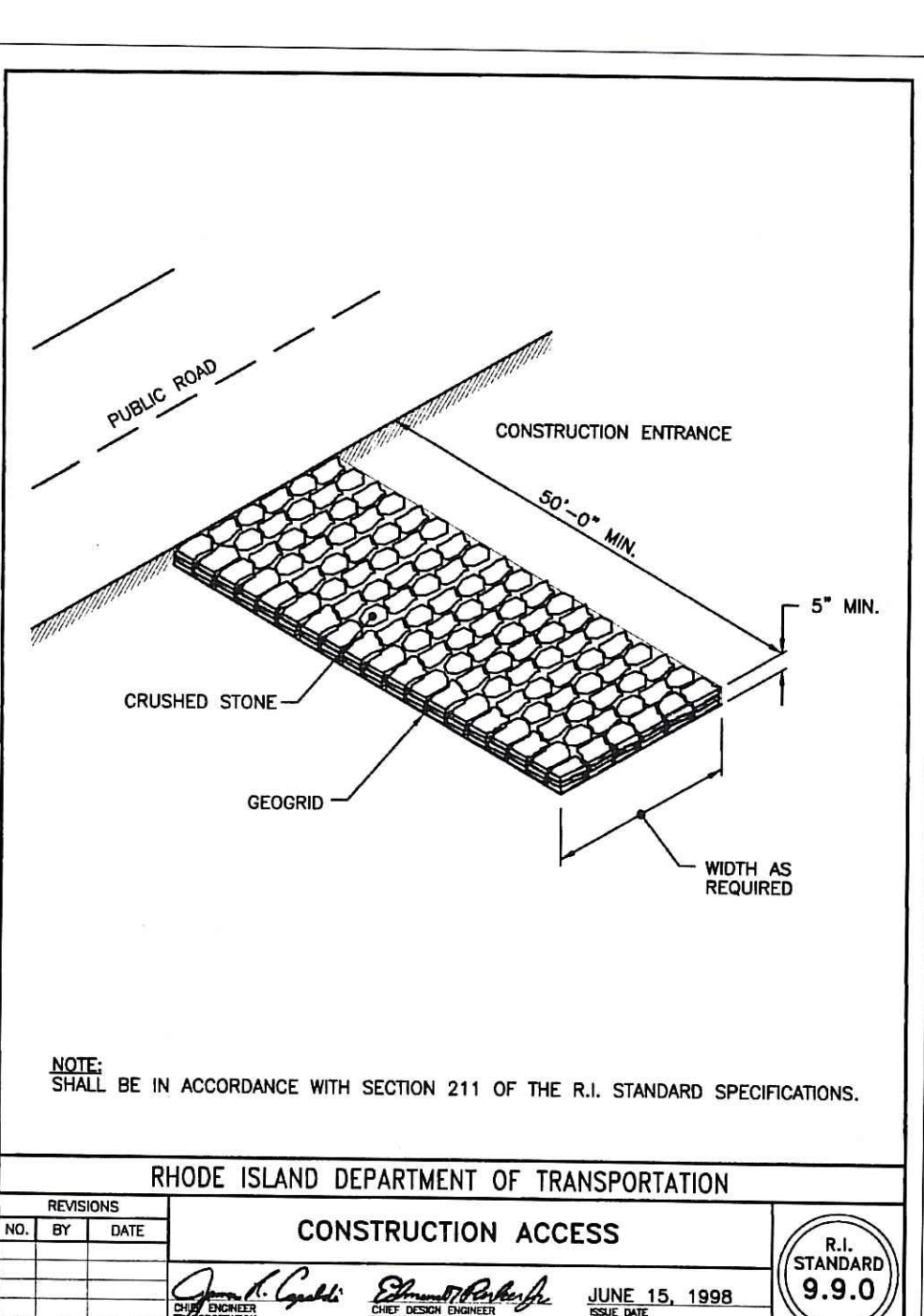
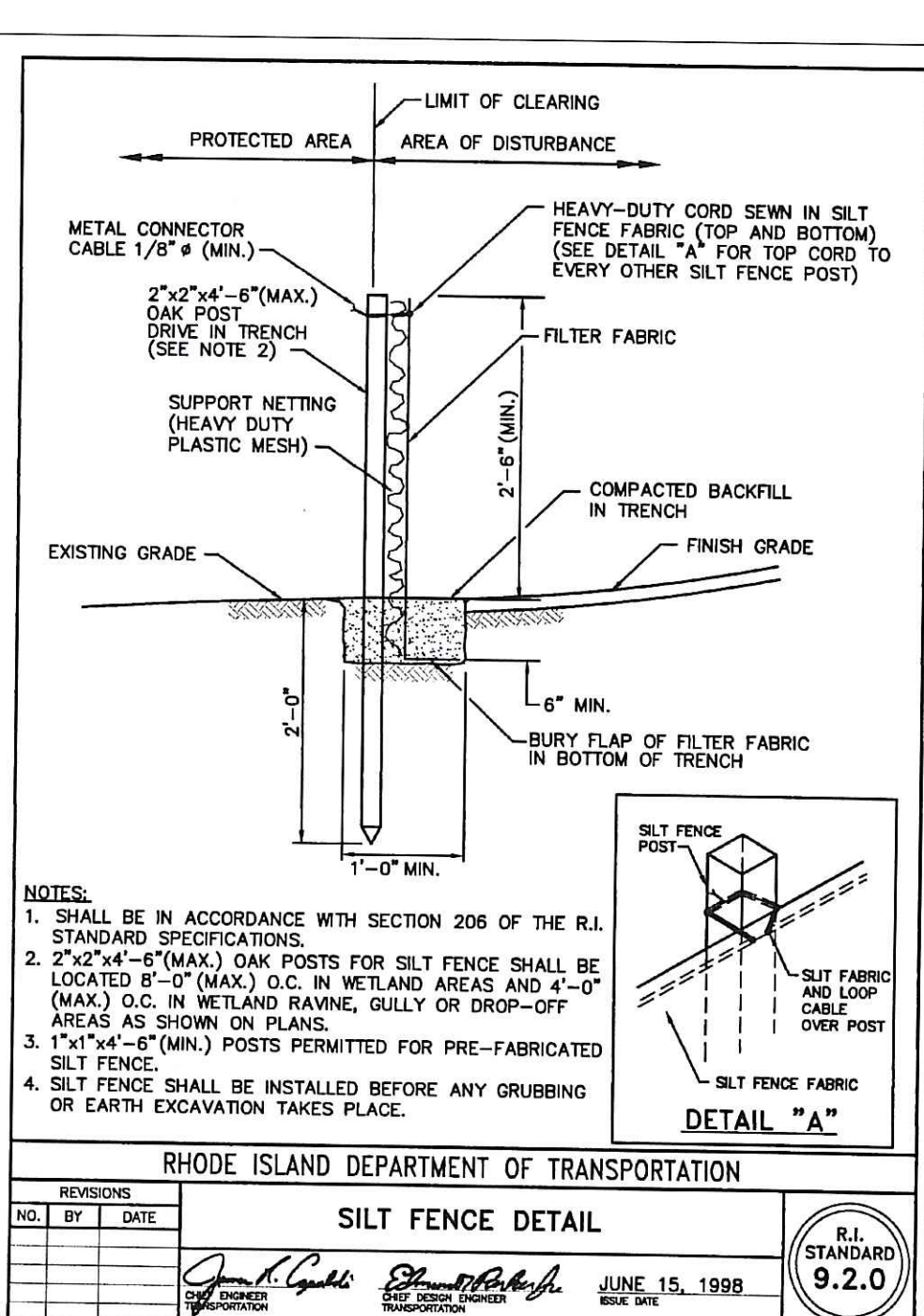
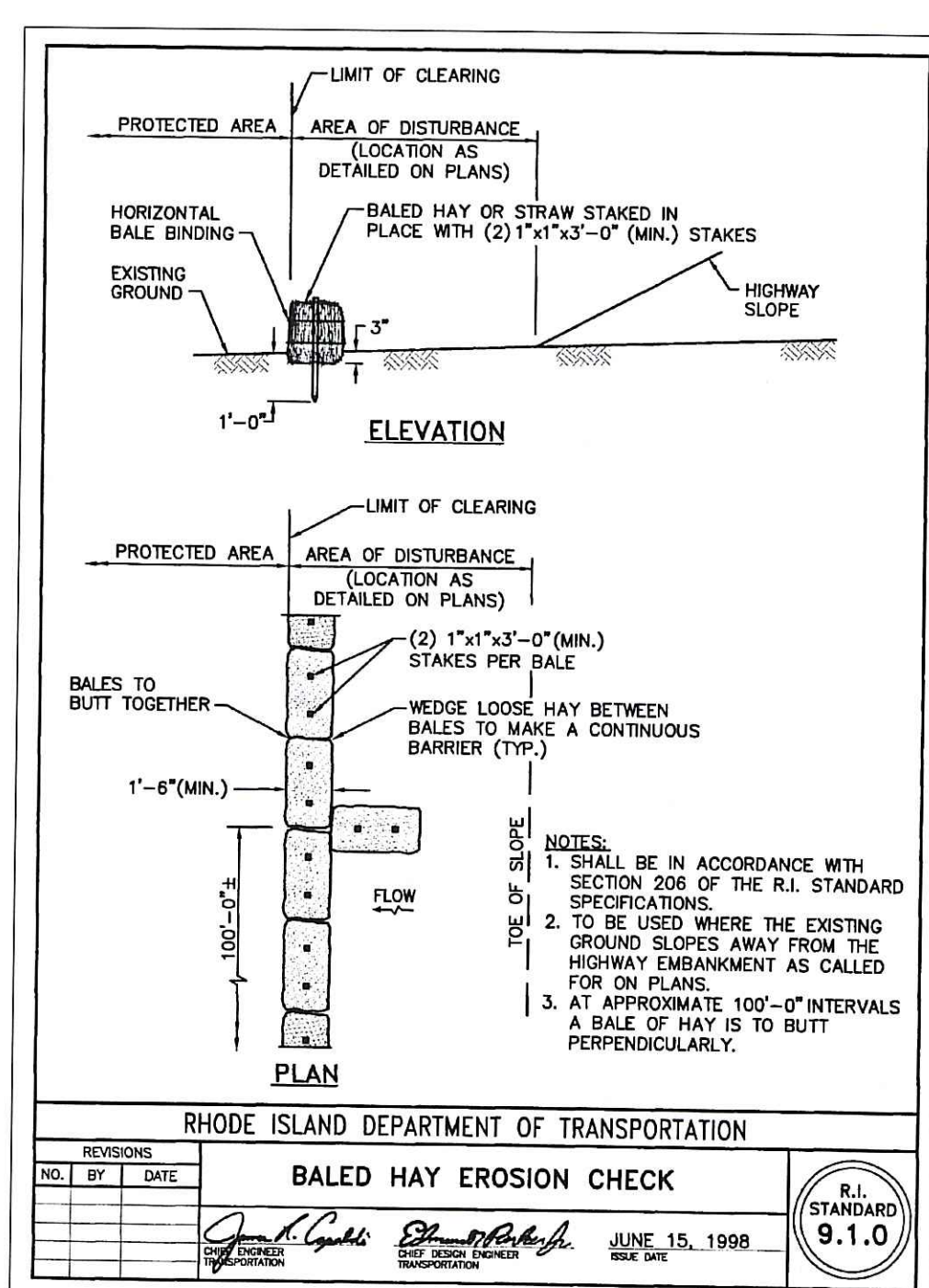
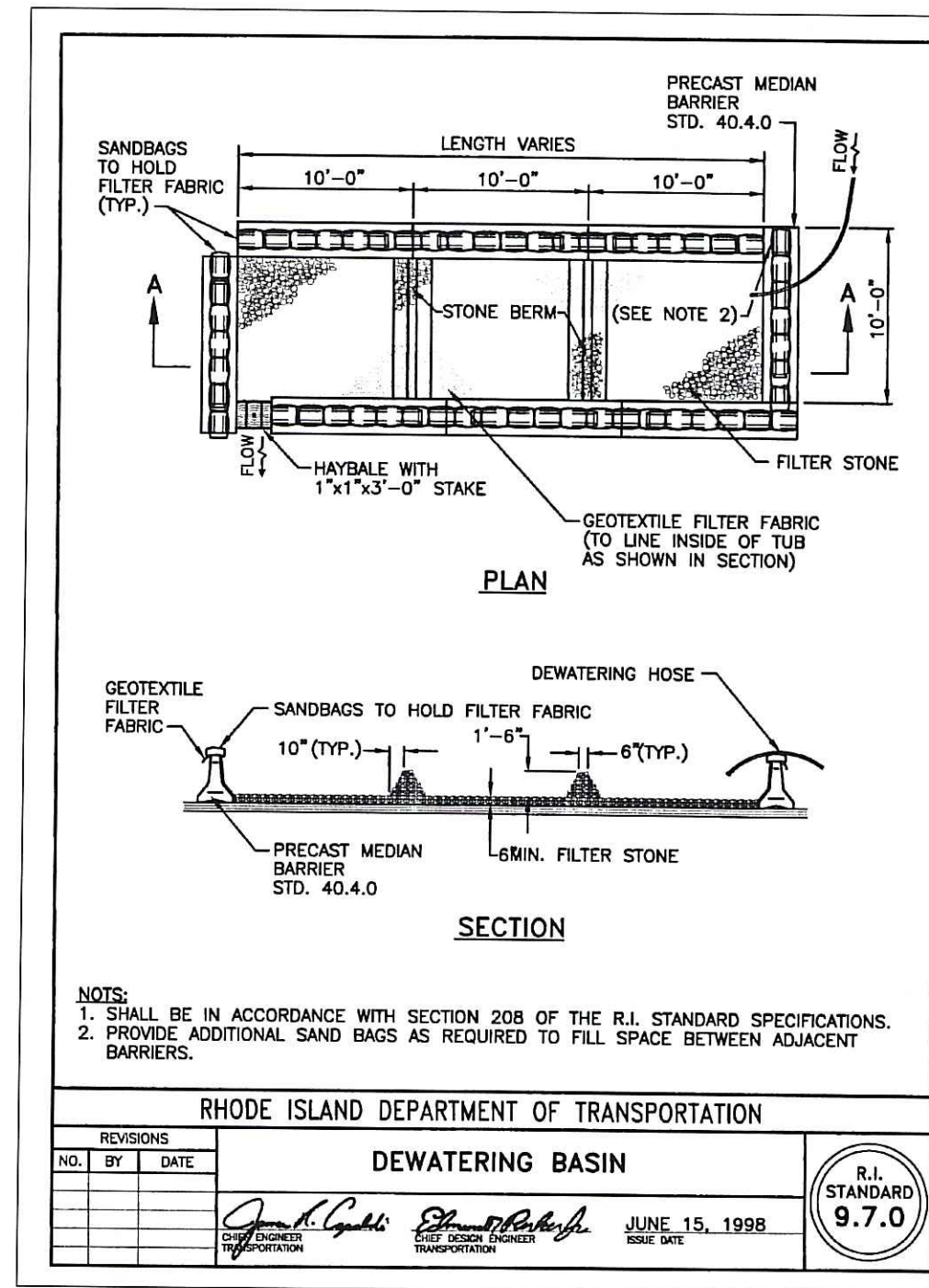
DAM REPAIR PLANS
for
AP 3E LOT 12
CAMELOT ESTATES PHASE B
RICHMOND, RHODE ISLAND
CONSTRUCTION PLAN

SCALE: AS NOTED	SHEET NO.: 2 OF 4
DRAWN BY: JP	DESIGN BY: JAR
DATE: 03/20/09	CHECKED BY: KK
	PROJECT NO.: 06059.00

EROSION CONTROL, SOIL STABILIZATION AND SEDIMENT CONTROL PROGRAM:

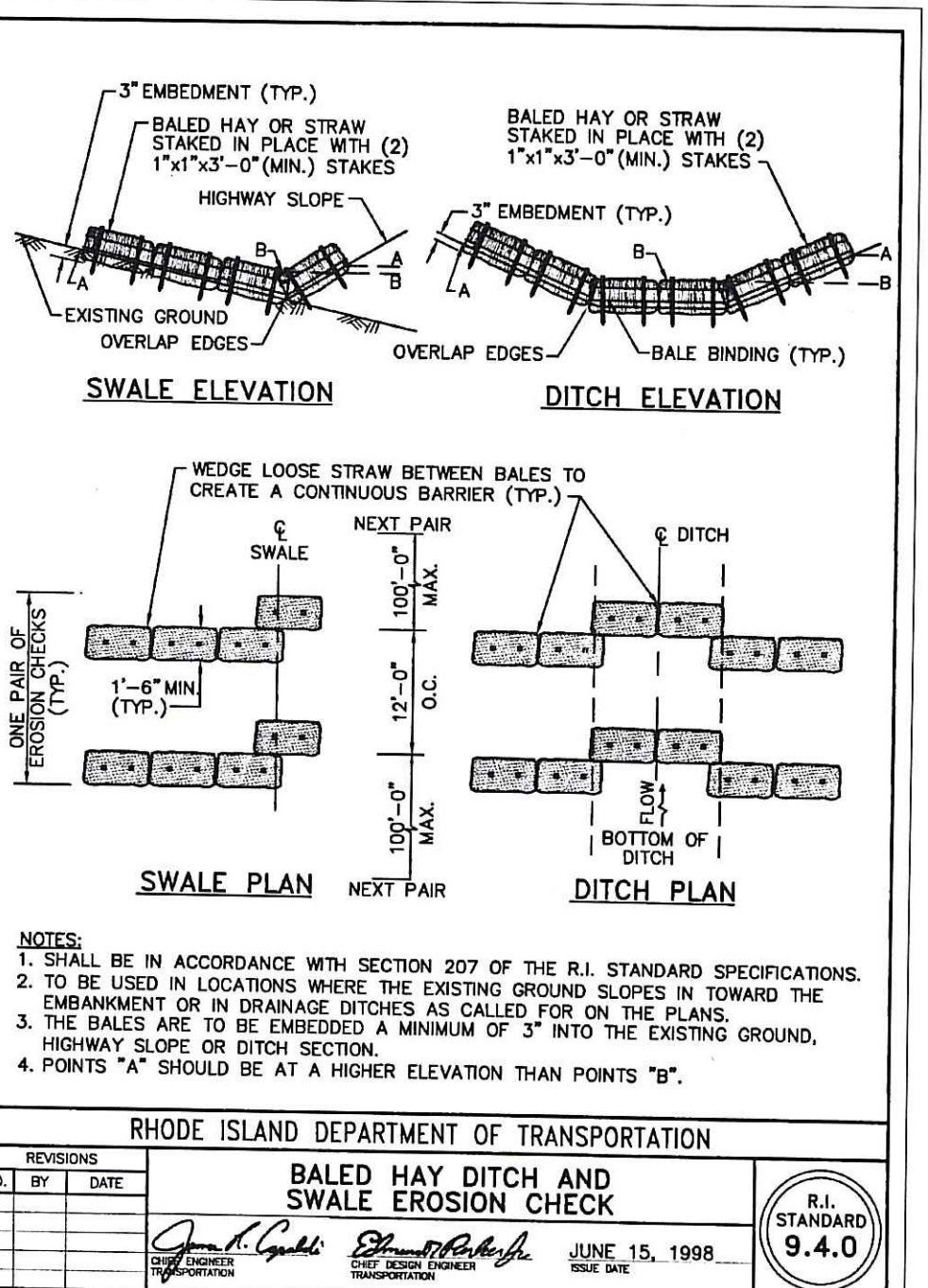
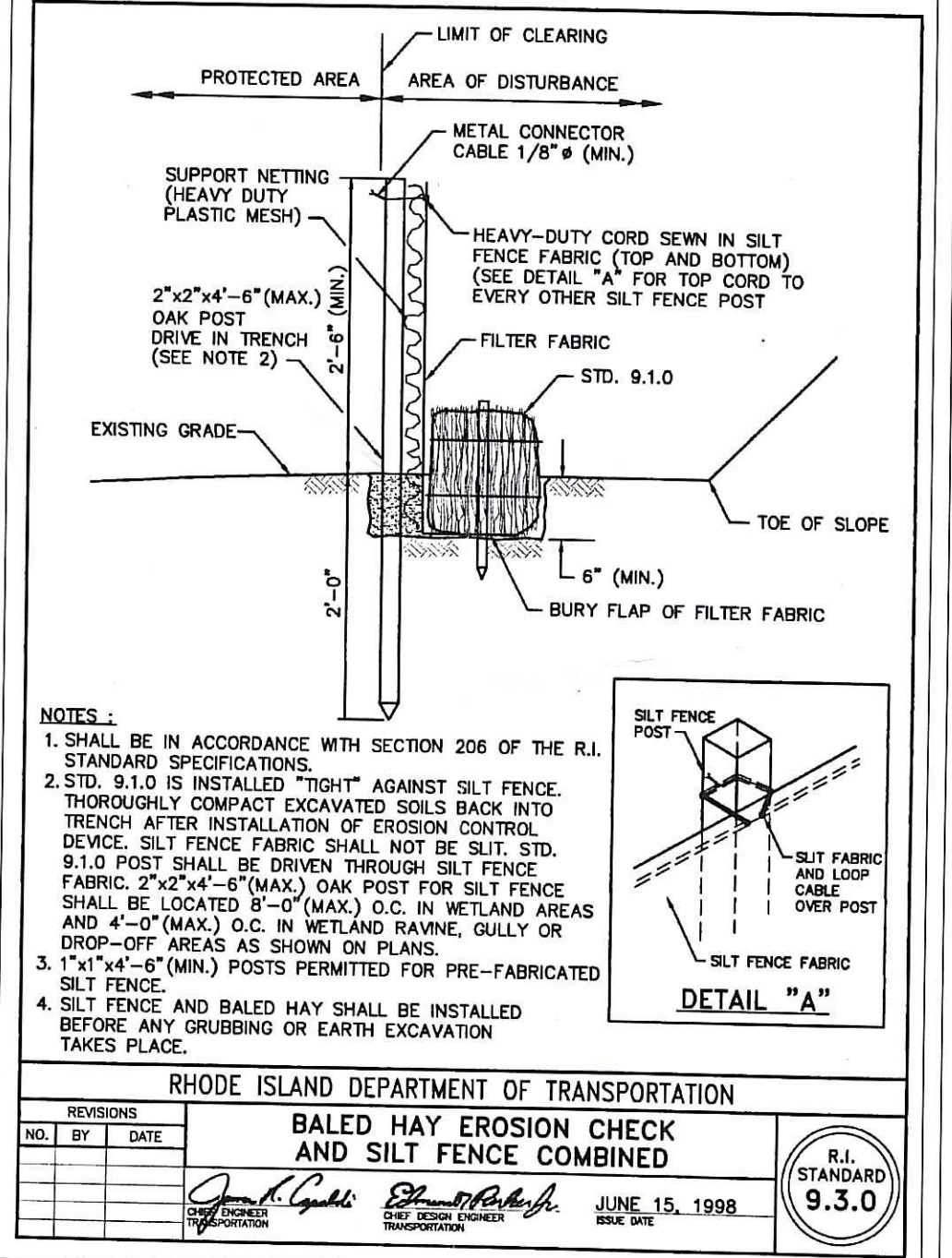
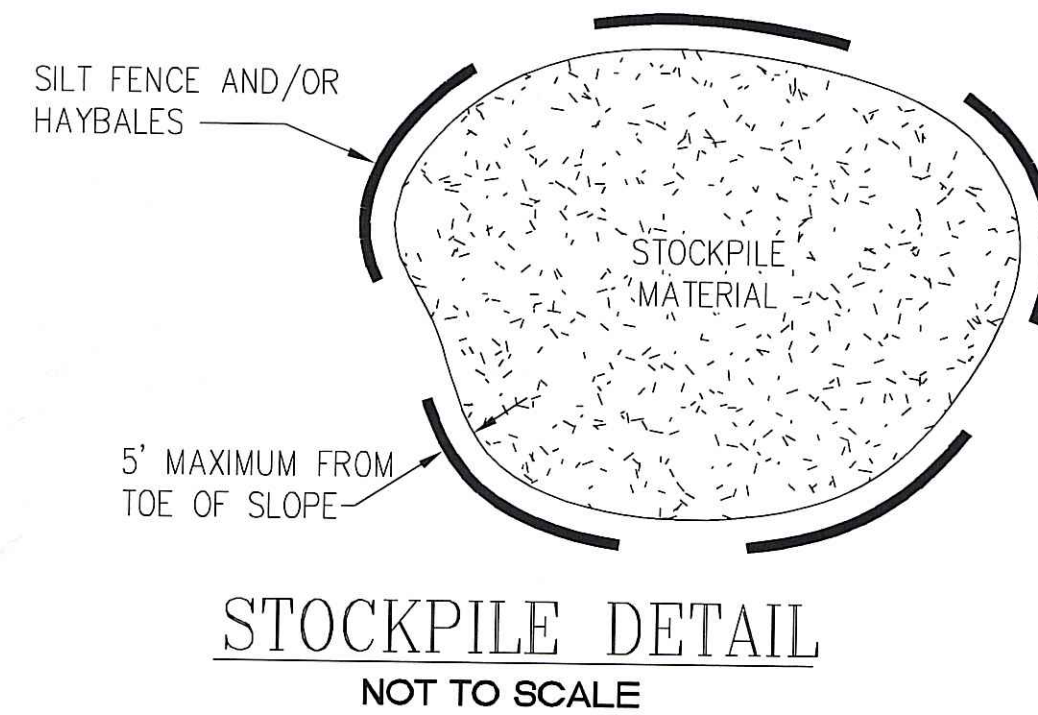
- PRIOR TO THE COMMENCEMENT OF ANY CLEARING, GRUBBING, DEMOLITION OR EARTHWORK ACTIVITY, TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AS INDICATED ON THE PLANS ARE TO BE INSTALLED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERIODIC INSPECTION, MAINTENANCE, REPAIR AND REPLACEMENT OF EROSION, SOIL STABILIZATION AND SEDIMENT CONTROL DEVICES UNTIL AN ACCEPTABLE PERMANENT VEGETATIVE GROWTH IS ESTABLISHED. THE CONTRACTOR SHALL MAINTAIN A DOCUMENTATION LOG OF ALL EROSION CONTROL MEASURE INSPECTIONS AND CORRECTIVE ACTIONS THROUGHOUT THE COURSE OF PROJECT CONSTRUCTION.
- TEMPORARY TREATMENTS SHALL CONSIST OF HAY, STRAW, FIBER MULCH, RIP-RAP OR PROTECTIVE COVER SUCH AS MAT OR FIBER LINING (BURLAP, JUTE FIBERGLASS OR NETTING AND EXCELSIOR). THESE AND OTHER ACCEPTABLE MEASURES SHALL BE INCORPORATED INTO THE WORK AS WARRANTED OR AS ORDERED BY ENGINEER.
- CONSTRUCTION SITES ARE DYNAMIC, THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND OR MOVEMENT OF EROSION, SOIL AND SEDIMENT CONTROL MEASURES AS NEEDED TO MAXIMIZE THE INTENT OF THE PROGRAM FOR ALL SITE CONDITIONS THROUGHOUT THE CONSTRUCTION PERIOD.
- HAY OR STRAW APPLICATION SHOULD BE IN THE AMOUNT OF 2000 LBS/ACRE.
- EROSION CONTROL MEASURES ARE TO BE REMOVED AT THE COMPLETION OF CONSTRUCTION OR AS DIRECTED BY THE ENGINEER.
- STOCKPILES OF TOPSOIL AND EARTH MATERIALS SHALL NOT BE LOCATED NEAR WATERWAYS OR WETLANDS. THEY SHALL HAVE SIDE SLOPES NO GREATER THAN THIRTY PERCENT (30%). STOCK PILES SHALL BE SURROUNDED ON THE DOWN GRADIENT OF THE GROUND SURFACE BY HAY BALES OR SILT FENCE AND THE STOCK PILE SHALL ALSO BE SEEDED AND/OR STABILIZED IN SOME MANNER TO PREVENT SOIL EROSION.
- DENUDED SLOPES SHALL NOT BE LEFT EXPOSED FOR EXCESSIVE PERIODS OF TIME, SUCH AS INACTIVE WINTER PERIODS.
- EXPOSED STEEP OR LONG SLOPES SHOULD BE TREATED WITH "CRIMPING" OR "TRACKING" TO REDUCE EROSION AND SEDIMENT AND TO TACK DOWN SEEDING OR MULCH APPLICATIONS.
- TEMPORARY SEEDING SHOULD BE DONE WITHIN ONE (1) MONTH AFTER DISTURBANCE.
- ALL DISTURBED AREAS MUST BE SEED OR PLANTED WITHIN THE CONSTRUCTION SEASON. STABILIZATION OF ONE FORM OR ANOTHER SHALL BE ACHIEVED WITHIN FIFTEEN (15) DAYS OF FINAL GRADING.
- TOPSOIL SHALL HAVE A SANDY LOAM TEXTURE, RELATIVELY FREE OF SUBSOIL MATERIAL, STONES, ROOTS, LUMPS OF SOIL, TREE LIMBS, TRASH OR CONSTRUCTION DEBRIS, TOPSOIL SHALL CONFORM WITH RHODE ISLAND SPECIFICATION M 20.01.
- THE NORMAL ACCEPTABLE SEASONABLE SEEDING DATES AREA APRIL 1ST THROUGH OCTOBER 31ST.
- SEED MIX SHALL BE INOCULATED WITHIN 24-HOURS BEFORE MIXING AND PLANTING, WITH APPROPRIATE INOCULATION FOR EACH SEED VARIETY.
- THE DESIGN SEED MIX UTILIZED IN ALL DISTURBED AREAS TO BE SEED SHALL BE COMPRISED OF THE FOLLOWING:

TYPE	% BY WEIGHT	SEEDING DATE
CREEING RED FESCUE	70	APRIL 1 - JUNE 15
ASTORIA BENTGRASS	5	AUG 15 - OCT 15
BIRDSFOOT TREEFOIL	15	
PERENNIAL RYEGRASS	10	
APPLICATION RATE	100LBS-ACRES	
- IN TOPSOIL SEEDING AREAS, THE CONTRACTOR WILL LIME AND/OR FERTILIZE AS REQUIRED TO COMPLIMENT OR UPGRADE EXISTING SOIL CONDITIONS.
- THE CONTRACTOR MUST REPAIR AND/OR RESEED ANY AREAS THAT DO NOT DEVELOP WITHIN A PERIOD OF ONE (1) YEAR. REPAIR AND RESEED SHALL BE DONE AT NO ADDITIONAL COST.
- TREES OR SHRUBS TO BE RETAINED SHALL BE FENCED OR ROPED OFF TO PROTECT THEM FROM CONSTRUCTION EQUIPMENT.



PERIODIC DAM MAINTENANCE ACTIVITIES:

- PERIODICALLY REMOVE VEGETATION (WEEDS, SAPLINGS, ETC.) FROM RIP RAP AREAS ALONG THE LIMITS OF THE DAM. FREQUENCY OF CUTTING SHALL BE BASED ON THE RATE OF VEGETATIVE GROWTH, AND PERFORMED TO PREVENT SUBSTANTIAL ROOT STRUCTURE FORMATION ALONG THE DAM.
- AS REQUIRED, REMOVED WATER BORNE DEBRIS FROM THE DAM SPILLWAY CREST AND OUTLET.
- RESET ANY PIECES OF RIPRAP ARMOR THAT HAVE BECOME DISLODGED DUE TO TRAFFIC OR SETTLEMENT. AT ALL TIMES, THE POLYETHYLENE LINE SHALL NOT BE EXPOSED TO EXTENDED PERIODS OF DIRECT SUNLIGHT.
- ENVIRONMENTAL CONDITIONS MAY REQUIRE THAT SPILLWAY FLASHBOARDS BE REMOVED OR ADDED TO MAINTAIN THE EXISTING POND WATER ELEVATION.
- WOODEN FLASHBOARDS SHALL BE PERIODICALLY INSPECTED AND DETERIORATED PIECES REPLACED WITH NEW PRESSURE TREATED SOUTHERN PINE BOARDS TO MATCH THE SIZE(S) OF THE EXISTING FLASH BOARDS.
- HOMEOWNERS' ASSOCIATION WILL BE RESPONSIBLE FOR DAM MAINTENANCE.



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Kambiz Karbassi
 No. 4737
 REGISTERED PROFESSIONAL ENGINEER

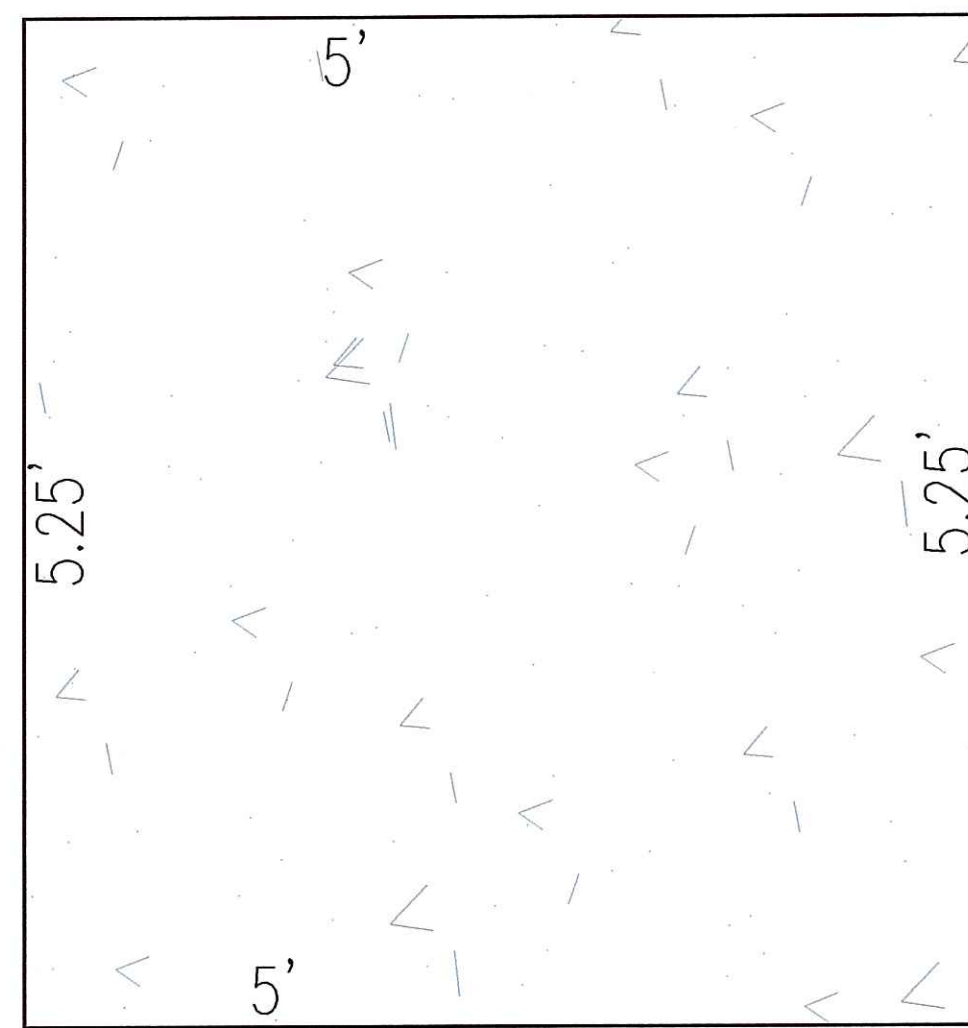
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No.	DATE	DRWN	CHKD
1.	07/02/09	KAB	KK

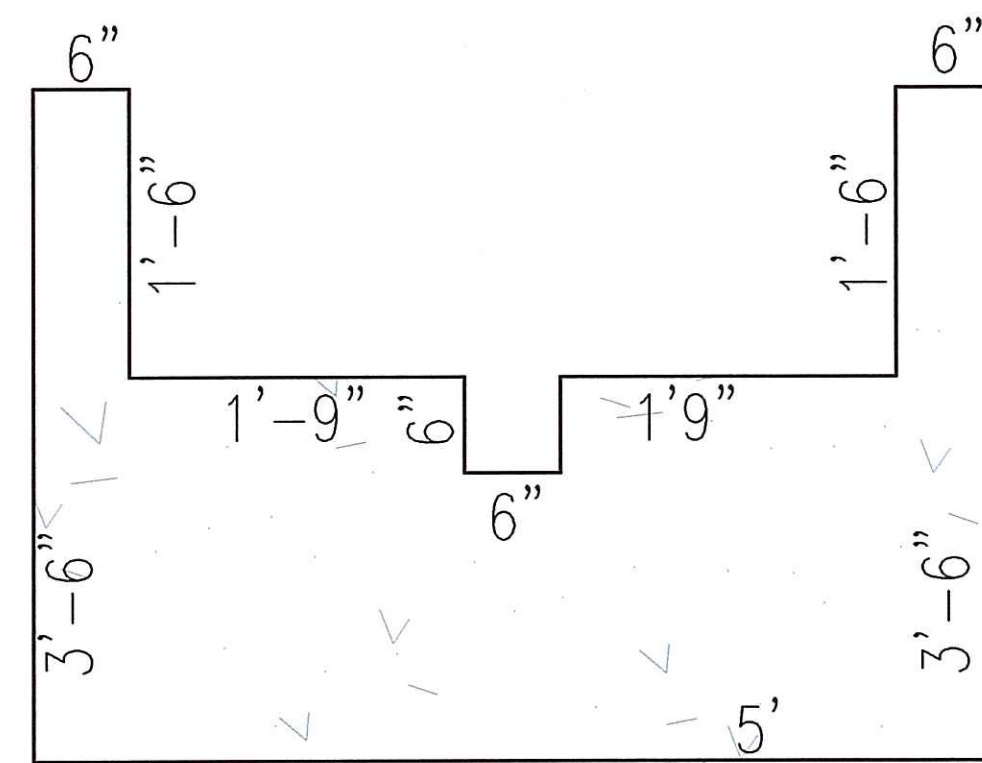
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DAM REPAIR PLANS
 for
 AP 3E LOT 12
 CAMELOT ESTATES PHASE B
 in
 RICHMOND, RHODE ISLAND
 CONSTRUCTION DETAILS

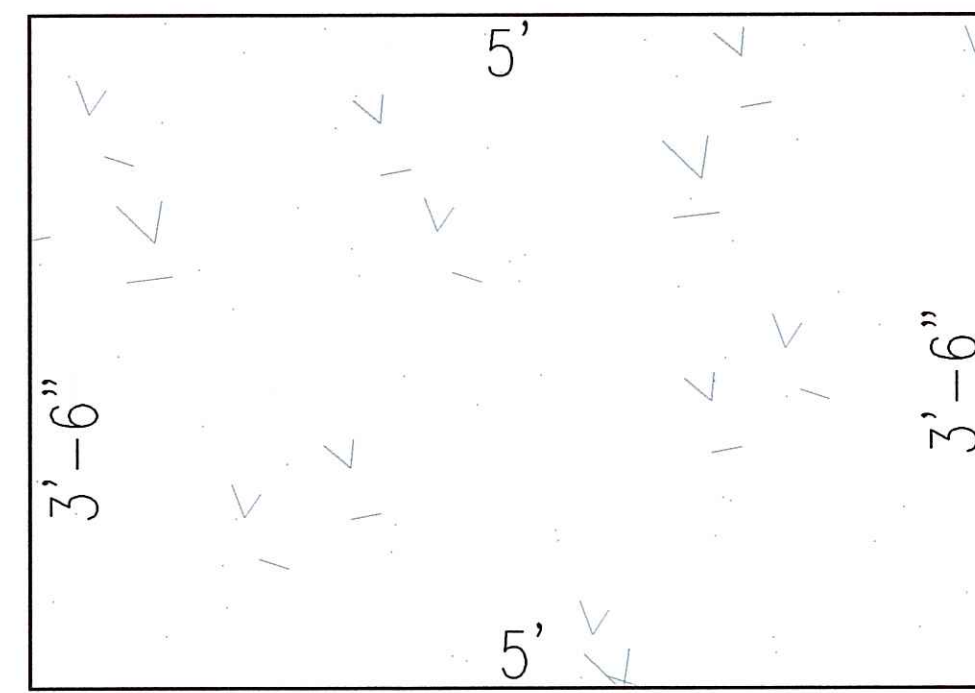
SCALE: AS NOTED	SHEET NO: 3 OF 4
DRAWN BY: JP	DESIGN BY: JAR
DATE: 03/20/09	CHECKED BY: KK
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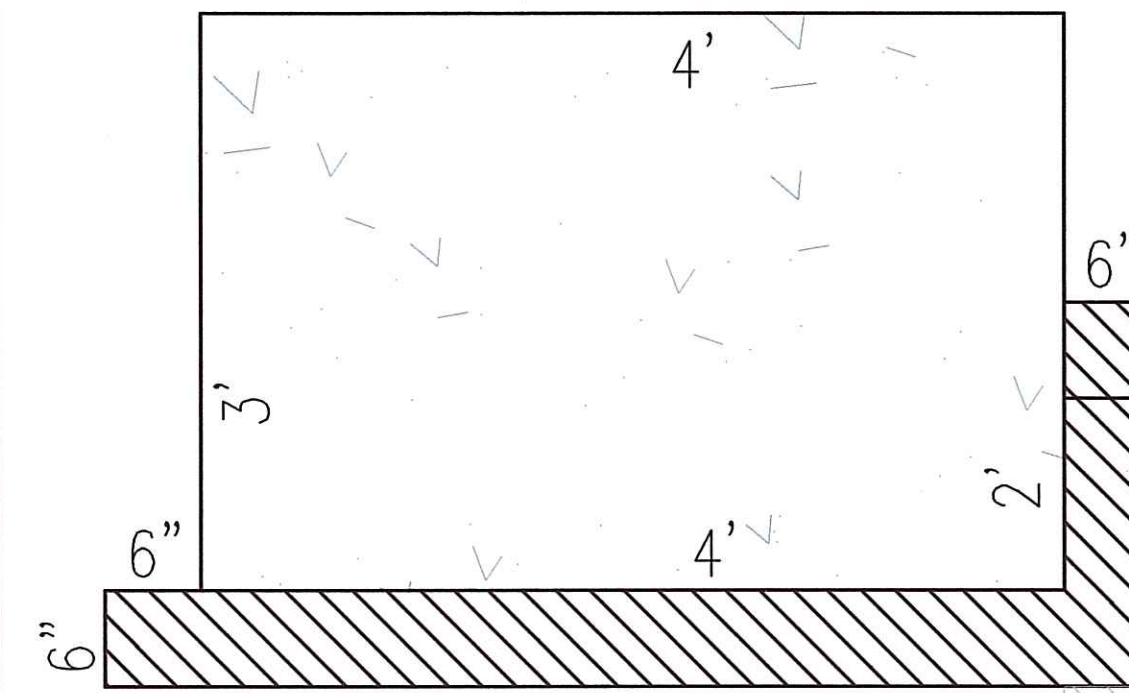
BOTTOM PANEL



FRONT PANEL



LEFT & RIGHT PANELS



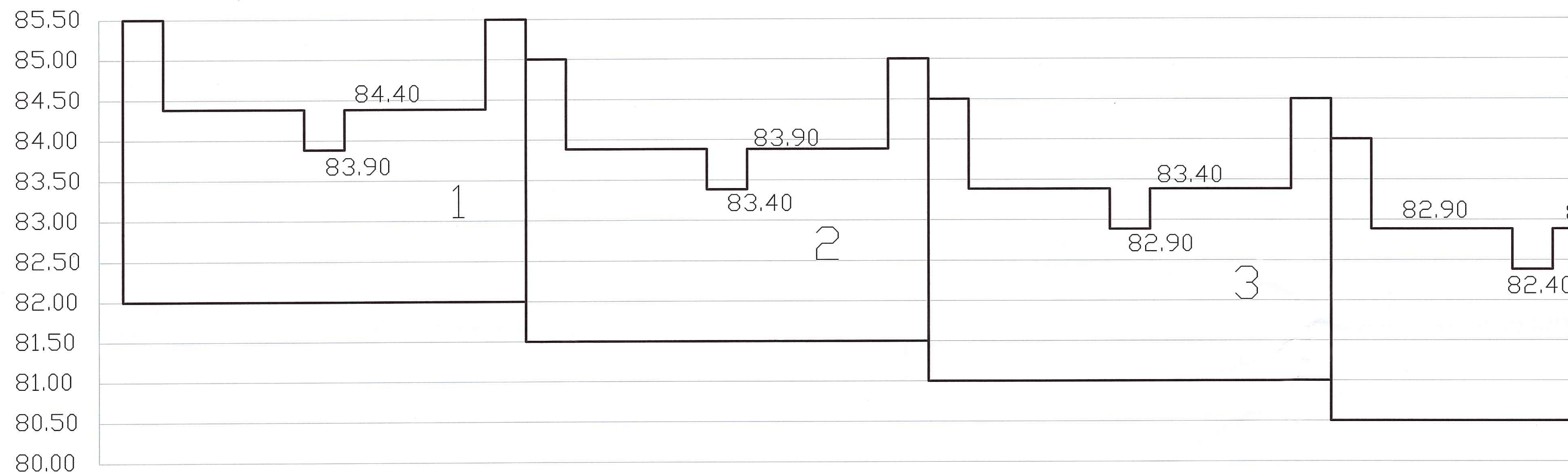
SIDE VIEW

ELEVATION VIEW-PRECAST CONCRETE BOX FISH LADDER

SCALE: 1"=1'

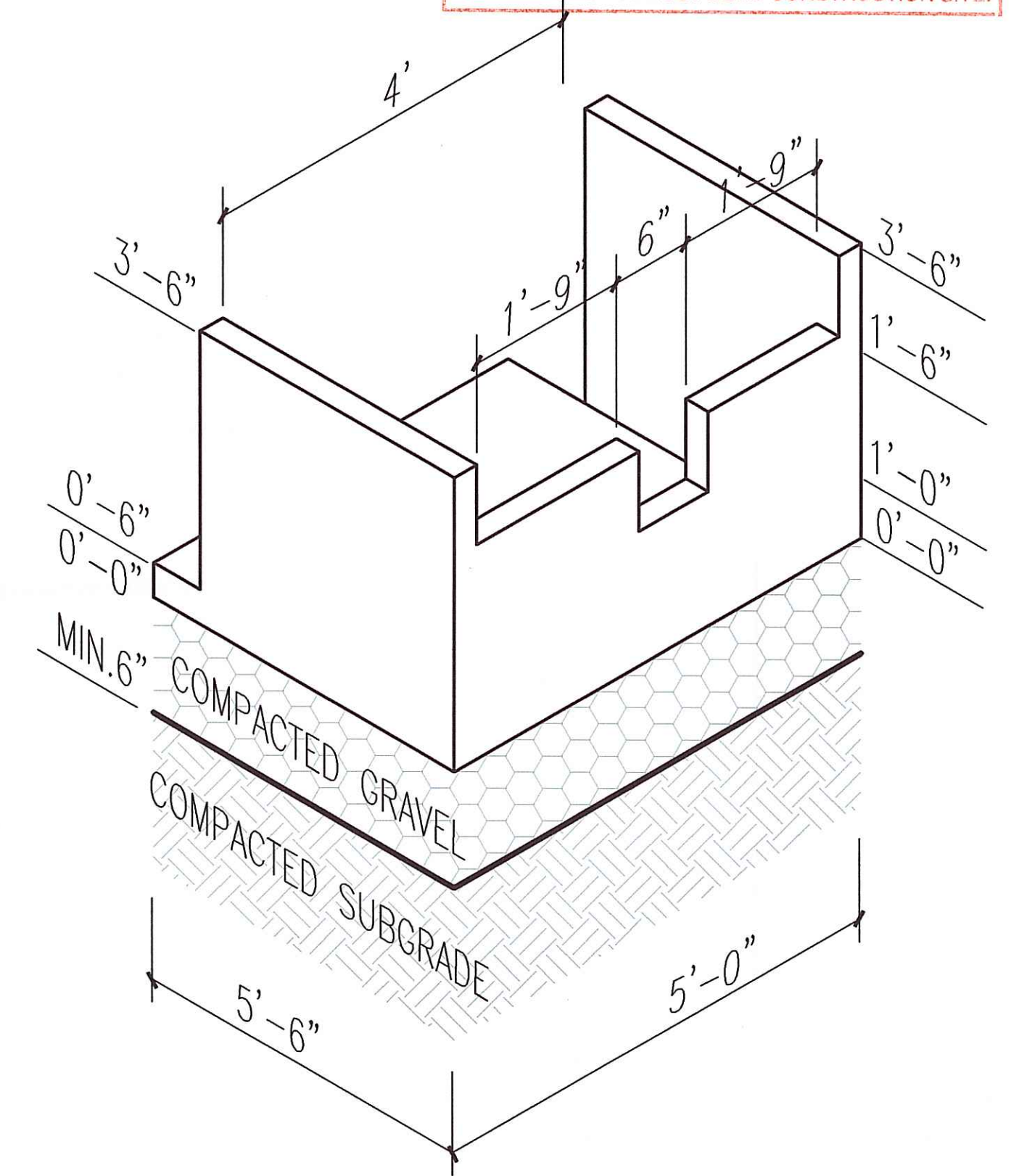
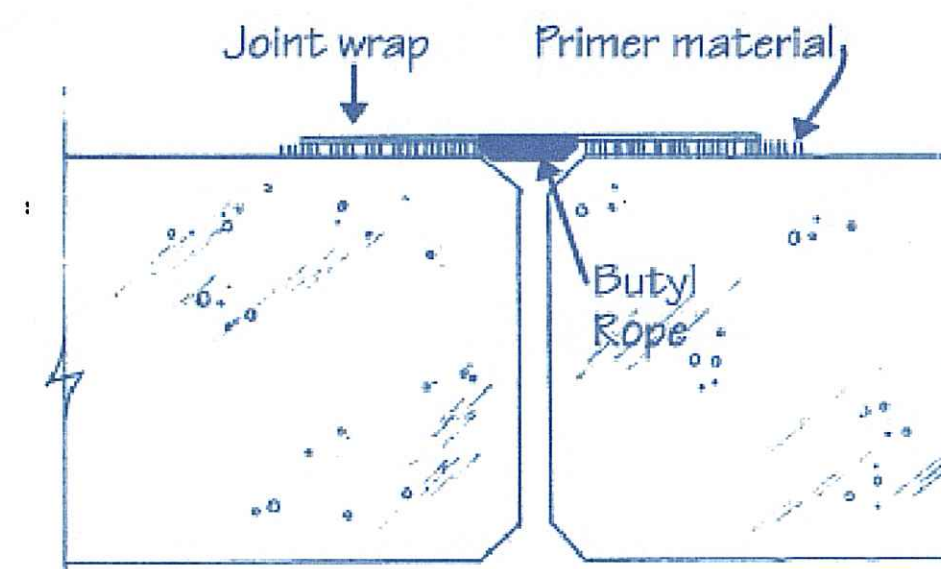


DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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FISH LADDER INSTALLATION

1. FISH LADDER INSTALLATION SHALL TAKE PLACE DURING LOW FLOW CONDITIONS.
2. INDIVIDUAL BOX UNITS SHALL BE SET ON COMPACTED SUBGRADE.
3. BUTT JOINTS MADE BY TWO ADJOINING UNITS SHALL BE COVERED WITH A 1" X 2" PIECE OF BUTYL ROPE AND A MINIMUM OF 6" WIDE JOINT WRAP. THE SURFACE SHALL BE FREE OF DIRT. A PRIMER COMPATIBLE WITH THE JOINT WRAP TO BE USED SHALL BE APPLIED. EXTERNAL WRAP SHALL BE EZ-WRAP RUBBER OR APPROVED EQUAL.
4. SHOP DRAWINGS ARE REQUIRED.
5. EACH BOX UNIT IS TO CONTAIN A GRAVEL/COBBLE MIXTURE TO A MAXIMUM DEPTH OF 6 INCHES. THIS MATERIAL SHALL BE A ROUNDED AND WASHED GRAVEL BANK RUN MATERIAL PREFERABLY 1-6 INCHES IN DIAMETER WITH NO MORE THAN 10% OF THE MATERIAL BEING IN THE 4-6 INCH SIZE RANGE.



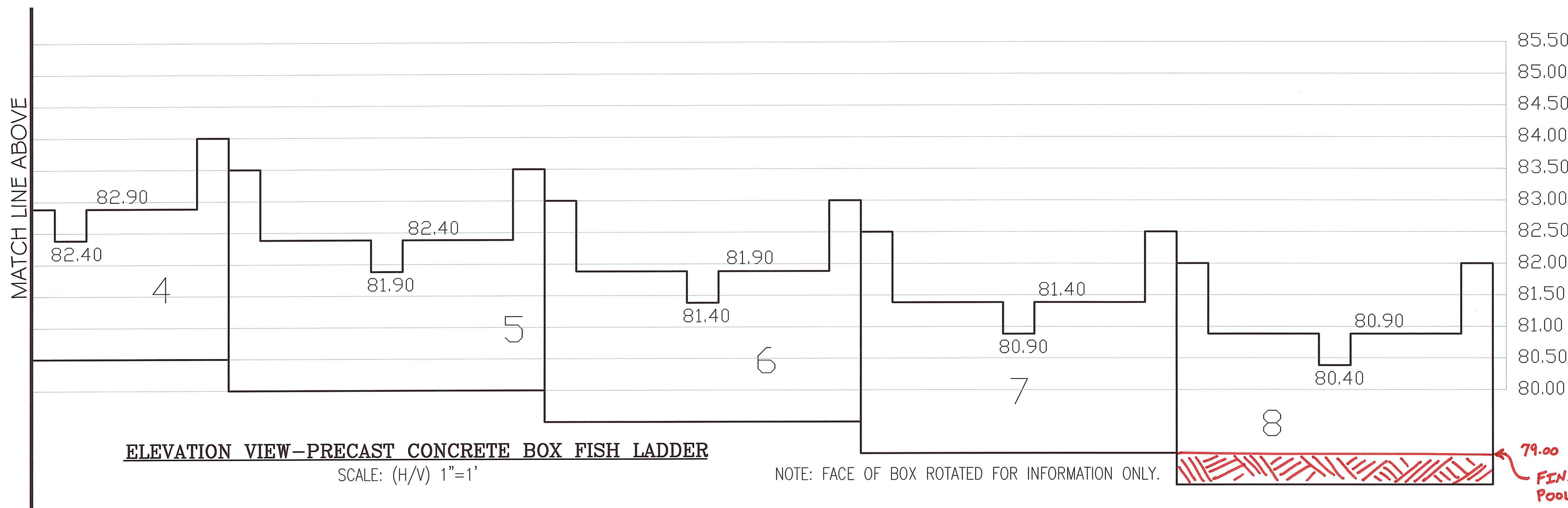
ISOMETRIC VIEW-PRECAST CONCRETE BOX

NTS

ELEVATION VIEW-PRECAST CONCRETE BOX FISH LADDER

SCALE: (H/V) 1"=1'

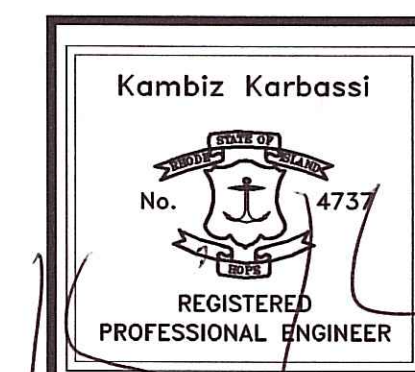
NOTE: FACE OF BOX ROTATED FOR INFORMATION ONLY.



ELEVATION VIEW-PRECAST CONCRETE BOX FISH LADDER

SCALE: (H/V) 1"=1'

NOTE: FACE OF BOX ROTATED FOR INFORMATION ONLY.



REVISIONS			
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1.	07/02/09	KAB	KK
2.	12/28/09	KAB	KK

DAM REPAIR PLANS
for
AP 3E LOT 12
CAMELOT ESTATES PHASE B
in
RICHMOND, RHODE ISLAND
CONSTRUCTION DETAILS

SCALE: AS NOTED	SHEET NO: 4 OF 4	
DRAWN BY: KAB	DESIGN BY: KAB	CHECKED BY: KK
DATE: 03/20/09	PROJECT NO.: 06059.00	