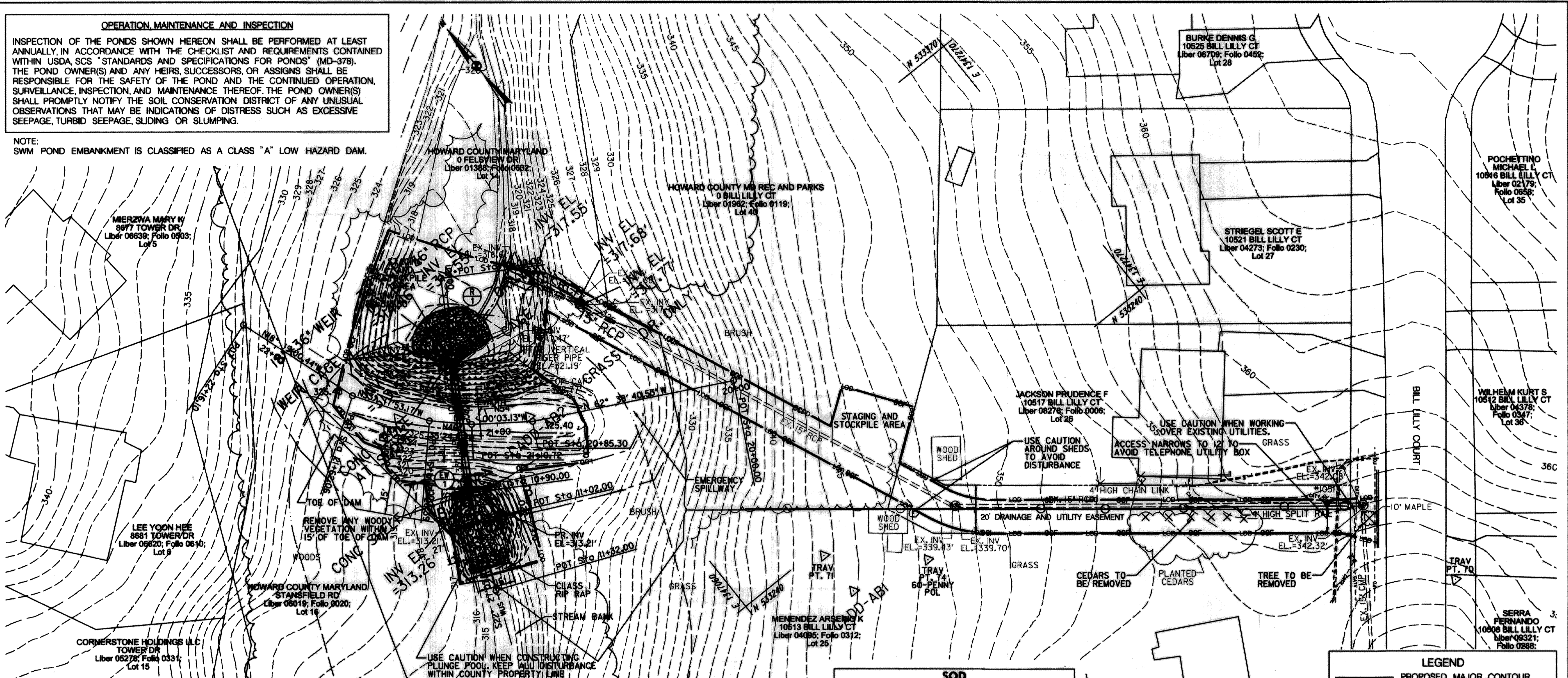


OPERATION, MAINTENANCE AND INSPECTION

INSPECTION OF THE PONDS SHOWN HEREON SHALL BE PERFORMED AT LEAST ANNUALLY, IN ACCORDANCE WITH THE CHECKLIST AND REQUIREMENTS CONTAINED WITHIN USDA, SCS "STANDARDS AND SPECIFICATIONS FOR PONDS" (MD-378). THE POND OWNER(S) AND ANY HEIRS, SUCCESSORS, OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE POND AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF. THE POND OWNER(S) SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATIONS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUMPING.

NOTE:
SWM POND EMBANKMENT IS CLASSIFIED AS A CLASS "A" LOW HAZARD DAM.



SURVEY CONTROL			
TRAVERSE POINT	ELEVATION	NORTHING	EASTING
70	353.05	533063.8931	1347297.5905
71	343.67	533236.1219	1347096.6138
72	325.40	533394.1741	1346995.9106
74	347.40	533207.7670	1347131.3723

CONSTRUCTION BASELINE CONTROL COORDINATES			
POINT	STATION	NORTHING	EASTING
POT	10+00.00	533425.8840	1347046.3098
POT	10+90.00	533348.8755	1346999.7300
POT	11+02.00	533338.0538	1346994.5444
POT	11+32.00	533310.3278	1346983.0871
POT	20+00.00	533316.4314	1347114.7016
POT	20+85.30	533355.6268	1347038.9418
POT	21+10.72	533370.5692	1347018.3746
POT	21+28.39	533382.7119	1347005.5385
POT	21+62.06	533410.8517	1346987.0555
POT	22+16.10	533462.1517	1346970.0729

REMOVE AND RESET 4' HIGH SPLIT RAIL FENCE	
QUANTITY (LF)	REMARKS
190	SCE TO EXISTING SHED

30" RCP - ASTM C-361, CLASS B-25	
STATION	QTY (L.F.)
STA. 10+35 TO STA. 10+90	55

TYPE C ENDWALL FOR 30" RCP, EW-1		
STATION	QTY (EA)	REMARKS
STA. 10+90, 0' LT	1	SEE DETAIL D-5.21 ON SHEET 4

RISER STRUCTURE R-1 SEE DETAIL, SHEET 4	
STATION	QTY (EA)
STA. 10+35, 0' LT	1

STABILIZATION MATTING	
QUANTITY (SY)	REMARKS
413	BIODEGRADABLE STRAW MATTING ON EMBANKMENT

TREE REMOVAL	
QUANTITY (EA)	REMARKS
7	IN DRAINAGE AND UTILITY EASEMENT

CLASS I RIP RAP	
STATION	QTY (S.Y.)
STA. 10+24, 0' LT	60
STA. 11+19, 0' LT	11

CLASS II RIP RAP	
STATION	QTY (S.Y.)
STA. 11+02, 0' LT	59

SOD	
QUANTITY (SY)	REMARKS
305	PLACE SOD IN EASEMENT USED FOR ACCESS

EXCAVATION	
QUANTITY (CY)	REMARKS
308	EMBANKMENT AND OUTFALL

GEOSYNTHETIC CLAY LINER	
QUANTITY (SY)	REMARKS
127	FOR LINING UPSTREAM EMBANKMENT

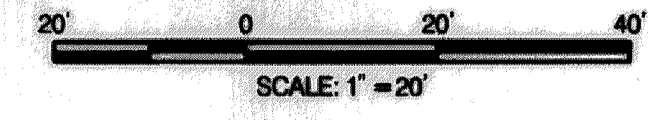
GEOTEXTILE	
QUANTITY (SY)	REMARKS
59	CLASS SE

ORANGE CONSTRUCTION FENCE	
QTY (LF)	REMARKS
1120	FOR PERIMETER & MULCH ACCESS

NOTE:
PLACE FILL ON TOP OF EMBANKMENT TO BRING TO FINISHED ELEVATION OF 325.40 MIN. TOP WIDTH 8'

LEGEND

- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- TOE OF DAM
- PROPERTY LINE
- EXISTING TREE
- 4' SPLIT RAIL FENCE
- WUS - WATERS OF THE US
- 75' STREAM BUFFER
- CLASS 1 RIP RAP
- CLASS 2 RIP RAP
- GEOSYNTHETIC CLAY LINER
- LOD - LIMIT OF DISTURBANCE
- OCF - ORANGE CONSTRUCTION FENCE
- 30" RCP



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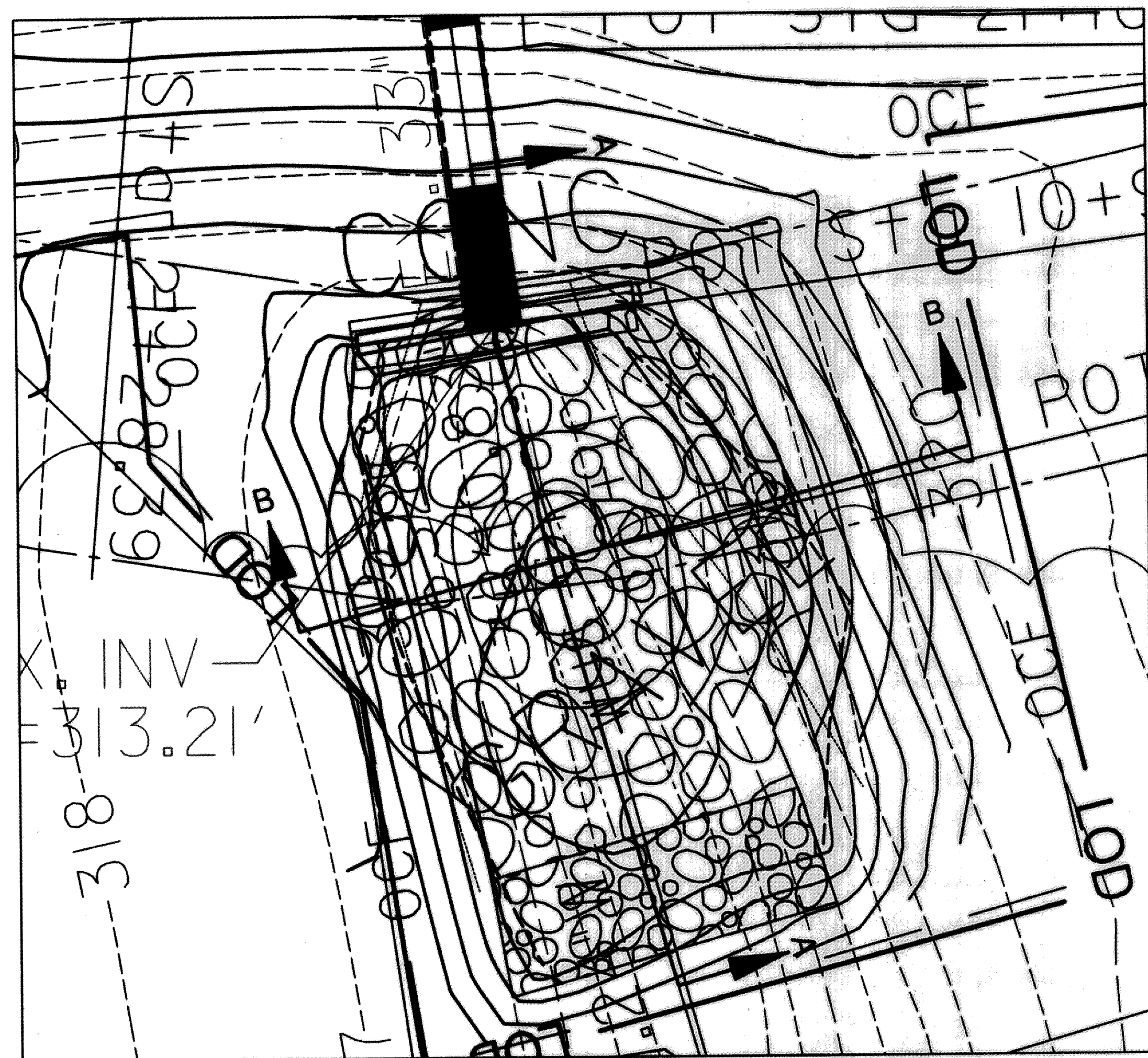
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DRN: MR			
CHK: CB			
DATE: 8/1/12			
BY	NO.	REVISION	DATE

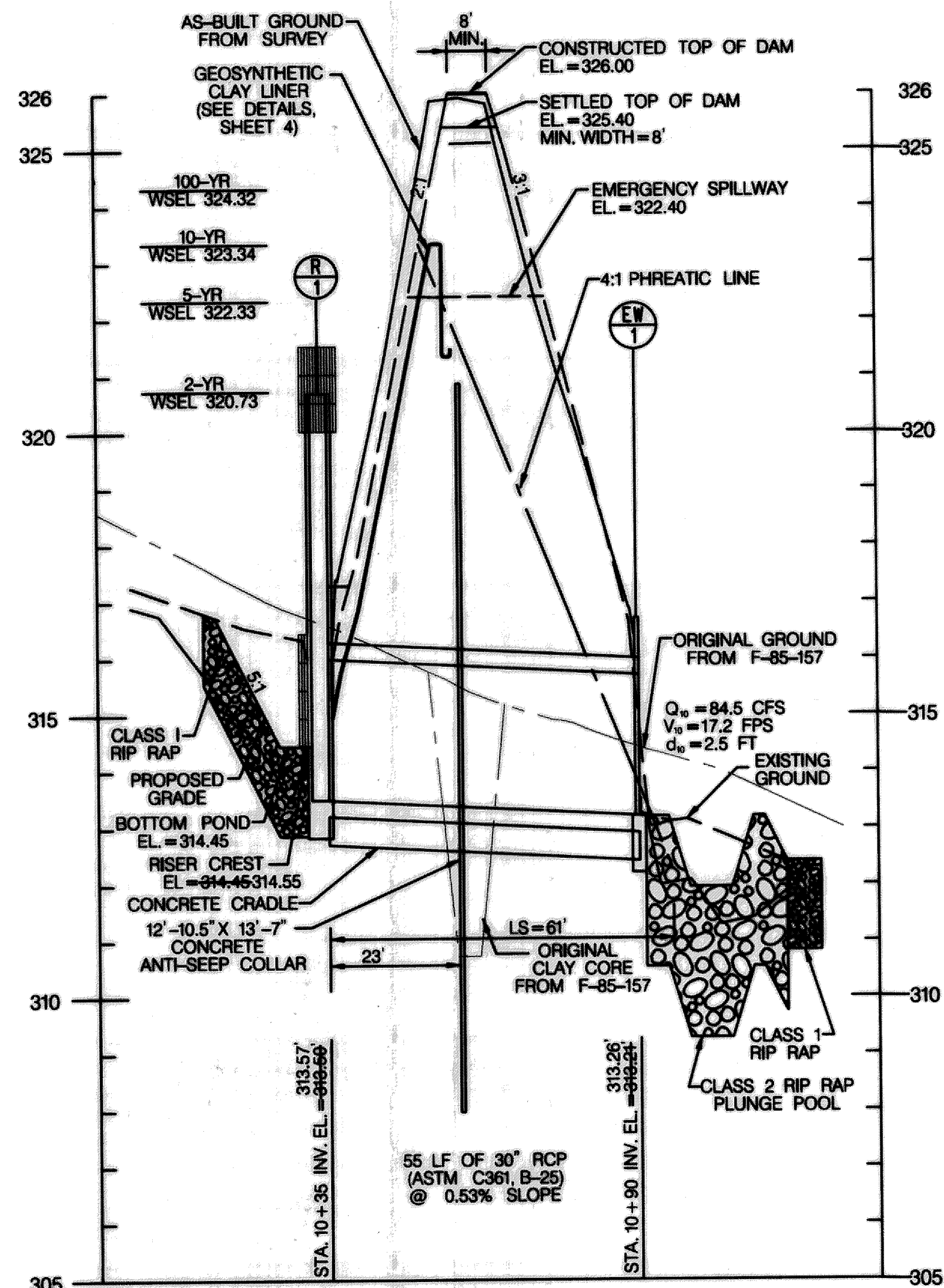
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PRINCIPAL SPILLWAY REPLACEMENT PROJECT
CAPITAL PROJECT D 1159
HOWARD COUNTY**

SITE PLAN

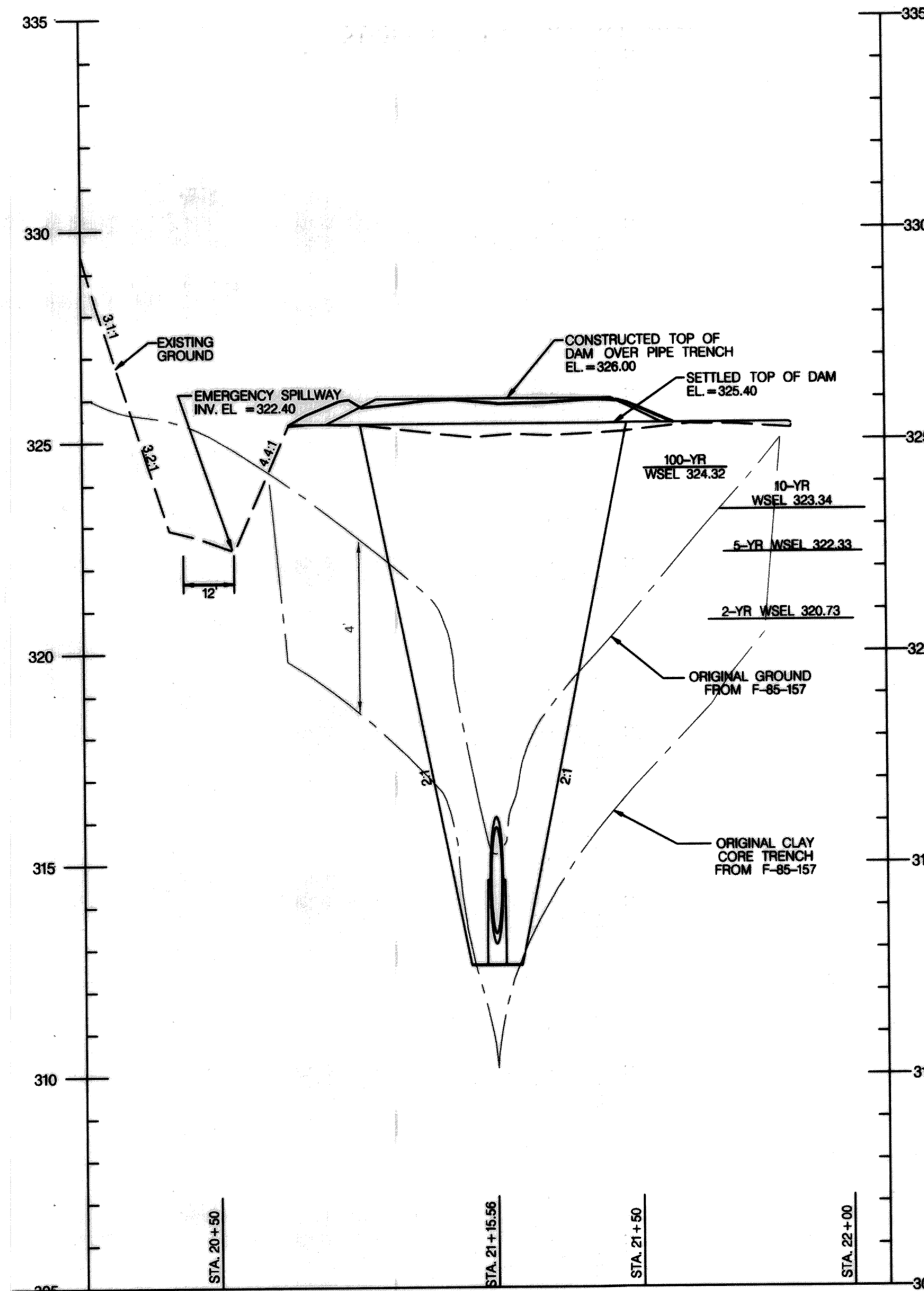
SCALE: 1" = 20'
SHEET: 2 OF 4



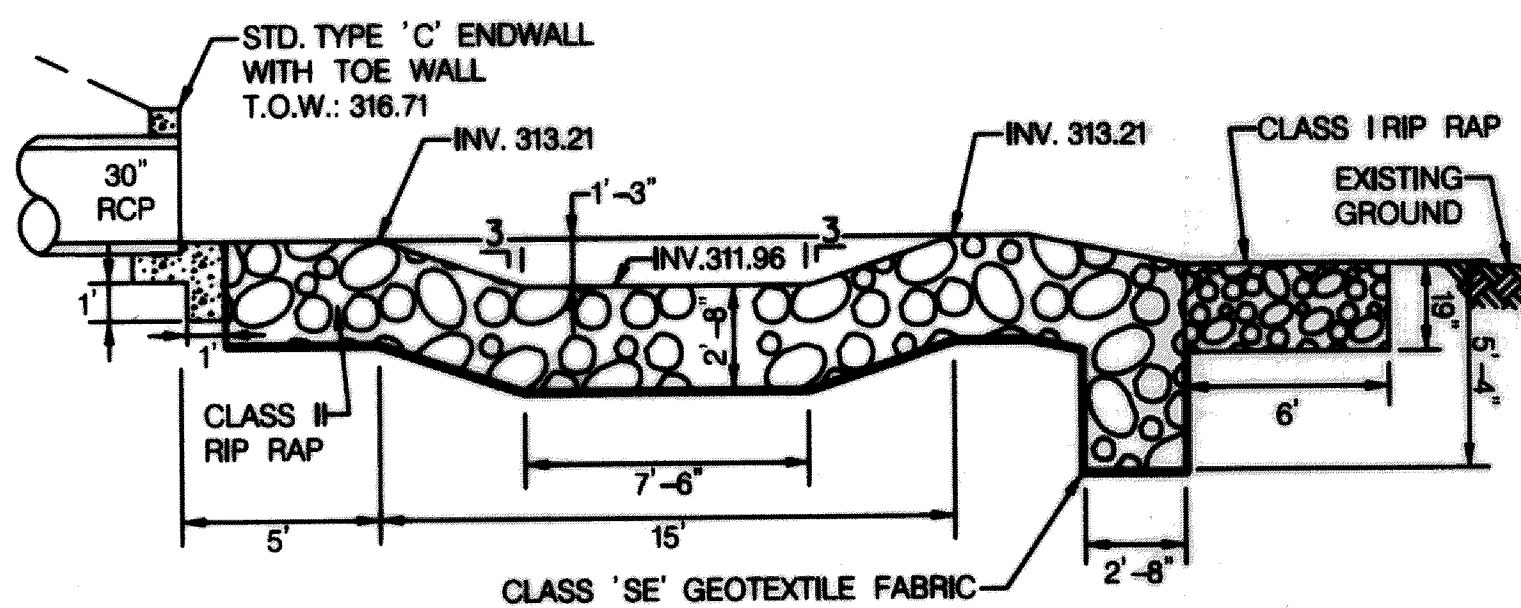
RIP RAP PLUNGE POOL DETAIL
STA 11+00.0' LT SCALE: 1" = 5'



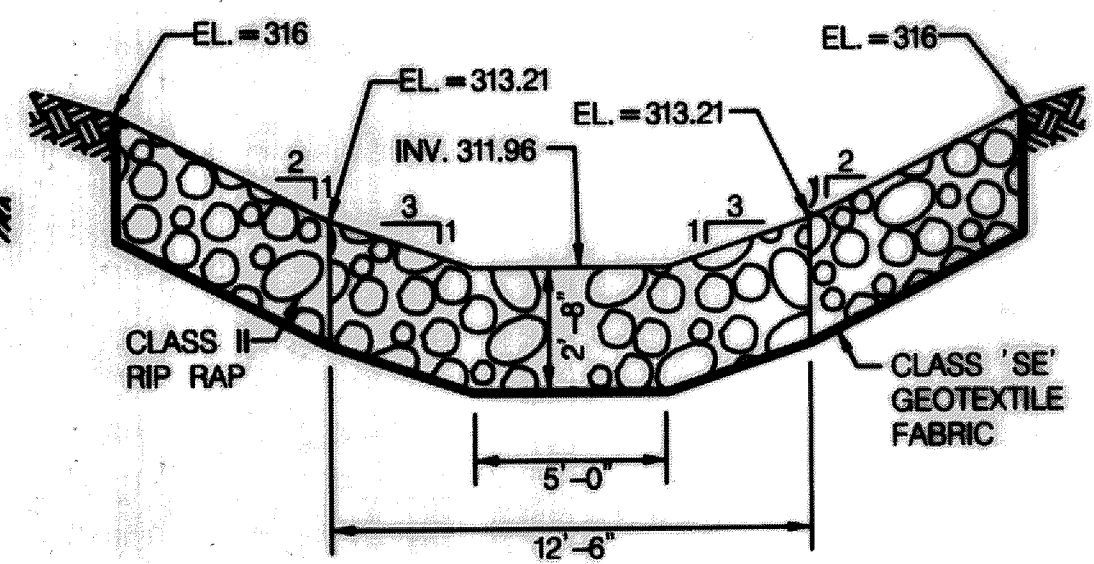
SPILLWAY PIPE PROFILE
HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 2'



CENTERLINE OF EMBANKMENT PROFILE
HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 2'



SECTION A-A
SCALE: 1" = 5'



SECTION B-B
SCALE: 1" = 5'

FILTER FABRIC LINING GEOTEXTILE CLASS 'SE' SHALL BE EMBEDDED A MINIMUM OF 4" AND SHALL EXTEND 6" BEYOND THE EDGE OF RIPRAP.

PLUNGE POOL CONSTRUCTION SPECIFICATIONS

1. PREPARE THE SUBGRADE FOR THE PLUNGE POOL TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
2. USE SPECIFIED CLASS OF RIPRAP.
3. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, AND PROTECT FROM PUNCHING, CUTTING, OR TEARING. REPAIR ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE BY PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. PROVIDE A MINIMUM OF ONE FOOT OVERLAP FOR ALL REPAIRS AND FOR JOINING TWO PIECES OF GEOTEXTILE. EMBED THE GEOTEXTILE A MINIMUM OF 4 INCHES AND EXTEND THE GEOTEXTILE A MINIMUM OF 6 INCHES BEYOND THE EDGE OF THE SCOUR HOLE.
4. STONE FOR THE PLUNGE POOL MAY BE PLACED BY EQUIPMENT, CONSTRUCT TO THE FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. DELIVER AND PLACE THE STONE FOR THE PLUNGE POOL IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENEOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. PLACE STONE FOR THE PLUNGE POOL IN A MANNER TO PREVENT DAMAGE TO THE GEOTEXTILE. HAND PLACE TO THE EXTENT NECESSARY.
5. AT THE PLUNGE POOL OUTLET, PLACE THE STONE SO THAT IT MEETS THE EXISTING GRADE.
6. MAINTAIN LINE, GRADE, AND CROSS SECTION. KEEP OUTLET FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. AFTER HIGH FLOWS INSPECT FOR SCOUR BENEATH THE RIPRAP OR DISLODGEEMENT OF STONES. MAKE NECESSARY REPAIRS IMMEDIATELY.

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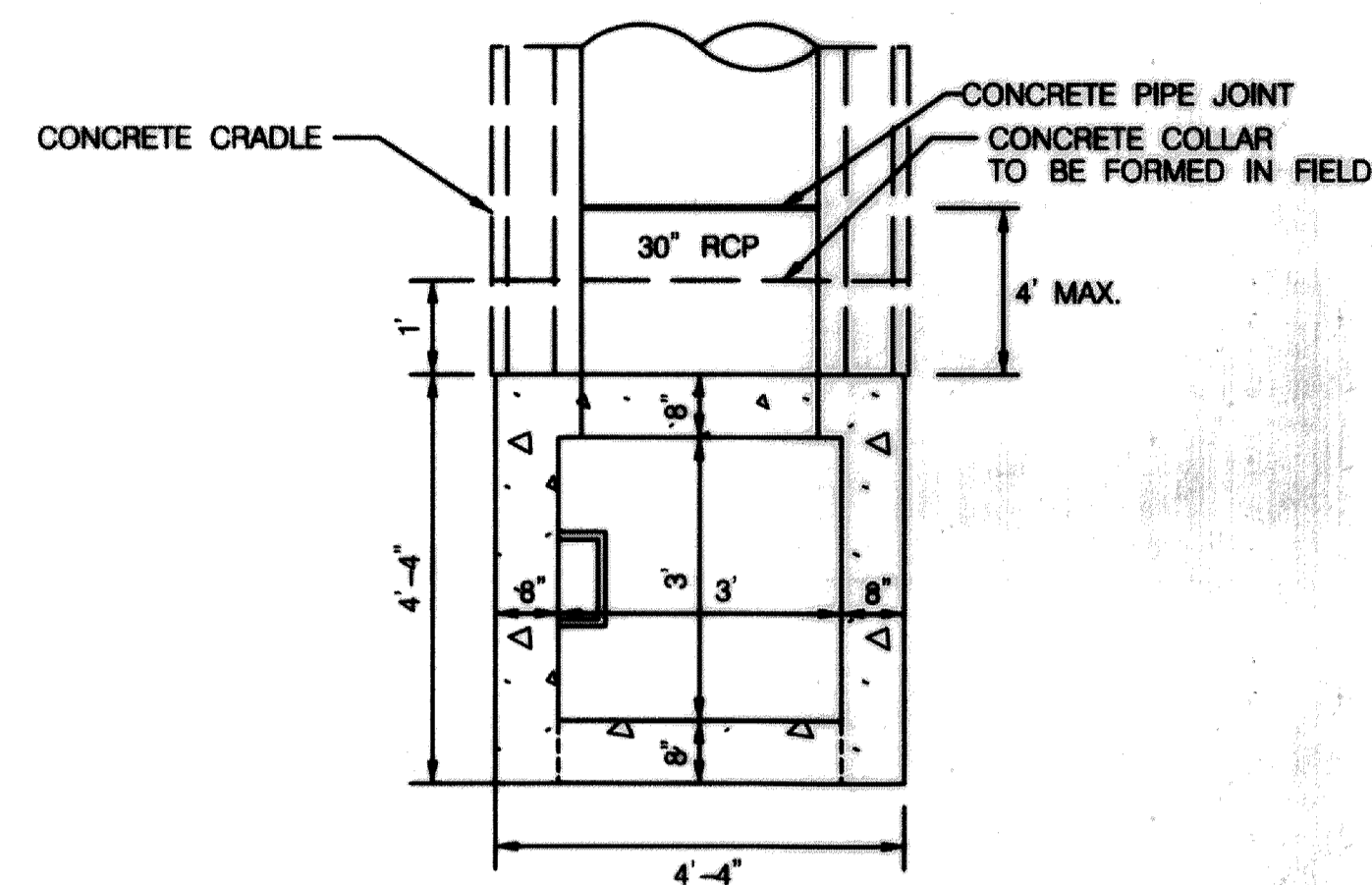


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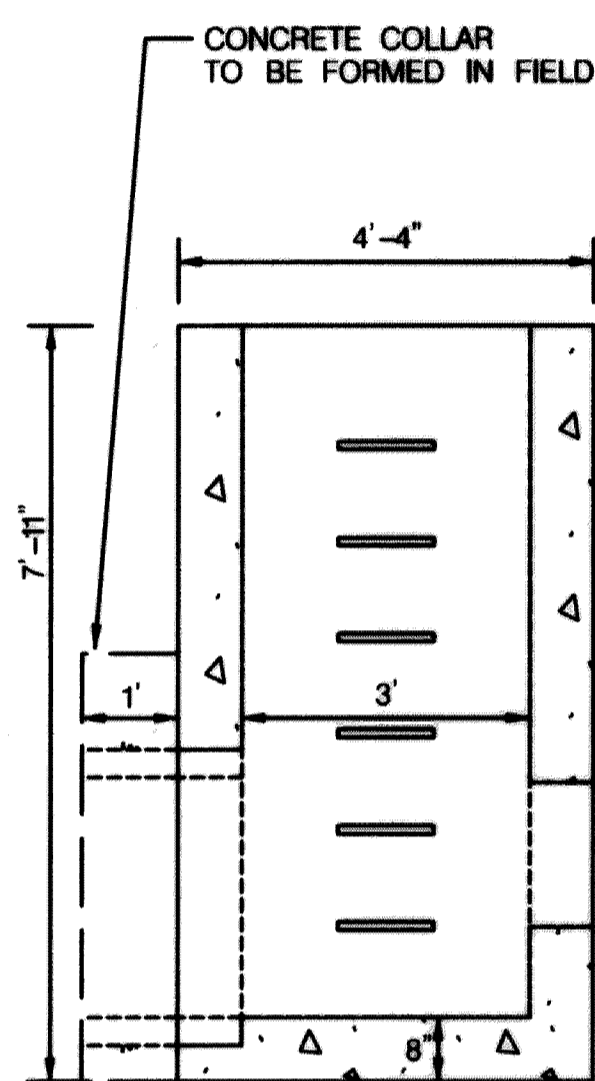
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**STORMDRAIN PROFILE AND
SCOUR POOL DETAIL SHEET**

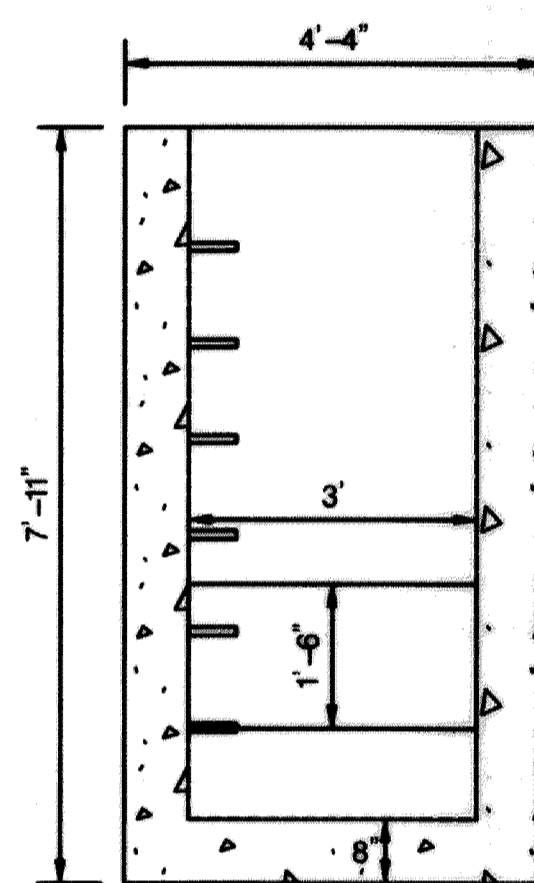
SCALE
AS SHOWN
SHEET
3 OF 4



RISER PLAN
SCALE: 1" = 2'



LEFT SIDE



FRONT

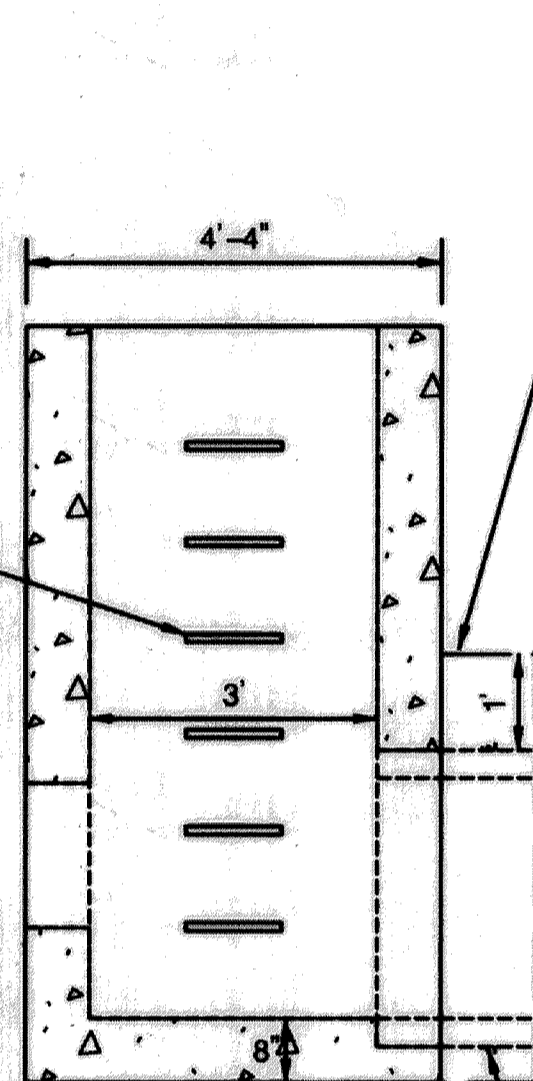
2-YR WSEL = 320.73
TOP OF RISER
EL = 320.70

RISER STEP

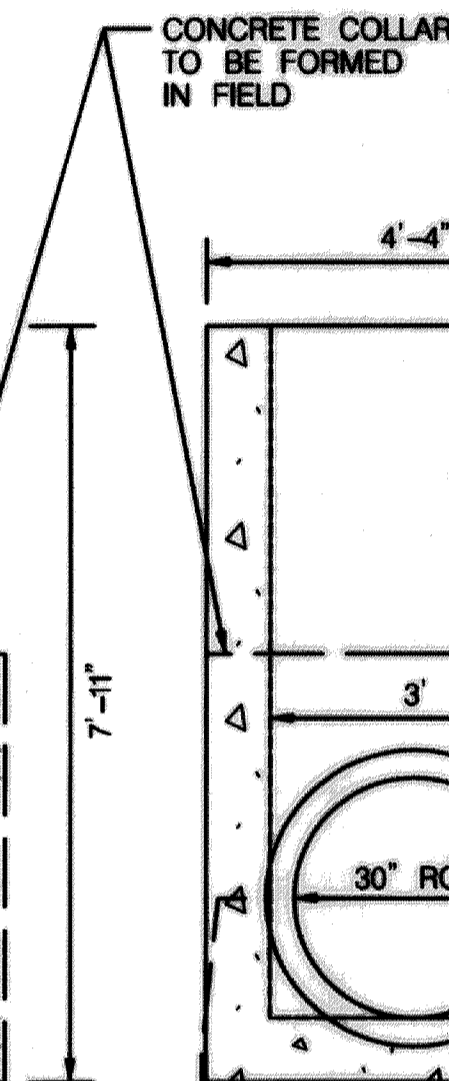
RISER CREST
INV. EL = 314.45

30" RCP
INV. EL = 314.45-314.55

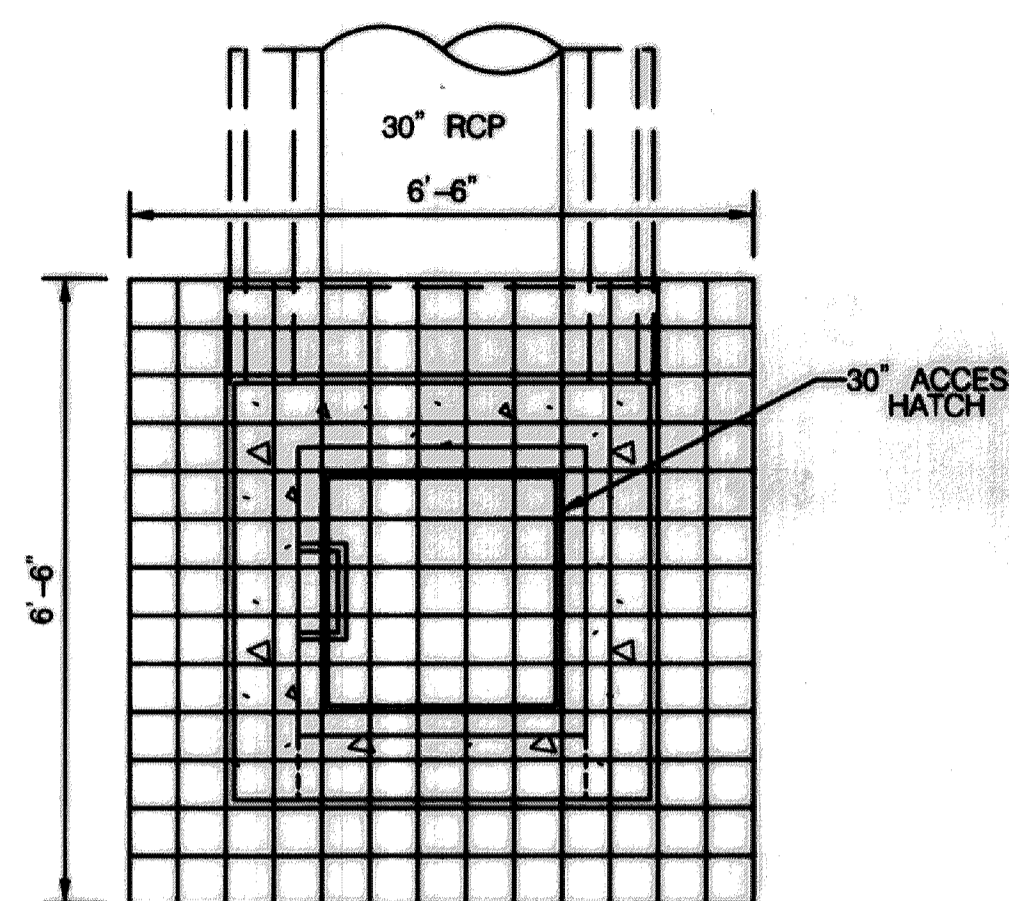
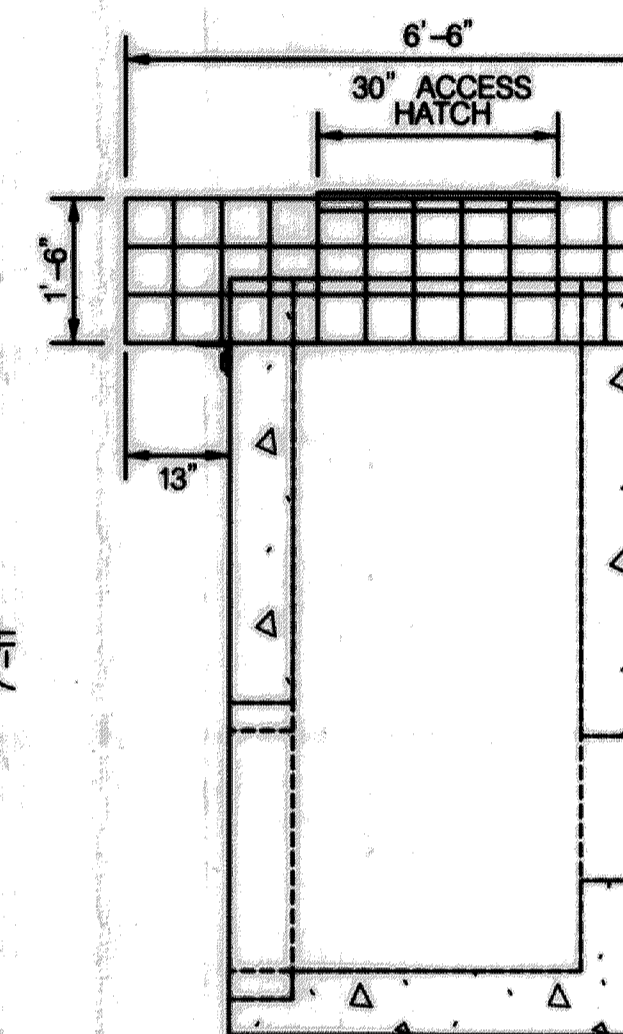
BOTTOM FOOTER
EL = 312.79



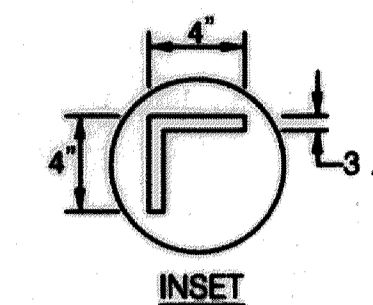
RIGHT SIDE



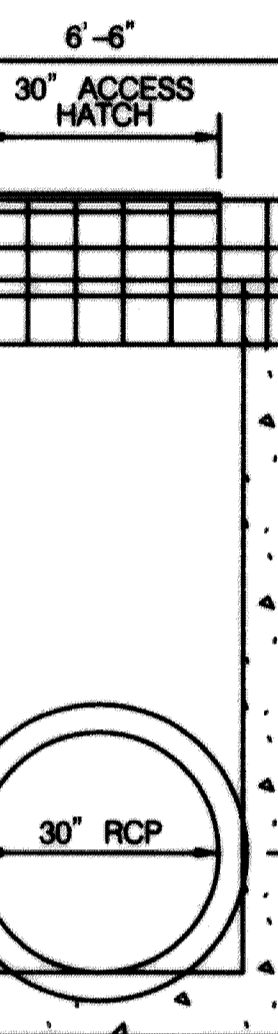
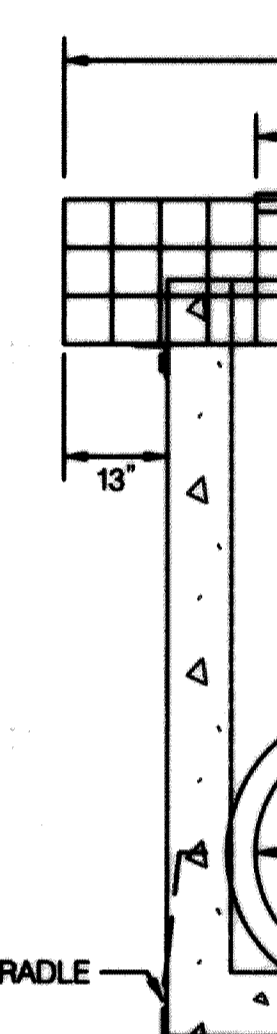
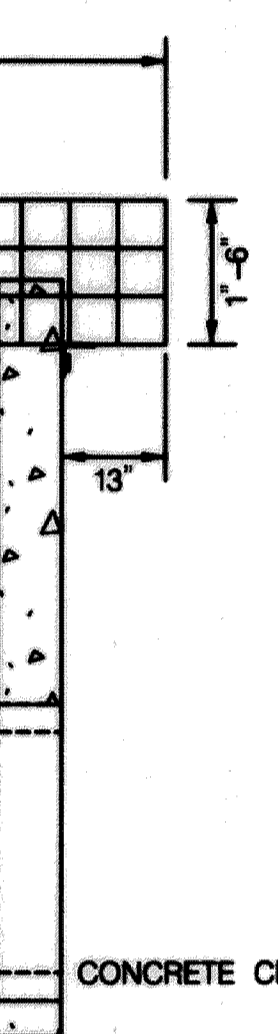
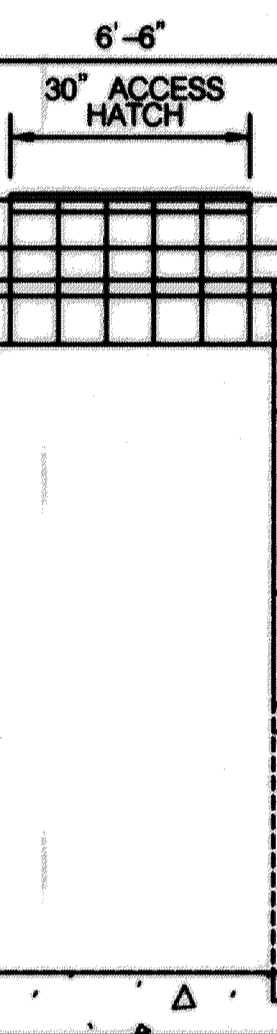
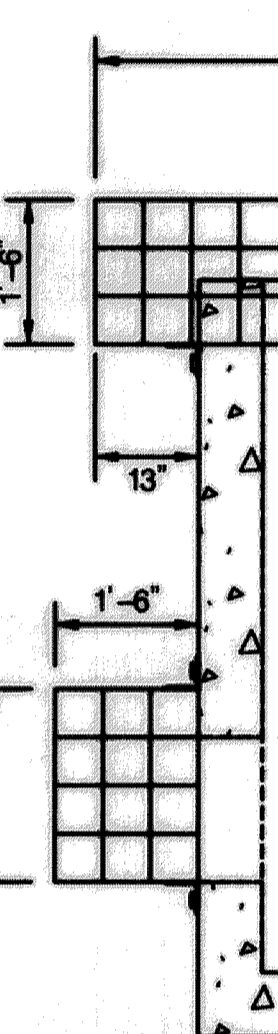
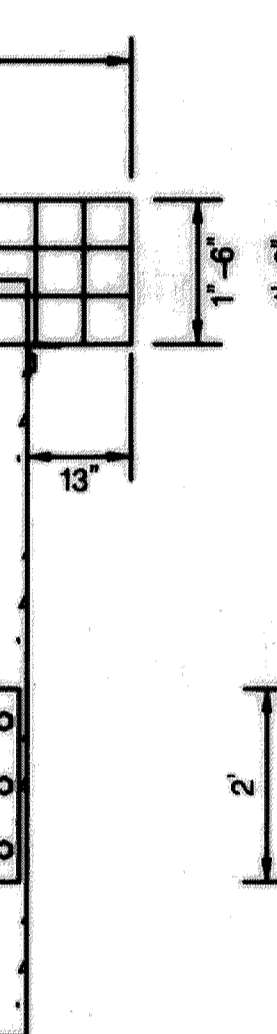
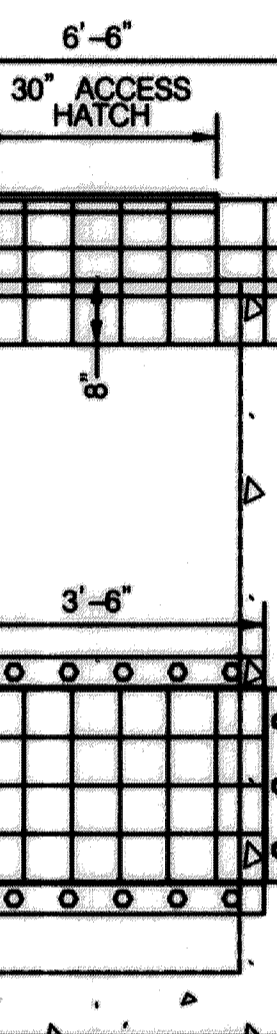
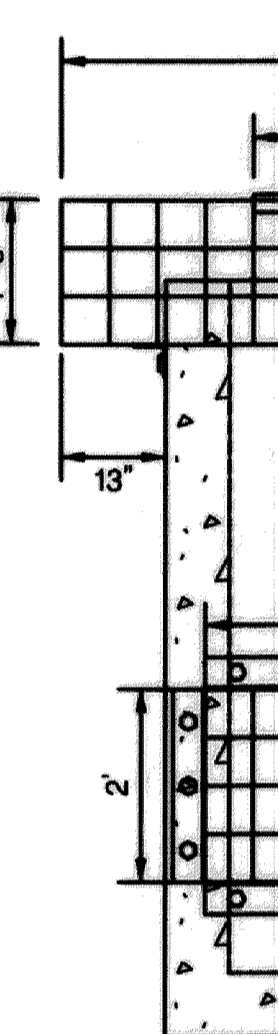
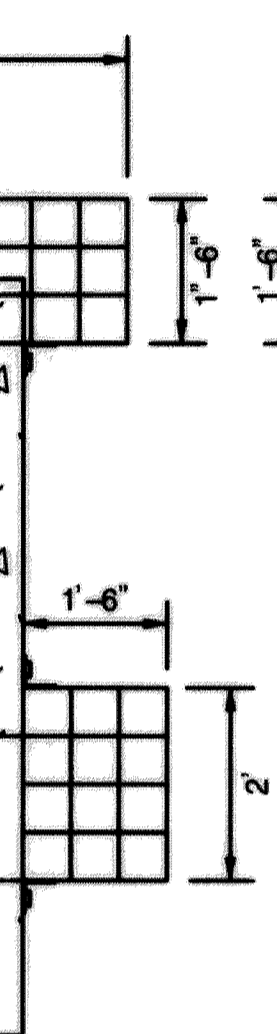
BACK
WATERSTOP GASKET
(SEE DETAIL)



PLAN



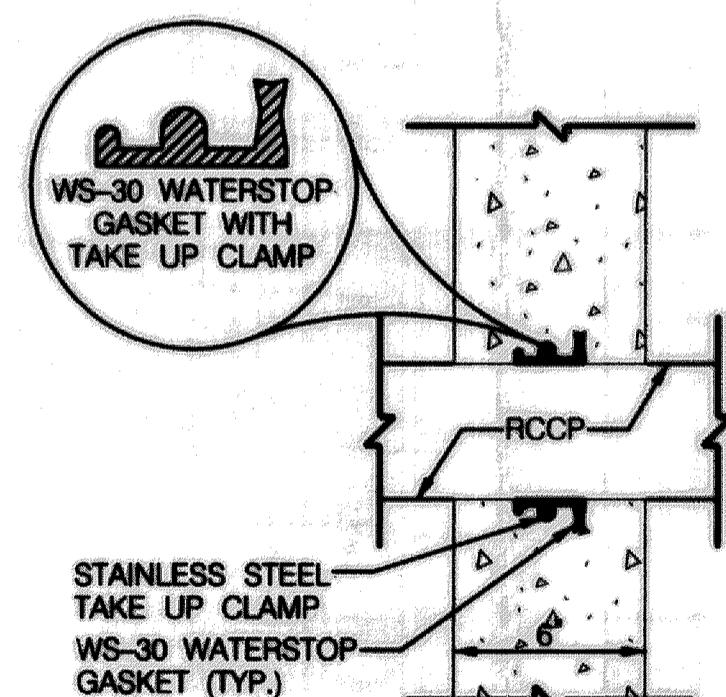
INSET



CONCRETE CRADLE

- RISER CONSTRUCTION NOTES:**
- RISER STEPS SHALL FOLLOW DETAIL G-5.21 FOR MANHOLE AND INLET STEPS.
 - SHA MIX NO. 3 CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF LATEST EDITION OF ACI 301 AND ACI 318.
 - PRECAST STRUCTURES SHALL BE DESIGNED BY A PRECAST CONCRETE STRUCTURES MANUFACTURER IN ACCORDANCE TO LOADING SPECIFIED IN LATEST EDITIONS OF ASTM C857 AND ASTM C890.
 - PRECAST STRUCTURES SHALL CONFORM TO THE REQUIREMENTS OF LATEST EDITIONS OF ASTM C858 AND MARYLAND NRCS FOND CODE MD-378.
 - RESILIENT CONNECTORS BETWEEN MANHOLE STRUCTURES, PIPES, AND LATERALS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF LATEST EDITIONS OF ASTM C923.
 - OVERALL HEIGHT OF PRECAST IS ADJUSTABLE IN 6" INCREMENTS. FINAL GRADE ADJUSTMENTS SHALL BE MADE BY THE CONTRACTOR WITH MIX NO. 3 CONCRETE.
 - INVERT SHALL BE APPROVED PRECAST PLAIN MIX NO. 3 CONCRETE. INVERT TO SLOPE DOWN TOWARD OUTLET AT THE RATE OF 2" PER FOOT, OR AS SHOWN ON PLAN OR AS DIRECTED.
 - REFER TO DETAIL D-4.10 FOR REBAR PLACEMENT.
 - FIRST BARREL JOINT OF CONCRETE PIPE SHALL HAVE A WATERTIGHT CONNECTION AND BE PLACED NO MORE THAN 4' FROM RISER.

RISER ELEVATION
SCALE: 1" = 2'



WS-30 WATERSTOP GASKET DETAIL
NOT TO SCALE

- TRASH RACK CONSTRUCTION NOTES:**
- FRAME SHALL BE CONSTRUCTED OF 4" X 4" X 3/16" STEEL ANGLE WITH THE CORNERS MITRED AND BUTT WELDED.
 - THE FRAME SHALL BE PAINTED WITH TWO COATS OF COLD GALVANIZED COMPOUND IN "BATTLESHIP GREY".
 - BARs SHALL BE #6 REBAR AT 6" CC EACH WAY, HOT-DIPPED GALVANIZED AND FILLET WELDED TO THE ANGLE FRAME.
 - ALL STEEL SHALL BE ASTM A-36.
 - TRASH RACK SHALL BE BOLTED ONTO THE OUTSIDE FACE OF THE RISER USING 3/8" DIA. STAINLESS STEEL EXPANSION BOLTS, @ 11" CC MIN. 4" FROM EDGE OF CONCRETE RISER. DRILL ANGLE FRAME TO ALLOW PASSAGE OF BOLTS.
 - ENSURE A 1" CLEARANCE BETWEEN TRASH RACK AND DAM EMBANKMENT SLOPE.
 - PROVIDE LOCKABLE HINGED ACCESS HATCH IN TOP OF TRASH RACK OVER RISER STEPS.

TRASH RACK DETAIL
SCALE: 1" = 2'

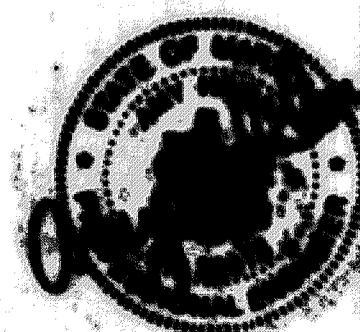
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RISER DETAIL SHEET

SCALE

AS SHOWN

SHEET

4 OF 4