

# HOWARD COUNTY

## Capital Project #D-1159

# Turf Valley Overlook Principal Spillway Lining

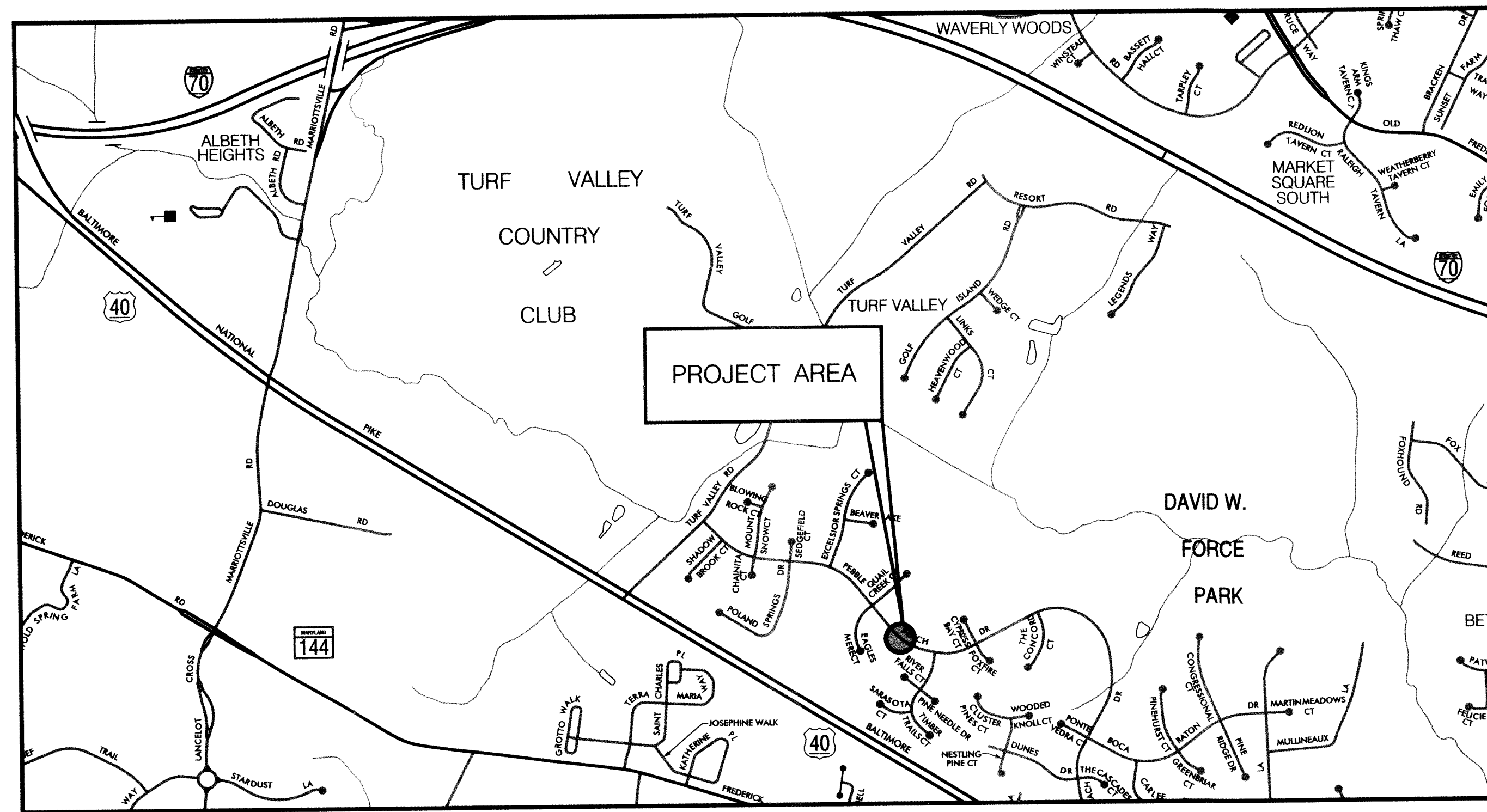
Storm Water Management Division  
Bureau Of Environmental Services

### INDEX OF SHEETS

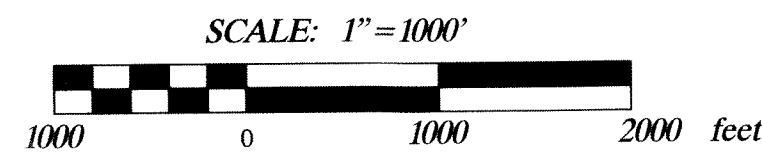
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1	TITLE SHEET
2	SITE PLAN
3	PIPE PROFILE
4	RISER DETAIL SHEET
5	EROSION AND SEDIMENT CONTROL NOTES
6	EROSION AND SEDIMENT CONTROL DETAIL SHEET

### LEGEND

PROPOSED MEDIAN BARRIER	
ELECTRICAL HAND BOX - SIGNALS	
FLOW LINE	
STATE, COUNTY OR CITY LINES	
PROPOSED TRAFFIC BARRIER	
EXISTING TRAFFIC BARRIER	
PROPOSED FENCE LINE	
EXISTING FENCE LINE	
RIGHT OF WAY LINE	
EXISTING ROADWAY	
BASE OR SURVEY LINE	
TRAVERSE POINT	
APPROXIMATE LIMITS OF CUT AND/OR FILL	
PROPOSED MAJOR CONTOUR	
PROPOSED MINOR CONTOUR	
LIMIT OF DISTURBANCE	
EXISTING MAJOR CONTOURS	
EXISTING MINOR CONTOURS	
EXISTING PIPE/CULVERT	
EXISTING DROP INLET	
WETLAND	
HEDGE / TREE LINE	
BUSH / TREE	
CONIFEROUS TREE	
LIGHT POLE	



HORIZONTAL DATUM	NAD 83/91
VERTICAL DATUM	NAVD 88



### GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST FIVE (5) WORKING DAYS PRIOR TO ANY WORK BEING DONE.
- THIS PLAN IS PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS /BUREAU OF ENGINEERING CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- SURVEY OF THIS SITE WAS PERFORMED BY AB CONSULTANTS, INC-MARCH 2011.
- THE COORDINATES SHOWN HEREON ARE BASED ON HOWARD COUNTY GEODETIC CONTROL, WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. BENCHMARKS SHOWN HEREON WERE PROVIDED BY AB CONSULTANTS INC.
- WATERS OF THE US WERE DELINEATED BY McCORMICK TAYLOR FEBRUARY 2011.
- OBSTRUCTIONS SHOWN ON THIS DRAWING ARE FOR THE CONVENIENCE OF THE CONTRACTOR ONLY AND McCORMICK TAYLOR DOES NOT WARRANT OR GUARANTEE THE CORRECTNESS OR COMPLETENESS OF THE INFORMATION GIVEN. THE CONTRACTOR MUST VERIFY SUCH INFORMATION TO HIS OWN SATISFACTION.
- THE EXISTING INFORMATION SHOWN ON THESE PLANS WAS TAKEN FROM THE BEST AVAILABLE SOURCES AND SHALL BE VERIFIED BEFORE STARTING CONSTRUCTION. HOWARD COUNTY DOES NOT GUARANTEE THE COMPLETENESS OR THE CORRECTNESS OF THE SHOWN INFORMATION.
- THE CONTRACTORS SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE ANY DAMAGE INCURRED DUE TO THE CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY. ALL UTILITIES SHALL HAVE A CLEARANCE BY A MINIMUM OF 6 INCHES VERTICALLY AND A MINIMUM OF 5 FEET HORIZONTALLY.
- SHOULD THE CONTRACTOR DISCOVER DISCREPANCIES BETWEEN THE PLANS AND FIELD CONDITIONS, THE CONTRACTOR SHALL NOTIFY McCORMICK TAYLOR IMMEDIATELY TO RESOLVE THE SITUATION.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.
- SITE DEVELOPMENT DETAILS ARE REFERENCED FROM THE AS-BUILT PLANS FOR TURF VALLEY OVERLOOK SECTION 2 AREA 1 (F-88-039).
- A JOINT PERMIT APPLICATION HAS BEEN SUBMITTED TO THE MARYLAND DEPARTMENT OF THE ENVIRONMENT FOR THIS PROJECT. (TRACKING NUMBER 201161108)
- PROJECT IMPACTS INCLUDE WORK IN A USE 4-P STREAM. IN-STREAM WORK MAY NOT BE CONDUCTED DURING THE PERIOD BETWEEN MARCH 1 THROUGH JUNE 1.

### PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.  
LICENSE NO. 32013, EXPIRATION DATE: 7/5/2013

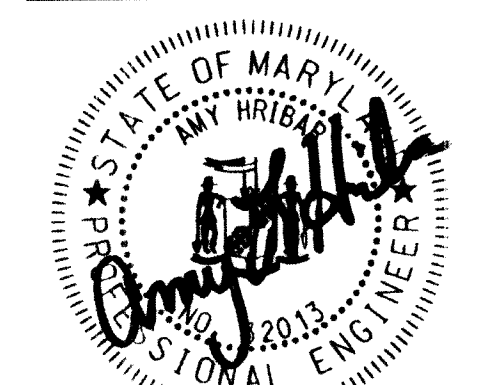
### DESIGN CERTIFICATION

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

### OWNER'S/DEVELOPER'S CERTIFICATION

I/WE HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

I HEREBY CERTIFY THAT THE AS-BUILT PLANS WERE CONSTRUCTED AS SHOWN HEREON IN RED.



AS-BUILT 4/16/13

**MARYLAND DEPARTMENT OF THE ENVIRONMENT**  
WATER MANAGEMENT ADMINISTRATION  
DAM SAFETY DIVISION

*V. P. Dalal* 4/12/12  
SR. REGULATORY AND COMPLIANCE ENGINEER

4-12-2012  
DATE

*Amy L. Hribar*  
DESIGNER'S SIGNATURE

MARYLAND  
REGISTRATION  
NUMBER 32013

AMY L. HRIBAR  
PRINTED NAME

4/19/12  
DATE

*Howard E. Saltzman*  
OWNER/DEVELOPER SIGNATURE

Howard E. Saltzman, Chief, Stormwater Management Division  
PRINTED NAME AND TITLE

**DEPARTMENT OF PUBLIC WORKS**  
HOWARD COUNTY, MARYLAND

*Samuel A. ...* 4/19/12  
DIRECTOR OF PUBLIC WORKS DATE

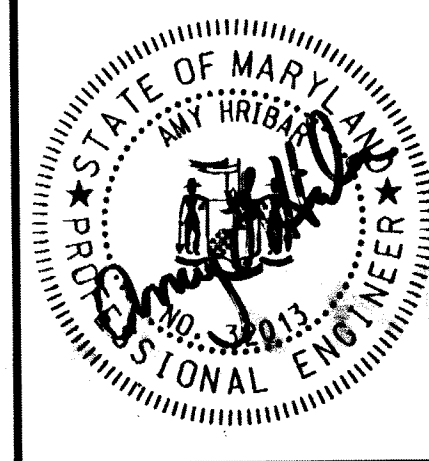
*Howard E. Saltzman* 4/19/12  
CHIEF, STORMWATER MANAGEMENT DIVISION DATE

**McCormick Taylor**  
Engineers & Planners  
Since 1946

509 South Exeter Street  
4th Floor  
Baltimore, Maryland 21202  
(410) 662-7400

**Howard County**  
MARYLAND

Storm Water Management Division  
Bureau of Environmental Services  
6751 Columbia Gateway Drive, Suite 514,  
Columbia, Maryland 21046-3143  
(410) 313-6444



DES:	AH	1	BLUELINE REVISION	8/28/12
MG	ALH	1	AS-BUILT	4/16/13
DRN:	MR			
CHK:	CB			
DATE:	4/11/12			
BY	NO.		REVISION	DATE

**TURF VALLEY OVERLOOK  
POND 2 PRINCIPAL SPILLWAY LINING  
CAPITAL PROJECT #D-1159  
HOWARD COUNTY**

**TITLE SHEET**

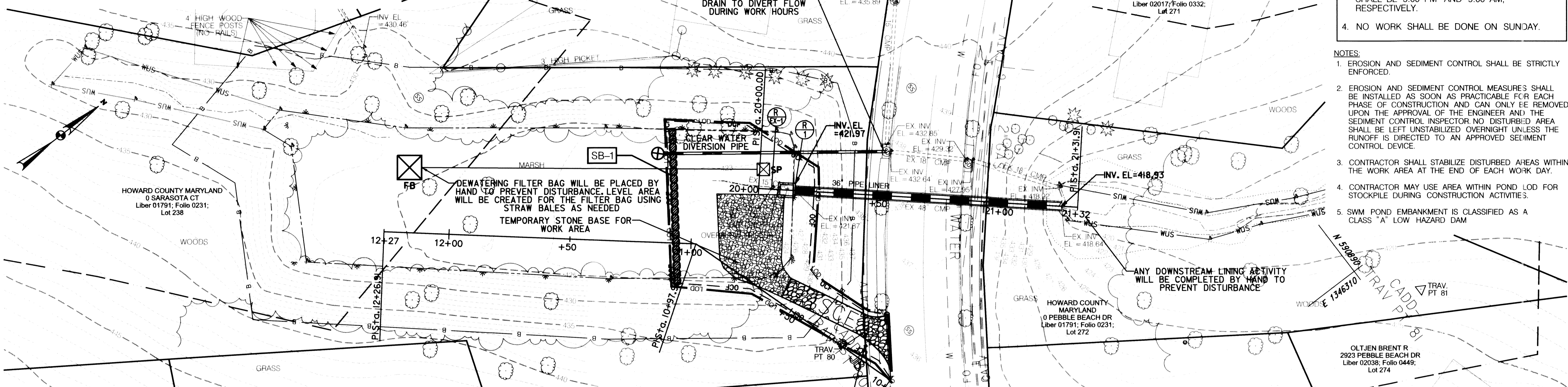
SCALE AS SHOWN  
SHEET 1 OF 6

**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.

- TIME RESTRICTION NOTES:**
1. PUMPING IS NOT PERMITTED BETWEEN THE HOURS OF 7:00 PM AND 7:00 AM, MONDAY THROUGH FRIDAY.
  2. CONSTRUCTION EQUIPMENT SHALL NOT BE STARTED NOR RUN BETWEEN THE HOURS OF 7:00 PM AND 7:00AM, MONDAY THROUGH FRIDAY.
  3. FOR SATURDAY WORK, THE ABOVE HOURS SHALL BE 5:00 PM AND 9:00 AM, RESPECTIVELY.
  4. NO WORK SHALL BE DONE ON SUNDAY.

- NOTES:**
1. EROSION AND SEDIMENT CONTROL SHALL BE STRICTLY ENFORCED.
  2. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AS SOON AS PRACTICABLE FOR EACH PHASE OF CONSTRUCTION AND CAN ONLY BE REMOVED UPON THE APPROVAL OF THE ENGINEER AND THE SEDIMENT CONTROL INSPECTOR. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS THE RUNOFF IS DIRECTED TO AN APPROVED SEDIMENT CONTROL DEVICE.
  3. CONTRACTOR SHALL STABILIZE DISTURBED AREAS WITHIN THE WORK AREA AT THE END OF EACH WORK DAY.
  4. CONTRACTOR MAY USE AREA WITHIN POND LOD FOR STOCKPILE DURING CONSTRUCTION ACTIVITIES.
  5. SWM POND EMBANKMENT IS CLASSIFIED AS A CLASS "A" LOW HAZARD DAM.



**TEMPORARY NO. 2 STONE BASE**

STATION	QTY	REMARKS
10+75, 15' RT	8 CY	NO. 2 STONE

**SANDBAG DAM**

FROM	TO	QTY (LF)	REMARKS	TOP ELEV.
11+06, 47' LT	11+06, 18' RT	65	SB-1	426.00

**CONSTRUCTION BASELINE CONTROL COORDINATES**

POINT	STATION	NORTHING	EASTING
PI	10+00.00	590710.3168	1346229.4477
PI	10+97.96	590680.7752	1346136.0460
PI	12+26.91	590581.4444	1346053.8198
PI	20+00.00	590715.2589	1346133.6728
PI	21+31.91	590815.3182	1346219.6310

**SURVEY CONTROL**

TRAVERSE POINT	ELEVATION	NORTHING	EASTING
80	436.83	590713.9485	1346207.2857
81	422.82	590907.3895	1346332.6046

**MARYLAND DEPARTMENT OF THE ENVIRONMENT**  
 WATER MANAGEMENT ADMINISTRATION  
 DAM SAFETY DIVISION

*V. P. Dalal* 4/12/12  
 VISTY P. DALAL, SR. REGULATORY AND COMPLIANCE ENGINEER

**DEWATERING FILTER BAG**

STATION	QTY (EA)	REMARKS
12+19	1	28' RT

**DIVERSION PIPE**

STATION	QTY (LF)	REMARKS
10+52 TO 11+13	92	

**36" SNAP-TITE PIPE LINER**

STATION	QTY (LF)	REMARKS
20+15 TO 21+25	110	LD. 33.784'

**ORANGE CONSTRUCTION FENCE**

FROM	TO	QTY (LF)
10+00	12+93	343

**RISER STRUCTURE, R-1 - SEE DETAIL, SHEET 3**

STATION	QTY (EA)	REMARKS
20+09 TO 20+16	1	

**STABILIZED CONSTRUCTION ENTRANCE**

STATION	QTY (EA)	REMARKS
10+25	1	12' RT

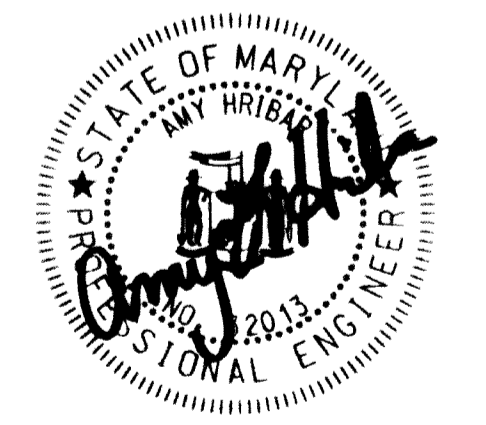
**CLEAR WATER PUMP**

STATION	QTY (EA)	REMARKS
11+15	1	37' RT

**SUMP PIT**

STATION	QTY (EA)	REMARKS
20+01	1	8' LT

I HEREBY CERTIFY THAT THE AS-BUILT PLANS WERE CONSTRUCTED AS SHOWN HEREON IN RED.



AS-BUILT 4/16/13  
 SCALE: 1" = 20'

**LEGEND**

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- WUS --- WATERS OF THE US
- 75' STREAM BUFFER
- WETLAND BOUNDARY
- B --- WETLAND BUFFER
- TOE OF DAM
- PROPERTY LINE
- EXISTING TREE
- LOD --- LIMIT OF DISTURBANCE
- OCF --- ORANGE CONSTRUCTION FENCE
- NO. 2 STONE
- PIPE LINING
- SANDBAG DAM
- FB --- DEWATERING FILTER BAG
- SP --- SUMP PIT
- CLEAR WATER PUMP
- CLEAR WATER DIVERSION PIPE
- STABILIZED CONSTRUCTION ENTRANCE

**DEPARTMENT OF PUBLIC WORKS**  
 HOWARD COUNTY, MARYLAND

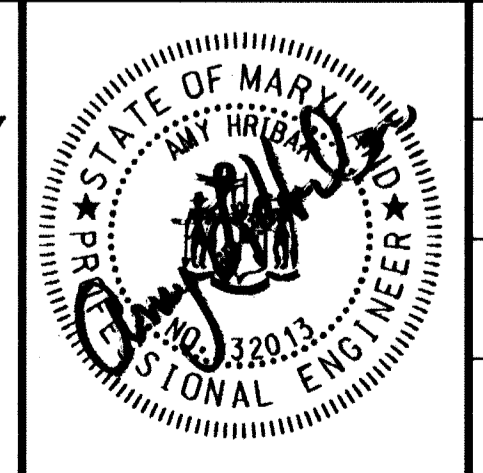
*Edwin E. Janel* 4/19/12  
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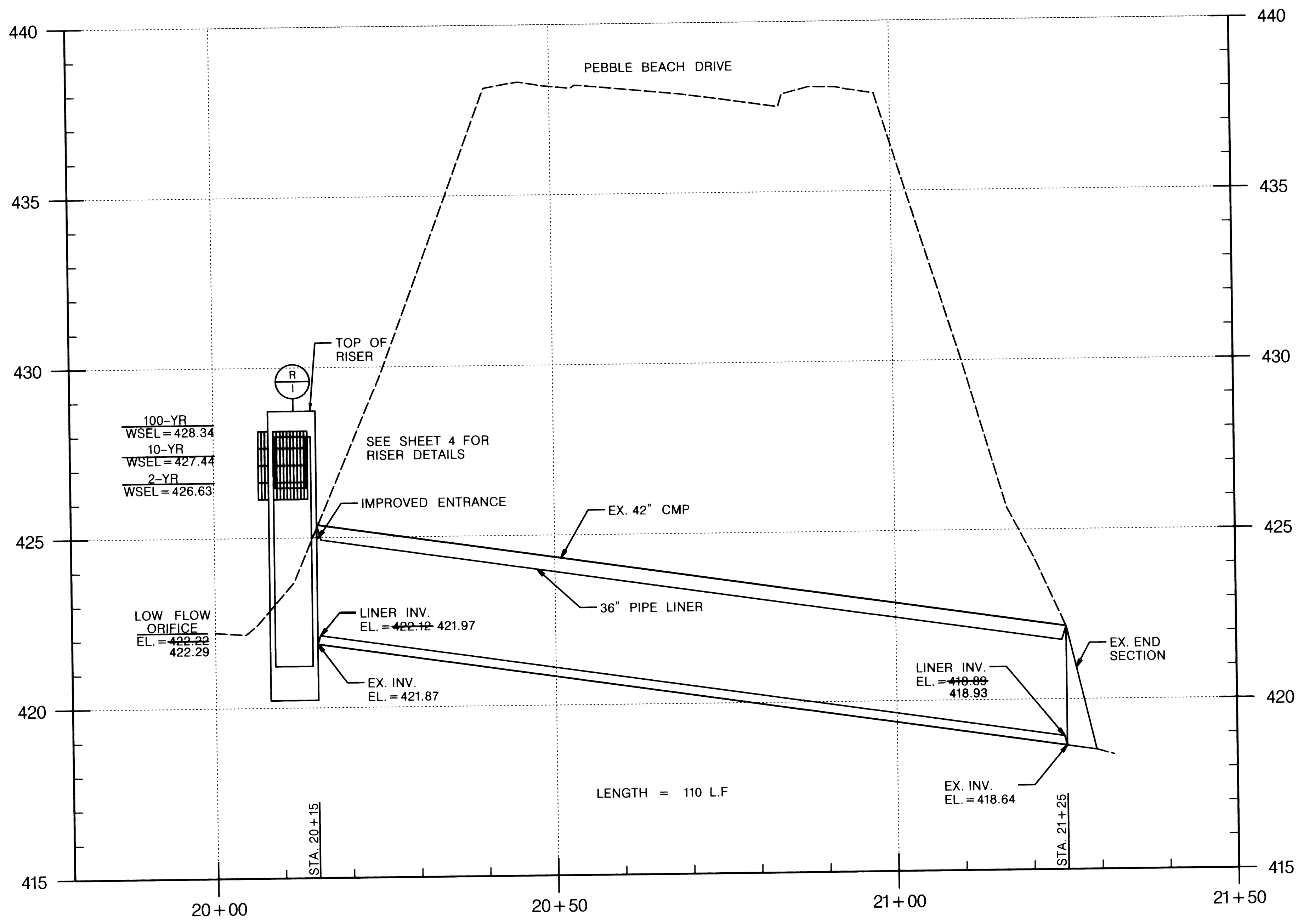


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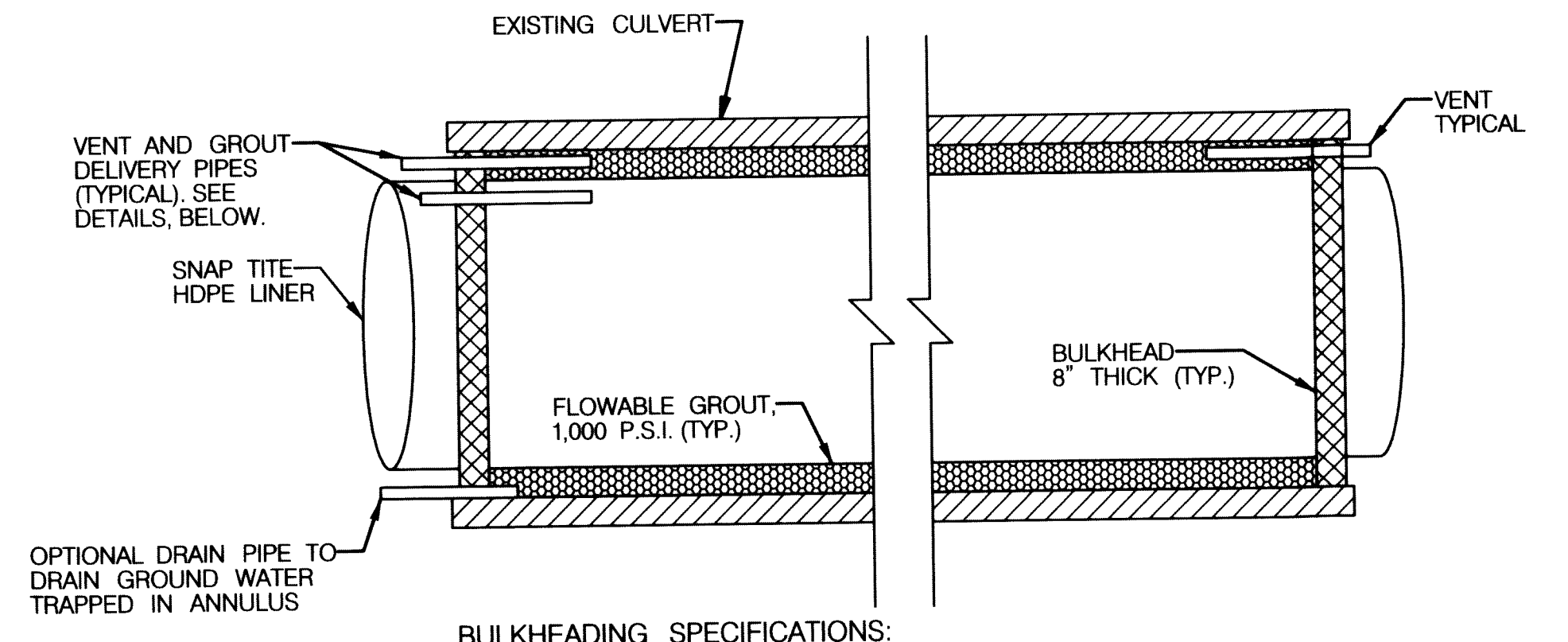
**TURF VALLEY OVERLOOK**  
**POND 2 PRINCIPAL SPILLWAY LINING**  
**CAPITAL PROJECT D 1159**  
**HOWARD COUNTY**

**SITE PLAN**

SCALE: 1" = 20'  
 SHEET: 2 OF 6

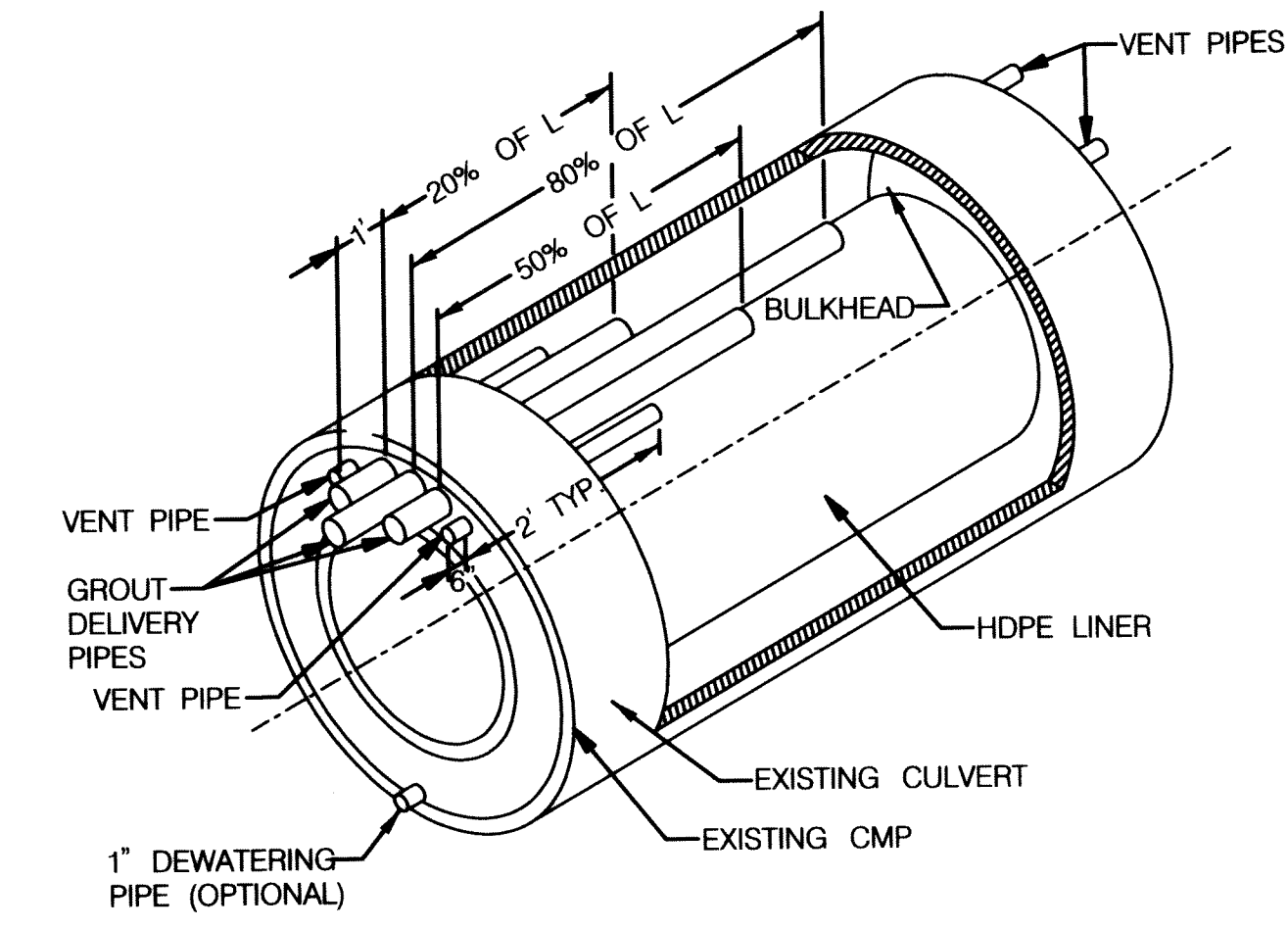


**SPILLWAY PIPE PROFILE**  
 HORIZONTAL SCALE: 1" = 10'  
 VERTICAL SCALE: 1" = 2'

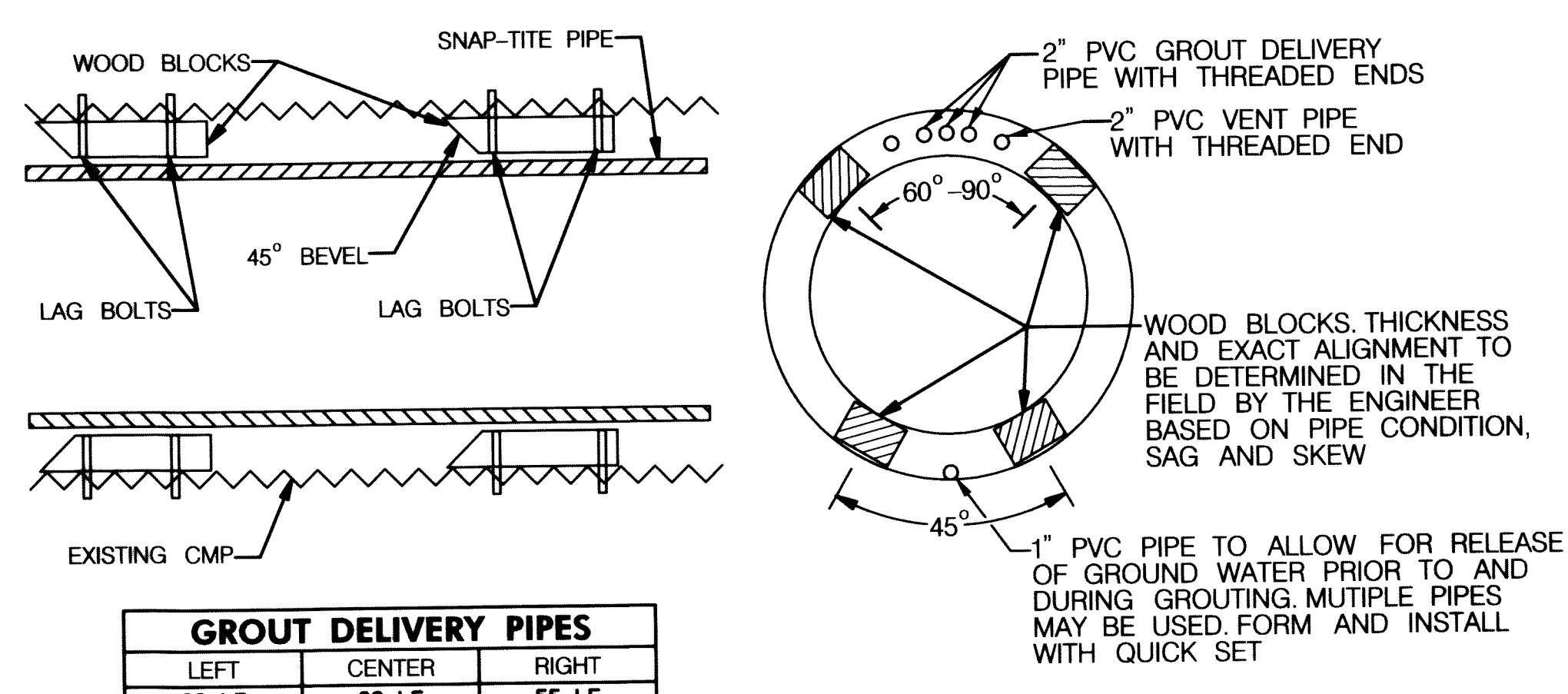


**BULKHEADING SPECIFICATIONS:**  
 THE ENDS OF THE PIPE SHALL BE BULKHEADED USING TWO COURSES OF BRICK AND MORTAR OR POURED CONCRETE 8" THICK MINIMUM. THE OUTSIDE OF THE BULKHEAD SHALL BE PARGED WITH MORTAR TO ACHIEVE A SMOOTH SURFACE. AT THE ENTRANCE END OF THE PIPE, THE BULKHEAD SHALL BE FORMED INTO A SMOOTH BEVELED ENTRANCE AT ROUGHLY A 45 DEGREE ANGLE, WITH THE PIPE LINER RECESSED FROM THE HEADWALL.

**TYPICAL GROUTING ARRANGEMENT**  
 SCALE: NOT TO SCALE



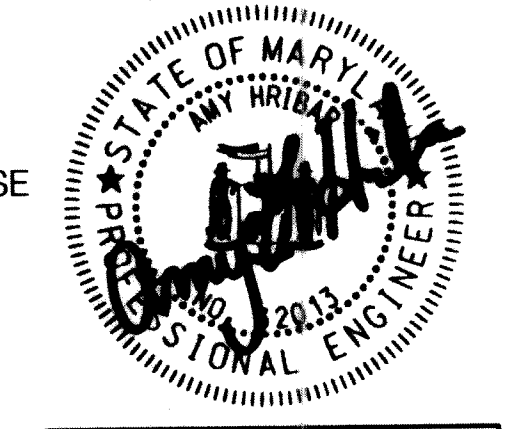
**SEALING THE ANNULAR SPACE**  
 SCALE: NOT TO SCALE



GROUT DELIVERY PIPES		
LEFT	CENTER	RIGHT
22 LF	88 LF	55 LF

**BLOCKING DETAIL**  
 SCALE: NOT TO SCALE

I HEREBY CERTIFY THAT THE AS-BUILT PLANS WERE CONSTRUCTED AS SHOWN HEREON IN RED.



AS-BUILT 4/16/13

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 WATER MANAGEMENT ADMINISTRATION  
 DAM SAFETY DIVISION

*V. P. Dalal* 4/12/12  
 VISTY P. DALAL, SR. REGULATORY AND COMPLIANCE ENGINEER DATE

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

*Edgar J. Jones* 4/19/12  
 CHIEF, BUREAU OF ENVIRONMENTAL SERVICES DATE

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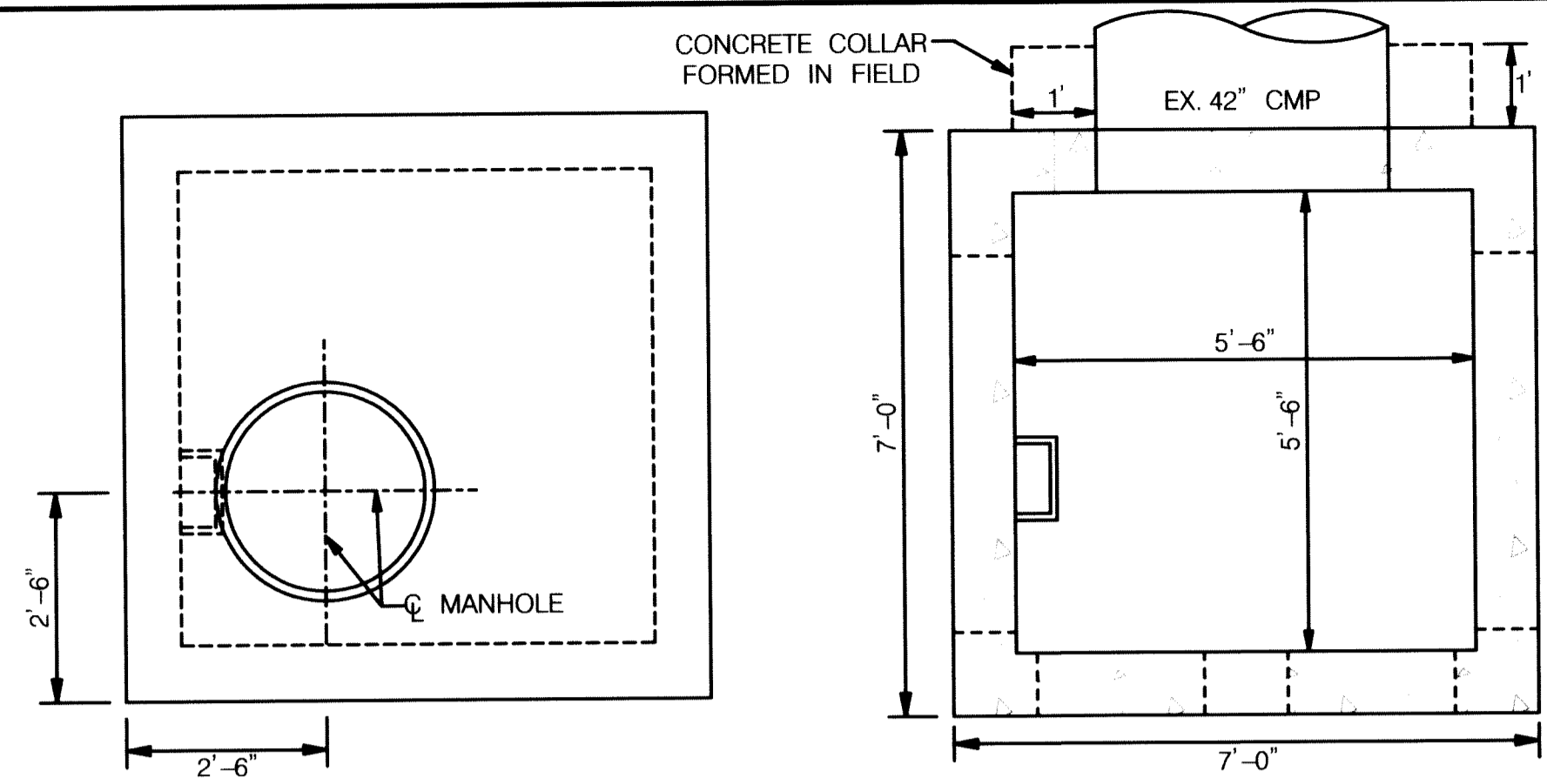


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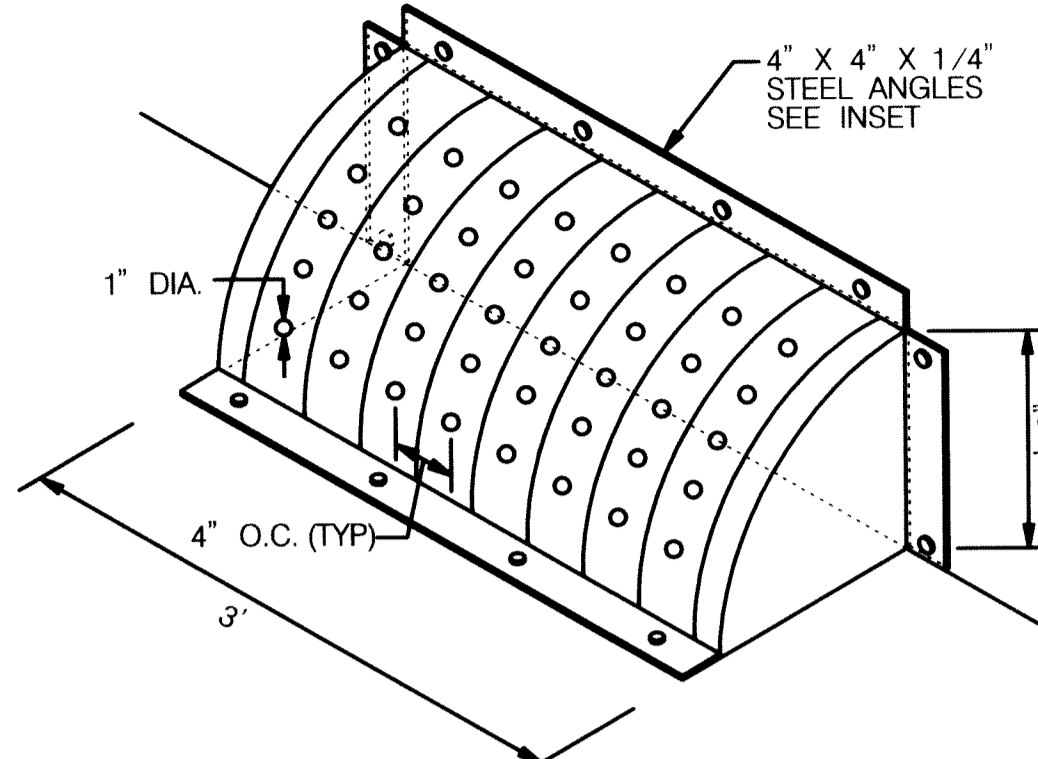
TURF VALLEY OVERLOOK  
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**PIPE PROFILE**

SCALE  
 AS SHOWN  
 SHEET  
 3 OF 6

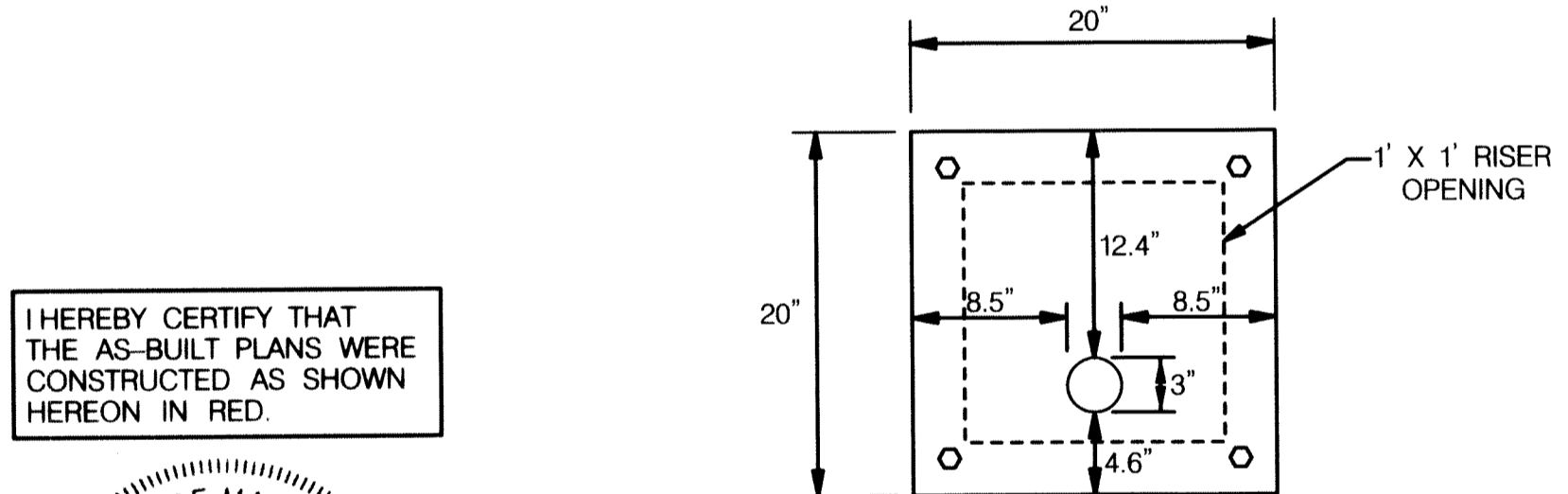
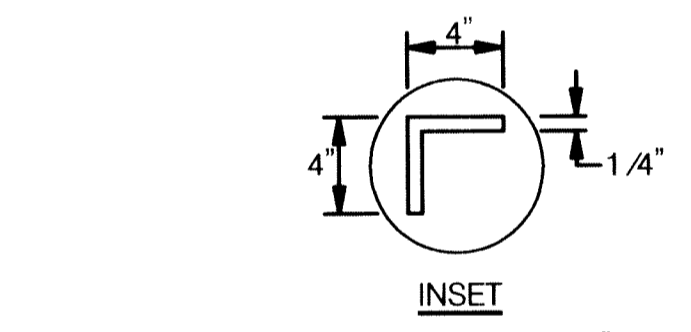
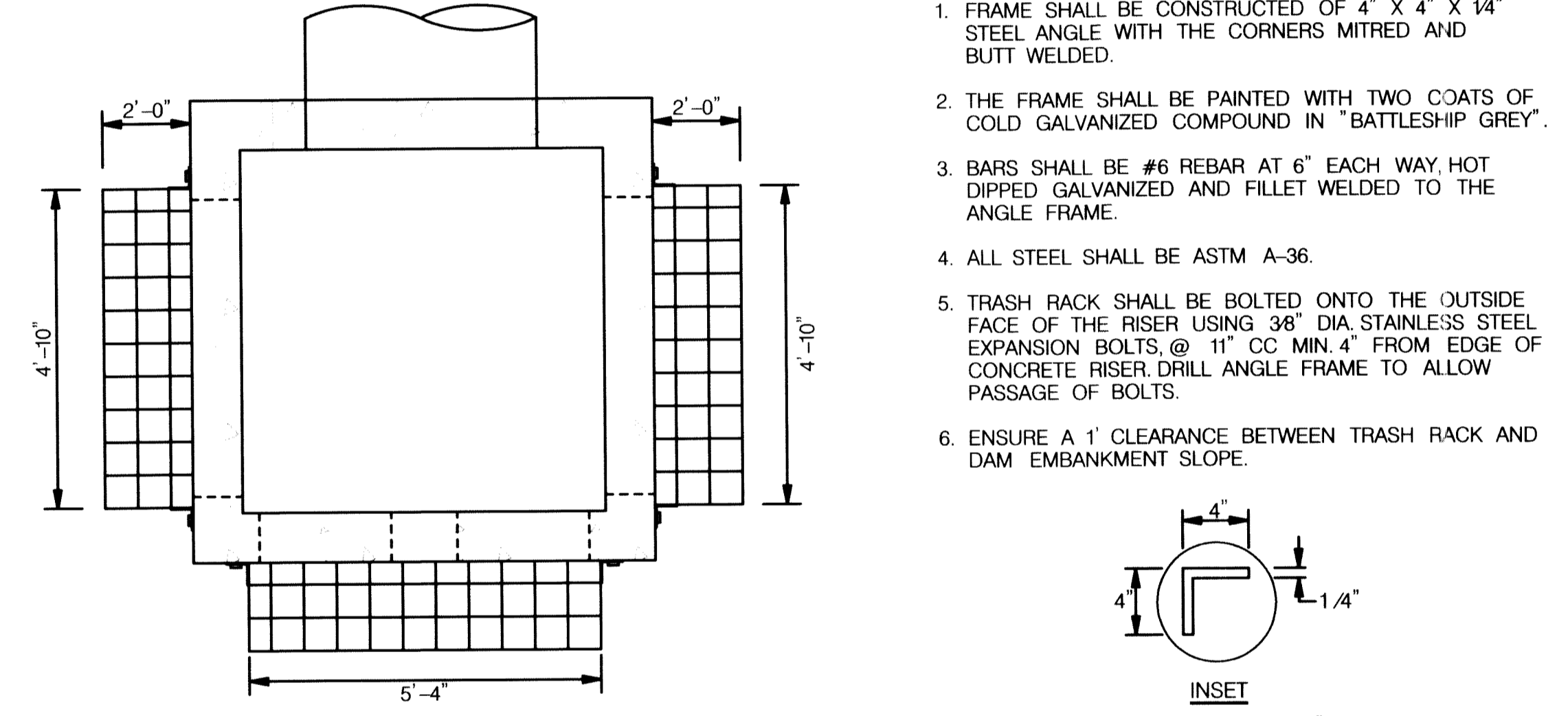
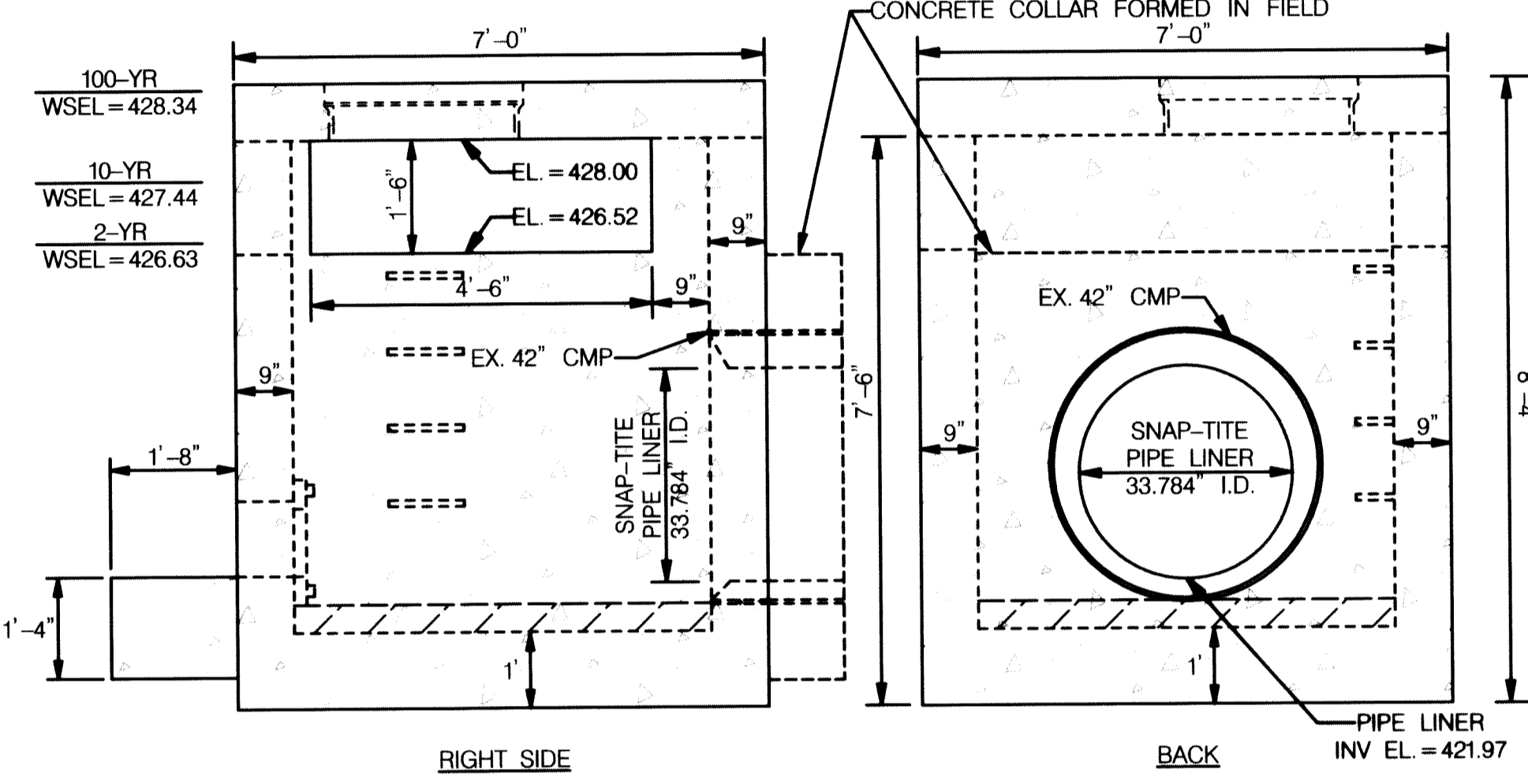
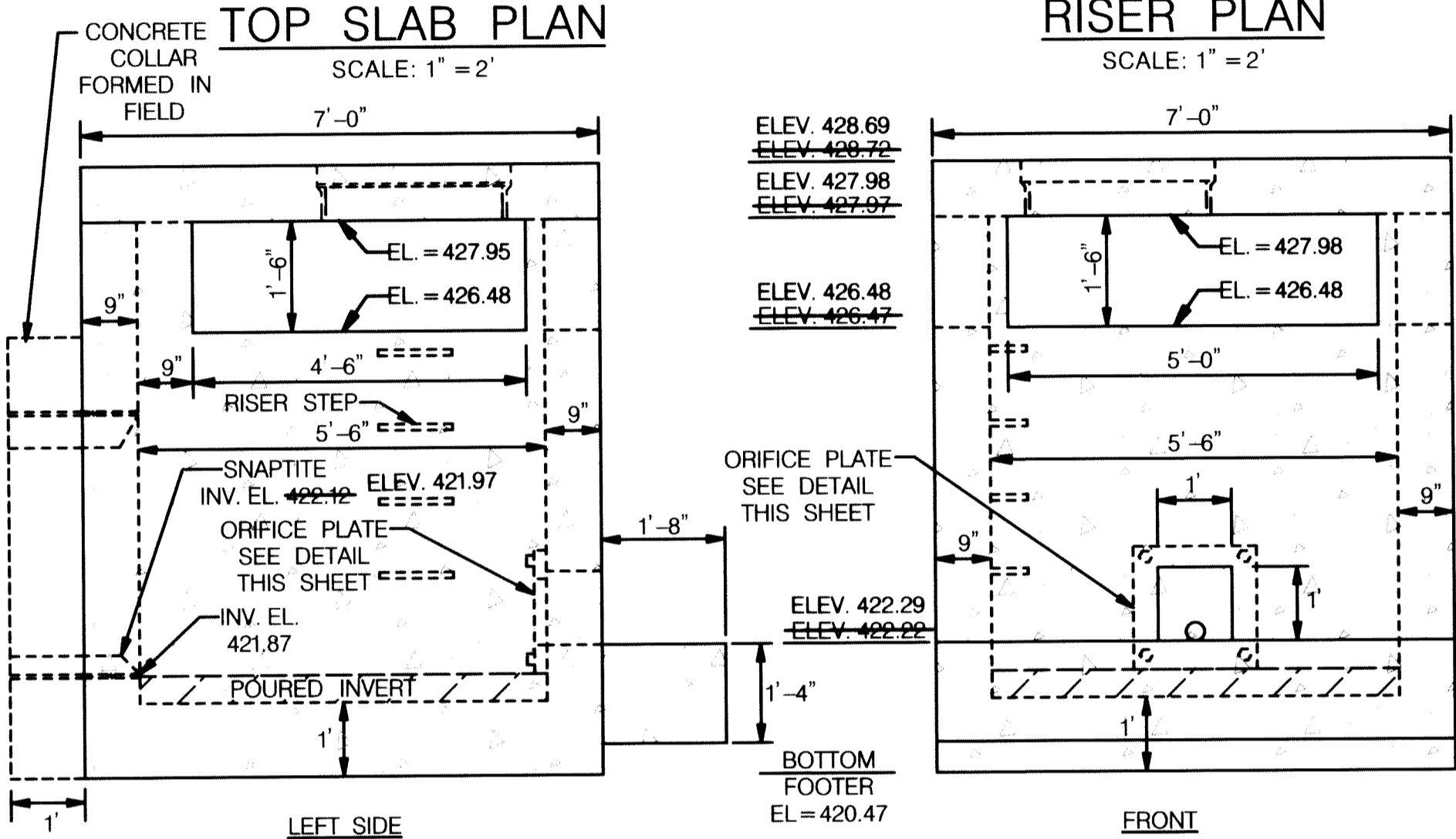


- RISER CONSTRUCTION NOTES:**
- RISER STEPS SHALL FOLLOW DETAIL G-5.21 FOR MANHOLE AND INLET STEPS
  - SHA MIX NO.3 CONCRETE SHALL BE USED AND SHALL CONFORM TO THE REQUIREMENTS OF LATEST EDITION OF ACI 301 AND ACI 318.
  - RISER STRUCTURE SHALL BE CAST IN PLACE AND DESIGNED
  - PRECAST STRUCTURES SHALL BE DESIGNED BY A PRECAST CONCRETE STRUCTURES MANUFACTURER IN ACCORDANCE TO LOADING SPECIFIED IN LATEST EDITIONS OF ASTM C857 AND ASTM C890.
  - RISER PRECAST STRUCTURES SHALL CONFORM TO THE REQUIREMENTS OF LATEST EDITIONS OF ASTM C858 AND MARYLAND NRCS POND 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. ENSURE CLEARANCE FOR ORIFICE PLATE WHEN PLACING POURED INVERT. INVERT TO SLOPE DOWN TOWARD OUTLET OR AS DIRECTED.
  - REFER TO DETAIL D-4.10 FOR REBAR PLACEMENT.
  - REFER TO DETAIL D-3.91 SIDEWALK FRAME AND COVER FOR MANHOLE COVER.
  - RISER STRUCTURE SHALL BE CONSTRUCTED AS A MONOLITHIC STRUCTURE.
  - CONSTRUCT CONCRETE COLLAR TO ENSURE WATERTIGHT SEAL AT RISER AND PIPE CONNECTION.



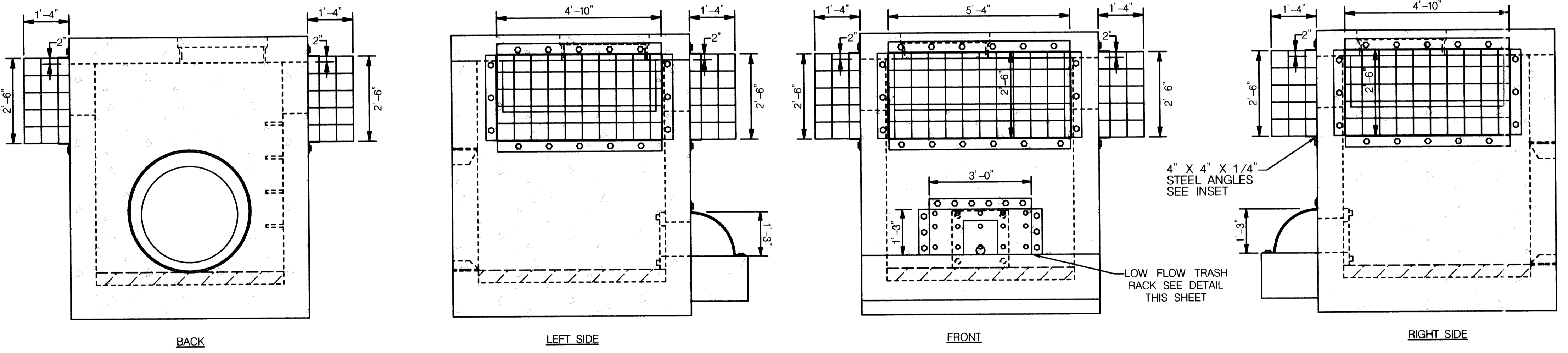
- LOW FLOW TRASH RACK NOTES:**
- TRASH RACK STEEL TO CONFORM TO ASTM A-36.
  - ALL SURFACES TO BE COATED WITH ZRC COLD GALVANIZED COMPOUND AFTER WELDING.
  - TRASH RACK TO BE FASTENED TO THE CONCRETE WITH MASONRY ANCHORS. TRASH RACK TO BE REMOVABLE.
  - CENTER TRASH RACK OVER ORIFICE OPENING IN RISER STRUCTURE.
  - USE MIX NO.3 CONCRETE FOR CONCRETE PAD.
  - PROVIDE #4 @12" EACH WAY IN CONCRETE PAD. REINFORCING TO CONFORM TO ASTM A615 GRADE 60.

**LOW FLOW TRASH RACK DETAIL**  
NOT TO SCALE



- ORIFICE PLATE NOTES:**
- 20" X 20" X 1/2" GALVANIZED STEEL ORIFICE PLATE.
  - 3.0" DIA ORIFICE PLATE TO BE BOLTED TO THE INSIDE DOWN STREAM FACE OF CONCRETE RISER USING 1/2" STAINLESS STEEL CONCRETE ANCHORS.

**ORIFICE PLATE**  
NOT TO SCALE



**TRASH RACK DETAIL**  
SCALE: 1" = 2'

I HEREBY CERTIFY THAT THE AS-BUILT PLANS WERE CONSTRUCTED AS SHOWN HEREON IN RED.

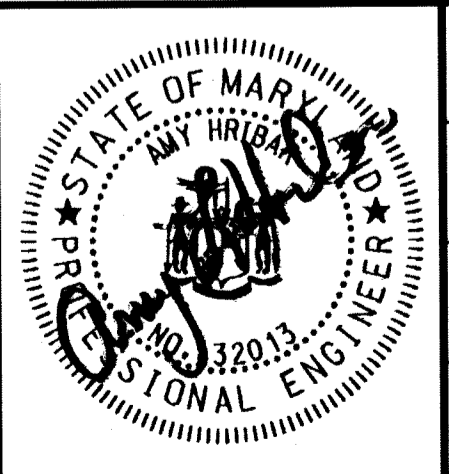


AS-BUILT 4/16/13

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SCALE  
AS SHOWN  
SHEET  
4 OF 6

# HOWARD COUNTY

## Capital Project #D-1159

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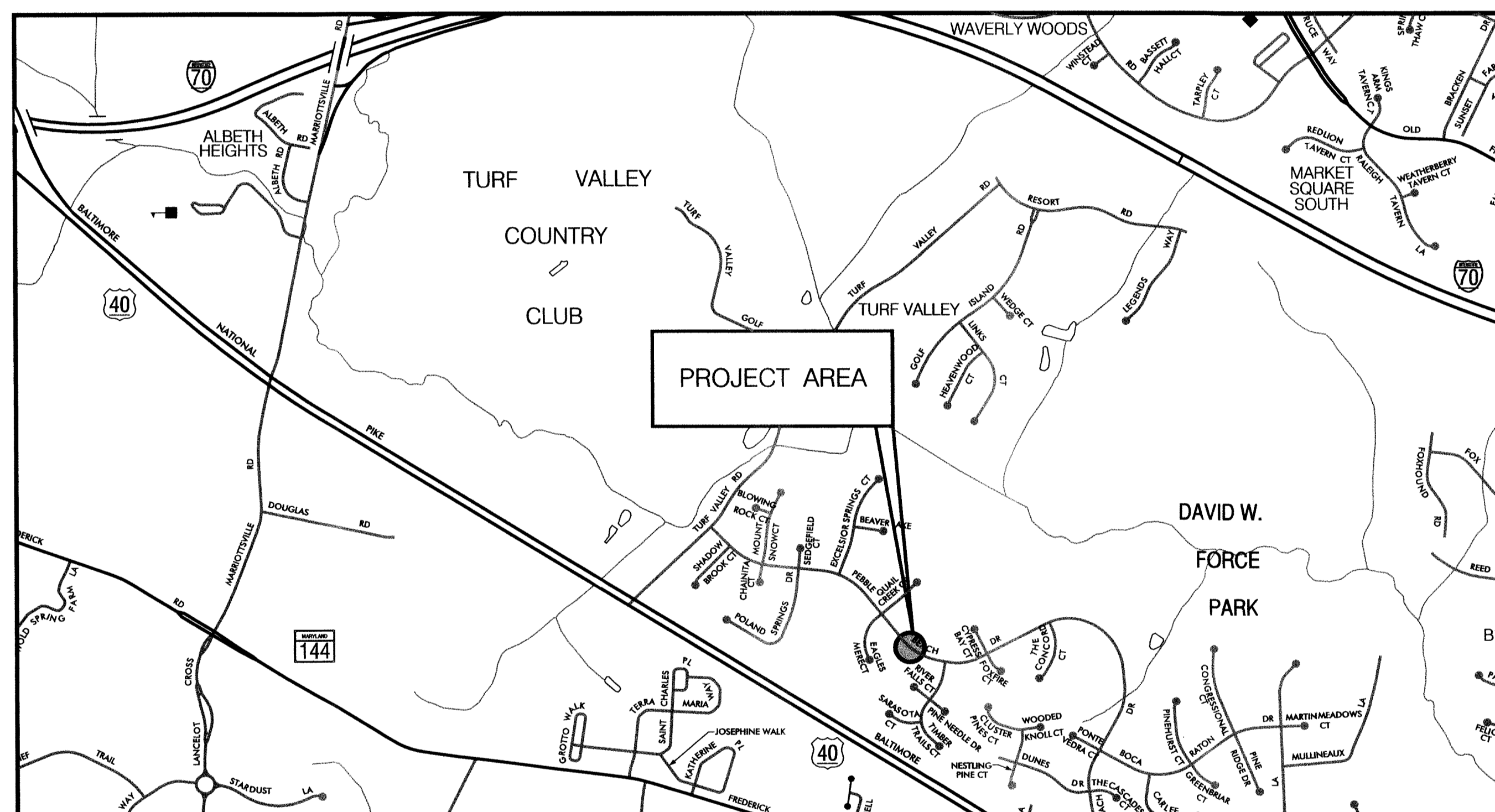
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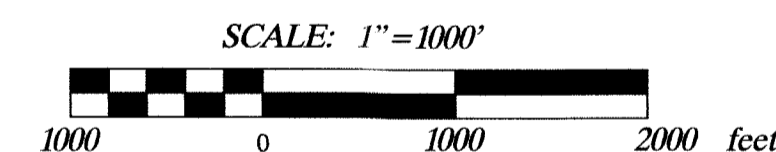
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### LEGEND

PROPOSED MEDIAN BARRIER	
ELECTRICAL HAND BOX - SIGNALS	
FLOW LINE	
STATE, COUNTY OR CITY LINES	
PROPOSED TRAFFIC BARRIER	
EXISTING TRAFFIC BARRIER	
PROPOSED FENCE LINE	
EXISTING FENCE LINE	
RIGHT OF WAY LINE	
EXISTING ROADWAY	
BASE OR SURVEY LINE	
TRAVERSE POINT	
APPROXIMATE LIMITS OF CUT AND/OR FILL	
PROPOSED MAJOR CONTOUR	
PROPOSED MINOR CONTOUR	
LIMIT OF DISTURBANCE	
EXISTING MAJOR CONTOURS	
EXISTING MINOR CONTOURS	
EXISTING PIPE/CULVERT	
EXISTING DROP INLET	
WETLAND	
HEDGE / TREE LINE	
BUSH / TREE	
CONIFEROUS TREE	
LIGHT POLE	



HORIZONTAL DATUM	NAD 83/91
VERTICAL DATUM	NAVD 88



### GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MDSA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST FIVE (5) WORKING DAYS PRIOR TO ANY WORK BEING DONE.
- THIS PLAN IS PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS /BUREAU OF ENGINEERING CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- SURVEY OF THIS SITE WAS PERFORMED BY AB CONSULTANTS, INC-MARCH 2011.
- THE COORDINATES SHOWN HEREON ARE BASED ON HOWARD COUNTY GEODETIC CONTROL, WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. BENCHMARKS SHOWN HEREON WERE PROVIDED BY AB CONSULTANTS INC.
- WATERS OF THE US WERE DELINEATED BY McCORMICK TAYLOR FEBRUARY 2011.
- OBSTRUCTIONS SHOWN ON THIS DRAWING ARE FOR THE CONVENIENCE OF THE CONTRACTOR ONLY AND McCORMICK TAYLOR DOES NOT WARRANT OR GUARANTEE THE CORRECTNESS OR COMPLETENESS OF THE INFORMATION GIVEN. THE CONTRACTOR MUST VERIFY SUCH INFORMATION TO HIS OWN SATISFACTION.
- THE EXISTING INFORMATION SHOWN ON THESE PLANS WAS TAKEN FROM THE BEST AVAILABLE SOURCES AND SHALL BE VERIFIED BEFORE STARTING CONSTRUCTION. HOWARD COUNTY DOES NOT GUARANTEE THE COMPLETENESS OR THE CORRECTNESS OF THE SHOWN INFORMATION.
- THE CONTRACTORS SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO THE CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY. ALL UTILITIES SHALL HAVE A CLEARANCE BY A MINIMUM OF 6 INCHES VERTICALLY AND A MINIMUM OF 5 FEET HORIZONTALLY.
- SHOULD THE CONTRACTOR DISCOVER DISCREPANCIES BETWEEN THE PLANS AND FIELD CONDITIONS, THE CONTRACTOR SHALL NOTIFY McCORMICK TAYLOR IMMEDIATELY TO RESOLVE THE SITUATION.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.
- SITE DEVELOPMENT DETAILS ARE REFERENCED FROM THE AS-BUILT PLANS FOR TURF VALLEY OVERLOOK SECTION 2 AREA 1 (F-88-033).
- A JOINT PERMIT APPLICATION HAS BEEN SUBMITTED TO THE MARYLAND DEPARTMENT OF THE ENVIRONMENT FOR THIS PROJECT. (TRACKING NUMBER 201161108)
- PROJECT IMPACTS INCLUDE WORK IN A USE 4-P STREAM. IN-STREAM WORK MAY NOT BE CONDUCTED DURING THE PERIOD BETWEEN MARCH 1 THROUGH JUNE 1.

### PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.  
LICENSE NO. 32013, EXPIRATION DATE: 7/5/2013

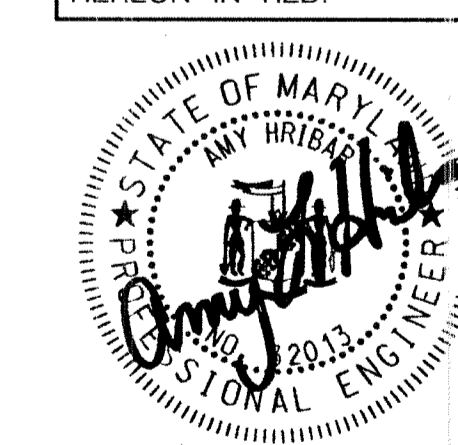
### DESIGN CERTIFICATION

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

### OWNER'S/DEVELOPER'S CERTIFICATION

I/WE HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

I HEREBY CERTIFY THAT THE AS-BUILT PLANS WERE CONSTRUCTED AS SHOWN HEREON IN RED.



AS-BUILT 4/16/13

**MARYLAND DEPARTMENT OF THE ENVIRONMENT**  
WATER MANAGEMENT ADMINISTRATION  
DAM SAFETY DIVISION

V. P. DAAL  
SR. REGULATORY AND COMPLIANCE ENGINEER

4/12/12  
DATE

4-12-2012  
DATE

DESIGNER'S SIGNATURE

4/19/12  
DATE

OWNER/DEVELOPER SIGNATURE

MARYLAND  
REGISTRATION  
NUMBER 32013

AMY L. HRIBAR  
PRINTED NAME

Howard E. Saltzman  
Chief, Stormwater Management Division  
PRINTED NAME AND TITLE

**DEPARTMENT OF PUBLIC WORKS**  
HOWARD COUNTY, MARYLAND

RAYMOND R. EVERS  
DIRECTOR OF PUBLIC WORKS

4/20/12  
DATE

HOWARD E. SALTZMAN  
CHIEF, STORMWATER MANAGEMENT DIVISION

4/19/12  
DATE

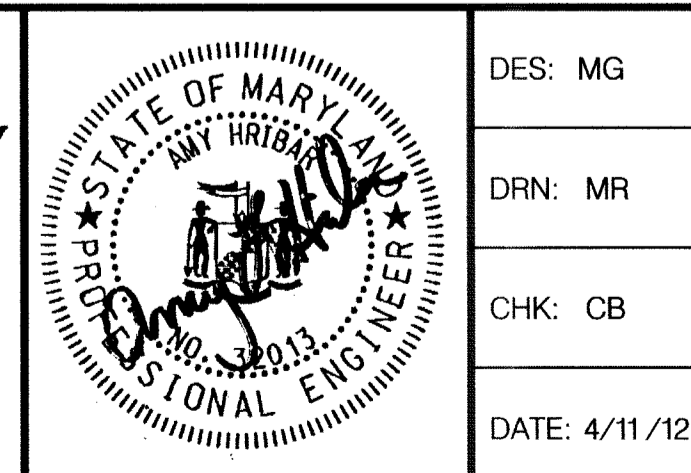
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(410) 662-7400

**Howard County**  
MARYLAND

Storm Water Management Division  
Bureau of Environmental Services  
6751 Columbia Gateway Drive, Suite 514  
Columbia, Maryland 21046-3143  
(410) 313-6444



DES:	MG	AH	1	BLUELINE REVISION	8/28/12
DRN:	MR	ALH	1	AS-BUILT	4/16/13
CHK:	CB				
DATE:	4/11/12	BY	NO.	REVISION	DATE

**TURF VALLEY OVERLOOK  
POND 2 PRINCIPAL SPILLWAY LINING  
CAPITAL PROJECT #D-1159  
HOWARD COUNTY**

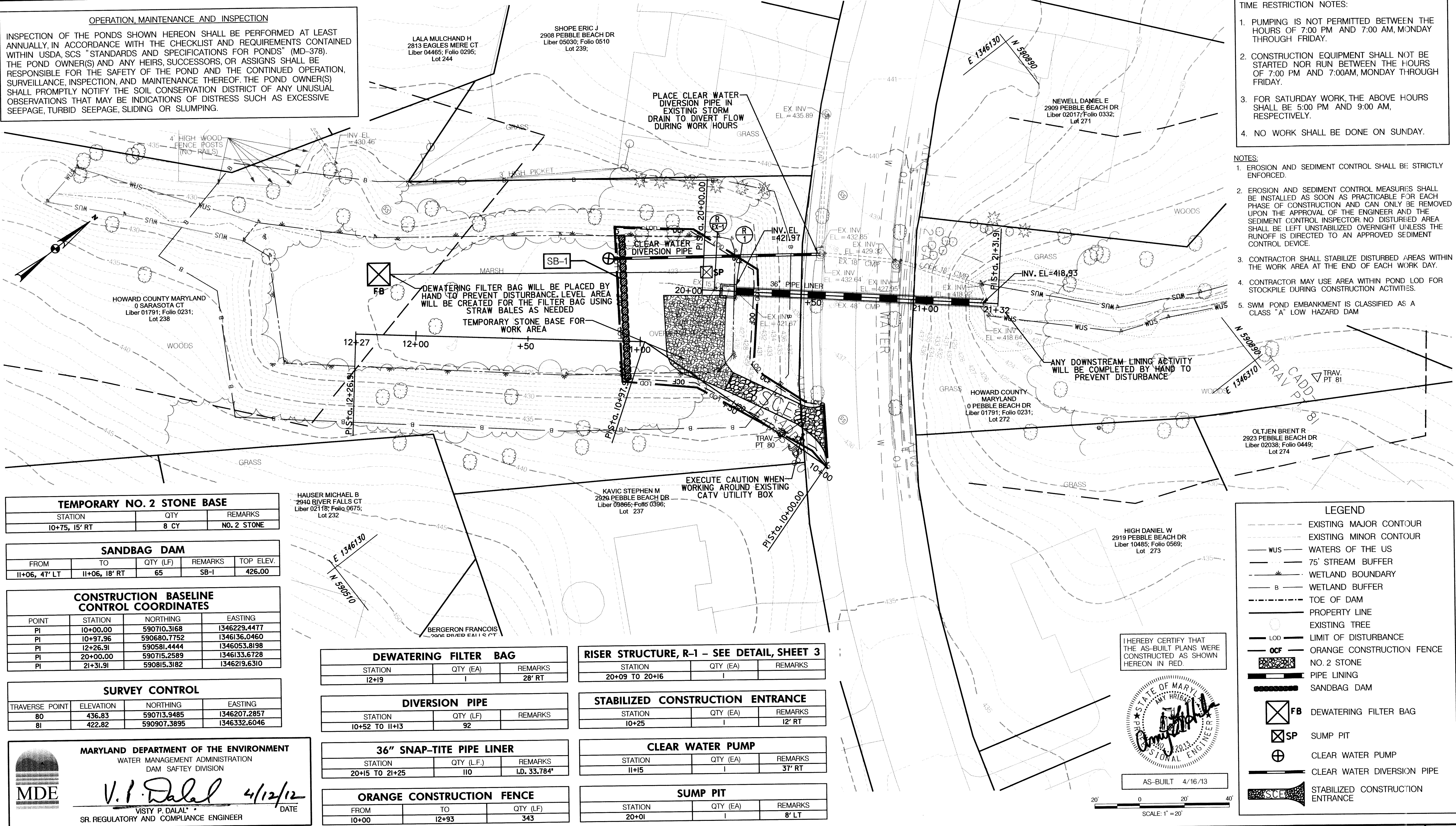
**TITLE SHEET**

SCALE AS SHOWN  
SHEET 1 OF 6

**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.

- TIME RESTRICTION NOTES:**
1. PUMPING IS NOT PERMITTED BETWEEN THE HOURS OF 7:00 PM AND 7:00 AM, MONDAY THROUGH FRIDAY.
  2. CONSTRUCTION EQUIPMENT SHALL NOT BE STARTED NOR RUN BETWEEN THE HOURS OF 7:00 PM AND 7:00AM, MONDAY THROUGH FRIDAY.
  3. FOR SATURDAY WORK, THE ABOVE HOURS SHALL BE 5:00 PM AND 9:00 AM, RESPECTIVELY.
  4. NO WORK SHALL BE DONE ON SUNDAY.

- NOTES:**
1. EROSION AND SEDIMENT CONTROL SHALL BE STRICTLY ENFORCED.
  2. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AS SOON AS PRACTICABLE FOR EACH PHASE OF CONSTRUCTION AND CAN ONLY BE REMOVED UPON THE APPROVAL OF THE ENGINEER AND THE SEDIMENT CONTROL INSPECTOR. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS THE RUNOFF IS DIRECTED TO AN APPROVED SEDIMENT CONTROL DEVICE.
  3. CONTRACTOR SHALL STABILIZE DISTURBED AREAS WITHIN THE WORK AREA AT THE END OF EACH WORK DAY.
  4. CONTRACTOR MAY USE AREA WITHIN POND LOD FOR STOCKPILE DURING CONSTRUCTION ACTIVITIES.
  5. SWM POND EMBANKMENT IS CLASSIFIED AS A CLASS "A" LOW HAZARD DAM



**TEMPORARY NO. 2 STONE BASE**

STATION	QTY	REMARKS
10+75, 15' RT	8 CY	NO. 2 STONE

**SANDBAG DAM**

FROM	TO	QTY (LF)	REMARKS	TOP ELEV.
11+06, 47' LT	11+06, 18' RT	65	SB-1	426.00

**CONSTRUCTION BASELINE CONTROL COORDINATES**

POINT	STATION	NORTHING	EASTING
PI	10+00.00	590710.3168	1346229.4477
PI	10+97.96	590680.7752	1346136.0460
PI	12+26.91	590581.4444	1346053.8198
PI	20+00.00	590715.2589	1346133.6728
PI	21+31.91	590815.3182	1346219.6310

**SURVEY CONTROL**

TRAVERSE POINT	ELEVATION	NORTHING	EASTING
80	436.83	590713.9485	1346207.2857
81	422.82	590907.3895	1346332.6046

**MARYLAND DEPARTMENT OF THE ENVIRONMENT**  
 WATER MANAGEMENT ADMINISTRATION  
 DAM SAFETY DIVISION  
*V. P. Dalal* 4/12/12  
 VISTY P. DALAL, SR. REGULATORY AND COMPLIANCE ENGINEER

**DEWATERING FILTER BAG**

STATION	QTY (EA)	REMARKS
12+19	1	28' RT

**DIVERSION PIPE**

STATION	QTY (LF)	REMARKS
10+52 TO 11+13	92	

**36" SNAP-TITE PIPE LINER**

STATION	QTY (L.F.)	REMARKS
20+15 TO 21+25	110	LD. 33.784'

**ORANGE CONSTRUCTION FENCE**

FROM	TO	QTY (LF)
10+00	12+93	343

**RISER STRUCTURE, R-1 - SEE DETAIL, SHEET 3**

STATION	QTY (EA)	REMARKS
20+09 TO 20+16	1	

**STABILIZED CONSTRUCTION ENTRANCE**

STATION	QTY (EA)	REMARKS
10+25	1	12' RT

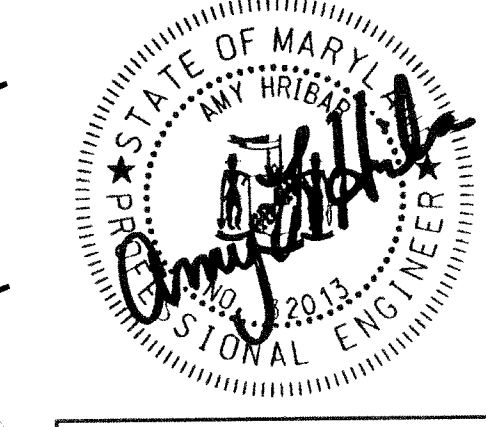
**CLEAR WATER PUMP**

STATION	QTY (EA)	REMARKS
11+15	1	37' RT

**SUMP PIT**

STATION	QTY (EA)	REMARKS
20+01	1	8' LT

I HEREBY CERTIFY THAT THE AS-BUILT PLANS WERE CONSTRUCTED AS SHOWN HEREON IN RED.



AS-BUILT 4/16/13  
 SCALE: 1" = 20'

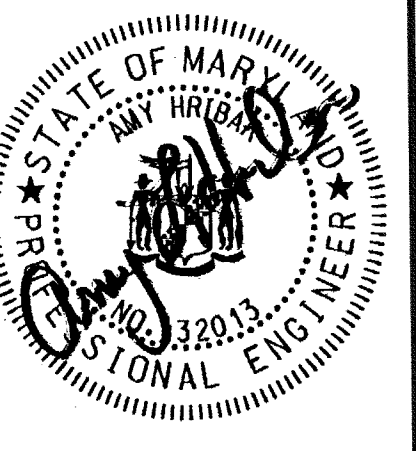
**LEGEND**

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- WUS - WATERS OF THE US
- 75' STREAM BUFFER
- WETLAND BOUNDARY
- WETLAND BUFFER
- TOE OF DAM
- PROPERTY LINE
- EXISTING TREE
- LOD - LIMIT OF DISTURBANCE
- OCF - ORANGE CONSTRUCTION FENCE
- NO. 2 STONE
- PIPE LINING
- SANDBAG DAM
- FB - DEWATERING FILTER BAG
- SP - SUMP PIT
- CLEAR WATER PUMP
- CLEAR WATER DIVERSION PIPE
- SCF - STABILIZED CONSTRUCTION ENTRANCE

**DEPARTMENT OF PUBLIC WORKS**  
 HOWARD COUNTY, MARYLAND  
*Eudyn J. Jone* 4/19/12  
 CHIEF, BUREAU OF ENVIRONMENTAL SERVICES

**McCormick Taylor**  
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 509 South Exeter Street  
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 Baltimore, Maryland 21202  
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**Howard County**  
 MARYLAND  
 Storm Water Management Division  
 Bureau of Environmental Services  
 6751 Columbia Gateway Drive, Suite 514  
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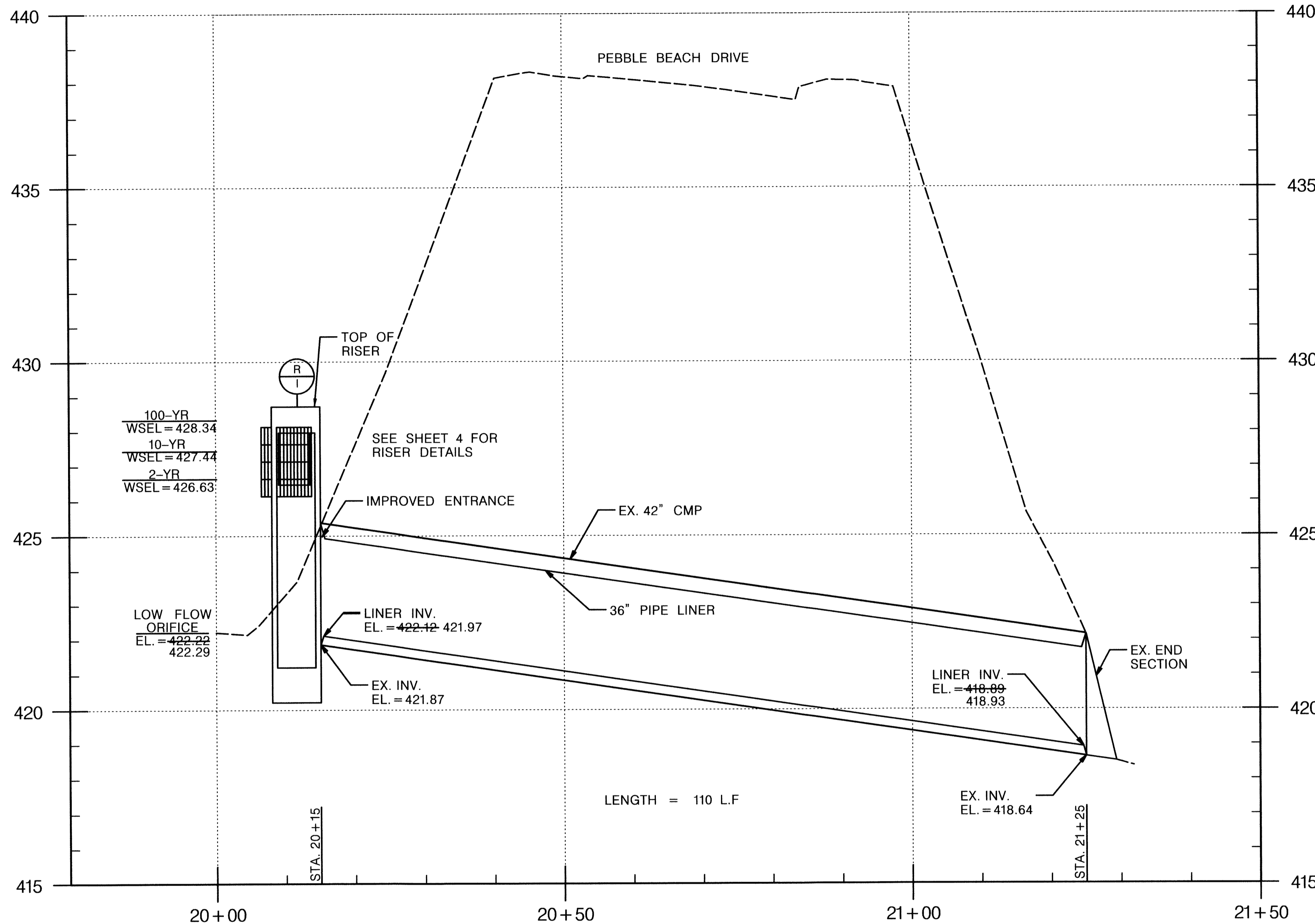


DES:	ALH	AS-BUILT	4/16/13
MG			
DRN:	MR		
CHK:	CB		
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BY	NO.	REVISION	DATE

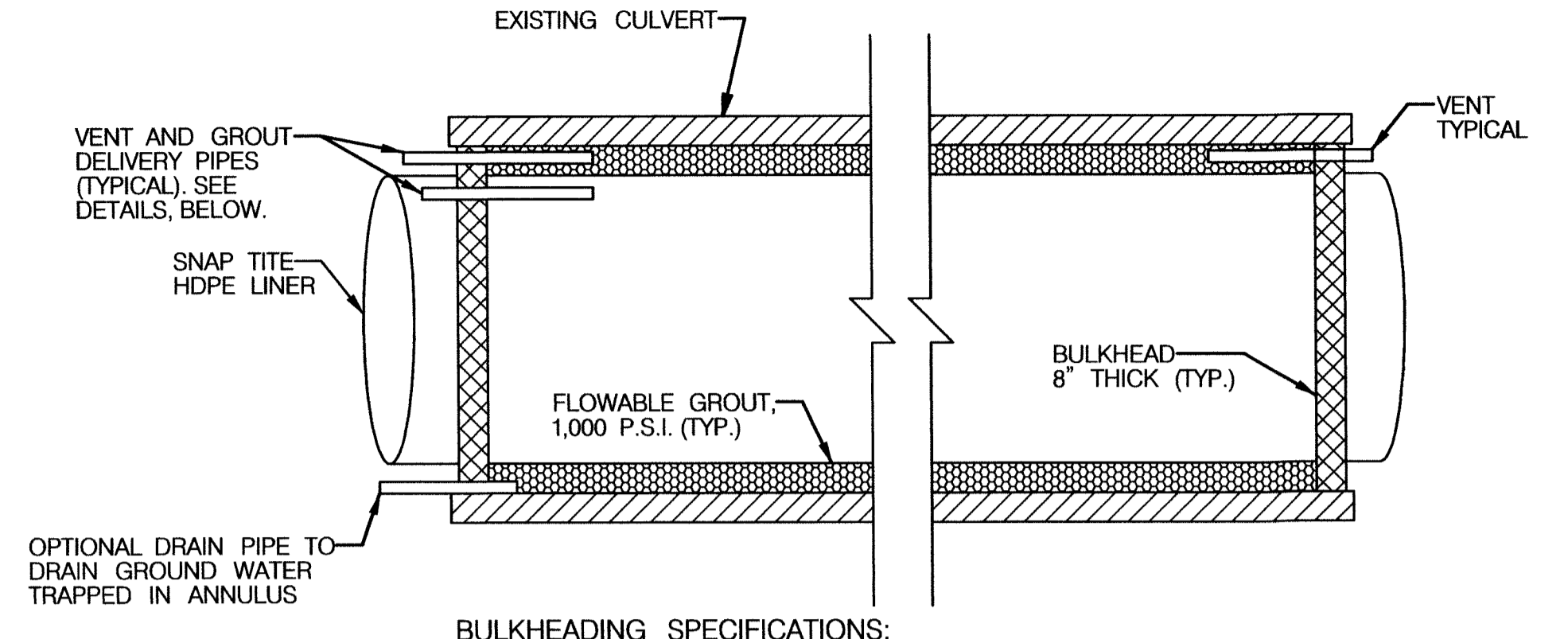
**TURF VALLEY OVERLOOK**  
**POND 2 PRINCIPAL SPILLWAY LINING**  
**CAPITAL PROJECT D 1159**  
**HOWARD COUNTY**

**SITE PLAN**

SCALE 1" = 20'  
 SHEET 2 OF 6

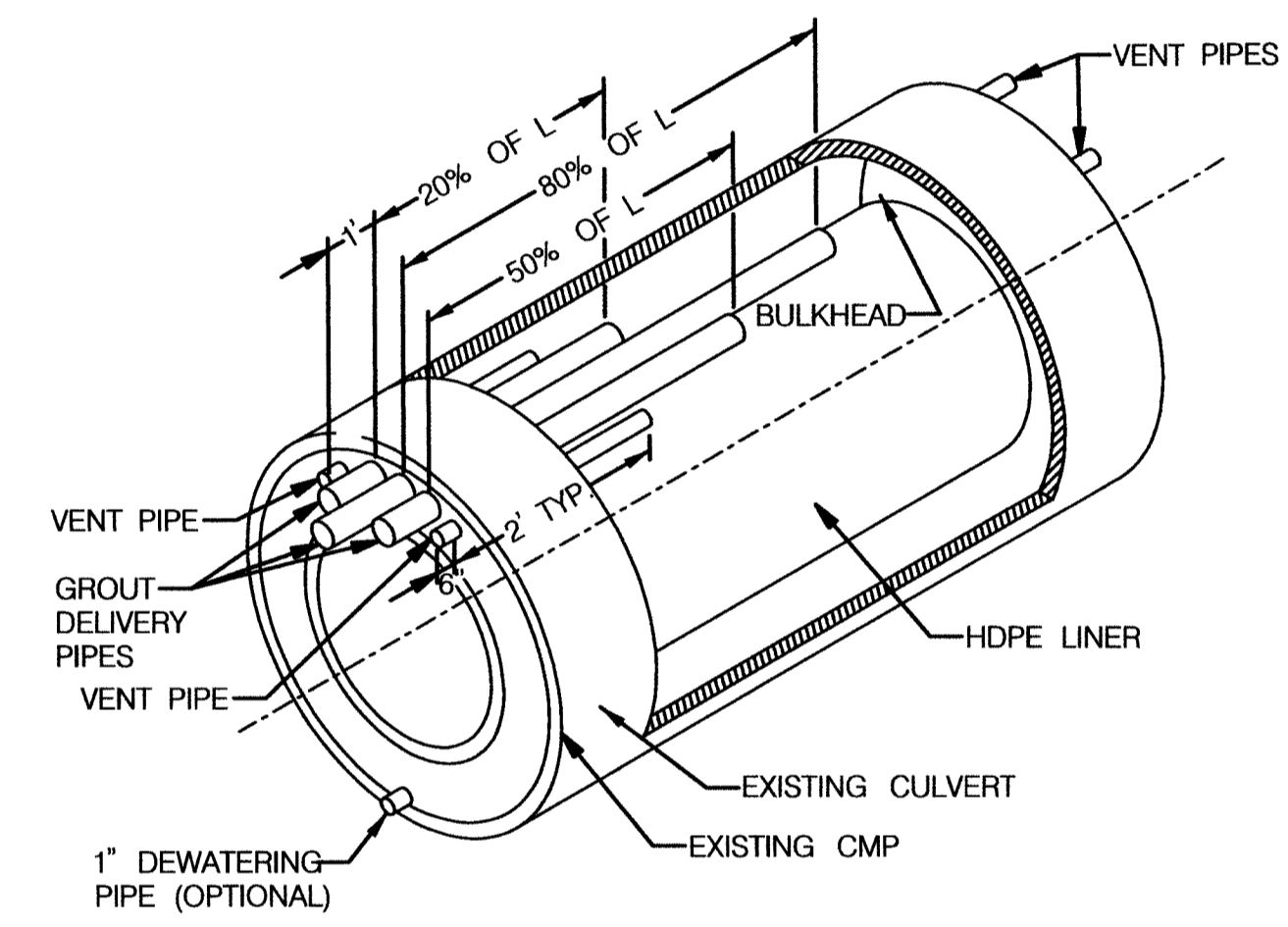


**SPILLWAY PIPE PROFILE**  
 HORIZONTAL SCALE: 1" = 10'  
 VERTICAL SCALE: 1" = 2'

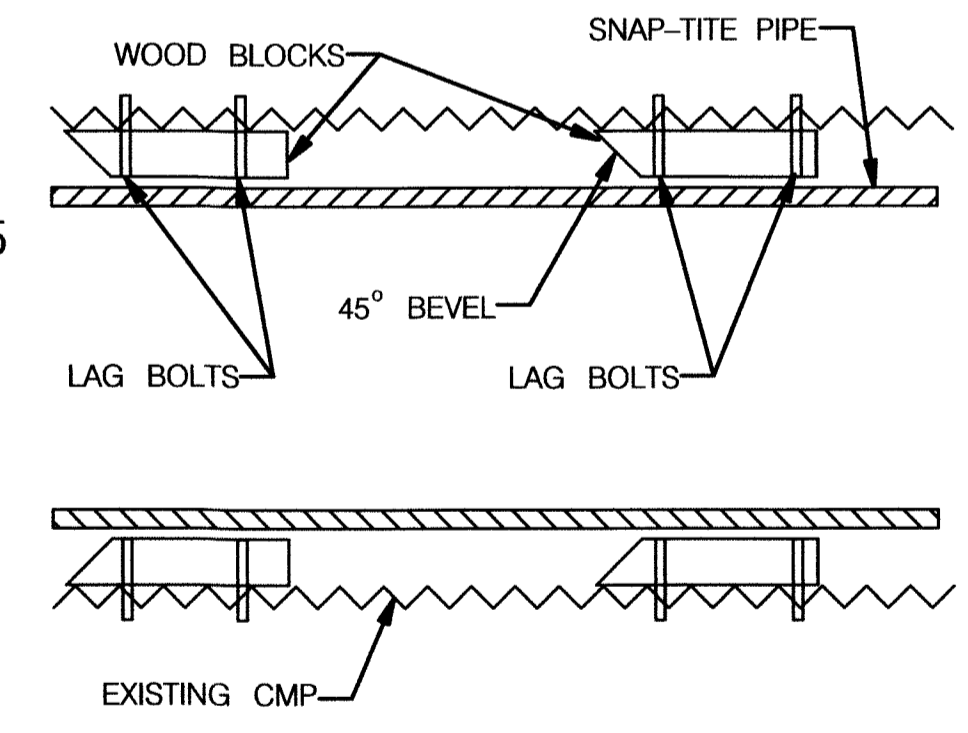


**BULKHEADING SPECIFICATIONS:**  
 THE ENDS OF THE PIPE SHALL BE BULKHEADED USING TWO COURSES OF BRICK AND MORTAR OR POURED CONCRETE 8" THICK MINIMUM. THE OUTSIDE OF THE BULKHEAD SHALL BE PARGED WITH MORTAR TO ACHIEVE A SMOOTH SURFACE. AT THE ENTRANCE END OF THE PIPE, THE BULKHEAD SHALL BE FORMED INTO A SMOOTH BEVELED ENTRANCE AT ROUGHLY A 45 DEGREE ANGLE, WITH THE PIPE LINER RECESSED FROM THE HEADWALL.

**TYPICAL GROUTING ARRANGEMENT**  
 SCALE: NOT TO SCALE

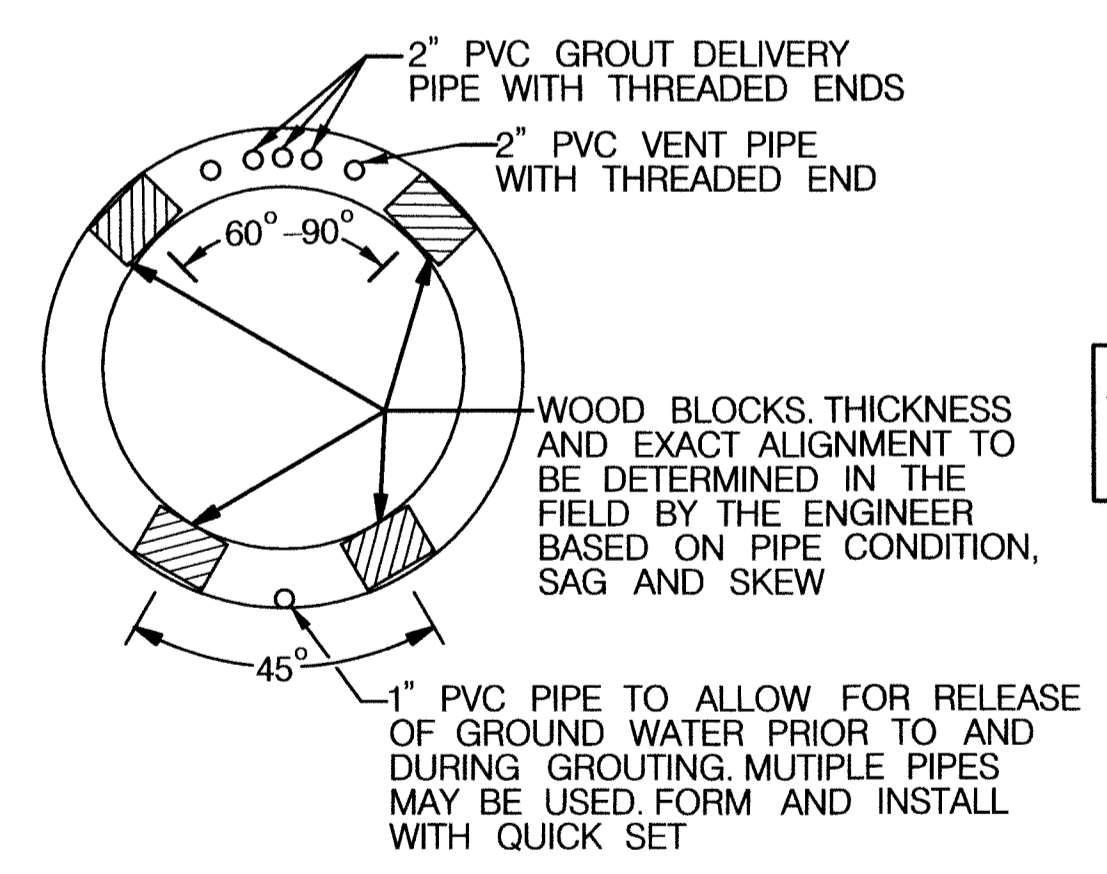


**SEALING THE ANNULAR SPACE**  
 SCALE: NOT TO SCALE

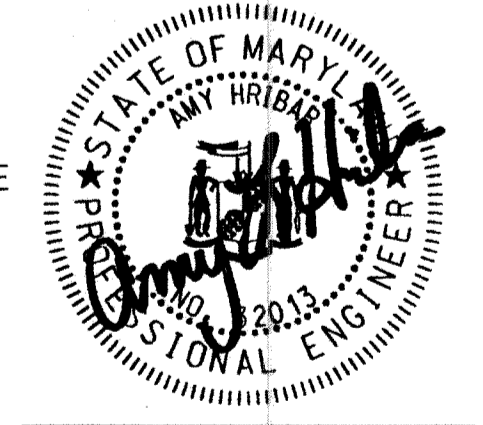


GROUT DELIVERY PIPES		
LEFT	CENTER	RIGHT
22 LF	88 LF	55 LF

**BLOCKING DETAIL**  
 SCALE: NOT TO SCALE



I HEREBY CERTIFY THAT THE AS-BUILT PLANS WERE CONSTRUCTED AS SHOWN HEREON IN RED.



AS-BUILT 4/16/13

**MARYLAND DEPARTMENT OF THE ENVIRONMENT**  
 WATER MANAGEMENT ADMINISTRATION  
 DAM SAFETY DIVISION

*V. P. Dalal* 4/12/12  
 VISTY P. DALAL, SR. REGULATORY AND COMPLIANCE ENGINEER

**DEPARTMENT OF PUBLIC WORKS**  
 HOWARD COUNTY, MARYLAND

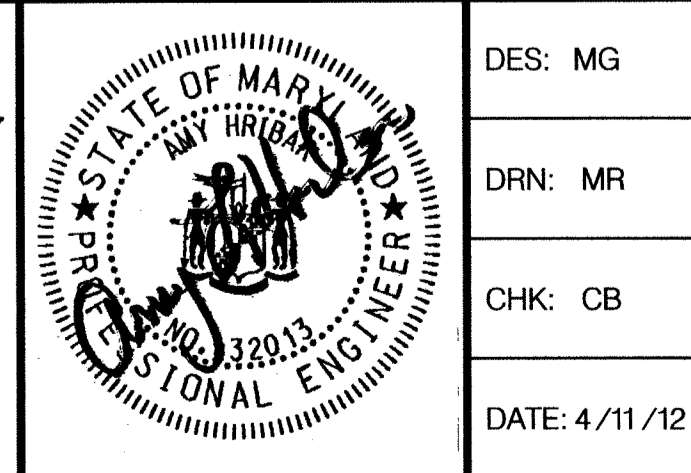
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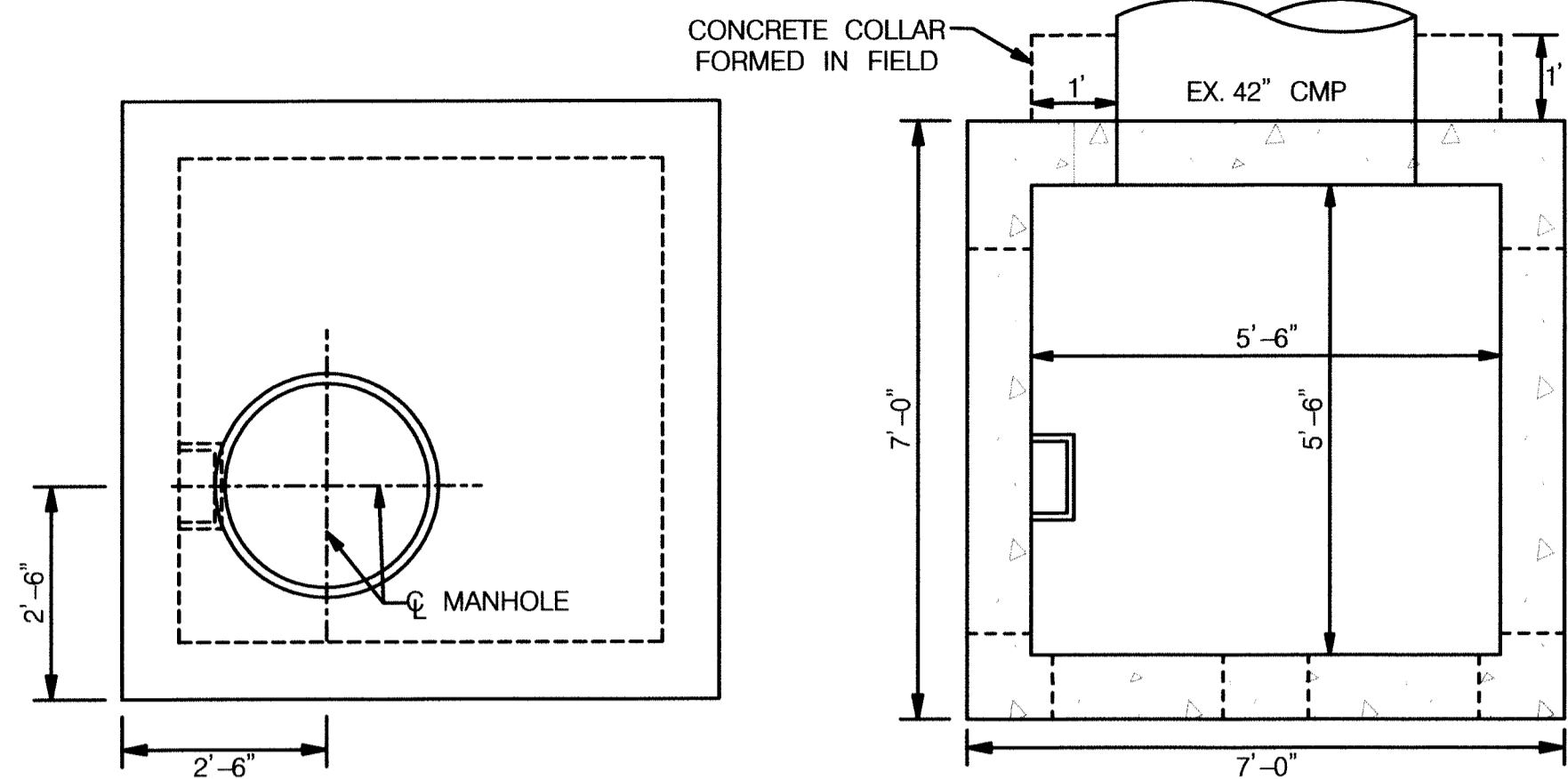
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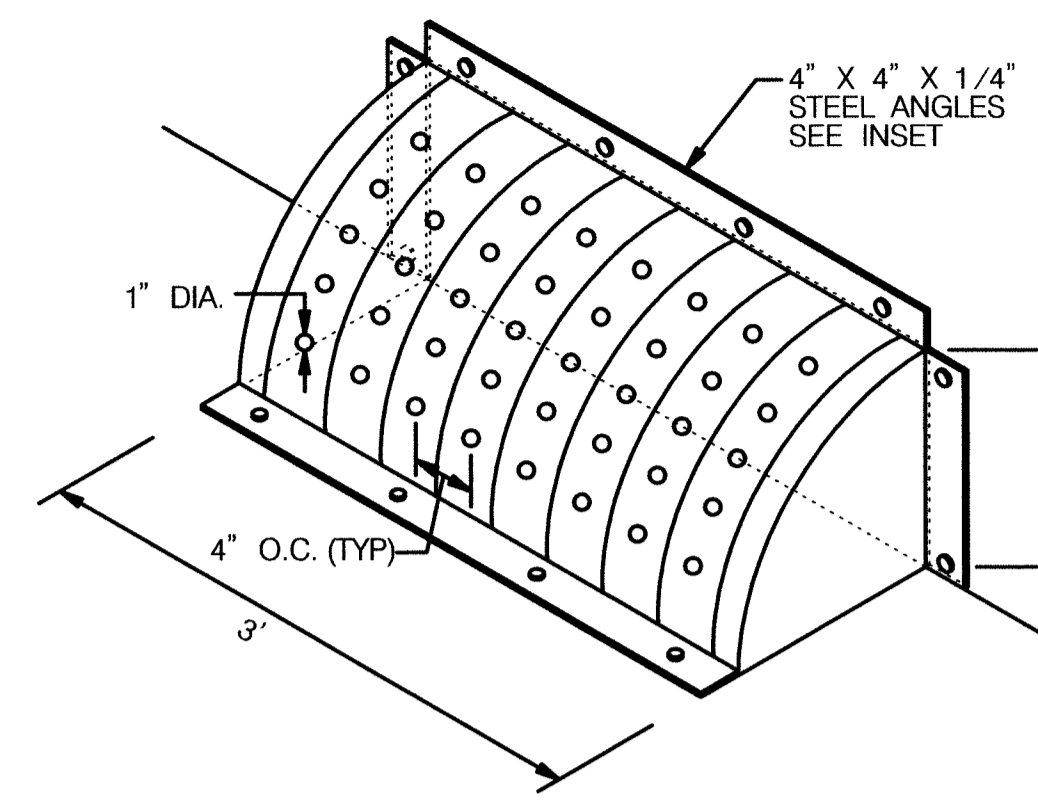
DES: MG	ALH	1	AS-BUILT	4/16/13
DRN: MR				
CHK: CB				
DATE: 4/11/12	BY	NO.	REVISION	DATE

**TURF VALLEY OVERLOOK**  
**POND 2 PRINCIPAL SPILLWAY LINING**  
**CAPITAL PROJECT D 1159**  
**HOWARD COUNTY**

**PIPE PROFILE**

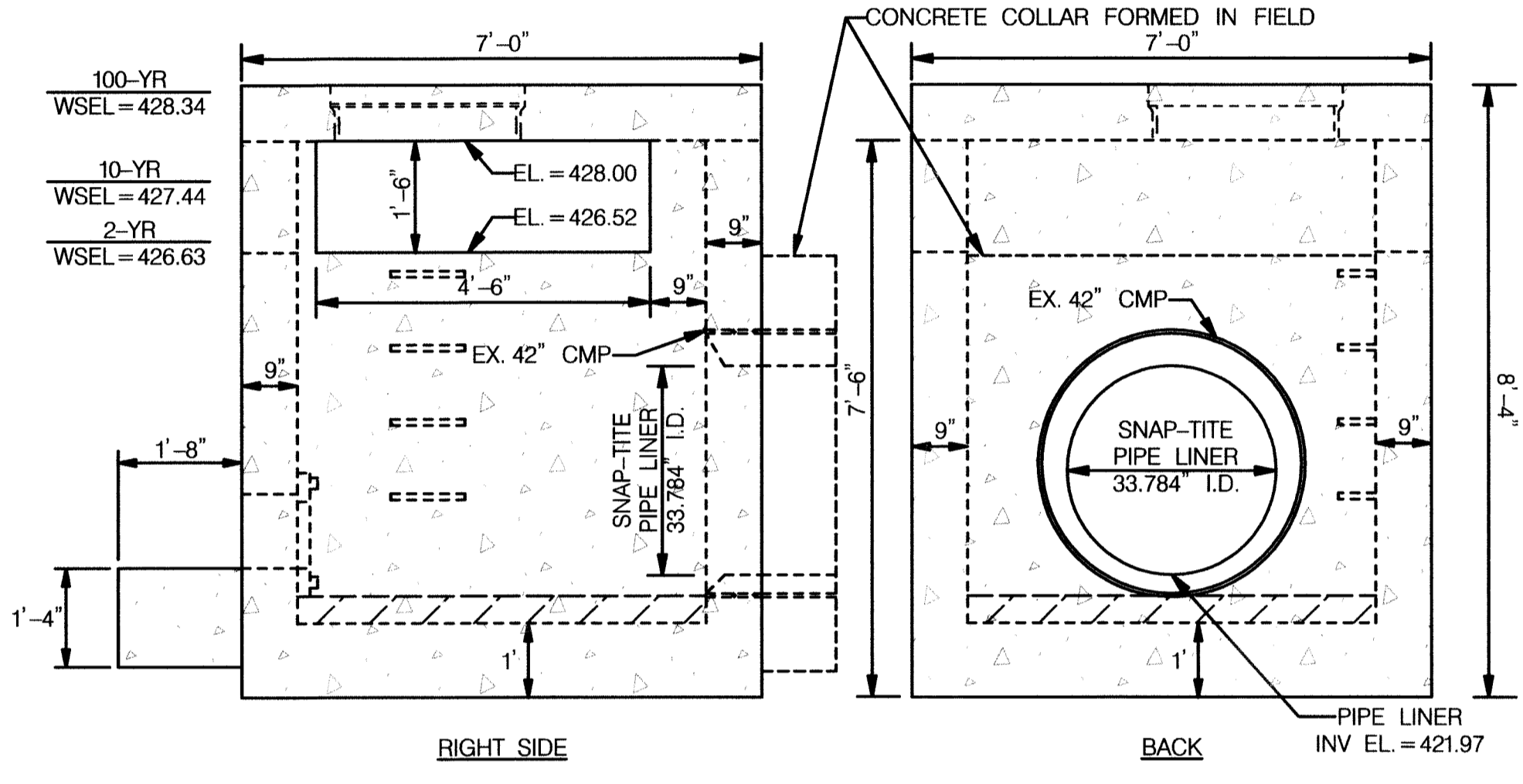
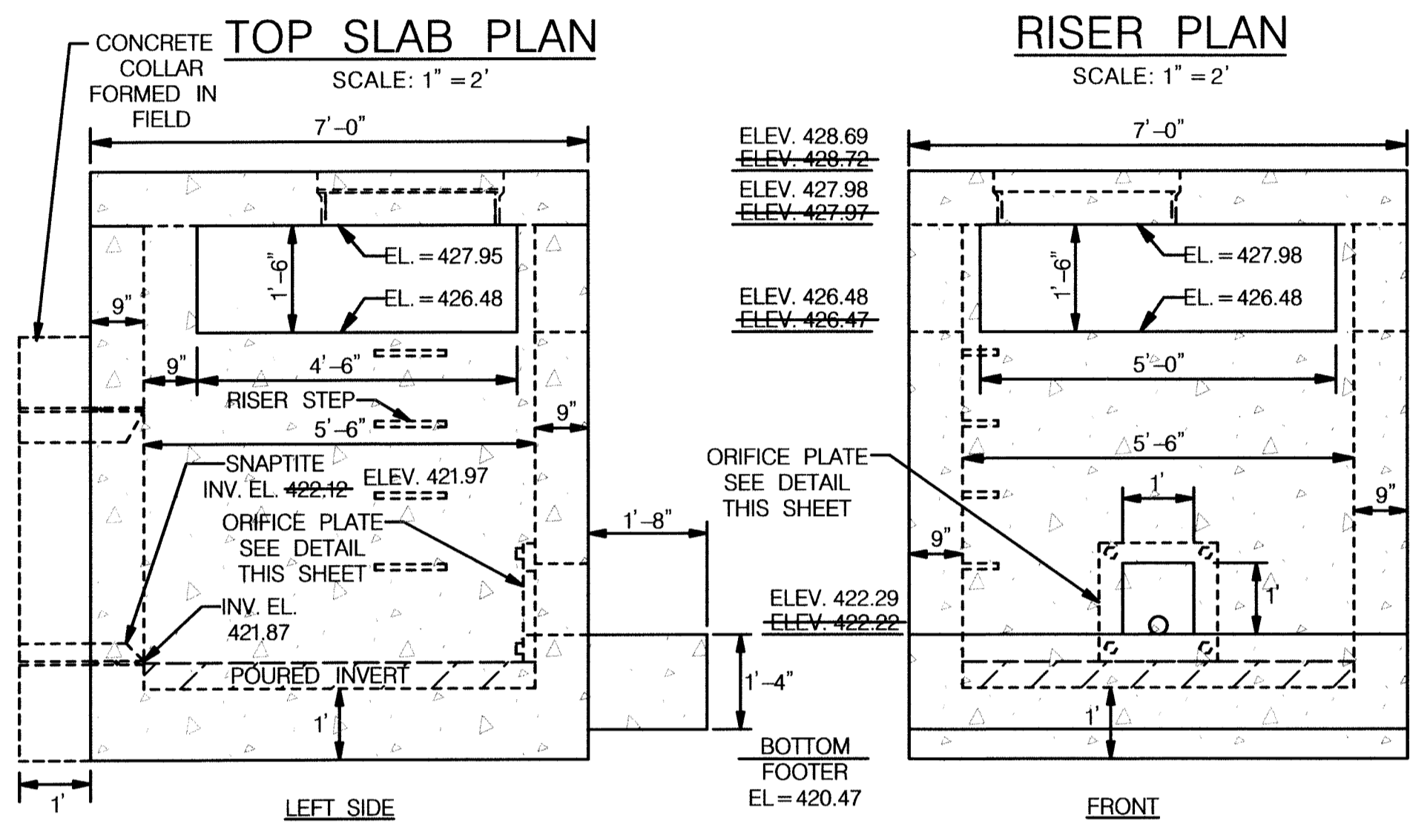


- RISER CONSTRUCTION NOTES:**
- RISER STEPS SHALL FOLLOW DETAIL G-5.21 FOR MANHOLE AND INLET STEPS
  - SHA MIX NO. 3 CONCRETE SHALL BE USED AND SHALL CONFORM TO THE REQUIREMENTS OF LATEST EDITION OF ACI 301 AND ACI 318.
  - RISER STRUCTURE SHALL BE CAST IN PLACE AND DESIGNED
  - PRECAST STRUCTURES SHALL 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 POND 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 MIX NO. 3 CONCRETE. ENSURE CLEARANCE FOR ORIFICE PLATE WHEN PLACING POURED INVERT. INVERT TO SLOPE DOWN TOWARD OUTLET OR AS DIRECTED.
  - REFER TO DETAIL D-4.10 FOR REBAR PLACEMENT.
  - REFER TO DETAIL D-3.91 SIDEWALK FRAME AND COVER FOR MANHOLE COVER.
  - RISER STRUCTURE SHALL BE CONSTRUCTED AS A MONOLITHIC STRUCTURE.
  - CONSTRUCT CONCRETE COLLAR TO ENSURE WATERTIGHT SEAL AT RISER AND PIPE CONNECTION.

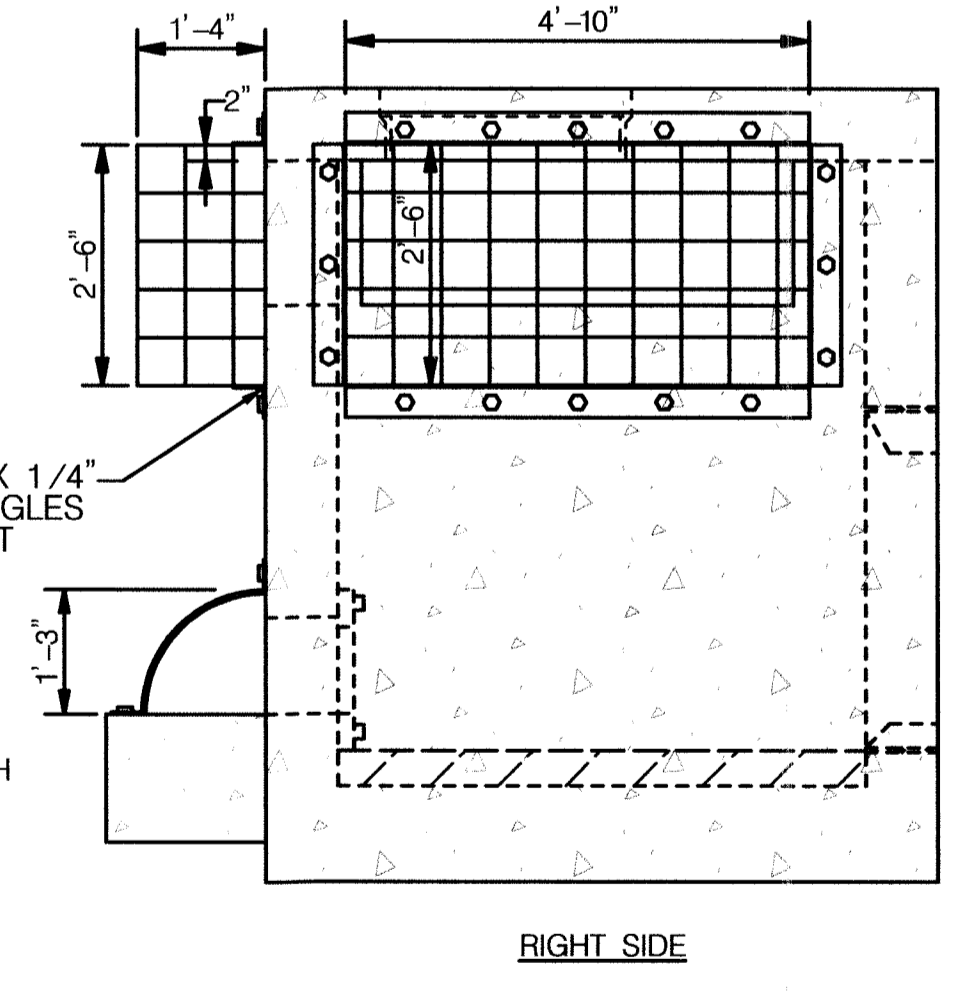
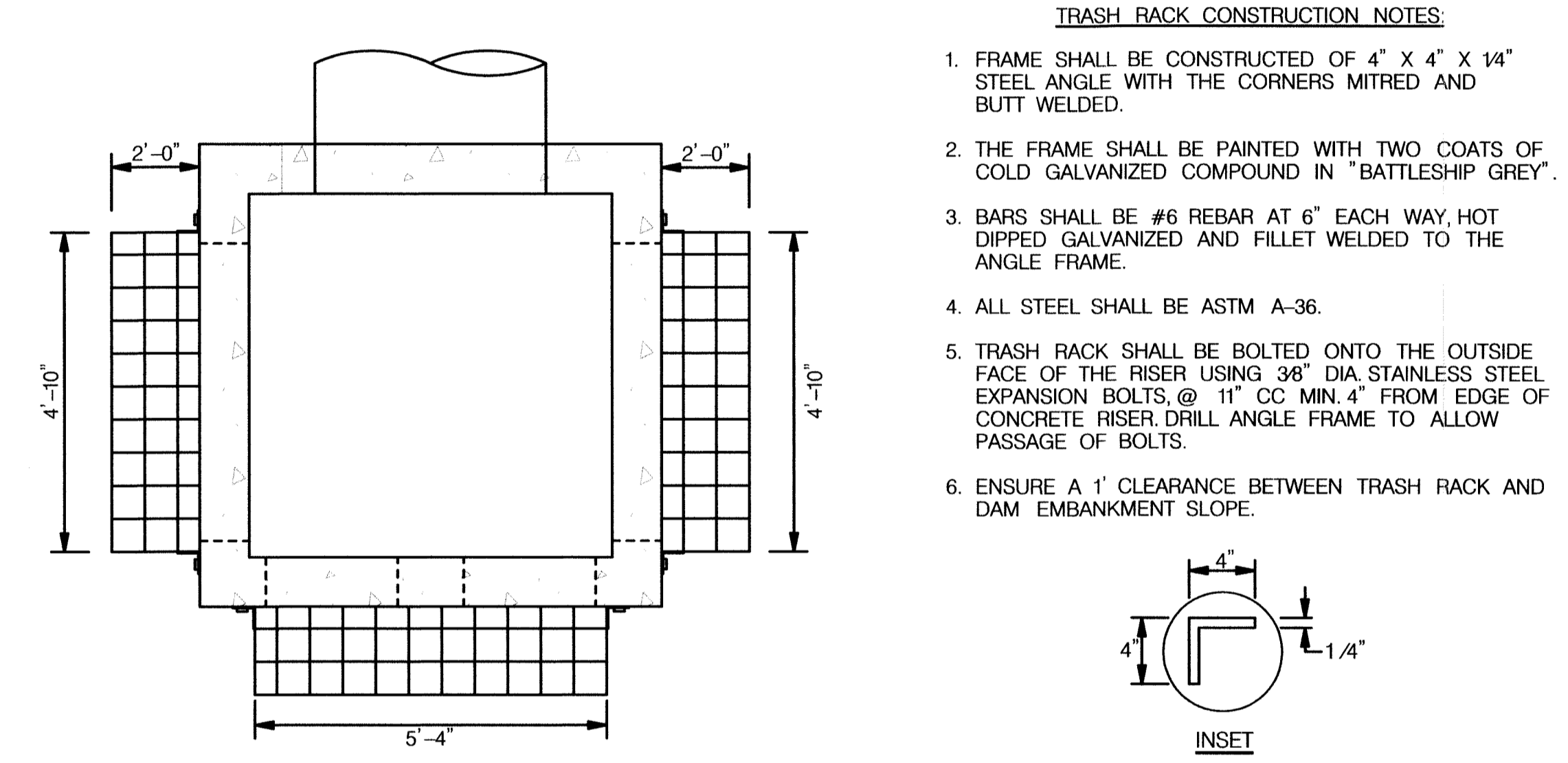


- LOW FLOW TRASH RACK NOTES:**
- TRASH RACK STEEL TO CONFORM TO ASTM A-36.
  - ALL SURFACES TO BE COATED WITH ZRC COLD GALVANIZED COMPOUND AFTER WELDING.
  - TRASH RACK TO BE FASTENED TO THE CONCRETE WITH MASONRY ANCHORS. TRASH RACK TO BE REMOVABLE.
  - CENTER TRASH RACK OVER ORIFICE OPENING IN RISER STRUCTURE.
  - USE MIX NO.3 CONCRETE FOR CONCRETE PAD.
  - PROVIDE #4 @12" EACH WAY IN CONCRETE PAD. REINFORCING TO CONFORM TO ASTM A615 GRADE 60.

**LOW FLOW TRASH RACK DETAIL**  
NOT TO SCALE

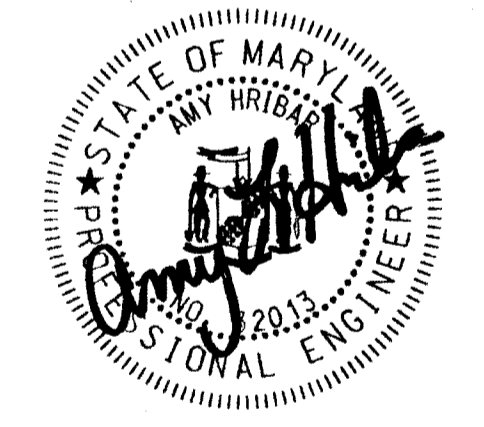


**RISER ELEVATION**  
SCALE: 1" = 2'



**TRASH RACK DETAIL**  
SCALE: 1" = 2'

I HEREBY CERTIFY THAT THE AS-BUILT PLANS WERE CONSTRUCTED AS SHOWN HEREON IN RED.



- ORIFICE PLATE NOTES:**
- 20" X 20" X 1/2" GALVANIZED STEEL ORIFICE PLATE.
  - 3.0" DIA ORIFICE PLATE TO BE BOLTED TO THE INSIDE DOWN STREAM FACE OF CONCRETE RISER USING 1/2" STAINLESS STEEL CONCRETE ANCHORS.

**ORIFICE PLATE**  
NOT TO SCALE

AS-BUILT 4/16/13

**MARYLAND DEPARTMENT OF THE ENVIRONMENT**  
WATER MANAGEMENT ADMINISTRATION  
DAM SAFETY DIVISION

*V. P. Dalal* 4/12/12  
VISTY P. DALAL, SR. REGULATORY AND COMPLIANCE ENGINEER

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**TURF VALLEY OVERLOOK**  
POND 2 PRINCIPAL SPILLWAY LINING  
CAPITAL PROJECT D 1159  
HOWARD COUNTY

**RISER DETAIL SHEET**

SCALE: AS SHOWN  
SHEET: 4 OF 6