

**LEGEND**

- Gas Valve
- Abutment Line
- Pump Adapter Connection with 2" offset

OFFICE OF SPECIAL RECLAMATION  
264 INDUSTRIAL DRIVE  
OAK HILL, WV 25901  
OFFICE: 1-304-465-1911  
FAX: 1-304-465-0631

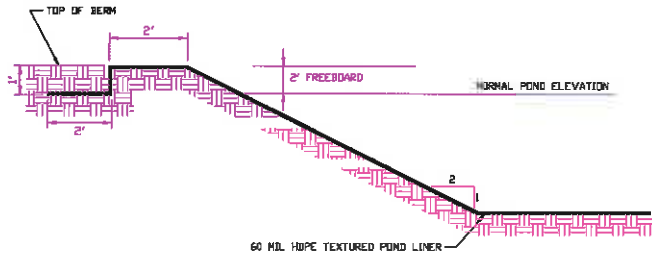
DEP CONTRACT NO: 16299  
DESIGNED BY: NLP  
DRAWN BY: ARS  
CHECKED BY:  
APPROVED BY:



REVISIONS		
DATE	BY	CR
AUGUST 2013		CR

**ED-E DEVELOPMENT COMPANY INC**  
**PERMIT S-1032-86**  
**DEP16299**  
PRESTON COUNTY, WEST VIRGINIA

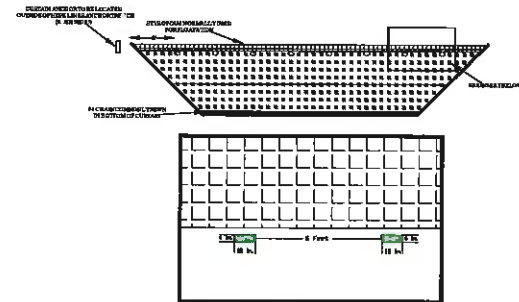
OVERVIEW MAP		SHT. NO.
SCALE: NONE	DATE: MAY 2013	2R
		TOTAL
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POND LINER ANCHOR DETAILS

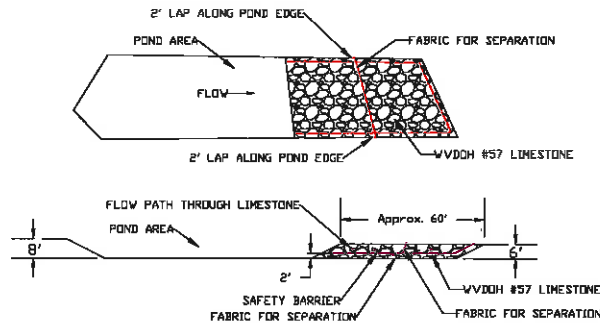
ED-E DEVELOPMENT COMPANY, INC  
 PERMIT S-1032-86  
 DEP16299

Settling Pond Number	Inlet Type	Outlet Type
1	1 Spreader	3 Spreader
2	2 Spreader	4 Spreader
3	1 Spreader	3 Spreader
4	2 Spreader	4 Spreader
5	1 Spreader	4 Spreader
6	2 Spreader	Gutter



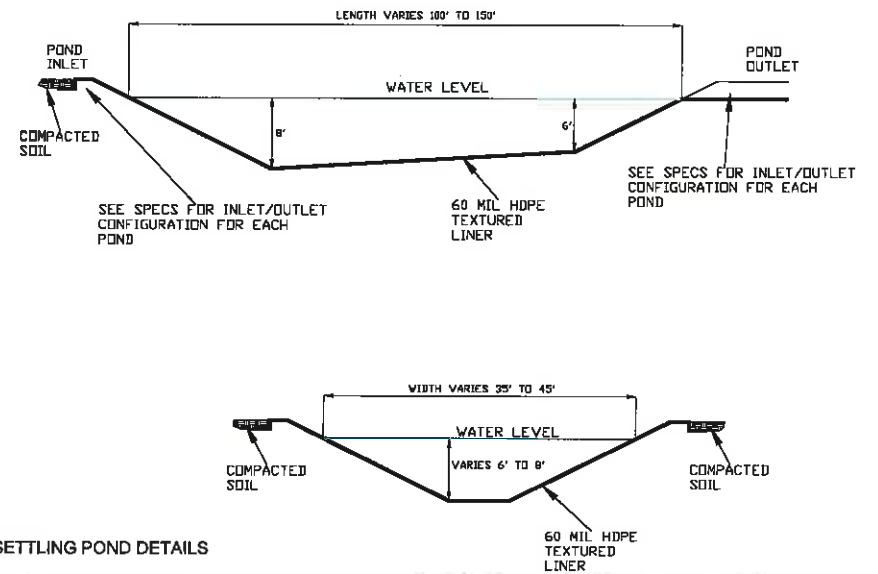
- NOTES:
1. WINDOWS ON BAFFLE CURTAINS SHALL BE CUT ON THE TOP, LEFT AND RIGHT SIDES LEAVING A FLAP ON THE BOTTOM PORTION.
  2. BAFFLE CURTAINS MUST BE FOLDED AND SEWN TO CONFORM TO THE 2H/1V POND SIDE SLOPES.
  3. BAFFLE CURTAINS MUST EXTEND TO THE BOTTOM OF THE POND.
  4. CABLE MUST EXTEND 10 FEET BEYOND BOTH ENDS OF THE BAFFLE CURTAIN.

BAFFLE CURTAIN DETAILS



- NOTES:
1. LIMESTONE BED DIMENSIONS WILL BE APPROXIMATE TO THE MINIMUM AMOUNT OF STONE SPECIFIED.
  2. GEOTEXTILE FABRIC FOR SEPARATION MEETING REQUIREMENTS OF ASTM D 2885 SECTION 7 CLASS 2 WILL BE UTILIZED TO FORCE WATER FLOW DOWN AND THROUGH THE BOTTOM 2 FOOT PORTION OF THE LIMESTONE BED.
  3. THE GEOTEXTILE FABRIC FOR SEPARATION WILL BE PLACED AT THE APPROXIMATE CENTER LOCATION OF THE LIMESTONE BED. THE FABRIC WILL EXTEND TO THE TOP OF THE LIMESTONE BED AND TO THE DEPTH OF THE SAFETY BARRIER.
  4. GEOTEXTILE FABRIC FOR SEPARATION WILL ALSO BE USED AS A PROTECTIVE BARRIER BETWEEN HDPE LINER AND STONE.
  5. A SAFETY BARRIER WILL BE PLACED AT 2 FEET (4-1/2 INCHES) ABOVE THE BOTTOM AND SIDES OF THE POND IN THE LIMESTONE AS TO PROVIDE A DEFINED LOCATION OF THE 2 FOOT HEIGHT ABOVE THE HDPE LINER TO PREVENT DAMAGE TO THE HDPE LINER DURING FUTURE MAINTENANCE OF THE LIMESTONE BED.
  6. SAFETY BARRIER SHALL BE OF A HIGH VISIBILITY ORANGE POLYPROPYLENE CONSTRUCTION OF AT LEAST 4 FOOT IN WIDTH AND A MAX MESH OPENING OF 2 INCH X 4 INCH AS DICTATED UNDER ASTM D4873. ANY CONNECTIONS WILL HAVE A MINIMUM 1 FOOT OVERLAP.

LIMESTONE BED DETAILS



SETTLING POND DETAILS

OFFICE OF SPECIAL RECLAMATION  
 204 INDUSTRIAL DRIVE  
 OAK HILL, WV 25901  
 OFFICE: 1-304-485-1911  
 FAX: 1-304-485-0031

DEP CONTRACT NO. 16299  
 DESIGNED BY:  
 DRAWN BY:  
 CHECKED BY:  
 APPROVED BY:



REVISIONS		
DATE	BY	CA
AUGUST 2013		

**ED-E DEVELOPMENT COMPANY INC**  
**PERMIT S-1032-86**  
**DEP16299**  
 PRESTON COUNTY, WEST VIRGINIA

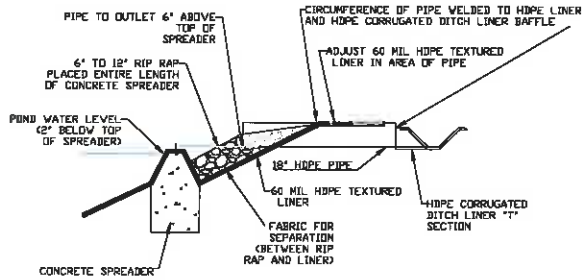
MISCELLANEOUS POND DETAILS

SCALE: NONE

DATE: MAY 2013

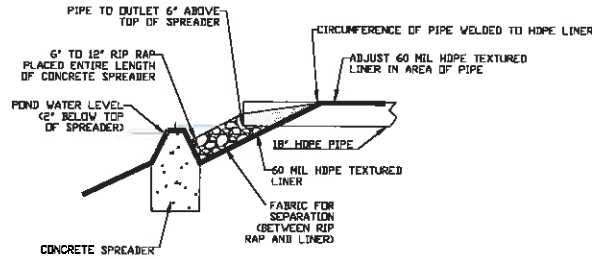
SHT. NO.  
 S-R  
 TOTAL  
 20

**TYPE 1 SPREADER**

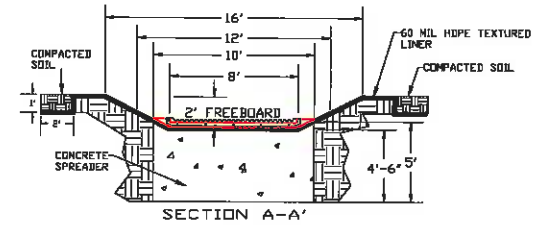


CONCRETE SPREADER POND INLET FLOW PARALLEL TO POND EMBANKMENT WITH PIPE

**TYPE 2 SPREADER**

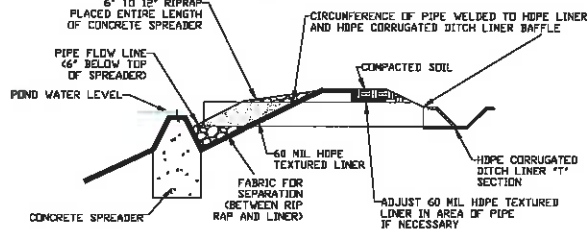


CONCRETE SPREADER POND INLET FLOW PERPENDICULAR TO POND EMBANKMENT WITH PIPE



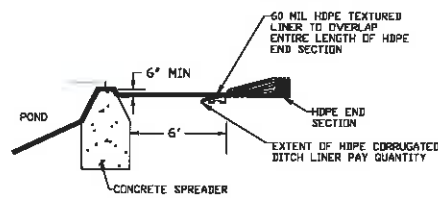
SECTION A-A'

**TYPE 3 SPREADER**

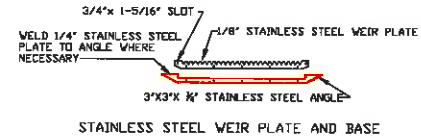


CONCRETE SPREADER POND OUTLET FLOW PARALLEL TO POND EMBANKMENT WITH PIPE

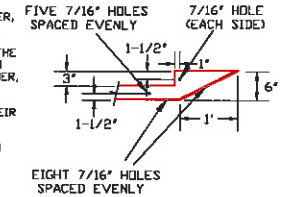
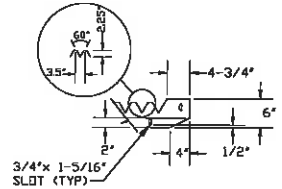
**TYPE 4 SPREADER**



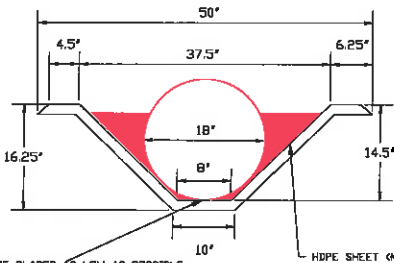
CONCRETE SPREADER POND OUTLET FLOW PERPENDICULAR TO POND EMBANKMENT WITH HDPE END SECTION



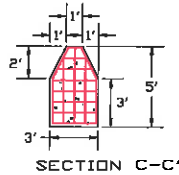
STAINLESS STEEL WEIR PLATE AND BASE



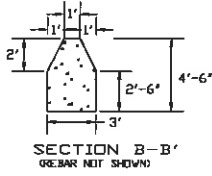
- NOTES:
1. ATTACH WEIR PLATE TO WEIR BASE WITH 3/8 INCH X 1 INCH STAINLESS STEEL BOLTS WITH A WASHER ON BOTH SIDES, LOCK WASHER, AND NUT.
  2. THE WEIR BASE SHALL BE ANCHORED, ABOVE THE HDPE LINER, TO THE CONCRETE SPREADER WITH 3/8 INCH X 1-9/16 INCH CONCRETE DROP IN ANCHORS, SPACED EVENLY AS SHOWN. THE BOLTS SHALL HAVE A WASHER, LOCK WASHER, AND NUT.
  3. INDUSTRIAL SILICONE SHALL BE PLACED BETWEEN THE WEIR AND WEIR BASE IMMEDIATELY PRIOR TO INSTALLING.
  4. SLOTS IN WEIR PLATE AND HOLES IN WEIR BASE SHALL BE ALIGNED AND SPACED EVENLY.



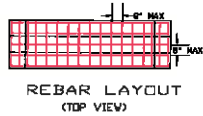
HDPE PIPE AND CORRUGATED DITCH LINER CROSS SECTION



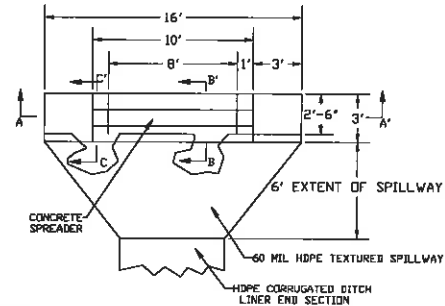
SECTION C-C'



SECTION B-B' (REBAR NOT SHOWN)



REBAR LAYOUT (TOP VIEW)



- NOTES:
1. 1 INCH CHAMFER ON ALL CONCRETE CORNERS IN CONTACT WITH HDPE LINER.
  2. FABRIC FOR SEPARATION ON TOP OF 60 MIL HDPE TEXTURED LINER IN AREAS THAT ARE COVERED WITH STONE.
  3. 2 INCH MINIMUM CONCRETE COVER OVER ALL REBAR.
  4. REBAR SHALL BE #5 BAR AND LOCATED ON A 8 INCH MAX CENTER TO CENTER SPACING VERTICAL AND HORIZONTAL AND SHALL BE TIED USING STEEL WIRE AT EACH INTERSECTION.
  5. ANY SPLICES IN REBAR SHALL BE A MINIMUM OF 30 BAR DIAMETERS.
  6. FINISH GRADE OF CONCRETE SPREADER SHALL BE LEVEL WITH A MAXIMUM TOLERANCE OF 1/8 INCH MEASURED VERTICALLY THE ENTIRE 8 FOOT LENGTH OF SPILLWAY.
  7. HDPE END SECTION PAID PER LINEAR FOOT AS HDPE CORRUGATED DITCH LINER, MEASURED TO THE EXTENT SHOWN.

OFFICE OF SPECIAL RECLAMATION  
254 INDUSTRIAL DRIVE  
OAK HILL, WV 26041  
OFFICE: 1-304-486-1911  
FAX: 1-304-465-0051

DEP CONTRACT NO. 16296  
DESIGNED BY:  
DRAWN BY:  
CHECKED BY:  
APPROVED BY:



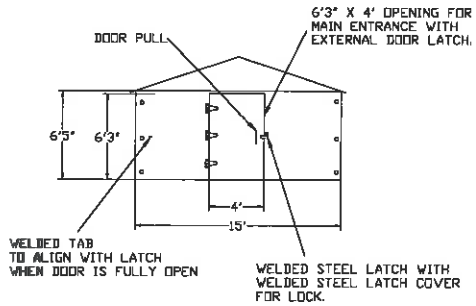
REVISIONS		
DATE	BY	LD
AUGUST 2013		

**ED-E DEVELOPMENT COMPANY INC**  
**PERMIT S-1032-86**  
**DEP16299**  
PRESTON COUNTY, WEST VIRGINIA

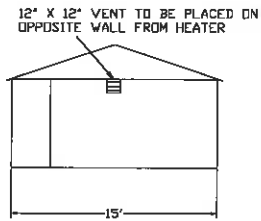
**CONCRETE SPREADER DETAILS**  
SCALE: NONE  
DATE: MAY 2013

SHT. NO.  
9-R  
TOTAL  
20

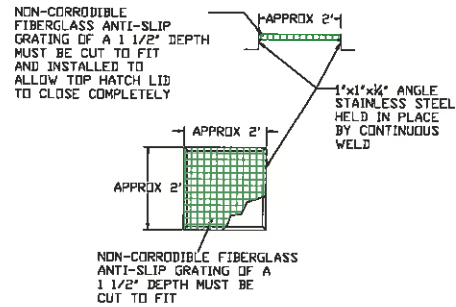
4' WIDE DOOR



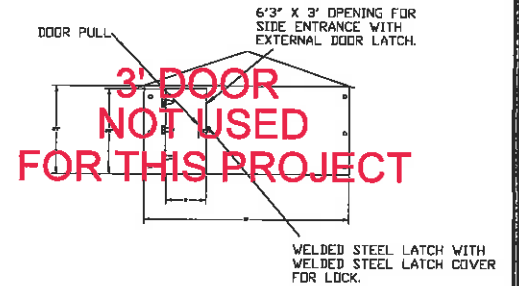
VENT DETAIL



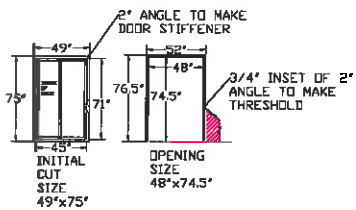
TOP HATCH DETAILS



3' WIDE DOOR

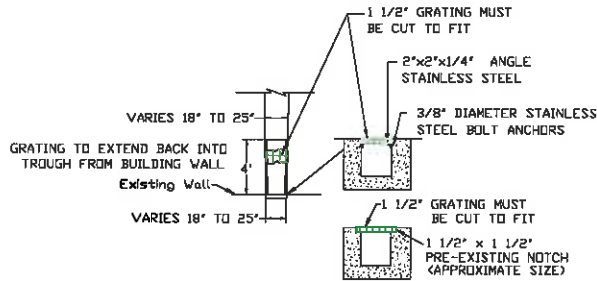


4' WIDE DOOR DETAILS



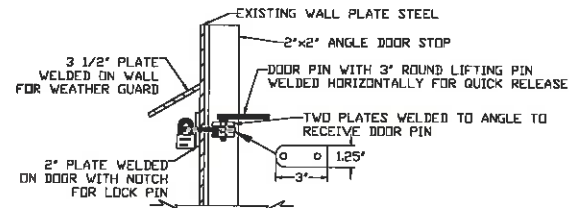
- NOTES: 1. NEED 44 FEET OF 2 INCH x 2 INCH ANGLE 1/4 INCH THICK FOR OPENINGS AND DOOR STIFFENER  
 2. ALL ANGLE STIFFENERS SHALL BE ON THE INSIDE OF BUILDING AND DOOR  
 3. DOOR SHALL BE 1/2 INCH ABOVE FLOOR AS TO ALLOW FREE MOVEMENT OF DOOR

TROUGH GRATING DETAILS

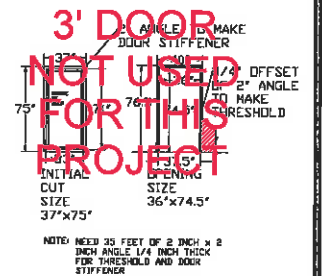


NOTE: DEP AGENT ON SITE WILL VERIFY THE ANCHORING METHOD TO BE USED

LATCH DETAIL VIEW

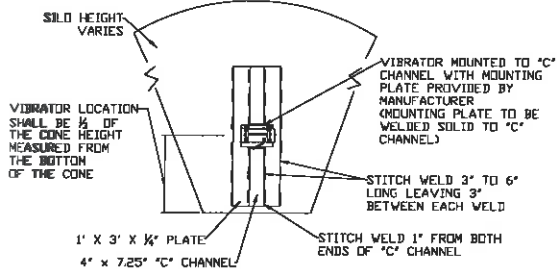


3' WIDE DOOR DETAILS

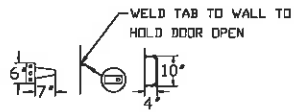


NOTE: NEED 35 FEET OF 2 INCH x 2 INCH ANGLE 1/4 INCH THICK FOR THRESHOLD AND DOOR STIFFENER

SILD VIBRATOR DETAILS

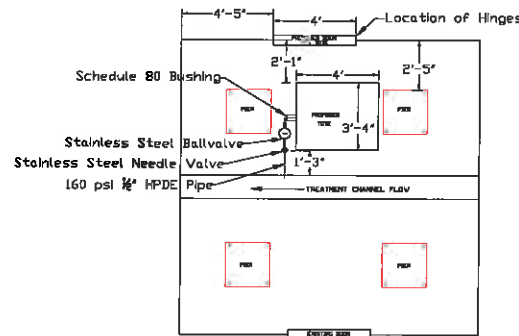


HINGE AND PULL DETAILS



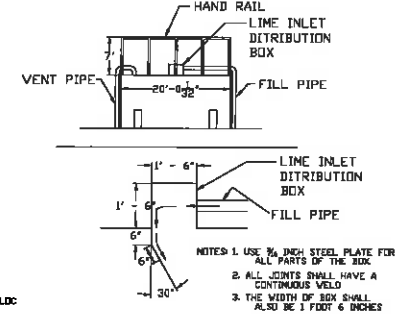
- NOTE: 1. THREE HINGES PER DOOR. DEP TO VERIFY LOCATION AND HINGE SIDE. WELD HINGES TO WALL AND DOOR PLATING.  
 2. 1/2 INCH ROUND STEEL ROD FOR DOOR PULLS TO BE WELDED ON EACH SIDE OF DOOR.  
 3. WELD TAB TO WALL FOR RUBBER STRAP TO SECURE DOOR WHEN OPEN.

SECONDARY CHEMICAL TREATMENT SYSTEM



- NOTE 1. All Pipe Connections to be Completed with 1/2 inch Hose Clamps of 160 psi  
 2. Top of tote shall be fitted with a 2\"/>

FILLING PIPE MODIFICATION DETAILS



- NOTES: 1. USE 3/4 INCH STEEL PLATE FOR ALL PARTS OF THE BOX.  
 2. ALL JOINTS SHALL HAVE A CONTINUOUS WELD.  
 3. THE WIDTH OF BOX SHALL ALSO BE 1 FOOT 6 INCHES.

OFFICE OF SPECIAL RECLAMATION  
 24 INDUSTRIAL DRIVE  
 OAK HILL, WV 25901  
 OFFICE: 1-304-466-1911  
 FAX: 1-304-465-0531

DEP CONTRACT NO. 16296  
 DESIGNED BY:  
 DRAWN BY:  
 CHECKED BY:  
 APPROVED BY:

REVISIONS		
DATE	BY	LS
August 2013		

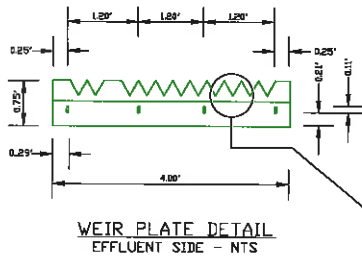
**ED-E DEVELOPMENT COMPANY INC**  
**PERMIT S-1032-86**  
**DEP16299**  
 PRESTON COUNTY, WEST VIRGINIA

AQUA-FIX BUILDING MODIFICATION DETAILS

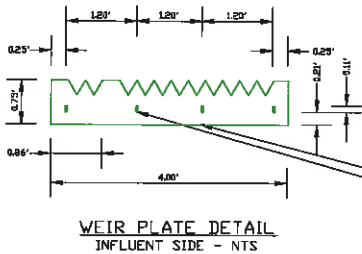
SCALE: NONE

DATE: MAY 2013

SHT. NO.  
 10-R  
 TOTAL  
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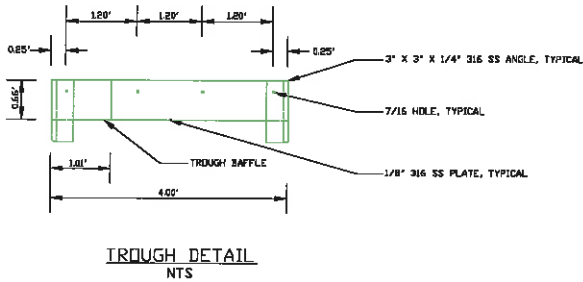
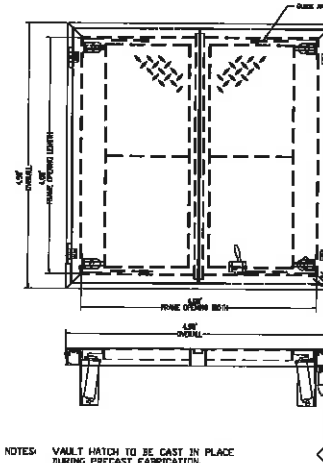
NOTES: WEIR PLATE LOCATED ON THE EFFLUENT SIDE OF THE TROUGH SHALL HAVE 11 WEIRS, 2 WEIRS FOR DRIVE WATER AND 9 WEIRS FOR AMD TO BE TREATED.



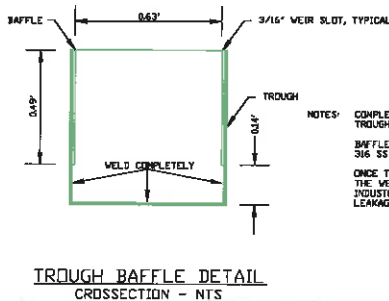
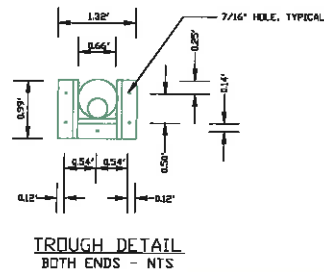
NOTES: WEIR PLATE LOCATED ON THE INFLUENT SIDE OF THE TROUGH SHALL HAVE 31 WEIRS, 2 WEIRS FOR DRIVE WATER AND 29 WEIRS FOR AMD TO BE TREATED.

INCHES	80°V NOTCH WEIR FLOW RATES			
	1-WEIR	4-WEIRS	18-WEIRS	22-WEIRS
0.1	0.01	0.04	0.17	0.21
0.2	0.04	0.16	0.65	0.83
0.3	0.09	0.36	1.61	2.06
0.4	0.17	0.67	3.02	3.79
0.5	0.28	1.12	5.06	6.18
0.6	0.43	1.71	7.88	9.39
0.7	0.61	2.46	11.52	13.48
0.8	0.84	3.36	16.14	18.50
0.9	1.11	4.44	20.50	24.44
1.0	1.43	5.71	25.79	31.41
1.1	1.80	7.19	32.38	39.55
1.2	2.21	8.86	39.88	48.72
1.3	2.68	10.74	48.32	59.86
1.4	3.22	12.87	57.80	70.77
1.5	3.80	15.20	68.40	83.50
1.6	4.44	17.77	79.87	97.74
1.7	5.16	20.62	92.80	113.42
1.8	5.92	23.69	106.82	130.21
1.9	6.78	27.02	121.60	148.61
2.0	7.68	30.69	137.95	168.61
2.1	8.63	34.63	155.29	189.89
2.2	9.67	38.88	174.00	212.76
2.3	10.79	43.18	194.29	237.47
2.4	11.98	47.91	216.59	263.49
2.5	13.23	52.94	239.22	291.18
2.6	14.66	58.34	262.63	320.87
2.7	16.00	63.99	287.96	353.03
2.8	17.48	69.95	314.79	388.74
2.9	19.00	76.32	343.42	418.74
3.0	20.73	82.94	373.21	452.14

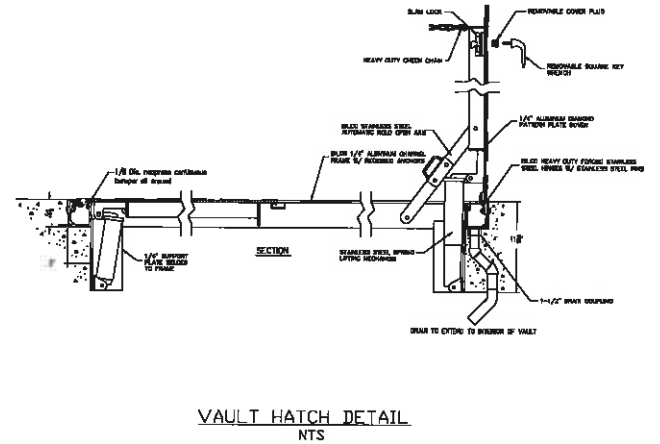
BILCO TYPE JD-2AL 4.0' X 4.0' OR EQUIVALENT



NOTES: ALL HARDWARE SHALL BE STAINLESS STEEL UNLESS OTHERWISE NOTED.  
ATTACH WEIRS TO TROUGH WITH 3/8" X 1" BOLTS WITH A WASHER ON BOTH SIDES, LOCK WASHER, AND NUT.  
TROUGH SHALL BE ANCHORED TO THE CONCRETE WITH 3/8" X 1-3/16" CONCRETE DROP IN ANCHORS. THE BOLT SHALL HAVE A WASHER, LOCK WASHER, AND NUT.  
INDUSTRIAL SILICONE SHALL BE PLACED BETWEEN THE TROUGH AND CONCRETE IMMEDIATELY PRIOR TO INSTALLING THE TROUGH.



NOTES: COMPLETELY WELD BAFFLE TO TROUGH AT ALL POINTS OF CONTACT.  
BAFFLE SHALL BE MADE OF 1/8" 316 SS PLATE.  
ONCE THE WEIR PLATES ARE INSTALLED, THE WEIR SLOT SHALL BE SEALED WITH INDUSTRIAL SILICONE TO ELIMINATE LEAKAGE.



VAULT HATCH DETAIL NTS

OFFICE OF SPECIAL RECLAMATION  
254 INDUSTRIAL DRIVE  
OAK HILL, WV 25901  
OFFICE: 1-304-465-1911  
FAX: 1-304-465-0031

DEP CONTRACT NO. 16299  
DESIGNED BY: LLR  
DRAWN BY: LLR  
CHECKED BY: DBM  
APPROVED BY: DBM



REVISIONS		
DATE	BY	PK
August 2013		

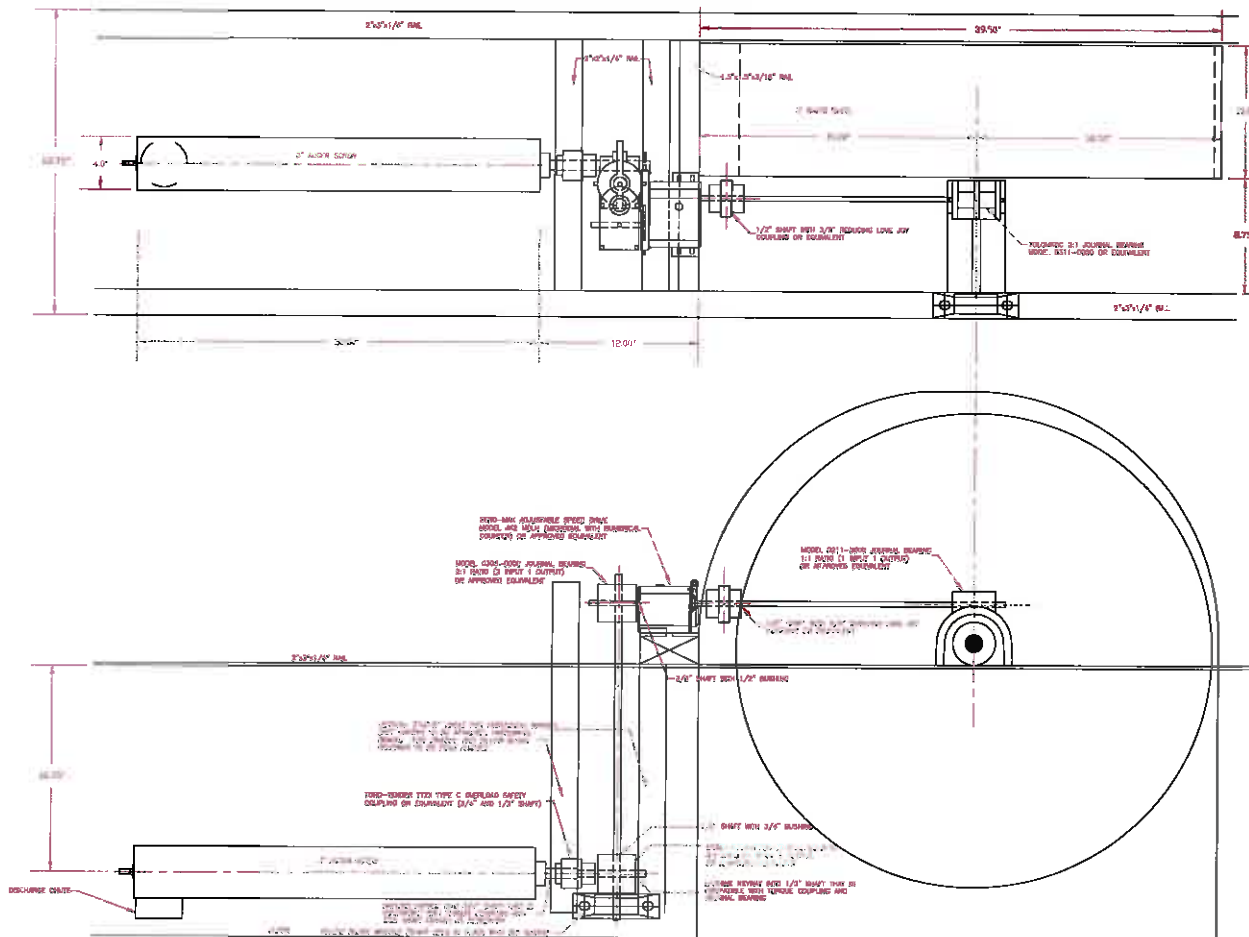
ED-E DEVELOPMENT COMPANY INC  
PERMIT S-1032-86  
DEP16299  
PRESTON COUNTY, WEST VIRGINIA

FLOW PROPORTIONAL SIPHON SYSTEM  
DISTRIBUTION BOX DETAILS

SCALE: NTS

DATE: MAY 2013

SHT. NO.  
17-R  
TOTAL  
20



DRIVE LINE SCHEMATIC  
NEW CONFIGURATION - SHEET DETAIL  
PLAN VIEW - NTS

- NOTE: 1. ALL SHAFTS SHALL BE COLD ROLLED STEEL.  
2. ALL MECHANISMS WITH GREASE FITTINGS SHALL BE FITTED WITH HYDRAULIC GREASE HOSES. HOSES SHALL BE CONCENTRATED ON A COMMON GREASE BID IN A LOCATION TO BE DETERMINED BY WADRP FOR EACH SITE.

3. ADJUSTABLE SPEED DRIVE AND COMPONENTS DEPICTED ON SIDE OF WHEEL OF EXISTING COG. HOWEVER ADJUSTABLE SPEED DRIVE AND COMPONENTS MAY BE PLACED ON OPPOSITE SIDE OF WHEEL, IF ALTERNATE PLACEMENT ALLOWS FOR BETTER ALIGNMENT.

OFFICE OF SPECIAL RECLAMATION  
224 INDUSTRIAL DRIVE  
DAX HILL, WV 25801  
OFFICE: 1-304-469-1911  
FAX: 1-304-465-0031

DEP CONTRACT NO. 16299  
DESIGNED BY: LLR  
DRAWN BY: KAH  
CHECKED BY: MLP  
APPROVED BY:



REVISIONS		
DATE	BY	CA
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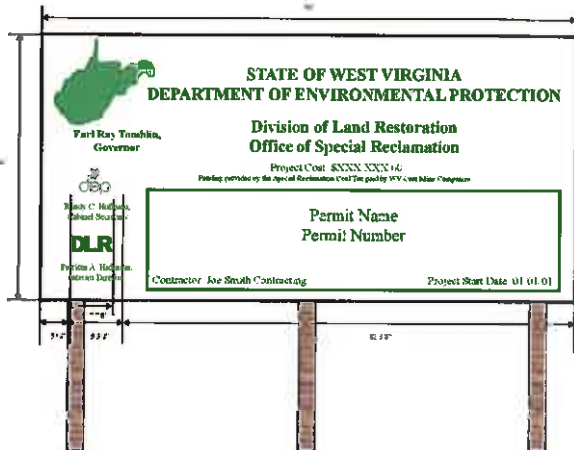
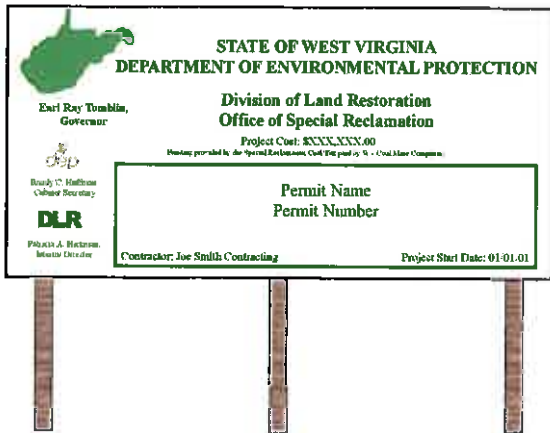
ADJUSTABLE SPEED DRIVE DETAILS

SCALE: NTS

DATE: MAY 2013

SHT. NO.
19-R
TOTAL
20





**General Requirements**

**Project Construction Sign**

**Work Required**

The work to be performed under this Section consists of providing all labor, material and equipment necessary to install a project sign as indicated on the detail included herein and as specified herein.

**Materials**

- (a) **Paint.** Paint for the project sign shall be one (1) coat Exterior-Grade Wood Primer-Sealer, and two (2) coats Exterior-Grade Enamel by Glidden or equivalent.
- (b) **Sign.** Sign face shall be 3/4" x 4" x 8' Marine Exterior plywood, 4" x 4" x 12' posts and 2" x 4" cross bracing shall be pressure treated.
- (c) **Hardware.** All hardware shall be manufactured from good, commercial-quality material and be rust resistant such as galvanized coated.

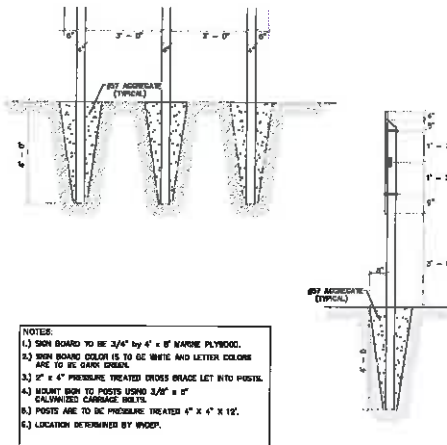
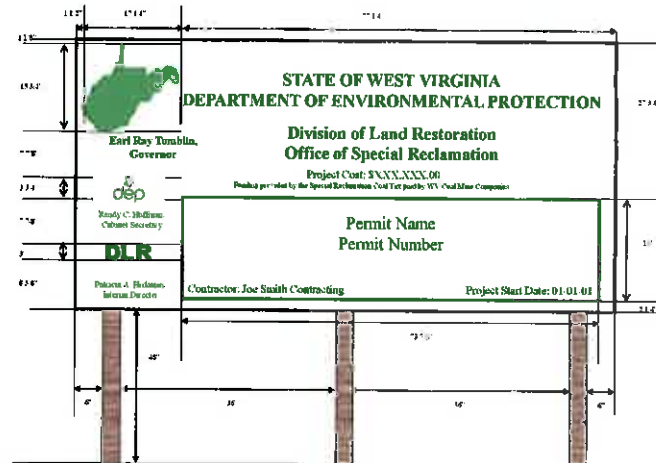
**Execution**

(a) **Project Sign.** The signboard shall be cut to the dimensions shown on the details herein. The sign shall be painted with one (1) coat of primer and two (2) coats of white enamel. All exterior cut edges shall be smooth sanded prior to painting. All edges shall be double primed. The letters, border and strips shall be painted as shown on the detail drawing.

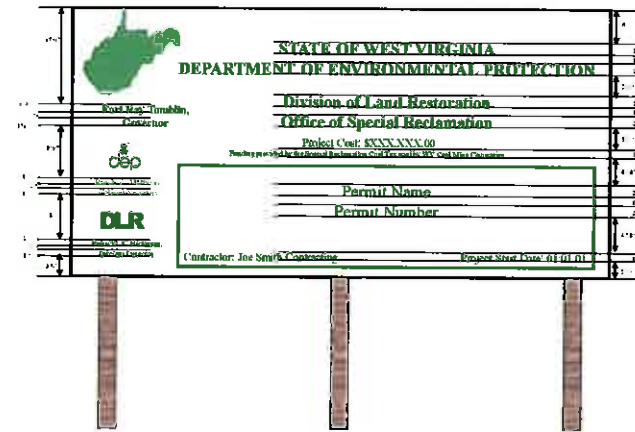
The Contractor shall bolt the sign to posts and provide required cross bracing. The posts and sign shall be erected and posts set in gravel base, as shown on the drawings. One (1) sign is required and is to be located at the direction of WVEDP.

(c) **Payment.** Payment for the work which shall include installation of the project sign shall be incidental to the lump sum bid item for "Mobilization/Demobilization"

Note: No construction work shall commence prior to the project sign being installed.



- NOTES**
- 1.) SIGN BOARD TO BE 3/4" BY 4" X 8' MARINE PLYWOOD.
  - 2.) SIGN BOARD COLOR IS TO BE WHITE AND LETTER COLORS ARE TO BE DARK GREEN.
  - 3.) 2" X 4" PRESSURE TREATED CROSS BRACE LET INTO POSTS.
  - 4.) SETBACK FROM TO POSTS USING 3/4" X 2" GALVANIZED CORNER BOLTS.
  - 5.) POSTS ARE TO BE PRESSURE TREATED 4" X 4" X 12'.
  - 6.) LOCATION DETERMINED BY WVEDP.



OFFICE OF SPECIAL RECLAMATION  
364 INDUSTRIAL DRIVE  
OAK HILL, WV 25901  
OFFICE: 1-304-465-1911  
FAX: 1-304-465-2031

DEP CONT RACT NO. 16298  
DESIGNED BY:  
DRAWN BY:  
CHECKED BY:  
APPROVED BY:

STATE OF WEST VIRGINIA  
dep Division of Land Restoration  
Office of Special Reclamation

REVISIONS		
DATE	BY	QZ
10/01/2013		

**ED-E DEVELOPMENT COMPANY INC**  
**PERMIT S-1032-86**  
**DEP16299**  
PRESTON COUNTY, WEST VIRGINIA

CONSTRUCTION SIGN DETAILS

SCALE: NONE

DATE: MAY 2013

SHT. NO.  
20-R  
TOTAL  
20