

# Hydrodynamic Separator aka Sand/Grit/Oil/Water Separator



## V2B1 Sizing Chart

Based on removal of 80% TSS at 110 Microns.

V2B1 MODEL NUMBER	D1 DIA (ft.)	D2 DIA (ft.)	MIN. DEPTH BELOW INLET INVERT (ft.)	TREATMENT RATE (cfs)	MAX. INLET PIPE DIA. (in.)
2	4	4	3.5	1.54	12
3	4	5	3.5	1.97	16
4	5	5	4.5	2.40	21
6	6	5	4.5	2.93	24
7	6	6	4.5	3.46	24
8	7	6	4.5	4.08	30
9	7	5	4.5	3.55	30
10	8	5	4.5	4.27	36
11	8	6	4.5	4.80	36
12	8	7	4.5	5.42	36
13	8	8	5.0	6.14	36
14	10	5	5.0	6.00	42
15	10	6	5.0	6.53	42
16	10	7	5.0	7.15	42
17	10	8	5.0	7.87	42
18	10	10	5.5	9.60	42
19	12	5	5.0	8.11	48
20	12	6	5.0	8.64	48
21	12	7	5.5	9.26	48
22	12	10	5.5	11.71	48
25	12	8	5.5	9.98	48
40	12	12	5.5	13.47	48
50	16	10	6.0	17.09	72
60	20	10	6.0	24.00	80

Note: Some diameter sizes may not be available from some affiliates.

## V2B1 Properties

- NJCAT Verified
- Constructed with local materials (manhole, pipe, etc.)
- Swirl technology in the first chamber
- Patented center draw
- 2 manhole configuration
- Baffle wall (floatable collection) in the second chamber

## Benefits

- Shallower Manholes
- Ease of maintenance
- No inserts means autonomy
- Each V2B1 design is unique to the site conditions
- Design includes shop drawings, specifications, maintenance schedule and back-water analysis.

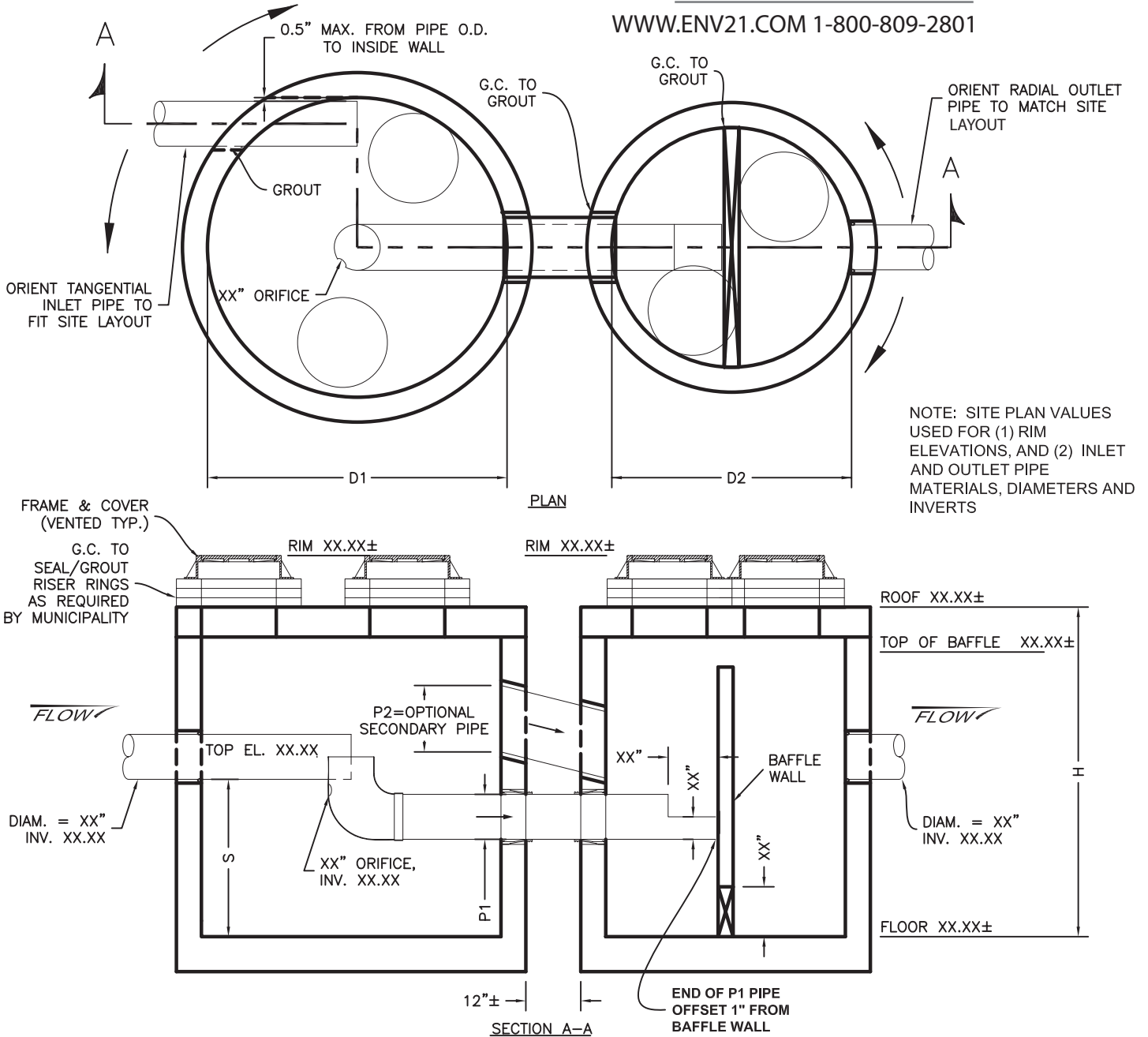
## About the V2B1

The V2B1's unique standard pre-cast concrete, two-manhole design helps you meet the EPA goal of 80% TSS removal efficiency.

The inlet manhole has a tangential mounted inlet pipe that creates a swirl flow pattern, which improves flow distribution and reduces turbulence, thus enhancing sedimentation settling. The environment 21 "Center Withdrawal Elbow Pipe" conveys flow to the outlet manhole where floatable debris is retained by using an underflow baffle wall. All environment 21 products are designed with ease of maintenance in mind. The V2B1 has access openings to all stages of the separation process and has a direct and unobstructed access to the sump. The V2B1 is ideal for all sites requiring a hydrodynamic separator especially those with unique site scenarios involving other utilities.

### Let ENV 21 do the work for you.

ENV 21 will size, design and provide you with the appropriate product to fit your project and your budget. We will provide you with shop drawings, specifications, installation details, back-water analysis, and a maintenance schedule. We even offer maintenance agreements with maintenance performed according to the recommended schedule.



V2B1 SIZING TABLE					
V2B1 MODEL #	IMPERVIOUS AREA, ACRES	D1 (ft.)	D2 (ft.)	H (ft.)	S (ft.)
3	0.3 -1.3	4	5	7±	4.1±
4	1.3-2.0	5	5	7±	4.4±
6	2.0-3.0	6	5	8±	4.7±
9	3.0-4.0	7	5	8±	4.9±
11	4.0-5.3	8	6	9±	5.1±
17	5.3-8.3	10	8	10±	5.5±
25	8.3-11.7	12	8	11±	5.9±

**GENERAL NOTE:**

MANHOLE DESIGN SPECIFICATIONS CONFORM TO LATEST A.S.T.M. C478 SPEC. FOR PRECAST REINFORCED CONCRETE MANHOLE SECTIONS. DESIGN LOADING: AASHTO HS20-44

**MANUFACTURING NOTES:**

- 1) DESIGN OF INTERNAL PVC PIPING PROVIDED TO LICENSED MANUFACTURER BY ENVIRONMENT 21, LLC.
- 2) LOCATION AND SIZE OF MANHOLE OPENINGS MAY BE ADJUSTED BY LICENSED MANUFACTURER.

Not to Scale