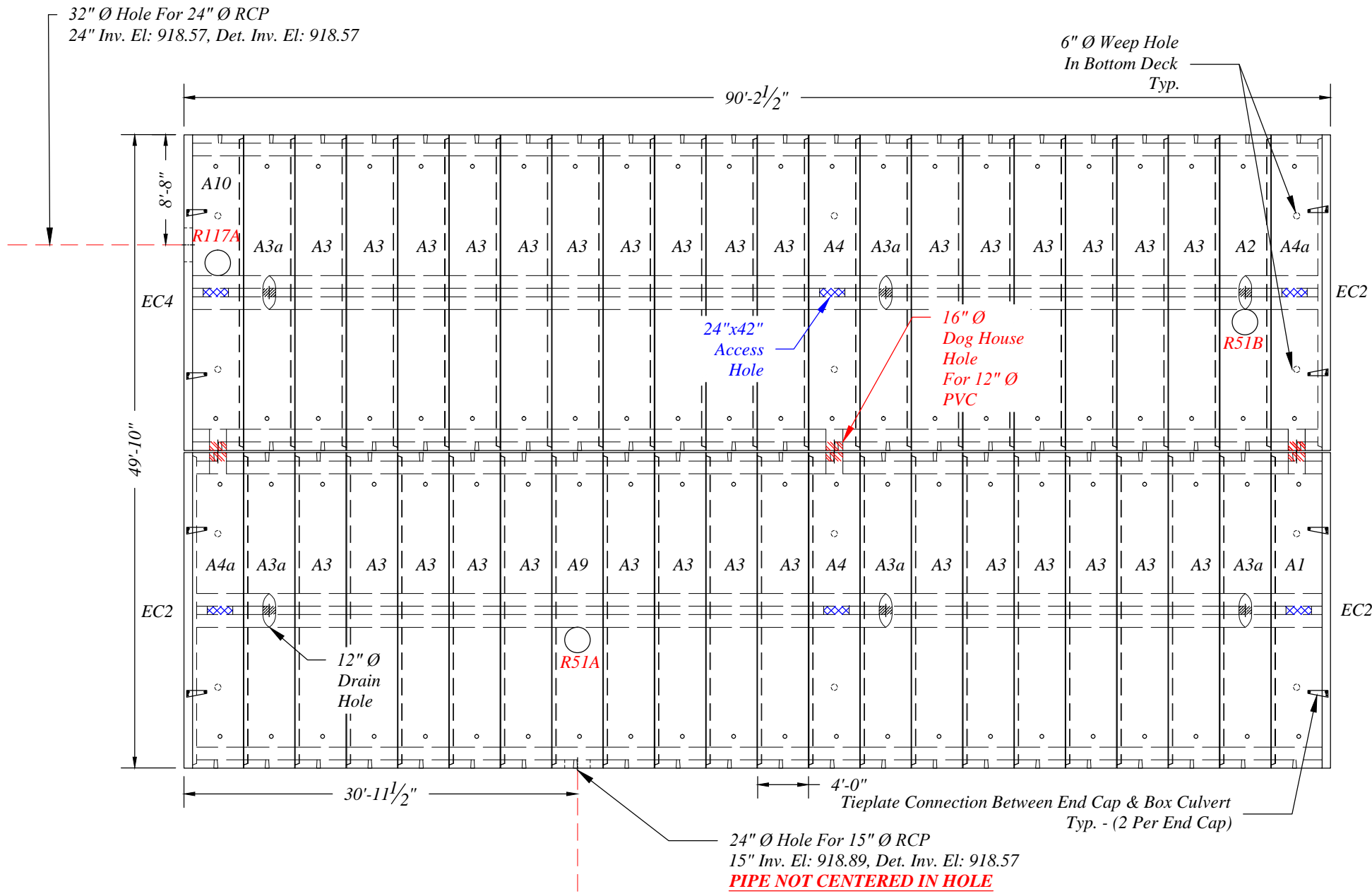



# Pittsfield Mixed Use Development - Retention System

## System D1 - Overall Layout

- Notes:
- Box culverts manufactured to ASTM C-1577 specifications w/ HL-93 standard loading & 4' to 7' of cover. Steel design by Delta Engineers.
  - Internal box joints & end caps to be sealed w/ 1½" EZ-Stik & EZ-Primer.
  - Exterior top and sides of joints for detention system to be sealed with 9⅝" wide Mel-Dek & Mel-Prime along with Mastic & 36" wide Mirafi Filter Fabric.
  - Connections between separate box runs will be via 12" Ø PVC grouted in 16" Ø Holes. (12" PVC & grout by others)
  - Separate box runs will have a 2" gap between them & filled with grout. (Grout supplied by others)
  - Boxes to have weep holes in base in various locations to allow system to drain dry.
  - Contractor to seal handling & weep holes by applying approved mastic around the holes and then applying 2 layers of mirafi filter fabric as directed by the engineer before backfilling.
  - Contractor to seal lift holes w/concrete plugs & apply approved mastic over the plugged holes as directed by the engineer before backfilling.
  - Boxes are designed with lift holes cast in for use with coffee pots and cables. Equipment as well as cables required for unloading and installation to be provided by contractor.
  - Each section will weigh approximately 7,875 Lbs / L.F.
  - Heaviest lift will be 16.00 Tons.



Box Culvert Quantities							
A1	A2	A3	A3a	A4	A4a	A9	A10
1	1	31	5	2	2	1	1

 www.ncp-inc.com/	401 Kelton Street, Bay City, MI 48706		<b>Proposed - System D1 - 23'-6" x 5'-6" Dual Cell</b>						
	5281 Lansing Road Charlotte, MI 48813		2701 Chicago Dr. SW Wyoming, MI 49519		Concordia Exc. Sterling Heights, MI		Pittsfield Mixed Use Development Pittsfield Twp., MI		
	4950 White Lake Rd. Clarkston, MI 48346		3756 Centennial Rd. Sylvania, OH 43560		Date 20th July, 2018	Revised 1st Oct., 2018	Rev. No. 4	Drawn By MRZ	Scale 3/32" = 1'