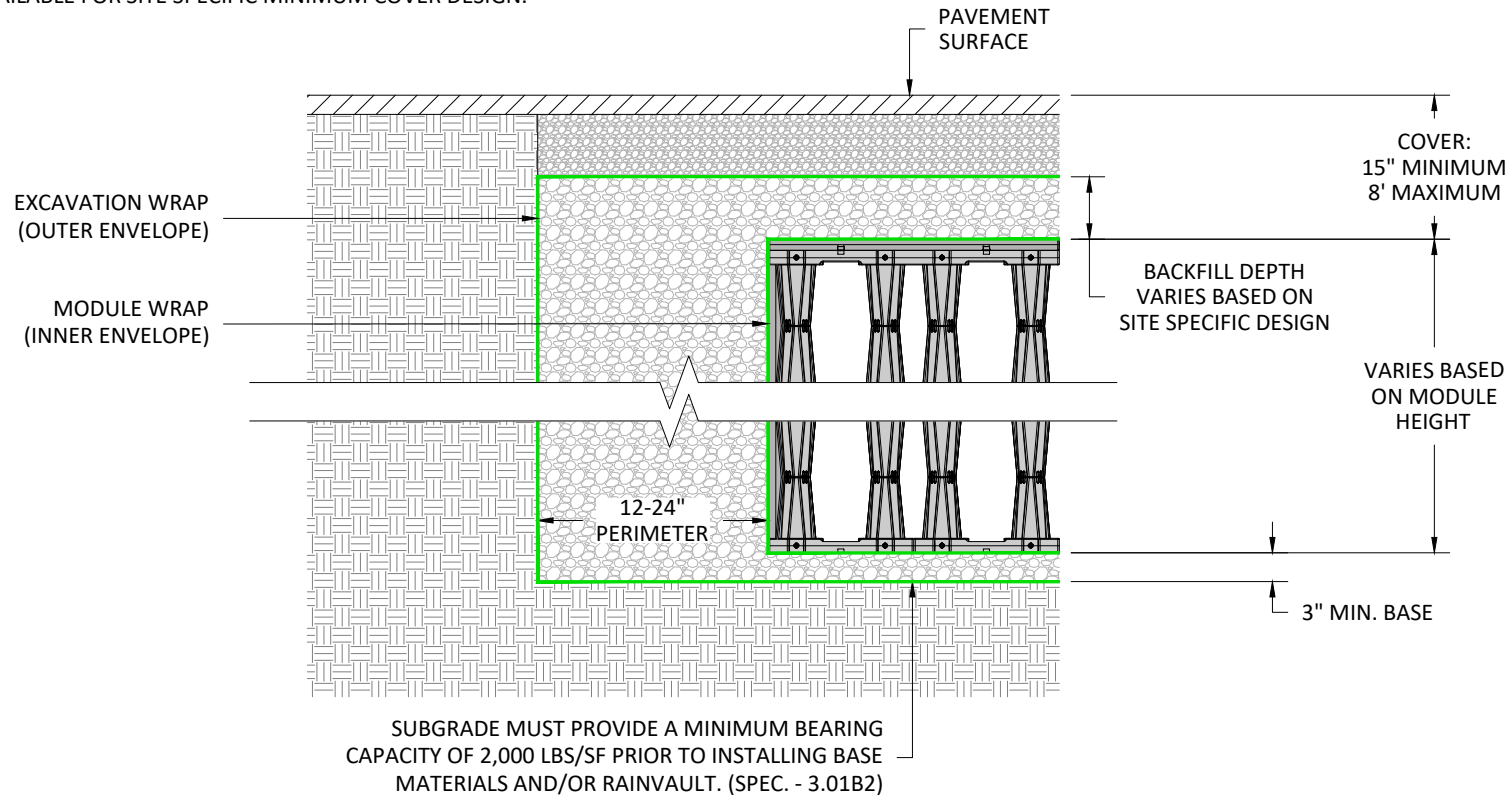


HS-20 TRAFFIC LOADING:  
 THE RAINVAULT SYSTEM MEETS AASHTO HL-93 LOADING UNDER THE  
 AASHTO LRFD BRIDGE DESIGN SPECIFICATION. A CUSTOM LOAD MODEL  
 TOOL IS AVAILABLE FOR SITE SPECIFIC MINIMUM COVER DESIGN.



NOTES:

1. BASE, BACKFILL, AND COVER MATERIALS (SPEC. - 2.02C):
  - ALL MATERIALS IMMEDIATELY SURROUNDING RAINVAULT MODULES MUST BE ANGULAR, LESS THAN 1.5" IN DIAMETER, AND FREE OF DEBRIS OR OTHER DISSIMILAR MATERIALS.
  - ACCEPTABLE MATERIALS INCLUDE GROUPS GW, GP, SW, AND SP FROM THE UNIFIED SOIL CLASSIFICATION SYSTEM.
  - SANDY IN-SITU MATERIALS MEETING THESE REQUIREMENTS MAY BE USED IN LIEU OF IMPORT MATERIALS.
2. SYSTEM WRAP (SPEC. - 2.01B):
  - INNER ENVELOPE: GEOTEXTILE FABRIC OR IMPERMEABLE GEOMEMBRANE SHALL BE USED TO ENVELOPE THE RAINVAULT SYSTEM TO PREVENT BACKFILL OR SOIL INTRUSION INTO THE SYSTEM.
  - OUTER ENVELOPE: GEOTEXTILE FABRIC OR IMPERMEABLE GEOMEMBRANE MAY BE USED AGAINST THE EXCAVATION FLOOR AND WALLS TO WRAP WASHED STONE BACKFILL TO REALIZE ADDITIONAL CAPACITY BEYOND THE MODULE VOLUME.
  - GEOTEXTILE FABRIC SHALL BE NONWOVEN POLYPROPYLENE WITH A NOMINAL WEIGHT OF 8 OZ/SY, SUCH AS GEOTEX 801 OR N-180.
  - FOR INFILTRATION APPLICATIONS, CONSIDER USING A WOVEN MONOFILAMENT GEOTEXTILE SUCH AS GEOTEX 111F OR FW-402 ON THE BOTTOM OF THE SYSTEM FOR BOTH INNER AND OUTER ENVELOPES.
  - IMPERMEABLE GEOMEMBRANE MATERIALS MAY BE USED ON THE BOTTOM AND SIDES OF THE SYSTEM (TYPICALLY REPLACING THE OUTER ENVELOPE) FOR STORMWATER HARVESTING APPLICATIONS OR TO PREVENT GROUNDWATER INTRUSION INTO THE SYSTEM. USE 8 OZ/SY NONWOVEN GEOTEXTILE ON BOTH SIDES OF THE GEOMEMBRANE FOR ADDED PROTECTION OF THE LINER.
  - SYSTEMS THAT INCLUDE A FIRST FLUSH FILTER SECTION REQUIRE A 300 LB WOVEN GEOTEXTILE SUCH AS GEOTEX 315ST BENEATH THE MODULES FOR SCOUR PROTECTION.

**RAINVAULT**  
 UNDERGROUND DETENTION SYSTEM

**Ripple** Stormwater Technologies  
 FOR ADDITIONAL INFORMATION PLEASE CONTACT:  
 RIPPLE STORMWATER TECHNOLOGIES  
 804-400-9490 | WWW.RIPPLESTORMWATER.COM

RAINVAULT  
 HS-20 VEHICULAR TRAFFIC  
 LOADING DETAIL

REV. DATE  
 03/20/2024

NOT TO SCALE