6.0" [150 mm] DIA **LARGE RIB SMALL RIB CULTEC RECHARGER® 280HD SPECIFICATIONS** LARGE RIB **CULTEC HVLV® FC-24 FEED CONNECTOR PRODUCT SPECIFICATIONS** INSPECTION PORT KNOCK-OUT **END DETAIL END DETAIL** CULTEC RECHARGER 280HD CHAMBERS ARE DESIGNED FOR UNDERGROUND STORMWATER CULTEC HVLV FC-24 FEED CONNECTORS ARE DESIGNED TO CREATE AN INTERNAL MANIFOLD FOR CULTEC RECHARGER 280HD MANAGEMENT. THE CHAMBERS MAY BE USED FOR RETENTION, RECHARGING, DETENTION OR CONTROLLING THE FLOW OF ON-SITE STORMWATER RUNOFF. 1. THE CHAMBERS WILL BE MANUFACTURED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832) CHAMBER PARAMETERS 47.0" [1194 mm] 1. THE CHAMBERS WILL BE MANUFACTURED BY CULTEC, INC. OF BROOKFIELD, CT. 2. THE CHAMBER SHALL BE VACUUM THERMOFORMED OF HIGH MOLECULAR WEIGHT HIGH DENSITY POLYETHYLENE (HMWHDPE) WITH A BLACK INTERIOR AND BLUE EXTERIOR. (203-775-4416 OR 1-800-428-5832) MODEL 280RHD STARTER MODEL RHD UNITS ARE USED AS SINGLE 3. THE CHAMBER WILL BE ARCHED IN SHAPE MODEL 280SHD STARTER 2. THE CHAMBER SHALL BE VACUUM THERMOFORMED OF HIGH MOLECULAR WEIGHT HIGH STAND ALONE SECTIONS. 4. THE CHAMBER WILL BE OPEN-BOTTOME DENSITY POLYETHYLENE (HMWHDPE) WITH A BLACK INTERIOR AND BLUE EXTERIOR. LARGE RIB 5. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC HVLV FC-24 FEED CONNECTOR SHALL BE 12 INCHES (305 mm) TALL, 16 3. THE CHAMBER WILL BE ARCHED IN SHAPE. INCHES (406 mm) WIDE AND 24.2 INCHES (614 mm) LONG — 96.0" [2438 mm] —— $6.\ THE\ NOMINAL\ STORAGE\ VOLUME\ OF\ THE\ HVLV\ FC-24\ FEED\ CONNECTOR\ WILL\ BE\ 0.913\ FT^{9}\ /\ FT\ (0.085\ m^{3}\ /\ m)\ -\ WITHOUT\ MINIMAL\ MINIM$ 4. THE CHAMBER WILL BE OPEN-BOTTOMED. |---- INSTALLED LENGTH = 84.0" [2134 mm] -----THE CHAMBER WILL BE JOINED USING AN INTERLOCKING OVERLAPPING RIB METHOD. 7. THE HVLV FC-24 FEED CONNECTOR CHAMBER SHALL HAVE 2 CORRUGATIONS. - MAXIMUM PIPE SIZE IN END WALL: 42.0" [1066 mm] --- 42.0" [1066 mm] ---CONNECTIONS MUST BE FULLY SHOULDERED OVERLAPPING RIBS, HAVING NO 8. THE HVLV FC-24 FEED CONNECTOR MUST BE FORMED AS A WHOLE CHAMBER HAVING TWO OPEN END WALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE END WALLS. THE UNIT WILL FIT INTO THE SIDE PORTALS OF THE CULTEC MODEL 280SHD STARTER SEPARATE COUPLINGS OR SEPARATE END WALLS. MODEL SHD 1" [525 mm] PVC - SMALL RIB LARGE RIB -UNITS ARE USED RECHARGER STORMWATER CHAMBER AND ACT AS CROSS FEED CONNECTIONS CREATING AN INTERNAL MANIFOLD 6. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC RECHARGER 280HD SHALL BE TO BEGIN A LINE. 9. THE CHAMBER WILL BE DESIGNED TO WITHSTAND TRAFFIC LOADS WHEN INSTALLED ACCORDING TO CULTEC'S 26.5 INCHES (673 mm) TALL, 47 INCHES (1194 mm) WIDE AND 8 FEET (2.44 m) LONG. THE MODEL 280IHD INTERMEDIATI RECOMMENDED INSTALLATION INSTRUCTIONS INSTALLED LENGTH OF A JOINED RECHARGER 280HD SHALL BE 7 FEET (2.13 m). LARGE RIB 10. THE CHAMBER SHALL BE MANUFACTURED IN AN ISO 9001:2015 CERTIFIED FACILITY 7. MAXIMUM INLET OPENING ON THE CHAMBER ENDWALL IS 21 INCHES (525 mm) HDPE. **CULTEC NO. 410™ NON-WOVEN GEOTEXTILE** CULTEC NO. 410™ NON-WOVEN GEOTEXTILE MAY BE USED WITH CULTEC CONTACTOR® AND RECHARGER® THE CHAMBER WILL HAVE TWO SIDE PORTALS TO ACCEPT CULTEC HVLV® FC-24 FEED 9.0" [229 mm] STORMWATER INSTALLATIONS TO PROVIDE A BARRIER THAT PREVENTS SOIL INTRUSION INTO THE STONE. CONNECTORS TO CREATE AN INTERNAL MANIFOLD. NOMINAL INSIDE DIMENSIONS OF THE SIDE PORTAL SHALL HAVE A WIDTH OF 11.25" [286 mm] AND HEIGHT OF 11.5" [292 MODEL 280IHD INTERMEDIATE **MODEL IHD** mm]. THE SIDE PORTAL CAN ACCEPT A MAXIMUM OUTER DIAMETER (O.D.) PIPE SIZE OF UNITS ARE USED AS MIDDLE 1. THE GEOTEXTILE SHALL BE PROVIDED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 12.25 INCHES [311 mm]. 35.0" [889 mm] -✓ SIDE PORTAL FOR OPTIONAL INTERNAL MANIFOLD SECTIONS TO EXTEND THE 1-800-428-5832) LENGTH OF A LINE. (ACCOMMODATES CULTEC HVLV FC-24 FEED CONNECTOR 47.0" [1194 mm] — **-**THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC HVLV® FC-24 FEED CONNECTOR THE GEOTEXTILE SHALL BE BLACK IN APPEARANCE. OR STORM PIPE) SHALL BE 12 INCHES (305 mm) TALL, 16 INCHES (406 mm) WIDE AND 24.2 INCHES (614 mm) 3. THE GEOTEXTILE SHALL HAVE A TYPICAL WEIGHT OF 4.5 OZ/SY (142 G/M). MODEL 280EHD END MAX. PIPE: 4. THE GEOTEXTILE SHALL HAVE A TENSILE STRENGTH VALUE OF 120 LBS (533 N) PER ASTM D4632 10" [250 mm] HDPE LARGE RIB 12" [300 mm] PVC 10. THE NOMINAL STORAGE VOLUME OF THE RECHARGER 280HD CHAMBER WILL BE 6.079 5. THE GEOTEXTILE SHALL HAVE AN ELONGATION @ BREAK VALUE OF 50% PER ASTM D4632 TESTING FT3 / FT (0.565 m³ / m) - WITHOUT STONE. THE NOMINAL STORAGE VOLUME OF A JOINED RECHARGER 280HD SHALL BE 42.553 FT³ / UNIT (1.205 m³ / UNIT) - WITHOUT STONE. METHOD 6. THE GEOTEXTILE SHALL HAVE A MULLEN BURST VALUE OF 225 PSI (1551 KPA) PER ASTM D3786 TESTING CULTEC RECHARGER 280HD CHAMBER STORAGE = 6.079 CF/FT [0.565 m³/m] MODEL EHD 11. THE NOMINAL STORAGE VOLUME OF THE HVLV FC-24 FEED CONNECTOR WILL BE 0.913 INSTALLED LENGTH ADJUSTMENT = 1.0' [0.3048 m] MODEL 280EHD END UNITS FT³ / FT (0.085 m³ / m) - WITHOUT STONE. ARE USED TO END THE LENGTH 7. THE GEOTEXTILE SHALL HAVE A PUNCTURE STRENGTH VALUE OF 65 LBS (289 N) PER ASTM D4833 TESTING METHOD OF A LINE 12. THE RECHARGER 280HD CHAMBER WILL SEVENTY-TWO DISCHARGE HOLES BORED INTO THE SIDEWALLS OF THE UNIT'S CORE TO PROMOTE LATERAL CONVEYANCE OF 8. THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE VALUE OF 340 LBS (1513 N) PER ASTM D6241 TESTING WATER. 9. THE GEOTEXTILE SHALL HAVE A TRAPEZOID TEAR VALUE OF 50 LBS (222 N) PER ASTM D4533 TESTING 13. THE RECHARGER 280HD CHAMBER SHALL HAVE 15 CORRUGATIONS. **CULTEC RECHARGER 280HD HEAVY DUTY END DETAIL INFORMATION CULTEC RECHARGER 280HD HEAVY DUTY THREE VIEW** METHOD. 10. THE GEOTEXTILE SHALL HAVE A AOS VALUE OF 70 U.S. SIEVE (0.212 MM) PER ASTM D4751 TESTING 14. THE ENDWALL OF THE CHAMBER, WHEN PRESENT, WILL BE AN INTEGRAL PART OF THE CONTINUOUSLY FORMED UNIT. SEPARATE END PLATES CANNOT BE USED WITH THIS 11. THE GEOTEXTILE SHALL HAVE A PERMITTIVITY VALUE OF 1.7 SEC-1 PER ASTM D4491 TESTING METHOD. — CULTEC NO. 410 NON-WOVEN GEOTEXTILE AROUND STONE. TOP AND SIDES END OF RUN 12. THE GEOTEXTILE SHALL HAVE A WATER FLOW RATE VALUE OF 135 GAL/MIN/SF (5500 L/MIN/SM) PER MANDATORY, BOTTOM PER ENGINEER'S DESIGN PREFERENCE 15. THE RECHARGER 280RHD STAND ALONE UNIT MUST BE FORMED AS A WHOLE CHAMBER ASTM D4491 TESTING METHOD. HAVING TWO FULLY FORMED INTEGRAL ENDWALLS AND HAVING NO SEPARATE END 13. THE GEOTEXTILE SHALL HAVE A UV STABILITY @ 500 HOURS VALUE OF 70% PER ASTM D4355 TESTING PAVEMENT OR FINISHED GRADE PLATES OR SEPARATE END WALLS. - MIN. 95% COMPACTED FILL 16. THE RECHARGER 280SHD STARTER UNIT MUST BE FORMED AS A WHOLE CHAMBER **CULTEC NO. 4800™ WOVEN GEOTEXTILE** HAVING ONE FULLY FORMED INTEGRAL ENDWALL AND ONE PARTIALLY FORMED - RECHARGER 280HD - 1-2 INCH [25-50 mm] WASHED, CRUSHED STONE CULTEC NO. 4800 WOVEN GEOTEXTILE IS DESIGNED AS A UNDERLAYMENT TO PREVENT SCOURING INTEGRAL ENDWALL WITH A LOWER TRANSFER OPENING OF 9 INCHES (229 mm) HIGH X HEAVY DUTY CHAMBER SURROUNDING CHAMBERS CAUSED BY WATER MOVEMENT WITHIN THE CULTEC CHAMBERS AND FEED CONNECTORS UTILIZING THE 35 INCHES (889 mm) WIDE. CULTEC MANIFOLD FEATURE. IT MAY ALSO BE USED AS A COMPONENT OF THE CULTEC SEPARATOR ROW - CULTEC HVLV FC-24 FEED TO ACT AS A BARRIER TO PREVENT SOIL/CONTAMINANT INTRUSION INTO THE STONE WHILE ALLOWING 12.0' [3.66 m] MAX. 17. THE RECHARGER 280IHD INTERMEDIATE UNIT MUST BE FORMED AS A WHOLE CHAMBER 8.0" [203 mm] MIN. FOR PAVED FOR MAINTENANCE CONNECTOR WHERE SPECIFIED COVER DEPTH HAVING ONE FULLY OPEN ENDWALL AND ONE PARTIALLY FORMED INTEGRAL ENDWALL MODEL 280EHD 10.0" [254 mm] MIN. FOR UNPAVED WITH A LOWER TRANSFER OPENING OF 9 INCHES (229 mm) HIGH X 35 INCHES (889 mm) THE GEOTEXTILE SHALL BE PROVIDED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832) 18. THE RECHARGER 280EHD END UNIT MUST BE FORMED AS A WHOLE CHAMBER HAVING ONE FULLY FORMED INTEGRAL ENDWALL AND ONE FULLY OPEN END WALL AND HAVING THE GEOTEXTILE SHALL BE BLACK IN APPEARANCE. 6.0" [152 mm] MIN. NO SEPARATE END PLATES OR END WALLS. THE GEOTEXTILE SHALL HAVE A TENSILE STRENGTH OF 550 X 550 LBS (2,448 X 2,448 N) PER ASTM D4632 TESTING METHOD 19. THE HVLV FC-24 FEED CONNECTOR MUST BE FORMED AS A WHOLE CHAMBER HAVING THE GEOTEXTILE SHALL HAVE A ELONGATION @ BREAK RESISTANCE OF 20 X 20% PER ASTM D4632 TWO OPEN END WALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE END MODEL 280IHD WALLS. THE UNIT WILL FIT INTO THE SIDE PORTALS OF THE RECHARGER 280HD AND BEGINNING THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE OF 5,070 X 5,070 LBS/FT 26.5" [673 mm] ACT AS CROSS FEED CONNECTIONS. OF RUN (74 X 74 KN/M) PER ASTM D4595 TESTING METHOD. THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE @ 2% STRAIN OF 960 X 1,096 20. CHAMBERS MUST HAVE HORIZONTAL STIFFENING FLEX REDUCTION STEPS BETWEEN THE RIBS. (14 X 16 KN/M) PER ASTM D4595 TESTING METHOD. 21. THE CHAMBER WILL HAVE A RAISED INTEGRAL CAP AT THE TOP OF THE ARCH IN THE THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE @ 5% STRAIN OF 2,740 X 2, 6.0" [152 mm] MIN. CENTER OF EACH UNIT TO BE USED AS AN OPTIONAL INSPECTION PORT OR 740 LBS/FT (40 X 40 KN/M) PER ASTM D4595 TESTING METHOD. SHOWN WITH HVLV FC-24 CLEAN-OUT. THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE @ 10% STRAIN OF 4,800 X FEED CONNECTOR INSERTED 4,800 LBS/FT (70 X 70 KN/M) PER ASTM D4595 TESTING METHOD. MODEL 280IHD 22. THE UNITS MAY BE TRIMMED TO CUSTOM LENGTHS BY CUTTING BACK TO ANY 9. THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE RESISTANCE OF 1,700 LBS (7,560 N) PER ASTM CORRUGATION. D6241 TESTING METHOD. 12.0" [305 mm] MIN. — 52.0" [1321 mm] —— 10. THE GEOTEXTILE SHALL HAVE A TRAPEZOIDAL TEAR RESISTANCE OF 180 X 180 LBS (801 X 801 N) 23. THE CHAMBER SHALL BE MANUFACTURED IN AN IN AN ISO 9001:2015 CERTIFIED SIDE PORTAL TO BE TRIMMED ON-SITE 11. THE GEOTEXTILE SHALL HAVE AN APPARENT OPENING SIZE OF 40 US STD. SIEVE (0.425 MM) PER TO ACCOMMODATE CULTEC HVLV FC-24 — CULTEC NO. 4800 WOVEN GEOTEXTILE TO BE PLACED BENEATH INTERNAL MANIFOLD 24. THE CHAMBER WILL BE DESIGNED TO WITHSTAND TRAFFIC LOADS WHEN INSTALLED ASTM D4751 TESTING METHOD FEATURE AND BENEATH ALL INLET/OUTLET PIPES (FOR SCOUR PROTECTION) FEED CONNECTOR ACCORDING TO CULTEC'S INSTALLATION INSTRUCTIONS. 12. THE GEOTEXTILE SHALL HAVE A PERMITTIVITY RATING OF 0.15 SEC-1 PER ASTM D4491 TESTING MODEL 280SHD 25. THE CHAMBER SHALL BE DESIGNED AND MANUFACTURED TO MEET THE MATERIAL AND THE GEOTEXTILE SHALL HAVE A WATER FLOW RATING OF 11.5 GPM/FT2 (470 LPM/M2) PER ASTM — PROJECT ENGINEER OF RECORD OR GEOTECHNICAL CONSULTANT IS RESPONSIBLE FOR ENSURING THAT THE STRUCTURAL REQUIREMENTS OF IAPMO PS 63-2019, INCLUDING RESISTANCE TO D4491 TESTING METHOD. REQUIRED BEARING CAPACITY OF SUB-GRADE SOILS HAS BEEN MET AASHTO H-10 AND H-20 HIGHWAY LIVE LOADS. WHEN INSTALLED IN ACCORDANCE WITH **HVLV FC-24 FEED CONNECTOR** 14. THE GEOTEXTILE SHALL HAVE A UV RESISTANCE OF 80% @ 500 HRS. PER ASTM D4355 TESTING CULTEC'S INSTALLATION INSTRUCTIONS. 26. MAXIMUM ALLOWED COVER OVER TOP OF UNIT SHALL BE 12 FEET (3.65 m). $\left(\frac{280\text{HD}}{4.0}\right)$ $\binom{280HD}{5.0}$ **CULTEC RECHARGER 280HD HEAVY DUTY CROSS SECTION GENERAL NOTES CULTEC RECHARGER 280HD HEAVY DUTY TYPICAL INTERLOCK** PAVEMENT OR FINISHED GRADE INLET/OUTLET PIPE PER ENGINEER DESIGN — 24.2" [614 mm] — ► PIPE TO BE INSERTED 12.0" [305 mm] MIN. INTO CHAMBER - PAVEMENT SUB-BASE (WHEN APPLICABLE) MAXIMUM PIPE SIZE CULTEC NO. 410 NON-WOVEN GEOTEXTILE AROUND STONE. TOP AND 21" [525 mm] HDPE 21" [525 mm] PVC SIDES MANDATORY, BOTTOM PER ENGINEER'S DESIGN PREFERENCE - MINIMUM 95% COMPACTED FILL 24.0" [610 mm] MIN. SQUARE RECHARGER 280HD HEAVY DUTY CHAMBER 1-2 INCH [25-50 mm] WASHED, CRUSHED STONE SURROUNDING CHAMBERS CULTEC NO. 410 NON-WOVEN GEOTEXTILE 14.5" [368 mm] 16.0" [406 mm] CULTEC FC-24 OPTIONAL INSPECTION PORT OPTIONAL INSTITUTE (SEE ZOOM DETAIL (280HD) AROUND STONE. TOP AND SIDES MANDATORY. — MIN. 95% COMPACTED FILL BOTTOM PER ENGINEER'S DESIGN PREFERENCE - PAVEMENT OR FINISHED GRADE 10.25" PAVEMENT OR FINISHED GRADE CULTEC HVLV FC-24 FEED CONNECTOR WHERE SPECIFIED 12.0" [305 mm] MIN - 12.0" [300 mm] SDR-35 / SCH. 40 PVC COLLAR - 6.0 INCH [152 mm] MIN. DEPTH OF - FIELD PLACED CLASS "C" CONCRETE 1-2 INCH [25-50 mm] WASHED CRUSHED 24.2" [614 mm] → STONE ABOVE CHAMBERS MAINTAIN 6.0" [150 mm] CLEARANCE BETWEEN HEAVY DUTY LID AND PVC CLEAN-OUT CAP 7.5' [2.29 m] MIN. CULTEC NO. 4800 WOVEN GEOTEXTILE 6.0" [150 mm] SDR-35 / SCH 40 PVC ENDCAP **NEENAH FOUNDRY** CULTEC RECHARGER 280HD BENEATH FEED CONNECTORS CLEAN-OUT ADAPTER W/ SCREW-IN CAP MODEL R-5900-A HEAVY-DUTY CHAMBER CULTEC FC-24 (OR EQUAL) HEAVY DUTY - 6.0" [150 mm] SDR-35 / SCH. 40 PVC RISER FRAME AND LID 10.0' [3.0 m] MIN. - 6.0 INCH [152 mm] MIN. DEPTH OF - 6.0" [150 mm] SDR-35 / SCH. 40 PVC COUPLING **CULTEC NO. 4800 WOVEN GEOTEXTILE** 1-2 INCH [25-50 mm] WASHED CRUSHED BENEATH INLET PIPES STONE BENEATH CHAMBERS TRIM CHAMBER INSPECTION PORT KNOCK-OUT TO MATCH O.D. OF 6.0" [150 mm] INSPECTION PORT PIPE CULTEC NO. 4800 WOVEN GEOTEXTILE TO BE PLACED BENEATH INTERNAL MANIFOLD 6.0" [150 mm] SDR-35 / SCH 40 PVC FEATURE AND BENEATH ALL INLET/OUTLET PIPES (FOR SCOUR PROTECTION - 12.0 INCH [305 mm] MIN. WIDTH OF 1-2 INCH [25-50 mm] NSERTED 8" [200 mm] INTO CHAMBER) WASHED, CRUSHED STONE BORDER SURROUNDING SIDE PORTAL TO BE CUT IN FIELD TO ALLOW FOR HVLV FC-24 FEED CONNECTOR OR STORM PIPE AS NEEDED (SEE FIGURE 1). CUT SHALL BE WITHIN 1/4" [6 mm] TOLERANCE OF SIDE PORTAL TRIM GUIDELINE FIGURE 1 ALL CHAMBERS 10" [250 mm] HDPE 12" [300 mm] PVC PROJECT ENGINEER OF RECORD OR GEOTECHNICAL CONSULTANT IS RESPONSIBLE FOR 12.0" [305 mm] - PIPE PER ENGINEER DESIGN. ENSURING THAT THE REQUIRED BEARING CAPACITY OF SUB-GRADE SOILS HAS BEEN MET PIPE TO BE INSERTED 12.0 INCHES [305 mm] MIN. INTO CHAMBER. MAXIMUM PIPE SIZE 21" [525 mm] HDPE 21" [525 mm] PVC ZOOM OF SIDE PORTAL SHOWING MAX. PIPE O.D. **CULTEC HVLV FC-24 CULTEC INTERNAL MANIFOLD - OPTIONAL INSPECTION PORT DETAIL OPTIONAL INSPECTION PORT - ZOOM DETAIL CULTEC RECHARGER 280HD HEAVY DUTY PLAN VIEW** FEED CONNECTOR THREE VIEW CULTEC, Inc. **CULTEC STORMWATER CHAMBER** RECHARGER 280HD THIS DRAWING WAS PREPARED TO SUPPORT THE PROJECT ENGINEER OF RECORD FOR THE PROPOSED SYSTEM. IT IS Subsurface Stormwater Management Systems THE ULTIMATE RESPONSIBILITY OF THE PROJECT ENGINEER OF RECORD TO ENSURE THAT THE CULTEC SYSTEM'S **DETAIL SHEET** PROJECT NO: 2019 PH: (203) 775-4416 P.O. Box 280 DESIGN IS IN FULL COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS. IT IS THE PROJECT ENGINEER OF PH: (800) 4-CULTEC RECORD'S RESPONSIBILITY TO ENSURE THAT THE CULTEC PRODUCTS ARE DESIGNED IN ACCORDANCE WITH TRAFFIC APPLICATION 878 Federal Road CULTEC, INC CHECKED BY: TECH DRAWN BY: CULTEC'S MINIMUM REQUIREMENTS. CULTEC DOES NOT APPROVE PLANS, SIZING, OR SYSTEM DESIGNS FX: (203) 775-1462 Brookfield, CT 06804

SCALE:

N.T.S.

SHEET NO:

1 OF 1

tech@cultec.com

www.cultec.com

6.0" [150 mm] DIA **LARGE RIB SMALL RIB CULTEC RECHARGER® 280HD SPECIFICATIONS** LARGE RIB **CULTEC HVLV® FC-24 FEED CONNECTOR PRODUCT SPECIFICATIONS** INSPECTION PORT KNOCK-OUT **END DETAIL END DETAIL** CULTEC RECHARGER 280HD CHAMBERS ARE DESIGNED FOR UNDERGROUND STORMWATER CULTEC HVLV FC-24 FEED CONNECTORS ARE DESIGNED TO CREATE AN INTERNAL MANIFOLD FOR CULTEC RECHARGER 280HD MANAGEMENT. THE CHAMBERS MAY BE USED FOR RETENTION, RECHARGING, DETENTION OR CONTROLLING THE FLOW OF ON-SITE STORMWATER RUNOFF. 1. THE CHAMBERS WILL BE MANUFACTURED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832) CHAMBER PARAMETERS 47.0" [1194 mm] 1. THE CHAMBERS WILL BE MANUFACTURED BY CULTEC, INC. OF BROOKFIELD, CT. 2. THE CHAMBER SHALL BE VACUUM THERMOFORMED OF HIGH MOLECULAR WEIGHT HIGH DENSITY POLYETHYLENE (HMWHDPE) WITH A BLACK INTERIOR AND BLUE EXTERIOR. (203-775-4416 OR 1-800-428-5832) MODEL 280RHD STARTER MODEL RHD UNITS ARE USED AS SINGLE 3. 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METHOD 6. THE GEOTEXTILE SHALL HAVE A MULLEN BURST VALUE OF 225 PSI (1551 KPA) PER ASTM D3786 TESTING CULTEC RECHARGER 280HD CHAMBER STORAGE = 6.079 CF/FT [0.565 m³/m] MODEL EHD 11. THE NOMINAL STORAGE VOLUME OF THE HVLV FC-24 FEED CONNECTOR WILL BE 0.913 INSTALLED LENGTH ADJUSTMENT = 1.0' [0.3048 m] MODEL 280EHD END UNITS FT³ / FT (0.085 m³ / m) - WITHOUT STONE. ARE USED TO END THE LENGTH 7. THE GEOTEXTILE SHALL HAVE A PUNCTURE STRENGTH VALUE OF 65 LBS (289 N) PER ASTM D4833 TESTING METHOD OF A LINE 12. THE RECHARGER 280HD CHAMBER WILL SEVENTY-TWO DISCHARGE HOLES BORED INTO THE SIDEWALLS OF THE UNIT'S CORE TO PROMOTE LATERAL CONVEYANCE OF 8. THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE VALUE OF 340 LBS (1513 N) PER ASTM D6241 TESTING WATER. 9. THE GEOTEXTILE SHALL HAVE A TRAPEZOID TEAR VALUE OF 50 LBS (222 N) PER ASTM D4533 TESTING 13. THE RECHARGER 280HD CHAMBER SHALL HAVE 15 CORRUGATIONS. **CULTEC RECHARGER 280HD HEAVY DUTY THREE VIEW CULTEC RECHARGER 280HD HEAVY DUTY END DETAIL INFORMATION** METHOD. 10. THE GEOTEXTILE SHALL HAVE A AOS VALUE OF 70 U.S. SIEVE (0.212 MM) PER ASTM D4751 TESTING 14. THE ENDWALL OF THE CHAMBER, WHEN PRESENT, WILL BE AN INTEGRAL PART OF THE CONTINUOUSLY FORMED UNIT. SEPARATE END PLATES CANNOT BE USED WITH THIS 11. THE GEOTEXTILE SHALL HAVE A PERMITTIVITY VALUE OF 1.7 SEC-1 PER ASTM D4491 TESTING METHOD. END OF RUN - CULTEC NO. 410 NON-WOVEN GEOTEXTILE AROUND STONE. TOP AND SIDES 12. THE GEOTEXTILE SHALL HAVE A WATER FLOW RATE VALUE OF 135 GAL/MIN/SF (5500 L/MIN/SM) PER MANDATORY, BOTTOM PER ENGINEER'S DESIGN PREFERENCE 15. THE RECHARGER 280RHD STAND ALONE UNIT MUST BE FORMED AS A WHOLE CHAMBER ASTM D4491 TESTING METHOD. HAVING TWO FULLY FORMED INTEGRAL ENDWALLS AND HAVING NO SEPARATE END 13. THE GEOTEXTILE SHALL HAVE A UV STABILITY @ 500 HOURS VALUE OF 70% PER ASTM D4355 TESTING - CULTEC HVLV FC-24 FEED RECHARGER 280HD -PLATES OR SEPARATE END WALLS. - FINISHED GRADE CONNECTOR WHERE SPECIFIED **HEAVY DUTY CHAMBER** 16. THE RECHARGER 280SHD STARTER UNIT MUST BE FORMED AS A WHOLE CHAMBER - 1-2 INCH [25-50 mm] WASHED, CRUSHED STONE **CULTEC NO. 4800™ WOVEN GEOTEXTILE** HAVING ONE FULLY FORMED INTEGRAL ENDWALL AND ONE PARTIALLY FORMED SURROUNDING CHAMBERS CULTEC NO. 4800 WOVEN GEOTEXTILE IS DESIGNED AS A UNDERLAYMENT TO PREVENT SCOURING INTEGRAL ENDWALL WITH A LOWER TRANSFER OPENING OF 9 INCHES (229 mm) HIGH X CAUSED BY WATER MOVEMENT WITHIN THE CULTEC CHAMBERS AND FEED CONNECTORS UTILIZING THE 35 INCHES (889 mm) WIDE. CULTEC MANIFOLD FEATURE. IT MAY ALSO BE USED AS A COMPONENT OF THE CULTEC SEPARATOR ROW 12.0' [3.66 m] MAX. - NATURALLY COMPACTED FILL — 6.0" [152 mm] MIN. TO ACT AS A BARRIER TO PREVENT SOIL/CONTAMINANT INTRUSION INTO THE STONE WHILE ALLOWING COVER DEPTH 17. THE RECHARGER 280IHD INTERMEDIATE UNIT MUST BE FORMED AS A WHOLE CHAMBER FOR MAINTENANCE HAVING ONE FULLY OPEN ENDWALL AND ONE PARTIALLY FORMED INTEGRAL ENDWALL MODEL 280EHD WITH A LOWER TRANSFER OPENING OF 9 INCHES (229 mm) HIGH X 35 INCHES (889 mm) THE GEOTEXTILE SHALL BE PROVIDED BY CULTEC, INC. OF BROOKFIELD, CT. 6.0" [152 mm] MIN (203-775-4416 OR 1-800-428-5832) 18. THE RECHARGER 280EHD END UNIT MUST BE FORMED AS A WHOLE CHAMBER HAVING ONE FULLY FORMED INTEGRAL ENDWALL AND ONE FULLY OPEN END WALL AND HAVING THE GEOTEXTILE SHALL BE BLACK IN APPEARANCE. NO SEPARATE END PLATES OR END WALLS. THE GEOTEXTILE SHALL HAVE A TENSILE STRENGTH OF 550 X 550 LBS (2,448 X 2,448 N) PER ASTM D4632 TESTING METHOD 19. THE HVLV FC-24 FEED CONNECTOR MUST BE FORMED AS A WHOLE CHAMBER HAVING 26.5" [673 mm] THE GEOTEXTILE SHALL HAVE A ELONGATION @ BREAK RESISTANCE OF 20 X 20% PER ASTM D4632 TWO OPEN END WALLS AND HAVING NO SEPARATE END PLATES OR SEPARATE END MODEL 280IHD WALLS. THE UNIT WILL FIT INTO THE SIDE PORTALS OF THE RECHARGER 280HD AND BEGINNING THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE OF 5,070 X 5,070 LBS/FT ACT AS CROSS FEED CONNECTIONS. OF RUN (74 X 74 KN/M) PER ASTM D4595 TESTING METHOD. THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE @ 2% STRAIN OF 960 X 1,096 20. CHAMBERS MUST HAVE HORIZONTAL STIFFENING FLEX REDUCTION STEPS BETWEEN 6.0" [152 mm] MIN THE RIBS. (14 X 16 KN/M) PER ASTM D4595 TESTING METHOD. 21. THE CHAMBER WILL HAVE A RAISED INTEGRAL CAP AT THE TOP OF THE ARCH IN THE THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE @ 5% STRAIN OF 2,740 X 2, CENTER OF EACH UNIT TO BE USED AS AN OPTIONAL INSPECTION PORT OR 740 LBS/FT (40 X 40 KN/M) PER ASTM D4595 TESTING METHOD. SHOWN WITH HVLV FC-24 CLEAN-OUT. THE GEOTEXTILE SHALL HAVE A WIDE WIDTH TENSILE RESISTANCE @ 10% STRAIN OF 4,800 X 12.0" [305 mm] MIN. 🔫 🕒 47.0" [1193 mm] -----FEED CONNECTOR INSERTED 4,800 LBS/FT (70 X 70 KN/M) PER ASTM D4595 TESTING METHOD. CENTER TO CENTER MODEL 280IHD 22. THE UNITS MAY BE TRIMMED TO CUSTOM LENGTHS BY CUTTING BACK TO ANY 9. THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE RESISTANCE OF 1,700 LBS (7,560 N) PER ASTM CORRUGATION. D6241 TESTING METHOD. - CULTEC NO. 4800 WOVEN GEOTEXTILE TO BE PLACED BENEATH INTERNAL MANIFOLD 10. THE GEOTEXTILE SHALL HAVE A TRAPEZOIDAL TEAR RESISTANCE OF 180 X 180 LBS (801 X 801 N) 23. THE CHAMBER SHALL BE MANUFACTURED IN AN IN AN ISO 9001:2015 CERTIFIED FEATURE AND BENEATH ALL INLET/OUTLET PIPES (FOR SCOUR PROTECTION) SIDE PORTAL TO BE TRIMMED ON-SITE 11. THE GEOTEXTILE SHALL HAVE AN APPARENT OPENING SIZE OF 40 US STD. SIEVE (0.425 MM) PER TO ACCOMMODATE CULTEC HVLV FC-24 24. THE CHAMBER WILL BE DESIGNED TO WITHSTAND TRAFFIC LOADS WHEN INSTALLED ASTM D4751 TESTING METHOD. — PROJECT ENGINEER OF RECORD OR GEOTECHNICAL CONSULTANT IS RESPONSIBLE FOR ENSURING THAT THE FEED CONNECTOR ACCORDING TO CULTEC'S INSTALLATION INSTRUCTIONS. 12. THE GEOTEXTILE SHALL HAVE A PERMITTIVITY RATING OF 0.15 SEC-1 PER ASTM D4491 TESTING REQUIRED BEARING CAPACITY OF SUB-GRADE SOILS HAS BEEN MET MODEL 280SHD 25. THE CHAMBER SHALL BE DESIGNED AND MANUFACTURED TO MEET THE MATERIAL AND THE GEOTEXTILE SHALL HAVE A WATER FLOW RATING OF 11.5 GPM/FT2 (470 LPM/M2) PER ASTM STRUCTURAL REQUIREMENTS OF IAPMO PS 63-2019, INCLUDING RESISTANCE TO D4491 TESTING METHOD. AASHTO H-10 AND H-20 HIGHWAY LIVE LOADS. WHEN INSTALLED IN ACCORDANCE WITH **HVLV FC-24 FEED CONNECTOR** 14. THE GEOTEXTILE SHALL HAVE A UV RESISTANCE OF 80% @ 500 HRS. PER ASTM D4355 TESTING CULTEC'S INSTALLATION INSTRUCTIONS. 26. MAXIMUM ALLOWED COVER OVER TOP OF UNIT SHALL BE 12 FEET (3.65 m). $\left(\frac{280\text{HD}}{4.0}\right)$ $\binom{280HD}{5.0}$ **CULTEC RECHARGER 280HD HEAVY DUTY CROSS SECTION GENERAL NOTES** CULTEC RECHARGER 280HD HEAVY DUTY TYPICAL INTERLOCK INLET/OUTLET PIPE PER ENGINEER DESIGN. PIPE TO BE INSERTED 12.0" [305 mm] MIN. INTO CHAMBER MAXIMUM PIPE SIZE: FINISHED GRADE — 24.2" [614 mm] — 1-2 INCH [25-5 mm] WASHED, CRUSHED 21" [525 mm] PVC STONE SURROUNDING CHAMBERS CULTEC NO. 410 NON-WOVEN GEOTEXTILE NATURALLY COMPACTED FILL RECHARGER 280HD HEAVY DUTY CHAMBER AROUND STONE. TOP AND SIDES MANDATORY, BOTTOM PER ENGINEER'S DESIGN PREFERENCE 6.0" [150 mm] SDR-35 / SCH. 40 PVC ENDCAP CLEAN-OUT ADAPTER W/ SCREW-IN CAP OPTIONAL INSPECTION PORT CULTEC FC-24 16.0" [406 mm] (SEE ZOOM DETAIL (280HD) — NATURALLY COMPACTED FILL CULTEC NO. 410 NON-WOVEN GEOTEXTILE AROUND STONE. TOP AND SIDES MANDATORY, - FINISHED GRADE BOTTOM PER ENGINEER'S DESIGN PREFERENCE — FINISHED GRADE · CULTEC HVLV FC-24 FEED CONNECTOR WHERE SPECIFIED 6.0 INCH [152 mm] MIN. DEPTH OF 24.2" [614 mm] ---1-2 INCH [25-50 mm] WASHED CRUSHED STONE ABOVE CHAMBERS - 6.0" [150 mm] SDR-35 / SCH. 40 PVC RISER 7.5' [2.29 m] MIN. CULTEC NO. 4800 WOVEN GEOTEXTILE · CULTEC RECHARGER 280HD BENEATH FEED CONNECTORS CULTEC FC-24 HEAVY-DUTY CHAMBER - 6.0" [150 mm] SDR-35 / SCH. 40 PVC COUPLING 10.0' [3.0 m] MIN. CULTEC NO. 4800 WOVEN GEOTEXTILE TRIM CHAMBER INSPECTION PORT KNOCK-OUT TO MATCH O.D. OF 6.0 INCH [152 mm] MIN. DEPTH OF BENEATH INLET PIPES 1-2 INCH [25-50 mm] WASHED CRUSHED 6.0" [150 mm] INSPECTION PORT PIPE STONE BENEATH CHAMBERS CULTEC NO. 4800 WOVEN GEOTEXTILE TO BE PLACED BENEATH INTERNAL MANIFOLD 6.0" [150 mm] SDR-35 / SCH 40 PVC FEATURE AND BENEATH ALL INLET/OUTLET PIPES (FOR SCOUR PROTECTION) 12.0 INCH [305 mm] MIN. WIDTH OF 1-2 INCH [25-51 mm] (INSERTED 8.0" [203 mm] INTO CHAMBER) WASHED, CRUSHED STONE BORDER SURROUNDING SIDE PORTAL TO BE CUT IN FIELD TO ALLOW FOR HVLV FC-24 FEED CONNECTOR FIGURE 1 ALL CHAMBERS OR STORM PIPE AS NEEDED (SEE FIGURE 1). CUT SHALL BE WITHIN 1/4" [6 mm] 10" [250 mm] HDPE TOLERANCE OF SIDE PORTAL TRIM GUIDELINE 12" [300 mm] PVC 12.0" [305 mm] PIPE PER ENGINEER DESIGN. PROJECT ENGINEER OF RECORD OR GEOTECHNICAL CONSULTANT IS RESPONSIBLE FOR . PIPE TO BE INSERTED 12.0 INCHES [305 mm] MIN. INTO CHAMBER. ENSURING THAT THE REQUIRED BEARING CAPACITY OF SUB-GRADE SOILS HAS BEEN MET MAXIMUM PIPE SIZE 21" [525 mm] HDPE 21" [525 mm] PVC ZOOM OF SIDE PORTAL SHOWING MAX. PIPE O.D. **CULTEC HVLV FC-24**

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CULTEC RECHARGER 280HD HEAVY DUTY PLAN VIEW

THIS DRAWING WAS PREPARED TO SUPPORT THE PROJECT ENGINEER OF RECORD FOR THE PROPOSED SYSTEM. IT IS THE ULTIMATE RESPONSIBILITY OF THE PROJECT ENGINEER OF RECORD TO ENSURE THAT THE CULTEC SYSTEM'S DESIGN IS IN FULL COMPLIANCE WITH ALL APPLICABLE LAWS AND REGULATIONS. IT IS THE PROJECT ENGINEER OF RECORD'S RESPONSIBILITY TO ENSURE THAT THE CULTEC PRODUCTS ARE DESIGNED IN ACCORDANCE WITH CULTEC'S MINIMUM REQUIREMENTS. CULTEC DOES NOT APPROVE PLANS, SIZING, OR SYSTEM DESIGNS.

FEED CONNECTOR THREE VIEW

RECHARGER 280HD
DETAIL SHEET
NON-TRAFFIC APPLICATION

OPTIONAL INSPECTION PORT - ZOOM DETAIL

PROJECT NO: DATE: 2019 DRAWN BY: CULTEC, INC CHECKED BY: TECH SCALE: N.T.S. SHEET NO: 1 OF 1

CULTEC INTERNAL MANIFOLD - OPTIONAL INSPECTION PORT DETAIL