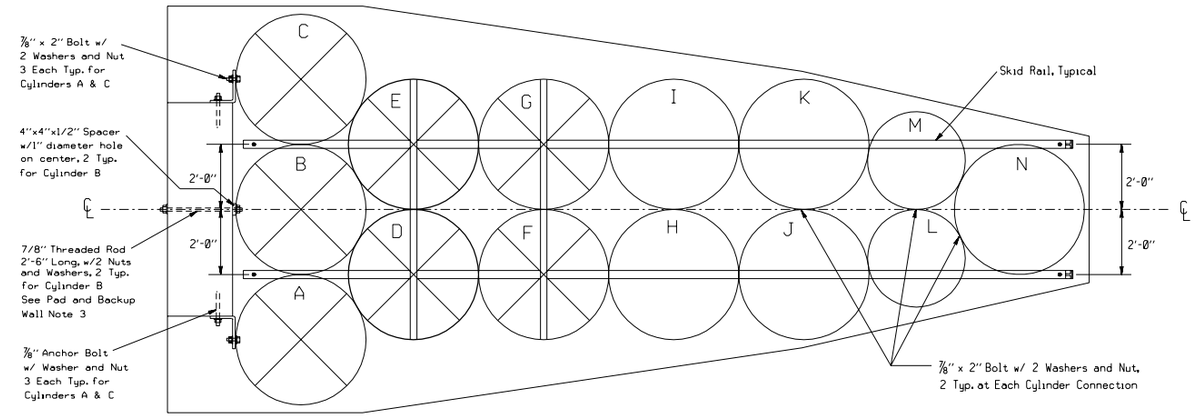
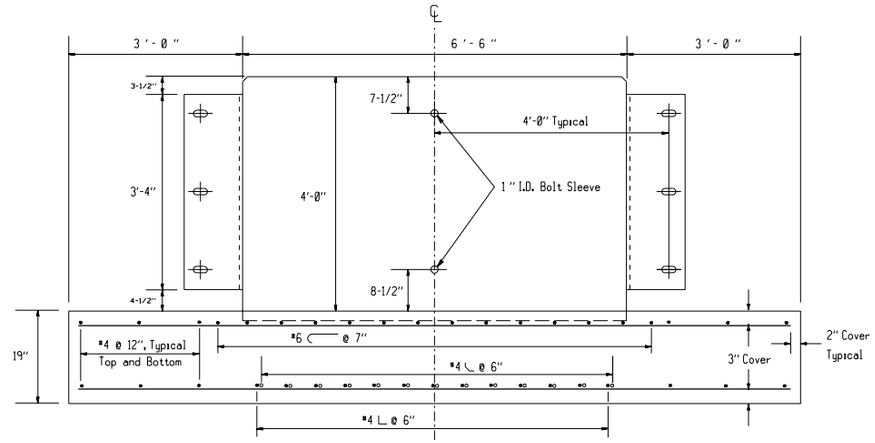
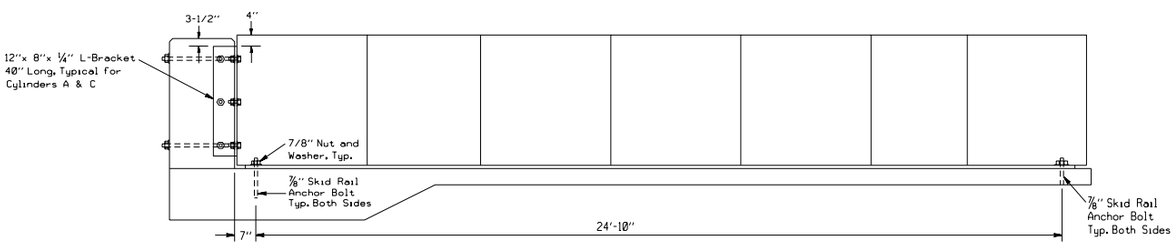


ANCHORAGE and ASSEMBLY DETAILS



BACKUP WALL
SECTION B - B



ASSEMBLY NOTES

1. Skid Rails and L-Brackets shall be placed in position over the corresponding Ancor Bolts, and secured in place with washers and nuts. All anchor bolt nuts shall be tightened to a minimum final torque of 75 ft-lb.
2. Cylinder B shall be connected to the Backup Wall with two (2) ⅞"x 2'-6" threaded rods and nuts conforming to ASTM A325, and washers conforming to ASTM F436. 4"x 4"x ½" ASTM A36 steel spacers with 1"-diameter holes on center shall be placed between the Backup Wall and Cylinder B as shown above. All theaded rods, nuts, washers, and spacers shall be galvanized after fabrication in conformance with ASTM A153.
3. All Cylinders (A thru N) shall be placed on the Skid Rails in the configuation shown above. It is extemely important that the individual Cylinders be placed in their proper position in the array. All Cylinders shall be connected to each other at all points of tangency with two (2) ⅞"x 2" bolts, nuts and washers. Cylinders A and C shall be secured to the corresponding L-Bracket with three (3) ⅞"x 2" bolts, nuts and washers. All bolts shall be tightened to a minimum final torque of 75 ft-lb.
4. Cylinder connection hardware (bolts, nuts, and washers) shall be supplied by the CIAS manufacturer. Anchoring hardware (threaded rods, spacers, chemical anchor bolts, and related nuts and washers) shall be supplied by the CIAS installation contractor as part of the Pad and Backup Wall construction.

PAD and BACKUP WALL NOTES

1. Construction of the CIAS shall conform to the requirements of the Connecticut Department of Transportation, Standard Specifications for Roads, Bridges and Incidental Construction (most recent edition) and the Special Provisions.
2. The CIAS Pad and Backup Wall shall be constructed with concrete having a minimum compressive strength (f'c) of 4000 psi.
3. All reinforcing steel shall be new deformed bars conforming to ASTM A615, Grade 60 unless otherwise noted. Welded Wire Fabric shall be size designation 6x6 - W4xW4 and Grade 60. The Bolt Sleeves shall be 1"-diameter, Schedule 40 steel pipe conforming to the requirements of ASTM A53, Grade B. They shall be tied to the reinforcing cage in the exact locations shown above prior to the placement of the Backup Wall concrete. When securing CIAS to an existing Backup Wall, use two (2) ⅞" chemical anchor bolts in place of Bolt Sleeves and Threaded Rods for Cylinder B.
4. Top of Pad elevations shall be within the range 0" to 1/4" above the top elevations of the surrounding pavement. The Pad shall NOT be constructed such that water will collect and be retained on its surface at any time.
5. The Pad and Backup Wall details shown are for construction on a gravel base. Backup Walls and Pads constructed on existing concrete or bridge decks shall be designed to meet site requirements.
6. Anchor bolts and nuts shall conform to ASTM A325. Washers for the anchor studs shall conform to ASTM F436. Anchor studs, nuts and washers shall be galvanized after fabrication in accordance with ASTM A153. Each anchor bolt shall be chemically imbedded in a prepared hole in strict conformance with the manufacturer's recommendations. The chemical anchors and methods of hole preparation shall be approved by the Engineer before work begins. Each anchor bolt shall have 2" of threads exposed above the concrete surface.

REV.	DATE	DESCRIPTION	SHEET. NO.
1	5/97	Width of Backup Wall; L-Brackets.	

REVISIONS

NOT TO SCALE

DESIGNER: A. A. M. 7/84
DRAFTER: Eric C. Lohrey 1/91
CHECKED BY: Michael M. Kasinskas 1/91
DATE CHECKED:

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

ENGINEER: OFFICE OF ENGINEERING
APPROVED BY: DATE:

OFFICE OF ENGINEERING

PROJECT TITLE:
CADD PLOTTED

TOWN:

DRAWING TITLE:
CONNECTICUT IMPACT ATTENUATION SYSTEM (CIAS)
BACKUP WALL AND ASSEMBLY DETAILS

PROJECT NO.:
DRAWING NO.: MDS-
SHEET NO.: