REACT 350® (36")

(3 foot [915 mm] wide Systems)

Reusable Energy Absorbing Crash Terminal

Self-Restoring, Reusable Crash Cushions for Narrow Hazards

ENERGY ABSORPTION
SYSTEMS, INC.
A Quixote Company
Saving Lives By Design

Corporate Offices:
35 East Wacker Dr.
11th Floor, Chicago, IL 60601-2076
Telephone: (312) 467-6750
FAX: (312) 467-1356
http://www.energyabsorption.com/

Engineering and Manufacturing Facilities:
Rocklin, CA
Pell City, AL

Product Manual

REACT 350® (36")

Table of Contents

General Information

This manual contains important information on the REACT 350 (36”). Proper installation of the REACT 350 (36") is essential to assure maximum performance. Take the time to review this manual including product limitations thoroughly before performing the necessary design work. Do not attempt to install any crash cushion without the proper plans and installation manual from the manufacturer.

If you need additional information, or have questions about the REACT 350 (36"), please call:

Energy Absorption Systems, Inc. **Customer Service Department at 1-888-323-6374**.

RETURN GOODS POLICY

Before returning any goods for credit please contact Energy Absorption Systems Inc. Customer Service Department at 1-888-323-6374 or your local distributor for proper instructions.

REACT 350® (36")

System Overview

The REACT 350® (36") is a highly efficient, redirective, non-gating, reusable crash cushion. This System is capable of shielding hazards up to 914 mm (3') wide. It consists of a series of "smart plastic" cylinders attached to a steel base track. The term "smart plastic" refers to the memory characteristics of the cylinders. After a head-on design impact as described in NCHRP 350*, the REACT 350 (36") has the ability to recover a major portion of its shape, position and energy absorbing capability.

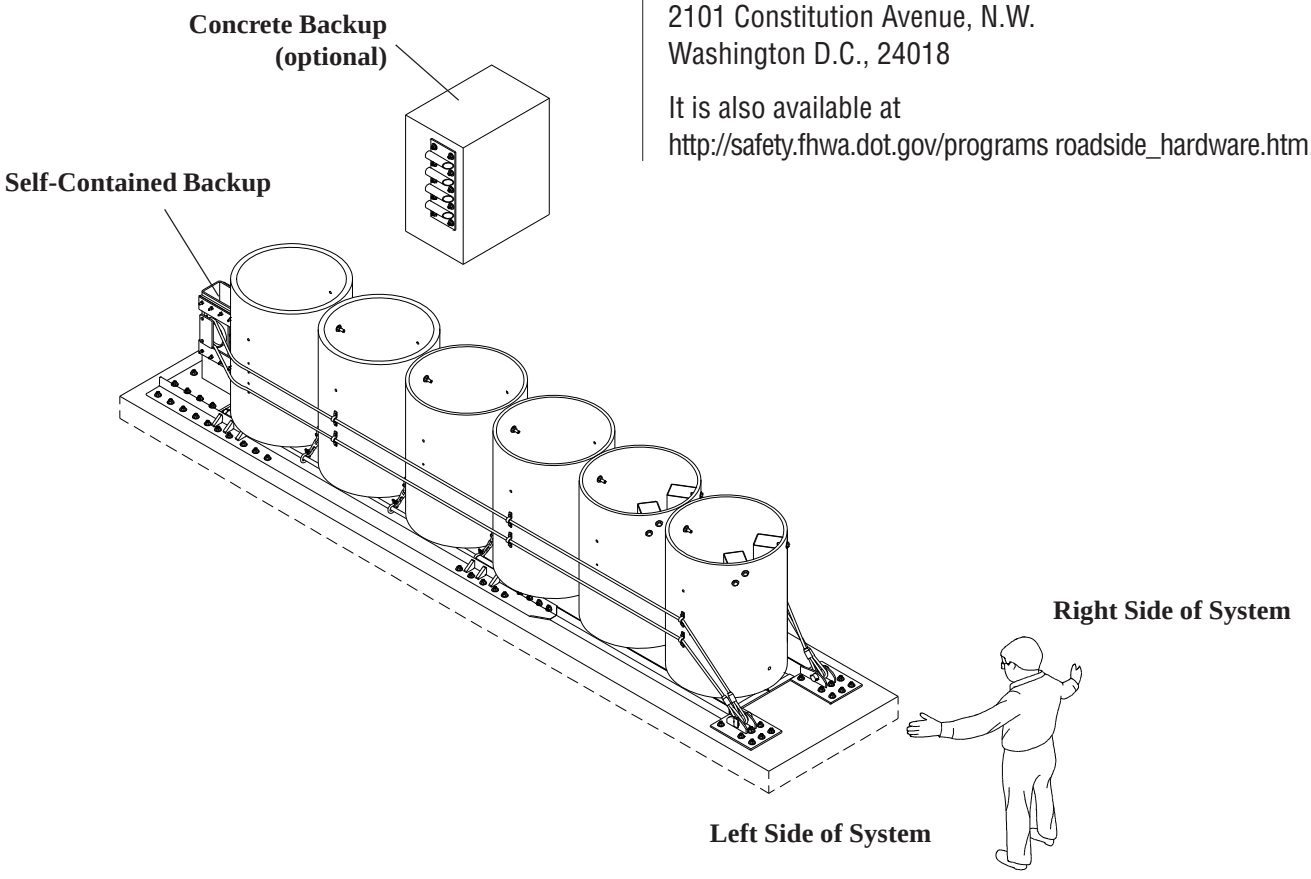
The REACT 350 (36") utilizes various cylinder wall thicknesses to accommodate both light cars and heavier, high-center-of-gravity vehicles. Its modular design allows the System length to be tailored to the specific design speed of the site.

Two backup options are available to further meet specific requirements of each location. A self-contained backup is available, or the REACT 350 (36") can be mounted to a new or existing concrete backup. In some locations, either backup type may be applicable.

*NCHRP Report 350 =
National Cooperative Highway Research Program
Report 350

Copies may be obtained from:
Transportation Research Board
National Research Council
2101 Constitution Avenue, N.W.
Washington D.C., 24018

It is also available at
http://safety.fhwa.dot.gov/programs roadside_hardware.htm.



REACT 350® (36")

General Specifications

I. General

All REACT 350® (Reusable Energy Absorbing Crash Terminal 350) shall be produced by Energy Absorption Systems, Incorporated, of Chicago, Illinois.

II. Description of System

A. General

REACT 350 refers to a family of reusable crash cushions made up from arrays of cylinders that have the ability to recover a major portion of their shape, position, and capabilities after being impacted. Transitions are available and may be required depending on the site conditions.

B. Component Description

1. The cylinders shall be made of high molecular weight, high-density polyethylene (HMW/HDPE). Each cylinder shall be nominally 915 mm [36”] outside diameter and 1.22 m [48”] high. The wall thickness of the cylinders may vary from 20 mm [.8”] to 53 mm [2.1”]. Cylinder color shall be black.
2. The REACT 350 (36") shall have a restraining cable system consisting of heavy galvanized steel wire rope on each side of the system.
3. Two options for backups are available for the REACT 350 (36").
    a. The steel, Self-Contained Backup Assembly has a cable system that begins and ends at the front anchor and is looped through an adjustable tensioning device on the sides of the backup, thus providing two cable strands on each side of the unit.
    b. The Side Mounted Anchor System is designed to be anchored to an existing concrete block. The system shall have two sets of cable strands on each side of the System, thus providing four cable strands on each side of the System.

C. Material Specifications

1. Metal work shall be fabricated from either M1020 Merchant Quality or ASTM A-36 steel. After fabrication, metal work shall be galvanized in accordance with ASTM A-123. All welding shall be done by or under the direction of a certified welder.
2. The System shall be assembled with galvanized fasteners. All bolts, nuts, and washers shall be Commercial Quality “American National Standard” unless otherwise specified.

III. Performance Criteria

A. The REACT 350 (36") shall perform as a redirective, non-gating crash cushion as specified in the National Cooperative Highway Research Program Report 350, 1993, (NCHRP 350).
1. The REACT 350 (36") Nine Row System shall perform as specified in NCHRP 350 when impacted at a speed of 100 km/h (62 mph).
2. The REACT 350 (36") Six Row System shall perform as specified in NCHRP 350 when impacted at a

General Specifications (cont'd.)

speed of 90 km/h (55 mph).

3. The REACT 350 (36") Four Row System shall perform as specified in NCHRP 350 when impacted at a speed of 70 km/h (43 mph).
4. The REACT 350 (36") System will be able to withstand multiple impacts without cylinder replacement. All cylinders require replacement when the REACT 350 (36") cannot be pulled out and held at 90% of its original length. It is anticipated that the plastic cylinders will survive in a highway environment for a period ranging from 10 to 15 years unless damaged due to impacts. To ensure full impact performance the unit shall require inspection after each impact and shall be pulled out to its original length.

B. Evaluation Criteria

1. For head-on impacts into the nose, a REACT 350 (36") shall be specified that is capable of meeting the Occupant Risk Criteria as recommended in NCHRP 350. For vehicles weighing between 820 and 2000 kg [1810 and 4410 lbs.], the theoretical impact velocity of a hypothetical front seat passenger against the vehicle's interior (calculated from vehicle acceleration and 660 mm [24"] forward displacement) shall be less than 12 m/s [39.4 ft/sec], and the vehicle's highest 10 millisecond average acceleration subsequent to the instant of the hypothetical passenger impact shall be less than 20 G's.
2. The REACT 350 (36") Nine Row System shall be capable of redirecting 2000 kg [4,410 lb.] vehicles that impact the sides of the system at speeds up to 100 km/h [62 mph] at angles of 20° for both right-way and wrong-way impacts (angles measured from system's longitudinal centerline) assuming appropriate transition hardware is properly installed. The REACT 350 (36") Nine Row System shall be capable of redirecting 820 kg [1,810 lb.] vehicles that impact the sides of the system at speeds up to 100 km/h [62 mph] at angles of 15°.
3. The REACT 350 (36") shall be designed and constructed so no solid debris is present from the system that can create a hazard on the roadway after either head-on or side angle design impacts.

IV. Test Criteria

The REACT 350 (36") Nine Row System shall have been fully tested per the recommended criteria set forth in the National Cooperative Highway Research Program (NCHRP) Report 350, 1993, Test Level 3 for redirective, non-gating terminals and crash cushions.

V. Design and Selection Criteria

A. Design, selection and placement of crash cushions shall conform to The American Association of State and Highway and Transportation Officials (AASHTO) Publication, "Roadside Design Guide" 1996.

B. Installation of REACT 350 (36") Systems shall be accomplished in accordance with the recommendations of Energy Absorption Systems, Inc.

REACT 350® (36")

Design Criteria

Backup Type

It is important to fully understand the limitations of each backup type so the correct REACT 350 (36") is chosen for each location.

The REACT 350 (36") is available with a selfcontained backup or may be attached to a concrete backup. Refer to figures 1 and 2 along with the backup assembly drawings to determine which type of backup is appropriate.

Self-Contained Backup

REACT 350 (36”) with a self-contained “steel tube” backup require two cables, one cable on each side of the cylinders. These cables begin at the front of the system, travel through the cable clips on the cylinders, loop around the backup structure, travel back through the cable clips, and terminate at the front of the system.

Concrete Backup

REACT 350 (36”) with a concrete backup require four cables. Two cables on each side of the cylinders begin at the side anchor plates, travel through the cable clips on the cylinders, loop around the pin on the front anchor plates, travel back through the cable clips, and terminate at the side anchor plates.

Existing concrete structures may serve as backups for REACT 350 (36”) provided they meet specific size and strength requirements.

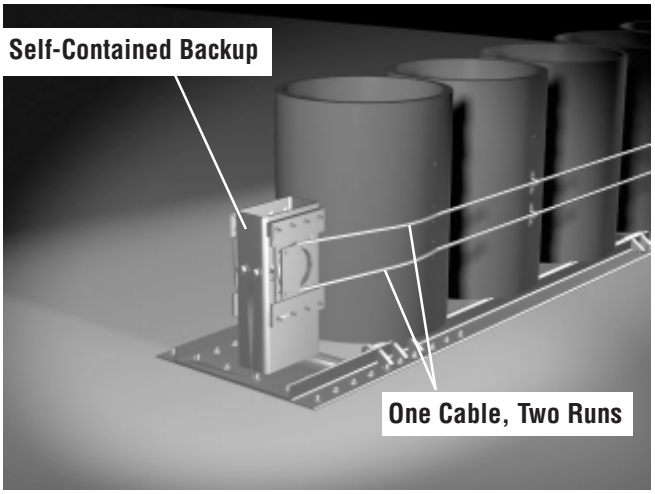


Figure 1
Self-Contained Backup

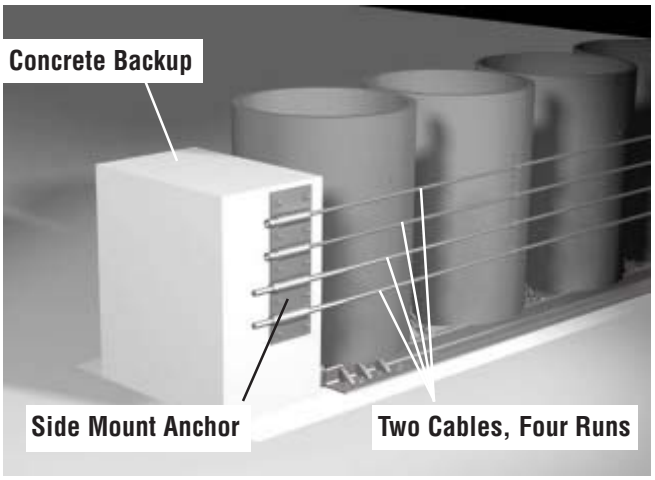


Figure 2
Concrete Backup

REACT 350® (36")

Design Criteria (cont'd.)

Number of Bays

A bay consists of one cylinder. The terms bay and cylinder may be used interchangeably. The cylinder at the front of the system (traffic end) is always bay 1, and each subsequent bay is sequentially numbered to the rear of the system (hazard end). The standard REACT 350 (36") is available in 4, 6, and 9 bay configurations so the length of the system can be custom tailored for the design speed of the roadway.

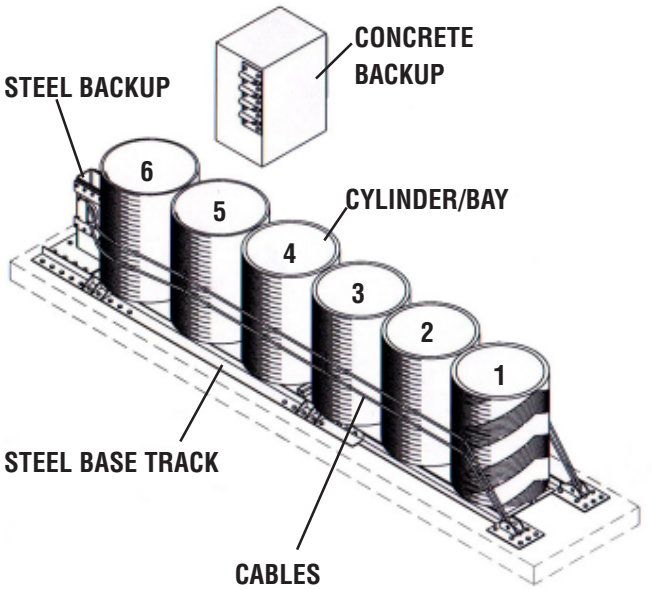


Figure 3
Number of Bays

Foundation/Anchoring

Permanent Installations

For permanent installations, the REACT 350 (36") should be installed only on an existing or freshly placed and cured concrete base (28 MPa [4000 psi] minimum). Orientation of the concrete base and the attenuator must comply with the project plans or as otherwise determined by the resident project engineer.

Recommended dimension and reinforcement specifications for new concrete pads can be found on the standard drawings.

Temporary Installations

For temporary installations in construction zones, REACT 350 (36") models may be installed on asphalt. Only systems with a self-contained backup may be installed on asphalt. Provide a minimum of 76 mm [3"] layer of asphalt over a minimum of 76 mm [3"] layer of Portland Cement concrete, 152 mm [6"] layer of asphalt over 152 mm [6"] layer of subbase, or 203 mm [8"] layer of asphalt with no subbase. Refer to figures 5a, 5b, 5c or 5d. 460 mm [18"] threaded rods, installed with the two part MP-3 grout must be used for these foundations.

A pre-cast, steel reinforced, concrete slab may also be used with the 4-bay systems. A simple excavation will facilitate quick and easy placement and removal at temporary locations. Pre-cast slabs may be created for longer systems, but generally these do not facilitate installation and removal significantly.

REACT 350® (36")

Design Criteria (cont'd.)

Foundation Specifications for Permanent Installations

For an independant, soil-supported system, include a below-grade anchor block as part of the pad detail. See figure 4a. The large block will keep the pad from sliding during an impact. If the system is to be placed against and supported by a rigid barrier or other structure, the below-grade anchor block may be omited. See figure 4b. Additional details can be found on the standard drawings.

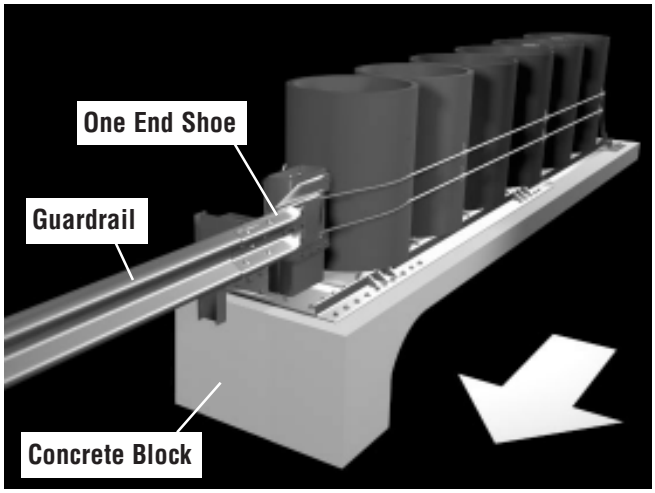


Figure 4
Below-Grade Anchor Block

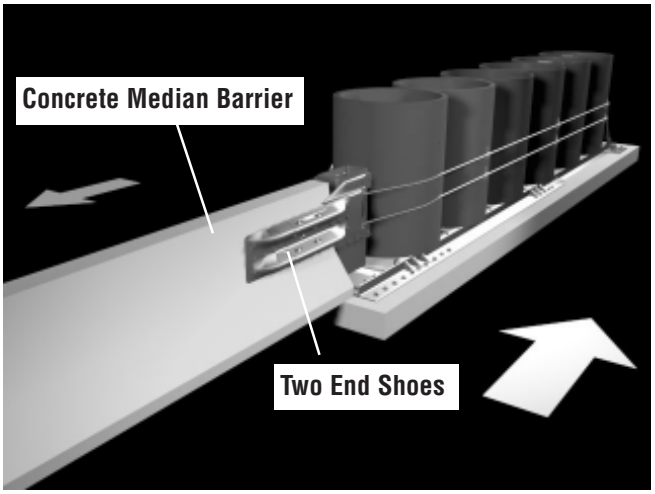


Figure 5
Anchor Block Not Needed

REACT 350® (36")

Design Criteria (cont'd.)

The REACT 350 (36") may be installed on any of the following foundations using the specified anchorage:

A: Concrete Pad

Foundation

150 mm [6"] minimum
Portland Cement Concrete (P.C.C.)

Anchorage

MP-3 Polyester Anchoring System:

- 190 mm [7.5"] studs
- 140 mm [5.5"] embedment

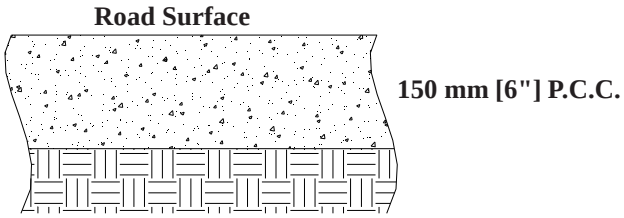


Figure 6
Concrete Pad

B: Asphalt over P.C.C.

Foundation

75 mm [3"] minimum Asphaltic Concrete (A.C.) over 75 mm [3"] minimum Portland Cement Concrete (P.C.C.)

Anchorage

MP-3 Polyester Anchoring System:

- 460 mm [18"] studs
- 420 mm [16.5"] embedment

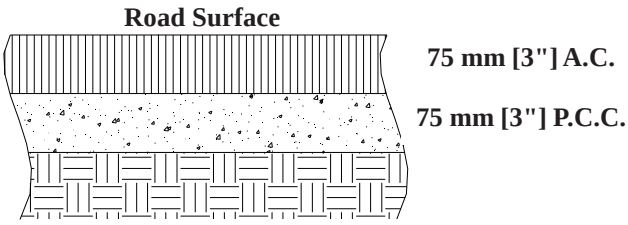
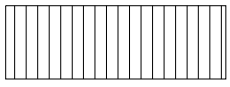


Figure 7
Asphalt/Concrete

Definitions:

A. C. (Asphaltic Concrete)



AR-4000 A. C. (Per ASTM D3381 '83) .75" Maximum, Medium (Type A or B) aggregate.

Sieve Size	Operating Range (%) Passing
1"	100
3/4"	95-100
3/8"	65-80
No. 4	49-54
No. 8	36-40
No. 30	18-21
No. 200	3-8

REACT 350® (36")

Design Criteria (cont'd.)

C: Asphalt over Subbase

Foundation

150 mm [6"] minimum Asphaltic Concrete (A.C.) over 150 mm [6"] minimum Compacted Subbase (C.S.)

Anchorage

MP-3 Polyester Anchoring System:

- 460 mm [18"] studs
- 420 mm [16.5"] embedment

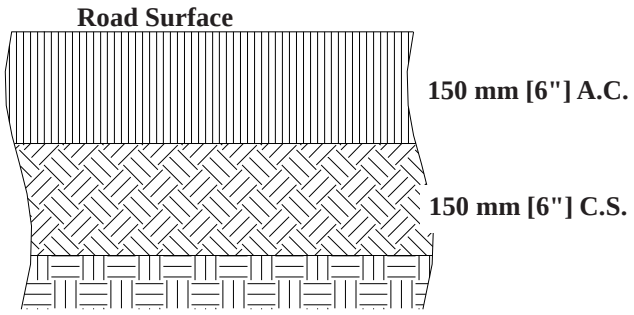


Figure 8
Asphalt/Subbase

D: Asphalt Only

Foundation

200 mm [8"] minimum (A.C.).

Anchorage

MP-3 Polyester Anchoring System:

- 460 mm [18"] studs
- 420 mm [16.5"] embedment

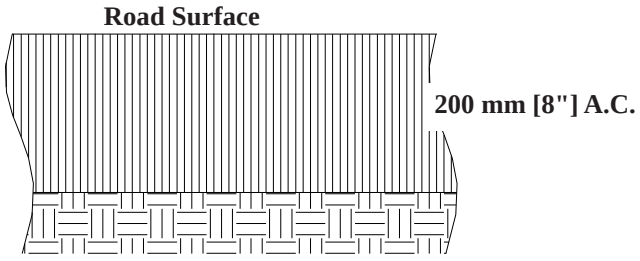
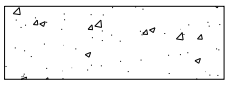


Figure 9
Asphalt

P.C.C.
(Portland Cement Concrete)



Stone aggregate concrete mix, 4000 psi minimum 28 day compressive strength (Sampling per ASTM C31-84 or ASTM C42-84a, testing per ASTM C39-84).

C.S. (Compacted Subbase)

150 mm [6"] minimum depth 95% compaction, Class 2 aggregate.

Sieve Size	Moving Average (%) Passing
3"	100
2 1/2"	90-100
No. 4	40-90
No. 200	0-25

REACT 350® (36")

Design Criteria (cont'd.)

Special Site Conditions

Contact Energy Absorption Systems Customer Service Department if you would like assistance with your application, as proper model selection is essential to the performance of the REACT 350 System. You will need to answer the following questions:

1. Are curbs, islands, or elevated objects (delineators or signs) present at the site? What height and width are they? All curbs and elevated objects should be removed. Curbs should be removed from behind the backup to approximately 15 m [50'] in front of the REACT 350 (36"). Any curbs that must remain should be 102 mm [4"] maximum and be mountable. Signs should not interfere with the system's ability to collapse. Generally, a vehicle should not interact with two appurtenances at the same time. Allow adequate spacing.
2. If the installation site is a gore area (place where two roads diverge), what is the angle of divergence?
3. What is the general geometry of the site? Include the roadway for 150 m [500'] in front of the hazard, so traffic patterns can be visualized.
4. Is there an existing guardrail or median barrier at the site?
5. What is the width of the hazard to be protected?
6. Will there be traffic approaching from the rear of the system? Is the system in a twoway traffic situation with traffic going in opposite directions on either side of the system? Or, is the system on the side of the road where cross over traffic is a concern? If so, a transition from the hazard to the rear of the system may be necessary to prevent a vehicle from snagging on the rear of the system. See bidirectional traffic page 16.
7. Are there any other unique features at the site that may affect the positioning or performance of the REACT 350 (36")? (See next paragraph)

Other Factors That May Affect Your Design:

1. The existence of drain inlets or buried culvert pipe.
2. Junction boxes or other appurtenances located near the hazard.
3. Insufficient space for the length of system preferred.
4. The location and movement of expansion joints.
5. Breaking cross-slopes under or near the proposed installation or severe cross-slope under the system. Provide leveling to 8% maximum slope - see Figure 6. Often a system can be moved further forward to a more level site. Transitioning may be extended back to the existing hazard to accommodate the site.

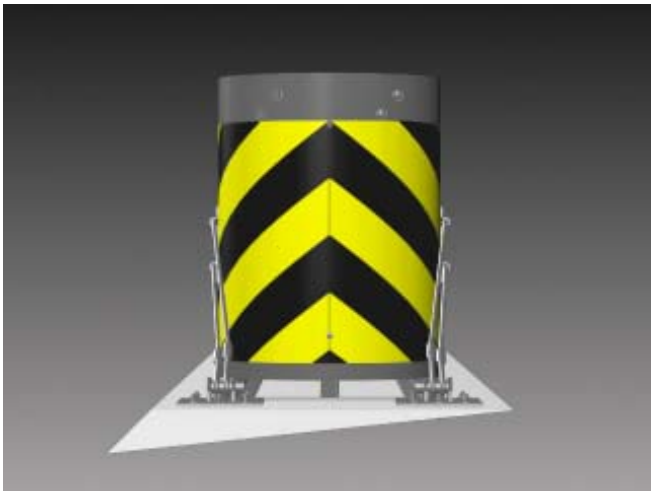


Figure 10
Cross-Slope

REACT 350® (36")

Design Criteria (cont'd.)

REACT 350 (36") Standard Model Numbers

Reference	Model No.	# of Bays	System Length		Max. Design Speed	
			Meters	Feet-inches	km/h	mph
REACT 350.4	43B036	4	4.64	15'-2 3/4"	70	43
	43C036	4	4.19	13'-9"	70	43
REACT 350.6	55B036	6	6.47	21'-2 3/4"	89	55
	55C036	6	6.02	19'-9"	89	55
REACT 350.9	62B036	9	9.21	30'-2 3/4"	100	62
	62C036	9	8.76	28'-9"	100	62
REACT 350.9HS	70B036	9	9.21	30'-2 3/4"	113	70
	70C036	9	8.76	28'-9"	113	70

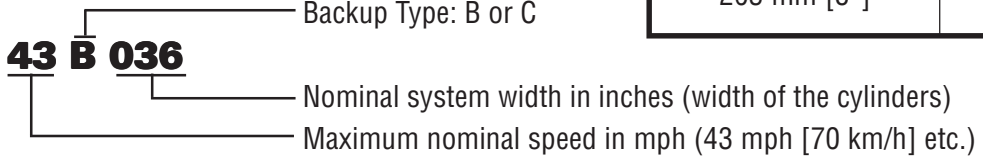
WARNING!

Shaded area depicts systems not tested to NCHRP Report 350 standards. NCHRP Report 350 does not outline test criteria for speeds in excess of 100 km/h (62 mph). Reference REACT 350.9HS is identical to Reference REACT 350.9 except some of the cylinders are thicker. Reference REACT 350.9HS is expected to comply with NCHRP Report 350 TL-3 requirements and offer additional capacity for impacts up to 115 km/h [70 mph].

Impact conditions which differ from those described in the NCHRP Report 350 test matrix for non-gating, redirective crash cushions may result in different crash results than those encountered in testing. Furthermore, impacts in excess of TL-3 impact severity or the existence of unusual impact conditions such as vehicle instability resulting from traversing curbs or excessive cross slopes prior to impact may compromise crash performance. Performance criteria relative to structural adequacy, occupant risk and vehicle trajectory may not meet NCHRP 350 evaluation criteria.

Model Number Description

B	C
Self-contained steel backup	Concrete backup with side mount anchors
Typical hazard width 203 mm [8"]	Max. hazard width 914 mm [36"]



REACT 350® (36")

Design Criteria (cont'd.)

Self-contained Backup

Overview

The REACT 350 System with a self-contained backup is designed to minimize installation time. This type of system arrives at the site fully assembled. The installation crew needs only to lift and place the system in front of the barrier, then drill and set the anchors. Refer to the installation manual for a complete list of instructions.

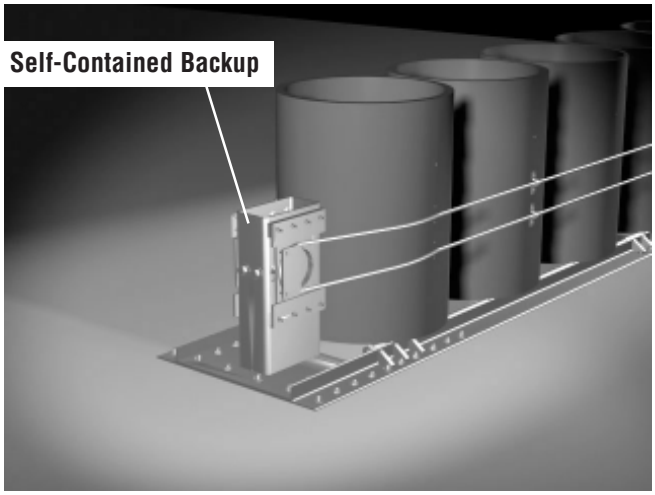


Figure 7
Self-Contained Backup

Hazard Width

Generally, the REACT 350 (36") with a self-contained backup can shield obstacles to 203 mm [8"] wide in a gore application. This type of system can also shield wider hazards in non-gore and bidirectional traffic locations (See Offsetting the System and Bidirectional Traffic on next page).

When shielding median barriers (813 mm [32"] tall safety shape), a self-contained system may be used if the base or "toe" of the barrier is tapered to a total width of 330 mm [13"]. See figure 8.

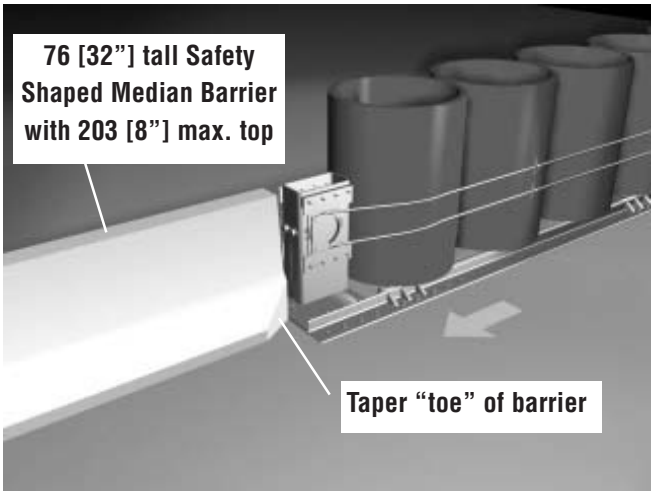


Figure 8
Tapered Barrier

REACT 350® (36")

Design Criteria (cont'd.)

Guardrail Attachment

Hardware is available to mount w-beam guardrail or a safety shaped barrier to the self-contained backup of the REACT 350 (36"). A folded transition plate and w-beam connector can mount to either or both sides of the backup assembly. See figure 9. If bidirectional traffic is present, special post spacing, rail, and rubrail will be required for guardrail.

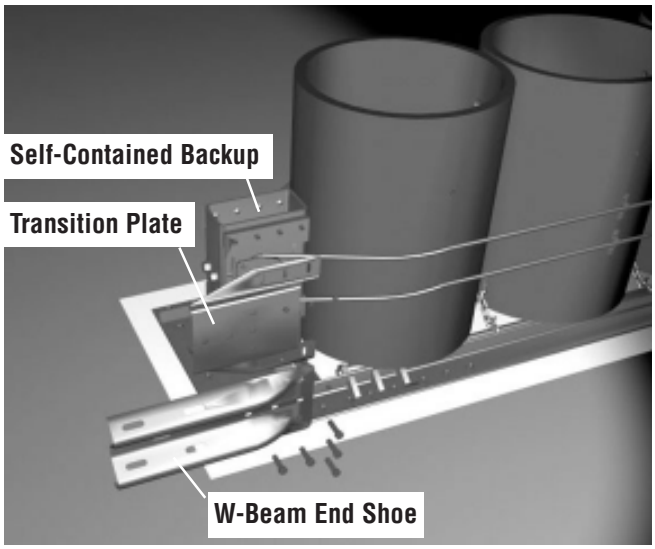


Figure 9
Guardrail Attachment Hardware

Bidirectional Traffic

If bidirectional traffic (vehicles traveling opposite directions on either side of the system) is present, special consideration needs to be taken when placing the system. It is important that the self-contained backup does not become a hazard to the reverse direction traffic. If a system is placed in a location where traffic will be approaching from the rear of the system, transition hardware may be required.

Optionally, if space permits, the REACT 350 (36") may be offset so that the backup structure is shielded by the hazard (See Offsetting the System). Guardrail transition hardware may also be used.

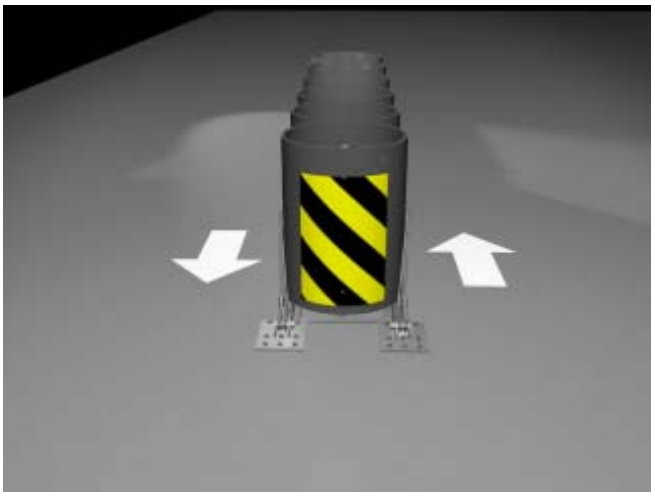


Figure 10
Bidirectional Traffic

REACT 350® (36")

Design Criteria (cont'd.)

Offsetting the System

If space permits, REACT 350 (36"), with a self-contained backup, may be offset from the center of the hazard. Offsetting may be necessary for two reasons:

1) To shield a hazard wider than 200 mm [8"]
2) If bidirectional traffic is present

When offsetting the system, align the vertical face of the backup structure with the face of the barrier (See figure 11). With this method, REACT 350 (36") with self-contained backup may shield hazards up to 610 mm [24"].

If a wider hazard is present or if bidirectional traffic is present, a concrete backup may be required. Contact Energy Absorption Systems, Inc. Customer Service Department.

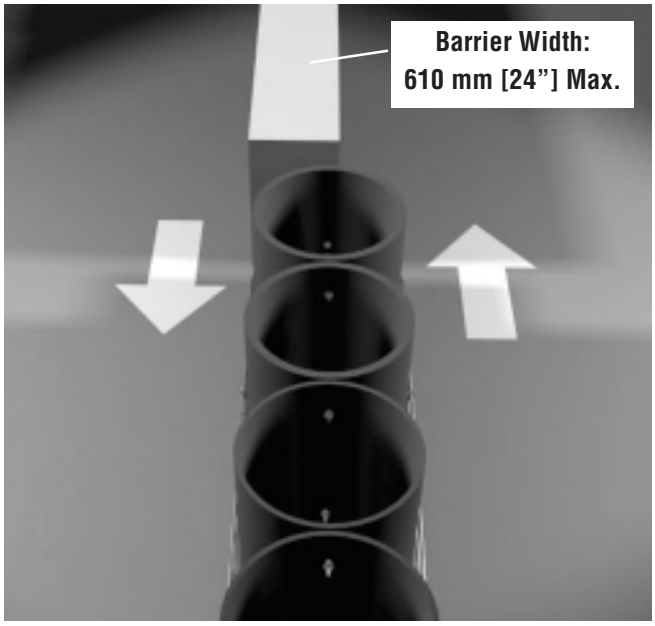


Figure 11
Offsetting the System

Concrete Backup

Overview

The REACT 350 (36") is also designed to mount directly to a new or existing concrete backup. This type of system requires slightly more installation time, as the cables must be installed on site. Refer to the Installation manual for a complete list of instructions.

Existing concrete backups must be a minimum of 1 m [40"] high, 610 mm [24"] long, and 762 mm [30"] to 914 mm [36"] wide, with a 28 day strength of 28 MPa (4000 psi) and fully reinforced.

If your existing structure does not meet these minimums, special hardware and designs may be available for them. Contact Energy Absorption Systems, Inc. Customer Service Department with your site information.

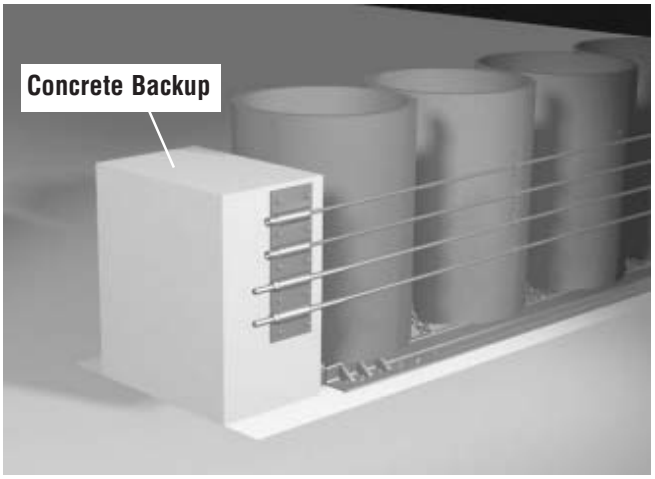


Figure 12
Offsetting the System

REACT 350® (36")

Design Criteria (cont'd.)

Hazard Width

The REACT 350 (36") with a concrete backup may protect obstacles up to 914 mm [36"] wide. The backup must be 762 mm [30"] to 914 mm [36"] wide to use standard side anchor hardware.

Bidirectional Traffic

If bidirectional traffic (vehicles traveling opposite directions on either side of the system) is present, special consideration needs to be taken when placing the system.

It is important that the concrete backup itself does not become a hazard to the reverse direction traffic. If a system is placed in a location where traffic will be approaching from the rear of the system, the backup should not protrude beyond the hazard being shielded. Concrete tapering may be required.

Also, an additional standard side anchor plate should be rotated 180 degrees and placed behind the first anchor plate (see Figure 13). In this case, the backup must be 762 mm [30"] long.

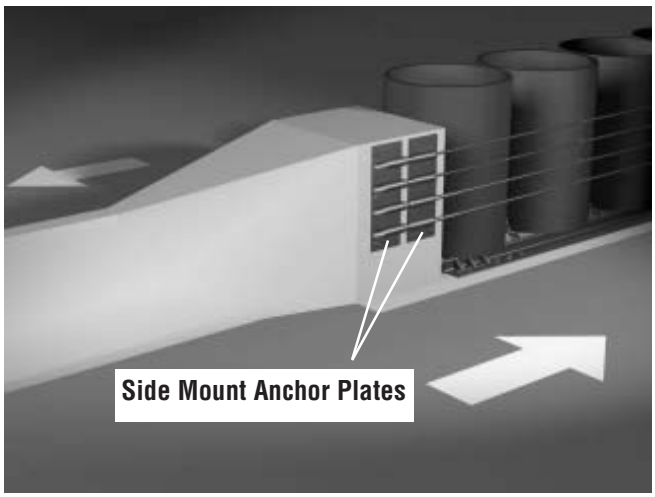


Figure 13
Standard Anchor Plate

Joints

The REACT 350 (36") may span longitudinal joints, however custom hardware will be required.

The REACT 350 (36") may also span a transverse joint if the joint falls under the front section of base track. In this case, the front section of base track should be cut after installation so as not to span the joint with structural steel. Never cut the rear section of base track. The joint movement must be limited to 38 mm [1.5"]. Four cylinder systems do not have a front section of base track that can be cut.

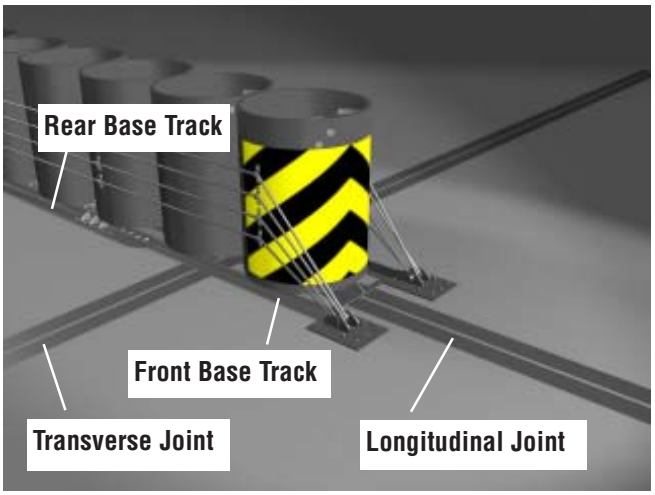


Figure 14
Longitudinal or Transverse Joints

REACT 350® (36")

Limitations and Warnings

Energy Absorption Systems, Inc., in compliance with the National Cooperative Research Highway Program 350 (NCHRP Report 350) "Recommended Procedures for the Safety Performance of Highway Safety Features", contracts with FHWA approved testing facilities to perform crash tests, evaluation of tests, and submittal of results to the Federal Highway Administration for review.

The REACT 350 (36") was tested to meet the requirements and guidelines of NCHRP Report 350. These tests typically evaluate product performance by closely simulating actual impacts involving a typical range of vehicles on our roadways, from lightweight cars (approx. 820 kg [1800 lb.]) to full size pickup trucks (approx. 2000 kg [4400 lb.]). A product can be certified for various speed levels.

Level I: 50 km/h [31.10 mph]

Level II: 70 km/h [43.49 mph]

Level III: 100 km/h [62.13 mph]

These tests are not designed to represent the performance of products when impacted by every vehicle type or every impact condition.

Energy Absorption Systems, Inc. does not represent nor warrant that the results of these controlled tests show that vehicle impacts with the products in other conditions would necessarily avoid injury to person(s) or property. Impacts that exceed the design capabilities of the product may not result in acceptable crash performance as outlined in NCHRP Report 350, relative to structural adequacy, occupant risk and vehicle trajectory. Energy Absorption Systems, Inc. expressly disclaims any warrant or liability for injury or damage to persons or property resulting from any impact, collision, or harmful contact with products, other vehicles, or nearby hazards or objects by any vehicle, object or person, whether or not the products were installed by or under the direction of Energy Absorption Systems, Inc. or by third parties.

The REACT 350 (36") was designed to be installed, delineated, and maintained in accordance with State and Federal guidelines. Energy Absorption Systems, Inc. offers a reflective delineator panel and has reflective tabs for its REACT line of products. However, the material is only intended to supplement delineation required by the Department of Transportation's "Manual on Uniform Traffic Control Devices" (MUTCD). Design tables are provided in the product manual to aid in selecting the most appropriate product configuration for proper application to the site. The engineer should be careful to properly select, install and maintain the product. Careful evaluation of the site geometry, vehicle population type, speed, traffic direction and visibility are some of the elements that require evaluation in the proper selection of a safety appurtenance. For example, curbs could cause unsafe vehicle trajectory.

After an impact occurs, the product should be restored to its original condition as soon as possible. When a reusable safety product is struck, it is still necessary to restore the product to it original length and inspect all the components for damage and repair and/or replace components as necessary.

The restorable nature of the cylinders provides for potential rebounding of an impacting vehicle into pathways beyond the reserve area. Field performance assessments indicate secondary impacts have not problematically resulted.

REACT 350® (36")

Site Data Form (Please make copies)

Created by_____ Date Submitted_____

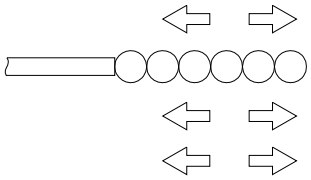
Company_____ Date Required_____

Site Location / Title _____

City/County_____ State/Country_____

1. Location of hazard:
___ Median ___Gore ___Roadside ___Toll

2. Direction of traffic (circle all appropriate arrows)



3. Object being protected: (sketch hazard and dimension)

___Concrete Barrier (show barrier with dimensions)
___New Jersey Barrier, ___F Shape Barrier,
___Single Slope Barrier, ___Other
___Guardrail (show cross section with dimensions)
___Thrie-Beam, ___W-Beam, ___Other

4. Design Speed of Roadway _____ (mph or km/h) Sketch of hazard

5. Foundation ____Grade, ____Deck structure, ____Continuous concrete pavement

6. Does expansion joint pass through System location? ___ No, ___Yes. If yes, attach a drawing of site showing the exact location of the joint. What is the maximum movement in the joint? _____ Show the direction of movement.

7. Does curbing exist? _____ No, _____Yes If yes, what is the curb height?

8. Is cross slope greater than 8%? _____No, ____Yes If yes, what is the slope?

9. Provide photos and/or sketches of the site. Be sure to give dimensions for obstacles.
(Use the back of this sheet or attach an additional sheet with sketches of the site.)

10. Number of impacts expected per year?

11. Drawings requested
_____ Quantity _____ Drawing Size (11x17 unless specified)

_____ Set _____Cover Sheet Only _____ Cover sheet and Concrete Work

12. Temporary/Construction Zone or Permanent

REACT 350® (36")

Order Form (Please make copies)

Bill To: _____

_____

_____

Ship To: _____

_____

_____

Date: _____ Order No. _____

Job No. _____

Job Name: _____

If you need costs: _____

Project No. _____

Section No. _____

IMPORTANT: Use one sheet per System unless the Systems are identical.

Special instructions _____

_____

Quantity	Model No.	Description
_____	R43B036	4 Cylinders with steel, self-contained backup
_____	R55B036	6 Cylinders with steel, self-contained backup
_____	R62B036	9 Cylinders with steel, self-contained backup
_____	R70B036	9 Cylinders with steel, self-contained backup
_____	R43C036	4 Cylinders with concrete backup
_____	R55C036	6 Cylinders with concrete backup
_____	R62C036	9 Cylinders with concrete backup
_____	R70C036	9 Cylinders with concrete backup

Transitions

_____

_____

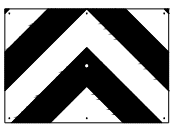
_____

Concrete Anchors ____ Yes ____ No

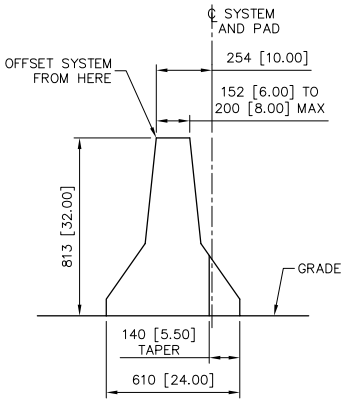
Asphalt Anchors ____ Yes ____ No

Reflective Nose Cover

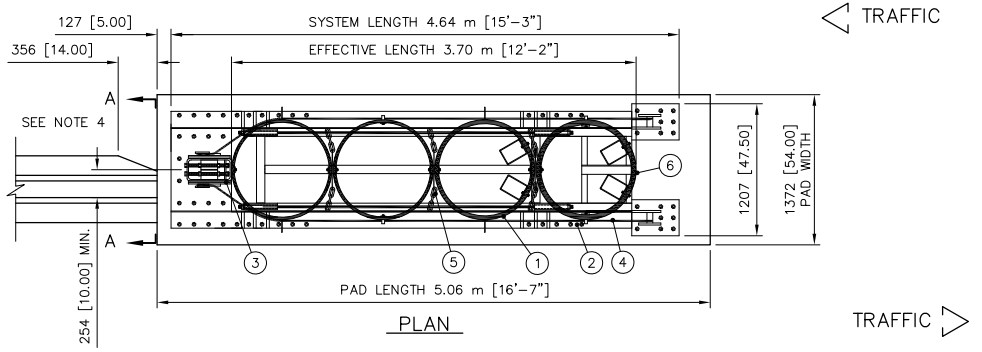
____ Left (Universal) ____ Gore ____ Right (Universal) ____ Special

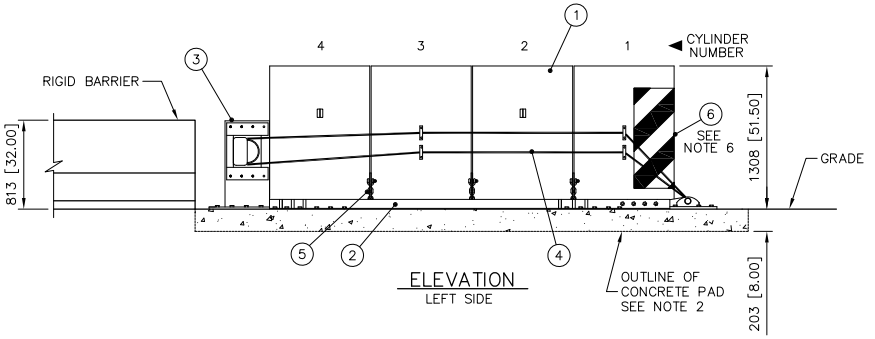

REACT 350® (36")



VIEW A–A
SCALE 1:20



PLAN



ELEVATION
LEFT SIDE

NOTES:
1. IN COMPLIANCE WITH THE AASHTO 2002 ROADSIDE DESIGN GUIDE, MANUFACTURER RECOMMENDS REMOVAL OF ALL CURBS AND ISLANDS TO ENSURE PROPER IMPACT PERFORMANCE.
2. 203 [8.00] MIN. REINFORCED 28 MPa [4000 PSI] P.C. CONCRETE PAD OR 203 [8.00] MIN. NON–REINFORCED 28 MPa [4000 PSI] P.C. CONCRETE ROADWAY MEASURING AT LEAST 3.66 m [12'–0"] WIDE BY 15.24 m [50'–0"] LONG.
3. SEE THE "REACT 350 PRODUCT MANUAL" FOR A DESCRIPTION OF ITS IMPACT PERFORMANCE CHARACTERISTICS AND DESIGN LIMITATIONS BEFORE PLACING A SYSTEM AT A GIVEN SITE. INFORMATION AND COPIES OF ABOVE MANUAL ARE AVAILABLE BY CALLING CUSTOMER SERVICE DEPARTMENT AT (312) 467–6750.
4. WHERE NECESSARY, THE CUSTOMER SHALL SUPPLY A TRANSITION FROM THE SYSTEM TO THE OBJECT BEING SHIELDED TO PREVENT SNAGGING OF VEHICLES. TRANSITION ASSEMBLIES ARE SUPPLIED AS ACCESSORIES AND ARE ORDERED SEPARATELY.
5. UNITS OF MEASUREMENT ARE MILLIMETERS [INCHES] UNLESS OTHERWISE NOTED.
6. NOSE COVER NOT INCLUDED IN MODEL NUMBER. ORDER SEPARATELY.

BIDIRECTIONAL
MODEL NO. 43B036

KEY
1. CYLINDER
2. BASE TRACK
3. BACKUP
4. CABLE
5. STABILIZER CHAIN
6. REFLECTIVE NOSE COVER

Revisions	Date	Rev.	By	Ckd.	App.
REMOVED HOLES FOR DEBRIS COVERS, ADDED REFLECTORS,REVISED NOTE 2, ADDED DEBRIS COVER OPTION AND REFLECTORS TO REFERENCES	09/18/02	D	RGC	STT	FJP
REVISED FRONT BASETRACK	09/14/01	B	LWC	STT	SPT
REVISED NOTE 2	2/27/02	C	DDW	STT	SPT

REFERENCES

SERIAL#		CYLINDERS	3535001–0000
SALES ORDER#		BACKUP/BASE TRACK	3535002–0000
EH PROJECT#		CONCRETE PAD	3535004–0000
DESIGN SPEED	70 km/h [43 MPH]	STABILIZER CHAIN	3535008–0000
NOSE TYPE		REFLECTIVE NOSE	3535003–0000
NUMBER OF UNITS		REFLECTOR ASSY	3535055–0000
DEBRIS COVERS	3535079–0000 (OPTIONAL)	RESTRAINING CABLE	3535005–0000

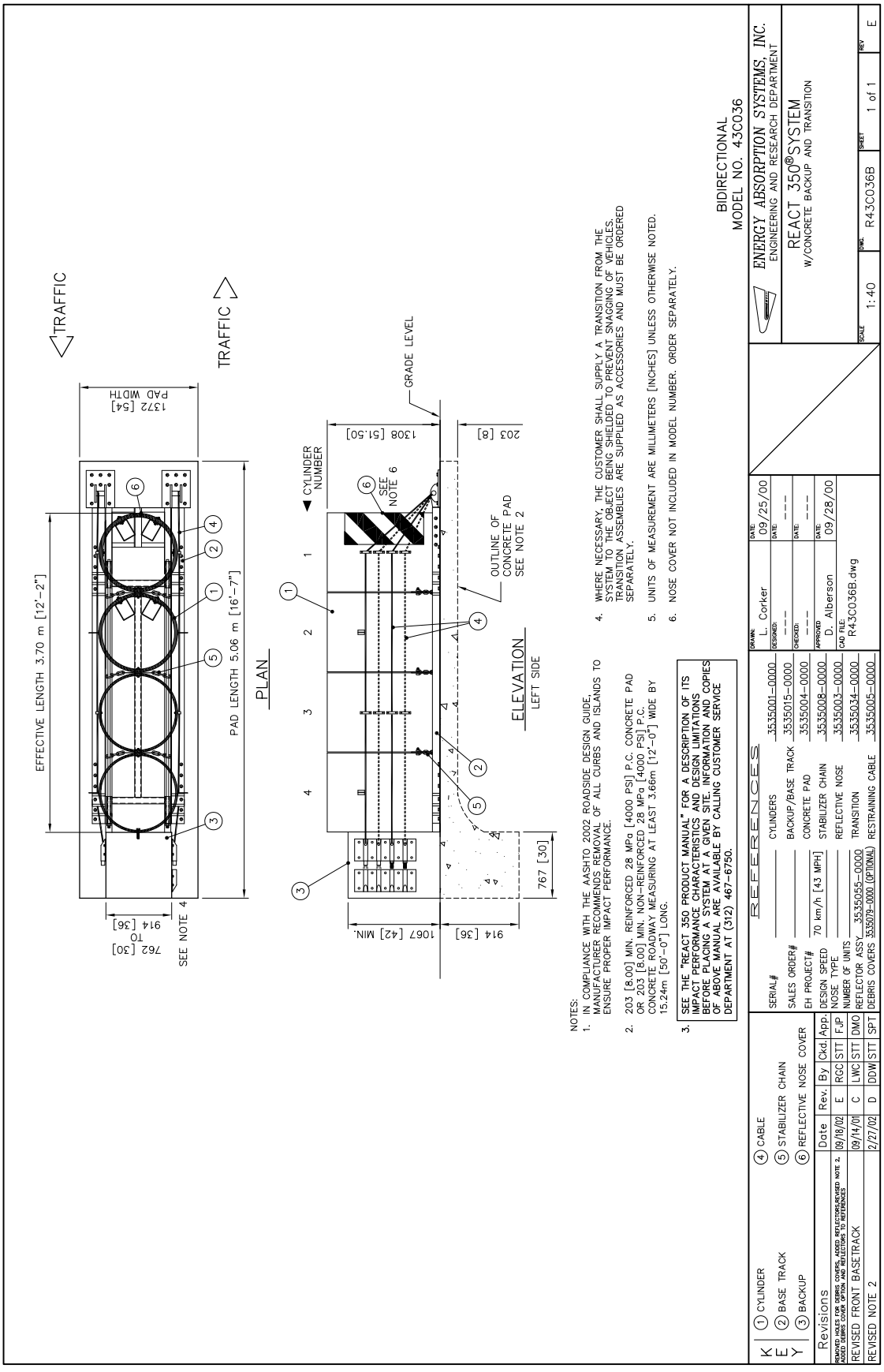
DRAWN:	D. Kohfeld	DATE:	9/25/00
DESIGNED:	---	DATE:	---
CHECKED:	---	DATE:	---
APPROVED	D. Alberson	DATE:	09/28/00
CAD FILE:	R43B036B.dwg		

ENERGY ABSORPTION SYSTEMS, INC.
ENGINEERING AND RESEARCH DEPARTMENT

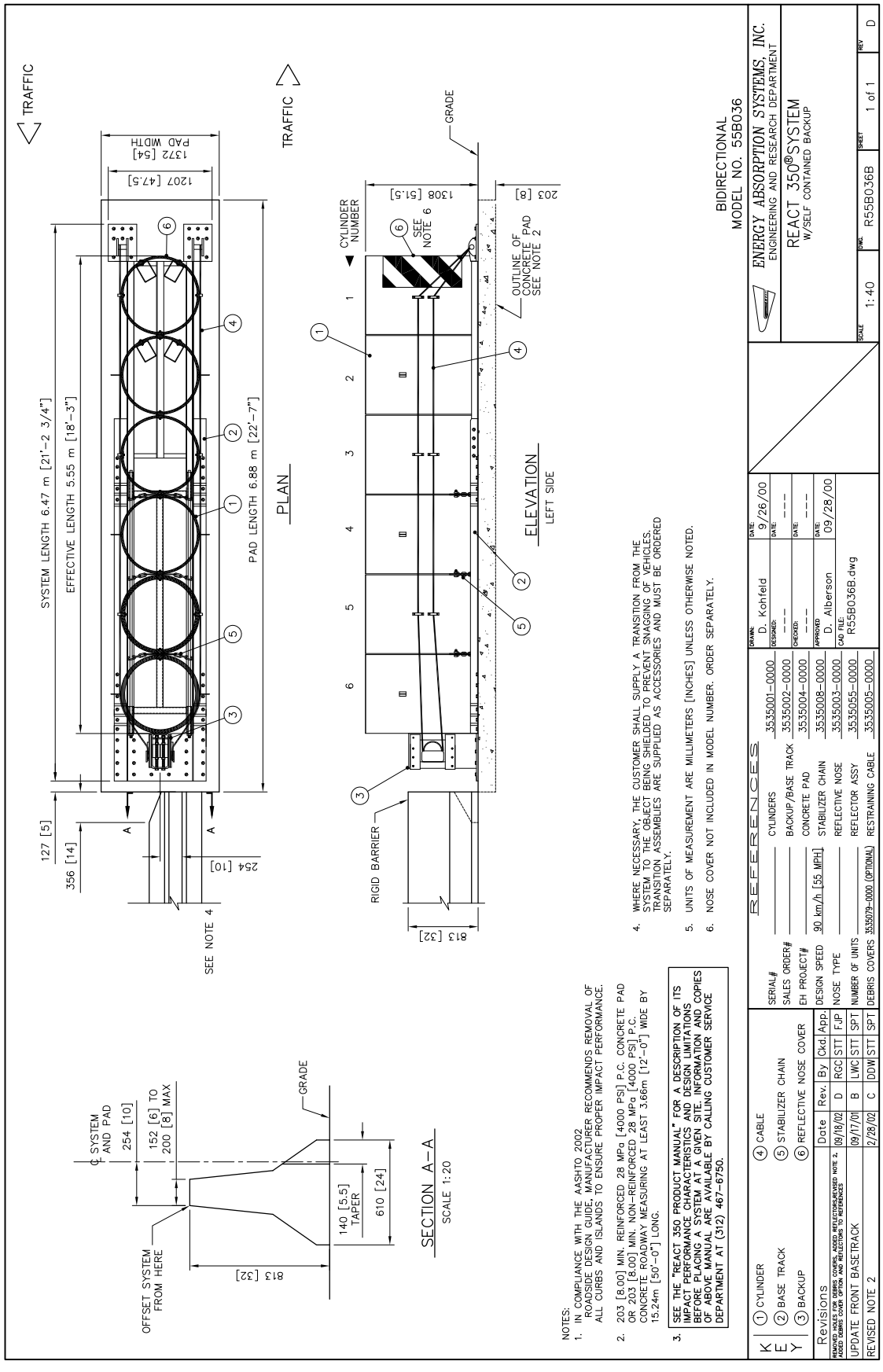
REACT 350®SYSTEM
W/SELF CONTAINED BACKUP

SCALE	DWG.	SHEET	REV
1:40	R43B036B	1 of 1	D

REACT 350® (36")


TRAFFIC
TRAFFIC
EFFECTIVE LENGTH 3.70 m [12'-2"]
PAD LENGTH 5.06 m [16'-7"]
1372 [54] PAD WIDTH
762 [30] TO 914 [36]
SEE NOTE 4
PLAN
CYLINDER NUMBER
GRADE LEVEL
1308 [51.50]
203 [8]
SEE NOTE 6
OUTLINE OF CONCRETE PAD SEE NOTE 2
ELEVATION
LEFT SIDE
1067 [42] MIN.
914 [36]
767 [30]
NOTES:
1. IN COMPLIANCE WITH THE AASHTO 2002 ROADSIDE DESIGN GUIDE, MANUFACTURER RECOMMENDS REMOVAL OF ALL CURBS AND ISLANDS TO ENSURE PROPER IMPACT PERFORMANCE.
2. 203 [8.00] MIN. REINFORCED 28 MPa [4000 PSI] P.C. CONCRETE PAD OR 203 [8.00] MIN. NON-REINFORCED 28 MPa [4000 PSI] P.C. CONCRETE ROADWAY MEASURING AT LEAST 3.66m [12'-0"] WIDE BY 15.24m [50'-0"] LONG.
3. SEE THE "REACT 350 PRODUCT MANUAL" FOR A DESCRIPTION OF ITS IMPACT PERFORMANCE CHARACTERISTICS AND DESIGN LIMITATIONS BEFORE PLACING A SYSTEM AT A GIVEN SITE. INFORMATION AND COPIES OF ABOVE MANUAL ARE AVAILABLE BY CALLING CUSTOMER SERVICE DEPARTMENT AT (312) 467-6750.
4. WHERE NECESSARY, THE CUSTOMER SHALL SUPPLY A TRANSITION FROM THE SYSTEM TO THE OBJECT BEING SHIELDED TO PREVENT SNAGGING OF VEHICLES. TRANSITION ASSEMBLIES ARE SUPPLIED AS ACCESSORIES AND MUST BE ORDERED SEPARATELY.
5. UNITS OF MEASUREMENT ARE MILLIMETERS [INCHES] UNLESS OTHERWISE NOTED.
6. NOSE COVER NOT INCLUDED IN MODEL NUMBER. ORDER SEPARATELY.
BIDIRECTIONAL
MODEL NO. 43C036
KEY
① CYLINDER
② BASE TRACK
③ BACKUP
④ CABLE
⑤ STABILIZER CHAIN
⑥ REFLECTIVE NOSE COVER
REFERENCES
SERIAL# _____ CYLINDERS 35350001-0000
SALES ORDER# _____ BACKUP/BASE TRACK 35350015-0000
EH PROJECT# _____ CONCRETE PAD 35350004-0000
70 km/h [43 MPH] STABILIZER CHAIN 35350008-0000
DESIGN SPEED _____ REFLECTIVE NOSE 35350003-0000
NOSE TYPE _____ TRANSITION 35350034-0000
NUMBER OF UNITS _____ RESTRAINING CABLE 35350005-0000
REFLECTOR ASSY. 35350055-0000
DEBRIS COVERS 35350179-0000 (OPTIONAL)
DRAWN: L. Corker DATE: 09/25/00
DESIGNED: --- DATE: ---
CHECKED: --- DATE: ---
APPROVED D. Alberson DATE: 09/28/00
CAD FILE: R43C036B.dwg
ENERGY ABSORPTION SYSTEMS, INC.
ENGINEERING AND RESEARCH DEPARTMENT
REACT 350® SYSTEM
W/CONCRETE BACKUP AND TRANSITION
SCALE 1:40 DWG. R43C036B SHEET 1 of 1 REV E
Revisions
Date Rev. By Ckd. App.
REMOVED HOLES FOR DEBRIS COVERS, ADDED REFLECTORS(REVISED NOTE 2, ADDED DEBRIS COVER OPTION AND REFLECTORS TO REFERENCES 09/18/02 E RCC STT FJP
REVISED FRONT BASETRACK 09/14/01 C LWC STT DMO
REVISED NOTE 2 2/27/02 D DDW STT SPT

REACT 350® (36")



NOTES:
1. IN COMPLIANCE WITH THE AASHTO 2002 ROADSIDE DESIGN GUIDE, MANUFACTURER RECOMMENDS REMOVAL OF ALL CURBS AND ISLANDS TO ENSURE PROPER IMPACT PERFORMANCE.
2. 203 [8.00] MIN. REINFORCED 28 MPa [4000 PSI] P.C. CONCRETE PAD OR 203 [8.00] MIN. NON-REINFORCED 28 MPa [4000 PSI] P.C. CONCRETE ROADWAY MEASURING AT LEAST 3.66m [12'-0"] WIDE BY 15.24m [50'-0"] LONG.
3. SEE THE "REACT 350 PRODUCT MANUAL" FOR A DESCRIPTION OF ITS IMPACT PERFORMANCE CHARACTERISTICS AND DESIGN LIMITATIONS BEFORE PLACING A SYSTEM AT A GIVEN SITE. INFORMATION AND COPIES OF ABOVE MANUAL ARE AVAILABLE BY CALLING CUSTOMER SERVICE DEPARTMENT AT (312) 467-6750.
4. WHERE NECESSARY, THE CUSTOMER SHALL SUPPLY A TRANSITION FROM THE SYSTEM TO THE OBJECT BEING SHIELDED TO PREVENT SNAGGING OF VEHICLES. TRANSITION ASSEMBLIES ARE SUPPLIED AS ACCESSORIES AND MUST BE ORDERED SEPARATELY.
5. UNITS OF MEASUREMENT ARE MILLIMETERS [INCHES] UNLESS OTHERWISE NOTED.
6. NOSE COVER NOT INCLUDED IN MODEL NUMBER. ORDER SEPARATELY.

KEY
① CYLINDER
② BASE TRACK
③ BACKUP
④ CABLE
⑤ STABILIZER CHAIN
⑥ REFLECTIVE NOSE COVER

Revisions	Date	Rev.	By	Ckd.	App.
REMOVED HOLES FOR DEBRIS COVERS, ADDED REFLECTORS/REVISED NOTE 2, ADDED DEBRIS COVER OPTION AND REFLECTORS TO REFERENCES	09/18/02	D	RGC	STT	FJP
UPDATE FRONT BASETRACK	09/17/01	B	LWC	STT	SPT
REVISED NOTE 2	2/28/02	C	DDW	STT	SPT

SERIAL#
SALES ORDER#
EH PROJECT#
DESIGN SPEED 90 km/h [55 MPH]
NOSE TYPE
NUMBER OF UNITS
DEBRIS COVERS 3535079-0000 (OPTIONAL)

REFERENCES

CYLINDERS	3535001-0000
BACKUP/BASE TRACK	3535002-0000
CONCRETE PAD	3535004-0000
STABILIZER CHAIN	3535008-0000
REFLECTIVE NOSE	3535003-0000
REFLECTOR ASSY	3535055-0000
RESTRAINING CABLE	3535005-0000

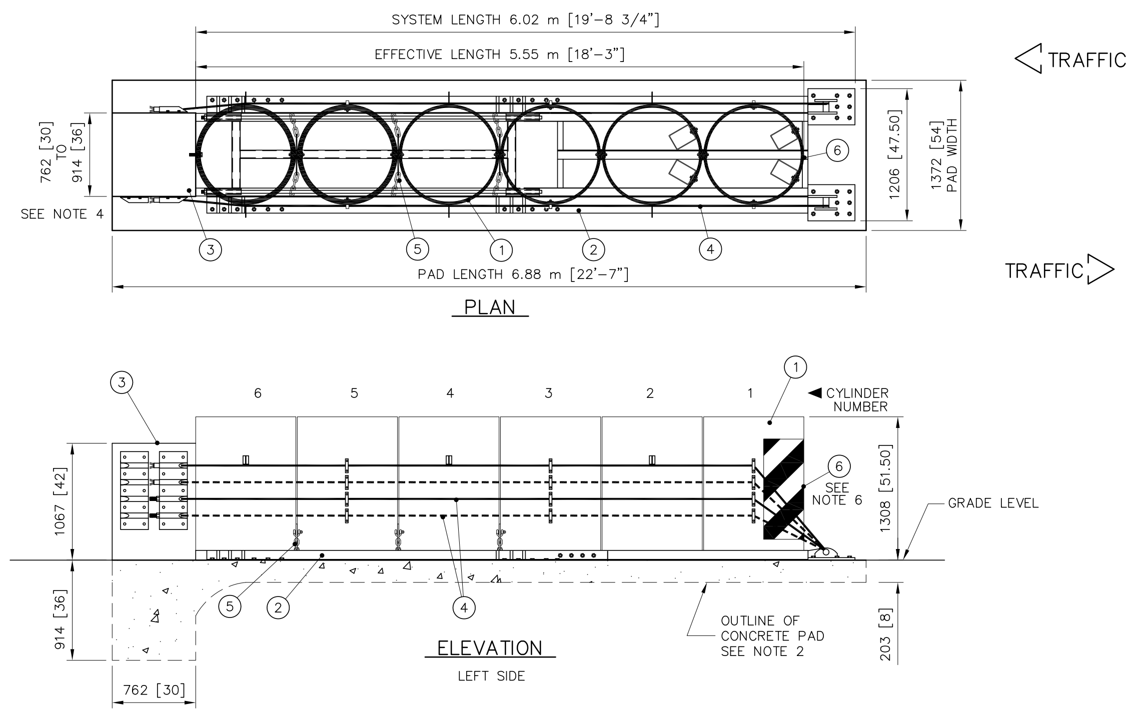
DRAWN: D. Kohfeld DATE: 9/26/00
DESIGNED: --- DATE: ---
CHECKED: --- DATE: ---
APPROVED: D. Alberson DATE: 09/28/00
CAD FILE: R55B036B.dwg

ENERGY ABSORPTION SYSTEMS, INC.
ENGINEERING AND RESEARCH DEPARTMENT

REACT 350® SYSTEM
W/SELF CONTAINED BACKUP

SCALE 1:40 | DWG. R55B036B | SHEET 1 of 1 | REV D

REACT 350® (36")



NOTES:

1. IN COMPLIANCE WITH THE AASHTO 1996 ROADSIDE DESIGN GUIDE, MANUFACTURER RECOMMENDS REMOVAL OF ALL CURBS AND ISLANDS TO ENSURE PROPER IMPACT PERFORMANCE.
2. 203 [8.00] MIN. REINFORCED 28 MPa [4000 PSI] P.C. CONCRETE PAD OR 203 [8.00] MIN. NON-REINFORCED 28 MPa [4000 PSI] P.C. CONCRETE ROADWAY, MEASURING AT LEAST 3.66m [12'-0"] WIDE BY 15.24m [50'-0"] LONG.
3. **SEE THE "REACT 350 PRODUCT MANUAL" FOR A DESCRIPTION OF ITS IMPACT PERFORMANCE CHARACTERISTICS AND DESIGN LIMITATIONS BEFORE PLACING A SYSTEM AT A GIVEN SITE. INFORMATION AND COPIES OF ABOVE MANUAL ARE AVAILABLE BY CALLING CUSTOMER SERVICE DEPARTMENT AT (312) 467-6750.**
4. WHERE NECESSARY, THE CUSTOMER SHALL SUPPLY A TRANSITION FROM THE SYSTEM TO THE OBJECT BEING SHIELDED TO PREVENT SNAGGING OF VEHICLES. TRANSITION ASSEMBLIES ARE SUPPLIED AS ACCESSORIES AND MUST BE ORDERED SEPARATELY.
5. UNITS OF MEASUREMENT ARE MILLIMETERS [INCHES] UNLESS OTHERWISE NOTED.
6. NOSE COVER NOT INCLUDED IN MODEL NUMBER. ORDER SEPARATELY.

BIDIRECTIONAL
MODEL NO. 55C036

KEY

(1) CYLINDER	(4) CABLE
(2) BASE TRACK	(5) STABILIZER CHAIN
(3) BACKUP	(6) REFLECTIVE NOSE COVER

Revisions

Revisions	Date	Rev.	By	Ckd.	App.
REMOVED HOLES FOR DEBRIS COVERS, ADDED REFLECTORS, REVISED NOTE 2, ADDED DEBRIS COVER OPTION AND REFLECTORS TO REFERENCES	09/18/02	E	RGC	STT	FP
REVISED FRONT BASETRACK	09/17/01	C	LWC	STT	SPT
REVISED NOTE 2	2/27/02	D	DDW	STT	SPT

REFERENCES

SERIAL#		CYLINDERS	3535001-0000
SALES ORDER#		BACKUP/BASE TRACK	3535015-0000
EH PROJECT#		CONCRETE PAD	3535004-0000
DESIGN SPEED	90 km/h [55 MPH]	STABILIZER CHAIN	3535008-0000
NOSE TYPE		REFLECTIVE NOSE	3535003-0000
NUMBER OF UNITS		TRANSITION	3535034-0000
REFLECTOR ASSY	3535055-0000	RESTRAINING CABLE	3535005-0000
DEBRIS COVERS	3535079-0000 (OPTIONAL)		

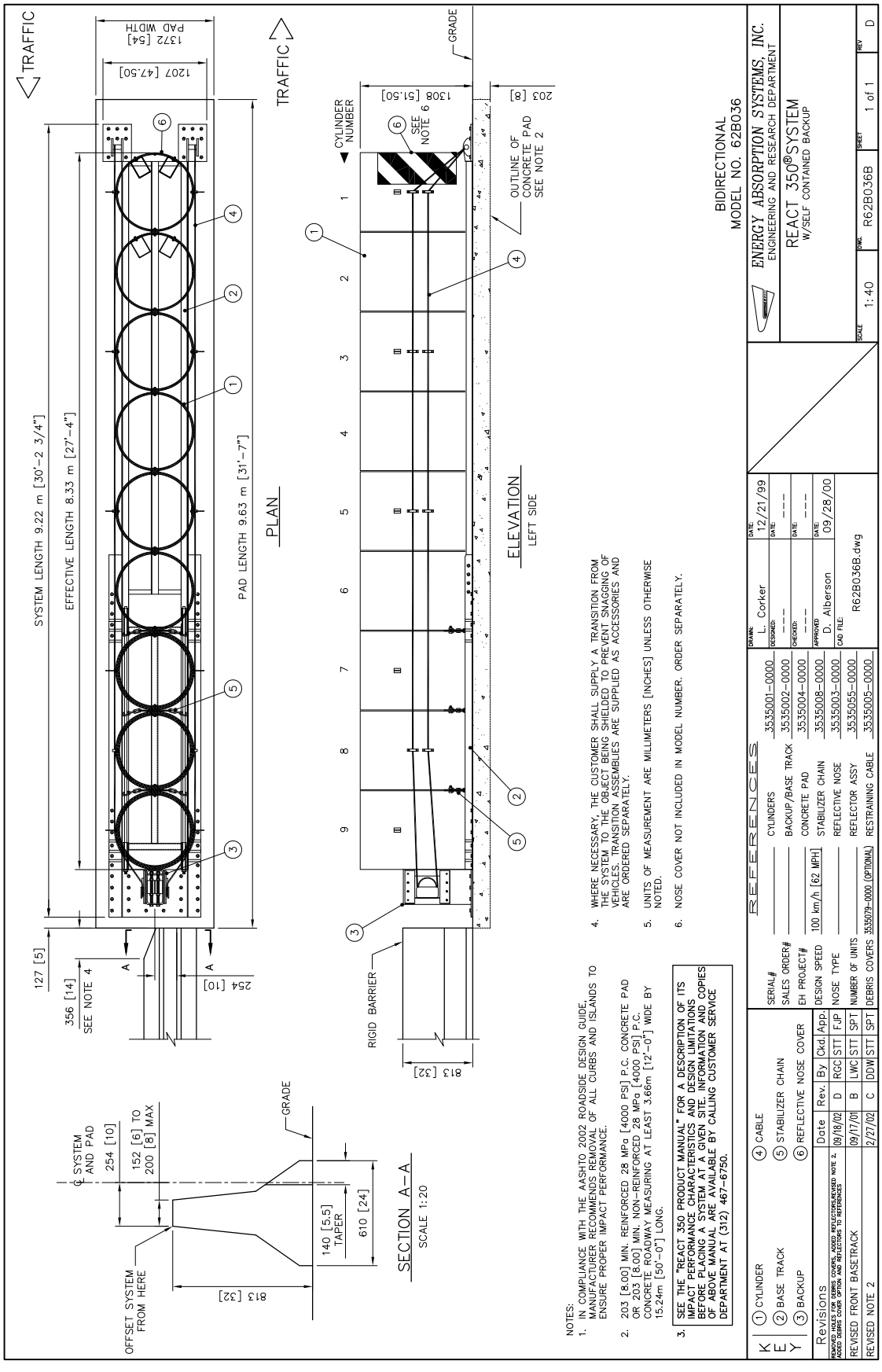
DRAWN: L. Corker	DATE: 12/22/99
DESIGNED: ---	DATE: ---
CHECKED: ---	DATE: ---
APPROVED: Dean Alberson	DATE: 09/28/00
CAD FILE: R55C036B.dwg	

ENERGY ABSORPTION SYSTEMS, INC.
ENGINEERING AND RESEARCH DEPARTMENT

REACT 350® SYSTEM
W/CONCRETE BACKUP AND TRANSITION

SCALE	DWG.	SHEET	REV
1:40	R55C036B	1 of 1	E

REACT 350® (36")



NOTES:

1. IN COMPLIANCE WITH THE AASHTO 2002 ROADSIDE DESIGN GUIDE, MANUFACTURER RECOMMENDS REMOVAL OF ALL CURBS AND ISLANDS TO ENSURE PROPER IMPACT PERFORMANCE.
2. 203 [8.00] MIN. REINFORCED 28 MPa [4000 PSI] P.C. CONCRETE PAD OR 203 [8.00] MIN. NON-REINFORCED 28 MPa [4000 PSI] P.C. CONCRETE ROADWAY MEASURING AT LEAST 3.66m [12'-0"] WIDE BY 15.24m [50'-0"] LONG.
3. **SEE THE "REACT 350 PRODUCT MANUAL" FOR A DESCRIPTION OF ITS IMPACT PERFORMANCE CHARACTERISTICS AND DESIGN LIMITATIONS BEFORE PLACING A SYSTEM AT A GIVEN SITE. INFORMATION AND COPIES OF ABOVE MANUAL ARE AVAILABLE BY CALLING CUSTOMER SERVICE DEPARTMENT AT (312) 467-6750.**
4. WHERE NECESSARY, THE CUSTOMER SHALL SUPPLY A TRANSITION FROM THE SYSTEM TO THE OBJECT BEING SHIELDED TO PREVENT SNAGGING OF VEHICLES. TRANSITION ASSEMBLIES ARE SUPPLIED AS ACCESSORIES AND ARE ORDERED SEPARATELY.
5. UNITS OF MEASUREMENT ARE MILLIMETERS [INCHES] UNLESS OTHERWISE NOTED.
6. NOSE COVER NOT INCLUDED IN MODEL NUMBER. ORDER SEPARATELY.

KEY

① CYLINDER	④ CABLE
② BASE TRACK	⑤ STABILIZER CHAIN
③ BACKUP	⑥ REFLECTIVE NOSE COVER

Revisions	Date	Rev.	By	Ckd.	App.
REMOVED HOLES FOR DEBRIS COVERS, ADDED REFLECTORS(REVISED NOTE 2, ADDED DEBRIS COVER OPTION AND REFLECTORS TO REFERENCES	09/18/02	D	RCC	STT	FJP
REVISED FRONT BASETRACK	09/17/01	B	LWC	STT	SPT
REVISED NOTE 2	2/27/02	C	DDW	STT	SPT

REFERENCES

SERIAL#		CYLINDERS	3535001-0000
SALES ORDER#		BACKUP/BASE TRACK	3535002-0000
EH PROJECT#		CONCRETE PAD	3535004-0000
DESIGN SPEED	100 km/h [62 MPH]	STABILIZER CHAIN	3535008-0000
NOSE TYPE		REFLECTIVE NOSE	3535003-0000
NUMBER OF UNITS		REFLECTOR ASSY	3535055-0000
DEBRIS COVERS	3535079-0000 (OPTIONAL)	RESTRAINING CABLE	3535005-0000

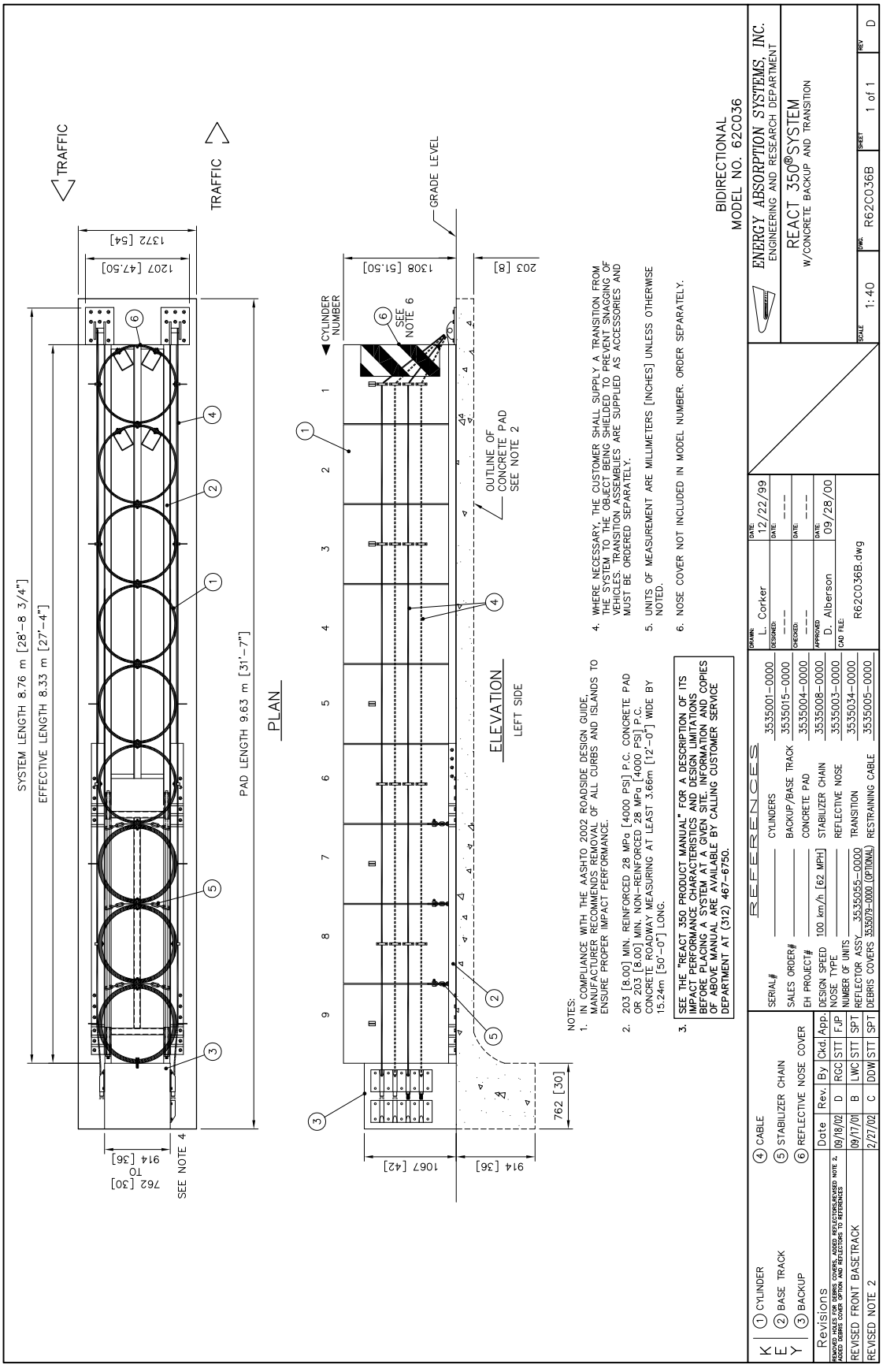
DRAWN:	L. Corker
DESIGNED:	---
CHECKED:	---
APPROVED	D. Alberson
CAD FILE:	R62B036B.dwg
DATE	12/21/99
DATE	---
DATE	---
DATE	09/28/00

ENERGY ABSORPTION SYSTEMS, INC.
ENGINEERING AND RESEARCH DEPARTMENT

REACT 350® SYSTEM
W/SELF CONTAINED BACKUP

SCALE	DWG.	SHEET	REV
1:40	R62B036B	1 of 1	D

REACT 350® (36")


TRAFFIC
TRAFFIC
SYSTEM LENGTH 8.76 m [28'-8 3/4"]
EFFECTIVE LENGTH 8.33 m [27'-4"]
PAD LENGTH 9.63 m [31'-7"]
1372 [54]
1207 [47.50]
PLAN
762 [30] TO 914 [36]
SEE NOTE 4
GRADE LEVEL
1308 [51.50]
203 [8]
CYLINDER NUMBER
SEE NOTE 6
OUTLINE OF CONCRETE PAD SEE NOTE 2
ELEVATION
LEFT SIDE
762 [30]
1067 [42]
914 [36]
BIDIRECTIONAL
MODEL NO. 62C036
NOTES:
1. IN COMPLIANCE WITH THE AASHTO 2002 ROADSIDE DESIGN GUIDE, MANUFACTURER RECOMMENDS REMOVAL OF ALL CURBS AND ISLANDS TO ENSURE PROPER IMPACT PERFORMANCE.
2. 203 [8.00] MIN. REINFORCED 28 MPa [4000 PSI] P.C. CONCRETE PAD OR 203 [8.00] MIN. NON-REINFORCED 28 MPa [4000 PSI] P.C. CONCRETE ROADWAY MEASURING AT LEAST 3.66m [12'-0"] WIDE BY 15.24m [50'-0"] LONG.
3. SEE THE "REACT 350 PRODUCT MANUAL" FOR A DESCRIPTION OF ITS IMPACT PERFORMANCE CHARACTERISTICS AND DESIGN LIMITATIONS BEFORE PLACING A SYSTEM AT A GIVEN SITE. INFORMATION AND COPIES OF ABOVE MANUAL ARE AVAILABLE BY CALLING CUSTOMER SERVICE DEPARTMENT AT (312) 467-6750.
4. WHERE NECESSARY, THE CUSTOMER SHALL SUPPLY A TRANSITION FROM THE SYSTEM TO THE OBJECT BEING SHIELDED TO PREVENT SNAGGING OF VEHICLES. TRANSITION ASSEMBLIES ARE SUPPLIED AS ACCESSORIES AND MUST BE ORDERED SEPARATELY.
5. UNITS OF MEASUREMENT ARE MILLIMETERS [INCHES] UNLESS OTHERWISE NOTED.
6. NOSE COVER NOT INCLUDED IN MODEL NUMBER. ORDER SEPARATELY.
KEY
① CYLINDER
② BASE TRACK
③ BACKUP
④ CABLE
⑤ STABILIZER CHAIN
⑥ REFLECTIVE NOSE COVER
Revisions
Date | Rev. | By | Ckd. | App
REDUCED ANGLE FOR DEBRIS COVERS, ADDED REFLECTORS,REVISED NOTE 2, ADDED DEBRIS COVER OPTION AND REFLECTORS TO REFERENCES | 09/18/02 | D | RGC | STT | FJP
REVISED FRONT BASETRACK | 09/17/01 | B | LWC | STT | SPT
REVISED NOTE 2 | 2/27/02 | C | DDW | STT | SPT
REFERENCES
SERIAL# _____ CYLINDERS 35350001-0000
SALES ORDER# _____ BACKUP/BASE TRACK 35350015-0000
EH PROJECT# _____ CONCRETE PAD 35350004-0000
DESIGN SPEED 100 km/h [62 MPH] STABILIZER CHAIN 35350008-0000
NOSE TYPE _____ REFLECTIVE NOSE 35350003-0000
NUMBER OF UNITS _____ TRANSITION 35350034-0000
REFLECTOR ASSY 35350055-0000
DEBRIS COVERS 35350079-0000 (OPTIONAL) RESTRAINING CABLE 35350005-0000
DRAWN: L. Corker DATE: 12/22/99
DESIGNED: --- DATE: ---
CHECKED: --- DATE: ---
APPROVED D. Alberson DATE: 09/28/00
CAD FILE: R62C036B.dwg
ENERGY ABSORPTION SYSTEMS, INC.
ENGINEERING AND RESEARCH DEPARTMENT
REACT 350® SYSTEM
W/CONCRETE BACKUP AND TRANSITION
SCALE 1:40 DWG. R62C036B SHEET 1 of 1 REV D

CYLINDER SCHEDULE
43B036 & 43C036
43 MPH [70 kph]

	CYL. NO.	STOCK NO.	DESCRIPTION	O.D.	STEEL B/U ASSEMBLY	CONCRETE B/U ASSEMBLY
*	1	4170	HDPE CYLINDER	36"	3535011-0000	3535011-0100
	2	4150	HDPE CYLINDER	36"	3535012-0000	3535012-0000
*	3	4130	HDPE CYLINDER	36"	3535013-0000	3535013-0100
	4	4120	HDPE CYLINDER	36"	3535014-0000	3535014-0000

CYLINDER SCHEDULE
55B036 & 55C036
55 MPH [90 kph]

	CYL. NO.	STOCK NO.	DESCRIPTION	O.D.	STEEL B/U ASSEMBLY	CONCRETE B/U ASSEMBLY
*	1	4130	HDPE CYLINDER	36"	3535017-0000	3535017-0100
	2	4130	HDPE CYLINDER	36"	3535018-0000	3535018-0000
*	3	4130	HDPE CYLINDER	36"	3535013-0000	3535013-0100
	4	4130	HDPE CYLINDER	36"	3535019-0000	3535019-0000
*	5	4170	HDPE CYLINDER	36"	3535020-0000	3535020-0100
	6	4170	HDPE CYLINDER	36"	3535021-0000	3535021-0000

CYLINDER SCHEDULE
62B036 & 62C036
62 MPH [100 kph]

	CYL. NO.	STOCK NO.	DESCRIPTION	O.D.	STEEL B/U ASSEMBLY	CONCRETE B/U ASSEMBLY
*	1	4110	HDPE CYLINDER	36"	3535022-0000	3535022-0100
	2	4110	HDPE CYLINDER	36"	3535023-0000	3535023-0000
*	3	4120	HDPE CYLINDER	36"	3535024-0000	3535024-0100
	4	4120	HDPE CYLINDER	36"	3535025-0000	3535025-0000
*	5	4130	HDPE CYLINDER	36"	3535013-0000	3535013-0100
	6	4130	HDPE CYLINDER	36"	3535019-0000	3535019-0000
	7	4140	HDPE CYLINDER	36"	3535039-0000	3535039-0000
*	8	4150	HDPE CYLINDER	36"	3535029-0000	3535029-0100
	9	4150	HDPE CYLINDER	36"	3535077-0000	3535077-0000

* INDICATES CYLINDERS WITH CABLE STRAPS.

Revision	Date	Rev	By	Chk.	App.
REMOVED CYLINDER THICKNESS	10/10/00	A	LWC	BB	KM
UPDATED 62 MPH CYLINDER SCHEDULE TABLE-ECO 2274	2/22/07	B	DDS	JME	AJC
ECO 2328; IN 62 MPH TABLE,3535077-0000 WAS 3535026-0000	9/11/07	C	DDS	JME	AJC

DRAWN: L. CORKER	DATE: 10/26/1999	
DESIGNED:	DATE:	
CHECKED:	DATE:	
APPROVED: DEAN ALBERSON	DATE: 9/28/2000	
FILE: 3535001-0000.idw		
NEXT ASSEMBLY:		

ENERGY ABSORPTION SYSTEMS, INC.
ENGINEERING AND RESEARCH DEPARTMENT

REACT 350® SYSTEM
CYLINDER ASSEMBLY SCHEDULE

SCALE:	DRAWING:	SHEET:	REV
1=1	3535001-0000	1 of 1	C

CYLINDER SCHEDULE
70B036 & 70C036

	CYL. No.	STOCK No.	DESCRIPTION	O.D.	STEEL B/U ASSEMBLY	CONCRETE B/U ASSEMBLY
*	1	4120	HDPE CYLINDER	36"	3535035–0000	3535035–0100
	2	4120	HDPE CYLINDER	36"	3535036–0000	3535036–0000
*	3	4130	HDPE CYLINDER	36"	3535013–0000	3535013–0100
	4	4130	HDPE CYLINDER	36"	3535019–0000	3535019–0000
*	5	4150	HDPE CYLINDER	36"	3535029–0000	3535029–0100
	6	4150	HDPE CYLINDER	36"	3535026–0000	3535026–0000
	7	4170	HDPE CYLINDER	36"	3535037–0000	3535037–0000
*	8	4170	HDPE CYLINDER	36"	3535020–0000	3535020–0100
	9	4170	HDPE CYLINDER	36"	3535021–0000	3535021–0000

* INDICATES CYLINDERS WITH CABLE STRAPS.

Revisions	Date	Rev.	By	Ckd.	App.
REMOVED CYLINDER THICKNESS	10/10/00	A	LWC	BB	KM

DRAWN: L. CORKER DATE: 09/21/00
DESIGNED: DATE:
CHECKED: B. BURGESS DATE: 10/17/00
APPROVED: DEAN ALBERSON DATE: 09/28/00
CAD FILE: 3535001–0700.dwg

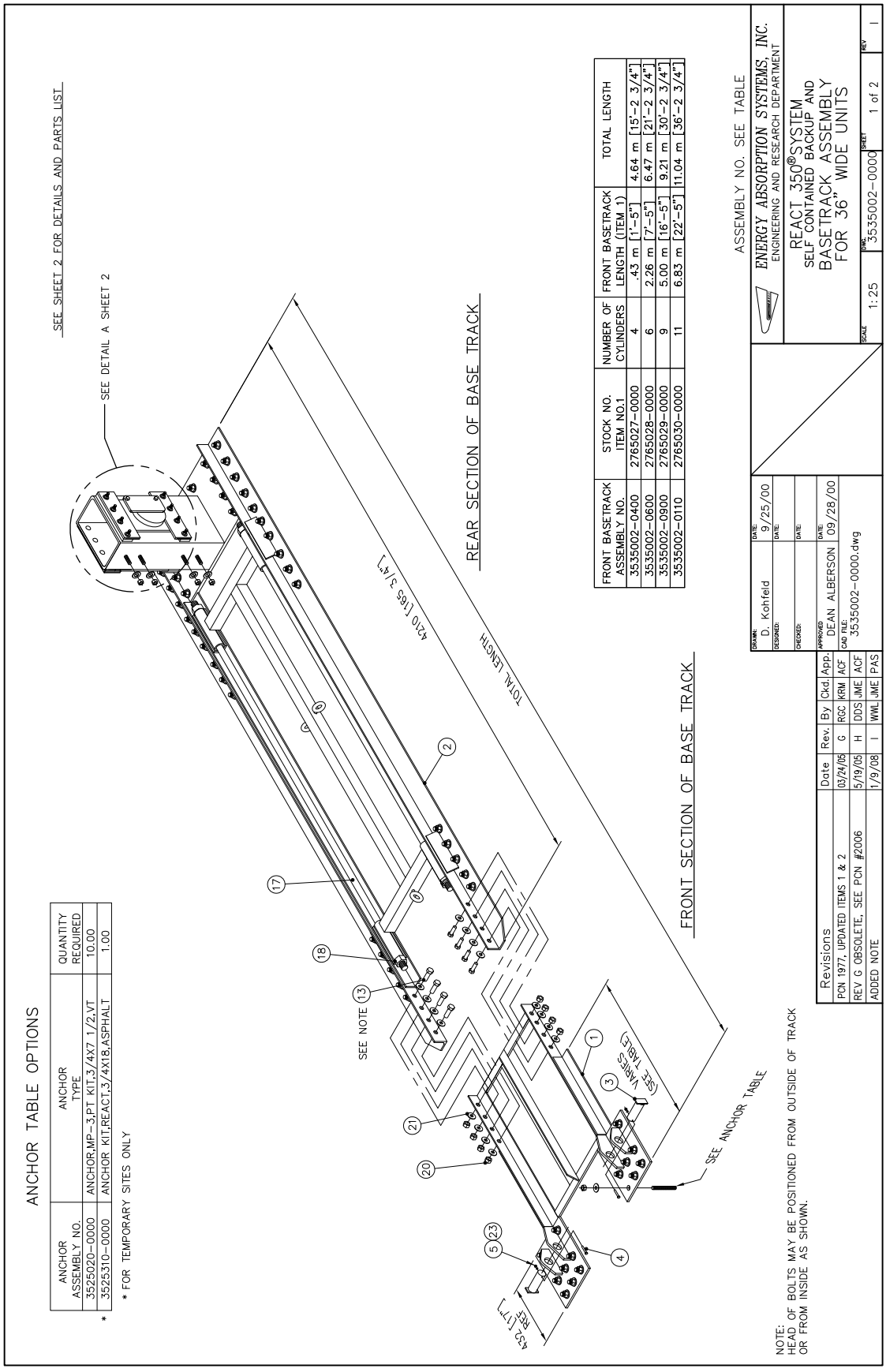
ENERGY ABSORPTION SYSTEMS, INC.
ENGINEERING AND RESEARCH DEPARTMENT

REACT 350®SYSTEM

CYLINDER ASSEMBLY SCHEDULE

SCALE: 1:1 | DWG. 3535001–0700 | SHEET 1 of 1 | REV A

REACT 350® (36")



ANCHOR TABLE OPTIONS

ANCHOR ASSEMBLY NO.	ANCHOR TYPE	QUANTITY REQUIRED
3525020-0000	ANCHOR,MP-3,PT KIT,3/4X7 1/2,VT	10.00
* 3525310-0000	ANCHOR KIT,REACT,3/4X18,ASPHALT	1.00

* FOR TEMPORARY SITES ONLY

FRONT BASETRACK ASSEMBLY NO.	STOCK NO. ITEM NO.1	NUMBER OF CYLINDERS	FRONT BASETRACK LENGTH (ITEM 1)	TOTAL LENGTH
3535002-0400	2765027-0000	4	.43 m [1'-5"]	4.64 m [15'-2 3/4"]
3535002-0600	2765028-0000	6	2.26 m [7'-5"]	6.47 m [21'-2 3/4"]
3535002-0900	2765029-0000	9	5.00 m [16'-5"]	9.21 m [30'-2 3/4"]
3535002-0110	2765030-0000	11	6.83 m [22'-5"]	11.04 m [36'-2 3/4"]

NOTE:
HEAD OF BOLTS MAY BE POSITIONED FROM OUTSIDE OF TRACK OR FROM INSIDE AS SHOWN.

Revisions	Date	Rev.	By	Ckd.	App.
PCN 1977, UPDATED ITEMS 1 & 2	03/24/05	G	RGC	KRM	ACF
REV G OBSOLETE, SEE PCN #2006	5/19/05	H	DDS	JME	ACF
ADDED NOTE	1/9/08	I	WWL	JME	PAS

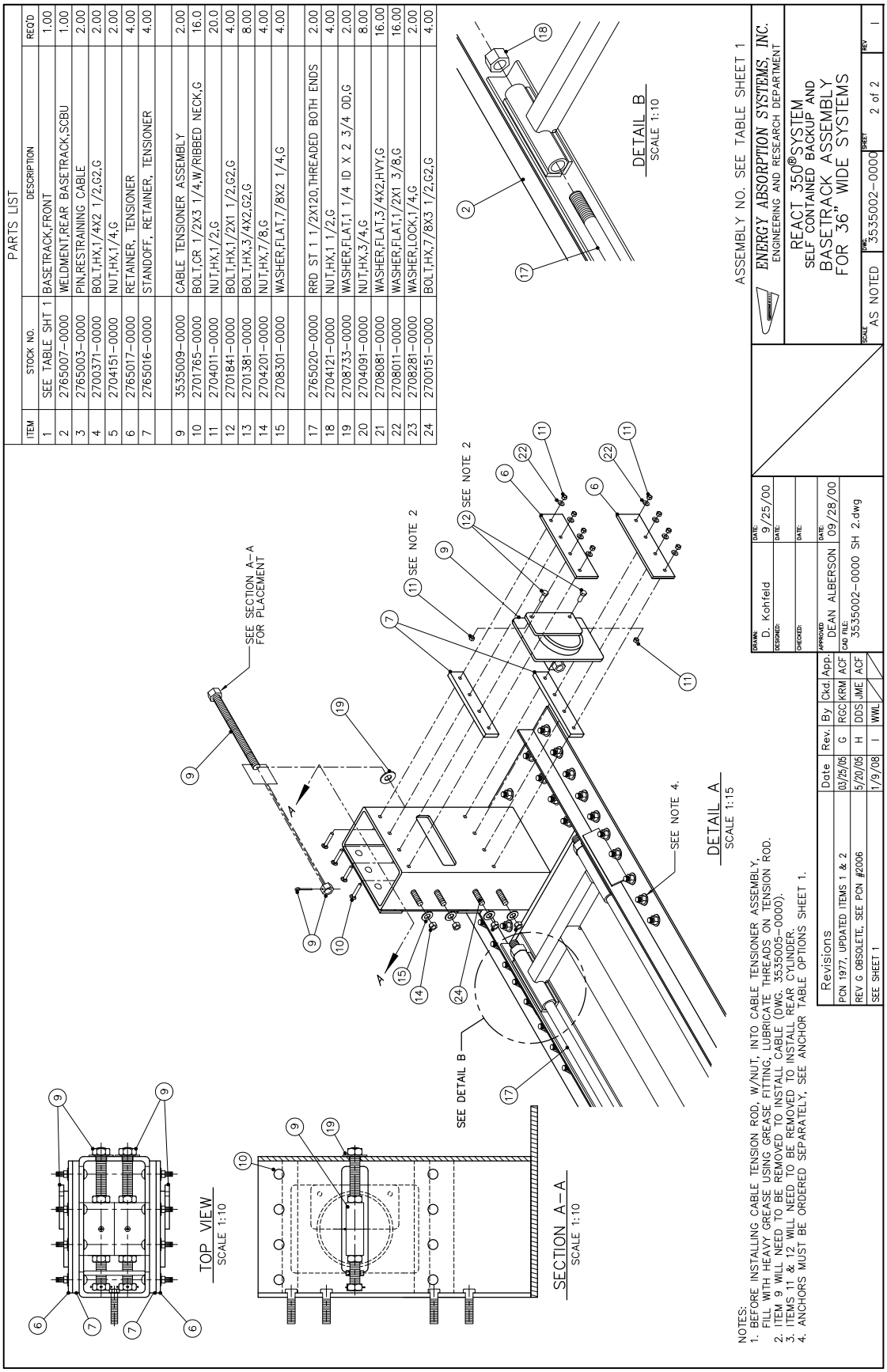
DRAWN: D. Kohfeld DATE: 9/25/00
DESIGNED: DATE:
CHECKED: DATE:
APPROVED: DEAN ALBERSON DATE: 09/28/00
CAD FILE: 3535002-0000.dwg

ENERGY ABSORPTION SYSTEMS, INC.
ENGINEERING AND RESEARCH DEPARTMENT

REACT 350® SYSTEM
SELF CONTAINED BACKUP AND BASETRACK ASSEMBLY FOR 36" WIDE UNITS

SCALE 1:25 DWG 3535002-0000 SHEET 1 of 2 REV I

REACT 350® (36")


PARTS LIST
ITEM | STOCK NO. | DESCRIPTION | REQ'D
1 | SEE TABLE SHT 1 | BASETRACK,FRONT | 1.00
2 | 2765007-0000 | WELDMENT,REAR BASETRACK,SCBU | 1.00
3 | 2765003-0000 | PIN,RESTRAINING CABLE | 2.00
4 | 2700371-0000 | BOLT,HX,1/4X2 1/2,G2,G | 2.00
5 | 2704151-0000 | NUT,HX,1/4,G | 2.00
6 | 2765017-0000 | RETAINER, TENSIONER | 4.00
7 | 2765016-0000 | STANDOFF, RETAINER, TENSIONER | 4.00
9 | 3535009-0000 | CABLE TENSIONER ASSEMBLY | 2.00
10 | 2701765-0000 | BOLT,CR 1/2X3 1/4,W/RIBBED NECK,G | 16.0
11 | 2704011-0000 | NUT,HX,1/2,G | 20.0
12 | 2701841-0000 | BOLT,HX,1/2X1 1/2,G2,G | 4.00
13 | 2701381-0000 | BOLT,HX,3/4X2,G2,G | 8.00
14 | 2704201-0000 | NUT,HX,7/8,G | 4.00
15 | 2708301-0000 | WASHER,FLAT,7/8X2 1/4,G | 4.00
17 | 2765020-0000 | RRD ST 1 1/2X120,THREADED BOTH ENDS | 2.00
18 | 2704121-0000 | NUT,HX,1 1/2,G | 4.00
19 | 2708733-0000 | WASHER,FLAT,1 1/4 ID X 2 3/4 OD,G | 2.00
20 | 2704091-0000 | NUT,HX,3/4,G | 8.00
21 | 2708081-0000 | WASHER,FLAT,3/4X2,HVY,G | 16.00
22 | 2708011-0000 | WASHER,FLAT,1/2X1 3/8,G | 16.00
23 | 2708281-0000 | WASHER,LOCK,1/4,G | 2.00
24 | 2700151-0000 | BOLT,HX,7/8X3 1/2,G2,G | 4.00
ASSEMBLY NO. SEE TABLE SHEET 1
SEE SECTION A-A FOR PLACEMENT
SEE NOTE 2
SEE NOTE 2
SEE NOTE 4.
SEE DETAIL B
DETAIL A
SCALE 1:15
DETAIL B
SCALE 1:10
TOP VIEW
SCALE 1:10
SECTION A-A
SCALE 1:10
NOTES:
1. BEFORE INSTALLING CABLE TENSION ROD, W/NUT, INTO CABLE TENSIONER ASSEMBLY, FILL WITH HEAVY GREASE USING GREASE FITTING, LUBRICATE THREADS ON TENSION ROD.
2. ITEM 9 WILL NEED TO BE REMOVED TO INSTALL CABLE (DWG. 3535005-0000).
3. ITEMS 11 & 12 WILL NEED TO BE REMOVED TO INSTALL REAR CYLINDER.
4. ANCHORS MUST BE ORDERED SEPARATELY, SEE ANCHOR TABLE OPTIONS SHEET 1.
Revisions
PCN 1977, UPDATED ITEMS 1 & 2 | 03/25/05 | G | RGC | KRM | ACF
REV G OBSOLETE, SEE PCN #2006 | 5/20/05 | H | DDS | JME | ACF
SEE SHEET 1 | 1/9/08 | I | WWL
DRAWN: D. Kohfeld DATE: 9/25/00
DESIGNED: DATE:
CHECKED: DATE:
APPROVED: DEAN ALBERSON DATE: 09/28/00
CAD FILE: 3535002-0000 SH 2.dwg
ENERGY ABSORPTION SYSTEMS, INC.
ENGINEERING AND RESEARCH DEPARTMENT
REACT 350® SYSTEM
SELF CONTAINED BACKUP AND
BASETRACK ASSEMBLY
FOR 36" WIDE SYSTEMS
SCALE AS NOTED
DWG. 3535002-0000
SHEET 2 of 2
REV I

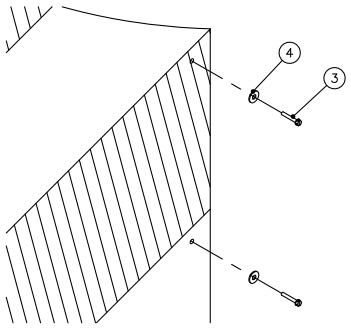
REACT 350® (36")

NEXT ASSEMBLY:	MATERIAL:	TOL ANGULAR: °1
43B036-55B036-62B036-70B036 43C036-55C036-62C036-70C036	SEE MATERIAL SPECIFICATIONS	TOL LINEAR: 1/8" UNLESS OTHERWISE NOTED.

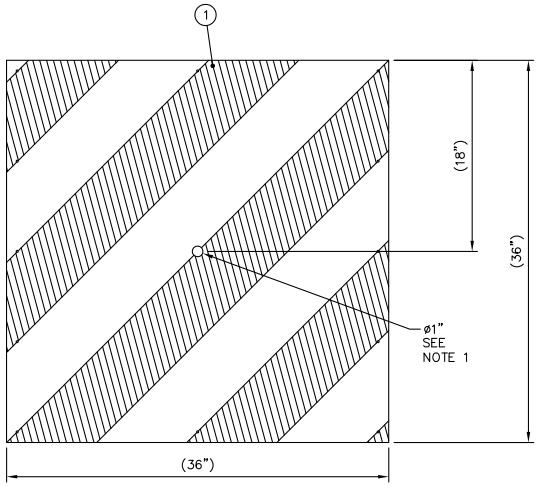
PARTS LIST

	ITEM	STOCK NO.	DESCRIPTION	REQ'D
	1	2765041-4000	NOSE COVER,HDPE,REFL TAPE DIA,UNIVERSAL	1.00
*	2	2765041-3000	NOSE COVER,HDPE,REFLECTIVE TAPE DIA.,GR	1.00
	3	2706996-0300	SCREW,PN,#8X1,TAPPING,AB,S	12.00
	4	2708371-0300	WASHER,FLAT,#8,S	12.00

* SEE SHEET 2 EA.

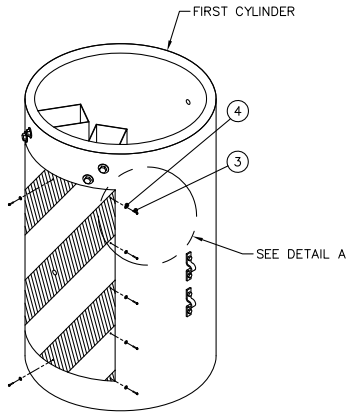


DETAIL A
SCALE 1:5



UNIVERSAL
ASSEMBLY
3535003-4000

AS SHOWN, APPROACH TRAFFIC PASSES TO LEFT OF SYSTEM NOSE. HAZARD/OBJECT IS ON RIGHT SIDE OF TRAVELWAY.
FOR APPROACH TRAFFIC ON RIGHT OF SYSTEM NOSE & HAZARD/OBJECT ON THE LEFT OF TRAVELWAY, ROTATE 90°.



ISO
SCALE 1:15

NOTE:

1. LOCATE ø1" HOLE IN NOSE COVER OVER ø1" HOLE IN CYLINDER, THEN SECURE WITH ITEMS 3 AND 4.
2. SCREW ITEM 3 INTO CYLINDER, PUNCHING THRU REFLECTIVE TAPE AND INTO EXISTING HOLES IN NOSE COVER, UNTIL HEAD OF FASTENER IS FLUSH. DO NOT CONTINUE TO SPIN FASTENER.
3. NOSE COVER NOT INCLUDED IN MODEL AND MUST BE ORDERED SEPARATELY. DESIRED NOSE MUST BE SPECIFIED WHEN ORDERING. REVIEW APPLICATION DETAIL ON SHEET 2 OF 2 TO VERIFY TYPE.

Revisions	Date	Rev.	By	Ckd.	App.	Q.C.
REMOVED DEBRIS COVER HOLE	10/02/02	D	RGC	KRM	FJP	STT
REMOVED ASSEMBLIES 3535003-1000 & -2000,ADDED 3535003-4000	03/05/02	C	RSG	JME	DMO	STT

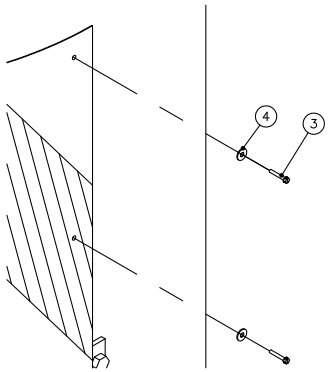
DRAWN: L. CORKER	DATE: 09/25/00	ENERGY ABSORPTION SYSTEMS, INC. ENGINEERING AND RESEARCH DEPARTMENT
DESIGNED:	DATE:	REACT 350®SYSTEM
CHECKED:	DATE:	NOSE COVER ASSEMBLY
APPROVED: DEAN ALBERSON	DATE: 09/28/00	
Q.C.	DATE:	
CAD FILE: 3535003-0000.dwg	SCALE: 1:10	DWG. 3535003-0000 SHEET 1 of 2 REV D

NEXT ASSEMBLY:	MATERIAL:	TOL ANGULAR: ±1
	SEE MATERIAL SPECIFICATIONS	TOL LINEAR: 1/8" UNLESS OTHERWISE NOTED.

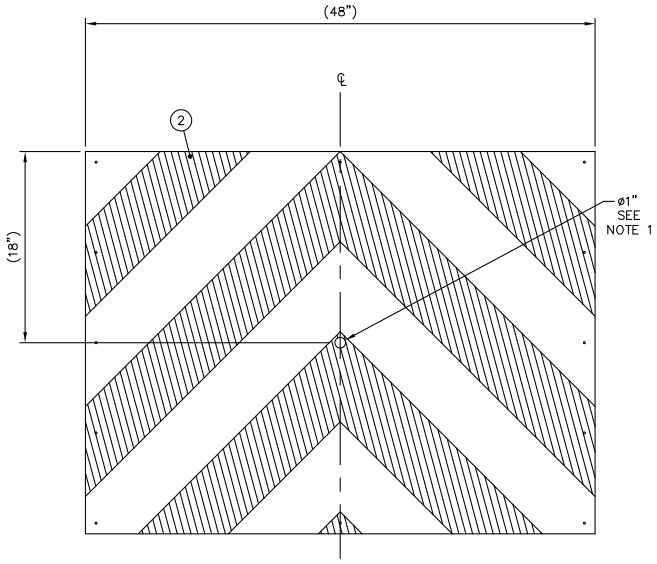
PARTS LIST

ITEM	STOCK NO.	DESCRIPTION	REQ'D

SEE SHEET 1 FOR PARTS LIST

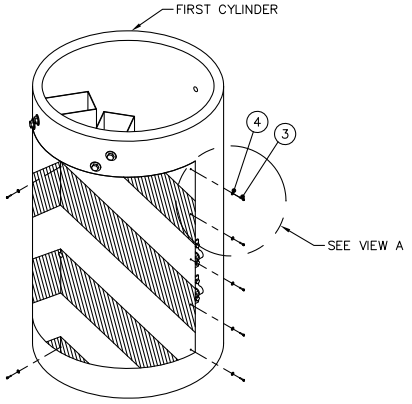


DETAIL A
SCALE 1:5



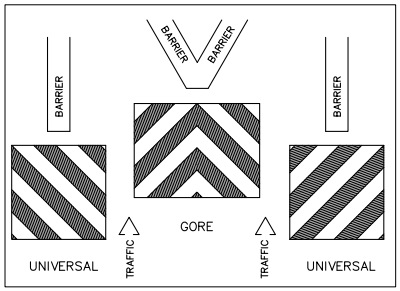
GORE
ASSEMBLY
3535003–3000

APPROACH TRAFFIC PASSES ON
BOTH SIDES OF SYSTEM NOSE.



ISO
SCALE 1:20

APPLICATION DETAIL



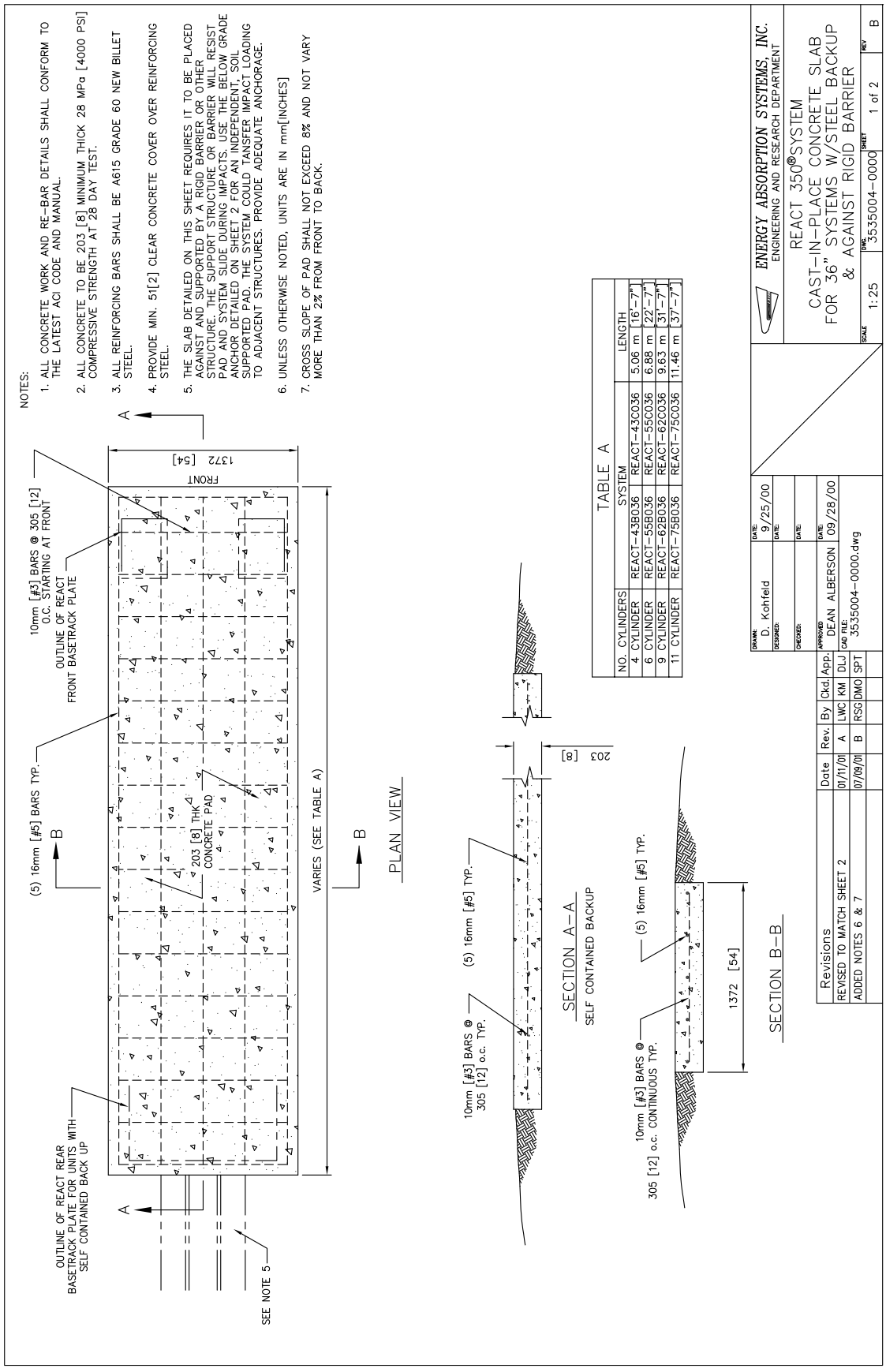
NOTE:
1. LOCATE ø1" HOLE IN NOSE COVER OVER ø1" HOLE IN CYLINDER,
2. SCREW ITEM 3 INTO CYLINDER, PUNCHING THRU REFLECTIVE TAPE AND INTO EXISTING HOLES IN NOSE COVER UNTIL HEAD OF FASTENER IS FLUSH. DO NOT CONTINUE TO SPIN FASTENER.

Revisions	Date	Rev.	By	Ckd.	App.	Q.C.
REMOVED DEBRIS COVER HOLE	10/02/02	D	RGC	KRM	FJP	STT
CENTERED 1" HOLE ON CORE ASSY., UPDATED APPLICATION DETAIL	03/05/02	C	RSG	JME	DMO	STT

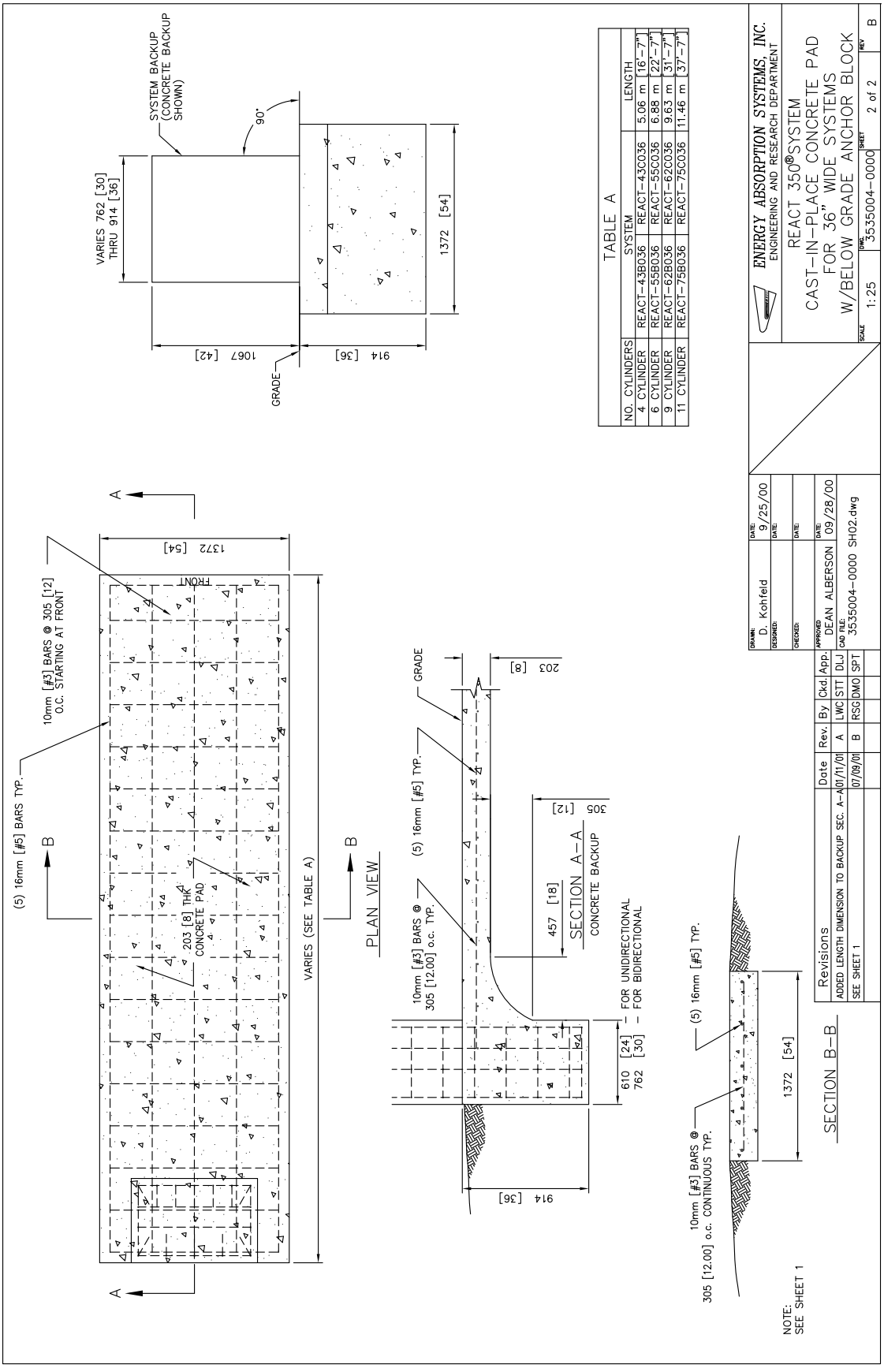
DRAWN: L. CORKER	DATE: 09/25/00	ENERGY ABSORPTION SYSTEMS, INC. ENGINEERING AND RESEARCH DEPARTMENT
DESIGNED:	DATE:	REACT 350®SYSTEM
CHECKED:	DATE:	
APPROVED: DEAN ALBERSON	DATE: 09/28/00	NOSE COVER ASSEMBLY
Q.C.	DATE:	

CAD FILE:	SCALE	DWG.	SHEET	REV
3535003–0000 SH02.dwg	1:10	3535003–0000	2 of 2	D

REACT 350® (36")


NOTES:
1. ALL CONCRETE WORK AND RE-BAR DETAILS SHALL CONFORM TO THE LATEST ACI CODE AND MANUAL.
2. ALL CONCRETE TO BE 203 [8] MINIMUM THICK 28 MPa [4000 PSI] COMPRESSIVE STRENGTH AT 28 DAY TEST.
3. ALL REINFORCING BARS SHALL BE A615 GRADE 60 NEW BILLET STEEL.
4. PROVIDE MIN. 51[2] CLEAR CONCRETE COVER OVER REINFORCING STEEL.
5. THE SLAB DETAILED ON THIS SHEET REQUIRES IT TO BE PLACED AGAINST AND SUPPORTED BY A RIGID BARRIER OR OTHER STRUCTURE. THE SUPPORT STRUCTURE OR BARRIER WILL RESIST PAD AND SYSTEM SLIDE DURING IMPACTS. USE THE BELOW GRADE ANCHOR DETAILED ON SHEET 2 FOR AN INDEPENDENT, SOIL SUPPORTED PAD. THE SYSTEM COULD TANSFER IMPACT LOADING TO ADJACENT STRUCTURES. PROVIDE ADEQUATE ANCHORAGE.
6. UNLESS OTHERWISE NOTED, UNITS ARE IN mm[INCHES]
7. CROSS SLOPE OF PAD SHALL NOT EXCEED 8% AND NOT VARY MORE THAN 2% FROM FRONT TO BACK.
PLAN VIEW
FRONT
1372 [54]
VARIES (SEE TABLE A)
(5) 16mm [#5] BARS TYP.
10mm [#3] BARS @ 305 [12] O.C. STARTING AT FRONT
OUTLINE OF REACT FRONT BASETRACK PLATE
203 [8] THK CONCRETE PAD
OUTLINE OF REACT REAR BASETRACK PLATE FOR UNITS WITH SELF CONTAINED BACK UP
SEE NOTE 5
SECTION A-A
SELF CONTAINED BACKUP
10mm [#3] BARS @ 305 [12] o.c. TYP.
(5) 16mm [#5] TYP.
203 [8]
SECTION B-B
10mm [#3] BARS @ 305 [12] o.c. CONTINUOUS TYP.
(5) 16mm [#5] TYP.
1372 [54]
TABLE A
NO. CYLINDERS
SYSTEM
LENGTH
4 CYLINDER REACT-43C036 5.06 m [16'-7"]
6 CYLINDER REACT-55C036 6.88 m [22'-7"]
9 CYLINDER REACT-62C036 9.63 m [31'-7"]
11 CYLINDER REACT-75C036 11.46 m [37'-7"]
Revisions
Date
Rev.
By
Ckd.
App.
REVISED TO MATCH SHEET 2 01/11/01 A LWC KM DLJ
ADDED NOTES 6 & 7 07/09/01 B RSG DMO SPT
DRAWN: D. Kohfeld DATE: 9/25/00
DESIGNED: DATE:
CHECKED: DATE:
APPROVED DEAN ALBERSON DATE: 09/28/00
CAD FILE 3535004-0000.dwg
ENERGY ABSORPTION SYSTEMS, INC.
ENGINEERING AND RESEARCH DEPARTMENT
REACT 350® SYSTEM
CAST-IN-PLACE CONCRETE SLAB
FOR 36" SYSTEMS W/STEEL BACKUP
& AGAINST RIGID BARRIER
SCALE 1:25
DWG 3535004-0000
SHEET 1 of 2
REV B

REACT 350® (36")


SYSTEM BACKUP (CONCRETE BACKUP SHOWN)
VARIES 762 [30] THRU 914 [36]
90°
1372 [54]
1067 [42]
914 [36]
GRADE
TABLE A
NO. CYLINDERS | SYSTEM | LENGTH
4 CYLINDER | REACT-43B036 | REACT-43C036 | 5.06 m [16'-7"]
6 CYLINDER | REACT-55B036 | REACT-55C036 | 6.88 m [22'-7"]
9 CYLINDER | REACT-62B036 | REACT-62C036 | 9.63 m [31'-7"]
11 CYLINDER | REACT-75B036 | REACT-75C036 | 11.46 m [37'-7"]
(5) 16mm [#5] BARS TYP.
10mm [#3] BARS @ 305 [12] O.C. STARTING AT FRONT
FRONT
1372 [54]
203 [8] THK CONCRETE PAD
VARIES (SEE TABLE A)
PLAN VIEW
(5) 16mm [#5] TYP.
GRADE
203 [8]
10mm [#3] BARS @ 305 [12.00] o.c. TYP.
457 [18]
305 [12]
SECTION A-A
CONCRETE BACKUP
610 [24] – FOR UNIDIRECTIONAL
762 [30] – FOR BIDIRECTIONAL
914 [36]
(5) 16mm [#5] TYP.
10mm [#3] BARS @ 305 [12.00] o.c. CONTINUOUS TYP.
1372 [54]
SECTION B-B
NOTE: SEE SHEET 1
Revisions
ADDED LENGTH DIMENSION TO BACKUP SEC. A-A | 01/11/01 | A | LWC | STT | DLJ
SEE SHEET 1 | 07/09/01 | B | RSG | DMO | SPT
DRAWN: D. Kohfeld | DATE: 9/25/00
DESIGNED: | DATE:
CHECKED: | DATE:
APPROVED: DEAN ALBERSON | DATE: 09/28/00
CAD FILE: 3535004-0000 SH02.dwg
ENERGY ABSORPTION SYSTEMS, INC.
ENGINEERING AND RESEARCH DEPARTMENT
REACT 350® SYSTEM
CAST-IN-PLACE CONCRETE PAD
FOR 36" WIDE SYSTEMS
W/BELOW GRADE ANCHOR BLOCK
SCALE 1:25 | DWG. 3535004-0000 | SHEET 2 of 2 | REV B

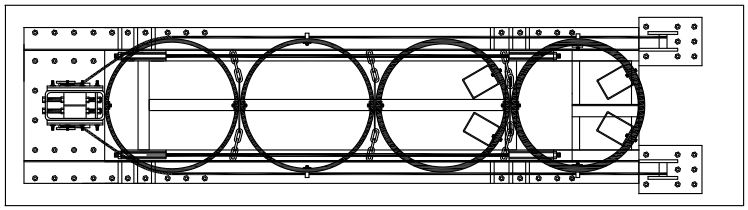
REACT 350® (36")

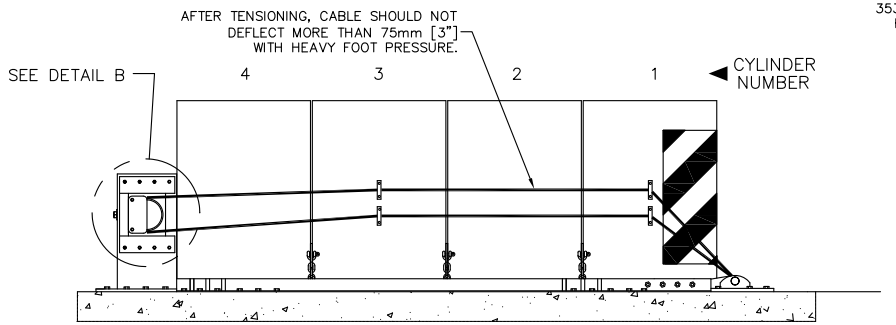
NEXT ASSEMBLY:	MATERIAL:	TOL ANGULAR: / TOL LINEAR: UNLESS OTHERWISE NOTED.

PARTS LIST

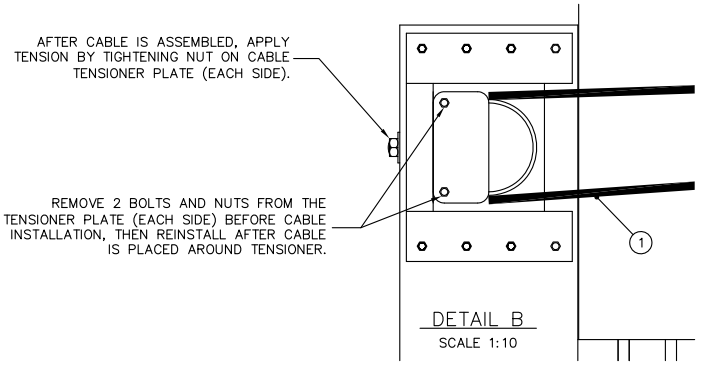
ITEM	STOCK NO.	DESCRIPTION	REQ'D
1	SEE TABLE	RESTRAINING CABLES	2.00

CABLE LENGTHS (SELF CONTAINED BACKUPS)		
NO. CYLINDERS	CABLE LENGTH	ITEM 1
4	9.12 m [29'–11"]	4204
6	12.8 m [41'–11"]	4206
9	18.3 m [59'–11"]	4209
11	21.9 m [71'–11"]	4211

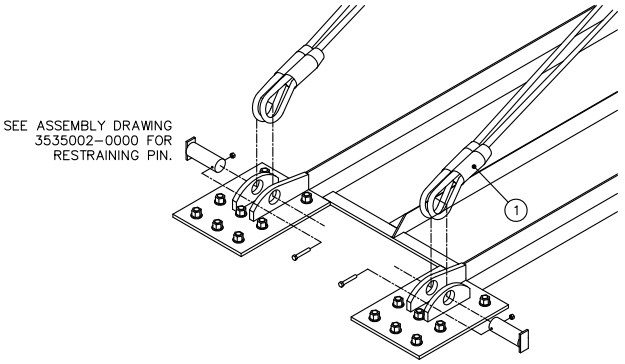




ELEVATION
SCALE 1:30



DETAIL B
SCALE 1:10



FRONT CABLE ATTACHMENT DETAIL
FOR SELF CONTAINED BACKUP
SCALE 1:15

Revisions	Date	Rev.	By	Ckd.	App.
REVISED DETAIL A	02/12/01	A	LWC	BB	DLJ
UPDATED ASSEMBLIES, AND ITEM 1 P/N'S	07/02/01	B	LWC	DLJ	DMO
REMOVED DEBRIS COVER HOLES	10/02/02	C	RGC	STT	FJP

DRAWN: D. KOHFELD — DATE: 9/25/00
DESIGNED: — DATE:
CHECKED: — DATE:
APPROVED: DEAN ALBERSON — DATE: 09/28/00
CAD FILE: 3535005–0000.dwg

ENERGY ABSORPTION SYSTEMS, INC.
ENGINEERING AND RESEARCH DEPARTMENT

REACT 350®SYSTEM

CABLE ASSEMBLIES

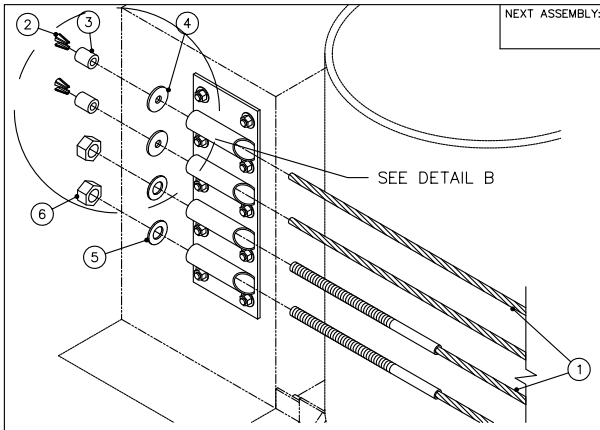
SCALE: AS NOTED | DWG.: 3535005–0000 | SHEET: 1 of 2 | REV: C

NEXT ASSEMBLY:	MATERIAL:	TOL ANGULAR:
		TOL LINEAR: UNLESS OTHERWISE NOTED.

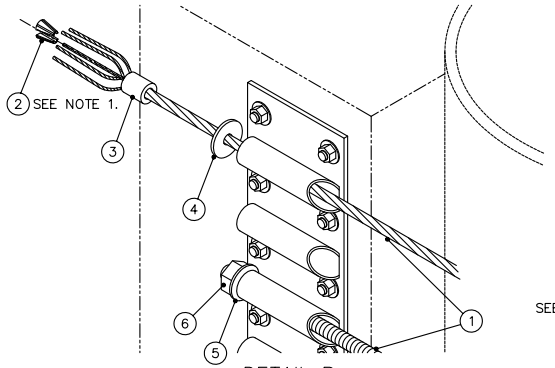
CABLE LENGTHS (CONCRETE BACKUPS)			
NO. CYLINDERS	ASSEMBLY NO.	CABLE LENGTH	ITEM 1
4	3535005–0140	12.20 m [40']	4214
6	3535005–0160	15.24 m [50']	4216
9	3535005–0190	21.34 m [70']	4219
11	3535005–0210	27.43 m [90']	4221

PARTS LIST

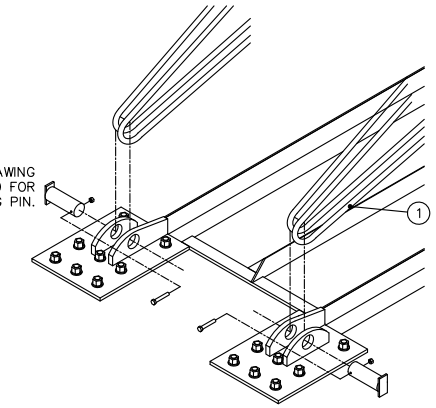
ITEM	STOCK NO.	DESCRIPTION	REQ'D
1	SEE TABLE	RESTRAINING CABLES	4.00
2	2765025–0000	WEDGE,7 WIRE ANCHOR,#6,(REACT)	4.00
3	2765026–0000	FERRULE,7 WIRE ANCHOR,#6,(REACT)	4.00
4	2708303–0000	WASHER,FLAT,3/4X3 OD,G	4.00
5	2708732–0000	WASHER,FLAT,1 1/2X3 OD,G	4.00
6	2704121–0000	NUT,HX,1 1/2,G	4.00



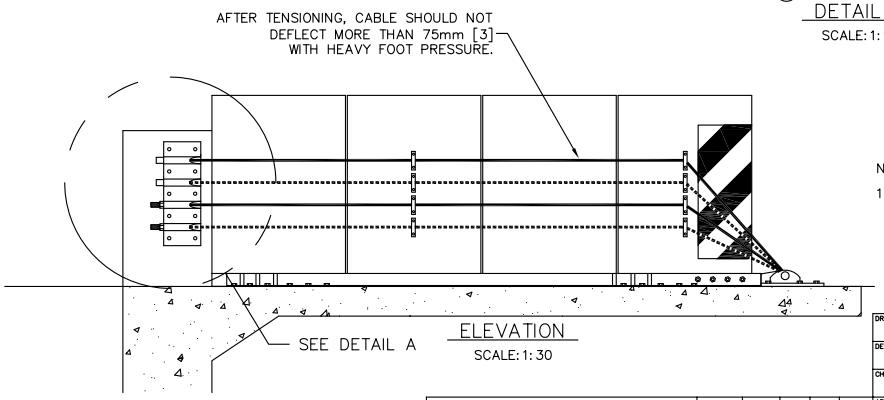
DETAIL A
SCALE: 1:15



DETAIL B
SCALE: 1:10



FRONT CABLE ATTACHMENT DETAIL
FOR CONCRETE BACKUP
SCALE: 1:15



ELEVATION
SCALE: 1:30

NOTES:

1. SLIDE ITEM 4 ONTO END OF CABLE FIRST, THEN ITEM 3. UN–BRAID CABLE (ITEM1). INSERT MIDDLE STRAND BETWEEN ITEM 2, PLACE REMAINING 6 STRANDS INTO SLOTS AROUND ITEM 2 THEN PUSH INTO ITEM 3 TO TIGHTEN.

ASSEMBLY NO. SEE TABLE

Revisions	Date	Rev.	By	Ckd.	App.
ADDED ITEMS 2,3 & 4 TO PARTS LIST	12/27/00	A	LWC	BB	DLJ
UPDATED ASSEMBLIES AND ITEM 1 P/N'S	07/02/01	B	LWC	JMT	DMO
REMOVED DEBRIS COVER HOLES	10/02/02	C	RGC	STT	FJP

DRAWN: L. Corker	DATE: 02/25/00	
DESIGNED: ———	DATE: ———	
CHECKED: ———	DATE: ———	
APPROVED: Dean Alberson	DATE: 09/28/00	
CAD FILE: 3535005–0000.dwg		

ENERGY ABSORPTION SYSTEMS, INC.
ENGINEERING AND RESEARCH DEPARTMENT

REACT 350®SYSTEM

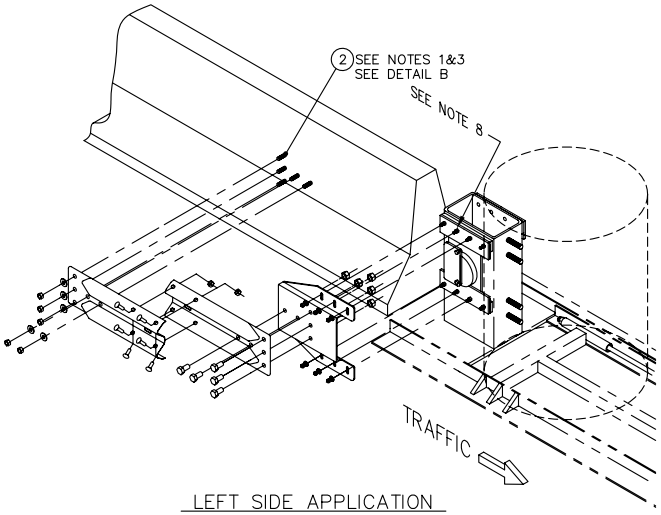
CABLE ASSEMBLIES

SCALE	DWG.	SHEET	REV
AS NOTED	3535005–0000	2 of 2	C

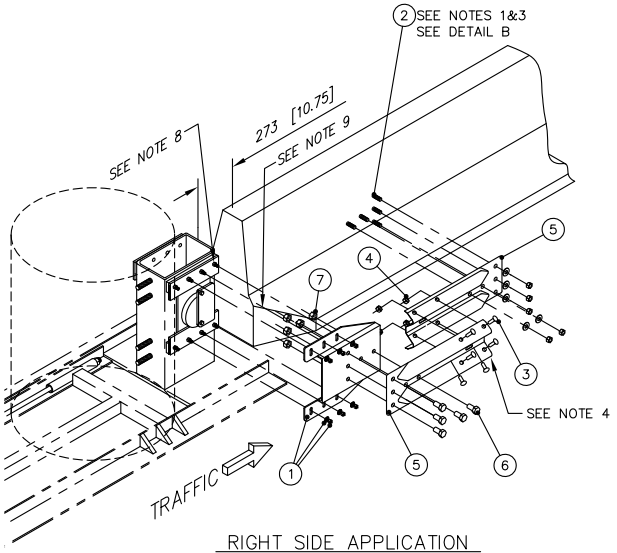
REACT 350® (36")

PARTS LIST			
ITEM	STOCK NO.	DESCRIPTION	REQ'D
1	4720	TRANSITION PLATE ASSEMBLY	1.00
2	3525130–0000	ANCHOR,MP–3,PT KIT,3/4X6 1/2 HOR	1.00
3	2701811–0000	BOLT,RAIL,5/8X1 1/4,G	8.00
4	2704191–0000	NUT,HX,5/8,G,RAIL	8.00
5	2752171–0000	END SHOE,W–BEAM	2.00
6	2701641–0000	BOLT,HX,3/4X1 1/4,G2,G	5.00
7	2704091–0000	NUT,HX,3/4,G	5.00

DETAIL B
NOT TO SCALE



LEFT SIDE APPLICATION



RIGHT SIDE APPLICATION

NOTES:

1. USE TRANSITION PANEL AS TEMPLATE FOR DRILLING.
2. IMPACT FORCES COULD BE TRANSFERRED INTO TERMINAL END OF THE BARRIER. ADEQUATE REINFORCING AND ANCHORAGE ARE REQUIRED FOR PROPER IMPACT PERFORMANCE.
3. ANCHOR STUD END SHOULD BE FLUSH WITH OUTSIDE SURFACE OF ANCHOR NUT, SEE DETAIL B.
4. TRANSITION ASSEMBLIES ARE SUPPLIED AS ACCESSORIES AND ARE ORDERED SEPARATELY.
5. END SHOES MUST BE LAPPED FOR TRAFFIC DIRECTION.
6. ITEMS 3 THROUGH 7 ARE STANDARD HIGHWAY HARDWARE & MAY BE SUPPLIED BY CUSTOMER. ORDER PART NUMBER 4720 TO RECEIVE ITEM 1 ONLY.
7. THIS TRANSITION ASSEMBLY MAY BE USED FOR NEW JERSEY BARRIER, F–SHAPED OR VERTICAL CONCRETE WALL.
8. EXISTING STUDS, WASHERS AND NUTS TO REMAIN. INSTALL TRANSITION PLATE ON TOP OF EXISTING HARDWARE.
9. TRIM BARRIER 5 1/2" DEEP X 14" LONG, AS SHOWN.

Revisions	Date	Rev.	By	Ckd.	App.
ADDED NOTE 8, TRIMMED CMB,	1/17/01	A	DK	STT	DLJ
ADDED ALL ITEMS AS PART OF ASSY	08/27/02	B	LWC	BB	SPT

DRAWN: D. Kohfeld — DATE: 9/25/00
DESIGNED: — DATE:
CHECKED: B. BURGESS — DATE: 10/17/00
APPROVED: — DATE:
CAD FILE: 3535006–0000.dwg

ASSEMBLY NO. 3535006–0000

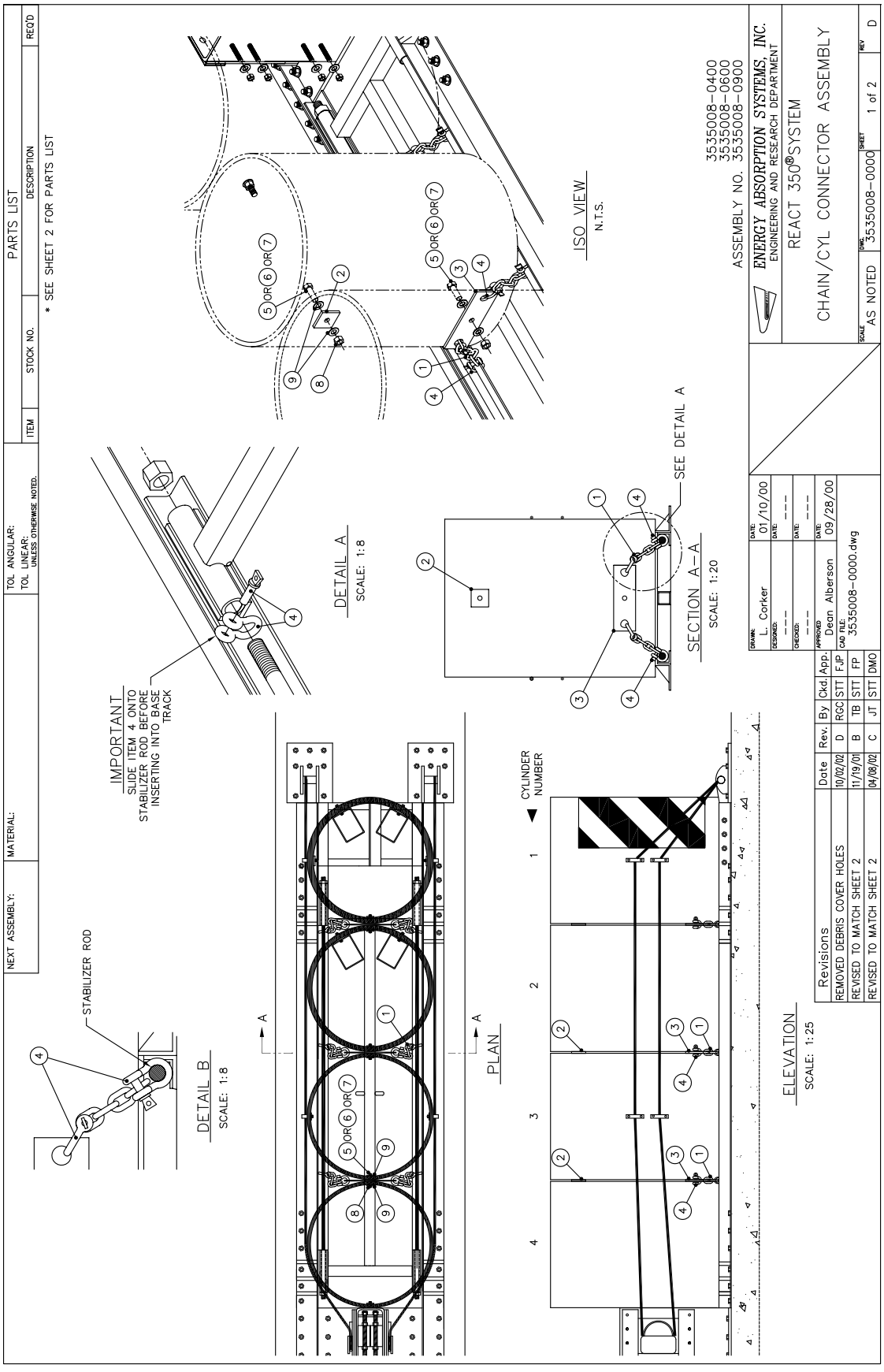
ENERGY ABSORPTION SYSTEMS, INC.
ENGINEERING AND RESEARCH DEPARTMENT

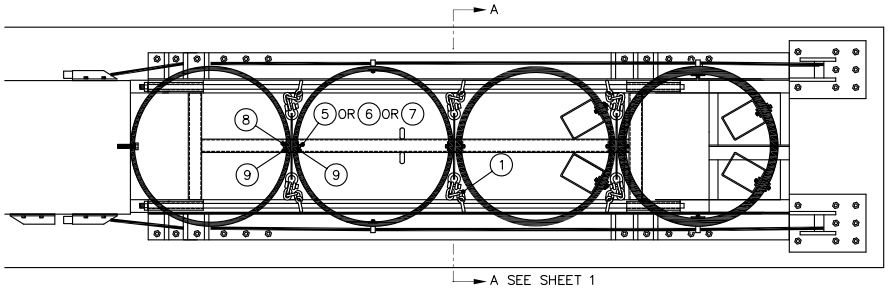
REACT 350®SYSTEM

TRANSITION ASSY,SC BU,N,REACT 350

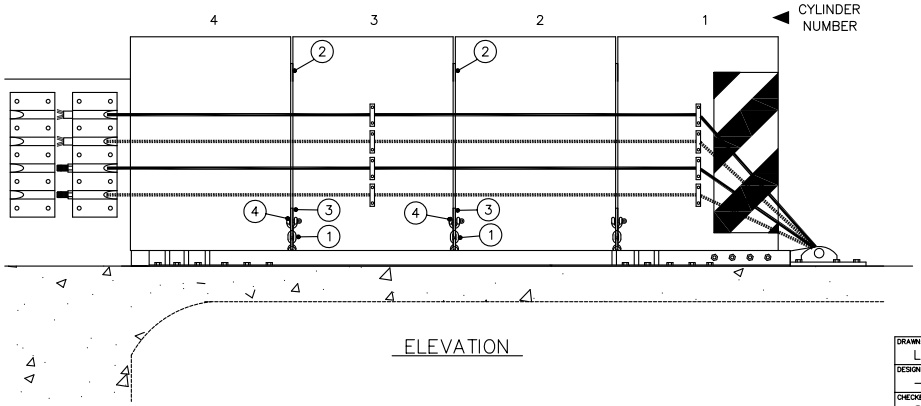
SCALE	DWG.	SHEET	REV
1:30	3535006–0000	1 of 1	B

REACT 350® (36")


PARTS LIST
ITEM
STOCK NO.
DESCRIPTION
REQ'D
* SEE SHEET 2 FOR PARTS LIST
TOL ANGULAR:
TOL LINEAR: UNLESS OTHERWISE NOTED.
NEXT ASSEMBLY:
MATERIAL:
ISO VIEW
N.T.S.
DETAIL A
SCALE: 1:8
SECTION A–A
SCALE: 1:20
SEE DETAIL A
IMPORTANT
SLIDE ITEM 4 ONTO STABILIZER ROD BEFORE INSERTING INTO BASE TRACK
STABILIZER ROD
DETAIL B
SCALE: 1:8
PLAN
ELEVATION
SCALE: 1:25
CYLINDER NUMBER
3535008-0400
3535008-0600
3535008-0900
ASSEMBLY NO.
ENERGY ABSORPTION SYSTEMS, INC.
ENGINEERING AND RESEARCH DEPARTMENT
REACT 350® SYSTEM
CHAIN/CYL CONNECTOR ASSEMBLY
SCALE: AS NOTED
DWG.: 3535008-0000
SHEET: 1 of 2
REV: D
DRAWN: L. Corker DATE: 01/10/00
DESIGNED: --- DATE: ---
CHECKED: --- DATE: ---
APPROVED: Dean Alberson DATE: 09/28/00
CAD FILE: 3535008-0000.dwg
Revisions
REMOVED DEBRIS COVER HOLES 10/02/02 D RGC STT FJP
REVISED TO MATCH SHEET 2 11/19/01 B TB STT FP
REVISED TO MATCH SHEET 2 04/08/02 C JT STT DMO



PLAN



ELEVATION

ASSEMBLY 3535008–0400

PARTS LIST (4 CYLINDER REACT 350)

	ITEM	STOCK NO.	DESCRIPTION	REQ'D
	1	2752024–0000	CHAIN, PROOF COIL,1/2,4 LINKS,REACT	6.00
	2	2765015–0000	FTB ST 1/2X4X4,W/HOLE,G,(REACT)	3.00
	3	2765013–0000	FTB ST 1/2X5X15,G,(REACT)	3.00
C	4	2728806–0000	SHACKLE,ANCHOR,5/8,W/SCREW PIN	12.00
*	5	2700171–0000	BOLT,HX,3/4X4 1/2,G2,G	4.00
*	6	2700191–0000	BOLT,HX,3/4X5 1/2,G2,G	2.00
	8	2704091–0000	NUT,HX,3/4,G	6.00
	9	2708081–0000	WASHER,FLAT,3/4,HVY,G	12.00

* ITEM 5 USED TO CONNECT CYLINDERS 2 & 3 AND 3 & 4.
* ITEM 6 USED TO CONNECT CYLINDERS 1 & 2.

ASSEMBLY 3535008–0600

PARTS LIST (6 CYLINDER REACT 350)

	ITEM	STOCK NO.	DESCRIPTION	REQ'D
	1	2752024–0000	CHAIN, PROOF COIL,1/2,4 LINKS,REACT	6.00
	2	2765015–0000	FTB ST 1/2X4X4,W/HOLE,G,(REACT)	3.00
	3	2765013–0000	FTB ST 1/2X5X15,G,(REACT)	3.00
C	4	2728806–0000	SHACKLE,ANCHOR,5/8,W/SCREW PIN	12.00
*	5	2700171–0000	BOLT,HX,3/4X4 1/2,G2,G	4.00
*	6	2700191–0000	BOLT,HX,3/4X5 1/2,G2,G	2.00
	7	2700882–0000	BOLT,HX,3/4X3 1/2,G2,G	4.00
	8	2704091–0000	NUT,HX,3/4,G	10.00
	9	2708081–0000	WASHER,FLAT,3/4,HVY,G	20.00

* ITEM 5 USED TO CONNECT CYLINDERS 3 & 4 AND 4 & 5.
* ITEM 6 USED TO CONNECT CYLINDERS 5 & 6.
* ITEM 7 USED TO CONNECT CYLINDERS 1 & 2 AND 2 & 3.

ASSEMBLY 3535008–0900

PARTS LIST (9 CYLINDER REACT 350)

	ITEM	STOCK NO.	DESCRIPTION	REQ'D
	1	2752024–0000	CHAIN, PROOF COIL,1/2,4 LINKS,REACT	6.00
	2	2765015–0000	FTB ST 1/2X4X4,W/HOLE,G,(REACT)	3.00
	3	2765013–0000	FTB ST 1/2X5X15,G,(REACT)	3.00
C	4	2728806–0000	SHACKLE,ANCHOR,5/8,W/SCREW PIN	12.00
*	5	2700171–0000	BOLT,HX,3/4X4 1/2,G2,G	2.00
*	6	2700191–0000	BOLT,HX,3/4X5 1/2,G2,G	6.00
	7	2700882–0000	BOLT,HX,3/4X3 1/2,G2,G	8.00
	8	2704091–0000	NUT,HX,3/4,G	16.00
	9	2708081–0000	WASHER,FLAT,3/4,HVY,G	24.00

* ITEM 5 USED TO CONNECT CYLINDERS 5 & 6.
* ITEM 6 USED TO CONNECT CYLINDERS 6 & 7, 7 & 8 AND 8 & 9.
* ITEM 7 USED TO CONNECT CYLINDERS 1 & 2, 2 & 3, 3 & 4, 4 & 5

Revisions	Date	Rev.	By	Ckd.	App.
REMOVED DEBRIS COVER HOLES	10/02/02	D	RGC	STT	FJP
QTY ITEM 6 WAS 4;ITEM 7 WAS 10.00	11/19/01	B	TB	STT	FP
QTY ITEM 4 WAS 6	4/9/02	C	JT	STT	DMO

DRAWN: L. Corker	DATE: 01/22/01	
DESIGNED: ———	DATE: ———	
CHECKED: S. Trageser	DATE: 02/27/01	
APPROVED: Dean Anderson	DATE: 09/28/00	
CAD FILE: 3535008–0000 SH02.dwg		

ENERGY ABSORPTION SYSTEMS, INC.
ENGINEERING AND RESEARCH DEPARTMENT

REACT 350®SYSTEM

CHAIN/CYL CONNECTOR ASSEMBLY

SCALE	DWG.	SHEET	REV
1:25	3535008–0000	2 of 2	D

NOTES:

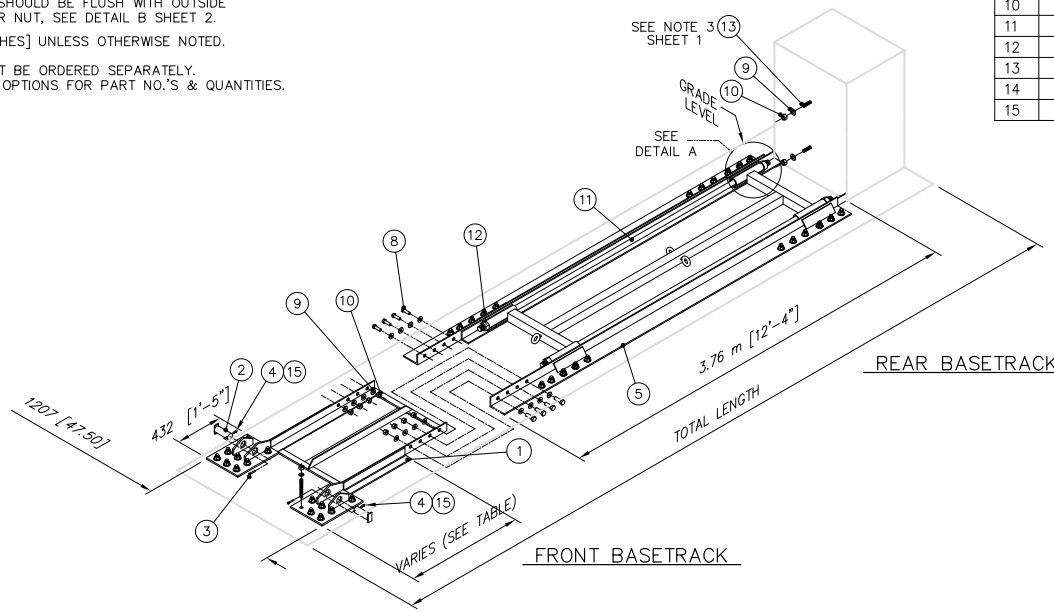
1. BACKUP MUST BE ABLE TO WITHSTAND A MAXIMUM OVERTURNING MOMENT OF 226 kNm [2000 KIP–IN.] AT DECK LINE FOR DURATIONS 40± ms.
2. IMPACT FORCES COULD BE TRANSFERRED INTO STRUCTURE THROUGH SYSTEM. ADEQUATE ANCHORAGE IS REQUIRED FOR PROPER IMPACT PERFORMANCE.
3. USE ITEMS 1, 5 AND 6 AS TEMPLATES FOR DRILLING CONCRETE. INSTALL ITEM 13 USING MP–3 EPOXY ITEM 14 TO SECURE. USE NUTS AND WASHERS ITEMS 9 & 10.
4. ANCHOR STUD END SHOULD BE FLUSH WITH OUTSIDE SURFACE OF ANCHOR NUT, SEE DETAIL B SHEET 2.
5. UNITS ARE mm [INCHES] UNLESS OTHERWISE NOTED.
6. ANCHOR BOLTS MUST BE ORDERED SEPARATELY. SEE ANCHOR TABLE OPTIONS FOR PART NO.'S & QUANTITIES.

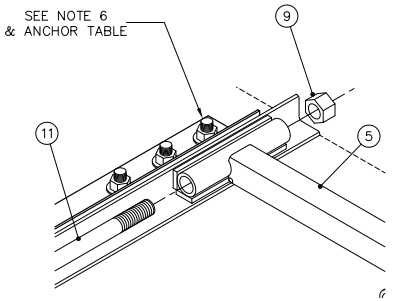
ANCHOR TABLE OPTIONS

	ANCHOR ASSEMBLY NO.	ANCHOR TYPE	QUANTITY REQUIRED
BASETRACK	3525020–0000	ANCHOR,MP–3,PT KIT,3/4X7 1/2,VT	7.00
SIDE CABLE ANCHOR	3525130–0000	ANCHOR,MP–3,PT KIT,3/4X6 1/2 HOR	4.00

PARTS LIST

ITEM	STOCK NO.	DESCRIPTION	REQ'D
1	SEE TABLE	BASETRACK,FRONT	1.00
2	2765003–0000	PIN,RESTRAINING CABLE	2.00
3	2700371–0000	BOLT,HX,1/4X2 1/2,G2,G	2.00
4	2704151–0000	NUT,HX,1/4,G	2.00
5	2765031–0000	WELDMENT,REAR BASETRACK,CONC(REACT)	1.00
6	2765019–0000	WELDMENT,CABLE ANCHOR,CONC,(REACT)	2.00
8	2701381–0000	BOLT,HX,3/4X2,G2,G	8.00
9	2708081–0000	WASHER,FLAT,3/4X2,HVY,G	18.00
10	2704091–0000	NUT,HX,3/4,G	10.00
11	2765020–0000	RRD ST 1 1/2X120,THREADED BOTH ENDS	2.00
12	2704121–0000	NUT,HX,1 1/2,G	4.00
13	2699941–0000	STUD,3/4X8 1/2,G5,G	2.00
14	3525110–0000	MP–3,PINT PACKAGE	1.00
15	2708281–0000	WASHER,LOCK,1/4,G	2.00





DETAIL A
SCALE 1:10

TABLE

BASETRACK ASSEMBLY NO.	STOCK NO. ITEM NO.1	NUMBER OF CYLINDERS	FRONT BASETRACK LENGTH (ITEM 1)	TOTAL LENGTH
3535015–0400	2765027–0000	4	0.43 m [1'–5"]	5.06 m [16'–7"]
3535015–0600	2765028–0000	6	2.26 m [7'–5"]	6.88 m [22'–7"]
3535015–0900	2765029–0000	9	5.00 m [16'–5"]	9.63 m [31'–7"]
3535015–0110	2765030–0000	11	6.83 m [22'–5"]	10.59 m [34'–9"]

ASSEMBLY NO. SEE TABLE

Revisions	Date	Rev.	By	Ckd.	App.
PCN 1977, UPDATE ITEM 5	03/24/05	E	RGC	KRM	ACF
REV E OBSOLETE, SEE PCN #2006	5/20/05	F	DDS	JME	ACF
ITEMS 3 & 4 WERE PLATED. ADDED ITEM 15	04/30/02	D	JT	JME	RCB

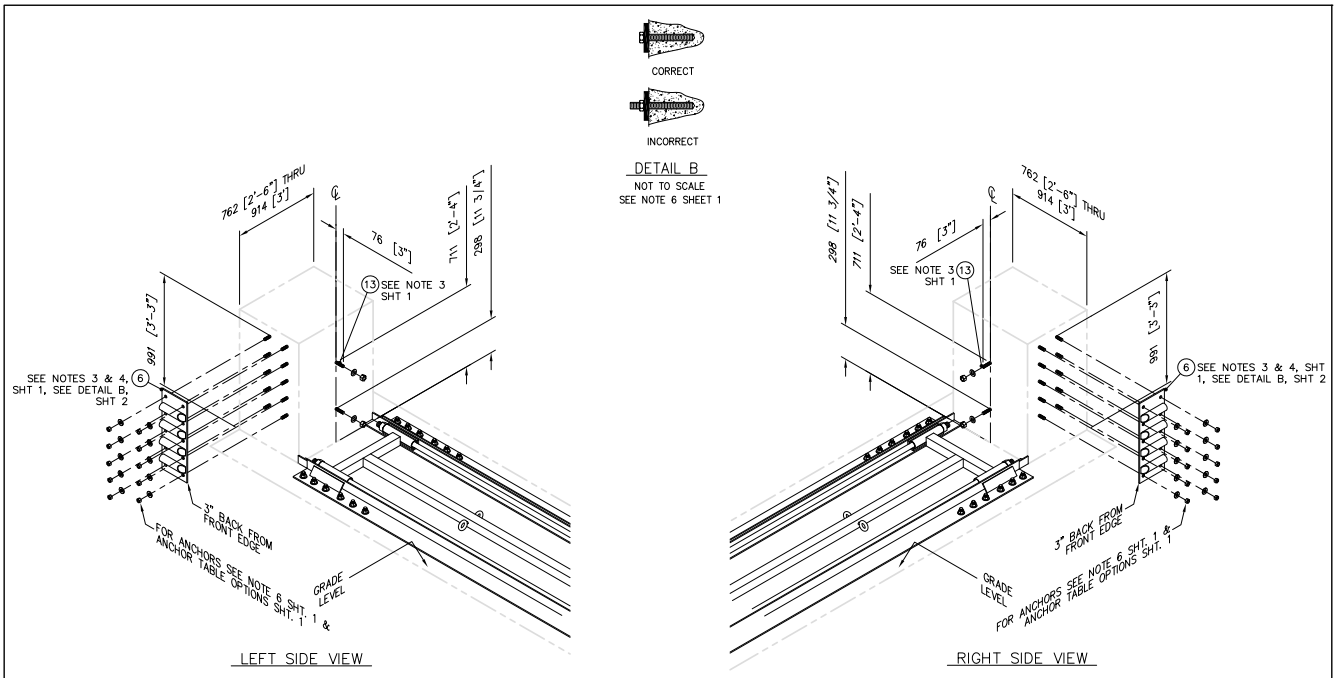
DRAWN: L. CORKER	DATE: 12/22/99	
DESIGNED:	DATE:	
CHECKED:	DATE:	
APPROVED: DEAN ALBERSON	DATE: 09/28/00	
CAD FILE: 3535015–0000.dwg		

ENERGY ABSORPTION SYSTEMS, INC.
ENGINEERING AND RESEARCH DEPARTMENT

REACT 350® SYSTEM
CONCRETE BACKUP
BASETRACK ASSEMBLY
36" WIDE SYSTEMS

SCALE	DWG.	SHEET	REV
1:40	3535015–0000	1 of 3	F

REACT 350® (36")



ASSEMBLY NO. 3535015-0000

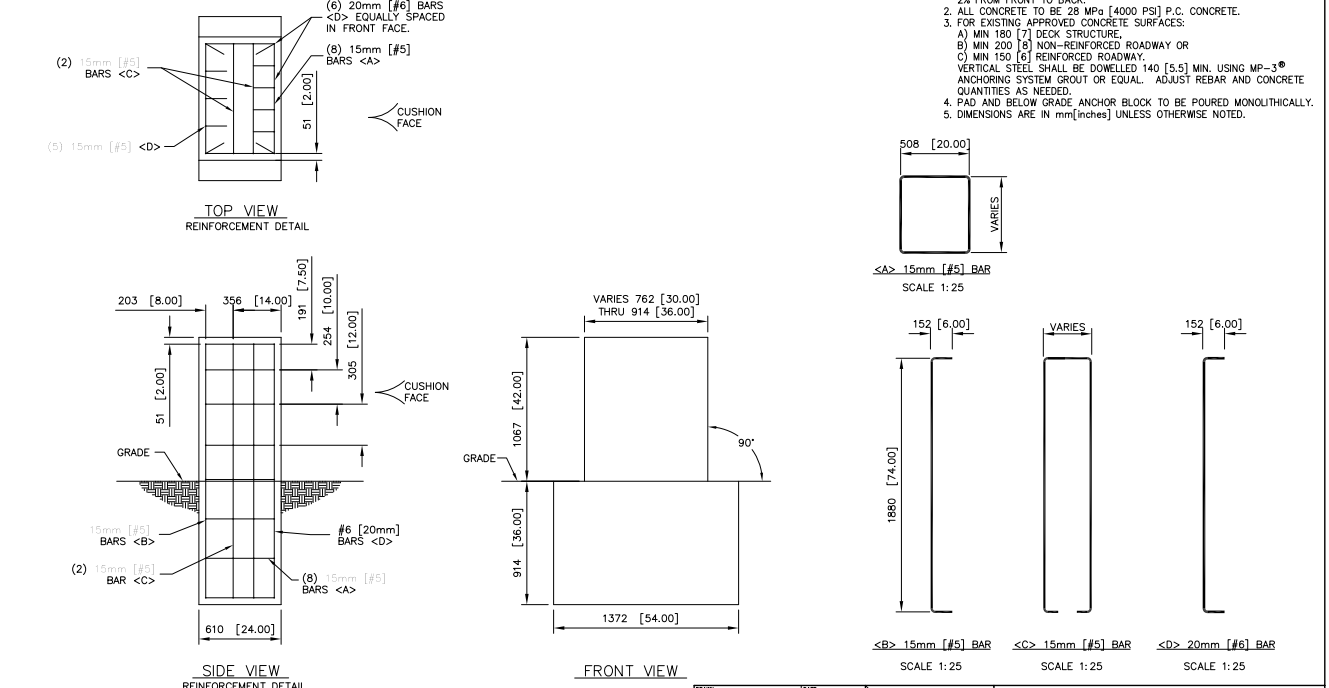
Revisions	Date	Rev.	By	Ckd.	App.
PCN 1977, SEE SHEET 1	03/25/05	E	RGC	KRM	ACF
REV E OBSOLETE, SEE PCN #2006	5/20/05	F	DDS	JME	ACF
REV CHANGED TO MATCH SHEET 1	04/30/02	D	JT	JME	RCB

DRAWN: L. CORKER	DATE: 12/22/99
DESIGNED:	DATE:
CHECKED:	DATE:
APPROVED: DEAN ALBERSON	DATE: 09/28/00
CAD FILE: 3535015-0000.dwg	

ENERGY ABSORPTION SYSTEMS, INC.
ENGINEERING AND RESEARCH DEPARTMENT

REACT 350®SYSTEM
CONCRETE BACKUP,
BASETRACK ASSEMBLY
36" WIDE SYSTEMS

SCALE	DWG	SHEET	REV
1:30	3535015-0000	2 of 3	F



NOTES:
1. CROSS SLOPE OF PAD SHALL NOT EXCEED 8%
   2% FROM FRONT TO BACK.
2. ALL CONCRETE TO BE 28 MPa [4000 PSI] P.C. CONCRETE.
3. FOR EXISTING APPROVED CONCRETE SURFACES:
   A) MIN 180 [7] DECK STRUCTURE,
   B) MIN 200 [8] NON-REINFORCED ROADWAY OR
   C) MIN 150 [6] REINFORCED ROADWAY.
   VERTICAL STEEL SHALL BE DOWELLED 140 [5.5] MIN. USING MP-3® ANCHORING SYSTEM GROUT OR EQUAL. ADJUST REBAR AND CONCRETE QUANTITIES AS NEEDED.
4. PAD AND BELOW GRADE ANCHOR BLOCK TO BE POURED MONOLITHICALLY.
5. DIMENSIONS ARE IN mm[inches] UNLESS OTHERWISE NOTED.

<A> 15mm [#5] BAR
SCALE 1:25

<B> 15mm [#5] BAR
SCALE 1:25

<C> 15mm [#5] BAR
SCALE 1:25

<D> 20mm [#6] BAR
SCALE 1:25

Revisions	Date	Rev.	By	Ckd.	App.
PCN 1977, SEE SHEET 1	03/25/05	E	RGC	KRM	ACF
REV E OBSOLETE, SEE PCN #2006	5/20/05	F	DDS	JME	ACF
REV CHANGED TO MATCH SHEET 1	04/30/02	D	JT	JME	RCB

DRAWN: L. CORKER	DATE: 09/21/00
DESIGNED:	DATE:
CHECKED:	DATE:
APPROVED: DEAN ALBERSON	DATE: 09/28/00
CAD FILE: 3535015-0000 SH 03.dwg	

ENERGY ABSORPTION SYSTEMS, INC.
ENGINEERING AND RESEARCH DEPARTMENT

REACT 350®SYSTEM

CONCRETE BACKUP DETAILS
30-36,CONC,(REACT)

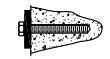
SCALE	DWG	SHEET	REV
1:25	3535015-0000	3 of 3	F

NEXT ASSEMBLY:	MATERIAL:	TOL ANGULAR: TOL LINEAR: UNLESS OTHERWISE NOTED.

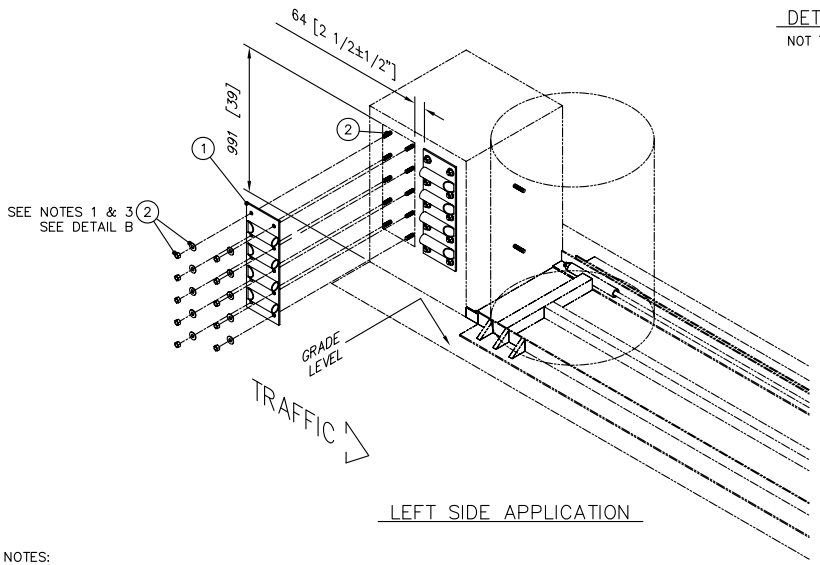
PARTS LIST

ITEM	STOCK NO.	DESCRIPTION	REQ'D
1	2765019-0000	WELDMENT,CABLE ANCHOR,CONC,(REACT)	1.00
2	3525130-0000	ANCHOR,MP-3,PT KIT,3/4X6 1/2 HOR	*2.00

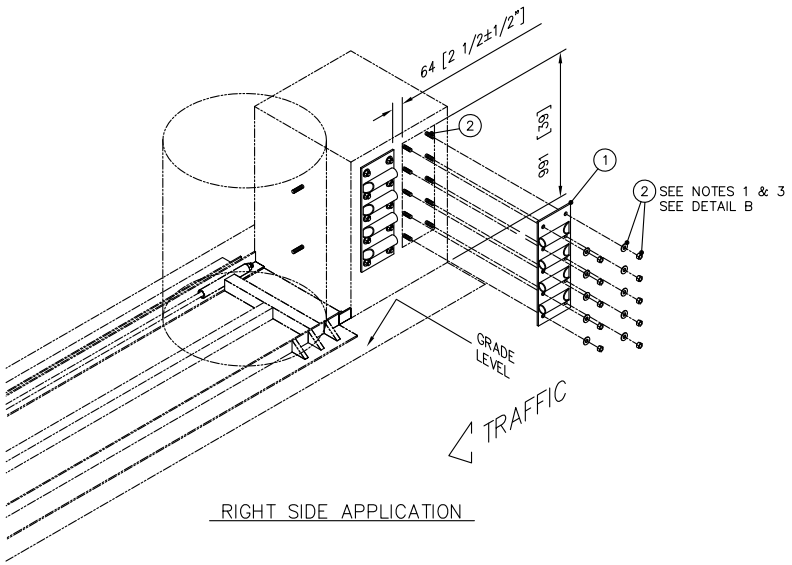
* EXPANSION ANCHORS OPTIONAL (SUPPLIED BY OTHERS).



DETAIL B
NOT TO SCALE



LEFT SIDE APPLICATION



RIGHT SIDE APPLICATION

NOTES:

1. USE CABLE ANCHOR (ITEM 1) AS TEMPLATE FOR DRILLING. RECOMMENDED HOLE DEPTH 140 [5 1/2"]. FINAL TORQUE TO BE 165Nm [120 FT-LBS] (TYP).
2. ANCHOR STUD END SHOULD BE FLUSH WITH OUTSIDE SURFACE OF ANCHOR NUT, SEE DETAIL B.
3. UNITS ARE mm [INCHES] UNLESS OTHERWISE NOTED.

ASSEMBLY NO. 3535034-0000

Revisions	Date	Rev.	By	Ckd.	App.
REVISED B/U & TRANS., ITEM 2 WAS 4791	02/09/01	A	RSG	KM	DLJ

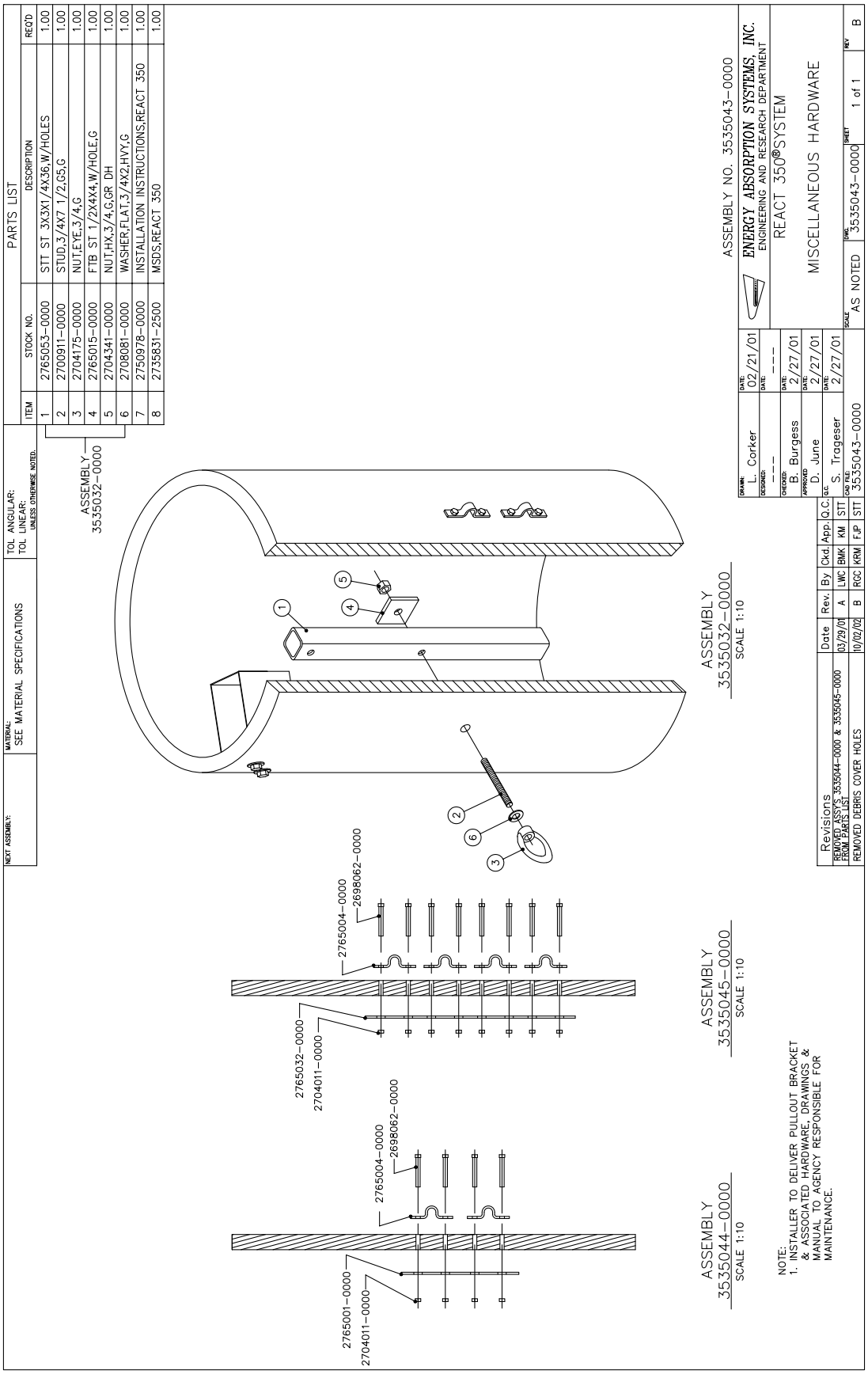
DRAWN: L. CORKER	DATE: 01/25/00	
DESIGNED:	DATE:	
CHECKED:	DATE:	
APPROVED: DEAN ALBERSON	DATE: 09/28/00	
CAD FILE: 3535034-0000.dwg		

ENERGY ABSORPTION SYSTEMS, INC.
ENGINEERING AND RESEARCH DEPARTMENT

REACT 350® SYSTEM
TRANSITION ASSEMBLY
FOR USE W/CONCRETE B.U.

SCALE	DWG.	SHEET	REV
1:30	3535034-0000	1 of 1	A

REACT 350® (36")


PARTS LIST
ITEM | STOCK NO. | DESCRIPTION | REQ'D
1 | 2765053-0000 | STT ST 3X3X1/4X36,W/HOLES | 1.00
2 | 2700911-0000 | STUD,3/4X7 1/2,G5,G | 1.00
3 | 2704175-0000 | NUT,EYE,3/4,G | 1.00
4 | 2765015-0000 | FTB ST 1/2X4X4,W/HOLE,G | 1.00
5 | 2704341-0000 | NUT,HX,3/4,G,GR DH | 1.00
6 | 2708081-0000 | WASHER,FLAT,3/4X2,HVY,G | 1.00
7 | 2750978-0000 | INSTALLATION INSTRUCTIONS,REACT 350 | 1.00
8 | 2735831-2500 | MSDS,REACT 350 | 1.00
ASSEMBLY 3535032-0000
ASSEMBLY NO. 3535043-0000
ENERGY ABSORPTION SYSTEMS, INC.
ENGINEERING AND RESEARCH DEPARTMENT
REACT 350®SYSTEM
MISCELLANEOUS HARDWARE
ASSEMBLY 3535032-0000
SCALE 1:10
ASSEMBLY 3535045-0000
SCALE 1:10
ASSEMBLY 3535044-0000
SCALE 1:10
2765004-0000
2698062-0000
2765032-0000
2704011-0000
2765001-0000
2704011-0000
NOTE:
1. INSTALLER TO DELIVER PULLOUT BRACKET & ASSOCIATED HARDWARE, DRAWINGS & MANUAL TO AGENCY RESPONSIBLE FOR MAINTENANCE.
Revisions
REMOVED ASSY'S 3535044-0000 & 3535045-0000 FROM PARTS LIST
REMOVED DEBRIS COVER HOLES
DRAWN: L. Corker 02/21/01
DESIGNED: ___
CHECKED: B. Burgess 2/27/01
APPROVED: D. June 2/27/01
G.E. S. Trageser 2/27/01
CAD FILE: 3535043-0000
SCALE: AS NOTED
DWG: 3535043-0000
SHEET 1 of 1
REV B

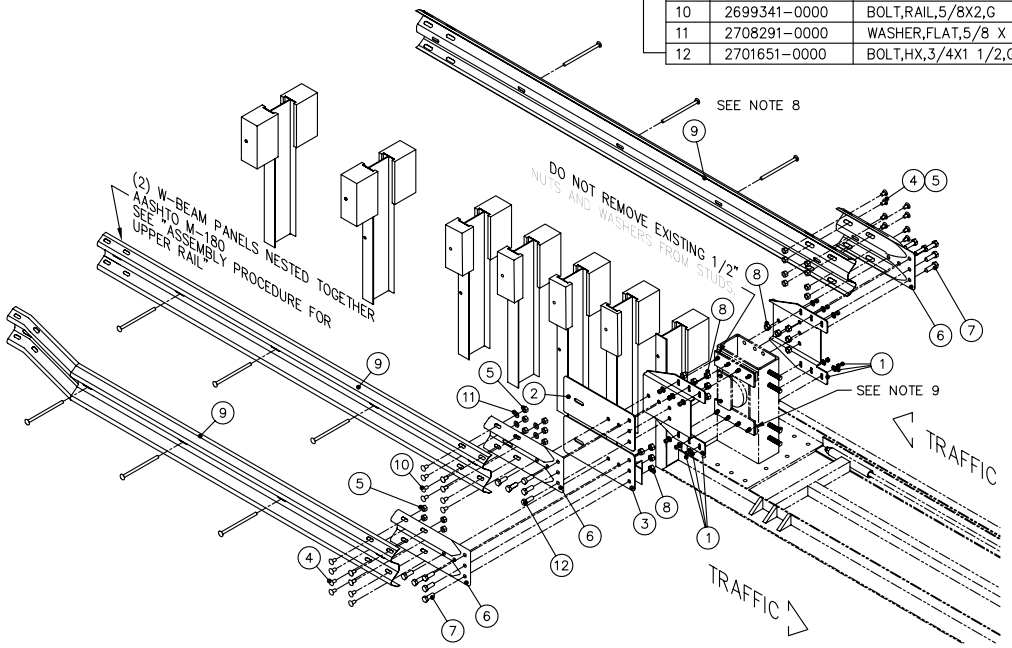
REACT 350® (36")

NOTES:

1. STANDARD BARRIER HARDWARE HAS BEEN USED TO DEVELOP THIS GUARDRAIL TRANSITION. SEE "A GUIDE TO STANDARDIZED HIGHWAY BARRIER RAIL HARDWARE," 1995, AASHTO-AGC-ARBTA JOINT COMMITTEE.
2. DO NOT BOLT NESTED W-BEAM OR RUBRAIL W-BEAM TO POSTS AND BLOCKS ON POSTS #2 AND #4. BOLT BLOCKS DIRECTLY TO POSTS.
3. USE OF PLATE WASHERS (FWR01) IS OPTIONAL.
4. THE RUBRAIL MAY BE SHOP BENT IN THE LAST 915mm [36"] TO FACILITATE INSTALLATION.
5. POSTS 1, 3, 5, 6 AND 7 REQUIRE AN ADDITIONAL HOLE TO ATTACH RUBRAIL.
6. TRANSITION ASSEMBLIES ARE SUPPLIED AS ACCESSORIES AND ARE ORDERED SEPARATELY.
7. END SHOES MUST BE LAPPED FOR TRAFFIC DIRECTION.
8. ITEMS 4, THROUGH 12 ARE STANDARD HIGHWAY HARDWARE & ARE TO BE SUPPLIED BY CUSTOMER. RAIL ATTACHMENT, HARDWARE POST AND BLOCKOUT MATERIAL NEEDS TO BE DETERMINED AND SUPPLIED AS NEEDED BY OTHERS. ORDER ASSEMBLY 3535048-0000 TO RECEIVE ITEMS 1, 2 AND 3.
9. DO NOT REMOVE EXISTING STUDS, NUTS, AND WASHERS FROM BACKUP.

PARTS LIST

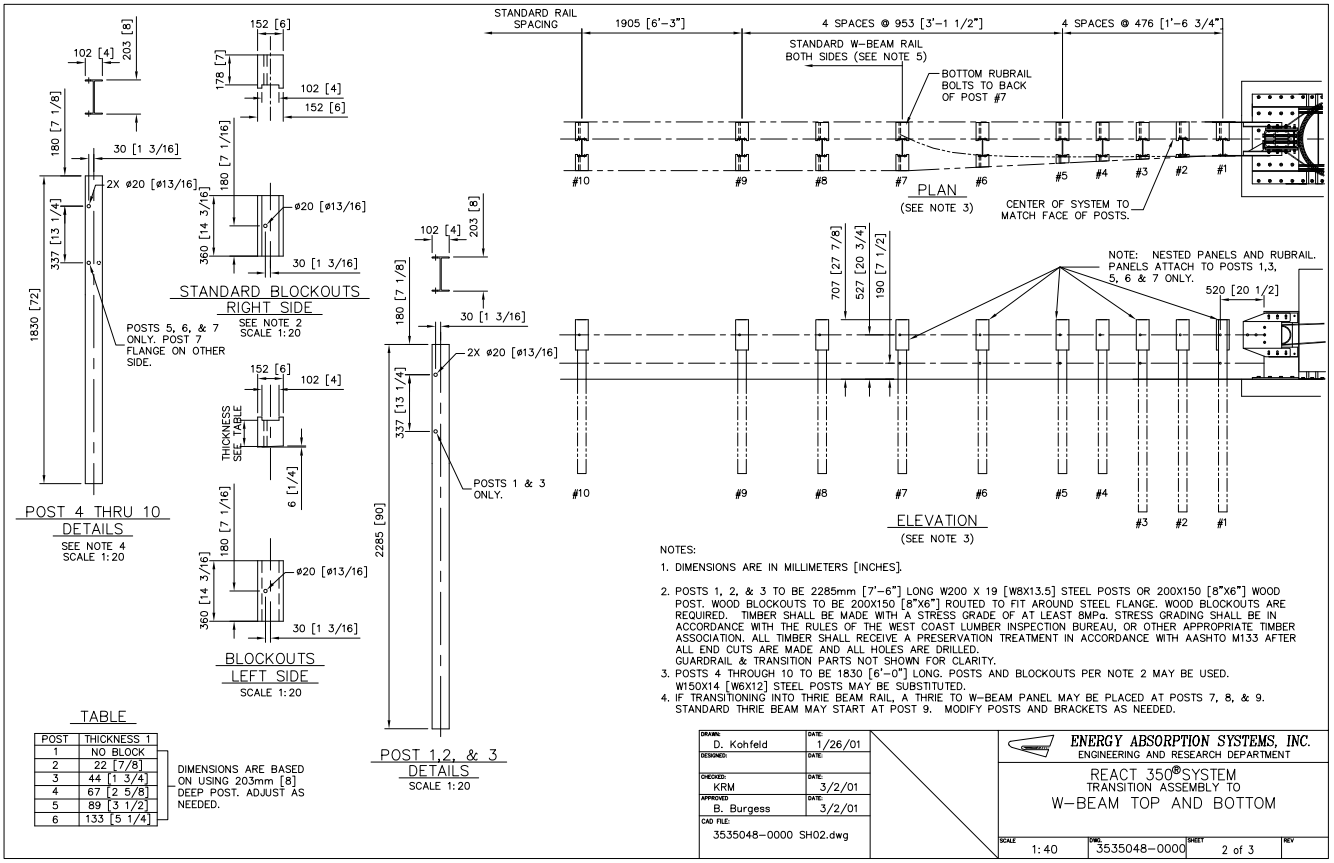
ITEM	STOCK NO.	DESCRIPTION	REQ'D
1	4720	TRANSITION PLATE ASSEMBLY	2.00
2	2765046-0000	END SHOE CONNECTOR PLATE	1.00
3	2765044-0000	RUBRAIL BRACE	1.00
4	2701811-0000	BOLT,RAIL,5/8X1 1/4,G	16.0
5	2704191-0000	NUT,HX,5/8,G,RAIL	24.00
6	2752171-0000	END SHOE,W-BEAM	3.00
7	2701641-0000	BOLT,HX,3/4X1 1/4,G2,G	10.0
8	2704091-0000	NUT,HX,3/4,G	15.00
9	N/A	W-BEAM PANEL	4.00
10	2699341-0000	BOLT,RAIL,5/8X2,G	8.00
11	2708291-0000	WASHER,FLAT,5/8 X 1 3/4,G	8.00
12	2701651-0000	BOLT,HX,3/4X1 1/2,G2,G	5.00



ASSEMBLY NO. 3535048-0000

DRAWN: D. Kohfeld	DATE: 1/23/01	ENERGY ABSORPTION SYSTEMS, INC. ENGINEERING AND RESEARCH DEPARTMENT	
DESIGNED:	DATE:	REACT 350®SYSTEM	
CHECKED: KRM	DATE: 3/2/01	TRANSITION ASSY,SC BU,N,REACT 350 WITH RUB RAIL	
APPROVED: B. Burgess	DATE: 3/2/01		
CAD FILE: 3535048-0000.dwg		SCALE: 1:30	DWG.: 3535048-0000 SHEET: 1 of 3 REV

REACT 350® (36")



NOTES:

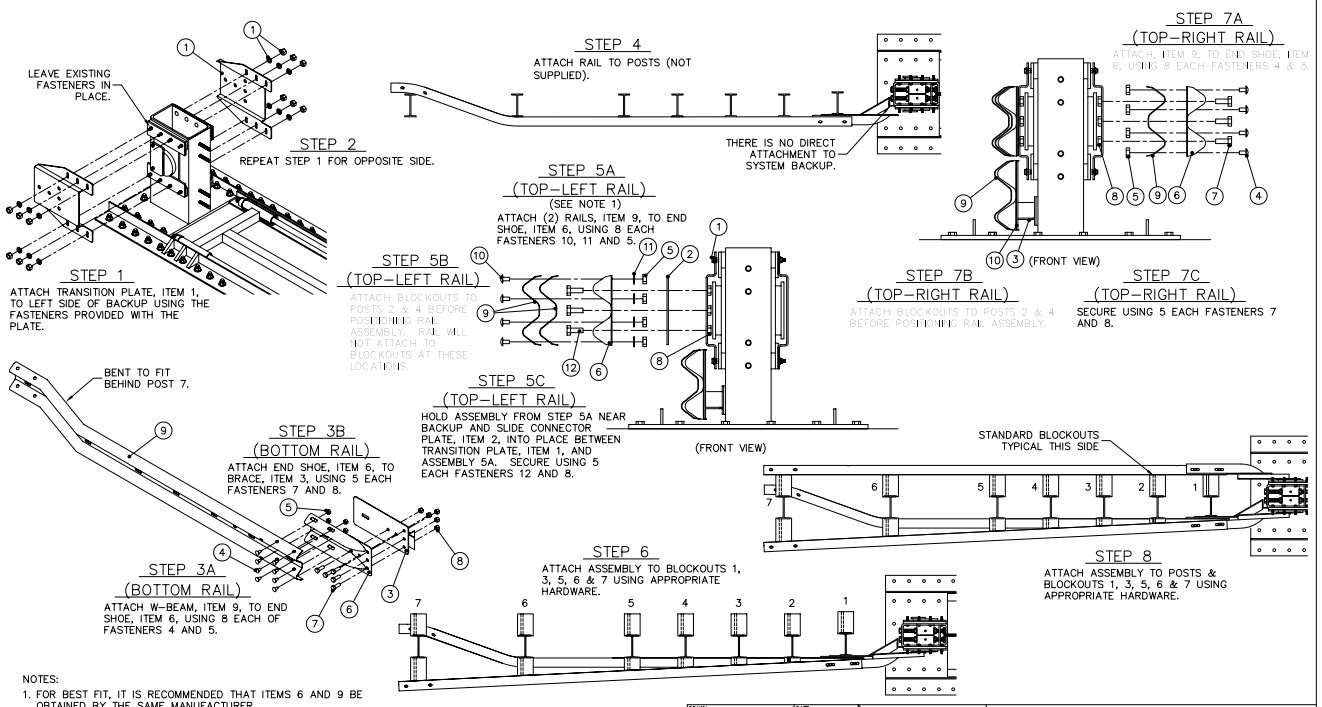
1. DIMENSIONS ARE IN MILLIMETERS [INCHES].
2. POSTS 1, 2, & 3 TO BE 2285mm [7'-6"] LONG W200 X 19 [W8X13.5] STEEL POSTS OR 200X150 [8"X6"] WOOD POST. WOOD BLOCKOUTS TO BE 200X150 [8"X6"] ROUTED TO FIT AROUND STEEL FLANGE. WOOD BLOCKOUTS ARE REQUIRED. TIMBER SHALL BE MADE WITH A STRESS GRADE OF AT LEAST 8MPa. STRESS GRADING SHALL BE IN ACCORDANCE WITH THE RULES OF THE WEST COAST LUMBER INSPECTION BUREAU, OR OTHER APPROPRIATE TIMBER ASSOCIATION. ALL TIMBER SHALL RECEIVE A PRESERVATION TREATMENT IN ACCORDANCE WITH AASHTO M133 AFTER ALL END CUTS ARE MADE AND ALL HOLES ARE DRILLED.
   GUARDRAIL & TRANSITION PARTS NOT SHOWN FOR CLARITY.
3. POSTS 4 THROUGH 10 TO BE 1830 [6'-0"] LONG. POSTS AND BLOCKOUTS PER NOTE 2 MAY BE USED. W150X14 [W6X12] STEEL POSTS MAY BE SUBSTITUTED.
4. IF TRANSITIONING INTO THRIE BEAM RAIL, A THRIE TO W-BEAM PANEL MAY BE PLACED AT POSTS 7, 8, & 9. STANDARD THRIE BEAM MAY START AT POST 9. MODIFY POSTS AND BRACKETS AS NEEDED.

DRAWN: D. Kohfeld	DATE: 1/26/01
DESIGNED:	DATE:
CHECKED: KRM	DATE: 3/2/01
APPROVED: B. Burgess	DATE: 3/2/01
CAD FILE: 3535048-0000 SH02.dwg	

ENERGY ABSORPTION SYSTEMS, INC.
ENGINEERING AND RESEARCH DEPARTMENT

REACT 350®SYSTEM
TRANSITION ASSEMBLY TO
W-BEAM TOP AND BOTTOM

SCALE	DWG.	SHEET	REV
1:40	3535048-0000	2 of 3	



NOTES:

1. FOR BEST FIT, IT IS RECOMMENDED THAT ITEMS 6 AND 9 BE OBTAINED BY THE SAME MANUFACTURER.

DRAWN: D. Kohfeld	DATE: 1/26/01
DESIGNED:	DATE:
CHECKED: KRM	DATE: 3/2/01
APPROVED: B. Burgess	DATE: 3/2/01
CAD FILE: 3535048-0000 SH03.dwg	

ENERGY ABSORPTION SYSTEMS, INC.
ENGINEERING AND RESEARCH DEPARTMENT

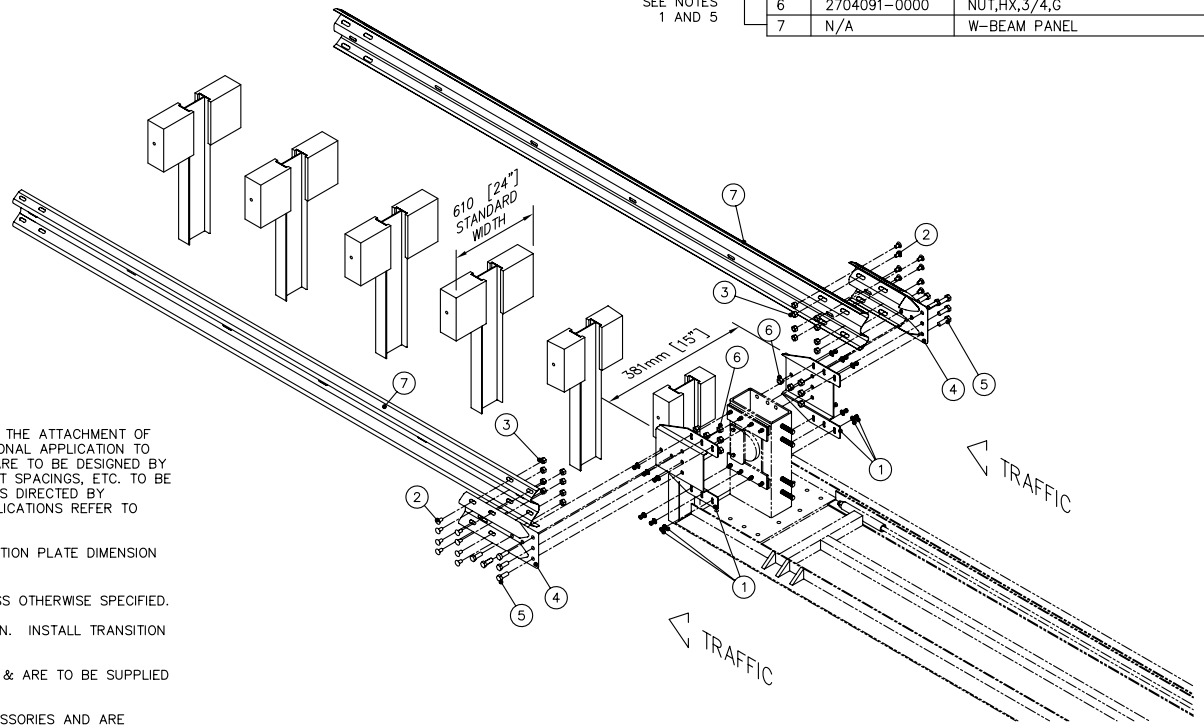
REACT 350®SYSTEM
TRANSITION ASSEMBLY TO
W-BEAM TOP AND BOTTOM

SCALE	DWG.	SHEET	REV
1:20	3535048-0000	3 of 3	

REACT 350® (36")

PARTS LIST			
ITEM	STOCK NO.	DESCRIPTION	REQ'D
1	4720	TRANSITION PLATE ASSEMBLY	2.00
2	2701811–0000	BOLT,RAIL,5/8X1 1/4,G	16.0
3	2704191–0000	NUT,HX,5/8,G,RAIL	16.0
4	2752171–0000	END SHOE,W–BEAM	2.00
5	2701641–0000	BOLT,HX,3/4X1 1/4,G2,G	10.0
6	2704091–0000	NUT,HX,3/4,G	10.0
7	N/A	W–BEAM PANEL	2.00

NOT SUPPLIED WITH ASSEMBLY SEE NOTES 1 AND 5



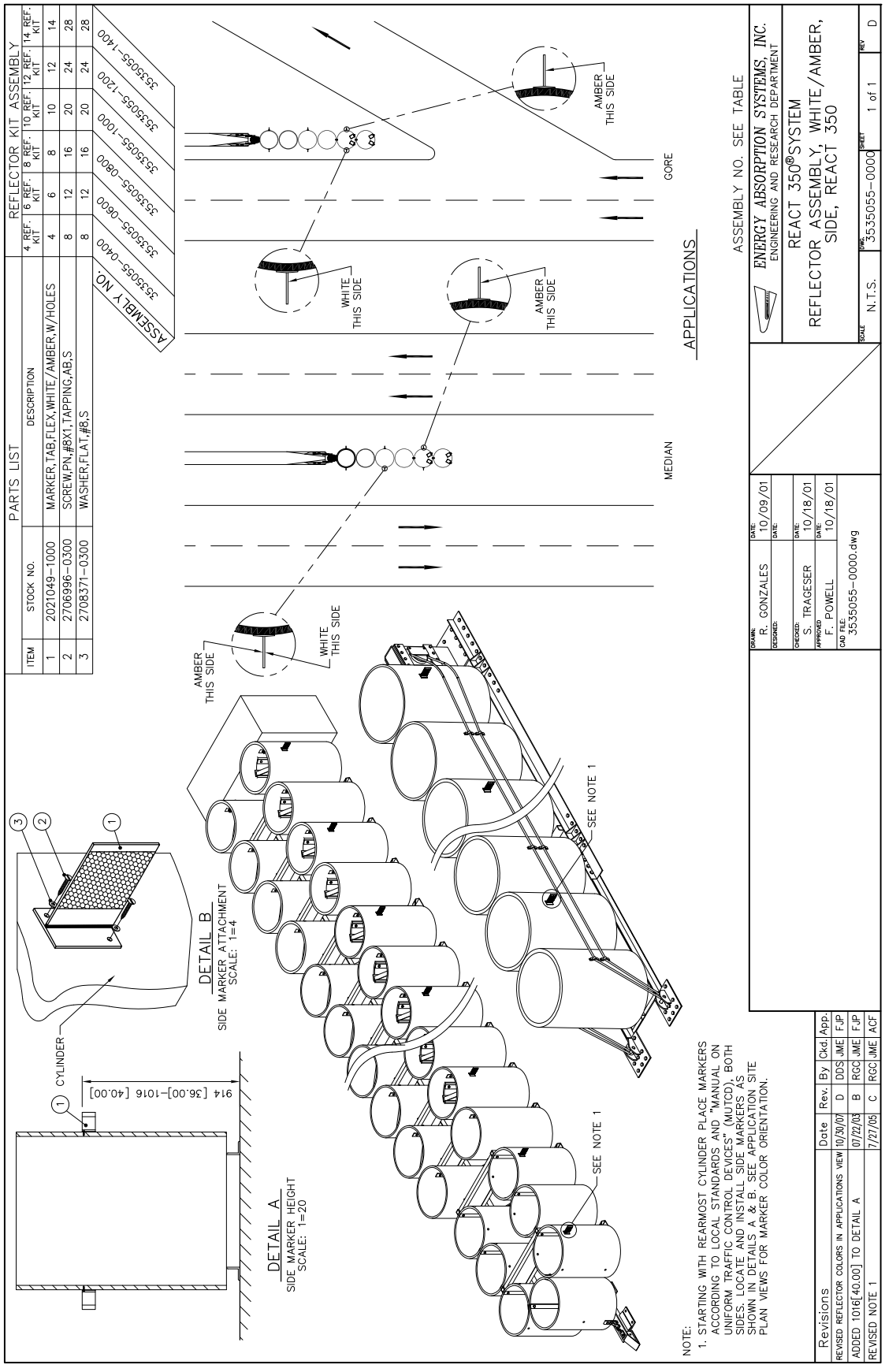
NOTES:

1. THE SCOPE OF THIS DRAWING IS RESTRICTED TO THE ATTACHMENT OF STANDARD W–BEAM GUARDRAIL IN A UNIDIRECTIONAL APPLICATION TO THE REACT SYSTEM. ALL DOWNSTREAM HARDWARE TO BE DESIGNED BY OTHERS. POST AND BLOCKOUT MATERIALS, POST SPACINGS, ETC. TO BE PER CONTRACT PLANS, STATE STANDARDS OR AS DIRECTED BY RESPONSIBLE AGENCY. FOR BIDIRECTIONAL APPLICATIONS REFER TO DRAWING #3535048–0000.
2. FACE OF TRANSITION PLATE TO FACE OF TRANSITION PLATE DIMENSION IS APPROXIMATELY 381mm [15"].
3. DIMENSIONS ARE IN MILLIMETERS [INCHES] UNLESS OTHERWISE SPECIFIED.
4. EXISTING STUDS, WASHERS, AND NUTS TO REMAIN. INSTALL TRANSITION PLATE ON TOP OF EXISTING HARDWARE.
5. ITEMS 2–7 ARE STANDARD HIGHWAY HARDWARE & ARE TO BE SUPPLIED BY CUSTOMER.
6. TRANSITION ASSEMBLIES ARE SUPPLIED AS ACCESSORIES AND ARE ORDERED SEPARATELY.

ASSEMBLY NO. 4720 (ITEM 1)

DRAWN: D. Kohfeld	DATE: 1/8/01	ENERGY ABSORPTION SYSTEMS, INC. ENGINEERING AND RESEARCH DEPARTMENT	
DESIGNED:	DATE:	REACT 350®SYSTEM	
CHECKED: KRM	DATE: 3/6/01	TRANSITION ASSY,SC BU,UNI,REACT 350	
APPROVED: B. Burgess	DATE: 3/6/01		
CAD FILE: 3535053–0000.dwg		SCALE: 1:30	DWG.: 3535053–0000 SHEET: 1 of 1 REV

REACT 350® (36")


PARTS LIST
ITEM
STOCK NO.
DESCRIPTION
1
20210349-1000
MARKER,TAB,FLEX,WHITE/AMBER,W/HOLES
2
2706996-0300
SCREW,PN,#8X1,TAPPING,AB,S
3
27083771-0300
WASHER,FLAT,#8,S
REFLECTOR KIT ASSEMBLY
4 REF. KIT
6 REF. KIT
8 REF. KIT
10 REF. KIT
12 REF. KIT
14 REF. KIT
4
6
8
10
12
14
8
12
16
20
24
28
8
12
16
20
24
28
ASSEMBLY NO.
3535055-0400
3535055-0600
3535055-0800
3535055-1000
3535055-1200
3535055-1400
APPLICATIONS
MEDIAN
CORE
WHITE THIS SIDE
AMBER THIS SIDE
AMBER THIS SIDE
WHITE THIS SIDE
AMBER THIS SIDE
SEE NOTE 1
SEE NOTE 1
DETAIL B
SIDE MARKER ATTACHMENT
SCALE: 1=4
CYLINDER
914 [36.00]-1016 [40.00]
DETAIL A
SIDE MARKER HEIGHT
SCALE: 1=20
NOTE:
1. STARTING WITH REARMOST CYLINDER PLACE MARKERS ACCORDING TO LOCAL STANDARDS AND "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD), BOTH SIDES. LOCATE AND INSTALL SIDE MARKERS AS SHOWN IN DETAILS A & B. SEE APPLICATION SITE PLAN VIEWS FOR MARKER COLOR ORIENTATION.
Revisions
Date
Rev.
By
Chkd.
App.
REVISED REFLECTOR COLORS IN APPLICATIONS VIEW
10/30/07
D
DDS
JME
FJP
ADDED 1016[40.00] TO DETAIL A
07/22/03
B
RGC
JME
FJP
REVISED NOTE 1
7/21/05
C
RGC
JME
ACF
DRAWN: R. GONZALES DATE: 10/09/01
DESIGNED: DATE:
CHECKED: S. TRAGESER DATE: 10/18/01
APPROVED: F. POWELL DATE: 10/18/01
CAD FILE: 3535055-0000.dwg
ASSEMBLY NO. SEE TABLE
ENERGY ABSORPTION SYSTEMS, INC.
ENGINEERING AND RESEARCH DEPARTMENT
REACT 350® SYSTEM
REFLECTOR ASSEMBLY, WHITE/AMBER, SIDE, REACT 350
SCALE N.T.S.
DWG 3535055-0000
SHEET 1 of 1
REV D

Notes

Customer Service Department

USA
Phone 1-888-323-6374 **Fax 1-312-467-1356**

Asia Pacific
Phone +65 6276 3398 **Fax +65 6276 6218**

Europe
Phone +44-1473-221-105 **Fax +44-1473-221-106**

35 East Wacker Dr., 11th Floor
Chicago, IL 60601-2076
Engineering and Manufacturing Facilities:
Rocklin, California and Pell City, Alabama

ENERGY ABSORPTION
SYSTEMS, INC.

A Quixote Company
Saving Lives By Design

Rev. 1/15/08

http://www.energyabsorption.com/