Transportation Research Center Inc. independently manages a transportation research and testing facility, serving the needs of industries, governments, trade associations, and educational organizations worldwide. Transportation Research Center (the Center) is located near East Liberty, Ohio, approximately 40 miles northwest of Columbus. Because much of TRC Inc.’s work is proprietary, many projects are described in general terms. However, the information presented on the following pages will give the reader an appreciation of the extent of TRC Inc.’s capabilities.

History

The Center was developed by the State of Ohio as a transportation research and development proving ground with the purpose of encouraging motor vehicle research and development activities in Ohio. The Center began testing in 1974. In 1979, the State of Ohio’s Transportation Research Board entered into a management agreement with The Ohio State University’s (University) College of Engineering to oversee the operations of the Center. In 1987, the Center was sold as part of an economic inducement to Honda of America Manufacturing, Inc. to build an automobile plant in Ohio. In order to insure that the business of the Center could be preserved without violating the confidentiality of the Center’s customers, the University established Transportation Research Center Inc., a non-profit corporation. TRC Inc. is governed by a Board of Directors chaired by the University’s Dean of College of Engineering.

Mission Statement

As the leading independent provider of testing, development and research, TRC helps the transportation industry create safer, improved products. We will accomplish our mission through high-quality services at our world-class facility, while satisfying stakeholders’ expectations.

Vision

Customer satisfaction is our competitive advantage.

Quality Policy

We will strive to meet or exceed customer expectations.

Environmental

We will strive to protect the environment and assure safe and healthful working conditions.

“ISO 9001 and ISO 14001 Registered”

Equal Employment Opportunity

It is the policy of Transportation Research Center Inc. to provide equal opportunity in all areas of employment practices, without regard to race, color, religion, national origin, sex, age, disability, veteran status, or any other reason prohibited by law.
I am pleased to present, on behalf of our staff, the annual report for Transportation Research Center Inc. for the fiscal year ending June 30, 2004.

Revenue from all sources for Fiscal Year 2004 was $41.9 million, reflecting a 5% increase from the previous year. This figure represents TRC Inc.’s highest revenue on record by topping Fiscal Year 2003’s best revenue of $39.7 million. However, TRC Inc. expects a modest decrease in revenue of 1% to $41.4 million due to the restructuring of our management fee with an anticipated surplus of $2.1 million for the coming fiscal year.

This year marks a milestone for Transportation Research Center. In 2004, TRC celebrates its 30th anniversary of automotive testing. Since 1974, we have served over 800 customers worldwide. The Center’s facilities have been expanded, and TRC Inc. has increased its service offerings to accommodate customer testing needs. We have achieved ISO 9001 and 14001 accreditations, and we have gained a reputation for being one of the finest testing facilities available anywhere in the world. For this, I would like to thank TRC Inc.’s stakeholders, especially our staff, for their untiring dedication to the company. I would also like to thank our Board of Directors for their continued guidance and support throughout the years.

Respectfully,

R. D. “Rick” Gildow
President
Introduction

This year Transportation Research Center (the Center) marks its 30th anniversary of automotive testing. The Center has gained a reputation as the world’s leading vehicular testing facility. This reputation has been maintained, not only because of the quality of the services offered, but also because the challenges that each year brings are viewed as new and exciting opportunities for growth.

Since the Center began operations in 1974, new programs have been developed for customers in the areas of collision avoidance, energy absorption, fuel economy, emissions, durability, performance, noise, crash simulation, and crashworthiness. Please see the timeline presented on page five of this report for an overview of our progress since we began. Test programs evaluate the performance of passenger cars, trucks, airplanes, tracked vehicles, off-road vehicles, recreational vehicles, buses, motorcycles, electric vehicles, and automotive components. TRC Inc. schedules and monitors all facilities with primary importance placed on the safety and security of each customer.

TRC Inc. is continually improving and adapting to meet changing customer needs. To enhance the Center and TRC Inc.’s overall service offerings, new facilities have been designed to assist customers in developing safe and marketable products. To complement our new facilities, TRC Inc. has acquired ISO 9001 and 14001 registrations. These registrations demonstrate TRC Inc. ’s abiding commitment to meeting or exceeding the expectations of our customers. We will continue to measure and improve the quality of the services we provide.

The following pages of this report are dedicated to describing each of TRC Inc.’s primary business areas — Contract Services, Durability & Dynamics Operations, and Impact Laboratory Operations — including a brief review of their activities and accomplishments during the past year.
Timeline of TRC from 1962 to 2004

Research Facility Established by The Ohio State University and Ohio Division of Highways

Facility Approved

Groundbreaking

First Test on Vehicle Dynamics Area

Off-Road Course

8100 Acres Acquired

NHTSA/Office of Defects Investigation

Track Complete Official Opening

NHTSA Engineering Test Facility

TESTING

FACILITY CONSTRUCTION

FACILITY DESIGN

NHTSA Safety Research Lab

Eastern Field Test Center

Established as an EPA Coastdown Test Center

Corrosion Facility

TRC Inc. Created

Epoxied Pad

Paved Rough Road & Chipping Corrosion Course

Winding Gravel Road

Noise, Vibration and Handling Durability Courses

Components Testing Laboratory

Research Park Construction

ISO Noise Pad and Clean Water Trough

CONTINUOUS TESTING

CONTINUOUS CONSTRUCTION

CONTINUOUS DESIGN

Additional Brake Slope

Off-Road Mobility

1.5 Mile Winding Road

25 year Anniversary

Japanese Nat’l Traffic Safety and Environment Lab Certification

Ride & Handling Course

Wet Handling Course

Paved 10% & 23% Slopes

Skid Car System

Ride Quality Courses

25th Anniversary Celebration

Japan’s National Traffic Safety and Environment Laboratory Certification

Ride & Handling Course

Wet Handling Course

Paved 10% & 23% Slopes

Skid Car System

Ride Quality Courses

Continental Testing

Continual Construction

Continual Design

30th Anniversary of Crosswind Generators

ISO 9001 Registered

Repaved 50-acre Vehicle Dynamics Area

Emisssions Lab Acquired

ISO 14001 Registered

Crash Lighting Upgrade

PACE Award Sponsor

Calibration Lab

Automated Fuel Plaza

30th Anniversary Celebration

Japan’s National Traffic Safety and Environment Laboratory Certification

Ride & Handling Course

Wet Handling Course

Paved 10% & 23% Slopes

Skid Car System

Ride Quality Courses

Continental Testing

Continual Construction

Continual Design
The Facilities and Equipment

Under the terms of a management agreement, Transportation Research Center Inc. (TRC Inc.) exclusively schedules the facilities and equipment of the Center. In addition, TRC Inc. maintains the facilities and buildings, which include approximately 145 lane-miles of improved and unimproved road surfaces and 328,000 square feet of building space. Annual extensive facility upgrades are made through maintenance and repair, procurement of equipment, and facility construction based on customer survey feedback.

During Fiscal Year 2004, Durability and Dynamics Operations (DDO) saw the acquisition of an SEA, Ltd. automated steering controller for use in National Highway Traffic and Safety Administrations’s (NHTSA’s) New Car Assessment Program (NCAP) rollover procedure. The rollover procedure is an automated driving test that determines a vehicle’s level of wheel lift or the point at which a vehicle may tip over. The data collected from this test, along with the data from a static stability measurement, is combined to create a star rating that NHTSA publishes to inform consumers on vehicle safety at the point of purchase. This equipment should be a significant revenue generator for DDO as all vehicle manufacturers, along with many, if not all, larger component and tire manufacturers, have a vested interest in this testing.

DDO also saw the installation of ride roads along the edge of the northeast straight-a-way of the high speed test track (HSTT). These ride roads will complement our current vehicle dynamics area-based roads as they are enclosed within a security fence that will allow uncamouflaged testing of prototype vehicles during daylight hours.

For Fiscal Year 2004, the Impact Laboratory designed and completed construction of a roadside safety feature test bed to allow for National Highway Cooperative Research Program (NCHRP) 350 testing. This area will be used to test guard rails, safety barriers, signposts, bridge abutments and other roadside safety features.

TRC Inc. has always been concerned with understanding our customers’ expectations. In response to customer demands during this past year, we hope to continued our stature as one of the world’s best proving grounds.
Durability and Dynamics Operations (DDO) continued the growth it experienced during Fiscal Year 2003 as record revenues were up 11% with 73.6% originating from 19 vehicle manufacturers. As in the past, test driving is the main focus for DDO. Test driver hours totaled 246,485 reflecting an expected modest decrease of 3.9% since Fiscal Year 2003’s hours were the highest on record. The benefit of a full year’s worth of Emissions Laboratory business also produced sizeable gains as Fuel and Lubes Testing grew from 5% of DDO’s customer base to 9.5%, resulting in 5.5% of the total revenues for DDO. The following table describes the percentage of business by industry classification.

<table>
<thead>
<tr>
<th>Industry Classification</th>
<th>FY 2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle Manufacturers</td>
<td>73.6%</td>
</tr>
<tr>
<td>Component Manufacturers</td>
<td>10.2%</td>
</tr>
<tr>
<td>Fuels &amp; Lubes</td>
<td>9.5%</td>
</tr>
<tr>
<td>State and Federal Organizations</td>
<td>3.8%</td>
</tr>
<tr>
<td>Independent Labs</td>
<td>1%</td>
</tr>
<tr>
<td>Litigation/Engineering Firms</td>
<td>1%</td>
</tr>
<tr>
<td>Other</td>
<td>1.2%</td>
</tr>
</tbody>
</table>

The majority of testing involves powertrain, rough road, chassis, corrosion, and fuel additive durability. In addition, DDO conducts brake, fuel economy, skid truck correlation and vehicle handling testing to FMVSS, SAE, and ASTM standards. DDO maintains a 24-hour-a-day, seven-day-a-week operation for rapid, but safe, mileage accumulation.

Fiscal Year 2004 was a busy year for DDO, as we worked diligently to encompass the Emissions Laboratory into the operations after acquiring the necessary equipment late in the fourth quarter of Fiscal Year 2003. New instrumentation was purchased and many facility upgrades were incorporated. This should continue through FY 2005 as we plan to purchase a new dynamometer to support our emissions customers.

DDO has always been concerned with understanding our customers’ expectations. In response to customer demands during this past year, we have purchased a steering robot controller for use in the New Car Assessment Program (NCAP) Rollover procedure for dynamic rollover resistance rating testing. This dynamic test uses a steering maneuver resulting in a drive path similar in shape to a fishhook.

Additionally, DDO was awarded a contract with the U.S. Department of Transportation to conduct rollover testing on a number of vehicles. As published by the National Highway Traffic and Safety Administration (NHTSA), these test results are part of the measurement used along with a static formula to determine a vehicle’s propensity to roll.

With continued economic growth, improvements to the Emissions Laboratory, and the installation of new facilities and systems to meet our customers’ ever-increasing needs, we expect to see a modest increase in both test driving hours and overall revenue for DDO in Fiscal Year 2005.
The Impact Laboratory Operations (ILO) crash testing experienced continued growth from Fiscal Year 2003. A total of 359 crash tests were performed in fiscal year 2004 resulting in a 4% increase from Fiscal Year 2003. In contrast, 142 impact simulation tests were performed in Fiscal Year 2004 showing a decline of 37% from Fiscal Year 2003. The majority of ILO’s testing involved development and certification of automobiles and light trucks to meet occupant protection requirements established by the U.S. Federal and Canadian Motor Vehicle Safety Standards, European Economic Community, and manufacturers.

ILO continued to support government contracts for the National Highway Traffic Safety Administration, Vehicle Research and Test Center (NHTSA/VRTC), and Volpe National Transportation Systems Center. Government crash testing for front and side occupant protection and fuel system integrity, sled simulation testing, static fixture structural integrity, and crash dummy and standards development research programs comprised 18.7% of ILO’s activity. The following table describes the percent of business by industry classification:

<table>
<thead>
<tr>
<th>Industry Classification</th>
<th>FY 2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle Manufacturers</td>
<td>74.8%</td>
</tr>
<tr>
<td>Government Agencies</td>
<td>18.7%</td>
</tr>
<tr>
<td>Engineering/Litigation</td>
<td>2.1%</td>
</tr>
<tr>
<td>Component Manufacturers</td>
<td>3.4%</td>
</tr>
<tr>
<td>Other</td>
<td>3%</td>
</tr>
</tbody>
</table>

ILO strives to understand customers’ expectations and respond accordingly. As a result, ILO continues to improve data quality from high-speed images. In Fiscal Year 2003 we purchased nine high-speed digital cameras, and we augmented that purchase this year with seven digital cameras to bring our total to 22. Additionally, we acquired a large range of child seats to perform FMVSS 208 low risk deployment testing. Most importantly, a major design and construction project was undertaken to develop a test bed for roadside safety features. With the accumulation of these purchases and improvements, we will diversify our revenue streams and, in turn, increase the importance of ILO to the organization.
The mission of Contract Services is to provide customers with high quality engineering and technical support to improve the safety, quality, and competitiveness of their products. Customers of Contract Services include automotive manufacturers, component manufacturers, and the federal government. The following table describes the percentage of business by industry classification for FY 2004:

<table>
<thead>
<tr>
<th>Industry Classification</th>
<th>FY 2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government Agencies</td>
<td>50.0%</td>
</tr>
<tr>
<td>Component Manufacturers</td>
<td>29.7%</td>
</tr>
<tr>
<td>Vehicle Manufacturers</td>
<td>20.3%</td>
</tr>
</tbody>
</table>

Contracts Services is comprised of technical personnel whose services are dedicated to specific customers on a full-time basis. Their work predominately involves research analysis, lab testing, and procedure development. The personnel in these groups include engineering technicians, engineering assistants, photographers, designers, research engineers, and research scientists.

Many of our employees hold memberships in professional societies such as the Society of Automotive Engineers (SAE), and play major roles on various technical committees. Numerous technical papers were authored or co-authored by our staff members during the past year. The affiliations, committee work, and published writings bring recognition and industry-wide professional exposure to TRC Inc.

Employment in the Contract Services group increased 8.1% over the prior fiscal year. Improvements in our hiring process led to increased efficiencies in filling jobs and, therefore, increased customer satisfaction. We also successfully renegotiated our contract with a large component manufacturer for a three-year period. A moderate increase in revenues for Fiscal Year 2005 is expected.

We look forward to the challenge of continuing to improve our services and exceeding customer expectations!
The Activities

Quality Planning, Assurance, Improvement, and Control

TRC Inc.'s Quality Policy:

We will strive to meet or exceed customer expectations.

TRC Inc. is committed to providing services that meet or exceed the expectations of its customers and is dedicated to a quality policy which is understood, implemented, and maintained at all levels of the organization.

Each of TRC Inc.'s five Primary Business Functions (Crash, Sled, Durability, Dynamics, Contract Services) has its own quality system process definition (SPD) team, which has determined the expectations of its customers and the technical requirements necessary to meet those expectations. Based on these expectations and requirements, performance goals and objectives have been established and are monitored throughout the organization and through customer surveys. Performance ratings and internal process measurement results are reviewed on a regular basis, and potential performance issues and preventive actions are managed through a formal corrective and preventive action system.

ISO 9001 Registration

As part of TRC Inc.'s commitment to customer satisfaction and continual improvement, the organization acquired registration to the ISO 9001:1994 in May 2000 and successfully acquired/upgraded registration to the ISO 9001:2000 revision of the Standard in May 2002. The ISO 9001 Standard is an international model for quality management systems. Organizations are required to identify and document best business practices, and to implement these practices to achieve consistent quality services to meet and exceed customer expectations.

Following registration, the registrar conducts surveillance audits to ensure continuing compliance to the Standard. Since the initial registration, TRC Inc. has maintained compliance through five surveillance audits. The 9001:2000 version includes a process-based quality management system model with an increased focus on customer satisfaction and continual improvement. For TRC Inc., the process of upgrading to the 9001:2000 Standard included streamlining the internal audit process and utilizing process data to further drive improvements. TRC Inc. will continue to be dedicated to providing quality service to our customers through completion of our company-wide quality objectives of accurate services, timely services, and well-planned and organized services.

ISO 14001 Registration

TRC Inc. received its ISO 14001 registration in October 2002. ISO 14001 is a model for environmental management systems and addresses the management of business activities impacting the environment. Although not required by the ISO 14001 Standard, TRC Inc. has incorporated health and safety into our environmental management system. TRC Inc.'s external registrar will conduct its next surveillance audit in October 2004.

Environmental, Health and Safety (EH&S) Policy

TRC Inc.'s Policy Statement

We will strive to protect the environment and assure safe and healthful working conditions.

TRC Inc.'s EH&S Policy Principles

1. TRC Inc. is committed to continual improvement in TRC Inc.’s environmental, health, and safety program by setting objectives and targets and by evaluating our performance to those goals.

2. TRC Inc. is committed to prevention of pollution by using processes and materials that prevent, reduce, or minimize pollution. This includes recycling, control mechanisms, material substitution, and efficient use of resources.

3. TRC Inc. is committed to compliance with all applicable environmental, health, and safety regulations, laws, and other internal and external requirements.

4. TRC Inc. provides education and training to ensure understanding of the environmental, health, and safety policies throughout the organization.

Through preparation for the ISO 14001 registration audit, TRC Inc. has identified applicable significant environmental aspects and their impacts on the surroundings. TRC Inc. is focusing its efforts on the following aspects of its activities:

- Waste
- Natural Resources
- Air Emissions
- Hazardous Materials
- Resource Conservation
- Occupational Health & Safety

Targets have been established at the company-wide or area-specific level to measure the organization’s performance in meeting these objectives.
The third year recipient of the renewable scholarship is Abigail Moyer, who is majoring in Mechanical Engineering at Purdue.
Governance

Board of Directors

Mr. George Arnold
Attorney at Law
TRC Inc. Vice Chairman of the Board

Dr. Thomas J. Rosol
Interim Vice President for Research
The Ohio State University

Ms. Greta J. Russell
University Controller
The Ohio State University

Dr. James C. Williams
Dean of the College of Engineering
The Ohio State University
TRC Inc. Chairman of the Board

Mr. Rick D. Gildow
Transportation Research Center Inc.
TRC Inc. President

Other Officers

Mr. Shawn T. Ahern, CPA
TRC Inc. Vice President
Treasurer of the Board

Mr. Milton J. Dunlop
TRC Inc. Vice President

Ms. Jill R. Macy
TRC Inc. Vice President

Mr. John W. Phillips
TRC Inc. Vice President

Mr. Stacy Weislogel
Associate Dean
College of Engineering
The Ohio State University
TRC Inc. Board Secretary

General Counsel
Mr. John S. De Libera

Independent Auditors
Deloitte & Touche LLP

Board Changes
Dr. James C. Williams, Chairman of the TRC Inc. Board, completed his term as Dean of the College of Engineering and will be returning to the faculty effective July 1, 2004. William A. "Bud" Baeslack III will replace Dr. Williams. Dr. Baeslack returns to the Ohio State University from Rensselaer Polytechnic Institute in Troy, New York, where he was Dean of the School of Engineering. We are pleased to welcome back Dr. Baeslack, who previously served on the TRC Inc. Board from 1998 to 1999. The TRC Inc. Board has one vacancy in the appointed class of Directors.