

# A.1 Executive Summary

## Introduction

With more than 100 people moving to Austin each day, drivers have experienced dramatically increased congestion along the segment of SH 71 from Presidential Boulevard to SH 130. The roadway provides a crucial connection to the Austin-Bergstrom International Airport (ABIA) and Bastrop. Prompt completion of the SH 71 Toll Lanes Project (the “Project”) will improve mobility and safety while reducing travel time for motorists in the region.

Balfour Beatty Infrastructure, Inc. (BBII) is a globally recognized infrastructure contractor that has been doing business in the area for 20 years. As a corporate citizen of Austin with employees who live and work in the community, BBII understands the importance of this project to the Texas Department of Transportation (TxDOT) and the region.

BBII has assembled a team with the ideal combination of experience and knowledge to achieve TxDOT’s goals for designing and constructing the Project. Our Texas-based team of design and construction professionals is committed to providing TxDOT with maximum benefits from design-build (DB) delivery while focusing on project-specific efficiencies in maintenance of traffic, cost, environmental protection, quality, safety, schedule, DBE participation, and coordination with TxDOT.

## Proposer/Equity Member

### Balfour Beatty Infrastructure, Inc. – Lead Contractor

BBII is a wholly owned subsidiary of Balfour Beatty plc, an engineering, construction, and services group serving the international markets for rail, road, utility systems, buildings, and complex structures. BBII’s Texas division primarily serves the highway infrastructure markets for TxDOT, the North Texas Turnpike Authority, and the Harris County Toll Road Authority. Successful projects include the President George Bush Turnpike, the Dallas North Tollway, and multiple sections of Sam Houston Toll Road, Katy Freeway, and Westpark Tollway in Houston. Additionally, BBII worked in joint venture to deliver the SH 130 project, the SH 161 project and currently the Dallas Horseshoe project. BBII is ready to apply its experience and DB best practices to the SH 71 Toll Lanes Project.

## Major Participants

### Parsons Brinckerhoff, Inc. – Lead Designer

Parsons Brinckerhoff began providing transportation design in Texas in 1949 and has maintained a full-service presence in Austin since 1985. Significant clients include TxDOT, City of Austin, Capital Area Metropolitan Planning Organization (MPO), City of San Antonio, Alamo Area MPO, HCTRA, NTTA, Dallas Area Rapid Transit, and DFW International Airport. Parsons Brinckerhoff has participated in numerous DB projects worldwide in various capacities, including serving as lead designer for the DFW Connector and the Dallas Horseshoe project. Parsons Brinckerhoff’s strong knowledge of the regulatory and business environment in Texas and working relationships in the Austin area will promote efficient and cost-effective solutions for the Project.

### Raba Kistner Infrastructure – Independent Quality Firm

Raba Kistner Infrastructure (RKI) is a privately held Texas corporation that has provided innovative engineering solutions for both the public and private sectors on Texas roadway and bridge projects for the past 44 years. Applying extensive Texas and local experience, RKI will ensure that design and construction meet TxDOT’s expectations. Recent Texas projects include SH 161 Western Extension, Liberty Parkway (Spur 601), U.S. 290 East, and SH 130 Segments 1-6. RKI is familiar with and has developed systems to support owner verification testing, including audit and statistical validation requirements of FHWA. Having worked with BBII and TxDOT as an independent quality firm on multiple projects, RKI brings knowledge and working relationships that will drive verifiable quality and keep the project on schedule.

### Ramming Paving Company – Construction Subcontractor

Ramming Paving Company serves central Texas from its home office in Austin. The company offers a full range of paving services, offering quality and dependability in all aspects of the asphalt industry. Ramming Paving is committed to maintaining the highest quality for clients including TxDOT, the City of Austin, Travis County, and other local municipalities as well as numerous contractors. Ramming Paving was a key subcontractor to BBII on the SH 45 SE Toll Road Project in Austin, responsible for placing 167,000 tons of asphalt under a quality assurance/quality control (QA/QC) protocol similar to protocol for DB delivery. With Ramming Paving’s involvement and innovative procedures for asphalt recycling utilized, the SH 45 SE project was the recipient of the 2010 Quality in Construction Award from the National Asphalt Pavement Association.

## Non-Major Participants

### Beverly Silas & Associates – Public Outreach Coordination

Beverly Silas & Associates (BSA) is a privately owned, DBE, public affairs/public involvement firm founded in 2007 and headquartered in Austin. Recognized by the Conference of Minority Transportation Officials as the 2011 Woman-Owned Business of the Year and honored as the 2010 Women’s Transportation Seminar Heart of Texas Chapter Woman of the Year, BSA has well-established contacts throughout the local community. BSA is working with Parsons Brinckerhoff, the City, and TxDOT to provide public outreach services for the IH 35 Corridor Development Program. Other projects have included FM 969 Corridor Development, North Lamar Boulevard/Burnet Road Corridor Development, City of Austin Urban Rail, U.S. 290E Context Sensitive Design, and U.S. 290E/Springdale Road Overpass.

### MWM Design Group – Survey

MWM Design Group (MWM) is an Austin DBE firm providing full-service professional surveying for over 30 years. MWM has the sufficient resources to provide surveying services to support the Project during the design phase. The firm has provided comprehensive surveying services through on-call contracts with the TxDOT Austin District for 2006-2008 and 2009-2011.

**P.E. Structural Consultants – Structures Design**

P.E. Structural Consultants (PESC) is an Austin-based, woman-owned DBE, structural engineering consulting firm specializing in the structural design and architectural engineering of bridges and buildings. Founded in 1992, the firm’s experience includes the design of major bridges and transportation structures, structural investigation and retrofit, and construction support. PESC has a long history of service to TxDOT and an extensive resume of notable bridge and transportation structures. PESC played an integral role providing bridge, aesthetic, and toll facility structural design for four DB projects in Austin including SH 130, U.S. 290E, U.S. 183A, and SH 45. The firm has also supported as three DBs outside of Austin: the Americas Interchange, Spur 1601, and Loop 1604. PESC designed the ABIA Terminal Bridge as a value-engineering redesign.

**STL Engineers – Quality Assurance**

STL Engineers (STL) is a full-service, DBE-certified materials testing and environmental consulting firm based in Dallas. STL will support RKI with QA. Founded in 2003, STL has executed indefinite quantity/indefinite delivery contracts with TxDOT for materials testing and geotechnical engineering services. The firm has also performed technical oversight testing for the LBJ Expressway and SH 190 as well as owner verification testing on the PGBT Eastern Extension and the Dallas Horseshoe project.

**TBG Partners – Aesthetics and Landscaping Design**

TBG Partners (TBG) is a landscape architecture and planning firm founded in Austin in 1987. The firm includes more than 100 professionals in landscape architecture, planning, and environmental services. An employee-owned corporation, TBG provides development of sustainable roadsides and context-sensitive transportation solutions to develop transportation infrastructure that reduces maintenance costs, promotes regional character, provides enhanced safety, and affords enhanced ecological function. TBG is

currently developing context-sensitive and gateway concept design solutions for the Bergstrom Expressway/U.S. 183S project. At ABIA, TBG renovated all airport signage and wayfinding graphics. The firm is also working with the City of Austin on the Third Street Renovation, a Great Streets Program to create a consistent urban streetscape that is safe for pedestrians.

**The Rios Group, Inc. – Utility Coordination**

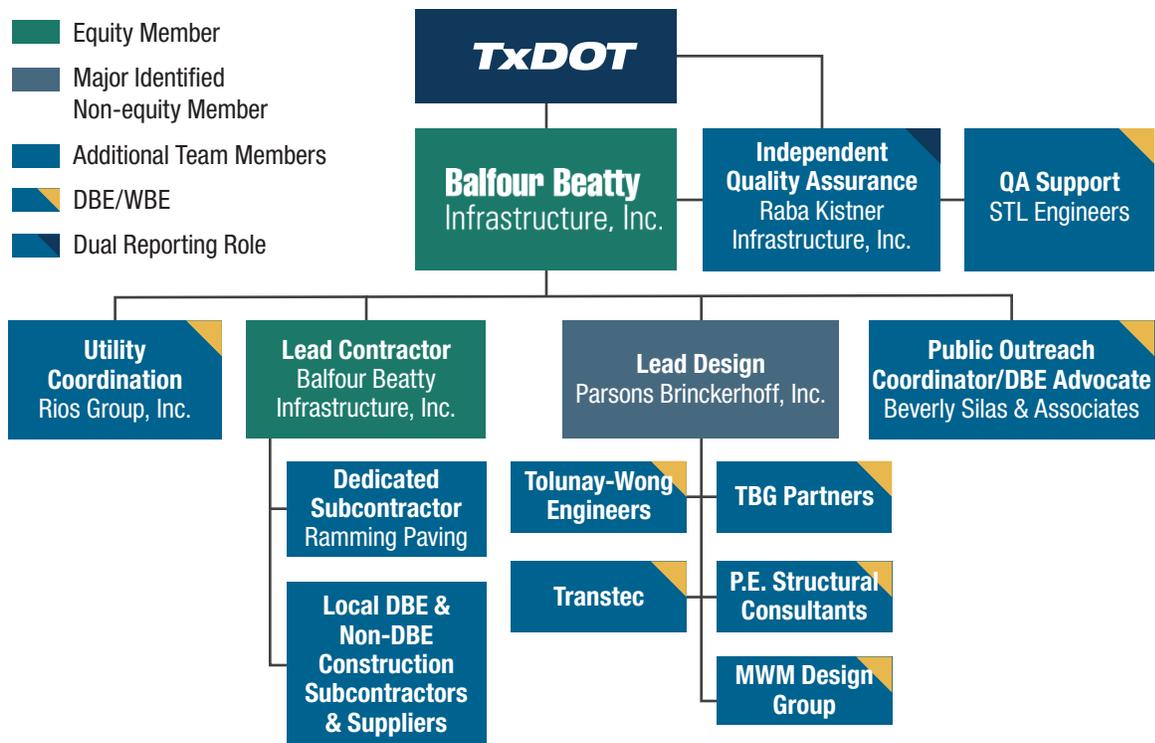
The Rios Group, Inc. (TRG), is headquartered in Fort Worth, where the company maintains a staff of more than 30 people, with additional offices in Dallas, Houston, Austin, and Lubbock. Through a divestiture, TRG purchased the established utilities division of Gorrondona & Associates, Inc., which included subsurface utility engineering, utility coordination, all personnel, and equipment. TRG is a certified DBE with TxDOT.

**The Transtec Group, Inc. – Pavement Design**

The Transtec Group, Inc. (Transtec) is a global, DBE-certified pavement engineering firm based in Austin. Transtec has earned a reputation for developing concepts that lower cost and increase performance. Transtec has served as the pavement designer and engineer of record on more than eight major DB projects, including U.S. 183A in Austin; DFW Connector, SH 121 Chisholm Trail, and I-35E in Dallas; SH 99 Segments F1, F2, and G in Houston; and U.S. 77 in Corpus Christi.

**Tolunay-Wong Engineers, Inc. – Geotechnical Services**

Tolunay-Wong Engineers, Inc. (TWE) was founded in 1993 in Houston and has grown to a staff of more than 250 employees in Texas and Louisiana. TWE provides geotechnical engineering, construction materials testing, and deep foundations testing. TWE is a private, minority-owned firm and Texas Historically Underutilized Business. The firm’s quality system is compliant with ASTM E329 and ISO Guide 17025-2005. TWE is also compliant with the NQA-1 quality standards developed by the American Society of Mechanical Engineers for field exploration, laboratory testing, and nuclear



facility engineering. The firm's DB and toll lanes projects include the DFW Connector, Grand Parkway (Segments F1, F2, and G on SH 99), and U.S. 290E from Decker Lane to FM 973. TWE also provided geotechnical evaluations for Austin Executive Airport in Manor, Texas.

### A.1.a Summary of Changes to Proposer's Qualifications Statement

BBII has made no changes to the qualifications statement.

### A.1.b Summary of Changes in Proposer's Organization and Key Personnel since Submission of Qualifications Statement

The only change to key personnel since the submission of BBII's qualifications statement is the addition of Brian Schoenemann, PE, as an alternate for construction quality acceptance manager. In the case that Airport Expressway Partners is selected for the SH 183 Managed Lanes project, Mr. Schoenemann will replace Bryan Raschke, PE, and commit 100% availability to the Project.

### A.1.c Summary of Proposed Management, Decision-Making, and Day-to-Day Operation Structure

The BBII team is led by Jeff Berger, our project manager, who will be TxDOT's single point of contact for the Project. Through Mr. Berger's experience managing the complex IH 10 Katy Freeway projects, he has developed the key qualifications needed to lead the SH 71 Toll Lanes DB project. Mr. Berger will make the critical day-to-day decisions necessary to advance the project. TxDOT will benefit from a project manager who can apply best practices used on previous TxDOT projects without a learning curve.

BBII's team includes an executive committee consisting of senior executives from design, construction, and QC. The executive committee will support the project management team during project start-up and ensure the Project is mobilized quickly and efficiently while maintaining solid relationships with TxDOT and stakeholders. They will continue supporting management throughout the life of the Project.

Our past DB experience has shown that a strong partnership between all project participants is critical to making quick decisions and preventing disputes. Our project team brings a history of working together on complex projects such as SH 130 and the Horseshoe. With shared successes on infrastructure projects throughout the state, the BBII team offers TxDOT the benefit of a team with an established understanding of the quality and safety programs, minimized disputes through an understanding of each other's capabilities, and faster resolution of any issues that arise.

### A.1.d Summary of Project Development Plan

#### Summary of Technical Solutions

##### Our Commitment to Improving Mobility

As residents of metropolitan Austin and central Texas, the key personnel proposed by the BBII team know first-hand the challenges of driving the SH 71 corridor. The team's commitment is to start the Project promptly upon Notice to Proceed and finish construction within 730 days. We will

work in partnership with TxDOT and the CTRMA to enhance safety, reduce congestion and reduce travel time along the SH 71 corridor.

#### Alternative Technical Concepts

The BBII team submitted 11 Alternative Technical Concepts (ATCs) to TxDOT demonstrating our commitment to design and construction innovations that we believe would add value to the Project. As a result, 9 ATCs were either approved or conditionally approved and 8 have been included in our technical solution. Throughout the project life cycle, our team will use innovative thinking to provide improvements in design and construction that are appropriate to the highway corridor and lead to successful project delivery for all involved.

The TxDOT-approved ATCs have been incorporated into the proposal are presented in the table below.

ATC No.	Description	Proposal Cross-reference
ATC BBII-02	Improved Constructability of MSE walls	D.1.1.2.c Concept Plans for Walls
ATC BBII-04	TOM Wearing Course	D.1.1.3.e Pavement Design
ATC BBII-05	M-E design Methodology	D.1.1.3.e Pavement Design
ATC BBII-06	High Quality Prime Undercoat	D.1.1.3.e Pavement Design
ATC BBII-07	Revised Aesthetics for FM 973	D.1.1.2.a Concept Plans for Bridges
ATC BBII-08	Optimized Reinf Steel for Top Mat in Bridge Decks	D.1.1.2.a Concept Plans for Bridges
ATC BBII-09	Standardized Pylon Design	D.1.1.2.a Concept Plans for Bridges
ATC BBII-11	Uniform T551 Rail	D.1.1.2.a Concept Plans for Bridges

#### Construction Staging, Sequencing, Maintenance and Traffic Management

The BBII team developed a plan for construction staging and sequencing for the base scope of work with a minimum number of traffic phases while maintaining mobility and access to a high level. Key elements of our approach include the following:

- Completion of all major construction activity within three major phases;
- Advancing construction of the new FM 973 intersection into early stages of the project to provide initial benefit for local traffic along FM 973.
- Maintaining operation of both existing indirect left-turn (Michigan U-turn) intersections recently completed as part of the superstreet concept, to facilitate improved mobility and flexibility during nighttime and weekend restrictions as the FM 973 intersection is constructed;
- Early deployment and integration of CCTV cameras at Presidential Boulevard and FM 973, for use in traffic surveillance and monitoring during construction; and
- Close coordination with ABIA, including regular construction updates provided to airport representatives and rental car companies.

These strategies will allow our team to meet the project schedule and goals while satisfying all technical requirements to maintain specified numbers

of traffic lanes, limit closures, and promote a safe environment for both construction crews and those traveling through the work zone.

### Communication

Effective communication is vital to project delivery. BBII's successful experience on SH 130, SH 161, and Horseshoe proves that proper planning results in achieving design criteria, reducing construction costs, and improving ease of maintenance and access. Interdisciplinary design reviews are essential to remaining on schedule, resolving conflicts before they happen and allowing the design/team to effectively partner with TxDOT.

Prior to issuance of NTP 1, we will conduct a workshop with TxDOT to establish communication protocols that will facilitate timely decision-making to deliver the Project in compliance with the Design-Build Agreement (DBA). The workshop will include discussions on our project approach, mitigations to the risks we have identified, and establishment of design criteria. We refined these methods during the SH 130, SH 161, and Horseshoe DB projects, and we are dedicated to further improving them to develop and strengthen our working relationship with TxDOT.

### Environment

The BBII team will develop, operate and maintain a Comprehensive Environmental Protection Program for the Project to ensure environmental compliance with all applicable environmental laws and commitments. We will incorporate all guidelines of ISO 14001 to protect the environment. The BBII team anticipates addressing the following environmental issues:

- Cultural resources
- Hazardous materials
- Endangered Texas fatmucket mussel in Onion Creek
- Stormwater management
- Migratory birds at existing overpasses

BBII's Environmental Compliance Manager, Mark Preusse, PE, has experienced all these issues. Mr. Preusse will work with key members of the BBII team to design and integrate best practices into each project phase.

### Utilities

Upon NTP1, BBII will build upon pre-proposal work to facilitate cooperation with utility owners and minimize utility impacts. Our approach to utilities is based on our Utility Adjustment Concept Plan developed using the information from the Utility Conflict Matrix. BBII will update the plan and matrix as new or relocated utilities are found. Updating the schedule and communicating the status with TxDOT and the utility owners is necessary for effective planning and scheduling. We will implement an aggressive and comprehensive communication program to facilitate continued cooperation from each utility owner.

### Summary of Project Management Plan

A successful DB project needs a team structure that allows members to operate clearly defined responsibilities, efficient communication, effective work processes, and assimilation of TxDOT into the team. The BBII team comprises experienced constructors, engineers, and local technicians and subcontractors committed and ready to deliver the Project. Our organizational chart emphasizes the roles and responsibility of each of our highly qualified key personnel and supports the goal of including TxDOT as a team member.

Partnership is a crucial element of successful project delivery. Good, solid communication tools and early alignment on Project goals facilitate positive relationships among the design and construction teams, TxDOT, CTRMA, FHWA, and other stakeholders. We will leverage the tools we have used successfully on past DB projects to maximize the effectiveness of our communication and goal alignment. We will develop critical project relationships through weekly project manager briefings, Technical Work Groups (TWGs), DB coordination meetings, senior staff meetings, partnering, and prompt issue resolution.

During the proposal phase, our team performed a thorough risk evaluation. Our risk management approach is designed to minimize surprises for TxDOT and enhance TxDOT's local credibility through avoidance of controversy or project delays. To ensure the effectiveness of mitigation strategies, BBII will assign the risk to the person or organization most capable of managing the risk. All BBII team members will report on risk mitigation efforts throughout the Project.

A primary focus during the construction of the SH 71 toll lanes is proactive safety. With Zero Harm, the boldest safety initiative in the industry, uncompromising commitment to safety is essential to the BBII culture. This focus on a safe work zone begins with planning in the design phase through scheduling and sequencing in a traffic management plan to minimize impacts to the traveling public, the local community, and the environment.

Developing a detailed comprehensive baseline schedule for the Project is the first step in delivering the Project on time and under budget. Being able to use the schedule to monitor progress against the plan is equally important. The BBII team will draw from local knowledge and systems proven on previous DB projects to develop a realistic, detailed baseline estimate and remain within budget. The master schedule will be organized by a work breakdown structure that allows schedule activities to be separated into design, construction, and maintenance.

Adequate resources are essential to effective project execution. A key strength of the BBII team is a depth of resources to meet schedule milestones. The fact that the design for the Horseshoe and LP 1604 projects will be nearing completion in parallel with the anticipated NTP1 for the SH 71 Toll Lanes Project places BBII in the unique position to leverage design personnel experienced in execution under the DB model. We are prepared to provide a rapid response to any unexpected needs for additional resources.

In the fast-paced DB execution environment, we have found that effective and timely communication is best accomplished through face-to-face interactions that result in documented responsibilities accessible to everyone through our Electronic Data Management System. We will customize this system to meet the needs of TxDOT and the Project. We will use Bentley Transmittal Services and ProjectWise will be used to make sure all team members work from the most current documents. Electronic Laboratory Verification Information System (ELVIS)—software proven in Texas on the SH 130, SH 161, Horseshoe, and 281/1604 Interchange projects—will be used to collect, process, and report testing inspections and test results.

From inception to delivery of completed records, BBII has a proven plan to manage the project for success.

### Summary of Quality Management Plan

BBII's Quality Management Plan (QMP) represents a wealth of collective experience and valuable lessons learned from successful execution of QA/

QC on DB projects. The projects delivered by BBII team members include the San Antonio U.S. 281 Interchange, DFW Connector, Texas SH 130 Segments 1-6, and Utah I-15 CORE.

An ISO 9001:2008-compliant QMP will steer BBII’s approach to quality management. The QMP provides the foundation for planning, establishing, executing, and continually improving the overall quality system requirements, including the Design Quality Management Plan, Construction Quality Management Plan, Maintenance Management Plan, and CEPP. These plans will be founded on the requirements of the DBA with auditable operational processes and procedures for the QC and QA components of the respective plans. Five core procedures in BBII’s QMP will drive the consistency and expectation of quality implementation during all stages of the project. These ISO-compliant procedures are:

- Control of Documents
- Control of Records
- Internal Audit
- Control of Non-conformance
- Corrective/Preventative Action

BBII’s quality management approach in a fast-paced and dynamic design-build environment is to instill effective integration and clear communication in a team of distinctly different disciplines and roles. This approach has been proven to foster efficiency, productivity, and successful delivery by clearly defining responsibilities for all stakeholders during mobilization, design, construction, and maintenance.

BBII’s QMP will also contain procedures for management review, personnel competency and training, supplier evaluation, measurement and analysis, and customer satisfaction, further implementing ISO 9001:2008 requirements.

### A.1.d Summary of Approach to DBE Participation

At BBII, building sustainable relationships and partnering with small, minority, and women-owned business enterprises (SMWBES) is more than a corporate social responsibility policy; it is a non-negotiable standard of performance. Within the last five years, our construction division awarded more than \$5 billion in SMWBE contracts. BBII will reach out to DBEs to offer project opportunities and to help them overcome barriers they may have in small business growth. We extend beyond meeting TxDOT’s numerical goals to create meaningful opportunities through workshops, training, mentoring, and ongoing networking and relationship building opportunities. The project experience gained by the DBE and small businesses will help their firms grow and prepare them for future TxDOT work.

**Subcontracting Methods:** BBII will implement a comprehensive program to maximize the utilization of DBE and small businesses, meeting or exceeding the 4% of design and 8% of construction goals. We will implement a DBE outreach program that advertises the Project and bid opportunities specifically to the DBE and small business community. We will divide work into economically feasible packages for DBEs and will require same for second and third-tier contract opportunities.

**DBE Training:** Our training program will provide regular workshops and technical assistance for DBEs and small businesses. The workshops will have internal and external speakers covering topics to assist DBE firms in their growth. To maximize DBE/minority business enterprise participation

we will build on the success of similar workshops we held for the Horseshoe project by working with local MBE/DBE organizations, including the U.S. Hispanic Contractors Association de Austin, Texas Association of Historically Underutilized Businesses, and the Capital City African American Chamber of Commerce. Workshops will be held quarterly during the startup year. A key goal of early workshops is to provide feedback to the community on how participation in DB differs from standard construction bidding.

The short-term goals of the workshops will be to increase DBE participation in the SH 71 Toll Lanes Project. The long-term goals are to empower the firms for growth and foster relationships with MBE/DBE firms for roles in future BBII projects.

## Conclusion

BBII has assembled a team with the skills, tools, resources, experience, and relationships to address the key success factors for the Project. Our companies and key personnel also bring established working relationships with TxDOT, local agencies and municipalities that will be crucial to on-time completion and support for the Project. BBII stands ready to apply our skills in partnership with TxDOT to make the SH 71 Toll Lanes Project a regional success and model project. The team’s commitment is to start the Project promptly upon Notice to Proceed and finish construction within 730 days.

BBII Team Benefits to TxDOT



Traveling public will benefit from safer and improved mobility



DB team commits to the Project’s 730-day schedule



Project management plan effectively addresses coordination with TxDOT and other stakeholders including adjacent contractors



Sensitivities to environment will result in a constructible project



Innovative design will minimize utility relocation



With Zero Harm, safety is not only an uncompromising commitment, it is our culture

