

WE BUILD TEXAS

*A Field Guide to
Successful Project Delivery*



WE BUILD TEXAS – SAFELY
WE BUILD TEXAS – EFFECTIVELY
WE BUILD TEXAS – ON TIME
WE BUILD TEXAS – TOGETHER

Working together to deliver projects successfully.



This is a living document that will be updated as more ideas are shared.

WORKING TOGETHER TO DELIVER PROJECTS SUCCESSFULLY.

The Texas Legislature and voters of Texas have recognized the importance of a strong transportation system and voted overwhelmingly to pass funding measures that nearly double the investment for our highways. Elected officials have mandated that our use of these funds must be accountable and transparent. This presents an extraordinary opportunity to define what the Texas highway industry is capable of.

As partners, TxDOT and AGC of Texas must be able to identify and replicate successful practices so that every project demonstrates the talent, partnership, and efficiency to the best of our abilities. In support of this concept, we have created We Build Texas—a program to foster good partnering techniques, positive contract relationships, and best practices.

The historic increase in program funding is not only a testament to the needs of the traveling public. It is also a deeply meaningful vote of confidence in the abilities of the Texas highway industry. To fulfill this confidence, we must have partnerships based on trust and competence.

We Build Texas is designed to provide a platform for all parties to share successful practices with their industry partners. With our best efforts and in the spirit of partnership, let's begin.

PARTNERING

PARTNERING is a business process intended to assist project teams with setting goals, resolving disputes and improving project outcome.

Partnering **IS**:

- Working together - not against each other
- Developing an attitude of trust and goodwill
- Relationship building
- Teamwork and collaboration
- Skillful and effective communication
- Hard work and commitment
- Solving problems efficiently

Partnering **IS NOT**;

- A 5-minute discussion in a pre-construction meeting
- Simply signing some project pledge
- A weekend of relaxing fun, games or team-building exercises
- Free food
- Extra work for free
- Easy to achieve!

Reshaping or redefining the word “partnering” is not the intent of this effort. Once again, we are sharing ideas that people have seen or used in the past to make a project successful.

HOW WOULD YOU DEFINE A SUCCESSFUL PROJECT?

This question was asked of many TxDOT engineers and leaders in the construction industry. **IT ALL COMES DOWN TO MAINTAINING GOOD TWO-WAY COMMUNICATION.** From all responses received, many had common elements, such as:

Safety

- Safety will always be first in a successful project
- Safety of the traveling public
- Safety of the employees working on the project

Money

- Cost – funding, although increased through the help of the legislators and voters, is still limited due to the vast needs of the state
- Budget - maintaining controls on the project to prevent project creep, overruns or increases that affect other much needed projects. Clearly, changes happen on the project that may increase the budget and overall cost and should not be discouraged solely for budget but should be used judiciously
- Profit – Contractor must make a profit. Contractors cannot survive without making a profit

Timeliness

- Contract time – No liquidated damages from exceeding reasonable time constraints established by the contract
- Meeting milestones – work is completed on portions of the project as per contract or agreed upon schedule
- Provide timely decisions to all issues to keep the project moving

Relationships

- Willingness to work together to achieve a common goal
- Good communication on issues, observations, etc.
- Trust that each is doing their respective role with the project
- Positive, or at least neutral, attitudes. NOT adversarial.

Perception

- Progressive work is recognized on the project and the project is moving forward. Little stoppage or lack of work being performed such that it is recognized by the public noticeable to the public
- Projects that stand the test of time. Maintains a quality ride and approve time.
- Projects that are noticeably clean, safe and attractive.
- Wanting to work again with the same team on a future project

Quality

- Meeting or exceeding the requirement of client/owners/public.
- Ensuring the completed project accomplishes its intended purpose.

One answer early in the process had a story to tell:

In Beaumont on IH 10 where we have had the opportunity to work with them in opening an important project ahead of a very tight schedule. This project is IH 10 at Major Drive near Ford Park, which hosts the South Texas State Fair each spring. The fair event had very tight windows for lane closures. The District Engineer had to include substantial completion milestones that were a challenge. During the project, there was abnormally frequent and heavy rains (even for Beaumont) and a city utility that was late being moved. The area engineer changed during the project and the chief inspector was loaned from another office. All the things that would make you think this job would end up a failure were in place and happened at exactly the wrong times.

However, the project lanes were open for use over two months ahead of schedule and in plenty of time for the fair sponsors to not be pestering the District. Working with the new area engineer both parties stepped through several key decision points and partnered solutions to issues that kept the job moving. This included allowing us to temporarily “borrow” borrow from the row when the heavy rains took away our source of dirt. TxDOT district administration took the time on several occasions to drive the job with the contractor’s leadership and help with solutions. The contract provisions, incentives and the partnering approach made the job successful even under the tight and tough conditions.

– David Casteel, P.E., Williams Brothers Construction

Discussions later added by the District Engineer.

- *During the design process, we brought contractors in to review our plans and give feedback on construction phasing...*
- *We discussed the phasing to accomplish ...*
- *We wanted to heavily incentivize this project, and had originally suggested having four to five milestones of key components being opened by certain dates, such as lanes, ramps, turnarounds, etc. These would have overlapped and several were dependent on each other. Based on contractor feedback, we went with one major milestone: – have all lanes in final configuration before the 2017 fair. This simplified everything for everyone and gave the contractor maximum flexibility.*
- *After letting, the TxDOT and contractor leadership teams met to strategize how to approach the project given the tight schedule. This included the District Engineer, Director of Construction, and Area Engineer from TxDOT, and the entire leadership team from Williams Brothers Construction, including the founder of the company.*
- *In looking at what we had planned to do, TxDOT decided to make some staffing changes to our oversight of the project. I committed that if they were going to assign their A Team to this job, we would as well and promised to have top notch decision makers on the ground, as well as an escalation process that would quickly respond to any questions posed*

- Tucker Ferguson P.E., Beaumont District Engineer

Would you consider the above a successful project?

FOUR AREAS WERE IDENTIFIED AS BEING INTEGRAL TO SUCCESS

1. Contract Relationships
2. Prior to Letting
3. Post-Letting to Construction Start
4. Construction Start to Contract Completion

CONTRACT RELATIONSHIPS

Aspects that lead to successful project delivery

- Making safety a priority
- Dedicating yourself to putting the project first over personalities
- Putting the right team on the project
- Provide support from the top

Personal aspects to success

- Mutual respect
- Honest Communication
- Open mindedness
- Integrity
- Overriding sense of fairness
- Share outcomes up and down the line from DE to AE to project level personnel as well as owners to superintendents to foremen

Ownership of the project

- Recognize each other's goals and objectives and respect them
- Create mindset: this is not a state job; this is not the contactors job; this is our job
- Mutually own the problems and solutions (not one side vs. the other). It is up to both parties and no one stands alone
- Develop a sense of urgency from both parties at the start of the project
- Recognize that we succeed together or fail together
- emphasize that the project cannot fail. Make it resonate at all levels

Develop Relationships

- Project level staff meet routinely, at least monthly; more frequent where it makes sense.
- DEs and Owners should meet routinely
- If your name is on the escalation ladder, then you need to establish a working relationship with all parties (including the person at your level of the escalation ladder).
- Spend the time and make the effort to develop relationships
- Tour each other's facilities and operations, tour projects together,
- Show the effort it takes to prepare bid, change order, etc.
- Break bread together; meals are ideal for discussions
- Participate in meetings where mutual interests such as AGC meetings or other events that encourage parties to spend time together.

- Open communication, collaboration and trust are the foundation to better and quicker decisions making down the road
- Communicate in person or by phone. Emails are quick and provide documentation but are impersonal and are often misinterpreted

Recognition

- Give credit where credit is due
- Take blame when appropriate
- Celebrate success; celebrate success no matter the size
- Recognize and respect each other's ethical constraints

PRIOR TO LETTING

- Make plans and schedules available for review to all parties as early as possible.
- Contractors must respond to early review of plans and schedules with comments—even if there are no issues.
- TxDOT should facilitate pre-bid meetings on projects.
- Contractors should contact area offices to view projects. This helps support the relationships and accommodate pre-bid questions in person.

Plans: Items to Consider

- Provide thorough and consistent guidance to design engineers and consultants.
- Clearly define objectives and milestones
- Be consistent with the district format, styles and where or how information is being relayed
- Develop process and expectations that are repeatable
- Maintain consistency of work items and materials
- Work towards no surprises, highlight unusual/key items
- Use “alternatives” where they are truly equal and conforms to the goals of the project.
- Work with Area Office to discuss any past issues or patterns on field issues.

Time Determination Schedule: Items to Consider

- Clearly define objectives and milestones
- Consider project specific needs (materials, equipment, location, traffic, phasing, quantities, etc.)
- Consider time of year, weather, holidays, local events, traffic, material availability and time for their production when starting and during life of project
- Consider alternative bidding techniques (i.e. A+B)
- Use incentives/disincentives and milestones on key items
- Consider time of day or night and adjust rates or use accordingly
- If need exists for aggressive schedules, bring to the attention of contractors (AGC meetings, contractor meetings, etc.)
- Consider start time on the non-critical projects. Projects such as seal coats are let earlier and contractors send in start times for their projects based on weather, materials and personnel

Early Review of Plans and Schedules (repeat but more details)

- Solicit review and comments early in the design process
- Use electronic distribution of plans and schedules to allow more review time for bidders
- Develop a consistent way for transmitting comments – face to face meetings, emails, electronic process
- Schedule meeting with contractors on regionally significant or traffic critical projects
- Consider project size, significance and timeliness when considering a project for early review – treat each project as a locally significant project
- Items of concern beyond schedules include sequence of work, traffic control, typical sections, structures information, materials, etc.

Showing the Project

- Get plans early and be prepared
- Provide all interested parties the opportunity to review the project
- Keep record of all questions asked and answers provided and provide to all prospective bidders
- Ensure all interested parties are treated fairly and equitably
- Show the project on the ground if possible or at least discuss in person. If available, include designer, consultant with the area engineer and contractor.
- Showing projects help foster and develop strong contract relationships

Advertisement of Projects

- Review a rolling 12-month project schedule at AGC meetings
- Provide overview of district wish list (2-3 years or more)
- Advertise earlier on significant or complicated projects to allow a more responsible bid
- Make draft plans and schedule available as early as possible
- Share TxDOT CPM schedules with contractors for review

Changes to Plans and Schedules

- Don't fear change
- Changes to plans should be considered if it keeps the bidding open and fair
- Changes to time determination schedules are acceptable if prior to letting, so share thoughts and concerns with data and details. Broad statements do not provide helpful information.
- Addendums are encouraged if they could affect the bid of a project; they can be done all the way to the last minute with appropriate approval. Contractors are encouraged to bring up items that could impact the understanding of items in the project
- Eliminate the statement “bid as shown in the plans” if this statement is required then something is wrong, address it
- Provide updates if there are changes on the project scopes and costs

POST-LETTING TO CONSTRUCTION START

The time between the letting and the start of construction is extremely important. This time frame will establish the tone and goals for the project. If it is our desire to make all projects successful, then remember all jobs are important (just like the County Fair Project or the Direct Connector.) The Contractor and TxDOT should assign the appropriate persons to these suggested tasks and allow the time necessary to establish the direction for all projects. It has been proven that if the upper levels of TxDOT and the Contractors demonstrate the importance of projects by participating early and often, the projects have a good chance of being successful.

Open lines of communications as soon as practical!

Open and Honest Communication

- Make sure the right team is assembled to provide the best opportunity for success (all parties).
- Identify Project Responsible Persons (PRP) for all parties involved; contractor, sub-contractor(s), TxDOT and consultants leading their respective entities and are responsible for the success of the project
- Assure all PRP are included in project communication.
- Verify all project start up documents, including training records, are in complete and timely
- Schedule meetings with all actively participates in all meetings necessary for a successful project

Suggested Meetings

Schedule meetings as soon as possible and not right before work begins. This allows the best chance of a good start. Suggested meetings include:

Preconstruction - Check List Meeting – 1 hour

- Have the right people at the meeting. AE runs the meeting with construction project manager.
- Executives from each party dependent on the magnitude of the project
- Include elected officials, law enforcement first responders, school, or others deemed appropriate
- Submit all pre-work information before the meeting (such as material sourcing, sub approvals, responsible persons' list, training, etc.)
- Have an agenda tailored to the project
- PRP from each entity should identify project person within their organization and their role to make this project a success. Self-introductions of guests and their role in the project
- Provide an overview and key objectives of project
- Discuss impacts and who is watching
- Discuss any special needs or community impacts
- Cover basic items TxDOT currently cover (project description, responsible persons, safety information, sequence, duration, closures, ROW and utility issues, environmental regulations specific to the project, local coordination with media/law enforcement/schools, etc.)
- Ideally, submitted package would suffice for much of the check-list discussion and would not need to be repeated, so more time could be allowed to discuss the project in enough detail for the guests and satisfy their questions and concerns

Preconstruction - Detailed Meeting – TBD up to a full day

- Invite all TxDOT, contractor, sub-contractor(s) and consultants responsible for the success of the meeting and communicate and agree to those involved in the meeting
- Prior to meeting, exchange bullet points on items and assure the appropriate level of authority is present relative to the magnitude of the project or issue
- Provide a clear understanding of the project, why it is important and agree on the scope of the project
- Cover the partnering process including project charter and issue resolution ladder and what it takes to make a successful project
- Issue resolution ladder
 - Detailed enough to provide realistic time lines with increasing response time as the issue progresses up the ladder; i.e. ½ day, 1 day, 2 days, 15 days
 - If the issue cannot be resolved at lower level it should progress to next level quickly; do not delay
 - If issue progresses up the ladder it progresses up both sides of the ladder at the same time
 - Commitment from all to work in urgent manner to resolve issues to keep project on schedule
 - Flatten the ladder. Expand the authority of the jobsite personnel and inspector. Too many levels make it too easy to wait and let the decision pass on to the next level reducing accountability and creating delays
- Include any schedule for follow up meeting and assign champions if necessary
- Cover all job specific challenges currently known
- Action items with responsible persons should be identified at the meeting
- Be open to sequence changes that may improve the project without jeopardizing the goals of the project
- Discuss
 - Review quickly items from above; impacts, who is watching, special needs, community requirement
 - All ideas to enhance safety of the project
 - All issues with Right of Way and Utilities
 - All constructability items that could improve the project; identify errors and change orders
 - Meeting milestones and ramifications of doing what we say we are going to do
- Discuss submission of project documents
 - That not only affect the beginning of the project but throughout the project.
 - Electronically not just submitted but stored, for ease of review and control of information and reduces the lost information from long duration projects and personnel changes
 - Discussion on how electronic information will be exchanged; drop box, e-folder, etc.
 - Consistency. Be aware of the district's process and the same information districtwide

Preconstruction – Schedule Meeting – TBD

- May be combined with previous meeting as agreed
- Make the level of time devoted to schedule match the level of construction. For example, an overlay would not need the same level of scheduling discussion as an interchange
- Invite PRPs and all appropriate job personnel that are involved in the planning and delivery of the project, this can be reduced from the previous meeting
- Provide and review schedule that can be agreed upon
- If too complex for this meeting, then agree on what to cover so both parties understand project sequence and schedule
- Assign action items that may be needed to complete baseline understanding of the project or milestones
- Establish regular meetings and required attendees
- Early review, testing and approval of construction material.

CONSTRUCTION START TO CONTRACT COMPLETION

Develop a sense of urgency for timely decision making and project delivery. This goes for both parties in bringing issues forward and responding quickly

Decision Making

- Be prepared to make tough decisions (TxDOT and Contractors)
- Don't be afraid to seek information, advice and input
- Not everything is going to be black and white, make the best decision with the information you have
- Handle issues at the lowest level
- Handle things at the appropriate level with the appropriate personnel
- Escalate quickly if beyond one's authority without fear of reprisals or taking offense
- Make timely decisions, even if later is proven wrong. It is better make a decision than no decision
- Recognize each other's ability to affect issues
- Recognize that we all have bosses and our decisions may be overruled, don't take or give offense, then move on
- Make sure subcontractors are aware they cannot negotiate or make changes to the plans with the state by themselves. The project contract is between the state and the prime contractor, subcontractors do not have the right to change the contract

Project Responsible People (PRP)

- Need to be available and engaged. Regular meeting—monthly at a minimum
- Needs to provide good direction to field personnel (equipment operators, surveyors, inspectors, lab technicians, etc.)
- Design Project Manager remain engaged to facilitate design resolutions and answer questions
- Utility Coordinator remains engaged until the utilities have advanced beyond their ability to impact the project
- Prime contractor should provide thorough and consistent oversight of sub-contractors
- Area Engineer and District Construction Coordinator

- Review monthly schedules and progress with contractor
- Conduct regular meetings with contractor to discuss progress, schedule and recovery plan
- Agree to a substantial completion date for each project and measure its progress. This may be distributed as a commitment for to the public
- Document discussions as project progresses to hold each other accountable. This advises both parties if further action is required
- Develop a monthly report on progress to project delivery or remaining phases/milestones

Issue Resolution and Escalation

- Communication and urgency are key
- Issues should be communicated to the level of their importance. Example: if a legislator's wife has an incident on your job, not only does the AE need to know but Director of Construction (DOC), District Engineer (DE) and possibly Administration. Escalate information to the appropriate level
- Execute timely. Develop a sense of urgency to resolve issues
- Use the escalation ladder: if it needs revision because of new personnel, missing steps, etc., then agree and change it
- Resolve issues at its lowest level. Support those decisions!
- Issues should be addressed a level agreed upon by the escalation ladder. Follow the escalation ladder chain of command and don't cross levels, except in emergencies
- If an issue is immediately recognized as beyond the authority level of the individual, escalate it immediately
- Issues can be escalated immediately with a phone call
- If necessary and practical, discuss at location of issue. This often increases understanding and urgency
- Urgency needs to be driven by what is happening on the project and the impact to the schedule now or the future
- Use the clean desk approach: Is there something on the desk at the end of the day that needs to be resolved?
- Issues not resolved should be brought to attention of AE by the end of the day
- No surprises. Discuss items as they come up so they can be addressed at the appropriate time
- Adjust time on projects for holiday, special events, weather, etc. as the project progresses--do not wait

Change Orders

- Execute timely
- Provide details as quickly as possible. Understand the process, provide prices and justifications when required as quickly as possible
- Include any time adjustments with the change order as the project proceeds; do not wait until the end of the project. Estimate time adjustments and revise, if necessary, later. Contractor time requests must be reasonable and in line with the specifications
- Understand the level of authority and communicate early if it is beyond your authority escalate to the proper level quickly
- Verbal change orders for critical items are acceptable; follow up with appropriate formal change orders

Time

One of the most important aspects of all projects that impacts everyone and everything related to the project, traveling public, land owners and business, contractor and TxDOT. This should be discussed before the project begins and throughout the construction period. Both contractors and TxDOT should keep this in the forefront of discussions and not put it off to a later date.

- Must be in alignment with the plans and specifications
- Address time with ROW and Utility issues when it exceeds notice in specifications
- Address time when utilities are discovered during the progress of the project
- Adjust time at time of changes in work
- Discussion and adjustment of time may be warranted when items are overrun
- Consideration needs to be for extended holidays and events.

For example, a construction project along a highly-commercialized area where businesses were dependent on access. Work progressed through the Thanksgiving holidays, severely impacting the “heaviest shopping days of the year.” The reduction in capacity created extremely slow moving traffic through this area making headlines with the local media. This phase was completed the following week. TxDOT and the contractor agreed to postpone the next phase until after the holidays, opening up all the lanes to accommodate the continued heavy holiday traffic.

Taking this work out of phase, created situation where the work could not be done simultaneously, Result, the critical path was extended. No other changes to the work were necessary. This change in phasing created the need for a change order for time and possibly compensation.

Electronic Documentation

Goal: Implement an electronic system for locating project documentation which would not require hard copy transmittals.

- Electronic system for both, contractor & TxDOT, to be able to view and see what paperwork is missing
- Creates consistency for all districts and contractors to follow the same process and request the same information
- Many offices still handle paperwork. Not all are electronic. Many have the record keeper in control and managing this part of the project, which could lead to project acceptance issues at the end
- An electronic project box or drop box for the contractor to continually deposit paperwork would help clarify any missing paperwork issues. Drop box or e-folder that way paperwork is not lost
- Utilize current systems such as Site Manager or EPRS

Buying Projects and Close Outs

- Executed timely, it cost money (insurance, bonding, etc.) which can be substantial. Sixty days is the recommended maximum time frame
- Contractor should perform their own punch list review prior to TxDOT's
- Combine check lists. If TxDOT and consultant are working together, combine efforts and provide one list
- No surprises. Items at this point should have been discussed
- Contractor provide missing or incomplete documentation within agreed timeline. If documents are missing, the AE and DOC will determine the ability to close without the documents, so do not delay
- Interim inspections on items of work can be performed to expedite final acceptance; i.e. signal work, bridge rail, etc.
- Interim audits can be performed prior to acceptance such as DBE, warranties, etc. to speed up the close out process

Post Construction Meeting

- Have you considered a Post Construction Meeting?
- Opportunity to celebrate accomplishments and recognize those who made the project successful
- Consider inviting senior staff such as District Engineers, Owners, local leaders and elected officials, to bring full circle include designer and all other appropriate parties to this meeting
- Review items that made the project successful
- Review items that can be improved on
- Discuss plans and best practices for future projects. Hindsight is always so clear

Our business is changing. We can choose to change with it and work together or struggle.

Remember WE BUILD TEXAS!

