



# SUSTAINABLE TURFGRASS MANAGEMENT FOR MUNICIPALITIES AND ISD'S

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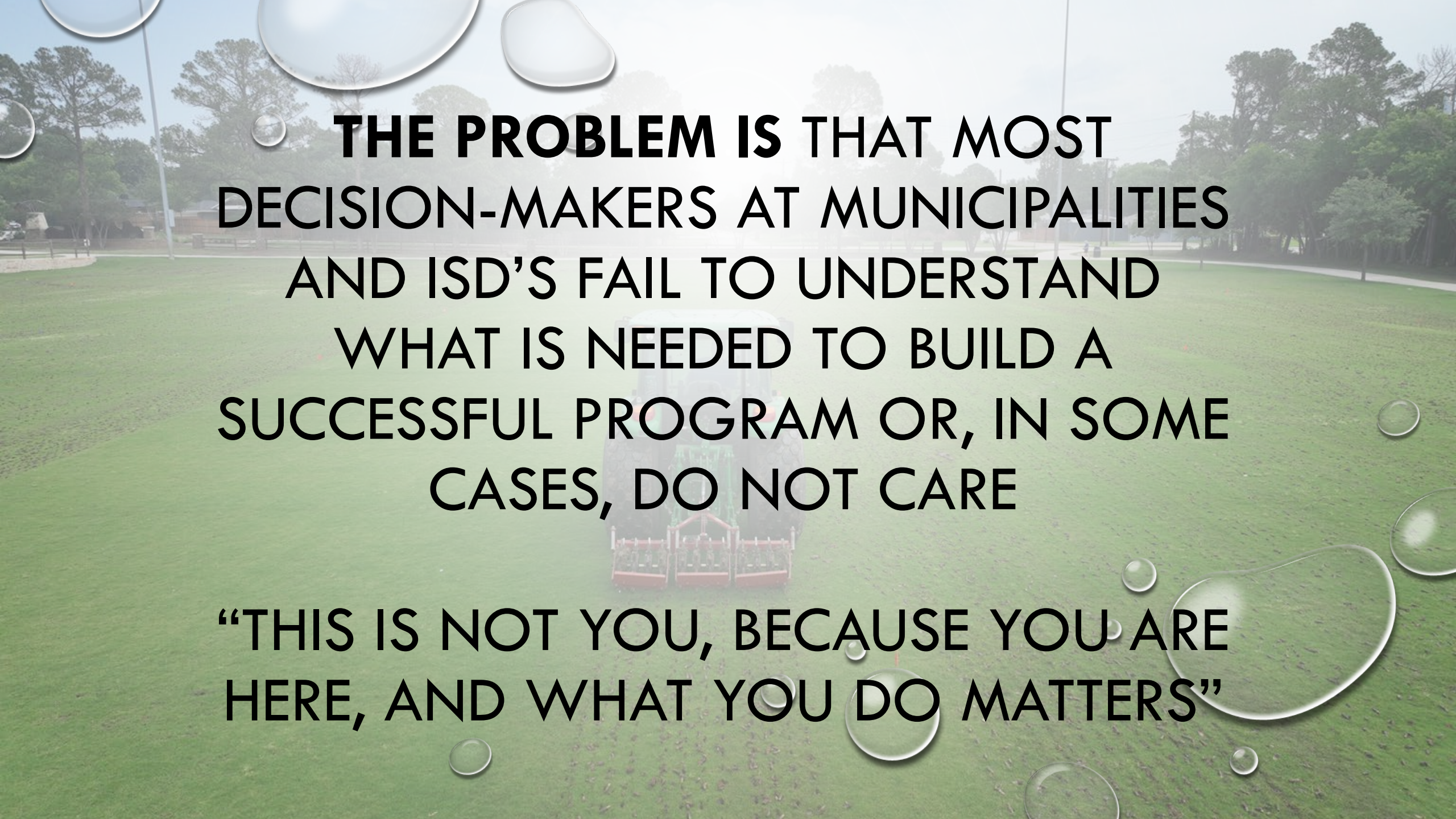
# **SUSTAINABLE TURFGRASS MANAGEMENT FOR MUNICIPALITIES AND ISD'S**

**PHIL LOZANO MCPTM, CPRP, FMP**

# ME 25 YEARS AGO AT A STMA CONFERENCE IN ARIZONA








**THE PROBLEM IS THAT MOST  
DECISION-MAKERS AT MUNICIPALITIES  
AND ISD'S FAIL TO UNDERSTAND  
WHAT IS NEEDED TO BUILD A  
SUCCESSFUL PROGRAM OR, IN SOME  
CASES, DO NOT CARE**

**“THIS IS NOT YOU, BECAUSE YOU ARE  
HERE, AND WHAT YOU DO MATTERS”**



A person wearing a light blue shirt and a cap stands on a green golf course, looking towards the left. A white line is visible on the grass. The background shows a line of trees under a clear sky. The image is overlaid with several water droplets of various sizes, some of which are larger and more prominent than others.

**A SUCCESSFUL SUSTAINABLE  
TURFGRASS PROGRAM TYPICALLY  
STARTS WITH A DESIRED OUTCOME  
OR EXPECTATION AND  
CONFRONTING A PROBLEM**



An aerial photograph of a soccer field. In the center, a red and black golf cart is parked on a paved path. Below it, three workers in blue and black clothing are working on a white soccer goal. The field is green with white boundary lines. The background shows a residential area with houses and trees. The image is overlaid with several semi-transparent circular bubbles of varying sizes.

# IT IS USUALLY ONE OF TWO THINGS

1. TO MAKE THINGS BETTER

2. TO MEET A NEED



# GATHERING INFORMATION FOR PLANNING



## ChatGPT

Building a sustainable turfgrass program involves considering various factors, including environmental impact, resource conservation, and long-term maintenance. Here are some key steps and considerations for creating a sustainable turfgrass program:

### 1. Site Assessment:

- Evaluate the site conditions, including soil type, drainage, sunlight exposure, and climate. This information will help in selecting the most suitable turfgrass varieties.

### 2. Choose the Right Turfgrass Varieties:

- Select turfgrass varieties that are well-suited to the local climate and soil conditions. Native or adapted species often require less water and maintenance.

### 3. Water Management:

- Implement efficient irrigation practices to minimize water usage. Use smart irrigation systems with weather-based controllers to optimize watering schedules based on environmental conditions.

### 4. Soil Health:

- Focus on improving soil health through proper aeration, topdressing, and organic matter additions. Healthy soil promotes better water retention, nutrient availability, and root development.

### 5. Fertilizer Management:

- Develop a fertilization plan based on soil tests to provide the necessary nutrients without over-application. Consider using slow-release fertilizers to minimize nutrient runoff.

### 6. Integrated Pest Management (IPM):

- Adopt an IPM approach to control pests and diseases. This involves monitoring for potential issues, using cultural practices, and resorting to chemical treatments only when necessary and in targeted amounts.

### 7. Mowing Practices:

- Set mowing heights appropriate for the turfgrass species. Avoid mowing too short, as it can stress the grass and make it more susceptible to pests and diseases.

### 8. Renovation and Overseeding:

- Regularly renovate the turf by overseeding with improved varieties. This helps maintain a dense, healthy turf that is more resistant to pests and diseases.

### 9. Waste Management:

- Implement a waste management plan for grass clippings and other organic debris. Consider composting or recycling these materials to reduce landfill waste.

### 10. Education and Outreach:

- Educate staff, groundskeepers, and the community about sustainable turfgrass practices. Promote the importance of water conservation, soil health, and responsible maintenance.

### 11. Monitoring and Evaluation:

- Continuously monitor the turfgrass area for signs of stress, pests, or diseases. Regularly assess the success of your sustainable practices and make adjustments as needed.

### 12. Budgeting and Resource Allocation:

- Allocate resources effectively by developing a budget that considers long-term sustainability goals. Invest in the right equipment, technology, and training for staff.

### 13. Collaboration with Experts:

- Work with local extension services, universities, or turfgrass experts to stay updated on the latest research and best practices in sustainable turf management.

### 14. Community Engagement:

- Engage with the community to build support for sustainable practices. This may involve providing educational programs, workshops, or involving community members in maintenance activities.

# RESOURCES

**Self**

**Colleagues**

**Stakeholders**

**Boards**



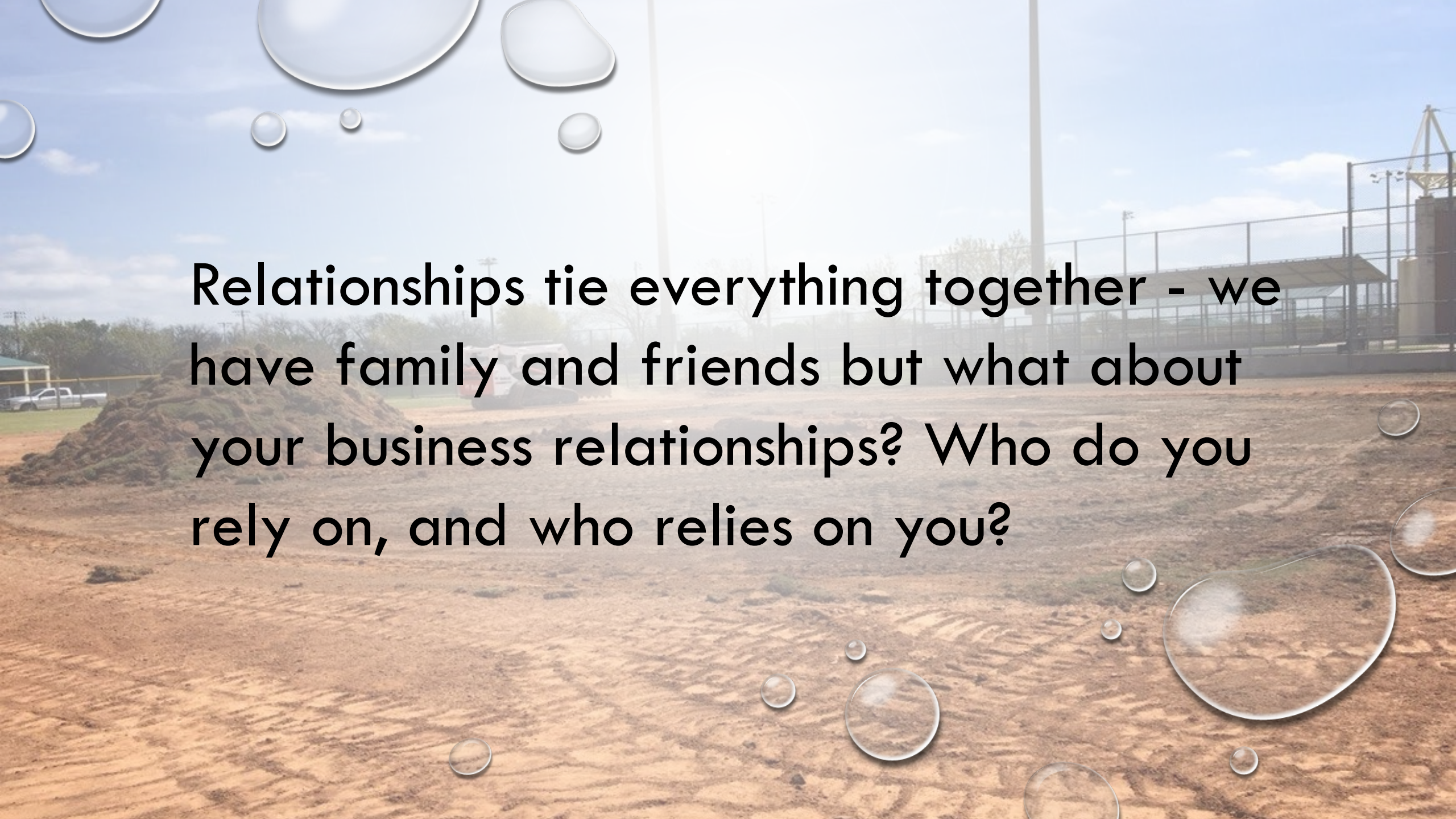
**SFMA**

**Sports Orgs**

**Coaches**

**Councils**





**Relationships tie everything together - we have family and friends but what about your business relationships? Who do you rely on, and who relies on you?**



# WORLD CUP 1994 COTTON BOWL





# CONDITIONS AND PERFORMANCE ASSESSMENT

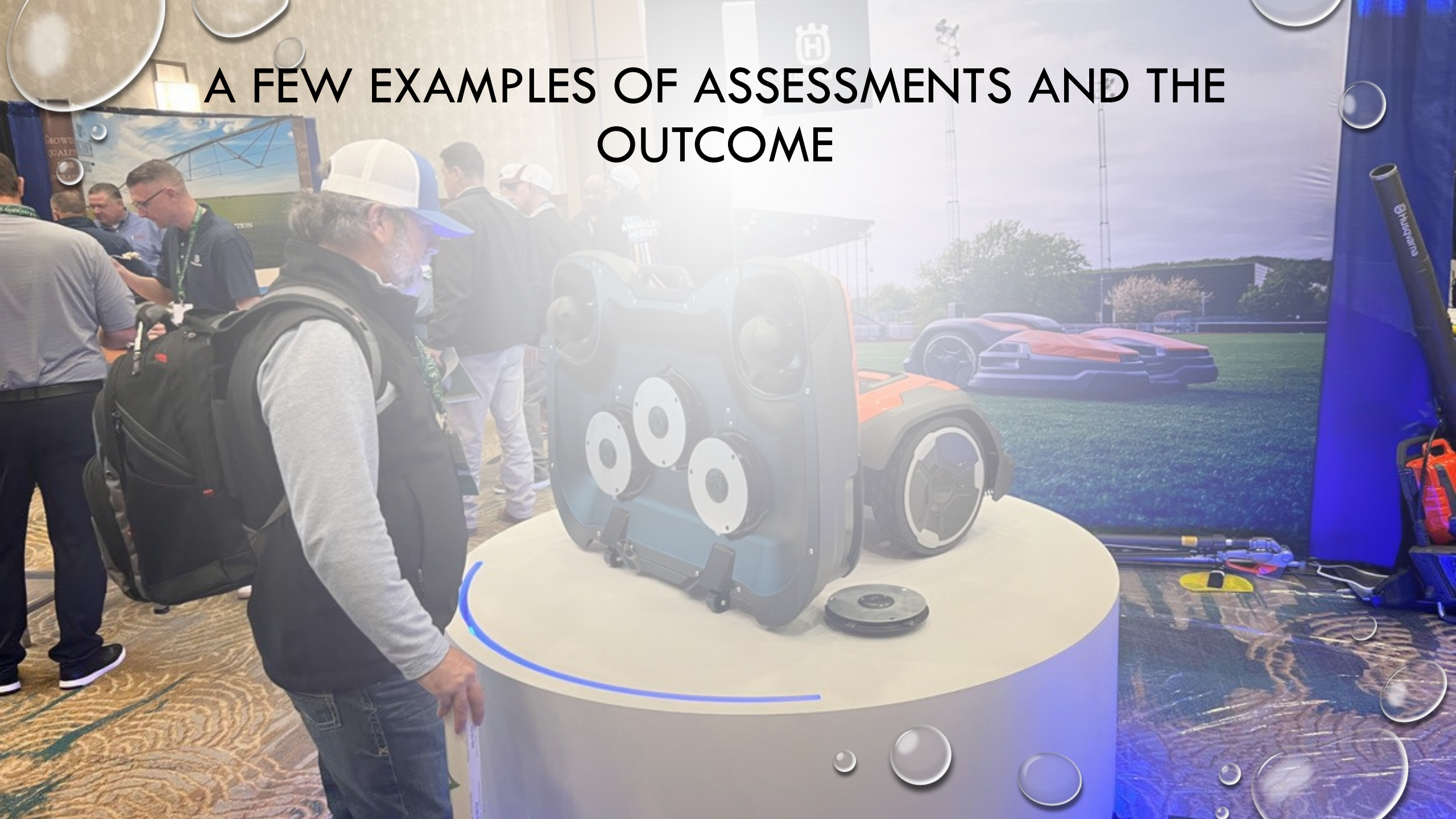


# CONDITIONS AND PERFORMANCE ASSESSMENT (TELLING/WRITING THE STORY)

- COMMUNICATE WITH ALL THAT YOU ARE PERFORMING A FULL ASSESSMENT TO UNDERSTAND WHAT YOU HAVE AND WHERE IMPROVEMENTS NEED TO BE MADE TO MEET EXPECTATIONS – **“TELL YOUR STORY!”**
- CONDITIONS AND PERFORMANCE ASSESSMENT REPORT FOR EACH VENUE (TAKE PICTURES/DRONE FOOTAGE IS ALWAYS GOOD)
- ACRES AND LEVELS OF MAINTENANCE – HIGH, MEDIUM, LOW/PASSIVE
- **STAFF AND COMPETENCY (STRENGTHS AND AREAS FOR GROWTH)**
- **IDENTIFY BAD HABITS**
- EQUIPMENT INVENTORY AND PERFORMANCE ASSESSMENT BASED ON USAGE (LOOKING TO MODERNIZE TO BE MORE EFFICIENT. EX, ROBOT MOWERS AND PAINTERS)
- UNDERSTAND YOUR BUDGET AND THE PROCESS FOR REQUESTING FUNDS, FTE'S, EQUIPMENT, ETC
- **“INVOLVE YOUR TEAM AND STAKEHOLDERS IN THE PROCESS**
- DEVELOP A PLAN WITH A BUDGET AND INCLUDE THE TOTAL COST OF SERVICE - REOCCURRING ROUTINE MAINTENANCE (WORK ORDER SYSTEM), SUPPLIES, TRAINING, OT, EQUIPMENT, UTILITIES, AND CONTRACT SERVICES.
- **“ROI” = ECONOMIC IMPACT**



# A FEW EXAMPLES OF ASSESSMENTS AND THE OUTCOME





# DESOTO CHAMPIONSHIP FIELD THEN





# DESOTO CHAMPIONSHIP FIELD AFTER RENOVATION





# DESOTO MEADOWCREEK PARK (F4 TORNADO)





# MEADOWCREEK CHAMPIONSHIP FIELD 2016 (WHAT THE FIELD “WTF” AND GRIT)





# MEADOWCREEK CHAMPIONSHIP FIELD 2017 TTA FIELD OF THE YEAR 2018





# WHAT IS YOUR STORY?





# DRP SOCCER FIELD





# NOW SOCCER FIELD OF THE YEAR





# SOCCKER FIELD OF THE YEAR





# IN-HOUSE TRAINING PROGRAMS





# IN-HOUSE TRAINING PROGRAMS





# IMPLEMENT THE PLAN AND CAPTURE THE DATA

The screenshot displays the Cityworks software interface for a Work Order. The top navigation bar includes the Cityworks logo, a search bar, and the user name 'Lozano, Phil'. Below the navigation bar is a menu with options like 'Inbox', 'Recents', 'Work Order', 'Service Request', 'Crews', 'Reports', 'GIS Search', 'Projects', 'Inspections', 'PLL Admin', 'Permits & Cases', 'Search Permits', 'Inspections/Tasks', 'License Renewals', and 'GIS & Land'. The main form is divided into several sections:

- Work Order:** Contains fields for Description (Mow / Trim lower soccer field), Number (175137), Entity Type (ATHELETIC\_FIELDS), Category (Parks), Initiated By (Hill, Brent), Date (12/12/2019 2:56 PM), Status (Not Started), Priority (Medium), Requested By (DORIA, GABRIEL J), Supervisor (DORIA, GABRIEL J), Submit To (SCHMIDT, PHILLIP), Date (12/12/2019 2:56 PM), Projected Start (03/5/2020 12:00 PM), and Projected Finish (03/5/2020 12:00 PM). It also includes fields for Actual Start, Actual Finish, Stage (Actual), and Expense Type (Maintenance).
- Location Information:** Shows WO Address (2200 Briarhill Blvd), Location Details (Unity Lower Soccer Field), Shop, Map Page, Title Number, District, X Location, and Y Location.
- Custom Fields:** A list of custom fields for the 'Mow / Trim' category, including 'Was PPE worn?', 'All equipment accounted for?', 'Any safety concerns?', 'Beds weeded?', 'All areas blown after mowing?', 'Any equipment damaged?', and 'Mow, edge and line-trim site?'.
- Assets:** A table showing Total Entities (1) with columns for Asset, Asset Id, Asset Uid, Location, Warranty Date, and Work Order. The table contains one entry for ATHELETIC\_FIELDS with Asset Id 0 and Asset Uid 0. A note below the table states '- Pink rows indicate inventory still under warranty.'
- Map Layer Fields:** A section with a 'Reset' button.
- Work Cycle:** Fields for Repeat (Every), Interval (1 Weeks), and From (Projected Start Date). It also shows Date Printed and Next Print Date (12/17/2019).
- Related Work Activities:** Sections for Service Requests, Inspections, and Work Orders, each with an 'Add' button.
- Details:** Fields for Project, Account, Contract, Contractor, Legal Billable, Contractor Billable, Update Map, Cancel Work Order, Cancelled By, Date, Cancel Reason, Units Accomplished (0), Description, and Lock Units Desc.

**Work Orders Are An Excellent Way To Document Work and Collect Historical Data!**





# COMMUNICATING AND HAVING CRUCIAL CONVERSATIONS



Crucial Conversations.  
FOR MASTERING DIALOGUE





# SUSTAINABILITY

## LEADERSHIP VIRTUES WHEN LEADING YOUR TEAM, COMMUNICATING WITH STAKEHOLDERS, AND **TELLING YOUR STORY**

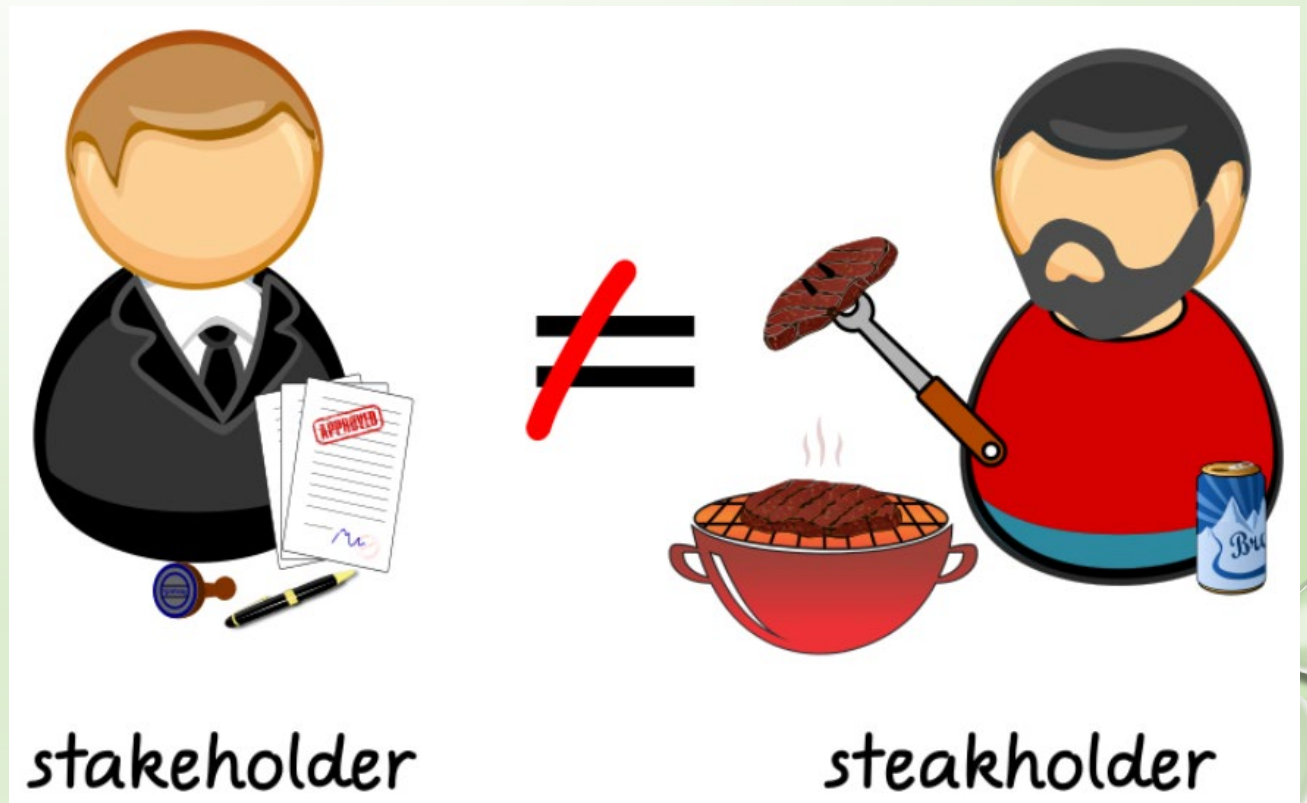
- HUMILITY – ACTIVELY LISTENING, BEING OPEN TO THE STAKEHOLDERS AND YOUR STAFF – OWN YOUR MISTAKES
- PRUDENCE – DISCERNING FOR THE BEST ANSWERS, METHODS, AND OUTCOME
- TEMPERANCE – METER EMOTIONS AND ASK FOR WHAT YOU NEED AND BE HONEST, DON'T INFLATE THE NEED
- PATIENCE – WHEN TIME PERMITS - TAKE YOUR TIME
- FORTITUDE/COURAGE – YOUR CALL TO ACTION - DON'T GET DISCOURAGED BY NAYSAYERS AND OPINIONS
- PERSEVERANCE – CONTINUE TO MOVE FORWARD
- JUSTICE – GIVING OTHERS THEIR JUST DUE – **YOUR CUSTOMER AND STAFF INVESTMENT**
- COUNCIL/CRUCIAL CONVERSATION - DON'T SHY AWAY FROM DIFFICULT CONVERSATIONS. SPEAK WITH AUTHORITY AND BE RESPECTFUL – YOU WERE HIRED FOR YOUR EXPERTISE, “NO ONE ELSE IS COMING; IT IS ON YOU”

**PEOPLE ARE ASSETS AND ARE WORTH YOUR TIME**



# COMMUNICATION

- IDENTIFY YOUR STAKEHOLDERS – STAFF, SPORTS ORGANIZATIONS, BOARDS, COUNCILS, ATHLETES, COACHES, FANS
- MEET AND UNDERSTAND THE STAKEHOLDER'S EXPECTATIONS
- INVOLVE YOUR STAFF IN THE PROCESS
- **TELL YOUR STORY! AND DO IT WELL**





# PEOPLE ARE ASSETS AND WORTH THE EFFORT





# PREPARE FOR THE UNPLANNED EVENTS AND UNREALISTIC EXPECTATIONS

- ATTITUDE IS EVERYTHING!
- HOW DO YOU RECOVER FROM A 50% LOSS OF VEGETATION AND YOU ARE ONLY 2 WEEKS INTO THE SEASON?
- GERMAN NATIONAL TEAM RESPONSE WHEN DIRECTED WHERE TO PRACTICE DURING 1994 WORLD CUP.
- HOW DO YOU TRANSITION FROM BATTLE OF THE BANDS TO THE TEXAS OU RED-RIVER CLASSIC?
- OMGOOOSH...I HAVE TO REPLACE THE FIELD AFTER A ROLLING STONES CONCERT!
- HOW DO YOU COMMUNICATE WITH A COACH WHO WANTS TO IMPROVE THE AESTHETICS OF A SOFTBALL FIELD BY ADDING AN APRON OF SOD SO IT WILL LOOK LIKE A BASEBALL FIELD ALL WHILE IGNORING THE TRIP HAZARDS THAT CAUSED PLAYER INJURIES IN THE PREVIOUS SEASON?
- HOW DO YOU TELL YOUR BOSS THAT THE AD IS GOING TO MAKE A MISTAKE THAT WILL PUT PLAYERS AT RISK BY PUSHING OUT A SYNTHETIC FIELD REPLACEMENT - AND WHO WILL BE LIABLE.....WHO IS RESPONSIBLE FOR MAKING THE CALL

**MORE IS LOST IN INDECISION THAN IN MAKING THE RIGHT DECISION, ESPECIALLY WHEN IT IS TOUGH AND NOT THE POPULAR ONE**



# ENGAGING WITH YOUR STAKE HOLDERS - PARK BOARD





# ENGAGING WITH YOUR STAKE HOLDERS - PARK BOARD





# STAKEHOLDERS



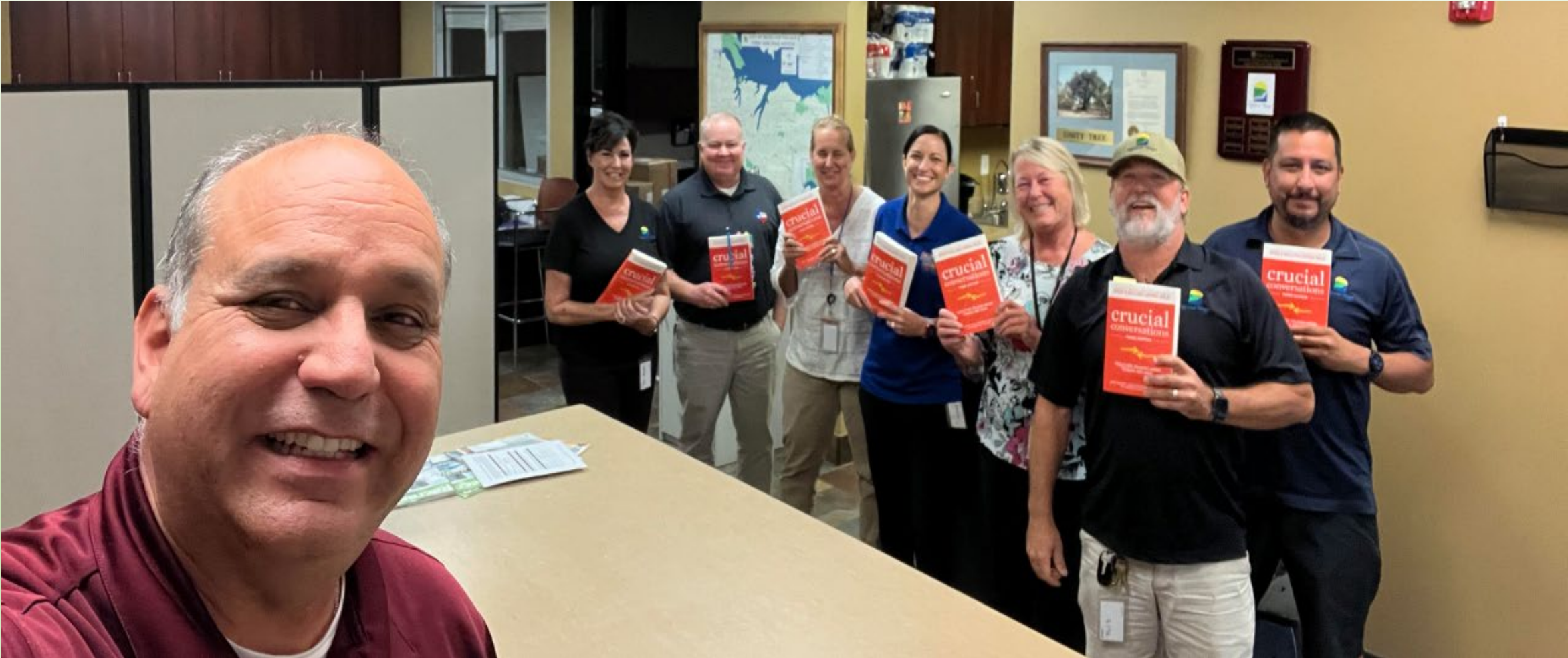


# LESSONS TO BE LEARNED





# INVESTING IN YOUR TEAM







# BUDGETING THE BUILD/CONSTRUCTION PROCESS



# NEW BUILD UNITY SOFTBALL FIELD SOON TO BE FIELD OF THE YEAR





# GEORGE W. BUSH LITTLE LEAGUE FIELD WACO TX MAINTAINING AN ATTITUDE OF EXCELLENCE







**NOT ENOUGH MONEY, NO  
EQUIPMENT, AND NOT ENOUGH  
EMPLOYEES**

**BUILD TO WHAT YOU CAN MAINTAIN  
AT A HIGH LEVEL**

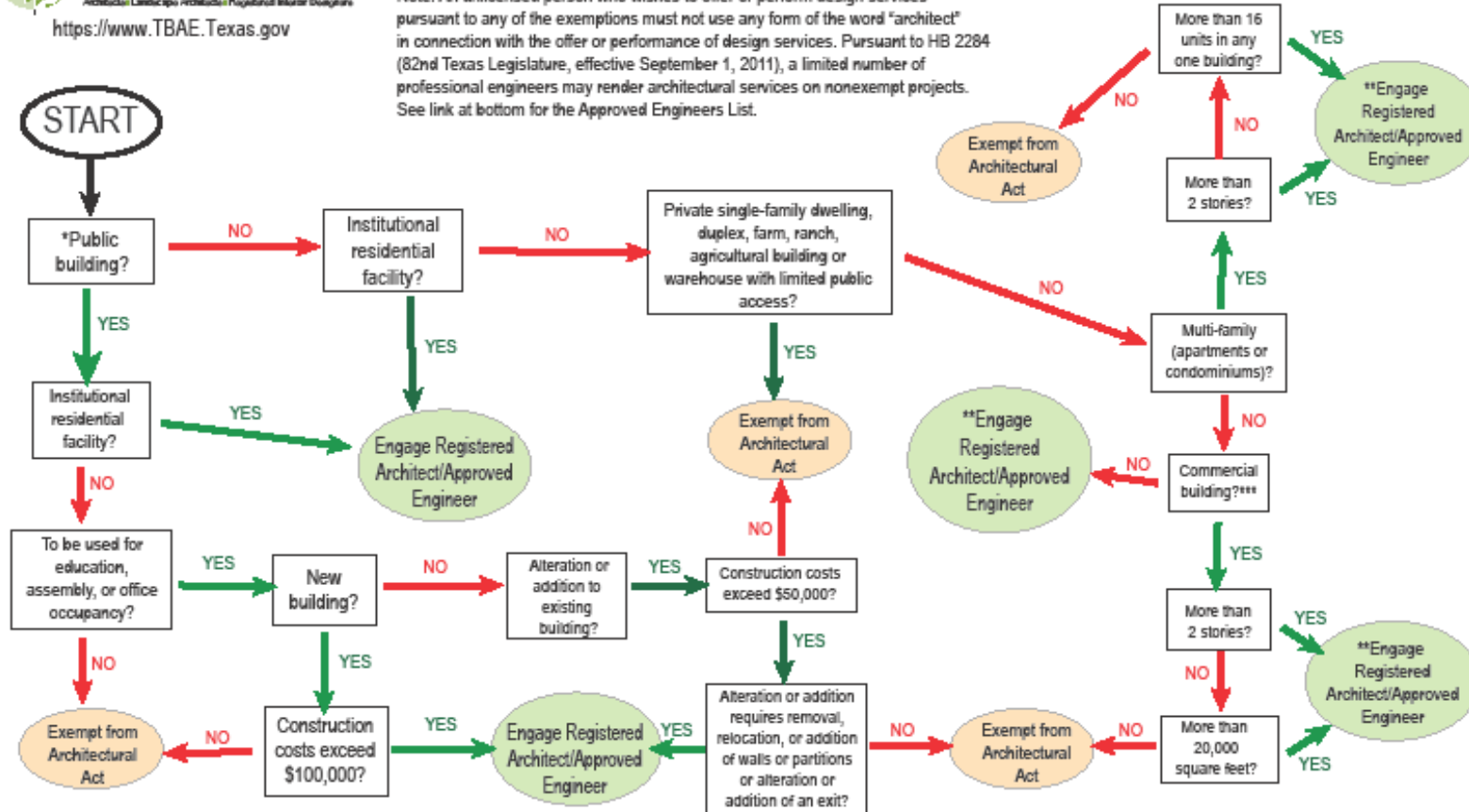


# UNDERSTAND THE PROCESS



## When to Engage an Architect or Approved Engineer for Design and Construction Observation

Note: An unlicensed person who wishes to offer or perform design services pursuant to any of the exemptions must not use any form of the word "architect" in connection with the offer or performance of design services. Pursuant to HB 2284 (82nd Texas Legislature, effective September 1, 2011), a limited number of professional engineers may render architectural services on nonexempt projects. See link at bottom for the Approved Engineers List.



- \* "Public Building" means any building that is owned by a State agency, a political subdivision of the State, or any other public entity in Texas.
- \*\* If a project involves only the alteration of an existing building and the alteration does not involve a substantial structural or exitway change to the building, the project is exempt from the architectural act.
- \*\*\* "Commercial building" means an enclosed structure primarily used for the purchase, sale, or exchange of commodities or services.



# BUDGETING THE BUILD/CONSTRUCTION PROCESS

- UNDERSTAND AND KNOW YOUR BUDGET AND WHAT YOU ARE RESPONSIBLE FOR IN THE BUDGET PROCESS – READ THE POLICIES
- UNDERSTAND THE BUDGET PROCESS FROM CRADLE TO GRAVE – ASK QUESTIONS – GATHER INFORMATION – REQUEST TRAINING – USE YOUR NETWORK AND PROFESSIONAL ASSOCIATIONS – UNDERSTAND YOUR ORGANIZATION’S BUDGET IN TOTALITY
- BE A GOOD LISTENER
- MEET WITH PURCHASING AND FINANCE TO UNDERSTAND THE PROCUREMENT AND BIDDING PROCESS
- **UNDERSTAND THE PROCESS FOR ASKING FOR FUNDING AND THE APPROVAL PROCESS**
- INVOLVE YOUR TEAM – BUILD YOUR LIST OF REQUESTS WITH OPC AND RANK THEM
- **BUILD AND TOTAL COST BUDGET**



# BUDGET “TOTAL COST

- NEW CONSTRUCTION
- FIELD TYPE – NATURAL OR SYNTHETIC
- **NUMBER OF EVENTS – GAMES AND PRACTICES**
- LABOR (ROUTINE AND ANTICIPATED SPECIAL MAINTENANCE TASKS)
- AGRONOMICAL PROGRAM (MOWING, FERTILIZER, PEST CONTROL, TESTING, AERATION, VERTICUTTING, VACUUMING, TOP-DRESSING)
- EQUIPMENT – LARGE AND SMALL
- EQUIPMENT MAINTENANCE
- VEHICLE(S)
- SUPPLIES FUEL,
- UTILITY ENERGY, WATER
- CONTRACT SERVICES - LASER LEVELING, DEEP-TINE AERATION, FRAISE MOWING,
- ADMINISTRATIVE
- EVENT STAFF AND OT
- TRAINING AND CONFERENCES
- LICENSES AND CERTIFICATIONS
- ANNUAL DUES





Be a goldfish.



# 2024 UNITY PARK BASEBALL RENOVATION 1.4M BUDGETED 4M ESTIMATED

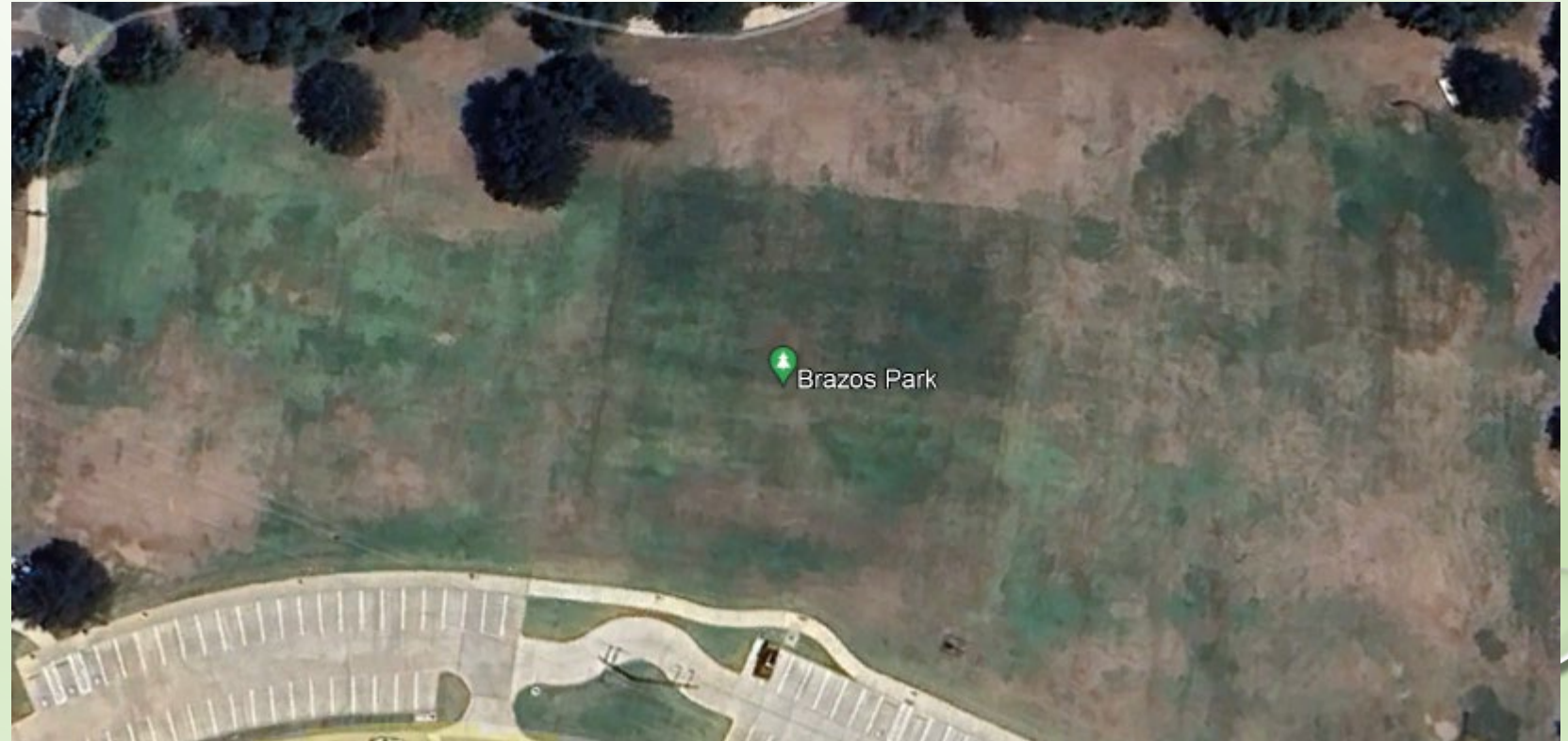
Renovation of

- 4 baseball fields (irrigation, fencing, infield)
- 1 flex field
- 2 youth football fields
- Add 1 basketball court
- Upgrade tennis center lighting





# 2024 UNITY PARK BASEBALL RENOVATION 1.4M BUDGETED 4M ESTIMATED







**THE END**