

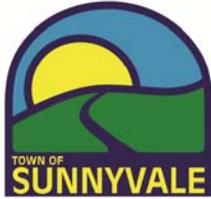


Town of Sunnyvale

Town Council

January 18, 2016

Town Council Special Meeting 6:00 P.M.



**AMENDED
TOWN OF SUNNYVALE
SUNNYVALE TOWN COUNCIL
SPECIAL MEETING
COUNCIL CHAMBERS - 127 N. COLLINS RD
MONDAY, JANUARY 18, 2016
6:00 P.M.**

INVOCATION

PLEDGE OF ALLEGIANCE

CALL MEETING TO ORDER

Mayor calls the Meeting to order, state the date and time. State Councilmembers present and declare a quorum present.

PUBLIC FORUM

Citizens may speak on any matter other than personnel matters or matters under litigation. No Town Council actions or discussion will be taken until such matter is placed on the agenda and posted in accordance with law.

DISCUSSION/ACTION ITEMS:

1. DISCUSS UNIFIED DEVELOPMENT ORDINANCE UPDATE.

This item may be discussed in the Conference Room and will be open to the public.

TOWN MANAGER

2. DISCUSS AND APPROVE FINAL DESIGN ALTERNATIVE FOR THE TRIPP & COLLINS RD. INTERSECTION.

ECONOMIC DEVELOPMENT

3. PRESENTATION BY TOWN STAFF REGARDING AN UPDATE TO THE SUNNYVALE CENTER INDUSTRIAL PARK PROJECT AND DISCUSSION.

FIRE DEPARTMENT

4. DISCUSS AND CONSIDER RESOLUTION ADOPTING DALLAS COUNTY HAZARDOUS MITIGATION PLAN.

TOWN MANAGER

5. DISCUSS AND APPROVE PLAN TO CONDUCT COMPETITION FOR NEW OFFICIAL TOWN FLAG.

MAYOR & COUNCIL

6. MAYOR AND COUNCIL REQUESTS FOR FUTURE STAFF UPDATES AND AGENDA ITEMS.

ADJOURN

ALL LOCATIONS IDENTIFIED ARE IN THE TOWN OF SUNNYVALE UNLESS OTHERWISE INDICATED. FOR A DETAILED PROPERTY DESCRIPTION, PLEASE CONTACT THE BUILDING OFFICIAL AT TOWN HALL. ALL ITEMS ON THE AGENDA ARE FOR POSSIBLE DISCUSSION AND ACTION. PLEASE TURN OFF ALL TELEPHONES AND HANDHELD COMMUNICATION DEVICES WHILE IN ATTENDANCE AT THIS MEETING.

THE SUNNYVALE TOWN COUNCIL RESERVES THE RIGHT TO ADJOURN INTO EXECUTIVE SESSION AT ANY TIME DURING THE COURSE OF THIS MEETING TO DISCUSS ANY OF THE MATTERS LISTED ABOVE, AS AUTHORIZED BY TEXAS GOVERNMENT CODE SECTION 551.071 (CONSULTATION WITH ATTORNEY), 551.072 (DELIBERATION ABOUT REAL PROPERTY), 551.073 (DELIBERATIONS ABOUT GIFTS AND DONATIONS), 551.074 (PERSONNEL MATTERS), 551.076 (DELIBERATIONS ABOUT SECURITY DEVICES), AND 551.087 (ECONOMIC DEVELOPMENT).

THE TOWN OF SUNNYVALE IS COMMITTED TO COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA). REASONABLE ACCOMMODATIONS AND EQUAL ACCESS TO COMMUNICATIONS WILL BE PROVIDED TO THOSE WHO PROVIDE NOTICE TO THE DIRECTOR OF COMMUNITY SERVICES AT 972-226-7177 AT LEAST 48 HOURS PRIOR TO THE MEETING.

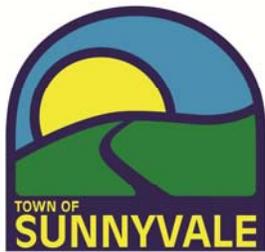
THE FOREGOING NOTICE WAS POSTED IN THE FOLLOWING LOCATIONS:

SUNNYVALE ISD 417 E. TRIPP ROAD
SUNNYVALE LIBRARY AT 402 TOWER PLACE

I HEREBY CERTIFY THAT THE FOREGOING NOTICE WAS POSTED ON JANUARY 15, 2016 IN THE FOLLOWING LOCATION AND REMAINED SO POSTED CONTINUOUSLY FOR AT LEAST 72 HOURS PRECEDING THE SCHEDULED TIME OF SAID MEETING:

TOWN HALL AT 127 N. COLLINS ROAD

LESLIE BLACK, TOWN SECRETARY



Prepared By: Rashad Jackson, AICP

Summary

WORKSHOP WITH FREESE AND NICHOLS FOR DEVELOPMENT OF A UNIFIED DEVELOPMENT ORDINANCE (UDO).

In July, 2015, Council approved the development of a Unified Development Ordinance, with the purpose of modernizing the Town's land development regulations and address major issues within the ordinances.

The draft Subdivision Ordinance and Zoning Ordinance Diagnostic Report was presented to Council in October 2015. The report contained 66 recommendations and were based on a thorough evaluation of the Town's existing ordinances and interviews conducted with Council, Planning and Zoning members, Developers and other stakeholders.

Staff has worked to address some of the more immediate issues within the ordinance(s), but with the addition of the Comprehensive Plan update, which will result in needed amendments to the Town's zoning and/or subdivision ordinances, there are other items that need to be addressed.

At the last UDO workshop, Town Council provided comments to our consultant with regard to the direction they would like to proceed with the recommendations noted in the Diagnostic Report. Freese and Nichols have addressed a majority of the Diagnostic Report comments and are presenting 6 remaining topics for final review. The purpose of this workshop is to gain Council consensus on the last 6 topics in order to proceed forward with the actual drafting of the UDO.

Fiscal Impact

None.

Attachments

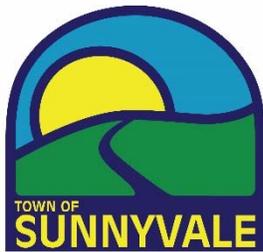
- Workshop Handout – UDO update

Sunnyvale UDO | Diagnostic Report Updates

Monday, January 11, 2016

Meeting Purpose: To gain Council consensus on topics to proceed forward with the UDO

Item #	Page #	Topic	Action
3	7	<p>Who Approves Plats? States law requires that the P&Z approves plats. State law also allows for a <u>dual approval</u> option, which requires both the P&Z and Council's approval. Council expressed a desire to be involved in the plat approval. The only disadvantage for dual approval is the longer application processing time.</p>	<p>Option 1: P&Z is sole approval body for plats Option 2: P&Z and Council must both approve plats</p>
4	7	<p>Should Staff Approve Amending and Minor Plats? The ordinance currently requires Council approval for amending plats and is unclear regarding minor plat approval authority. State law allows these plats to be processed administratively. Staff approval will shorten the time it takes to approve these types of plats.</p>	<p>Option 1: Allow staff to approve amending and minor plats Option 2: Allow staff to approve amending plats only or minor plats only Option 3: Amending and minor plats must be approved through the standard plat approval process</p>
N/A	N/A	<p>Public Hearings for Zoning Cases In zoning cases (e.g., rezoning), should notification go further out than the current 400' to property owners? State law only requires 200'.</p>	<p>Option 1: Keep 400' requirement Option 2: Increase from 400' to a specific amount. Option 3: Reduce to 200' (State standard)</p>
57	20	<p>Add a Standard Planned Development (PD) District to Replace the Planned Residential Overlay (PRO) District Simplify the zoning process by replacing the PRO with a PD zoning district and process. There are no more 1,000 acre sites available for the PRO.</p>	<p>Option 1: Allow for residential PDs (minimum size: 30 acres) and nonresidential PDs (minimum size: 5 or 10 acres) Option 2: Keep the current PRO and Planned Commercial District</p>
58	20	<p>Delete Maximum Density Requirement and Replace with a Minimum Lot Size Maximum density is difficult to apply across all residential zoning types. Simplify by only using the existing minimum lot size for each zoning district. Target densities can be reached using the PD method.</p>	<p>Option 1: Use the existing minimum lot sizes for each zoning district and delete the maximum density requirement (Move the <u>incentive density</u> and <u>bonus density</u> to new PD section) Option 2: Keep the maximum density requirement, but tailor to each zoning district</p>
59	21	<p>Add New Residential Zoning Districts The comprehensive plan calls for "medium density" and "town density residential" on the north side of the Town. The current zoning regulations do not accommodate this recommendation.</p>	<p>Option 1: Do not add any residential districts to the UDO. Option 2: Add the text of the residential districts, but do not rezone (update the zoning map) until the Council deems it appropriate Option 3: Plan to address the Comprehensive Plan's recommendation through the Planned Development (PD) process (Note: assumes new PD section is created)</p>



Town of Sunnyvale

Prepared By: Sean Fox, Town Manager

Summary:

DISCUSS AND APPROVE FINAL DESIGN ALTERNATIVE FOR THE TRIPP & COLLINS RD. INTERSECTION.

Background & Analysis:

Over the past several months, Council was provided and reviewed information provided related to traffic intersection control measures. Six different alternatives were presented to address the current traffic concerns and future growth along the Collins corridor. Those alternatives were based on an Intersection Control Evaluation that was completed by along Collins Road at the T-intersections of E Tripp Road (west) and E Tripp Road (east). The southern intersection is currently operating under temporary traffic signal control. The northern intersection is currently being operated with stop control along Tripp Road and uncontrolled along Collins Road. This study compared modifying the existing intersections to incorporate traffic signals versus the conversion to either a singular roundabout or dual roundabouts.

The comprehensive evaluation presented quantitative criteria including operational performance for motorists, estimated right-of-way (ROW) costs, construction costs, maintenance costs, and study period costs (including societal collision costs).

Council last reviewed the information on December 11, 2015 and approved eliminating the three traffic signals alternatives, reducing the number to three. The decision of which intersection control design is ultimately the best and most appropriate for the Town of Sunnyvale plays a critical part in the ongoing design and engineering of the Collins Road expansion north of SH-80.

The engineers from GHD and NDM will be on hand to answer any questions or provide additional information.

Staff Recommendation:

None.

Attachment:

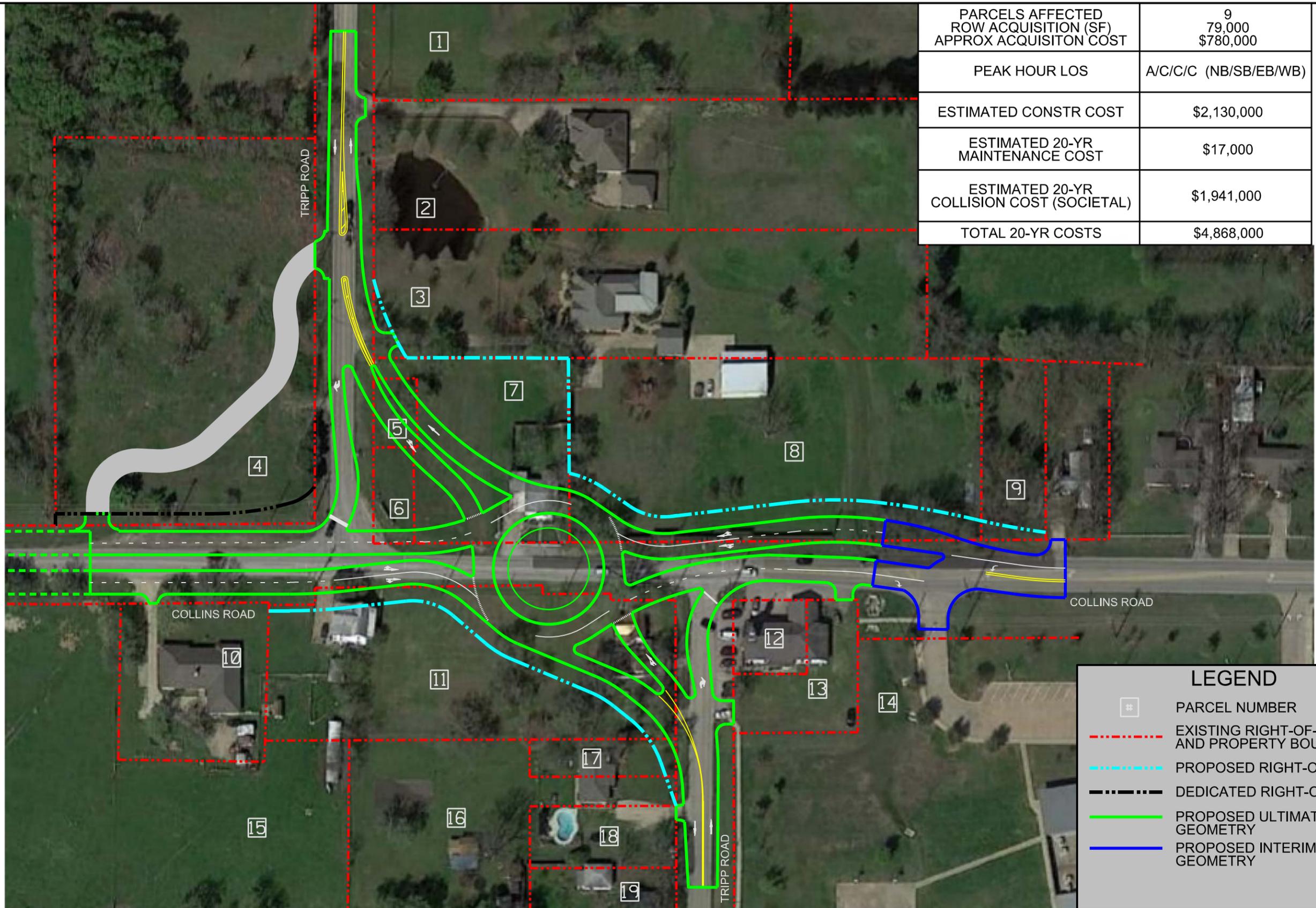
Updated Collins Road Intersection Control Evaluation

Collins Road Intersection Control Evaluation

Summary Evaluation of Quantitative Criteria for the Roundabout Alternatives

	Evaluation Criteria	Roundabout Alternative 4.1	Roundabout Alternative 5	Roundabout Alternative 6
Tripp Road (west) to northern project terminus	Build-Out Traffic Peak Hour Approach Leg Delay – critical approach(es) , (sec)	Up to 35 seconds	Up to 15 seconds	Up to 15 seconds
	Estimated Parcels Affected	9	10	14
	Estimated Property to be Acquired, (SF)	79,000	57,000	96,000
	*Estimated ROW Costs, (\$)	\$780,000	\$680,000	\$1,040,000
	Estimated Constr Cost, (\$)	\$2,130,000	\$1,810,000	\$2,080,000
	Estimated 20-Year Maintenance Cost, (PC, \$)	\$17,000	\$34,000	\$17,000
	Estimated 20-Year Collision Costs, (PC, \$)	\$1,941,000	\$1,746,000	\$1,941,000
Collins Road Widening US Hwy 80 to Tripp Road (west)	Estimated Constr Cost, (\$)	\$4,100,000	\$4,100,000	\$4,100,000
Collins Road Widening US Hwy 80 to northern project terminus	Estimated Constr Cost, (\$)	\$6,230,000	\$5,910,000	\$6,180,000

*ROW Costs include ROW acquisition, ROW and easement documentation, appraisal and review appraisal services, and improvement costs.



PARCELS AFFECTED	9
ROW ACQUISITION (SF)	79,000
APPROX ACQUISITION COST	\$780,000
PEAK HOUR LOS	A/C/C/C (NB/SB/EB/WB)
ESTIMATED CONSTR COST	\$2,130,000
ESTIMATED 20-YR MAINTENANCE COST	\$17,000
ESTIMATED 20-YR COLLISION COST (SOCIETAL)	\$1,941,000
TOTAL 20-YR COSTS	\$4,868,000



LEGEND	
#	PARCEL NUMBER
- - - - -	EXISTING RIGHT-OF-WAY AND PROPERTY BOUNDARY
- · - · - ·	PROPOSED RIGHT-OF-WAY
- - - - -	DEDICATED RIGHT-OF-WAY
— (green)	PROPOSED ULTIMATE RDWY GEOMETRY
— (blue)	PROPOSED INTERIM RDWY GEOMETRY

GHD
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ALTERNATIVE #4.1 - ONE ROUNDABOUT
 COLLINS ROAD AT TRIPP ROAD
 SUNNYVALE, TX

ROUNDABOUT OVERVIEW



EXHIBIT: 1.4.1

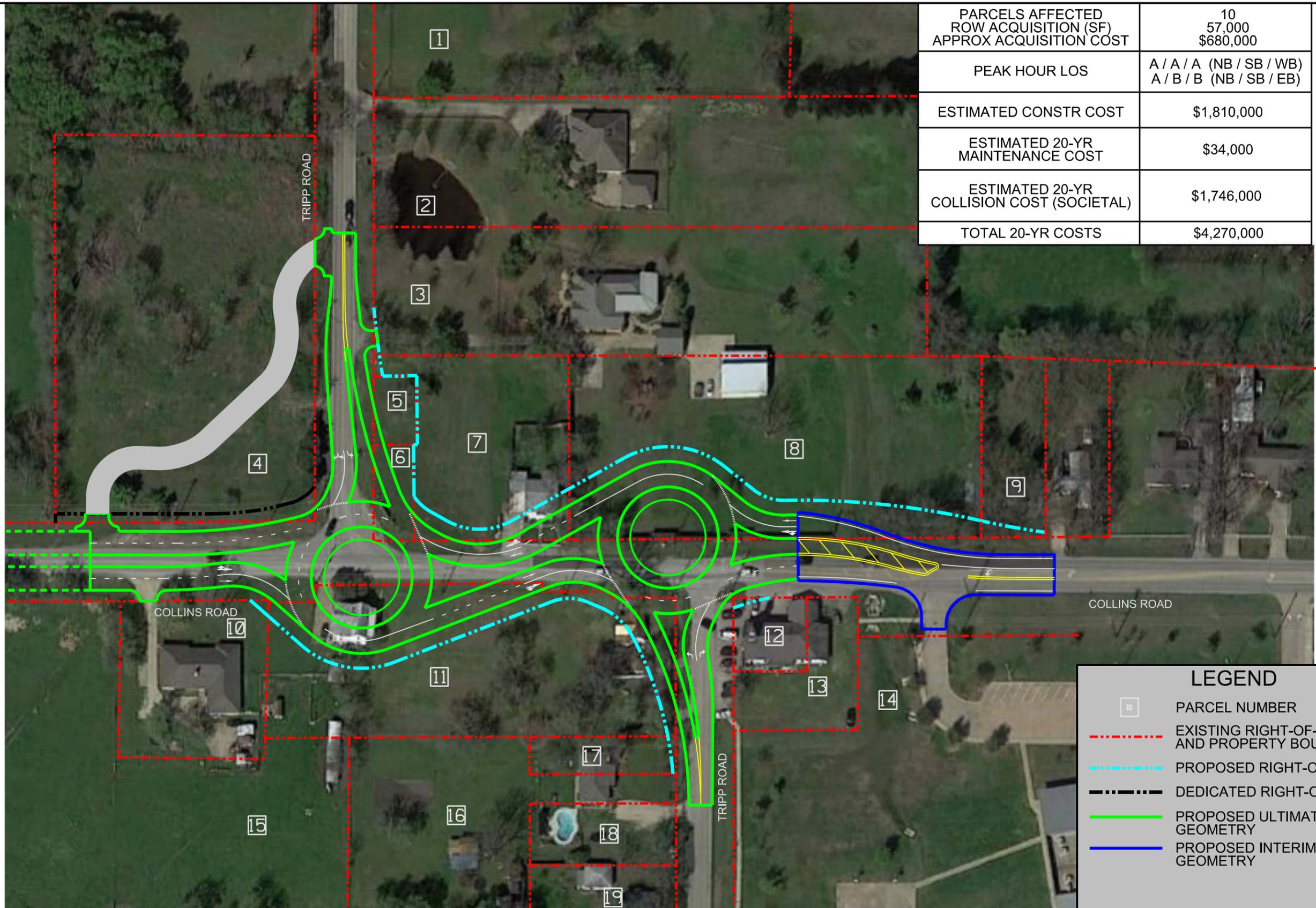
TOWN OF SUNNYVALE

**OPINION OF PROBABLE CONSTRUCTION COST
ALTERNATIVE #4.1 - ONE ROUNDABOUT (CENTERED)**

	APPROXIMATE QUANTITY	UNIT	GENERAL	ENGINEER'S ESTIMATE	
			ITEM DESCRIPTION	UNIT PRICE	TOTAL
ROADWAY ITEMS					
1	1	LS	MOBILIZATION AND PREPARATION OF ROW	\$ 120,000.00	\$ 120,000.00
2	18.5	STA	PREP ROW	\$ 2,500.00	\$ 46,250.00
3	5000	CY	EARTHWORK	\$ 15.00	\$ 75,000.00
4	5800	SY	PAVEMENT REMOVAL	\$ 8.00	\$ 46,400.00
5	11000	SY	PAVING ITEMS	\$ 90.00	\$ 990,000.00
6	6	MO	TRAFFIC CONTROL	\$ 10,000.00	\$ 60,000.00
7	1	LS	DRAINAGE	\$ 99,000.00	\$ 99,000.00
8	1	LS	PAVEMENT MARKINGS AND SIGNAGE	\$ 74,250.00	\$ 74,250.00
9	1	LS	ILLUMINATION	\$ 148,500.00	\$ 148,500.00
10	1	LS	LANDSCAPING	\$ 49,500.00	\$ 49,500.00
11	1	LS	EROSION CONTROL	\$ 24,750.00	\$ 24,750.00
12	1	LS	UTILITY ADJUSTMENTS (WATER AND SEWER - MINOR)	\$ 39,600.00	\$ 39,600.00
13	0	EA	TRAFFIC SIGNALS	\$ 250,000.00	\$ -
14	1	LS	CONTINGENCY (20%)	\$ 354,650.00	\$ 354,650.00
			CONSTRUCTION ROUNDED SUBTOTAL		\$ 2,130,000.00
PARCEL NO.					
3, 5, 6, 7, 8, 9, 11, 16, 17	79,000	SF	*RIGHT OF WAY ACQUISITION - 9 PARCELS	\$ 5.00	\$ 395,000.00
SEE ABOVE	18	EA	ROW AND EASEMENT DOCUMENTATION	\$ 2,757.50	\$ 49,635.00
SEE ABOVE	9	EA	APPRAISAL AND REVIEW APPRAISAL	\$ 4,000.00	\$ 36,000.00
7	1	EA	IMPROVEMENTS (HOUSE) - COST VIA DCAD / REALTOR.COM	\$ 111,000.00	\$ 111,000.00
11-1	1	EA	IMPROVEMENTS (HOUSE) - COST VIA DCAD / REALTOR.COM	\$ 115,240.00	\$ 115,240.00
11-2	1	EA	IMPROVEMENTS (HOUSE) - COST VIA DCAD / REALTOR.COM		
7, 11-1, 11-2	3	EA	REMOVE EXIST STRUCTURE	\$ 25,000.00	\$ 75,000.00
			ROW ROUNDED SUBTOTAL		\$ 780,000.00
			TOTAL (CONSTRUCTION + ROW)		\$ 2,910,000.00

*DOES NOT ACCOUNT FOR ROW DEDICATION BY TRINITY CAPITAL BANK

GHD has prepared this preliminary cost estimate using information reasonably available and based on assumptions and judgments made by GHD. The estimates have been prepared for the purpose of comparing alternatives and must not be used for any other purpose. The cost estimates are preliminary estimates only. Actual prices, costs and other variables may be different to those used to prepare the cost estimate and may change. GHD does not represent, warrant or guarantee that the intersection modifications can or will be undertaken at a cost which is the same or less than this cost estimate.



PARCELS AFFECTED	10
ROW ACQUISITION (SF)	57,000
APPROX ACQUISITION COST	\$680,000
PEAK HOUR LOS	A / A / A (NB / SB / WB) A / B / B (NB / SB / EB)
ESTIMATED CONSTR COST	\$1,810,000
ESTIMATED 20-YR MAINTENANCE COST	\$34,000
ESTIMATED 20-YR COLLISION COST (SOCIETAL)	\$1,746,000
TOTAL 20-YR COSTS	\$4,270,000

LEGEND	
#	PARCEL NUMBER
- - - - -	EXISTING RIGHT-OF-WAY AND PROPERTY BOUNDARY
- · - · - ·	PROPOSED RIGHT-OF-WAY
- · - · - ·	DEDICATED RIGHT-OF-WAY
—	PROPOSED ULTIMATE RDWY GEOMETRY
—	PROPOSED INTERIM RDWY GEOMETRY

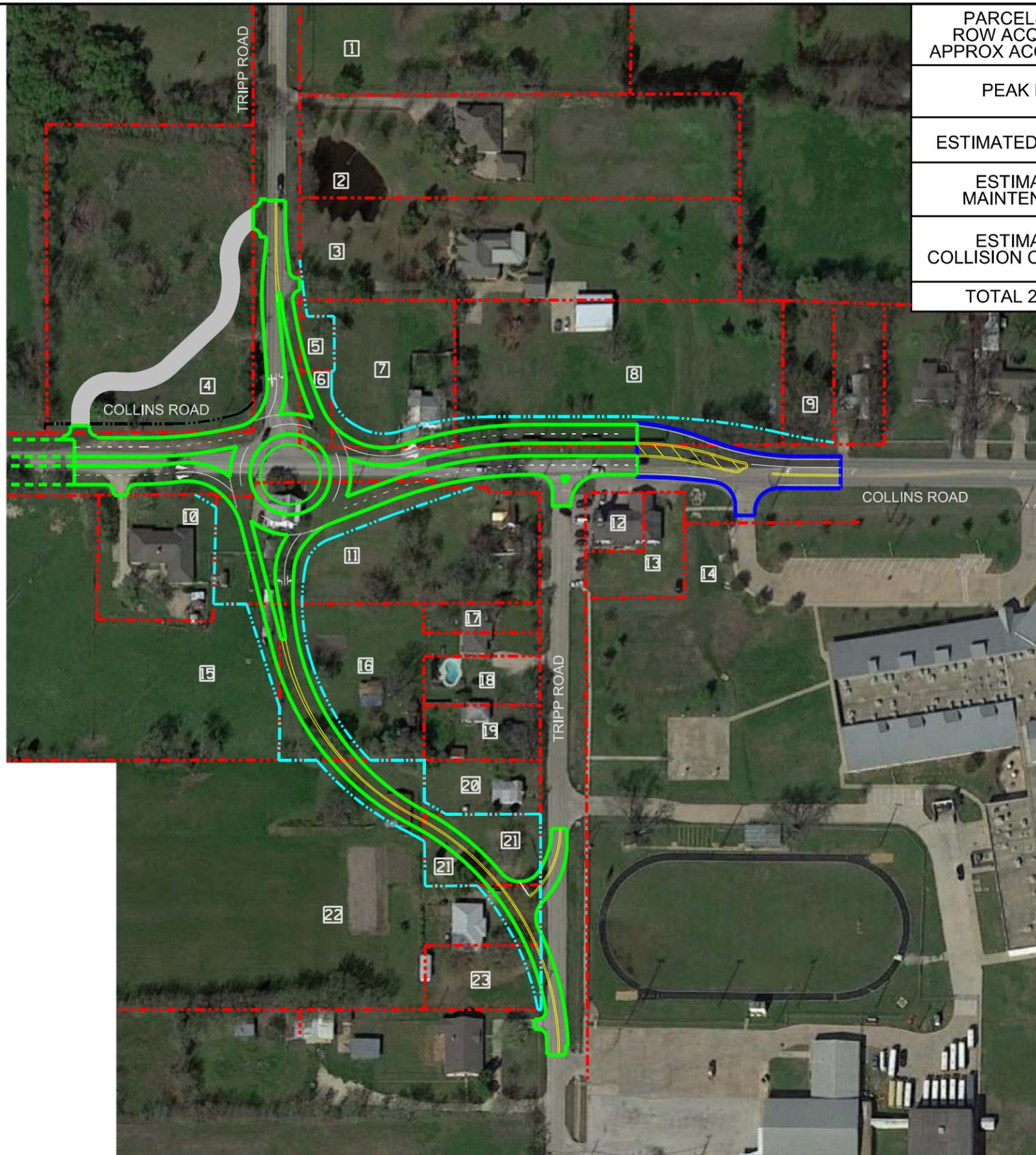
TOWN OF SUNNYVALE

OPINION OF PROBABLE CONSTRUCTION COST
ALTERNATIVE #5 - TWO ROUNDABOUTS

	APPROXIMATE QUANTITY	UNIT	GENERAL	ENGINEER'S ESTIMATE	
			ITEM DESCRIPTION	UNIT PRICE	TOTAL
ROADWAY ITEMS					
1	1	LS	MOBILIZATION AND PREPARATION OF ROW	\$ 100,000.00	\$ 100,000.00
2	15	STA	PREP ROW	\$ 2,500.00	\$ 37,500.00
3	5500	CY	EARTHWORK	\$ 15.00	\$ 82,500.00
4	5200	SY	PAVEMENT REMOVAL	\$ 8.00	\$ 41,600.00
5	9300	SY	PAVING ITEMS	\$ 90.00	\$ 837,000.00
6	6	MO	TRAFFIC CONTROL	\$ 10,000.00	\$ 60,000.00
7	1	LS	DRAINAGE	\$ 83,700.00	\$ 83,700.00
8	1	LS	PAVEMENT MARKINGS AND SIGNAGE	\$ 62,775.00	\$ 62,775.00
9	1	LS	ILLUMINATION	\$ 83,700.00	\$ 83,700.00
10	1	LS	LANDSCAPING	\$ 62,775.00	\$ 62,775.00
11	1	LS	EROSION CONTROL	\$ 20,925.00	\$ 20,925.00
12	1	LS	UTILITY ADJUSTMENTS (WATER AND SEWER - MINOR)	\$ 33,480.00	\$ 33,480.00
13	0	EA	TRAFFIC SIGNALS	\$ 250,000.00	\$ -
14	1	LS	CONTINGENCY (20%)	\$ 301,191.00	\$ 301,191.00
			CONSTRUCTION ROUNDED SUBTOTAL		\$ 1,810,000.00
PARCEL NO.					
3, 5, 6, 7, 8, 9, 10, 11, 12, 17	57,000	SF	*RIGHT OF WAY ACQUISITION - 10 PARCELS	\$ 5.00	\$ 285,000.00
SEE ABOVE	20	EA	ROW AND EASEMENT DOCUMENTATION	\$ 2,757.50	\$ 55,150.00
SEE ABOVE	10	EA	APPRAISAL AND REVIEW APPRAISAL	\$ 4,000.00	\$ 40,000.00
7	1	EA	IMPROVEMENTS (HOUSE) - COST VIA DCAD / REALTOR.COM	\$ 111,000.00	\$ 111,000.00
11-1	1	EA	IMPROVEMENTS (HOUSE) - COST VIA DCAD / REALTOR.COM	\$ 115,240.00	\$ 115,240.00
11-2	1	EA	IMPROVEMENTS (HOUSE) - COST VIA DCAD / REALTOR.COM	PART OF 8	
7, 11-1, 11-2	3	EA	REMOVE EXIST STRUCTURE	\$ 25,000.00	\$ 75,000.00
			ROW ROUNDED SUBTOTAL		\$ 680,000.00
			TOTAL (CONSTRUCTION + ROW)		\$ 2,490,000.00

*DOES NOT ACCOUNT FOR ROW DEDICATION BY TRINITY CAPITAL BANK

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PARCELS AFFECTED	14
ROW ACQUISITION (SF)	96,000
APPROX ACQUISITION COST	\$1,040,000
PEAK HOUR LOS	A/B/B/B (NB/SB/EB/WB)
ESTIMATED CONSTR COST	\$2,080,000
ESTIMATED 20-YR MAINTENANCE COST	\$17,000
ESTIMATED 20-YR COLLISION COST (SOCIETAL)	\$1,941,000
TOTAL 20-YR COSTS	\$5,078,000



LEGEND	
#	PARCEL NUMBER
- - - - -	EXISTING RIGHT-OF-WAY AND PROPERTY BOUNDARY
- · - · -	PROPOSED RIGHT-OF-WAY
- · - · -	DEDICATED RIGHT-OF-WAY
—	PROPOSED ULTIMATE RDWY GEOMETRY
—	PROPOSED INTERIM RDWY GEOMETRY



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ALTERNATIVE #6 - ONE ROUNDABOUT (SOUTH)
COLLINS ROAD AT TRIPP ROAD
SUNNYVALE, TX

ROUNDABOUT OVERVIEW

SCALE
0 80 160

EXHIBIT: 1.6

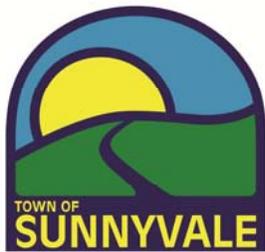
TOWN OF SUNNYVALE

**OPINION OF PROBABLE CONSTRUCTION COST
ALTERNATIVE #6 - ONE ROUNDABOUT (SOUTH)**

	APPROXIMATE QUANTITY	UNIT	GENERAL	ENGINEER'S ESTIMATE	
			ITEM DESCRIPTION	UNIT PRICE	TOTAL
ROADWAY ITEMS					
1	1	LS	MOBILIZATION AND PREPARATION OF ROW	\$ 120,000.00	\$ 120,000.00
2	21	STA	PREP ROW	\$ 2,500.00	\$ 52,500.00
3	5000	CY	EARTHWORK	\$ 15.00	\$ 75,000.00
4	5300	SY	PAVEMENT REMOVAL	\$ 8.00	\$ 42,400.00
5	10700	SY	PAVING ITEMS	\$ 90.00	\$ 963,000.00
6	6	MO	TRAFFIC CONTROL	\$ 10,000.00	\$ 60,000.00
7	1	LS	DRAINAGE	\$ 96,000.00	\$ 96,000.00
8	1	LS	PAVEMENT MARKINGS AND SIGNAGE	\$ 72,225.00	\$ 72,225.00
9	1	LS	ILLUMINATION	\$ 144,450.00	\$ 144,450.00
10	1	LS	LANDSCAPING	\$ 48,150.00	\$ 48,150.00
11	1	LS	EROSION CONTROL	\$ 24,075.00	\$ 24,075.00
12	1	LS	UTILITY ADJUSTMENTS (WATER AND SEWER - MINOR)	\$ 38,520.00	\$ 38,520.00
13	0	EA	TRAFFIC SIGNALS	\$ 250,000.00	\$ -
14	1	LS	CONTINGENCY (20%)	\$ 347,264.00	\$ 347,264.00
CONSTRUCTION ROUNDED SUBTOTAL					\$ 2,080,000.00
PARCEL NO.					
3, 5, 6, 7, 8, 9, 10, 11, 15, 16, 20, 21, 22, 23	96,000	SF	*RIGHT OF WAY ACQUISITION - 14 PARCELS	\$ 5.00	\$ 480,000.00
SEE ABOVE	28	EA	ROW AND EASEMENT DOCUMENTATION	\$ 2,757.50	\$ 77,210.00
SEE ABOVE	14	EA	APPRAISAL AND REVIEW APPRAISAL	\$ 4,000.00	\$ 56,000.00
7	1	EA	IMPROVEMENTS (HOUSE) - COST VIA DCAD / REALTOR.COM	\$ 111,000.00	\$ 111,000.00
11	1	EA	IMPROVEMENTS (HOUSE) - COST VIA DCAD / REALTOR.COM	\$ 115,240.00	\$ 115,240.00
21	1	EA	IMPROVEMENTS (HOUSE) - COST VIA DCAD / REALTOR.COM	\$ 82,000.00	\$ 82,000.00
22	1	EA	IMPROVEMENTS (STORAGE SHED) - COST VIA DCAD / REALTOR.COM	\$ 20,000.00	\$ 20,000.00
7, 11, 22, 21	4	EA	REMOVE EXIST STRUCTURE	\$ 25,000.00	\$ 100,000.00
ROW ROUNDED SUBTOTAL					\$ 1,040,000.00
TOTAL (CONSTRUCTION + ROW)					\$ 3,120,000.00

*DOES NOT ACCOUNT FOR ROW DEDICATION BY TRINITY CAPITAL BANK

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Town of Sunnyvale

Prepared By: Johnny Meeks
Randall Heye

Summary:

UPDATE ON THE SUNNYVALE CENTER INDUSTRIAL PARK WATER MAIN REPLACEMENT PROJECT

Background & Analysis:

The Sunnyvale Center Industrial Park, located on Clay Road between Scyene Road and Aston Drive, experienced five to six major breaks to its water works system during 2014. The breaks and condition of the water works system are a significant disruption to the existing businesses, hinder potential business expansion, may lead to future business retention issues and are an impediment to new businesses locating to the Sunnyvale Center Industrial Park. All of which negatively impacts economic development within the industrial park.

After coordination with the Sunnyvale Center Industrial Park Property Owners Association and its representatives, staff has identified a possible solution that would improve the water works system by assessing benefitted properties a portion of the estimated cost of improvements in accordance with Chapter 552 of the Texas Local Government Code. These public improvements may include constructing, extending, enlarging, or reconstructing the system.

Town Council has previously approved a resolution declaring the need for improvements at the industrial park exist, stating the general nature of the improvements, and directing staff to obtain detailed plans, specifications, and cost estimates of the improvements for future consideration by Town Council.

Staff would like to provide the Town Council an update regarding the proposed Sunnyvale Center Industrial Park project.

Fiscal Impact:

The 4A Development Corporation previously assigned \$1,100,000 for the design and construction of the project with the expectation that half of the total project costs will be reimbursed to the Corporation via an assessment placed on the benefitted property owners by the Town. The latest Opinion of Probable Construction Cost for the project is \$945,689.16. Including design, the total project cost is anticipated to be approximately \$1,070,700.

Staff Recommendation:

None.

Attachment:

- Preliminary Engineering Report - 2015-07-22

Preliminary Engineering Report

<i>Client:</i>	Town of Sunnyvale	<i>MJCE Project No.</i>	75182-0900
<i>Address:</i>	127 N. Collins Road	<i>Project Name:</i>	Sunnyvale Industrial Park Water Main Replacements
<i>City, State, Zip:</i>	Sunnyvale, TX 75182	<i>Date:</i>	7/22/15
<i>Attention:</i>	Randall Heye, Director of Economic Development		

PROJECT DESCRIPTION:	<p><u>Project Summary</u></p> <p>This project includes preliminary and final design and construction related professional engineering services for the replacement and/or installation of approximately 7,600 L.F. of 12" and 8" water lines to include all related appurtenances (such as: valves, services, fire hydrants, etc.). A new connection will be made to the Sunnyvale water system in order to provide a looped system that will enhance water quality and permit shutdowns of portions of the pipelines for maintenance or repair in the future without disrupting service to the entire area. Additional fire hydrants will also be installed at intervals of 300' to comply with Fire Protection requirements for the developed areas. For this project, water line replacements will be planned in locations that will avoid disruption where possible during construction to existing businesses located in the Industrial Park and near property lines for undeveloped tracts in order to minimize impacts to future development. Efforts have begun to coordinate with the business owners and Property Owners Association representatives to identify potential concerns in advance of preparation of the design.</p> <p><u>Existing System</u></p> <p>The project system includes multiple lengths of what is believed to be 8-inch steel or cast iron water mains. These mains are generally located in a pattern surrounding the existing buildings in the Industrial Park south of the main entrance. Additionally, there are a number of appurtenances included in the private water system including fire hydrants, valves, and old boxes. These steel or iron mains have deteriorated significantly over many years and have now reached the end of their useful life. There have been numerous failures requiring repairs that disrupt service to the entire Industrial Park area. These pipelines are located throughout the Industrial Park and are all in need of replacement. All of the appurtenances on these pipelines are assumed to be in similar condition and have no additional useful life. All of the old mains were developed as a "private" system and have been maintained by the property owners in the Industrial Park. These mains have all been identified for replacement with this current project.</p> <p>There are areas within the industrial park that have more recently been installed with non-corrosive PVC pipe material. These mains were also installed as "private" pipelines. These mains are generally located between the existing buildings and are believed to be in good condition. There are also a number of appurtenances on these mains that are thought to be in good condition. These lengths of pipeline are highlighted in yellow on "Preliminary Engineering Report - Exhibit A" and marked to remain in service. Portions of these mains must be replaced based on the need for the larger size pipeline planned for service to the entire industrial park. The limits of these mains that are to remain in service may be difficult to determine. An evaluation will be made during the survey and design to determine the extent of these mains that can remain in service and connected to the new pipelines.</p>
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PROJECT DESCRIPTION (CONT):

Proposed System

The proposed system will provide dual connections with new pipelines to the existing Sunnyvale water system pipeline in Clay Road. A new 12-inch pipeline will be connected to the existing 12-inch pipeline and across Clay Road near the south end of the Industrial Park. A new 12-inch pipeline will be designed within new easements along the outer edges of the currently developed area. This will provide service to the existing development and provide access to water for the future development around the edges of the Industrial Park. An additional new 12-inch pipeline will be extended into the Industrial Park from Clay Road beginning at the existing crossing south of the Industrial Park main entrance. This will connect to the new 12-inch that is to be installed around the existing developed area. The new 12-inch pipelines will provide dual connections to the existing system enhancing water quality and service to the Industrial Park through multiple feeds that can provide service without disruption if one of the connections is taken out of service for maintenance or repair. The preliminary alignment of these pipelines is shown on the attached "Preliminary Engineering Report - Exhibit A".

The existing 8-inch PVC pipelines that have been more recently installed will be connected to the new 12-inch pipeline and remain in service. A new connection will be made to the existing 8-inch pipeline installed through the northern part of the Industrial Park. This will aid the system by providing looping of the system that will enhance water quality and provide the ability to shut down portions of the system without disrupting other areas. New easements will be developed along the existing pipelines that are to remain in service as they will become public water mains and must have the authorization for maintenance, repair, and replacement by Town of Sunnyvale personnel.

The new pipelines will include installation of fire hydrants each 300 feet that will provide adequate fire protection for the area. Multiple valves will also be provided that will allow isolation of a fire hydrant for maintenance without disrupting service to the others. The valves will also provide the Town operators the ability to maintain and repair portions of the newly developed system without interrupting service to multiple businesses. These additional appurtenances are shown on the preliminary layout shown on "Preliminary Engineering Report - Exhibit A" attached and included as part of this Preliminary Engineering Report.

Pipeline Easements

New pipeline easements will be required for both the new pipelines within the Industrial Park and for the existing pipelines that are to remain in service within the Industrial Park. These easements will be prepared as part of the design of the project. The easements will provide access to the Town of Sunnyvale to the "public" mains within the Industrial Park. The easements will be presented to the current property owners for approval prior to authorizing construction. Temporary work space for construction will be requested to permit construction activity by the contractor on areas adjacent to the easements. For multiple services to the same property, an extension of the public water main may be installed in an easement. If this is necessary, it will be in an easement and be maintained by the Town of Sunnyvale staff.

Existing Services

The existing water services at each of the buildings located in the Sunnyvale Industrial Park will need to be connected to the new pipelines in an alternate location. Many of the existing water meters that serve the buildings are located within the structure of the building. The new services to be installed will require that the water meter be located at the easement line, outside of any structure. This would apply for 2-inches and smaller. The larger services may be planned to have a vault potentially in an additional easement adjacent to the water line easement. All service lines from the meter to locations within the

<p>PROJECT DESCRIPTION (CONT):</p>	<p>properties will remain private and the responsibility of the property owners to maintain. Locations for the services will be coordinated with the property owners. If a building/property has more than one service, there may be an extension of the public water system in an easement that will provide water to multiple services. As mentioned in the easement discussion, this additional line would be a public main operated by Town staff.</p>
<p>DESIGN APPROACH:</p>	<p><u>Water Main Design</u></p> <p>The design of the water mains in the Sunnyvale Industrial Park is planned with a goal of minimizing disruption to the businesses located and operating there while providing pipelines that can be readily managed and maintained by the Town staff. The new pipelines will be planned with consideration of a number of criteria including:</p> <ul style="list-style-type: none"> • Operational considerations for the Town of Sunnyvale water distribution system • Providing adequate fire protection and operational flexibility to maintain service to the area while performing partial system shutdowns for maintenance or repairs • Enhance water distribution looping to improve water quality in the system • Minimal impact to operating businesses located in the area • Minimized impacts to properties planned for future development <p>The new pipelines will be designed with a layout to accommodate multiple connections to the existing water main in Clay Road. The current service with one connection will be enhanced with the looping of the system to have a total of 3 connections to the existing system. A new connection will be added near the south end of the park across Clay Road to connect to and eliminate the dead-end main in Clay Road. The new pipelines will also be connected to a recently installed 8-inch pipeline crossing Clay Road near the central part of the Industrial Park to enhance distribution. The new pipelines in the park will also be designed to connect to the existing 8-inch pipeline installed recently near the north end of the park. This will further enhance the system reliability and quality for the entire Industrial Park. The proposed schematic drawing for the locations of these new pipelines is shown on the attached "Preliminary Engineering Report - Exhibit A".</p> <p>The existing fire protection in the Industrial Park will be enhanced with the design of the new pipelines. The new pipelines to be installed will be designed to comply with current standards and Town of Sunnyvale requirements. Fire hydrants will be spaced at 300 linear feet along the new pipelines such that they will comply with maximum spacing for an industrial area. There will also be valves installed on the new mains to create the ability to maintain/repair a single fire hydrant while keeping the remainder of the system and all other fire hydrants in service. The installation of the valves and the additional pipeline connections will also provide the ability for the Town staff to work on the pipelines if a problem occurs without disrupting service to multiple businesses. These additional valves are indicated on the attached "Preliminary Engineering Report - Exhibit A".</p> <p>The design of the new water mains to be installed in the Industrial Park will be planned to minimize impacts to the existing businesses located within the area. The new mains will be designed to be installed in a location that provides the ability to install them with the old mains in service. A request was made by one of the businesses to be connected to the new system early in the construction process to enhance water quality. This will be considered in the design of the new system. Construction drawings and specifications will be developed to prioritize areas to be placed in service in such a way that the operation of the businesses is minimally impacted. Portions of the pipelines to be installed will be installed without cutting the paving in order to preserve the integrity of the paving and to avoid disrupting access to the traffic that exists while the businesses are operating. The design of the new pipelines as discussed will</p>

**DESIGN
APPROACH
(CONT):**

permit the existing businesses to continue with water service from the old pipelines until the new lines are in service. At that time, the services will be transferred to the new pipelines with only a short-term disruption to the businesses. The construction standards will require that this be coordinated with the business owner/operators to avoid unplanned disruption to the water services within the area. This will be a coordinated effort between the design drawings and the contract specifications. The coordination will also be completed with Town staff that will be performing the daily inspection of the construction.

The new pipelines will be installed adjacent to undeveloped areas within the Sunnyvale Industrial Park. The property survey will identify all properties that will require easements to install the new pipelines. A meeting was held at the initiation of the project with property owners and representatives of the Property Owners Association. The new pipelines will be designed following the survey of the potential alignment. An objective of the planned locations for the pipelines will be to minimize the impacts to the existing properties by placing them in locations that will maximize the building area. The pipeline routes will be planned to be in close proximity to property lines where possible. This effort will be balanced with the operational concerns of the Town staff and the need to be able to effectively maintain the system both with the existing development and potential additional development. The pipeline route will also be planned to provide opportunity to expand the system in the future to serve newly developed properties within the Sunnyvale Industrial Park.

Project Design Steps

Preliminary Engineering Report - The design process will include approval of this Preliminary Engineering Report prior to beginning survey of the site. The Town staff will review this document. Their comments will be addressed. It was also agreed at the meeting with property owners that a revised schematic design would be provided to the property owners for their review and comment. Efforts will be made to accommodate the comments of the property owners while maintaining the operational needs identified by the Town staff.

Survey - A route survey will be performed to obtain information needed to proceed with the project design. All appropriate information will be sought to develop easements for all water mains located in the Sunnyvale Industrial Park. The route survey will include the existing mains in order to assist with the development of those mains that are to remain in service and be used in the future. The survey will provide information required to stake the installation locations during construction.

Design Drawings – The design drawings will be developed to a standard scale such that the location of the new pipelines will be clearly shown. The plans will also provide the contractor with the information needed to install the pipelines in the correct location. The drawings will be developed utilizing a 1 inch = 40 feet horizontally and a vertical scale of 1-inch = 4 feet. The plans will be developed showing the 12-inch pipelines in plan and profile view to clarify all details. The 8-inch pipelines will be developed in the same scale with only the plan view being shown. All details will be shown that are required for clarification of construction requirements and for areas where facilities are congested. The details will also include drawings that specify how surface conditions are to be restored after construction. The plans will show the location of all appurtenances and services to be installed to provide water to the businesses. Design drawings will also provide a location map to identify where in the Town the project is located.

Preliminary Design – The Preliminary Design drawings will be submitted to the Town of Sunnyvale staff for review at an approximate 50% completion point. This review will provide the staff the opportunity to provide comments and suggestions on modifications they feel are needed to the design. The staff will

**DESIGN
APPROACH
(CONT):**

also be able to provide updates on any changes in the need for the project that may have occurred since the design began. It was suggested that the design drawings also be presented to the property owners at this stage as the actual location of the pipelines will be known at that time. The property owners will be asked to provide any comments or questions that may arise after reviewing the preliminary design drawings.

Final Design – The Final Design drawings will be submitted to the Town staff at approximately 90% completion as the final recommended design. The staff will be asked to review and provide comments and concerns prior to completing the project design in preparation for construction. Comments will be addressed and the plans resubmitted in preparation for construction.

Easement Documents - The Town of Sunnyvale staff plans to obtain approval of all easements needed to construct the pipelines and to maintain them after installation. The preparation of Easement Documents will follow completion of design plans. Easement descriptions will be prepared and submitted to the Town staff in order to facilitate obtaining approval from the property owners for the water lines within the Industrial Park. Documents needed to clarify the easements and identify the locations will be provided during this phase of the project. Easement documents will also include provisions for temporary work space for construction of the pipelines along the route of the pipelines.

Construction Specifications – The construction of the project will require the design plans and the Construction Specifications. These will be developed in close coordination with the Town staff to utilize standard construction documents that have been utilized in the past. The specifications will be prepared to clarify bid items for the construction activity and special provisions that are unique to the actual project within the Sunnyvale Industrial Park. These documents will be submitted to the Town staff for review. Comments will be addressed prior to considering the project completed and ready for construction.

Construction Administration – The project is planned to proceed to construction when the designs are finished. The project will be publicly advertised for bids by the Town staff. The pre-bid meeting will be attended. Comments will be prepared following the meeting. Any required modifications to designs based on the outcome of the meeting will be addressed and a bid addendum provided for circulation to prospective bidders. Once the project bids are received, they will be reviewed for accuracy and references will be checked. A recommendation will be provided to the Town staff for award. Requests for Information (RFIs) will be reviewed during construction for conformance to the plans. A final walk-through inspection will be held with the contractor and Town staff. Items requiring additional activity (Punch List) will be identified and presented to the contractor for correction or updating. Final Record Drawings will be prepared based on the information provided by the Town inspector of the actual location of appurtenances and pipelines. Final documents will be submitted to the Town staff in CAD format as well as pdf (hard copy) format.

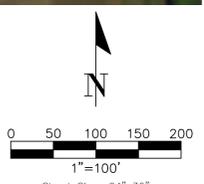
PER Prepared by:

Scott Crawford, P.E., Project Engineer
 Bob Johnson, P.E., Project Manager
 McManus & Johnson Consulting Engineers, LLC



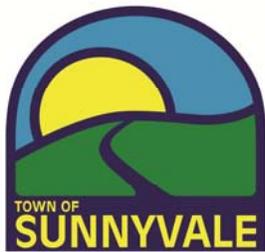
McMANUS & JOHNSON
 CONSULTING ENGINEERS, LLC
 400 Chisholm Place | Suite 310 | Plano, TX 75075
 TBPE Firm No. 15276

- Legend**
- Existing 8" Water
 - Proposed 12" Water
 - Proposed 8" Water
 - Proposed Water Services (1" to 4")
 - ◆ Fire Hydrant
 - T Valve
 - ◆ Ex. Fire Hydrant to Remain



Town of Sunnyvale

Industrial Park Water Line Improvements Preliminary Engineering Report - Exhibit A



Town of Sunnyvale

Prepared By: Richard Berkobien – Fire Chief

Summary:

DISCUSS AND CONSIDER A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF SUNNYVALE, TEXAS, ADOPTING THE DALLAS COUNTY HAZARD MITIGATION PLAN (HazMAP).

Background & Analysis:

FEMA has concluded the review of the Dallas County, Texas, local mitigation action plan that was submitted in November 2015, and the plan is found to be approvable pending adoption. In order for this plan to receive final FEMA approval, the jurisdiction(s) must adopt this plan and submit the complete adoption package to the state within 90 days. The plan update timeline will begin on the date of the FEMA approval letter.

Mitigation is commonly defined as sustained actions taken to reduce or eliminate long-term risk to people and property from hazards and their effects. Hazard mitigation planning is a process in which hazards are identified and profiled, people and facilities at risk are assessed for threat and vulnerability, and mitigation actions are developed. A mitigation plan states the aspirations and specific courses of action that a community intends to follow to reduce vulnerability and exposure to future hazard events. These plans are formulated through a systematic process centered on the participation of citizens, businesses, public officials, and other community stakeholders.

This plan is an update of the Dallas County Hazard Mitigation Plan (HazMAP) that was adopted in January 2009. The plan has been developed to comply with the requirements of the Federal Disaster Mitigation Act of 2000 and subsequent updates.

The Dallas County Hazard Mitigation Working Group, comprising of representatives of each participating jurisdiction, led the development of the update and contributed significant staff time towards the developments. Update development support was also provided through the Federal Emergency Management Agency (FEMA) Pre-Disaster Mitigation (PDM) grant, administered by the Texas Division of Emergency Management (TDEM) and sub-guaranteed by the North Central Council of Governments (NCTCOG). Coordination and final compilation of the update was provided by the Dallas County Office of Homeland Security and Emergency Management (HSEM). This mitigation plan is a planning document, not a regulatory document.

The objectives of the plan update remain the same as those of the previous plan that was adopted in 2009, which is to reduce the negative impacts of future disasters on the communities of Dallas County. These include:

- ✓ To save lives and reduce injuries.
- ✓ Minimize damage to buildings and infrastructure (especially critical facilities).
- ✓ Minimize economic losses

Financial Impact:

An approved Dallas County HazMAP may render the County eligible for pre-disaster and post-disaster federal funding for mitigation purposes such as the Hazard Mitigation Grant Program, Pre-Disaster Mitigation Grant Program, and the Emergency Management Performance Grant. Adoption of the resolution does not cost the town. Failure to adopt the resolution could limit future grant funding and disaster reimbursement.

Staff Recommendation:

Staff recommends approval.

Attachment:

Proposed resolution and summary of the Dallas County Hazard Mitigation Action Plan.

RESOLUTION 16-01

**A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF SUNNYVALE, TEXAS,
ADOPTING THE DALLAS COUNTY HAZARDOUS MITIGATION PLAN.**

WHEREAS, the Town Council recognizes the threat that natural hazards pose to people and property within (local community); and

WHEREAS, the Town of Sunnyvale has participated in the preparation of a multi-hazard mitigation plan, hereby known as the 2015 Dallas County Hazardous Mitigation Plan in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS, the 2015 Dallas County Hazardous Mitigation Plan identifies mitigation goals and actions to reduce or eliminate long- term risk to people and property in the Town of Sunnyvale from the impacts of future hazards and disasters; and

WHEREAS, adoption by the Town Council demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the 2015 Dallas County Hazardous Mitigation Plan.

NOWHEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF SUNNYVALE, TEXAS, THAT:

Section 1. The Town Council adopts the 2015 Dallas County Hazardous Mitigation Plan.

ADOPTED this 11th day of January, 2016.

Jim Phaup, Mayor

Leslie Black, Town Secretary



**Dallas County
Hazard Mitigation Action Plan
(HazMAP)
November 2015**

Executive Summary

Mitigation is commonly defined as sustained actions taken to reduce or eliminate long-term risk to people and property from hazards and their effects. Hazard mitigation planning is a process in which hazards are identified and profiled, people and facilities at risk are assessed for threat and vulnerability, and mitigation actions are developed. A mitigation plan states the aspirations and specific courses of action that a community intends to follow to reduce vulnerability and exposure to future hazard events. These plans are formulated through a systematic process centered on the participation of citizens, businesses, public officials, and other community stakeholders.

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- ✓ To save lives and reduce injuries.
- ✓ Minimize damage to buildings and infrastructure (especially critical facilities).
- ✓ Minimize economic losses

Participating jurisdictions in this plan update expanded from 11 to 22 jurisdictions and are as follows:

Participating Jurisdictions	
Dallas County (Unincorporated)	City of Glenn Heights
Town of Addison	Town of Highland Park
City of Balch Springs	City of Irving
City of Carrollton	City of Lancaster
City of Cedar Hill	City of Richardson
City of Cockrell Hill	City of Rowlett
City of Coppell	City of Sachse
City of Dallas	City of Seagoville

Participating Jurisdictions	
City of DeSoto	Town of Sunnyvale
City of Duncanville	City of University Park
City of Farmers Branch	City of Wilmer

Non-Participating Jurisdictions That Adopted a Stand-alone Plan	
City of Garland	City of Hutchins
City of Grand Prairie	City of Mesquite

This plan update shows that communities in Dallas County continue to be subject to a number of natural hazards. The hazards addressed in this plan include severe storms, high winds, hail, lightning, flooding, tornadoes, winter storms, extreme heat, drought, dam or levee failure, wildfire and earthquakes. Other hazards discussed that do not affect Dallas County include expansive soils, coastal erosion, hurricane/tropical storms, and land subsidence. While most of the hazards identified have occurred in Dallas County, flooding, severe storms, drought and tornadoes stand out as the predominant hazard risks. The historical occurrences, location, extent, probability and vulnerability of these hazards have been documented in this update. Also discussed in this update are the local policies and capabilities that participating jurisdictions have and/or would like to implement to mitigate some of the effects of the hazards identified if sufficient resources were available. No significant changes have been made to the hazards identified in the plan.

The Mitigation Strategy is the heart of the plan and outlines various action items that, given sufficient funding, could be implemented to address the risks of the hazards identified. Several of the action items identified are on-going or have been deferred from previous actions items that were discussed in the 2009 plan. These action items are designed to mitigate the effects of natural disasters and include programs such as upgrading of infrastructure to expanding public outreach and education programs. In this respect, the strategy of the plan has remained intact as to that of the previously adopted plan. The programs or action items identified in the plan update have been prioritized by the local jurisdictions and represent a local approach to addressing local hazards that is most relevant to the local jurisdictions.

The main changes in this plan update from the initial mitigation plan that was adopted in 2009 are in the formatting and structuring of the content. The contents of this plan update are designed and organized to be more reader-friendly and as functional as possible. For instance, the number of sections has changed from four to nine. The **Summary of Plan** section below provides a breakdown of what is covered in each section.

The hazards have remained the same as those discussed in the 2009 plan and so have the mitigation strategies. We have discussed four new hazards, which do not affect Dallas County, so as to match the plan with the State of Texas Mitigation Plan. These hazards include hurricanes, land subsidence, coastal erosion and expansive soils. Most the changes are in the format and structure of the plan.

One notable structural change is that the plan is comprised of two main parts, a base section and a jurisdiction-specific annex section. The base section of the plan discusses the plan for Dallas County. Section 5 in particular discusses the hazard, the extent and impact of the hazards, the historical occurrences of the hazards identified, the probability of future occurrences, and the results of the vulnerability and risk assessment process. The section captures events that have taken place in all participating jurisdictions as applicable. The jurisdiction-specific annexes or sub-plans section provides a focused and strategic approach to discussing specific hazard risks that are unique to each participating jurisdiction. The jurisdictional annexes build off of the base plan that addressed the natural hazards common throughout Dallas County. It provides a closer look at the capabilities, critical facilities, land use/development trends and vulnerabilities of a particular jurisdiction.

Summary of Plan

Sections 1 and 2 of the plan provide the background of the plan and provide a profile for the planning area and introduce the jurisdictions participating in the plan update. They also outline the scope, purpose, and authority of the plan.

Section 3 provides a profile of the Dallas County planning area. It discusses geographic elements that include location, size, physical features, population and demographic information, governmental structures, and the basic economic aspects of Dallas County.

Section 4 documents the planning process. It addresses Element A of the Local Mitigation Plan Review Tool. It identifies the various stakeholders in the planning process as well as discusses public participation in the plan. It provides an overview of the hazards, time line for the plan, and mitigation strategies, as well as the process of identification and risk assessment methodologies utilized.

Section 5 presents information on individual hazards. For each hazard, the plan presents a description of the hazard, the hazard extent, a history of historical hazard events, the probability of future occurrences, and the results of the vulnerability and risk assessment process.

Section 6 presents the mitigation goals and objectives. Section 7 provides the previous mitigation action items submitted in the 2009 HazMAP and a current analysis for each action. The section also addresses all of the newly developed mitigation actions for HazMAP update.

Section 8 identifies plan maintenance procedures including plan incorporation and implementation.

Section 9 provides the jurisdictional annexes that provide specific information of how each jurisdiction conducted its planning process and includes specific risk and vulnerability assessments of the specific or unique hazard not addressed in Section 5 of this plan update.

The following is a brief discussion of what has been included in each of the sections of the update plan.

Section 1 and 2: Introduction and Scope Purpose and Authority of Plan

In 2009, Dallas County and 10 other participating jurisdictions within Dallas County adopted the Dallas County Hazard Mitigation Action Plan (HazMAP) after it was approved by FEMA. The mitigation planning regulation of the Disaster Mitigation Act requires that mitigation plans be reviewed and revised within five (5) years of approval to maintain eligibility for mitigation grant funding. Dallas County began the planning process to renew the HazMAP in March 2013, and updated each section of the original plan, this time involving 22 of the 26 cities within Dallas County.

Plan Scope: The focus of the Dallas County Hazard Mitigation Action Plan (HazMAP) update is to mitigate relevant hazards as determined using the Dallas County HazMAP adopted in 2009 (formerly referred to as DaLMS) and the Dallas County Hazard Identification and Risk Assessment (HIRA) Matrix. Each participating jurisdiction reviewed the 2009 HazMAP and completed the HIRA to determine the risk levels of the most common hazards that affect Dallas County; hazards that are ranked in percentages using a formula provided in the HIRA tool.

Purpose: The plan update is an opportunity for Dallas County and participating jurisdictions to evaluate successful mitigation actions and explore opportunities to avoid future disaster loss. The purpose of the plan is to:

- ✓ Assess previous mitigation projects and develop unique mitigation strategies to meet future development and risks;
- ✓ Encourage improvements in floodplain management, participation in the National Flood Insurance Program (NFIP), and qualifying for FEMA's Community Rating System, thereby reducing flood insurance premiums for citizens;
- ✓ Devise solutions to strengthen emergency management by addressing prevalent risk of natural and man-caused hazards; and
- ✓ Develop and implement a comprehensive hazard mitigation plan update for Dallas County as a whole.

Authority: The plan update will comply with all requirements promulgated by the Texas Division of Emergency Management (TDEM) and all applicable provisions of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, Section 104 of the Disaster Mitigation Act of 2000 (DMA 2000) (P.L. 106-390), and the Bunning-Bereuter-Blumenauer Flood Insurance Reform Act of 2004 (P.L. 108-264). It will also comply with FEMA's February 26, 2002 Interim Final Rule ("the Rule") at 44 CFR, Part 201, which specifies the criteria for approval of mitigation plans required in Section 322 of the DMA 2000 and standards found in FEMA's "Local Multi-Hazard Mitigation Planning Guidance" (released July 1, 2008). The updated plan will be developed in accordance with FEMA's Community Rating System (CRS) Floodplain Management Plan standards and policies.

Section 4: Planning Process

Dallas County Office of Homeland Security and Emergency Management (HSEM) took the lead in updating the Dallas County Hazard Mitigation Action Plan (HazMAP). The Dallas County HazMAP Working Group was formed and comprised of at least one representative from each participating jurisdiction in Dallas County. The table below lists the participating jurisdictions in the Dallas County HazMAP Update.

Participating Jurisdiction	Name	Title
Dallas County (Unincorporated)	Michael Gaciri	Hazard Mitigation Specialist
Town of Addison	John O'Neal	Fire Chief/EMC
City of Balch Springs	David Haas	Emergency Management Coordinator
City of Carrollton	Elliot Reep	Emergency Management Coordinator
City of Cedar Hill	John Ballard	Fire Chief/EMC
City of Cockrell Hill	Bret Haney	Assistant City Administrator
City of Coppell	Brad Simpkins	Emergency Management Coordinator
City of Dallas	Nicholas LaGrassa	Emergency Management Specialist
City of DeSoto	Jerry Duffield	Fire Chief
City of Duncanville	Sam Rhode	Emergency Management Coordinator
City of Farmers Branch	Ashleigh Feryan	Emergency Management Specialist
City of Glenn Heights	Jeremy Tennant	Public Safety Director
Town of Highland Park	Rick Pyle	Assistant Police Chief
City of Irving	Jason Carriere	Emergency Management Coordinator
City of Lancaster	Thomas Griffith	Fire Chief/EMC
City of Richardson	Alisha Gimbel	Preparedness and Mitigation Coordinator
City of Rowlett	Ed Balderas	Fire Chief/EMC
City of Sachse	Rick Coleman	Fire Chief/EMC
City of Seagoville	Todd Gilcrease	Fire Chief/EMC
City of Sunnyvale	Richard Adkins	Fire Fighter / EMT
City of University Park	Randy Howell	Fire Chief/EMC
City of Wilmer	Mark Hamilton	Fire Chief/EMC

The updated plan had several new participating jurisdictions from the original mitigation plan adopted in 2009. As stated earlier, participating jurisdictions increased from 11 to 22. In order to help participating jurisdictions meet the planning update requirements, Dallas County HSEM proposed that each participating jurisdiction form a Hazard Mitigation Planning Team (HMPT) that would coordinate the hazard mitigation update planning process at the jurisdictional level. The HMPT actively participated in developing the plan in the following way:

- ✓ Reviewed and analyzed each section of the 2009 plan

- ✓ Determined changes that were to be documented and the process the team took to make these decisions
- ✓ Assessed and identified specific hazards within the respective jurisdictions
- ✓ Identified goals and mitigation action items to the specific hazards identified within each respective jurisdiction
- ✓ Conducted a capabilities assessment for their jurisdiction
- ✓ Provided opportunity for public participation within their jurisdiction
- ✓ Reviewed and provided input to the drafts developed in the HazMAP

Each jurisdiction then appointed a representative to the Dallas County Hazard Mitigation Planning Working Group. The purpose of the Working Group was to facilitate a collaborative planning process for all participating jurisdictions. The Working Group performed the following tasks in updating the plan:

- ✓ Established plan development, goals, and objectives
- ✓ Established a time line for completion of the plan
- ✓ Ensured that the plan meets the requirements of the Disaster Mitigation Act of 2000
- ✓ Solicited and encouraged the participation of the public in the plan development process
- ✓ Assisted in the gathering information for inclusion in the plan
- ✓ Organized and coordinated the public involvement process
- ✓ Gathered all pertinent information to be included in the plan
- ✓ Assisted in completing a draft plan for review

Kickoff meetings were held on March 11, 2013, April 30, 2013, and May 1, 2013. Other working meetings were held on May 29, 2013, June 7, 2013, and July 24, 2013. The purpose of these meetings was to provide overall guidance to the planning process, review the existing hazard mitigation planning materials, update risk assessment, and discuss mitigation strategies. This plan was developed as a county-wide hazard mitigation plan focusing on collaboration to implement mitigation strategies throughout the county, while maintaining accountability within each participating city to identify and track specific mitigation actions.

Public Participation

An important requirement of mitigation planning is public participation and stakeholder involvement. Input from individual citizens and the community as a whole provides the planning team with a greater understanding of local concerns and increases the likelihood of successfully implemented mitigation actions.

Public involvement in the development of the update was sought at separate periods in the planning process: (1) the beginning of the planning process, (2) the drafting stage and (3) between completion of the final draft and plan approval and adoption. Public input was sought using three methods: (1) open public meetings, (2) survey instruments and (3) making copies of draft Plan deliverables available for public review on the participating jurisdiction websites, public offices and public libraries.

In addition to the option to have open public meetings, Dallas County provided an opportunity for citizens and stakeholders to provide input and comment through the use of an online public hazard survey. This online survey was designed to obtain data and information from residents from all of Dallas County and the participating jurisdictions. The public were directed to the online survey through various public outreach methods that

included flyers, Facebook, Twitter, newspaper clippings, and public notices on websites and in public areas such as city hall and public libraries.

The survey was available in both English and Spanish and was open from April 2013 through October 2013. A total of 527 responses were submitted, which provided valuable input for the participating jurisdictions to further consider in developing the plan update. A summary of the survey findings is provided in Appendix A.

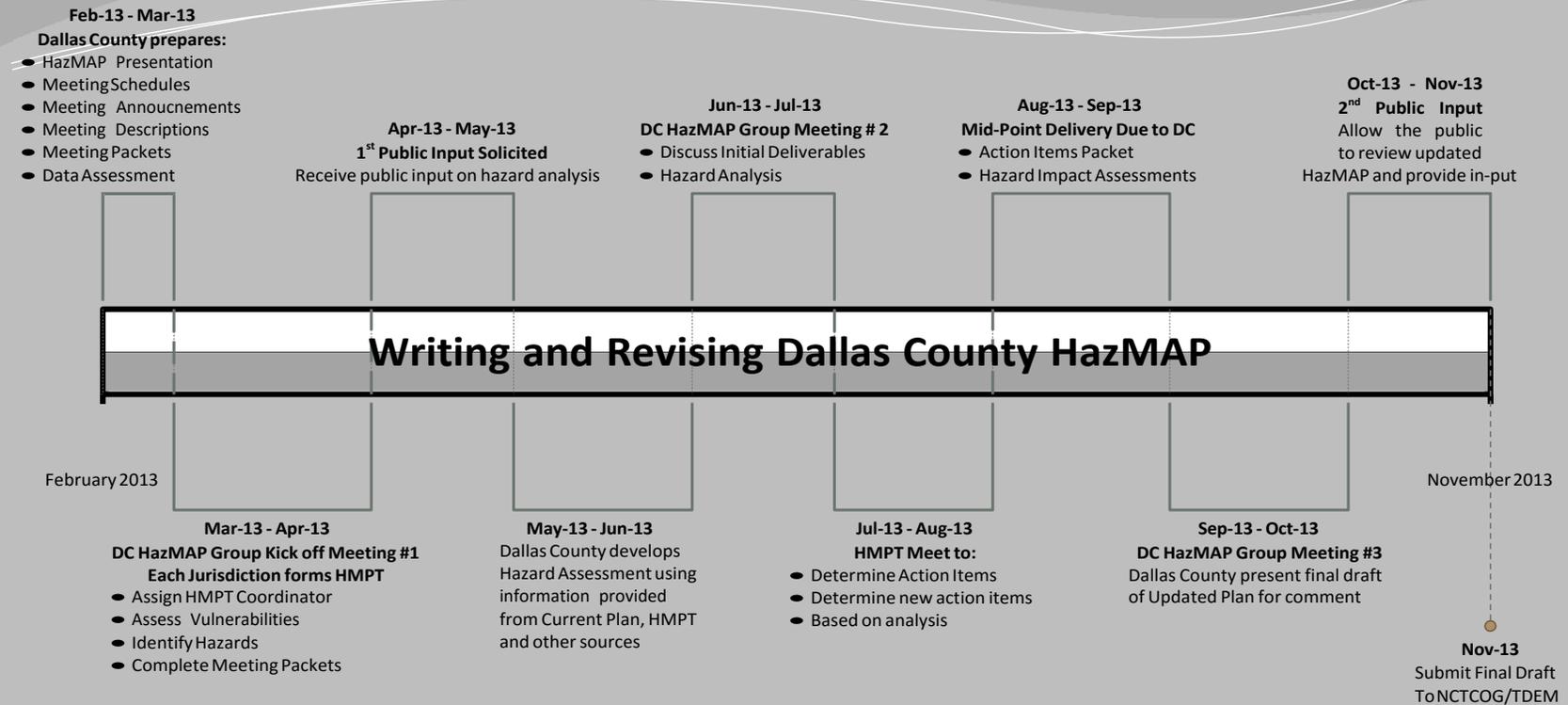
Meeting Summaries

Below is a list of meetings that the Dallas County HazMAP Working Group held and a summary of the purpose for each meeting.

Date	Discussion/Purpose of Meeting
March 11, 2013	<u>Web Conference Meeting</u> Introduction of the mitigation planning requirements to participating jurisdictions A detailed overview of the mitigation planning process was provided as well as the expectations of the participating jurisdictions
April 30, 2013	<u>Kickoff Meeting - Southern Jurisdictions - Dallas County HazMAP Working Group</u> A detailed overview of the planning process and planning requirements was discussed. Planning resources were provided to assist in mitigation planning, these included data sources and reference materials and websites, data collection templates, and the proposed timeline for submitting the data collection templates (deliverable). The proposed timeline schedule also included the activities that were to be covered at each of the meetings
May 1, 2013	<u>Kickoff Meeting - Northern Jurisdictions - Dallas County HazMAP Working Group</u> A detailed overview of the planning process and planning requirements was discussed. Planning resources were provided to assist in mitigation planning, these included data sources and reference materials and websites, data collection templates, and the proposed timeline for submitting the data collection templates (deliverable). The proposed timeline schedule also included the activities that were to be covered at each of the meetings
July 24, 2013	<u>2nd Meeting of the Dallas County HazMAP Working Group</u> Analyzed completed Hazard Identification Risk Assessment (HIRA) Matrix sheets; Reviewed the information provided in the public survey; Conducted a County wide hazard analysis and vulnerability assessment. Developed mitigation goals for Dallas County Provided additional resources to assist the HMPTs to conduct capabilities assessments, develop mitigation action items using the resources from FEMA
October 2, 2013	<u>Web Conference Meeting</u> Reviewed jurisdictional deliverables including the completed HIRA Matrices, specific hazard analysis and vulnerabilities for each jurisdiction Provided guidance for public input and comment
February 3, 2014	<u>Web Conference Meeting</u> Reviewed action items Reviewed public input information on the hazards identified

Date	Discussion/Purpose of Meeting
	Conducted analysis of the public data received Determined and updated action items identified based on the review and analysis conducted

Proposed Project Schedule - Dallas County Hazard Mitigation Action Plan (HazMAP) Update



Pre-Disaster Mitigation (PDM) Grant - PDMC-PL-06-TX-2012-032
 2008 Dallas County Hazard Mitigation Action Plan (HazMAP)
 Update Timeline

Appendix DC A-1: Hazard Identification and Risk Assessment (HIRA) Matrix

Scale	
Low/UNLIKELY EVENT PROBABLE NEXT 10 YEARS	1
AVERAGE/OCCASIONAL EVENT POSSIBLE NEXT 5 YEARS	2
MEDIUM/MODERATE/LIKELY EVENT POSSIBLE NEXT 3 YEARS	3
HIGH/HIGHLY LIKELY EVENT POSSIBLE NEXT YEAR	4



Scale	
Low	1
MEDIUM/MODERATE	2
HIGH	3
CATASTROPHIC	4

Hazard Identification and Risk Assessment (HIRA)

Date: _____

Hazard	Probability	Frequency	Severity	Risk Factor	People	Property	Environment	Potential Damage	Total Vulnerability
	(P/F)*S=RF				People + Property + Environment =Potential Damage (PD)				RF/PD=V
Severe Storms:									
High Winds									
Hail									
Lightning									
Winter Storms									
Tornado									
Flooding									
Pandemic/Public Health Emergency									
Extreme Temperatures/Heat									
Hazardous Materials Incidents Nuclear /Radiological									
Wildfire									
Utility Failure									
Energy/Fuel Shortage									
Terrorist Attack									
Urban Fire									
Earthquake									
Levee/Dam Failure									
Drought									
Aircraft Accident									
Stream Bank Erosion									
Chemical/Biological/ Nuclear/Radiological/ Explosive Attack (CBRNE)									
Civil Disorder									

Instructions of How to Use the HIRA – Taken From Dallas County EMP - 2009

A. Situation

Dallas County is exposed to many hazards, all of which have the potential for disrupting the community, causing casualties, and damaging or destroying public or private property. A summary of the major hazards that Dallas County may face is provided in Figure 1. These major hazards are identified as natural, man-made, and technological hazards. Figure 1: Hazard Summary identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to people (Citizens of Dallas County), property, and the environment. In Figure 2, identifies the probability, frequency, severity, risk factor, potential damage, and total vulnerability to Dallas County employees, facilities, and business processes that will also be used during Continuity of Operations/Continuity of Government planning. Additional hazard information is provided in our Dallas County Hazard Identification and Risk Assessment (HIRA), which is published separately.

Hazard Identification and Risk Assessment

Profiling Hazards

This section of the plan will provide an overview of the specific natural, technological, and man-made hazards that can affect Dallas County, including information on historical occurrences and the probability of future occurrences. The following table contains the Hazard and Risk Assessment for Dallas County. To determine the hazards that pose the greatest threat, a Hazard Identification and Risk Assessment was completed to determine impact to people, property, environment, Dallas County employees, Dallas County facilities, and Dallas County Business Processes. In the assessment, numerical values were assigned for the following factors:

1.) Frequency of Occurrence:

Event probable next 10 years	1
Event possible next 5 years	2
Event possible next 3 years	3
Event possible next (1) year	4

2.) Probability:

Low/Unlikely	1	Less than 1% annual probability
Average/Occasional	2	Between 1 and 10% annual probability
Medium/Moderate/ Likely	3	Between 10 and 100% annual probability
High/Highly Likely	4	100% annual probability

3.) Severity:

Low	1	Very few injuries, if at all none
Medium/Moderate	2	Minor Injuries
High	3	Multiple deaths/injuries
Catastrophic	4	High number of deaths/injuries

The risk factor was calculated by dividing the Frequency by the Probability times the severity to determine the risk factor $(P/F) * S = RF$.

4.) Impact to People, Property, Environment, Dallas County Employees, Dallas County Facilities, and Dallas County Business Processes:

Low	1	<ul style="list-style-type: none"> ● Minor illness or injury to employees resulting in one day's absence ● Does not violate laws ● Little or minimal environmental damage
Medium/Moderate	2	<ul style="list-style-type: none"> ● Injury or illness of resulting in one or more work days lost ● Mitigable environmental damage where restoration activities can be done
High	3	<ul style="list-style-type: none"> ● Results in partial permanent disability, injuries or illness of 3 employees or more ● Reversible environmental damage ● Violation of law/regulation
Catastrophic	4	<ul style="list-style-type: none"> ● Results in partial permanent disability, injuries or illness of 3 employees or more ● Reversible environmental damage ● Violation of law/regulation

5.) Potential Damage: The potential damage was calculated by adding the numerical value given to people, property, and the environment (Dallas County Employees, Dallas County Facilities, and Dallas County Businesses Processes) will equal the potential damage. $(\text{People} + \text{Property} + \text{Environment} = \text{Potential Damage (PD)})$ or $(\text{Dallas County Employees} + \text{Dallas County Facilities} + \text{Dallas County Business Processes} = \text{Potential Damage (PD)})$

6.) Total Vulnerability: The total vulnerability is calculated by dividing the potential damage by the risk factor to get the percentage of vulnerability for people, property, and the environment. $\text{Risk Factor (RF)} / \text{Potential Damage (PD)} = \text{Vulnerability (V)}$. The total vulnerability was ranked from the highest percentage to the lowest percentage.

7.) The descriptors in the **Priority Risk Index (PRI)** is used in this plan with the purpose of categorizing potential hazards for Dallas County and categorize and define each of the levels and values. It is to be used in collaboration with the HIRA Matrix

PRI Category	Degree of Risk		
	Level	Criteria	Index Value
	Unlikely/Low	Event Probable next 10 yrs.	1
Probability	Possible/Average/Occasional	Event possible in next 5 yrs.	2
	Likely/Moderate	Event possible in next 3 yrs.	3
	Highly Likely/High	Event possible next year	4
	Low	Very few injuries, if at all none	1
Life Impact	Medium/Moderate	Minor Injuries	2
	Critical	Multiple deaths/injuries	3
	Catastrophic	High number of deaths/injuries	4
	Low	Only minor property damage and minimal disruption of life. Temporary shutdown of critical facilities.	1
Property Impact	Medium/Moderate	More than 10% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one day.	2
	Critical	More than 25% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for more than one week.	3
	Catastrophic	More than 50% of property in affected area damaged/destroyed. Complete shutdown of critical facilities for 30 days or more.	4
	Negligible	Less than 1% of area affected	1
Spatial Extent	Small	Between 1 and 10% of area affected	2
	Moderate	Between 10 and 50% of area affected	3
	Large	Between 50 and 100% of area affected	4

Section 5: Hazard Identification and Risk Assessment

The identification of the hazards is based on the hazards listed in the Dallas County Local Mitigation Strategy (DaLMS) Plan that was adopted in January 2009. Each jurisdiction through its Hazard Mitigation Planning Team (HMPT) reviewed the risk assessment process conducted in the previous plan as well as the Dallas County Hazard Identification and Risk Assessment (HIRA) matrix. These were the primary guides in assisting the Working Team in developing the Dallas County Risk Assessment. Other references used in creating the risk assessment included the *FEMA Local Mitigation Planning Handbook (March 2013)* and the *FEMA State and Local Mitigation Planning How-to-Guide*.

While several hazards impact Dallas County and its jurisdictions, they were not all evaluated the same way. This is due to the differences in data collected, risk assessment methodologies, and spatial extent of the hazards. Each jurisdiction was also given a HIRA form as depicted above, which allowed them to reflect unique and varied risks as pertains to it. Participating jurisdictions ranked hazards in terms of the probability or frequency of occurrence and the extent or magnitude of impact. The assessments were also used to set priorities for mitigation based on potential dollar losses and loss of lives.

The hazard identification criteria include event occurrence, future development patterns and/or proximity to hazard. Only historic events from 04/01/2007 through August 2013 have been included in this updated plan for hazards that are considered to affect the planning area equally. The original plan lists historic hazard events from 01/01/1950 through 03/31/2007. The following is a summary of natural hazards identified.

1. **Flooding:** The accumulation of water within a water body, which results in the overflow of excess water onto adjacent lands, usually floodplains. The floodplain is the land adjoining the channel of a river, stream, ocean, lake, or other watercourse or water body that is susceptible to flooding. Most floods fall into the following three categories: riverine flooding, coastal flooding, or shallow flooding.
2. **Hail:** Due to the rapidly changing climate in Texas, large scale hailstorms are especially prevalent. Hailstorm incidents have been reported throughout the North Texas region, including Dallas County, therefore establishing that all parts of the region are equally vulnerable to hailstorms.
3. **High Winds:** High winds are often responsible for most of the wind damage associated with a thunderstorm. These winds are often confused with Tornadoes because of similar damage and wind speeds. However, the strong and gusty winds associated with straight-line winds blow roughly in a straight line unlike the rotating winds of a tornado. Downbursts or microbursts are examples of damaging straight-line winds. A downburst is a small area of rapidly descending rain and rain-cooled air beneath a thunderstorm that produces a violent, localized downdraft covering 2.5 miles or less.
4. **Lightning:** Thunderstorm and lightning events are generated by atmospheric imbalance and turbulence due to the combination of the following conditions: unstable warm air rising rapidly into the atmosphere; sufficient moisture to form clouds and rain; and upward lift of air currents caused by colliding cold and warm weather fronts, sea breezes or mountains. Lightning is generated by the buildup of charged ions in a thundercloud, and the discharge of a lightning bolt interacts with the best conducting object or surface on the ground.

5. **Tornado:** Dallas County lies within the region that is referred to as Tornado Alley. Tornado Alley is the term used to describe the region of the U.S. where the strongest Tornadoes occur most frequent. A tornado is a violently rotating column of air, in contact with the ground, either pendant from a cumuliform cloud or underneath a cumuliform cloud, and often (but not always) visible as a condensation funnel cloud.
6. **Winter Storm:** Winter storms in Texas, although not as numerous as in our neighbor states to the north, do occur often enough and with enough severity to be a threat to people and property. The types which Texans are most familiar with are snowstorms, blizzards, cold waves, and ice storms. Generally, the winter storm season in Texas runs from late November to mid-March, although severe winter weather has occurred as early as October and as late as May in some locations. Texas is disrupted more severely by severe winter storms than are regions that experience severe weather more frequently. The Texas Panhandle and North Central Texas around Dallas and Texarkana are most vulnerable to severe winter storms.
7. **Drought:** Drought is defined as the consequence of a natural reduction in the amount of precipitation expected over an extended period of time, usually a season or more in length. It is often referred to as a condition of climatic dryness that is severe enough to reduce soil moisture and water supplies below the requirements necessary to sustain normal plant, animal, and human life. Given the expanse of the land mass within Texas and the geographic location of two-thirds of the counties of the State are located either in an arid or semi-arid climate, roughly those west of a North-South line formed by Interstate Highway 35, are almost always in varying stages of drought.
8. **Extreme Heat:** Extreme Heat is defined as a combination of very high temperatures and exceptionally humid conditions. When persisting over a period of time, it is called a heat wave. All of Texas is vulnerable to extreme heat, but most particular in West Texas. In addition, large metropolitan areas, such as Dallas/Fort Worth and Houston may experience extreme heat since they have an abundance of concrete. This effect is known as urban heat islands and can be dangerous to those without air conditioners.
9. **Dam and Levee Failure:** A dam failure is defined as a systematic failure of the dam structure resulting in the uncontrolled release of water, often resulting in floods that could exceed the 100-year flood plain boundaries. A dam failure could create mass fatalities, mass structural damage and/or a cascading potential if a populated area is located below the dam structure.
10. **Wildfire:** An uncontrolled fire burning in an area of vegetative fuels such as grasslands, brush, or woodlands. Heavier fuels with high continuity, steep slopes, high temperatures, low humidity, low rainfall, and high winds all work to increase the risk for people and property located within wildfire hazard areas or along the urban/wildland interface. Wildfires are part of the natural management of forest ecosystems, but most are caused by human factors.
11. **Earthquake:** Almost all of the earthquakes in Texas have been caused by one of two sources. The major source is relief of tectonic stress along fault lines. These are most common in the Rio Grande rift belt, the Panhandle, the Ouachita Belt, and the Coastal Plain. It has been suggested that the small earthquakes that occur in the region, such as the ones that have occurred in Dallas County, may be attributed to well injections associated with oil and gas field operations and occur in areas near large oil and gas fields.

These 11 natural hazards have been addressed in the Risk Assessment according to the following categories:

1. **Definition and types:** Description of natural hazard and different types, if applicable.
2. **Location and extent:** Areas with in Dallas County and participating jurisdictions where natural hazards have occurred and may occur in the future, including their severity.
3. **Occurrence:** Historical record of past natural hazard events were noted in the original plan. These historical events were provided by the National Climatic and Data Center for Dallas County, Texas between 01/01/1950 and 03/31/2007. This plan only includes hazard occurrences between 04/01/2007 and 08/30/2013.
4. **Vulnerability:** Areas subject to potential disaster from natural hazards.
5. **Probability of recurrence:** Potential for natural hazard to occur in the future, based on High, Medium, and Low, where High = Probable and likely in the near future (within 5 years); Medium = Possible in the near future (5 to 15 years); Low = Not likely to occur (longer than 15 years).

Other hazards identified in the State of Texas Mitigation Plan that are mentioned in this plan update but not discussed in detail in the risk assessment include:

1. **Hurricane/Tropical Storm:** Hurricanes and tropical storms are classified as cyclones and are developed by counter-clockwise circulation of winds around a low-pressure center in the Northern Hemisphere. Latent heat from condensation of warm water is the key energy source for these storms.
2. **Expansive Soils:** Soils and soft rock that tend to swell or shrink due to changes in moisture content are known as expansive soils. Expansive soils are often referred to as swelling clays because clay materials are most susceptible to swelling and shrinking.
3. **Coastal Erosion:** Coastal erosion is the wearing away of land and the resulting loss of beach, shoreline or dune material along a coastline.
4. **Land Subsidence:** According to the State of Texas Mitigation Plan, land subsidence is defined as the loss of surface elevation due to the removal of subsurface support. It can range from broad, regional lowering of the land surface, to localized collapses. Land subsidence extent is measured by the number of feet of land loss, or sinks.

These natural hazards are not addressed in detail due to their no to minimal level of risk within the NCTCOG region including Dallas County.

Section 6: Mitigation Strategies

The mitigation strategy development for the plan update involved reviewing mitigation goals included in the 2009 HazMAP, providing analyses for past actions, and developing new mitigation actions.

Based on the discussions and recommendations of Dallas County Hazard Mitigation Action Plan Working Group members, the goals and objectives developed were derived from the 2009 HazMAP that was already in place. This was because most of the goals and objectives were broad enough to accommodate the strategies for mitigating the hazards identified in both the Hazard Identification and Risk Assessment (HIRA) and the Capabilities Assessment conducted by each participating jurisdiction.

An inclusive process was used to develop and prioritize new mitigation actions for this plan update. These included:

- ✓ Review of the mitigation goals and objectives from the 2009 HazMAP.
- ✓ A "menu" of optional mitigation actions was developed based on action items from the 2009 HazMAP, local and state mitigation plans, as well as federal publications such as the FEMA's Mitigation Ideas: A Resource for Reducing Risk to Natural

Hazards, January 2013 and the *Local Mitigation Planning Handbook, March 2013*.

The participants reviewed the optional mitigation actions and narrowed the list down to those that were most applicable to their area of responsibility, most cost effective in reducing risk, could be implemented easily, and would be likely to receive institutional and community support.

- ✓ Potential Federal and State funding sources to assist implementing proposed actions were inventoried
- ✓ Planning team members considered benefits that would result from the mitigation actions versus the cost of those projects. Detailed cost-benefit analyses were beyond the scope of this plan. However, economic evaluation was one factor that helped team members select one mitigation action from competing actions.

The following goals and objectives were identified:

Goal 1: Reduce or eliminate loss of life and property damage resulting from severe weather events.

- ✓ **Objective 1-A:** Update, enhance, and enforce building codes and ordinances to ensure structures are more disaster resistant
- ✓ **Objective 1-B:** Maintain existing codes and ordinances that require front end mitigation of hazards
- ✓ **Objective 1-C:** Limit development in flood plain areas

Goal 2: Identify and implement hazard mitigation projects to reduce the impact of hazard events and disaster.

- ✓ **Objective 2-A:** Identify areas where repetitive damages occur during chronic hazard events
- ✓ **Objective 2-B:** Buy-out repetitive loss properties
- ✓ **Objective 2-C:** Incorporate disaster resistant features in government facilities and infrastructure
- ✓ **Objective 2-D:** Expand and coordinate Early Warning Systems currently in use

Goal 3: Increase public support and understanding of hazard mitigation and disasters.

- ✓ **Objective 3-A:** Provide public education materials to residents and private sector
- ✓ **Objective 3-B:** Encourage private sector participation in future mitigation efforts
- ✓ **Objective 3-C:** Encourage public participation in future mitigation efforts
- ✓ **Objective 3-D:** Heighten public awareness for natural and man-made hazards

Goal 4: Reduce losses and repetitive damages for chronic hazard events while promoting insurance coverage for catastrophic hazards.

- ✓ **Objective 4-A:** Increase participation in the National Flood Insurance Program (NFIP) and Community Rating System (CRS)

Goal 5: Continue to build capacity for hazard mitigation in Dallas County.

- ✓ **Objective 5-A:** Continue partnerships within the region to enhance mitigation planning efforts
- ✓ **Objective 5-B:** Identify federal and state programs that provide financial assistance to help attract funds for mitigation projects and programs
- ✓ **Objective 5-C:** Promote land use for public recreation

Section 7: Action Items

Jurisdictions that participated in the 2009 HazMAP reviewed the previous actions and determined whether the actions had been completed, should be deferred as an ongoing activity, or should be deleted from the plan. Any actions that are marked as “deferred” or ongoing have been carried over and included in the updated plan.

For the jurisdictions that were joining in the updated plan, each was given the opportunity to review the action items identified and were asked to determine which action item they could include as part of their jurisdictional plan.

It was recommended that jurisdictions use the STAPLE+E criteria recommended by FEMA for determining the priority of action items identified. The STAPLE+E criteria recommends that jurisdictions look at the Social, Technical, Administrative, Political, Legal, Economic, Environmental factors necessary for implementing an action item. However, each participating jurisdiction was free to use any methodology that was best suited to their needs in determining the priority of action items to include in this plan. New action items were placed in the respective jurisdictions annex section of the update plan.

Action items selected were developed along local capabilities and resources. These included:

- ✓ Local Planning and Regulations
- ✓ Structure and Infrastructure Projects
- ✓ Public Education and Awareness Programs
- ✓ Technical and Administrative
- ✓ Financial

Section 8: Plan Maintenance

Dallas County HSEM and each participating jurisdiction through the Dallas County Hazard Mitigation Action Plan (HazMAP) Working Group will be responsible for ensuring that this plan is monitored on an ongoing basis. Dallas County HSEM will be available to assist participating jurisdictions in facilitating reviews of the mitigation actions set forth in this plan and discuss progress. Each jurisdiction will be responsible for developing a list of items to be updated in future revisions of this plan. The following are the activities that will be involved in the plan maintenance procedures:

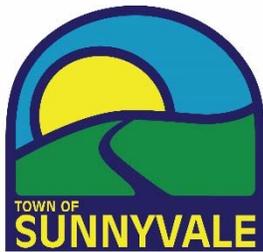
- ✓ Monitoring and evaluating the plan
- ✓ Updating the plan
- ✓ Incorporating the plan into other planning mechanisms
- ✓ Continued public involvement

Section 9: Jurisdictional Annexes

In the jurisdictional annexes we have a discussion on each of the 22 participating jurisdictions’ planning and regulatory, administrative and technical, financial capacity, and educational and outreach capabilities, to carry out hazard mitigation activities. These capabilities were evaluated and attention was given to state, regional or local plans, regulations and development requirements. These included, but were not limited to, local plans, zoning laws, sub-division and site-specific regulations, building codes, flood insurance programs, natural resources and conservation statutes. This section was previously included in Chapter 2 of the original plan and developed into a standalone section of this updated plan to provide a better content flow.

Next in the Approval and Adoption Process





Town of Sunnyvale

Prepared By: Sean Fox, Town Manager

Summary:

DISCUSS AND APPROVE PLAN TO CONDUCT COMPETITION FOR NEW OFFICIAL TOWN FLAG.

Background & Analysis:

Sunnyvale resident, Ross Miracle, submitted a proposed design and draft resolution for a new official Town Flag in March 2015 but the resolution failed by a vote of 3/3.

In December 2015, Mr. Miracle submitted a petition requesting Council reconsider the proposal of adopting a new official Town Flag.

Council directed Staff to devise a rough plan to accommodate Mr. Miracle's for consideration.

Staff Recommendation:

Staff recommends a six person committee be established comprised of the following groups:

- Town Council
- Sunnyvale ISD
- 4A EDC
- 4B EDC
- Library Board
- Qualified Vexillologist

- February 1st to April 30th - Open submission of possible flag designs (90 days)
- First week of May - Committee workshop to narrow submissions to Top 5
- ~May 25th - All designs sent to Sunnyvale residents via water bill insert
- June 1st to June 30th - Voting via water bill inserts and online via my sidewalk
- July 2016 - Presentation to results to Council for possible adoption

Notes: You must be a Sunnyvale resident to make a submission. All submissions must be made in a standardized size and file format to the Town Secretary by April 30th, 2016. Voting will include top 5 designs and the current Town Flag. Each member of the Committee votes and the qualified Vexillologist votes only in the case of a tie. Committee members and their immediate family are not allow to make a submission.

Attachment: