Agenda Information Sheet

DEPARTMENT: Transportation

ACM: Mario Canizares

Date: September 12, 2017

SUBJECT

..Title

Receive a report, hold a discussion and provide direction on the design schedule for the proposed reconstruction of Fire Station 3.

..Body

BACKGROUND

As part of a City Council presentation on January 10, 2017, regarding the Fire Station 4 construction contract, Council requested that staff establish a schedule providing the opportunity to review design components and related construction costs on future fire station projects. On April 18, Kirkpatrick Architect Studios was awarded a design contract in the amount of $652,000 for the design of Station 3.

The reconstruction of Fire Station 4 and Fire Station 3 were approved as part of the 2014 Bond Election. The Fire Department worked with the Citizens' Bond Committee to incorporate elements of a Fire Department Facilities Study completed in January 2013 that planned for Station 4 to be constructed to accommodate an Engine and a Medic Unit. Staff understands Medic 4 is tentatively approved as part of the FY 2017-18 Budget and staffing for that unit will be partially offset by the SAFER Grant award.

The 2013 Facilities Study scoped a larger facility for the reconstruction of Fire Station 3. The facility was scoped to house the existing Engine Company, Medic Unit, and Aircraft Fire Rescue Truck, in addition to a future aerial Ladder Truck (currently unfunded). This scope was included in presentations to the Citizens Bond Committee and subsequently to City Council. The proposed accommodation of an additional Ladder Truck was part of the Facilities Study as it addresses an operational deficiency in the Fire Department's capacity as validated by the recent Insurance Services Office (ISO) report. The design for the larger footprint was incorporated into the Fire Department's 2014 Bond Proposal because staff plans for the new station to be operational in excess of fifty years and adequately serve reasonable expansion projections.

The architect recently provided staff with schematic design details, generally 15-20 percent of design. This design level provides spatial relationships, scale and form. Three facility scopes or floor plans were developed. Three options for foundations and two façade options were provided that could be applied to each floor plan. The cost estimates provided at this time are for the schematic design in Scope 1 which is the largest of the three floor plans and the staff recommended scope. Each floor plan differs in initial square footage while maintaining design similarities with the recently completed Station 2, as well as Station 4 that is currently under construction.

Scope 1:

This option, 16,100 square feet, represents the scope of Station 3 as originally conceived to accommodate existing Station 3 units and the addition of a future Ladder Truck. Scope 1 is the result of the challenge presented to the firefighter design team. The design team applied lessons learned from the construction of Fire Station 2 and the actual "living and working" conditions experienced over the past several months since Station 2 became operational. The design team was asked to identify areas in which square footage could be reallocated, eliminated or more

efficiently placed while maintaining a safe and functional facility. Scope 1 is 16,100 square feet with an estimated based base bid of $5,875,000, approximately $365 per square foot.

Scope 2:

This option represents a short-term savings of $964,406 from Scope 1 by designing the living quarters to accommodate existing Station 3 units only, for a total of 13,457 square feet in the initial phase. (Cost estimates are based on the opinion of probable cost developed for Scope 1, $365 per foot). This scope assumes a Phase II expansion of 1,875 square feet in living quarters at a later date to support the proposed addition of a Ladder Truck once it is funded and put into service. To ensure Option 2 remains viable for future expansion, it will be necessary to maintain the expansion property at the site to accommodate the footprint of the proposed build-out.

While it is not possible to accurately estimate the cost of Phase II at an unspecified future date, staff anticipates the total cost of a phased implementation, Phase I + Phase II, to significantly exceed the cost of constructing the fully scoped station as contemplated in Scope 1, as a single construction project.

Scope 3:

Scope 3 is 12,217 square feet and is estimated at $4,458,105, based on the $365 per square foot cost estimate developed for Scope 1. This option provides a short-term savings of $1,416,894. Scope 3 is similar to Scope 2 in that it proposes short-term savings associated with a two-phase implementation plan by reducing living quarters in Phase I. It further reduces the footprint by eliminating a truck room bay providing only three bays. While Station 3 is designed for more units and personnel than Station 2, it is important to note that this option would have one less truck bay than Station 2. A Ladder Truck can be accommodated with a three truck room bay, however, it would require a "stacked unit" housing of vehicles in the long-term. The permanent reduction of the truck bay is an important operational aspect as "stacking" front line units is not recommended for safety and response time considerations. A Phase II construction project could add firefighter dormitory space but it is not feasible to add an additional truck room bay in Phase II of Scope 3. Similar to Scope 2, subsequent expansions will most likely be more costly than constructing full capacity of the station in a single phase construction plan.

Foundation Options:

These estimates are based on the design reflected in Scope 1.

Option 1A – Drilled Pier with Grade Supported Slabs ($410,000)

This option is included in the base bid and is acceptable by the architect but the structure may experience some movement, up to one inch vertical movement.

Option 1B – Drilled Pier with Structural Slabs (+ $190,000 to base)

This option is preferred by the architect and would add an additional $190,000 to the estimated base bid of $5,875,000. This option provides the best structural support for the building with only "negligible" vertical movement.

Option 2 – Shallow Spread Footings and Grade Supported Slab (- $140,000)

This option is the most economical foundation considered, however, is not recommended by the architect due to the potential of one inch of vertical movement of both the spread footings and ground supported slab. This option would provide a cost savings of $140,000 to the estimated base bid cost estimate.

Façade Options:

Base Bid – Traditional Masonry

The massing and materials shown in Elevation A (Exhibit 1) represents Denton's and the University's perceived historic roots. The use of masonry and cast stone with divided lite windows indicates that it is firmly tied to its community. The building relies on careful brick detailing to mitigate its mass and scale and creates interest from a neighborhood vehicular perspective. Using a low slope roof behind a parapet is a departure from previous fire stations, but is in keeping with its institutional scale and proximity to the neighborhood.

Alternate Elevation – Contemporary – Glass & Iron

Elevation B represents Denton's and the University's potential future as the gateway to the Metroplex through its form and materials. The glazing reinforces Denton's governmental commitment to transparency and allows citizens the opportunity to see their tax dollars at work while the masonry and aluminum on the façade are readily recognizable as durable materials. These three materials tie the building to the larger Denton context of 'town and gown'. The area's optimism is reflected in the sloping roof, while simultaneously acknowledging its regional setting by providing ample shade.

Staff will facilitate the discussion on this proposal with Council through Exhibit 2. Based on Council direction on the recommended design, Scope 1, staff would work with the Kirkpatrick Studios to bring back an approximate 90-percent design for Council consideration in December 2017. Key City of Denton staff and representatives from the local design firm, Kirkpatrick Studios, will be available to provide additional information as Council may request.

OPTIONS

Scope 1: 16,100 square foot facility designed to accommodate current Station 3 units and allow additional square footage for living quarters and truck bay for a proposed Ladder Truck to meet future service levels. Cost is estimated at $5,875,000, approximately $365 per square foot

Scope 2: Phased construction of a 15,332 square foot facility. Phase I is 13,457 total square feet. Scope 2 total footprint to be reduced from Scope 1 by 768 square feet. Phase II construction would add the 1,875 square feet of additional living quarters at a later date, to accommodate the proposed Ladder Truck. Cost is estimated at $4,910,594, approximately $365 per square foot.

Scope 3: Phased construction of a 14,092 total square foot facility designed to accommodate current Station 3 units. Phase I construction is estimated at 12,217 square feet. 1,875 square feet of additional living quarters could be added as part of a Phase II construction project, however, total truck room bays would be capped at three bays requiring stacking of trucks. Cost is estimated at $4,458,105, approximately $365 per square foot.

Other options to be considered with each scope are type of foundation, façade and whether the structure will be built to meet LEED standards.

ESTIMATED SCHEDULE OF PROJECT

Staff is targeting December 2017, to bring forward a 90-percent design concept with an updated opinion of probable cost to City Council for consideration. Final design submittal for building permit is targeted for March 2018, with the award of a construction contract in the Fall of 2018. An estimated construction phase of 18 months would begin thereafter.

PRIOR ACTION/REVIEW (Council, Boards, Commissions)

December 13, 2016 – Station 4 Construction Contract
January 10, 2017 – Station 4 design process
April 11, 2017 – Station 3 design process
April 18, 2017 – Station 3 design contract awarded

FISCAL INFORMATION

The 2014 Bond Program estimated the reconstruction cost of Station 3 to be $8,620,000. The City of Denton closed on the property in May 2016 in the amount of $1,776,780. In 2016, project funding was transferred from this project in the amount of $1.1 million to offset construction costs for Station 4 and an additional $172,000 was transferred to offset construction costs for the Fire Training Burn Tower.

Based on the current opinion of probable cost (Exhibit 3) for the recommended baseline design of $5,875,000 and current project expenditures to date (real estate and design services), the project is demonstrating a short-fall of approximately$1,227,587. The proposed FY 20107-18 Budget includes the sale of $1,275,000 in Certificates of Obligation to complete this project. It is anticipated a more refined cost estimate based on final project design in early Calendar Year 2018, will provide a more refined project cost estimate, prior to issuing additional debt.

STRATEGIC PLAN RELATIONSHIP

The City of Denton's Strategic Plan is an action-oriented road map that will help the City achieve its vision. The foundation for the plan is the five long-term Key Focus Areas (KFA): Organizational Excellence; Public Infrastructure; Economic Development; Safe, Livable, and Family-Friendly Community; and Sustainability and Environmental Stewardship. While individual items may support multiple KFAs, this specific City Council agenda item contributes most directly to the following KFA and goal:

Related Key Focus Area: **Safe, Liveable & Family-Friendly Community**
Related Goal: **1.1 Manage financial resources in a responsible manner**

EXHIBITS

2. Fire Station 3 PowerPoint Presentation
3. Opinion of Probable Cost

Respectfully submitted:
Mark Nelson
Transportation Director