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SOLID WASTE & RECYCLING DEPARTMENT

MEMORANDUM

From: Vance Kemler, General Manager, Solid Waste & Recycling Services

To: Public Utilities Board

Date: March 27, 2017

Subject: Downtown Square District Trash and Recycling Service

EXECUTIVE SUMMARY:

The Public Utilities Board has requested an update on the City's plans to address dumpster locations around the Downtown Square. The Solid Waste & Recycling Department has recommended to the City Council that the Square District recycling and trash service be provided by establishing four recycling and trash shared collection centers. The first shared location has been established following the completion of the Hickory Street reconstruction project and the installation of a shared dumpster revetment in the Williams Trade Square parking lot. The second recycling and trash shared collection center is currently planned for the northwest quadrant of the square and will be built as part of the public parking area located adjacent to the intersection of McKinney St. and Cedar St. Staff has been evaluating possible locations and solutions to provide the remaining two sites, no specific plans have been determined.

BACKGROUND:

The collection of trash and other waste materials is always a challenge in concentrated urban and suburban areas; especially if the area developed before modern solid waste collection methods had evolved. Most of the commercial and multi-family residential accounts typical of urban areas are served with dumpsters and roll-off containers of various sizes. Rolling carts may be offered to those accounts that generate little trash. Restaurants and bars produce a large amount of food waste that includes liquids, as well as cardboard boxes and heavy glass bottles. These items are best collected in dumpsters as they can hold larger volumes that allow less frequent collections, and the businesses can take out the trash as needed without ever having to store it on their premises. For these reasons, dumpsters have been the method the City historically utilizes

for the businesses and multi-family residential accounts in the downtown square area, despite having no room on private property to place or screen them. However, with a growing local music and food scene, and an emphasis on tourism boosted by the A-Train, tourists, citizens, and business owners would like to see less of the dumpsters as they travel along the streets and sidewalks.

On January 15, 2011 the Denton City Council passed the Downtown Implementation Plan (DTIP), setting the standards for infrastructure revitalization. The Solid Waste & Recycling Department (SW&R) participated in the planning process to address trash collection systems, both in the greater *Downtown District*, and in the *Square District*. The Square District is defined in the DTIP as the four streets that make up the courthouse square (Elm, Locust, Hickory and Oak), and the streets behind them (Austin, Pecan, Walnut and Cedar), called *mews streets*; and the corresponding section of Mulberry St. For SW&R purposes it also includes the section of the Hickory St. corridor to Industrial St. This is the highly urban area where most dumpsters were/are located on the streets, with few options to move them onto private property. The Square District accounts for approximately one-third of the total waste for the entire Downtown District.

During the initial public input portion of the DTIP planning process, citizens indicated they would like trash dumpsters to be screened. Additionally, a survey of Square District stakeholders conducted by the Solid Waste & Recycling Department established that 96 percent of the merchants supported on-site recycling. With an emphasis on sustainability, the City wanted to establish a visible recycling program to show both citizens and visitors that we are striving to meet our waste diversion goals.

Jacobs Engineering, the city's consultants leading the DTIP process, considered five trash collection systems: hand collected plastic bags; rolling carts; side load bulk containers (dumpsters); front load bulk containers (dumpsters), and compactors (roll-off receiving containers and self-contained roll-off compactors). The Solid Waste & Recycling Department staff assessed these services as to the appropriateness for the Denton Square District. Recently, questions have been raised regarding the alternate collection methods previously assessed; background from staff's research and recommendations is provided for those eliminated methods:

- **Hand-collected plastic bags (and carts)**- Staff researched each of the cities suggested by Jacobs as models of urban hand-collection systems during the planning process- these were Seattle, WA; McKinney, TX; and Austin, TX. Denton staff spoke directly to city staff and/or to contracted collection agency staff in each of these locations to understand the methods they employed to collect trash and recycling.
- **Seattle**- Trash and recycling are collected from alleys downtown. Seattle requires businesses to locate trash and recycling dumpsters on their property where possible, to allow room for emergency vehicles to get through the alleys. Some businesses, such as light retail, are allowed to opt for a bag service to help alleviate the crowded alleys; however that service does not include restaurants and bars.

- In McKinney, they also have a mixed bag and residential style cart service on their square, which is collected from front sidewalks; this does not include recycling options. This bag or cart service is not available to the bars and restaurants, which must use dumpsters for their trash. There are alleys and parking lots in closer relation to their square, which provide areas to locate dumpsters close to the businesses on their square. Denton has a higher concentration of restaurants/bars than McKinney, in the comparison areas.
- Austin never had any form of hand collected bag service in their 6th St. and Congress Ave. area; rather there is dumpster service in alleys behind these businesses. The alleys are straight and narrow, not allowing for angled collection of larger dumpsters, so they use the 4-cubic yard side load dumpsters which line the alleys. The businesses in this district pay for a separate contract managed by Austin Resource Recovery that includes recycling and trash collection, and street cleaning.

Other comparison cities not used by Jacobs-

- Grapevine, TX. Grapevine has a bustling Main Street and the businesses have either dumpsters or carts on their rear side, on the mews streets, where the trash is collected from both the street and parking areas. Like in Denton, dumpsters sit along the streets and are unscreened in parking lots. Each business has its own dumpster or several carts, and recycling is an option that they can choose. Restaurants all have dumpsters in their parking areas.
- In New Orleans, LA. The French Quarter area employs a cart/bag combination service. Commercial solid waste collection in the French Quarter and Downtown Development District occurs twice a day, seven days a week, between 4:00 a.m. and 9:00 a.m., and between 5:00 p.m.-7:00 p.m. Properties may not leave carts or bags on public rights-of-way between the hours of 10:00 a.m. and 4:30 p.m. It is staff's experience, however, that bags and carts are always on the sidewalks, where tourists must walk very close. This in no way alleviates the odors, fugitive liquids, or litter that is perceived to be "caused" by dumpsters; in fact, it is much worse.
- Many large urban cities also employ mixed collection methods with rolling dumpsters on casters, roll-off containers, bags, and carts, but these are stored in the large buildings' loading dock areas or parking garages between collections.
- **Side load bulk containers** –These containers cannot be angled for the truck approach, they have to sit at the "curb" perpendicular to the street. During the DTIP assessment, staff demonstrated that these 3 or 4-cubic yard side load dumpsters would take up more parking spaces than the front load dumpsters, essentially lining the street. The amount of total

dumpsters would increase because side-load dumpsters are limited to 4 cubic yards (due to the limited lift capacity of the collection truck hydraulic lift) and the collection frequency per week would have to increase significantly, perhaps to more than once per day, depending on the number of dumpsters utilized. This option is costly to the ratepayer and exacerbates the parking problems. If the trucks must collect more than once per day, then the second collection would interfere with vehicular and pedestrian traffic.

Many older cities have alleys in their downtown districts; and the larger businesses tend to have some parking or rear areas for their support services that are not considered to be in the public view, unlike Denton's "mews streets." Staff found no particular collection model that would eliminate the visibility of trash receptacles. Given the information from the DTIP public meetings, the merchant survey, and the research, the staff recommendations to Jacobs Engineering were to devise a new program to relocate, consolidate and screen the dumpsters in the Square District, all while implementing on-site recycling.

The final recommendations published in the DTIP pertaining to Solid Waste included the implementation of a financial structure funded by the merchants using the dumpsters in the streets, such as Tax Increment Financing (TIF) or a Public Improvement District (PID), to pay for infrastructure improvements; and to implement a "mews" street program in the Square District for parking and trash removal (p. 124). A priority recommendation list for Solid Waste recommended conducting a pilot program; implementing a new plan for container locations, type, and pricing to cover these extra costs of providing trash and recycling services to this area; establishing a broad recycling program, and screening for the dumpsters and roll-off containers.

Solid Waste & Recycling staff moved quickly to reach these goals. At the time, dumpsters in the Square District were assigned to individual merchant accounts. Under this system, the number of dumpsters would have doubled with the inclusion of on-site recycling. The goal of SW&R staff was to *add* recycling while *decreasing* and *relocating* dumpsters, in order to increase parking spaces. A new system was devised to eliminate the assigned/dedicated trash dumpster system, replace about half with recycling dumpsters, establish a shared dumpster service, and assess a combined trash & recycling rate for the Square District merchants based on historical volume use. They would now share the dumpsters, and use the closest ones. Staff hoped to locate the dumpsters where they would be placed permanently, so they could be easily screened.

Public meetings and individual meetings with merchants were held to discuss the proposed trash removal system. A Pilot program began in January of 2011.

DISCUSSION:

Several years passed since the City passed the DTIP, and funds for downtown street improvements have been directed toward the Hickory Street corridor. Questions resurfaced regarding the plan for dumpsters located on streets in the Square District. In May of 2015, Solid

Waste & Recycling conducted an updated investigation of the collection methods that had been studied previously through the DTIP process. Using the current information of volumes and frequency of trash and recycling collected, staff considered the issues and estimated amounts of containers and cost of collection for each of the following collection containers:

1. Bags
2. Rolling Carts
3. Front load dumpsters (8-yd)
4. Compactors

The nature of restaurant and bar waste, cost prohibitions, lack of storage space in square businesses, set out and collection frequencies, and clean up issues, still cause staff to strongly disqualify bag or cart collection service. However, staff did conduct a comparison of volumes, and calculate the amount of ninety-six gallon carts (large) needed to replace dumpsters in the Square District at three different collection frequencies:

- Once per week collection- 928 carts
- Three times per week collection- 309 carts
- Seven days a week collection- 133 carts

It would require a large amount of carts to replace dumpsters, and the lack of inside or screened space to store them would leave them lined up outside of the businesses. In most cases, that is on the mews streets. They would likely be collected every day, including holidays, interfering with parking and traffic, and could pose a problem with odor and blocking pedestrian traffic. They also would not accommodate the large cardboard boxes that most restaurants and retail businesses produce, so those would likely be stacked on the sidewalk next to the carts.

Focusing on dumpsters as the best collection option, two main alternatives were considered:

1. **Leave the locally shared trash and recycling dumpsters on each of the mews streets, and strategically locate and screen them in each of the street improvement projects, per the Downtown Implementation Plan.** The screening costs and public right-of-ways usage costs would be borne by these property owners and businesses. The cost would vary depending on design, size, and materials used.

Further analysis:

- **Pros-** In this option, dumpsters are much more convenient, and potentially safer, for the users. Locating containers closer to the businesses using them does encourage some shared responsibility for keeping the area clean and litter free.
 - **Cons-** Dumpsters are still near pedestrians and odors may be a problem. This option limits adding on-street parking spaces.
2. **Relocate all shared dumpsters to four common collection sites around the square.** The dumpster collections for the businesses in each quadrant would be in one location,

and would be enclosed. We already have a model of this system at the Williams Square collection site, and that would be considered one of the four.

To estimate the needs of each collection station, the businesses were divided into quadrants, and the amount and kind of dumpsters already in service in the Square District shared plan were used to determine volumes and frequency of collection needed.

At six days per week collection:

- Southeast Quadrant (Williams Square)- four dumpsters, two trash and two recycling
- Southwest Quadrant- four dumpsters, two trash and two recycling
- Northwest Quadrant- four dumpsters, two trash and two recycling
- Northeast Quadrant- two dumpsters, one trash, one recycling

The costs for each collection site would vary with any land acquisition and with size of enclosures, which would be borne by the property owners and businesses using they sites.

Pros- This option would remove dumpsters from street areas, and offers some consolidation against future growth. This option may result in more on-street parking areas and enhance pedestrian experiences.

Cons- Distance to dispose of trash and recycling can cause hardship, especially for restaurant employees that may not be physically able to transport trash/recycling over distances, although they may be able to use rolling bins design for moving trash longer distances. This option could also be unsafe for staff to use late at night- a fear that has been expressed by some business owners and managers throughout the DTIP process. These sites would need continuous maintenance and cleaning, as shared locations tend to attract illegal dumping and encourage a lack of accountability from any of the users, since these locations would be further from each of their businesses and these costs would be reflected in the collection service rates for these businesses as would the cost for obtaining sites for these stations and any construction and operating costs.

In either scenario, growth or changes in business types would have to be accommodated by increasing frequency of collection, rather than enlarging the enclosures or adding dumpsters. At some point, seven days a week collection of commercial trash may become necessary.

CONCLUSION:

The Solid Waste & Recycling Department has recommended to the City Council that the Square District recycling and trash service be provided by establishing four recycling and trash shared collection centers. The first shared location has been establish following the completion of the Hickory Street reconstruction project and the installation of a shared dumpster revetment in the Williams Trade Square parking lot. The second recycling and trash shared collection center is

currently planned for the northwest quadrant of the square and will be built as part of the public parking area located adjacent to the intersection of McKinney St. and Cedar St. Staff has been evaluating possible locations and solutions to provide the remaining two sites, no specific plans have been determined. The costs of these centers and the collection service be recovered in the Solid Waste Rate Schedule for the Square District for all businesses using these shared collection centers. Only those businesses that have their own recycling and trash containers on their property, and screened to meet the dumpster enclosure requirements would be exempt from using these Square District shared collection centers.