



COTTON BELT

Cotton Belt Corridor Regional Rail

Hazardous Materials Technical Memorandum

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1.0 INTRODUCTION

The Dallas Area Rapid Transit (DART) Board of Directors adopted the 2030 Transit System Plan (TSP) on October 24, 2006. The 2030 TSP updates the prior 1995 TSP that included several corridors currently in planning, design or construction. DART owns 52 miles of the Cotton Belt Corridor from north Fort Worth to Wylie (LOPEZGARCIA September, 2008). The Cotton Belt Corridor Regional Rail Project proposes implementation of passenger transit service on a 26-mile rail alignment extending from Dallas/Fort Worth International Airport (DFW Airport) to the Richardson/Plano area of Texas. The project corridor passes through Collin, Dallas and Tarrant counties and includes the cities of Grapevine, Coppell, Carrollton, Addison, Dallas, Richardson and Plano. The general vicinity map is presented in **Figure 1**. The Cotton Belt Corridor is an existing east/west freight rail corridor purchased by DART in 1990 and designated as a preserved corridor for future transit rail service. The proposed Cotton Belt project would be located primarily on the existing right of way (ROW). The ROW width varies throughout the corridor, but is generally 100 feet. The proposed project would operate in conjunction with continued freight rail service, except where proposed alternatives deviate from the existing alignment and through the North Dallas area where freight abandonment has been approved from Knoll Trail in Dallas to Renner Junction in Richardson.

The purpose of this report is to provide an understanding of key environmental hazard issues associated with either at-grade options or below-grade options and how they could be addressed in the corridor. Specifically, this effort will:

- Provide an overview of environmental Hazardous and Regulated Material (Hazmat) sites present within a one-half mile radius of the Cotton Belt Corridor
- Document any soil or groundwater contamination within a one-half mile radius of the Cotton Belt Corridor
- Review the design concepts and assess the potential impact of existing Hazmat sites or contaminated ground on the project
- Provide recommendations for the alternate options or mitigation options at the areas of environmental concern

1.1 Study Area

The Cotton Belt Corridor study area for this Hazmat assessment is generally defined as a one-half mile buffer on each side of the existing freight rail alignment. This assessment will address Hazmat issues for the 26-mile corridor.

2.0 LEGAL AND REGULATORY CONTEXT

2.1 Regulatory Data Search

A search of the regulatory databases for sites that handle, generate, transport, store, or dispose of hazardous and/or regulated materials was conducted by Environmental Data Resources, Inc. (EDR). Federal, state and other regulatory databases were searched for sites within the American Society for Testing Materials (ASTM)-specified search distances (ASTM E 1527-05, 2005) from the project centerline. The EDR report was generated for potential hazardous sites within a one-half mile radius from the proposed project corridor and existing DART right-of-way where construction activities would be expected.

2.2 Interviews

No interviews were conducted during this assessment.

3.0 METHODOLOGY

The Cotton Belt Corridor was evaluated by reviewing available regulatory agency databases, aerial photographs, topographic maps, and by site reconnaissance. These documents and site visits were intended to serve as an overall environmental screening for the Cotton Belt Corridor in order to begin to address potential Hazmat issues related to proposed project.

3.1 Regulatory Database Review

From the EDR regulatory agency database report, potential hazardous sites within a one-half mile radius were evaluated and ranked based on the premise that the proposed project corridor would be located on existing right-of-way and construction activities. Construction activities would involve primarily surface disturbances related to track replacement and/or maintenance activities except in the areas where the track will be either below-grade or deviates from the existing alignment. With the below-grade or deviation from the existing alignment, the evaluation involved limited sub-surface evaluation of the potential impacts from Hazmat sites. Potential sites were ranked either high, medium, or low based on the distance to the project corridor, activities that were and are being conducted at the site, and the history of releases, spills, or violations. Based on these criteria, sites that are located on the vicinity of the proposed corridor, have documented site activities that could contaminate soil or groundwater, or have a history of violations or contaminated media have a high potential to impact the site. If the site was listed as contaminated and was within 500 feet of the DART right-of-way, it was ranked as medium risk. Other contaminated sites that were not within 500 feet or the site case has been closed were ranked as low risk. The identified sites within a one-half mile radius were summarized and presented in the Potential Environmental Hazards table in **Attachment A**. Due to its large size, the EDR Report is presented in a CD format.

Potential hazardous sites were further screened based on the future construction activities. The proposed construction activities could be at existing at-grade, below-grade or above-grade levels. For above- and below-grade level options, deeper subsurface soils would be disturbed for trench, tunnel, or pillar construction. For the area where construction would be at-grade level, potential hazardous sites within the 500 feet of the DART right-of-way buffer were evaluated. For other areas (proposed below-grade or above-grade level construction area), all impacted sites within a one-half mile radius were evaluated. The main difference between the two approaches is the depth of excavation. This is because the risk of encountering hazardous materials increases as the depth of excavation increases.

3.2 Project Footprint Review

The 26 mile Cotton Belt Corridor is divided into three sections. Section 1 covers from DFW Airport to the Trinity River just west of I-35. Section 2 covers from Trinity River to the Dallas North Tollway in Addison, and Section 3 covers from Dallas North Tollway to Shiloh Road in Plano, Texas. Each section also has subsections which provides proposed stations and parking areas, alternate routes, and at-grade, below-grade or above grade corridor lines. The exhibits of

those sections are provided in the engineering reports. Based on those corridor footprints, impacted sites within either 500 feet or one-half mile were selected for hazardous evaluation.

3.3 Site Reconnaissance

A pedestrian survey was conducted on the 26 mile Cotton Belt corridor, alternate routes, proposed stations and parking lots on November 13, 21, 29, and December 3, 2012 to identify any potential hazardous materials or activities present on the existing DART right-of-way property and adjacent areas without trespassing on private properties. During the site reconnaissance, the half mile section from the north side of the DFW Airport to the existing railroad track was not surveyed.

The Fort Worth and Western Railroad (FWWR), Dallas, Garland and Northeastern (DGNO), and Kansas City Southern (KCS) railroad companies operate their freight trains along this Cotton Belt Corridor. The detailed information on railroad segment ownership is presented in **Figure 2**. The site visit was conducted with an assigned flagger from each respective railroad company for the safety of the URS personnel. DGNO operates, dispatches, and maintains approximately six freight trains per week along the Cotton Belt Corridor from Renner Junction to Carrollton. KCS operates, dispatches, and maintains approximately twelve trains per day along this alignment from Wylie to Renner Junction or from Dallas via the overpass at Cotton Belt towards Alliance Airport (Fort Worth). Union Pacific (UP) has non-exclusive overhead trackage rights from Wylie to Fort Worth that pertain to point-to-point operations. However, they do not currently operate local service (LOPEZGARCIA 2008).

During the site visit, abnormal conditions related to potential Hazmat sites within the DART right-of-way were noted and photo-documented.

3.4 Topography and Aerial Photo Review

Topographic maps provided with EDR regulatory agency database were reviewed to locate the potential Hazmat site and compare their topographic elevation with the existing DART right-of-way property. All listed hazardous sites were also cross checked with aerial photos included in Google Earth internet program to verify the distance of those identified sites from the Cotton Belt Corridor and the presence of other potential Hazmat sites. Historical aerial photos were not reviewed.

4.0 AFFECTED ENVIRONMENT

4.1 Findings from Data Review

As expected, more potential hazardous material sites are found within the developed corridors than in the less developed sections. Potential hazardous waste sites that are on adjacent properties in proximity to the corridor, have documented site activities that could contaminate soil or groundwater, or have a history of violations or contaminated media have a high to medium potential to impact the site. Other sites without a history of violations or leaks or spills and are located on the adjacent properties or beyond are typically ranked as a low risk.

Based on the criteria discussed under the regulatory database review section, a total of 320 potential risk sites within a one-half mile buffer of the DART right-of-way corridor were identified from EDR report and are summarized in **Attachment A**. Using the screening criteria discussed in the methodology section, the list of potential sites were further screened and evaluated for the potential to impact construction activities. From this screening, a total of 33 potential risk sites were identified within the defined criteria which might impact the construction activities. These 33 sites which have had environmental problems in the past are presented in **Table 1**. These sites were further evaluated in detail for the potential impact during construction activities along the corridor. Most of these sites have been remediated and are listed as low risk. However; out of 33 sites, two sites are rated as a high risk and nine as a medium risk. The rest of the 22 sites were rated as a low potential to impact the project corridor. As discussed earlier, this risk classification is based on the nature of the site contamination and proximity to the DART right-of-way. It is important to note that this risk ranking would be applicable to DART right-of-way area only if the ground is disturbed during construction activities. Based on the current alignment, it appears that none of the identified high or medium risk sites are within the construction area where subsurface soil will be disturbed during the construction activities hence, do not pose any risk. However, if the current alignment changes, then further evaluation of the sites listed in **Table 1** may be required. The approximate location and nature of contamination of the identified high and medium risk sites are discussed below.

Two sites that are rated high risk are located at Southeast corner of 10th Street and existing DART railroad Track in Plano, TX. Both facilities are located in the same vicinity and have the same **Map ID-29**. This site address is 910 10th Street, Plano, TX which is within 100 feet from the DART right-of-way. The site soil is contaminated with volatile organic compounds (VOCs), Chlorinated solvents, metals. In the past, this site had also received notice of violations. Although these two are high risk contaminated sites, these sites may not pose any risk during construction activities. Because the proposed construction activities would be at existing at-grade level and minimal soil disturbance is anticipated. The detail locations of these facilities are shown in **Figure 3D**.

The remaining nine sites are rated as a medium risk potential and are shown in **Figures 3A** through **Figure 3E**. These facilities (the Map IDs 11, 37, 42, 48, 85, 107, 109, 110, and 160) are located within 500 feet along the corridor.

Map IDs 37, 42, and 48 are located near the intersection of US 75 (North Central Expressway) and Cotton Belt Corridor and are shown in **Figure-3D**. **Map ID 42** site, located at 810 North Central Express Parkway, is a dry cleaning facility and the site soil is contaminated with chlorinated solvents. **Map ID 48** is a Leaking Petroleum Storage Tank (LPST) site located at 625 North Central Express Parkway and the site groundwater is contaminated. **Map ID 37** is a Leaking Petroleum Storage Tank (LPST) site located at 900 F Avenue and had received notice of violation in the past. Since proposed track in this area will be above the grade over the North Central Parkway, there is the potential to encounter contaminated soil and/or groundwater in these areas during the railroad construction activities.

Map ID 11 is an industrial site which is located at 1714 E 14th Street. This site generates industrial hazardous waste and has received notice of violation in the past, hence it is ranked as medium risk site. However; proposed rail construction activities in this vicinity will be at grade level and any encounter of contaminated soil and/or groundwater is not anticipated. The location of this facility is shown in **Figure 3E**.

Map ID 85 is a dry cleaning facility which is located at 5403 Arapaho Road within the Dallas City limit. This site is within 500 feet from the DART right-of way and both soil and groundwater are contaminated with chlorinated solvents. Since proposed construction will be at the grade, no impact of these contaminated soil and groundwater on the construction activities are anticipated. The location of this facility is shown in **Figure 3D**.

Map ID 107 is located in 4801-4807 Arapaho Road east of Addison Airport (**Figure 3B**). The site soil and groundwater are contaminated with paint solvents and metals. It appears that remedy has been performed; certificate of completion has not been reported. Although the site is contaminated, it will have minimum impact on proposed construction, because the construction activities will be at grade level and minimum soil will be disturbed.

Map IDs 109 and 110 are located in Lindberg Drive west of Addison Airport (**Figure 3B**). The site soil and groundwater are contaminated with VOCs, metals, and Total Petroleum Hydrocarbons (TPH). Although the site is contaminated, it will have minimum impact on proposed construction, because the construction activities will be at grade level and minimum soil will be disturbed.

Map ID 160 is located at 1015 Hutton Dr. just west of I-35E within the Carrollton city limits (**Figure 3A**). This is a fleet fueling and maintenance site that generates chemical wastes. Since the proposed construction activities will be at grade, no impact on construction activities from this site is anticipated.

Orphan sites listed in the EDR report were also evaluated based on provided physical address. Any orphan sites within 500 feet from DART corridor was considered for potential impact due to construction activities. Only one site was identified based on this criteria and the general

location for this site is presented in **Figures 3C**. The orphan site is named St. Johns Cleaners (ORF-1) and is located at 15203 Knoll Trail Dr. in Dallas. No facility information is available.

4.2 Findings from Site Reconnaissance

Cotton Belt Corridor:

During site reconnaissance, no significant environmental impacts related to hazardous materials were observed along the 26-mile Cotton Belt Corridor within the existing DART right-of-way property or adjacent areas. During site reconnaissance, a few empty five gallon drums, stained railroad track, and household trash were observed along the edge of the DART right-of-way. Besides trash, one dark spill area on the railroad track was observed approximately 200 feet east from the Knoll Trail Dr. within the Dallas city limits. Also in the same vicinity, black stained pebbles were found on the track. During site reconnaissance, it was observed that some kind of chemicals might have spilled on the railroad track and caused staining of the rock (see **Photo 5** in **Attachment B**). In the same area (1,000 feet east from Knoll Trail Dr.) unusually colored water was flowing in the culvert under the railroad track (see **Photo 4** in **Attachment B**). The cause of this phenomenon is unknown. However, this could be due to discharge of residential chlorinated water into the drainage. Hence, it will not be any issue during rail construction activities. Half-burned logs on the side of the railroad track were observed between Coit Road and Waterview Parkway in Dallas. At the corner of the active KCS rail line and Synergy Park Blvd, excavated soils and other construction debris were observed on the ground. Since the proposed line will be at the grade level which is approximately 20 feet above the ground in this area, no potential impact from these materials is anticipated. A round locked manhole was found east of Preston Road, south from the railroad track and east of the Fairhill school boundary. The photo logs for these observations are presented in **Attachment B**.

Proposed Stations and Parking areas:

Eleven stations are proposed within the proposed corridor. Out of eleven, six stations will have parking lots adjacent to the station area. Besides the existing Cotton Belt Corridor, proposed parking and station areas were also surveyed for potential hazardous materials. The findings of each station are discussed below.

DFW North Station: This proposed station is located north from the SH114 and east from the Texan Trail road. The proposed Cotton Belt Corridor project assumes that the proposed Fort Worth Transportation Authority's (The T) TEX Rail project extending from southwest Fort Worth to Terminal B at DFW Airport will be in place. The DART project would utilize the portion of the T's project that extends northwest, on new right-of-way, from the DFW Terminal B Station to the DFW North Station located just south of the Cotton Belt Corridor. At this station the TEX Rail Project turns to west on the Cotton Belt right-of-way, while the DART project turns to the east. Section 1 of the Cotton Belt Corridor Project begins at the DFW North Station. DART's proceeds northeast and connects to the existing Cotton Belt freight track. At the time of the site reconnaissance, DFW Airport property was not accessed. However, based on the EDR regulatory database search, no Hazmat site with potential risk was found within one-half mile from this site.

North Lake Station: This proposed station with parking lot is located north of North Lake and south from Belt Line Road and opposite the ADI warehouse located at 346 E Belt Line Rd in Coppell. During the site visit, the proposed station was fenced and therefore, it was inaccessible.

However, the proposed station area was observed from outside of the fence and it appeared that no environmental issue is present except the high tension power line that crosses the property. Based on the EDR regulatory database search, no Hazmat site with potential risk was found within ½ mile from this site.

Downtown Carrollton Station: This proposed station with parking lot is located on north side of the existing DART Green Line parking area. The proposed station site was surveyed during site visit. No environmental impacts related to hazardous materials were found in the proposed parking areas. However, to the north from the proposed site there is a creek with riparian vegetation. During future environmental reviews, further evaluation should be performed to assess any potential impact on surface water habitat before any construction activities begin. Based on the EDR regulatory database search, no Hazmat site with potential risk was found within ½ mile from this site. There was one Hazmat site (**Map ID 160**) was located just outside of the ½ mile radius (see **Figure 3A**).

Addison Transit Center Station: This proposed station without parking lot is located between Addison Road and Quorum Drive. The proposed station will be built on existing DART right-of-way property. No environmental issue was observed during site visit. Also, based on the EDR regulatory database search, no Hazmat site with potential risk was found within ½ mile from this site.

Knoll Trail Station: This proposed station without parking lot is located just east of Knoll Trail Drive. The proposed station will be built on existing DART right-of-way property. During site visit, dark stained rocks were found on the rail road track (see **Photo no. 5** in **Attachment B**). Also, based on the EDR regulatory database search, one Hazmat site (**Map ID 85**) and one orphan site (ORC-1 St John's cleaners) were found within ½ mile from this station (see **Figure 3C**). However, these sites are expected to have a low potential to impact the project corridor.

Preston Road Station: This proposed station without parking lot is located just east of Preston Road. The proposed station will be built on existing DART right-of-way property. No environmental issue was observed during site visit. Also, based on the EDR regulatory database search, no Hazmat site with potential risk was found within ½ mile from this site.

Renner Village Station: This proposed station with parking lot is located between Dickerson Street and Coit Road. This proposed station with parking lot has two options: east Renner Village Station or west Renner Village Station. The west option is just east of Dickerson road and west option is located just west of Coit Road (see **Figure 2**). At the time of the site visit, the west Renner Village Station parking lot was not in the scope of work, hence not surveyed. The east Renner Village Station parking lot was occupied by Adventure Landing Theme Park, but it was not accessible. Based on the EDR regulatory database search, one Hazmat site (**Map ID 60**) was found on the proposed west Renner Village Station parking lot (see **Table 1**). Contaminated soil from a LPST site was documented at the site. However, the final concurrence was issued and case has been closed. No other Hazmat site with potential risk was found within ½ mile from this proposed station area.

UTD/Synergy Park Station: This proposed station with parking lot is located on the northwest corner of the existing DART RR track and the Kansas City Southern railroad track. The proposed

station site was surveyed during site visit. No environmental impacts related to hazardous materials were found on proposed parking areas. Also, based on the EDR regulatory database search, no Hazmat site with potential risk was found within ½ mile from this site.

Bush Turnpike Station: This is an existing station for DART Red Line transit. This station would be constructed if the South Alignment alternate route is selected. This existing DART Red Line station site was surveyed during the site visit. No environmental impacts related to hazardous materials were found on the station area site. Also, based on the EDR regulatory database search, no Hazmat site with potential risk was found within one-half mile from this site.

12th Street Station: This proposed station with parking lot is located on northeast corner of the existing DART RR track and DART Red Line Transit system. The 12th Street Station has two options: An at-grade station option associated with the North Alignment Alternative and an aerial station option with depressed freight tracks associated with the South Alignment Alternative. Both proposed station areas were surveyed during site visit and no environmental impacts related to hazardous materials were found. However, currently, the proposed parking lot is occupied by a pawn shop, Caliber Collision Center and Reed Fence and Deck Company and was not surveyed. Based on the EDR regulatory database search, one potential Hazmat site (**Map ID 29**) was found within one-half mile from this site which is located at the corner of 10th Street and existing DART railroad track (see **Figure 3D** and **Table 1**). This site soil is contaminated with VOCs, chlorinated solvents, and metals. If the parking lot for this station were constructed with minimum subsurface disturbance, then this site should not pose a risk.

Shiloh Road Station: This proposed station with parking lot is located on the southwest corner of the existing DART railroad track and Shiloh Road. The proposed station and parking lot area was surveyed during site visit. No environmental impacts related to hazardous materials were found on the proposed parking areas. However, there is a power station north of the proposed station parking lot and south of the rail alignment. Also, based on the EDR regulatory database search, no Hazmat site with potential risk was found within one-half mile from this site.

4.3 Data Gaps

The 26 mile Cotton Belt corridor, alternate routes including South Alignment Alternative near the DART Red Line, and proposed stations and parking areas were surveyed. However, a section from the DFW Airport to the main Cotton Belt Corridor and an alternate west Renner Village Station and parking lot option were proposed after the site reconnaissance, hence these two areas were not surveyed for any environmental hazard materials. Also, proposed parking areas for 12th Street Station and east Renner Village Station were occupied and hence not surveyed. However, no potential hazmat site was identified within one-half mile of these areas in EDR Regulatory agency database.

4.4 Conclusions

The Cotton Belt Corridor Regional Rail Project proposes implementation of passenger transit service on approximately a 26-mile rail alignment extending from north of DFW Airport to the Richardson/Plano area of Texas. The purpose of this report is to provide an understanding of key environmental Hazmat issues associated with either an at-grade or a below-grade options and how the identified issues could be addressed to minimize impact on construction activities.

A search of the regulatory databases for sites that handle, generate, transport, store, or dispose of hazardous and/or regulated materials was conducted by Environmental Data Resources, Inc. (EDR). The EDR report was generated for the one-half mile radius of the Cotton Belt corridor and was reviewed for potential hazardous site. From the database a total of 26 potential Hazmat sites were identified. However, out of 26 sites, two sites are rated high risk due to chlorinated solvent contamination in the soil, eight as medium risk, and the remaining 16 were rated as a low potential to impact construction activities. Based on the current alignment, it appears that none of the identified high or medium risk sites are within the construction area where subsurface soil would be disturbed during the construction activities hence, should not pose a risk. However, if current alignment changes, then further evaluation of the sites may be required to determine the Hazmat risk. There may be a potential for a Hazmat risk area near the US 75 intersection if subsurface soil is disturbed during construction activities. There are two Hazmat sites (**Map ID 42 and 48**) on either side of the US 75 which are in medium risk category. The existing DART railroad track goes over the US 75. If the existing bridge is replaced and subsurface soil is disturbed for pillar construction, then there is a potential for the Hazmat risk.

From the site reconnaissance, no significant environmental impact related to hazardous materials was observed along the 26-mile Cotton Belt Corridor, either on existing DART right-of-way property or adjacent properties. However, a few spills and stains were observed on the track as well as household trash on properties adjacent to the right-of-way.

4.5 Recommendations

From EDR database evaluation and site reconnaissance the following recommendations are proposed.

- Stained soil present on the DART Cotton Belt corridor right-of-way should be tested for contamination and should be properly removed, if contaminants are identified.
- If surface and sub-surface soils are disturbed during pillar construction, tunneling or during trenching at below the grade level track near the contaminated sites, the soil and groundwater should be tested for potential contamination.
- Contractors should be prepared to encounter potentially hazardous conditions when working in proximity to high or medium risk sites and should have proper equipment available to protect their workers and the environment if hazardous materials are encountered.

5.0 REFERENCES

American Society of Testing Materials (ASTM), E 1527-05, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.

Environmental Data Resources, Inc. (EDR), November 23, 2010. Cotton Belt Corridor Project - EDR Data Map TM Corridor Study (2925107. 1S).

Cotton Belt Corridor, Environmental Review and Assessment of Rail, Alignment Concepts Presented to Dallas Area Rapid Transit –DART ·Presented by LOPEZGARCIA GROUP
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TABLES

FIGURES

ATTACHMENT A
Summary Table and
EDR Report (CD Attached)

ATTACHMENT B
Photo Logs