Appendix A

Design Engineering Plans

Volume B
A-2

Volume B

Cotton Belt Final Draft 10% PE Plans - Line

Section CB-2 Part 1
VICINITY MAP
NO SCALE

COTTON BELT REGIONAL RAIL
ELM FORK OF TRINITY RIVER TO DALLAS NORTH TOLLWAY
LINE SECTION CB-2

NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

IN-PROGRESS

DART PROJECT

COTTON BELT REGIONAL RAIL SYSTEM
LINE SECTION CB-2

TITLE SHEET
## Horizontal Alignment Data
### Centerline of Northbound Track

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### Notes:
1. Grid coordinates are based on the Texas State Plane Coordinate System, WGS 1984, Survey Foot.
2. Coordinates shown herein are based on the Texas State Plane Coordinate System, WGS 1984, Survey Foot.
3. Curve radii are based on the chord definition.
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**NOTES:**
1. GRID COORDINATES = SURFACE COORDINATES X 0.999863513
2. COORDINATES SHOWN HEREON ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NAD83, SURVEY FOOT.
3. CURVE RADII ARE BASED ON THE CHORD DEFINITION.
### Centerline of Northbound Track

#### Horizontal Alignment Data

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#### Notes:
1. Grid Coordinates = SURFACE COORDINATES DSM 0.999863513
2. Coordinates shown herein are based on the Texas State Plane Coordinate system, NAD83, SURVEY 1983.
3. Curve values are based on the chord definition.

NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

CONTRACT SHEET NO. 025-0009
CENTERLINE OF NORTHBOUND TRACK

COTTON BELT REGIONAL RAIL SYSTEM

HDR PROJECT
# Horizontal Alignment Data

## Centerline of Southbound Track

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## Notes:

1. GRID COORDINATES = SURFACE COORDINATES X 0.999863513
2. COORDINATES SHOWN HEREON ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NAD83, SURVEY FOOT.
3. CURVE RADII ARE BASED ON THE CHORD DEFINITION.
**LINE SECTION CB-2 SB**  
**HORIZONTAL ALIGNMENT DATA**  
**CENTERLINE OF SOUTHBOUND TRACK**

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<tr>
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<tr>
<td>CB2-V</td>
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<td>2394+75.89</td>
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<tr>
<td>CB2-W</td>
<td>PI</td>
<td>2424+41.49</td>
<td>7036006.70</td>
<td>2478532.78</td>
<td>R = 3815.05</td>
<td>1043.07</td>
<td>36 2' 56&quot; 12'&quot;</td>
<td>1.75</td>
<td>1.13</td>
<td>56</td>
<td>24°31’07’ Left</td>
<td>SPIRAL</td>
<td>10/29/18</td>
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<td>CS</td>
<td>2425+89.89</td>
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**NOTES:**

1. GRID COORDINATES = SURFACE COORDINATES X 0.999863513
2. COORDINATES SHOWN HEREON ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM (WGS 1984, SURVEY FOOT).  
3. CURVE RADII ARE BASED ON THE CHORD DEFINITION.
# Horizontal Alignment Data

## Line Section CB-2 SB

### Centerline of Southbound Track

<table>
<thead>
<tr>
<th>Curve Name</th>
<th>Point</th>
<th>Chainage</th>
<th>N=</th>
<th>E=</th>
<th>Element</th>
<th>Length</th>
<th>Degree of Curve</th>
<th>Curve Radii</th>
<th>Passenger Speed</th>
<th>Peak Speed</th>
<th>Deflection Angle</th>
</tr>
</thead>
<tbody>
<tr>
<td>CB2-JJ PI</td>
<td>P1</td>
<td>2376+73.67</td>
<td>7037253.54</td>
<td>2482409.43</td>
<td>R + 22006.33</td>
<td>95.08</td>
<td>6% + 6° 15' 1&quot;</td>
<td>0.50</td>
<td>0.05</td>
<td>55</td>
<td>0° 14' 06&quot; Left</td>
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<tr>
<td>CB2-NW PI</td>
<td>P1</td>
<td>2377+20.62</td>
<td>7037273.01</td>
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<td>527.33</td>
<td></td>
<td></td>
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<tr>
<td>CB2-KK PI</td>
<td>P1</td>
<td>2382+95.07</td>
<td>7037511.24</td>
<td>2482974.87</td>
<td>R + 22938.33</td>
<td>94.22</td>
<td>6% + 9° 14' 56&quot;</td>
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<td>0.05</td>
<td>55</td>
<td>0° 14' 07&quot; Right</td>
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<td>CB2-KK PI</td>
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</tbody>
</table>

### Notes:

1. Grid coordinates = surface coordinates X 0.999863513
2. Coordinates shown herein are based on the Texas State Plane coordinate system, NAD 83, surveyed datum, and are UTM zone 15.
3. Curve radii are based on the chord definition.

### Definitions:

1. Grid coordinates = surface coordinates X 0.999863513
2. Coordinates shown herein are based on the Texas State Plane coordinate system, NAD 83, surveyed datum, and are UTM zone 15.
3. Curve radii are based on the chord definition.
### Centerline of CB-2 Industry 1 Track

#### Horizontal Alignment Data

<table>
<thead>
<tr>
<th>Curve Name</th>
<th>Point</th>
<th>Change</th>
<th>Coordinate (ft)</th>
<th>Element</th>
<th>Degree of Curve</th>
<th>Eh</th>
<th>Ev</th>
<th>Passenger Speed</th>
<th>Freight Speed</th>
<th>Deflection Angle</th>
</tr>
</thead>
<tbody>
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<td>245441.50</td>
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<td>130.89</td>
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<td>435.75</td>
<td>0.00</td>
<td>1.04</td>
<td>NA</td>
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<td>60°28'21&quot; Right</td>
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</tr>
<tr>
<td>CB-IND1-a</td>
<td>PI</td>
<td>3+77.16</td>
<td>1035108.50</td>
<td>245479.75</td>
<td>R = 383.07</td>
<td>437.73</td>
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<td>NA</td>
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<td>60°28'21&quot; Right</td>
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<tr>
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<td>245476.20</td>
<td>65.17</td>
<td>0.00</td>
<td>0.35</td>
<td>NA</td>
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<td>2°23'29&quot; Left</td>
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</tr>
<tr>
<td>CB-IND1-b</td>
<td>PI</td>
<td>3+77.16</td>
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<td>245479.75</td>
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<td>2°23'29&quot; Left</td>
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<td>PT</td>
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<td>1035111.38</td>
<td>245476.20</td>
<td>66.77</td>
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<td>0.35</td>
<td>NA</td>
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<td>2°23'29&quot; Left</td>
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<tr>
<td>CB-IND1-c</td>
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<td>6+37.72</td>
<td>1035133.50</td>
<td>245483.00</td>
<td>R = 1910.08</td>
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<td>1°44'02&quot; Right</td>
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<td>PT</td>
<td>7+86.21</td>
<td>1035166.50</td>
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<td>NA</td>
<td>10</td>
<td>3°12'16&quot; Right</td>
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</tbody>
</table>

**Notes:**

1. Grid coordinates = surface coordinates x 0.999863513
2. Coordinates shown herein are based on the Texas State Plane Coordinate System, U.S. Survey Foot.
3. Curve radii are based on the chord definition.

---

**Centerline of CB-2 Industry 1 Track**

**Horizontal Alignment Data**

- Curve Name: CB-2 Industry 1
- Element: STRAIGHT
- Degree of Curve: 130.89°
- Eh: 435.75 ft
- Ev: 0.00 ft
- Passenger Speed: 1.04 mph
- Freight Speed: 1.04 mph
- Deflection Angle: 60°28'21" Right
### Horizontal Alignment Data

**Line Section CB-2 Industry 2**

#### Centerline of CB-2 Industry 2 Track

<table>
<thead>
<tr>
<th>Curve Name</th>
<th>Point</th>
<th>Chainage</th>
<th>Northing</th>
<th>Easting</th>
<th>Element</th>
<th>Degree of Curve</th>
<th>Eo</th>
<th>Eo</th>
<th>Passenger Speed</th>
<th>Freight Speed</th>
<th>Section Width</th>
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</thead>
<tbody>
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<td>POB</td>
<td>0+00.00</td>
<td>7038155.26</td>
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<td>STRAIGHT</td>
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</tr>
<tr>
<td>PI</td>
<td>0+30.41</td>
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<td></td>
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</tr>
<tr>
<td>PT</td>
<td>1+00.00</td>
<td>7038177.39</td>
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<td>PI</td>
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<td>PC</td>
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<td>POE</td>
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</tbody>
</table>

**Notes:**

1. GRID COORDINATES = SURVEY COORDINATES X 0.999863513
2. COORDINATES SHOWN HEREON ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NORTH U.S., SURVEY FOOT.
3. CURVES AND ARE BASED ON THE CHORD DEFINITION.
### Horizontal Alignment Data

#### Line Section CB-2 Industry 3

**Centerline of CB-2 Industry 3 Track**

<table>
<thead>
<tr>
<th>Curve Name</th>
<th>Point</th>
<th>Chainage</th>
<th>Northing</th>
<th>Easting</th>
<th>Curve Type</th>
<th>Element</th>
<th>30'</th>
<th>Curvature</th>
<th>EA</th>
<th>EU</th>
<th>Speed</th>
<th>Deflection Angle</th>
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<tbody>
<tr>
<td>POB</td>
<td>10+00.00</td>
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<td>2464158.31</td>
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<td>30.17</td>
<td>Standard</td>
<td>119.41</td>
<td>6°21'35&quot; Right</td>
<td>1.14</td>
<td>NA</td>
<td>10</td>
<td>12°08'15&quot; Right</td>
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<tr>
<td>PI</td>
<td>10+30.17</td>
<td>7038170.14</td>
<td>2464187.84</td>
<td>STRAIGHT</td>
<td>Standard</td>
<td>119.41</td>
<td>6°21'35&quot; Right</td>
<td>1.14</td>
<td>NA</td>
<td>10</td>
<td>12°08'15&quot; Right</td>
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</tr>
<tr>
<td>PC</td>
<td>11+49.5</td>
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<td>2464301.32</td>
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<td>PI</td>
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<td>7038053.65</td>
<td>2464543.59</td>
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<td>440.66</td>
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<td>7037898.73</td>
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<td>66.12</td>
<td>Standard</td>
<td>66.12</td>
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**Notes:**

1. Grid coordinates = survey coordinates x 0.999863513
2. Coordinates shown herein are based on the Texas State Plane Coordinate System North, east, survey grid.
3. Curve radii are based on the chord definition.
### Curve Name | Point | Chainage | Northing | Easting | Element | Degree of Curve | Eo | Eo | Contact Point Speed | Ref Point Speed | Deflection Angle |
<table>
<thead>
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<th></th>
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<td>PI</td>
<td>10+30.19</td>
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<td>2465505.41</td>
<td>STRAIGHT 90.54</td>
<td>6° 11' 30&quot; Left</td>
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<tr>
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<td>7037900.90</td>
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</tbody>
</table>

**Notes:**
1. Grid Coordinates = SURFACE COORDINATES X 0.999863513
2. Coordinates shown herein are based on the Texas State Plane Coordinate System, North, U.S. Survey Foot.
3. Curve Radii are based on the chord definition.

**NOTES:**
- GRID COORDINATES = SURFACE COORDINATES X 0.999863513
- CURVE RADII ARE BASED ON THE CHORD DEFINITION.
- GRID COORDINATES = SURFACE COORDINATES X 0.999863513
**LINE SECTION CB-2 INDUSTRY 5**  
**HORIZONTAL ALIGNMENT DATA**  
**CENTERLINE OF CB-2 INDUSTRY 5 TRACK**

<table>
<thead>
<tr>
<th>Curve Name</th>
<th>Point</th>
<th>Chainage</th>
<th>Northing</th>
<th>Easting</th>
<th>Element</th>
<th>Degree of Curvature</th>
<th>E (+ve)</th>
<th>E (-ve)</th>
<th>Passenger Speed</th>
<th>Freight Speed</th>
<th>Deflection Angle</th>
</tr>
</thead>
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<td>POB</td>
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<tr>
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<td>2466959.87</td>
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<td>1.25</td>
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<td>1.25</td>
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</tr>
</tbody>
</table>

**NOTES:**
1. GRID COORDINATES = SURFACE COORDINATES X 0.999863513  
2. COORDINATES SHOWN HEREON ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, WGS 84, U.S. SURVEY FOOT.  
3. CURVE RADIUS ARE BASED ON THE CHORD DEFINITION.
### Horizontal Alignment Data

**Line Section CB-2 Industry 6**

**Centerline of CB-2 Industry 6 Track**

<table>
<thead>
<tr>
<th>Curve Name</th>
<th>Point</th>
<th>Chainage</th>
<th>Northing</th>
<th>Easting</th>
<th>Element</th>
<th>Degree of Curve</th>
<th>Ee</th>
<th>Ex</th>
<th>Passenger Speed</th>
<th>Freight Speed</th>
<th>Deflection Angle</th>
</tr>
</thead>
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<td>2470565.20</td>
<td>Straight</td>
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</tr>
<tr>
<td>PI</td>
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<td>7036847.57</td>
<td>2470558.57</td>
<td>Straight</td>
<td>31.25</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>PC</td>
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**Notes:**

1. **Grid Coordinates:**
   - SURFACE COORDINATES: X 0.999863513
   - SURVEY FOOT, SURFACE ELEVATION, SURFACE COORDINATES X 0.999863513

2. **Coordinates shown herein are based on the Texas State Plane Coordinate System, WAD 83, U.S. Survey Foot**

3. **Curves used are based on the chord definition**
### CENTERLINE OF CB-2 INDUSTRY 7 TRACK

**LINE SECTION CB-2 INDUSTRY 7**

**HORIZONTAL ALIGNMENT DATA**

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<th>POINT</th>
<th>CHAINAGE</th>
<th>NORTHING</th>
<th>EASTING</th>
<th>ELEMENT</th>
<th>LENGTH</th>
<th>DEGREE OF CURVATURE</th>
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<th>Eh</th>
<th>Passenger Speed</th>
<th>Freigh</th>
<th>DEVIATION ANGLE</th>
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**NOTES:**

1. GRID COORDINATES = SURFACE COORDINATES X 0.999863513
2. COORDINATES SHOWN HEREON ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM WGS 84, U.S. SURVEY FOOT
3. CURVE RADII ARE BASED ON THE CHORD DEFINITION.
## Horizontal Alignment Data

**Line Section CB-2 Industry 8**

### Centerline of CB-2 Industry 8 Track

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<th>Element</th>
<th>Degree of Curve</th>
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<th>Eh</th>
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<th>Freight Speed</th>
<th>Deflection Angle</th>
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### Notes:
1. Grid Coordinates = SURFACE COORDINATES X 0.999863513
2. Coordinates shown herein are based on the Texas State Plane Coordinate System (WGS84, UTMzone 12, survey feet).
3. Curve values are based on the chord definition.

---

**NOT AN APPROVED DRAWING**

**PRELIMINARY 10% DESIGN**

---

**COTTON BELT REGIONAL RAIL SYSTEM**

**LINE SECTION CB-2**

**IN-PROGRESS**

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**DART PROJECT**

---

**HDR**

---

**gpc**

---

**DART**

---

**NOT AN APPROVED DRAWING**

**PRELIMINARY 10% DESIGN**
### Curve Table

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<th>Point</th>
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<th>Element</th>
<th>Long.</th>
<th>Degree of Curvature</th>
<th>Eo</th>
<th>Ei</th>
<th>Passenger Speed</th>
<th>Freight Speed</th>
<th>Deflection Angle</th>
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### Notes
1. GRID COORDINATES = SURFACE COORDINATES X 0.999863513
2. COORDINATES SHOWN ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, WGS84, SURVEY FOOT.
3. CURVE RADIUS IS BASED ON THE CHORD DEFINITION.

### Horizontal Alignment Data

- Curve Name: CB2-IND9-A
- PI: 14+14.39
- PC: 11+61.58
- PT: 15+99.47
- POE: 17+37.63
- Element: STRAIGHT
- R = 350.00
- Curve Type: C
- Scale: NO SCALE
- Drawn By: L. GUBLO
- Designed By: C. PHONPITUCK
- In Charge: M. MARTIN
- Checked By: A. STAHLNECKER
- Date: FEB 02 2018
- HDR ENGINEERING, INC.
- TBPE FIRM NO. F-754
- NOT AN APPROVED DRAWING
# Horizontal Alignment Data

## Curve Name

<table>
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<th>Easting</th>
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<th>Degree of Curve</th>
<th>Speed</th>
<th>Free-Slip Speed</th>
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</table>

## Notes

1. Grid coordinates are in the Texas State Plane Coordinate System, NAD83.
2. Coordinates shown herein are based on the Texas State Plane Coordinate System, NAD83, Survey Foot, Coordinate System, NAD83, Survey Foot.
3. Curve radii are based on the chord definition.

## Preliminary 10% Design

- **Centerline of CB-2 Industry 9A Track**
- **Horizontal Alignment Data**

**Notes:**

- Not an approved drawing.
- Preliminary 10% design.

**Contract Sheet No.:** 206 of 673

**Contract No.:** CC-2020

**Cotton Belt Regional Rail System**

**Line Section CB-2**

**In-Progress**

**Dart Project**
### Centerline of CB-2 Industry 10 Track

**Horizontal Alignment Data**

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#### Notes:
1. Grid coordinates = surface coordinates x 0.999863513
2. Coordinates shown herein are based on the Texas State Plane Coordinate System (WGS 84). Survey foot.
3. Curve radii are based on the chord definition.
### Horizontal Alignment Data

**Line Section CB-2 Industry 11**

**Centerline of CB-2 Industry 11 Track**

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<th>Point</th>
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<th>Element</th>
<th>Length</th>
<th>Degree of Curve</th>
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**Notes:**

1. Grid coordinates are based on the Texas State Plane Coordinate System, NAD83, U.S. Survey Foot.
2. Coordinates shown herein are for the survey footprint only and are not referenced to the horizontal alignment of the proposed alignment.
3. Curve radii are based on the chord definition.

---

**NOTES:**

- Grid coordinates are based on the Texas State Plane Coordinate System, NAD83, U.S. Survey Foot.
- Coordinates shown herein are for the survey footprint only and are not referenced to the horizontal alignment of the proposed alignment.
- Curve radii are based on the chord definition.
## Horizontal Alignment Data

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### Notes:
1. Grid coordinates x are surface coordinates x 0.999863513.
2. Coordinates shown herein are based on the Texas State Plane Coordinate System, NAD 83, Survey Foot.
3. Curve radii are based on the chord definition.
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**NOTES:**
1. SURFACE COORDINATES = SURVEY FOOT.
2. COORDINATES SHOWN HEREON ARE GRID COORDINATES = SURFACE COORDINATES X 0.999863513.
3. CURVE RADIUS ARE BASED ON THE CHORD DEFINITION.

**NOT AN APPROVED DRAWING**

**PRELIMINARY 10% DESIGN**
# Centerline of CB-2 Siding W Track

## Horizontal Alignment Data

### Curve Name | Point | Chainage (ft) | Northing (ft) | Easting (ft) | Element | Degree of Curve | E | Ex | Passenger Speed | Freight Speed | Deflection Angle
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## Notes:
1. GRID COORDINATES = SURFACE COORDINATES X 0.999863513
2. COORDINATES SHOWN HEREON ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM 1983, NAD 83, SURVEY FOOT.
3. CURVE RADII ARE BASED ON THE CHORD DEFINITION.
## Line Section CB-2 Siding E

### Horizontal Alignment Data

**Centerline of CB-2 Siding E Track**

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<th>Easting (ft)</th>
<th>Element</th>
<th>Degree of Curve</th>
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**Notes:**

1. Grid coordinates = surface coordinates \* 0.999863513
2. Coordinates shown herein are based on the Texas State Plane coordinate system: zones, NAD83, survey foot.
3. Curve radii are based on the chord definition.
### Curve Name | Point | Change | Northing | Easting | Element | Degree of Curve | Eh | Eh | Fix-Sprit | Speed | Speed | Fix-Sprit |
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**NOTES:**

1. SURFACE COORDINATES = SURVEY FOOT.
2. GRID COORDINATES = SURFACE COORDINATES X 0.999863513.
3. CURVE RADIUS BASED ON THE CHORD DEFINITION.

**DEFINITION:**

1. GRID COORDINATES = SURFACE COORDINATES X 0.999863513.
2. CURVE RADII ARE BASED ON THE CHORD DEFINITION.
3. CURVE RADII ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NAD83, U.S. SURVEY FOOT.
## Horizontal Alignment Data

**Line Section CB-2 BNSF Mainline (Future)**

**Centerline of CB-2 BNSF Main (Fut) Track**

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- BNS-FUT-A
- BNS-FUT-B
- BNS-FUT-C

### Curve Data

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<th>North (ft)</th>
<th>Easting (ft)</th>
<th>Element</th>
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### Notes
1. **GRID COORDINATES**: SURFACE COORDINATES X 0.999863513
2. **COORDINATES SHOWN HEREON ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM (WGS 84, SURVEY FOOT).**
3. **CURVES USED ARE BASED ON THE CHORD DEFINITION.**

**DEFINITION.**

1. **GRID COORDINATES**: SURFACE COORDINATES X 0.999863513
2. **COORDINATES SHOWN HEREON ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NAD83, U.S. BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM (WGS 84, SURVEY FOOT).**
3. **CURVES USED ARE BASED ON THE CHORD DEFINITION.**

**NOT AN APPROVED DRAWING**

**PRELIMINARY 10% DESIGN**

**CONTRACT SHEET NO.**: 304 of 873

**IN-PROGRESS**

**DART PROJECT**

**COTTON BELT REGIONAL RAIL SYSTEM**

**LINE SECTION CB-2**

**Drawing Date**: FEB 02 2018

**TBPE FIRM NO.**: F-754

**HDR ENGINEERING, INC.**

**ON 02/02/2018**

**AMANDA STAHLNECKER, P.E. NO.**: 124571

**L. GUBLO**

**CENTERLINE OF CB-2 BNSF FUT TRACK**

**HORIZONTAL ALIGNMENT DATA**

**LINE SECTION CB-2 BNSF MAINLINE (FUT) TRACK**
## Line Section CB-2 DGNO
### Horizontal Alignment Data

#### Centerline of CB-2 DGNO Track

<table>
<thead>
<tr>
<th>Curve Name</th>
<th>Point</th>
<th>Chainage</th>
<th>Northing</th>
<th>Easting</th>
<th>Element</th>
<th>Longitude</th>
<th>Degree of Curve</th>
<th>C+</th>
<th>C-</th>
<th>Passenger Speed</th>
<th>FreIGHT Speed</th>
<th>Selection Note</th>
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<tbody>
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<td>64</td>
<td>15</td>
<td>25</td>
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</tr>
</tbody>
</table>

#### Notes:
1. Grid coordinates = SURFACE COORDINATES X 0.999863513
2. Coordinates shown herein are based on the Texas State Plane Coordinate System, NAD83, SURVEY FOOT.
3. Curve radii are based on the chord definition.

---

### Horizontal Alignment Data

- **DGNO-A**
  - Curve Name: FJ
  - Chainage: 0+00.00
  - Northing: 7035641.81
  - Easting: 2457066.27
  - Element: STRAIGHT
  - Degree of Curve: 117.30

- **DGNO-B**
  - Curve Name: FJ
  - Chainage: 1+71.00
  - Northing: 7033206.35
  - Easting: 2454399.24
  - Element: SPIRAL
  - Degree of Curve: 60.00

- **DGNO-C**
  - Curve Name: FJ
  - Chainage: 2+61.00
  - Northing: 7033115.46
  - Easting: 2454947.76
  - Element: SPIRAL
  - Degree of Curve: 60.00

- **DGNO-D**
  - Curve Name: FJ
  - Chainage: 3+22.12
  - Northing: 7033020.26
  - Easting: 2455351.38
  - Element: SPIRAL
  - Degree of Curve: 60.00

- **DGNO-E**
  - Curve Name: FJ
  - Chainage: 3+46.04
  - Northing: 7032960.64
  - Easting: 2455409.54
  - Element: SPIRAL
  - Degree of Curve: 60.00

- **DGNO-F**
  - Curve Name: FJ
  - Chainage: 3+46.04
  - Northing: 7032960.64
  - Easting: 2455409.54
  - Element: SPIRAL
  - Degree of Curve: 60.00

---

### Deflection

- **Gauge**
  - Chainage: 0+00.00
  - Northing: 7035641.81
  - Easting: 2457066.27
  - Degree of Curve: 117.30

- **DGNO-A**
  - Chainage: 1+71.00
  - Northing: 7033206.35
  - Easting: 2454399.24
  - Degree of Curve: 117.30

- **DGNO-B**
  - Chainage: 2+61.00
  - Northing: 7033115.46
  - Easting: 2454947.76
  - Degree of Curve: 117.30

- **DGNO-C**
  - Chainage: 3+22.12
  - Northing: 7033020.26
  - Easting: 2455351.38
  - Degree of Curve: 117.30

- **DGNO-D**
  - Chainage: 3+46.04
  - Northing: 7032960.64
  - Easting: 2455409.54
  - Degree of Curve: 117.30

- **DGNO-E**
  - Chainage: 3+46.04
  - Northing: 7032960.64
  - Easting: 2455409.54
  - Degree of Curve: 117.30

- **DGNO-F**
  - Chainage: 3+46.04
  - Northing: 7032960.64
  - Easting: 2455409.54
  - Degree of Curve: 117.30
### Line Section CB-2 DGNO Connection
#### Horizontal Alignment Data

**Centerline of CB-2 DGNO Connection Track**

<table>
<thead>
<tr>
<th>Curve Name</th>
<th>Point</th>
<th>Change</th>
<th>Length (ft)</th>
<th>Curve Type</th>
<th>Degree of Curve</th>
<th>E0</th>
<th>E1</th>
<th>Passenger Speed (MPH)</th>
<th>Freight Speed (MPH)</th>
<th>Deflection Angle</th>
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</thead>
<tbody>
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<td>0+00.00</td>
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</tr>
<tr>
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<td></td>
<td></td>
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</tr>
<tr>
<td>S2</td>
<td>2+72.25</td>
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<td>STRAIGHT</td>
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<td></td>
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<td>S3</td>
<td>5+30.25</td>
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<tr>
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<tr>
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<td>5°12'18&quot; Right</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>5°12'18&quot; Right</td>
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**Notes:**

1. Grid coordinates = SURFACE COORDINATES X 0.999863513
2. Coordinates shown herein are based on the Texas State Plane Coordinate System, NAD 83, SURVEY FOOT.
3. Curve radii are based on the chord definition.
# Line Section CB-2 BNSF Connection 1

## Horizontal Alignment Data

**Centerline of CB-2 BNSF Connection 1 Track**

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<th>Curve Name</th>
<th>Point</th>
<th>Change</th>
<th>Northing</th>
<th>Easting</th>
<th>Element</th>
<th>Degree of Curve</th>
<th>Speed</th>
<th>Rise</th>
<th>Setback</th>
<th>Deflection Angle</th>
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<td>3° 0' 0&quot; Right</td>
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<td>0.75</td>
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<td>3° 0' 0&quot; Right</td>
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<td>0.75</td>
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<td>NA</td>
<td>3° 0' 0&quot; Right</td>
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</tbody>
</table>

### Notes:

1. Grid coordinates = SURFACE coordinates × 0.999863513.
2. Coordinates shown herein are based on the Texas State Plane Coordinate System North, U.S. Survey Feet.
3. Curve radii are based on the chord definition.
# Horizontal Alignment Data

## Centerline of CB-2 BNSF Connection 1 (Future) Track

### Curve Data Table

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<thead>
<tr>
<th>Curve Name</th>
<th>Point</th>
<th>Chainage</th>
<th>Northing</th>
<th>Easting</th>
<th>Element</th>
<th>Degree of Curve</th>
<th>Eh</th>
<th>Ev</th>
<th>Passenger Speed</th>
<th>Freight Speed</th>
<th>Selection Basic</th>
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### Notes:
1. SURFACE COORDINATES X 0.999863513
2. COORDINATES SHOWN HEREON ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NAD83, U.S. SURVEY
3. CURVE RADII ARE BASED ON THE CHORD DEFINITION.
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### Notes
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2. CURVES SHOWN HEREIN ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NAD83, U.S. SURVEY FOOT.
3. CURVES SHOWN ARE BASED ON THE CHORD DEFINITION.
### Line Section CB-2 Galleria Spur W
#### Horizontal Alignment Data

**Centerline of CB-2 Galleria Spur W Track**

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**LINE SECTION CB-2 GALLERIA SPUR E**
**HORIZONTAL ALIGNMENT DATA**
**CENTERLINE OF CB-2 GALLERIA SPUR E TRACK**

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**NOTES:**
1. GRID COORDINATES = SURFACE COORDINATES X 0.999863513
2. COORDINATES SHOWN HEREON ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM: NAD83, U.S. SURVEY FOOT.
3. CURVE RADIUS ARE BASED ON THE CHORD DEFINITION.
DOUBLE TRACK AT-GRADE #2

STA 2198+37 to STA 2199+30
STA 2199+20 to STA 2200+30

SEE CON-DRAW FOR ADDITIONAL END CONDITIONS AND DETAIL DETAILS

DOUBLE TRACK AT-GRADE #1

STA 2014+00 to STA 2014+31
STA 2014+20 to STA 2014+60
STA 2016+00 to STA 2016+39

SEE CON-DRAW FOR ADDITIONAL END CONDITIONS AND DETAIL DETAILS

NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

COTTON BELT REGIONAL RAIL SYSTEM
LINE SECTION CB-1
GUIDEWAY
TYPICAL SECTIONS
SHEET 1 OF 2

IN-PROGRESS
DART PROJECT
HDR

CONTRACT NO.
D-201

PAGE
1002-900

DRAWN:

CHECKED:

DATE:

PREPARED:

SCALE:
1" = 20' - 0"
Fill Section with Retaining Wall and Trail

Cut Section with Retaining Wall #1

Ditch Section Details

Cut Section with Retaining Wall #2

Note: The preliminary engineering typical sections are general in nature and are provided to set guidelines and general design parameters. As detailed drawings and design develop, the design drawings shall take precedence and will replace the development of the typical sections.

Not an approved drawing.

Preliminary 10% design.
NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

MATCH LINE CB-2 NB STA 2028+00.00

SEE DWG NO. RC6-2003

MATCH LINE CB-2 SB STA 2028+00.00

NOTE:
1. EXISTING PROPERTY LINE AND RIGHT-OF-WAY LINES ARE SHOWN FROM RECORD INFORMATION AND DO NOT REPRESENT AN ACTUAL SURVEY.
2. PRELIMINARY, THIS DOCUMENT SHALL NOT BE USED OR VIEWED FOR ANY PURPOSE AND SHALL NOT BE USED OR VIEWED OR RELIED UPON AS A FINAL SURVEY DOCUMENT.

LEGEND

SCALE (IN FEET)

EXISTING RIGHT OF WAY

EXISTING PROPERTY LINE

NOTES:

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IN-PROGRESS

NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

MATCH LINE CB-2 NB STA 2028+00.00

SEE DWG NO. RC6-2003

MATCH LINE CB-2 SB STA 2028+00.00

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LEGEND

SCALE (IN FEET)

EXISTING RIGHT OF WAY

EXISTING PROPERTY LINE

NOTES:

1. EXISTING PROPERTY LINE AND RIGHT-OF-WAY LINES ARE SHOWN FROM RECORD INFORMATION AND DO NOT REPRESENT AN ACTUAL SURVEY.

2. PRELIMINARY, THIS DOCUMENT SHALL NOT BE USED OR VIEWED FOR ANY PURPOSE AND SHALL NOT BE USED OR VIEWED OR RELIED UPON AS A FINAL SURVEY DOCUMENT.
NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

1. EXISTING PROPERTY LINE AND RIGHT-OF-WAY LINES ARE SHOWN FOR RECORD INFORMATION AND DO NOT REPRESENT AN ACTUAL SURVEY).

2. PRELIMINARY: THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE USED OR RELIED UPON AS A FINAL SURVEY DOCUMENT.

RELEASE DATE 02/02/2018

LEGEND

---

EXISTING PROPERTY LINE
EXISTING RIGHT OF WAY
PROPOSED PROPERTY LINE
PROPOSED RIGHT OF WAY

NOTES:

SEE DWG No. RC6-2007B
MATCH LINE CB-2
OUSE FROM SHEET RC6-2007 TO
RIGHT-OF-WAY PLAN
SHEET RC6-2007C

IN-PROGRESS

DART PROJECT
COTTON BELT REGIONAL RAIL SYSTEM
LINE SECTION CB-2

NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

CONTRACT SHEET No.: 321 of 873

CONTACT No.: RC6-2007B

TBPE FIRM NO. F-356/TBPLS NO. 100189-00
NATHAN D. MAIER CONSULTING ENGINEERS, INC.
NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

NOTE:
1. EXISTING PROPERTY LINE AND RIGHT-OF-WAY LINES ARE SHOWN FOR REFERENCE INFORMATION AND DO NOT REPRESENT AN ACTUAL SURVEY DOCUMENT.

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LEGEND

EXISTING RIGHT OF WAY

EXISTING PROPERTY LINE

MATCH LINE CB-2
SEE DWG No. RC6-2007B

MATCH LINE CB-2
SEE DWG No. RC6-2008C

EXISTING RIGHT OF WAY

EXISTING PROPERTY LINE

1" = 40'

NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

CONTRACT SHEET No. 322 of 873

COTTON BELT REGIONAL RAIL SYSTEM
LINE SECTION CB-2

RIGHT-OF-WAY PLAN
FROM SHEET RC6-2007B

DART PROJECT

M. CARTER
G. MATTHEWS
L. GILLESPIE

TBPE FIRM REG. NO. F-356
TBPLS FIRM REG. NO. 100189-00
NATHAN D. MAIER CONSULTING ENGINEERS, INC.
NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

SCALE (IN FEET)

EXISTING RIGHT OF WAY

EXISTING PROPERTY LINE

NOTE:
1. EXISTING PROPERTY LINE AND RIGHT-OF-WAY LINES ARE SHOWN FROM RECORD INFORMATION AND DO NOT REPRESENT AN ACTUAL BOUNDARY SURVEY.

2. PRELIMINARY. THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE USED OR RELIED UPON AS A FINAL SURVEY DOCUMENT. (RELEASE DATE 02/02/2018)

LEGEND

--- EXISTING RIGHT OF WAY ---

--- EXISTING PROPERTY LINE ---
NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

SCALE (IN FEET)
0 20 40 80

EXISTING RIGHT OF WAY
EXISTING PROPERTY LINE

LEGEND

NOTES:
1. EXISTING PROPERTY LINE AND RIGHT-OF-WAY
   LINES ARE SHOWN FOR DESIGN PURPOSES AND
   DO NOT REPRESENT AN ACTUAL SURVEY DOCUMENT.
2. PRELIMINARY. THIS DRAWING SHALL NOT BE RECORDED
   BY ANY MEANS OR USED TO EXIST OR RELIANCE ON AS A
   FINAL SURVEY DOCUMENT. RELEASE DATE 02/02/2018

M. CARTER
R. SANTINI
G. MATTHEWS
L. GILLESPIE
NOT APPROVED DRAWING
PRELIMINARY 10% DESIGN

NOTES:
1. EXISTING PROPERTY LINE AND RIGHT-OF-WAY LINES ARE SHOWN FROM RECORD INFORMATION AND DO NOT REPRESENT AN ACTUAL SURVEY.
2. PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE USED OR VIEWED AS A FINAL SURVEY DOCUMENT.

LEGEND
- - - - - - EXISTING RIGHT OF WAY
- - - - - - EXISTING PROPERTY LINE
- - - - - - PROPOSED RIGHT OF WAY

IN-PROGRESS

M. CARTER

NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

COTTON BELT REGIONAL RAIL SYSTEM
LINE SECTION CB-2

RIGHT-OF-WAY PLAN
STA 2132+00.00 TO STA 2140+00.00

SCALE (IN FEET)
0
20
40
80

EXISTING RIGHT OF WAY
EXISTING PROPERTY LINE
PROPOSED RIGHT OF WAY

LEFT TURN LANE
RIGHT TURN LANE
NO STOPPING
NO STANDING
TURNS PERMITTED
NO STANDING
NO STOPPING
NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

NOTES:

1. EXISTING PROPERTY LINE AND RIGHT-OF-WAY LINES ARE SHOWN FROM RECORD INFORMATION AND DO NOT REPRESENT AN ACTUAL SURVEY SURVEY.

2. PRELIMINARY. THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE USED OR VIEWED OR RELIED UPON AS A FINAL SURVEY DOCUMENT.

LEGEND:

--- EXISTING PROPERTY LINE
--- EXISTING RIGHT OF WAY

1" = 40'
NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

STATION ADDITION
COLUMBIAN CLUB PUMP

RIGHT-OF-WAY PLAN
SCALE (IN FEET)
0
20
40
80

EXISTING RIGHT OF WAY
EXISTING PROPERTY LINE
PROPOSED RIGHT OF WAY

LEGEND

RELEASE DATE 02/02/2018
OR RELIED UPON AS A FINAL SURVEY DOCUMENT.
FOR ANY PURPOSE AND SHALL NOT BE USED OR VIEWED
DO NOT REPRESENT AN ACTUAL BOUNDARY SURVEY.

1. EXISTING PROPERTY LINE AND RIGHT-OF-WAY
LINES ARE SHOWN FROM RECORD INFORMATION AND
NOTES:

G. MATTHEWS
L. GILLESPIE
R. SANTINI

SEE DWG No. RC6-2028
MATCH LINE CB-2 NB STA 2228+00.00
SEE DWG No. RC6-2030
MATCH LINE CB-2 NB STA 2236+00.00

M A T C H  L I N E  C B - 2  N B  S T A  2 2 2 8 + 0 0 .0 0
S E E  D W G  N o . R C 6 - 2 0 2 9
S E E  D W G  N o . R C 6 - 2 0 3 0
M A T C H  L I N E  C B - 2  N B  S T A  2 2 3 6 + 0 0 .0 0
RC6-2029

STA 2228+00.00 TO STA 2236+00.00
NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

NOTES:
1. EXISTING PROPERTY LINE AND RIGHT-OF-WAY LINES ARE SHOWN FROM RECORD INFORMATION AND DO NOT REPRESENT AN ACTUAL BOUNDARY SURVEY.
2. PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE CONSIDERED OR RELIED UPON AS A FINAL SURVEY DOCUMENT.

IN-PROGRESS
COITON BELT REGIONAL RAIL SYSTEM
LINE SECTION CB-2

NOTES:

1. EXISTING PROPERTY LINE AND RIGHT-OF-WAY LINES ARE SHOWN FROM RECORD INFORMATION AND DO NOT REPRESENT AN ACTUAL BOUNDARY SURVEY.
2. PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE CONSIDERED OR RELIED UPON AS A FINAL SURVEY DOCUMENT.

LEGEND

EXISTING RIGHT OF WAY
EXISTING PROPERTY LINE

M. CARTER
R. SANTINI
G. MATTHEWS
L. GILLESPIE
NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

NOTES:
1. EXISTING PROPERTY LINE AND RIGHT-OF-WAY LINES ARE SHOWN FROM RECORD INFORMATION AND DO NOT REPRESENT AN ACTUAL SURVEY.
2. PRELIMINARY PLANS DOCUMENT SHALL NOT BE RELIED UPON OR RELIED UPON AS A FINAL SURVEY DOCUMENT, INCLUDING SURVEY PLACED.

LEGEN:

--- EXISTING ROADS
--- EXISTING PROPERTY LINE

IN-PROGRESS
PRELIMINARY 10% DESIGN

NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN
NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

NOT TO BE USED FOR CONSTRUCTION, BIDDING, OR PERMIT PURPOSES.

IT IS NOT TO BE USED FOR CONSTRUCTION, IN-PROGRESS AUTHORITY OF:

FOR THE PURPOSE OF REVIEW UNDER THE

THIS DOCUMENT IS RELEASED

ON 02/02/2018
NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

NOTES:
1. EXISTING PROPERTY LINE AND RIGHT-OF-WAY LINES ARE SHOWN FROM RECORD INFORMATION.
   DO NOT REPRESENT AN ACTUAL BOUNDARY SURVEY.
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   AS A FINAL SURVEY DOCUMENT. RELEASE DATE 02/02/2018

LEGEND

--- EXISTING RIGHT OF WAY
--- EXISTING PROPERTY LINE

Lot 3
Lot 5

CROSSOVER 7

STA 2316+00.00 TO STA 2324+00.00
RIGHT-OF-WAY PLAN

SCALE (IN FEET)
0 20 40 80

EXISTING ROW OF TREES
EXISTING ROW

ARAPAHO ROAD

NOTES:
G. MATTHEWS
L. GILLESPIE
M. CARTER
R. SANTINI

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Two Park Lane Place / 8080 Park Lane / Suite 600
Dallas, Texas 75231 / (214) 739-4741

TBPE FIRM NO. F-356/TBPLS NO. 100189-00
NATHAN D. MAIER CONSULTING ENGINEERS, INC.
ON 02/02/2018

LONNY GILLESPIE, RPLS
NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

MATCH LINE CB-2 NB STA 2356+00.00
SEE Dwg No. RC6-2045

NOTES:
1. EXISTING PROPERTY LINE AND RIGHT-OF-WAY LINES ARE SHOWN FROM RECORD INFORMATION AND DO NOT REPRESENT AN ACTUAL SURVEYED LINE. FOR ANY PURPOSE AND SHALL NOT BE USED OR VIEWED OR RELIED UPON AS A FINAL SURVEY DOCUMENT.
2. PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE.

LEGEND

--- EXISTING RIGHT-OF-WAY
--- EXISTING PROPERTY LINE
--- PROPOSED RIGHT-OF-WAY

IN-PROGRESS
PRELIMINARY 10% DESIGN
COTTON BELT REGIONAL RAIL SYSTEM
LINE SECTION CB-2

NOTES:
1. EXISTING PROPERTY LINE AND RIGHT-OF-WAY LINES ARE SHOWN FROM RECORD INFORMATION AND DO NOT REPRESENT AN ACTUAL SURVEYED LINE. FOR ANY PURPOSE AND SHALL NOT BE USED OR VIEWED OR RELIED UPON AS A FINAL SURVEY DOCUMENT.
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NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

NOTES:
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IN-PROGRESS

COTTON BELT REGIONAL RAIL SYSTEM
LINE SECTION CB-2

RIGHT-OFF-WAY PLAN
STA 2372+00.00 TO STA 2380+00.00

NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

NOTES:
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IN-PROGRESS

COTTON BELT REGIONAL RAIL SYSTEM
LINE SECTION CB-2

RIGHT-OFF-WAY PLAN
STA 2372+00.00 TO STA 2380+00.00

NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

NOTES:
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NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

CONTRACT SHEET No. 390 of 873

COTTON BELT REGIONAL RAIL SYSTEM
LINE SECTION CB-2

GUIDEWAY PLAN AND PROFILE
STA 2084+00.00 TO STA 2092+00.00

IN-PROGRESS
DART PROJECT

DATE: FEB 02 2018
CHECKED: M. MARTIN
DESIGNED: A. STAHLNECKER
DRAWN: C. PHONPITUCK
IN CHARGE: L. GUBLO

L. GUBLO

COTTON BELT REGIONAL RAIL SYSTEM

SCALE (IN FEET) 1" = 40'

NOTE:
1. SEE DWG No. CC1-2001 FOR ADDITIONAL NOTES.
NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

NOTES
1. PROFILES FOR THE PROPOSED DGNO AND BNSF TRACKS HAVE NOT BEEN FULLY DEVELOPED AND ARE NOT INCLUDED ON THIS SUBMITTAL.

2. SEE DWG NO. CC1-2001 FOR ADDITIONAL NOTES.
NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

COTTON BELT REGIONAL RAIL SYSTEM
LINE SECTION CB-2

DART PROJECT

HDR ENGINEERING, INC.

DART Engineering Services

IN-PROGRESS

1. SEE DWG. No. CC1-2019 FOR ADDITIONAL NOTES.

MATCH LINE CB-2 NB STA 2156+00.00 TO STA 2164+00.00

EXISTING GROUND LINE

PROPOSED TOP OF NB RAIL

1.18%

EXISTING GROUND LEVEL

VERIZON UGT
QWEST FIBER OPTIC
SPRINT FIBER OPTIC

VERIZON UGT
QWEST FIBER OPTIC
SPRINT FIBER OPTIC

175'

20'

50'

30'

WITH OTHERS

TRAIL IN COOPERATION

 hành với tư cách đại diện của DART, tất cả các quyền trừ ngoại trừ các mục được luật pháp bảo vệ.
NOTE:
1. SEE DWG. No. CC1-2001 FOR ADDITIONAL REMARKS.
NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

COTTON BELT REGIONAL RAIL SYSTEM
LINE SECTION CB-2

1. SEE DWG. No. CC1-2001 FOR ADDITIONAL NOTES.

NOTE:

A. STAHLNECKER
M. MARTIN
C. PHONPITUCK
L. GUBLO

1" = 40'
NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

COTTON BELT REGIONAL RAIL SYSTEM
LINE SECTION CB-2

GUIDEWAY PLAN AND PROFILE
STA 2290+00.00 TO STA 2300+00.00

NOTE:
1. SEE DWG. No. CC1-2001 FOR ADDITIONAL NOTES.
NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

CB2-IND11-A
3280.00'
210.00'
478.04'
2.25"
2.14"
60 MPH

CB2-H
3260.00'
190.00'
60 MPH
2.50"
1.92"
493.84'

STA 2300+00.00 TO STA 2308+00.00
GUIDEWAY PLAN AND PROFILE

EXISTING GROUND LINE

1. SEE DWG NO. CC1-2001 FOR ADDITIONAL NOTES.
NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN
NOTE:
1. SEE DWG. No. CC1-2007 FOR ADDITIONAL NOTES.
### Not An Approved Drawing

**Preliminary 10% Design**

**Match Line BNSF Connection 1 STA 8+00.00**

---

<table>
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<tr>
<th>STA</th>
<th>Elevation</th>
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<th>Elevation</th>
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**Match Line BNSF Connection 1 STA 8+00.00**

**COTTON BELT REGIONAL RAIL SYSTEM**

**LINE SECTION CB-2**

**NOT AN APPROVED DRAWING**

**PRELIMINARY 10% DESIGN**

---

**GUIDEWAY PLAN AND PROFILE**

**STA 0+00.00 TO STA 8+00.00**

---

**IN-PROGRESS**

**DART PROJECT**

---

**HDR**

**gpc**

---

**AMANDA STAHLNECKER, P.E. NO. 124571**

---

**FEB 02 2018**

---

**NOTES:**

1. See DWG. No. CC1-2001 for additional notes.

---

**SCALE (IN FEET):**

**VERT**

<table>
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<tr>
<th>490</th>
<th>500</th>
<th>510</th>
<th>520</th>
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<th>560</th>
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<td>5</td>
<td>10</td>
<td>15</td>
<td>20</td>
<td>25</td>
<td>30</td>
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</table>

---

**EXISTING GROUND ELEVATION**

**PROPOSED TOP OF RAIL ELEVATION**

---

**SEE DWG. NO. CC1-2051 FOR MATCH LINE BNSF CONNECTION 1 STA 8+00.00**
NOTE:
1. SEE DWG. No. CC1-2001 FOR ADDITIONAL NOTES.
NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

NOTES:
1. SEE DWG No. CC1-2057 FOR ADDITIONAL NOTES.
2. TOP OF RAIL OF FUTURE BNSF MAINLINE TO MATCH TOP OF RAIL OF PROPOSED BNSF MAINLINE.

1. SEE DWG No. CC1-2001 FOR ADDITIONAL NOTES.

TOP OF RAIL OF PROPOSED BNSF MAINLINE.

TOP OF RAIL OF FUTURE BNSF MAINLINE TO MATCH TOP OF RAIL OF PROPOSED BNSF MAINLINE.
NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

NOTES:
1. SEE DWG No. CC1-2001 FOR ADDITIONAL NOTES.
2. TOP OF RAIL OF FUTURE BNSF MAINLINE TO MATCH TOP OF RAIL OF PROPOSED BNSF MAINLINE.

TOP OF RAIL OF PROPOSED BNSF MAINLINE.
1. SEE DWG. No. CC1-2001 FOR ADDITIONAL NOTES.

NOTE:

- Exact locations identified in Table 1.

Table 1:

<table>
<thead>
<tr>
<th>Ground Line</th>
<th>Existing Ground Elev (ft)</th>
<th>Proposed Top of Rail Elev (ft)</th>
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<tr>
<td>31+10</td>
<td>481.89</td>
<td>481.39</td>
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<tr>
<td>31+40</td>
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<td>31+70</td>
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<td>481.39</td>
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- MATCHLINE DGNO STA 31+10 TO STA 31+40 |

- RETAINING WALL PROPOSED NO 15 TO 2146+52.43 |

- CB-2 NB STA 32+00 TO STA 33+14.69 = PI NO 15 TO STA 32+00.00 |

NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

COTTON BELT REGIONAL RAIL SYSTEM
GUIDEWAY PLAN AND PROFILE
STA 32+00.00 TO STA 33+14.69

IN-PROGRESS
PRELIMINARY 10% DESIGN

DART PROJECT

HDR

DART

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NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

COTTON BELT REGIONAL RAIL SYSTEM
GUIDEWAY PLAN AND PROFILE
STA 32+00.00 TO STA 33+14.69

IN-PROGRESS
PRELIMINARY 10% DESIGN

DART PROJECT

HDR

DART

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**PRELIMINARY 10% DESIGN**

**COTTON BELT REGIONAL RAIL SYSTEM**

**LINE SECTION CB-2**

**STA 10+00.00 TO STA 13+50.00**

---

<table>
<thead>
<tr>
<th>INDEX No.</th>
<th>Notes on Top</th>
<th>Profile to be Developed by Final</th>
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<tbody>
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**NOTES**

1. See DWG No. CC1-2001 for additional notes.

---

**SCALE (IN FEET)**

<table>
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<th>SCALE</th>
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---

**IN-PROGRESS**

**DART PROJECT**

**HDR**

**gpc**

**DART**

---

**NOTES**

- EXISTING GROUND ELEV
- PROPOSED TOP OF RAIL ELEV

---

**DESIGNER.**

**A. STAHLNECKER**

**M. MARTIN**

**C. PHONPITUCK**

**L. GUBLO**

---

**15+00**

---

**ERTICLE PLAN**

**CB2-IND4-A**

---

**PLANS**

**GUIDEWAY PLAN AND PROFILE**

---

**DATE**

**FEB 02 2018**

---

**TBPE FIRM NO. F-754**

**HDR ENGINEERING, INC.**

**ON 02/02/2018**

**AMANDA STAHLNECKER, P.E. NO. 124571**

---

**L G U B L O 1/29/2018**

---

*[Image of the drawing with tables and notes]*
NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

NOTE:
1. SEE ENG. NO. CC1-2001 FOR ADDITIONAL NOTES.

MATCH LINE CB-2 INDUSTRY 6 STA 5+00 TO STA 5+50

NOTE: TOP OF RAIL PROFILE TO BE DEVELOPED BY FINAL DESIGNER.

VERT SCALE (IN FEET)

HORIZ SCALE (IN FEET)

Ls= 533.41'  
Ea= 0.00'  
Eu= 1.20'  
Lc= 0.00'  
Rc= 0.00'  
V= 10 MPH

Ls= 509.71'  
Ea= 0.00'  
Eu= 1.29'  
Lc= 0.00'  
Rc= 0.00'  
V= 10 MPH

IN-PROGRESS
COTTON BELT REGIONAL RAIL SYSTEM
LINE SECTION CB-2

DART PROJECT

996

333.41'  
0.00'  
1.20'  
0.00'  
10 MPH

309.71'  
0.00'  
1.29'  
0.00'  
10 MPH

NOTE: TOP OF RAIL PROFILE TO BE DEVELOPED BY FINAL DESIGNER.
NOTE: STA 10+00.00 TO STA 15+74.60

GUIDEWAY PLAN AND PROFILE

CB-2 INDUSTRY 10

NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

NOT AN APPROVED DRAWING
PRELIMINARY 10% DESIGN

NOTE: TOP OF RAIL PROFILE TO BE DEVELOPED BY FINAL DESIGNER.

1. SEE DWG. NO. CC1-2001 FOR ADDITIONAL REMARKS.