Enhancing Mobility within the Southern Dallas Inland Port

FY 2020 BUILD Grant Application

Attachment 1: Traffic Signal Locations
Enhancing Mobility within the Southern Dallas Inland Port Project
Traffic Signal Improvements Locations
<table>
<thead>
<tr>
<th>NUMBER</th>
<th>SIGNAL ID</th>
<th>CITY</th>
<th>CORRIDOR STREET</th>
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<td>PLEASANT RUN</td>
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<td>ELM</td>
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</table>
Enhancing Mobility within the Southern Dallas Inland Port

FY 2020 BUILD Grant Application

Attachment 2: VA DART Station Routes to Rail Recommendations
Recommended Improvements

Possible Pedestrian Safety Countermeasures
- Unsignalized Crosswalk Improvements:
  1. Crosswalk Signs, Markings & Lighting
  2. Raised Crosswalk
  3. Advance "Yield Here" Sign
  4. In-Street Pedestrian Crossing
  5. Curb Extension
  6. Pedestrian Refug Island
  7. Rectangular Rapid Flashing Beacon
  8. Road Diet
  9. Pedestrian Hybrid Beacon

- Signalized Crosswalk Improvements:
  10. Add Marked Crosswalks & Provide Countdown, Accessible Pedestrian Signals
  11. Traffic Signal

Primary Routes

<table>
<thead>
<tr>
<th>Route</th>
<th>Street</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>Liberty Loop</td>
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<tr>
<td>B</td>
<td>Mentor Ave</td>
</tr>
<tr>
<td>C</td>
<td>Atlas Dr</td>
</tr>
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<td>D</td>
<td>Kildare Ave</td>
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<td>E</td>
<td>Liberty Loop</td>
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<tr>
<td>F</td>
<td>Opal Ave</td>
</tr>
<tr>
<td>G</td>
<td>Adelaide Dr</td>
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<td>H</td>
<td>Kingsley Dr</td>
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<td>I</td>
<td>Gracey St</td>
</tr>
<tr>
<td>J</td>
<td>Bartlett Ave</td>
</tr>
<tr>
<td>K</td>
<td>S Denley Dr</td>
</tr>
</tbody>
</table>

Existing Residential and Employment Population (Number of People)

- Ppl
  - 0 - 234
  - 235 - 499
  - 500 - 2998
  - 3000 - 5998
  - 6000 - 10339

Improvement Code Legend (See Matrix)
- 7C-VA-SW-01
  - 7C Station Number
  - VA Station Abbreviation
  - SW Sidewalk (or CW for Crosswalk)
  - 01 Improvement Number (Matches on Map)
<table>
<thead>
<tr>
<th>ID</th>
<th>Owner</th>
<th>Improvement Type</th>
<th>Street Name</th>
<th>Between</th>
<th>Side of Street</th>
<th>Length (ft)</th>
<th>Notes</th>
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<tbody>
<tr>
<td>7C-VA-SW-01</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Fernwood Ave</td>
<td>North Study Boundary &amp; Fordham Rd</td>
<td>West</td>
<td>55</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems.</td>
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<td>7C-VA-SW-02</td>
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<td>New Sidewalk</td>
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<td>North Study Boundary &amp; Fordham Rd</td>
<td>East</td>
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<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems.</td>
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<td>7C-VA-SW-03</td>
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<td>Repair</td>
<td>Fordham Rd</td>
<td>Fernwood Ave &amp; S Denley Dr</td>
<td>North</td>
<td>30</td>
<td>Remove and replace sidewalk panels where differential settlement, cracking, and eroded sediment have created trip hazards and grass overgrowth.</td>
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<tr>
<td>7C-VA-SW-04</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Fordham Rd</td>
<td>Fernwood Ave &amp; S Denley Dr</td>
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<td>15</td>
<td>Extend sidewalk to edge of street and build pedestrian ramp.</td>
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<td>7C-VA-SW-05</td>
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<td>New Sidewalk</td>
<td>S Denley Dr</td>
<td>North Study Boundary &amp; Fordham Rd</td>
<td>West</td>
<td>255</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Aprons would need to be constructed for durable sidewalk crossings for four unpaved residential driveways. Residential parallel parking on the unpaved shoulder would likely need to be discontinued.</td>
</tr>
<tr>
<td>7C-VA-SW-06</td>
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<td>New Sidewalk</td>
<td>S Denley Dr</td>
<td>North Study Boundary &amp; Fordham Rd</td>
<td>East</td>
<td>265</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Aprons would need to be constructed for durable sidewalk crossings for three unpaved residential driveways and a wide gravel church parking area that is flush with the street. A fire hydrant may need to be adjusted near the corner with Fordham Rd, and a sump drainage inlet would need to be modified.</td>
</tr>
<tr>
<td>7C-VA-SW-07</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Fordham Rd</td>
<td>S Denley Dr &amp; S Lancaster Rd</td>
<td>North</td>
<td>490</td>
<td>Street lacks existing curb and gutter on the west end of the block, which should be considered for construction together with sidewalk if possible to avoid drainage problems. A large bush and a small tree would both need to be trimmed back or removed. An apron would need to be constructed for a durable sidewalk crossing for an unpaved residential driveway. Two driveway aprons, one steep and the other in poor condition, may need to be reconstructed for level and durable sidewalk crossings unless an easement can be obtained for sidewalk to bypass them. A sump drainage inlet would need to be modified near the corner with Fordham Rd. A few underground utility manholes would likely need to be adjusted.</td>
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<tr>
<td>7C-VA-RP-08</td>
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<td>S Lancaster Rd</td>
<td>Fordham Rd &amp; Fordham Rd</td>
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<td>45</td>
<td>Remove and replace cracked sidewalk panels that create a trip hazard.</td>
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<td>Fordham Rd</td>
<td>S Lancaster Rd &amp; Opal Ave</td>
<td>South</td>
<td>150</td>
<td>Right angle parking for an auto car business blocks the path of sidewalk. A narrow but non-compliant pedestrian path exists between the building and the parking spaces. Parking stops might make it possible to convert this to a compliant sidewalk.</td>
</tr>
<tr>
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<td>New Sidewalk</td>
<td>Opal Ave</td>
<td>North Study Boundary &amp; Fordham Rd</td>
<td>East</td>
<td>55</td>
<td>Some residential landscaping would need to be removed for sidewalk to line up with the level portion of a driveway apron crossing.</td>
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### Half Mile Area Improvements Matrix

#### VA Medical Center Station

**Sidewalk & Shared Use Path Segments**

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<th>Improvement Type</th>
<th>Street Name</th>
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<th>Length (ft)</th>
<th>Notes</th>
<th>Priority Score</th>
<th>Opinion of Probable Cost</th>
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<td>Remove and replace sidewalk panels where differential settlement, cracking, and eroded sediment have created trip hazards and grass overgrowth.</td>
<td>13</td>
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<td>7C-VA-SW-12</td>
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<td>S Denley Dr &amp; S Lancaster Rd</td>
<td>South</td>
<td>220</td>
<td>Street lacks existing curb and gutter on the west end of the block, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Two aprons, one for a gravel residential driveway and the other for a vacant lot that appears to receive vehicles frequently, would need to be constructed for durable sidewalk crossings. A small asphalt parking lot for a church would need to have fewer and reconfigured parking spaces to allow sidewalk to cross. Residential parallel parking on the unpaved shoulder would likely need to be discontinued.</td>
<td>15</td>
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<td>7C-VA-RP-13</td>
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<td>Fordham Rd</td>
<td>S Denley Dr &amp; S Lancaster Rd</td>
<td>South</td>
<td>35</td>
<td>Remove and replace sidewalk panels where differential settlement, cracking, and eroded sediment have created trip hazards and grass overgrowth. Street lacks existing curb and gutter on the west end of the block, which should be considered for construction together with sidewalk if possible to avoid drainage problems.</td>
<td>18</td>
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<td>S Denley Dr &amp; S Lancaster Rd</td>
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<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems.</td>
<td>17</td>
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<td>West</td>
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<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. A fire hydrant would need to be adjusted to make way for sidewalk. A large tree would likely experience root damage. Residential parallel parking on the unpaved shoulder would likely need to be discontinued.</td>
<td>6</td>
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<td>West Study Boundary &amp; Exeter Ave</td>
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<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Residential parallel parking on the unpaved shoulder would likely need to be discontinued.</td>
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<td>West Study Boundary &amp; Exeter Ave</td>
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<td>180</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Excavation and short retaining walls will likely be needed to make the way level for sidewalk, and a steep, unpaved driveway would need to be reconstructed for a level sidewalk crossing. A few trees may experience root damage near excavation areas.</td>
<td>12</td>
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<td>7C-VA-SW-18</td>
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<td>West Study Boundary &amp; Exeter Ave</td>
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<td>210</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Four medium-sized trees would experience root damage or need to be removed to build sidewalk. An apron would need to be constructed for an unpaved driveway to a residential back yard for a durable sidewalk crossing.</td>
<td>7</td>
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<tr>
<td>ID</td>
<td>Owner</td>
<td>Improvement Type</td>
<td>Street Name</td>
<td>Between</td>
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<td>Length (ft)</td>
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<td>West</td>
<td>415</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Unpaved driveway aprons to a residential backyard, and alley, and a church parking lot would each need to have aprons constructed for durable and level sidewalk crossings.</td>
<td>14</td>
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<td>7C-VA-RP-20</td>
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<td>Fernwood Ave</td>
<td>Fordham Rd &amp; Exeter Ave</td>
<td>East</td>
<td>85</td>
<td>Remove and replace sidewalk panels where cracking and erosion have created trip hazards and grass overgrowth. Street lacks existing curb and gutter on the west end of the block, which should be considered for construction together with sidewalk if possible to avoid drainage problems.</td>
<td>12</td>
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<td>7C-VA-SW-21</td>
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<td>New Sidewalk</td>
<td>Fernwood Ave</td>
<td>Fordham Rd &amp; Exeter Ave</td>
<td>East</td>
<td>370</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Some backfill may be need to level the way for sidewalk on a mild slope down to a vacant property bordered by trees and dense vegetation. Vegetation would need to be cleared, and some trees may be impacted in the process.</td>
<td>14</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-22</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>S Denley Dr</td>
<td>Fordham Rd &amp; Paducah Ave</td>
<td>West</td>
<td>305</td>
<td>Existing curb and gutter is in poor condition on the north end of the block, being significantly overgrown by grass, and absent farther south. It should be considered for construction together with sidewalk if possible to avoid drainage problems. A concrete apron would need to be constructed for a gravel residential driveway to provide a durable sidewalk crossing. Some residential landscaping in one yard may need to be removed or relocated.</td>
<td>17</td>
<td>TBD</td>
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<td>7C-VA-SW-23</td>
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<td>New Sidewalk</td>
<td>S Denley Dr</td>
<td>Fordham Rd &amp; Paducah Ave</td>
<td>East</td>
<td>295</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. A sump drainage inlet would likely need to be modified.</td>
<td>12</td>
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</tr>
<tr>
<td>7C-VA-RP-24</td>
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<td>Repair</td>
<td>Exeter Ave</td>
<td>E Frio Dr &amp; Fernwood Ave</td>
<td>North</td>
<td>70</td>
<td>Remove and replace cracked sidewalk panels that create a trip hazard and have become partially overgrown by grass.</td>
<td>14</td>
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<tr>
<td>7C-VA-SW-25</td>
<td>City of Dallas</td>
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<td>E Frio Dr &amp; Fernwood Ave</td>
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<td>15</td>
<td>Extend sidewalk to edge of street and build pedestrian ramp.</td>
<td>15</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-26</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Paducah Ave</td>
<td>S Denley Dr &amp; S Lancaster Rd</td>
<td>North</td>
<td>495</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. A pair of trees may experience root damage. Concrete aprons would need to be constructed for up to three driveways (two residential and one commercial) that do not extend all the way across the unpaved shoulder to the street pavement.</td>
<td>22</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-RP-27</td>
<td>City of Dallas</td>
<td>Repair</td>
<td>Exeter Ave</td>
<td>E Frio Dr &amp; Fernwood Ave</td>
<td>South</td>
<td>285</td>
<td>Remove and replace moderately to severely damaged sidewalk panels that pose trip hazards and have become partially to mostly overgrown by grass. Several large bushes along the fence line of a vacant property would need to be removed or significantly cut back to avoid obstructing the sidewalk. Extend sidewalk to edge of street and build pedestrian ramps at each end of the block.</td>
<td>13</td>
<td>TBD</td>
</tr>
</tbody>
</table>
### Half Mile Area Improvements Matrix

**VA Medical Center Station**

**Sidewalk & Shared Use Path Segments**

<table>
<thead>
<tr>
<th>ID</th>
<th>Owner</th>
<th>Improvement Type</th>
<th>Street Name</th>
<th>Between</th>
<th>Side of Street</th>
<th>Length (ft)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>7C-VA-SW-28</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Frio Dr</td>
<td>Exeter Ave &amp; Ann Arbor Ave</td>
<td>West</td>
<td>340</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. An unpaved driveway to a gated back yard residential shed would need to have an apron constructed for a durable sidewalk crossing. A sump drainage inlet near the corner with Ann Arbor Ave would need to be modified. Residential parallel parking on the unpaved shoulder would likely need to be discontinued.</td>
</tr>
<tr>
<td>7C-VA-SW-29</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Frio Dr</td>
<td>Exeter Ave &amp; Ann Arbor Ave</td>
<td>East</td>
<td>355</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Unpaved driveways to a fenced back yard and to a gated church parking lot would need to have aprons constructed for durable sidewalk crossings. Residential parallel parking on the unpaved shoulder would likely need to be discontinued. Near the corner with Ann Arbor Ave, right angle church parking is flush with the street. The surface is as durable as sidewalk, but the church congregrants appear to double-park in the long right-angle spaces, blocking the pedestrian path. The fenced parking lot may be underutilized. Three parking spaces near the church door closest to the street would likely need to be eliminated to provide sidewalk passage.</td>
</tr>
<tr>
<td>7C-VA-SW-30</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>E Frio Dr</td>
<td>Exeter Ave &amp; Ann Arbor Ave</td>
<td>West</td>
<td>240</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems.</td>
</tr>
<tr>
<td>7C-VA-SW-31</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>E Frio Dr</td>
<td>Exeter Ave &amp; Ann Arbor Ave</td>
<td>East</td>
<td>415</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. An unpaved residential driveway would need to have an apron constructed for a durable sidewalk crossing. Several trees near the corner with Ann Arbor Ave may experience root damage.</td>
</tr>
<tr>
<td>7C-VA-SW-32</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Fernwood Ave</td>
<td>Exeter Ave &amp; Ann Arbor Ave</td>
<td>West</td>
<td>420</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Backfill will be needed to level the way for sidewalk, and culvert crossings of driveways would need to be modified. Unpaved driveways to two homes and two church parking lot entrances would need to have aprons constructed for durable sidewalk crossings. A sump drainage inlet near the corner with Ann Arbor Ave would need to be modified. Trees near the north edge of the unpaved church parking lot at the roadway's edge would need to be removed.</td>
</tr>
</tbody>
</table>

**Improvement Code Legend**

ID: 7C-VA-SW-01

7C ← Station Number
SW ← Sidewalk (or CW=crosswalk, VW=Veloweb, SP=SP
VA ← Station Abbreviation
Shared-Use Path, RP=sidewalk repair, GR=Gap to Remain)
01 ← Improvement Number (matches on Map)
### Half Mile Area Improvements Matrix

#### VA Medical Center Station

**Sidewalk & Shared Use Path Segments**

<table>
<thead>
<tr>
<th>ID</th>
<th>Owner</th>
<th>Improvement Type</th>
<th>Street Name</th>
<th>Between</th>
<th>Side of Street</th>
<th>Length (ft)</th>
<th>Notes</th>
<th>Priority</th>
<th>Opinion of Probable Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>7C-VA-SW-33</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Fernwood Ave</td>
<td>Exeter Ave &amp; Ann Arbor Ave</td>
<td>East</td>
<td>420</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Backfill will be needed to level the way for sidewalk, and culvert crossings of driveways would need to be modified. Underground utility boxes and manholes may need to be adjusted. Four residential driveways that are unpaved or in poor condition would need to have aprons constructed for durable sidewalk crossings. A sump drainage inlet near the corner with Ann Arbor Ave would need to be modified. A few trees may experience root damage.</td>
<td>17</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-34</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>S Denley Dr</td>
<td>Paducah Ave &amp; Ann Arbor Ave</td>
<td>West</td>
<td>545</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. A sump drainage inlet near the corner with Ann Arbor Ave would need to be modified. Sidewalk construction would require construction of aprons for two wide church driveways and two residential driveways that are in poor condition. Three small trees would either need to be trimmed back or removed.</td>
<td>23</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-35</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>S Denley Dr</td>
<td>Paducah Ave &amp; Ann Arbor Ave</td>
<td>East</td>
<td>615</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. A sump drainage inlet near the corner with Ann Arbor Ave would need to be modified. A large tree just inside the fence for the Holland Elementary School athletic field would suffer extensive root damage. A gated, unpaved vehicular access point to the same field would need to have an apron constructed for a durable sidewalk crossing. At the intersection with Paducah Ave, either the school field fencing would need to be set back or the corner radius modified so that new sidewalk could connect to existing sidewalk along Paducah Ave.</td>
<td>17</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-RP-36</td>
<td>City of Dallas</td>
<td>Repair</td>
<td>Ann Arbor Ave</td>
<td>E Frio Dr &amp; Fernwood Ave</td>
<td>North</td>
<td>60</td>
<td>Remove and replace concrete panels where differential settlement and cracking have caused sedimentation, grass overgrowth and excess cross slope.</td>
<td>16</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-RP-37</td>
<td>City of Dallas</td>
<td>Repair</td>
<td>Ann Arbor Ave</td>
<td>Fernwood Ave &amp; S Denley Dr</td>
<td>North</td>
<td>115</td>
<td>Remove and replace concrete panels where differential settlement and cracking have caused sedimentation, grass overgrowth and potential trip hazards. A few underground utility handholes will likely need to be adjusted.</td>
<td>19</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-42</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Frio Dr</td>
<td>Ann Arbor Ave &amp; Waweenoc Ave</td>
<td>West</td>
<td>415</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Three residential driveways and an alleyway that are either unpaved or in poor condition would need to have aprons constructed for durable sidewalk crossings. A utility pole may need to be relocated to provide a pedestrian ramp and connection to existing sidewalk along Ann Arbor Ave if new sidewalk cannot bypass the pole. A residential front yard fence that blocks the way for sidewalk would need to be partially removed in either case.</td>
<td>13</td>
<td>TBD</td>
</tr>
</tbody>
</table>
### Half Mile Area Improvements Matrix

**VA Medical Center Station**

**Sidewalk & Shared Use Path Segments**

| ID          | Owner          | Improvement Type | Street Name       | Between | Side of Street | Length (ft) | Notes \n|-------------|----------------|------------------|-------------------|---------|----------------|-------------|-------
<p>| 7C-VA-SW-43 | City of Dallas | New Sidewalk     | Frio Dr           | Ann Arbor Ave &amp; Waweenoc Ave | East       | 290          | Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Right angle parking spaces for a convenience store are flush with the street near the intersection with Ann Arbor Ave. Sidewalk and parking stops are present between the parking spaces and the store building, but a parking space would need to be removed to connect this sidewalk to future sidewalk further south. An unpaved driveway to a fenced and gated yard used for junk vehicle storage, as well as a steep residential driveways and another driveway in poor condition, would need to have aprons constructed for durable sidewalk crossings. | 15      | TBD              |
| 7C-VA-SW-44 | City of Dallas | New Sidewalk     | E Frio Dr         | Ann Arbor Ave &amp; Waweenoc Ave | West      | 380          | Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Parallel parking next to a business on the corner with Ann Arbor Ave would likely need to be discontinued, though the existing right angle spaces closer to the corner are separated from the building and the street corner by durable sidewalk and could remain with the addition of parking stops. Near the intersection with Waweenoc Ave, a steep, gated driveway to a back yard shed would need to be reconstructed for a level sidewalk crossing. Excavation, short retaining walls, and resetting of residential side yard ornamental fencing would be necessary to level the way for sidewalk between this driveway and the corner. A pair of trees would likely experience root damage. A utility pole and its guy wires near the corner would need to be adjusted or possibly relocated. | 14      | TBD              |
| 7C-VA-SW-45 | City of Dallas | New Sidewalk     | E Frio Dr         | Ann Arbor Ave &amp; Waweenoc Ave | East      | 385          | Most of street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. A residential side yard hedge would need to be removed to make way for sidewalk. A gated, unpaved driveway to a residential back yard would need to have an apron constructed for a durable sidewalk crossing. Some vegetation and tree branches near mid-block would need to be cut back. | 17      | TBD              |
| 7C-VA-SW-46 | City of Dallas | New Sidewalk     | Fernwood Ave      | Ann Arbor Ave &amp; Waweenoc Ave | West      | 470          | Most of street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. At the south end of the block, a short segment of curb and a storm drain inlet are largely covered by eroded sediment and grass, and may need repairs to function properly. Excavation and short retaining walls would likely be needed to make way for sidewalk adjacent to a church parking lot at a higher elevation. Three asphalt driveways to the parking lot would need to be reconstructed for level sidewalk crossings. | 19      | TBD              |</p>
<table>
<thead>
<tr>
<th>ID</th>
<th>Owner</th>
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<th>Street Name</th>
<th>Between</th>
<th>Side of Street</th>
<th>Length (ft)</th>
<th>Notes</th>
<th>Priority Score</th>
<th>Opinion of Probable Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>7C-VA-SW-47</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Fernwood Ave</td>
<td>Ann Arbor Ave &amp; Waweenoc Ave</td>
<td>East</td>
<td>505</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. A tree near the edge of the street would experience root damage unless sidewalk can bypass it on the far side of the tree from the street adjacent to a vacant parcel. Four unpaved residential driveways would need to be reconstructed for durable sidewalk crossings.</td>
<td>21</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-RP-48</td>
<td>City of Dallas</td>
<td>Repair</td>
<td>Ann Arbor Ave</td>
<td>S Denley Dr &amp; S Denley Dr</td>
<td>South</td>
<td>40</td>
<td>Remove and replace concrete panels where differential settlement and cracking have caused sedimentation, grass overgrowth and potential trip hazards.</td>
<td>24</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-49</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>S Denley Dr</td>
<td>Ann Arbor Ave &amp; Wison Pl</td>
<td>West</td>
<td>325</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Landscaping near the corner with Waweenoc Ave would need to be removed, and the adjacent tree could suffer root damage. Excavation and short retaining walls may be needed to level the way for sidewalk adjacent to this home. A relatively steep residential driveway in somewhat poor condition may need to be reconstructed for a durable and level sidewalk crossing. A tree near Mentor Ave would need to be removed or experience significant root damage unless sidewalk could bypass it at a significant distance on the far side of the street from the tree, with an easement on the adjacent vacant parcel likely being required.</td>
<td>21</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-50</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Frio Dr</td>
<td>Waweenoc Ave &amp; Mentor Ave</td>
<td>West</td>
<td>370</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Landscaping near the corner with Waweenoc Ave would need to be removed, and the adjacent tree could suffer root damage. Excavation and short retaining walls may be needed to level the way for sidewalk adjacent to this home. A relatively steep residential driveway in somewhat poor condition may need to be reconstructed for a durable and level sidewalk crossing. A tree near Mentor Ave would need to be removed or experience significant root damage unless sidewalk could bypass it at a significant distance on the far side of the street from the tree, with an easement on the adjacent vacant parcel likely being required.</td>
<td>12</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-51</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Waweenoc Ave</td>
<td>Frio Dr &amp; E Frio Dr</td>
<td>South</td>
<td>5</td>
<td>Extend sidewalk to edge of street and build pedestrian ramp.</td>
<td>13</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-53</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Frio Dr</td>
<td>Waweenoc Ave &amp; Mentor Ave</td>
<td>East</td>
<td>370</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Two utility poles (and one set of guy wires) near the corners with both Waweenoc Ave and Mentor Ave would need to be relocated to connect sidewalk to the intersection corners. Hedges along an ornamental residential front yard fence would also need to be removed. Aprons would need to be constructed for two residential driveways that are unpaved or in poor condition, and also possibly for a mid-block alley to provide durable sidewalk crossings, though it does not appear the alley receives much if any traffic due to its short length between Frio Dr and E Frio Dr.</td>
<td>14</td>
<td>TBD</td>
</tr>
</tbody>
</table>
# Half Mile Area Improvements Matrix

## VA Medical Center Station

### Sidewalk & Shared Use Path Segments

<table>
<thead>
<tr>
<th>ID</th>
<th>Owner</th>
<th>Improvement Type</th>
<th>Street Name</th>
<th>Between</th>
<th>Street Length (ft)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>7C-VA-SW-01</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>E Frio Dr</td>
<td>Waweenoc Ave &amp; Mentor Ave</td>
<td>West 410</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Two trees would likely experience root damage and may need to be removed. Excavation and short retaining walls may be needed between street level and a slightly elevated, adjacent residential yard. A new apron may need to be constructed for a steep, gated, partially paved driveway in poor condition that leads to this home's back yard. It's possible the driveway could be abandoned, since there is vehicular access to the property from Frio Dr and there is insufficient space to park or maneuver a vehicle between the gate and an apparent new addition to the home that seems to have replaced the former driveway. Aprons would need to be constructed for another residential driveway that is unpaved or in poor condition, and also possibly for a mid-block alley to provide durable sidewalk crossings, though it does not appear the alley receives much if any traffic due to its short length between Frio Dr and E Frio Dr. A surface valve for an underground high pressure water main is present near the south end of the block, though there appears to be room for sidewalk to bypass it. A nearby tree, however, would likely need to be removed.</td>
</tr>
<tr>
<td>7C-VA-SW-02</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>E Frio Dr</td>
<td>Waweenoc Ave &amp; Mentor Ave</td>
<td>East 415</td>
<td>Most of street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. At the north end of the block, a short segment of curb and a storm drain inlet are largely covered by eroded sediment and grass, and may need repairs to function properly. A mid-block tree would need to have branches trimmed back and may experience root damage. An asphalt residential driveway in poor condition would need to have an apron constructed for a durable sidewalk crossing.</td>
</tr>
<tr>
<td>7C-VA-SW-03</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Fernwood Ave</td>
<td>Waweenoc Ave &amp; Mentor Ave</td>
<td>West 415</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Excavation and short retaining walls may be needed between street level and a slightly elevated, adjacent residential yard. Some tree branches may need to be cut back. A new apron would need to be constructed for an unpaved driveway to a residential back yard to provide a durable sidewalk crossing. A landscaping bush near the corner with Mentor Ave would likely need to be removed.</td>
</tr>
</tbody>
</table>

**Notes:**
- Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems.
- Excavation and short retaining walls may be needed between street level and a slightly elevated, adjacent residential yard.
- Some tree branches may need to be cut back. A new apron would need to be constructed for an unpaved driveway to a residential back yard to provide a durable sidewalk crossing.
- A landscaping bush near the corner with Mentor Ave would likely need to be removed.
<table>
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<tr>
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<th>Owner</th>
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<th>Length (ft)</th>
<th>Notes</th>
<th>Priority</th>
<th>Opinion of Probable Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>7C-VA-SW-57</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Fernwood Ave</td>
<td>Wawenoc Ave &amp; Mentor Ave</td>
<td>East</td>
<td>415</td>
<td>Most of street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Excavation and short retaining walls may be needed between street level and a slightly elevated vacant parcel at the south end of the block. Some tree branches may need to be cut back, and two or three trees may experience root damage or need to be removed. New aprons would need to be constructed for two unpaved residential driveways to provide durable and level sidewalk crossings.</td>
<td>23</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-58</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>S Denley Dr</td>
<td>Wilson Pl &amp; Mentor Ave</td>
<td>West</td>
<td>335</td>
<td>Three existing driveway aprons to a vacant parcel and an unpaved residential driveway would need to be extended to provide durable sidewalk crossings.</td>
<td>31</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-59</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>S Denley Dr</td>
<td>Wilson Pl &amp; Mentor Ave</td>
<td>East</td>
<td>130</td>
<td>Near the north end of this segment, excavation and short retaining walls would likely be needed to level the way for sidewalk through a hill slope without impacting a nearby utility pole.</td>
<td>27</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-60</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>S Lancaster Rd</td>
<td>Wilson Pl &amp; Mentor Ave</td>
<td>West</td>
<td>475</td>
<td>A series of closely spaced square stepping stone tiles are present in the grass strip between the curb and the access/angled parking area for a mixed-use retail/apartment building. Though a parallel sidewalk is present between the parking aisle and the building, removal of the stone tiles and replacement with standard sidewalk would provide a slightly more direct accessible path to the DART station a half block to the south.</td>
<td>34</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-61</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Mentor Ave</td>
<td>Gracey St &amp; S Denley Dr</td>
<td>North</td>
<td>415</td>
<td>A few trees along the residential fence line may experience root damage or need to be removed during sidewalk construction.</td>
<td>30</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-62</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>S Denley Dr &amp; S Lancaster Rd</td>
<td>Gracey St &amp; S Denley Dr</td>
<td>North</td>
<td>150</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems.</td>
<td>29</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-63</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Fernwood Ave</td>
<td>Mentor Ave</td>
<td>Southwest</td>
<td>5</td>
<td>Extend sidewalk to edge of street and build pedestrian ramp.</td>
<td>18</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-64</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Mentor Ave</td>
<td>Gracey St &amp; S Denley Dr</td>
<td>South</td>
<td>215</td>
<td>A utility pole may need to be relocated slightly to make adequate width for sidewalk. Underground utility boxes would likely need to be adjusted. Some excavation and short retaining walls may be needed to level the way for sidewalk between the street curb and residential back yard fence at slightly higher elevations. The existing fence does not appear very stable, so it may need to be reset after sidewalk construction. An unpaved residential driveway would need to have a new apron constructed for a durable and level sidewalk crossing. One or two trees on either side of the residential fencing could experience root damage.</td>
<td>34</td>
<td>TBD</td>
</tr>
</tbody>
</table>
## Half Mile Area Improvements Matrix

### VA Medical Center Station

#### Sidewalk & Shared Use Path Segments

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<tr>
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</thead>
<tbody>
<tr>
<td>7C-VA-SW-65</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Mentor Ave</td>
<td>S Denley Dr &amp; S Lancaster Rd</td>
<td>South</td>
<td>160</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. A pair of unpaved access points to a vacant lot would need to have aprons constructed for durable sidewalk crossings. A few trees bordering the lot would likely experience root damage. Parallel parking on the unpaved shoulder would likely need to be discontinued.</td>
<td>38</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-66</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Frio Dr</td>
<td>Mentor Ave &amp; Hortense Ave</td>
<td>West</td>
<td>365</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. An unpaved driveway to a gated residential back yard may need to have an apron constructed for a durable sidewalk crossing. Tree branches and miscellaneous vegetation near the corner with Mentor Ave and mid-block may need to be trimmed back, and some root damage could occur.</td>
<td>13</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-67</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Frio Dr</td>
<td>Mentor Ave &amp; Hortense Ave</td>
<td>East</td>
<td>375</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. A tree near Mentor Ave just inside an ornamental residential front yard fence may experience root damage. An apron may need to be constructed for a mid-block alley to provide a durable sidewalk crossing, though it does not appear the alley receives much if any traffic due to its short length between Frio Dr and E Frio Dr. Two steep driveways down to gated residential back yards would need to be reconstructed for level sidewalk crossings, and segments of the back yard fences and gates would likely need to be removed and reset as a consequence. Backfill, a short retaining wall, and pedestrian hand railing would likely be needed to construct sidewalk across a downslope to residential back yard fencing and, near Hortense Ave, to where sidewalk would run parallel to a residential driveway at a lower elevation than the street. A utility pole at this location may need to be relocated.</td>
<td>16</td>
<td>TBD</td>
</tr>
</tbody>
</table>
### Half Mile Area Improvements Matrix

#### Sidewalk & Shared Use Path Segments

<table>
<thead>
<tr>
<th>ID</th>
<th>Owner</th>
<th>Improvement Type</th>
<th>Street Name</th>
<th>Between</th>
<th>Side of Street</th>
<th>Length (ft)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>7C-VA-SW-68</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>E Frio Dr</td>
<td>Mentor Ave &amp; Hortense Ave</td>
<td>West</td>
<td>365</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. An unpaved driveway to a gated residential back yard would need to have an apron constructed for a durable sidewalk crossing. An apron may need to be constructed for a mid-block alley to provide a durable sidewalk crossing, though it does not appear the alley receives much if any traffic due to its short length between Frio Dr and E Frio Dr. Excavation and a short retaining wall may be needed for the southern half of the block to level the way for sidewalk between the street and the adjacent home at a higher elevation. Two utility poles will likely need to be relocated in the process. A steep residential driveway in poor condition would need to be reconstructed with a new slope and apron to provide a level and durable sidewalk crossing. Residential parallel parking on the unpaved shoulder would likely need to be discontinued.</td>
</tr>
<tr>
<td>7C-VA-SW-69</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>E Frio Dr</td>
<td>Mentor Ave &amp; Hortense Ave</td>
<td>East</td>
<td>380</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Two unpaved residential driveways and an unpaved alleyway would need to have aprons constructed for durable sidewalk crossings. A large tree near the intersection with Mentor Ave would need to be removed. Residential parallel parking on the unpaved shoulder would likely need to be discontinued.</td>
</tr>
<tr>
<td>7C-VA-SW-70</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Hortense Ave</td>
<td>Ramona Ave &amp; Frio Dr</td>
<td>North</td>
<td>465</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Five or six residential driveways that are either unpaved or in poor condition would need to have aprons constructed for durable sidewalk crossings. A large tree near the corner with Frio Dr would likely need to be removed unless it can be trimmed back significantly on one side or an easement can be obtained for sidewalk to bypass it at an unusual setback into the adjacent vacant property. Also near the corner with Frio Dr, regrading of the adjacent slopes may be required to level the way for sidewalk.</td>
</tr>
<tr>
<td>ID</td>
<td>Owner</td>
<td>Improvement Type</td>
<td>Street Name</td>
<td>Between</td>
<td>Side of Street</td>
<td>Length (ft)</td>
<td>Notes</td>
</tr>
<tr>
<td>-------------</td>
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<tr>
<td>7C-VA-SW-71</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Hortense Ave</td>
<td>Frio Dr &amp; E Frio Dr</td>
<td>North</td>
<td>40</td>
<td>Extend sidewalk panel to street edge and build pedestrian ramp. Due to an uphill slope between where the sidewalk ends and the edge of Frio Dr a short distance to the west, several segments of sidewalk would need to be removed, elevated with backfill, and replaced. An adjacent unpaved residential driveway would need to be regraded and constructed with an apron in conjunction with these changes, and short retaining walls may be needed between the driveway and Frio Dr as described in the note for Frio Dr. Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems.</td>
</tr>
<tr>
<td>7C-VA-SW-72</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Hortense Ave</td>
<td>Frio Dr &amp; E Frio Dr</td>
<td>North</td>
<td>40</td>
<td>Extend sidewalk panel to street edge and build pedestrian ramp. Due to a downhill slope between where the sidewalk ends and the edge of E Frio Dr a short distance to the east, several segments of sidewalk would need to be removed, excavated to a lower grade, and replaced. These changes would need to be made in conjunction with sidewalk excavation and short retaining walls along E Frio Dr, as described in the note for that sidewalk gap segment. Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems.</td>
</tr>
<tr>
<td>7C-VA-SW-73</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Hortense Ave</td>
<td>Ramona Ave &amp; Frio Dr</td>
<td>South</td>
<td>510</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Five to seven residential driveways that are either unpaved or in poor condition would need to have aprons constructed for durable sidewalk crossings. Underground utility boxes would likely need to be adjusted. A large tree and a large tree stump would likely need to be removed to make way for sidewalk, and a few other trees may experience root damage. One or two utility poles may need to be relocated. Residential parallel parking on the unpaved shoulder would likely need to be discontinued.</td>
</tr>
<tr>
<td>7C-VA-RP-74</td>
<td>City of Dallas</td>
<td>Repair</td>
<td>Hortense Ave</td>
<td>Frio Dr &amp; E Frio Dr</td>
<td>South</td>
<td>110</td>
<td>Remnants of old sidewalk remain intermittently along much of this short block. All remaining sidewalk panels are in poor condition, being broken up and largely overgrown by grass. Remove and replace these panels. Two unpaved residential driveways would need to have aprons constructed for durable sidewalk crossings. Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. A small tree near the corner with Frio Dr may need to be removed.</td>
</tr>
</tbody>
</table>
### Improvement Code Legend

ID: 7C-VA-SW-01

**7C** → Station Number

**VA** → Station Abbreviation

**SW** → Sidewalk (or CW=crosswalk, VW=Veloweb, SP=Shared-Use Path, RP=sidewalk repair, GR=Gap to Remain)

**01** → Improvement Number (matches on Map)

### Half Mile Area Improvements Matrix

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<th>Opinion of Probable Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>7C-VA-SW-75</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Frio Dr</td>
<td>Hortense Ave &amp; Atlas Dr</td>
<td>West</td>
<td>365</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Excavation and short retaining walls or regrading of adjacent hill slopes may be needed to level the way for sidewalk. An unpaved residential driveway, an unpaved alley, and a steep residential driveway would need to have aprons constructed for level and durable sidewalk crossings. A tree near the corner with Atlas Dr would likely experience root damage.</td>
<td>14</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-76</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Frio Dr</td>
<td>Hortense Ave &amp; Atlas Dr</td>
<td>East</td>
<td>365</td>
<td>A wide concrete gutter, built without curb on the north half of the block and without curb to the south, occupies the space that would otherwise be needed for sidewalk. Insufficient space exists for sidewalk between the curb or gutter and adjacent residential fencing. The drainage design for this roadway would need to be re-evaluated to determine if the wide gutter could be replaced with sidewalk adjacent to standard curb and gutter.</td>
<td>15</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-77</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>E Frio Dr</td>
<td>Hortense Ave &amp; Atlas Dr</td>
<td>West</td>
<td>345</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Excavation and short retaining walls would be needed to level the way for sidewalk next to residential fencing for yards at a higher elevation. An unpaved residential driveway to a gated front yard, a steep asphalt driveway to a gated back yard shed, three steep residential driveways, and an unpaved alley would need to have aprons constructed for level and durable sidewalk crossings. A few landscaped cactus plants would need to be removed. A sump drainage inlet near the corner with Atlas Dr would need to be modified.</td>
<td>13</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-78</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>E Frio Dr</td>
<td>Hortense Ave &amp; Atlas Dr</td>
<td>East</td>
<td>370</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Three residential driveways that are unpaved or in poor condition would need to have aprons constructed for durable sidewalk crossings. A tree near Hortense Ave may experience root damage, and other trees and vegetation overhanging fences from adjacent residential yards would need to be cut back. A sump drainage inlet near the corner with Atlas Dr would need to be modified. Residential parallel parking on the unpaved shoulder would likely need to be discontinued.</td>
<td>18</td>
<td>TBD</td>
</tr>
</tbody>
</table>
### Half Mile Area Improvements Matrix

#### VA Medical Center Station

**Sidewalk & Shared Use Path Segments**

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</tr>
</thead>
<tbody>
<tr>
<td>7C-VA-SW-79</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Gracey St</td>
<td>Mentor Ave &amp; Atlas Dr</td>
<td>West</td>
<td>745</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Backfill would likely be needed to level the way for sidewalk adjacent to residential front yards that slope somewhat downward, away from the roadway. Underground utility boxes would likely need to be adjusted. Six residential driveways that are unpaved or in poor condition, as well as three access points to large, vacant lots and an unpaved alleyway, would all need to have new aprons constructed for durable sidewalk crossings. Residential parallel parking on the unpaved shoulder would likely need to be discontinued.</td>
<td>30</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-80</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Gracey St</td>
<td>Mentor Ave &amp; Atlas Dr</td>
<td>East</td>
<td>110</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Two residential driveways in poor condition would need to have new aprons constructed for durable sidewalk crossings. Residential parallel parking on the unpaved shoulder and sidewalk should be discontinued.</td>
<td>28</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-RP-81</td>
<td>City of Dallas</td>
<td>Repair</td>
<td>Gracey St</td>
<td>Mentor Ave &amp; Atlas Dr</td>
<td>East</td>
<td>80</td>
<td>Remove and replace existing sidewalk panels the have cracked and/or weathered significantly, leading to trip hazards and grass overgrowth. Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Residential parallel parking on the unpaved shoulder and sidewalk should be discontinued, as this has likely contributed to existing sidewalk damage.</td>
<td>28</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-82</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Gracey St</td>
<td>Mentor Ave &amp; Atlas Dr</td>
<td>East</td>
<td>380</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Two unpaved residential driveways and at least two access points to vacant lots would need to have new aprons constructed for durable sidewalk crossings. A few trees may experience root damage.</td>
<td>28</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-83</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>S Denley Dr</td>
<td>Mentor Ave &amp; Atlas Dr</td>
<td>West</td>
<td>75</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Two unpaved residential driveways and at least two access points to vacant lots would need to have new aprons constructed for durable sidewalk crossings. A few trees may experience root damage.</td>
<td>33</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-RP-84</td>
<td>City of Dallas</td>
<td>Repair</td>
<td>S Denley Dr</td>
<td>Mentor Ave &amp; Atlas Dr</td>
<td>West</td>
<td>20</td>
<td>Repair driveway crossing and remove and replace adjacent sidewalk panels that have cracked and partially eroded away.</td>
<td>33</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-RP-85</td>
<td>City of Dallas</td>
<td>Repair</td>
<td>S Denley Dr</td>
<td>Mentor Ave &amp; Atlas Dr</td>
<td>West</td>
<td>150</td>
<td>Remove and replace sidewalk panels where differential settlement has created trip hazards and excess cross slope.</td>
<td>31</td>
<td>TBD</td>
</tr>
</tbody>
</table>

**Improvement Code Legend**

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**North Central Texas Council of Governments**

**DART Red & Blue Line Corridors Last Mile Connections**

**NOTICE**: This document is for informational purposes only and is not for construction.
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<tr>
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</thead>
<tbody>
<tr>
<td>7C-VA-RP-86</td>
<td>City of Dallas</td>
<td>Repair</td>
<td>S Denley Dr</td>
<td>Mentor Ave &amp; Atlas Dr</td>
<td>East</td>
<td>755</td>
<td>Remnants of old sidewalk remain intermittently along about 50% of this block where older homes have been removed in recent years. Most remaining sidewalk panels are in poor condition, many being broken and having experienced differential settlement or tree root upheaval. Remove and replace most panels. Some trees that are close to the existing sidewalk alignment may need to be removed to ensure easier maintenance of future sidewalk.</td>
</tr>
<tr>
<td>7C-VA-RP-87</td>
<td>City of Dallas</td>
<td>Repair</td>
<td>S Lancaster Rd</td>
<td>Mentor Ave &amp; Atlas Dr</td>
<td>West</td>
<td>25</td>
<td>Remove and replace sidewalk panels where cracking has caused trip hazards and grass overgrowth.</td>
</tr>
<tr>
<td>7C-VA-SW-88</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Atlas Dr</td>
<td>E Frio Dr &amp; Kildare Ave</td>
<td>North</td>
<td>320</td>
<td>A large tree may experience root damage during sidewalk construction.</td>
</tr>
<tr>
<td>7C-VA-SW-89</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Atlas Dr</td>
<td>E Frio Dr &amp; Kildare Ave</td>
<td>North</td>
<td>105</td>
<td>Three or four trees may experience root damage during sidewalk construction. One relatively steep residential driveway may need to be reconstructed for a level sidewalk crossing.</td>
</tr>
<tr>
<td>7C-VA-SW-90</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Atlas Dr</td>
<td>Killdare Ave &amp; Gracey St</td>
<td>North</td>
<td>155</td>
<td>A small tree may need to be removed in order for sidewalk to bypass a utility pole. Concrete in poor condition adjacent to a church driveway would need to be removed for a durable and level sidewalk crossing.</td>
</tr>
<tr>
<td>7C-VA-SW-91</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Atlas Dr</td>
<td>Gracey St &amp; Bartlett Ave</td>
<td>North</td>
<td>125</td>
<td>Low-hanging branches of a large tree would need to be cleared to make way for sidewalk, and the same tree would likely experience root damage. A steep, adjacent apron to an otherwise unpaved alley would likely need to be reconstructed at a shallower slope to provide a level sidewalk crossing. The parcel adjoining most of this block has recently been cleared of the trees previously there, so upcoming construction may add the missing sidewalk.</td>
</tr>
<tr>
<td>7C-VA-SW-92</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Atlas Dr</td>
<td>Bartlett Ave &amp; S Denley Dr</td>
<td>North</td>
<td>240</td>
<td>An easement may be needed (on a parcel owned by the City) for sidewalk to bypass a utility pole and above-ground utility box at the corner with Denley Dr. A driveway apron to a vacant parcel is in poor condition, and would need to be reconstructed for a durable sidewalk crossing. Another easement on the same parcel may be needed just to the east for sidewalk to bypass a utility pole and cluster of above-ground utility boxes. Two more wide driveway aprons to the parcel, closer to Lancaster Rd, would need to be extended (and preferably narrowed) for better defined, level and durable sidewalk crossings. Utility pole guy wires may need to be adjusted.</td>
</tr>
<tr>
<td>7C-VA-SW-93</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Atlas Dr</td>
<td>S Denley Dr &amp; S Lancaster Rd</td>
<td>North</td>
<td>250</td>
<td></td>
</tr>
</tbody>
</table>

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**NOVEMBER 2019**

DRAFT - Not for Construction
## Half Mile Area Improvements Matrix

### VA Medical Center Station

#### Sidewalk & Shared Use Path Segments

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</tr>
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<tbody>
<tr>
<td>7C-VA-SW-94</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Atlas Dr</td>
<td>E Frio Dr &amp; Kildare Ave</td>
<td>South</td>
<td>760</td>
<td>Near the west end of the block, excavation and short retaining walls would likely be needed to build sidewalk across residential yards that slope up away from the street. A couple of trees may experience root damage, and a utility pole may need to be relocated. A few relatively steep driveway aprons may need to be reconstructed to provide level sidewalk crossings. A DART bus stop that is not served by sidewalk is present near the corner with Kildare Ave.</td>
<td>24</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-95</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Atlas Dr</td>
<td>Killdare Ave &amp; Gracey St</td>
<td>South</td>
<td>140</td>
<td>The curb radius or residential front yard fence corner at the intersection with Kildare Ave may need to be modified to connect new sidewalk to proposed sidewalk along Kildare Ave while still providing pedestrian ramps. A steep driveway apron near the same fenced yard may need to be reconstructed for a level sidewalk crossing unless the fence can be moved back. Three trees are likely to experience root damage, and the closest of these to the roadway may need to be removed.</td>
<td>26</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-96</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Atlas Dr</td>
<td>Gracey St &amp; Bartlett Ave</td>
<td>South</td>
<td>175</td>
<td>Four large trees near a residential fence line would likely experience root damage. A DART bus stop that is not served by sidewalk is present near the corner with Bartlett Ave.</td>
<td>31</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-97</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Atlas Dr</td>
<td>Bartlett Ave &amp; S Denley Dr</td>
<td>South</td>
<td>390</td>
<td>A residential driveway in poor condition would need to be reconstructed with an apron to provide a durable sidewalk crossing. A tree may experience root damage, and another large tree stump would need to be removed to make way for sidewalk.</td>
<td>32</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-98</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Atlas Dr</td>
<td>S Denley Dr &amp; S Lancaster Rd</td>
<td>South</td>
<td>190</td>
<td>A large tree would likely experience root damage during sidewalk construction, and branches of other trees would need to be cut back.</td>
<td>30</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-99</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Frio Dr</td>
<td>Atlas Dr &amp; Adelaide Dr</td>
<td>West</td>
<td>460</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Five residential driveways that are unpaved or in poor condition would need to have aprons constructed for durable sidewalk crossings. Two trees on either side of a wide gravel driveway may experience root damage or need to be removed unless sidewalk can bypass them an unusual distance away from the street in residential front yards. In the case of one of the trees, a section of chain link fence separating adjacent front yards would need to be removed.</td>
<td>15</td>
<td>TBD</td>
</tr>
</tbody>
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**VA Medical Center Station**

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<th>Length (ft)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>7C-VA-SW-100</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Frio Dr</td>
<td>Atlas Dr &amp; Adelaide Dr</td>
<td>East</td>
<td>460</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Three residential driveways that are unpaved or in poor condition would need to have aprons constructed for durable sidewalk crossings. A small tree near Atlas Dr would experience root damage or need to be removed unless sidewalk can bypass it an unusual distance away from the street in the residential front yard. A tree stump to the south and two dead trees would also need to be removed to make way for sidewalk. Other trees may experience root damage and/or need to have low-hanging branches cleared. A sump drainage inlet would need to be modified near the corner with Adelaide Dr. Residential parallel parking on the unpaved shoulder would likely need to be discontinued.</td>
</tr>
<tr>
<td>7C-VA-SW-101</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>E Frio Dr</td>
<td>Atlas Dr &amp; Adelaide Dr</td>
<td>West</td>
<td>490</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Aprons for a gated, residential back yard driveway and a gravel residential driveway would need to be reconstructed for level and durable sidewalk crossings. Underground utility boxes would likely need to be adjusted. A sump drainage inlet would need to be modified near the corner with Atlas Dr. Residential parallel and angled parking on the unpaved shoulder and on a short side-yard residential driveway near Adelaide Dr would likely need to be discontinued. A pair of utility poles near this home may need to be relocated.</td>
</tr>
<tr>
<td>7C-VA-SW-102</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>E Frio Dr</td>
<td>Atlas Dr &amp; Adelaide Dr</td>
<td>East</td>
<td>490</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Aprons for six residential driveways and a church driveway that are either unpaved or in poor condition would need to be constructed for durable sidewalk crossings. A tree near the corner with Atlas Dr would likely experience root damage or need to be removed, and another tree near the chain link fence corner for the back yard of the same home would need to be removed unless the fence can be relocated. Farther south, a large tree would need to be removed unless an adjacent utility pole can be relocated. Residential parallel parking on the unpaved shoulder would likely need to be discontinued.</td>
</tr>
</tbody>
</table>
### Improvement Code Legend

VS: Station Number
SW: Sidewalk (or CW=crosswalk, VW=Veloweb, SP=Shared-Use Path, RP=sidewalk repair, GR=Gap to Remain)
ID: Improvement Number (matches on Map)

<table>
<thead>
<tr>
<th>ID</th>
<th>Owner</th>
<th>Improvement Type</th>
<th>Street Name</th>
<th>Between</th>
<th>Side of Street</th>
<th>Length (ft)</th>
<th>Notes</th>
<th>Priority Score</th>
<th>Opinion of Probable Cost</th>
</tr>
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<tbody>
<tr>
<td>7C-VA-SW-103</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Kildare Ave</td>
<td>Atlas Dr &amp; Adelaide Dr</td>
<td>West</td>
<td>510</td>
<td>Aprons may need to be reconstructed for five residential driveways that are constrained by fences or other obstructions that would prevent sidewalk crossings at a level location. Two utility poles and a fire hydrant may need to be relocated. On one vacant lot, a large mound of earth in the path of sidewalk would need to be excavated and removed. A tree near Atlas Dr would likely suffer root damage, while another tree near the corner with Adelaide Dr may need to be removed. Other trees would need to have low-hanging branches cleared.</td>
<td>24</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-104</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Kildare Ave</td>
<td>Atlas Dr &amp; Adelaide Dr</td>
<td>East</td>
<td>555</td>
<td>The curb radius or residential front yard fence corner at the intersection with Kildare Ave may need to be modified to connect new sidewalk to proposed sidewalk along Kildare Ave while still providing pedestrian ramps. One utility pole and its guy wires may need to be relocated, while another utility pole near a fence corner in a sloped area would definitely need to be relocated. Four steep residential driveways would need to be reconstructed for level sidewalk crossings. Excavation and retaining walls would be needed to level the way for sidewalk in front of two or three residential yards that slope upward away from the street. Four trees, some bushes, and other landscaping plants in front of a terraced residential front yard would need to be removed to make way for sidewalk, and the retaining wall forming the terrace may need to be modified or reconstructed, with potential impacts to other trees and plants in the yard. Underground utility boxes would likely need to be modified. A segment of chain link fence separating adjacent front yards would need to be removed to allow sidewalk to cross uphill of an adjacent, steep apron to an otherwise unpaved driveway. The driveway apron would need to be extended for a durable sidewalk crossing. A retaining wall that extends nearly to the corner with Adelaide Dr would need to be shortened in conjunction with sidewalk and retaining wall construction along Adelaide Dr to connect to any future sidewalk there.</td>
<td>23</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-105</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Bartlett Ave</td>
<td>Atlas Dr &amp; Adelaide Dr</td>
<td>West</td>
<td>175</td>
<td>Excavation and short retaining walls may be needed to build sidewalk in the slightly sloped space between the curb and ornamental fence for a residential front yard, unless the yard is regraded and the fence reset at a slightly lower elevation. Underground utility boxes would likely need to be adjusted. An adjacent driveway may need to be reconstructed for a level sidewalk crossing.</td>
<td>29</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-106</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Bartlett Ave</td>
<td>Atlas Dr &amp; Adelaide Dr</td>
<td>West</td>
<td>60</td>
<td>Adjacent driveways would likely need to be reconstructed for level sidewalk crossings. An underground utility box may need to be adjusted.</td>
<td>25</td>
<td>TBD</td>
</tr>
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</table>
### Half Mile Area Improvements Matrix

#### VA Medical Center Station

<table>
<thead>
<tr>
<th>ID</th>
<th>Owner</th>
<th>Improvement Type</th>
<th>Street Name</th>
<th>Between</th>
<th>Side of Street</th>
<th>Length (ft)</th>
<th>Notes</th>
<th>Priority Score</th>
<th>Opinion of Probable Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>7C-VA-SW-107</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Bartlett Ave</td>
<td>Atlas Dr &amp; Adelaide Dr</td>
<td>East</td>
<td>260</td>
<td>Two utility poles and one associated set of guy wires would need to be relocated to make adequate width for sidewalk. A large tree between two fence corners would probably suffer significant root damage.</td>
<td>28</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-RP-108</td>
<td>City of Dallas</td>
<td>Repair</td>
<td>S Denley Dr</td>
<td>Atlas Dr &amp; Adelaide Dr</td>
<td>West</td>
<td>175</td>
<td>Remove and replace sidewalk panels that have cracked and eroded significantly, causing trip hazards and grass overgrowth.</td>
<td>29</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-109</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Adelaide Dr</td>
<td>West Study Boundary &amp; Frio Dr</td>
<td>North</td>
<td>320</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Aprons for two residential driveways that are either unpaved or in poor condition would need to be constructed for durable sidewalk crossings.</td>
<td>8</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-RP-110</td>
<td>City of Dallas</td>
<td>Repair</td>
<td>Adelaide Dr</td>
<td>Frio Dr &amp; E Frio Dr</td>
<td>North</td>
<td>105</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems.</td>
<td>15</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-111</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Adelaide Dr</td>
<td>E Frio Dr &amp; Burnside Ave</td>
<td>North</td>
<td>340</td>
<td>Street lacks existing and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. A few small trees may need to be removed to build sidewalk, and others could suffer root damage. Three gravel residential driveways would need to have aprons constructed for durable sidewalk crossings. Underground utility boxes would likely need to be adjusted.</td>
<td>18</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-112</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Adelaide Dr</td>
<td>Burnside Ave &amp; Kildare Ave</td>
<td>North</td>
<td>120</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. A driveway sporn to a vacant parcel in poor condition would need to be reconstructed to provide a durable sidewalk crossing. An above-ground utility box mounted in the sidewalk blocks passage on the east side of this driveway, and a utility pole blocks the way for sidewalk to the west. Both would need to be relocated, and other underground utility boxes would need to be adjusted or relocated.</td>
<td>19</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-113</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Adelaide Dr</td>
<td>Burnside Ave &amp; Kildare Ave</td>
<td>North</td>
<td>240</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Either a brick and mortar mailbox or the residential front yard chain link fence just behind it would need to be relocated to make way for sidewalk. One utility pole, the guy wires for another a short distance to the east, and underground utility boxes would also need to be relocated or adjusted.</td>
<td>21</td>
<td>TBD</td>
</tr>
</tbody>
</table>

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**Improvement Code Legend**

ID: 7C-VA-SW-01

7C ← Station Number  SW ← Sidewalk (or CW=crosswalk, VW=Veloweb, SP=sidewalk repair, GR=Gap to Remain)  
VA ← Station Abbreviation  Shared-Use Path, RP=sidewalk repair, GR=Gap to Remain  
01 ← Improvement Number (matches on Map)

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**North Central Texas Council of Governments**

**DART Red & Blue Line Corridors Last Mile Connections**

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**NOVEMBER 2019**

**DRAFT - Not for Construction**
## Half Mile Area Improvements Matrix

### VA Medical Center Station

#### Sidewalk & Shared Use Path Segments

**Improvement Code Legend**

- **ID:** 7C-VA-SW-01
- **VA:** VA Medical Center Station, **SW:** Sidewalk (or CW=crosswalk, VW=Veloweb, SP=Shared-Use Path, RP=sidewalk repair, GR=Gap to Remain)
- **City:** City of Dallas

<table>
<thead>
<tr>
<th>ID</th>
<th>Owner</th>
<th>Improvement Type</th>
<th>Street Name</th>
<th>Between</th>
<th>Side of Street</th>
<th>Length (ft)</th>
<th>Notes</th>
<th>Priority Score</th>
<th>Opinion of Probable Cost</th>
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<tbody>
<tr>
<td>7C-VA-SW-114</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Adelaide Dr</td>
<td>Kildare Ave &amp; Bartlett Ave</td>
<td>North</td>
<td>300</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Excavation and retaining walls would be needed to build sidewalk across a steep slope from street level up to two elevated residential yards. At one of the homes, a set of concrete steps perpendicular to the street, surrounded by a sloped concrete retaining wall on either side, would need to be removed and replaced with steps oriented parallel to the street to allow sidewalk to pass. Two sloped driveways would both likely need to be reconstructed to provide level sidewalk crossings. At the corner with Bartlett Ave, a short retaining wall topped by chain link fence for a residential front yard may need to be modified for enough width to allow sidewalk to connect at the corner.</td>
<td>23</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-115</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Adelaide Dr</td>
<td>Bartlett Ave &amp; S Denley Dr</td>
<td>North</td>
<td>310</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. A sump drainage inlet near the corner with Bartlett Ave would need to be modified, and a fire hydrant may need to be relocated. Residential parallel parking on the unpaved shoulder would likely need to be discontinued.</td>
<td>29</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-116</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Adelaide Dr</td>
<td>S Denley Dr &amp; S Lancaster Rd</td>
<td>North</td>
<td>165</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. An unpaved residential driveway would need to have an apron constructed to provide a durable sidewalk crossing.</td>
<td>27</td>
<td>TBD</td>
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<tr>
<td>7C-VA-SW-117</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Adelaide Dr</td>
<td>West Study Boundary &amp; Frio Dr</td>
<td>South</td>
<td>300</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Four or five trees near the street along a vacant parcel would need to be removed unless sidewalk bypassed them at an unusually great setback from the street. A couple other trees could also experience root damage if their removal were not needed.</td>
<td>8</td>
<td>TBD</td>
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<tr>
<td>7C-VA-RP-118</td>
<td>City of Dallas</td>
<td>Repair</td>
<td>Adelaide Dr</td>
<td>Frio Dr &amp; E Frio Dr</td>
<td>South</td>
<td>110</td>
<td>Remove and replace sidewalk panels and a driveway crossing, which are broken up and largely overgrown by grass. Extend sidewalk to each corner of the block and add pedestrian ramps. Root damage would be likely to one small tree that has caused root upheaval. Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems.</td>
<td>15</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-119</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>E Frio Dr</td>
<td>Adelaide Dr &amp; Owega Ave</td>
<td>East</td>
<td>5</td>
<td>Extend sidewalk to edge of street and build pedestrian ramp.</td>
<td>16</td>
<td>TBD</td>
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<tr>
<td>ID</td>
<td>Owner</td>
<td>Improvement Type</td>
<td>Street Name</td>
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<td>Side of Street</td>
<td>Length (ft)</td>
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<tr>
<td>7C-VA-SW-120</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Adelaide Dr</td>
<td>E Frio Dr &amp; Burnside Ave</td>
<td>South</td>
<td>310</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Gravel driveways to a home and a church would need to have aprons constructed for durable sidewalk crossings. Residential parallel parking on the unpaved shoulder would likely need to be discontinued.</td>
<td>12</td>
<td>TBD</td>
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<tr>
<td>7C-VA-SW-121</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Adelaide Dr</td>
<td>Burnside Ave &amp; Kildare Ave</td>
<td>South</td>
<td>120</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Aprons would need to be constructed for an unpaved access point to a gated residential back yard storing several vehicles, as well two other unpaved residential driveways, to provide durable sidewalk crossings.</td>
<td>19</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-122</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Adelaide Dr</td>
<td>Burnside Ave &amp; Kildare Ave</td>
<td>South</td>
<td>250</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Excavation and retaining walls would likely be needed to build sidewalk across slopes from street level up to two elevated residential yards. Three residential driveways, either unpaved or with high slope, would each likely need to be reconstructed to provide level and durable sidewalk crossings. Underground utility boxes would likely need to be adjusted or relocated.</td>
<td>23</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-123</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Adelaide Dr</td>
<td>Kildare Ave &amp; Bartlett Ave</td>
<td>South</td>
<td>300</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Two unpaved driveways, one for a daycare center and the other for a church, would need to have aprons constructed (preferably at a narrower width) to provide durable sidewalk crossings. A tree near the roadside on the daycare center property would likely experience root damage during sidewalk construction. A tree near the church would need to be removed unless sidewalk can bypass it somewhat close to the church building.</td>
<td>24</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-124</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Adelaide Dr</td>
<td>Bartlett Ave &amp; S Denley Dr</td>
<td>South</td>
<td>305</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Underground utility boxes would need to be adjusted or relocated.</td>
<td>25</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-125</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Adelaide Dr</td>
<td>S Denley Dr &amp; S Lancaster Rd</td>
<td>South</td>
<td>220</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Underground utility boxes would need to be adjusted or relocated.</td>
<td>26</td>
<td>TBD</td>
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<tr>
<td>ID</td>
<td>Owner</td>
<td>Improvement Type</td>
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<tr>
<td>7C-VA-SW-126</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Frio Dr</td>
<td>Adelaide Dr &amp; Owega Ave</td>
<td>West</td>
<td>315</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Underground utility boxes would need to be adjusted or relocated. Up to three utility poles would need to be relocated and three trees removed to make way for sidewalk. Three residential driveways, either unpaved, in poor condition or with high slopes, would each likely need to be reconstructed to provide level and durable sidewalk crossings. Residential parallel parking on the unpaved shoulder would likely need to be discontinued.</td>
<td>13</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-127</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Frio Dr</td>
<td>Adelaide Dr &amp; Owega Ave</td>
<td>East</td>
<td>295</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Several trees could experience root damage during sidewalk construction, and miscellaneous tree branches and plants would need to be cut back. An unpaved residential driveway would need to be reconstructed to provide a durable sidewalk crossing. Residential parallel parking on the unpaved shoulder would likely need to be discontinued.</td>
<td>9</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-128</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>E Frio Dr</td>
<td>Adelaide Dr &amp; Owega Ave</td>
<td>West</td>
<td>290</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. A pair of trees would likely experience root damage during sidewalk construction. An unpaved apron to a residential shed would need to have an apron constructed to provide a durable sidewalk crossing, and another apron to a gated back yard would also need to be reconstructed for proper slope. A utility pole would need to be relocated. Excavation, short retaining walls, and resetting of a residential back yard fence could be necessary to provide a level way for sidewalk in a narrow sloped space. Underground utility boxes will likely need to be adjusted. Residential parallel parking on the unpaved shoulder would likely need to be discontinued.</td>
<td>14</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-129</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Frio Dr</td>
<td>Owega Ave &amp; South Study Boundary</td>
<td>West</td>
<td>205</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. A tall, dead tree stump would need to be removed to make way for sidewalk. An unpaved residential driveway would need to have an apron constructed to provide a durable sidewalk crossing.</td>
<td>12</td>
<td>TBD</td>
</tr>
<tr>
<td>ID</td>
<td>Owner</td>
<td>Improvement Type</td>
<td>Street Name</td>
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<td>Side of Street</td>
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</tr>
<tr>
<td>7C-VA-SW-130</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Frio Dr</td>
<td>Owega Ave &amp; South Study</td>
<td>East</td>
<td>220</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. A tall, dead tree stump would need to be removed to make way for sidewalk. Excavation, short retaining walls, and resetting of a residential back yard fence could be necessary to provide a level way for sidewalk in a narrow sloped space. Two unpaved residential driveways and a paved but steep residential driveway would need to have new aprons constructed to provide level and durable sidewalk crossings. Miscellaneous vegetation along a residential fence line would need to be cut back.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7C-VA-SW-131</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>E Frio Dr</td>
<td>Owega Ave &amp; Kingsley Dr</td>
<td>West</td>
<td>290</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Excavation, short retaining walls, and resetting of a residential chain link fence would likely be necessary to provide a level way for sidewalk in a narrow sloped space. One or two utility poles may need to be relocated. Three residential driveways that are unpaved or in poor condition would need to have new aprons constructed to provide durable sidewalk crossings. Residential parallel parking on the unpaved shoulder would likely need to be discontinued.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7C-VA-SW-132</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>E Frio Dr</td>
<td>Owega Ave &amp; Kingsley Dr</td>
<td>East</td>
<td>245</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. One or two utility poles may need to be relocated if easements cannot be obtained to bypass them. Six residential driveways that are unpaved, steep, or in poor condition would need to have new aprons constructed to provide durable sidewalk crossings. A tree near the road would need to be removed unless it can be bypassed by sidewalk on a vacant parcel at an unusually great setback from the road. Residential parallel parking on the unpaved shoulder would likely need to be discontinued.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7C-VA-SW-133</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Owega Ave</td>
<td>Frio Dr &amp; E Frio Dr</td>
<td>North</td>
<td>10</td>
<td>Extend sidewalk to edge of street and build pedestrian ramp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7C-VA-SW-134</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Owega Ave</td>
<td>Frio Dr &amp; E Frio Dr</td>
<td>South</td>
<td>10</td>
<td>Extend sidewalk to edge of street and build pedestrian ramp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7C-VA-SW-135</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Kingsley Dr</td>
<td>South Study Boundary &amp; E Frio Dr</td>
<td>North</td>
<td>5</td>
<td>Extend sidewalk to edge of street and build pedestrian ramp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7C-VA-SW-136</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Kingsley Dr</td>
<td>South Study Boundary &amp; E Frio Dr</td>
<td>South</td>
<td>25</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7C-VA-SW-137</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>E Frio Dr</td>
<td>Kingsley Dr &amp; South Study Boundary</td>
<td>West</td>
<td>25</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ID</td>
<td>Owner</td>
<td>Improvement Type</td>
<td>Street Name</td>
<td>Between</td>
<td>Side of Street</td>
<td>Length (ft)</td>
<td>Notes</td>
<td>Priority Score</td>
<td>Opinion of Probable Cost</td>
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</tr>
<tr>
<td>7C-VA-RP-138</td>
<td>City of Dallas</td>
<td>Repair</td>
<td>Burnside Ave</td>
<td>Adelaide Dr &amp; Kingsley Dr</td>
<td>East</td>
<td>140</td>
<td>Remove and replace sidewalk panels that have experienced significant cracking and/or differential settlement from tree root upheaval or other causes, creating trip hazards and grass overgrowth. Tree root damage may occur, but other measures should be taken if possible to elevate the new sidewalk panels above the tree roots and reduce the likelihood of further sidewalk damage.</td>
<td>18</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-139</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Kildare Ave</td>
<td>Adelaide Dr &amp; Kingsley Dr</td>
<td>West</td>
<td>55</td>
<td>An underground utility manhole will likely need to be adjusted, and a concrete apron to an otherwise unpaved residential driveway would need to be extended to provide a durable sidewalk crossing.</td>
<td>20</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-RP-140</td>
<td>City of Dallas</td>
<td>Repair</td>
<td>Kildare Ave</td>
<td>Adelaide Dr &amp; Kingsley Dr</td>
<td>West</td>
<td>75</td>
<td>An underground utility manhole will likely need to be adjusted, and a residential driveway with a steep apron would need to be reconstructed to provide a level sidewalk crossing aligning with existing sidewalk on the south side of the driveway.</td>
<td>20</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-141</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Kildare Ave</td>
<td>Adelaide Dr &amp; Kingsley Dr</td>
<td>West</td>
<td>80</td>
<td>A utility pole will likely need to be relocated, and a gated residential driveway with a steep apron would need to be reconstructed to provide a level sidewalk crossing unless the adjacent fencing and gate can be moved back. Another residential driveway would also need to be reconstructed for a level sidewalk crossing.</td>
<td>19</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-142</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Kildare Ave</td>
<td>Adelaide Dr &amp; Kingsley Dr</td>
<td>West</td>
<td>220</td>
<td>A large tree near the corner with Adelaide Dr would need to be removed or experience root damage unless sidewalk bypassed it at an unusually great setback from the curb. One other tree may experience root damage, and a landscaped hedge may need to be removed. One driveway at the southern end of the gap may need to be reconstructed for a level sidewalk crossing that aligns with existing sidewalk to the south.</td>
<td>18</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-143</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Kildare Ave</td>
<td>Adelaide Dr &amp; Kingsley Dr</td>
<td>East</td>
<td>385</td>
<td>At the north and south ends of the block, excavation and retaining walls would be needed to build sidewalk in the sloped space between the curb and elevated residential front yards. One tree would likely experience root damage in the process. Up to two fire hydrants and three utility poles would need to be relocated, and seven steep driveways would need to be reconstructed for level sidewalk crossings. Underground utility boxes would likely need to be adjusted.</td>
<td>21</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-144</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Bartlett Ave</td>
<td>Adelaide Dr &amp; Kingsley Dr</td>
<td>West</td>
<td>260</td>
<td>A large tree near the corner with Adelaide Dr would need to be removed or experience root damage unless sidewalk bypassed it at an unusually great setback from the curb. One other tree may experience root damage, and a landscaped hedge may need to be removed. One driveway at the southern end of the gap may need to be reconstructed for a level sidewalk crossing that aligns with existing sidewalk to the south.</td>
<td>26</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-RP-145</td>
<td>City of Dallas</td>
<td>Repair</td>
<td>Bartlett Ave</td>
<td>Adelaide Dr &amp; Kingsley Dr</td>
<td>East</td>
<td>30</td>
<td>Remove and replace sidewalk panels where significant cracking has resulted in trip hazards and grass overgrowth.</td>
<td>25</td>
<td>TBD</td>
</tr>
<tr>
<td>ID</td>
<td>Owner</td>
<td>Improvement Type</td>
<td>Street Name</td>
<td>Between</td>
<td>Side of Street</td>
<td>Length (ft)</td>
<td>Notes</td>
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</tr>
<tr>
<td>7C-VA-SW-146</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Kingsley Dr</td>
<td>E Frio Dr &amp; Burnside Ave</td>
<td>North</td>
<td>310</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. The unpaved parking area for a church would need to have access points defined and likely three concrete aprons built for durable sidewalk crossings that would also avoid church-goers driving over the sidewalk. An existing residential driveway in poor condition would also need to have a new apron constructed for a durable sidewalk crossing. Near the corner with Burnside Ave, excavation and modification or replacement of the existing retaining wall topped with chain-link fence around a residential yard would be required to level the way for sidewalk in a sloped area. The alignment of the wall and fence near the corner would also need to be modified to allow for the construction of pedestrian ramps and connection of the sidewalk to existing sidewalk along Burnside Ave.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7C-VA-SW-147</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Kingsley Dr</td>
<td>Burnside Ave &amp; Kildare Ave</td>
<td>North</td>
<td>200</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Residential parallel parking on the unpaved shoulder would likely need to be discontinued.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7C-VA-SW-148</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Kingsley Dr</td>
<td>Kildare Ave &amp; Bartlett Ave</td>
<td>North</td>
<td>305</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Some excavation, short retaining walls, and/or regrading and resetting of an adjacent residential fence may be needed to level a slope for sidewalk near the corner with Kildare Ave. Two residential driveways, one unpaved and the other relatively steep and in poor condition, would need to have new aprons constructed to provide level and durable sidewalk crossings. A large tree could experience root damage. Near the intersection at the east end of the block, providing a connection with other new sidewalk along Bartlett Ave may require resetting a chain link fence corner. Residential parallel parking on the unpaved shoulder would likely need to be discontinued.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7C-VA-SW-149</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Kingsley Dr</td>
<td>Bartlett Ave &amp; S Denley Dr</td>
<td>North</td>
<td>250</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. A storm drain inlet in poor condition and nearly filled with sediment may need to be adjusted or replaced. One or more driveways would need to be defined for access to each of two large, mostly unpaved vacant parcels, and aprons constructed for each driveway for durable sidewalk crossings. An unpaved residential driveway would similarly need a new apron. A utility pole may need to be relocated. A bush near the corner with Bartlett Ave would need to be removed, and a nearby tree would likely experience root damage.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# Half Mile Area Improvements Matrix

## Sidewalk & Shared Use Path Segments

### Improvement Code Legend

- **ID:** 7C-VA-SW-01
- **7C:** Station Number
- **VA:** Station Abbreviation
- **SW:** Sidewalk (or CW=crosswalk, VW=Veloweb, SP=Shared-Use Path, RP=sidewalk repair, GR=Gap to Remain)

### Notes

- Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. One unpaved residential driveway would need to have an apron constructed for a durable sidewalk crossing. A utility pole may need to be relocated to connect existing residential sidewalk to commercial sidewalk at the boundary between properties where a disconnect is present.

### City of Dallas

<table>
<thead>
<tr>
<th>ID</th>
<th>Owner</th>
<th>Improvement Type</th>
<th>Street Name</th>
<th>Between</th>
<th>Side of Street</th>
<th>Length (ft)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>7C-VA-SW-150</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Kingsley Dr</td>
<td>S Denley Dr &amp; S Lancaster Rd</td>
<td>North</td>
<td>110</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. One unpaved residential driveway would need to have an apron constructed for a durable sidewalk crossing. A utility pole may need to be relocated to connect existing residential sidewalk to commercial sidewalk at the boundary between properties where a disconnect is present.</td>
</tr>
<tr>
<td>7C-VA-SW-151</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>E Frio Dr</td>
<td>Kingsley Dr &amp; South Study Boundary</td>
<td>East</td>
<td>55</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. The unpaved parking area for a church would need to have access points defined with at least one concrete apron to avoid church-goers driving over the sidewalk.</td>
</tr>
<tr>
<td>7C-VA-SW-152</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Kingsley Dr</td>
<td>E Frio Dr &amp; Burnside Ave</td>
<td>South</td>
<td>305</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. The unpaved parking area for a church would need to have access points defined and likely two concrete aprons built for durable sidewalk crossings that would also avoid church-goers driving over the sidewalk. A tree may experience root damage. Near the corner with Burnside Ave, excavation and modification or replacement of the existing retaining wall around a residential yard would be required to level the way for sidewalk in a sloped area. The alignment of the wall near the corner would also need to be modified to allow for the construction of pedestrian ramps and connection of the sidewalk to existing sidewalk along Burnside Ave. A utility pole at this location would likely need to be relocated.</td>
</tr>
<tr>
<td>7C-VA-SW-153</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Kingsley Dr</td>
<td>Burnside Ave &amp; Kildare Ave</td>
<td>South</td>
<td>125</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Four trees are located near the roadway and would likely experience significant root damage when building sidewalk. A somewhat sloped driveway in fair condition may need to be reconstructed to provide a level and durable sidewalk crossing. Backfill would be needed to the east of this driveway to bypass a utility pole and level the way for new sidewalk up an abutment to existing sidewalk on the bridge over Lisbon Creek.</td>
</tr>
<tr>
<td>7C-VA-SW-154</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Kingsley Dr</td>
<td>Burnside Ave &amp; Kildare Ave</td>
<td>South</td>
<td>185</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. An unpaved access point to a gated residential yard may need to have an apron constructed for a durable sidewalk crossing. Near the intersection at the east end of the block, providing a connection with other new sidewalk along Kildare Ave would require resetting a chain link fence corner and/or relocating a utility pole that block the way.</td>
</tr>
</tbody>
</table>
## Half Mile Area Improvements Matrix

### VA Medical Center Station

**Sidewalk & Shared Use Path Segments**

<table>
<thead>
<tr>
<th>ID</th>
<th>Owner</th>
<th>Improvement Type</th>
<th>Street Name</th>
<th>Between</th>
<th>Side of Street</th>
<th>Length (ft)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>7C-VA-SW-01</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Kingsley Dr</td>
<td>Kildare Ave &amp; Bartlett Ave</td>
<td>South</td>
<td>310</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Some excavation and short retaining walls would likely be needed to level a slope for sidewalk near the corner with Kildare Ave. Some root damage to adjacent trees could result. Three residential driveways, two unpaved and the other in poor condition, would need to have new aprons constructed to provide durable sidewalk crossings. A large tree would likely experience significant root damage or need to be removed. A bush near the corner with Bartlett Ave would need to be removed.</td>
</tr>
<tr>
<td>7C-VA-SW-02</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Kingsley Dr</td>
<td>Bartlett Ave &amp; S Denley Dr</td>
<td>South</td>
<td>310</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. A storm drain inlet in poor condition and nearly filled with sediment may need to be adjusted or replaced. Three driveways to residential back yards that are unpaved or in poor condition would need to have aprons constructed for durable sidewalk crossings. At one of these driveways, large wooden fence gates would need to be modified so as not to block the sidewalk path when opened. Near the intersection at the east end of the block, providing a connection with existing sidewalk along Denley Dr would require resetting a chain link fence corner or relocating a utility pole that block the way. Resetting the fence would complicate vehicular access from Denley Dr to an unpaved driveway for the corner home, which does not have a paved driveway or garage. A new driveway and gate may need to be built, therefore, unless the utility pole can be relocated. Residential parallel parking on the unpaved shoulder would likely need to be discontinued.</td>
</tr>
</tbody>
</table>

### Improvement Code Legend

**ID:** 7C-VA-SW-01

- **7C** – Station Number
- **VA** – Station Abbreviation
- **SW** – Sidewalk (or CW=crosswalk, VW=Veloweb, SP=Shared-Use Path, RP=sidewalk repair, GR=Gap to Remain)
- **01** – Improvement Number (matches on Map)

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**North Central Texas Council of Governments**

**DART Red & Blue Line Corridors Last Mile Connections**

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**NOVEMBER 2019**

**DRAFT - Not for Construction**
### Half Mile Area Improvements Matrix

#### Sidewalk & Shared Use Path Segments

<table>
<thead>
<tr>
<th>ID</th>
<th>Owner</th>
<th>Improvement Type</th>
<th>Street Name</th>
<th>Between</th>
<th>Side of Street</th>
<th>Length (ft)</th>
<th>Notes</th>
<th>Priority Score</th>
<th>Opinion of Probable Cost</th>
</tr>
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<tbody>
<tr>
<td>7C-VA-SW-157</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Kingsley Dr</td>
<td>S Denley Dr &amp; S Lancaster Rd</td>
<td>South</td>
<td>250</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Near the intersection at the west end of the block, providing a connection with existing sidewalk along Denley Dr would require resetting an ornamental fence corner with stone pillars or relocating a utility pole that block the way. Residential parallel parking on the unpaved shoulder would likely need to be discontinued. At the east end of the block, right-angle parking for a beauty salon and liquor store are flush with the street pavement. Sufficient space in the parking area exists to place parking stops and provide a walking path between the buildings and the parking spaces. However, a sidewalk connection would be needed between the northwest building corner of the beauty salon and the proposed sidewalk set closer to the curb adjacent to the residential property to the west. A connection through the parking lot made with raised sidewalk or additional parking stops would be needed from the northeast building corner of the liquor store to the intersection corner at Lancaster Rd.</td>
<td>16</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-158</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Kildare Ave</td>
<td>Kingsley Dr &amp; South Study Boundary</td>
<td>West</td>
<td>605</td>
<td>Near the intersection at the north end of the block, providing a connection with other new sidewalk along Kingsley Dr would require resetting a chain link fence corner and/or relocating a utility pole that block the way. Four steep driveway aprons would need to be reconstructed for level sidewalk crossings unless the residential front yard fences and gates running along the street at the top side of the aprons can be relocated to allow sidewalk to bypass the existing aprons on level driveway surfaces. Three trees at these driveways would need to be removed if bypassing rather than reconstructing the aprons. One other tree would likely experience root damage or need to be removed, and other low-hanging tree branches would need to be cut back. One other driveway apron would need to be extended for a durable sidewalk crossing at an otherwise unpaved access point to a vacant parcel.</td>
<td>16</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-159</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Kildare Ave</td>
<td>Kingsley Dr &amp; South Study Boundary</td>
<td>East</td>
<td>205</td>
<td>Excavation and short retaining walls would be needed to build sidewalk across the sloped space between the curb and residential front yards at a higher elevation. Three steep driveways would need to be reconstructed for level sidewalk crossings. Two trees would likely need to be removed, and a utility pole would likely need to be relocated.</td>
<td>19</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-RP-160</td>
<td>City of Dallas</td>
<td>Repair</td>
<td>S Denley Dr</td>
<td>Kingsley Dr &amp; South Study Boundary</td>
<td>West</td>
<td>40</td>
<td>Remove and replace sidewalk panels that have been severely cracked, resulting in trip hazards and grass overgrowth.</td>
<td>18</td>
<td>TBD</td>
</tr>
<tr>
<td>ID</td>
<td>Owner</td>
<td>Improvement Type</td>
<td>Street Name</td>
<td>Between</td>
<td>Side of Street</td>
<td>Length (ft)</td>
<td>Notes</td>
<td>Priority Score</td>
<td>Opinion of Probable Cost</td>
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</tr>
<tr>
<td>7C-VA-RP-161</td>
<td>City of Dallas</td>
<td>Repair</td>
<td>S Denley Dr</td>
<td>Kingsley Dr &amp; South Study Boundary</td>
<td>East</td>
<td>300</td>
<td>Remove and replace very old and damaged sidewalk panels that have been severely cracked, resulting in trip hazards and partial to nearly complete grass overgrowth.</td>
<td>15</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-162</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>S Denley Dr</td>
<td>Kingsley Dr &amp; South Study Boundary</td>
<td>East</td>
<td>10</td>
<td>The wide driveway to a gated church parking lot may need to be reconstructed for a level sidewalk crossing. Another narrower driveway may also need to be reconstructed for a level crossing. A tree would need to have lower branches trimmed, and could experience root damage or need to be removed, along with removal of some other church landscaping.</td>
<td>14</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-RP-163</td>
<td>City of Dallas</td>
<td>Repair</td>
<td>S Denley Dr</td>
<td>Kingsley Dr &amp; South Study Boundary</td>
<td>East</td>
<td>50</td>
<td>An existing, wide and steep driveway apron on church property that does not need lead to a parking area would need to be removed or bypassed to construct sidewalk. Removing the apron would likely cause root damage and perhaps require removal of a small tree. New sidewalk would likely be able to bypass the steep southern church driveway apron and cross the driveway at a relatively level location.</td>
<td>9</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-164</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>S Denley Dr</td>
<td>Kingsley Dr &amp; South Study Boundary</td>
<td>East</td>
<td>70</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Some excavation, short retaining walls, and/or regrading and resetting of an adjacent residential fence may be needed to level a slope for sidewalk near the corner with Kildare Ave.</td>
<td>11</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-165</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Kingsley Dr</td>
<td>Burnside Ave &amp; Kildare Ave</td>
<td>North</td>
<td>175</td>
<td>Two trees may experience root damage during sidewalk construction. One unpaved residential driveway would need to have an apron constructed for a durable sidewalk crossing.</td>
<td>16</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-166</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Opal Ave</td>
<td>Fordham Rd &amp; Ann Arbor Ave</td>
<td>West</td>
<td>440</td>
<td>Remove and replace sidewalk panels that have cracked and spalled significantly, causing grass overgrowth.</td>
<td>22</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-RP-167</td>
<td>City of Dallas</td>
<td>Repair</td>
<td>Opal Ave</td>
<td>Fordham Rd &amp; Ann Arbor Ave</td>
<td>West</td>
<td>40</td>
<td>A few trees along the residential fence line may experience root damage or need to be removed if building sidewalk set back from the curb to align with level driveway crossing locations. Curbside sidewalk could minimize tree root damage but require reconstruction of driveway aprons for level crossings. In either case, underground utility boxes would likely need to be adjusted or relocated.</td>
<td>25</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-168</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Opal Ave</td>
<td>Fordham Rd &amp; Ann Arbor Ave</td>
<td>West</td>
<td>185</td>
<td>Two unpaved residential driveways would require new aprons for durable sidewalk crossings. One of the driveways may require some regrading for a level crossing. A small tree near this driveway would likely need to be removed.</td>
<td>24</td>
<td>TBD</td>
</tr>
</tbody>
</table>

**Notes:**
- **Priority Score:** The priority score reflects the importance of the project.
- **Opinion of Probable Cost:** TBD indicates that the probable cost has not been determined.
### Half Mile Area Improvements Matrix

**VA Medical Center Station**

**Sidewalk & Shared Use Path Segments**

<table>
<thead>
<tr>
<th>ID</th>
<th>Owner</th>
<th>Improvement Type</th>
<th>Street Name</th>
<th>Between</th>
<th>Side of Street</th>
<th>Length (ft)</th>
<th>Notes</th>
<th>Priority Score</th>
<th>Opinion of Probable Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>7C-VA-SW-170</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Custer Dr</td>
<td>Biglow Dr &amp; Easter Ave</td>
<td>North</td>
<td>610</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Sidewalk construction would require construction of an aprons for a church driveway and five residential driveways that are either unpaved or in poor condition. Underground utility boxes and manholes would need to be adjusted. Residential parallel parking on the unpaved shoulder would likely need to be discontinued.</td>
<td>18</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-171</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Custer Dr</td>
<td>Easter Ave &amp; North Study Boundary</td>
<td>North</td>
<td>260</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. A slightly steep residential driveway may need to have an apron constructed for a durable sidewalk crossing. Near the study area boundary, a culvert crossing of a creek would need to be widened to provide sidewalk, and the guardrail protecting the drop-off to the creek bed would need to be reset. Vegetation would need to be cut back, and nearby trees could be affected.</td>
<td>13</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-172</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Custer Dr</td>
<td>Biglow Dr &amp; Easter Ave</td>
<td>South</td>
<td>615</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Right angle parking for a church near the corner with Biglow Dr is flush with the street and would need to be converted to angled or parallel parking to make space for sidewalk between the building and the parking spaces. Sidewalk construction would require construction of aprons for two residential driveways that are in poor condition. Residential parallel parking on the unpaved shoulder would likely need to be discontinued.</td>
<td>18</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-173</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Custer Dr</td>
<td>Easter Ave &amp; North Study Boundary</td>
<td>South</td>
<td>280</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. An unpaved driveway to a gated church parking lot would need to have an apron constructed for a durable sidewalk crossing. Near the study area boundary, a culvert crossing of a creek would need to be widened to provide sidewalk, and the guardrail protecting the drop-off to the creek bed would need to be reset. Vegetation would need to be cut back, and nearby trees could be affected. Residential parallel parking on the unpaved shoulder would likely need to be discontinued.</td>
<td>13</td>
<td>TBD</td>
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<tr>
<td>7C-VA-RP-174</td>
<td>City of Dallas</td>
<td>Repair</td>
<td>Ann Arbor Ave</td>
<td>S Lancaster Rd &amp; Opal Ave</td>
<td>North</td>
<td>70</td>
<td>Excessive cracking and erosion of sidewalk panels have occurred near two underground utility boxes and a utility pole located in the middle of the sidewalk, resulting in complete grass overgrowth of some sidewalk panels. Remove and replace the existing panels. Ideally, the utility pole would also be relocated to provide an accessible sidewalk. A utility pole guy wire near the corner with Lancaster Rd should also be relocated to provide an accessible sidewalk width.</td>
<td>26</td>
<td>TBD</td>
</tr>
<tr>
<td>ID</td>
<td>Owner</td>
<td>Improvement Type</td>
<td>Street Name</td>
<td>Between</td>
<td>Side of Street</td>
<td>Length (ft)</td>
<td>Notes</td>
<td>Priority Score</td>
<td>Opinion of Probable Cost</td>
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<td>7C-VA-RP-175</td>
<td>City of Dallas</td>
<td>Repair</td>
<td>Ann Arbor Ave</td>
<td>S Lancaster Rd &amp; Opal Ave</td>
<td>North</td>
<td>95</td>
<td>Correct drainage or retaining wall problem that has resulted in the collection of excessive amounts of sediment and debris on the sidewalk adjacent to the retaining wall.</td>
<td>26</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-RP-176</td>
<td>City of Dallas</td>
<td>Repair</td>
<td>Ann Arbor Ave</td>
<td>Biglow Dr &amp; Easter Ave</td>
<td>North</td>
<td>10</td>
<td>Remove and replace concrete panels where differential settlement and/or cracking have caused sedimentation, grass overgrowth and potential trip hazards. An underground utility box surrounded by sidewalk will need to be adjusted.</td>
<td>20</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-177</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Gladewater Rd</td>
<td>East Study Boundary &amp; Ann Arbor Ave</td>
<td>West</td>
<td>290</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Two residential driveways that are in poor condition would need to have aprons constructed for durable sidewalk crossings. Residential parallel parking on the unpaved shoulder would likely need to be discontinued.</td>
<td>13</td>
<td>TBD</td>
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<tr>
<td>7C-VA-SW-178</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Gladewater Rd</td>
<td>East Study Boundary &amp; Ann Arbor Ave</td>
<td>East</td>
<td>270</td>
<td>Street lacks existing curb and gutter, which should be considered for construction together with sidewalk if possible to avoid drainage problems. Near a bridge over a creek at the south end of the segment, backfill will be needed to level the way for sidewalk, and a culvert crossing under a residential driveway will need to be modified. This driveway, as well as two others that are unpaved or in poor condition, would need to have aprons constructed for durable sidewalk crossings. Residential parallel parking on the unpaved shoulder would likely need to be discontinued.</td>
<td>13</td>
<td>TBD</td>
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<tr>
<td>7C-VA-RP-179</td>
<td>City of Dallas</td>
<td>Repair</td>
<td>Ann Arbor Ave</td>
<td>East Study Boundary &amp; Ann Arbor Ave</td>
<td>North</td>
<td>75</td>
<td>Remove and replace sidewalk panels where differential settlement adjacent to the abutments for the bridge over a creek has created trip hazards and accumulation of sediment over the sidewalk.</td>
<td>12</td>
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<tr>
<td>7C-VA-SW-217</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Horizon Dr</td>
<td>North Terminus &amp; Inca Dr</td>
<td>East</td>
<td>220</td>
<td>A swinging gate and/or two large underground utility vaults that protrude several inches above the ground may need to be modified for sidewalk to pass through a pinch point between them and a fence and utility pole to reach the Lisbon Swimming Pool at the north end of Horizon Dr. Just north of Inca Dr, two swinging gates in the chain link fence that provide access to the field around Harry Stone Montessori School may need to be modified so as to allow them not to block the path of future sidewalk when opened.</td>
<td>10</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-218</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Inca Dr</td>
<td>Horizon Dr</td>
<td>Northeast</td>
<td>5</td>
<td>Extend sidewalk to edge of street and build pedestrian ramp.</td>
<td>10</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-219</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Inca Dr</td>
<td>Horizon Dr</td>
<td>Southeast</td>
<td>5</td>
<td>Extend sidewalk to edge of street and build pedestrian ramp.</td>
<td>10</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-220</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Horizon Dr</td>
<td>Inca Dr &amp; S2nd St</td>
<td>East</td>
<td>420</td>
<td>Remove and replace sidewalk panels that are broken and partially missing next to a storm drain inlet, reducing the width of the sidewalk to less than 4 feet.</td>
<td>35</td>
<td>TBD</td>
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<tr>
<td>7C-VA-RP-221</td>
<td>City of Dallas</td>
<td>Repair</td>
<td>S Lancaster Rd</td>
<td>Atlas Dr &amp; Adelaide Dr</td>
<td>East</td>
<td>10</td>
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<tr>
<td>ID</td>
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<td>Improvement Type</td>
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<td>Length (ft)</td>
<td>Notes</td>
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<tr>
<td>7C-VA-RP-222</td>
<td>City of Dallas</td>
<td>Repair</td>
<td>S Lancaster Rd</td>
<td>52nd St &amp; Kingsley Dr</td>
<td>East</td>
<td>30</td>
<td>Correct a trip hazard where an underground utility box in a cutout from a surrounding sidewalk panel has either settled and been covered by sediment and grass or has been removed without the sidewalk being repaired.</td>
<td></td>
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<tr>
<td>7C-VA-RP-223</td>
<td>City of Dallas</td>
<td>Repair</td>
<td>S Lancaster Rd</td>
<td>Kingsley Dr &amp; South Study Boundary</td>
<td>East</td>
<td>20</td>
<td>Remove and replace sidewalk panels where differential settlement has occurred adjacent to a storm drain inlet, causing a trip hazard, and where cracking and erosion have reduced the sidewalk width and created another trip hazard.</td>
<td></td>
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<tr>
<td>7C-VA-RP-225</td>
<td>City of Dallas</td>
<td>Repair</td>
<td>Eastgate Cir</td>
<td>52nd St &amp; Dupont Dr</td>
<td>North</td>
<td>40</td>
<td>Remove and replace sidewalk panels where a very large tree has caused upheaval of panels and a major trip hazard. Tree root damage may occur, but other measures should be taken if possible to elevate the new sidewalk panels above the tree roots and reduce the likelihood of further sidewalk damage.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7C-VA-RP-226</td>
<td>City of Dallas</td>
<td>Repair</td>
<td>Eastgate Cir</td>
<td>52nd St &amp; Dupont Dr</td>
<td>South</td>
<td>20</td>
<td>Remove and replace sidewalk panels where a very large tree has caused upheaval of panels and a major trip hazard. Tree root damage may occur, but other measures should be taken if possible to elevate the new sidewalk panels above the tree roots and reduce the likelihood of further sidewalk damage.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7C-VA-SW-180</td>
<td>U.S. Department of Veterans Affairs</td>
<td>New Sidewalk</td>
<td>6th St</td>
<td>Ann Arbor Ave &amp; Liberty Loop</td>
<td>West</td>
<td>45</td>
<td>A chain link fence and gate topped by barbed wire separate Ann Arbor Ave from the Veterans Administration Medical Center parking lot at this location. Sidewalk along the east side of 6th Street could be extended north to Ann Arbor Ave over a short open channel drainage swale with the addition of a steel plate and the modification of the vehicular access gate to accommodate pedestrians also. Since this would not represent a more direct path between the DART station and any buildings on the VA campus than other existing pedestrian routes, this change would be unlikely to attract new DART ridership.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7C-VA-GR-181</td>
<td>U.S. Department of Veterans Affairs</td>
<td>Gap to Remain</td>
<td>Liberty Loop</td>
<td>Avenue of Flags &amp; 6th St</td>
<td>North</td>
<td>540</td>
<td>A chain link fence topped by barbed wire separating Lancaster Rd from the Veterans Administration Medical Center parking lot would need to be at least partially removed to provide sidewalk. Since the south side of Liberty Loop at this location already has sidewalk, a crosswalk is provided to the parking garage to the north, the parking garage is exclusively for the Veterans Administration rather than for DART riders, and pedestrian connections between the station and VA buildings are already available along more direct routes via Ave of Flags, new sidewalk here would be unlikely to attract new DART ridership.</td>
<td></td>
<td></td>
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<tr>
<td>7C-VA-SW-182</td>
<td>U.S. Department of Veterans Affairs</td>
<td>New Sidewalk</td>
<td>Liberty Loop</td>
<td>6th St &amp; Liberty Loop</td>
<td>North</td>
<td>265</td>
<td>Sidewalk north of the right angle parking spaces that are flush with the street pavement and south of the perimeter fence for the VA campus would be unlikely to attract much new DART ridership even if the adjacent VA Medical Center perimeter fence were opened to pedestrian traffic.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ID</td>
<td>Owner</td>
<td>Improvement Type</td>
<td>Street Name</td>
<td>Between</td>
<td>Side of Street</td>
<td>Length (ft)</td>
<td>Priority Score</td>
<td>Opinion of Probable Cost</td>
<td>Notes</td>
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<tr>
<td>7C-VA-SW-183</td>
<td>U.S. Department of Veterans Affairs</td>
<td>New Sidewalk</td>
<td>Liberty Loop</td>
<td>Ann Arbor Ave &amp; Liberty Loop</td>
<td>West</td>
<td>40</td>
<td>22</td>
<td>TBD</td>
<td>The barbed-wire topped chain link fence and access gate (which appears to be typically closed for vehicular traffic) would need to be modified to allow new sidewalk to connect to the VA Medical Center campus from Ann Arbor Ave. This sidewalk connection would provide only a slight reduction in walking distance to the station for residents of neighborhoods to the north and east.</td>
</tr>
<tr>
<td>7C-VA-GR-186</td>
<td>U.S. Department of Veterans Affairs</td>
<td>Gap to Remain</td>
<td>Liberty Loop</td>
<td>6th St &amp; Liberty Loop</td>
<td>South</td>
<td>590</td>
<td>0</td>
<td>TBD</td>
<td>Guardrail between the roadway and an adjacent building would need to be removed to allow sidewalk to pass. A parallel parking space next to another building (used as angled parking for maintenance vehicles) would also need to be removed. Since the north side of Liberty Loop at this location already has sidewalk, a crosswalk is provided to the building to the south, and pedestrian connections between the station and the VA Medical Center buildings are already available along more direct routes to the station via Mentor Ave, new sidewalk here would be unlikely to attract new DART ridership.</td>
</tr>
<tr>
<td>7C-VA-SW-190</td>
<td>U.S. Department of Veterans Affairs</td>
<td>New Sidewalk</td>
<td>Liberty Loop</td>
<td>Ann Arbor Ave &amp; Liberty Loop</td>
<td>East</td>
<td>70</td>
<td>13</td>
<td>TBD</td>
<td>The barbed-wire topped chain link fence and access gate (which appears to be typically closed for vehicular traffic) would need to be modified to allow new sidewalk to connect to the VA Medical Center campus from Ann Arbor Ave. This sidewalk connection would provide only a slight reduction in walking distance to the station for residents of neighborhoods to the north and east.</td>
</tr>
<tr>
<td>7C-VA-GR-195</td>
<td>U.S. Department of Veterans Affairs</td>
<td>Gap to Remain</td>
<td>Liberty Loop</td>
<td>Veterans Dr &amp; 3rd St</td>
<td>East</td>
<td>40</td>
<td>16</td>
<td>TBD</td>
<td>This link would likely not provide a reduction in walking distance to the station for any potential future DART riders, but could be useful for some walking trips internal to the VA Medical Center campus.</td>
</tr>
<tr>
<td>7C-VA-GR-197</td>
<td>U.S. Department of Veterans Affairs</td>
<td>Gap to Remain</td>
<td>Liberty Loop</td>
<td>Veterans Dr &amp; 3rd St</td>
<td>West</td>
<td>290</td>
<td>0</td>
<td>TBD</td>
<td>Insufficient space for sidewalk exists between roadway and retaining wall holding back slope at higher elevation above.</td>
</tr>
<tr>
<td>7C-VA-SW-199</td>
<td>U.S. Department of Veterans Affairs</td>
<td>New Sidewalk</td>
<td>Liberty Loop</td>
<td>Veterans Dr &amp; 3rd St</td>
<td>West</td>
<td>515</td>
<td>0</td>
<td>TBD</td>
<td>Insufficient space for sidewalk exists between roadway and retaining wall for parking lot at higher elevation above.</td>
</tr>
<tr>
<td>7C-VA-SW-202</td>
<td>U.S. Department of Veterans Affairs</td>
<td>New Sidewalk</td>
<td>3rd St</td>
<td>Liberty Loop &amp; Energy Center Cir</td>
<td>South</td>
<td>90</td>
<td>21</td>
<td>TBD</td>
<td>Sidewalk on the south side of Liberty Loop adjacent only to the VA Medical Center perimeter fence would be unlikely to serve any existing or future pedestrian travel demand.</td>
</tr>
<tr>
<td>ID</td>
<td>Owner</td>
<td>Improvement Type</td>
<td>Street Name</td>
<td>Between</td>
<td>Side of Street</td>
<td>Length (ft)</td>
<td>Notes</td>
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<tr>
<td>7C-VA-GR-203</td>
<td>U.S. Department of Veterans Affairs</td>
<td>Gap to Remain</td>
<td>Liberty Loop</td>
<td>Atlas Dr &amp; 3rd St</td>
<td>North</td>
<td>385</td>
<td>Sidewalk construction would require excavation and retaining walls, which could in turn cause root damage to several nearby trees. Two streetlight poles would also likely need to be relocated. This sidewalk would be unlikely to serve much if any pedestrian travel demand since it would mostly connect Lancaster Rd to parking areas east of the main VA Medical Center buildings (thus encouraging driving more than walking or transit). Walking trips between the station and the main hospital buildings have direct access via Ave of Flags. Through walking trips to the station to/from neighborhoods east of the hospital campus, even if allowed via the hospital's northern entrances, would have more direct walking routes to the station via Ann Arbor Ave.</td>
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<tr>
<td>7C-VA-SW-204</td>
<td>U.S. Department of Veterans Affairs</td>
<td>New Sidewalk</td>
<td>Liberty Loop</td>
<td>Atlas Dr &amp; 3rd St</td>
<td>South</td>
<td>850</td>
<td>Backfill would be required to make a level way for sidewalk on a downhill slope towards the hospital campus perimeter fence. Dome trees on the slope may be affected. Sidewalk on the south side of Liberty Loop adjacent only to the VA Medical Center perimeter fence would be unlikely to serve any existing or future pedestrian travel demand.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7C-VA-SW-207</td>
<td>City of Dallas</td>
<td>New Sidewalk</td>
<td>Ann Arbor Ave</td>
<td>Gladewater Rd &amp; Veterans Dr</td>
<td>South</td>
<td>45</td>
<td>Extend sidewalk to edge of street and build pedestrian ramp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7C-VA-SW-208</td>
<td>U.S. Department of Veterans Affairs</td>
<td>New Sidewalk</td>
<td>Veterans Dr</td>
<td>Ann Arbor Ave &amp; Energy Center Cir</td>
<td>West</td>
<td>330</td>
<td>A gap in the barbed-wire topped chain link fence and access gate (which appears to be typically closed for vehicular traffic) would need to be provided to allow new sidewalk to connect to the VA Medical Center campus from Anne Arbor Ave. A wayfinding sign and a streetlight pole would need to be relocated. An open channel drainage swale would need to be bridged by a steel plate. This sidewalk connection would not provide a reduction in walking distance to the station for residents of neighborhoods to the north and east.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7C-VA-GR-209</td>
<td>U.S. Department of Veterans Affairs</td>
<td>Gap to Remain</td>
<td>Liberty Loop &amp; Energy Center Cir</td>
<td>Veterans Dr</td>
<td>North</td>
<td>270</td>
<td>The covered pedestrian ramp up to the entrance of a building obstructs sidewalk from continuing along the north side of Veterans Dr along part of this segment.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7C-VA-SW-210</td>
<td>U.S. Department of Veterans Affairs</td>
<td>New Sidewalk</td>
<td>Veterans Dr</td>
<td>Ann Arbor Ave &amp; Energy Center Cir</td>
<td>East</td>
<td>375</td>
<td>Two gaps in the barbed-wire topped chain link fence and access gate (which appears to be typically closed for vehicular traffic) would need to be provided to allow new sidewalk to connect to the VA Medical Center campus from Anne Arbor Ave. One gap could be provided at a pedestrian gate (leading to an empty field) that already appears to be kept open at times. This sidewalk connection would not provide a reduction in walking distance to the station for residents of neighborhoods to the north and east.</td>
<td></td>
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<td>7C-VA-SW-211</td>
<td>U.S. Department of Veterans Affairs</td>
<td>New Sidewalk</td>
<td>Veterans Dr</td>
<td>Liberty Loop &amp; Energy Center Cir</td>
<td>South</td>
<td>215</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Half Mile Area Improvements Matrix

### Sidewalk & Shared Use Path Segments

<table>
<thead>
<tr>
<th>ID</th>
<th>Owner</th>
<th>Improvement Type</th>
<th>Street Name</th>
<th>Between</th>
<th>Side of Street</th>
<th>Length (ft)</th>
<th>Notes</th>
<th>Priority Score</th>
<th>Opinion of Probable Cost</th>
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<tbody>
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<td>7C-VA-SW-01</td>
<td>U.S. Department of Veterans Affairs</td>
<td>New Sidewalk</td>
<td>Energy Center Cir</td>
<td>Veterans Dr &amp; 3rd St</td>
<td>East</td>
<td>385</td>
<td>Seven or eight small trees between the roadway and a retaining wall need to be removed to build sidewalk. A dumpster would also need to be relocated.</td>
<td>13</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-02</td>
<td>U.S. Department of Veterans Affairs</td>
<td>New Sidewalk</td>
<td>Energy Center Cir</td>
<td>Veterans Dr &amp; 3rd St</td>
<td>West</td>
<td>415</td>
<td>The wide loading dock for the rear of the building northeast of here would be an undesirable place for pedestrian crossings, so this sidewalk segment would be of little value.</td>
<td>12</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-SW-03</td>
<td>U.S. Department of Veterans Affairs</td>
<td>New Sidewalk</td>
<td>Energy Center Cir</td>
<td>Veterans Dr &amp; 3rd St</td>
<td>North</td>
<td>225</td>
<td>The wide loading dock for the rear of the building here would be an undesirable place for pedestrian crossings, so this sidewalk segment would be of little value.</td>
<td>12</td>
<td>TBD</td>
</tr>
</tbody>
</table>

### Opinion of Probable Cost:
- U.S. Department of Veterans Affairs Subtotal: $- $-
- Total for All Sidewalk Recommendations in Half Mile Area: $- $-

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**NOVEMBER 2019**

DRAFT - Not for Construction
### Half Mile Area Improvements Matrix

#### VA Medical Center Station

**Crosswalk Segments**

<table>
<thead>
<tr>
<th>ID</th>
<th>Owner</th>
<th>Improvement Type</th>
<th>Street Name</th>
<th>At/Between</th>
<th>Side of Street</th>
<th>Length (ft)</th>
<th>Notes</th>
<th>Priority Score</th>
<th>Opinion of Probable Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>7C-VA-CW-38</td>
<td>City of Dallas</td>
<td>Upgrade Crosswalk</td>
<td>Ann Arbor Ave</td>
<td>Fernwood Ave</td>
<td>West</td>
<td>55</td>
<td>Add high-visibility crosswalk markings and pedestrian ramps to this existing signed but unmarked crosswalk between a church and its parking lot on the opposite side of a 4-lane undivided roadway. Streetlighting is already present. Consider a road diet to reduce the street width to one lane in each direction, with curb extensions adjacent to on-street parallel parking for the church. A road diet would also be consistent with the City's plans to implement local on-street bicycle lanes along Ann Arbor Ave, but the bike lanes may require removal of on-street parking. In this case, a median refuge island may be more advantageous than curb extensions. If four travel lanes are to remain, add advance yield lines and &quot;Yield Here to Pedestrians&quot; signing at the yield lines to avoid a dual threat situation for pedestrians. Also consider providing pedestrian-actuated rectangular rapid-flashing beacons (RRFB's).</td>
<td>15</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-CW-39</td>
<td>City of Dallas</td>
<td>Upgrade Crosswalk</td>
<td>Ann Arbor Ave</td>
<td>Fernwood Ave</td>
<td>East</td>
<td>55</td>
<td>Add high-visibility crosswalk markings and pedestrian ramps to this existing signed but unmarked crosswalk between a church and its parking lot on the opposite side of a 4-lane undivided roadway. Streetlighting is already present. Consider a road diet to reduce the street width to one lane in each direction, with curb extensions adjacent to on-street parallel parking for the church. A road diet would also be consistent with the City's plans to implement local on-street bicycle lanes along Ann Arbor Ave, but the bike lanes may require removal of on-street parking. In this case, a median refuge island may be more advantageous than curb extensions. If four travel lanes are to remain, add advance yield lines and &quot;Yield Here to Pedestrians&quot; signing at the yield lines to avoid a dual threat situation for pedestrians. Also consider providing pedestrian-actuated rectangular rapid-flashing beacons (RRFB's).</td>
<td>19</td>
<td>TBD</td>
</tr>
</tbody>
</table>
## Improvement Code Legend

**ID:** 7C-VA-SW-01

- **7C: Station Number**
- **SW: Sidewalk** (or **CW=crosswalk, VW=Veloweb, SP=**)
- **VA: Station Abbreviation** (Shared-Use Path, **RP=sidewalk repair, GR=Gap to Remain**)
- **01: Improvement Number (matches on Map)**

### Crosswalk Segments

<table>
<thead>
<tr>
<th>ID</th>
<th>Owner</th>
<th>Improvement Type</th>
<th>Street Name</th>
<th>At/Between</th>
<th>Side of Street</th>
<th>Length (ft)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>7C-VA-CW-40</td>
<td>City of Dallas</td>
<td>Upgrade Crosswalk</td>
<td>Ann Arbor Ave</td>
<td>S Denley Dr (W)</td>
<td>West</td>
<td>55</td>
<td>Consider upgrades to this existing signed and marked school crosswalk across a 4-lane undivided roadway in a reduced speed 20 mph school zone. Streetlighting is already present. Consider a road diet to reduce the street width to one lane in each direction, with curb extensions adjacent to on-street parallel parking near a church and day care center on opposite sides of the street. A road diet would also be consistent with the City's plans to implement local on-street bicycle lanes along Ann Arbor Ave, but the bike lanes may require removal of on-street parking. In this case, a median refuge island may be more advantageous than curb extensions. If four travel lanes are to remain, add advance yield lines and &quot;Yield Here to Pedestrians&quot; signing at the yield lines to avoid a dual threat situation for pedestrians. Also consider providing pedestrian-actuated rectangular rapid-flashing beacons (RRFB's).</td>
</tr>
<tr>
<td>7C-VA-CW-41</td>
<td>City of Dallas</td>
<td>Upgrade Crosswalk</td>
<td>Ann Arbor Ave</td>
<td>S Denley Dr (W)</td>
<td>West</td>
<td>55</td>
<td>Consider upgrades to this existing signed and marked school crosswalk across a 4-lane undivided roadway in a reduced speed 20 mph school zone. Streetlighting is already present. Consider a road diet to reduce the street width to one lane in each direction, with curb extensions or a median refuge area provided to shorten the crossing distance. A road diet would also be consistent with the City's plans to implement local on-street bicycle lanes along Ann Arbor Ave, but the bike lanes may require removal of on-street standing areas adjacent to school property. With bike lanes, a median refuge island may be more advantageous than curb extensions. Coordination with Holland Elementary School should occur to ensure sufficient space for vehicular queues during school arrival and dismissal times are maintained. If four travel lanes are to remain, add advance yield lines and &quot;Yield Here to Pedestrians&quot; signing at the yield lines to avoid a dual threat situation for pedestrians. Also consider providing pedestrian-actuated rectangular rapid-flashing beacons (RRFB's).</td>
</tr>
<tr>
<td>7C-VA-CW-224</td>
<td>City of Dallas</td>
<td>Upgrade Crosswalk</td>
<td>52nd St</td>
<td>Eastgate Cir</td>
<td>East</td>
<td>45</td>
<td>Replace existing school crossing warning signs with fluorescent yellow-green signs with diagonal-downward pointing arrow panels (W16-7P) facing each direction of traffic at existing marked crosswalk.</td>
</tr>
</tbody>
</table>

### Opinion of Probable Cost - City of Dallas Subtotal:

$ -

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**NOVEMBER 2019**

DRAFT - Not for Construction
<table>
<thead>
<tr>
<th>ID</th>
<th>Owner</th>
<th>Improvement Type</th>
<th>Street Name</th>
<th>At/Between</th>
<th>Side of Street</th>
<th>Length (ft)</th>
<th>Notes</th>
<th>Priority Score</th>
<th>Opinion of Probable Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>7C-VA-CW-184</td>
<td>U.S. Department of Veterans Affairs</td>
<td>Upgrade Crosswalk</td>
<td>Liberty Loop</td>
<td>Midblock</td>
<td>N/A</td>
<td>45</td>
<td>Remove existing pedestrian warning signs of varying design and mounting height. Add MUTCD-compliant double-sided diamond-shaped pedestrian warning signs (W11-2) with diagonal-downward pointing arrow panels (W16-7P) facing each direction of traffic at existing marked crosswalk. All signs shall be mounted 7 feet above the roadway pavement surface.</td>
<td>22</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-CW-185</td>
<td>U.S. Department of Veterans Affairs</td>
<td>Upgrade Crosswalk</td>
<td>Liberty Loop</td>
<td>Midblock</td>
<td>N/A</td>
<td>45</td>
<td>Remove existing pedestrian warning signs of varying design and mounting height. Add MUTCD-compliant double-sided diamond-shaped pedestrian warning signs (W11-2) with diagonal-downward pointing arrow panels (W16-7P) facing each direction of traffic at existing marked crosswalk. All signs shall be mounted 7 feet above the roadway pavement surface.</td>
<td>28</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-CW-187</td>
<td>U.S. Department of Veterans Affairs</td>
<td>Upgrade Crosswalk</td>
<td>Avenue of Flags</td>
<td>Liberty Loop</td>
<td>East</td>
<td>40</td>
<td>Add MUTCD-compliant double-sided diamond-shaped pedestrian warning signs (W11-2) with diagonal-downward pointing arrow panels (W16-7P) facing the inbound (eastbound) direction of traffic at existing marked crosswalk across Ave of Flags. All signs shall be mounted 7 feet above the roadway pavement surface. (These signs should not be located on this same crosswalk facing westbound traffic, since stop signs are already present.)</td>
<td>37</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-CW-188</td>
<td>U.S. Department of Veterans Affairs</td>
<td>Upgrade Crosswalk</td>
<td>Avenue of Flags</td>
<td>N/A</td>
<td>North</td>
<td>35</td>
<td>Remove existing pedestrian warning signs of varying design and mounting height. Add MUTCD-compliant double-sided diamond-shaped pedestrian warning signs (W11-2) with diagonal-downward pointing arrow panels (W16-7P) facing each direction of traffic at existing marked crosswalk. All signs shall be mounted 7 feet above the roadway pavement surface.</td>
<td>22</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-CW-189</td>
<td>U.S. Department of Veterans Affairs</td>
<td>Upgrade Crosswalk</td>
<td>Avenue of Flags</td>
<td>N/A</td>
<td>South</td>
<td>35</td>
<td>Remove existing pedestrian warning signs of varying design and mounting height. Add MUTCD-compliant double-sided diamond-shaped pedestrian warning signs (W11-2) with diagonal-downward pointing arrow panels (W16-7P) facing each direction of traffic at existing marked crosswalk. All signs shall be mounted 7 feet above the roadway pavement surface.</td>
<td>50</td>
<td>TBD</td>
</tr>
<tr>
<td>ID</td>
<td>Owner</td>
<td>Improvement Type</td>
<td>Street Name</td>
<td>At/Between</td>
<td>Side of Street</td>
<td>Length (ft)</td>
<td>Notes</td>
<td>Priority Score</td>
<td>Opinion of Probable Cost</td>
</tr>
<tr>
<td>---------------</td>
<td>--------------------------------------------</td>
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<td>-------------</td>
<td>------------</td>
<td>----------------</td>
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<td>-------------------------------------------------------------------------------------------------</td>
<td>----------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>7C-VA-CW-191</td>
<td>U.S. Department of Veterans Affairs</td>
<td>Upgrade Crosswalk</td>
<td>1st St</td>
<td>Midblock</td>
<td>N/A</td>
<td>60</td>
<td>Remove existing pedestrian warning signs of varying design and mounting height. Add MUTCD-compliant double-sided diamond-shaped pedestrian warning signs (W11-2) with diagonal-downward pointing arrow panels (W16-7P) facing each direction of traffic at existing marked crosswalk. All signs shall be mounted 7 feet above the roadway pavement surface.</td>
<td>14</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-CW-192</td>
<td>U.S. Department of Veterans Affairs</td>
<td>Upgrade Crosswalk</td>
<td>Liberty Loop</td>
<td>Midblock</td>
<td>N/A</td>
<td>80</td>
<td>Remove existing pedestrian warning signs of varying design and mounting height. Add MUTCD-compliant double-sided diamond-shaped pedestrian warning signs (W11-2) with diagonal-downward pointing arrow panels (W16-7P) facing each direction of traffic at existing marked crosswalk. All signs shall be mounted 7 feet above the roadway pavement surface.</td>
<td>16</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-CW-194</td>
<td>U.S. Department of Veterans Affairs</td>
<td>Upgrade Crosswalk</td>
<td>Liberty Loop</td>
<td>Midblock</td>
<td>N/A</td>
<td>65</td>
<td>Remove existing pedestrian warning signs of varying design and mounting height. Add MUTCD-compliant double-sided diamond-shaped pedestrian warning signs (W11-2) with diagonal-downward pointing arrow panels (W16-7P) facing each direction of traffic at existing marked crosswalk. All signs shall be mounted 7 feet above the roadway pavement surface.</td>
<td>19</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-CW-196</td>
<td>U.S. Department of Veterans Affairs</td>
<td>Upgrade Crosswalk</td>
<td>Liberty Loop</td>
<td>Midblock</td>
<td>N/A</td>
<td>65</td>
<td>Remove existing pedestrian warning signs of varying design and mounting height. Add MUTCD-compliant double-sided diamond-shaped pedestrian warning signs (W11-2) with diagonal-downward pointing arrow panels (W16-7P) facing each direction of traffic at existing marked crosswalk. All signs shall be mounted 7 feet above the roadway pavement surface.</td>
<td>16</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-CW-198</td>
<td>U.S. Department of Veterans Affairs</td>
<td>Upgrade Crosswalk</td>
<td>Liberty Loop</td>
<td>Midblock</td>
<td>N/A</td>
<td>70</td>
<td>Remove existing pedestrian warning signs of varying design and mounting height. Add MUTCD-compliant double-sided diamond-shaped pedestrian warning signs (W11-2) with diagonal-downward pointing arrow panels (W16-7P) facing each direction of traffic at existing marked crosswalk. All signs shall be mounted 7 feet above the roadway pavement surface.</td>
<td>20</td>
<td>TBD</td>
</tr>
<tr>
<td>7C-VA-CW-200</td>
<td>U.S. Department of Veterans Affairs</td>
<td>Upgrade Crosswalk</td>
<td>Liberty Loop</td>
<td>Midblock</td>
<td>N/A</td>
<td>55</td>
<td>Remove existing pedestrian warning signs of varying design and mounting height. Add MUTCD-compliant double-sided diamond-shaped pedestrian warning signs (W11-2) with diagonal-downward pointing arrow panels (W16-7P) facing each direction of traffic at existing marked crosswalk. All signs shall be mounted 7 feet above the roadway pavement surface.</td>
<td>20</td>
<td>TBD</td>
</tr>
</tbody>
</table>
### Improvement Code Legend

**ID:** 7C-VA-SW-01

- **7C** – Station Number
- **VA** – Station Abbreviation
- **SW** – Sidewalk (or CW=crosswalk, VW=Veloweb, SP=Shared-Use Path, RP=sidewalk repair, GR=Gap to Remain)
- **01** – Improvement Number (matches on Map)

### Half Mile Area Improvements Matrix

<table>
<thead>
<tr>
<th>ID</th>
<th>Owner</th>
<th>Improvement Type</th>
<th>Street Name</th>
<th>At/Between</th>
<th>Side of Street</th>
<th>Length (ft)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>7C-VA-CW-201</td>
<td>U.S. Department of Veterans Affairs</td>
<td>Upgrade Crosswalk</td>
<td>Liberty Loop</td>
<td>3rd St</td>
<td>North</td>
<td>90</td>
<td>Remove existing pedestrian warning signs of varying design and mounting height. Add MUTCD-compliant double-sided diamond-shaped pedestrian warning signs (W11-2) with diagonal-downward pointing arrow panels (W16-7P) facing each direction of traffic at existing marked crosswalk. All signs shall be mounted 7 feet above the roadway pavement surface.</td>
</tr>
<tr>
<td>7C-VA-CW-205</td>
<td>U.S. Department of Veterans Affairs</td>
<td>Upgrade Crosswalk</td>
<td>Liberty Loop</td>
<td>Atlas Dr</td>
<td>Southeast</td>
<td>35</td>
<td>Remove existing pedestrian warning signs of varying design and mounting height. Add MUTCD-compliant double-sided diamond-shaped pedestrian warning signs (W11-2) with diagonal-downward pointing arrow panels (W16-7P) facing each direction of traffic at existing marked crosswalk. All signs shall be mounted 7 feet above the roadway pavement surface.</td>
</tr>
<tr>
<td>7C-VA-CW-206</td>
<td>U.S. Department of Veterans Affairs</td>
<td>Upgrade Crosswalk</td>
<td>Liberty Loop</td>
<td>Atlas Dr</td>
<td>Northeast</td>
<td>35</td>
<td>Remove existing pedestrian warning signs of varying design and mounting height. Add MUTCD-compliant double-sided diamond-shaped pedestrian warning signs (W11-2) with diagonal-downward pointing arrow panels (W16-7P) facing each direction of traffic at existing marked crosswalk. All signs shall be mounted 7 feet above the roadway pavement surface.</td>
</tr>
<tr>
<td>7C-VA-CW-216</td>
<td>U.S. Department of Veterans Affairs</td>
<td>Upgrade Crosswalk</td>
<td>Veterans Dr</td>
<td>Midblock</td>
<td>N/A</td>
<td>35</td>
<td>Remove existing pedestrian warning signs of varying design and mounting height. Add MUTCD-compliant double-sided diamond-shaped pedestrian warning signs (W11-2) with diagonal-downward pointing arrow panels (W16-7P) facing each direction of traffic at existing marked crosswalk. All signs shall be mounted 7 feet above the roadway pavement surface.</td>
</tr>
</tbody>
</table>

**Opinion of Probable Cost - U.S. Department of Veterans Affairs Subtotal**: $-

**Opinion of Probable Cost - Total for All Crosswalk Recommendations in Half Mile Area**: $-
Enhancing Mobility within the Southern Dallas Inland Port

FY 2020 BUILD Grant Application

Attachment 3: Letters of Support
May 1, 2020

The Honorable Elaine Chao
Secretary
U.S. Department of Transportation
1200 New Jersey Avenue SE
Washington, DC 20590

Dear Secretary Chao:

I am writing to express my support for North Central Texas Council of Governments’ (NCTCOG) application submitted to the Department of Transportation for the BUILD grant for the Enhancing Mobility Within the Southern Dallas Inland Port project.

As you and your staff review the proposal, I trust you will give full consideration to the many strengths of this application. As you know, Dallas County is classified as being nonattainment for ozone, proving efforts to promote greater transit use and enhance the transit experience to be essential for improving air quality as well as connecting workers to jobs. If funded, this project will provide additional mobility and transit connectivity in the part of southern Dallas County surrounding the International Inland Port of Dallas (IIPOD), a trade and logistics hub. Located at the nexus of Interstate Highway (IH) 20, IH 35, and IH 45, this dynamic area has emerged in recent years as a hub for job and economic growth, benefitting the cities of Dallas, DeSoto, Hutchins, Lancaster and Wilmer. Mobility improvements in the area will support the IIPOD’s continued growth by better connecting the local workforce to job sites.

I would appreciate your efforts to ensure that I am kept informed of the progress of this application. Please contact Holten Stringer (Holten_Stringer@cornyn.senate.gov), my Grants Coordinator, with any developments regarding this proposal as soon as they are available.

Thank you for your assistance and consideration.

Sincerely,

[Signature]

JOHN CORNYN
United States Senator
April 28, 2020

The Honorable Elaine L. Chao
Secretary of Transportation
United States Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Chao:

I am pleased to support the United States Department of Transportation 2020 Better Utilizing Investments to Leverage Development (BUILD) Grant application submitted by the North Central Texas Council of Governments (NCTCOG) for the Enhancing Mobility Within the Southern Dallas Inland Port Project.

The Enhancing Mobility Within the Southern Dallas Inland Port Project will provide additional mobility and transit connectivity in the part of southern Dallas County surrounding the International Inland Port of Dallas (IIPOD), a trade and logistics hub. Located at the nexus of Interstate Highway (IH) 20, IH 35, and IH 45, this dynamic area has emerged in recent years as a hub for job and economic growth, benefitting the cities of Dallas, DeSoto, Hutchins, Lancaster and Wilmer. Mobility improvements in the area will support the IIPOD’s continued growth by better connecting the local workforce to job sites. The requested funding will enable coordinated thoroughfare and transit-friendly improvements through multiple agencies and partnerships, and deployment of smart technologies will improve road safety and optimize throughput for all modes.

Responding to transit and market demands in the region, this project will connect rural residents and large employers of the IIPOD to an existing light rail system, the nearby Veteran’s Assistance Medical Center, and education and job training opportunities. Infrastructure and transit service improvements will address the challenges commuters currently experience in reaching job centers across long distances and at non-traditional hours. The infrastructure improvements will include new or revamped sidewalks, transit-friendly street design, new or upgraded bus facilities and smart traffic signals. Transit service improvements will include expanded service area connections, convenient connections to existing transit services, including a light rail station on the Dallas Area Rapid Transit’s Blue Line, and coordinated service planning through partnerships.
The Environmental Protection Agency classifies Dallas County as being in nonattainment for ozone, so efforts to promote greater transit use and enhance the transit experience will be essential for improving air quality as well as connecting workers to jobs. Therefore, funding will also support increased trips by electric buses and free or subsidized transit passes for the local workforce. These initiatives will work together with the proposed infrastructure improvements to address short and long-term mobility and accessibility needs for the Southern Dallas County Inland Port area, helping strengthen connections to job centers, expanding employment opportunities and accelerating the area’s economic development.

Again, I fully support the 2020 BUILD application submitted by NCTCOG for the Enhancing Mobility Within the Southern Dallas Inland Port Project. Thank you for your time and consideration of this project. If you have any questions, please contact my office at 202 225-8885.

Sincerely,

Eddie Bernice Johnson
Member of Congress
May 14, 2020

The Honorable Elaine L. Chao
Secretary of Transportation
United States Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Chao:

This letter is sent to indicate my support of the United States Department of Transportation 2020 Better Utilizing Investments to Leverage Development (BUILD) Grant application submitted by the North Central Texas Council of Governments (NCTCOG) for the Enhancing Mobility Within the Southern Dallas Inland Port Project.

The Enhancing Mobility Within the Southern Dallas Inland Port Project will provide additional mobility and transit connectivity in the region of southern Dallas County that surrounds the International Inland Port of Dallas (IIPOD), a trade and logistics hub. Located at the nexus of Interstate Highway IH-20, IH-35E, and IH-45, this dynamic area has emerged in recent years as a hub for job and economic growth that greatly benefits the cities of Dallas, DeSoto, Hutchins, Lancaster and Wilmer. Mobility improvements in the area will support the IIPOD’s continued growth by better connecting the local workforce to numerous job sites. The requested funding will also enable coordinated thoroughfare and transit-friendly improvements through multiple agencies and partnerships, and the deployment of smart technologies will improve road safety and optimize throughput for all modes.

Responding to transit and market demands in the region, this project will connect rural residents and large employers of the IIPOD to an existing light rail system, the nearby
Veteran’s Administration North Texas Health Care System, three higher education institutions and multiple job training opportunities. Infrastructure and transit service improvements will address the challenges commuters currently experience in reaching job centers across long distances and at non-traditional hours.

The infrastructure improvements will include new or revamped sidewalks, transit-friendly street design, new or upgraded bus facilities and smart traffic signals. Transit service improvements will include expanded service area connections, convenient connections to existing transit services, including a light rail station on the Dallas Area Rapid Transit’s Blue Line, and coordinated service planning through partnerships.

The Environmental Protection Agency classifies Dallas County as being in nonattainment for ozone, so efforts to promote greater transit use and enhance the transit experience are essential for improving air quality as well as connecting workers to jobs. BUILD grant funding will also support increased trips by electric buses and free or subsidized transit passes for the local workforce. These initiatives will work together with the proposed infrastructure improvements to address short and long-term mobility and accessibility needs for the Southern Dallas County Inland Port area, help to strengthen connections to job centers, expand employment opportunities and further accelerate the area’s economic development.

The opportunity to better connect industry with an underserved workforce represents a win-win for all of North Texas. And as the state senator representing this evolving southern Dallas County region, I lend my full support for the 2020 BUILD application submitted by NCTCOG for the Enhancing Mobility Within the Southern Dallas Inland Port Project. Thank you for your time and consideration of this project. If you have any questions, please contact my Texas Senate District office at 5787 S. Hampton Rd. #385, Dallas, TX 75232; or by telephone at 214-467-0123.

Respectfully,

Royce West
Texas Senate
District 23
May 7, 2020

The Honorable Elaine L. Chao  
Secretary of Transportation  
United States Department of Transportation  
1200 New Jersey Avenue, SE  
Washington, DC 20590

Dear Madam Secretary:

I am very pleased to support the North Central Texas Council of Governments’ (NCTCOG) application for the United States Department of Transportation 2020 Better Utilizing Investments to Leverage Development (BUILD) Grant for the Enhancing Mobility Within the Southern Dallas Inland Port Project.

In recent years the Interstate Highway (IH) 20, IH 35, and IH 45 corridor known as the International Inland Port of Dallas (IIPOD) has become a hub for job and economic growth in the southern sector of Dallas County. There are approximately 110 companies, including 28 large employers, in IIPOD that have the ability to provide over 30,000 jobs; however, the lack of mobility and connectivity has been a major barrier to employers and employees. Commuters and job seekers within Texas House District 110 have expressed concern regarding the lack of public transit services, access to reliable personal transportation, and their ability to secure transportation assistance such as affording a Lyft, Uber or obtaining a ride from friends or family as barriers in retaining employment within the IIPOD. Mobility improvement for IIPOD is vital for employee retention and sustained future growth.

By responding to the transit and mobility demands in the area, the Enhancing Mobility Project will build infrastructure connecting commuters and jobseekers to job centers across long distances and at non-traditional hours. These improvements include the expansion of light rail on the Dallas Area Rapid Transit’s (DART’s) Blue Line which will magnify District 110 connectivity. The project will sponsor free or subsidized transit passes for the local workforce and relieve some of the financial burdens many commuters face. The Enhancing Mobility Project strengthens connections to job centers, expands employment opportunities, and accelerates the economic development of Southern Dallas County.

I fully support the 2020 BUILD application submitted by NCTCOG for the Enhancing Mobility Within the Southern Dallas Inland Port Project. Please feel free to contact me should you need additional information. I can be reached at 214-371-3300 or Toni.Rose@House.Texas.Gov.

Sincerely,

Toni Rose  
State Representative  
District 110
The Honorable Elaine L. Chao  
Secretary of Transportation  
United States Department of Transportation  
1200 New Jersey Avenue, SE  
Washington, DC 20590  

Dear Secretary Chao:

It is an honor to endorse and support the United States Department of Transportation 2020 Better Utilizing Investments to Leverage Development (BUILD) Grant application submitted by the North Central Texas Council of Governments (NCTCOG) for the Enhancing Mobility Within the Southern Dallas Inland Port Project.

The Enhancing Mobility Within the Southern Dallas Inland Port Project will provide additional mobility and transit connectivity in the part of southern Dallas County surrounding the International Inland Port of Dallas (IIPOD), a trade and logistics hub. Located at the nexus of Interstate Highway (IH) 20, IH 35, and IH 45, this dynamic area has emerged in recent years as a hub for job and economic growth, benefitting the cities of District 109 in which I represent, including Dallas, DeSoto, Hutchins, Lancaster and Wilmer. Mobility improvements in this area will substantially support the IIPOD’s continued growth by better connecting the local workforce to job sites. The requested funding will enable coordinated thoroughfare and transit-friendly improvements through multiple agencies and partnerships, and deployment of smart technologies will improve road safety and optimize throughput for all modes.

Responding to transit and market demands in the region, this project will connect rural residents and large employers of the IIPOD to an existing light rail system, the nearby Veteran’s Assistance Medical Center, and education and job training opportunities. Infrastructure and transit service improvements will address the challenges commuters currently experience in reaching job centers across long distances and at non-traditional hours. The infrastructure improvements will include new or revamped sidewalks, transit-friendly street design, new or upgraded bus facilities and smart traffic signals. Transit service improvements will include expanded service area connections,
convenient connections to existing transit services, including a light rail station on the Dallas Area Rapid Transit’s Blue Line, and coordinated service planning through partnerships.

The Environmental Protection Agency classifies Dallas County as being in nonattainment for ozone, so efforts to promote greater transit use and enhance the transit experience will be essential for improving air quality as well as connecting workers to jobs. Therefore, funding will also support increased trips by electric buses and free or subsidized transit passes for the local workforce. These initiatives will work together with the proposed infrastructure improvements to address short and long-term mobility and accessibility needs for the Southern Dallas County Inland Port area, helping strengthen connections to job centers, expanding employment opportunities and accelerating the area’s economic development.

Again, I support the 2020 BUILD application submitted by NCTCOG for the Enhancing Mobility Within the Southern Dallas Inland Port Project. Thank you for your time and consideration of this project. If you have any questions, please feel free to contact my office by phone at (972) 227-1064 or by email at District109.Sherman@house.texas.gov.

Sincerely,

Carl O. Sherman, Sr.
State Representative
District 109
May 13, 2020

The Honorable Elaine L. Chao  
Secretary of Transportation  
United States Department of Transportation  
1200 New Jersey Avenue, SE  
Washington, DC 20590

Dear Secretary Chao:

Dallas County is pleased to support the United States Department of Transportation 2020 Better Utilizing Investments to Leverage Development (BUILD) Grant application submitted by the North Central Texas Council of Governments (NCTCOG) for the **Enhancing Mobility within the Southern Dallas Inland Port Project.**

The Enhancing Mobility within the Southern Dallas Inland Port Project will provide additional mobility and transit connectivity in the part of southern Dallas County surrounding the International Inland Port of Dallas (IIPOD), a trade and logistics hub. Located at the nexus of Interstate Highway (IH) 20, IH 35, and IH 45, this dynamic area has emerged in recent years as a hub for job and economic growth, benefitting the cities of Dallas, DeSoto, Hutchins, Lancaster and Wilmer. Mobility improvements in the area will support the IIPOD’s continued growth by better connecting the local workforce to job sites. The requested funding will enable coordinated thoroughfare and transit-friendly improvements through multiple agencies and partnerships, and deployment of smart technologies will improve road safety and optimize throughput for all modes.

Responding to transit and market demands in the region, this project will connect rural residents and large employers of the IIPOD to an existing light rail system, the nearby Veteran’s Assistance Medical Center, and education and job training opportunities. Infrastructure and transit service improvements will address the challenges commuters currently experience in reaching job centers across long distances and at non-traditional hours. The infrastructure improvements will include new or revamped sidewalks, transit-friendly street design, new or upgraded bus facilities and smart traffic signals. Transit service improvements will include expanded service area connections, convenient connections to existing transit services, including a light rail station on the Dallas Area Rapid Transit’s Blue Line, and coordinated service planning through partnerships.
The Environmental Protection Agency classifies Dallas County as being in nonattainment for ozone, so efforts to promote greater transit use and enhance the transit experience will be essential for improving air quality as well as connecting workers to jobs. Therefore, funding will also support increased trips by electric buses and free or subsidized transit passes for the local workforce. These initiatives will work together with the proposed infrastructure improvements to address short and long-term mobility and accessibility needs for the Southern Dallas County Inland Port area, helping strengthen connections to job centers, expanding employment opportunities and accelerating the area’s economic development.

In closing, Dallas County fully supports the 2020 BUILD application submitted by NCTCOG for the Enhancing Mobility within the Southern Dallas Inland Port Project. Thank you for your time and consideration of this project. If you have any questions, please contact Clay.Jenkins@dallascounty.org.

Sincerely,

Clay Lewis Jenkins
Dallas County Judge
April 28, 2020

The Honorable Elaine L. Chao
Secretary of Transportation
United States Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Chao:

Dallas County, Commissioner District 1, is pleased to support the United States Department of Transportation 2020 Better Utilizing Investments to Leverage Development (BUILD) Grant application submitted by the North Central Texas Council of Governments (NCTCOG) for the Enhancing Mobility Within the Southern Dallas Inland Port Project.

The Enhancing Mobility Within the Southern Dallas Inland Port Project will provide additional mobility and transit connectivity in the part of southern Dallas County surrounding the International Inland Port of Dallas (IIPOD), a trade and logistics hub. Located at the nexus of Interstate Highway (IH) 20, IH 35, and IH 45, this dynamic area has emerged in recent years as a hub for job and economic growth, benefiting the cities of Dallas, DeSoto, Hutchins, Lancaster and Wilmer. Mobility improvements in the area will support the IIPOD’s continued growth by better connecting the local workforce to job sites. The requested funding will enable coordinated thoroughfare and transit-friendly improvements through multiple agencies and partnerships, and deployment of smart technologies will improve road safety and optimize throughput for all modes.

Responding to transit and market demands in the region, this project will connect rural residents and large employers of the IIPOD to an existing light rail system, the nearby Veteran’s Assistance Medical Center, and education and job training opportunities. Infrastructure and transit service improvements will address the challenges commuters currently experience in reaching job centers across long distances and at non-traditional hours. The infrastructure improvements will include new or revamped sidewalks, transit-friendly street design, new or upgraded bus facilities and smart traffic signals. Transit service improvements will include expanded service area connections, convenient connections to existing transit services, including a light rail station on the Dallas Area Rapid Transit’s Blue Line, and coordinated service planning through partnerships.

The Environmental Protection Agency classifies Dallas County as being in nonattainment for ozone, so efforts to promote greater transit use and enhance the transit experience will be essential for improving air quality as well as connecting workers to jobs. Therefore, funding will also support increased trips by electric buses and free or subsidized transit passes for the local workforce. These initiatives will work together with the proposed infrastructure improvements to address short and long-term mobility and accessibility needs for the Southern Dallas County Inland Port area, helping strengthen connections to job centers, expanding employment opportunities and accelerating the area’s economic development.

Again, I fully support the 2020 BUILD application submitted by NCTCOG for the Enhancing Mobility Within the Southern Dallas Inland Port Project. Thank you for your time and consideration of this project. If you have any questions, please contact me.

Sincerely,

[Signature]

Dr. Theresa M. Daniel
Dallas County Commissioner

411 Elm Street, Administration Building,
2nd Floor, Dallas, Texas 75202
(214) 653-6668
May 8, 2020

The Honorable Elaine L. Chao
Secretary of Transportation
United States Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Chao:

The City of Dallas is pleased to support the United States Department of Transportation 2020 Better Utilizing Investments to Leverage Development (BUILD) Grant application submitted by the North Central Texas Council of Governments (NCTCOG) for the Enhancing Mobility Within the Southern Dallas Inland Port Project.

The Enhancing Mobility Within the Southern Dallas Inland Port Project will provide additional mobility and transit connectivity in the part of southern Dallas County surrounding the International Inland Port of Dallas (IIPOD), a trade and logistics hub. Located at the nexus of Interstate Highway (IH) 20, IH 35, and IH 45, this dynamic area has emerged in recent years as a hub for jobs and economic growth, which has benefitted the cities of Dallas, DeSoto, Hutchins, Lancaster, and Wilmer.

We expect that IIPOD will continue to grow in the years ahead and serve as a significant asset to the regional economy in the country’s fourth-largest metropolitan area. With that growth, comes the need for mobility improvements and better connections to the local workforce through all modes of transportation.

The BUILD Discretionary Grant would allow this project to ultimately connect rural residents and large employers of the IIPOD to an existing light rail system, the nearby Veterans Affairs Medical Center, and education and job training opportunities.

Planned infrastructure and transit service improvements will address the challenges commuters currently experience reaching job centers across long distances and at non-traditional hours. The infrastructure improvements will include new or revamped sidewalks, transit-friendly street design, new or upgraded bus facilities, and smart traffic signals. Transit service improvements will include improved and expanded service-area connections and coordinated service planning through partnerships.

Dallas County is in nonattainment for ozone, according to the Environmental Protection Agency. As such, efforts to promote greater transit use and enhance the transit experience will be essential for improving air quality as well as connecting workers to jobs. Funding will also support increased trips by electric buses and free or subsidized transit passes for the local workforce. These initiatives, together with the proposed infrastructure improvements to address short and long-term mobility and accessibility needs for the Southern Dallas County Inland Port area, will accelerate the area’s economic development and provide a measurable return on investment for the funding provided by the BUILD Discretionary Grant.

Thank you for your time and consideration of this project. If you have any questions, please contact Dina Colarossi, dina.colarossi@dallascityhall.com, 214.671.9062.

Sincerely,

Eric Johnson
April 30, 2020

The Honorable Elaine L. Chao  
Secretary of Transportation  
United States Department of Transportation  
1200 New Jersey Avenue, SE  
Washington, DC 20590  

Dear Secretary Chao:

The City of DeSoto is pleased to support the United States Department of Transportation 2020 Better Utilizing Investments to Leverage Development (BUILD) Grant application submitted by the North Central Texas Council of Governments (NCTCOG) for the Enhancing Mobility Within the Southern Dallas Inland Port Project.

The Enhancing Mobility Within the Southern Dallas Inland Port Project will provide additional mobility and transit connectivity in the part of southern Dallas County surrounding the International Inland Port of Dallas (IIPOD), a trade and logistics hub. Located at the nexus of Interstate Highway (IH) 20, IH 35, and IH 45, this dynamic area has emerged in recent years as a hub for job and economic growth, benefitting the cities of Dallas, DeSoto, Hutchins, Lancaster and Wilmer. Mobility improvements in the area will support the IIPOD’s continued growth by better connecting the local workforce to job sites. The requested funding will enable coordinated thoroughfare and transit-friendly improvements through multiple agencies and partnerships, and deployment of smart technologies will improve road safety and optimize throughput for all modes.

Responding to transit and market demands in the region, this project will connect rural residents and large employers of the IIPOD to an existing light rail system, the nearby Veteran’s Assistance Medical Center, and education and job training opportunities. Infrastructure and transit service improvements will address the challenges commuters currently experience in reaching job centers across long distances and at non-traditional hours. The infrastructure improvements will include new or revamped sidewalks, transit-friendly street design, new or upgraded bus facilities and smart traffic signals. Transit service improvements will include expanded service area connections, convenient connections to existing transit services, including a light rail station on the Dallas Area Rapid Transit’s Blue Line, and coordinated service planning through partnerships.

The Environmental Protection Agency classifies Dallas County as being in nonattainment for ozone, so efforts to promote greater transit use and enhance the transit experience will be essential for improving air quality as well as connecting workers to jobs.
Therefore, funding will also support increased trips by electric buses and free or subsidized transit passes for the local workforce. These initiatives will work together with the proposed infrastructure improvements to address short and long-term mobility and accessibility needs for the Southern Dallas County Inland Port area, helping strengthen connections to job centers, expanding employment opportunities and accelerating the area’s economic development.

Again, the City of DeSoto fully supports the 2020 BUILD application submitted by NCTCOG for the Enhancing Mobility Within the Southern Dallas Inland Port Project.

Thank you for your time and consideration of this project.

Sincerely,

\[signature\]
Curtistene S. McCowan
Mayor
May 4, 2020

The Honorable Elaine L. Chao
Secretary of Transportation
United States Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Chao:

The City of Hutchins is pleased to support the United States Department of Transportation 2020 Better Utilizing Investments to Leverage Development (BUILD) Grant application submitted by the North Central Texas Council of Governments (NCTCOG) for the Enhancing Mobility Within the Southern Dallas Inland Port Project.

The Enhancing Mobility Within the Southern Dallas Inland Port Project will provide additional mobility and transit connectivity in the part of southern Dallas County surrounding the International Inland Port of Dallas (IIPOD), a trade and logistics hub. Located at the nexus of Interstate Highway (IH) 20, IH 35, and IH 45, this dynamic area has emerged in recent years as a hub for job and economic growth, benefitting the cities of Dallas, DeSoto, Hutchins, Lancaster and Wilmer. Mobility improvements in the area will support the IIPOD’s continued growth by better connecting the local workforce to job sites. The requested funding will enable coordinated thoroughfare and transit-friendly improvements through multiple agencies and partnerships, and deployment of smart technologies will improve road safety and optimize throughput for all modes.

Responding to transit and market demands in the region, this project will connect rural residents and large employers of the IIPOD to an existing light rail system, the nearby Veteran’s Assistance Medical Center, and education and job training opportunities. Infrastructure and transit service improvements will address the challenges commuters currently experience in reaching job centers across long distances and at non-traditional hours. The infrastructure improvements will include new or revamped sidewalks, transit-friendly street design, new or upgraded bus facilities and smart traffic signals. Transit service improvements will include expanded service area connections, convenient connections to existing transit services, including a light rail station on the Dallas Area Rapid Transit’s Blue Line, and coordinated service planning through partnerships.

The Environmental Protection Agency classifies Dallas County as being in nonattainment for ozone, so efforts to promote greater transit use and enhance the transit experience will be essential for improving air quality as well as connecting workers to jobs. Therefore, funding will also support increased trips by electric buses and free or subsidized transit passes for the local workforce. These initiatives will work together with the proposed infrastructure improvements to address short and long-term mobility and accessibility needs for the Southern Dallas County Inland Port area, helping strengthen connections to job centers, expanding employment opportunities and accelerating the area’s economic development.

Again, the City of Hutchins fully supports the 2020 BUILD application submitted by NCTCOG for the Enhancing Mobility Within the Southern Dallas Inland Port Project. Thank you for your time and consideration of this project. If you have any questions, please contact me at 972-225-6121.

Sincerely,

[Signature]

Mario Vasquez
Mayor
May 1, 2020

The Honorable Elaine L. Chao  
Secretary of Transportation  
United States Department of Transportation  
1200 New Jersey Avenue, SE  
Washington, DC 20590

Dear Ms. Chao,

The City of Wilmer is pleased to support the United States Department of Transportation 2020 Better Utilizing Investments to Leverage Development (BUILD) Grant application submitted by the North Central Texas Council of Governments (NCTCOG) for the Enhancing Mobility Within the Southern Dallas Inland Port Project.

The Enhancing Mobility Within the Southern Dallas Inland Port Project will provide additional mobility and transit connectivity in the part of southern Dallas County surrounding the International Inland Port of Dallas (IIPOD), a trade and logistics hub. Located at the nexus of Interstate Highway (IH) 20, IH 35, and IH 45, this dynamic area has emerged in recent years as a hub for job and economic growth, benefitting the cities of Dallas, DeSoto, Hutchins, Lancaster and Wilmer. Mobility improvements in the area will support the IIPOD’s continued growth by better connecting the local workforce to job sites. The requested funding will enable coordinated thoroughfare and transit-friendly improvements through multiple agencies and partnerships, and deployment of smart technologies will improve road safety and optimize throughput for all modes.

Responding to transit and market demands in the region, this project will connect rural residents and large employers of the IIPOD to an existing light rail system, the nearby Veteran’s Assistance Medical Center, and education and job training opportunities. Infrastructure and transit service improvements will address the challenges commuters currently experience in reaching job centers across long distances and at non-traditional hours. The infrastructure improvements will include new or revamped sidewalks, transit-friendly street design, new or upgraded bus facilities and smart traffic signals.
Transit service improvements will include expanded service area connections, convenient connections to existing transit services, including a light rail station on the Dallas Area Rapid Transit's Blue Line, and coordinated service planning through partnerships.

The Environmental Protection Agency classifies Dallas County as being in nonattainment for ozone, so efforts to promote greater transit use and enhance the transit experience will be essential for improving air quality as well as connecting workers to jobs. Therefore, funding will also support increased trips by electric buses and free or subsidized transit passes for the local workforce. These initiatives will work together with the proposed infrastructure improvements to address short and long-term mobility and accessibility needs for the Southern Dallas County Inland Port area, helping strengthen connections to job centers, expanding employment opportunities and accelerating the area's economic development.

Again, the City of Wilmer fully supports the 2020 BUILD application submitted by NCTCOG for the Enhancing Mobility Within the Southern Dallas Inland Port Project. Thank you for your time and consideration of this project. If you have any questions, please do not hesitate in contacting me 972-441-6373.

Best Regards,

Emmanuel Wealthy,
Mayor
Enhancing Mobility within the Southern Dallas Inland Port
May 8, 2020

The Honorable Elaine L. Chao  
Secretary of Transportation  
United States Department of Transportation  
1200 New Jersey Avenue, SE  
Washington, DC 20590

Dear Secretary Chao:

Dallas Area Rapid Transit (DART) is pleased to support the United States Department of Transportation 2020 Better Utilizing Investments to Leverage Development (BUILD) Grant application submitted by the North Central Texas Council of Governments (NCTCOG) for the **Enhancing Mobility Within the Southern Dallas Inland Port Project.**

This project will provide additional mobility and transit connectivity in the part of southern Dallas County surrounding a trade and logistics center called the International Inland Port of Dallas (IIPOD). Located at the nexus of Interstate Highway (IH)-20, IH-35, and IH-45, this dynamic area has emerged in recent years as a hub for job and economic growth, benefitting the cities of Dallas, DeSoto, Hutchins, Lancaster, and Wilmer. Mobility improvements in the area will support continued economic growth by better connecting the local workforce to job sites within the IIPOD. This funding will enable coordinated thoroughfare and transit-friendly improvements through multiple agencies and partnerships, and deployment of smart technologies will improve road safety and optimize throughput for all modes.

Additionally, this project’s infrastructure and transit service improvements will enable rural residents to connect to large employers in the IIPOD, Veteran’s Assistance Medical Center, and education and job training opportunities by utilizing DART’s extensive multi-modal network during non-traditional hours. The infrastructure improvements will include new or revamped sidewalks, transit-friendly street design, new or upgraded bus facilities and smart traffic signals. Transit service improvements will include expanded service area connections, convenient connections to existing transit services, including a light rail station on DART’s Blue Line, and coordinated service planning through partnerships.

The Environmental Protection Agency classifies Dallas County as being in nonattainment for ozone, so efforts to promote greater transit use and enhance the transit experience are essential for improving air quality, as well as connecting workers to jobs. Therefore, funding will also support increased trips by electric buses and free or subsidized transit passes for the local workforce. These initiatives will work together with the proposed infrastructure improvements to address short and long-term mobility and accessibility needs for the Southern Dallas County Inland Port area, helping strengthen connections to job centers, expanding employment opportunities and accelerating the area’s economic development.
Again, DART fully supports the 2020 BUILD application submitted by NCTCOG for the Enhancing Mobility Within the Southern Dallas Inland Port Project and appreciates your consideration of this project. Please feel free to contact me at 214-749-2544 if you have any questions.

Sincerely,

/s/ Gary C. Thomas
Reviewed and approved, but not signed due to COVID-19 Coronavirus Pandemic

Gary C. Thomas
President/Executive Director

c: DART Board
    Edie Diaz, Vice President, Government and Community Relations
April 30, 2020

The Honorable Elaine L. Chao
Secretary of Transportation
United States Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Chao:

STAR Transit is pleased to support the United States Department of Transportation 2020 Better Utilizing Investments to Leverage Development (BUILD) Grant application submitted by the North Central Texas Council of Governments (NCTCOG) for the Enhancing Mobility Within the Southern Dallas Inland Port Project.

The Enhancing Mobility Within the Southern Dallas Inland Port Project will provide additional mobility and transit connectivity in the part of southern Dallas County surrounding the International Inland Port of Dallas (IIPoD), a trade and logistics hub. Located at the nexus of Interstate Highway (IH) 20, IH 35, and IH 45, this dynamic area has emerged in recent years as a hub for job and economic growth, benefitting the cities of Dallas, DeSoto, Hutchins, Lancaster and Wilmer. Mobility improvements in the area will support the IIPoD’s continued growth by better connecting the local workforce to job sites. The requested funding will enable coordinated thoroughfare and transit-friendly improvements through multiple agencies and partnerships, and deployment of smart technologies will improve road safety and optimize throughput for all modes.

Responding to transit and market demands in the region, this project will connect rural residents and large employers of the IIPoD to an existing light rail system, the nearby Veteran’s Assistance Medical Center, and education and job training opportunities. Infrastructure and transit service improvements will address the challenges commuters currently experience in reaching job centers across long distances and at non-traditional hours. The infrastructure improvements will include new or revamped sidewalks, transit-friendly street design, new or upgraded bus facilities and smart traffic signals. Transit service improvements will include expanded service area connections, convenient connections to existing transit services, including a light rail station on the Dallas Area Rapid Transit’s Blue Line, and coordinated service planning through partnerships.

The Environmental Protection Agency classifies Dallas County as being in nonattainment for ozone, so efforts to promote greater transit use and enhance the transit experience will be essential for improving air quality as well as connecting workers to jobs. Therefore, funding will also support increased trips by electric buses and free or subsidized transit passes for the local workforce. These initiatives will work together with the proposed infrastructure improvements to address short and long-term mobility and accessibility needs for the Southern Dallas County Inland Port area, helping strengthen connections to job centers, expanding employment opportunities and accelerating the area’s economic development.

Again, STAR Transit fully supports the 2020 BUILD application submitted by NCTCOG for the Enhancing Mobility Within the Southern Dallas Inland Port Project. Thank you for your time and consideration of this project. If you have any questions, please contact Tommy Henricks, Executive Director at thenricks@startransit.org.

Sincerely,

Tommy Henricks
Executive Director
Enhancing Mobility within the Southern Dallas Inland Port
May 8, 2020

The Honorable Elaine L. Chao  
Secretary of Transportation  
United States Department of Transportation  
1200 New Jersey Avenue, SE  
Washington, DC 20590

Dear Secretary Chao:

The Southern Dallas County Inland Port Transportation Management Association is pleased to support the United States Department of Transportation 2020 Better Utilizing Investments to Leverage Development (BUILD) Grant application submitted by the North Central Texas Council of Governments (NCTCOG) for the Enhancing Mobility Within the Southern Dallas Inland Port Project.

The Enhancing Mobility Within the Southern Dallas Inland Port Project will provide additional mobility and transit connectivity in the part of southern Dallas County surrounding the International Inland Port of Dallas (IIPOD), a trade and logistics hub. Located at the nexus of Interstate Highway (IH) 20, IH 35, and IH 45, this dynamic area has emerged in recent years as a hub for job and economic growth, benefitting the cities of Dallas, DeSoto, Hutchins, Lancaster and Wilmer. Mobility improvements in the area will support the IIPOD’s continued growth by better connecting the local workforce to job sites. The requested funding will enable coordinated thoroughfare and transit-friendly improvements through multiple agencies and partnerships, and deployment of smart technologies will improve road safety and optimize throughput for all modes.

Responding to transit and market demands in the region, this project will connect rural residents and large employers of the IIPOD to an existing light rail system, the nearby Veteran’s Assistance Medical Center, and education and job training opportunities. Infrastructure and transit service improvements will address the challenges commuters currently experience in reaching job centers across long distances and at non-traditional hours. The infrastructure improvements will include new or revamped sidewalks, transit-friendly street design, new or upgraded bus facilities and smart traffic signals. Transit service improvements will include expanded service area connections, convenient connections to existing transit services, including a light rail station on Dallas Area Rapid Transit’s Blue Line, and coordinated service planning through partnerships.

The Environmental Protection Agency classifies Dallas County as being in nonattainment for ozone, so efforts to promote greater transit use and enhance the transit experience will be essential for improving air quality as well as connecting workers to jobs. Therefore, funding will also support increased trips by electric buses and free or subsidized transit passes for the local
workforce. These initiatives will work together with the proposed infrastructure improvements to address short and long-term mobility and accessibility needs for the Southern Dallas County Inland Port area, helping strengthen connections to job centers, expanding employment opportunities and accelerating the area’s economic development.

Again, Southern Dallas County Inland Port Transportation Management Association fully supports the 2020 BUILD application submitted by NCTCOG for the Enhancing Mobility Within the Southern Dallas Inland Port Project and appreciates your consideration of this project. If you have any questions, please contact me directly at 214-749-2544 or gthomas@dart.org.

Sincerely,

/s/ Gary C. Thomas
Reviewed and approved, but not signed due to COVID-19 Coronavirus Pandemic

Gary C. Thomas
Interim Executive Director
Southern Dallas County Inland Port Transportation Management Association
May 11, 2020

The Honorable Elaine Chao
Secretary of Transportation
United States Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Chao,

On behalf of the Dallas Regional Chamber’s (DRC) 1,100 member companies and the 500,000 citizens who work for them, we are pleased to support the United States Department of Transportation’s 2020 Better Utilizing Investments to Leverage Development (BUILD) Grant application submitted by the North Central Texas Council of Governments (NCTCOG) for the Enhancing Mobility Within the Southern Dallas Inland Port Project.

The Enhancing Mobility Within the Southern Dallas Inland Port Project will provide additional mobility and transit connectivity in the part of southern Dallas County surrounding the International Inland Port of Dallas (IIPOD), a trade and logistics hub. Located at the nexus of Interstate Highway (IH) 20, IH 35, and IH 45, this dynamic area has emerged in recent years as a hub for job and economic growth, benefitting the cities of Dallas, DeSoto, Hutchins, Lancaster and Wilmer. Mobility improvements in the area will support the IIPOD’s continued growth by better connecting the local workforce to job sites. This will enhance our ability to directly recruit new companies, jobs, and cause new development in the IIPOD hub. The requested funding will enable coordinated thoroughfare and transit-friendly improvements through multiple agencies and partnerships, and deployment of smart technologies will improve road safety and optimize throughput for all modes.

Responding to transit and market demands in the region, this project will connect rural residents and large employers of the IIPOD to an existing light rail system, the nearby Veteran’s Assistance Medical Center, and education and job training opportunities. Infrastructure and transit service improvements will address the challenges commuters currently experience in reaching job centers across long distances and at non-traditional hours. The infrastructure improvements will include new or revamped sidewalks, transit-friendly street design, new or upgraded bus facilities and smart traffic signals. Transit service improvements will include expanded service area connections, convenient connections to existing transit services, including a light rail station on the Dallas Area Rapid Transit’s Blue Line, and coordinated service planning through partnerships.

The Environmental Protection Agency classifies Dallas County as being in nonattainment for ozone, so efforts to promote greater transit use and enhance the transit experience will be essential for improving air quality as well as connecting workers to jobs. Therefore, funding will also support increased trips by electric buses and free or subsidized transit passes for the local workforce. These initiatives will work together with the proposed infrastructure improvements to address short and long-term mobility and accessibility needs for the Southern Dallas County Inland Port area, helping strengthen connections to job centers, expanding employment opportunities and accelerating the area’s economic development.

The DRC fully supports the 2020 BUILD Grant application submitted by the NCTCOG for the Enhancing Mobility Within the Southern Dallas Inland Port Project and continues to support policies and solutions that address future infrastructure needs to ensure Texas to be a great state to live, work, and do business. We greatly appreciate your leadership and consideration.

Respectfully,

Dale Petroskey
President & CEO
Dallas Regional Chamber
May 8, 2020

The Honorable Elaine L. Chao
Secretary of Transportation
United States Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Chao:

The Best Southwest Partnership is pleased to support the United States Department of Transportation 2020 Better Utilizing Investments to Leverage Development (BUILD) Grant application submitted by the North Central Texas Council of Governments (NCTCOG) for the Enhancing Mobility Within the Southern Dallas Inland Port Project.

The Enhancing Mobility Within the Southern Dallas Inland Port Project will provide additional mobility and transit connectivity in the part of southern Dallas County surrounding the International Inland Port of Dallas (IIPOD), a trade and logistics hub. Located at the nexus of Interstate Highway (I-H) 20, I-H 35, and I-H 45, this dynamic area has emerged in recent years as a hub for job and economic growth, benefitting the cities of Dallas, DeSoto, Hutchins, Lancaster and Wilmer. Mobility improvements in the area will support the IIPOD’s continued growth by better connecting the local workforce to job sites. The requested funding will enable coordinated thoroughfare and transit-friendly improvements through multiple agencies and partnerships, and deployment of smart technologies will improve road safety and optimize throughput for all modes.

Responding to transit and market demands in the region, this project will connect rural residents and large employers of the IIPOD to an existing light rail system, the nearby Veteran’s Assistance Medical Center, and education and job training opportunities. Infrastructure and transit service improvements will address the challenges commuters currently experience in reaching job centers across long distances and at non-traditional hours. The infrastructure improvements will include new or revamped sidewalks, transit-friendly street design, new or upgraded bus facilities and smart traffic signals. Transit service improvements will include expanded service area connections, convenient connections to existing transit services, including a light rail station on the Dallas Area Rapid Transit’s Blue Line, and coordinated service planning through partnerships.

The Environmental Protection Agency classifies Dallas County as being in nonattainment for ozone, so efforts to promote greater transit use and enhance the transit experience will be essential for improving air quality as well as connecting workers to jobs. Therefore, funding will also support increased trips by electric buses and free or subsidized transit passes for the local workforce. These initiatives will work together with the proposed infrastructure improvements to address short and long-term mobility and accessibility needs for the Southern Dallas County Inland Port area, helping strengthen connections to job centers, expanding employment opportunities and accelerating the area’s economic development.
Again, The Best Southwest Partnership fully supports the 2020 BUILD application submitted by NCTCOG for the Enhancing Mobility Within the Southern Dallas Inland Port Project. Thank you for your time and consideration of this project. If you have any questions, please do not hesitate to contact me.

Sincerely,

Cory A. Lacy  
President  
Best Southwest Partnership  
300 E. Wheatland Road  
Duncanville TX 75116  
(972) 780-5090  
director@bestsouthwest.org
May 7, 2020

The Honorable Elaine L. Chao
Secretary of Transportation
United States Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Chao:

Oncor Electric Delivery is pleased to support the United States Department of Transportation 2020 Better Utilizing Investments to Leverage Development (BUILD) Grant application submitted by the North Central Texas Council of Governments (NCTCOG) for the Enhancing Mobility Within the Southern Dallas Inland Port Project.

The Enhancing Mobility Within the Southern Dallas Inland Port Project will provide additional mobility and transit connectivity in the part of southern Dallas County surrounding the International Inland Port of Dallas (IIPOD), a trade and logistics hub. Located at the nexus of Interstate Highway (IH) 20, IH 35, and IH 45, this dynamic area has emerged in recent years as a hub for job and economic growth, benefitting the cities of Dallas, DeSoto, Hutchins, Lancaster and Wilmer. Mobility improvements in the area will support the IIPOD’s continued growth by better connecting the local workforce to job sites. The requested funding will enable coordinated thoroughfare and transit-friendly improvements through multiple agencies and partnerships, and deployment of smart technologies will improve road safety and optimize throughput for all modes.

Responding to transit and market demands in the region, this project will connect rural residents and large employers of the IIPOD to an existing light rail system, the nearby Veteran’s Assistance Medical Center, and education and job training opportunities. Infrastructure and transit service improvements will address the challenges commuters currently experience in reaching job centers across long distances and at non-traditional hours. The infrastructure improvements will include new or revamped sidewalks, transit-friendly street design, new or upgraded bus facilities and smart traffic signals. Transit service improvements will include expanded service area connections, convenient connections to existing transit services, including a light rail station on the Dallas Area Rapid Transit’s Blue Line, and coordinated service planning through partnerships.

The Environmental Protection Agency classifies Dallas County as being in nonattainment for ozone, so efforts to promote greater transit use and enhance the transit experience will be essential for improving air quality as well as connecting workers to jobs. Therefore, funding will also support increased trips by electric buses and free or subsidized transit passes for the local workforce. These initiatives will work together with the proposed infrastructure improvements to address short and long-term mobility and accessibility needs for the Southern Dallas County Inland Port area, helping strengthen connections to job centers, expanding employment opportunities and accelerating the area’s economic development.

Again, Oncor Electric Delivery fully supports the 2020 BUILD application submitted by NCTCOG for the Enhancing Mobility Within the Southern Dallas Inland Port Project. I would be the
technical contact, manage day-to-day activities, and be responsible for coordinating Oncor’s involvement in this project and bring our internal resources to bear to ensure the required electrical infrastructure supports the operations, tempo and needs of the contemplated project.

Please feel free to contact me at 817-240-8823 (during alternative work locations requirements or 214-486-5657 when return to normal work locations are implemented) or David.Treichler@Oncor.com if you have any questions or concerns.

Sincerely,

Signed: David Treichler

Dr. David Treichler
Director Strategy and Technology
Oncor Electric Delivery
1616 Woodall Rodgers Freeway
Dallas, Texas 75202-1234
May 8, 2020

The Honorable Elaine L. Chao
Secretary of Transportation
United States Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Chao:

UNT Dallas is pleased to support the United States Department of Transportation 2020 Better Utilizing Investments to Leverage Development (BUILD) Grant application submitted by the North Central Texas Council of Governments (NCTCOG) for the Enhancing Mobility Within the Southern Dallas Inland Port Project.

The Enhancing Mobility Within the Southern Dallas Inland Port Project will provide additional mobility and transit connectivity in the part of southern Dallas County surrounding the International Inland Port of Dallas (IIPOD), a trade and logistics hub. Located at the nexus of Interstate Highway (IH) 20, IH 35, and IH 45, this dynamic area has emerged in recent years as a hub for job and economic growth, benefitting the cities of Dallas, DeSoto, Hutchins, Lancaster and Wilmer. Mobility improvements in the area will support the IIPOD’s continued growth by better connecting the local workforce to job sites. The requested funding will enable coordinated thoroughfare and transit-friendly improvements through multiple agencies and partnerships, and deployment of smart technologies will improve road safety and optimize throughput for all modes.

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Again, UNT Dallas fully supports the 2020 BUILD application submitted by NCTCOG for the Enhancing Mobility Within the Southern Dallas Inland Port Project. Thank you for your time and consideration of this project.

Sincerely,

Bob Mong
President

7300 University Hill Blvd., Suite 362 • Dallas, Texas 75241-4603
972-780-1092 (Direct) • 214-535-7137 (Cell) • Bob.Mong@untdallas.edu
The Honorable Elaine L. Chao
Secretary of Transportation
United States Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Chao:

The Dallas County Community College (“DCCCD”), on behalf of Cedar Valley College (“Cedar Valley”), is pleased to support the Better Utilizing Investments to Leverage Development (“BUILD”) grant application submitted by the North Central Texas Council of Governments (“NCTCOG”) for the Enhancing Mobility Within the Southern Dallas Inland Port Project.

Cedar Valley College is located in southern Dallas County near the International Inland Port of Dallas (“IIPOD”) which is located at the nexus of Interstate Highway (IH) 20, IH 35, and IH 45. This dynamic area has emerged in recent years as a hub for job and economic growth, benefitting the cities of Dallas, DeSoto, Hutchins, Lancaster and Wilmer. Enhancing mobility services within southern Dallas County with a special emphasis on the Inland Port Project will provide enhanced mobility and transit connectivity to the residents of many of the communities the DCCCD serves. These mobility enhancements and improvements will also support those seeking better access to local employment opportunities. The requested funding will enable coordinated thoroughfare and transit-friendly improvements through multiple agencies and partnerships, while the deployment of smart technologies will improve road safety and optimize throughput for all modes of transport.

Cedar Valley College has already been engaged in this work to respond to market demands and the transit needs in the region. As such, it is prepared to support the expansion of the newly created transit stations by serving as a new transit site. The Inland Port Project will connect Dallas County residents and large employers of the IIPOD to an existing light rail system, that is convenient to the nearby Veteran’s Assistance Medical Center, and a future DCCCD education and job training site. The funding would help promote greater transit use, improve connectivity of job seekers to jobs, and provide workers with shorter and more accessible commuting options. This funding will also address the needs for sidewalks, and other types transit-friendly mobility choices.

Again, the DCCCD is pleased to fully support the 2020 BUILD grant application submitted by North Central Texas Council of Governments for Enhancing Mobility within the Southern Dallas Inland Port Project. These initiatives will work together with the proposed infrastructure improvements to address short and long-term mobility and accessibility needs for the southern Dallas County Inland Port area, helping strengthen connections to job centers, expanding employment opportunities for residents, and accelerating the area’s economic development.

Thank you for your time and consideration of this project. If you have any questions, please feel free to contact me by email, jseabrooks@dcccd.edu, or phone at 972-860-8251.

Sincerely,

Joe Seabrooks, Ph.D.
President
May 12, 2020

The Honorable Elaine L. Chao
Secretary of Transportation
United States Department of Transportation
1200 New Jersey Avenue, SE
Washington, DC 20590

Dear Secretary Chao:

Paul Quinn College is pleased to support the United States Department of Transportation 2020 Better Utilizing Investments to Leverage Development (BUILD) Grant application submitted by the North Central Texas Council of Governments (NCTCOG) for the Enhancing Mobility Within the Southern Dallas Inland Port Project.

The Enhancing Mobility Within the Southern Dallas Inland Port Project will provide additional mobility and transit connectivity in the part of southern Dallas County surrounding the International Inland Port of Dallas (IIPOD), a trade and logistics hub. Located at the nexus of Interstate Highway (IH) 20, IH 35, and IH 45, this dynamic area has emerged in recent years as a hub for job and economic growth, benefitting the cities of Dallas, DeSoto, Hutchins, Lancaster and Wilmer. Mobility improvements in the area will support the IIPOD’s continued growth by better connecting the local workforce to job sites. The requested funding will enable coordinated thoroughfare and transit-friendly improvements through multiple agencies and partnerships, and deployment of smart technologies will improve road safety and optimize throughput for all modes.

Responding to transit and market demands in the region, this project will connect rural residents and large employers of the IIPOD to an existing light rail system, the nearby Veteran’s Assistance Medical Center, and education and job training opportunities. Infrastructure and transit service improvements will address the challenges commuters currently experience in reaching job centers across long distances and at non-traditional hours. The infrastructure improvements will include new or revamped sidewalks, transit-friendly street design, new or upgraded bus facilities and smart traffic signals. Transit service improvements will include expanded service area connections, convenient connections to existing transit services, including a light rail station on the Dallas Area Rapid Transit’s Blue Line, and coordinated service planning through partnerships.

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Again, Paul Quinn College fully supports the 2020 BUILD application submitted by NCTCOG for the Enhancing Mobility Within the Southern Dallas Inland Port Project. Thank you for your time and consideration of this project. If you have any questions, please contact me at bbrinson@pqc.edu or call 214.379.5573.

Sincerely,

Bruce Brinson
Chief Financial Officer
The Honorable Elaine L. Chao  
Secretary of Transportation  
United States Department of Transportation  
1200 New Jersey Avenue, SE  
Washington, DC 20590  
Dear Secretary Chao:

The Texas Research Alliance is pleased to support the United States Department of Transportation  
2020 Better Utilizing Investments to Leverage Development (BUILD) Grant application submitted by the North Central Texas Council of Governments (NCTCOG) for the Enhancing Mobility Within the Southern Dallas Inland Port Project.

The Enhancing Mobility Within the Southern Dallas Inland Port Project will provide additional mobility and transit connectivity in the part of southern Dallas County surrounding the International Inland Port of Dallas (IIPOD), a trade and logistics hub. Located at the nexus of Interstate Highway (IH) 20, IH 35, and IH 45, this dynamic area has emerged in recent years as a hub for job and economic growth, benefitting the cities of Dallas, DeSoto, Hutchins, Lancaster and Wilmer. Mobility improvements in the area will support the IIPOD’s continued growth by better connecting the local workforce to job sites. The requested funding will enable coordinated thoroughfare and transit-friendly improvements through multiple agencies and partnerships, and deployment of smart technologies will improve road safety and optimize throughput for all modes.

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Again, Texas Research Alliance fully supports the 2020 BUILD application submitted by NCTCOG for the Enhancing Mobility Within the Southern Dallas Inland Port Project. Thank you for your time and consideration of this project. If you have any questions, please contact Dr. Victor A. Fishman, Executive Director, victor@tradfw.org, (814) 404-3899 (mobile).

Sincerely,

Victor A. Fishman, Ph.D.  
Executive Director  
Texas Research Alliance  
www.texasresearchalliance.org
April 28, 2020

The Honorable Elaine L. Chao  
Secretary of Transportation  
United States Department of Transportation  
1200 New Jersey Avenue, SE  
Washington, DC 20590

Dear Secretary Chao:

The Dallas Innovation Alliance is pleased to support the United States Department of Transportation 2020 Better Utilizing Investments to Leverage Development (BUILD) Grant application submitted by the North Central Texas Council of Governments (NCTCOG) for the Enhancing Mobility Within the Southern Dallas Inland Port Project.

The Enhancing Mobility Within the Southern Dallas Inland Port Project will provide additional mobility and transit connectivity in the part of southern Dallas County surrounding the International Inland Port of Dallas (IIPoD), a trade and logistics hub. Located at the nexus of Interstate Highway (IH) 20, IH 35, and IH 45, this dynamic area has emerged in recent years as a hub for living wage job and larger economic growth, benefitting the cities of Dallas, DeSoto, Hutchins, Lancaster and Wilmer. Mobility improvements in the area will support the IIPoD's continued growth by better connecting the local workforce to job sites. The requested funding will enable coordinated thoroughfare and transit-friendly improvements through multiple agencies and partnerships, and deployment of smart technologies will improve road safety and optimize throughput for all modes.

Responding to transit and market demands in the region, this project will connect rural residents and large employers of the IIPoD to an existing light rail system, the nearby Veteran’s Assistance Medical Center, and education and job training opportunities. Infrastructure and transit service improvements will address the challenges commuters currently experience in reaching job centers across long distances and at non-traditional hours. The infrastructure improvements will include new or revamped sidewalks, transit-friendly street design, new or upgraded bus facilities and smart traffic signals. Transit service improvements will include expanded service area connections, convenient connections to existing transit services, including a light rail station on the Dallas Area Rapid Transit’s Blue Line, and coordinated service planning through partnerships.

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Again, The Dallas Innovation Alliance fully supports the 2020 BUILD application submitted by NCTCOG for the Enhancing Mobility Within the Southern Dallas Inland Port Project. Thank you for your time and consideration of this project. If you have any questions, please contact me, Jennifer Sanders, Executive Director, at (214) 909-0400 or Jennifer.Sanders@DallasInnovationAlliance.com.

Best wishes,

Jennifer Sanders
Executive Director
Dallas Innovation Alliance
The Honorable Elaine L. Chao  
Secretary of Transportation  
United States Department of Transportation  
1200 New Jersey Avenue, SE  
Washington, DC 20590

Dear Secretary Chao:

On behalf of the Regional Transportation Council (RTC), which serves as the Metropolitan Planning Organization (MPO) for the Dallas-Fort Worth (DFW) area, I am pleased to support the United States Department of Transportation 2020 Better Utilizing Investments to Leverage Development (BUILD) Discretionary Grant application submitted by the North Central Texas Council of Governments (NCTCOG) for the **Enhancing Mobility Within the Southern Dallas Inland Port Project**.

The Enhancing Mobility Within the Southern Dallas Inland Port Project will provide additional mobility and transit connectivity in the part of southern Dallas County surrounding the International Inland Port of Dallas (IIPOD), a trade and logistics hub. Located at the nexus of Interstate Highway (IH) 20, IH 35, and IH 45, this dynamic area has emerged in recent years as a hub for job and economic growth, benefitting the cities of Dallas, DeSoto, Hutchins, Lancaster, and Wilmer. Mobility improvements in the area will support the IIPOD’s continued growth by better connecting the local workforce to job sites. The requested funding will enable coordinated thoroughfare and transit-friendly improvements through multiple agencies and partnerships, and deployment of smart technologies will improve road safety and optimize throughput for all modes.

Responding to transit and market demands in the region, this project will connect rural residents and large employers of the IIPOD to an existing light rail system, the nearby Veteran’s Assistance Medical Center and education and job training opportunities. Infrastructure and transit service improvements will address the challenges commuters currently experience in reaching job centers across long distances and at non-traditional hours. The infrastructure improvements will include new or revamped sidewalks, transit-friendly street design, new or upgraded bus facilities and smart traffic signals. Transit service improvements will include expanded service area connections, convenient connections to existing transit services, including a light rail station on the Dallas Area Rapid Transit’s Blue Line, and coordinated service planning through partnerships.

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workforce. These initiatives will work together with the proposed infrastructure improvements to address short and long-term mobility and accessibility needs for the Southern Dallas County Inland Port area, helping strengthen connections to job centers, expanding employment opportunities and accelerating the area’s economic development.

The project is consistent with the plans and policies of Mobility 2045: The Metropolitan Transportation Plan for North Central Texas. All federally funded surface transportation projects must also be included in the Transportation Improvement Program. If the project is successful in receiving funds, the RTC will support its inclusion and modification, as needed, in the 2021-2024 Transportation Improvement Program for North Central Texas.

Again, the RTC fully supports the 2020 BUILD application submitted by NCTCOG for the Enhancing Mobility Within the Southern Dallas Inland Port Project. Thank you for your time and consideration of this project. If you have any questions, please contact me at (817) 695-9241 or mmorris@nctcog.org.

Sincerely,

Michael Morris, P.E.
Director of Transportation, NCTCOG

TB:kw
The Honorable Elaine L. Chao  
Secretary of Transportation  
United States Department of Transportation  
1200 New Jersey Avenue, SE  
Washington, DC 20590

Dear Secretary Chao:

The City of Lancaster is pleased to support the United States Department of Transportation 2020 Better Utilizing Investments to Leverage Development (BUILD) Grant application submitted by the North Central Texas Council of Governments (NCTCOG) for the Enhancing Mobility Within the Southern Dallas Inland Port Project.

The Enhancing Mobility Within the Southern Dallas Inland Port Project will provide additional mobility and transit connectivity in the part of southern Dallas County surrounding the International Inland Port of Dallas (IIPOD), a trade and logistics hub. Located at the nexus of Interstate Highway (IH) 20, IH 35, and IH 45, this dynamic area has emerged in recent years as a hub for job and economic growth, benefitting the cities of Dallas, DeSoto, Hutchins, Lancaster and Wilmer. Mobility improvements in the area will support the IIPOD’s continued growth by better connecting the local workforce to job sites. The requested funding will enable coordinated thoroughfare and transit-friendly improvements through multiple agencies and partnerships, and deployment of smart technologies will improve road safety and optimize throughput for all modes.

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Again, the City of Lancaster fully supports the 2020 BUILD application submitted by NCTCOG for the Enhancing Mobility Within the Southern Dallas Inland Port Project. Thank you for your time and consideration of this project. If you have any questions, please contact 972-218-1300.

Sincerely,

Clyde C. Hairston

Clyde C. Hairston
Mayor
## BUILD Project Schedule

### Enhancing Mobility within the Southern Dallas Inland Port

<table>
<thead>
<tr>
<th>Year</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
<th>2027</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quarter</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

**Transit Vehicles and Associated Infrastructure**

- **Electric Bus Procurement**
  - D
  - D
  - D
  - P

- **Electric Chargers**
  - D
  - D
  - D
  - C
  - P

**On-Demand Transit Service**

- **On-Demand Service**
  - D
  - D
  - D
  - D

- **Transit Passes**
  - D
  - D
  - O
  - O
  - O
  - O
  - O
  - O
  - O
  - O
  - O

**Pedestrian Infrastructure**

- D
  - D
  - D
  - C
  - C
  - C
  - C
  - C
  - C
  - C

**Traffic Signal Improvements**

- D
  - D
  - D
  - C
  - C
  - C
  - C

**Legend**

- D: Design/Planning
- C: Construction
- P: Procurement
- O: Operation
Enhancing Mobility within the Southern Dallas Inland Port

FY 2020 BUILD Grant Application

Attachment 5: Benefit-Cost Analysis Methodology
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I. METHODOLOGY – BENEFIT COST ANALYSIS

The following description provides the methodology for the detailed calculations of benefits and costs of the proposed Enhancing Mobility Within the Southern Dallas Inland Port Project. Benefits are assumed to incur after project completion from 2022 for a 10-year time span of benefits to 2032.

TABLE 1: EXECUTIVE SUMMARY MATRIX OF PROJECT

<table>
<thead>
<tr>
<th>Current Status/Baseline and Problem to be Addressed</th>
<th>Change to Baseline or Alternatives</th>
<th>Types of Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of transit service coverage, access, and frequency to major employers in the Southern Dallas County Inland Port area. Lack of sidewalks connecting the VA Medical Center Station. Inefficient signal timing withing the Inland Port and area surrounding the VA Medical Center.</td>
<td>Add on-demand electric bus service connecting more employers and area to regional transit with higher service frequencies. Add transit signal priority and other signal improvements. Add sidewalk to improve access.</td>
<td>Improved mobility through transit travel time, reduced congestion, lower driver cost, and improved air quality, and enhanced safety for commuters.</td>
</tr>
</tbody>
</table>

The no-build alternative scenario in this benefit cost analysis (BCA) assumes continuation of existing STAR Hutchins and Desoto fixed bus routes and DART GoLink Service. The build alternative includes the assumptions outlined in the narrative and this BCA document.

Modeled Transit Service Assumptions

Transit ridership, traffic volumes (vehicle miles traveled), and congestion forecast for current conditions and forecast build and no-build conditions based on a post process of the North Central Texas Council of Governments (NCTCOG) DFX Regional Travel Demand Model. This version of the travel demand model was used for Mobility 2045: The Metropolitan Transportation Plan for North Central Texas and is based on demographic forecasts at the Traffic Survey Zone (TSZ) level.

The Regional Travel Demand Model does not have a specific mode for on-demand transit service. An approximated fixed route bus was used to replicate the major services envisioned thus generating ridership forecasts. Bus headways are assumed to be 40 minutes, representing 20-minute wait time. The buses assume to use the existing roadway network using regular vehicle speed. The alignment of the route connected the major employers and colleges in a long continuous route.

This representation may seem inferior to the flexible service plan for the area. This is because it does not provide access to all employer and residential locations, maximum wait time was used,
and vehicle type is regular bus. This minimum combination is chosen because existing experience with flexible transportation services provided by DART have resulted in unexpectedly low number of users. For example, the ridership in this area for DART GoLink service is about 80 passengers per weekday. Therefore, the analysis has chosen the conservative approach for ridership estimation.

The estimated ridership for year 2028, using the approximate route, is 626 passengers per weekday. The average trip length is about 15 minutes in terms of time and 6 miles in terms of length. It is estimated that as a result of this project implementation 5,200 VMT is removed from the roadway system. The model estimates the average speed of 40 mph and all links in the region, which would indicate 130 Vehicle Hours Traveled (VHT) reduction from the roadway system. In these calculations, the VMT of the electric vehicle used for the public transit service in this project is not subtracted from VMT and VHT values. This is a slight overestimation that is ignored because there are only eight electric vehicles anticipated for this project and their effects on the roadway system is negligible.

To check the reasonability of these estimates, observed trips and characteristics from DART GoLink could be used. It should be cautioned that GoLink is a very limited new service in the area that could be considered in the ramp up period to maturation. The service carries about 80 passengers per weekday. The average passengers wait time is estimated to be about five minutes with average trip length of 15 minutes for about 7 miles average length. The number of vehicles used for this service is approximated to be either one or two vehicles. The proposed on-demand transportation plan is most like GoLink service that almost 8 times more vehicles, mature market, and enhanced vehicles and operational characteristics. The analysis estimated 700 users in 2028 which is about 30% more than normalized value of demand. Supply of the service based on 2019 service.

II. BENEFITS

A. Mobility

Transit Passenger Travel Time Savings
Existing transit riders in the no-build scenario will benefit from improved travel times in the build scenario as the on-demand service reduced both in-vehicle time and average of 12 minutes and wait time and average of 33 minutes. This was calculated based on the model transit service assumptions. This BCA takes a conservative approach by using only weekdays (260 annually) in calculating annual service for all benefits.

\[
\text{Transit Passenger Travel Time Savings = (R*T1*S1)+(R*T2*S2)}
\]

\[\begin{align*}
T1 &= \text{Annual Transit Trip Travel Time Savings (hours/year)} \\
T2 &= \text{Annual Waiting time savings (hours/year)} \\
R &= \text{Number Riders} \\
S1 &= \text{Hourly Value of Travel time ($16.60) per USDOT BCA Guidance} \\
S2 &= \text{Hourly Value of Waiting time ($30.40) per USDOT BCA Guidance}
\end{align*}\]
**All Vehicle Travel Time Savings from Signals**
The implementation of signal improvement will result in an approximate 15 second travel time improvement for approximately 60% of drivers at the improved intersections. Traffic volumes are assumed to be reduced by approximately the same rate as vehicle miles traveled in the service area over the 10-year period. The time value assigned to all travelers was $16.60 to keep estimates conservative and reflect the mix of commercial and personal travel in this zone. Additionally, vehicle occupancy of 1 driver per vehicle was used.

\[
All\ Vehicle\ Travel\ Time\ Savings = (V*0.6) * T * S
\]

- \(V\) = Annual Forecast traffic volumes at intersections
- \(T\) = Annual Reduced signal delay time (hours/year)
- \(S\) = Hourly Value of Travel time ($16.60) per USDOT BCA Guidance

**Congestion Delay Savings**
Reduced vehicle hours of congestion delay per year for all roadway users in the Inland Port will occur as a result of the added transit service. The reduced hours of congestion delay were multiplied by the per hour value of general travel time and the average vehicle occupancy of 1.39 provided by the USDOT BCA guidance to produce an annual benefit value.

\[
Congestion\ Delay\ Savings = (H *P) * S
\]

- \(H\) = Annual Vehicle Hours/day of reduced congestion delay
- \(P\) = Persons per vehicle
- \(S\) = Hourly Value of Travel time ($16.60) per USDOT BCA Guidance

**Personal Vehicle Cost Savings**
Reduced personal auto use cost is calculated using the reduction in miles traveled by each new transit commuter who uses transit instead of driving. NCTCOG regional travel model assumes an average trip length of 13.28 miles and a constant commuter rail fare of $2.10, assuming all riders transfer from DART rail. Transit passes for the service will be free for the first 3 years of operation and increase to $1 consistent with STAR Transit’s bus fare in year 2026.

\[
Vehicle\ Operating\ Cost\ Savings = (R1*(L*S)-F1) + [(R2*(L*S)*3years) + ((R2*(L*S)-F2)*7years)]
\]

- \(R1\) = Annual New transferring Transit Riders
- \(R2\) = Annual New Riders from the Inland Port area
- \(L\) = Length of average trip in miles (NCTCOG regional average)
- \(S\) = Savings per mile ($0.41 per US DOT BCA Guidance)
- \(F1\) = Fare for average regional rail trip
- \(F2\) = Future on-demand service fare
B. Air Quality

Emissions Reductions

The emissions assessment for this project is derived from lowering vehicle emissions as some people use this new on-demand electric transit service in place of driving their vehicles. The ridership for this transit service is estimated from the Dallas-Fort Worth, regional travel model, which consists of complex computer programs that include inputs of roadway and transit networks and population/employment data to forecast how future travel will impact the transportation system. Emission factors used to calculate the vehicle emissions are obtained from the EPA’s emission factor model, MOtor Vehicle Emission Simulator (MOVES). The MOVES model is a state-of-the-science emission modeling system that estimates mobile source emissions/emission factors for many pollutants exiting vehicle exhaust systems.

The impacts are quantified using the transit methodology in the Texas Guide to Accepted Mobile Source Emission Reduction Strategies guidebook.

The outputs of the technical analysis result in positive air quality impacts from the new on-demand electric transit service. In addition, the estimates are believed to be conservative with further air quality benefits generated from other elements mentioned within this report, such as building sidewalks and traffic signal improvements.

This project, once implemented, will assist with the region’s air quality goals, per section 176(c)(4) of the Clean Air Act Amendments (CAAA) of 1990, which requires Metropolitan Planning Organizations (MPO) for areas designated as nonattainment for the pollutant ozone, to conduct an air quality conformity analysis. The most recent conformity determination can be found here, [https://www.nctcog.org/nctcg/media/Transportation/DocsMaps/Quality/Air/FHWA-DFW-2018-Transportation-Conformity-Determination-Letter.pdf](https://www.nctcog.org/nctcg/media/Transportation/DocsMaps/Quality/Air/FHWA-DFW-2018-Transportation-Conformity-Determination-Letter.pdf).

Annual estimates were calculated for Nitrogen Oxides (NOX), Volatile Organic Compounds (VOCs) and Carbon Dioxide (CO2).

\[
\text{Air Quality Benefit} = \left[ \frac{(R \times D)}{2000} \right] \times V
\]

\[\begin{align*}
R &= \text{Reduction in pollutant and greenhouse gas pounds per day} \\
D &= \text{Days per year} \\
V &= \text{Value of reduction per short ton}
\end{align*}\]

C. Safety

Reduction in Automobile Crashes

Improving intersection technology through adding transit signal priority and coordinating the traffic signals along area arterial corridors will improve safety for commuters. Additionally, adding sidewalks in the VA Medical Center Station area will improve safety. A crash reduction factor is applied for transit signal priority obtained from the Crash Modification Factor Clearinghouse: [http://www.cmfclearinghouse.org/detail.cfm?facid=7273](http://www.cmfclearinghouse.org/detail.cfm?facid=7273). Similarly for coordination of traffic signals [http://www.cmfclearinghouse.org/detail.cfm?facid=9868#commentanchor](http://www.cmfclearinghouse.org/detail.cfm?facid=9868#commentanchor). Installation of
sidewalks is anticipated to provide at least a 65% crash reduction rate (https://safety.fhwa.dot.gov/provencountermeasures/walkways/). The crash rate for sidewalks was calculated using crashes occurring within 100 feet of sidewalk improvements.

The number of crashes were obtained from TxDOT’s Crash Records Information System (CRIS) by KABCO Accident Classification System categories. This data is only composed of TxDOT "Reportable Crashes". A "Reportable Motor Vehicle Traffic Crash" is defined by TxDOT as any crash involving motor vehicle in transport that occurs or originates on a traffic way, results in injury to or death of any person, or damage to the property of any one person to the apparent extent of $1,000. A traffic way is defined as any land way open to the public as a matter of right or custom for moving persons or property from one place to another. Latest available data for 5-year annualization was available for 2014 – 2018 for the North Central Texas region.

\[
\text{Annual Crash Reduction} = (C \times \text{CRF1}) + (C \times \text{CRF2})
\]

\[
\begin{align*}
C &= \text{Annual Crash rate at applicable intersections} \\
\text{CRF1} &= \text{Crash reduction factor for transit signal priority} \\
\text{CRF2} &= \text{Crash reduction factor for coordination of traffic signals}
\end{align*}
\]

D. Residual Value

**Remaining Service Life of Sidewalks and Signals**

New sidewalks and signals in this project will have a remaining service life beyond the 10-year benefit of the on-demand electric bus service. The current value of each improvement was divided by the years of its life span and then discounted annually. Value remaining after the end of the 10-year calculation was added to the benefit calculation. Signal improvements are estimated to have a useful lifespan of 14 years by the project team. Sidewalks useful life without major repair are assumed at 25 years based on FHWA’s “Guide for Maintaining Pedestrian Facilities for Enhanced Safety (2013)” - https://safety.fhwa.dot.gov/ped_bike/tools_solve/fhwasa13037/chap6.cfm. All project components not included are expected to last as long as the project analysis period.

\[
\text{Residual Value} = [(U - Y) / U] \times C
\]

\[
\begin{align*}
U &= \text{Useful Service Life of Project} \\
Y &= \text{Years of Analysis Period} \\
C &= \text{Cost of Project Component}
\end{align*}
\]

III. COSTS

A. Capital Construction

Proposed construction costs were obtained in coordination with Dallas Area Rapid Transit, and STAR transit, City of Dallas, and Dallas County. Construction costs were estimated based on the proposed construction schedule and activities for each quarter. The total construction cost estimates used in this BCA are given in 2018 real dollars. The following table summarizes each
component’s capital construction cost in 2018 dollars, including costs incurred prior to the grant application up through 2032.

**TABLE 2: CONSTRUCTION COST PER PROJECT COMPONENT**

<table>
<thead>
<tr>
<th>Component Name</th>
<th>Construction Cost (2018 dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electric Bus Procurement</td>
<td>$2,400,000</td>
</tr>
<tr>
<td>EV Charging Infrastructure</td>
<td>$2,375,000</td>
</tr>
<tr>
<td>Operation of Transit Service</td>
<td>$1,500,000</td>
</tr>
<tr>
<td>Transit Passes</td>
<td>$375,000</td>
</tr>
<tr>
<td>Pedestrian Infrastructure</td>
<td>$3,750,000</td>
</tr>
<tr>
<td>Traffic Signal Improvements</td>
<td>$1,600,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$12,000,000</strong></td>
</tr>
</tbody>
</table>

B. Operations and Maintenance

Over the lifespan of the project the electric bus charging stations, traffic signals, sidewalks, and transit operations are expected to incur annual maintenance cost not included in the BUILD grant project cost. This application for funding includes 3 years of startup maintenance cost reflected in the operations and maintenance calculations of this BCA.

Charing stations for the buses annual cost includes

- Annual electricity consumption – estimated based on AFLEET model, from Argonne National Lab with cost per kWh was assumed to be $0.0848/kWh, per state average electricity prices sourced from the Energy Information Administration (https://www.eia.gov/electricity/state/)


- Maintenance and repair based on a quote from ChargePoint Warranty.

- Station Management – estimated based on EV Group quote of Greenlote Network Software

Additionally, using public land and private partnerships there will be no annual lease cost for the stations.

Traffic signal annual maintenance cost is estimated to be an average of 10% of improvement capital cost annually. The City of Dallas Department of Public Works average annual sidewalk maintenance cost per mile of $4,250 is assumed for sidewalk improvements in this project as they are located completely within the City of Dallas. Transit service operations and maintenance cost per transit operator input are assumed to average $500,000 annually. The first 3 years of cost are included in the BUILD project application to start the service but will be locally funded for the remaining life of the project.

Details for the O&M cost estimate are in in the “Costs” tab of the BCA Tables Excel file.
IV. SUMMARY OF BENEFITS AND COST

A. Result Ratio

Results of the benefit cost comparison are summarized in Table 3. The benefits are assumed to incur after project completion from 2022 for a 10-year life span of the projects to 2032. All monetized estimates were discounted at a 7% rate to 2018 dollars. The details tables (Excel) have a tabs detailing the calculations of each benefit and the modeled assumptions of ridership, VMT, Vehicle hours of congestion delay, plus the cost summary table.

TABLE 3: IMPROVEMENTS PROJECT BENEFIT/COST SUMMARY

<table>
<thead>
<tr>
<th>Costs and Benefits</th>
<th>Nominal Total Value</th>
<th>NPV Discounted to 2018 (7%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Costs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction Cost</td>
<td>$10,125,000</td>
<td>$7,525,488</td>
</tr>
<tr>
<td>Operation and Maintenance Cost</td>
<td>$8,139,812</td>
<td>$4,588,650</td>
</tr>
<tr>
<td><strong>Total Cost</strong></td>
<td>$18,264,812</td>
<td>$12,114,139</td>
</tr>
<tr>
<td><strong>Benefits</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobility Benefits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Travel Time Savings</td>
<td>$95,001,091</td>
<td>$53,430,949</td>
</tr>
<tr>
<td>Congestion Delay Savings</td>
<td>$10,039,453</td>
<td>$5,486,817</td>
</tr>
<tr>
<td>Driver Cost Savings</td>
<td>$1,891,798</td>
<td>$1,053,311</td>
</tr>
<tr>
<td>Air Quality Benefit</td>
<td>$9,630</td>
<td>$5,675</td>
</tr>
<tr>
<td>Safety Benefit</td>
<td>$286,213,537</td>
<td>$159,268,777</td>
</tr>
<tr>
<td>Value of Remaining Service Life</td>
<td>$2,707,143</td>
<td>$1,049,877</td>
</tr>
<tr>
<td><strong>Total Benefit</strong></td>
<td>$395,862,652</td>
<td>$220,295,406</td>
</tr>
<tr>
<td><strong>Net Present Value (NPV)</strong></td>
<td></td>
<td>$208,181,268</td>
</tr>
<tr>
<td><strong>Benefit-Cost Ratio (BCR)</strong></td>
<td></td>
<td>18.18</td>
</tr>
</tbody>
</table>
Attachment 6

The following attachment is not included in the view since it is not a PDF file. Upon submission, this file will be transmitted to the Grantor without data loss.

BCA_Inland_Port_tables
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1.0 Project Description

1.1 Overview of Concept

The North Central Texas Council of Governments (NCTCOG), in conjunction with STAR Transit, the cities of Dallas, DeSoto, and Lancaster, and the Texas Department of Transportation (TxDOT) developed the following United States Department of Transportation FY 2020 BUILD Grant application for a project that will enhance mobility to and within the Southern Dallas Inland Port, which is a premier job destination but lacking mobility options. The Enhancing Mobility within the Southern Dallas Inland Port project will seek to build out transit, pedestrian, and traffic signal infrastructure to expand access to regionally significant employment, education, and healthcare centers in southern Dallas County and beyond. The focus will be on both expanding connectivity within a targeted area of the inland port and greater southern Dallas county and in connecting residents of rural communities of Rockwall and Kaufman County surrounding the southern Dallas area to these key destinations.

Exhibit 1 shows the project area, which will consist of three main components:

a. **Transit:** The procurement of eight small electric buses (EBs) to deliver on-demand transit in the Inland Port. Five electric vehicle supply equipment (EVSE/chargers) will also be purchased and installed at strategic locations for this bus service. Transit passes will also be purchased to help residents connect to jobs, education, and healthcare.

b. **Pedestrian Infrastructure:**
   The construction of pedestrian infrastructure, such as sidewalks and crosswalks, in the vicinity of the Veterans Affairs (VA) Medical Center and adjacent light-rail station.

c. **Traffic Signal Improvements:**
   41 new traffic signals that will prioritize transit vehicles on key corridors in the project area. Several of the planned signal improvements will also facilitate safer pedestrian movements in conjunction with the sidewalk and crosswalk improvements.

Transit

The largest component of the project will be the purchase and operation of eight cutaway EBs. The on-demand bus service will be operated by STAR Transit in and around the Inland Port area in connection with their existing routes in DeSoto and Hutchins. The on-demand service will expand access to over 30,000 jobs at distribution centers and other large employers in the Inland Port. Reliable transportation has long been a significant hinderance for employees and employers in this area. The “2019 Southern
Dallas Inland Port Employer and Employee Survey” completed by the newly created Southern Dallas County Inland Port Transportation Management Association (TMA), in conjunction with, the Dallas Regional Chamber and Workforce Solutions of Greater Dallas, identified that 61 percent of employers have been unable to retain employees due to transportation issues.

The buses will enhance the interconnectivity of this project area while also increasing mobility options to the rest of the region for residents of the rural communities in southern Dallas County. The buses will connect with the Dallas Area Rapid Transit’s (DART) Blue Line light-rail station located at the University of North Texas-Dallas (UNT-Dallas) to enhance access to that campus and other south Dallas destinations, such as Paul Quinn College and the VA Medical Center, as well as beyond into Dallas. With STAR Transit’s traditionally rural service in neighboring counties, the expanded service will help connect rural residents with jobs, education, and medical facilities in the Inland Port. The EBs will also reduce congestion and associated environmental impacts. The environmental benefits will be further increased by the buses being fully electric.

Electric charging infrastructure will be needed in five locations to optimize use throughout the service area. The chargers are expected to be DC fast chargers that allow for rapid and efficient charging. They will mostly be located in or around hubs of activity and potential transit ridership. A charger is planned for the UNT-Dallas DART Station, which can also be used for future DART EBs. A charger will be placed at STAR Transit’s headquarters and bus depot in the City of Terrell to the east and one will be located at Cedar Valley College. The remaining two chargers will be strategically located in the Inland Port, in proximity to several major thoroughfares and employers (See Section 2).

Pedestrian Infrastructure
An important element of the BUILD grant is to provide critical multi-modal infrastructure for pedestrians to an important rail station on the DART Blue Line, the Dallas VA Medical Center Station. “The VA North Texas Health Care System is a progressive health care provider in the heart of Texas and covers 38 counties in Texas and two in southern Oklahoma. Accredited by The Joint Commission, the 1A complexity level facility is the second largest VA health care system in the country, serving more than 129,000 Veterans.” The headquarters are located in Dallas, at the VA Medical Center stop and are an important economic driver to the Region with over 3,500 employees located on or coming to the campus, along with thousands of annual visitors.

NCTCOG was awarded by the Federal Transit Administration (FTA) a $1.75 million planning grant in 2016 to help the Dallas-Fort Worth Region enhance accessibility and development
around 28 DART stations along the system’s Blue and Red Lines through an FTA TOD Planning Pilot Grant. An important task of that study was developing first and last mile “routes to rail” infrastructure assessments and recommendations of improvements needed to sidewalks and routes connecting pedestrians to rail stations. The planning work developed priority improvements within ½ mile of each station and an analysis of costs. These projects will improve access and connectivity to residents and workers, thus increasing potential transit ridership and connections to various locations near each stop, such as the VA Medical Center hospital and surrounding facilities. Local residents, employees, and visitors will be able to access the hospital, light-rail station, a recently completed Transit-Oriented Development, and other destinations along and around the adjacent Lancaster Road corridor in a far easier and safer way.

**Traffic Signal Improvements**

Finally, several intersections throughout the project area are planned to receive updated traffic signals equipment and technology that will give priority to transit vehicles, pedestrians, and improve overall traffic safety as outlined in Attachment 1. The goal of traffic signal improvements is to support reliable, efficient movement of people and goods by filling critical gaps that will improve transportation operations within the Inland Port and the VA Medical Center areas. The improvements will focus on balancing the needs of through and local traffic. To achieve this, improvements such as traffic signal coordination, and low-cost measures at intersections such as vehicle and pedestrian detection, pedestrian signals, traffic signal communications, and transit signal priority will be implemented.

Traffic signal coordination will provide the ability to synchronize multiple intersections to enhance seamless progression along the major routes, while simultaneously minimizing vehicle delays on the side streets. Signal retiming will result in less stops and starts and increased vehicle progression to improve the operation of arterials, reducing emissions from both transit and non-transit vehicles. It will involve baseline data collection, development and implementation of new signal timing plans, and additional data collection after retiming has been implemented. These improvements will reduce vehicular emissions and improve mobility. In addition, it will substantially reduce fuel costs due to congestion relief. A total of 41 traffic signals will be retimed.

Traffic detection systems will be deployed at 17 intersections. The system will use sensors to detect the presence of vehicles in real time to improve signal operation and provide traffic management staff with real time data. Traffic engineering staff can use this data to adjust traffic signal timing as needed to enhance signal operations. The efficiency of the transportation network will be improved by optimizing individual intersections in coordination with the overall transportation network, all working together to smooth the flow of traffic across an area.

Pedestrian traffic signal equipment will be deployed at 12 intersections to improve pedestrian safety and the efficiency of both pedestrian and vehicular traffic. Pedestrian traffic signals provide a safe opportunity for pedestrian to cross the roadway to minimize pedestrian and vehicle conflicts at an intersection. The deployment of these signals will focus on strategic locations near the Veterans Hospital to provide residents, employees and patients with safe and accessible pedestrian movements within this area. Safer pedestrian movement accommodates the
accessibility need for pedestrians to exit buses reach their destinations and return to their transit vehicles.

Traffic signal communications will be deployed at 41 intersections. These locations are along the transit routes as well as all locations within the VA Medical Center area. The outcome is to enable traffic engineers to communicate with each local traffic signal controller at remote locations for real-time monitoring and emergency response. In addition, this communication allows traffic signals to communicate with each other to ensure the traffic signal timing remains optimized. The communication from a traffic signal and the central traffic signal control software is essential to ensure traffic signals are working properly to reduce delay by recognizing vehicle, transit and pedestrian movement requests.

This project includes deployment of Transit Signal Priority (TSP) at 41 signalized intersections to improve on-demand transit operations, arterial transportation network operations, and to increase the acceptance of transit. TSP will reduce transit delay by extending the duration of green signals for transit vehicles providing late bus recovery and increased speeds when necessary, providing transit vehicles with the ability to improve schedule adherence, reducing missed connections and increasing the reliability of on time arrivals.

These project components will be planned and delivered to comprehensively expand accessibility, options, and safety for the thousands of current and future employees, residents, and students in this rapidly growing and historically underserved area.

1.2 Socio-Economic Context

The Southern Dallas County Inland Port is a growing employment center in the Dallas–Fort Worth (DFW) region estimated to have more than 32,000 jobs and approximately 2,000 businesses based on the 2019 Inland Port Survey. The area is located at the intersection of five municipalities within Dallas county, including Dallas, DeSoto, Hutchins, Lancaster, and Wilmer, covering approximately 76,000 acres. It is located within the DFW-Arlington Census Metropolitan Statistical Area (MSA), the largest inland metropolitan area in the United States. For 2019, the US Census estimates the population of the DFW-Arlington MSA is just over 7.5 million people. By population, it is the largest metropolitan area in Texas and the fourth largest in the United States. The Southern Dallas Inland Port specifically is a key location for intermodal and truck goods movement. Furthermore, it is located at the intersection of IH 35, IH 45, and IH 20, providing optimal mobility for transporting freight to local, regional and national destinations.

Portions of the Southern Dallas Inland Port are expected to see strong population growth over the next twenty years. Exhibit 2 shows past trends and future forecasts for population growth within the five Inland Port cities, Dallas County, and the 12-county NCTCOG Metropolitan Planning Area (MPA). Population density is critical to understanding context for transportation needs. Mobility 2045: the current Metropolitan Transportation Plan for North Central Texas (Mobility 2045) indicates that Dallas is one of four urban counties where population density is projected to increase from 1,845 to 2,820 people per square mile between the years 2017 and 2045, compared to an increase from 796 to 1,237 people per square mile for the entire MPA. In 2045, Dallas
county is projected to be the most densely populated county in the region. The Southern Dallas Inland Port is currently home to just over 89,000 people and greater concentrations of population in this area will amplify the transportation challenges for both residents and those traveling to the area for work.

*Exhibit 2: Population Trends and Forecasts for Project-Related Locations*

<table>
<thead>
<tr>
<th>Location</th>
<th>1990 Census¹</th>
<th>2000 Census¹</th>
<th>2010 Census¹</th>
<th>2030 Forecast²</th>
<th>2040 Forecast²</th>
<th>Growth 2010-2040</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Dallas</td>
<td>1,011,044</td>
<td>1,033,728</td>
<td>1,200,372</td>
<td>1,242,191</td>
<td>1,420,781</td>
<td>18%</td>
</tr>
<tr>
<td>City of Desoto</td>
<td>30,741</td>
<td>36,381</td>
<td>49,349</td>
<td>59,903</td>
<td>65,330</td>
<td>32%</td>
</tr>
<tr>
<td>City of Hutchins</td>
<td>2,756</td>
<td>3,039</td>
<td>5,340</td>
<td>13,922</td>
<td>17,941</td>
<td>236%</td>
</tr>
<tr>
<td>City of Lancaster</td>
<td>22,332</td>
<td>24,791</td>
<td>36,789</td>
<td>58,895</td>
<td>69,717</td>
<td>90%</td>
</tr>
<tr>
<td>City of Wilmer</td>
<td>2,477</td>
<td>2,734</td>
<td>3,720</td>
<td>4,698</td>
<td>7,500</td>
<td>102%</td>
</tr>
<tr>
<td>Dallas County</td>
<td>1,852,691</td>
<td>2,078,959</td>
<td>2,372,993</td>
<td>2,822,809</td>
<td>3,107,541</td>
<td>31%</td>
</tr>
<tr>
<td>12-County NCTCOG MPA</td>
<td>4,013,418</td>
<td>5,197,317</td>
<td>6,417,724</td>
<td>8,661,603</td>
<td>9,949,215</td>
<td>55%</td>
</tr>
</tbody>
</table>

Sources: 1. U.S. Census Population Estimates  

As a growing job center, the ability of the Southern Dallas Inland Port to attract businesses across various industries and maintain a healthy workforce is critical to its long-term prosperity. Employment in the MPA is projected to grow from 4,584,235 jobs in 2017 to 7,024,227 job in 2045. Dallas county is projected to grow from 2,147,027 jobs in 2017 to 3,298,213 jobs in 2045, leading the region in the increase of jobs. While the entire region is expected to experience strong growth rates, the location of this project is particularly centralized in the region’s largest area for growth over the next 25 years. The most prominent employment categories in the area are manufacturing and distribution. The area has become a major hotspot for large industrial developers and Fortune 500 companies. The largest employers include Amazon with three warehouses/distribution centers in the zone, FedEx, Kohl’s E-fulfillment, and Procter & Gamble Distributing. The location of the top 10 employers in the project area can be seen in Exhibit 3. The zone is also continuously active with as many as 48 percent of employers operating facilities 24 hours a day. The Inland Port is seen as an important source of working-class jobs where over 75 percent of the positions pay over $15 per hour. Transportation reliability is major concern for employers in the area. As noted in employer interviews, it is one of the primary reasons for termination. Access to reliable transportation which was also cited by 35 percent of employees as a challenge.
Central to the goals of this project is enhancing the connections to resources and employment in a way that is equitable for all. Environmental justice seeks an equitable distribution of benefits and burdens for minority populations and low-income populations. This equitable distribution can be achieved by identifying and addressing disproportionately high and adverse effects of a transportation project. Environmental justice can be addressed in the planning phase of project development using a demographic profile to locate minority and low-income populations.

Environmental justice populations for the project area were identified using American Community Survey 5-Year Estimates, 2014-2018. The population of Census block groups partially or completely within the study area for the Southern Dallas Inland Port project is 106,570. Minorities comprise 92 percent of the population of block groups in the study area compared to 70 percent of the population in Dallas County.

The low-income households for this analysis are defined as those located in a Census block group with a median household income in the past 12 months (in 2018 inflation-adjusted dollars) below $25,100, the 2018 Department of Health and Human Services poverty guidelines for a family of four. The 2018 poverty guidelines are used to align with the most current American Community Survey data, 2014-2018. The median household income in the past 12 months for Census block groups within or partially within the study area ranges from $14,740 to $83,250. As Exhibit 4 shows, eight block groups in the study area have a median household income below poverty.
The concentrations of minority and low-income populations within the project area are essential to understanding the potential impact of the proposed project. This project seeks to increase the equitable distribution of transportation options within the Southern Dallas Inland Port by building upon existing transit service in the area to provide for increased availability and frequency.

Improvements will not only provide better accessibility to destinations outside the area, but also key connections to employment, education, and social services located directly within the Inland Port. Connecting residents to resources at this level will better empower them to fill the significant workforce needs of quickly growing employers in the area. In turn, this will greatly assist in improving quality of life and the household income potential of all that choose to call the Southern Dallas Inland Port home.

1.3 Transportation Challenges

The Inland Port area is served by two transit providers, DART and STAR Transit, both of which connect to select major employment centers and to DART’s UNT Dallas Station for light rail service (key transfer point). Despite existing transit services in the area, there are significant gaps in service in the Inland Port. Due to existing land uses and dispersed development patterns, access to reliable transportation and mobility options is a challenge in the Inland Port; a challenge which is exacerbated by limited transit availability and pedestrian connectivity issues.

Access to Reliable Transportation and Mobility Options

Access to reliable transportation in the Inland Port is challenging, and mobility options are largely limited to personal vehicle use. This limited access impacts the ability of people to get to their destinations, such as an employer location or school, and may create a daily burden for many people in the form of higher transportation costs and a heightened concern in regards to trip planning. Nearby rural communities also have limited options for connecting to jobs, education and medical facilities located in the Inland Port.

Given that the Inland Port covers an extensive area (over 120 square miles) and is home to approximately 2,000 businesses dispersed throughout the area, providing transportation options is critical to access these and other key destinations on a reliable and convenient basis. A recent
survey of Inland Port area employers and job-seekers cited access to reliable transportation as a significant barrier to maintaining or seeking a job in the Inland Port.

Additionally, other key destinations in the Inland Port include: colleges and universities, public schools, medical facilities, and shopping centers. As transportation provides access to a wide range of destinations, reliability issues and limitations in mobility options are likely to adversely impact one’s ability to access all destinations in one form or another.

**Limited Transit Availability**

Existing transit services south of IH20 is limited in terms of area coverage, service hours, and level of service. Existing services cover only 25 percent of the Inland Port and do not adequately meet the transit needs of those who would like to use transit as a viable transportation option.

*Exhibit 5: Existing Transit Service within the Southern Dallas Inland Port*

Exhibit 5 shows the area coverage provided by two transit providers: DART and STAR Transit. STAR operates two fixed-routes in the Inland Port area: the DeSoto route, and the Hutchins Shuttle. The routes serve primarily the cities of DeSoto and Hutchins. Relative to the Inland Port boundaries, these fixed-routes cover mostly the central-western region with stops centered around select key destinations, such as industrial parks, Cedar Valley College, and medical facilities. DART operates an on-demand service, GoLink, that provides curb-to-curb transportation in a small area at the southern end of Dallas. Relative to the Inland Port boundaries, GoLink serves a small area in the central region.

STAR’s service hours are very limited. The DeSoto route operates only on weekdays during peak hours in the morning and afternoon (four-hour timeframe for each part of the day), with a trip frequency of one-hour. The Hutchins route operates on weekdays during peak hours and limited service late night. DART’s GoLink on-demand service operates 15 continuous hours during weekdays, and reduced hours during weekends—but the service area is small relative to the larger Inland Port area.
Given that the Inland Port encompasses an area slightly more than 120 square miles and is home to approximately 2,000 businesses, the existing transit service available does not meet current transit demand. Furthermore, in the 2019 Inland Port Survey, major employers indicated that many of their employees and customers would use transit if it were available to them.

**Pedestrian Connectivity and Safety**
As documented in NCTCOG’s FTA funded TOD planning study, which focused on identifying priority improvements for enhancing first-last mile pedestrian connectivity to DART’s rail stations, the VA Medical Center Station is lacking safe and accessible pedestrian infrastructure to and from the station. Using ½ mile analysis zones, the VA Medical Center Station was identified as having a slightly over 9 miles of infrastructure needs, which include: new sidewalk construction, sidewalk repair, crosswalk and safety treatments, and more.

This connectivity and safety challenge is critical because it adversely impacts the ability of pedestrians (and users of other alternative modes) to not only access DART’s transit service, but other key destinations. A key destination includes the VA Medical center, which employs over 3,500 employees and provides critical care for thousands of veterans that depend on its essential healthcare services.

**1.4 Targeted Transportation Solutions**
The following solutions address the transportation challenges outlined in the previous section by filling in the significant gaps in transit service in the Inland Port, and by enhancing accessibility and mobility in a manner that incentivizes alternative modes of travel.

**Improve Access to Reliable Transportation and Mobility Options**
This project will directly address the challenge of accessing reliable transportation and mobility options by implementing a new and expanded transit service, while investing in sidewalk improvements that support alternative modes of travel. As existing transit serves primarily areas in the Inland Port that are within the Dallas-Fort Worth-Arlington Urbanized Area (UZA), extensive rural areas outside of the UZA stand to gain access to a new (and reliable) mobility option: on-demand transit service.

Improved access to reliable transportation will facilitate connections to key destinations within the Inland Port and beyond. Connections to key destinations include: workforce to the numerous businesses, students to the three colleges in the area (also K-12 schools), and patients to medical centers—such as the VA Medical Center, and the Methodist Charlton Medical Center.

An important connection includes rural area residents to destinations in the UZA. The sidewalk improvements around DART’s VA Medical Center Station will improve first/last-mile connections for those traveling to and from this area, while also facilitating access to transit.

**New and Expanded On-Demand Transit Service**
Compared to the limited transit service currently available in the Inland Port, the proposed on-demand transit service will cover an expanded area and meet transit demand more effectively and efficiently. The on-demand service will facilitate connections to destinations within the Inland Port, and beyond as it will connect to a key transfer point in DART’s light rail system: UNT Dallas Station.
Given the expanded reach of the new transit service, workers will benefit from the availability of more work opportunities within the Inland Port and beyond. From 2019 Inland Port Survey, many job-seekers surveyed indicated that they are underemployed or unemployed and consider access to reliable transportation options as critical to taking advantage of these work opportunities. This project will help workers take advantage of these opportunities.

**Enhance Pedestrian Connectivity and Safety**

This project will address the pedestrian connectivity and safety challenge around the VA Medical Center Station by building critical infrastructure that targets a portion of the pedestrian infrastructure gap, which totals over 9 miles. As determined in the referenced TOD planning study, the infrastructure gap amounts to nearly $6.3 million for full construction of recommended improvements; this project, however, will focus on implementing improvements identified as High Priority, and a portion of those identified as Medium Priority and will construct approximately 4.5 miles. Exhibit 6 below summarizes, by priority level and estimated cost, all the recommended improvements included in TOD planning study. As mentioned, this project will focus on constructing a significant share of all improvements, which amounts to $3.75 million.

**Exhibit 6: FTA Planning Routes to Rail: VA Medical Center Station Recommendations**

<table>
<thead>
<tr>
<th>Improvement Priority</th>
<th>Sidewalks/Shared Use Paths</th>
<th>Crosswalks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Linear Ft (LF)</td>
<td>Cost</td>
</tr>
<tr>
<td>High</td>
<td>13,970</td>
<td>$1,697,700</td>
</tr>
<tr>
<td>Medium</td>
<td>18,095</td>
<td>$2,207,600</td>
</tr>
<tr>
<td>Low</td>
<td>15,490</td>
<td>$1,889,800</td>
</tr>
<tr>
<td>Total</td>
<td>47,555</td>
<td>$5,795,110</td>
</tr>
</tbody>
</table>

Enhancing pedestrian connectivity and safety by filling critical infrastructure gaps around the VA Medical Center Station will facilitate access to DART’s transit service, potentially leading to increases in ridership, and other key destinations, such as the VA Medical Center. As a major employer in the Dallas-Fort Worth region and as a provider of essential healthcare services, facilitating access to the VA Medical Center will benefit people not only in local neighborhoods but beyond. Additionally, this project will be used to show early success for the FTA funding planning work and planning will become action that will lead to other regional and local funding initiatives to complete these critical last mile connection gaps.

1.5 Alternatives Considered

**No-Build Alternative**

Not implementing a new on-demand transit service to address the significant service gaps in the Inland Port would effectively maintain the status quo: unreliable transportation and limited mobility options, inadequate transit availability, and pedestrian connectivity and safety issues. The conditions maintained by the No-Build Alternative create daily challenges for many people manifested in various ways: higher transportation costs, difficulty in maintaining or seeking employment within the Inland Port, difficulty in accessing education/training opportunities and
medical centers, and compelled to avoid alternative modes of travel (e.g. walking, biking) due to safety concerns resulting from a lack of supporting infrastructure.

Moreover, investment in electric vehicle technology is very unlikely in the no-build alternative. Less than 10 large EBs are in service in the metroplex, and those are in service in areas with the highest transit demand. Considering that this project proposes use of smaller EBs (i.e. cutaways) in relatively lower demand areas, there is not much incentive to deploy this type of technology in the no-build scenario. In fact, a goal of deploying this technology as part of this project is to incentivize both public and private sectors to consider using electric vehicle technology to reduce operational costs, reduce emissions, and showcase that this technology can be deployed at an efficient scale in varying operating environments.

**Fixed-Route Transit Service**

Given the existing land uses and dispersed development patterns in the Inland Port, there is not sufficient population and employment densities to support a fixed-route transit system. The population and employment densities in the Inland Port are 742 people per square mile and 225 jobs per square mile; relative to that of Dallas, it represents a reduction of 80 percent and 95 percent, respectively. The existing transit services in the area and their service characteristics, support the statement that a fixed-route is not feasible in the Inland Port.

**Project Location**

The project area spans an over 120 square mile area that comprises the International Inland Port of Dallas (IIPOD), a large portion of south Dallas, the cities of Lancaster, Hutchins, and Wilmer, and portions of the city of DeSoto, unincorporated Dallas County, and rural communities of Kaufman County. A large portion of the project area lies within the Dallas-Fort Worth-Arlington Urbanized Area (UZA). However, a majority of the investment for this project will fall in the rural areas just outside the UZA. In addition, the far northern section of the project area, in the vicinity of the VA Medical Center north of Ledbetter Drive (Texas State Highway Loop 12), are two Federal Opportunity Zones. This section within the Opportunity Zones comprises little of the overall project area but is where much of the pedestrian infrastructure and traffic signal improvements are planned.

Within this large area, there are approximately 90,000 residents and over 30,000 employees; 110 companies in the project area employ 50 or more people. Additionally, three colleges in the area have over 12,000 students combined. That diversity of land use and destinations has only increased in the last decade, with dozens of employers moving into the area. The northern and western sections of the area match the suburban land use patterns of much of the region. The south and east sections though are far more rural in development with large portions of undeveloped land between many of the new employment centers and subdivisions that have been built in recent years. This includes large logistics facilities for Amazon, FedEx, Home Depot, and dozens of other companies. These undeveloped areas are poised for new development though as major investments into transportation infrastructure have been made or are planned for IIPOD. These improvements have been added to facilitate the growth of this area into a major freight hub for the region.
The IIPOD is centrally located to much of the United States and neighboring countries and is directly connected to major national freight corridors such as: IH 35E, IH 45, and IH 20. The inland port is also serviced by two Class 1 railroads: BNSF Railway (BNSF), and the Union Pacific Railroad (UP). UP operates a 360-acre Dallas Intermodal Terminal within the IIPOD and is adjacent to IH 45. BNSF has also expressed interest in developing an intermodal facility in the area. Existing freight corridors within the IIPOD enables the region to reach 98 percent of the US population within 48 hours by truck[1]. IH 35, known as the NAFTA highway, is a primary north/south interstate that connects major intermodal centers along the heartland of the nation, and provides connections to Canada and Mexico. IH 45 provides a direct connection to the Port of Houston, a major intermodal port. IH 20 provides a critical system connection between southern California ports and eastern population centers like Atlanta.

Much of the project area is a patchwork of transit providers. In the south and east sections of the project area there is no public transportation service. The new on-demand transit service utilizing the EBs will serve to fill this significant gap. The pedestrian infrastructure improvements will be done in the vicinity of the VA Medical Center, in the very north section of the project area. This is an area that would benefit greatly from increased walkability with the hospital, DART station, and Lancaster Road corridor serving as a major activity center for all of south Dallas. Finally, the signal improvements will be the most geographically spread of the three project components. In total, 41 signals will be improved in some way, whether to enhance transit, pedestrian, or overall traffic movements. These signals are on major corridors in the project area, particularly in and around IIPOD, the IH-35E corridor, and on the Lancaster Road corridor near the VA Medical Center.

[1] The Southern Dallas County Infrastructure Analysis Report by NCTCOG

2.0 Grant Funds and Sources/Uses of Project Funds

2.1 Technical Feasibility

This project includes several elements that underwent technical feasibility analysis: on-demand transit service, EBs, location of charging infrastructure for EBs, traffic signal improvements, and sidewalk improvements.

Implementing a new on-demand transit service in the Inland Port is technically feasible based on existing market conditions and ongoing discussions with DART and STAR Transit. The characteristics of existing transit service in the area also support this conclusion: STAR Transit’s limited fixed-route service (only during peak hours, and long frequencies), and DART’s GoLink service in a relatively small area of the Inland Port. As GoLink demonstrates, on-demand transit service in the area is technically feasible. This project will build on GoLink’s service profile by expanding service to areas that have a transit need but currently do not have that option available. Furthermore, DART and STAR Transit support this project as it is proposed, since they believe it is technically feasible and can address a significant transit need in the area.

Regarding the electric component of this new on-demand service, buses and charging infrastructure, coordination with local partners and bus manufacturers indicates that this project is technically feasible. The EBs for this project, which will be smaller vehicles (known as cutaways in the industry) compared to traditional 35-40’ buses, are manufactured by several
companies. Based on market information about these smaller EBs, which spans eight different manufacturers, there is a range of technical capabilities currently available that meet the operational demands of the proposed on-demand service. Similarly, coordination with local partners regarding the location of vehicle charging infrastructure also indicates technical feasibility. DART and STAR Transit both support hosting charging infrastructure at their properties (i.e. UNT Dallas Station, STAR’s operations center); Cedar Valley College and UNT Dallas both support the idea of not only hosting charging infrastructure, but also making space available at their properties for electric bus storage. Another important partner in this project is ONCOR, the local electric utility company, that has offered to perform site assessments at identified locations to determine system capacity impacts and needs. Coordination will continue with all partners to identify optimal sites at the identified locations for bus charging infrastructure.

Regarding proposed traffic signal and sidewalk improvements, coordination efforts with all affected cities and agencies (e.g. Texas Department of Transportation, City of Dallas, DeSoto, etc.) will continue throughout the project planning and implementation phases to minimize impacts associated with construction, improvements, timing, and performance monitoring.

### 2.2 Financial Feasibility

Exhibit 7 identifies the funding sources and cost estimates for the Enhancing Mobility Within the Southern Dallas Inland Port Project. All costs are in 2018 dollars. The amount of this 2020 BUILD Grant request is **$12 million** for use in the project’s construction and implementation phase. Multiple non-federal funding sources will be utilized to cover approximately 23 percent of the project costs. Although the BUILD program allows the federal funding share for eligible projects in a rural area to exceed 80 percent, the federal share for this project will be only about 77 percent.
Exhibit 7: Enhancing Mobility within the Southern Dallas Inland Port Funding Table*

<table>
<thead>
<tr>
<th>Project Element</th>
<th>Cost (Percent of Total Project Cost)</th>
<th>Non-Federal (Percent of Project Element Cost)</th>
<th>BUILD Request (Percent of Project Element Cost)</th>
<th>Funding Split (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBs</td>
<td>$2,400,000 (20%)</td>
<td>$480,000 (20%)</td>
<td>$1,920,000 (80%)</td>
<td>100%</td>
</tr>
<tr>
<td>Electric Recharging Infrastructure</td>
<td>$2,375,000 (20%)</td>
<td>$475,000 (20%)</td>
<td>$1,900,000 (80%)</td>
<td>80% 20%</td>
</tr>
<tr>
<td>Transit Operations</td>
<td>$1,500,000 (13%)</td>
<td>$300,000 (20%)</td>
<td>$1,200,000 (80%)</td>
<td>100%</td>
</tr>
<tr>
<td>Transit Passes</td>
<td>$375,000 (3%)</td>
<td>$375,000 (100%)</td>
<td>$0 (--)</td>
<td>73% 27%</td>
</tr>
<tr>
<td>Sidewalk Improvements</td>
<td>$3,750,000 (31%)</td>
<td>$750,000 (20%)</td>
<td>$3,600,000 (80%)</td>
<td>-- 100%</td>
</tr>
<tr>
<td>Traffic Signal Improvements</td>
<td>$1,600,000 (13%)</td>
<td>$320,000 (20%)</td>
<td>$1,280,000 (80%)</td>
<td>-- 100%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>$12,000,000 (100%)</td>
<td>$2,700,000 (23%)</td>
<td>$9,300,000 (77%)</td>
<td>51% 49%</td>
</tr>
</tbody>
</table>

*No other federal funding sources will be utilized.

The table above illustrates each projects’ funding source distribution for non-federal and BUILD funding requests including percentages of each project element and Non-Federal/BUILD percentages.

Approximately $1.63 million in Regional Toll Revenue (RTR) funds will be used as the source of the non-federal match for purchase of the EBs, electric recharging infrastructure, transit operations, and the purchase of transit passes. NCTCOG’s RTR program, which is an outcome of Texas Legislature enabling the Texas Department of Transportation (TxDOT) to consider public- and private-sector partnerships to finance roadways. The result is a completed project with a toll component and revenue for transportation projects. RTR dollars result from certain toll/managed lane projects in the Dallas-Fort Worth region. It expedites transportation projects by providing desperately needed funding. Drivers utilize these toll roads/managed lanes, paying the designated toll, and those tolls funds are funneled back into the region to cover the mobility needs of our region. The use of RTR funds as non-federal match for this project were approved by the Regional Transportation Council (RTC) May 14, 2020. The RTC is the independent transportation policy body of the Metropolitan Planning Organization and is responsible for overseeing the metropolitan transportation planning process including the selection and funding of transportation projects (including RTR projects).

DART and the City of Dallas have been important partners in the work already conducted in conjunction with the FTA pilot study. The City has committed to provide a 20 percent local match or (up to $750,000) to any BUILD funds received for the pedestrian last mile connection infrastructure needs. The $3.75 million will include 10 percent for design. Additionally,
$619,000 of current City bond funds going into the project area around the station for minor street improvements and another $125,000 being invested by Dallas Water and Utilities can be leveraged as part of the project. (Attachment 2)

The participating agencies will provide the non-federal match for all traffic signal improvements. Details on specific signal improvements including locations are included in Attachment 3.

2.3 Risk Assessment and Mitigation Strategies

The project presents risk factors through use of a new technology: Electric transit vehicles (EV) have not yet been deployed in the North Texas region for this type of service, or in this platform, and charging infrastructure in the project area is sparse. This presents concerns ranging from agency expertise to conduct maintenance/repair, vehicle capability to perform the required work (e.g. range limitations, heating/cooling concerns), and whether the vehicles will have adequate downtime to recharge batteries as needed to respond to on-demand service. However, NCTCOG is confident in its experience and expertise to be able to mitigate these risks in several ways outlined below.

NCTCOG will ensure, through formal procurement processes, that all vehicles purchased are commercially-available, original equipment manufacturer (OEM) vehicles, and that they have all necessary EPA/CARB, FMCSA, and/or FMVSS certifications, as required by the NOFO. Technical specifications will be drafted to ensure that procurement results in acquisition of EV shuttles capable of performing the required work, and NCTCOG will require responding vendors to provide training on the EVs as part of the procurement contract to ensure that local fleet staff have adequate capacity to be able to perform repair/maintenance as needed. In addition, NCTCOG is a participant in a proposed project to develop a medium- and heavy-duty EV training program, which would be led by the National Alternative Fuels Training Consortium (NAFTC) at West Virginia University. The proposal was submitted to the Department of Energy in April 2020 and award announcements are expected in fall 2020. This project will ensure that NCTCOG staff are closely engaged in developing subject matter expertise with regard to EV maintenance and repair issues. NCTCOG plans to also engage Cedar Valley College, part of the Dallas County Community College system, as a training center through the NAFTC as such participation would be complementary to the existing automotive program. This would further develop a local knowledge base and workforce capable of providing the necessary support to keep these vehicles operating properly.

NCTCOG has confirmed that at least one currently available EV shuttle is capable of recharging with DC Fast Charge infrastructure, which is highly preferred to ensure operations can continue uninterrupted. As the EV market is evolving rapidly, NCTCOG expects that this capability will be more widespread once vehicle procurements are ready to proceed. NCTCOG will specifically seek responses from vehicle vendors whose shuttles are capable of accommodating DC Fast Charge and will require the vendor to provide details regarding compatible EVSE. EVSE procurement will be conducted after the vehicle procurement to ensure compatibility between shuttles and EVSE. NCTCOG has budgeted to purchase and install five different charging sites, most of which are expected to be constructed on property owned by public sector partners who can leverage the infrastructure for other uses. This ensures that the task of securing charging host sites is of minimal risk.
Finally, electric transit projects are at much higher risk of problematic implementation if the utility is not engaged early and often. This project has the support of Oncor Electric Delivery, which is the deregulated electrical transmission and distribution service provider that serves the project area. Oncor has provided a letter of support for the project and has committed to implementing any make-ready upgrades needed for the project. They also will be engaged in conversation with the transit agency and potential EVSE host sites throughout the project, providing advice and expertise and greatly mitigating risk as the project moves toward implementation. Support from the City of Dallas and other cities with authority over EVSE permitting further facilitates smooth implementation. Most anticipated charging station sites are located within municipalities that have prior experience permitting such installations.

2.4 Performance Monitoring

NCTCOG is committed to working with the City of Dallas to evaluate the effectiveness of increased access to the VA medical center station. In partnership with DART and future regional on-board transit surveys, NCTCOG will evaluate ridership and perceived increased ease and comfort of access. NCTCOG also has available electronic pedestrian counters that could be employed by partners such as the City of Dallas to count before and after activity at various locations.

Furthermore, NCTCOG will assist in monitoring overall performance of the new on-demand transit service using several metrics: ridership, on-time performance, and vehicle revenue miles. Ridership data gives an indication of overall service consumption and enables transportation planners to assess service effectiveness relative to adopted service goals and objectives to continue to refine the service product. As the expected average wait time for pick-up for this new service is 20 minutes, monitoring on-time performance will help evaluate service reliability and suggest operational adjustments if needed to uphold that wait time standard. The last metric, vehicle revenue miles, will provide an indication as to the vehicle’s duty cycle and can help monitor the EBs in relation to their adopted Transit Asset Management plan to maximize these assets’ useful life.

Regarding traffic signal improvements, signal communications systems will allow agencies to monitor signal status to verify proper operation, including remotely implementing of new timing plans as appropriate to address field conditions such as unanticipated congestion, crashes, and to identify signal malfunction. Performance monitoring options to measure traffic signal effectiveness include the following:

- Before and after pedestrian related crash data along the major routes will be compared to analyze effectiveness of the project.
- Before and after travel time runs along major routes will be compared to monitor performance to measure effectiveness of new signals timing plans.
- Before and after bus travel times and schedule adherence will be compared to measure effectiveness of transit signal priority.
- Effectiveness of vehicle detector will be measured by before and after number of vehicles utilizing an individual intersection.
3.0 Selection Criteria

3.1 Primary Selection Criteria

3.1.1 Safety

Maintaining and increasing safety for all moving within the Southern Dallas Inland Port is a high priority for this project. Between the years 2014 to 2018, there were 1232 observed crashes reported at signalized intersections within the project area. Two of these were fatal and 179 resulted in a confirmed injury. As population and employment continue to grow in the area, the potential for increased risk only becomes greater.

By providing increased transit service, vehicular traffic to the area will be reduced, resulting in several safety benefits. According to a report by the American Public Transit Association, *The Hidden Traffic Safety Solution: Public Transportation*, traffic casualties tend to decline as transit ridership increases. This project proposes bringing additional transit service to the Southern Dallas Inland Port, which will allow for those commuting to take advantage of enhanced transit options, potentially lowering their risk of crash or fatality. Those continuing to utilize personal automobiles will also benefit from the reduced amount of potentially dangerous vehicular traffic and congestion on the roadway.

The project also proposes signal improvements and transit signal priority. These improvements will reduce delay at intersections and provide safe mobility for all, regardless of transportation mode. The implementation of transit signal priority in the Southern Dallas Inland Port is expected to result in a total safety benefit of approximately $82 million. Similarly, the traffic signal improvements will result in a total safety benefit of approximately $75 million.

Finally, the addition of new sidewalks around the VA Medical Center Station will further enhance connectivity and safety benefits for pedestrians. According to the Federal Highway Administration, installation of sidewalks is anticipated to provide at least a 65 percent crash reduction rate. Between the years 2014 to 2018, there were 113 observed motor vehicle crashes within 100 feet of the proposed VA Medical Center Station sidewalk improvements. 11 resulted in a confirmed injury and 23 in a possible injury. The proposed sidewalk improvements will result in a total safety benefit of approximately $1.3 million.

The calculations of the direct safety benefits associated with the proposed improvements are included in Attachments 5 and 6: Benefit-Cost-Analysis (BCA). Combined, these improvements are expected to reduce the annual crash rate from 246 to 34.25 per year. The net present value of the total direct safety benefit attributed to the proposed project is approximately $159 million assuming a discount rate of seven percent.

3.1.2 State of Good Repair

The public infrastructure around the VA has suffered from lack of proper maintenance in a large city like Dallas with more needs than resources. The average annual cost of sidewalk...
maintenance per mile is $4,280. There have not always been enough funds citywide to properly maintain adequate standards and from staff observations, there are American with Disabilities Act (ADA) violations with curb ramp access and connectivity that make connections for vulnerable populations challenging, those with mobility challenges using transit to reach the hospital would find it difficult to navigate the heaving sidewalks, gaps in sidewalks, or other obstructions. Infrastructure from the surrounding neighborhood to the transit stop or new uses being built along the main boulevard, Lancaster Road fronting the station and hospital is in even worse repair and must be addressed.

Regarding the transit component of this project, EBs typically have less regular maintenance needs compared to buses powered by internal combustion engines because they have fewer moving parts and fewer fluids to change (e.g. engine oil). Also, electric vehicles typically have reduced brake wear due to regenerative braking, which is a system that captures a proportion of energy that is typically lost during braking and stores it in the battery for later use. So, in addition to efficiency gains, electric vehicles have less maintenance needs over their lifespan, which, from a mechanical standpoint, can help maintain the vehicle in a state of good repair over a longer period.

To maintain EBs in a manner that maximizes their useful life, NCTCOG will ensure that procurement of EBs include a training program designed for local fleet staff to learn the essentials of operating EBs and how to perform repair/maintenance as needed. The default useful life benchmark established by the FTA for cutaway buses is 10 years; training, along with additional NCTCOG resources made available to local fleet staff, will aim to meet the default useful life benchmark at a minimum.

### 3.1.3 Economic Competitiveness

Economic Competitiveness is always enhanced by increased access. The VA Medical Center area is one that has been slowly trying to reshape itself with the hospital and DART station as critical anchors. In recent years the Lancaster Urban Village was built as a mixed-use transit-oriented development located in this area of the City which is targeted for growth and redevelopment. The project was the first major development in many years in the area and consisted of 193 units of housing, 14,000 square feet of retail and structured parking of 395 spaces. One hundred of the units house tenants whose income is 80 percent or less of the City median. The project is directly across from the DART station and the Hospital.

The project was part of a successful partnership with the Department of Housing and Urban Development (HUD) and is a catalyst for future development. Additional incentives, such as enhanced infrastructure will bring amenities to this underserved community and support the expanding VA Hospital. This project was supported though Public Private Partnership Program, New Markets Tax Credits, HUD Section 108, HUD 221(d)(4) Loan Guarantee, Tax Increment Financing – TOD TIF District.

The area and much of the focused project area is part of the “Mayor’s GrowSouth Initiative” which has a goal to foster economic development opportunities in Southern Dallas. The City currently owns several contiguous tracks of land near the transit station and has been working through various Request for Proposals to develop a public-private partnership for redevelopment.
The goal would be to bring additional housing, retail, and other uses to the area. There are incentive funds set aside by the City Council of up to $750,000 to leverage and a goal of this project would be to assist the City in reaching a successful development team that will see the benefits of millions of public investment making their funds go even further. As of last fall, no proposals had proved successful to meet the needs of the community and the City. This infrastructure is potentially critical to the project’s success.

Economic competitiveness is enhanced through use of EV technology, which achieves greater efficiency than a conventional internal combustion engine (ICE). Electric motors are inherently more efficient than internal combustion engines. According to [www.fueleconomy.gov](https://www.fueleconomy.gov), EVs convert about 59–62 percent of the electrical energy from the grid to power at the wheels. This is about three times as efficient as conventional gasoline vehicles, which only convert about 17–21 percent of the energy stored in gasoline to power at the wheels. Thus, even in the event ridership is low, this project will achieve a net improvement in overall energy efficiency by replacing inefficient ICE trips with more efficient electric trips.

EVs also achieve lower operating costs, which can improve the “bottom line” not only for STAR Transit, but for any fleet that decides to electrify. While lower operating costs of EVs are recognized nationwide, it is particularly favorable to deploy EVs in North Texas due to Texas’ low electricity prices. In 2018, the average retail electricity price in Texas was 8.48 cents per kilowatt-hour, versus an average of 11.50 across the rest of the country. A shift toward electric trucks among the private companies operating in the inland port has the potential to be highly impactful for those companies from an economic perspective. Successful implementation of this project as a proof of concept for EV technology in their own “backyard” can help spur this transition.

The project also presents opportunity for expansion of skilled job opportunities in this sector of the region through the potential participation of Cedar Valley College as a training center through the NAFTC.

Improving transit service to the Inland Port enhances economic competitiveness. In a survey of large employers, 61 percent cited transportation as a barrier to retaining employees and that 58 percent of their employees have requested some form of transportation assistance getting to or from work. Easing the transportation burdens of employers and employees with a faster more flexible transit service will reduce their cost and allow them to be more productive. The Inland Port attracts employees from the entire DFW region with its manufacturing and distribution logistics jobs through employers such as Amazon, FedEx, Solar Turbines Inc, and Home Depot Distribution center. These industries further fuel jobs in retail and other service sectors creating significant job growth.

Opportunities to connect college students at the three colleges in this zone will significantly improve student transportation and enhance their economic competitiveness. This includes Paul Quinn College (identified by the US Department of Education as a Historically Black Colleges and Universities), UNT-Dallas, the only public, accredited 4-year university in the City of

1 [https://www.fueleconomy.gov/feg/evtech.shtml](https://www.fueleconomy.gov/feg/evtech.shtml)
2 [https://www.eia.gov/electricity/state/](https://www.eia.gov/electricity/state/)
Dallas, and Cedar Valley College, part of the Dallas County Community College District. Together the three institutions enroll approximately 12,500 students annually who with this new transit service will have increased access to industry connections and opportunities.

3.1.4 Environmental Sustainability

This project will provide a variety of environmental and energy benefits. EVs provide reductions in both criteria pollutants and greenhouse gas emissions, as illustrated in the BCA. As 10 counties in the DFW area are nonattainment for ozone, the reductions in nitrogen oxides (NOx) emissions gained from use of ZEVs are critically important to achieving ozone standards. While the emissions reductions shown are limited to direct “tailpipe” emissions to be conservative, NCTCOG believes that real-world benefits will be even greater on a well-to-wheels basis, as Texas’ electrical grid is cleaner than the national average and enables even greater emissions reductions when evaluated more holistically. According to the Electric Reliability Council of Texas’ (ERCOT) Fuel Mix Report for 2019, total electricity generation was sourced from over 40 percent natural gas, 20 percent wind, 11 percent nuclear power and 1 percent solar, with coal dropping to 20 percent.3 As 2019 was a year of record consumption, moving forward, wind is expected to outpace coal power in terms of overall grid contribution in future years. New power generation projects approved in Texas are predominantly wind and solar power, with a small fraction of natural gas, indicating that electricity generation in Texas will continue to become increasingly low-emissions. Successful EV projects in Texas are thus likely to be standard-bearers on a well-to-wheels basis. The following graph illustrates the emissions benefits associated with utilizing EBs for the 10-year service life of these vehicles relative to the other fuel types currently used for similar transit service in DFW: gasoline, diesel, or compressed natural gas as demonstrated in Exhibit 8.

Exhibit 8: Comparison of Criteria Pollutant Emissions for Proposed Service by Fuel Type

Beyond emissions reductions, the project achieves a net improvement in energy efficiency due to transition from inherently inefficient ICE vehicles to highly efficient electric vehicles. On a

3 http://www.ercot.com/gridinfo/generation
well-to-wheels basis, the net energy consumption associated with EV trips is a fraction of that consumed by conventional vehicles. This efficiency is even further enhanced through the efficiencies of the “buy local” concept, which can be applied to the electric grid of Texas. As the ERCOT grid is fairly isolated from the rest of the country, electricity consumed in Texas is likely generated in Texas. This minimizes losses in the fuel supply chain, further optimizing the benefits associated with the choice of EVs as the core technology.

Sustainability is also enhanced by the accelerating momentum surrounding electrification of transit fleets in North Texas. Large transit authorities in DFW have already deployed EV transit pilot projects, and both have expressed interest in expanding the use of EV technologies. DFW International Airport, which runs a large bus fleet for various services such as parking and terminal shuttles, is also looking to electrify. Successful demonstration of electrified service in a different vehicle platform will help further the transition to electrification regionwide.

Multi-modal infrastructure improvements that benefit walking and bicycling provide enhancements to overall air quality through a reduction of auto-oriented trips, which can reduce emissions and air pollutants. Additionally, there are proven health benefits to physical exercise and activity and whether it is a choice or a necessity to walk or ride a bicycle to a destination, each mode of transportation should be as accessible and safe as the others. The VA Medical Center infrastructure element will provide those choices that are sustainable for many years to come with a positive outcome to the environment.

3.1.5 Quality of Life

Enhanced Connections to Key Destinations
The new on-demand transit service and sidewalk improvements will enhance connections to key destinations within the Inland Port and beyond. As the new transit service will serve primarily areas outside of existing service, those utilizing this service will benefit from new and/or enhanced connections to jobs, schools, medical facilities, shopping centers, and more—connections which are currently non-existent or limited. Rural areas outside of the Dallas-Fort Worth-Arlington Urbanized Area (UZA) will benefit tremendously from new connections resulting directly from the new on-demand transit service. As the new transit service will connect to a key transfer point in DART’s UNT Dallas Station for light rail service, the reach of these connections will effectively be extended to the greater metropolitan region.

Students at Paul Quinn College, UNT-Dallas, and Cedar Valley College will experience improved access to their campuses and surrounding communities. Additionally, ease of access between the employers and education institutions can provided for targeted job training needs of those employers. Tying together the educational and employment opportunities by an affordable transit option will enhance the productivity and advancement of human capital in the Inland Port.

The City of Dallas has invested significantly in thinking strategically about needs for the Inland Port and the vision of the community and residents accessing the VA Center. The City of Dallas was awarded Community Challenge Planning Funds from HUD’s Office of Sustainable Housing and Communities for TOD planning. A Lancaster Corridor Committee was formed of residents
and businesses and public meetings were held to engage ideas. A plan was developed and adopted in 2013 that focuses on infrastructure needs to assist in redevelopment. The plan focused on safety and multi-modal connectivity which this BUILD grant application helps to achieve. NCTCOG has also participated in significant planning in the area around the Inland Port and around the UNT southern DART station and these projects help move the needle forward on implementing community plans for the future of the area.

Reliability and Convenience
As the new transit service will be on-demand, users will experience more flexibility due to the characteristics of this type of service: curb-to-curb service, 20 minutes average wait time for pick-up, and on-demand request. The ability to book a trip through a smartphone (or phone call if needed) is convenient for many users. Additionally, the high trip frequency of this new service makes transit more reliable (much improved compared to the long frequency of existing fixed-route service), and directly addresses the transportation reliability issue cited by many employers and job-seekers in the Inland Port.

Public Health Improvements
Clean air is foundational to a good quality of life. The North Texas region faces air quality challenges, as 10 counties are designated by the Environmental Protection Agency (EPA) as serious nonattainment under the 2008 8-Hour Ozone National Ambient Air Quality Standards (NAAQS). Nine of these counties are also designated as marginal nonattainment under the 2015 Ozone NAAQS. As on-road mobile emissions are the cause of nearly two-thirds of ozone-forming pollution in DFW, projects to reduce transportation emissions are critical to overall regional air quality improvement. This project will directly support regional efforts to achieve ozone standards by offsetting light-duty passenger vehicle trips with zero-emission transit vehicle trips – both improving mobility while simultaneously reducing tailpipe emissions.

3.2 Secondary Selection Criteria

3.2.1 Innovative Technologies
This project has the potential to substantially transform the current state of the art transit operations in Texas. There is substantial interest among several major fleets across Texas in using EVs for smaller-platform transit service, but no such projects have been deployed to date. Successful completion of this project and demonstration that this technology can fulfill operational needs will be a springboard for adoption by agencies across the state. Across DFW, an estimated 4.6 million miles of paratransit service are currently served by 488 cutaway vehicles, about half of which are gasoline or diesel and another half are fueled by compressed natural gas. Successful demonstration of EVs in this project will lay the foundation for electrification of this platform regionwide. Using the AFLEET tool developed by the Argonne National Laboratory, NCTCOG has estimated that over the 10-year vehicle useful life, electrification of these 488 vehicles would reduce approximately 128,500 tons ozone-forming NOx, 81,500 tons ozone-forming volatile organic compounds, and over 4,000 tons each fine particulate matter.

4 https://dallascityhall.com/departments/pnv/Pages/Lancaster-Area-Plan-landing-page.aspx
5 https://www.nctcog.org/nctcg/media/Transportation/DocsMaps/Plan/Landuse/Dev/UNTDallas.pdf
particulate matter and coarse particulate matter, achieving both direct health and environmental benefits. A region-wide electrification could also yield substantial benefits in terms of well-to-wheel reductions in greenhouse gases and petroleum consumption, as illustrated by the following graphs. These impacts were also calculated using the Argonne National Laboratory AFLEET tool as seen in Exhibit 9 below.

Exhibit 9: Well to Wheels Petroleum Displacement

Beyond inspiring further transit vehicle transitions, this project has the potential to be impactful through high exposure to the many private sector goods movement fleets with facilities in the project area. Successful implementation of this project as a proof of concept for EV technology in their own “backyard” can help spur their own transitions to electrified transportation.

The traffic signal technology that is proposed as part this project includes traffic detection systems and cameras, traffic signal communications, traffic signal retiming, transit signal priority and pedestrian signals. These elements help to reduce conflict detection by providing a safety phase for pedestrian to cross, transit and other vehicle progression to reduce starts and stops along the corridor, and detection systems to identify when a vehicle or pedestrian is waiting to proceed into the intersection. Through the integration of these technologies the traffic signal will provide optimal performance by improving safety and the movement of pedestrian and vehicles.

3.2.2 Innovative Financing

The Enhancing Mobility Within the Southern Dallas Inland Port Project will leverage multiple existing partnerships ongoing within the region to maximize opportunities and resources. The following project elements will reduce overall administrative costs:

Cooperative Vehicle Procurement (CVP): NCTCOG will purchase the EBs on behalf of STAR Transit through a regional CVP planned for late 2020. The CVP will ease the administrative burden on several small transit providers, including STAR, by leveraging nearly $6 million in funding for replacement and expansion of transit fleets across the region. NCTCOG will ensure compliance with federal procurement requirements, deliver savings and efficiencies to regional partners, and continue efforts to implement regional transit vehicle standards. This project specifically will add eight small EBs to the CVP for the purposes of serving the Inland
Port Area. The CVP will ensure these vehicles are procured in a manner that is both cost-effective and efficient, allowing project goals to be fully achieved on schedule.

**Electric Infrastructure:** Siting for EV charging infrastructure will be secured through partnerships with local colleges, universities, employers, and public transit providers, who will serve as host locations for charging stations. This also enables the charging stations to be leveraged to serve a broader community beyond the transit vehicles included in this project, as the host locations may launch or expand EV programs of their own, or for their students/employees/customers. In addition, Oncor Electric Delivery has committed to completing any make-ready upgrades needed on the distribution side of the meter to enable successful charging installations.

**Shared Parking:** STAR Transit will be partnering with Cedar Valley College (CVC) to store the EBs when not in use at the CVC campus as it is centrally located within the Inland Port and will also serve as a host site for EV charging.

**VA Medical Center:** The VA Medical Center Infrastructure Element provides for a supportive partnership with the City of Dallas, through collaboration with DART and partners at the VA Medical Center. Current bond funds and future City funds will assist in realizing the proposed improvements. These investments can be further leveraged to assist the City in the public-private partnerships that are looking to acquire and have set aside Tax Increment Financing (TIF) funds and land assembly as incentives. This is a small critical part of the three main focus areas of transit connecting to large employers, education and job training, and health care for our Veterans and their families.

3.3 Partnership

3.3.1 Stakeholders

**Project Parties**
The Enhancing Mobility Within the Southern Dallas Inland Port Project is a multi-jurisdictional effort between NCTCOG, STAR Transit, the Cities of Cedar Hill, Dallas, DeSoto, and Lancaster, and the Texas Department of Transportation (TxDOT). All partners have a strong history of working together on improving mobility withing the Southern Dallas Inland Port. The roles of each partner are described below.

**North Central Texas Council of Governments (Grant Applicant)**
NCTCOG is serving as the applicant for this BUILD grant. NCTCOG is a voluntary association of cities, counties, school districts, and special districts established in January 1966 to assist local governments in planning for common needs, cooperating for mutual benefit, and coordinating for sound regional development. North Central Texas is a 16-county metropolitan region centered around Dallas and Fort Worth. The region has a population of more than 7 million (which is larger than 38 states), and an area of approximately 12,800 square miles (which is larger than nine states). NCTCOG has 229 member governments, including all 16 counties, 167 cities, 19 independent school districts, and 27 special districts. Since 1974, NCTCOG has served as the MPO for the Dallas-Fort Worth area. NCTCOG’s Transportation Department is responsible for the regional planning process for all transportation modes, and also provides technical support.
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and staff assistance to the RTC and its technical committees, which comprise the MPO policy-making structure. The department also provides technical aid to local governments and transportation providers in planning, coordinating, and implementing transportation decisions.

**STAR Transit (Grant Recipient/Project Implementation)**

STAR Transit is a public bus transportation service, offering bus transportation in Kaufman County, Rockwall County, Mesquite, Balch Springs, Seagoville, Hutchins and DeSoto. STAR Transit is a political sub-division of the state of Texas and provides over 235,000 rides per year. STAR Transit will provide the on-demand service for the Southern Dallas Inland Port through expanded service area connections, convenient connections to existing transit services, including a light rail station, and coordinated service planning through partnerships.

**Cities of Cedar Hill, Dallas, DeSoto, and Lancaster and TxDOT (Project Implementation)**

The cities of Cedar Hill, Dallas, DeSoto, and Lancaster and TxDOT play an important role with project implementation. All pedestrian infrastructure improvements and traffic signal improvements will be located within their jurisdictions and will assist by coordinating any permitting processes or other local requirements. Details on specific signal improvements including locations are included in Attachment 1. Support for the project from these entities is included in Attachment 4 – Letters of Support.

**Other Key Entities Involved in Delivering the Project**

**Dallas Area Rapid Transit**

Dallas Area Rapid Transit (DART) operates in the City of Dallas and 12 other surrounding cities with an extensive network of DART Light Rail, Trinity Railway Express commuter rail, bus routes and paratransit services which move more than 220,000 passengers per day across a 700-square-mile service area. DART will serve as a host site for EV charging at their UNT Dallas Station, which will be an important location for enhancing regional connectivity. The UNT Dallas Station is served by the South Oak Cliff segment of the DART Rail Blue line.

**Cedar Valley College**

Cedar Valley College (CVC), one of the seven independently accredited colleges within the Dallas County Community College District, is located in the Southern sector of Dallas County. More than 8,500 students benefit from its comprehensive curriculum which includes credit and non-credit offerings. As noted, this project can introduce additional partnerships with CVC and the NAFTC in developing a local workforce to support maintenance and repair needs of EVs and related infrastructure. CVC will also serve a host site for one of the EV charging locations.

**Oncor Electric Delivery**

Oncor Electric Delivery Company LLC, headquartered in Dallas, is a regulated electricity distribution and transmission business to provide reliable electricity delivery to consumers. Oncor operates the largest distribution and transmission system in Texas, delivering power to more than 3.6 million homes and businesses in Texas. Oncor is committed to ensuring the required electrical infrastructure supports the operations, tempo and needs of the Enhancing Mobility Within the Inland Port project.
3.3.2 Collaborating Organizations

The requested funding will enable coordinated thoroughfare and transit-friendly improvements through multiple agencies and partnerships, and deployment of smart technologies will improve road safety and optimize throughput for all modes. Responding to transit and market demands in the region, this project will connect rural residents and large employers of the IIPOD to an existing light rail system, the nearby VA Medical Center, and education and job training opportunities. The infrastructure improvements will include new or revamped sidewalks, transit-friendly street design, new or upgraded bus facilities and smart traffic signals.

These initiatives will work together with the proposed infrastructure improvements to address short and long-term mobility and accessibility needs for the Southern Dallas County Inland Port area, helping strengthen connections to job centers, expanding employment opportunities and accelerating the area’s economic development. Other important stakeholders that have been engaged to collectively address local transportation issues include:

- University of North Texas at Dallas
- Paul Quinn College
- Southern Dallas County Inland Port Transportation Management Association
- Dallas Regional Chamber
- Texas Research Alliance
- Best Southwest Partners
- Dallas County

Support for the project from these entities is included in Attachment 4 – Letters of Support.

4.0 Project Readiness

4.1 Project Schedule

Upon notification that the Improving Mobility within the Southern Dallas Inland Port project has been awarded the BUILD Grant, the project’s three components will be added to the NCTCOG Transportation Improvement Program (TIP) at the next quarterly modification due to be complete by February 2021. Additionally, project partnership and implementation agreements with the partnering and implementing agencies will be completed on the same timeline as the TIP modifications following standard partnership approaches used in the region. Additionally, all construction and improvements will be done in existing public right-of-way. There will be no need to acquire any right-of-way or real property. Project work will be able to commence immediately upon the completion of the funding programming and partnership agreements.

Funds will be obligated no later than September 30, 2022, per requirements in the FY 2020 BUILD Notice of Funding Opportunity. In addition, all funding for this project provided through the BUILD Grant program will be expended prior to September 30, 2027. Please see Attachment 5 for design/planning, procurement, construction, and operation scheduling activities for each project component.
4.2 NEPA Status

The Enhancing Mobility Within the Inland Port Project does not require any significant environmental permits or reviews. While the project includes construction and installation of EV charging stations and pedestrian improvements, the environmental impacts associated with this infrastructure are minimal. Experience indicates that these types of EV infrastructure installations may qualify for a Categorical Exclusion, as impacts are generally limited to shallow earth disturbance and running of electrical conduit on properties that have already been developed with parking and/or structures. The pedestrian infrastructure component of the project will also pursue Categorical Exclusions because they will not individually or cumulatively involve significant social, economic, built, or natural environmental impacts.

4.3 Legislative Approvals

Following the BUILD Grant opportunity announcement, the Regional Transportation Council (RTC), the independent transportation policy body of the Metropolitan Planning Organization for the Dallas-Fort Worth area, approved the Enhancing Mobility Within the Southern Dallas Inland Port project on May 14, 2020. A letter from the RTC, included in Attachment 4 - Letters of Support, indicates that this project is consistent with the programs and policies in Mobility 2045.

Mobility 2045 includes numerous strategies that are to be implemented that support the Enhancing Mobility Within the Southern Dallas Inland Port Project. Specific references include:

- **Community Access Transit Programs (TR2-001)** – Supports transit services, primarily demand-response transit, that link people to essentials such as employment, education/job training, medical care, and enriching activities.
- **Last-Mile Transit Connections (TR2-002)** – Supports bus services that improve passengers’ access to their final destinations after using regional transit.
- **Regional Connections: Next Generation Transit Program (TR2-003)** – Includes recommendations for improving services through public and private agencies, and implementing service as needed in communities.
- **Active Transportation Network Implementation (BP2-002)** – Includes completing linkages to transit and major destinations and implementing projects that improve accommodations and safety for pedestrians, with special attention given to disadvantaged communities.
- **Transit Oriented Development (SD3-002)** – Promote transit-oriented development for all station types improves “last mile” connections.
- **Transportation System Management & Operations (TSMO3-001)** – Includes installation of pedestrian facilities by local agencies as part of intersection improvement and traffic signal improvement programs shall provide access to usable walkways or sidewalks.
- **Transportation System Management & Operations (TSMO3-006)** – Includes encouraging, evaluating, and deploying new energy-efficient, low-cost technologies for Intelligent Transportation Systems and Transportation System Management and Operations projects throughout the region through 2045.
Signal Improvement Program (TSMO2-002) – Includes implementing traffic signal improvements: signal timing optimization, signal hardware upgrade, and system interconnection in communities throughout the region through 2045.

5.0 Benefit Cost Analysis

5.1 Brief Description of Methodology

The benefits of implementing the Enhancing Mobility within the Southern Dallas Inland Port project were assessed by comparing the no-build scenario to the proposed BUILD project. The no-build scenario assumes continued operation of low frequency fixed route buses in only a small portion of the project area. It assumes travel conditions and metrics follow the existing forecast of Mobility 2045: The Metropolitan Transportation Plan for North Central Texas.

Benefits of the implementation of new on-demand electric bus service are anticipated to result from improved travel time and vehicle operating cost savings for transit riders, as well as general reduction in vehicle congestion and the forecast pollutant and greenhouse gas emissions. Additionally, the implementation of signal improvements with transit signal priority is expected to reduce delay at intersections and increase safety. Finally, building new sidewalks around the VA Medical Center Station will increase pedestrian safety. These benefits have all been monetized in 2018 dollars and discounted per US DOT BCA Guidance to account for the time value of money to determine the value of benefits at the end of the 10-year lifespan of the EBs, which determined the project analysis period. In addition to the capital cost included in this grant request, detailed annual maintenance cost to be covered by local governments are also included in calculating the benefit to cost ratio. The details of each calculation are described in Attachments 6 and 7.

Significant benefit is also expected to occur supporting increase job retention and attendance at the major logistics and warehouse employers of the Inland Port. This could return tens of thousands of dollars per employee to the employers in reduced employee turnover cost due to transportation issues. However, the exact amount attributable to transportation improvements requires further study and was not monetized in this BCA.

5.2 Results

The total mobility, air quality, safety, and residual value of implementing the Enhancing Mobility within the Southern Dallas Inland Port project result in a discounted net present value of $208 million at the end of the 10-year analysis period. The benefit to cost ratio is 18 to 1 meaning this project produces significantly more benefit than its implementation cost.