this plan is detailed in Section VII of this report under Implementation. The land use plan is shown on the following page.

Table 28
LAND USE SUMMARY
JOHNSON COUNTY INTERNATIONAL AIRPORT
MASTER DEVELOPMENT PLAN

<table>
<thead>
<tr>
<th></th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Developed</td>
</tr>
<tr>
<td>Runways and Aprons</td>
<td>350.0</td>
</tr>
<tr>
<td>Proposed Passenger Terminal</td>
<td>--</td>
</tr>
<tr>
<td>Terminal Support Services</td>
<td>--</td>
</tr>
<tr>
<td>Airside Users</td>
<td>85.5</td>
</tr>
<tr>
<td>Intermodal Distribution Center</td>
<td>--</td>
</tr>
<tr>
<td>Industrial/Manufacturing</td>
<td>131.0</td>
</tr>
<tr>
<td>Business Park</td>
<td>87.2</td>
</tr>
<tr>
<td>Commercial/Retail</td>
<td>1.6</td>
</tr>
<tr>
<td>Open Space</td>
<td>--</td>
</tr>
<tr>
<td>Golf Course</td>
<td>--</td>
</tr>
<tr>
<td>Parkway Corridor</td>
<td>--</td>
</tr>
<tr>
<td>Pedestrian Corridor</td>
<td>--</td>
</tr>
<tr>
<td>300-foot ROW for 21st Century Parkway</td>
<td>--</td>
</tr>
<tr>
<td>Total</td>
<td>655.3</td>
</tr>
</tbody>
</table>

Source: BRW, Inc.

Runways and Aprons
This category includes current and proposed airfield runways and aprons and are based on existing conditions and those proposed in the Coffman Airfield Operations Master Plan for JCIA.

Proposed Passenger Terminal
The proposed terminal is also shown in the MDP as located in the Coffman Master Plan. In this MDP, the access from U.S. 56 has been modified to include a proposed future direct connection between the terminal area and I-35 to the north/northeast. The alignment and design of this connection will require additional study in the future.

Hammer, Siler, George Associates
BRW, Inc.
Section VI. MASTER DEVELOPMENT PLAN

This section of the report presents the recommended Master Development Plan (MDP) for the future development of Johnson County Industrial Airport nonaeronautical properties. The recommended MDP is based on the analysis of market and physical opportunities and the forecast market potentials contained in the previous sections of the report. Johnson County Industrial Airport (JCIA) has significant opportunities for signature new development that can benefit Johnson County in many ways for many years to come.

- First, the land assets of the Airport and their unique relationship to airfield activities can provide specialized development opportunities only available to users needing airport access.

- Second, a public golf course accessible to all Johnson County residents can be established, providing a unique component to the business park as well as providing the residents of Johnson County and the surrounding communities a much needed public amenity.

- Third, there is existing development which has been instrumental in building the foundation for new development types in JCIA. The quality and visibility of the North Supply office building at the major entrance from I-35 sets the stage to continue that image in selected areas of JCIA. The existing industrial development at JCIA has also established the area as a prime candidate for continued industrial development.
Fourth, the establishment of new infrastructure systems and agreements for water supply and sewage treatment facilities provide the needed capacities to serve development at JCIA into the future.

The master development plan is bold in its vision, but uncomplicated in structure. Simply stated, the organizational framework is based on JCIA’s assets. The following principles apply:

- Utilize Industrial Parkway as the major spine around which most development will be organized.
- Establish unique development enclaves which build upon the unique assets located in those areas such as providing a business park in conjunction with the golf course which takes advantage of locational attributes of drainages, water retention, and runway clear zones.
- Reserve land adjacent to runways for users requiring runway access.
- Capitalize on symbiotic relationships between modes of transit by optimizing truck access, rail access, and runway access.

The MDP is separated into three major elements, the land use plan, the infrastructure development plan, and the urban design plan.

Land Use Plan

The amount and distribution of the major land uses in the land use plan were developed based on the market analysis forecasts of development potentials. This land use plan represents the full build-out potential for JCIA, and the first phase of...
this plan is detailed in Section VII of this report under Implementation. The land use plan is shown on the following page.

Table 28
LAND USE SUMMARY
JOHNSON COUNTY INTERNATIONAL AIRPORT
MASTER DEVELOPMENT PLAN

<table>
<thead>
<tr>
<th></th>
<th>Developed</th>
<th>Undeveloped</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Runways and Aprons</td>
<td>350.0</td>
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<td>1,080.0</td>
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<tr>
<td>Proposed Passenger Terminal</td>
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<td>92.4</td>
<td>92.4</td>
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<tr>
<td>Terminal Support Services</td>
<td>--</td>
<td>36.3</td>
<td>36.3</td>
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<tr>
<td>Airside Users</td>
<td>85.5</td>
<td>142.0</td>
<td>227.5</td>
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<td>Intermodal Distribution Center</td>
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<td>110.5</td>
<td>110.5</td>
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<tr>
<td>Industrial/Manufacturing</td>
<td>131.0</td>
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<td>541.7</td>
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<td>87.2</td>
<td>293.0</td>
<td>380.2</td>
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<tr>
<td>Commercial/Retail</td>
<td>1.6</td>
<td>31.7</td>
<td>33.3</td>
</tr>
<tr>
<td>Open Space</td>
<td>--</td>
<td>371.0</td>
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<tr>
<td>Golf Course</td>
<td>--</td>
<td>251.2</td>
<td>251.2</td>
</tr>
<tr>
<td>Parkway Corridor</td>
<td>--</td>
<td>33.8</td>
<td>33.8</td>
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<tr>
<td>Pedestrian Corridor</td>
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<tr>
<td>300-foot ROW for 21st Century Parkway</td>
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<td>75.0</td>
<td>75.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>655.3</strong></td>
<td><strong>2,578.0</strong></td>
<td><strong>3,233.3</strong></td>
</tr>
</tbody>
</table>

Source: BRW, Inc.

Runways and Aprons
This category includes current and proposed airfield runways and aprons and are based on existing conditions and those proposed in the Coffman Airfield Operations Master Plan for JCIA.

Proposed Passenger Terminal
The proposed terminal is also shown in the MDP as located in the Coffman Master Plan. In this MDP, the access from U.S. 56 has been modified to include a proposed future direct connection between the terminal area and I-35 to the north/northeast. The alignment and design of this connection will require additional study in the future.

Hammer, Siler, George Associates
BRW, Inc.
Terminal/Support Service
This land use designation includes areas for potential passenger support services such as car rental, restaurants, and other associated air travel support uses.

Airside Users
This land use designation is intended to be set aside for users requiring airfield access as a major component to their operations. This would include such uses as FBO’s, air freight and cargo, air maintenance facilities, flight training, and similar uses. A total of 227.5 acres are designated for development utilizing airfield access.

Intermodal Distribution Center
This category is intended to provide a site to take advantage of the unique combination of transit modes currently operating at JCIA. An intermodal Distribution Center, similar to the one at Huntsville, Alabama, could serve JCIA in a unique way, providing the full use capabilities of trucking, rail, and air transport. A site of 110.5 acres is set aside for this future development opportunity.

Industrial/Manufacturing
This category is intended to accommodate the same type of manufacturing/industrial uses as currently exist at JCIA. JCIA is known as an industrial park, and it is intended that it continue to offer that same market in the future. A total of 410.7 acres of undeveloped land and 131 acres of developed land, or a total of 541.7 acres, are designated for this use.

Business Park
This land use is designated for properties adjacent to the golf course; however, there is also an expansion of business park uses in conjunction with the area in proximity to the North Supply office building. These uses are meant to take advantage of the market for business park tenants as well as provide an enhanced image for JCIA as one enters JCIA or passes by it along the regional arterials. The architectural standards and streetscape systems in the business park area will necessarily be demanding a higher quality finish and image than in the industrial areas of JCIA. Significant effort has been made to ensure frontage on the golf course for as many parcels as possible. There is a total of 87.2 acres of
existing development reclassified as Business Park and 293 acres of undeveloped land, for a total of 380.2 acres of business park land.

Commercial/Retail
This land use is designated for two parcels. A small retail facility in the heart of JCIA near the ponds, park, and museum would serve the tenants and workers at JCIA with convenience retail or commercial uses, such as a convenience store, sandwich shop, or other similar use. The larger retail area in the southwest corner of JCIA will provide an area for neighborhood retail uses such as a drug store, supermarket, or other similar retail needing that land area and access from regional roads such as U.S. 56 or the 21st Century Parkway.

Open Space
This land use is set aside for properties that will serve as an amenity to tenants and workers at JCIA. It is intended to provide trails and landscaped open space for the enjoyment of workers at lunch and to provide a visual amenity with ponds, wetland areas, and improved park facilities.

Golf Course
The proposed public golf course is to be built as an amenity to the business park. It is intended to serve the recreational needs of Johnson County in addition to attracting high quality development in and around it to improve the image of JCIA. The location of the 251.2-acre golf course site along 151st provides for a positive visual amenity for JCIA to travelers passing by, as well as to vehicles entering the business park.

Parkway Corridor
This is an overlay land use designation for uses along the Industrial Parkway corridor. Uses in this zone must provide a higher quality building finish and increased landscape standards than required in other area at JCIA in general.

Pedestrian Corridor
The addition of pedestrian pathways and sidewalks is critically needed at JCIA. The need to provide safe pedestrian areas, apart from vehicular traffic, is critical to the well-being of workers walking or jogging during lunch time. The system shown on the plans provides a distinct network of trails, both adjacent to the streets and through open space areas, linking uses to open space amenities such as parks, the golf course, etc.
21st Century Parkway Corridor
This land use designation is to accommodate the required 300-foot ROW for 21st Century Parkway along the west edge of JCIA. The need to relocate the railroad tracks, reduce some parcel sizes, and remove some existing facilities is highlighted as a result of providing for the ROW.

Infrastructure Development Plan

Circulation

Regional Connections. Interstate 35 provides the primary connections to JCIA from the north and south. Most private autos use the I-35/Industrial Parkway connection to enter JCIA. The MDP would maintain this connection and complete Industrial Parkway through JCIA to a connection at 151st Street at the north boundary. This connection is important in future access to JCIA as 151st becomes upgraded as planned.

The need for new access from I-35 to the new air terminal is identified. Traffic flow from I-35 through the interchange with Industrial Parkway and U.S. 56 to the new terminal would be difficult, therefore, a more direct connection to I-35 from the planned terminal access is needed via an interchange farther to the north/northeast as permitted with I-35.

The planned 21st Century Parkway along the western edge of JCIA impacts development along that edge and restricts access to JCIA from the parkway as well. The ROW for the parkway will be taken from JCIA along the western boundary as indicated on the plans. Relocation of the railroad tracks, reductions in current available leasable land, and the removal of some existing structures will occur as a
result of the parkway. Connections to the parkway from 151st, 159th, 167th, and 172nd will be made to provide access to and from JCIA.

U.S. 56 will continue to provide access to JCIA via its intersection with Industrial Parkway to the south. The eastern boundary intersection with U.S. 56 will necessarily have to be eliminated as the new runways are built.

151st Street is planned to be upgraded and serve as a regional east/west connector. Its adjacency to the north boundary of JCIA will provide excellent opportunities for regional access to JCIA. Intersections with 151st and Industrial Parkway and the internal business collector road will be provided as shown on the plan.

**Arterial Parkways.** Internal circulation at JCIA will be served primarily by Industrial Parkway. Industrial Parkway currently serves as the major spine, and as the MDP illustrates, it will be continued to the north and connect to 151st Street to provide a connection to regional access from the east and west. Industrial Parkway will continue to serve as the primary road through JCIA, and should be treated as an important visual element in the future improvements and development at JCIA.

A secondary parkway serving the future passenger terminal is also shown. This parkway will have the same design standards applied as at Industrial Parkway, and will necessarily have a direct connection to I-35 to the north/northeast in the future.

**Collectors.** Connections between Industrial Parkway and the 21st Century Parkway and 151st Street will be made by primary collector roads as shown. Three connections to 21st Century Parkway will be made by these collector roads at 159th, 167th, and 172nd.
167th, and 172nd. One connection from Industrial Parkway to 151st through the business park will be made as shown on the plans. These roads will function as primary collectors, tying the internal circulation spine of JCIA to regional connections outside of JCIA.

**Local Roads.** Local roads will provide access to development parcels including planned and existing roads.

**Pedestrian Network.** The pedestrian circulation system shown on the land use plan is intended to provide a unified network of trails and sidewalks linking uses to each other and to open space. It is primarily intended to serve tenants and workers at JCIA during lunch or leisure time, allowing safe pedestrian access to parks, retail, and other uses. This network would consist of roadside sidewalks in addition to off-street trails/walks passing through open space and between uses.

**Railroad Access.** A new rail spur should be constructed to serve the intermodal distribution center near the proposed passenger terminal. Other rail improvements will be required as a result of eventual displacement by the construction of the 21st Century Parkway.

**Water**

The existing water distribution system at JCIA is in need of nearly total replacement. The Water Utility Plan shown on the following page illustrates the anticipated improvements to the water system as they relate to the MDP. This plan is representative of estimated sizes and extent required to meet the needs of JCIA in...
future development, and it should be recognized that a detailed water system study should be performed prior to any water system improvements.

**Sewer**

The Sanitary Sewer Plan is shown on the following page. While a brand new sewage treatment plant has been constructed at JCIA with excess capacity to accommodate future development, the lines serving that plant are generally insufficient and in need of replacement. The sewer plan has been developed assuming replacement of those lines and substitution with new lines in areas of inadequate lines and where new development is planned. This plan relates to the anticipated trunk sewer system needed to serve JCIA at full build-out. It should be noted that, as with the water system, a detailed study on the condition of the existing system should take place prior to making any improvements that may be shown.

**Design Guidelines**

The design guidelines are intended to augment the existing JCIA controls, covenants, and restrictions (CCRs). The addition of the business park, passenger terminal, commercial and passenger support land uses necessarily add further dimension to design standards already in place. These guidelines will establish the parameters by which additional CCRs can be drafted pertaining to those uses previously mentioned.

These guidelines are broken into two parts, private and public. The public guidelines deal with treatments in the public ROW, particularly streetscapes. The private guidelines deal with standards for private development including building
setbacks, side yards, building height, and other issues. These guidelines are just that—guidelines. All designs will be subject to review by the Airport Commission and should comply with the existing CCRs.

Public/Streetscape Design Guidelines

Because the streets in JCIA provide prime opportunities to convey image improvements, it is important that design standards be applied to those streets and be implemented by JCIA as the appropriate timing of development occurs which those streets serve. The following is a summary of design standards for streetscape development at JCIA:

**Industrial Parkway (and Passenger Terminal Parkway)**

<table>
<thead>
<tr>
<th>Description</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROW width</td>
<td>115 feet</td>
</tr>
<tr>
<td>Typical lane width</td>
<td>12 feet</td>
</tr>
<tr>
<td>Landscaped median</td>
<td>20 feet</td>
</tr>
<tr>
<td>Detached sidewalk</td>
<td>8 feet</td>
</tr>
<tr>
<td>Street lighting, ASL w/FS mounting</td>
<td>30-foot Ht</td>
</tr>
</tbody>
</table>

Street light standards already in place on Industrial Parkway should be continued throughout the length of the road and introduced on the parkway serving the future passenger terminal. This will promote design continuity for monies already invested in the upgrades to the parkway.

**Industrial Collector**

<table>
<thead>
<tr>
<th>Description</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROW width</td>
<td>60 feet</td>
</tr>
<tr>
<td>Typical lane width</td>
<td>12 feet</td>
</tr>
<tr>
<td>Flush median/turn lane</td>
<td>14 feet</td>
</tr>
<tr>
<td>Attached sidewalk</td>
<td>5 feet</td>
</tr>
<tr>
<td>Street lighting, ASL w/FS mounting</td>
<td>30-foot Ht</td>
</tr>
</tbody>
</table>
Business Park Collector

ROW width 60 feet
Typical lane width 12 feet
Flush median/turn lane 12 feet
Detached sidewalk 5 feet
Street lighting, ALW186-1A 25-foot Ht

Local Streets

ROW width 50 feet
Typical lane width 12 feet
Detached sidewalk 5 feet
Street lighting, ALW186-1A 25-foot Ht

Major Entry Feature

Monument entry signs on architectural walls
Ornamental landscaping
Special sign up-lighting
Special paving

Secondary Entry Feature

Free-standing entry sign in median treatment
Ornamental landscaping
Special sign lighting
Special paving

Private Development Design Guidelines

Typical Parking Lot

Stall lengths 18 feet
Stall width 9 feet
Drive width 24 feet
Setback to street ROW (minimum) 15 feet
Setback to Ind. Pkwy. (minimum) 50 feet
Buffer to buildings 18 feet
Sideyard setback to P.L. (minimum) 15 feet
Typical Parking Ratios:

<table>
<thead>
<tr>
<th>Type</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office</td>
<td>4 Spaces/1,000 S.F.</td>
</tr>
<tr>
<td>Office showroom</td>
<td>3 Spaces/1,000 S.F.</td>
</tr>
<tr>
<td>Office/mfg./whse.</td>
<td>1.2-2.5 Spaces/1,000 S.F.</td>
</tr>
<tr>
<td>Retail</td>
<td>5 Spaces/1,000 S.F.</td>
</tr>
<tr>
<td>Industrial</td>
<td>1 Space/Employee</td>
</tr>
</tbody>
</table>

Industrial Development

Minimum setbacks:
- Front yard (Ind. Pkwy.) 50 feet
- Front yard (exc. Ind. Pkwy.) 25 feet
- Side yard 25 feet

Landscaping is required in the front yard as a buffer to street frontage and as a buffer between the building and the parking areas. See typical sections for standards regarding landscape treatment.

Screening with fencing or evergreen landscaping is required at all mechanical areas, loading docks, or other negative visual components to service facilities of buildings or facilities.

Business Park Development

Minimum setbacks:
- Front yard (Ind. Pkwy) 50 feet
- Front yard (exc. Ind. Pkwy) 15 feet
- Side yard 25 feet

Landscaping is required in the front yard as a buffer to street frontage and as a buffer between the building and the parking areas. See typical sections for standards regarding landscape treatment.

Air Cargo/Intermodal Center/Airfield Development

Minimum setbacks:
- From parkways 50 feet
- From collectors/locals 25 feet
- Side yard 25 feet
Landscaping is required in the front yard as a buffer to street frontage and as a buffer between the building and the parking areas. See typical sections for standards regarding landscape treatment.

**Commercial/Retail Development:**

Minimum setbacks:
- From parkways: 50 feet
- From collectors/locals: 15 feet
- Side yard: 25 feet

Landscaping is required in side yards as a buffer to adjacent development and to screen loading and service areas from adjacent development and the streets. Landscaping is also required in the setback area between street frontage and the parking area, but is allowed to have primarily low ground covers, shrubs, or other landscaping allowing visibility to the structure.
TYPICAL BUSINESS COLLECTOR PLAN VIEW

TYPICAL BUSINESS COLLECTOR SECTION

DESIGN GUIDELINES

Streetscapes

JOHNSON COUNTY INDUSTRIAL AIRPORT