114. A Path to Enlightenment: Local Transportation Policies and Standards

A City Perspective

Road School 2018
David Hayward, PE
City Engineer – Columbus, IN
Vocabulary

R/W Dedication
- Subdivision Control Ordinance
- Thoroughfare Plan

R/W Protection
- Thoroughfare Plan

Street Design Standards
- Subdivision Control Ordinance

Access Management
- Zoning Ordinance

Thoroughfare Plan – Policy statement

Bicycle-Pedestrian Standards/Policies
- Bicycle and Pedestrian Plan
- Thoroughfare Plan
CASE STUDIES
Case #1 – R/W Dedication
R/W Dedication

New subdivision proposed
Adjacent to existing subdivision
R/W Dedication

New subdivision proposed
Adjacent to existing subdivision

R/W dedication required by Subdivision Control Ordinance
R/W Dedication

Stub Streets from previous subdivision (3)
Neighborhood connections are required by Subdivision Control Ordinance and Thoroughfare Plan

- Owners in existing neighborhood fought the connections.
- Plan Commission eventually granted some relief from the requirement.
  - Bicycle-Pedestrian only connections
  - Emergency vehicle only connections
  - Reduced number of connections.
Case #2 – R/W Protection
R/W Protection

Route shown on Thoroughfare Plan
Logical terminus of new road
R/W Protection

Owner requested a permit to build, as shown in orange
R/W Protection

Eventually, the owners have been very successful and now have 3 buildings on the site.

Ultimately the route was deleted from Thoroughfare Plan – not feasible.
Case #3 – Street Design Standards
Street Design Standards

Columbus is making an effort to narrow our streets and our R/W.

Thoroughfare Plan establishes street classifications:

<table>
<thead>
<tr>
<th>Function</th>
<th>Character</th>
<th>Land Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freeway</td>
<td>Urban</td>
<td>Residential</td>
</tr>
<tr>
<td>Arterial</td>
<td>Suburban</td>
<td>Commercial</td>
</tr>
<tr>
<td>Collector</td>
<td>Rural</td>
<td>Industrial</td>
</tr>
<tr>
<td>Local</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Subdivision Control Ordinance sets standards for streets in each classification.
# Street Design Standards

## Design Elements for Collector Streets (Table 16.24-2)

<table>
<thead>
<tr>
<th>Design Elements</th>
<th>Street Classification: Collector</th>
<th>Street Classification: Collector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medians:</td>
<td>Residential</td>
<td>Commercial</td>
</tr>
<tr>
<td>Minimum Width</td>
<td>Permitted</td>
<td>Permitted</td>
</tr>
<tr>
<td>Maximum Width</td>
<td>20'</td>
<td>20'</td>
</tr>
<tr>
<td>Curbs (vertical curb)</td>
<td>Permitted</td>
<td>Permitted</td>
</tr>
<tr>
<td>Median Trees</td>
<td>Permitted</td>
<td>Permitted</td>
</tr>
<tr>
<td>Drainage</td>
<td>Permitted</td>
<td>Permitted</td>
</tr>
<tr>
<td>Lighting (in median)</td>
<td>Permitted</td>
<td>Permitted</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Traffic Lanes:</th>
<th>Rural</th>
<th>Collector</th>
<th>Suburban</th>
<th>Urban</th>
<th>Rural</th>
<th>Collector</th>
<th>Suburban</th>
<th>Urban</th>
<th>Rural</th>
<th>Collector</th>
<th>Suburban</th>
<th>Urban</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lane width (excluding curb &amp; gutter)</td>
<td>10'</td>
<td>11'</td>
<td>12'</td>
<td>10'</td>
<td>11'</td>
<td>12'</td>
<td>10'</td>
<td>11'</td>
<td>12'</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Lanes</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cross slope from crown</td>
<td>-</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td>-</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Superelevation</td>
<td>-</td>
<td>4% Max.</td>
<td>4% Max.</td>
<td>-</td>
<td>-</td>
<td>4% Max.</td>
<td>4% Max.</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paving material</td>
<td>A or C</td>
<td>A or C</td>
<td>A or C</td>
<td>A or C</td>
<td>A or C</td>
<td>A or C</td>
<td>A or C</td>
<td>A or C</td>
<td>A or C</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bicycle Lanes:</th>
<th>Rural</th>
<th>Collector</th>
<th>Suburban</th>
<th>Urban</th>
<th>Rural</th>
<th>Collector</th>
<th>Suburban</th>
<th>Urban</th>
<th>Rural</th>
<th>Collector</th>
<th>Suburban</th>
<th>Urban</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bike lanes (min. width)</td>
<td>4'</td>
<td>4'</td>
<td>4'</td>
<td>4'</td>
<td>4'</td>
<td>4'</td>
<td>4'</td>
<td>4'</td>
<td>4'</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pavement Markings</td>
<td>Required</td>
<td>Required</td>
<td>Required</td>
<td>Required</td>
<td>Required</td>
<td>Required</td>
<td>Required</td>
<td>Required</td>
<td>Required</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parking (one/both sides):</th>
<th>Rural</th>
<th>Collector</th>
<th>Suburban</th>
<th>Urban</th>
<th>Rural</th>
<th>Collector</th>
<th>Suburban</th>
<th>Urban</th>
<th>Rural</th>
<th>Collector</th>
<th>Suburban</th>
<th>Urban</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parallel parking (width per side)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Angle parking</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cross slope</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Curb / Curb and Gutter:</th>
<th>Rural</th>
<th>Collector</th>
<th>Suburban</th>
<th>Urban</th>
<th>Rural</th>
<th>Collector</th>
<th>Suburban</th>
<th>Urban</th>
<th>Rural</th>
<th>Collector</th>
<th>Suburban</th>
<th>Urban</th>
</tr>
</thead>
<tbody>
<tr>
<td>6&quot; Curb and Gutter (2' wide)</td>
<td>Permitted</td>
<td>Permitted</td>
<td>Permitted</td>
<td>Required</td>
<td>Permitted</td>
<td>Permitted</td>
<td>Permitted</td>
<td>Required</td>
<td>Permitted</td>
<td>Permitted</td>
<td>Permitted</td>
<td>Required</td>
</tr>
</tbody>
</table>
Access Management
Case #4 – Access Management

- Former Clarion (Holiday Inn)
- Circle K
- Starbucks
- Traffic Signal
- SR 46
Access Management

On-Going Discussion with INDOT Traffic Engineer:

• What to do with Clarion Driveway?
• Dual left turn lanes for NB traffic?
• Turning movements at Starbucks & Circle K driveways?

Work with INDOT staff
Case #5 – Bicycle-Pedestrian
Bicycle-Pedestrian Standards/Policies

INDOT Bridge Rehab Project
Overpass constructed in 1961 – No sidewalks
City requested bicycle – pedestrian features
Collector street – Bike & Ped Plan, T-Fare Plan

INDOT recommendation did not include bike/ped facilities
Bicycle-Pedestrian Standards/Policies

Collector street
- Bike & Ped Plan
- T-Fare Plan
- Commons Paths (INDOT complete streets policy)
- FHWA requirements

INDOT recommendation did not include bike and pedestrian facilities

Ultimately, INDOT agreed to include bike lanes and sidewalks if City/County have facilities built to the project termini. Construction planned for FY 2020.
In Columbus - City-wide
13.5% of our land is used for streets and highways.

Plus parking lots, parking garages, driveways, garages, private streets, etc. total may be over 25%

That’s over 2,416 acres of land (more than 3X all of our parks combined)

How efficiently are we using that land?

• Cars are used 4% of the time. 96% of the time they are stored or parked.
Questions?

Contact Information:
David L. Hayward, PE
City Engineer
Executive Director of Public Works
City of Columbus
812-376-2540
dhayward@columbus.in.gov