



TOPIC

Contract Plans Sheet Development Guidelines

NUMBER

TSB10-01(A)

SUPERSEDES

TSB09-01(A)

APPROVAL

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VALIDATION DATE

00/00/0000

### Topic

Many of ODOT's drafting standards have been developed and documented in the ODOT Contract Plans Development Guide while other drafting standards of practice have only been available through institutional knowledge. These practices have been followed by different disciplines within Tech Services over the past many years and adhering to these standards is critical to providing a useful and consistent product. This advisory documents current standards of practice used by Bridge, Geology, Geotechnical, Hydraulics, Roadway, and Traffic engineering disciplines in the production of design products. Representatives from each of these groups participated in the development of this guidance document. This information is not intended to be comprehensive or all encompassing of all disciplines or all standards of practice within each discipline. Only areas needing clarification have been addressed in this advisory.

### Advisory Information (use additional pages if needed)

#### Contract Plans Sheet Development Matrix

|  | Drawing #        | CALC Book # | Border & Title Block | Structure # (1, 2) | Sheet Size |
|--|------------------|-------------|----------------------|--------------------|------------|
| <b>Critical Traffic Structures:</b> <sup>2,5</sup> |                  |             |                      |                    |            |
| Sign Bridge  | Traffic & Bridge | Yes         | Traffic              | Yes                | 11x17      |
| VMS Bridge   | ITS & Bridge     | Yes         | ITS                  | Yes                | 11x17      |
| Monotube Sign Cantilever                           | Traffic & Bridge | Yes         | Traffic              | Yes                | 11x17      |
| Monotube VMS Cantilever                            | ITS & Bridge     | Yes         | ITS                  | Yes                | 11x17      |
| Sign Butterfly                                     | Traffic & Bridge | Yes         | Traffic              | Yes                | 11x17      |
| VMS Butterfly                                      | ITS & Bridge     | Yes         | ITS                  | Yes                | 11x17      |
| High Mast  | Traffic & Bridge | Yes         | Traffic              | Yes                | 11x17      |
| Camera Pole  | ITS & Bridge     | Yes         | ITS                  | Yes                | 11x17      |

Any changes/updates in Technical Services Directives or Bulletins (Manuals, Standard Specifications and Drawings) take precedence over information in Advisories.

|   | Drawing #          | CALC Book # | Border & Title Block | Structure # (1, 2)  | Sheet Size |
|---|--------------------|-------------|----------------------|---------------------|------------|
| <b>Structures Mounted to a Bridge:</b> <sup>1</sup> |                    |             |                      |                     |            |
| Camera, signs, Illumination, etc.                   | Bridge             | Yes         | Bridge               | Yes                 | 22x34      |
|   |                    |             |                      |                     |            |
| <b>Other Structures:</b>                            |                    |             |                      |                     |            |
| Tanks, pump stations, etc                           | Bridge             | Yes         | Bridge               | Yes                 | 22x34      |
|   |                    |             |                      |                     |            |
| <b>Signal Poles:</b>                                |                    |             |                      |                     |            |
| Using a Standard drawing                            | Traffic            | -----       | Traffic              | -----               | 11x17      |
| Special Design                                      | Traffic            | Yes         | Traffic              | -----               | 11x17      |
|   |                    |             |                      |                     |            |
| <b>Illumination Poles:</b>                          |                    |             |                      |                     |            |
| Using a Standard drawing                            | Traffic            | -----       | Traffic              | -----               | 11x17      |
| Special Design                                      | Traffic            | Yes         | Traffic              | -----               | 11x17      |
|   |                    |             |                      |                     |            |
| <b>Culverts</b> <sup>3,6,7</sup>                    |                    |             |                      |                     |            |
| 20' and larger <sup>4</sup>                         | Bridge             | Yes         | Bridge               | Yes                 | 22x34      |
| 6' and larger and less than 20'                     | Geo/Hydro & Bridge | -----       | Geo/Hydro            | Yes                 | 11x17      |
| Less than 6' and larger than 4'                     | Geo/Hydro          | -----       | Roadway              | -----               | 11x17      |
| 4' and smaller                                      | Roadway            | -----       | Roadway              | -----               | 11x17      |
|   |                    |             |                      |                     |            |
| <b>Bridges</b> <sup>8</sup>                         | Bridge             | Yes         | Bridge               | Yes                 | 22x34      |
|   |                    |             |                      |                     |            |
| <b>Retaining Walls</b> <sup>9</sup>                 |                    |             |                      |                     |            |
| Bridge Retaining Wall                               | Bridge             | Yes         | Bridge               | Yes <sup>12</sup>   | 22x34      |
| Highway Retaining Wall                              | Geo/Hydro & Bridge | Yes         | Geo/Hydro            | Yes <sup>12</sup>   | 11x17      |
| Minor Retaining Wall                                | Roadway            | -----       | Roadway              | ----- <sup>12</sup> | 11x17      |
| Sound Wall  | Bridge             | Yes         | Bridge               | Yes                 | 22x34      |
|   |                    |             |                      |                     |            |
| <b>Material Source</b>                              | Geo/Hydro          | -----       | Roadway              | -----               | 11x17      |
|   |                    |             |                      |                     |            |
| <b>Landslide Correction</b> <sup>10</sup>           | Geo/Hydro          | -----       | Roadway              | -----               | 11x17      |
|   |                    |             |                      |                     |            |
| <b>Earthwork</b> <sup>11</sup>                      | Roadway            | -----       | Roadway              | -----               | 11x17      |
|   |                    |             |                      |                     |            |
| <b>Bank Protection</b>                              | Geo/Hydro          | -----       | Roadway              | -----               | 11x17      |
|   |                    |             |                      |                     |            |
| <b>Erosion Control</b>                              | Geo/Hydro          | -----       | Roadway              | -----               | 11x17      |

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Notes:

1. Any structure that is mounted to a bridge requires the use of the Standard Bridge drafting practice.
2. Bridge drawing numbers will be specified on the drawing as a reference number for use in the Bridge Data System except when the structure is mounted to a Bridge.
3. Bridge Span – as defined in the Bridge Design & Drafting Manual. Hydraulic Span – as defined in the Hydraulics Manual. For span determination of multiple barrel culverts refer to the Hydraulics Manual and NBI manual.
4. NBI Structure: All structures with a bridge span of 20 ft. or larger will be included in the NBI system/Database/Inspection/funding program.
5. Reference the most recent versions of the Traffic Structures Design Manual and the Bridge Design & Drafting Manual for additional information.
6. Wingwalls that accompany structures will appear on the same sheet size and border as the primary structure.
7. Assumes ODOT Standard Drawings are being used.
8. This includes Bridge Abutments, as defined in ODOT GDM Section 15.2.1, as well as any other walls, such as wing walls, that are of monolithic construction with the bridge.
9. Refer to the Wall Category definitions in ODOT GDM Section 15.2.1.
10. This includes buttresses and horizontal drains and any associated ground improvements.
11. This includes cut slopes, embankments, fill foundations, rockslopes and any associated ground improvements.
12. Refer to the Structure Number requirements in ODOT GDM Section 15.2.8.6 for guidance on determining which wall categories and configurations that require structure numbers.

### *Target Audience*

This advisory has been compiled to provide Region Tech Center staff and consultant staff with this undocumented institutional knowledge needed to assist them in continuing to develop a quality product.

Representatives from each of the affected groups in Technical Services and the Office of Maintenance (Bridge, Geology, Geotechnical Engineering, Hydraulics, Roadway, ITS and Traffic Engineering) have contributed to, reviewed, and approved this advisory and the information contained herein.

Always refer to discipline specific manuals and guidance documents for the most current plan sheet development standards as they take precedence over this advisory.

## *Contact Information*

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