### General Sheet

<table>
<thead>
<tr>
<th>No.</th>
<th>TITLE</th>
<th>Latest</th>
<th>Pg.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TITLED SHEET</td>
<td>9-77</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>INDEX</td>
<td>9-77</td>
<td>3</td>
</tr>
</tbody>
</table>

### Construction Drawing Requirements

<table>
<thead>
<tr>
<th>DT-1P</th>
<th>TITLE SHEET FOR DRAWINGS</th>
<th>9-77</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>DT-1S</td>
<td>TITLE SHEET FOR DRAWINGS (SUB-DIVISION)</td>
<td>6-70</td>
<td>5</td>
</tr>
<tr>
<td>DT-2</td>
<td>MAP OF FEDERAL &amp; STATE AID ROADS</td>
<td>9-77</td>
<td>6</td>
</tr>
<tr>
<td>DT-3</td>
<td>DIRECTORY OF COUNTY OFFICIALS</td>
<td>9-77</td>
<td>7</td>
</tr>
<tr>
<td>DT-4</td>
<td>DRAWING &amp; SPECIFICATIONS REQMTS</td>
<td>9-77</td>
<td>8</td>
</tr>
</tbody>
</table>

### Drainage Design Requirements

<table>
<thead>
<tr>
<th>DD-1</th>
<th>LEGAL DITCH LOC. ADJ. TO ROAD</th>
<th>6-70</th>
<th>14</th>
</tr>
</thead>
<tbody>
<tr>
<td>DD-2</td>
<td>RAINFALL CHART &amp; COEF &quot;C&quot; TABLE</td>
<td>6-70</td>
<td>15</td>
</tr>
</tbody>
</table>

### Drainage Appurtenances

<table>
<thead>
<tr>
<th>DW-1</th>
<th>9-77 VTHD</th>
</tr>
</thead>
<tbody>
<tr>
<td>DW-2</td>
<td>9-77 VTHD</td>
</tr>
<tr>
<td>DW-3</td>
<td>10-77 VTHD</td>
</tr>
<tr>
<td>DW-4</td>
<td>10-77 VTHD</td>
</tr>
<tr>
<td>DW-5</td>
<td>6-74 VTHD</td>
</tr>
<tr>
<td>DW-6</td>
<td>10-77 VTHD</td>
</tr>
</tbody>
</table>

### Pavement Design Requirements

<table>
<thead>
<tr>
<th>No.</th>
<th>TITLE</th>
<th>Latest</th>
<th>Pg.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>JOINTS - CONCRETE PAVEMENT</td>
<td>6-70</td>
<td>2.9</td>
</tr>
<tr>
<td></td>
<td>REINFORCED PAVEMENT DETAILS</td>
<td>8-70</td>
<td>3.1</td>
</tr>
</tbody>
</table>

### Grading Section Requirements

<table>
<thead>
<tr>
<th>No.</th>
<th>TITLE</th>
<th>Latest</th>
<th>Pg.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MINOR STREET - (EXIST. 7-17-67)</td>
<td>6-70</td>
<td>2.9</td>
</tr>
<tr>
<td></td>
<td>COLLECTOR STREET (EXIST. 7-17-67)</td>
<td>6-70</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td>ARTERIAL STREET</td>
<td>8-70</td>
<td>4.0</td>
</tr>
</tbody>
</table>

### Drive & Intersection Design Requirements

<table>
<thead>
<tr>
<th>AC-F</th>
<th>COLLECTORS &amp; DRIVES AT INTERS</th>
<th>6-70</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC-G</td>
<td>COLLECTORS &amp; DRIVES - ONE WAY OP</td>
<td>6-70</td>
</tr>
<tr>
<td>AC-G</td>
<td>COLLECTORS &amp; DRIVES - TWO WAY OP</td>
<td>6-70</td>
</tr>
<tr>
<td>AC-R</td>
<td>PUBLIC ROAD APPROACH</td>
<td>6-70</td>
</tr>
</tbody>
</table>

### Pavement Appurtenances

<table>
<thead>
<tr>
<th>REDRAWN - D.K.</th>
<th>JAN 1970</th>
<th>REMOVED - 003, P35/DK</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADDED DW-3 - D.K.</td>
<td>SEPT. 1970</td>
<td>PO 502 D.K. JUNE 1976</td>
</tr>
<tr>
<td>ADDED PJ-3 - D.K.</td>
<td>OCT. 1970</td>
<td>DW-1 &amp; DW-2 RMVD SEPT 1979 A.R.R.</td>
</tr>
<tr>
<td>ADDED UT-1 - D.K.</td>
<td>JAN. 1971</td>
<td>AC-P REMOVED SEPT 1979 A.R.R.</td>
</tr>
<tr>
<td>GEN'L D.K.</td>
<td>JAN. 1971</td>
<td>ADDED SHT. 20.1 APR. 2005 DHC</td>
</tr>
<tr>
<td>ADDED (DW-4-407450)</td>
<td>MAY 1971</td>
<td></td>
</tr>
<tr>
<td>ADDED (DW-6) D.K.</td>
<td>JAN. 1972</td>
<td></td>
</tr>
<tr>
<td>REMOVED - EC-1, P35/DK</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PD-TI D.K.</td>
<td>JUNE 1976</td>
<td></td>
</tr>
</tbody>
</table>

### Note:
Standards on this sheet no. 2 apply to Public Works & Subdivisions.
Sheet no. 3 applies only to Public Works.

---

**Division of Engineering**
**St. Joseph County, Indiana**

**Approved by:**

**Standard Drawing:**

**Date:** JAN 1970
<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Pg. No.</th>
<th>No.</th>
<th>Title</th>
<th>Pg. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>BR-1A</td>
<td>Typical Plan</td>
<td>32</td>
<td>TS-1</td>
<td>Span &amp; Catenary Detail</td>
<td>31.4</td>
</tr>
<tr>
<td>BR-1B</td>
<td>Typical Elevation &amp; Section</td>
<td>33</td>
<td>TS-2</td>
<td>Lighting Poles</td>
<td>37.3</td>
</tr>
<tr>
<td>BR-2</td>
<td>Pile End Bent - Ty. A &amp; B</td>
<td>34</td>
<td>TS-3</td>
<td>Pole Foundations &amp; Loop Detectors</td>
<td>31.6</td>
</tr>
<tr>
<td>BR-3</td>
<td>Pile End Bent - Ty. C &amp; D</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BR-4</td>
<td>Prstd Concrete Bridges</td>
<td>36</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BR-5</td>
<td>Bridge Widening Details</td>
<td>37</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BR-6A</td>
<td>Bridge Plaque Detail (Structure No.)</td>
<td>37.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BR-6B</td>
<td>Bridge Plaque Detail (Constr.)</td>
<td>37.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BR-6C</td>
<td>Bridge Plaque Detail (Reconstructed)</td>
<td>37.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Traffic Control - Appurtenances</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TA-1</td>
<td>Traffic Island - 3 Lane</td>
<td>37.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TA-2</td>
<td>Traffic Island - 4 or More Lane</td>
<td>37.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Traffic Control - Signs &amp; Markings</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TC-5</td>
<td></td>
<td>39.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TC-8</td>
<td>Traffic Signs - Information</td>
<td>4-95</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TC-8A</td>
<td>Traffic Signs - Information</td>
<td>4-95</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Miscellaneous</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SW-1</td>
<td>Residential Sidewalk &amp; Approach</td>
<td>39.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SW-2</td>
<td>Sidewalk Ramp (Handicap)</td>
<td>39.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>GR-1A</td>
<td>Guard Rail Type To Component Details</td>
<td>20.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>GR-1S</td>
<td>Guard Rail Type D Component Details</td>
<td>20.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>GR-2A</td>
<td>Guard Rail Type To Post Spacing</td>
<td>20.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>GR-2S</td>
<td>Guard Rail Post Spacing</td>
<td>20.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>GR-3</td>
<td>Guard Rail Buried Ends</td>
<td>20.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>GR-3S</td>
<td>Guard Rail Type D Buried Ends</td>
<td>20.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>REVISEd BY</td>
<td></td>
<td></td>
<td>DATE</td>
<td></td>
</tr>
<tr>
<td></td>
<td>REDRAWn - D.K</td>
<td>JAN 1970</td>
<td></td>
<td>REMOVED TC-1, TC-2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gen'l D.K.</td>
<td>JAN 1971</td>
<td></td>
<td>TC-7A, TC-7B</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Added Traffic Control - Signals &amp; Markings</td>
<td>JUNE 1971 D.K</td>
<td></td>
<td>Added SW-1, SW-2, SW-1, SW-2, SW-2</td>
<td>APRIL 1977 D.K</td>
</tr>
<tr>
<td></td>
<td>Added TA-1 &amp; TA-2</td>
<td>JUNE 1971 D.K</td>
<td></td>
<td>Added GR-1, GR-2, GR-2, GR-2</td>
<td>JUNE 1977 D.K</td>
</tr>
<tr>
<td></td>
<td>Added BR-6A &amp; BR-6C</td>
<td>JUNE 1971 D.K</td>
<td></td>
<td>TC-1 Removed</td>
<td>JUNE 1979 D.K</td>
</tr>
</tbody>
</table>

**DIVISION OF ENGINEERING**  
ST. JOSEPH COUNTY, INDIANA  

**INDEX**  
DRAWN BY D.K.  
DATE: JAN 1970
ST. JOSEPH COUNTY, INDIANA

DEPARTMENT OF PUBLIC WORKS

PROJECT: ☐ ROAD ☐ BRIDGE ☐ DRAINAGE

AREA MAP
SCALE: 1"=1000'
(SHALL INCLUDE NEAREST EAST-WEST & NORTH-SOUTH PRIMARY OR SECONDARY AID HIGHWAY)
OR
MAP ON STD. D-T-2

ST. JOSEPH COUNTY, INDIANA SPECIFICATIONS
LATEST EDITION, TO BE USED WITH THESE PLANS.

NOTES:
1. THIS SHEET TO BE USED WITH EACH SET OF DRAWINGS
   DO NOT INCLUDE PREVIOUSLY CONSTRUCTED STREETS.
   ON ANY TITLE SHEET.
2. DIMENSIONS SHOWN FOR LETTERING INCLUDES VERTICAL SPACING
   AND DOES NOT INDICATE SIZE OF LETTERING.
<table>
<thead>
<tr>
<th>SEQUENCE</th>
<th>SHEET</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIRST</td>
<td>TITLE</td>
</tr>
<tr>
<td></td>
<td>KEY MAP</td>
</tr>
<tr>
<td></td>
<td>PROJECT NAME</td>
</tr>
<tr>
<td></td>
<td>LOCATION</td>
</tr>
<tr>
<td></td>
<td>STREETS, UTILITIES INCLUDED</td>
</tr>
<tr>
<td></td>
<td>COMMISSIONER'S NAMES</td>
</tr>
<tr>
<td></td>
<td>A.P.C. PRELIM. PLAT APPROVAL DATE</td>
</tr>
<tr>
<td></td>
<td>COUNTY ENG'S APPROVAL</td>
</tr>
<tr>
<td></td>
<td>OWNER'S NAME &amp; ADDRESS</td>
</tr>
<tr>
<td></td>
<td>Const. Eng's. NAME &amp; SEAL</td>
</tr>
<tr>
<td>SECOND</td>
<td>DETAILS</td>
</tr>
<tr>
<td></td>
<td>APPROV'L OF PRELIM. PLAT FOR CONTRACT</td>
</tr>
<tr>
<td></td>
<td>APPROV'L OF PRELIM.OF FINAL PLAT OF PRIOR ADJ. AREAS (IF AVAILABLE)</td>
</tr>
<tr>
<td></td>
<td>TENTATIVE PLAT OF PROPERTY ADJ. TO AREA IF AVAILABLE</td>
</tr>
<tr>
<td></td>
<td>S.P.C. DETAILS THIS CONTRACT-TYP SECTION OF ROAD; DITCH, BRIDGE</td>
</tr>
<tr>
<td></td>
<td>SPCL. APPURTENANCES; INTERSECT, DRIVES, SCOTCH, EROSION CONTROL</td>
</tr>
<tr>
<td></td>
<td>EXISTING SITE PLAN- BRIDGE</td>
</tr>
<tr>
<td></td>
<td>PROP. SITE PLAN - BRIDGE</td>
</tr>
<tr>
<td></td>
<td>S.P.C. BRIDGE DETAILS</td>
</tr>
<tr>
<td></td>
<td>SOIL-LOG WITH A GRADATION CHART</td>
</tr>
<tr>
<td></td>
<td>ENGRS. ANALYSIS OF SUITABILITY OF USE</td>
</tr>
<tr>
<td>THIRD</td>
<td>APPROVED DRAINAGE PLAN</td>
</tr>
<tr>
<td>FOURTH</td>
<td>PLAN &amp; PROFILE (STREETS &amp; ROADS)</td>
</tr>
<tr>
<td></td>
<td>NORTH ARROW</td>
</tr>
<tr>
<td></td>
<td>STATIONS- SQ TO NORTH &amp; W. TO EAST</td>
</tr>
<tr>
<td></td>
<td>POINTS OF BEGINNING &amp; END</td>
</tr>
<tr>
<td></td>
<td>BENCHMARKS-USGS DATUM (1'-PER LOGO, MIN. 2 PER CONTRACT)</td>
</tr>
<tr>
<td></td>
<td>HORIZ SURVEY DATA</td>
</tr>
<tr>
<td></td>
<td>VERTICAL SURVEY DATA</td>
</tr>
<tr>
<td></td>
<td>EXISTING RIGHT OF WAY</td>
</tr>
<tr>
<td></td>
<td>PROPOSED RIGHT OF WAY</td>
</tr>
<tr>
<td></td>
<td>PROPERTY LINES &amp; LOT NO'S</td>
</tr>
<tr>
<td></td>
<td>EQUATIONS AT INTERSECTIONS &amp; CROSSING SURVEY LINES</td>
</tr>
<tr>
<td></td>
<td>CONTROL POINTS REFERENCED</td>
</tr>
<tr>
<td></td>
<td>PROPOSED PAVEMENT-SHADED</td>
</tr>
<tr>
<td></td>
<td>EXISTING ROAD-DASHED, ALSO STREETS IN PRIOR SECTION</td>
</tr>
<tr>
<td></td>
<td>RADI AT PROPOSED INTERSECTIONS</td>
</tr>
<tr>
<td></td>
<td>NOTES, DETAILS &amp; STANDARDS</td>
</tr>
<tr>
<td></td>
<td>CROSS REFERENCED</td>
</tr>
<tr>
<td></td>
<td>EXISTING UTILITIES- ABOVE &amp; BELOW GROUND</td>
</tr>
<tr>
<td></td>
<td>NAMES OF PROPERTY OWNERS</td>
</tr>
<tr>
<td></td>
<td>TITLE BLOCK COMPLETION</td>
</tr>
<tr>
<td></td>
<td>PROJECT STREET NAMES</td>
</tr>
<tr>
<td></td>
<td>SECTION NO, GRAPHIC &amp; NUMERIC &amp; DATE</td>
</tr>
<tr>
<td>FIFTH</td>
<td>PLAN &amp; PROFILE (SEWERS &amp; WATER)</td>
</tr>
<tr>
<td></td>
<td>DRAWN ON INTERMEDIATE COPY OF STREET PLAN &amp; PROFILE</td>
</tr>
<tr>
<td></td>
<td>HORIZONTAL SURVEY DATA</td>
</tr>
<tr>
<td></td>
<td>VERTICAL SURVEY DATA</td>
</tr>
<tr>
<td></td>
<td>PROPOSED MANHOLE, INLETS, ETC.</td>
</tr>
<tr>
<td></td>
<td>PROPOSED VALVES, HYDRANTS, ETC.</td>
</tr>
<tr>
<td></td>
<td>PROPOSED HOUSE SEWER SERVICES</td>
</tr>
<tr>
<td></td>
<td>PROPOSED HOUSE WATER SERVICES</td>
</tr>
<tr>
<td></td>
<td>NOTES, DETAILS &amp; STANDARDS</td>
</tr>
<tr>
<td></td>
<td>CROSS REFERENCED</td>
</tr>
<tr>
<td>SIXTH</td>
<td>CROSS SECTIONS</td>
</tr>
<tr>
<td></td>
<td>ROADS, INTERVAL PER INSTRUCTIONS, SPECIAL DITCHES</td>
</tr>
<tr>
<td></td>
<td>1. INTERVAL-50' PLUS CHANGES, IN ALIGNMENT OR SECTION</td>
</tr>
<tr>
<td></td>
<td>2. INTERVAL, PER INSTRUCTIONS</td>
</tr>
<tr>
<td></td>
<td>RETENTION AREAS, EITHER 50' INTERVALS OR 2' CONTOUR MAP</td>
</tr>
<tr>
<td></td>
<td>TEMPLET PLOTTING</td>
</tr>
<tr>
<td></td>
<td>AREAS &amp; VOLUMES</td>
</tr>
<tr>
<td>SEVENTH</td>
<td>STANDARDS</td>
</tr>
<tr>
<td></td>
<td>APPLICABLE STANDARDS INCLUDED IN CONTRACT</td>
</tr>
<tr>
<td></td>
<td>TO BE STAPLED TO FRONT OF DWGS</td>
</tr>
</tbody>
</table>

**GENERAL NOTES**

1. SEQUENCE - ORDER OF SHEETS
   5'- SUBDIVISION REQUIREMENTS

2. DRAWINGS -
   24" x 36" STANDARD SHEETS
   PLAN & PROFILE: PREFERABLE-PLATE I FEDERAL AID
   X-SECTIONS: REQUIRED- PLATE I FEDERAL AID

3. DESIGN DATA CRITERIA- SEE OTHER STANDARDS

4. "AS BUILT" DRAWINGS ARE TO BE FILED WITH COMPLETION AFFIDAVIT, ARE TO BE REPRODUCIBLE COPIES SHOWING, CONTRACTORS & UTILITIES, DATE OF COMPLETION

**DIVISION OF ENGINEERING**

**ST. JOSEPH COUNTY, INDIANA**

**STANDARD DRAWING**

**DRAWING & SPECIFICATIONS REQUESTS**

**DT-4**
SHOULDER TO BE PLACED ADJACENT TO NEW CONSTRUCTION WITHIN THE R/W SAME AS EXISTING ROAD.
SHOULDER TO BE PLACED ADJACENT TO NEW CONSTRUCTION WITHIN THE SAME AS EXISTING ROAD.
SHOULDER TO BE PLACED ADJACENT TO NEW CONSTRUCTION WITHIN THE R/W, SAME AS EXISTING ROAD.

EDGE OF DELINEATION TO COUNTY STANDARDS

BARRIER MEDIAN TO COUNTY STANDARDS

VARIABLE

EDGE OF PAVEMENT

STATE HIGHWAY

SHOULDER LINE

A - 40'
B - 25' MAXIMUM RADIUS
F - 1:10 TAPER - 25' MINIMUM
G - 25' MINIMUM

H - 1:5 TAPER - 50' MINIMUM
L - 100 MINIMUM
K - 20'
S - BARRIERS

BARRIER MEDIAN

COMMERCIAL DRIVE

2 WAY ON 2 LANE ROAD

DRAWING NUMBER AC-C3
NOTE:
WHEN "I" IS OTHER THAN 90°
THE "B" RADIUS IS TO BE BY
APPROVAL OF COUNTY ENGINEER.

SHOULDER TO BE PLACED ADJACENT TO NEW CONSTRUCTION WITHIN
R/W, SAME AS EXISTING ROAD.

EDGES OF DELINEATION TO COUNTY STANDARDS

A - COUNTY ENGINEERING STANDARDS
B - 25' MINIMUM
F - 10 TAPER - 75' MINIMUM
I - 60° MINIMUM - 120° MAXIMUM
G - 25' MINIMUM
H - 15 TAPER - 50' MINIMUM
L - 75' MINIMUM

PUBLIC ROAD APPROACH

ST. JOSEPH COUNTY, INDIANA

DATE: MAR. 1970
DRAWN BY D.K.

SCALE: NONE
STANDARD DRAWING

DIVISION OF ENGINEERING

COMMISSIONER
With W. F. Mallory
KEITH W. KIEFFENSTEIN
COMMISSIONER
JERRY J. MILLER
COMMISSIONER
CLARENCE R. KELLOGG
ENGINEER
WILLIAM J. RICHARDSON P.E.
Notes:
1. Ditch To Be Located Beyond R/W Line if Necessary.
2. Spoil Material To Be Used In Filling For New Side Slope.
3. New Fill To Be Benched Into Existing Sideslope To Prevent Sliding.
4. Vegetation & Tree Removal On Existing Side Slope To Be In Accordance With Ditch Project Specifications.
5. Ditch Project Plans & Specifications Must Have Approval Of County Engineer Prior To Bidding & Construction.
6. This Standard Applicable To All Drainage Ditch Projects In St. Joseph County.
ST JOSEPH COUNTY, INDIANA

NOTE: DERIVED FROM ISOPLETHIAL MAPS TECHNICAL PAPER NO. 40, RAINFALL FREQUENCY ATLAS OF THE UNITED STATES PUBLISHED BY U.S. DEPARTMENT OF COMMERCE.

DRAINAGE ENGINEER

WALTER F. MIDDLETON P.E.

DIVISION OF ENGINEERING
ST. JOSEPH COUNTY, INDIANA

RAINFALL CHART & COEFFICIENT C TABLE

BAND 1: STEEP BARREN, IMPERVIOUS SURFACES
BAND 2: ROLLING BARREN IN UPPER BAND VALUES, FLAT BARREN IN LOWER PART OF BAND STEEP FORESTED & STEEP GRASS MEADOWS
BAND 3: TIMBER LANDS OF MODERATE TO STEEP SLOPES, MOUNTAINOUS, FARMING
BAND 4: FLAT PERVERSUS SURFACES, FLAT FARMLANDS, WOODED AREAS AND MEADOWS

GENERAL: FOR MIXED COVER CONDITIONS A WEIGHTED AVERAGE COEFFICIENT IS RECOMMENDED
NOTES:
1. 11.6 Blocks per Sq. Yd.
2. Ty. A = 8" Thick
3. Ty. B = 4" Thick
4. Toewall to be paid as Eip-Rap. (See Details)
5. Toe elevation to be at least under ground line. Extend if necessary.
**VIEW A-A**

**STRUCTURE WITH CURVED WINGS**

**VIEW A-A**

**SHOULDER WIDTH STRUCTURE**

**NOTE:**
Use Backup Plate to Drill Holes in Concrete to Prevent Spalling. Spalling Shall be Repaired With Cement Grout Before Assembly

**SYMBOLABOUT**

**BRIDGE**

**PLAN**

**BEAM GUARD RAIL - T**

No Scale

**LEGEND**

* * * * To Be Determined in Field
W As Shown on Drawings
† When Curb is Used "W" Shall be Such That the Face of the Guard Rail be 3" Behind Face of Curb.

**STANDARD DRAWING**

**DEPARTMENT OF ENGINEERING**

**GUARD RAIL - T**

**POST SPACING**

**ALUMINUM TUBE**

**GENERAL NOTES**

1. Guard Rail to be Built Parallel to the Edge of Pavement as Near as Possible.
2. Guard Rail Posts to be Driven Vertically. Where Driving is Not Possible, a Hole, Not Less Than 12" in Dia. May be Used. Earth Back-Fill in 6" Layers, Composted, Shall Then be Used to the Top of the Drilled Hole. The Post Then be Driven Through the Fill Material to Grade.
3. Concrete Surfaces Shall be Surf-Cut to an 8" Square and Removed, Post Drives and Bituminous Surface Material Used for Surfacing Repair.
4. For Guard Rail - Type B at Locations Other Than Bridge Approaches, Standard Post Spacing of 8" Shall be Used Unless Noted Otherwise in Project Drawings.
5. This Std. Deg. (GR-2A) Conforms to General With I.S.H.C.S. Deg. GR-9. Event of Conflict Between These Two Stats., the County Engineer Will Which to Use.
**VIEW A-A**

**STRUCTURE WITH CURVED WINGS**

**NOTE**
For Installation At Buried Ends
See Guard Rail GR-33

**PLAN**

**BEAM GUARD RAIL**

No Scale

**LEGEND**

- **W** - As Shown on Drawings.
- **When Curb is Used** W Shall be Such That the Face of the Guard Rail be 3" Beyond Face of Curb.

**GENERAL NOTES**

1. Guard Rail to be Built Parallel to the Edge of Pavement on New as Possible.
2. Guard Rail Posts to be Driven Vertically. Where Driving is Not Possible, a Drilled Hole, Not Less Than 12" in Dia May be Used.
3. Concrete Surfaces Shall be Saw-Cut to an 8" Square and Replacement of the Driven and Bituminous Surface Material Used for Sill Repair.
4. For Guard Rail-Types A at Locations Other Than Bridge Approaches, the Standard Post Spacing of 2'-6" Shall Be Used Unless Differently in the Project Drawing.
5. This Std. Dwg. (GR-25) Conforms in General With L.S.N.C.C. of GR-3. In the Event of Conflict Between These Two Items, the County Engineer Will Decide Which to Use.

**STANDARD DRAWING**

**DEPARTMENT OF ENGINEERING**

**ST. JOSEPH COUNTY, INDIANA**

**GUARD RAIL-DS**

**POST SPACING**

**STEEL BEAM**

**SHEET NO. 4**

**REVIEW & CHECKED**

**ENGINEER**

WILLIAM J. RICHARDSON P.E.

**CERTIFIED BY**

**COMMISSIONER**

RICHARD L. LARRISON DIST. 1

RICHARD D. JASINSKI DIST. 2

HENRY BERTETTI DIST. 3

**APPROVED**

1-2-78

**OF 6**
**INSTALLATION FOR ALUMINUM TUBE GUARD RAIL**

**NOTE:** Rail splice for aluminum tube guard rail shall be bent to fit when used for buried end section.

---

**ELEVATION**

**PLAN VIEW**

**INSTALLATION for STEEL BEAM GUARD RAIL**

**Ds**

**GENERAL NOTES**

1. This Std. Dwg. (GR-3) Conforms in General With I.S.H.C.S. Dwg. GR-10. In the Event of Conflict Between These Two Stan., the County Engineer Will Decide Which to Use.
2. See GR-33 for Ds With Concrete Block Terminal. Std. Dwg. GR-33 Will Be Used Only When Specifically Required in the Project Drawings.
ELEVATION

PLAN VIEW

INSTALLATION WITH CONC. ANCHOR

SECTION A-A

STEEL BEAM

CONCRETE BLOCK CONNECTION DETAIL
COMBINATION CURB & GUTTER
 TYPE A

COMBINATION CURB & GUTTER
 TYPE B

COMBINATION CURB & GUTTER
 TYPE C

NOTES
2. Keyway to be Eliminated if Curb is Placed Monolithically with Pavement.
3. Class "A" Concrete to be Used.
4. When C & G is Continuous Across Intersection or Drive Curb Flag to be Removed to Dotted Line.

STANDARD CURB

STANDARD HEADER

DIVISION OF ENGINEERING
ST. JOSEPH COUNTY, INDIANA

CONCRETE CURB

DRAWING NUMB: E-C-2
DRAWN BY: A.P.
DATE: JUNE 1967
SCALE: 1'-0" = 1'-0"
STANDARD CURB DRAWING

COMMISSIONER: CLAIRE M. RICHARDSON, D.P.
COMMISSIONER: MARCEL C. VALERIE LAFAYETTE
COMMISSIONER: KEITH A. RICHARDSON, P.E.

APPROVED: JULY 1967

REV: SUBJ.: DATE: 6

HATCH RELOCATED & PLANNED, OVER all: 6-28-70 A.
NOTE ADDED: 6-28-70 A.
TYPE C CURB & GUTTER ADDED: JUNE 1976 A.R.
GEN'L.: FEB. 1975 D.
MONOLITHIC NOTE ADDED: 4-24-69 JJ
1. Existing concrete curb shall be sawcut, removed, and replaced to the nearest existing joint.
2. Expansion material shall be installed at the joint of the new curb with the existing curb.
3. Expansion material shall be placed between the curb and driveway.
4. The contractor shall maintain the direction & flow of water in the curbline and submit a drawing showing the existing curbline elevations and the proposed curb work.
5. A minimum five foot transition shall be required from the depressed curb to the Comb. Curb & Gutter, Type 'A'.
6. Class 'A' Concrete shall be used.
7. Contraction Joints shall be placed every ten feet.
8. An inspection shall be required prior to any work. A second inspection shall be required before pouring the depressed curb.
9. A final inspection shall be required upon completion of curb work & prior to any asphalt repair. All asphalt repair shall be completed per County Standards & at the County Engineer's direction.
10. Depressed curb shall not be allowed when the driveway approach slopes downward from the roadway toward a home or garage.
11. Depressed curb may not be allowed when an existing structure is located within the driveway approach.
12. The County Engineer must approve the installation of a depressed curb.
13. All depressed curb work requires a driveway permit per the ordinance.

**NOTES**

**DESIGNATED AS A - A**

**DESIGNATED AS B - B**

**Designated**

**Typical Driveway Installation**

**Depressed Curb & Gutter**

**Combination Curb & Gutter**

Type 'A'

<table>
<thead>
<tr>
<th>Typical Installation</th>
<th>DRAWING NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EC-1</td>
</tr>
</tbody>
</table>

**DIVISION OF ENGINEERING**

**ST. JOSEPH COUNTY, INDIANA**

**APPROVED** 11/14/2003

**COMMISSIONER**

**COMMISSIONER**

**COMMISSIONER**

**ENGINEER**

**DRAWN BY** R.J.C

**REVIEWED BY** J.J.C

**DATE** 5/24/2004

**STANDARD**

**ROLLED CURB - DEPRESSED CURB**

**SCALE** None
NOTES

1. Cul de Sac Streets Or Loop Streets Having 10 Lots Or Less Maybe Reduced As Follows:
   a. 24'-0" Back To Back Of Curbs.
   b. 26'-0" Right Of Way
   c. 10'-0" Easement - Each Side

2. Pavement To Be Designed In Accordance With County Design Manual.

3. I.C.8-20-115, A County Highway R/W may not be laid out with less than 20' on each side of the centerline, exclusive of additional width required for Cafs, Fills, Drainage, and Public Safety.

4. Typical Section for Existing, Relocated, Proposed, or New Roadway.
NOTES

1. Pavement To Be Designed In Accordance With County Design Manual.
2. Typical Section for Existing, Relocated, Proposed, or New Roadway.
ARterial street - typical section

See notes

40' - 0" R/W (minimum)

Gross in accordance with
Latest County Standards
9' to 12'
9' to 12'
2'

Pavement in accordance with Latest County Standards
5' Compacted Aggregate Base
2" HAC Binder
6" Comp. Aggregate for Shoulders

Rural connector - typical section

NOTES:
1. Existing Half Section to be Constructed of Present Time. Final Determination of Developer's Responsibility to be in accordance with County Subdivision Ordinance.
2. Future Widened Half Section to be used as a Guide. Final Design of each Arterial Street or Road to be Contingent on the Latest County or State Design Standards.
3. Placement of Underground Utilities to be in Accordance with Standard Drawing GS-2 Collector Road Grading Section.
4. For Additional Information regarding Lane and Shoulder Widths see I.N.D.O.T. "Design Standards for R.R.R. Projects."
5. Minimum Pavement Section: 1" HAC Surface
2" HAC Binder
5" Comp Aggregate, Type "P"
See County Standards for Pavement Design Criteria
6. I.C. B-20-1-15, A County Highway R/W may not be laid out with less than 20' on each side of the centerline, exclusive of additional width required for Cuts, Fill, Drainage, and Public Safety.
7. Typical Cross Section for Existing, Relocated, Proposed, or New Roadway

Division of Engineering
ST. JOSEPH COUNTY, INDIANA

STREET GRADING SECTIONS

REVISED R/W, and Added Note No. 7
Jan. '03
Di

DRAWN
DATE
5
Jan. '95
Di

March 24-69

STANDARD DRAWING

DATE: JANUARY 1969

COMPL.-REPLACES GS-3 OF 7-17-67

FEB-69

STANDARD DRAWING

COMMISSIONER

EDD S. KENSPERGER

COMMISSIONER

FLORENE W. MILLER

COMMISSIONER

CLARENCE R. KELLEY

ENGINEER

WILLIAM J. RICHARDSON P.E.
LEGEND
A - EXPANSION JOINT PLAIN.
AN - EXPANSION JOINT WITH LOAD TRANSFER.
B - UNITIED LONGITUDINAL JOINTS.
C - UNITIED CONTRACTION-Tied or Pre-molded Strip
D - TRANSVERSE CONTRACTION JOINTS.
E - TIED LONGITUDINAL OR CONSTRUCTION JOINTS.
R - RADIUS TO BE DESIGNED.
V - VARIABLE TO BE DESIGNED.

NOTES:
1. SEE SHEET PJ-2 FOR JOINT DETAILS.
2. WHEN REINFORCED CONCRETE PAVEMENT IS SPECIFIED, USE JOINT "D" IN PLACE OF JOINT "C".
3. SEE STANDARD DRAWINGS GS-1 B GS-2 FOR PAVEMENT WIDTHS.

NOTE:
IF SPEED LIMIT IN EXCESS OF 35 M.P.H. TRANSVERSE JOINT SPACING TO BE RANDOMIZED AT INTERVALS OF 13'-19' - 18'-12' (REPEAT) AND SKewed 4' FT. IN 24' FT. THIS APPLIES ONLY TO NON-REINFORCED PAVEMENT SKew TO BE DONE ONLY UP TO AN JOINT AT INTERSECTIONS.

DIVISION OF ENGINEERING
ST. JOSEPH COUNTY, INDIANA

CONCRETE PAVEMENT
PJ-1
TYPE-A
EXPANSION JOINT - PLAIN

Fill with joint sealer
Expansion joint filler
Expansion cap
Lubricate this end

TYPE-AN
EXPANSION JOINT - WITH LOAD TRANSFER

Fill with joint sealer

TYPE-B
UNTIED LONGITUDINAL JOINT

d/8 smooth dowel bar 15/16" @ 12" ctr.

TYPE-C
UNTIED CONTRACTION JOINT
Sawed or Premolded Strip

Fill with joint sealer
Lubricate one end

TYPE-D
TRANSVERSE CONTRACTION JOINT

d/8 smooth dowel bar 15/16" @ 12" ctr.
Lubricate one end

TYPE-E
TIED LONGITUDINAL OR CONSTRUCTION JOINT

Deformed tie bars 1/2" @ 30" at 24" ctr.

CONCRETE PAVEMENT & DETAILS

DEPARTMENT OF ENGINEERING
ST. JOSEPH COUNTY, INDIANA

Joints

CONSTRUCTION STANDARDS

ENGINEER
WILLIAM J. RICHARDSON P.E.
CERTIFIED BY

COMMISSIONERS:
RICHARD L. LARRISON DIST.1
RICHARD D. JASINSKI DIST. 2

DRAWN BY D.K.
DATE June 19
CHECKED BY
No Scale

PJ-2
LOAD TRANSFER DEVICE

WIDTH = ONE LANE 12' MAX.

PLAN

SEALER
3/4" FILLER
EXPANSION
JOINT
CONTRACTION
JOINT

NOTE:
PLACE OF LOCATIONS SHOWN ON PLANS.
GREASE ALTERNATE ENDS OF DOWEL AFTER DEVICE IS
SET & SPINED DOWN & INSPECTED.
DEVICE SHALL BE SPINED WITH 1/2" Ø PINS 15' LONG
PROVIDE A 3/4" PREFORMED JOINT FILLER AT EXPANSION
JOINTS AND CUPS FOR EACH DOWEL BAR TYPE A FILLER
SHALL BE PUNCHED FOR DOWELS.

PLAN OF REINFORCED CONCRETE SLAB

SECTION

TYPICAL ELEVATION

40'-0'

CONTRACTION JOINT
EDGE OF PAVEMENT
CONTRACTION JOINT

6/2-24 WIRE FABRIC

LONGITUDINAL JOINT

1/8 BARS
3'-0" LONG 3'-0" c.c.

FABRIC SHEET 14'-0" LONG

REINFORCED PAVEMENT DETAILS

CONCRETE PAVEMENT

DRAWN BY

ST. JOSEPH COUNTY, INDIANA

P.J. 3
APPROACH PAVEMENT - TYPE & LIMITS AS SPECIFIED
SEE STD. BR - 4 FOR DETAILS

PROFILE GRADE & G

TAPER = 1' PER 10' TYPICAL

PILE END BENT - SEE STD BR 2 & 3
SPAN AS SPECIFIED
BEAM GO. RAIL 30'-0" MIN. TYPICAL

PLAN
SCALE 1" = 10'-0"

COMMISSIONER
KEITH A. KLOPPFORDT

COMMISSIONER
CLARENCE R. KELLEY

ENGINEER
WILLIAM J. RICHARDSON, P.E.

DIVISION OF ENGINEERING
ST. JOSEPH COUNTY, INDIANA

SCALE: 1" = 10'-0"
DATE: JAN., 1969
STANDARD DRAWING

TYPICAL PLAN
PRSTD. CONCRETE BRIDGES
DRAWN BY WJR
TYPE A

1/2 SECTION 21'-0"

6' 10 1/2" 10 1/2" 4 EQ. SPACES 10 1/2" 10 1/2" 4 EQ. SPACES 10 1/2" 10 1/2" 2 EQ. SPACES

BATTER

TYPE B

1/2 SECTION 21'-0"

12" 12" 3 EQ. SPACES 12" 12" 3 EQ. SPACES 12" 12" 3 EQ. SPACES 12"

TYPICAL SECTION

DESIGN DATA

F = 3000 PSI
F = 2000 PSI
F = 20,000 PSI

PILES: 40 TONS/PILE MIN. BEARING

DIVISION OF ENGINEERING
ST. JOSEPH COUNTY, INDIANA

SCALE: 1" = 2'-0"

STANDARD DRAWING

DATE: FEB - 1969

DRAWN BY: K.

PILLE END BENTS

PRSTD. CONCRETE BRIDGES BR-2
## BILL OF MATERIALS - FOR 1 BENT

<table>
<thead>
<tr>
<th>SPAN MAX</th>
<th>TYPE</th>
<th>BEAM #</th>
<th>NO. 8 BARS</th>
<th>NO. 401 BARS</th>
<th>NO. 402 BARS</th>
<th>TOTAL</th>
<th>CLASS D</th>
<th>NO. 14&quot; PILES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>NO. REQD.</td>
<td>LBS. REQD.</td>
<td>NO. REQD.</td>
<td>LBS. REQD.</td>
<td></td>
<td>LBS. REQD.</td>
</tr>
<tr>
<td>39'</td>
<td>A</td>
<td>WS-17-8</td>
<td>I1</td>
<td>1300</td>
<td>29</td>
<td>180</td>
<td>70</td>
<td>180</td>
</tr>
<tr>
<td>47'</td>
<td></td>
<td>WS-21-8</td>
<td>I1</td>
<td>1300</td>
<td>28</td>
<td>175</td>
<td>70</td>
<td>180</td>
</tr>
<tr>
<td>59'</td>
<td>B</td>
<td>WS-27-8</td>
<td>I1</td>
<td>1300</td>
<td>28</td>
<td>175</td>
<td>74</td>
<td>190</td>
</tr>
<tr>
<td>71'</td>
<td>C</td>
<td>WS-33-8</td>
<td>I1</td>
<td>1300</td>
<td>31</td>
<td>190</td>
<td>82</td>
<td>210</td>
</tr>
<tr>
<td>85'</td>
<td>D</td>
<td>WS-42-8</td>
<td>I1</td>
<td>1300</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*INDIANA STATE HWY. DEPT.*

STD. DRAWING PB8A & PB8B

---

### STEEL DETAILS

- **NO. 402 X 3/8**
- **NO. 401 X 9-1/2**
- **NO. 8 X 43-11**

---

**DIVISION OF ENGINEERING**

ST. JOSEPH COUNTY, INDIANA

**SCALE:** NONE

**STANDARD DRAWING**

**DRAWN BY:** WJR

**DATE:** JANUARY 1969

**DETAILS**

**PRSTD. CONCRETE BRIDGES**

**DRAWING NUM:** BR-4

---

**APPROVED:** 12-19-70

**COMMISSIONER:** Keith A. Kuhlmann

**COMMISSIONER:** Jerry J. Miller

**COMMISSIONER:** Clarence R. Keller

**ENGINEER:** William J. Richardson PE.
(NAME OF BRIDGE)

RECONSTRUCTED (YEAR)

ST. JOSEPH COUNTY, INDIANA

COMMISSIONERS
(NAME) DISTRICT ONE
(NAME) DISTRICT TWO
(NAME) DISTRICT THREE
(NAME) AUDITOR
(NAME) ENGINEER

COUNTY COUNCIL
(NAME) DISTRICT A
(NAME) DISTRICT B
(NAME) DISTRICT C
(NAME) DISTRICT D
(NAME) DISTRICT E
(NAME) DISTRICT F
(NAME) DISTRICT G
(NAME) DISTRICT H
(NAME) DISTRICT I

CONSULTING ENGINEER
CONTRACTOR

1/4" BORDER

APPROVED 11-13-72

COMMISSIONER
August H. Coreman

COMMISSIONER
Richard Larrison

COMMISSIONER
Clarence R. Kelley

ENGINEER
John R. M. Namara P.E.
NOTES:

SURFACE TEXTURE OF THE RAMP SHALL BE THAT OBTAINED BY A COARSE
BROOMING, TRANSVERSE TO THE SLOPE OF THE RAMP.
THE NORMAL GUTTER LINE PROFILE SHALL BE MAINTAINED THROUGH THE
AREA OF THE RAMP.
Installation Details Controller
Cabinet Foundation Type "P-1"

Mast Arm Pole And Steel Strain Pole Foundation

Loop Detector

Cross Section Through Pavement For Curb &
Non Curb Sections

Handhole

Push Wire In With Wooden
Stick Only

Roadway Loop Wire

Overlap Cut So That Slot
At Corner Has Full Depth

Detector Housing

Typical Slot Plan
Two Lane Approach
Fill Slot With Sealant

Roadway Loop Wire

Loop In Concrete
Or Asphalt

12 11 10 9 8 7 6 5 4 3 2 1
INKED D.K. 6/76

DEPARTMENT OF ENGINEERING
ST. JOSEPH COUNTY, INDIANA

POLE FOUNDATIONS &
LOOP DETECTORS

CONSTRUCTION STANDARDS

STANDARD DRAWING

ENGINEER
WILLIAM J. RICHARDSON P.E.

CERTIFIED BY

COMMISSIONERS
DAVID MICHAEL KELLEY

DRAWN BY

CHECKED BY

DRAWN DATE

CHECKED DATE

Scale: 1/8"=1'-0"
SAE SHEET NO.

TS-3
1. Make all transverse measurements from reference line.

2. Beginning of island as shown in the plans.

Note:
Chart or strips to be placed 5 ft. apart center to center.

Varies — 4'-0" to 12'-0"

1'-0" varies 1'-0"

2'-0" to 8'-0"

---

**TABLE OF OFFSETS**

<table>
<thead>
<tr>
<th>DISTANCE</th>
<th>LEFT EDGE</th>
<th>RIGHT EDGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4.0</td>
<td>8.2</td>
</tr>
<tr>
<td>10</td>
<td>3.8</td>
<td>9.3</td>
</tr>
<tr>
<td>15</td>
<td>3.4</td>
<td>10.3</td>
</tr>
<tr>
<td>20</td>
<td>3.2</td>
<td>11.2</td>
</tr>
<tr>
<td>25</td>
<td>2.9</td>
<td>11.8</td>
</tr>
<tr>
<td>30</td>
<td>2.6</td>
<td>12.4</td>
</tr>
<tr>
<td>35</td>
<td>2.5</td>
<td>12.8</td>
</tr>
<tr>
<td>40</td>
<td>2.4</td>
<td>13.1</td>
</tr>
<tr>
<td>45</td>
<td>1.8</td>
<td>13.4</td>
</tr>
<tr>
<td>50</td>
<td>1.6</td>
<td>13.4</td>
</tr>
<tr>
<td>55</td>
<td>1.5</td>
<td>13.4</td>
</tr>
<tr>
<td>60</td>
<td>1.2</td>
<td>13.2</td>
</tr>
<tr>
<td>65</td>
<td>1.0</td>
<td>12.8</td>
</tr>
<tr>
<td>70</td>
<td>0.8</td>
<td>12.2</td>
</tr>
<tr>
<td>75</td>
<td>0.5</td>
<td>11.4</td>
</tr>
<tr>
<td>80</td>
<td>0.3</td>
<td>10.2</td>
</tr>
<tr>
<td>85</td>
<td>0.2</td>
<td>8.8</td>
</tr>
<tr>
<td>90</td>
<td>0.0</td>
<td>7.3</td>
</tr>
<tr>
<td>95</td>
<td>0.0</td>
<td>6.0</td>
</tr>
<tr>
<td>100</td>
<td>0.0</td>
<td>5.2</td>
</tr>
<tr>
<td>105</td>
<td>0.0</td>
<td>4.5</td>
</tr>
<tr>
<td>110</td>
<td>0.0</td>
<td>4.2</td>
</tr>
<tr>
<td>115</td>
<td>0.0</td>
<td>4.0</td>
</tr>
</tbody>
</table>
TABLE OF OFFSETS

<table>
<thead>
<tr>
<th>DISTANCE</th>
<th>LEFT EDGE</th>
<th>RIGHT EDGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>0.0</td>
<td>4.4</td>
</tr>
<tr>
<td>10</td>
<td>0.0</td>
<td>5.3</td>
</tr>
<tr>
<td>15</td>
<td>0.0</td>
<td>6.3</td>
</tr>
<tr>
<td>20</td>
<td>0.0</td>
<td>7.4</td>
</tr>
<tr>
<td>25</td>
<td>0.0</td>
<td>8.2</td>
</tr>
<tr>
<td>30</td>
<td>0.0</td>
<td>8.6</td>
</tr>
<tr>
<td>35</td>
<td>0.0</td>
<td>9.1</td>
</tr>
<tr>
<td>40</td>
<td>0.0</td>
<td>9.4</td>
</tr>
<tr>
<td>45</td>
<td>0.0</td>
<td>9.2</td>
</tr>
<tr>
<td>50</td>
<td>0.0</td>
<td>9.0</td>
</tr>
<tr>
<td>55</td>
<td>0.0</td>
<td>8.4</td>
</tr>
<tr>
<td>60</td>
<td>0.0</td>
<td>7.6</td>
</tr>
<tr>
<td>65</td>
<td>0.0</td>
<td>6.6</td>
</tr>
<tr>
<td>70</td>
<td>0.0</td>
<td>5.7</td>
</tr>
<tr>
<td>75</td>
<td>0.0</td>
<td>5.0</td>
</tr>
<tr>
<td>80</td>
<td>0.0</td>
<td>4.5</td>
</tr>
<tr>
<td>85</td>
<td>0.0</td>
<td>4.2</td>
</tr>
<tr>
<td>90</td>
<td>0.0</td>
<td>4.0</td>
</tr>
</tbody>
</table>

NOTES:
1. MAKE ALL TRANSVERSE MEASUREMENTS FROM REFERENCE LINE.
2. BEGINNING OF ISLAND AS SHOWN IN THE PLANS.

SECTION A-A

NOTE: CHAFTED STRIPS TO BE PLACED 5 FT. APART - CENTER TO CENTER

Varies 4'-0" To 9'-5"

1'-0"

2'-0" To 7'-5"

1'-0"

SECTION
SCALE 1/2" = 1'-0"
Note: Contact Local Postmaster for Final Approval of Mailbox Location.
S.J.C. SERIES NOT REFLECTORIZED

COLOR CODE

RED*    YELLOW*
WHITE*   BLACK
GREEN*   REFLECTORIZED

BEGIN COUNTY MAINTENANCE
SJG-1  40" X 20"

END COUNTY MAINTENANCE
SJG-2  40" X 20"

ENTER ST. JOSEPH COUNTY
SJG-3  40" X 20"

LEAVE ST. JOSEPH COUNTY
SJG-4  40" X 20"
COLOR CODE

- RED
- YELLOW
- WHITE
- BLACK
- GREEN
- REFLECTORIZED

TYPICAL ROAD NAME SIGN LOCATION

ELEVATION

ROAD NAME SIGNS

GREEN BACKGROUND
WHITE LETTERS & BORDER

CONFORMS TO I.S.H.D. UNIFORM TRAFFIC CONTROL DEVICES.
CONC. PATCH IN ASPHALT PAVEMENT

Edge of Pmvt.

ASPHALT
PAVEMENT
2" THICK or
MORE

2'-0 Minimum
(IF Less Remove
To Edge)

-90° Transverse
Joint

3'-0 Transverse
Joint

Saw Cut
Pavement
(Parallel to
Joint) 4 Min. Depth Before
Final Removal

CONCRETE
PAVEMENT

HOLE

90° Transverse
Joint

90° Transverse
Joint

Saw Cut
Pavement
(Parallel to
Joint) 4 Min. Depth Before
Final Removal

CONCRETE
PAVEMENT

HOLE

Saw Cut
Pavement
(Parallel to
Joint) 4 Min. Depth Before
Final Removal

CONCRETE
PAVEMENT

HOLE

GENERAL NOTES

1. A Utility Construction Permit shall be obtained from the Engineering Department prior to any type of excavation in County Road Right-of-Way.
2. In case of emergency excavation, the Engineering Department is to be notified as soon as possible by Permit Application.
3. Initial Excavation
   a. Place necessary safety lighting, barricades, and warning signs.
   b. Cut initial access hole only as large as required to perform work.
   c. Backfill initial work hole with clean granular material using mechanical compaction equipment. Backfill and compact in 6 (Six) inch layers. Each layer must be thoroughly compacted before the next layer is placed.
   d. Under no circumstances will an excavation be left open after the working hours, holidays, or weekends.
4. Temporary Patch
   a. If conditions do not allow the placement of the permanent concrete patch, a temporary asphalt patch shall be allowed.
   b. When a temporary patch is to be in place for more than 12 hours, the permittee shall furnish the County Highway Department with the name and phone number of the party who will be responsible for after-hours maintenance.
5. Weather Limitations
   a. Unless special permission is obtained, no permanent patches shall be placed between October 1st and May 1st. During these periods, a durable temporary patch shall be placed in the original access hole.
   b. The maintenance of this temporary patch shall be the sole responsibility of the permittee.
   c. If 4b above (after hours maintenance) shall be complied with in the event of a winter patch.
6. Permanent Patch Installation
   a. All joints shall be cut to a depth of 4 (Four) inches before final removal is performed. All joints between existing pavement and new concrete shall be smooth and straight. This applies for existing asphalt or concrete pavements.
   b. Final Pavement Replacement shall be 10 (Ten) inches thick, HI-EARLY, Class A (Slag) Concrete with 6% - 8% Air Entrainment.
   c. Natural or black concrete finish shall be as noted at left.
   d. Pavement Patch shall be smooth and level. No more than 1/4" variation from a straight edge in 6'-0" shall be allowed. Smooth rideability must be maintained.
7. Patch in Pavements Less than 2" Thick. Asphalt patches shall be acceptable in pavements with less than 2 inches of asphalt depth.

COUNTY HIGHWAY CROSSINGS

NOTE

1. No open cuts shall be allowed across improved County roads for laying of utility lines. All crossings shall be pushed or bored under the road so that no damage is done to the road surface.
2. Under no circumstances shall any side of a push hole excavation extend closer than 4'-0' from the pavement or curb edge.

CONC. PATCH IN CONC. PAVEMENT

(WITH or WITHOUT SKEWED JOINTS)

TYPICAL PLAN VIEWS

Scale: 1" = 4'-0"

CONC.
PVMT.

Saw Cut
Pavement
(Parallel to
Joint) 4 Min. Depth Before
Final Removal

ASPH.
PVMT.

1/8" High Ears Conc. Patch
Backfill with
Clean Granular
Material, Mechanically
Stabilized in lift.

*1'-0" Min. Eave Over Undisturbed
Subgrade Material.

TYPICAL SECTION

Scale: 1/2" = 1'-0"

CONC. PATCH IN CONC. PAVEMENT

Edge of Pmvt.

CONCRETE
PAVEMENT

HOLE

CONCRETE
PAVEMENT

HOLE

CONCRETE
PAVEMENT

HOLE

FINAL CONCRETE FINISH

1. All Finish Concrete Shall Have a Rough Broom Finish Perpendicular to Traffic Direction.
2. Concrete Patches in Asphalt Pavements shall be finished black using a cement coloring powder such as COLOR PIGMENTS INC. TP-250 Black or equivalent.
3. Final Finish Shall be Sprayed With a Clear Curing - Sealing Compound to Prevent Concrete Spalling.

STANDARD DRAWING

DEPARTMENT OF ENGINEERING

ST. JOSEPH COUNTY, INDIANA

PERMANENT ROAD PATCH

ASPHALT or CONCRETE PAVEMENTS

INCLUDE DWG. TC-9 WITH THIS DWG.
NOTES:

Saw Cut immediately prior to Paving

The Minimum Width of a Patch shall be 4" from the Top of the Utility Trench, but shall not be less than 4" from the Edge of the Pavement.

For Lengths less than 100' the section will be 6" Concrete

For Lengths Longer than 100', where Compaction is done by a Roller, a Bituminous Section will be allowed when it is designed according to County Standards, if the Existing Pavement is Bituminous.

If the Saw Cut is 4" or Less from the Centerline of the Pavement, then the Entire Lane must be Replaced. Pavement shall match the Existing Pavement.

Except as noted otherwise on Std. Drawing "UT-2", the minimum Concrete Section shall be 6" of Plain Cement Concrete. The County Engineer may require Design Calculations to verify the Section.

SECTION A-A

Scale: 1/4" = 1'0"

BITUMINOUS PVMT. REPAIR

SECTION B-B

Scale: 1/4" = 1'0"

CONCRETE PVMT. REPAIR

PVMT. REPAIRS for UTILITY CONSTR.

DEPARTMENT OF ENGINEERING
ST. JOSEPH COUNTY, INDIANA

STANDARD DRAWING

PROJECT

CERTIFIED BY

DEVELOPED BY

DRAWN BY

CHECKED BY

DATE: Apr. 1995

SHEET NO.

OF