LUCAS COUNTY
STANDARD CONSTRUCTION DRAWINGS
<table>
<thead>
<tr>
<th>DWG. NO.</th>
<th>PAGE</th>
<th>ROADWAY &amp; PAVEMENT</th>
<th>DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>RP-1</td>
<td>2-3</td>
<td>TYPICAL SECTIONS</td>
<td>04/17/07</td>
</tr>
<tr>
<td>RP-2</td>
<td>4</td>
<td>CUL-DE-SAC DETAILS</td>
<td>04/17/07</td>
</tr>
<tr>
<td>RP-3</td>
<td>5</td>
<td>CONCRETE CURB &amp; WALK DETAILS</td>
<td>04/17/07</td>
</tr>
<tr>
<td>RP-4</td>
<td>6</td>
<td>CURB RAMPS WITH TRUNCATED DOMES</td>
<td>04/17/07</td>
</tr>
<tr>
<td>RP-5</td>
<td>7</td>
<td>TURNAROUNDS</td>
<td>03/06</td>
</tr>
<tr>
<td>RP-6</td>
<td>8</td>
<td>SPEED HUMP</td>
<td>03/06</td>
</tr>
<tr>
<td>RP-7</td>
<td>9</td>
<td>GUARDRAIL BARRICADE</td>
<td>03/06</td>
</tr>
<tr>
<td>RP-8</td>
<td>10</td>
<td>MAILBOX SUPPORT (TYPE 1 &amp; 2)</td>
<td>03/06</td>
</tr>
<tr>
<td>RP-9</td>
<td>11</td>
<td>ROADWAY MONUMENTS</td>
<td>11/29/12</td>
</tr>
</tbody>
</table>

**DRAINAGE**

| CB-1           | 12   | TYPE A-1 CATCH BASIN                            | 04/17/07 |
| CB-2           | 13-14| TYPE A-2/A-4 CATCH BASIN                        | 04/17/07 |
| CB-3           | 15   | TYPE A-3 CATCH BASIN                            | 04/17/07 |

**TRAFFIC**

| TR-1           | 16   | ROAD NAME SIGN DETAIL                           | 11/27/12 |
| TR-2           | 17   | ADVANCED ROAD NAME SIGN                         | 11/27/12 |
| TR-3           | 18   | SIGN BLANK DETAIL                                | 03/06    |
| TR-4           | 19   | YIELDING POST                                   | 01/19/01 |
| TR-5           | 20   | TYPICAL SIGN LOCATION DETAIL                    | 03/06    |
| TR-6           | 21   | CANTILEVER SIGN SUPPORT 3 - LANE CONTROL        | 03/06    |
| TR-7           | 22   | CANTILEVER SIGN SUPPORT 4 - LANE CONTROL        | 03/06    |
| TR-8           | 23   | STRAIN POLE DETAIL                              | 03/06    |
| TR-9           | 24   | POLE & PEDESTAL FOUNDATION DETAILS              | 03/06    |
| TR-10          | 25   | CABINET FOUNDATION & WORK PAD DETAIL           | 04/17/07 |
| TR-11          | 26   | PULL BOX WITH NEW OR EXISTING CONDUIT           | 04/17/07 |
| TR-12          | 27   | GENERATOR POWER PANEL                           | 03/06    |
**TYPICAL BLVD. HALF SECTION**

NEW RESIDENTIAL STREET

SEE STANDARD CONSTRUCTION DRAWING RP-3 FOR DETAIL

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**LEGEND**

1. ITEM 204 SUBGRADE COMPACTION
2. ITEM 304 AGGREGATE BASE
3. ITEM 4D7 TACK COAT FOR INTERMEDIATE COURSE (1 A RATE OF 0.04 GAL./S.Y.)
4. ITEM 4D9 PRIME COAT (1 A RATE OF 0.4 GAL./S.Y.)
5. ITEM 44B 18" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG 64-22, AS PER PLAN
6. ITEM 44B 36" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG 64-22, AS PER PLAN
7. ITEM 605 6" SHALLOW PIPE UNDERDRAINS, 707.31 OR 707.41 W/ FILTER FABRIC WRAP & 6" TYPE F, 707.33, 707.42 OR 707.43 AT ALL STRUCTURES
8. ITEM 609 4" CONCRETE WALK / 6" CONCRETE WALK AT DRIVEWAYS (SEE STANDARD CONSTRUCTION DRAWING RP-3)
9. ITEM 609 CURB, TYPE A (SEE STANDARD CONSTRUCTION DRAWING RP-3)
10. ITEM 609 CURB, TYPE F (SEE STANDARD CONSTRUCTION DRAWING RP-3)

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**TYPICAL CUL-DE-SAC HALF SECTION**

NEW RESIDENTIAL STREET

SEE STANDARD CONSTRUCTION DRAWING RP-3 FOR DETAIL

---

PASSENGER DESIGN SHOWN IS A MINIMUM AND DESIGN WILL BE SUBJECT TO SITE SPECIFIC SOIL TYPES AND PROPOSED DEVELOPMENT TYPE AND USE.
Pavement design shown is a minimum and design will be subject to site specific soil types and proposed development type and use.

**LEGEND**

1. Item 204 Subgrade Compaction
2. Item 304 Aggregate Base
3. Item 407 Tack Coat for Intermediate Course (o a rate of 0.04 gal./yd.²)
4. Item 408 Prime Coat (o a rate of 0.4 gal./yd.²)
5. Item 448 2½" Asphalt Concrete Intermediate Course, Type 2, PG 64-22, as per plan
6. Item 448 3½" Asphalt Concrete Surface Course, Type 1, PG 64-22, as per plan
7. Item 605 6" Shallow Pipe Underdrains, 707.31 or 707.41 w/ filter fabric wrap & 6" type f, 707.32, 707.42 or 707.45 at all structures
8. Item 608 4" concrete walk / 6" concrete walk at driveways (see standard construction drawing RP-3)
9. Item 609 Curb, Type A (see standard construction drawing RP-3)
10. Item 609 Curb, Type F (see standard construction drawing RP-3)
11. Item 609 Combination Curb and Gutter, Type 2
12. Storm sewer (2½" RT.)
13. Water Line (18'-10" RT.)
14. Sanitary sewer (22'-23" LT.)

**Typical Section**

Commercial/Industrial Street

**Underdrain Trench Detail**

*4" Item 304 included in unit price bid for Item 605, 6" Shallow Pipe Underdrain, with filter fabric wrap.*

*Filter fabric wrap, 712.09, type A. Surrounding granular filter and lapped equal to the width of trench at the top of granular material.*
4' CONCRETE WALK

5' SIDEWALK EASEMENT

TRANSITION SIDEWALK FROM 1' INSIDE THE SIDEWALK EASEMENT TO 1' INSIDE THE RIGHT-OF-WAY.

NOTES:
1. FOR RESIDENTIAL DEVELOPMENT COMMERCIAL AND INDUSTRIAL CUL-DE-SACS WILL BE DESIGNED FOR ANTICIPATED TRUCK USAGE.
2. THIS DETAIL IS APPLICABLE WHEN THE LENGTH OF THE CUL-DE-SAC STREET IS NOT GREATER THAN 700 FEET.

5' SIDEWALK EASEMENT

TRANSITION SIDEWALK FROM 1' INSIDE THE SIDEWALK EASEMENT TO 1' INSIDE THE RIGHT-OF-WAY.

NOTES:
1. FOR RESIDENTIAL DEVELOPMENT COMMERCIAL AND INDUSTRIAL CUL-DE-SACS WILL BE DESIGNED FOR ANTICIPATED TRUCK USAGE.
2. THIS DETAIL IS APPLICABLE WHEN THE LENGTH OF THE CUL-DE-SAC STREET EXCEEDS 700 FEET.
**ITEM 609 CURB, TYPE A**

- **TOP OF CURB**
  - To be dropped to this point at all drives

- **NORMAL WIDTH OF PAVEMENT**
  - 4" to 6" flexible pavement surface

- **FLEXIBLE PAVEMENT**
  - Surface to be in contact with pavement

- **TACK COAT CURB**
  - 8" aggregate base

- **SEAL W/103.01**
  - Cost included W/446 (Typ.)

**NOTES**

- General: The design details shown herein shall govern the construction of driveways unless otherwise shown in the Project Plans.

- Joints: In addition to the joints shown herein, impressed joints shall be placed in Portland cement concrete driveways at intervals not to exceed 10' in the portion of the driveway back of the approach. For asphalt driveways, use 1" expansion joint and impressed joints.

- Thickness: Minimum residential thickness required shall be 6" for Portland cement concrete driveways or 2" of asphalt on 6" of aggregate base for asphalt driveways.

- Impressed Joints for Portland cement concrete driveways shall be 3/8" minimum width by 2" depth.

**ITEM 609 CURB, TYPE F**

- **CURVE TYPE F**
  - Shall be constructed according to Item 500.04 of the 2000 State of Ohio Department of Transportation construction and material specifications, except for the following:

- **FLEXIBLE PAVEMENT**
  - Surface

- **R=25'**

- **W=10"**

**NOTES**

- Transverse Slope: 1/8" per ft. (Max.)

- **CONCRETE CURB**
  - Material, 700.03

- **EXPANSION JOINT**
  - 3/8" wide x 1" deep (Typ.)

**SIDEWALK THROUGH DRIVEWAY DETAIL**

- **EX W/TH WIDTH VARY**

- **6" THICK CONCRETE WALK**
  - 12" minimum

- **1/4" EXPANSION JOINT**

- **MATERIAL, 700.03**

- **W/ CONC. APPROACH**

- **DRIVE APPROACH**
  - 10' minimum
  - 5' (Typ.)

**SIDEWALK DETAIL**

- **CONCRETE DRIVE**

- **EXPANSION JOINT**

- **MATERIAL, 700.03**

- **AT 25' INTERVALS**

- **5" TRANSVERSE JOINT INTERVALS**

- **Typ.**

- **Typ.**
TURNAROUND, TYPE A

GUARDRAIL BARRICADE (SEE STANDARD CONSTRUCTION DRAWING RP-7)

2' BUFFER LOT

21.5'

30' MIN.

30' R/W

22' PAVEMENT

60' R/W

TYPICAL SECTION FOR TYPE A

1. ITEM 448 3" ASPHALT CONCRETE SURFACE COURSE, TYPE I OR TYPE II
2. ITEM 304 8" AGGREGATE BASE

TURNAROUND, TYPE B

GUARDRAIL BARRICADE (SEE STANDARD CONSTRUCTION DRAWING RP-7)

2' BUFFER LOT

21.6'

20'

12'

30' R/W

22' PAVEMENT

60' R/W

TYPICAL SECTION FOR TYPE B

1. ITEM 448 3" ASPHALT CONCRETE SURFACE COURSE, TYPE I OR TYPE II
2. ITEM 304 8" AGGREGATE BASE
SECTION A-A

SECTION B-B

SPEED HUMP DETAIL

1. Item 448- 1½" asphalt concrete surface course, Type 1, PG 64-22
2. Item 448- ½" to 1½" asphalt concrete surface course, Type 1, PG 64-22
3. Item 407- Tack coat (0.075 Cal./S.Y.)
GUARDRAIL BARRICADE DETAILS

NOTES

(1) STANDARD DRAWING OR-1.1, OR-2.1 AND TC-41.02 FOR ADDITIONAL DETAILS AND SPECIFICATIONS NOT COVERED ON THIS DRAWING.

RAIL: USE W-BEAM RAIL MEETING AASHTO M 180 TYPE I CLASS A, AS SPECIFIED IN OR-86.

POSTS: POSTS MAY BE CONSTRUCTED OF WOOD OR STEEL. WOOD POSTS MAY BE ROUND OR 8" SQUARE, SAWN. THE ROUND POSTS SHALL BE 8" IN DIAMETER AT THE TOP AND NOT MORE THAN 7" LARGER AT THE BOTTOM. RAIL WITH A UNIFORM TAPER. POSTS SHALL BE PRESSURE TREATED AS PER FPE-574. BORE HOLES AS REQUIRED. RIVET THE TOPS OF POSTS AFTER THE POSTS ARE SET. STEEL POSTS ARE TO BE WELD OR ANCHORED IN CONCRETE. USE THE SAME TYPE OF POSTS ACROSS THE LENGTH OF THE GUARDRAIL. POSTS SHALL BE SPECIFIED IN THE PLANS OR PERMITTED BY THE ENGINEER. ALL POSTS SPECIFIED IN THE PLANS ARE TO BE SET IN DRILLED HOLES OR BOTH SHOES MAY BE DRIVEN OR SCREWED TO GRADE.

ALTERNEATE POSTS: ENGINEERED GUARDRAIL POSTS HAVING MET NCHP 350 CRITERIA. ALL MATERIALS ARE TO BE ARRANGED TO THE SPECIFICATIONS OF THE MANUFACTURER. INSTALLATION IS TO BE ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS AND INSTALLMENTS SHOWN ON THE APPROVED LIST.

WASHERS: INSTALL APPROPRIATE SIZE BUTT WASHERS OR THE MOUNTING BOLTS INSTALLED ON WOOD POSTS.

GUARDRAIL HEIGHT: FOR INITIAL INSTALLATION CONSTRUCT THE GUARDRAIL WITHIN 1" OF THE STANDARD HEIGHT, OR 273/4" TO THE TOP OF W-BEAM RAIL.

PAYMENT: ALL LABOR, EQUIPMENT AND MATERIALS INCLUDING GUARDRAIL, FENCE, END SECTIONS, GUARDRAIL POSTS, OBJECT MARKER SIGNS AND SIGN POSTS SHALL BE INCLUDED IN THE ITEM CODE, EACH GUARDRAIL, BARRICADE.
MAILBOX SUPPORT DETAILS

NOTE: LUCAS COUNTY ROAD MAINTENANCE TYPICAL INSTALLATION

LOCAL SUPPLIER OF BRACKET IS
WATERVILLE SHEET METAL CO. INC.
1210. WATERTOWN MONCLOVA RD.
WATERVILLE, OH 43566
(419) 878-5050
OR EQUAL AS APPROVED BY THE LUCAS COUNTY ENGINEER.
A monument shall be placed at each change in direction on the boundary of the plat and one such monument shall be placed on the throughline at every next major intersection and at the beginning and end of all street curves.

A type A monument shall be placed in all unpaved areas. A type B monument shall be placed in all paved areas.

**Type A**

A cylindrical concrete marker six (6") inches in diameter and thirty (30") inches in length with a quarter (¼") inch iron rod cast at the central axis of the marker shall be cast. The steel marker shall be cast to a height of the surface of the surrounding ground. The type A monument shall be identified with a durable marker (i.e., cap, plate) bearing the surveyor's name, registration number, and/or name or company name per ORC 4733-37-03.

![Diagram of Type A Monument](image)

**Type B**

A cylindrical concrete marker as described under Type A except that a machine type iron bolt through a leader of one (1") inch in diameter by twelve (12") inches in length shall be placed in a vertical position with the head of the bolt upward and level with the surface of the pavement. A point shall be marked on the head of the bolt to indicate the exact point referred to on the final plat.

![Diagram of Type B Monument](image)
CURB INLET CASTING
NEENAH R-3158-A
EAST JORDAN 7020 WITH M2 SINUSOIDAL GRATE & T1 BACK, AS SHOWN, OR EQUAL.
NOTE: THIS CASTING IS NOT TO BE USED WITH "TYPE F" MOUNTABLE CURB.

SECTION A-A

SECTION C-C

SECTION B-B

NOTES
CASTINGS: THE DESIGN SHALL BE ESSENTIALLY THE SAME AND EQUALLY AS STRONG AS THOSE SHOWN.

THE FOLLOWING TEXT SHALL BE CAST INTO THE TOP OF THE CURB CASTING:
"DUMP NO WASTE" AND "DRAINS TO WATERWAY"

TEXT SHALL BE PRINTED IN BOLD, CAPITAL LETTERS WITH A MINIMUM HEIGHT OF 3/8", "WATERWAY" MAY BE SUBSTITUTED WITH "STREAM", "RIVER", "LAKE", ETC.

ACTUAL PLACEMENT AND LOGO MAY VARY PER MANUFACTURER.

BEARING AREAS: THE FRAME AND GRATE SHALL BE SO FITTED AND FINISHED AS TO PROVIDE A FIRM AND EVEN SEAT. NO PROJECTIONS SHALL EXIST ON BEARING AREAS OF EITHER CASTING AND THE GRATE SHALL SEAT IN ITS FRAME WITHOUT ROCKING.

WALLS: WHEN USED IN PLACE OF CONCRETE, BRICK SIDE WALLS SHALL BE 8" NOMINAL THICKNESS.

PRECAST WALLS SHALL HAVE A MINIMUM THICKNESS OF 8" AND REINFORCING SHALL BE SUFFICIENT TO PERMIT SHIPPING AND PLACED WITHOUT DAMAGE.

OPENINGS: PIPE OPENINGS SHALL BE THE O.D. OF THE PIPE BEING SUPPLIED PLUS 2" WHEN FABRICATED OR FIELD CUT. FILL ANY VODS PER CMS 601.

DEPTH: STRUCTURE SHALL BE CONSTRUCTED SO THAT THE MINIMUM DEPTH FROM T/C TO TOP OF CURB IS FOUR FEET (4).

BLOCKOUTS: BLOCKOUTS SHALL BE PAVED WITH CLASS C CONCRETE IN CURB AND GUTTER AND PAID FOR AS A PART OF THE CURB AND GUTTER WITH NO DEDUCTION IN CURB AND GUTTER QUANTITIES BECAUSE OF THE CASTINGS.

STEPS: STEPS SHALL BE PROVIDED WHERE THE DEPTH EXCEEDS 6' AND SHALL MEET THE MATERIAL REQUIREMENTS OF ITEM 604 OF THE FDOT CONSTRUCTION AND MATERIAL SPECIFICATIONS.

PAYMENT: ALL MATERIALS AND LABOR, INCLUDING EXCAVATION AND BACKFILLING, SHALL BE PAID UNDER FOR ITEM 604 TYPE A-1 CATCH BASIN.
CURB INLET CASTING

A-2 (USE WITH CURB, TYPE A) NEENAH
R-3246-F, AS SHOWN, EAST JORDAN 7037 W/ M2 GRATE & T1 BACK, OR EQUAL

A-4 (USE WITH CURB, TYPE F) NEENAH
R-3246-E, AS SHOWN, EAST JORDAN 7037 W/ M2 GRATE & T2 BACK, OR EQUAL

SEE SHEET 2/2 FOR DETAIL
NOTES

CASTINGS: THE DESIGN SHALL BE ESSENTIALLY THE SAME AND EQUALLY AS STRONG AS THOSE SHOWN.

THE FOLLOWING TEXT SHALL BE CAST INTO THE TOP OF THE CURB CASTING:

"DUMP NO WASTE" AND "DRAINS TO WATERWAY"

TEXT SHALL BE PRINTED IN BOLD, CAPITAL LETTERS WITH A MINIMUM HEIGHT OF 1/4. "WATERWAY" MAY BE SUBSTITUTED WITH "STREAM", "RIVER", "LAKE", ETC. ACTUAL PLACEMENT AND SIZE MAY VARY PER MANUFACTURER.

BEARING AREAS: THE FRAME AND GRATE SHALL BE SO FITTED AND FINISHED AS TO PROVIDE A TIGHT AND EVEN SEAT. NO PROJECTIONS SHALL EXIST ON BEARING AREAS OF EITHER CASTING AND THE GRATE SHALL SIT IN ITS FRAME WITHOUT ROCKING.

WALLS: WHEN USED IN PLACE OF CONCRETE, BRICK SIDE WALLS SHALL BE 8" NOMINAL THICKNESS.

PRECAST CONSTRUCTION: CONCRETE SHALL MEET THE REQUIREMENTS OF CMS 706.13. PRECAST WALLS SHALL HAVE A MINIMUM THICKNESS OF 4" AND REINFORCING SHALL BE SUFFICIENT TO PERMIT SHIPPING AND PLACEMENT WITHOUT DAMAGE.

OPENINGS: PIPE OPENINGS SHALL BE THE O.D. OF THE PIPE BEING SUPPLIED PLUS 2" WHEN FABRICATED OR FIELD CUT. FILL ANY Voids PER CMS 601.

DEPTH: STRUCTURE SHALL BE CONSTRUCTED SO THAT THE MINIMUM DEPTH FROM T/C TO TOP OF CONDUIT IS FOUR FEET (4').

DOWELS: FOUR 1" x 1/8" DOWELS ARE REQUIRED FOR CONCRETE GUTTER BLOCKOUT.

APPLY TO CMS 451.08 B AND 706.13 FOR DOWEL SPECIFICATIONS.

APPLIES TO A-4 CATCH BASIN ONLY.

BLOCKOUTS: BLOCKOUTS SHALL BE PAVED WITH CLASS C CONCRETE IN CURB AND GUTTER AND PAID FOR AS A PART OF THE CURB AND GUTTER WITH NO REDUCTION IN CURB AND GUTTER QUANTITIES BECAUSE OF THE CASTINGS.

STEPS: STEPS SHALL BE PROVIDED WHERE THE DEPTH EXCEEDS 6" AND SHALL MEET THE MATERIAL REQUIREMENTS OF ITEM 604 OF THE COTT CONSTRUCTION AND MATERIAL SPECIFICATIONS.

PAYMENT: ALL MATERIALS AND LABOR, INCLUDING ExcAVATION AND BACKFILLING, SHALL BE PAID FOR UNDER ITEM 604 TYPE A-2 OR A-4 CATCH BASIN.
NOTES

GRATE: THE BI-DIRECTIONAL FLOW GRATE SHALL BE PROVIDED UNLESS THE CATCH BASIN IS LOCATED IN A FLOW THROUGH GUTTER. IN A FLOW THROUGH GUTTER A ONE DIRECTIONAL FLOW GRATE SHALL BE PROVIDED.

CASTINGS: THE DESIGN SHALL BE ESSENTIALLY THE SAME AND EQUALLY AS STRONG AS THOSE SHOWN.

THE FOLLOWING TEXT SHALL BE CAST INTO THE TOP OF THE CURB CASTING:

"DUMP NO WASTE" AND "DRAIN TO WATERWAY"

TEXT SHALL BE PRINTED IN BOLD, CAPITAL LETTERS WITH A MINIMUM HEIGHT OF 3/16". "WATERWAY" MAY BE SUBSTITUTED WITH "STREAM", "RIVER", "LAKE", ETC. ACTUAL PLACEMENT AND LOGO MAY VARY PER MANUFACTURER.

BEARING AREAS: THE FRAME AND GRATE SHALL BE SO FITTED AND FINISHED AS TO PROVIDE A FIRM AND EVEN SEAT. NO PROJECTIONS SHALL EXIST ON BEARING AREAS OF EITHER CASTING AND THE GRATE SHALL SEAT IN ITS FRAME WITHOUT ROUGHING.

WALLS: WHEN USED IN PLACE OF CONCRETE, BRICK SIDE WALLS SHALL BE 8" NOMINAL THICKNESS.


PREFAB WALLS SHALL HAVE A MINIMUM THICKNESS OF 8" AND REINFORCING SHALL BE SUFFICIENT TO PERMIT SHIPMENT AND PLACEMENT WITHOUT DAMAGE.

OPENINGS: PIPE OPENINGS SHALL BE THE O.D. OF THE PIPE BEING INSTALLED PLUS 1" WHEN FABRICATED OR FIELD CUT. FILL ANY Voids PER CMS 601.

DEPTH: STRUCTURE SHALL BE CONSTRUCTED SO THAT THE MINIMUM DEPTH FROM T/C TO TOP OF CONDUIT IS FOUR FEET (4').

DOVELS: FOUR 1"X1" DOVELS ARE REQUIRED FOR CONCRETE GUTTER BLOCKOUT.

REFER TO CMS 451.08 B AND 705.13 FOR DOVEL SPECIFICATIONS.

BLOCKOUTS: BLOCKOUTS SHALL BE PAVED WITH CLASS C CONCRETE IN CURB AND GUTTER AND PAID FOR AS A PART OF THE CURB AND GUTTER WITH NO DISSONANCE IN CURB AND GUTTER QUANTITIES BECAUSE OF THE CASTINGS.

STEPS: STEPS SHALL BE PROVIDED WHERE THE DEPTH EXCEEDS 6" AND SHALL MEET THE REQUIREMENTS OF ITEM 604 OF THE DOOT CONSTRUCTION AND MATERIAL SPECIFICATIONS.

PAYMENT: ALL MATERIALS AND LABOR, INCLUDING EXCAVATION AND BACKFILLING, SHALL BE PAID FOR UNDER ITEM 604 TYPE A-3 CATCH BASIN.
1. Type 1 signs are to be used when at least one approach to the intersection has a speed limit of 35 MPH or greater and at least 1 intersecting road has 4 or more lanes of travel.

2. Type 2 signs are to be used when at least one approach to the intersection has a speed limit of 35 MPH or greater and the intersecting roads have 2-3 lanes of travel.

3. Type 3 signs are to be used when all approaches of traffic to the intersection have a speed limit less than 35 MPH and all roads have less than 4 lanes of travel.

4. Horizontal spacing between objects may vary depending on the required width of the sign, but should not be less than 1-inch.

5. All text kerning should remain as close to 100% as possible, but may be reduced to a minimum of 60% of original text kerning.

6. All units of measure are in inches unless otherwise noted.

7. When a sign requires two rows of text, both text objects should be "left aligned" relative to each other.

8. When a sign requires two rows of text, the next object with the greatest length is to be positioned so that there is equal distance on either side of the text object.

9. Use type B reflective sheeting complying with DOT CMS 770.15 for white portions of face on signs. Use green or flat complying with DOT CMS 770.23 for green portions of face on signs.

10. Reference the Lucas County Engineer's standard construction drawings for sign blank detail.
FONTs:

ROAD NAME: 6" TYPE C
ROAD EXTENSION: 6" TYPE C

NOTES

1. Advanced road name signs are to be installed with advanced lane control signs at a location consistent with the Ohio Manual of Uniform Traffic Control Devices.
2. Sign width shall match the width of the advanced lane control sign it is to be installed above. This may require reducing object spacing or text kerning.
3. The road extension abbreviation should be included on the sign, but may be excluded when space is restricted by the sign width and inclusion of the road extension abbreviation would require a reduction in font size.
4. All road extension abbreviations shall be consistent with the Ohio Manual of Uniform Traffic Control Devices.
5. Horizontal spacing between objects may vary depending on the required width of the sign, but should not be less than 1/8 inch.
6. All text kerning should remain as close to 100% as possible, but may be reduced to a minimum of 50% of original text kerning.
7. All units of measure are in inches, unless otherwise noted.
8. When a sign requires two rows of text, both text objects should be “left aligned” relative to each other.
9. The text object is to be positioned so that there is an equal distance (X) on either side of the text object.
10. When a sign requires two rows of text, the text object with the greater length is to be positioned so that there is equal distance on either side of the text object.
11. Use Type C reflective sheathing complying with COOT OMS 730.19 for white portions of face on signs. Use green co-polymer film complying with COOT OMS 730.23 for green portions of face on signs.
12. Reference the Lucas County Engineer’s Standard Construction Drawings for sign blank detail.

COLORS:

LEGEND — WHITE
BACKGROUND — GREEN
BORDER — WHITE
NOTES

1. FOR EACH DETAIL SHOWN, ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

2. ALL BOLT HOLES SHALL BE 3/8" IN DIAMETER, AND MAY BE DRILLED OR PUNCHED TO FINISHED SIZE.

3. DIMENSIONS BETWEEN BOLT HOLES SHALL BE TO TOLERANCE OF +/- 1/32".

4. ALL RADIUS CORNERS ARE 1.5".

5. ALL ALUMINUM SHEETS AND PLATES SHALL BE IN ACCORDANCE WITH 2005 OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS (1/1/05)

7.50.11 ALUMINUM SHEET AND PLATE.
FURNISH SHEETS FOR EXTRUDED PANELS ACCORDING TO ASTM B 209 (B 209M), 3003-H118, OR 5052-H32. FURNISH SHEETS FOR FLAT SHEET AND OVERLAY SIGNS, ACCORDING TO ASTM B 209 (B 209M), 3004-H16, 5052-H32, OR 6061-T6. FURNISH PLATES FOR SIGN SUPPORT STRUCTURES ACCORDING TO ASTM B 209 (B 209M), 6061-T6.
TYPICAL SQUARE POST ANCHOR BASE INSTALLATION

**DETAIL "A"**
- POST
- GROUND LINE
- ANCHOR
- SEE DETAIL "A"
- SEE DETAIL "B"
- 2"
- 4" MIN
- 8" MAX
- 48" DEPTH
- 5/16" STEEL HEX NUT
- LOCK WASHER
- WASHER
- 5/16" CORNER BOLT
- STEEL DRIVE RIVET 3/8" DIAMETER X 1/4" GRIP RANGE WITH STEEL PIN
- 3/8" I.D. X 1-1/4" O.D. PLASTIC WASHER
- TOP CAP
- SQUARE POST SIGN ATTACHMENT DETAIL

**POST TYPE S**

<table>
<thead>
<tr>
<th>POST NO.</th>
<th>TYPE</th>
<th>POST DIMENSIONS (IN)</th>
<th>ANCHOR DIMENSIONS (IN)</th>
<th>NUMBER OF POSTS PERMITTED IN SEVEN FOOT PATH IN EXPOSED LOCATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>S</td>
<td>1.750 1.750 0.083</td>
<td>2.000 2.000 0.105</td>
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<tr>
<td>3</td>
<td>S</td>
<td>2.000 2.000 0.083</td>
<td>2.250 2.250 0.105</td>
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<tr>
<td>4</td>
<td>S</td>
<td>2.500 2.500 0.105</td>
<td>3.000 3.000 0.188</td>
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</tr>
</tbody>
</table>

**NOTES:**
1. USE OF ANCHOR BASE IS REQUIRED IN LIEU OF SINGLE POST INSTALLATION.
2. ANCHOR SQUARE POST MAY HAVE DIE-CUT KNOCKOUTS OR OPEN HOLES.
3. SQUARE POST ABOVE GROUND LEVEL SHALL BE KNOCKOUT TYPE.
4. ITEMS PROVIDED SHALL COMPLY WITH ODOT CONSTRUCTION AND MATERIALS SPECIFICATIONS 630.
NOTES:

1. CONDUIT SIZE, NUMBER AND ORIENTATION SHALL BE PROVIDED IN THE FOUNDATION AS SHOWN ON THE PLAN.

2. AN ADDITIONAL 3" P.V.C. CONDUIT (SCHEDULE 40) SHALL BE PROVIDED IN EACH COMBINATION POLE FOUNDATION FOR LOCATING IF POWER TO THE LUMINARIES IS NOT TO BE PROVIDED AS PART OF THIS PROJECT, THIS CONDUIT SHALL BE CAPPED AT BOTH ENDS.

3. MODIFICATION TO THE FOUNDATION WILL BE REQUIRED WHEN SITE WITH LOAD BEARING CAPACITY OF LESS THAN 3000 P.S.F. IS ENCOUNTERED. MODIFICATION TO THE FOUNDATION IS SUBJECT TO THE APPROVAL OF THE ENGINEER.

4. FOUNDATION SHALL BE CAST-IN-PLACE WITH CLASS "C" CONCRETE. THE FOUNDATION SQUARE DRAIN COWL SHALL BE FORGED TO 6" BELOW GROUND LINE AND BE BUILT AS AN INTERNAL PART OF FOUNDATION.

5. ALL ANCHOR BOLTS SHALL BE PROVIDED WITH STANDARD GALVANIZED STEEL HEX NUTS, LEVELING NUTS, PLAIN AND LOCKNUTS. ANCHOR BOLTS SHALL BE SECURED DURING THE PLACEMENT OF CONCRETE TO ENSURE ACCURATE PLUMBING AND LEVEL PRODUCTION 3/8".

6. WHEN THE FOUNDATION IS PLACED ADJACENT TO A PAVED SURFACE, 1/2" PRE-FORMED EXPANSION JOINT MATERIAL SHALL BE PLACED BETWEEN THE FOUNDATION AND THE ADJACENT PAVED SURFACE. IN ADDITION, FOR POLES THE TOP OF THE FOUNDATION SHALL BE PLUMB WITH THE ADJACENT SURFACE AND SLOped TO DRAIN.

FOR PEDESTAL, THE AREA OF CONTACT WITH THE PEDESTAL BASE SHALL BE LEVEL. IF ADJACENT PAVED SURFACE, THE REMAINDER OF THE FOUNDATION TOP SHALL BE SMOOTHD TO MEET THE ADJACENT SURFACE.
CABINET FOUNDATION DETAIL

12" CABINET RISER

ELEVATION SIDE VIEW

TOP OF CONCRETE

GROUND LINE

CABINET FOUNDATION

NOTES:

1. THE SIZE OF THE UPS FOUNDATION MAY VARY BASED ON THE CABINET SIZE PROVIDED.

2. UPS FOUNDATION ELEVATION SHOULD MATCH CABINET FOUNDATION ELEVATION.

3. THE DIMENSIONS SHOWN REPLACES THAT IN ODGT SCD TC-83.20. ALL OTHER REQUIREMENTS OF SCD TC-83.20 APPLY.

<table>
<thead>
<tr>
<th>FOUNDATION CONCRETE</th>
<th>WORK PAD</th>
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<tbody>
<tr>
<td>2.13 C.Y.</td>
<td>3.92 S.Y.</td>
</tr>
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</table>

CABINET & WORK PAD DETAIL

PLAN VIEW

SEPARATE BID ITEMS:

633 EA CABINET RISER
633 EA CONTROLLER WORK PAD
633 EA CABINET FOUNDATION
633 EA CONTROLLER MISC.: UNINTERRUPTABLE POWER SUPPLY, (UPS), 1000 WATT
633 EA CONTROLLER UNIT, TYPE TS2/A1, WITH CABINET, TYPE TS2, AS PER PLAN
NOTES:

1. **Pullbox Frame and Lid** shall be Neenah or Approved Equal.
   - **Type A** Pullbox: R-1782-PL, Solid Lid
   - **Type B** Pullbox: R-1782-5L, Solid Lid
   - **Type C** Pullbox: R-1788-3L, Solid Lid

2. **Pullbox frame** shall be set in a bed of mortar atop pullbox.

3. Forms shall be tubular with 3/8 inch wall thickness, spirally wound, laminated fiber and concentrically placed. Dimensions shown are i.d. forms will remain in place upon completion of construction.

4. Concrete shall be Class C meeting State of Ohio, Department of Transportation, Construction and Material Specifications, Item 456. Concrete for pullboxes shall be poured in place.

5. Pervious Basket shall be No. 4 coarse aggregate meeting State of Ohio, Department of Transportation, Construction and Material Specifications, Item 703.

6. When pullbox is installed in paved areas, an adequate area shall be removed by saw cutting or by removal back to an expansion joint. Paving matching the surrounding area shall be placed from the pullbox rim down to the bottom of existing pavement.
MATERIAL SPECIFICATIONS FOR GENERATOR / INVERTER POWER PANEL EQUIPMENT


HEAVY DUTY POWER RELAY - SHALL BE 30 AMP, 120 VAC, OPERATING, AN AMMONIUM, MODEL (M92-24-M), WITH A SERIES BY-STAND COVER IS REQUIRED. TO ORDER, CALL 1-800-555-6766.

LINE VOLTAGE INDICATOR LIGHT - THE INDICATOR LIGHT SHALL BE A 120 V AC LIGHT EMITTING DIODE WITH A RED LENS.


GENERATOR POWER PANEL ENCLOSURE

NOTES:
1. THE ENCLOSURE SHALL BE CONSTRUCTED OF 1/8" THICK ALUMINUM.
2. THE LOCK SHALL BE THE STANDARD POLICE DOOR TYPE, KEYED WITH THE STANDARD FLASHER DOOR SKELETON KEY.
3. THE DOOR SHALL BE SEALED WITH A FOAM RUBBER GASKET TO PREVENT MOISTURE FROM ENTERING THE ENCLOSURE.
4. THE ENCLOSURE SHALL BE MOUNTED ONTO THE OUTSIDE OF THE CONTROLLER CABLE WITH NON-ACCESSIBLE BOLTS AND SEALED WITH A HIGH QUALITY SILICON CAULK AT ALL SURFACES TOUCHING THE CABINET.
5. THE HINGE SHALL BE OF STAINLESS STEEL OR EQUIVALENT CORROSIVE-RESISTANT MATERIAL.

ELECTRICAL HOOKUP DETAIL FOR THE GENERATOR POWER PANEL