GENERAL NOTES:
- MOST STANDARD PLANS R-28-1, R-29-1, R-30-1, AND R-40-1 SHALL BE FOLLOWED IN CONJUNCTION WITH THESE STANDARD PLANS.
- ALL SAW CUTTING SHALL BE DONE PERPENDICULAR AND PARALLEL TO THE DIRECTION OF TRAVEL.
- SAW CUTTING SHALL PROVIDE A STRAIGHT, CLEAN EDGE TO ENHANCE BONDING.
- ALL CUTS SHALL BE RECTANGULAR AND NEATLY CUT TO AVOID SPALLING OF PAVEMENT.
- ALL ROAD/UTILITY CUTS OF AN AREA GREATER THAN 12" x 12" SHALL EXTEND THE FULL WIDTH OF THE TRAVEL LANE.
- FOR PAVEMENT WITH LOAD TRANSFER DOWELS OR REINFORCEMENT, NEW LOAD TRANSFER DOWELS/REINFORCEMENT SHALL BE PLACED TO MAINTAIN BEARING CAPACITY OF ROADWAY.
- CUTS LESS THAN 12" SHALL BE PATCHED WITH PCC IF GREATER THAN 12", ENSURE CUT IS IN ACCORDANCE WITH STANDARD DETAILS AND MATCHING EXISTING ROADWAY.
- BUMPS/CUTS/VALLED AREAS WITH EDGE GREATER THAN 2" DEEP/NARROW MUST BE MOLDED WITH HWA BEFORE OPEN TO TRAFFIC SEE STANDARD DETAIL.
- MEandering SIDEWALKS SHALL ONLY BE PLACED IN THE CITY'S ROW OR WHERE AN EASEMENT IS ESTABLISHED.
- NEW SIDEWALKS CONSTRUCTION SHALL MEET OR EXCEED CURRENT ADA AND ACCESSIBILITY STANDARDS.
- REPLACED SIDEWALKS SHALL BE THE EXTENT PRACTICABLE, MEET OR EXCEED ADA AND ACCESSIBILITY STANDARDS.
- SIDEWALK, DRIVEWAY OPENINGS & APPROACHES SHALL CONFORM TO MOST STANDARD PLAN DETAILS R-26-1 AND R-29-1.
- MARSHALL MIXES 13a (LEVELING) & 36a (TOP) MAY BE SUBSTITUTED FOR OCEME HMA MIX DESIGNS AS DEEMED APPROPRIATE BY THE ENGINEER.
- ASPHALT Binder SHALL BE INCLUDED IN THE PAY ITEM FOR HWA.
- MOST PCC PL MIX DESIGN SHALL BE USED FOR ALL CONCRETE UNLESS OTHERWISE STATED OR DIRECTED BY THE ENGINEER.
- OPENING TO TRAFFIC SPACING (2012 STANDARD SPECIFICATIONS FOR CONSTRUCTION, TABLE 603-1):
  - <72 HOURS, GRADE P-NC, 3500 psi
  - 72 HOURS PLUS, GRADE P-1, PIM, 550 psi
GENERAL NOTES:
- MOST STANDARD PLANS R-28-4, R-29-4, R-30-4, AND R-31-4 SHALL BE FOLLOWED IN CONJUNCTION WITH THESE STANDARD PLANS.
- ALL CUTS SHALL BE BORNE PARALLEL AND PARALLEL TO THE DIRECTION OF TRAVEL.
- ALL CUTS SHALL BE CLEAN, RAW EDGE TO EDGE, AND ENSURE CUTS ARE MATCHING EXISTING ROADWAY.
- BUMPS/CUTS/VILLED AREAS WITH EDGE GREATER THAN 2" DEEP/MILD MUST BE REFINISHED OR MILL MILD BEFORE OPEN TO TRAFFIC. SEE STANDARD DETAIL.
- VEHICING SIDEWALK SHALL ONLY BE PLACED IN THE CITY'S ROW OR WHERE AN EASEMENT IS ESTABLISHED.
- NEW SIDEWALK CONSTRUCTION SHALL MEET OR EXCEED CURRENT ADA AND ACCESSIBILITY STANDARDS.
- REPLACED SIDEWALK SHALL, TO THE EXTENT PRACTICABLE, MEET OR EXCEED ADA AND ACCESSIBILITY STANDARDS.
- SIDEWALK/DRIVEWAY OPENINGS & APPROACHES SHALL CONFORM TO MOST-ENGINEERING PLAN DETAILS R-28-4 AND R-29-4.
- MARSHALL MIXES 16A (LEVELING) & 36A (TOP) MAY BE SUBSTITUTED FOR SILVERADO HMA MIX DESIGNS AS DEEMED APPROPRIATE BY THE ENGINEER.
- ASPHALT SPRAY SHALL BE SUBMITTED IN THE PAY ITEM FOR HMA.
- MOST PCC MIX DESIGN SHALL BE USED FOR ALL CONCRETE UNTIL OTHERWISE STATED OR DIRECTED BY THE ENGINEER.
- OPENING TO TRAFFIC SPECIFICATIONS (2012 STANDARD SPECIFICATIONS FOR CONSTRUCTION, TABLE 603-1):
  - 0-48 HOURS, GRADE F-NC, 500 psi
  - 48-72 HOURS, GRADE F-70, 500 psi
  - 72 HOURS, GRADE F-100, 500 psi
GENERAL NOTES:
- Most standard plans R-28-I, R-29-I, R-30-I, and R-30-I shall be followed in conjunction with these standard plans.
- All saw cuts shall be done perpendicular and parallel to the direction of travel.
- Saw cutting shall provide a straight, clean edge to enhance bonding.
- All cuts shall be rectangular and neatly cut to avoid spalling of pavement.
- All road/utility cuts of an area greater than 12" x 12" shall extend full width of the travel lane.
- For pavement with load transfer dowels/ribs, reinforcement, new load transfer dowels/ribs shall be placed to maintain bearing capacity of roadway.
- Cuts less than 12" shall be patched with PCC if greater than 12", ensure cut is in accordance with standard details, and matching existing roadway.
- Bumps/cuts/milled areas with edge greater than 2" deep/high must be mended with HMA before open to traffic. See standard detail.
- Median striping sidewalks shall only be placed in the city's ROW or where an easement is established.
- New sidewalk construction shall meet or exceed current ADA and accessibility standards.
- Replaced sidewalk shall be to the extent practicable, meet or exceed ADA and accessibility standards.
- Sidewalk, driveway openings & approaches shall conform to most standard plan details R-29-I and R-30-I.
- Marshall mixes 13a (leveling) & 36a (top) may be substituted for subgrade HMA mix designs as deemed appropriate by the engineer.
- Asphalt binder shall be included in the pay item for HMA.
- Most PCCP mix design shall be used for all concrete unless otherwise stated or directed by the engineer.
- Opening to traffic speeds (2012 standard specifications for construction, Table 603-1):
  - <72 hours, grade P-NC, 550 psi
  - 72 hours & 4, grade P1, P1M, 550 psi

NOTES:
1. All surface shall be parallel to edge of roadway/gutter
2. G5-1H @ 0.10/gal/sqy between lifts
3. Performance grade binder to be used: PG 64-28

RESIDENTIAL / LOW TRAFFIC VOLUME ROAD ASPHALT UTILITY TRENCH DETAIL

APPLIES TO:
** RESIDENTIAL ROADS
** CITY LOCAL ROADS
** LOW-VOLUME ROADS
**STANDARD DETAILS**

**LOCAL/RESIDENTIAL ROADS**

**CITY OF KALAMAZOO**

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**RESIDENTIAL / LOW TRAFFIC VOLUME ROAD ASPHALT PAVEMENT DETAIL**

1. CUT SHALL BE PARALLEL TO EDGE OF ROADWAY/CUTTER
2. **SG-1H @ 0.10/GAL/SYD** BETWEEN LIFTS
3. PERFORMANCE GRADE BINDER TO BE USED: PG 64-28

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**APPLICATIONS TO:**

**• RESIDENTIAL ROADS**
**• CITY LOCAL ROADS**
**• LOW-VOLUME ROADS**
COMMERCIAL ROAD
ASPHALT PAVEMENT DETAIL

NOTE:
1. CUT SHALL BE PARALLEL TO EDGE OF ROADWAY/GUTTER
2. 20-30 @ 0.10/24/48/72 BETWEEN LIFTS
3. PERFORMANCE GRADE BINDER TO BE USED, PG 64-28
4. HEAVY COMMERCIAL AGT COULD WARRANT CHANGE TO DESIGN.

APPLIES TO:
** CITY MAJOR ROADS
** COMMERCIAL ROADS
** HIGH VOLUME ROADS

GENERAL NOTES:
- MOST STANDARD PLANS R-28-1, R-29-1, R-30-1, AND
  R-30-2 SHALL BE FOLLOWED IN CONJUNCTION WITH THESE
  STANDARD PLANS.
- ALL SAW CUTTING SHALL BE DONE PERPENDICULAR AND
  PARALLEL TO THE DIRECTION OF TRAVEL.
- SAW CUTTING SHALL PROVIDE A STRAIGHT, CLEAN, EDGE TO
  ENHANCE BONDING.
- ALL CUTS SHALL BE RECTANGULAR AND HEAVILY CUT TO AVOID
  SPALLING OF PAVERMENT.
- ALL ROAD/UTILITY CUTS OF AN AREA GREATER THAN 12"X12"
  SHALL EXTEND THE FULL WIDTH OF THE TRAVEL LANE.
- FOR PAVEMENT WITH LOAD TRANSFER DOWEL OR
  REINFORCEMENT, NEW LOAD TRANSFER DOWEL/REINFORCEMENT
  SHALL BE PLACED TO MAINTAIN BEARING CAPACITY OF
  ROADWAY.
- CUTS LESS THAN 12" SHALL BE PATCHED WITH PCC, IF
  GREATER THAN 12", ENSURE CUT IS IN ACCORDANCE WITH
  STANDARD DETAILS AND MATCHING EXISTING ROADWAY.
- BUMPS/CUTS/VALED AREAS WITH EDGE GREATER THAN 2"
  DEEP/MILD MUST BE MOLDED WITH HMA BEFORE OPEN TO
  TRAFFIC SEE STANDARD DETAIL.
- VEERING RIDGE SIDEWALK SHALL ONLY BE PLACED IN THE CITY'S
  ROW OR WHERE AN ENTRANCE IS ESTABLISHED.
- NEW SIDEWALK CONSTRUCTION SHALL MEET OR EXCEED CURRENT
  ADA AND ACCESSIBILITY STANDARDS.
- REPLACED SIDEWALK SHALL, TO THE EXTENT PRACTICABLE, MEET
  OR EXCEED ADA AND ACCESSIBILITY STANDARDS.
- SIDEWALK, DRIVeway OPENINGS & APPLIANCES SHALL CONFORM
  TO MOST STANDARD PLAN DETAILS R-28-1 AND R-29-1.
- MARSHALL MIXES 13A (LEVELING) & 26A (TOP) MAY BE
  SUBSTITUTED FOR SUPERPAVE HMA MIX DESIGNS AS DEEMED
  APPROPRIATE BY THE ENGINEER.
- ASPHALT BINDER SHALL BE INCLUDED IN THE PAY ITEM FOR
  HMA.
- MOST PPC PI MIX DESIGN SHALL BE USED FOR ALL CONCRETE
  UNLESS OTHERWISE STATED OR DIRECTED BY THE ENGINEER.
- OPENING TO TRAFFIC SPEERINGS (2012 STANDARD
  SPECIFICATIONS FOR CONSTRUCTION, TABLE 603-1):
- 72 HOURS, GRADE P-NC, 550 psi
- 72 HOURS, GRADE P-1, PIM, 550 psi
GENERAL NOTES:
- MOST STANDARD PLANS R-26-1, R-29-1, R-30-1, AND R-33-1 MAY BE FOLLOWED IN CONJUNCTION WITH THESE STANDARD PLANS.
- ALL CUTS WILL BE DONE PERPENDICULAR AND PARALLEL TO THE DIRECTION OF TRAFFIC.
- CUTS SHALL PROVIDE A STRAIGHT, CLEAN EDGE TO ENHANCE DRAINAGE.
- ALL CUTS WILL BE RECTANGULAR AND NEATLY CUT TO AVOID SPALLING OF MASONRY.
- ALL ROAD/UTILITY CUTS OF AN AREA GREATER THAN 12" X 12" SHALL EXTEND THE FULL WIDTH OF THE TRAFFIC LANE.
- FOR PAVEMENT WITH LOAD TRANSFER DOWELS OR REINFORCEMENT, THE LOAD TRANSFER DOWELS/REINFORCEMENT SHALL BE PLACED TO MAINTAIN BEARING CAPACITY OF ROADWAY.
- CUTS LESS THAN 12" WILL BE PATCHED WITH PCC IF GREATER THAN 12", ENSURE CUT IS IN ACCORDANCE WITH STANDARD DETAILS AND MATCHING EXISTING ROADWAY.
- BUMPS/OUTLINES AREAS WITH EDGE GREATER THAN 2" DEEP/HIGH MUST BE MATED WITH HMA BEFORE OPEN TO TRAFFIC, SEE STANDARD DETAIL.
- VARYING SIDEWALK SHALL ONLY BE PLACED IN THE CITY'S ROW OR WHERE AN EASEMENT IS ESTABLISHED.
- NEW SIDEWALK CONSTRUCTION SHALL MEET OR EXCEED CURRENT ADA AND ACCESSIBILITY STANDARDS.
- REPAIRED SIDEWALK SHALL, TO THE EXTENT PRACICABLE, MEET OR EXCEED ADA AND ACCESSIBILITY STANDARDS.
- SIDEWALK, DRIVEWAY OPENINGS & APPROACHES SHALL CONFORM TO MOST STANDARD PLANS DETAILS R-26-1 AND R-29-1.
- MARSHALL MIXES 13% (LEVELING) & 26A (TOP) MAY BE SUBSTITUTED FOR ABOVE HMA MIX DESIGNS AS DEEMED APPROPRIATE BY THE ENGINEER.
- ASPHALT BINDER SHALL BE INCLUDED IN THE PAY ITEM FOR HMA.
- MOST PCC PL MIX DESIGN SHALL BE USED FOR ALL CONCRETE UNLESS OTHERWISE STATED OR DIRECTED BY THE ENGINEER.
- OPENING TO TRAFFIC SPREADINGS (2012 STANDARD SPECIFICATIONS FOR CONSTRUCTION, TABLE 603-1):
  - 60-HOURS, GRADE P-NC. 550 psi
  - 72-HOURS, GRADE P-1, PIM. 550 psi

APPLIES TO:
• CITY MAJOR ROADS
• COMMERCIAL ROADS
• HIGH VOLUME ROADS
GENERAL NOTES:
- MOST STANDARD PLANS R-28-I, R-29-I, R-30-I, AND R-44-I-F SHALL BE FOLLOWED IN CONJUNCTION WITH THESE STANDARD PLANS.
- ALL SAW CUTS SHALL BE DONE PERPENDICULAR AND PARALLEL TO THE DIRECTION OF TRAVEL.
- SAW CUTS SHALL PROVIDE A STRAIGHT, CLEAN EDGE TO ENHANCE DRIVING.
- ALL CUTS SHALL BE RECTANGULAR AND NEATLY CUT TO AVOID SPALLING OF PAVEMENT.
- ALL ROAD/UTILITY CUTS OF AN AREA GREATER THAN 12"X12" SHALL EXTEND THE FULL WIDTH OF THE TRAVEL LANE.
- FOR PAVEMENT WITH LOAD TRANSFER, SOLDERING OR REINFORCEMENT, NEW LOAD TRANSFER SOLDERING OR REINFORCEMENT SHALL BE PLACED TO MAINTAIN BEARING CAPACITY OF PAVEMENT.
- CLEANS LESS THAN 12" SHALL BE PATCHED WITH PCF, IF GREATER THAN 12", ENSURE CUT IS IN ACCORDANCE WITH STANDARD DETAILS AND MATCHING EXISTING ROADWAY.
- BUMPS/CUTS/MILLED AREAS WITH EDGE GREATER THAN 2" DEEP MUST BE WELDED WITH HMA BEFORE OPEN TO TRAFFIC. SEE STANDARD DETAIL.
- MEDIANING SIDEWALK ONLY IF PLACED IN THE CITY'S ROW OR WHERE AN EASEMENT IS ESTABLISHED.
- NEW SIDEWALK CONSTRUCTION SHALL BE MEET OR EXCEED CURRENT ADA AND ACCESSIBILITY STANDARDS.
- REPLACED SIDEWALK SHALL BE TO THE EXISTING PROPORTION, ELEVATION OR EXCEED ADA AND ACCESSIBILITY STANDARDS.
- SIDEWALK/DRIVEWAY OPENINGS & APPROACHES SHALL CONFORM TO MOST STANDARD PLAN DETAILS R-28-I AND R-30-I.
- MARSHALL MIXES 13A (LEVELING) & 36A (TOP) MAY BE SUBSTITUTED FOR SCAFFOLD HMA MIX DESIGNS AS DEEMED APPROPRIATE BY THE ENGINEER.
- ASPHALT ENRGER SHALL BE INCLUDED IN THE PAY ITEM FOR HMA.
- MOST PCP MIX DESIGN SHALL BE USED FOR ALL CONCRETE UNLESS OTHERWISE SPECIFIED OR DIRECTED BY THE ENGINEER.
- OPENING TO TRAFFIC SPEEINGS (2012 STANDARD SPECIFICATIONS FOR CONSTRUCTION, TABLE 603-1):
  - 47 HOURS, GRADE 2-NC, 500 psi
  - 72 HOURS 4, GRADE 2C, PIM, 550 psi

NOTE:
1. CUT SHALL BE PARALLEL TO EDGE OF ROADWAY/CUTTER.
2. FOR POINCOLES 12" DIAMETER AND SMALLER - ALL CONCRETE.
3. FOR 1" X 1" AND LARGER HAND COMPACT LAYERS AS SHOWN AND FINISH WITH CONCRETE.

APPLIES TO:
- CITY MAJOR ROADS
- COMMERCIAL ROADS
- HIGH VOLUME ROADS
GENERAL NOTES:
- MOST STANDARD PLANS R-26-1, R-29-1, R-30-1, AND R-31-1 SHALL BE FOLLOWED IN CONJUNCTION WITH THESE STANDARD PLANS.
- ALL SAW CUTTING SHALL BE DONE PERPENDICULAR AND PARALLEL TO THE DIRECTION OF TRAVEL.
- SAW CUTTING SHALL PROVIDE A STRAIGHT, CLEAN, EDGE TO ENHANCE BONDING.
- ALL CUTS SHALL BE RECTANGULAR AND NEATLY CUT TO AVOID SPALLING OF PAVEMENT.
- ALL ROAD/UTILITY CUTS OF AN AREA GREATER THAN 12"X12" SHALL EXTEND THE FULL WIDTH OF THE TRAVEL LANE.
- FOR PAVEMENT WITH LOAD TRANSFER BOLTS OR REINFORCEMENT, NEW LOAD TRANSFER BOLTS/REINFORCEMENT SHALL BE PLACED TO MAINTAIN BEARING CAPACITY OF ROADWAY.
- CUTS LESS THAN 12" SHALL BE PATCHED WITH PCC IF GREATER THAN 12", ENSURE CUT IS IN ACCORDANCE WITH STANDARD DETAILS AND MATCHING EXISTING ROADWAY.
- BUMPS/CUTS/MILLED AREAS WITH EDGE GREATER THAN 2" DEEP/HIGH MUST BE MENDED WITH HMA BEFORE OPEN TO TRAFFIC SEE STANDARD DETAIL.
- MEandering SIDEWALKS SHALL ONLY BE PLACED IN THE CITY'S ROW OR WHERE AN EXISTING IS ESTABLISHED.
- NEW SIDEWALK CONSTRUCTION SHALL MEET OR EXCEED CURRENT ADA AND ACCESSIBILITY STANDARDS.
- REPLACED SIDEWALK SHALL BE TO THE EXTENT PRACTICAL, MEET OR EXCEED ADA AND ACCESSIBILITY STANDARDS.
- SIDEWALK, DRIVEWAY OPENINGS & APPROACHES SHALL ConFORM TO MOST STANDARD PLAN DETAILS R-26-1 AND R-29-1.
- MARSHALL MIXES 13A (LEVELING) & 36A (TOP) MAY BE SUBSTITUTED FOR SUPERPAVE HMA MIX DESIGNS AS DEEMED APPROPRIATE BY THE ENGINEER.
- ASPHALT BINDER SHALL BE INCLUDED IN THE PAY ITEM FOR HMA.
- MOST PCC PL MIX DESIGN SHALL BE USED FOR ALL CONCRETE UNLESS OTHERWISE STATED OR DIRECTED BY THE ENGINEER.
- OPENING TO TRAFFIC SPREANS (2012 STANDARD SPECIFICATIONS FOR CONSTRUCTION, TABLE 603-1):
  - 472 HOURS, GRADE P-NC, 650 psi
  - 72 HOURS 4., GRADE PC, PIM, 550 psi

APPLIES TO:
- ** CITY MAJOR ROADS
- ** COMMERCIAL ROADS
- ** HIGH VOLUME ROADS
APPLICATIONS TO:

- City Major/Local Roads
- Commercial Roads
- High/Low Volume Roads
- Winter Road Cuts (Surface Temp is below 35°F) and/or no plant mixed HMA is available.