City of Union, Kentucky
LEGAL NOTICE

This is to notify that the City of Union, Kentucky is advertising for sealed public bids for their 2021 Street Repairs Program including the following: Phase A: Pavement Milling & Full Asphalt Resurfacing, Joint Sealing, HC Ramps, Base/Surface Repairs and Crack and Joint Sealing:
Phase B – Concrete Curb and Gutter & Sidewalk Replacements; and, Phase C – Edge/Side Drains System. The Bidding Documents include the following: Instructions to Bidders, Technical Specifications, General & Special Conditions & Restoration, Contractor Insurance Requirements, Phases Summary, Locations & Details, and Bidders Quantities Sheets for each Phase and Parts of the work. Bidding Documents can be printed from the city's website at http://www.cityofunionky.org. Separate copies (all pages) may be purchased at the city building for a non-refundable fee of $50. Each sealed bid shall be accompanied by either a cashier's check or satisfactory bid bond, in a sum, not less than five (5) percent of the aggregate amount of the bid, payable to the city of Union, Kentucky. The successful bidder is required to execute and provide a construction contract surety in an amount not less than 100% of the bid. Special attention should be given to the Contractor's Insurance Requirements. Sealed Bids and/or Any Proposal or Proposals in response to this solicitation will be due, opened and publicly read aloud on Tuesday, May 25th at 4:00 PM at the Warren S. Moore Union City Building, 1843 Mt. Zion Road, Union, Kentucky 41091. Following review of the bid tabs by the City Engineer with a recommendation, an award to the successful bidder or bidders is expected at the City Commission Meeting on Monday, June 7th, 2021, subject to a formal signed contract or contracts for a construction start on or after July 1st, 2021.

CITY OF UNION 2021 STREET REPAIRS PROGRAM

INSTRUCTIONS TO BIDDERS

1. GENERAL

   Bidders shall inform themselves of all conditions relating to the proposed work. Bids shall be submitted on a separate copy of the Proposal or Proposals, as supplied herein for that purpose. The Proposal contained in the Contract Documents is for the convenience of the bidders, not to be detached from the full set of documents or filled out or executed unless a duplicate Proposal form or forms are not furnished to the bidder.

   Note – It is the city's intent to award the entire scope of work (i.e., Phase A: Parts 1 through 10; Phase B Parts 1 & 2; and, Phase C: Parts 1, 2 and 3) to the lowest and best qualified bidding contractor or contractors. However, due to the diversity of the work by Phases, any qualified contractor can submit bids for all Phases including A, B and C or bid on any individual Phase for the scope of work. However, any Parts of any Phase including Phase A, B and/or C must be bid by the same contractor to qualify for an award. Further, the city has the right to accept, reject, modify any bid provided such changes are in the best interests of the city and contractor or contractors bidding on the Program, subject to the advice of the city's legal counsel.

   The Proposal or Proposals shall be enclosed in a sealed envelope and clearly labeled with the name of the project, name and address of the bidder, and the date and time of the opening, so as to guard against premature opening of any bid.

2. REJECTION OF PROPOSALS

   Proposals that contain any omission, condition or limitation or that show any other irregularity of any kind may be rejected as unacceptable.

3. DISCREPANCY (BID PRICE)

   In case of a discrepancy between the bid price in words and letters and the bid price in numbers in the Proposal, the bid price in words and letters shall control.

4. CONSENT OF SURETY

   When specifically required hereafter, Consent of Surety should be executed and accompany the Proposal.

5. BID GUARANTY

As set out in the Notice to Bidders, the bidder shall be required to furnish Bid Guaranty in the amount of not less than five percent (5%) of the bid.

6. EXTRA WORK

   Any departures from the original Contract will be made as provided in the General Conditions under "Extra Work".

7. SECOND HAND SALVAGED MATERIALS

   The use of second hand and/or salvaged materials will not be permitted unless specifically provided for in the specifications.

8. AWARD OF THE CONTRACT

   The Contract will be awarded to the lowest and best responsible bidder as soon as practicable after the opening of bids. However, in the selection of equipment or materials, a contract may be awarded to a responsible bidder other than the lowest in the interest of standardization or ultimate economy if the advantage of such standardization or ultimate economy is clearly evident.

9. EXECUTION OF THE CONTRACT

   At least three (3) duplicate copies of the Construction Contract and Performance Bond shall be executed within the time specified in the Proposal.

10. INTERPRETATION OF CONTRACT DOCUMENTS

    If any person contemplating the submission of a bid for the proposed contract is in doubt as to the true meaning of any part of the plans, specifications or other proposed contract documents, he or she should contact the City Engineer Barry J. Burke PE PLS. The person making the request will be identified for record. Any common information will be shared with the other contractors bidding on the same project. The Owner will not be responsible for other explanations or interpretations of the proposed documents except as issued in accordance herewith.

11. QUALIFICATIONS OF BIDDERS

    Contractors bidding on the work shall provide evidence of their experience within the class of work involved, including at least two (2) projects of comparable size and type performed by them as a general contractor.

    Proposals submitted by contractors who have not, in the opinion of the Engineer and/or Owner, have sufficient experience in the size and type of work involved, may not be considered.

12. ALTERNATES

None

13. MODIFICATION AND/OR WITHDRAWAL OF BIDS

"Telecommunication" modification of the bid is prohibited. Any bidder may withdraw his bid in person or by telecommunication or written request at any time prior to the scheduled time for closing the receipt of bids. Withdrawals after the scheduled time for closing the receipt of bids will not be permitted for a period of thirty (30) days.

14. DISQUALIFIED BIDDERS

Any bidder who has defaulted on any contract within the past three (3) years shall be considered as unqualified for any portion of the proposed work.

15. MATERIALS AND EQUIPMENT REQUIREMENTS IN THE PROPOSAL

It is the intent of these specifications to specify standard materials and equipment. When space is provided within the Proposal, the bidders shall specify the equipment and materials they propose to use on the project. The Owner may declare a bid irregularity wherein the equipment and materials are not specifically named by the bidder, where requested.

16. "OR APPROVAL EQUAL" CLAUSE

Whenever the words "or approved equal" appear in the specifications, these words shall be interpreted to mean an item of material or equipment that in the opinion of the Engineer is similar to that named, suited to the same use and capable of performing the same function as that named.

17. SPECIFIED BRANDS, MAKES OR MANUFACTURE

Wherever in the specifications a certain brand, make or manufacturer is specified, it is intended to denote the quality standard of the article desired, but unless otherwise noted does not restrict bidders to the specific brand, make or manufacturer. Thus, the intent is to set forth and convey to the prospective bidder the general style, type, character and quality of the article desired.

18. PAYMENT FOR MATERIALS STORED AT PROJECT SITE

Payment for materials or equipment stored at the site of the project may be allowed by the Owner to the extent of 90% of the cost of such materials or equipment upon specific recommendation of the Engineer. Materials or equipment eligible for an advance payment prior to being incorporated in the work or prior to installation include

cast/ductile iron pipe, valves, special cast/ductile iron fittings, structural steel, machinery, equipment or such other items as in the opinion of the Engineer qualifies as eligible.

19. CONTRACT SECURITY OR SURETY OR PERFORMANCE BOND

The Contractor shall be required to furnish a surety bond executed by a surety company duly authorized to do business within the state in which the work is to be performed in an amount at least equal to 100% of the contract bid price, as security for the faithful performance of the contract, and as security for the payment of all persons performing labor and furnishing materials in connection with the contract. This bond shall be executed in the form provided as a part of the contract documents.

20. EMPLOYMENT AND QUALIFICATIONS

No person under the age of sixteen (16) years, and no convict labor shall be employed to perform any work under this contract. No person whose age or physical condition is such as to make his employment dangerous to his health or safety or to the health and safety of others shall be employed to perform any work under this contract, provided that these qualifications shall not be in conflict with the employment of physically handicapped persons, otherwise employable, where such persons may be safely assigned to work which they can ably perform. There shall be no discrimination because of race, creed, color or political affiliations in the employment of persons for work under this contract.

21. EMPLOYMENT SERVICES AND LABOR PREFERENCES

With respect to all skilled, semi-skilled and unskilled workers employed to perform work on the project, preference in employment shall be given first to persons who reside in the city in which the work is to be performed and second to persons residing the county in which the work is to be performed.

22. PAYMENT TO EMPLOYEES

The Contractor and each of his sub-contractors shall pay each of his employees engaged in work on the project in full (less deductions made mandatory by law) in cash and not less often than once each week.

23. MATERIALS, CONVICT MADE

No materials manufactured or produced in a penal or correctional institution shall be incorporated in the project under this contract.

24. MATERIALS, DOMESTIC AND FOREIGN

Only such unmanufactured articles, materials and supplies as have been mined or produced within the United States of America, and only such manufactured articles,

materials and supplies as have been manufactured within the United States of America substantially all from articles, materials or supplies, mined, produced or manufactured as the case may be within the United States of America, shall be employed under this contract in the construction of the project.

25. WAGES AND HOURS

Wages and hours are covered within the Special Conditions of these Specifications.

26. CONSTRUCTION RECORDS AND REPORTS

When requested, the Contractor shall furnish to the Owner substantial proof that all payrolls for services rendered and invoices for materials supplied have been duly paid as herein required, and such other data as the Owner may require.

In connection with a lump sum contract, the Contractor shall furnish the Engineer a suitable detailed breakdown on which to base partial payment estimates.

When required, the Contractor shall furnish and keep current a suitable progress chart or schedule showing the estimated and actual progress of the work. The progress chart or schedule shall be subject to approval by the Engineer.

The Contractor shall furnish all necessary information for and assist in the preparation of and/or prepare the partial payment estimates on forms approved by the Engineer.

The Engineer or his authorized representative and/or other agents shall be permitted to inspect all payrolls, records of personnel, invoices of materials and other relevant data and records.

27. PARTIAL PAYMENT ESTIMATES

Not later than the 15th day of each calendar month, the Owner shall make partial payments to the Contractor on the basis of an estimate submitted by the Contractor and approved by the Engineer for the work performed during the preceding calendar month by the Contractor. The Owner shall retain not less than five percent (5%) of each such estimate until final completion and acceptance of all covered by the contract. Any partial payment request must be made at least 20 days prior to the 15th day of each calendar month.

CONTRACTOR ACCOUNTS

The Contractor shall make payments in accord with the following: (1) all transportation and utility services not later the 20th day of the calendar month following when such services are rendered; (2) all materials, tools and other expendable equipment to the extent of 90% of the cost thereof, not later than the 20th day of the calendar month

following when such materials, tools and equipment are delivered to the site of the project; and, the balance of the costs thereof not later than the 30th day following completion of that part of the work in or on which such materials, tools and equipment are incorporated or used; and, (3) to each of his sub-contractors, no later than the 5th day following each payment to the Contractor, the respective amounts allowed the Contractor on account for the work performed by his sub-contractors, to the extent of each such sub-contractor's interest therein.

28. FINAL PAYMENT

Final payment shall be made in accordance with the details as set forth under the General Conditions. Following a general observation of the work completed after an approximate time period of 30 days, the Owner shall move to finalize the contract and return the full balance of the retainage held back to the contractor. If certain items need further repairs, the Owner shall notify the Contractor and re-observe satisfactory completion of same prior to release of the Final Payment.

29. COMMENCEMENT AND COMPLETION OF WORK

The Contractor shall commence work on the project on the date to be specified in a written order from the Engineer and shall fully complete all work within the number of days set out in the Proposal and/or Contract, from and including said date.

CITY OF UNION 2021 STREET REPAIRS PROGRAM

TECHNICAL SPECIFICATIONS
CONCRETE STREETS, CURBS AND SIDEWALKS

The cement concrete pavement work shall consist of a single course of cement concrete, including reinforcement and joints such as, expansion, longitudinal, construction, contraction joints on a prepared sub grade or insulation course in conformity with the lines, grades and cross sections shown on the improvement drawings.

ITEM 1
GRADING

This term shall consist of all earth work above and below sub grade elevations including necessary excavations and or filling for streets, curb and gutter, catch basins, sidewalks, cut slopes, construction of embankments, and all other work incidental thereto.

1.1 EXCAVATION

All cut and fill slopes shall be constructed no steeper than 2.5 horizontal to 1 vertical unless stated otherwise All excavations shall be made to approximate sub grade elevation. The exposed sub grade shall be proof rolled with a heavy piece of on-site equipment.

1.2 EXCAVATION BELOW SUBGRADE

Whenever an excavation below the sub grade elevation to remove soft or yielding soils is required, the excavation can be backfilled with soils that were removed provided they are clean clayey soils free of organic matter and other deleterious materials, aerated and dried to near optimum moisture content. These soils shall be placed in shallow level layers, 6 to 8 inches, near optimum moisture content or with 3 percent of optimum moisture content on the wet side of the curve and compacted with a kneading type of compaction equipment such as a sheepsfoot roller, to a density not less than 95 percent of maximum density as determined by the standard Proctor moisture-density test (ASTM D698-78 or AASHTO-99) or 90 percent of maximum density as determined by the modified Proctor moisture-density test (ASTM D1557-78).

1.3 EMBANKMENT

The City Engineer shall be notified before starting the grading. All topsoil shall be removed to a depth of at least four (4) - inches to remove the surface vegetation and heavy root system. This material should be stockpiled and used for landscaping. None of this topsoil shall be used in embankments within the right of way or within the zone of influence of a structure. The embankment shall be constructed of clean clayey soils free of organic or other deleterious materials. Limestone may be incorporated with the clayey soils provided that the size and quantity of limestone does not retard compaction. The embankment soils shall be placed in shallow level layers, 6 to 8 inches and compacted near optimum moisture content or within 3 percent of optimum moisture content on the wet side of the curve with a kneading type compaction equipment, such as a sheepsfoot

roller, to a density not less than 95 percent of maximum density as determined by the standard Proctor moisture-density test (ASTM D699-78 or ASHTTO-99) or 90 percent of maximum density as determined by the modified Proctor moisture-density test (ASTM Dl557-78). At the discretion of the City Engineer, a recognized testing laboratory may be required to run moisture density tests (ASTM D698-78 or ASTM D1557-78) and field density tests (ASTM D1556-64 or ASTM D2922-73) to determine the percent compaction. The cost of such testing shall be at the expense of the contractor.

1.4 SUBGRADE, UNDERDRAINS AND EDGE OR SIDE DRAINS

The sub-grade is defined as the top one (1) foot of the soil profile at finished grade prior to placing the pavement. This top one (1) foot of soil will consist of compacted fill placed for embankments as outlined in Item 1.3, undisturbed soils in the transitional area from cut to fill immediately below the topsoil and undisturbed soils in cut areas. The top one (1) foot of sub grade shall be compacted to 98 percent of maximum density as determined by the standard Proctor moisture- density (ASTM 0698-78) or 93 percent of maximum density as determined by the modified Proctor moisture-density test (ASTM D1557-78) within one (1) percent of optimum moisture content immediately prior to placing any pavement. This specification increases the compaction requirements in compacted fill areas since the embankment shall be compacted to 95 percent or 90 percent of maximum density standard Proctor and modified Proctor respectively. In transitional areas from cut to fill, the soils have been subject to the seasonal changes of freezing and thawing and wetting and drying. These soils will exist at moisture contents well above optimum moisture content and at densities on the order of 60 to 80 percent of maximum densities. These soils will have to be aerated and dried in order to obtain the specified percent of compaction for sub grade. Soils in cut areas will exist at moisture contents above optimum moisture content and at densities on the order of 90 percent of maximum density. These soils shall be aerated and dried in order to achieve the recommended moisture content and density for sub grade. Any soft spots resulting from high moisture content that are encountered at the time of construction shall be aerated and dried to reduce the moisture content to near optimum moisture content, then re-compacted to the specified density. The sub grade shall be shaped to plan elevation, grade and cross section.

Sewer laterals or any other excavations within the limits of the area to be paved shall be backfilled with a well-graded granular soil. This granular backfill shall be placed in shallow level layers, not exceeding 12-inches, near optimum moisture content and compacted with an appropriate type of compaction equipment, such as a vibrating plate or roller, to a density not less than 93 percent or 90 percent of maximum density, standard Proctor and modified Proctor, respectively, or 120 percent of a relative density test (ASTM D2049-69). Under no circumstances should the granular backfill be flushed with water to obtain compaction.

Normally there is some time delay between sub grade preparation and placing of the pavement. Immediately prior to placing paving, the sub grade should be in a moist condition near optimum moisture content. If the sub grade has become excessively wet it shall be scanted, aerated, dried and re-compacted immediately prior to placing the pavement. If the sub-grade has become excessively dry, the surface shall be wetted so as to increase the moisture content to near optimum moisture content and re-compacted immediately prior to placing the pavement.

Subgrade under drainage systems – In order to maintain maximum densities of subgrade comprised of clayey and granular soils, a four (4) – inch minimum perforated solid wall pipe under drainage system shall be installed and connected to an approved storm sewer system at each of the following locations in accord with the related details per Appendix "C" of the Boone County Subdivision Regulations.

1. Interconnecting street catch basins opposite each other at the sump and catch basins at the entrance to cul-de-sacs.

2. Extending from any street catch basin perpendicular for full width beneath street pavement.

3. Extending perpendicular from any street catch basin to any water main trench within the right-of-way.

4. Extending from any street catch basin when excavations within subgrade are replaced with clean granular soils.

5. Extending from any street catch basin to intercept a water table generated from a natural spring or other damaging discharge observed during grading operations. All connections to catch basins shall be inspected and approved by the City Engineer.

Edge or Side Drains - This item of work shall consist of installation of 6-inch perforated edge drain (Schedule 40, PVC SDR 35 or ADS N-12) behind the curb on various streets that have discharged excessive drainage onto the sidewalk, curb and gutter section and street sub grades. The 6-inch pipe shall be wrapped in a sock, the trench backfilled with crushed stone and seeded and mulched or sod restored, as needed. Individual side drains shall be extended beneath the sidewalk and include the fittings and connections to any sump pump lines or roof leaders located within the limits of the public rights-of-way for the connection to existing catch basins, as required.

The City Engineer or his representative inspector shall be given not less than 24 hours before placement of the pavement in order that he may have adequate time to check the alignment, grade, cross section and quality of the sub grade.

1.5 EQUIPMENT FOR COMPACTION

Any compaction equipment capable of uniformly producing the required density, without lamination of or within successive layers, will be permitted.

1.6 REINFORCING TIE-ROD INSTALLATION FOR CURBS

Where curbs are to be constructed on the surface of existing pavement, the pavement will be drilled vertically to the depth and spacing as shown on the details of the plans. The centerline of the holes shall be the centerline of the proposed curve. Deformed reinforcing rods shall be inserted in the holes to tie the proposed concrete curb to the existing pavement.

1.7 FORMING

Forms shall be erected to receive the specified curb width on the surface of the pavement. The elevation of the top of the forms shall be set to satisfy the proposed height of curb above the finished pavement surface. All forms shall be maintained in a smooth alignment without abrupt changes.

1.8 REINFORCING STEEL INSTALLATION

Deformed reinforcing steel shall be cut to length conforming to the existing gutter contraction joints or not to exceed fifteen (15) feet where joints do not exist, will be tied to the rods previously inserted in drilled holes, so that a minimum of two (2) inches of concrete will cover the steel on top and sides of finished-curbs. Reinforcing steel will not be continuous thru joints.

1.9 CLEANING OF EXISTING PAVEMENT

The existing surface or edge of pavement will be swept clean of all dirt and debris prior to placement of concrete. The surface will be wetted with water just prior to placement of concrete to improve the bond between the existing pavement and proposed curbs.

1.10 CONCRETE PLACEMENT AND FINISHING

The concrete will be placed and vibrated to prevent honeycomb forming on the face of the curb. After the concrete has been edged, both front and back, with a one-half (1/2) inch radius edging tool, the front form will be removed and the surface of the front face and top of the curb will be finished. The back form shall remain in place until concrete has set.

1.11 CONTRACTION JOINTS

Contraction joints conforming to existing joints in pavement will be saw cut and then filled as described in Item 8.3.

1.12 CURING

Curing of all concrete shall conform to Item 7.1.

1.13 CONCRETE SIDEWALK RESTORATION

Concrete sidewalks shall be a minimum of four (4) inches and increased to five (5) inches thick as a part of a driveway and of a width as specified on the plans or conforming to the width of the existing sidewalk.

Sidewalks shall be finished to true surface and grade and be free from irregularities. Surface finish shall be sack-finished texture marked in squares equal to the width. All edges are shall be neatly edged.

Expansion joints shall be placed at intersection joints with street curbing and/or existing pavement.

1.14 WHEEL CHAIR RAMPS

Wheel chair ramps shall be installed at all intersections, where sidewalks extend to the curb line at all crosswalks. These ramps shall extend through the curb into the gutter line, as required during curb construction. Care shall be taken to ensure that gutter drainage does not settle onto ramps or sidewalks causing a safety hazard. These ramps shall be constructed according to Federal ADA Specifications enacted on June 1, 1975 including any amendments.

1.15 EQUIPMENT OPERATED ON STREETS

Only pneumatic equipment will be allowed to operate over any paved surface. Any damage caused by the operation of equipment shall be repaired at the contractor's expense. Paved streets adjacent to new development shall have all mud removed daily or be subject to the fine provided in an ordinance.

1.16 SUBGRADE FOR SIDEWALKS AND DRIVEWAYS

Sub grade for sidewalks and driveways shall comply with Item 1.4 of these specifications.

1.17 This section left open.

1.18 UTILITIES

Care shall be taken at all times to protect all utilities.

1.19 SOIL DENSITY TESTS

Soil density tests, including moisture - density tests (ASTM D698-78 or ASTM D1557-78) and/or field density tests (ASTM D1556-64 or ASTM D2922-78) are required to determine the percent compaction in accord with the following:

(1) Embankments - a minimum of one (1) test for each three (3) feet in elevation per 400 lineal feet or every 2,500 cubic yards, or fraction thereof, of embankment section;

(2) Utility backfill excavations for storm, sanitary sewer and water system crossings - a minimum of one (1) test for each two (2) feet in elevation per 100 lineal feet, or fraction thereof, of utility trench open cut beneath street subgrade and within three (3) feet outside of street pavements;

(3) Subgrades — a minimum of one (1) test per 100 lineal feet for streets 500 lineal feet or less; or, one (1) test per 200 lineal feet for streets over 500 lineal feet at each of the following locations, where applicable:

(a) Compacted fill placed for embankments;

(b) Undisturbed soils in transitional areas from cut to fill immediately below the topsoil;

(c) Undisturbed soils at depths greater than three (3) feet below the original ground in cut areas.

Field density tests of soil embankment, utility excavations or sub grade are not applicable, when at least one of the following conditions exist:

(1) More than five (5) percent of the material contains greater than one (1) inch sieve size particles; or

(2) More than 60 percent of the material contains greater than No. 4 sieve size particles except DGA (dense graded aggregate).

Proof of conditions (1) or (2) shall be performed by at least one (1) graduation test by a recognized testing laboratory and mailed directly to the City Engineer.

All soil density testing shall be at the expense of the contractor. The results of these tests shall be mailed directly to the contractor and the City Engineer. The results of all soil testing shall be compared to the densities, as stated in Items 1.2, 1.3, and 1.4 of these specifications. Any deficiencies found in construction must be remedied in the field or resolved between the contractor, subcontractors and the City Engineer.

ITEM 2
MATERIALS

Concrete shall be composed of Portland Cement, air-entraining agent, aggregates, and water combined in such proportions as to meet current KDOT Class A 4000 psi concrete specifications.

2.1 PORTLAND CEMENT

Cement shall conform to requirements of the current ASTM specifications for Portland Cement Type I or Type III (Designation C-I 50).

2.2 AIR-ENTRAINING AGENT

Air-entraining agents shall conform to the requirements of current ASTM Specifications for Air-entraining Agents for Concrete (Designation C-260).

2.3 CHEMICAL ADMIXES FOR CONCRETE

Admixtures shall conform to requirements of the ASTM Specifications for Admixtures of Type A and Type D (Designation C-494).

2.4 AGGREGATES

Aggregates shall conform to current requirements for concrete pavements of the Kentucky Department of Transportation, Bureau of Highways.

2.5 WATER

Water used in mixing or curing concrete shall be equal to that supplied for drinking.

2.6 REINFORCING STEEL

Reinforcing steel, where specified, shall conform to current Standard Specifications of the Kentucky Department of Transportation, Bureau of Highways.

2.7 JOINTS

Expansion joints shall be non-extruding preformed fillers conforming to Kentucky Department of Transportation Road and Bridge Specifications.

Contraction joints may be either sawed or pre-molded 1/8-inch-thick in depth as shown on the plans and details and shall be carried full width through the integral curb.

2.8 CURING

Curing materials shall conform to current Kentucky Department of Transportation, Bureau of Highways Specifications

ITEM 3
BATCHING, TESTING AND FORMING

3.1 BATCHING

Batching shall conform to Kentucky Department of Transportation, Bureau of Highways Specifications.

3.2 STRENGTH OF CONCRETE

All concrete shall attain minimum strength to meet KYTC Class A 4000 psi concrete specifications.

3.3 TESTING

At least three (3) test cylinders shall be made for each day's placement if less than 100 cubic yards; or, for each 100 cubic yards or portion thereof by a recognized testing laboratory and broken, one (1) at 7 days and two (2) at 28 days. For the first initial set, test one (1) cylinder at three (3) days, have it analyzed and call the City Engineer regarding the probable 28-day strength. (See Technical Specs – Cast-In-Place Concrete,

Item 3.9 B). The results of these tests shall be sent directly to the contractor and the City Engineer.

For each set (at least three) of test cylinders made, the slump and air content shall be measured. The slump test shall be run in accord with ASTM C14378 and the air content test in accord with ASTM C23 1-81. The results of these tests shall be sent directly to the contractor and the City Engineer.

The fabricating, curing, breaking and reporting the test cylinders, the slump test and air content test shall be made at the contractor's expense.

3.4 FORMS

Forms may be of wood or metal and shall have a depth equal to or greater than the prescribed edge thickness of the pavement. Forms shall be straight and free from bends or warps.

3.5 SETTING FORMS

When forms are set and secured, they shall provide the specified elevation and thickness of slab. Forms shall have "J" bolts securely bolted thereto, and spaced as required per the plans. They shall be cleaned and oiled each time they are used.

ITEM 4
CONCRETE PLACEMENT

4.1 PLACING CONCRETE

The concrete shall be mixed in quantities required for immediate use and shall be deposited on the sub-grade to the required depth and width of the construction lane in successive batches and in a continuous operation, without the use of intermediate forms or bulkheads. The concrete shall be placed as uniformly as possible, in order to minimize the amount of additional spreading necessary. While being placed, the concrete shall be vibrated and compacted with suitable tools, so that the formation of voids or honeycomb pockets is prevented.

No concrete shall be placed around manholes or other structures until they have been brought to the required grade and alignment. Additional tamping and compaction will be required after raising manholes.

(a) Cold Weather Concreting - Concrete may be placed when the air temperature in the shade and away from artificial heat is thirty-five (35) degrees Fahrenheit or higher. No concrete shall be placed upon frozen sub grade. Concrete shall be protected from freezing for a period up to seven (7) days.

(b) Hot Weather Concreting - Except by approval of the City Engineer, concrete placing shall cease if the temperature of the plastic concrete cannot be maintained at ninety (90) degrees Fahrenheit or lower. To facilitate the placement of concrete

in hot weather, a retarding chemical admixture Type B or D, in conformance with ASTM C-494, may be used.

ITEM 5
FINISHING

5. 1 FINISHING

Pavement shall be struck off and consolidated with a mechanical finishing machine or by hand-finishing methods. The finishing machine shall be provided with a screed, which will consolidate the concrete by pressure, vibration, or both. All concrete shall be brought to a true and even surface, free from pockets.

When hand-finishing is used, the concrete shall be struck off and consolidated with a vibrating screed to the elevation shown on the plans. When forward motion of the screed is stopped, the vibrator shall be shut off and not allowed to idle on the concrete.

5.2 STRAIGHT EDGING

The City Engineer may require areas to be straight edged to determine any irregularities.

5.3 EDGING

Before final finishing and initial set, edges of the slab and curb shall be edged with an edger having a radius of 1/8 inch.

5.4 FINAL SURFACE FINISH

Final finishing shall be accomplished with a burlap drag followed with brooming at right angles to the center line.

ITEM 6
INTEGRAL CURB

6.1 INTEGRAL CURB

Integral curb shall be constructed with or immediately following the screeding operation. Care shall be taken so that the curb construction does not lag the pavement construction and form a “cold joint”.

All concrete driveway entrances shall be provided with pre-molded expansion joint material along the full width of the driveway per the county/city specifications.

ITEM 7
CURING

7.1 CURING

Concrete shall be cured by protecting it against loss of moisture, rapid temperature change, rain, flowing water, and mechanical injury for a period of not less than 5 days. Moist curing, waterproof paper, pigmented liquid membrane compound, or a combination thereof may be used.

Immediately after finishing operations have been completed, the entire surface shall be covered by the curing medium.

ITEM 8
JOINTS

8.1 JOINTS

Joints, tie bars, and load transfer bars shall be constructed and spaced as detailed in Appendix C of the Boone County Subdivision Regulations (Joint Details). Concrete pavement shall include expansion, contraction, transverse, construction and longitudinal joints. Transverse joints are expansion and contraction joints which shall be continuous across the pavement lane including the curb. Longitudinal joints are parallel and connect the pavement lanes. Construction joints are required when the placement of concrete is delayed. The location of transverse construction joints may be either planned (coincidental with a contraction joint) or emergency (not coincidental with a contraction joint). In general, the location of longitudinal joints shall be centered between pavement lanes except for street widths 30 feet and wider.

8.2 EXPANSION JOINTS

Expansion joints shall be Type 1. Filler material shall conform to Item 2.7 of these regulations and extend the entire width of the pavement. All dimensions and spacing shall be shown on the plans or referenced herein. The filler shall be held accurately in place during the placing and finishing of the concrete by a bulkhead, a metal channel cap or other approved method. Expansion joints shall be installed at the following locations: (1) at all street intersections at the point of curvature of the turning radii entering the intersection; and (2) at cul-de-sacs or turnarounds at the point of curvature of the first turning radii approaching the turnaround. In no case shall the expansion joint spacing exceed 300 feet.

No concrete shall be left above the expansion material or across the joint at any point. Any concrete spanning the ends of the joint next to the forms shall be carefully cut away after the forms are removed.

Before the pavement is opened to traffic, the groove above the filler shall be cleaned and sealed with joint sealing material specified in Items 2.7 and 10.1 of these specifications.

8.3 CONTRACTION JOINTS

Transverse contraction joints shall be Type 2. They may be sawed or grooved with a metal jointing tool, equal to a depth of one-fourth (1/4) of the pavement thickness. If the pavement is grooved with a metal jointing tool, special care should be taken to prevent surface irregularities at the joint location. The spacing of un-doweled contraction joints

shall be specified as shown on the plans or details or referenced herein. In no case shall the contraction joint be spaced at intervals greater than a distance of fifteen (15) feet between joints or as the existing pavement, being rehabilitated.

If sawed joints are specified, they shall be sawed within a time frame of between four (4) hours and eight (8) hours following placement of each pavement section. However, depending upon temperature, weather conditions, and other factors affecting setting times, variations to these time frames may be required to ensure that joints are sawed early enough to control cracking, but late enough to prevent any damage by blade action to the slab surface and to the concrete immediately adjacent to the joint.

8.4 CONSTRUCTION JOINTS

Transverse construction joints shall be used wherever the placing of concrete is suspended for more than thirty (30) minutes. A planned transverse construction joint shall be Type 3, with smooth bars if the joint occurs at the location of a contraction joint. An emergency transverse construction joint shall be Type 4 with deformed tie bars if the joint occurs at any other location.

8.5 LONGITUDINAL JOINTS

Longitudinal joints between lanes shall be Type 6 of the tied construction type. An alternative longitudinal joint Type 7 may be used with slip-form paving operations. The location of longitudinal joints shall be centered between pavement lanes and coincide with lane markings wherever possible, except for street widths of 30 feet and wider where joints shall be located at equal intermediate locations. In these cases, longitudinal joints may be sawed and shall be Type 5.

8.6 INTEGRAL CURB JOINTS

In the construction of transverse joints, special care must be taken to ensure that all transverse joints extend continuously through the pavement and curb.

ITEM 9
TIE BARS

9.1 TIE BARS

All tie bar reinforcement for concrete pavement shall conform to Item 2.6 of these specifications. All tie bars shall be deformed bars for Types 4, 5, 6, and 7, and plain or smooth bars for Type 1 and 3.

ITEM 10
JOINT SEALING

10.1 JOINT SEALING COMPOUND

The material used for filling and sealing cracks and/or joints shall be Meadows #164 Hot Pour Rubber Asphalt Sealer, Meadows HI-Spec Hot Pour Joint Sealing Compound or approved equal.

10.2 APPLICATION

Material must be melted in a double boiler, oil jacketed melter equipped with a mechanical agitator, pump, gas pressure gauges, and separate temperature thermometers for both oil bath and melting-vat, with accessible control valves and gauges.

On start up of melter, the oil bath temperature shall be raised, not to exceed 450 degrees (F). Add small quantities of crack filler material to the melter and while continuously agitating, add additional material as needed. Control material temperature at 380 degrees (F). Do not exceed 400 degrees (F) at the start up.

The sealing and filling of joints and/or cracks shall be performed at an air temperature of 40 degrees (F) or higher. For best results, cracks should be filled to a depth of ¼ inch below the surface. Where necessary to limit the depth of the sealant, use cotton or backer rope inserted to the correct depth of the cleaned joint or crack.

Small quantities of unused material remaining in the melter may be re-melted and used the following day.

If pre-molded joints were utilized in the construction of the street, cracks must be sawed to ½" depth before applying sealer.

ITEM 11
STRUCTURES ENCOUNTERED IN THE PAVED AREA

11.1 MANHOLES AND CATCH BASINS

All manholes and catch basins encountered in the areas to be paved shall be raised or lowered to the surface of the new pavement. Catch basins may be separated from the pavement and curb by boxing out around basin.

ITEM 12
PROTECTION OF PAVEMENT

12.1 PROTECTION AND OPENING TO TRAFFIC

Traffic shall be excluded from the pavement by erecting and maintaining barricades and signs until the concrete is at least fourteen (14) days old or has attained a compressive strength of 3,500 pounds per square inch or 550 pounds per square inch flexural strength. This traffic restriction shall apply to the contractor's construction equipment and vehicles, as well as general traffic. As soon as curing and sealing are completed, the contractor shall clean up the pavement free from all debris.

ITEM 13
CURB, GUTTER, SIDEWALK AND DRIVEWAYS

13.1 CURB, GUTTER, SIDEWALK AND DRIVEWAYS

Construction of curb, gutter, sidewalk, and driveways shall require the same care as the street pavement. All of the preceding specifications for street pavement shall apply, where applicable, to the construction of curb, gutter, sidewalks, and driveways within the right-of-way. In addition, sidewalks or driveways shall be constructed so that the transverse joint spacing shall be equal to the width of the sidewalk or driveway, but in no case shall the transverse joint spacing for driveways exceed twelve (12) feet and not greater than five (5) feet for sidewalk spacing. Sidewalks as a part of driveways and driveways, within the right- of-way, shall be constructed with a pavement thickness of at least five (5) inches (see Appendices for typical section details). Commercial and Industrial entrances require the sidewalk thickness to conform to the design pavement thickness.

ITEM 14
PAVEMENT THICKNESS

14.1 PAVEMENT THICKNESS

Pavement thickness shall be as provided on the plans and details.

14.2 TOLERANCE IN PAVEMENT

Deficiency in pavement thickness determined by drilling or coring new concrete pavements shall not exceed 0.20 inches. When thickness of pavement is deficient by more than 0.20 inches, such areas shall be removed and/or replaced unless otherwise determined using testing reports, pavement live cycle as evaluated and determined by the City Engineer.

TECHNICAL SPECIFICATIONS
CAST-IN-PLACE CONCRETE

ITEM 1
GENERAL

1.1 RELATED DOCUMENTS

A. Conditions of the Contract apply to this Section as fully as though repeated herein.

1.2 SECTION INCLUDES

A. Labor, material and equipment required for complete installation of all concrete work.

B. Such work shall include foundations, walls, beams, columns, slabs, sidewalks and any additional concrete work not specifically listed.

1.3 REFERENCES

A. Standards of American Society for Testing Materials listed in this section and in referenced ACT publications.

B. ACT Manual of Concrete Inspection.

C. Standard Drawings KYTC, 1991, as amended

D. Latest Addition of KYTC Standard Specifications for Road & Bridge Construction.

1.4 SUBMITTALS

A. Submit shop drawings showing reinforcing grade, bar size, placement, laps, splices and details.

B. Promptly submit two (2) copies of all test and inspection reports required by quality control section listed below. Any deviation from specifications or drawings encountered by testing or inspection personnel shall be reported immediately to the City Engineer.

1.5 WARRANTY

A. If any concrete is found defective in strength, is not true to line or level, is poured out of place, or has not been protected properly against the effects of weather, or if any reinforcing is found exposed or not properly placed, the City Engineer may direct that such concrete be removed and replaced at contractor's expense. Random cores may be taken to assure proper placement of reinforcing and slab thickness.

ITEM 2
PRODUCTS

2.1 MATERIALS

A. Portland Cement: ASTM C 150, Type I.

B. Portland Cement Air Entraining: ASTM C 150, Type IA or Type IIIA. Air entraining agents conforming to ASTM C260 may be used in lieu of air entraining cement.

C. Fine Aggregate: ASTM C33, clean, hard, natural sand.

D. Coarse Aggregate: State of Kentucky Department of Transportation Construction and Material Specifications per Grading No. 57 maximum size of 1 inch.

E. Water: Potable.

F. Pozzolans - Fly Ash: Not Permitted.

G. Admixtures: Except for air entraining and water reducing, admixtures are not permitted without approval of the City Engineer. Submit manufacturer's information to the City Engineer, with historical strength tests based on proposed cement, aggregate and admixtures.

H. Reinforcing Steel: ASTM A615, Grade 60.

I. Welded Wire Fabric: ASTM A185 flat sheets for floor slabs on grade.

J. Expansion Joint Filler: Non-extruding resilient bituminous type conforming to ASTM D 1751.

K. Joint Sealant: Two-part semi-rigid epoxy 100% solids sealant - Metzger/McGuire MM-80 as manufactured by Metzger McGuire or Masterbuilders Masterfil CJ, or approved equal.

L. Curing Compound: To meet all specifications described within KYTC Standard Specifications for Road & Bridge Construction, latest edition.

M. Curing Membrane: Polyethylene film (white), 6 mil for slabs.

N. Hardener: Lapidolith manufactured by Sonnebom or approved equal.

O. Bond Breaker: 4 mil polyethylene film or 15# building paper.

P. Polyurethane Sealer: Sonothane by Sonneborn or approved equal.

2.2 CONCRETE MIXES

A. All concrete to meet KYTC Class A Standards.

ITEM 3
EXECUTION

3.1 CONCRETE FORMS

A. Construct forms to shape, lines and dimensions of members as required on the drawings. All forms shall be secured sufficiently tight to prevent leakage of mortar.

B. Construct all formwork and related bracing to maintain position and shape under the loads incurred during concrete placement.

C. Removal of formwork for self-supporting structural concrete beams/slabs shall conform to the following.

1. All removals shall meet all standards of KYTC Standard Specifications for Road & Bridge Construction, latest edition.

2. Footing and wall forms may be removed provided no damage to concrete will occur upon stripping forms. Do not backfill against concrete retaining walls until concrete has achieved full specified strength.

3.2 REINFORCING

A. Reinforcing must be free of excessive rust, loose scale, mud, oil and any nonmetallic coating that will adversely affect bonding capacity.

B. Placement of reinforcing bars, including bar clearance and concrete coverage shall be in accord with KYTC Standard specifications for Road and Bridge Construction latest edition. Place in accord with approved shop drawings and contract documents.

C. Splices and laps for reinforcing shall be governed by KYTC Standard Specifications for Road and Bridge Construction, latest edition.

3.3 COLD WEATHER REOUIREMENTS

A. Cold weather requirements govern when minimum ambient temperature is expected to fall below 40 degrees (F).

B. Concrete shall not be placed on frozen ground.

C. Mix, place, protect and cure concrete in strict accordance with KYTC Standards Specifications for Road and Bridge Construction, latest edition.

3.4 HOT WEATHER REQUIREMENTS

A. Hot weather requirements govern when maximum ambient temperature is expected to rise above 85 degrees F.

B. Mix, place, protect and cure concrete in strict accordance with KYTC Standard Specifications for Road & Bridge Construction, latest edition.

C. Admixtures proposed for construction under these conditions, such as water-reducing retarders, shall be tested thoroughly with concrete mixes for this job. All aspects of concrete construction applicable shall be considered before approval. Submit specifications on retarder to the City Engineer for approval with concrete mix designs.

D. Batch, mix and transport concrete as per KYTC Standard Specifications for Road and Bridge Construction, latest edition.

E. Water curing shall be required for hot weather construction.

F. The General Contractor shall take every precaution to insure that all concrete operations are performed promptly and without interruption.

3.5 JOINTS IN CONCRETE CONSTRUCTION

A. Construction Joints for walls and continuous wall footings shall have reinforcing cross joints so that shear keys shall not be necessary. Construction joints may be located at General Contractor's discretion and may be at such locations that each section can be filled in one continuous operation.

B. Construction joints for concrete beams and structural slabs shall be at mid-span unless otherwise stated on the plans. Reinforcing shall extend through the joints. No horizontal joint shall be allowed.

C. All other joints to meet KYTC Standards.

3.6 PLACEMENT

A. Reinforcing shall be properly placed and secured before pouring concrete.

B. Place concrete as near as possible to its final position to avoid segregation. Place in a continuous operation between construction joints so that concrete remains plastic and flows readily to avoid cold joints.

C. Distribute concrete evenly and consolidate with mechanical vibrators.

D. Concrete temperature at time of placement shall not exceed 90 degrees (F).

3.7 CURING AND PROTECTION

A. Protect freshly cast concrete from damaging effects of the elements including freezing, rapid drop in temperature, and loss of moisture and from future construction operations.

B. Concrete - Curing Options:

1. Curing compound – two (2) coats for exterior concrete.
2. Backfill - Footings.
3. Wet Burlap - Footings.
4. Forms, if left in place, should be wetted and exposed surfaces should be covered.

3.8 EXTERIOR CONCRETE WORK

A. Use air-entrained concrete for all exterior work such as sidewalks, curbs, and retaining walls.

B. Sidewalks:

1. Construct walks at least four (4) inches thick in panels with no panel having a surface area exceeding 36 square feet.

2. Control Joints: Not more than 1/8 inches in width, tool to a depth of 1/4 of walk thickness.
3. Expansion Joints: 1/2" thick expansion joint filler. Construct between walk and any abutting masonry or concrete. Construct transverse expansion joints at uniform intervals of not more than 40 feet.
4. Slope sidewalks, ramps, and entry slabs a minimum of 1/8 inches per foot or to local subdivision regulation standards.
5. Finish: Broom finish surface with joints and edges tooled with edging tool. Surface shall not vary in flatness more than ¼-inch in 10 feet.

C. Curbs:

1. Construct straight and true. Top and sides shall not vary more than ¼-inch in 10 feet.
2. Joints: Where practical, align joints in curb with like joints in adjoining work.
3. Expansion Joints: ½ inches thick expansion joint filler cut to shape of curb at intervals of not more than 40-foot long.
4. Control Joints: Construct by inserting metal plates not over 1/8-inch thick in forms at 10-foot intervals.
5. Curbs on public streets shall meet all local standards.

3.9 FIELD QUALITY CONTROL - GENERAL CONTRACTOR TESTING AGENCY RESPONSIBILITY

A. Reference also Spec. Section 01400 for payment for testing and ACI Manual of Concrete Inspection.

B. The following testing and inspection requirements shall he performed by an independent testing laboratory approved by the City Engineer. The General Contractor shall assist in testing, inspection, and coordination as necessary, and in any corrective work required.
1. Obtain copies of all mix design data, including any approved concrete admixtures.
2. Inspect all excavations and/or prepared subgrade for suitability of pouring concrete. Grade will be uniform and level with subgrade formed for edges thickened as detailed.
3. Inspect concrete formwork for dimensions and alignment.
4. Inspect reinforcing bars for grade, size, location, splicing and cover.
5. Concrete Tests:
   a. Cylinder tests for Compressive Strength — ASTM C39:
      1) Concrete cylinders shall be cast in steel or plastic molds. No wood or cardboard molds are acceptable.
      2) Cast one (1) set of three (3) test cylinders for each day's placement of less than 100 cubic yards.
      3) Cast one (1) set of three (3) test cylinders for each additional 100 cubic yards of each mix placed each day.
      4) Test one (1) cylinder at 7 days and two (2) cylinders at 28 days.
      5) For first set of cylinders cast for slab-on-grade, test one (1) cylinder at 3 days. Analyze probable 28-day strength. Inform the City Engineer

immediately by telephone if there appears to be concern for achieving required 28-day strength.

b. Random test concrete trucks for slump, air content, and temperature.

c. All concrete not meeting specifications will be rejected and removed from the job site.

C. Examine location and construction of all joints in concrete for conformance with plans, notes and specifications.

D. All work is to be performed in accordance with ACT requirements for hot or cold weather concreting, as may apply.

E. Inspect for adequate consolidation of all concrete.

F. Verify specified methods for curing and protection of concrete are being followed.

G. Submit daily reports to the City Engineer during all concrete operations indicating location of pour; quantity of concrete poured; concrete slump, temperature and air content; field conditions - temperature, weather, wind; and curing method.

TECHNICAL SPECIFICATIONS
ASPHALT CONCRETE PAVEMENT FOR STREET AND DRIVEWAY CONSTRUCTION

The work covered by these specifications consists of furnishing all labor, equipment and materials and in performing all operations in connection with the construction of asphalt concrete pavement in accord with these specifications and the applicable improvement drawings and details.

Asphaltic concrete pavement work shall consist of one (1) or more layers of asphaltic concrete with or without granular base and/or sub-base courses, constructed on a prepared subgrade in conformity with the lines, grades and cross sections, as shown on the plans. A string-line or automatic grade control device shall be used.

The data included herewith is based upon the general soil conditions, which exist in the area. These general soil conditions, representing approximately 75 percent of the soils in the area, are clayey overburden soils, described as lean to moderately plastic silty clays, classified according to the Unified Soil Classification System (USCS) as CL soils. Any site which is made up of soils substantially different should be evaluated independently by a qualified Geotechnical Engineer. The geotechnical work consists of drilling, testing and engineering evaluation of all field and laboratory data in light of the proposed design plans. Examples of substantially different soil conditions are the very silty clays or clayey silts along the flood plain of the Licking and Ohio Rivers, the clayey sands, the fine to medium sands and the fine to coarse sands and gravels of the flood plain of the Ohio River such as the Belleview Bottoms in Boone County, the loess type deposits, clayey sands, silty sands and sandy clays of the Ft. Wright area and the “fat” waxy looking clays in Boone County.

ITEM 1
GRADING

This term shall consist of all grading above or below sub-grade elevations of whatever nature required to bring the street to proper sub-grade elevations including necessary excavation and

proper sloping of all cuts, and other work incidental thereto.

1.1 EXCAVATIONS

All excavations shall be made to approximate grade or subgrade elevations consistent with approved plans. Excavations shall not be steeper than a cut slope of 2.5 horizontal to 1 vertical.

1.2 EXCAVATION BELOW SUBGRADE

Whenever excavations below sub-grade elevation to remove spongy or unstable material, organic matter or other materials is required, the contractor shall remove same and shall replace with compactable embankment soils as per Item 1.3. The excavation can be backfilled with soils that were removed provided they are clean clayey soils free of organic matter and other deleterious material, aerated and dried to near optimum moisture content or clean clayey borrow soils that have moisture contents near optimum moisture content.

1.3 EMBANKMENT

All surface vegetation and heavy root system shall be removed to eliminate all vegetation from the area upon which the embankment is to be constructed. Soils so removed shall not be used in construction of embankment. These materials shall be stockpiled and re-spread across scarified areas after the scarified areas have been brought to within inches of finished grade.

Embankments shall be constructed of approved soils to approximate sub-grade elevation in shallow level layers, 6 to 8 inches, within three (3) percent of optimum moisture content on the dry side of the curve or within four (4) percent of optimum moisture content on the wet side of the curve, compacted with an appropriate equipment to a density not less than 95% percent of maximum density, as determined by the standard Proctor moisture-density test (ASTM D698-78 or AASHO T-99) or 87% percent of maximum density as determined by the modified Proctor moisture-density test (ASTM D1557-58-78 or AASHTO T180). All soils placed in areas involving public improvements shall be constructed to slopes no steeper that 2.5 horizontal to 1 vertical and flatter where possible for ease of maintenance.

1.4 BACKFILL

Clayey soils or granular soils shall be used to backfill utility crossings within the right-of-way and compacted to the densities stated in Item 1.3. Under no conditions shall granular backfill be flushed with water to obtain compaction. Utilities which are parallel and within three (3) feet either side of the pavement shall be compacted.

1.5 SUBGRADE, UNDERDRAINS AND EDGE DRAINS

The sub-grade is defined as the top one (1) foot of the soil profile at finished grade prior to placing the pavement. This top one (1) foot of soil will consist of: (a) compacted fill

placed for embankments and as outlined in Item 1.3; (b) undisturbed soils in the transitional areas from cut to fill immediately below the topsoil; or (c) undisturbed soils at depths greater than three (3) feet below the original ground surface in cut areas. The top one (1) foot of sub-grade shall be compacted to 98 percent of maximum density as determined by the standard Proctor moisture-density test (ASTM D687-78 or AASHTO T-99) or 90% percent of maximum density as determined by the modified Proctor moisture-density test (ASTM 1557-78 or AASHTO T-180) within two (2) percent of optimum moisture content on the dry side of the curve or four (4) percent of optimum moisture content on the wet side of curve immediately prior to placing the pavement. In transitional areas from cut to fill, the soils have been subject to the seasonal changes of freezing and thawing and wetting and drying. These soils will exist at moisture contents well above optimum moisture content and at densities on the order of 60 to 80 percent of maximum density (ASTM D698-78). These soils shall be scarified, aerated and dried in order to obtain the specified percent compaction for the sub-grade. Soils in cut areas, three (3) feet below original grade, will exist at moisture contents above optimum moisture content and at densities on the order of 90 percent of maximum density (ASTM D698-78). These soils shall be scarified, aerated, and dried in order to obtain the specified percent compaction for sub-grade.

Subgrade Underdrainage Systems - In order to maintain maximum densities of subgrade comprised of clayey and granular soils, a four (4) - inch minimum perforated solid wall pipe under-drainage system shall be installed and connected to an approved storm sewer system at each of the following locations in accord with the related details per Appendix "C" of the Boone County Subdivision Regulations.

1. Interconnecting street catch basins opposite each other at the sump and catch basins at the entrance to cul-de-sacs.

2. Extending from any street catch basin perpendicular for full width beneath street pavement.

3. Extending perpendicular from any street catch basin to any water main trench within the right-of-way.

4. Extending from any street catch basin when excavations within sub-grade are replaced with clean granular soils.

5. Extending from any street catch basin to intercept a water table generated from a natural spring or other damaging discharge observed during grading operations. All connections to catch basins shall be inspected and approved by the City Engineer or his representative.

Any soft or yielding areas resulting from high moisture content that are encountered at the time of construction shall be scarified, aerated and dried to reduce the moisture content nearer to optimum moisture content, then re-compacted to the specified density.

The sub-grade shall be shaped to plan elevation and cross section. Immediately prior to placing the concrete, the sub-grade shall be checked for conformity with the cross

section shown on the plans by means of an approved template on the side forms. If necessary, materials shall be removed or added as required, to bring all portions of the sub-grade to correct elevations. The sub-grade shall be thoroughly compacted and again checked with the template. Concrete shall not be placed on any parts of the sub-grade which have not been checked for correct elevation. The sub-grade shall be clean of loose or wet material prior to placing concrete.

Prior to placing the concrete, the contractor shall proof roll the compacted sub-grade with a fully loaded single axle dump truck. The City Engineer shall observe the proof rolling for consistency. Areas which are subject to excessive pumping or rutting shall be reworked and re-compacted as described above. All sub-grade testing shall be made not more than 48 hours prior to placement of pavement, unless extreme weather conditions dictate retesting (rain, freezing temperature, excessive temperature, etc.).

Edge or Side Drains - This item of work shall consist of installation of 6-inch edge drain (Schedule 40, PVC SDR 35 or ADS N-12) behind the curb on various streets that have discharged excessive drainage onto the sidewalk, curb and gutter section and street sub grades. The 6-inch pipe shall be wrapped in a sock, the trench backfilled with crushed stone and seeded and mulched or sod restored, as needed. Individual side drains shall be extended beneath the sidewalk and include the fittings and connections to any sump pump lines or roof leaders located within the limits of the public rights-of-way for the connection to existing catch basins, as required.

When requested, the City Engineer shall be contacted not less than (12) twelve hours prior to placement of materials.

1.6 EQUIPMENT FOR COMPACTION OF BACKFILL, EMBANKMENT AND SUBGRADE

Any compaction equipment capable of producing the required embankment and sub-grade densities, without lamination, will be permitted. Clayey type soils shall be compacted with kneading type compaction equipment, such as a sheepsfoot roller. Cohesionless soils shall be compacted with vibratory type equipment, such as a vibrating plate or roller. All compaction equipment shall be in good condition and shall be operated efficiently to assure uniform compaction.

1.7 SUBGRADE FOR SIDEWALKS AND DRIVEWAYS

Sub-grade for sidewalks and driveways within the limits of the right-of-way shall comply with Item 1.5.

1.8 EQUIPMENT OPERATED ON STREETS

The contractor shall be permitted to operate only pneumatic tired equipment over any paved streets surfaces and shall be responsible for correcting any damage to street surfaces resulting from the contractor’s operation. Paved streets adjacent to new development shall have all loose soil or mud removed at the end of each day’s work.

1.9 UTILITIES

Special precautions shall be taken by the contractor to avoid damage to existing overhead and underground utilities. Before proceeding with the work, the contractor shall confer with all public or private companies, agencies or departments that own or operate utilities in the vicinity of the construction work. The contractor shall be diligent in his efforts to use every possible means to locate existing utilities.

1.10 SOIL DENSITY TESTS: Soil density tests, including moisture-density tests (ASTM D698-78 or ASTM D1557-78) and field density tests (ASTM D1556-64 or ASTM D2922-78), are required to determine the percent compaction in accord with the following:

(1) Embankment - Minimum of one (1) test for each three (3) feet in elevation per 400 lineal feet or every 2500 cubic yards, or fraction thereof, of embankment section;

(2) Utility backfill excavations for storm, sanitary sewer and water system crossings - a minimum of one (1) test for each two (2) feet in elevation per 100 lineal feet, or fraction thereof, of utility trench open cut beneath street sub-grade and within three (3) feet outside of street pavements. CLSM (flowable fill) backfill may be used without the requirement for compaction testing.

(3) Sub-grades - minimum of one (1) test per 100 lineal feet for streets over 500 lineal feet or less or one (1) test per 200 lineal feet for streets over 500 lineal feet at each of the following locations, where applicable:

(a) Compacted fill placed for embankments;

(b) Undisturbed soils in transitional areas from cut to fill immediately below the topsoil; and

(c) Undisturbed soils at depths greater then 3 feet below the original ground in cut areas.

Density test soil embankment, utility excavations, or sub-grade are not applicable when at least one of the following conditions exist:

(1) More than five (5) percent of the material contains greater than one (1) inch sieve size particles; or,

(2) More than 60 percent of the material contains greater than No. 4 sieve size particles except DGA (dense graded aggregate).

Proof of conditions (1) or (2) shall be performed by at least one (1) graduation test by a recognized testing laboratory and mail directly to the Contractor and City Engineer.

All soil density testing shall be at the expense of the Contractor. The results of these tests shall be mailed directly to the Contractor and City Engineer. The results of all

soil testing shall be compared to the densities, stated in Items 1.3, 1.4, 1.5, and 1.7 of these specifications. Any deficiencies found in construction work must be remedied in the field or resolved between the Contractor, Subcontractors and City Engineer.

ITEM 2
PREPARATION OF GRANULAR SUBBASE

2.1 THICKNESS OF GRANULAR SUBBASE

The thickness of granular sub-base comprises a portion of the required design thickness, as per the plans and details.

ITEM 3
ASPHALT PAVEMENT

3.1 DESCRIPTION AND GENERAL REQUIREMENTS

This item shall consist of furnishing all materials and performing all construction procedures required to build an asphalt pavement, on a prepared and approved subgrade, conforming to the requirements of these specifications and to the pavement design shown on the plans. It may include any, or all, but is not necessarily limited to, materials and methods specified under this Item (Item 3) only.

Asphalt pavement shall consist of an asphalt concrete surface course, or courses, constructed on a base course, or courses and/or sub-base course designed in compliance with the requirements of Item 4.2, the plans and these specifications.

Successive layers of the pavement shall be offset from the edge of the underlying layer, a distance equal to the course thickness of the lower layer, except when abutting existing construction. When the asphalt layers of the pavement abut a building foundation, a barrier curb, or other similar vertical surface, the abutting surface shall be heavily painted with asphalt prior to construction of the asphalt course. The surface course shall be finished one-fourth (1/4) inch above adjacent flush construction to permit proper compaction.

3.2 MATERIALS AND CONSTRUCTION REQUIREMENTS

3.2.1. ASPHALT CONCRETE SURFACE COURSE: Asphalt Concrete Surface Course materials and construction shall conform to the current requirements of the Kentucky Department of Transportation, Bureau of Highways, for Bituminous Concrete Surface, Class I and Binder (Sections 401, 402). Surface course mixture composition shall conform to the requirements Surface Class I and Binder as set forth in Table B-1. Minimum Asphalt Concrete Surface Course Thickness shall be as stated in Table B-2.

3.2.2 ASPHALT CONCRETE BASE COURSE: Asphalt Concrete Base Course materials and construction shall conform to the current requirements of the Kentucky Department of Transportation, Bureau of Highways, Specifications for Asphalt Concrete Base Course (Sections 401, 403).

Composition requirements of the mixture shall conform to the gradation limits for Asphalt Concrete Base Course set forth in Table B-1. Asphalt content used shall fall within the range shown and shall be approved by the inspector.

3.2.3 CRUSHED AGGREGATE BASE COURSE:

3.2.3.1 DESCRIPTION: Crushed Aggregate Base Course, when provided for in the approved structural design of the pavement, shall consist of a granular layer constructed on prepared sub grade or subbase in accordance with these specifications and in conformity with the approved dimensions, lines, grades, and cross sections.

3.2.3.2 MATERIALS AND CONSTRUCTION METHODS: Crushed Aggregate Base Course shall conform to all the current requirements for materials and construction methods of the Kentucky Department of Transportation for Dense Graded Aggregate Base Course as per Section 303.

3.2.4 GRANULAR SUBBASE COURSE

3.2.4.1 DESCRIPTION: Sub-base, when provided for in the approved structural design of the pavement, shall consist of a granular layer conforming to the following material and construction specifications.

3.2.4.2. MATERIALS AND CONSTRUCTION METHODS: Crushed Aggregate Sub-base Course shall conform to all the current requirements for materials and construction methods of the Kentucky Department of Transportation for Dense Graded Aggregate Sub-base Course as per Section 303.

3.2.5 ASPHALT PRIME COAT: Asphalt Prime Coat shall be applied to the surface of granular courses upon which asphalt base or surface courses will be constructed.

Asphalt Prime shall conform to the Kentucky Department of Transportation requirements for Cutback Asphalt Emulsion Primer Type L as per Section 407. Prime shall be applied to the surface of granular base course at a rate of 0.25 to 0.50 gallons per square yard, as directed by the engineer, in conformance with requirements of the referred to specification.

3.2.6 ASPHALT TACK COAT: Tack Coat shall consist of SS-1H, meeting the current requirements of the Kentucky Department of Transportation. It shall, when directed by the inspector, be diluted with equal parts of water. Application equipment and procedure shall conform to the requirements of the Kentucky Department of Transportation for Tack Coats as per Section 407. Tack Coat shall be applied to the surface of asphalt courses that have become dusty or dry from traffic use at a rate of 0.10 gallon per square yard of the diluted SS-1H before the subsequent course is constructed or in other circumstances when the inspector so directs.

ITEM 4
DESIGN OF ASPHALT PAVEMENT STRUCTURE

4.1 DESCRIPTION: Asphalt pavement structures for subdivision streets shall be designed in conformance with the requirements of this specification. Thickness of the total pavement and of component layers shall be determined on the basis of Street Classification.

4.2 PAVEMENT THICKNESS REQUIREMENTS: Thickness of component layers of the pavement for streets within the right-of-way and of the total pavement structure shall be determined as per Table B-2. Where streets are to serve industrial or commercial areas, the pavement design shall be based on a study prepared by the engineer projecting the type of vehicles using said streets and traffic volumes, and approved by the City Engineer.

ITEM 5
ADJUSTING UTILITY TOPS

5.1 DESCRIPTION: The contractor shall raise or lower existing utility tops to coincide with the finished grade elevation of the paving.

ITEM 6
JOINT SEALING COMPOUND

The material used for filling and sealing cracks and/or joints between concrete and/or asphalt shall be W.R. Meadows Sealtight #164 Hot Pour Rubber Asphalt Sealer or approved equal.

ITEM 7
PAVEMENT THICKNESS MEASUREMENTS

Pavement thickness for each type street classification shall be as provided in Table B-2. Streets that are subject to exceptional heavy truck traffic shall require a more complete detailed analysis by the City Engineer.

Upon completion of all asphalt courses, cores shall be taken at approximately 300 foot intervals alternating lanes, to determine pavement thickness. On streets less than 600 feet in length, a minimum of three (3) pavement cores shall be taken. A deviation of the specified thickness of 0.2 inches shall be tolerable. When the pavement thickness is less than the allowable deviation, additional pavement cores shall be taken at 25-foot intervals ahead and behind, until the specified thickness has been measured. The depth of the total deviation shall be determined by averaging all deficient cores. The length of the deficient area shall be determined by distance between the two farthest deficient cores plus 25 feet. The minimum deficient area shall be 25 feet in length times the lane width.

When the pavement thickness is less than the specified allowable deviation, the contractor shall have the following Options:

Option 1. Remove the pavement, lower the sub-grade to county/city specifications, retest the subgrade and replace the pavement; or

Option 2. After having satisfied all other county/city specifications pertaining to pavement construction (i.e., field density and sub-grade testing, etc.), the contractor shall pay the city of Union a proportion of the contract price. The contract price will be figured using the given variables below. This is similar to the procedure set forth in the Kentucky Transportation Cabinet's Standard Specifications for Road and Bridge Construction, latest edition.

When determining the contract price, the minimum deficient area to be used will be 25 linear feet, each lane being separate.

PAVEMENT DEFICIENCY

Deficiency in Thickness Determined by Cores in inches	Proportional Part of Contract Price Payable to City of Union, Kentucky
0.00" to 0.20"	0%
0.21" to 0.30"	20%
0.31" to 0.40"	40%
0.41" to 0.50"	60%
0.51" to 0.75"	80%
0.76" to 1.00"	100%

The minimum thickness allowed under this option shall be as follows:

Designed Depth	Minimum Thickness
7.0"	6.0"
8.0"	7.0"
9.0"	8.0"
10.0"	9.0"

Any pavement that has a thickness deficiency of more than the 1.0" deviation shall be replaced, as stated above in Option 1.

TABLE B-1
TABLE OF COMPOSITION LIMITS FOR BITUMINOUS CONCRETE

Sieve Size	Percent Passing by Weight		
	Base	Binder	Surface
1-1/2 inches	100		
1 - inch	(2)		

3/4 - inch	70-98	100	
½ - inch	---	---	100
3/8 - inch	44-76	57-85	80-100
No. 4	30-58	37-68	55-80
No. 8	21-45	25-52	35-60
No. 16	14-35	15-38	20-45
No. 50	5-20	5-20	5-21
No. 100	3-10	3-10	3-14
No. 200	2-6	2-6	2-7
Asphalt Content (1)	3.5-6.5	4.0-7.0	4-8

(1) Percent by weight of total mixture.

(2) When the specified thickness of the Bituminous Base course is 2 - inches or less, either 100 percent of the aggregate shall pass the 1-inch sieve or the Contractor may request in writing to use Bituminous Concrete Binder. When the Contractor elects to use bituminous concrete binder in lieu of bituminous concrete base, all requirements for thickness and compaction (or density) will apply, the same as if bituminous concrete base was used.

TABLE B-2
THICKNESS REQUIREMENTS FOR BITUMINOUS CONCRETE STREETS

STREET CLASSIFICATION	PAVEMENT DESIGN				
	TOTAL MINIMUM THICKNESS (METHOD 1)		TOTAL MINIMUM THICKNESS (METHOD 2)		
	SURFACE INCH)	BASE (INCHES)	SURFACE (INCHES)	BASE (INCHES)	GRANULAR SUBBASE

					(INCHES)
Local	1-1/2	2 @3-3/4”	1-1/2	3-1/2	9
Sub-Collector	1-1/2	2 @4-1/4”	1-1/2	4-1/2	10
Collector	1-1/2	2 @4-3/4”	1-1/2	5-1/2	11

NOTES:

(1) Methods 1 and 2 will produce approximately the same pavement quality and strength.

(2) Selection of the method shall be at the engineer’s option.

(3) Designations pertinent to surface and binder and base courses used in this table correspond to the Kentucky Department of Highways Standard Specifications for Road and Bridge Construction as follows:

a) Surface and Binder (State Highway Designation Sections 401, 402);

b) Base (State Highway Designation Sections 401, 403) — Each layer of bituminous concrete base shall be constructed to a compacted thickness of no less than three (3) inches nor more than five (5) inches, unless otherwise directed by the engineer;

c) Granular base or granular sub-base for Method 2 shall conform to composition limits specified in Sections 3.2.3 and 3.2.4. Each layer of granular base or sub-base shall be constructed to a compacted thickness of no less than three (3) inches nor more than eight (8) inches, unless other directed by the engineer.

(4) Where streets are to serve industrial areas, the pavement thickness shall be a minimum of 11 - inches and all streets, including curb designed streets, shall have ditch lines with flow lines at an elevation lower than the street sub-grade. Streets serving commercial areas, the pavement thickness shall be a minimum of 10 - inches.

(5) Arterial streets shall be based on requirements of the Kentucky Department of Transportation.

SUPPLEMENT TO THE TECHNICAL SPECIFICATIONS FOR ASPHALT CONCRETE PAVEMENT FOR STREET AND DRIVEWAY CONSTRUCTION

1.1 PATCHING

Before resurfacing all holes shall be thoroughly cleaned, primed, and patched with bituminous concrete (Bit. Concrete Surface conforming to Ky. Standard Specs.).

1.2 CLEANING GUTTERS

All gutters shall be thoroughly cleaned of all foreign material before resurfacing. Where vegetation exists, same shall be removed and area sprayed with an approved weed killer.

1.3 REMOVAL OF ABRUPT IRREGULARITIES

When resurfacing, any abrupt projections above existing grade shall be removed so as to facilitate at least 3/4 – inches of coverage over such object.

1.4 SUBGRADE FABRIC

When specified or required by the Engineer, sub-grade fabric shall be placed over a smooth sub-grade extending a minimum of one - (1) foot beyond the base course. The fabric shall be left smooth with the edges anchored to prevent scooting during base course application. The fabric will be lapped a minimum of one (1) foot and tacked down to prevent any scooting.

1.5 PAVING FABRIC

Paving fabric shall be non-woven polypropylene fabric having the following properties: Tensile strength, either direction - mm. 50 lb; Elongation, warp direction, @ 20 lb, ins./3 ins.-0.6 max.; Elongation, fill direction, @ 30 lb, ins./3-ins.-l.0 max.; and Weight, 3-5 oz/sy (fused two sides). The fabric shall be machine placed and essentially wrinkle free. Brooming may be necessary to remove air bubbles and insure complete contact. The fabric will be overlapped a minimum of six - (6) inches. A tack coat shall be applied to the overlapped area to prevent slipping. The minimum air temperature shall be at least 50 degrees (F) for six (6) before the tack coat and fabric are to be applied. The temperature of the tack coat (AC-20) shall be a minimum of 290 degrees (F).

1.6 TRANSPORTATION OF MATERIALS

Bituminous mixtures shall be transported by truck having tight, clean, smooth metal beds that have been sprayed with a minimum amount of soap emulsion, paraffin oil, or lime solution to prevent the mixture from adhering to the beds. Each truck shall be covered with canvas or other suitable material of such size that will protect the mixture from the seasonal weather conditions.

TECHNICAL SPECIFICATIONS
EXISTING UTILITIES

1.0 EXISTING UTILITIES

The relocation of any existing utilities necessitated by the work shall be done at the sole expense of the Contractor. Any damage to any utilities shall be repaired by the Contractor at his own expense.

TECHNICALSPECIFICATIONS
STORM SEWERS
SCOPE OF WORK

1.0 WORK INCLUDED

The Contractor shall furnish all material, equipment, tools, and labor necessary to do the work as shown on the contract drawings, and unload, haul, and distribute all pipe, and accessories. The contractor shall also remove the pavement as stipulated; excavate the

trenches and pits to the required dimensions, construct and maintain all bridges for traffic control; sheet, brace, and support the adjoining ground or structures where necessary; handle all drainage or ground water; provide barricades, guards, and warning lights, lay the pipe, backfill and consolidate the trenches and pits, remove surplus excavated material; clean the site work, and maintain the street or other surfaces over the trenches as specified.

1.1 2.0 MATERIALS

2.0.1 Storm Sewer Pipe shall meet the following requirements:

Aluminized Steel Type 2 Ultra Flo Pipe
Pipe Specification - AASHTO M-36 Type IR
Aluminized Coating - AASHTO M-274
Connecting Bands - AASHTO M-36 IR including H- 12 hugger band with 7/8" diameter O-Ring gasket. Bands having a diameter of 48 – inches and smaller shall have one bolt, bar and strap connector. Bands larger than 48 – inches shall have two - (2) bolt bar and strap connectors per band.

Perma - Loc Polyvinyl Chloride Large Diameter Helical Solid T Ribbed Pipe
Pipe Specification - AASHTO M-304 M-89 (18"- 48")
Joints - Intregal Bell B Gasketed Joint
Gasket - ASTM F477
Installation - ASTM D2321

Polyvinyl Chloride Pipe
ASTM D3034 - SDR 35 (4" - 15")
Pipe Specification - ASTM F679 (18" - 27")
Joints - ASTM D3212
Gasket - ASTM F477
Installation - ASTM D2321

Polyvinyl Chloride Pipe
Material Specification - ASTM F-794 Series 46 (18"- 48")
Joints - ASTM D3212
Gasket - ASTM F-477
Installation - ASTM D2321

High Density Polyethylene Pipe (N-12 Pipe) - (up to 30")
Material Specification - ASTM D3350; Pipe - ASTM F2306

3. 0 CONSTRUCTION

3.0.1 No pipe shall be laid until the location has been staked by the Engineer, if required.

3.0.2 A trench shall be excavated wide enough to allow for proper placement and compaction of the selected materials in the haunching area. The wall of the trench shall be as nearly vertical as possible. If rock or other unyielding material is

encountered, it shall be excavated and foundation prepared as required under Ky. Dept. of Transportation, Bureau of Highway, Standard Specifications. In case unstable foundation is encountered at the established grade, the unstable material shall be removed and replaced with a suitable material to a width and depth and in a manner that will provide a uniform and firm foundation. Manholes or junction boxes may be precast concrete or masonry. Boxes shall be sized to provide the space of a standard precast manhole and on concrete footing slab eight (8) inches thick and walls shall be no less than eight (8) inches thick.

3.0.3. In all of the operations including the pipe placement, jointing, bedding and backfilling, extreme care shall taken by the contractor to ensure that the pipe is not damaged during unloading or placement on the bed or during compaction of the backfill. Any pipe culvert which is not in true alignment and grade or which shows undue settlement after placement or is otherwise damaged shall be removed and replaced without extra compensation.

3. 0.4. Basis of payment shall be at the unit price per foot bid, complete and in place.

4. 0 BEDDING AND BACKFILL

4.0.1. Bedding - The bedding directly beneath the pipe is required to bring the trench bottom up to grade. The purpose of the bedding is to provide uniform longitudinal support of the pipe. The bedding shall be a maximum six (6) – inches in thickness stable of a well graded granular material.

4.2. Backfilling – The initial backfill shall be comprised of Class II coarse sands and gravels with maximum particle size of 1-1/2 inches to include various graded sands and gravel containing small percentages of fines, generally granular and non-cohesive soils. The maximum loose lift thickness shall be eight - (8) inches. Adequate compaction shall be obtained by hand or visual observation behind other acceptable compaction equipment. A controlled moisture content and a well graded backfill may be required to limit the compaction effort while maintaining the original shape of the pipe. The initial backfill shall extend at least 12 – inches above the top of the pipe.

For yard areas, the contractor shall backfill the remaining portion of the trench for to 92% Standard Proctor. For areas within the public right-of-way, the density of compaction (See the Embankment specification for both Concrete and Asphalt Streets) shall comply with the current County/City standards using industry standard mechanical and/or pneumatic compaction equipment. Compaction test reports, where required, shall be submitted to both the contractor and engineer.

When backfilling with bank run gravel as required by the Engineer, the backfilling compaction shall all be performed by tampers or rammers. Mechanical tamping shall be required over pipe where the street pavement is to be replaced immediately. When backfilling with Controlled Density Backfill (CLSM), the Contractor shall comply with all KYTC Specifications and the plans and specifications herein.

Whenever, in the opinion of the Engineer it is necessary, he may require the Contractor to use a combination of any of the above outlined methods for proper compaction of the backfill in the trenches.

Before final acceptance, the Contractor will be required to level off all trenches where backfill material has been plied up or to bring the trench up to the level of the surrounding street, roadway, or terrain, where necessary. All excess earth or other materials shall be removed from the streets, roadways and private property. The Contractor shall provide extra material necessary for filling the trench at no extra cost.

5. PAYMENT

5.1. Payment will be made at the unit price per foot bid, complete and in place.

CATCH BASINS & JUNCTION BOX

1.0 SCOPE OF WORK

1.0.1. The Contractor shall furnish all materials, equipment, and labor necessary to construct double gutter curb inlet catch basins, manholes, yard catch basins, and detention structures as shown on the attached plans and detailed drawings. Catch Basins to be poured or precast concrete only.

2.0 MATER1ALS

2.0.1. All concrete shall comply with the paving specifications, where applicable.

3.0 PAYMENT

3.0.1. Payment will be made at the unit price bid each, complete and in place, with frame and grating.

TRAFFIC CALMING

1.0 SCOPE OF WORK

1.0.1. The Contractor shall furnish all materials, equipment, and labor necessary to remove and reconstruct existing asphalt “speed humps”, a “narrowing center island”, a “speed table” or other devices in accord with the Institute of Traffic Engineers (ITE) minimum standards as shown on the detailed drawings.

2.0 MATER1ALS

2.0.1. All asphalt and/or concrete shall comply with the street paving specifications.

3.0 PAYMENT

3.0.1. Payment will be made at the unit price bid for each speed hump or narrowing center island complete and in place, with industry standard paint striping for warning motorists for such controls.

TRAFFIC LANE PAVEMENT MARKINGS

1.1 SCOPE OF WORK

1.0.2. The Contractor shall furnish all materials, equipment, and labor necessary to apply traffic lane pavement markings as shown on the plans or bidder sheets for each street in accord with the Manual on Uniform Control Devices (MUTCD) minimum standards.

2.0 MATERIALS, COLORS, WIDTHS AND LOCATIONS

2.0.1. All traffic lane pavement markings shall comply with the Manual on Uniform Control Devices (MUTCD) and/or the Kentucky Transportation Cabinet / Department of Highways Standard Specifications for Road and Bridge Construction, latest addition.

3.0 PAYMENT

3.0.1. Payment will be made at the unit price bid for each pavement marking type based upon the length in lineal feet of paint striping applied on the pavement per the applicable industry standards for warning motorists for such controls.

CITY OF UNION 2021 STREET REPAIRS PROGRAM

GENERAL CONDITIONS

1. DEFINITIONS AND MEANING OF TERMS:

Whenever in these specifications and contract documents the following terms or pronouns referring to them are used, the intent and meaning shall be interpreted as follows:

(a) The Contract or Agreement shall mean the contract executed by the Owner and the Contractor, of which these General Conditions form a part.

(b) The terms Owner (the city of Union, Kentucky) and Contractor shall mean the respective parties to the Contract.

(c) The term Engineer or City Engineer shall mean Barry J. Burke PE PLS, 9620 Soaring Breezes, Union, Kentucky 41091-1479, or his duly authorized representative.

2. NOTICE AND SERVICE THEREOF ON CONTRACTOR:

The address given in the Proposal upon which this Contract is founded and the Contractor's office at or near the site of the work are hereby designated as places to either of which notices, letters and other communications to the Contractor shall be certified, mailed or delivered. The delivering at the above-named places or depositing in a postpaid wrapper directed to the first named place, in any post office box regularly maintained by the Post Office Department, of any notice, letter, or other communication to the Contractor and the date of said service shall be the date of such delivery or mailing. The first named address may be changed at any time by an instrument in writing, executed and acknowledged by the Contractor and delivered to the Owner. Nothing herein contained shall be deemed to preclude or render inoperative the service of any notice, letter, or other communication upon the Contractor personally.

3. CONTRACTOR:

It is understood and agreed that the Contractor has satisfied himself as to the nature and location of the work, the topography of the ground, the character of equipment or other facilities needed for the proper prosecution of the work, the general and local conditions, and all other matters which in any way affect the work under the Contract.

No verbal statement of any officer, agent, employee of the Owner, either before or after the execution of this Contract, shall affect or modify any of the terms or obligations herein contained. Only one (1) Contractor is to sign this Contract. For convenience, the specifications may be divided into separate headings or divisions to cover the various trades represented in the work, and wherein "Contractors", such as "Electrical

Contractor', "Plumbing Contractor" and/or other "Contractors" as referred to, it has been for convenience only.

4. ASSIGNMENT OF CONTRACT:

The Contractor will not be permitted to assign his Contract or any portion thereof, nor may any monies due that become due there under, without the written approval of the Owner.

5. SUBLETTING CONTRACT:

The Contractor shall not sublet, sell, transfer, assign or otherwise dispose of any portion of his Contract to any individual, co-partnership, or corporation without the prior written consent of the Owner.

6. CONTRACT DOCUMENTS:

The Notice to Bidders, Instruction to Bidders, General Conditions, Special Conditions, Technical Provisions, Proposal, Contract, Contract Bond, Plans and Details and Standard Specifications referred to in the documents shall all be binding on the Contractor and shall be as fully a part of the Contract as if thereto attached or therein repeated in words or numbers.

7. FAILURE TO COMPLETE WORK ON TIME:

Should the Contractor fail to complete the work within the time, where specified in his Proposal and/or Contract, if specifically required taking into consideration all reasonable situations, there will be deducted by the Owner "Liquidated Damages" in the amount per day as set out in the said Proposal and/or Contract. The amount of "Liquidated Damages" shall in no event be considered as a penalty or otherwise than an agreed "Liquidated and adjustment damage" to reimburse by reason of the Contractor's failure to complete the work within the specified time. A log indicating working days will be kept jointly by the City of Union and the Contractor.

Liquidated damages shall be $500.00 per working day.

This paragraph shall not apply when the amount of liquidated damage to be assessed per day is not set out in the Proposal and/or Contract.

8. CONTRACT TIME — DELAYS AND EXTENSIONS:

The number of days in which the Contractor shall fully perform the proposed improvement has been set out in the Proposal and/or Contract. In arriving at any credit due the Contractor for an extension of time on the Contract, the Owner, upon recommendation of the Engineer, will allow such credit as in its judgment is deemed

equitable and just for all delays occasioned by any act or failure to act on its part or caused by forces beyond the Contractor's control. Additional time will also be allowed the Contractor to cover approved overruns or additions to Contract in the same proportion that the said overrun or addition in monetary value bears to the original Contract amount.

9. PROGRESS OF THE WORK:

The Contractor shall give his personal superintendence to the work or have a competent superintendent, satisfactory to the Owner and the Engineer, on the work at all times during the progress, with full authority to act for him. The Contractor shall also provide an adequate staff for the proper coordination and expediting of his work.

The Contractor shall be prepared to start work as stipulated in the Proposal, but not until he has received official notice from the Engineer to do so. The work shall progress in a manner and with sufficient materials, equipment and labor as is considered necessary to ensure completion within the time set forth in the Contract. The Contractor shall not suspend the work or any portion of it without the written consent of the Owner.

10. CHARACTER OF WORKMEN AND EQUIPMENT:

The Contractor shall employ only workmen skilled in their various duties and shall dismiss, at the request of the Engineer, any person employed in, about or upon the work, which misconducts them or is incompetent or negligent in the performance of duties assigned to him. The Contractor shall furnish such equipment and employ such labor as is considered necessary by the Engineer for the proper performance of the work.

11. DEFECTIVE MATERIALS AND WORKMANSHIP:

Materials brought on the work which are not in accord with the specifications shall be removed from the site of the work by the Contractor at his own expense, and so disposed of that there will be no probability of their being used on the work or in the construction.

Upon notice from the Engineer, all defective workmanship shall be immediately remedied by the Contractor, at his own expense.

If the Contractor fails to remove defective materials or to correct defective workmanship within a reasonable time, fixed in the notice from the Engineer, the Owner may remove them and/or correct the work and charge all the expense in the connection therewith to the Contractor.

12. GUARANTEE:

All machinery and equipment and fittings of every kind furnished under this Contract shall be free from defects of manufacture, materials and/or workmanship. The Contractor agrees herein under to replace materials and workmanship found inherently defective

within twelve (12) months after completion of the work. In cases where such defects shall be caused by forces beyond the Contractors control, as determined by the Engineer, the replacements will not have to be made by the Contractor.

13. ENGINEER'S STATUS:

The Engineer shall have general supervision and direction of the work. He shall have authority to stop the work whenever such action may be necessary, to insure the proper execution of the contract. He shall also have authority to reject work and materials which do not conform to the Contract, to direct the place or places where work shall be progressed, and to have the Contractor's force increased or decreased as in his judgment where required. The Engineer shall decide all engineering questions which arise during the execution of the work.

The Engineer shall make decisions on all claims in behalf of the City or the Contractor, and on all other matters relating to the progress of the work in the interpretation of the Contract. All such decisions of the Engineer shall be final.

14. LINES & GRADES

Where required, the Engineer will locate all control points from which the Contractor can proceed and will provide suitable references from which lines and grades can be established. The construction work shall be performed in strict conformity with such points and instructions.

Where required, the Contractor shall use proper precaution to preserve bench-marks and all Engineers stakes or other markings. In case of willful or careless destruction, the contractor shall be charged with the resulting expense of resetting points and stakes.

15. INSPECTION OF WORK:

The Engineer and/or his representatives shall at all times have full access to the work and to all materials intended for use in the work, as well as to plants where such materials are produced and the Contractor shall provide facilities for such access and inspection. If any work should be covered up without the approval or consent of the Engineer, the work shall be uncovered for inspection at the Contractor's expense, where directed by the Engineer.

16. BID DOCUMENTS/SPECIFICATIONS:

The Contractor shall keep one (1) set of the Bid Documents, Plans and/or Specifications on-site of the work. This set shall be kept current by addition of all approved changes, addenda and amendments thereto.

The Bid Documents, Plans and/or Specifications are intended to be explanatory to each other; but, should any discrepancy appear or any misunderstanding arise as to the import of anything contained in either, the decision of the Engineer shall be final and binding on the Contractor.

Any corrections of errors or omissions in the Bid Documents, Plans and/or Specifications may be made by the Engineer when such corrections are necessary for the proper fulfillment of their intention as construed by him.

All work or materials shown within Bid Documents, Plans and Specifications and not mentioned in the Bid Quantity Sheet, or any work mentioned in the Bid Quantity Sheet and not shown on the details, shall be furnished, performed and done by the Contractor as if the same were both mentioned in the specifications and shown on the plans.

Should the Contractor in preparing his bid find anything necessary for the construction of the project that is not mentioned in the Bid Documents, Plans and Specifications, or any discrepancy, he shall notify the Engineer so that such items may be included. Should the Contractor fall to notify the Engineer of such items, it will be assumed that his bid included everything necessary for the complete construction in the spirit and intent of the designs shown.

In case of discrepancy, figure dimensions shall govern over scale dimensions, large scale details shall govern over small-scale drawings, plans shall govern over specifications, and detailed technical specifications shall govern over general specifications.

17. SHOP DRAWINGS:

When requested by the Engineer, shop drawings shall be furnished by the Contractor to the Engineer in the proper form and manner. Unless otherwise set out, all shop drawings shall be furnished in duplicate of five (5) copies. It shall be clearly understood by the Contractor that the Engineer will examine the shop drawings for general design only, and that his approval stamped on such drawings shall be approval only for general design and the Contractor shall in all cases be held responsible for detailed dimensions. In case of discrepancy between shop drawings and the requirements of the plans and specifications and contract documents, the provisions of the plans and specifications and contract documents still prevail even though the shop drawings have been approved by the Engineer, unless the conflict therein has been specifically waived in writing by the Engineer.

18. INSPECTION AND TESTS:

The extent of and requirements for the inspection and testing of materials, workmanship, machinery and equipment, is set out in the specifications. Bureaus, laboratories and/or agencies selected by the Contractor for inspection and testing service shall be approved by the Engineer.

The cost of such inspection and testing service in connection with materials, workmanship, machinery and equipment furnished by the Contractor shall be borne by the Contractor. The Owner will pay for any inspection and testing service required in connection with materials, workmanship or equipment furnished by the Owner.

The Contractor shall furnish at his own expense, including packing and delivery charges, all samples of materials furnished by him that are necessary for testing purposes.

19. PERMITS AND CODES:

Unless otherwise set out in the specifications, the Contractor shall make application for, obtain and pay for all licenses and permits, and shall pay all fees and charges in connection therewith. The Contractor shall be required to comply with all state or municipal ordinances, laws and/or codes insofar as the same are binding upon the Owner.

The intent of this Contract is that the Contractor shall base his bid upon the plans and specifications, but that all work installed shall comply with all applicable codes and regulations or as amended by any waivers or modifications.

Before installing the work, the Contractor shall examine the Bid Documents, Plans and Specifications in compliance with applicable codes and regulations bearing on the work, and shall immediately report any discrepancies to the Engineer. Where the requirements of the Bid Documents, Plans and Specifications fail to comply with the applicable code or regulation, the Owner will adjust by Change Order the Contract to conform to the code or regulation (unless waivers in writing covering the differences have been granted by the governing authority), and shall make appropriate adjustment in the Contract price. Should the Contractor fail to observe the foregoing provisions and install work at variance with any applicable code or regulation as may be amended by waivers (notwithstanding the fact that such installation is in compliance with the plans and specifications), the Contractor shall remove such work without cost to the Owner, but a Change Order will be issued to cover only the excess cost the Contractor would have been entitled to receive if the change had been made before the Contractor commenced work on the items involved.

20. STANDARD SPECIFICATIONS:

Where standard specifications such as the standard specifications of the American Society of Testing Materials, the American Standard Association, The American Association of State Highway Officials, the Civil Aeronautics Administration, the Federal Specifications, etc., are referred to in the specifications and contract documents and in Bid Documents/Specifications, said references shall be construed to mean the latest amended and/or revised versions of the said standard or tentative specifications.

21. ALTERATION IN PLANS:

The Owner reserves the right to make such alteration in the Plans or Details or in the character of the work as may be considered by the Engineer necessary or desirable from time to time to complete the project in an acceptable manner; provided that, if alterations are made, the general character of the work as a whole is not changed thereby. Such alterations shall not be considered as a waiver of any condition of the contract nor to invalidate any of the provisions nor to release the bond thereof.

22. CHANGES IN THE WORK:

The Owner may make changes in the work of the Contractor by making alterations therein or by making additions thereto or by omitting work there from without invalidating the Contract and without relieving or releasing the Contractor from any guarantee given by him pursuant to the Contract provisions, and without affecting the validity of the guaranty bonds. All such work shall be executed under the conditions of the original contract.

Except in an emergency endangering life or property, no change shall be made by the Contractor unless pursuance of a written order from the Owner, countersigned by the Engineer, authorizing the change and no claim for an adjustment of the Contract Price or time shall be valid unless so ordered.

Should the Contractor encounter or discover during the progress of the work sub-surface or latent conditions at the site materially differing from those shown on the plans or indicated in the specifications, the attention of the Engineer shall immediately be called to such conditions before they are disturbed. If the Engineer finds that they so materially differ, he shall at once make changes in the plans or specifications as he may find necessary, and any adjustment in the Contract Price as provided herein.

23. CLAIMS FOR EXTRA COST:

If the Contractor claims that any instructions by the Plans or Specifications or otherwise involve extra cost or extension of time, he shall, within ten (10) days after the receipt of such instructions, and in any event before proceeding to execute the work, submit his protest thereto in writing to the Engineer, stating clearly and in detail the basis of his objections. No such claim shall be valid unless so made.

Claims for additional compensation for extra work, due to alleged errors in spot elevations, contour lines or bench marks, will not be recognized unless accompanied by certified survey data, made prior to the time the original ground was disturbed, clearly showing that errors exist which resulted or would result in handling more material or

performing more work, that would be reasonable estimated from the plans and topographical maps issued.

Any discrepancies which may be discovered between actual conditions and those represented by the topographical maps and plans shall at once be reported to the Engineer, and such work shall not proceed except at the Contractor's risk, until written instructions have been received by him from the Engineer.

If, on the basis of the available evidence, the Engineer determines that an adjustment of the Contract Price or time is justifiable, the procedure shall then be as provided herein for "Changes in Work".

By execution of this Contract, the Contractor warrants that he has visited the site of the proposed work and filly acquainted himself with the conditions existing there relating to construction and labor, and that he fully understands the facilities, difficulties, and restrictions attending the execution of the work under the Contract. The Contractor further warrants that he has thoroughly examined and is familiar with the drawings, specifications, and all other documents comprising the Contract. The Contractor further warrants that by execution of this Contract his failure when he was bidding on the Contract to receive or examine any form, instrument or document or to visit the site and acquaint himself with conditions existing there, in no way relieves him from any obligation under the Contract and the Contractor agrees that the Owner shall be justified in rejecting any claim based on facts regarding which he should have been on notice as a result thereof.

24. EXTRA WORK:

The Contractor shall perform all extra work ordered in writing by the Engineer and the value of such work shall be determined in one or more of the following ways:

(a) Such work will be paid for on a basis of the actual cost of all the items of labor, on the job supervision, materials, use of equipment and insurance plus fifteen (15%) percent which will cover the Contractor's general supervision, overhead, and profit.

(b) By estimate and acceptance in a lump sum.

(c) By unit prices named in the Contract or subsequently agreed upon.

The above provided, however that the cost of all extra work shall be determined in advance of authorization by the Engineer and approved by the Owner.

All such extra work shall be executed under the conditions of the original Contract, except that any claim for extension of time shall be adjusted according to the proportionate increase or decrease in the final total cost of the work.

No extra work in any case shall be done except upon an order from the Engineer; and no claim on the part of the Contractor for pay for extra work shall be recognized unless so authorized by the Engineer.

25. LANDS FOR WORK:

The Owner shall provide the lands from private property the right of access to same, except that the Contractor shall provide land required for storage of his materials and shall provide land for erection of any temporary construction facilities for the storage of his equipment. The Contractor will construct at his own expense any temporary roads or bridges necessary for his own use and also furnish his own water supply unless otherwise specifically set out herein.

26. SEPARATE CONTRACTS:

The Owner reserves the right to let other contracts in connection with the work. The Contractor shall afford other Contractors reasonable opportunity for ingress and egress and storage of their materials and the execution of their work, and shall properly connect and coordinate his work with theirs. The respective right of various interests involved shall be established by the Engineer to secure proper completion of the various portions of the work.

27. CITY'S RIGHT TO DO WORK:

If the Contractor should neglect or fail to construct the work properly or fail or refuse to perform any provision of the Contract, the City after ten (10) days written notice to the Contractor, may without prejudice to any other remedy he may have made good such deficiencies and may deduct the cost thereof from any monies due or which may thereafter become due to the Contractor.

28. SUSPENSION OF WORK:

The Engineer or Owner shall have the authority to suspend the work in whole or in part by giving five (5) days notice to the Contractor in writing. The Owner shall reimburse the Contractor for the expenses incurred by him in connection with the work under this contract as a result of such suspension if the suspension of the work is caused through no fault of the Contractor himself.

29. RIGHT OF OWNER TO TERMINATE CONTRACT:

If the Contractor fails to begin the work under the Contract within the specified time or fails to perform the work with sufficient workmen and equipment with sufficient materials to ensure the prompt completion of said work within the specified time, or perform the work improperly or neglect or refuse to remove materials or perform anew such work as shall be rejected as defective or unsuitable or shall be stopped by a Court

Order resulting from injunctive action or shall discontinue the prosecution of the work, or if the Contractor shall become insolvent or be declared bankrupt or commit any act of bankruptcy or insolvency or allow any final judgment to stand against him unsatisfied for a period of five (5) days or shall fail to refuse to remove within forty-eight (48) hours after receipt of proper notice, any employee or person engaged in work under the Contract, or shall make an assignment for the benefit of creditors or from any other cause whatsoever shall not carry out the work in an acceptable manner, the Owner shall give notice in writing to the Contractor and his Surety of such delay, neglect or default, specifying the same, and if the Contractor within a period often (10) days after such notice shall not proceed in accordance therewith, then the Owner shall upon written certificate from the Engineer of the fact of such delay, neglect or default, and the Contractor's failure to comply with such notice, have full power and authority without violating the Contract to terminate the Contractor's right to proceed with the work, take over the prosecution of the work of said Contractor, to appropriate or use any and all materials and equipment on the ground as may be suitable and acceptable and may enter into an agreement for the completion of said Contract according to the terms and provisions thereof, and use other methods as in the Owner's opinion shall be required for the completion of said Contract in an acceptable manner. All costs and charges incurred by the Owner, together with the costs of completing the work under Contract shall be deducted from any monies due or which may become due said Contractor. In case the expense so incurred by the Owner shall be less than the sum which would have been payable under the Contract, if it had been completed by said Contractor, then the Contractor shall be entitled to receive the difference and in case such expense shall exceed the sum which would have been payable under the Contract, then the Contractor and the Surety shall be liable and shall pay to the Owner the amount of said excess.

30. USING COMPLETED PORTION OF WORK:

The Owner shall have the right to take possession of and use any completed portion or portions of the work even though the time for completing the entire work or such portions may not have expired. The possession and use by the Owner shall not be deemed an acceptance of any work not completed in accordance with the Contract. If such prior use increases the cost of or delays the work, the Contractor shall be entitled to such extra compensation or extension of time or both as the Engineer may determine. The use by the Owner of any portion of the work shall release the Contractor from his Builder's Risk Insurance such portion used.

31. OWNER'S RIGHT TO WITHHOLD PAYMENTS:

In order to protect itself from loss, the Owner may withhold payment which would otherwise be due the Contractor on account of:

(a) Failure to remedy defective work or remove defective materials from the job;
(b) Properly certified claims filed against Contractor;
(c) Expiration of contract time;

(d) For other causes which in the opinion of the Engineer would justify the Owner in withholding such payment or payments.

32. DEDUCTIONS FOR UNCORRECTED WORK:

If the Engineer and Owner deem it inexpedient to correct work injured or not done in accordance with the Contract, an equitable deduction from the contract price shall be made thereof.

33. ACCIDENT PREVENTION:

The Contractor shall exercise proper precaution at all times for the protection of persons and property. The safety provisions of applicable laws, building and construction codes shall be observed and the Contractor shall take or cause to be taken such additional safety measures as the Engineer may determine to be reasonably necessary. Machinery equipment and all hazards shall be guarded in accordance with the safety provisions of the Manual of Accident Prevention in Construction published by the Associated General Contractors of American, to the extent that such provisions are not in contradiction with the applicable laws.

34. SANITARY FACILITIES:

The Contractor shall furnish, install and maintain ample sanitary facilities for the workmen. As the needs arise, enclosed temporary toilets in sufficient number shall be placed as directed by the Engineer. Permanent toilets, installed under this Contract shall not be used during construction. Drinking water shall be provided from a proved safe source so piped or transported as to be kept clean and fresh and served from single service containers or other satisfactory types.

35. PROTECTION OF WORK AND PROPERTY:

The Contractor shall comply with all laws, ordinances, rules and regulations bearing on the conduct of the work. He shall maintain adequate protection for all the work from damage and shall protect the Owner's property from injury or loss in connection with the performance of this Contract. He shall make good to the Owner any such damage, injury or loss.

The Contractor shall provide Builder's Risk Insurance against fire, explosion, flood and storm in all cases where there is any considerable risk from such causes, and all work shall be at his risk until final acceptance or use of same by the Owner.

36. RESPONSIBILITY FOR DAMAGE CLAIMS, ETC:

The Contractor shall indemnify and save harmless the Owner and all of its officers, agents and employees from all suits, actions or claims of any character, name and

description brought for or on account of any injuries or damages received or sustained by any person, persons or property by or from the Contractor or by or in consequence of any neglect in safeguarding the work or through the use of unacceptable materials used in construction, or by or on account of any act of omission, neglect or misconduct of the said Contractor or by or on account or any claims or amounts recovered from any infringement of patent, trademark or copyright; or from any claims or amounts arising or recovered under any law, ordinance, order or decree and so much of the money due the said Contractor under and by virtue of his Contract, as shall be considered necessary by the Owner may be retained for the use of the Owner or in case no money is due, his surety shall be held until such suit or suits, action or actions, claim or claims for injuries or damages as aforesaid, shall have been settled and suitable evidence to that effect furnished to the Owner.

37. ROYALTIES & PATENTS:

The Contractor shall pay for all royalties and license fees and shall defend all suits or claims for infringements of any patent rights and shall save the Owner harmless from loss on account thereof, except when the Owner shall specify a particular process or the product of a particular manufacturer or manufacturers; then the Owner shall be responsible for such infringements of patents and license fees on such processes or products as he may specify.

38. NON-REBATE OF WAGES:

The Contractor shall comply with the regulations, ruling and interpretations of the Secretary of Labor of the United States pursuant to the Anti-Kickback Act (Title 18, U.S.C. Sec. 874 and Title 40, U.S.C., Sec. 276c) which makes it unlawful to induce any person employed in the construction or repair of public buildings or public works to give up any part of the compensation to which he is entitled under his Contract of employment; and, the Contractor agrees to insert a like provision in all subcontracts hereunder.

39. ACCEPTANCE & FINAL PAYMENT:

Upon notice that the work is ready for final inspection and acceptance, the Engineer shall make such inspection and when he finds the work acceptable under the Contract fully performed, he shall promptly issue a “Final Certificate” over his signature stating effect that the work provided for in the Contract has been satisfactorily completed and is accepted.

The balance due the Contractor, including the percentage retained during the construction period, shall be paid to the Contractor by the Owner; this final payment will be on or about thirty (30) days after date of the Engineer’s “Final Certificate”.

Before issuance of "Final Payment", the Contractor shall submit satisfactory evidence to the Owner that all payrolls, material bills, and other indebtedness connected with the work have been paid, when requested.

In making "Final Payment" to the Contractor, all charges for liquidated damages or other charges, as are provided for in the Contract and these Specifications, that may be due the Owner shall be deducted.

40. CONTRACTOR'S FINAL RELEASE:

Before the Owner pays to the Contractor his final payment on the work, the Contractor will be required to sign a final release. This final release shall be notarized and shall state that all claims against the Owner on the Contractor's part have been met in full; it shall further state that all accounts for labor performed, accounts for materials, liens, judgment, and claims of every nature against the Contractor have been satisfied by him. It shall further state any obligation whatsoever in connection with work which may be presented or suits arising there from after the settlement are to be borne by the Contractor. In case the Contractor is unable to settle any claim that may be in dispute or litigation, the Owner may allow him to furnish a proper bond to indemnify the Owner against the lien and release the final estimate to him.

It is understood that the Contractor is to guarantee to the Owner all completed construction within twelve (12) months from date of final release and will replace such defective construction without cost to Owner.

41. FINAL CLEANING-UP:

The work will not be considered as completed nor final payment made until all final cleaning up has been done by the Contractor in a manner satisfactory to the Engineer.

42. BID PRICES TO INCLUDE INCIDENTAL WORK:

The bid prices will cover and include the cost and expense of all contingents, accessories and incidental work and material required to complete the improvement. This work includes replacement of services, pavement, fences or any other objects which are damaged or disturbed in the process of construction on this work. It shall also include where necessary, watchmen, flagmen, barricades, red lights, construction joints, finishing and curing concrete, dust prevention, maintaining traffic, controlling storm water and siltation, providing access to property and other incidents which occur on a normal construction job.

43. PREVAILING RATE OF WAGES:

The prevailing rate of wages to be paid laborers, workmen and mechanics have been determined and fixed by the Department of Industrial Relations of the Commonwealth of Kentucky and Contractor shall so conform, when required by state statute.

44. CASH ALLOWANCES:

The Contractor shall include in the Contract sum all allowances named in the contract documents and shall cause the work so covered to be done by such Contractors and for such sums as the Engineer may direct. The contract sum shall be adjusted in conformity therewith. The Contractor declares that the contract sum include such sums for expenses and profit on account of cash allowances as he deems proper. No demand for expenses or profit other than those included in the contract sum shall be allowed. The Contractor shall not be required to employ for any such work, persons against whom he has reasonable objections.

45. PHOTOGRAPHIC HISTORY OF PROJECT:

When requested, it is the Contractor's responsibility to keep a photographic history of the project. At a minimum, the contractor should use video tape, (in a media form acceptable to the City, i.e., VHS, CD, etc.), the entire project area and submit the media to the City Clerk for approval prior to the start of construction. This media may be used as a resource if issues/conflicts arise with homeowners during or after construction.

CITY OF UNION 2021 STREET REPAIRS PROGRAM

SPECIAL CONDITIONS

1. SCOPE OF WORK:

The work to be performed under this Contract consists of furnishing all materials, equipment, supplies, labor and transportation, including fuel, power, water, etc. and performing all work required within the Contract, in strict accordance with the plans and specifications, all of which are made a part herein and including such details as may be furnished by the Engineer from time to time during the progress of the work in further explanation of said plans or change orders.

2. PROJECT SIGNS AND PROPERTY OWNER NOTIFICATIONS:

The Contractor is required to provide any signs as requested by federal, state or local agencies. The Contractor shall notify the city at least two-(2) weeks before any awarded work on a public street is scheduled to start. At least one-(1) week before the actual start of work, the city will provide and post legible notification signage(s) along streets in advance of public improvement projects advising motorists of a project soon to start. The signage(s) will include a city contact phone number and the city's website, which will identify in more detail the general location and extent of the work to be included in the project. The Contractor is also responsible for notifying property owners abutting and impacted by the project via no parking signage or other written notes to residents in an acceptable fashion. Such notification shall include a general schedule of the work to ensure general cooperation with owners regarding removing vehicles from the street pavement, and other repair work to driveway aprons, sidewalks, etc. preventing owners from use on a temporary basis. The Contactor's notification shall also include any further details regarding any street or drainage repairs, milling operations, barricades, opening to traffic and/or final resurfacing, where applicable. The Contractor is responsible for providing the City with a copy of the Contractor's notification to the property owner or owners to help resolve any problems as defined within the contract documents.

3. FIELD OFFICE:

No field office is required.

4. EXISTING UTILITIES:

Special precaution shall be taken by the Contractor to avoid damage to existing overhead and underground utilities owned and operated by the city or other public or private utility companies.

With particular respect to existing underground utilities, all available information concerning their location has been shown on the drawings. While it is believed that the locations shown are reasonably correct, neither the Engineer, nor the City can guarantee the accuracy or adequacy of this information.

Before proceeding with the work, the Contractor shall confer with all public or private companies, agencies or departments that own and operate utilities impacting the construction work. The purpose of this conference or conferences shall be to: a) notify said companies, agencies or departments of the proposed construction schedule; b) verify the location of and possible interference with the existing utilities that are shown on the plans; c) arrange for necessary suspensions of service, if any; and d) make arrangements to locate and avoid interference with all utilities (including house connections) not shown on the plans. The City Engineer and the City have no objection to the Contractor arranging for said utility companies, agencies, or departments to locate and uncover their own utilities. However, in so far as the City is concerned, the Contractor shall bear the entire responsibility for locating and avoiding or repairing damage to said existing utilities.

Where existing utilities or other underground structures are encountered, they shall not be displaced or physically impacted unless necessary, and if damaged or impacted, they shall be repaired or replaced in as good or better condition than found as quickly as possible. All such utilities that are so damaged or impacted shall be replaced at the Contractor's expense unless in the opinion of the City Engineer or other utility owners, such damage was caused through no fault of the Contractor.

It is expected that the Contractor will be diligent in his efforts and use every possible means to locate existing utilities. Any claims for unavoidable damage based on improper or unknown locations will be thoroughly examined in the light of the Contractor's efforts to locate the said utilities or obstructions prior to beginning construction.

5. HOURS OF WORK & RECORDS:

The Contractor shall conform to all provisions of the Kentucky Revised Statues 337.510 to 337.990 relative to wages and hours. This shall include full and accurate payroll records covering all disbursements of wages to employees as covered in KRS 337.520. Wages will be defined in the Wage Information Section, if applicable.

Hours of work shall be as set out in KRS 337.540 that is not more than eight (8) hours in one (1) calendar day no more than forty (40) hours in one (1) week except in case of emergency caused by fire, flood or damage to life or property.

Any laborer, workman, mechanic, helper, assistant or apprentice working in excess of eight (8) hours per day or 40 hours in one (1) week, except in case of emergency, shall be paid not less than 1-1/2 times the "Prevailing Wage Rate" as set out hereinafter.

6. WORK ON PRIVATE PROPERTY:

In connection with work performed on private property, the Contractor shall take every precaution to avoid damage to the property owner's buildings, grounds and facilities. Fences, hedges, shrubs, mailboxes, driveway aprons, etc., within the construction limits including the public rights-of-way, shall carefully be removed, preserved and replaced when the construction is completed. All grassed areas shall be graded and seeded as set forth in "Seeding" section. Grassed areas other than lawns shall be graded, fertilized and seeded, when construction is

completed. When construction is completed, the private property owner's facilities and grounds shall be restored to as good or better condition than found as quickly as possible at the Contractor's expense.

Large trees or other facilities within the actual construction limits that cannot be preserved and replaced shall be removed by the Contractor, but the City will assume the responsibility for settling with the property owner for the loss of said trees or facilities. The trees and facilities, however, as designated on the plans and the Contractor shall be solely and entirely responsible for any damage to trees or facilities not so designated.
Foundations adjacent to where an excavation is to be made below the bottom of the foundation, shall be supported by shoring, bracing or underpinning as long as the excavation shall remain open, and the Contractor shall be held strictly responsible for any damage to said foundations.

It may be necessary for the protection of buildings and foundations to leave such shoring in place, which becomes the Contractor's responsibility for this protection of building, etc., but any shoring, if required is to be paid for at cost of material (as measured).

7. WATER:

All water used on the project shall be furnished by the Contractor.

8. TESTING OF MATERIALS AND EQUIPMENT:

A. Responsibility: Testing of all materials, products and equipment for which the specifications require tests to determine compliance with the plans and specifications, shall be accomplished by the Contractor at his own expense, except that the expense of the Resident Engineer or Inspector and tests specified in the technical provisions of these specifications to be performed by the City will be at the City's expense. The Contractor shall be responsible for the compliance of such materials, products, and equipment with the requirements of the specifications. Whenever such tests are made, compliance shall be made to the satisfaction of the Engineer.

B. Proof of Compliance: When directed by the Engineer or when required by the Technical Provisions of these specifications, satisfactory proof of compliance with the specifications shall be submitted in one or more of the following ways:

(1) Manufacturer's Certificate of Compliance: In case of standard labeled stock products of standard manufacture which have a record of satisfactory performance in similar work over a period of not less than two (2) years, the Engineer may accept a notarized statement from the manufacturer certifying that the product conforms to the applicable specifications.

(2) Mills Certificate: For materials where such practice is usual standard, the Engineer may accept the manufacturer's certified mill and laboratory certificate.

(3) Testing Laboratory Certification: The Engineer may accept a certificate from a commercial testing laboratory satisfactory to him certifying that it has tested the

product submitted within a period acceptable to the Engineer and that it conforms to the requirements of the specifications.

(4) Report of Actual Laboratory Test. The Engineer may require that the Contractor make actual tests of any products and submit a report of the specific test. Such tests shall be made by a commercial testing laboratory satisfactory to the Engineer. Samples tested shall be selected by the Engineer or his representative. The method of testing shall comply with the method required by the pertinent Federal or other Professional Society specifications.

C. Re-Testing: Re-testing materials in constant use may be required periodically at not more than once a month by the Engineer. Any retesting required shall be at the Contractor's expense.

9. SPECIAL DATA:

A. General:

Prior to commencement of construction, the Contractor shall submit his plan of operation to the Engineer for approval. The Contractor's plan shall be coordinated with the activities of the city or utility agency, where applicable, and shall clearly indicate the sequence of the work for proper coordination.

The Contractor shall conform at all times with current safety practices on the project.

B. Trade Names:

Any catalogue number or trade name used herein or on the drawings is for descriptive purposes only.

C. Frost Line:

The normal frost line has been determined for the site of the work as being two-(2) feet, 6 – inches below the surface of the ground. Except for under drains, side drains or other pre-existing systems, as extended, all pipe shall have a minimum cover of 36 - inches.

10. INTERFERENCE WITH TRAFFIC ON PRIVATE AND PUBLIC PROPERTY:

A. The Contractor at all times shall conduct the work in such manner as to cause as little interference as possible with private business or with private and public travel on the public roadway. All damage (other than that resulting from normal wear and tear) to existing roads or pavements shall be repaired to as good condition as they were prior to the beginning of the work and to the satisfaction of the Engineer.

B. The Contractor shall, wherever necessary or required, provide and maintain proper barricade, fences, danger signals, signs, and lighting, provide a sufficient number of watchmen, where required, and take such other precautions as may be necessary to protect the life, property, adjacent buildings, and structures.

The Contractor shall be liable for and hold the city free and harmless from all damages occasioned in any way by his act or neglect or that of his agents, employees or workmen.

C. Where the Contractor finds it necessary to remove excavated material to some other location, care should be taken not to overload trucks which would in turn spill material out or damage streets, roads or other highways. Any such material deposited upon such roadways shall be immediately cleaned up from that location and properly disposed of.

D. Where it is necessary and is agreeable with the city and private property owners, excavated materials may be temporarily piled in the streets or roadways; however, one (1) lane of traffic must be maintained at all times.

E. The Contractor shall comply with any regulations requested by State or County Highway Officials when construction impacts their rights of ways.

After any excavated materials have been removed, all hard surface streets or roadways shall be thoroughly cleaned and left free of dirt and sediment. Streets, roadways or driveways which do not have hard surfaces must be restored to their original condition at the expense of the Contractor.

By no means will the Contractor be permitted to store excavated materials in streets or roadways over-night without authorization of the Engineer.

Whether excavated materials are stored in the street or not, the Contractor shall at his own expense keep all streets or roadways free of all dirt and sediment.

11. LEGAL CONTRACT, PLANS AND SPECIFICATIONS:

The Legal Contract, properly consummated by both parties, will be furnished to the Contractor without charge.

A sufficient number of sets of Plans, Details and/or Specifications for construction will be furnished to the Contractor without charge. Additional sets will be furnished upon request at the cost of reproduction.

12. CHANGE IN SCOPE OF WORK:

The City reserves the right to increase or decrease or change the scope of the project where covered. Where covered, the unit prices as bid shall cover said changes. Where changes are made on the lump sum contract items, the change shall be made as covered in the “General Conditions”, “Extra Work”.

CITY OF UNION 2021 STREET REPAIRS PROGRAM

PUBLIC RIGHTS-OF-WAY AND LAWN RESTORATION – SEEDING

1.0. GENERAL

1. l. SUMMARY

1.1.1. This Section includes the following: Preparation and seeding of all unpaved areas disturbed under this contract.

1.2. RELATED DOCUMENTS

1.2.1. Plans and general provisions of the Contract, including General Conditions, Special Conditions, and Earthwork related sections apply to this Section.

1.3. PROJECT CONDITIONS

1.3.1. Installer shall examine the sub grade, verify the elevations, observe the conditions under which landscaping operations are to be performed and notify the contractor of unsatisfactory conditions.

1.4. WARRANTY

1.4.1. The warranty period for lawns within public rights-of-way and private property shall be one (1) year.

2.0. PRODUCTS

2.1. TOPSOIL

2.1.1. Topsoil shall be provided in accord with the related Earthwork Sections.

2.1.2. Topsoil shall not contain more than 40 percent clay in that portion passing a No. 10 sieve and shall contain not less than five (5) % or more than 20 percent organic matter as determined by loss of ignition on samples oven dried to constant weight at 212 deg (F).

2.2. GRASS MATERIALS

2.2.1. The following is a general guideline to be utilized as a minimum specification:

2.2.3.1. Urban Areas. All areas to be seeded which are considered to be urban in character, and any that are in front of a residence, shall be seeded with the following mixture: (percentages are by

weight.): a) 40% Kentucky Bluegrass (Poa pratensis); b) 40% Creeping Red Fescue (Festuca rubra); and c) 20% Annual Ryegrass (Lolium multifiorum).

2.2.3.2. Rights of Ways and Easements. All areas in rights-of-way or easements adjacent to rights-of-way, other than urban areas, shall be seeded with the following mixture: a) 30% Kentucky Bluegrass (Poa pratensis); b) 50 % Kentucky 31 Tall Fescue (Festuca arundinaces Var. KY 31; and c) 20% Annual Ryegrass (Lolium multiflorum).

2.3. SOIL ADDITIVES

2.3.1. The contractor should contact the U.S. Department of Agriculture, Natural Resources Conservation Service, 6028 Camp Ernst Road, Burlington, KY 41005, 859-586-7903 (Fax 859-586-6107) or other local USDA office in the project locale for testing and advice before seeding. In the absence of certified soil tests, one of the following soil additive methodologies shall be applied at the rates specified:

2.3.1.1. Methodology #l: Commercial Fertilizer: 30 lbs per 1000 sf of 5-10-5; or 25 lbs per 1000 sf of 10-10-10; or 10 lbs per 1000 sf of 5-20-20; and Lime: Natural limestone ASTM C602 Class T with minimums of 99 percent passing the No.8 sieve and 75 percent passing the No. 60 sieve, spread two (2) per acre (80 lbs per 1000 sf.); or

2.3.1.2. Methodology #2: Organic Matter: For residential lawns only, apply two (2) cy per 1,000 sf of either: Peat Moss; well-decomposed sawdust; well-rotted, weed- free manure; organic compost; or sewage sludge (non-industrial).

3.0 EXECUTION

3.1. GENERAL:

3.1.1. The Contractor shall provide all labor, materials, tools, and equipment required to grade, fertilize, seed and mulch in good, workman like manner all of the areas disturbed as a part of the work required herein.

3.2. PREPARATION FOR LAWNS:

3.2.1. Loosen sub-grade of lawn areas to a minimum depth of 4” by disking or harrowing. Remove stones over ¾” in any dimension and sticks, roots, rubbish and other extraneous matter with power equipment. Limit preparation to areas that will be seeded promptly after preparation.

3.2.2. Mix specified soil amendments and fertilizers with topsoil at the rates specified by disking or harrowing. Delay mixing of fertilizer if seeding will not follow within a few days.

3.2.3. The Contractor is to grade lawn areas to a smooth even surface with loose uniformly fine texture. Roll, rake, remove ridges and fill depressions, as required to meet finish grades and prevent puddling of water. All grass, weed, roots, sticks, stones, and other debris are to be removed and the soil carefully brought to the finished grade by hand raking. Limit fine grading to areas that will be seeded immediately after grading. The final seed bed should be firm and free of large clods, rocks, and other extraneous material.

3.2.4. Moisten prepared lawn areas before seeding if soil is dry. Water thoroughly and allow surface to dry before seeding lawns. Do not create a muddy soil condition.

3.2.5. Restore lawn areas to specified condition if eroded or otherwise disturbed after fine grading and prior to seeding.

3.3. SEEDING LAWNS:

3.3.1. Seeding shall be broadcast over the prepared area at seven (7) lbs per 1000 sq ft.

3.3.2. The use wet seed or seed that is moldy or otherwise damaged is prohibited.

3.3.3. Sow seed using a spreader or seeding machine. Do not seed when wind velocity exceeds 5 mph. Distribute seed evenly over entire area by sowing equal quantity in two (2) directions at right angles to each other.

3.3.4. Sow not less than the quantity of seed specified.

3.3.5. Rake seed lightly into the top 1/8” of the soil and compact with a culti-packer.

3.3.6. Protect seeded areas against erosion by spreading specified lawn mulch after completion of seeding operations. Spread uniformly to form a continuous blanket not more than 1” loose measurement over seeded areas. The mulch covering should be thin enough to expose about 50% percent of the soil surface (one to two bales per 1000 sq ft).

3.3.6.1. At the Contractor’s option, the method of placing and tying down straw using an asphaltic emulsion shall be as described within KYTC specifications.

3.4. MAINTENANCE

3.4.1. Maintain new lawn within public rights-of-way and private property until adequate germination for cutting by property owners is achieved within the same season or the following spring. Contractor is responsible for re-seeding and mulching or sod replacement in the event that such doesn't survive during normal weather normal conditions.

3.5 CLEAN UP, INSPECTION AND ACCEPTANCE

3.5.1 Keep pavements clean and areas of construction in an orderly condition.

3.5.2. Protect lawn and materials from damage for all landscaping operations.

3.5.3. When seeding operations are complete, the Engineer or his representative will, upon request, perform an inspection to determine acceptability. Any non-compliance shall be remedied to the satisfaction of the Engineer.

PUBLIC RIGHTS-OF-WAY AND LAWN RESTORATION - SODDING

1. 0. GENERAL

1. l. SUMMARY

1.1.1. This Section includes the preparation and seeding of all unpaved areas disturbed under this contract.

1.2. RELATED DOCUMENTS

1.2.1. Plans and general provisions of the Contract, including General Conditions, Special Conditions, and Earthwork related sections apply to this Section

1.3. PROJECT CONDITIONS

1.3.1 Installer shall examine the subgrade, verify the elevations, observe the conditions under which landscaping operations are to be performed and notify the contractor of unsatisfactory conditions.

1.4. WARRANTY

1.4.1. The warranty period for lawns within public rights-of-way and private property shall be one (1) year.

2.0. PRODUCTS

2.1. TOPSOIL

2.1.1. Topsoil shall be provided in accord with the related Earthwork Sections.

2.1.2. Topsoil shall not contain more than 40 percent clay in that portion passing a No. 10 sieve and shall contain not less than five (5) percent or more than 20 percent organic matter as determined by loss on ignition of samples oven dried to constant weight at 212 degrees (F).

2.2. GRASS MATERIALS

2.2.1. Provide fresh, clean, new-crop, nursery grown sod.

2.2.2. Sod shall be free of objectionable grassy and broadleaf weeds.

2.2.3. Sod shall include fine fescues, tall fescues. Perennial rye grass, annual rye grass and Kentucky Bluegrass from acceptable selections.

2.2.4. Thickness of cut: Sod shall be machine cut at a uniform soil thickness of 5/8" plus or minus ¼" at the time of cutting. Measurement for thickness shall exclude top growth and thatch.

2.2.5. Pad size: Individual pieces of sod shall be cut to the supplier's standard width (+/- ½") and length +/- 5 percent).

2.2.6. Sod Sections: Sod sections shall be strong to support their own weight; not harvested if excessively wet or dry; mowed uniformly at a 2" height; and, delivered and transplanted within a 36-hour period unless a suitable preservation method is approved before delivery.

2.3. SOIL ADDITIVES

2.3.1. The contractor should contact the U.S. Department of Agriculture, Natural Resources Conservation Service, 6028 Camp Ernst Road, Burlington, KY 41005, 859-586-7903 (Fax 859-586-6107) or other local USDA office in the project locale for testing and advice before seeding. In the absence of certified soil tests, one of the following soil additive methodologies shall be applied at the rates specified:

2.3.1.1. Methodology #l: Commercial Fertilizer: 30 lbs per 1000 sf of 5-10-5; or 25 lbs per 1000 sf of 10-10-10; or 10 lbs per 1000 sf of 5-20-20; and Lime: Natural limestone ASTM C602 Class T with minimums of 99 percent passing the No.8 sieve and 75 percent passing the No. 60 sieve, spread two (2) per acre (80 lbs per 1000 sf.); or

2.3.1.2. Methodology #2: Organic Matter: For residential lawns only, apply two (2) cy per 1,000 sf of either: Peat Moss; well-decomposed sawdust; well-rotted, weed- free manure; organic compost; or sewage sludge (non-industrial).

3.0. EXECUTION

3.1. GENERAL:

3.1.1. The Contractor shall provide all labor, materials, tools, and equipment required to grade, fertilize, seed and mulch in good, workmanlike manner all of the areas disturbed as a part of the work required herein.

3.2. PREPARATION FOR LAWNS:

3.2.1. Loosen sub-grade of lawn areas to a minimum depth of 4" by disking or harrowing. Remove stones over ¾" in any dimension and sticks, roots, rubbish and other extraneous matter with power equipment. Limit preparation to areas that will be seeded promptly after preparation.

3.2.2. Mix specified soil amendments and fertilizers with topsoil at the rates specified by disking or harrowing. Delay mixing of fertilizer if seeding will not follow within a few days.

3.2.3. The Contractor is to grade lawn areas to a smooth even surface with loose uniformly fine texture. Roll, rake, remove ridges and fill depressions, as required to meet finish grades and prevent puddling of water. All grass, weed, roots, sticks, stones, and other debris are to be removed and the soil carefully brought to the finished grade by hand raking. Limit fine grading to areas that will be seeded immediately after grading. The final seedbed should be firm and free of large clods, rocks and other extraneous material.

3.2.4. Moisten prepared lawn areas before seeding if soil is dry. Water thoroughly and allow surface to dry before seeding lawns. Do not create a muddy soil condition.

3.2.5. Restore lawn areas to specified condition if eroded or otherwise disturbed after fine grading and prior to seeding.

3.3. SODDING

3.3.1 Lay sod within 36 hours from time of stripping. Do not plant dormant sod or if ground is frozen.

3.3.2. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod strips. Do not overlap. Stagger strips to offset joints in adjacent courses. Work from boards to avoid damage to subgrade or sod. Tamp or roll lightly to ensure contact with subgrade. Work sifted soil into minor cracks between pieces of sod. Remove the excess to avoid smothering of adjacent grasses.

3.3.3. Anchor sod on slopes greater than 4:1 with wood pegs to prevent slippage.

3.3.4. Water sod thoroughly with fine spray immediately after planting.

3.4. MAINTENANCE

3.4.1. Maintain new lawn within rights-of-way and private property until adequate germination for cutting by property owners is achieved within the same season or the following spring. Contractor is responsible for re-seeding and mulching or sod replacement in the event that such doesn't survive during normal weather normal conditions.

3.5. CLEAN UP, INSPECTION AND ACCEPTANCE

3.5.1 Keep pavements clean and areas of construction in an orderly condition.

3.5.2. Protect lawn and materials from damage for all landscaping operations.

3.5.3. When seeding operations are complete, the City Engineer or his representative will, upon request, perform an inspection to determine acceptability. Any non-compliance shall be remedied to the satisfaction of the Engineer.

CITY OF UNION 2021 STREET REPAIRS PROGRAM

CONTRACTOR INSURANCE REQUIREMENTS

Prior to commencement of work, City of Union, KY requires all contractors to submit a Certificate of Insurance to City of Union, KY (and other parties upon request) in the form of a standard Acord Form 25 that fully complies with the requirements of our contract agreement. Failure to provide the certificate with the proper coverage and limits will result in delayed payment to the contractor. The following is an outline of the Insurance requirements that must be provided and so indicated on the Certificate of Insurance.

Commercial General Liability (CGL) with limits of insurance not less than:

- $1,000,000 Each Occurrence
- $1,000,000 Personal Injury and Advertising Injury
- $2,000,000 General Aggregate
- $2,000,000 Products/Completed Operations Aggregate

1. The General Aggregate shall apply separately to each project per ISO form CG2503 (11/85) or its equivalent.
2. CGL coverage shall be written on ISO occurrence form CG0001(04/13), or an equivalent form providing coverage for liability arising from
    - Premises/Operations
    - Independent contractors
    - Products-Completed Operations
    - Personal and Advertising Injury
    - Contractual
    - Explosion, Collapse, Subsidence Hazards (no XCU exclusions are acceptable)
    - EIFS only if applicable to the scope of work

Automobile Liability

- Business Auto Liability with limits of at least $1,000,000 Combined Single Limit each accident
- Business Auto coverage must include liability arising out of all owned, leased, hired and non-owned automobiles.

Commercial Umbrella

- Umbrella limits must be at least $1,000,000
- Umbrella coverage must include as insureds all entities that are additional insureds on the CGL.

Workers Compensation

- State Statutory limits in the state which the work is being performed.
- Employers Liability limits Each Accident; $1,000,000; Disease (Each Employee) $1,000,000; Disease Policy Limit $1,000,000

Additional Insured Requirements

All such insurance, including General Liability and Umbrella/Excess liability except Workers Compensation/Employers Liability shall name City of Union, KY, Architect and Engineer as:

- Additional Insured (ongoing operations) per form CG2010 (7/04) or its equivalent naming City of Union, KY
- Additional Insured (completed operations) per form CG2037 (7/04) or its equivalent naming City of Union, KY

Additional Coverage Requirements

- Coverage shall be Primary & Non-Contributory and any coverage provided by City of Union, KY, Architect or Engineer shall be excess coverage only for the benefit of City of Union, KY, Architect or Engineer.
- Coverage shall remain in effect for a minimum period of two (2) years from the date of substantial completion for all claims & losses against City of Union, KY, Architect and Engineer including but not limited to those claims that arise out of injuries to the employees of the contractor, employees of the contractor's subcontractors or injuries to third parties form your work under this agreement or as a result of the Contractor's performance
- Waiver of Subrogation in favor of City of Union, KY, Architect and Engineer shall be included and shall apply to all policies where allowable by law

General Insurance & Safety Requirements

- The Certificate of Insurance should be mailed to the corporate office of City of Union, KY, attention of the City Administrative Officer. If applicable to a specific project, reference the project number and project name on the Certificate. Copies of the Certificate and supporting forms showing compliance with the insurance requirements must be provided prior to commencement of work.
- Contractor's policies shall be endorsed to provide that there will be no cancellation or reduction in coverage without thirty (30) days prior written notice to City of Union, KY.
- Contractor shall ensure that all tiers of their subcontractors shall procure and maintain insurance in like form and adequate amounts including Additional Insured requirements, all as set forth in the Contractor Insurance Requirements in this document.
- Contractor agrees that it is responsible for ensuring the safety of its employees, its subcontractor's employees and others on the jobsite. Contractor has the duty to provide a safe place for the performance of the contractor's and subcontractors' work under this agreement, including but not limited to, provision of general and safety supervision of the performance of contractor's work, ensuring that the safe use and condition of all equipment used in connection with the performance of contractor's work, implementation of procedures intended to ensure the safe performance of contractor's work, implementation of safety precautions regarding the use of or exposure to any hazardous materials in the performance of contractor's work, and compliance with any and all federal, state and/or local laws, ordinances, or regulations regarding job site safety including all OSHA requirements.
- Contractor acknowledges that it is the sole party responsible for the safe performance of the contractor's work, even if City of Union, KY has implemented any safety program or regulations at the project or jobsite.

Additional Provisions

- Contractor expressly understands and agrees that any insurance protection furnished by the Provider as required herein shall in no way limit the Provider's responsibility to carry adequate coverage. The absence of a demand for any type of insurance or insurance condition, or for higher coverage limits shall not be construed as a waiver of the Provider's obligations to carry and maintain the appropriate types of insurance at limits that are appropriate to the liability exposures associated with the agreement to which these Insurance Requirements. City of Union, KY does not represent that the coverage and the limits specified herein will necessarily be adequate to cover Provider's complete liability.

INSURANCE CHECKLIST – (The contract takes precedence. This is a guide only)

Everything shown below is required unless changes are approved by City of Union, KY.

GENERAL LIABILITY – Certificate must include copies of the forms.

_____Limits of Liability – Minimum Limits: $1,000,000 occurrence / $ 2,000,000 aggregate
_____Additional Insured CG2010 (or its equivalent) for ongoing operations
_____Additional Insured CG2037 (or its equivalent) for completed operations
_____Waiver of Subrogation
_____Primary & Non-Contributory
_____Per Project Aggregate
_____30 days prior written notice for cancellation or material change in coverage

AUTO LIABILITY – Certificate must include copies of the forms.

_____Limits of Liability – Minimum Combined Single Limit: $1,000,000
_____Additional Insured
_____Waiver of Subrogation
_____30-days prior written notice for cancellation or material change in coverage

UMBRELLA / EXCESS LIABILITY – Certificate must include copies of the forms.

_____Limits of Liability – Minimum Limits: $1,000,000 per occurrence / $1,000,000 aggregate
_____Additional Insured
_____Waiver of Subrogation
_____Primary & Non-Contributory
_____30 days prior written notice for cancellation or material change in coverage

KENTUCKY WORK COMP

_____Kentucky should be shown as a covered state.

_____ DESCRIPTION OF OPERATIONS

City of Union, KY and its officers, employees and agents are additional insureds in regards to general liability, auto liability and umbrella/excess liability. All coverage is primary and non-contributory and any coverage provided City of Union, KY is excess coverage solely for the benefit of City of Union, KY. Waiver of Subrogation in favor of additional insured applies to all policies where allowable by law. All policies shall be endorsed to provide there will be no cancellation or reduction in coverage without thirty (30) days prior written notice given to City of Union, KY. Copies of all additional insured, waivers of subrogation, primary & non-contributory and 30 days notices of cancellation forms are attached for review.

CITY OF UNION, KENTUCKY
2021 STREET REPAIRS PROGRAM
SCOPE OF WORK SUMMARY
PHASES A, B and C

PHASE A – PARTS 1 THROUGH 10 – BITUMINOUS ASPHALT REPAIRS (See Plan Sketches and Bidders Quantities Sheets)

PART 1 – Lassing Green/Bayberry Lane Resurfacing (about 500 LF between Mountain Laurel and Aspen Place)

PART 2 – Lassing Green/Bayberry Lane Resurfacing (about 450 LF north from Aspen Place including the cul-de-sac)

PART 3 – Lassing Green/Greenbrier Place Resurfacing (about 220 LF north from Mountain Laurel including the cul-de-sac)

PART 4 – Union Village/Merrimac Court Resurfacing (about 400 LF from Richmond Road including the cul-de-sac)

PART 5 – Union Village/Sherman Court Resurfacing (about 470 LF from Braxton Road including the cul-de-sac)

PART 6 – Union Village/Braxton Road Resurfacing (about 980 LF from center median to Pickett Run)

PART 7 – Hempsteade/Bayswater Drive Resurfacing (about 1220 LF from Cedarwood Drive to Cul-de-sac)

PART 8 – Union Village/Richmond Road Resurfacing (about 1860 LF from commercial/ residential to Sumpter Court)

PART 9 – Various Asphalt Base/Surface Repairs (about 12 streets – 212.5 SY)

PART 10 – Various Asphalt Joint/Crack Sealing (about 9170 LF on 16 streets)

PHASE B – CONCRETE CURB & GUTTER & SIDEWALK REPLACEMENT – Various Locations (about 256 LF and six (6) sidewalk sections) (See Bidders Quantities Sheets)

PHASE C – PARTS 1, 2 and 3 - EDGE/SIDE DRAIN SYSTEM (See Plan Sketches and Bidders Quantities Sheets)

PART 1 – Hempsteade Drive (about 340 LF fronting addresses 10233 to 10263).

PART 2 – Arbor Springs/Lincoln Court (about 280 LF fronting addresses 1404 to 1420).

PART 3 – Harmony/Evening Star (New SGCB at the Soaring Breezes SE intersection)

Barry J. Burke, PE PLS

Civil & City Engineering, Construction Inspections, Land Use Planning, Forensic Engineering, Expert Witness

May 4th, 2020

City of Union, Kentucky
1843 Mt. Zion Road
Union, Kentucky 41091

PROPOSAL: CITY OF UNION 2021 STREET REPAIRS
PHASE A – PARTS 1 THROUGH 10 – PAVEMENT MILLING & FULL ASPHALT RESURFACING, HC RAMPS, BASE/SURFACE REPAIRS AND CRACK & JOINT SEALINGS

SUBMISSIONS: A. Bidders Quantities Sheets (Phase A Parts 1 thru 10)
B. Surety/Performance Bond (Ref. Inst to Bidders #19)
C. Insurance (Ref. Contractors Insurance Requirements/Checklist

In compliance with the advertisement for bids, the undersigned bidder having familiarized himself with the work required by the contract documents, the site where the work is to be performed, labor conditions and all laws, regulations and other factors affecting performance of the work, and having satisfied himself of the expense and difficulties to attain performance of the work, hereby proposes and agrees, if the bid is accepted, to enter into agreement to perform all work, including the assumption of obligations, duties and responsibilities necessary for successful completion of the contract in a timely manner as set forth in accord with the Submissions, as noted above, including the quantities, unit costs and total costs using the attached Bid Quantity Sheets for the Project properly completed for review with a recommendation given to the city of Union by the City Engineer.

Note – It is the city's intent to award the entire scope of work (i.e., Phase A: Parts 1 thru 10; Phase B Parts 1 & 2; and, Phase C Parts 1, 2 & 3) to the lowest and best qualified bidding contractor or contractors. However, due to the diversity of the work by Phases, any qualified contractor can submit bids for all Phases including A, B and C or bid on any individual or separate Phase for the scope of work. However, all Parts 1 through 10 of Phase A, or any Parts of Phase B or C must be bid by the same contractor to qualify for an award. Further, the city has the right to accept, reject, modify any bid provided such changes are in the best interests of the city and contractor or contractors bidding on the Program, subject to the advice of the city's legal counsel.

Special attention should be given to any line item shown as "(where required)" on the Bidders Quantities Sheets. Such decision shall be made only by the City Engineer, after an on-site observation is made with the contractor or contractors able to provide such work, as required.

GENERAL CONTRACTOR COMPANY NAME: _____

BIDDERS QUANTITIES SHEET
PHASE A – PARTS 1 THROUGH 10

Contractors with questions during the bidding process should contact Barry J. Burke, PE at (513) 476-3235 (c) or email: burkebarry@msn.com. All questions shall be answered no later than 24 hours prior to the Public Bid Opening on Tuesday, May 25th, 2021 at 4:00 PM				
ITEM **PHASE A – PART 1**	**QUANTITY**	**UNIT**	**UNIT COST**	**TOTAL COST**
LASSING GREEN SUBDIVISION				
BAYBERRY LANE (ABOUT 500 LF BETWEEN MT LAUREL WAY AND ASPEN PLACE)				
SD1 was pre-notified by email of the project on 02/01/2021				
Street Pavement Repairs				
Milling Asphalt Concrete Lanes (2" depth saw-cut at gutter joints spread 6'-7' wide) including hauling away & disposal)	**778**	**SY**		
7"/11" Concrete Curb & Gutter (where required)	**20**	**LF**		
8" Asphalt Base Repairs (where required)	**50**	**SY**		
2" Asphalt Surface Course w/Tack Coat	**120**	**TONS**		
Joint Sealing Concrete Gutter at Curb	**1000**	**LF**		
Miscellaneous				
Adjusting Water Valves, (where required)	**2**	**EA**		
Seeding & Mulching (where required)	**1**	**LS**		
TOTAL PHASE A – PART 1 **(Dollars and Cents in Numerals)**				
GENERAL CONTRACTOR NAME				

BIDDERS QUANTITIES SHEET
PHASE A – PARTS 1 THROUGH 10

Contractors with questions during the bidding process should contact Barry J. Burke, PE at (513) 476-3235 (c) or email: burkebarry@msn.com. All questions shall be answered no later than 24 hours prior to the Public Bid Opening on Tuesday, May 25th, 2021 at 4:00 PM				
ITEM **PHASE A – PART 2**	**QUANTITY**	**UNIT**	**UNIT COST**	**TOTAL COST**
LASSING GREEN SUBDIVISION				
BAYBERRY LANE (ABOUT 450 LF BETWEEN ASPEN PLACE INTO THE CUL-DE-SAC)				
SD1 was pre-notified by email of the project on 02/01/2021				
Street Pavement Repairs				
Milling Asphalt Concrete Lanes (2" depth saw-cut at gutter joints spread 6'-7' wide) including hauling away & disposal)	**700**	**SY**		
7"/11" Concrete Curb & Gutter (where required)	**20**	**LF**		
8" Asphalt Base Repairs (where required)	**50**	**SY**		
2" Asphalt Surface Course w/Tack Coat	**108**	**TONS**		
Joint Sealing Concrete Gutter at Curb	**9001**	**LF**		
Miscellaneous				
Adjusting Water Valves, (where required)	**2**	**EA**		
Seeding & Mulching (where required)	**1**	**LS**		
TOTAL PHASE A – PART 2 **(Dollars and Cents in Numerals)**				
GENERAL CONTRACTOR NAME				

BIDDERS QUANTITIES SHEET
PHASE A – PARTS 1 THROUGH 10

Contractors with questions during the bidding process should contact Barry J. Burke, PE at (513) 476-3235 (c) or email: burkebarry@msn.com. All questions shall be answered no later than 24 hours prior to the Public Bid Opening on Tuesday, May 25th, 2021 at 4:00 PM				
ITEM PHASE A – PART 3	**QUANTITY**	**UNIT**	**UNIT COST**	**TOTAL COST**
LASSING GREEN SUBDIVISION				
GREENBRIER PLACE (ABOUT 220 LF BETWEEN MOUNTAIN LAURAL WAY INTO THE CUL-DE-SAC)				
SD1 was pre-notified by email of the project on 02/01/2021				
Street Pavement Repairs				
Milling Asphalt Concrete Lanes (2" depth saw-cut at gutter joints spread 6'-7' wide) including hauling away & disposal)	**342**	**SY**		
7"/11" Concrete Curb & Gutter (where required)	**20**	**LF**		
8" Asphalt Base Repairs (where required)	**25**	**SY**		
2" Asphalt Surface Course w/Tack Coat	**53**	**TONS**		
Joint Sealing Concrete Gutter at Curb	**440**	**LF**		
Miscellaneous				
Adjusting Water Valves, (where required)	**2**	**EA**		
Seeding & Mulching (where required)	**1**	**LS**		
TOTAL PHASE A – PART 3 (Dollars and Cents in Numerals)				
GENERAL CONTRACTOR NAME				

BIDDERS QUANTITIES SHEET
PHASE A – PARTS 1 THROUGH 10

Contractors with questions during the bidding process should contact Barry J. Burke, PE at (513) 476-3235 (c) or email: burkebarry@msn.com. All questions shall be answered no later than 24 hours prior to the Public Bid Opening on Tuesday, May 25th, 2021 at 4:00 PM				
ITEM PHASE A – PART 4	**QUANTITY**	**UNIT**	**UNIT COST**	**TOTAL COST**
UNION VILLAGE SUBDIVISION				
MERRIMAC COURT (ABOUT 400 LF OFF RICHMOND ROAD INTO THE CUL-DE-SAC)				
SD1 was pre-notified by email of the project on 02/01/2021				
Street Pavement Repairs				
Milling Asphalt Concrete Lanes (2" depth saw-cut at gutter joints spread 6'-7' wide) including hauling away & disposal)	**622**	**SY**		
7"/11" Concrete Curb & Gutter (where required)	**20**	**LF**		
8" Asphalt Base Repairs (where required)	**50**	**SY**		
2" Asphalt Surface Course w/Tack Coat	**96**	**TONS**		
Joint Sealing Concrete Gutter at Curb	**800**	**LF**		
Miscellaneous				
ADA Handicap Curb Ramp (See Detail)	**2**	**EA**		
Adjusting Water Valves, (where required)	**2**	**EA**		
Seeding & Mulching (where required)	**1**	**LS**		
TOTAL PHASE A –PART 4 (Dollars and Cents in Numerals)				
GENERAL CONTRACTOR NAME				

BIDDERS QUANTITIES SHEET
PHASE A – PARTS 1 THROUGH 10

Contractors with questions during the bidding process should contact Barry J. Burke, PE at (513) 476-3235 (c) or email: burkebarry@msn.com. All questions shall be answered no later than 24 hours prior to the Public Bid Opening on Tuesday, May 25th, 2021 at 4:00 PM				
ITEM PHASE A – PART 5	**QUANTITY**	**UNIT**	**UNIT COST**	**TOTAL COST**
UNION VILLAGE SUBDIVISION				
SHERMAN COURT (ABOUT 470 LF OFF BRAXTON ROAD INTO THE CUL-DE-SAC)				
SD1 was pre-notified by email of the project on 02/01/2021				
Street Pavement Repairs				
Milling Asphalt Concrete Lanes (2" depth saw-cut at gutter joints spread 6'-7' wide) including hauling away & disposal)	**622**	**SY**		
7"/11" Concrete Curb & Gutter (where required)	**20**	**LF**		
8" Asphalt Base Repairs (where required)	**50**	**SY**		
2" Asphalt Surface Course w/Tack Coat	**113**	**TONS**		
Joint Sealing Concrete Gutter at Curb	**940**	**LF**		
Miscellaneous				
ADA Handicap Curb Ramp (See Detail)	**2**	**EA**		
Adjusting Water Valves, (where required)	**2**	**EA**		
Seeding & Mulching (where required)	**1**	**LS**		
TOTAL PHASE A –PART 5 (Dollars and Cents in Numerals)				
GENERAL CONTRACTOR NAME				

BIDDERS QUANTITIES SHEET
PHASE A – PARTS 1 THROUGH 10

Contractors with questions during the bidding process should contact Barry J. Burke, PE at (513) 476-3235 (c) or email: burkebarry@msn.com. All questions shall be answered no later than 24 hours prior to the Public Bid Opening on Tuesday, May 25th, 2021 at 4:00 PM				
ITEM PHASE A – PART 6	**QUANTITY**	**UNIT**	**UNIT COST**	**TOTAL COST**
UNION VILLAGE SUBDIVISION				
BRAXTON ROAD (ABOUT 980 LF (from North median near Sherman to Pickett Run)				
SD1 was pre-notified by email of the project on 02/01/2021				
Street Pavement Repairs				
Milling Asphalt Concrete Lanes (2" depth saw-cut at gutter joints spread 6'-7' wide) including hauling away & disposal)	**1524**	**SY**		
7"/11" Concrete Curb & Gutter (where required)	**10**	**LF**		
8" Asphalt Base Repairs (where required)	**50**	**SY**		
2" Asphalt Surface Course w/Tack Coat	**236**	**TONS**		
Joint Sealing Concrete Gutter at Curb	**1960**	**LF**		
Miscellaneous				
ADA Handicap Curb Ramp (See Detail)	**2**	**EA**		
Adjusting Water Valves, (where required)	**2**	**EA**		
Seeding & Mulching (where required)	**1**	**LS**		
TOTAL PHASE A –PART 6 (Dollars and Cents in Numerals)				
GENERAL CONTRACTOR NAME				

BIDDERS QUANTITIES SHEET
PHASE A – PARTS 1 THROUGH 10

Contractors with questions during the bidding process should contact Barry J. Burke, PE at (513) 476-3235 (c) or email: burkebarry@msn.com. All questions shall be answered no later than 24 hours prior to the Public Bid Opening on Tuesday, May 25th, 2021 at 4:00 PM				
ITEM **PHASE A – PART 7**	**QUANTITY**	**UNIT**	**UNIT COST**	**TOTAL COST**
HEMPSTEADE SUBDIVISION				
BAYSWATER ROAD (ABOUT 1220 LF (FROM CEDARWOOD TO CUL-DE-SAC)				
SD1 was pre-notified by email of the project on 02/01/2021				
Street Pavement Repairs				
Milling Asphalt Concrete Lanes (2" depth saw-cut at gutter joints spread 6'-7' wide) including hauling away & disposal)	**1898**	**SY**		
7"/11" Concrete Curb & Gutter (where required)	**20**	**LF**		
8" Asphalt Base Repairs (where required)	**50**	**SY**		
2" Asphalt Surface Course w/Tack Coat	**293**	**TONS**		
Joint Sealing Concrete Gutter at Curb	**2440**	**LF**		
Miscellaneous				
ADA Handicap Curb Ramp (See Detail)	**2**	**EA**		
Adjusting Water Valves, (where required)	**4**	**EA**		
Seeding & Mulching (where required)	**1**	**LS**		
TOTAL PHASE A –PART 7 (Dollars and Cents in Numerals)				
GENERAL CONTRACTOR NAME				

BIDDERS QUANTITIES SHEET
PHASE A – PARTS 1 THROUGH 10

Contractors with questions during the bidding process should contact Barry J. Burke, PE at (513) 476-3235 (c) or email: burkebarry@msn.com. All questions shall be answered no later than 24 hours prior to the Public Bid Opening on Tuesday, May 25th, 2021 at 4:00 PM				
ITEM **PHASE A – PART 8**	**QUANTITY**	**UNIT**	**UNIT COST**	**TOTAL COST**
UNION VILLAGE SUBDIVISION				
RICHMOND ROAD (ABOUT 1860 LF (from North median near Sherman to Pickett Run)				
SD1 was pre-notified by email of the project on 02/01/2021				
Street Pavement Repairs				
Milling Asphalt Concrete Lanes (2" depth saw-cut at gutter joints spread 6'-7' wide) including hauling away & disposal)	**2893**	**SY**		
7"/11" Concrete Curb & Gutter (where required)	**40**	**LF**		
8" Asphalt Base Repairs (where required)	**50**	**SY**		
2" Asphalt Surface Course w/Tack Coat	**447**	**TONS**		
Joint Sealing Concrete Gutter at Curb	**3720**	**LF**		
Miscellaneous				
ADA Handicap Curb Ramp (See Detail)	**2**	**EA**		
Adjusting Water Valves, (where required)	**4**	**EA**		
Seeding & Mulching (where required)	**1**	**LS**		
TOTAL PHASE A –PART 8 (Dollars and Cents in Numerals)				
GENERAL CONTRACTOR NAME				

BIDDERS QUANTITIES SHEET
PHASE A – PARTS 1 THROUGH 10

Contractors with questions during the bidding process should contact Barry J. Burke, PE at (513) 476-3235 (c) or email: burkebarry@msn.com. All questions shall be answered no later than 24 hours prior to the Public Bid Opening on Tuesday, May 25th, 2021 at 4:00 PM				
PHASE A PART 9 (See Technical Specifications)	**QUANTITY**	**UNIT**	**UNIT COST**	**TOTAL COST**
VARIOUS LOCATIONS				
ASPHALT BASE/SURFACE REPAIRS (Each Repair Approximates a min 3" Depth)				
Abbington Drive – PBSR: (1125 –10'x10'); (1157 – 6'x6')	15	SY		
Bayswater Drive – PBSRS: (1099 - 2'x20'); (1124 & 1128 - 2'x30'); (1112 - 2'x14')	15	SY		
Brandsteade Court – PBSR: (10107 & 10093 – 2'x10')	4.5	SY		
Braxton Road – PBSR: (9090 – 2'x8')	2	SY		
Burleigh Lane – PBSR (9882 – 10'x20')	22	SY		
Dawns Light – PBSR (2232 – Level depression in Roundabout – 3'x22')	7	SY		
Evensong Drive – PBSR: (3773 & 3781 – 10'x10'); (3760 – 3'x30'); (3757 – 2'x20'); (Intersection w/Sweetsong – 10'x20')	60	SY		
Pembroke Drive – PBSR (10236)	2	SY		
Riviera Drive & Westbrook Blvd (new surface to drain**) (See also Phase B Part 1 – Concrete Curb and Gutter Replacement – By Others)**	30	SY		
Sonata Drive: PBSR: (3812 – 10'x15'); (3820 – 10'x15')	33	SY		
Sweet Harmony Lane – PBRS: (opposite Stillmeadow – 10'x 20')	22	SY		
Total Asphalt Base/Surface Repairs	**212.5**	**SY**		
TOTAL PHASE A PART 9 (Dollars and Cents in Numerals)				
GENERAL CONTRACTOR NAME				

BIDDERS QUANTITIES SHEET
PHASE A – PARTS 1 THROUGH 10

Contractors with questions during the bidding process should contact Barry J. Burke, PE at (513) 476-3235 (c) or email: burkebarry@msn.com. All questions shall be answered no later than 24 hours prior to the Public Bid Opening on Tuesday, May 25th, 2021 at 4:00 PM				
ITEM PHASE A PART 10 (See Technical Specifications)	**APPROXIMATE QUANTITY**	**UNIT**	**UNIT COST**	**TOTAL COST**
Existing Transverse & Longitudinal Joints & Curb & Gutter Crack Sealing. Note: 7-8 LF approximates 1.0 LB of Joint Sealer, or as required or needed.				
HARMONY ESTATES				
Aria Court – Six (6) Transverse Joints	**120***	**LF**		
Evensong Drive (Melody Lane to Peaceful Alley to Sapphire Lane)	**1350***	**LF**		
Sonata Drive	**1070***	**LF**		
Splendor Drive	**600***	**LF**		
Sapphire Lane	**470***	**LF**		
PLANTATION POINT LANCASHIRE				
Lancashire Drive (Wetherington to Cherbourg)	**780***	**LF**		
Capri Court	**750***	**LF**		
Cherbourg Drive (Lancashire to Abbington)	**630***	**LF**		
Napa Ridge Court	**750***	**LF**		
HEMPSTEADE ESTATES				
Bayswater Drive (Hempsteade to 1018) – CL Joint	**425***	**LF**		
Brandsteade Court	**1050***	**LF**		
UNION POINT CENTRE				
Callie Way (Between US 42 and Lea Way	**175***	**LF**		
WESTBROOK ESTATES				
Rainbow Terrace – (9521 & 9533 –	**50***	LF		

Seal Transverse Joints				
Riviera Drive (South of Westbrook toward Rosemont)	**550***	**LF**		
Camelot Court	**400***	**LF**		
* Approximate Street Length – Open Cracks and Open Joints Vary	**9170***	**LF**		
TOTAL PHASE A –PART 10 (Dollars and Cents in Numerals)				
TOTAL PHASE A – BIDDERS QUANTITIES SHEETS – PARTS 1 THROUGH 10 (Dollars and Cents in Numerals)				
GENERAL CONTRACTOR NAME				

LIST OF QUALIFIED SUBCONTRACTORS THAT WILL BE USED ON THIS PROJECT

1.) _____

2.) _____

3.) _____

SPECIAL NOTE – BASED UPON PREVIOUS ANNUAL UNDESIREABLE CONTRACTOR SCHEDULING DELAYS INTO THE WINTER SEASON, THE CITY EXPECTS PHASE A OF WORK TO START AND BE COMPLETED AS SOON AS POSSIBLE BEGINNING ON OR AFTER JULY 1ST. (SEE GENERAL CONDITIONS ITEM NO 7 – LIQUIDATED DAMAGES).
CONTRACTUAL NOTE – IF ANY PART OF PHASE A IS NOT COMPLETED BY DECEMBER 24TH OF THE CALENDER YEAR, THE CITY WILL DEDUCT $500/DAY FOR THE PORTION OF WORK NOT COMPLETED UNTIL SUCH TIME THAT 100% OF THE WORK IS SATISFACTORILY COMPLETED.

IF AWARDED THE PROJECT, I ANTICIPATE THAT THIS WORK CAN BEGIN BY _____, WITH SUBSTANTIAL COMPLETION BY _____.

SIGNED: _____

TITLE: _____

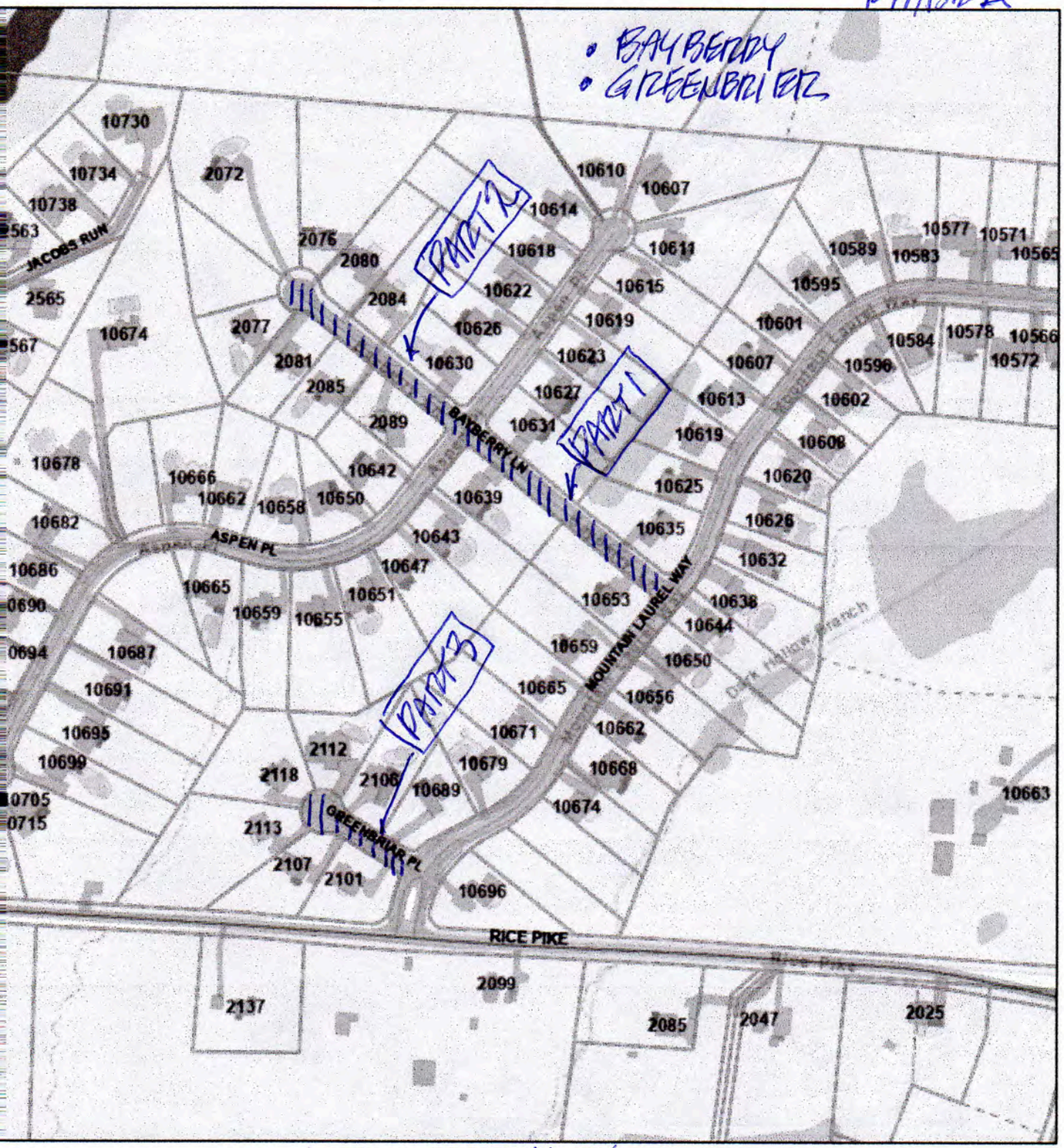
COMPANY NAME: _____

DATE: _____

CITY OF UNION FY 2021-2022 FULL RESURFACING PHASE A

Boone County, Kentucky

- BAYBERRY
- GREENBRIER



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FULL RESURFACING

1:4,514

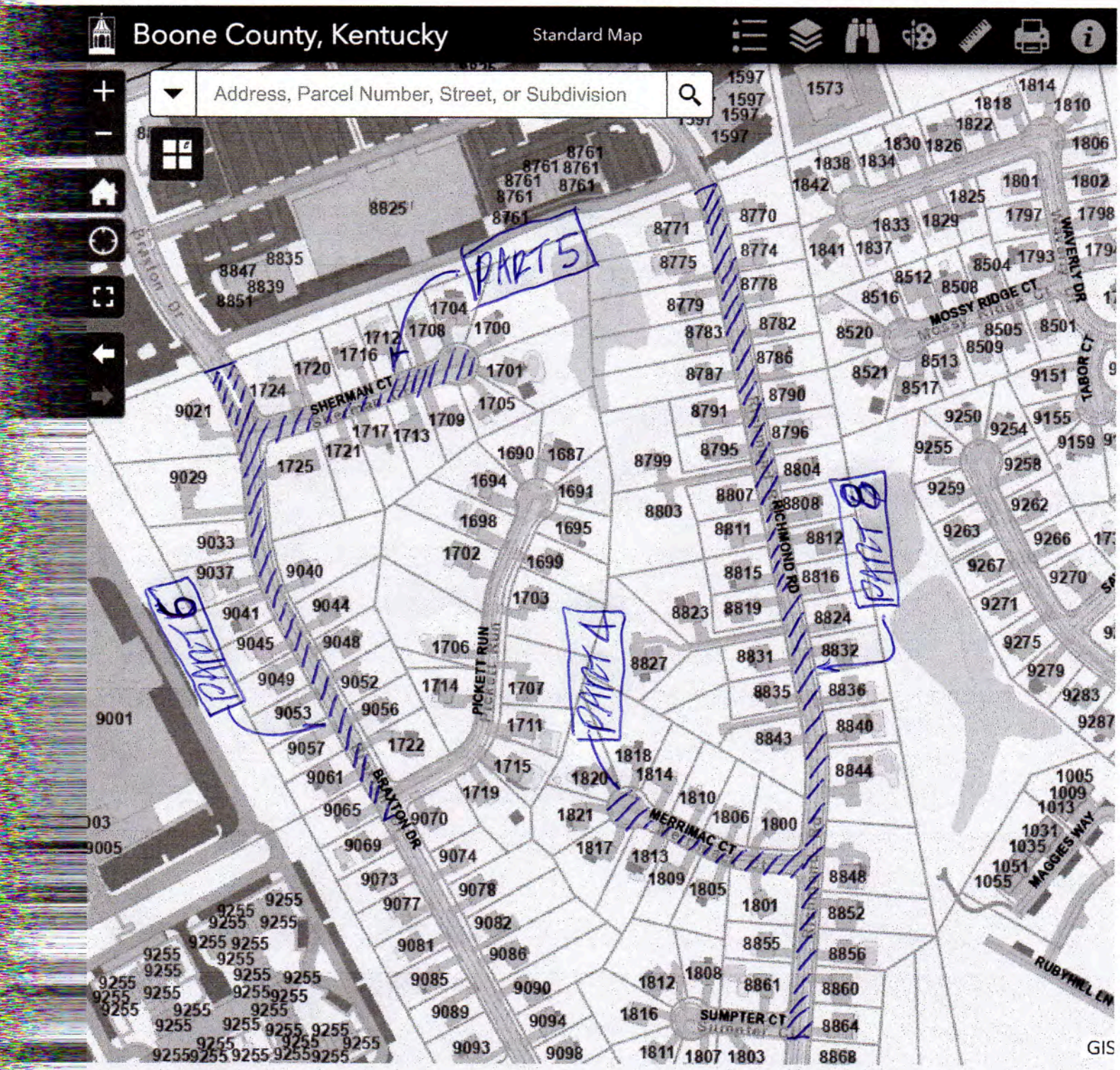
0 0.03 0.06 0.12 mi

0 0.05 0.1 0.19 km

Major Streets
Collector
Residential Streets
All Streets (FT)
All Streets (TF)
Building Footprints
Tax Parcels
Parcel Tract Lines
Paved Areas
Roadway
Exterior Features
Deck
Driveway
Patio
Sidewalk
Swimming Pool
Walking Trail

2/1/21

Esri, HERE, Garmin, INCREMENT P, NGA, USGS, GIS Services Division, Boone County Planning Commission



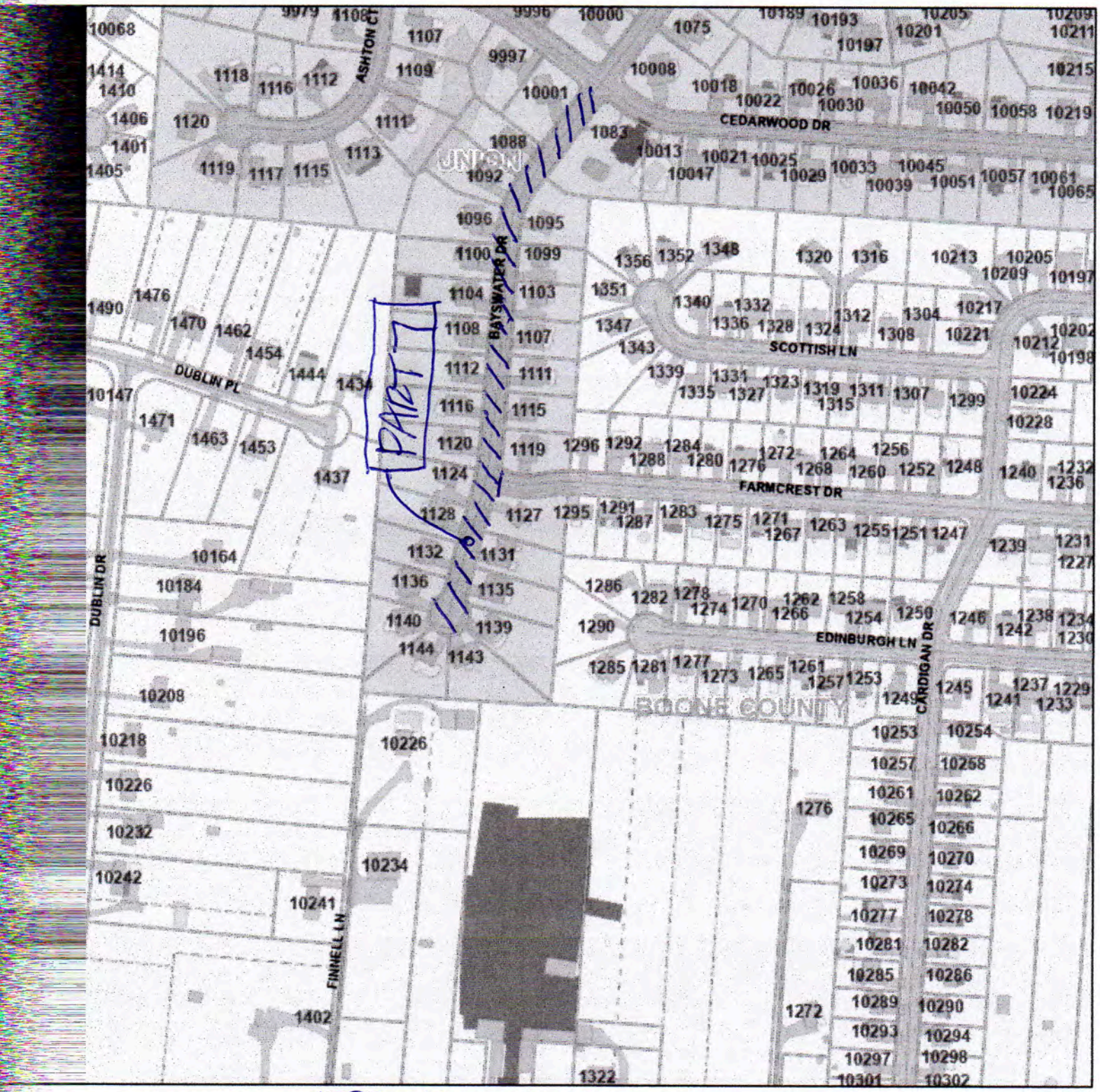
FULL RESURFACING 2/1/21

CITY OF UNION FY2021-2022
FULL RESURFACING PROJECTS
PHASE A

- MERRIMAC
- SHERMAN
- BRAXTON
- RICHMOND

CITY OF UNION * BAYSWATER DRIVE

Boone County, Kentucky



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FULL RESURFACING

1:4,514

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0 0.05 0.1 0.19 km

FY 2021-2022
PHASE A

GIS Services Division, Boone County Planning Commission

3/18/21

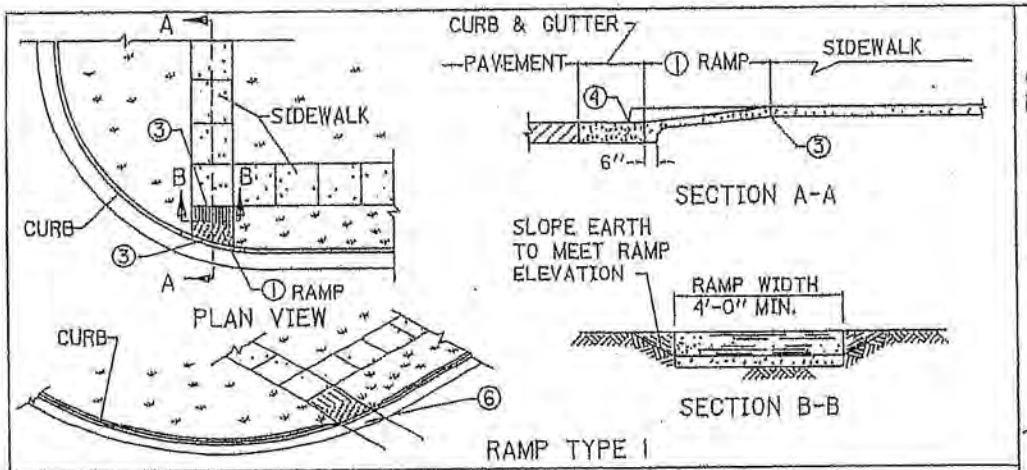
Residential Streets
Building Footprints
Tax Parcels
Parcel Tract Lines
Paved Areas
Roadway

Parking Lot
Swimming Pool

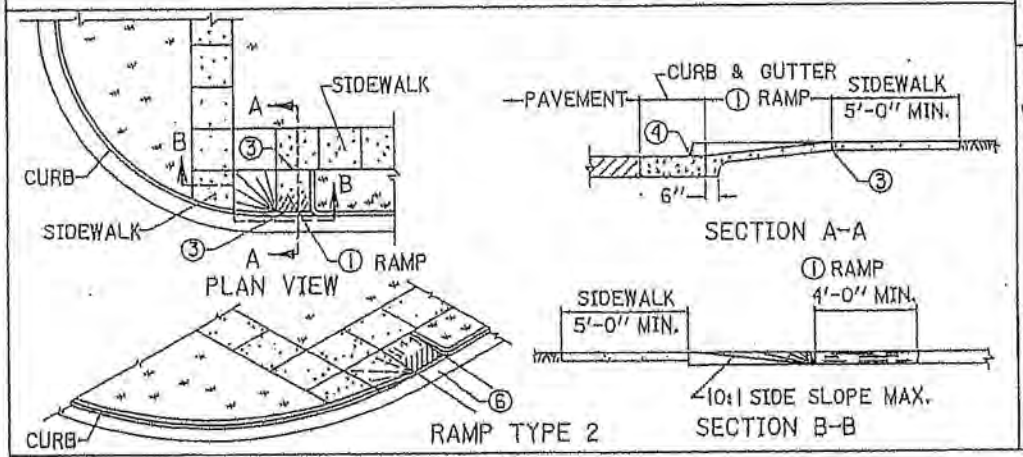
Exterior Features
Deck
Driveway
Patio
Sidewalk

Recreation Features
Basketball Court
Playground
Building Site Number (Labels)
Waterbodies

COUNTY OF	ITEM NO.	SHEET NO.



RAMP TYPE 1



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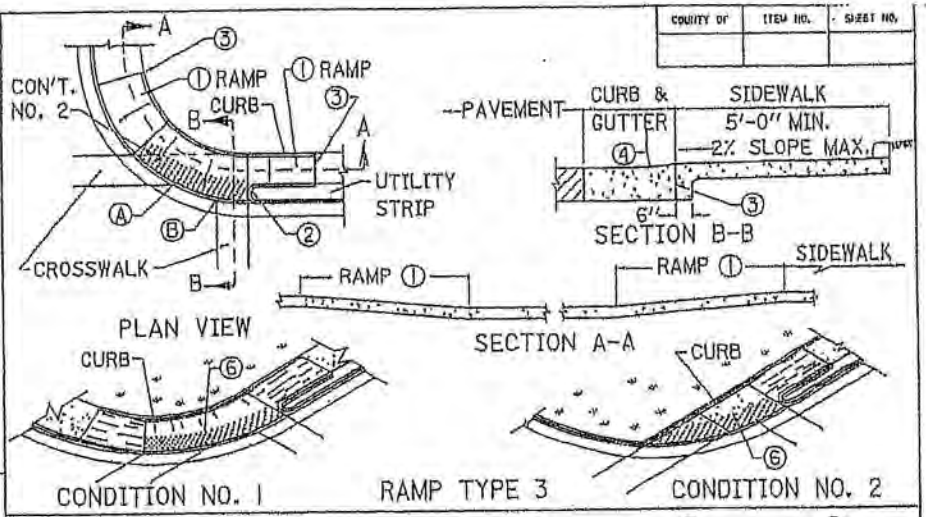
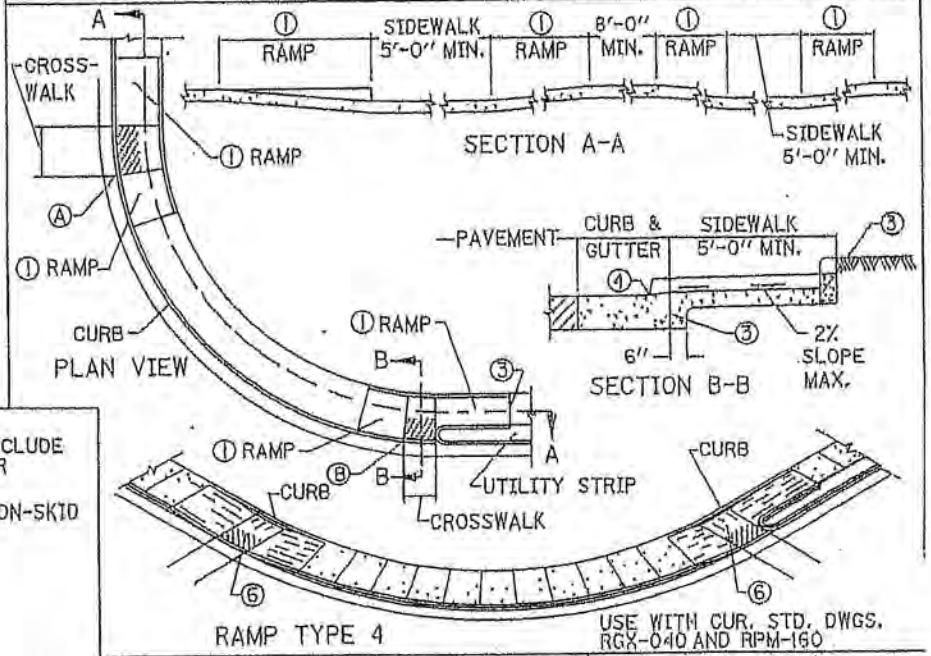


RAMP TYPE 3



RAMP TYPE 4

USE WITH CUR. STD. DWGS. RGX-040 AND RPM-160

NOTES

RAMPS SHALL BE PAID PER SQ. YARD OF 4" CONC. SIDEWALK AND THE UNIT PRICE SHALL INCLUDE ALL MATERIALS, FORMS, CURB BEHIND RAMP AND LANDING, AND INCIDENTALS NECESSARY FOR CONSTRUCTION.

THE RAMP SHALL BE CONSTRUCTED OF CLASS "A" CONCRETE. A BROOM FINISH OR EQUAL NON-SKID FINISH IS REQUIRED. DETECTABLE WARNINGS SHALL BE A SEPARATE BID ITEM.

THE NORMAL GUTTER LINE SHALL BE MAINTAINED THROUGH THE AREA OF THE RAMP.

RAMPS SHOULD BE LOCATED WITHIN MARKED LIMITS OF CROSSWALKS.

USE RAMP TYPE 3, WHEN POINT A TO B IS LESS THAN 20 FEET.

USE RAMP TYPE 4 WHEN POINT A TO B IS 20 FEET OR MORE.

① CURB RAMP GRADE SHALL NOT EXCEED 12:1, CROSS SLOPE SHALL NOT EXCEED 2%. ON RETROFIT CURB RAMPS, GRADES OF 12.5% for 2'-0" OR 10% FOR 5'-0" ARE PERMISSABLE.

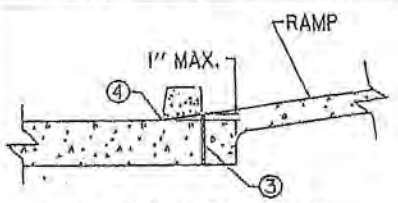
② CURB RETURN REQUIRED WHEN UTILITY STRIP IS 4 FEET OR GREATER. FOR UTILITY STRIPS LESS THAN 4 FEET, THE AREA IS TO BE SURFACED WITH SIDEWALK WITHIN THE RAMP.

③ 1/2" EXPANSION JOINT AT BACK OF CURB LINE AND AT SIDEWALK LINE.

④ NO BUMP PERMITTED. SAME SLOPE AS RAMP AND NOT TO EXCEED 1" IN HEIGHT. RAMPS SHALL BE CONSTRUCTED SO THAT WATER WILL NOT ACCUMULATE ON WALKING SURFACES.

5. ALL SIDEWALK RAMPS REQUIRE DETECTABLE WARNINGS.

⑥ LANDINGS WILL PROVIDE A LEVEL AREA (LESS THAN 2% GRADE OR CROSS SLOPE) AT APPROXIMATE STREET ELEVATION. A 4 FOOT SQUARE LEVEL LANDING IS THE REQUIRED MINIMUM.



DROP CURB FOR RAMP

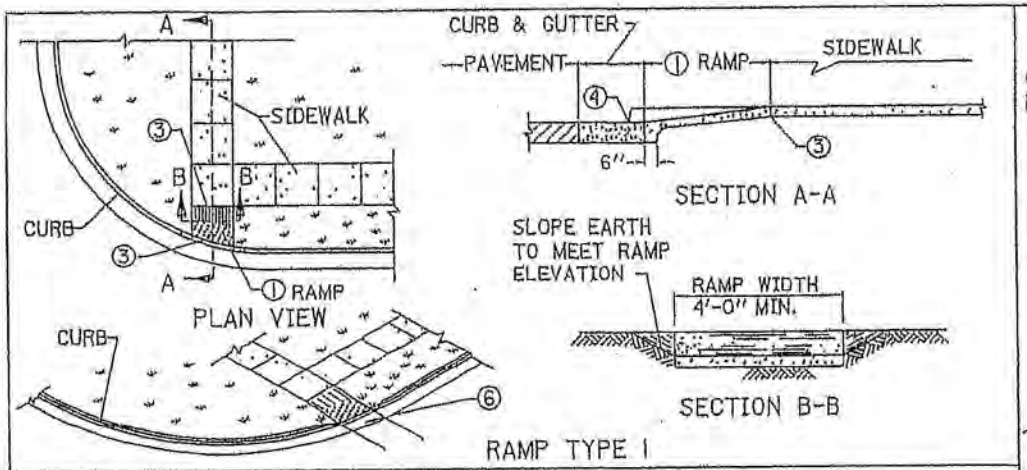
KENTUCKY
DEPARTMENT OF HIGHWAYS

SIDEWALK RAMPS

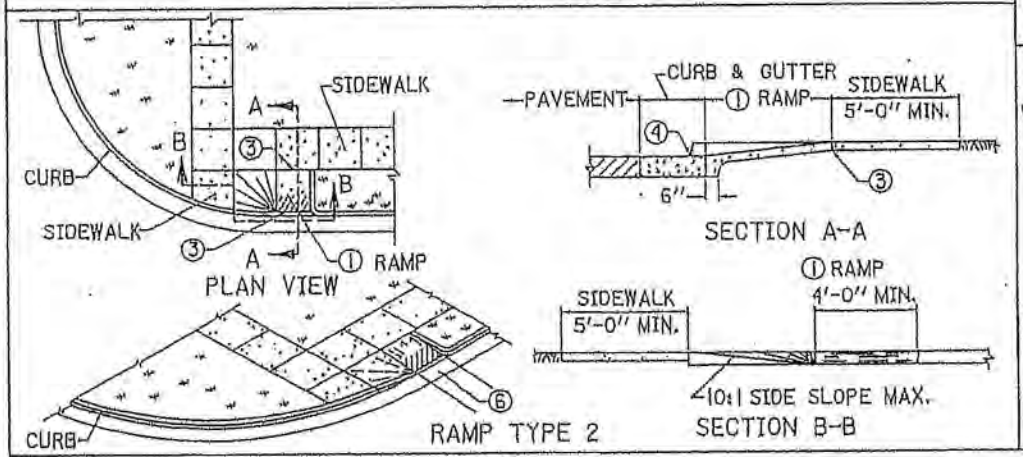
APPROVED _____ 12-16-08
HEAD DIVISION OF HIGHWAY DESIGN — DATE

014

COUNTY OF	ITEM NO.	SHEET NO.



RAMP TYPE 1



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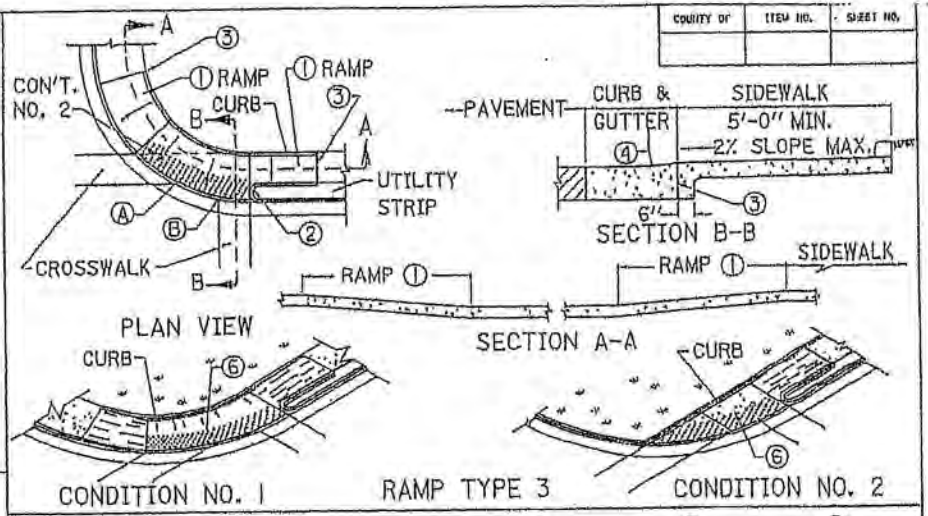

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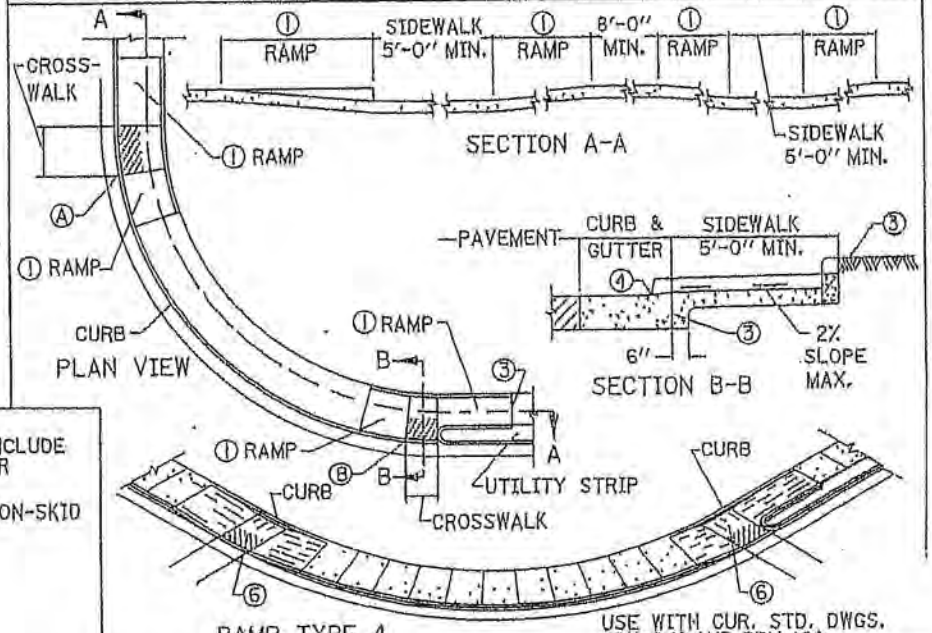

RAMP TYPE 4

USE WITH CUR. STD. DWGS. RGX-040 AND RPM-160

NOTES

RAMPS SHALL BE PAID PER SQ. YARD OF 4" CONC. SIDEWALK AND THE UNIT PRICE SHALL INCLUDE ALL MATERIALS, FORMS, CURB BEHIND RAMP AND LANDING, AND INCIDENTALS NECESSARY FOR CONSTRUCTION.

THE RAMP SHALL BE CONSTRUCTED OF CLASS "A" CONCRETE. A BROOM FINISH OR EQUAL NON-SKID FINISH IS REQUIRED. DETECTABLE WARNINGS SHALL BE A SEPARATE BID ITEM.

THE NORMAL GUTTER LINE SHALL BE MAINTAINED THROUGH THE AREA OF THE RAMP.

RAMPS SHOULD BE LOCATED WITHIN MARKED LIMITS OF CROSSWALKS.

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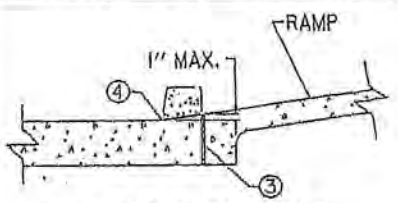


DROP CURB FOR RAMP

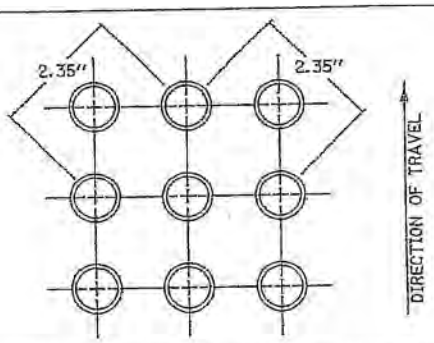
KENTUCKY DEPARTMENT OF HIGHWAYS

SIDEWALK RAMPS

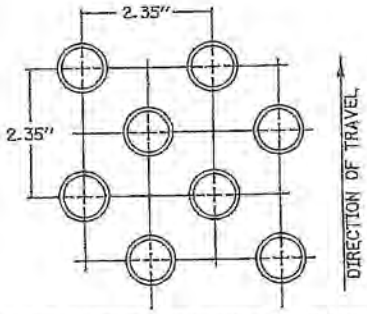
APPROVED _____ 12-16-08

HEAD DIVISION OF HIGHWAY DESIGN — DATE

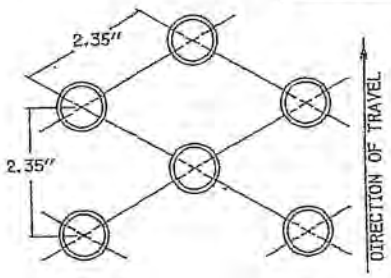
014



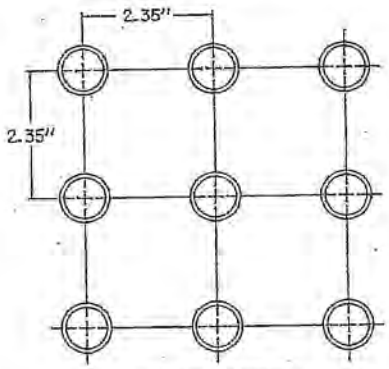
SQUARE PATTERN (PARALLEL ALIGNMENT)



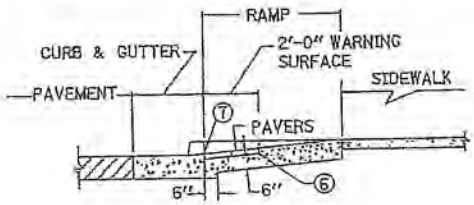
SQUARE PATTERN (DIAGONAL ALIGNMENT)



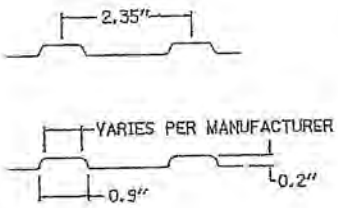
TRIANGULAR PATTERN



SQUARE PATTERN



TYPICAL DETECTABLE WARNING INSTALLATION



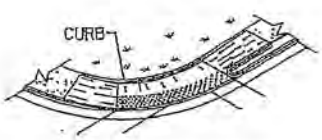
DETECTABLE WARNINGS PROFILE

NOTES

BID ITEM AND UNIT TO BID.
DETECTABLE WARNINGS - SQ. FT.

1. LANDINGS WILL PROVIDE A LEVEL AREA (LESS THAN 2% GRADE OR CROSS SLOPE) AT APPROXIMATE STREET ELEVATION. A 4 FOOT SQUARE LEVEL LANDING IS THE REQUIRED MINIMUM.
2. ALL SIDEWALK RAMPS REQUIRE DETECTABLE WARNINGS.
3. COMMERCIAL DRIVEWAYS WITH TRAFFIC CONTROL DEVICES REQUIRE ADA SIDEWALK TREATMENTS WITH DETECTABLE WARNINGS.
4. PAVERS SHALL BE CONCRETE WITH A MINIMUM THICKNESS OF 2".
5. PAVERS SHALL BE A COLOR HOMOGENOUS THROUGHOUT THE PAVER, THAT COLOR SHALL CONTRAST VISUALLY WITH THE ADJOINING SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT. THE DEPARTMENT WILL ALLOW EITHER YELLOW OR RED AS COLORS.

⑥ PAVERS TO BE SET IN MORTAR.
⑦ DETECTABLE WARNING SURFACE BEGINS AT BACK OF CURB.



TYPICAL PLACEMENT PARALLEL CURB RAMPS

USE WITH CUR. STD. RPM-160 AND RPM-170

KENTUCK
DEPARTMENT OF
DETECTABL
WARNING

Barry J. Burke, PE PLS

Civil & City Engineering, Construction Inspections, Land Use Planning, Forensic Engineering, Expert Witness

May 4th, 2021

City of Union, Kentucky
1843 Mt. Zion Road
Union, Kentucky 41091

PROPOSAL: CITY OF UNION 2021 STREET REPAIRS
PHASE B PARTS 1 & 2 – CONCRETE CURB & GUTTER & SIDEWALK REPLACEMENTS

SUBMISSIONS:
A. Bidders Quantities Sheets (Phase B Parts 1 & 2)
B. Surety/Performance Bond (Ref. Inst to Bidders #19)
C. Insurance (Ref. Contractors Insurance Requirements/Checklist)

In compliance with the advertisement for bids, the undersigned bidder having familiarized himself with the work required by the contract documents, the site where the work is to be performed, labor conditions and all laws, regulations and other factors affecting performance of the work, and having satisfied himself of the expense and difficulties to attain performance of the work, hereby proposes and agrees, if the bid is accepted, to enter into agreement to perform all work, including the assumption of obligations, duties and responsibilities necessary for successful completion of the contract in a timely manner as set forth in accord with the Submissions, as noted above, including the quantities, unit costs and total costs using the attached Bid Quantity Sheets for the Project properly completed for review with a recommendation given to the city of Union by the City Engineer.

Note – It is the city's intent to award the entire scope of work (i.e., Phase A: Parts 1 through 10; Phase B; Parts 1 & 2 and, Phase C: Parts 1, 2 & 3) to the lowest and best qualified bidding contractor or contractors. However, due to the diversity of the work by Phases, any qualified contractor can submit bids for all Phases including A, B and C or a bid on any individual Phase for the scope of work. However, any Parts of any Phase must be bid by the same contractor to qualify for an award. Further, the city has the right to accept, reject, modify any bid provided such changes are in the best interests of the city and contractor or contractors bidding on the Program, subject to the advice of the city's legal counsel.

Special attention should be given to any line item shown as "(where required)" on the Bidders Quantities Sheets. Such decision shall be made only by the City Engineer, after an on-site observation is made with the contractor or contractors able to provide such work as required.

GENERAL CONTRACTOR COMPANY NAME: _____

BIDDERS QUANTITIES SHEET
PHASE B PARTS 1 & 2

Contractors with questions during the bidding process should contact Barry J. Burke, PE at (513) 476-3235 (c) or email: burkebarry@msn.com. All questions shall be answered no later than 24 hours prior to the Public Bid Opening on Tuesday, May 25th, 2021 at 4:00 PM				
ITEM – PHASE B (See Special Notes & Technical Specifications)	**QUANTITY**	**UNIT**	**UNIT COST**	**TOTAL COST**
VARIOUS LOCATIONS				
PART 1 CONCRETE CURB & GUTTER REPLACEMENTS (min 3 feet in length)				
Arbor Springs Blvd (Roll Curb Gutter (RCG) – 4 sections (1997/2001/1964**) (See C&G Details incl Rebars and Seed/Mulch Restoration)**	**12**	**LF**		
Ashton Court S - RCG -7 sections (1107 to 1109)	**21**	**LF**		
Bayswater Drive (Cedarwood to CDS) – RCG – 2 sections opposite (1025)	**6**	**LF**		
Bayswater Drive (Cedarwood to CDS) – RCG (1099)	**3**	**LF**		
Cedarwood Drive (Hempsteade to Bayswater) – RCG near CB (10039)	**6**	**LF**		
Cherbourg Drive (Richmond to CDS) RCG – about 10 sections (9849 to 9841)	**30**	**LF**		
Churchill Drive – RCG @ DW (1051); 2 sections @ DW (1098)	**9**	**LF**		
Deepwood Court RCG-2 sections (10015)	**6**	**LF**		
Easymoor Court – RCG (10308)	**3**	**LF**		
Evensong Drive (Melody Lane to Peaceful Alley to Sapphire Lane) – 4' RCG @ Peaceful Alley; and, Depressed CG - 2 sections @ driveway (3692)	**10**	**LF**		
Farmview Drive – Vertical CG @ US42 Intersection	**3**	**LF**		
Hartwood Court E – RCG-2 sections in CDS (10201)	**6**	**LF**		
Hartwood Court W – RCG @ CB (10177)	**6**	**LF**		
Hempsteade Drive (Bayswater to 150' north of Cedarwood) – RCG (10216);	**3**	**LF**		
Hempsteade Drive (at C/Joint w/rebar exposed) – RCG (10245);	**4**	**LF**		
Lancashire Drive (Wetherington to Cherbourg) RCG (1204 & 1208)	**6**	**LF**		
Melody Drive (Brilliance to Sonata to Evensong) Vertical CG near intersection (9810)	**3**	**LF**		
Natchez Trace – RCG – 2 sections (2147)	**6**	**LF**		

Pembroke Drive – RCG – 2 sections @ CBs each side @ Holderness Intersection; 1 section @ (10236)	**15**	**LF**		
Rainbow Terrace S – RCG (9513)	**15**	**LF**		
Richmond Road (residential to Braxton) RCG – (opposite retail access drive)	**3**	**LF**		
Riviera Drive (North of Westbrook) In-lane water ponding @ NW Int; Raise RCG/Int to Drain; Include ADA Ramp and Sidewalk (Resurfacing in street by others) (**See attached Sketch Plan for detail)**	**40**	**LF**		
Russwill Lane RCG-2 sections (10123)	**6**	**LF**		
Soaring Breezes (Evensong Dr to Wilshire to Sweet Harmony) RCG @ Sweet Harmony	**3**	**LF**		
Sonata Drive Depressed CG @ Peaceful Alley	**3**	**LF**		
Sweet Harmony Lane (US 42 to Stillmeadow) RCG – (westbound lane opposite Stillmeadow)	**3**	**LF**		
Whittlesey Drive E RCG – (10125 & 10145)	**7**	**LF**		
Wilshire Court N – RCG (1306 & 1314); RCG (1320);	**12**	**LF**		
Windsor Way RCG @ Churchill Dr Intersection	**6**	**LF**		
Total Concrete Curb & Gutter Replacements	**256**	**LF**		
PART 2 CONCRETE SIDEWALK REPLACEMENTS (4" Slabs from Joint to Joint via significant cracking or unsafe appreciable settlements)				
Aria Court (3996)	1	Slab		
Melody Drive (9810; 9826; 9827; and, 9830)	4	Slab		
Sonata Drive (3805)	1	Slab		
Total Sidewalk Replacements	**6**	**Slabs**		
TOTAL PHASE B PARTS 1 & 2 (Dollars and Cents in Numerals)				
GENERAL CONTRACTOR NAME				

SPECIAL NOTES:

1. All work shall comply with the Boone County/City of Union Materials and Construction Standards and Specifications including but not limited to the following sections attached hereto by reference: (a) Instructions to Bidders; (b) Technical Specifications; (c) General Conditions; (d) Special Conditions; (e) Restoration; and, (f) Plans & Details. Copies of the above documents are made an integral part of this project. The contractor is responsible for reviewing these documents and shall conform to all standards, where and if applicable, during all phases the project work herein.
2. All traffic control shall be in accord with the "Manual on Uniform Traffic Control Devices" latest addition. (MUTCD) If there are questions regarding the city's streets, the Contractor shall coordinate these issues with the City Engineer.
3. The Contractor is responsible for contacting the various appropriate governmental agencies or special districts for inspection, if the work impacts the following: water system (Boone County Water District); sanitary sewers including manholes or laterals directly under public street pavement (Sanitation District No. 1); surface storm drainage systems (city of Union); subsurface storm drainage systems (Sanitation District No. 1); telecommunications systems (Cincinnati Bell, Inc.); and, energy systems (Duke Energy of Kentucky).
4. The Contractor shall prevent soil erosion into storm inlets, sewers and streams during construction per the SD1 and Kentucky "Best Management Practices for Construction Activities"
5. The Contractor shall notify any abutting property owners of the work impacted including removal of vehicles from the street and temporary non-use of driveways prior to start of construction.
6. All concrete surfaces shall be neatly saw-cut to provide a smooth finished edge. All repair work shall conform to the Curb and Gutter, Sidewalk and Joint Details included herein and the Materials and Specifications included within Appendix "A" for Concrete Pavements or within Appendix "B" for Asphalt Pavements of the Boone County / City of Union Subdivision Regulations. Copies of all batch tickets for 4000 psi concrete or asphalt mix design shall be provided to the City Engineer, upon request.
7. The contractor shall not submit any partial bids. However, multiple contractors may be considered to perform the work as described.
8. Any damage beyond the construction area or any property damage to property owners is the responsibility of the Contractor. The city of Union expects quick response to any damages.
9. Any adjustments to existing utility lids, water meters, mailboxes, manholes, etc. shall be included within the appropriate unit costs, if and where applicable.
10. The City Engineer may authorize minor changes on-site during construction, although any changes which may affect any necessary and/or aesthetic aspect must be pre-approved by the City Engineer or city officials before any of this work is authorized. The Contractor shall give the City Engineer and/or the City Administrative Officer all pertinent information for a Change Order to be issued.

LIST OF QUALIFIED SUBCONTRACTORS THAT WILL BE USED ON THIS PROJECT

1.) _____

2.) _____

3.) _____

SPECIAL NOTE – BASED UPON PREVIOUS ANNUAL UNDESIREABLE CONTRACTOR SCHEDULING DELAYS INTO THE WINTER SEASON, THE CITY EXPECTS PHASE B OF WORK TO START AND BE COMPLETED AS SOON AS POSSIBLE BEGINNING ON OR AFTER JULY 1ST. (SEE GENERAL CONDITIONS ITEM NO 7 – LIQUIDATED DAMAGES).
CONTRACTUAL NOTE – IF ANY PART OF PHASE B IS NOT COMPLETED BY DECEMBER 24TH OF THE CALENDER YEAR, THE CITY WILL DEDUCT $500/DAY FOR THE PORTION OF WORK NOT COMPLETED UNTIL SUCH TIME THAT 100% OF THE WORK IS SATISFACTORILY COMPLETED.

IF AWARDED THE PROJECT, I ANTICIPATE THAT THIS WORK CAN BEGIN BY _____, WITH SUBSTANTIAL COMPLETION BY _____.

SIGNED: _____

TITLE: _____

COMPANY NAME: _____

DATE: _____

[redacted]o subject)

[redacted]rry Burke <BurkeBarry@msn.com>

[redacted]9/1/2020 1:10 PM

burkeburke@msn.com <burkeburke@msn.com>

CITY OF UNION, KY

[redacted]t Outlook for Android

FY 2021-2022 STREET REPAIRS

PHASES A and B

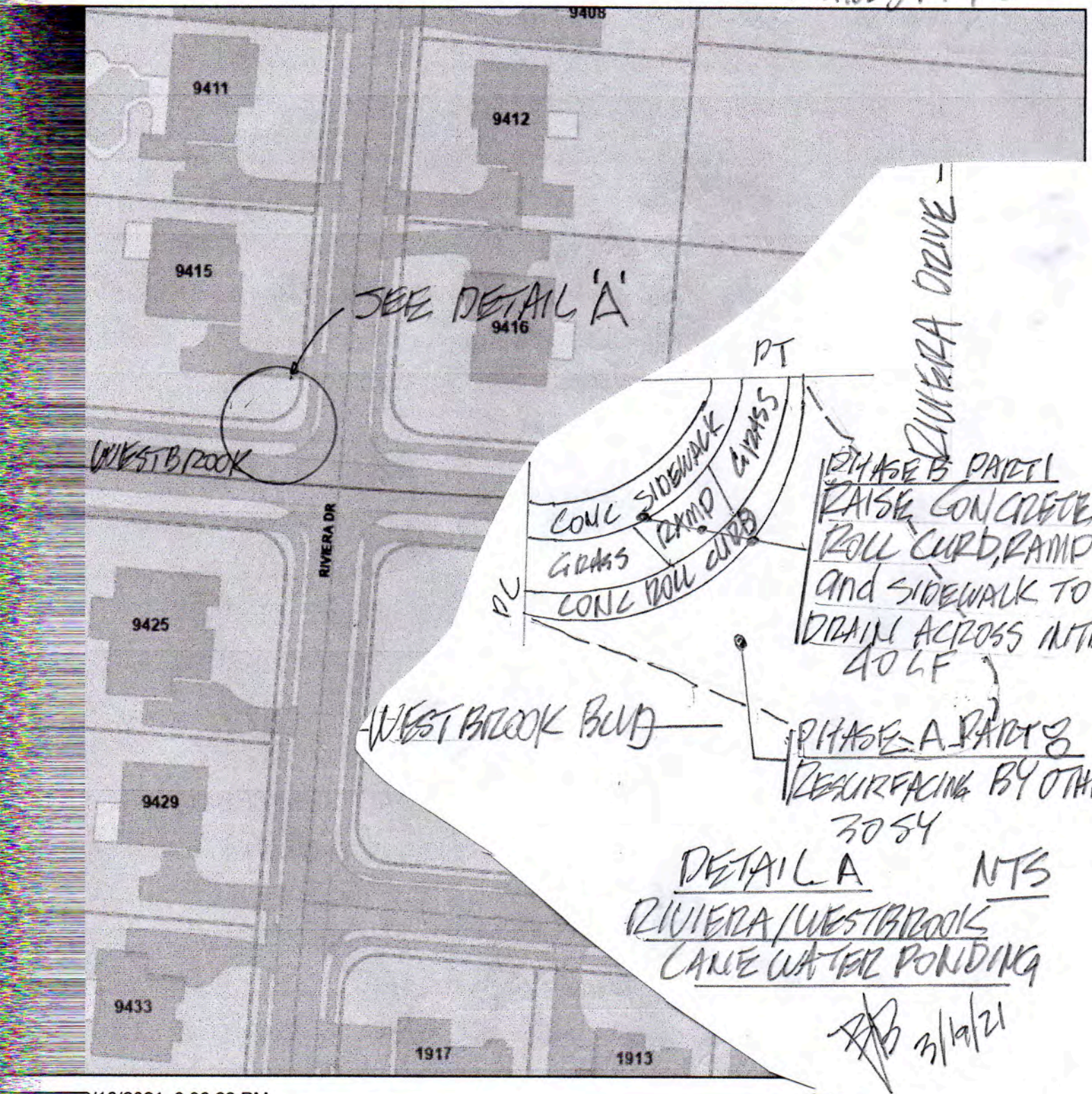
RIVIERA/WESTBROOK CALIFE BONDING

SEE DETAIL and BID SHEETS

3/19/21

CITY OF CRESCENT SPRINGS FY 2021-2022 PHASES A & B

Boone County, Kentucky



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Major Streets
Collector
Residential Streets
Building Footprints
Tax Parcels
Parcel Tract Lines

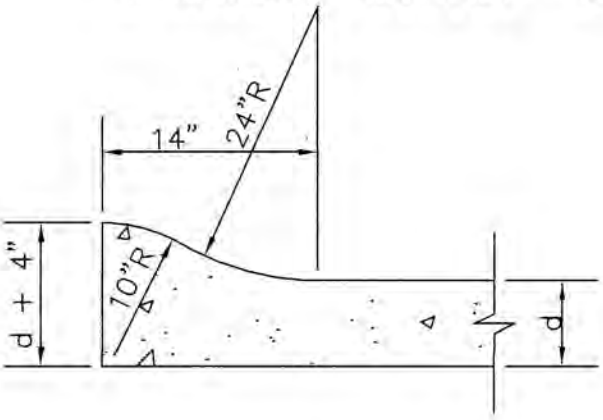
Paved Areas
Roadway

Exterior Features
Driveway
Patio
Sidewalk

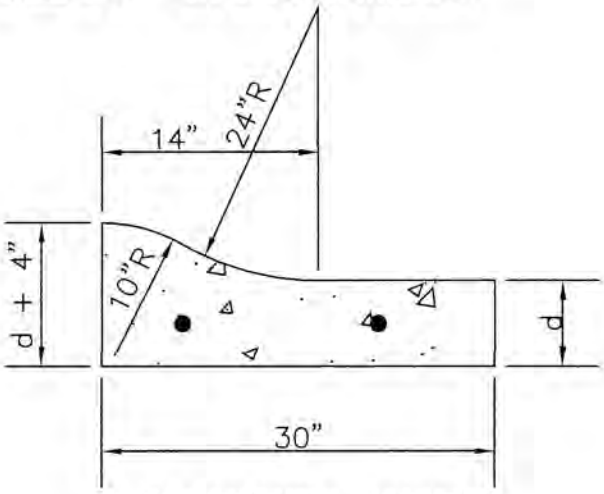
0 40 80 160 ft
0 12.5 25 50 m

GIS Services Division, Boone County Planning Commission

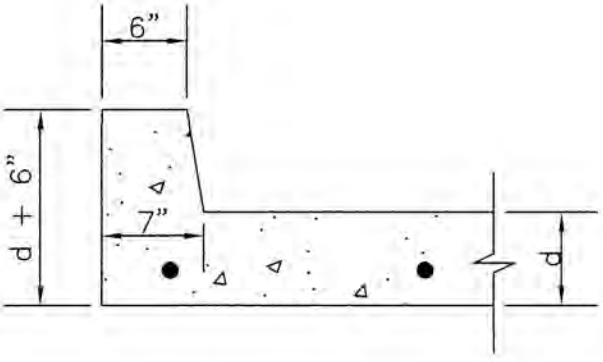
CURB AND GUTTER DETAILS



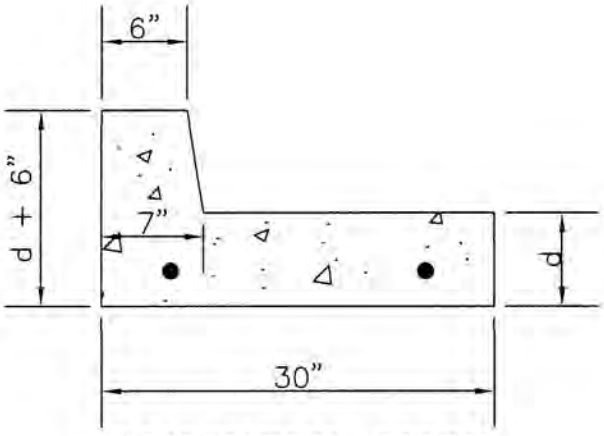
CONCRETE CURB &
CONCRETE PAVEMENT



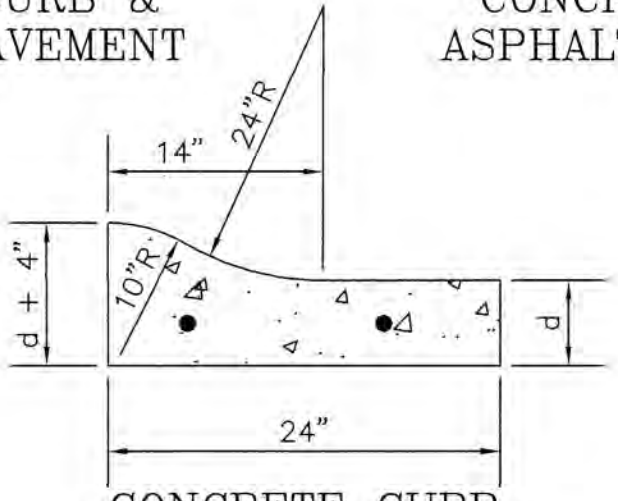
CONCRETE CURB
ASPHALT PAVEMENT



CONCRETE CURB &
CONCRETE PAVEMENT



CONCRETE CURB
ASPHALT PAVEMENT



CONCRETE CURB
ASPHALT PAVEMENT
CONDOMINIUM SREET

EXPANSION JOINTS SHALL BE PLACED AT ALL PCs, PTs, AT THE RETURN RADIUS AT CUL-DE-SACS, AND FIVE FEET ON EACH SIDE OF CATCH BASINS. THE MAXIMUM DISTANCE BETWEEN JOINTS SHALL BE 300 FEET. DOWEL BARS WITH CAPS SHALL BE PLACED AT JOINT

Barry J. Burke, PE PLS

Civil & City Engineering, Construction Inspections, Land Use Planning, Forensic Engineering, Expert Witness

May 4th, 2021

City of Union, Kentucky
1843 Mt. Zion Road
Union, Kentucky 41091

PROPOSAL: UNION 2021 STREET REPAIRS – PHASE C PARTS 1, 2 & 3 – EDGE & SIDE DRAINS AND STORM SEWER SYSTEM ALONG PUBLIC STREET RIGHTS-OF-WAY

LOCATIONS: THREE (3) STREETS INCLUDING HEMPSTEADE DRIVE, LINCOLN COURT AND EVENING STAR

SUBMISSIONS:
A. Bidders Quantities Sheets (Phase C Parts 1, 2 & 3)
B. Surety/Performance Bond (Ref. Inst to Bidders #19)
C. Insurance (Ref. Contractors Insurance Requirements/Checklist)

In compliance with the advertisement for bids, the undersigned bidder having familiarized himself with the work required by the contract documents, the site where the work is to be performed, labor conditions and all laws, regulations and other factors affecting performance of the work, and having satisfied himself of the expense and difficulties to attain performance of the work, hereby proposes and agrees, if the bid is accepted, to enter into agreement to perform all work, including the assumption of obligations, duties and responsibilities necessary for successful completion of the contract in a timely manner as set forth in accord with the Submissions, as noted above, including the quantities, unit costs and total costs using the attached Bid Quantity Sheets for the Project properly completed for review with a recommendation given to the city of Union by the City Engineer.

Note – It is the city's intent to award the entire scope of work (i.e., Phase A: Parts 1 through 10; Phase B; Parts 1 & 2; and, Phase C: Parts 1, 2 & 3) to the lowest and best qualified bidding contractor or contractors. However, due to the diversity of the work by Phases, any qualified contractor can submit bids for all Phases including A, B and C or bid on any individual Phase for the scope of work. However, any Parts of any Phase including Phase A, B and/or C must be bid by the same contractor to qualify for an award. Further, the city has the right to accept, reject, modify any bid provided such changes are in the best interests of the city and contractor or contractors bidding on the Program, subject to the advice of the city's legal counsel.

Special attention should be given to any line item shown as "(where required)" on the Bidders Quantities Sheets. Such decision shall be made only by the City Engineer, after an on-site observation is made with the contractor or contractors able to provide such work as required.

GENERAL CONTRACTOR NAME: _____

BIDDERS QUANTITIES SHEET
PHASE C – PARTS 1, 2 & 3

Contractors with questions during the bidding process should contact Barry J. Burke, PE at (513) 476-3235 (c) or email: burkebarry@msn.com. All questions shall be answered no later than 24 hours prior to the Public Bid Opening on Tuesday, May 25th, 2021 at 4:00 PM				
PHASE C PART 1 **NOTE – See the attached a Sketch Plan. Further details will be based upon on-site observations with the awarded Contractor. A Coring Permit to CB is required by SD No. 1**	**QUANTITY**	**UNIT**	**UNIT COST**	**TOTAL COST**
HEMPSTEADE DRIVE **(Addresses 10233 to 10263)** SD1 and Residents will be pre-notified by letter of the project				
6" Perforated Edge Drain w/Sock (SDR 35)	**300**	**LF**		
1'x1' Precast Cleanout w/Metal Grate	**5**	**EA**		
Concrete Driveway Apron & Sidewalk (two separate sections at 4000 PSI PCC)	**41**	**SY**		
6" Solid Wall Laterals to Right-of-Way (SDR 35) (See **Special Notes** for Private Lateral Connections by Others)	**40**	**LF**		
Restoration (Seed & Mulch)	**1**	**LS**		
TOTAL PHASE C PART 1 **(Dollars and Cents in Numerals)**				
GENERAL CONTRACTOR NAME				

BIDDERS QUANTITIES SHEET
PHASE C – PARTS 1, 2 & 3

Contractors with questions during the bidding process should contact Barry J. Burke, PE at (513) 476-3235 (c) or email: burkebarry@msn.com. All questions shall be answered no later than 24 hours prior to the Public Bid Opening on Tuesday, May 25th, 2021 at 4:00 PM				
PHASE C PART 2 **NOTE – See the attached a Sketch Plan. Further details will be based upon on-site observations with the awarded Contractor. A Coring Permit to CB is required by SD No. 1**	**QUANTITY**	**UNIT**	**UNIT COST**	**TOTAL COST**
PLANTATION POINT ARBOR SPRINGS/LINCOLN COURT **(Addresses 1404 to 1420)** SD1 and Residents will be pre-notified by letter of the project				
6" Perforated Edge Drain w/Sock (SDR 35)	**240**	**LF**		
1'x1' Precast Cleanout w/Metal Grate	**4**	**EA**		
Concrete Driveway Apron & Sidewalk (three separate sections at 4000 PSI PCC)	**31**	**SY**		
6" Solid Wall Laterals to Right-of-Way (SDR 35) (See **Special Notes** for Private Lateral Connections by Others)	**40**	**LF**		
Restoration (Seed & Mulch)		**LS**		
TOTAL PHASE C PART 2 **(Dollars and Cents in Numerals)**				
GENERAL CONTRACTOR NAME				

BIDDERS QUANTITIES SHEET
PHASE C – PARTS 1, 2 & 3

Contractors with questions during the bidding process should contact Barry J. Burke, PE at (513) 476-3235 (c) or email: burkebarry@msn.com. All questions shall be answered no later than 24 hours prior to the Public Bid Opening on Tuesday, May 25th, 2021 at 4:00 PM				
PHASE C PART 3 **NOTE – See the attached a Sketch Plan. Further details will be based upon on-site observations with the awarded Contractor. A Coring Permit to CB is required by SD No. 1**	**QUANTITY**	**UNIT**	**UNIT COST**	**TOTAL COST**
EVENING STAR **(Southeast corner at Soaring Breezes intersection)**				
Standard Curb Inlet (SD1 STM - 01.2)	**1**	**EA**		
12" Storm Sewer (SDR 35)	**10**	**LF**		
Roll Concrete Curb Restoration (two separate sections at 4000 PSI PCC)	**6**	**LF**		
Restoration (Seed & Mulch)	**1**	**LS**		
TOTAL PHASE C PART 3 **(Dollars and Cents in Numerals)**				
TOTAL PHASE C – PARTS 1, 2 & 3 **(Dollars and Cents in Numerals)**				
GENERAL CONTRACTOR NAME				

SPECIAL NOTES:

1. All work shall comply with the Boone County/City of Union Materials and Construction Standards and Specifications including but not limited to the following sections attached hereto by reference: (a) Instructions to Bidders; (b) Technical Specifications (i.e., specifically Item 1 Section 1.4); (c) General Conditions; (d) Special Conditions; (e) Restoration; (f) Insurance Requirements; and, (g) the Bidders Quantities Sheets including on-site observations with the Contractor.
2. The City has notified each abutting property owner impacted by the project by letter describing the scope of the city's work prior to start of the project.
3. The Contractor is responsible for obtaining a tap-in permit for coring any of the existing storm water catch basins included within the project from the owner of said basins, which is SD No.1.
4. The Contractor shall notify each abutting property owner impacted including removal or relocation of vehicles along the street and/or temporary non-use of driveways, aprons and sidewalks prior to start and estimated time for completion of construction.
5. Private Lateral Connections by Others. Should the City's PWC and City Commission approve this project, some agreement or commitment in writing from property owners along streets named Hempsteade Drive and Lincoln Court should be installed by the property owner or owners at no cost to the city with a connection to the subject Edge/Side Drain system as proposed by the City. Any private agreement between the Contractor and a property owner is beyond the City's responsibility. (See the Sketch Plans for details).
6. Any adjustments to existing utility lids, water meters, mailboxes, manholes, etc. within the public rights-of-way shall be included within the appropriate unit costs, if and where applicable.
7. The City advises that the Bid Quantities shown are only estimates. Thus, the contractor shall be paid for only those items constructed, which are required as determined by the City Engineer. The City Engineer may authorize changes during construction, although any changes must be pre-approved by the City Engineer before any of this work is authorized. The Contractor shall give the City Engineer and/or the City Administrative Officer all pertinent information for a Change Order to be issued.

GENERAL CONTRACTOR NAME: _____

LIST OF QUALIFIED SUBCONTRACTORS THAT WILL BE USED ON THIS PROJECT

1.) _____

2.) _____

3.) _____

SPECIAL NOTE – BASED UPON PREVIOUS ANNUAL UNDESIREABLE CONTRACTOR SCHEDULING DELAYS INTO THE WINTER SEASON, THE CITY EXPECTS PHASE C OF WORK TO START AND BE COMPLETED AS SOON AS POSSIBLE BEGINNING ON OR AFTER JULY 1ST. (SEE GENERAL CONDITIONS ITEM NO 7 – LIQUIDATED DAMAGES).
CONTRACTUAL NOTE – IF ANY PART OF PHASE C IS NOT COMPLETED BY DECEMBER 24TH OF THE CALENDER YEAR, THE CITY WILL DEDUCT $500/DAY FOR THE PORTION OF WORK NOT COMPLETED UNTIL SUCH TIME THAT 100% OF THE WORK IS SATISFACTORILY COMPLETED.

IF AWARDED THE PROJECT, I ANTICIPATE THAT THIS WORK CAN BEGIN BY _____, WITH SUBSTANTIAL COMPLETION BY _____.

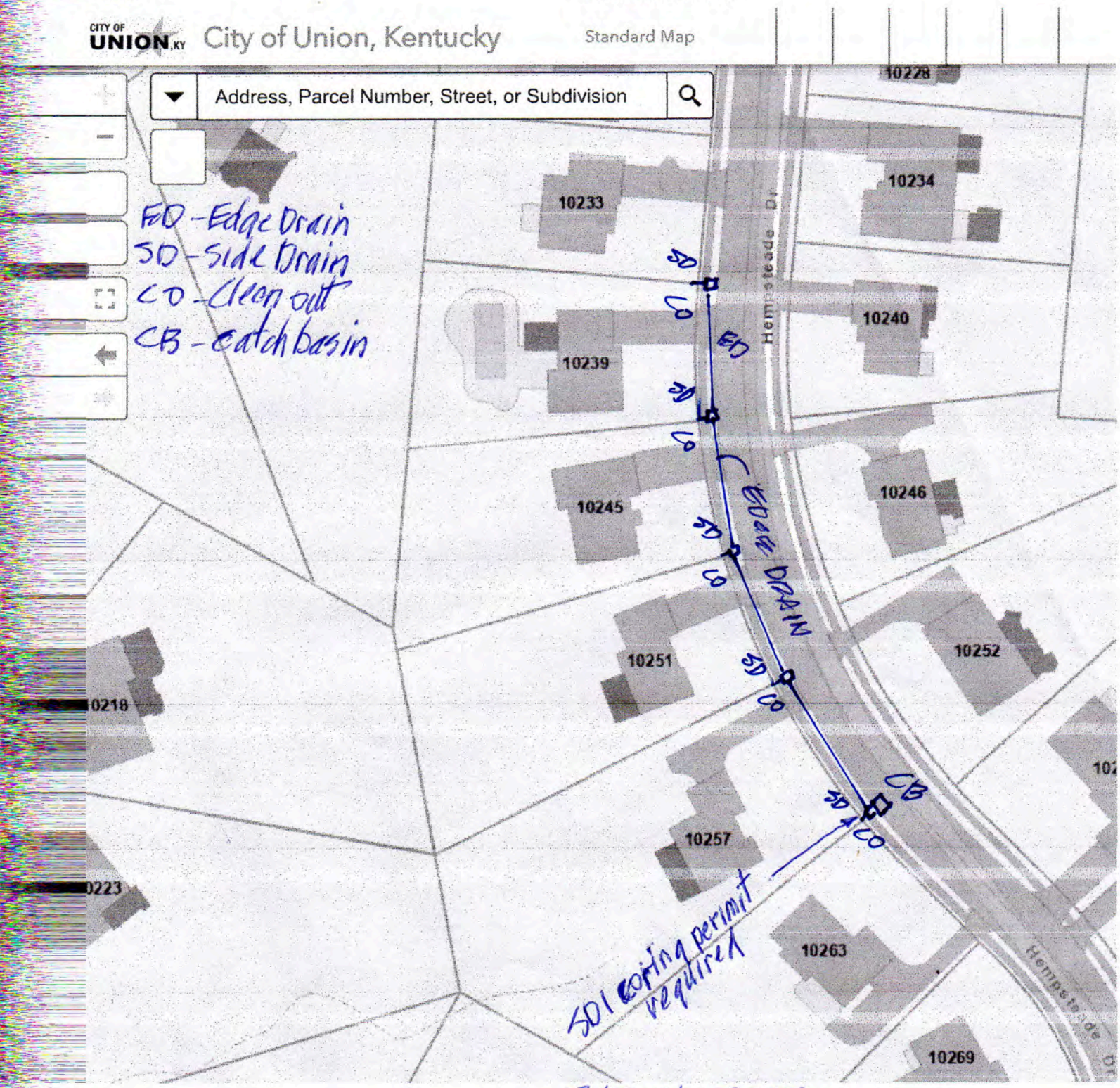
SIGNED: _____

TITLE: _____

COMPANY NAME: _____

DATE: _____

CITY OF UNION, KY City of Union, Kentucky Standard Map



2/1/21

FY 2021-2022
HEMPSTEADE DRIVE
EDGE/SIDE DRAIN
(10233) to CB(10263) 300 L.F.+/-
PHASE C PART I

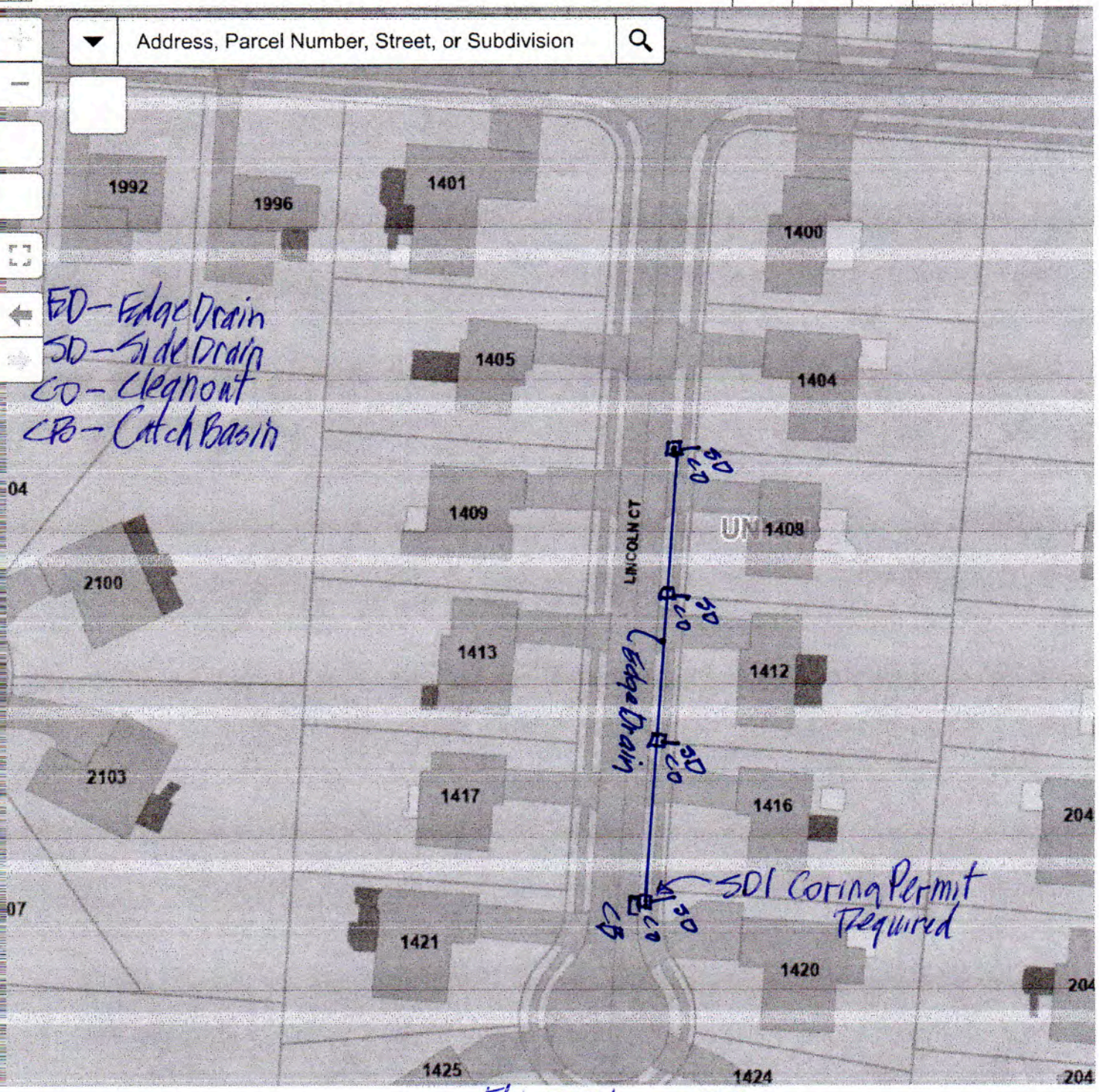
30 60ft
-84.649 38.943 Degrees

Boone County, Kentucky

Boone County, Kentucky

Standard Map

Address, Parcel Number, Street, or Subdivision



FY 2021-2022
LINCOLN COURT
EDGE/SIDE DRAIN
(1404) to (1420) CB - 240 LF
PHASE C PART 2

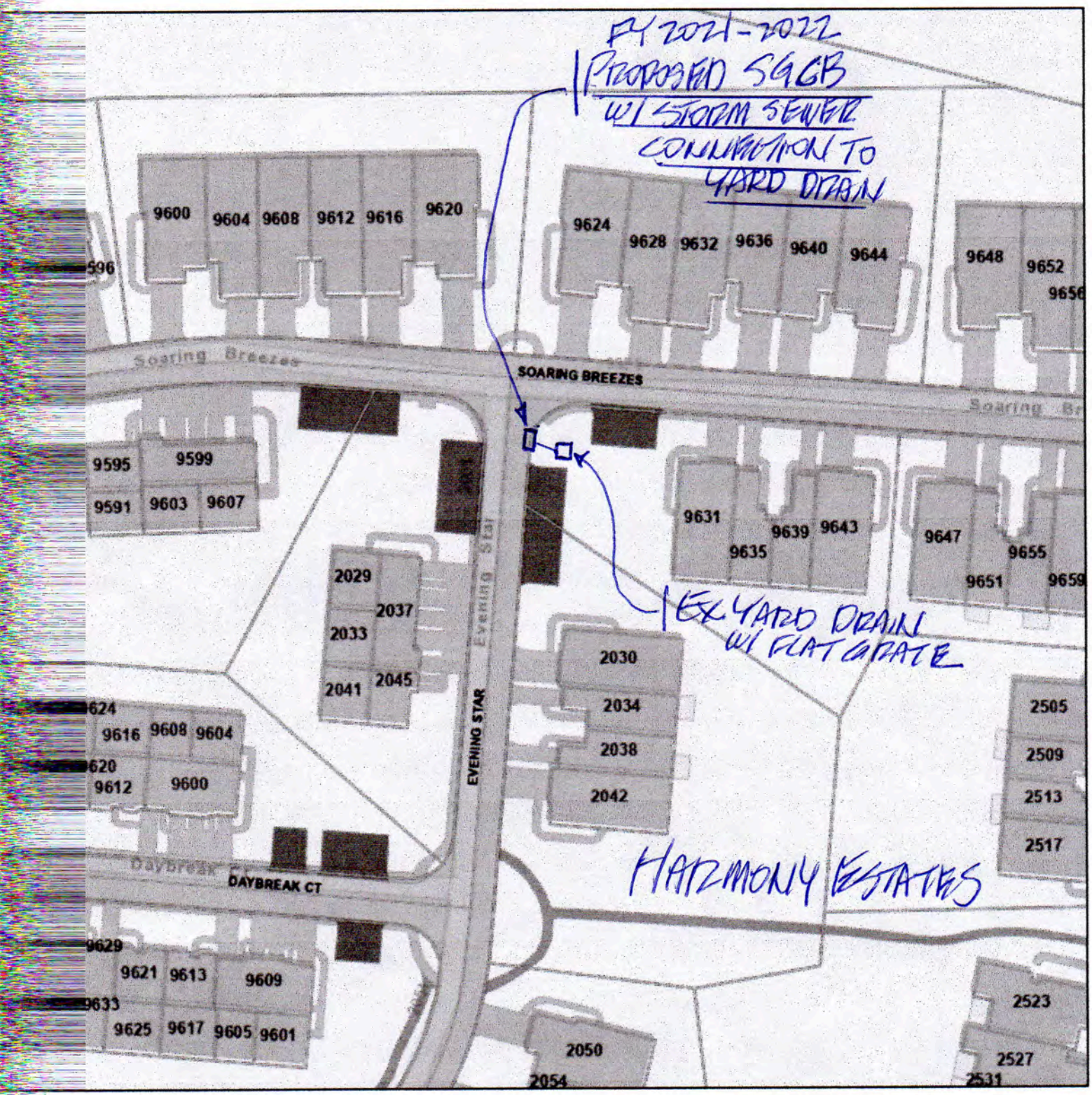
3/3 2/1/21

30 60ft

-84.666 38.958 Degrees

CITY OF UNION

Boone County, Kentucky



1/25/2021, 1:51:06 PM

1:1,128

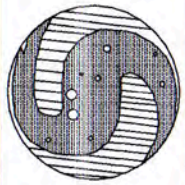
0 0.01 0.01 0.03 mi

0 0.01 0.02 0.04 km

Residential Streets
Building Footprints
Tax Parcels
Parcel Tract Lines
Paved Areas
Roadway
Parking Lot
Exterior Features
Driveway
Patio
Sidewalk
Walking Trail

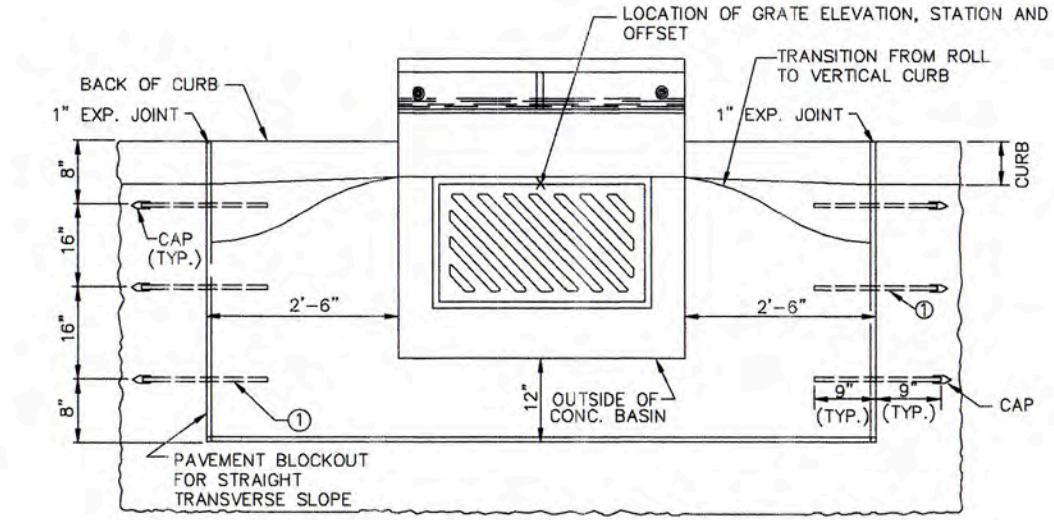
#3 2/1/21
PHASE C PART 3

Esri, HERE, Garmin, INCREMENT P, NGA, USGS, GIS Services Division, Boone County Planning Commission

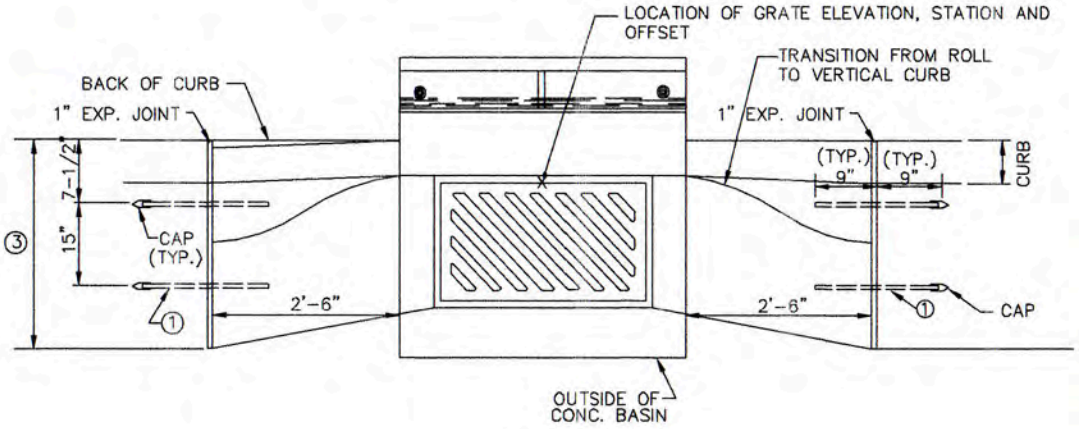


SANITATION DISTRICT NO. 1
1045 Eaton Drive
FT. Wright, Kentucky 41017
Ph: (859) 578-7460
Fax: (859) 331-2436

REVISION	BY	DATE



PLAN OF CATCH BASIN BLOCKOUT IN RIGID PAVEMENT



PLAN OF CATCH BASIN BLOCKOUT IN FLEXIBLE PAVEMENT

NOTES:

1. GRATES AND CASTINGS: SEE SPECIFICATION SECTION 05540. UNLESS THE PLANS SPECIFICALLY REQUIRE THE GRATE "V", THE DIAGONAL GRATE SHALL BE PROVIDED AND PLACED SUCH THAT THE DIAGONAL BARS DIRECT DRAINAGE FLOW TOWARD THE CURB.
2. PRECAST CONSTRUCTION: PERMITTED, EXCEPT FOR THE APRON. CONCRETE SHALL MEET REQUIREMENTS OF SD1's STANDARD SPECIFICATIONS. PRECAST WALLS SHALL HAVE A MINIMUM THICKNESS OF 6" AND REINFORCING SHALL BE SUFFICIENT TO PERMIT SHIPPING AND PLACEMENT WITHOUT DAMAGE.
3. OPENINGS: THE MAXIMUM PIPE OPENING SHALL BE THE OUTSIDE DIAMETER (O.D.) OF THE PIPE BEING SUPPLIED PLUS 3" WHEN FIELD CUT.
4. DOWELS: FOUR 3/4" X 18" DOWELS ARE REQUIRED FOR CONCRETE PAVEMENT OR GUTTER BLOCKOUT. REFER TO DOWEL DETAIL THIS DRAWING.
5. BLOCKOUT: BLOCKOUTS SHALL BE CONSTRUCTED AS SHOWN IN THIS DETAIL. ALL CONCRETE AND ASPHALT SHALL CONFORM TO THE GOVERNING JURISDICTIONS REGULATIONS.

CITY OF UNION
FY 2021-2022
PHASE C PART 3

3/19/21

KEY NOTES:

1. 3/4" SMOOTH DOWEL LOCATION FOR CURB AND GUTTER.
2. 4" MINIMUM DEPTH, 4,000 PSI CONCRETE WITH SCRIBED INVERT.
3. FOLLOW LOCAL SUBDIVISION REGS FOR CURB DESIGN.

STANDARD CURB INLET (STM-01.2)

N.T.S.

(REFERENCE -BOONE CO. SUB. DETAIL C.12 & ODOT CB 2.2)

DATE: SEPTEMBER 2018

STANDARD DRAWING NO: STM-01.2