ADDENDUM NUMBER TWO

DATE: April 9, 2021

OWNER: City of Troy

SUBJECT: Addendum Number Two
Cherry St. Improvements
Project No. M15-7199

This Addendum forms a part of the Bidding and Contract Documents and modifies the original Bidding Documents. **FAILURE TO ACKNOWLEDGE RECEIPT OF ADDENDUM MAY SUBJECT BIDDER TO DISQUALIFICATION.**

ITEM:

1. CHANGE:
Job Specifications – Section 4000 – Asphalt Pavement
All specifications regarding tack coat have been removed. See the revised specifications for asphalt pavement attached with this addendum.

2. CHANGE:
Job Specifications – Section 5900 - Street Lighting
See the revised specifications for street lighting attached with this addendum. Revisions are in red. Bidders shall utilize the catalog number found in the specifications for street light details.

3. CHANGE:
Bid Form, Page BF - 4
Alternate No. 2 added as seen below. See the revised bid form attached with this addendum.

ALT. 2	Sanitary Lateral replacement (City to provide pipe. Contractor to install pipe from existing lateral tap to right of way line)	30	Each		

4. CHANGE:
Sheet DE-7
Specify grate type "Neenah no. R-3067-L". See the revised sheet attached with this addendum.

5. CHANGE:
Sheet LD-1
Details have been revised. See the revised sheet attached with this addendum.

6. CHANGE:
Sheets RD-3, RD-5, & RD-6
People's Bank has performed construction since survey and sheets have been revised to show existing. See the revised sheets attached with this addendum.

7. QUESTIONS:
Will pavement edge treatment be added as a line item?
Pavement edge treatment is incidental to all pavement construction.

Does an asphalt price adjustment index need to take place?
An asphaltic concrete price adjustment index is not necessary for this project.

END ADDENDUM NO. 2

SECTION 4000 – ASPHALT PAVEMENT

1. GENERAL

   A. This Section includes: Construction of an asphaltic concrete pavement leveling course and surface overlay. The leveling and surface course shall be asphaltic concrete as specified in the latest version of the "Missouri Standard Specifications for Highway Construction."

2. DESCRIPTION OF WORK

   A. Extent of asphalt paving work is shown on drawings.

3. SUBMITTALS

   A. Material Certificates: Provide copies of materials certificates signed by material producer and Contractor certifying that each material item complies with, or exceed, specified requirements.

4. SITE CONDITIONS

   A. Construct asphalt pavement when atmospheric temperature is above 45°F (7°C), and when base is dry.

   B. Grade Control: Establish and maintain required lines and elevations.

5. MATERIALS

   A. General: Use materials as specified in the Plans.

   B. Coarse Aggregate: Sound, durable rock meeting the requirements of the Missouri Standard Specifications for Highway Construction.

   C. Fine Aggregate: Fine, granular material meeting the requirements of the Missouri Standard Specifications for Highway Construction.

   D. Mineral Filler: Rock or slag dust, hydraulic cement, or other inert material complying with the requirements of the Missouri Standard Specifications for Highway Construction.

   E. Asphalt Binder shall be homogenous and free from water, and shall not, on heating, foam below the specified minimum flash point. It shall be prepared by refining crude petroleum by suitable methods. It shall conform to the requirements of the Missouri Standard Specifications for Highway Construction.

   F. Prime Coat: Cutback asphalt type, AASHTO M-82 (ASTM D2027) MC-30, MC-70 or MC-250.

   G. Blotter Aggregate: Washed concrete sand.

6. ASPHALT AGGREGATE MIXTURE

   A. Provide plant-mixed, hot-laid asphalt aggregate mixture complying with the Missouri Standard Specifications for Highway Construction.

7. PLACING MIX

A. General: Place asphalt pavement mixture on dry, prepared surface, spread and strike-off. Spread mixture at minimum temperature of 225°F (107°C). Place only when both air temperature and surface temperature are above 45°F. Place inaccessible and small areas by hand. Place each course to required grade, cross-section, and compacted thickness.

B. The mixture shall be spread only upon a clean and dry surface, and only when weather conditions are suitable.

C. Paver Placing: Place in strips not less than 9' wide, unless otherwise acceptable to Resident Engineer. After first strip has been placed and rolled, place succeeding strips and extend rolling to overlap previous strips. This procedure shall be followed until the full width of the street is complete. The Contractor will not be allowed to place asphalt on other streets until an entire street is complete. The intent is to avoid cold longitudinal joints on the surface course. If Contractor does not pave adjacent to the previous strip, the Contractor will be required to sawcut the longitudinal joint to create a vertical edge. Prior to the adjacent asphalt mat the Contractor shall clean the vertical edge. This work shall be considered incidental to the contract.

D. Hot Joints: prior to the first pavement strip's temperature dropping below 200 degrees Fahrenheit, the second strip will be required to be laid alongside the first pavement strip. This will create a hot joint, the density on both sides of the joint will be compacted together to form a solid bond. The intent is to avoid cold longitudinal joints; this includes longitudinal and transverse butt joints.

E. Butt Joints: Saw cutting cold transverse butt joints will be required. All saw cuts will be incidental to the contract.

8. ROLLING

A. General: Begin rolling when mixture will bear roller weight without excessive displacement.

B. Compact mixture with hot hand tampers or vibrating plate compactors approved by the Engineer in areas inaccessible to rollers.

C. Breakdown Rolling: Accomplish breakdown or initial rolling using an eight ton to twelve ton three wheel roller or two wheel tandem roller or self propelled pneumatic roller immediately following rolling of joints and outside edge. Check surface after breakdown rolling, and repair displaced areas by loosening and filling, if required, with hot material.

D. Second Rolling: Follow breakdown rolling as soon as possible, while mixture is hot with a pneumatic tire oscillating-type roller developing at least 80 pounds per square inch contact pressure for all wheels. Continue second rolling until mixture has been thoroughly compacted.

E. Finish Rolling: Perform finish rolling while mixture is still warm enough for removal of roller marks with not less than a ten ton, two or three wheel tandem-type roller. Continue rolling until roller marks are eliminated and pavement has attained maximum density.

F. The Contractor shall complete all Rolling activities prior to the asphalt mixture cooling below 185 degrees Fahrenheit.

G. Patching: Remove and replace pavement areas mixed with foreign materials and defective areas. Cut-out such areas and fill with fresh, hot asphalt pavement mixture. Compact by rolling to maximum surface density and smoothness.

H. Protection: After final rolling, do not permit vehicular traffic on pavement until it has cooled and hardened.

I. Erect barricades to protect paving from traffic until mixture has cooled enough not to become marked.

9. FIELD QUALITY CONTROL

A. General: Test in-place asphalt pavement courses for compliance with requirements for thickness and surface smoothness. Repair or remove and replace unacceptable pavement as directed by Engineer.

10. THICKNESS

A. In-place compacted thickness will not be acceptable if exceeding the following allowable variation from required thickness:

1. Surface Course (BP-1): 2" nominal thickness, or as otherwise indicated on the plans, with a variance of no more than 1/4", plus or minus, 1-3/4" to 2-1/4".

2. Spot Wedge (BP-2): 1" nominal thickness as needed, or as otherwise indicated on the plans.

3. Base Course (Type-X): 3" nominal thickness per pass, or as otherwise indicated on the plans.

11. SURFACE SMOOTHNESS

A. The surface of each layer shall be substantially free from waves or irregularities. The final surface shall not vary from a 10-foot straightedge, applied parallel to the centerline, by more than 1/8 inch. At transverse construction joints, the surface shall not vary from the 10-foot straightedge by more than 1/8 inch. The Profile Index (PRI) shall be no greater than 15 inches per mile, in accordance with the Missouri Standard Specifications for Highway Construction.

B. Check surface areas at intervals as directed by Engineer.

12. ASPHALT DRIVEWAYS

All specifications for the construction of asphalt driveways shall be the same as previously specified in this section with the following exceptions:

A. ASPHALT AGGREGATE MIXTURE

1. Provide plant-mixed, hot-laid, Type BP-1 asphalt aggregate mixture complying with the Missouri Standard Specifications for Highway Construction.

B. THICKNESS

1. In-place compacted thickness will not be acceptable if exceeding the following allowable variation from required thickness:

a) Final thickness: 5" nominal thickness, or as otherwise indicated on the plans, with a variance of no more than 1/4", plus or minus, 4-3/4" to 5-1/4".

13. MEASUREMENT

A. Asphalt Pavement. The quantity measured shall be the number of square yards of asphalt in place, compacted and approved by the Engineer.

14. PAYMENT

A. Payment shall be at the unit prices as herein indicated. These prices shall be full compensation for the execution of pay items indicated including all material, furnishing equipment, labor, tools and incidentals necessary to complete these items.

B. If there is no quantity shown in the bidding schedule, the work covered by this section shall be considered as a subsidiary obligation of the Contractor covered under the other contract items. Only accepted work will be measured.

C. Asphalt Pavement (BP-1)
(Surface Course). Payment shall be at the unit price per square yard of asphalt placed which shall be full compensation for furnishing and placing all materials.

D. Asphalt Pavement (BP-2)
(Spot Wedge). Payment shall be at the unit price per square yard of asphalt placed which shall be full compensation for furnishing and placing all materials.

E. Asphalt Pavement (Type-X)
(Base Course). Payment shall be at the unit price per square yard of asphalt placed which shall be full compensation for furnishing and placing all materials.

ITEM 4000.1 ASPHALT PAVEMENT – SQUARE YARDS

END SECTION 4000

SECTION 5900 – STREET LIGHTING

1. GENERAL

A. This section shall include furnishing labor, equipment, materials, and services necessary for the installation of the street lighting system as shown on the plans, the visual illustrations and in the manner hereinafter specified. This shall include but not be limited to:

1. Supplying the Ornamental Tear-Drop Luminaires, minimums of 152Watt, 19,000 Lumens, 70 CRI and efficacy matching wattage output. Shall be 4K CCT LED array, Asymmetric Type III light distribution lighting system mounted onto ornamental scroll-type mounting arms on cast aluminum street light fluted poles as shown on the lighting details;

2. Acceptable overall total height of the pole, mast arm and luminaire assembly to range from a minimum height of 20 foot from the bottom of the tear-drop glass globe;

   a) Tear-Drop Luminaire accessories to include a **glass textured** tear-drop globe, scroll-type mounting arm, prismatic reflector or refractor mounted inside the globe or fabricated into the glass globe to achieve the Type III light distribution and the diode array

3. Installation by Contractor of concrete street light bases and anchor bolts;

4. Installation of secondary power distribution load center pedestal and coordination with Ameren Missouri for the installation of power supply from the power source to the load center panel;

5. Installation by Contractor of underground PVC conduit (open trench and/or directional bore), cable, hand-holes, base mounted ornamental cast aluminum, fluted street light poles, concrete bases, ornamental tear-drop style luminaires, scroll-type mounting arms, adjustable clamp-on banner arms and GFI receptacle as specified.

B. All work described to be executed in first class workmanship manner.

C. All material, equipment and workmanship to be in strict accordance with the latest edition of the National Electrical Code (NEC), OSHA requirements and all regulations, state, local, Ameren Missouri electrical requirements and industry standards. In case of a conflict of codes, the more stringent shall apply.

D. The Contractor shall obtain and pay for all local permits, licenses and inspection fees and coordinate all inspections required for approval of the equipment and material installations as shown on the drawings.

E. Upon completion of the work, Contractor to leave premises clean and ready for use.

2. REFERENCES

A. American Association of State Highway and Transportation Officials (AASHTO)
B. AASHTO C-HSLTS - Structural Supports for Highway Signs, Luminaires and Traffic Signals
C. American National Standards Institute (ANSI)
D. ANSI C82.4 - Ballasts for High-Pressure Sodium Lamps (Multiple Supply Type)

E. ANSI C136.2, C136.10,C136.14, C136.15, C136.17, C136.31 - Roadway Lighting Luminaire
F. National Fire Protection Association (NFPA)
G. NFPA 70 - National Electrical Code
H. Illuminating Engineering Society of North America (IESNA)
I. IES RP-8 - Recommended Practice for Roadway Lighting
J. IESNA Lighting Handbook
K. American Society for Testing and Materials (ASTM)
L. ASTM A 36 - Structural Steel

3. SUBMITTALS

The Contractor shall be responsible for submitting for approval by the Project Engineer prior to ordering all materials to be used for street lighting. Materials to include; pole and luminaire specifications and drawing details, load center pedestal specifications and drawing details, assembly specified color samples, conduit and hand-hole. If the Project Engineer deems it necessary, the Contractor shall also submit a photometric drawing illustrating the light distribution for the entire project for their proposed product.

4. MATERIALS / INSTALLATION

A. The Street Light Assembly shall include but not be limited to the following:
- Concrete base mounted fluted cast aluminum street light pole,
- Decorative **glass** tear-drop LED luminaire,
- Decorative scroll-type mounting arm,
- One (1) pair **adjustable height** banner arm assembly,
- GFI receptacle **recessed** assembly,
- **Field Adjustable Lumen Output Control Module**
- All cables, connections, fuse holders, fittings and fasteners required and specified for each pole. All fasteners, bolts and nuts to be **STAINLESS STEEL. Galvanized or any other corrosive metal is not acceptable.**

B. Installation of all lighting materials shall be per the manufacturers written instructions.

C. It will be the responsibility of the contractor, the project engineer and the public agency to coordinate the removal of existing light pole assemblies, overhead cabling and vertical support poles as necessary with the utility company owning said utility poles and equipment prior to the installation of the new pole assemblies, sidewalks, ramps, driveways and road widening.

D. All exposed surfaces shall be **powder coated** as per the manufacturer's available premium application based on the pole material and meeting the following requirements;
a) Application. Powder shall be applied by electrostatic spray
b) Film Thickness. Dry film thickness shall be 3-4 mils
c) Hardness. Pencil hardness shall be H to 2H
d) Impact. Paint shall be directly impacted with a 160-pound variable impact tester per ASTM D-2794
e) Adhesion. Using a sharp blade scribe a series of eight, 1/8-inch squares. Press a strip of pressure sensitive adhesive tape over squares. After two (2) minutes remove the tape. Results shall be a level four (4) or better per ASTM-3359-B
f) Abrasion Resistance shall be per ASTM D-4060. Weight loss of coating after 1,000 cycles of the abraser shall be 40-60 milligrams
g) Salt Spray Resistance shall be per ASTM B-117. No undercutting shall be present after 500 hours in five (5) percent salt spray at 95 degrees Fahrenheit and 95 percent relative humidity

h) Humidity Resistance shall be per ASTM D-2247. Steel panels in an un-scribed condition shall exhibit no effect after 1,000 hours exposure to 100 percent relative humidity at 100 degrees Fahrenheit
i) Weatherability. Powder coating shall meet the minimum weatherability standards set forth in ASTM 336

E. CONCRETE BASE MOUNTED LIGHT POLE ASSEMBLY WITH ORNAMENTAL BASE, ORNAMENTAL SCROLL MAST ARM & BANNER ARMS

1. Shall be the approved Lighting Manufacturer - Aquity Brands "Holophane - Sitelink" - North Yorkshire Aluminum Pole Assembly - **#NYA SL6 17D C09 BK ABG FGB** with **17** inch base and **West Liberty Roadway Arm decorative** scroll type mast arm - **#WLC 48IN 1A TN BK and West Liberty decorative arm fitter - #WLDF QSM BK** **Complete pole assembly to be black in color.**

2. Pole Design shall meet or exceed the following requirements:
   a) Pole shall be designed in accordance with AASHTO Standard Specifications. Wind speed values are for a 3 second gust per ASCE 7-98 and AASHTO 2001. Calculated per ASCE 7-98, 50-year recurrence interval, 1.0 Importance factor. Assumes load 12 inches above post top. Minimum Safety Factor = 2.0
   b) The pole height shall be in compliance with the specified luminaire height, scroll-type mast arm and tenon. The pole shaft shall be 5-inch diameter with the manufacturer's fluted design made of steel materials. Pole to meet or exceed the AASHTO and ASNI C136.20 national specifications for deflection and stiffness
   c) Pole shall require **on the house-side quadrant (180*) of the pole:**
      - one (1) access hand-hole and cover fabricated into pole
      - one (1) **recessed** GFI receptacle assembly fabricated into pole
   d) All fasteners shall be supplied with the pole and shall be constructed of stainless steel
   e) Pole shall include anchor base, anchor bolts, and anchor bolt pattern template
   f) Installations of the street light poles are to be in accordance with the manufacturer's detailed instructions

3. Pole Protective Covering: Prior to shipment, all poles and bases shall be completely wrapped per the pole manufacturer's recommendations. The Contractor will be responsible for the arrival of poles on site in an undamaged condition. Cutting instruments (i.e. knives) shall not be used as a means of removing packaging material.

4. Banner Arms: Shall be - **#BA 24IN 1A BO SL6 HB 100P BK.** - clamp-on, break-away and be capable of an adjustable mounting height with internal safety cable. Contractor shall supply two (2) adjustable arms per street light pole assembly with the manufacturer's stainless-steel mounting hardware. **Color to match the pole - black.**

5. GFI Assembly: Each pole to have included a **recessed style**, 20amp GFI duplex receptacle and protective covering installed 12 inches below the bottom of the mast arm assembly. **Color to match the pole - black.**

6. Ornamental Pole Base: Shall be **17** inches in diameter at the bottom, a height of 24 inches and be designed to fir the above specified pole.

7. All fasteners for decorative base shall be constructed of stainless steel. **Galvanized or any other corrosive metal is not acceptable.**

F.ORNAMENTAL TEAR-DROP LUMINAIRE

1. Shall be the approved Lighting Manufacturer - Aquity Brands "Holophane - Sitelink" - Esplanade LED 2 Series (ESL2) Tear-Drop Style Luminaire Assembly - **#ESL2 P50S 40K MVOLT TG3 QSM BK PR3 AO SH. Complete luminaire assembly to be black in color.**

2. Luminaire design shall meet or exceed the following requirements:
   a) Luminaire 30 inches in height, fabricated from one-piece die-cast aluminum / steel or formed and welded aluminum / steel housing with a base mounted fitter to accept the manufacturer's standard type tenon and assembled to form a weather and bug-proof unit
   b) Globe shall be the manufacturer's standard **textured glass,** tear-drop design with standard globe holder and finial. Fastening bolts or set screws to be stainless steel
   c) **Textured glass** with prismatic optics or interior mounted reflector for a Type 3 asymmetric light distribution. **Polycarbonate or acrylic globe material is not acceptable**
   d) Luminaire shall include a 152Watt, 19,000 lumen, 4k CCT LED array, with minimums 19,000 lumen output, 70CRI rating, 70,000-hour life-cycle and an efficacy rating to match the wattage output per lumen
   f) Premium multi-tap driver (120V - 277V) compatible with the LED array and pre-wired to 40 volt tap from the manufacturer. Driver shall be capable of starting temperatures as low as minus 20 degrees F, a power factor of 90 percent, manufacturer's premium available start type with plus or minus ten percent LED power regulation and single- phase voltage input. Assembly shall be easily accessible and removable with quick disconnects
   g) **Field Adjustable Lumen Output Control Module**
   h) Be controlled by a single, load center pedestal interior mounted photo-control. **Individual luminaire NEMA photo-control receptacle to be excluded**

G. LOAD CENTER PANEL (Metered Commercial Pedestal)

1. 200Amp, 16" Commercial Pedestal shall be of NEMA Type 3R rainproof construction and shall be UL listed as "Enclosed Industrial Control Equipment" (UL 508A). External construction shall comply with UL50 requirements and shall be constructed as per the manufacturer's standard (as specified and shown on the drawing details).

2. External construction shall consist of the manufacturer's standard aluminum housing.

3. No fasteners except sealing screws shall be removable externally. Hinges shall be stainless steel and of the continuous piano type.

4. Pedestal mounting bolts shall not be externally accessible. Pedestal shall have the option of either being embedded in concrete or use the manufacturer's anchor base kit to be bolted to concrete the concrete base. The concrete base to be installed as specified in the drawing details. **The base of the pedestal to be sealed on the concrete with a continuous bead of clear silicone caulk.**

5. The metering section must be pad-lockable and sealable and have a hinged swing back hood with an integral hinged polycarbonate sealable window for access to demand meters. An external nameplate shall be permanently attached to the hood. A stainless-steel handle

shall be provided on the front exterior of the hood. Meter socket type shall meet the requirements of Ameren Missouri.

6. The utility termination section must be pad-lockable and sealable and shall have a stainless-steel handle provided on a lift-off cover. Sufficient clearance shall be provided for multiple diameter conduits for utility cables entrance. Utility landing lugs shall be UL listed and shall accommodate #6-350 kcmil conductors.

7. The customer compartment door to be hinged on the left-hand side and include a stainless pad-lockable hasp to secure compartment. A door keeper shall be provided to keep door in open position. A print pocket on the inside of the door shall hold all wiring schematics, circuit directories and instructions in a clear weatherproof sleeve.

8. Required UL labeling shall be included shall be located on the inside of the customer door.

9. Distribution and control equipment shall be behind an internal dead-front door with a quarter-turn securing latch and be hinged to open more than 90 degrees. Dead-front door shall be hinged on same side as customer compartment door.

10. All distribution and control equipment shall be factory wired using 600-volt wire sized according to NEC and UL requirements.

11. Provided documentation shall list circuit breaker combinations and those to be used for de-rated operation for series ratings. Circuit breakers shall be permanently labeled with engraved name plates.

12. Pedestal shall contain/meet the following:
    a) Meter Socket - 1 Ringless Socket with lever bypass
    b) Amp rating - 200 amps
    c) System Voltage - Single phase, Three wire, 120/240 volt
    d) Circuit Breaker Disconnect Schedule:
        i. 200-amp Pedestal: Two (2) double pole main disconnect
        ii. Minimum of twelve (12) secondary single pole circuit breaker availability (as shown on the metered circuit directory on the drawing details)
        iii. Installed Circuit Breakers - Two (2) - 30 amp/double-pole / 240 volt for lighting, Two (2) - 20 amp/double-pole / 240 volt for receptacles One (1) - 15 amp/single-pole / 120 volt for the photo-control
        iv. Interior Photo-Control standard NEMA twist-lock socket - with window & external shield with a light emitting access hole drilled into the shield
        v. **"Time Delay"** Twist-Lock Photo-Cell
        vi. Circuit Breaker Trip Handle - for photo-control override
        vii. Distribution Interior - Metered Lug-Lug Breakers
        viii. Enclosure size - 16 inches wide by 17 inches deep by 48 inches high
        ix. Bus bar shall be copper
        x. Cabinet shall have terminal blocks
        xi. Cabinet to have a stainless steel **latch-able locking mechanism** to accommodate a locking padlock
    e) Load Center Panel Pedestal to be installed per the manufacturer's required specifications and location and as shown on the plans. The power source requirements and location have been coordinated between Ameren Missouri and the project engineer. All required cabling, (overhead or underground), wooden poles for spanning secondary power supply and transformers if needed, conduit,

load center panel pedestal wiring and connections to each load center panel from the

power source to be in accordance with the National Electrical Code (NEC) and industry standard

f) It will be the responsibility of Ameren Missouri, as necessary, to supply secondary power to the load center panel pedestal as per specified and shown on the drawings

g) It the responsibility of the Contractor to provide conduit, cable and riser to the designated utility pole as shown on the plans. **It will be the responsibility of the project engineer and the public agency to coordinate all applications for the newly installed load center pedestal. Refer to Premise Work Number #728010500 with Ameren Missouri to coordinate inspection and the power source material installation and the load center being energized**

G. UNDERGROUND CABLE IN CONDUIT

1. All wiring shall be installed in PVC conduit. Conduit shall be provided where exposed to the weather or for turn-ups into fixture bases and exterior buried conduit.

2. Conduit shall be CIC (cable in conduit), or approved equal:
   a) Conduit to consist of high-density polyethylene material in accordance with ASTM D 3350. Acceptable standard conduit to be black HDPE NEMA TC-7. Conduit size to be in accordance with allowable National Electrical Code (NEC) fill percentages and detailed drawings
   b) Cable in the conduit to comply with the specification outlined under "Cable"
   c) Conduit sizes will range from ¾ inch to 2 ½ inches. See plans for specific sizes and locations
   d) It shall be the option of the Contractor for the method of installation of the conduit, with the exception of conduit under roadway pavement. All conduit under the road shall be installed by directional bore. The options for other locations are either by open trench installation or by directional bore
   e) Open trench installations shall be at a minimum depth of 24 inches below finish grade elevation. After trench is open, the conduit shall be placed in the trench with all conduits connected to the conduits stubbed out of the concrete street light pole bases and placed at the hand hole locations and properly compacted with mechanical equipment in 8-inch lifts with existing soil or backfill material until the trench is completely filled to grade
   f) The directional bore conduit to comply with the description of the conduit for the open trench listed above and installed at the same minimum depth. Contractor shall install a pull rope (mule tape) inside the conduit

H. CONCRETE STREET LIGHT BASE

1. Concrete bases to include reinforcing steel (horizontal and vertical), anchor bolts, PVC conduit, and grounding rods in accordance with the manufacturer's minimum requirements. Design mix to produce normal-weight concrete consisting of Portland cement, aggregate, water-reducing or set retarding admixture, air-entraining admixture, and water to produce the following properties:
   a) Compressive Strength: 3,000 psi, minimum at 7 days, unless otherwise indicated
   b) Air Content: 5 ½ percent +/- 1 ½ percent

2. Construction and the installation of the concrete street light bases to be as per the base

typical details on the plans.

3. Round fiber forms must be continuous throughout the five (5) foot concrete base.

4. During the pouring of the concrete for the base, mechanical vibration is required.

5. After concrete reaches required strength, unless installed in concrete sidewalk, the top exposed above grade section of the concrete base (sonotube) shall be removed uniformly and any honey-combs or voids in the exposed base to be repaired to a smooth and clean appearance. **All exposed sections and edges of the concrete base to also be tooled and finished with round edges and tooled to a smooth finish.**

I. CABLE

1. Underground cable for street lighting power supply to be **#4 AWG,** copper, 600V stranded general purpose wiring for installation in conduit or other recognized raceways, or approved equal.

2. Street lighting power supply cable colors and sizes as listed in the specifications.

3. Power supply cable from the power source to the load center panel pedestal shall be per Ameren Missouri electrical requirements and the National Electrical Code (NEC) on size and installation.

4. Street light pole cable shall be a minimum of 14/2 + ground, 600 volt shielded tray cable with PVC/Nylon insulation UL type TC with ground. Use for the installation from the luminaire cable leads to the cable at the base of the street light pole.

5. Receptacle pole cable to be a minimum of 12/2 + ground, 600 volt jacketed cable with PVC/Nylon insulation.

6. All cable installed inside any conduit **MUST** be continuous from the point of origin to point of termination of load. Cable splicing is not acceptable.

7. All conductors shall be identified by phase, circuit and voltage at each panel, both in-ground and light pole access hand-holes. Provide waterproof nonmetallic bands or identification tags for each conductor at each location.

8. All conductors throughout the project shall be color coded as follows:

TO LUMINAIRE	
PHASE	**120/240 VOLT**
A	RED
B	BLACK
GROUND	GREEN

TO RECEPTACLE	
PHASE	**120/240 VOLT**
A	BLUE
B	BLACK
NUETRAL	WHITE

The grounding cable MUST be a jacketed "green" cable. Bare copper grounding cable is not acceptable.

J. HAND-HOLE

1. Hand-hole shall be a gasketed type with two (2) bolts and shall have a minimum rating of ANSI Tier 8:

a) Enclosure lid to be labeled "Street Lighting"
b) Enclosure shall be 13 inches wide by 24 inches long by 18 inches deep
c) Enclosure shall be stackable type with open bottom

2. The installation of enclosures shall be as per the typical details on the plans. As shown on the detail, all conduits must enter the hand-hole from underneath the side-wall. Installing conduit through the hand-hole sidewall **is not acceptable.**

K. FUSES

1. Fuses shall be single-pole, inline fuse holders for each conductor compatible with each street light assembly.

2. Compatible 3-amp minimum fuses shall be included with each street light assembly as per the typical pole wiring diagram detail.

3. Fuse holders to be wired directly from the load center panel pedestal cable to the luminaire conductor. Splicing smaller cables from the load center conductor to the fuse holder (jumpers) is not acceptable.

5. MATERIAL CERTIFICATIONS

A. Buy America. Raw materials and manufacturing process to form, shape, cut, or weld materials shall be provided in North America to be considered of domestic origin. They shall be of the ASTM type as called forth in this specification. Mill certifications shall be supplied by the manufacturer verifying conformance to these specifications.

6. MEASUREMENT

A. All materials and items to be paid for on the basis of measurement shall be measured and determined by the Engineer in accordance with the Drawings and Specifications, or as authorized by the Owner.

B. Street Light Assembly. The quantity measured shall be the number of decorative tear-drop style luminaires, scroll-type mounting arms, street light poles, light pole cable and all additional materials specified installed and accepted.

C. Concrete Street Light Base. The quantity measured shall be the number of concrete street light bases installed and accepted.

D. Underground Cable in Conduit. The quantity measured shall be the lineal foot of cable in conduit installed and accepted.

E. Hand-Hole. The quantity measured shall be the number of hand-hole enclosures and covers installed and accepted.

F. Load Center Panel Pedestal. The quantity measured shall be for load center panel pedestal installed and accepted. This is to include the coordination with Ameren Missouri on their required material and installation from the load center panel pedestal to the power source pole location ONLY.

7. PAYMENT

A. If there is not quantity shown in the bidding schedule, the work by this section shall be considered as a subsidiary obligation of the Contract covered under the other contract items. Only accepted work will be measured.

B. If no unit price is included in the contract, the work outlined and required to complete the contract or as directed by the project engineer, will be considered incidental to the work and no direct payment for the work will be made.

C. Street Light Assembly. Payment shall be at the unit prices as herein indicated for each street light and pole assembly shown on the drawings. These prices shall be full compensation for the installation of the ornamental luminaries, mounting arms, banner arms, street light poles, pole cable, fusing and all connections as indicated, including: all material, equipment, labor, tools, and appurtenances necessary to complete the installation.

D. Concrete Street Light Base. Payment shall be at the unit prices as herein indicated for the concrete street light poles shown on the drawings. These prices shall be full compensation for the installation of the bases to include excavation, forms, steel reinforcing rods, light pole anchor bolts, conduit, grounding rod and concrete as indicated including: all material, equipment, labor, tools and appurtenances necessary to complete the installation.

E. Underground Cable in Conduit. Payment shall be at the unit prices as herein indicated for the underground conduit and power cable shown on the drawings. These prices shall be full compensation for the installation of the conduit and cable as indicated, including: all material, equipment, labor, tools, and appurtenances necessary to complete the installation.

F. Hand-Hole. Payment shall be the unit prices as herein indicated for the installation of all hand-hole enclosures and covers. This price shall be full compensation for the installation of the hand-hole enclosures to include excavation, base rock and covers as indicated to include: all material, equipment, labor, tools and appurtenances necessary to complete the installation.

G. Load Center Panel (Metered Pedestal). Payment shall be at the unit prices as herein indicated for the load center panel pedestal shown on the drawings. These prices shall be full compensation for the installation of the load center pedestal as indicated, including: all materials, equipment, labor, tools, and appurtenances necessary to complete the installation from the load center to the Ameren power source location ONLY. **Fees associated with Ameren Missouri supplying additional equipment and installation for the power source IS NOT to be included in the load center pedestal installation cost. The costs are the responsibility of the public agency for payment separate from the project costs.**

   All cable and conduit installed from the load center to the Ameren Missouri utility pole as shown on the plans to include a 3' PVC riser above grade at the pre-determined power source pole and a 40' length of power supply cable coiled to that location. All required load center wiring and conduit size to the load center panel from the power supply source to be determined by Ameren Missouri and the National Electrical Code requirements and shall be included in the cost of the load center panel pedestal. Conduit and associated cabling from the load center to the lighting assemblies shall be paid by the lineal foot of cable in conduit.

H. It will be the responsibility of the project engineer, electrical sub-contractor and the public agency to coordinate all applications for the newly installed load center panel pedestal. **The public agency to be responsible for all costs incurred for materials and equipment by Ameren Missouri to supply the secondary power source for the load center panel**

pedestal over routine power source connections at a pole location which has been pre-determined by Ameren Missouri and the project engineer prior to the installation. Refer to Premise Work Number #728010500 with Ameren Missouri to coordinate inspection of the power source material equipment and the load center panel being energized.

END SECTION 5900

ARTICLE 10

BID FORM PROPOSAL

PROJECT NAME: Cherry St. Road Maintenance/Improvements STP-9900(387) BID TIME: 2:00 p.m.

PROJECT LOCATION: Troy, Missouri BID DATE: April 16th, 2021

BIDDER NAME_____

TO: City of Troy, Missouri ("Owner")

In response to the Invitation for Bids for Project No.STP-9900(387), CDBG# 2008-DN-21, and in accordance with the Instructions to Bidders and other Bidding Documents, the undersigned Bidder declares that he has had an opportunity to examine the site of the Work and has carefully examined the Contract Documents therefore, including the Addenda identified below, and on the basis thereof, and being fully familiar with the local conditions affecting the Work, and upon written notice of award of contract, acknowledges and agrees to provide all labor, material, equipment, tools, management and supervision, safety and technical services, insurance, bonds and incidentals necessary or required for the faithful performance of the Contract Work in accordance with the above-referenced documents in a safe, timely and workmanlike manner for the following Base Bid Price:

BASE BID:

_____

Dollars (Amount in Words)

($_____)

DETERMINATION OF LOW BIDDER. The Low Bidder will be determined by the total of the Base Bid.

DETERMINATION OF DBE PERCENTAGE. The DBE goal percentage will be based on the Cherry St. Road Maintenance / Improvements base bid total.

ACKNOWLEDGEMENT OF ADDENDA. The bidder acknowledges the following addenda were issued in conjunction with these bidding documents.

Addendum No. _____ Date: _____

Addendum No. _____ Date: _____

Addendum No. _____ Date: _____

Addendum No. _____ Date: _____

The Base Bid and Alternate amounts are more fully itemized as follows:

ITEMIZED BID FORM

Federal Project No. STP-9900(387)

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	EXTENSION
1500.1	Mobilization	1	Lump Sum		
1500.2	Pedestrian Crossing Sign (W16-7/W16-7p)	8	Each		
1500.3	Speed Limit Sign 30 MPH (R2-1)	6	Each		
1500.4	Yield Sign (R1-2)	5	Each		
1500.5	Keep Right Sign (R4-7)	3	Each		
1500.6	One Way Sign (R6-1/W1-8R)	5	Each		
1500.7	Street Sign (D3-1)	4	Each		
1500.8	Road Work Ahead Sign (W20-1)	7	Each		
1500.9	End Road Work Sign (G20-2)	3	Each		
1500.10	Stop Here on Red Sign (W10-6)	4	Each		
1500.11	Speed Limit Ahead Sign (W3-5)	5	Each		
1500.12	Speed Limit Sign 15 MPH (R2-1)	5	Each		
1500.13	Signal Ahead (W3-3)	5	Each		
1500.14	Road Closed Ahead Sign (W20-3A)	4	Each		
1500.15	Road Closed Sign (R11-2)	20	Each		
1500.16	Sidewalk Closed Sign (R9-9)	14	Each		
1500.17	Do Not Enter Sign (R5-1)	4	Each		
1500.18	One Way Sign (R6-1)	10	Each		
1500.19	Type III Barricade	48	Each		
1500.20	Channelizer	123	Each		
2200.1	Removal of Improvements	1	Lump Sum		
2300.1	Earthwork	53	STA.		
2300.2	Subgrade Repair	6,869	S.Y.		
2350.1	Silt Fence	1,528	L.F.		
2350.2	Inlet Protection	94	Each		
2350.3	MSD 8 Rip Rap	24	Tons		
2350.4	MSD 6 Rip Rap	7	Tons		
3000.1	New Curb Inlet	25	Each		
3000.2	New Double Curb Inlet	2	Each		
3000.3	New Triple Curb Inlet	1	Each		
3000.4	New Grated Inlet	7	Each		
3000.5	New Grated Inlet with Side Intake	42	Each		
3000.6	New Double Grated Inlet with Side Intake	14	Each		
3000.7	New Area Inlet	1	Each		
3000.8	New Storm Manhole	4	Each		
3000.9	18" F.E.S.	1	Each		
3000.10	24" F.E.S.	1	Each		
3000.11	30" F.E.S.	1	Each		
3000.12	15" RCP Storm Sewer	2,090	L.F.		
3000.13	18" RCP Storm Sewer	1,217	L.F.		
3000.14	24" RCP Storm Sewer	821	L.F.		
3000.15	30" RCP Storm Sewer	528	L.F.		
3000.16	36" RCP Storm Sewer	304	L.F.		

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	EXTENSION
4000.1	Asphalt Pavement	605	S.Y.		
5000.1	Concrete Sidewalk 4 in.	1,867	S.Y.		
5000.2	Concrete ADA Ramp	373	S.Y.		
5000.3	Concrete Pavement, 8 in.	13,739	S.Y.		
5000.4	Concrete Pavement, 6 in.	678	S.Y.		
5000.5	Concrete Island	80	S.Y.		
5000.6	Concrete Driveway, 6 in	36	S.Y.		
5000.7	Concrete Approach, 8 in	3,761	S.Y.		
5000.8	6" Vertical Curb	1,693	L.F.		
5000.9	6" Curb and Gutter	3,543	L.F.		
5000.10	Mountable Curb	353	L.F.		
5000.11	Concrete Step, Sta 0+66	1	Each		
5000.12	Type 5 Aggregate Base, 4" (Sidewalk)	2,240	S.Y.		
5000.13	Type 5 Aggregate Base, 4" (Roadway)	18,970	S.Y.		
6000.1	Crosswalk	16	Each		
6000.2	4" Yellow Paint Striping (Single)	450	L.F.		
6000.3	4" Yellow Paint Striping (Double)	1,693	L.F.		
6000.4	4" Yellow Paint Striping (Solid with Dash)	3,091	L.F.		
6000.5	6" White Paint Striping	4,115	L.F.		
6000.6	24" White Paint Stop Bar	124	L.F.		
6000.7	Pavement Marking "Right" Directional Arrow	4	Each		
6000.8	Pavement Marking "Left" Directional Arrow	18	Each		
6000.9	Pavement Marking "Straight" Directional Arrow	5	Each		
6000.10	Pavement Marking Yield Triangles	5	Each		
9000.1	Seeding	1	Acre		
JSP 1	Sawcutting	3,435	L.F.		
JSP 2	6" Sanitary Lateral	48	L.F.		
JSP 3	Retaining Wall	271	S.F.		
JSP 4	Roundabout Center Stamped Pavement 8 in	151	S.Y.		
JSP 5	Handicap Detectable Warning Plates (per location)	33	Each		
JSP 6	Pavement Striping Diagonal Yellow (Includes Lane Stripes and Diagonals)	1	Lump Sum		
JSP 7	Parking Lot Striping	1	Lump Sum		
JSP 8	Fencing	171	L.F.		
JSP 9	Bollard	20	Each		
JSP 10	Wheel Stop	11	Each		
JSP 11	Signal Removal/Improvements	1	Lump Sum		
JSP 12	Temporary Signal	3	Each		
JSP 13	Traffic Signal	1	Lump Sum		
JSP 14	Video Detection Cable	1	Lump Sum		
				Base Bid TOTAL	$

Contractor is required to indicate with a " * " which line items will be performed by the DBE(s).

Alternate #1

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	EXTENSION
ALT. 1	Street Lights	10	Each		

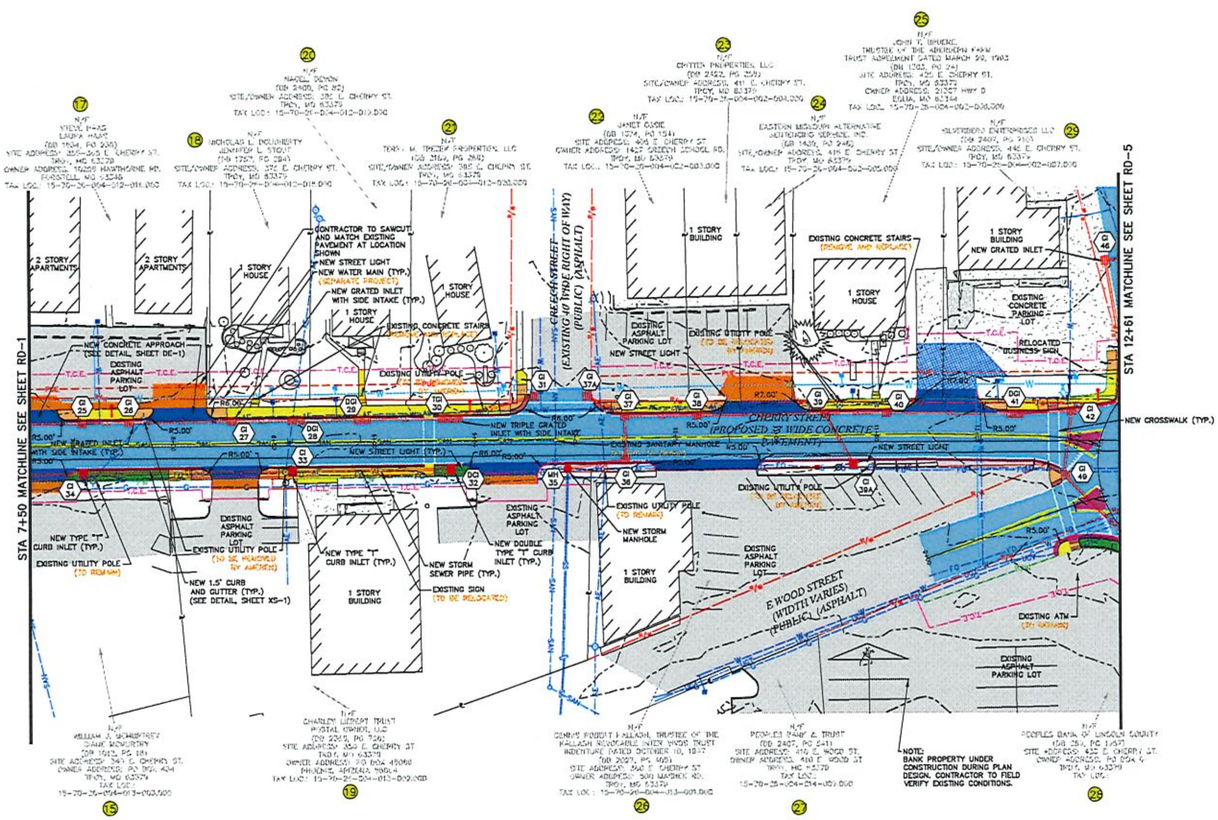
Alternate #2

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	EXTENSION
ALT. 2	Sanitary Lateral replacement (City to provide pipe. Contractor to install pipe from existing lateral tap to right of way line)	30	Each		

Contractor is required to indicate with a " * " which line items will be performed by the DBE(s).

PLAN AND PROFILE STA. 7+50 TO 12+61

SCALE: 1"=30'
SEPT. 2020



WATER MAIN SHOWN PER INFORMATION PROVIDED BY THE CITY OF TROY AND OTHERPERSONS AND SHOULD BE CONSIDERED APPROXIMATE. WATER MAIN LOCATION TO BE VERIFIED BY CONTRACTOR BEFORE ANY WORK BEGINS.

BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.

NOTE:
ALL EXISTING CITY OWNED AND PRIVATE RESIDENCE SIDEWALKS SHALL BE CONNECTED TO THE NEW SIDEWALKS WITH A SMOOTH TRANSITION CREATING NO GAP OR ABRUPT CHANGE IN GRADE.

NOTE:
ANY UTILITY COVERS THAT REMAIN IN THE PATH OF THE NEW ROADWAY AND SIDEWALK SUCH AS MANHOLES AND WATER METERS SHALL HAVE A SLIP RESISTANT TOP. (PER ADA)

NOTE:
THIS PROJECT HAS BEEN DESIGNED TO COMPLY WITH ALL REQUIRED ADA GUIDELINES AND SPECIFICATIONS.

NOTE:
CONTRACTOR TO ENSURE SIDEWALK TOP IS AT EXISTING GRADE IN ALL GRASS AREAS. THIS WILL ENSURE DRAINAGE CONDITIONS DO NOT CHANGE AFTER THE SIDEWALK IS CONSTRUCTED.

ALL LAWN AREAS DISTURBED SHALL BE REPAIRED WITH SEED AND STRAW UNLESS NOTED OTHERWISE.

ALL NEW SIDEWALKS SHALL HAVE A 2.0% OR LESS CROSS SLOPE (PER ADA)

CONTRACTOR TO USE EXTREME CAUTION AND CARE TO MINIMIZE ANY IMPACT TO EXISTING TREES & BUSHES.

NOTE:
ALL EXISTING WATER METERS ON THE SOUTH SIDE OF CHERRY STREET ARE TO BE CONNECTED TO THE NEW RELOCATED WATERMAIN.

ERIC SCOTT KIRCHNER E-2001004618
4/8/2021
DATE

Eric S. Kirchner No. E-2001004618
Registered Professional Engineer
State of Missouri
for Cochran Engineering & Surveying

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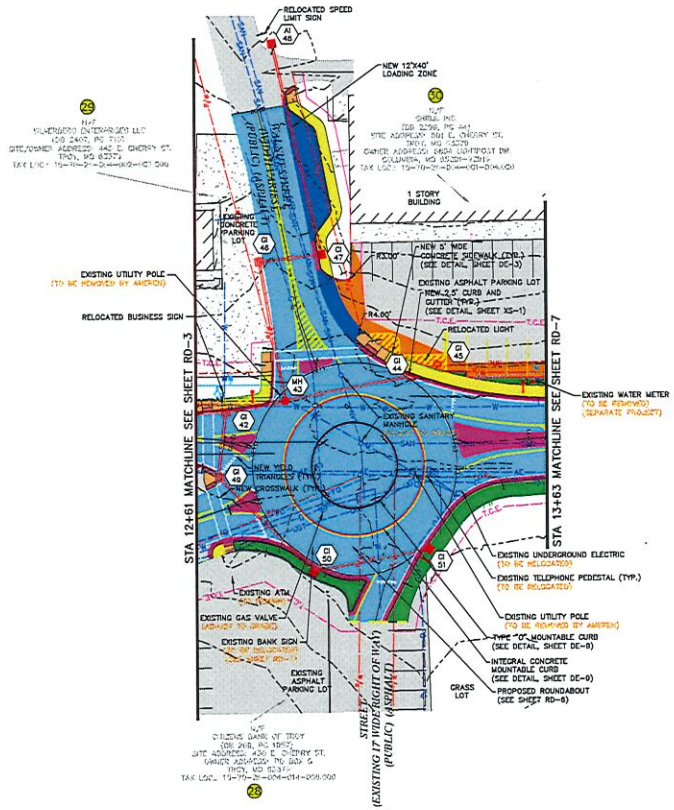
IMPROVEMENT PLANS FOR
CHERRY STREET STP-9900(387)/CDBG NO: 2008-DN-21
TROY, MISSOURI

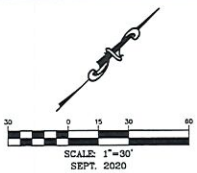
DATE:	REVISION:	DWN. BY:	APPD. BY:
04-08-21	PER IN-HOUSE COMMENTS	CBD	ESK

PLAN AND PROFILE STA. 7+50 TO 12+61

DWN. BY: ERH
APPD. BY: ESK
DATE: SEPT. 2020
SCALE: 1" = 30'
PROJ. NO. M15-7199
DWG. NO. RD-3

PLAN AND PROFILE STA. 12+61 TO 13+63





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ERIC S. KIRCHNER
E-2001004618
REGISTERED PROFESSIONAL ENGINEER
4/5/2021
DATE

Eric S. Kirchner No. E-2001004618
Registered Professional Engineer
State of Missouri
for Cochran Engineering & Surveying

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COCHRAN
• Civil Engineering
• Land Surveying
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• Master Planning
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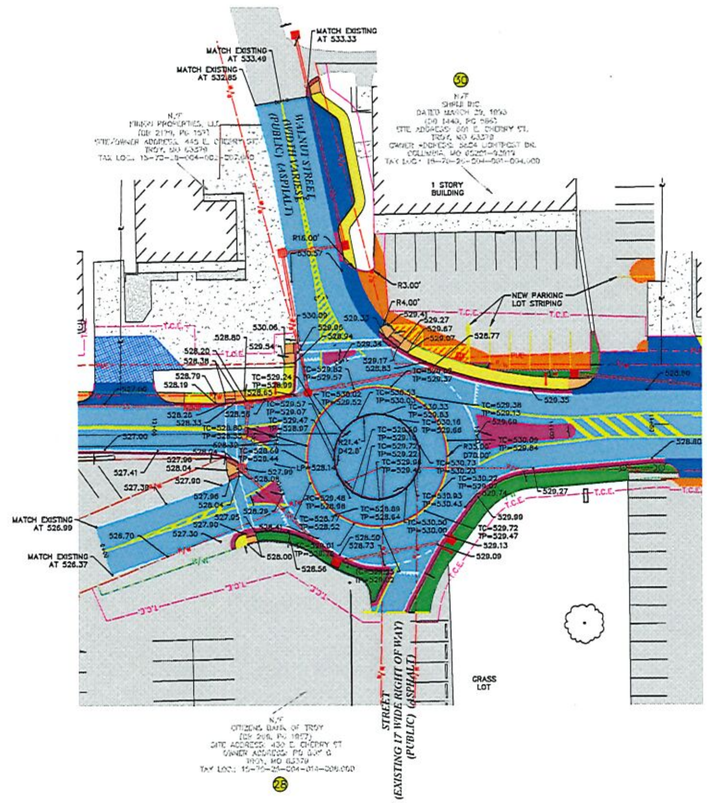
IMPROVEMENT PLANS FOR
CHERRY STREET STP-9900(387)/CDBG NO: 2008-DN-21
TROY, MISSOURI

DATE:	REVISION:	DRN. BY:	APPD. BY:
04-08-21	PER IN-HOUSE COMMENTS	CBD	ESK

PLAN AND PROFILE STA. 12+61 TO 13+63

DWN. BY: ERH | APPD. BY: ESK
DATE: SEPT. 2020
SCALE: 1" = 30'
PROJ. NO.: M15-7199
DWG. NO.: RD-5

ROUNDABOUT WARPING



SCALE: 1"=30'
SEPT. 2020

NOTE:
ALL SPOT ELEVATIONS ON THIS SHEET ARE TOP OF PAVEMENT, NOT TOP OF CURB, UNLESS OTHERWISE NOTED.

DATE
Eric S. Kirchner No. E-2001004618
Registered Professional Engineer
State of Missouri
for Cochran Engineering & Surveying

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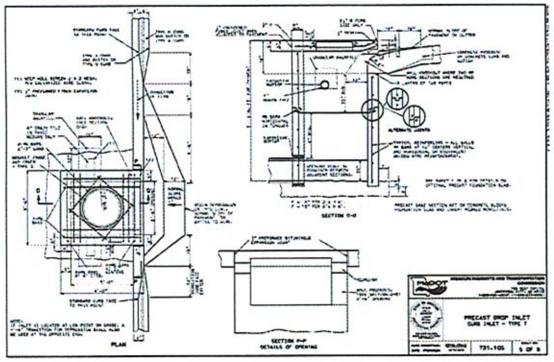
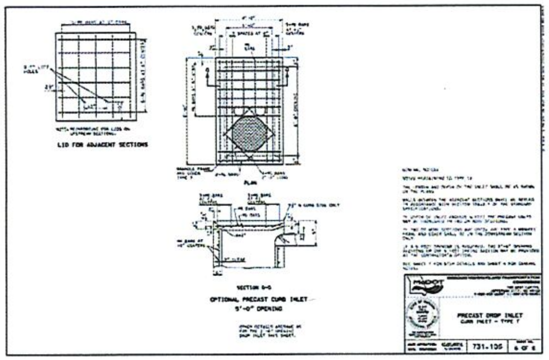
IMPROVEMENT PLANS FOR
CHERRY STREET STP-9900(387)/CDBG NO: 2008-DN-21
TROY, MISSOURI

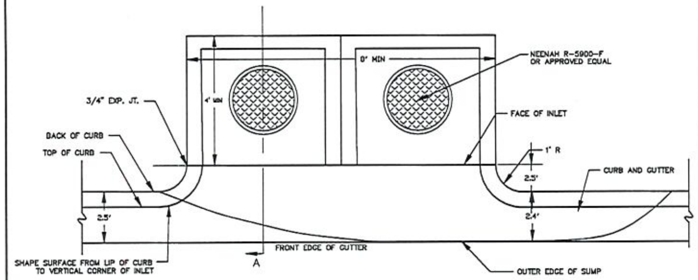
DATE:	REVISION:	DWN. BY:	APP'D BY:
04-08-21	PER IN-HOUSE COMMENTS	CBD	ESK

ROUNDABOUT WARPING
DWN. BY: ERH APP'D BY: ESK
DATE: SEPT. 2020
SCALE: 1" = 30'
PROJ. NO: M15-7199
DWG. NO: RD-6

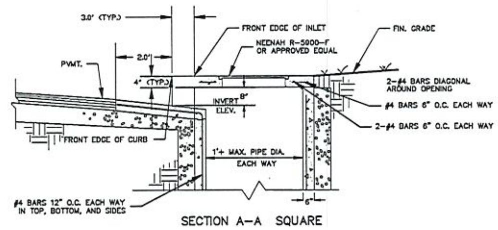
Drawing name: Z:\2015\M15-7199 - Cherry Street, Troy\ENGINEERING\DRAWINGS\04_CONSTRUCTION DOCUMENTS\5_M15-7199 Plan and Profile.dwg Tab: RD-6 Plotted on: Apr 09, 2021 - 9:53am Plotted by: cdeming







PLAN OF GUTTER SUMP



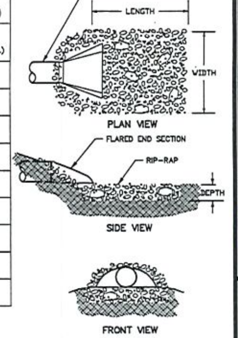
SECTION A–A SQUARE

TYPE "B" TOP DOUBLE CURB INLET DETAIL

NO SCALE

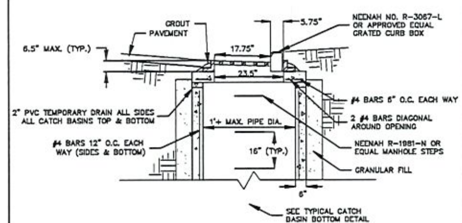
RIP-RAP SCHEDULE (MINIMUMS)

PIPE DIA. (IN.)	DEPTH (IN.)	WIDTH (FT.)	LENGTH (FT.)	MIN. TO MAX. SIZE RIP-RAP (IN.)
12	12	4	10	4–12
15	12	4	11	4–12
18	12	4	12	6–12
21	12	5	13	6–12
24	18	6	14	6–12
30	18	7	16	6–12
36	18	12	20	6–12
48	24	20	20	6–18
60	24	25	25	6–18



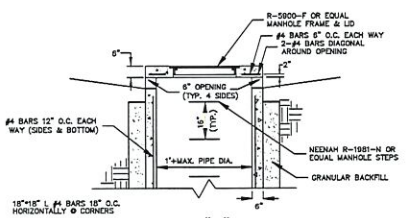
END SECTION AND RIP-RAP DETAIL

NO SCALE



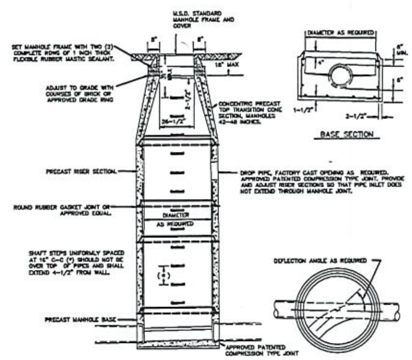
GRATED INLET WITH SIDE INTAKE DETAIL

NO SCALE



TYPE "B" AREA INLET DETAIL

NO SCALE



NOTES:

1) THE MINIMUM INSIDE DIAMETER FOR THE BASE AND RISER SECTIONS SHAL BE 42 INCHES FROM 8 INCH DIAMETER SANITARY SEWER AND ALL STORM SEWERS. THE MINIMUM INSIDE DIAMETER FOR SANITARY SEWER LARGER THAN 8 INCH DIAMETER IS 48 INCHES. MANHOLE SHALL MEET ASTM C-478 REQUIREMENTS.
2) FLOWLINE ELEVATIONS OF INCOMING PIPES SHALL BE 1 INCH HIGHER THAN THAT OF OUTGOING PIPE.
3) PIPE SIZES LARGER THAN 24 INCH DIAMETER MAY REQUIRE MANHOLE DIAMETERS OF 60 INCH, 72 INCH OR 96 INCH AS DETERMINED BY OUTSIDE DIAMTERS AND ORIENTATIONS FOR CONNECTING OF PIPES.
4) ECCENTRIC CONES SHALL BE USED ON DIAMTERS 60 INCH AND LARGER. STEPS SHALL EXTEND DOWN VERTICAL WALL OF CONE.
5) PRIOR TO FABRICATION, SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL OF MANHOLES ON PIPE DIAMETERS LARGER THAN 24 INCH AND ALSO FOR THOSE STRUCTURES WITH A DROP PIPE CONNECTION.

MANHOLE DETAIL

NO SCALE

4/8/2021

DATE

Eric S. Kirchner No. E-2001004618
Registered Professional Engineer
State of Missouri
for Cochran Engineering & Surveying

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IMPROVEMENT PLANS FOR CHERRY STREET STP-9900(387)/CDBG NO: 2008-DN-21 TROY, MISSOURI

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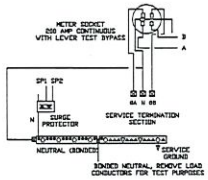
04-08-21	PER IN-HOUSE COMMENTS	CBD	ESK

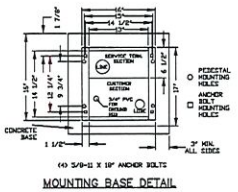
DWN. BY: ERH	APPD. BY: ESK
DATE: SEPT. 2020	
SCALE: NO SCALE	
PROJ. NO: M15-7199	
DWG. NO: DE-7	

DETAILS

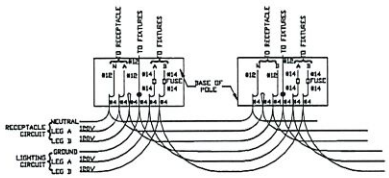
LIGHTING DETAILS



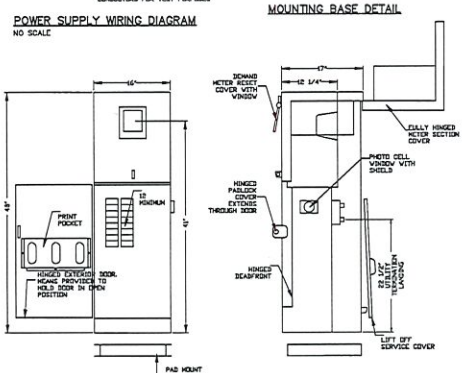
POWER SUPPLY WIRING DIAGRAM
NO SCALE

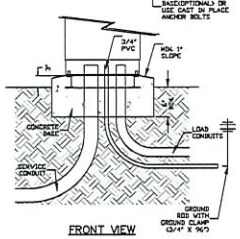


MOUNTING BASE DETAIL

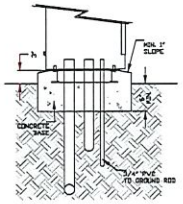


TYPICAL POLE WIRING DIAGRAM
NO SCALE



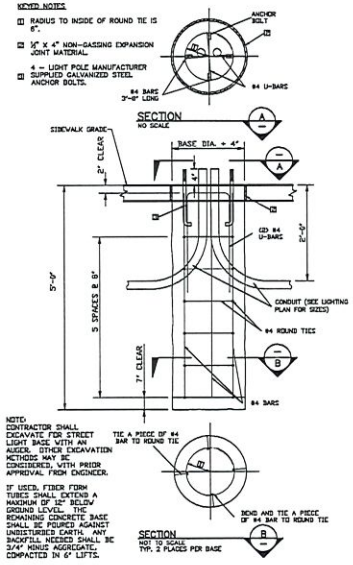


FRONT VIEW

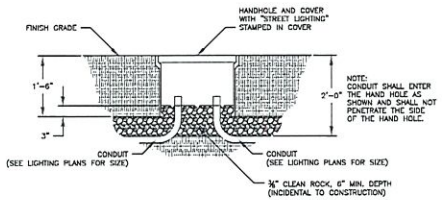


SIDE VIEW

LOAD CENTER
NO SCALE



CONCRETE STREETLIGHT BASE IN SIDEWALK
NO SCALE



NOTE:
CONDUIT SHALL ENTER THE HAND HOLE AS SHOWN AND SHALL NOT PENETRATE THE SIDE OF THE HAND HOLE.

PREFORMED HANDHOLE
NO SCALE

ERIC SCOTT KIRCHNER
NUMBER E-2001004618
4/6/2021
DATE

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• General Consulting

IMPROVEMENT PLANS FOR
CHERRY STREET STP-9900(387)/CDBG NO: 2008-DN-21
TROY, MISSOURI

DATE:	REVISION:	DRN. BY:	APP'D BY:
04-08-21	PER IH-HOUSE COMMENTS	CBD	ESK

LIGHTING DETAILS

DRN. BY:	EMB
APP'D BY:	ESK
DATE:	AUGUST 2020
SCALE:	NONE
PROJ. NO:	M15-7199
DWG. NO:	LD-1