

NOTICE TO BIDDERS

Notice is hereby given that the City of South Bend, Indiana, Board of Public Works will receive sealed bids at the Office of the Board of Public Works, County-City Building Room 1316, 227 West Jefferson Blvd, South Bend, Indiana, 46601 until the hour of **10:30 a.m.**, Local Time, on February 18, 2016 for the following:

South Bend One-Way to Two-Way Street Conversion **Project No. 116-001**

Work includes construction of a roundabout at the intersection of Michigan Street and Chippewa Avenue, all more particularly described in plans and specifications prepared by Lawson-Fisher Associates, P.C., phone 574-234-3167. Work also includes construction of a one-way to two-way street conversion within the downtown South Bend area along Main Street and Michigan Street / St. Joseph Street, including intersection, traffic signal, streetscape, and roadway improvements, all more particularly described in plans and specifications prepared by American Structurepoint, Inc., phone 317-547-5580. Work also includes construction of a roundabout at the intersection of Michigan Street and Marion Street, all more particularly described in plans and specifications prepared by Lawson-Fisher Associates, P.C., phone 574-234-3167. Work also includes construction of a roundabout at the intersection of Michigan Street and Bartlett Street, all more particularly described in plans and specifications prepared by Jones Petrie Rafinski Corp., phone 574-232-4388.

The Contract Documents are on file and available for public inspection commencing on the first advertise date during regular working hours at the Department of Public Works (1316 County-City Building, South Bend, Indiana), and at MACIAF 3215-A Sugar Maple Court, South Bend, IN 46628. Additionally, the Contract Documents will be available that same day for inspection or purchase at American Reprographics Company ("ARC", located at 1303 Northside Blvd., South Bend, Indiana, 46615), <http://www.e-arc.com>, (574) 287-2944, toll free at (800) 783-7231. There will be a non-refundable charge for reproduction as set by ARC for every set of documents for all bidders.

Bids must be on the City of South Bend Contractor's Bid for Public Work Form, accompanied by a Certified Check or Bid Bond in the amount of not less than five percent (5%) of the base bid plus any alternates, in a sealed envelope noting the project name, number and your company's information on the front.

Each bidder or contractor (hereinafter the contractor) must comply with "City of South Bend EEO Contracting Provision Diversity Utilization" included in the specifications as to each construction trade it intends to use on this construction contract and all other construction work (both federal and non-federal) in the St. Joseph County area during the performance of this contract or subcontract. The contractor commits itself to the goals for minority manpower and all other requirements, terms and conditions of these bid conditions by submitting a properly sealed bid. Woman and Minority-Owned Business Enterprises (W/MBE) are encouraged to respond to this notification.

This project is being re-advertised to notify bidders that this project will not have a MANDATORY pre-bid meeting. A pre-bid meeting was held on January 19, 2016. Non-attendees are not excluded from bidding on this project. Any questions about bidding conditions must be addressed to American Structurepoint via email at southbend@structurepoint.com no later than February 10, 2016.

The Board reserves the right to reject any or all bids or to accept a full or partial award of the bid or bids which, in its judgment, will be to the best interests of the City of South Bend.

BOARD OF PUBLIC WORKS

Linda M. Martin, Clerk

Publish two (2) times:

January 22, 2016

January 29, 2016

XXXI.	DESCRIPTION OF WORK	24
XXXII.	PLANS	24
XXXIII.	MUNICIPAL OPERATIONS	25
XXXIV.	UNDISTRIBUTED ITEMS	25
XXXV.	INSPECTION HOLE	26
XXXVI.	GEOTECHNICAL REPORT	27
XXXVII.	REESTABLISH NATIONAL GEODETIC SURVEY (NGS) MONUMENT	27
XXXVIII.	SAMPLING AND TESTING	27
XXXIX.	COMMUNITY OUTREACH PLAN	29
XL.	PUBLIC SAFETY	30
XLI.	STREET CLEANING	30
XLII.	EROSION CONTROL PLAN AND PROOF OF PUBLICATION (SWPPP)	30
XLIII.	CRITICAL PATH SCHEDULE	31
XLIV.	CONTACT DESIGNEES	33
XLV.	PERMITS	33
XLVI.	MOBILIZATION AND DEMOBILIZATION	33
XLVII.	STATEMENTS ABOUT EXISTING CONDITIONS OF ADDITIONAL RIGHT-OF-WAY AND ENCROACHMENTS	34
XLVIII.	CLEARING RIGHT-OF-WAY	35
XLIX.	PAVEMENT REMOVAL	36
L.	POLE FOUNDATION REMOVAL	36
LI.	LIGHT STANDARD AND FOUNDATION REMOVAL	36
LII.	TREE REMOVAL	37
LIII.	REMOVAL AND ABANDONMENT OF STRUCTURES AND MUNICIPAL UTILITIES	37
LIV.	CONCRETE CURB REMOVAL	38
LV.	CONCRETE SIDEWALK REMOVAL	38
LVI.	REMOVE AND SALVAGE SIGN STRUCTURES	38
LVII.	TRAFFIC SIGNAL EQUIPMENT, REMOVE AND SALVAGE	39
LVIII.	<PROVISION DELETED>	
LIX.	HOUSES AND BUILDINGS REMOVAL	40
LX.	EARTHWORK	40
LXI.	COMMON EXCAVATION	41
LXII.	TEMPORARY EROSION CONTROL MEASURES	42
LXIII.	TEMPORARY EROSION AND SEDIMENT CONTROL, DROP INLET PROTECTION	43
LXIV.	TEMPORARY EROSION AND SEDIMENT CONTROL, SILT FENCE	43
LXV.	STRUCTURE EXCAVATION	43
LXVI.	BORROW AND BACKFILL	44
LXVII.	COMPACTED AGGREGATE	44
LXVIII.	SURFACE MILLING, ASPHALT	45

CVIII.	ADJUST STRUCTURES TO GRADE	77
CIX.	DOGHOUSE MANHOLE	78
CX.	RECONSTRUCTED STRUCTURES	78
CXI.	GEOTEXTILE	78
CXII.	WATER MAIN	79
CXIII.	LANDSCAPE IRRIGATION	83
CXIV.	IRRIGATION REPAIR	93
CXV.	IRRIGATION, TREE WATERING SYSTEM	94
CXVI.	WATER SERVICE LINE ADJUSTMENTS	95
CXVII.	SIGN POST, SQUARE, REINFORCED ANCHOR BASE	96
CXVIII.	SIGN, SHEET ASSEMBLY, RELOCATE	96
CXIX.	ILLUMINATED WALL LETTERING	97
CXX.	MISCELLANEOUS EQUIPMENT FOR LIGHTING	97
CXXI.	PORTABLE CHANGEABLE MESSAGE BOARD SIGNS	98
CXXII.	CONSTRUCTION LIGHTING	98
CXXIII.	STREET NAME SIGNS	99
CXXIV.	PROJECT INFORMATION SIGN	99
CXXV.	TRAFFIC SIGNAL – DETECTION AND INTERCONNECTION	101
CXXVI.	FIBER OPTIC	102
CXXVII.	CROSSWALK SYSTEM – FLUSH BI-DIRECTIONAL FIXTURE	103
CXXVIII.	CROSSWALK SYSTEM – FLASHING PEDESTRIAN SIGN	104
CXXIX.	CROSSWALK SYSTEM CONTROLLER	105
CXXX.	CROSSWALK SYSTEM – PEDESTRIAN PUSH-BUTTON SYSTEM	107
CXXXI.	HANDHOLES	108
CXXXII.	WIRE	108
CXXXIII.	CONDUIT, PVC, SCHEDULE 80	108
CXXXIV.	TESCO CABINET	108
CXXXV.	<PROVISION DELETED>	
CXXXVI.	ELECTRICAL DEVICES IN POST	109
CXXXVII.	STREET LIGHTING	109
CXXXVIII.	LIGHT STANDARDS	111
CXXXIX.	LIGHT POLE FOUNDATION	113
CXL.	ORNAMENTAL LIGHTING	113
CXLI.	PAVEMENT MARKINGS FOR TRAFFIC MAINTENANCE	115
CXLII.	PAVEMENT MESSAGE MARKINGS FOR CYCLE TRACK	115
CXLIII.	THERMAL DETECTION CAMERA SYSTEM	116
CXLIV.	<PROVISION DELETED>	
CXLV.	SIGNAL FIBER OPTIC INTERCONNECT CABLE	117
CXLVI.	CLEAN AND PAINT EXISTING SIGNAL EQUIPMENT	117

CXLVII.	WIRELESS VEHICLE DETECTION SYSTEM	118
CXLVIII.	TRAFFIC SIGNAL EQUIPMENT SALVAGED BY THE DEPARTMENT	120
CXLIX.	ACCESSIBLE PEDESTRIAN SIGNALS	121
CL.	DETECTOR CARD RACK AND DETECTOR MODULES	122
CLI.	ELECTRICAL INSULATION SEALANT	122
CLII.	LOOP DETECTION	123
CLIII.	SIGNAL CANTILEVER STRUCTURE, HAND HOLE COVERS	123
CLIV.	SIGNAL CANTILEVER STRUCTURE, RELOCATE	123
CLV.	SIGNAL CANTILEVER STRUCTURE	123
CLVI.	CONDUIT, HDPE , SCHEDULE 80	124
CLVII.	TRAFFIC SIGNAL HEAD, 3 SECTION, 12" RED AMBER GREEN BIKE SIGNALS	124
CLVIII.	DECORATIVE SIGNAGE FOR CYCLE TRACK	124
CLIX.	INLET REMOVAL AND CATCH BASIN REMOVAL	128
CLX.	PERMANENT TUBULAR MARKERS	128
CLXI.	CURB IDENTIFICATION MARKERS	128
CLXII.	LOOP TESTING TABLE	130
CLXIII.	CABLESPAN SIGN STRUCTURE	130
CLXIV.	MISCELLANEOUS EQUIPMENT FOR LIGHTING - PROJECT 114-032B	130
CLXV.	HOSPITAL SIGN, REMOVE	130
CLXVI.	ROUNDBOUT STRUCTURAL REINFORCED CONCRETE FEATURES	130
CLXVII.	MASONRY FEATURES	130

(v)	Sewer Lateral, Private Building, Reinstatement	2 EA
(vi)	Pavement Removal	100 SYS
(vii)	Water	10 kGAL

b. Division B, Project 115-019

(i)	Road Closure Sign Assembly	20 EA
(ii)	Detour Route Marker Assembly	50 EA
(iii)	Sign, Sheet, Remove and Reset	20 EA
(iv)	Conduit, PVC Schedule 80, 2-Inch	100 LFT
(v)	Conduit, HDPE, Schedule 80, 3-Inch	1,500 LFT
(vi)	Conduit, HDPE, Schedule 80, 4-Inch	400 LFT

c. Division B, Project 114-035

(i)	Inspection Hole	10 EA
(ii)	Adjust Water Service Line, Commercial	2 EA
(iii)	Tap, Water Service, 1-Inch (City Tap Fee)	2 EA
(iv)	Cap Existing Water Service Line	2 EA
(v)	Sewer Lateral, Private Building, Reinstatement	2 EA
(vi)	Water	10 kGAL

d. Division B, Project 114-032B

(i)	Video Inspection for Pipe	100 LFT
(ii)	Casting, Adjust to Grade	2 EA

3. The Itemized Proposal and Declarations include the above noted quantities.

XXXV. INSPECTION HOLE

A. Prevailing Specifications/INDOT Standard Specification Section: 105.03, 105.06, 107.20

B. Additions:

1. This work shall consist of digging inspection holes in accordance with 105.03, to verify the exact location of underground utilities that are in potential conflict with the proposed construction.
2. Materials, tools, equipment, labor and incidentals shall be provided as required.
3. Once utility locates are marked in the field, inspection holes shall be dug at critical locations as agreed upon by the Department along the marked locates where the utility is within 2 feet of the proposed construction. The inspection holes shall be dug to a depth to either the underground utility or to a depth 1 foot below the proposed construction elevation, whichever is shallower. The inspection hole shall be as large as necessary to search for the marked underground utility within 2 feet horizontally of each side of the marked locate. If the utility is found, as directed, outside the 2 feet horizontal distance from the locate mark, then it shall be considered as an additional inspection hole.
4. The results of inspection holes shall be plotted on the plan sheets and provided in .pdf

brush, guardrail, mailboxes, poles, posts, brick, and any other item to be removed within the construction limits not specifically identified with its own pay item or identified as receiving an alternate treatment. Underground items such as City water, storm and sanitary sewer shall not be removed unless specifically identified in the plans.

8. The Contractor shall not remove any signs not specifically shown for removal on the plans or unless directed by the Engineer
9. Where fence and gates are shown to be removed on the plans, the Contractor shall notify the property owners one (1) week in advance of the removal date to confirm the limits of removal and coordinate the placement of temporary fencing.
10. This work shall not be measured but will be paid for at the Lump Sum (LS) unit price for CLEARING RIGHT-OF-WAY. The cost of all materials, equipment, tools, labor, transportation, operations, and all other incidentals shall be included in the cost of the item. Clearing Right of Way shall include the removal of all items not specifically set out as pay items in the Itemized Proposal.

XLIX. PAVEMENT REMOVAL

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 202
- B. Additions:
 1. The Contractor shall remove and dispose of any concrete pavement areas shown on the plans to be removed or as directed by the Engineer.
 2. An undistributed quantity of Pavement Removal has been included in the Contract for unidentified areas of concrete pavement. See Special Provision **XXXIV** for additional details.
 3. All pavement areas to be removed shall be neat line saw cut at removal limits for full depth removal. Saw cutting for removal shall not be measured for pavement but shall be considered incidental to the Contract.
 4. Pavement Removal will be paid for at the contract unit price per square yard for PAVEMENT REMOVAL. Asphalt type pavement removal shall be paid for as Common Excavation in accordance with INDOT Standard Specifications Section 203.

L. POLE FOUNDATION REMOVAL

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 202
- B. Additions:
 1. The site contains existing concrete pole foundations that will be removed, full depth.
 2. Foundation removal will be paid for at the contract unit price for "Pole Foundation, Remove...EACH" as indicated on the itemized proposal sheet.

LI. LIGHT STANDARD AND FOUNDATION REMOVAL

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 202
- B. Additions:
 - 1. Light pole, foundation and electrical appurtenances removal will be paid for at the contract unit price for "Light Standard and Foundation, Remove...EACH" as indicated on the itemized proposal sheet.

LII. TREE REMOVAL

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 201
- B. Additions:
 - 1. Trees larger than 18" in diameter at a point 36 inches above the surface elevation shall be measured per each tree removed. Trees less than 18" in diameter at a point 36 inches above the surface elevation shall not be measured for payment but shall be included in the cost of Clearing Right-of-Way.
 - 2. Tree Removal will be paid for at the contract unit price for "Tree, Remove...EACH" as indicated on the itemized proposal sheet and shall include the cost to remove the stump and roots as required and disposal off site.

LIII.REMOVAL AND ABANDONMENT OF STRUCTURES AND MUNICIPAL UTILITIES

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 202
- B. Additions:
 - 1. Where indicated on the plans, existing structures: inlets, catch basins, and manholes (storm and sanitary) shall be removed. Void areas shall be backfilled with suitable granular material, incidental to this Pay Item.
 - 2. Where indicated on the Plans, existing water distribution system components (caps and fire hydrants) shall be removed. Void areas shall be backfilled with suitable granular material, incidental to this pay item.
 - 3. Items removed shall be properly disposed of off-site. Structure castings, fire hydrants and any other items of value shall be salvaged to the Owner.
 - 4. Storm Pipes indicated on the Plans for removal or abandonment shall be investigated by the Contractor for indications of existing or recent active discharge. If no such indication is present, the pipe is to be removed or abandoned or plugged. If there is indication of active or recent discharge, Contractor shall contact the Engineer.
 - 5. Where indicated on the Plans the existing storm sewer and manhole structures shall be abandoned. For abandonment, each existing manhole structure shall be removed to a minimum of 3-feet below the existing grade and properly disposed off-site. The annular space shall be filled with flowable mortar to 1-foot below the subgrade elevation, then fill the remaining area with granular material. The existing casting and frames shall be removed and turned over to the Owner. The Contractor shall verify all structure material types, diameters, and depths. For abandonment, the existing sanitary sewer shall be flushed to remove any residual sewage. Then the storm pipe to be abandoned shall be

- (iii) Sta. 51+54.2 Line "D", 30.9' Lt.
- b. Division B, Project 114-035
 - (i) Sta. 14+04 Line "A", 37.7' Rt.
 - (ii) Sta. 14+06 Line "A", 34.6' Lt.
 - (iii) Sta. 23+43 Line "PR-A", 74.4' Rt.
 - (iv) Sta. 38+95 Line "PR-B"
 - (v) Sta. 43+80 Line "PR-B1"
- 2. Materials to be salvaged shall be removed without damage in sections that can be readily transported. These materials shall be stockpiled neatly at a location as directed by the Engineer.
- 3. The cost of removing the sign structures, removal of existing foundations in accordance with the Standard Specifications, and the delivery and stockpiling of the salvaged materials will not be paid for separately but shall be included in the cost of the salvaged structure.
- 4. Payment will be made at the Unit Prices set forth in the Proposal for SIGN STRUCTURE, SALVAGE (LSUM).

LVII. TRAFFIC SIGNAL EQUIPMENT, REMOVE AND SALVAGE

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 200, 802
- B. Additions:
 - 1. All traffic signal equipment shall become the property of the Owner. Delivery shall be coordinated with 48 hours advance notice to a location as directed by the Engineer.
 - 1-1. All salvageable traffic signal equipment removed from Main Street from south of Sample Street to north of LaSalle Avenue shall be delivered to the INDOT LaPorte District Traffic Division Yard.
 - 2. All salvageable traffic signal equipment removed from Main Street south of Sample Street or from Michigan Street shall be delivered to the City at 731 S Lafayette Boulevard, South Bend, IN.
 - 3. The Contractor shall be responsible for all related coordination with INDOT, the City and the electric power service utility in advance of the work.
 - a. The Contractor shall remove all unused signal conductors and abandon unused signal conduit.
 - 4. Signal strain poles, mast arms, signal heads, controllers, and controller cabinets at the following locations shall be removed, salvaged and delivered to the City of South Bend:
 - b. Division B, Project 114-035
 - (i) Sta. 15+80 Line "A", 36.23' Rt.

- (ii) Sta. 15+79 Line "A", 38 Lt.
- (iii) Sta. 15+91.21 Line "A", 49' Lt.
- (iv) Sta. 15+92.72 Line "A", 49' Rt.
- (v) Sta. 16+64.21 Line "A", 38' Rt.
- (vi) Sta. 16+66 Line "A", 38' Rt.
- (vii) Sta. 22+26 Line "PR-A", 16.5' Rt.
- (viii) Sta. 22+24 Line "PR-A", 4.7' Rt.
- (ix) Sta. 22+58 Line "PR-A", 31.4' Lt.
- (x) Sta. 22+75 Line "PR-A", 65.8' Rt.
- (xi) Sta. 23+16 Line "PR-A", 51.9' Lt.
- (xii) Sta. 23+37 Line "PR-A", 8.9' Rt.
- (xiii) Sta. 40+64 Line "PR-B", 7.8' Lt.
- (xiv) Sta. 40+64 Line "PR-B", 1.7' Lt.
- (xv) Sta. 40+75 Line "PR-B", 46.4' Rt.
- (xvi) Sta. 41+09.7 Line "PR-B", 1.8' Lt.
- (xvii) Sta. 41+55.7 Line "PR-B1", 37.5' Rt.

- 5. Materials to be salvaged shall be removed without damage in sections that can be readily transported. These materials shall be stockpiled neatly at a location as directed by the Engineer.
- 6. The cost of removing the signal equipment, removal of existing foundations in accordance with the Standard Specifications, and the delivery and stockpiling of the salvaged materials will not be paid for separately but shall be included in the cost of the removed signal equipment.
- 7. Payment will be made at the Unit Prices set forth in the Proposal for **TRAFFIC SIGNAL EQUIPMENT, REMOVE (EACH) and TRANSPORTATION OF SALVAGEABLE SIGNAL EQUIPMENT (PER EACH INTERSECTION)**.

LVIII. <PROVISION DELETED>

LIX. HOUSES AND BUILDINGS REMOVAL

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 306
- B. Additions:
 - 1. The removal of houses and buildings shall include the removal and proper abandonment of the basement walls, basement floors, footings, sewer and water connections to the Right-of-Way limit and any necessary backfilling.
 - 2. The removal and proper abandonment of the basement walls, basement floors, footings, sewer and water connections and any necessary backfilling shall be included in the contract lump sum price for HOUSES AND BUILDINGS, REMOVE, **PARCEL (Number)**.

LX. EARTHWORK

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 203
- B. Additions:
 - 1. Earthwork includes all excavation of soils, and any other materials within the project limits not paid for elsewhere, to establish the grades required by the work, including undercut required to establish pavement base grades.
 - 2. Earthwork includes the transportation, hauling and disposal of excess material from the project limits, with the exception of pavement removal, which is to be considered incidental to the PAVEMENT, REMOVE Pay Item.

entrances to the construction site in order to keep mud and soil from reaching the existing roadways and storm inlets. The Contractor shall erect and maintain silt fencing along key areas of perimeter of the construction site. Wind erosion protection shall be provided and maintained for all stockpiles and mounds. Remove existing vegetation and stockpile native soils onsite.

9. The Contractor shall schedule excavation and grading efforts/activities to allow for proper re-vegetation/seeding prior to the winter months.
10. Prior to commencing work, the Contractor shall prepare and submit to the Engineer for approval a Storm Water Pollution Plan that includes, at a minimum, the following items:
 - a. Locations of all proposed soil stockpiles, borrow areas, or disposal areas.
 - b. Locations of all proposed vehicle and equipment parking areas, vehicle and equipment fueling locations, placement of the site construction trailers, location of all onsite batch plants, and designated concrete truck washout areas.
 - c. Location of all construction entrances where vehicles and equipment will enter and exit the site.
 - d. Material handling and spill prevention plan, which shall include a list of expected materials that may be present on the site during construction operations, as well as a written description of how these materials will be handled to minimize the potential that the materials may enter storm water runoff from the site.
 - e. Statement that the erosion control measures for the project will, at a minimum, be inspected on a weekly basis and within 24-hours of every ½ inch rain event.

LXIII. TEMPORARY EROSION AND SEDIMENT CONTROL, DROP INLET PROTECTION

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 205
- B. Additions:
 1. Product for temporary drop inlet protection for erosion and sediment control shall be FlexStorm Inlet Filter by Inlet & Pipe Protection, Inc. or approved equal.
 2. The cost of Temporary Erosion and Sediment Control, Drop Inlet Protection shall include the removal and disposal of sediment, as directed by the project representative. If the FlexStorm Inlet Filter is damaged during construction of this project either by normal use, remaining sediment or vandalism, it shall be replaced at no cost to the city.
 3. Temporary Erosion and Sediment Control, Drop Inlet Protection will be paid for at the contract unit price for "[Temporary Inlet Protection](#) ...EACH" as indicated on the itemized proposal sheet.

LXIV. TEMPORARY EROSION AND SEDIMENT CONTROL, SILT FENCE

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 205
- B. Additions:
 1. Temporary Silt Fence will be paid for at the contract unit price for "Temporary Silt Fence...LFT" as indicated on the itemized proposal sheet.

LXV. STRUCTURE EXCAVATION

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 206

B. Additions:

1. Structure excavation shall not be measured directly, but shall be included in the cost of the various other pay items.

LXVI. BORROW AND BACKFILL

A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 211

B. Additions:

1. The Contractor shall furnish all the necessary equipment, labor and materials to complete backfill of excavations with approved Borrow material.
2. The Contractor shall test the existing material and document that it is acceptable for use as structure backfill. Once satisfactory test results have been received, the Engineer may visually approve excavated material for use as structure backfill, or request additional analyses. It is anticipated that there will be enough excavated soil that meets the specified requirements for structure backfill (904.05) and that additional structure backfill will not be required; however an undistributed quantity for Structure Backfill has been included in the Contract. See Special Provision **XXXIV** for additional details.
3. The cost of providing Borrow for backfill and Structure Backfill, wasting or stockpiling excavated materials testing or excavated materials and the compaction of the backfill material shall not be paid for separately but shall be included in the cost of various other pay items. Payment for structure backfill obtained from an off-site source will be made at the Unit Price set forth in the Proposal for STRUCTURE BACKFILL, TYPE ____ (CYS).

LXVII. COMPACTED AGGREGATE

A. Prevailing Specifications: City of South Bend Design and Construction Standards / 2016, INDOT Standard Specifications Section 301

B. Additions:

1. All coarse aggregate shall be Class D or higher of the specified size. The cost of placing, compacting, water and necessary incidentals shall be included in the cost of the compacted aggregate.
2. The use of slag and local aggregate shall not be allowed.
3. The depth of compacted aggregate shall be 6-inches below proposed pavement and drives. Quantity shall be based on plan neat lines.
4. Plan quantities are based on an assumed compacted density of 1.9 tons/cubic yard.
5. Payment for compacted aggregate for construction entrance, pipe and structure bedding will be considered incidental to furnishing and installing the respective Pay Item.
6. The condition of the subgrade at the time paving material is placed is required to be in accordance with INDOT Standard Specifications 105.03 and 207.03.
7. Prior to placing the base course of asphalt on the prepared aggregate subgrade, proof rolling in accordance with INDOT Standard Specifications 203.09 and 203.26 is required.

determinations should be equal to or greater than 96 percent of the average test section density and no individual determination shall be lower than 95 percent. When compaction of any course of bituminous mixtures is controlled by density, two test strips shall be constructed in accordance with Indiana Test Method No. 577.

4. HMA Patching shall be installed at the direction of the Engineer in order to address deteriorated pavement conditions prior to or resulting from detour routes along lower classification streets. An undistributed quantity of HMA Patching has been included in the Contract. See Special Provision **XXXIV** for additional details.
5. Original weight tickets shall be provided to the Owner for each day on which asphalt is placed. The Owner reserves the right to require certified scales be used to measure the above noted Pay Items at no additional cost to the Contract.

LXXI. HOT MIX ASPHALT PAVEMENT

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 402
- B. Additions:
 1. No vehicular traffic of any kind shall be permitted on any lift until the mixture has hardened sufficiently to not be unduly distorted.
 2. Only coarse limestone will be used for the course aggregate.
 3. The use of rap or asphalt shingles will not be allowed.

LXXII. TACK COAT

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 406
- B. Additions:
 1. Previously laid HMA courses, as well as any pavement that has become dirty, shall be cleaned and tacked prior to the placement of additional HMA courses.
 2. The accepted quantities of ASPHALT FOR TACK COAT will be paid for at the contract unit price per ton (TON), complete in place. If the Contractor exceeds the restoration/pavement limits shown on the Plans, the associated costs of the overrun will be absorbed by the Contractor.

LXXIII. QC/QA PLAIN CEMENT CONCRETE PAVEMENT

- A. Prevailing Specifications: City of South Bend Design and Construction Standards / 2016, INDOT Standard Specifications Section 500
- B. Additions:
 1. The Contractor shall furnish all necessary equipment, labor and materials required to complete the QC/QA plain cement concrete pavement for the thickness specified as shown on the Plans.
 2. Construction joints shall be placed and sealed in accordance with the City of South Bend Standards, incidental to concrete pavement work item.

LXXIV. PCCP, PLAIN

- A. Prevailing Specifications: INDOT 2016 Standard Specifications Section 502
- B. Additions:
1. The use of slag or local aggregate will not be permitted.
 2. The bid item shall include, but not be limited to, all cost for labor, materials, tools, equipment, excavation, backfilling, compaction, forming, saw cutting, joint construction, curing, smoothness, tining, etc. per current INDOT standard details for 9" & 10" concrete pavement.
 3. Incidental concrete pavement transverse and longitudinal joint construction shall be performed in accordance with current INDOT Standard Detail Drawings E 503-CCPJ-OI thru E 503-CCPJ-08.
 4. The bidder is responsible for obtaining these Standard Detail Drawings prior to bidding. The Standard Detail Drawings are available from the Engineer prior to the bid and on the INDOT website.
 5. Transverse and longitudinal joint spacing shall be as per the plan drawings.
 6. Concrete pavement joints shall be placed as approved by the City. Additional pavement joints shall be incidental to the work as directed by the City to match into curb joints, drive approach pavement joints, castings, etc. Joints for separate pavement construction around castings shall be incidental as directed by the City.
 7. The mainline concrete pavement (PCCP) section shall consist of nine (9) inches and ten (10) inches of plain concrete over six (6) inches of No. 53, aggregate over compacted subgrade. The concrete mix shall be developed from crushed limestone aggregate. The concrete shall have a minimum of 6 bags of cement per cubic yard of concrete, and shall reach 4000 psi in 28 days as verified by the Contractor's testing of cylinders or flex beams from each individual pour (a minimum 3 test samples per pour).
 8. The subbase material shall be adequately pre-moistened immediately before the pour to reduce the amount of moisture drawn from the concrete.
 9. The Contractor shall provide job mix formula information including admixtures to the City for approval sufficiently in advance of the work.
 10. Concrete mixing and transportation shall be completed transit mixed methods. Discharge from a truck agitator or a truck mixer shall be completed within 90 min of mixing the water, cement, and aggregates. Concrete shall be uniformly mixed when delivered to the job site. Batch tickets for each load of concrete shall indicate the weight of cement and aggregates, volume of water, and the type and amount of any approved admixtures. When concrete is delivered in transit mixers, additional water to increase the workability of a load may be added within 45 minutes of initial mixing only as approved in each case by the City. Following any and all adding of water at the site, the concrete shall be thoroughly mixed and tested for slump before being incorporated into the work. Any addition of water shall be noted on the batch ticket and shall not occur as a continuing operation. Concrete with water added after leaving the plant must have a slump of less than or equal to 4.0 inches to be incorporated into the work. Concrete exceeding 4" slump shall not be used for pavement on the project.
 11. Contraction joints shall be neatly sawed as per INDOT standards at spacing as directed.

12. The Contractor shall be responsible for correcting any surface smoothness defects as deemed necessary by the City at the Contractor's expense.
13. The Contractor shall take steps to avoid vandalism of the work, including the timing of pours, providing of a night watchman, etc. There will be no direct payment for this work.
14. The Contractor shall be responsible for repair and/or replacement of cracked or vandalized pavement at locations and by methods as deemed appropriate by the City.
15. Concrete approach pavement shall be as per INDOT Standard Specifications and Standard Detail Drawings, including joints, curing, etc., and as otherwise directed by the City.
16. Longitudinal slopes on approaches shall be no greater than 8.33%.
17. PCCP, Plain, will be paid for at the contract unit price for "PCCP, (thickness) IN...SYS" as indicated on the itemized proposal sheet.

LXXV. PCCP, COLORED

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 502
- B. Additions:
 1. This work shall consist of placing concrete and applying color and pattern to the surface of the roundabout truck apron, splitter islands, and other concrete pavement areas, in reasonably close conformance with the lines and grades shown on the plans or as directed.
 2. The use of slag or local aggregate will not be permitted.
 3. The bid item shall include, but not be limited to, all cost for labor, materials, tools, equipment, excavation, backfilling, compaction, forming, saw cutting, joint construction, curing, smoothness, finish, etc. per current INDOT standard details for 6", 8" & 10" concrete pavement.
 4. Incidental concrete pavement transverse and longitudinal joint construction shall be performed in accordance with current INDOT Standard Detail Drawings E 503-CCPJ-OI thru E 503-CCPJ-08.
 5. The coloring material shall be applied at full depth of PCCP, and shall be Chromix Admixture by Scofield, or approved equal.
 - a. Color shall be "Brownstone" (#1010) for crosswalks and truck aprons, "Chicory Spice" (#1078) for upper concrete aprons in center of roundabout.
 - b. Curing compound shall be as recommended by color material manufacturer.
 6. The Contractor shall provide color samples with specified finish for approval by the Owner in advance of ordering the material. All work shall be done in accordance with the color material manufacturer's recommendations.
 7. The work shall be done in accordance with the typical pavement section detail on the plans. The pour for crosswalks shall be the 10" thick, 8" thick for truck apron and 6" thick for the upper concrete apron located above the truck apron, poured monolithically. The pavement shall include full depth colored concrete.

paid for separately but shall be included in the cost of the sleeper slab.

3. Payment for sleeper slab will be made at the Unit Prices set forth in the Proposal for SLEEPER SLAB (LFT).

LXXVII. MATERIAL TESTING

- A. Prevailing Specifications: none
- B. Additions:
 1. The Contractor will be responsible for meeting the City's requirements for all Material Testing.
 2. Contractor shall provide copies of all testing reports to Owner and/or Owner's Representative.
 3. Material Testing shall not be measured for pavement but shall be included in the cost of the pay items being tested.

LXXVIII. CONCRETE SIDEWALKS AND CURB RAMPS

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 604
- B. Additions:
 1. Expansion joints shall be placed at a maximum spacing of forty (40) feet and at any additional places as shown on the City of South Bend "Design and Construction Standards". Payment for joint material for sidewalk and curb ramps will be included in the unit price for the respective Pay Item.
 2. Transverse control joints shall be placed at equal intervals not to exceed five (5) feet or as shown on the plans.
 3. Any existing walks on private property that lead to the City's sidewalk shall match the grade of the replaced sidewalk. The method of grade equalization will be determined by the Engineer.
 4. The use of slag or local aggregate will not be permitted.
 5. Curb ramps shall include "EZ-Set" ceramic composite detectable warning panels, or approved equal. The cost of the detectable warning panels shall be included with this item.
 6. Transverse grooving as shown on INDOT Standard Drawings shall not be applied to concrete curb ramps installed as part of the Project.
 7. Modified concrete curb ramps shall be constructed in accordance with the INDOT Standard Drawings except as modified as shown on the plans or as noted herein.
 8. Curb ramp pay limits will be behind the curb and will include the 12:1 ramp(s), the 2% landing, and optional curb at back of ramp, Curb ramp pay limits will include flared sides only if the flared sides are to be constructed in concrete as shown on the plans. No additional payment will be made for the depressed curb, but will be paid for as the adjacent type of curb.
 9. The accepted quantities of concrete curb ramps will be paid for at the contract unit price

per square yard for CURB RAMP, CONCRETE, TYPE as indicated on the itemized proposal sheet, complete in place.

10. The accepted quantities of modified concrete curb ramps will be paid for at the contract unit price per square yard for CURB RAMP, CONCRETE, TYPE as indicated on the itemized proposal sheet, complete in place.
11. The accepted quantities of concrete curb ramps which do not conform to types designated by INDOT will be paid for at the contract unit price per square yard for CURB RAMP, CONCRETE, UNIQUE as indicated on the itemized proposal sheet, complete in place.
12. The accepted quantity of decorative 5 inch concrete sidewalk will be paid for at the contract unit price per square yard for CONCRETE SIDEWALK, DECORATIVE as indicated on the itemized proposal sheet, complete in place.

LXXIX. CONCRETE CURBS

A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 605

B. Additions:

1. The use of slag or local aggregate will not be permitted.
2. Expansion material is required at all cold joints.
3. Transverse control joints shall be placed at equal intervals not to exceed ten (10) feet in standard curb.
4. The new curb height will be adjusted during the last ten (10) feet to match the existing curb profile.
5. Curb, as a pay item, stops at the commencement of any concrete approach. For a concrete approach with a wing, this is at the beginning of the wing. For an approach with a radius, the approach ends and the curb begins at the tangent point of the radius of the approach and the curb line.
 - a. Running a curb slip forming machine through a concrete approach will not be considered in the quantity for curb.
6. Any areas disturbed not designated for sod or outside of the construction limits during the removal or replacement of the curb shall be restored to original or better condition. All costs associated with restoration should be included in the unit price for the concrete curb.
7. See the plans for the curb details to be used on this project.
8. The Contractor shall backfill with topsoil an excavated area behind the curb, required to install the curb.
9. All curb shall be placed with a maximum allowable horizontal tolerance of 0.25 inch. Any curb that exceeds this tolerance shall be removed and replaced at the Contractor's expense.
10. Concrete Curb will be paid for at the contract unit price for "Curb, Concrete...LFT" as indicated on the itemized proposal sheet.
11. Concrete Curb and Gutter B will be paid for at the contract unit price for "Curb and Gutter,

5. Decorative brick pavers system will be measured by the square yard, complete in place.
6. Excavation, backfill, subgrade preparation, furnishing and installing the completed base, leveling course, edge restraints, labor, materials, and all necessary incidentals shall be included in the cost of brick pavers.
7. All cutting of pavers or special paver placement to fit with castings or other features as directed by the City shall be incidental to the cost of the work.
8. The accepted quantity of decorative brick will be paid for at the contract unit price per square yard for DECORATIVE BRICK as indicated on the itemized proposal sheet.

LXXXIV. PCCP FOR APPROACHES

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 610
- B. Additions:
 1. All driveway approaches shall be built according to the details as shown on City of South Bend's "Design and Construction Standards" and as shown on the Plans.
 2. The use of slag or local aggregate will not be permitted.
 3. Tooled joints shall be placed in all driveways to match the sidewalk jointing pattern as shown on the plans or as directed. The cost of providing the tooled joint pattern will not be paid for separately but shall be included in the cost of the driveway.
 4. The accepted quantities of PCCP for approaches will be paid for at the contract unit price per square yard for PCCP FOR APPROACHES, (thickness) IN as indicated on the itemized proposal sheet.

LXXXV. PERMEABLE PAVEMENT

- A. Prevailing Specifications: none
- B. Additions:
 1. This work includes all labor, materials, equipment, and incidentals required and perform all operations in connection with the installation of the permeable pavement in accordance with the lines, grades, design and dimensions shown on the plans, as specified herein, and as directed.
 2. The permeable pavement shall be PaveDrain® [System](#) as represented by:

LOCAL

D2 Land & Water Resources
info@d2lwr.com
PH. (800) 597-2180
www.d2lwr.com

NATIONAL

PaveDrain, LLC
info@pavedrain.com
PH. (888) 575-5339
www.pavedrain.com

3. Subgrade shall be prepared in accordance with the plans and [Manufacturer's approved recommendations](#).
4. Geotextile separator material shall be in accordance with [Manufacturer's approved recommendations](#).
5. [PaveDrain® System No. 1](#) aggregate material shall be [placed and compacted](#) in accordance with [Manufacturer's approved recommendations](#).

6. Underdrains shall be [dual wall HDPE perforated](#) Pipe and installed in accordance with the details shown on the plans and in accordance with the Standard Specifications.
7. Geogrid separator material shall be in accordance with the manufacturer's recommendations.
8. Immediately prior to placing mats, the prepared area shall be inspected by the Engineer. No mats shall be placed thereon until that area has been approved.
9. The mats shall be placed on the geogrid separator so as to produce a smooth plane surface. No individual block within the plane of placed articulating concrete mats shall protrude more than one-quarter of an inch or as otherwise specified by the Engineer.
10. Mats shall be attached to a spreader bar or other conventional device to aid in the lifting and placing of the mats in their proper position by the use of a large, tracked excavator or other appropriate equipment. The equipment used shall be adequate capacity to place the mats without bumping, dragging, or otherwise damaging the aggregate bedding layer. The mats shall be "zippered" together forming a seamless mat to mat connection.
11. Joints do not require backfilling with smaller aggregates or sand in order to function properly. The joints are meant to be left open.
12. Upon completion of the permeable pavement installation, the surface infiltration rate of the pavement shall be verified by ASTM C1701M-09 to confirm the required infiltration rate of the pavement. If the system fails to perform as recommended by the manufacturer, it shall be removed and replaced at no cost to the Owner.
13. The manufacturer's representative shall provide a minimum 36 month maintenance program; including a visual inspection report with photos and a recommended cleaning schedule with the PaveDrain® Vac Head and associated combination sanitation vac truck. Maintenance shall be required when either of the following are reached:
 - a. The surface infiltration rates of more than 75% of the surface area fall below 10% of the rate required by the manufacturer.
 - b. Surface ponding remains for 24 hours in an area larger than 10 square feet.
14. Subgrade treatment will be measured and paid in accordance with the Standard Specifications.
15. The cost of supplying and installing geotextile separator, [PaveDrain® System No. 1](#) aggregate, [dual wall HDPE perforated pipe](#), geogrid separator, permeable pavement mats, 36 month maintenance program and all appurtenances necessary for a complete installation will not be paid for separately, but shall be included in the cost of the permeable pavement.
16. Payment will be made at the Unit Prices set forth in the Proposal for PERMEABLE PAVEMENT (SYS).

LXXXVI. DECORATIVE FENCE

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 603.
- B. Additions:
 1. Description:

12. The cost of connecting to downstream existing manholes, inlets, or catch basins will be included in the cost of the pay items.

CII. STRUCTURE CONNECTIONS

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 715, 720
- B. Additions:
 1. Pipe connections to existing structures shall be made by coring a circular hole of the appropriate size to accept the new pipe connection and boot. Oversized holes and grouting shall not be used.
 2. The cost of coring, boot installation, pipe installation and all appurtenances necessary for a complete installation will not be paid for separately but shall be included in the cost of the pipe.

CIII. PRECAST CONCRETE HEADWALL

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 715
- B. Additions:
 1. Precast Concrete Headwall will be paid for at the contract unit price for "Precast Concrete Headwall....EACH" as indicated on the itemized proposal sheet.

CIV. SANITARY SEWER LATERALS

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 715 & City Standard Drawings, Sheets WW-1 through WW-8
- B. Additions:
 1. This work shall entail the removal of conflicting portions of existing sanitary laterals and the reinstatement of said laterals encountered in the progress and prosecution of the work.
 2. Where proposed work conflicts with existing private building sewer laterals, a segment of the existing sewer lateral, in conflict, shall be removed and replaced/reinstated. Removal of existing sanitary laterals shall be limited to the first joint upstream and downstream of the portion of work in conflict with the proposed improvements, or as required to tie into existing lateral locations. This work will be measured on a per instance basis for conflicting laterals encountered during the course of the Work and shall include all labor, equipment and materials (including pipe, fittings and couplings).
 3. Replacement work materials shall be PVC SDR 35 per ASTM D3034. New sanitary laterals and fittings shall be 6-inch diameter PVC SDR 35 per ASTM D3034 unless otherwise directed by the Owner.
 4. The work performed with this Pay Item shall conform to the current City Standards and IDEM's requirements.
 5. Watertight joints shall be provided at all connections.
 6. Installation of the sanitary sewer pipe shall be in accordance with the pipe manufacturer's

recommendations, ASTM D2321, the City of South Bend's requirements and IDEM's requirements. Pipe installations shall be backfilled as shown on the Plans or as directed.

7. Leakage tests of the sanitary sewer shall be conducted by the Contractor for infiltration or exfiltration using a hydrostatic test. The hydrostatic test shall be performed with a minimum positive head of 2-feet. The rate of infiltration or exfiltration shall not exceed 100 gallons per inch diameter per mile per day for any section of the system. In lieu of the hydrostatic test, all sanitary sewer piping shall be subject to a low pressure air test per ASTM F1417. The City and Engineer shall be advised 48-hours prior to conducting all tests.
8. Trench excavation, pipe material, backfill material, trench backfilling, pipe bedding, compaction, testing and all incidentals shall not be measured directly, but shall be included in the unit cost of these Pay Items.
9. Material for pipe bedding shall not be measured or paid for directly, but shall be considered incidental to the project.

CV. CASTING, FURNISH, INSTALL AND ADJUST TO GRADE

A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 720

B. Additions:

1. Casting, Furnish, Install and Adjust to Grade will be paid for at the contract unit price for "Casting, (type), Install and Adjust to Grade...EA" as indicated on the itemized proposal sheet.

CVI. CASTING, REMOVE AND RESET

A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 720

B. Additions:

1. Remove and Reset Casting will be paid for at the contract unit price for "Casting, Remove and Reset...EA" as indicated on the itemized proposal sheet.

CVII. STANDARD INLETS, MANHOLES, AND CATCH BASINS

A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 720 & City Standard Drawings, Sheets D-3 & WW-1

B. Additions:

1. Structures and castings shall be of the size and type as identified on the Structure Data Table, or approved equal, unless otherwise approved by the Engineer.
2. Structures shall be provided with flexible watertight connections for all pipe connections of size 30-inch diameter or less without exceptions, per current City of South Bend policy.
3. The Contractor shall submit dimensioned scalable shop drawings for all manhole and inlet structures which clearly indicate the base elevation of the structure, inverts of all incoming and outgoing pipes, top of slab, and casting elevations.
4. No brick or block shall be used in the construction of a new manhole or when adjusting the elevation of the frame and cover.

2. Sanitary and storm [manhole castings](#) requiring grade adjustment have been indicated on the Plans.
3. The Contractor is directed to City Prevailing Specification 2100 for additional requirements related to chimney seal requirements.
4. Payment for such sanitary and storm and manhole structural and casting elevation adjustments shall include all labor, materials and incidentals to perform the work as specified herein and to meet the requirements of the City.
5. Adjustments to water valves and gas valves shall not be measured or paid for directly but shall be considered incidental to the remaining work, included in the cost of various other Pay Items.

CIX. DOGHOUSE MANHOLE

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 702, 720
- B. Additions:
 1. Casting Type shall be as identified on the Pre-Cast Doghouse Manhole detail, or approved equal.
 2. Doghouse Manhole will be paid for at the contract unit price for "[Manhole, \(type\), Modified, Doghouse...EACH](#)" as indicated on the itemized proposal sheet.

CX. RECONSTRUCTED STRUCTURES

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 720.04
- B. Additions:
 1. The work shall include all incidentals for materials, labor and installation.
 2. The work shall be measured and paid by the LFT completed in place at the contract unit price for "Structure, Inlet, Reconstructed" or "Structure, Manhole, Reconstructed" as indicated on the itemized proposal sheet.

CXI. GEOTEXTILE

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 918
- B. Additions:
 1. The geotextile material will be in accordance with the physical requirements as follows:

TEST	METHOD	REQUIREMENTS (2)
Grab Strength	ASTM D 4632	80 lb.
Seam Strength (1)	ASTM D 4632	70 lb.
Puncture Strength	ASTM D 4833	25 lb.
Trapezoid Tear	ASTM D 4533	25 lb.
Apparent Opening Size, AOS	ASTM D 4751	Sieve No. 50 or Smaller Opening
Permeability	ASTM D 4491	0.1 mm/sec

Ultraviolet Degradation at 150	ASTM D 4355	70% Strength Retained
(1) Values will apply to both filed and manufactured seams.		
(2) The value in the weaker principal direction shall be used. All numerical values will represent the minimum average roll value. Test results from a sampled roll in a lot shall be in accordance with or shall exceed the minimum values shown in the table. Lots shall be sampled in accordance with ASTM D 4354.		

2. Geotextile will be paid for at the contract unit price for "Geotextile ...SYS" as indicated on the itemized proposal sheet.

CXII. WATER MAIN

- A. Prevailing Specifications: none
- B. Additions:
 1. General Requirements:
 - a. Contractor shall coordinate the connection to the existing water main with the City of South Bend and the South Bend Water Works. The cost for the connection to the existing water main shall be included in the cost of the pipe.
 - b. Contractor shall field verify all locations and elevations of the existing water mains.
 2. Submittals:
 - a. Contractor shall supply shop drawings and manufacturer's product data for the piping.
 - b. As-Builts:
 - (i) Contractor shall provide one (1) set of As-Built drawings to the City of South Bend.
 3. Materials:
 - a. Ductile Iron Pipe
 - (i) Pipe shall meet requirements of ANSI 21.50 (AWWA C150) for thickness Class 50.
 - (ii) Push-on joints and rubber gaskets shall meet the requirements of ANSI/AWWA C111/21.11. Cement mortar lining with bituminous seal coat for pipe and fittings shall meet the requirements of ANSI/AWWA C104/21.4. Exterior bituminous coating for fittings and pipe shall meet the requirements of ANSI/AWWA C106/21.6 or ANSI/AWWA C151/21.51 as applicable. Mechanical joints shall be used at all fittings.
 - (iii) Exterior coating for pipe and fittings shall be a minimum of 1 mil of an asphalt coating per AWWA C151.
 4. Installation:
 - a. Water Main
 - (i) Pipe and accessories shall be handled so as to ensure delivery to the trench in

sound, undamaged condition. Particular care shall be taken not to injure the pipe coating or lining. If the coating or lining of any pipe or fitting is damaged, the repair shall be made by the Contractor at his expense in a satisfactory manner.

- (ii) No other pipe or material of any kind shall be placed inside a pipe or fitting after the coating has been applied. Pipe shall be carried into position and not dragged. Use of pinch bars and tongs for aligning or tuning pipe will be permitted only on the bare ends of the pipe.
- (iii) The interior of pipe and accessories shall be thoroughly cleaned of foreign matter before being lowered into the trench and shall be kept clean during laying operations by plugging or other approved method.
- (iv) Before installation, the pipe shall be inspected for defects. Material found to be defective before or after laying shall be replaced with sound material without additional expense to the Owner.
- (v) Rubber gaskets that are not to be installed immediately shall be stored in a cool dark place.
- (vi) Pipe and accessories shall be carefully lowered into the trench by means of derrick, ropes, belts, slings or other authorized equipment. Under no circumstance shall any water-line materials be dropped or dumped into the trench. Care shall be taken to avoid abrasion of the pipe coating.
- (vii) Except where necessary in making connections with other lines or as authorized by the Engineer, pipe shall be laid with the bells facing in the direction of laying.
- (viii) The full length of each section of pipe shall rest solidly upon the pipe bed, with recesses excavated to accommodate bells, couplings, and joints. Pipe that has the grade or joint disturbed after laying shall be taken up and relaid. Pipe shall not be laid in water or when trench conditions are unsuitable for the work.
- (ix) Water shall be kept out of the trench until joining is completed. When work is not in progress, open ends, or pipe, fittings, and valves shall be securely closed so that no trench water, earth, or other substance will enter the pipes or fittings. Where any part of the coating or lining is damaged, the repair shall be made by the Contractor at his expense in a satisfactory manner.
- (x) Mechanical and push-on joints shall be installed in accordance with AWWA C600 for buried lines or AWWA C606 for grooved and flanged pipe above ground or in pits.
- (xi) The maximum allowable deflection is equal to **one-half** of the deflection allowed in AWWA C600. If the alignment requires deflection in excess of the above limitations, special bends or a sufficient number of shorter lengths of pipe shall be furnished to provide angular deflections within the limits set forth.
- (xii) Cutting of pipe: Cutting of pipe shall be done in a neat and workmanlike manner without damage to the pipe. Unless otherwise recommended by the manufacturer and authorized by the Engineer/Architect, cutting shall be done with an approved type of mechanical cutter. A wheel cutter shall be used when practicable. Squeeze type mechanical cutters shall not be used for ductile iron.

- (xiii) The Contractor shall install a 2" water main tap for the sampling and testing contingencies for the new water main construction. Tap configuration and location shall be provided by the Contractor for City approval prior to the work.
- (xiv) The Contractor shall ensure that the minimum length of 10 x pipe diameter of undisturbed soil separation is maintained between proposed bends and proposed valves, as well as between proposed valves and proposed temporary water stops, as shown in the plans.
- (xv) Wedge action restraint joints shall be constructed at locations of pipe and fitting joints as showing on the plan drawings. Restraint joints shall be "Megalug Series 1100" or approved equal.
- (xvi) Transition couplings shall be constructed at connections between existing and proposed water main to account for differences in pipe outside diameter dimensions as encountered. Transition couplings shall be "JCM 204" steel reducing coupling or approved equal.
- (xvii) Maintain existing 20" water main depth for cover.
- (xviii) The Contractor shall verify depth and location of all existing utilities and features adjacent to the proposed water main construction limits in advance of the work. No measurement or payment shall be made for verification to be included in the cost of the established water main pay items.
- (xix) For Division B, Part 3 of 3 (114-032B), the Contractor shall investigate and demonstrate to the City in advance of the water main work that the existing 20" water main valve at Station 19+26+/- is sufficiently operation or not. If the existing valve is successfully demonstrated to be sufficiently operational, the proposed north 20" butterfly valve shall not be required and shall not be ordered by the Contractor. If the proposed north 20" butterfly valve is not required, the proposed north temporary water stop shall be located a minimum 20 LFT of undisturbed soil north of the proposed north water main bend, at a location approved by the City. No measurement or payment will be made to existing valve investigation and demonstration to be include in the cost of the established water main pay items.

b. Bracing

at least 10-feet, then maximum horizontal separation shall be provided with vertical separation of bottom of water line at least 18- inches above top of sewer. Where this vertical separation cannot be obtained, the sewer shall be constructed of AWWA approved ductile iron pipe with mechanical joints or PVC pipe (SDR 26 or SDR21) with compression seals. The pipe should be pressure tested in place at 150 PSI without leakage before backfilling.

(iii) Crossing

(i) Normal Conditions: Water mains crossing any existing or proposed sewer shall be laid to provide a separation of at least 18-inches between the outside of the water line and the outside of the sewer whenever possible.

(ii) Unusual Conditions: When local conditions prevent a vertical separation described in crossing, normal condition, paragraph above, the following construction shall be used.

1. Sanitary sewers passing over or under water mains shall be constructed of ductile iron pipe with mechanical joints or PVC pipe (SDR 26 or SDR 21) as described in parallel installation, unusual conditions.

2. Water mains passing over sewer lines shall be laid to provide:

a. Vertical separation of at least 18-inches between top of sewer and bottom of water lines.

b. Adequate structural support for the sewers to prevent excessive deflection of the joints, resulting in the breaking of the water line.

c. Maximum separation of water and sewer line joints.

(iv) Sanitary and/or Combined Sewers or Sewer Manholes: No water pipes shall pass through or come in contact with any part of a sewer or sewer manhole.

7. Method of Measurement:

a. This work will be measured by the length of pipe, size of pipe and material of pipe installed, or as indicated per pay item in the Itemized Proposal sheet.

b. The fire hydrant assembly shall include pipe, fittings, gate valve and box, restraints, and fire hydrant from the main line tee to the fire hydrant.

8. Basis of Payment:

a. The accepted quantity of pipe, per size and material, will be paid for at the contract unit price per linear foot installed.

b. The costs of all equipment, labor, materials, testing, disinfection and incidentals will not be paid for directly but shall be included in the cost of pipe.

c. Ductile Iron Water Main will be paid for at the contract unit price per linear foot for WATER MAIN, DUCTILE IRON of the size as indicated on the itemized proposal sheet.

d. Fittings, connections, and valves will be paid for at the contract unit price per each for the items and sizes indicated in the Itemized Proposal.

CXIII. LANDSCAPE IRRIGATION

A. Prevailing Specifications: none

B. Additions:

1. This work includes all labor, materials, equipment, and incidentals required and perform all

8. Unless otherwise approved by the Owner, water service shall not be interrupted for any period in excess of eight (8) hours.
9. This work will be measured on a per instance basis for removal and reinstatement of conflicting water service connections or existing lead pipe water service connections encountered during the course of the Work. This work shall include all labor, equipment and materials (including: 1" Copper Type K, Pipe; Curb Stop Valve & Box, Fittings and Couplings).
10. This work shall include the relocation or adjustment in elevation of existing curb stop valves & boxes for service connections.
11. For the replacement of lead pipes, the City Water Department shall be responsible for the tapping of the water main, with the Contractor responsible from the new tap to the reconnection of the new work to the existing work.
12. Water service connection work shall not extend from the main tap beyond the existing service valve (curb stop), unless the valve (curb stop) is in conflict with the proposed work. Where connection to the main tap is located under pavement not noted for full depth replacement, Contractor shall include full depth asphalt removal/replacement in the respective bid item. Contractor shall be responsible for furnishing and installing curb stops, with specific brand and type to be coordinated by the Contractor with the City of South Bend Water Works Department. If a new tap is required, the Contractor shall be responsible for the tap fee to the City of South Bend Water Works for performance of the tap work. The City tap fee includes corporation stop, curb stop valve and box.
13. This work will be paid for at the contract unit price per each (EACH) ADJUST WATER SERVICE LINE, RESIDENTIAL; and TAP, WATER SERVICE, 1-INCH (CITY TAP FEE) requiring such adjustment which price shall constitute all labor, materials and incidentals to complete the work in place.
14. Where noted on the plans or directed by the Owner, the Contractor shall cap existing water services watertight. This work will be paid for at the contract unit price per each (EACH) CAP EXISTING WATER SERVICE LINE which price shall include all labor, materials and incidentals to complete the work.

CXVII. SIGN POST, SQUARE, REINFORCED ANCHOR BASE

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 802.
- B. Additions:
 1. Sign Post, Square, Reinforced Anchor Base will be paid for at the contract unit price per type for "Sign Post, Square, (type), Reinforced Anchor Base...LFT" as indicated on the itemized proposal sheet.

CXVIII. SIGN, SHEET ASSEMBLY, RELOCATE

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 802.
- B. Additions:
 1. Sign, Sheet Assembly, Relocate will be paid for at the contract unit price for "Sign, Sheet Assembly, Relocate...EA" as indicated on the itemized proposal sheet.

CXXI. PORTABLE CHANGEABLE MESSAGE BOARD SIGNS

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 801.
- B. Additions:
 - 1. Contractor shall provide portable, trailer-mounted, changeable message board signs with a self-contained power supply for the sign that has the following features:
 - a. Message sign panel large enough to display three lines of eight inch (8") high characters with a minimum of eight-character display per message line.
 - b. Size shall be appropriate for non-interstate use with a dimension of approximately 84"x42" display.
 - c. It shall have the capacity for multiple preprogrammed messages (three line displays) to be selected by the Engineer.
 - d. A waterproof, lockable cover for the controller keyboard.
 - e. An operator's manual, a service manual, and wiring diagram.
 - f. Variable mounting height of at least seven feet (7') from the pavement to the bottom of the message sign panel.
 - g. The capacity to operate with a battery pack for two hours under full load.
 - 2. **Seven** Portable Changeable Message Board signs are provided on the proposal sheet for placement as directed by the City.

CXXII. CONSTRUCTION LIGHTING

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 801.
- B. Additions:
 - 1. Acceptable levels of illumination shall be maintained in the project area throughout the project and will be defined by:
 - a. Existing lights remaining in operation along at least one side of the roadway, or
 - b. Temporary illumination equivalent in quantity and spacing to the existing lighting along one side of the roadway.
 - 2. The Contractor shall coordinate with American Electric Power (AEP) and determine which, if any existing roadway lights may remain in place through construction.
 - 3. If temporary construction lighting is required or desired, a written request shall be made to the Engineer. Authorization will be required before temporary lighting may be used.
 - 4. Temporary lighting shall remain the property of the Contractor.
 - 5. Power generation shall subscribe to the CITY's noise ordinance (Chapter 14, Article 3, Section 13-57.05), or shall be provided via temporary electric service.
 - 6. Construction Lighting will be measured by the Day for each pole to which temporary lighting

9. All paint or exterior coverings used shall be exterior grade coating suitable for use on wood or the material of construction. The sign shall be prepared as follows:
 - a. Sign Face:
 - (i) The sign face background shall be white and can consist of a minimum two coats of paint.
 - b. Supports and Trim:
 - (i) The supports and trim shall be white and can consist of a minimum of two coats of paint. The front facing surface of the 2-inch x 4-inch frame shall be royal blue or black.
10. The size and color of lettering shall be approved by the Owner during the Shop Drawing process. The emblem of the Owner and Engineer shall be reasonably close in color to that supplied to the Contractor by the Owner.
11. The sign shall include the following information regarding the Project, Contractor, Owner and Engineer:
 - a. Project:
 - (i) Name, City Project Number, Neighborhood Group
 - b. Contractor:
 - (i) Name required. Contractor Emblem is suggested for identification, but is optional.
 - c. Owner:
 - (i) Name, Emblem
 - d. Engineer:
 - (i) Name, Emblem
12. The sign shall be installed within one week after work begins at the site.
13. Install sign in accordance with all laws and codes having jurisdiction.
14. Erect sign in a prominent location, secure from vandalism.
15. All fasteners used in the fabrication and installation of the sign shall be rust-proof.
16. The sign shall be adequately supported and braced to remain in the proper positioning and alignment, including resistance to wind loads and toppling of the sign.
17. Maintain the sign plumb, level and free of graffiti for the duration of the work.
18. When directed, at completion of project, remove sign from property.
19. This work will be paid for at the contract unit price per each for PROJECT INFORMATION SIGN installed in place.

- b. Handholes are required every 300 LFT. Existing handholes shall be used where available. A 10 LFT slack coil of fiber optic cable shall be included in each handhole. Placement of new handholes shall be approved by the Engineer prior to construction.
7. The Contractor shall connect the new multi-mode fiber optic cable at the Navarre Street traffic signal controller to the existing single-mode traffic signal master fiber which connects the traffic signal controller at the Michigan Street / Angela Boulevard intersection to the City's computer network.
 - a. A fiber optic signal converter will be required between the multi-mode fiber and the single-mode fiber. The fiber optic signal converter shall be as directed by the Engineer.
8. All fiber optic conduit shall be PVC, Schedule 80, or as approved by the Engineer.
9. Single-mode Fiber Optic Cable for Interconnect shall be Corning ALTOS® Single-mode 12-strand (part number 012EU4-T4101D20).
10. Multi-mode Fiber Optic Cable for Interconnect shall be Corning ALTOS® Multi-mode 12-strand (part number 012TU4-T4180D20).
11. Wire #10 shall be a pole circuit cable, THWH, No. 10 Copper, Stranded, 1/C. Contractor shall provide 3 runs of wire (load, neutral and ground) from the base to each luminaire.
12. Fiber optic cable shall be installed with tracer wire and the tracer wire shall be continuous through all handholes. All [work with MetroNet facilities](#) shall be completed by MetroNet technician with current certifications as required by the Corning Manufacturer's warranty. Contractor shall coordinate with MetroNet regarding all splicing, connections, intercepts, handhold placement, etc. which involves the fiber-optic cable.
13. All ground disturbed by the Contractor during construction of these items shall be restored to the existing condition, or better.
14. Plastic conduit will be measured by the linear foot and paid for at the contract unit price for CONDUIT, PVC, 2 IN., SCHEDULE 80 (LFT). The costs of connections to existing handholes and traffic signal controller cabinets and restoration of ground disturbed by installation will be included in the cost of this item.
15. Fiber optic cable will be measured by the linear foot and paid for at the contract unit price for TRAFFIC SIGNAL CABLE, FIBER OPTIC, SINGLE-MODE (LFT); and TRAFFIC SIGNAL CABLE, FIBER OPTIC, MULTI-MODE (LFT).
16. Handholes will be paid for at the contract unit price for HANDHOLE, TRAFFIC (EACH).
17. Insulating links, unfused connector kits, fused connector kits, etc. shall be considered incidental to the installation of traffic signal mounted luminaires and will not be measured or paid for separately.

CXXVI. FIBER OPTIC

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 805.
- B. Additions:

1. The fiber optic connection of the O'Brien Recreation Center, located at 321 E. Walter St., South Bend, IN 46601, is currently made to fiber optic cable dedicated to the CITY's traffic signals.
2. The contractor shall coordinate with Ben Hudson, St. Joseph County Metronet (Metronet), 574-968-5353, to have Metronet's contractor disconnect the O'Brien Center from the traffic fiber optic cable and reconnect it to the Metronet fiber optic located in the same conduit.
3. This work will not be measured, but will be paid for at the Lump Sum price bid for FIBER OPTIC, CITY PARK RECONNECTION.
4. The Contractor shall relocate Metronet facilities in the area of the Marion Roundabout (Division B, Part 2 of 3) as shown in the plans. Relocation work shall only be performed by a contractor approved by Metronet.
5. Payment for the relocation of Metronet facilities as described above will be made at the unit price set forth in the proposal for FIBER OPTIC, RELOCATE (LFT) which shall include all labor, materials and incidentals to complete the work in place. Modifications to handholes will not be paid for directly but shall be considered incidental to the work.
6. All work with MetroNet facilities shall be in accordance with the requirements listed in Special Provision CXXV.

CXXVII. CROSSWALK SYSTEM – FLUSH BI-DIRECTIONAL FIXTURE

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 807.
- B. Additions:
 1. The work shall include all incidentals for materials, labor, installation and coordination for the installation of a flush bi-directional fixture at the crosswalks as shown on the plans.
 2. The fixture shall be model FI-TS601YL as marketed by Traffic Safety Corporation or approved equal. In order to be considered equal, the alternate fixture shall satisfy the following requirements.
 3. Construction - The fixture shall be bi-directional and of modular design comprised of a top casting and two (2) pre-focused optical cartridges made of high tensile strength aluminum alloy. The fixture shall be 0.00" above grade when mounted in the factory supplied mounting base. The diameter of the fixture shall not exceed 8" and all mounting hardware shall be stainless steel.
 4. Durability - The fixture shall withstand a static load of 44,000 lb. without sustaining permanent deformation or cracking of materials. Leads, gaskets, etc. shall be rated to withstand 300 degrees F.
 5. LED/Light Cartridge – Each lens shall be molded of high performance optical grade glass and formed in a removable factory sealed optical cartridge. Two cartridges required per fixture. Each cartridge consumes 2.5 watts per cartridge (5 watts per fixture) during the activation period of the fixture.
 6. Photometric Performance – The fixture shall have both daytime and nighttime visibility exceeding that of a 50-watt halogen lamp, using a yellow light.
 7. Finish – The fixture shall be anodized natural aluminum and be dark grey in color.
 8. Mounting Base – Fixtures shall be installed in a mounting base (TSC's #BA-725-5-2MR) of high strength steel, hot dip galvanized after fabrication per ASTM-153 specifications,

6. The work shall be measured and paid by EACH at the contract unit price for “Crosswalk System – Pedestrian Bush-Button System....Each” as indicated on the itemized proposal sheet.

CXXXI. HANDHOLES

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 807.
- B. Additions:
 1. Handholes will be paid for at the contract unit price for “Handhole ...EACH” as indicated on the itemized proposal sheet.

CXXXII. WIRE

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 807.
- B. Additions:
 1. Wire will be paid for at the contract unit price for “NO. gauge WIRE...LFT” as indicated on the itemized proposal sheet.

CXXXIII. CONDUIT, PVC, SCHEDULE 80

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 807.
- B. Additions:
 1. The cost to push the conduit will not be paid for separately but shall be included in the cost of the conduit, complete and in place.
 2. Conduit will be paid for at the contract unit price for CONDUIT, PVC, SCHEDULE 80 (DIA.) IN. (LFT) as indicated on the itemized proposal sheet and shall include all costs to install the conduit, complete and in place.

CXXXIV. TESCO CABINET

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 805, 807.
- B. Additions:
 1. The electric service pedestals shall be a City of South Bend approved enclosure as manufactured by Tesco Controls, Inc. Location of single and dual meter service pedestals are provided in the plans. **TESCO cabinets shall be painted black.**
 2. Cabinet foundation, wiring and all connections necessary are included in this pay item.
 3. Traffic signals shall remain in operation at all times during installation of service pedestals.
 4. The Contractor shall extend the wiring from the existing signal cabinet to the new service pedestal in new conduit.
 5. The removal of the existing service from the existing controller cabinet as shown on the plans will not be paid for separately but shall be included in the cost of this pay item.

6. The Contractor shall provide additional breaker within enclosure for additional electrical panel at each roundabout were service pedestals are called for in the plans.
7. The electric service point shall be paid for at the contract unit price for TESCO CABINET WITH SINGLE SERVICE, FOUNDATION, WIRING, ETC. or TESCO CABINET WITH DUAL SERVICE, FOUNDATION, WIRING, ETC as indicated on the itemized proposal sheet.

CXXXV. <PROVISION DELETED>

CXXXVI. ELECTRICAL DEVICES IN POST

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 807
- B. Additions:

1. **Electrical devices in post** material and installation shall match existing and per plan details.
2. **Electrical devices in post** will be paid for at the contract unit prices as follows, and as indicated on the itemized proposal sheet. The costs of materials, labor, equipment, and all other incidental materials necessary for the completion of site lighting and electrical receptacles shall be included in the cost of the pay item.

a. **ELECTRICAL DEVICES IN POST** EACH

CXXXVII. STREET LIGHTING

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 807
- B. Additions:
 1. The Contractor shall provide a dual meter, City of South Bend approved enclosure as manufactured by Tesco Controls, Inc.
 2. Provide additional breaker within enclosure for additional electrical panel in **each** roundabout.
 3. Street Lights shall be spaced and constructed per plans and have features as listed below, or approved equal:

sidewalk down lighting from street light and replace with cover plate. Any removed down lights shall be delivered to the City of South Bend Bureau of Traffic and Lighting.

6. WIRE #4 shall be 4-1/C, No. #4, THWH, Colored, Stranded Copper in Cable-Duct to be placed in a trench or conduit. Conduit shall be PVC Schedule 80, 2-Inch. The color coding of the insulation shall include one black, one white, one red and one green. The wiring shall be installed using the black wire for circuit connections, 1, 3 and 5; the red wire for circuit connections 2, 4 and 6. The white wire for neutral and the green wire for earth ground.
7. Circuit C shall be placed on a separate meter from Circuits A & B.
8. WIRE #10 shall be a pole circuit cable, THWH, No. 10, Copper, Stranded, 1/c. Contractor shall provide (3) runs of wire, (load, neutral and ground) going from the base to each luminaire.
9. The Contractor is advised to order street lighting materials as soon as possible due to the project schedule.
10. The Contractor shall deliver a total of (3) additional street lights and (1) additional pedestrian light, to be used as spares, to the City of South Bend Bureau of Traffic and Lighting. Spares shall be both the pole and luminaire and any finials, fittings, covers, etc. necessary to have a complete assembly. Final payment will not be released until all spare parts are delivered.
11. The Contractor shall arrange for Indiana Michigan (AEP) Power Company to provide electrical service. The service point shall consist of a Tesco Industrial Control Panel, South Bend Dual Meter Standard, with foundation. Underground cable duct shall be supplied from AEP's utility pole to the base of the Tesco Industrial Control Panel in accordance with South Bend Dual Meter Standard detail. No measurement will be made of cable duct where it is part of the service point.
12. Electrical wiring shall be continuous from the point of service to street light foundation and from street light foundation to street light foundation. Splices shall be made in access panel located at base of the light pole. Contractor shall replace the entire conduit and/or wiring cable from cabinet to street light foundation or from street light foundation to street light foundation that is cut or damaged during construction at no additional cost to the Owner.
13. No connections using wire nuts shall be allowed.
14. Connectors and Fittings shall not be measured or paid for directly, but shall be considered incidental to the project.
15. The Tesco enclosure shall be paid for at the contract unit price for TESCO CABINET WITH SINGLE SERVICE, FOUNDATION WIRING, ETC (EACH) as indicated on the itemized proposal sheet.
16. This work will be paid for at the contractor unit price per each (EACH) of CABLE-DUCT MARKER; HANDHOLE, LIGHTING; LIGHTING FOUNDATION; SERVICE POINT; STREET LIGHT; PEDESTRIAN LIGHT; WIRE #4 (LFT); WIRE #10 (LFT); AND CONDUIT, LIGHTING (LFT) which price shall constitute all labor, materials and incidentals to complete the work in place.

CXXXVIII. LIGHT STANDARDS

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 807

- (i) Kim Lighting. Cat. EL218F3-8L3KUV-BL, SM18-BL-P (ESL Spectrum Ltg. (574) 255-2151).
 - (ii) Lamp: LED 3,000K, Micro Floodlight.
 - (iii) Finish to be: Black
 - (iv) Base color: Black
- g. Type G:
- (i) Beacon Lighting. Cat. CDT/24NB/55/3K/5x3/UNV/BBT/HV (Cadet Floodlight), Kim Lighting Base Cat. SM18/BL/P (Light Base) (ESL Spectrum Ltg. (574) 255-2151).
 - (ii) Lamp: LED 3,000K, Cadet Floodlight.
 - (iii) Finish to be: Black
 - (iv) Base color: Black
- h. Light Standards shall include the cost of the pole, one LED luminaire mounted on the pole, bracket arms, all wiring in the pole from the base to the luminaire and all connections required to complete the wiring in the base of the pole, material, labor, equipment and appurtenances, complete in place and operational.
- i. The accepted quantities of the specified light standards will be paid for at the contract unit price per each for LIGHT STANDARD, TYPE as indicated on the itemized proposal sheet.

CXXXIX. LIGHT POLE FOUNDATION

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 807
- B. Additions:
 - 1. Each Street Light and Drive light will be mounted on a concrete foundation, as shown on the plans.
 - 2. The contractor is advised to order lighting materials as soon as possible due to the project schedule limits.
 - 3. The cost of the Light Pole Foundation shall include the anchor bolts, reinforcing steel, grounding, concrete, materials, labor, equipment and appurtenances required to construct the foundation complete and in place.
 - 4. Light Pole Foundation will be paid for at the contract unit price **per each for the diameter and length** for "Light **Standard** Foundation, (dia.) FT. x (length) FT....EACH" as indicated on the itemized proposal sheet.

CXL. ORNAMENTAL LIGHTING

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 807.
- B. Additions:
 - 1. This work shall consist of purchasing and installing street light poles and ornamental street light luminaires.
 - 2. All materials shall be in accordance with Section 807.03 and as specified below:
 - a. Single Light Pole, 18' Pole and Post Mounted Luminaire:

CXLIV. <PROVISION DELETED>

CXLV. SIGNAL FIBER OPTIC INTERCONNECT CABLE

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 805.
- B. Additions:
 - 1. The contractor shall maintain the existing traffic signal interconnect between adjacent traffic signals cabinets/controllers and the City of South Bend network.
 - 2. The existing interconnect type is fiber optic. The location of the interconnect is not known throughout the project limits due to the detail and limits of survey obtained for this job, therefore, extreme care shall be used to verify and maintain existing interconnect without damage.
 - 3. In locations where traffic signal cabinets are to be relocated, the existing interconnect shall be located/verified and relocated/reconnected as necessary. The City shall provide splicing details as needed for all new drop cables. New drop cables will be paid for at the contract unit price per linear foot for SIGNAL INTERCONNECT, FIBER OPTIC. The cost of all splices, splice kits, and connectors necessary for complete installation of the drop cables shall be included in the cost of the pay item.
 - 4. In locations where traffic signal cabinets are to be removed, the existing interconnect shall be maintained to allow for the traffic signal system continuity of operations.

CXLVI. CLEAN AND PAINT EXISTING SIGNAL EQUIPMENT

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 805, 809.

B. Additions:

1. All new, relocated, and relocated mast arm assemblies, traffic signal cabinets, and pedestal poles shall be painted black.
2. Painting shall be paid for at the contract unit price for "Clean and Paint Existing Signal Equipment LF" as indicated on the itemized proposal sheet.

CXLVII. WIRELESS VEHICLE DETECTION SYSTEM

A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 805.

B. Additions:

1. This work shall consist of furnishing and installing wireless vehicle detection systems for vehicle detection at traffic signals as identified on the plans.
2. The wireless vehicle detection system (WVDS), is comprised of wireless magnetometer detectors, contact closure cards, receiver processors, and wireless repeaters installed for a signalized intersection. The system shall be capable of monitoring vehicles on a roadway via detection of changes in inductance caused by the presence or passage of a vehicle and shall provide detector outputs to a traffic signal controller.
3. The WVDS shall include magnetometer detectors, a minimum of two receiver processors, the required mounting equipment, cables, rack mounted cards, set-up and operating software, all connectors, and miscellaneous equipment necessary for the installation and operation of the system. If required, the WVDS shall also include wireless repeaters.
4. Only models from the Department's approved materials list for traffic signal control equipment shall be used.
5. Ethernet cable for wireless vehicle detectors shall be outdoor rated and UV shielded.
6. Prior to the installation, the Contractor shall test all wireless magnetometer detectors and demonstrate proper operation and communication between the wireless magnetometer detectors and the receiver processor and wireless repeater, if required.
7. Prior to the installation, the Contractor shall demonstrate that each wireless magnetometer detector is within range of its corresponding receiver processor, using wireless repeaters as necessary. All wireless magnetometer detectors assigned to either a receiver processor or wireless repeater shall be located within a 120° arc measured from the receiver processor or wireless repeater.
8. The Contractor shall install each wireless magnetometer detector in the roadway according to the manufacturer's recommendations with one wireless magnetometer detector programmed to count vehicles for each through travel lane. Holes cored in the pavement shall be cleaned and dried before installing wireless magnetometer detectors. The cored pavement shall be backfilled according to the manufacturer's recommendations.
9. Receiver processors and wireless repeaters shall be mounted on traffic signal steel strain, or cantilever poles, or signal pedestals on type A foundations. The mounting height of receiver processors above the pavement surface shall be between 20 ft and 35 ft. The mounting height of wireless repeaters above the pavement surface shall be between 13 ft and 35 ft.

10. The minimum distance between a receiver processor and wireless repeater mounted on the same structure shall be 2 ft. This distance may be increased to enable better communication between the devices.
11. After installation, the Contractor shall demonstrate successful communication between each wireless magnetometer detector, receiver processor, and wireless repeater to the Engineer.
12. Wireless magnetometer detectors, contact closure cards, receiver processors and wireless repeaters will be measured by the number of units installed.
13. Wireless magnetometer detectors, contact closure cards, receiver processors and wireless repeaters will be paid for at the contract unit price per each:
 - a. Contact Closure CardEACH
 - b. Receiver ProcessorEACH
 - c. Wireless Magnetometer Detector, **New**EACH
 - d. Wireless RepeaterEACH
 - e. **Wireless Magnetometer Detector, Relocated**EACH
14. The cost of coring the pavement, sealant, and all work necessary for proper installation and operation of the wireless magnetometer detectors shall be included in the cost of the wireless magnetometer detector.
15. The cost of cables, connectors, set-up and operating software, access boxes, rack mounted expansion cards, and all hardware necessary to complete the installation shall be included in the cost of the contact closure cards.
16. The cost of required mounting equipment, cables, connectors, and miscellaneous equipment necessary for proper installation and operation of the receiver processors shall be included in the cost of the receiver processors.
17. The cost of required mounting equipment, connectors, and miscellaneous equipment necessary for proper installation and operation of the wireless repeaters shall be included in the cost of the wireless repeaters.
18. **New and relocated wireless** detectors, where specified in the plans, shall be installed per the diagram provided on INDOT Standard Drawing E 805-T-173d.
19. **Wireless magnetometers are currently in use at the intersection of Main Street and LaSalle Avenue. These existing magnetometers shall be maintained in place or relocated as depicted in the plans. All wireless magnetometers shall be mapped to the signal controller as indicated in the plans.**

B. Additions:

1. The Department desires to salvage the traffic signal equipment listed below:

EQUIPMENT	EXISTING LOCATION
Pedestrian Signals	Main Street & Bronson Street
Pedestrian Signals	Main Street & South Street
Pedestrian Signals	Main Street & Monroe Street
Pedestrian Signals	Main Street & Western Avenue
Pedestrian Signals	Main Street & Wayne Street
Pedestrian Signals	Main Street & Jefferson Blvd
Pedestrian Signals	Main Street & Washington Street
Pedestrian Signals	Main Street & Colfax Avenue
Pedestrian Signals	Main Street & LaSalle Avenue
Pedestrian Signals	Michigan Street & Sample Street
Pedestrian Signals	Michigan Street & Bronson Street
Pedestrian Signals	Michigan Street & South Street
Pedestrian Signals	Michigan Street & Monroe Street
Pedestrian Signals	Michigan Street & Western Avenue
Pedestrian Signals	Michigan Street & Wayne Street
Pedestrian Signals	Michigan Street & Jefferson Blvd
Pedestrian Signals	Michigan Street & Washington Street
Pedestrian Signals	Michigan Street & Colfax Avenue
Pedestrian Signals	Michigan Street & LaSalle Avenue

2. The City desires to salvage the traffic signal equipment listed below:

EQUIPMENT	EXISTING LOCATION
Mast Arm	Main Street & Calvert Street

3. Traffic signal equipment to be salvaged shall be stored and transported in accordance with 805.03. Designated locations for delivery of transported equipment shall be coordinated with the Engineer.

CXLIX. ACCESSIBLE PEDESTRIAN SIGNALS

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 805, 922.

B. Additions:

1. Pedestrian push buttons shall be the type designated in the contract documents, APS or Non-APS.
2. The cost of the push button, pedestrian actuated signal sign, any accessible pedestrian signal components and all hardware required to complete the installation shall be included in the cost of pedestrian push button.
3. Pedestrian push-button assemblies shall meet the standards of the MUTCD and

CLII. LOOP DETECTION

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 805.
- B. Additions:
 - 1. The contractor shall perform loop tagging, testing and vehicle simulator testing in accordance with 805.09. Loop tagging tables are provided in the appendix. Documentation of loop testing results shall utilize the form on INDOT recurring special provision 805-T-039d.

CLIII. SIGNAL CANTILEVER STRUCTURE, HAND HOLE COVERS

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 805.
- B. Additions:
 - 1. The contractor shall replace missing or repair damaged mast arm hand hole covers on all existing mast arms as necessary prior to painting. The cost of replacing covers shall be considered incidental and included with the cost of other pay items.
 - 2. These items will be paid for at the contract price for SIGNAL CANTILEVER STRUCTURE, HAND HOLE COVERS (EACH).

CLIV. SIGNAL CANTILEVER STRUCTURE, RELOCATE

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 805.
- B. Additions:
 - 1. The contractor shall relocate existing mast arm assemblies as detailed in the plans. Relocated mast arms shall be installed in accordance with the INDOT Standard Specifications.
 - 2. This work shall be paid for at the contract price for SIGNAL CANTILEVER STRUCTURE, RELOCATE (EACH).

CLV. SIGNAL CANTILEVER STRUCTURE

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 805.
- B. Additions:
 - 1. All new signal cantilever structures located along Sample Street shall be single arm type per current INDOT standard drawings. All signal cantilever structures of this type shall have a galvanized finish and be paid for at the contract price for SIGNAL CANTILEVER STRUCTURE, SINGLE ARM (EACH). Said structures shall utilize a Type B foundation per the current INDOT Standard Drawings which shall be paid for at the contract price for SIGNAL CANTILEVER STRUCTURE, DRILLED SHAFT FOUNDATION, TYPE B.
 - a. Including Intersection Numbers 28 and 46 as shown on the plans.
 - 2. All new signal cantilever structures locate south of Sample Street and north of Chippewa Avenue shall be cantilever truss type arms per INDOT 1998 standard drawings (See Appendix) and shall match the style of existing signal cantilever structures located within this portion of the project limits. All signal cantilever structures of this type shall have a galvanized finish and be paid for

at the contract price for SIGNAL CANTILEVER STRUCTURE, SINGLE TRUSS ARM (EACH). Foundations for these structures shall be, constructed per the details provided in said standard drawings and paid for at the contract unit price for SIGNAL CANTILEVER STRUCTURE, DRILLED SHAFT FOUNDATION, TYPE A.

- a. Including Intersection Numbers 32, 50, and 51 as shown on the plans.
3. All new signal cantilever structures located north of Sample Street and south of Marion Street shall be cantilever truss type arms per INDOT 1998 standard drawings and shall match the style of existing signal cantilever structures located within this portion of the project limits. All signal cantilever structures of this type shall be painted FS 17038 (Black), and be paid for at the contract price for SIGNAL CANTILEVER STRUCTURE, SINGLE TRUSS ARM (EACH). Foundations for these structures shall be, constructed per the details provided in said standard drawings and paid for at the contract unit price for SIGNAL CANTILEVER STRUCTURE, DRILLED SHAFT FOUNDATION, TYPE A.
 - a. Including Intersection Numbers 20 through 27, 38, 43 through 45, and 54 through 58 as shown on the plans
4. The contractor is advised to order new signal cantilever structures as soon as possible due to the project schedule.

CLVI. CONDUIT, HDPE, SCHEDULE 80

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 805.
- B. Additions:
 1. An undistributed quantity of 3 IN HDPE Schedule 80 conduit is included for connection of conduit from new service pedestals with single meters to the existing service points.
 2. An undistributed quantity of 4 IN HDPE Schedule 80 conduit is included for connection of conduit from new service pedestals with dual meters to the existing service points.
 3. Conduit will be paid for at the contract price per linear foot for CONDUIT, HDPE, SCHEDULE 80, (diameter) as indicated on the itemized proposal sheet.

CLVII. TRAFFIC SIGNAL HEAD, 3 SECTION, 12" RED AMBER GREEN BIKE SIGNALS

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 805.
- B. Additions:
 1. Traffic signal head shall consist of a standard 3 section signal head with 12 inch lenses each depicting a bicycle symbol as indicated in the plans.
 2. This bike traffic signal will be measured and paid for at the contract price per each installation for BIKE TRAFFIC SIGNAL HEAD, 3 SECTION, 12 IN as indicated on the itemized proposal sheet. The cost of required mounting equipment, connectors, and miscellaneous equipment necessary for proper installation and operation shall be included in the cost of the pay item.

CLVIII. DECORATIVE SIGNAGE FOR CYCLE TRACK

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 802.
- B. Additions:
 1. This work shall consist of fabricating and placing cycle track signs as indicated on plans. This signage package consists of custom exterior architectural signage. Sign contractor to furnish all labor, materials, services, equipment and apparatus whether necessary or incidental to complete installation of all sign types required for the project as shown in construction plans and specified herein.
 2. Sign contractor shall coordinate and provide sign component design services necessary to

11. Accessories

- a. Anchors and Inserts: Provide nonferrous-metal or hot dip galvanized and inserts for exterior installations and elsewhere as required for corrosion resistance. Use toothed steel or lead expansion bolt devices for drilled in place anchors. Furnish inserts as required to be set into concrete or masonry work. All exposed fasteners shall be a security type requiring special tools for removal.

12. Installation

- a. Location and placement: Locate signs and accessories where indicated, using mounting methods of types described and complying with manufacturer's written instructions and/or best practices.
- b. Install signs level, plumb and at heights indicated, with sign surfaces free of distortion and other defects in appearance.

13. Decorative Signs will be measured by each sign complete in place. Sign post and panel design, preparation, fabrication, labor, materials, and all necessary incidentals shall be included in the cost of the decorative sign.

14. The accepted quantity of decorative signs will be paid for at the contract unit price per for each **SIGN, DECORATIVE, TWO WAY CYCLE TRACK** as indicated on the itemized proposal sheet.

15. If a supplemental bicycle yield to pedestrian single sided sign is to be installed with the decorative sign, in accordance with the locations and details as shown on the plans, the accepted quantity of decorative signs will be paid for at the contract unit price per for each **SIGN, DECORATIVE, TWO WAY CYCLE TRACK WITH SUPPLEMENT** as indicated on the itemized proposal sheet. The supplemental sign shall be included in the cost of the pay item.

CLIX. INLET REMOVAL AND CATCH BASIN REMOVAL

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 202.
- B. Additions:
 1. All existing Inlets and Catch Basins that are to be removed, as identified on the plans, will be measured and paid for at the contract unit price per each for **INLET, REMOVE** as indicated on the itemized proposal sheet.

CLX. PERMANENT TUBULAR MARKERS

- A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 801, 923.
- B. Additions:
 1. This work shall consist of installing tubular delineation markers to the bridge deck at the intersection of St. Joseph Street and Colfax Avenue as shown on the plans.
 2. Tubular markers shall be placed as shown on the plans. The tubular markers are to be placed as a permanent installation.
 3. Markers shall be secured in place by adhesives. The use of metal bases or weighting will not be allowed.

CLXI. CURB IDENTIFICATION MARKERS

- A. Prevailing Specifications: None.
- B. Additions:

B. Additions:

1. Strain poles, bands and attachments shall be primed and painted with black powder-coated paint. Powder coating material shall be a thermosetting polyester powder coating with a minimum coating thickness of 2.0 mils. Powder coating application shall be electrostatically applied.
2. Payment shall be made at the contract unit price per each for OVERHEAD SIGN STRUCTURE, CABLESPAN and CABLESPAN SIGN STRUCTURE FOUNDATION, IV which shall include all labor, materials and incidentals respectively for the work complete in place.

CLXIV. MISCELLANEOUS EQUIPMENT FOR LIGHTING – PROJECT 114-032B

A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 807.

B. Additions:

1. Provide a 120/240V Single phase, Three Wire 60 Amp Service for the roundabout from Tesco Box.
2. Miscellaneous Equipment for Lighting shall include, but not limited to Provide and install as required a wall mounted cabinet enclosure that shall include a Photocell, Time Clock and circuits as noted on the plans, lighting contactors as required for a complete and functioning lighting control system for all proposed lighting within the roundabout area, hardware, connections, grounding, fused and unfused connector kits, compression fittings, circuit breakers, relay switches, receptacles, and insulation links.
3. Provide and install as required noted empty raceways and handhole that shall intercept existing empty raceways that extends outside the construction limits.
4. The Contractor shall provide all miscellaneous equipment required to successfully complete the work. No measurement will be made for the established pay item to be paid per Lump Sum, complete in place.
5. Miscellaneous Equipment will be paid for at the contract unit price for “Miscellaneous Equipment for Lighting...Lump Sum” as indicated on the itemized proposal sheet.

CLXV. HOSPITAL SIGN, REMOVE

A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 202.

B. Additions:

1. Removal shall include the sign and any concrete foundation in its entirety.
2. The Contractor shall carefully remove, protect and deliver the sign materials except for foundation to the hospital authorities in existing condition, promptly upon removal.
3. Hospital sign will be paid for at the contract unit price for “hospital sign removal...each” as indicated on the itemized proposal sheet.

CLXVI. ROUNDABOUT STRUCTURAL REINFORCED CONCRETE FEATURES

A. Prevailing Specifications: 2016, INDOT Standard Specifications Section 702, 703.

B. Additions:

1. Brick facing and precast caps, planters, etc. shall be in accordance with the contract documents.
2. Roundabout structural reinforced concrete features will be paid at the contact unit prices as follows, and as indicated on the itemized proposal sheet:
 - a. "Roundabout – Upper Retaining Wall...LFT"
 - b. "Roundabout – Lower Retaining Wall...LFT"
 - c. "Roundabout – Concrete Columns.....CYS"
 - d. "Roundabout – Reinforcing Steel.....LBS"
 - e. "Concrete Monument Footing.....CYS"

CLXVII. MASONRY FEATURES

A. Prevailing Specifications: None.

B. Additions:

1. General:
 - a. All labor materials, equipment and supervision required to furnish and install Masonry Features.
 - b. This section includes the requirements for modular face brick, precast concrete caps, precast concrete planters, joint reinforcement, steel ties, mortar and grout.
2. Quality Assurance:
 - a. Single Source Responsibility for Masonry Units: Obtain exposed masonry units of uniform texture and color, or a uniform blend within the ranges accepted for these characteristics, from one manufacturer for each different product required for each continuous surface of visually related surfaces.
 - b. Single Source Responsibility for Mortar Materials: Obtain mortar ingredients of uniform quality, including color for exposed masonry, from one manufacturer for each cementitious component and from one source and producer for each aggregate.
 - c. Field Constructed Mock-Ups: Prior to installation of masonry work, erect sample wall panels to further verify selections made for color and textural characteristics, under sample submittals of masonry units and mortar, and to represent completed masonry work for qualities of appearance, materials and construction; build mock-ups to comply with the following requirements:
 - d. Build mock-ups for the following types of masonry, including mortar and accessories and structural backup. One typical short pier showing, face and accent bricks, and one 2 foot wall extension. Precast cap and light fixture not required.
 - e. Retain mock-ups during construction as standard for judging completed masonry work. When directed, demolish mock-ups and remove from site.
3. Submittals:
 - a. Product Data: Submit manufacturer's product data for each type of masonry unit, accessory, and other manufactured products, including certifications that each type complies with specified requirements.
 - b. Shop Drawings: Submit cutting and setting drawings for stone caps showing sizes, profiles, and locations.
 - c. Samples for Initial Selection: Unit masonry samples showing full extent of colors and textures available for each type of exposed masonry unit required.

- d. Color Selection Samples: Sealant color samples for brick and precast concrete caps.
- 4. Delivery, Storage, and Handling:
 - a. Deliver masonry materials to project in undamaged condition.
 - b. Store and handle masonry units to prevent their deterioration or damage due to moisture, temperature changes, contaminants, corrosion, or other causes. Limit moisture absorption of concrete masonry units during delivery and until time of installation to the maximum percentage specified for Type I units for the average annual relative humidity as reported by the U.S. Weather Bureau Station nearest project site.
 - c. Store cementitious materials off the ground, under cover, and in dry location.
 - d. Store aggregates where grading can be maintained.
 - e. Store masonry accessories including metal items to prevent deterioration by corrosion and accumulation of dirt.
- 5. Project Conditions:
 - a. Protection of Work: During erection, cover top of walls with waterproof sheeting at end of each day's work. Cover partially completed structures when work is not in progress.
 - b. Extend cover a minimum of 20 inches down both sides and hold cover securely in place.
 - c. Staining: Prevent grout or mortar or soil from staining the face of masonry to be left exposed or painted. Immediately remove grout or mortar in contact with such masonry.
 - d. Protect base of walls from rain-splashed mud and mortar splatter by means of coverings spread on ground and over wall surface.
 - e. Protect sills, ledges, and projections from droppings of mortar.
 - f. Cold Weather Protection (NOTE: No additional compensation will be provided for cold weather protection):
 - (i) Do not lay masonry units which are wet or frozen.
 - (ii) Remove any ice or snow formed on masonry bed by carefully applying heat until top surface is dry to touch.
 - (iii) Remove masonry damaged by freezing conditions.
 - g. For clay masonry units with initial rates of absorption (suction) which require them to be wetted before laying, comply with the following requirements:
 - (i) For units with surface temperatures above 32°F, wet with water heated to above 70°F.
 - (ii) For units with surface temperatures below 32°F, wet with water heated to above 129°F.
 - h. Perform the following construction procedures while masonry work is progressing. Temperature ranges indicated below apply to air temperatures existing at time of installation except for grout.
 - i. For grout, temperature ranges apply to anticipated minimum night temperatures. In heating mortar and grout materials, maintain mixing temperature selected within 43°F.
 - (i) 39°F to 32°F:
 - (i) Mortar: Heat mixing water to produce mortar temperature between 39° F and 120° F.
 - (ii) Grout: Follow normal masonry procedures.
 - (ii) 32°F to 25°F:

- (i) Mortar: Heat mixing water and sand to produce mortar temperatures between 39°F and 120°F; maintain temperature of mortar on boards above freezing.
- (ii) Grout: Heat grout materials to 90°F to produce in-place grout temperature of 70°F at end of work day.
- (iii) 25°F to 19°F:
 - (i) Mortar: Heat mixing water and sand to produce mortar temperatures between 39°F and 84°F; maintain temperature of mortar on boards above freezing.
 - (ii) Grout: Heat grout materials to 90°F to produce in-place grout temperature of 70°F at end of work day.
 - (iii) Heat both sides of walls under construction using salamanders or other heat sources.
 - (iv) Use windbreaks or enclosures when wind is in excess of 15 mph.
- (iv) 19°F and below:
 - (i) Mortar: Heat mixing water and sand to produce mortar temperatures between 39°F and 120°F.
 - (ii) Grout: Heat grout materials to 90°F to produce in place grout temperature of 70°F at the end of work day.
 - (iii) Masonry Units: Heat masonry units so they are above 20°F at time of laying.
 - (iv) Provide enclosure and auxiliary heat to maintain an air temperature of at least 39°F for 24 hours after layout units.
- (v) Do not heat water for mortar and grout to above 160°F.
- j. Protect completed masonry and masonry not being worked on in the following manner. Temperature ranges indicated apply to mean daily air temperatures except for grouted masonry, temperature ranges apply to anticipated minimum night temperatures.
 - (i) 39°F to 32°F:
 - (i) Protect masonry from rain or snow for at least 24 hours by covering with weather-resistive membrane.
 - (ii) 32°F to 25°F:
 - (i) Completely cover masonry with weather-resistive membrane for at least 24 hours.
 - (iii) 25°F to 20°F:
 - (i) Completely cover masonry with weather-resistive insulating blankets or similar protection for at least 24 hours; 40 hours for grouted masonry.
 - (iv) 20°F and below:
 - (i) Except as otherwise indicated, maintain masonry temperature above 32°F for 24 hours using enclosures and supplementary heat, electric heating blankets, infrared lamps, or other methods proven to be satisfactory. For grouted masonry, maintain heated enclosure to 39°F for 48 hours.
- 6. Products:
 - a. Brick Made from Clay:
 - (i) General: Comply with referenced standards and other requirements indicated below applicable to each form of brick required.
 - (ii) Model/Style: Modular Admiral Full Range, Vel. A through Belden Brick Company or

approved equal.

(iii) Size: Standard Modular: 2-1/4 inches x 3-5/8 inches x 7-5/8 inches.

(iv) Facing Brick: ASTM C 216, and as follows:

(i) Grade SW

(ii) Type FBX (normal size and color variations)

(iii) Application: Use where brick is exposed, unless otherwise indicated.

b. Precast Concrete Caps:

(i) Precast Concrete shall be used. Comply with referenced plans for dimensions. The contractor is responsible submitting samples that confirm this requirement to the plans.

(ii) Color: Natural White

c. Mortar and Grout Materials:

(i) Portland Cement: ASTM C 150, Type I, may be used for cold weather construction.

(ii) Hydrated Lime: ASTM C 207, Type S.

(iii) Aggregate for Mortar: ASTM C 144, except for joints less than 1/4 inches use aggregate graded with 100% passing the No. 16 sieve.

(iv) Aggregate for Grout: ASTM C 404 for coarse aggregate and sand for fine aggregate.

(v) Water: Clean and potable.

(vi) Mortar color: Natural Grey

d. Miscellaneous Masonry Accessories:

(i) Galvanized Steel Ties: ASTM A 526 (commercial quality) for anchors in mortar. 53 L.

(ii) Weeps: 2-1/2" high Quadro-Vent, through Hohmann & Bernard or approved equal.

(iii) Expansion Joint Sealant and backer rod to meet brick manufacturer's requirements and to closely match the brick and precast concrete colors. Sample and color submittal required.

(iv) Brick Veneer "Sealer": Siloxane WB Concentrate through Prosoco.

e. Masonry Cleaners:

(i) Cleaner: Manufacturer's standard strength general purpose cleaner designed for new masonry surfaces of type indicated; composed of blended organic and inorganic acids combined with special wetting systems and inhibitors; expressly approved for intended use by manufacturer of masonry units being cleaned.

7. Execution:

a. Installation, General:

(i) Cleaning Reinforcing: Before placing, remove loose rust, ice, and other coatings from reinforcing.

(ii) Leave openings for equipment to be installed before completion of masonry work. After installation of equipment, complete masonry work to match work immediately adjacent to the opening.

(iii) Cut masonry units with motor-driven saws to provide clean, sharp, unchipped edges. Cut units as required to provide continuous patten and to fit adjoining work.

Use full-size units without cutting where possible.

(iv) Use dry cutting saws to cut concrete masonry units.

b. Construction Tolerances:

(i) Variation in Cross-Sectional Dimensions: For all elements, from dimensions shown, do not exceed minus 1/4 inches nor plus 1/2 inches.

(ii) Variation in Mortar Joint Thickness: Do not exceed bed joint thickness indicated by more than plus or minus 1/8 inches, with a maximum thickness limited to 1/2 inches. Do not exceed head joint thickness indicated by more than plus or minus 1/8 inches.

c. Laying Masonry Walls:

(i) Layout columns in advance for accurate spacing of surface bond patterns with uniform joint widths and to accurately locate openings, movement-type joints, returns, and offsets. Avoid the use of less than half-size units at corners.

(ii) Lay-up columns to comply with specified construction tolerances, with courses accurately spaced and coordinated with other work.

(iii) Pattern Bond: Lay exposed masonry in the bond pattern shown or, if not shown, lay in running bond with vertical joint in each course centered on units or courses above and below.

(iv) Stopping and Resuming Work: Rack back 1/2 unit length in each course; do not tooth. Clean exposed surfaces of set masonry, wet units lightly (if required) and remove loose masonry units and mortar prior to laying fresh masonry.

(v) Expansion Joints: Contractor shall install vertical expansion joints within masonry verneer at the following spacing:

(i) 10' maximum distance from corners and 20' maximum spacing.

d. Mortar Bedding and Jointing;

(i) Lay solid brick size masonry units with completely filled bed and head joint; butter ends with sufficient mortar to fill head joints and shove into place. Do not slush head joints.

(ii) Lay hollow concrete masonry units with full mortar coverage on horizontal and vertical face shells. Bed webs in mortar in starting course on footings and in all courses of piers, columns and pilasters, and where adjacent to cells or cavities to be reinforced or filled with concrete or grout. For starting course on footings where cells are not grouted, spread out full mortar bed including areas under cells.

(iii) Set stone caps in full bed or mortar. Fill dowel, anchor, and similar holes solid. Wet stone joint surface thoroughly before setting; for stone surfaces which are soiled, clean bedding, and exposed surfaces with fiber brush and soap powder followed by thorough rinsing with clear water.

(iv) Maintain joint widths shown, except for minor variations required to maintain bond alignment. If not shown, lay walls with 3/8 inches joints.

(v) Cut joints flush for masonry walls which are to be concealed or to be covered by other materials, unless otherwise indicated.

(vi) Rake joints of all brick.

(vii) Remove masonry units disturbed after laying; clean and reset in fresh mortar. Do not pound corners or jambs to shift adjacent stretcher units which have been set in position. If adjustments are required, remove units, clean off mortar, and reset in fresh mortar.

- (viii) Rake back head joints in precast concrete caps and all joints between precast concrete caps and brick 5/8 inches and seal joints with sealant. Sealant color to match precast concrete.
- e. Anchoring Masonry Veneers:
 - (i) Anchor masonry veneers at masonry cavity walls with masonry-veneer anchors to comply with the following:
 - (i) Use adjustable (two-piece) type reinforcement installed in horizontal mortar joints.
 - (ii) Embed tie sections in masonry veneer joints.
 - (ii) Masonry Veneer Tie Spacing:
 - (i) Provide ties installed in horizontal joints, at not less than one metal tie for 1.77 sq. ft. of wall area, spaced not to exceed 16 inches o.c. horizontally and 16 inches o.c. vertically.
 - (ii) Stagger ties in alternate courses.
 - (iii) Install additional anchors within 12 inches of openings and at intervals, not exceeding 16 inches, around perimeter.
 - (iv) At intersecting and abutting walls, provide ties at no more than 16 inches o.c. vertically.
- f. Anchoring Precast Concrete Caps:
 - (i) Contractor shall anchor precast concrete caps to concrete walls and pedestals with stainless steel dowels and epoxy in place. Install per plans.
- g. Repair, Pointing, and Cleaning:
 - (i) Remove and replace masonry units which are loose, chipped, broken, stained, or otherwise damaged, or if units do not match adjoining units as intended. Provide new units to match adjoining units and install in fresh mortar or grout, pointed to eliminate evidence of replacement.
 - (ii) Pointing: During the tooling of joints, enlarge any voids or holes, except weep holes, and completely fill with mortar. Point-up all joints including corners, openings, and adjacent work to provide a neat, uniform appearance, prepared for application of sealants.
 - (iii) Final Cleaning: After mortar is thoroughly set and cured, clean masonry as follows:
 - (i) Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
 - (ii) Test cleaning methods on sample column; leave one half of column uncleaned for comparison purposes. Obtain Engineer's approval of sample cleaning before proceeding with cleaning of masonry.
 - (iii) Protect adjacent stone and non-masonry surfaces from contact with cleaner by covering them with liquid strippable masking agent, polyethylene film, or waterproof masking tape.
 - (iv) Saturate wall surfaces with water prior to application of cleaners; remove cleaners promptly by rinsing thoroughly with clear water.
 - (v) Use bucket and brush hand cleaning method described in BIA "Technical Note No. 20 Revised" to clean brick masonry made from clay or shale using job mixed detergent solution.
 - (vi) Clean concrete unit masonry to comply with masonry manufacturer's directions

and applicable NCMA “Tek” bulletins.

(iv) Protection: Provide final protection and maintain conditions in a manner acceptable to installer, which ensures unit masonry work is without damage.

8. Measurement and Payment:

- a. Measurement and payment of masonry features shall be by the established pay items units of measure for portions completed in place. Incidental construction, such as mortar, grout, etc., shall be included in the cost of the established pay items as bid.
- b. Masonry features will be paid at the contact unit prices as follows, and as indicated on the itemized proposal sheet:
 - (i) “Roundabout – Modular Face Brick.....LFT”
 - (ii) “Precast Concrete Wall Cap, 24”.....LFT”
 - (iii) “Precast Concrete Cap, 56” SQ.....EACH”
 - (iv) “Precast Concrete Cap, 68” SQ.....EACH”
 - (v) “Precast Concrete Planter.....EACH”



**BID / PROPOSAL
CITY OF SOUTH BEND**

Project Name **South Bend One-Way to Two-Way Conversion**

Project No. **116-001 Div. A**

For Bids Due **February 18, 2016**

Item No.	Description	Quantity	Unit	Unit Price	Total Amount
1	CONSTRUCTION ENGINEERING	1	LS		
2	CPM SCHEDULE	1	LS		
3	CMP SCHEDULE, MONTHLY UPDATE	8	EACH		
4	MOBILIZATION AND DEMOBILIZATION	1	LS		
5	VIDEO RECORD	1	LS		
6	UTILITY ALLOWANCE	10,000	DOL		
7	SPRINKLER REPAIR ALLOWANCE	5,000	DOL		
8	UNDISTRIBUTED ALLOWANCE	35,000	DOL		
9	CLEARING RIGHT OF WAY	1	LS		
10	TESTING FOR ASBESTOS	2	EACH		
11	PAVEMENT REMOVAL	8,396	SYS		
12	CURB, CONCRETE, REMOVE	226	LFT		
13	HOUSES AND BUILDINGS, REMOVE, PARCEL NO 13	1	LS		
14	HOUSES AND BUILDINGS, REMOVE, PARCEL NO 14	1	LS		
15	SIDEWALK, CONCRETE, REMOVE	1,458	SYS		
16	INLET, REMOVE	11	EACH		
17	MANHOLE, REMOVE	1	EACH		
18	<Pay Item Deleted>			---	---
19	EXCAVATION, COMMON	2,000	CYS		
20	BORROW	1,800	CYS		
21	DEWATERING AND PROTECTION OF EXISTING STRUCTURES	1	LS		
22	TEMPORARY INLET PROTECTION	69	EACH		
23	TEMPORARY SILT FENCE	2,244	LFT		
24	NO 2 STONE	100	TON		
25	SUBGRADE TREATMENT, TYPE I	8,504	SYS		
26	SUBGRADE TREATMENT, TYPE II	542	SYS		
27	SUBGRADE TREATMENT, TYPE III	227	SYS		

Item No.	Description	Quantity	Unit	Unit Price	Total Amount
28	SUBGRADE TREATMENT, TYPE IC	401	SYS		
29	STRUCTURAL BACKFILL, TYPE 2	552	CYS		
30	COMPACTED AGGREGATE, NO. 53, BASE	1,209	TON		
31	SUBBASE FOR PCCP	1,376	CYS		
32	WIDENING WITH HMA, TYPE D	31	TON		
33	MILLING, ASPHALT, 1 1/2 IN	55,363	SYS		
34	MILLING, PROFILE	2,355	SYS		
35	QC/QA-HMA, 3, 70, SURFACE, 9.5 mm	538	TON		
36	QC/QA-HMA, 3, 70, INTERMEDIATE, 19.0 mm	634	TON		
37	QC/QA-HMA, 3, 64, BASE, 25.0 mm	1,065	TON		
38	JOINT ADHESIVE, SURFACE	3,482	LFT		
39	JOINT ADHESIVE, INTERMEDIATE	2,252	LFT		
40	LIQUID ASPHALT SEALANT	3,482	LFT		
41	ASPHALT FOR TACK COAT	4	TON		
42	QC/QA-PCCP, 10 IN	4,532	SYS		
43	CORING, PCCP	1	LS		
44	PCCP, 10 IN , DECORATIVE	438	SYS		
45	PCCP, 6 IN	401	SYS		
46	PCCP, COLORED, 6 IN	200	SYS		
47	6" PCCP BANDING	35	LFT		
48	D-1 CONTRACTION JOINT	3,376	LFT		
49	SLEEPER SLAB	485	LFT		
50	<Pay Item Deleted>			---	---
51	DECORATIVE PICKET FENCE	72	LFT		
52	HMA FOR SIDEWALK	41	TON		
53	SIDEWALK, CONCRETE, 4"	1,094	SYS		
54	CURB RAMP, CONCRETE, A	20	SYS		
55	CURB RAMP, CONCRETE, C	72	SYS		
56	CURB RAMP, CONCRETE, D	8	SYS		
57	CURB RAMP, CONCRETE, G	9	SYS		
58	CURB RAMP, CONCRETE, L	27	SYS		
59	CURB, CONCRETE	1,669	LFT		
60	CURB AND GUTTER, COMBINED	923	LFT		
61	CENTER CURB, D, CONCRETE	22	SYS		

Item No.	Description	Quantity	Unit	Unit Price	Total Amount
62	PCCP FOR APPROACHES, 6 IN	33	SYS		
63	PCCP FOR APPROACHES, 9 IN	509	SYS		
64	MAILBOX ASSEMBLY, SINGLE	6	EACH		
65	BENCH MARK POST, RESET	1	EACH		
66	INSPECTION HOLE	10	EACH		
67	MOBILIZATION AND DEMOBILIZATION FOR SEEDING	4	EACH		
68	FERTILIZER	1	TON		
69	WATER	19	KGAL		
70	SODDING, NURSERY AND TOPSOIL	4,585	SYS		
71	BRICK PAVERS	445	SYS		
72	IRRIGATION, TREE WATERING SYSTEM	23	EACH		
73	OVERSTORY TREE, 2" CALIPER	23	EACH		
74	ORNAMENTAL TREE, 2", CALIPER	6	EACH		
75	PERENNIAL, NO. 1 CONTAINER	266	EACH		
76	ORNAMENTAL GRASS, NO. 1 CONTAINER	67	EACH		
77	SHRUB, NO.3 CONTAINER	171	EACH		
78	GROUNDCOVER, PLUG	1,670	EACH		
79	SHREDDED HARDWOOD MULCH	35	CYD		
80	LANDSCAPE EDGING	105	LFT		
81	GATOR WATERING BAG	23	EACH		
82	IRRIGATION, LANDSCAPE	4,645	SFT		
83	REINFORCING STEEL	1	TON		
84	MODULAR FACE BRICK	1,425	SFT		
85	UPPER RETAINING WALLS	75	LFT		
86	LOWER RETAINING WALLS	110	LFT		
87	CONCRETE COLUMNS	60	CYS		
88	CONCRETE MONUMENT FOOTING	17	CYS		
89	4" MONUMENT RING CONCRETE	20	SYS		
90	24" WIDE PRECAST CONCRETE WALL CAP	182	LFT		
91	56" SQ PRECAST CONCRETE CAP	4	EACH		
92	68" SQ PRECAST CONCRETE CAP	4	EACH		
93	PRECAST CONCRETE PLANTER	4	EACH		
94	METER PIT	1	LS		

Item No.	Description	Quantity	Unit	Unit Price	Total Amount
95	ADJUST WATER SERVICE LINE, RESIDENTIAL	2	EACH		
96	TAP, WATER SERVICE, 1-INCH (CITY TAP FEE)	2	EACH		
97	CAP EXISTING WATER SERVICE LINE	2	EACH		
98	PIPE, TYPE 2 CIRCULAR 12 IN (WATER MAIN GRADE)	103	LFT		
99	PIPE, TYPE 2 CIRCULAR 15 IN (WATER MAIN GRADE)	188	LFT		
100	PIPE, TYPE 2 CIRCULAR 18 IN (WATER MAIN GRADE)	37	LFT		
101	PIPE, TYPE 2 CIRCULAR 12 IN	629	LFT		
102	PIPE, TYPE 2 CIRCULAR 15 IN	356	LFT		
103	PIPE, TYPE 2 CIRCULAR 18 IN	176	LFT		
104	HMA FOR STRUCTURE INSTALLATION, TYPE A	57	TON		
105	PIPE, PLUG EXISTING	4	EACH		
106	DRYWELL	3	EACH		
107	CASTING, ADJUST TO GRADE , MANHOLE	9	EACH		
108	CASTING, ADJUST TO GRADE, INLET	3	EACH		
109	CASTING, NEENAH R-1801-G, FURNISH AND ADJUST TO GRADE	2	EACH		
110	CASTING, NEENAH R-3457-C2, FURNISH AND ADJUST TO GRADE	5	EACH		
111	INLET, R13	3	EACH		
112	PIPE CATCH BASIN, 24 IN	3	EACH		
113	STRUCTURE, MANHOLE, RECONSTRUCTED	5	LFT		
114	STRUCTURE, INLET, RECONSTRUCTED	3	LFT		
115	INLET, B15	11	EACH		
116	INLET, C15	19	EACH		
117	CONSTRUCTION SIGN, C	5	EACH		
118	CONSTRUCTION SIGN, BUSINESS SERVICE, TYPE C	4	EACH		
119	TEMPORARY PAVEMENT MARKING, 4 IN	23,270	LFT		
120	TEMPORARY PAVEMENT MARKING, REMOVABLE, 4 IN	3,210	LFT		
121	TEMPORARY PAVEMENT MESSAGE MARKING, REMOVABLE, LANE INDICATION ARROW	6	EACH		
122	CONSTRUCTION SIGN, A	78	EACH		
123	CONSTRUCTION SIGN, B	14	EACH		
124	MAINTAINING TRAFFIC	1	LS		

Item No.	Description	Quantity	Unit	Unit Price	Total Amount
125	BARRICADE, III-B	48	LFT		
126	SIGNAL HEAD, RELOCATE	9	EACH		
127	SIGN POST, SQUARE, TYPE 1, UNREINFORCED ANCHOR BASE	673	LFT		
128	SIGN POST, SQUARE, TYPE 2, UNREINFORCED ANCHOR BASE	72	LFT		
129	SIGN, SHEET ASSEMBLY, RELOCATE	26	EACH		
130	CABLE SPAN SIGN STRUCTURE FOUNDATION, IV	2	EACH		
131	SIGN, SHEET, WITH LEGEND 0.080"	296	SFT		
132	SIGN, SHEET, WITH LEGEND 0.100 IN	281	SFT		
133	SIGN, SHEET, WITH LEGEND 0.125 IN THICKNESS	77	SFT		
134	SIGN STRUCTURE, SALVAGE	2	EACH		
135	OVERHEAD SIGN STRUCTURE, MONOTUBE, REMOVE	1	EACH		
136	OVERHEAD SIGN STRUCTURE, CABLESPAN	1	EACH		
137	ILUMINATED WALL LETTERING	1	LS		
138	TESCO CABINET W/DUAL SERVICE, FOUNDATION, WIRING & ETC	1	EACH		
139	TRAFFIC SIGNAL EQUIPMENT, REMOVE	4	EACH		
140	TESCO CABINET W/SINGLE SERVICE, FOUNDATION, WIRING & ETC	3	EACH		
141	SIGNAL POLE FOUNDATION, 36 IN X 144 IN	4	EACH		
142	HANDHOLE, SIGNAL, TYPE 1	12	EACH		
143	SIGNAL HANDHOLE ADJUST TO GRADE	4	EACH		
144	CONDUIT, HDPE, SCHEDULE 80, 2 IN	823	LFT		
145	PEDESTRIAN SIGNAL HEAD, 12 IN., RELOCATE	3	EACH		
146	PEDESTRIAN SIGNAL HEAD WITH INTERNATIONAL SYMBOLS, 12 IN, COUNTDOWN	8	EACH		
147	SIGNAL PEDESTAL FOUNDATION, A	4	EACH		
148	PVC SCHEDULE 80 CONDUIT, 3/4"	475	LFT		
149	SIGNAL POLE, PEDESTAL, 12FT	1	EACH		
150	<Pay Item Deleted>			---	---
151	<Pay Item Deleted>			---	---
152	<Pay Item Deleted>			---	---
153	SIGNAL CANTILEVER STRUCTURE, SINGLE TRUSS ARM 25 FT.	1	EACH		

Item No.	Description	Quantity	Unit	Unit Price	Total Amount
154	SIGNAL CANTILEVER STRUCTURE, DRILLED SHAFT FOUNDATION, TYPE A	1	EACH		
155	THERMAL DETECTION CAMERA	6	EACH		
156	THERMAL DETECTION SYSTEM	3	LS		
157	TRAFFIC SIGNAL HEAD, 3 SECTION, 12 IN	7	EACH		
158	TRAFFIC SIGNAL HEAD, 5 SECTION, 12 IN	1	EACH		
159	SPAN, CATENARY, AND TETHER	4	EACH		
160	DISCONNECT HANGER	4	EACH		
161	SIGNAL CABLE, ROADWAY LOOP, COPPER 1C/14GA	480	LFT		
162	SIGNAL CABLE, CONTROL, COPPER 5C/14GA	4,103	LFT		
163	<Pay Item Deleted>			---	---
164	SIGNAL CABLE, CONTROL, COPPER 7C/14GA	1,042	LFT		
165	SIGNAL CABLE, DETECTOR LEAD-IN COPPER 2C/16GA	164	LFT		
166	SIGNAL DETECTOR HOUSING	1	EACH		
167	SAW CUT FOR ROADWAY LOOP AND SEALANT	160	LFT		
168	SIGNAL STRAIN POLE, STEEL, 30 FT	4	EACH		
169	HANDHOLE, LIGHTING	2	EACH		
170	LIGHTING FOUNDATION	18	EACH		
171	STREET LIGHT	20	EACH		
172	PEDESTRIAN LIGHT	2	EACH		
173	WIRE NO. 4	3,130	LFT		
174	TRAFFIC SIGNAL CABLE, FIBER OPTIC, SINGLE-MODE	5,990	LFT		
175	TRAFFIC SIGNAL CABLE, FIBER OPTIC, MULTI-MODE	1,540	LFT		
176	CONDUIT, PVC, 2 IN, SCHEDULE 80	8,471	LFT		
177	NEW PANEL AND LIGHTING CONTACTOR	1	EACH		
178	LANDSCAPE LIGHTS, LED, TYPE 'F', NEW	21	EACH		
179	LANDSCAPE LIGHTS, LED, TYPE 'G', NEW	4	EACH		
180	NO. 3 WIRE	320	LFT		
181	NO. 8 WIRE	160	LFT		
182	WIRE NO. 10	3,900	LFT		
183	NO. 12 WIRE	225	LFT		

Item No.	Description	Quantity	Unit	Unit Price	Total Amount
184	HANDHOLE, TRAFFIC	20	EACH		
185	CABLE-DUCT MARKER	4	EACH		
186	CONSTRUCTION LIGHTING	200	DAY		
187	LINE, THERMOPLASTIC, BROKEN, WHITE, 4 IN	168	LFT		
188	LINE, THERMOPLASTIC, SOLID, WHITE, 4 IN.	3,688	LFT		
189	LINE, REMOVE	4,945	LFT		
190	LINE, MULTI-COMPONENT, BROKEN, WHITE, 4 IN	47	LFT		
191	LINE, MULTI-COMPONENT, SOLID, WHITE, 4 IN	1,612	LFT		
192	<Pay Item Deleted>			---	---
193	LINE, MULTI-COMPONENT, SOLID, YELLOW, 4 IN	1,684	LFT		
194	<Pay Item Deleted>			---	---
195	<Pay Item Deleted>			---	---
196	<Pay Item Deleted>			---	---
197	TRANSVERSE MARKING, THERMOPLASTIC, CROSSWALK	1,820	LFT		
198	PAVEMENT MESSAGE MARKINGS, MULTI-COMPONENT, LANE INDICATION ARROW	4	EACH		
199	<Pay Item Deleted>			---	---
200	TRANSVERSE MARKINGS, MULTI-COMPONENT, CROSSWALK, WHITE, 24 IN.	234	LFT		
201	TRANSVERSE MARKING, MULTI-COMPONENT, SOILD, YELLOW, CROSSHATCH, 8 IN.	206	LFT		
202	PAVEMENT MESSAGE MARKINGS, THERMOPLASTIC, BIKE SYMBOL	27	EACH		
203	TRANSVERSE MARKINGS, MULTI-COMPONENT , YIELD LINE CHEVRON	90	LFT		
204	LINE, MULTI-COMPONENT, DOTTED, WHITE, 4 IN.	43	LFT		
205	LINE, THERMOPLASTIC, DOTTED, WHITE, 4 IN.	25	LFT		
206	LINE, THERMOPLASTIC, SOLID, WHITE, 6 IN	480	LFT		
207	LINE, THERMOPLASTIC, BROKEN, YELLOW, 4 IN	4,701	LFT		
208	LINE, THERMOPLASTIC, SOLID, YELLOW, 4 IN	20,968	LFT		
209	TRANSVERSE MARKING, THERMOPLASTIC, CROSSHATCH LINE, YELLOW, 8"	94	LFT		

Item No.	Description	Quantity	Unit	Unit Price	Total Amount
210	TRANSVERSE MARKING, THERMOPLASTIC, STOP LINE, 24 IN	303	LFT		
211	PAVEMENT MESSAGE MARKING, THERMOPLASTIC, LANE INDICATION ARROW	77	EACH		
212	FIBER OPTIC, CITY PARK RECONNECTION	1	LS		
213	NATIONAL GEODETIC SURVEY MONUMENT, REESTABLISH	1	LS		
214	8" STANDARD CURB, CONCRETE	545	LFT		
215	CURB RAMP, CONCRETE, B	58	SYS		
216	FIRE HYDRANT ASSEMBLY	1	EACH		
217	TEMPORARY TRANSVERSE PAVEMENT MARKING, REMOVABLE, STOP LINE, 24"	136	LFT		
218	DETOUR ROUTE MARKER ASSMEBLY	19	EACH		
219	FLASHING ARROW SIGN	540	DAY		
220	PORTABLE CHANGEABLE MESSAGE SIGN	1,080	DAY		
221	SIGNAL HEAD, COVER	8	EACH		
222	SIGNAL HEAD, TEMPORARY	4	EACH		
223	SOLAR POWERED FLASHING BEACON ASSEMBLY, RELOCATE	2	EACH		
224	MISCELLANEOUS EQUIPMENT FOR LIGHTING	1	LS		
225	PIPE, REMOVE EXISTING STORM SEWER	404	LFT		
226	PCCP, 5 IN.	33	SYS		
227	QC/QA-HMA, 4, 76, SURFACE, 9.5 mm	4,423	TON		
228	CURB RAMP, CONCRETE, F	8	SYS		
229	PEDESTRIAN PUSH BUTTON, NON-APS	24	EACH		
230	PAVEMENT MESSAGE MARKING, THERMOPLASTIC, SHARE THE ROAD	27	EACH		
231	TRAFFIC SIGNAL HEAD, 3-SECTION, RELOCATE	7	EACH		
232	SIGNAL POLE, PEDESTAL, 4 FT.	3	EACH		
233	SEWER LATERAL, PRIVATE BUILDING, REINSTATEMENT	2	EACH		

Bidder (Firm): _____

Address: _____

City/State/Zip: _____

Telephone Number: () _____

By _____

(Signature)

(Printed Name of Person Signing)



**BID / PROPOSAL
CITY OF SOUTH BEND**

Project Name **South Bend One-Way to Two-Way Conversion**

Project No. **116-001 Div. B**

For Bids Due **February 18, 2016**

Item No.	Description	Quantity	Unit	Unit Price	Total Amount
1	CONSTRUCTION ENGINEERING	1	LS		
2	RAILROAD INSURANCE	1	LS		
3	CPM SCHEDULE	1	LS		
4	CPM SCHEDULE, MONTHLY UPDATE	12	EACH		
5	MOBILIZATION AND DEMOBILIZATION	1	LS		
6	VIDEO RECORD	1	LS		
7	UTILITY ALLOWANCE	10,000	DOL		
8	SPRINKLER REPAIR ALLOWANCE	5,000	DOL		
9	UNDISTRIBUTED ALLOWANCE	35,000	DOL		
10	MATERIAL TESTING	1	LS		
11	TREE, REMOVE	30	EACH		
12	CLEARING RIGHT OF WAY	1	LS		
13	TESTING FOR ASBESTOS	1	EACH		
14	PAVEMENT REMOVAL	29,987	SYS		
15	CURB, CONCRETE, REMOVE	15,421	LFT		
16	CURB AND GUTTER, REMOVE	7,367	LFT		
17	HOUSES AND BUILDINGS, REMOVE, PARCEL NO. 35	1	LS		
18	SIDEWALK, CONCRETE, REMOVE	16,764	SYS		
19	INLET, REMOVE	98	EACH		
20	LIGHT STANDARD AND FOUNDATION, REMOVE	140	EACH		
21	TRAFFIC SIGNAL EQUIPMENT, REMOVE	255	EACH		
22	<Pay Item Deleted>			---	---
23	FIRE HYDRANT ASSEMBLY, REMOVE	11	EACH		
24	FLAG POLE AND FOUNDATION, REMOVE	2	EACH		
25	EXCAVATION, COMMON	16,254	CYS		
26	BORROW	1,899	CYS		

Item No.	Description	Quantity	Unit	Unit Price	Total Amount
27	SEDIMENT, REMOVE	8	CYS		
28	TEMPORARY INLET PROTECTION	383	EACH		
29	TEMPORARY MULCH	10	TON		
30	TEMPORARY SILT FENCE	1,184	LFT		
31	NO 2 STONE	400	TON		
32	TEMPORARY SEED MIXTURE	1,104	LBS		
33	SUBGRADE TREATMENT, TYPE I	10,725	SYS		
34	SUBGRADE TREATMENT, TYPE II	1,063	SYS		
35	SUBGRADE TREATMENT, TYPE IV	6,440	SYS		
36	SUBGRADE TREATMENT, TYPE IB	8,669	SYS		
37	STRUCTURAL BACKFILL, TYPE 1	3,420	CYS		
38	STRUCTURAL BACKFILL, TYPE 5	557	CYS		
39	COMPACTED AGGREGATE, NO. 53, BASE	5,211	TON		
40	DENSE GRADED SUBBASE	881	CYS		
41	<Pay Item Deleted>			---	---
42	HMA PATCHING, TYPE D	637	TON		
43	WIDENING WITH HMA, TYPE D	2,271	TON		
44	MILLING, ASPHALT, 1 1/2 IN	69,177	SYS		
45	MILLING ASPHALT, 3 1/2 IN	1,344	SYS		
46	MILLING ASPHALT, 4 1/2 IN	1,005	SYS		
47	MILLING ASPHALT, 2 1/2 IN	7,101	SYS		
48	MILLING, APPROACH	1,790	SYS		
49	MILLING, ASPHALT, 2 IN	5,707	SYS		
50	QC/QA-HMA, 2, 70, SURFACE, 9.5 mm	207	TON		
51	QC/QA-HMA, 4, 76, SURFACE, 9.5 mm	6,657	TON		
52	QC/QA-HMA, 4, 76, SURFACE, 12.5 mm	1,281	TON		
53	QC/QA-HMA, 2, 70, INTERMEDIATE, 19.0 mm	345	TON		
54	QC/QA-HMA, 4, 76, INTERMEDIATE, 19.0 mm	1,494	TON		
55	QC/QA-HMA, 2, 64, BASE, 19.0 mm	414	TON		
56	QC/QA-HMA, 4, 64, BASE, 19.0 mm	2,048	TON		
57	HMA SURFACE, TYPE B	630	TON		
58	HMA INTERMEDIATE, TYPE B	175	TON		
59	HMA BASE, TYPE B	410	TON		

Item No.	Description	Quantity	Unit	Unit Price	Total Amount
60	JOINT ADHESIVE, SURFACE	38,298	LFT		
61	JOINT ADHESIVE, INTERMEDIATE	6,063	LFT		
62	LIQUID ASPHALT SEALANT	38,356	LFT		
63	ASPHALT FOR TACK COAT	30	TON		
64	QC/QA PCCP, 10 IN.	13,482	SYS		
65	<Pay Item Deleted>			---	---
66	PCCP, 9 IN	1,365	SYS		
67	PCCP, 6 IN	30	SYS		
68	PCCP, 5 IN.	198	SYS		
69	PCCP, 4 IN.	599	SYS		
70	PCCP, COLORED, 10 IN	1,467	SYS		
71	PCCP, COLORED, 8 IN 9 IN	69	SYS		
72	PCCP, COLORED, 6 IN	415	SYS		
73	<Pay Item Deleted>			---	---
74	6" PCCP BANDING	35	SYS		
75	PERMEABLE PAVEMENT	2,272	SYS		
76	D-1 CONTRACTION JOINT	5,759	LFT		
77	SLEEPER SLAB	358	LFT		
78	PREFORMED JOINT MATERIAL	358	LFT		
79	GUARDRAIL, REMOVE	199	LFT		
80	GUARDRAIL END TREATMENT, MS	2	EACH		
81	<Pay Item Deleted>			---	---
82	SIDEWALK, CONCRETE, 4"	7,586	SYS		
83	SIDEWALK, CONCRETE, 5"	10,768	SYS		
84	SIDEWALK, CONCRETE, 6"	596	SYS		
85	SIDEWALK, CONCRETE, DECORATIVE	1,796	SYS		
86	MOW STRIP, CONCRETE	8	LFT		
87	CURB RAMP, CONCRETE, A	741	SYS		
88	CURB RAMP, CONCRETE, C	558	SYS		
89	<Pay Item Deleted>			---	---
90	CURB RAMP, CONCRETE, E	87	SYS		
91	CURB RAMP, CONCRETE, F	95	SYS		
92	CURB RAMP, CONCRETE, G	215	SYS		
93	CURB RAMP, CONCRETE, H	148	SYS		

Item No.	Description	Quantity	Unit	Unit Price	Total Amount
94	CURB RAMP, CONCRETE, K	127	SYS		
95	CURB RAMP, CONCRETE, L	73	SYS		
96	CURB RAMP, CONCRETE, UNIQUE	94	SYS		
97	<Pay Item Deleted>			---	---
98	CURB, INTEGRAL, CONCRETE	8,878	LFT		
99	CURB, INTEGRAL, B, CONCRETE, MODIFIED	781	LFT		
100	CURB, CONCRETE	7,348	LFT		
101	<Pay Item Deleted>			---	---
102	<Pay Item Deleted>			---	---
103	CENTER CURB, D, CONCRETE	46	SYS		
104	CURB AND GUTTER, B, CONCRETE	15,639	LFT		
105	HMA FOR APPROACHES, TYPE B	957	TON		
106	PCCP FOR APPROACHES, 9 IN	1,283	SYS		
107	PCCP FOR APPROACHES, 8 IN	279	SYS		
108	PCCP FOR APPROACHES, 6 IN	988	SYS		
109	<Pay Item Deleted>			---	---
110	HEADER, CONCRETE	2,760	LFT		
111	GEOTEXTILES	100	SYS		
112	MOBILIZATION AND DEMOBILIZATION FOR SEEDING	2	EACH		
113	WATER	51	KGAL		
114	SODDING, NURSERY AND TOPSOIL	18,142	SYS		
115	CURB IDENTIFICATION MARKER	194	EACH		
116	BRICK, DECORATIVE	1,478	SYS		
117	BRICK, DECORATIVE, PERMEABLE	6,029	SYS		
118	OVERSTORY TREE, 2" CALIPER	215	EACH		
119	ORNAMENTAL TREE, 2", CALIPER	22	EACH		
120	EVERGREEN TREE, 6'-8' HEIGHT	14	EACH		
121	SHRUB, NO.3 CONTAINER	614	EACH		
122	PERENNIAL, NO. 1 CONTAINER	1,608	EACH		
123	ORNAMENTAL GRASS, NO. 1 CONTAINER	444	EACH		
124	GROUNDCOVER, PLUG	2,441	EACH		
125	SHREDDED HARDWOOD MULCH	2,356	CYS		
126	TRASH ENCLOSURE	1	EACH		

Item No.	Description	Quantity	Unit	Unit Price	Total Amount
127	TRASH RECEPTACLE	17	EACH		
128	BACKFILL MIX FOR PLANTINGS	479	CYS		
129	BENCH	4	EACH		
130	BICYCLE RACK	11	EACH		
131	SIGN, DECORATIVE, TWO WAY CYCLE TRACK	4	EACH		
132	SIGN, DECORATIVE, TWO WAY CYCLE TRACK WITH SUPPLEMENT	2	EACH		
133	SIGN, DECORATIVE, SHARED USE PATH	3	EACH		
134	PAVEMENT MESSAGE MARKING, MULTI-COMPONENT, SHARED CYCLE TRACK	8	EACH		
135	PAVEMENT MESSAGE MARKING, MULTI-COMPONENT, CYCLE TRACK SYMBOL	31	EACH		
136	PRECAST CONCRETE PLANTER	12	EACH		
137	TREE GRATE	69	EACH		
138	LANDSCAPE EDGING	415	LFT		
139	IRRIGATION, TREE WATERING SYSTEM	156	EACH		
140	IRRIGATION, LANDSCAPE	15,348	SYS		
141	IRRIGATION, REPAIR	2,100	SYS		
142	GABION RENO MATTRESS	16	SYS		
143	MASONRY WALL	62	CYS		
144	ROUNDAABOUT - REINFORCING STEEL	2	TON		
145	ROUNDAABOUT - MODULAR FACE BRICK	3,075	SFT		
146	ROUNDAABOUT - UPPER RETAINING WALLS	170	LFT		
147	ROUNDAABOUT - LOWER RETAINING WALLS	220	LFT		
148	ROUNDAABOUT - CONCRETE COLUMNS	120	CYS		
149	CONCRETE MONUMENT FOOTING	36	CYS		
150	4" MONUMENT RING CONCRETE	20	SYS		
151	24" WIDE PRECAST CONCRETE WALL CAP	364	LFT		
152	56" SQ PRECAST CONCRETE CAP	8	EACH		
153	68" SQ PRECAST CONCRETE CAP	8	EACH		
154	<Pay Item Deleted>			---	---
155	PRECAST CONCRETE HEADWALL	1	EACH		
156	METER PIT	1	LS		
157	PIPE, TYPE 4 CIRCULAR 6 IN	624	LFT		
158	PIPE, TYPE 2 CIRCULAR 8 IN	42	LFT		
159	PIPE, TYPE 2 CIRCULAR 10 IN	18	LFT		

Item No.	Description	Quantity	Unit	Unit Price	Total Amount
160	PIPE, TYPE 2 CIRCULAR 12 IN	5,497	LFT		
161	PIPE, TYPE 2 CIRCULAR 15 IN	182	LFT		
162	PIPE, TYPE 2 CIRCULAR 18 IN	474	LFT		
163	PIPE, TYPE 2 CIRCULAR 21 IN	103	LFT		
164	PIPE, TYPE 2 CIRCULAR 24 IN	279	LFT		
165	PIPE, TYPE 2 CIRCULAR 30 IN	294	LFT		
166	PIPE, TYPE 2 CIRCULAR 36 IN	416	LFT		
167	PIPE, TYPE 2 CIRCULAR 42 IN	28	LFT		
168	HMA FOR STRUCTURE INSTALLATION, TYPE B	20	TON		
169	VIDEO INSPECTION FOR PIPE	7,957	LFT		
170	WATER METER VAULT	1	EACH		
171	CASTING, ADJUST TO GRADE	73	EACH		
172	CASTING, 2, FURNISH AND ADJUST TO GRADE	5	EACH		
173	CASTING, 4, FURNISH AND ADJUST TO GRADE	17	EACH		
174	CASTING, 10, FURNISH AND ADJUST TO GRADE	6	EACH		
175	CASTING, 13, FURNISH AND ADJUST TO GRADE	2	EACH		
176	INLET, A3	2	EACH		
177	INLET, R13	4	EACH		
178	INLET, A2, MODIFIED	3	EACH		
179	CATCH BASIN, J15	7	EACH		
180	CATCH BASIN, K10	92	EACH		
181	CATCH BASIN, S14	1	EACH		
182	CATCH BASIN, F7	2	EACH		
183	CATCH BASIN, M10	17	EACH		
184	CATCH BASIN, B15	9	EACH		
185	CATCH BASIN, C15	1	EACH		
186	PIPE CATCH BASIN, 12 IN	3	EACH		
187	MANHOLE, C4	22	EACH		
188	MANHOLE, D4	1	EACH		
189	MANHOLE, D15, MODIFIED	10	EACH		
190	MANHOLE, F4	2	EACH		
191	MANHOLE, H4	3	EACH		
192	MANHOLE, H10, MODIFIED	1	EACH		

Item No.	Description	Quantity	Unit	Unit Price	Total Amount
193	MANHOLE, J10, MODIFIED	2	EACH		
194	MANHOLE, C15, MODIFIED, DOGHOUSE	1	EACH		
195	MANHOLE, D15, MODIFIED, DOGHOUSE	1	EACH		
196	INLET, B15, MODIFIED	4	EACH		
197	INLET, C15, MODIFIED	8	EACH		
198	INLET, B15	8	EACH		
199	INLET, C15	1	EACH		
200	TRENCH DRAIN	287	LFT		
201	STRUCTURE, MANHOLE, RECONSTRUCTED	3	LFT		
202	FIRE HYDRANT ASSEMBLY	12	EACH		
203	FIRE HYDRANT, RESET	9	EACH		
204	WATER MAIN, D.I., 6"	84	LFT		
205	WATER QUALITY STRUCTURE	1	EACH		
206	WATER MAIN, D.I. 20"	481	LFT		
207	THRUST BLOCK, CONCRETE	4	EACH		
208	MECHANICAL JOINT RESTRIANT FOR 20" DI WATER MAIN	26	EACH		
209	WATERSTOP FOR 20" DI WATER MAIN	2	EACH		
210	TEMPORARY PAVEMENT MESSAGE MARKING, REMOVABLE, LANE INDICATION ARROW	20	EACH		
211	CONSTRUCTION SIGN, C	22	EACH		
212	ROAD CLOSURE SIGN ASSEMBLY	48	EACH		
213	TEMPORARY PANEL SIGNS	759	SFT		
214	TEMPORARY PANEL SIGN SUPPORTS	248	LFT		
215	TEMPORARY PAVEMENT MARKING, 4 IN	43,907	LFT		
216	TEMPORARY PAVEMENT MARKING, REMOVABLE, 24"	240	LFT		
217	DETOUR ROUTE MARKER ASSEMBLY	223	EACH		
218	CONSTRUCTION SIGN, A	273	EACH		
219	CONSTRUCTION SIGN, B	28	EACH		
220	FLASHING ARROW SIGN	1,410	DAY		
221	CHANGEABLE MESSAGE SIGN	7	EACH		
222	TUBULAR MARKER, PERMANENT	12	EACH		
223	MAINTAINING TRAFFIC	1	LS		
224	BARRICADE, III-A	1,030	LFT		

Item No.	Description	Quantity	Unit	Unit Price	Total Amount
225	BARRICADE, III-B	1,724	LFT		
226	BOLLARD, DECORATIVE, ILLUMINATED	33	EACH		
227	HOSPITAL SIGN REMOVAL	1	EACH		
228	SIGN POST, SQUARE, TYPE 1, REINFORCED ANCHOR BASE	1,900	LFT		
229	<Pay Item Deleted>			---	---
230	PROJECT INFORMATION SIGN	1	EACH		
231	SIGN, SHEET ASSEMBLY, RELOCATE	64	EACH		
232	SIGN, SHEET, WITH LEGEND 0.080"	842	SFT		
233	SIGN, SHEET, WITH LEGEND 0.100 IN	321	SFT		
234	SIGN STRUCTURE, SALVAGE	1	LS		
235	SIGNAL EQUIPMENT, SALVAGE	1	LS		
236	<Pay Item Deleted>			---	---
237	TRANSPORTATION OF SALVAGEABLE SIGNAL EQUIPMENT	31	EACH		
238	TESCO CABINET W/DUAL SERVICE, FOUNDATION, WIRING, ETC.	6	EACH		
239	TESCO CABINET W/SINGLE SERVICE, FOUNDATION, WIRING & ETC	16	EACH		
240	MAST ARM HAND HOLE COVERS	36	EACH		
241	WIRELESS MAGNETOMETER DETECTOR, RELOCATE	24	EACH		
242	SIGNAL CABLE INTERCONNECT, FIBER OPTIC	875	LFT		
243	SIGNAL POLE, PEDESTAL, 15 FT	7	EACH		
244	LOOP DETECTOR DELAY COUNTING AMPLIFIER, 2 CHANNEL	49	EACH		
245	LOOP DETECTOR RACK	11	EACH		
246	CONTACT CLOSURE CARD	1	EACH		
247	RECEIVER PROCESSOR	1	EACH		
248	<Pay Item Deleted>			---	---
249	<Pay Item Deleted>			---	---
250	HANDHOLE, SIGNAL, TYPE 1	70	EACH		
251	HANDHOLE, SIGNAL, ADJUST TO GRADE	29	EACH		
252	RELOCATE CONTROLLER CABINET	7	EACH		
253	CONTROLLER, RELOCATE AND REWIRE	7	EACH		
254	TRAFFIC SIGNAL HEAD, 3-SECTION, RELOCATE	99	EACH		

Item No.	Description	Quantity	Unit	Unit Price	Total Amount
255	PEDESTRIAN SIGNAL HEAD, 12 IN., RELOCATE	4	EACH		
256	PEDESTRIAN SIGNAL HEAD, COUNTDOWN, 18 IN	144	EACH		
257	SIGNAL PEDESTAL FOUNDATION, A	60	EACH		
258	SIGNAL POLE, PEDESTAL, 12FT	47	EACH		
259	PVC SCHEDULE 80 CONDUIT, 1"	287	LFT		
260	PVC SCHEDULE 80 CONDUIT, 3/4"	6,225	LFT		
261	CONDUIT, PVC, 2 IN, SCHEDULE 80	12,761	LFT		
262	PVC SHEDULE 80 CONDUIT, 3"	160	LFT		
263	CONDUIT, HDPE, 2 IN, SCHEDULE 80	21,065	LFT		
264	CONDUIT, STEEL, 2 IN, GALVANIZED	55	LFT		
265	<Pay Item Deleted>			---	---
266	<Pay Item Deleted>			---	---
267	<Pay Item Deleted>			---	---
268	<Pay Item Deleted>			---	---
269	SIGNAL CANTILEVER STRUCTURE, SINGLE TRUSS ARM 35 FT.	4	EACH		
270	SIGNAL CANTILEVER STRUCTURE, SINGLE TRUSS ARM, 45 FT.	1	EACH		
271	SIGNAL CANTILEVER STRUCTURE, SINGLE TRUSS ARM, 50 FT.	1	EACH		
272	SIGNAL CANTILEVER STRUCTURE, DRILLED SHAFT FOUNDATION, TYPE A	40	EACH		
273	SIGNAL CANTILEVER STRUCTURE, DRILLED SHAFT FOUNDATION, TYPE B	3	EACH		
274	SIGNAL CANTILEVER STRUCTURE, RELOCATE	32	EACH		
275	CLEAN AND PAINT EXISTING SIGNAL EQUIPMENT	14,300	SFT		
276	THERMAL DETECTION CAMERA	8	EACH		
277	THERMAL DETECTION SYSTEM	4	EACH		
278	TRAFFIC SIGNAL HEAD, 3 SECTION, 12", RED AMBER GREEN BIKE SIGNALS	8	EACH		
279	TRAFFIC SIGNAL HEAD, 5 SECTION, 12", RED AMBER GREEN, AMBER ARROW, GREEN ARROW	23	EACH		
280	CROSSWALK SYSTEM CONTROLLER	1	EACH		
281	PEDESTRIAN PUSH BUTTON, NON-APS	82	EACH		
282	CROSSWALK SYSTEM - PEDESTRIAN PUSH-BUTTON STATION	4	EACH		

Item No.	Description	Quantity	Unit	Unit Price	Total Amount
283	CROSSWALK SYSTEM - FLASHING PEDESTRIAN SIGN	8	EACH		
284	CROSSWALK SYSTEM - FLUSH BI-DIRECTIONAL FIXTURE	20	EACH		
285	CONSTRUCTION LIGHTING	1,400	DAY		
286	SIGNAL CABLE, SERVICE, COPPER. 3C/8GA	400	LFT		
287	SIGNAL CABLE, ROADWAY LOOP, COPPER 1C/14GA	39,445	LFT		
288	SIGNAL CABLE, CONTROL, COPPER 5C/14GA	27,742	LFT		
289	SIGNAL CABLE, CONTROL, COPPER 7C/14GA	8,858	LFT		
290	SIGNAL CABLE, DETECTOR LEAD-IN COPPER 2C/16GA	11,324	LFT		
291	SIGNAL DETECTOR HOUSING	88	EACH		
292	<Pay Item Deleted>			---	---
293	ILLUMINATED WALL LETTERING	1	LS		
294	SAW CUT FOR ROADWAY LOOP AND SEALANT	14,953	LFT		
295	HANDHOLE, LIGHTING	34	EACH		
296	LIGHT STANDARD FOUNDATION, 2FT DIAMETER X 6FT	178	EACH		
297	LUMINAIRE, ORNAMENTAL	207	EACH		
298	LIGHT POLE, ORNAMENTAL, SINGLE	97	EACH		
299	LIGHT STANDARD TYPE 'D'	10	EACH		
300	LIGHT STANDARD TYPE 'E'	29	EACH		
301	LIGHT STANDARD TYPE 'A'	5	EACH		
302	LIGHT STANDARD TYPE 'B'	4	EACH		
303	LIGHT STANDARD TYPE 'C'	6	EACH		
304	<Pay Item Deleted>			---	---
305	<Pay Item Deleted>			---	---
306	LANDSCAPE LIGHTS, LED, TYPE 'F'	21	EACH		
307	LANDSCAPE LIGHTS, LED, TYPE 'G'	4	EACH		
308	NEW PANEL AND LIGHTING CONTACTOR	1	EACH		
309	MISCELLANEOUS EQUIPMENT FOR LIGHTING	1	LS		
310	3/0 WIRE	320	LFT		
311	NO. 3 WIRE	640	LFT		
312	NO. 4 WIRE, COPPER, 1/C	61,980	LFT		
313	NO. 6 WIRE, COPPER, 1/C	46,053	LFT		
314	NO. 8 WIRE	20,990	LFT		

Item No.	Description	Quantity	Unit	Unit Price	Total Amount
315	NO. 10 WIRE	24,200	LFT		
316	NO. 12 WIRE	5,150	LFT		
317	WIRE, TW/THW, NO 10 COPPER STRANDED	0	LFT		
318	CABLE, POLE CIRCUIT THWN, NO 10 COPPER, STRANDED, 1/C	5,578	LFT		
319	WIRE, NO 6 COPPER IN PLASTIC DUCT, 4 1/C	714	LFT		
320	WIRE, NO 6 COPPER IN PLASTIC DUCT, IN TRENCH, 4 1/C	4,625	LFT		
321	CONNECTOR KIT, UNFUSED	256	EACH		
322	CONNECTOR KIT, FUSED	256	EACH		
323	MULTIPLE COMPRESSION FITTING, NON-WATERPROOFED	361	EACH		
324	MULTIPLE COMPRESSION FITTING, WATERPROOFED	224	EACH		
325	INSULATION LINK, NON-WATERPROOFED	23	EACH		
326	INSULATION LINK, WATERPROOFED	262	EACH		
327	<Pay Item Deleted>			---	---
328	LINE, REMOVE	48,085	LFT		
329	PAVEMENT MESSAGE MARKING, THERMOPLASTIC, BIKE SYMBOL	94	EACH		
330	PAVEMENT MESSAGE MARKING, MULTI-COMPONENT, BIKE SYMBOL	13	EACH		
331	LINE, THERMOPLASTIC, SOLID, WHITE, 4 IN.	38,287	LFT		
332	LINE, THERMOPLASTIC, SOLID, YELLOW, 4 IN	57,468	LFT		
333	LINE, THERMOPLASTIC, BROKEN, WHITE, 4 IN	2,477	LFT		
334	LINE, THERMOPLASTIC, BROKEN, YELLOW, 4 IN	5,429	LFT		
335	LINE, THERMOPLASTIC, SOLID, WHITE, 6 IN	18,820	LFT		
336	LINE, THERMOPLASTIC, SOLID, YELLOW, 6 IN	651	LFT		
337	LINE, THERMOPLASTIC, SOLID, YELLOW, 8"	1,144	LFT		
338	LINE, THERMOPLASTIC, DOTTED, WHITE, 6 IN.	631	LFT		
339	LINE, MULTI-COMPONENT, BROKEN, WHITE, 4 IN	205	LFT		
340	LINE, MULTI-COMPONENT, SOLID, WHITE, 4 IN	8,810	LFT		
341	LINE, MULTI-COMPONENT, SOLID, YELLOW, 4 IN	3,790	LFT		
342	LINE, MULTI-COMPONENT, BROKEN, YELLOW, 4 IN	1,124	LFT		
343	LINE, MULTI-COMPONENT, SOLID, WHITE, 6 IN	2,128	LFT		

Item No.	Description	Quantity	Unit	Unit Price	Total Amount
344	LINE, MULTI-COMPONENT, DOTTED, WHITE, 8 IN.	96	LFT		
345	TRANSVERSE MARKING, THERMOPLASTIC, CROSSHATCH LINE, YELLOW, 8"	860	LFT		
346	TRANSVERSE MARKING, THERMOPLASTIC, CROSSHATCH LINE, YELLOW, 12"	50	LFT		
347	TRANSVERSE MARKING, THERMOPLASTIC, CROSSWALK LINE, 6"	10,753	LFT		
348	TRANSVERSE MARKING THERMOPLASTIC CROSSWALK, WHITE 24"	3,116	LFT		
349	TRANSVERSE MARKING, THERMOPLASTIC, STOP LINE, 24 IN	3,825	LFT		
350	TRANSVERSE MARKING, THERMOPLASTIC, YIELD, WHITE, 24 IN.	117	LFT		
351	TRANSVERSE MARKING, MULTI-COMPONENT, WHITE, CROSSHATCH, 8 IN.	289	LFT		
352	TRANSVERSE MARKINGS MULTI-COMPONENT, CROSSHATCH LINE, WHITE, 12"	27	LFT		
353	TRANSVERSE MARKING, MULTI-COMPONENT, CROSSWALK LINE, 6"	1,071	LFT		
354	TRANSVERSE MARKING MULTI-COMPONENT, STOP LINE, 24"	294	LFT		
355	TRANSVERSE MARKINGS, MULTI-COMPONENT, CROSSWALK, WHITE, 24 IN.	429	LFT		
356	TRANSVERSE MARKINGS, MULTI-COMPONENT, YIELD LINE, WHITE, 24 IN.	92	LFT		
357	PAVEMENT MESSAGE MARKING, THERMOPLASTIC, LANE INDICATION ARROW	323	EACH		
358	PAVEMENT MESSAGE MARKING, THERMOPLASTIC, (ONLY)	29	EACH		
359	PAVEMENT MESSAGE MARKING, THERMOPLASTIC, HANDICAP SYMBOL	4	EACH		
360	PAVEMENT MESSAGE MARKINGS, MULTI-COMPONENT, LANE INDICATION ARROW	24	EACH		
361	PAVEMENT MESSAGE MARKING, MULTI-COMPONENT, (ONLY)	4	EACH		
362	PAVEMENT MESSAGE MARKINGS, MULTI-COMPONENT HANDICAP SYMBOL	13	EACH		
363	PAVEMENT MARKING, SOLID, MULTI-COMPONENT, GREEN	1,536	SYS		
364	PAVEMENT MARKING, SOLID, MULTI-COMPONENT, RED	50	SYS		

Item No.	Description	Quantity	Unit	Unit Price	Total Amount
365	HMA FOR PATCHING, TYPE B	390	TON		
366	PCCP, 10 IN., DECORATIVE	428	SYS		
367	POROUS CONCRETE	298	SYS		
368	FENCE, TEMPORARY	560	LFT		
369	CURB RAMP, CONCRETE, G, MODIFIED	13	SYS		
370	CONCRETE STAIR	30	LFT		
371	STAIR RAILING	14	LFT		
372	CURB, CONCRETE, 8 IN	1,108	LFT		
373	CASTING, FURNISH, INSTALL & ADJUST TO GRADE	7	EACH		
374	TEMPORARY TRANSVERSE PAVEMENT MARKING, STOP LINE, 24"	30	LFT		
375	TEMPORARY PAVEMENT MARKING, REMOVABLE, 4"	10,190	LFT		
376	BARRICADE, II	12	LFT		
377	SIGNAL HEAD, COVER	8	EACH		
378	MISCELLANEOUS ELECTRICAL EQUIPMENT	1	LS		
379	MISC ELECTRICAL REVISIONS	1	LS		
380	CONTROLLER CABINET FOUNDATION, P1	7	EACH		
381	FIBER OPTIC, RELOCATE	175	LFT		
382	WIRELESS MAGNETOMETER DETECTOR, NEW	18	EACH		
383	PEDESTRIAN PUSH BUTTON, RELOCATE	4	EACH		
384	LIGHT STANDARD FOUNDATION, 2FT DIAMETER X 8FT	10	EACH		
385	ELECTRICAL DEVICES AND POST	33	EACH		
386	LINE, THERMOPLASTIC, SOLID, WHITE, 12 IN.	760	LFT		
387	LINE, THERMOPLASTIC, SOLID, WHITE, 24 IN.	35	LFT		
388	LINE, MULTI-COMPONENT, SOLID, WHITE, 8 IN.	600	LFT		
389	LINE, MULTI-COMPONENT, SOLID, WHITE, 12 IN	2,050	LFT		
390	LINE, MULTI-COMPONENT, SOLID, WHITE, 24 IN	15	LFT		
391	CATCH BASIN, E7	1	EACH		
392	SIGN, SHEET, REMOVE	51	EACH		
393	LIGHT POLE, ORNAMENTAL. TWIN	54	EACH		
394	SIGNAL CABLE, CONTROL, COPPER 3C/14GA	106	LFT		
395	TRAFFIC SIGNAL HEAD, 5-SECTION, RELOCATE	1	EACH		
396	TRAFFIC SIGNAL CABLE, FIBER OPTIC, MULTI-MODE	2,060	LFT		

Item No.	Description	Quantity	Unit	Unit Price	Total Amount
397	PAVEMENT MARKING, SOLID, THERMOPLASTIC, GREEN	296	SYS		
398	PAVEMENT MESSAGE MARKING, MULTI-COMPONENT, PED. SYMBOL	19	EACH		
399	POLE FOUNDATION, REMOVE	10	EACH		
400	WATER MAIN, D.I., 8"	123	LFT		
401	WATER MAIN, TESTING TAP, 2 IN.	3	EACH		
402	WATER SERVICE, COPPER, 2 IN.	65	LFT		
403	WATER SERVICE, D.I., 4 IN.	24	LFT		
404	CONNECT TO EXISTING WATER SERVICE, 4 IN.	1	EACH		
405	CONNECT TO EXISTING WATER MAIN, 6 IN.	1	EACH		
406	CONNECT TO EXISTING WATER MAIN, 8 IN.	2	EACH		
407	TRANSITION COUPLING, 20 IN.	12	EACH		
408	45 DEGREE ELBOW, 2 IN.	4	EACH		
409	45 DEGREE ELBOW, 8 IN.	4	EACH		
410	90 DEGREE ELBOW, 20 IN.	8	EACH		
411	CAP, 6 IN.	1	EACH		
412	CAP, REMOVE EXISTING, 6 IN.	1	EACH		
413	TEE, 6 IN. X 6 IN. X 4 IN.	1	EACH		
414	CORPORATION STOP, 2 IN.	2	EACH		
415	GATE VALVE AND BOX, 4 IN.	1	EACH		
416	BUTTERFLY VALVE AND BOX, 20 IN.	4	EACH		
417	INSERT VALVE AND BOX, 8 IN.	2	EACH		
418	TEMPORARY LINE STOP VALVE, 20 IN.	4	EACH		
419	MANHOLE, REMOVE	3	EACH		
420	CURB RAMP, CONCRETE, B	30	SYS		
421	TRANSVERSE MARKING, THERMOPLASTIC, CROSSHATCH LINE, WHITE, 8"	60	LFT		
422	ADJUST WATER SERVICE LINE, COMMERCIAL	2	EACH		
423	INSPECTION HOLE	10	EACH		
424	TAP, WATER SERVICE, 1 IN. - CITY TAP FEE	2	EACH		
425	CAP EXISTING WATER SERVICE LINE	2	EACH		
426	SEWER LATERAL PRIVATE BUILDING, REINSTATEMENT	2	EACH		
427	SIGNAL POLE, PEDESTAL, 4 FT.	9	EACH		

Item No.	Description	Quantity	Unit	Unit Price	Total Amount
428	PAVEMENT MESSAGE MARKING, THERMOPLASTIC, SHARE THE ROAD	21	EACH		
429	CONDUIT, HDPE, SCHEDULE 80, 3 IN.	260	LFT		
430	CONDUIT, HDPE, SCHEDULE 80, 4 IN.	80	LFT		
431	SIGN, SHEET ASSEMBLY, NEW	2	EACH		
432	SIGN, SHEET, AND SUPPORTS, REMOVE	69	EACH		

Bidder (Firm):

Address:

City/State/Zip:

Telephone Number:

()

By

(Signature)

(Printed Name of Person Signing)

**CITY OF SOUTH BEND
MINORITY AND WOMEN BUSINESS ENTERPRISE DIVERSITY
DEVELOPMENT PROGRAM**



**FORM MWBE-2.0
EVIDENCE OF GOOD FAITH EFFORTS**

This completed form should be included as part of the Bids documents related to City of South Bend Public Works Projects requiring Good Faith Efforts to obtain MBE/WBE participation. It is the bidder's sole responsibility to verify whether any listed minority or woman business meets the qualifications of a Minority or Women's owned business as defined by the Indiana Department of Administration ("IDOA").

Project Number: 116-001 Date: _____

Project Name: South Bend One-Way to Two-Way Street Conversion

Bidder: _____

Contact Person: _____ Telephone: _____

Address: _____

City: _____ State: _____ Zip: _____

Email: _____

To determine whether a bidder has demonstrated good faith efforts to reach the MBE/WBE utilization goals set forth in the City of South Bend Public Works Project Specifications, the City and its agencies, boards, or commissions, **REQUIRE ALL** of the following Good Faith Efforts as listed in the table below*:

	EVIDENCE OF GOOD FAITH EFFORTS
	MBE/WBE LIST(S): The bidder reviewed the City of South Bend's Minority and Women Business Enterprise Diversity Development Program, which uses the IDOA approved list of Minority and Women Owned Business as found on their website (http://www.in.gov/idoa).
	ACTION (ADVERTISE/CONTACT): In order for your bid to be deemed responsive, the City of South Bend requires that all perspective bidders complete no less than 2 of the following: <ol style="list-style-type: none"> 1. Attend all pre-bid meetings scheduled by the City to inform MBE/WBEs of contracting and subcontracting opportunities. 2. Advertise in general circulation and/or trade association publications concerning subcontracting opportunities, and allow MBE/WBEs reasonable time to respond. 3. Perform any and all necessary steps to provide written notice in a manner reasonably calculated to inform MBE/WBEs of subcontracting opportunities and allowed sufficient time for them to participate effectively. 4. Utilize pre-existing services of available community organizations, small and/or disadvantaged business assistance offices and other organizations that provided assistance in the recruitment and placement of MBE/WBE firms. <p>**Bidder must circle or otherwise notate which of the two (2) required actions were performed.</p>
	GOOD FAITH NEGOTIATIONS: The bidder negotiated in good faith with interested MBE/WBEs, including providing such MBE/WBE's with adequate information about the plans, specifications and other requirements of the subcontract and did not reject MBE/WBEs as unqualified without sound business reasons based on a thorough investigation of their capabilities.
	SMALL CONTRACT(S): The bidder selected specific portions of the work to be performed by MBE/WBEs in order to increase the likelihood of meeting the MBE/WBE goals (including breaking down contracts into smaller units to facilitate MBE/WBE participation)
	CONTRACT RECORDS: The bidder has maintained the following records for each MBE/WBE that has bid on the subcontracting opportunity: <ol style="list-style-type: none"> 1. Name, address, and telephone number; 2. A description of information provided by the bidder or subcontractor; and 3. A statement of whether an agreement was reached, and if not, why not, including any reasons for concluding that the MBE/WBE was unqualified to perform the job.

***Proper demonstration of Good Faith Effort requires your initials next to all of the above boxes. Any omissions shall be considered grounds for rejection of the bid by the Board of Public Works. The City of South Bend reserves the right to request additional information.**

**CITY OF SOUTH BEND
MINORITY AND WOMEN BUSINESS ENTERPRISE DIVERSITY
DEVELOPMENT PROGRAM**



**FORM MWBE-2.1
MBE/WBE CONTACTED**

This completed form should be supplied with Bids that pertain to City of South Bend Public Works Projects requiring contacted MBE/WBE to obtain Good Faith Efforts. It is the bidder's sole responsibility to verify whether any listed minority or woman business meets the qualifications of a Minority or Women's owned business.

PAGE _____ OF _____

Project Number: 116-001 MBE/WBE Participation Goal _____

Project Name: South Bend One-Way to Two-Way Street Conversion

Bidder: _____

By: _____
(Signature) (Title) (Date)

MBE/WBE Firm _____

Owner or Contact at MBE/WBE Firm _____

Telephone: _____ Fax: _____ Email: _____

TYPE OF WORK SOLICITED FOR THIS PROJECT:

RESULTS OF CONTACT WITH THE MBE/WBE FIRM:

MBE/WBE Firm _____

Owner or Contact at MBE/WBE Firm _____

Telephone: _____ Fax: _____ Email: _____

TYPE OF WORK SOLICITED FOR THIS PROJECT:

RESULTS OF CONTACT WITH THE MBE/WBE FIRM:

