

ATTACHMENT A PORTLAND CEMENT CONCRETE BID SPECIFICATION

1. ALL WORK WILL BE IN ACCORDANCE WITH IOWA 2019 SUDAS STANDARDS
2. ALL P.C. CONCRETE SHALL BE MINIMUM 28 DAY STRENGTH OF 4000 PSI MIX – MAY BE SUBMITTED FOR AIR, SLUMP AND CYLINDER CHECK IN SOME APPLICATIONS
3. REMOVAL WORK INCLUDES DEMOLITION, REMOVAL AND PROPER DISPOSAL OF ALL DEBRIS
4. NEW CONSTRUCTION INCLUDES MINIMAL GRADING THAT WILL NOT EXCEED A CUT OR FILL IN EXCESS OF 10 INCHES
5. CONTRACTOR TO PROVIDE CLEAN TOP SOIL FOR BACKFILL. NO BACKFILLING WILL BE PERMITTED FROM THE PAVED SURFACE.
6. CONTRACTOR TO REMOVE ALL CONCRETE PROJECT RELATED DEBRIS FROM SITE AND DISPOSE OF IN ACCORDANCE WITH ALL LAWS AND REGULATION.
7. CONTRACTOR WILL PROVIDE A WRITTEN “NOT TO EXCEED” AMOUNT PRIOR TO STARTING WORK
8. CONTRACTOR MUST NOTIFY THE CITY OF DES MOINES CONTACT FOR INSPECTION OR VERBAL APPROVAL AFTER FRAMING IS COMPLETE AND BEFORE ANY CONCRETE IS POURED
9. CONTRACTOR WILL BE RESPONSIBLE FOR ANY AND ALL DAMAGE DONE TO FINISHED CONCRETE AFTER POUR AND BEFORE CURE, CONTRACTOR IS RESPONSIBLE FOR SECURING AREA, ORANGE CONSTRUCTION FENCE IS AN APPROVED METHOD
10. CONTRACTOR IS RESPONSIBLE FOR ALL PROPERTY DAMAGE FROM EQUIPMENT AND RELATED VEHICLES, CITY REPRESENTATIVE AND CONTRACTOR TO DISCUSS REPAIR METHODS PRIOR TO THE START OF ANY WORK
11. C4 MIX IS REQUIRED FOR ALL FLAT WORK
12. ALL ASSOCIATED PERMITS MUST BE PURCHASED BY CONTRACTOR FOR ALL WORK DONE, COPY OF THAT PERMIT MUST BE KEPT ONSITE DURING WORK
13. PREPARATION:
 - a. ALL WORK MUST HAVE 4” COMPACTED BASE UNLESS OTHERWISE NOTED BY A CITY REPRESENTATIVE, BASE MUST BE GRADATION OF 1/4” MINUS LIMESTONE
 - b. REMOVE ALL LOOSE MATERIAL FROM COMPACTED BASE PRIOR TO PLACING CONCRETE
14. INSTALLER QUALIFICATIONS:
 - a. PROVIDE INSTALLER QUALIFICATIONS ILLUSTRATING THAT THE EXPERIENCED INSTALLER HAS COMPLETED PAVEMENT WORK SIMILAR IN MATERIAL, DESIGN AND EXTENT TO THAT INDICATED FOR THIS CONTRACT AND WHOSE WORK HAS RESULTED IN CONSTRUCTION WITH AT LEAST A 5 YEAR RECORD OF SUCCESSFUL IN-SERVICE PERFORMANCE
15. MANUFACTURERS QUALIFICATIONS:

- a. PROVIDE QUALIFICATIONS ILLUSTRATING MANUFACTURER OF READY-MIXED CONCRETE PRODUCTS COMPLYING WITH ASTM C 94 REQUIREMENTS FOR PRODUCTION FACILITIES AND EQUIPMENT, ALSO PROVIDE NAME AND CONTACT INFORMATION FOR ANY READY-MIX PLANT THAT WILL BE USED ON CITY PROJECTS

16. TRAFFIC CONTROL:

- a. MAINTAIN ACCESS FOR VEHICULAR AND PEDESTRIAN TRAFFIC AS REQUIRED FOR CONSTRUCTION ACTIVITIES
- b. MAINTAIN ACCESS FOR ANY OTHER CONSTRUCTION ACTIVITIES

17. FORM MATERIAL:

- a. PLYWOOD, METAL, METAL-FRAMED PLYWOOD OR OTHER APPROVED PANEL-TYPE MATERIALS TO PROVIDE FULL-DEPTH, CONTINUOUS, STRAIGHT, SMOOTH EXPOSED SURFACES
- b. USE FLEXIBLE OR CURVED FORMS FOR CURVES OF A RADIUS 100 FEET OR LESS
- c. FORM-RELEASE AGENT MUST BE OF SUCH THAT WILL NOT BOND WITH, STAIN, OR ADVERSELY AFFECT CONCRETE SURFACES AND WILL NOT IMPAIR SUBSEQUENT TREATMENTS OF CONCRETE SURFACES
- d. FORMS MUST REMAIN IN PLACE FOR AT LEAST 24 HOURS AFTER CONCRETE PLACEMENT
- e. NOTIFY OWNER'S REPRESENTATIVE FOR APPROVAL OF LOCATION AND ALIGNMENT OF FORMS PRIOR TO INSTALLING CONCRETE

18. RELATED MATERIALS:

- a. EXPANSION-JOINT-FILLER STRIPS MUST MEET ASTM D3575, FLEXIBLE FOAM EXPANSION JOINT FILLER, SYNTHETIC FOAM OF ISOMETRIC POLYMERS, OR ASPHALTIC MEETING ASTM D 1751. WIDTH TO BE 3/8" MAXIMUM

19. STEEL REINFORCEMENT:

- a. REINFORCEMENT BARS: ASTM A 615/A 615M, GRADE 60
- b. PLAIN STEEL WIRE: ASTM 82
- c. JOINT DOWELL BARS: PLAIN STEEL BARS, ASTM A 615/A 615M, GRADE 60. CUT BARS TRUE TO LENGTH WITH ENDS SQUARE AND FREE OF BURRS
- d. SUPPORTS FOR REINFORCEMENT: CHAIRS, SPACERS, AND OTHER DEVICES FOR SPACING, SUPPORTING, AND FASTENING REINFORCEMENT BARS, WELDED WIRE FABRIC, AND DOWELS IN PLACE. MANUFACTURE BAR SUPPORTS ACCORDING TO CRSI'S "MANUAL OF STANDARD PRACTICE" FROM STEEL WIRE, PLASTIC, OR PRECAST CONCRETE OR FIBER-REINFORCED CONCRETE OF GREATER COMPRESSIVE STRENGTH THAN CONCRETE

20. CONCRETE PLACEMENT:

- a. PREVENT CONCRETE FROM SPLATTERING ONTO ADJACENT VERTICAL SURFACES SUCH AS BUILDINGS, PLANTERS, STONWORK, RESTROOMS AND SHELTER BUILDINGS WITH 6 MIL. POLY-

SHEETS OR SUITABLE ALTERNATIVE. ALL SURFACES ADJOINING THE CONCRETE PLACEMENT SHALL BE CLEANED PRIOR TO LEAVING THE WORK SITE

- b. BEFORE PLACING CONCRETE, INSPECT AND COMPLETE FORMWORK INSTALLATION, REINFORCEMENT STEEL AND ITEMS TO BE IMBEDDED OR CAST IN
- c. REMOVE SNOW, ICE OR FROST FROM BASE COURSE SURFACE AND REINFORCEMENT BEFORE PLACING CONCRETE, DO NOT PLACE CONCRETE ON FROZEN SURFACES
- d. MOISTEN BASE COURSE TO PROVIDE A UNIFORM DAMPENED CONDITION AT THE TIME THE CONCRETE IS PLACED. ENSURE THAT ALL STRUCTURES TO BE CAST IN ARE AT THE REQUIRED FINISH ELEVATION AND ALIGNMENT
- e. COLD WEATHER PLACEMENT: PROTECT CONCRETE WORK FROM PHYSICAL DAMAGE OR REDUCED STRENGTH THAT COULD BE CAUSED BY FROST, FREEZING ACTIONS OR LOW TEMPERATURES.
 - i. WHEN AIR TEMPERATURES HAVE FALLEN OR IS EXPECTED TO FALL BELOW 40 DEGREES F COVER CONCRETE FOR A MINIMUM OF 72 HOURS WITH INSULATED BLANKET AFTER FINISHING CONCRETE SURFACE
 - ii. DO NOT USE FROZEN MATERIALS OR MATERIALS CONTAINING ICE AND SNOW
 - iii. DO NOT USE CALCIUM CHLORIDE, SALT OR OTHER MATERIALS CONTAINING ANTIFREEZE AGENTS OR CHEMICAL ACCELERATORS, UNLESS OTHERWISE SPECIFIED IN THE DESIGN MIX
- f. HOT WEATHER PLACEMENT: COVER REINFORCEMENT STEEL WITH WATER SOAKED BURLAP SO STEEL TEMPERATURES WILL NOT EXCEED AMBIENT AIR TEMPERATURES IMMEDIATELY BEFORE EMBEDDING IN CONCRETE
- g. FOG-SPRAY FORMS, REINFORCEMENT STEEL, AND SUBGRADE JUST BEFORE PLACING CONCRETE. KEEP SUBGRADE MOISTURE UNIFORM WITHOUT STANDING WATER, SOFT SPOTS OR DRY AREAS

21. JOINTS: CONSTRUCT, EXPANSION AND WEAKENED PLANE JOINTS AND TOOL EDGINGS TRUE TO LINE WITH FACES PERPENDICULAR TO SURFACE PLANE OF CONCRETE. CONSTRUCT TRANSVERSE JOINTS AT RIGHT ANGLES TO CENTERLINE UNLESS OTHERWISE INDICATED

- a. EXPANSION JOINTS: FORM EXPANSION JOINTS OF PREFORMED JOINT FILLER STRIPS ABUTTING CONCRETE CURBS, CATCH BASINS, MANHOLES, INLETS, SEATWALLS, STRUCTURES, WALKS, OTHER FIXED OBJECTS AND WHERE INDICATED
 - i. LOCATE EXPANSION JOINTS AT INTERVALS OF 30 FEET MAXIMUM, OR AS OTHERWISE INDICATED
 - ii. EXTEND JOINT FILLERS FULL WIDTH AND DEPTH OF JOINT
 - iii. TERMINATE JOINT FILLER MORE THAN 1 INCH BELOW FINISHED SURFACE FOR APPLICATION OF JOINT SEALANT
 - iv. FURNISH JOINT FILLERS IN ONE-PIECE LENGTHS. WHERE MORE THAN ONE LENGTH IS REQUIRED, LACE OR CLIP JOINT FILLER TOGETHER

- v. PROTECT TOP EDGE OF JOINT FILLER DURING CONCRETE PLACEMENT WITH METAL, PLASTIC, OR OTHER PREFORMED TEMPORARY CAP. REMOVE PROTECTIVE CAP AFTER CONCRETE HAS BEEN PLACED ON BOTH SIDES OF JOINT
 - b. EDGING: TOOL EDGES OF PAVEMENT, GUTTERS, CURBS AND JOINTS IN CONCRETE AFTER INITIAL FLOATING WITH AN EDGING TOOL TO A FOLLOWING RADIUS. REPEAT TOOLING OF EDGES AFTER APPLYING SURFACE FINISHES. ELIMINATE “SHINERS” MARKS OR OTHER MARKS ON CONCRETE SURFACES. RADIUS: ¼ INCH
22. FINISHING: WETTING OF CONCRETE SURFACES DURING SCREEDING, INITIAL FLOATING OR FINISHING OPERATIONS IS PROHIBITED
- a. FLOAT FINISH: BEGIN THE SECOND FLOATING OPERATION WHEN BLEED WATER SHEEN HAS DISAPPEARED AND THE CONCRETE SURFACE HAS STIFFENED SUFFICIENTLY TO PERMIT OPERATIONS. FLOAT SURFACE WITH POWER DRIVEN FLOATS, OR BY HAND FLOATING IF AN AREA IS SMALL OR INACCESSIBLE TO POWER UNITS. FINISH SURFACES TO TRUE PLANES. CUT DOWN HIGH SPOTS, AND FILL LOW SPOTS. REFLOAT SURFACE IMMEDIATELY TO UNIFORM GRANULAR TEXTURE
 - b. CONCRETE SIDEWALKS GET A LIGHT TEXTURED UNIFORM BROOM FINISH
 - c. FINISHING, TEXTURES AND JOINTS OF NEW CONCRETE ARE TO MATCH ALL ADJACENT PAVEMENT
 - d. CONCRETE CURING COMPOUND MUST BE “CLEAR” AND APPROVED BY THE CITY PRIOR TO USE

BID SHEET

CONCRETE SIDEWALK CONSTRUCTION:

TYPE I WORK: **REMOVE & REPLACE**, BROOM FINISH

A. FIVE INCHES THICK.

BID PRICE: \$ _____ PER SQUARE FOOT

B. SIX INCHES THICK.

BID PRICE: \$ _____ PER SQUARE FOOT

TYPE II WORK: **CONSTRUCT NEW** SIDEWALK, BROOM FINISH

A. FIVE INCHES THICK.

BID PRICE: \$ _____ PER SQUARE FOOT

B. SIX INCHES THICK.

BID PRICE: \$ _____ PER SQUARE FOOT

C. ADA CURB RAMPS WITH IRON TRUNCATED DOMES **5 FOOT WIDE**

BID PRICE: \$ _____ PER EACH

D. ADA CURB RAMPS WITH IRON TRUNCATED DOMES **8 FOOT WIDE**

BID PRICE: \$ _____ PER EACH

CONCRETE SLAB CONSTRUCTION:

TYPE I WORK: SLAB WORK, 6" THICK, TROWEL OR BROOM FINISH

A. BID PRICE: \$ _____ PER SQUARE FOOT

TYPE I WORK: SLAB WORK, 5" THICK, TROWEL OR BROOM FINISH

A. BID PRICE: \$ _____ PER SQUARE FOOT

CONCRETE CURB AND GUTTER CONSTRUCTION:

TYPE I WORK: CURB AND GUTTER WORK, 6" CURB WITH 12 WIDE GUTTER, 18" WIDE TOTAL

A. NEW 18" CURB AND GUTTER

BID PRICE: \$ _____ PER LINEAL FOOT

B. CURB AND GUTTER REMOVAL AND DISPOSAL ONLY

BID PRICE: \$ _____ PER LINEAL FOOT

BEAM CURB CONSTRUCTION:

(WITH 1 CONTINUOUS RUN OF #4 EPOXY COATED REBAR)

A. 8" X 12" \$ _____ PER LINEAL FOOT

B. 8" X 18" \$ _____ PER LINEAL FOOT

C. 6" X 12" \$ _____ PER LINEAL FOOT

D. 6' X 18" \$ _____ PER LINEAL FOOT

CONCRETE FOOTING CONSTRUCTION:

TYPE I WORK: FOOTING WORK, **24"** DIAMETER 4' DEEP #4 EPOXY COATED REBAR CAGE BROOM FINISH TOP

A. BID PRICE: \$ _____ EACH

TYPE I WORK: FOOTING WORK, **36"** DIAMETER 4' DEEP #4 EPOXY COATED REBAR CAGE BROOM FINISH TOP

B. BID PRICE: \$ _____ EACH

CONCRETE DEMOLITION:

TYPE I WORK: FIVE- OR SIX-INCH-THICK REMOVAL AND DISPOSAL

C. BID PRICE: \$ _____ PER SQUARE FOOT

REINFORCEMENT:

(EXCLUDE PRICE OF CONCRETE, REINFORCEMENT AND LABOR ONLY)

A. WIRE MESH 14 GAGE 4" X 4" OPENING WELDED: \$ _____ PER SQUARE

B. RE-ROD 1/2" NO. 4 BAR **GRAY STEEL** TIED: \$ _____ PER SQUARE FOOT

C. RE-ROD 1/2" NO. 4 BAR **EPOXY COATED** TIED: \$ _____ PER SQUARE FOOT

D. FIBER: \$ _____ PER SQUARE FOOT

EXPOSED AGGREGATE:

(EXCLUDE PRICE OF CONCRETE, LABOR ONLY)

A. BID PRICE: \$ _____ PER SQUARE FOOT

POLISHED CONCRETE (LABOR ONLY)

\$ _____ PER SQUARE FOOT

PRICE PER HOUR FOR MISCELLANEOUS WORK NOT DESCRIBED ABOVE: \$ _____ PER HOUR