Great Rivers Greenway

LIVE LIFE OUTSIDE

November 7, 2016

RE: Notice to Bidders
Great Rivers Greenway District
Centennial Greenway Phase IIA
Federal Project Number: TAP-9900(677)
Burns & McDonnell Project Number: 85395
Addendum Number 02

Organizations intending to submit a bid on Centennial Greenway Phase IIA are hereby advised of the following additions and modifications to the bidding documents:

1. Below are responses to questions received by the construction manager.

    a. **Question -** *Are you able to provide the detail for the 12 and 14 inch piling material? Length of each pipe pile? Total piles for each dimension as well as wall thickness.*

    Answer – *The piles are not pipe piles. They are HP piles. The specifying information is tabulated on sheets S-102 and S-203.*

    b. **Question -** *Are you able to provide a plan holders listing?*

    Answer – *Plan Holders listing is attached to this addendum.*

    c. **Question -** *We bidding to engineer and manufacture the MSE retaining walls on the Centennial Greenway project and would like some clarification surrounding the wall details. The MSE wall specifications/details do not specify an aesthetic form liner. We would like to submit a bid with an ashlar form liner at no additional cost. Specifically, we would like to propose the same form liner used on the MSE walls along 141 from the Page Olive Connector Project. The attached picture is from one of the abutment walls at 141 & Waterworks Rd. The liner is known as Custom Rock Ashlar 12020.*

Answer – *Ashlar form liner is acceptable. It matches existing retaining wall in the area. Other acceptable wall forms include matching the existing retaining walls on MoDOT Route 364 in Saint Charles County.*

d. **Question** – *I have not found a clear delineation of Add Alternates 1-3. The bid quantities for each do not furnish enough information to correctly identify what the alternates consist of. I was working on the drainage estimate and I was looking at the Summary of Quantities Sheets and found something I don't understand.*

On Sheet 2B3 for Item numbers 61-69, I found similar quantities under this breakdown (locally funded items) and also on 2B5 under alternate 2. For example Item number 65 shows 39 feet on Page U-101. Item 138 (add alternate) shows the same quantity on the same sheet. There are only 39 feet on sheet U-101 so the same quantity cannot be in the base bid and also in the alternate. Other items appear to have similar problems.

Answer – *The quantities that are shown on the summary sheets as Locally Funded Items are for the shared use path. The recurring pay item names that are shown on sheet 2B-5 for Add Alternate 2 are for the construction of the spur and overlook area on sheet C-102. Please refer to the attached for clarification of the Base Bid quantities and the Add*

Alternate quantities. The following pay items and quantities are for the work at the spur and overlook.

126	B-JSP-25	CLASS A EXCAVATION	CY	250
127	B-JSP-26	COMPACTING EMBANKMENT	CY	1,828
128	B-JSP-28	TYPE 5 AGGREGATE FOR BASE (4 IN. THICK)	SY	204
129	B-JSP-29	TYPE 5 AGGREGATE FOR BASE (8 IN. THICK)	SY	278
130	B-JSP-30	GRAVEL (A)	TON	11
131	B-JSP-31	BITUMINOUS PAVEMENT MIXTURE PG64-22, (BP-1)	TON	26
132	B-JSP-32	BITUMINOUS PAVEMENT MIXTURE PG64-22 (BASE)	TON	26
133	B-JSP-33	PRIME COAT	GAL	98
134	B-JSP-34	TACK COAT	GAL	24
135	B-JSP-35A	CONCRETE PAVEMENT (8" NON-REINF)	SY	164
136	B-JSP-35B	CONCRETE PAVEMENT (12" NON-REINF)	SY	40
137	B-JSP-36A	MSD AREA INLET	EA	5
138	B-JSP-37A	12" CLASS III RCP	LF	483
139	B-JSP-38A	12" PRE-CAST CONCRETE FLARED END SECTION	EA	3
140	B-JSP-54	GROUTED COMPOST	LS	1
141	B-JSP-72	COMPOST SOCK DITCH CHECK	EA	24
142	B-JSP-77	TYPE 1 TURF REINFORCEMENT MAT	SY	802
150	B-JSP-208	CONCRETE UNIT PAVERS	SF	1,455
151	B-JSP-209A	MULTI-PIECE PRECAST FREESTANDING SEAT WALL	SF	325
152	B-JSP-209B	SEAT WALL COPING	LF	135

e. **Question -** *Plan Sheet 2B-1, Concrete Pavement (8" Non-Reinf) has a quantity of 195 sy on Sheet L-102 and 162 sy. Is this a duplicate of the same area?*

Answer – *The Concrete Pavement (8" Non-Reinf) and Type 5 Aggregate for Base (4" Thick) quantities on Sheets L-102 and L-300 should not have been included on the Summary of Quantities Sheet 2B-1. The quantities for these items have been adjusted on Sheet 2B-1. The aforementioned quantities have been moved to the Add Alternate #2 Summary on Sheet 2B-5.*

Refer to the attachment clarification.

f. **Question -** *The drainage items (MSD Area Inlet, 12" Class III RCP, and 12" FES) listed on Plans Sheet 2B-5 for Add Alternate 2 are duplicated on plan sheet 2B-3 for the base bid items.*

Answer – *The drainage items (MSD Area Inlet, 12" Class III RCP, and 12" FES) listed on Sheet 2B-5 for Add Alternate #2 and on Sheet 2B-3 for the Base Bid Items are not duplicate quantities. The items for Add Alternate #2 are for drainage at the Spur and Overlook Area. The items for the Base Bid are for drainage of the shared use path.*

Refer to the attachment clarification.

2. JSP 000064 is replaced with the attached job special provision. Graffiti protection requirements for the retaining wall has been added as well as panel shape requirements and form lining option.

3. JSP 000418 is replaced with the attached job special provision. More specific description of painted bridge graphics has been included.

4. The following bridge suppliers are pre-qualified for the project:

   a. Contech Engineered Solutions
   9025 Centre Point Drive, Suite 400
   West Chester, OH 45069
   Contact: Todd Black
   E-mail: tblack@conteches.com
   Phone: (913) 216-3818

b. Big R Manufacturing LLC dba Big R Bridge
PO Box 1290
Greeley, CO 80632
Contact: Nick Cammack
E-mail: ncammack@bigrbridge.com
Phone: (970) 356-9600

c. Cameron Bridge Works
1051 South Main Street
Elmira, NY 14904
Contact: Katie Fairbanks
E-mail: katie@cameronbridgeworks.com
Phone: (607) 734-9456

d. Wheeler Lumber LLC
9330 James Ave South
Bloomington, MN 55431
Contact: Michael Purkey
E-mail: mpurkey@wheeler1892.com
Phone: (612) 249-0852

5. The bid form is revised. Use bid form attached to Addendum 2. Bid form updated for clarification of base bid and add alternate bid quantities.

6. The typical section sheets are revised. See typical sections attached to Addendum 2. Existing pavements on Route 364, 94 and Ramps are 14-inches thick.

Great Rivers Greenway

LIVE LIFE OUTSIDE

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ACKNOWLEDGEMENT
ADDENDUM NO. 2

(Please Sign and Include With Bid)

Addendum Received By: _____ Date _____
(Signature of Authorized Representative)

Name: _____ Title: _____
(Printed Name of Authorized Representative)

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Sincerely,

Dennis Koscielski, P.E.
Design Team Project Manager

DK/DK

cc: MoDOT – Vince G. Kaimann
GRG – Patrick Owens
Construction Manager – Craig Schluter
Alta – Paul Wojciechowski
Cole – Jeremy Roach

Addendum #2 Question 1C - Plan Holders List

Number	Company Name	Name	Phone Number	Phone
1	Big R Bridge (Greeley, CO)	Nick Cammack	ncammack@bigrbridge.com	270-331-3936
2	Building Works, Inc. (St. Louis, MO)	Thom Schwetye	tschwetye@buildingworksinc.com	314-647-2841
3	Contech (worldwide)	Todd Black	tblack@conteches.com	913-216-3818
4	D and S Fencing (Festus, MO)	Brad Schaeffer	bradschaeffer@dandsfence.com	636-937-8300
5	DJM Ecological Services (Wentzville, MO)	Becky McMahon	bmcmahon@djmecological.com	314-478-2388
6	Gateway Tree Care (Fenton, MO)	Victoria Hutchens	vhutchens@gatewaytreecare.com	636-600-1396
7	Gershenson Construction Co., Inc. (Eureka, MO)	Chuck Risley	crisley@gershenson.com	314-574-8035
8	Gerstner Electric (St. Louis, MO) (St. Louis, MO)	Bidding Bidding	Bidding@gerstnerelectric.com	636-349-5999
9	Gleeson Asphalt, Incorporated (Belleville, IL)	Jack Sanders	jack@gleesonasphalt.com	618-235-7600
10	Helitech (Belleville, IL)	Tim Distler	tdistler@helitechccd.com	314-409-5956
11	Home Turf LLC (DeSoto, MO)	Greg Perris	greg.perris@charter.net	636-798-3056
12	Interstate Signways (Little Rock, AR)	Hannah Searcy	hsearcy@interstatesigns.com	501-490-4242
13	JTL Landscaping (Florissant, MO)	Richard R. Elliott	eoliarich@gmail.com	636-295-0903
14	KCI Construction Company (Saint Louis, MO)	Tom Huster	tomhuster@KCIConstruction.com	314-220-3569
15	Kolb (Weldon Spring, MO)	Brian VanCardo	bvancardo@kolbgrading.com	314-575-8296
16	Kozeny-Wagner, Inc. (Arnold, MO)	Chris Kozeny	ckozeny@kozenywagner.com	636-296-2012
17	Krupp (Ellisville, MO)	Estimating Department	Bid@kruppmo.com	636-391-8844
18	Maxim Crane Works, LP (Wilder, KY)	Todd Murphy	tmurphy@maximcrane.com	859-441-7400
19	Millstone Weber (St Charles, MO)	Bob Stubbs	bob.stubbs@millstoneweber.com	636-688-8794
20	Native Landscape Solultions, Inc. (St. Louis, MO)	Mary Jo LaBarge	maryjo@nativelandscape.biz	314-544-7918
21	Phillips Hardy Inc. (Boonville & Columbia, MO)	Chance Hollingsworth	estimating@phillipshardy.com	573-447-8070
22	R.V. Wagner, Inc. (Saint Louis, MO)	Black Boggs	bboggs@rvwagner.com	314-892-1600
23	Redi Rock by Schreiter (O'Fallon, MO)	Jeff McKay	jmckay4956@aol.com	636-240-2600
24	Reinhold Electric (St. Louis, MO)	Kris Schmittgens	kris@reinholdelectric.com	314-631-1158
25	Southern Illinois Builders Association (O'Fallon, IL)	Sarah	projects@siba-agc.org	618-624-9055
26	St. Louis Composting Inc. (St. Louis region)	Roy Gross	rgross@stlcompost.com	314-581-6372
27	Vee Jay Cement (St. Louis, MO)	Sal Vitale	samCV@veejaycement.com	314-351-3366
28	W&W | AFCO Steel, LLC (Little Rock, AR)	Heather Armstrong	harmstrong@afcosteel.com	501-301-3601
29	Vee Jay Cement (St. Louis, MO)	Sal Vitale	samCV@veejaycement.com	314-351-3366

Addendum #2
Question 1D

CENTENNIAL GREENWAY – PHASE IIA

ADD ALTERNATES 1 THROUGH 3 CLARIFICATION

LEGEND:

ADD ALTERNATE 1 ITEMS

ADD ALTERNATE 2 ITEMS

ADD ALTERNATE 3 ITEMS

Addendum #2
Question 1D

SUMMARY OF QUANTITIES (SHEET 3 OF 6)

SUMMARY OF QUANTITIES (LOCALLY FUNDED ITEMS)

ITEM NUMBER	BID ITEM	SPEC REFERENCE	DESCRIPTION	UNITS	PROJECT QUANTITY	ENGINEER'S DISCRETION	DISCRETION QUANTITY	BID QUANTITY
47	JSP-21	MoDOT 201	CLEARING AND GRUBBING	AC	9.9	0%	0	**9.9**
48	JSP-22		TEMPORARY TREE PROTECTION	LF	1,102	0%	0	**1,102**
49	JSP-23	MoDOT 202	REMOVAL OF IMPROVEMENTS	LS	1	0%	0	**1**
50	JSP-24		FULL DEPTH SAW-CUT	LF	1,447.3	0%	0	**1,447.3**
51	JSP-25	MoDOT 203	CLASS A EXCAVATION	CY	40,853	0%	0	**40,853**
52	JSP-26	MoDOT 203	COMPACTING EMBANKMENT	CY	34,996	0%	0	**34,996**
53	JSP-27	MoDOT 204	SETTLEMENT GAUGES	EA	8	0%	0	**8**
54	JSP-29	MoDOT 304	TYPE 5 AGGREGATE FOR BASE (8 IN. THICK)	SY	4,112	0%	0	**4,112**
55	JSP-30	MoDOT 310	GRAVEL (A)	TON	154	0%	0	**154**
56	JSP-31	MoDOT 401	BITUMINOUS PAVEMENT MIXTURE PG64-22, (BP-1)	TON	367	0%	0	**367**
57	JSP-32	MoDOT 401	BITUMINOUS PAVEMENT MIXTURE PG64-22 (BASE)	TON	367	0%	0	**367**
58	JSP-33	MoDOT 408	PRIME COAT	GAL	1,378	0%	0	**1,378**
59	JSP-34	MoDOT 407	TACK COAT	GAL	331	0%	0	**331**
60	JSP-35C	MoDOT 502	CONCRETE TRAIL APPROACH SLAB	SY	68	0%	0	**68**
61	JSP-36A	MSD	MSD AREA INLET	EA	4	0%	0	**4**
62	JSP-36B	MSD	MSD CURB INLET	EA	3	0%	0	**3**
63	JSP-36C	MSD	MSD GRATE INLET	EA	2	0%	0	**2**
64	JSP-36D	MSD	MSD MANHOLE	EA	5	0%	0	**5**
65	JSP-37A	MSD	12" CLASS III RCP	LF	540	0%	0	**540**
66	JSP-37B	MSD	15" CLASS IV RCP	LF	109	0%	0	**109**
67	JSP-37C	MSD	18" CLASS IV RCP	LF	208	0%	0	**208**
68	JSP-38A	MSD	12" PRE-CAST CONCRETE FLARED END SECTION	EA	2	0%	0	**2**
69	JSP-38B	MSD	18" PRE-CAST CONCRETE FLARED END SECTION	EA	2	0%	0	**2**
70	JSP-45A	MoDOT 607	60" CHAIN LINK FENCE	LF	462	0%	0	**462**
71	JSP-45B	MoDOT 607	60" CHAIN LINK FENCE ON RETAINING WALLS AND SLOPES	LF	1,533	0%	0	**1,533**
72	JSP-47	MoDOT 608	CONCRETE SIDEWALK	SY	108	0%	0	**108**
73	JSP-48	MoDOT 608	DETECTABLE WARNING PANELS	SF	184	0%	0	**184**
74	JSP-49	MoDOT 608	CONCRETE CURB RAMP	SY	198	0%	0	**198**
75	JSP-53A	MoDOT 611	FURNISHING TYPE 2 ROCK BLANKET	CY	55	0%	0	**55**
76	JSP-53B	MoDOT 611	PLACING TYPE 2 ROCK BLANKET	CY	55	0%	0	**55**
77	JSP-59	MoDOT 618	MOBILIZATION	LS	1	0%	0	**1**
78	JSP-60	MoDOT 627	CONTRACTOR SURVEYING AND STAKING	LS	1	0%	0	**1**
79	JSP-61		PROTECTION AND RESTORATION OF SITE	LS	1	0%	0	**1**

ITEM NUMBER	C-020	C-051	C-052	C-053	C-054	C-101	C-102	C-103	C-104	C-105	C-106	C-107	C-108	C-109	C-110
47		2.1	2.6	1.4	3.8										
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50		713.0	409.6	324.7											
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53															
54						555	562	334	560	630	452	560	459		
55						14	22	13	22	25	18	22	18		
56						35	53	31	52	59	42	52	43		
57						35	53	31	52	59	42	52	43		
58						131	197	117	196	221	159	196	161		
59						32	47	28	47	53	38	47	39		
60						34		34							
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70											213	249			
71								88	176	253	92				
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ITEM NUMBER	L-101	L-102	L-103	L-104	L-105	L-106	L-107	L-108	L-109	L-110	L-200	L-300	C-302	C-303	C-304	C-305	C-306	C-501	C-502	C-503	C-504	C-505	C-506
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70																							
71													224	160	192	144	204						
72																		27	50				
73																		80	80	24			
74																		71	101	26			
75			14																				
76			14																				
77																							
78																							
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ITEM NUMBER	C-601	C-602	C-603	C-604	C-611	C-612	C-613	C-614	C-621	C-622	C-623	C-624	S-101 to S-116	S-201 to S-217	SP-01	SP-02	SP-03	T-101	T-103	TC-501 to TC-516	U-101	U-102	U-103	U-104	U-105	U-106	U-107	U-108	U-109	U-110
47																														
48					271	736	95																							
49																														
50																														
51	753	10,781	2,727	26,592																										
52	24,007	8,948	1,259	782																										
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61																						1	1			1	1			
62																					1		1			1				
63																					1			1						
64																					1	1	2	1						
65																					39	160	123	191		27				
66																					109									
67																					208									
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ITEM NUMBER 71 IS THE BASE BID OPTION FOR ALL ITEMS CALLED OUT AS "DECORATIVE PEDESTRIAN GUARDRAIL" ON THE PLANS. REPLACING THE CHAIN LINK FENCE WITH DECORATIVE PEDESTRAIN GUARDRAIL IS TO BE CONSIDERED ADD ALT 3.

no.	date	by	chd	description
0	9/19/16	JB	DK	ISSUED FOR BID

FEDERAL ID NUMBER: TAP 9900 677

UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE INFORMATION AND, THEREFORE, THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. THE VERIFICATION OF THE LOCATIONS OF ALL UNDERGROUND UTILITIES AS EITHER SHOWN OR NOT SHOWN ON THESE PLANS SHALL BE THE RESPONSIBILITY OF THE CONTRACTORS, AND SHALL BE LOCATED PRIOR TO CONSTRUCTION.

JOEL J. BIRKE
NUMBER
PE-2014016927
9/19/2016

JOEL J. BIRKE
PROFESSIONAL ENGINEER
LICENSE NO. 2014016927

BURNS
McDONNELL

425 SOUTH WOODS MILL ROAD
CHESTERFIELD, MISSOURI 63017
314-682-1500
ENG. 000165

date
September 2016

detailed
J. Birke

designed
J. Birke

checked
D. Koscielski

Great Rivers Greenway

GREAT RIVERS GREENWAY
CENTENNIAL GREENWAY PHASE IIA

SUMMARY OF QUANTITIES

project
85395

contract

drawing
2B-3

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rev.
0

file: [illegible]

Addendum #2
Question 1D

SUMMARY OF QUANTITIES (SHEET 4 OF 6)

SUMMARY OF QUANTITIES (LOCALLY FUNDED ITEMS) (CONTINUED)

ITEM NUMBER	BID ITEM	SPEC REFERENCE	DESCRIPTION	UNITS	PROJECT QUANTITY	ENGINEER'S DISCRETION	DISCRETION QUANTITY	BID QUANTITY
80	JSP-62		RETAINING WALL DRAINAGE SYSTEMS	LS	1	0%	0	**1**
81	JSP-63	MoDOT 720	WETCAST MODULAR BLOCK WALL	SF	2,589	0%	0	**2,589**
82	JSP-64	MoDOT 720	MECHANICALLY STABILIZED EARTH WALL SYSTEMS	SF	11,434	0%	0	**11,434**
83	JSP-65		WATER POLLUTION CONTROL MANAGER	WEEK	45	0%	0	**45**
84	JSP-66	MoDOT 806	COMPOST SOCK SILT BARRIER	LF	8,130	0%	0	**8,130**
85	JSP-67	MoDOT 806	SEDIMENT REMOVAL	CY	150	0%	0	**150**
86	JSP-68	MoDOT 806	INLET PROTECTION	EA	15	0%	15	**30**
87	JSP-69		EROSION CONTROL BLANKET	SY	41,458	0%	0	**41,458**
88	JSP-70		PERMANENT EROSION CONTROL BLANKET	SY	1,180	0%	0	**1,180**
89	JSP-71	MoDOT 806	TEMPORARY SEEDING AND MULCHING	AC	9.0	0%	0	**9.0**
90	JSP-72	MoDOT 806	COMPOST SOCK DITCH CHECK	EA	67	0%	0	**67**
91	JSP-73		WASHDOWN STATION	EA	6	0%	0	**6**
92	JSP-74		CONSTRUCTION ENTRANCES	EA	6	0%	0	**6**
93	JSP-75		STORM WATER POLLUTION PREVENTION PLAN (SWPPP)	LS	1	0%	0	**1**
94	JSP-76		TEMPORARY CONTRACTOR ACCESS	LS	1	0%	0	**1**
95	JSP-77	MoDOT 806	TYPE 1 TURF REINFORCEMENT MAT	SY	3,032	0%	0	**3,032**
96	JSP-78		OUTLET PROTECTION MAT	SF	256	0%	0	**256**
97	JSP-79	MoDOT 901	TRENCHING TYPE I	LF	982	0%	0	**982**
98	JSP-80	MoDOT 901	PULL BOX, PREFORMED CLASS 1	EA	9	0%	0	**9**
99	JSP-81	MoDOT 901	CABLE-CONDUIT, 1 IN., 2 CONDUCTORS AND 1 BARE NEUTRAL, 2 AWG	LF	1,030	0%	0	**1,030**
100	JSP-82		INSTALL OWNER FURNISHED BIKE COUNTERS	EA	2	0%	0	**2**
101	JSP-83A		GROUND IMPROVEMENT SYSTEM (WALL 1)	LS	1	0%	0	**1**
102	JSP-83B		GROUND IMPROVEMENT SYSTEM (WALL 2)	LS	1	0%	0	**1**
103	JSP-83C		GROUND IMPROVEMENT SYSTEM (WALL 3)	LS	1	0%	0	**1**
104	JSP-83D		GROUND IMPROVEMENT SYSTEM (WALL 4)	LS	1	0%	0	**1**
105	JSP-83E		GROUND IMPROVEMENT SYSTEM (WALL 5)	LS	1	0%	0	**1**
106	JSP-84		LAW ENFORCEMENT	ALLOWANCE	1	0%	0	**1**
107	JSP-85		ADDITIONAL MOBILIZATION FOR SEEDING	EA	16	0%	0	**16**
108	JSP-205		NATIVE GRASS PLANTING AREAS	SY	10,332	0%	0	**10,332**
109	JSP-206A		FESCUE SEED	AC	9.2	0%	0	**9.2**
110	JSP-206B		FESCUE SOD	SY	1,082	0%	0	**1,082**
111	JSP-207A		BENCHES	EA	3	0%	0	**3**
112	JSP-207B		TRASH RECEPTACLES	EA	3	0%	0	**3**
113	JSP-207C		BIKE RACKS	EA	3	0%	0	**3**
114	JSP-212		DECORATIVE BOLLARD	EA	6	0%	0	**6**
115	JSP-301		DOUBLE-SIDED RECTANGULAR RAPID FLASHING BEACON WITH PEDESTRIAN PUSH BUTTON	EA	2	0%	0	**2**
116	JSP-302A	MoDOT 620	24" PERMANENT WHITE PAVEMENT MARKING	LF	65	10%	7	**72**
117	JSP-302B	MoDOT 620	4" SOLID YELLOW PAVEMENT MARKING	LF	241	10%	25	**266**
118	JSP-302C	MoDOT 620	HIGH VISIBILITY CROSSWALK	LF	60	10%	6	**66**
119	JSP-303B		ROADWAY SIGNS	SF	111	20%	23	**134**
120	JSP-303C		GROUND MOUNTED SIGN POST (ROADWAY)	EA	10	20%	2	**12**
121	JSP-303E		BRIDGE WEIGHT LIMIT SIGNS	EA	4	20%	0	**4**

THESE ARE ALL BASE BID LANDSCAPING ITEMS. ALL ADD ALT 2 LANDSCAPING ITEMS ARE BOXED ON SHEET 2B-5 OF THIS ATTACHMENT.

THESE ARE ALL BASE BID LANDSCAPING ITEMS. ALL ADD ALT 2 LANDSCAPING ITEMS ARE BOXED ON SHEET 2B-5 OF THIS ATTACHMENT.

ITEM NUMBER	C-020	C-051	C-052	C-053	C-054	C-101	C-102	C-103	C-104	C-105	C-106	C-107	C-108	C-109	C-110
80															
81															
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91	6														
92	6														
93															
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121															

ITEM NUMBER	L-101	L-102	L-103	L-104	L-105	L-106	L-107	L-108	L-109	L-110	L-200	L-300
80												
81												
82												
83												
84												
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101												
102												
103												
104												
105												
106												
107												
108		6,882	1,414	983	1,053							
109	1.00	1.00	1.00	0.40	0.30	0.40	0.40	0.30		4.40		
110		317	219	210		126		210				
111	1				2							
112	1	1			1							
113	1				2							
114												
115												
116												
117												
118												
119												
120												
121												

ITEM NUMBER	C-302	C-303	C-304	C-305	C-306	C-501	C-502	C-503	C-504	C-505	C-506	C-101	C-102	C-103	C-104
80															
81					2,589										
82	3,955	2,001	2,581	2,897											
83															
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114						1									
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116															
117															
118															
119															
120															
121												2		2	

ITEM NUMBER	C-611	C-612	C-613	C-614	C-621	C-622	C-623	C-624	S-101 to S-116	S-201 to S-217	SP-01	SP-02	SP-03	T-101	T-103
80															
81															
82															
83															
84	2,085	2,265	1,655	2,125											
85	27	63	38	22											
86	7	5	3												
87					9,100	9,295	5,155	17,908							
88						555	625								
89	1.90	2.15	1.25	3.70											
90	6	40	21												
91															
92															
93															
94															
95					117	1,705	1,210								
96					96	160									
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120															
121															

ITEM NUMBER	TC-501 to TC-516	U-101	U-102	U-103	U-104	U-105	SP-01	SP-02	SP-03	T-101	W-101 to W-116
80											
81											
82											
83											
84											
85											
86											
87											
88											
89											
90											
91											
92											
93											
94											
95											
96											
97		476		506							
98		3		6							
99		500		530							
100											
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112											
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114											
115										2	
116								65			
117								241			
118								60			
119								80	13		18
120								5	2		3
121											

no.	date	by	chd	description
0	9/19/16	JB	DK	ISSUED FOR BID

FEDERAL ID NUMBER: TAP 9900 677

UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE INFORMATION AND, THEREFORE, THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. THE VERIFICATION OF THE LOCATIONS OF ALL UNDERGROUND UTILITIES AS EITHER SHOWN OR NOT SHOWN ON THESE PLANS SHALL BE THE RESPONSIBILITY OF THE CONTRACTORS, AND SHALL BE LOCATED PRIOR TO CONSTRUCTION.

JOEL J. BIRKE
NUMBER
PE-2014016927
9/19/2016

JOEL J. BIRKE
PROFESSIONAL ENGINEER
LICENSE NO. 2014016927

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McDONNELL
425 SOUTH WOODS MILL ROAD
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314-682-1500
ENG. 000165

date	detailed
September 2016	J. Birke
designed	checked
J. Birke	D. Koscielski

Great Rivers Greenway

GREAT RIVERS GREENWAY
CENTENNIAL GREENWAY PHASE IIA

SUMMARY OF QUANTITIES

project	contract
85395	

drawing	rev.
2B-4 —	0

file: [illegible]

Millimeters
Scale For Microfilming
Inches

Addendum #2
Question 1D

SUMMARY OF QUANTITIES (SHEET 5 OF 6)

ALL "WAYFINDING SIGNAGE" AS SHOWN ON SHEETS W-101 THRU W-116 SHALL BE INCLUDED IN ADD ALT 1. NO BASE BID ITEMS EXIST IN THAT SHEET RANGE.

SUMMARY OF QUANTITIES - ADD ALTERNATE 1 (LOCALLY FUNDED ITEMS)

ITEM NUMBER	BID ITEM	SPEC REFERENCE	DESCRIPTION	UNITS	PROJECT QUANTITY	ENGINEER'S DISCRETION	DISCRETION QUANTITY	BID QUANTITY	SP-02	SP-03	W-101	W-102	W-103	W-104	W-105	W-106	W-107	W-108	W-109	W-110	W-111	W-112	W-113	W-114	W-115	W-116
122	A-JSP-211		WAYFINDING SIGNAGE (SEE JSP FOR SIGN TYPES)	EA	48	10%	5	**53**			11	3	10	1	1	2		2	4	1	5	3	1			4
123	A-JSP-303A		TRAIL SIGNS	SF	48	20%	10	**58**	11	37																
124	A-JSP-303C		GROUND MOUNTED SIGN POST (TRAIL)	EA	16	20%	4	**20**	4	12																
125	A-JSP-303D		PRAIRIE RESTORATION SIGNS	EA	10	0%	0	**10**																		

ALL "PRAIRIE RESORATION SIGNS" AS DESCRIBED IN JSP-303D SHALL BE INCLUDED IN ADD ALT 1.

ALL "TRAIL SIGNS" AND "GROUND MOUNTED SIGN POSTS (TRAIL)" AS DESCRIBED IN JSP-303 SHALL BE INCLUDED IN ADD ALT 1. THESE ITEMS ARE ALL SIGNAGE FOR THE SHARED USE PATH FACILITY. ALL SIGNS FOR THE ROADWAY ARE TO BE INCLUDED IN THE BASE BID.

SUMMARY OF QUANTITIES - ADD ALTERNATE 2 (LOCALLY FUNDED ITEMS)

Refer to Addendum 2, Question 1E Attachment for updated quantities for Item Numbers 128 and 135.

ITEM NUMBER	BID ITEM	SPE REFER	DESCRIPTION	UNITS	PROJECT QUANTITY	ENGINEER'S DISCRETION	DISCRETION QUANTITY	BID QUANTITY	C-102	C-601	C-611	C-612	C-621	C-622
126	B-JSP-25	MoDOT 203	CLASS A EXCAVATION	CY	250	0%	0	**250**		250				
127	B-JSP-26	MoDOT 203	COMPACTING EMBANKMENT	CY	1,828	0%	0	**1,828**		1,828				
128	B-JSP-28	MoDOT 304	TYPE 5 AGGREGATE FOR BASE (4 IN. THICK)	SY	42	0%	0	**42**	2					
129	B-JSP-29	MoDOT 304	TYPE 5 AGGREGATE FOR BASE (8 IN. THICK)	SY	278	0%	0	**278**	278					
130	B-JSP-30	MoDOT 310	GRAVEL (A)	TON	11	0%	0	**11**	11					
131	B-JSP-31	MoDOT 401	BITUMINOUS PAVEMENT MIXTURE PG64-22, (BP-1)	TON	26	0%	0	**26**	26					
132	B-JSP-32	MoDOT 401	BITUMINOUS PAVEMENT MIXTURE PG64-22 (BASE)	TON	26	0%	0	**26**	26					
133	B-JSP-33	MoDOT 408	PRIME COAT	GAL	98	0%	0	**98**	98					
134	B-JSP-34	MoDOT 407	TACK COAT	GAL	24	0%	0	**24**	24					
135	B-JSP-35A	MoDOT 502	CONCRETE PAVEMENT (8" NON-REINF)	SY	2	0%	0	**2**	2					
136	B-JSP-35B	MoDOT 502	CONCRETE PAVEMENT (12" NON-REINF)	SY	40	0%	0	**40**						
137	B-JSP-36A	MSD	MSD AREA INLET	EA	5	0%	0	**5**						
138	B-JSP-37A	MSD	12" CLASS III RCP	LF	483	0%	0	**483**						
139	B-JSP-38A	MSD	12" PRE-CAST CONCRETE FLARED END SECTION	EA	3	0%	0	**3**						
140	B-JSP-54		GROUTED COMPOST	LS	1	0%	0	**1**						
141	B-JSP-72	MoDOT 806	COMPOST SOCK DITCH CHECK	EA	24	0%	0	**24**			19	5		
142	B-JSP-77	MoDOT 806	TYPE 1 TURF REINFORCEMENT MAT	SY	802	0%	0	**802**					476	326
143	B-JSP-201A		DECIDUOUS SHADE / STREET TREE	EA	77	0%	0	**77**						
144	B-JSP-201B		EVERGREEN TREE	EA	24	0%	0	**24**						
145	B-JSP-201C		FLOWERING/ORNAMENTAL TREE	EA	82	0%	0	**82**						
146	B-JSP-201D		SHRUBS AND ORNAMENTAL GRASSES	EA	681	0%	0	**681**						
147	B-JSP-202		PERENNIALS	EA	1,007	0%	0	**1,007**						
148	B-JSP-203		MULCH	CY	171	0%	0	**171**						
149	B-JSP-204		PLANTING SOIL	CY	1,532	0%	0	**1,532**						
150	B-JSP-208		CONCRETE UNIT PAVERS	SF	1,455	0%	0	**1,455**						
151	B-JSP-209A		MULTI-PIECE PRECAST FREESTANDING SEAT WALL	SF	325	0%	0	**325**						
152	B-JSP-209B		SEAT WALL COPING	LF	135	0%	0	**135**						

ITEM NUMBER	L-101	L-102	L-103	L-104	L-105	L-106	L-107	L-108	L-109	L-110	L-300	C-501	C-502	C-503	C-505	T-103	U-101	U-102	U-103	U-104	U-105	U-106	U-107
126																							
127																							
128											40	0	0	0	0	0							
129																							
130																							
131																							
132																							
133																							
134																							
135																							
136																							
137																		[illegible]	[illegible]			[illegible]	[illegible]
138																	39	103	123	191		27	
139																		2	1				
140																							
141																							
142																							
143	2	18	5	2	3	12	8	7		20													
144							5	11		8													
145		23	7	10	3	3	10	8		18													
146	42	180	146		155			158															
147	30	60	243		389			285															
148	4.5	40.0	22.2	2.4	15.3	20.5	23.1	35.5		6.7													
149	36	728	348	93	200	8	11	85		23													
150											1,455												
151											325												
152											135												

ALL OF THESE ITEMS ARE PAY ITEMS USED ELSEWHERE ON THE PROJECT. THE BOXED QUANTITIES ON THIS TABLE ARE SPECIFICALLY FOR THE "SPUR AND OVERLOOK AREA." THIS AREA IS OUTLINED ON THE FOLLOWING SHEET, USING SHEET C-102 AS A TEMPLATE. ALL ITEMS NEEDED TO COMPLETE THIS AREA, INCLUDING BUT NOT LIMITED TO, ARE GRADING, DRAINAGE, PAVING, HARDSCAPING, LANDSCAPING, EROSION CONTROL, ETC. AND ARE TO BE CONSIDERED INCLUDED IN ADD ALT 2.

ALL TREES, SHRUBS, PERENNIALS, MULCH AND PLANTING SOIL ARE TO BE CONSIDERED ADD ALT 2. THE ONLY LANDSCAPING ITEMS INCLUDED IN THE BASE BID ARE BOXED ON SHEET 2B-4 OF THIS ATTACHEMENT AND ARE ITEM NUMBERS 87, 88, 89, 107, 108, 109, AND 110.

ALL OF THESE ITEMS ARE PAY ITEMS USED ELSEWHERE ON THE PROJECT. THE BOXED QUANTITIES ON THIS TABLE ARE SPECIFICALLY FOR THE "SPUR AND OVERLOOK AREA." THIS AREA IS OUTLINED ON THE FOLLOWING SHEET, USING SHEET C-102 AS A TEMPLATE. ALL ITEMS NEEDED TO COMPLETE THIS AREA, INCLUDING BUT NOT LIMITED TO, ARE GRADING, DRAINAGE, PAVING, HARDSCAPING, LANDSCAPING, EROSION CONTROL, ETC. AND ARE TO BE CONSIDERED INCLUDED IN ADD ALT 2.

description
ISSUED FOR BID

00 677

FEDERAL

SHOWN OR NOT SHOWN ON THESE PLANS SHALL BE THE RESPONSIBILITY OF THE CONTRACTORS, AND SHALL BE LOCATED PRIOR TO CONSTRUCTION.

JOEL J. BIRKE
PROFESSIONAL ENGINEER
LICENSE NO. 2014016927

BURNS & McDONNELL
425 SOUTH WOODS MILL ROAD
CHESTERFIELD, MISSOURI 63017
314-682-1500
ENG. 000165

GREAT RIVERS GREENWAY
NTENNIAL GREENWAY PHASE IIA

SUMMARY OF QUANTITIES

85395 | contract

2B-5 — rev. **0**

RN\GreatRivers\85395_CentennialIIA\Design\CADD\Road_Sheets\85395_C-002B-5_SUMMARY OF QUANTITIES.dgn

Addendum #2
Question 1D

no.	date	by	chd	description
0	9/19/16	JB	DK	ISSUED FOR BID

ALL ITEMS IN THIS SHAPE ARE SPECIFICALLY FOR THE "SPUR AND OVERLOOK AREA" AND ARE TO BE CONSIDERED ADD ALT 2.

THESE QUANTITIES ARE OUTLINED ON SHEET 2B-5. ALL ITEMS NEEDED TO COMPLETE THIS AREA, INCLUDING BUT NOT LIMITED TO, ARE GRADING, DRAINAGE, PAVING, HARDSCAPING, LANDSCAPING, EROSION CONTROL, ETC. AND ARE TO BE CONSIDERED INCLUDED IN ADD ALT 2.

NORTH

0 20' 40'
SCALE IN FEET

N/F STATE OF MISSOURI

2 / L-102 PAVER CIRCLE AND SEAT WALL (SEE LANDSCAPING PLANS)

PT STA 1+15.64

PC STA 1+55.64

4'x4' - 8" CONCRETE PAD FOR SITE FURNITURE (2 SY) 1 / C-504

CURVE #104

PRC STA 1+94.55

2' FBD

1+00

CURVE #103

PRC STA 0+86.73

PRC STA 0+62.71

SPUR CL

2+00

PRC STA 2+18.57

8' WIDE SPUR

CURVE #101

CURVE #102

2' FBD

CURVE #105

CURVE #106

PC STA 0+36.19

PT STA 2+45.09

MATCHLINE STATION 14+75

15+00

PT STA 15+37.33

16+00

17+00

18+00

CP#110

110

CP#112

112

10' WIDE SHARED USE PATH

BEGIN SPUR CONSTRUCTION
SPUR STA: 0+05.00

4' FBD

END SPUR CONSTRUCTION
SPUR STA: 2+76.28

4' FBD

CURVE #2

MATCHLINE STATION 18+75

PRC STA 18+68.19

SUP CL

0010

2+81

CURVE #1

SUP STA: 16+25.00
SPUR STA: 0+00.00

4' FBD

SUP STA: 17+75.00
SPUR STA: 2+81.28

BORING 4

SLOPE LIMITS (TYP)

PC STA 17+83.51

EXIST TREE LINE (TYP)

EXIST DETENTION BASIN

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FEDERAL ID NUMBER: TAP 9900 677

STATE OF MISSOURI
JOEL J. BIRKE
NUMBER PE-2014016927
PROFESSIONAL ENGINEER
9/19/2016

JOEL J. BIRKE
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LICENSE NO. 2014016927

BURNS McDONNELL
425 SOUTH WOODS MILL ROAD
CHESTERFIELD, MISSOURI 63017
314-682-1500
ENG. 000165

date	detailed
September 2016	J. Birke
designed	checked
J. Birke	D. Koscielski

Great Rivers Greenway

GREAT RIVERS GREENWAY
CENTENNIAL GREENWAY PHASE IIA

PLAN SHEET

project	contract
85395	

drawing **C-102** — rev. **0**

file: Z:\Clients\TRN\GreatRivers\85395_Centennial\Design\CADD\Road_Sheets\85395_C-102_Plan Sheet.dgn

Millimeters
Scale For Microfilming
Inches

Addendum #2
Question 1D

SUMMARY OF QUANTITIES (SHEET 6 OF 6)

ALL DECORATIVE PEDESTRIAN GUARDRAIL AS CALLED OUT ON THE PLANS IS INCLUDED IN ADD ALT 3. THE BASE BID OPTION IS TO INSTALL "60-INCH CHAIN LINK FENCE ON RETAINING WALLS AND SLOPES" AS SHOWN ON ITEM NUMBER 71 ON SHEET 2B-3.

SUMMARY OF QUANTITIES - ADD ALTERNATE 3 (LOCALLY FUNDED ITEM)

ITEM NUMBER	BID ITEM	SPEC REFERENCE	DESCRIPTION	UNITS	PROJECT QUANTITY	ENGINEER'S DISCRETION	DISCRETION QUANTITY	BID QUANTITY
153	C-JSP-46		DECORATIVE PEDESTRIAN GUARDRAIL	LF	1,533	0%	0	**1,533**

ITEM NUMBER	C-020	C-051	C-052	C-053	C-054	C-101	C-102	C-103	C-104	C-105	C-106	C-107	C-108	C-109	C-110	L-101	L-102	L-103	L-104	L-105	L-106	L-107	L-108	L-109	L-110	L-200	L-300
153								88	176	253	92																

ITEM NUMBER	C-302	C-303	C-304	C-305	C-306	C-501	C-502	C-503	C-504	C-505	C-506	C-601	C-602	C-603	C-604	C-611	C-612	C-613	C-614	C-621	C-622	C-623	C-624	S-101 to S-116	S-201 to S-217	SP-01	SP-02	SP-03	T-101	T-103	TC-501 to TC-516	U-101	U-102	U-103	U-104	U-105	U-106	U-107	U-108	U-109	U-110
153	224	160	192	144	204																																				

SUMMARY OF QUANTITIES - ADD ALTERNATE 4 (LOCALLY FUNDED ITEM)

ITEM NUMBER	BID ITEM	SPEC REFERENCE	DESCRIPTION	UNITS	PROJECT QUANTITY	ENGINEER'S DISCRETION	DISCRETION QUANTITY	BID QUANTITY
154	D-JSP-210		BIKE SHELTER	EA	1	0%	0	**1**

ITEM NUMBER	C-020	C-051	C-052	C-053	C-054	C-101	C-102	C-103	C-104	C-105	C-106	C-107	C-108	C-109	C-110	L-101	L-102	L-103	L-104	L-105	L-106	L-107	L-108	L-109	L-110	L-200	L-300
154																											

ITEM NUMBER	C-302	C-303	C-304	C-305	C-306	C-501	C-502	C-503	C-504	C-505	C-506	C-601	C-602	C-603	C-604	C-611	C-612	C-613	C-614	C-621	C-622	C-623	C-624	S-101 to S-116	S-201 to S-217	SP-01	SP-02	SP-03	T-101	T-103	TC-501 to TC-516	U-101	U-102	U-103	U-104	U-105	U-106	U-107	U-108	U-109	U-110
154																														1											

SUMMARY OF QUANTITIES - ADD ALTERNATE 5 (LOCALLY FUNDED ITEM)

ITEM NUMBER	BID ITEM	SPEC REFERENCE	DESCRIPTION	UNITS	PROJECT QUANTITY	ENGINEER'S DISCRETION	DISCRETION QUANTITY	BID QUANTITY
155	E-JSP-154		YEAR 1 LANDSCAPE MAINTENANCE	EA	1	0%	0	**1**

SUMMARY OF QUANTITIES - ADD ALTERNATE 6 (LOCALLY FUNDED ITEM)

ITEM NUMBER	BID ITEM	SPEC REFERENCE	DESCRIPTION	UNITS	PROJECT QUANTITY	ENGINEER'S DISCRETION	DISCRETION QUANTITY	BID QUANTITY
156	F-JSP-155		YEAR 2 LANDSCAPE MAINTENANCE	EA	1	0%	0	**1**

SUMMARY OF QUANTITIES - ADD ALTERNATE 7 (LOCALLY FUNDED ITEM)

ITEM NUMBER	BID ITEM	SPEC REFERENCE	DESCRIPTION	UNITS	PROJECT QUANTITY	ENGINEER'S DISCRETION	DISCRETION QUANTITY	BID QUANTITY
157	G-JSP-156		YEAR 3 LANDSCAPE MAINTENANCE	EA	1	0%	0	**1**

no.	date	by	chd	description

FEDERAL ID NUMBER: TAP 9900 677

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9/19/2016

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date September 2016	detailed J. Birke
designed J. Birke	checked D. Koscielski

Great Rivers Greenway

GREAT RIVERS GREENWAY
CENTENNIAL GREENWAY PHASE IIA

SUMMARY OF QUANTITIES

project 85395	contract
drawing **2B-6**	rev. 0

Addendum #2
Question 1E

SUMMARY OF QUANTITIES (SHEET 1 OF 6)

1600

1226

SUMMARY OF QUANTITIES (FEDERALLY REIMBURSED ITEMS)

ITEM NUMBER	BID ITEM	SPEC REFERENCE	DESCRIPTION	UNITS	PROJECT QUANTITY	ENGINEER'S DISCRETION	DISCRETION QUANTITY	BID QUANTITY
1	JSP-28	MoDOT 304	TYPE 5 AGGREGATE FOR BASE (4 IN. THICK)	SY	~~1,957~~	0%	0	~~1,957~~ 1600
2	JSP-35A	MoDOT 502	CONCRETE PAVEMENT (8" NON-REINF)	SY	~~1,583~~	0%	0	~~1,583~~ 1226
3	JSP-39	MoDOT 605	4" PERFORATED PVC UNDERDRAIN	LF	197	5%	10	207
4	JSP-40	MoDOT 605	OUTLET PIPES AND SPLASH PADS	EA	2	0%	0	2
5	JSP-41	MoDOT 606	GUARDRAIL TYPE A	LF	250.0	0%	0	250.0
6	JSP-42	MoDOT 606	BRIDGE ANCHOR SECTION	EA	5	0%	0	5
7	JSP-43	MoDOT 606	TRANSITION SECTION	EA	5	0%	0	5
8	JSP-44	MoDOT 606	TYPE A CRASHWORTHY END TERMINAL	EA	3	0%	0	3
9	JSP-50	MoDOT 608	6" CONCRETE MEDIAN STRIP	SY	16	0%	0	16
10	JSP-51	MoDOT 609	CONCRETE CURB TYPE S	LF	376	0%	0	376
11	JSP-52	MoDOT 609	CURB AND GUTTER TYPE B	LF	83	0%	0	83
12	JSP-55	MoDOT 617	CONCRETE TRAFFIC BARRIER, TYPE D	LF	643	0%	0	643
13	JSP-56	MoDOT 617	CONCRETE TRAFFIC BARRIER, TYPE C (RETAINING WALL)	LF	359	0%	0	359
14	JSP-57	MoDOT 617	CONCRETE TRAFFIC BARRIER, TYPE C	LF	154	0%	0	154

ITEM NUMBER	C-020	C-051	C-052	C-053	C-054	C-101	C-102	C-103	C-104	C-105	C-106	C-107	C-108	C-109	C-110	L-101	L-102	L-103	L-104	L-105	L-106	L-107	L-108	L-109	L-110
1						526		109		154	57		31				~~195~~								
2						492		75		154	57						~~195~~								
3																									
4																									
5																									
6										1															
7										1															
8										1															
9																									
10																									
11													48												
12																									
13										232	87														
14						154																			

ITEM NUMBER	L-200	L-300	C-302	C-303	C-304	C-305	C-306	C-501	C-502	C-503	C-504	C-505	C-506	C-601	C-602	C-603	C-604	C-611	C-612	C-613	C-614
1		~~162~~						109	433	132		2									
2		~~162~~						11	282	106		2									
3																					
4																					
5			50.0		200.0																
6			1	1	1	1															
7			1	1	1	1															
8			1		1																
9								16													
10								18	231	65		62									
11								35													
12			187	126	159	171															
13			20	20																	
14																					

ITEM NUMBER	C-621	C-622	C-623	C-624	S-101 to S-116	S-201 to S-217	SP-01	SP-02	SP-03	T-101	T-103	TC-501 to TC-516	U-101	U-102	U-103	U-104	U-105	U-106	U-107	U-108	U-109	U-110
1											47											
2											47											
3													197									
4													2									
5																						
6																						
7																						
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9																						
10																						
11																						
12																						
13																						
14																						

no.	date	by	chd	description
0	9/19/16	JB	DK	ISSUED FOR BID

FEDERAL ID NUMBER: TAP 9900 677

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JOEL J. BIRKE
NUMBER
PE-2014016927

9/19/2016

JOEL J. BIRKE
PROFESSIONAL ENGINEER
LICENSE NO. 2014016927

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314-682-1500
ENG. 000165

date
September 2016

detailed
J. Birke

designed
J. Birke

checked
D. Koscielski

Great Rivers Greenway

GREAT RIVERS GREENWAY
CENTENNIAL GREENWAY PHASE IIA

SUMMARY OF QUANTITIES

project
85395

contract

drawing
2B-1

—

rev.
0

file: Z:\Clients\TRN\GreatRivers\85395_CentennialIIA\Design\CADD\Road_Sheets\85395_C-002B-1_SUMMARY OF QUANTITIES.[illegible]

Millimeters

Scale For Microfilming

Inches

Addendum #2
Question 1E

SUMMARY OF QUANTITIES (SHEET 5 OF 6)

SUMMARY OF QUANTITIES - ADD ALTERNATE 1 (LOCALLY FUNDED ITEMS)

ITEM NUMBER	BID ITEM	SPEC REFERENCE	DESCRIPTION	UNITS	PROJECT QUANTITY	ENGINEER'S DISCRETION	DISCRETION QUANTITY	BID QUANTITY	C-020	C-051	C-052	C-053	C-054	C-101	C-102	C-103	C-104	C-105	C-106	C-107	C-108	C-109	C-110	L-101	L-102	L-103	L-104	L-105	L-106	L-107	L-108	L-109	L-110	L-200	L-300	C-302	C-303	C-304	C-305	C-306	S-101 to S-113	S-201 to S-215	SP-01	SP-02	SP-03	T-101	T-103	W-101	W-102	W-103	W-104	W-105	W-106	W-107	W-108	W-109	W-110	W-111	W-112	W-113	W-114	W-115	W-116
122	A-JSP-211		WAYFINDING SIGNAGE (SEE JSP FOR SIGN TYPES)	EA	48	10%	5	53																																											11	3	10	1	1	2		2	4	1	5	3	1			4
123	A-JSP-303A		TRAIL SIGNS	SF	48	20%	10	58																																															11	37																		
124	A-JSP-303C		GROUND MOUNTED SIGN POST (TRAIL)	EA	16	20%	4	20																																															4	12																		
125	A-JSP-303D		PRAIRIE RESTORATION SIGNS	EA	10	0%	0	10																																																																																																																																												

SUMMARY OF QUANTITIES - ADD ALTERNATE 2 (LOCALLY FUNDED ITEMS)

ITEM NUMBER	BID ITEM	SPEC REFERENCE	DESCRIPTION	UNITS	PROJECT QUANTITY	ENGINEER'S DISCRETION	DISCRETION QUANTITY	BID QUANTITY	C-020	C-051	C-052	C-053	C-054	C-101	C-102	C-103	C-104	C-105	C-106	C-107	C-108	C-109	C-110	L-101	L-102	L-103	L-104	L-105	L-106	L-107	L-108	L-109	L-110	L-200	L-300
126	B-JSP-25	MoDOT 203	CLASS A EXCAVATION	CY	250	0%	0	250																											
127	B-JSP-26	MoDOT 203	COMPACTING EMBANKMENT	CY	1,828	0%	0	1,828																											
128	B-JSP-28	MoDOT 304	TYPE 5 AGGREGATE FOR BASE (4 IN. THICK)	SY	~~42~~	0%	0	~~42~~ 204							2																				~~40~~ 202
129	B-JSP-29	MoDOT 304	TYPE 5 AGGREGATE FOR BASE (8 IN. THICK)	SY	278	0%	0	278							278																				
130	B-JSP-30	MoDOT 310	GRAVEL (A)	TON	11	0%	0	11							11																				
131	B-JSP-31	MoDOT 401	BITUMINOUS PAVEMENT MIXTURE PG64-22, (BP-1)	TON	26	0%	0	26							26																				
132	B-JSP-32	MoDOT 401	BITUMINOUS PAVEMENT MIXTURE PG64-22 (BASE)	TON	26	0%	0	26							26																				
133	B-JSP-33	MoDOT 408	PRIME COAT	GAL	98	0%	0	98							98																				
134	B-JSP-34	MoDOT 407	TACK COAT	GAL	24	0%	0	24							24																				
135	B-JSP-35A	MoDOT 502	CONCRETE PAVEMENT (8" NON-REINF)	SY	~~2~~	0%	0	~~2~~ 164							2																				162
136	B-JSP-35B	MoDOT 502	CONCRETE PAVEMENT (12" NON-REINF)	SY	40	0%	0	40																											40
137	B-JSP-36A	MSD	MSD AREA INLET	EA	5	0%	0	5																											
138	B-JSP-37A	MSD	12" CLASS III RCP	LF	483	0%	0	483																											
139	B-JSP-38A	MSD	12" PRE-CAST CONCRETE FLARED END SECTION	EA	3	0%	0	3																											
140	B-JSP-54		GROUTED COMPOST	LS	1	0%	0	1																											
141	B-JSP-72	MoDOT 806	COMPOST SOCK DITCH CHECK	EA	24	0%	0	24																											
142	B-JSP-77	MoDOT 806	TYPE 1 TURF REINFORCEMENT MAT	SY	802	0%	0	802																											
143	B-JSP-201A		DECIDUOUS SHADE / STREET TREE	EA	77	0%	0	77																2	18	5	2	3	12	8	7		20		
144	B-JSP-201B		EVERGREEN TREE	EA	24	0%	0	24																						5	11		8		
145	B-JSP-201C		FLOWERING/ORNAMENTAL TREE	EA	82	0%	0	82																	23	7	10	3	3	10	8		18		
146	B-JSP-201D		SHRUBS AND ORNAMENTAL GRASSES	EA	681	0%	0	681																42	180	146		155			158				
147	B-JSP-202		PERENNIALS	EA	1,007	0%	0	1,007																30	60	243		389			285				
148	B-JSP-203		MULCH	CY	171	0%	0	171																4.5	40.0	22.2	2.4	15.3	20.5	23.1	35.5		6.7		
149	B-JSP-204		PLANTING SOIL	CY	1,532	0%	0	1,532																36	728	348	93	200	8	11	85		23		
150	B-JSP-208		CONCRETE UNIT PAVERS	SF	1,455	0%	0	1,455																											1,455
151	B-JSP-209A		MULTI-PIECE PRECAST FREESTANDING SEAT WALL	SF	325	0%	0	325																											325
152	B-JSP-209B		SEAT WALL COPING	LF	135	0%	0	135																											135

ITEM NUMBER	C-302	C-303	C-304	C-305	C-306	C-501	C-502	C-503	C-504	C-505	C-506	C-601	C-602	C-603	C-604	C-611	C-612	C-613	C-614	C-621	C-622	C-623	C-624	S-101 to S-116	S-201 to S-217	SP-01	SP-02	SP-03	T-101	T-103	TC-501 to TC-516	U-101	U-102	U-103	U-104	U-105	U-106	U-107	U-108	U-109	U-110
126												250																													
127												1,828																													
128						0	0	0		0																				0											
129																																									
130																																									
131																																									
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134																																									
135																																									
136																																									
137																																	2	1			1	1			
138																																39	103	123	191		27				
139																																	2	1							
140																																									
141																19	5																								
142																				476	326																				
143																																									
144																																									
145																																									
146																																									
147																																									
148																																									
149																																									
150																																									
151																																									
152																																									

no.	date	by	chd	description
0	9/19/16	JB	DK	ISSUED FOR BID

FEDERAL ID NUMBER: TAP 9900 677

UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE INFORMATION AND, THEREFORE, THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. THE VERIFICATION OF THE LOCATIONS OF ALL UNDERGROUND UTILITIES AS EITHER SHOWN OR NOT SHOWN ON THESE PLANS SHALL BE THE RESPONSIBILITY OF THE CONTRACTORS, AND SHALL BE LOCATED PRIOR TO CONSTRUCTION.

JOEL J. BIRKE
NUMBER PE-2014016927
9/19/2016

JOEL J. BIRKE
PROFESSIONAL ENGINEER
LICENSE NO. 2014016927

BURNS McDONNELL

425 SOUTH WOODS MILL ROAD
CHESTERFIELD, MISSOURI 63017
314-682-1500
ENG. 000165

date September 2016	detailed J. Birke
designed J. Birke	checked D. Koscielski

Great Rivers Greenway

GREAT RIVERS GREENWAY
CENTENNIAL GREENWAY PHASE IIA

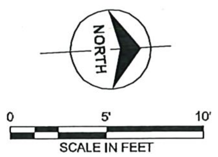
SUMMARY OF QUANTITIES

project 85395	contract
drawing 2B-5	— rev. 0

file: Z:\Clients\TRN\GreatRivers\85395_CentennialIIA\Design\CADD\Road_Sheets\85395_C-002B-5_SUMMARY OF QUANTITIES

Millimeters
Scale For Microfilming
Inches

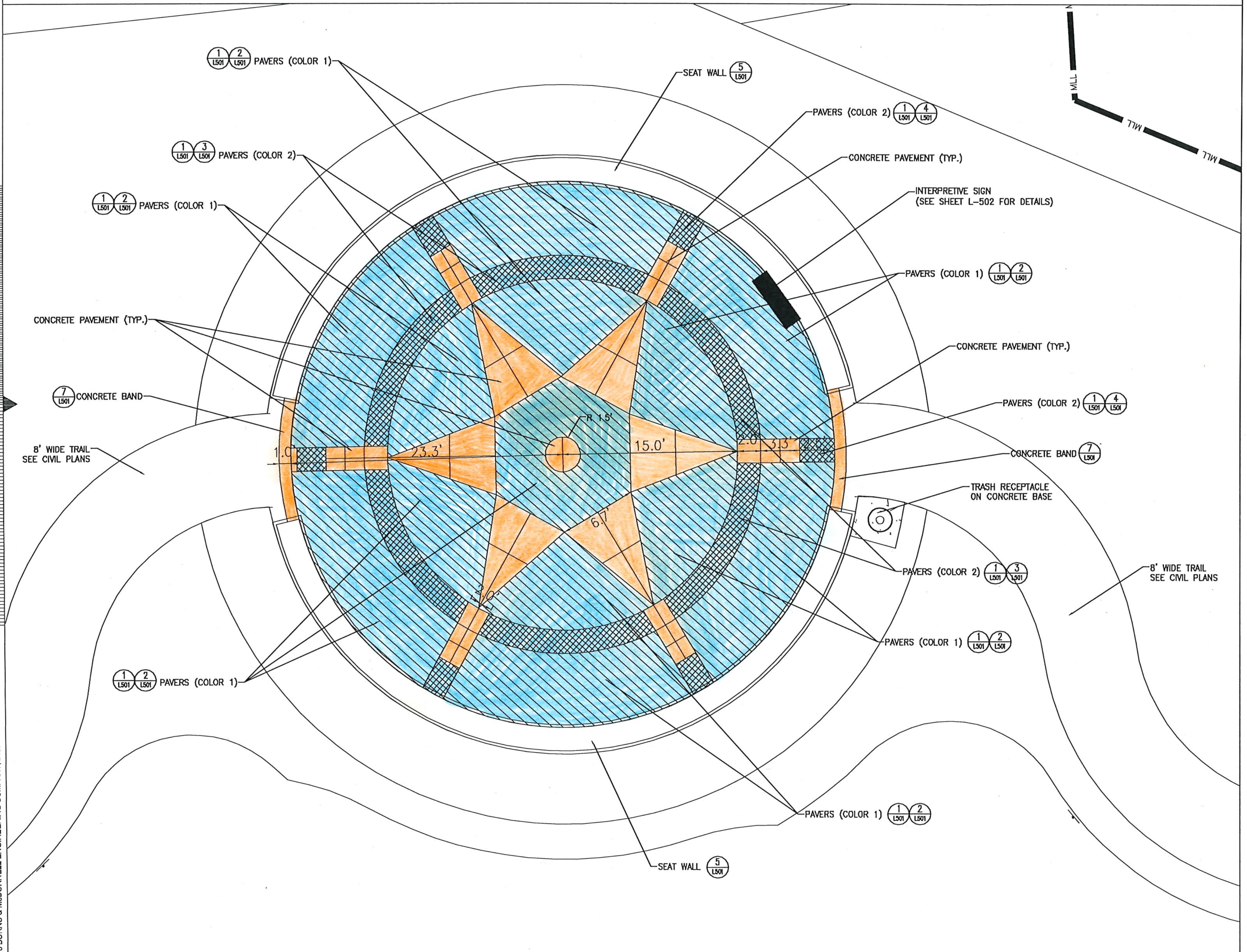
Addendum #2
Question 1E



GENERAL NOTES:
1. SEE SHEET L-501 FOR OVERLOOK DETAILS.
2. SEE SHEET L-502 FOR INTERPRETIVE SIGN DETAILS.

AREA SUMMARY:
PAVERS – COLOR 1 +/– 1,240 S.F.
PAVERS – COLOR 2 +/– 215 S.F.
CONCRETE +/– 256 S.F.

HARDSCAPE QUANTITIES	TOTAL		
ITEM DESCRIPTION	UNIT	QUANTITY	REMARKS
CONCRETE UNIT PAVERS	SF	1,455	
CONCRETE PAVEMENT AT OVERLOOK	SF	256	
FREESTANDING SEAT WALL	SF	325	
SEAT WALL COPING	LF	135	



7 **OVERLOOK ENLARGEMENT**
SCALE: 1"=5'–0" REF. DWG. L-102

LEGEND:

8" NON-REIN CONC PVMT ON 4" TYPE 5 AGG. BASE (SETTING BED FOR PAVERS)

12" NON-REIN CONC PVMT ON 4" TYPE 5 AGG. BASE

no.	date	by	chd	description
0	9/19/16	JH	JR	ISSUED FOR BID

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FEDERAL ID NUMBER: TAP 9900 677

Landscape Architect

cole
+ ST. LOUIS
401 S. 18th Street
Suite 200
St. Louis, MO 63103
314.984.9887 tel
CIVIL ENGINEERING / SURVEYING / PLANNING / LANDSCAPE ARCHITECTURE

MoDOT

BURNS McDONNELL
425 SOUTH WOODS MILL ROAD
CHESTERFIELD, MISSOURI 63017
314-682-1500
ENG. 000165

date: September 2016	detailed: J. Horvath
designed: J. Horvath / J. Roach	checked: J. Horvath / J. Roach

Great Rivers Greenway

GREAT RIVERS GREENWAY
CENTENNIAL GREENWAY PHASE IIA

PAVEMENT PLAN

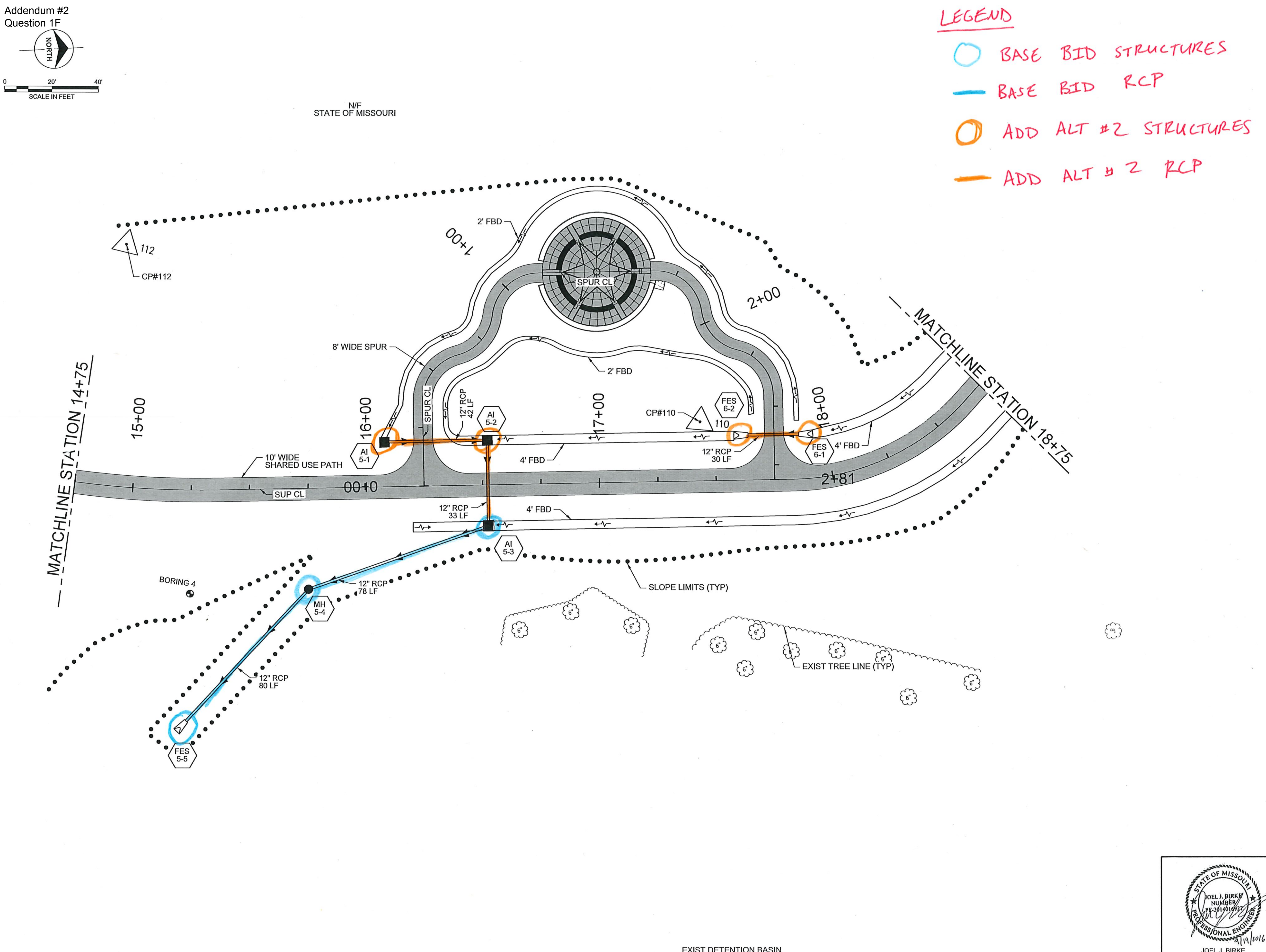
project: 85395	contract:
drawing: L-300	rev.: 0

file:

STATE OF MISSOURI
JOSEPH C. HORVATH, III
NUMBER LA-2007013280
LANDSCAPE ARCHITECT
9/19/16

JOSEPH C. HORVATH, III
LANDSCAPE ARCHITECT
LICENSE NO. LA-2007013280

Addendum #2
Question 1F



no.	date	by	chd	description
0	9/19/16	JB	DK	ISSUED FOR BID

FEDERAL ID NUMBER: TAP 9900 677

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MoDOT

BURNS McDONNELL
425 SOUTH WOODS MILL ROAD
CHESTERFIELD, MISSOURI 63017
314-682-1500
ENG. 000165

date: September 2016
detailed: J. Birke
designed: J. Birke
checked: D. Koscielski

Great Rivers Greenway

GREAT RIVERS GREENWAY
CENTENNIAL GREENWAY PHASE IIA

UTILITY PLAN SHEET

project: 85395
contract:
drawing: U-102 —
rev.: 0

JOEL J. BIRKE
PROFESSIONAL ENGINEER
LICENSE NO. 2014016927

JSP 64 – MECHANICALLY STABILIZED EARTH WALL SYSTEMS

01. SCOPE

A. This work shall consist of furnishing and constructing Mechanically Stabilized Earth Wall Systems in accordance with these specifications, as shown on the plans or as directed.

B. Maximum settlement allowed for Mechanically Stabilized Earth Wall Systems shall not exceed 4.5 inches.

02. DESIGN

A. Design procedures shall follow all requirements and conform to the current edition of the Missouri Standard Specifications for Highway Construction. (Section 720)

B. Only the Mechanically Stabilized Earth Wall Systems shown in the Missouri Department of Transportation Bridge Office pre-qualified products listing will be allowed for use by the contractor. The bridge prequalified products list may be obtained from the bridge office or MoDOT's website. Any deviation from the prequalified wall system details previously submitted to the Bridge Office shall be specifically outlined in the cover letter submitted with the design plans, details, and computations.

03. MATERIALS

All materials shall conform to the Missouri Standard Specifications for Highway Construction, Division 1000 Materials Details, specifically as follows:

Section 501 – Concrete
Section 1010 – Select Granular Backfill for Structural Systems
Section 1011 – Geotextile
Section 1013 – Miscellaneous Drainage Material
Section 1036 – Reinforcing Steel for Concrete
Section 1039 – Resin Anchor Systems
Section 1052 –Mechanically Stabilized Earth Wall System Components
Section 1059 – Sacrificial Graffiti Protection System

04. EXECUTION

REVIEW RETAINING WALL MOCK-UP CONFERENCE
Conduct conference at Project site. Review methods and procedures related to retaining wall construction, but not limited to, the following:

a. Review requirements for retaining wall work, including restriction of traffic during installation period and for remainder of construction period.

b. Conference to take place after 100 square feet of retaining wall is installed. Contractor shall not proceed with additional retaining wall installation until mock-up is approved.

c. Any cost for mock-up shall be incidental to the project. This includes removal and reconstruction of mock-up.

Contractor shall carefully construct the Mechanically Stabilized Earth Wall Systems as indicated on the plans and at locations designated by Engineer. Contractor shall verify the limits of the Mechanically Stabilized Earth Wall Systems prior to placement.

Contractor shall apply graffiti protection to the exposed face wall. Materials shall conform to the Missouri Department of Transportation current edition of Standard Specifications for Highway Construction (*Section 1059.40*). Execution requirements shall conform to the Missouri Department of Transportation current edition of Standard Specifications for Highway Construction (*Section 711).*

MSE Wall Aesthetic Requirements

4.1.0 Materials.

4.1.1 Shop Drawings. Contractor shall provide complete shop drawings of all aesthetic treatments.

4.1.2 Formwork. Formwork for aesthetic treatment of the cast-in-place concrete, concrete facing panels for the MSE wall systems, and architectural elements shall be a type that produces uniform results consistent in both, pattern and depth of relief with the project design aesthetics. The contractor shall be responsible to coordinate the aesthetic treatments of all components to meet the design aesthetic criteria described herein and as shown on plans.

Shape of panels shall be rectangular or match the panel shapes of these two existing bridges:

- Heritage Crossing over Route 364
- Eastbound Route 94 over ramp from Westbound Route 364 to St. Peters Parkway

At the contractor's option, panels may be form lined. There will be no additional payment for form lining. No mixing of pattern numbers or manufacturers will be permitted. The form liner pattern shall be a stacked ashlar cut stone pattern similar to the existing bridge at Harvester Road over Route 364 or approved equal.

4.1.3 Form Ties. Wall form ties shall be placed in a uniform pattern. In surface areas receiving the aesthetic treatment form liner, all form ties shall be placed in the simulated stone surface. Form ties shall be fiberglass ties that shall hold the forms in the correct alignment. The color of the ties shall closely match the concrete wall color. Ties shall be ground flush with the surface of concrete prior to pressure washing.

4.1.4 Form Release Agent. Form release agents shall be the manufacturer's standard non-staining, non-petroleum based and compatible with surface sealer finish coating. Form release agents shall be applied to all surfaces of the form liner at the manufacturer's recommended rate.

4.1.5 Gaskets. Closed cell compressible neoprene of such thickness as is appropriate to assure leakage prevention shall be used to prevent joint leakage. One face shall be coated with an adhesive tape to assure proper positioning at the time of form closure. The neoprene shall be sufficiently compressible as to assure virtual "zero" separation of the forms as a result of the use of this product.

4.1.6 Aggregates.

4.1.6.1 Aggregate Source. The aggregate incorporated into the concrete mix of all aesthetic concrete MSE Wall components shall be from the same source. The aggregate incorporated into the concrete mix of all aesthetic concrete bridge components shall be from the same source as the balance of the bridge concrete work. The purpose for this provision is to ensure uniformity of materials and color once areas are pressure washed and aggregates become exposed. Single-source shall be interpreted as one contiguous rock quarry, gravel pit or dredging location. This provision in no way alters the specification requirements for aggregate quality specified in other sections of the project specifications.

4.1.6.2 Aggregate Gradation. Concrete mixes supplied for the construction of the aesthetic treatments shall be in accordance with the following requirements. The concrete aggregate for the aesthetic treatment mix shall be Gradation E in accordance with Sec 1005 for any areas where

aesthetic treatment is formed monolithically with the structure. This requirement for aggregate size is necessary to permit concrete mixture to flow freely and fill completely into reveals and form liner proposed in the aesthetic treatment. Gradation E aggregate shall meet the aggregate source requirements.

4.1.7 Joint Materials. Bond breaker material shall be polyethylene tape, coated paper, metal foil or similar type materials. The backup material shall be compressible, non-shrink, non-reactive with the sealant and non-absorptive material type such as extruded butyl or polychloroprene foam rubber. The joint sealant shall be an elastomeric, multi-component sealant, in accordance with Federal Specification TT-S-227, Type II. The sealant color shall match the pressure washed concrete surface color.

4.2.0 Construction Requirements.

4.2.1 Reveals and Texture. All reveals and texture shall be continuous from element to element through construction joints and around corners. Techniques shall be utilized to ensure true continuous texture between separate elements. Sand blasting will not be permitted for cleaning concrete surface, as sand blasting will reduce the special surface texture specified. Pressure washing with water is the preferred method of removing laitance. Pressure washing cleaning shall provide a minimum pressure of 3000 psi (21 MPa) at a rate of 3 to 4 gallons per minute (11.4 to 15.1 L/min) using a fan nozzle held perpendicular to the surface at a distance of 2 to 3 feet (0.6 to 0.9 m). The completed surface shall be free of blemishes, discolorations, surface voids and conspicuous form marks to the satisfaction of the engineer.

4.2.2 Sample Test Panels. Sample test panels shall be constructed to demonstrate the contractor's workmanship for all form liner textures and patterns as shown on the plans. The sample test panels may also be used for demonstration special surface finish if approved by the engineer. The architectural surface treatment of the finished work shall achieve the same final effect as demonstrated on the approved sample test panels. The materials used in construction of the sample test panels shall be in accordance with all standards as listed in this specification and the plans. The concrete mix shall be consistent with the project specifications and criteria. The minimum size of the sample test panels shall be 6 x 6 feet x 8 inches (1.8 x 1.8 x 0.2 m). The form liner finish shall be demonstrated in a vertical strip covering one-half to three-quarters of the sample test panel(s).

4.2.3 Patches. Holes and defects in concrete surface shall be filled within 48 hours of when the forms are removed. The same patching materials and techniques shall be used that were approved on sample test panels. The patches shall be made with a stiff mortar made with the same material

sources as the concrete. The mortar mix proportions shall be adjusted so the dry patch matches the dry adjacent concrete. White cement shall be added to the mortar mix if necessary to lighten the mortar mix.

4.2.4 Joints. Joints shall be sealed when the sealant, air and concrete temperatures are above 40°F (4°C). Joints shall be primed and filled flush with joint sealant in accordance with the manufacturer's recommendation. All construction control and expansion joints shall occur within the vertical joints as shown in the elevation views on the plans. All vertical expansion joints shall be filled with preformed fiber expansion joint filler covered with bond break tape and sealed with elastomeric, multi-component sealant.

All materials and construction requirements shall conform to the Missouri Department of Transportation current edition of Standard Specifications for Highway Construction. *(Section 720)*

05. METHOD OF MEASUREMENT

Measurement of Mechanically Stabilized Earth Wall Systems will be made to the nearest square foot. The quantity to be paid will be measured from the top of the wall to the top of the leveling pad wall as shown on the plans. No adjustments in the measured quantity will be permitted for additional wall area required to meet the minimum wall elevations shown the plans for any particular wall system.

No measurement will be made for required excavation for placement of the concrete leveling pad for the Mechanically Stabilized Earth Wall Systems. All other excavation required for the construction of the Small Block Retaining Wall system will be included in the trail items.

06. BASIS OF PAYMENT

Payment for the above described work, including all material, additional concrete, equipment, labor, graffiti protection system, aesthetic requirements, and any other incidental work necessary to complete this item, will be considered completely covered by the contract unit price for "**Mechanically Stabilized Earth Wall Systems**".

The accepted quantity of **"Mechanically Stabilized Earth Wall Systems"**, complete in place, will be paid for at the contract unit price for each of the pay items included in the contract. Payment for "Mechanically Stabilized Earth Wall Systems" will be made at the contract unit price, and paid for under item number: **JSP-64**.

<< End of JSP-64 >>

JSP-418 – PEDESTRIAN TRUSS SUPERSTRUCTURE

01. GENERAL

1.1 Scope

These specifications are for a fully engineered clear span bridge of steel construction and shall be regarded as minimum standards for design and construction.

1.2 Qualified Suppliers

Each bidder is required to identify their intended bridge supplier as part of the bid submittal. Qualified suppliers must have at least 5 years experience fabricating these type structures.

Suppliers must be approved by the owner's agent or engineer 7 calendar days prior to bid.

The contractor must provide the following documentation, for any proposed supplier, at least 14 calendar days prior to bid:

* PEDESTRIAN TRUSS SUPERSTRUCTURE QUESTIONNAIRE ATTACHED TO JSP-418

* Product Literature

* All documentation to insure the proposed supplier will be in compliance with these specifications. This shall include:

  - Representative design calculations
  - Representative drawings
  - Splicing and erection procedures
  - Warranty information
  - Inspection and Maintenance procedures
  - AISC Shop Certification
  - Welder Qualifications
  - Painter Qualifications
  - Manufacturer Data Sheets for paint system components

* Proposed suppliers must have at least five (5) years experience designing and fabricating these type structures and a minimum of five (5) successful bridge projects, of similar construction, each of which has been in service at least three (3) years. List the location, bridge size, owner, and a contact for reference for each project.

  The engineer will evaluate and verify the accuracy of the submittal prior to bid. If

the engineer determines that the qualifying criteria have not been met, the contractor's proposed supplier shall be rejected. The engineer's ruling shall be final.

02. GENERAL FEATURES OF DESIGN

2.1 Span

Bridge span shall be as indicated on contract drawings. There shall be a clear dimension at 60 degrees Fahrenheit of 3.5” from end of floor beam to face of back wall at each end of the bridge. See substructure plans and expansion device plans for details.

2.2 Clear Width

Clear travel width of the bridge shall be 10'-0" and shall be as measured from the extreme inside face of bridge truss or railing system.

2.3 Bridge System Type

Bridge(s) shall be designed as a modified Pratt truss that has parallel top and bottom chords, one (1) diagonal per panel and plumb end vertical members (see detail below). Interior vertical members shall be equally spaced. Spacing between interior vertical members shall not be less than the chord-to-chord height nor greater than 150% of the chord-to-chord height. Interior vertical members may be either plumb or perpendicular to the chord faces.

2.3.1 Bridge(s) shall be designed utilizing an H-Section configuration where the floor beams are placed up inside the trusses and attached to the truss verticals.

2.3.2 The bridge manufacturer shall determine the distance from the top of the deck to the top and bottom truss members based upon the dimensions given in the contract drawings.

2.4 Member Components

All members of the vertical trusses (top and bottom chords, verticals, and diagonals) shall be fabricated from square and/or rectangular structural steel tubing. Other structural members and bracing shall be fabricated from structural steel shapes or square and rectangular structural steel tubing. The top and bottom chords shall be at least 2” larger than the verticals and diagonals in the horizontal dimension.

Unless the floor and fastenings are specifically designed to provide adequate lateral support to the top flange of open shape stringers (w-shapes or channels), a minimum of one stiffener shall be provided in each stringer at every floor beam location.

2.5 Attachments

2.5.1 Vertical Picket Safety Rail

Vertical picket safety rails shall be connected to the top chord up to a minimum height of 6′-0″ above the deck surface as shown on the contract drawings. The pickets shall be spaced so as to prevent a 4″ sphere from passing through the truss. Pickets shall be round, square or rectangular tubing. Vertical pickets shall be capped at the top by a continuous horizontal rail.

The picket safety system shall be designed for an infill loading of 200 pounds, applied horizontally at right angles, to a one square foot area at any point in the system.

2.5.2 Horizontal Safety Rails

Horizontal safety rails shall be placed on the structure up to a minimum height of 3′-0″ above the deck surface. Safety rails shall be placed so as to prevent a 4″ sphere from passing through the truss. Safety rails shall be placed on the inside of the truss. Safety rails placed on the inside of the truss shall have their ends sealed and ground smooth so as to produce no sharp edges.

The safety rail system shall be designed for an infill loading of 200 pounds, applied horizontally at right angles, to a one square foot area at any point in the system.

2.5.3 Toe Plate

The bridge shall be supplied with a 4″ high structural steel toe plate. Toe plate shall be coated in the same method as the truss.

Toe plates shall be attached to the inside face of the bridge truss verticals with the toes of the flanges oriented away from the path as designed by the manufacturer. The span of the toe plates from centerline to centerline of support shall not exceed 6′-6″

Toe plating will be attached to the truss members at a height adequate to prevent any gap between the bottom of the plate and the top of the deck.

2.5.4 Rub rails

The bridge will be supplied with a 6″ structural steel channel (C6) rub rail. Rub rail shall be coated in the same method as the truss.

Rub rails shall be attached to the inside face of the bridge truss verticals with the toes of the flanges oriented away from the path as designed by the manufacturer. The span of the rub rails from centerline to centerline of support shall not exceed 6′-6″.

The top of the rubrail shall be 3′-6″ above the top of the deck (measured at the outside edge of the deck). The clear opening between the rub rail and the top chord shall be such that a 6.0 inch diameter sphere shall not pass through.

2.5.5 Steel Face Plate

Each truss will have a 1/4” steel face plate infilling the entire depth between the top and bottom chord. The plate shall be oriented to the outside of the truss verticals and diagonals but close enough to truss verticals to allow the top and bottom chord to project at least 2” proud of the plate on the outside face. The steel face plate material shall be ASTM A709 Grade 36 or 50. If the face plate is fabricated of more than one single plate, all butt joints shall be complete joint penetration welds and ground smooth.

2.6 Camber

The bridge shall have a vertical camber dimension at midspan equal to 100% of the full dead load deflection including weight of concrete deck.

2.7 Elevation Difference

The bridge abutments shall be constructed at the elevations shown on the plans. The top of the deck at the centerline of the trail shall be constructed at the “PG” elevations shown on the plans.

2.8 Cross Slope

The deck shall be constructed to a 1.00% cross slope sloping in the direction specified on the contract drawings. This shall be accomplished by sloping the floor beams.

03. ENGINEERING

Structural design of the bridge structure(s) and bearings shall be performed by or under the direct supervision of a licensed professional engineer and done in accordance with recognized engineering practices and principles. The engineer shall be licensed to practice in Missouri.

3.1 Design Loads

In considering design and fabrication issues, this structure shall be assumed to be statically loaded. No dynamic analysis shall be required nor shall fabrication issues typically considered for dynamically loaded structures be considered for this bridge.

3.1.1 Dead Load

The bridge structure design shall consider its own dead load (superstructure and original decking), as well as the additional loads listed below:

3.1.2 Uniform Live Load

3.1.2.1 Pedestrian Live Load

Main Members: Main supporting members, including girders, trusses and arches shall be designed for a pedestrian live load of 85 pounds per square foot of bridge walkway area. The pedestrian live load shall be applied to those areas of the walkway so as to produce maximum stress in the member being designed. If the bridge walkway area to which the pedestrian live load is applied (deck influence area) exceeds 400 square feet, the pedestrian live load may be reduced by the following equation:

$$w = 85\,[0.25 + \frac{15}{\sqrt{A_I}})]$$

Where w is the design pedestrian load (psf) and A_I is the deck influence area in square feet.

The reduced design live load shall not be less than 65 pounds per square foot of bridge walkway area.

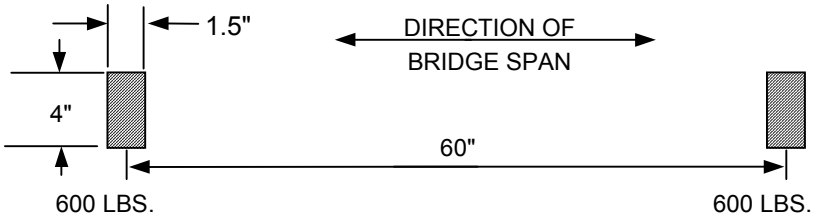
Secondary Members: Bridge decks and supporting floor systems, including secondary stringers, floor beams and their connections to main supporting members shall be designed for a live load of 85 pounds per square foot, with no reduction allowed.

3.1.3 Concentrated Loads

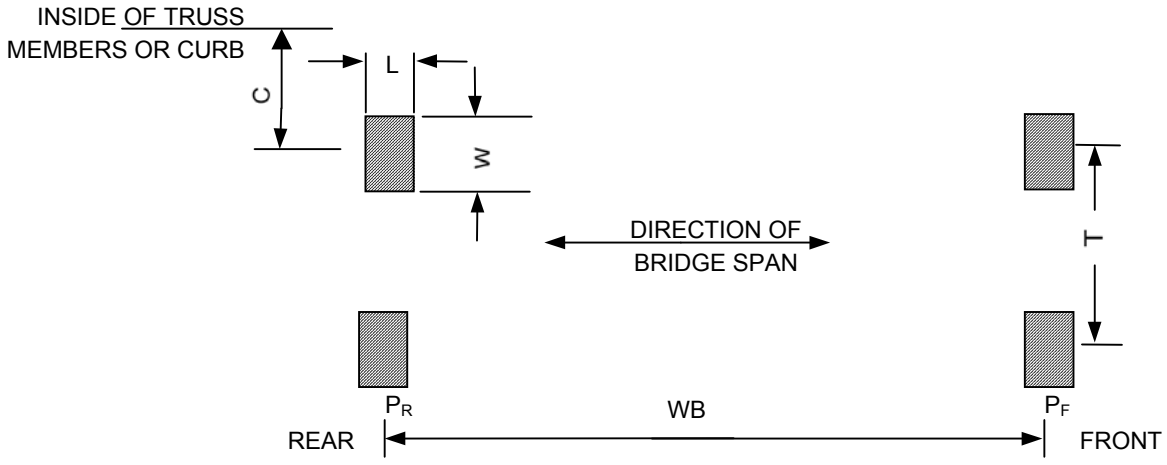
The bridge superstructure, floor system and decking shall be designed for each of the following point load conditions:

3.1.3.1 A concentrated load of 1000 pounds placed on any area 2.5 ft x 2.5 ft square.

3.1.3.2 A 1200 pound two wheel vehicle with a wheelbase and tire print area as shown in the following diagram:



3.1.3.3 A 10,000 pound four wheeled vehicle with the appropriate wheelbase, tire track and tire print area as shown in the following diagram: (See Table I for the values corresponding to the selected vehicle.)



Vehicle	Axle and Wheel Spacings		Front Wheels			Rear Wheels			
Weight	WB	T	P_F	L	W	P_R	L	W	C*
4,000#	48"	32"	1,000#	2.0"	5.0"	1,000#	2.0"	5.0"	9"
6,000#	66"	48"	1,500#	2.5"	6.0"	1,500#	2.5"	6.0"	12"
8,000#	102"	60"	1,600#	3.0"	8.0"	2,400#	3.0"	8.0"	15"
10,000#	120"	72"	2,000#	3.5"	8.5"	3,000#	3.5"	8.5"	18"

(*C is the minimum dimension from center of wheel to the inside face of truss or curb.)

TABLE I

All of the concentrated or wheel loads shall be placed so as to produce the maximum stress in each member being analyzed. Critical stresses need be calculated assuming there is only one vehicle on the bridge at any given time. Assumptions that vehicles only travel down the center of the bridge or that the vehicle load is a uniform line load will not be allowed.

Each four wheeled vehicle load listed in Table I, up to and including the maximum weight vehicle selected, must be used in determining critical deck stresses. The wheel distribution for deck design shall be as specified in Section 4.3.1. Stringers shall be designed for the applied wheel loads assuming no lateral load distribution to adjacent stringers.

A vehicle impact allowance is not required.

3.1.4 Wind Load

3.1.4.1 Horizontal Forces

The bridge(s) shall be designed for a wind intensity based on the AASHTO *LRFD Guide Specifications for the Design of Pedestrian Bridges* (with 2015 interims) and the AASHTO *LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals* (1st Edition) as referenced therein.

Gust Effect Factor, G shall be taken as 1.14 or greater.

Drag Coefficient, Cd shall be taken as 1.70 or greater.

Wind Importance Factor, Ir shall be taken as 1.15.

The wind load shall be applied horizontally at right angles to the longitudinal axis of the structure.

The wind loading shall be considered both in the design of the lateral load bracing system and in the design of the truss vertical members, floor beams and their connections.

3.1.4.2 Overturning Forces

The effect of forces tending to overturn structures shall be calculated assuming that the wind direction is at right angles to the longitudinal axis of the structure. In addition, an upward force shall be applied at the windward quarter point of the transverse superstructure width. This force shall be 20 pounds per square foot of deck.

3.1.7 Top Chord/Railing Loads

The top chord, truss verticals, and floor beams shall be designed for lateral wind loads (per section 3.1.4.1) and for any loads required to provide top chord stability as outlined in Section 3.3.6; however, in no case shall the load be less than 50 pounds per lineal foot or a 200 pound point load, whichever produces greater stresses, applied in any direction at any point along the top chord or at the top of the vertical picket safety system, if higher than the top chord.

3.1.8 Stream Force Load

The bridge shall be designed for a stream flow pressure (5 ft/sec) acting on the bridge superstructure in accordance with the following formula:

$$P_{max} = 2[1.4(V)^2]$$

Where,

V = 5 fps (average velocity of water in feet per second)

and

P_{max} = Maximum steam flow pressure in pounds per square foot, uniformly distributed on the portion of the cross sectional area of the bridge which is submerged.

3.1.9 Load Combinations

The loads listed herein shall be considered to act in the combinations found in the AASHTO *LRFD Guide Specifications for the Design of Pedestrian Bridges* (with 2015 interims) Section 3.7.

3.2 Design Limitations

3.2.1 Deflection

3.2.1.1 Vertical Deflection

The vertical deflection of the main trusses due to service pedestrian live load shall not exceed 1/500 of the span.

The vertical deflection of cantilever spans of the structure due to service pedestrian live load shall not exceed 1/300 of the cantilever arm length.

The deflection of the floor system members (floor beams and stringers) due to service pedestrian live load shall not exceed 1/360 of their respective spans.

The service pedestrian live load shall be 85 PSF, reduced in accordance with Section 3.1.2.1, but should in no case be less than 65 PSF for deflection checks.

Deflection limits due to occasional vehicular traffic shall not be considered.

3.2.1.2 Horizontal Deflection

The horizontal deflection of the structure due to lateral wind loads shall not exceed 1/500 of the span under the wind load specified above with a load factor of 1.0.

3.2.2 Minimum Thickness of Metal

The minimum thickness of all structural steel members shall be 1/4" nominal and be in accordance with the AISC Manual of Steel Constructions' "Standard Mill Practice Guidelines". For ASTM A500 and ASTM A847 tubing, the section properties used for design shall be per the Steel Tube Institute of North America's Hollow Structural Sections "Dimensions and Section Properties".

3.3 Governing Design Codes / References

Structural members shall be designed in accordance with recognized engineering practices and principles as follows:

3.3.1 Structural Steel Design

American Association of State Highway and Transportation Officials (AASHTO). Structural steel design shall be in accordance with the *LRFD Guide Specifications for the Design of Pedestrian Bridges* (with 2015 interims) and the *LRFD Bridge Design Specifications* (with 2015 interims).

3.3.2 Welded Tubular Connections

American National Standards Institute / American Welding Society (ANSI/AWS) and the Canadian Institute of Steel Construction (CISC).

All welded tubular connections shall be checked, when within applicable limits, for the limiting failure modes outlined in the ANSI/AWS D1.1 Structural Welding Code or in accordance with the "Design Guide for Hollow Structural Section Connections" as published by the Canadian Institute of Steel Construction (CISC).

When outside the “validity range” defined in these design guidelines, the following limit states
or failure modes must be checked:

* Chord face plastification
* Punching shear (through main member face)
* Material failure
  - Tension failure of the web member
  - Local buckling of a compression web member
* Weld failure
  - Allowable stress based on “effective lengths”
  - “Ultimate” capacity
* Local buckling of a main member face
* Main member failure:
  - Web or sidewall yielding
  - Web or sidewall crippling
  - Web or sidewall buckling

- Overall shear failure

All tubular joints shall be plain unstiffened joints (made without the use of reinforcing plates) except as follows:

* Floor beams which frame directly into the truss verticals (H-Section bridges) may be designed with or without end stiffening plates as required by design.

* Where chords, end floor beams and in high profiles the top end struts weld to the end verticals, the end verticals (or connections) may require stiffening to transfer the forces from these members into the end vertical.

* Truss vertical to chord connections.

NOTE: The effects of fabrication tolerances shall be accounted for in the design of the structure. Special attention shall be given to the actual fit-up gap at welded truss joints.

3.3.4 Concrete

American Concrete Institute (ACI)

Reinforced concrete shall be designed in accordance with the “Building Code Requirements for Structural Concrete” (ACI 318).

3.3.5 Top Chord Stability

American Association of State Highway and Transportation Officials (AASHTO). *LRFD Guide Specifications for the Design of Pedestrian Bridges* (with 2015 interims) Section 7.1.2.

For uniformly loaded bridges, the vertical truss members, the floor beams and their connections (transverse frames) shall be proportioned to resist a lateral force of not less than 1/100k times the top chord compressive load, but not less than .004 times that top chord load, applied at the top chord panel points of each truss. The top chord load is determined by using the larger top chord axial force in the members on either side of the "U-frame" being analyzed. For end frames, the same concept applies except the transverse force is 1% of the axial load in the end post member.

For bridges with vehicle loads, the lateral force applied at the top chord elevation for design of the transverse frames shall not be less than 1% of the top chord compression due to dead load plus any vehicle loading.

The bending forces in the transverse frames, as determined above, act in conjunction with all forces produced by the actual bridge loads as determined by an appropriate analysis which assumes that the floor beams are “fixed” to the

trusses at each end.

NOTE: The effects of three dimensional loading (including "U-frame" requirements) shall be considered in the design of the structure. The "U-frame" forces shall be added to the forces derived from a three dimensional analysis of the bridge.

3.3.6 Laminated Neoprene Bearing Pad Assemblies and Type N PTFE Bearings

Bearings shall be designed in accordance with the materials, configuration and dimensional limitations indicated in the contract drawings and specifications JSP-420 and JSP421.

Bearing design shall be in accordance with the Missouri Department of Transportation Engineering Policy Guide 751.11.2 and all therein referenced sections of the AASHTO LRFD Bridge Design Specifications.

04. MATERIALS

4.1 Steel

4.1.1 Painted Steel

All Blast Cleaning shall be done in a dedicated OSHA approved indoor facility owned and operated by the bridge fabricator. Blast operations shall use Best Management Practices and exercise environmentally friendly blast media recovery systems.

Bridges which are to be painted shall be fabricated using ASTM A500 grade C cold-formed welded square and rectangular tubing (Fy = 50,000 psi) and/or high strength, low allow, atmospheric corrosion resistant ASTM A847 cold-formed welded square and rectangular tubing (Fy = 50,000 psi) and/or ASTM A588, ASTM A242, ASTM A572, ASTM A 606 (Fy = 50,000 psi) and/or ASTM A36 (Fy = 36,000 psi) plate and structural steel shapes. Splice plates, if required, shall be ASTM A588.

All painted bridges shall be painted in a dedicated indoor OSHA approved paint facility that is owned and operated by the bridge fabricator. The paint facility shall control ambient conditions for humidity, temperature and any other recommendations of the paint manufacturer or Section 1081 of the 2011 Missouri Department of Transportation Standard Specifications for Highway Construction.

The fabricator must hold a "Sophisticated Paint Endorsement" as set forth by

AISC.

4.3 Decking

4.3.1 Concrete Deck

The bridge shall be furnished with a stay-in-place galvanized steel form deck suitable for pouring a reinforced concrete slab. The form deck shall be designed to carry the dead load of the wet concrete, weight of the form decking, plus a construction load of 20 PSF uniform load or a 150 pound concentrated load on a 1′-0″ wide section of deck. When edge supports are used, deflection is limited to 1/180 of the span or 3/4″, whichever is less. Without edge supports, deflection shall be limited to 1/180 of the span or 3/8″, whichever is less.

The form deck shall be either smooth or composite. Composite decking shall not be used as reinforcing when designing for vehicular wheel loads. The form deck material shall be supplied in accordance with ASTM A653 and galvanized to a minimum G90 coating weight.

The deck slab shall be constructed using concrete with Missouri Department of Transportation Class B-2 (Modified) normal weight concrete: minimum 28-day strength (f_c') of 4,000 PSI.

Concrete deck design shall be performed by the bridge manufacturer. Concrete decks shall be designed for concentrated loads as specified in Section 3.1.3. The wheel loads used for deck design shall be distributed per the Structural Engineering Handbook, 4th Ed., by Gaylord, Gaylord and Stallmeyer. The load distribution width is equal to the tire width plus 0.6 times the slab span but in no case will it be greater than the smallest of the following values:

1. 1/2 the deck width,
2. 75% of the wheel track spacing, or
3. 4′ + 0.06S, per AASHTO, where S = slab span in feet

05. WELDING

5.1 Welding

Welding and weld procedure qualification tests shall conform to the provisions of ANSI/AWS D1.1 “Structural Welding Code”, 1996 Edition. Filler metal shall be in accordance with the applicable AWS Filler Metal Specification (i.e. AWS A 5.28 for the GMAW Process). For exposed, bare, unpainted applications of corrosion resistant steels (i.e. ASTM A588 and A847), the filler metal shall be in accordance with AWS D1.1, Section 3.7.3.

5.2 Welders

Welders shall be properly accredited operators, each of whom shall submit certification of satisfactorily passing AWS standard qualification tests for all positions with unlimited thickness of base metal, have a minimum of 6 months experience in welding tubular structures and have demonstrated the ability to make uniform sound welds of the type required.

06. SUBMITTALS

ANY COSTS ASSOCIATED WITH DELAYS CAUSED BY THE REJECTION OF THESE SUBMITTALS SHALL BE FULLY BORNE BY THE CONTRACTOR AND BRIDGE SUPPLIER.

6.1 Submittal Drawings

Schematic drawings and diagrams shall be submitted to the customer for their review after receipt of order. Submittal drawings shall be unique drawings, prepared to illustrate the specific portion of the work to be done. All relative design information such as member sizes, bridge reactions, and general notes shall be clearly specified on the drawings. Drawings shall have cross referenced details and sheet numbers. All drawings shall be signed and sealed by a Professional Engineer who is licensed in accordance with Section 3.

Contractor shall submit proposed painting layout (Section 6.5) with the bridge fabrication drawings for review. The bridge shop drawings will not be reviewed without the proposed painting submittals for review.

6.2 Structural Calculations

Structural calculations for the bridge superstructure and bearings shall be submitted by the bridge manufacturer and accepted by the owner's authorized agent. All calculations shall be signed and sealed by a Professional Engineer who is licensed in accordance with Section 3. The calculations shall include all design information necessary to determine the structural adequacy of the bridge. The calculations shall include the following:

* All AASHTO allowable stress checks for axial, bending and shear forces in the critical member of each truss member type (i.e. top chord, bottom chord, floor beam, vertical, etc.).

* Checks for the critical connection failure modes for each truss member type (i.e. vertical, diagonal, floor beam, etc.). Special attention shall be given to all welded

tube on tube connections (see section 3.3.2 for design check requirements).

* All bolted splice connections.

* Main truss deflection checks.

* U-Frame stiffness checks (used to determine K factors for out-of-plane buckling of the top chord) for all half through or "pony" truss bridges.

* Signed and sealed load rating calculations and summary sheet in accordance with MoDOT Engineering Policy Guide 136.7.2.2.6.4

* Deck design.

* Bearing design.

NOTE: The analysis and design of triangulated truss bridges shall account for moments induced in members due to joint fixity where applicable. Moments due to both truss deflection and joint eccentricity must be considered.

6.3 Welder certifications in compliance with AWS standard qualification tests.

6.4 Welding procedures in compliance with Section 5.1.

6.5 Painting Submittals

6.5.1 The bridge manufacturer shall submit shop drawings of the bridge graphics. Contractor shall not begin fabrication of the bridge until the painting graphic layout is approved. Shop drawings shall indicate the following:

a. Pantone color numbers.
b. Height of lettering for the words.
c. Font type used for the lettering.
d. Section View from the perpendicular roadways (Route 364 and Route 94).
e. All graphics to be completed on scaled drawings.
f. Other graphic elements to show the paint type and details.
g. Product Data Sheet and Materials Safety Data Sheet for the paint system and any solvent that will be used during the project
h. Visual Standard for Surface Preparation – Visual standard shall be maintained at the cleaning facility and shall be available for viewing by Construction Manager, MoDOT representative, Design Engineer, Project Owner and City of St. Charles representative.
i. Steel cleaning – Contractor to list SSPC standards used to clean the steel before painting.
j. Wet film thickness per coat of paint.
k. Dry film thickness per coat of paint.

l. Representative example of manufacturer's paint warranty.
m. PDF and EPS files of face plate graphics. The minimum number of graphics to be submitted is one for each face plate (8 total for the project).

07. FABRICATION

NO FABRICATION SHALL TAKE PLACE PRIOR TO ACCEPTANCE OF ALL SUBMITTALS LISTED IN SECTION 6.

7.1 General Requirements

7.1.1 Drain Holes

When the collection of water inside a structural tube is a possibility, either during construction or during service, the tube shall be provided with a drain hole at its lowest point to let water out.

7.1.2 Welds

Special attention shall be given to developing sufficient weld throats on tubular members. Fillet weld details shall be in accordance with AWS D1.1, Section 3.9 (See AWS Figure 3.2). Unless determined otherwise by testing, the loss factor "Z" for heel welds shall be in accordance with AWS Table 2.8. Fillet welds which run onto the radius of a tube shall be built up to obtain the full throat thickness (See Figure 7.1). The maximum root openings of fillet welds shall not exceed 3/16" in conformance with AWS D1.1, Section 5.22. Weld size or effective throat dimensions shall be increased in accordance with this same section when applicable (i.e. fit-up gaps> 1/16").

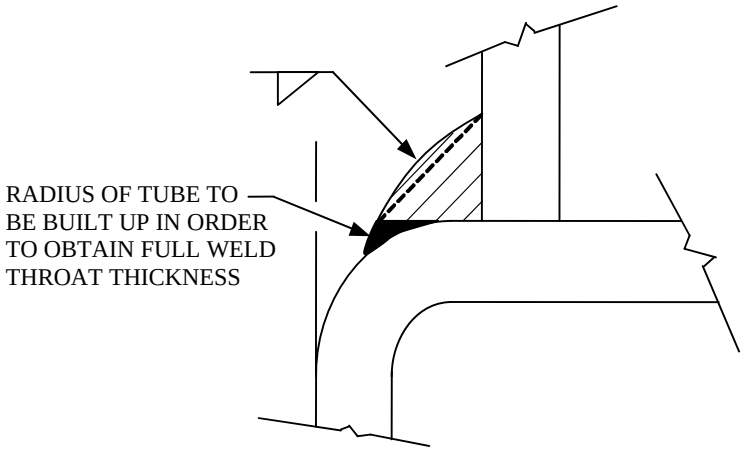


FIGURE 7.1
BUILD UP RADIUS WELD

The fabricator shall have verified that the throat thickness of partial joint penetration groove welds (primarily matched edge welds or the flare-bevel-groove welds on underhung floor beams) shall be obtainable with their fit-up and weld procedures. Matched edge welds shall be "flushed" out when required to obtain the full throat or branch member wall thickness.

For full penetration butt welds of tubular members, the backing material shall be fabricated prior to installation in the tube so as to be continuous around the full tube perimeter, including corners. Backing may be of four types:

* A "box" welded up from four (4) plates.

* Two "channel" sections, bent to fit the inside radius of the tube, welded together with full penetration welds.

* A smaller tube section which slides inside the spliced tube.

* A solid plate cut to fit the inside radius of the tube.

Corners of the "box" backing, made from four plates, shall be welded and ground to match the inside corner radii of the chords. The solid plate option shall require a weep hole either in the chord wall above the "high side" of the plate or in the plate itself. In all types of backing, the minimum fit-up tolerances for backing must be maintained at the corners of the tubes as well as across the "flats".

7.1.3 Sealing and Caulking

To prevent rust runs on painted structures, open ends of all tubes shall be capped and seal welded. Wherever practical, member end connections and steel on steel contact surfaces, such as stringer to floor beam connections, shall be welded all around. Long seams between members or any seam which cannot be practically welded shall be caulked.

7.1.4 Paint Clearance

To provide adequate clearance for initial painting and future recoating, a minimum of a 1-1/2″ gap shall be provided between any two opposing painted surfaces. If this gap cannot be maintained, member sizes shall be increased or filler plates added to bring the opposing surfaces in contact for seal welding.

7.1.5 Bridge Data Placard

Each end of each bridge span shall have a permanently affixed engraved placard listing the bridge manufacturer, serial number, the design loads, and the date of manufacture.

7.2 Quality Certification

Bridge(s) shall be fabricated by a fabricator who is currently certified by the American Institute of Steel Construction to have the personnel, organization, experience, capability, and commitment to produce fabricated structural steel for the category “Major Steel Bridges” as set forth in the AISC Certification Program with Fracture Critical Endorsement. Quality control shall be in accordance with procedures outlined for AISC certification. For painted structures, the fabricator must hold a "Sophisticated Paint Endorsement" as set forth in the AISC certification program. Furthermore, the bridge(s) shall be fabricated in a facility owned and/or leased by the corporate owner of the manufacturer, and fully dedicated to bridge manufacturing.

08. FINISHING

Contractor shall be responsible for providing bridge finishes that represent the bridge graphics in the project plans. All exposed surfaces shall be painted. Logo graphics shall appear on the exterior face of all face plates (8 total for the project).

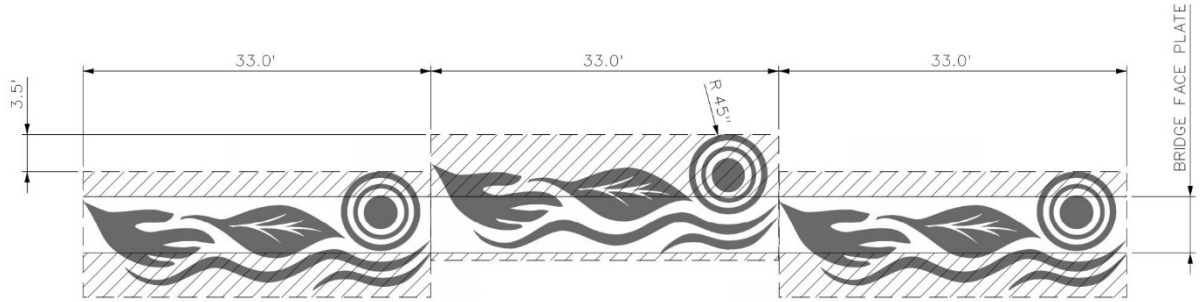
Design intent of the bridge painting is to match colors on the existing Great Rivers Greenway Grant’s Trail Bridge over I-44. Bridge location is 38.5715ºN, 90.3912ºW.

Grant's Trail Bridge Photo Inserted

Construction Manager to provide .eps file of the Great Rivers Greenway logo. The logo is to be used for the background elements of the bridge face plate painting (hand, leaf, wave & sun).

The painting on the bridge is an enhancement for the project. Contractor shall utilize the entire length of the bridge to assemble the logos matching the Grant's Trail Bridge.

The logo shall be scaled such that the outer edge outer ring of the sun graphic has a diameter of 90 inches. The logo shall be repeated every 33 feet along the length of the bridge. Every other logo shall be staggered upward 42 inches such that the first logo primarily shows the hand, leaf and sun and the second logo primarily shows the wave. See concept below:



The text "Great Rivers Greenway" shall be Clarendon font with 15-inch letter height.

The text "Centennial Greenway" shall be Clarendon font with 10-inch letter height.

8.1 Blast Cleaning

8.1.1 Painted Steel

All exposed surfaces of steel to be painted shall be blast cleaned in accordance with the appropriate section of the Steel Structures Painting Council Surface Preparation Specifications as recommended by the paint manufacturer.

8.2 Painting

A bridge pre-painting conference shall take place between Contractor, Bridge Manufacturer, Construction Manager, MoDOT representative, Design Engineer, Project Owner and City of Saint Charles before any painting takes place.

Construction Manager, MoDOT representative, Design Engineer, Project Owner and City of

Saint Charles representative shall be provided site access to the painting facility to witness the installation of the bridge graphics.

8.2.1 Painting System

All exposed steel surfaces shall receive shop applied prime, intermediate and finish coats. Graphics to be applied in a fourth coat. The paint system shall consist of the following:

Prime: High-Solids Inorganic Zinc Silicate meeting the requirements of 1045.3 of the 2011 Missouri Department of Transportation Standard Specifications for Highway Construction.

Intermediate: Multiple-component modified epoxy primer meeting the requirements of 1045.4 of the 2011 Missouri Department of Transportation Standard Specifications for Highway Construction.

Finish coat and graphics coats: Modified siloxane hybrid with Max VOC of 3.50 lb/gal and meeting or exceeding the following performance characteristics:

Test Method	Results
Adhesion: ASTM D4541	1362 psi
EMMAAQUA Weathering	Exposure 12 mos. Gloss Retention 90% Exposure 24 mos. Gloss Retention 73% Exposure 32 mos. Gloss Retention 61%
Flexibility: Conical Mandrel	> 0.375 inches
Pencil Hardness	F
QUV-A Weathering	Exposure 4000 hours Gloss Retention 99% Exposure 8000 hours 8 0% gloss retention Exposure 12000 hours Gloss Retention 53%
South Florida Weathering	Exposure 4 years Gloss Retention 90% dE: 0.45 color change
Wet Adhesion: “X-Cut” Knife Adhesion	No failure after 7 days

The prime, intermediate, finish and graphics coats shall be applied in accordance with and to the minimum dry film thickness listed in the paint manufacturer’s

recommendations. The finish and graphics coat paint colors shall be selected by the owner at the time of shop drawing submittals.

NOTE: Unless specified otherwise, connection faying surfaces and the interior surfaces of all structural tubing shall not be coated.

8.2.2 Painting Record Submittals

Environmental conditions during painting shall be recorded by the bridge manufacturer. The minimum elements required for recording are as follows:

a. Temperature
b. Relative humidity
c. Dew point
d. Surface temperature
e. Wind
f. Wet film thickness
g. Dry film thickness

Environmental conditions shall be submitted once per week to Construction Manager during painting of the bridge elements.

8.2.3 Touch-up Paint

A nominal quantity of touch-up paint will be provided to repair marred surfaces. Touch-up painting includes any and all painting required after the structure reaches the site, and is the responsibility of others. This painting shall include, but not be limited to, the following areas:

1. Any areas damaged due to shipping, handling, and erection of the bridge and components.
2. Bolt heads and exposed area of bolts and nuts as applicable.
3. Non-galvanized attachments or anchor bolts if not made of corrosion resistant steel.
4. If applicable, small areas (0″ to 2″ each side) around bolted field splices, designed as “slip critical”, where one or all paint coats may be required to be left off the faying surfaces.

8.2.4 Painter Qualifications

All painters shall be certified by the appropriate paint manufacturer for proper handling, mixing, thinning (if required) and application of the paint system in accordance with the manufacturer’s instructions. The all painting shall be performed under full-time supervision by one or more painters certified by the Department of Transportation in the state in which the bridge is manufactured.

09. DELIVERY AND ERECTION

Delivery is made to a location nearest the site which is easily accessible to normal over-the-road tractor/trailer equipment. All trucks delivering bridge materials will need to be unloaded at the time of arrival.

The manufacturer will provide detailed, written instruction in the proper lifting procedures and splicing procedures (if required). The method and sequence of erection shall be the responsibility of others.

At or before the time of bridge delivery, the bridge manufacturer shall provide written inspection and maintenance procedures to be followed by the bridge owner.

10. BEARINGS

10.1 Bearing Devices

Bearings and their connections to the truss shall be designed by the bridge manufacturer in accordance with the materials, configuration and dimensional limitations indicated in the contract drawings and specifications JSP-420 and JSP-421.

The step height (from bottom of bearing to top-of-deck) shall be determined by the bridge manufacturer.

The bearings may be fabricated and supplied by the bridge manufacturer or another source at the contractor's option.

11. FOUNDATIONS

The bridge manufacturer shall provide bearing details compatible with anchor bolts of the number, diameter, minimum grade and finish specified in the contract drawings. Engineering design of the bridge supporting foundations (abutment, pier, bracket and/or footings), including design of anchor bolt embedments, shall be the responsibility of the foundation engineer. The contractor shall provide all materials for (including anchor bolts) and construction of the bridge supporting foundations. The contractor shall install the anchor bolts in accordance with the manufacturer's anchor bolt spacing dimensions.

Information as to bridge support reactions and anchor bolt locations will be furnished by the bridge manufacturer after receipt of order and after the bridge design is complete.

12. METHOD OF MEASUREMENT

Final measurement of **"Pedestrian Truss Superstructure"** shall not be made unless changes from the contract plans are authorized by the engineer during construction or appreciable errors are found in the contract quantity.

13. BASIS OF PAYMENT

Payment for “Pedestrian Truss Superstructure” will be made per square foot at the contract unit price, and paid for under item number: **JSP-418**. All costs associated with design, fabrication, painting, shipping, storage, field assembly, and erection of the prefabricated truss system complete-in-place shall be considered completely covered by the contract unit price for “Pedestrian Truss Superstructure”. Fabrication of bearings, flat plate expansion devices and construction of concrete deck and reinforcing steel shall not be included in the cost of “Pedestrian Truss Superstructure”.

14. WARRANTY

The bridge manufacturer shall warrant that it can convey good title to the goods, that they are free of liens and encumbrances and that their engineered steel structure as delivered is free of design, material and workmanship defects, including defects in the paint system, for a period of ten years from the date of delivery.

This warranty shall not cover bridge installation workmanship, concrete bridge deck, defects in the bridge caused by abuse, misuse, overloading, accident, improper installation, maintenance, alteration or any other cause not expressly warranted. This warranty does not cover damage resulting from or relating to the use of any kind of de-icing material. This warranty shall be void unless owner's records are supplied which show compliance with the minimum guidelines specified and supplied under Section 9.

Repair, replacement or adjustment, at the sole discretion of the bridge manufacturer, shall be the exclusive remedy for defects under this warranty. Under no circumstances shall the bridge manufacturer be liable for any consequential or incidental damages.

15. APPROVAL CHECKLIST

The following checklist will be used in the evaluation of all submittals to assure compliance with the Special Specifications for Prefabricated Bridge. This checklist is considered the minimum acceptable requirements for compliance with these specifications. Any deviations from this checklist shall be considered grounds for rejection of the submittal. Any costs associated with delays caused by the rejection of the submittal, due to non-compliance with this checklist, shall be fully borne by the contractor and bridge supplier.

SUBMITTAL DRAWINGS
Data Required to be Shown:

- □ Bridge Elevation
- □ Bridge Cross Section
- □ All Member Sizes
- □ All Vertical Truss Members are Square or Rectangular Tubing
- □ Bridge Reactions
- □ General Notes Indicating
  - □ AISC Stress Conformance
  - □ Material Specifications to be Followed
  - □ Design Live Load
  - □ Design Vehicle Load (If Applicable)
  - □ Design Wind Load
  - □ Other Specified Design Loads
  - □ Welding Process
  - □ Blast Cleaning
  - □ Paint System to be Used (If Applicable)
- □ Paint Color Chart (If Applicable)
- □ Detailed Bolted Splices (If Applicable)
- □ Bolted Splice Location (If applicable)
- □ Signature and Seal of Professional Engineer, licensed in Accordance with Section 3.

DESIGN CALCULATIONS
Data Required to be Shown:

- □ Data Input for 3-D Analysis of Bridge
  - □ Joint Coordinates & Member Incidences
  - □ Joint and Member Loads
  - □ Member Properties
  - □ Load Combinations
- □ AASHTO Member Stress Checks for Each Member Type
- □ Critical Connection Failure Mode Checks For Each Member Type
  - □ Chord Face Plastification Checks
  - □ Punching Shear Checks
  - □ Material Failure Checks (Truss Webs)
  - □ Weld Failure Checks (Effective Length)
  - □ Weld Failure Checks (Ultimate)
  - □ Local Buckling of the Main Member Face Checks
  - □ Main Member Yielding Failure Checks
- □ Main Member Crippling Failure Checks
- □ Main Member Buckling Failure Checks
- □ Main Member Shear Failure Checks
- □ All Bolted Splice Checks (if applicable)
- □ Main Truss Deflection Checks
- □ Decking Material Checks
- □ "U-Frame" Stiffness Checks (if applicable)
- □ Interior and End Portal Design Checks (if applicable)
- □ Determination of Top Chord K Factor Based on "U-Frame" Stiffness (if applicable)
- □ Consideration of Individual Member Moments Due to Truss Deflection, Joint Fixity and Joint Eccentricity

FABRICATION SUBMITTALS
Data Required to be Shown:

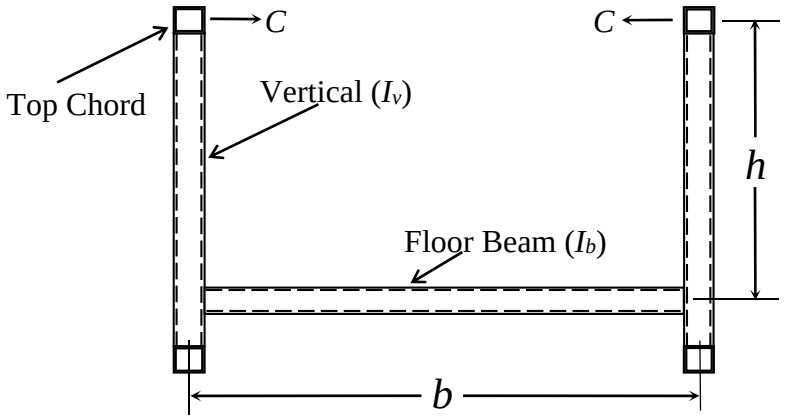
- □** Written Installation Instructions
- □** Written Splicing Instructions
- □** Written Maintenance & Inspection Instructions
- □** Welder Certifications
  - □** Welding Procedures
- □ Material Certifications (if applicable)
  - □ Structural Steel (if applicable)
  - □ Decking (if applicable)
  - □ Structural Bolts (if applicable)
  - □** Quality Control Section of AISC Certification Manual (if applicable)
  - □** Painter Certifications (if applicable)
  - □ Weld Testing Reports (if applicable)

** NOTE: These items are required to be submitted along with Submittal Drawings and Design Calculations. Those Fabrication Submittal Items not marked are to be submitted prior to shipment of the bridge.

Appendix A

1/K FOR VARIOUS VALUES OF CL/P_c and n

	n						
1/K	4	6	8	10	12	14	16
1.000	3.686	3.616	3.660	3.714	3.754	3.785	3.809
0.980		3.284	2.944	2.806	2.787	2.771	2.774
0.960		3.000	2.665	2.542	2.456	2.454	2.479
0.950			2.595				
0.940		2.754		2.303	2.252	2.254	2.282
0.920		2.643		2.146	2.094	2.101	2.121
0.900	3.352	2.593	2.263	2.045	1.951	1.968	1.981
0.850		2.460	2.013	1.794	1.709	1.681	1.694
0.800	2.961	2.313	1.889	1.629	1.480	1.456	1.465
0.750		2.147	1.750	1.501	1.344	1.273	1.262
0.700	2.448	1.955	1.595	1.359	1.200	1.111	1.088
0.650		1.739	1.442	1.236	1.087	0.988	0.940
0.600	2.035	1.639	1.338	1.133	0.985	0.878	0.808
0.550		1.517	1.211	1.007	0.860	0.768	0.708
0.500	1.750	1.362	1.047	0.847	0.750	0.668	0.600
0.450		1.158	0.829	0.714	0.624	0.537	0.500
0.400	1.232	0.886	0.627	0.555	0.454	0.428	0.383



" U - Frame"

Where: $C = \dfrac{E}{h^2\,[h/3I_v + b/2I_b]}$

$L = Length\ in\ inches\ of\ one\ truss\ panel$

$P_c = Buckling\ Load\ (= Top\ Chord\ Compression\ x\ F.S.)$

$n = Number\ of\ Panels$

Reference: Galambos, T.V. (1988) "Guide to Stability Design Criteria for Metal Structures", 4th Ed., PP 515-529.

<< End of JSP-418 >>

MANDATORY BRIDGE SUPER STRUCTURE PREQUALIFICATION QUESTIONAIRE

JSP NUMBER 418 –

Bridge Supplier
Company Name: _____

Address: _____

_____

_____

Phone: _____

E-mail: _____

Attach the following to this questionnaire and submit to:

Craig Schluter
Construction Manager
Paric Corporation
77 Westport Plaza #250
St. Louis, MO 63146
Phone: (636) 561-9574

1. Product Literature

2. All documentation to insure the proposed substitution will be in compliance with these specifications. This shall include:
   - Representative design calculations
   - Representative drawings
   - Splicing and erection procedures
   - Warranty information
   - Inspection and Maintenance procedures
   - AISC Shop Certification
   - Welder Qualifications

3. Experience Summary: List the location, bridge size, owner, and a contact for reference for each project.

<< End of Questionnaire >>

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BID FORM: Centennial Greenway - Phase IIA (Addendum 2)

ITEM NO.	BID ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	ITEM COST
FEDERALLY REIMBURSED ITEMS						
1	JSP-28	TYPE 5 AGGREGATE FOR BASE (4 IN. THICK)	SY	~~1,957~~ 1,600		
2	JSP-35A	CONCRETE PAVEMENT (8" NON-REINF)	SY	~~1,583~~ 1,226		
3	JSP-39	4" PERFORATED PVC UNDERDRAIN	LF	207		
4	JSP-40	OUTLET PIPES AND SPLASH PADS	EA	2		
5	JSP-41	GUARDRAIL TYPE A	LF	250		
6	JSP-42	BRIDGE ANCHOR SECTION	EA	5		
7	JSP-43	TRANSITION SECTION	EA	5		
8	JSP-44	TYPE A CRASHWORTHY END TERMINAL	EA	3		
9	JSP-50	6" CONCRETE MEDIAN STRIP	SY	16		
10	JSP-51	CONCRETE CURB TYPE S	LF	376		
11	JSP-52	CURB AND GUTTER TYPE B	LF	83		
12	JSP-55	CONCRETE TRAFFIC BARRIER, TYPE D	LF	643		
13	JSP-56	CONCRETE TRAFFIC BARRIER, TYPE C (RETAINING WALL)	LF	359		
14	JSP-57	CONCRETE TRAFFIC BARRIER, TYPE C	LF	154		
15	JSP-304A	CONSTRUCTION SIGNS	SF	1,237		
16	JSP-304B	CHANNELIZER	EA	571		
17	JSP-304C	TYPE III MOVABLE BARRICADE (THREE LANE)	EA	5		
18	JSP-304D	TYPE III MOVABLE BARRICADE (ONE LANE)	EA	7		
19	JSP-304E	FLASHING ARROW PANEL	EA	17		
20	JSP-304F	IMPACT ATTENUATOR (9 SAND BARRELS)	EA	9		
21	JSP-304G	CHANGEABLE MESSAGE SIGN	EA	11		
22	JSP-304H	TUBULAR MARKER (FLEXIBLE DELINEATOR)	EA	7		

Note: Bid Form available as Excel file from Construction Manager.

Craig Schluter
Navigate Building Solutions
Phone: 314-713-6205
E-mail: craig@navigatebuildingsolutions.com

BID FORM: Centennial Greenway - Phase IIA (Addendum 2)						
23	JSP-305	TEMPORARY CONCRETE TRAFFIC BARRIER	LF	3,286		
24	JSP-401	CLASS 1 EXCAVATION	CY	282		
25	JSP-402	BRIDGE APPROACH SLAB	SY	68		
26	JSP-403	DRILLED SHAFTS 3FT 0IN DIAMETER	LF	83		
27	JSP-404	ROCK SOCKETS 2FT 6IN DIAMETER	LF	16		
28	JSP-405	ROCK SOCKETS 3FT 0IN DIAMETER	LF	100		
29	JSP-406	SUPPLEMENTARY TELEVISION CAMERA INSPECTION	EA	4		
30	JSP-407	FOUNDATION INSPECTION HOLES	LF	156		
31	JSP-408	SONIC LOGGING TESTING	EA	4		
32	JSP-409A	STRUCTURAL STEEL PILES (12 IN)	LF	1,688		
33	JSP-409B	STRUCTURAL STEEL PILES (14 IN)	LF	370		
34	JSP-410	DYNAMIC PILE TESTING	EA	10		
35	JSP-411	PRE-BORE FOR PILING	LF	253		
36	JSP-412	PILE POINT REINFORCEMENT	EA	34		
37	JSP-413	CLASS B CONCRETE (SUBSTRUCTURE)	CY	253		
38	JSP-414	SLAB ON STEEL	SY	546		
39	JSP-415	REINFORCING STEEL (BRIDGES)	LB	58,490		
40	JSP-416	PROTECTIVE COATING - CONCRETE BENTS AND PIERS (EPOXY)	EA	6		
41	JSP-417	EXPANSION DEVICE (FLAT PLATE)	LF	60		
42	JSP-418	PREFABRICATED TRUSS PEDESTRIAN BRIDGE	SF	4,910		
43	JSP-419	VERTICAL DRAIN AT END BENTS	EA	4		
44	JSP-420	LAMINATED NEOPRENE BEARING PAD ASSEMBLY	EA	8		
45	JSP-421	TYPE N PTFE BEARING	EA	8		
46	JSP-422	CORRUGATED METAL PIPE PILE SPACERS	EA	24		

BID FORM: Centennial Greenway - Phase IIA (Addendum 2)						
LOCALLY FUNDED ITEMS						
47	JSP-21	CLEARING AND GRUBBING	AC	9.9		
48	JSP-22	TEMPORARY TREE PROTECTION	LF	1,102		
49	JSP-23	REMOVAL OF IMPROVEMENTS	LS	1		
50	JSP-24	FULL DEPTH SAW-CUT	LF	1,447.3		
51	JSP-25	CLASS A EXCAVATION	CY	40,853		
52	JSP-26	COMPACTING EMBANKMENT	CY	34,996		
53	JSP-27	SETTLEMENT GAUGES	EA	8		
54	JSP-29	TYPE 5 AGGREGATE FOR BASE (8 IN. THICK)	SY	4,112		
55	JSP-30	GRAVEL (A)	TON	154		
56	JSP-31	BITUMINOUS PAVEMENT MIXTURE PG64-22, (BP-1)	TON	367		
57	JSP-32	BITUMINOUS PAVEMENT MIXTURE PG64-22 (BASE)	TON	367		
58	JSP-33	PRIME COAT	GAL	1,378		
59	JSP-34	TACK COAT	GAL	331		
60	JSP-35C	CONCRETE TRAIL APPROACH SLAB	SY	68		
61	JSP-36A	MSD AREA INLET	EA	4		
62	JSP-36B	MSD CURB INLET	EA	3		
63	JSP-36C	MSD GRATE INLET	EA	2		
64	JSP-36D	MSD MANHOLE	EA	5		
65	JSP-37A	12" CLASS III RCP	LF	540		
66	JSP-37B	15" CLASS IV RCP	LF	109		
67	JSP-37C	18" CLASS IV RCP	LF	208		
68	JSP-38A	12" PRE-CAST CONCRETE FLARED END SECTION	EA	2		
69	JSP-38B	18" PRE-CAST CONCRETE FLARED END SECTION	EA	2		

BID FORM: Centennial Greenway - Phase IIA (Addendum 2)						
70	JSP-45A	60" CHAIN LINK FENCE	LF	462		
71	JSP-45B	60" CHAIN LINK FENCE ON RETAINING WALLS AND SLOPES	LF	1,533		
72	JSP-47	CONCRETE SIDEWALK	SY	108		
73	JSP-48	DETECTABLE WARNING PANELS	SF	184		
74	JSP-49	CONCRETE CURB RAMP	SY	198		
75	JSP-53A	FURNISHING TYPE 2 ROCK BLANKET	CY	55		
76	JSP-53B	PLACING TYPE 2 ROCK BLANKET	CY	55		
77	JSP-59	MOBILIZATION	LS	1		
78	JSP-60	CONTRACTOR SURVEYING AND STAKING	LS	1		
79	JSP-61	PROTECTION AND RESTORATION OF SITE	LS	1		
80	JSP-62	RETAINING WALL DRAINAGE SYSTEMS	LS	1		
81	JSP-63	WETCAST MODULAR BLOCK WALL	SF	2,589		
82	JSP-64	MECHANICALLY STABILIZED EARTH WALL SYSTEMS	SF	11,434		
83	JSP-65	WATER POLLUTION CONTROL MANAGER	WEEK	45		
84	JSP-66	COMPOST SOCK SILT BARRIER	LF	8,130		
85	JSP-67	SEDIMENT REMOVAL	CY	150		
86	JSP-68	INLET PROTECTION	EA	30		
87	JSP-69	EROSION CONTROL BLANKET	SY	41,458		
88	JSP-70	PERMANENT EROSION CONTROL BLANKET	SY	1,180		
89	JSP-71	TEMPORARY SEEDING AND MULCHING	AC	9		
90	JSP-72	COMPOST SOCK DITCH CHECK	EA	67		
91	JSP-73	WASHDOWN STATION	EA	6		
92	JSP-74	CONSTRUCTION ENTRANCES	EA	6		

BID FORM: Centennial Greenway - Phase IIA (Addendum 2)						
93	JSP-75	STORM WATER POLLUTION PREVENTION PLAN (SWPPP)	LS	1		
94	JSP-76	TEMPORARY CONTRACTOR ACCESS	LS	1		
95	JSP-77	TYPE 1 TURF REINFORCEMENT MAT	SY	3,032		
96	JSP-78	OUTLET PROTECTION MAT	SF	256		
97	JSP-79	TRENCHING TYPE I	LF	982		
98	JSP-80	PULL BOX, PREFORMED CLASS 1	EA	9		
99	JSP-81	CABLE-CONDUIT, 1 IN., 2 CONDUCTORS AND 1 BARE NEUTRAL, 2 AWG	LF	1,030		
100	JSP-82	INSTALL OWNER FURNISHED BIKE COUNTERS	EA	2		
101	JSP-83A	GROUND IMPROVEMENT SYSTEM (WALL 1)	LS	1		
102	JSP-83B	GROUND IMPROVEMENT SYSTEM (WALL 2)	LS	1		
103	JSP-83C	GROUND IMPROVEMENT SYSTEM (WALL 3)	LS	1		
104	JSP-83D	GROUND IMPROVEMENT SYSTEM (WALL 4)	LS	1		
105	JSP-83E	GROUND IMPROVEMENT SYSTEM (WALL 5)	LS	1		
106	JSP-84	LAW ENFORCEMENT	ALLOWANCE	1		
107	JSP-85	ADDITIONAL MOBILIZATION FOR SEEDING	EA	16		
108	JSP-205	NATIVE GRASS PLANTING AREAS	SY	10,332		
109	JSP-206A	FESCUE SEED	AC	9.2		
110	JSP-206B	FESCUE SOD	SY	1,082		
111	JSP-207A	BENCHES	EA	3		
112	JSP-207B	TRASH RECEPTACLES	EA	3		
113	JSP-207C	BIKE RACKS	EA	3		
114	JSP-212	DECORATIVE BOLLARD	EA	6		
115	JSP-301	DOUBLE-SIDED RECTANGULAR RAPID FLASHING BEACON WITH PEDESTRIAN PUSH BUTTON	EA	2		
116	JSP-302A	24" PERMANENT WHITE PAVEMENT MARKING	LF	72		
117	JSP-302B	4" SOLID YELLOW PAVEMENT MARKING	LF	266		
118	JSP-302C	HIGH VISIBILITY CROSSWALK	LF	66		
119	JSP-303B	ROADWAY SIGNS	SF	134		
120	JSP-303C	GROUND MOUNTED SIGN POST (ROADWAY)	EA	12		
121	JSP-303E	BRIDGE WEIGHT LIMIT SIGNS	EA	4		

BID FORM: Centennial Greenway - Phase IIA (Addendum 2)						
LOCALLY FUNDED ITEMS (ADD ALTERNATE 1)						
122	A-JSP-211	WAYFINDING SIGNAGE (SEE JSP FOR SIGN TYPES)	EA	53		
123	A-JSP-303A	TRAIL SIGNS	SF	58		
124	A-JSP-303C	GROUND MOUNTED SIGN POST (TRAIL)	EA	20		
125	A-JSP-303D	PRAIRIE RESTORATION SIGNS	EA	10		
LOCALLY FUNDED ITEMS (ADD ALTERNATE 2)						
126	B-JSP-25	CLASS A EXCAVATION	CY	250		
127	B-JSP-26	COMPACTING EMBANKMENT	CY	1,828		
128	B-JSP-28	TYPE 5 AGGREGATE FOR BASE (4 IN. THICK)	SY	~~42~~ 204		
129	B-JSP-29	TYPE 5 AGGREGATE FOR BASE (8 IN. THICK)	SY	278		
130	B-JSP-30	GRAVEL (A)	TON	11		
131	B-JSP-31	BITUMINOUS PAVEMENT MIXTURE PG64-22, (BP-1)	TON	26		
132	B-JSP-32	BITUMINOUS PAVEMENT MIXTURE PG64-22 (BASE)	TON	26		
133	B-JSP-33	PRIME COAT	GAL	98		
134	B-JSP-34	TACK COAT	GAL	24		
135	B-JSP-35A	CONCRETE PAVEMENT (8" NON-REINF)	SY	~~2~~ 164		
136	B-JSP-35B	CONCRETE PAVEMENT (12" NON-REINF)	SY	40		
137	B-JSP-36A	MSD AREA INLET	EA	5		
138	B-JSP-37A	12" CLASS III RCP	LF	483		
139	B-JSP-38A	12" PRE-CAST CONCRETE FLARED END SECTION	EA	3		

BID FORM: Centennial Greenway - Phase IIA (Addendum 2)						
140	B-JSP-54	GROUTED COMPOST	LS	1		
141	B-JSP-72	COMPOST SOCK DITCH CHECK	EA	24		
142	B-JSP-77	TYPE 1 TURF REINFORCEMENT MAT	SY	802		
143	B-JSP-201A	DECIDUOUS SHADE / STREET TREE	EA	77		
144	B-JSP-201B	EVERGREEN TREE	EA	24		
145	B-JSP-201C	FLOWERING/ORNAMENTAL TREE	EA	82		
146	B-JSP-201D	SHRUBS AND ORNAMENTAL GRASSES	EA	681		
147	B-JSP-202	PERENNIALS	EA	1,007		
148	B-JSP-203	MULCH	CY	171		
149	B-JSP-204	PLANTING SOIL	CY	1,532		
150	B-JSP-208	CONCRETE UNIT PAVERS	SF	1,455		
151	B-JSP-209A	MULTI-PIECE PRECAST FREESTANDING SEAT WALL	SF	325		
152	B-JSP-209B	SEAT WALL COPING	LF	135		
LOCALLY FUNDED ITEMS (ADD ALTERNATE 3)						
153	C-JSP-46	DECORATIVE PEDESTRIAN GUARDRAIL	LF	1,533		
LOCALLY FUNDED ITEMS (ADD ALTERNATE 4)						
154	D-JSP-210	BIKE SHELTER	EA	1		
LOCALLY FUNDED ITEMS (ADD ALTERNATE 5)						
155	E-JSP-154	YEAR 1 LANDSCAPE MAINTENANCE	EA	1		
LOCALLY FUNDED ITEMS (ADD ALTERNATE 6)						
156	F-JSP-155	YEAR 2 LANDSCAPE MAINTENANCE	EA	1		
LOCALLY FUNDED ITEMS (ADD ALTERNATE 7)						
157	G-JSP-156	YEAR 3 LANDSCAPE MAINTENANCE	EA	1		

BID FORM: Centennial Greenway - Phase IIA (Addendum 2)	
FEDERALLY REIMBURSED ITEMS SUBTOTAL =	
LOCALLY FUNDED ITEMS SUBTOTAL =	
ADD ALTERNATE 1 SUBTOTAL =	
ADD ALTERNATE 2 SUBTOTAL =	
ADD ALTERNATE 3 SUBTOTAL =	
ADD ALTERNATE 4 SUBTOTAL =	
ADD ALTERNATE 5 SUBTOTAL =	
ADD ALTERNATE 6 SUBTOTAL =	
ADD ALTERNATE 7 SUBTOTAL =	
TOTAL BID AMOUNT =	

Bid Requirement:

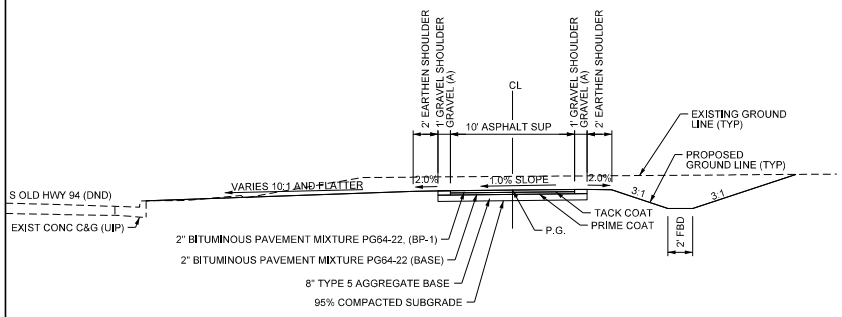
The following providers are qualified by Great Rivers Greenway District to provide the installation of the Native Seed Mixes.

Barker Horticultural Services, LLC
DJM Ecological Services,
Landesign, LLC
Two Alpha Contracting

If a sub-contractor not listed above is proposed to complete installation of Native Seed Mixes, the sub-contractor shall complete qualification with Great Rivers Greenway seven (7) days prior to the bid opening time specified in the Notice to Bidders.

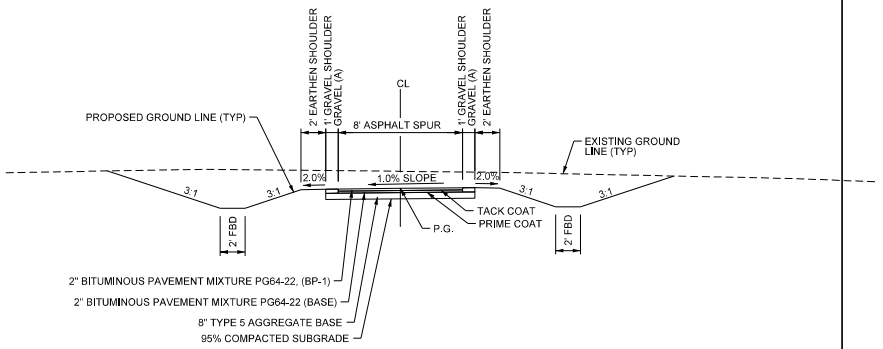
Please indicate below which planting contractor has been included in your bid:

BMP/Seeding Contractor Used: _____



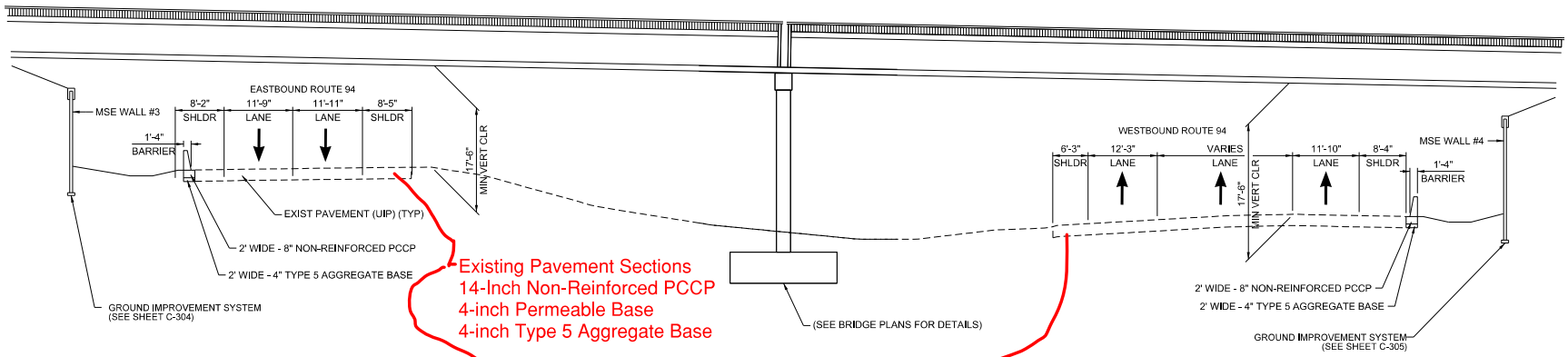
TYPICAL SECTION 11

(NOT TO SCALE)
STA 33+50.00 TO STA 35+50.33
STA 35+82.75 TO STA 44+03.30



TYPICAL SECTION 12

(NOT TO SCALE)
STA 0+05.00 TO STA 1+17.34
STA 1+63.98 TO STA 2+76.28



TYPICAL SECTION - ROUTE 94

(NOT TO SCALE)

NOTES:

1. SEE PLANS SHEET C-052 FOR REMOVALS.
2. SEE PLAN SHEETS C-103, C-304 AND C-305 FOR LIMITS OF PAVEMENT, BARRIERS, WALLS AND GUARDRAIL.

no.	date	by	chd	description
0	9/19/16	JB	DK	ISSUED FOR BID

FEDERAL ID NUMBER: TAP 9900 677

UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE INFORMATION AND, THEREFORE, THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. THE VERIFICATION OF THE LOCATIONS OF ALL UNDERGROUND UTILITIES AS EITHER SHOWN OR NOT SHOWN ON THESE PLANS SHALL BE THE RESPONSIBILITY OF THE CONTRACTORS, AND SHALL BE LOCATED PRIOR TO CONSTRUCTION.

BURNS McDONNELL
425 SOUTH WOODS MILL ROAD
CHESTERFIELD, MISSOURI 63017
314-682-1500
ENG. 000165

date	detailed
September 2016	J. Birke
designed	checked
J. Birke	D. Koscielski

Great Rivers Greenway

GREAT RIVERS GREENWAY
CENTENNIAL GREENWAY PHASE IIA

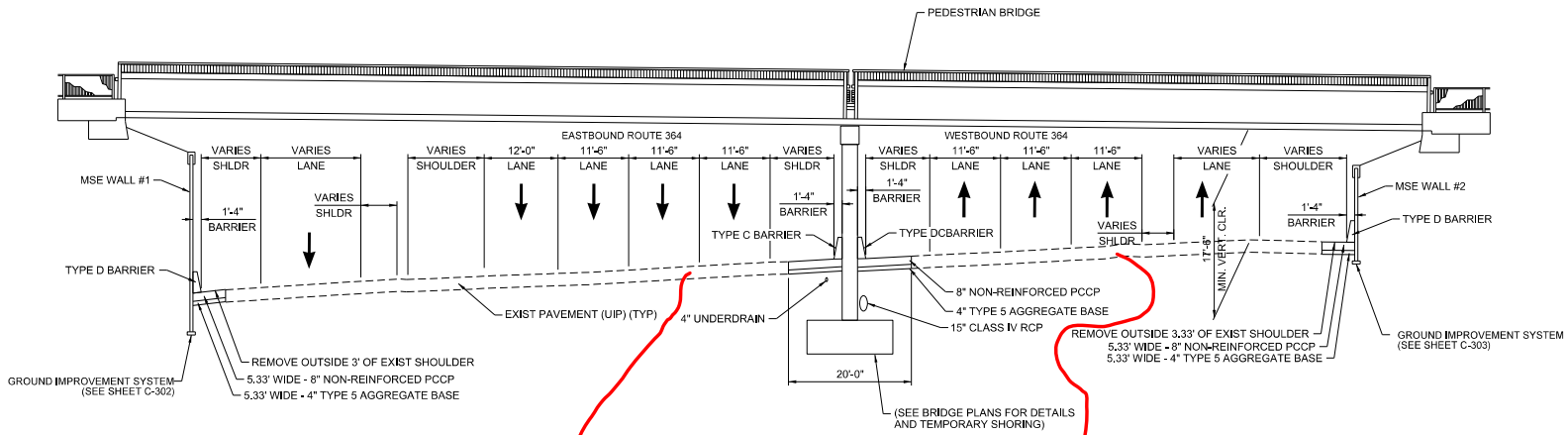
TYPICAL SECTIONS

project	contract
85395	

drawing **C-005** — rev. **0**

file:

JOEL J. BIRKE
PROFESSIONAL ENGINEER
LICENSE NO. 2014016927



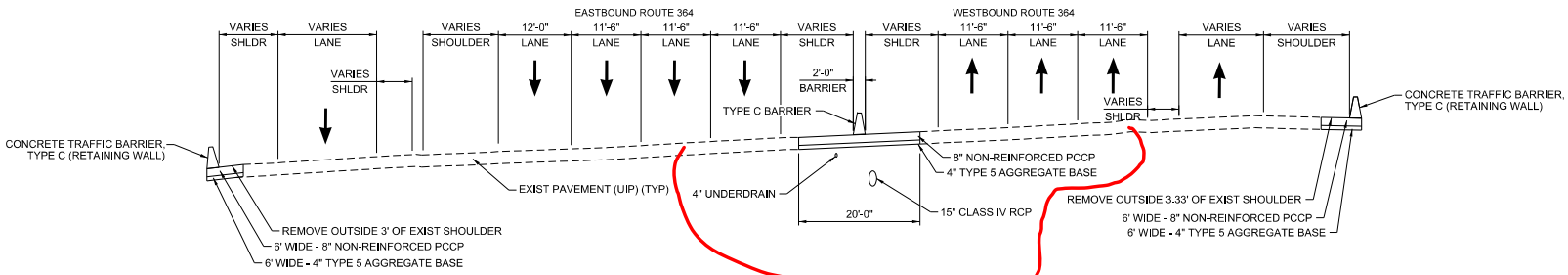
TYPICAL SECTION - ROUTE 364

(NOT TO SCALE)

NOTES:

1. SEE PLANS SHEET C-051 FOR REMOVALS.
2. SEE PLAN SHEETS C-101, C-302 AND C-303 FOR LIMITS OF PAVEMENT, BARRIERS, WALLS AND GUARDRAIL.

Existing Pavement Section:
14" Non-Reinforced PCCP
4" Permeable Base
4" Type 5 Aggregate Base



TYPICAL SECTION - ROUTE 364

(NOT TO SCALE)

Existing Pavement Section:
14" Non-Reinforced PCCP
4" Permeable Base
4" Type 5 Aggregate Base

no.	date	by	chd	description
0	9/19/16	JB	DK	ISSUED FOR BID

FEDERAL ID NUMBER: TAP 9900 677

UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE INFORMATION AND, THEREFORE, THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. THE VERIFICATION OF THE LOCATIONS OF ALL UNDERGROUND UTILITIES AS EITHER SHOWN OR NOT SHOWN ON THESE PLANS SHALL BE THE RESPONSIBILITY OF THE CONTRACTORS, AND SHALL BE LOCATED PRIOR TO CONSTRUCTION.

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CHESTERFIELD, MISSOURI 63017
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date	detailed
September 2016	J. Birke
designed	checked
J. Birke	D. Koscielski

Great Rivers Greenway

GREAT RIVERS GREENWAY
CENTENNIAL GREENWAY PHASE IIA

TYPICAL SECTIONS

project	contract
85395	

drawing C-006 — rev. 0

JOEL J. BIRKE
PROFESSIONAL ENGINEER
LICENSE NO. 2014016927