ADDENDUM NO. 4

DATE: March 2, 2018

TO: All Bidders

FROM: Penny Owens, Assistant Purchasing Agent

SUBJECT: Addendum No. 4 – Magnolia Avenue Streetscape Project

PROJECT NO.: 15A-R-0584 & 16A-R-0609

BIDS TO BE OPENED: March 6, 2018, at 11:00 a.m. Eastern Time

This addendum becomes a part of the Contract Documents and modifies the original specifications as noted.

Changes to the Contract Documents & Specifications:

Release Agent for Colored and Stamped Concrete

The release agent is to be Butterfield Perma-Cast in colors R14-Walnut and R12-Storm Gray.

Sealer for Colored and Stamped Concrete

The sealer is to be Clear Guard Cure and Seal by Butterfield (or Owner approved equal) in a No Gloss Finish.

Bid Proposal

A revised bid proposal form is attached to this addendum. The following is a summary of the changes made:

- 1.) The description for Item No. 22.12.4 was revised.
- 2.) Item No. 70.13 was added.
- 3.) Item No. 70.14 was added.
- 4.) Item No. 71.04 was removed.
- 5.) The quantity for Item No. 725-22.25 was decreased.
- 6.) Item No. 730-12.40 was added.

Revised Sheets

A revised Phase I & Phase II Sheet No. 2A is attached to this addendum. The following is a summary of the changes made:

- 1.) The description for Item No. 22.12.4 was revised.
- 2.) Item No. 70.13 was added.
- 3.) Footnote 14 was added.
- 4.) Item No. 70.14 was added.
- 5.) Footnote 15 was added.
- 6.) Item No. 71.04 was removed.
- 7.) The quantity for Item No. 725-22.25 was decreased.
- 8.) Item No. 730-12.40 was added.
- 9.) Footnote 13 was added.

Clarification of Contract Documents & Specifications:

The following are responses to questions received from potential bidders:

Questions

Question #1: What storm structure is item 22.12.4, No. 12 Catch Basin >16'-20' Depth w/ Bike Grate to be used for? There is no type 12 structure of that depth listed in either Phase storm chart.

Response: The description for Item No. 22.12.4 has been changed to No. 42 Catch Basin, > 4' – 8' Depth.

Question #2: What TDOT standard drawing should be used for item 22.05, Junction Box?

Response: TDOT STD DWG. D-JBS-1, Standard 32" X 32" Square Concrete No. 1 Junction Box.

Question #3: Item 713-16.20 Street Name Signs. Plans say 8" Upper and 6" Lower case letters on a sign that is 18" tall. Typically, 8" is used on a 12" high sign and 12" is used on an 18" sign. Please clarify.

Response: While the MUTCD does allow for the use of larger letters if desired, all overhead signs currently used by the City of Knoxville Sign Shop are 18" metal with 8" Upper case letters. For consistency, the signs on this project shall have 8" Upper and 6" Lower case letters.

Question #4: Item 725-22.25 Conduit Bank 2" (HDPE). Plans show 2 of the 2" conduit in the bank run. Does this need to be encased in concrete or just buried?

Response: Where outside of the roadway, it will be direct buried and be paid for under Item No.

725-22.25. Item No. 730-12.40 has been added to cover side street crossings where encasement will be required.

Question #5: Can Solomon Colors, Inc. integral color "Camel" be used as an equivalent to the Butterfield "Weathered Terra Cotta" for the colored concrete?

Response: The substitution request will not be considered at this time.

Question #6: Can you distinguish the difference in pay items 13.12 and 71.04? Specifically what are the limits for item 71.04?

Response: Item No. 71.04 has been removed. All 4" colored and stamped concrete will be included in Item No. 13.12.

Question #7: Can you further clarify items 26.10 and 26.20 and the soil amendments referenced in the specs? The response in addendum #3 to question #61 states that both items 26.10 and 26.20 are subject to testing and both items may require organic or inorganic amendments based on the test results. Item 26.20 is for PLANTING MIX – AMENDMENTS, is that meant to be planting soil or amendments or planting soil with amendments? For instance, if item 26.10 TOPSOIL is tested and the results say that amendments are required, will the required quantity of amendments to be paid for as item 26.20 IN ADDITION to the quantity of item 26.10?

Response: Imported topsoil, meeting the requirements of specification section 32 90 00, shall be used for Item No. 26.10. Any amendments added to the topsoil will not be paid for under Item No. 26.20. Item No. 26.20 is to be used for amended planting soil. Bidders should assume that Nature's Helper Soil Conditioner (or accepted equal) will be used for entire quantity listed under Item No. 26.20.

Question #8: There are no pay items for excavation/conduit/backfill of the various runs of conduit needed for the street lighting system. If the cost for excavation/conduit/backfill of the conduits is included in other pay items, such as 70.06 LTG BRANCH WIRING, UNDER SIDEWALK, then the contractor has no way to get paid for the work to install the conduits runs until the very end of the project when the wire is pulled. Can items be added for the excavation/conduit/backfill of the different street lighting conduit runs?

Response: Item No. 70.13 has been added to cover excavation, conduit, and backfill only.

END OF ADDENDUM NO. 4

BID PROPOSAL CITY OF KNOXVILLE, TENNESSEE

Magnolia Avenue Streetscape Project Phase I, Project No. 15A-R-0584 Phase II, Project No. 16A-R-0609

TO THE PURCHASING AGENT
CITY OF KNOXVILLE, TENNESSEE

	hereby propose(s) to furnish all material, labor, and
appliances and do all work required to complete the Co	ontract for the Magnolia Avenue Streetscape Project
Project No. 15A-R-0584 (Phase I) and Project No. 16A-	-R-0609 (Phase II), located in the City of Knoxville
Tennessee, in a workmanlike manner and in accordance	with the plans of the Department of Engineering an

Bidder further agrees that in case of failure to sign a delivered contract within thirty (30) days, the certified check or bid bond accompanying this bid and the proceeds thereof shall be the property of the City of Knoxville if the City chooses to retain said bid bond or check.

BID SCHEDULE

	CITY OF KNOXVILLE ES	TIMAT	ED ROADWA	AY QUANTITIES	
ITEM			TOTAL	PRICE	TOTAL PRICE
NO.	DESCRIPTION	UNITS	QUANTITY	PER UNIT	PER ITEM
1.10	Mobilization of Forces, Supplies				
	and Equipment (Maximum Amount				
	= \$14,000 + 1% of Contract	LS	1		
1.50	Construction Stakes, Lines and				
	Grades	LS	1		
2.20	Tree and Shrub Removal	LS	1		
3.10	Removal of Pipe	LF	2,277		
3.11	Removal of Rigid Pavement,		•		
	Sidewalk, Etc.	SY	6,886		
3.12	Removal of Vehicular Concrete	SY	7,101		
3.13	Removal of Asphalt Pavement	SY	5,411		
3.14	Removal of Curb	LF	5,302		
3.15	Removal of Curb and Gutter	LF	1,364		
3.16	Removal of Subsurface Trolley		•		
	Tracks	LF	1,375		
4.20	Common Excavation	CY	1,900		
5.30	Maintenance Stone	TON	2,500		
10.30	Saw Cutting Asphalt Pavement	LF	14,330		

ITEM			TOTAL	PRICE	TOTAL PRICE
NO.	DESCRIPTION 4" Mountable Cyah and Cytton	UNITS	QUANTITY	PER UNIT	PER ITEM
12.41	4" Mountable Curb and Gutter, Type 4-30	LF	25		
12.46	4" Nonmountable Concrete Curb	LF	100		
12.95	10" Concrete Curb	LF	37		
13.10	Concrete Sidewalks	SF	41,113		
13.11	Concrete Steps	LS	41,113		
13.12	4" Thick Concrete Paving	LS	1		
13.12	(Colored and Stamped)	SF	2,540		
13.13	8" Thick Concrete Paving		,		
	(Colored and Stamped)	SF	415		
13.20	Concrete Driveways	SF	11,693		
14.10	Flowable Fill (Flowable Mortar)	CY	13		
20.07	6" HDPE	LF	576		
20.08	12" HDPE	LF	1,654		
20.14	18" R.C.P.	LF	2,195		
20.16	24" R.C.P.	LF	608		
20.18	30" R.C.P.	LF	382		
20.20	36" R.C.P.	LF	70		
20.22	42" R.C.P.	LF	25		
20.24	48" R.C.P.	LF	426		
21.30	Water Quality Unit				
	w/Diversion Box	EA	1		
22.00	No. 3 Manhole, 4' - 8'	EA	3		
22.01	No. 3 Manhole, 8' - 12'	EA	2		
22.02	No. 3 Manhole, 16' - 20'	EA	1		
22.05	Junction Box, Type 1	EA	3		
22.10.2	No. 10 Catch Basin, > 4' - 8' Depth				
	w/Bicycle Grate	EA	1		
22.12.1	No. 12 Catch Basin, 0' - 4' Depth				
22.12.2	w/Bicycle Grate	EA	1		
22.12.2	No. 12 Catch Basin, > 4' - 8' Depth w/Bicycle Grate	EA	24		
22.12.3	No. 12 Catch Basin, > 8' - 12' Depth	LA	24		
22.12.9	w/Bicycle Grate	EA	18		
22.12.4	No. 42 Catch Basin, > 4' - 8' Depth	EA	1		
22.12.5	No. 51 Catch Basin, > 16' - 20'	- _	-		
	Depth w/Bicycle Grate	EA	1		
22.12.6	GDOT Throated Inlet 1033F	EA	3		
22.12.7	Temporary Grate	EA	7		
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NO. DESCRIPTION UNITS QUANTITY PER UNIT PER ITEM	ITEM			TOTAL	PRICE	TOTAL PRICE
(TDOT No. 42) 8' - 12' EA 1 22.40.2 Conversion of Existing Catch Basin to Junction Box EA 2 22.40.3 Adjustment of Existing Manhole EA 3 22.40.4 Conversion of Existing Manhole to Junction Box EA 1 26.10 Topsoil CY 820 26.20 Planting Mix - Amendments CY 95 26.30 Shrubs/Groundcover SF 26,180 26.40 Ornamental Trees EA 19 26.50 Medium Shade Trees EA 12 26.60 Large Shade Trees EA 42 26.70 Sod SF 15,720 26.80 Hardwood Mulch CY 88 31.10 Erosion Control LS 1 31.15 Tree Protection Fencing LF 292 34.10 Construction Area Traffic Control LS 1 38.10 Cold Planing of Asphalt Pavement TON 2,036 39.10 Temporary Pavement Marking (Line) Lighting Pole Assembly - Redestrian Lighting EA 20 70.02 Lighting Pole Assembly - Pedestrian Lighting EA 60 70.03 Street Lighting EA 60 70.04 In-Grade Lighting Fixtures EA 9 70.05 Lighting Control Panel Assemblies EA 2 70.06 Lighting Control Panel Assembly EA 87 70.07 LTG Branch Wiring, Under Sidewalk LF 11,660 70.07 LTG Branch Wiring, Under Sidewalk LF 11,660 70.08 Secondary Service Lateral LCP1, Under Sidewalk LF 99 70.09 Secondary Service Lateral LCP2 LF 275			UNITS	QUANTITY	PER UNIT	PER ITEM
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70.09 Secondary Service Lateral LCP2 LF 275	70.08	Secondary Service Lateral LCP1,		•		
			LF	99		
70.10 Service Risers EA 2		•	LF	275		
	70.10	Service Risers	EA	2		

ITEM			TOTAL	PRICE	TOTAL PRICE
NO.	DESCRIPTION	UNITS	QUANTITY	PER UNIT	PER ITEM
70.11	Pull Boxes	EA	7		
70.12	Concrete Encasement for Duct				
5 0.42	Banks	LF	891		
70.13	2" Electrical Conduit	LF	211		
70.14	Monument Sign Lighting Service	LS	1		
71.01	Benches	EA	31		
71.02	Trash Receptacles	EA	16		
71.03	Bike Loops	EA	23		
303-01	Mineral Aggregate, Type A Base, Grading D	TON	4,500		
307-02.01	Asphalt Concrete Mix (PG70-22) (BPMB-HM) Grading A	TON	125		
307-02.06	Asphalt Concrete Mix (PG70-22) (BPMB-HM) Grading B	TON	3,711		
307-02.08	Asphalt Concrete Mix (PG70-22) (BPMB-HM) Grading B-M2	TON	81		
402-01	Bituminous Material for Prime Coat (PC)	TON	9		
403-01	Bituminous Material for Tack Coat (TC)	TON	19		
411-02.10	ACS Mix (PG70-22) Grading D	TON	2,480		
702-01.01	Extruded Sloping Curb	LF	3,014		
702-03	Concrete Combined Curb & Gutter	CY	641		
713-16.20	Sign (Street Name Sign)	EA	12		
713-16.21	Sign (Turning Traffic Yield to Pedestrian 30" R10-15L)	EA	1		
725-02.79	Fiber Optic Closure (48F Enclosure)	EA	3	_	
725-03.09	Ethernet Switch (Type A)	EA	3		-
725-22.25	Conduit Bank (2" HDPE)	LF	4,611		
725-23.02	Fiber Optic Testing	LS	1		
725-23.12	Fiber Optic Cable (48F)	LF	2,641		
725-23.21	Fiber Optic Drop Cable (12F)	LF	150		
725-24.61	Training	LS	1		
730-01.02	Removal of Signal Equipment	EA	3		
730-02.09	Signal Head Assembly		•		
730-02.30	(130 with Backplate) Signal Head Assembly	EA	24		
720 02 21	(140 A3H with Backplate)	EA	1		
730-03.21	Install Pull Box (Type B)	EA	12		

ITEM			TOTAL	PRICE	TOTAL PRICE
NO.	DESCRIPTION	UNITS	QUANTITY	PER UNIT	PER ITEM
730-03.23	Install Pull Box				
	(Fiber Optic - Type A)	EA	7		
730-03.24	Install Pull Box		_		
	(Fiber Optic - Type B)	EA	3		
730-03.33	Fiber Optic Splice Fusion	EA	12		
730-05.01	Electrical Service Connection	EA	3		
730-05.02	Service Cable				
	(2 Conductor, #8 AWG)	LF	242		
730-08.01	Signal Cable - 3 Conductor				
	(14 AWG Stranded)	LF	3,058		
730-08.02	Signal Cable - 5 Conductor				
5 20 00 02	(14 AWG Stranded)	LF	3,393		
730-08.03	Signal Cable - 7 Conductor		-0-		
72 0 00 07	(14 AWG Stranded)	LF	685		
730-08.05	Signal Cable - 12 Conductor		1.504		
720 12 02	(14 AWG Stranded)	LF	1,534		
730-12.02	Conduit 2" Diameter (PVC)	LF	701		
730-12.03	Conduit 3" Diameter (PVC)	LF	147		
730-12.09	Conduit 3" Diameter (RGS)	LF	2,520		
730-12.40	Encased Conduit (Conduit Bank 2"				
	HDPE)	LF	440		
730-13.07	Vehicle Detector				
	(Sonem 2000 Priority Control)	EA	12		
730-13.08	Vehicle Detector (Wavetronix)	EA	12		
730-15.09	Cabinet (Sixteen Phase Base				
	Mounted)	EA	3		
730-16.14	Controller (Sixteen Phase Actuated				
	Naztec ATC)	EA	3		
730-23.30	Pedestal Pole (10')	EA	14		
730-23.72	Cantilever Signal Support				
	(1 ARM @ 35')	EA	1		
730-23.80	Cantilever Signal Support				
	(1 ARM @ 40')	EA	1		
730-23.88	Cantilever Signal Support	T	_		
720 22 00	(1 ARM @ 45')	EA	6	_	
730-23.98	Cantilever Signal Support	T .	2		
720 22 00	(1 ARM @ 55')	EA	2		
730-23.99	Cantilever Signal Support	T7: A	2		
720 26 06	(1 ARM @ 60')	EA	2		
730-26.06	Pedestrian Pushbutton Post	EA	5		

		TOTAL	PRICE	TOTAL PRICE
DESCRIPTION	UNITS	QUANTITY	PER UNIT	PER ITEM
Countdown Ped Sgnl Head				
w/Audible Push Button &				
15 in Sign	EA	24		
Battery Back-Up and Power				
Conditioner	EA	3		
Temporary Traffic Signal System	LS	1		
\ [Countdown Ped Sgnl Head w/Audible Push Button & 15 in Sign Battery Back-Up and Power Conditioner	Countdown Ped Sgnl Head W/Audible Push Button & EA Battery Back-Up and Power Conditioner EA	DESCRIPTION UNITS QUANTITY Countdown Ped Sgnl Head w/Audible Push Button & EA 24 Battery Back-Up and Power Conditioner EA 3	DESCRIPTION UNITS QUANTITY PER UNIT Countdown Ped Sgnl Head w/Audible Push Button & EA 24 Battery Back-Up and Power Conditioner EA 3

Total of all Roadway Items <u>\$</u>

	KUB ESTIMATED QUANTITIES						
A1000	Mobilization (Limited to Unit Price Bid or 8.25% of Project Bid Total, Whichever is Less)	I G	1				
A 1010-	'	LS	1 .				
A1010a	Traffic Control, Plans	LS	1 .	_			
A1010b	Traffic Control Implementation	LS	1.				
A1015	Pre-Construction Site Video	T. C.	4				
A 1016	Recording	LS	1 .				
A1016	Temporary Guying of Utility Poles	EA	3				
A2115a	Gravity Sewer Pipe, PVC, 8 Inches, Paved, 0 - 6 Feet Deep	LF	146				
A2175a	Gravity Sewer Pipe, DIP, 8 Inches, Paved, 0 - 6 Feet Deep	LF	31				
A2176a	Gravity Sewer Pipe, DIP, 8 Inches, Paved, Installed Within 16" Steel Casing, 0 - 6 Feet Deep	LF	100				
A2395	Closed Circuit Television (CCTV) Inspections (As Directed by Owner)	LF	300				
A2400c	Pipe Heavy Cleaning (As Directed by Owner), 8 - Inch Diameter	LF	300	_			
A2405	Point Repair in Roadway	LF	10				
A2415c	Pipe Bursting, 8 - Inch Diameter	LF	1,760				
A2420	PVC Sewer Lateral Appurtenances	EA	-				
A2425a	PVC Sewer Lateral, 6-Inch	EA	20				
A2423a	Diameter, In Road	LF	500				
A2425b	PVC Sewer Lateral, 6-Inch		•				
	Diameter, In Easement	LF	60				
A2435a	Manhole, Concrete, 4-Foot	ΕA	2				
A2495e	Diameter, 0 - 6 Feet Deep Drop Manhole, 4-Foot Diameter,	EA	3 .				
	12 - 14 Feet Deep	EA	1				

ITEM NO.	DESCRIPTION	UNITS	TOTAL QUANTITY	PRICE PER UNIT	TOTAL PRICE PER ITEM
A2575a	Manhole Lining, 1-Inch Thick				
	Cementitious Lining, 4 - Foot				
	Diameter	VF	100		
A2590	Abandon Existing Manhole	EA	1		
A2620c	Abandon Existing Sewers by				
	Grouting in Place, 8 - Inch Diameter	LF	300		
A2630	Sewer Flow Control	LS	1		
A6000	Temporary Patching	LF	500		
A307-02.06	Asphalt Concrete Mix (PG70-22)				
	(BPMB-HM) Grading B	TON	610		
A6020	Crushed Rock Surfacing, Roadways,				
	and Driveways	SY	165		
A6025	Seeding	SY	450		
A6030	Sodding	SY	5		
B3000f	Water Line, 8" DIP Water Line Under Pavement or Within 3' of Edge of Pavement per Section 02321	LF	2,800		
B3000g	Water Line, 6" DIP Water Line Under Pavement or Within 3' of Edge of Pavement per Section 02321	LF	140		
B3000j	Water Line, 2" Water Line Under Pavement or Within 3' of Edge of Pavement per Section 02321	LF	250		
B3000s	Water Line, 8" Restrained Joint	ΕA	140		
D2005h	Gaskets Wester Mein Born 2" Directional	EA	140		-
B3005b	Water Main Bore, 2" Directional Bore	LF	1,825		
B3010a	Water Valve Installation, 2" HDPE Valve	EA	3		
B3010b	Water Valve Installation, 4" Gate Valve	EA	1		
B3010c	Water Valve Installation, 6" Gate Valve	EA	1		
B3010d	Water Valve Installation, 8" Gate Valve	EA	15		
B3015a	Air Valves, Blowoff Valves, & Hydrants, 2" Blow-Off Valve Assembly	EA	5		
B3015b	Air Valves, Blowoff Valves, & Hydrants, 1" Air-Release Valve	EA	2		
	riyaranta, r mi-recieuse varve	ĽA	<i>L</i>		

ITEM			TOTAL	PRICE	TOTAL PRICE
NO.	DESCRIPTION	UNITS	QUANTITY	PER UNIT	PER ITEM
B3015d	Air Valves, Blowoff Valves, &				
	Hydrants, Fire Hydrant Assembly	EA	7		
B3015f	Air Valves, Blowoff Valves, &				
	Hydrants, 8" Insertion Valve	EA	1		
B3020a	Tie-Ins to Existing Facilities, Sta.				
	0+00 Line "A"	EA	1		
B3020b	Tie-Ins to Existing Facilities, Sta.				
	0+00 Line "B"	EA	1		
B3020c	Tie-Ins to Existing Facilities,				
	Connection to Existing 6" CI Water				
	at Austin Street	EA	1		
B3020d	Tie-Ins to Existing Facilities,				
	Connection to Existing 12" Water at				
	Bertrand St.	EA	1		
B3020e	Tie-Ins to Existing Facilities,				
	Connection to Existing 14" Water at				
	Bertrand St.	EA	1		
B3020f	Tie-Ins to Existing Facilities, Sta.		-		
20201	23+24.74 End of Line "A"	EA	1		
B3025a	Service Connections, Reconnection	Lil	1		
D3023a	(Service Tap) - 1" and Smaller	EA	31		
B3025b	Service Connections, Reconnection	Lit	31		
D 30230	(Service Tap) - 1 1/2" - 2"	EA	7		
B3025e	Service Connections, Reconnection	LA	7		
D3023C	(Fireline) - 4"	EA	1		
B3025f	Service Connections, Reconnection	LA	1		
D 30231	(Fireline) - 6"	EA	1		
B3025h	Service Connections, Meter Well	EA	1		
D 302311	and Lid, Meter Horn, and				
	Associated Fittings - 1" and Smaller	ΕA	20		
D2025:	_	EA	30		
B3025i	Service Connections, Meter Well				
	and Lid, Meter Horn, and	Ε.	7		
D20251	Associated Fittings - 1 1/2" - 2"	EA	7		
B3025k	Service Connections, Meter Well				
	and Lid, Meter Horn, and	7 7.4	4		
D2027	Associated Fittings - 4"	EA	1		
B30250	Service Connections, Meter Well				
	and Lid, Meter Horn, and				
	Associated Fittings - 3/4" Copper				
	Service Pipe	LF	793		
		DD (

ITEM			TOTAL	PRICE	TOTAL PRICE
NO.	DESCRIPTION	UNITS	QUANTITY	PER UNIT	PER ITEM
B3025p	Service Connections, Meter Well				
	and Lid, Meter Horn, and				
	Associated Fittings - 1" Copper	T IP	106		
D2025	Service Pipe	LF	126		
B3025pp	Service Connections, Meter Well				
	and Lid, Meter Horn, and				
	Associated Fittings - 1 1/2" Copper Service Pipe	LF	160		
B3025q	Service Connections, Meter Well	LГ	100		
D3023q	and Lid, Meter Horn, and				
	Associated Fittings - 2" Copper				
	Service Pipe	LF	110		
B3025s	Service Connections, Meter Well		110		
	and Lid, Meter Horn, and				
	Associated Fittings - 4" Dip Service				
	Pipe	LF	34		
D.1a	Deductive Line Item, Credit for				
	Reuse of Existing Meter Well and				
	Lid	EA	-38		
B3030a	Retire Existing Water Facilities,				
	Abandon Existing Mains	LS	1		
B3030b	Retire Existing Water Facilities,				
	Abandoned Existing Water Valves,				
	Air Valves, & Blowoff Assemblies	EA	50		
B3030c	Retire Existing Water Facilities,				
	Abandon Existing Fire Hydrants	EA	7		
B6000	Temporary Patching	LF	750		
B307-02.06	Asphalt Concrete Mix (PG70-22)				
	(BPMB-HM) Grading B	TON	2,625		
B6020	Crushed Rock Surfacing, Roadways,				
	and Driveways	SY	585		
B6025	Seeding	SY	1,600		
B6030	Sodding	SY	15		
	To	tal of all	KUB Items	\$	
	10	.a. or un		Ψ	
		TOTAL	BID	\$	

[ESTIMATED QUANTITIES						
	ITEM NO.	DESCRIPTION	UNIT	QUANTITY			
	1.10 1.50	MOBILIZATION OF FORCES, SUPPLIES AND EQUIPMENT (MAXIMUM AMOUNT = \$14,000 + 1% OF CONTRACT AMOUNT) CONSTRUCTION STAKES, LINES AND GRADES	LS LS	1			
1	2.20	TREE AND SHRUB REMOVAL	LS	1			
	3.10	REMOVAL OF PIPE	L.F.	2277			
-	3.11	REMOVAL OF RIGID PAVEMENT, SIDEWALK, ETC. REMOVAL OF VEHICULAR CONCRETE	S.Y.	6886 7101			
ł	3.13	REMOVAL OF ASPHALT PAVEMENT	S.Y.	5411			
Ì	3.14	REMOVAL OF CURB	L.F.	5302			
Start I	3.15	REMOVAL OF CURB AND GUTTER	L.F.	1364			
2	3.16	REMOVAL OF SUBSURFACE TROLLEY TRACKS	L.F.	1375			
	4.20	COMMON EXCAVATION	C.Y.	1900			
	5.30	MAINTENANCE STONE	TON	2500			
	10.30	SAW CUTTING ASPHALT PAVEMENT	L.F.	14330 25			
ŀ	12.41	4" MOUNTABLE CURB AND GUTTER, TYPE 4-30 4" NONMOUNTABLE CONCRETE CURB	L.F.	100			
	12.95	10" CONCRETE CURB	L.F.	37			
1	13.10	CONCRETE SIDEWALKS	S.F.	41113			
3	13.11	CONCRETE STEPS	LS	1			
	13.12	4" THICK CONCRETE PAVING (COLORED AND STAMPED)	S.F.	2540			
4	13.13 13.20	8" THICK CONCRETE PAVING (COLORED AND STAMPED) CONCRETE DRIVEWAYS	S.F.	415 11693			
	14.10	FLOWABLE FILL (FLOWABLE MORTAR)	C.Y.	13			
	20.07	6" HDPE	L.F.	576			
1	20.07	12" HDPE	L.F.	1654			
ŀ	20.14	18" R.C.P.	L.F.	2195			
į	20.16	24" R.C.P.	L.F.	608			
[20.18	30" R.C.P.	L.F.	382			
	20.20	36" R.C.P.	L.F.	70			
	20.22	42" R.C.P. 48" R.C.P.	L.F.	25 426			
	21.30	WATER QUALITY UNIT W/ DIVERSION BOX	EACH	1			
-	22.00	NO. 3 MANHOLE, 4' - 8'	EACH	3			
ł	22.00	NO. 3 MANHOLE, 8' - 12'	EACH	2			
İ	22.02	NO. 3 MANHOLE, 16' - 20'	EACH	1			
[22.05	JUNCTION BOX, TYPE 1	EACH	3			
-	22.10.2	NO. 10 CATCH BASIN, > 4' - 8' DEPTH W/ BICYCLE GRATE	EACH	1			
ł	22.12.1	NO. 12 CATCH BASIN, 0' - 4' DEPTH W/BICYCLE GRATE NO. 12 CATCH BASIN, > 4' - 8' DEPTH W/BICYCLE GRATE	EACH EACH	24			
, h	22.12.3	NO. 12 CATCH BASIN, > 8' - 12' DEPTH W/BICYCLE GRATE	EACH	18			
2	22.12.4	NO. 42 CATCH BASIN, > 4' - 8' DEPTH	EACH				
[22.12.5	NO. 51 CATCH BASIN, > 16' - 20' DEPTH W/BICYCLE GRATE	EACH	J Y			
	22.12.6	GDOT THROATED INLET 1033F	EACH	3			
(5)	22.12.7 22.15	TEMPORARY GRATE AREA DRAIN CATCH BASIN (TDOT NO. 42) 8' - 12'	EACH EACH	7			
ŀ	22.40.2	CONVERSION OF EXISTING CATCH BASIN TO JUNCTION BOX	EACH	2			
İ	22.40.3	ADJUSTMENT OF EXISTING MANHOLE	EACH	3			
	22.40.4	CONVERSION OF EXISTING MANHOLE TO JUNCTION BOX	EACH	1			
I	26.10	TOPSOIL	C.Y.	820			
[26.20	PLANTING MIX - AMENDMENTS	C.Y.	95			
	26.30	SHRUBS/GROUNDCOVER	S.F.	26180			
-	26.40 26.50	ORNAMENTAL TREES MEDIUM SHADE TREES	EACH EACH	19 12			
ŀ	26.60	LARGE SHADE TREES	EACH	42			
ļ	26.70	SOD	S.F.	15720			
İ	26.80 26.90	STONE MULCH	C.Y.	340 8			
[04.45	EDOCION CONTROL	1.5				
	31.10 31.15	EROSION CONTROL TREE PROTECTION FENCING	LS L.F.	1 292			
	34.10	CONSTRUCTION AREA TRAFFIC CONTROL	LS	1			
	38.10	COLD PLANING OF ASPHALT PAVEMENT	TON	2036			
	39.10	TEMPORARY PAVEMENT MARKING (LINE)	L.F.	5030			
	42.00	TACTILE WARNING SYSTEM, CAST IN PLACE	EACH	34			
6	63.10	SIGNAGE AND STRIPING	LS	1			
ŀ	70.01	LIGHTING POLE ASSEMBLY - STREET LIGHTING	EACH	20			
ł	70.02	LIGHTING POLE ASSEMBLY - PEDESTRIAN LIGHTING	EACH	60			
ľ	70.03	STREET LIGHTING ASSEMBLY, POLE & ARM BY OTHERS	EACH	6			
[70.04	IN-GRADE LIGHTING FIXTURES	EACH	9			
	70.05	LIGHTING CONTROL PANEL ASSEMBLIES	EACH	2			
	70.06 70.07	LTG BRANCH WIRING, UNDER SIDEWALK LTG BRANCH FITTINGS	L.F. EACH	11660 87			
-	70.07	SECONDARY SERVICE LATERAL LCP1, UNDER SIDEWALK	L.F.	99			
}	70.09	SECONDARY SERVICE LATERAL LCP2	L.F.	275			
ļ	70.10	SERVICE RISERS	EACH	2			
[70.11	PULL BOXES	EACH	7			

	ESTIMATED QUANTITIES					
	ITEM NO.	DESCRIPTION	UNIT	QUANTITY		
^	70.12	CONCRETE ENCASEMENT FOR DUCT BANKS	L.F.	891		
2 4	70.13	2" ELECTRICAL CONDUIT	L.F.	211		
(15)	70.14	MONUMENT SIGN LIGHTING SERVICE	LS			
	74.04	DENOUES	EAGU	24		
-	71.01 71.02	BENCHES TRASH RECEPTACLES	EACH	31 16		
1	71.02	BIKE LOOPS	EACH	23		
	303-01	MINERAL AGGREGATE, TYPE A BASE, GRADING D	TON	4500		
1	307-02.01	ASPHALT CONCRETE MIX (PG70-22) (BPMB-HM) GRADING A	TON	125		
	307-02.06	ASPHALT CONCRETE MIX (PG70-22) (BPMB-HM) GRADING B	TON	3711		
Ì	307-02.08	ASPHALT CONCRETE MIX (PG70-22) (BPMB-HM) GRADING B-M2	TON	81		
				8 8		
	402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC)	TON	9		
1	403-01	BITUMINOUS MATERIAL FOR TACK COAT (TC)	TON	19		
1	1000000		8 T. 105	1000		
	411-02.10	ACS MIX(PG70-22) GRADING D	TON	2480		
ł	702-01.01	EXTRUDED SLOPING CURB	L.F.	3014		
ľ	702-03	CONCRETE COMBINED CURB & GUTTER	C.Y.	641		
İ						
	713-16.20	SIGN (STREET NAME SIGN)	EACH	12		
	713-16.21	SIGN (TURNING TRAFFIC YEILD TO PEDESTRIAN 30" R10-15L)	EACH	1		
1	725-02.79	FIBER OPTIC CLOSURE (48F ENCLOSURE)	EACH	3		
	725-02.79	ETHERNET SWITCH (TYPE A)	EACH	3		
$\sqrt{2}$	725-22.25	CONDUIT BANK (2" HDPE)	L.F.	4611)		
$-\gamma$	725-23.02		<u>∼L.S</u>			
İ	725-23.12	FIBER OPTIC CABLE (48F)	L.F.	2641		
	725-23.21	FIBER OPTIC DROP CABLE (12F)	L.F.	150		
	725-24.61	TRAINING	LS	1		
-	730-01.02	REMOVAL OF SIGNAL EQUIPMENT	EACH	3		
(11)	730-01.02	SIGNAL HEAD ASSEMBLY (130 WITH BACKPLATE)	EACH	24		
10	730-02.30	SIGNAL HEAD ASSEMBLY (140 A3H WITH BACKPLATE)	EACH	1		
(12)	730-03.21	INSTALL PULL BOX (TYPE B)	EACH	12		
	730-03.23	INSTALL PULL BOX (FIBER OPTIC -TYPE A)	EACH	7		
1	730-03.24	INSTALL PULL BOX (FIBER OPTIC -TYPE B)	EACH	3		
	730-03.33	FIBER OPTIC SPLICE FUSION	EACH	12		
11)	730-05.01	ELECTRICAL SERVICE CONNECTION	EACH	3		
	730-05.02	SERVICE CABLE (2 CONDUCTOR, #8 AWG)	L.F.	242		
	730-08.01 730-08.02	SIGNAL CABLE - 3 CONDUCTOR (14 AWG STRANDED) SIGNAL CABLE - 5 CONDUCTOR (14 AWG STRANDED)	L.F.	3058 3393		
-	730-08.02	SIGNAL CABLE - 7 CONDUCTOR (14 AWG STRANDED)	L.F.	685		
ł	730-08.05	SIGNAL CABLE - 12 CONDUCTOR (14 AWG STRANDED)	L.F.	1534		
ł	730-12.02	CONDUIT 2" DIAMETER (PVC)	L.F.	701		
İ	730-12.03	CONDUIT 3" DIAMETER (PVC)	L.F.	147		
$\wedge \sim$	730-12.09	CONDUIT 3" DIAMETER (RGS)	L.F.	2520		
2\(\bar{1}\)	730-12.40		L.F.	440		
10	730-13.07 730-13.08	VEHICLE DETECTOR (SONEM 2000 PRIORITY CONTROL) VEHICLE DETECTOR (WAVETRONIX)	EACH EACH	12		
(10) (10)	730-15.00	CABINET (SIXTEEN PHASE BASE MOUNTED)	EACH	3		
10	730-16.14	CONTROLLER (SIXTEEN PHASE ACTUATED NAZTEC ATC)	EACH	3		
9	730-23.30	PEDESTAL POLE (10')	EACH	14		
9	730-23.72	CANTILEVER SIGNAL SUPPORT (1 ARM @ 35')	EACH	1		
9	730-23.80	CANTILEVER SIGNAL SUPPORT (1 ARM @ 40')	EACH	1		
9	730-23.88	CANTILEVER SIGNAL SUPPORT (1 ARM @ 45')	EACH	6		
9	730-23.98 730-23.99	CANTILEVER SIGNAL SUPPORT (1 ARM @ 55') CANTILEVER SIGNAL SUPPORT (1 ARM @ 60')	EACH	2		
9 9	730-23.99	PEDESTRIAN PUSHBUTTON POST	EACH	5		
8	730-26.11	COUNTDOWN PED SGNL HEAD W/AUDIBLE PUSH BUTTON & 15 IN	EACH	24		
•	730-35.06	BATTERY BACK-UP AND POWER CONDITIONER	EACH	3		
7	730.40.02	TEMPORARY TRAFFIC SIGNAL SYSTEM	LS	1		
		EQUINOTES:				

FOOT	NOTE	S:

- ① INCLUDES THE REMOVAL OF TREES AND SHRUBS AS SHOWN ON THE PRESENT LAYOUT SHEETS.
- INCLUDES REMOVAL AND DISPOSAL OF RAILS, WOOD CROSS TIES, AND AN AREA OF SOIL 10' WIDE BY 2' DEEP (+/- 926 C.Y.) CROSS TIES AND SOME EXCAVATED SOILS ASSOCIATED WITH REMOVAL OF THE TRACKS WILL NEED TO BE HAULED TO A CLASS 1 LANDFILL AS SPECIAL WASTE. HAULING AND TIPPING FEES ARE INCLUDED IN THIS ITEM.
- INCLUDES 120 S.F. OF OF CONCRETE STEPS WITH HANDRAIL.
- HIGH EARLY STRENGTH CONCRETE TO BE USED ON ALL DRIVEWAYS. NEENAH FOUNDRY R-3067-C COMBINATION FRAME AND TYPE L GRATE TO BE USED ON SOUTH SIDE BASINS WHEN CROSS DRAINS HAVE BEEN INSTALLED DURING NORTH SIDE
- PHASE OF CONSTRUCTION BEFORE SOUTH SIDE CURB HAS BEEN COMPLETED. TO INCLUDE ALL PERMANENT SIGNAGE AND PAVEMENT MARKINGS INCLUDING ITEMS SUCH AS ACCESSIBLE SYMBOLS AND STREET PRINT XD CROSSWALK MARKINGS. THERMOPLASTIC OR PREFORMED PLASTIC SHALL BE USED FOR SPECIALTY ITEMS SUCH AS STOP LINES, CROSS WALKS, ARROWS, CHANNELIZATION, AND OTHER SPECIALTY STRIPING ITEMS EXCEPT LINES. PERMANENT PAVEMENT MARKINGS FOR EDGE, CENTER SKIP AND LANE LINES SHALL BE ENHANCED FLAT LINE THERMOPLASTIC.
- REFER TO THE WORK ZONE TRAFFIC SIGNAL NOTE ON SHEET 14D FOR PHASE I AND 13C FOR PHASE II.
- ACCESSIBLE ADA PUSHBUTTON WITH VERBAL MESSAGE.
- SEE SPECIAL NOTE 3 (SHEET 17 FOR PHASE I AND 16 FOR PHASE II)
- (1) SEE SPECIAL NOTE 1 (SHEET 17 FOR PHASE I AND 16 FOR PHASE II) CONTACT PHILLIP REYES 865-215-6730 FOR EQUIPMENT DELIVERY AND POWER REQUEST
 - SEE SPECIAL NOTE 6 (SHEET 17 FOR PHASE I AND 16 FOR PHASE 2)
- CONDUIT SHALL BE CONCRETE ENCASED UNDER SIDE STREETS.
- TO INCLUDE EXCAVATION, CONDUIT, AND BACKFILL. WIRING AND ENCASEMENT NOT INCLUDED.
- (5) TO INCLUDE ITEMS NOTED IN KEY NOTE 12, SHEET E2.

	KUB ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	
A1000	MOBILIZATION (LIMITED TO UNIT PRICE BID OR 8.25% OF PROJECT BID TOTAL, WHICHEVER IS LESS)	LS	1	
A1010a	TRAFFIC CONTROL, PLANS	LS	1	
A1010b	TRAFFIC CONTROL IMPLEMENTATION	LS	1	
A1015	PRE-CONSTRUCTION SITE VIDEO RECORDING	LS	1	
A1016	TEMPORARY GUYING OF UTILITY POLES	EACH	3	
A2115a A2175a	GRAVITY SEWER PIPE, PVC, 8 INCHES, PAVED, 0 - 6 FEET DEEP GRAVITY SEWER PIPE, DIP, 8 INCHES, PAVED, 0 - 6 FEET DEEP	L.F.	146 31	
A2176a	GRAVITY SEWER PIPE, DIP, 8 INCHES, PAVED, INSTALLED	L.F.	100	
A2395	WITHIN 16" STEEL CASING, 0 - 6 FEET DEEP CLOSED CIRCUIT TELEVISION (CCTV) INSPECTIONS (AS	L.F.	300	
	DIRECTED BY OWNER) PIPE HEAVY CLEANING (AS DIRECTED BY OWNER), 8 - INCH	Statement State	All the second control of	
A2400c A2405	DIAMETER POINT REPAIR IN ROADWAY	L.F.	300 10	
A2405 A2415c	PIPE BURSTING, 8 - INCH DIAMETER	L.F.	1760	
A2420	PVC SEWER LATERAL APPURTENANCES	EACH	20	
A2425a	PVC SEWER LATERAL, 6-INCH DIAMETER, IN ROAD	L.F.	500	
A2425b	PVC SEWER LATERAL, 6-INCH DIAMETER, IN EASEMENT	L.F.	60	
A2435a	MANHOLE, CONCRETE, 4-FOOT DIAMETER, 0 - 6 FEET DEEP	EACH	3	
A2495e	DROP MANHOLE, 4-FOOT DIAMETER, 12 - 14 FEET DEEP	EACH	1	
A2575a	MANHOLE LINING, 1-INCH THICK CEMENTITIOUS LINING, 4 - FOOT	V.F.	100	
A2590	DIAMETER ABANDON EXISTING MANHOLE	EACH	1	
A2620c	ABANDON EXISTING SEWERS BY GROUTING IN PLACE, 8 - INCH	L.F.	300	
A2630	DIAMETER SEWER FLOW CONTROL	LS	1	
A6000	TEMPORARY PATCHING	L.F.	500	
A307-02.06	ASPHALT CONCRETE MIX (PG70-22) (BPMB-HM) GRADING B	TON	610	
A6020	CRUSHED ROCK SURFACING, ROADWAYS, AND DRIVEWAYS SEEDING	S.Y.	165 450	
A6025 A6030	SEEDING SODDING	S.Y.	450 5	
B3000f	WATER LINE, 8" DIP WATER LINE UNDER PAVEMENT OR WITHIN	L.F.	2800	
	3' OF EDGE OF PAVEMENT PER SECTION 02321 WATER LINE, 6" DIP WATER LINE UNDER PAVEMENT OR WITHIN	000000 00	\$3.5000000 20	
B3000g	3' OF EDGE OF PAVEMENT PER SECTION 02321	L.F.	140	
B3000j	WATER LINE, 2" WATER LINE UNDER PAVEMENT OR WITHIN 3' OF EDGE OF PAVEMENT PER SECTION 02321	L.F.	250	
B3000s	WATER LINE, 8" RESTRAINED JOINT GASKETS	EACH	140	
B3005b	WATER MAIN BORE, 2" DIRECTIONAL BORE	L.F.	1825	
B3010a	WATER VALVE INSTALLATION, 2" HDPE VALVE	EACH	3	
B3010b	WATER VALVE INSTALLATION, 4" GATE VALVE	EACH	1	
B3010c	WATER VALVE INSTALLATION, 6" GATE VALVE	EACH	1	
B3010d	WATER VALVE INSTALLATION, 8" GATE VALVE AIR VALVES, BLOWOFF VALVES, & HYDRANTS, 2" BLOW-OFF	EACH	15	
B3015a	VALVE ASSEMBLY AIR VALVES, BLOWOFF VALVES, & HYDRANTS, 1" AIR-RELEASE	EACH	5	
B3015b	VALVE	EACH	2	
B3015d	AIR VALVES, BLOWOFF VALVES, & HYDRANTS, FIRE HYDRANT ASSEMBLY	EACH	7	
B3015f	AIR VALVES, BLOWOFF VALVES, & HYDRANTS, 8" INSERTION VALVE	EACH	1	
B3020a	TIE-INS TO EXISTING FACILITIES, STA. 0+00 LINE "A"	EACH	1	
B3020b	TIE-INS TO EXISTING FACILITIES, STA. 0+00 LINE "B"	EACH	1	
B3020c	TIE-INS TO EXISTING FACILITIES, CONNECTION TO EXISTING 6" CI WATER AT AUSTIN STREET	EACH	1	
B3020d	TIE-INS TO EXISTING FACILITIES, CONNECTION TO EXISTING 12"	EACH	1	
(C) C (24) (C) (25) (C) (C) (C) (C) (C) (C) (C) (C) (C) (C	WATER AT N, BERTRAND ST. TIE-INS TO EXISTING FACILITIES, CONNECTION TO EXISTING 14"			
B3020e	WATER AT N. BERTRAND ST.	EACH	1	
B3020f	TIE-INS TO EXISTING FACILITIES, STA. 23+24.74 END OF LINE "A" SERVICE CONNECTIONS, RECONNECTION (SERVICE TAP) - 1"	EACH	1	
B3025a	AND SMALLER	EACH	31	
B3025b	SERVICE CONNECTIONS , RECONNECTION (SERVICE TAP) - 1 1/2" - 2"	EACH	7	
B3025e	SERVICE CONNECTIONS, RECONNECTION (FIRELINE) - 4"	EACH	1	
B3025f	SERVICE CONNECTIONS, RECONNECTION (FIRELINE) - 6"	EACH	1	
B3025h	SERVICE CONNECTIONS, METER WELL AND LID, METER HORN, AND ASSOCIATED FITTINGS - 1" AND SMALLER	EACH	30	
B3025i	SERVICE CONNECTIONS, METER WELL AND LID, METER HORN,	EACH	7	
	AND ASSOCIATED FITTINGS - 1 1/2" - 2" SERVICE CONNECTIONS, METER WELL AND LID, METER HORN,	=======================================		
B3025k	AND ASSOCIATED FITTINGS - 4"	EACH	1	
B3025o	SERVICE CONNECTIONS, METER WELL AND LID, METER HORN, AND ASSOCIATED FITTINGS - 3/4" COPPER SERVICE PIPE	L.F.	793	
B3025p	SERVICE CONNECTIONS, METER WELL AND LID, METER HORN, AND ASSOCIATED FITTINGS - 1" COPPER SERVICE PIPE	L.F.	126	
B3025pp	SERVICE CONNECTIONS, METER WELL AND LID, METER HORN,	L.F.	160	
Control Editor	AND ASSOCIATED FITTINGS - 1 1/2" COPPER SERVICE PIPE SERVICE CONNECTIONS, METER WELL AND LID, METER HORN,			
B3025q	AND ASSOCIATED FITTINGS - 2" COPPER SERVICE PIPE SERVICE CONNECTIONS, METER WELL AND LID, METER HORN,	L.F.	110	
B3025s	AND ASSOCIATED FITTINGS - 4" DIP SERVICE PIPE	L.F.	34	
D.1a	DEDUCTIVE LINE ITEM, CREDIT FOR REUSE OF EXISTING METER WELL AND LID	EACH	-38	
B3030a	RETIRE EXISTING WATER FACILITIES, ABANDON EXISTING MAINS	LS	1	
B3030b	RETIRE EXISTING WATER FACILITIES, ABANDONED EXISTING	EACH	50	
B3030c	WATER VALVES, AIR VALVES, & BLOWOFF ASSEMBLIES RETIRE EXISTING WATER FACILITIES, ABANDON EXISTING FIRE HYDRANTS	EACH	7	
Denon	TEMPODADY DATCHING	1.5	750	
B6000	TEMPORARY PATCHING ASPHALT CONCRETE MIX (PG70.22) (RRMR HM) GRADING R	L.F.	750 2625	
B307-02.06	ASPHALT CONCRETE MIX (PG70-22) (BPMB-HM) GRADING B CRUSHED ROCK SURFACING, ROADWAYS, AND DRIVEWAYS	TON S.Y.	2625 585	
B6020	STOSTILE TOOK OOK DOING, NORDWATO, AND DRIVEWATO	J. I.	300	
B6020 B6025	SEEDING	S.Y.	1600	

PROJECT No.			YEAR	SHEET No.	
1	15A-R-0584			2017	2A
REVISIONS					
No.	DATE	BY	,	BRIEF DE	ESCRIPTION
1	02-22-2018	MLK		ADDENDUM 3 - ITE	M NO. REVISIONS
2	02-28-2018	MLK		ADDENDUM 4 - ITE	M NO. REVISIONS



CITY OF KNOXVILLE OFFICE OF REDEVELOPMENT

ESTIMATED QUANTITIES

MAGNOLIA AVENUE STREETSCAPE PROJECT PHASE I & PHASE II