

ADDENDUM NO. 4

Date: June 20, 2019

To: All Bidders

From: Penny Owens, Assistant Purchasing Agent, City of Knoxville

Subject: Addendum No. 4 – Mineral Springs Avenue Bridge Project

Bid Date: **June 25, 2019 at 11:00 am (Eastern Time)**

This addendum is being published to provide clarification to the specifications. This addendum becomes a part of the Contract Document and modifies the original project plans and specifications as noted.

Changes to the Contract Documents & Specifications:

The quantities for Item 710-09.01 (6" Perforated Pipe with Vertical Drain System) and Item 710-09.02 (6" Pipe Underdrain) have been updated to account for the work associated with the retaining wall. A new bid form and updated plan sheets are attached to reflect these changes.

The City would like the Contractor to install non-woven geotextile fabric to wrap the granular backfill (Class A, Grading D backfill) for the retaining wall and the bridge abutments. This fabric will wrap the granular backfill and provide separation between the granular backfill and the select granular material shown on TDOT STD-10-1. There will be no separate payment for this non-woven geotextile fabric, all costs for materials, equipment, and labor to install this fabric shall be included in the costs of other items.

END OF ADDENDUM NO. 4

BID PROPOSAL
CITY OF KNOXVILLE, TENNESSEE

Mineral Springs Avenue Bridge Project
Project No. 14A-B-0570

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 Contract for the Mineral Springs Avenue Bridge Project, Project No. 14A-B-0570, located in the City of Knoxville, Tennessee, in a workmanlike manner and in accordance with the plans of the Department of Engineering and specifications herewith attached.

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

ITEM NO.	DESCRIPTION	UNITS	TOTAL QUANTITY	PRICE PER UNIT	TOTAL PRICE PER ITEM
1.10	Mobilization of Forces, Supplies and Equipment	LS	1	_____	_____
2.10	Clearing and Grubbing	LS	1	_____	_____
3.10	Removal of Structures and Obstructions	LS	1	_____	_____
4.10	Excavation (Unclassified)	CY	178	_____	_____
5.10	Mineral Aggregate Base	TON	211	_____	_____
5.40	No 57 Stone	TON	14	_____	_____
7.10	Tack Coat	GAL	163	_____	_____
9.10	Bituminous Plant Mix, Grading B-M	TON	78	_____	_____
9.11	Bituminous Plant Mix, Grading C-S	TON	18	_____	_____
10.10	Asphaltic Concrete Surface, Grading D	TON	105	_____	_____
12.62	6" Concrete Combine Curb & Gutter, Type 6-30	LF	524	_____	_____
13.10	Concrete Sidewalks	SF	2,728	_____	_____
13.11	Curb Cut	EA	3	_____	_____
20.14	18" RCP	LF	243	_____	_____

ITEM NO.	DESCRIPTION	UNITS	TOTAL QUANTITY	PRICE PER UNIT	TOTAL PRICE PER ITEM
22.12	No. 12 Catch Basin	EA	7		
22.14	No. 14 Catch Basin	EA	2		
22.15	Area Drain Catch Basin	EA	1		
26.10	Top Soil	CY	76		
28.10	Sodding	SY	912		
31.50	Sediment Removal	CY	36		
31.70	Erosion and Sediment Control	LS	1		
31.80	In-Stream Diversion	LS	1		
34.10	Construction Area Traffic Control	LS	1		
36.50	Geotextile Fabric for Erosion Stabilization	SY	80		
38.10	Milling Asphaltic Concrete, Surface Milling	TON	89		
39.10	Pavement Marking (Line)	LF	1,685		
39.20	Pavement Marking (Crosswalk Striping)	LF	42		
39.30	Pavement Marking (Stop Line)	LF	55		
42.10	Concrete Ditch	LF	180		
70.20	Tactile Warning System, Cast-In-Place	EA	3		
203-03.10	Select Granular Material	TON	660		
204-11	Bridge Excavation (Unclassified)	CY	1,415		
303-01.02	Granular Backfill (Bridges)	TON	900		
303-01.03	Granular Backfill (Retaining Walls)	TON	490		
604-01.20	Box Tube Safety Rail	LF	184		
604-01.32	Class A Concrete (Leveling)	CY	50		
604-02.03	Epoxy Coated Reinforcing Steel	LBS	26,769		
604-03.01	Class A Concrete (Bridges)	CY	255		
604-03.02	Steel Bar Reinforcement (Bridges)	LBS	17,439		
604-03.09	Class D Concrete (Bridges)	CY	115		
604-05.31	Bridge Deck Grooving (Mechanical)	SY	380		
604-09.10	Class A Concrete (Retaining Walls)	CY	155		
615-02.03	Prestressed Concrete Box Beam (21"x36")	LF	520		
620-05.02	Standard Concrete Pedestrian Classic Rail	LF	152		
621-05.02	Temporary Shoring	LS	1		
709-05.08	Machined Rip-Rap (Class B)	TON	235		

ITEM NO.	DESCRIPTION	UNITS	TOTAL QUANTITY	PRICE PER UNIT	TOTAL PRICE PER ITEM
710-09.01	6" Perforated Pipe with Vertical Drain System	LF	305	_____	_____
710-09.02	6" Pipe Underdrain	LF	30	_____	_____
TOTAL BID				\$	_____

TOTAL BID (In Words):

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
1.10	MOBILIZATION OF FORCES, SUPPLIES AND EQUIPMENT	L.S.	1
2.10	CLEARING AND GRUBBING	L.S.	1
3.10	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	L.S.	1
4.10	EXCAVATION (UNCLASSIFIED)	C.Y.	178
5.10	MINERAL AGGREGATE BASE	TON	211
5.40	NO. 57 STONE	TON	14
7.10	TACK COAT	GALLON	163
9.10	BITUMINOUS PLANT MIX, GRADING BM-2	TON	78
9.11	BITUMINOUS PLANT MIX, GRADING C-3	TON	18
10.10	ASPHALTIC CONCRETE SURFACE, GRADING D	TON	105
12.62	6" CONCRETE COMBINED CURB & GUTTER, TYPE 6-30	L.F.	524
13.10	CONCRETE SIDEWALKS	S.F.	2728
13.11	CURB CUT	EACH	3
20.14	18" R.C.P.	L.F.	243
22.12	NO. 12 CATCH BASIN	EACH	7
22.14	NO. 14 CATCH BASIN	EACH	2
22.15	AREA DRAIN CATCH BASIN	EACH	1
26.10	TOP SOIL	C.Y.	76
28.10	SODDING	S.Y.	912
31.50	SEDIMENT REMOVAL	C.Y.	36
31.70	EROSION AND SILTATION CONTROL	L.S.	1
31.80	IN-STREAM DIVERSION	L.S.	1
34.10	CONSTRUCTION AREA TRAFFIC CONTROL	L.S.	1
36.50	GEOTEXTILE FABRIC FOR EROSION STABILIZATION	S.Y.	80
38.10	MILLING ASPHALTIC CONCRETE, SURFACE MILLING	TON	89
39.10	PAVEMENT MARKING (LINE)	L.F.	1685
39.20	PAVEMENT MARKING (CROSSWALK STRIPPING)	L.F.	42
39.30	PAVEMENT MARKING (STOP LINE)	L.F.	55
42.10	CONCRETE DITCH	L.F.	180
70.20	TACTILE WARNING SYSTEM, CAST-IN-PLACE	EACH	3
203-03.10	SELECT GRANULAR MATERIAL	TON	660
204-11	BRIDGE EXCAVATION (UNCLASSIFIED)	CY	1415
303-01.02	GRANULAR BACKFILL (BRIDGES)	TON	900
303-01.03	GRANULAR BACKFILL (RETAINING WALLS)	TON	490
604-01.20	BOX TUBE SAFETY RAIL	L.F.	184
604-01.32	CLASS A CONCRETE (LEVELING)	CY	50
604-02.03	EPOXY COATED REINFORCING STEEL	LBS	26769
604-03.01	CLASS "A" CONCRETE (BRIDGES)	CY	255
604-03.02	STEEL BAR REINFORCEMENT (BRIDGES)	LBS	17439
604-03.09	CLASS "D" CONCRETE (BRIDGES)	CY	115
604-05.31	BRIDGE DECK GROOVING (MECHANICAL)	SY	380
604-09.10	CLASS "A" CONCRETE (RETAINING WALLS)	CY	155
615-02.03	PRESTRESSED CONCRETE BOX BEAM (21"x36")	LF	520
620-05.02	STANDARD CONCRETE PEDESTRIAN CLASSIC RAIL	LF	152
621-05.02	TEMPORARY SHORING	LS	1
709-05.08	MACHINED RIP-RAP (CLASS B)	TON	235
710-09.01	6" PERFORATED PIPE WITH VERTICAL DRAIN SYSTEM	LF	305
710-09.02	6" PIPE UNDERDRAIN	LF	30

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- 1 INCLUDES THE COST OF REMOVING ALL EXISTING DRAINAGE STRUCTURES AND TWO TREES (14" BRADFORD PEARS) IN CONFLICT WITH PROPOSED IMPROVEMENTS. ALSO INCLUDES COMPLETE REMOVAL OF EXISTING BRIDGE NO. 43-A658-00.22 AND APPROACHES TO NATURAL GROUND BETWEEN STA. 10+87.00 AND STA. 12+16.00. EXISTING BRIDGE CONSISTS OF: 3 CONCRETE DECK GIRDER APPROACH SPANS AT 56'-0" WIDE TOTALING 129'-0" LONG.
- 2 INCLUDES THE COST OF INSTALLATION AND MAINTENANCE OF ALL CATCH BASIN PROTECTION, SEDIMENT TUBES, SLT FENCE, 15' X15' FILTER BAG AND 30" TEMPORARY DIVERSION CULVERT.
- 3 SEE SUBSECTION 209.07 OF THE TDOT STANDARD SPECIFICATIONS FOR MAINTENANCE AND REPLACEMENT OF SEDIMENT FILTER BAG.
- 4 INCLUDES ALL COSTS FOR ALL PHASES OF THE TEMPORARY IN-STREAM DIVERSION, INCLUDING LABOR, MATERIALS AND MAINTENANCE.
- 5 INCLUDES THE COST OF ALL LABOR AND MATERIALS REQUIRED FOR INSTALLATION AND REMOVAL OF ALL TEMPORARY TRAFFIC CONTROL ITEMS AND DETOUR SIGNAGE.
- 6 EXCAVATION BASED ON FINAL PROFILE AT ABUTMENTS AND EXISTING GROUND.
- 7 GRANULAR BACKFILL SHALL BE CLASS "A" GRADING "D" MATERIAL. SEE STANDARD DRAWING NO. STD-10-1.
- 8 INCLUDES QUANTITY OF STEEL REQUIRED FOR BRIDGE DECK, BACKWALL, AND ABUTMENTS. REBAR QUANTITIES NOT INCLUDED IN THIS ITEM FOR PAVEMENT AT BRIDGE ENDS AND PARAPETS.
- 9 INCLUDES QUANTITY OF CONCRETE REQUIRED FOR SIDEWALKS ON THE BRIDGE DECK. ITEM DOES NOT INCLUDE CONCRETE REQUIRED FOR SIDEWALKS ON ROADWAY APPROACHES.
- 10 INCLUDES ALL LABOR AND MATERIALS (EXCEPT REINFORCING STEEL) NECESSARY TO POUR THE NEW CONCRETE DECK AND ABUTMENT BACKWALL.
- 11 INCLUDES ALL LABOR, EQUIPMENT, AND MATERIALS REQUIRED TO MECHANICALLY GROOVE THE BRIDGE DECK AND PAVEMENT AT BRIDGE ENDS AND TO REMOVE GROOVING RESIDUE.
- 12 COST OF ELASTOMERIC PADS AND RUBBER BONDING CEMENT TO BE INCLUDED IN THE UNIT PRICE BID FOR THE PRESTRESSED BEAM.
- 13 INCLUDES ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED TO STABILIZE EXCAVATIONS AT ABUTMENTS, AS NEEDED.
- 14 COST OF POLYETHYLENE SHEETING AND ALL MISCELLANEOUS ITEMS NECESSARY FOR INSTALLATION TO BE INCLUDED IN THE UNIT PRICE BID FOR PERFORATED PIPE.
- 15 SEE STANDARD DRAWING STD-10-1.
- 16 SEE TDOT STANDARD DRAWING STD-11-3 FOR DETAILS. CONTRACTOR SHALL OMIT THE TRI STAR EMBLEM FROM THIS INSTALLATION.
- 17 ITEM INCLUDES ALL LABOR AND MATERIALS REQUIRED TO CONSTRUCT NEW SIDEWALKS ON ROADWAY APPROACHES. ITEM DOES NOT INCLUDE LABOR OR MATERIALS REQUIRED FOR SIDEWALKS ON THE BRIDGE DECK.

GENERAL NOTES

UTILITIES

- 1. THE LOCATION OF UTILITIES SHOWN WITHIN THESE PLANS ARE APPROXIMATE ONLY. EXACT LOCATIONS WILL BE DETERMINED IN THE FIELD BY CONTACTING THE UTILITY COMPANIES INVOLVED.
- 2. UNLESS OTHERWISE NOTED, ALL UTILITY ADJUSTMENTS WILL BE PERFORMED BY THE UTILITY OR ITS REPRESENTATIVE. THE CONTRACTORS AND UTILITY OWNERS WILL BE REQUIRED TO COOPERATE WITH EACH OTHER IN ORDER TO EXPEDITE THE WORK REQUIRED BY THIS CONTRACT.
- 3. THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT. THE COST OF PROTECTING UTILITIES FROM DAMAGE AND FURNISHING SPECIAL EQUIPMENT WILL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.
- 4. THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR CONTACTING ALL AFFECTED UTILITIES PRIOR TO SUBMITTING HIS BID, IN ORDER TO DETERMINE THE EXTENT TO WHICH UTILITY RELOCATIONS AND / OR ADJUSTMENTS WILL HAVE UPON THE SCHEDULE OF THE WORK FOR THE PROJECT. SOME UTILITY FACILITIES MAY NEED TO BE ADJUSTED CONCURRENTLY WITH THE CONTRACTOR'S OPERATIONS, WHILE SOME WORK MAY BE REQUIRED AROUND UTILITY FACILITIES THAT WILL REMAIN IN PLACE. IT IS UNDERSTOOD AND AGREED THAT THE CONTRACTOR WILL RECEIVE NO ADDITIONAL COMPENSATION FOR ANY DELAYS OR INCONVENIENCE CAUSED BY THE UTILITY ADJUSTMENTS.
- 5. THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF THE UTILITIES. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY OWNERS AND REQUEST THEM TO PROPERLY LOCATE THEIR RESPECTIVE UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY.
- 6. SOME UTILITIES CAN BE LOCATED BY CALLING THE TENNESSEE ONE CALL SYSTEM, INC. AT 1-800-351-1111.
- 7. ALL POWER, LIGHT AND COMMUNICATION LINES, POLES, WATER LINES, GAS LINES, SEWER LINES OR OTHER PUBLIC UTILITIES CONFLICTING WITH THE PROPOSED IMPROVEMENTS SHALL BE RESET OR ADJUSTED BY THEIR RESPECTIVE OWNERS AS FOLLOWS:
 KNOXVILLE UTILITIES BOARD - ALL GAS, ELECTRIC, WATER, AND SANITARY SEWER LINES.
 AT&T - ALL TELEPHONE LINES.
 WOW! OR COMCAST - ALL CABLE TELEVISION

GRADING

- 1. ADEQUATE EROSION AND SEDIMENT CONTROL MEASURES MUST BE MAINTAINED BY THE CONTRACTOR DURING CONSTRUCTION IN ACCORDANCE WITH THE PROVISIONS SPECIFIED IN THE TENNESSEE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (JANUARY 1, 2015 EDITION)
- 2. EXCAVATED MATERIAL IN EXCESS OF THAT REQUIRED FOR EMBANKMENT FILLING, OR UNSUITABLE FOR SUCH SHALL BE DISPOSED OF PROPERLY BY THE CONTRACTOR WITH THE SITE OF DISPOSAL BEING APPROVED BY THE ENGINEER. ALL APPLICABLE PERMITS FOR THE DISPOSAL OF MATERIAL SHALL BE OBTAINED BY THE CONTRACTOR.
- 3. ALL EARTHEN AREAS EXPOSED BY CONSTRUCTION SHALL BE COVERED WITH 4 INCHES OF TOPSOIL AND SODDED. WORK SHALL BE DONE IN AN EXPEDIENT MANNER TO MINIMIZE TIME OF EXPOSURE TO WEATHER.
- 4. ANY AREA THAT IS DISTURBED OUTSIDE THE LIMITS OF CONSTRUCTION DURING THE LIFE OF THIS PROJECT SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE. CONTRACTOR SHALL CLEAR ONLY AREAS TO BE EXCAVATED.

MAINTENANCE OF TRAFFIC

- 1. CONTRACTOR SHALL NOTIFY AFFECTED PROPERTY OWNERS TWO WEEKS PRIOR TO MAKING ANY LANE CLOSURES AND BEGINNING WORK.
- 2. ACCESS TO ALL PRIVATE DRIVES MUST BE MAINTAINED DURING CONSTRUCTION.
- 3. PEDESTRIAN ACCESS MUST BE MAINTAINED TO ALL ADJOINING PROPERTIES DURING CONSTRUCTION AND NON-CONSTRUCTION HOURS.
- 4. THE CONTRACTOR IS RESPONSIBLE FOR DESIGNATING A STAGING AREA WITH THE APPROVAL OF THE ENGINEER, LOCATED TO MINIMIZE IMPACT TO THE AREA. THE CONTRACTOR MUST IDENTIFY A PARKING AREA, WITH THE APPROVAL OF THE ENGINEER, FOR EMPLOYEE PARKING.
- 5. THE CONTRACTOR SHALL NOT OPERATE TRACK-DRIVEN EQUIPMENT ON THE ADJACENT LOCAL STREET SYSTEM AND IS DISCOURAGED FROM OPERATING RUBBER-TIRED CONSTRUCTION EQUIPMENT ON ADJACENT STREETS. IN THE EVENT THAT SUCH OPERATIONS BECOME NECESSARY, THEY MUST BE COORDINATED THROUGH THE ENGINEER.
- 6. THE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTAINING NECESSARY TRAFFIC CONTROL. ALL SITUATIONS AND TRAFFIC SCHEMES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF KNOXVILLE SPECIFICATIONS, SECTION 34.0 AND THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (MUTCD).

DRAINAGE

- 1. THE COST OF EXCAVATION AND BACKFILL FOR PIPE CULVERTS AND CATCH BASINS IS TO BE INCLUDED IN THE PRICE BID FOR THE RESPECTIVE STRUCTURE.
- 2. WHERE A PIPE CULVERT OR CATCH BASIN IS MOVED TO A NEW LOCATION FROM THAT SHOWN ON THE PLANS, THUS INCREASING OR DECREASING THE AMOUNT OF EXCAVATION, NO INCREASE OR DECREASE OF PAYMENT SHALL BE MADE FOR SUCH CHANGE.
- 3. ALL PIPE CULVERTS SHALL BE INSTALLED WITH A MINIMUM CLASS "B" BEDDING WITH A MINERAL AGGREGATE BASE FOUNDATION MEETING THE REQUIREMENTS OF SECTION 5.0 OF THE CITY OF KNOXVILLE SPECIFICATIONS. BACKFILL OF PIPES, SEWERS AND CULVERTS UNDER STREETS (OR LESS THAN 5 FEET FROM THE OUTSIDE EDGE OF THE ROADWAY) CURBS, GUTTERS AND SIDEWALKS SHALL BE ACCOMPLISHED WITH MINERAL AGGREGATE BASE MATERIAL MEETING THE REQUIREMENTS OF SECTION 5 OF THESE SPECIFICATIONS AND COMPACTED AS HEREIN ABOVE SPECIFIED. THE COST OF THE BACKFILL IS NOT A SEPERATE PAY ITEM AND SHALL BE INCLUDED IN THE BID PRICE PER LINEAR FOOT.

PROJECT No.	YEAR	SHEET No.	
14A-B-0570	2019	2	
REVISIONS			
No.	DATE	BY	BRIEF DESCRIPTION
1	06-12-19	KR	FOOTNOTES ADDED; RAIL ITEM UPDATE
2	06-18-19	KR	QUANTITY UPDATE



CONSTRUCTION PLANS



CITY OF KNOXVILLE DEPARTMENT OF ENGINEERING		DRAWN: DESIGNED: DATE: CHECKED: APPROVED:
ESTIMATED QUANTITIES AND GENERAL NOTES		

PROJECT No.	YEAR	SHEET No.	
14A-B-0570	2019	6C	
REVISIONS			
No.	DATE	BY	BRIEF DESCRIPTION
1	06-12-19	KR	ITEM UPDATE; FOOTNOTES ADDED/REVISED
2	06-18-19	KR	QUANTITY UPDATE

ITEM NO.	DESCRIPTION	UNIT	TOTAL	SUPERSTRUCTURE	ABUTMENT NO.1	ABUTMENT NO.2	RETAINING WALL
① 3.10	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	L.S.	1				
② 203-03.10	SELECT GRANULAR MATERIAL	TON	660				660
② 204-11	BRIDGE EXCAVATION (UNCLASSIFIED)	CY	1,415		245	305	865
③ 303-01.02	GRANULAR BACKFILL (BRIDGES)	TON	900		400	500	
③ 303-01.03	GRANULAR BACKFILL (RETAINING WALLS)	TON	490				490
604-01.20	BOX TUBE SAFETY RAIL	L.F.	184				184
604-01.32	CLASS A CONCRETE (LEVELING)	CY	50		30	20	
④ 604-02.03	EPOXY COATED REINFORCING STEEL	LBS	26,769	18,940	2,684	3,390	1755
⑤ 604-03.01	CLASS "A" CONCRETE (BRIDGES)	CY	255	31	106	118	
604-03.02	STEEL BAR REINFORCEMENT (BRIDGES)	LBS	17,439		4,440	5,074	7925
⑥ 604-03.09	CLASS "D" CONCRETE (BRIDGES)	CY	115	115			
⑦ 604-05.31	BRIDGE DECK GROOVING (MECHANICAL)	SY	380				
604-09.10	CLASS "A" CONCRETE (RETAINING WALLS)	CY	155				155
⑧ 615-02.03	PRESTRESSED CONCRETE BOX BEAM (21"x36")	LF	520				
⑫ 620-05.02	STANDARD CONCRETE PEDESTRIAN CLASSIC RAIL	LF	152				
⑪ 621-05.02	TEMPORARY SHORING	LS	1		0.33	0.33	0.33
709-05.08	MACHINED RIP-RAP (CLASS B)	TON	235				
⑨ 710-09.01	6" PERFORATED PIPE WITH VERTICAL DRAIN SYSTEM	LF	305		60	60	185
⑩ 710-09.02	6" PIPE UNDERDRAIN	LF	30		10	10	10

- ① LUMP SUM: TO INCLUDE COMPLETE REMOVAL OF EXISTING BRIDGE NO. 43-A658-00.22 AND APPROACHES TO NATURAL GROUND BETWEEN STA. 10+87.00 AND STA. 12+16.00. EXISTING BRIDGE CONSISTS OF: 3 CONCRETE DECK GIRDER APPROACH SPANS AT 56'-0" WIDE TOTALING 129'-0" LONG.
- ② EXCAVATION BASED ON FINAL PROFILE AT ABUTMENTS AND EXISTING GROUND.
- ③ GRANULAR BACKFILL SHALL BE CLASS "A" GRADING "D" MATERIAL. SEE STANDARD DRAWING NO. STD-10-1.
- ④ INCLUDES QUANTITY OF STEEL REQUIRED FOR BRIDGE DECK, BACKWALL, AND ABUTMENTS. REBAR QUANTITIES NOT INCLUDED IN THIS ITEM FOR PAVEMENT AT BRIDGE ENDS AND PARAPETS.

- ⑦ INCLUDES ALL LABOR, EQUIPMENT, AND MATERIALS REQUIRED TO MECHANICALLY GROOVE THE BRIDGE DECK AND PAVEMENT AT BRIDGE ENDS AND TO REMOVE GROOVING RESIDUE.
- ⑧ COST OF ELASTOMERIC PADS AND RUBBER BONDING CEMENT TO BE INCLUDED IN THE UNIT PRICE BID FOR THE PRESTRESSED BEAM.
- ⑨ COST OF POLYETHYLENE SHEETING AND ALL MISCELLANEOUS ITEMS NECESSARY FOR INSTALLATION TO BE INCLUDED IN THE UNIT PRICE BID FOR PERFORATED PIPE.
- ⑩ SEE STANDARD DRAWING STD-10-1.
- ⑪ INCLUDES ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED TO STABILIZE EXCAVATIONS AT ABUTMENTS, AS NEEDED.

- ① ⑤ INCLUDES QUANTITY OF CONCRETE REQUIRED FOR SIDEWALKS ON THE BRIDGE DECK. ITEM DOES NOT INCLUDE CONCRETE REQUIRED FOR SIDEWALKS ON ROADWAY APPROACHES.
- ⑥ INCLUDES ALL LABOR AND MATERIALS (EXCEPT REINFORCING STEEL) NECESSARY TO POUR THE NEW CONCRETE DECK AND ABUTMENT BACKWALL.

- ① ⑫ SEE TDOT STANDARD DRAWING STD-11-3 FOR DETAILS. CONTRACTOR SHALL OMIT THE TRI STAR EMBLEM FROM THIS INSTALLATION.

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CITY OF KNOXVILLE DEPARTMENT OF ENGINEERING	DRAWN: DESIGNED: DATE: CHECKED: APPROVED:
TABULATED QUANTITIES	
MINERAL SPRINGS AVENUE BRIDGE REPLACEMENT PROJECT	