A d d e n d u m

Iowa Department of Transportation
Office of Contracts

Date of Letting: February 21, 2017
Date of Addendum: February 8, 2017

B.O.	Proposal ID	Proposal Work Type	County	Project Number	Addendum
102	09-0036-063	PCC PAVEMENT - GRADE & REPLACE	BREMER	NHSN-003-6(63)--2R-09	21FEB102A01

Make the following changes to the PROPOSAL SCHEDULE OF PRICES:

Change Proposal Line No. 0210 2430-0000100 MODULAR BLOCK RETAINING WALL:
From: 605.000 SF
To: 60.500 SF

Add Proposal Line No. 1131 2523-0000100 LIGHT POLES; 102.000 EACH

Add Proposal Line No. 1132 2523-0000200 ELECTRICAL CIRCUITS; 23,000.000 LF

Add Proposal Line No. 1133 2523-0000310 HANDHOLES AND JUNCTION BOXES; 28.000 EACH

If the above changes are not made, they will be made as shown here.

Replace plans sheets C.2, C.5, N.1, N.2, N.3, N.4, N.5, N.6, N.7, N.8, N.9, N.10, N.12, N.13, N.14, N.15, & S.13

C.2 -
Corrected items 110, 111, & 112 total.

C.5 -
Added more information to Item No. 102 2599-9999014 (SQUARE FEET' ITEM) BRICK PAVERS INSTALL, reference information.

N.1-
Changed quantity for Item No. 60 – ELECTRICAL CONDUITS – From: 22,000 LF, To: 23,000 LF
Revised Reference Note for Item No. 60 – ELECTRICAL CONDUITS

N.2 – N.10-
Revised Note 6 to include language requiring the Contractor to Coordinate the final conduit connections for the Traffic Controllers with the Owner.

N.12 – N.15

Revised Conduit material for Blinking Pedestrian Sign Assembly from 2” PVC – Schedule 40 – To: 1” HDPE

Revised Conduit placement locations for Blinking Pedestrian Sign Assembly

S.13-

Revised Sheet to show Modular Bock Retaining Wall drawn behind back of sidewalk.

Added Top of Wall Elevation to Retaining Walls.

ESTIMATED PROJECT QUANTITIES
(UP TO A 5 DIVISION PROJECT)

Division 1: IOWA DOT
Division 2: CITY OF WAVERLY
Division 3: 50% Iowa DOT/50% City of Waverly

Item No.	Item Code	Item	Unit	Quantities						
				Estimated				As Built		
				Division 1	Division 2	Division 3	Total	Division 1	Division 2	Division 3
58	2518-6910000	SAFETY CLOSURE	EACH	141			141			
59	2520-3350015	FIELD OFFICE	EACH	1			1			
63	2524-6765010	REMOVE AND REINSTALL SIGN AS PER PLAN	EACH	144			144			
64	2524-9276010	PERFORATED SQUARE STEEL TUBE POSTS	LF	864.0			864.0			
65	2524-9276021	PERFORATED SQUARE STEEL TUBE POST ANCHOR, BREAK-AWAY SOIL INSTALLATION	EACH	43			43			
66	2524-9276024	PERFORATED SQUARE STEEL TUBE POST ANCHOR, BREAK-AWAY CONCRETE INSTALLATION	EACH	21			21			
67	2526-8285000	CONSTRUCTION SURVEY	LS	1.00			1.00			
68	2527-9263109	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED	STA	714.94			714.94			
69	2527-9263112	PAINTED PAVEMENT MARKINGS, HIGH-BUILD WATERBORNE	STA	807.26			807.26			
70	2527-9263131	WET RETROREFLECTIVE REMOVABLE TAPE MARKINGS	STA	129.84			129.84			
71	2527-9263138	PAINTED SYMBOLS AND LEGENDS, HIGH-BUILD WATERBORNE	EACH	2			2			
72	2527-9263180	PAVEMENT MARKINGS REMOVED	STA	704.98			704.98			
73	2528-8445110	TRAFFIC CONTROL	LS	0.90	0.10		1.00			
74	2528-8445113	FLAGGERS	EACH				See Proposal			
75	2528-9109020	TEMPORARY LANE SEPARATOR SYSTEM	LF	21,313.0			21,313.0			
76	2533-4980005	MOBILIZATION	LS	1.00			1.00			
77	2554-0112004	WATER MAIN, TRENCHED, DUCTILE IRON PIPE (DIP), 4 IN.	LF		16		16			
78	2554-0112006	WATER MAIN, TRENCHED, DUCTILE IRON PIPE (DIP), 6 IN.	LF		231		231			
79	2554-0112008	WATER MAIN, TRENCHED, DUCTILE IRON PIPE (DIP), 8 IN.	LF		12,721		12,721			
80	2554-0112010	WATER MAIN, TRENCHED, DUCTILE IRON PIPE (DIP), 10 IN.	LF		70		70			
81	2554-0112012	WATER MAIN, TRENCHED, DUCTILE IRON PIPE (DIP), 12 IN.	LF		98		98			
82	2554-0122008	WATER MAIN, TRENCHLESS, DUCTILE IRON PIPE (DIP), 8 IN.	LF		372		372			
83	2554-0122010	WATER MAIN, TRENCHLESS, DUCTILE IRON PIPE (DIP), 10 IN.	LF		51		51			
84	2554-0122012	WATER MAIN, TRENCHLESS, DUCTILE IRON PIPE (DIP), 12 IN.	LF		53		53			
85	2554-0203000	FITTINGS BY WEIGHT, DUCTILE IRON	LB		11,684		11,684			
86	2554-0204110	WATER SERVICE STUB, COPPER, 1 IN.	EACH		104		104			
87	2554-0204120	WATER SERVICE STUB, COPPER, 2 IN.	EACH		2		2			
88	2554-0207004	VALVE, GATE, DIP, 4 IN.	EACH		1		1			
89	2554-0207008	VALVE, GATE, DIP, 8 IN.	EACH		54		54			
90	2554-0207010	VALVE, GATE, DIP, 10 IN.	EACH		4		4			
91	2554-0207012	VALVE, GATE, DIP, 12 IN.	EACH		2		2			
92	2554-0210201	FIRE HYDRANT ASSEMBLY, WM-201	EACH		18		18			
93	2595-0005120	RAILROAD PROTECTIVE LIABILITY INSURANCE FOR CHICAGO, CENTRAL AND	LS	1.00			1.00			
		PACIFIC RAILROAD / CEDAR RIVER RAILROAD COMPANY								
94	2599-9999005	('EACH' ITEM) BLINKING PEDESTRIAN SIGN ASSEMBLY	EACH		6		6			
95	2599-9999005	('EACH' ITEM) REMOVAL OF FIRE HYDRANT	EACH		15		15			
96	2599-9999005	('EACH' ITEM) TEMPORARY WATER MAIN CONNECTIONS	EACH		19		19			
97	2599-9999005	('EACH' ITEM) WATER SERVICE STUB, COPPER, 1 1/4 IN.	EACH		2		2			
98	2599-9999005	('EACH' ITEM) WATER SERVICE STUB, COPPER, 6 IN.	EACH		7		7			
99	2599-9999009	('LINEAR FEET' ITEM) REMOVAL OF WATER MAIN	LF		9,891.6		9,891.6			
100	2599-9999010	('LUMP SUM' ITEM) VIBRATION MONITORING	LS	1.00			1.00			
101	2599-9999014	('SQUARE FEET' ITEM) BRICK PAVERS, FURNISH	SF		633		633			
102	2599-9999014	('SQUARE FEET' ITEM) BRICK PAVERS, INSTALL	SF		12,214		12,214			
103	2599-9999014	('SQUARE FEET' ITEM) BRICK PAVERS, REMOVE AND SALVAGE	SF		12,660		12,660			
104	2599-9999018	('SQUARE YARDS' ITEM) 2" POLYSTYRENE INSULATION	SY		410.0		410.0			
105	2601-2634105	MULCHING, BONDED FIBER MATRIX	ACRE	3.1			3.1			
106	2601-2636044	SEEDING AND FERTILIZING (URBAN)	ACRE	3.1			3.1			
107	2601-2642120	STABILIZING CROP - SEEDING AND FERTILIZING (URBAN)	ACRE	1.0			1.0			
108	2602-0000320	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 20 IN. DIA.	LF	18,630.0			18,630.0			
109	2602-0000350	REMOVAL OF PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE	LF	18,630.0			18,630.0			
110	2602-0000400	TEMPORARY INTAKE OR MANHOLE COVER ASSEMBLY	EACH	57	13	17	87			
111	2602-0000410	MAINTENANCE OF TEMPORARY INTAKE OR MANHOLE COVER ASSEMBLY	EACH	57	13	17	87			
112	2602-0000420	REMOVAL OF TEMPORARY INTAKE OR MANHOLE COVER ASSEMBLY	EACH	57	13	17	87			
113	2602-0010010	MOBILIZATIONS, EROSION CONTROL	EACH	1			1			
114	2602-0010020	MOBILIZATIONS, EMERGENCY EROSION CONTROL	EACH	1			1			

NOTE: ADDITIONAL ITEMS AS SHOWN ON THE N SHEETS.

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
94	**2599-9999005**	**('EACH' ITEM) BLINKING PEDESTRIAN SIGN ASSEMBLY**
		Refer to sheets N.12-N.15 for additional information and location details.
		Signs, Lighting, Pole, Push Buttons, and Wiring will be furnished and installed by the Owner. Foundations and Conduit shall be furnished and installed by the Contractor.
		Each installation shall consist of 1 Concrete Sign Foundation, 1 Pre-Cast Concrete Handhole, and Conduit to tie into Proposed Lighting Conduit.
		Method of Measurement: The Engineer will measure each Blinking Pedestrian Sign Assembly.
		Basis of Payment: The Contractor will be paid the contract unit price for each Blinking Pedestrian Sign Assembly satisfactorily installed. The contract unit price bid shall be considered full compensation for furnishing all materials, equipment, and labor to install each Blinking Pedestrian Sign Assembly according to the contract documents.
95	**2599-9999005**	**('EACH' ITEM) REMOVAL OF FIRE HYDRANT**
		Refer to tabulation 110-2_EA on sheet M.35 for more information.
		Refer to tabulation 108-11A_WM (Water Main Notes) on sheet M.34 for more information.
		Refer to sheets U.44-U.86 for subsurface utility removal information.
		The Contractor shall coordinate all Water Main work with the City of Waverly Water Department.
		Method of Measurement: The Engineer will measure each Fire Hydrant Removed.
		Basis of Payment: The Contractor will be paid the contract unit price for each Fire Hydrant satisfactorily removed. The contract unit price bid shall be considered full compensation for furnishing all materials, equipment, and labor to remove each Fire Hydrant according to the contract documents.
96	**2599-9999005**	**('EACH' ITEM) TEMPORARY WATER MAIN CONNECTIONS**
		Refer to tabulation 110-2_TC on sheet M.35 for more information.
		Refer to tabulation 108-11A_WM (Water Main Notes) on sheet M.34 for more information.
		Refer to sheets M.36-M.55 for additional information and location details.
		Refer to sheet B.4 for additional information.
		The Contractor shall coordinate all Water Main work with the City of Waverly Water Department.
		Method of Measurement: The Engineer will measure each Temporary Water Main Connection made between the Proposed Water Main and the Existing Water Main.
		Basis of Payment: The Contractor will be paid the contract unit price for each Temporary Water Main Connection satisfactorily made between the Proposed Water Main and the Existing Water Main. The contract unit price bid shall be considered full compensation for furnishing all materials, equipment, and labor to Temporarily Connect the Proposed Water Main to the Existing Water Main according to the contract documents.
97	**2599-9999005**	**('EACH' ITEM) WATER SERVICE STUB, COPPER, 1 1/4 IN.**
		Refer to tabulation 108-11A_WM (Water Main Notes) on sheet M.34 for more information.
		Refer to sheets M.36-M.55 for additional information and location details.
		Refer to sheet B.4 for additional information.
		The Contractor shall coordinate all Water Main work with the City of Waverly Water Department.
		Method of Measurement: The Engineer will measure each Water Service Stub, Copper, 1-1/4 in., installed.
		Basis of Payment: The Contractor will be paid the contract unit price for each Water Service Stub, Copper, 1-1/4 in., satisfactorily installed. The contract unit price bid shall be considered full compensation for furnishing all materials, equipment, and labor necessary to remove the existing Water Service Stub and replace it with a 1-1/4" Copper Service Stub. This shall include, but not be limited to, 1-1/4" Copper Service pipe, corporation, stop, stop box, connection to Home Owner's service, excavation, trenching, and backfilling.
98	**2599-9999005**	**('EACH' ITEM) WATER SERVICE STUB, COPPER, 6 IN.**
		Refer to tabulation 108-11A_WM (Water Main Notes) on sheet M.34 for more information.
		Refer to sheets M.36-M.55 for additional information and location details.
		Refer to sheet B.4 for additional information.
		The Contractor shall coordinate all Water Main work with the City of Waverly Water Department.
		Method of Measurement: The Engineer will measure each Water Service Stub, Copper, 6 in., installed.
		Basis of Payment: The Contractor will be paid the contract unit price for each Water Service Stub, Copper, 6 in., satisfactorily installed. The contract unit price bid shall be considered full compensation for furnishing all materials, equipment, and labor necessary to remove the existing Water Service Stub and replace it with a 6" Copper Service Stub. This shall include, but not be limited to, 6" Copper Service pipe, corporation, stop, stop box, connection to Home Owner's service, excavation, trenching, and backfilling.
99	**2599-9999009**	**('LINEAR FEET' ITEM) REMOVAL OF WATER MAIN**
		Refer to tabulation 110-15_WM on sheet M.35 for more information.
		Refer to tabulation 108-11A_WM (Water Main Notes) on sheet M.34 for more information.
		Refer to sheets U.44-U.86 for subsurface utility removal information.
		The Contractor shall coordinate all Water Main work with the City of Waverly Water Department.
		Method of Measurement: Linear feet as shown in the contract documents.
		Basis of Payment: The Contractor will be paid the contract unit price per linear foot of Water Main satisfactorily removed. The contract unit price bid shall be considered full compensation for furnishing all materials, equipment, and labor to remove the Water Main according to the contract documents.
100	**2599-9999010**	**('LUMP SUM' ITEM) VIBRATION MONITORING**
		Refer to the SPECIAL PROVISIONS FOR VIBRATION MONITORING TO PROTECT HISTORIC STRUCTURES for more information.

100-4A
10-29-02

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
		METHOD OF MEASUREMENT: The item Vibration Monitoring will be measured as a lump sum unit of work.
		BASIS OF PAYMENT: Vibration Monitoring will be paid for at the contract lump sum price. This price shall be full payment for pre-construction surveys; furnishing, installing, monitoring, and removing crack monitoring gauges; preparing and providing a report documenting crack monitoring during this project; furnishing, installing, monitoring, and removing vibration monitoring equipment; preparing and providing a report documenting vibration data collected during this project; notification of vibration events; post-construction surveys; reports; and all labor, equipment and materials necessary to complete the work as described. There will be no compensation for delays as the result of exceeding the PPV threshold or delays from faulty or damaged monitoring equipment. There will be no compensation for adjustment of construction activities or or equipment to reduce the vibration levels to less than the maximum PPV, should an exceedance occur.
101	**2599-9999014**	**('SQUARE FEET' ITEM) BRICK PAVERS, FURNISH**
		Refer to notes on typical section AHTS-1, AHTS-2, and AHTS-3 on sheet B.5 for Brick Paver material information.
		Refer to tabulation 100-19_BRICK on sheet C.12 for more information.
		Intent of item is to furnish Brick Pavers due to cracked or broken pavers that could not be salvaged.
		Method of Measurement: Square feet as shown in the contract documents.
		Basis of Payment: The Contractor will be paid the contract unit price per square foot of Brick Pavers satisfactorily furnished. The contract unit price bid shall be considered full compensation for furnishing all materials, equipment, and labor to furnish the Brick Pavers according to the contract documents.
102	**2599-9999014**	**('SQUARE FEET' ITEM) BRICK PAVERS, INSTALL**
		Refer to typical section AHTS-1, AHTS-2, and AHTS-3 on sheet B.5 for installation information.
		Refer to tabulation 100-19_BRICK on sheet C.12 for more information.
		Intent of item is to install Brick Pavers that were previously removed and salvaged, or furnished new.
		Method of Measurement: Square feet as shown in the contract documents.
		Basis of Payment: The Contractor will be paid the contract unit price per square foot of Brick Pavers satisfactorily installed. The contract unit price bid shall be considered full compensation for furnishing all materials, equipment, and labor to Install the Brick Pavers according to the contract documents. This shall include, but not be limited to, leveling for the paver base as detailed in typical section AHTS-2, furnishing the materials for the paver base as detailed in typical section AHTS-2, constructing the paver base as detailed in typical section AHTS-2, installing the Brick Pavers in the pattern as detailed in AHTS-1, placement of 6" deep Concrete Slab on grade around Light Column and providing Expansion Material and Score Joints as shown on typical section AHTS-1.
103	**2599-9999014**	**('SQUARE FEET' ITEM) BRICK PAVERS, REMOVE AND SALVAGE**
		Refer to tabulation 100-19_REMBRICK on sheet C.12 for more information.
		Refer to sheets U.1-U.43 for surface removal details and limits.
		Intent of item is to remove and salvage the existing pavers along IA 3 in the sidewalk area to be reinstalled later.
		Method of Measurement: Square feet as shown in the contract documents.
		Basis of Payment: The Contractor will be paid the contract unit price per square foot of Brick Pavers satisfactorily removed and salvaged. The contract unit price bid shall be considered full compensation for furnishing all materials, equipment, and labor to Remove and Salvage the Brick Pavers according to the contract documents.
104	**2599-9999018**	**('SQUARE YARDS' ITEM) 2" POLYSTYRENE INSULATION**
		Refer to tabulation 108-11A_WM (Water Main Notes) on sheet M.34 for more information.
		Refer to sheets M.36-M.55 for additional information and location details.
		Refer to sheet B.4 for additional information.
		The Contractor shall coordinate all Water Main work with the City of Waverly Water Department.
		Bid Item includes 20% additional quantity to be placed at the Engineer's discretion.
		Method of Measurement: Square yards as shown in the contract documents.
		Basis of Payment: The Contractor will be paid the contract unit price per square yard of 2" Polystyrene Insulation satisfactorily installed. The contract unit price bid shall be considered full compensation for furnishing all materials, equipment, and labor to install the 2" Polystyrene Insulation according to the contract documents.
105	**2601-2634105**	**MULCHING, BONDED FIBER MATRIX**
		A Bonded Fiber Matrix shall be applied as the mulch for all areas designated as "Stabilizing Crop-Seeding and Fertilizing (Urban)". The seed and fertilizer for the area to be covered shall be applied before the Bonded Fiber Matrix Hydraulic Mulch application. Application rate shall be a minimum of 3,000 lbs per acre.
106	**2601-2636044**	**SEEDING AND FERTILIZING (URBAN)**
		For all areas designated by the Engineer. Seedbed preparation, fertilizer and seed will be required per Article 2601.03,C,4. All seed and fertilizer shall be applied with ground driven equipment.
107	**2601-2642120**	**STABILIZING CROP - SEEDING AND FERTILIZING (URBAN)**
		Included for disturbed areas as directed by the Engineer. All urban disturbed areas shall be seeded and fertilized per Article 2601.03,C,2.

Changed By Addenda

Plot Date: —

ESTIMATED PROJECT QUANTITIES
(DIVISION 2)

12-13-16

ITEM NO.	ITEM CODE	ITEM	UNIT	TOTAL	AS BUILT QTY
59	2523-0000100	LIGHTING POLES	EACH	102	
60	2523-0000200	ELECTRICAL CIRCUITS	LF	23,000	
61	2523-0000310	HANDHOLES AND JUNCTION BOXES	EACH	28	

REV. 1

ESTIMATE REFERENCE INFORMATION

Data listed below is for informational purposes only and shall not constitute a basis for any extra work orders.

ITEM NO.	ITEM CODE	DESCRIPTION
59	2523-0000100	THIS UNIT CONSISTS OF THE LABOR AND MATERIAL TO INSTALL (70) CONCRETE PIERS AND ASSOCIATED ANCHOR BOLTS AS SPECIFIED ON THE PLANS TO BE USED FOR DECORATIVE STREET LIGHT POLES FURNISHED BY OTHERS. (28) OF THESE SHALL BE NEW CONCRETE PIERS, AS DETAILED ON THE FDN DRAWING. (33) OF THESE ARE EXISTING PRE-CAST CONCRETE PIERS TO BE REUSED FROM EXISTING DECORATIVE STREET LIGHTS. (9) OF THESE ARE EXISTING PRE-CAST CONCRETE PIERS TO BE REUSED FROM EXISTING COBRA HEAD STREET LIGHTS. CONCRETE PIERS SHALL BE INSTALLED AT THE LOCATIONS SHOWN ON THE PLANS. THE UNIT ALSO CONSISTS OF THE LABOR AND MATERIALS TO INSTALL (33) SCREW-IN ANCHOR FOUNDATIONS AND ASSOCIATED ANCHOR BOLTS TO BE USED FOR COBRA HEAD STREET LIGHT POLES FURNISHED BY OTHERS. (3) OF THESE ARE EXISTING ANCHORS TO BE REUSED FROM EXISTING COBRA HEAD STREET LIGHTS. THE SCREW-IN ANCHORS SHALL BE MILLERBERND MANUFACTURING CO. #490A40 NO EQUAL. ANCHOR FOUNDATIONS SHALL BE INSTALLED PER MANUFACTURER RECOMMENDATIONS AT THE LOCATIONS SHOWN ON THE PLANS.
		REV. 1
60	2523-0000200	THIS UNIT CONSISTS OF THE LABOR AND MATERIALS TO INSTALL 23,000 LINEAL FEET OF 1.5" PVC SCHEDULE 40 CONDUIT IN THE LOCATIONS SHOWN ON THE PLANS. CONDUIT SHALL BE INSTALL 24" BELOW SUBGRADE. 21,000 LINEAL FEET OF TRENCHING SHALL BE USED ALONG WITH 2,000 LINEAL FEET OF BORING TO INSTALL THE CONDUIT AS SHOWN ON THE PLANS. ALL FITTINGS REQUIRED TO CONNECT TO EXISTING EQUIPMENT ARE INCIDENTAL.
61	2523-0000310	THIS UNIT CONSISTS OF THE LABOR AND MATERIAL TO INSTALL A HANDHOLE AT THE LOCATIONS SHOWN ON THE DRAWINGS. HANDHOLE SHALL BE POLYMER CONCRETE WITH DIMENSIONS OF 11" X 18", 12" DEEP. HANDHOLES ARE REQUIRED TO CONFORM TO ALL TEST PROVISIONS OF THE MOST CURRENT ANSI/SCTE 77 "SPECIFICATION FOR UNDERGROUND ENCLOSURE INTEGRITY" FOR TIER 8 APPLICATIONS. ALL COVERS ARE REQUIRED TO HAVE THE TIER LEVEL RATING EMBOSSED ON THE SURFACE ALONG WITH THE WORD "ELECTRIC". IN NO ASSEMBLY CAN THE COVER DESIGN LOAD EXCEED THE DESIGN LOAD OF THE BOX. COVER SHALL BE SECURED TO BOX WITH TWO BOLTS. BOX SHALL HAVE AN OPEN BOTTOM. PROVIDE QUAZITE PC OR EQUAL.

LICENSED PROFESSIONAL ENGINEER
DENNIS J. HASELHOFF 13674
IOWA

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(DATE)

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LICENSED PROFESSIONAL ENGINEER
KURT SANDMAN 17585
IOWA

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REV	DATE	DESCRIPTION
1	1-19-17	ADDED CONDUIT FOR TRAFFIC CONTROLLERS

DGR ENGINEERING

Project Manager: DJH
Designer: RDK
Project Number: 419608
Phone: (712) 472-2531

WAVERLY UTILITIES
WAVERLY, IOWA

ESTIMATE OF QUANTITIES
BREMER AVENUE STREET LIGHTING

SHEET TITLE

FILE NO. | ENGLISH | DESIGN TEAM WHKS & CO. | BREMER COUNTY | PROJECT NUMBER NHSN-003-6(63)--2R-09 | SHEET NUMBER N.1

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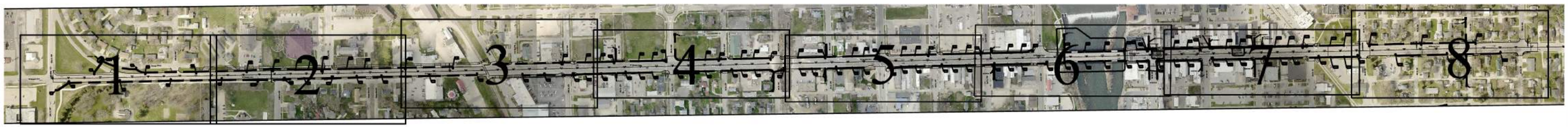
Changed by Addenda

Plot Date: 1/19/2017 3:37:07 PM



NOTES

1. LIGHTING UNITS AND CONDUCTOR WILL BE FURNISHED AND INSTALLED BY THE OWNER. FOUNDATIONS AND CONDUIT SHALL BE FURNISHED AND INSTALLED BY THIS CONTRACTOR.
2. DISTANCE BETWEEN STREET CENTER-LINE AND STREET LIGHT BASE IS SHOWN AS APPROXIMATE. VERIFY ACTUAL DISTANCE FROM STREET CENTER-LINE TO STREET LIGHT BASE CENTER-LINE TO MAINTAIN A 3' MINIMUM DISTANCE BETWEEN STREET LIGHT BASE CENTER-LINE AND BACK OF STREET CURB WHILE AVOIDING UTILITIES AND OVERHEAD CANOPIES UNLESS DIRECTED OTHERWISE BY THE OWNER.
3. COORDINATE FINAL LOCATION OF STREET LIGHTS WITH THE OWNER/ENGINEER.
4. THIS PLAN SPECIFIES CONDUIT SIZE, TYPE AND GENERAL LOCATIONS. THE EXACT LOCATION WILL BE DETERMINED IN THE FIELD.
5. ALL CONDUIT SHALL BE 1.5" PVC - SCHEDULE 40.
6. REV. 1 — CONTRACTOR TO MAKE FINAL CONDUIT CONNECTION TO EXISTING CONDUIT/HANDHOLES AS SHOWN. COORDINATE FINAL CONDUIT CONNECTIONS TO THE EXISTING REMOTE CONTROL OF OUTDOOR CIRCUITS (RCOC) AND TRAFFIC CONTROLLERS WITH THE OWNER.
7. COORDINATE FINAL LOCATIONS OF HANDHOLES WITH THE OWNER.
8. PROPOSED DECORATIVE UNITS SHALL BE MOUNTED ON CONCRETE PIERS UNLESS NOTED OTHERWISE. PROPOSED COBRA HEAD UNITS SHALL BE INSTALLED ON SCREW-IN ANCHORS UNLESS NOTED OTHERWISE.
9. PRE-CAST CONCRETE PIERS ARE EXISTING AND SHALL BE REMOVED AND REINSTALLED AT LOCATIONS NOTED IN LIGHTING SCHEDULE. PIERS SHALL BE USED FOR SAME POLE TYPE AS EXISTING.
10. CAP EXISTING CONDUIT AS REQUIRED UNTIL INSTALLATION OF NEW EQUIPMENT.

LEGEND

- DECORATIVE LIGHTING UNIT
- COBRA HEAD LIGHTING UNIT
- COBRA HEAD/TRAFFIC SIGNAL
- XX1 — LIGHTING UNIT ID
  - E = EXISTING
  - P = PROPOSED
  - C = COBRA HEAD
  - D = DECORATIVE
- PERMANENT GROUND ROD (25 OHMS OR LESS)
- CONDUIT (SIZE AS NOTED)
- BORE WITH CONDUIT
- HANDHOLE
- RCOCX (X = ID NO.)
- FOUNDATION
  - N = NEW
  - R = REUSE
  - A = ANCHOR
  - P = CONCRETE PIER

REV	DATE	DESCRIPTION
1	1-19-17	ADDED CONDUIT FOR TRAFFIC CONTROLLERS

DGR ENGINEERING

Project Manager: DJH
Designer: RDK
Project Number: 419608
Phone: (712) 472-2531

WAVERLY UTILITIES
WAVERLY, IOWA

STREET LIGHT CORRIDOR
BREMER AVENUE STREET LIGHTING

SHEET KEY

FILE NO. | ENGLISH | DESIGN TEAM WHKS & CO. | BREMER COUNTY | PROJECT NUMBER NHSN-003-6(63)--2R-09 | SHEET NUMBER N.2

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NOTES

1. LIGHTING UNITS AND CONDUCTOR WILL BE FURNISHED AND INSTALLED BY THE OWNER. FOUNDATIONS AND CONDUIT SHALL BE FURNISHED AND INSTALLED BY THIS CONTRACTOR.
2. DISTANCE BETWEEN STREET CENTER-LINE AND STREET LIGHT BASE IS SHOWN AS APPROXIMATE. VERIFY ACTUAL DISTANCE FROM STREET CENTER-LINE TO STREET LIGHT BASE CENTER-LINE TO MAINTAIN A 3' MINIMUM DISTANCE BETWEEN STREET LIGHT BASE CENTER-LINE AND BACK OF STREET CURB WHILE AVOIDING UTILITIES AND OVERHEAD CANOPIES UNLESS DIRECTED OTHERWISE BY THE OWNER.
3. COORDINATE FINAL LOCATION OF STREET LIGHTS WITH THE OWNER/ENGINEER.
4. THIS PLAN SPECIFIES CONDUIT SIZE, TYPE AND GENERAL LOCATIONS. THE EXACT LOCATION WILL BE DETERMINED IN THE FIELD.
5. ALL CONDUIT SHALL BE 1.5" PVC - SCHEDULE 40.
6. REV. 1 — CONTRACTOR TO MAKE FINAL CONDUIT CONNECTION TO EXISTING CONDUIT/HANDHOLES AS SHOWN. COORDINATE FINAL CONDUIT CONNECTIONS TO THE EXISTING REMOTE CONTROL OF OUTDOOR CIRCUITS (RCOC) AND TRAFFIC CONTROLLERS WITH THE OWNER.
7. COORDINATE FINAL LOCATIONS OF HANDHOLES WITH THE OWNER.
8. PROPOSED DECORATIVE UNITS SHALL BE MOUNTED ON CONCRETE PIERS UNLESS NOTED OTHERWISE. PROPOSED COBRA HEAD UNITS SHALL BE INSTALLED ON SCREW-IN ANCHORS UNLESS NOTED OTHERWISE.
9. PRE-CAST CONCRETE PIERS ARE EXISTING AND SHALL BE REMOVED AND REINSTALLED AT LOCATIONS NOTED IN LIGHTING SCHEDULE. PIERS SHALL BE USED FOR SAME POLE TYPE AS EXISTING.
10. CAP EXISTING CONDUIT AS REQUIRED UNTIL INSTALLATION OF NEW EQUIPMENT.

LEGEND

- DECORATIVE LIGHTING UNIT
- COBRA HEAD LIGHTING UNIT
- COBRA HEAD/TRAFFIC SIGNAL
- XX1 — LIGHTING UNIT ID (E = EXISTING, P = PROPOSED, C = COBRA HEAD, D = DECORATIVE)
- PERMANENT GROUND ROD (25 OHMS OR LESS)
- CONDUIT (SIZE AS NOTED)
- BORE WITH CONDUIT
- HANDHOLE
- RCOCX (X = ID NO.)
- FOUNDATION (N = NEW, R = REUSE, A = ANCHOR, P = CONCRETE PIER)

0 40 80
SCALE (FT.)

LIGHTING SCHEDULE

ID	STATION	LEFT (ft.)	RIGHT (ft.)	LOCATION	TYPE	FOUNDATION TYPE	DIST.	POLE BASE	FIXTURE	DRIVER	MOUNT HEIGHT	ARM LENGTH	TILT
EC1	75+28		74	20th Street	Cobra Head	Existing	T2	Breakaway	LeoTek EC9 LED	120W	N/A	N/A	N/A
PC2	80+25	50		Bremer Parkway	Cobra Head	RA	T2	Breakaway	LeoTek EC9 LED	120W	35'	12'	0°
PC3	76+02		27.5	Bremer Avenue	Cobra Head	NA	T2	Breakaway	LeoTek EC9 LED	350mA	35'	12'	5°
PC4	77+62	32.5		Bremer Avenue	Cobra Head	NA	T2	Breakaway	LeoTek EC9 LED	350mA	35'	12'	5°
PC5	79+22		27.5	Bremer Avenue	Cobra Head	NA	T2	Breakaway	LeoTek EC9 LED	350mA	35'	12'	5°
PC6	80+82	27.5		Bremer Avenue	Cobra Head	NA	T2	Breakaway	LeoTek EC9 LED	350mA	35'	12'	5°
PC7	82+42		27.5	Bremer Avenue	Cobra Head	NA	T2	Breakaway	LeoTek EC9 LED	350mA	35'	12'	5°
PC8	84+02	27.5		Bremer Avenue	Cobra Head	NA	T2	Breakaway	LeoTek EC9 LED	350mA	35'	12'	5°

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WAVERLY UTILITIES
WAVERLY, IOWA

STREET LIGHT CORRIDOR
BREMER AVENUE STREET LIGHTING

SHEET 1 OF 8

FILE NO. | ENGLISH | DESIGN TEAM WHKS & CO. | BREMER COUNTY | PROJECT NUMBER NHSN-003-6(63)--2R-09 | SHEET NUMBER N.3

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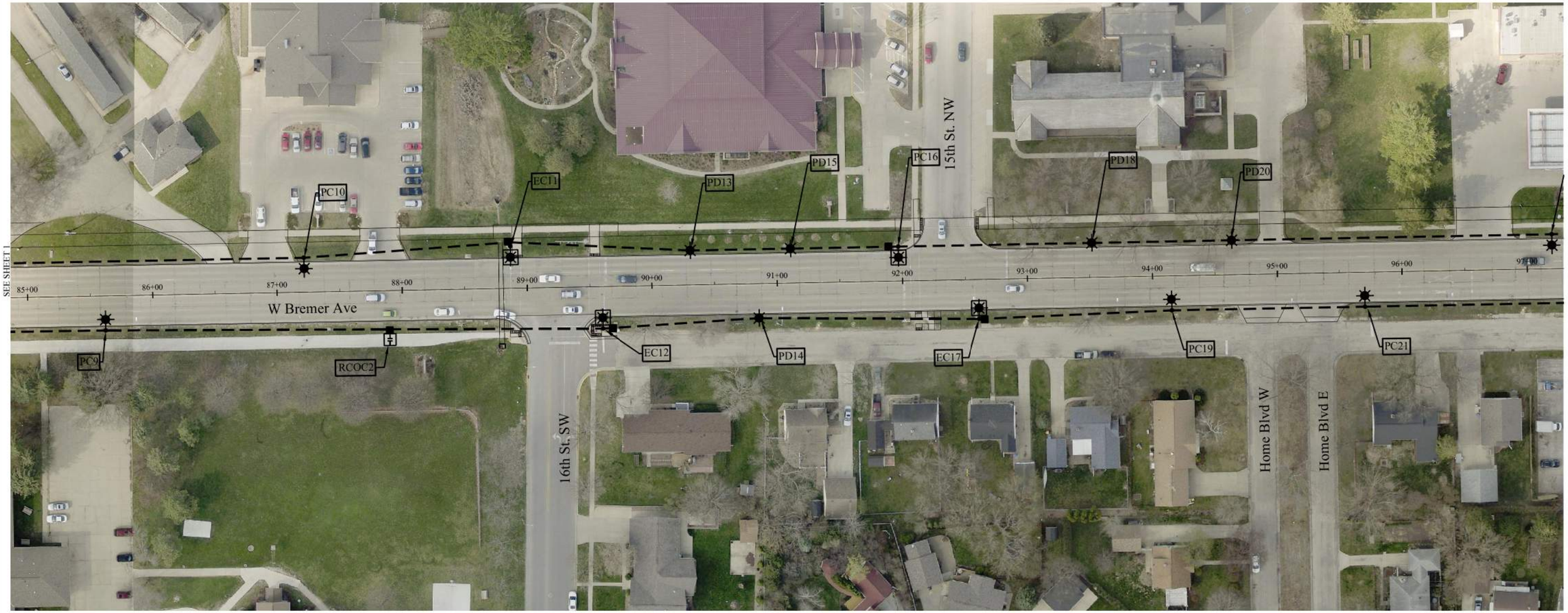

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0 40 80
SCALE (FT.)

LIGHTING SCHEDULE

ID	STATION	LEFT (ft.)	RIGHT (ft.)	LOCATION	TYPE	FOUNDATION TYPE	DIST.	POLE BASE	FIXTURE	DRIVER	MOUNT HEIGHT	ARM LENGTH	TILT
PC9	85+62		27.5	Bremer Avenue	Cobra Head	NA	T2	Breakaway	LeoTek EC9 LED	350mA	35'	12'	5°
PC10	87+22	27.5		Bremer Avenue	Cobra Head	NA	T2	Breakaway	LeoTek EC9 LED	350mA	35'	12'	5°
EC11	88+87	33.5		Bremer Avenue	Cobra Head	Existing	T2	Breakaway	LeoTek EC9 LED	350mA	35'	12'	5°
EC12	89+60		33.5	Bremer Avenue	Cobra Head	Existing	T2	Breakaway	LeoTek EC9 LED	350mA	35'	12'	5°
PD13	90+31	27.5		Bremer Avenue	Decorative	NP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD14	90+85		27.5	Bremer Avenue	Decorative	NP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD15	91+11	27.5		Bremer Avenue	Decorative	NP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PC16	91+97	27.5		Bremer Avenue	Cobra Head	Existing	T2	Breakaway	LeoTek EC9 LED	350mA	36'	8'	5°
EC17	92+61		31.5	Bremer Avenue	Cobra Head	Existing	T2	Breakaway	LeoTek EC9 LED	350mA	36'	8'	5°
PD18	93+52	27.5		Bremer Avenue	Decorative	NP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PC19	94+15		27.5	Bremer Avenue	Cobra Head	RA	T2	Breakaway	LeoTek EC9 LED	350mA	35'	12'	5°
PD20	94+64	27.5		Bremer Avenue	Decorative	NP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PC21	95+70		27.5	Bremer Avenue	Cobra Head	NA	T2	Breakaway	LeoTek EC9 LED	530mA	35'	12'	5°

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DGR ENGINEERING

Project Manager: DJH
Designer: RDK
Project Number: 419608
Phone: (712) 472-2531

WAVERLY UTILITIES
WAVERLY, IOWA

STREET LIGHT CORRIDOR
BREMER AVENUE STREET LIGHTING

SHEET 2 OF 8

FILE NO. | ENGLISH | DESIGN TEAM WHKS & CO. | BREMER COUNTY | PROJECT NUMBER NHSN-003-6(63)--2R-09 | SHEET NUMBER N.4

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0 40 80
SCALE (FT.)

LIGHTING SCHEDULE

ID	STATION	LEFT (ft.)	RIGHT (ft.)	LOCATION	TYPE	FOUNDATION TYPE	DIST.	POLE BASE	FIXTURE	DRIVER	MOUNT HEIGHT	ARM LENGTH	TILT
PC22	97+20	27.5		Bremer Avenue	Cobra Head	NA	T2	Breakaway	LeoTek EC9 LED	530mA	35'	12'	5°
PC23	98+70		27.5	Bremer Avenue	Cobra Head	NA	T2	Breakaway	LeoTek EC9 LED	530mA	35'	12'	5°
PC24	100+20	27.5		Bremer Avenue	Cobra Head	NA	T2	Breakaway	LeoTek EC9 LED	530mA	35'	12'	5°
PC25	101+70		27.5	Bremer Avenue	Cobra Head	RA	T2	Breakaway	LeoTek EC9 LED	530mA	35'	12'	5°
PC26	103+09	36.5		Bremer Avenue	Cobra Head	NA	T2	Breakaway	LeoTek EC9 LED	530mA	35'	12'	5°
PC27	104+55		36.5	Bremer Avenue	Cobra Head	NA	T2	Breakaway	LeoTek EC9 LED	530mA	35'	12'	5°
PC28	105+93		36.5	Bremer Avenue	Cobra Head	NA	T2	Breakaway	LeoTek EC9 LED	530mA	35'	12'	5°
EC29	107+05	38.5		Bremer Avenue	Cobra Head	Existing	T2	Breakaway	LeoTek EC9 LED	350mA	36'	8'	5°
EC30	107+73		41.5	Bremer Avenue	Cobra Head	Existing	T2	Breakaway	LeoTek EC9 LED	350mA	36'	8'	5°
PD31	108+49	36.5		Bremer Avenue	Decorative	RP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD32	108+49		36.5	Bremer Avenue	Decorative	RP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A

REV	DATE	DESCRIPTION
1	1-19-17	ADDED CONDUIT FOR TRAFFIC CONTROLLERS

DGR ENGINEERING

Project Manager: DJH
Designer: RDK
Project Number: 419608
Phone: (712) 472-2531

WAVERLY UTILITIES
WAVERLY, IOWA

STREET LIGHT CORRIDOR
BREMER AVENUE STREET LIGHTING

SHEET 3 OF 8

FILE NO. | ENGLISH | DESIGN TEAM WHKS & CO. | BREMER COUNTY | PROJECT NUMBER NHSN-003-6(63)--2R-09 | SHEET NUMBER N.5

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0 40 80
SCALE (FT.)

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- HANDHOLE
- RCOCX (X = ID NO.)
- FOUNDATION
  N = NEW A = ANCHOR
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LIGHTING SCHEDULE

ID	STATION	LEFT (ft.)	RIGHT (ft.)	LOCATION	TYPE	FOUNDATION TYPE	DIST.	POLE BASE	FIXTURE	DRIVER	MOUNT HEIGHT	ARM LENGTH	TILT
PD33	109+40	36.5		Bremer Avenue	Decorative	RP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD34	109+50		36.5	Bremer Avenue	Decorative	RP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PC35	110+31	36.5		Bremer Avenue	Cobra Head	NA	T2	Breakaway	LeoTek EC9 LED	350mA	35'	12'	5º
PC36	111+06		36.5	Bremer Avenue	Cobra Head	NA	T2	Breakaway	LeoTek EC9 LED	350mA	35'	12'	5º
PD37	111+85	36.5		Bremer Avenue	Decorative	NP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD38	111+85		36.5	Bremer Avenue	Decorative	NP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD39	112+71	36.5		Bremer Avenue	Decorative	NP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD40	112+71		36.5	Bremer Avenue	Decorative	NP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PC41	113+62	36.5		Bremer Avenue	Cobra Head	NA	T2	Breakaway	LeoTek EC9 LED	350mA	35'	12'	5º
PC42	114+30		36.5	Bremer Avenue	Cobra Head	NA	T2	Breakaway	LeoTek EC9 LED	350mA	35'	12'	5º
PD43	115+00	36.5		Bremer Avenue	Decorative	NP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD44	115+00		36.5	Bremer Avenue	Decorative	NP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD45	116+03	36.5		Bremer Avenue	Decorative	RP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD46	116+03		36.5	Bremer Avenue	Decorative	RP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PC47	116+91	36.5		Bremer Avenue	Cobra Head	NA	T2	Breakaway	LeoTek EC9 LED	350mA	35'	12'	5º
PC48	117+71		36.5	Bremer Avenue	Cobra Head	NA	T2	Breakaway	LeoTek EC9 LED	350mA	35'	12'	5º
PD49	118+30	36.5		Bremer Avenue	Decorative	RP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD50	118+30		36.5	Bremer Avenue	Decorative	RP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD51	119+08	36.5		Bremer Avenue	Decorative	RP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD52	119+13		36.5	Bremer Avenue	Decorative	RP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PC53	120+16	36.5		Bremer Avenue	Cobra Head	NA	T2	Breakaway	LeoTek EC9 LED	350mA	35'	12'	5º
PC54	120+98		36.5	Bremer Avenue	Cobra Head	NA	T2	Breakaway	LeoTek EC9 LED	350mA	35'	12'	5º

REV	DATE	DESCRIPTION
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WAVERLY UTILITIES
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STREET LIGHT CORRIDOR
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SHEET 4 OF 8

FILE NO. | ENGLISH | DESIGN TEAM WHKS & CO. | BREMER COUNTY | PROJECT NUMBER NHSN-003-6(63)--2R-09 | SHEET NUMBER N.6

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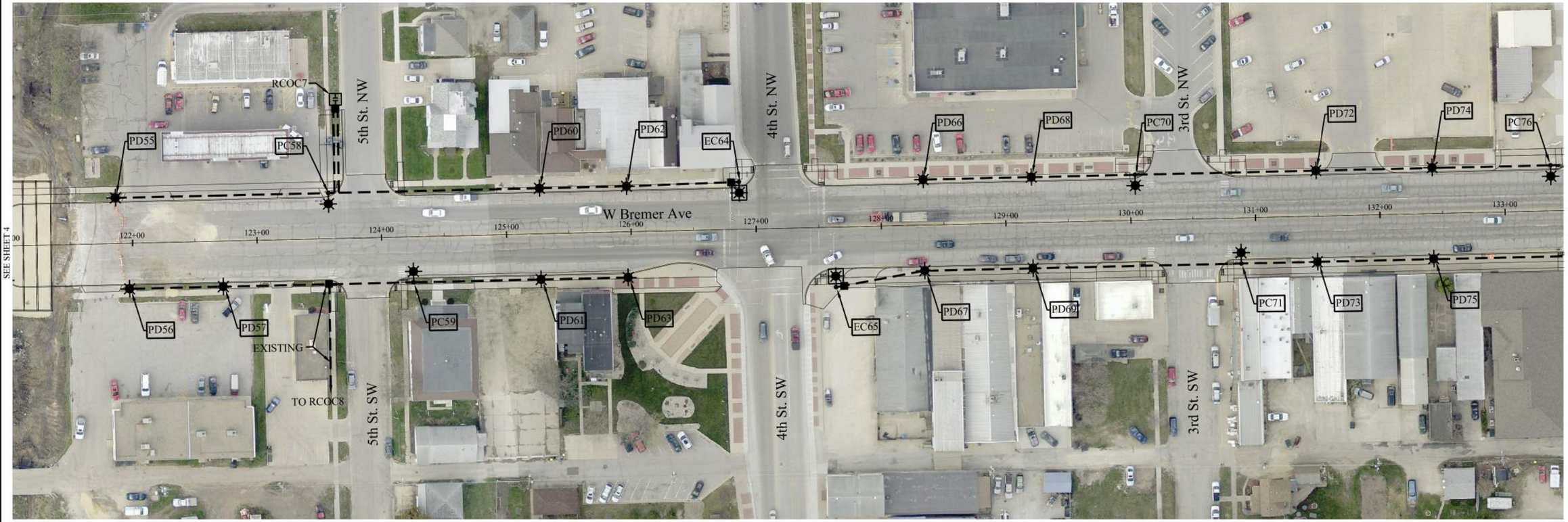

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SCALE (FT.)

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LIGHTING SCHEDULE

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PD55	121+87	36.5		Bremer Avenue	Decorative	RP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD56	121+97		36.5	Bremer Avenue	Decorative	RP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD57	122+72		36.5	Bremer Avenue	Decorative	RP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PC58	123+58	36.5		Bremer Avenue	Cobra Head	NA	T2	Breakaway	LeoTek EC9 LED	350mA	35'	12'	5º
PC59	124+25		36.5	Bremer Avenue	Cobra Head	NA	T2	Breakaway	LeoTek EC9 LED	350mA	35'	12'	5º
PD60	125+27	36.5		Bremer Avenue	Decorative	RP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD61	125+27		36.5	Bremer Avenue	Decorative	RP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD62	125+97	36.5		Bremer Avenue	Decorative	RP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD63	125+97		36.5	Bremer Avenue	Decorative	RP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
EC64	126+87	38		Bremer Avenue	Cobra Head	Existing	T2	Breakaway	LeoTek EC9 LED	350mA	36'	8'	5º
EC65	127+63		48	Bremer Avenue	Cobra Head	Existing	T2	Breakaway	LeoTek EC9 LED	350mA	36'	8'	5º
PD66	128+34	36.5		Bremer Avenue	Decorative	RP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD67	128+34		36.5	Bremer Avenue	Decorative	RP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD68	129+21	36.5		Bremer Avenue	Decorative	RP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD69	129+21		36.5	Bremer Avenue	Decorative	RP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PC70	130+04	36.5		Bremer Avenue	Cobra Head	NA	T2	Breakaway	LeoTek EC9 LED	350mA	35'	12'	5º
PC71	130+88		36.5	Bremer Avenue	Cobra Head	NA	T2	Breakaway	LeoTek EC9 LED	350mA	35'	12'	5º
PD72	131+49	36.5		Bremer Avenue	Decorative	RP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD73	131+49		36.5	Bremer Avenue	Decorative	RP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD74	132+45	36.5		Bremer Avenue	Decorative	RP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD75	132+45		36.5	Bremer Avenue	Decorative	RP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PC76	133+37	36.5		Bremer Avenue	Cobra Head	NA	T2	Breakaway	LeoTek EC9 LED	350mA	35'	12'	5º

REV	DATE	DESCRIPTION
1	1-19-17	ADDED CONDUIT FOR TRAFFIC CONTROLLERS

DGR ENGINEERING

Project Manager: DJH
Designer: RDK
Project Number: 419608
Phone: (712) 472-2531

WAVERLY UTILITIES
WAVERLY, IOWA

STREET LIGHT CORRIDOR
BREMER AVENUE STREET LIGHTING

SHEET 5 OF 8

FILE NO. | ENGLISH | DESIGN TEAM WHKS & CO. | BREMER COUNTY | PROJECT NUMBER NHSN-003-6(63)--2R-09 | SHEET NUMBER N.7

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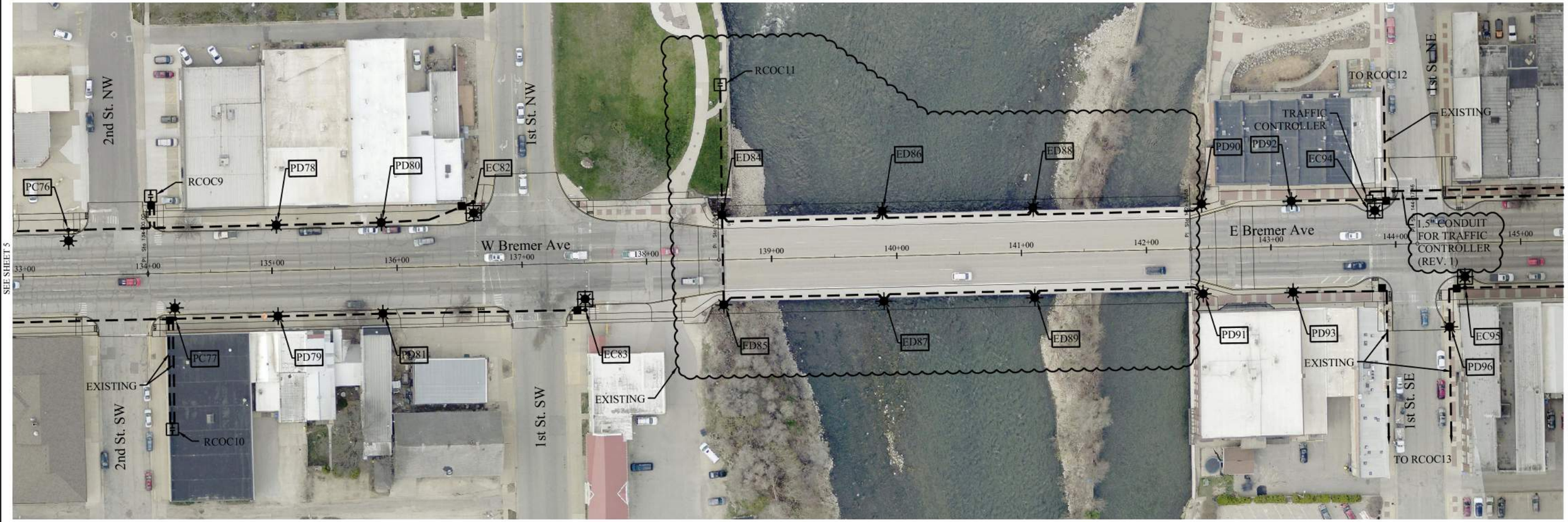

0 40 80
SCALE (FT.)

NOTES

1. LIGHTING UNITS AND CONDUCTOR WILL BE FURNISHED AND INSTALLED BY THE OWNER. FOUNDATIONS AND CONDUIT SHALL BE FURNISHED AND INSTALLED BY THIS CONTRACTOR.
2. DISTANCE BETWEEN STREET CENTER-LINE AND STREET LIGHT BASE IS SHOWN AS APPROXIMATE. VERIFY ACTUAL DISTANCE FROM STREET CENTER-LINE TO STREET LIGHT BASE CENTER-LINE TO MAINTAIN A 3' MINIMUM DISTANCE BETWEEN STREET LIGHT BASE CENTER-LINE AND BACK OF STREET CURB WHILE AVOIDING UTILITIES AND OVERHEAD CANOPIES UNLESS DIRECTED OTHERWISE BY THE OWNER.
3. COORDINATE FINAL LOCATION OF STREET LIGHTS WITH THE OWNER/ENGINEER.
4. THIS PLAN SPECIFIES CONDUIT SIZE, TYPE AND GENERAL LOCATIONS. THE EXACT LOCATION WILL BE DETERMINED IN THE FIELD.
5. ALL CONDUIT SHALL BE 1.5" PVC - SCHEDULE 40. REV. 1
6. CONTRACTOR TO MAKE FINAL CONDUIT CONNECTION TO EXISTING CONDUIT/HANDHOLES AS SHOWN. COORDINATE FINAL CONDUIT CONNECTIONS TO THE EXISTING REMOTE CONTROL OF OUTDOOR CIRCUITS (RCOC) AND TRAFFIC CONTROLLERS WITH THE OWNER.
7. COORDINATE FINAL LOCATIONS OF HANDHOLES WITH THE OWNER.
8. PROPOSED DECORATIVE UNITS SHALL BE MOUNTED ON CONCRETE PIERS UNLESS NOTED OTHERWISE. PROPOSED COBRA HEAD UNITS SHALL BE INSTALLED ON SCREW-IN ANCHORS UNLESS NOTED OTHERWISE.
9. PRE-CAST CONCRETE PIERS ARE EXISTING AND SHALL BE REMOVED AND REINSTALLED AT LOCATIONS NOTED IN LIGHTING SCHEDULE. PIERS SHALL BE USED FOR SAME POLE TYPE AS EXISTING.
10. CAP EXISTING CONDUIT AS REQUIRED UNTIL INSTALLATION OF NEW EQUIPMENT.

LEGEND

- DECORATIVE LIGHTING UNIT
- COBRA HEAD LIGHTING UNIT
- COBRA HEAD/TRAFFIC SIGNAL
- XX1 — LIGHTING UNIT ID
  - E = EXISTING
  - P = PROPOSED
  - C = COBRA HEAD
  - D = DECORATIVE
- PERMANENT GROUND ROD (25 OHMS OR LESS)
- CONDUIT (SIZE AS NOTED)
- BORE WITH CONDUIT
- HANDHOLE
- RCOCX (X = ID NO.)
- FOUNDATION
  - N = NEW
  - R = REUSE
  - A = ANCHOR
  - P = CONCRETE PIER

LIGHTING SCHEDULE

ID	STATION	LEFT (ft.)	RIGHT (ft.)	LOCATION	TYPE	FOUNDATION TYPE	DIST.	POLE BASE	FIXTURE	DRIVER	MOUNT HEIGHT	ARM LENGTH	TILT
PC77	134+21		36.5	Bremer Avenue	Cobra Head	NA	T2	Breakaway	LeoTek EC9 LED	350mA	35'	12'	5°
PD78	135+04	36.5		Bremer Avenue	Decorative	RP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD79	135+04		36.5	Bremer Avenue	Decorative	RP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD80	135+88	36.5		Bremer Avenue	Decorative	RP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD81	135+88		36.5	Bremer Avenue	Decorative	RP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
EC82	136+62	51		Bremer Avenue	Cobra Head	Existing	T2	Breakaway	LeoTek EC9 LED	530mA	36'	8'	5°
EC83	137+50		37.5	Bremer Avenue	Cobra Head	Existing	T2	Breakaway	LeoTek EC9 LED	530mA	36'	8'	5°
ED84	138+61	36		Bremer Avenue	Decorative	Existing	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
ED85	138+61		36	Bremer Avenue	Decorative	Existing	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
ED86	139+89	36		Bremer Avenue	Decorative	Existing	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
ED87	139+89		36	Bremer Avenue	Decorative	Existing	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
ED88	141+10	36		Bremer Avenue	Decorative	Existing	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
ED89	141+10		36	Bremer Avenue	Decorative	Existing	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD90	142+45	36		Bremer Avenue	Decorative	NP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD91	142+45		36	Bremer Avenue	Decorative	NP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD92	143+17	36.5		Bremer Avenue	Decorative	NP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD93	143+17		36.5	Bremer Avenue	Decorative	NP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
EC94	143+84	36		Bremer Avenue	Cobra Head	Existing	T2	Breakaway	LeoTek EC9 LED	350mA	36'	8'	5°
EC95	144+55		36	Bremer Avenue	Cobra Head	Existing	T2	Breakaway	LeoTek EC9 LED	350mA	36'	8'	5°
PD96	144+42		67	1st St. NE	Decorative	NP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A

REV	DATE	DESCRIPTION
1	1-19-17	ADDED CONDUIT FOR TRAFFIC CONTROLLERS

DGR ENGINEERING

Project Manager: DJH
Designer: RDK
Project Number: 419608
Phone: (712) 472-2531

WAVERLY UTILITIES
WAVERLY, IOWA

STREET LIGHT CORRIDOR
BREMER AVENUE STREET LIGHTING

SHEET 6 OF 8

FILE NO. | ENGLISH | DESIGN TEAM WHKS & CO. | BREMER COUNTY | PROJECT NUMBER NHSN-003-6(63)--2R-09 | SHEET NUMBER N.8

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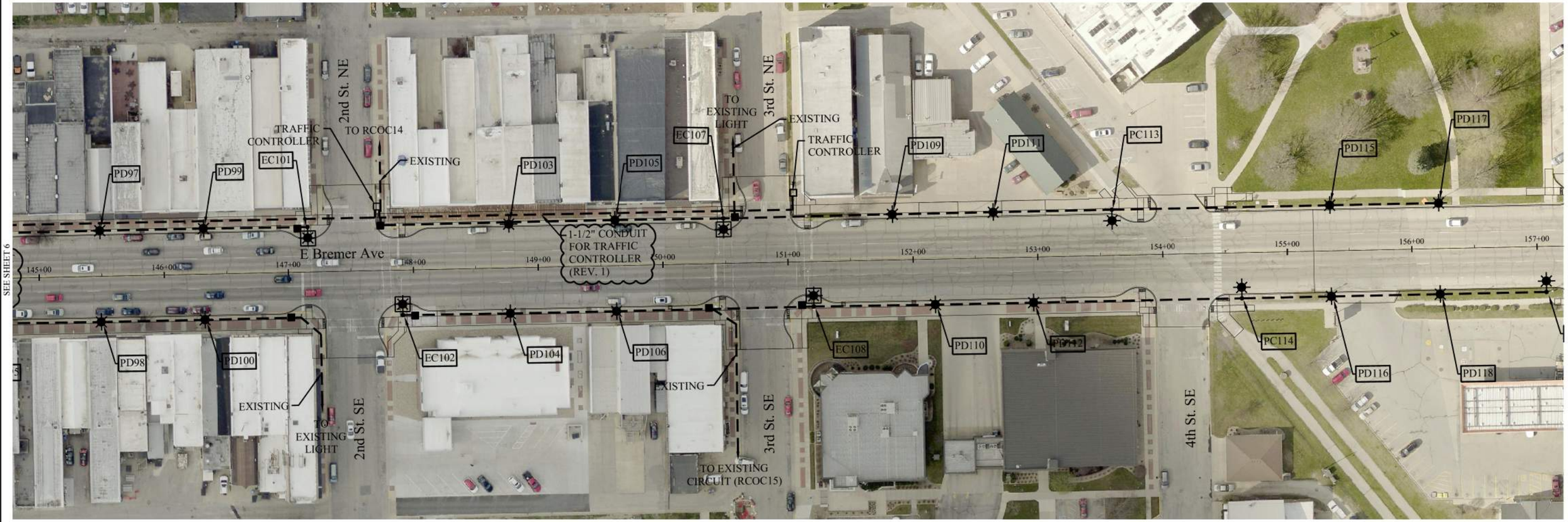

0 40 80
SCALE (FT.)

NOTES

1. LIGHTING UNITS AND CONDUCTOR WILL BE FURNISHED AND INSTALLED BY THE OWNER. FOUNDATIONS AND CONDUIT SHALL BE FURNISHED AND INSTALLED BY THIS CONTRACTOR.
2. DISTANCE BETWEEN STREET CENTER-LINE AND STREET LIGHT BASE IS SHOWN AS APPROXIMATE. VERIFY ACTUAL DISTANCE FROM STREET CENTER-LINE TO STREET LIGHT BASE CENTER-LINE TO MAINTAIN A 3' MINIMUM DISTANCE BETWEEN STREET LIGHT BASE CENTER-LINE AND BACK OF STREET CURB WHILE AVOIDING UTILITIES AND OVERHEAD CANOPIES UNLESS DIRECTED OTHERWISE BY THE OWNER.
3. COORDINATE FINAL LOCATION OF STREET LIGHTS WITH THE OWNER/ENGINEER.
4. THIS PLAN SPECIFIES CONDUIT SIZE, TYPE AND GENERAL LOCATIONS. THE EXACT LOCATION WILL BE DETERMINED IN THE FIELD.
5. ALL CONDUIT SHALL BE 1.5" PVC - SCHEDULE 40.
6. REV. 1 — CONTRACTOR TO MAKE FINAL CONDUIT CONNECTION TO EXISTING CONDUIT/HANDHOLES AS SHOWN. COORDINATE FINAL CONDUIT CONNECTIONS TO THE EXISTING REMOTE CONTROL OF OUTDOOR CIRCUITS (RCOC) AND TRAFFIC CONTROLLERS WITH THE OWNER.
7. COORDINATE FINAL LOCATIONS OF HANDHOLES WITH THE OWNER.
8. PROPOSED DECORATIVE UNITS SHALL BE MOUNTED ON CONCRETE PIERS UNLESS NOTED OTHERWISE. PROPOSED COBRA HEAD UNITS SHALL BE INSTALLED ON SCREW-IN ANCHORS UNLESS NOTED OTHERWISE.
9. PRE-CAST CONCRETE PIERS ARE EXISTING AND SHALL BE REMOVED AND REINSTALLED AT LOCATIONS NOTED IN LIGHTING SCHEDULE. PIERS SHALL BE USED FOR SAME POLE TYPE AS EXISTING.
10. CAP EXISTING CONDUIT AS REQUIRED UNTIL INSTALLATION OF NEW EQUIPMENT.

LEGEND

- DECORATIVE LIGHTING UNIT
- COBRA HEAD LIGHTING UNIT
- COBRA HEAD/TRAFFIC SIGNAL
- XX1 — LIGHTING UNIT ID
  - E = EXISTING, P = PROPOSED
  - C = COBRA HEAD, D = DECORATIVE
- PERMANENT GROUND ROD (25 OHMS OR LESS)
- CONDUIT (SIZE AS NOTED)
- BORE WITH CONDUIT
- HANDHOLE
- RCOCX (X = ID NO.)
- FOUNDATION
  - N = NEW, A = ANCHOR
  - R = REUSE, P = CONCRETE PIER

LIGHTING SCHEDULE

ID	STATION	LEFT (ft.)	RIGHT (ft.)	LOCATION	TYPE	FOUNDATION TYPE	DIST.	POLE BASE	FIXTURE	DRIVER	MOUNT HEIGHT	ARM LENGTH	TILT
PD97	145+49	36.5		Bremer Avenue	Decorative	NP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD98	145+49		36.5	Bremer Avenue	Decorative	NP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD99	146+32	36.5		Bremer Avenue	Decorative	NP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD100	146+32		36.5	Bremer Avenue	Decorative	NP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
EC101	147+16	36		Bremer Avenue	Cobra Head	Existing	T2	Breakaway	LeoTek EC9 LED	350mA	36'	8'	5°
EC102	147+91		36	Bremer Avenue	Cobra Head	Existing	T2	Breakaway	LeoTek EC9 LED	350mA	36'	8'	5°
PD103	148+77	35		Bremer Avenue	Decorative	NP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD104	148+77		36.5	Bremer Avenue	Decorative	NP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD105	149+62	36.5		Bremer Avenue	Decorative	NP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD106	149+62		36.5	Bremer Avenue	Decorative	NP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
EC107	150+49	36		Bremer Avenue	Cobra Head	Existing	T3	Breakaway	LeoTek EC9 LED	530mA	36'	8'	5°
EC108	151+20		36	Bremer Avenue	Cobra Head	Existing	T3	Breakaway	LeoTek EC9 LED	530mA	36'	8'	5°
PD109	151+84	36.5		Bremer Avenue	Decorative	NP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD110	152+17		36.5	Bremer Avenue	Decorative	NP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD111	152+65	36.5		Bremer Avenue	Decorative	NP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD112	152+96		36.5	Bremer Avenue	Decorative	NP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PC113	153+60	36.5		Bremer Avenue	Cobra Head	RP	T2	Breakaway	LeoTek EC9 LED	350mA	35'	12'	5°
PC114	154+63		36.5	Bremer Avenue	Cobra Head	RP	T2	Breakaway	LeoTek EC9 LED	350mA	35'	12'	5°
PD115	155+35	36.5		Bremer Avenue	Decorative	RP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD116	155+35		36.5	Bremer Avenue	Decorative	RP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD117	156+22	36.5		Bremer Avenue	Decorative	RP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A
PD118	156+22		36.5	Bremer Avenue	Decorative	RP	T3	Breakaway	King K118 LED	120W	14'	N/A	N/A

REV	DATE	DESCRIPTION
1	1-19-17	ADDED CONDUIT FOR TRAFFIC CONTROLLERS

DGR ENGINEERING

Project Manager: DJH
Designer: RDK
Project Number: 419608
Phone: (712) 472-2531

WAVERLY UTILITIES
WAVERLY, IOWA

STREET LIGHT CORRIDOR
BREMER AVENUE STREET LIGHTING

SHEET 7 OF 8

FILE NO. | ENGLISH | DESIGN TEAM WHKS & CO. | BREMER COUNTY | PROJECT NUMBER NHSN-003-6(63)--2R-09 | SHEET NUMBER N.9

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SCALE (FT.)

NOTES

1. LIGHTING UNITS AND CONDUCTOR WILL BE FURNISHED AND INSTALLED BY THE OWNER. FOUNDATIONS AND CONDUIT SHALL BE FURNISHED AND INSTALLED BY THIS CONTRACTOR.
2. DISTANCE BETWEEN STREET CENTER-LINE AND STREET LIGHT BASE IS SHOWN AS APPROXIMATE. VERIFY ACTUAL DISTANCE FROM STREET CENTER-LINE TO STREET LIGHT BASE CENTER-LINE TO MAINTAIN A 3' MINIMUM DISTANCE BETWEEN STREET LIGHT BASE CENTER-LINE AND BACK OF STREET CURB WHILE AVOIDING UTILITIES AND OVERHEAD CANOPIES UNLESS DIRECTED OTHERWISE BY THE OWNER.
3. COORDINATE FINAL LOCATION OF STREET LIGHTS WITH THE OWNER/ENGINEER.
4. THIS PLAN SPECIFIES CONDUIT SIZE, TYPE AND GENERAL LOCATIONS. THE EXACT LOCATION WILL BE DETERMINED IN THE FIELD.
5. ALL CONDUIT SHALL BE 1.5" PVC - SCHEDULE 40.
6. REV. 1 — CONTRACTOR TO MAKE FINAL CONDUIT CONNECTION TO EXISTING CONDUIT/HANDHOLES AS SHOWN. COORDINATE FINAL CONDUIT CONNECTIONS TO THE EXISTING REMOTE CONTROL OF OUTDOOR CIRCUITS (RCOC) AND TRAFFIC CONTROLLERS WITH THE OWNER.
7. COORDINATE FINAL LOCATIONS OF HANDHOLES WITH THE OWNER.
8. PROPOSED DECORATIVE UNITS SHALL BE MOUNTED ON CONCRETE PIERS UNLESS NOTED OTHERWISE. PROPOSED COBRA HEAD UNITS SHALL BE INSTALLED ON SCREW-IN ANCHORS UNLESS NOTED OTHERWISE.
9. PRE-CAST CONCRETE PIERS ARE EXISTING AND SHALL BE REMOVED AND REINSTALLED AT LOCATIONS NOTED IN LIGHTING SCHEDULE. PIERS SHALL BE USED FOR SAME POLE TYPE AS EXISTING.
10. CAP EXISTING CONDUIT AS REQUIRED UNTIL INSTALLATION OF NEW EQUIPMENT.

LEGEND

- DECORATIVE LIGHTING UNIT
- COBRA HEAD LIGHTING UNIT
- COBRA HEAD/TRAFFIC SIGNAL
- XX1 — LIGHTING UNIT ID (E = EXISTING, P = PROPOSED, C = COBRA HEAD, D = DECORATIVE)
- PERMANENT GROUND ROD (25 OHMS OR LESS)
- CONDUIT (SIZE AS NOTED)
- BORE WITH CONDUIT
- HANDHOLE
- RCOCX (X = ID NO.)
- FOUNDATION (N = NEW, R = REUSE, A = ANCHOR, P = CONCRETE PIER)

LIGHTING SCHEDULE

ID	STATION	LEFT (ft.)	RIGHT (ft.)	LOCATION	TYPE	FOUNDATION TYPE	DIST.	POLE BASE	FIXTURE	DRIVER	MOUNT HEIGHT	ARM LENGTH	TILT
PC119	157+07		36.5	Bremer Avenue	Cobra Head	RP	T2	Breakaway	LeoTek EC9 LED	350mA	35'	12'	5°
PC120	157+82	36.5		Bremer Avenue	Cobra Head	RP	T2	Breakaway	LeoTek EC9 LED	350mA	35'	12'	5°
PC121	159+45		36.5	Bremer Avenue	Cobra Head	RP	T2	Breakaway	LeoTek EC9 LED	350mA	35'	12'	5°
PC122	161+07	36.5		Bremer Avenue	Cobra Head	RP	T2	Breakaway	LeoTek EC9 LED	350mA	35'	12'	5°
PC123	162+67		36.5	Bremer Avenue	Cobra Head	RP	T2	Breakaway	LeoTek EC9 LED	350mA	35'	12'	5°
PC124	164+48	36.5		Bremer Avenue	Cobra Head	RP	T2	Breakaway	LeoTek EC9 LED	350mA	35'	12'	5°
PC125	166+03		36.5	Bremer Avenue	Cobra Head	RP	T2	Breakaway	LeoTek EC9 LED	350mA	35'	12'	5°

REV	DATE	DESCRIPTION
1	1-19-17	ADDED CONDUIT FOR TRAFFIC CONTROLLERS

DGR ENGINEERING

Project Manager: DJH
Designer: RDK
Project Number: 419608
Phone: (712) 472-2531

WAVERLY UTILITIES
WAVERLY, IOWA

STREET LIGHT CORRIDOR
BREMER AVENUE STREET LIGHTING

SHEET 8 OF 8

FILE NO. | ENGLISH | DESIGN TEAM WHKS & CO. | BREMER COUNTY | PROJECT NUMBER NHSN-003-6(63)--2R-09 | SHEET NUMBER N.10

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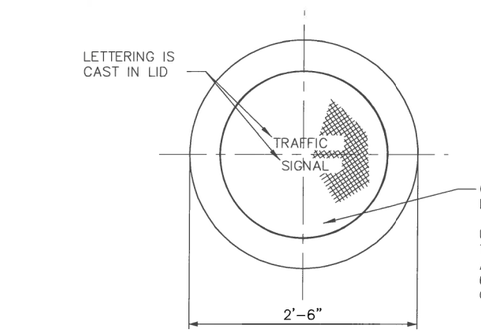
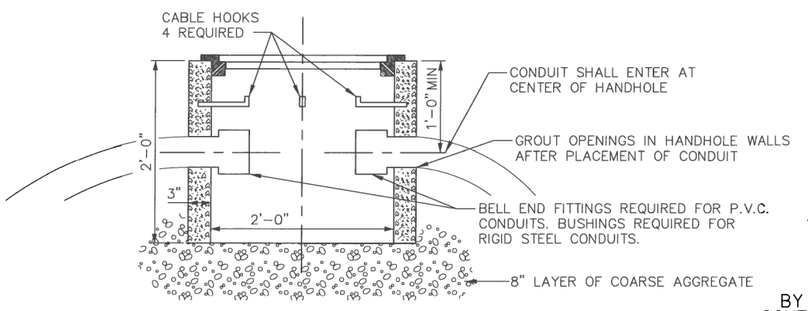
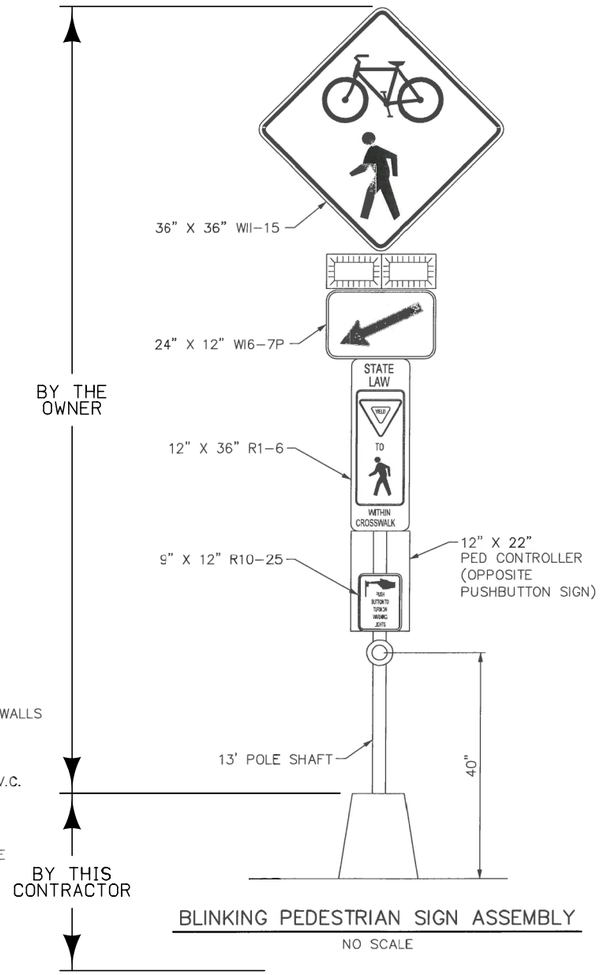




PRE-CAST CONCRETE HANDHOLE

NO SCALE



BLINKING PEDESTRIAN SIGN ASSEMBLY

NO SCALE

BLINKING PEDESTRIAN SIGN ASSEMBLY LOCATIONS			
LOCATION STATION	SIDE	OFFSET	REMARKS
113+50.00	RT	32.00'	INSTALL INCLUDES 75 LF OF 1" HDPE
113+61.00	LT	32.00'	INSTALL INCLUDES 40 LF OF 1" HDPE
120+82.50	RT	32.00'	INSTALL INCLUDES 80 LF OF 1" HDPE
120+98.00	LT	32.00'	INSTALL INCLUDES 50 LF OF 1" HDPE
154+44.50	RT	32.00'	INSTALL INCLUDES 45 LF OF 1" HDPE
154+61.50	LT	32.00'	INSTALL INCLUDES 85 LF OF 1" HDPE
TOTAL		6 EACH	375 LF OF 1" HDPE

NOTES:

SIGNS, LIGHTING, POLE, PUSH BUTTONS AND WIRING WILL BE FURNISHED AND INSTALLED BY THE OWNER. FOUNDATIONS AND CONDUIT SHALL BE FURNISHED AND INSTALLED BY THIS CONTRACTOR.

THIS PLAN SPECIFIES CONDUIT SIZE, TYPE AND GENERAL LOCATION. THE EXACT LOCATION WILL BE DETERMINED IN THE FIELD

ALL CONDUIT SHALL BE 1" HDPE

CONTRACTOR TO MAKE FINAL CONDUIT CONNECTION TO EXISTING CONDUIT/HANDHOLES AS SHOWN. COORDINATE FINAL CONDUIT CONNECTIONS TO THE EXISTING REMOTE CONTROL OF OUTDOOR CIRCUITS (RCOC) WITH THE OWNER.

EACH INSTALLATION SHALL CONSIST OF 1 CONCRETE SIGN FOUNDATION, 1 PRE-CAST CONCRETE HANDHOLE, AND CONDUIT TO TIE TO THE EXISTING REMOTE CONTROL OF OUTDOOR CIRCUITS (RCOC).

8th St. NW

CONTRACTOR TO STUB
10' PAST PAVING

F04

E1

113

114

115

W

STA. 113+61.00 32.00' LT.
INSTALL BLINKING PEDESTRIAN SIGN ASSEMBLY
AND PRE-CAST CONCRETE HANDHOLE ACCORDING
TO THE SIGNAL DETAILS ON SHEET N.12

1" HDPE

STA. 113+50.00 32.00' RT.
INSTALL BLINKING PEDESTRIAN SIGN ASSEMBLY
AND PRE-CAST CONCRETE HANDHOLE ACCORDING
TO THE SIGNAL DETAILS ON SHEET N.12

G2

8th St. SW

0 FEET 10

FILE NO.	ENGLISH	DESIGN TEAM WHKS & CO.	BREMER COUNTY	PROJECT NUMBER NHSN-003-6(63)--2R-09	SHEET NUMBER N.13

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6th St. NW

CONTRACTOR TO STUB
10' PAST PAVING

STA. 120+98.00 32.00' LT.
INSTALL BLINKING PEDESTRIAN SIGN ASSEMBLY
AND PRE-CAST CONCRETE HANDHOLE ACCORDING
TO THE SIGNAL DETAILS ON SHEET N.12

1" HDPE

STA. 120+82.50 32.00' RT.
INSTALL BLINKING PEDESTRIAN SIGN ASSEMBLY
AND PRE-CAST CONCRETE HANDHOLE ACCORDING
TO THE SIGNAL DETAILS ON SHEET N.12

6th St. SW

0 10 FEET

FILE NO.	ENGLISH	DESIGN TEAM WHKS & CO.	BREMER COUNTY	PROJECT NUMBER NHSN-003-6(63)--2R-09	SHEET NUMBER N.14

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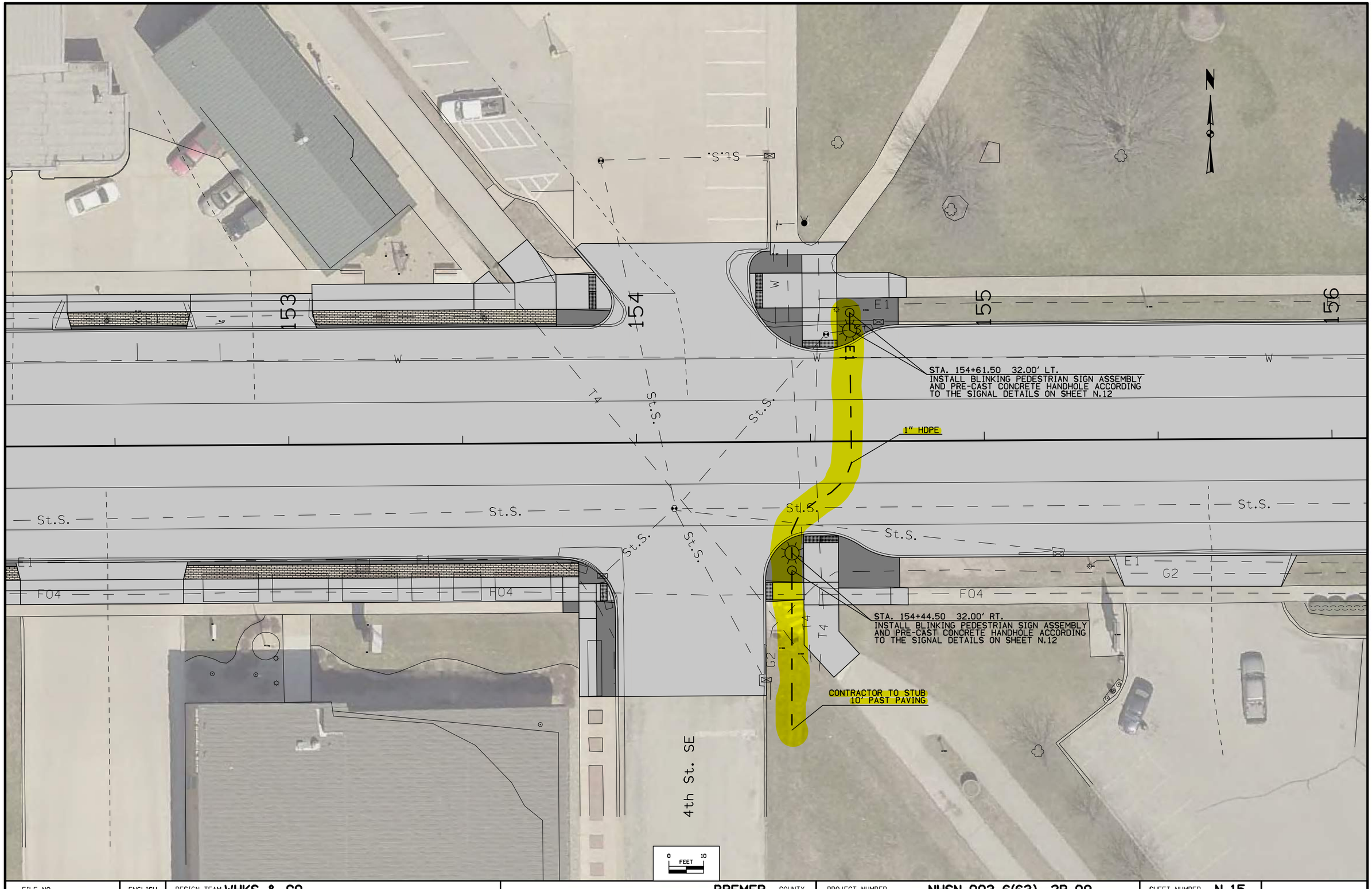
Changed by Addenda



FILE NO.	ENGLISH	DESIGN TEAM WHKS & CO.	BREMER COUNTY	PROJECT NUMBER NHSN-003-6(63)--2R-09	SHEET NUMBER N.15

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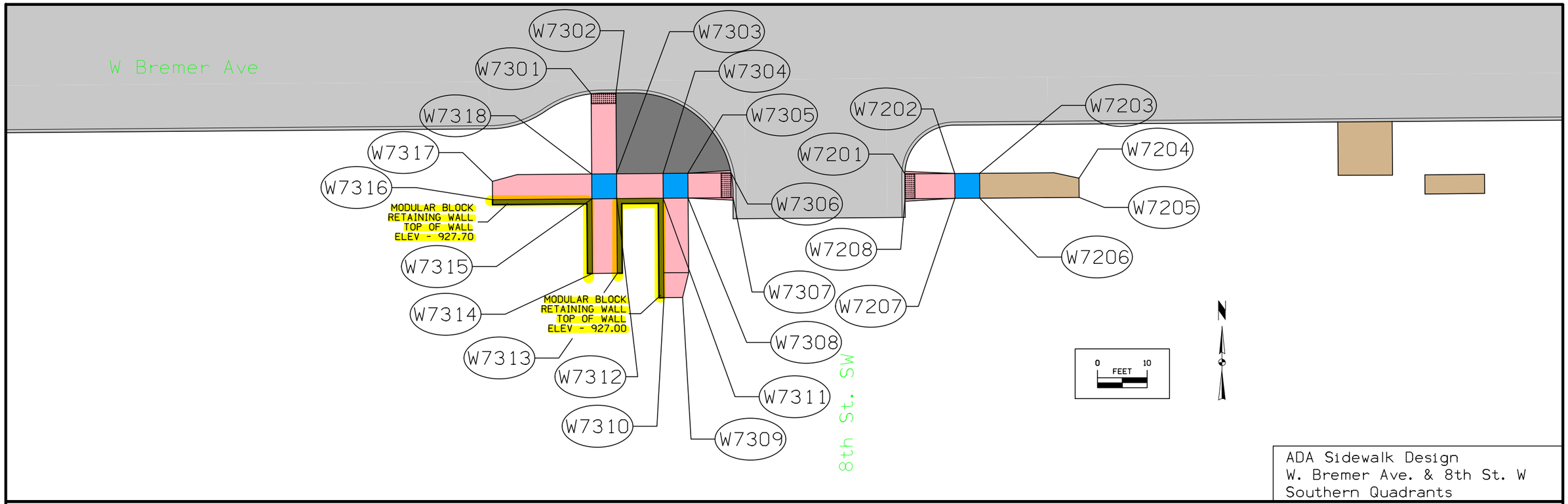
Changed by Addenda



ADA Sidewalk Design
W. Bremer Ave. & 8th St. W
Southern Quadrants

113-10
10-15-13

SIDEWALK COMPLIANCE

See S Sheets

* Does not include curb
(1) Staking required by Contracting Authority per Article 2511.03 of the Standard Specifications.

Point to Point		Sidewalk Designation	Distance*	Δ Elevation	Slope	Acceptable Constructed Range	Staking Required on this Quadrant? (1)	Measured Slope	Initials	Remarks		FOR INFORMATION ONLY: VALUES USED TO DETERMINE DESIGNED SLOPES			
			FT	FT	%	Pos. or Neg.		%				Point	Station	Offset	Elevation
W7201	W7208	Ramp Cross Slope	5.00	0.21	4.2%	0.1% to 5.2%						W7201	114+16.15	43.25	923.64
W7208	W7207	Ramp Running Slope	10.00	-0.09	-0.9%	0.5% to 8.3%						W7202	114+26.19	43.25	923.69
W7201	W7202	Ramp Running Slope	10.00	0.05	0.5%	0.5% to 8.3%						W7203	114+31.19	43.25	923.62
W7207	W7202	Landing/Turning Space	5.00	-0.07	-1.4%	0.1% to 2.0%						W7204	114+51.19	44.38	922.68
W7207	W7206	Landing/Turning Space	5.00	-0.07	-1.4%	0.1% to 2.0%						W7205	114+51.19	48.25	922.73
W7202	W7203	Landing/Turning Space	5.00	-0.07	-1.4%	0.1% to 2.0%						W7206	114+31.19	48.25	923.69
W7206	W7203	Landing/Turning Space	5.00	-0.07	-1.4%	0.1% to 2.0%						W7207	114+26.19	48.25	923.76
W7206	W7205	Sidewalk Running Slope	20.00	-0.96	-4.8%	0.5% to 5.0%	Yes					W7208	114+16.15	48.25	923.85
W7203	W7204	Sidewalk Running Slope	20.00	-0.94	-4.7%	0.5% to 5.0%	Yes								
W7205	W7204	Match Existing Cross Slope	3.87	-0.05	-1.3%	Match Existing						W7301	113+53.11	26.62	926.02
												W7302	113+58.11	26.50	925.91
W7307	W7306	Ramp Cross Slope	5.00	0.13	2.6%	0.1% to 3.6%						W7303	113+58.11	42.75	925.91
W7307	W7308	Ramp Running Slope	9.05	0.72	8.0%	0.5% to 8.3%	Yes					W7304	113+67.46	42.75	925.17
W7306	W7305	Ramp Running Slope	8.69	0.52	6.0%	0.5% to 8.3%						W7305	113+72.46	42.75	925.08
W7308	W7305	Landing/Turning Space	5.00	-0.07	-1.4%	0.1% to 2.0%						W7306	113+81.15	42.75	924.56
W7308	W7311	Landing/Turning Space	5.00	0.09	1.8%	0.1% to 2.0%	Yes					W7307	113+81.50	47.75	924.43
W7305	W7304	Landing/Turning Space	5.00	0.09	1.8%	0.1% to 2.0%	Yes					W7308	113+72.46	47.75	925.15
W7311	W7304	Landing/Turning Space	5.00	-0.07	-1.4%	0.1% to 2.0%						W7309	113+71.19	67.75	925.96
W7311	W7310	Ramp Running Slope	20.00	0.87	4.4%	0.5% to 8.3%						W7310	113+67.46	67.75	926.11
W7308	W7309	Ramp Running Slope	20.00	0.81	4.1%	0.5% to 8.3%						W7311	113+67.46	47.75	925.24
W7310	W7309	Match Existing Cross Slope	3.74	-0.15	-4.0%	Match Existing						W7312	113+58.11	47.75	925.98
W7311	W7312	Ramp Running Slope	9.35	0.74	7.9%	0.5% to 8.3%	Yes					W7313	113+58.11	62.75	926.98
W7304	W7303	Ramp Running Slope	9.35	0.74	7.9%	0.5% to 8.3%	Yes					W7314	113+53.11	62.75	927.14
W7312	W7303	Landing/Turning Space	5.00	-0.07	-1.4%	0.1% to 2.0%						W7315	113+53.11	47.75	926.07
W7312	W7315	Landing/Turning Space	5.00	0.09	1.8%	0.1% to 2.0%	Yes					W7316	113+33.11	47.75	927.69
W7303	W7318	Landing/Turning Space	5.00	0.09	1.8%	0.1% to 2.0%	Yes					W7317	113+33.11	44.06	927.70
W7315	W7318	Landing/Turning Space	5.00	-0.07	-1.4%	0.1% to 2.0%						W7318	113+53.11	42.75	926.00
W7312	W7313	Ramp Running Slope	15.00	1.00	6.7%	0.5% to 8.3%									
W7315	W7314	Ramp Running Slope	15.00	1.07	7.1%	0.5% to 8.3%									
W7314	W7313	Match Existing Cross Slope	5.00	-0.16	-3.2%	Match Existing									
W7315	W7316	Ramp Running Slope	20.00	1.62	8.1%	0.5% to 8.3%	Yes								
W7318	W7317	Ramp Running Slope	20.00	1.70	8.5%										
W7316	W7317	Match Existing Cross Slope	3.70	0.01	0.3%	Match Existing									
W7318	W7301	Ramp Running Slope	16.14	0.02	0.1%	0.5% to 8.3%									
W7303	W7302	Ramp Running Slope	16.25	0.00	0.0%	0.5% to 8.3%									
W7301	W7302	Ramp Cross Slope	5.00	-0.11	-2.2%	0.1% to 3.2%									