



PLANS OF PROPOSED IMPROVEMENT ON THE
STATE HIGHWAY ROAD SYSTEM
O'BRIEN COUNTY

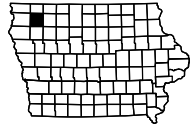
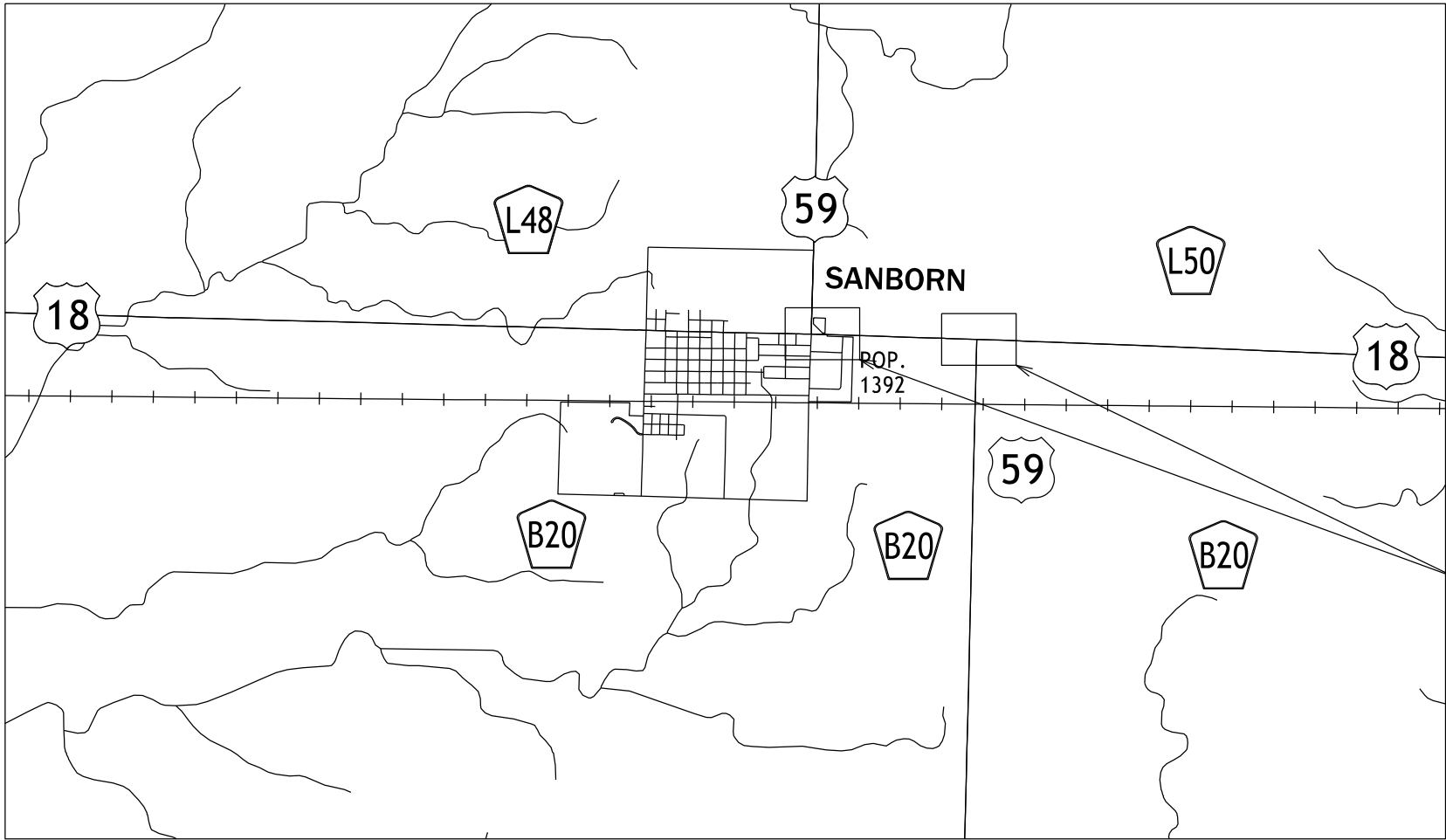
Lighting

US 59 and US 18 Intersections in Sanborn

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

Value Engineering Saves. Refer to Article 1105.14 of the Specifications.



REVISIONS

TOTAL

8

PROJECT IDENTIFICATION NUMBER

24-71-018-040

PROJECT NUMBER

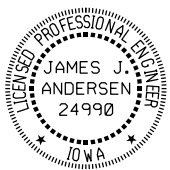
NHSN-018-2(151)--2R-71

R.O.W. PROJECT NUMBER

INDEX OF SHEETS

No.	DESCRIPTION
A Sheets	Title Sheet
A.1	Title Page
C Sheets	Quantities and General Information
C.1-C.2	Estimated Quantities and Reference Notes
C.3-C.4	Tabulations
P Sheets	Lighting Plan
P.1-P.2	Lighting Plan
U Sheets	Lighting Detail Sheets
U.1	One-Line Diagrams

LIGHTING DESIGN



I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Signature
James J. Andersen

5/5/2026

Printed or Typed Name

James J. Andersen

My license renewal date is December 31, 2026

Pages or sheets covered by this seal:

A.1, C.1-4, P.1-2, U.1

FILE NO.

ENGLISH

DESIGN TEAM

IOWA DOT / HDR

O'BRIEN COUNTY

PROJECT NUMBER NHSN-018-2(151)--2R-71

SHEET NUMBER A.1

SYSTEMTIME

SYSTEMDATE

USERNAME

DGNSPEC

ESTIMATED PROJECT QUANTITIES AND REFERENCE NOTES

Lighting Items :

Item no.	Item Code	Item	Unit	Quantities	Estimate Reference Notes
				Estimated	
				Lighting Items	
1	2401-6745356	REMOVAL OF CONCRETE FOOTINGS OF LIGHT POLES	EACH	1	Refer to plan sheets and Tab 110-16 for locations.
2	2401-6745765	REMOVAL OF LIGHT POLES	EACH	1	<p>Includes the removal of 1 pole and base. Refer to plan sheets and Tab 110-16 for locations.</p> <p>All materials removed shall become the property of the Contractor.</p> <p>Bases shall be removed a minimum of 1.0 feet below existing ground.</p> <p>METHOD OF MEASUREMENT: The engineer will count the number of light poles removed.</p> <p>BASIS OF PAYMENT: The contractor shall be paid the contract unit price for each light pole assembly removed.</p>
3	2523-0000100	LIGHTING POLES	EACH	11	Bid to include LED fixtures as listed in 'Roadway Luminaires' description in Tab 108-11A. Bid to include transformer bases and poles with mounting heights and mastarm lengths as shown on the lighting plans.
4	2523-0000200	ELECTRICAL CIRCUITS	LF	1,764	<p>Bid to include 600-volt fuses at 3 amperes for luminaire supply (L-1 connectors) and 5 amperes for tap circuit protection (Y-1 connectors) located in the junction boxes or handholes. Included are (10) type Y-1 connectors, (12) type L-1 connectors, and (10) type L-2 connectors.</p> <p>L-2 connectors in circuits with conductor sizes that do not fit standard connector to be split bolt connectors with waterproof covering. Electrical circuit length is calculated from plan dimensions as the linear, one-way length of both new and existing embedded conduits. No allowance has been added to this quantity. Allowances have been added to all wire and cable quantities listed in Tab 108-12.</p>
5	2523-0000310	HANDHOLES AND JUNCTION BOXES	EACH	5	All handholes to be LI-103, Type II.
6	2523-0000400	CONTROL CABINET	EACH	2	Control Cabinet to be based on LI-151, with photocell, contactor, and as shown on drawings.
7	2526-8285040	CONSTRUCTION SURVEY, LOCATION SURVEY	LS	1	<p>Refer to TC-283 for traffic control layout.</p> <p>Staking in the S Sheets is incidental to Construction Survey. This staking will be defined as verifying slopes of the form work by using a level, or other means, at the quadrants identified in the S Sheets. This serves as an additional check to verify slopes are within tolerances prior to placing concrete. Survey information provided in project plans is for reference only and should not be used for purposes related to construction survey. Project plans and associated electronic files are not geo-referenced to a standard coordinate system and should not be used to establish construction survey baselines.</p> <p>Prior to construction, perform a survey to lay out the proposed grading design per Section 2526.01.</p>
8	2526-9000000	GEOSPATIAL MAPPING OF SUB-SURFACE AND UNDERGROUND UTILITIES	LF	1,764	Refer to DS-23045.
9	2528-8445110	TRAFFIC CONTROL	LS	1	--
10	2533-4980005	MOBILIZATION	LS	1	

Item no.	Item Code	Item	Unit	Quantities	Estimate Reference Notes
				Estimated	
				Lighting Items	
11	2599-9999005	('EACH' ITEM) Meter Pedestal	EACH	1	<p>Supply and install City of Sanborn approved meter pedestal for electrical service. The meter pedestal shall include all circuit breakers as shown in the respective one-line diagram.</p> <p>Method of Measurement: The Engineer will count the number of meter pedestals installed.</p> <p>Basis of Payment: The Contractor shall be paid the contract unit price for meter pedestals installed. This payment shall be considered full compensation for furnishing all labor, equipment, and materials required to properly supply and install meter pedestal, as specified.</p>

232_03B
9/28/22

EROSION CONTROL (URBAN SEEDING)

Area to be seeded is estimated to be less than 1 acre. If the Contractor determines the area exceeds 2 acres, notify the Engineer. Approved quantity in excess of 2 acres will be paid for as extra work according to Article 1109.03,B of the Standard Specifications.

Following the completion of work in a disturbed area and according to the seeding dates in Section 2601 of the Standard Specifications, place seed, fertilizer, and mulch on the disturbed area as follows:

Place seed and fertilize according to the requirements of Article 2601.03,C,4 and Section 4169 of the Standard Specifications.

Place mulch according to the requirements of Articles 2601.03,E,2,a and 4169.07,A of the Standard Specifications.

Preparing the seedbed, furnishing and applying seed, fertilizer, and mulch are incidental to mobilization and will not be paid for separately.

232_11
6/21/23

EROSION CONTROL (STABILIZING CROP SEEDING)

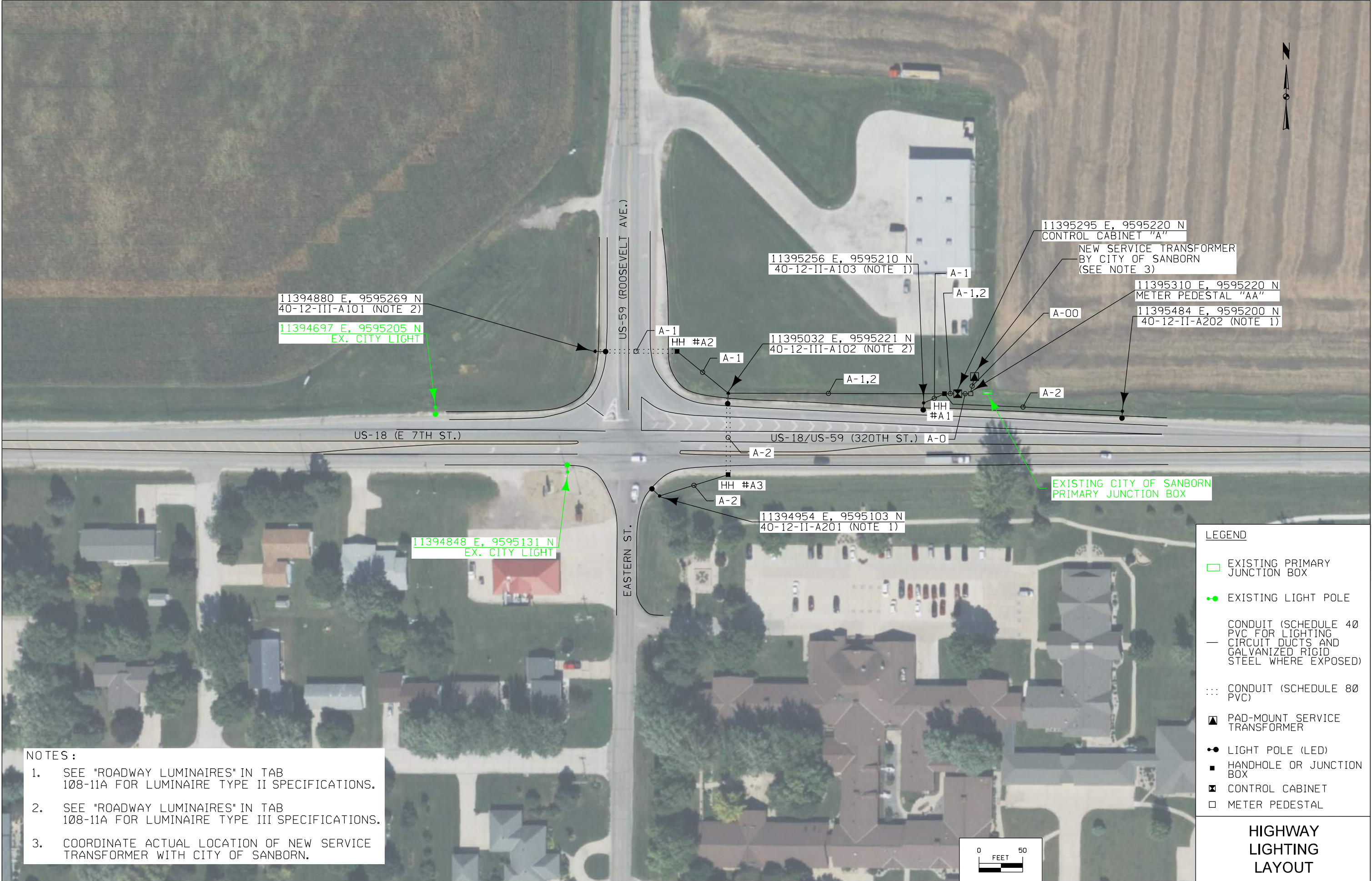
Area to be seeded is estimated to be less than 1 acre. If the contractor determines the area exceeds 2 acres, notify the Engineer. Approved quantity in excess of 2 acres will be paid for as extra work according to Article 1109.03,B of the Standard Specifications.

If outside of permanent seeding dates in Section 2601 of the Standard Specifications, or if required by a storm water permit, place stabilizing crop, fertilizer, and mulch on the disturbed area as follows:

Place seed and fertilize according to the requirements of Article 2601.03,C,1 and Section 4169 of the Standard Specifications.

Place mulch according to the requirements of Articles 2601.03,E,2,a and 4169.07,A of the Standard Specifications.

Preparing the seedbed, furnishing and applying seed, fertilizer, and mulch are incidental to mobilization and will will not be paid for separately.



FILE NO.	ENGLISH	DESIGN TEAM	IOWA DOT / HDR	O'BRIEN COUNTY	PROJECT NUMBER	NHSN-018-2(151)--2R-71	SHEET NUMBER	P.1
SYSTEMTIME	SYSTEMDATE	USERNAME	DGNSPEC					



NOTES :

- SEE "ROADWAY LUMINAIRES" IN TAB 108-11A FOR LUMINAIRE TYPE III SPECIFICATIONS.
- REMOVE EXISTING LIGHT POLE.

NEW SERVICE TRANSFORMER
BY CITY OF SANBORN

A-00
(NOTE 1)

METER PEDESTAL "AA"

M

METER

60A
2P

A-0

CONTROL CABINET "A"

50A
2P

20A
1P

20A
2P

CONTACTOR

CONTACTOR

CONTACTOR

20A
2P

20A
2P

A-1

A-2

SPARE

SPARE

LIGHT POLES A101-A103

LIGHT POLES A201-A202

CABINET A ONE-LINE DIAGRAM

MEC EXISTING
120/240V SERVICE

EXISTING
CABLE

EXISTING METER PEDESTAL

M

METER

60A
2P

B-0

CONTROL CABINET "B"

50A
2P

20A
1P

20A
2P

CONTACTOR

CONTACTOR

CONTACTOR

20A
2P

20A
2P

B-1

B-2

SPARE

SPARE

LIGHT POLES B101-B104

LIGHT POLES B201-B202

CABINET B ONE-LINE DIAGRAM

CIRCUIT SCHEDULE

CKT	CABLE/CONDUIT DESCRIPTION	CONDUCTORS: COPPER (CU) OR ALUMINUM (AL)
A-00	CONDUCTORS BY CITY OF SANBORN, 2" C	CU
A-0	2-#6, 1-#6N, 1-#6G, 2" C	CU
B-0	2-#6, 1-#6N, 1-#6G, 2" C	CU
A-1	2-#8, 1-#8G, 2" C	CU
A-2	2-#8, 1-#8G, 2" C	CU
A-1.2	4-#8, 1-#8G, 2" C	CU
B-1	2-#8, 1-#8G, 2" C	CU
B-2	2-#8, 1-#8G, 2" C	CU

NOTE :

1. ROUTE 2" EMPTY CONDUIT TO NEW CITY OF SANBORN PAD MOUNT TRANSFORMER. DETERMINE ROUTING OF CONDUIT AFTER COORDINATING ACTUAL LOCATION OF TRANSFORMER AND OTHER SERVICE REQUIREMENTS WITH THE CITY OF SANBORN.

CONTROL CABINET
ONE-LINE DIAGRAM