

CONTRACT NO 63041

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

U.S. RT 14 (MINER STREET)
U.S. RT 12/45 (GRACELAND AVENUE & LEE STREET)
SECTION NO: 06-00199-00-LS
LIGHTING IMPROVEMENTS AND STREETScape
CITY OF DES PLAINES
COOK COUNTY
JOB NO. C-91-491-08
PROJECT NO. ARA-00D1(795)

SHEET INDEX

1. COVER SHEET
2. SUMMARY OF QUANTITIES
3. (E1) SITE PLAN
- 4.-7. LIGHTING PLANS
- 8.-11. (E2-E5) LIGHTING WIRING DIAGRAMS
- 12.-16. (E6-E10) ONE LINE DIAGRAMS AND SCHEDULES
17. (E11) ELECTRICAL NOTES AND SCHEDULES
- 18.-19. LIGHTING AND STREETScape DETAILS
- 19A. TC-10 TRAFFIC CONTROL PROTECTION SIDE ROADS, INTERSECTIONS AND DRIVEWAYS
- 19B. TC-14 TRAFFIC CONTROL PROTECTION AT TURNBAYS

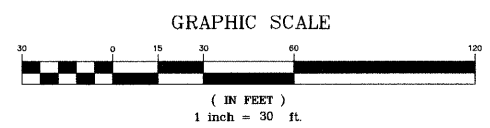
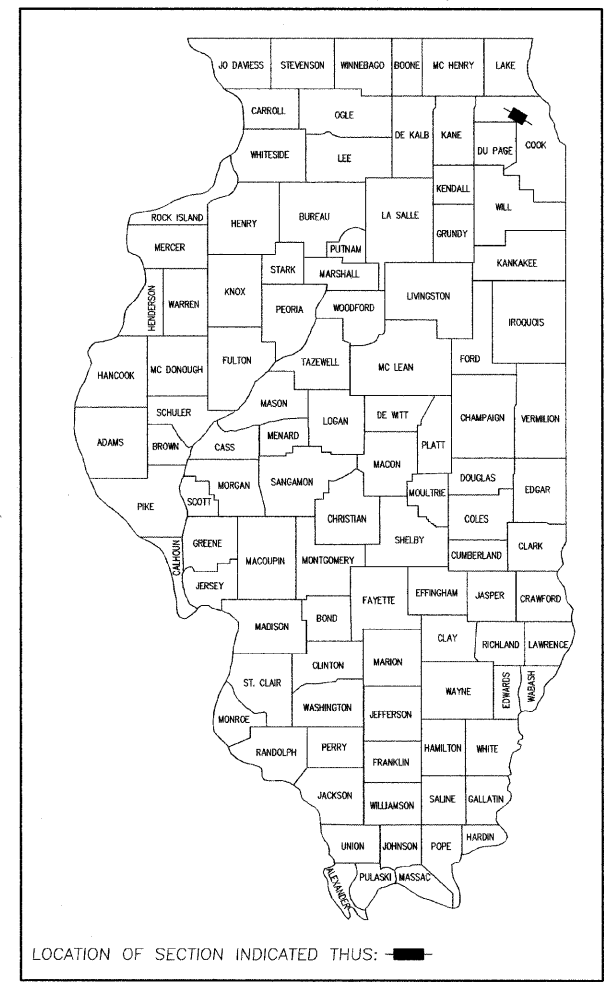
TRAFFIC DATA

US RT 14: 2007 ADT = 18,600
 POSTED SPEED LIMIT = 30 MPH

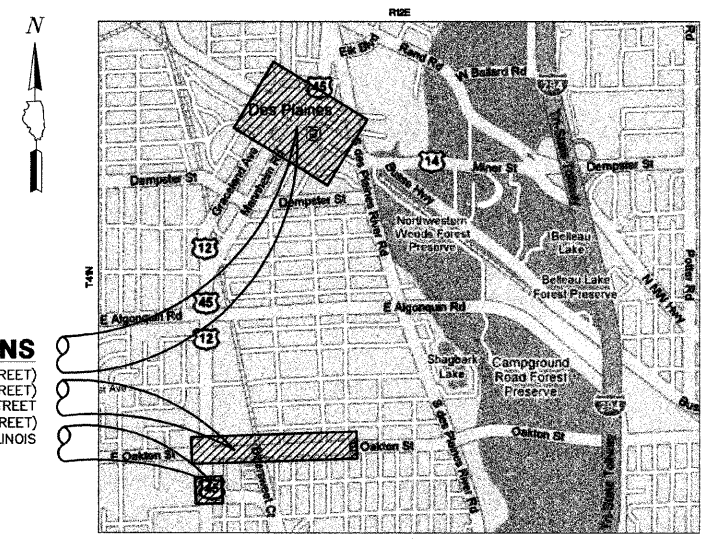
US RT 12/45: 2007 ADT = 21,300
 POSTED SPEED LIMIT = 30 MPH

STATE STANDARDS

000001-05 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
 701101-02 OFF-RD OPERATIONS, MULTILANE LESS THAN 4.5 M (15') AWAY
 701501-05 URBAN LANE CLOSURE, 2L, 2W, UNDIVIDED
 701601-06 URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
 701606-06 URBAN LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
 701701-06 URBAN LANE CLOSURE, MULTILANE INTERSECTION
 701801-04 LANE CLOSURE MULTILANE 1W OR 2W CROSSWALK OR SIDEWALK CLOSURE
 701901-01 TRAFFIC CONTROL DEVICES
 814001-02 HANDHOLES
 878001-07 CONCRETE FOUNDATION DETAILS
 TC-10 - TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS
 TC-14 - TRAFFIC CONTROL AND PROTECTION AT TURNBAYS



LOCATION MAP
(NOT TO SCALE)



PROJECT LOCATIONS

- U.S. RT 14 (MINER STREET)
- U.S. RT 12/45 (GRACELAND AVENUE & LEE STREET)
- OAKTON STREET
- U.S. RT 12/45 (MANNHEIM ROAD & LEE STREET)
- DES PLAINES, ILLINOIS

GROSS & NET LENGTH OF PROJECT = 8,600 FEET = 1.63 MILES

Call 48 hours before you dig
 (including Sat., Sun., & Holidays)
 1-800-892-0123

NOTE:
 CONSTRUCTION MEANS, METHODS AND JOB SITE SAFETY IS THE COMPLETE RESPONSIBILITY OF THE CONTRACTOR.

EXISTING UTILITIES: WHEN THE PLANS OR SPECIAL PROVISIONS INCLUDE INFORMATION PERTAINING TO THE LOCATION OF UNDERGROUND UTILITY FACILITIES, SUCH INFORMATION REPRESENTS ONLY THE OPINION OF THE ENGINEER AS TO THE LOCATION OF SUCH UTILITIES AND IS ONLY INCLUDED FOR THE CONVENIENCE OF THE BIDDER. THE ENGINEER AND OWNER ASSUME NO RESPONSIBILITY WHATSOEVER IN RESPECT TO THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN ON THE PLANS RELATIVE TO THE LOCATION OF UNDERGROUND UTILITY FACILITIES OR THE MANNER IN WHICH THEY ARE TO BE REMOVED OR ADJUSTED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES. HE SHALL ALSO OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES, DETAILED INFORMATION RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULES OF THE UTILITY COMPANIES FOR REMOVING OR ADJUSTING THEM.

CONTRACTOR IS RESPONSIBLE FOR CONTACTING J.U.L.I.E. AT 1-800-892-0123 AND MUST ACQUIRE A DIG NUMBER A MINIMUM OF 72 HOURS PRIOR TO ANY WORK BEING DONE.



Bruce L. Shrade

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

APPROVED: August 20 2009
[Signature]
 CITY OF DES PLAINES, REPRESENTATIVE

APPROVED: SEPTEMBER 1 2009
[Signature]
 DISTRICT 1 ENGINEER OF LOCAL ROADS & STREETS

RELEASING FOR BID
 BASED ON LIMITED
 REVIEW

SEPTEMBER 1, 2009
[Signature]
 DEPUTY DIRECTOR OF HIGHWAYS, REGION 1 ENGINEER

GEWALT HAMILTON
 ASSOCIATES, INC.
 Consulting Engineers & Surveyors
 850 Forest Edge Drive
 Vernon Hills, IL 60061
 847-470-9700
 FAX 847-470-9701

SIGNED: Bruce L. Shrade P.E.
 DATE: August 20 2009
 ILLINOIS LICENSE NO.: 62-39905
 EXPIRATION DATE: 11-30 2009

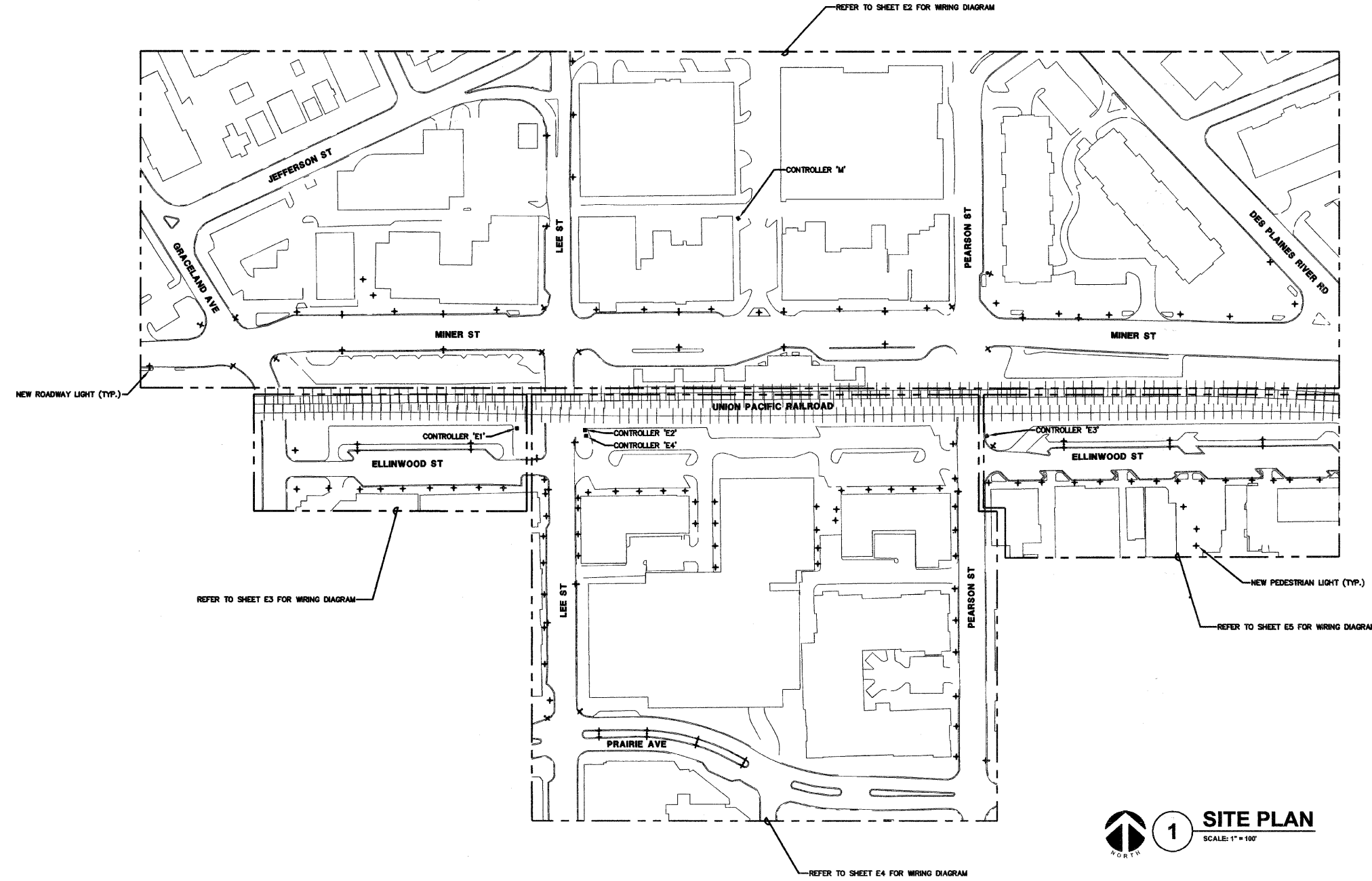
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ASSOCIATE FIELD ENGINEER KEVIN STALLWORTH, P.E. (847-705-4188)

F.A.P. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	06-00199-00-LS	COOK	19	3
E1: SITE PLAN				
ILLINOIS 63041				

GENERAL ELECTRICAL NOTES:

1. REFER TO SHEETS E6 THRU E10 FOR ONE LINE DIAGRAM, ONE LINE DIAGRAM NOTES, CONTROL DIAGRAM, BILL OF MATERIALS, CABINET ELEMENTARY DIAGRAM, AND LIGHTING CONTROL CABINET DETAIL.
2. REFER TO SHEET E11 FOR LUMINAIRE SCHEDULE, LIGHTING NOTES, CONTROLLER ELECTRICAL NOTES.
3. REFER TO SHEET E11 FOR GENERAL INSTALLATION NOTES.



1 SITE PLAN
SCALE: 1" = 100'

CONTRACTOR NOTE: LOCATION AND TYPE OF LANDSCAPING IMPROVEMENTS ARE SPECIFIED IN CONTRACT SPECIFICATIONS.

THERE ARE NO LIGHTING IMPROVEMENTS ON OAKTON STREET.

K J ENGINEERING CONSULTANTS
1771 W. DIEHL ROAD, SUITE 300
NAPERVILLE, IL 60563
630.527.2320 FAX: 630.527.2321
www.kjw.com
PROJECT #07.0610.00

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REFERENCE SCALE IN INCHES
0 1 2 3

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
850 Forest Edge Drive
Vernon Hills, IL 60061
(847) 476-9700
(847) 476-9701 Fax

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
E1: SITE PLAN
DES PLAINES LIGHTING IMPROVEMENTS AND STREETSCAPE DES PLAINES, ILLINOIS

SCALE: 1"=100'
DATE: 8-14-2009

DRAWN BY: JOP
DESIGNED BY: MCK
CHECKED BY: MCK

**POLE PLACEMENT
US RT 14 (MINER ST)**

STATION	CIRCUIT	POLE LABEL	SETBACK*
0+49	C	MC1	2.0'
1+77	D	MD1	2.0'
2+56	C	MC2	8.5'
2+96	A	MA2	4.0'
3+65	B	MB2	4.0'
3+65	D	MD2	2.0'
4+50	A	MA4	4.0'
5+29	B	MB4	4.0'
5+29	C	MC3	2.0'
6+17	A	MA5	4.0'
6+87	D	MD3	3.0'
7+53	C	MC4	4.0'
7+79	A	MA7	4.0'
8+56	B	MB7	4.0'
9+13	A	MA9	4.0'
9+13	D	MD4	2.0'
9+65	B	MB10	4.0'
10+43	A	MA10	5.0'

**POLE PLACEMENT
US RT 12/45 (LEE ST)**

STATION	CIRCUIT	POLE LABEL	SETBACK*
7+48	B	MB5	8.0'
8+77	A	MA6	5.5'
9+57	B	MB8	2.0'
10+22	B	MB6	2.5'
10+59	A	MA8	2.0'
11+43	B	MB9	2.0'

**POLE PLACEMENT
US RT 12/45 (GRACELAND AVE)**









STATION	CIRCUIT	POLE LABEL	SETBACK*
1+20	B	MB1	14.0'
0+96	A	MA1	4.0'

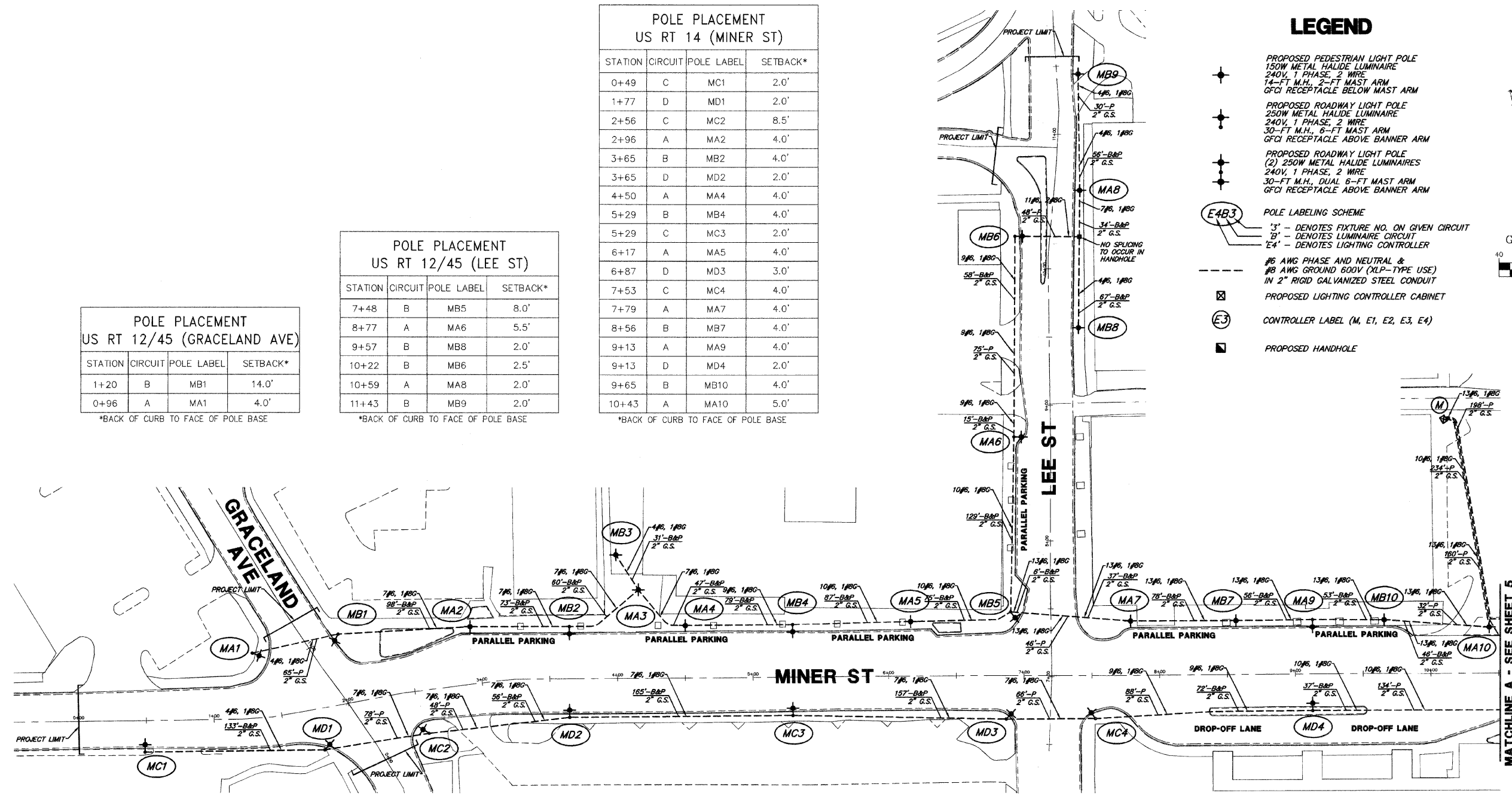
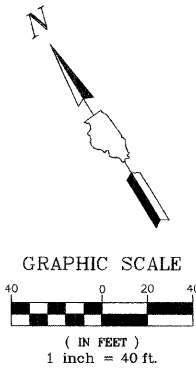
*BACK OF CURB TO FACE OF POLE BASE

*BACK OF CURB TO FACE OF POLE BASE

*BACK OF CURB TO FACE OF POLE BASE

LEGEND

- 
PROPOSED PEDESTRIAN LIGHT POLE
 150W METAL HALIDE LUMINAIRE
 240V, 1 PHASE, 2 WIRE
 14-FT M.H., 2-FT MAST ARM
 GFCI RECEPTACLE BELOW MAST ARM
- 
PROPOSED ROADWAY LIGHT POLE
 250W METAL HALIDE LUMINAIRE
 240V, 1 PHASE, 2 WIRE
 30-FT M.H., 6-FT MAST ARM
 GFCI RECEPTACLE ABOVE BANNER ARM
- 
PROPOSED ROADWAY LIGHT POLE
 (2) 250W METAL HALIDE LUMINAIRES
 240V, 1 PHASE, 2 WIRE
 30-FT M.H., DUAL 6-FT MAST ARM
 GFCI RECEPTACLE ABOVE BANNER ARM
- 
POLE LABELING SCHEME
 '3' - DENOTES FIXTURE NO. ON GIVEN CIRCUIT
 'B' - DENOTES LUMINAIRE CIRCUIT
 'E4' - DENOTES LIGHTING CONTROLLER
- 
 #6 AWG PHASE AND NEUTRAL &
 #8 AWG GROUND 600V (NLP-TYPE USE)
 IN 2" RIGID GALVANIZED STEEL CONDUIT
- 
PROPOSED LIGHTING CONTROLLER CABINET
- 
CONTROLLER LABEL (M, E1, E2, E3, E4)
- 
PROPOSED HANDHOLE



BENCH AND TRASH RECEPTACLE INSTALLATION NOTES:

1. ALL PROPOSED BENCHES AND TRASH RECEPTACLES ARE TO BE INSTALLED AT LOCATIONS DESIGNATED AND MARKED BY THE ENGINEER.
2. PLACEMENT OF EACH BENCH AND TRASH RECEPTACLE IS AS FOLLOWS:
 6 - ALONG MINER STREET BETWEEN PEARSON STREET AND LEE STREET
 4 - ALONG OAKTON STREET BETWEEN WHITE STREET AND U.S RT 12/45 (LEE STREET/MANNHEIM ROAD)

LIGHTING INSTALLATION NOTES:

1. ALL PROPOSED LIGHTING UNITS ARE REPLACEMENTS OF EXISTING UNITS IN THE SAME OR NEARBY LOCATION.
2. FOR ROADWAY LUMINAIRES MOUNTED ON COMBINATION TRAFFIC SIGNAL MAST ARM ASSEMBLIES, REMOVAL ITEMS INCLUDE THE LUMINAIRE, MAST ARM AND WIRING TO POLE BASE. THE PROPOSED REPLACEMENT LIGHTING UNIT SHALL BE INSTALLED AS A SEPARATE POLE ADJACENT TO THE EXISTING TRAFFIC SIGNAL ASSEMBLY.

CONDUIT INSTALLATION NOTES:

1. EXISTING CONDUIT THAT IS IN SUITABLE CONDITION FOR RE-USE, AS APPROVED BY THE ENGINEER, SHALL REMAIN IN PLACE AND BECOME PART OF THE PROPOSED LIGHTING SYSTEM INSTALLATION.
2. EXISTING CONDUIT THAT IS NOT IN SUITABLE CONDITION FOR RE-USE, AS APPROVED BY THE ENGINEER, SHALL BE ABANDONED IN PLACE, AND NEW CONDUIT SHALL BE INSTALLED AS SHOWN ON THE PLANS.

PLANS PREPARED BY:
GEWALT HAMILTON
 ASSOCIATES, INC.
 Consulting Engineers & Surveyors
 550 Forest Ridge Drive
 Vernon Hills, IL 60061
 (847) 478-9700
 (847) 478-9701 Fax

REVISIONS	
NAME	DATE

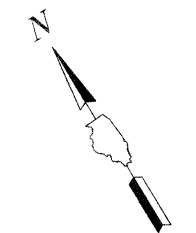
ILLINOIS DEPARTMENT OF TRANSPORTATION
LIGHTING PLAN (1 OF 4)

**DES PLAINES LIGHTING IMPROVEMENTS
 AND STREETScape
 DES PLAINES, ILLINOIS**

DRAWN BY: DRS
 DESIGNED BY: AJP
 CHECKED BY: BLS

SCALE: 1"=40'
 DATE: 8-14-2009

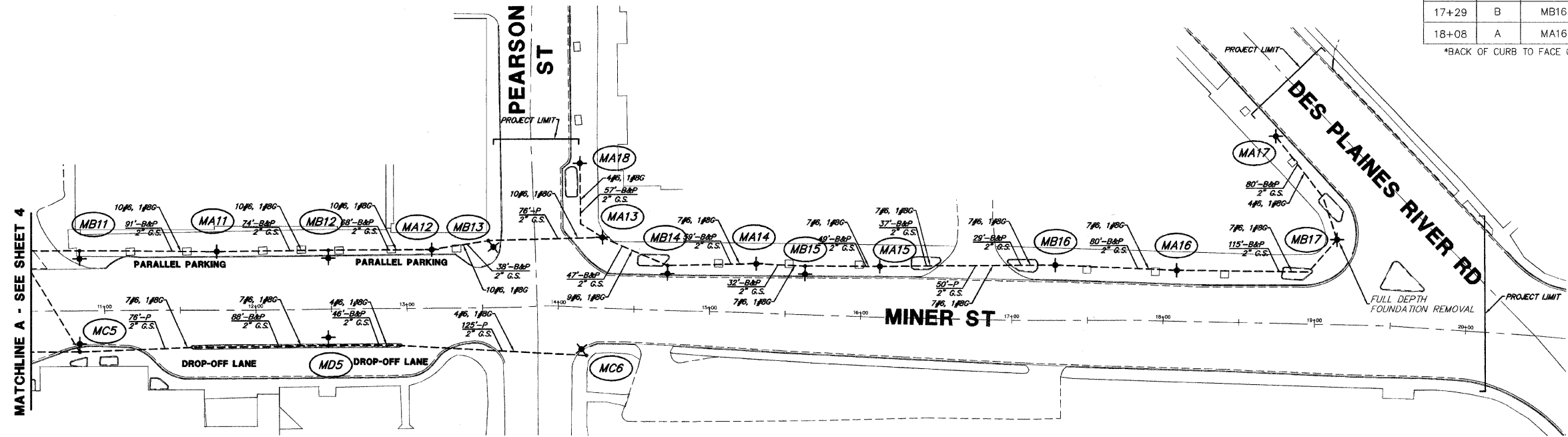
LEGEND



- PROPOSED PEDESTRIAN LIGHT POLE
150W METAL HALIDE LUMINAIRE
240V, 1 PHASE, 2 WIRE
14'-FT M.H., 2'-FT MAST ARM
GFCI RECEPTACLE BELOW MAST ARM
- PROPOSED ROADWAY LIGHT POLE
250W METAL HALIDE LUMINAIRE
240V, 1 PHASE, 2 WIRE
30'-FT M.H., 6'-FT MAST ARM
GFCI RECEPTACLE ABOVE BANNER ARM
- PROPOSED ROADWAY LIGHT POLE
(2) 250W METAL HALIDE LUMINAIRES
240V, 1 PHASE, 2 WIRE
30'-FT M.H., DUAL 6'-FT MAST ARM
GFCI RECEPTACLE ABOVE BANNER ARM
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'3' - DENOTES FIXTURE NO. ON GIVEN CIRCUIT
'B' - DENOTES LUMINAIRE CIRCUIT
'E4' - DENOTES LIGHTING CONTROLLER
- #6 AWG PHASE AND NEUTRAL &
#8 AWG GROUND 600V (XLP-TYPE USE)
IN 2" RIGID GALVANIZED STEEL CONDUIT
- PROPOSED LIGHTING CONTROLLER CABINET
- CONTROLLER LABEL (M, E1, E2, E3, E4)

STATION	CIRCUIT	POLE LABEL	SETBACK*
10+84	B	MB11	9.5'
10+84	C	MC5	2.0'
11+74	A	MA11	3.0'
12+48	B	MB12	3.0'
12+48	D	MD5	0.5'
13+17	A	MA12	3.0'
13+55	B	MB13	15.0'
14+20	C	MC6	4.0'
14+28	A	MA13	20.0'
14+72	B	MB14	6.0'
15+30	A	MA14	6.0'
15+62	B	MB15	6.0'
16+12	A	MA15	6.0'
17+29	B	MB16	6.0'
18+08	A	MA16	6.0'

*BACK OF CURB TO FACE OF POLE BASE



BENCH AND TRASH RECEPTACLE INSTALLATION NOTES:

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- PLACEMENT OF EACH BENCH AND TRASH RECEPTACLE IS AS FOLLOWS:
6 - ALONG MINER STREET BETWEEN PEARSON STREET AND LEE STREET
4 - ALONG OAKTON STREET BETWEEN WHITE STREET AND U.S RT 12/45 (LEE STREET/MANNHEIM ROAD)

LIGHTING INSTALLATION NOTES:

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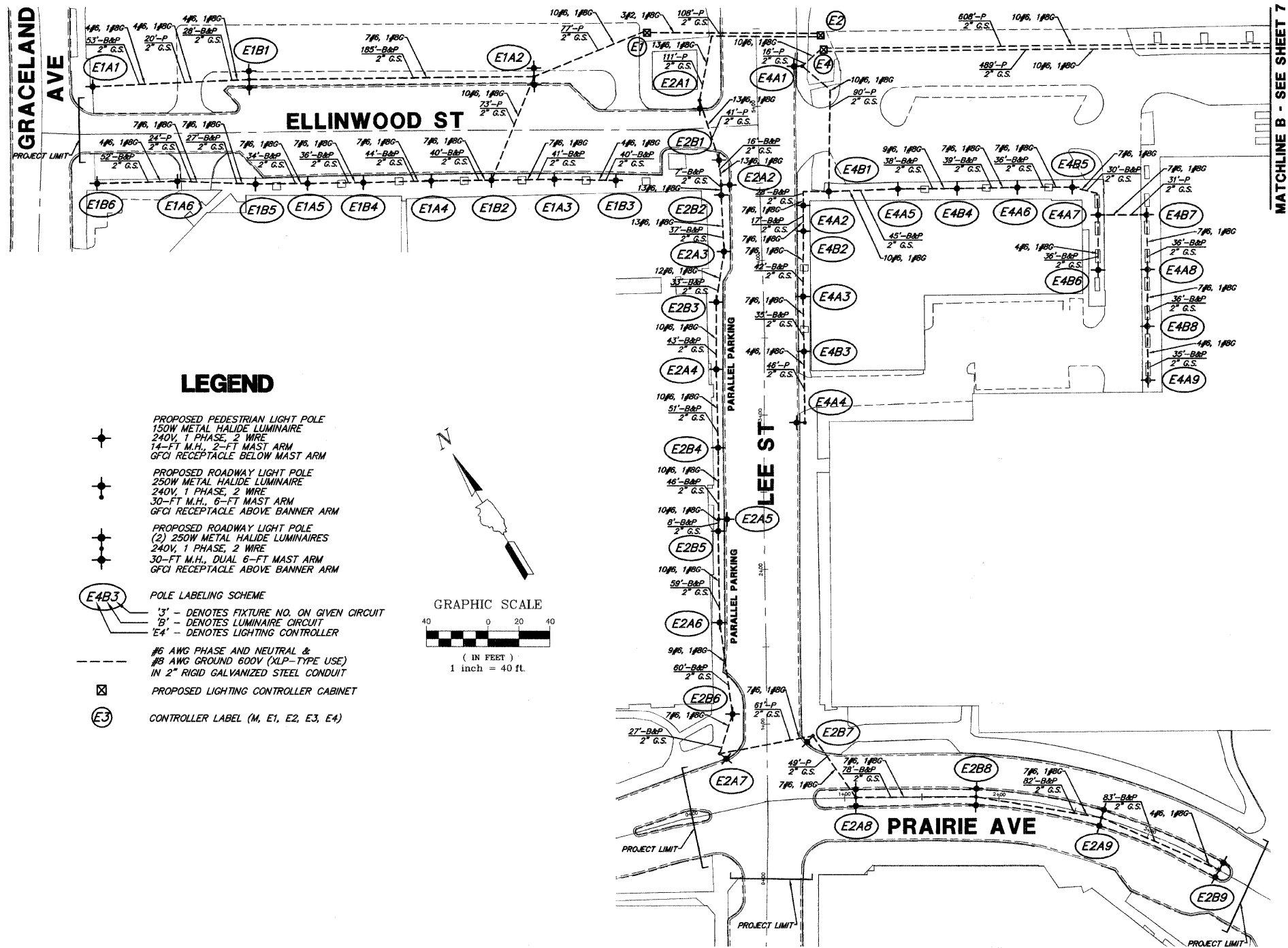
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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
LIGHTING PLAN (2 OF 4)
DES PLAINES LIGHTING IMPROVEMENTS
AND STREETSCAPE
DES PLAINES, ILLINOIS
SCALE: 1"=40'
DATE: 8-14-2009
DRAWN BY: DRS
DESIGNED BY: AJP
CHECKED BY: BLS

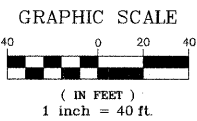


POLE PLACEMENT US RT 12/45 (LEE ST)			
STATION	CIRCUIT	POLE LABEL	SETBACK*
0+81	A	E2A7	8.5'
0+92	B	E2B7	6.0'
1+07	B	E2B6	6.0'
1+66	A	E2A6	2.0'
2+25	B	E2B5	2.0'
2+33	A	E2A5	2.0'
2+79	B	E2B4	2.0'
2+95	A	E4A4	2.0'
3+30	A	E2A4	2.0'
3+41	B	E4B3	2.0'
3+74	B	E2B3	2.0'
3+76	A	E4A3	2.0'
4+07	A	E2A3	4.0'
4+18	B	E4B2	2.0'
4+35	A	E4A2	2.0'
4+43	B	E2B2	4.0'
4+50	A	E2A2	4.0'
4+66	B	E2B1	4.0'
5+05	A	E2A1	11.0'
5+26	A	E4A1	2.0'

*BACK OF CURB TO FACE OF POLE BASE

LEGEND

- PROPOSED PEDESTRIAN LIGHT POLE
 150W METAL HALIDE LUMINAIRE
 240V, 1 PHASE, 2 WIRE
 14'-FT M.H., 2'-FT MAST ARM
 GFCI RECEPTACLE BELOW MAST ARM
- PROPOSED ROADWAY LIGHT POLE
 250W METAL HALIDE LUMINAIRE
 240V, 1 PHASE, 2 WIRE
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CONDUIT INSTALLATION NOTES:

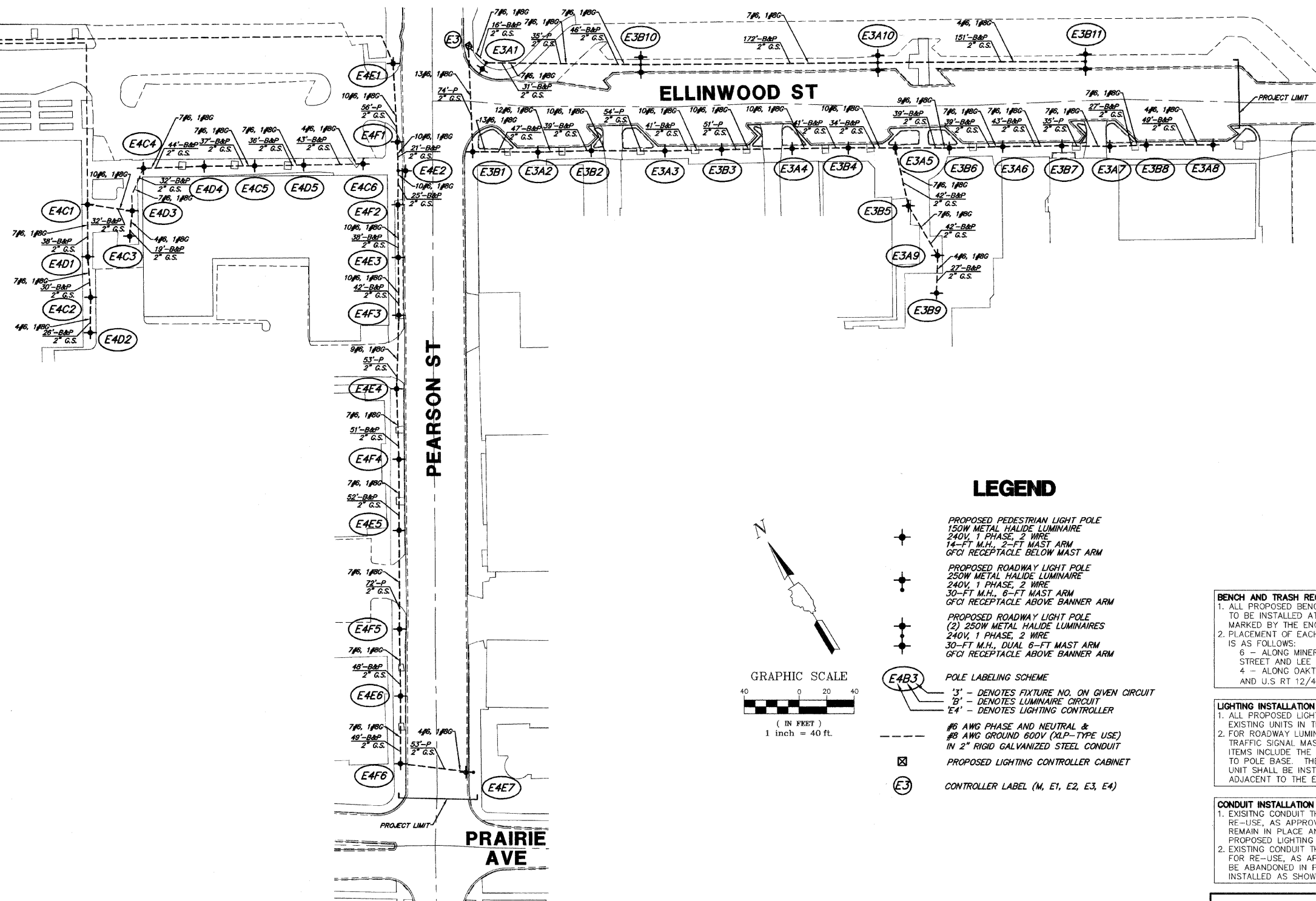
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

REVISIONS	
NAME	DATE

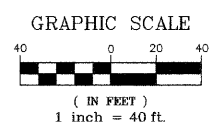
ILLINOIS DEPARTMENT OF TRANSPORTATION
LIGHTING PLAN (3 OF 4)
 DES PLAINES LIGHTING IMPROVEMENTS
 AND STREETSCAPE
 DES PLAINES, ILLINOIS
 SCALE: 1"=40'
 DATE: 8-14-2009
 DRAWN BY: DRS
 DESIGNED BY: AJP
 CHECKED BY: BLS

MATCHLINE B - SEE SHEET 6



LEGEND

- 
 PROPOSED PEDESTRIAN LIGHT POLE
 150W METAL HALIDE LUMINAIRE
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- FOR ROADWAY LUMINAIRES MOUNTED ON COMBINATION TRAFFIC SIGNAL MAST ARM ASSEMBLIES, REMOVAL ITEMS INCLUDE THE LUMINAIRE, MAST ARM AND WIRING TO POLE BASE. THE PROPOSED REPLACEMENT LIGHTING UNIT SHALL BE INSTALLED AS A SEPARATE POLE ADJACENT TO THE EXISTING TRAFFIC SIGNAL ASSEMBLY.

CONDUIT INSTALLATION NOTES:

- EXISTING CONDUIT THAT IS IN SUITABLE CONDITION FOR RE-USE, AS APPROVED BY THE ENGINEER, SHALL REMAIN IN PLACE AND BECOME PART OF THE PROPOSED LIGHTING SYSTEM INSTALLATION.
- EXISTING CONDUIT THAT IS NOT IN SUITABLE CONDITION FOR RE-USE, AS APPROVED BY THE ENGINEER, SHALL BE ABANDONED IN PLACE, AND NEW CONDUIT SHALL BE INSTALLED AS SHOWN ON THE PLANS.

PLANS PREPARED BY:
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 ASSOCIATES, INC.
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 650 Forest Ridge Drive
 Vernon Hills, IL 60069
 (847) 478-9700
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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
LIGHTING PLAN (4 OF 4)

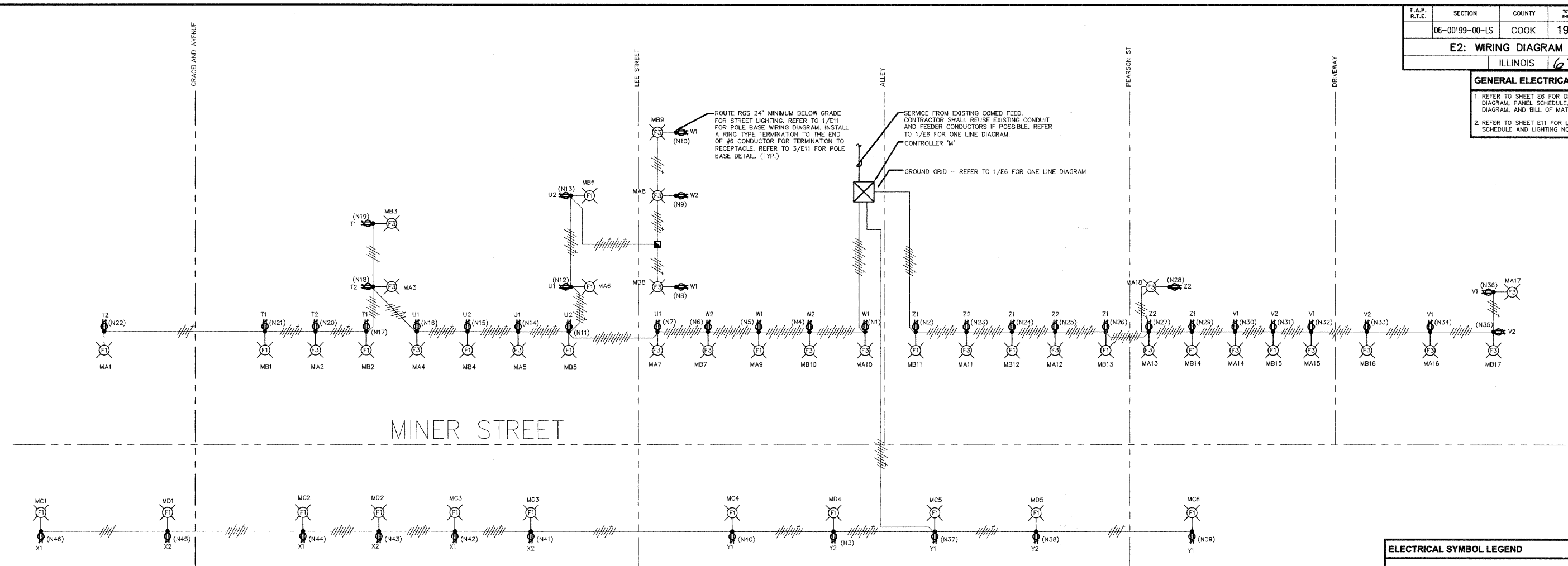
**DES PLAINES LIGHTING IMPROVEMENTS
 AND STREETSCAPE
 DES PLAINES, ILLINOIS**

SCALE: 1"=40'
 DATE: 8-14-2009

DRAWN BY: DRS
 DESIGNED BY: AJP
 CHECKED BY: BLS

GENERAL ELECTRICAL NOTES

- REFER TO SHEET E6 FOR ONE LINE DIAGRAM, PANEL SCHEDULE, CONTROL DIAGRAM, AND BILL OF MATERIALS.
- REFER TO SHEET E11 FOR LUMINAIRE SCHEDULE AND LIGHTING NOTES.



1 WIRING DIAGRAM - CONTROLLER 'M'
NO SCALE

LOAD TABULATION AND VOLTAGE DROP FOR LIGHTING CONTROLLER "M"

CIRCUIT	VOLT AMPS	AMPS	HIGHEST VOLTAGE DROP ON CIRCUIT
A LTG	4180	17.4	2.5% (MA1)
B LTG	4570	19.0	2.7% (MB1)
C LTG	1860	7.8	2.2% (MC1)
D LTG	1550	6.5	1.9% (MD1)
W1 RECEPTS	800	6.7	3.1% (MB9)
W2 RECEPTS	600	5.0	2.0% (MA8)
X1 RECEPTS	600	5.0	4.3% (MC1)
X2 RECEPTS	600	5.0	3.8% (MD1)
Y1 RECEPTS	600	5.0	2.6% (MC6)
Y2 RECEPTS	400	3.3	1.6% (MD5)
Z1 RECEPTS	800	6.7	2.3% (MB14)
Z2 RECEPTS	800	6.7	2.6% (MA18)
V1 RECEPTS	800	6.7	4.7% (MA17)
V2 RECEPTS	600	5.0	3.6% (MB17)
T1 RECEPTS	600	5.0	3.6% (MB1)
T2 RECEPTS	600	5.0	3.9% (MA1)
U1 RECEPTS	800	6.7	3.2% (MA4)
U2 RECEPTS	600	5.0	2.9% (MB6)

ELECTRICAL SYMBOL LEGEND

- REFER TO LUMINAIRE SCHEDULE ON SHEET E11 FOR FIXTURE TYPE
- POLE MOUNTED LUMINAIRE
- #6 AWG PHASE AND NEUTRAL & #8 GROUND 600V. (XLP-TYPE USE) IN 2" RIGID GALVANIZED STEEL CONDUIT
- GROUND
- NEUTRAL
- PHASE
- E2A3 CIRCUITING DESIGNATION SCHEME
- 3 - DENOTES FIXTURE NO. ON GIVEN CIRCUIT
A - DENOTES CIRCUIT LABEL
E2 - DENOTES LIGHTING CONTROLLER
- (N1) CALCULATION NODE FOR VOLTAGE DROP
- REFER TO 2/E6 AND 2/E10 FOR LIGHTING CONTROL CABINET DETAILS.
- DUPLEX RECEPTACLE, WEATHERPROOF, REFER TO SHEET E11 FOR MATERIAL LIST. INSTALL ABOVE TOP BANNER ARM.
- 2 - DENOTES 120 VOLT PHASE
W - DENOTES 240 VOLT CIRCUIT AND NEUTRAL

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www.kjw.com PROJECT #07.0610.00

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REFERENCE SCALE IN INCHES
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ILLINOIS DEPARTMENT OF TRANSPORTATION
E2: WIRING DIAGRAM 'M'

DES PLAINES LIGHTING IMPROVEMENTS AND STREETSCAPE
DES PLAINES, ILLINOIS

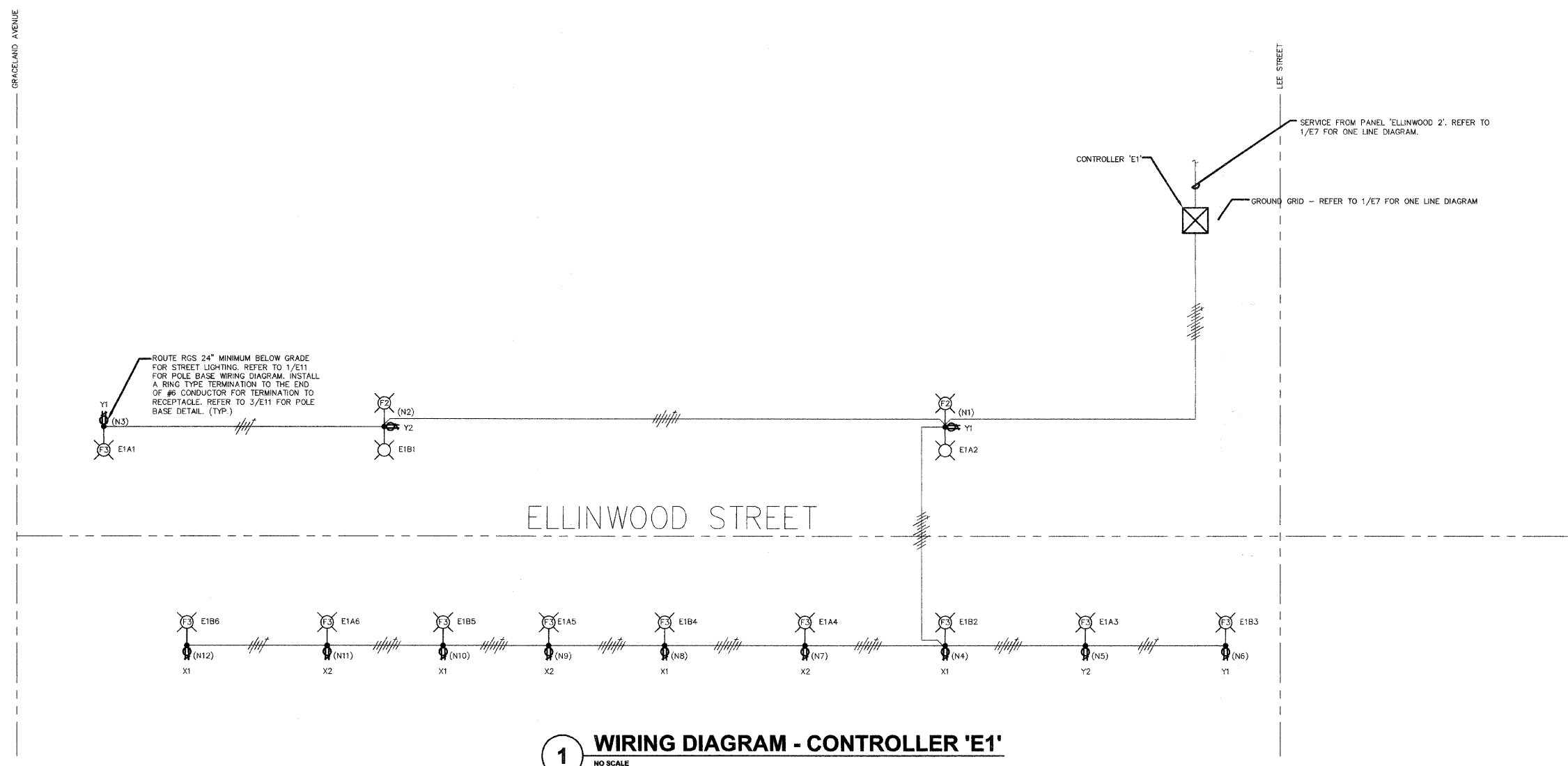
SCALE: NTS
DATE: 8-14-2009

DRAWN BY: JOP
DESIGNED BY: MCK
CHECKED BY: MCK

F.A.P. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	06-00199-00-LS	COOK	19	9
E3: WIRING DIAGRAM 'E1'				
ILLINOIS 63041				

GENERAL ELECTRICAL NOTES

- REFER TO SHEET E7 FOR ONE LINE DIAGRAM, PANEL SCHEDULE, CONTROL DIAGRAM, AND BILL OF MATERIALS.
- REFER TO SHEET E11 FOR LUMINAIRE SCHEDULE AND LIGHTING NOTES.



1 WIRING DIAGRAM - CONTROLLER 'E1'
NO SCALE

ELECTRICAL SYMBOL LEGEND

- REFER TO LUMINAIRE SCHEDULE ON SHEET E11 FOR FIXTURE TYPE
- POLE MOUNTED LUMINAIRE
- #6 AWG PHASE AND NEUTRAL & #8 GROUND 600V. (XLP-TYPE USE) IN 2" RIGID GALVANIZED STEEL CONDUIT
- GROUND
- NEUTRAL
- PHASE
- CIRCUITING DESIGNATION SCHEME
- 3 - DENOTES FIXTURE NO. ON GIVEN CIRCUIT
- A - DENOTES CIRCUIT LABEL
- E2 - DENOTES LIGHTING CONTROLLER
- (N1) CALCULATION NODE FOR VOLTAGE DROP
- REFER TO 2/E8 AND 2/E10 FOR LIGHTING CONTROL CABINET DETAILS.
- DUPLEX RECEPTACLE, WEATHERPROOF. REFER TO SHEET E11 FOR MATERIAL LIST. INSTALL ABOVE TOP BANNER ARM.
- 2- DENOTES 120 VOLT PHASE
- W- DENOTES 240 VOLT CIRCUIT AND NEUTRAL

LOAD TABULATION AND VOLTAGE DROP FOR LIGHTING CONTROLLER "E1"

CIRCUIT	VOLT AMPS	AMPS	HIGHEST VOLTAGE DROP ON CIRCUIT
A LTG	1670	7.0	0.5% (E1A6)
B LTG	1670	7.0	0.6% (E1B6)
X1 RECEPES	800	6.7	1.7% (E1B6)
X2 RECEPES	600	5.0	1.3% (E1A6)
Y1 RECEPES	600	6.0	0.7% (E1A1)
Y2 RECEPES	400	3.3	0.6% (E1B1)

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NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
E3: WIRING DIAGRAM 'E1'

DES PLAINES LIGHTING IMPROVEMENTS AND STREETScape DES PLAINES, ILLINOIS

SCALE: NTS
DATE: 8-14-2009

DRAWN BY: JOP
DESIGNED BY: MCK
CHECKED BY: MCK

F.A.P. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	06-00199-00-LS	COOK	19	10
E4: WIRING DIAGRAM 'E2' & 'E4'				
ILLINOIS 63041				

GENERAL ELECTRICAL NOTES

- REFER TO SHEETS E4 AND E10 FOR ONE LINE DIAGRAMS, PANEL SCHEDULES, CONTROL DIAGRAMS, AND BILL OF MATERIALS.
- REFER TO SHEET E11 FOR LUMINAIRE SCHEDULE AND LIGHTING NOTES.

LOAD TABULATION AND VOLTAGE DROP FOR LIGHTING CONTROLLER "E4"

CIRCUIT	VOLT AMPS	AMPS	HIGHEST VOLTAGE DROP ON CIRCUIT
A LTG	2090	8.7	0.7% (E4A9)
B LTG	1680	7.0	0.7% (E4B8)
C LTG	1260	5.3	1.3% (E4C6)
D LTG	1050	4.4	1.0% (E4D5)
E LTG	1670	7.0	2.5% (E4E7)
F LTG	1260	5.3	1.9% (E4F6)
U1 RECEP	1000	8.3	1.0% (E4A4)
U2 RECEP	800	6.7	0.9% (E4B3)
V1 RECEP	800	6.7	1.9% (E4A9)
V2 RECEP	800	6.7	1.9% (E4B8)
W1 RECEP	600	5.0	2.2% (E4D3)
W2 RECEP	600	5.0	2.2% (E4D2)
X1 RECEP	600	5.0	2.6% (E4C6)
X2 RECEP	400	3.3	1.7% (E4D5)
Y1 RECEP	800	6.7	4.0% (E4E4)
Y2 RECEP	600	5.0	3.0% (E4F3)
Z1 RECEP	600	5.0	4.2% (E4F6)
Z2 RECEP	600	5.0	4.4% (E4E7)

ELECTRICAL SYMBOL LEGEND

- REFER TO LUMINAIRE SCHEDULE ON SHEET E11 FOR FIXTURE TYPE
- POLE MOUNTED LUMINAIRE
- #6 AWG PHASE AND NEUTRAL & #8 GROUND 600V. (XLP-TYPE USE) IN 2" RIGID GALVANIZED STEEL CONDUIT
- GROUND
- NEUTRAL
- PHASE
- CIRCUITING DESIGNATION SCHEME
3 - DENOTES FIXTURE NO. ON GIVEN CIRCUIT
A - DENOTES CIRCUIT LABEL
E2 - DENOTES LIGHTING CONTROLLER
- (N1) CALCULATION NODE FOR VOLTAGE DROP
- REFER TO 2/E8 AND 2/E10 FOR LIGHTING CONTROL CABINET DETAILS.
- DUPLEX RECEPTACLE, WEATHERPROOF, REFER TO SHEET E11 FOR MATERIAL LIST. INSTALL ABOVE TOP BANNER ARM.
- 2- DENOTES 120 VOLT PHASE
W- DENOTES 240 VOLT CIRCUIT AND NEUTRAL

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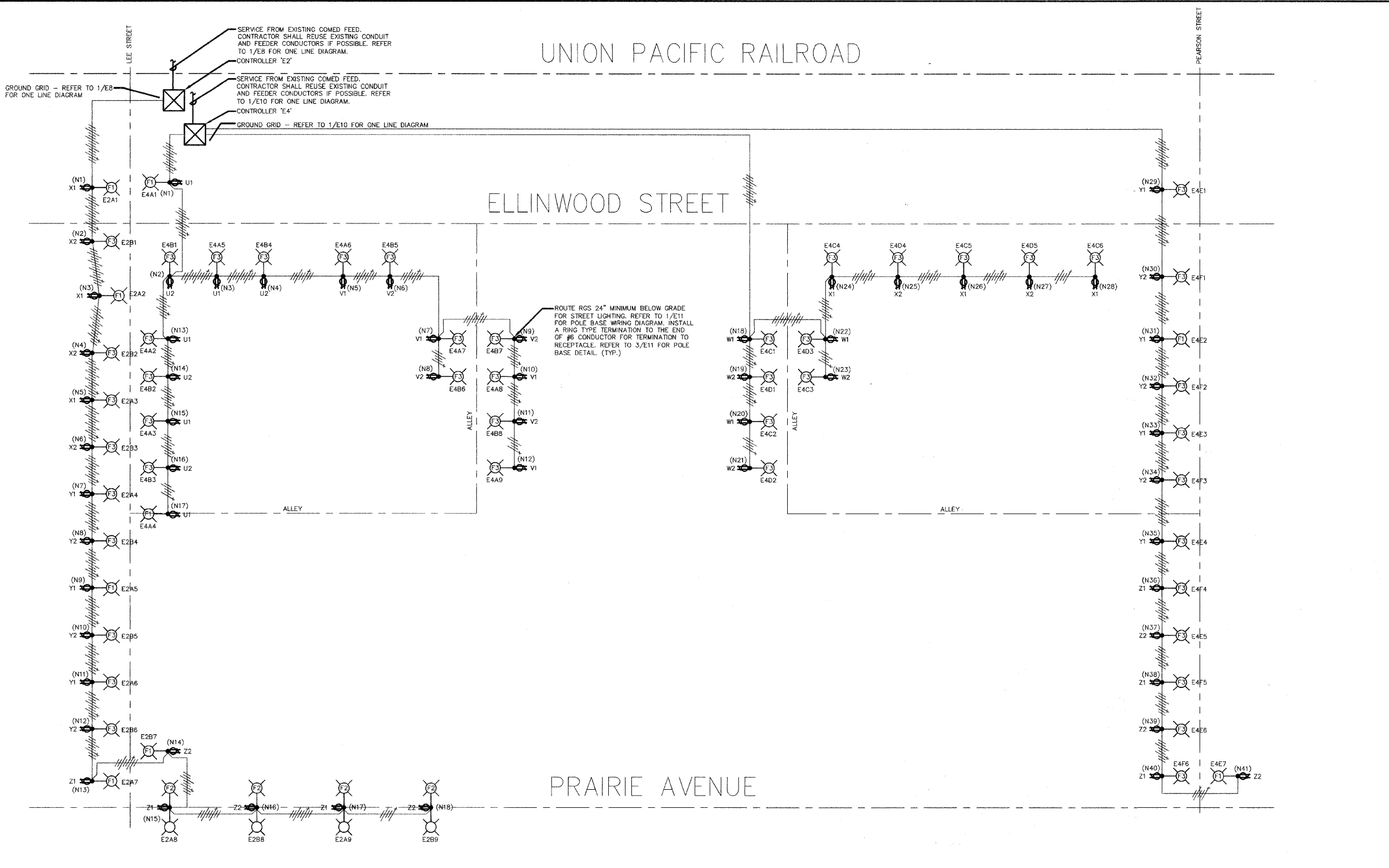
REFERENCE SCALE IN INCHES
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ILLINOIS DEPARTMENT OF TRANSPORTATION
E4: WIRING DIAGRAM 'E2' & 'E4'

DES PLAINES LIGHTING IMPROVEMENTS AND STREETScape DES PLAINES, ILLINOIS

SCALE: NTS
 DATE: 8-14-2009

DRAWN BY: JOP
 DESIGNED BY: MCK
 CHECKED BY: MCK



UNION PACIFIC RAILROAD

ELLINWOOD STREET

PRAIRIE AVENUE

LOAD TABULATION AND VOLTAGE DROP FOR LIGHTING CONTROLLER "E2"

CIRCUIT	VOLT AMPS	AMPS	HIGHEST VOLTAGE DROP ON CIRCUIT
A LTG	3110	13.0	2.6% (E2A9)
B LTG	2810	11.7	2.8% (E2B9)
X1 RECEP	600	5.0	0.7% (E2A3)
X2 RECEP	600	5.0	0.9% (E2B3)
Y1 RECEP	600	5.0	1.4% (E2A6)
Y2 RECEP	600	5.0	1.6% (E2B6)
Z1 RECEP	600	5.0	2.8% (E2A9)
Z2 RECEP	600	5.0	3.1% (E2B9)

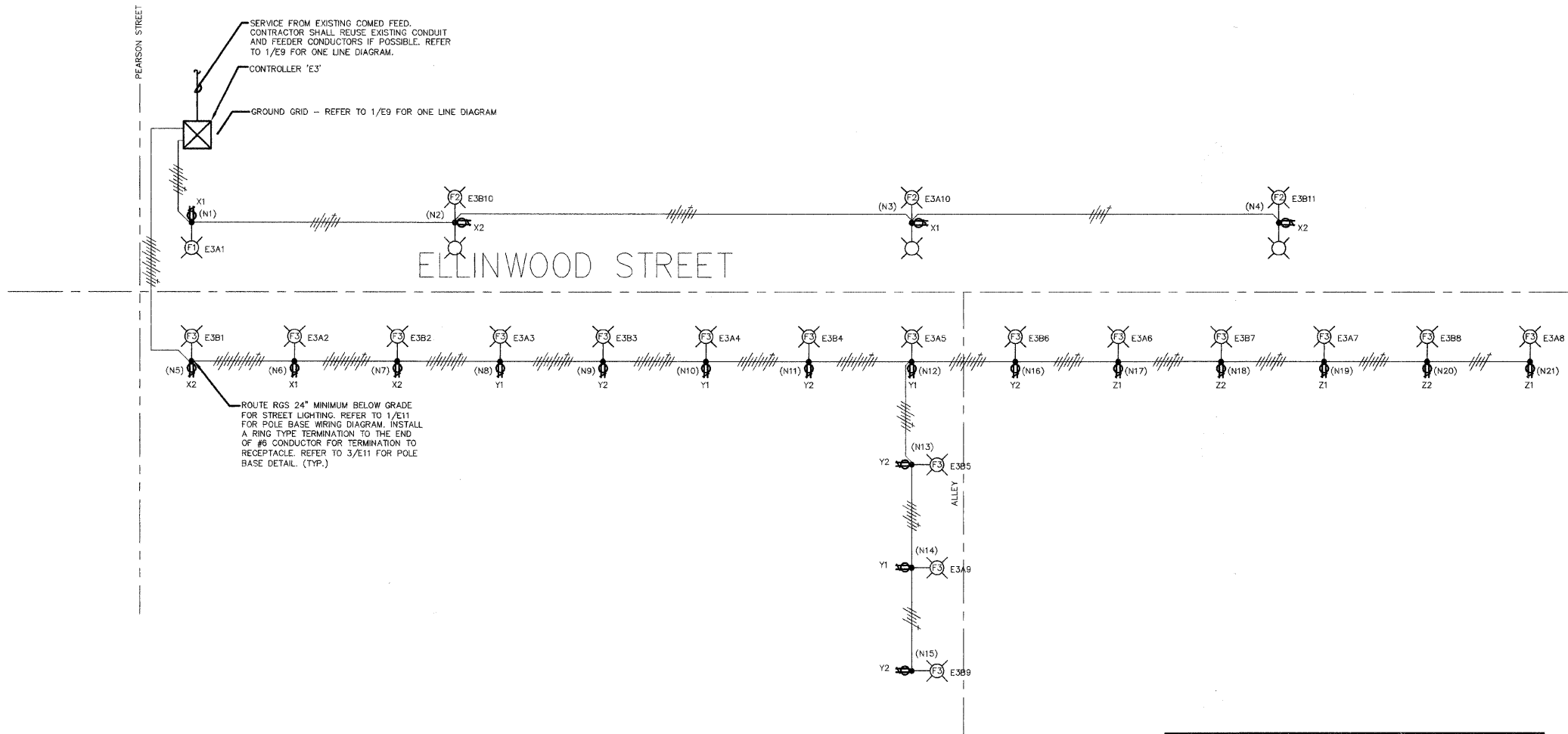
1 WIRING DIAGRAM - CONTROLLERS 'E2' AND 'E4'
 NO SCALE

PLANS PREPARED BY:
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 Vernon Hills, IL 60061
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 (847) 478-9701 Fax

REVISIONS	
NAME	DATE

GENERAL ELECTRICAL NOTES

- REFER TO SHEET E9 FOR ONE LINE DIAGRAM, PANEL SCHEDULE, CONTROL DIAGRAM, AND BILL OF MATERIALS.
- REFER TO SHEET E11 FOR LUMINAIRE SCHEDULE AND LIGHTING NOTES.



SERVICE FROM EXISTING COMED FEED.
CONTRACTOR SHALL REUSE EXISTING CONDUIT
AND FEEDER CONDUCTORS IF POSSIBLE. REFER
TO 1/E9 FOR ONE LINE DIAGRAM.

CONTROLLER 'E3'

GROUND GRID -- REFER TO 1/E9 FOR ONE LINE DIAGRAM

ROUTE RGS 24" MINIMUM BELOW GRADE
FOR STREET LIGHTING. REFER TO 1/E11
FOR POLE BASE WIRING DIAGRAM. INSTALL
A RING TYPE TERMINATION TO THE END
OF #6 CONDUCTOR FOR TERMINATION TO
RECEPTACLE. REFER TO 3/E11 FOR POLE
BASE DETAIL. (TYP.)

1 WIRING DIAGRAM - CONTROLLER 'E3'
NO SCALE

**LOAD TABULATION AND VOLTAGE DROP
FOR LIGHTING CONTROLLER "E3"**

CIRCUIT	VOLT AMPS	AMPS	VOLTAGE DROP AT WORST POLE
A LTG	2600	10.8	1.1% (E3A8)
B LTG	3130	13.0	1.1% (E3B8)
X1 RECEPES	600	5.0	0.4% (E3A10)
X2 RECEPES	800	6.7	1.1% (E3B11)
Y1 RECEPES	800	6.7	2.1% (E3A9)
Y2 RECEPES	1000	8.3	2.6% (E3B5)
Z1 RECEPES	600	6.7	2.2% (E3A8)
Z2 RECEPES	400	5.0	1.5% (E3B8)

ELECTRICAL SYMBOL LEGEND

- REFER TO LUMINAIRE SCHEDULE ON SHEET E11 FOR FIXTURE TYPE
- POLE MOUNTED LUMINAIRE
- #6 AWG PHASE AND NEUTRAL & #8 GROUND 600V. (XLP-TYPE USE) IN 2" RIGID GALVANIZED STEEL CONDUIT
- GROUND
- NEUTRAL
- PHASE
- CIRCUITING DESIGNATION SCHEME
3 - DENOTES FIXTURE NO. ON GIVEN CIRCUIT
A - DENOTES CIRCUIT LABEL
E2 - DENOTES LIGHTING CONTROLLER
- (N1) CALCULATION NODE FOR VOLTAGE DROP
- REFER TO 2/E8 AND 2/E10 FOR LIGHTING CONTROL CABINET DETAILS.
- DUPLEX RECEPTACLE, WEATHERPROOF, REFER TO SHEET E11 FOR MATERIAL LIST. INSTALL ABOVE TOP BANNER ARM.
- 2- DENOTES 120 VOLT PHASE
W- DENOTES 240 VOLT CIRCUIT AND NEUTRAL

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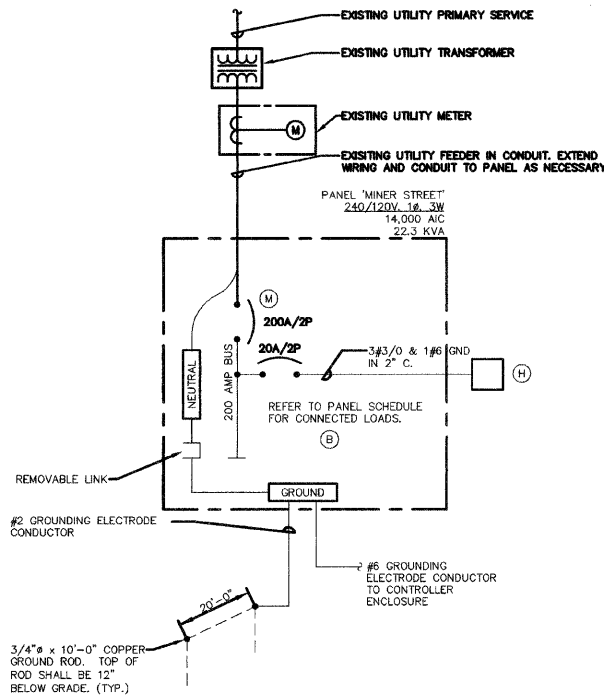
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
E5: WIRING DIAGRAM 'E3'

**DES PLAINES LIGHTING IMPROVEMENTS
AND STREETSCAPE
DES PLAINES, ILLINOIS**

SCALE: NTS
DATE: 8-14-2009

DRAWN BY: JOP
DESIGNED BY: MCK
CHECKED BY: MCK



1 ONE LINE DIAGRAM MINER STREET
NO SCALE

PANEL NAME: MINER STREET CONNECTED 22.3 KVA

TYPE: BOLT-ON
MOUNTING: SURFACE - INTERIOR ONLY
FED FROM: UTILITY
AIC RATING: 14,000

SOLID NEUTRAL GROUND BUS

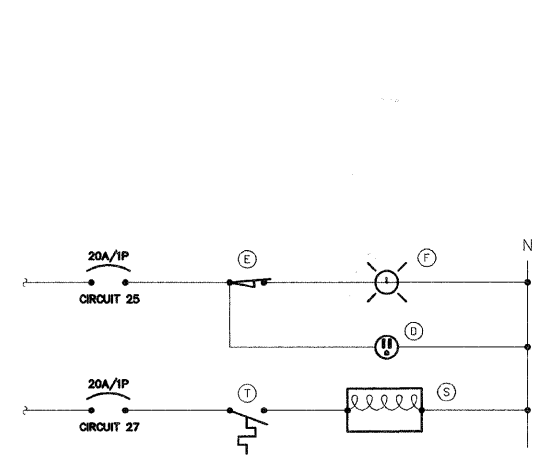
MAIN: 200A MCB
VOLTS: 240/120
PHASE: 1
WIRE: 3

CKT NO.	LOAD DESCRIPTION	WIRE SIZE	LOAD KVA	BREAKER AMP	BREAKER P	LOAD KVA	WIRE SIZE	LOAD DESCRIPTION	CKT NO.	
1	A 3F1, 15F3	*S	4.1	30	2	20	1	0.6 *S X1 3 RECEPT.	2	
3						20	1	0.6 *S X2 3 RECEPT.	4	
5	B 10F1, 7F3	*S	4.6	30	2	20	1	0.6 *S Y1 3 RECEPT.	6	
7						20	1	0.4 *S Y2 2 RECEPT.	8	
9	C 6F1	*S	1.9	30	2	20	1	0.8 *S Z1 4 RECEPT.	10	
11						20	1	0.8 *S Z2 4 RECEPT.	12	
13	D 5F1	*S	1.6	30	2	20	1	0.8 *S V1 4 RECEPT.	14	
15						20	1	0.6 *S V2 3 RECEPT.	16	
17	SURGE ARRESTOR	*O	0.1	30	2	20	1	0.8 *S W1 4 RECEPT.	18	
19						20	1	0.6 *S W2 3 RECEPT.	20	
21	SPARE					20	1	0.8 *S U1 4 RECEPT.	22	
23	SPARE					20	1	0.6 *S U2 3 RECEPT.	24	
25	LGT. RECEPT. IN CABINET		12	0.3	20	1	20	1	0.6 *S T1 3 RECEPT.	26
27	CABINET HEATER		12	0.4	20	1	20	1	0.6 *S T2 3 RECEPT.	28
29	LGT CONTROL		12	0.1	20	1	20	1	0.6 *S	30

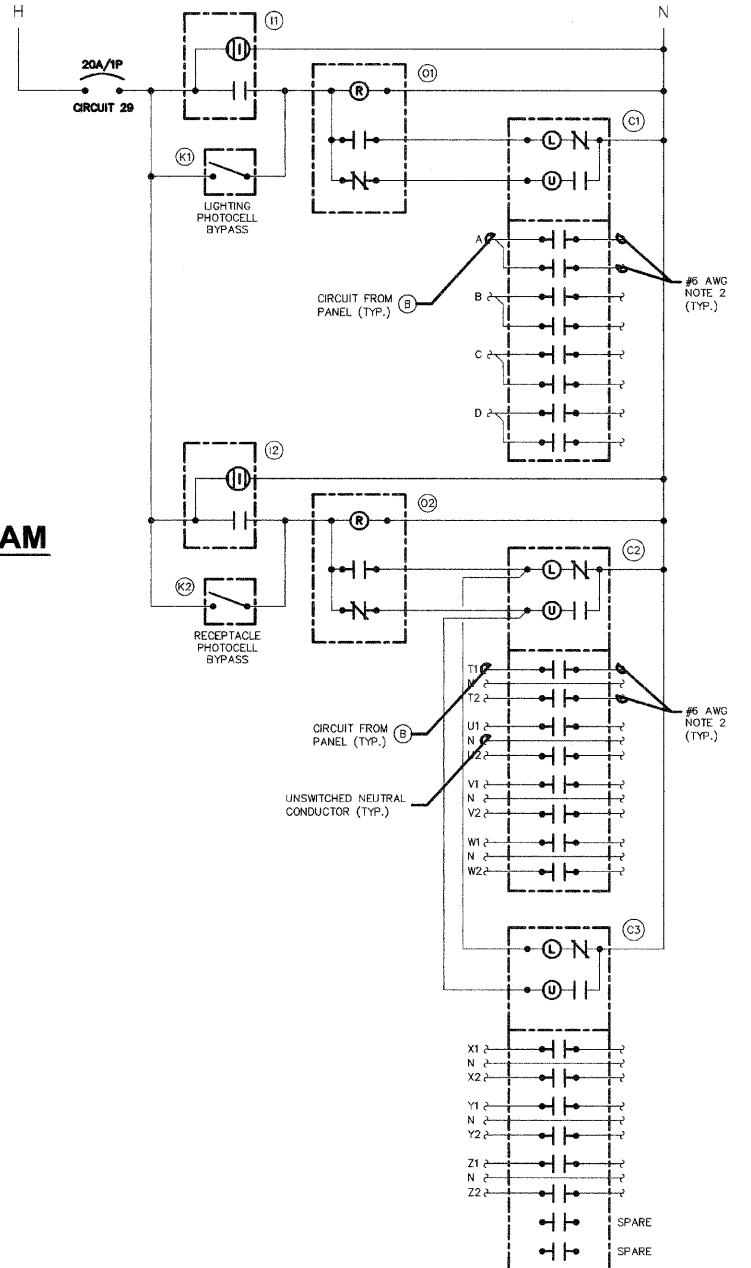
NOTES: *S = REFER TO SHEET E3 FOR WIRE SIZE. *O = REFER TO ONE LINE DIAGRAM ON SHEET E6 FOR WIRE SIZE.

ONE-LINE DIAGRAM NOTES

- AIC RATINGS LISTED FOR EQUIPMENT ARE MINIMUM REQUIREMENTS FOR BUS BRACING AND DEVICE RATING. ALL EQUIPMENT SHALL BE FULLY RATED UNLESS SPECIFICALLY NOTED AS SERIES RATED.
- ALL FUSES FROM 0 AMPERE TO 200 AMPERE SHALL BE DUAL ELEMENT, CLASS RK-5 UNLESS NOTED OTHERWISE.
- INDICATES DIRECT CONNECTION OF GROUND CONDUCTOR TO GROUND BUS.



3 CABINET ELEMENTARY DIAGRAM
NO SCALE

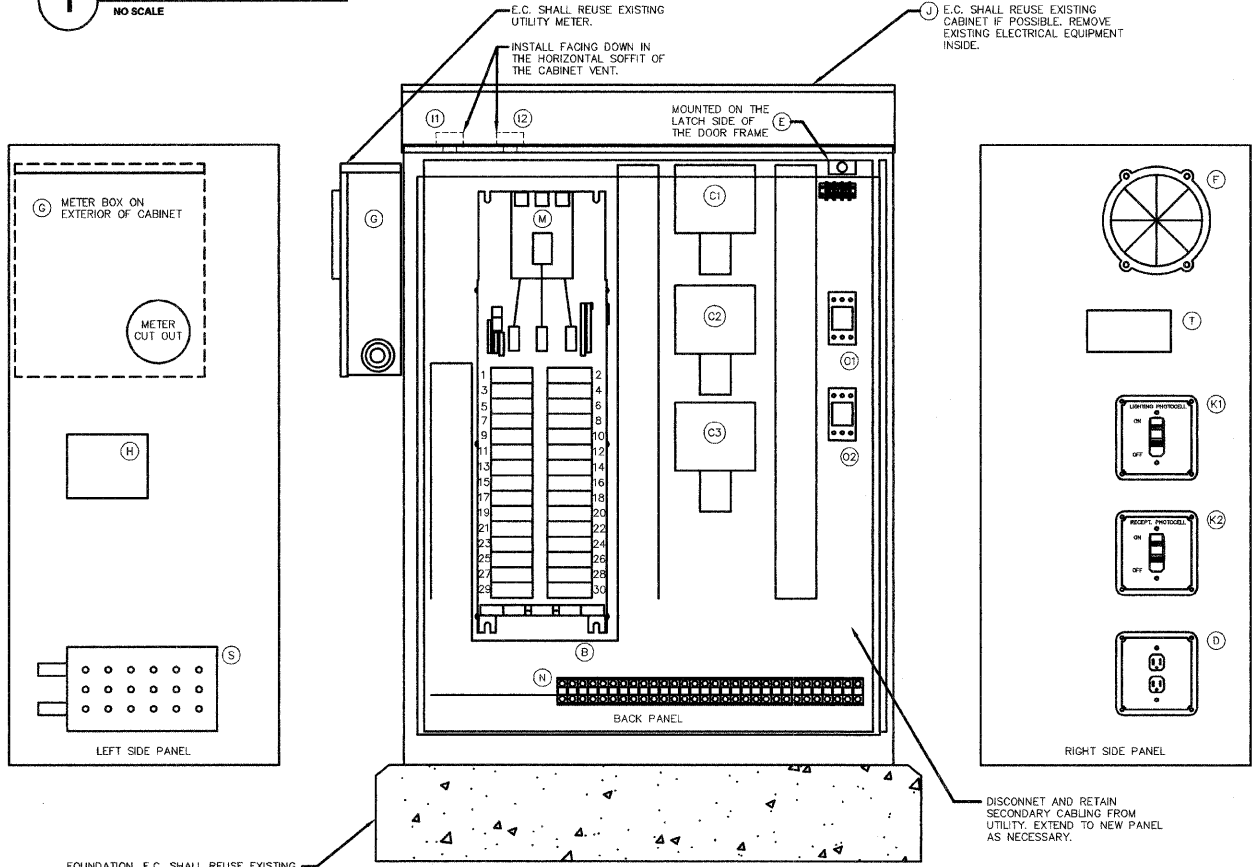


4 LIGHTING CONTROL ELEMENTARY DIAGRAM
NO SCALE

NOTES:
1. ALL CABINET INTERIOR WIRING SHALL BE STRANDED COPPER #12 AWG THWN UNLESS NOTED OTHERWISE.
2. ROUTE TO STREET LIGHTING LUMINAIRES VIA TERMINAL BLOCK. (N)

BILL OF MATERIALS FOR LIGHTING CONTROLLER "M"

ITEM #	QUANTITY	DESCRIPTION
B	1	BRANCH CIRCUIT PANEL INTERIOR, 200A COPPER BUS, 240/120 VOLT, MOLDED CASE THERMAL MAGNETIC CIRCUIT BREAKERS, BOLT ON TYPE, AIC RATING OF 14,000 AMPS AT 240 VOLTS, SQUARE D 1650-4000, G.E. ADO, SIEMENS P1, OR OUTLER HAMMER P1R1.
C1, C2, C3	3	MEDICAL CONTACTOR, 8 POLE, 30 AMP, 120V COIL, SQUARE D 8903-1640V02, G.E. OR 365FM2, OUTLER HAMMER C30B. PROVIDE WITH TWO-WIRE CONTROL FOR PHOTOCELL INTERFACE.
D	1	GFI RECEPTACLE 120V, 20A, SPECIFICATION, GRADE, NEMA 5-20R IN WEATHER-PROOF BOX WITH FLAP-TYPE COVER, HUBBELL EF5362A WITH NP26 COVER, LEXTON, PASS & SEYMOUR, OR COPPER.
E	1	20A SPDT MICRO SWITCH (MOUNT WITH ACTUATOR TO SWITCH WHEN DOOR OPENED), 120 VOLT, 15 AMP CONTACTS, SQUARE D XCKL110, G.E., OUTLER HAMMER, OR SIEMENS.
F	1	60 WATT LIGHT FIXTURE, VAPOR TIGHT WITH GLOBE AND GUARD AND MOUNTING BOX. LAMP PROVIDED WITH FIXTURE.
G	1	METER FITTING, 1 PHASE, 3 WIRE, 100 AMP
H	1	SURGE ARRESTOR, BRACKET MOUNTED, 120/240 VOLT SERVICE, SQUARE D SQS1175, G.E., OUTLER HAMMER.
I1, I2	2	PHOTOCELL, 120V, 1500 VA RATED, SINGLE POLE, SINGLE THROW CONTACT, WEATHERPROOF AND CORROSION PROOF ENCLOSURE. ILL. LISTED, TORK 3000, PARAGON, OR INTERMATIC.
J	1	E.C. SHALL REUSE EXISTING CABINET IF POSSIBLE. ENCLOSURE PAD MOUNTED, STAINLESS STEEL, N.E.M.A. 4 CONSTRUCTION WITH KEY LOCKING DOOR. KEY CYLINDER SHALL MATCH EXISTING VILLAGE LIGHTING CONTROLLER LOCKS. HOFFMAN, OR APPROVED EQUAL, 30"W, 48"H, 18"D
K1, K2	2	TOGGLE SWITCH, SPDT, 20 AMP, 240 VOLT, SPECIFICATION GRADE MOUNTED IN SURFACE BOX. HUBBELL HBL1221, LEVITON 1221-2, PASS & SEYMOUR PS20AC1, OR COOPER 2221.
M	1	MAIN CIRCUIT BREAKER, MOLDED CASE THERMAL MAGNETIC, SERVICE ENTRANCE DUTY RATED 240 VOLT, 200 AMP, 2 POLE, AIC RATING OF 14,000 AMPS AT 240 VOLTS. INTEGRAL TO BRANCH PANEL.
N	1	COPPER LOAD TERMINAL BLOCK FOR AWG#8 AND AWG#12
O1, O2	2	FORM TYPE C RELAY, ELECTRICALLY HELD, ONE NORMALLY OPEN (N.O.) AND ONE NORMALLY CLOSED (N.C.) CONTACTS, 600V CONTINUOUS DUTY COIL, 30 AMP CONTACT RATING, SQUARE D CLASS 8501, G.E., OR OUTLER HAMMER.
T	1	THERMOSTAT, 40-80 DEGREE RANGE, CHROMALOX WR60, TRANE, MODNE, OR REZTOR.
S	1	HEATER, 120 VOLT, 375 WATT, 40-80 DEGREE THERMOSTAT, CHROMALOX 276-10, TRANE, MODNE, OR REZTOR.



2 LIGHTING CONTROL CABINET
NO SCALE
ILL LISTED
IDOT APPROVED

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630.527.2320 FAX: 630.527.2321
www.kje.com PROJECT #07.0610.00

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REFERENCE SCALE IN INCHES
0 1 2 3

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
850 Forest Ridge Drive
Verona Hills, IL 60061
(847) 478-9700
(847) 478-9701 Fax

REVISIONS

NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
E6: ONE LINE DIAGRAM & SCHEDULES

DES PLAINES LIGHTING IMPROVEMENTS AND STREETSCAPE
DES PLAINES, ILLINOIS

SCALE: NTS
DATE: 8-14-2009

DRAWN BY: JOP
DESIGNED BY: MCK
CHECKED BY: MCK

PANEL NAME: ELLINWOOD 1 CONNECTED 6.7 KVA

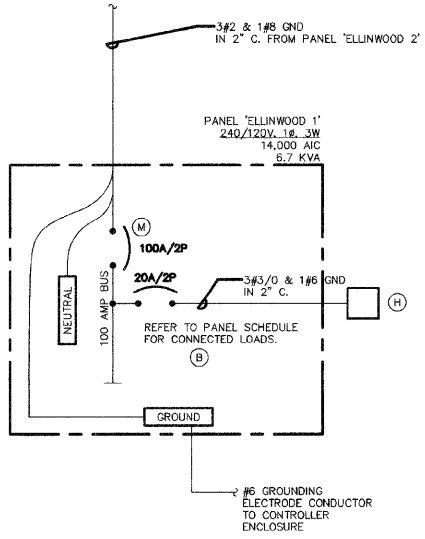
TYPE: BOLT-ON
MOUNTING: SURFACE - INTERIOR ONLY
FED FROM: PANEL 'ELLINWOOD 2'
AIC RATING: 14,000

SOLID NEUTRAL
GROUND BUS

MAIN: 100A MCB
VOLTS: 240/120
PHASE: 1
WIRE: 3

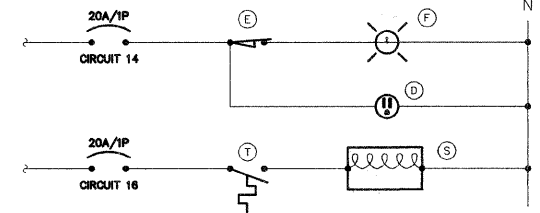
CKT NO.	LOAD DESCRIPTION	WIRE SIZE	LOAD KVA	BREAKER AMP	BREAKER P	LOAD KVA	WIRE SIZE	LOAD DESCRIPTION	CKT NO.	
1	A 1F2, 5F3	"S	1.7	20	2	20	1 0.8	"S X1 4 RECEPT.	2	
3						20	1 0.6	"S X2 3 RECEPT.	4	
5	B 1F2, 5F3	"S	1.7	20	2	20	1 0.6	"S Y1 3 RECEPT.	6	
7						20	1 0.4	"S Y2 2 RECEPT.	8	
9	SURGE ARRESTOR	"O	0.1	20	2	20	1	SPARE	10	
11						20	1	SPARE	12	
13	SPARE					20	2 20	1 0.3	12 LGT. RECEPT. IN CABINET	14
15						20	1 0.4	12 CABINET HEATER	16	
17	SPACE					20	1 0.1	12 LGT CONTROL	18	

NOTES: "S" = REFER TO SHEET E3 FOR WIRE SIZE. "O" = REFER TO ONE LINE DIAGRAM ON SHEET E7 FOR WIRE SIZE.

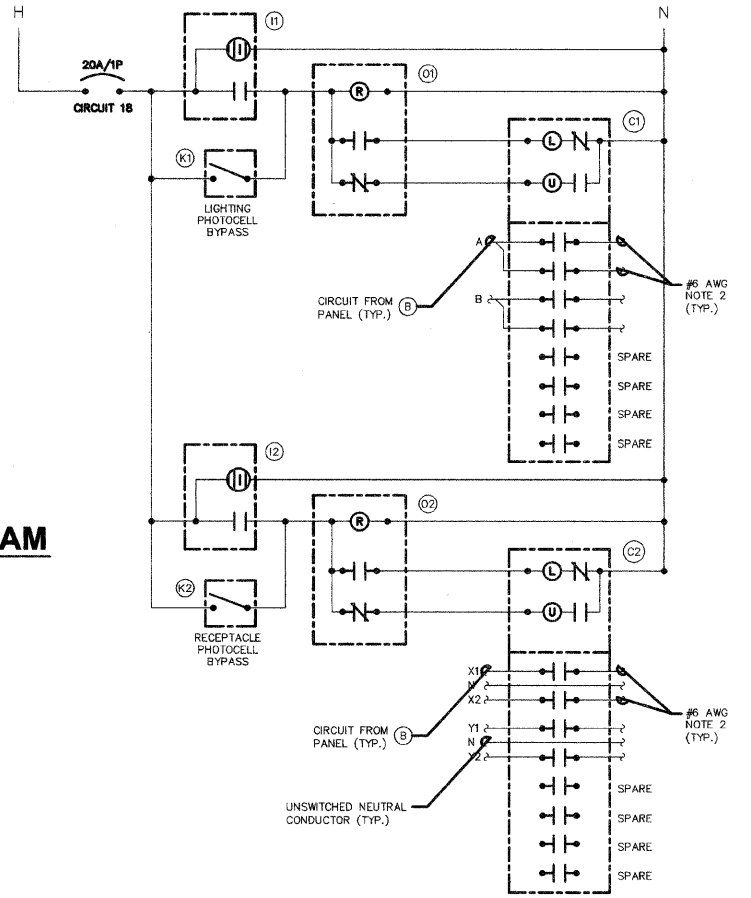


1 ONE LINE DIAGRAM ELLINWOOD 1
NO SCALE

- ONE-LINE DIAGRAM NOTES**
- AIC RATINGS LISTED FOR EQUIPMENT ARE MINIMUM REQUIREMENTS FOR BUS BRACING AND DEVICE RATING. ALL EQUIPMENT SHALL BE FULLY RATED UNLESS SPECIFICALLY NOTED AS SERIES RATED.
 - ALL FUSES FROM 0 AMPERE TO 200 AMPERE SHALL BE DUAL ELEMENT, CLASS RK-5 UNLESS NOTED OTHERWISE.
 - INDICATES DIRECT CONNECTION OF GROUND CONDUCTOR TO GROUND BUS.



3 CABINET ELEMENTARY DIAGRAM
NO SCALE

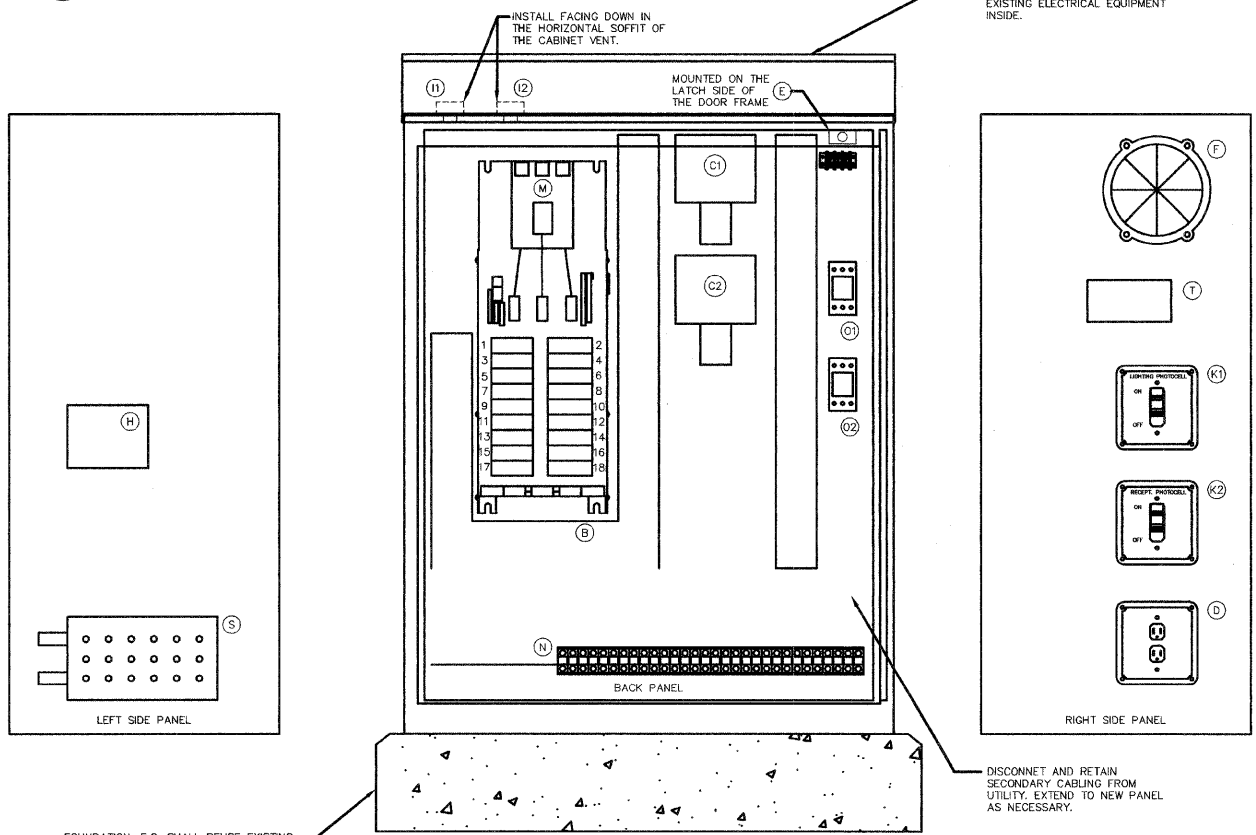


4 LIGHTING CONTROL ELEMENTARY DIAGRAM
NO SCALE

NOTES:
1. ALL CABINET INTERIOR WIRING SHALL BE STRANDED COPPER #12 AWG THWN UNLESS NOTED OTHERWISE.
2. ROUTE TO STREET LIGHTING LUMINAIRES VIA TERMINAL BLOCK.

BILL OF MATERIALS FOR LIGHTING CONTROLLER "E1"

ITEM #	QUANTITY	DESCRIPTION
B	1	BRANCH CIRCUIT PANEL INTERIOR, 100A COPPER BUS, 240/120 VOLT, MOLDED CASE THERMAL MAGNETIC CIRCUIT BREAKERS, BOLT ON TYPE, AIC RATING OF 14,000 AMPS AT 240 VOLTS, SQUARE D 1630-NQDD, G.E. A0, SIEMENS P1, OR CUTLER HAMMER, PRL1.
C1 C2	2	MECHANICAL CONTACTOR, 8 POLE, 30 AMP, 120V COIL, SQUARE D 6903-LQ40V02, G.E. CP360M2, CUTLER HAMMER C308C, PROVIDE WITH TWO-WIRE CONTROL FOR PHOTOCCELL INTERFACE.
D	1	GFI RECEPTACLE 120V, 20A, SPECIFICATION GRADE, NEMA 5-20R IN WEATHER-PROOF BOX WITH FLAP-TYPE COVER, HUBBELL GF5362A WITH WP26 COVER, LEVITON, PASS & SEYMOUR, OR COPPER.
E	1	20A SPDT MICRO SWITCH (MOUNT WITH ACTUATOR TO SWITCH WHEN DOOR OPENED), 120 VOLT, 15 AMP CONTACTS, SQUARE D XCK1110, G.E., CUTLER HAMMER, OR SIEMENS.
F	1	60 WATT LIGHT FIXTURE, VAPOR TIGHT WITH GLOBE AND GUARD AND MOUNTING BOX. LAMP PROVIDED WITH FIXTURE.
H	1	SURGE ARRESTOR, BRACKET MOUNTED, 120/240 VOLT SERVICE, SQUARE D S0SA1175, G.E., CUTLER HAMMER.
I1 I2	2	PHOTOCCELL, 120V, 1500 VA RATED, SINGLE POLE, SINGLE THROW CONTACT, WEATHERPROOF AND CORROSION PROOF ENCLOSURE, U.L. LISTED, TORK 3000, PARAGON, OR INTERMATIC.
J	1	E.C. SHALL REUSE EXISTING CABINET IF POSSIBLE. ENCLOSURE PAD MOUNTED, STAINLESS STEEL, N.E.M.A. 4 CONSTRUCTION WITH KEY LOCKING DOOR. KEY CYLINDER SHALL MATCH EXISTING VILLAGE LIGHTING CONTROLLER LOCKS. HOFFMAN, OR APPROVED EQUAL, 30"W, 48"H, 18"D
K1 K2	2	TOGGLE SWITCH, SPDT, 20 AMP, 240 VOLT, SPECIFICATION GRADE MOUNTED IN SURFACE BOX. HUBBELL HBL1221, LEVITON 1221-2, PASS & SEYMOUR PS20AC1, OR COOPER 2221.
M	1	MAIN CIRCUIT BREAKER, MOLDED CASE THERMAL MAGNETIC, SERVICE ENTRANCE DUTY RATED 240 VOLT, 100 AMP, 2 POLE, AIC RATING OF 14,000 AMPS AT 240 VOLTS, INTEGRAL TO BRANCH PANEL.
N	1	COPPER LOAD TERMINAL BLOCK FOR #6/6 AND #6/12
O1 O2	2	FORM TYPE C RELAY, ELECTRICALLY HELD, ONE NORMALLY OPEN (N.O.) AND ONE NORMALLY CLOSED (N.C.) CONTACTS, 600V CONTINUOUS DUTY COIL, 30 AMP CONTACT RATING, SQUARE D CLASS 8501, G.E., OR CUTLER HAMMER.
T	1	THERMOSTAT, 40-80 DEGREE RANGE, CHROMALOX WR80, TRANE, MODINE, OR REZTOR.
S	1	HEATER, 120 VOLT, 375 WATT, 40-80 DEGREE THERMOSTAT, CHROMALOX 276-10, TRANE, MODINE, OR REZTOR.



2 LIGHTING CONTROL CABINET
NO SCALE
U.L. LISTED
DOT APPROVED

K J ENGINEERING CONSULTANTS
1771 W. DIEHL ROAD, SUITE 300
NAPERVILLE, IL 60563
630.527.2320 FAX: 630.527.2321
www.kjw.com
PROJECT # 07.0610.00

ILLINOIS DEPARTMENT OF TRANSPORTATION
E7: ONE LINE DIAGRAM & SCHEDULES

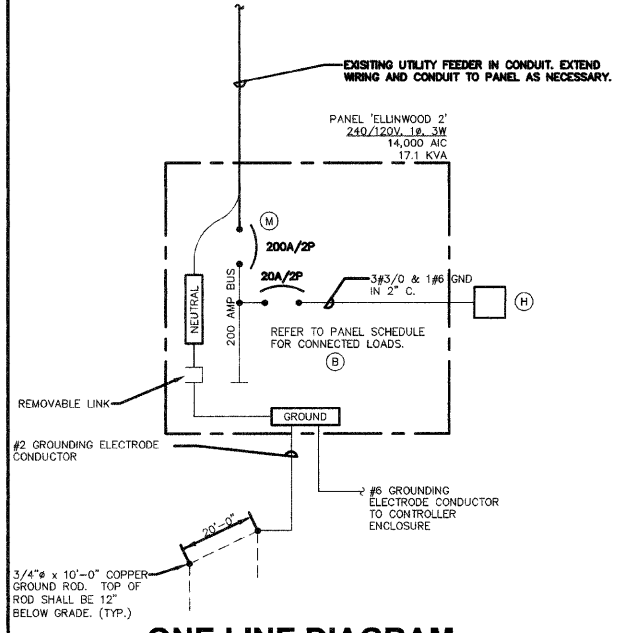
DES PLAINES LIGHTING IMPROVEMENTS AND STREETSCAPE DES PLAINES, ILLINOIS

SCALE: NTS
DATE: 8-14-2009

DRAWN BY: JOP
DESIGNED BY: MCK
CHECKED BY: MCK

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
850 Forest Ridge Drive
Vernon Hills, IL 60061
(847) 476-9700
(847) 476-9701 Fax

REVISIONS	
NAME	DATE



1 ONE LINE DIAGRAM ELLINWOOD 2
NO SCALE

PANEL NAME: ELLINWOOD 2 CONNECTED 17.1 KVA

TYPE: BOLT-ON
MOUNTING: SURFACE - INTERIOR ONLY
FED FROM: UTILITY
AIC RATING: 14,000

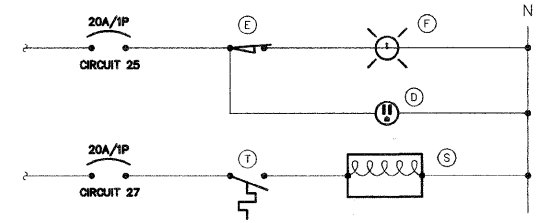
MAIN: 200A MCB
VOLTS: 240/120
PHASE: 1
WIRE: 3

CKT NO.	LOAD DESCRIPTION	WIRE SIZE	LOAD KVA	BREAKER AMP	BREAKER P	LOAD KVA	WIRE SIZE	LOAD DESCRIPTION	CKT NO.
1	A 4F1, 2F2, 3F3	*S 3.1	30	2	20	1	0.6	*S X1 3 RECEPT.	2
3					20	1	0.6	*S X2 3 RECEPT.	4
5	B 1F1, 2F2, 3F3	*S 2.8	30	2	20	1	0.6	*S Y1 3 RECEPT.	6
7					20	1	0.6	*S Y2 3 RECEPT.	8
9	SURGE ARRESTOR	*O 0.1	30	2	20	1	0.6	*S Z1 3 RECEPT.	10
11					20	1	0.6	*S Z2 3 RECEPT.	12
13	PANEL 'E1'	2	6.7	100	2	20	1		14
15					20	1		SPARE	16
17	SPACE				20	1		SPARE	18
19	SPACE				20	1		SPARE	20
21	SPACE							SPARE	22
23	SPACE							SPARE	24
25	LGT. RECEPT. IN CABINET	12	0.3	20	1			SPARE	26
27	CABINET HEATER	12	0.4	20	1			SPARE	28
29	LGT CONTROL	12	0.1	20	1			SPARE	30

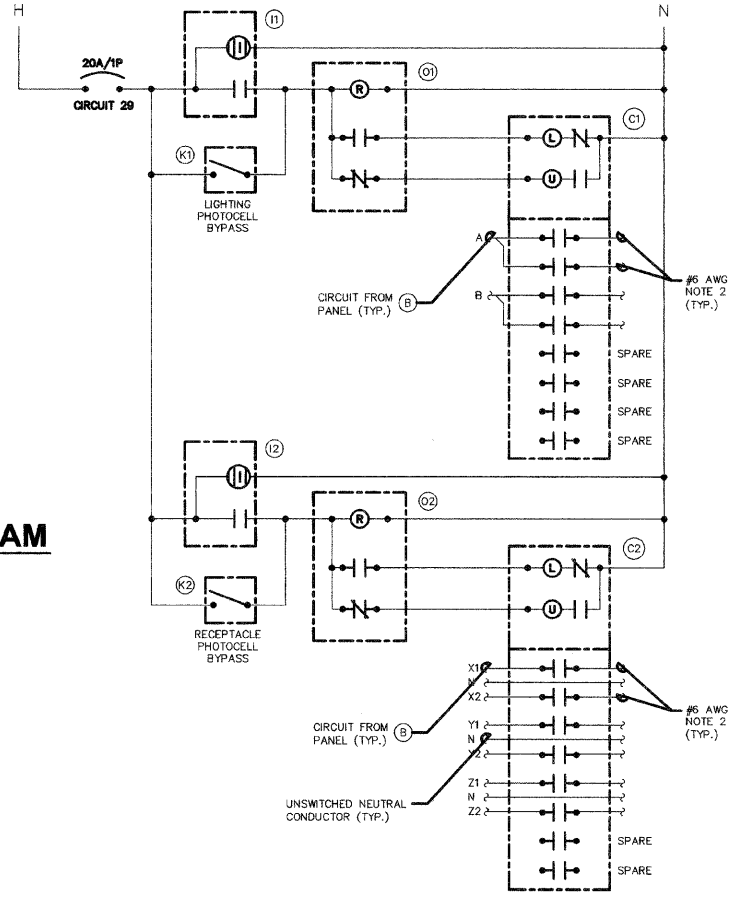
NOTES: *S = REFER TO SHEET E3 FOR WIRE SIZE. *O = REFER TO ONE LINE DIAGRAM ON SHEET E8 FOR WIRE SIZE.

ONE-LINE DIAGRAM NOTES

- AIC RATINGS LISTED FOR EQUIPMENT ARE MINIMUM REQUIREMENTS FOR BUS BRACING AND DEVICE RATING. ALL EQUIPMENT SHALL BE FULLY RATED UNLESS SPECIFICALLY NOTED AS SERIES RATED.
- ALL FUSES FROM 0 AMPERE TO 200 AMPERE SHALL BE DUAL ELEMENT, CLASS RK-5 UNLESS NOTED OTHERWISE.
- INDICATES DIRECT CONNECTION OF GROUND CONDUCTOR TO GROUND BUS.



3 CABINET ELEMENTARY DIAGRAM
NO SCALE

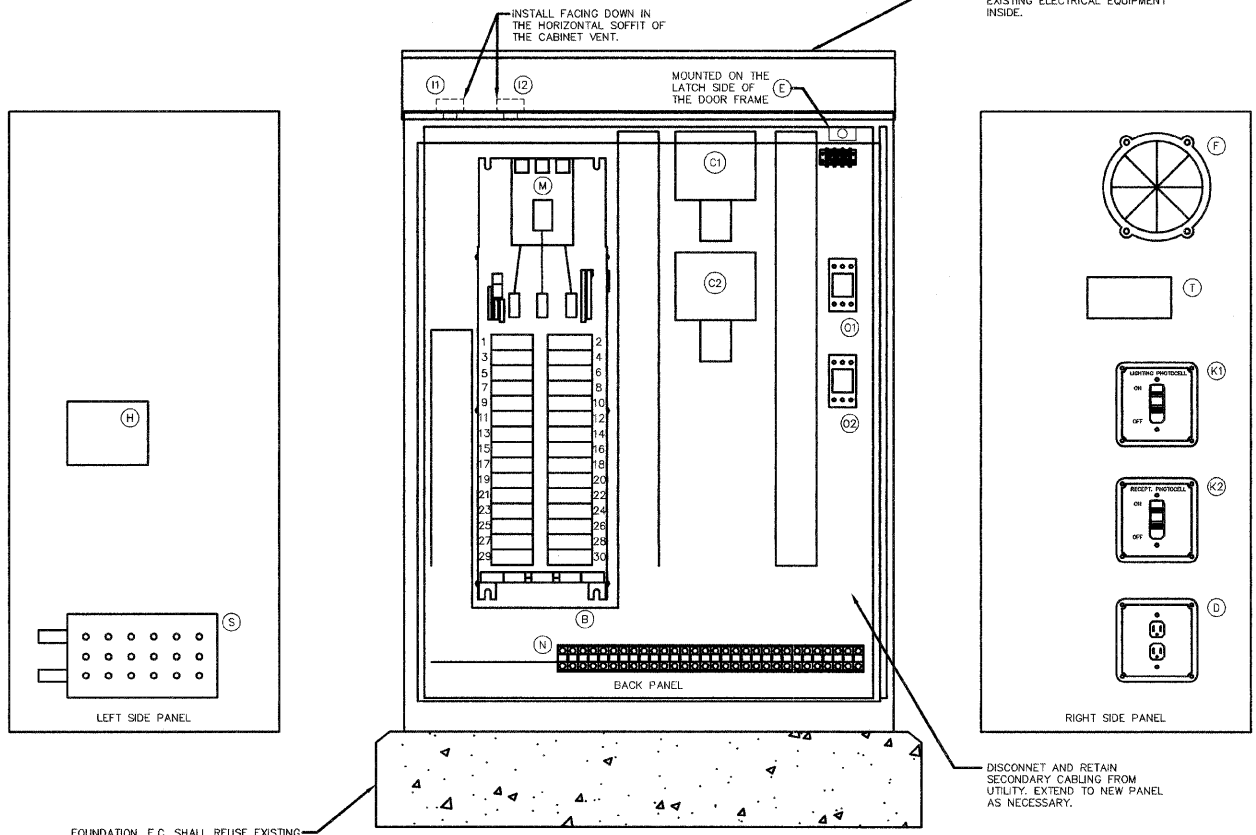


4 LIGHTING CONTROL ELEMENTARY DIAGRAM
NO SCALE

NOTES:
1. ALL CABINET INTERIOR WIRING SHALL BE STRANDED COPPER #12 AWG THWN UNLESS NOTED OTHERWISE.
2. ROUTE TO STREET LIGHTING LUMINAIRES VIA TERMINAL BLOCK. (N)

BILL OF MATERIALS FOR LIGHTING CONTROLLER "E2"

ITEM #	QUANTITY	DESCRIPTION
B	1	BRANCH CIRCUIT PANEL INTERIOR, 200A COPPER BUS, 240/120 VOLT, MOLDED CASE THERMAL MAGNETIC CIRCUIT BREAKERS, BOLT ON TYPE, AIC RATING OF 14,000 AMPS AT 240 VOLTS; SQUARE D 1630-ND20, G.E. AQ, SIEMENS P1, OR CUTLER HAMMER PRL1.
C1 C2	2	MECHANICAL CONTACTOR, 8 POLE, 30 AMP, 120V COIL, SQUARE D 8903-LGX40V02, G.E. CR360ML2, CUTLER HAMMER C30B. PROVIDE WITH TWO-WIRE CONTROL FOR PHOTOCELL INTERFACE.
D	1	60I RECEPTACLE 120V, 20A, SPECIFICATION GRADE, NEMA 5-20R IN WEATHER-PROOF BOX WITH FLAP-TYPE COVER, HUBBELL GF5322A WITH WP26 COVER, LEVITON, PASS & SEYMOUR, OR COPPER.
E	1	20A SPOT MICRO SWITCH (MOUNT WITH ACTUATOR TO SWITCH WHEN DOOR OPENED), 120 VOLT, 15 AMP CONTACTS, SQUARE D XCK1110, G.E., CUTLER HAMMER, OR SIEMENS.
F	1	60 WATT LIGHT FIXTURE, VAPOR TIGHT WITH GLOBE AND GUARD AND MOUNTING BOX. LAMP PROVIDED WITH FIXTURE.
H	1	SURGE ARRESTOR, BRACKET MOUNTED, 120/240 VOLT SERVICE, SQUARE D S2SA1175, G.E., CUTLER HAMMER.
I1 I2	2	PHOTOCELL, 120V, 1500 VA RATED, SINGLE POLE, SINGLE THROW CONTACT, WEATHERPROOF AND CORROSION PROOF ENCLOSURE, U.L. LISTED, TORK 3000, PARADON, OR INTERMATIC.
J	1	E.C. SHALL REUSE EXISTING CABINET IF POSSIBLE. ENCLOSURE PAD MOUNTED, STAINLESS STEEL, N.E.M.A. 4 CONSTRUCTION WITH KEY LOCKING DOOR. KEY CYLINDER SHALL MATCH EXISTING VILLAGE LIGHTING CONTROLLER LOCKS. HOFFMAN, OR APPROVED EQUAL. 30"W, 48"H, 18"D
K1 K2	2	TOGGLE SWITCH, SPDT, 20 AMP, 240 VOLT, SPECIFICATION GRADE MOUNTED IN SURFACE BOX, HUBBELL HBL1221, LEVITON 1221-2, PASS & SEYMOUR PS20ACT, OR COPPER 2221.
M	1	MAIN CIRCUIT BREAKER, MOLDED CASE THERMAL MAGNETIC, SERVICE ENTRANCE DUTY RATED 240 VOLT, 200 AMP, 2 POLE, AIC RATING OF 14,000 AMPS AT 240 VOLTS. INTEGRAL TO BRANCH PANEL.
N	1	COPPER LOAD TERMINAL BLOCK FOR AWG#6 AND AWG#12
O1 O2	2	FORM TYPE C RELAY, ELECTRICALLY HELD, ONE NORMALLY OPEN (N.O.) AND ONE NORMALLY CLOSED (N.C.) CONTACTS, 600V CONTINUOUS DUTY COIL, 30 AMP CONTACT RATING, SQUARE D CLASS 8501, G.E., OR CUTLER HAMMER.
T	1	THERMOSTAT, 40-80 DEGREE RANGE, CHROMALOX WR80, TRANE, MODINE, OR REZTOR.
S	1	HEATER, 120 VOLT, 375 WATT, 40-80 DEGREE THERMOSTAT, CHROMALOX 276-10, TRANE, MODINE, OR REZTOR.



2 LIGHTING CONTROL CABINET
NO SCALE
U.L. LISTED
IDOT APPROVED

K J ENGINEERING CONSULTANTS
1771 W. DIEHL ROAD, SUITE 300
NAPERVILLE, IL 60563
630.527.2320 FAX: 630.527.2321
www.kjew.com
PROJECT #07.0610.00

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REFERENCE SCALE IN INCHES
0 1 2 3

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
650 Forest Ridge Drive
Verona Hills, IL 60061
(847) 476-9700
(847) 476-9701 Fax

REVISIONS

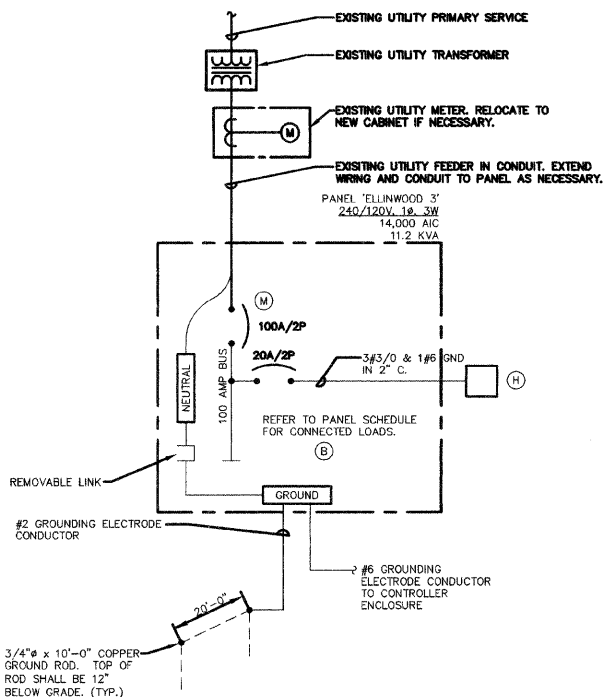
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
EB: ONE LINE DIAGRAM & SCHEDULES

DES PLAINES LIGHTING IMPROVEMENTS AND STREETScape
DES PLAINES, ILLINOIS

SCALE: NTS
DATE: 8-14-2009

DRAWN BY: JOP
DESIGNED BY: MCK
CHECKED BY: MCK



TYPE: BOLT-ON
MOUNTING: SURFACE-INTERIOR ONLY
FED FROM: UTILITY
AIC RATING: 14,000

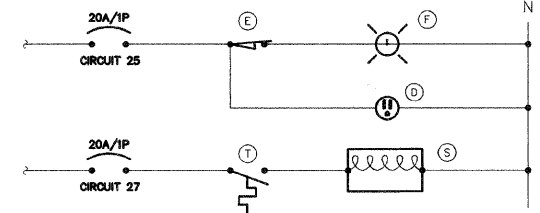
PANEL NAME: ELLINWOOD 3
CONNECTED 11.2 KVA

MAIN: 100A MCB
VOLTS: 240/120
PHASE: 1
WIRE: 3

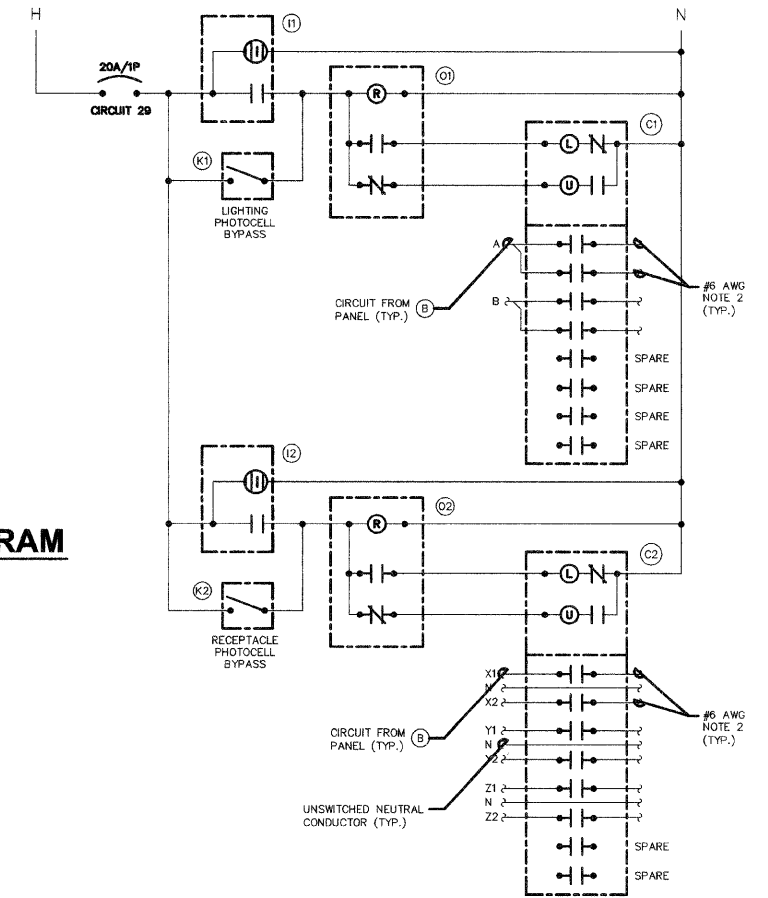
CKT NO.	LOAD DESCRIPTION	WIRE SIZE	LOAD KVA	BREAKER AMP	BREAKER P	LOAD KVA	WIRE SIZE	LOAD DESCRIPTION	CKT NO.
1	A 1F1, 1F2, 8F3	*S	2.6	30	2	20	1	1.0 *S X1 5 RECEPT.	2
3						20	1	0.8 *S X2 4 RECEPT.	4
5	B 2F2, 9F3	*S	3.1	30	2	20	1	0.8 *S Y1 4 RECEPT.	6
7						20	1	1.0 *S Y2 3 RECEPT.	8
9	SURGE ARRESTOR	*O	0.1	30	2	20	1	0.6 *S Z1 3 RECEPT.	10
11						20	1	0.4 *S Z2 2 RECEPT.	12
13	SPARE			30	2	20	1	SPARE	14
15						20	1	SPARE	16
17	SPARE							SPARE	18
19	SPARE							SPARE	20
21	SPARE							SPARE	22
23	SPARE							SPARE	24
25	LGT. RECEPT. IN CABINET		12	0.3	20	1		SPARE	26
27	CABINET HEATER		12	0.4	20	1		SPARE	28
29	LGT CONTROL		12	0.1	20	1		SPARE	30

NOTES: *S = REFER TO SHEET E3 FOR WIRE SIZE. *O = REFER TO ONE LINE DIAGRAM ON SHEET E9 FOR WIRE SIZE.

- ONE-LINE DIAGRAM NOTES**
- AIC RATINGS LISTED FOR EQUIPMENT ARE MINIMUM REQUIREMENTS FOR BUS BRACING AND DEVICE RATING. ALL EQUIPMENT SHALL BE FULLY RATED UNLESS SPECIFICALLY NOTED AS SERIES RATED.
 - ALL FUSES FROM 0 AMPERE TO 200 AMPERE SHALL BE DUAL ELEMENT, CLASS RK-5 UNLESS NOTED OTHERWISE.
 - INDICATES DIRECT CONNECTION OF GROUND CONDUCTOR TO GROUND BUS.



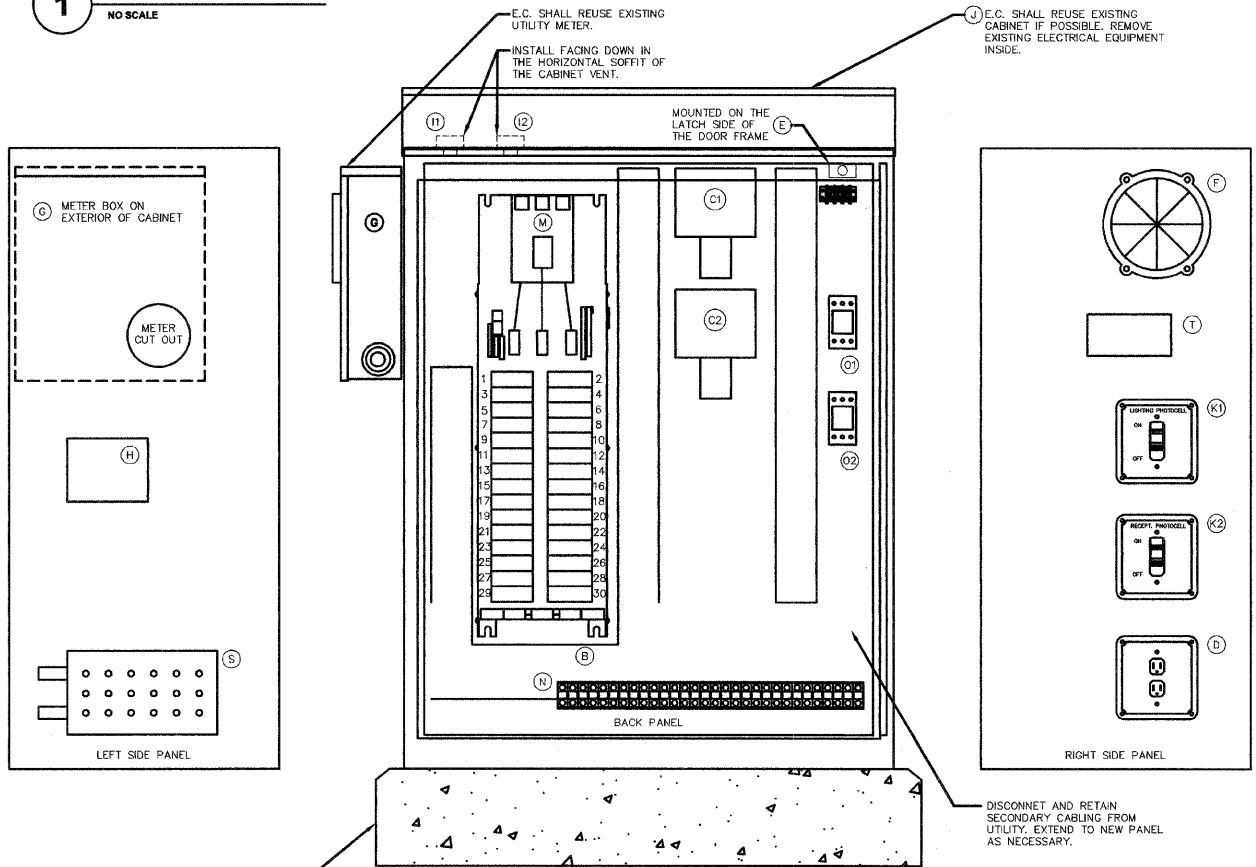
3 CABINET ELEMENTARY DIAGRAM
NO SCALE



4 LIGHTING CONTROL ELEMENTARY DIAGRAM
NO SCALE

- NOTES:
- ALL CABINET INTERIOR WIRING SHALL BE STRANDED COPPER #12 AWG THWN UNLESS NOTED OTHERWISE.
 - ROUTE TO STREET LIGHTING LUMINAIRES VIA TERMINAL BLOCK. (N)

1 ONE LINE DIAGRAM ELLINWOOD 3
NO SCALE



2 LIGHTING CONTROL CABINET
NO SCALE
U.L. LISTED
IDOT APPROVED

BILL OF MATERIALS FOR LIGHTING CONTROLLER "E3"

ITEM #	QUANTITY	DESCRIPTION
B	1	BRANCH CIRCUIT PANEL INTERIOR, 100A COPPER BUS, 240/120 VOLT, MOLDED CASE THERMAL MAGNETIC CIRCUIT BREAKERS, BUILT ON TYPE, AIC RATING OF 14,000 AMPS AT 240 VOLTS. SQUARE D 1630-NQ00, G.E. AQ, SIEMENS P1, OR OUTLER HAMMER PRL1.
C1 C2	2	MECHANICAL CONTACTOR, 8 POLE, 30 AMP, 120V COIL, SQUARE D 8903-LV40V02, G.E. CP360ML2, OUTLER HAMMER 6308G. PROVIDE WITH TWO-WIRE CONTROL FOR PHOTOCELL INTERFACE.
D	1	GR RECEPTACLE 120V, 20A, SPECIFICATION GRADE, NEMA 5-20R IN WEATHER-PROOF BOX WITH FLAP-TYPE COVER, HUBBELL GF5362A WITH WP26 COVER, LEVITON, PASS & SEYMOUR, OR COPPER.
E	1	20A SPDT MICRO SWITCH (MOUNT WITH ACTUATOR TO SWITCH WHEN DOOR OPENED), 120 VOLT, 15 AMP CONTACTS, SQUARE D NCKL110, G.E., OUTLER HAMMER, OR SIEMENS.
F	1	60 WATT LIGHT FIXTURE, VAPOR TIGHT WITH GLOBE AND GUARD AND MOUNTING BOX. LAMP PROVIDED WITH FIXTURE.
G	1	METER FITTING, 1 PHASE, 3 WIRE, 100 AMP
H	1	SURGE ARRESTOR, BRACKET MOUNTED, 120/240 VOLT SERVICE, SQUARE D S0SA1175, G.E., OUTLER HAMMER.
I1 I2	2	PHOTOCELL, 120V, 1500 VA RATED, SINGLE POLE, SINGLE THROW CONTACT, WEATHERPROOF AND CORROSION PROOF ENCLOSURE, U.L. LISTED, TORX 3000, PARAGON, OR INTERMATIC.
J	1	E.C. SHALL REUSE EXISTING CABINET IF POSSIBLE. ENCLOSURE PAD MOUNTED, STAINLESS STEEL, N.E.M.A. #4 CONSTRUCTION WITH KEY LOCKING DOOR. KEY CYLINDER SHALL MATCH EXISTING VILLAGE LIGHTING CONTROLLER LOCKS. HOFFMAN, OR APPROVED EQUAL. 30"W, 48"H, 18"D
K1 K2	2	TOGGLE SWITCH, SPDT, 20 AMP, 240 VOLT, SPECIFICATION GRADE MOUNTED IN SURFACE BOX. HUBBELL HBL121, LEVITON 122-2, PASS & SEYMOUR PS20AC1, OR COOPER 2221.
M	1	MAIN CIRCUIT BREAKER, MOLDED CASE THERMAL MAGNETIC, SERVICE ENTRANCE DUTY RATED 240 VOLT, 100 AMP, 2 POLE, AIC RATING OF 14,000 AMPS AT 240 VOLTS. INTEGRAL TO BRANCH PANEL.
N	1	COPPER LOAD TERMINAL BLOCK FOR AWG#6 AND AWG#12
O1 O2	2	FORM TYPE C RELAY, ELECTRICALLY HELD, ONE NORMALLY OPEN (N.O.) AND ONE NORMALLY CLOSED (N.C.) CONTACTS, 600V CONTINUOUS DUTY COIL, 30 AMP CONTACT RATING, SQUARE D G15501, G.E., OR OUTLER HAMMER.
T	1	THERMOSTAT, 40-80 DEGREE RANGE, CHROMALOX WR80, TRANE, MODINE, OR REZNOR.
S	1	HEATER, 120 VOLT, 375 WATT, 40-80 DEGREE THERMOSTAT, CHROMALOX 278-10, TRANE, MODINE, OR REZNOR.

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
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(847) 478-9700
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REVISIONS

NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
E9: ONE LINE DIAGRAM & SCHEDULES

DES PLAINES LIGHTING IMPROVEMENTS AND STREETSCAPE DES PLAINES, ILLINOIS

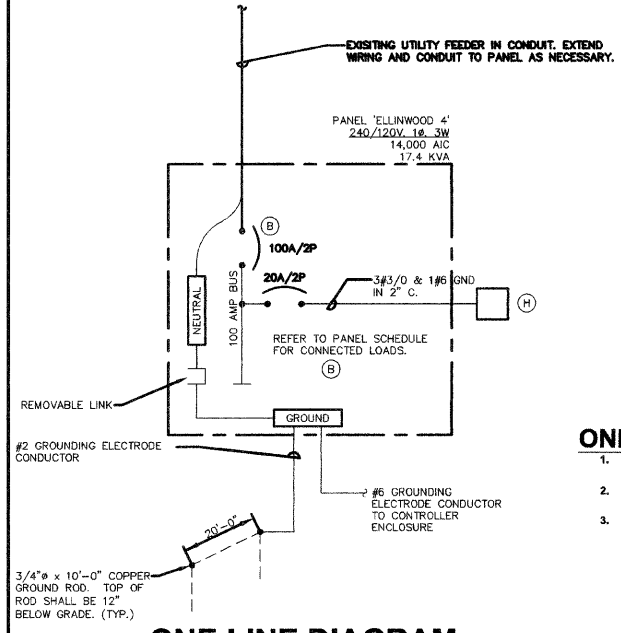
SCALE: NTS
DATE: 8-14-2009

DRAWN BY: JOP
DESIGNED BY: MCK
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REFERENCE SCALE IN INCHES
0 1 2 3



PANEL NAME: **ELLINWOOD 4** CONNECTED 17.4 KVA

TYPE: BOLT-ON MOUNTING: SURFACE - INTERIOR ONLY
 FED FROM: UTILITY AIC RATING: 14,500

SOLID NEUTRAL GROUND BUS MAIN: 100A MCB VOLTS: 240/120 PHASE: 1 WIRE: 3

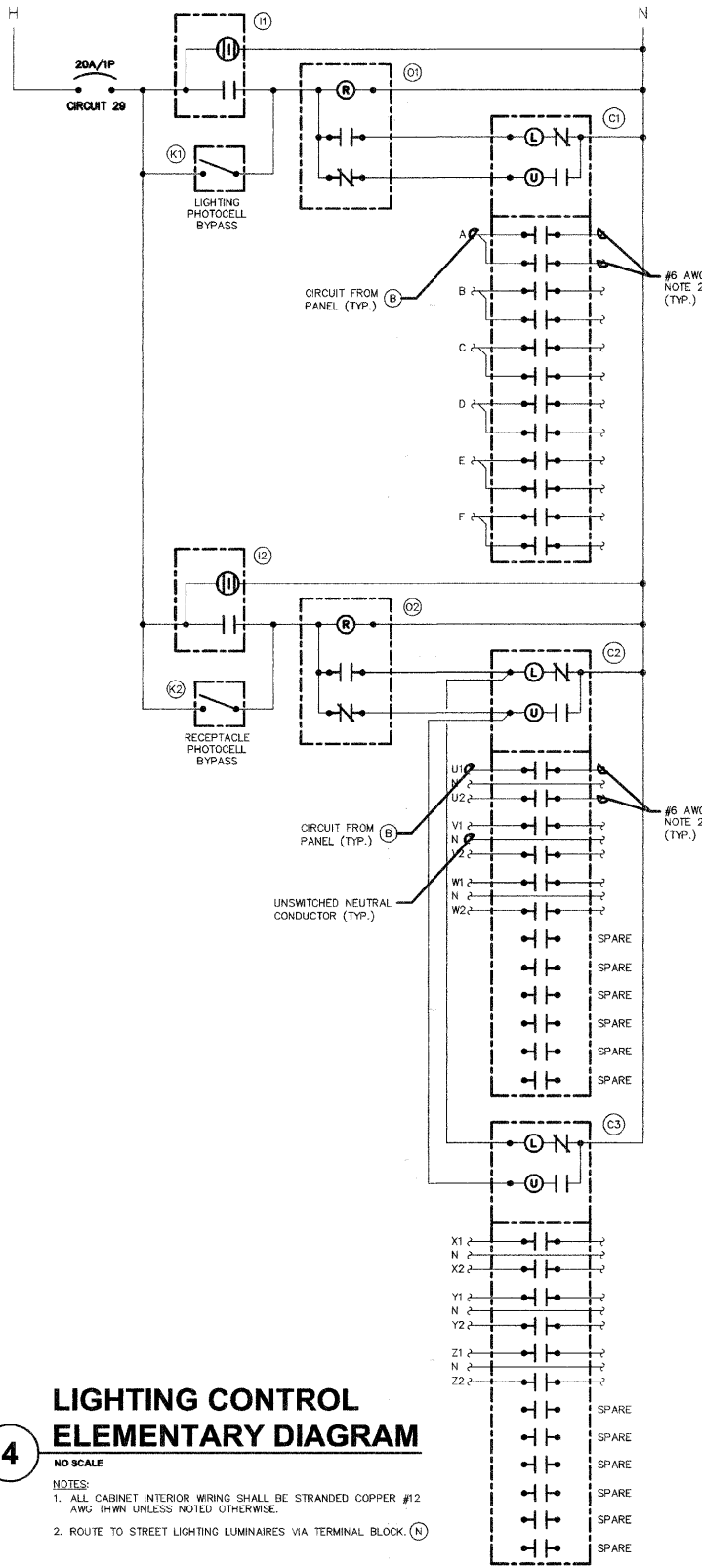
CKT NO.	LOAD DESCRIPTION	WIRE SIZE	LOAD KVA	BREAKER AMP	BREAKER P	LOAD KVA	WIRE SIZE	LOAD DESCRIPTION	CKT NO.
1	A 2F1, 7F3	*S	2.1	20	2	20	1	*S W1 3 RECEPT.	2
3								*S W2 3 RECEPT.	4
5	B 8F3	*S	1.7	20	2	20	1	*S X1 3 RECEPT.	6
7								*S X2 2 RECEPT.	8
9	C 8F3	*S	1.3	20	2	20	1	*S Y1 4 RECEPT.	10
11								*S Y2 3 RECEPT.	12
13	D 5F3	*S	1.1	20	2	20	1	*S Z1 3 RECEPT.	14
15								*S Z2 3 RECEPT.	16
17	E 2F1, 5F3	*S	1.7	20	2	20	1	*S U1 5 RECEPT.	18
19								*S U2 4 RECEPT.	20
21	F 6F3	*S	1.3	20	2	20	1	*S V1 4 RECEPT.	22
23								*S V2 4 RECEPT.	24
25	LGT. RECEPT. IN CABINET		12	0.3	20	1	20	*O SURGE ARRESTOR	26
27	CABINET HEATER		12	0.4	20	1			28
29	LGT. CONTROL		12	0.1	20	1	20		30

NOTES: *S = REFER TO SHEET E3 FOR WIRE SIZE. *O = REFER TO ONE LINE DIAGRAM ON SHEET E10 FOR WIRE SIZE.

- ### ONE-LINE DIAGRAM NOTES
- AIC RATINGS LISTED FOR EQUIPMENT ARE MINIMUM REQUIREMENTS FOR BUS BRACING AND DEVICE RATING. ALL EQUIPMENT SHALL BE FULLY RATED UNLESS SPECIFICALLY NOTED AS SERIES RATED.
 - ALL FUSES FROM 0 AMPERE TO 200 AMPERE SHALL BE DUAL ELEMENT, CLASS RK-5 UNLESS NOTED OTHERWISE.
 - INDICATES DIRECT CONNECTION OF GROUND CONDUCTOR TO GROUND BUS.

ONE LINE DIAGRAM ELLINWOOD 4

NO SCALE



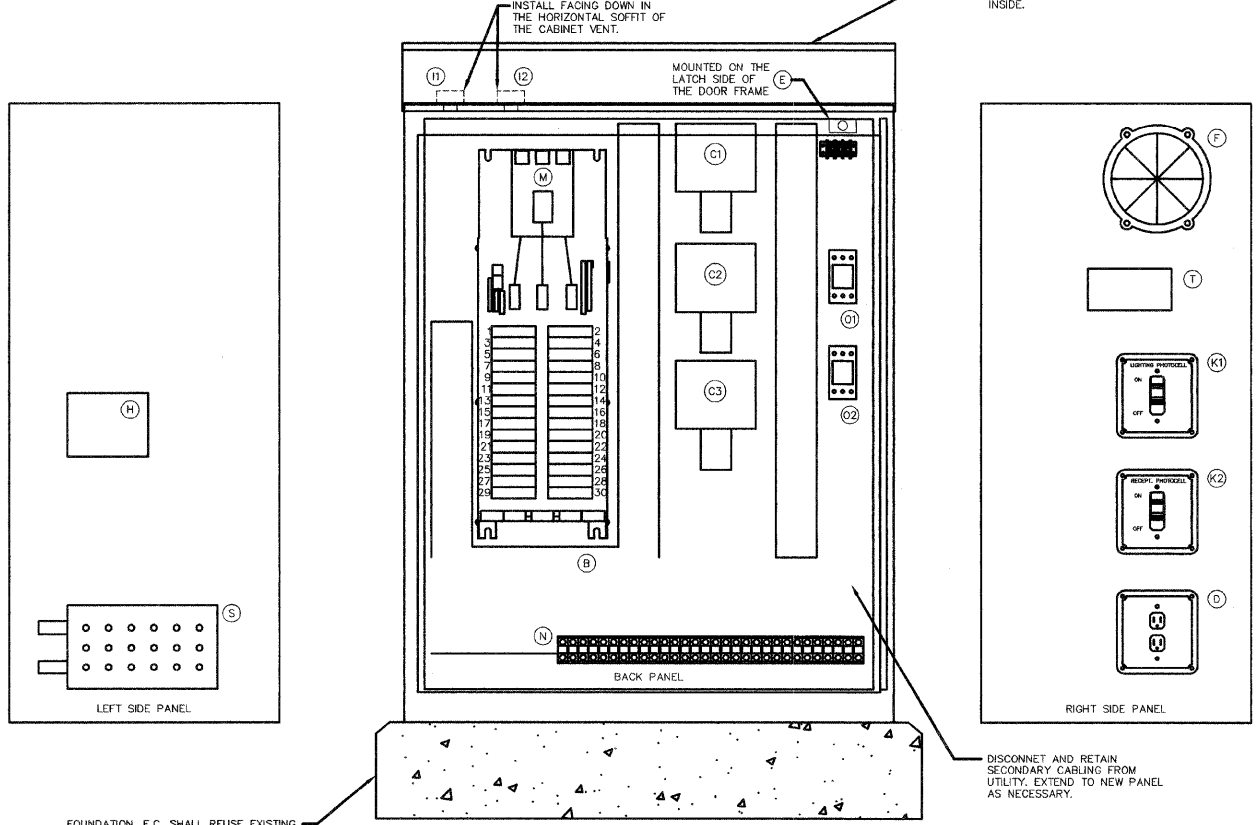
- ### LIGHTING CONTROL ELEMENTARY DIAGRAM
- NO SCALE
- NOTES:
- ALL CABINET INTERIOR WIRING SHALL BE STRANDED COPPER #12 AWG THWN UNLESS NOTED OTHERWISE.
 - ROUTE TO STREET LIGHTING LUMINAIRES VIA TERMINAL BLOCK. (N)

CABINET ELEMENTARY DIAGRAM

NO SCALE

BILL OF MATERIALS FOR LIGHTING CONTROLLER "E4"

ITEM #	QUANTITY	DESCRIPTION
B	1	BRANCH CIRCUIT PANEL INTERIOR, 100A COPPER BUS, 240/120 VOLT, MOLDED CASE THERMAL MAGNETIC CIRCUIT BREAKERS, BOLT ON TYPE, AIC RATING OF 14,000 AMPS AT 240 VOLTS, SQUARE D 1630-NQ00, G.E. AQ, SIEMENS P1, OR OUTLER HAMMER FR11.
C1 C2 C3	3	MECHANICAL CONTACTOR, 12 POLE, 30 AMP, 120V COIL, SQUARE D 8803-LGX40V02, G.E. CR368M2, OUTLER HAMMER C308C, PROVIDE WITH TWO-WIRE CONTROL FOR PHOTOCELL INTERFACE.
D	1	6F1 RECEPTACLE 120V, 20A, SPECIFICATION, GRADE, NEMA 5-20R IN WEATHER-PROOF BOX WITH FLAP-TYPE COVER, HUBBELL GF5362A WITH WP26 COVER, LEVITON, PASS & SEYMOUR, OR COPPER.
E	1	20A SPDT MICRO SWITCH (MOUNT WITH ACTUATOR TO SWITCH WHEN DOOR OPENED), 120 VOLT, 15 AMP CONTACTS, SQUARE D XKL110, G.E., OUTLER HAMMER, OR SIEMENS.
F	1	60 WATT LIGHT FIXTURE, VAPOR TIGHT WITH GLOBE AND GUARD AND MOUNTING BOX, LAMP PROVIDED WITH FIXTURE.
H	1	SURGE ARRESTOR, BRACKET MOUNTED, 120/240 VOLT SERVICE, SQUARE D SQS1175, G.E., OUTLER HAMMER.
I1 I2	2	PHOTOCELL, 120V, 1500 VA RATED, SINGLE POLE, SINGLE THROW CONTACT, WEATHERPROOF AND CORROSION PROOF ENCLOSURE, U.L. LISTED, TORK 3000, PARAGON, OR INTERMATIC.
J	1	F.C. SHALL REUSE EXISTING CABINET IF POSSIBLE. ENCLOSURE PAD MOUNTED, STAINLESS STEEL, N.E.M.A. 4 CONSTRUCTION WITH KEY LOCKING DOOR, KEY CYLINDER SHALL MATCH EXISTING WALLAGE LIGHTING CONTROLLER LOCKS, HOFFMAN, OR APPROVED EQUAL. 30"W, 48"H, 18"D
K1 K2	2	TOGGLE SWITCH, SPDT, 20 AMP, 240 VOLT, SPECIFICATION GRADE MOUNTED IN SURFACE BOX, HUBBELL HBL1221, LEVITON 1221-2, PASS & SEYMOUR PS20AC1, OR COOPER 2221.
M	1	MAIN CIRCUIT BREAKER, MOLDED CASE THERMAL MAGNETIC, SERVICE ENTRANCE DUTY RATED 240 VOLT, 100 AMP, 2 POLE, AIC RATING OF 14,500 AMPS AT 240 VOLTS, INTEGRAL TO BRANCH PANEL.
N	1	COPPER LOAD TERMINAL BLOCK FOR AWG#6 AND AWG#12.
O1 O2	2	FORM TYPE C RELAY, ELECTRICALLY HELD, ONE NORMALLY OPEN (N.O.) AND ONE NORMALLY CLOSED (N.C.) CONTACTS, 600V CONTINUOUS DUTY COIL, 30 AMP CONTACT RATING, SQUARE D CLASS 8501, G.E., OR OUTLER HAMMER.
T	1	THERMOSTAT, 40-80 DEGREE RANGE, CHROMALOX WR80, TRANE, MODINE, OR REZNOR.
S	1	HEATER, 120 VOLT, 375 WATT, 40-80 DEGREE THERMOSTAT, CHROMALOX 276-10, TRANE, MODINE, OR REZNOR.



LIGHTING CONTROL CABINET

NO SCALE
U.L. LISTED
IDOT APPROVED

PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
Consulting Engineers & Surveyors
850 Forest Ridge Drive
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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
E10: ONE LINE DIAGRAM & SCHEDULES
DES PLAINES LIGHTING IMPROVEMENTS AND STREETSCAPE DES PLAINES, ILLINOIS
SCALE: NTS
DATE: 8-14-2009
DRAWN BY: JOP
DESIGNED BY: MCK
CHECKED BY: MCK

K J ENGINEERING CONSULTANTS
1771 W. DEHL ROAD, SUITE 300
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PROJECT # 07-0810-00
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REFERENCE SCALE IN INCHES

GENERAL ELECTRICAL NOTES:

- "IES" INDICATES DETAIL NUMBER/SHEET NUMBER.
- "I" INDICATES KEYED NOTE USED TO DESCRIBE ADDITIONAL INFORMATION OF WORK REQUIRED, SPECIFIC TO THE SHEET AND/OR DETAIL IT IS SHOWN WITH.
- ALL ELECTRICAL CONDUCTORS SHALL BE COPPER.
- INDICATES NUMBER OF WIRES IN CONDUIT.
- ABBREVIATION KEY:
 E.C. ELECTRICAL CONTRACTOR
 C CONDUIT
 TYP TYPICAL
- LINE TYPE KEY:

ELECTRICAL INSTALLATION NOTES:

- CIRCUIT NUMBERS ARE SHOWN FOR CIRCUIT IDENTIFICATION. CIRCUITING SHALL AGREE WITH NUMBERING ON THE PANEL PROVIDED. COMMON NEUTRALS MAY BE USED FOR BRANCH CIRCUITS. BALANCE THE LOAD ON PANEL AS EVENLY AS POSSIBLE BETWEEN EACH PHASE.
- A #8 GREEN INSULATED LEAD ON CONDUIT SHALL BE INSTALLED WITH CIRCUIT CONDUCTORS TO ALL RECEPTACLES.
- ALL WELDING SHALL BE ACCORDING TO AMERICAN WELDING SOCIETY STANDARDS. CONTRACTOR SHALL FURNISH TO THE ARCHITECT/ENGINEER CERTIFICATES QUALIFYING EACH WELDER, PRIOR TO START OF WORK. THE ARCHITECT/ENGINEER RESERVES THE RIGHT TO REQUIRE QUALIFYING DEMONSTRATION, AT THE CONTRACTOR'S EXPENSE, OF ANY WELDERS ASSIGNED TO THE JOB.

LIGHTING NOTES:

- B-1. THE OWNER OF THE PROPOSED ROADWAY LIGHTING SYSTEM SHALL BE THE CITY OF DES PLAINES.
- B-2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MARK THE PROPOSED LOCATIONS OF ALL LIGHT POLES AND THE LIGHTING CONTROLLER FOR EXAMINATION AND CONFIRMATION WITH THE ENGINEER AT THE PRECONSTRUCTION INSPECTION. THE EXACT LOCATIONS OF ALL ITEMS SHALL BE CONFIRMED WITH THE ENGINEER PRIOR TO STARTING WORK.
- B-3. THE CONTRACTOR SHALL MAKE SPECIAL NOTE OF THE REQUIREMENTS FOR GROUNDING. GROUNDING CONNECTIONS AT THE FOUNDATION SHALL BE EXOTHERMICALLY WELDED, AS SPECIFIED, AND SHALL BE INSPECTED AND APPROVED BY THE RESIDENT ENGINEER PRIOR TO POURING CONCRETE OR BACKFILLING, AS APPLICABLE.
- B-4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ESTABLISHMENT OF FINISHED GRADE. THE ENGINEER MAY ASSIST THE CONTRACTOR AS APPLICABLE, BUT THE RESPONSIBILITY FOR COORDINATING FINISHED GRADE ELEVATION WITH THE TOP OF THE FOUNDATION HEIGHTS SHALL REMAIN WITH THE CONTRACTOR.
- B-5. ALL LIGHT POLES SHALL BE LOCATED WITHIN THE CORRECT SET BACK IDOT REQUIREMENTS FROM THE BACK OF CURB TO THE FACE OF THE PROPOSED LIGHT POLE.
- B-6. NO POLES SHALL BE ERECTED UNTIL THE RESPECTIVE FOUNDATIONS HAVE CURED, AS APPROVED BY THE ENGINEER.
- B-7. POLES WITH MAST ARMS SHALL NOT BE ERECTED AND LEFT TO STAND WITHOUT LUMINAIRES, TO MAINTAIN THE STRUCTURAL INTEGRITY OF POLES. NOTE THAT THE PROPOSED LIGHT POLES WILL NOT BE CONSIDERED COMPLETE WITHOUT THE LUMINAIRES INSTALLED.
- B-8. UNLESS OTHERWISE NOTED, ALL CONDUIT PROVIDED BY THIS CONTRACT SHALL BE 2" GALVANIZED STEEL CONDUIT CONFORMING TO IDOT SRSB SECTION 108B.01 (c).
- B-9. UNLESS OTHERWISE NOTED, ALL CONVENTIONAL POLES SHALL BE FRANGIBLE WITH BREAKAWAY COUPLINGS AS SPECIFIED.
- B-10. THE CONTRACTOR SHALL MAKE NOTE OF THE SPECIAL CONTROL CABINET, AUXILIARY CABINET AND LIGHTING UNIT IDENTIFICATION REQUIREMENTS NOTED ON THE DRAWINGS.
- B-11. ALL WIRING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE. PARTICULAR ATTENTION IS DIRECTED TO THE REQUIREMENTS FOR ELECTRIC SERVICE, GROUNDING, AND OVERCURRENT PROTECTION.
- B-12. THE ELECTRICAL SUPPLY SHALL BE A PROPERLY GROUNDED AC SYSTEM. DC SERIES WIRING WILL NOT BE PERMITTED.
- B-13. THE AC SYSTEM SHALL BE PROPERLY GROUNDED AT THE ASSOCIATED SERVICE DISCONNECTING MEANS. AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXTENDED CONTINUOUS WITH ALL CIRCUIT WIRING AND SHALL BE BONDED TO THE SYSTEM GROUND AT THE SERVICE DISCONNECTING MEANS. EQUIPMENT GROUNDING CONDUCTOR IS TO BE INSULATED. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE IN INTEGRAL PART OF ANY MULTI-CONDUCTOR CABLE OR SHALL BE RUN WITH THE CIRCUIT CONDUCTORS IN THE SAME RACEWAY. A SEPARATE GROUNDING CONDUCTOR WILL NOT BE PERMITTED. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE SPLICED AND BONDED VIA A RIGID CONNECTION AT EACH POLE.
- B-14. ALL CONDUCTORS AND EQUIPMENT SHALL HAVE PROPER OVERCURRENT PROTECTION. OVERCURRENT PROTECTION SHALL BE PROVIDED FOR EACH LUMINAIRE AND ITS ASSOCIATED BRANCH CIRCUIT EITHER BY THE USE OF INDIVIDUAL POLE BASE FUSING, FUSING WITHIN THE LUMINAIRE, OR OTHER MEANS AS APPROVED BY THE ENGINEER.
- B-15. THE ANCHOR BOLTS SHALL BE PROPERLY SECURED IN PLACE BEFORE THE CONCRETE IS PLACED IN THE FORMS.
- B-16. EXCAVATION FOR THE POLE FOUNDATION SHALL BE MADE WITH AN AUGER, 24 INCHES IN DIAMETER.
- B-17. ALL WORK SHALL CONFORM TO THE NATIONAL ELECTRICAL CODE, THE LATEST EDITION OF THE ILLINOIS DEPT. OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND ANY APPLICABLE LOCAL CODES.
- B-18. BEFORE INSTALLING LIGHT STANDARDS NEAR OVERHEAD UTILITIES CALL LOCAL UTILITY FOR LOCATION APPROVAL.
- B-19. LOCATION OF CONTROLLER CABINET SHALL BE VERIFIED IN THE FIELD BY THE ENGINEER BEFORE FOUNDATION IS EXCAVATED OR POURED.
- B-20. NO MATERIALS SHALL BE DELIVERED TO THE JOB SITE UNTIL ALL PERTINENT EQUIPMENT SUBMITTALS HAVE BEEN APPROVED BY THE ENGINEER.
- B-21. CONTRACTOR TO COORDINATE ALL SERVICE CONNECTIONS WITH LOCAL UTILITY COMPANY. CONTRACTOR SHALL PROVIDE THE PAD FOR TRANSFORMER PER LOCAL UTILITY REQUIREMENTS AND COIL SUFFICIENT CABLES AT TRANSFORMER FOR UTILITY CONNECTION.
- B-22. UPON COMPLETION OF THE PERMANENT LIGHTING SYSTEMS THE CONTRACTOR SHALL REQUEST IN WRITING A REQUEST FOR PRELIMINARY INSPECTION A MINIMUM OF THREE DAYS NOTICE TO THE CITY OF DES PLAINES SHALL BE THE ULTIMATE MAINTAINING AGENCY FOR THE LIGHTING SYSTEMS ON MINER STREET AND ELLINWOOD AVENUE.
- B-23. ALL PAY ITEMS REFER TO THE IDOT STANDARDS FOR ROAD AND BRIDGE CONSTRUCTION LATEST EDITION, UNLESS OTHERWISE NOTED.

CONTROLLER ELECTRICAL NOTES:

ALL CONTROL CABINET ITEMS SHALL HAVE SUITABLE IDENTIFICATION. OPEN CIRCUIT BREAKERS, CONTACTORS AND OTHER OPEN DEVICES SHALL HAVE PERMANENT SELF-STICKING TAGS. DEVICES IN ENCLOSURES SHALL HAVE ENGRAVED 3-COLOR LAMINATED PLASTIC NAMEPLATES ATTACHED TO ENCLOSURES WITH SCREWS. NAMEPLATES SHALL BE ENGRAVED TO CORRESPOND TO DESIGNATIONS ON THE DRAWINGS. INTERNAL CABINET WIRING SHALL BE IDENTIFIED OR AS DIRECTED BY THE ENGINEER BY MEANS OF SELF-STICKING TAGS APPLIED AT EACH CONNECTED END. IDENTIFICATION SHALL BE MADE BY THE CABINET MANUFACTURER.

CABINET SHALL BE FABRICATED FROM 3.175 (0.125-INCH) SHEET ALUMINUM # 3003H14, FORMED AND ARC WELDED ASSEMBLY.

ALL SCREWS AND HARDWARE SHALL BE PLATED, GALVANIZED, OR MADE OF BRASS, ALUMINUM OR STAINLESS STEEL.

ONE INCH THICK POLYSOCYANURATE INSULATION SHALL BE INSTALLED AND PERMANENTLY CEMENTED ON ALL SIDES OF THE CABINET AND DOORS.

ELECTRIC UTILITY METER BOX SHALL BE MOUNTED ON THE SIDE OF CONTROL CABINET AS SHOWN ON THE PANEL LAYOUT DIAGRAM.

THE CONTROLLER SHALL BE CONSTRUCTED TO U.L. STD. 508 AND BEAR THE U.L. LABEL "ENCLOSED INDUSTRIAL CONTROL PANEL", ASSEMBLED PANEL SHALL BE IDOT APPROVED.

METAL MOUNTING PANEL SHALL BE #10 GAUGE GALVANIZED SHEET STEEL FLANGED BACK 0.75-INCHES I.D. ON 4 SIDES.

CIRCUIT BREAKERS AND CONTACTORS AND OTHER COMPONENTS SHALL BE MOUNTED ON 3.175 (0.125-INCH) THICK GLASSIC INSULATION BACK PANEL.

ALL DEVICES SHALL BE FRONT REMOVEABLE.

BUS BARS SHALL HAVE 22 LUG TERMINALS SIZED TO ACCOMMODATE REQUIRED WIRE SIZES. NEUTRAL BUS SHALL BE PAINTED WHITE. GROUND BUS SHALL BE PAINTED GREEN.

ALL LUGS SHALL BE OF COPPER SCREWS AND CONNECTORS, SPRING HELD.

ALL WIRING TERMINATIONS SHALL BE RATED NOT LESS THAN 75 DEGREE CENTIGRADE.

ALL CONTROL WIRING SHALL BE 600V MACHINE TOOL WIRE TYPE MTW. ALL POWER WIRING SHALL BE 600V TYPE RHH/RHW.

ALL WIRING WITHIN THE CABINET SHALL BE COLOR CODED USING THESE ABBREVIATIONS:

R - RED Y - YELLOW
 B - BLACK W - WHITE
 BL - BLUE G - GREEN

ELEMENTARY DIAGRAMS SHOWN WITH BREAKER OPEN, CONTACTOR OPEN, CABINET DOOR CLOSED.

A LAMINATED COPY OF THE CIRCUIT SCHEMATIC DIAGRAM SHALL BE ATTACHED TO THE INSIDE OF THE CONTROLLER.

PROVIDE SEALING GROMMETS FOR ALL OPEN WIRING EXTENDED FROM DEVICES IN BOXES OR CABINETS WITHIN THE CONTROL.

ALL WIRING SHALL BE NEATLY DRESSED AND SUPPORTED.

LUMINAIRE SCHEDULE

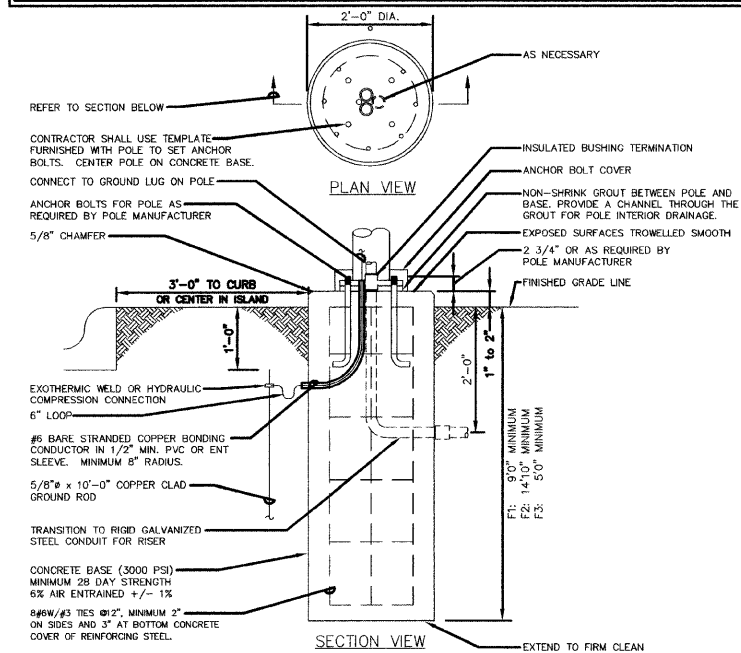
MOUNTING: (MTG)	LAMP TYPE:	LENS/SLOUVER: (LL)
RE- RECESSED	FL- FLUORESCENT	A- 125° ACRYLIC
SP- SUSPENDED	CF- COMPACT FLUORESCENT	B- BLACK BAFFLE
CL- CEILING SURFACE	IN- INCANDESCENT	C- CLEAR ALZAK
WL- WALL	LED- LIGHT EMITTING DIODE	D- PARABOLIC
UC- UNDER CABINET	HS- HIGH PRESSURE SODIUM	F- FRESNEL
CV- COVE	MH- METAL HALIDE	G- TEMPERED GLASS
PL- POLE	LV- LOW VOLTAGE	H- WALL WASHER
O- OTHER (SEE DESCRIPTION)	SMH- SUPER METAL HALIDE	P- POLYCARBONATE
	PSMH- PULSE START METAL HALIDE	K- KSH12, 125° ACRYLIC
	O- OTHER (SEE DESCRIPTION)	L- LOW IRESCENDENT SPECULAR ALUM.
	XL- EXTENDED LIFE 24,000 HR	N- NONE
	XLP- EXTENDED LIFE & OUTPUT 24,000 HOURS 3100 LUMENS	R- HIGH IMPACT DR ACRYLIC
		O- OTHER (SEE DESCRIPTION)
		##BF- BALLAST FACTOR
		HL- HIGH/LOW LEVEL BALLAST
		HP- HIGH PERFORMANCE
		ML- MULTI-VOLTAGE ELECTRONIC
		MV- MULTI-VOLTAGE ELECTRONIC

CATALOG NUMBER SHALL NOT BE CONSIDERED COMPLETE AND MATERIAL SHALL NOT BE ORDERED BY MANUFACTURER AND CATALOG NUMBER ONLY. THE COMPLETE DESCRIPTION AND THE SPECIFICATION SHALL BE COORDINATED WITH THE CATALOG NUMBER TO DETERMINE THE EXACT MATERIAL AND ACCESSORIES TO BE ORDERED. THE FIRST MANUFACTURER LISTED IS THE BASIS FOR DESIGN.

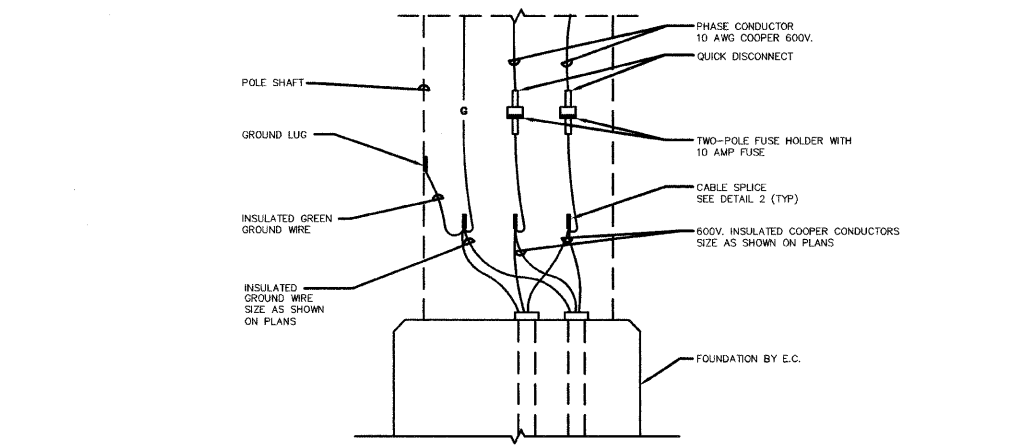
ALL LAMPS FOR THIS PROJECT SHALL BE FURNISHED AND INSTALLED BY THE ELECTRICAL CONTRACTOR UNLESS OTHERWISE NOTED.

ITEM	DESCRIPTION	SIZE	MTG	TYPE	LAMPS QUANTITY & SIZE	VOLTS	LL	APPROVED MANUFACTURER
F1	CAST ALUMINUM SMALL METROPOLIS LUMINAIRE MOUNTED ON 6" COBRA ARM WITH 30" OVERALL HEIGHT. UV STABILIZED POLYCARBONATE TYPE V PRISMATIC. INTERNAL FUSING. BLACK SEMI GLOSS. WET LISTED. 6" OD EXTRUDED FLUTED ALUMINUM SHAFT. LOCATION FOR RECEPTACLE TO BE MOUNTED AT TOP OF POLE. INSTALL BREAKAWAY COUPLINGS.	28" H 16" DIA	PL	MH	1 250W MOGUL BASE	240V	P	BEACON AP-10225-1400 AA-101 AL-32000-GC5-250MH2400-FS2-BKT
F2	TWO CAST ALUMINUM SMALL METROPOLIS LUMINAIRE MOUNTED ON 6" COBRA ARM WITH 30" OVERALL HEIGHT. UV STABILIZED POLYCARBONATE TYPE V PRISMATIC. BLACK SEMI GLOSS. WET LISTED. 6" OD EXTRUDED FLUTED ALUMINUM SHAFT. LOCATION FOR RECEPTACLE TO BE MOUNTED AT TOP OF POLE. INSTALL BREAKAWAY COUPLINGS.	28" H 16" DIA	PL	MH	2 250W MOGUL BASE	240V	P	BEACON AP-10225-1400 AA-101 AL-32000-GC5-250MH2400-FS2-BKT
F3	CAST ALUMINUM SMALL METROPOLIS LUMINAIRE MOUNTED ON 2" COBRA ARM WITH 14" POLE. UV STABILIZED POLYCARBONATE TYPE V PRISMATIC. BLACK SEMI GLOSS. WET LISTED. 6" OD EXTRUDED FLUTED ALUMINUM SHAFT. LOCATION FOR RECEPTACLE TO BE MOUNTED AT TOP OF POLE. INSTALL BREAKAWAY COUPLINGS.	28" H 16" DIA	PL	MH	1 150W MEDIUM BASE	240V	P	BEACON AP-10225-1400 AA-101 AL-32000-GC5-150MH2400-FS2-BKT

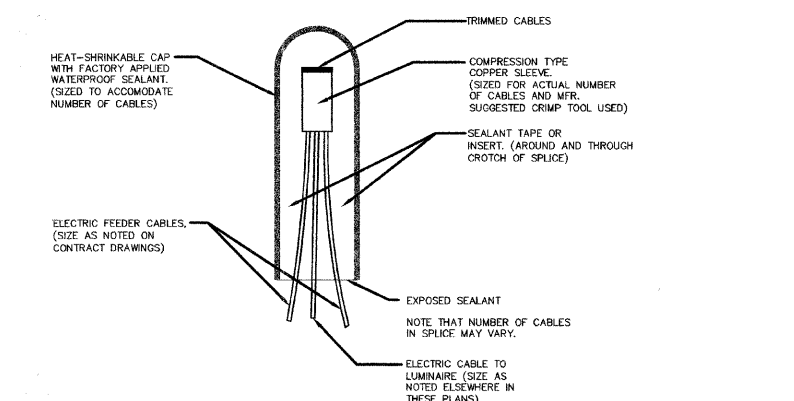
ITEM NO.	SYMBOL	DESCRIPTION	APPROVED MANUFACTURERS
1		RECEPTACLE, GROUND FAULT DUPLEX, 125 VOLT, 20 AMP, SPECIFICATION GRADE, 3 WIRE GROUNDING TYPE, IMPACT RESISTANT THERMOPLASTIC FACE, STRAIGHT BLADE, N.E.M.A. TYPE S-20R, TEST AND RESET BUTTONS IN FACE, WEATHERPROOF COVERPLATE, NEMA 3R RATED WHILE IN USE, CLEAR, NON-LOCKING, STANDARD DEPTH, VERTICAL MOUNT, FEDERAL SPECIFICATION AND U.L. LISTED, 2003 U.L. 943 COMPLIANT.	HUBBELL 6FR-5352ST/WR26WP LEVITON 7889/5977-CL PASS & SEYMOUR 2095/MUC10-C COOPER VOF20/4966
2		HANDHOLE, COMPOSITE POLYMER CONCRETE BODY AND COVER, STAINLESS STEEL HARDWARE, BOLTED NON-SKID COVER RATED FOR 10,000 LB. DESIGN LOAD OCCASIONAL NON-DELIBERATE VEHICULAR TRAFFIC. STACK UNITS TO ACHIEVE DEPTH SHOWN ON PLANS. UNITS IN LANDSCAPED AREAS SHALL BE GREEN IN COLOR. 11"W, 18"L, 18"D	HUBBELL/QUAZITE PC SERIES CARSON INDUSTRIES H SERIES ARMORCAST



3 POLE BASE DETAIL
NO SCALE



1 POLE BASE WIRING DIAGRAM
NO SCALE



2 SPLICING ELECTRIC CABLES
NO SCALE

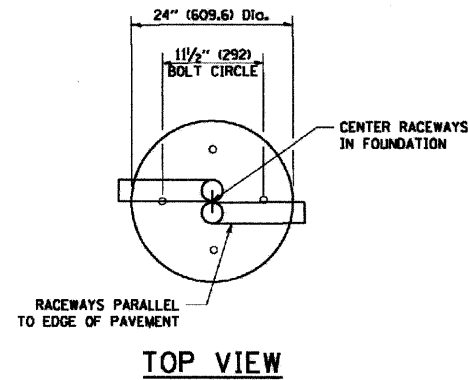
PLANS PREPARED BY: GEWALT HAMILTON ASSOCIATES, INC. Consulting Engineers & Surveyors 850 Forest Ridge Drive Vernon Hills, IL 60061 (847) 478-9700 (847) 478-9701 Fax	REVISIONS NAME DATE
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ILLINOIS DEPARTMENT OF TRANSPORTATION
E11: ELECTRICAL NOTES & SCHEDULES
 DES PLAINES LIGHTING IMPROVEMENTS AND STREETScape DES PLAINES, ILLINOIS
 DRAWN BY: JOP
 DESIGNED BY: MCK
 CHECKED BY: MCK
 SCALE: NTS
 DATE: 8-14-2009

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 www.kjw.com
 PROJECT # 07-0810.00
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 REFERENCE SCALE IN INCHES
 0 1 2 3

LIGHT POLE FOUNDATION DEPTH TABLE
30 FT. (9.144 m) TO 35 FT. (10.668 m) MOUNTING HEIGHT

SOIL CONDITIONS	DESIGN DEPTH "D" OF FOUNDATION	
	SINGLE ARM POLE	TWIN ARM POLE
SOFT CLAY Qu = 0.375 TON/SQ. FT.	11'-0" (3.35 m)	12'-8" (3.85 m)
MEDIUM CLAY Qu = 0.75 TON/SQ.FT	9'-0" (2.74 m)	14'-10" (4.52 m)
STIFF CLAY Qu = 1.50 TON/SQ. FT.	7'-6" (2.29 m)	8'-7" (2.61 m)
LOOSE SAND φ = 34°	9'-6" (2.90 m)	10'-7" (3.22 m)
MEDIUM SAND φ = 37.5°	9'-0" (2.74 m)	9'-10" (2.99 m)
DENSE SAND φ = 40°	8'-3" (2.51 m)	9'-7" (2.91 m)

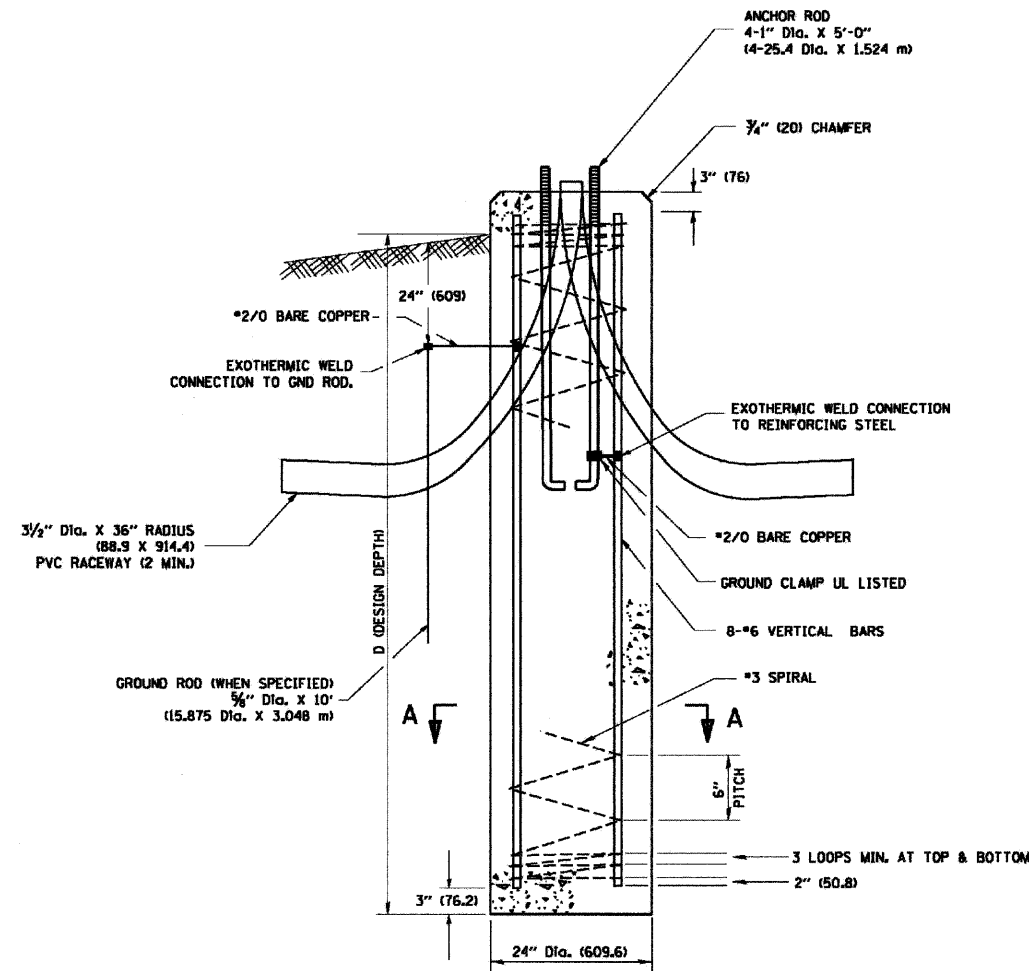


TOP VIEW

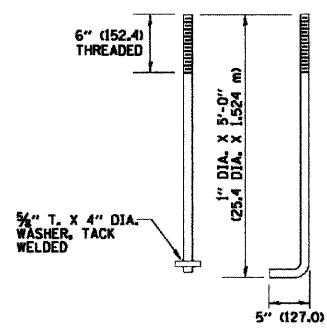
THE FOUNDATION DEPTHS ON THIS DETAIL SHALL APPLY TO ALL ROADWAY POLES ALONG MINER STREET, GRACELAND AVENUE AND LEE STREET

NOTES

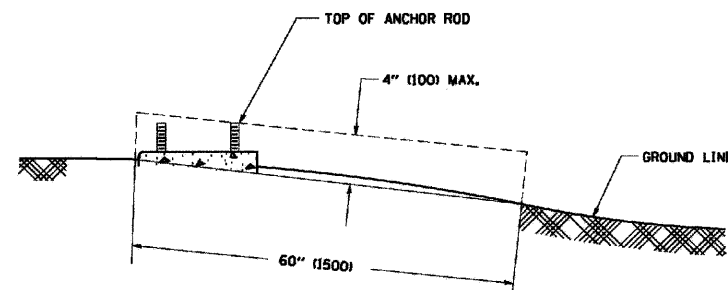
- ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.
- THE ANCHOR RODS AND RACEWAYS SHALL BE PROPERLY SECURED IN PLACE BEFORE THE CONCRETE IS PLACED.
- THE FOUNDATION SHALL NOT PROTRUDE MORE THAN 4 IN. (100 mm) ABOVE THE FINISHED GRADE WITHIN A 60 IN. (1.5 m) CHORD ACROSS THE FOUNDATION, WITH ANCHOR RODS INCLUDED, IN ACCORDANCE WITH AASHTO GUIDELINES. IF THE FOUNDATION HEIGHT, INCLUDING ANCHOR RODS, EXTENDS BEYOND THESE SPECIFIED LIMITS, THE FOUNDATION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. SEE FOUNDATION EXTENSION DETAIL.
- THE HOLE FOR THE FOUNDATION SHALL BE MADE BY DRILLING WITH AN AUGER, OF THE SAME DIAMETER AS THE FOUNDATION. IF SOIL CONDITIONS REQUIRE THE USE OF A LINER TO FORM THE HOLE, THE LINER SHALL BE WITHDRAWN AS THE CONCRETE IS DEPOSITED.
- THE TOP OF THE FOUNDATION SHALL BE CONSTRUCTED LEVEL. A LINER OR FORM SHALL BE USED TO PRODUCE A UNIFORM SMOOTH SIDE TO THE TOP OF THE FOUNDATION. FOUNDATION TOP SHALL BE CHAMFERED 3/4-IN. (20 mm).
- THE CONCRETE SHALL BE CLASS SI. CONCRETE SHALL CURE ACCORDING TO ARTICLE 1020.13 BEFORE LIGHT POLES ARE INSTALLED.
- THE ANCHOR ROD SHALL BE A HOOK ROD TYPE. COLD BENDING OF THE ANCHOR ROD WILL NOT BE ALLOWED. THE RADIUS OF THE HOOK BEND SHALL NOT BE LESS THAN 4 TIMES THE NOMINAL DIAMETER OF THE ANCHOR ROD. A TACK WELDED ANCHOR ROD MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER.
- THE ANCHOR RODS SHALL BE ACCORDING TO ASTM F1554 GRADE 725 (GRADE 105). NUTS SHALL BE HEXAGON NUTS ACCORDING TO ASTM A 194 2H OR ASTM A 563 DH, AND WASHERS SHALL BE ACCORDING TO ASTM F 436.
- ANCHOR RODS, NUTS AND WASHERS SHALL BE COMPLETELY GALVANIZED BY EITHER THE HOT-DIPPED PROCESS CONFORMING WITH AASHTO M 232, THE MECHANICAL PLATING METHOD CONFORMING TO AASHTO M 298, CLASS 50 WITH A MAXIMUM COATING THICKNESS OF 150 UMG MILS) OR THE ELECTROLYTIC PROCESS ACCORDING TO ASTM F 1136.
- THE ANCHOR RODS SHALL BE THREADED A MINIMUM OF 6 INCHES (150 mm) WITH A MINIMUM OF 3 INCHES (75 mm) OF THREADED ANCHOR ROD EMBEDDED IN THE FOUNDATION.
- ANCHOR RODS SHALL PROJECT 2 3/4" (69.9 mm) ABOVE THE TOP OF THE FOUNDATION. IF BREAKAWAY COUPLINGS ARE SPECIFIED, THE CONTRACTOR SHALL CAREFULLY COORDINATE THE ANCHOR ROD PROJECTION WITH THE INSTALLATION REQUIREMENTS OF THE BREAKAWAY COUPLINGS.
- THE CONTRACTOR SHALL USE A #3 SPIRAL AT 6" (152.4 mm) PITCH OR MAY SUBSTITUTE #3 TIES AT 12" (304.8 mm) O.C. WITH THE APPROVAL OF THE ENGINEER.
- THE CABLE TRENCHES AND FOUNDATION SHALL BE BACK FILLED AND COMPACTED AS SPECIFIED BEFORE THE LIGHT POLE IS ERECTED.
- THE RACEWAYS SHALL PROJECT 1" (25.4 mm) ABOVE THE TOP OF THE FOUNDATION.



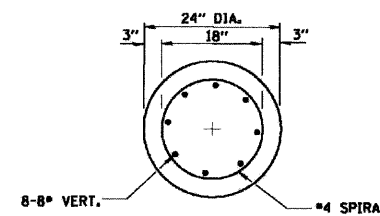
FOUNDATION DETAIL



ANCHOR BOLT DETAIL



FOUNDATION EXTENSION DETAIL



SECTION A-A

FILE NAME = W:\data\std\22x34\be388.dgn	USER NAME = geglianob	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	LIGHT POLE FOUNDATION		F.A. RTE. *	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -		30' (9.144 m) TO 35' (10.668 m) M.H. 1 1/2" (292 mm) BOLT CIRCLE		06-00199-00-LS	COOK	19	18	
		CHECKED -	REVISED -		SCALE: NONE	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	CONTRACT NO. 63041		
		DATE -	REVISED -		FED. ROAD DIST. NO. 1 (ILLINOIS) FED. AID PROJECT ARA-0001 (795)						

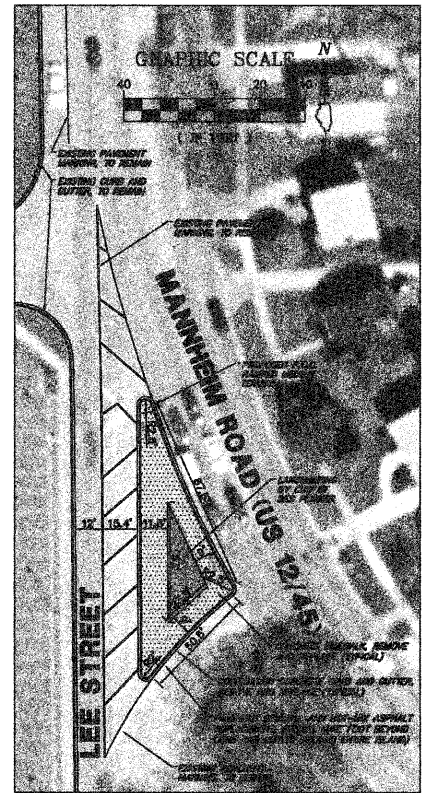
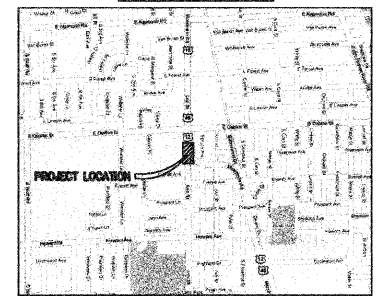
SCHEDULE OF QUANTITIES

Item No.	Code No.	Items	Unit	Quantity
2	20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	15
3	20703220	POROUS GRANULAR EMBANKMENT	CU YD	15
4	31101200	3/4" SUB-BASE GRANULAR MATERIAL, TYPE B 4"	SQ YD	340
5	35200600	EARTH EXCAVATION	CU YD	40
6	35300500	PORTLAND CEMENT CONCRETE BASE COURSE 10"	SQ YD	31
7	40300100	BITUMINOUS MATERIALS (PRIME COAT)	GAL	10
8	40900050	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	4
9	42400300	PORTLAND CEMENT CONCRETE SIDEWALK 6 INCH	SQ FT	2058
10	44000100	PAVEMENT REMOVAL	SQ YD	31
11	44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	275
12	44000600	SIDEWALK REMOVAL	SQ FT	2085
13	60603800	COMBINATION CONCRETE CURB AND GUTTER, TYPE B 6.12	FOOT	275
14	60629900	P.C.C. RAMPED MEDIAN TERMINAL	EACH	1
26	X0301766	DRILL AND GROUT #6 TIE BARS	EACH	280
29	Z0062450	SAWING PAVEMENT (FULL DEPTH)	FOOT	290

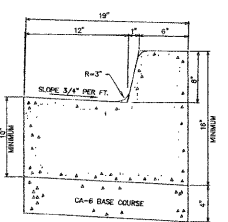
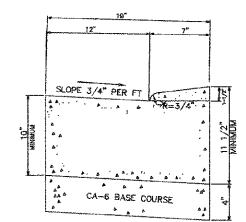
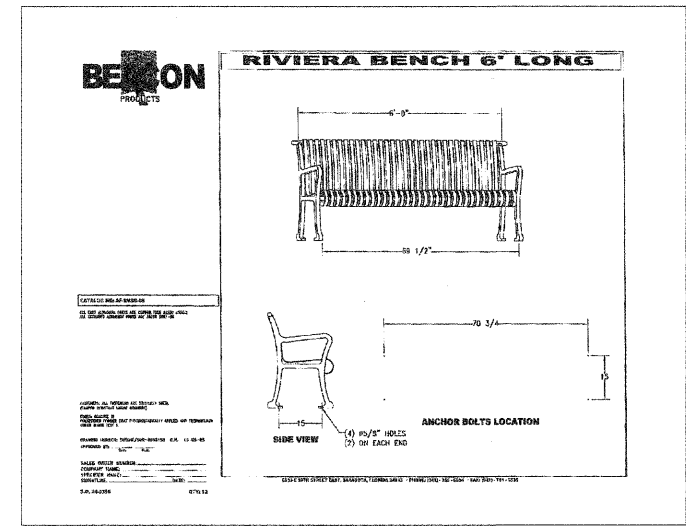
IDOT HIGHWAY STANDARDS

- 606301: PCC ISLANDS AND MEDIANS
- 701601: URBAN LANE CLOSURE, MULTILANE, 1W OR 2W WITH NONTRAVERSABLE MEDIAN
- 701605: URBAN LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
- 701701: URBAN LANE CLOSURE, MULTILANE INTERSECTION
- 701901: TRAFFIC CONTROL DEVICES

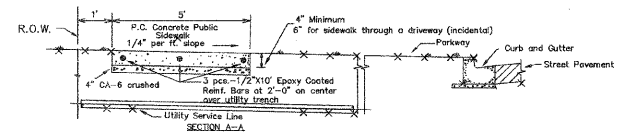
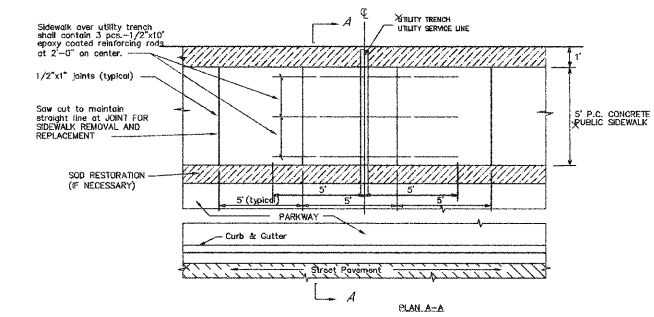
LOCATION MAP



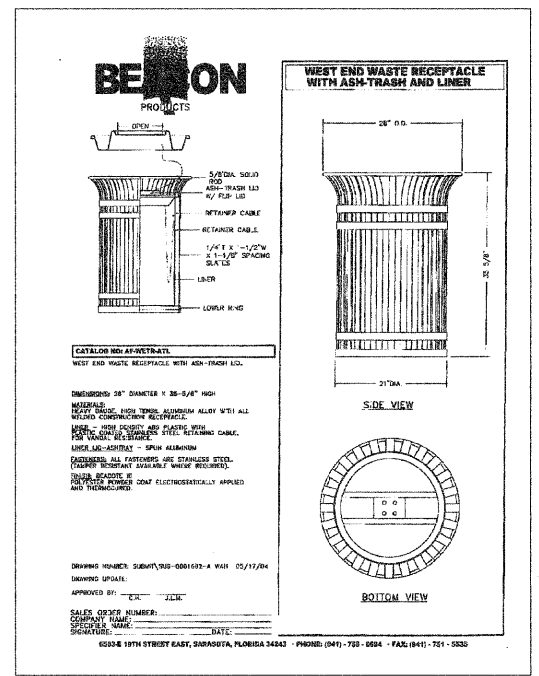
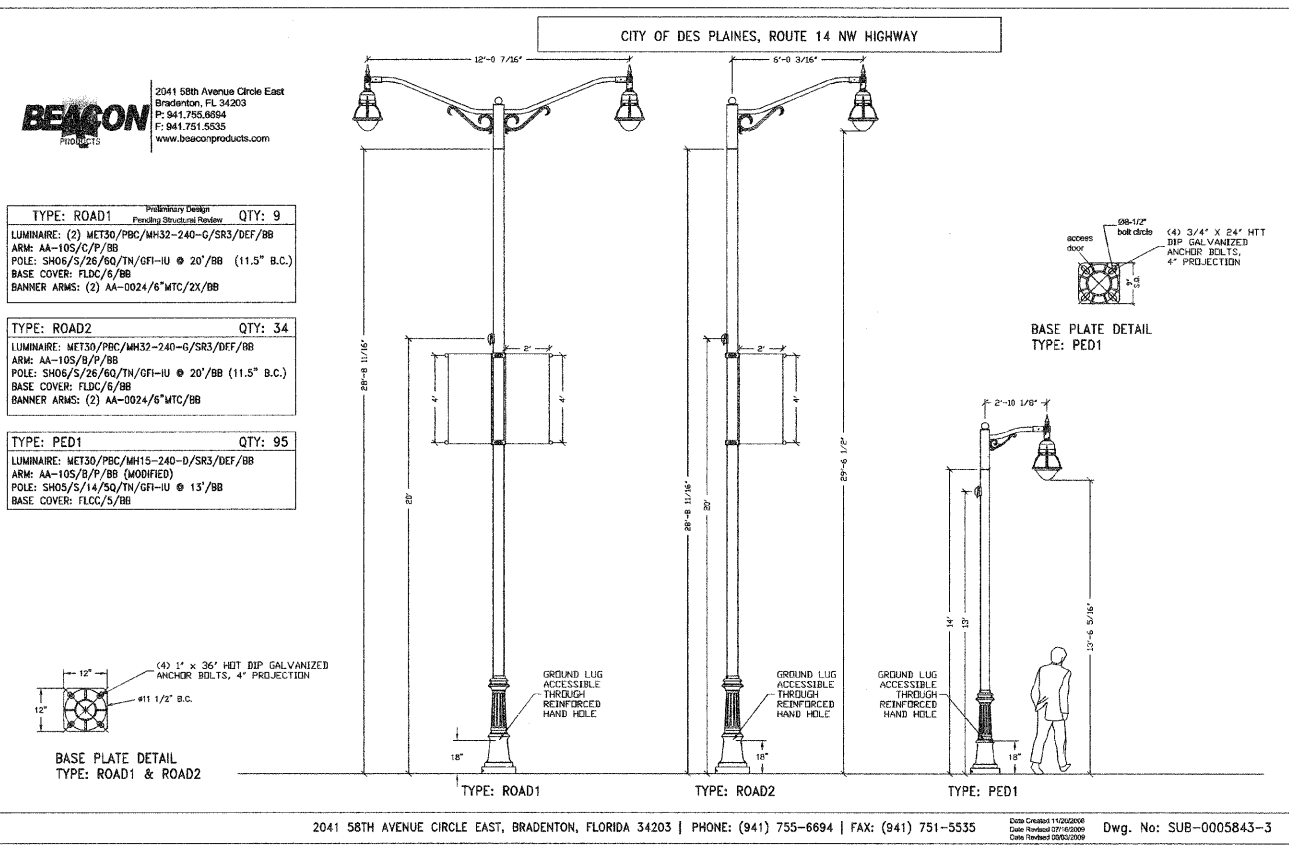
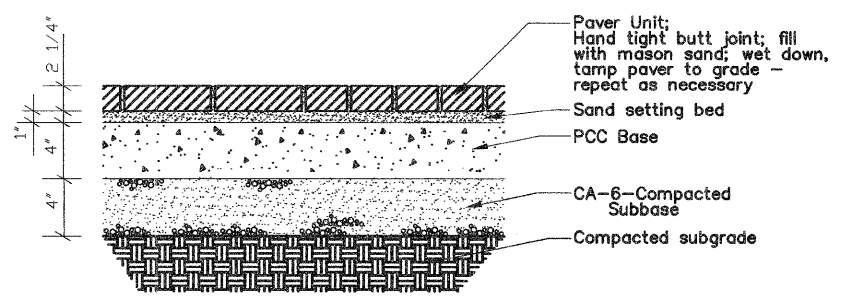
LEE STREET ISLAND



CONCRETE PUBLIC SIDEWALK DETAIL



BRICK PAVING DETAIL IN CITY R.O.W.



PLANS PREPARED BY:
GEWALT HAMILTON ASSOCIATES, INC.
 Consulting Engineers & Surveyors
 850 Forest Ridge Drive
 Vernon Hills, IL 60061
 (847) 478-9700
 (847) 478-9701 Fax

REVISIONS	
NAME	DATE

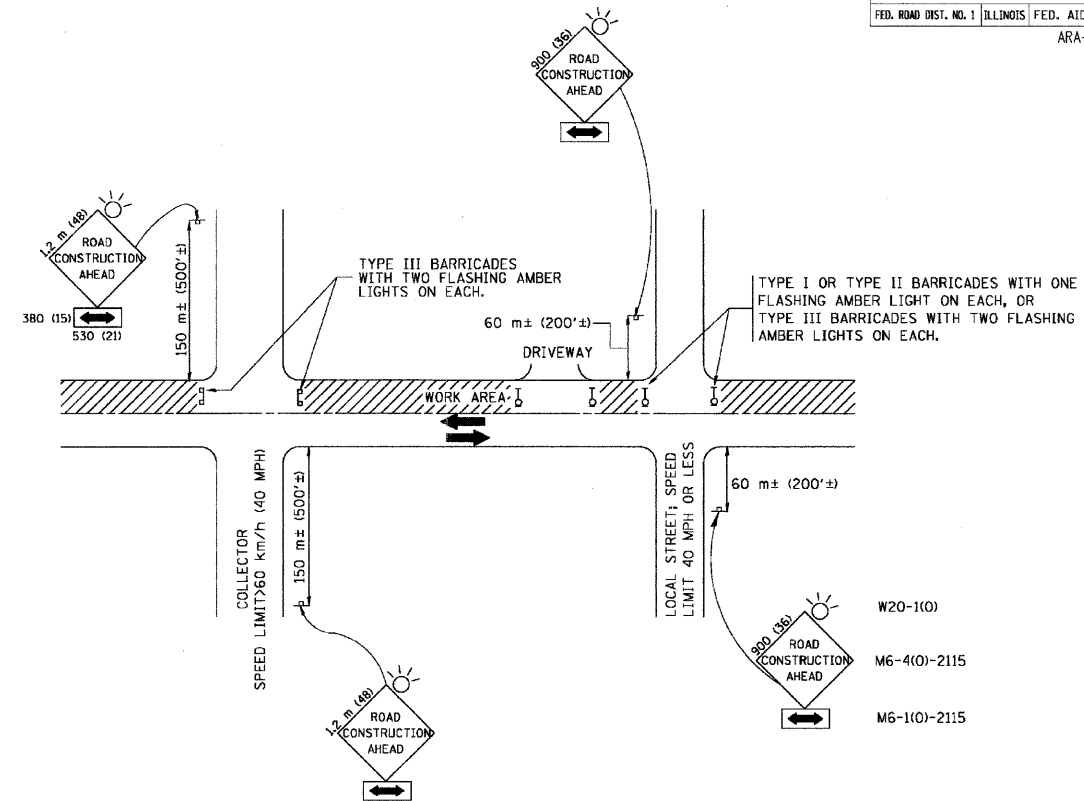
ILLINOIS DEPARTMENT OF TRANSPORTATION
LIGHTING & STREETScape DETAILS

**DES PLAINES LIGHTING IMPROVEMENTS AND STREETScape DETAILS
 DES PLAINES, ILLINOIS**

DRAWN BY: DRS
 DESIGNED BY: AJP
 CHECKED BY: BLS

SCALE: NTS
 DATE: 8-14-2009

F.A. SHEETS NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	06-00199-00-LS	COOK	19	19A
STAL.	TO STA.			
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT	ARA-0001 (795)	
63041				



TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

NOTES:

A. FOR NO LANE RESTRICTION ON THE SIDE ROAD OR DRIVEWAYS

1. SIDE ROAD WITH A SPEED LIMIT OF 60 km/h (40 MPH) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - a) ONE **ROAD CONSTRUCTION AHEAD** SIGN 900x900 (36x36) WITH A FLASHER AND FLAG MOUNTED ON IT APPROXIMATELY 60 m (200') IN ADVANCE OF THE MAIN ROUTE.
 - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
2. SIDE ROAD WITH A SPEED LIMIT GREATER THAN 60 km/h (40 MPH) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
 - a) ONE **ROAD CONSTRUCTION AHEAD** SIGN 1.2 m x 1.2 m (48x48) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 150 m (500') IN ADVANCE OF THE MAIN ROUTE.
 - b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION OF THE CLOSED PORTION.
3. WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).

B. FOR A LANE CLOSURE ON A SIDE ROAD OR DRIVEWAY:

- USE APPLICABLE PORTIONS OF THE TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES (STD. 701501, STD. 701606 OR THE APPROPRIATE STANDARD). THE SPACING OF SIGNS AND BARRICADES SHALL BE ADJUSTED FOR FIELD CONDITIONS AS DIRECTED BY THE ENGINEER. THE DIRECTIONAL ARROW SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE SIDE ROAD LANE CLOSURE.
- C. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAY UNLESS OTHERWISE NOTED.
 - D. THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCIDENTAL TO THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

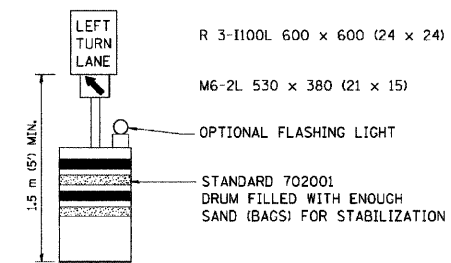
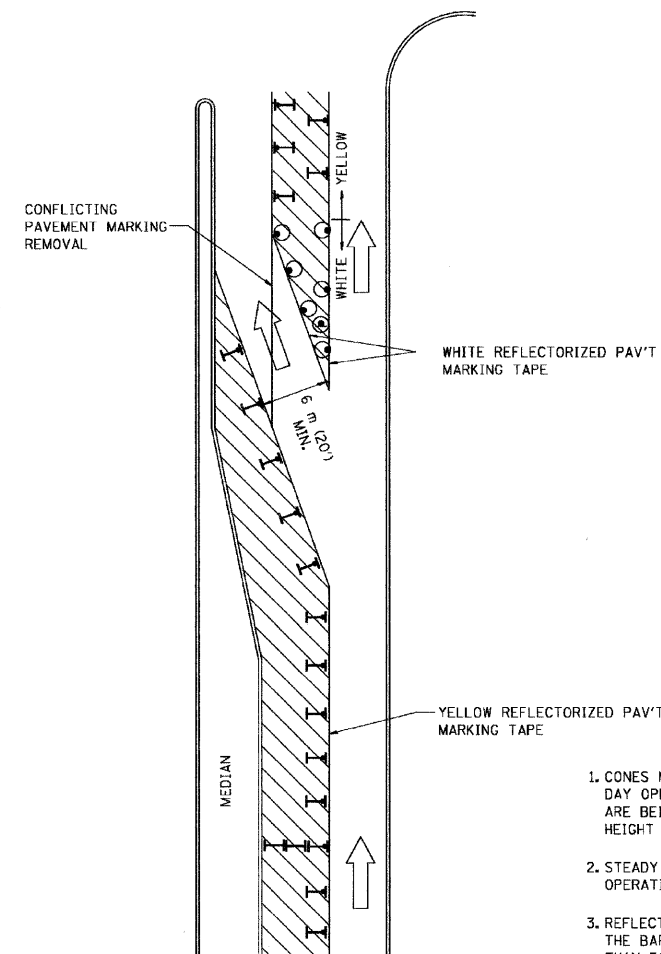
REVISIONS	
NAME	DATE
LHA	6/89
T. RAMMACHER	09/08/94
J. OBERLE	10/18/95
A. HOUSEH	03/06/96
A. HOUSEH	10/15/96
T. RAMMACHER	01/06/00

ILLINOIS DEPARTMENT OF TRANSPORTATION
 TRAFFIC CONTROL AND PROTECTION
 FOR
 SIDE ROADS, INTERSECTIONS, AND
 DRIVEWAYS

SCALE: VERT. _____ DRAWN BY _____
 HORIZ. _____ CHECKED BY _____
 DATE 10/18/2002

REVISION DATE: 01/06/00

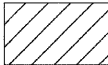





F. A. SHEET	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	06-00199-00-L3	COOK	19	19B
STA.	TO STA.			
FED. ROAD DIST. NO.	NUMBER	FED. AID PROJECT		
		ARA-0001 (795)		
		63041		



GENERAL NOTES

- CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 710 (28) IN HEIGHT. WHEN CONES ARE BEING USED, THE "LEFT TURN LANE" SIGN MAY BE SKID MOUNTED AT A MINIMUM HEIGHT OF 1.5 m (5').
- STEADY BURNING LIGHTS WILL NOT BE REQUIRED ON BARRICADES OR DRUMS FOR DAY OPERATIONS. ALL LIGHTS SHALL BE MONODIRECTIONAL.
- REFLECTORIZED TEMPORARY PAVEMENT MARKING TAPE SHALL BE PLACED THROUGHOUT THE BARRICADED AREA OF EACH TURN BAY WHERE THE CLOSURE TIME IS GREATER THAN FOURTEEN DAYS.
- THIS APPLICATION ALSO APPLIES WHEN WORK IS BEING PERFORMED IN THE RIGHT LANE(S) AND THE RIGHT TURN BAY IS TO REMAIN OPEN. UNDER THIS CONDITION, "RIGHT TURN LANE" R3-100 600 x 600 (24 x 24) AND M6-2R 530 x 380 (21 x 15) SHALL BE USED.
- THESE CONTROLS SHALL SUPPLEMENT MAINLINE TRAFFIC CONTROL FOR LANE CLOSURES.
- LONGITUDINAL DIMENSIONS MAY BE ADJUSTED TO FIT FIELD CONDITIONS.
- FORM BT 725 IS REQUIRED.
- TRAFFIC CONTROL AND PROTECTION AT TURN BAYS (TO REMAIN OPEN TO TRAFFIC) SHALL BE INCLUDED IN THE COST SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

LEGEND

-  WORK AREA
-  LANE OPEN TO TRAFFIC
-  TYPE I OR II BARRICADE WITH STEADY BURN LIGHT
-  DRUM WITH STEADY BURN LIGHT
-  DRUM WITH SIGN (WITH OPTIONAL FLASHING LIGHT) SEE DETAIL
-  TYPE I OR II CHECK BARRICADE WITH FLASHING LIGHT

All dimensions are in millimeters (Inches) unless otherwise shown.

ILLINOIS DEPARTMENT OF TRANSPORTATION
TRAFFIC CONTROL AND PROTECTION
AT TURN BAYS
(TO REMAIN OPEN TO TRAFFIC)

REVISIONS	
NAME	DATE
T. RAMMACHER	09/08/94
A. HOUSEH	11/07/95
A. HOUSEH	10/12/96
T. RAMMACHER	01/06/00

SCALE: NONE
DATE: 10/18/2002

DRAWN BY
CHECKED BY: LHA
TC-14

REVISION DATE: 01/06/00

DATE TIME
DGN SPEC
VPTC14