

APPLICATION AND AGREEMENT FOR USE OF
HIGHWAY RIGHT-OF-WAY FOR UTILITIES ACCOMMODATION

FOR DEPARTMENT USE ONLY

Permit Number <u>914-2014-014</u>	Highway Number <u>92</u>	County <u>WARREN</u>
DOT Project Number <u>NHSX-092-56D--3H-91</u>		Expiration/Completion Date <u>10-21-2014</u>

APPLICANT (INDIVIDUAL OR COMPANY)

First Name	Middle	Last Name	Phone Number	Ext.
Company Name Indianola Municipal Utilities			Phone Number (515) 961-9444	Ext.
Street Address P.O. Box 356, 111 South Buxton St.		City/Town Indianola	State IA	ZIP Code 50125

INSTALLATION TO BE ACCOMMODATED

Approval is hereby requested to enter within the state highway right-of-way for the accommodation of a utility installation as detailed on the attachments and further described as follows.

The installation shall consist of:

Overhead cable for electric transmission at 69 KV run longitudinally south of Hwy 92 within DOT ROW.

Ten poles will be set on DOT ROW.

Conductors:

One shield wire top (steel 3/8" 7 strand, class B galvanized, EHS)

Three 69 KV nominal wire vertically - tangentially arranged (T-2-336.4 ACSR, Bare)

Traffic control plan: TC-202 for Hwy 92 while installing the poles and down guys if necessary..

See drawing E8958-P12 Thru E8958-P15 for the plan view.

See drawings T69-021, T69-022, T69-026A, T69-064 for pole details.

and shall be located as shown on the detailed plan attached hereto. (See current Iowa Department of Transportation Utility Accommodation Policy for submittal of detailed plan requirements.)

WORK SITE LOCATION

The proposed work as described above is located in Section 27, 28, Twp. 76N
Range 24W on Highway No. Hwy. 92 generally located .25 mile (miles) west
(direction) from Indianola, IA
specifically located as being from 127.95 (Milepost #) and 361+75 (Highway Station)
to 128.38 (Milepost #) and 384+70 (Highway Station) on the South side of highway.

Applicant Signature and Agreement

I have read this Agreement, understand its provisions, and agree to abide by it and the utility accommodation policy of the Iowa Department of Transportation

Name of Agent (Print or Type) Bob Miller	Agent's Signature <i>[Signature]</i>	Title <u>Electric Superintendent</u>
Name of Owner (Print or Type) Indianola Municipal Utilities	Date <u>4/28/14</u>	

CITY ACTION (IF PROPOSED WORK IS WITHIN AN INCORPORATED CITY, CITY ACTION IS REQUIRED)

"The undersigned city joins in the grants embodied in the above permit executed by the Iowa Department of Transportation on condition that all of the covenants and undertakings therein running to the Iowa Department of Transportation shall inure to the benefit of the undersigned city and recommends action on said permit application as noted below by the delegated city official".

Recommend Approval Do Not Recommend Approval None Required

Handwritten Signature <i>[Signature]</i>	Title <u>Dir. of Com. Dev.</u>	Date <u>3-19-14</u>
Type or Print Name <u>JAMES BOWMAN</u>	Authorized Official for the City of Indianola IA	

COUNTY ACTION (IF PROPOSED WORK CROSSES COUNTY RIGHT-OF-WAY, COUNTY ACTION IS REQUIRED)

"The undersigned county joins in the grants embodied in the above permit executed by the Iowa Department of Transportation on condition that all of the covenants and undertakings therein running to the Iowa Department of Transportation shall inure to the benefit of the undersigned county and recommends action on said permit application as noted below by the delegated county official".

Recommend Approval Do Not Recommend Approval None Required

Handwritten Signature <i>[Signature]</i>	Title <u>Warren County Engineer</u>	Date <u>3-19-14</u>
Type or Print Name <u>Brian Morrissey</u>	Authorized Official for the County of <u>Warren</u>	

FOR DEPARTMENT USE ONLY

Special Requirements - in addition to the stipulations below, the following special requirements shall apply to this permit:

FEDERAL HIGHWAY ADMINISTRATION ACTION (WHEN REQUIRED)

Recommend Approval Do Not Recommend Approval None Required

Authorized FHWA Representative Signature

Date

DEPARTMENT OF TRANSPORTATION FINAL ACTION

Application Approved Application Denied

Authorized Highway District Representative
Dale O'Brien

Permit Number: 91U-2014-014

Signature *D. O'Brien*

Date *4-24-2014*

Notice of intention to start construction or maintenance activities on the highway right-of-way shall be made to:

Local DOT Contact Person (Type or Print Name)
Scott Sommers, P.E.

Phone Number
641-774-5056

Street Address
21922 480th St

City/Town
Chariton

State ZIP Code
IA 50049

AGREEMENTS

The utility company, corporation, applicant, permit holder or licensee, (hereinafter referred to as the Permit Holder) agrees with the Iowa Department (hereafter referred to as Department) that the following stipulations and those special requirements as listed on this page shall govern under this permit.

A. General

1. The installation shall meet the requirements of local municipal, county, state, and federal Iowa franchise rules and regulations, regulations and directives of the Iowa State Commerce Commission, the Department of Natural Resources, all rules and regulations of the Department and any other laws or regulations applicable.
2. The Permit Holder shall be fully responsible for any future adjustments of the facilities within the established highway right-of-way caused by highway construction or maintenance operations.
3. Non-compliance with any of the terms of the Department's policy, permit or agreement, may be considered cause for shut-down of utility construction operations or withholding of relocation reimbursement until compliance is assured, or revocation of the permit. The cost of any work caused to be performed by the State in removal of non-complying construction will be assessed against the Permit Holder.
4. The work described in this permit shall be completed as proposed in compliance with the stipulations and special requirements within one year from the date Department approval is received for said request. Failure on the part of the Permit Holder to abide by the stipulations or in constructing the work described as stipulated and within the time frame stated shall render this agreement and request null and void. The Permit Holder also agrees to save the State of Iowa and the Department harmless of any damages or losses that may be sustained by any person, or persons, on account of the conditions and requirements of this agreement.

B. Construction and Maintenance

1. The location, construction and maintenance of the utility installation covered by this application shall be in accordance with the current Department's Utility Accommodation Policy.
2. Before beginning any work in the highway right-of-way, it is the responsibility of the Permit Holder to obtain an easement from the drainage district if necessary. The Department assumes no responsibility for advising the Permit Holder of each location of a drainage district crossing. It is the Permit Holder's responsibility to locate these crossings and obtain any necessary easements or permission from the drainage district. See Code of Iowa, Chapter 468 for additional information.
3. A copy of the approved permit shall be available on the job site at all times for examination by Department officials.
4. All traffic control including sign placement and flagging are the responsibility of the Permit Holder. The original placement of signs and their removal upon completion of the work shall be accomplished by the Permit Holder.
5. Operations in the construction and maintenance of said utility installation shall be carried on in such a manner as to cause minimum interference to or distraction of traffic on said highway.
6. After November 24, 2008, all personnel in the highway right-of-way shall wear ANSI 107 Class 2 apparel at all times when exposed to traffic or construction equipment.

C. Liability

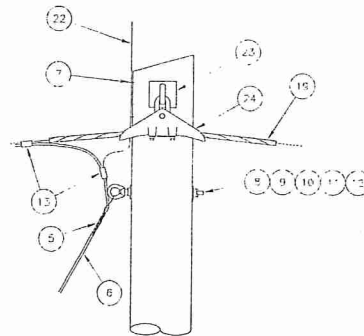
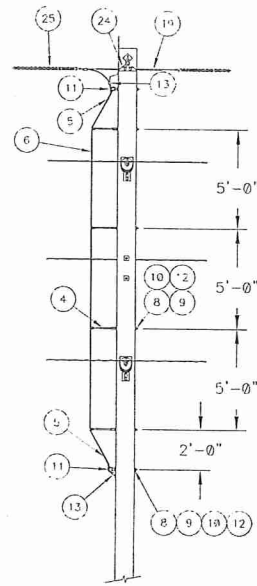
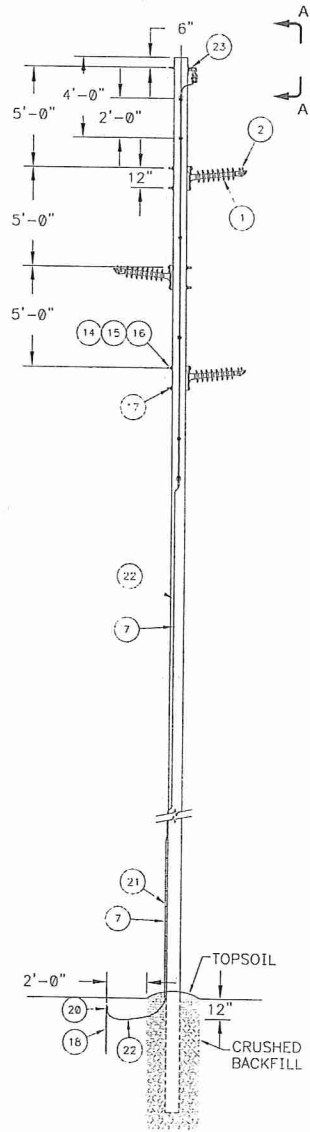
1. The Permit Holder shall indemnify and save harmless the State of Iowa, its agencies and employees, from any and all causes of action, suits at law or in equity, for losses, damages, claims or demands, and from any and all liability and expense of whatsoever nature, arising out of or in connection with the Permit Holder's use or occupancy of the public highway.
2. The state of Iowa and the Department assume no responsibility for damages to the Permit Holder's property occasioned by any construction or maintenance operations on said highway if Permit Holder has been notified in accordance with stipulation number D.3. or if the facilities are not located in accordance with this permit.

3. The State of Iowa, its agencies or employees, will be liable for expense incurred by the Permit Holder in its use and occupancy of the highway right-of-way only when negligence of the State, its agencies or employees, is the sole proximate cause of such expense. Whether in contract, tort or otherwise, the liability of the State, its agencies and employees, is limited to the reasonable, direct expense to repair damaged utilities, and in no event will such liability extend to loss of profits or business, indirect, special, consequential or incidental damages.

D. Notification

1. The Permit Holder is responsible for contacting Iowa One-Call (1-800-292-8989) and request the location of any underground utilities forty-eight (48) hours before excavation. Before beginning work in the highway right-of-way, the Permit Holder shall also contact any other known utility located in the area of the proposed work.
2. The Permit Holder agrees to give the Department forty-eight hours notice of its intention to start construction or to perform routine maintenance on the highway right-of-way. Said notice shall be made to the contact person whose name is shown on this page.
3. The Department shall give the Permit Holder at least forty-eight hours notice of any proposed construction or maintenance work, on either existing or newly acquired right-of-way when the proposed work will be ten feet of a utility location as previously approved by the Department by permit or written agreement. The Permit Holder shall be responsible within this time frame to arrange to protect its facilities.

Disclosure Statement: The information furnished on this form will be used by the Department of Transportation to determine approval or denial of the application. Failure to provide all information will result in denial of the application. Information furnished is public information and copies may be provided to the public upon request.



VIEW A-A
NOT TO SCALE

T69-021

69-KV TANGENT STRUCTURE, T2 CONDUCTOR

ITEM	QTY	MATID	UNIT	DESCRIPTION
1	3	16601	EA	INSULATOR, HORIZ LINE POST, 69 KV, GAIN BASE, CLAMP TOP, 1325 LB RCL
2	3	16192	EA	CLAMP, TRUNNION, CLAMP TOP, 266-T2 - 477-T2 ACSR
3		99999		NOT USED
4	4	16610	EA	INSULATOR, DOWN LEAD, FIBERGLASS, 5/8" X 12"
5	2	10791	EA	GRIP, DEAD-END, PREFORMED, 1/0 ACSR, AAC, AAC
6	25	05023	FI	CONDUCTOR, #1/0 ACSR, BARE
7	40	12550	EA	SINGLE, GROUND WIRE, 2" X 5/8"
8	6	12103	FA	BOLT, DOUBLE ARMING, 5/8" GALVANIZED, VARIOUS LENGTHS
9	12	12503	FA	WASHER, SQUARE, FLAT, 5/8" GALVANIZED
10	6	12403	EA	LOCKNUT, 5/8" GALVANIZED
11	2	12453	EA	EYE NUT, 5/8" GALVANIZED
12	6	12509	EA	WASHER, TWIN COILS, 5/8"
13	3	14205	EA	CONNECTOR, AL COMPRESSION, H-TAP, VARIOUS SIZES
14	6	12004	EA	BOLT, MACHINE, 3/4" GALVANIZED, VARIOUS LENGTHS
15	6	12506	EA	WASHER, SQUARE, CURVED, GALVANIZED, 3/4"
16	6	12404	EA	LOCKNUT, 3/4" GALVANIZED
17	6	12510	EA	WASHER, TWIN COILS, 3/4"
18	1	10402	CA	ROD, GROUND, 5/8" X 10', COPPERWELD, THREADED SECTIONAL
19	1	10790	CA	ROD, ARMOR, 3/8" IIS/CHS
20	1	10406	EA	CLAMP, 5/8" GROUND ROD TO #8 - 1/0 CU
21	8	10410	FT	MOLDING, GROUND WIRE, 1/2" PLASTIC
22	50	05041	FT	WIRE, #4 SOLID COPPER, SD, BARE
23	1	10150	EA	SUPPORT, SHIELD WIRE, SIDE MOUNTED, 5/8" X 12"
24	1	10541	EA	CLAMP, SUSPENSION, 3/8" EHS (WITH ARMOR ROD)
25	2	10761	FA	DAMPER, VIBRATION, SPIRAL, 0.327-0.461"

PRELIMINARY
NOT FOR CONSTRUCTION

REV	DATE	DESIG	DRFR	APP	ISSUED FOR	DESCRIPTION
A	03-13-13	PAE	AWB	APP	ISSUED FOR	

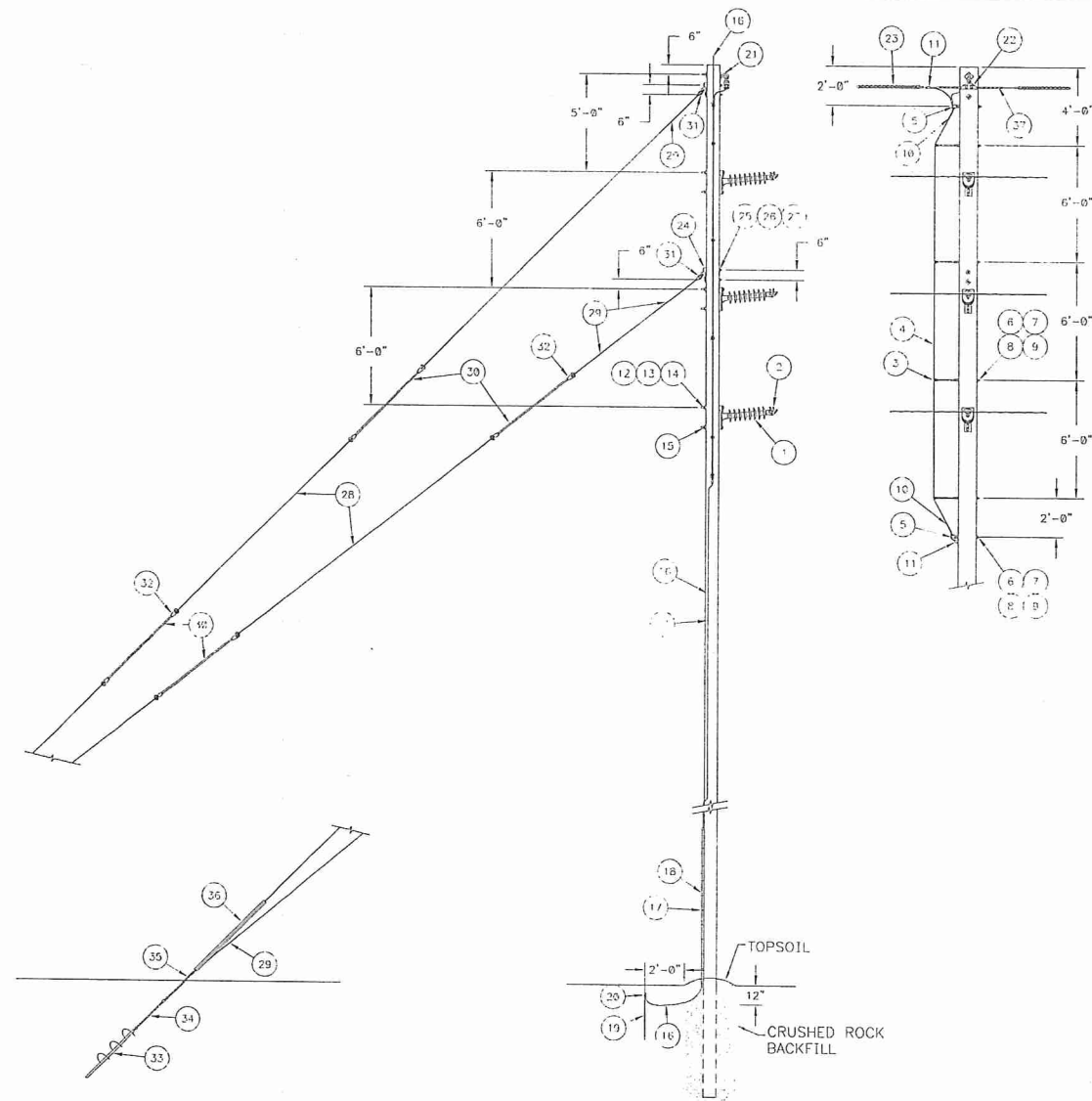
P & E ENGINEERING, LTD.
POWER SYSTEM ANALYSIS AND DESIGN
215 S. 5th
PO Box 420
Lakeland, FL 34002

DATE 05-16-12
DESIGNED PRL
DRAWN MRB
APPROVED JWE
APPROVED ARP

69KV TANGENT STRUCTURE T2 CONDUCTOR

SCALE: NONE
REV A

DWG NO
T69-021



T69-022
69KV, LIGHT ANGLE, GUYED, T2 CONDUCTOR

ITEM	QTY	MATID	UNIT	DESCRIPTION
1	3	16192	EA	INSULATOR, HORZ LINF POST, 69 KV, GAIN BASF, CLAMP TOP, 1225 LB RCL
2	3	16192	EA	CLAMP, TRIUNION, CLAMP TOP, 266-T2 - 477-T2 ACSR
3	4	16610	EA	INSULATOR, DOWN LEAD, FIBERGLASS, 5/8" x 12"
4	25	05823	-I	CONDUCTION, #1/8 ACSR, BARE
5	2	12453	EA	EYE HUII, 5/8" GALVANIZED
6	6	12103	EA	BOLT, DOUBLE ARWING, 5/8" GALVANIZED, VARIOUS LENGTHS
7	12	12033	EA	WASHER, SQUARE, FLAT, 5/8" GALVANIZED
8	6	12403	EA	LOCKNUT, 5/8" GALVANIZED
9	6	12509	EA	WASHER, TW'N COILS, 5/8"
10	2	10787	EA	GRIP, DEAD-END, PREFORMED, 1/8 ACSR, AAC, AAC
11	3	14205	EA	CONNECTOR, AL COMPRESSION, H-TAP, VARIOUS SIZES
12	6	12804	EA	BOLT, MACHINE, 3/4" GALVANIZED, VARIOUS LENGTHS
13	6	12586	EA	WASHER, SQUARE, CURVED, GALVANIZED, 3/4"
14	6	12404	EA	LOCKNUT, 3/4" GALVANIZED
15	6	12516	EA	WASHER, TW'N COILS, 3/4"
16	59	05847	EA	WIRE, #4 SOLID COPPER, SD, BARE
17	49	12558	EA	STAPLE, GROUND WIRE, 2" x 5/8"
18	8	10410	EA	MOLDING, GROUND WIRE, 1/2" PLASTIC
19	1	10402	EA	ROD, GROUND, 5/8" x 10", COPPERWELD, THREADED SECTIONAL
20	1	10406	EA	CLAMP, 5/8" GROUND ROD TO #8 - 1/8 CU
21	1	10168	EA	SUPPORT, SHIELD WIRE, SIDE MOUNTED, 5/8" x 12"
22	1	10547	EA	CLAMP, SUSPENSION, 3/8" EHS (WITH ARMOR ROD)
23	2	10761	EA	DAMPER, VIBRATION, SPIRAL, 0.327-0.461"
24	2	10201	EA	PLATE, POLE EYE, 6"
25	4	12005	EA	BOLT, MACHINE, 7/8", VARIOUS LENGTHS
26	4	12507	EA	WASHER, SQUARE, CURVED, GALVANIZED, 7/8"
27	4	12405	EA	LOCKNUT, 7/8", GALVANIZED
28	120	05707	EA	WIRE, GUY, 7/16", 7 STR, CLASS A GALVANIZED, EHS STEEL
29	12	05722	EA	GRIP, GUY, PREFORMED, 7/16"
30	4	16502	EA	INSULATOR, GUY, FIBERGLASS, 54", 36,000 POUND, 3/4" PINS, ONE ROLLER
31	2	10901	EA	THIMBLE CLEVIS, 40,000 POUND
32	4	16511	EA	ROLLER, GUY, 13/16" x 2-3/8" DIA, 3/4" PIN
33	1	10252	EA	ANCHOR, 8-10-12" TRIPLE HELIX
34	2	10279	EA	ROD, EXTENSION, 1-1/2" x 5"
35	1	10262	EA	ROD, ANCHOR, 1 1/2" ADAPTER WITH TRIPLE EYE
36	1	10350	EA	GUARD, GUY
37	1	10798	EA	ROD, ARMOR, 3/8" HS/EHS

69KV LIGHT ANGLE-GUYED
T2 CONDUCTOR

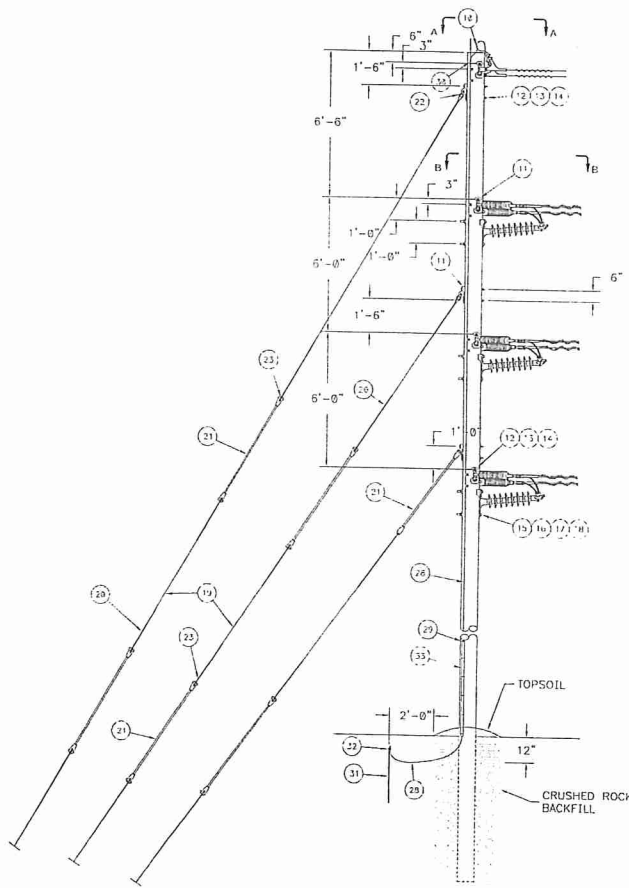
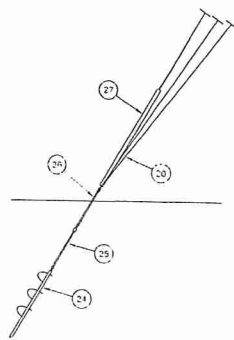
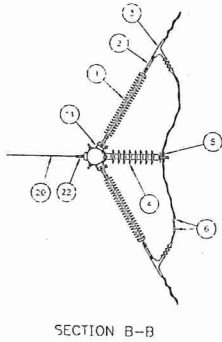
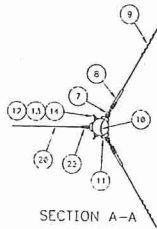
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A	07-30-13	PAE	MJB	JAE	ORIGINAL DESIGN

P & E ENGINEERING CO.
POWER SYSTEM ANALYSIS AND DESIGN
245 E. 5th
P.O. Box 120
Cedar Rapids, IA 52402
563-398-8500
FAX 563-398-3133
E-MAIL: info@peco.com

DATE 05-16-12
DESIGNED PAE
DRAWN MJB
APPROVED JWE
APPROVED ARP

69KV LIGHT ANGLE-GUYED T2 CONDUCTOR

SCALE: NONE
REV A
DWG NO T69-022



169-026A
69 KV DOUBLE DEADEND, MEDIUM ANGLE, BISECT GUYING, 3 DOWN GUYS

ITEM	QTY	MAT'D	UNIT	DESCRIPTION
1	6	16600	EA	INSULATOR, SUSPENSION, POLYMER, 69 KV, 35"
2	6	10947	EA	SOCKET EYE, 3/8" EXTENSION LINK
3	6	10500	EA	CLAMP, DEADEND, SEE VAR MAT LIST
4	3	16601	EA	INSULATOR, HORIZ LINE POST, 69 KV, GAIN BASE, CLAMP TOP, 225 LB RCL
5	3	16780	EA	CLAMP, TRUNNION, CLAMP TOP, SEE VAR MAT LIST
6	6	14794	EA	CONNECTOR, COMP SLEEVE, JUMPER, VARIOUS SIZES
7	2	10971	EA	CLEVIS-EYE, 7/8" OPENING, 3-3/8" C-C
8	2	10500	EA	CLAMP, DEADEND, SEE VAR MAT LIST
9	2	10760	EA	DAMPER, VIBRATION, SPIRAL, SEE VAR MAT LIST
10	2	14205	EA	CONNECTOR, AL COMPRESSION, HI-TAP, VARIOUS SIZES
11	11	10201	EA	PLATE, POLE EYE, 6"
12	22	12005	EA	BOLT, MACHINE, 7/8", VARIOUS LENGTHS
13	22	12507	EA	WASHER, SQUARE, CURVED, GALVANIZED, 7, 8"
14	22	12405	EA	LOCKWHL, 1/8", GALVANIZED
15	6	12034	EA	BOLT, MACHINE, 3/4" GALVANIZED, VARIOUS LENGTHS
16	6	12505	EA	WASHER, SQUARE, CURVED, GALVANIZED, 3/4"
17	6	12404	EA	LOCKWHL, 3/4" GALVANIZED
18	6	12510	EA	WASHER, TWIN COILS, 3/4"
19	200	05707	EA	WIRE, GUY, 7/16", 7 STR, CLASS A GALVANIZED, EHS STEEL
20	16	05722	EA	GRIP, GUY, PREFORMED, 7/16"
21	6	16502	EA	INSULATOR, GUY, FIBERGLASS, 54", 35,000 POUND, 3/4" PHHS, ONE ROLLER
22	2	10501	EA	THIMBLE CLEVIS, 40,000 POUND
23	5	16511	EA	ROLLER, GUY, 13/16" X 2-3/8" DIA, 3/4" PH
24	1	10252	EA	ANCHOR, 8-10-12" TRIPLE HELIX
25	2	10272	EA	ROD, EXTENSION, 1-1/2" X 5"
26	1	10262	EA	ROD, ANCHOR, 1-1/2" ADAPTER WITH TRIPLE EYE
27	1	10350	EA	GUARD, GUY
28	70	25041	FT	WIRE, #4 SOLID COPPER, SD, BARE
29	50	12500	EA	STAPLE, GROUND WIRE, 2" X 5/8"
30	1	14220	EA	CONNECTOR, COPPER CRIMPIT, #6 SCL-#4 STR TO #8 SCL-#4 STR
31	1	10402	EA	ROD, GROUND, 5/8" X 10", COPPERWELDED, ITHREADED SECTIONAL
32	1	10405	EA	CLAMP, 5/8" GROUND ROD TO #8 - 1/0 CU
33	8	10470	FT	MOLDING, GROUND WIRE, 1/2" PLASTIC

SPECIFY VARIABLE MATERIAL BY:
 CONDUCTOR BOLTED DEADEND: 6-1006xx
 CLAMP, TRUNNION CLAMP TOP: 3-1002xx
 SHIELD WIRE BOLTED DEADEND: 2-1006xx
 DAMPER VIBRATION, SPIRAL: 2-1004xx

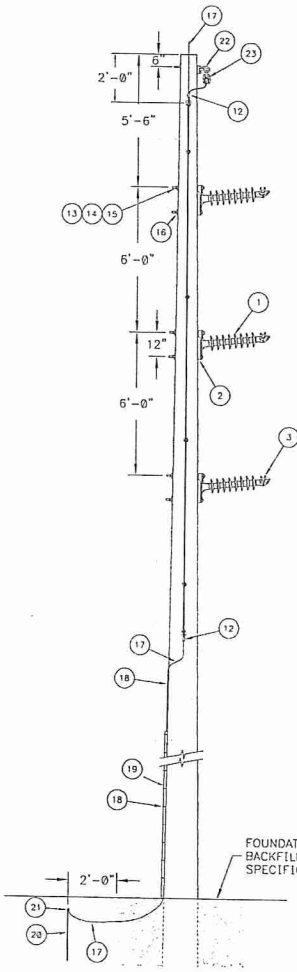
69KV DOUBLE DEADEND,
 MEDIUM ANGLE
 BISECT GUYING
 3 DOWN GUYS

REV	DATE	DES	CHK	APP	DESCRIPTION
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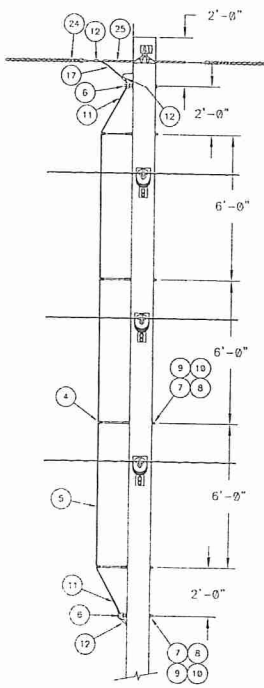
P & E ENGINEERING CO.
 POWER SYSTEM ANALYSIS AND DESIGN
 205 S. 30th
 P.O. Box 222
 Omaha, NE 68104

DATE 04-18-13
 DESIGNED P&E
 DRAWN MRB
 APPROVED JWE
 APPROVED ARP

SCALE: NONE
 REV A
 DWG NO T69-026A



FOUNDATION AND BACKFILL - SEE SPECIFICATIONS



T69-064

69KV, LIGHT ANGLE, LINE POST FRAMING, LAMINATED WOOD POLE

ITEM	QTY	MATTD	UNIT	DESCRIPTION
1	3	16601	EA	INSULATOR, HORZ LINE POST, 69 KV, GAIN BASE, CLAMP TOP, 1225 LB RCL
2	3	10013	EA	SHIM, TO ADAPT GAIN BASE INSULATOR TO FLAT, XX" BOLT SPACING
3	3	16180	EA	CLAMP, TRUNNION, CLAMP TOP, SEE VAR MAT LIST
4	4	16610	EA	INSULATOR, DOWN LEAD, FIBERGLASS, 5/8" X 12"
5	25	05023	FT	CONDUCTOR, #1/0 ACSR, BARE
6	2	12453	EA	EYE NUT, 5/8" GALVANIZED
7	6	12103	EA	BOLT, DOUBLE ARMING, 5/8" GALVANIZED, VARIOUS LENGTHS
8	12	12503	EA	WASHER, SQUARE, FLAT, 5/8" GALVANIZED
9	6	12403	EA	LOCKNUT, 5/8" GALVANIZED
10	6	12509	EA	WASHER, TWIN COILS, 5/8"
11	2	10701	EA	GRIP, DEAD-END, PREFORMED, 1/0 ACSR, AAC, AAAC
12	3	14205	EA	CONNECTOR, AL COMPRESSION, H-TAP, VARIOUS SIZES
13	6	12004	EA	BOLT, MACHINE, 3/4" GALVANIZED, VARIOUS LENGTHS
14	6	12504	EA	WASHER, SQUARE, FLAT, 3/4" GALVANIZED
15	6	12404	EA	LOCKNUT, 3/4" GALVANIZED
16	6	12510	EA	WASHER, TWIN COILS, 3/4"
17	50	05041	FT	WIRE, #4 SOLID COPPER, SD, BARE
18	40	12550	EA	STAPLE, GROUND WIRE, 2" X 5/8"
19	8	10410	FT	MOLDING, GROUND WIRE, 1/2" PLASTIC
20	1	10402	EA	ROD, GROUND, 5/8" X 10', COPPERWELD, THREADED SECTIONAL
21	1	10406	EA	CLAMP, 5/8" GROUND ROD TO #8 - 1/0 CU
22	1	10167	EA	SUPPORT, SHIELD WIRE, SIDE MOUNTED, 5/8" X 14", FLAT BASE
23	1	10540	EA	CLAMP, SUSPENSION, SEE VAR MAT LIST
24	2	10760	EA	DAMPER, VIBRATION, SPIRAL, SEE VAR MAT LIST
25	1	10780	EA	ROD, ARMOR, SEE VAR MAT LIST

SPECIFY VARIABLE MATERIAL BY:
 ARMOR ROD 1-T001XX
 CLAMP, TRUNION, CLAMP TOP 3-T002XX
 SUSPENSION CLAMP 1-T003XX
 DAMPER, VIBRATION, SPIRAL 2-T004XX

**PRELIMINARY
NOT FOR CONSTRUCTION**

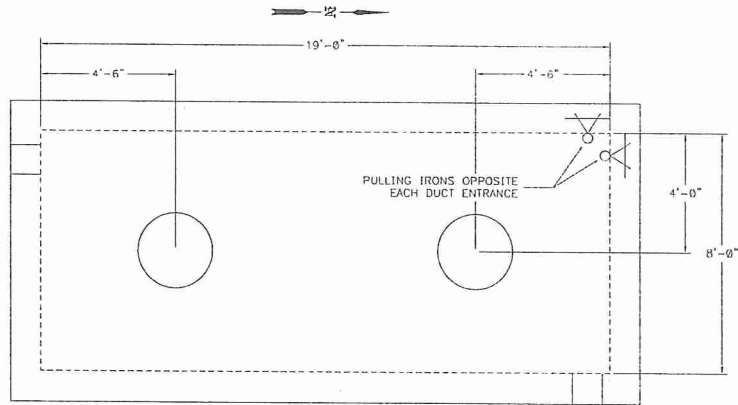
REV	DATE	DESIG	DFTR	APP	DESCRIPTION
A	04-02-13	P&E	DAW	JRP	ORIGINAL ISSUE

P & E ENGINEERING CO.
 POWER SYSTEM ANALYSIS AND DESIGN
 214 E. 5th
 P.O. Box 473
 Cedar Rapids, IA 52402
 515-241-7000
 FAX 515-241-0100
 402-292-0822

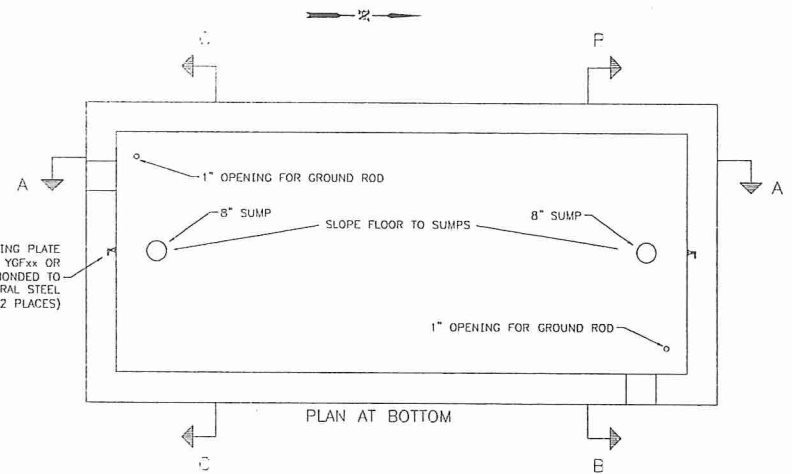
DATE 04-02-13
 DESIGNED P&E
 DRAWN DAW
 APPROVED JWE
 APPROVED ARP

69KV MEDIUM ANGLE, T2, LAMINATED WOOD POLE

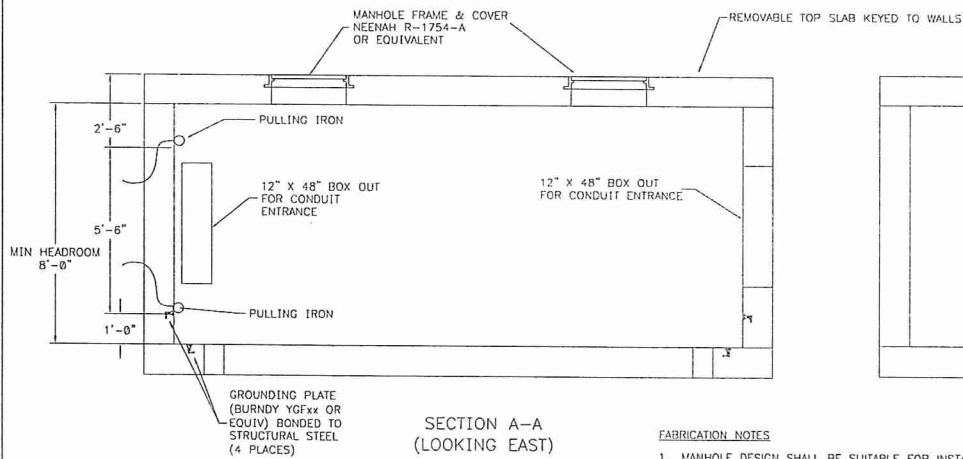
SCALE: AS NOTED
 REV A
 DWG NO T69-064



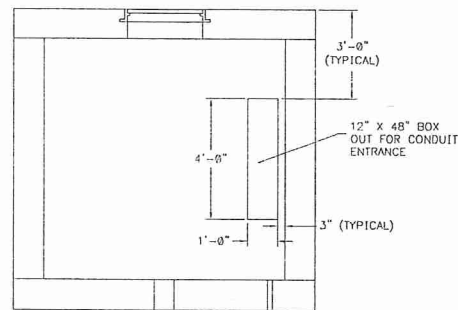
MANHOLE #2 -- LOCATION #02UG



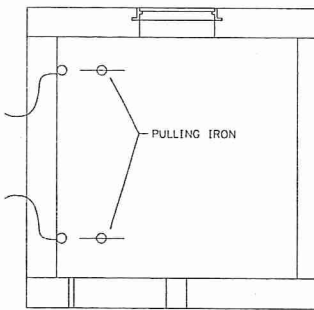
PLAN AT BOTTOM



SECTION A-A
(LOOKING EAST)



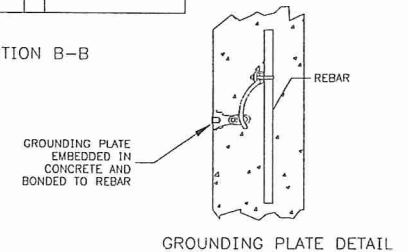
SECTION C-C



SECTION B-B

FABRICATION NOTES

1. MANHOLE DESIGN SHALL BE SUITABLE FOR INSTALLATION ALONG STATE HIGHWAYS AND WITH REQUIREMENTS OF AASTO H-20.
2. PROVIDE PULLING EYES (CONDUX 083B1301 OR EQUIVALENT) AND MANHOLE FRAMES & COVERS AS NOTED.
3. PROVIDE KNOCKOUT AREAS AS NOTED. KNOCK OUT AREAS SHALL BE VOID OF REBAR AND SHALL HAVE NO MORE THAN A 3" THICKNESS OF CONCRETE.
4. PRE-CAST SUPPLIER IS RESPONSIBLE FOR STRUCTURAL DESIGN OF MANHOLE.
5. SEE SPECIFICATION PARAGRAPH 17.0 IN SECTION 167222 FOR ADDITIONAL REQUIREMENTS



GROUNDING PLATE DETAIL

**PRELIMINARY
NOT FOR CONSTRUCTION**

REV	DATE	DESIGN	DATE	APP	DESCRIPTION
B	04/05/13	PAE	RWS	JSP	ADJUSTED POSITION OF PULLING IRON AND ADDED NOTES
A	03-13-13	PAE	RWS	JSP	ORIGINAL DESIGN

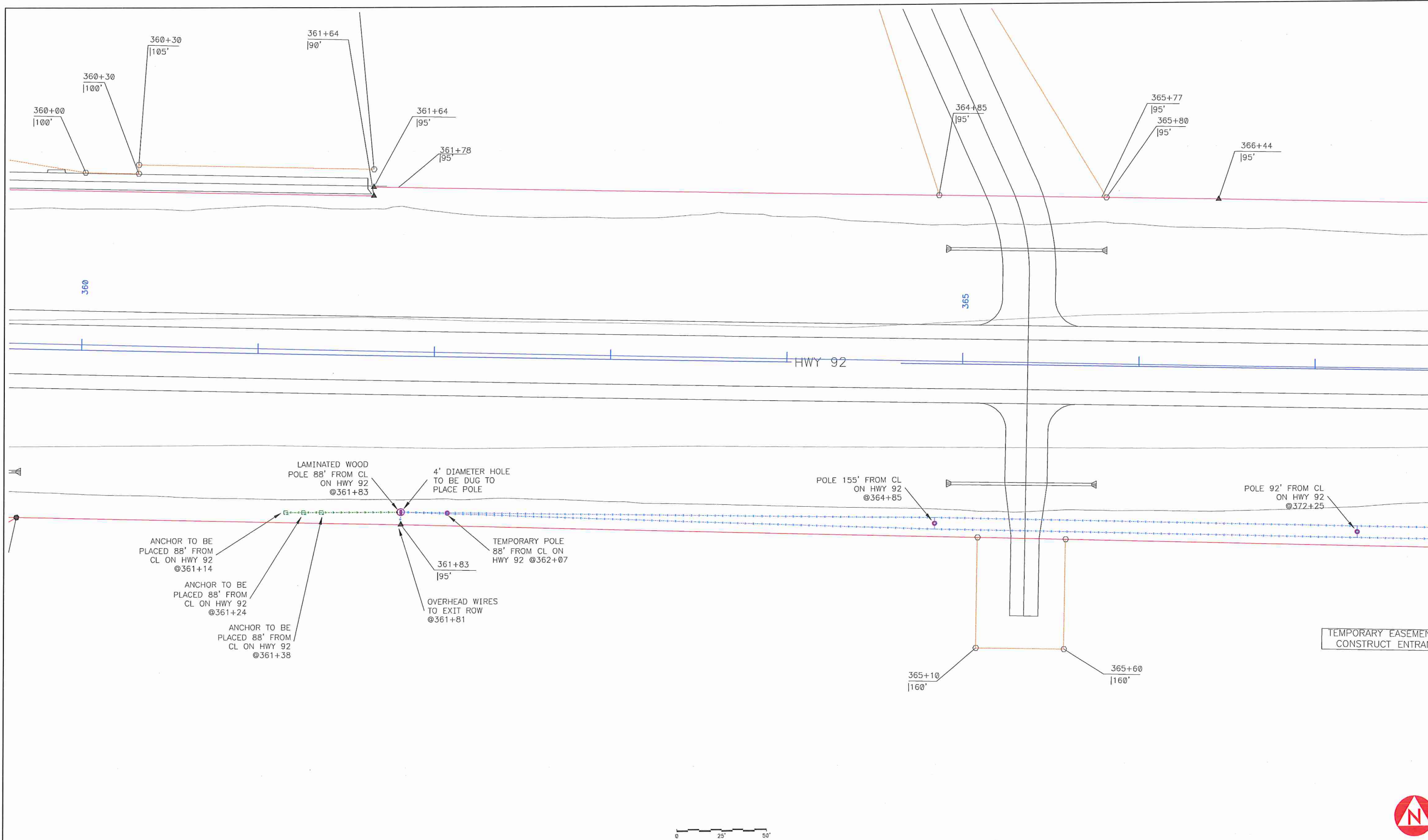
E. & F. ENGINEERING, CO.
POWER SYSTEM ANALYSIS AND DESIGN
245 E. 206
P.O. Box 422
Cedar Rapids, IA 52402

INDIANOLA MUNICIPAL UTILITIES
IMU
Electric • Water • Gas • Sewer

DATE 01-08-12
DESIGNED PAE
DRAWN DAW
APPROVED JHE
APPROVED ARP

INDIANOLA MUNICIPAL UTILITIES
HIGHWAY 92 DOT PROJECT
PREFABRICATED MANHOLE CONSTRUCTION, LOCATION 02UG

SCALE: AS NOTED
REV B
DWG NO E8958-U120



**PRELIMINARY
NOT FOR CONSTRUCTION**

REV	DATE	DESG	DFTR	APP	DESCRIPTION
B	08-05-13	P&E	RMB	ARP	ADDED OVERHEAD LINETYPE
A	07-16-13	P&E	RMB	ARP	ORIGINAL ISSUE

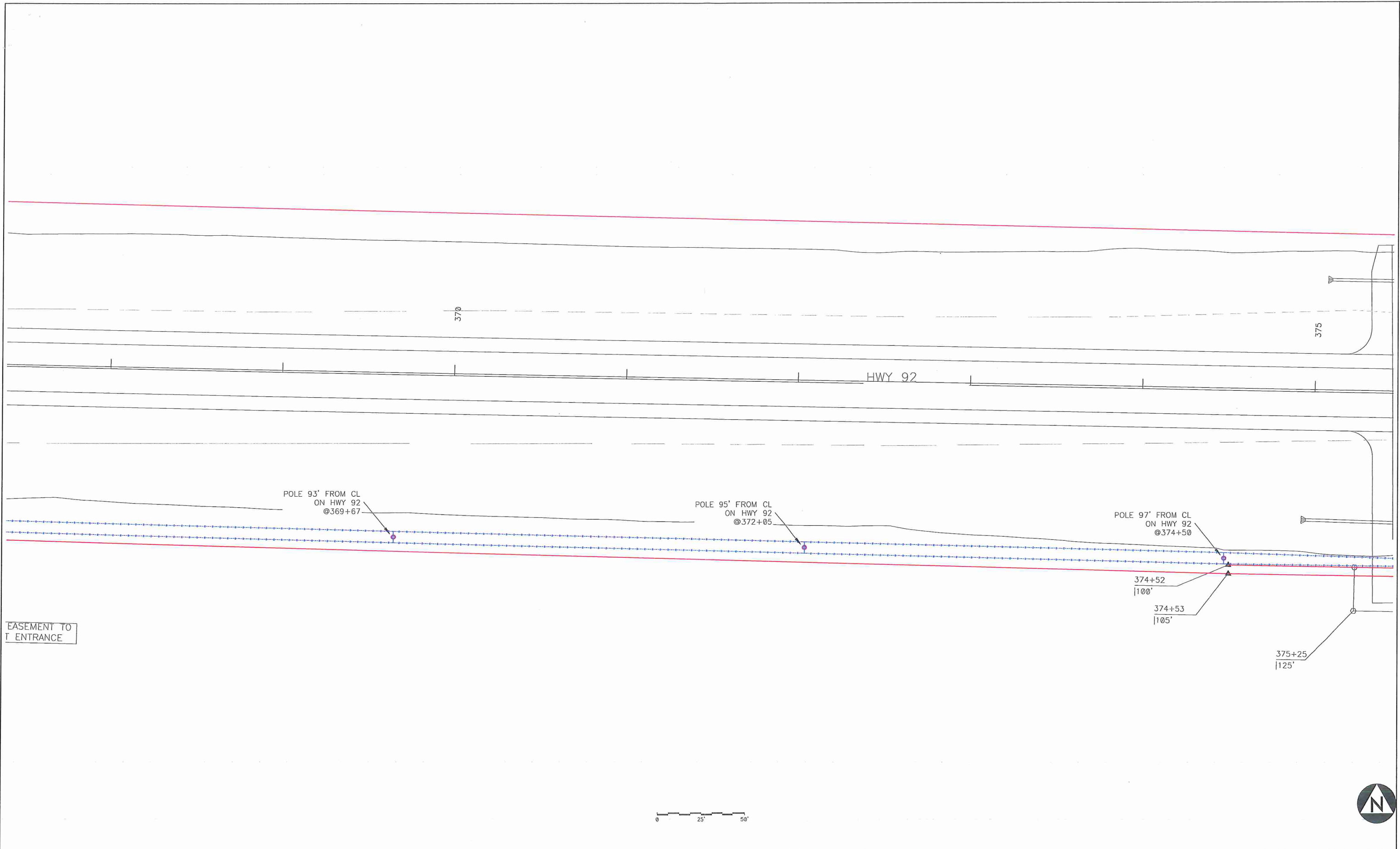
P & E ENGINEERING CO.
POWER SYSTEM ANALYSIS AND DESIGN
245 S. 5th
P.O. Box 620
Carlsbo, IA 50047
Office: 515-959-3083
Fax: 515-959-3138
pecon@pecon.com

INDIANOLA MUNICIPAL UTILITIES
IMU
Electric • Network Services • Water

DATE 01-08-12
DESIGNED P&E
DRAWN RMB
APPROVED JWE
APPROVED ARP

INDIANOLA MUNICIPAL UTILITIES
HIGHWAY 92 DOT PROJECT
HWY 92 PERMIT DRAWINGS

SCALE: AS NOTED
REV B
DWG NO E8958-P12



EASEMENT TO T ENTRANCE

**PRELIMINARY
NOT FOR CONSTRUCTION**

REV	DATE	DESIG	DFTR	APP	DESCRIPTION
B	08-05-13	P&E	RMB	ARP	ADDED OVERHEAD LINETYPE
A	07-16-13	P&E	RMB	ARP	ORIGINAL ISSUE

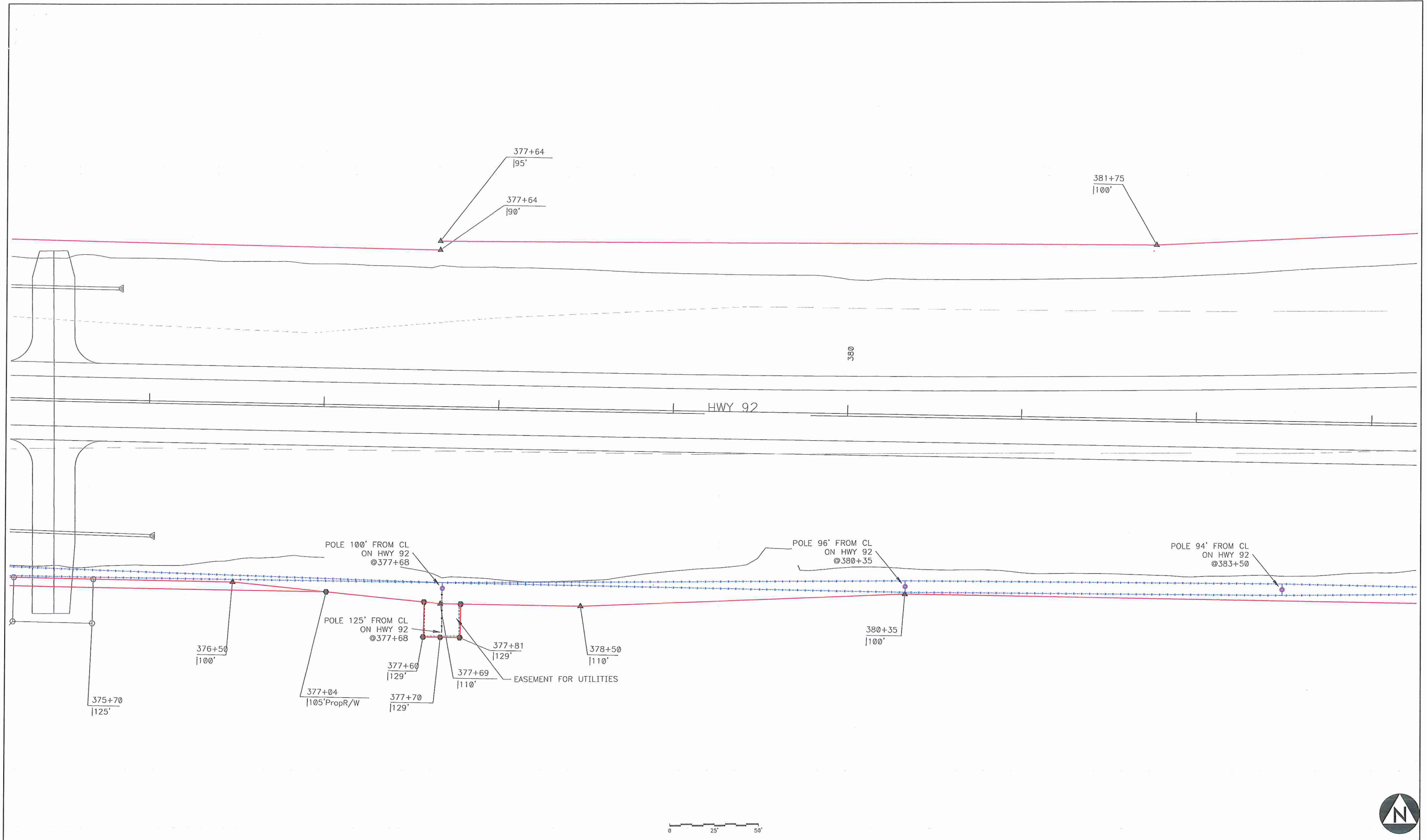
P & E ENGINEERING CO.
POWER SYSTEM ANALYSIS AND DESIGN
245 S. 5th
P.O. Box 620
Cahoon, IA 50047
Office: 515-999-3033
Fax: 515-999-3138
pea@pe-engineer.com

INDIANOLA MUNICIPAL UTILITIES
IMU
Electric • Network Services • Water

DATE 01-08-12
DESIGNED P&E
DRAWN RMB
APPROVED JWE
APPROVED ARP

INDIANOLA MUNICIPAL UTILITIES
HIGHWAY 92 DOT PROJECT
HWY 92 PERMIT DRAWINGS

SCALE: AS NOTED
REV B
DWG NO
E8958-P13



**PRELIMINARY
NOT FOR CONSTRUCTION**

REV	DATE	DESIG	DFTR	APP	DESCRIPTION
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A	07-16-13	P&E	RMB	ARP	ORIGINAL ISSUE

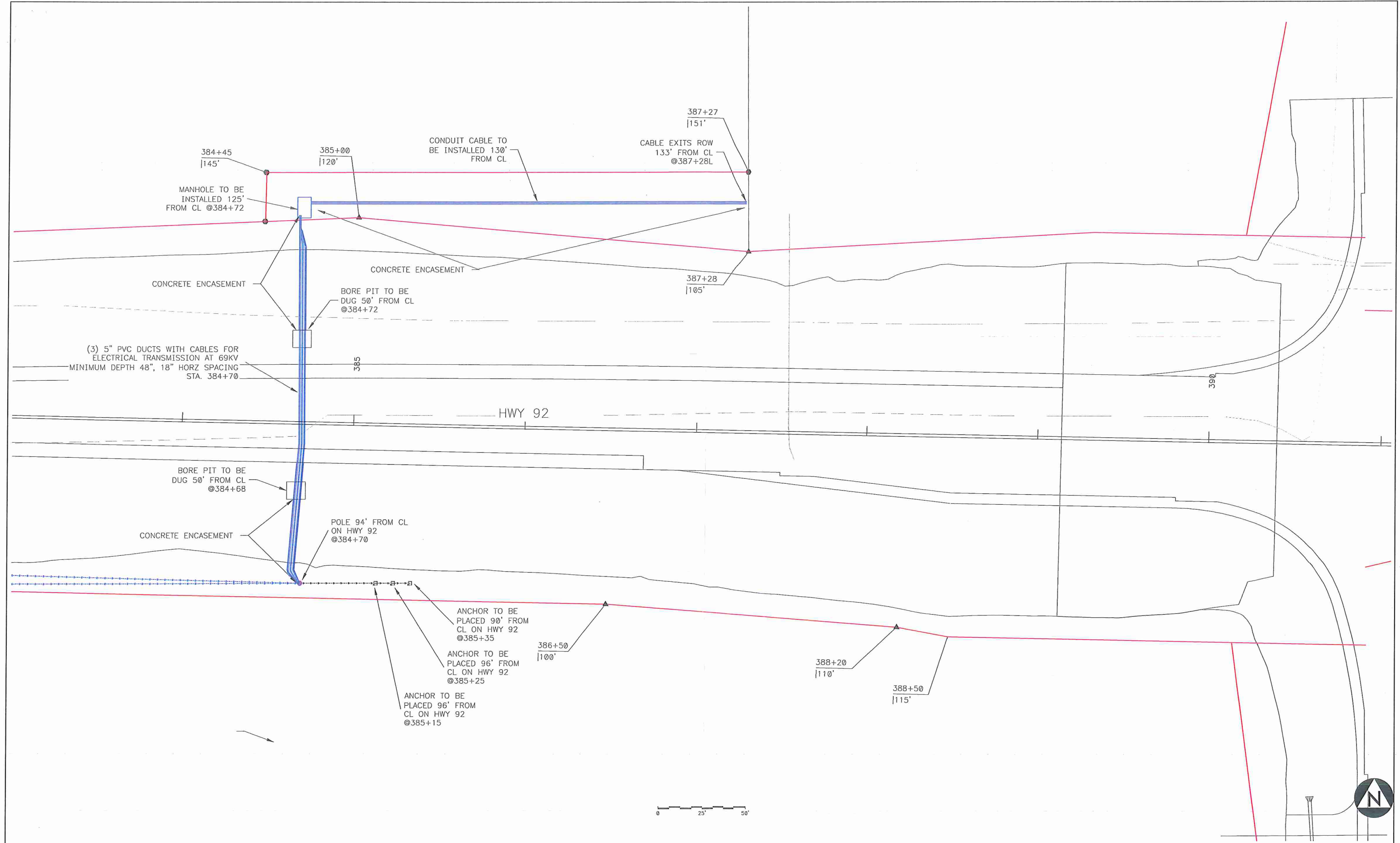
P & E ENGINEERING CO.
POWER SYSTEM ANALYSIS AND DESIGN
245 S. 5th
P.O. Box 620
Carlisle, IA 50047
Office: 515-989-3033
FAX: 515-989-3138
pe@pe.com



DATE 01-08-12
DESIGNED P&E
DRAWN RMB
APPROVED JWE
APPROVED ARP

INDIANOLA MUNICIPAL UTILITIES
HIGHWAY 92 DOT PROJECT
HWY 92 PERMIT DRAWINGS

SCALE: AS NOTED
REV B
DWG NO **E8958-P14**



**PRELIMINARY
NOT FOR CONSTRUCTION**

REV	DATE	DESG	DFTR	APP	DESCRIPTION
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A	07-16-13	P&E	RMB	ARP	ORIGINAL ISSUE

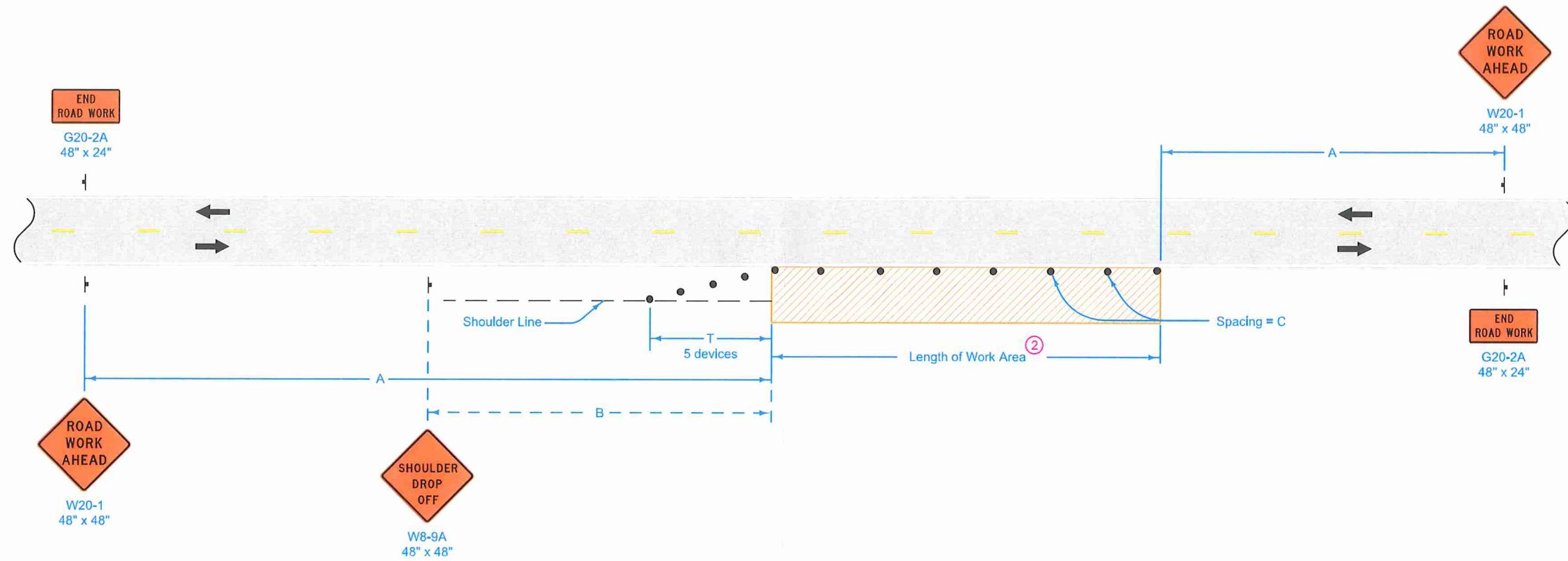
P & E ENGINEERING CO.
POWER SYSTEM ANALYSIS AND DESIGN
245 S. 5th
P.O. Box 620
Carrisle, IA 50047
Office: 515-959-3083
FAX: 515-959-3138
pe@pandesign.com

INDIANOLA MUNICIPAL UTILITIES
IMU
Electric • Network Services • Water

DATE 01-08-12
DESIGNED P&E
DRAWN RMB
APPROVED JWE
APPROVED ARP

INDIANOLA MUNICIPAL UTILITIES
HIGHWAY 92 DOT PROJECT
HWY 92 PERMIT DRAWINGS

SCALE: AS NOTED
REV B
DWG NO
E8958-P-15



LEGEND

- † Traffic Sign
- 42" Channelizer
- ▨ Work Area
- ← Direction of Traffic

SPEED LIMIT (mph)	A	B	C ^②	T
35 or less	500'	250'	40'	100'
40 - 45	700'	350'	80' ^①	200'
50 or greater	1000'	500'	100' ^①	200'

When a pavement edge drop-off exists, install a SHOULDER DROP-OFF sign.

No pavement edge drop-offs greater than pavement depth will be allowed during non-working hours.

Shoulder edge drop-offs shall be mitigated according to Article 1107.08.L2 of the Standard Specifications.

^① When the length of a pavement edge drop-off is 1000 feet or less, the temporary fillet requirement of Article 1107.08 of the Standard Specifications does not apply. Reduce channelizer spacing to 40 feet.

^② For work areas less than 200 feet long, use channelizers spaced at 20 foot centers or use a vehicle with an amber revolving light or amber strobe light.

Possible Contract Item:
Traffic Control

 Iowa Department of Transportation	REVISION
	7 10-15-13
STANDARD ROAD PLAN	TC-202
SHEET 1 of 1	
REVISIONS: Modified circle note 1.	
 APPROVED BY DESIGN METHODS ENGINEER	
SHOULDER CLOSURE (ONE LANE)	