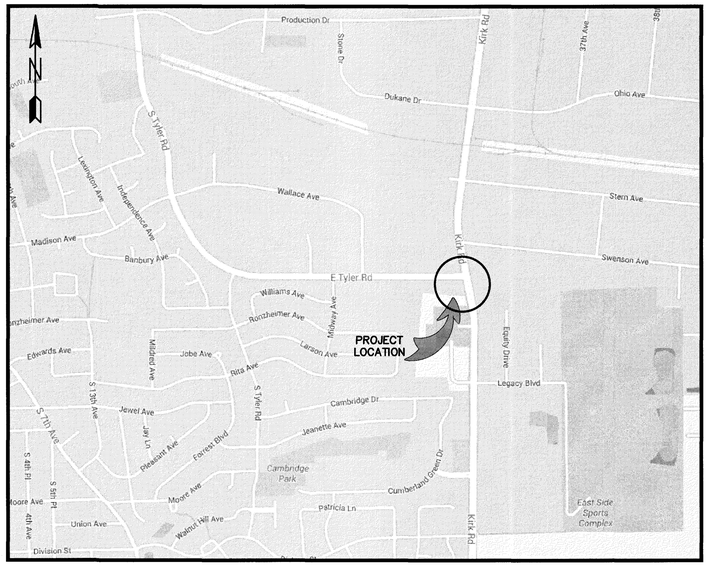
KIRK ROAD ELECTRIC DUCT CROSSING
ST. CHARLES, ILLINOIS

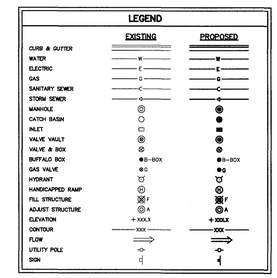
INDEX TO DRAWINGS

1. COVER
2. EXISTING CONDITIONS
3. PLAN AND PROFILE STA. 100+00 TO STA. 104+75
4. PLAN AND PROFILE STA. 20+00 TO STA. 21+75
5. STRUCTURAL MANHOLE DETAILS
6. ELECTRICAL DETAILS
7. CONSTRUCTION DETAILS
8. TRAFFIC CONTROL PLAN STAGE 1
9. TRAFFIC CONTROL PLAN STAGE 2



LOCATION MAP

PREPARED FOR:
CITY OF ST. CHARLES
TWO EAST MAIN STREET
ST. CHARLES, IL. 60174
PHONE: 630-377-4400
FAX: 630-377-4440



It's smart It's free It's the law
Call Before You Dig JULIE ILLINOIS ONE-CALL SYSTEM
Call before you dig 800.892.0123

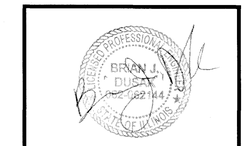
ENGINEERING
RESOURCE ASSOCIATES

2416 GALEN DRIVE
CHAMPAIGN, ILLINOIS 61821
PHONE (217) 351-6268
FAX (217) 355-1902

3S701 WEST AVENUE, SUITE 150
WARRENVILLE, ILLINOIS 60555
PHONE (630) 393-3060
FAX (630) 393-2152

10 S. RIVERSIDE PLAZA , SUITE 875
CHICAGO, ILLINOIS 60606
PHONE (312) 474-7841
FAX (312) 474-6099

FINAL REVISION: JULY 19, 2016
REVISED: JULY 12, 2016
REVISED: JUNE 29, 2016
REVISED: JUNE 10, 2016
REVISED: MARCH 9, 2016
REVISED: DECEMBER 23, 2015
REVISED: OCTOBER 30, 2015
ORIGINAL SUBMITTAL: OCTOBER 16, 2015



Brian J. Dusak, P.E.
IL. P.E. NO. 062-062144
Expires: November 30, 2017

ERA JOB NO.: 150809

H:\StCharles,City\150809 Kirk Rd Electrical Duct Crossing\CADD\150809 Kirk Rd Duct.dwg Updated by: Eric Wilde 7/19/2016

STORM SEWER SCHEDULE

[1]
INLET
RIM 785.10
INV 781.95(12"–S)

[2]
CATCH BASIN
RIM 785.99
INV 781.09(12"–N)
INV 781.04(12"–S)
INV 781.04(12"–W)
INV 780.99(15"–E)

[3]
INLET
RIM 788.10
INV 785.00(12"–ENE)

[4]
STORM MANHOLE
RIM 787.30
INV 782.70(12"–WSW)
INV 782.45(12"–N)
INV 782.75(12"–E)

[5]
INLET
RIM 787.50
INV 784.35(12"–ENE)

[6]
INLET
RIM 787.74
INV 784.84(12"–E)

[7]
CATCH BASIN
RIM 785.77
INV 779.87(24"–N)
INV 780.07(18"–S)
INV 780.22(18"–W)

[8]
CATCH BASIN
RIM 790.43
INV 782.23(18"–N)
INV 782.33(18"–W)

[9]
INLET
RIM 791.31
INV 783.11(18"–E&W)
INV 783.11(15"–S)

[10]
INLET
RIM 790.37
INV 783.52(18"–E)

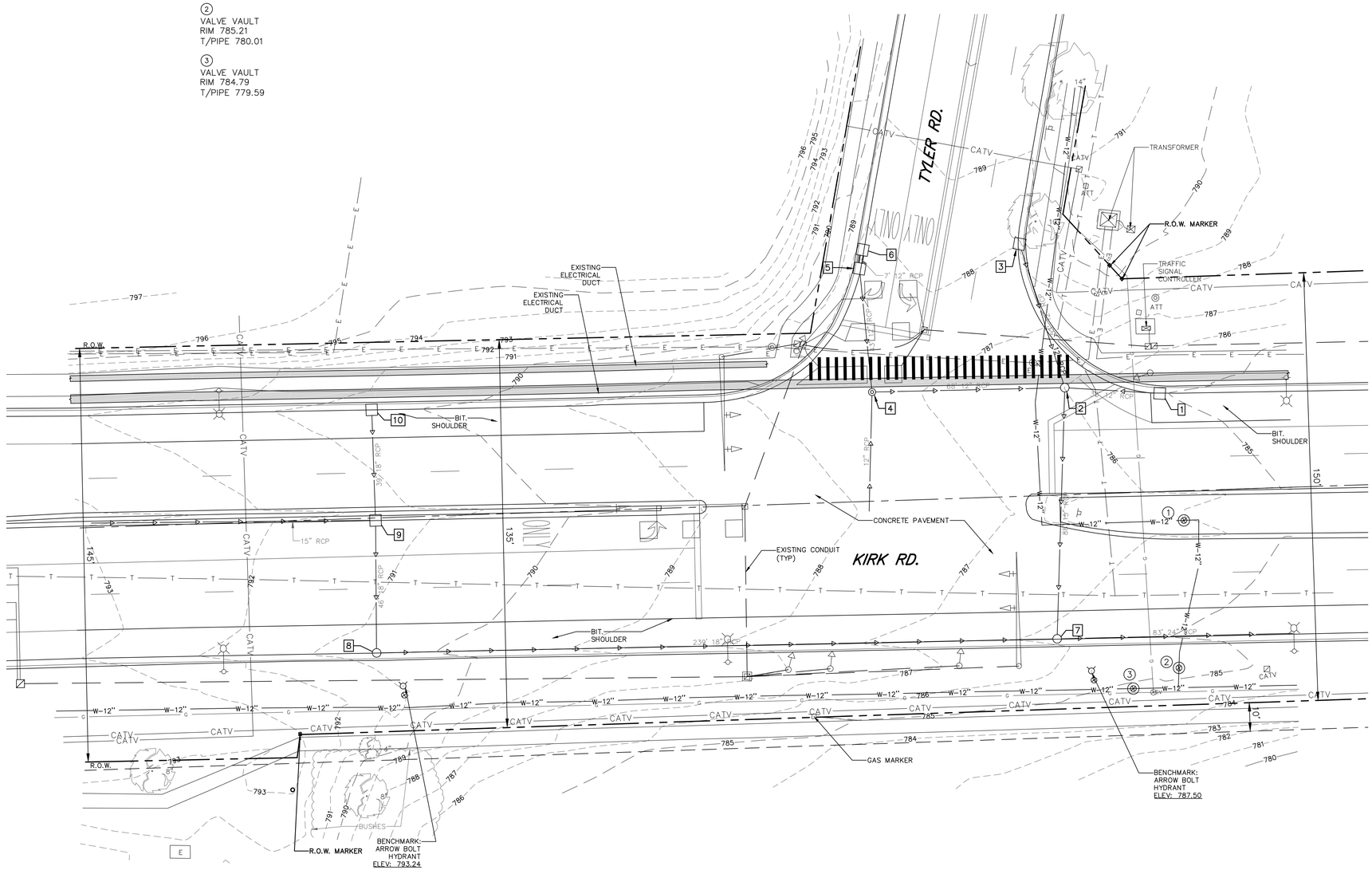
WATER STRUCTURE SCHEDULE

(1)
VALVE VAULT
RIM 786.25
T/PIPE 779.70

(2)
VALVE VAULT
RIM 785.21
T/PIPE 780.01

(3)
VALVE VAULT
RIM 784.79
T/PIPE 779.59

0 20' 40'
SCALE: 1"=20'



REVISIONS:					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DRAWN BY: RT
CHECKED BY: CS
APPROVED BY: MM

ENGINEERING RESOURCE ASSOCIATES, INC.
CONSULTING ENGINEERS, SCIENTISTS & SURVEYORS

3S701 WEST AVENUE, SUITE 150
WARRENVILLE, ILLINOIS 60555
PHONE (630) 393-3060
FAX (630) 393-2152

10 S. RIVERSIDE PLAZA , SUITE 875
CHICAGO, ILLINOIS 60606
PHONE (312) 474-7841
FAX (312) 474-6099

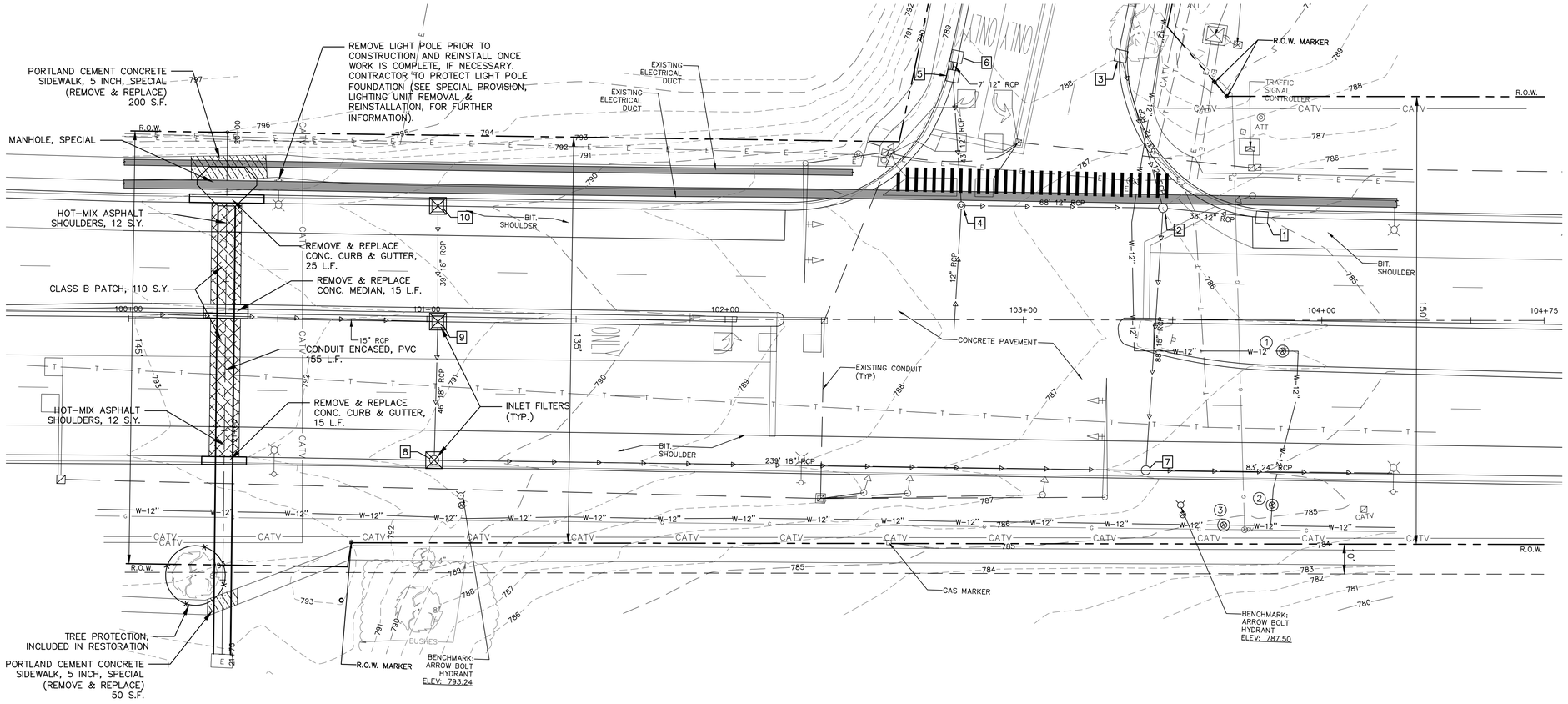
2416 GALEN DRIVE
CHAMPAIGN, ILLINOIS 61821
PHONE (217) 351-6268
FAX (217) 355-1902

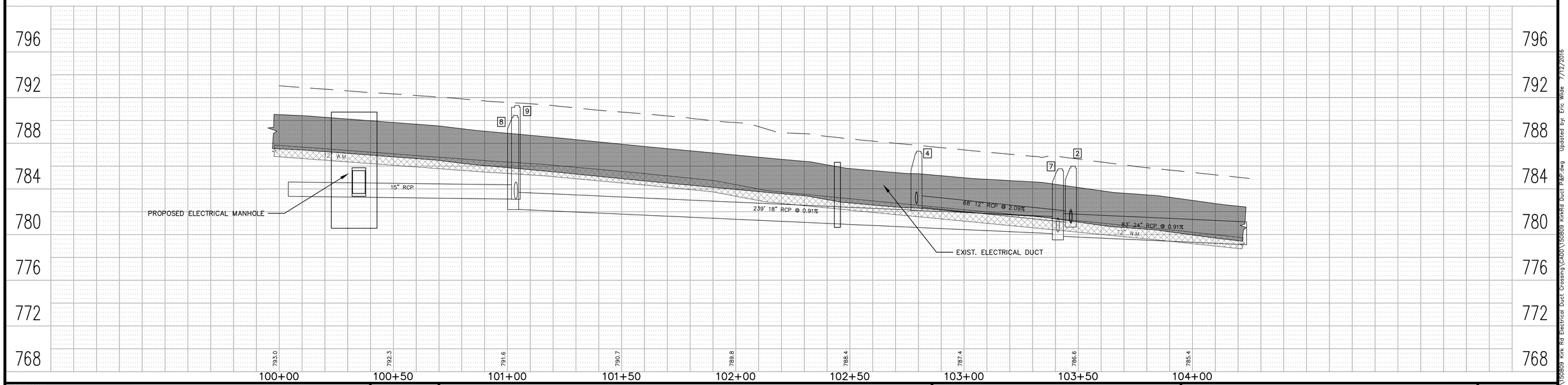
KIRK ROAD DUCT CROSSING
CITY OF ST. CHARLES, ILLINOIS

TITLE:
KIRK RD. DUCT CROSSING
EXISTING CONDITIONS

SCALE: 1"=20'
DATE: June, 2016
JOB NO: 150809
SHEET 2 OF 9

H:\StCharles,City\150809 Kirk Rd Electrical Duct Crossing\CADD\150809 KirkRd Duct.dwg Updated by: Eric Wilde 7/12/2016





REVISIONS:					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DRAWN BY: RT
CHECKED BY: CS
APPROVED BY: MM

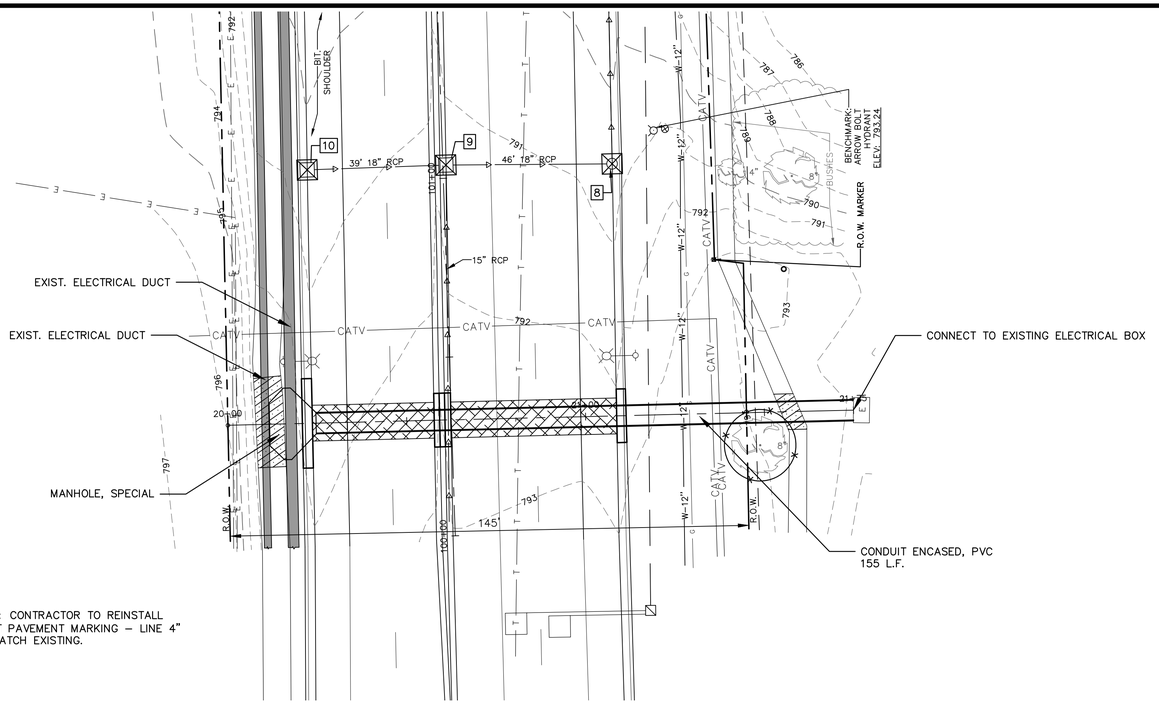
ENGINEERING RESOURCE ASSOCIATES, INC.
CONSULTING ENGINEERS, SCIENTISTS & SURVEYORS
3S701 WEST AVENUE, SUITE 150
WARRENVILLE, ILLINOIS 60555
PHONE (630) 393-3060
FAX (630) 393-2152
10 S. RIVERSIDE PLAZA , SUITE 875
CHICAGO, ILLINOIS 60606
PHONE (312) 474-7841
FAX (312) 474-6099
2416 GALEN DRIVE
CHAMPAIGN, ILLINOIS 61821
PHONE (217) 351-6268
FAX (217) 355-1902

KIRK ROAD DUCT CROSSING CITY OF ST. CHARLES, ILLINOIS

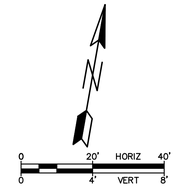
TITLE: KIRK ROAD PLAN AND PROFILE STA. 100+00 TO STA. 104+75

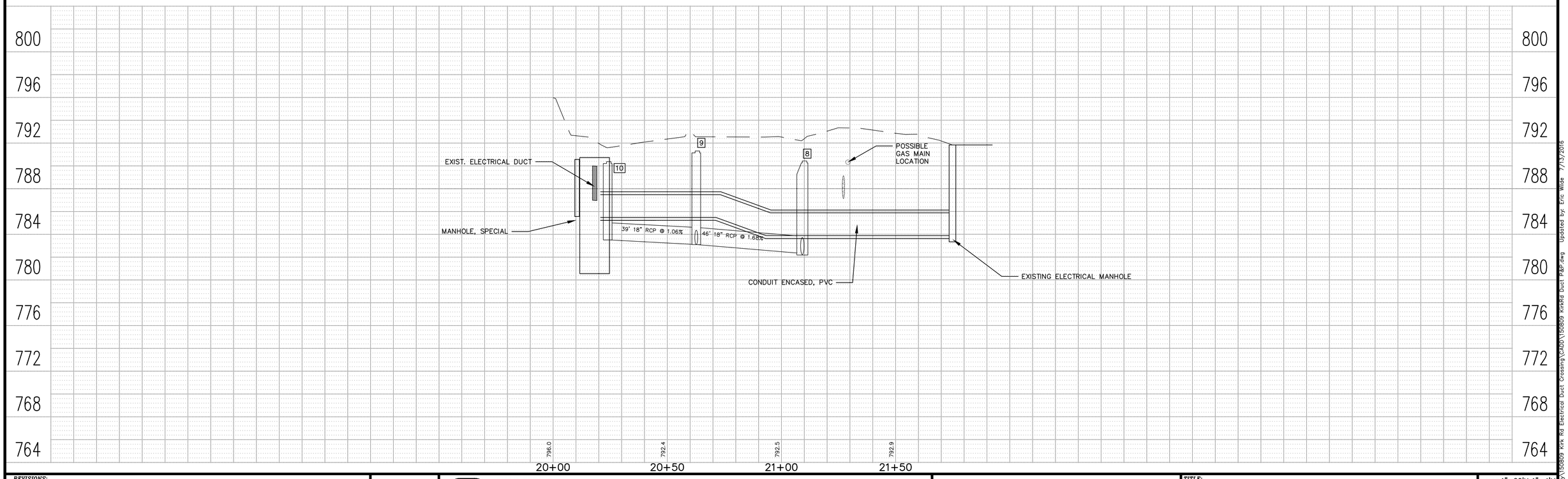
SCALE: 1"=20'H; 1"=4'V
DATE: June, 2016
JOB NO: 150809
SHEET 3 OF 9

H:\StCharles,City\150809 Kirk Rd Electrical Duct Crossing\CAD\150809 Kirkrd Duct P&P.dwg Updated by: Eric Wilde 7/12/2016



NOTE: CONTRACTOR TO REINSTALL PAINT PAVEMENT MARKING – LINE 4" TO MATCH EXISTING.





REVISIONS:					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DRAWN BY: RT
CHECKED BY: CS
APPROVED BY: MM

ENGINEERING RESOURCE ASSOCIATES, INC.
CONSULTING ENGINEERS, SCIENTISTS & SURVEYORS

3S701 WEST AVENUE, SUITE 150
WARRENVILLE, ILLINOIS 60555
PHONE (630) 393-3060
FAX (630) 393-2152

10 S. RIVERSIDE PLAZA , SUITE 875
CHICAGO, ILLINOIS 60606
PHONE (312) 474-7841
FAX (312) 474-6099

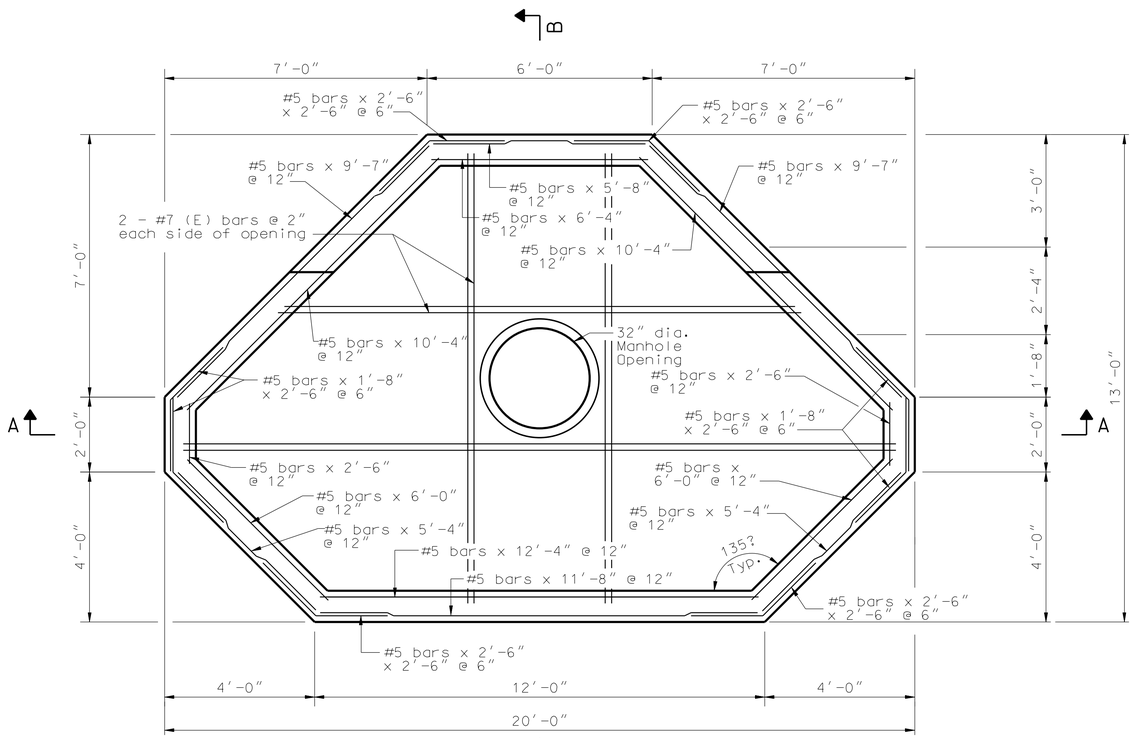
2416 GALEN DRIVE
CHAMPAIGN, ILLINOIS 61821
PHONE (217) 351-6268
FAX (217) 355-1902

KIRK ROAD DUCT CROSSING CITY OF ST. CHARLES, ILLINOIS

TITLE: KIRK ROAD DUCT CROSSING
PLAN AND PROFILE
STA. 20+00 TO STA. 21+75

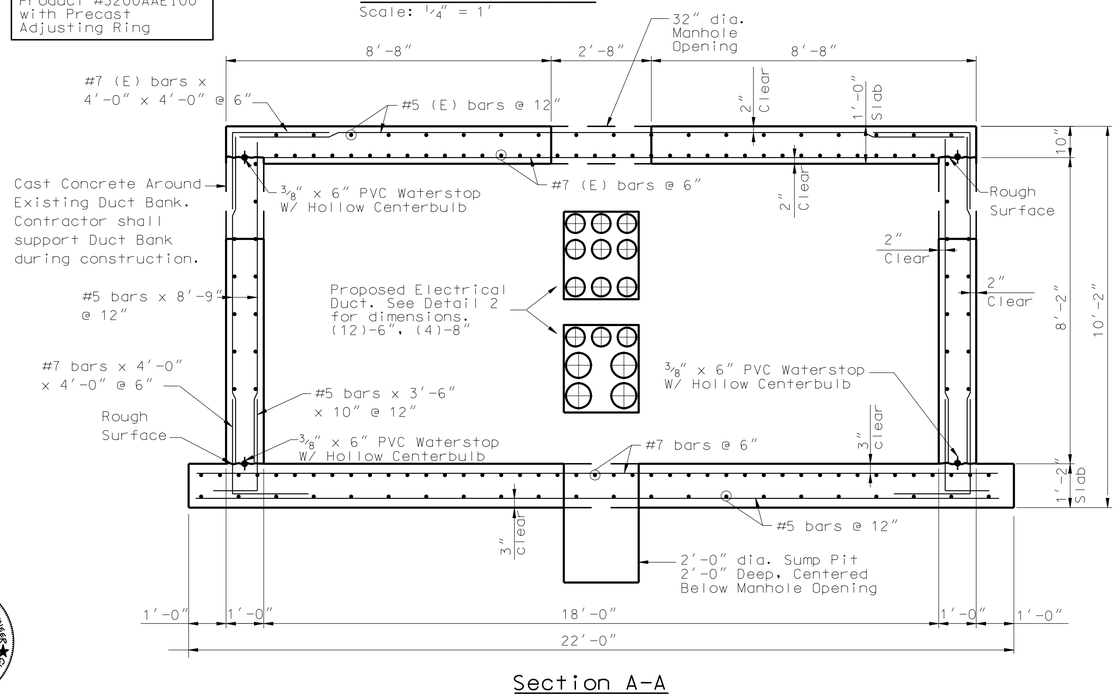
SCALE: 1"=20'H; 1"=4'V
DATE: June, 2016
JOB NO: 150809
SHEET 4 OF 9

H:\StCharles,city\150809 Kirk Rd Electrical Duct Crossing\CADD\150809 KirkRd Duct P&P.dwg Updated by: Eric Wilde 7/13/2016

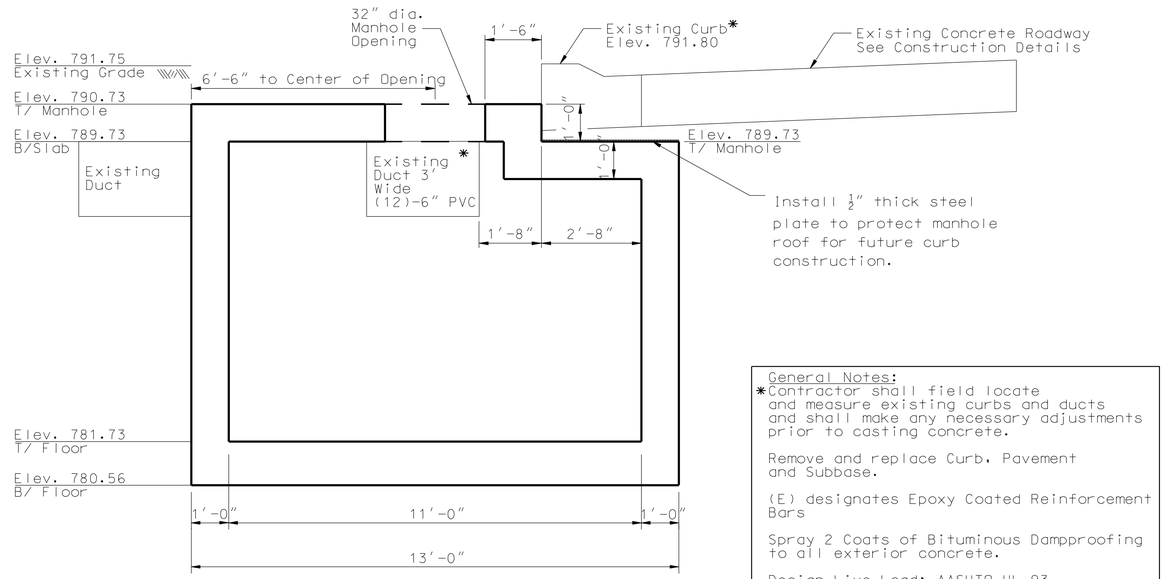


Note:
Use GMI Manhole Product #3200AAEI00 with Precast Adjusting Ring

Manhole Plan View
Scale: 1/4" = 1'



Section A-A
Scale: 1/4" = 1'



General Notes:
*Contractor shall field locate and measure existing curbs and ducts and shall make any necessary adjustments prior to casting concrete.

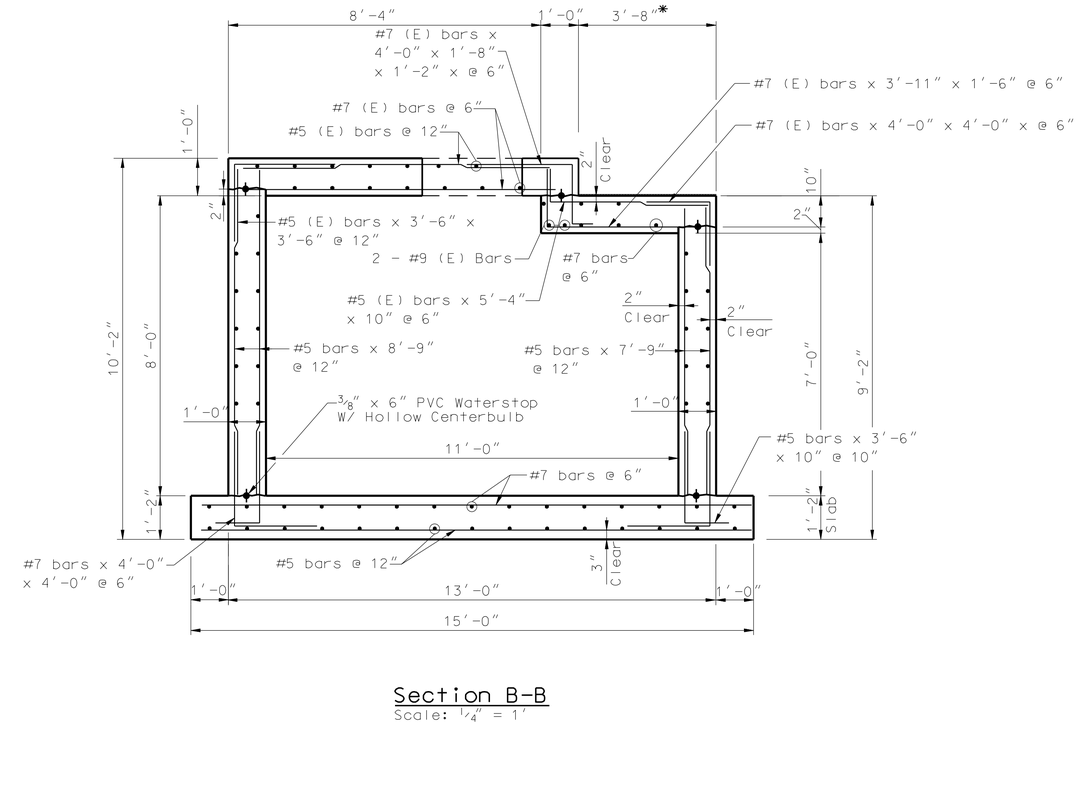
Remove and replace Curb, Pavement and Subbase.

(E) designates Epoxy Coated Reinforcement Bars

Spray 2 Coats of Bituminous Dampproofing to all exterior concrete.

Design Live Load: AASHTO HL-93

Section B-B
Scale: 1/4" = 1'



Section B-B
Scale: 1/4" = 1'

LICENSED STRUCTURAL ENGINEER
JOHN A. FRAUENHOFFER
61-5192
CHAMPAIGN
STATE OF ILLINOIS

REVISIONS:					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DRAWN BY: CS
CHECKED BY: JW
APPROVED BY: JF

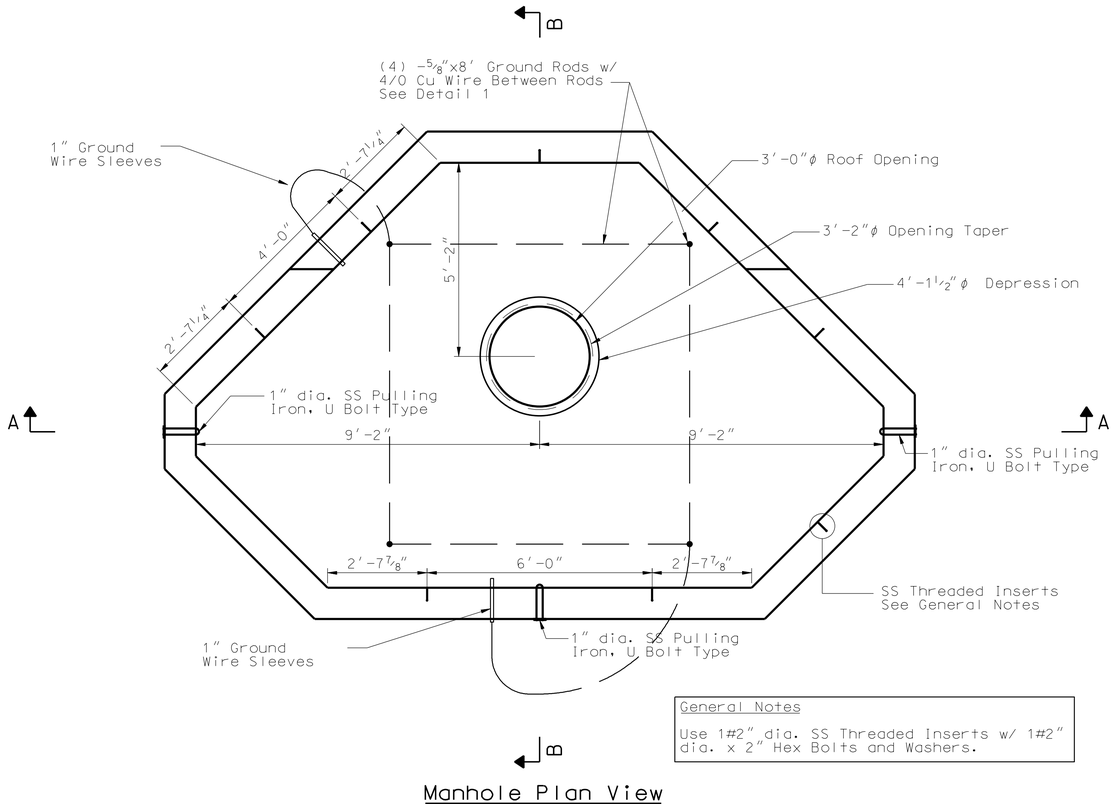
ENGINEERING RESOURCE ASSOCIATES, INC.
CONSULTING ENGINEERS, SCIENTISTS & SURVEYORS
3S701 WEST AVENUE, SUITE 150
WARRENVILLE, ILLINOIS 60555
PHONE (630) 393-3060
FAX (630) 393-2152
10 S. RIVERSIDE PLAZA, SUITE 875
CHICAGO, ILLINOIS 60606
PHONE (312) 474-7841
FAX (312) 474-6099
2416 GALEN DRIVE
CHAMPAIGN, ILLINOIS 61821
PHONE (217) 351-6268
FAX (217) 355-1902

KIRK ROAD DUCT CROSSING CITY OF ST. CHARLES, ILLINOIS

TITLE: KIRK ROAD DUCT CROSSING MANHOLE DETAILS

SCALE: AS NOTED
DATE: July, 2016
JOB NO: 150809
SHEET 5 OF 9 SHEETS

R:\StCharles\City\150809 Kirk Rd Electrical Duct Crossing\CAD\Manhole Details.dwg Updated by: Eric Wilde 7/12/2016



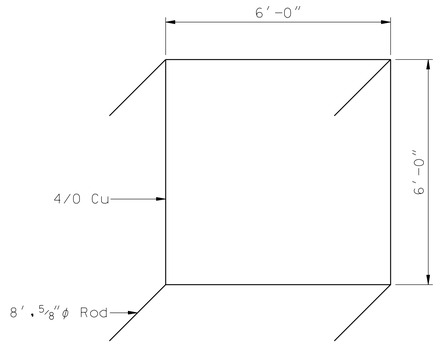
General Notes

Use 1#2" dia. SS Threaded Inserts w/ 1#2" dia. x 2" Hex Bolts and Washers.

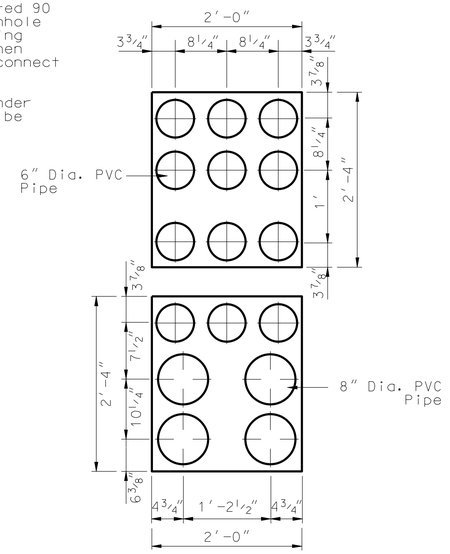
Manhole Plan View
Scale: 1/4" = 1'

Note:
East West duct shall be rotated 90 degrees after exiting the manhole to avoid conflict with existing utilities. Contractor will then rotate duct back upright to connect to existing electrical box.

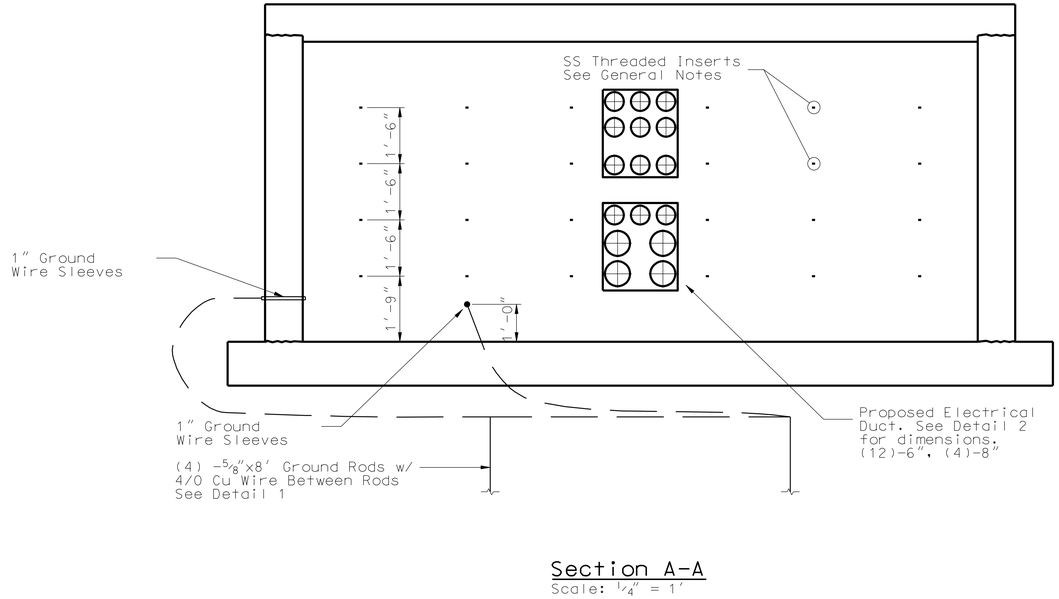
Add #4 bars @ 12" for duct under roadway. Reinforcement shall be incidental to concrete.



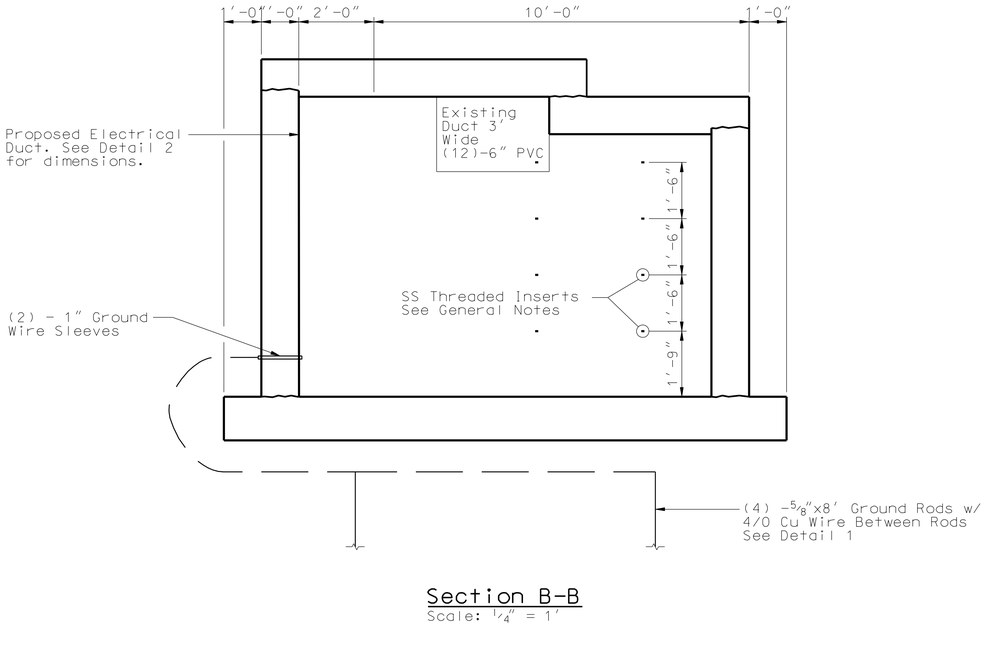
Detail 1
No Scale



Detail 2
Scale: 1/2" = 1'



Section A-A
Scale: 1/4" = 1'



Section B-B
Scale: 1/4" = 1'

REVISIONS:					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DRAWN BY: CS
CHECKED BY: JW
APPROVED BY: JF

ENGINEERING RESOURCE ASSOCIATES, INC.
CONSULTING ENGINEERS, SCIENTISTS & SURVEYORS

3S701 WEST AVENUE, SUITE 150
WARRENVILLE, ILLINOIS 60555
PHONE (630) 393-3060
FAX (630) 393-2152

10 S. RIVERSIDE PLAZA, SUITE 875
CHICAGO, ILLINOIS 60606
PHONE (312) 474-7841
FAX (312) 474-6099

2416 GALEN DRIVE
CHAMPAIGN, ILLINOIS 61821
PHONE (217) 351-6268
FAX (217) 355-1902

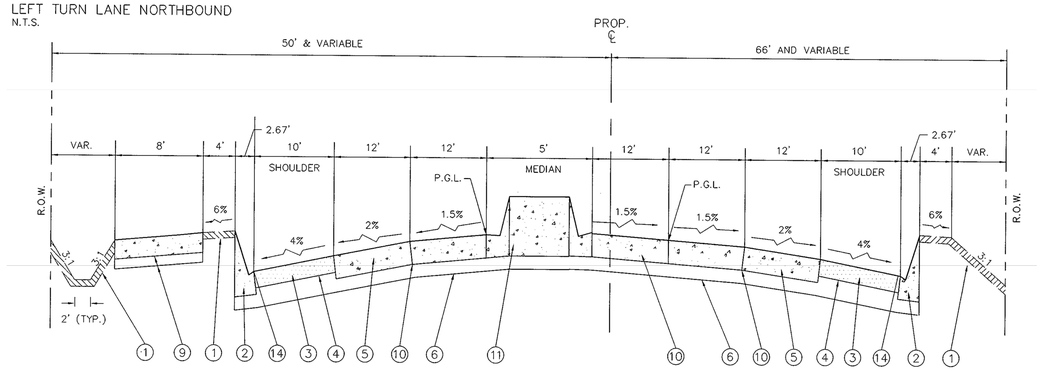
KIRK ROAD DUCT CROSSING CITY OF ST. CHARLES, ILLINOIS

TITLE: KIRK ROAD DUCT CROSSING ELECTRICAL DETAILS

SCALE: AS NOTED
DATE: July, 2016
JOB NO: 150809
SHEET 6 OF 9

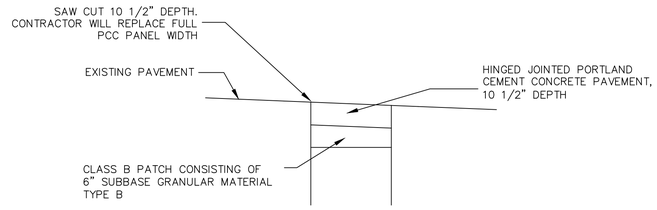
P:\St Charles,City\150809 Kirk Rd Electrical Duct Crossing\CADD\Manhole Details.dwg Updated by: Eric Wilde 7/12/2016

LEFT TURN LANE NORTHBOUND
N.T.S.

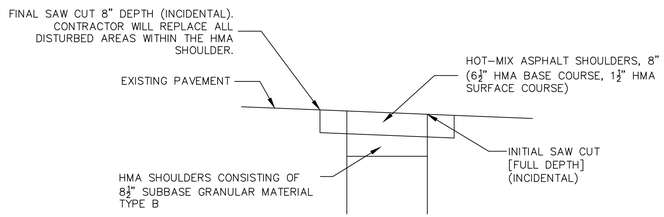


EXISTING ROADWAY SECTION
N.T.S.

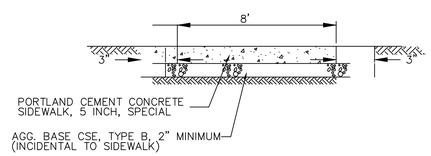
① EXISTING TOPSOIL WITH SALT TOLERANT SOD, 4"
② EXISTING COMBINATION CURB & GUTTER TYPE M–6.24 (2.67' WIDTH). (STD. 2130–15), 10½" FLAG ALSO WITH TYPE 24 FRAME & GRATE AS NEEDED (STD. 2424–1)
③ EXISTING BITUMINOUS SHOULDERS, 8" (6½" BITUMINOUS BASE COURSE, 1½" BITUMINOUS CONCRETE SURFACE COURSE, CLASS 1, MIXTURE D, TYPE 2 WITH CONTINUOUS RUMBLE STRIP)
④ EXISTING SUBBASE GRANULAR MATERIAL TYPE B, 8½"
⑤ EXISTING HINGED JOINTED PORTLAND CEMENT CONCRETE PAVEMENT, 10½" – STD. 2189–17
⑥ EXISTING SUBBASE GRANULAR MATERIAL TYPE B, 6"
⑦ EXISTING LANDSCAPE FILL SOIL
⑧ NOT USED
⑨ EXISINT PORTLAND CEMENT CONCRETE SIDEWALK, 5" (INCLUDES 3" SUBBASE GRANULAR TYPE B INCUDENTAL TO SIDEWALK)
⑩ EXISTING LONGITUDINAL CONSTRUCTION JOINT WITH #6 EPOXY COATED TOE BARS – 2' CENTERS, 2.5' LENGTH (STD. 2189–17)
⑪ EXISTING CONCRETE MEDIAN, TYPE SB–6.12 (STD. 2122–16), WITH #6 EPOXY COATED TIE BARS @ 2' CENTERS
⑫ EXISTING COMBINATION CURB & GUTTER, TYPE B–6.12 (1.58'), (STD. 2130–15), 10½" FLAG
⑬ NOT USED



CLASS B PATCH DETAIL
N.T.S.



HOT–MIX ASPHALT SHOULDERS DETAIL
N.T.S.



SIDEWALK DETAIL
N.T.S.

REVISIONS:					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DRAWN BY: RT
CHECKED BY: __
APPROVED BY: __

ENGINEERING RESOURCE ASSOCIATES, INC.
CONSULTING ENGINEERS, SCIENTISTS & SURVEYORS
3S701 WEST AVENUE, SUITE 150, WARRENVILLE, ILLINOIS 60555, PHONE (630) 393-3060, FAX (630) 393-2152
10 S. RIVERSIDE PLAZA , SUITE 875, CHICAGO, ILLINOIS 60606, PHONE (312) 474-7841, FAX (312) 474-6099
3002 CROSSING COURT, CHAMPAIGN, ILLINOIS 61822, PHONE (217) 351-6268, FAX (217) 355-1902

KIRK ROAD DUCT CROSSING
CITY OF ST. CHARLES, ILLINOIS

TITLE: CONSTRUCTION DETAILS

SCALE: 1"=20'
DATE: June, 2015
JOB NO: 150809
SHEET 7 OF 9

H:\StCharles,City\150809 Kirk Rd Electrical Duct Crossing\CADD\150809 Kirkrd Duct.dwg Updated by: Eric Wilde 7/12/2016

LEGEND

TYPE II BARRICADE WITH FLASHERS AS MANY AS DIRECTED BY ENGINEER

(1) CHANGEABLE MESSAGE SIGNS FOR ONE WEEK IN ADVANCE OF CLOSURE

(2) ROAD CONSTRUCTION AHEAD — W20-1 (48"x 48") B/O

(3) LANE ENDS MERGE LEFT — W9-2 (48"x 48") B/O

(6) ARROW BOARD (LEFT)

(8) RIGHT TURN LANE — 30"X36"

(9) SIDEWALK CLOSED — R9-9 24"X12"

(10) RIGHT LANE MUST TURN RIGHT — R3-7 30"X30"

(4) W4-2R(O)-48

(5) W20-7(O)-48

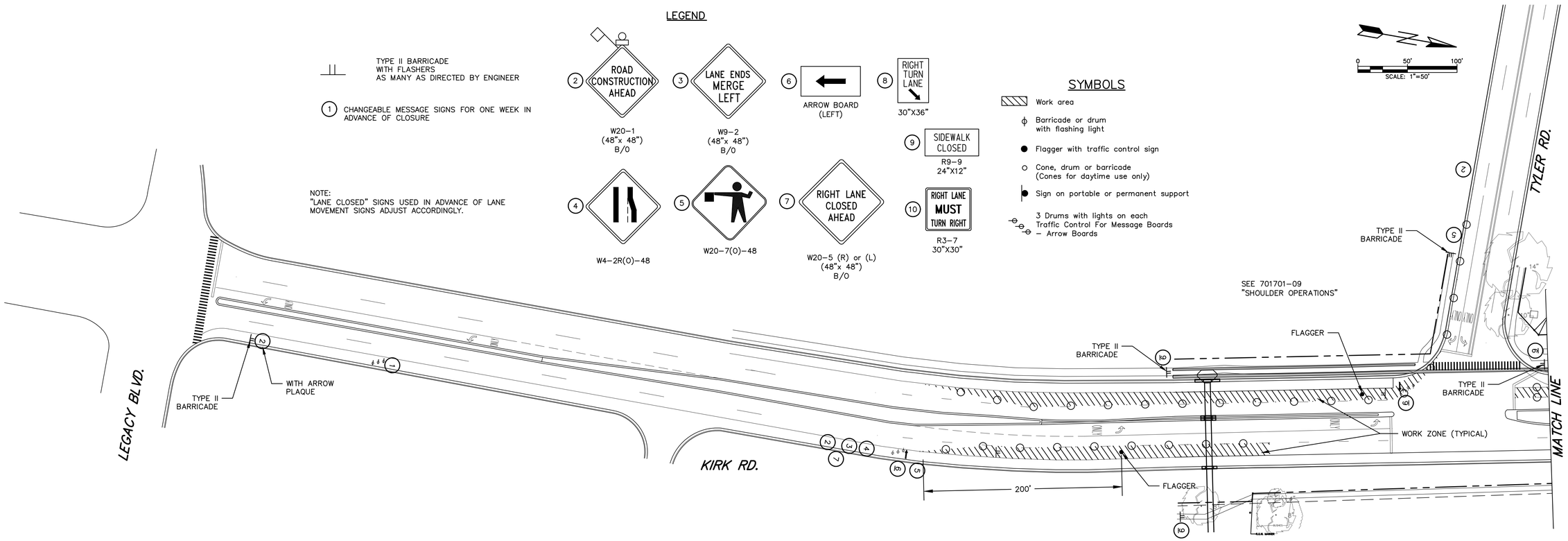
(7) RIGHT LANE CLOSED AHEAD — W20-5 (R) or (L) (48"x 48") B/O

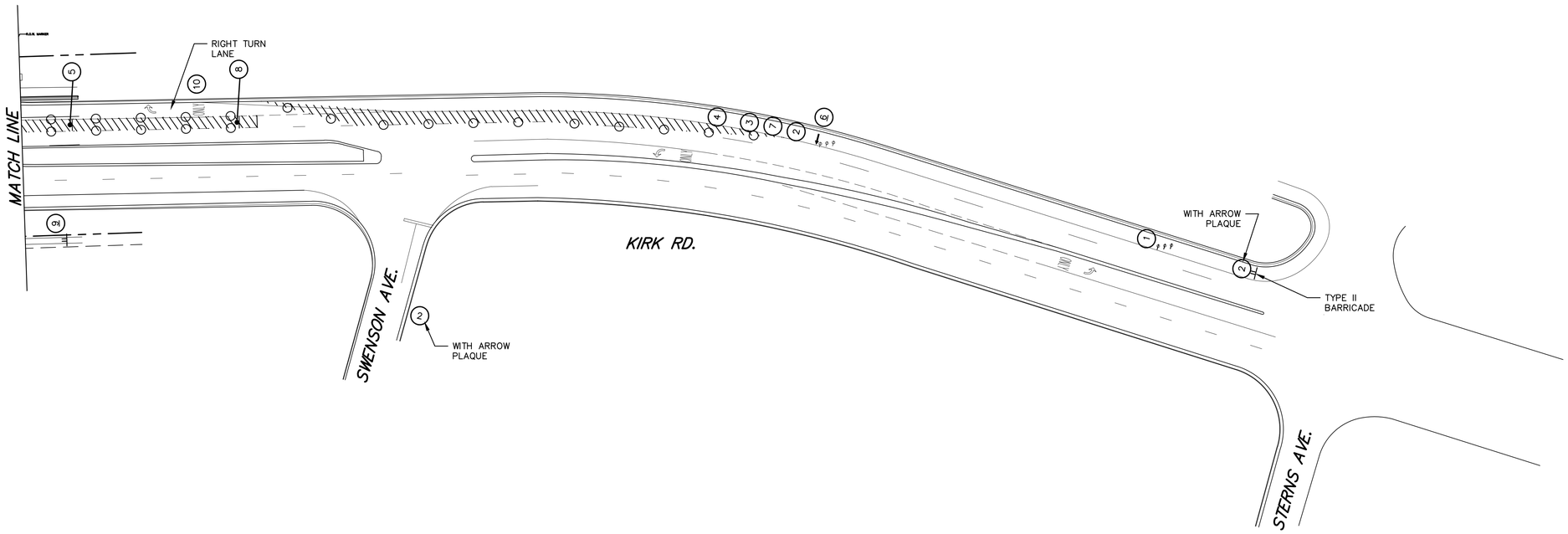
NOTE:
"LANE CLOSED" SIGNS USED IN ADVANCE OF LANE MOVEMENT SIGNS ADJUST ACCORDINGLY.

SYMBOLS

- Work area
- Barricade or drum with flashing light
- Flagger with traffic control sign
- Cone, drum or barricade (Cones for daytime use only)
- Sign on portable or permanent support
- 3 Drums with lights on each Traffic Control For Message Boards – Arrow Boards

0 50' 100'
SCALE: 1"=50'





REVISIONS:					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
07/18/16	RT	PER CITY REVIEW			

DRAWN BY: RT
CHECKED BY: CS
APPROVED BY: MM

ENGINEERING RESOURCE ASSOCIATES, INC.
CONSULTING ENGINEERS, SCIENTISTS & SURVEYORS

3S701 WEST AVENUE, SUITE 150
WARRENVILLE, ILLINOIS 60555
PHONE (630) 393-3060
FAX (630) 393-2152

10 S. RIVERSIDE PLAZA , SUITE 875
CHICAGO, ILLINOIS 60606
PHONE (312) 474-7841
FAX (312) 474-6099

2416 GALEN DRIVE
CchampaIGN, ILLINOIS 61821
PHONE (217) 351-6268
FAX (217) 355-1902

KIRK ROAD DUCT CROSSING
CITY OF ST. CHARLES, ILLINOIS

TITLE:
KIRK RD. AND TYLER RD.
TRAFFIC CONTROL PLAN
STAGE 1

SCALE: 1"=40'
DATE: July, 2016
JOB NO: 150809
SHEET 8 OF 9

H:\StCharles,City\150809 Kirk Rd Electrical Duct Crossing\CADD\150809 Kirkrd Traffic Control.dwg Updated by: rtanner 7/18/2016

LEGEND

TYPE II BARRICADE WITH FLASHERS AS MANY AS DIRECTED BY ENGINEER

(1) CHANGEABLE MESSAGE SIGNS FOR ONE WEEK IN ADVANCE OF CLOSURE

(2) ROAD CONSTRUCTION AHEAD — W20-1 (48"x 48") B/O

(3) LANE ENDS MERGE LEFT — W9-2 (48"x 48") B/O

(6) ARROW BOARD (LEFT)

(8) RIGHT TURN LANE — 30"X36"

(9) SIDEWALK CLOSED — R9-9 24"X12"

(10) RIGHT LANE MUST TURN RIGHT — R3-7 30"X30"

(4) W4-2R(O)-48

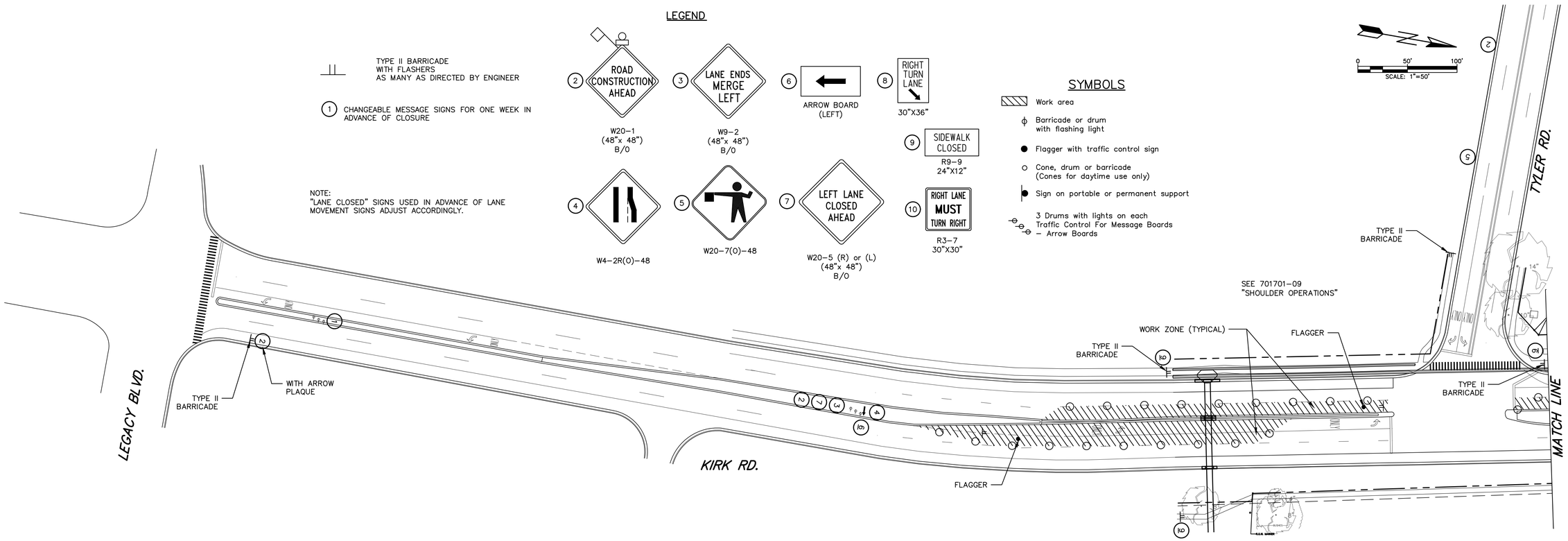
(5) W20-7(O)-48

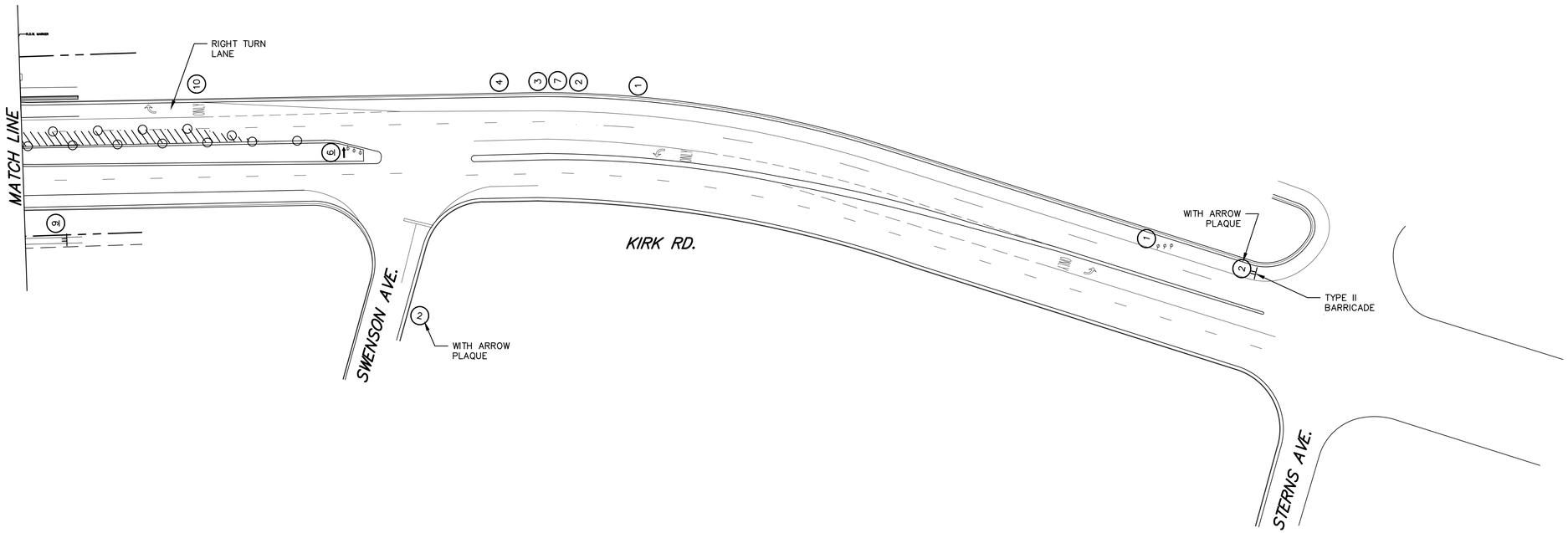
(7) LEFT LANE CLOSED AHEAD — W20-5 (R) or (L) (48"x 48") B/O

NOTE:
"LANE CLOSED" SIGNS USED IN ADVANCE OF LANE MOVEMENT SIGNS ADJUST ACCORDINGLY.

SYMBOLS

- Work area
- Barricade or drum with flashing light
- Flagger with traffic control sign
- Cone, drum or barricade (Cones for daytime use only)
- Sign on portable or permanent support
- 3 Drums with lights on each Traffic Control For Message Boards – Arrow Boards





REVISIONS:					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
07/18/16	RT	PER CITY REVIEW			

DRAWN BY: RT
CHECKED BY: CS
APPROVED BY: MM

ENGINEERING RESOURCE ASSOCIATES, INC.
CONSULTING ENGINEERS, SCIENTISTS & SURVEYORS

3S701 WEST AVENUE, SUITE 150
WARRENVILLE, ILLINOIS 60555
PHONE (630) 393-3060
FAX (630) 393-2152

10 S. RIVERSIDE PLAZA , SUITE 875
CHICAGO, ILLINOIS 60606
PHONE (312) 474-7841
FAX (312) 474-6099

2416 GALEN DRIVE
CHAMPAIGN, ILLINOIS 61821
PHONE (217) 351-6268
FAX (217) 355-1902

KIRK ROAD DUCT CROSSING
CITY OF ST. CHARLES, ILLINOIS

TITLE:
KIRK RD. AND TYLER RD.
TRAFFIC CONTROL PLAN
STAGE 2

SCALE: 1"=40'
DATE: July, 2016
JOB NO: 150809
SHEET 9 OF 9

H:\StCharles,City\150809 Kirk Rd Electrical Duct Crossing\CADD\150809 Kirkrd Traffic Control.dwg Updated by: rtanner 7/18/2016