

IOWA COMMUNICATIONS NETWORK

CONSTRUCTION DRAWINGS FOR:
WINTERSET COMMUNITY
SCHOOL DISTRICT CONNECTIONS
(MADISON COUNTY)

PROJECT OVERVIEW:

The ICN intends to extend the ICN Backbone from the corner of East Jefferson Street and North 10th Street to the Winterset Community School District (WCSD) High School. Also, ICN will extend fiber to the WCSD School Bus Garage and to the WCSD administrative offices currently under construction. The project will be in four phases:

Phase 1
Extend a 12-strand armored fiber connection from the existing ICN Backbone cable at the northwest corner of N 10th Street and E Jefferson Street to an existing ICN handhole in the Right of Way in front of 814 South 4th Avenue, a distance of approximately 7,043 feet. At 814 S. 4th Ave, the new cable will be spliced to an existing ICN cable to the High School.

Phase 2 (Hot Cut)
A mid-span insertion is to be performed on the ICN backbone, north of E. Jefferson Street along the west side of N. 10th Street. A bore of approximately 128 feet and two handholes will be required for the insertion. Contractor shall also expose the duct/cable at the mid-point of the insertion, cut the duct and pull the existing fiber back to the two handholes during the midnight splice window. Contractor shall provide a pulling crew to be on site at midnight on the night of the cut-over.

Phase 3
Extend a 12-strand dielectric fiber and tracer wire to the WCSD School Bus Garage first floor data location. A second mid-span insertion is required at the Bus Garage, 923 East Lane Street. The location of the mid-span insertion is on the west side of N. 10th Street north of East Lane St. A bore of approximately 183 feet and two handholes will be required for the insertion. Contractor shall also expose the cable at the mid-point of the insertion, cut the duct and pull the existing fiber back to the two handholes. Another bore of approximately 71 feet will be required to serve the building. See Building Entry detail for installation of T-Adapter, Tracer and Ground Rod. Phase 3 will take place after the mid-span insertion in Phase 2. The existing cable will be dead at that point, so all work will be performed during the day.

Phase 4
Extend a new 12-strand armored from an existing ICN handhole on the southeast corner of 4th Avenue and US Highway 169/Iowa Highway 92, to the new WCSD administrative office at 303 Wambold Drive (the frontage road along the north side of US Hwy 169/Iowa 92). This will require new conduit of approximately 331 feet to the Owner's handhole and installing fiber in the Owners new conduit approximately 200 feet from the Owner's handhole into the building first floor data room. It is located approximately 1000 feet west of the intersection of US Highway 169 and Iowa Highway 92.

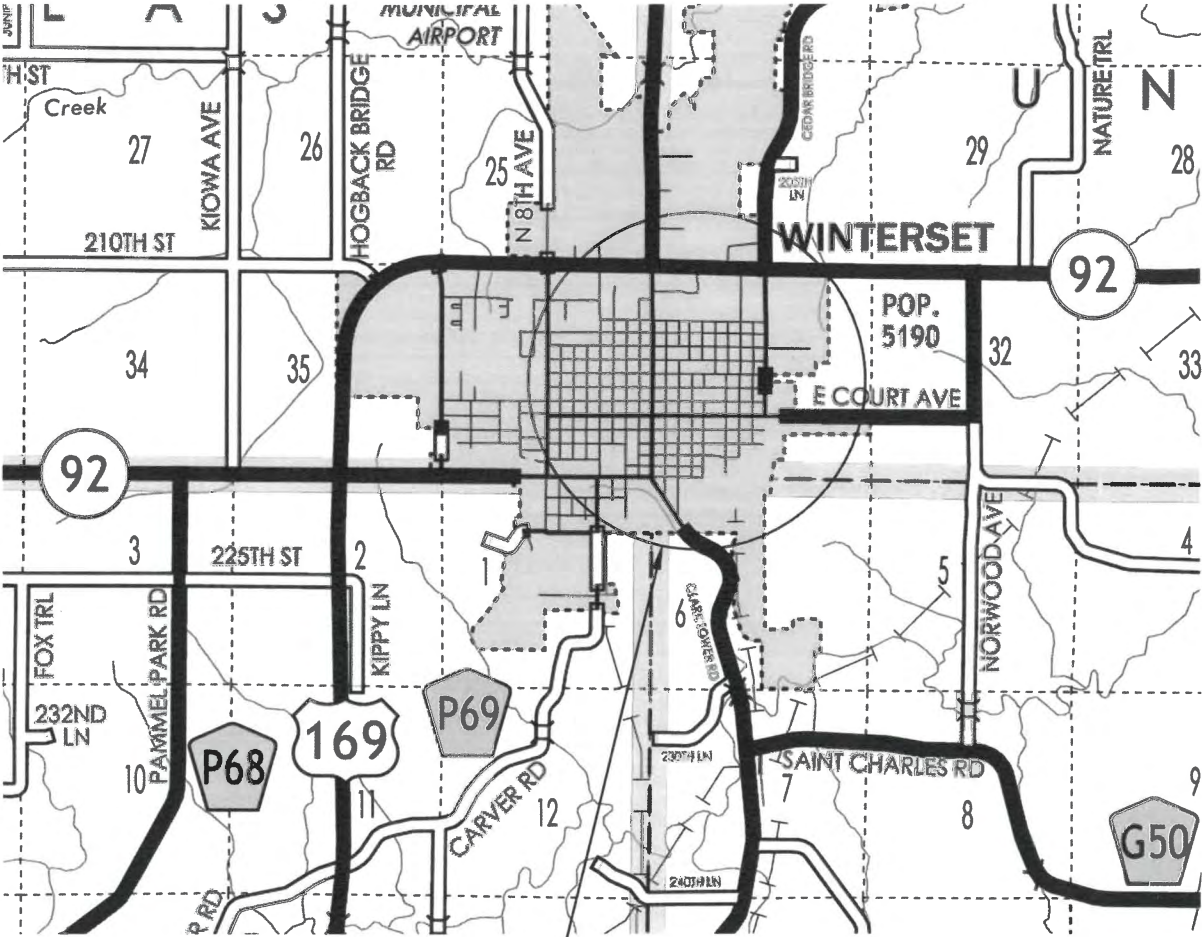
CONTRACTOR REQUIREMENTS FOR WINTERSET:

- THE CONTRACTOR SHALL COMPLY WITH ALL CITY OF WINTERSET REQUIREMENTS.
- THE CONTRACTOR SHALL POTHOLE ALL UTILITIES.
- POTHOLES SHALL BE BACKFILLED WITH SAND UP TO 6 INCHES BELOW GRADE.
- THE TOP 6 INCHES SHALL BE COMPACTED BLACK DIRT WITH THE ORIGINAL SOD ON TOP.
- THE CONTRACTOR SHALL MEET WITH THE CITY OF WINTERSET PRIOR TO BEGINNING WORK.
- THE CONTRACTOR SHALL COORDINATE WITH THE CITY THROUGHOUT THE PROJECT AND SHALL ARRANGE FOR A FINAL INSPECTION, BY THE CITY, OF ALL WORK, INCLUDING ANY DAMAGE CAUSED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL PROVIDE ICN WITH A WRITTEN STATEMENT FROM THE CITY, THAT THE CITY HAS INSPECTED AND APPROVES OF THE CONTRACTOR'S WORK.

CONTACTS*				
COMPANY	TYPE	NAME	PHONE	EMAIL
Iowa Communications Network (ICN)	OSP Engineer	Tim Flickinger	515-725-4699	timothy.flickinger@iowa.gov
Iowa Communications Network (ICN)	ICN Materials	Paul Damge	515-725-4749	paul.damge@iowa.gov
Fiber Network Services (FNS)	Splicing Coordination	Chris Harris	515-725-8929	chris.harris@iowa.gov
City of Winterset	Assistant City Administrator	Bob Hendricks	515-462-1422	bhendricks@cwmu.net

*THIS CONTACT LIST IS NOT ALL-INCLUSIVE. CONTRACTOR IS RESPONSIBLE FOR REQUESTING LOCATES OF ALL UTILITIES.

PROJECT LOCATION



PROJECT LOCATION



SHEET INDEX	
1	TITLE PAGE (THIS SHEET)
2	MATERIALS
3-15	CONSTRUCTION DRAWING
16-17	DETAILS
-	ICN STANDARD DETAIL ATTACHMENTS

LICENSED PROFESSIONAL ENGINEER

GREGORY T. SEIB

23179

IOWA

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

Signature

Gregory T. Seib

Printed or Typed Name

Gregory T. Seib

License Number

23179

5-29-2019

Date

My license renewal date is December 31, 2020

Pages or sheets covered by this set: 1-17



COMMUNITY SCHOOL DISTRICT CONNECTIONS WINTERSET IOWA				IOWA COMMUNICATIONS NETWORK 400 EAST 14TH STREET GRIMES STATE OFFICE BUILDING DES MOINES, IOWA 50319 ICN © 2019, COPY WITH PERMISSION
1	PRELIMINARY	5-22-19		
2	FINAL	5-29-19		
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ITEM	ICN PART NUMBER	QTY	NOTES
ICN PROVIDED MATERIALS			
FIBER CABLE			
12 strand Armored SM fiber		9800	
12 strand Indoor/Outdoor OFNR Dielectric SM fiber	Corning-C 012E8F-31131-29	300	
HANDHOLES AND LIDS			
Bulk 24"x36"x36" with lid Tier 22	BULKU2436360061001	10	
Bulk Puck ICN Logo Black	ACC7734-125	8	
Bulk Puck ICN Logo Orange	ACC7334OR-125	2	Locate point only
LOCATE FACILITIES			
LOCATE STATIONS			
TRIVIEW Test Station w/ Isolever 72" ORANGE (with 3 ICN decals applied) (Walker)	TVT172OB-EM9125	1	
IsoLever (Rhino Marker Isolation Lever only, no post)	EM9125-OR	2	Mount in handhole
ISO Lever Locate Box (pre-fabricated unit)	ISOLOCBOX	1	
GROUNDING			
Erico 1/2" x 6' Ground Rod (Graybar)	611360	4	
Burndy 1/2" Ground Rod Clamp (Anixter)	GRC12	4	
MARKERS FLAGS DECALS			
ICN Snap Around Vulcan 4"X4" 15Mil Coiled Pvc (ICN-4X4-Sa)	1502345 (ICN-4x4-SA)	20	
TERMINATION ITEMS: FDP, BULKHEADS, TRAYS, & RELATED			
Wall-Mountable Connector Housing (WCH), Holds 2 CCH connector panels	WCH-02P	2	
CCH Pigtailed Splice Cassette, 6 F, SC UPC Simplex, SM PRE-ASSEMBLED	CCH-CS06-3C-P00RE	2	
Leviton storage ring 24-inch	48900-OFR	1	
Leviton storage ring 11.5-inch	48900-IFR	1	
SPLICING MATERIALS			
SPLICE CLOSURES			
450BS FOSC450-BS-6-NT-0-B0V	F34112-000	4	
TRAY	FOSC450-B6-6-NT-0-B3V	1	
SPLICE TRAYS			
A TRAY 12 FOSC-ACC-A-TRAY-12 TRAY WITH 12 FUSION SPLICE HOLDER	497817-000	4	BS case
B TRAY 24 FOSC-ACC-B-TRAY-24-KIT	863927-000	1	B case
BONDING & TRACING HARDWARE			
FOSC Closure Sealing Kit FAK-MULDRP-45-4P/CBL-ATT	1F6818-000	3	
3M Scotchlok Shield Bond Connector 4460-D	4460-D	12	
CONTRACTOR PROVIDED MATERIALS			
HDPE Conduit (13.5 SDR)	2"	7628	
6 AWG Bare Solid Copper Ground Wire (Graybar) - 315' reel		1	
12 AWG Copperhead 30 MIL Insulated Orange Copper Clad Steel Tracer Wire***		210	
Contractor shall supply all other materials required for proper installation, including but not limited to: HDPE, Duct Splices, Grounding and Tracer Wires, Rock, Wire Mesh, etc.		X	

NOTE ON HDPE CONDUIT AND SPLICES:

1. HDPE SHALL BE ORANGE SMOOTH WALL SDR 13.5

2. DUCT SPLICES SHALL BE MADE OF THE FOLLOWING (IN ORDER OF PREFERENCE.)

-CRIMP ON

-CLAMP ON / BOLT ON (SPLIT COUPLINGS)

-PUSH ON

3. **ALL SPLICES SHALL BE AIR AND WATER TIGHT**

4. DUCT SPLICES SHALL BE OF A TYPE MADE SPECIFICALLY FOR JOINING HDPE CONDUIT

5. ALL DUCT SPLICES SHALL BE MADE IN SUCH MANNER AS TO ALLOW CONTINUOUS PULLING OF CABLE THROUGH DUCT.

ANY EXCEPTIONS MUST BE AGREED UPON IN WRITING PRIOR TO CONSTRUCTION:



COMMUNITY SCHOOL DISTRICT CONNECTIONS
WINTERSET IOWA

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IOWA COMMUNICATIONS NETWORK
400 EAST 14TH STREET
GRIMES STATE OFFICE BUILDING
DES MOINES, IOWA 50319
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- NOTES:
- STA. 0+00
EXISTING ICN HANDHOLE (24"X36"X36")
SPlice LS507
1 EA. ISO-LEVER LOCATE STATION
1 EA. FOSC 450B FIBER OPTIC SPLICE CLOSURE FOR MIDSHEATH SPLICE
1 EA. GROUND ROD
150' COIL OF 12 F/A LINK 1126B
 - 837' FROM STA. 0+00 TO STA. 8+37
1-2" CONDUIT (BORED)
LINK 1126B - 12 F/A

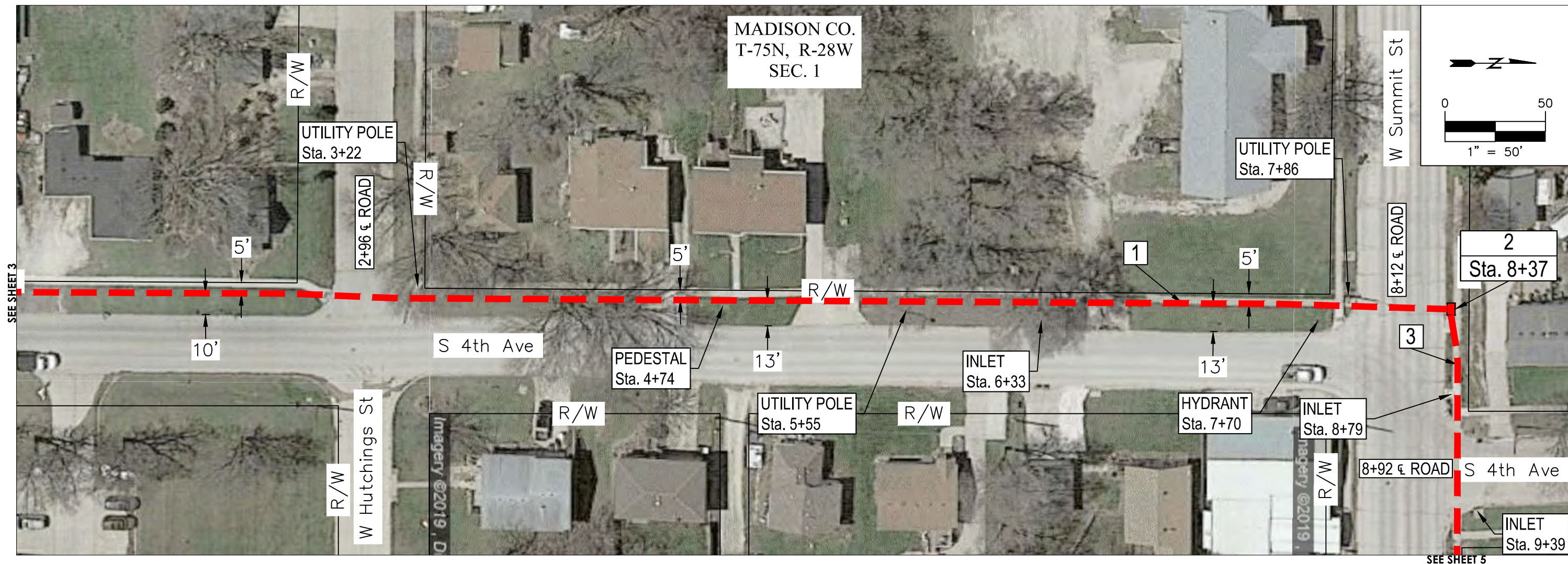
LEGEND

EXISTING DUCT	---
PROPOSED ICN DUCT	---
RIGHT-OF-WAY	---R/W---
EXISTING HANDHOLE	■
PROPOSED ICN HANDHOLE	■

- GENERAL NOTES:
- DUCT TO BE INSTALLED MINIMUM 48" DEPTH EXCEPT WHERE NOTED
 - THIS SHEET IS PART OF PHASE 1 OF THE PROJECT

CONSTRUCTION DOCUMENT

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- NOTES:
- 1-2" CONDUIT (BORED)
LINK 1126B - 12 F/A
 - STA. 8+37
1 EA. INSTALL HANDHOLE (24"X36"X36")
3' NORTH OF BOC
150' COIL OF 12 F/A LINK 1126B
 - 1,091' FROM STA. 8+37 TO STA. 19+28
1-2" CONDUIT (BORED)
LINK 1126B - 12 F/A

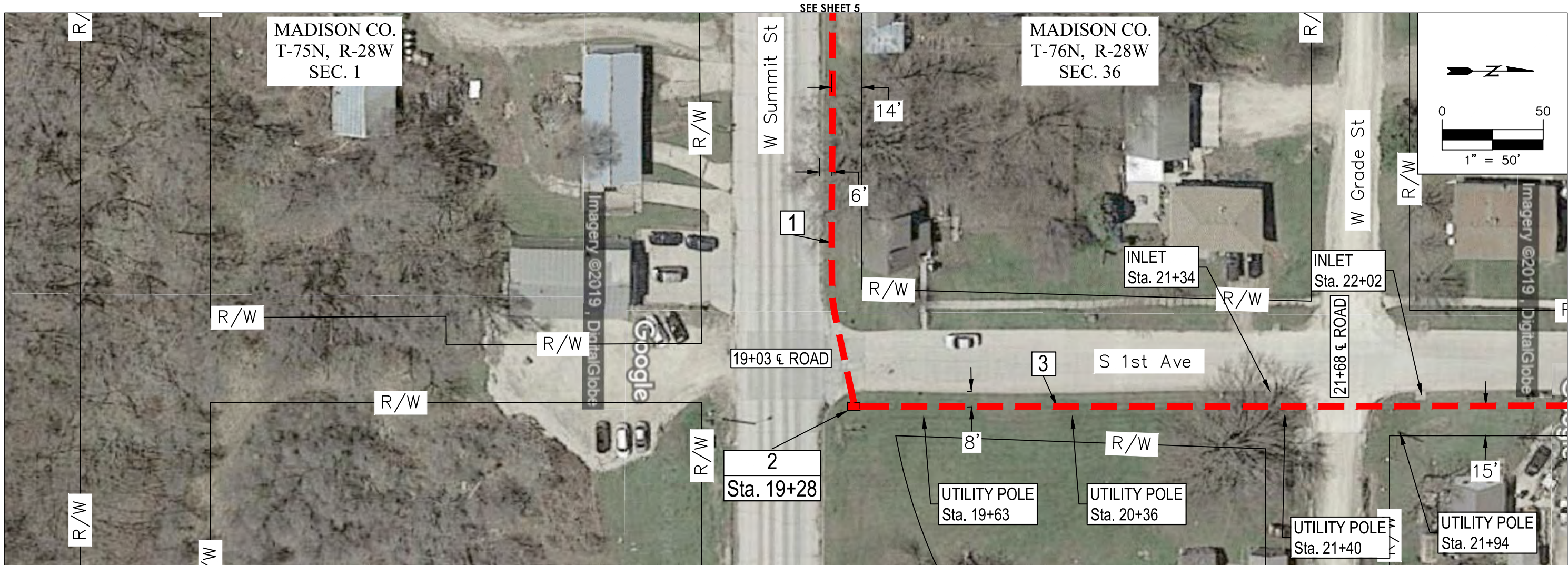
LEGEND

EXISTING DUCT	---
PROPOSED ICN DUCT	---
RIGHT-OF-WAY	— R/W —
EXISTING HANDHOLE	■
PROPOSED ICN HANDHOLE	■

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- NOTES:
- 1-2" CONDUIT (BORED)
LINK 1126B - 12 F/A
 - STA. 19+28
1 EA. INSTALL HANDHOLE, (24"X36"X36")
11' NORTH OF BOC AND 7' EAST OF BOC
150' COIL OF 12 F/A LINK 1126B
 - 827' FROM STA. 19+28 TO STA. 27+55
1-2" CONDUIT (BORED)
LINK 1126B - 12 F/A

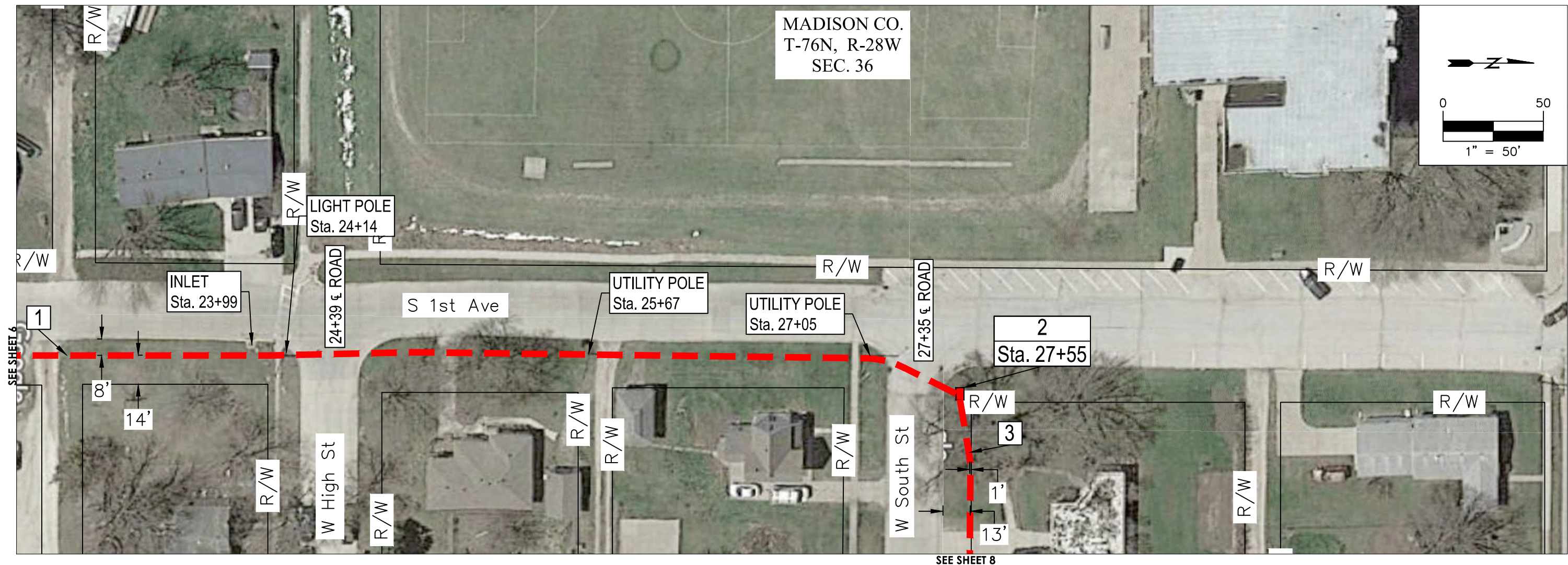
LEGEND

EXISTING DUCT	---
PROPOSED ICN DUCT	---
RIGHT-OF-WAY	R/W
EXISTING HANDHOLE	■
PROPOSED ICN HANDHOLE	■

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NOTES:

- 1-2" CONDUIT (BORED)
LINK 1126B - 12 F/A
- STA. 27+55
1 EA. INSTALL HANDHOLE (24"X36"X36")
8' NORTH OF BOC AND 11' EAST OF BOC
150' COIL OF 12 F/A LINK 1126B
- 1,314' FROM STA. 27+55 TO STA. 40+69
1-2" CONDUIT (BORED)
LINK 1126B - 12 F/A

LEGEND

EXISTING DUCT

PROPOSED ICN DUCT

RIGHT-OF-WAY

EXISTING HANDHOLE

PROPOSED ICN HANDHOLE

GENERAL NOTES:

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NOTES:
1. 1-2" CONDUIT (BORED)
LINK 1126B - 12 F/A

LEGEND

EXISTING DUCT

PROPOSED ICN DUCT

RIGHT-OF-WAY

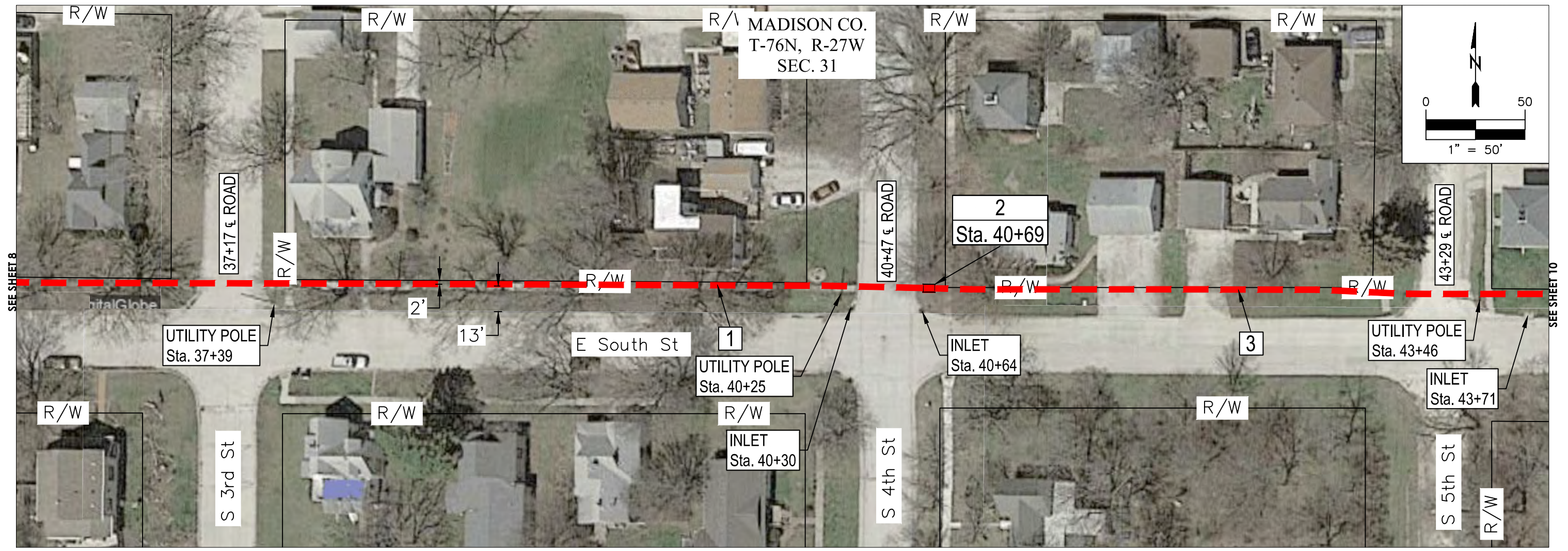
EXISTING HANDHOLE

PROPOSED ICN HANDHOLE

- GENERAL NOTES:
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- NOTES:
- 1-2" CONDUIT (BORED)
LINK 1126B - 12 F/A
 - STA. 40+69
1 EA. INSTALL HANDHOLE (24"X36"X36")
13' NORTH OF BOC AND 7' EAST OF BOC
150' COIL OF 12 F/A LINK 1126B
 - 1,186' FROM STA. 40+69 TO STA. 52+55
1-2" CONDUIT (BORED)
LINK 1126B - 12 F/A

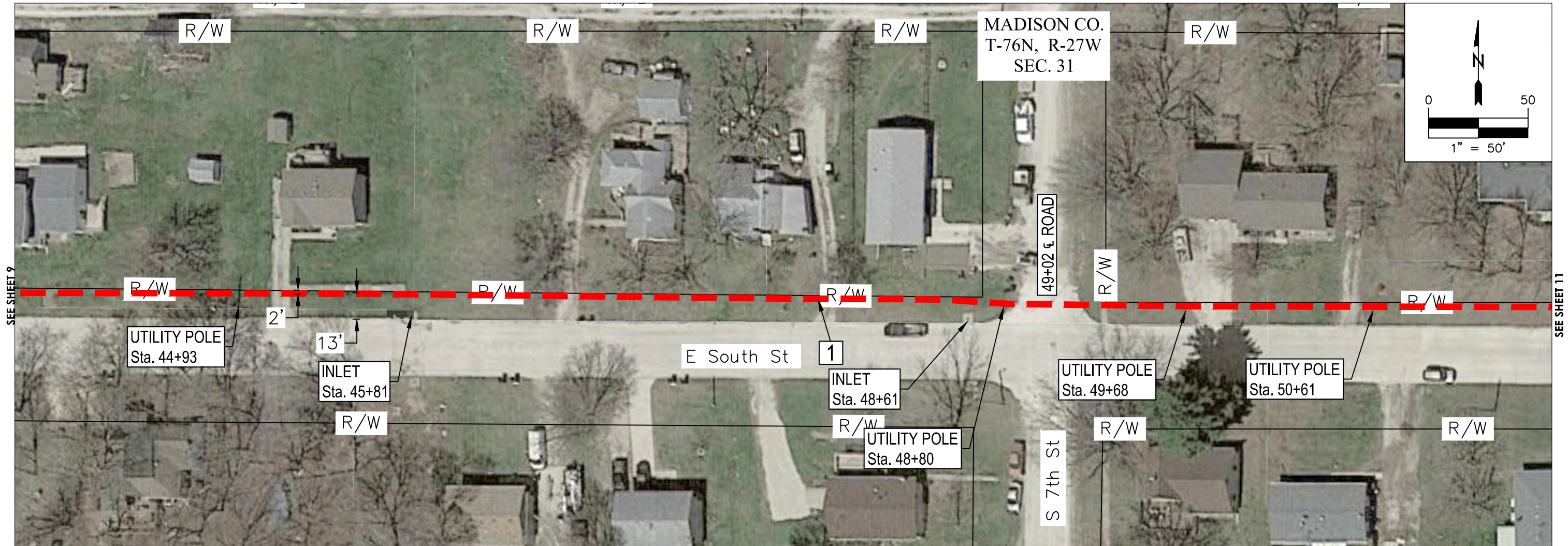
LEGEND

EXISTING DUCT	---
PROPOSED ICN DUCT	---
RIGHT-OF-WAY	---R/W---
EXISTING HANDHOLE	■
PROPOSED ICN HANDHOLE	■

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NOTES:
 1. 1-2" CONDUIT (BORED)
 LINK 1126B - 12 F/A

LEGEND

EXISTING DUCT ————

PROPOSED ICN DUCT ————

RIGHT-OF-WAY ———— R/W ————


EXISTING HANDHOLE ■

PROPOSED ICN HANDHOLE ■

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NOTES:

- 1-2" CONDUIT (BORED)
LINK 1126B - 12 F/A
- STA. 52+55
1 EA. INSTALL HANDHOLE (24"X36"X36")
13' NORTH OF BOC AND 9' EAST OF BOC
150' COIL OF 12 F/A LINK 1126B
- 1,052' FROM STA. 52+55 TO STA. 63+07
1-2" CONDUIT (BORED)
LINK 1126B - 12 F/A


LEGEND

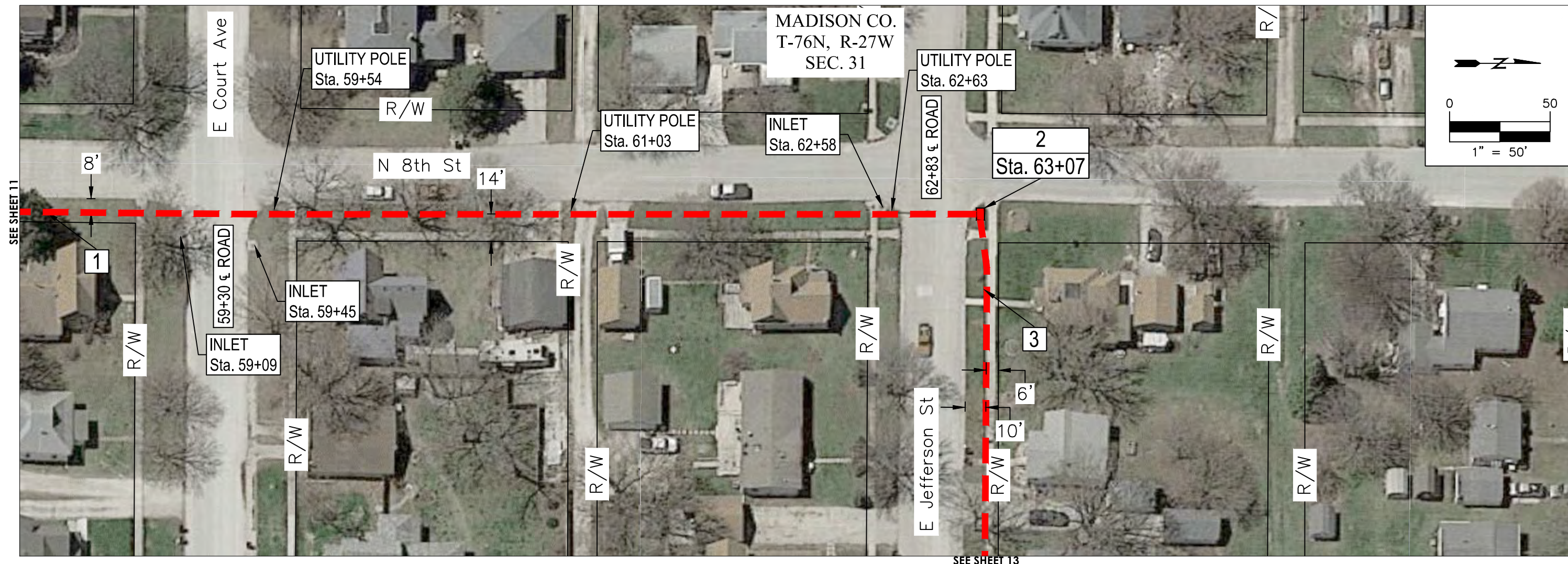
EXISTING DUCT	---
PROPOSED ICN DUCT	---
RIGHT-OF-WAY	---R/W---
EXISTING HANDHOLE	■
PROPOSED ICN HANDHOLE	■

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NOTES:

- 1-2" CONDUIT (BORED)
LINK 1126B - 12 F/A
- STA. 63+07
1 EA. INSTALL HANDHOLE (24"X36"X36")
6' NORTH OF BOC AND 6' EAST OF BOC
150' COIL OF 12 F/A LINK 1126B
- 608' FROM STA. 63+07 TO STA. 69+15
1-2" CONDUIT (BORED)
LINK 1126B - 12 F/A

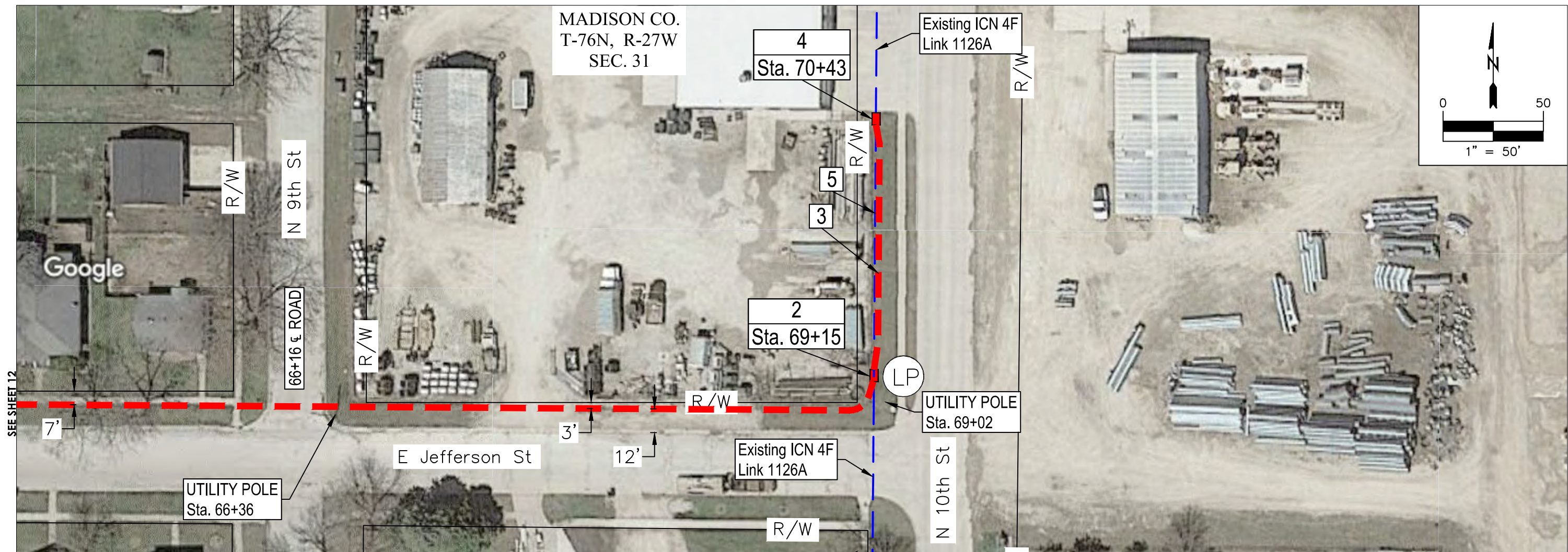
LEGEND	
EXISTING DUCT	---
PROPOSED ICN DUCT	---
RIGHT-OF-WAY	R/W
EXISTING HANDHOLE	■
PROPOSED ICN HANDHOLE	■

GENERAL NOTES:

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NOTES:


- 1-2" CONDUIT (BORED)
LINK 1126B - 12 F/A
- STA. 69+15
1 EA. INSTALL HANDHOLE, (24"X36"X36")
27' NORTH OF BOC AND 21' WEST OF BOC
150' COIL OF 12 F/A
(2 - 75' SPLICE TAILS FOR LINKS 1126A 1126B)
CAPTURE EXISTING ICN 1.25" BLACK CONDUIT
(POTHOLED AT 48" DEPTH)
1 EA. ISO-LEVER LOCATE STATION (MOUNT IN HH)
1 EA. GROUND ROD
1 EA. FOSC 450BS FIBER OPTIC SPLICE CLOSURE
SPLICE LS506
- 128' FROM STA. 69+15 TO STA. 70+43
1-2" CONDUIT (BORED)
LINK 1126A - 12 F/A
- STA. 70+43
1 EA. INSTALL HANDHOLE, (24"X36"X36")
3' SOUTH OF DRIVEWAY
150' COIL OF 12 F/A LINK 1126A
CAPTURE EXISTING ICN 1.25" BLACK CONDUIT
(POTHOLED AT 40" DEPTH)
1 EA. FOSC 450BS FIBER OPTIC SPLICE CLOSURE
SPLICE MS1126A-M
- MID-POINT OF MID-SPAN INSERTION
EXISTING 1.25" BLACK DUCT
POTHOLED AT 39" DEPTH
39" EAST OF FENCE
CUT DUCT AND FIBER
PULL BACK FIBER AND ROUTE TO HANDHOLES AT
STA. 69+15 AND STA. 70+43
WARNING - HOT CUT
TO BE COORDINATED WITH ICN DURING
A PLANNED MAINTANCE WINDOW

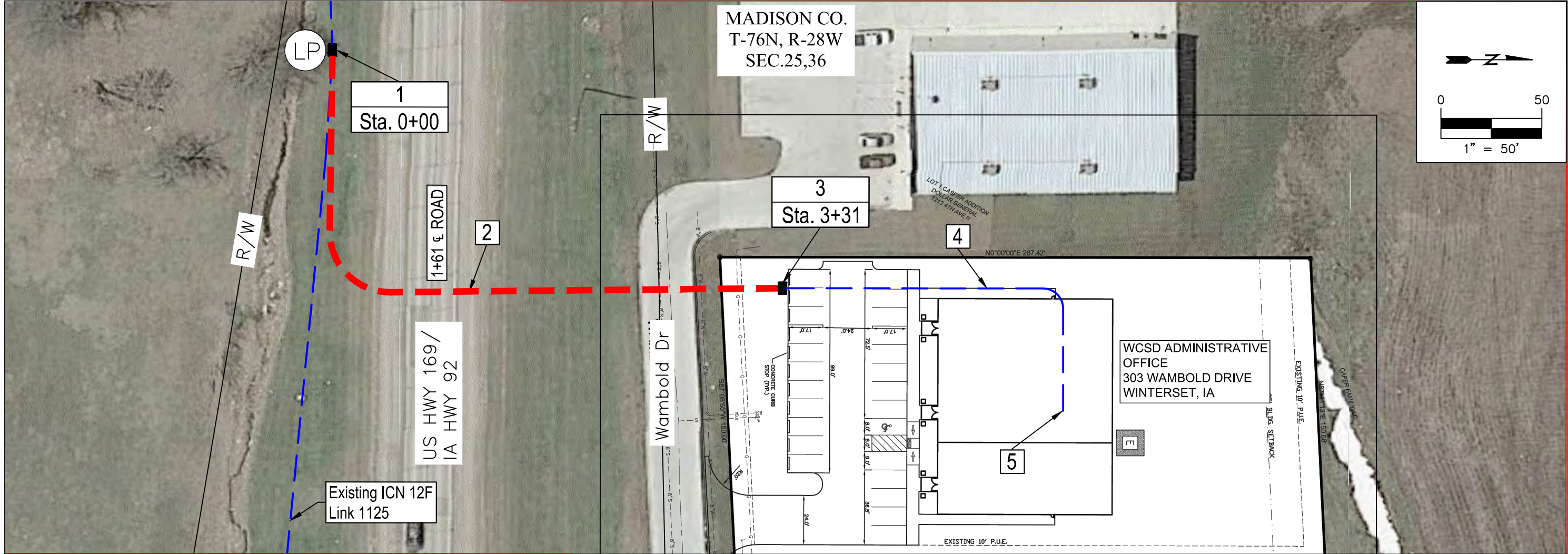
LEGEND	
EXISTING DUCT	---
PROPOSED ICN DUCT	---
RIGHT-OF-WAY	---
EXISTING HANDHOLE	■
PROPOSED ICN HANDHOLE	■

GENERAL NOTES:

- DUCT TO BE INSTALLED MINIMUM 48" DEPTH
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- THIS SHEET IS PART OF PHASE 1 AND PHASE 2 OF
THE PROJECT. PHASE 2 IS THE MID-SPAN INSERTION.

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- NOTES:
- STA. 0+00
EXISTING ICN HANDHOLE
EXISTING SPLICE LS509
1 EA. TRIVIEW LOCATE STATION (WITH 3 - #12 TRACER WIRE)
1 EA. GROUND ROD
150' COIL OF 12 F/A LINK 1125C
 - 331' FROM STA. 0+00 TO STA. 3+31
1 - 2" CONDUIT (BORED)
LINK 1125C - 12 F/A
 - STA. 3+31
HANDHOLE TO BE PLACED BY BUILDING OWNER, 30"X48"
CONTRACTOR TO VERIFY EXACT LOCATION OF HANDHOLE BEFORE BORING CONDUIT
IF HANDHOLE IS NOT INSTALLED, STUB 2" HDPE CONDUIT 4' ABOVE GRADE AND PLUG DUCT. STUB CONDUIT APPROX. 45' NORTH OF WAMBOLD DR. CURB AND 30' EAST OF DOLLAR GENERAL PARKING LOT.
COORDINATE EXACT LOCATION WITH CONTRACTOR AND OWNER
50' COIL OF 12 F/A - LINK 1125C
 - 196' FROM STA. 3+31 TO STA. 4+27
2" BUILDING OWNER CONDUIT
LINK 1125C - 12 F/A
 - STA. 4+27
FIRST FLOOR DATA ROOM
80' COIL OF 12 F/A
COORDINATE WITH ICN AND BUILDING OWNER
SEE DETAILS ON SHEET 17

LEGEND

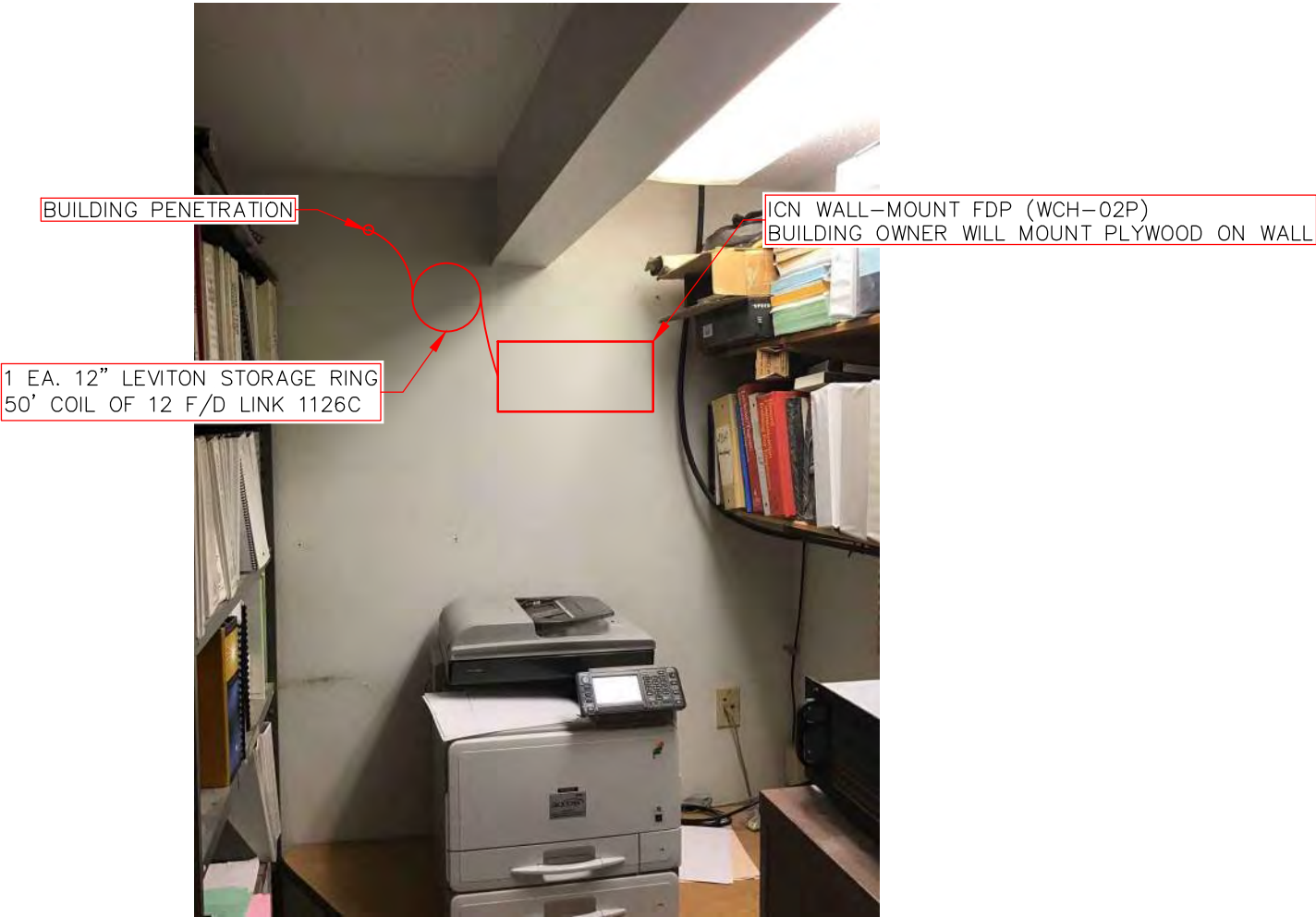
EXISTING DUCT	---
PROPOSED ICN DUCT	---
RIGHT-OF-WAY	---
EXISTING HANDHOLE	■
PROPOSED ICN HANDHOLE	■

- GENERAL NOTES:**
- DUCT TO BE INSTALLED MINIMUM 48" DEPTH EXCEPT WHERE NOTED
 - THIS SHEET IS PART OF PHASE 4 OF THE PROJECT

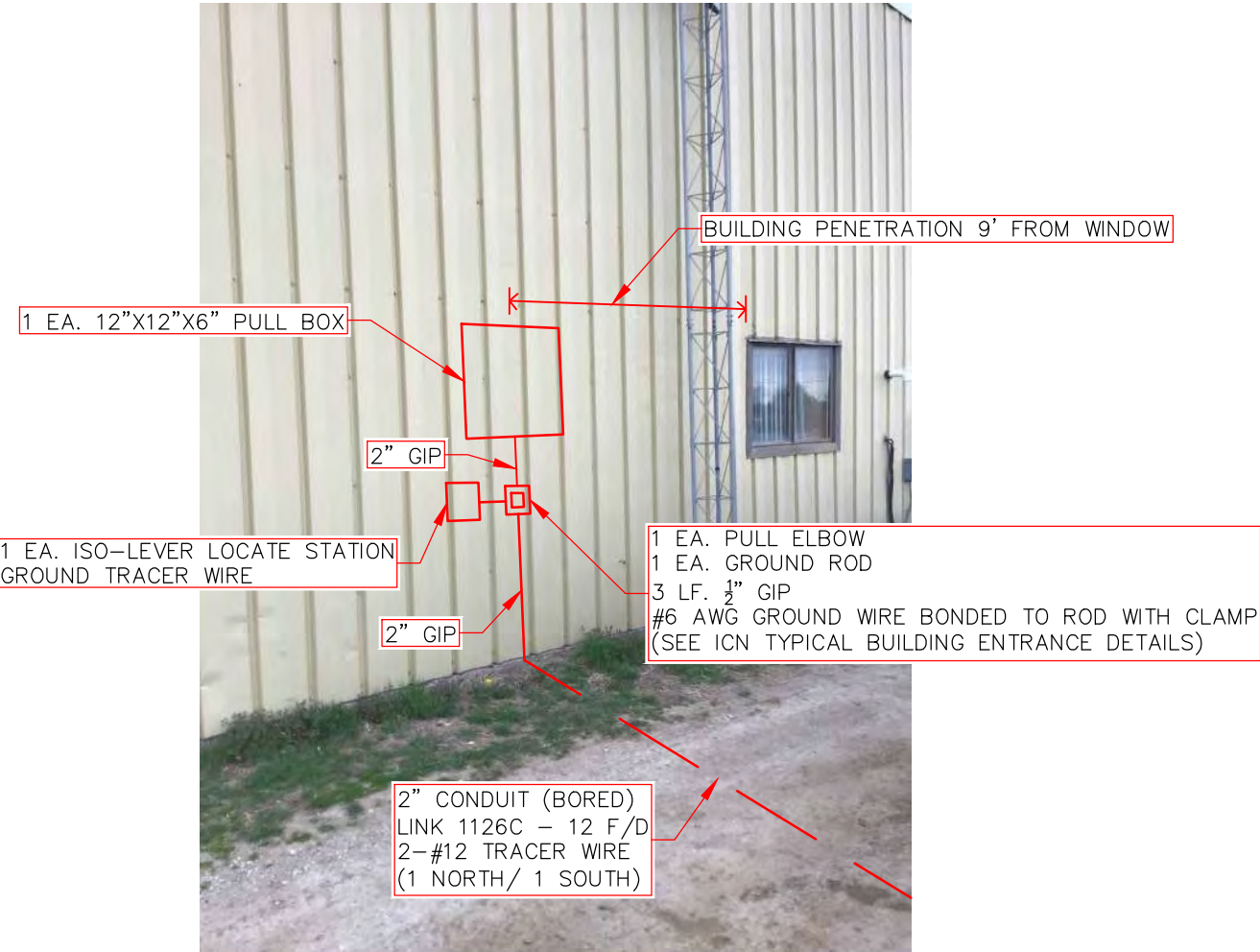
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WCSD SCHOOL BUS GARAGE




16.1 INTERIOR EAST WALL



16.2 EXTERIOR EAST BUILDING FACE
ICN STA. 2+54 (PHASE 3)

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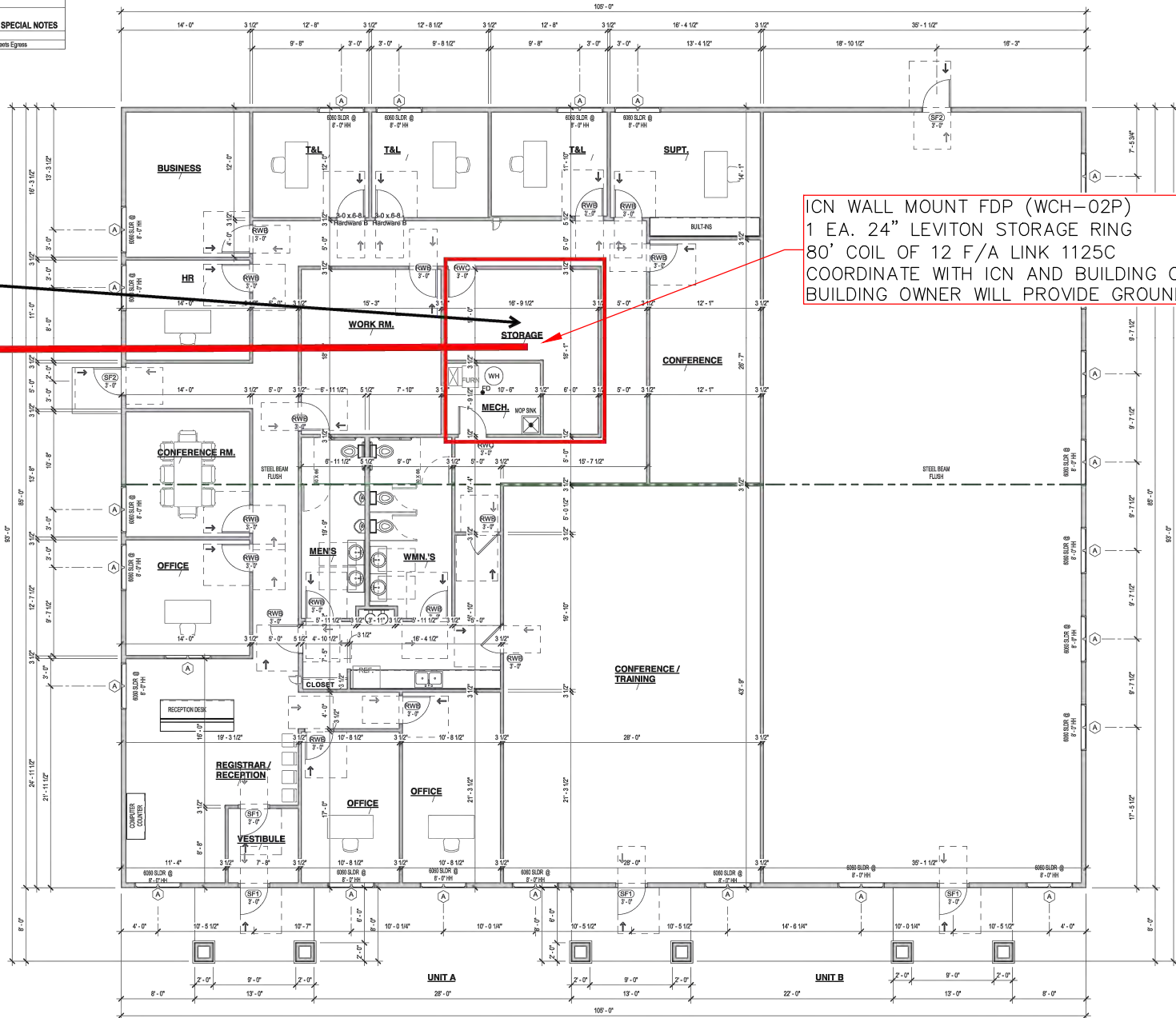
WCSD ADMINISTRATIVE OFFICE

WINDOW SCHEDULE						
ID	QTY	TYPE	ROUGH OPENINGS WIDTH HEIGHT	HEADER HEIGHT	SPECIAL NOTES	
A	24	6000 SLDR	15'-0" 8'-0"		Metal Egress	

TOTAL BUILDING AREA SCHEDULE	
NAME	SQ FT
First Floor	5950 SF
Grand Total	5950 SF

GENERAL CONSTRUCTION NOTES

1. 200 WALLS (8'-1 1/2" HGT.) ON MAIN FLOOR UNLESS OTHERWISE NOTED.
2. 200 WALLS (8'-1 1/2" HGT.) ON SECOND FLOOR UNLESS OTHERWISE NOTED.
3. EXTERIOR DIMENSIONS ARE FROM THE OUTSIDE OF SHEATHING TO OUTSIDE OF SHEATHING OR FROM FACE OF MASONRY TO FACE OF MASONRY.
4. INTERIOR DIMENSIONS ARE FROM THE FACE OF STUD TO FACE OF STUD.
5. ALL WINDOWS AND DOORS ARE SHOWN BELOW SCOPE UNLESS NOTED AS FLUSH.
6. BLOODING IN BATHROOMS FOR GRAB BARS REQUIRED IN ALL UNITS.



PLUM DESIGN SERVICES
1100 SE ALICE'S ROAD, WAUKESHA, IOWA 50601
TELEPHONE 515.978.9260 FAX 515.978.9261

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Corkrean Construction
Winterset Office
Winterset, Iowa

PROJECT ID:
PDS 4307

ISSUE DATE:
DATE: 01-11-19
DATE: 01-14-19
DATE: 02-11-19
DATE: 03-06-19
DATE:
DATE:
DATE:

First Floor

3/16" = 1'-0"

THIS PAGE IS INTENDED TO BE PRINTED ON 24"X36" PAPER TO BE TO SCALE

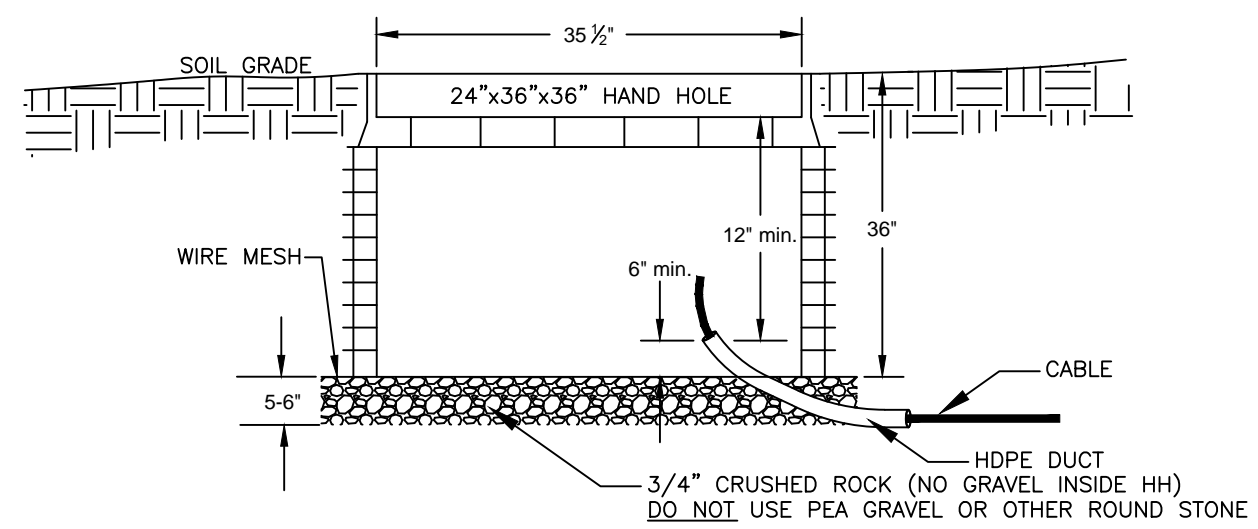
A3

CONSTRUCTION DOCUMENT

COMMUNITY SCHOOL DISTRICT CONNECTIONS WINTERSET IOWA				IOWA COMMUNICATIONS NETWORK 400 EAST 14TH STREET GRIMES STATE OFFICE BUILDING DES MOINES, IOWA 50319 ICN © 2019. COPY WITH PERMISSION
1	PRELIMINARY	5-22-19		
2	FINAL	5-29-19		
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4				

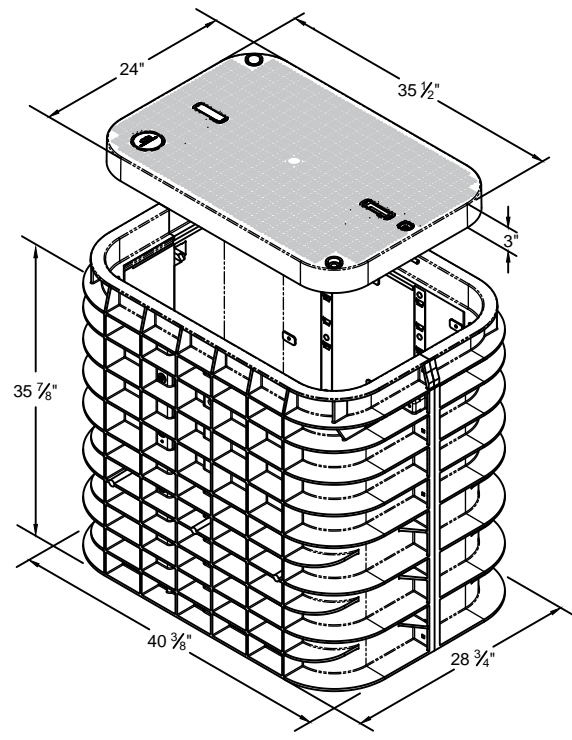
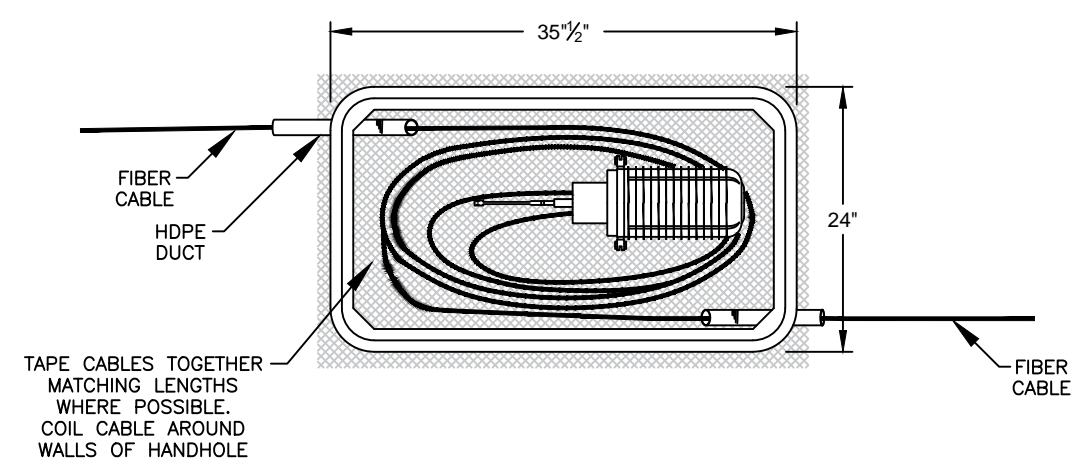
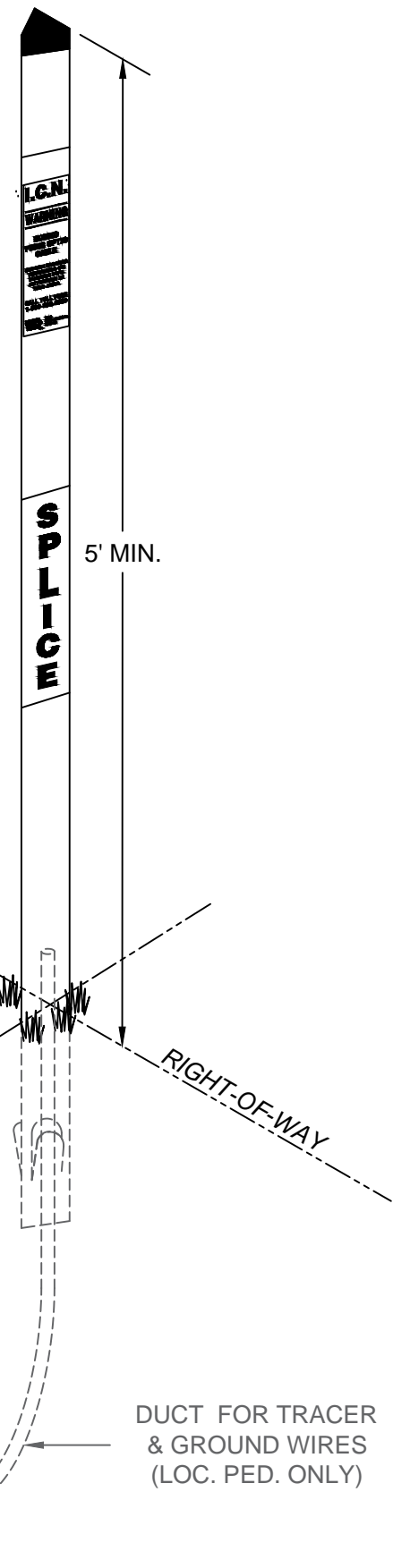
HANDHOLE PLACEMENT TYPICAL

24" X 36" X 36" HAND HOLE

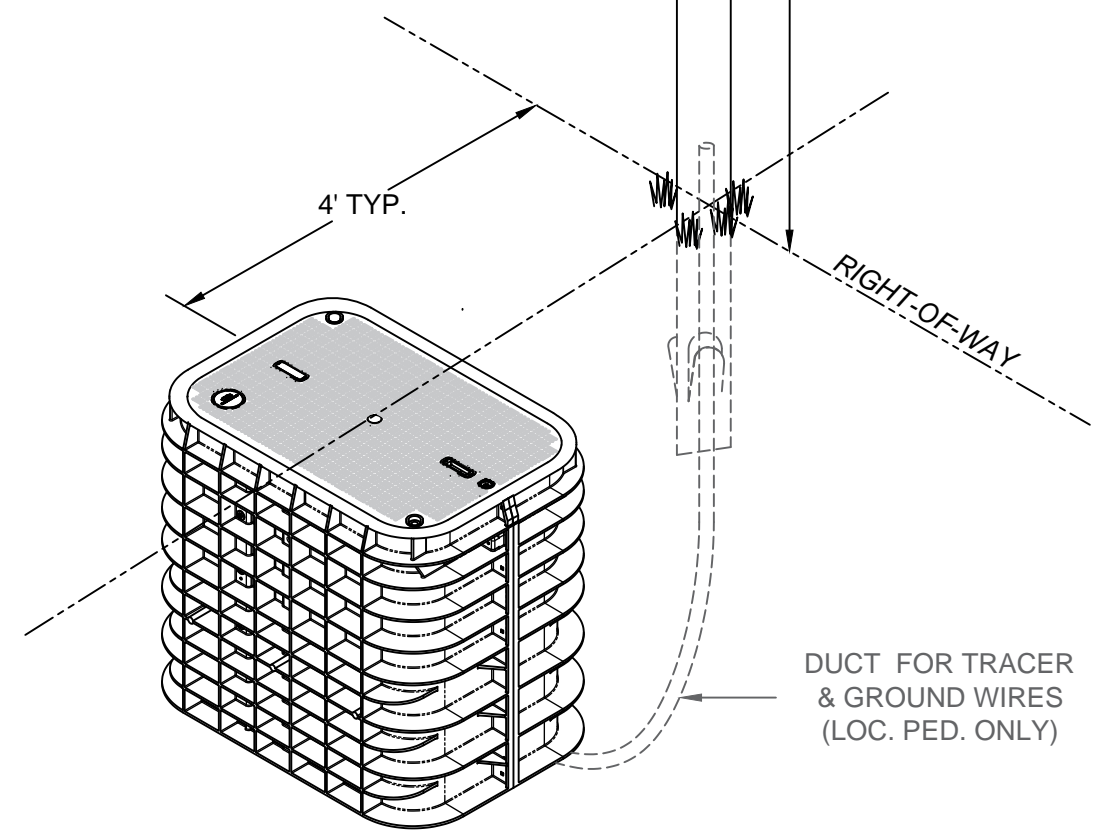


SEE INSTALLATION INSTRUCTIONS FOR PROPER PLACEMENT OF CHANNELL BULK HANDHOLE

TYPICAL TRIVIEW LOCATE PEDESTAL OR WARNING MARKER



BULK HANDHOLE TYPICAL 24"X36"X36"





INSTALLATION INSTRUCTION

Install Channell BULK Vaults

Date: 5/12/15

Installation Considerations

This Installation Instruction provides general information useful for installing the Channell BULK line of below-grade handhole vaults. This guide cannot anticipate all situations that could be encountered in the field and thus represents information applicable to common installation conditions. Please consult local company practice for proper product configuration for each application.

Site Preparation

1. Ensure that all local, state, federal, OSHA and company-specific regulations are met prior to beginning and throughout the installation process.
2. Plan the excavation approximately 12 to 16 inches in length and width larger than the actual dimensions of the handhole to be installed. **(See Figure 1)**
3. Excavate the hole 6 to 8 inches in depth more than the overall height dimension of the handhole with the cover in place. Tamp the floor of excavated pit using either a hand tamp tool and/or a mechanical tamper. (Remember: if the handhole is to be set in concrete, the polymer ring must be included in this dimension.)
4. Place 5 to 6 inches of 3/4" crushed rock over the entire floor. The rock should be free of soil and other organic matter. This important step prevents subsistence of the vault over time, aids in drainage, and provides a solid foundation for the handhole. **(See Figure 2)**
 - a. As an alternative, a dry mix of cement and crushed rock in a 1:10 ratio may be used to form a higher strength foundation.
 - b. NOTE: Do not use "pea gravel" or other "round stone" for this step.
5.
 - a. Place the handhole body into the pit. **(See Figure 3)**
 - b. Center the handhole body in the excavated pit parallel to the sidewalk and/or curb if applicable.
 - c. Level and adjust the height of the handhole body to grade, as required, by adding more crushed rock.

FOR THE PURPOSE OF THIS ILLUSTRATION, THIS HANDHOLE IS BEING PLACED AT A SITE THAT WILL HAVE A FUTURE SIDEWALK; THEREFORE, THE COMPOSITE RING IS REQUIRED. THE RING IS ONLY REQUIRED AT SITES WHERE THE HANDHOLE IS BEING PLACED IN AND SURROUNDED BY CONCRETE.

6. Place the cover on the handhole body to prevent the backfill dirt from entering the inside of the handhole. The cover should be level with the ground. Bolting of the cover is recommended but is not a requirement for this step; however, the cover must always be bolted down prior to departure of the site. **(See Figure 4)**
7. The excess soil removed from the excavated pit shall be used during the backfill of the pit. The backfill shall be tamped continuously during the filling process to prevent settling around the sides of the handhole. **(See Figure 5)**

During the filling process of the soil around the handhole, stones that are 3" and larger shall be removed from the soil and not used.

8. The final backfill shall be tamped with a slope away from the handhole. All excess backfill material shall be removed from the installation site. **(See Figure 6)**

Figure 1



Figure 2



Figure 3



Figure 4



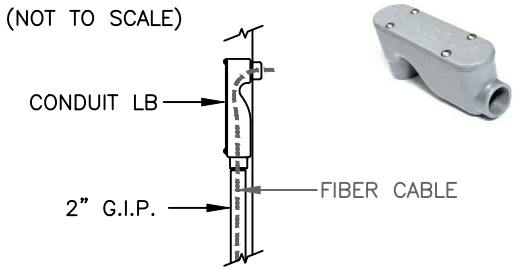
Figure 5



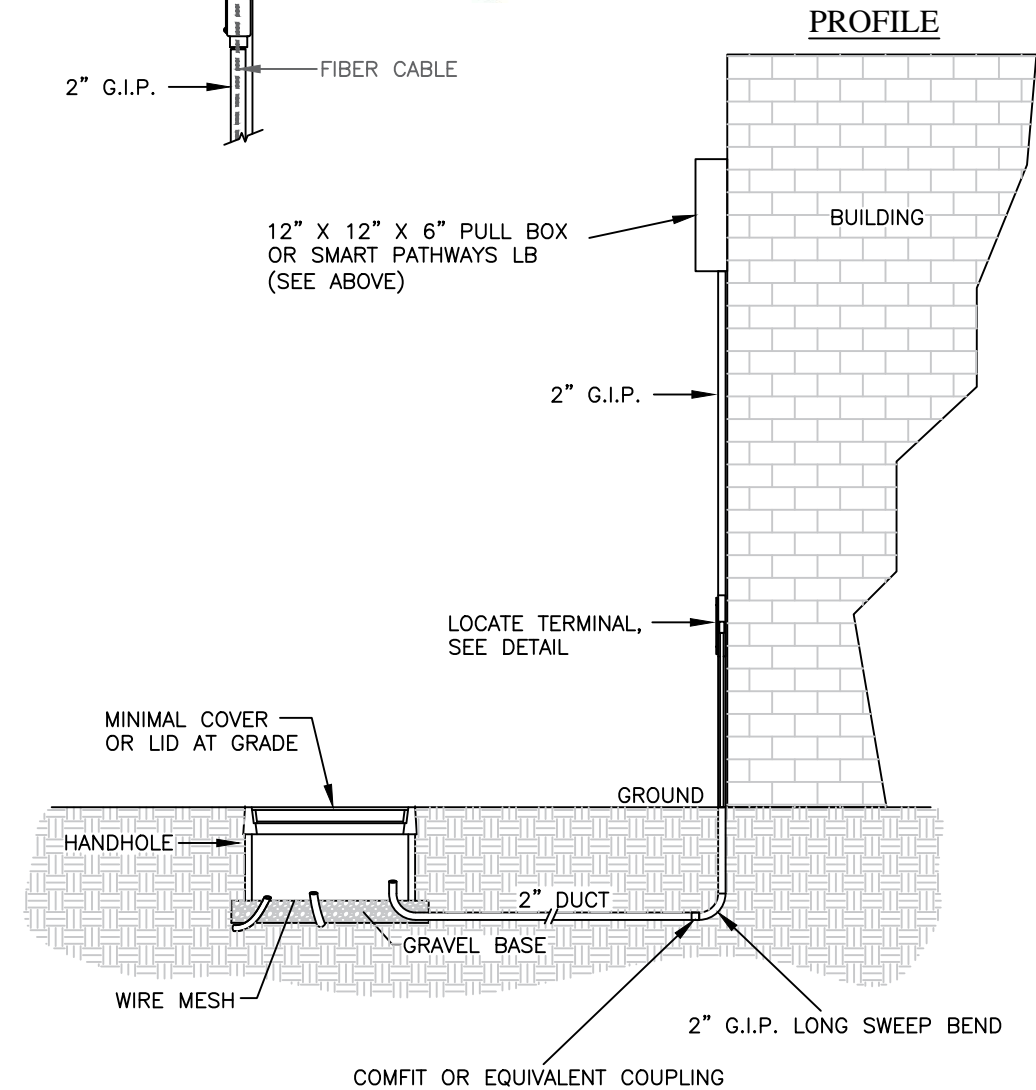
Figure 6



ALTERNATIVE TO PULL BOX:
SMART PATHWAYS LB
(NOT TO SCALE)

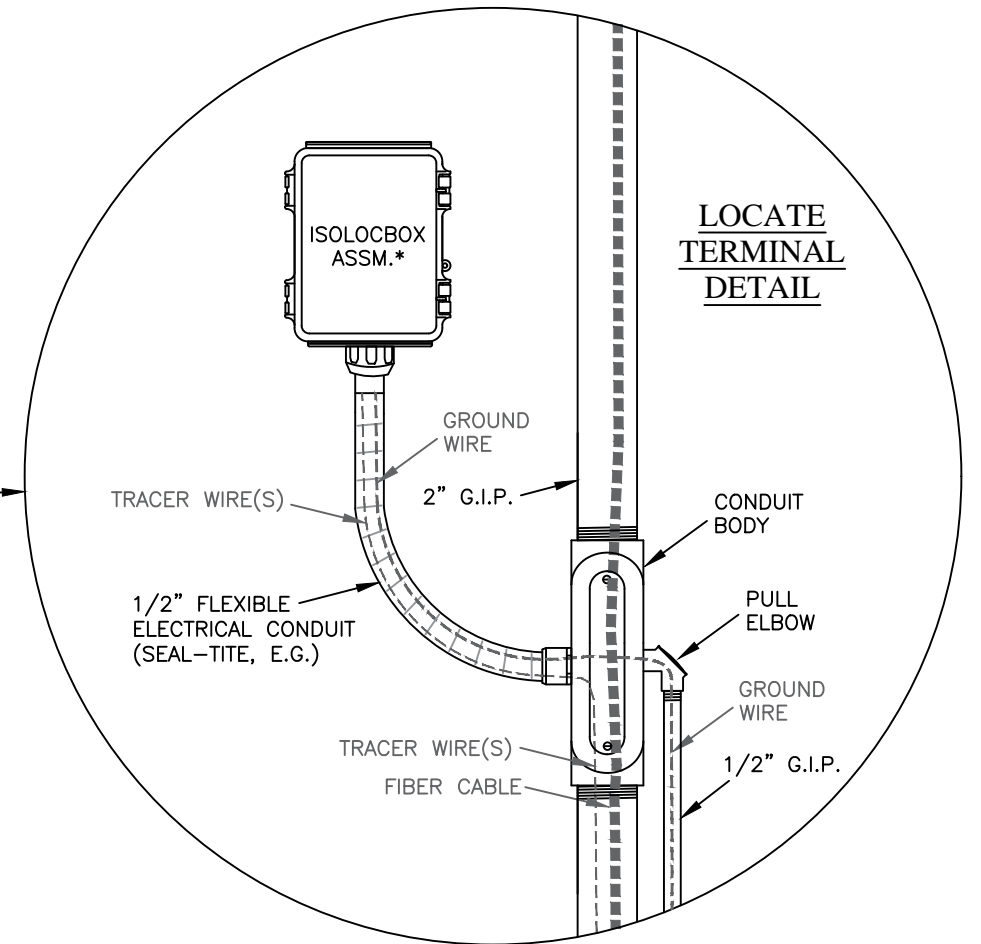
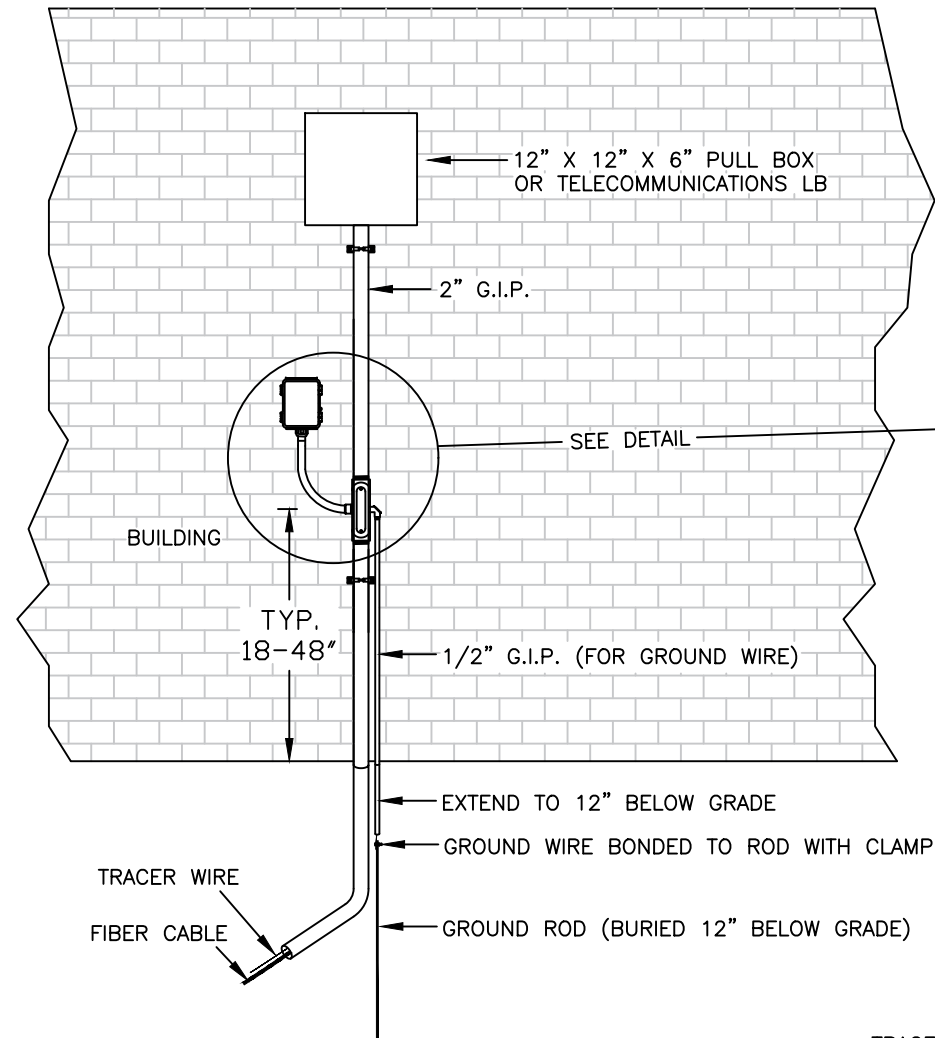


12" X 12" X 6" PULL BOX
OR SMART PATHWAYS LB
(SEE ABOVE)



TYPICAL ABOVE GROUND BUILDING ENTRANCE WITH LOCATE TERMINAL

ELEVATION



LOCATE TERMINAL DETAIL

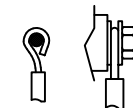
NOTES:

1. PLACE 2" G.I.P. WITH SWEEP TOWARDS NEW PULL BOX
2. (1) CORE HOLE THROUGH EXTERIOR WALL TO ACCOMMODATE 2" G.I.P.
3. PLUG ALL DUCTS WITH JACK MOON OR EQUIVALENT
4. BUILDING ENTRANCE SHALL HAVE WATER-TIGHT SEAL
5. ANCHOR 2" G.I.P. TO WALL WITH 2-HOLE STRAPS, SPACED NO MORE THAN 5- FEET APART
6. ALL COMPONENTS SHALL BE G.I.P. OR DIE CAST ALUMINUM
7. EMT AND PLASTIC ARE NOT ALLOWED
8. MOUNT LOCATE STATION A MINIMUM OF 18" ABOVE GRADE
9. SEAL ANY ACCESS HOLES DRILLED IN THE LOCATE STATION TO ROUTE WIRES WITH SILICONE
10. ALL COUPLINGS MUST ALLOW FOR BLOWING OR PULLING WITH NO OBSTRUCTION

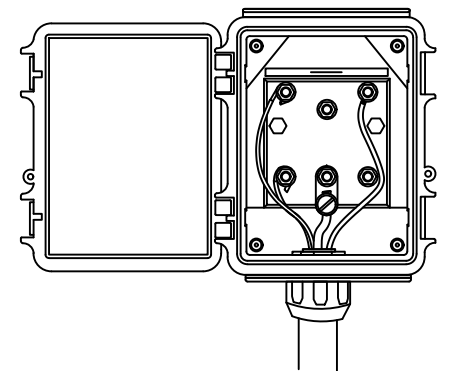
TRACER WIRE TERMINATION DETAIL

TERMINATION OF THE LOCATE WIRE AT A LOCATE PEDESTAL, LOCATE TERMINAL, OR IN A SPLICE CASE SHALL BE MADE IN THE FOLLOWING FASHION:

STRIP OFF A MINIMUM OF 3/4" OF INSULATION. USING A NEEDLE NOSE PLIERS, BEND A WIRE "EYELET" ON THE WIRE END IN A CLOCKWISE MANNER. USE A FLAT WASHER ON BOTH SIDES OF THE WIRE EYELET WHEN CINCHING IT DOWN ON THE STUD. FLAT WASHERS SHALL BE OF APPROPRIATE SIZE SUCH THAT THE HOLE MATCHES THE DIAMETER OF THE STUD AND THE OUTSIDE OF DIAMETER OF THE FLAT WASHER MATCHES REASONBLY CLOSE TO THE EYELET DIAMETER.

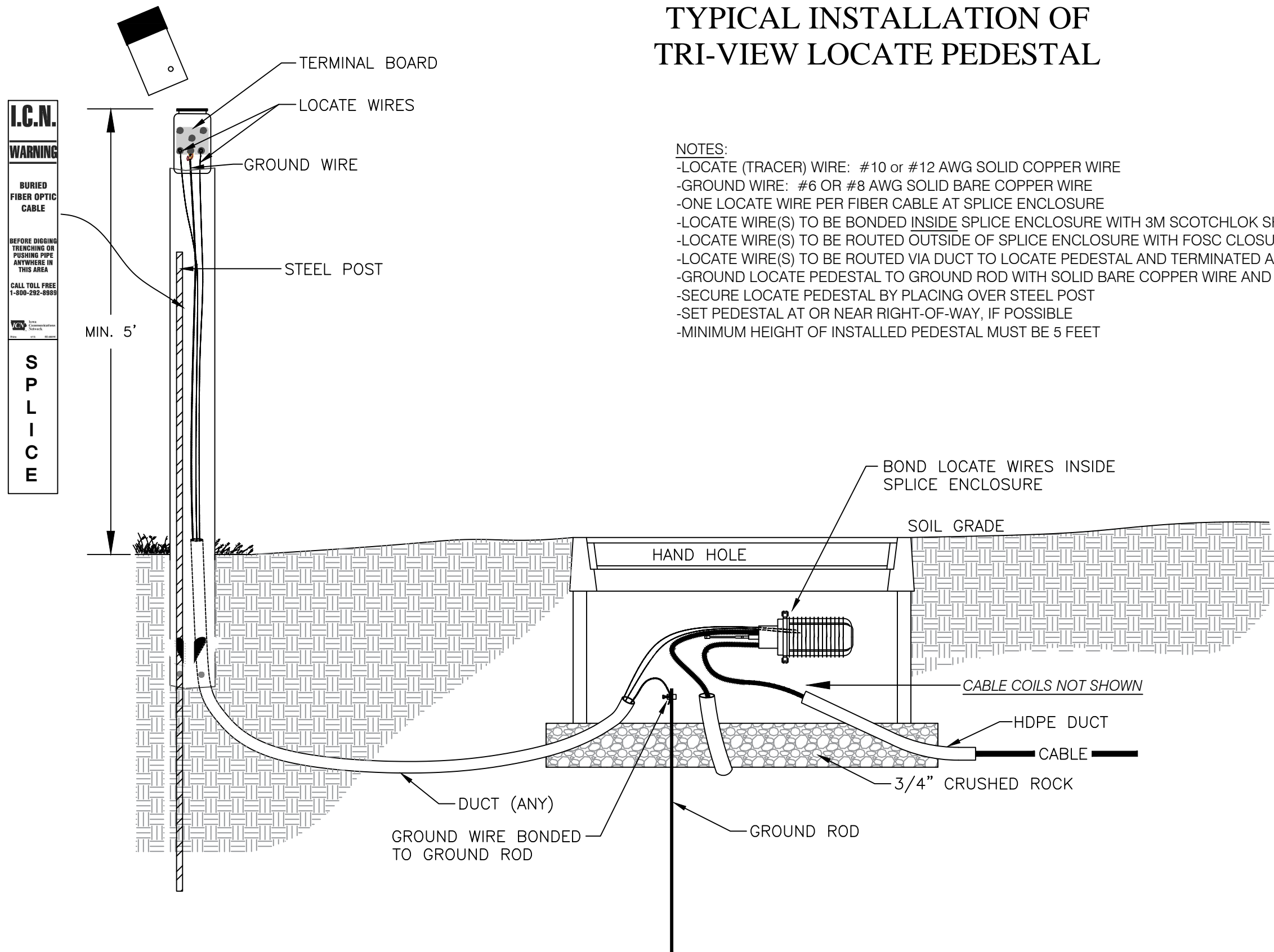


LOCATE TERMINAL ISOLOCBOX ASSM.*



*NOTE: ISOLOCBOX ASSEMBLY INCLUDES: BOX, ISOLEVER, PVC STAND-OFF, AND 1-FT OF FLEXIBLE CONDUIT WITH CONNECTORS

TYPICAL INSTALLATION OF TRI-VIEW LOCATE PEDESTAL



- NOTES:
- LOCATE (TRACER) WIRE: #10 or #12 AWG SOLID COPPER WIRE
 - GROUND WIRE: #6 OR #8 AWG SOLID BARE COPPER WIRE
 - ONE LOCATE WIRE PER FIBER CABLE AT SPLICE ENCLOSURE
 - LOCATE WIRE(S) TO BE BONDED INSIDE SPLICE ENCLOSURE WITH 3M SCOTCHLOK SHIELD BONDING KIT
 - LOCATE WIRE(S) TO BE ROUTED OUTSIDE OF SPLICE ENCLOSURE WITH FOSC CLOSURE SEALING KIT
 - LOCATE WIRE(S) TO BE ROUTED VIA DUCT TO LOCATE PEDESTAL AND TERMINATED AT TERMINAL BOARD
 - GROUND LOCATE PEDESTAL TO GROUND ROD WITH SOLID BARE COPPER WIRE AND GROUND CLAMP
 - SECURE LOCATE PEDESTAL BY PLACING OVER STEEL POST
 - SET PEDESTAL AT OR NEAR RIGHT-OF-WAY, IF POSSIBLE
 - MINIMUM HEIGHT OF INSTALLED PEDESTAL MUST BE 5 FEET

TRACER WIRE TERMINATION DETAIL

Termination of the locate wire at either a pedestal, puck, or in a splice case shall be made in the following fashion:

Strip off a minimum of 3/4" of insulation. Using a needle nose pliers bend a wire "eyelet" on the wire end in a clockwise manner. Use a flat washer on both sides of the wire eyelet when cinching it down on the stud. Flat washers shall be of appropriate size such that the hole matches the diameter of the stud and the outside diameter of the flat washer matches reasonably close to the eyelet diameter.

