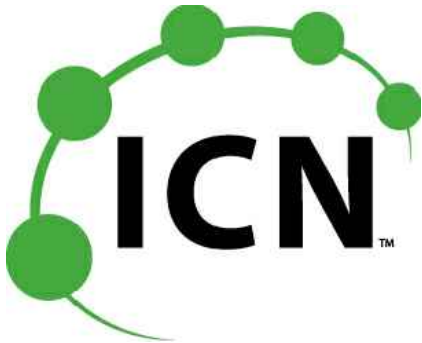




IOWA COMMUNICATIONS NETWORK
CLEAR LAKE POLICE DEPARTMENT TO 210TH STREET/B43
FIBER INSTALLATION
CERRO GORDO COUNTY, CLEAR LAKE, IOWA
511 1ST AVENUE N TO 210TH STREET/B43



509 SOUTH GILBERT STREET
IOWA CITY, IA 52240
PHONE: (319) 338-7557
STATE OF IOWA, DEPARTMENT OF LABOR
REGULATION NO. 00527328

PROJECT INFORMATION

SCOPE OF WORK:

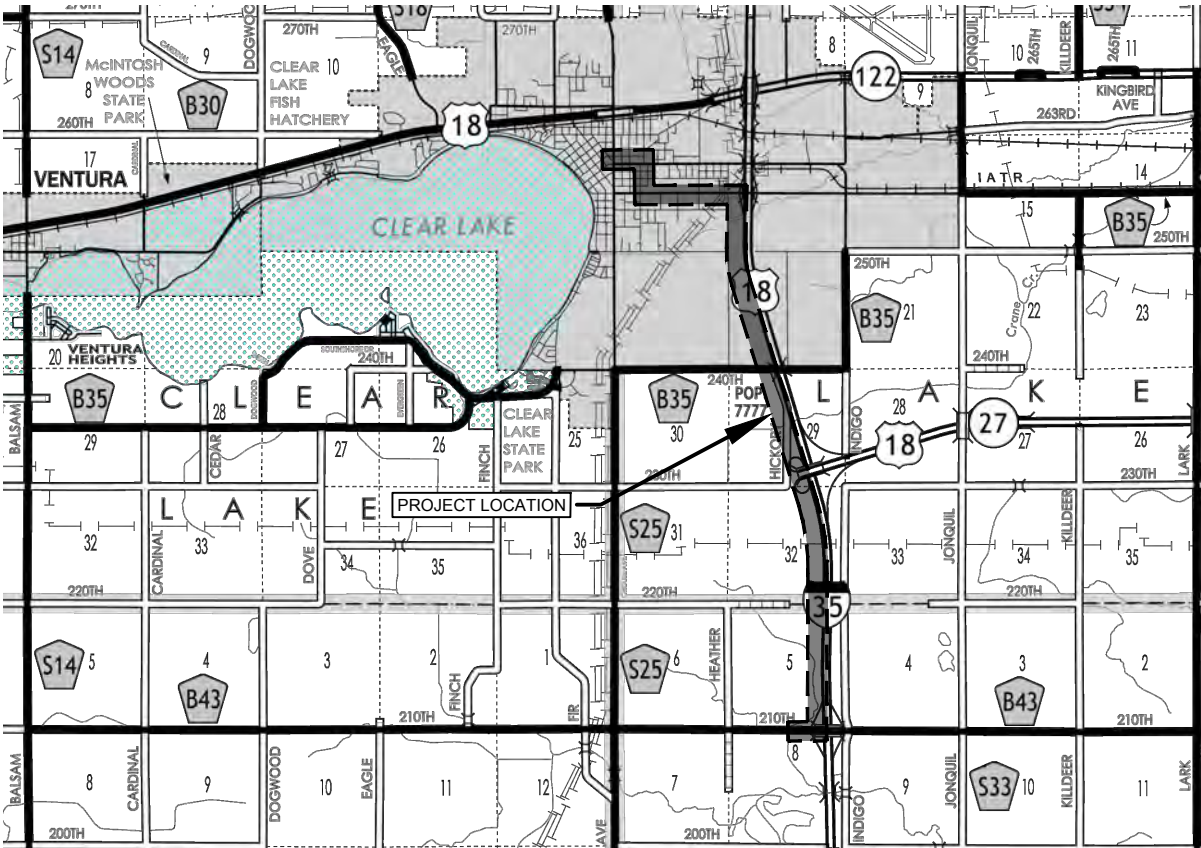
THE ICN INTENDS TO EXTEND A 48-STRAND ARMORED FIBER CABLE CONNECTION FROM THE POLICE DEPARTMENT AT 511 1ST AVENUE NORTH, CLEAR LAKE, IA HEREIN REFERRED TO AS THE "PD" TO AN EXISTING ICN SPLICE LS-516 AT 210TH STREET (B43) AND INTERSTATE 35 SOUTH OF CLEAR LAKE. THIS WILL REQUIRE NEW CONDUIT OF APPROXIMATELY 34,079 FEET, A NEW BUILDING ENTRANCE AND CONDUIT AT THE PD, AND INSTALLING APPROXIMATELY ~~34,144 FEET OF~~ 38,700 Feet of FIBER IN THE NEW CONDUIT AND BUILDING ENTRANCE. THIS REQUIRES NEW CONDUIT FROM THE CLEAR LAKE PD, OUT TO I-35, AND THEN SOUTH ALONG I-35 TO COUNTY ROAD 210TH STREET (B43). THIS WILL BE A COMBINATION OF PLOWING AND BORING AS REQUIRED.

CONTACT PERSON:

TIM FLICKINGER
IOWA COMMUNICATIONS NETWORK (ICN)
PHONE: (515) 725-4699
timothy.flickinger@iowa.gov

SANDRA SMITH
HBK ENGINEERING
509 S. GILBERT STREET
IOWA CITY, IA 52240
PHONE: (815) 207-1726
ssmith@hbkengeering.com

LOCATION MAP

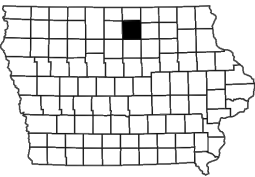


INDEX OF SHEETS

SHEET	TITLE
1	TITLE SHEET
2	ENGINEER GENERAL NOTES AND LEGEND
3	ICN INSTALLATION REQUIREMENTS
4	MATERIALS
5-6	OVERALL SHEET LAYOUT
CIVIL	
7-36	PLAN SHEETS
37-45	DETAIL SHEETS

UTILITY CONTACTS			
COMPANY	CONTACT NAME	PHONE	EMAIL
ALLIANT ENERGY (AIM)	ALLIANT ENERGY FIELD ENGINEER	(800) 255-4268	LOCATE_IPL@ALLIANTENERGY.COM
ALLIANT ENERGY (ANW)	ALLIANT ENERGY FIELD ENGINEER	(720) 255-4268	LOCATE_IPL@ALLIANTENERGY.COM
CENTURY LINK (CTLIA01)	TOM STURMER	(720) 578-8090	THOMAS.STURMER@CENTURYLINK.COM
CENTURY LINK (WCG)	TECH ON DUTY	(877) 366-8344	NATIONALRELO@CENTURYLINK.COM
CITY OF CLEAR LAKE (CCA)	JOE WEIGEL	(641) 357-6135	JWEIGEL@CLTEL.NET
CLEAR LAKE INDEPENDENT TEL (CL1)	DENNIS FITZGERALD	(641) 357-2111	DENNISFITZGERALD@CLTEL.COM
CLEAR LAKE SANITARY (LAD)	KELLY MCLAUGHLIN	(641) 357-2019	KMCLAUGHLIN@CLEARLAKE.SD.ORG
FLINT HILL RESOURCES, LC (K01)	MICHELLE SHUMAKER	(316) 828-8591	ONECALLICT@KOCHIND.COM
IOWA COMMUNICATIONS NETWORK (ICN)	SHANNON MARLOW	(800) 572-3940	ICNOUTSIDEPLANTIOWAONECALL@IOWA.GOV
IOWA DEPARTMENT OF TRANSPORTATION (IDOT)	LINDA KOFOOT	(641) 394-5634	LINDA.KOFOOT@DOT.IOWA.GOV
MAGELLAN MIDSTREAM PARTNERS, L (WMS)	DYAN GILLEAN	(918) 574-7098	WILCALL2@MAGELLANLP.COM
MEDIACOM (T10)	BOB STALKER	(641) 430-0748	RSTALKER@MEDIACOMCC.COM
UNITE PRIVATE NETWORKS, LLC (UPN)	JOE KILZER	(816) 425-3556	UPNGIS@UPNFIBER.COM
VERIZON (MC1)	DEAN BOYERS	(469) 886-4238	DEAN.BOYERS@VERIZON.COM
WINDSTREAM COMMUNICATIONS (WINIA)	LOCATE DESK	(800) 289-1901	LOCATE.DESK@WINDSTREAM.COM

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



NOTE:
CALL 811 FOR LOCATION OF UNDERGROUND TELEPHONE, ELECTRIC, GAS MAINS, CABLE TELEVISION AND OTHER UTILITIES.

EXISTING UNDERGROUND AND OVERHEAD UTILITIES AND DRAINAGE STRUCTURES HAVE BEEN PLOTTED FROM AVAILABLE INFORMATION AND THEREFORE, THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. IT IS THE RESPONSIBILITY OF THE INDIVIDUAL CONTRACTORS TO EXACTLY LOCATE AND PROTECT EACH EXISTING UTILITY BEFORE AND DURING ACTUAL CONSTRUCTION.



ICN – CLEAR LAKE POLICE DEPARTMENT TO EXISTING ICN TIE-IN POINT ON 210TH ST/B43



1	ISSUE FOR PERMIT	12/06/2019	IOWA COMMUNICATIONS NETWORK 400 EAST 14TH STREET GRIMES STATE OFFICE BUILDING DES MOINES, IOWA 50319 ICN © 2019, COPY WITH PERMISSION
2		----	
3			
4			

SECTION 4.0 EXISTING UTILITIES

SECTION 1.0 SCOPE OF WORK

1.02 SEE SHEET ~~3~~ FOR LOCATION OF ENGINEER'S ESTIMATE OF MATERIALS.

TO SCHEDULE A PRE-CONSTRUCTION WALK THROUGH WITH A HBK ENGINEERING REPRESENTATIVE. THIS WALK THROUGH MUST BE COMPLETED PRIOR TO THE COMMENCEMENT OF ANY WORK WITHIN THE LIMITS OF THIS PROJECT.

SECTION 2.0 MATERIALS

2105 MANNER, TO MINIMIZE CONGESTION OR INCONVENIENCE TO OTHER WORKERS, OR CONTRACTORS WORKING UNDER
 2110 ALTERNATE PERMITS.

3.08 RIGHT OF WAY LOCATIONS ARE APPROXIMATE. FIBER INSTALLATION 6'-0" MINIMUM OFF RIGHT-OF-WAY.

EXCAVATION: ARLINT WILL EVALUATE THE EXTENT OF THE DAMAGE SO AS TO DETERMINE WHETHER REPAIR IS REQUIRED PRIOR TO BACKFILL AND GRADE SURFACE RESTORATION.

SECTION 6.0 SAFETY

10. **OTHER COMMENTS:**

OWNER, IN THE EVENT THAT DAMAGE OCCURS.

EXISTING SANITARY MANHOLE

ICN GENERAL NOTES

STANDARD INSTALLATION REQUIREMENTS:

GENERAL REQUIREMENTS:

1. THE CONTRACTOR SHALL POTHOLE ALL EXISTING UTILITIES.
2. PROVIDE THE OWNERS OF ANY NATURAL GAS UTILITY 48 HOURS ADVANCE NOTICE THAT WORK IS SCHEDULED IN THE VICINITY OF THEIR LINES/MAINS SO THAT THEY CAN PROVIDE STANDBY AND PROTECT SERVICES.
3. MAINTAIN PROOF OF NOTIFICATION TO AND RECEIPT OF NOTIFICATION BY THE GAS UTILITY.
4. PERMITS AND COORDINATION
 - 4.1. SECURE ALL NECESSARY STATE AND LOCAL (CITY, COUNTY, ETC.) PERMITS, PUBLIC OR PRIVATE EASEMENTS, FACILITY PERMITS, USAGE PERMITS, AND ANY OTHER PERMIT REQUIRED BY AN AUTHORITY HAVING JURISDICTION (AHJ).
 - 4.2. ICN WILL OBTAIN AND PROVIDE COPIES OF IDOT PERMITS.
 - 4.3. IF PERMITS ARE REQUIRED TO BE IN THE NAME OF THE OWNER RATHER THAN THE CONTRACTOR, THE CONTRACTOR SHALL PREPARE THE PERMIT FOR THE OWNER'S SIGNATURE.
 - 4.4. COORDINATE INSTALLATION WITH ALL OWNERS AND AHJ OVER THE ROUTE, THE FIBER, RIGHT-OF-WAY AND BUILDINGS IN WHICH END POINTS WILL BE LOCATED.
 - 4.5. FAILURE TO COORDINATE WITH THE AHJ AND TO OBTAIN ALL NECESSARY PERMITS IS AT THE PERIL OF THE CONTRACTOR.
 - 4.6. RIGHT-OF-WAY PERMIT FEES ARE AN AUTHORIZED EXTRA ABOVE THE QUOTED BID PRICE. EXCAVATION PERMITS SHALL BE BY THE CONTRACTOR.
 - 4.7. ENSURE ALL FACILITIES ARE PLACED WITHIN THE PUBLIC RIGHT-OF-WAY.
5. ENSURE THAT PERSONNEL WORKING IN THE ROW ARE EQUIPPED WITH AND USE PROPER SAFETY EQUIPMENT AND ATTIRE.
6. ALL TOOLS AND TEST EQUIPMENT REQUIRED TO DO A PROJECT SHALL BE PROVIDED BY THE CONTRACTOR OR ITS SUBCONTRACTOR(S). SECURITY OF TOOLS AND TEST EQUIPMENT SHALL BE THE RESPONSIBILITY OF EACH WORKER. THE ICN SHALL NOT BE RESPONSIBLE FOR THE SECURITY OF ANY PROPERTY LEFT ON ICN'S PROPERTY OR ON PROPERTY CONTROLLED BY THE ICN OR THE STATE OF IOWA.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTRUCTING ITS EMPLOYEES IN SAFETY MEASURES CONSIDERED APPROPRIATE FOR THE JOB. IN ADDITION, THE CONTRACTOR SHALL NOT PERMIT PLACING OR USE OF TOOLS OR MATERIALS IN TRAFFIC LANES OR OTHER LOCATIONS. THE TOOLS OR MATERIALS SHALL NOT BE PLACED IN SUCH A MANNER SO AS TO CREATE SAFETY HAZARDS TO STATE EMPLOYEES, CONTRACTING AGENCY EMPLOYEES, THE PUBLIC OR THEMSELVES.
8. EXCAVATIONS AND TRENCHES: THE ICN REQUIRES ALL OPEN EXCAVATIONS OR TRENCHES TO BE MONITORED AND ATTENDED TO DURING CONSTRUCTION PER. THE ICN REQUIRES ALL OPEN EXCAVATIONS AND TRENCHES BACKFILLED THE SAME DAY. IF THE CONTRACTOR IS REQUIRED TO LEAVE AN EXCAVATION OR TRENCH OPEN, THEN THE CONTRACTOR SHALL PROPERLY FENCE AND/OR COVER THE EXCAVATION FOR SAFETY. CONTRACTOR SHALL FOLLOW ALL OSHA REQUIREMENTS FOR EXCAVATION AND TRENCH SAFETY.
9. CONTRACTOR AND ITS EMPLOYEES SHALL COMPLY WITH ALL OSHA REGULATIONS. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE STATE AND FEDERAL LAWS.
10. CONTRACTOR SHALL COMPLY WITH ALL IOWA ONE CALL REQUIREMENTS AS PROVIDED BY IOWA CODE, CHAPTER 480.
11. PROVIDE ALL LABOR AND SUPERVISION FOR THE PROJECT.
12. PROVIDE AND INSTALL MATERIALS NEEDED TO RESULT IN A FULLY FUNCTIONAL SYSTEM MEETING ICN STANDARDS, WHETHER OR NOT THE MATERIALS OR METHODS ARE SPECIFICALLY MENTIONED IN THIS DOCUMENT. SEE THE LIST OF ICN-FURNISHED MATERIALS.
13. INSTALL CABLE ROUTE MARKERS FURNISHED BY ICN. WHERE POSSIBLE, INSTALL MARKERS ADJACENT TO POLES, BUILDINGS OR IN OTHER PROTECTED AREAS.
14. A COPY OF THIS SCOPE OF WORK AND THE ENGINEERING PLAN FOR THIS PROJECT SHALL BE ON SITE AND AVAILABLE ANY TIME WORK IS BEING PERFORMED. FAILURE TO HAVE THE REQUIRED DOCUMENTS ON SITE MAY RESULT IN ICN REQUIRING THE CONTRACTOR TO STOP WORKING UNTIL THE REQUIRED DOCUMENTS ARE ON-SITE.
15. SUBCONTRACTORS SHALL MEET THE SAME QUALIFICATIONS STATED FOR CONTRACTORS. CONTRACTOR SHALL OBTAIN APPROVAL OF THE CONTRACTING AGENCY'S PROJECT MANAGER PRIOR TO USING A SUBCONTRACTOR ON ANY PROJECT.
16. RESTORE ALL DAMAGE TO PRIVATE PROPERTY, RIGHT-OF-WAY, ICN PROPERTY, AND ANY OTHER PROPERTY DAMAGED IN THE COURSE OF THE WORK.
 - 16.1.ANY DISRUPTION OF GRASS IN AN INDIVIDUAL'S YARD OR IN A PRIVATE MAINTAINED AREA OF THE PUBLIC RIGHT OF WAY (THE AREA BETWEEN THE SIDEWALK AND THE STREET CURB) MUST BE RESTORED THROUGH RE-SODDING. ANY DISRUPTION OF THE GRASS IN THE MEDIAN WAY OR AN UNIMPROVED SHOULDER MUST BE RESTORED EITHER THROUGH RE-SODDING OR RE-SEEDING AS REQUIRED BY THE ROW OWNER.
 - 16.2.AREAS SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION.
 - 16.3. DIRT SHALL BE MECHANICALLY COMPACTED AROUND HANDHOLES AND PITS.
 - 16.4. LAWNS SHALL BE SODDED WITH LIKE GRASS.
 - 16.5. CONTRACTOR IS RESPONSIBLE FOR WATERING THE SOD UNTIL IT HAS KNITTED TO THE GROUND BENEATH.
 - 16.6.ALL DEBRIS SHALL BE REMOVED FROM THE CONSTRUCTION AREAS INCLUDING BUT NOT LIMITED TO: CONSTRUCTION MATERIALS, TRASH, LARGE OBJECTS OR STONES WITHIN BACKFILLED AREAS, ETC.

DUCT INSTALLATION REQUIREMENTS

1. HDPE DUCT SHALL BE NO LESS THAN 36-42 INCHES DEEP.
2. DUCT SHALL BE INSTALLED IN THE PUBLIC RIGHT-OF-WAY.
3. WHEN CROSSING A HIGHWAY IN DOT RIGHT-OF-WAY, DUCT SHALL BE NO LESS THAN 48 INCHES BELOW GRADE UNDER THE ROADWAY AND SHOULDERS. HDPE MAY BE USED UNDER THE ROADWAY AND SHOULDERS IF INSTALLED AT A MINIMUM DEPTH OF 48".
4. SHOULD IT BE NECESSARY TO CROSS PRIVATE PROPERTY, THE CONTRACTOR MAY APPLY TO THE ICN FOR AN EXCEPTION, AND REQUEST PERMISSION TO SECURE AN EASEMENT. THE EASEMENT IS REQUIRED TO BE IN THE NAME OF ICN AND THE CONTRACTOR SHALL HAVE THE EASEMENT PREPARED BY A LAND SURVEYOR LICENSED IN THE STATE OF IOWA. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FEES UNLESS PREVIOUSLY AUTHORIZED BY THE ICN.
5. AT THE CONCLUSION OF THE PROJECT, PROVIDE AND LEAVE A PULL ROPE IN ALL DUCTS, CONDUITS AND PATHWAYS, INCLUDING INDOOR, OUTDOOR, NEW AND EXISTING.
6. DIRT SHALL BE MECHANICALLY COMPACTED AT ALL DUCT SPLICES, BORE PITS AND AROUND HANDHOLES.
7. GROUND SHALL BE RESTORED TO THE CONDITION FOUND PRIOR TO CONSTRUCTION AND DEBRIS REMOVED PRIOR TO SODDING OR SEEDING.
8. ALL CONDUITS SHALL BE PLUGGED VIA DUCT SEAL OR OTHER METHOD UPON COMPLETION OF CABLE INSTALLATION.
9. IF SCHEDULE 40 PVC CONDUIT IS UTILIZED, ALL ANGLES (45, 90 DEGREE OR OTHER) REQUIRE FITTINGS TO LONG SWEEP TO ACCOMMODATE MINIMUM CABLE BEND RADIUSES.
10. THE ICN REQUIRES PICTURES BY THE CONTRACTOR AND/OR ON- SITE INSPECTION BY ICN STAFF PRIOR TO COMPLETION OF THE PROJECT WHERE PIPE AND FITTINGS ARE NOT EXPOSED; I.E. UNDERGROUND, BEHIND A WALL, ETC.

HANDHOLE REQUIREMENTS

1. INSTALL HANDHOLES SO THAT THE LID IS LEVEL AND FLUSH WITH THE SURROUNDING NATURAL GRADE. THE LID SHALL NOT EXTEND ABOVE THE SURROUNDING NATURAL GRADE.
2. PROVIDE ¼” OPENING HARDWARE CLOTH TYPE SCREEN WIRE BELOW THE HANDHOLE.
3. PROVIDE 5-6 INCHES OF ¾” CRUSHED ROCK BELOW THE HANDHOLE. ROCK SHALL BE COMPACTED. GRAVEL SHALL EXTEND A MINIMUM OF 6 INCHES BEYOND THE OUTSIDE WALLS OF THE HANDHOLE. DO NOT USE PEA GRAVEL OR OTHER ROUND STONE.
4. DO NOT PLACE GRAVEL INSIDE HANDHOLE ABOVE THE HARDWARE CLOTH.
5. CONDUIT SHALL EXTEND A MINIMUM OF 6” ABOVE THE HARDWARE CLOTH/GRAVEL.
6. FAILURE OF THE CONTRACTOR TO INSTALL HANDHOLES AS SPECIFIED WILL CAUSE THE CONTRACTOR TO RETURN AND RE-INSTALL THE HANDHOLE ACCORDING TO THIS SPECIFICATION BEFORE PAYMENT FOR THE PROJECT IS MADE.
7. HANDHOLE INSTALLATIONS SHALL FOLLOW ICN STANDARD TYPICAL INSTALLATION; SEE TYPICAL DRAWING.

FIBER INSTALLATION REQUIREMENTS

1. INSTALL FIBER ACCORDING TO INDUSTRY “BEST PRACTICES”.
2. THE CONTRACTOR SHALL NOT VIOLATE THE MANUFACTURER'S MINIMUM INSTALLATION BEND RADIUS WHEN THE CABLE IS UNDER TENSION, OR THE MINIMUM INSTALLED BEND RADIUS.
3. TO PREVENT EXCEEDING THE MANUFACTURER'S MAXIMUM PULLING TENSION DURING INSTALLATION OF THE FIBER OPTIC CABLE, THE CONTRACTOR SHALL USE A “BREAK-AWAY” PULLING SWIVEL WHEN INSTALLING CABLE.
4. THE “BREAK-AWAY” FUNCTION SHALL ACTIVATE AT OR BELOW THE MAXIMUM PULLING TENSION SPECIFIED BY THE CABLE MANUFACTURER.
5. THE CONTRACTOR SHALL TEST ALL STRANDS OF THE FIBER, ON THE REEL, PRIOR TO BEGINNING FIBER INSTALLATION. CONFIRM THAT ALL STRANDS MEET MANUFACTURER'S LOSS SPECIFICATIONS.
6. THE CONTRACTOR SHALL FIELD VERIFY ALL LENGTHS AND EXISTING CONDITIONS PRIOR TO STARTING CONSTRUCTION.
7. SLACK LOOPS IN HANDHOLES SHALL BE COILED, INSTALLED, AND SECURED TO AVOID DAMAGE TO THE COIL AND NOT INTERFERE WITH LIDS.
8. SLACK LOOPS AT SPLICES SHALL BE COILED TO MATCH THE EXISTING FIBER CABLE TAILS AND ALLOWANCE FOR SPLICE PREPARATION.
9. ICN FIBER IN ALL HANDHOLES SHALL BE LABELED WITH ICN WRAP AROUND CABLE TAGS OR OTHER LABELED CABLE TAGS.

BUILDING ENTRY REQUIREMENTS

1. WEATHER-SEAL ALL PENETRATIONS.
2. USE MORTAR OR SIMILAR CEMENT TO SEAL PENETRATION OF BRICK OR CEMENT BLOCK.
3. FIRESTOP PENETRATIONS OF ANY FIRE-RATED FLOOR, WALL OR CEILING.
4. REPLACE THE FIRESTOP MATERIAL IN ANY EXISTING FIRESTOPPED PENETRATION USED BY THE CONTRACTOR.
5. ALL OUTDOOR CONDUITS, OF ANY LENGTH, SHALL BE GALVANIZED IRON PIPE (GIP). EMT, PVC AND PLASTIC ARE PROHIBITED.
6. IMMEDIATELY UPON INSTALLATION, SEAL THE ENDS OF ALL DUCTS WITH DUCT SEAL OR EXPANSION FOAM TO PREVENT SILTATION OR FILLING WITH MOISTURE. THIS APPLIES TO BOTH NEW AND EXISTING DUCTS.
7. AT THE CONCLUSION OF THE PROJECT, ENSURE THAT A PULL ROPE IS LEFT IN ALL PATHWAYS, BOTH INSIDE AND OUTSIDE, NEW AND EXISTING.

LOCATE FACILITY REQUIREMENTS

1. TRACER WIRE SHALL BE CONTINUOUS.
2. SPLICES IN THE TRACER WIRE ARE NOT ALLOWED. IF TRACER WIRE IS ACCIDENTALLY SEVERED, REQUEST PERMISSION FROM ICN TO SPLICE.
3. SPLICE ONLY IN HANDHOLES.
4. USE EITHER AN EPOXY SPLICE KIT, SCOTCH 3M 3832 OR A MOLEX PERMASEAL BUTT SPLICE. 10-12 GA. SPLICE MATERIALS SHALL BE DESIGNED FOR UNDERGROUND APPLICATIONS.
5. LEAVE THE WIRE SPLICE VISIBLE IN THE HANDHOLE.
6. ROUTE A GROUND WIRE FROM THE GROUND INSIDE THE BUILDING, THROUGH THE ENTRY TO THE TII 163 TERMINAL.
7. SECURE ALL RISER CONDUITS WITH 3 EACH TWO-HOLE CONDUIT STRAPS.
8. WIRE THE PEDESTAL/TERMINAL SO THAT LOCATES MAY BE PERFORMED IN ANY DIRECTION AND FROM THE FAR END.
9. DO NOT LEAVE ANY EXPOSED TRACER WIRE OR GROUND WIRE.
10. PERMANENTLY GROUND THE TRACER WIRE AT THE HANDHOLE ON THE FURNISHED GROUND ROD.
11. AT THE CONCLUSION OF THE PROJECT LEAVE THE TRACER WIRE SHIELD SHORTED TO GROUND IN THE LOCATE TERMINAL.
12. USE TRACER WIRE THAT IS RATED FOR DIRECT BURIAL WHERE REQUIRED. TRACER WIRE SHALL BE #12 AWG, SOLID HF CCS 30 MIL HDPE HIGH FLEX TRACER WIRE: EITHER SOLID COPPER OR COPPER CLAD STEEL.
13. LABEL ALL WIRES IN THE LOCATE TERMINAL/PEDESTAL/TRIVIEW. (I.E. “GROUND”, “FACING DMACC”, “FACING NORTH” ETC.)
14. FAILURE TO LABEL THE LOCATE WIRES WILL CAUSE THE CONTRACTOR TO RETURN AND PROPERLY LABEL THE WIRES BEFORE PAYMENT FOR THE PROJECT IS MADE.
15. BOND TRACER WIRE(S) WITHIN SPLICE ENCLOSURES UTILIZING A 3M 4460-D\FO SHIELD BONDING KIT.
16. ROUTE TRACER WIRE(S) OUT OF SPLICE ENCLOSURE THROUGH A SINGLE PORT UTILIZING A FOSC CLOSURE SEALING KIT.
17. AT SPLICE LOCATIONS WITH NO LOCATE PEDESTAL, TRACER WIRES SHALL BE BONDED TOGETHER, WITHIN THE SPLICE ENCLOSURE.
18. AT EACH END OF ANY TRACER WIRE, USE APPROPRIATE-SIZED RING TERMINAL (CRIMP) CONNECTORS USING APPROPRIATE CRIMP TOOL; OR CREATE A WIRE EYELET AS PER TYPICAL INSTALLATION OF TRI-VIEW LOCATE PEDESTAL DETAIL.

DELIVERABLES/ACCEPTANCE:

1. CONTRACTOR SHALL PROVIDE CONSTRUCTION REDLINE AS-BUILTS WITH:
 - 1.1. OFFSETS TO FIXED OBJECTS TO THE CABLE/CONDUIT RUNNING LINE, HANDHOLES AND NEW FACILITIES.
 - 1.2. METER MARKS OF CABLE INSTALLATIONS AT HANDHOLE ENTRY/EXIT, SPLICE LOCATIONS, BUILDING ENTRIES, ETC.
 - 1.3. DEPTHS OF CABLE AND/OR CONDUIT INSTALLATION.
 - 1.4. ONE ORIGINAL SET OF AS-BUILT DRAWINGS MUST BE PROVIDED WITHIN TWO (2) WEEKS AFTER COMPLETION OF CONSTRUCTION FOR THE ICN MANAGEMENT RECORDS. REDLINE AS-BUILT DRAWINGS MUST BE COMPLETE.
2. CONTRACTOR SHALL PROVIDE SPLICING REDLINE OF ALL SPLICING COMPLETED AND VALIDATION THAT THE SPLICE PLAN WAS FOLLOWED.
3. CONTRACTOR IS RESPONSIBLE TO LOCATE FIBER UNTIL ACCEPTANCE BY THE ICN. ACCEPTANCE INCLUDES:
 - 3.1. SUBMISSION OF CONSTRUCTION AND SPLICING RED LINE DRAWINGS BY CONTRACTOR.
 - 3.2. ASSIGNMENT OF LINK NUMBER BY THE ICN (IF APPLICABLE).
 - 3.3. SUBMISSION OF FINAL AS BUILT DRAWING BY THE ICN TO THE ICN NETWORK MAINTENANCE PROVIDER.
 - 3.4. SUBMISSION TO IOWA ONE CALL AND THE ICN NETWORK MAINTENANCE PROVIDER'S CONTRACT LOCATER.
 - 3.5. THE MEASUREMENTS IN THE STATEMENT OF WORK ARE ESTIMATES AND NEED TO BE VERIFIED BY THE CONTRACTOR.
4. ONLY WRITTEN MODIFICATIONS TO THIS SCOPE OF WORK ARE BINDING - VERBAL CHANGES TO THIS SCOPE OF WORK BY ANY PERSON OR PERSONS ARE NOT BINDING, UNLESS CONFIRMED IN WRITING.
5. FINAL PAYMENT WILL NOT BE PROCESSED UNTIL ALL DELIVERABLES ARE RECEIVED AND ACCEPTED.



ICN – CLEAR LAKE POLICE DEPARTMENT TO EXISTING ICN TIE–IN POINT ON 210TH ST/B43				 
1	ISSUE FOR PERMIT	12/06/2019	IOWA COMMUNICATIONS NETWORK 400 EAST 14TH STREET GRIMES STATE OFFICE BUILDING DES MOINES, IOWA 50319 ICN © 2019. COPY WITH PERMISSION	
2		----		
3				
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MATERIALS

Iowa Communications Network		Date:	12/06/19
Project Name: Cerro Gordo, Clear Lake, Police Dep't, 511 1st Ave N			
Project Number: 17190405			
ICN Provided Material List (Warehouse Contact Paul Damge 515.725.4749)			
Item	ICN Part Number	Qty	Notes
FIBER CABLE			
48 strand Armored SM fiber		38,700 36,804	Based 18,500' and 20,200 reels.
HANDHOLES AND LIDS			
Bulk 24"x36"x36" with lid Tier 22	BULKU2436360061001	25	
Bulk Puck ICN Logo Black	ACC7734-125	23	
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	2	HH9, HH15
ISO Lever Locate Box (pre-fabricated unit)	ISOLOCBOX	1	AT POLICE DEPARTMENT, 0+00
GROUNDING			
Erico 1/2" x 6' Ground Rod (Graybar)	611360	3	
Bumdy 1/2" Ground Rod Clamp (Anixter)	GRC12	3	
MARKERS FLAGS DECALS			
Warning Tape (1000')			By Contractor - Standard Communications warning tape on plowed segments.
ICN Snap Around Vulcan 4"x4" 15Mil Coiled Pvc (ICN-4X4-Sa)	1502345 (ICN-4x4-SA)	30	
T Post 6-ft Steel Studded	(provided with TriViews)	16 20	
TriView Warning Marker 78" with Orange Cap (with 3 decals - part number SD-9007K)	TVFL7800	20 16	Need to add more for long segments where no intermediate HH's.
TERMINATION ITEMS: FDP, BULKHEADS, TRAYS, & RELATED			
Closet Connector Housing (CCH), 2 rack units, holds 4 CCH cassettes	CCH-02U	1	
CCH Pigtailed Splice Cassette, 12 F, SC UPC Duplex, SM, SF PRE-ASSEMBLED	CCH-CS12-59-P00RE	1	
SPLICING MATERIALS			
SPLICE CLOSURES			
450B FOSC 450 FIBER SPLICE CLOSURE B SIZE-6 CABLE PORTS-3 GROUNDSWITHOUT TRAY	FOSC450-B6-6-NT-0-B3V	3	HH9 (MIDSHEATH), HH15, EXISTING HH ON 210TH
SPLICE TRAYS			
B TRAY 24 FOSC-ACC-B-TRAY-24-KIT	863927-000	5	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	7	

NOTE ON HDPE CONDUIT AND SPLICES:

- HDPE SHALL BE ORANGE SMOOTH WALL SDR 13.5
- DUCT SPLICES SHALL BE MADE OF THE FOLLOWING (IN ORDER OF PREFERENCE.)
 - ~~CRIMP ON~~
 - ~~CLAMP ON / BOLT ON (SPLIT COUPLINGS)~~
 - ~~PUSH ON~~
- ~~ALL SPLICES SHALL BE AIR AND WATER TIGHT~~
- DUCT SPLICES SHALL BE OF A TYPE MADE SPECIFICALLY FOR JOINING HDPE CONDUIT
- 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****

LISTING OF CONDUIT & FIBER WORK					
CONDUIT RUN	FROM	TO	LENGTH	1.25" CONDUIT	48 SM ARMORED FIBER, UNDERGROUND
1	TELECOM ROOM (POLICE STATION)	HH1	80	80	80
2	HH1	HH2	429	429	429
3	HH2	HH3	628	628	628
4	HH3	HH4	1297	1297	1297
5	HH4	HH5	581	581	581
6	HH5	HH6	329	329	329
7	HH6	HH7	849	849	849
8	HH7	HH8	1697	1697	1697
9	HH8	HH9	1739	1739	1739
10	HH9	HH10	1218	1218	1218
11	HH10	HH11	1515	1515	1515
12	HH11	HH12	1509	1509	1509
13	HH12	HH13	1576	1576	1576
14	HH13	HH14	1501	1501	1501
15	HH14	HH15	940	940	940
16	HH15	HH16	1649	1649	1649
17	HH16	HH17	1952	1952	1952
18	HH17	HH18	1769	1769	1769
19	HH18	HH19	1225	1225	1225
20	HH19	HH20	1508	1508	1508
21	HH20	HH21	1908	1908	1908
22	HH21	HH22	1974	1974	1974
23	HH22	HH23	1800	1800	1800
24	HH23	HH24	1894	1894	1894
25	HH24	HH25	1683	1683	1683
26	HH25	EXISTING ICN HH	829	829	829
TOTAL					34079
NOTE: THIS TABLE SHOWS APPROXIMATE LENGTHS IN CONDUIT ONLY AND DOES NOT INCLUDE ANY COILS OR SLACK FOR FINER CABLES, TRACER WIRE, PULL ROPE, ETC. CONTRACTOR SHALL VERIFY NECESSARY QUANTITIES INCLUDING COILS.					

ESTIMATE OF QUANTITIES				
ITEM NO.	ITEM	UNIT	PLANNED TOTAL	AS-BUILT TOTAL
1	MOBILIZATION	LS	1	
2	INSTALL 24" X 36" X 36" HANDHOLE	EA	25	
3	1.25" CONDUIT	LF	34,079	
4	48 SM ARMORED FIBER (TOTAL)	LF	36,804	
5	48 SM ARMORED FIBER (RUNNING LINE)	LF	34,079	
6	48 SM ARMORED FIBER (COIL)	LF	2,725	
7	ICN WARNING MARKERS	EA	16	
8	TRI-VIEW LOCATE STATION	EA	2	
9	GROUND ROD	EA	2 3	
10	TYCO 450BS-SPLICE ENCLOSURE	EA	4 3	

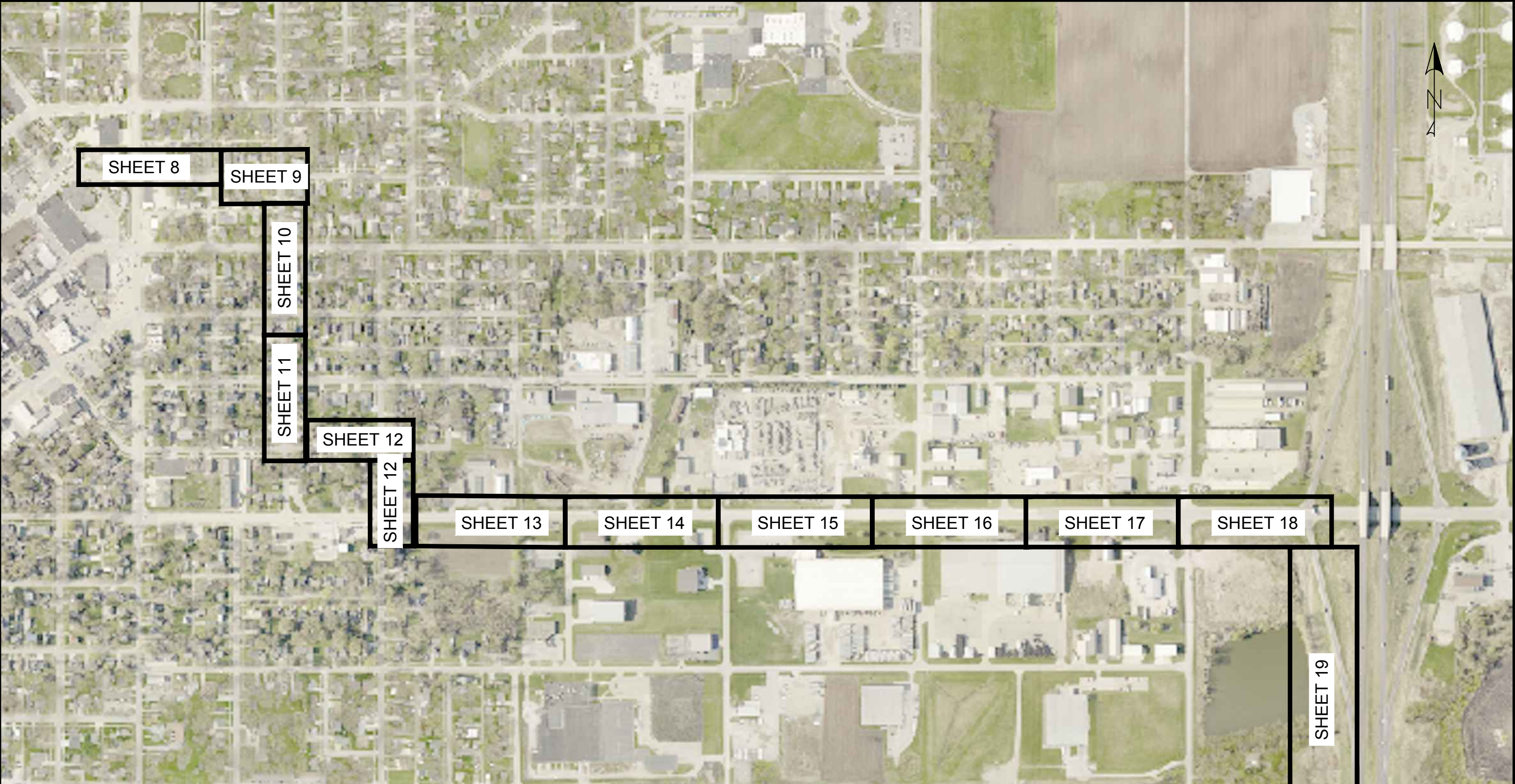
NOTE: CONDUIT INSTALLATION METHOD SHALL BE BORED UNDER ANY ROADWAYS, DRIVEWAYS, AND PAVED SURFACES. THE METHOD BETWEEN PLOW VERSUS BORE FOR CONDUIT INSTALLATION IS AT THE CONTRACTORS DISCRETION.

LISTING OF HANDHOLE WORK				
HANDHOLE LABEL	HANDHOLE TYPE	ROUTE	STATION	48 SM ARMORED FIBER COIL
TELECOM ROOM (POLICE STATION)	BLDG	1ST AVE N	0+00	BLDG
HH1	24" X 36" X 36"	1ST AVE N	0+80	100
HH2	24" X 36" X 36"	1ST AVE N	5+09	100
HH3	24" X 36" X 36"	N 10TH ST	11+37	100
HH4	24" X 36" X 36"	S 10TH ST	24+34	100
HH5	24" X 36" X 36"	S 10TH ST	30+15	100
HH6	24" X 36" X 36"	4TH AVE S	33+44	100
HH7	24" X 36" X 36"	4TH AVE S	41+93	100
HH8	24" X 36" X 36"	4TH AVE S	58+90	100
HH9 (LOCATE POINT)	24" X 36" X 36"	4TH AVE S	76+29	150
HH10	24" X 36" X 36"	I-35	88+47	100
HH11	24" X 36" X 36"	I-35	103+62	100
HH12	24" X 36" X 36"	I-35	118++71	100
HH13	24" X 36" X 36"	I-35	134+47	100
HH14	24" X 36" X 36"	I-35	149+48	100
HH15 (REEL END SPLICE)	24" X 36" X 36"	I-35	158+88	200
HH16	24" X 36" X 36"	I-35	175+37	100
HH17	24" X 36" X 36"	I-35	194+89	100
HH18	24" X 36" X 36"	I-35	212+53	100
HH19	24" X 36" X 36"	I-35	224+78	100
HH20	24" X 36" X 36"	I-35	239+86	100
HH21	24" X 36" X 36"	I-35	258+94	100
HH22	24" X 36" X 36"	I-35	278+68	100
HH23	24" X 36" X 36"	I-35	296+68	100
HH24	24" X 36" X 36"	I-35	315+62	100
HH25	24" X 36" X 36"	I-35	332+45	100
ICN EXISTING HH	EXISTING HH	210TH ST	340+74	75
TOTAL				2725



ICN – CLEAR LAKE POLICE DEPARTMENT TO EXISTING ICN TIE-IN POINT ON 210TH ST/B43

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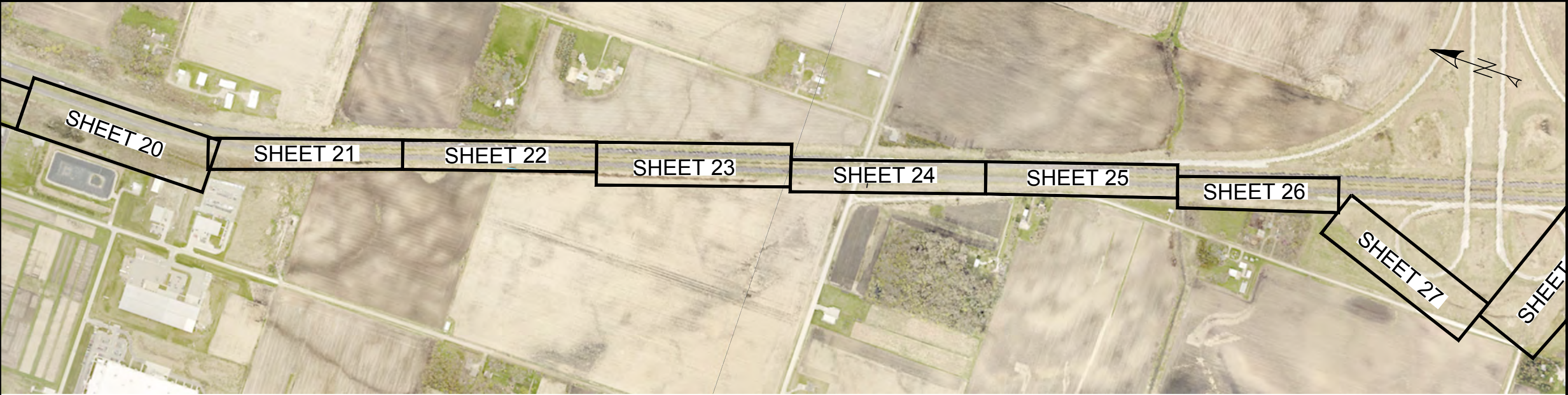
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SHEET LAYOUT

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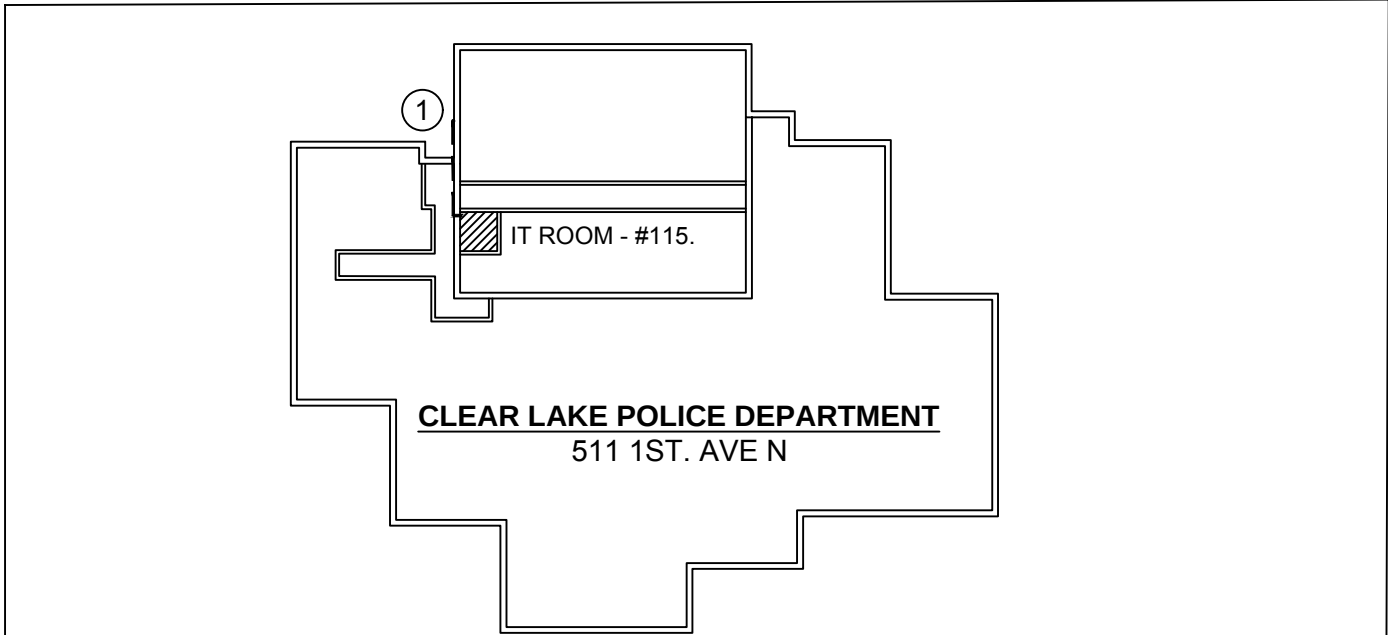


ICN - CLEAR LAKE POLICE DEPARTMENT TO
EXISTING ICN TIE-IN POINT ON 210TH ST/B43



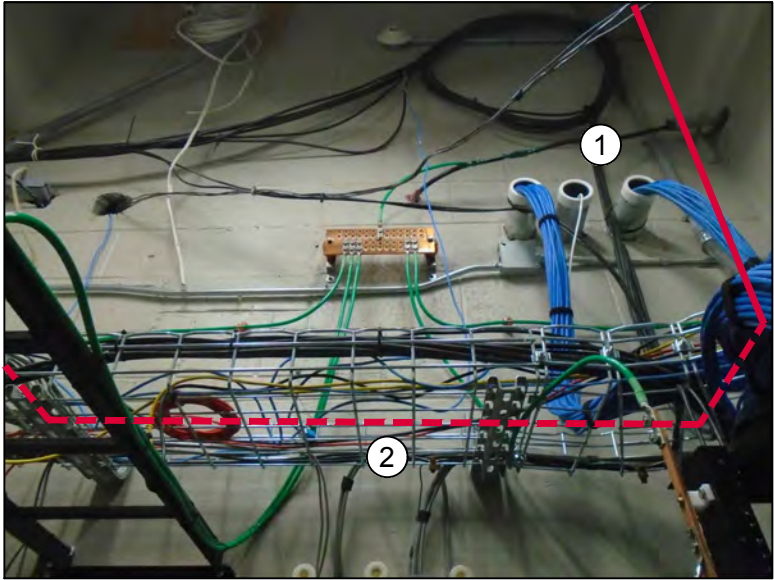
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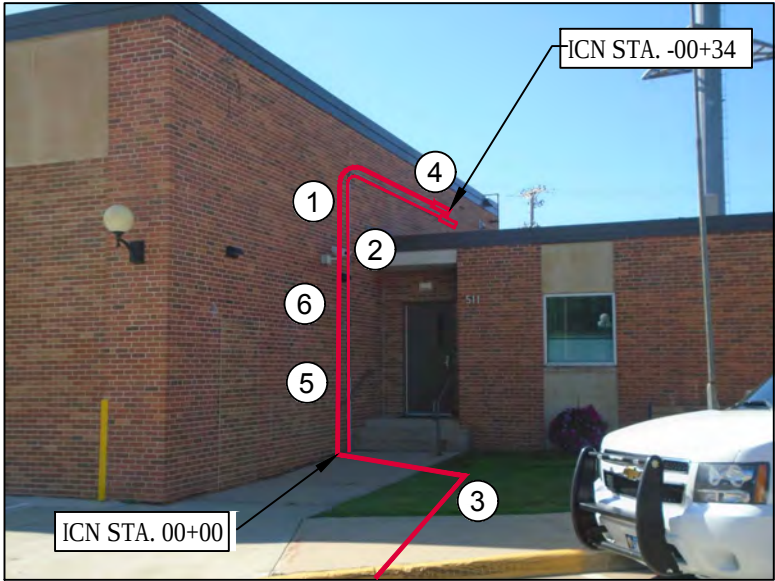
DETAIL 1
POLICE DEPARTMENT FLOOR PLAN

- ① NEW 1 1/4" RGS CONDUIT AND JUNCTION BOX. INSTALL ADJACENT TO EXISTING. CORE THROUGH MASONRY WALL INTO THE IT ROOM, #115.



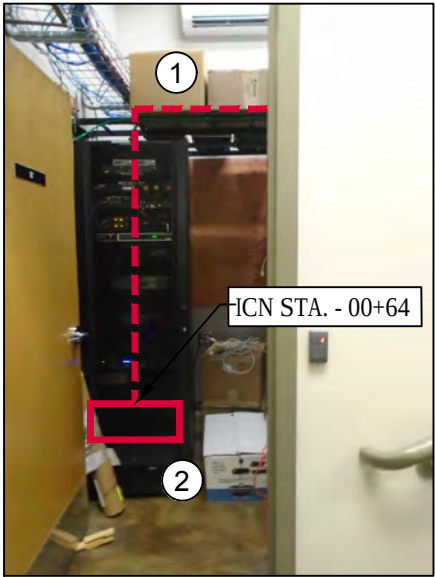
DETAIL 2
INTERIOR ROUTE IT ROOM #115

- ① ATTACH 10'-0" OF 1 1/4" RGS CONDUIT WITH U-CLAMPS. PULL FIBER THROUGH TO FIBER TRAY.
- ② RUN 20'-0" OF FIBER TO EQUIPMENT RACKS.



DETAIL 3
EXTERIOR CONNECTION TO POLICE DEPARTMENT

- ① NEW 1 1/4" RGS CONDUIT AND JUNCTION BOX. INSTALL ADJACENT TO EXISTING. CORE THROUGH MASONRY WALL INTO THE IT ROOM, #115.
- ② EXISTING RGS CONDUIT AND JUNCTION BOX BY OTHERS TO REMAIN.
- ③ UNDERGROUND CONNECTION TO BUILDING. PATCH CONCRETE WALK AND SOD TO MATCH EXISTING
- ④ SEE SHEET 36 FOR TYPICAL BUILDING ENTRANCE INSTALLATION DETAILS AND LOCATE POINT
- ⑤ LOCATE TERMINAL BOX. GROUND ROD TO BE PLACED PER TYPICAL ENTRANCE W/ #10 WIRE ROUTE TO END OF CABLE AND BONDED. SEE DETAIL 4
- ⑥ AVOID CONFLICT WITH EXISTING STAIR RAILING AND LIGHT FIXTURE.



DETAIL 4
EQUIPMENT CABINET IT ROOM #115

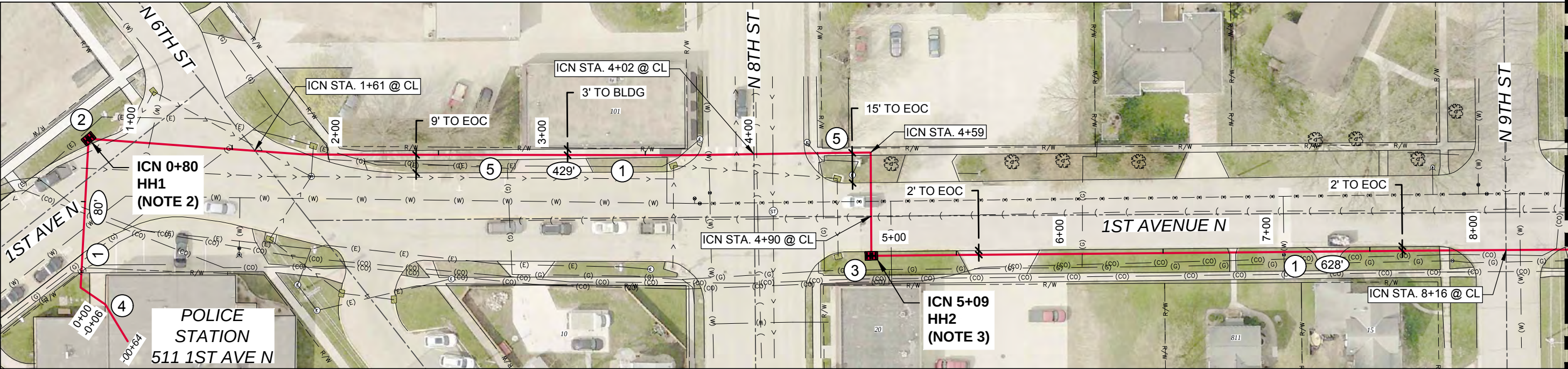
- ① ROUTE CABLE TO EXISTING CABINET. LEAVE 50' OF SLACK FOR TERMINATIONS. ROUTE #10 TRACER WIRE FROM EXTERIOR LOCATE POINT, THROUGH NEW ENTRY CONDUIT AND BOND TO THE CABLE'S ARMORED JACKET. TAPE TO CABLE ON INTERIOR SEGMENT. STATION NUMBERS DO NOT INCLUDE SLACK.
- ② VERIFY EQUIPMENT LOCATION WITH POLICE CHIEF PRIOR TO INSTALLATION.



ICN - CLEAR LAKE POLICE DEPARTMENT TO EXISTING ICN TIE-IN POINT ON 210TH ST/B43

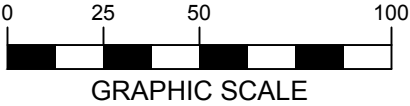
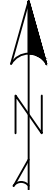


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CERRO GORDO COUNTY
CLEAR LAKE / LAKE TOWNSHIPS
T96-N R-22W



- ① PULL NEW LINK 0217 48 F/A THROUGH NEW 1 1/4" HDPE CONDUIT. 42" MINIMUM BELOW GRADE. GENERAL NOTE ONCE IN CLEAR LAKE - BORE FROM 0+00 (POLICE STATION) TO ICN STA. 76+29 - HH9 (I-35).
- ② ICN STA. 0+80. INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH1. 100' SLACK COIL 48 F/A.
- ③ ICN STA. 5+09. INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH2. 100' SLACK COIL 48 F/A.
- ④ ICN STA. 0+00. PULL NEW CONDUIT AND 48 F/A FROM POLICE STATION TO NEW BOX OUTSIDE BUILDING. SEE BUILDING ROUTE DETAILS ON SHEET 7 - DETAILS 1- 4.
- ⑤ ICN STA. 1+95 TO 3+75: ICN IS ALLOWED TO BORE UNDERNEATH THE SIDEWALK. CONTRACTOR SHALL PROTECT THE EXISTING SIDEWALK AND DOCUMENT THE CONDITION PRIOR TO CONSTRUCTION.

LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
TELECOM ROOM (POLICE STATION)	0+00	HH1	0+80	80
HH1	0+80	HH2	5+09	429
HH2	5+09	HH3	11+37	628
TOTAL				1137

* LENGTH DOES NOT INCLUDE SLACKCOILS



ICN - CLEAR LAKE POLICE DEPARTMENT TO EXISTING ICN TIE-IN POINT ON 210TH ST/B43

1

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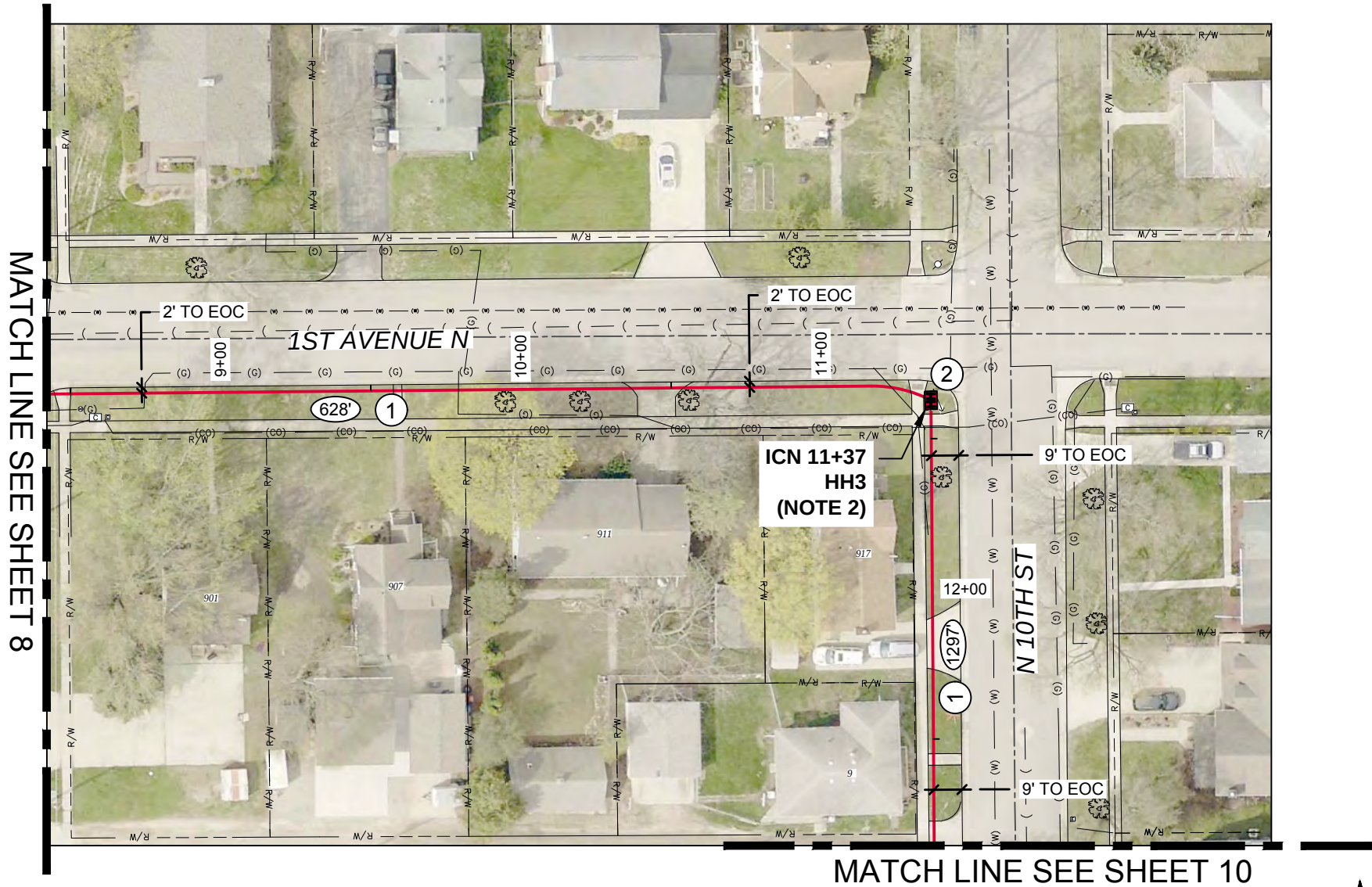
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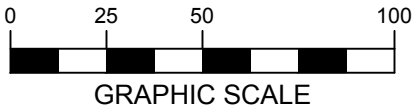
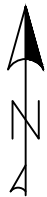
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CERRO GORDO COUNTY
LAKE TOWNSHIP
T96-N R-21W



- ① PULL NEW LINK 0217 48 F/A THROUGH NEW 1 1/4" HDPE CONDUIT.
42" MINIMUM BELOW GRADE. GENERAL NOTE ONCE IN CLEAR LAKE
- BORE FROM 0+00 (POLICE STATION) TO ICN STA. 76+29 - HH9 (I-35).
- ② ICN STA. 11+37 INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH3.
100' SLACK COIL 48 F/A.
- ③ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM
ALL EXISTING UTILITIES.

LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH2	5+09	HH3	11+37	628
HH3	11+37	HH4	24+34	1297
TOTAL				1925

* LENGTH DOES NOT INCLUDE SLACKCOILS



ICN – CLEAR LAKE POLICE DEPARTMENT TO
EXISTING ICN TIE-IN POINT ON 210TH ST/B43

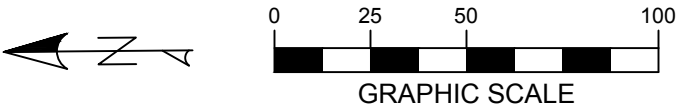


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LAKE TOWNSHIP
T96-N R-21W



- 1 PULL NEW LINK 0217 48 F/A THROUGH NEW 1 1/4" HDPE CONDUIT. 42" MINIMUM BELOW GRADE. GENERAL NOTE ONCE IN CLEAR LAKE - BORE FROM 0+00 (POLICE STATION) TO ICN STA. 76+29 - HH9 (I-35).
- 2 OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- 3 ICN STA. 14+86 TO 17+79 AND 18+10 TO 21+08: ICN IS ALLOWED TO BORE UNDERNEATH THE SIDEWALK. CONTRACTOR SHALL PROTECT THE EXISTING SIDEWALK AND DOCUMENT THE CONDITION PRIOR TO CONSTRUCTION.

LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH3	11+37	HH4	24+34	1297
TOTAL				1297

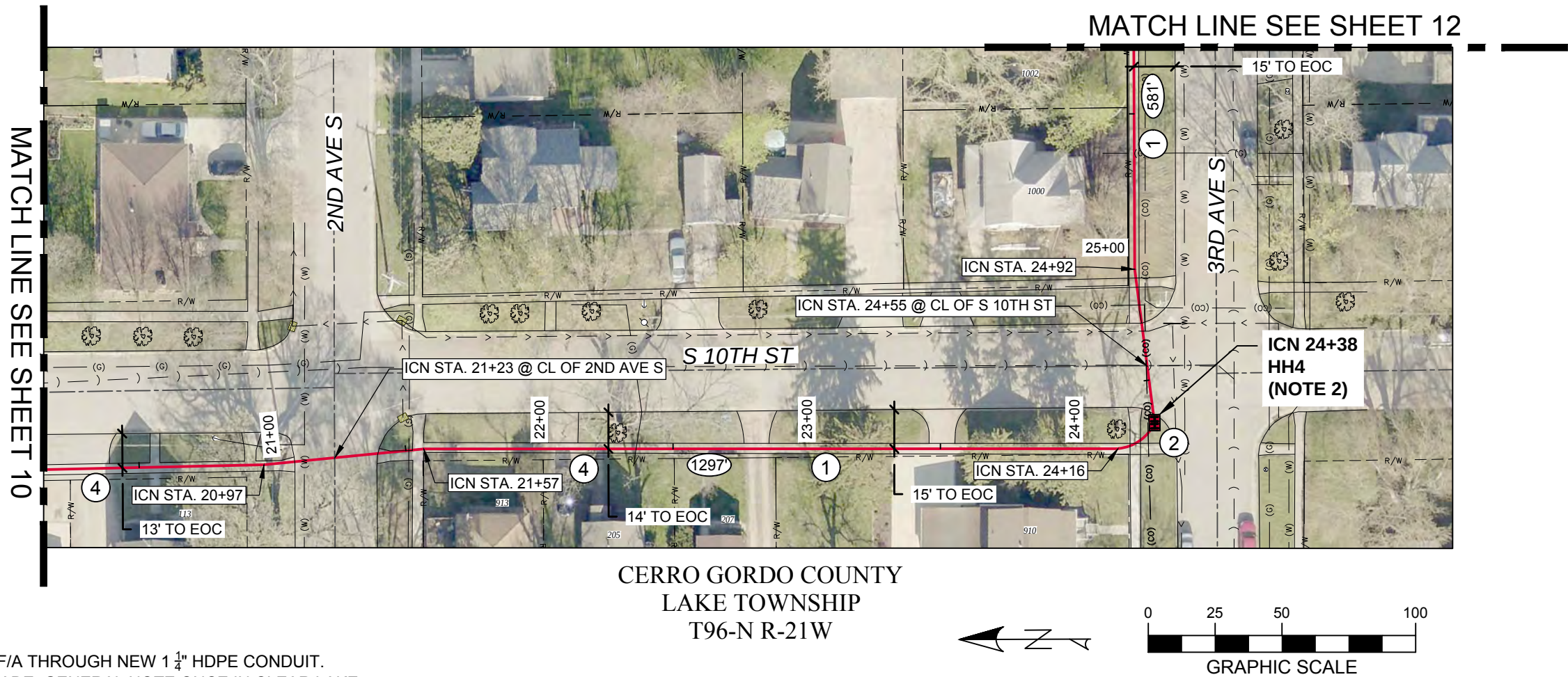
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ICN - CLEAR LAKE POLICE DEPARTMENT TO EXISTING ICN TIE-IN POINT ON 210TH ST/B43



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- ① PULL NEW LINK 0217 48 F/A THROUGH NEW 1 1/4" HDPE CONDUIT. 42" MINIMUM BELOW GRADE. GENERAL NOTE ONCE IN CLEAR LAKE - BORE FROM 0+00 (POLICE STATION) TO ICN STA. 76+29 - HH9 (I-35).
- ② ICN STA. 24+38 INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH4. 100' SLACK COIL 48 F/A.
- ③ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ④ ICN STA. 18+10 TO 21+08 AND 21+40 TO 24+26: ICN IS ALLOWED TO BORE UNDERNEATH THE SIDEWALK. CONTRACTOR SHALL PROTECT THE EXISTING SIDEWALK AND DOCUMENT THE CONDITION PRIOR TO CONSTRUCTION.

LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH3	11+37	HH4	24+34	1297
HH4	24+34	HH5	30+15	581
TOTAL				1878

* LENGTH DOES NOT INCLUDE SLACKCOILS

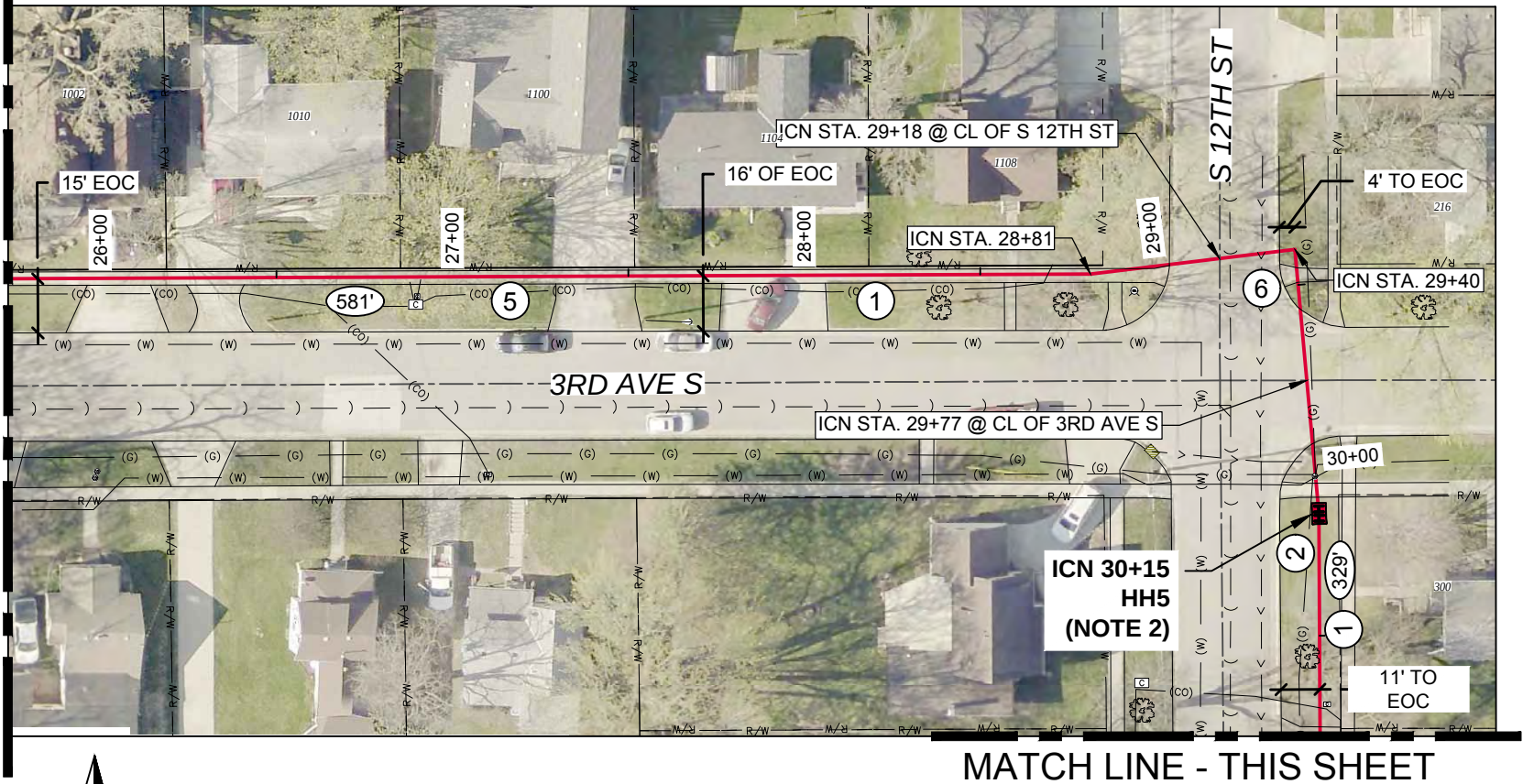


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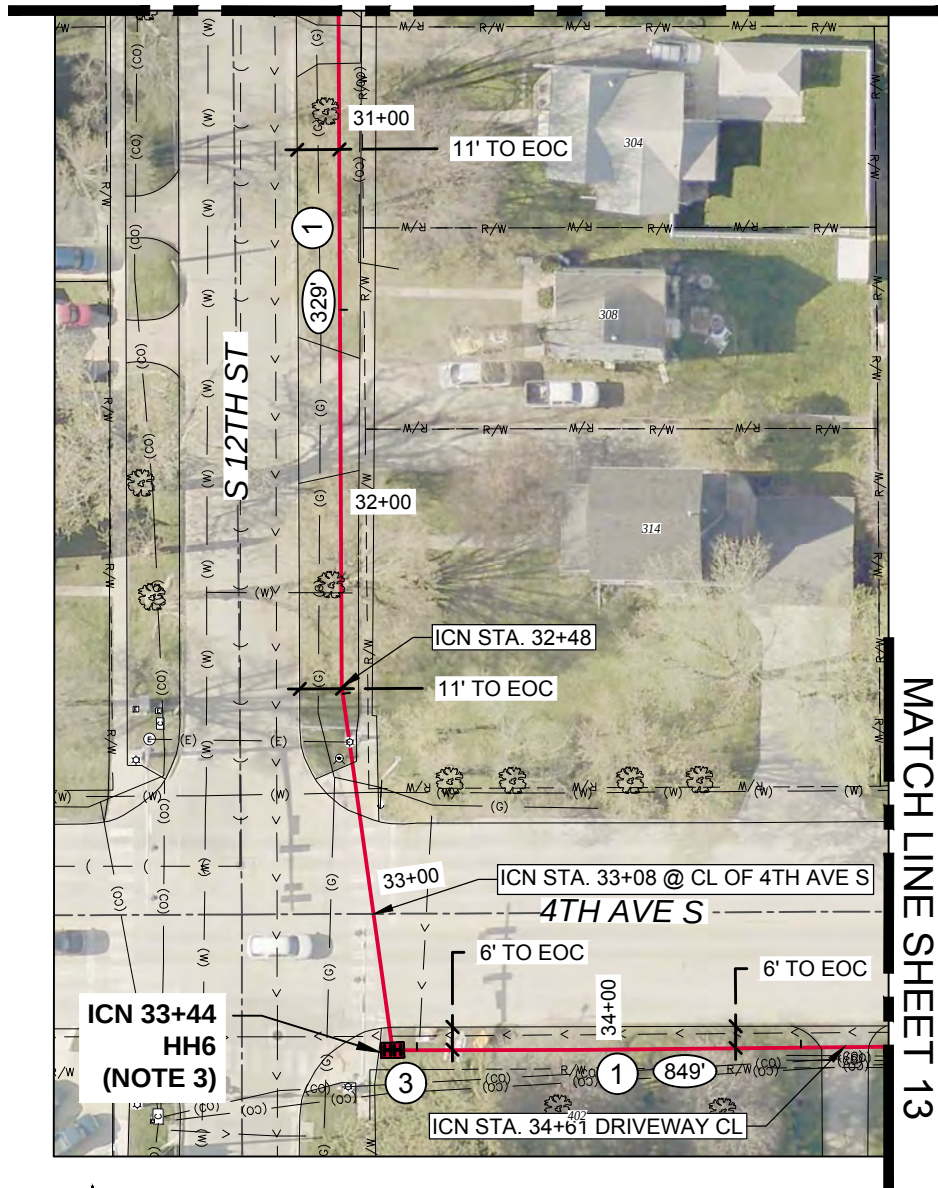


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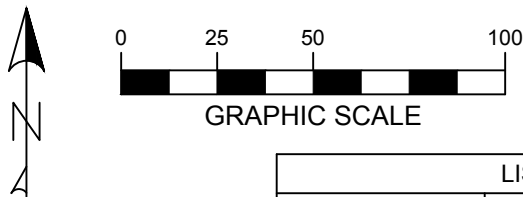
CERRO GORDO COUNTY
LAKE TOWNSHIP
T96-N R-21W

- ① PULL NEW LINK 0217 48 F/A THROUGH NEW 1 1/4" HDPE CONDUIT. 42" MINIMUM BELOW GRADE. GENERAL NOTE ONCE IN CLEAR LAKE - BORE FROM 0+00 (POLICE STATION) TO ICN STA. 76+29 - HH9 (I-35).
- ② ICN STA. 30+15 INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH5. 100' SLACK COIL 48 F/A.
- ③ ICN STA. 33+44 INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH6. 100' SLACK COIL 48 F/A.
- ④ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ⑤ ICN STA. 24+72 TO 28+94: ICN IS ALLOWED TO BORE UNDERNEATH THE SIDEWALK. CONTRACTOR SHALL PROTECT THE EXISTING SIDEWALK AND DOCUMENT THE CONDITION PRIOR TO CONSTRUCTION.
- ⑥ VERIFY LOCATES PRIOR TO PLACEMENT OF HH. UTILITIES FOUND IN AREA.

MATCH LINE - THIS SHEET



MATCH LINE SHEET 13



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH4	24+34	HH5	30+15	581
HH5	30+15	HH6	33+44	329
HH6	33+44	HH7	41+93	849
TOTAL				1759

* LENGTH DOES NOT INCLUDE SLACKCOILS

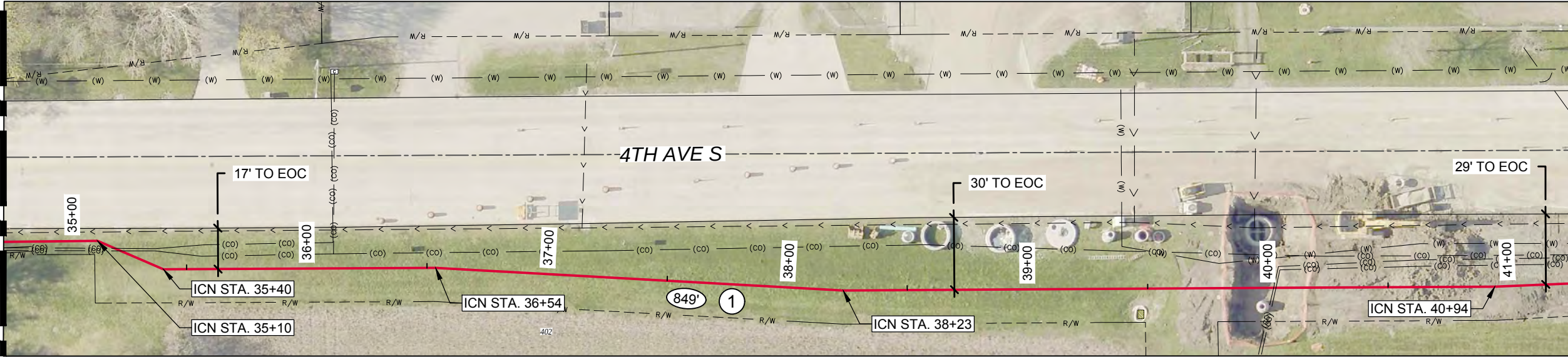


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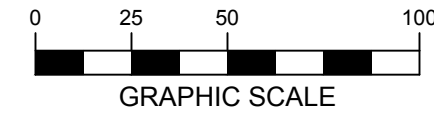
MATCH LINE SEE SHEET 12



MATCH LINE SEE SHEET 14

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LAKE TOWNSHIP
T96-N R-21W

- ① PULL NEW LINK 0217 48 F/A THROUGH NEW 1 1/4" HDPE CONDUIT.
42" MINIMUM BELOW GRADE. GENERAL NOTE ONCE IN CLEAR LAKE
- BORE FROM 0+00 (POLICE STATION) TO ICN STA. 76+29 - HH9 (I-35).
- ③ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM
ALL EXISTING UTILITIES.



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH6	33+44	HH7	41+93	849
TOTAL				849

* LENGTH DOES NOT INCLUDE SLACKCOILS



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- ① PULL NEW LINK 0217 48 F/A THROUGH NEW 1 1/4" HDPE CONDUIT. 42" MINIMUM BELOW GRADE. GENERAL NOTE ONCE IN CLEAR LAKE - BORE FROM 0+00 (POLICE STATION) TO ICN STA. 76+29 - HH9 (I-35).
- ② ICN STA. 41+93 INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH7. 100' SLACK COIL 48 F/A. INSTALL ICN MARKER.
- ③ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.

LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH6	33+44	HH7	41+93	849
HH7	41+93	HH8	58+90	1697
TOTAL				2546

* LENGTH DOES NOT INCLUDE SLACKCOILS

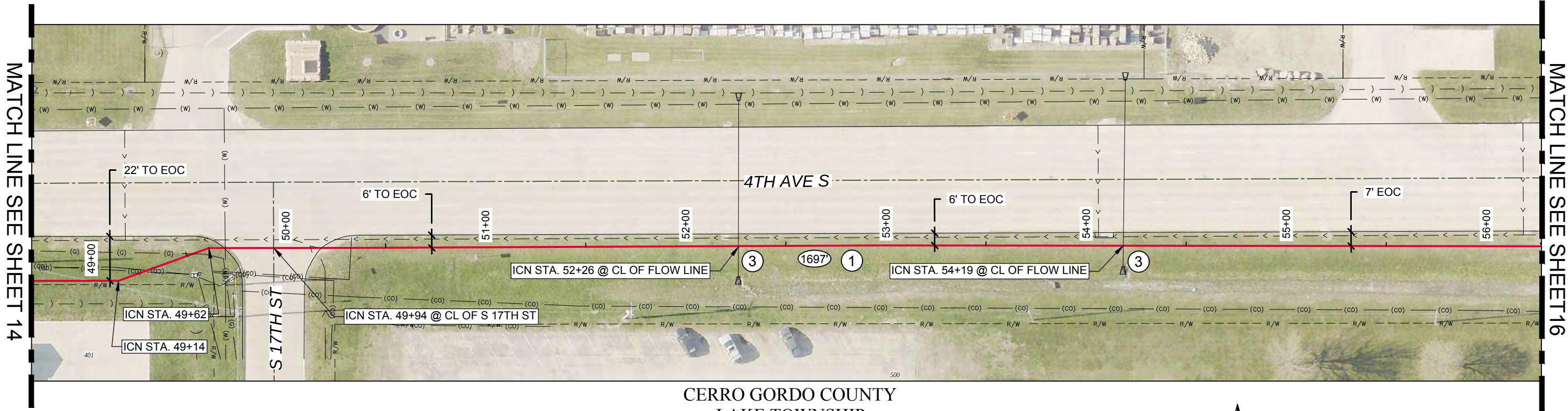


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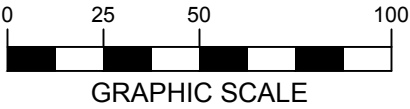
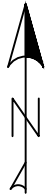


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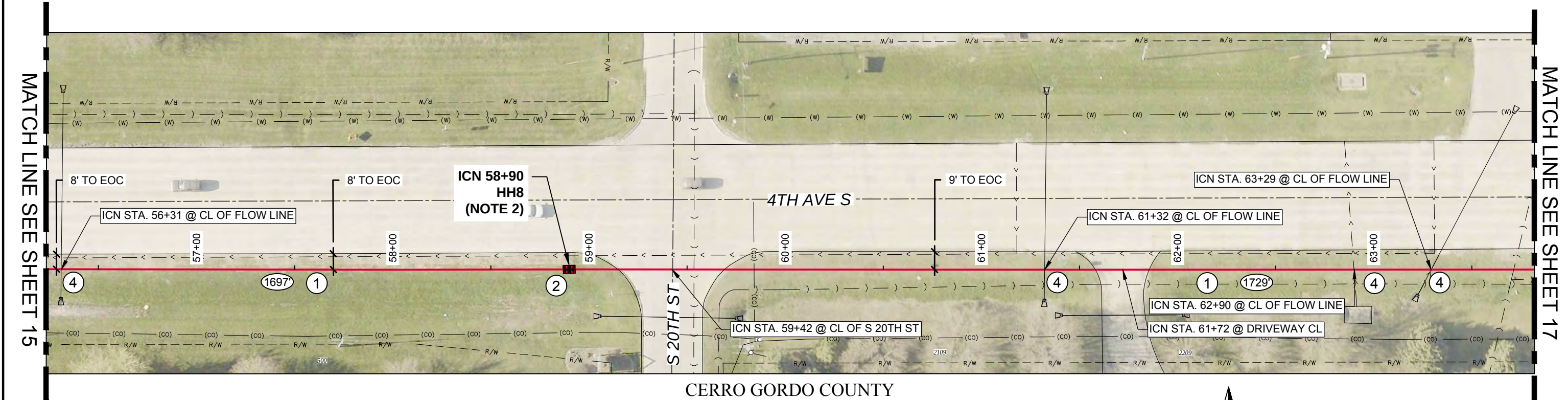
- ① PULL NEW LINK 0217 48 F/A THROUGH NEW 1 1/4" HDPE CONDUIT.
42" MINIMUM BELOW GRADE. GENERAL NOTE ONCE IN CLEAR LAKE
- BORE FROM 0+00 (POLICE STATION) TO ICN STA. 76+29 - HH9 (I-35).
- ② OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM
ALL EXISTING UTILITIES.
- ③ BORE MIN. DEPTH OF 10' BELOW FLOW LINE AT CULVERTS.
CULVERTS LOCATED AT ICN STATIONS: 52+26 & 54+19.
CONTRACTOR TO FIELD VERIFY FLOW LINE DEPTH.

LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH7	41+93	HH8	58+90	1697
TOTAL				1697

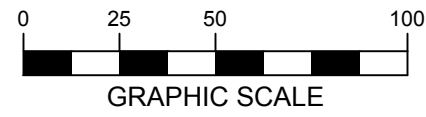
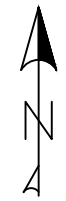
* LENGTH DOES NOT INCLUDE SLACKCOILS



ICN - CLEAR LAKE POLICE DEPARTMENT TO EXISTING ICN TIE-IN POINT ON 210TH ST/B43			hbk ICN	
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- ① PULL NEW LINK 0217 48 F/A THROUGH NEW 1 1/4" HDPE CONDUIT. 42" MINIMUM BELOW GRADE. GENERAL NOTE ONCE IN CLEAR LAKE - BORE FROM 0+00 (POLICE STATION) TO ICN STA. 76+29 - HH9 (I-35).
- ② ICN STA. 58+90 INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH8. 100' SLACK COIL 48 F/A. INSTALL ICN MARKER.
- ③ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ④ BORE MIN. DEPTH OF 10' BELOW FLOW LINE AT CULVERTS. CULVERTS LOCATED AT ICN STATIONS: 56+31, 61+32, 62+90 & 63+29. CONTRACTOR TO FIELD VERIFY FLOW LINE DEPTH.

LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH7	41+93	HH8	58+90	1697
HH8	58+90	HH9	76+29	1739
TOTAL				3436

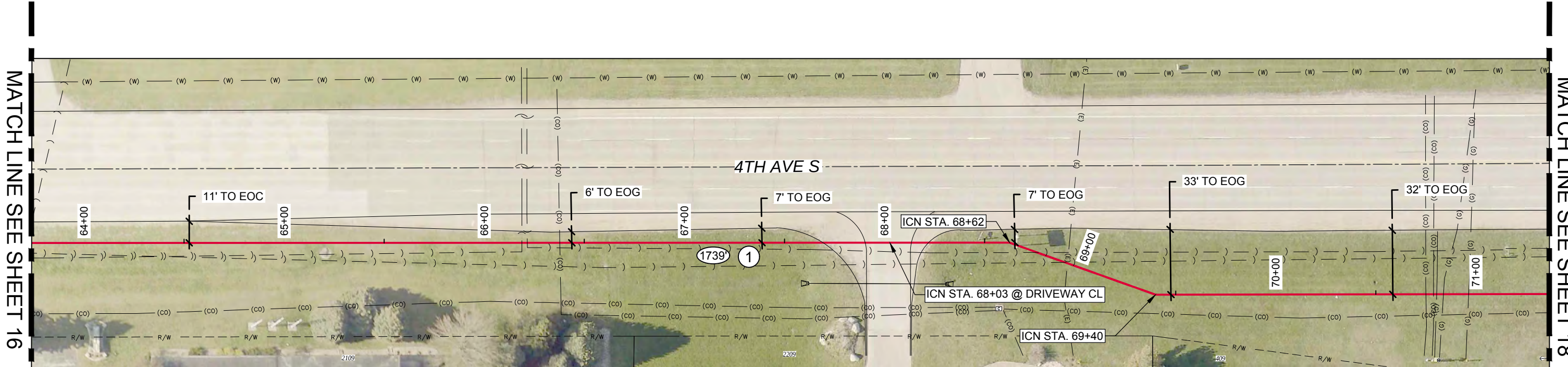
* LENGTH DOES NOT INCLUDE SLACKCOILS



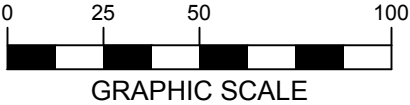
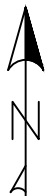
ICN - CLEAR LAKE POLICE DEPARTMENT TO EXISTING ICN TIE-IN POINT ON 210TH ST/B43

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400 EAST 14TH STREET
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CERRO GORDO COUNTY
LAKE TOWNSHIP
T96-N R-21W



- 1 PULL NEW LINK 0217 48 F/A THROUGH NEW 1 1/4" HDPE CONDUIT. 42" MINIMUM BELOW GRADE. GENERAL NOTE ONCE IN CLEAR LAKE - BORE FROM 0+00 (POLICE STATION) TO ICN STA. 76+29 - HH9 (I-35).
- 2 OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.

LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH8	58+90	HH9	76+29	1739
TOTAL				1739

* LENGTH DOES NOT INCLUDE SLACKCOILS



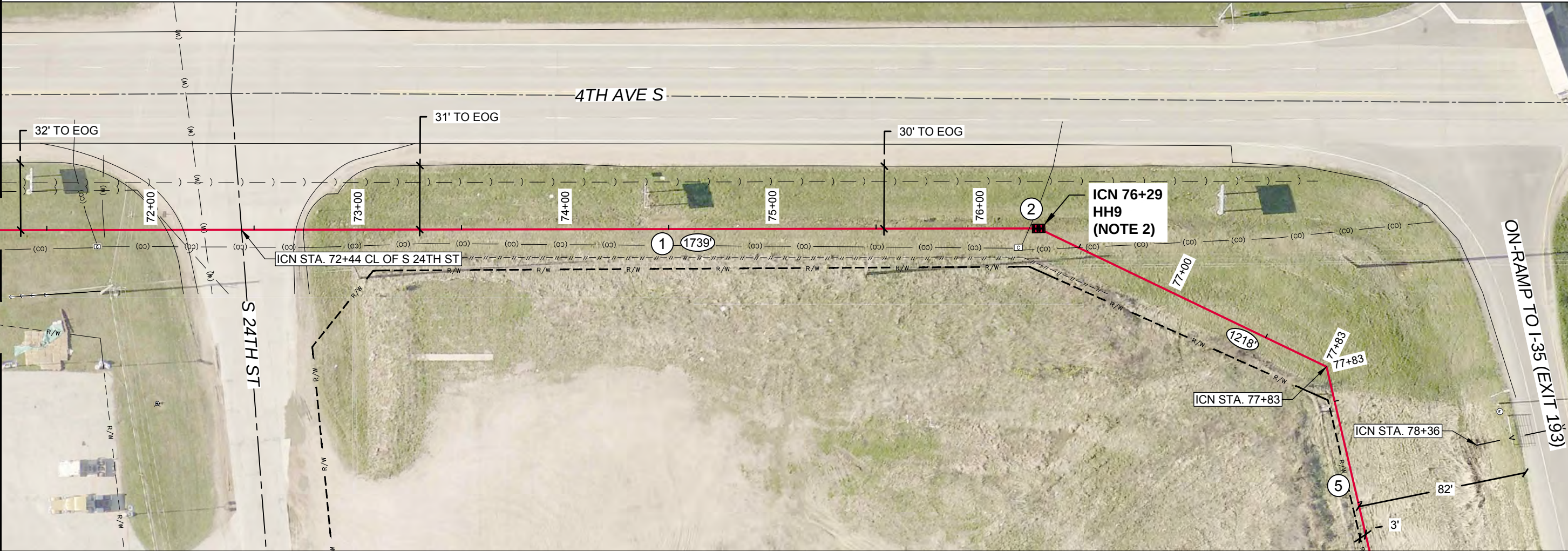
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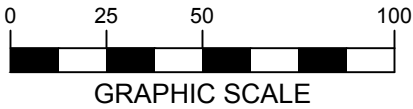
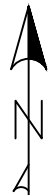
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MATCH LINE SEE SHEET 17

MATCH LINE SEE SHEET 19



CERRO GORDO COUNTY
LAKE TOWNSHIP
T96-N R-21W



- ① PULL NEW LINK 0217 48 F/A THROUGH NEW 1 1/4" HDPE CONDUIT. 42" MINIMUM BELOW GRADE. GENERAL NOTE ONCE IN CLEAR LAKE - BORE FROM 0+00 (POLICE STATION) TO ICN STA. 76+29 - HH9 (I-35).
- ② ICN STA. 76+29 INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH9. 150' SLACK COIL 48 F/A. LOCATE POINT PER TYP. ICN TO MID-SHEATH CABLE FOR LOCATE POINT. TYCO 450B CASE
- ③ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ④ 5' MIN. OFFSET FROM LOCATIONS WITH LIVING SNOW FENCE, VEGETATION AND TREE LINES IN IDOT RIGHT-OF-WAY.
- ⑤ PULL NEW LINK 0217 48 F/A THROUGH NEW 1 1/4" HDPE CONDUIT. 42" MINIMUM BELOW GRADE. STATIONING OF BORE AREAS ARE ESTIMATED. CONTRACTOR TO VERIFY EXACT BORE PIT LOCATIONS IN FIELD DUE TO REQUIRED DEPTH NEEDED FOR CROSSINGS AT UTILITIES, CULVERTS OR ROADWAYS.

IDOT NOTES:

- NO ACCESS IS ALLOWED FROM THE INTERSTATE OR ITS RAMPS.
- ACCESS TO THE ROW MUST BE FROM SIDE ROADS OR PRIVATE PROPERTY.
- ACCESS CONTROL FENCE MAY BE REMOVED FOR ACCESS TO THE ROW, BUT MUST BE IN PLACE DURING NON-WORKING HOURS.
- ALL VEHICLES IN THE ROW SHALL BE LOCATED OUTSIDE THE CLEAR ZONE.
- NO VEHICLE PARKING IS ALLOWED ON THE SHOULDER OF THE INTERSTATE.
- NO VEHICLES OR EQUIPMENT SHALL BE STORED WITHIN THE ROW DURING NON-WORKING HOURS.

LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH8	58+90	HH9	76+29	1739
HH9	76+29	HH10	88+47	1218
TOTAL				2957

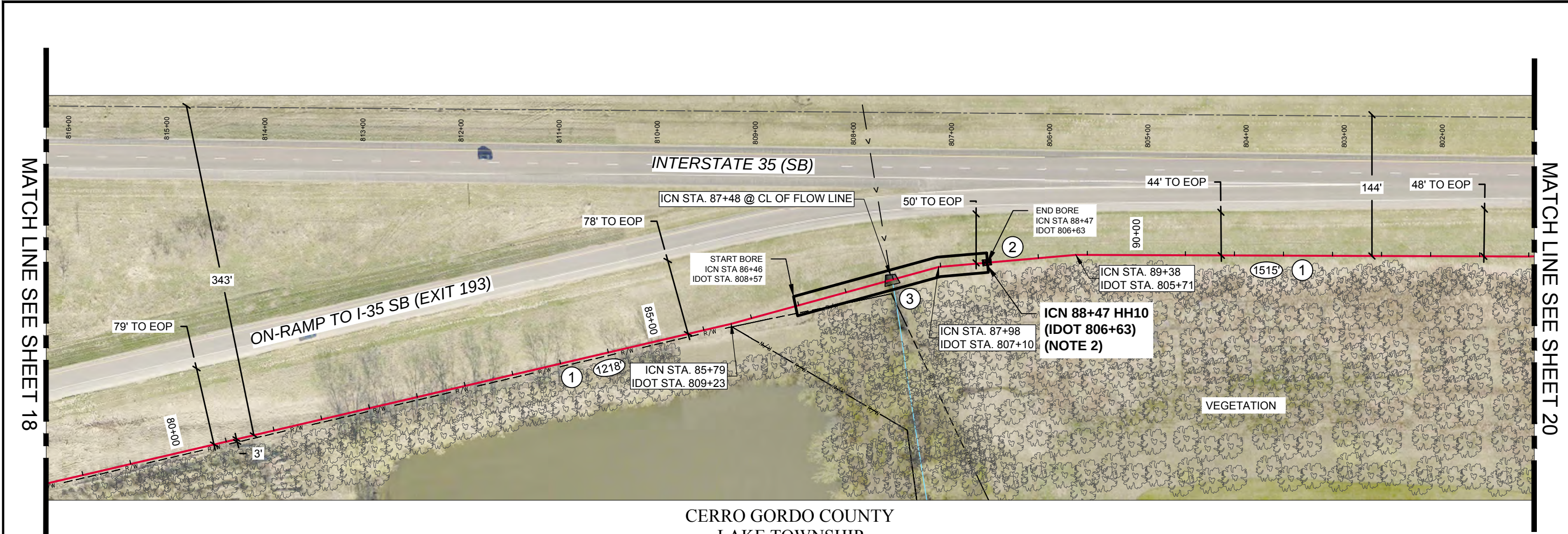
* LENGTH DOES NOT INCLUDE SLACKCOILS



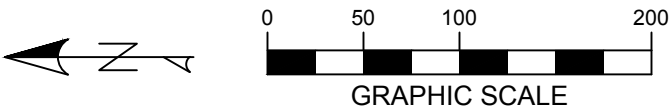
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CERRO GORDO COUNTY
LAKE TOWNSHIP
T96-N R-21W



- ① PULL NEW LINK 0217 48 F/A THROUGH NEW 1 1/4" HDPE CONDUIT. 42" MINIMUM BELOW GRADE. STATIONING OF BORE AREAS ARE ESTIMATED. CONTRACTOR TO VERIFY EXACT BORE PIT LOCATIONS IN FIELD DUE TO REQUIRED DEPTH NEEDED FOR CROSSINGS AT UTILITIES, CULVERTS OR ROADWAYS.
- ② ICN STA. 88+47 INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH10. 100' SLACK COIL 48 F/A. INSTALL ICN MARKER.
- ③ BORE MIN. DEPTH OF 10' BELOW FLOW LINE (ICN STA. 87+48). CONTRACTOR TO FIELD VERIFY FLOW LINE DEPTH.
- ④ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ⑤ 3' MIN OFFSET FROM IDOT ROW. 5' MIN. OFFSET FROM LIVING SNOW FENCE, VEGETATION AND TREE LINES IN IDOT RIGHT-OF-WAY.



ICN STA. 85+00 FACING NORTH
TOWARD 4TH AVE S



ICN STA. 87+48 AT CULVERT
FLOW LINE FACING SOUTH



ICN STA. 87+97 FACING SOUTH

LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH9	76+29	HH10	88+47	1218
HH10	88+47	HH11	103+62	1515
TOTAL				2733

* LENGTH DOES NOT INCLUDE SLACKCOILS

* REFER TO IDOT NOTES ON SHEET 18 FOR SPECIFICATIONS
ON WORKING IN THE IDOT RIGHT-OF-WAY



ICN - CLEAR LAKE POLICE DEPARTMENT TO EXISTING ICN TIE-IN POINT ON 210TH ST/B43

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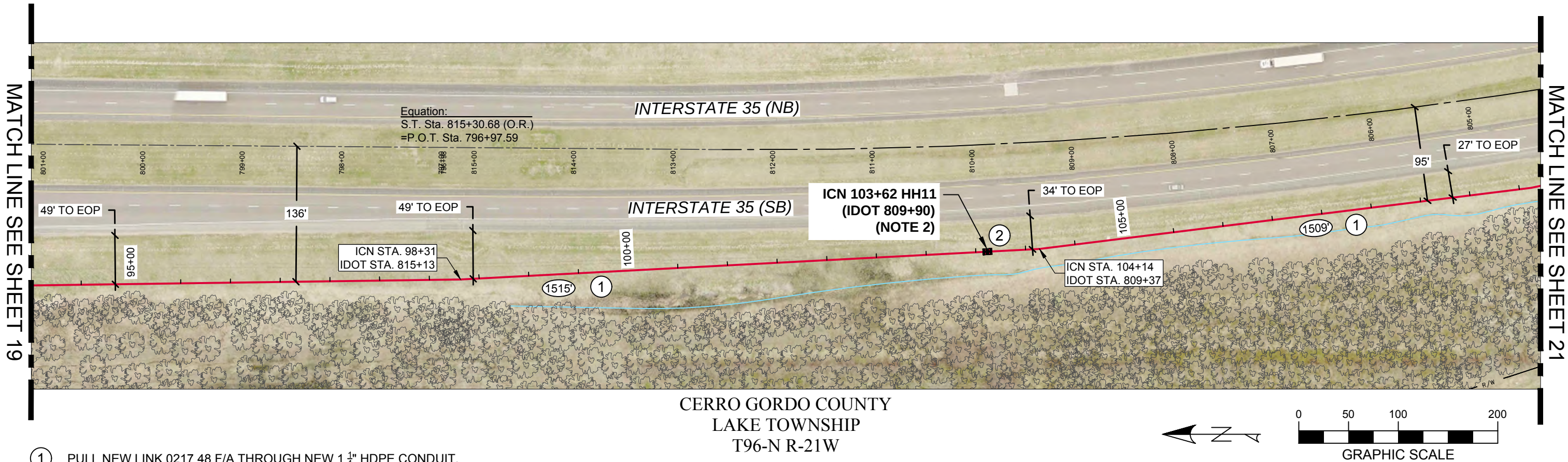
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CERRO GORDO COUNTY
LAKE TOWNSHIP
T96-N R-21W

- ① PULL NEW LINK 0217 48 F/A THROUGH NEW 1 1/4" HDPE CONDUIT. 42" MINIMUM BELOW GRADE. STATIONING OF BORE AREAS ARE ESTIMATED. CONTRACTOR TO VERIFY EXACT BORE PIT LOCATIONS IN FIELD DUE TO REQUIRED DEPTH NEEDED FOR CROSSINGS AT UTILITIES, CULVERTS OR ROADWAYS.
- ② ICN STA. 103+62 INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH11. 100' SLACK COIL 48 F/A. INSTALL ICN MARKER.
- ③ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ④ 3' MIN OFFSET FROM IDOT ROW. 5' MIN. OFFSET FROM LIVING SNOW FENCE, VEGETATION AND TREE LINES IN IDOT RIGHT-OF-WAY.

LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH10	88+47	HH11	103+62	1515
HH11	103+62	HH12	118+71	1509
TOTAL				3024

* LENGTH DOES NOT INCLUDE SLACKCOILS

* REFER TO IDOT NOTES ON SHEET 18 FOR SPECIFICATIONS
ON WORKING IN THE IDOT RIGHT-OF-WAY



ICN - CLEAR LAKE POLICE DEPARTMENT TO EXISTING ICN TIE-IN POINT ON 210TH ST/B43

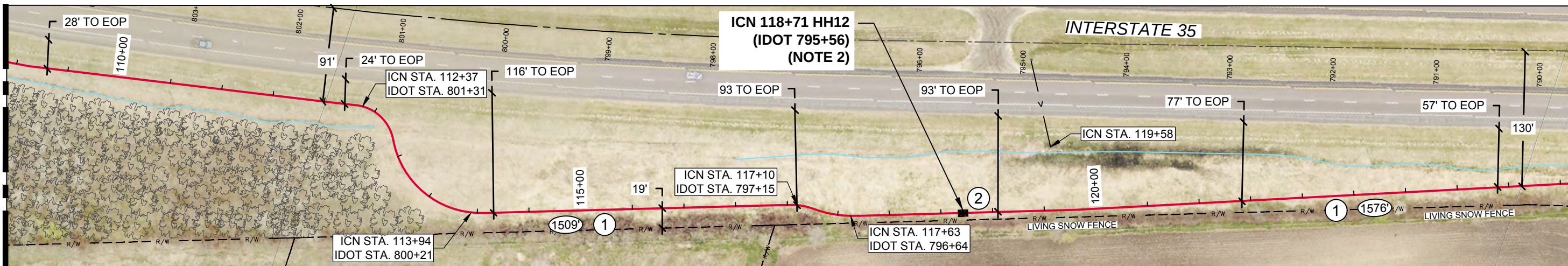
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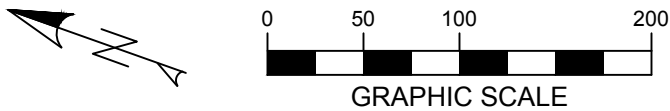
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MATCH LINE SEE SHEET 20

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CERRO GORDO COUNTY
LAKE TOWNSHIP
T96-N R-21W



- 1 PULL NEW LINK 0217 48 F/A THROUGH NEW 1 1/4" HDPE CONDUIT. 42" MINIMUM BELOW GRADE. STATIONING OF BORE AREAS ARE ESTIMATED. CONTRACTOR TO VERIFY EXACT BORE PIT LOCATIONS IN FIELD DUE TO REQUIRED DEPTH NEEDED FOR CROSSINGS AT UTILITIES, CULVERTS OR ROADWAYS.
- 2 ICN STA. 118+71 INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH12. 100' SLACK COIL 48 F/A. INSTALL ICN MARKER.
- 3 OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- 4 3' MIN OFFSET FROM IDOT ROW. 5' MIN. OFFSET FROM LIVING SNOW FENCE, VEGETATION AND TREE LINES IN IDOT RIGHT-OF-WAY.

LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH11	103+62	HH12	118+71	1509
HH12	118+71	HH13	134+47	1576
TOTAL				3085

* LENGTH DOES NOT INCLUDE SLACKCOILS

* REFER TO IDOT NOTES ON SHEET 18 FOR SPECIFICATIONS
ON WORKING IN THE IDOT RIGHT-OF-WAY



ICN - CLEAR LAKE POLICE DEPARTMENT TO EXISTING ICN TIE-IN POINT ON 210TH ST/B43

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1-800-292-8989

www.iowaonecall.com

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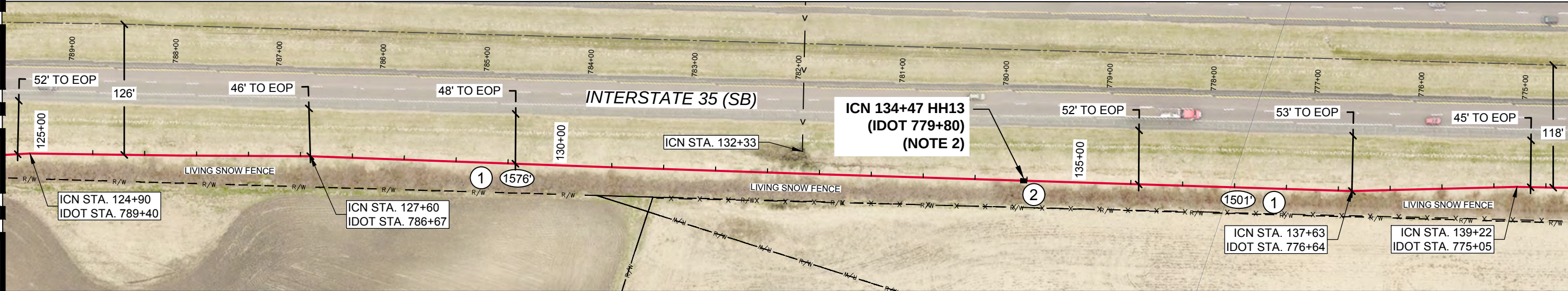
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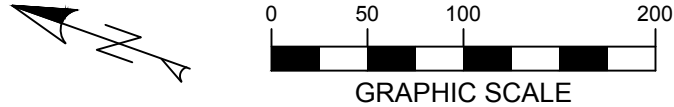
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CERRO GORDO COUNTY
LAKE TOWNSHIP
T96-N R-21W

- ① PULL NEW LINK 0217 48 F/A THROUGH NEW 1 1/4" HDPE CONDUIT. 42" MINIMUM BELOW GRADE. STATIONING OF BORE AREAS ARE ESTIMATED. CONTRACTOR TO VERIFY EXACT BORE PIT LOCATIONS IN FIELD DUE TO REQUIRED DEPTH NEEDED FOR CROSSINGS AT UTILITIES, CULVERTS OR ROADWAYS.
- ② ICN STA. 134+47 INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH13. 100' SLACK COIL 48 F/A. INSTALL ICN MARKER.
- ③ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ④ 3' MIN OFFSET FROM IDOT ROW. 5' MIN. OFFSET FROM LIVING SNOW FENCE, VEGETATION AND TREE LINES IN IDOT RIGHT-OF-WAY.



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH12	118+71	HH13	134+47	1576
HH13	134+47	HH14	149+48	1501
TOTAL				3077

* LENGTH DOES NOT INCLUDE SLACKCOILS

* REFER TO IDOT NOTES ON SHEET 18 FOR SPECIFICATIONS
ON WORKING IN THE IDOT RIGHT-OF-WAY



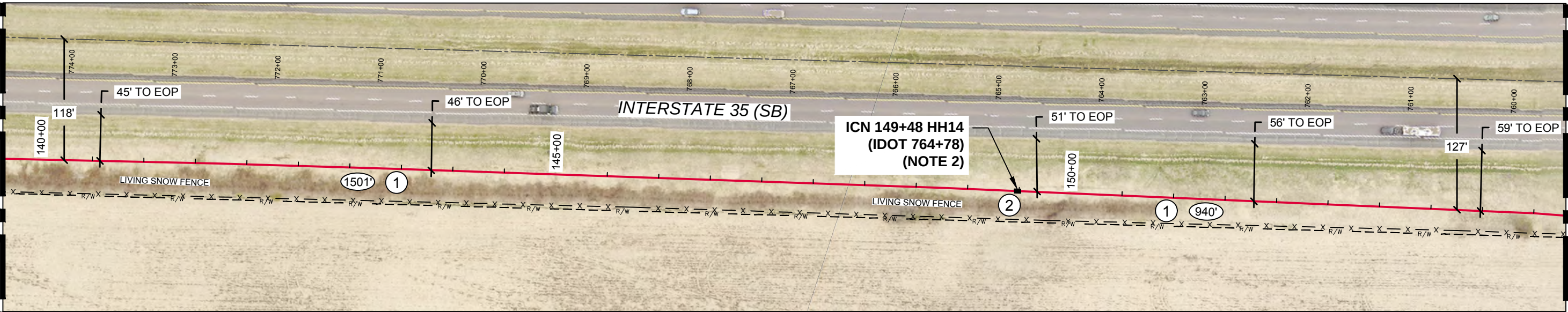
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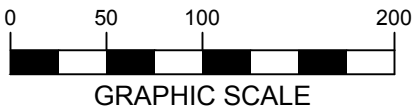
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MATCH LINE SEE SHEET 24



CERRO GORDO COUNTY
LAKE TOWNSHIP
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- ① PULL NEW LINK 0217 48 F/A THROUGH NEW 1 1/4" HDPE CONDUIT. 42" MINIMUM BELOW GRADE. STATIONING OF BORE AREAS ARE ESTIMATED. CONTRACTOR TO VERIFY EXACT BORE PIT LOCATIONS IN FIELD DUE TO REQUIRED DEPTH NEEDED FOR CROSSINGS AT UTILITIES, CULVERTS OR ROADWAYS.
- ② ICN STA. 149+48 INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH14. 100' SLACK COIL 48 F/A. INSTALL ICN MARKER.
- ③ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ④ 3' MIN OFFSET FROM IDOT ROW. 5' MIN. OFFSET FROM LIVING SNOW FENCE, VEGETATION AND TREE LINES IN IDOT RIGHT-OF-WAY.

LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH13	134+47	HH14	149+48	1501
HH14	149+48	HH15	158+88	940
TOTAL				2441

* LENGTH DOES NOT INCLUDE SLACKCOILS

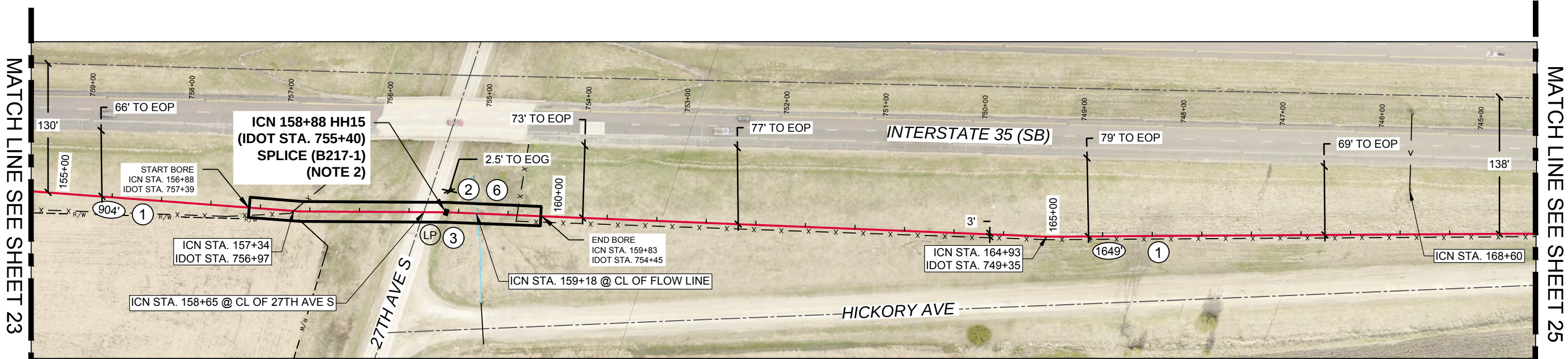
* REFER TO IDOT NOTES ON SHEET 18 FOR SPECIFICATIONS
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ICN - CLEAR LAKE POLICE DEPARTMENT TO
EXISTING ICN TIE-IN POINT ON 210TH ST/B43



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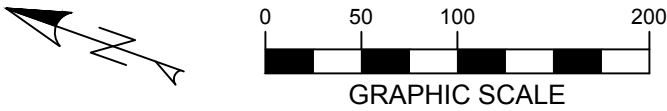


CERRO GORDO COUNTY
LAKE TOWNSHIP
T96-N R-21W

- ① PULL NEW LINK 0217 48 F/A THROUGH NEW 1 1/4" HDPE CONDUIT. 42" MINIMUM BELOW GRADE. STATIONING OF BORE AREAS ARE ESTIMATED. CONTRACTOR TO VERIFY EXACT BORE PIT LOCATIONS IN FIELD DUE TO REQUIRED DEPTH NEEDED FOR CROSSINGS AT UTILITIES, CULVERTS OR ROADWAYS.
- ② ICN STA. 158+88 INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH15. 100' SLACK COIL 48 F/A. INSTALL ICN TRIVIEW LOCATE PEDESTAL. ICN SPLICE LOCATION - B217-1. INSTALL TYCO 450B SPLICE CLOSURE, 1 - #6 GROUND WIRE WITH GROUND ROD, 2-#12 TRACER WIRES WITH 20' OF SLACK EA AND MIDSHEATH FIBER IN
- ③ BORE MIN. DEPTH OF 10' BELOW FLOW LINE (ICN STA. 159+18). CONTRACTOR TO FIELD VERIFY FLOW LINE DEPTH.
- ④ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ⑤ 3' MIN OFFSET FROM IDOT ROW. 5' MIN. OFFSET FROM LIVING SNOW FENCE, VEGETATION AND TREE LINES IN IDOT RIGHT-OF-WAY.
- ⑥ ICN STA. 158+88 REEL ENDS. LEAVE 100' SLACK ON EACH REEL FOR SPLICING



ICN STA. 155+00 LOOKING SOUTH
TOWARD 27TH AVE AND HICKORY AVE



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH14	149+48	HH15	158+88	940
HH15	158+88	HH16	175+37	1649
TOTAL				2589

* LENGTH DOES NOT INCLUDE SLACKCOILS

* REFER TO IDOT NOTES ON SHEET 18 FOR SPECIFICATIONS
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ICN - CLEAR LAKE POLICE DEPARTMENT TO EXISTING ICN TIE-IN POINT ON 210TH ST/B43

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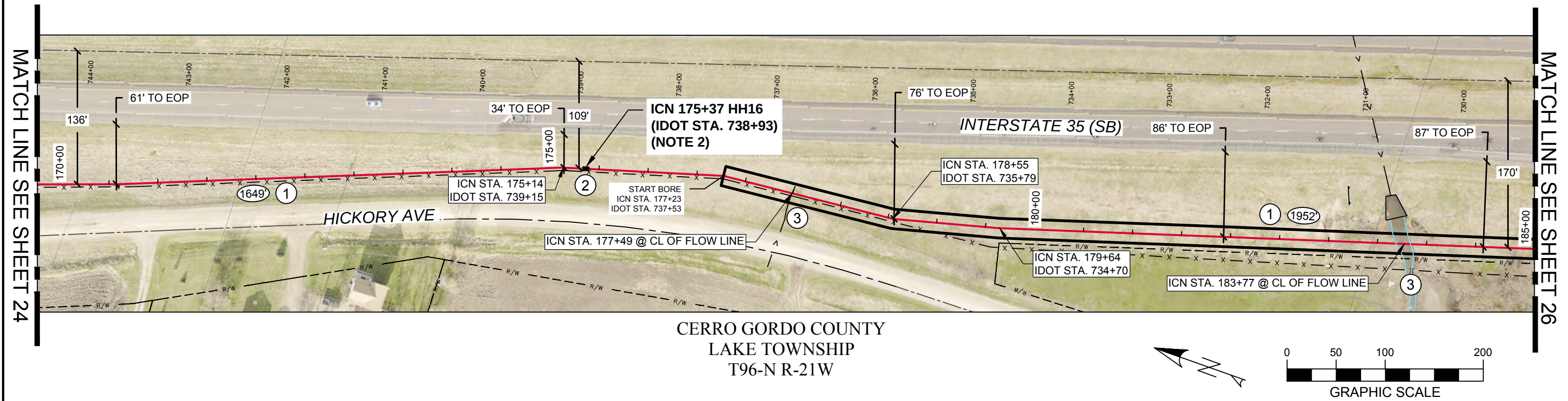
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- ① PULL NEW LINK 0217 48 F/A THROUGH NEW 1 1/4" HDPE CONDUIT. 42" MINIMUM BELOW GRADE. STATIONING OF BORE AREAS ARE ESTIMATED. CONTRACTOR TO VERIFY EXACT BORE PIT LOCATIONS IN FIELD DUE TO REQUIRED DEPTH NEEDED FOR CROSSINGS AT UTILITIES, CULVERTS OR ROADWAYS.
- ② ICN STA. 175+37 INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH16. 100' SLACK COIL 48 F/A. INSTALL ICN MARKER.
- ③ BORE MIN. DEPTH OF 10' BELOW FLOW LINE (ICN STA. 177+49 & 183+77). CONTRACTOR TO FIELD VERIFY FLOW LINE DEPTH.
- ④ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ⑤ 3' MIN OFFSET FROM IDOT ROW. 5' MIN. OFFSET FROM LIVING SNOW FENCE, VEGETATION AND TREE LINES IN IDOT RIGHT-OF-WAY.



ICN STA. 183+77
LOOKING WEST FROM I-35 (SB)

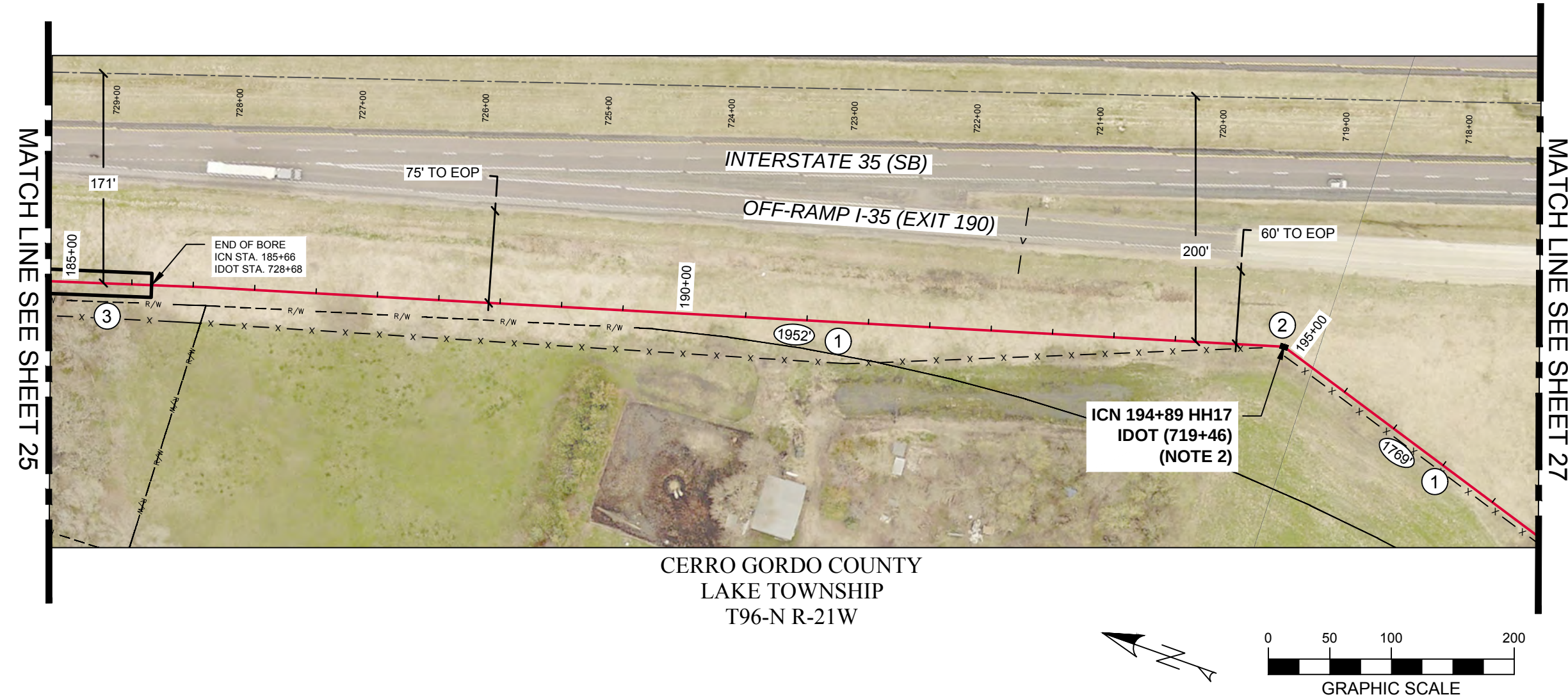
LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH15	158+88	HH16	175+37	1649
HH16	175+37	HH17	194+89	1952
TOTAL				3601

* LENGTH DOES NOT INCLUDE SLACKCOILS

* REFER TO IDOT NOTES ON SHEET 18 FOR SPECIFICATIONS
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- ① PULL NEW LINK 0217 48 F/A THROUGH NEW 1 1/4" HDPE CONDUIT. 42" MINIMUM BELOW GRADE. STATIONING OF BORE AREAS ARE ESTIMATED. CONTRACTOR TO VERIFY EXACT BORE PIT LOCATIONS IN FIELD DUE TO REQUIRED DEPTH NEEDED FOR CROSSINGS AT UTILITIES, CULVERTS OR ROADWAYS.
- ② ICN STA. 194+89. INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH17. 100' SLACK COIL 48 F/A. INSTALL ICN MARKER.
- ③ BORE MIN. DEPTH OF 10' BELOW FLOW LINE. CONTRACTOR TO FIELD VERIFY FLOW LINE DEPTH.
- ④ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ⑤ 3' MIN OFFSET FROM IDOT ROW. 5' MIN. OFFSET FROM LIVING SNOW FENCE, VEGETATION AND TREE LINES IN IDOT RIGHT-OF-WAY.

LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH16	175+37	HH17	194+89	1952
HH17	194+89	HH18	212+58	1769
TOTAL				3721

* LENGTH DOES NOT INCLUDE SLACKCOILS

* REFER TO IDOT NOTES ON SHEET 18 FOR SPECIFICATIONS
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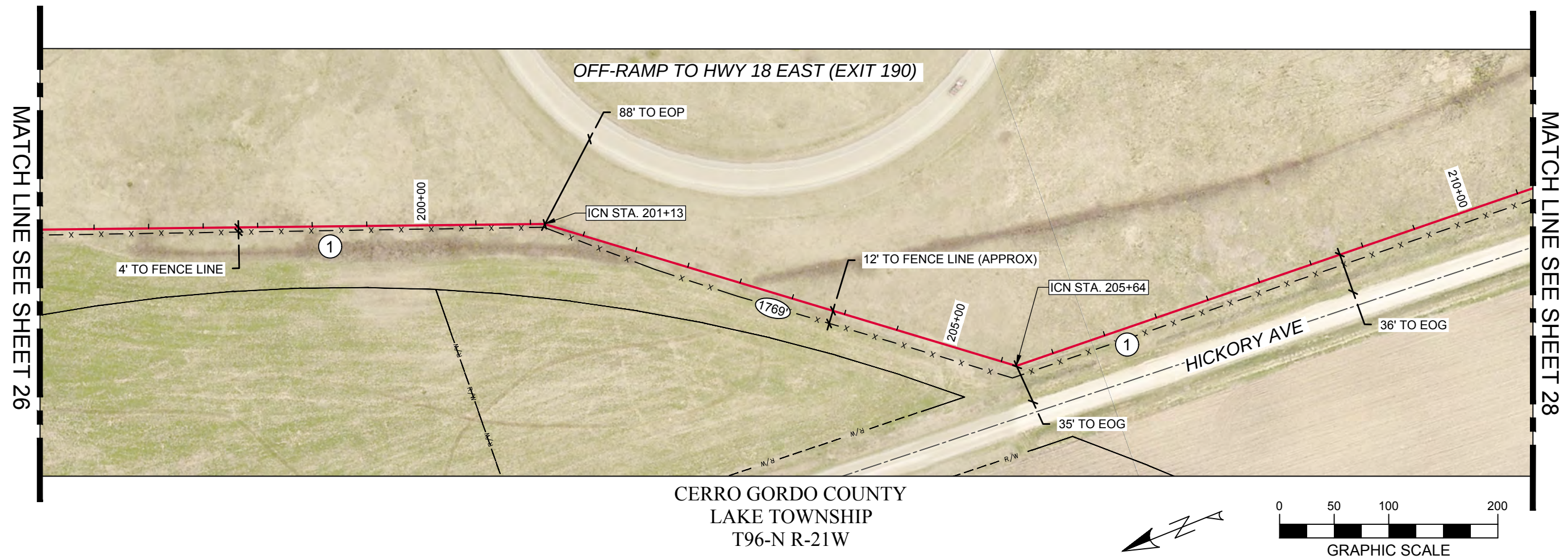


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- ① PULL NEW LINK 0217 48 F/A THROUGH NEW 1 1/4" HDPE CONDUIT. 42" MINIMUM BELOW GRADE. STATIONING OF BORE AREAS ARE ESTIMATED. CONTRACTOR TO VERIFY EXACT BORE PIT LOCATIONS IN FIELD DUE TO REQUIRED DEPTH NEEDED FOR CROSSINGS AT UTILITIES, CULVERTS OR ROADWAYS.
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LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH17	194+89	HH18	212+58	1769
TOTAL				1769

* LENGTH DOES NOT INCLUDE SLACKCOILS

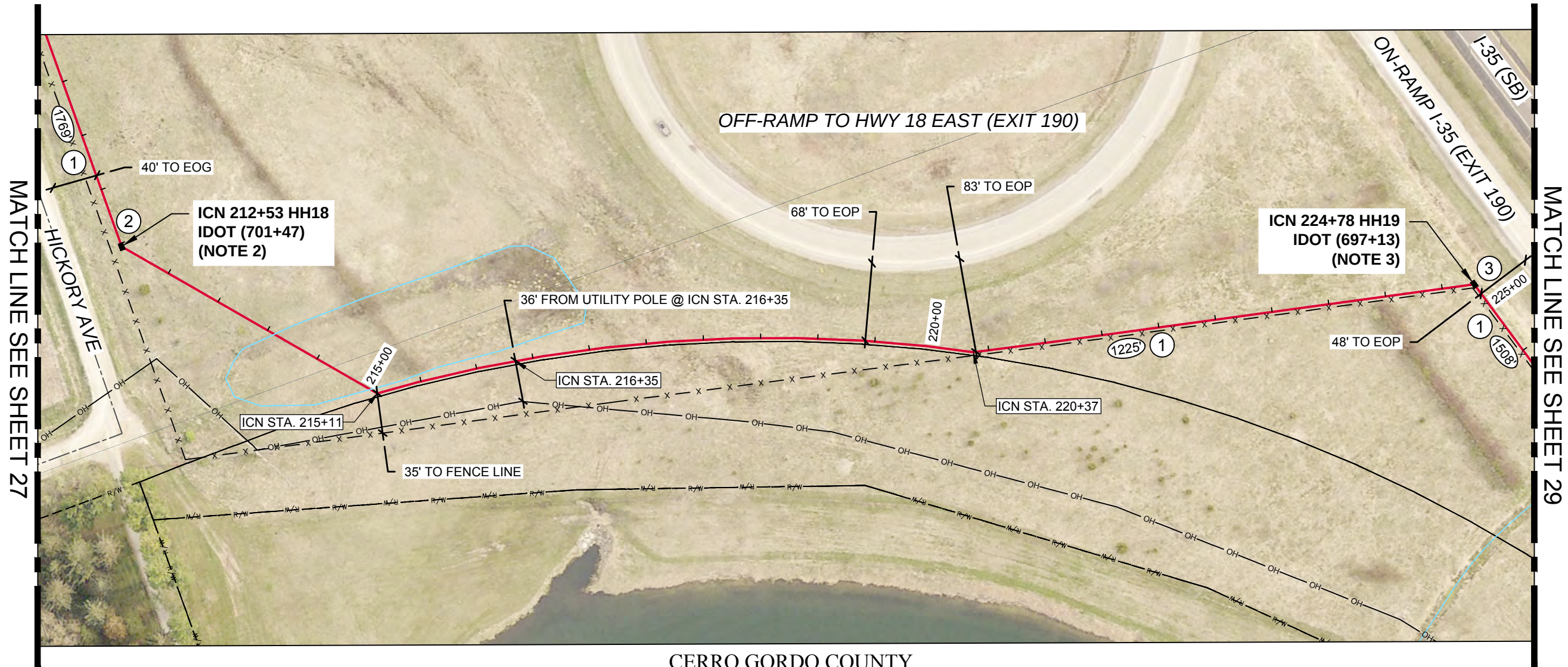
* REFER TO IDOT NOTES ON SHEET 18 FOR SPECIFICATIONS
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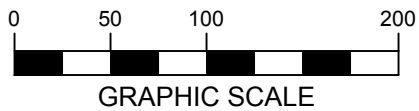
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LAKE TOWNSHIP
T96-N R-21W



- ① PULL NEW LINK 0217 48 F/A THROUGH NEW 1 1/4" HDPE CONDUIT. 42" MINIMUM BELOW GRADE. STATIONING OF BORE AREAS ARE ESTIMATED. CONTRACTOR TO VERIFY EXACT BORE PIT LOCATIONS IN FIELD DUE TO REQUIRED DEPTH NEEDED FOR CROSSINGS AT UTILITIES, CULVERTS OR ROADWAYS.
- ② ICN STA. 212+53. INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH18. 100' SLACK COIL 48 F/A. INSTALL ICN MARKER.
- ③ ICN STA. 224+78. INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH19. 100' SLACK COIL 48 F/A. INSTALL ICN MARKER.
- ④ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ⑤ 3' MIN OFFSET FROM IDOT ROW. 5' MIN. OFFSET FROM LIVING SNOW FENCE, VEGETATION AND TREE LINES IN IDOT RIGHT-OF-WAY.

* REFER TO IDOT NOTES ON SHEET 18 FOR SPECIFICATIONS
ON WORKING IN THE IDOT RIGHT-OF-WAY

LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH17	194+89	HH18	212+58	1769
HH18	212+53	HH19	224+78	1225
HH19	224+78	HH20	239+86	1508
TOTAL				4502

* LENGTH DOES NOT INCLUDE SLACKCOILS



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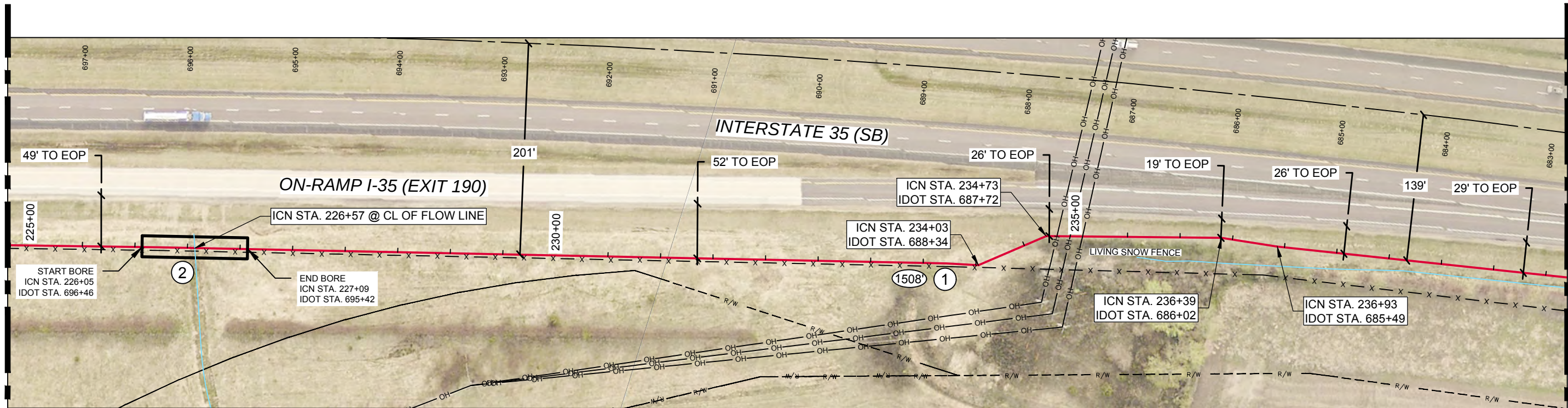
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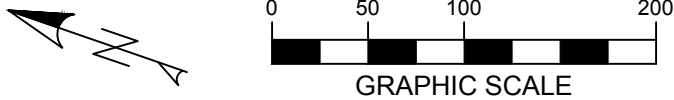
hbk **ICN**

MATCH LINE SEE SHEET 28

MATCH LINE SEE SHEET 30



CERRO GORDO COUNTY
LAKE TOWNSHIP
T96-N R-21W



- ① PULL NEW LINK 0217 48 F/A THROUGH NEW 1 1/4" HDPE CONDUIT. 42" MINIMUM BELOW GRADE. STATIONING OF BORE AREAS ARE ESTIMATED. CONTRACTOR TO VERIFY EXACT BORE PIT LOCATIONS IN FIELD DUE TO REQUIRED DEPTH NEEDED FOR CROSSINGS AT UTILITIES, CULVERTS OR ROADWAYS.
- ② BORE MIN. DEPTH OF 10' BELOW FLOW LINE (ICN STA. 226+57). CONTRACTOR TO FIELD VERIFY FLOW LINE DEPTH.
- ③ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ④ 3' MIN OFFSET FROM IDOT ROW. 5' MIN. OFFSET FROM LIVING SNOW FENCE, VEGETATION AND TREE LINES IN IDOT RIGHT-OF-WAY.

LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH19	224+78	HH20	239+86	1508
TOTAL				1508

* LENGTH DOES NOT INCLUDE SLACKCOILS

* REFER TO IDOT NOTES ON SHEET 18 FOR SPECIFICATIONS
ON WORKING IN THE IDOT RIGHT-OF-WAY

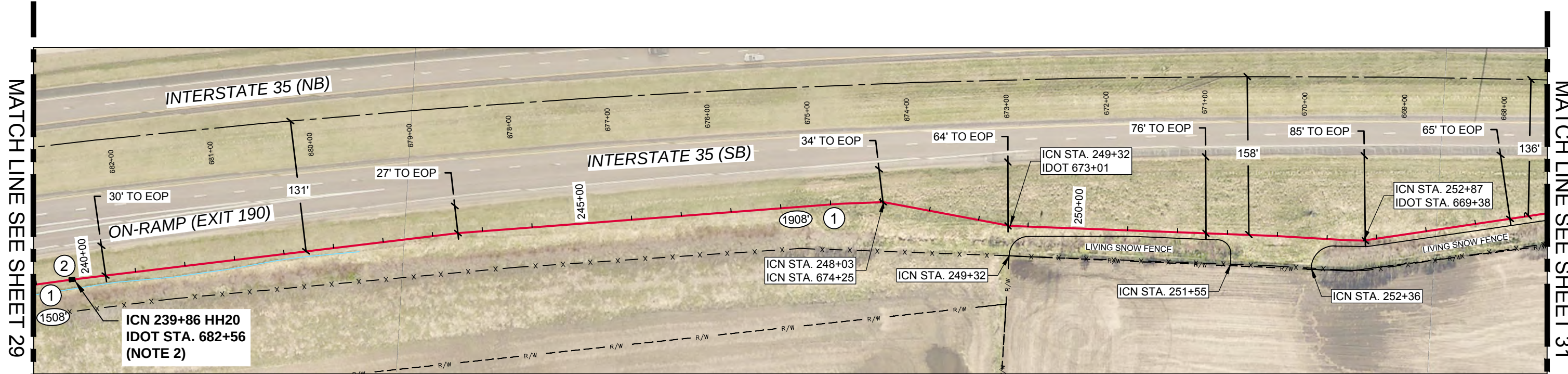


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CERRO GORDO COUNTY
LAKE TOWNSHIP
T96-N R-21W

- ① PULL NEW LINK 0217 48 F/A THROUGH NEW 1 1/4" HDPE CONDUIT. 42" MINIMUM BELOW GRADE. STATIONING OF BORE AREAS ARE ESTIMATED. CONTRACTOR TO VERIFY EXACT BORE PIT LOCATIONS IN FIELD DUE TO REQUIRED DEPTH NEEDED FOR CROSSINGS AT UTILITIES, CULVERTS OR ROADWAYS.
- ② ICN STA. 239+86. INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH20. 100' SLACK COIL 48 F/A. INSTALL ICN MARKER.
- ③ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ④ 3' MIN OFFSET FROM IDOT ROW. 5' MIN. OFFSET FROM LIVING SNOW FENCE, VEGETATION AND TREE LINES IN IDOT RIGHT-OF-WAY.

LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH19	224+78	HH20	239+86	1508
HH20	239+86	HH21	258+94	1908
TOTAL				3416

* LENGTH DOES NOT INCLUDE SLACKCOILS

* REFER TO IDOT NOTES ON SHEET 18 FOR SPECIFICATIONS
ON WORKING IN THE IDOT RIGHT-OF-WAY



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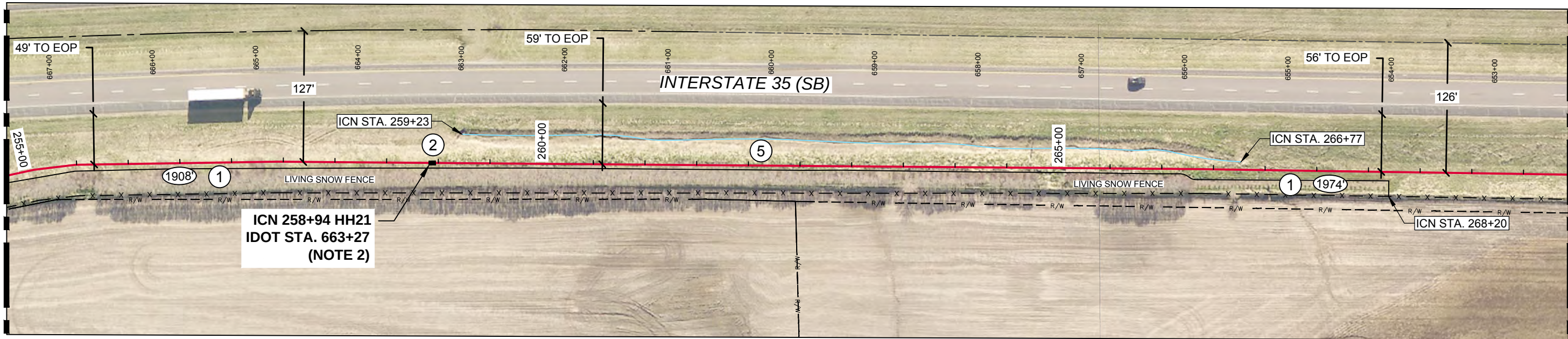
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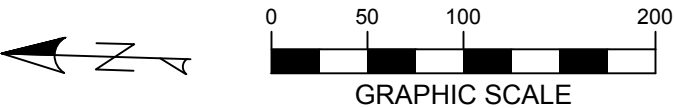
MATCH LINE SEE SHEET 30

MATCH LINE SEE SHEET 32



CERRO GORDO COUNTY
LAKE TOWNSHIP
T96-N R-21W

- ① PULL NEW LINK 0217 48 F/A THROUGH NEW 1 1/4" HDPE CONDUIT. 42" MINIMUM BELOW GRADE. STATIONING OF BORE AREAS ARE ESTIMATED. CONTRACTOR TO VERIFY EXACT BORE PIT LOCATIONS IN FIELD DUE TO REQUIRED DEPTH NEEDED FOR CROSSINGS AT UTILITIES, CULVERTS OR ROADWAYS.
- ② ICN STA. 258+68. INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH21. 100' SLACK COIL 48 F/A. INSTALL ICN MARKER.
- ③ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ④ 3' MIN OFFSET FROM IDOT ROW. 5' MIN. OFFSET FROM LIVING SNOW FENCE, VEGETATION AND TREE LINES IN IDOT RIGHT-OF-WAY.
- ⑤ THIS AREA IS STEEP WITH A DEEP FLOW LINE. CONTRACTOR MAY CONSIDER BORING THIS LOCATION. THE PROPOSED ROUTE SITS ON FLAT PART OF BACKSLOPE OF DITCH.



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH20	239+86	HH21	258+94	1908
HH21	258+94	HH22	278+68	1974
TOTAL				3882

* LENGTH DOES NOT INCLUDE SLACKCOILS

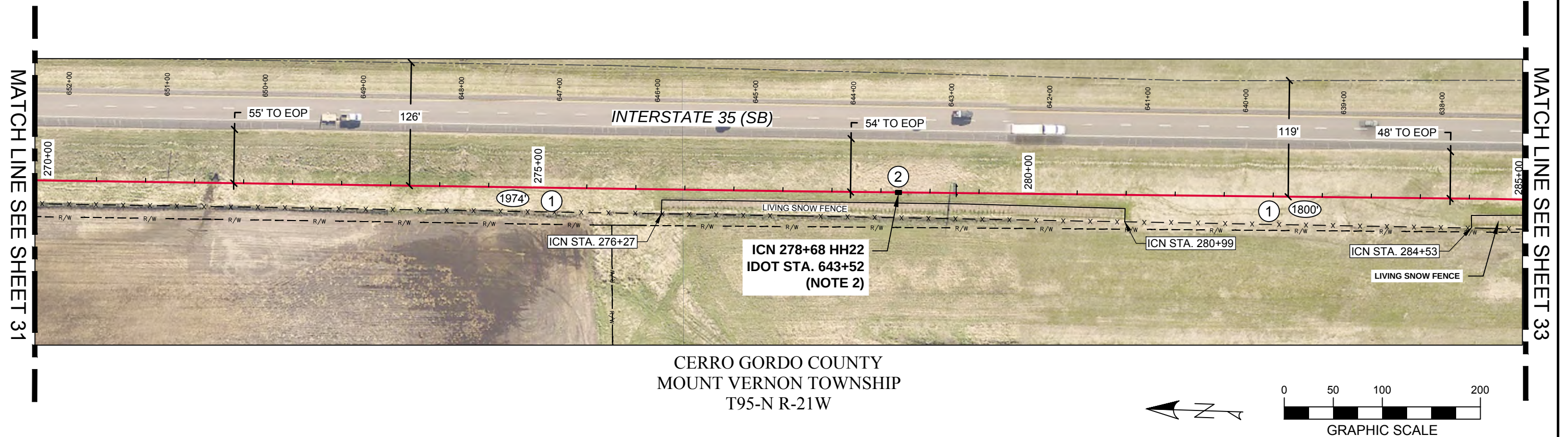
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- ① PULL NEW LINK 0217 48 F/A THROUGH NEW 1 $\frac{1}{4}$ " HDPE CONDUIT. 42" MINIMUM BELOW GRADE. STATIONING OF BORE AREAS ARE ESTIMATED. CONTRACTOR TO VERIFY EXACT BORE PIT LOCATIONS IN FIELD DUE TO REQUIRED DEPTH NEEDED FOR CROSSINGS AT UTILITIES, CULVERTS OR ROADWAYS.
- ② ICN STA. 278+68. INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH22. 100' SLACK COIL 48 F/A. INSTALL ICN MARKER.
- ③ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ④ 3' MIN OFFSET FROM IDOT ROW. 5' MIN. OFFSET FROM LIVING SNOW FENCE, VEGETATION AND TREE LINES IN IDOT RIGHT-OF-WAY.

LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH21	258+94	HH22	278+68	1974
HH22	278+68	HH23	296+68	1800
TOTAL				3774

* LENGTH DOES NOT INCLUDE SLACKCOILS

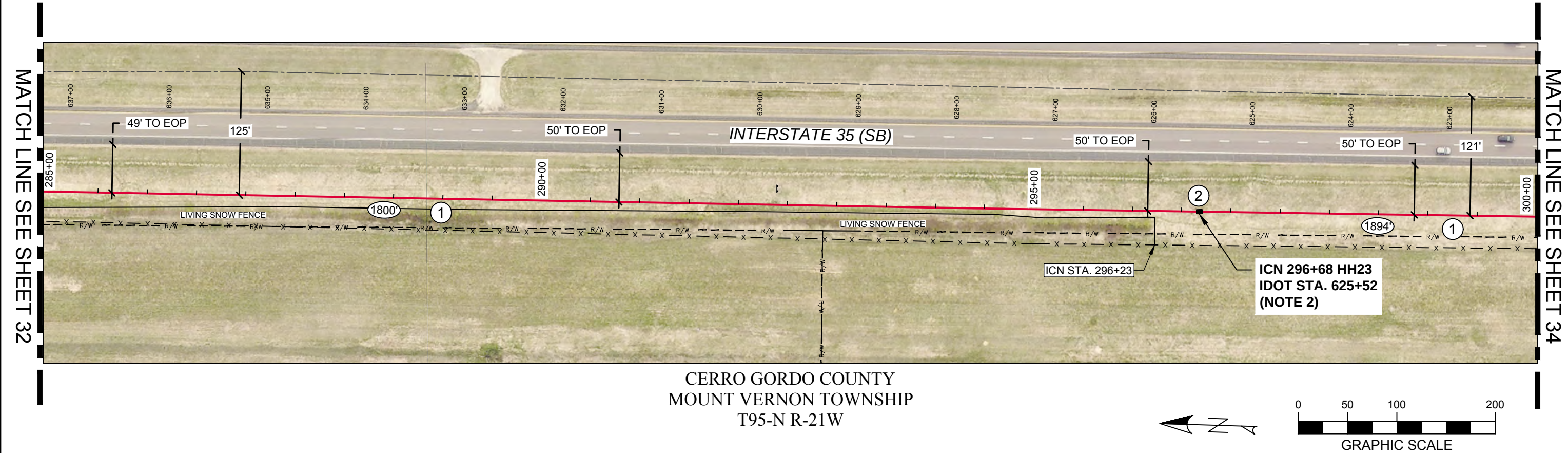
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- ② ICN STA. 296+68. INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH23. 100' SLACK COIL 48 F/A. INSTALL ICN MARKER.
- ③ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ④ 3' MIN OFFSET FROM IDOT ROW. 5' MIN. OFFSET FROM LIVING SNOW FENCE, VEGETATION AND TREE LINES IN IDOT RIGHT-OF-WAY.

LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH22	278+68	HH23	296+68	1800
HH23	296+68	HH24	315+62	1894
TOTAL				3694

* LENGTH DOES NOT INCLUDE SLACKCOILS

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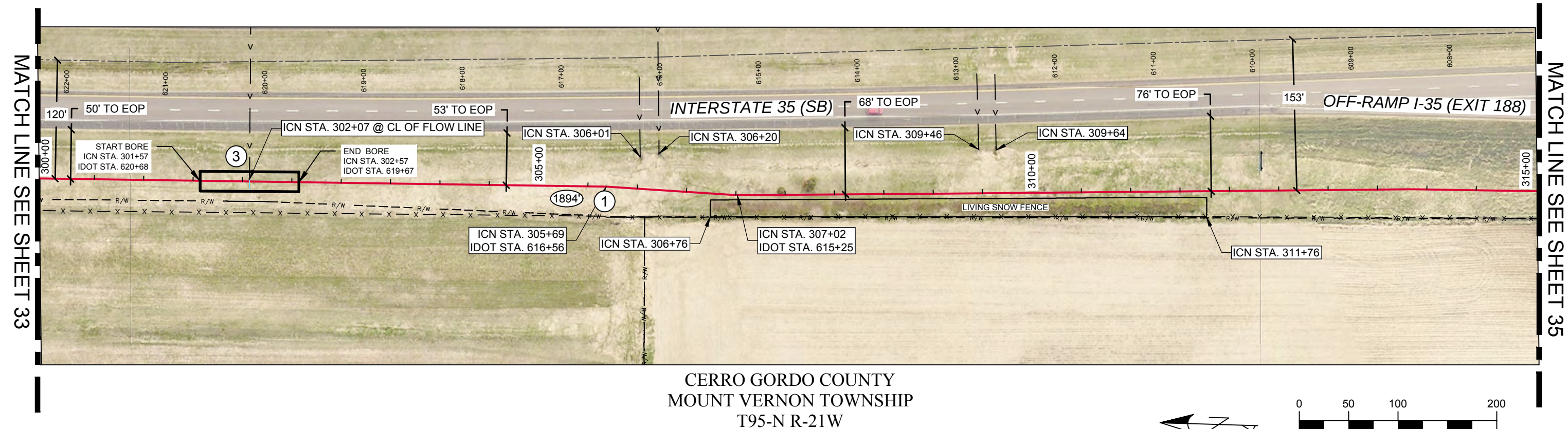
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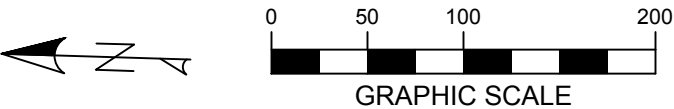
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CERRO GORDO COUNTY
MOUNT VERNON TOWNSHIP
T95-N R-21W

- ① PULL NEW LINK 0217 48 F/A THROUGH NEW 1 1/4" HDPE CONDUIT. 42" MINIMUM BELOW GRADE. STATIONING OF BORE AREAS ARE ESTIMATED. CONTRACTOR TO VERIFY EXACT BORE PIT LOCATIONS IN FIELD DUE TO REQUIRED DEPTH NEEDED FOR CROSSINGS AT UTILITIES, CULVERTS OR ROADWAYS.
- ② OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ③ BORE MIN. DEPTH OF 10' BELOW FLOW LINE (ICN STA. 302+07). CONTRACTOR TO FIELD VERIFY FLOW LINE DEPTH.
- ④ 3' MIN OFFSET FROM IDOT ROW. 5' MIN. OFFSET FROM LIVING SNOW FENCE, VEGETATION AND TREE LINES IN IDOT RIGHT-OF-WAY.



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH23	296+68	HH24	315+62	1894
TOTAL				1894

* LENGTH DOES NOT INCLUDE SLACKCOILS

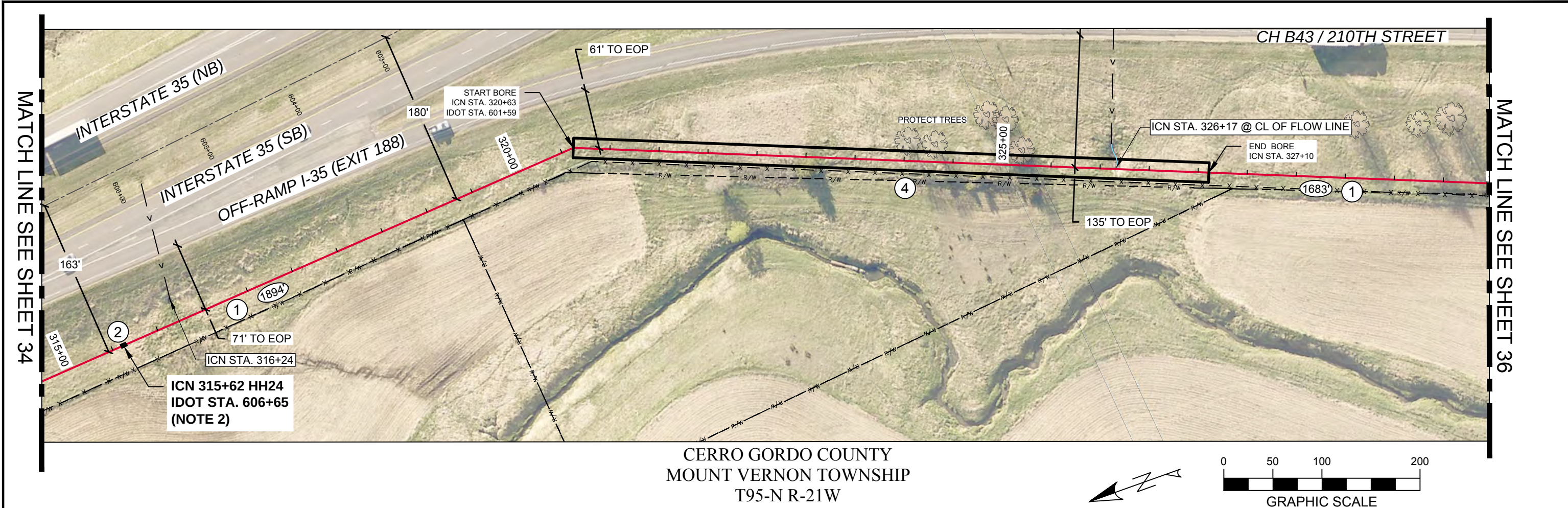
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- ② ICN STA. 315+62. INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH24. 100' SLACK COIL 48 F/A. INSTALL ICN MARKER.
- ③ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ④ BORE MIN. DEPTH OF 10' BELOW FLOW LINE (ICN STA. 326+17). CONTRACTOR TO FIELD VERIFY FLOW LINE DEPTH.
- ⑤ 3' MIN OFFSET FROM IDOT ROW. 5' MIN. OFFSET FROM LIVING SNOW FENCE, VEGETATION AND TREE LINES IN IDOT RIGHT-OF-WAY.

LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH23	296+68	HH24	315+62	1894
HH24	315+62	HH25	332+45	1683
TOTAL				3577

* LENGTH DOES NOT INCLUDE SLACKCOILS

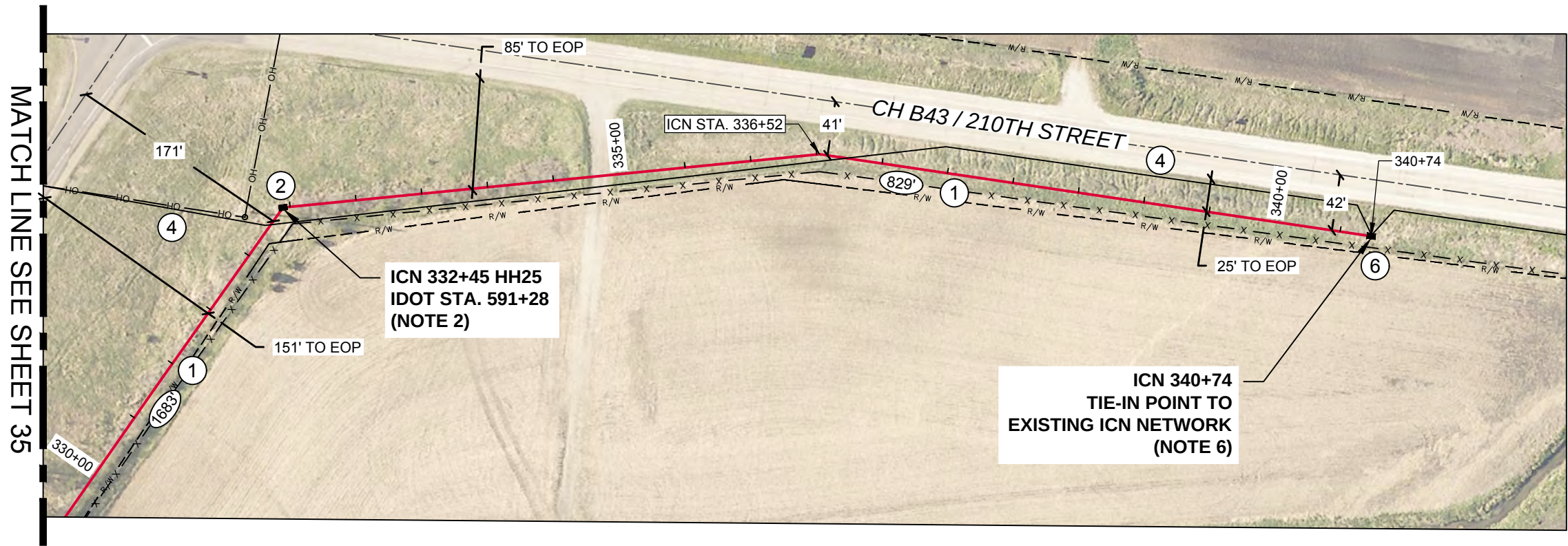
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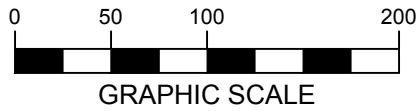
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MOUNT VERNON TOWNSHIP
T95-N R-21W



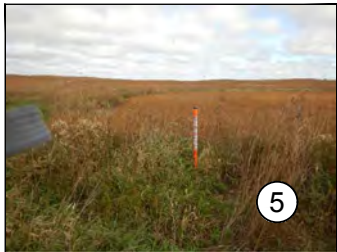
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- ② ICN STA. 332+45. INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH25. 100' SLACK COIL 48 F/A.
- ③ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ④ EXISTING ICN LINK 217 AND SPLICE LS516 (FORMERLY B207-2). CONTRACTOR SHALL PROTECT ICN EXISTING CABLE.
- ⑤ 3' MIN OFFSET FROM IDOT ROW. 5' MIN. OFFSET FROM LIVING SNOW FENCE, VEGETATION AND TREE LINES IN IDOT RIGHT-OF-WAY.

- ⑥ ICN STA. 340+74. TIE INTO ICN EXISTING FIBER NETWORK. CONTRACTOR TO EXPOSE EXISTING HANDHOLE AND NOTIFY ICN OF THE HANDHOLE SIZE AND DEPTH. CONTRACTOR SHALL RAISE HANDHOLE TO GRADE BY ADDING SPLIT CONDUIT OVER EXISTING CABLES AND ADD EXTENSION TO EXISTING HANDHOLE AS NECESSARY.

HANDHOLE MATERIALS SHALL BE CONSIDERED AN EXTRA DEPENDING ON SIZE REQUIRED. CONTRACTOR SHALL INSTALL NEW TRACER WIRE FROM EXISTING PEDESTAL AND LEAVE 20' OF SLACK IN HANDHOLE AND TEMPORARILY BOND TO NEW ARMORED CABLE FOR LOCATE PURPOSE. NEW LINK 0217 - 48 F/A: 75' COIL FOR SPLICE, 1-#6GROUND WIRE WITH GROUND ROD, 2-#12 TRACER WIRES WITH 20' OF SLACK EA. INSTALL TRI-VIEW LOCATE STATION - 3 WAY LOCATE POINT ADJACENT TO HH.



LOOKING EAST TOWARD 1-35
FROM ICN MARKER AT STA. 340+83



ICN MARKER AT
APPROX. STA. 340+83

LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH24	315+62	HH25	332+45	1683
HH25	332+45	ICN EX. TIE-IN POINT	340+74	829
TOTAL				2512

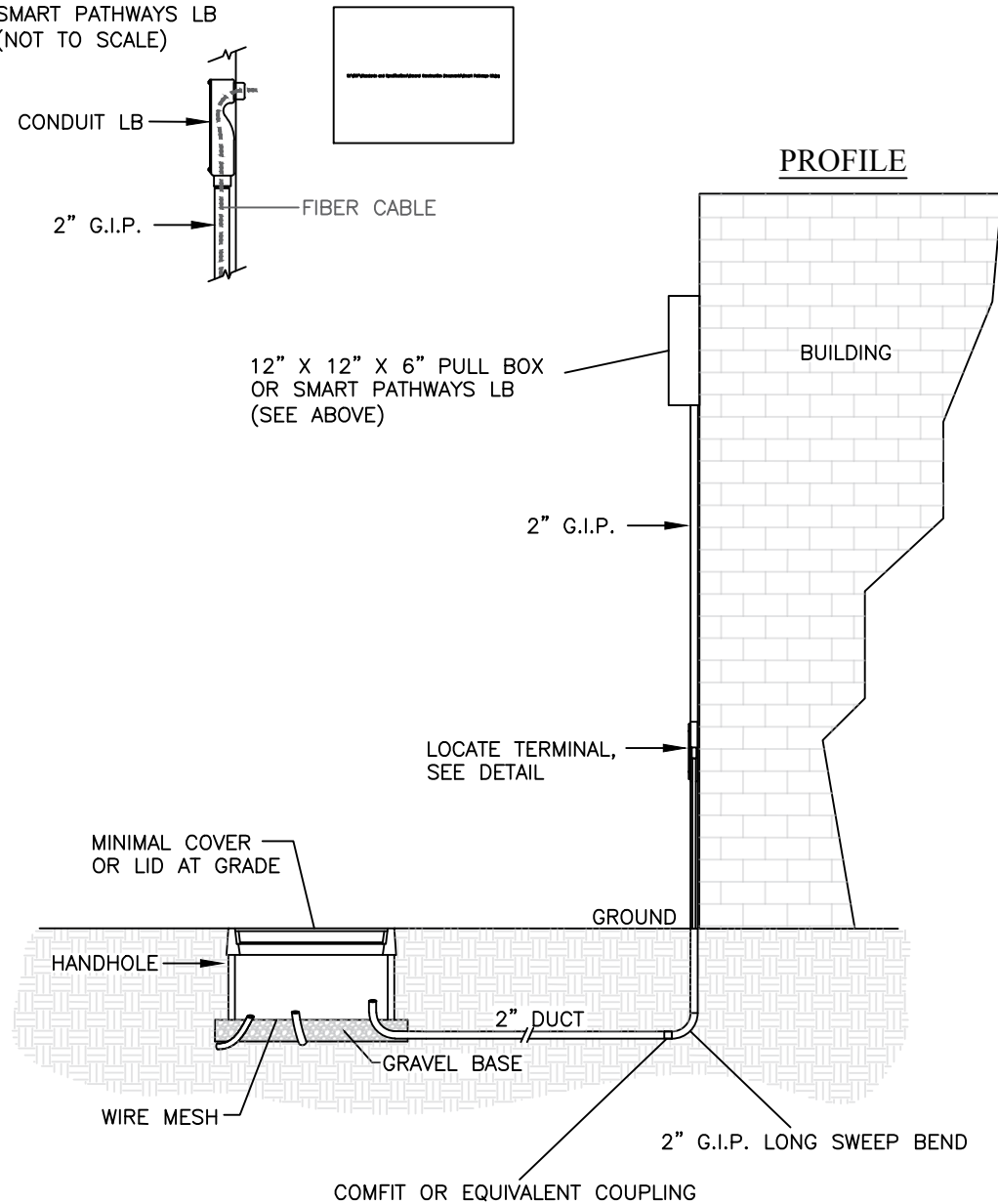
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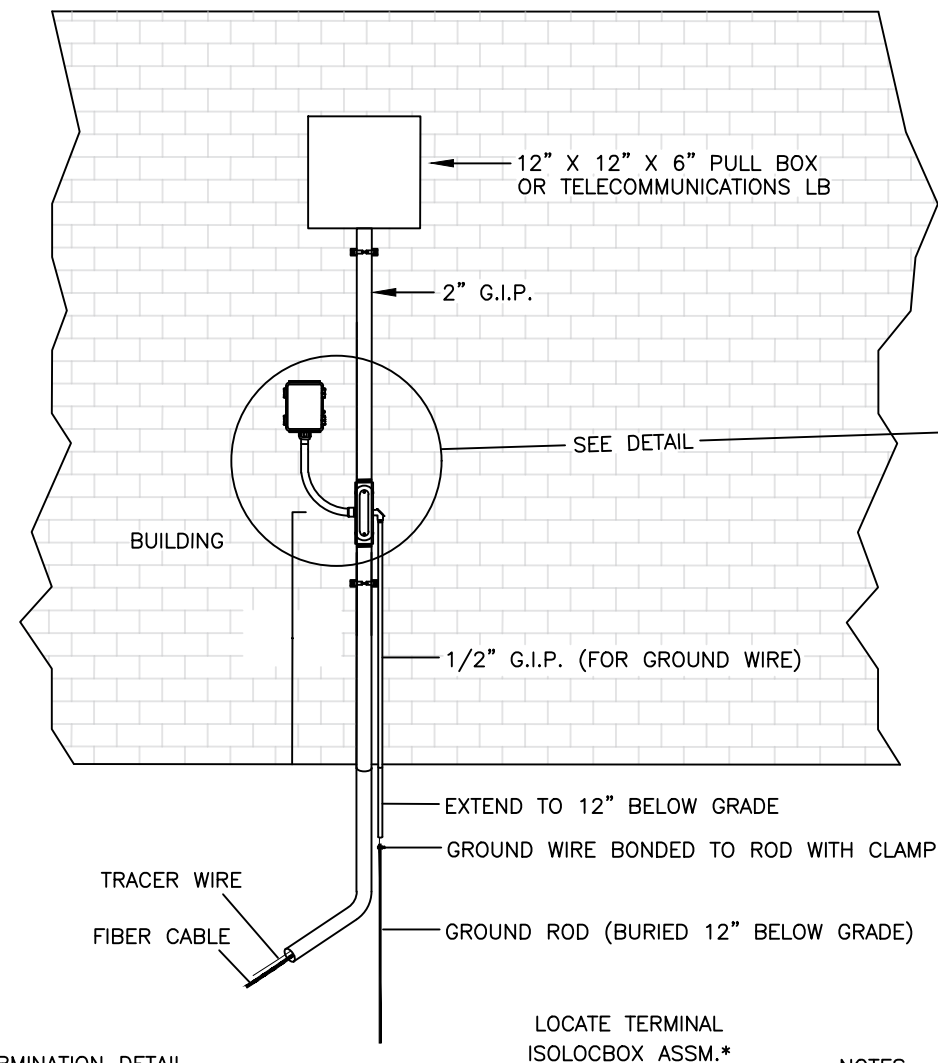
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ALTERNATIVE TO PULL BOX:
SMART PATHWAYS LB
(NOT TO SCALE)

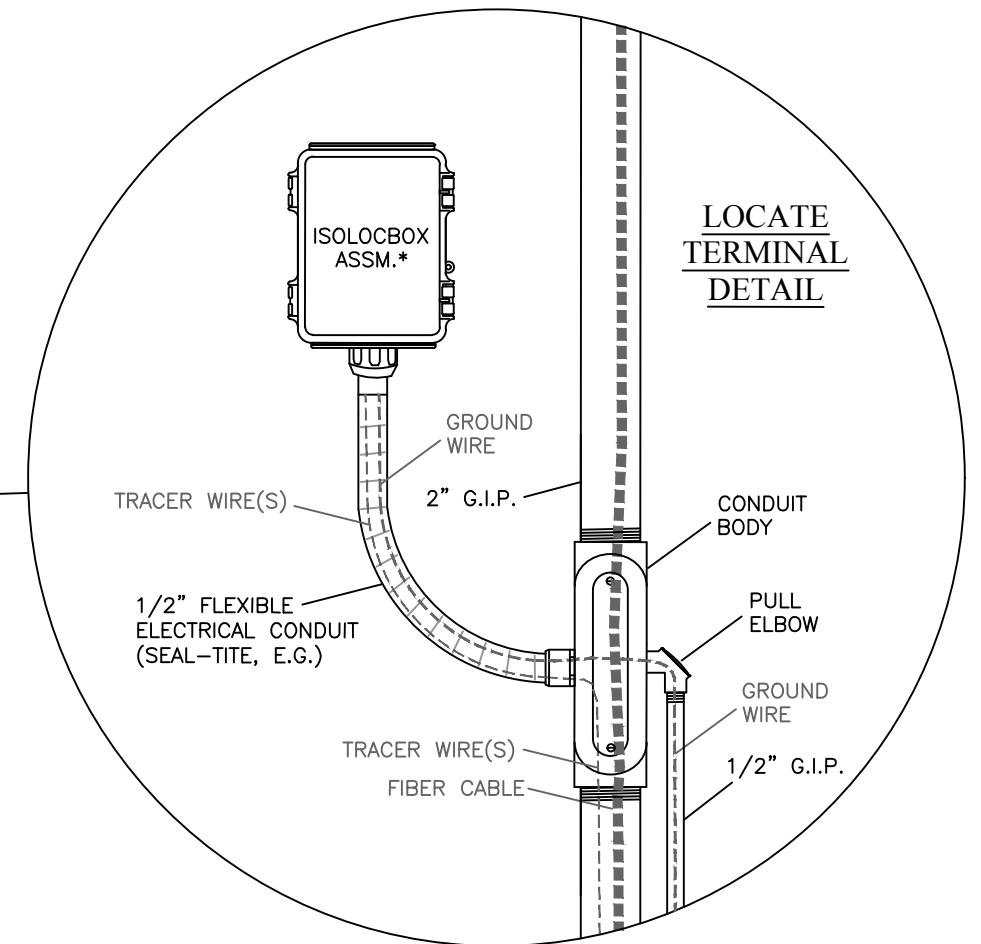


TYPICAL ABOVE GROUND BUILDING ENTRANCE WITH LOCATE TERMINAL

ELEVATION



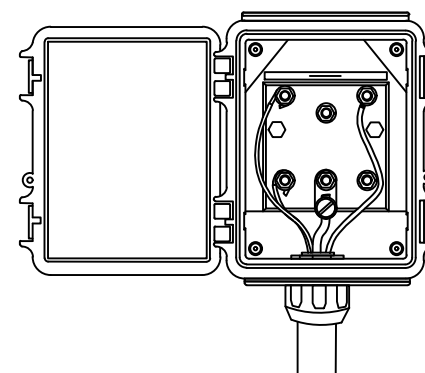
LOCATE
TERMINAL
DETAIL



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:

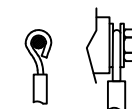
STRIP OFF A MINIMUM OF ¾" OF INSULATION. USING A NEEDLE NOSE PLIERS, BEND A WIRE "EYELET" ON THE WIRE END IN A CLOCKWISE MANNER. USE A FLAT WASHER ON BOTH SIDES OF THE WIRE EYELET WHEN CINCHING IT DOWN ON THE STUD. FLAT WASHERS SHALL BE OF APPROPRIATE SIZE SUCH THAT THE HOLE MATCHES THE DIAMETER OF THE STUD AND THE OUTSIDE OF DIAMETER OF THE FLAT WASHER MATCHES REASONABLY CLOSE TO THE EYELET DIAMETER.



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

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

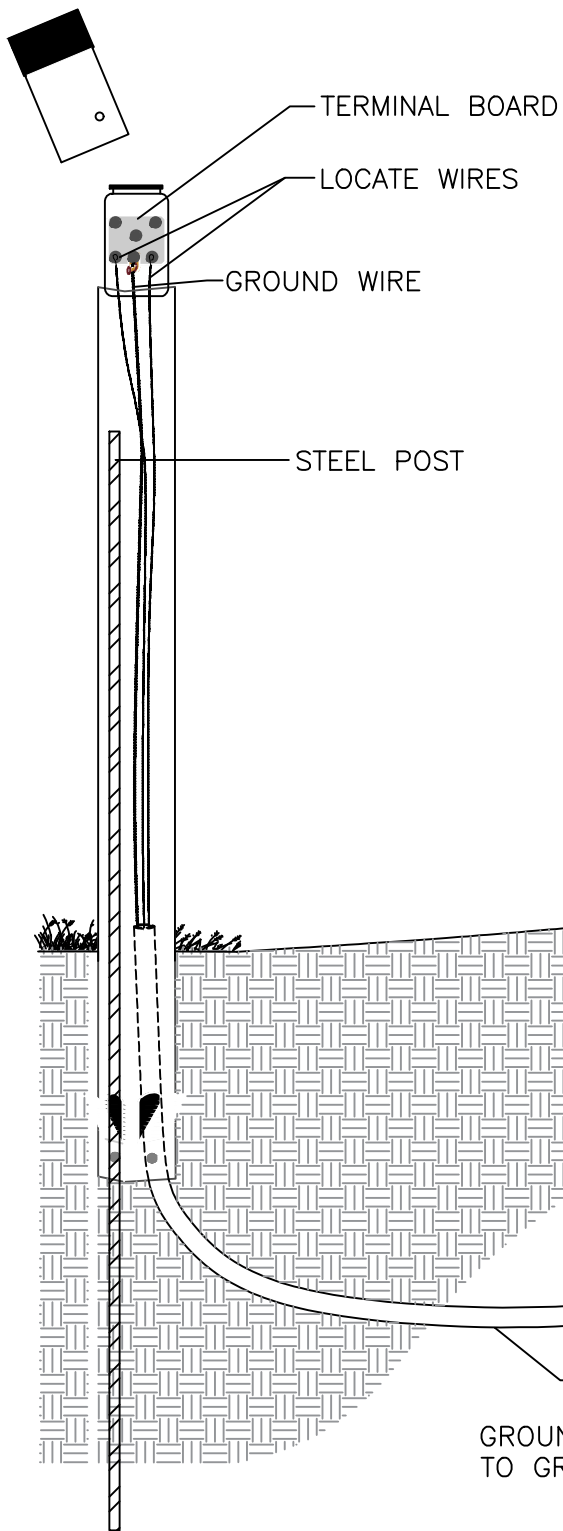


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TYPICAL INSTALLATION OF TRI-VIEW LOCATE PEDESTAL

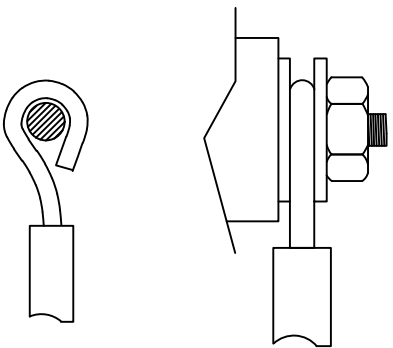


- NOTES:
- LOCATE (TRACER) WIRE: #10 or #12 AWG SOLID COPPER WIRE
 - GROUND WIRE: #6 OR #8 AWG SOLID BARE COPPER WIRE
 - ONE LOCATE WIRE PER FIBER CABLE AT SPLICE ENCLOSURE
 - LOCATE WIRE(S) TO BE BONDED INSIDE SPLICE ENCLOSURE WITH 3M SCOTCHLOK SHIELD BONDING KIT
 - LOCATE WIRE(S) TO BE ROUTED OUTSIDE 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.



ICN - CLEAR LAKE POLICE DEPARTMENT TO EXISTING ICN TIE-IN POINT ON 210TH ST/B43

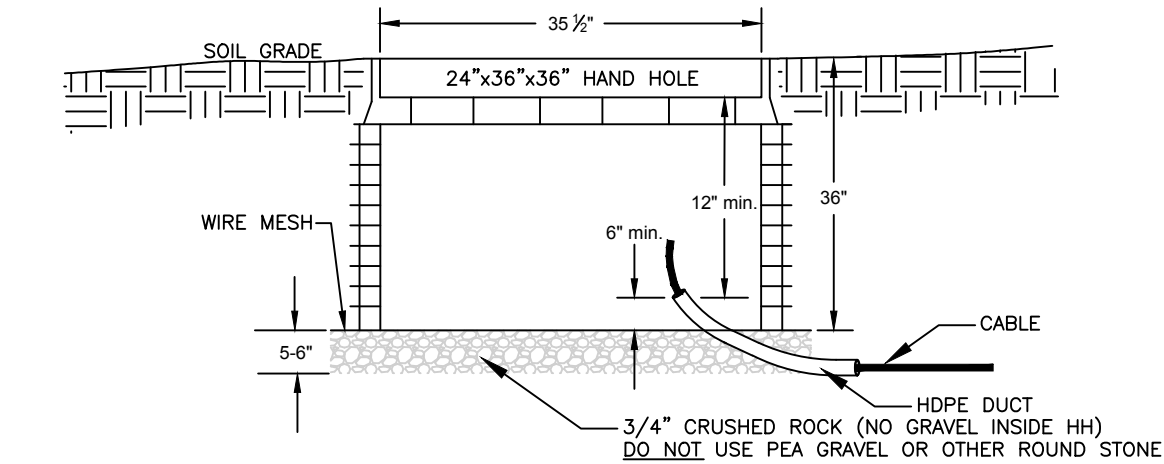


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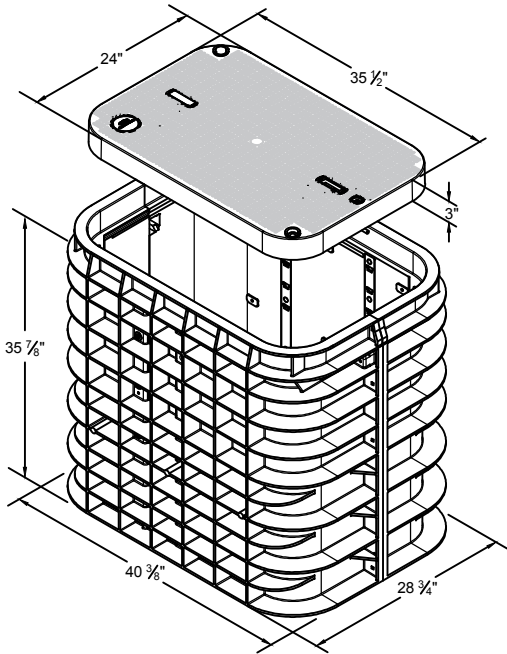
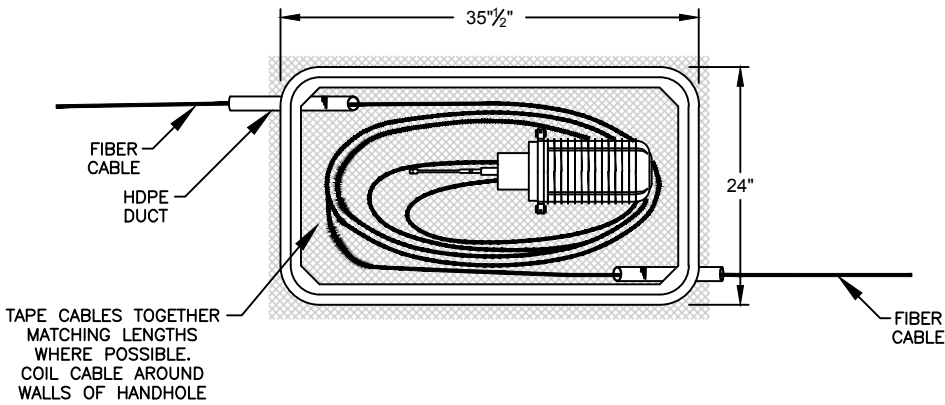
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HANDHOLE PLACEMENT TYPICAL

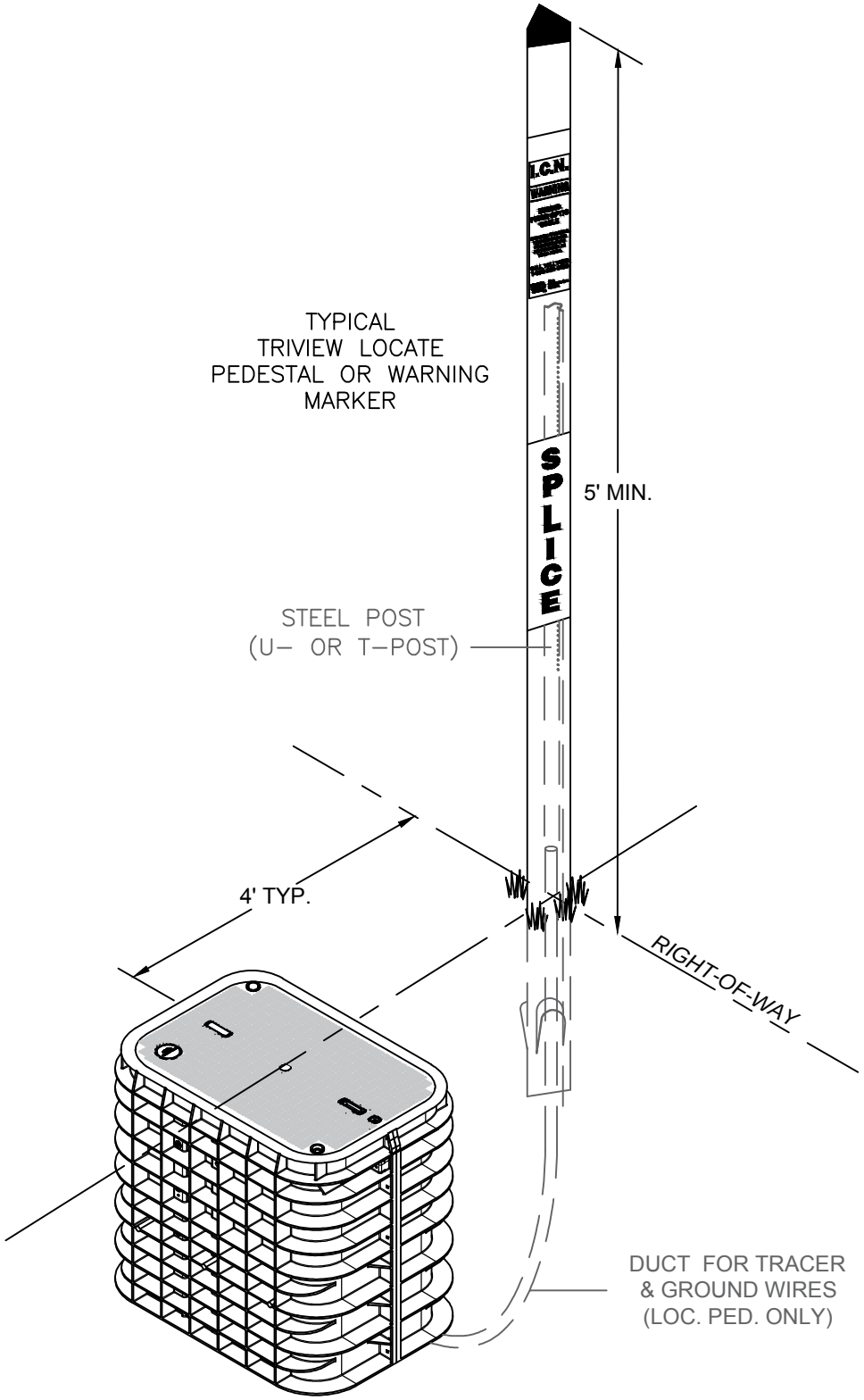
24" X 36" X 36" HAND HOLE



SEE INSTALLATION INSTRUCTIONS FOR PROPER PLACEMENT OF CHANNELL BULK HANDHOLE



BULK HANDHOLE TYPICAL 24"X36"X36"



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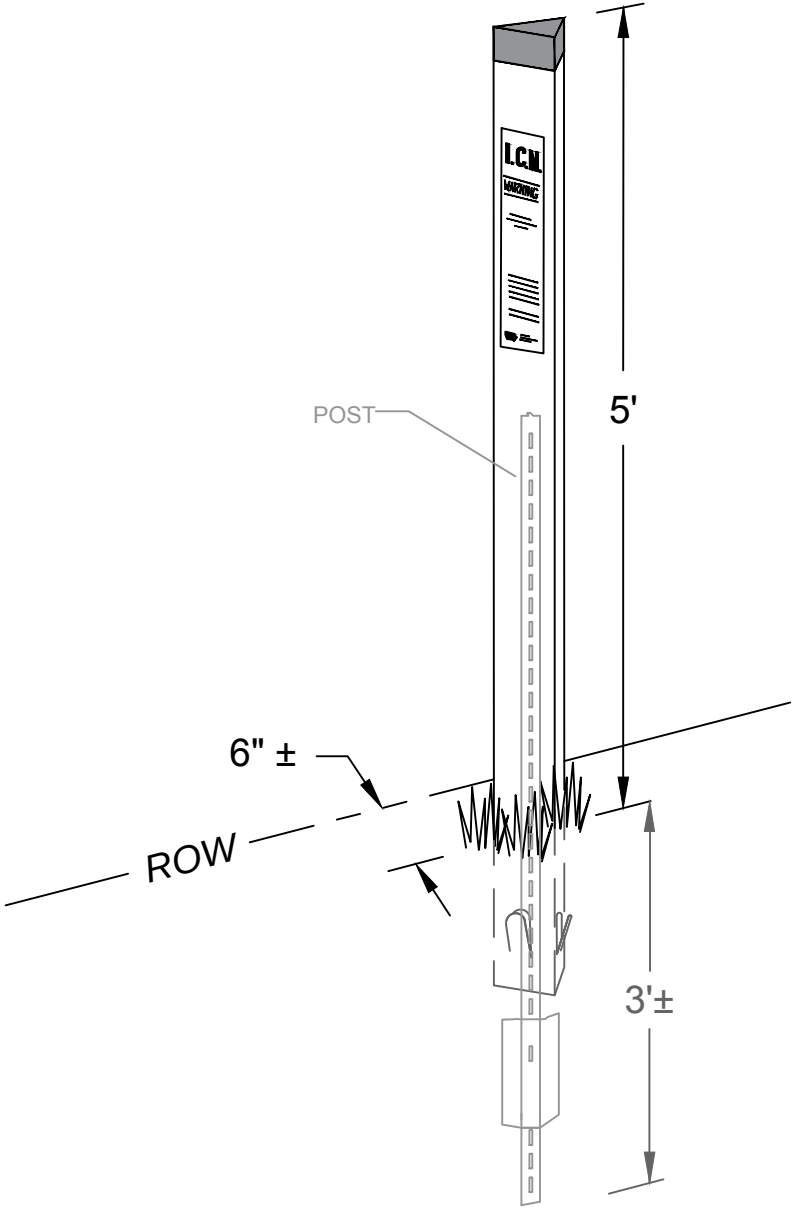
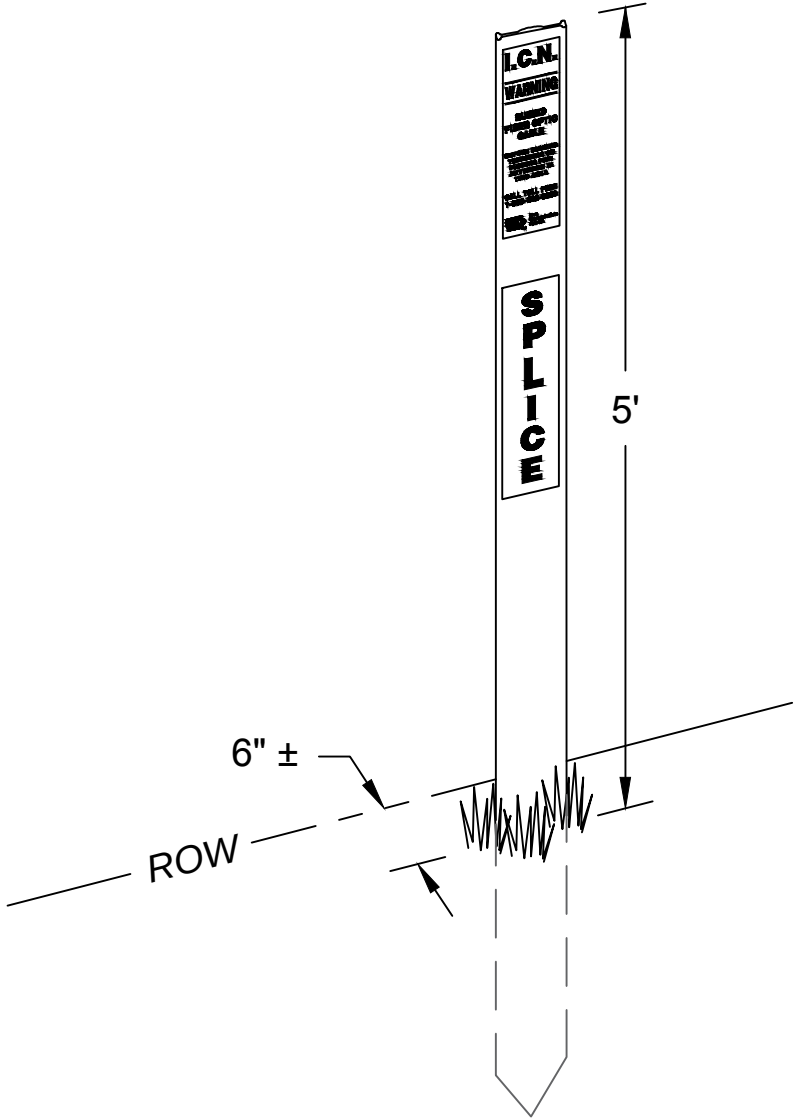
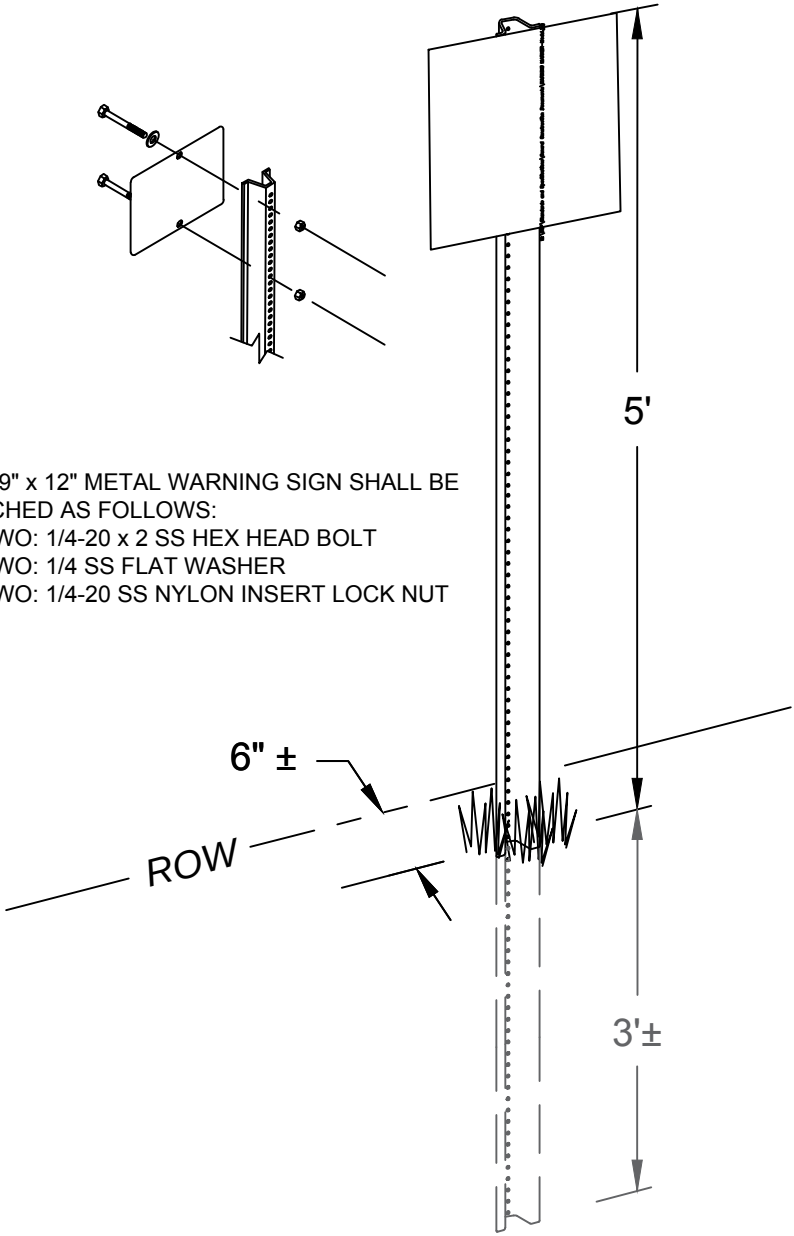
WARNING MARKER INSTALLATION DETAIL

METAL SIGN &
U-CHANNEL POST

FIBERGLASS
MARKER

TRIVIEW
MARKER

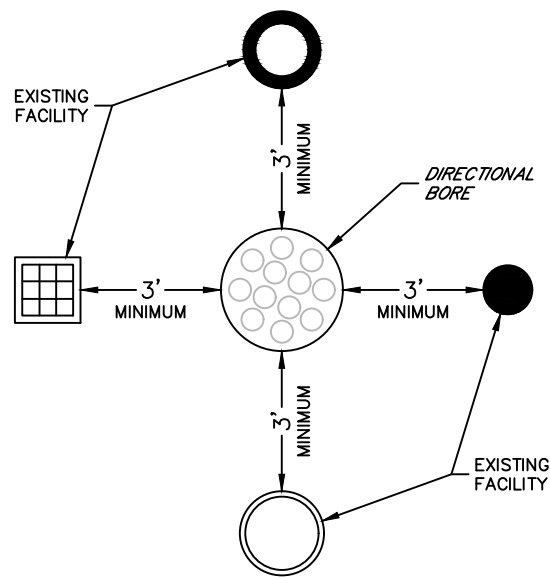
- EACH 9" x 12" METAL WARNING SIGN SHALL BE ATTACHED AS FOLLOWS:
- TWO: 1/4-20 x 2 SS HEX HEAD BOLT
 - TWO: 1/4 SS FLAT WASHER
 - TWO: 1/4-20 SS NYLON INSERT LOCK NUT



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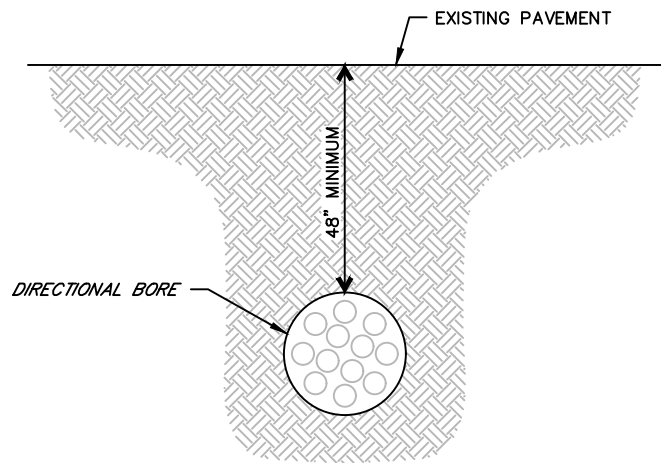


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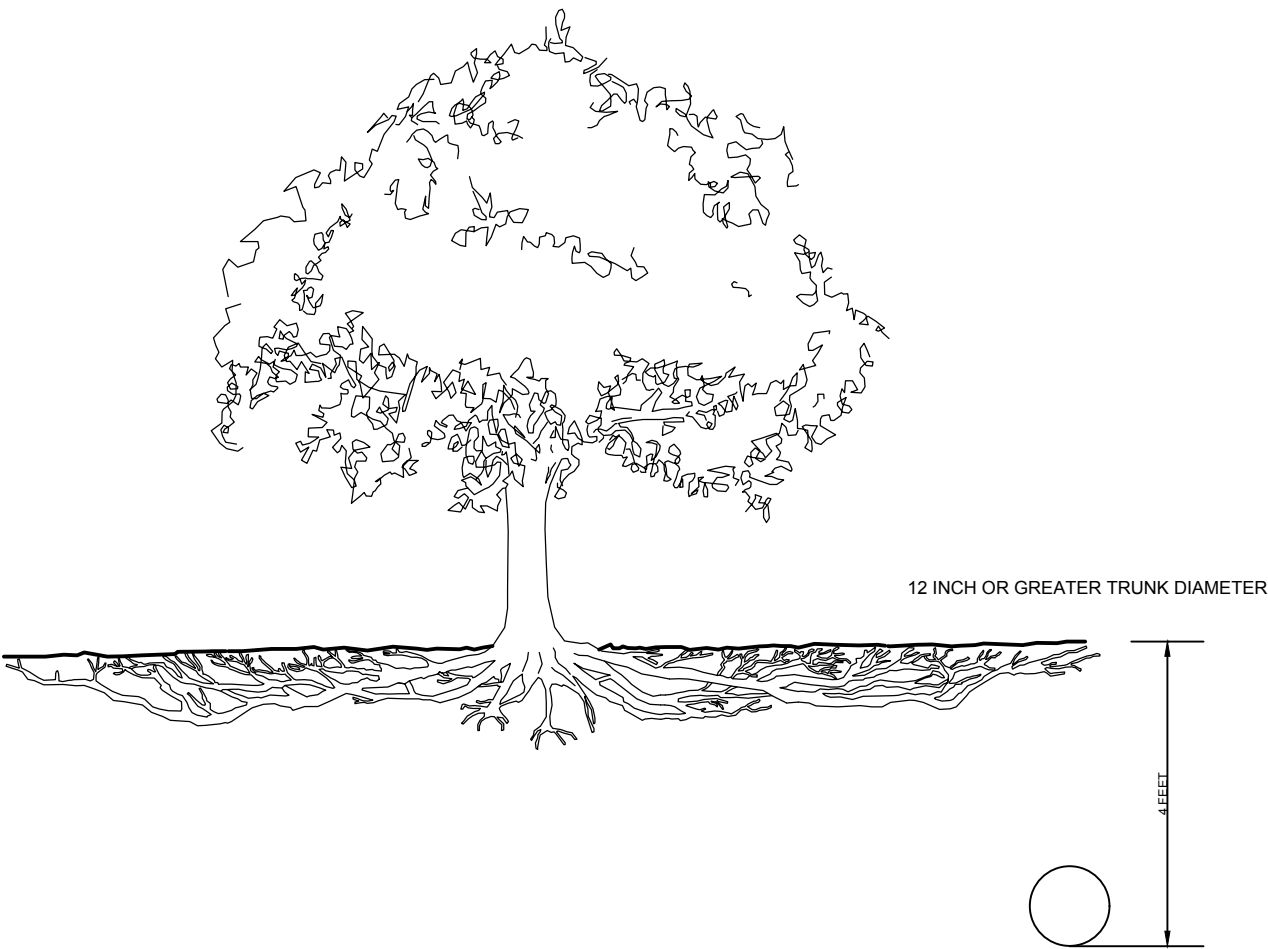


MAINTAIN A MINIMUM OF AT LEAST 3 FEET OF SEPARATION IN ANY DIRECTION BETWEEN DIRECTIONAL BORE AND ALL EXISTING FACILITIES.

UTILITY SEPARATION DETAIL



DIRECTIONAL BORING DETAIL



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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 recommend 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)



Install Channell BULK Vaults

Figure 1



Figure 2



Figure 3



Figure 4



Figure 5



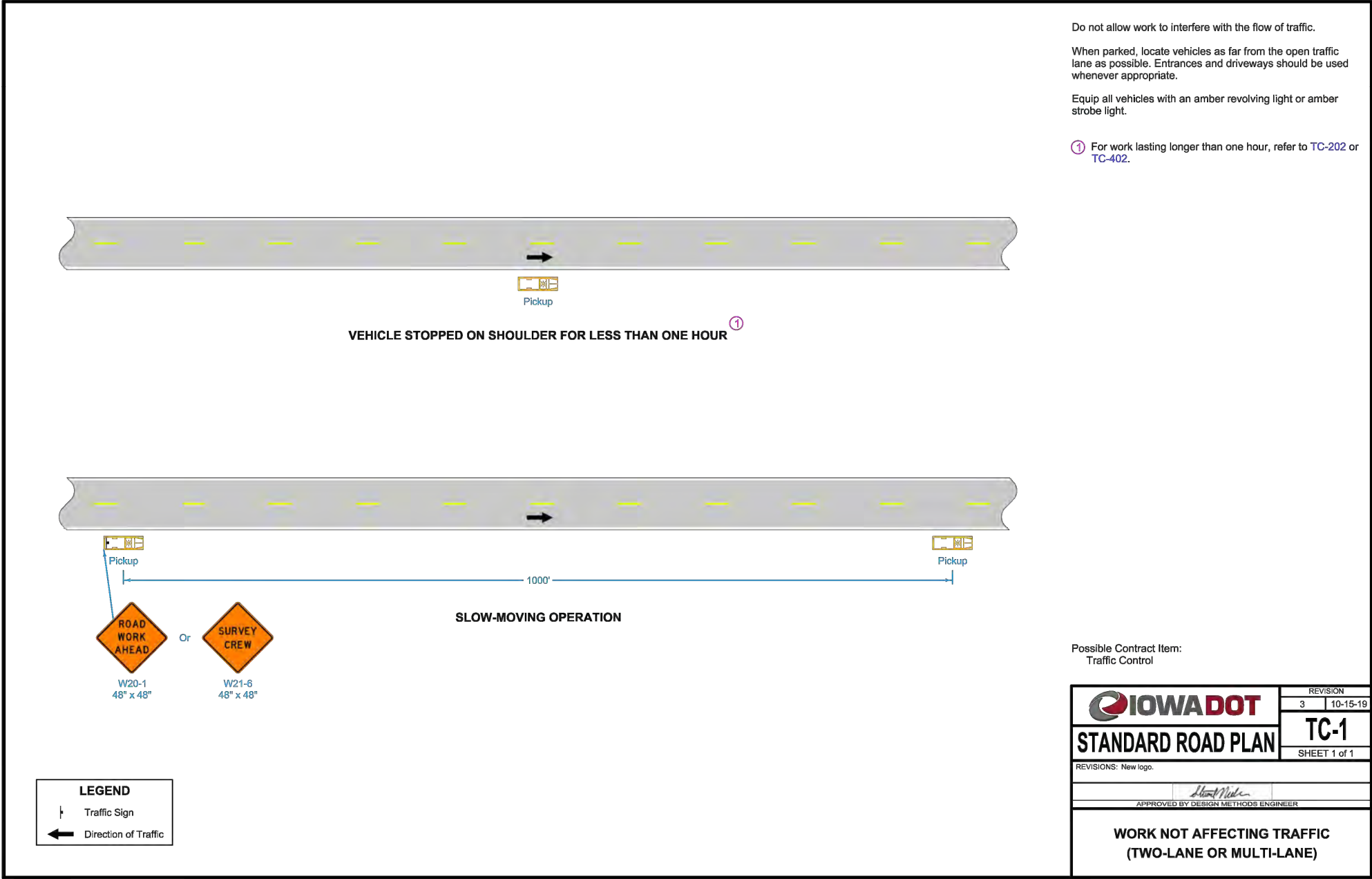
Figure 6



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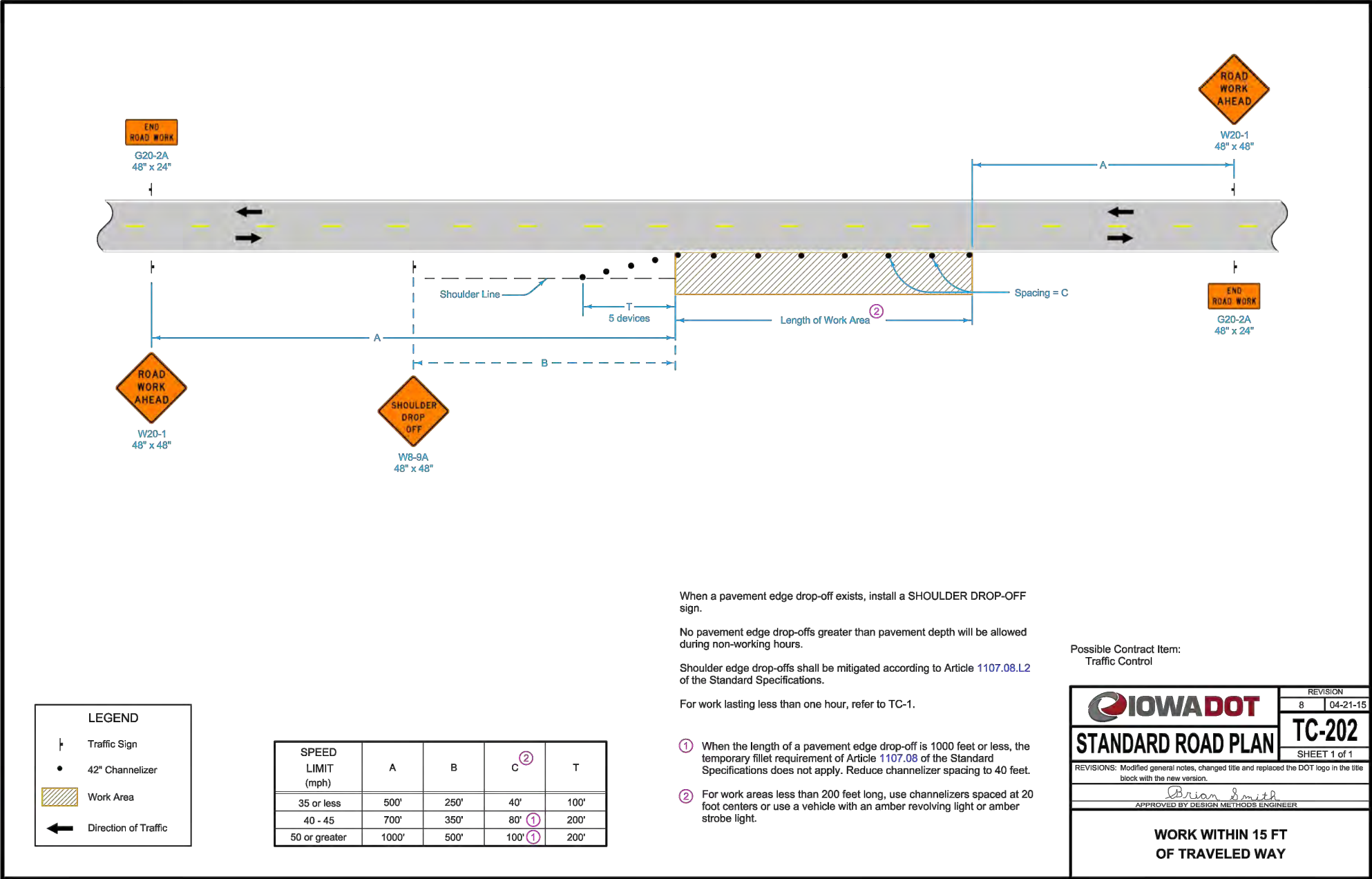


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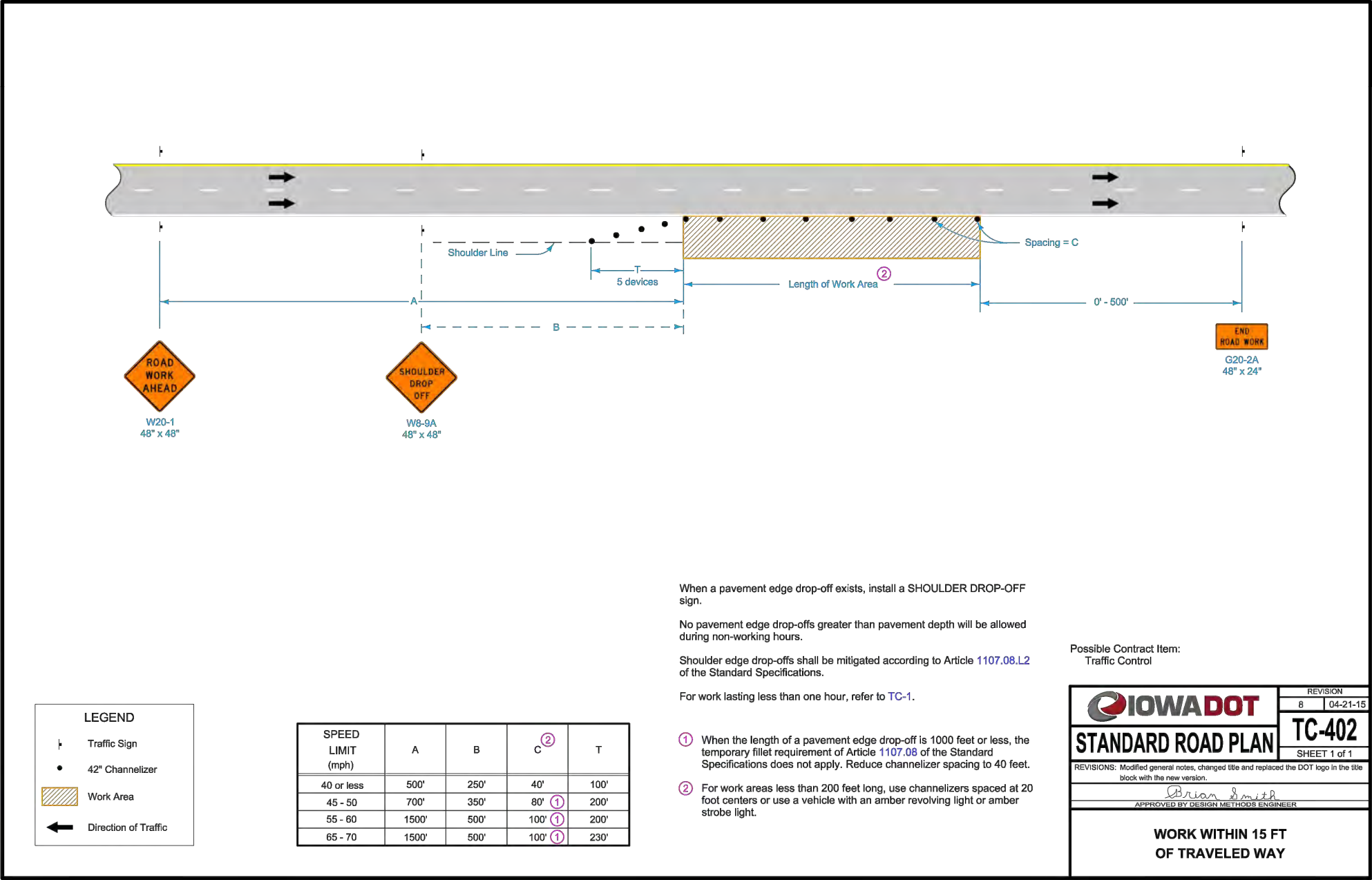


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