

IOWA COMMUNICATIONS NETWORK

INDIAN HILLS COLLEGE TO THE APPANOOSE SHERIFFS OFFICE FIBER INSTALLATION APPANOOSE COUNTY, CENTERVILLE, IOWA 721 N. 1ST ST TO 22158 DEWEY RD



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 INSTALL A 12-STRAND ARMORED FIBER CABLE CONNECTION FROM THE ICN DATA ROOM ON THE INDIAN HILLS COLLEGE CAMPUS, CENTERVILLE, IA TO THE NEW APPANOOSE COUNTY SHERIFFS OFFICE, CENTERVILLE, IA. THIS WILL REQUIRE CONDUIT OF APPROXIMATELY 15,868 FEET AND A TOTAL CABLE FOOTAGE OF APPROXIMATELY 18,357 FEET.

CONTACT PERSON:

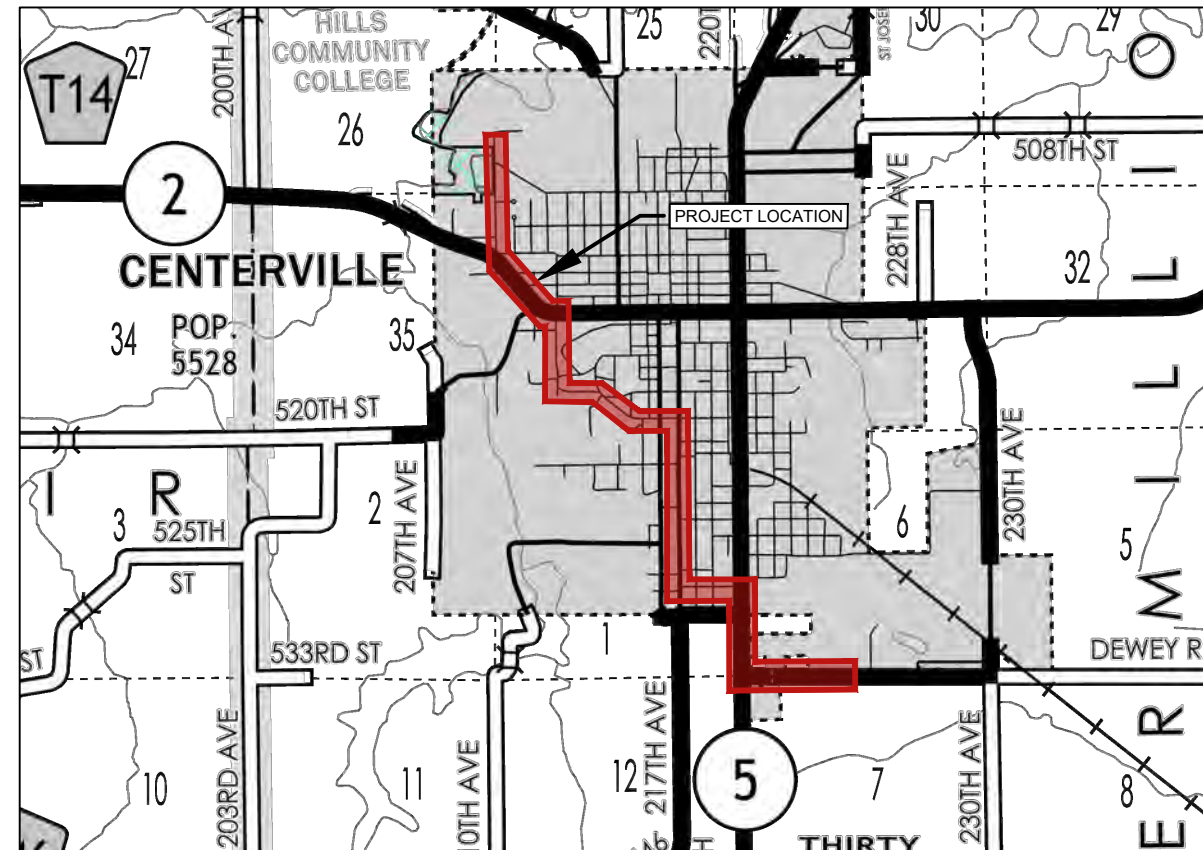
TIM FLICKINGER
IOWA COMMUNICATIONS NETWORK (ICN)
PHONE: (515) 725-4699
timothy.flickinger@iowa.gov

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

CHRIS MEYER
BUILDING MAINTENANCE - INDIAN HILLS COLLEGE
721 N. 1ST ST, CENTERVILLE, IA 52544
PHONE: (641) 919-0863
Chris.Myers@indianhills.edu

GARY ANDERSON
APPANOOSE COUNTY SHERIFFS OFFICE
22158 DEWEY RD, CENTERVILLE, IA 52544
PHONE: (641) 437-7100
sheriff@appanoosecountysheriff.org

LOCATION MAP



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UTILITY CONTACTS

COMPANY	CONTACT NAME	PHONE	PHONE
ALLIANT ENERGY (ASW)	ALLIANT ENERGY FIELD ENGINEER	(800) 255-4268	LOCATE_IPL@ALLIANTENERGY.COM
CITY OF CENTERVILLE (CTV)	STEVE HAWKINS	(641) 895-0164	PUBLICWORKS@CENTERVILLE-IA.ORG
IOWA COMMUNICATIONS NETWORK (ICN)	SHANNON MARLOW	(800) 572-3940	ICNOUTSIDEPLANTIOWAONECALL@IOWA.GOV
IOWA DEPARTMENT OF TRANSPORTATION (DISTRICT 5)	BOB YOUNIE	(515) 239-1589	BOB.YOUNIE@IOWADOT.US
NATEL INVESTMENTS L.C. (NLC)	NATEL SUPPORT	(641) 469-6220	LOCATES@NATEL.COM
RATHBUN REGIONAL WATER (RBW)	SCOTT JACKSON	(641) 647-1086	ONECALL@RRWA.NET
MEDIACOM CABLE (TC8)	DARRIN WALKER	(319) 759-3786	DWALKER@MEDIACOMCC.COM
UNITE PRIVATE NETWORKS, LLC (UPN)	JOE KILZER	(816) 425-3556	UPNGIS@UPNFIBER.COM
WINDSTREAM COMMUNICATIONS (WINIA)	LOCATE DESK	(800) 289-1901	LOCATE.DESK@WINDSTREAM.COM

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.



APPANOOSE COUNTY – CENTERVILLE, IA
COUNTY SHERIFF OFFICE – PSAP

1	75% PLAN SUBMITTAL	12/8/2021
2	95% PLAN SUBMITTAL	01/10/2022
3	FOR PERMIT REVIEW	1/13/2022
4		

IOWA COMMUNICATIONS NETWORK
400 EAST 14TH STREET
GRIMES STATE OFFICE BUILDING
DES MOINES, IOWA 50319
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ENGINEER GENERAL NOTES AND LEGEND

ALL CONDUIT AND HANDHOLE INSTALLATIONS, REMOVALS, MODIFICATIONS, AND TEMPORARY WORK SHALL BE DONE ACCORDING TO THE FOLLOWING NON-INCLUSIVE CONDITIONS:

SECTION 1.0 SCOPE OF WORK

- 1.01 INSTALLATION DESCRIPTION:
INSTALL CONDUIT AND ALL RELATED APPURTENANCES FOR FIBER OPTIC CABLE INSTALLATION. SEE PLANS FOR EXACT LOCATION, LENGTHS, QUANTITIES, AND DIMENSIONS OF PROPOSE IMPROVEMENTS.
- 1.02 SEE SHEET 3 FOR LOCATION OF ENGINEER'S ESTIMATE OF MATERIALS.
- 1.03 THE CONTRACTOR SHALL PROVIDE ALL MATERIAL, EQUIPMENT, LABOR, INSTALLATION, RESTORATION, UTILITY RELOCATION CHARGES, JOB SITE DELIVERY COSTS AND INCIDENTALS TO COMPLETE THE DESCRIBED OR ILLUSTRATED WORK, UNDER THIS CONTRACT.
- 1.04 ANY CHANGE-ORDER REQUEST MUST BE PRESENTED IN WRITING TO THE OWNER'S REPRESENTATIVE AND APPROVED PRIOR TO PROCEEDING WITH THE REQUESTED CHANGE. DOCUMENTATION CONCERNING ANY AND ALL CHANGE ORDERS WILL BE REDUCED TO FORMAL RECORD, FILED WITH THE OWNER'S REPRESENTATIVE, AND BE MADE AVAILABLE FOR FUTURE REFERENCE.
- 1.05 THE CONTRACTOR SHALL PROVIDE A MINIMUM 48 HOUR ADVANCED NOTICE TO HBK ENGINEERING (319-338-7557) 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.
- 1.06 THE ENGINEER WILL NOT BE RESPONSIBLE NOR ASSUME ANY LIABILITY FOR NEGLIGENT ACTS OR ERRORS OF OMISSIONS OF ANY CONTRACTOR, ANY SUBCONTRACTOR, OR ANY OF THE CONTRACTOR'S OR SUBCONTRACTORS' AGENTS OR EMPLOYEES OR ANY OTHER PERSONS (EXCEPT ENGINEER'S OWN EMPLOYEES) AT THE PROJECT SITE OR OTHERWISE PERFORMING ANY OF THE WORK OF THE PROJECT. ANY CONTRACTOR OR SUBCONTRACTOR, AS WELL AS THE ENGINEER, WILL BE RESPONSIBLE FOR HIS OWN SAFETY PROGRAM. NEITHER THE PROFESSIONAL ACTIVITIES OF THE ENGINEER, NOR THE PRESENCE OF THE ENGINEER OR HIS OR HER EMPLOYEES AND SUB-CONSULTANTS AT THE CONSTRUCTION SITE, SHALL RELIEVE ANY CONTRACTOR OF HIS OR HER OBLIGATIONS, DUTIES AND RESPONSIBILITIES INCLUDING, BUT NOT LIMITED TO, CONSTRUCTION MEANS, METHODS, SEQUENCE, TECHNIQUES OR PROCEDURES NECESSARY FOR PERFORMING, SUPERINTENDING OR COORDINATING ALL PORTIONS OF THE WORK OF CONSTRUCTION IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND ANY HEALTH OR SAFETY PRECAUTIONS REQUIRED BY ANY REGULATORY AGENCIES. THE ENGINEER AND HIS OR HER PERSONNEL HAVE NO AUTHORITY TO EXERCISE ANY CONTROL OVER ANY CONSTRUCTION CONTRACTOR OR OTHER ENTITY OR THEIR EMPLOYEES IN CONNECTION WITH ANY HEALTH OR SAFETY PRECAUTIONS.

SECTION 2.0 MATERIALS

- 2.01 ALL MATERIALS INSTALLED WITHIN THE LIMITS OF THIS PROJECT SHALL BE IN CONFORMANCE WITH STANDARD RECOMMENDATIONS OF THE NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION (NEMA) AND AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI).
- 2.02 ALL TRENCHED CONDUIT, ELBOWS, AND COUPLINGS SHALL BE HDPE UNLESS OTHERWISE NOTED. ALL BORED CONDUIT AND COUPLINGS SHALL BE HDPE SDR-13 UNLESS OTHERWISE NOTED.
- 2.03 JOB SITE MATERIAL WILL BE DELIVERED TO AND MAINTAINED AT THE STREET WORK AREAS IN A WELL MANAGED MANNER, TO MINIMIZE CONGESTION OR INCONVENIENCE TO OTHER WORKERS, OR CONTRACTORS WORKING UNDER ALTERNATE PERMITS.

SECTION 3.0 GENERAL NOTES

- 3.01 CONTRACTOR IS ADVISED TO READ ALL NOTES ON DRAWINGS, CAREFULLY.
- 3.02 THE CONTRACTOR SHALL VERIFY EXISTING STREET RIGHTS OF WAY TO THE EXTENT NECESSARY TO VERIFY PROPOSED WORK REMAINS WITHIN THESE RIGHTS OF WAY AND DOES NOT INFRINGE ON PRIVATE PROPERTY NOT OWNED BY THE OWNER.
- 3.03 SCALE FOR DRAWINGS IS FOR GENERAL INFORMATION ONLY. LOCATIONS AND DIMENSIONS SHALL BE TAKEN AS SHOWN AND THE DRAWINGS SHALL NOT BE SCALED.
- 3.04 CONTRACTOR SHALL COORDINATE ALL WORK WITH ALL PUBLIC AND PRIVATE UTILITIES AS WELL AS CITY AND STATE AGENCIES.
- 3.05 INSTALL CONDUIT MINIMUM OF 10'-0" BELOW ALL WATERWAYS AND CULVERT CROSSINGS. CONTRACTOR TO VERIFY CULVERT DEPTH PRIOR TO CONDUIT INSTALLATION.
- 3.06 NUMEROUS ELEVATION CHANGES. TOPOGRAPHY LINES SHOWN ON DRAWING FOR REFERENCE ONLY.
- 3.07 DUE TO EXISTING FORESTED AREAS, SOME TREE REMOVAL AND TRIMMING REQUIRED FOR CONDUIT OR HANDHOLE INSTALLATION WITHIN THE RIGHT-OF-WAY.
- 3.08 RIGHT OF WAY LOCATIONS ARE APPROXIMATE. FIBER INSTALLATION 6'-0" MINIMUM OFF RIGHT-OF-WAY.

SECTION 4.0 SAFETY

- 4.01 CONTRACTOR SHALL TAKE ALL NECESSARY SAFETY PRECAUTIONS TO PROTECT UTILITIES, PEDESTRIANS, WORKERS AND VEHICULAR TRAFFIC. THE CONTRACTOR SHALL PROVIDE TEMPORARY FENCES, BARRICADES, ETC. AS REQUIRED TO PROTECT ADJACENT PROPERTY AND THE PUBLIC DURING ALL PHASES OF CONSTRUCTION.
- 4.02 THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY BARRICADES, SIGNAGE, WARNING LIGHTS AND OTHER DEVICES AND KEEP ALL TRAFFIC CONTROL OPERATIONAL 24 HOURS A DAY AT ALL OPEN TRENCH LOCATIONS AND AT LOCATIONS WHICH DO NOT HAVE A FINISHED SURFACE OR ROAD PLATES.
- 4.03 THE CONTRACTOR SHALL COORDINATE INGRESS AND EGRESS TO ADJACENT PROPERTIES AND/OR CONSTRUCTION AFFECTED BY THE PROPOSED WORK.

SECTION 5.0 EXISTING UTILITIES

- 5.01 EXISTING CONDITIONS, STRUCTURES, UTILITIES AND SURFACE FEATURES SHOWN WERE OBTAINED FROM UTILITY ATLASES AND FROM DRAWINGS FURNISHED BY THE VARIOUS UTILITIES AND ARE ASSUMED TO BE ACCURATE AND CORRECT. THE CONTRACTOR SHALL PERFORM HIS OWN SURVEY AND VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS OF EXISTING STRUCTURES PRIOR TO STARTING ANY WORK.
- 5.02 FOR BORED INSTALLATIONS, THE CONTRACTOR SHALL PERFORM TEST HOLES AT ALL UTILITY CROSSINGS TO VERIFY THE LOCATION AND ELEVATION OF ALL UTILITIES PRIOR TO ANY EXCAVATION, AND TO LOCATE ANY POSSIBLE OBSTRUCTIONS. ALL TEST HOLES SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
- 5.03 FOR TRENCHED INSTALLATIONS, THE CONTRACTOR SHALL PERFORM TEST HOLES PER PLAN OR AS DEEMED NECESSARY TO VERIFY THE LOCATION AND ELEVATION OF ALL UTILITIES PRIOR TO ANY EXCAVATION, AND TO LOCATE ANY POSSIBLE OBSTRUCTIONS. ALL TEST HOLES SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
- 5.04 THE CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF ALL OVERHEAD OBSTRUCTIONS PRIOR TO THE COMMENCEMENT OF WORK.
- 5.05 EXISTING UTILITIES ARE SHOWN AT THEIR APPROXIMATE LOCATION. THE CONTRACTOR SHALL CONTACT IOWA ONE CALL AT 1(800)-292-8989 A MINIMUM OF 48 HOURS (EXCLUDING WEEKENDS AND GOVERNMENT HOLIDAYS) PRIOR TO COMMENCEMENT OF ANY PAVEMENT CUTS OR EXCAVATION TO REQUEST LOCATING AND MARKING OF EXISTING UTILITIES PRIOR TO PERFORMING ANY EXCAVATION WORK IN OR AROUND ANY UTILITY.
- 5.06 ALL EXCAVATION WORK NEAR AND AROUND EXISTING STRUCTURES AND UTILITIES SHALL BE BY HAND METHOD.
- 5.07 ALL DISCREPANCIES SHOULD BE REPORTED TO ENGINEER OF RECORD AT HBK ENGINEERING (319-338-7557). ANY QUESTIONS OR COMMENTS THE CONTRACTOR MAY HAVE ARE TO BE DISCUSSED WITH THE OWNER AND ENGINEER PRIOR TO CONSTRUCTION.
- 5.08 FURTHER, THE CONTRACTOR SHALL RECORD THE LOCATION AND ELEVATION OF ALL UTILITIES ENCOUNTERED, AND INSTALLATION OF NEW WORK, AS THE WORK PROGRESSES AND SHALL PREPARE RECORD DRAWINGS (RED-LINES) BASED ON HIS RECORDS. AS PART OF THE RECORD DRAWINGS, CONTRACTOR SHALL ALSO PROVIDE HORIZONTAL AND VERTICAL CONFIGURATION OF CONDUITS WHERE MULTIPLE CONDUITS ARE INSTALLED. THESE RECORDS TO BE SUPPLIED TO HBK ENGINEERING, LLC AT COMPLETION OF WORK.
- 5.09 AT SEWER DRAINS FROM HOMES OR OTHER BUILDINGS, IF THERE IS INTERFERENCE, REPLACE IN KIND. IN ALL CASES WHERE SEWER WORK IS DONE, A PERMIT SHOULD BE OBTAINED AND A SEWER INSPECTOR SHOULD BE PRESENT DURING THE WORK.
- 5.10 CONTRACTOR SHALL SUPPORT ALL WATER MAINS IN EXCESS OF 12" IN DIAMETER WITH A PERMANENT TYPE OF STRUCTURE UNLESS OTHERWISE NOTIFIED BY THE WATER DEPARTMENT, AND IS INCLUDED IN COST FOR DOING THE WORK. AT NO TIME DURING CONSTRUCTION SHALL WATER MAINS GO UNSUPPORTED FOR A SPAN GREATER THAN 8'-0".
- 5.11 CONTRACTOR RESPONSIBLE FOR OBTAINING AND PROVIDING REVIEW AND DESIGN OF ANY AND ALL TEMPORARY UTILITY SUPPORT SYSTEMS PRIOR TO CONSTRUCTION.
- 5.12 CONTRACTOR SHALL NOTIFY ALLIANT IN SITUATIONS WHERE STEEL PIPE CONDUCTOR IS NICKED DURING EXCAVATION. ALLIANT 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 WORK

- 6.01 NO STORAGE OF EQUIPMENT OR MATERIALS IN THE ROADWAY IS PERMITTED UNLESS THE CONTRACTOR OBTAINS WRITTEN PERMISSION FROM THE CITY, STATE, AND/OR GOVERNING BODY.
- 6.02 THE CONTRACTOR SHALL MARK ALL OPENINGS ON THE SURFACE PRIOR TO THE COMMENCEMENT OF EXCAVATION. ALL OPENINGS ON PAVED SURFACES SHALL BE SAW CUT PRIOR TO REMOVAL OF PAVEMENT.
- 6.03 CONTRACTOR RESPONSIBLE FOR OBTAINING AND PROVIDING REVIEW AND DESIGN OF ANY AND ALL SHORING SYSTEMS PRIOR TO CONSTRUCTION.
- 6.04 CONTRACTOR SHALL ASSUME ALL ELECTRICAL CABLES ARE ENERGIZED AND SHALL BE SUPPORTED SO AS NOT TO STRESS ANY PORTION OF THE CABLE.
- 6.05 CONTRACTOR SHALL PROVIDE APPROPRIATE ENGINEERED DE-WATERING MEASURES, IF NECESSARY, TO ENSURE GROUNDWATER TABLE REMAINS AT A DEPTH BELOW THE BASE OF THE EXCAVATION AT ALL TIMES DURING EXCAVATION, INSTALLATION AND BACKFILLING OPERATIONS.
- 6.06 THE ENGINEER SHALL BE NOTIFIED FOR RESOLUTION OF SITUATIONS WHERE CONDUIT DEPTH BELOW GRADE DEVIATES BY MORE THAN 3" AS CURRENTLY SHOWN ON PLAN/PROFILE DRAWINGS.
- 6.07 THE ENGINEER SHALL ALSO BE NOTIFIED FOR DISPOSITION OF SITUATIONS WHERE THE CONDUIT CANNOT MAINTAIN SEPARATIONS PER PLAN.

SECTION 7.0 RESTORATION

- 7.01 THE CONTRACTOR SHALL OBTAIN A PERMIT TO PERFORM ALL RESTORATION WORK IN THE CONTRACTOR'S NAME. ALL PAVING SHALL BE COMPLETED WITHIN 15 WORKING DAYS AFTER EXCAVATION IS BACKFILLED UNLESS OTHERWISE ARRANGED IN ADVANCE WITH GOVERNING AGENCY.
- 7.02 CONTRACTOR SHALL BREAK OUT SIDEWALK, DRIVEWAY, CURB AND GUTTER, PAVEMENT AND RESTORE TO PERMANENT CONDITION. CONTRACTOR TO CONFORM CONCRETE TO COLOR, FINISH, AND TEXTURE OF EXISTING SIDEWALKS, CURB AND GUTTER.
- 7.03 THE CONTRACTOR IS RESPONSIBLE FOR THE RESTORATION OF THE AREAS DISTURBED BY CONSTRUCTION ACTIVITIES. CONTRACTOR TO PAY ALL FEES AND OBTAIN ALL PERMITS FOR RESTORATION.
- 7.04 THE CONTRACTOR IS TO RESTORE ALL DAMAGED STRUCTURES AND UTILITIES TO THE SATISFACTION OF THE FACILITY OWNER, IN THE EVENT THAT DAMAGE OCCURS.

LEGEND

- FENCE
- EXISTING ROW LINE
- EXISTING FIBER OPTIC LINE
- EXISTING OVERHEAD LINE
- EXISTING STORM DRAIN
- EXISTING ELECTRIC (BURIED)
- EXISTING GAS LINE
- EXISTING STORM SEWER
- EXISTING SANITARY SEWER
- EXISTING WATER LINE
- EXISTING ICN FIBER
- EXISTING ICN (AERIAL)
- EXISTING ICN CONDUIT
- TO BE ABANDONED
- PROPOSED ICN FIBER
- PROPOSED AERIAL
- PROPOSED ICN CONDUIT
- CENTERLINE OF ROAD
- EXISTING WATERWAY BOUNDARY
- PROPOSED ICN HANDHOLE
- EXISTING ICN HANDHOLE
- PROPOSED HANDHOLE (BY OTHERS)
- EXISTING STORM CULVERT LOCATION
- EXISTING STORM MANHOLE
- EXISTING STORM INLET
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY CLEAN OUT
- EXISTING FIBER OPTIC MANHOLE
- EXISTING FIBER OPTIC HANDHOLE
- EXISTING COMMUNICATIONS MANHOLE
- EXISTING COMMUNICATIONS HANDHOLE
- EXISTING COMMUNICATIONS PEDESTAL
- EXISTING ELECTRIC MANHOLE
- EXISTING ELECTRIC TRANSFORMER
- EXISTING ELECTRIC PEDESTAL
- EXISTING ELECTRIC HANDHOLE
- EXISTING UTILITY POLE
- EXISTING GUY ANCHOR
- EXISTING LIGHT POLE
- EXISTING WATER MANHOLE
- EXISTING WATER VALVE
- EXISTING MONITORING WELL
- EXISTING FIRE HYDRANT
- EXISTING NATURAL GAS MANHOLE
- EXISTING NATURAL GAS VALVE
- EXISTING TREE



APPANOOSE COUNTY – CENTERVILLE, IA
COUNTY SHERIFF OFFICE – PSAP

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IOWA COMMUNICATIONS NETWORK
400 EAST 14TH STREET
GRIMES STATE OFFICE BUILDING
DES MOINES, IOWA 50319
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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). ALL CONTRACTORS AND SUBCONTRACTORS MUST BE LICENSED AND BONDED WITH THE CITY OF CLEAR LAKE.
 - 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 RADIUS.
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.



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MATERIALS

Iowa Communications Network		Date:	01/10/22
Project Name: Appanoose, Centerville, County Sheriff Connection			
Project Number: 04220105			
ICN Provided Material List (Warehouse Contact Paul Damge 515.725.4749)			
Item	ICN Part Number	Qty	Notes
FIBER CABLE			
12 strand Armored SM fiber (SOP12LAA3BBKOFX)	012EUC-T4100D20 (Corning)	19,000	
HANDHOLES AND LIDS			
24" X 36" X 36" TD handhole w/ 20T lid TIER 15 (Martin or New Basis)	243636PC	14	
LOCATE FACILITIES			
LOCATE STATIONS			
TRIVIEW Test Station w/ Isolever 72" ORANGE (with 3 ICN decals applied) (Walker)	TVT17208-EM9125	2	
Erico 1/2" x 6' Ground Rod (Graybar)	611360	2	
Burndy 1/2" Ground Rod Clamp (Anxter)	GRC12	2	
ICN Snap Around Vulcan 4"X4" 15Mil Coiled Pvc (ICN-4X4-Sa)	ICN-4X4-SA	20	
IRHTP Snap Around Vulcan 4"X4" 15Mil Coiled Pvc	1502185	0	
TERMINATION ITEMS: FDP, BULKHEADS, TRAYS, & RELATED			
Closet Connector Housing (CCH), 1 rack unit holds 2 CCH connector panels	CCH-01U	1	Community College
Wall-Mountable Connector Housing (WCH), Holds 2 CCH connector panels	WCH-02P	1	
CCH Pigtailed Splice Cassette, 12 F, SC UPC Duplex, SM, SF PRE-ASSEMBLED	CCH-CS12-59-P00RE	1	
CCH Pigtailed Splice Cassette, 6 F, SC UPC Simplex, SM PRE-ASSEMBLED	CCH-CS06-3C-P00RE	1	
Leviton storage ring 24-inch	48900-OFR	2	
SPLICING MATERIALS			
SPLICE CLOSURES			
*450A (with lug) FOSC450-A4-4-NT-0-A1V CLOSURE w/ GROUNDING & STD BSKFOR LT FIBER	FOSC450-A4-4-NT-0-A1V	2	
*FOSC Closure Sealing Kit FAK-MULDRP-45-4P/CBL-ATT	1F6818-000	2	
3M Scotchlok Shield Bond Connector 4460-D/FO	4460-D/FO	0	
*3M Scotchlok Shield Bond Connector 4460-D	4460-D	6	

LISTING OF CONDUIT & FIBER WORK					
CONDUIT RUN	FROM	TO	LENGTH	2" CONDUIT	12 SM ARMORED FIBER, UNDERGROUND
1	TELECOM ROOM (ICN BUILDING)	EX. HH1	5	EXISTING	5
2	EX. HH1	EX. HH2	239	EXISTING	239
3	EX. HH2	HH3	382	764 (2-2" CONDUITS THIS SEGMENT ONLY)	382
4	HH3	HH4	590	590	590
5	HH4	HH5	1246	1246	1246
6	HH5	HH6	1975	1975	1975
7	HH6	HH7	1615	1615	1615
8	HH7	HH8	993	993	993
9	HH8	HH9	1820	1820	1820
10	HH9	HH10	937	937	937
11	HH10	HH11	1229	1229	1229
12	HH11	HH12	1165	1165	1165
13	HH12	HH13	965	965	965
14	HH13	HH14	1344	1344	1344
15	HH14	HH15	1241	1241	1241
16	HH15	HH16	748	748	748
17	HH16	SHERIFFS OFFICE	163	EXISTING	163
TOTAL					16657

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.

LISTING OF HANDHOLE WORK				
HANDHOLE LABEL	HANDHOLE TYPE	ROUTE	STATION	12 SM ARMORED FIBER COIL
TELECOM ROOM (ICN BUILDING)	BLDG	ICN BLDG	0+00	BLDG
EX. HH1	EXISTING	ICN BLDG	0+05	100
EX. HH2	EXISTING	N 1ST ST	2+44	150
HH3	24" X 36" X 36"	N 1ST ST	6+26	100
HH4	24" X 36" X 36"	N 1ST ST	12+16	100
HH5	24" X 36" X 36"	HWY 2	24+62	100
HH6	24" X 36" X 36"	S 5TH ST	44+37	100
HH7	24" X 36" X 36"	W WALL ST	60+52	100
HH8	24" X 36" X 36"	S PARK ST	70+45	100
HH9	24" X 36" X 36"	DRAKE AVE	88+65	100
HH10	24" X 36" X 36"	DRAKE AVE	98+02	100
HH11	24" X 36" X 36"	DRAKE AVE	110+31	100
HH12	24" X 36" X 36"	DRAKE AVE	121+96	100
HH13	24" X 36" X 36"	DRAKE AVE	131+61	100
HH14	24" X 36" X 36"	S 18TH ST	145+05	100
HH15	24" X 36" X 36"	S 18TH ST	157+46	100
HH16	24" X 36" X 36"	DEWEY RD	164+94	150
TOTAL				1700

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	14	
3	2" CONDUIT	LF	15868	
4	12 SM ARMORED FIBER (TOTAL)	LF	18357	
5	12 SM ARMORED FIBER (RUNNING LINE)	LF	16657	
6	12 SM ARMORED FIBER (COIL)	LF	1700	
7	ICN WARNING MARKERS	EA	0	
8	TRI-VIEW LOCATE STATION	EA	2	
9	GROUND ROD	EA	2	
10	TYCO 450BS SPLICE ENCLOSURE	EA	2	

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.

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****



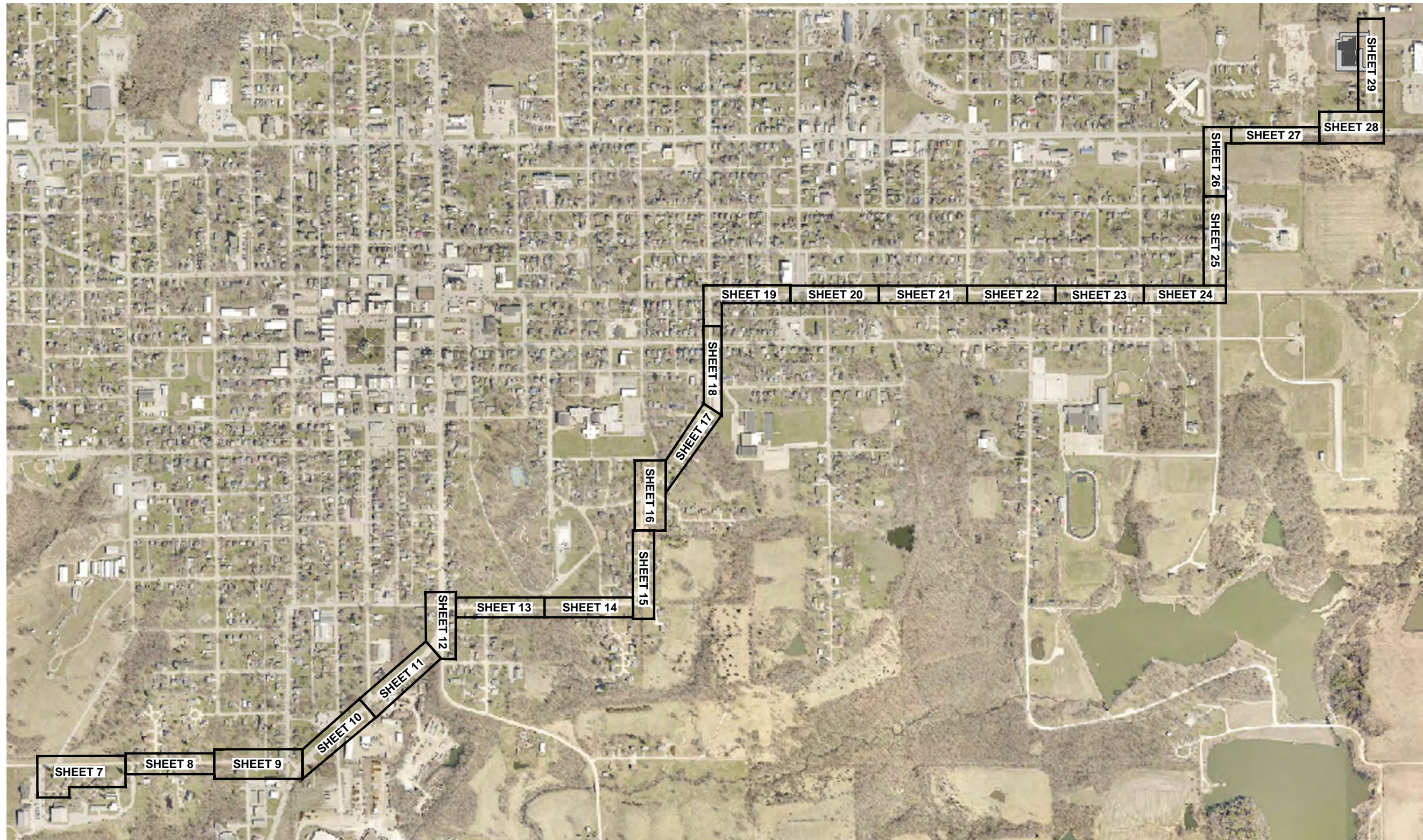
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OVERALL SHEETS LAYOUT



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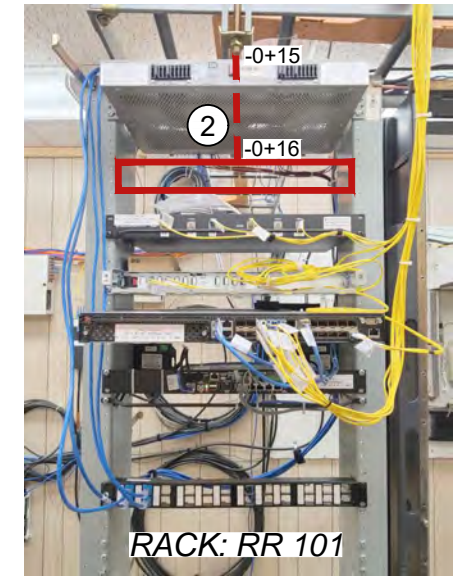
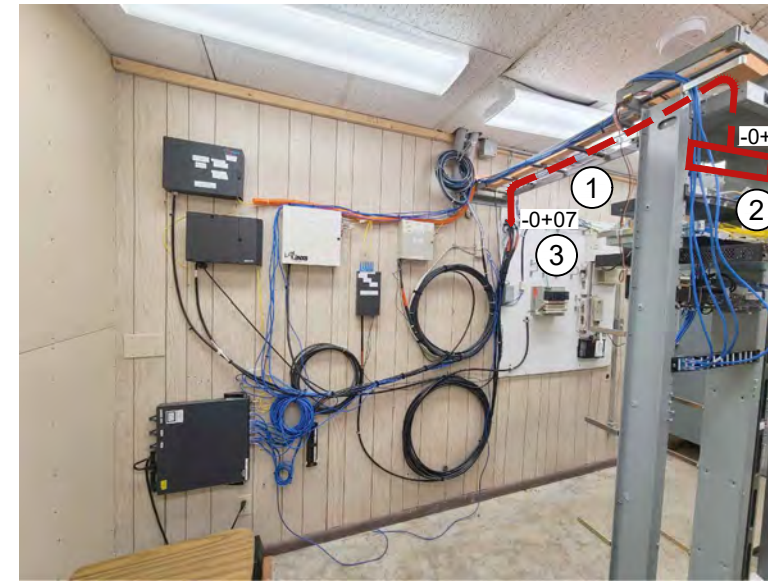
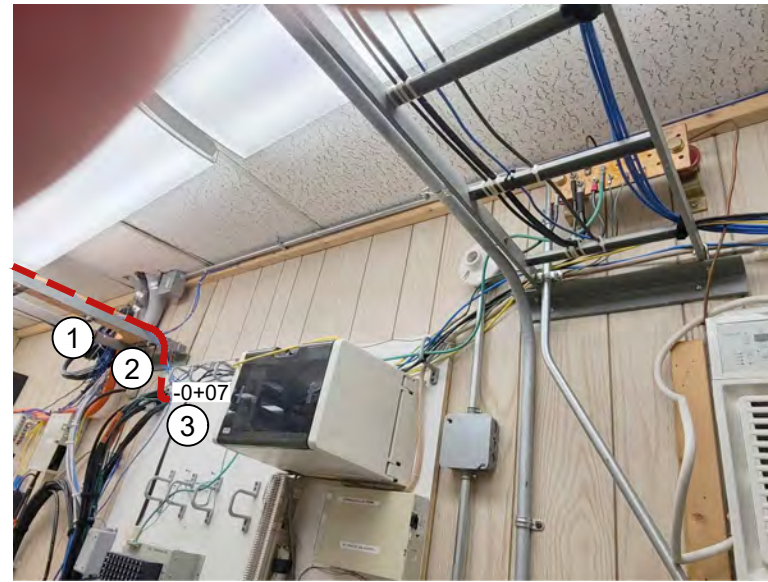


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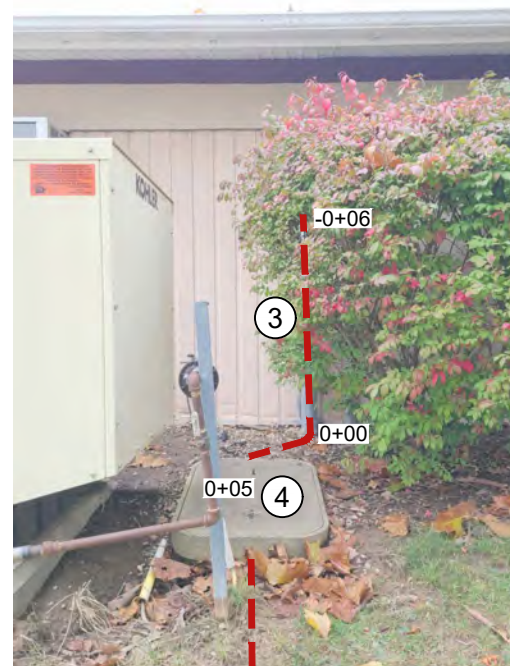
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DETAIL 1
INTERIOR ROUTE OF ICN TELECOM ROOM

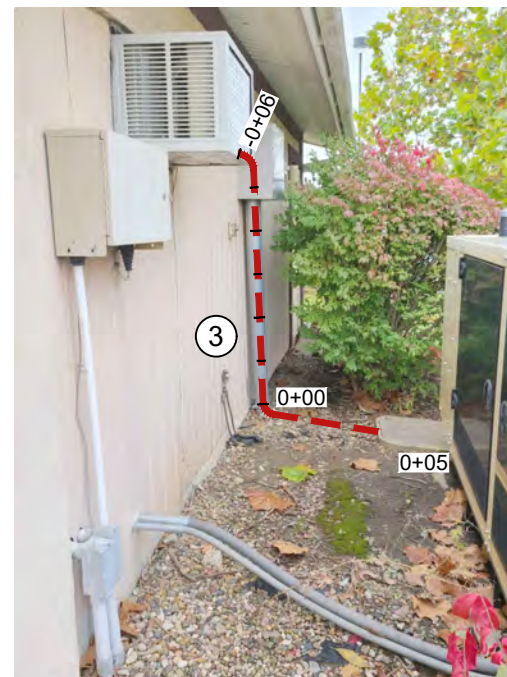
- ① RUN 20'-0" OF FIBER TO EQUIPMENT RACK.
 - ② ROUTE CABLE TO EXISTING RACK. LEAVE A 50' SLACK COIL FOR TERMINATIONS. ROUTE TRACER WIRE FROM EXTERIOR LOCATE POINT.
- COIL TO BE LEFT IN LEVITON STORAGE RING ON THE WALL FOR SPLICER ACCESS. CONTRACTOR TO TEMPORARILY BOND 12F/A CABLE TO GROUND BAR WITH #10 COPPER WIRE; LEAVE ENOUGH COPPER SLACK TO REACH THE LADDER RACK PANEL POSITION.
- ③ PULL FIBER THROUGH EXISTING CONDUIT.
 - ④ LEAVE 100' SLACK COIL IN HANDHOLE.



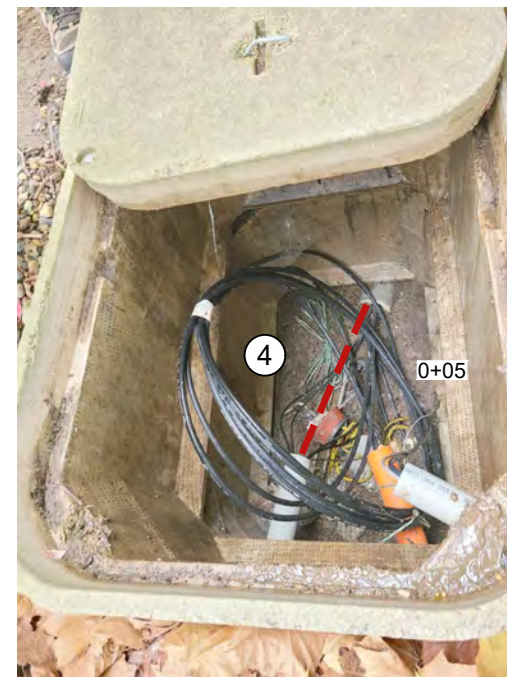
DETAIL 2
EXTERIOR ROUTE OUTSIDE ICN TELECOM ROOM



EXTERIOR ROUTE AT BUILDING



EX. HH1 TO EXISTING TERMINAL BOX



EXISTING ICN HANDHOLE - EX. HH1



ROUTE FROM EX. HH1 TO EX. HH2

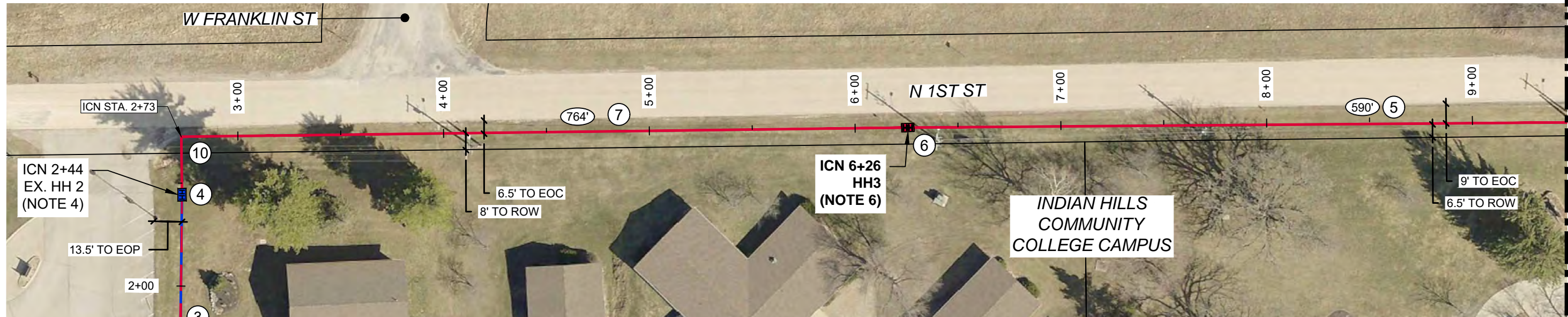


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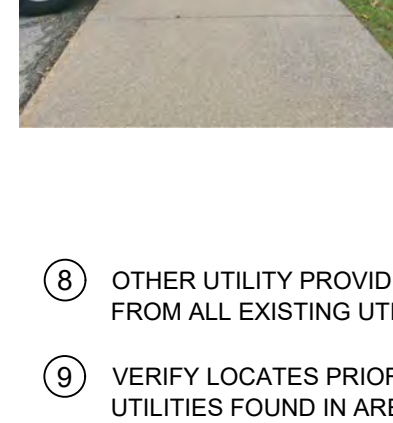
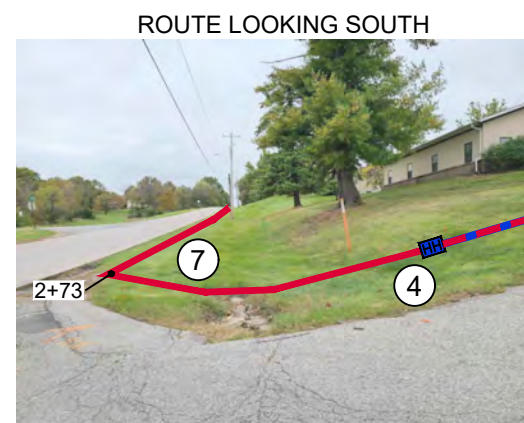
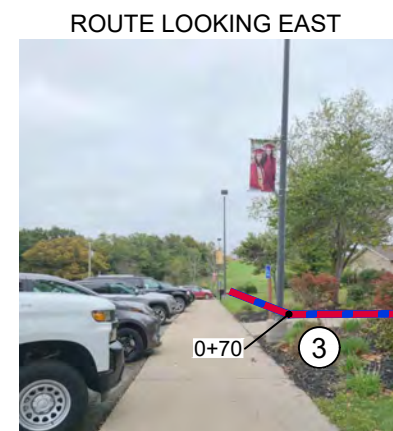
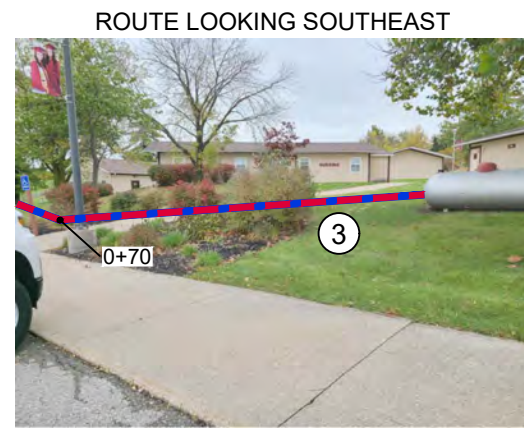
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MATCH LINE SEE SHEET 8

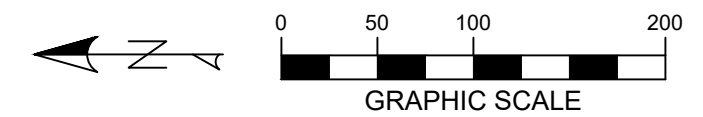
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⑩ ICN STA. 2+44 TO 10+00 FUTURE IHCC NEW BUILDING TO BE CONSTRUCTED BY THE COLLEGE.

RUNNING LINE AND NEW HH3 FOR FUTURE ACCESS MAY BE ADJUSTED BASED ON COORDINATION WITH IHCC DURING THEIR DESIGN FOR THE FUTURE BUILDING. SEE PAGE 33 FOR OVERVIEW DIAGRAM OF FUTURE COLLEGE BUILDING PLANS.

ICN WILL PROVIDE DIRECTION IN THE FUTURE OF ANY CHANGES REQUIRED IN THIS AREA; BUT THEY WOULD BE LIMITED TO THE LOCATION OF HH3 AND RUNNING LINE ADJUSTMENTS.



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
TELECOM ROOM	0+00	EX. HH1	0+05	5
EX. HH1	0+05	EX. HH2	2+44	239
EX. HH2	2+44	HH3	6+26	764
NOTE: 2-2" CONDUITS FROM EX. HH2 TO HH3				
HH3	6+26	HH4	12+16	590
TOTAL				1598

* LENGTH DOES NOT INCLUDE SLACKCOILS

- ① PULL NEW LINK 1523 12 F/A THROUGH EXISTING CONDUIT FROM OUTSIDE TERMINAL BOX TO EX. HH1. SEE DETAILS ON SHEET 6 (DETAIL 2). 42" MINIMUM BELOW GRADE.
- ② EXISTING ICN HANDHOLE - EX. HH1.
- ③ PULL NEW LINK 1523 12 F/A THROUGH EXISTING CONDUIT FROM CAMPUS ICN BUILDING TO EX. HH1 TO EX. HH2.
- ④ EXISTING ICN HANDHOLE - EX. HH2. LINK 1523 12 F/A - 150' COIL FOR LOCATE POINT MID-SHEATH CASE.

- ⑤ PULL NEW LINK 1523 12 F/A THROUGH NEW 1-2" HDPE CONDUIT. 42" MINIMUM BELOW GRADE.
- ⑥ ICN STA. 6+26 INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH3. 100' SLACK COIL 12 F/A.
- ⑦ INSTALL 2-2" HDPE CONDUITS FROM EX. HH2 TO PROPOSED HH3. PULL NEW LINK 1523 12F/A THROUGH ONLY 1-2" HDPE CONDUIT.

- ⑧ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ⑨ VERIFY LOCATES PRIOR TO PLACEMENT OF HH. UTILITIES FOUND IN AREA.

TRI-VIEW LOCATE STATION WITH GROUND ROD. LEAVE 2-#12 50' COILS FOR LOCATE POINT.



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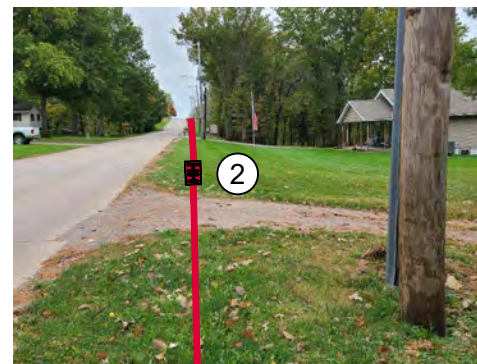
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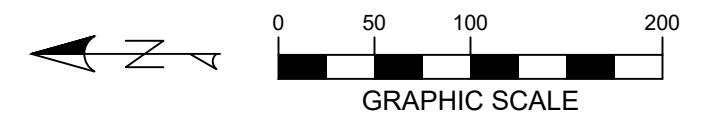
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ROUTE LOOKING SOUTH



HH4 - ICN STA. 12+16

- ① PULL NEW LINK 1523 12 F/A THROUGH NEW 1-2" HDPE CONDUIT. 42" MINIMUM BELOW GRADE.
- ② ICN STA. 12+16 INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH4. 100' SLACK COIL 12 F/A.
- ③ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ④ VERIFY LOCATES PRIOR TO PLACEMENT OF HH. UTILITIES FOUND IN AREA.



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH3	6+26	HH4	12+16	590
HH4	12+16	HH5	24+62	1246
TOTAL				1836

* LENGTH DOES NOT INCLUDE SLACKCOILS



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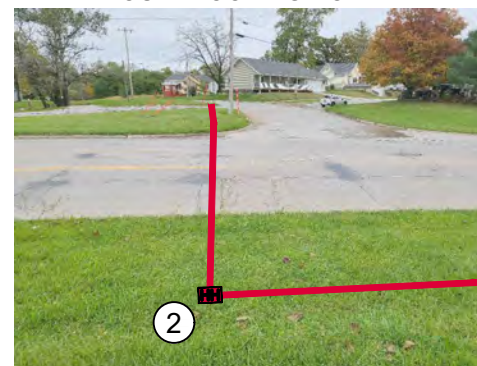


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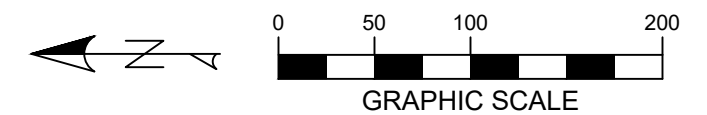


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ROUTE LOOKING NORTH



HH5 - ICN STA. 24+62



- ① PULL NEW LINK 1523 12 F/A THROUGH NEW 1-2" HDPE CONDUIT. 42" MINIMUM BELOW GRADE.
- ② ICN STA. 24+62 INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH5. 100' SLACK COIL 12 F/A.
- ③ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ④ VERIFY LOCATES PRIOR TO PLACEMENT OF HH. UTILITIES FOUND IN AREA.

LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH4	12+16	HH5	24+62	1246
HH5	24+62	HH6	44+37	1975
TOTAL				3221

* LENGTH DOES NOT INCLUDE SLACKCOILS



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COUNTY SHERIFF OFFICE - PSAP

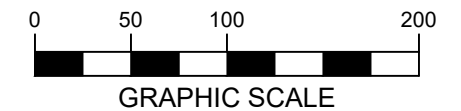


1	75% PLAN SUBMITTAL	12/8/2021	IOWA COMMUNICATIONS NETWORK 400 EAST 14TH STREET GRIMES STATE OFFICE BUILDING DES MOINES, IOWA 50319 ICN © 2021, COPY WITH PERMISSION
2	95% PLAN SUBMITTAL	01/10/2022	
3	FOR PERMIT REVIEW	1/13/2022	
4			



APPANOOSE COUNTY
VERMILLION TOWNSHIP
T69-N R-18W

- ① PULL NEW LINK 1523 12 F/A THROUGH NEW 1-2" HDPE CONDUIT. 42" MINIMUM BELOW GRADE.
- ② OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH5	24+62	HH6	44+37	1975
TOTAL				1975

* LENGTH DOES NOT INCLUDE SLACKCOILS



APPANOOSE COUNTY – CENTERVILLE, IA
COUNTY SHERIFF OFFICE – PSAP

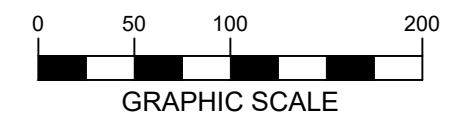
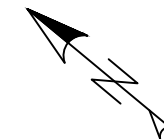


1	75% PLAN SUBMITTAL	12/8/2021	IOWA COMMUNICATIONS NETWORK 400 EAST 14TH STREET GRIMES STATE OFFICE BUILDING DES MOINES, IOWA 50319 ICN © 2021, COPY WITH PERMISSION
2	95% PLAN SUBMITTAL	01/10/2022	
3	FOR PERMIT REVIEW	1/13/2022	
4			



APPANOOSE COUNTY
VERMILLION TOWNSHIP
T69-N R-18W

- ① PULL NEW LINK 1523 12 F/A THROUGH NEW 1-2" HDPE CONDUIT. 42" MINIMUM BELOW GRADE.
- ② OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.



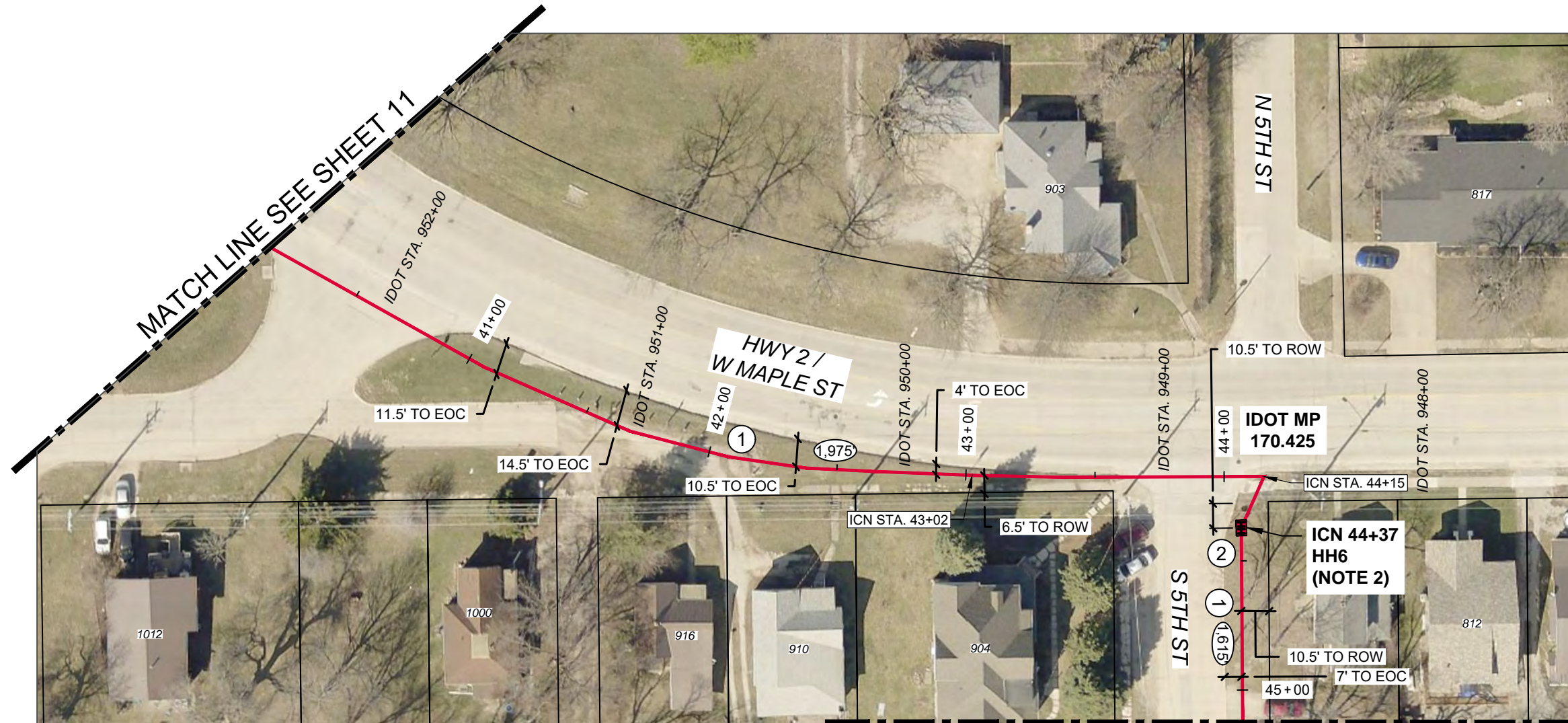
LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH5	24+62	HH6	44+37	1975
TOTAL				1975

* LENGTH DOES NOT INCLUDE SLACKCOILS



APPANOOSE COUNTY – CENTERVILLE, IA
COUNTY SHERIFF OFFICE – PSAP

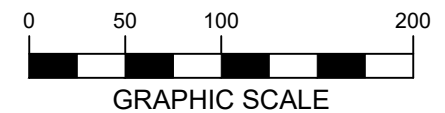
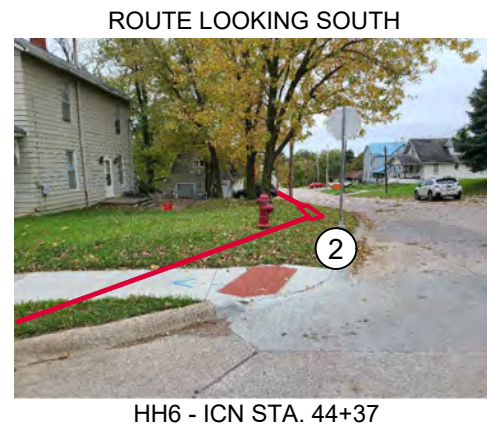
1	75% PLAN SUBMITTAL	12/8/2021	<p>IOWA COMMUNICATIONS NETWORK 400 EAST 14TH STREET GRIMES STATE OFFICE BUILDING DES MOINES, IOWA 50319 ICN © 2021, COPY WITH PERMISSION</p>
2	95% PLAN SUBMITTAL	01/10/2022	
3	FOR PERMIT REVIEW	1/13/2022	
4			



APPANOOSE COUNTY
VERMILLION TOWNSHIP
T69-N R-18W

MATCH LINE SEE SHEET 13

- ① PULL NEW LINK 1523 12 F/A THROUGH NEW 1-2" HDPE CONDUIT. 42" MINIMUM BELOW GRADE.
- ② ICN STA. 44+37 INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH6. 100' SLACK COIL 12 F/A.
- ③ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ④ VERIFY LOCATES PRIOR TO PLACEMENT OF HH. UTILITIES FOUND IN AREA.



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH5	24+62	HH6	44+37	1975
HH6	44+37	HH7	60+52	1615
TOTAL				3590

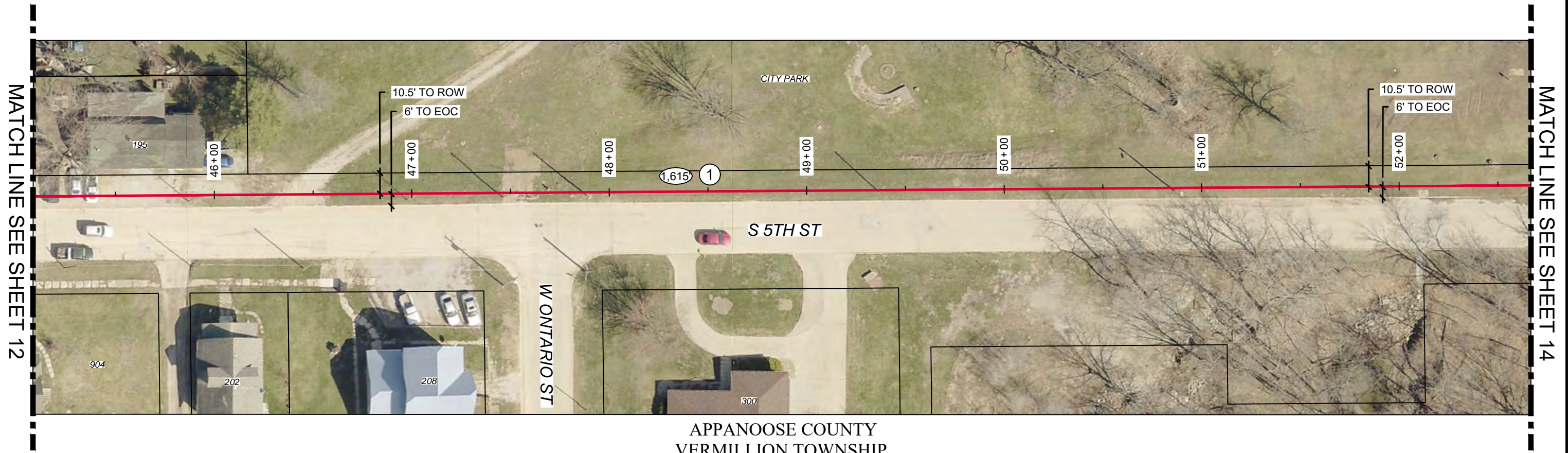
* LENGTH DOES NOT INCLUDE SLACKCOILS



APPANOOSE COUNTY - CENTERVILLE, IA
COUNTY SHERIFF OFFICE - PSAP

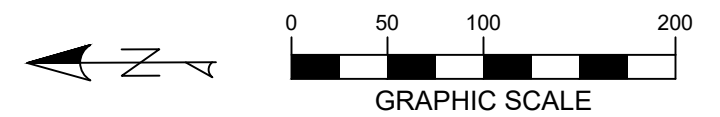


1	75% PLAN SUBMITTAL	12/8/2021	IOWA COMMUNICATIONS NETWORK 400 EAST 14TH STREET GRIMES STATE OFFICE BUILDING DES MOINES, IOWA 50319 ICN © 2021, COPY WITH PERMISSION
2	95% PLAN SUBMITTAL	01/10/2022	
3	FOR PERMIT REVIEW	1/13/2022	
4			



APPANOOSE COUNTY
VERMILLION TOWNSHIP
T69-N R-18W

- ① PULL NEW LINK 1523 12 F/A THROUGH NEW 1-2" HDPE CONDUIT. 42" MINIMUM BELOW GRADE.
- ② OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH6	44+37	HH7	60+52	1615
TOTAL				1615

* LENGTH DOES NOT INCLUDE SLACKCOILS



APPANOOSE COUNTY – CENTERVILLE, IA
COUNTY SHERIFF OFFICE – PSAP



1	75% PLAN SUBMITTAL	12/8/2021	IOWA COMMUNICATIONS NETWORK 400 EAST 14TH STREET GRIMES STATE OFFICE BUILDING DES MOINES, IOWA 50319 ICN © 2021, COPY WITH PERMISSION
2	95% PLAN SUBMITTAL	01/10/2022	
3	FOR PERMIT REVIEW	1/13/2022	
4			

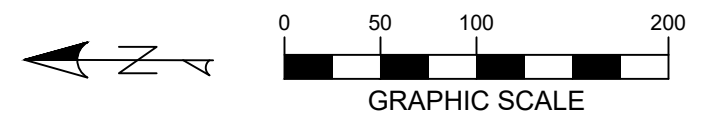
MATCH LINE SEE SHEET 13

MATCH LINE SEE SHEET 15



APPANOOSE COUNTY
VERMILLION TOWNSHIP
T69-N R-18W

- ① PULL NEW LINK 1523 12 F/A THROUGH NEW 1-2" HDPE CONDUIT. 42" MINIMUM BELOW GRADE.
- ② OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH6	44+37	HH7	60+52	1615
TOTAL				1615

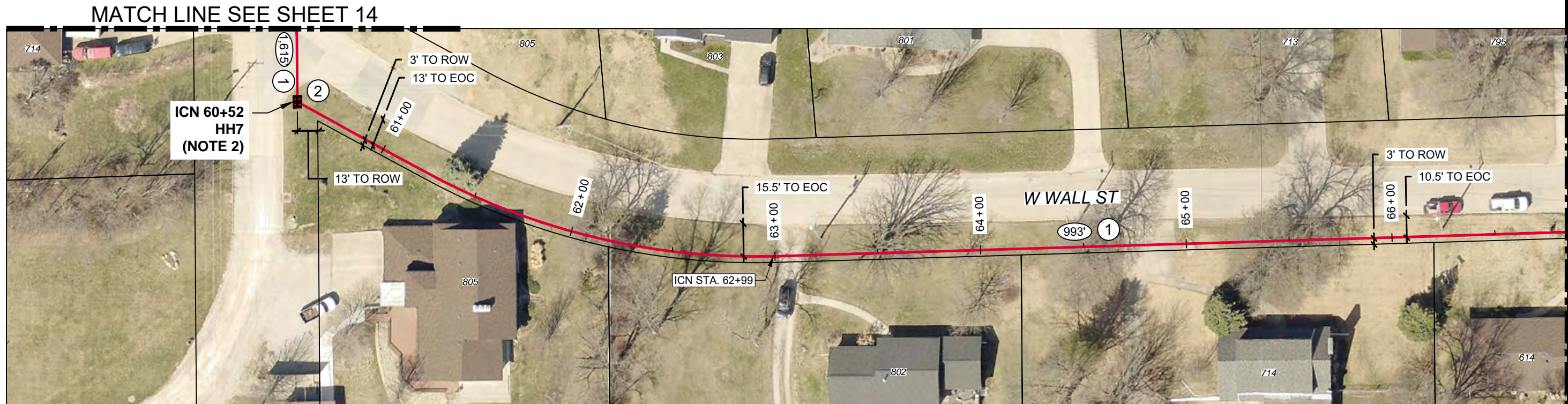
* LENGTH DOES NOT INCLUDE SLACKCOILS



APPANOOSE COUNTY – CENTERVILLE, IA
COUNTY SHERIFF OFFICE – PSAP



1	75% PLAN SUBMITTAL	12/8/2021	IOWA COMMUNICATIONS NETWORK 400 EAST 14TH STREET GRIMES STATE OFFICE BUILDING DES MOINES, IOWA 50319 ICN © 2021, COPY WITH PERMISSION
2	95% PLAN SUBMITTAL	01/10/2022	
3	FOR PERMIT REVIEW	1/13/2022	
4			



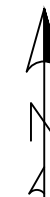
APPANOOSE COUNTY
VERMILLION TOWNSHIP
T69-N R-18W

ROUTE LOOKING SOUTH



HH7 - ICN STA. 60+52

- ① PULL NEW LINK 1523 12 F/A THROUGH NEW 1-2" HDPE CONDUIT. 42" MINIMUM BELOW GRADE.
- ② ICN STA. 60+52 INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH7. 100' SLACK COIL 12 F/A.
- ③ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ④ VERIFY LOCATES PRIOR TO PLACEMENT OF HH. UTILITIES FOUND IN AREA.



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH6	44+37	HH7	60+52	1615
HH7	60+52	HH8	70+45	993
TOTAL				2608

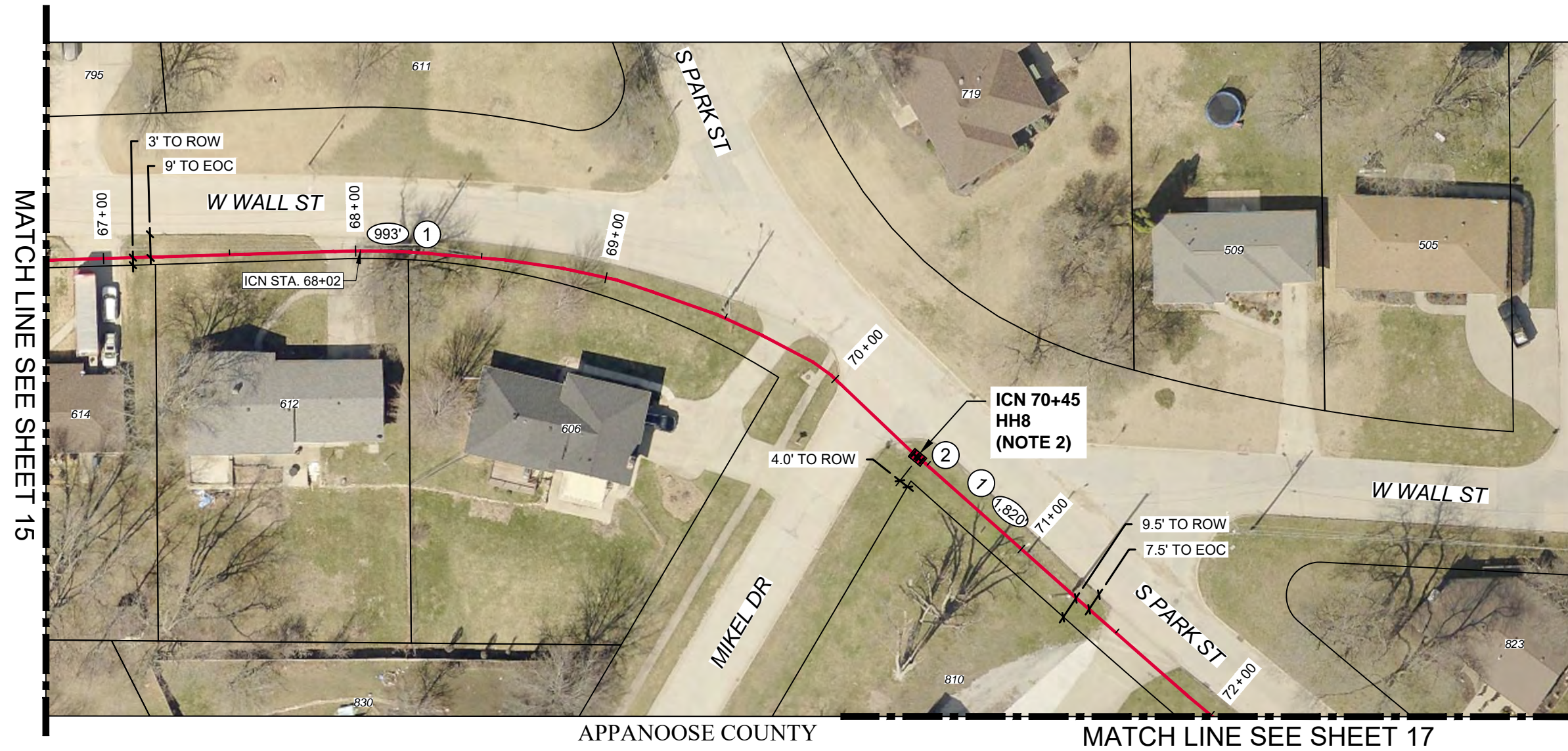
* LENGTH DOES NOT INCLUDE SLACKCOILS



APPANOOSE COUNTY – CENTERVILLE, IA
COUNTY SHERIFF OFFICE – PSAP



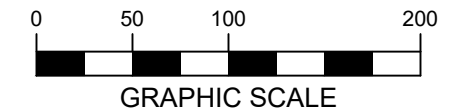
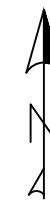
1	75% PLAN SUBMITTAL	12/8/2021	IOWA COMMUNICATIONS NETWORK 400 EAST 14TH STREET GRIMES STATE OFFICE BUILDING DES MOINES, IOWA 50319 ICN © 2021, COPY WITH PERMISSION
2	95% PLAN SUBMITTAL	01/10/2022	
3	FOR PERMIT REVIEW	1/13/2022	
4			



APPANOOSE COUNTY
VERMILLION TOWNSHIP
T69-N R-18W

MATCH LINE SEE SHEET 17

- ① PULL NEW LINK 1523 12 F/A THROUGH NEW 1-2" HDPE CONDUIT. 42" MINIMUM BELOW GRADE.
- ② ICN STA. 70+45 INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH8. 100' SLACK COIL 12 F/A.
- ③ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ④ VERIFY LOCATES PRIOR TO PLACEMENT OF HH. UTILITIES FOUND IN AREA.



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH7	60+52	HH8	70+45	993
HH8	70+45	HH9	88+65	1820
TOTAL				2813

* LENGTH DOES NOT INCLUDE SLACKCOILS



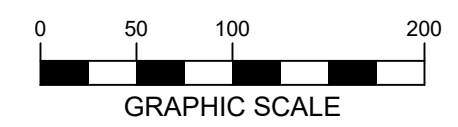
APPANOOSE COUNTY – CENTERVILLE, IA
COUNTY SHERIFF OFFICE – PSAP



1	75% PLAN SUBMITTAL	12/8/2021	IOWA COMMUNICATIONS NETWORK 400 EAST 14TH STREET GRIMES STATE OFFICE BUILDING DES MOINES, IOWA 50319 ICN © 2021, COPY WITH PERMISSION
2	95% PLAN SUBMITTAL	01/10/2022	
3	FOR PERMIT REVIEW	1/13/2022	
4			



APPANOOSE COUNTY
VERMILLION TOWNSHIP
T69-N R-18W



- ① PULL NEW LINK 1523 12 F/A THROUGH NEW 1-2" HDPE CONDUIT. 42" MINIMUM BELOW GRADE.
- ② OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.

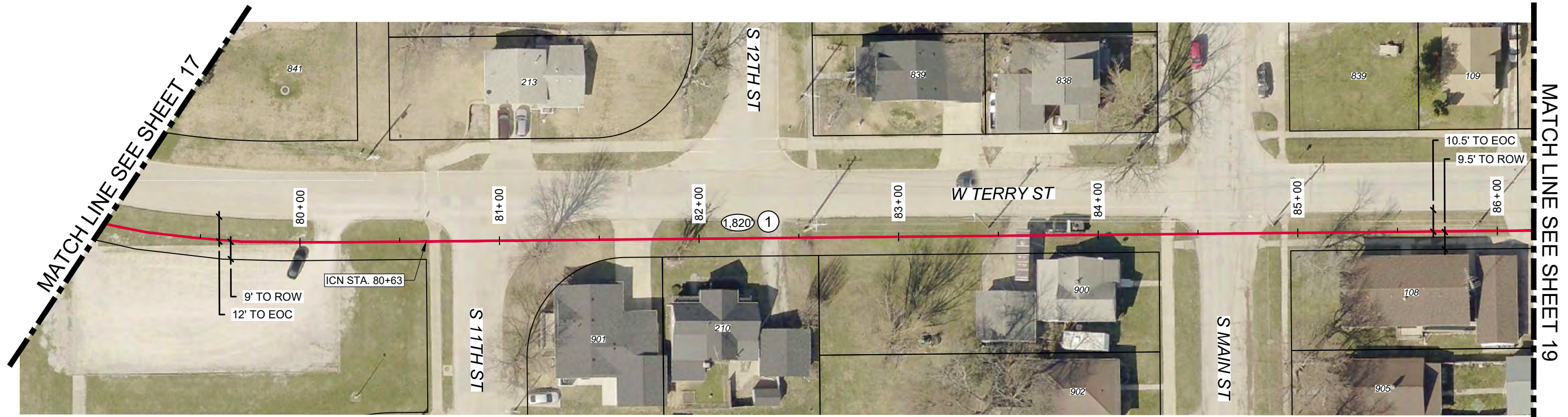
LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH8	70+45	HH9	88+65	1820
TOTAL				1820

* LENGTH DOES NOT INCLUDE SLACKCOILS



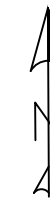
APPANOOSE COUNTY – CENTERVILLE, IA
COUNTY SHERIFF OFFICE – PSAP

1	75% PLAN SUBMITTAL	12/8/2021	<p>IOWA COMMUNICATIONS NETWORK 400 EAST 14TH STREET GRIMES STATE OFFICE BUILDING DES MOINES, IOWA 50319 ICN © 2021, COPY WITH PERMISSION</p>
2	95% PLAN SUBMITTAL	01/10/2022	
3	FOR PERMIT REVIEW	1/13/2022	
4			



APPANOOSE COUNTY
VERMILLION TOWNSHIP
T69-N R-18W

- ① PULL NEW LINK 1523 12 F/A THROUGH NEW 1-2" HDPE CONDUIT. 42" MINIMUM BELOW GRADE.
- ② OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH8	70+45	HH9	88+65	1820
TOTAL				1820

* LENGTH DOES NOT INCLUDE SLACKCOILS



APPANOOSE COUNTY – CENTERVILLE, IA
COUNTY SHERIFF OFFICE – PSAP



1	75% PLAN SUBMITTAL	12/8/2021	IOWA COMMUNICATIONS NETWORK 400 EAST 14TH STREET GRIMES STATE OFFICE BUILDING DES MOINES, IOWA 50319 ICN © 2021, COPY WITH PERMISSION
2	95% PLAN SUBMITTAL	01/10/2022	
3	FOR PERMIT REVIEW	1/13/2022	
4			

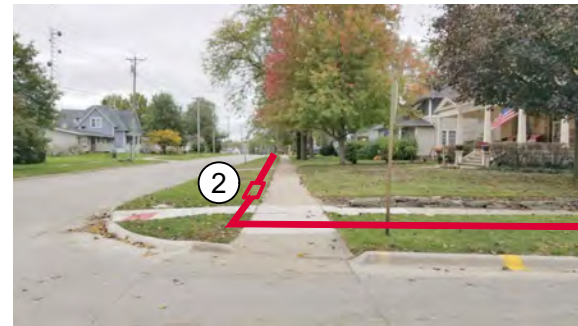
MATCH LINE SEE SHEET 18

MATCH LINE SEE SHEET 20



APPANOOSE COUNTY
VERMILLION TOWNSHIP
T69-N R-18W / T68-N R-18W

ROUTE LOOKING SOUTH



HH9 - ICN STA. 88+65

- ① PULL NEW LINK 1523 12 F/A THROUGH NEW 1-2" HDPE CONDUIT. 42" MINIMUM BELOW GRADE.
- ② ICN STA. 88+65 INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH9. 100' SLACK COIL 12 F/A.
- ③ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ④ VERIFY LOCATES PRIOR TO PLACEMENT OF HH. UTILITIES FOUND IN AREA.
- ⑤ USE CAUTION: GAS VALVES AND PAINT MARKINGS IN THIS AREA.

LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH8	70+45	HH9	88+65	1820
HH9	88+65	HH10	98+02	937
TOTAL				2757

* LENGTH DOES NOT INCLUDE SLACKCOILS



APPANOOSE COUNTY – CENTERVILLE, IA
COUNTY SHERIFF OFFICE – PSAP

1	75% PLAN SUBMITTAL	12/8/2021	hbK IOWA COMMUNICATIONS NETWORK 400 EAST 14TH STREET GRIMES STATE OFFICE BUILDING DES MOINES, IOWA 50319 ICN © 2021, COPY WITH PERMISSION
2	95% PLAN SUBMITTAL	01/10/2022	
3	FOR PERMIT REVIEW	1/13/2022	
4			

MATCH LINE SEE SHEET 19

MATCH LINE SEE SHEET 21



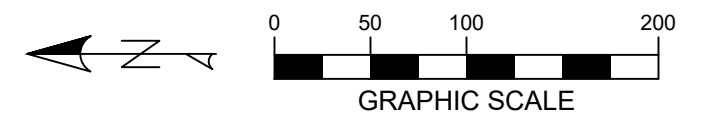
APPANOOSE COUNTY
VERMILLION TOWNSHIP
T68-N R-18W

- ① PULL NEW LINK 1523 12 F/A THROUGH NEW 1-2" HDPE CONDUIT. 42" MINIMUM BELOW GRADE.
- ② ICN STA. 98+02 INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH10. 100' SLACK COIL 12 F/A.
- ③ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ④ VERIFY LOCATES PRIOR TO PLACEMENT OF HH. UTILITIES FOUND IN AREA.

ROUTE LOOKING NORTH



HH10 - ICN STA. 98+02



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH9	88+65	HH10	98+02	937
HH10	98+02	HH11	110+31	1229
TOTAL				2166

* LENGTH DOES NOT INCLUDE SLACKCOILS



APPANOOSE COUNTY - CENTERVILLE, IA
COUNTY SHERIFF OFFICE - PSAP



1	75% PLAN SUBMITTAL	12/8/2021	IOWA COMMUNICATIONS NETWORK 400 EAST 14TH STREET GRIMES STATE OFFICE BUILDING DES MOINES, IOWA 50319 ICN © 2021, COPY WITH PERMISSION
2	95% PLAN SUBMITTAL	01/10/2022	
3	FOR PERMIT REVIEW	1/13/2022	
4			

MATCH LINE SEE SHEET 20

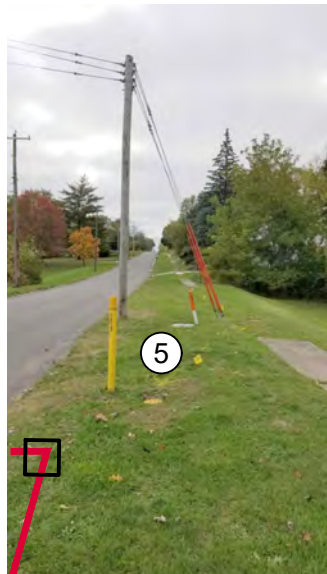
MATCH LINE SEE SHEET 22



APPANOOSE COUNTY
VERMILLION TOWNSHIP
T68-N R-18W

- ① PULL NEW LINK 1523 12 F/A THROUGH NEW 1-2" HDPE CONDUIT. 42" MINIMUM BELOW GRADE.
- ② ICN STA. 110+31 INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH11. 100' SLACK COIL 12 F/A.
- ③ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ④ VERIFY LOCATES PRIOR TO PLACEMENT OF HH. UTILITIES FOUND IN AREA.
- ⑤ USE CAUTION: GAS VALVES AND PAINT MARKINGS IN THIS AREA.

ROUTE LOOKING SOUTH

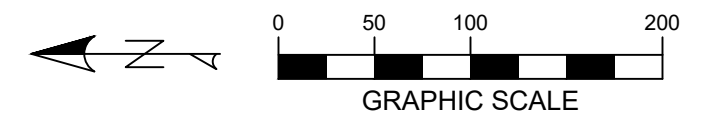


BORE PIT - ICN STA. 109+95

ROUTE LOOKING NORTH



HH11 - ICN STA. 110+31



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH10	98+02	HH11	110+31	1229
HH11	110+31	HH12	121+96	1165
TOTAL				2394

* LENGTH DOES NOT INCLUDE SLACKCOILS



APPANOOSE COUNTY - CENTERVILLE, IA
COUNTY SHERIFF OFFICE - PSAP

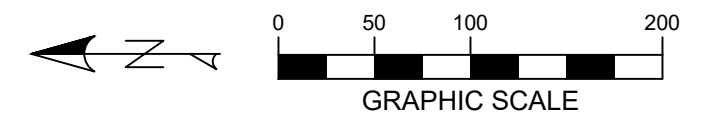


1	75% PLAN SUBMITTAL	12/8/2021	IOWA COMMUNICATIONS NETWORK 400 EAST 14TH STREET GRIMES STATE OFFICE BUILDING DES MOINES, IOWA 50319 ICN © 2021, COPY WITH PERMISSION
2	95% PLAN SUBMITTAL	01/10/2022	
3	FOR PERMIT REVIEW	1/13/2022	
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APPANOOSE COUNTY
VERMILLION TOWNSHIP
T68-N R-18W

- ① PULL NEW LINK 1523 12 F/A THROUGH NEW 1-2" HDPE CONDUIT. 42" MINIMUM BELOW GRADE.
- ② OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH11	110+31	HH12	121+96	1165
TOTAL				1165

* LENGTH DOES NOT INCLUDE SLACKCOILS



APPANOOSE COUNTY – CENTERVILLE, IA
COUNTY SHERIFF OFFICE – PSAP



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2	95% PLAN SUBMITTAL	01/10/2022	
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4			



MATCH LINE SEE SHEET 22

MATCH LINE SEE SHEET 24

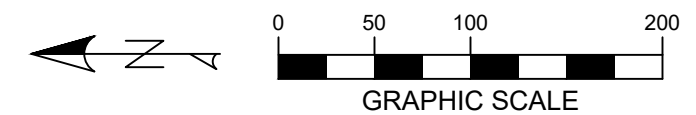
APPANOOSE COUNTY
VERMILLION TOWNSHIP
T68-N R-18W

ROUTE LOOKING SOUTH



HH12 - ICN STA. 121+96

- ① PULL NEW LINK 1523 12 F/A THROUGH NEW 1-2" HDPE CONDUIT. 42" MINIMUM BELOW GRADE.
- ② ICN STA. 121+96 INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH12. 100' SLACK COIL 12 F/A.
- ③ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ④ VERIFY LOCATES PRIOR TO PLACEMENT OF HH. UTILITIES FOUND IN AREA.



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH11	110+31	HH12	121+96	1165
HH12	121+96	HH13	131+61	965
TOTAL				2130

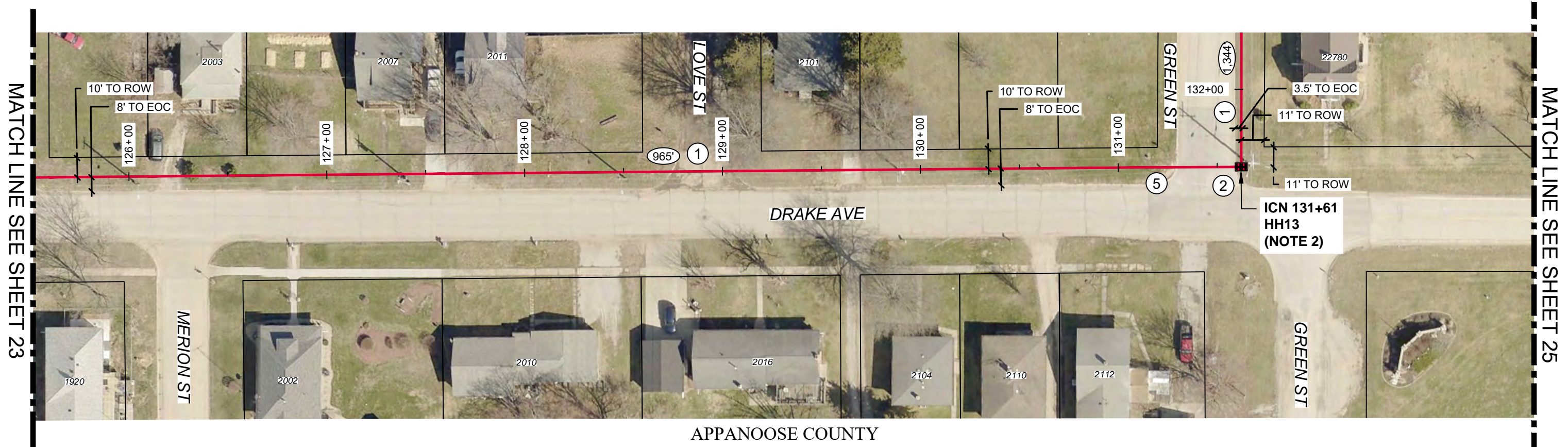
* LENGTH DOES NOT INCLUDE SLACKCOILS



APPANOOSE COUNTY – CENTERVILLE, IA
COUNTY SHERIFF OFFICE – PSAP

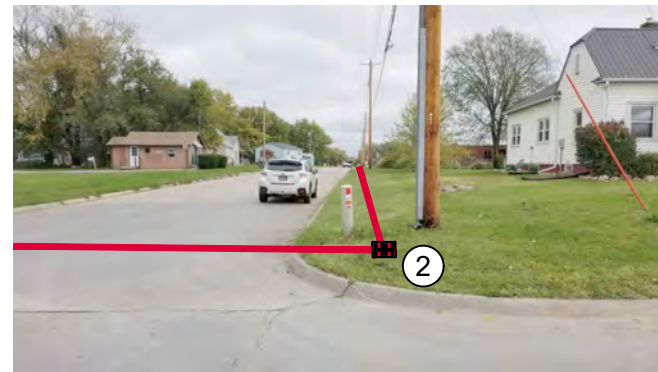
1	75% PLAN SUBMITTAL	12/8/2021
2	95% PLAN SUBMITTAL	01/10/2022
3	FOR PERMIT REVIEW	1/13/2022
4		

IOWA COMMUNICATIONS NETWORK
400 EAST 14TH STREET
GRIMES STATE OFFICE BUILDING
DES MOINES, IOWA 50319
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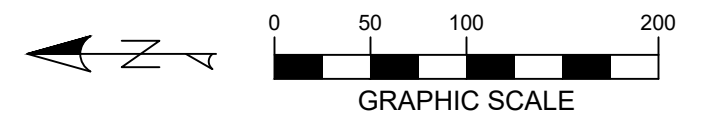
APPANOOSE COUNTY
VERMILLION TOWNSHIP
T68-N R-18W

ROUTE LOOKING EAST



HH13 - ICN STA. 131+61

- ① PULL NEW LINK 1523 12 F/A THROUGH NEW 1-2" HDPE CONDUIT. 42" MINIMUM BELOW GRADE.
- ② ICN STA. 131+61 INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH13. 100' SLACK COIL 12 F/A.
- ③ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ④ VERIFY LOCATES PRIOR TO PLACEMENT OF HH. UTILITIES FOUND IN AREA.
- ⑤ USE CAUTION: GAS VALVES AND PAINT MARKINGS IN THIS AREA.



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH12	121+96	HH13	131+61	965
HH13	131+61	HH14	145+05	1344
TOTAL				2309

* LENGTH DOES NOT INCLUDE SLACKCOILS



APPANOOSE COUNTY – CENTERVILLE, IA
COUNTY SHERIFF OFFICE – PSAP

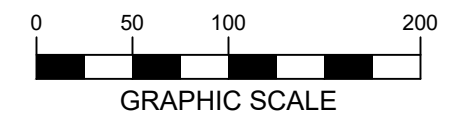
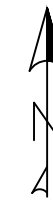


1	75% PLAN SUBMITTAL	12/8/2021	IOWA COMMUNICATIONS NETWORK 400 EAST 14TH STREET GRIMES STATE OFFICE BUILDING DES MOINES, IOWA 50319 ICN © 2021, COPY WITH PERMISSION
2	95% PLAN SUBMITTAL	01/10/2022	
3	FOR PERMIT REVIEW	1/13/2022	
4			



APPANOOSE COUNTY
VERMILLION TOWNSHIP
T68-N R-18W

- ① PULL NEW LINK 1523 12 F/A THROUGH NEW 1-2" HDPE CONDUIT. 42" MINIMUM BELOW GRADE.
- ② OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH13	131+61	HH14	145+05	1344
TOTAL				1344

* LENGTH DOES NOT INCLUDE SLACKCOILS



APPANOOSE COUNTY – CENTERVILLE, IA
COUNTY SHERIFF OFFICE – PSAP



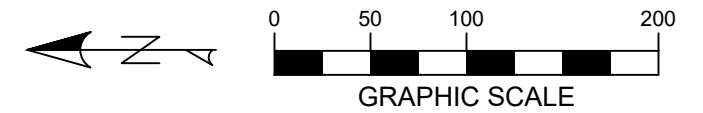
1	75% PLAN SUBMITTAL	12/8/2021	IOWA COMMUNICATIONS NETWORK 400 EAST 14TH STREET GRIMES STATE OFFICE BUILDING DES MOINES, IOWA 50319 ICN © 2021, COPY WITH PERMISSION
2	95% PLAN SUBMITTAL	01/10/2022	
3	FOR PERMIT REVIEW	1/13/2022	
4			

MATCH LINE SEE SHEET 26

MATCH LINE SEE SHEET 28



APPANOOSE COUNTY
VERMILLION TOWNSHIP
T68-N R-17W



- ① PULL NEW LINK 1523 12 F/A THROUGH NEW 1-2" HDPE CONDUIT. 42" MINIMUM BELOW GRADE.
- ② OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.

LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH14	145+05	HH15	157+46	1241
TOTAL				1241

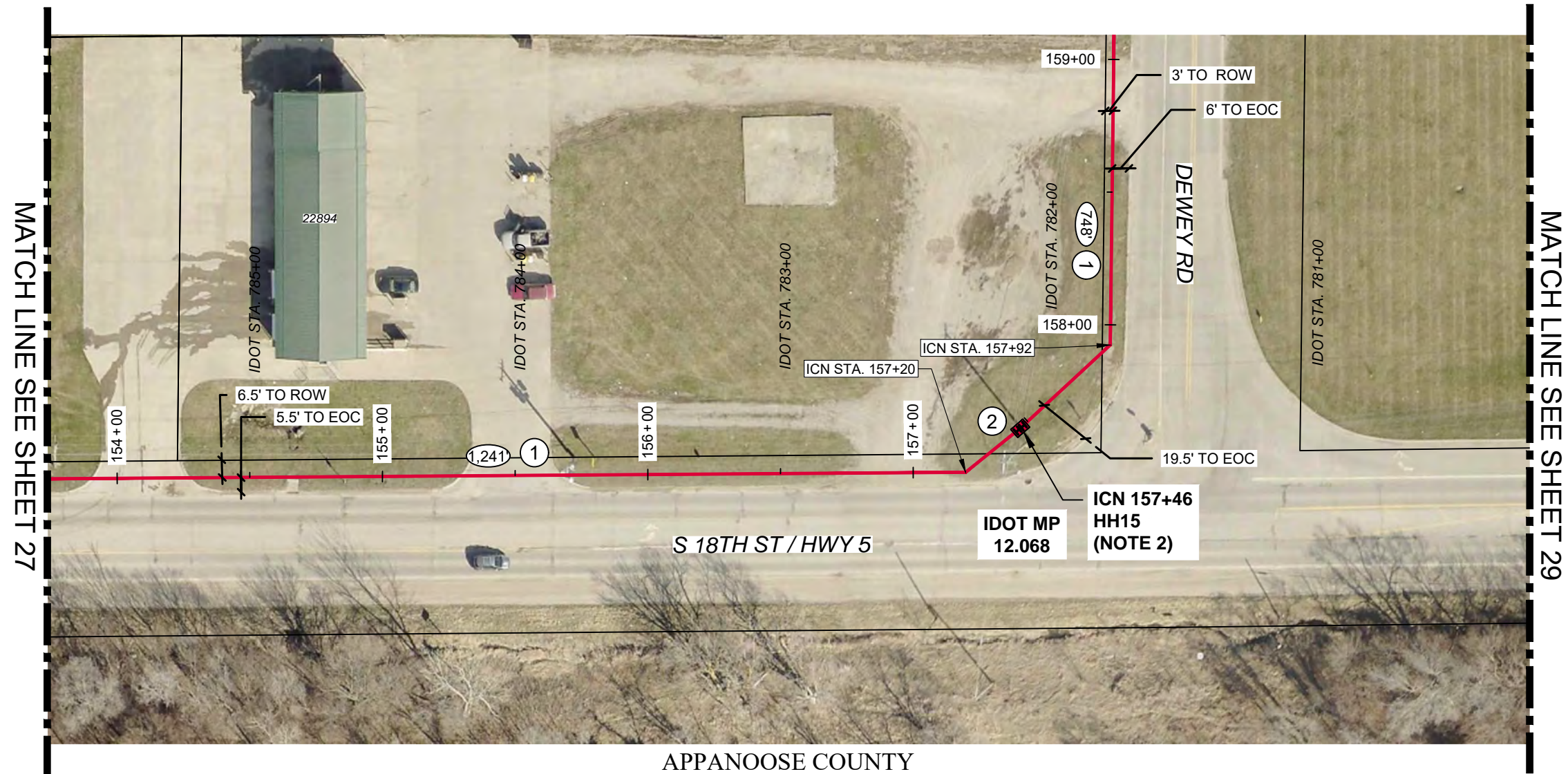
* LENGTH DOES NOT INCLUDE SLACKCOILS



APPANOOSE COUNTY – CENTERVILLE, IA
COUNTY SHERIFF OFFICE – PSAP

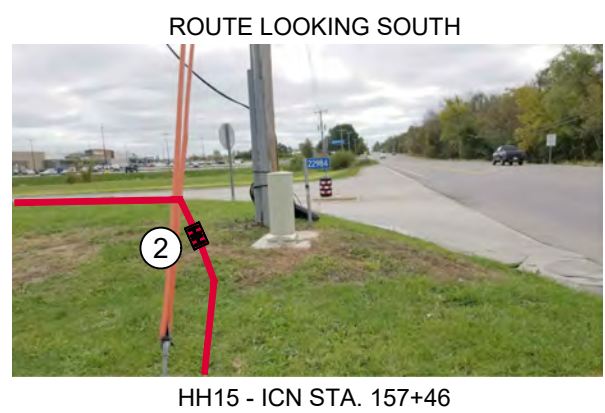
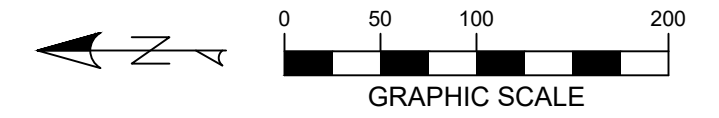


1	75% PLAN SUBMITTAL	12/8/2021	IOWA COMMUNICATIONS NETWORK 400 EAST 14TH STREET GRIMES STATE OFFICE BUILDING DES MOINES, IOWA 50319 ICN © 2021, COPY WITH PERMISSION
2	95% PLAN SUBMITTAL	01/10/2022	
3	FOR PERMIT REVIEW	1/13/2022	
4			



APPANOOSE COUNTY
VERMILLION TOWNSHIP
T68-N R-17W

- ① PULL NEW LINK 1523 12 F/A THROUGH NEW 1-2" HDPE CONDUIT. 42" MINIMUM BELOW GRADE.
- ② ICN STA. 157+46 INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH15. 100' SLACK COIL 12 F/A.
- ③ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ④ VERIFY LOCATES PRIOR TO PLACEMENT OF HH. UTILITIES FOUND IN AREA.



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH14	145+05	HH15	157+46	1241
HH15	157+46	HH16	164+94	748
TOTAL				1989

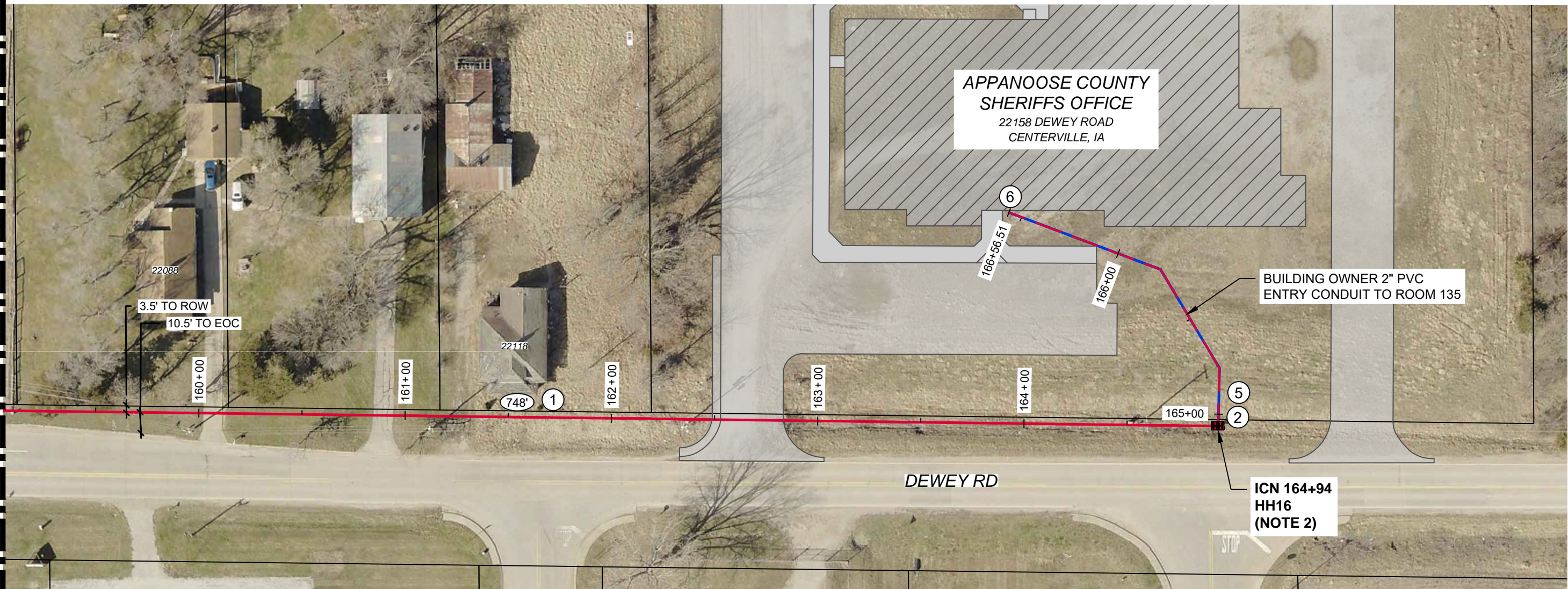
* LENGTH DOES NOT INCLUDE SLACKCOILS



APPANOOSE COUNTY – CENTERVILLE, IA
COUNTY SHERIFF OFFICE – PSAP

1	75% PLAN SUBMITTAL	12/8/2021	<p>IOWA COMMUNICATIONS NETWORK 400 EAST 14TH STREET GRIMES STATE OFFICE BUILDING DES MOINES, IOWA 50319 ICN © 2021, COPY WITH PERMISSION</p>
2	95% PLAN SUBMITTAL	01/10/2022	
3	FOR PERMIT REVIEW	1/13/2022	
4			

MATCH LINE SEE SHEET 28



- ① PULL NEW LINK 1523 12 F/A THROUGH NEW 1-2" HDPE CONDUIT. 42" MINIMUM BELOW GRADE.
- ② ICN STA. 164+94 INSTALL PROPOSED 24"x36"x36" ICN HANDHOLE - HH16. 150' SLACK COIL 12 F/A. HANDHOLE PLACEMENT MAY NEED TO BE ADJUSTED BASED ON COORDINATION WITH BUILDING CONSTRUCTION.

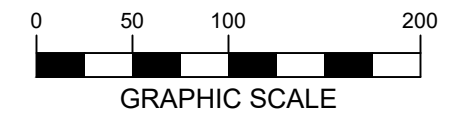
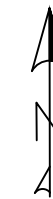
TRIVIEW LOCATE POINT 150' SLACK FOR NEW MID-SHEATH CASE FOR LOCATE POINT.
- ③ OTHER UTILITY PROVIDERS IN AREA. STAY 36" CLEAR FROM ALL EXISTING UTILITIES.
- ④ VERIFY LOCATES PRIOR TO PLACEMENT OF HH. UTILITIES FOUND IN AREA.
- ⑤ APPANOOSE COUNTY SHERIFF OFFICE TO CONNECT EXISTING CONDUIT INTO ICN HH16.
- ⑥ SERVER ROOM 135
SEE BUILDING DESIGN PLAN SHEET E4.1 (PAGE 30 & 32) FOR REFERENCE. LEAVE 75' COIL FOR SPLICING CONTRACTOR. TEMPORARILY BOND ARMORED CABLE TO GROUND BAR WITH #10 COPPER WIRE. CONTRACTOR IS REQUIRED TO COORDINATE WITH COUNTY SHERIFF FOR SITE ACCESS AND INSTALLATION OF NEW FACILITIES ON THE PROPERTY (BUILDING D.01 FOR REFERENCE ALSO, PAGE 31)

APPANOOSE COUNTY
VERMILLION TOWNSHIP
T68-N R-17W

ROUTE LOOKING WEST



HH16 - ICN STA. 164+94



LISTING OF HANDHOLES				
HANDHOLE	STATION	HANDHOLE	STATION	LENGTH FT
HH15	157+46	HH16	164+94	748
TOTAL				901

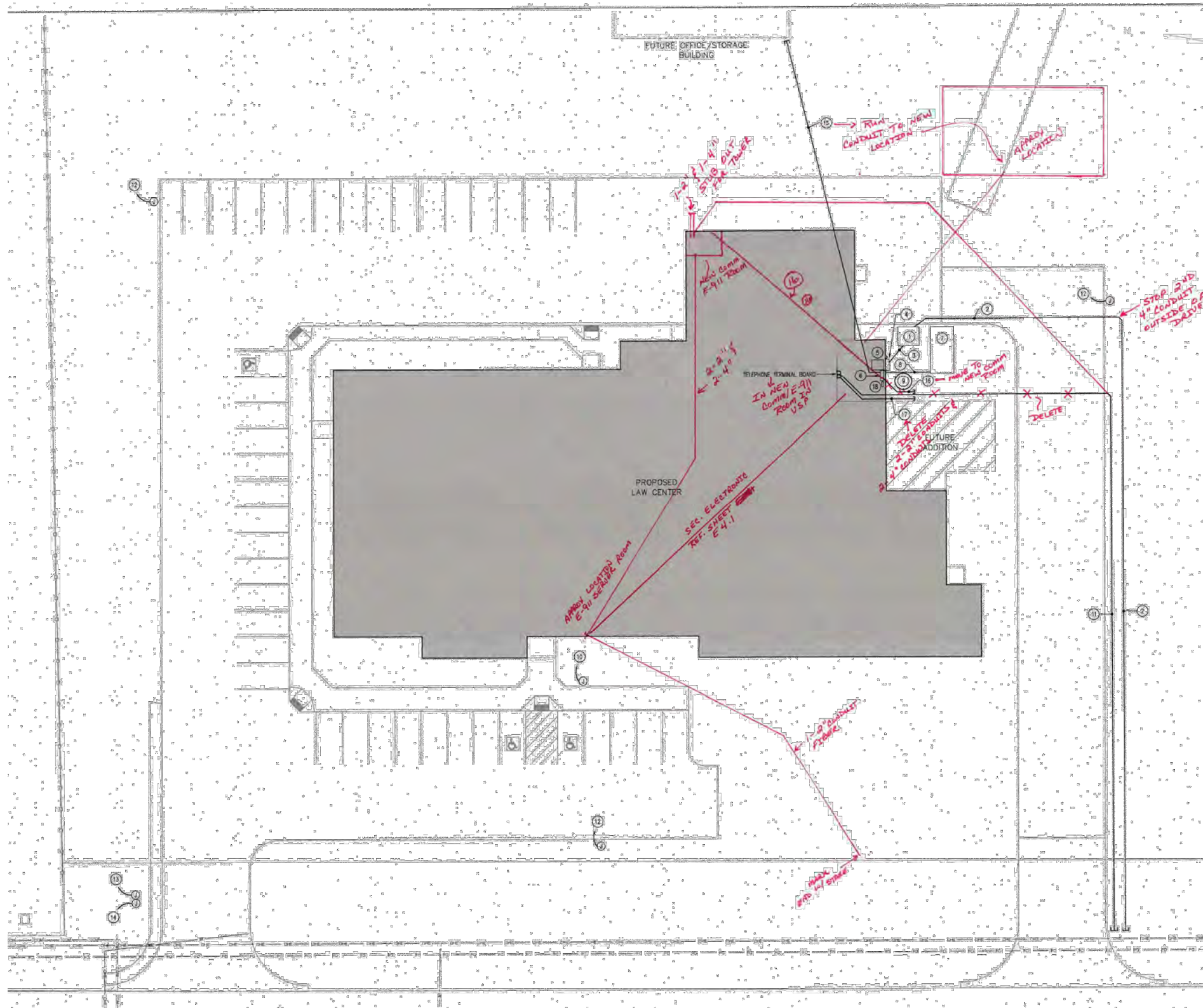
* LENGTH DOES NOT INCLUDE SLACKCOILS



APPANOOSE COUNTY - CENTERVILLE, IA		
COUNTY SHERIFF OFFICE - PSAP		
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LAW OFFICE SITE PLAN



SITE PLAN - ELECTRICAL
 SCALE: 1" = 20'-0"
 PLAN NORTH

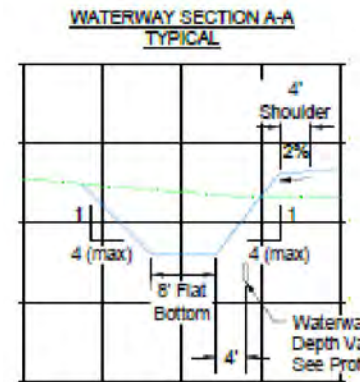
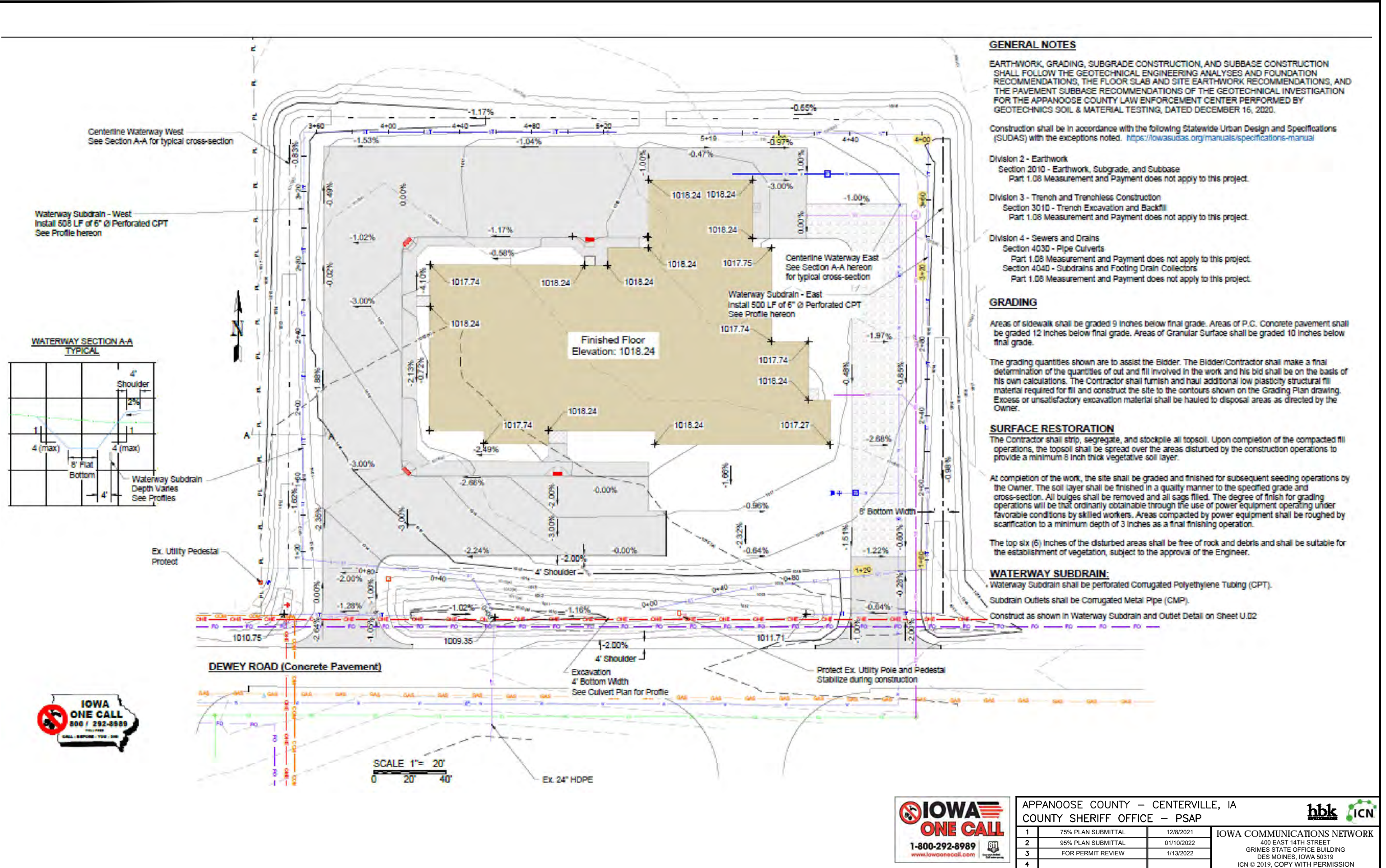


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 COUNTY SHERIFF OFFICE - PSAP

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GENERAL NOTES

EARTHWORK, GRADING, SUBGRADE CONSTRUCTION, AND SUBBASE CONSTRUCTION SHALL FOLLOW THE GEOTECHNICAL ENGINEERING ANALYSES AND FOUNDATION RECOMMENDATIONS, THE FLOOR SLAB AND SITE EARTHWORK RECOMMENDATIONS, AND THE PAVEMENT SUBBASE RECOMMENDATIONS OF THE GEOTECHNICAL INVESTIGATION FOR THE APPANOOSE COUNTY LAW ENFORCEMENT CENTER PERFORMED BY GEOTECHNICS SOIL & MATERIAL TESTING, DATED DECEMBER 16, 2020.

Construction shall be in accordance with the following Statewide Urban Design and Specifications (SUDAS) with the exceptions noted. <https://lowasudas.org/manuals/specifications-manual>

Division 2 - Earthwork
Section 2010 - Earthwork, Subgrade, and Subbase
Part 1.08 Measurement and Payment does not apply to this project.

Division 3 - Trench and Trenchless Construction
Section 3010 - Trench Excavation and Backfill
Part 1.08 Measurement and Payment does not apply to this project.

Division 4 - Sewers and Drains
Section 4030 - Pipe Culverts
Part 1.08 Measurement and Payment does not apply to this project.
Section 4040 - Subdrains and Footing Drain Collectors
Part 1.08 Measurement and Payment does not apply to this project.

GRADING

Areas of sidewalk shall be graded 9 inches below final grade. Areas of P.C. Concrete pavement shall be graded 12 inches below final grade. Areas of Granular Surface shall be graded 10 inches below final grade.

The grading quantities shown are to assist the Bidder. The Bidder/Contractor shall make a final determination of the quantities of out and fill involved in the work and his bid shall be on the basis of his own calculations. The Contractor shall furnish and haul additional low plasticity structural fill material required for fill and construct the site to the contours shown on the Grading Plan drawing. Excess or unsatisfactory excavation material shall be hauled to disposal areas as directed by the Owner.

SURFACE RESTORATION

The Contractor shall strip, segregate, and stockpile all topsoil. Upon completion of the compacted fill operations, the topsoil shall be spread over the areas disturbed by the construction operations to provide a minimum 8 inch thick vegetative soil layer.

At completion of the work, the site shall be graded and finished for subsequent seeding operations by the Owner. The soil layer shall be finished in a quality manner to the specified grade and cross-section. All bulges shall be removed and all sags filled. The degree of finish for grading operations will be that ordinarily obtainable through the use of power equipment operating under favorable conditions by skilled workers. Areas compacted by power equipment shall be roughed by scarification to a minimum depth of 3 inches as a final finishing operation.

The top six (6) inches of the disturbed areas shall be free of rock and debris and shall be suitable for the establishment of vegetation, subject to the approval of the Engineer.

WATERWAY SUBDRAIN:

Waterway Subdrain shall be perforated Corrugated Polyethylene Tubing (CPT).

Subdrain Outlets shall be Corrugated Metal Pipe (CMP).

Construct as shown in Waterway Subdrain and Outlet Detail on Sheet U.02

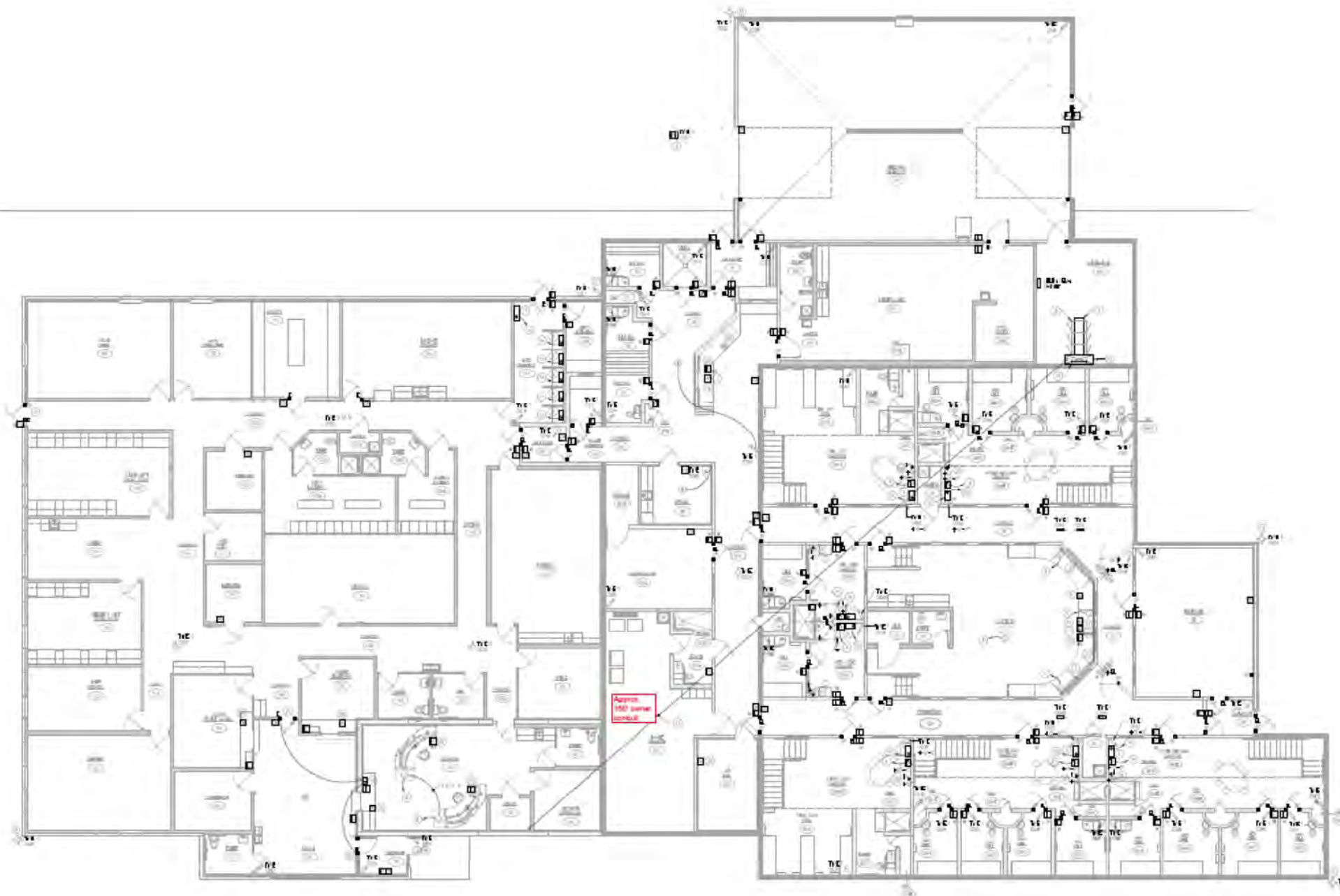


APPANOOSE COUNTY - CENTERVILLE, IA
COUNTY SHERIFF OFFICE - PSAP



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400 EAST 14TH STREET
GRIMES STATE OFFICE BUILDING
DES MOINES, IOWA 50319
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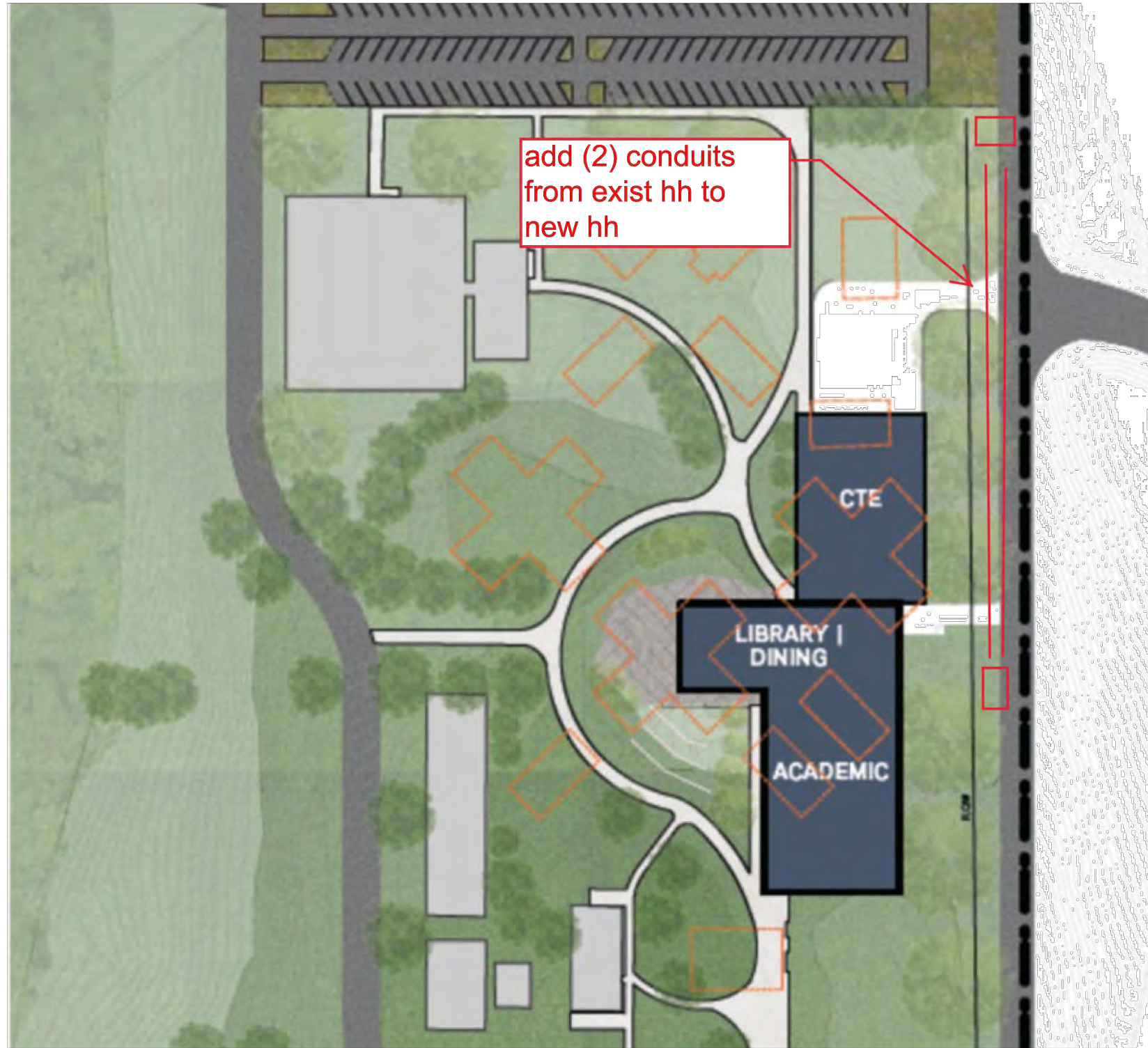
MAIN FLOOR PLAN - SECURITY ELECTRONICS SYSTEMS
SCALE: 1/8" = 1'-0"

LEGEND
 1. 10' x 10' AREA DETECTOR
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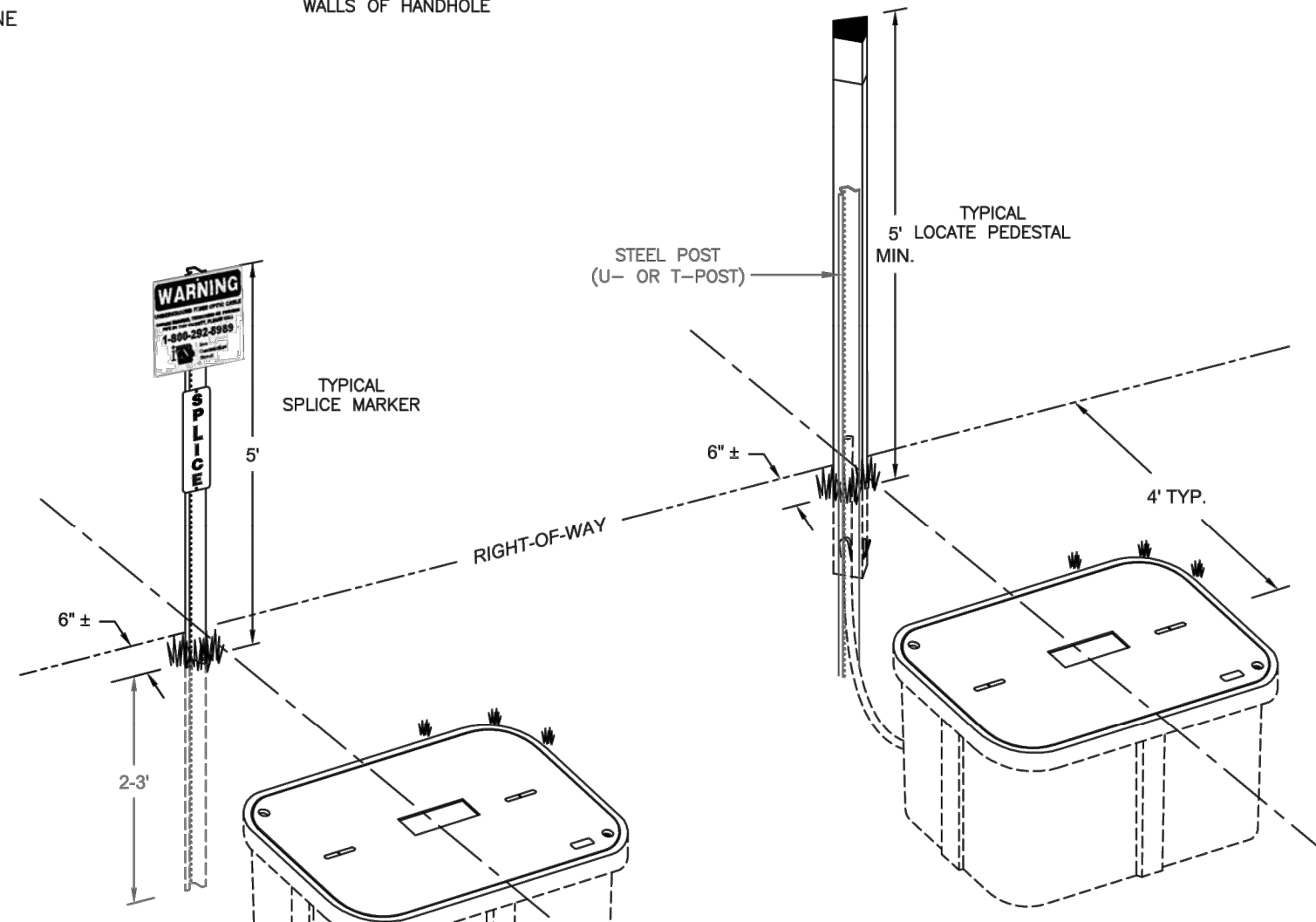
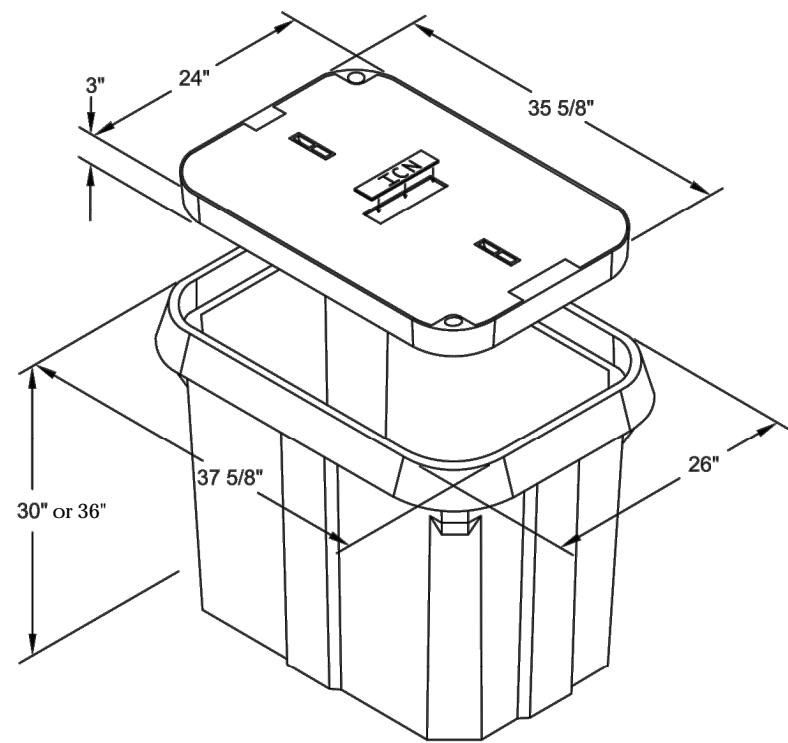
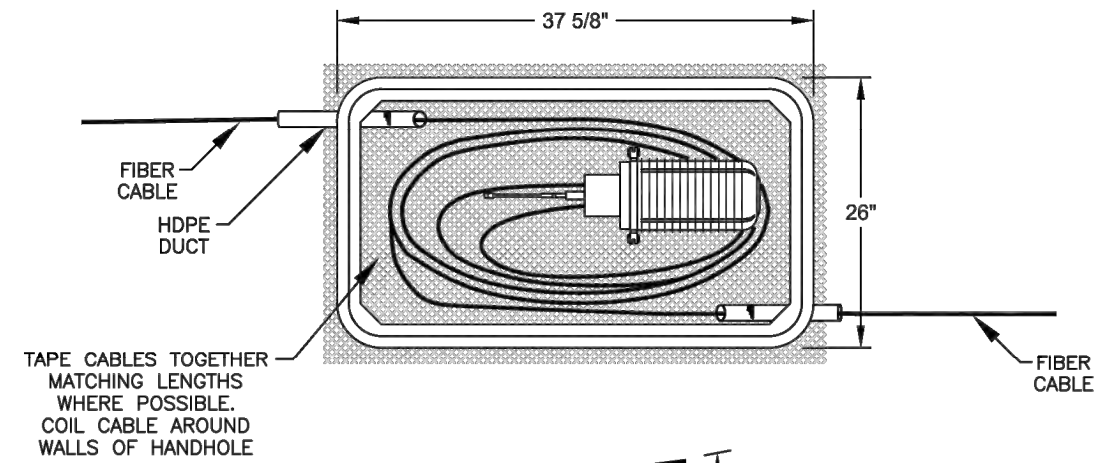
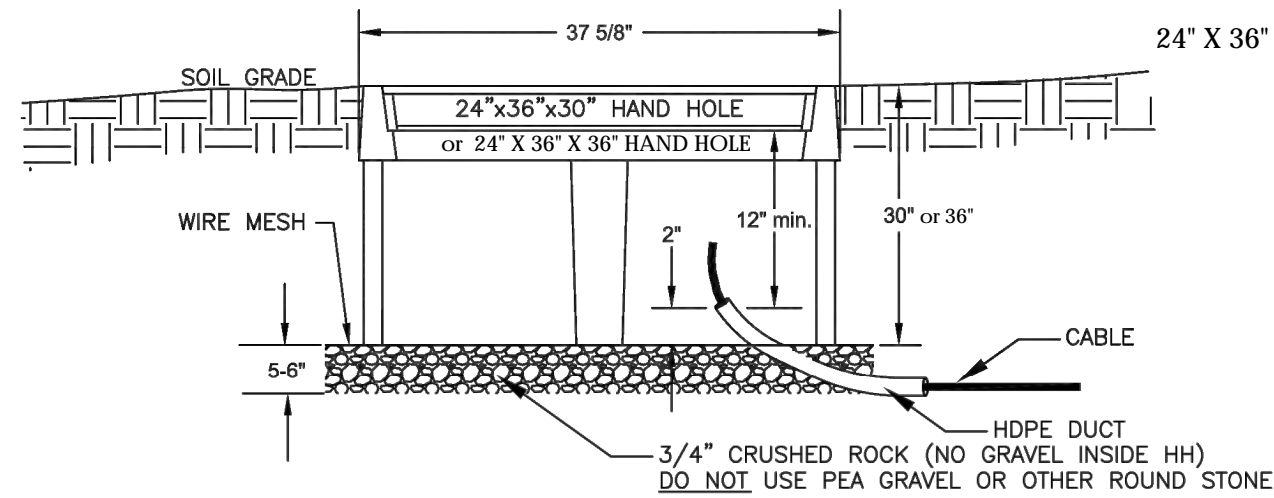


1	75% PLAN SUBMITTAL	12/8/2021
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HANDHOLE PLACEMENT TYPICAL

24" X 36" X 30" HAND HOLE
OR
24" X 36" X 36" HAND HOLE



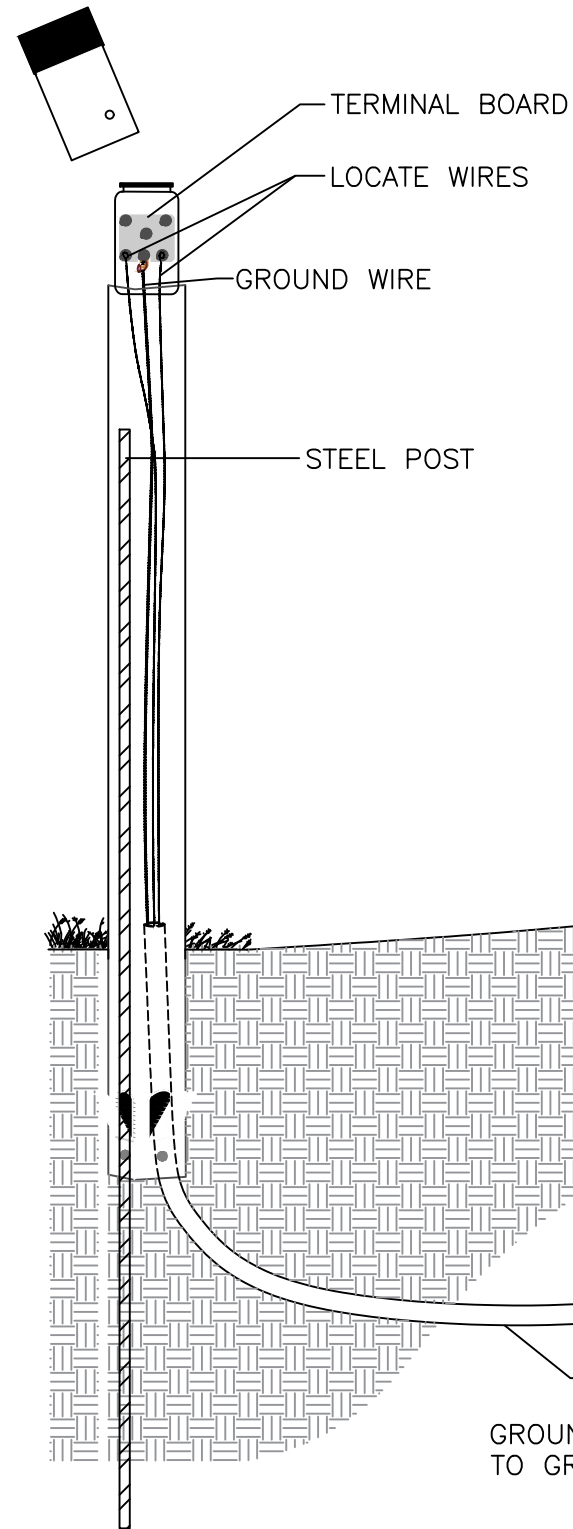
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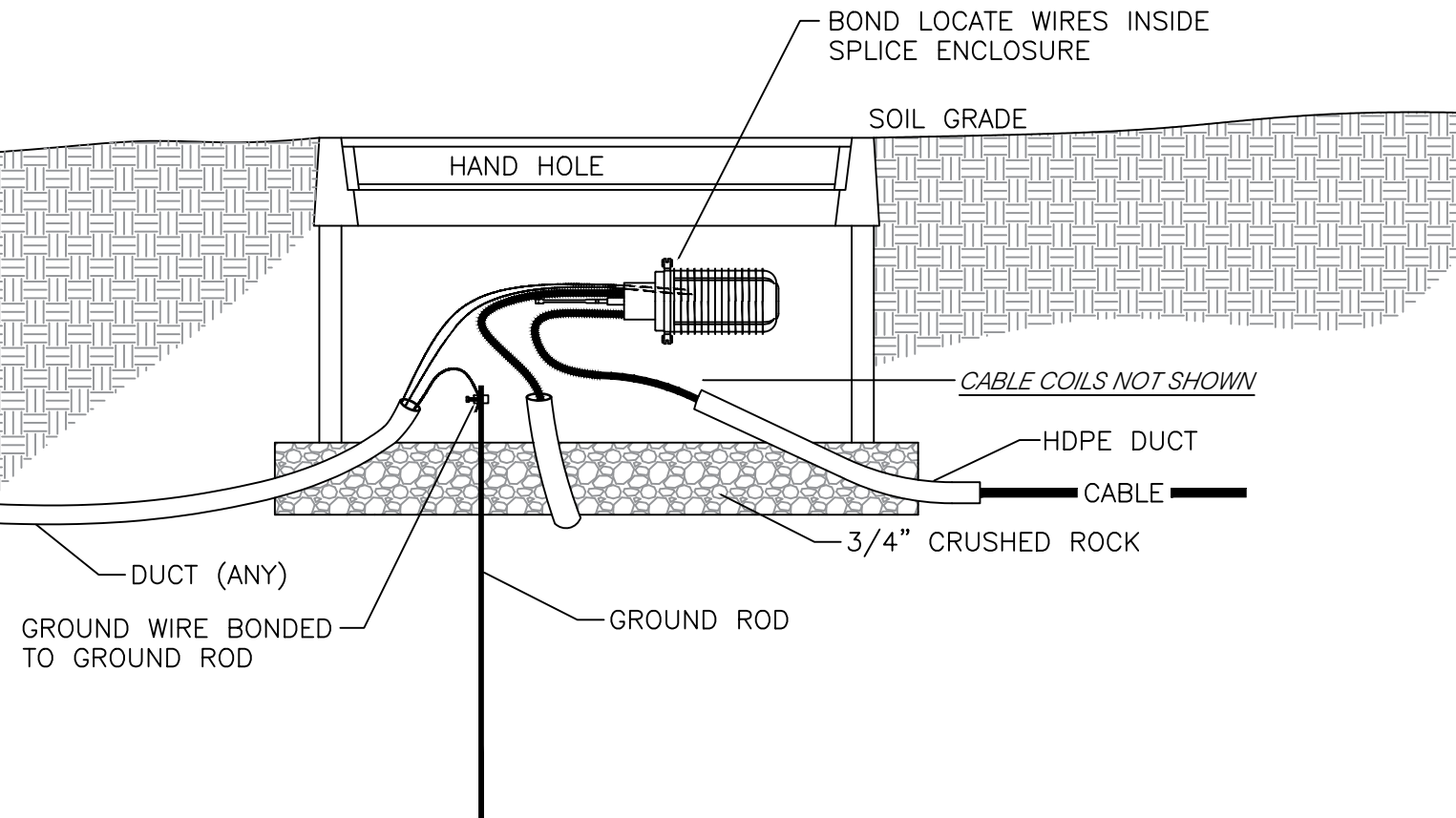
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TYPICAL INSTALLATION OF TRI-VIEW LOCATE PEDESTAL



NOTES:

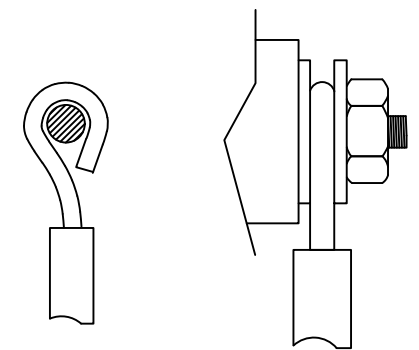
- LOCATE (TRACER) WIRE: #10 or #12 AWG SOLID COPPER WIRE
- GROUND WIRE: #6 OR #8 AWG SOLID BARE COPPER WIRE
- ONE LOCATE WIRE PER FIBER CABLE AT SPLICE ENCLOSURE
- LOCATE WIRE(S) TO BE BONDED INSIDE SPLICE ENCLOSURE WITH 3M SCOTCHLOK SHIELD BONDING KIT
- LOCATE WIRE(S) TO BE ROUTED OUTSIDE OF SPLICE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



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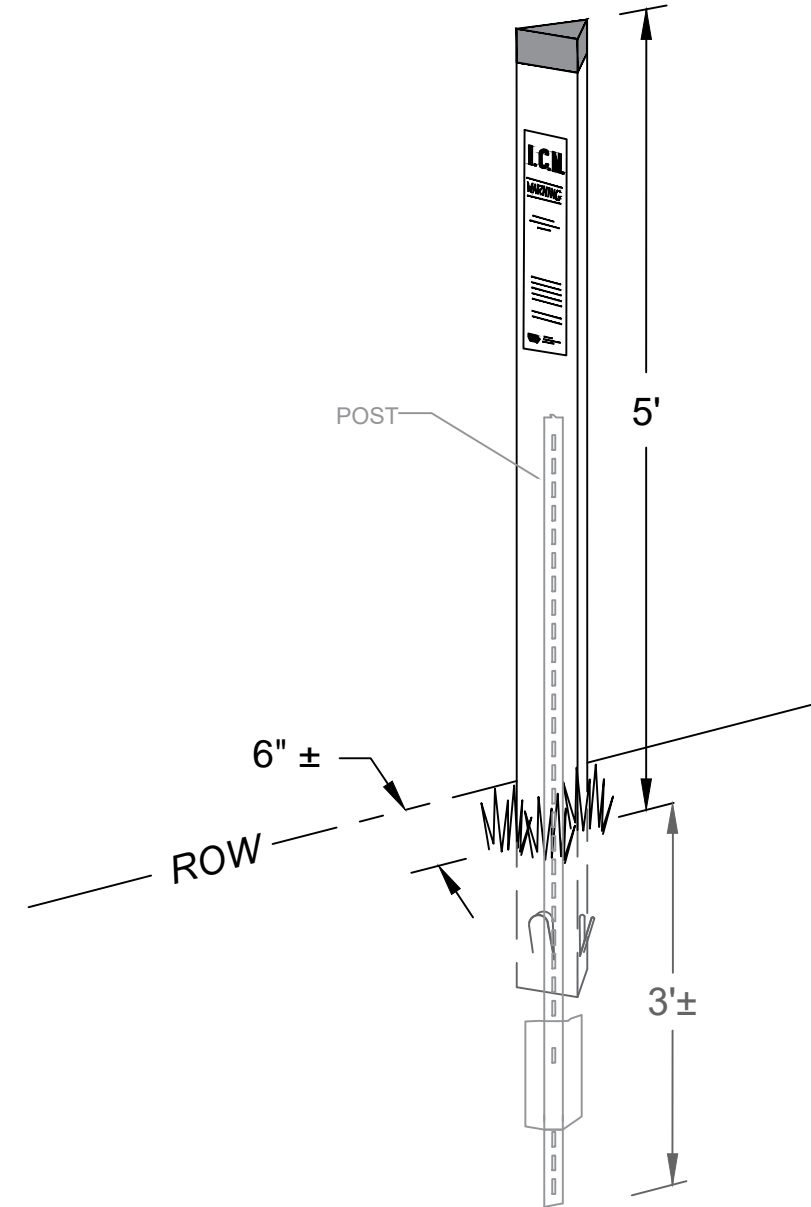
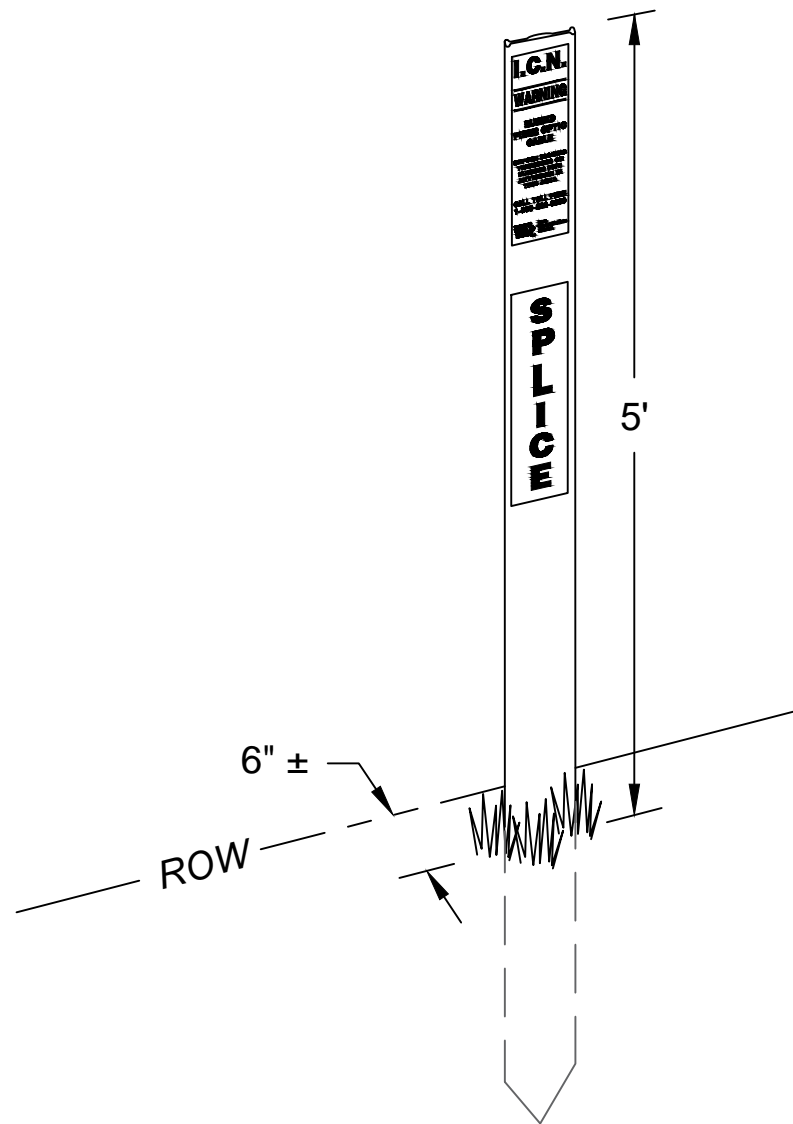
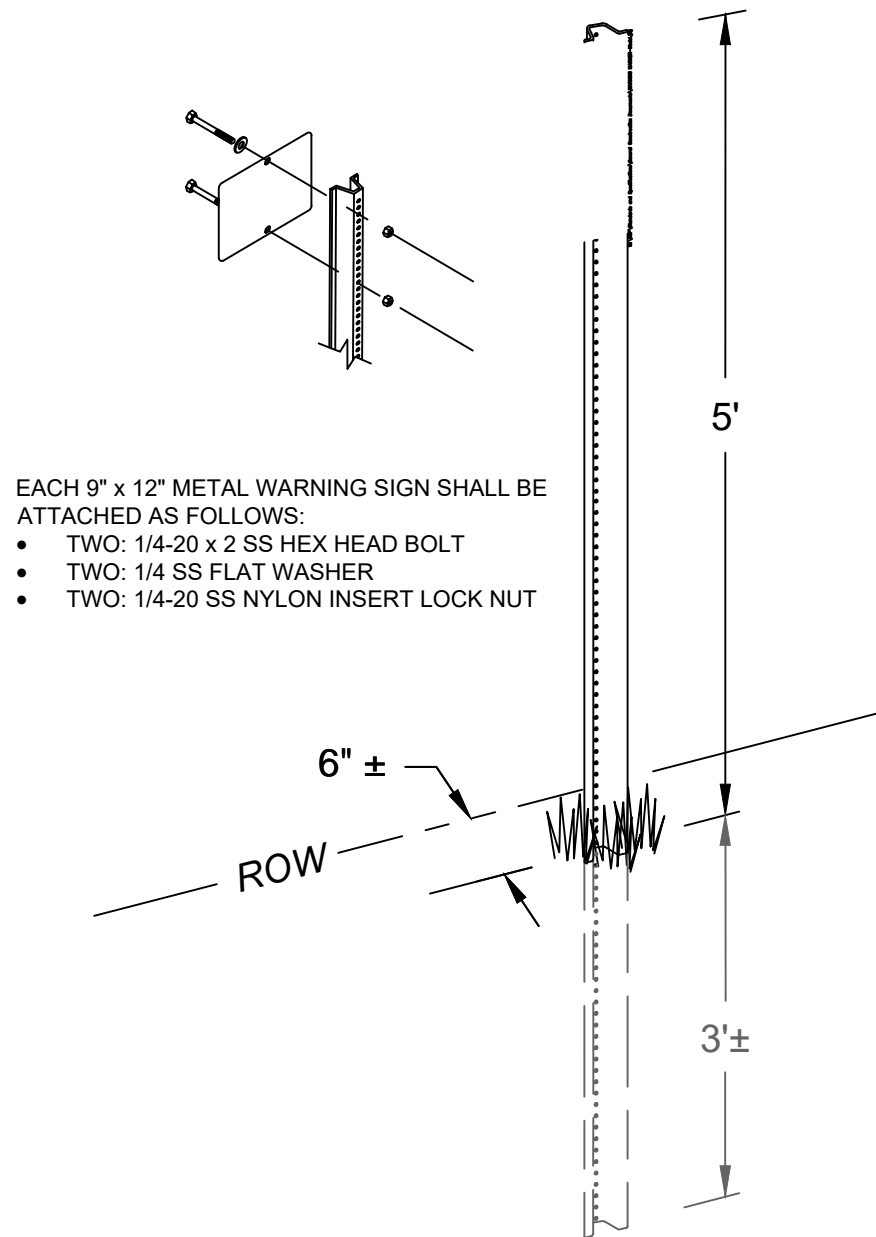
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WARNING MARKER INSTALLATION DETAIL

METAL SIGN & U-CHANNEL POST

FIBERGLASS MARKER

TRIVIEW MARKER

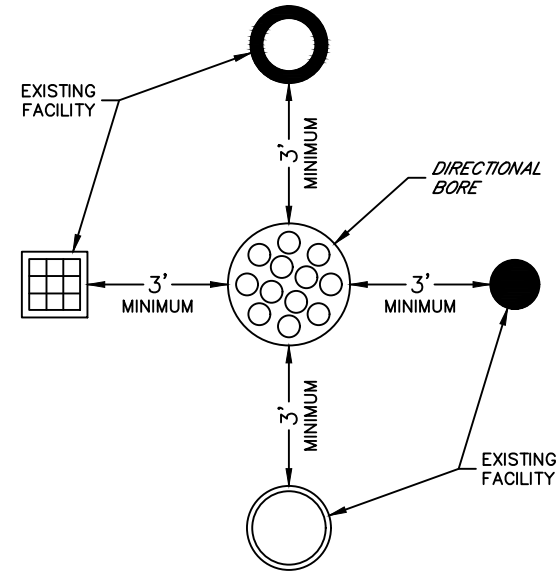


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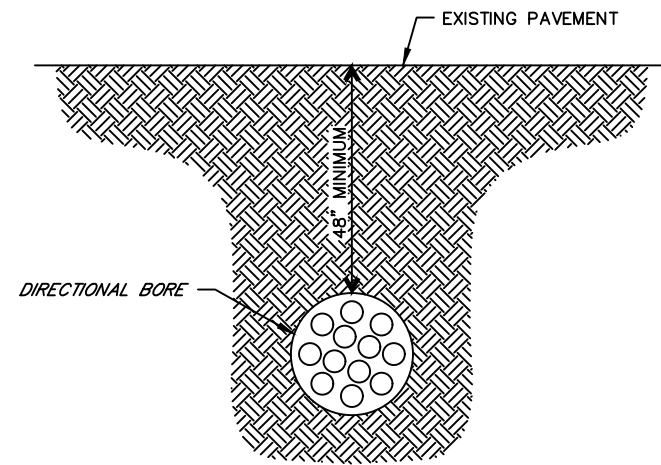
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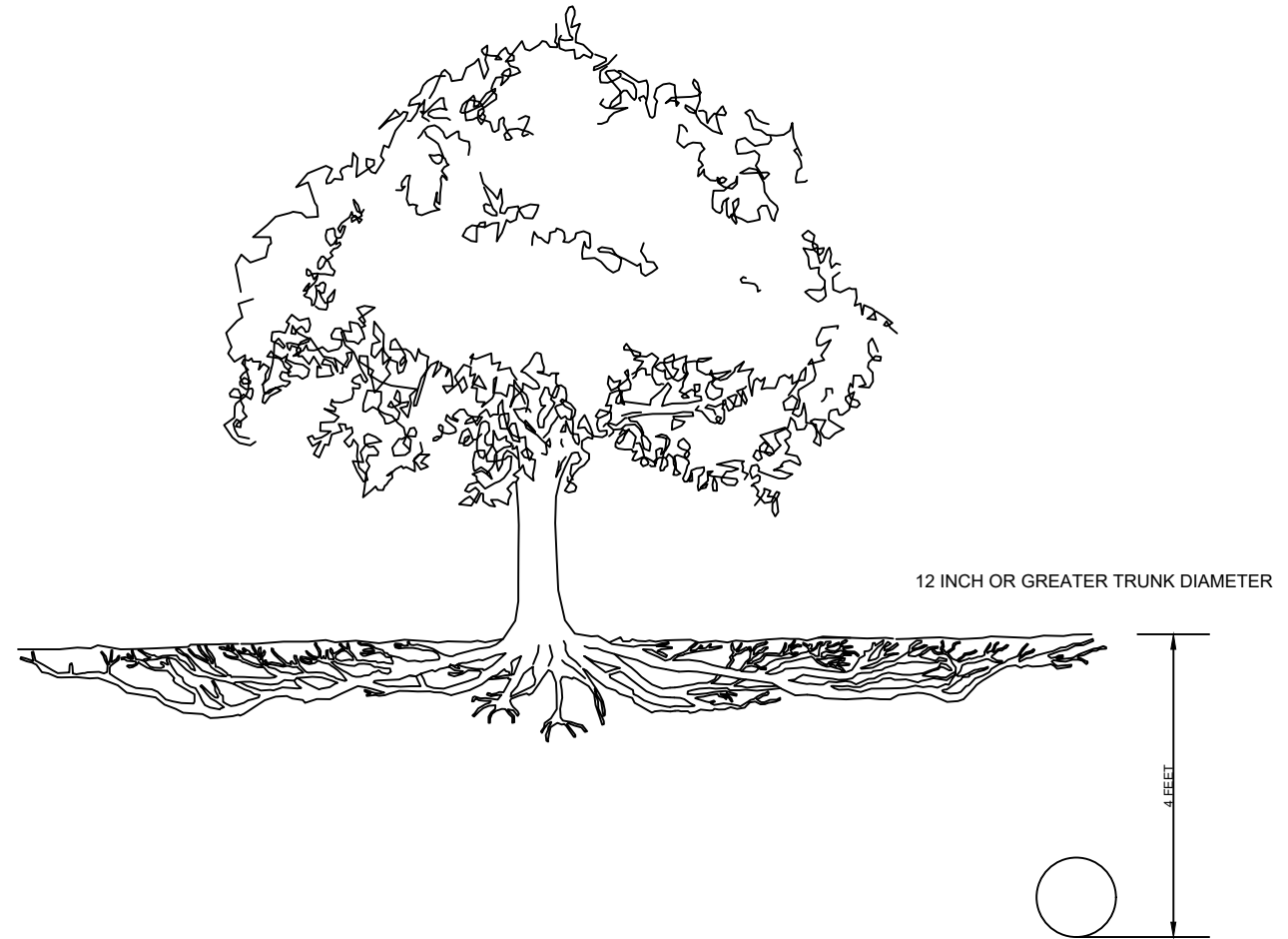


MAINTAIN A MINIMUM OF AT LEAST 3 FEET OF SEPARATION IN ANY DIRECTION BETWEEN DIRECTIONAL BORE AND ALL EXISTING FACILITIES.

UTILITY SEPARATION DETAIL



DIRECTIONAL BORING DETAIL



TREE PROTECTION - TUNNELING



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Do not allow work to interfere with the flow of traffic.

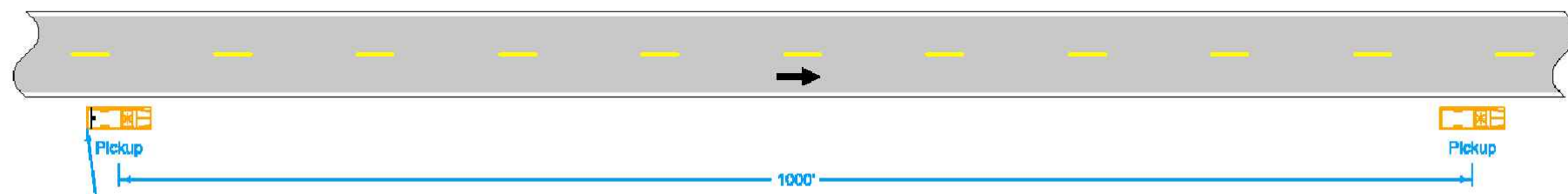
When parked, locate vehicles as far from the open traffic lane as possible. Entrances and driveways should be used whenever appropriate.

Equip all vehicles with an amber revolving light or amber strobe light.

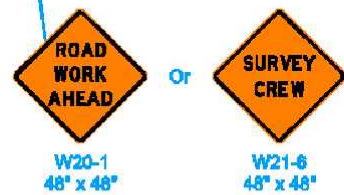
① For work lasting longer than one hour, refer to TC-202 or TC-402.



VEHICLE STOPPED ON SHOULDER FOR LESS THAN ONE HOUR ①



SLOW-MOVING OPERATION



LEGEND

┆ Traffic Sign

← Direction of Traffic

Possible Contract Item:
Traffic Control

	REVISION	
	3	10-15-19
STANDARD ROAD PLAN		TC-1
REVISIONS: New logo.		SHEET 1 of 1

Shawn Miller
APPROVED BY DESIGN METHODS ENGINEER

**WORK NOT AFFECTING TRAFFIC
(TWO-LANE OR MULTI-LANE)**

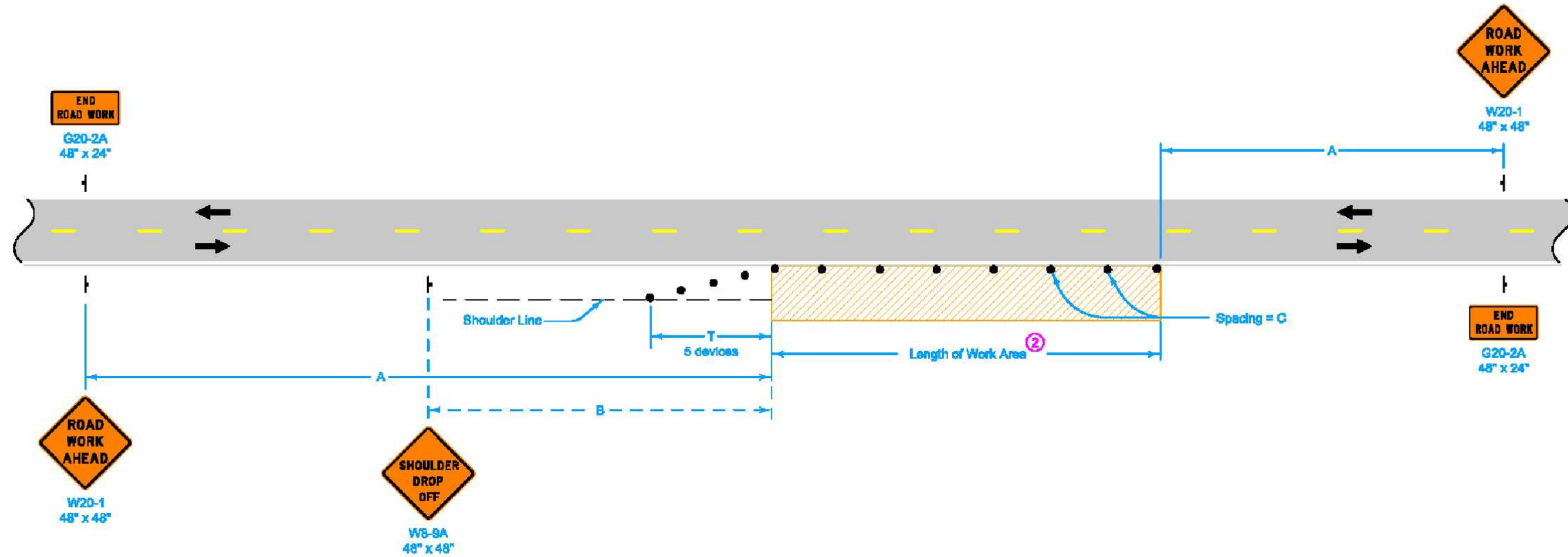


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LEGEND

- Traffic Sign
- 42" Channelizer
- Work Area
- Direction of Traffic

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

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

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

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

For work lasting less than one hour, refer to TC-1.

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

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

Possible Contract Item:
Traffic Control

IOWA DOT	REVISION	
	8	04-21-15
STANDARD ROAD PLAN		TC-202
		SHEET 1 of 1
REVISIONS: Modified general notes, changed title and replaced the DOT logo in the title block with the new version.		
APPROVED BY DESIGN METHODS ENGINEER		
WORK WITHIN 15 FT OF TRAVELED WAY		

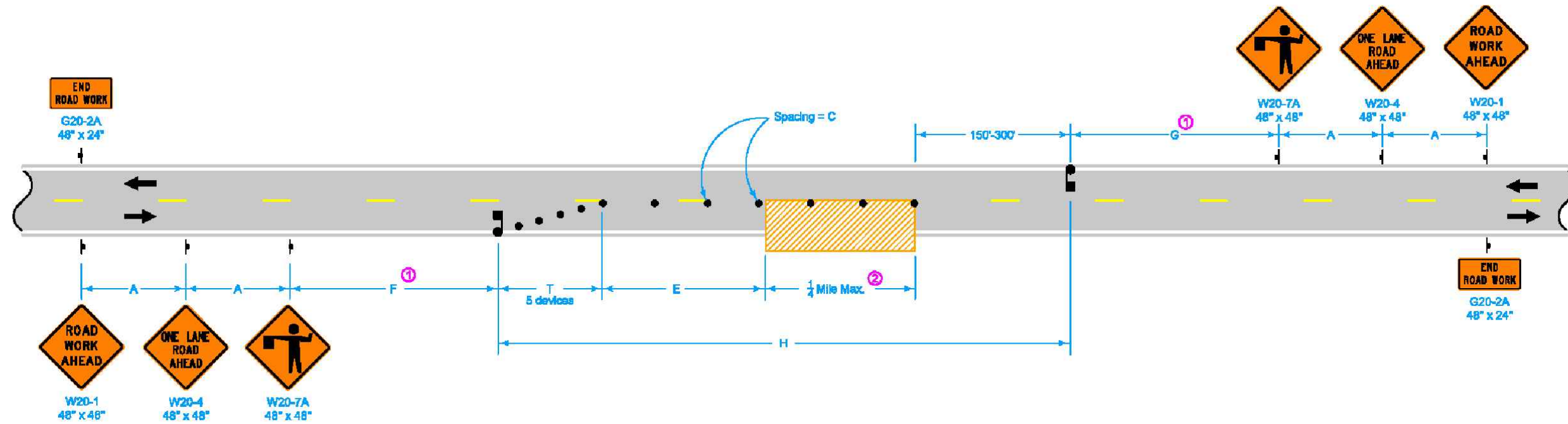


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LEGEND

- Traffic Sign
- Flagger
- 42" Channelizer
- Work Area
- Direction of Traffic

SPEED LIMIT (mph)	A	C	E	F and G Range	F + G Max.	H Max.	T
35 or less	250'	40'	0'-200'	500'-3000'	3500'	2000'	50'
40 - 45	350'	80'	0'-200'	700'-3000'	3700'	2000'	100'
50 or greater	500'	100'	200'-300'	1000'-3000'	4000'	2000'	100'

- ① Keep F and G distances as near to minimum values as work permits. However, to allow advancement of the work area without moving signs, F and G distances may be varied within the limits of the table. Maximum movement can be achieved by setting one F or G value at the minimum and the other value at its maximum.
- ② If length of work area exceeds 1/4 mile, use TC-214.

Possible Contract Items:
 Flaggers
 Traffic Control

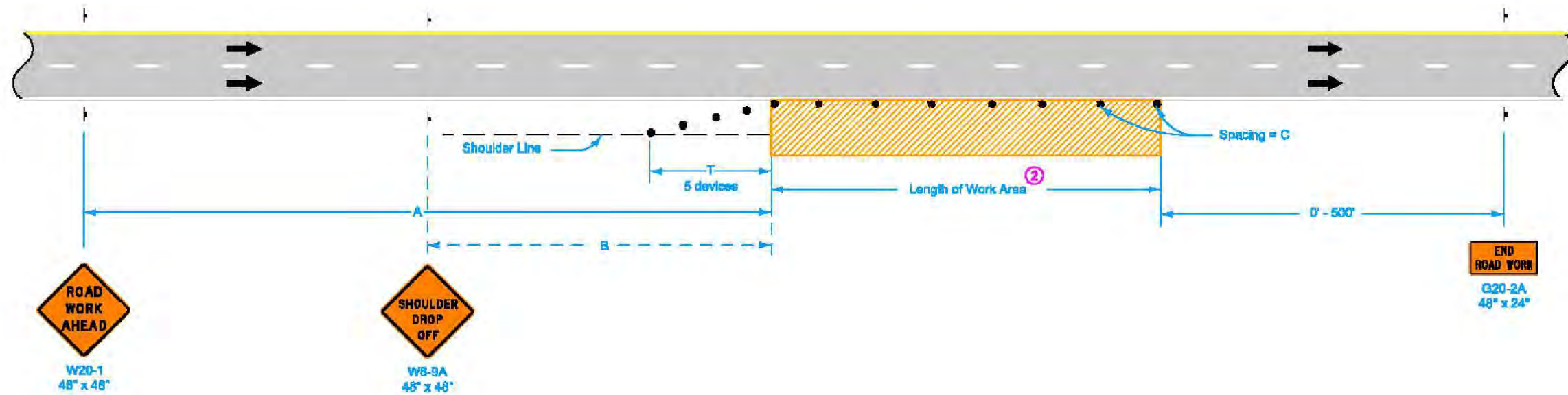
	REVISION
	4 10-15-19
STANDARD ROAD PLAN	TC-213
REVISIONS: New logo.	SHEET 1 of 1
APPROVED BY DESIGN METHOD/ENGINEER	
LANE CLOSURE WITH FLAGGERS	



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LEGEND

- Traffic Sign
- 42" Channelizer
- Work Area
- Direction of Traffic

SPEED LIMIT (mph)	A	B	C ^②	T
40 or less	500'	250'	40'	100'
45 - 50	700'	350'	80' ^①	200'
55 - 60	1500'	500'	100' ^①	200'
65 - 70	1500'	500'	100' ^①	230'

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

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

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

For work lasting less than one hour, refer to TC-1.

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

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

Possible Contract Item:
Traffic Control

 STANDARD ROAD PLAN	REVISION 8 04-21-15
	TC-402 SHEET 1 of 1
REVISIONS: Modified general notes, changed title and replaced the DOT logo in the title block with the new version.	
<i>Devin Smith</i> APPROVED BY DESIGN METHODS ENGINEER	
WORK WITHIN 15 FT OF TRAVELED WAY	



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