FIBER OPTIC GENERAL NOTES

1. ALL MATERIAL SHALL BE FROM THE CITY OF LAWRENCE PRE–APPROVED MATERIALS LIST AVAILABLE AT CITY HALL.
2. ALL TRAFFIC CONTROL IN CONJUNCTION WITH THE FIBER OPTIC CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND THE LAWRENCE TRAFFIC CONTROL HANDBOOK FOR STREET MAINTENANCE AND CONSTRUCTION OPERATIONS, LATEST REVISIONS.
3. THE CONTRACTOR SHALL STAKE THE LOCATIONS FOR ALL SERVICE BOXES TO BE INSTALLED. THE STATIONS AND OFFSETS PROVIDED ARE TO THE CENTER OF THE FIBER OPTIC EQUIPMENT. THE CONTRACTOR SHALL PROVIDE ELEVATIONS. IF OBSTRUCTIONS ARE ENCOUNTERED DURING INSTALLATION, THE CONTRACTOR WILL RE–STAKE THOSE LOCATIONS AFFECTED BY THE OBSTRUCTION. THE CITY FIBER OPTIC INSPECTOR SHALL INSPECT THE STAKING PRIOR TO ANY EXCAVATION/CONSTRUCTION.
4. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES, IF SHOWN, ARE AN APPROXIMATE ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES FOR LOCATIONS OF ALL UNDERGROUND LINES PRIOR TO EXCAVATION AND BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES, WHICH MIGHT OCCUR AS A RESULT OF THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
5. THE CITY OF LAWRENCE IS ON THE ONE CALL SYSTEM.
6. ALL CABLES IN SERVICE BOXES AND POLES SHALL BE IDENTIFIED WITH COLOR–CODED TAPE AS FOLLOWS:
   NORTH CABLE:TAPE COLOR CODE BLUE
   EAST CABLE: TAPE COLOR CODE YELLOW.
   SOUTH CABLE:TAPE COLOR CODE PURPLE
   WEST CABLE: TAPE COLOR CODE RED
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING EXISTING EQUIPMENT AS NOTED AND DELIVERING ALL SALVAGEABLE EQUIPMENT TO THE CITY OF LAWRENCE. THE CONTRACTOR SHALL CONTACT THE CITY OF LAWRENCE TRAFFIC DIVISION TO COORDINATE DELIVERY (AT LEAST 24–HOUR ADVANCE NOTICE SHALL BE PROVIDED). ALL RETURNED EQUIPMENT SHALL BE DISASSEMBLED PER THE INSTRUCTIONS OF THE TRAFFIC DIVISION OF THE CITY OF LAWRENCE DEPARTMENT OF MUNICIPAL SERVICES AND OPERATIONS (SEE THIS SHEET). THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE OR LOSS OF SALVAGEABLE EQUIPMENT.
8. ROCK AND SHALE MAY BE ENCOUNTERED AND THUS THE BID ITEMS SHALL REFLECT THE EXTRA WORK NECESSARY TO ACCOMPLISH THE INSTALLATION. NO ADDITIONAL PAYMENTS ("EXTRAS") WILL BE MADE FOR EXCAVATION OF ROCK OR SHALE AND SUITABLE BACKFILL MATERIALS. ALL CONDUIT TRENCHES WITHIN ROCK/SHALE SHALL BE BACKFILLED WITH SUITABLE MATERIAL AND PROPERLY COMPACTED IN ACCORDANCE WITH THE SPECIFICATIONS.
9. CONDUIT SHALL BE BORED (BY APPROVED METHODS) IN THOSE AREAS OUTSIDE OF THE STREET IMPROVEMENT LIMITS. NO MORE THAN 3 (THREE) CONDUITS SHALL BE PULLED BACK THROUGH THE SAME BORE UNLESS OTHERWISE APPROVED.
10. CONTINUOUS HDPE, SDR–11 (ORANGE) CONDUIT (SIZED PER PLAN) SHALL BE INSTALLED BETWEEN ALL SERVICE BOXES PRIOR TO PAVING WITHIN THE LIMITS OF THE STREET IMPROVEMENTS. CONDUIT SPLICES BETWEEN APPURTENANCES SHALL NOT BE ALLOWED UNLESS FUSION COUPLINGS OR OTHER FUSION METHODS ARE USED. WHEN MORE THAN 1 (ONE) CONDUIT IS INSTALLED, THEY SHALL BE COLORED AS FOLLOWS: SOLID ORANGE, ORANGE WITH WHITE STRIPE, ORANGE WITH BLUE STRIPE.
11. THE CONDUIT PLACEMENT SHALL BE COORDINATED WITH THE PAVING OPERATION, WHEN APPLICABLE. CONDUIT INSTALLATION AND CONDUIT CONNECTIONS SHALL BE INSPECTED AND APPROVED BY THE CITY INSPECTOR. THE CONTRACTOR SHALL PAY ANY AND ALL EXTRA COSTS OF INSTALLING CONDUITS BY ALTERNATE CONSTRUCTION METHODS AFTER PAVEMENT HAS BEEN PLACED OR FOR ANY DAMAGES TO PAVEMENT THAT MAY OCCUR DURING CONDUIT INSTALLATION. ALL TRENCHES FOR CONDUIT UNDER PROPOSED PAVED SURFACES (DRIVES, STREETS AND SIDEWALKS) SHALL BE BACKFILLED WITH FLOWABLE FILL UNLESS OTHERWISE DIRECTED, TO BELOW THE PROPOSED PAVEMENT SURFACE.
12. THE CONDUIT SHALL BE INSTALLED UNDER UNDERDRAIN PIPE CROSSINGS AND UNDER THE UNDERDRAIN BLANKETS. REFER TO THE STREET PLANS FOR UNDERDRAIN PIPE AND BLANKET LOCATIONS AND APPROPRIATE DETAILS, IF APPLICABLE.
13. ALL FIBER OPTIC FUSION SPLICES SHALL BE MADE AT AN EXISTING SERVICE BOX MADE IN THE PRESENCE OF THE INSPECTOR FOR APPROVAL.
14. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO MINIMIZE THE DOWNTIME OF THE EXISTING SYSTEMS TO BE MODIFIED. ANY EXISTING FIBER OPTIC SYSTEM SHALL BE MAINTAINEDDURING CONSTRUCTION AS LONG AS POSSIBLE UNTIL THE NEW SYSTEM IS INSTALLED AND OPERATING.
15. DAMAGE TO ANY EXISTING FIBER OPTIC EQUIPMENT DUE TO THE CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE EQUIPMENT SHALL BE REPLACED OR REPAIRED (AS DIRECTED BY THE CITY) WITH MATERIALS EQUAL OR BETTER THAN THE EXISTING MATERIAL.
16. ALL EXISTING FIBER OPTIC EQUIPMENT IS TO BE USED IN PLACE (U.I.P.) UNLESS OTHERWISE NOTED IN THE PLANS.
17. THE CONTRACTOR SHALL NOTIFY THE CITY OF LAWRENCE, DEPARTMENT OF MUNICIPAL SERVICES AND OPERATIONS OF THE EXACT CONSTRUCTION SCHEDULE SO THAT INSPECTION OF THE INSTALLATION CAN BE MADE.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING UNDERGROUND SPRINKLER SYSTEMS DURING CONSTRUCTION. ALL AFFECTED PIPES OR FITTINGS SHALL BE RESTORED TO ORIGINAL CONDITION AND LOCATION WITH NEW MATERIALS SIMILAR TO EXISTING. ALL RESTORATION WORK SHALL BE ACCEPTABLE TO THE ENGINEER AND PROPERTY OWNER.
19. ALL UNPAVED AREAS DAMAGED DURING CONSTRUCTION SHALL BE RESTORED TO THE ORIGINAL CONDITION. UNLESS OTHERWISE DIRECTED, GRASSY AREAS SHALL BE RE–SODDED.
20. CONTRACTOR SHALL USE A POLYMER LUBRICATING AGENT TO FACILITATE CONDUIT BORES UNDER PAVED STREETS. FAILURE TO DO SO WILL RESULT IN A DENIAL TO RETRIEVE BORE HEAD, IN THE CASE OF LOSS, UNDER ANY PAVED STREET BY EXCAVATION METHODS.
21. A 1C#10 AWG THHN/THWN STRANDED COPPER LOCATING CABLE (RED) SHALL BE INSTALLED IN ALL CONDUITS.
22. THE ENDS OF ALL CONDUIT IN SERVICE BOXES SHALL BE PLUGGED WITH AN APPROVED CONDUIT PLUG. REFER TO DETAIL ON PAGE 2 OF THE FIBER OPTICS DETAILS.
23. ALL FUSION SPLICES TO BE INSPECTED BY THE CITY OF LAWRENCE.

DROP FIBER CABLE SPLICE DETAILS

INTERSECTION: [NAMED DEVICE]

6–CT CABLE	1	2	3	4	5	6	
36–CT CABLE							

← TO THE [DIRECTION] TO THE [DIRECTION] →

INTERSECTION: [NAMED DEVICE]

6–CT CABLE	1	2	3	4	5	6	
36–CT CABLE							

← TO THE [DIRECTION] TO THE [DIRECTION] →

INTERSECTION: [NAMED DEVICE]

6–CT CABLE	1	2	3	4	5	6	
36–CT CABLE							

← TO THE [DIRECTION] TO THE [DIRECTION] →

INTERSECTION: [NAMED DEVICE]

6–CT CABLE	1	2	3	4	5	6	
36–CT CABLE							

← TO THE [DIRECTION] TO THE [DIRECTION] →

INTERSECTION: [NAMED DEVICE]

12–CT CABLE	1	2	3	4	5	6	(1)
36–CT CABLE							

← TO THE [DIRECTION] TO THE [DIRECTION] →

INTERSECTION: [NAMED DEVICE]

12–CT CABLE	1	2	3	4	5	6	(1)
36–CT CABLE							

← TO THE [DIRECTION] TO THE [DIRECTION] →

INTERSECTION: [NAMED DEVICE]

12–CT CABLE	1	2	3	4	5	6	(1)
36–CT CABLE							

← TO THE [DIRECTION] TO THE [DIRECTION] →

INTERSECTION: [NAMED DEVICE]

6–CT CABLE	1	2	3	4	5	6
72–CT CABLE						

← TO THE [DIRECTION] TO THE [DIRECTION] →

INTERSECTION: [NAMED DEVICE]

6–CT CABLE	1	2	3	4	5	6
72–CT CABLE						

← TO THE [DIRECTION] TO THE [DIRECTION] →

INTERSECTION: [NAMED DEVICE]

6–CT CABLE	1	2	3	4	5	6
72–CT CABLE						

← TO THE [DIRECTION] TO THE [DIRECTION] →

INTERSECTION: [NAMED DEVICE]

12–CT CABLE	1	2	3	4	5	6	(1)
72–CT CABLE							

← TO THE [DIRECTION] TO THE [DIRECTION] →

INTERSECTION: [NAMED DEVICE]

12–CT CABLE	1	2	3	4	5	6	(1)
72–CT CABLE							

← TO THE [DIRECTION] TO THE [DIRECTION] →

INTERSECTION: [NAMED DEVICE]

12–CT CABLE	1	2	3	4	5	6	(1)
72–CT CABLE							

← TO THE [DIRECTION] TO THE [DIRECTION] →

INTERSECTION: [NAMED DEVICE]

12–CT CABLE	1	2	3	4	5	6	(1)
72–CT CABLE							

← TO THE [DIRECTION] TO THE [DIRECTION] →

EXAMPLE HOW TO READ THESE CHARTS

6–CT CABLE	1	2	3	4	5	6	DROP CABLE & CABINET TERMINATIONS
72–CT CABLE		17	18	17	18		TRUNK CABLE FIBERS

← TO THE SOUTH TO THE NORTH →

IN THIS EXAMPLE, FIBERS 2 AND 3 OF THE 6–CT DROP CABLE GET SPLICED TO FIBERS 17 AND 18 OF THE TRUNK CABLE HEADING TO THE SOUTH. FIBERS 4 AND 5 OF THE 6–CT DROP CABLE GET SPLICED TO FIBERS 17 AND 18 HEADING TO THE NORTH. FIBERS 1 AND 6 OF THE DROP CABLE DO NOT GET SPLICED TO ANYTHING.

SPLICE NOTES

1. FOR 12–CT DROP CABLE, DO NOT TERMINATE FIBERS 7 TO 12.
2. ALL FIBER OPTIC CABLE SHALL CONFORM TO THE EIA/TIA COLOR CODING ACCORDING TO THE TIA/EIA–598 SPECIFICATIONS, OPTICAL FIBER CABLE COLOR CODING.
3. THE FIBER NUMBERS SHALL BE FOLLOWED DURING SPLICING/TERMINATING USING THIS INDUSTRY STANDARD COLOR CODING SCHEME. SOME FIBER OPTIC CABLE WILL VARY BY THE NUMBER OF FIBERS PER BUFFER TUBE WITH EITHER 6 OR 12 FIBERS PER BUFFER TUBE BEING THE INDUSTRY STANDARD.

CABLE SPLICE DETAILS

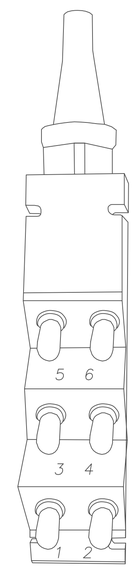
FIBER OPTIC LEGEND

EXISTING

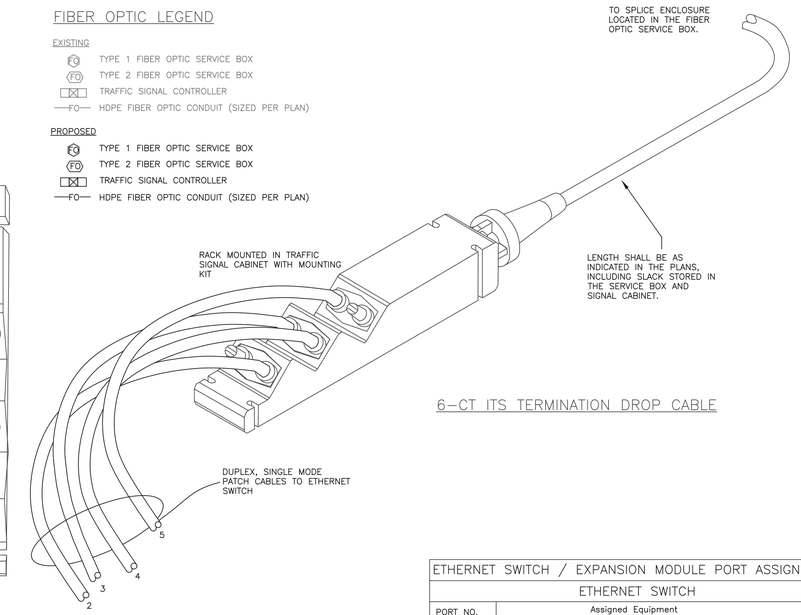
- FO TYPE 1 FIBER OPTIC SERVICE BOX
- FO TYPE 2 FIBER OPTIC SERVICE BOX
- TRAFFIC SIGNAL CONTROLLER
- —FO— HDPE FIBER OPTIC CONDUIT (SIZED PER PLAN)

PROPOSED

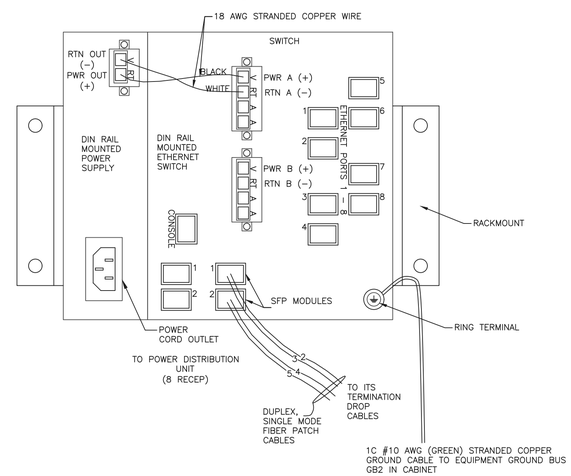
- FO TYPE 1 FIBER OPTIC SERVICE BOX
- FO TYPE 2 FIBER OPTIC SERVICE BOX
- TRAFFIC SIGNAL CONTROLLER
- —FO— HDPE FIBER OPTIC CONDUIT (SIZED PER PLAN)



TOP VIEW



6–CT ITS TERMINATION DROP CABLE



ETHERNET SWITCH / EXPANSION MODULE PORT ASSIGNMENTS	
ETHERNET SWITCH	
PORT NO.	Assigned Equipment
1	SIGNAL CONTROLLER MALFUNCTIONING
2	MANAGEMENT UNIT (MMU) EMERGENCY
3	VEHICLE PRE–EMPTION (EVP)
4	BATTERY BACKUP / UPS
5	PRESENCE RADAR DETECTOR INTERFACE MODULE
6	PRESENCE / ADVANCE RADAR DETECTOR INTERFACE MODULE
7	ADVANCE RADAR DETECTOR INTERFACE MODULE
8	VIDEO DETECTION
EXPANSION MODULE	
PORT NO.	ASSIGNED EQUIPMENT
1	FLASHING SCHOOL BEACONS
2	IRRIGATION
3	SPARE 1
4	SPARE 2
5	CCTV CAMERA 1 PoE INJECTOR
6	CCTV CAMERA 2 PoE INJECTOR
7	SPARE 3
8	SPARE 4

ETHERNET SWITCH & POWER SUPPLY DETAILS (WITH ETHERNET SWITCH / EXPANSON MODULE ASSIGNMENTS)

INSTRUCTIONS FOR DISASSEMBLY AND RETURN OF SALVAGED FIBER OPTIC EQUIPMENT

THE FOLLOWING IS A LIST OF FIBER OPTIC EQUIPMENT WHICH SHALL BE SALVAGED AND RETURNED TO THE CITY OF LAWRENCE, UNLESS OTHERWISE INSTRUCTED BY THE INSPECTOR. THE CITY MAINTAINS THE FIRST RIGHT OF REFUSAL OF ANY OF THE EQUIPMENT LISTED. THE PROJECT INSPECTOR WILL MAKE AN ON–SITE ASSESSMENT TO DETERMINE IF THE EQUIPMENT SHOULD BE SALVAGED OR DISPOSED. ANY EQUIPMENT THAT WILL NOT BE SALVAGED SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

1. ALL ETHERNET SWITCHES DESIGNATED TO BE REMOVED OR REPLACED SHALL BE REMOVED FROM THE SIGNAL CABINET AND RETURNED. ALL ETHERNET SWITCHES MOUNTED WITH A 19" RACKMOUNT KIT AND AN AC POWER CONVERTER SHALL BE RETURNED WITH ALL ITEMS STILL ATTACHED TO THE RACKMOUNT KIT. ALL CABLES SHALL BE DISCONNECTED FROM THE UNIT.
2. ALL ETHERNET VIDEO ENCODERS SHALL BE UNPLUGGED, ALL CABLES DISCONNECTED, AND RETURNED.
3. ALL ITS TERMINATION DROP CABLES SHALL BE DISCONNECTED AT THE SPLICE ENCLOSURE LOCATED IN THE SERVICE BOX AND REMOVED FROM THE CONDUIT BACK TO THE CONTROL CENTER CABINET. IF THE LEAD–IN CABLE CANNOT BE REMOVED FROM THE CONDUIT WITHOUT DAMAGING, THE ITEM SHOULD BE DISCARDED. ALL PATCH CABLES SHALL BE REMOVED AND DISCARDED. THE LEAD–IN CABLE SHALL BE NEATLY COILED AND TAPED AND TERMINATION CAPS RE–INSTALLED BEFORE RETURNING.
4. ALL TERMINAL SERVERS SHALL BE DISCONNECTED AND RETURNED.
5. SPLICE ENCLOSURES NOT DESIGNATED TO BE REUSED SHALL BE REMOVED AND RETURNED. EXISTING FIBER OPTIC CABLES SHALL BE CUT NEAR THE END OF THE ENCLOSURE. IT IS NOT NECESSARY TO OPEN THE ENCLOSURE AND REMOVE ABANDONED CABLE.
6. ALL SERVICE BOXES AND LIDS SHALL BE REMOVED AND RETURNED IF IN GOOD CONDITION.

2026 EDITION SHEET _____ OF _____

DATE	BY	REVISION
04–01–26	LJM	REPLACES ALL PREVIOUS VERSIONS OF FIBER OPTIC DETAILS
04–01–25	LJM	REPLACES ALL PREVIOUS VERSIONS OF FIBER OPTIC DETAILS

Lawrence KANSAS

STANDARD DETAILS FOR
FIBER OPTIC SPLICING AND GENERAL NOTES

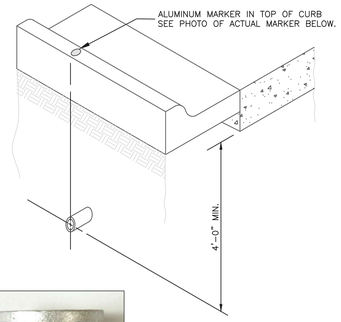
1 OF 4

DAVID P. CRONIN
CITY ENGINEER

CRAIG S. OWENS
CITY MANAGER

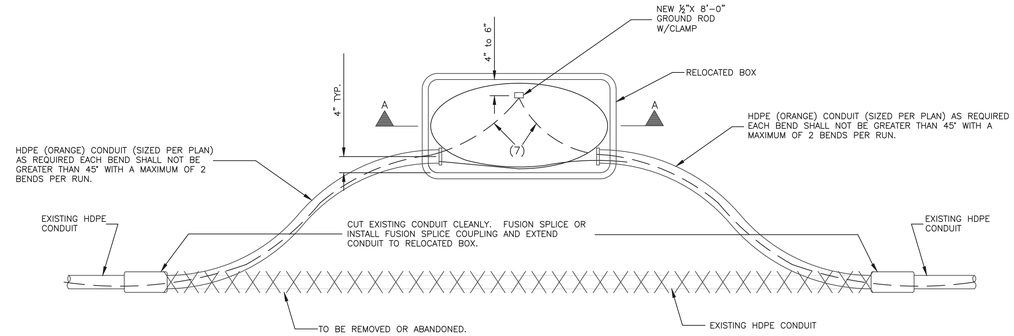
CONDUIT MARKING DETAIL NOTES:

1. CONDUIT UNDER ALL ROADWAY SURFACES SHALL BE PLACED A MINIMUM OF 4'–0" BELOW THE BOTTOM OF PAVEMENT AND SHALL EXTEND TO A JUNCTION BOX OR SERVICE BOX. THE CONDUIT SHALL BE INSTALLED TO DRAIN. ALL ENDS SHALL BE CAPPED IF NOT USED. AN ALUMINUM MARKER SHALL BE PLACED IN THE TOP OF THE CURB DIRECTLY OVER THE CONDUIT. ALUMINUM MARKERS WILL BE FURNISHED BY THE CITY OF LAWRENCE.
2. THE CONTRACTOR SHALL NOTIFY THE CITY OF LAWRENCE, DEPARTMENT OF MUNICIPAL SERVICES AND OPERATIONS, TRAFFIC SERVICES DIVISION, FOR INSPECTION OF THE CONDUIT INSTALLATION BY THE STREETLIGHTING INSPECTOR, BY CALLING (785)832–3035. AT LEAST 24 HOURS NOTICE SHALL BE PROVIDED. THE CONDUIT SHALL NOT BE COVERED SO AS TO ENSURE PROPER DEPTH, CORRECT CONDUIT MATERIAL, AND PROPER CONDUIT END TREATMENT AS DESCRIBED ABOVE.

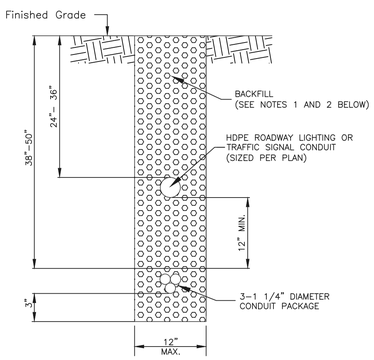


CONDUIT MARKING DETAIL

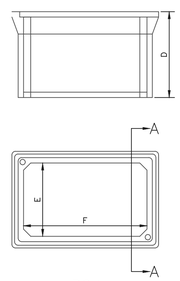
PHOTO OF ACTUAL MARKER



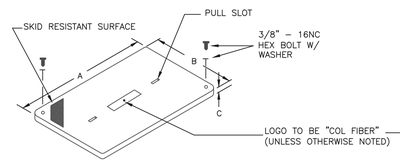
PLAN (CONDUIT POSITION) RELOCATED BOX INSTALLATION DETAIL



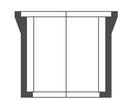
TRENCH W/MULTIPLE CONDUITS IN UNPAVED AREAS



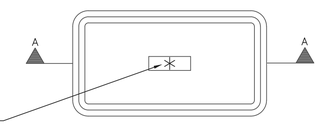
BOX



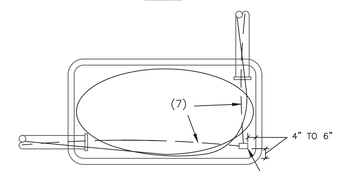
COVER



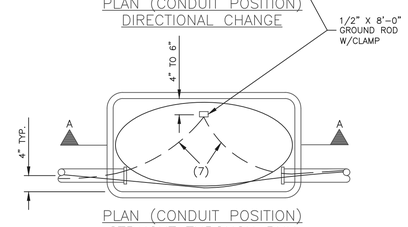
SECTION A–A



PLAN



PLAN (CONDUIT POSITION) DIRECTIONAL CHANGE

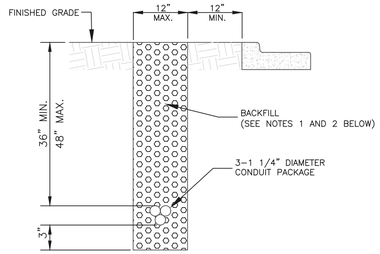


PLAN (CONDUIT POSITION) STRAIGHT THROUGH RUN

NOTES:

1. BOXES SHALL BE STACKABLE FOR EXTRA DEPTH.
2. THE 'FO' SERVICE BOX AND COVER SHALL BE RATED FOR NO LESS THAN 22,500 LBS TEST LOAD (TIER 15) LOAD PER ANSI/SCTE–77.
3. SERVICE BOX MATERIAL TO BE AN AGGREGATE CONSISTING OF SAND AND GRAVEL BOUND TOGETHER WITH A POLYMER AND REINFORCED WITH CONTINUOUS WOVEN GLASS STRANDS. THE MATERIAL MUST HAVE HAVE THE FOLLOWING MECHANICAL PROPERTIES:
   COMPRESSIVE STRENGTH – 11,000 PSI ASTM C–109/D3410
   TENSILE STRENGTH – 1,700 PSI ASTM C–496/D638/D2343
   FLEXURAL STRENGTH – 7,500 PSI ASTM C–580/D790
4. A 1/2" X 8'–0" GROUND ROD SHALL BE INSTALLED IN EACH SERVICE BOX.
5. THE CONDUIT SHALL ENTER AND EXIT THE SERVICE BOX BETWEEN 36" AND 48" AND SHALL BE 4" CENTERED OFF THE EDGE OF THE SERVICE BOX WALL. THE FIBER CABLE SHALL AT NO TIME HAVE LESS THAT AN 8" RADIUS BEND.
6. 18" MIN. LAYER OF 1/2" CLEAN CRUSHED ROCK SHALL BE CONSTRUCTED BELOW THE SERVICE BOX FOR DRAINAGE PURPOSES.
7. 1C#10 AWG THHN/THWN (RED) STRANDED COPPER LOCATING CABLE.
8. THE TYPE 2 FIBER BOX SHALL HAVE A TWO–PIECE OVERLAPPING COVER.
9. ALL CONDUIT SHALL BE CAPPED WITH AN APPROVED DEVICE, SIMILAR TO THE ONE SHOWN IN THE DETAIL BELOW.

PHOTO OF ACTUAL PLUG/CAP



TRENCHING IN UNPAVED AREAS

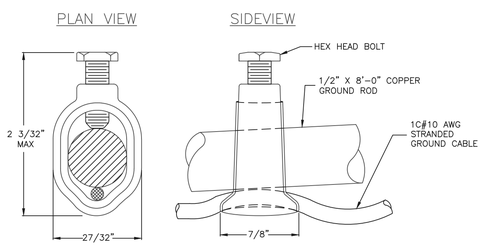
TRENCHING DETAILS

NOTES:

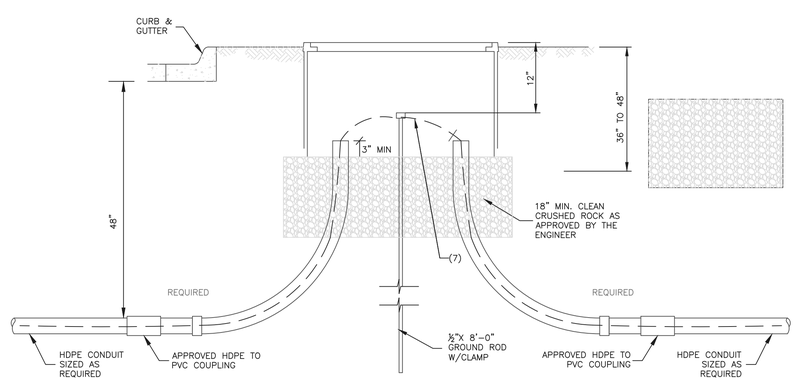
1. ALL TRENCHES FOR CONDUIT UNDER PROPOSED PAVED SURFACES SHALL BE BACKFILLED WITH FLOWABLE FILL.
2. BACKFILL IN UNPAVED AREAS SHALL BE EARTH OR AB–3 AND FREE OF RUBBLE AND ROCK. CONDUITS SHALL BE PITCHED TO DRAIN.

BOX TYPE	APPROXIMATE DIMENSIONS (INCHES)					
	A	B	C	D	E	F
TYPE 1 FIBER	35 5/8	24	3	36	22 1/4	33 7/8
TYPE 2 FIBER (8)	47 5/8	30 1/8	3	36	28 1/8	45 5/8

FIBERGLASS REINFORCED POLYMER CONCRETE FIBER OPTIC SERVICE BOX DETAILS



GROUND ROD CLAMP CONNECTION DETAIL



SECTION A–A

INITIAL BOX INSTALLATION DETAIL

2026 EDITION

SHEET _____ OF _____

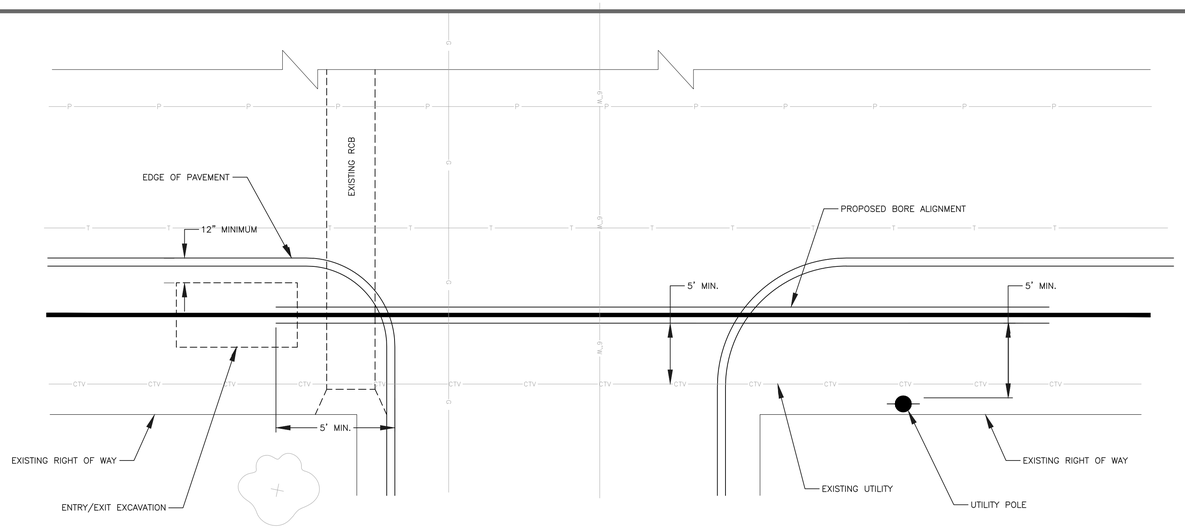
DATE	BY	REVISION
04–01–26	LJM	REPLACES ALL PREVIOUS VERSIONS OF FIBER OPTIC DETAILS
04–01–25	LJM	REPLACES ALL PREVIOUS VERSIONS OF FIBER OPTIC DETAILS

Lawrence KANSAS

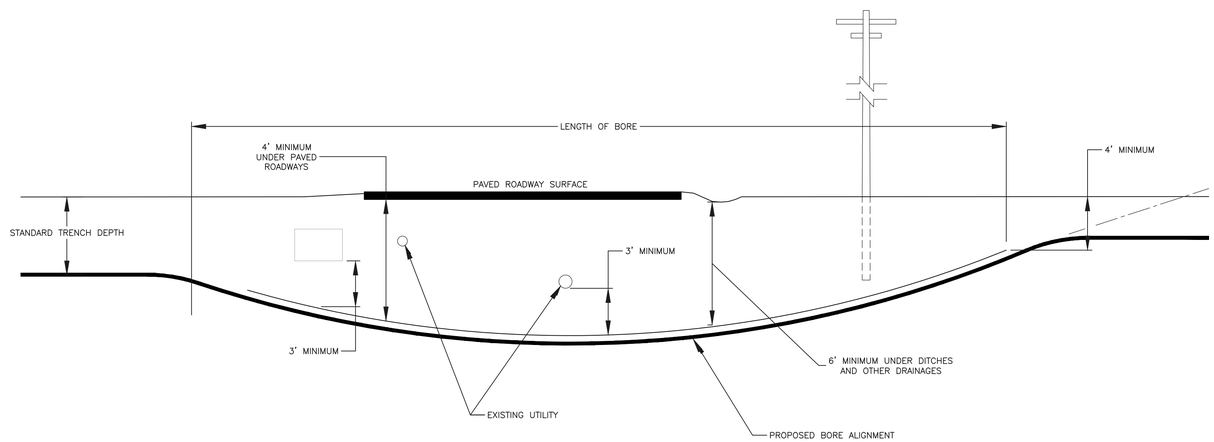
STANDARD DETAILS FOR
FIBER OPTIC BOXES AND CONDUIT

DAVID P. CRONIN
CITY ENGINEER

CRAIG S. OWENS
CITY MANAGER



HORIZONTAL MINIMUM CLEARANCES
N.T.S.



VERTICAL MINIMUM CLEARANCES
N.T.S.

HDD Installation Notes:

1. CITY OF LAWRENCE CODE AND CITY OF LAWRENCE DESIGN AND CONSTRUCTION STANDARDS ARE INCORPORATED, EXCEPT AS OTHERWISE NOTED.
2. THE PERMITTEE SHALL BE RESPONSIBLE FOR NOTIFICATION OF ONE-CALL SERVICES AND COORDINATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.
3. DRILLING FLUIDS SHALL BE CONTAINED AND REMOVED IMMEDIATELY UPON BORE COMPLETION.
4. ALL CONSTRUCTION MATERIALS SHALL BE REMOVED FROM THE SITE PRIOR TO RESTORATION OF DISTURBED AREAS.
5. ALL RESTORATION WORK SHALL BE IN ACCORDANCE WITH THE MANUAL OF INFRASTRUCTURE STANDARDS FOR RIGHT-OF-WAY RESTORATION. IN RESTORING THE RIGHT-OF-WAY, THE PERMITTEE GUARANTEES ITS WORK AND SHALL MAINTAIN IT FOR 24 MONTHS FOLLOWING ITS COMPLETION.
6. EXCAVATIONS UNDER PAVED SURFACES SHALL BE RESTORED IN COMPLIANCE WITH THE CITY OF LAWRENCE STANDARD DETAILS FOR STREET TRENCHING.

HORIZONTAL DIRECTIONAL DRILLING INSTALLATION

2026 EDITION

SHEET _____ OF _____

DATE	BY	REVISION
04-01-26	LJM	REPLACES ALL PREVIOUS VERSIONS OF FIBER OPTIC DETAILS
04-01-25	LJM	REPLACES ALL PREVIOUS VERSIONS OF FIBER OPTIC DETAILS

Lawrence KANSAS

STANDARD DETAILS FOR
HORIZONTAL DIRECTIONAL DRILLING INSTALLATION

DAVID P. CRONIN
CITY ENGINEER

CRAIG S. OWENS
CITY MANAGER

FIBER OPTIC BILL OF MATERIALS (1)

FROM	TO	TYPE 1 FIBER OPTIC SERVICE BOX (EA)	TYPE 2 FIBER OPTIC SERVICE BOX (EA)	½"X 8'-0" GROUND ROD & CLAMP	____ -CT FIBER OPTIC CABLE (LF)	____ -CT FIBER OPTIC CABLE (LF)	____ -CT FIBER OPTIC CABLE (LF)	6-CT ITS TERM. DROP CABLE LEAD-IN (LF) (3)	1C #10 AWG CABLE TRACER (LF)	2" HDPE CONDUIT (L.F.)	1-1/4" HDPE CONDUIT (L.F.)