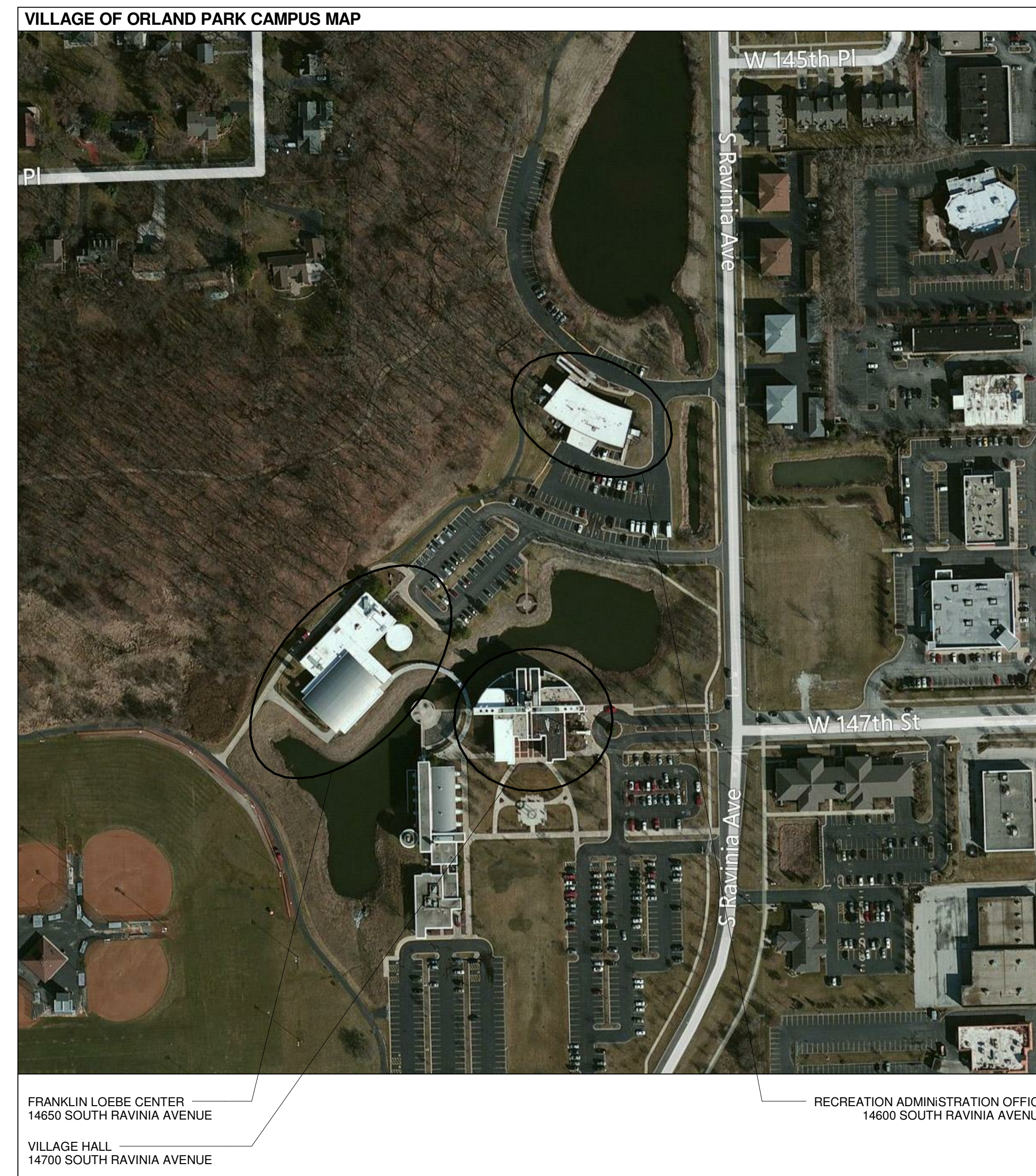
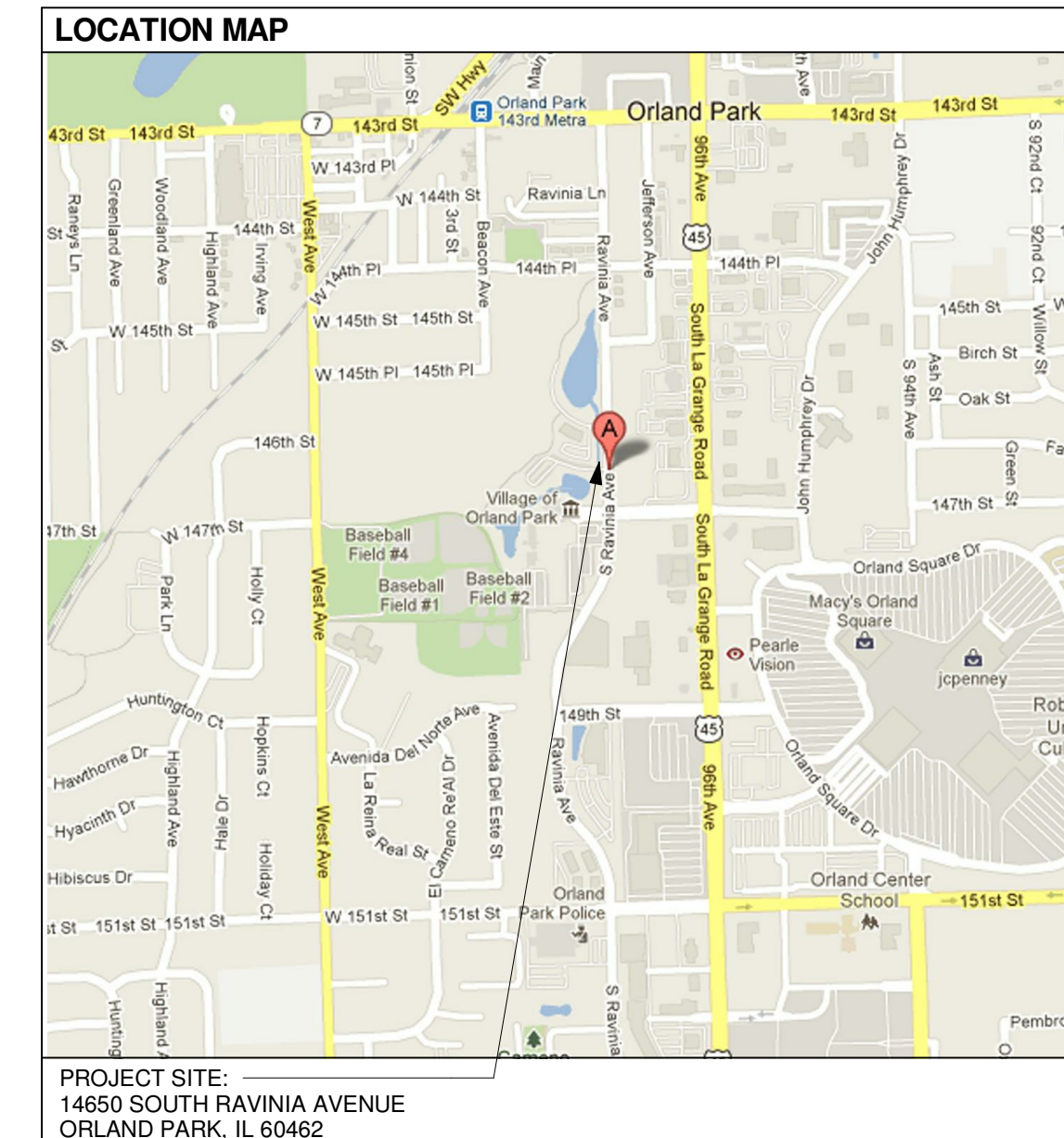


# FRANKLIN LOEBE CENTER DATA/VOICE BACKBONE CABLING RENOVATIONS

VILLAGE OF ORLAND PARK

14650 SOUTH RAVINIA AVENUE  
ORLAND PARK, IL 60462



223 W Jackson Blvd | Suite 1200  
Chicago, Illinois 60606  
ph:312.253.3400 fx:312.253.3401



## FRANKLIN LOEBE CENTER DATA/VOICE BACKBONE CABLING RENOVATIONS

For  
VILLAGE OF ORLAND PARK

At:  
14650 SOUTH RAVINIA AVENUE  
ORLAND PARK, IL 60462

**TDSi** TECHNICAL DESIGN SERVICES, INC.  
Telecommunications / Network  
Infrastructure Design & Consulting

1075 SHORE ROAD TEL: 630.983.9906  
SUITE A FAX: 630.983.9908  
NAPERVILLE, IL 60563-8758 www.tdsinc.biz

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NO.	ISSUED FOR	DATE
1	BIDDING	3.20.13

TITLE SHEET

Project: 11133.1

**T1.00**

### BOARD OF TRUSTEES

DANIEL J. MCLAUGHLIN	PRESIDENT
DAVID P. MAHER	VILLAGE CLERK
KATHLEEN M. FENTON	TRUSTEE
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EDWARD G. SCHUSSLER III	TRUSTEE
PATRICIA A. GIRA	TRUSTEE
CAROLE GRIFFIN RUZICH	TRUSTEE

### DRAWING INDEX

SHEET NUMBER	SHEET NAME
T1.00	TITLE SHEET
T2.00	DATA/VOICE SITE PATHWAY PLAN & DETAILS
T3.00	VILLAGE HALL INSTALLATION DETAILS
T3.01	VILLAGE HALL PARTIAL LOWER LEVEL PLAN
T3.10	FLC BUILDING INSTALLATION DETAILS
T3.11	FLC BUILDING PARTIAL LOWER LEVEL PLAN
T3.12	FLC BUILDING PARTIAL 1ST FLOOR PLAN
T3.20	REC ADMIN INSTALLATION DETAILS
T4.00	MISC. INSTALLATION DETAILS
TD5.00	EXISTING BACKBONE CABLE DEMO DIAGRAMS - ALTERNATE #1

### ALTERNATES:

ALTERNATE BID NO. 1: EXISTING UNDERGROUND CABLES

BASE BID:  
EXISTING UNDERGROUND CABLES TO BE SLEEVED PER DRAWINGS AND ABANDONED IN PLACE

ALTERNATE BID:  
EXISTING UNDERGROUND CABLES ARE TO BE REMOVED PER DRAWINGS ON TD5.00

### CERTIFICATION:

I HEREBY CERTIFY THAT THESE PLANS AND SPECIFICATIONS WERE PREPARED IN THE OFFICES OF STUDIO GC, INC. UNDER MY DIRECT SUPERVISION AND TO THE BEST OF MY KNOWLEDGE, COMPLY WITH THE FOLLOWING:

2009 INTERNATIONAL BUILDING CODE  
2009 INTERNATIONAL MECHANICAL CODE  
2011 NATIONAL ELECTRICAL CODE  
2004 STATE OF ILLINOIS PLUMBING CODE  
2006 INTERNATIONAL FIRE CODE  
2009 INTERNATIONAL PROPERTY MAINTENANCE CODE  
2009 ILLINOIS ENERGY CONSERVATION CODE  
1996 ILLINOIS ACCESSIBILITY CODE  
2007 NFPA 13, 2007 NFPA 72, 2002 NFPA 17A, 2004 NFPA 96  
ALL ADOPTED VILLAGE AMENDMENTS

ARCHITECT	_____
LICENSE NO. AND EXPIRATION DATE	_____
DATE SIGNED	_____



**FRANKLIN LOEBE CENTER DATA/VOICE BACKBONE CABLING RENOVATIONS**

For  
**VILLAGE OF ORLAND PARK**  
At:  
14880 SOUTH PAVANIA AVENUE  
ORLAND PARK, IL 60462

**TDS** Technical Design Services, Inc.  
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Infrastructure Design & Consulting  
1015 BLOOR ROAD TEL: 630.911.9905  
10177A FAX: 630.911.9908  
WAPORVILLE, IL 62561-8718 www.tdsinc.com

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**DATA/VOICE SITE PATHWAY PLAN & DETAILS**  
Project: 11133.1 **T2.00**

**SHEET NOTES**

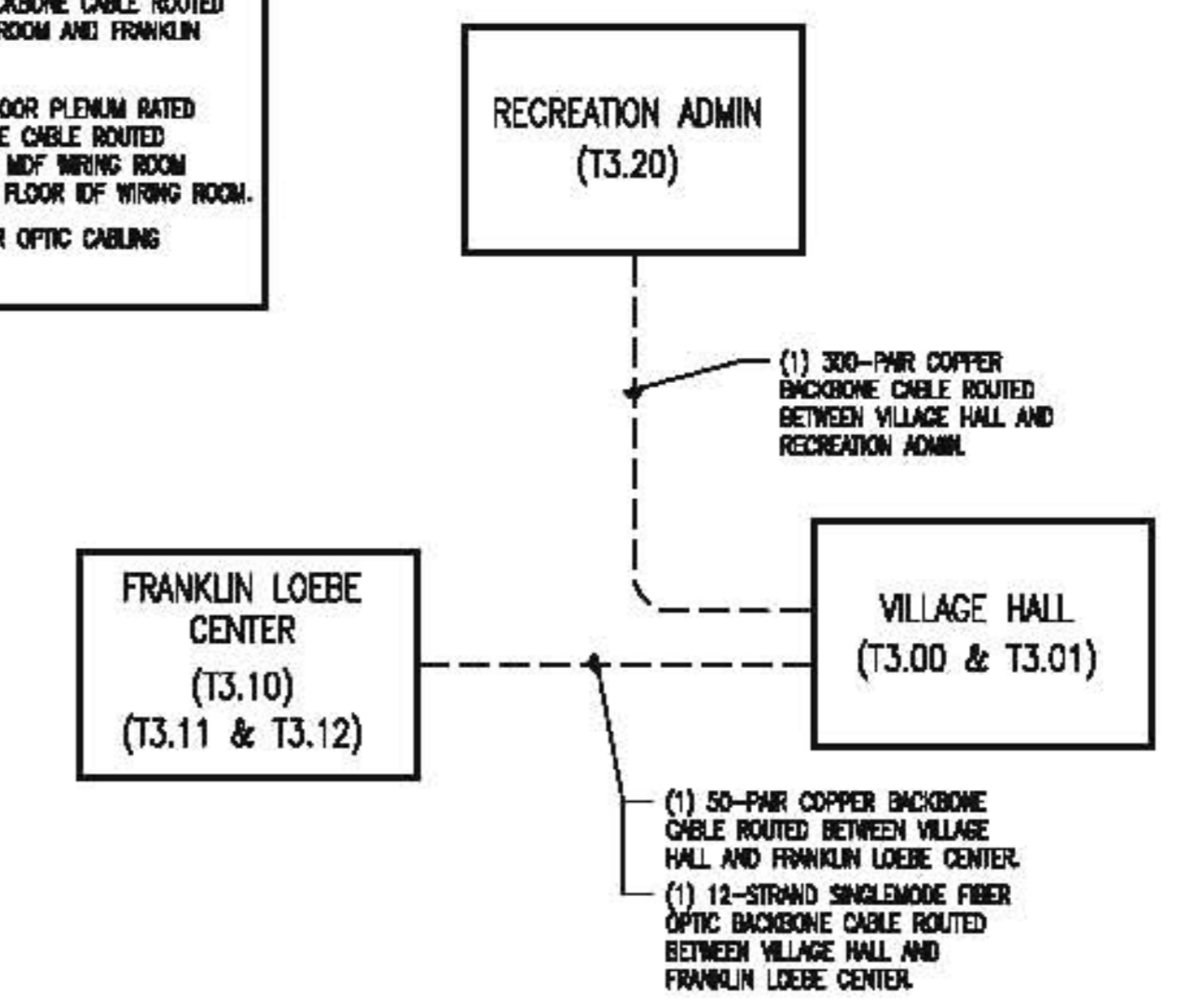
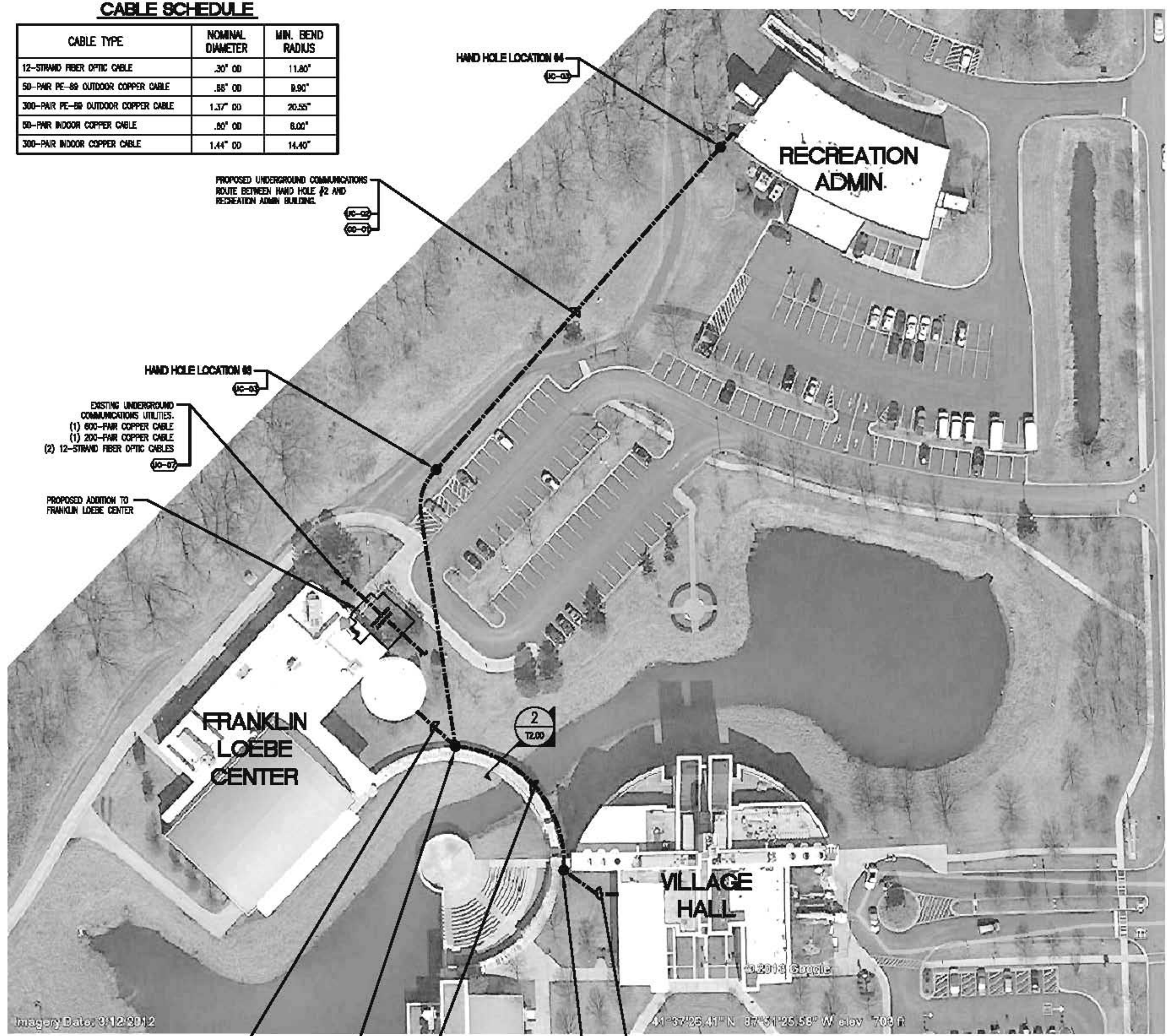
1. PRIMARY CABLE ROUTES ARE TO BE COORDINATED WITH THE OWNERS PROJECT MANAGER PRIOR TO INSTALLATION.
2. CABLE ROUTING SHOWN IS DIAGRAMMATIC. CONTRACTOR TO VERIFY EXACT ROUTING AND DISTANCES IN FIELD.
3. THE CONTRACTOR WILL BE RESPONSIBLE TO PROTECT ALL PUBLIC AND PRIVATE UTILITIES.
4. DAMAGE TO ANY PROPERTY BY THE CONTRACTOR SHALL BE REPAIRED TO THE SATISFACTION OF THE VILLAGE.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FOLLOWING ALL VILLAGE STANDARDS AND REQUIREMENTS.
6. CONTRACTOR SHALL BE REQUIRED TO SUBMIT ENGINEERED PATHWAY DRAWINGS TO VILLAGE FOR APPROVAL PRIOR TO CONSTRUCTION BEGINNING.
7. ALL INNERDUCTS ARE TO BE JOINED TOGETHER USING MANUFACTURER APPROVED COUPLINGS.
8. ALL EQUIPMENT TO BE NEW UNLESS NOTED AS EXISTING OR (BY OTHERS).
9. CONTRACTOR TO COORDINATE ANY DEVIATIONS OF THESE PLANS WITH OWNER PRIOR TO MOUNTING / INSTALLATION OF MATERIAL.
10. DISTANCE BETWEEN HANDHOLE LOCATIONS SHALL NOT EXCEED 600' (FEET).
11. CONTRACTOR TO SUBMIT AS-BUILT DRAWINGS OF UNDERGROUND PATHWAY ROUTE AT COMPLETION OF PROJECT. AS-BUILT DRAWING SHALL INDICATE EXACT ROUTE AS INSTALLED, DEPTH OF INNERDUCT AND HANDHOLE LOCATIONS.
12. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL PERMITTING AND FEES.
13. CONDUIT SWEEPS AND BEND RADIUS SHALL NOT EXCEED MIN. BEND RADIUS FOR INSTALLED CABLES AS DETAILED IN "CABLE SCHEDULE" ON THIS SHEET.

**TRADE SCOPE KEYED SHEET NOTES**

BY UNDERGROUND UTILITY CONTRACTOR	
UC-01	(1) NEW 3" SCH-11 HOPE INNERDUCT (ORANGE IN COLOR), EQUIPPED WITH (1) 800-POUND PULL ROPE.
UC-02	(1) NEW 2" SCH-11 HOPE INNERDUCT (ORANGE IN COLOR), EQUIPPED WITH (1) 800-POUND PULL ROPE.
UC-03	NEW HAND HOLE LOCATION. MATERIAL MANUFACTURER GRANITE. OPEN BOTTOM PG-STYLE BOX (30"W 48"L 30"D). BOX TO HAVE STANDARD COVER WITH BLANK LOGO AND BE EQUIPPED WITH PENTA-HEAD HEX BOLTS TO SECURE COVER TO BOX.
UC-04	(1) NEW 3" SCH-80 PVC CONDUIT (GRAY IN COLOR).
UC-05	30"x30"x10" NON METALLIC PVC JUNCTION BOX INSTALLED TO SIDE WALL OF PEDESTRIAN WALKWAY/BRIDGE FOR ROUTING OF COMMUNICATIONS CABLING. COORDINATE EXACT LOCATION WITH OWNER'S PROJECT MANAGER PRIOR TO INSTALLATION. (GRAY IN COLOR).
UC-06	REMOVE AND INSTALL (1) PVC CONDUIT EXPANSION COUPLING ALONG THE EXPOSED HORIZONTAL CONDUIT RUN TO PERMIT LINEAR MOVEMENT OF CONDUIT CAUSED BY THERMAL EXPANSION AND CONTRACTION. EXPANSION JOINT TO BE SOLVENT WELD TO PVC CONDUIT.
UC-07	CONTRACTOR SHALL HAND EXCAVATE TO LOCATE EXISTING COMMUNICATIONS CABLING WHERE NEW ADDITION FOUNDATION WALLS WILL BE INSTALLED. NEW ADDITION IS PLANNED TO BE SLAB ON GRADE CONSTRUCTION. ONCE EXISTING CABLES ARE LOCATED AND IDENTIFIED, CONTRACTOR SHALL PROVIDE AND INSTALL PROTECTIVE SPLIT SLEEVE AROUND EXISTING CABLES SO THAT NEW ADDITION FOUNDATION CAN BE INSTALLED WHILE PROVIDING PROTECTION TO EXISTING CABLING. COORDINATE THIS SCOPE OF WORK WITH OWNER'S PROJECT MANAGER. THIS WORK IS TO BE PROVIDED WITHIN THE BASE BID PRICE. REFER TO SHEET T05.00 FOR ALTERNATE PRICE SCOPE OF WORK.
BY CABLING CONTRACTOR	
CC-01	(1) 300-PAIR 24 AWG. OUTDOOR RATED (FLOODED) SINGLE SHIELD PE-89 COPPER BACKBONE CABLE ROUTED BETWEEN VILLAGE HALL ENTRANCE ROOM AND RECREATION ADMIN ENTRANCE ROOM.
CC-02	(1) NEW 50-PAIR 24 AWG. OUTDOOR RATED (FLOODED) SINGLE SHIELD PE-89 COPPER BACKBONE CABLE ROUTED BETWEEN VILLAGE HALL ENTRANCE ROOM AND FRANKLIN LOEBE CENTER ENTRANCE ROOM.
CC-03	(1) NEW 12-STRAND INDOOR/OUTDOOR PLENUM RATED SINGLEMODE FIBER OPTIC BACKBONE CABLE ROUTED BETWEEN VILLAGE HALL 1ST FLOOR IDF WIRING ROOM AND FRANKLIN LOEBE CENTER 1ST FLOOR IDF WIRING ROOM.
CC-04	CONTRACTOR TO COIL 15' OF FIBER OPTIC CABLING WITHIN HANDHOLE.

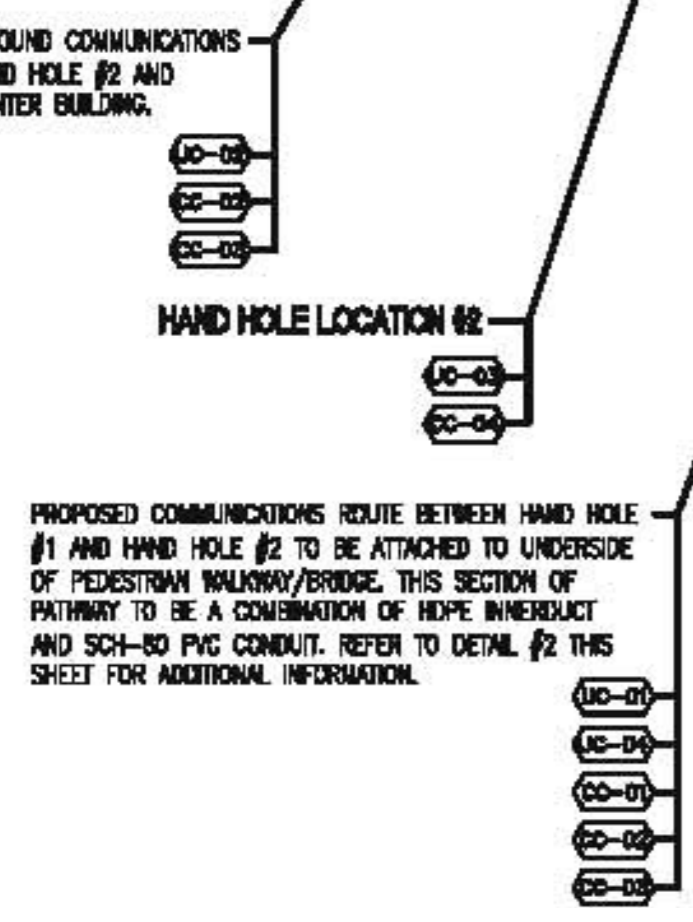
**CABLE SCHEDULE**

CABLE TYPE	NOMINAL DIAMETER	MIN. BEND RADIUS
12-STRAND FIBER OPTIC CABLE	.30" OD	11.60'
50-PAIR PE-89 OUTDOOR COPPER CABLE	.88" OD	8.90'
300-PAIR PE-89 OUTDOOR COPPER CABLE	1.37" OD	20.55'
50-PAIR INDOOR COPPER CABLE	.50" OD	8.00'
300-PAIR INDOOR COPPER CABLE	1.44" OD	14.40'



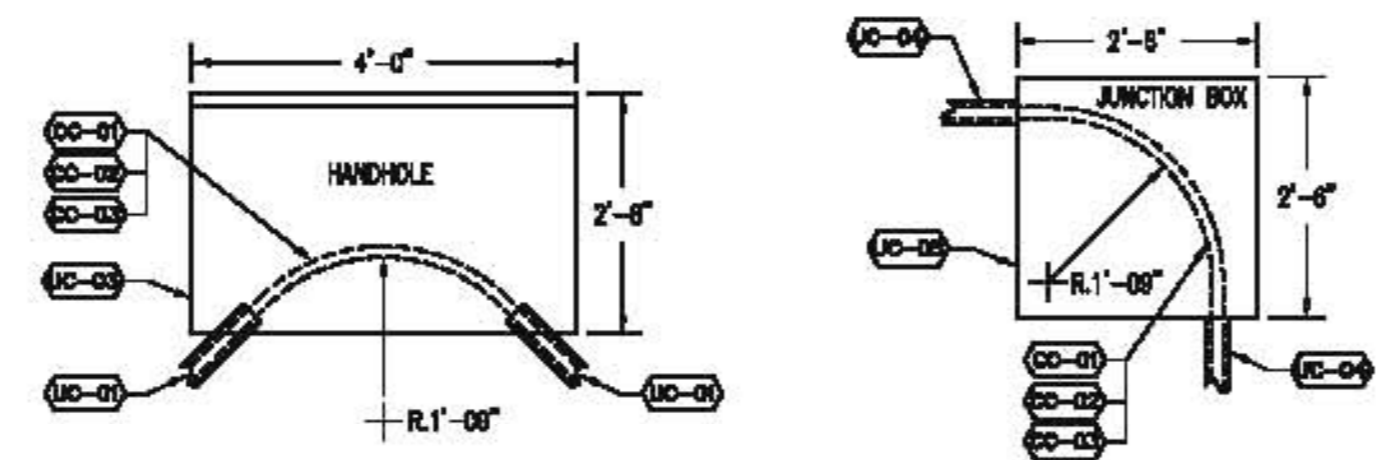
**3 DATA/VOICE BACKBONE LOGICAL DIAGRAM**  
T2.00 SCALE: NONE

**1 INTER-BUILDING DATA/VOICE PATHWAY SITE PLAN**  
T2.00 SCALE: NONE

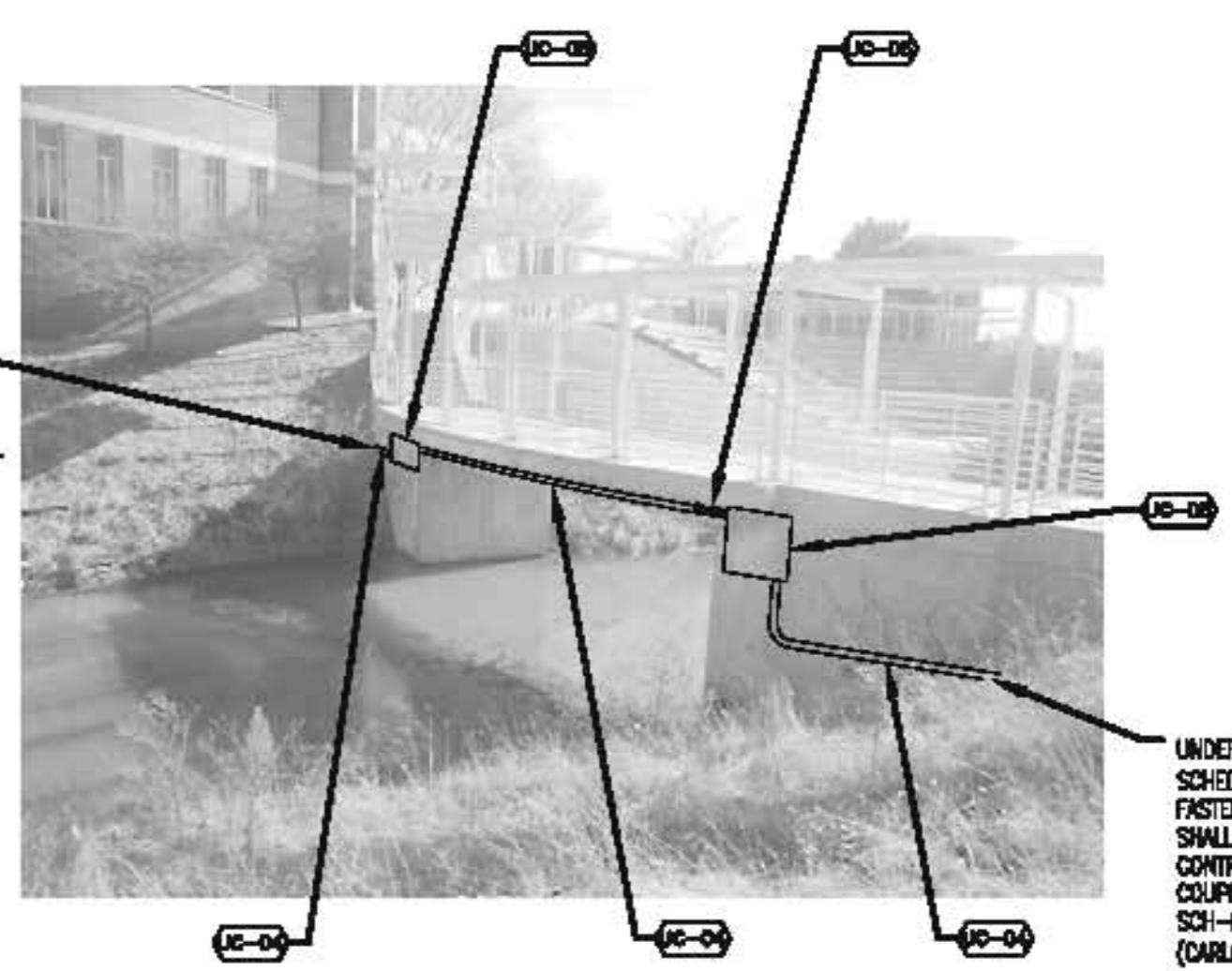


PROPOSED COMMUNICATIONS ROUTE BETWEEN HAND HOLE #1 AND HAND HOLE #2 TO BE ATTACHED TO UNDERSIDE OF PEDESTRIAN WALKWAY/BRIDGE. THIS SECTION OF PATHWAY TO BE A COMBINATION OF HOPE INNERDUCT AND SCH-80 PVC CONDUIT. REFER TO DETAIL #2 THIS SHEET FOR ADDITIONAL INFORMATION.

**4 DATA/VOICE BACKBONE HANDHOLE + JUNCTION BOX DETAIL**  
T2.00 SCALE: NONE



**2 PEDESTRIAN WALKWAY/BRIDGE PATHWAY DETAIL**  
T2.00 SCALE: NONE

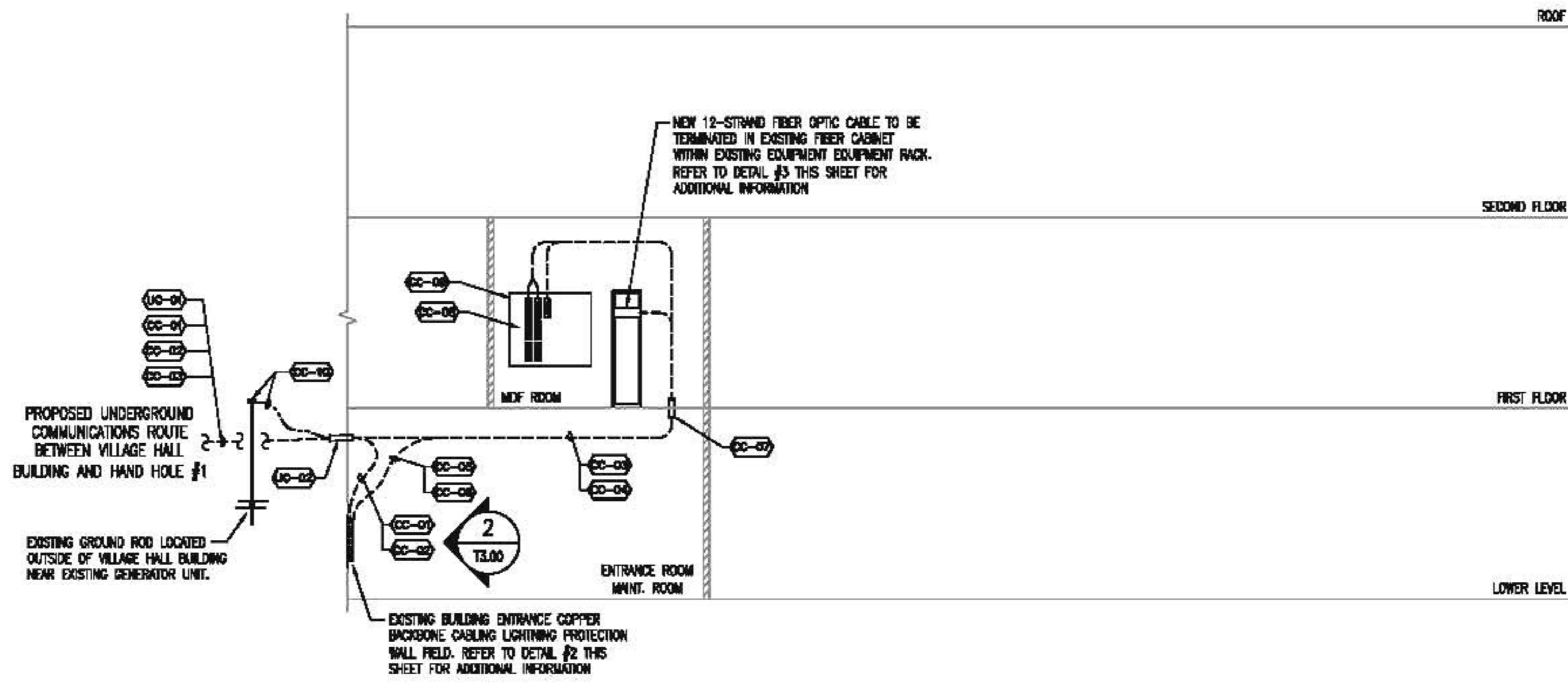


UNDERGROUND UTILITY CONTRACTOR TO UTILIZE SCHEDULE 80 (GRAY IN COLOR) PVC CONDUIT AND FASTENERS AT ALL EXPOSED AREAS. HOPE INNERDUCT SHALL BE UTILIZED FOR ALL UNDERGROUND PATHWAYS. CONTRACTOR SHALL INSTALL HOPE TRANSITION COUPLINGS TO JOIN UNDERGROUND INNERDUCT TO SCH-80 PVC CONDUIT. (CARLON STANDARD E-LOC COUPLING).

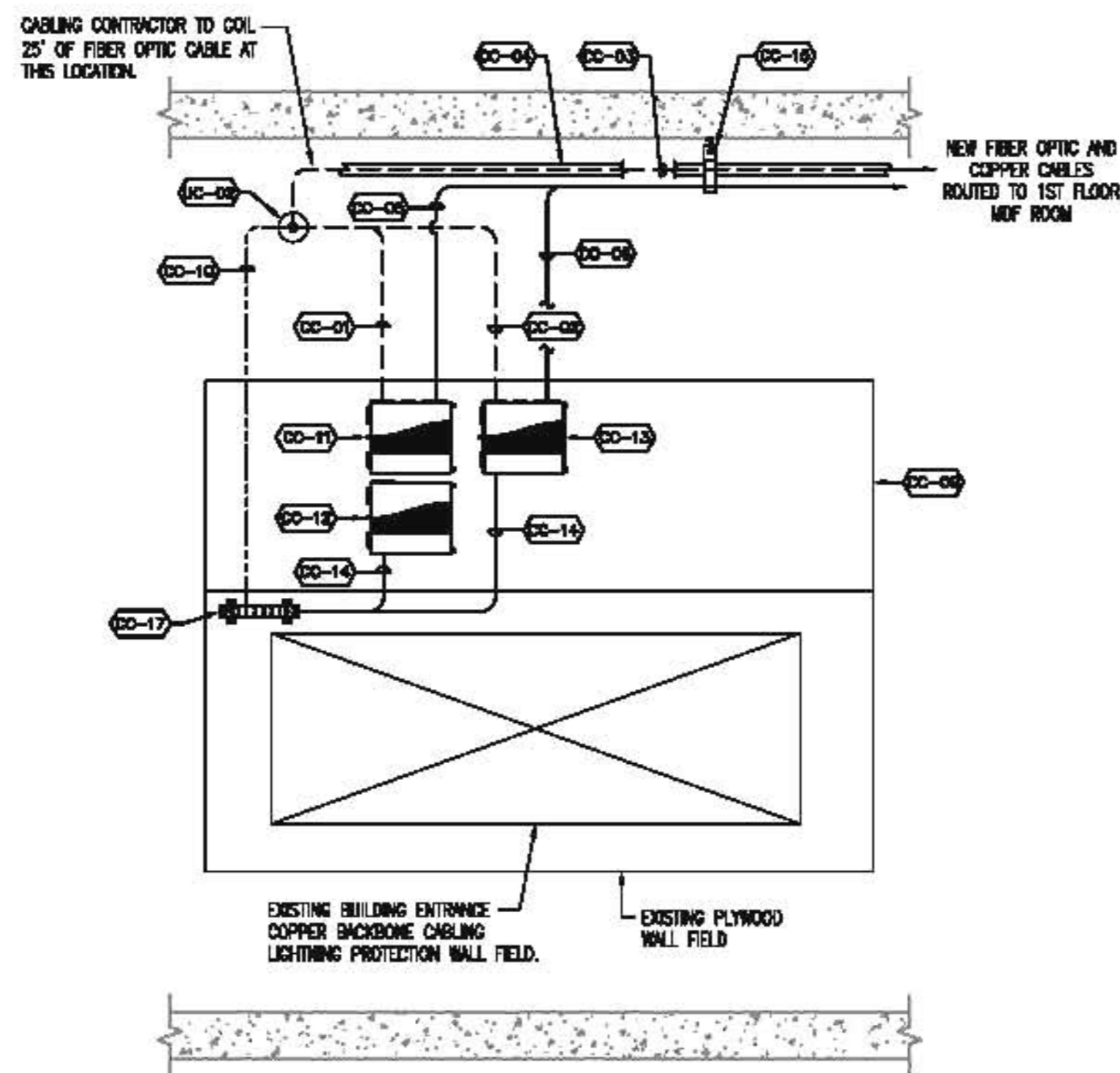
UNDERGROUND UTILITY CONTRACTOR TO UTILIZE SCHEDULE 80 (GRAY IN COLOR) PVC CONDUIT AND FASTENERS AT ALL EXPOSED AREAS. HOPE INNERDUCT SHALL BE UTILIZED FOR ALL UNDERGROUND PATHWAYS. CONTRACTOR SHALL INSTALL HOPE TRANSITION COUPLINGS TO JOIN UNDERGROUND INNERDUCT TO SCH-80 PVC CONDUIT. (CARLON STANDARD E-LOC COUPLING).

**TRADE SCOPE KEYED SHEET NOTES**

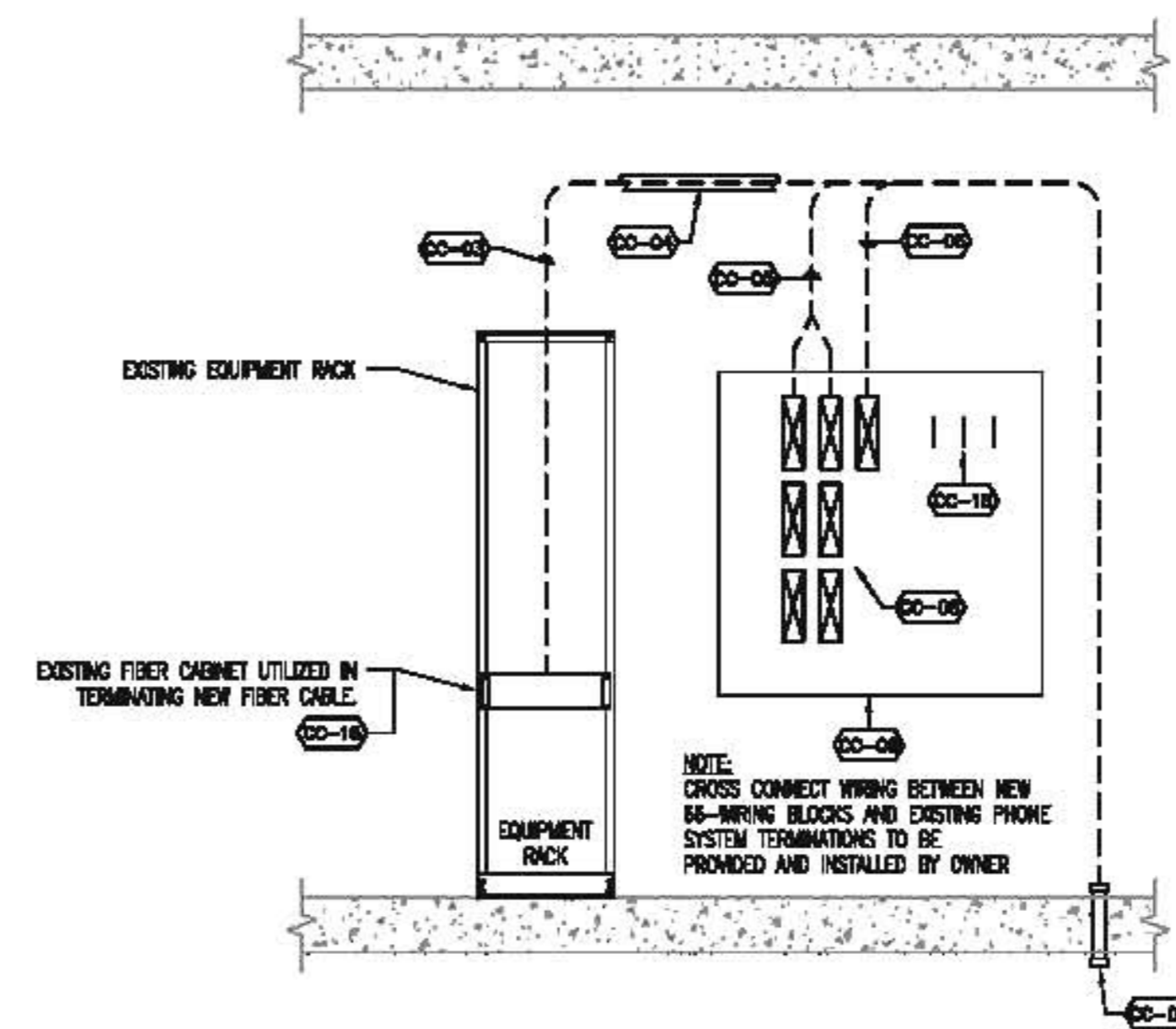
BY UNDERGROUND UTILITY CONTRACTOR	
CC-01	(1) NEW 3" SDR-11 HDPE INNERDUCT (ORANGE IN COLOR) EQUIPPED WITH (1) 900-POUND PULL ROPE.
CC-02	CONTRACTOR TO PROVIDE ALL MATERIAL AND LABOR TO INSTALL ENTRANCE CONDUIT SLEEVE INTO BUILDING. COORDINATE EXACT LOCATION WITH OWNER'S PROJECT MANAGER PRIOR TO INSTALLATION.
BY CABLING CONTRACTOR	
CC-03	(1) 300-PAIR 24 AWG. OUTDOOR RATED (FLOODED) SINGLE SHIELD PE-BB COPPER BACKBONE CABLE ROUTED BETWEEN VILLAGE HALL ENTRANCE ROOM AND RECREATION ADMIN ENTRANCE ROOM.
CC-04	(1) NEW 50-PAIR 24 AWG. OUTDOOR RATED (FLOODED) SINGLE SHIELD PE-BB COPPER BACKBONE CABLE ROUTED BETWEEN VILLAGE HALL ENTRANCE ROOM AND FRANKLIN LOEBE CENTER ENTRANCE ROOM.
CC-05	(1) NEW 12-STRAND INDOOR/OUTDOOR FLENUM RATED SINGLEMODE FIBER OPTIC BACKBONE CABLE ROUTED BETWEEN VILLAGE HALL 1ST FLOOR MDF WIRING ROOM AND FRANKLIN LOEBE CENTER 1ST FLOOR IDF WIRING ROOM.
CC-06	(1) NEW 1" CORRUGATED RISER RATED INNERDUCT BETWEEN BUILDING ENTRANCE CONDUIT AND FIBER TERMINATION SHELF WITHIN 1ST FLOOR EQUIPMENT RACK. INNERDUCT TO BE SUPPORTED WITH NEW J-HOOKS ON ALL HORIZONTAL CABLE PATHWAYS.
CC-07	(1) 300-PAIR 24 AWG. INDOOR RISER RATED COPPER BACKBONE CABLE ROUTED BETWEEN VILLAGE HALL ENTRANCE ROOM AND 1ST FLOOR MDF WIRING ROOM. COPPER CABLE TO BE SUPPORTED WITH NEW J-HOOKS ON ALL HORIZONTAL CABLE PATHWAYS.
CC-08	(1) 50-PAIR 24 AWG. INDOOR RISER RATED COPPER BACKBONE CABLE ROUTED BETWEEN VILLAGE HALL ENTRANCE ROOM AND 1ST FLOOR MDF WIRING ROOM. COPPER CABLE TO BE SUPPORTED WITH NEW J-HOOKS ON ALL HORIZONTAL CABLE PATHWAYS.
CC-09	(1) NEW 3" CONDUIT FLOOR SLEEVE FOR ROUTING OF NEW COMMUNICATIONS BACKBONE CABLING. COORDINATE EXACT INSTALLATION LOCATION WITH OWNER'S PROJECT MANAGER PRIOR TO INSTALLATION.
CC-10	NEW 86-WIRING BLOCKS AS REQUIRED FOR TERMINATION OF 300-PAIR AND 100-PAIR COPPER BACKBONE CABLES. COORDINATE EXACT INSTALLATION LOCATION WITH OWNER'S PROJECT MANAGER PRIOR TO INSTALLATION.
CC-11	NEW 3/4" AC GRADE FIRE-RATED PLYWOOD BACKBOARD GRADE "C" SIDE TO FACE WALL. PLYWOOD BACKBOARD SHALL BE TREATED WITH TWO COATS OF FIRE-RESISTANT PAINT. COORDINATE EXACT INSTALLATION LOCATION WITH OWNER'S PROJECT MANAGER PRIOR TO INSTALLATION.
CC-12	CONTRACTOR TO PROVIDE AND INSTALL NEW #4 AWG STRANDED COPPER GROUNDING CABLE BETWEEN EXISTING EXTERIOR GROUNDING ROD AND NEW GROUNDING BUSBAR LOCATED WITHIN MEDIA ENTRANCE ROOM.
CC-13	489 STYLE 200-PAIR 86/86 BUILDING ENTRANCE PROTECTOR UNIT FOR OVER-VOLTAGE PROTECTION OF 200-PAIR OF THE 300-PAIR COPPER BACKBONE CABLE FROM RECREATION ADMIN BUILDING.
CC-14	489 STYLE 100-PAIR 86/86 BUILDING ENTRANCE PROTECTOR UNIT FOR OVER-VOLTAGE PROTECTION OF 100-PAIR OF THE 300-PAIR COPPER BACKBONE CABLE FROM RECREATION ADMIN BUILDING.
CC-15	489 STYLE 50-PAIR 86/86 BUILDING ENTRANCE PROTECTOR UNIT FOR OVER-VOLTAGE PROTECTION OF 50-PAIR COPPER BACKBONE CABLE FROM FRANKLIN LOEBE CENTER.
CC-16	ALL 489 PROTECTOR UNITS TO BE GROUNDING WITH #6 AWG. COPPER GROUNDING WIRE (GREEN IN COLOR).
CC-17	NEW CABLING TO BE SUPPORTED WITH J-HOOKS ON ALL HORIZONTAL CABLE PATHWAYS.
CC-18	NEW 12-STRAND FIBER OPTIC CABLE TO TERMINATE ON "LC" CONNECTORS WITHIN EXISTING FIBER CABINET. CONTRACTOR TO PROVIDE AND INSTALL (1) CORNING LANDSCAPE DUPLEX "LC" SINGLEMODE ADAPTER PANEL WITHIN EXISTING FIBER CABINET. CORNING (#CCH-SP12-86
CC-19	NEW TELECOMMUNICATIONS GROUNDING BUSBAR (TGB).
CC-20	CONTRACTOR TO PROVIDE AND INSTALL (10) METAL D-RINGS ON NEW AND EXISTING PLYWOOD WALL FIELDS FOR ROUTING OF NEW CROSS CONNECT WIRING. COORDINATE EXACT MOUNTING LOCATIONS WITH OWNER PRIOR TO INSTALLATION. CROSS CONNECT WIRING BY OWNER.



**1 VILLAGE HALL - BACKBONE RISER DIAGRAM**  
T3.00 SCALE: NONE



**2 VILLAGE HALL - ENTRANCE ROOM DETAIL**  
T3.00 SCALE: NONE



**3 VILLAGE HALL - MDF ROOM DETAIL**  
T3.00 SCALE: NONE

**SHEET NOTES**

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2. CORES AND OPENINGS THROUGH FIRE RATED WALLS SHALL BE TEMPORARILY FIRE STOPPED WHEN NOT BEING WORKED.
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4. ALL WALL AND FLOOR OPENINGS ARE TO BE SLEEVED USING A METAL CONDUIT PROPERLY SEALED BETWEEN THE OUTER CONDUIT SURFACE AND THE HOLE. EACH END OF THE CONDUIT SLEEVE IS TO HAVE A STANDARD BUSHING FOR THE PROTECTION OF THE CABLES ROUTED WITHIN.
5. CABLE MANAGEMENT "J" HOOKS ARE TO BE SPACED WITHIN FOUR FEET OF EACH OTHER TO PREVENT EXCESSIVE CABLE DROOP BETWEEN SUPPORTS.
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8. ALL INNERDUCTS ARE TO BE JOINED TOGETHER USING MANUFACTURER APPROVED COUPLINGS.
9. INNERDUCTS ARE TO BE CONNECTED TO JUNCTION BOXES AND TERMINATION CABINETS USING MANUFACTURER APPROVED FITTINGS.



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**VILLAGE HALL INSTALLATION DETAILS**

Project: 11133.1 **T3.00**

**SHEET NOTES**

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**TRADE SCOPE KEYED SHEET NOTES**

BY UNDERGROUND UTILITY CONTRACTOR	
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CC-07	(1) NEW 3" CONDUIT FLOOR SLEEVE FOR ROUTING OF NEW COMMUNICATIONS BACKBONE CABLING. COORDINATE EXACT INSTALLATION LOCATION WITH OWNERS PROJECT MANAGER PRIOR TO INSTALLATION.



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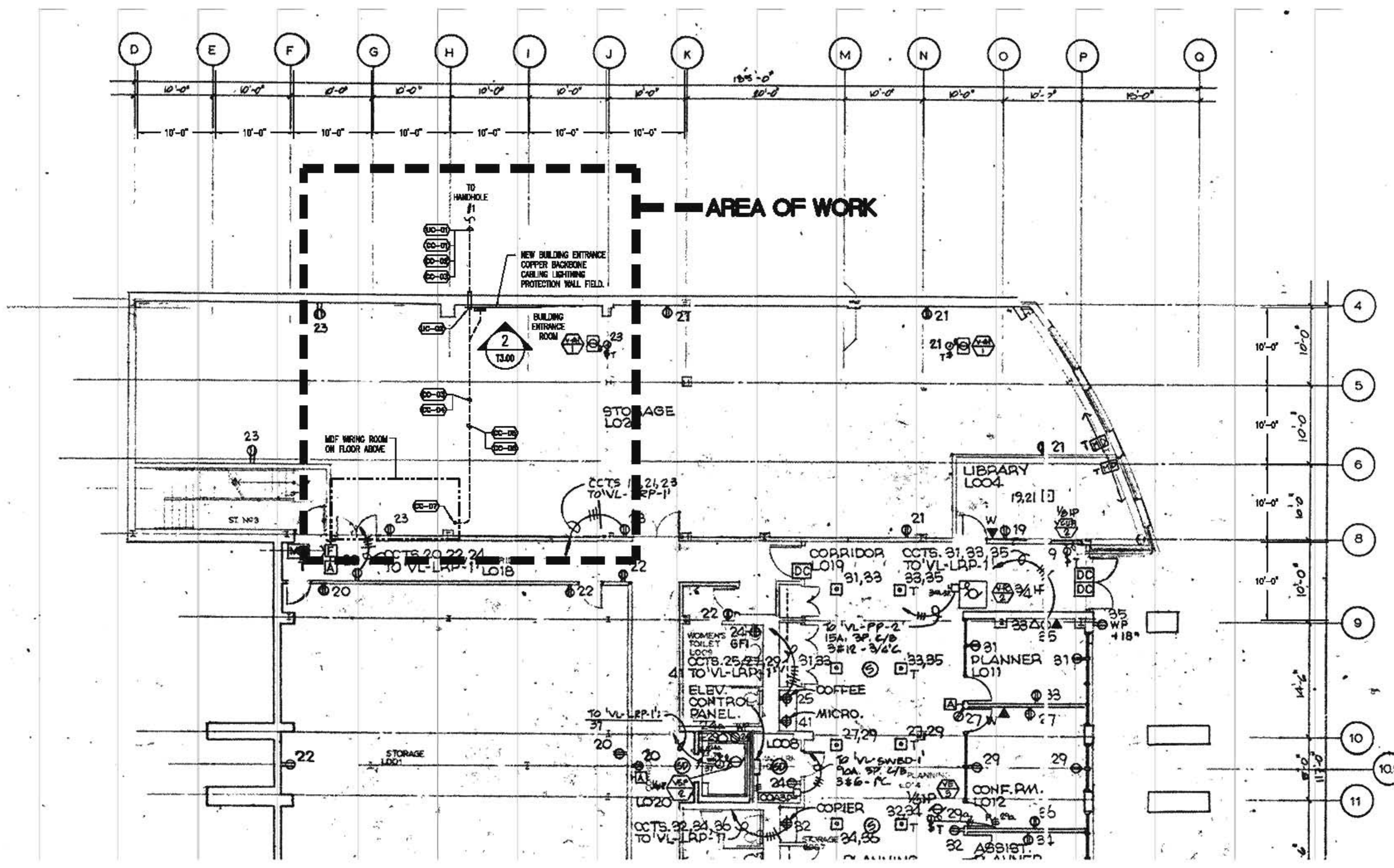
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**VILLAGE HALL PARTIAL LOWER LEVEL PLAN**

Project: 11133.1 **T3.01**



**1 VILLAGE HALL - PARTIAL LOWER LEVEL PLAN**  
T3.01 SCALE: NONE

**SHEET NOTES**

1. ALL PENETRATIONS THROUGH FIRE RATED WALLS AND FLOORS SHALL BE FIRE STOPPED TO THE RATING OF THE ASSOCIATED WALL AND/OR FLOOR.
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5. CABLE MANAGEMENT "J" HOOKS ARE TO BE SPACED WITHIN FOUR FEET OF EACH OTHER TO PREVENT EXCESSIVE CABLE DROOP BETWEEN SUPPORTS.
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7. ALL CABLING IS TO BE ROUTED PARALLEL TO STRUCTURAL WALLS.
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9. INNERDUCTS ARE TO BE CONNECTED TO JUNCTION BOXES AND TERMINATION CABINETS USING MANUFACTURER APPROVED FITTINGS.



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14860 SOUTH RAVINIA AVENUE  
ORLAND PARK, IL 60462



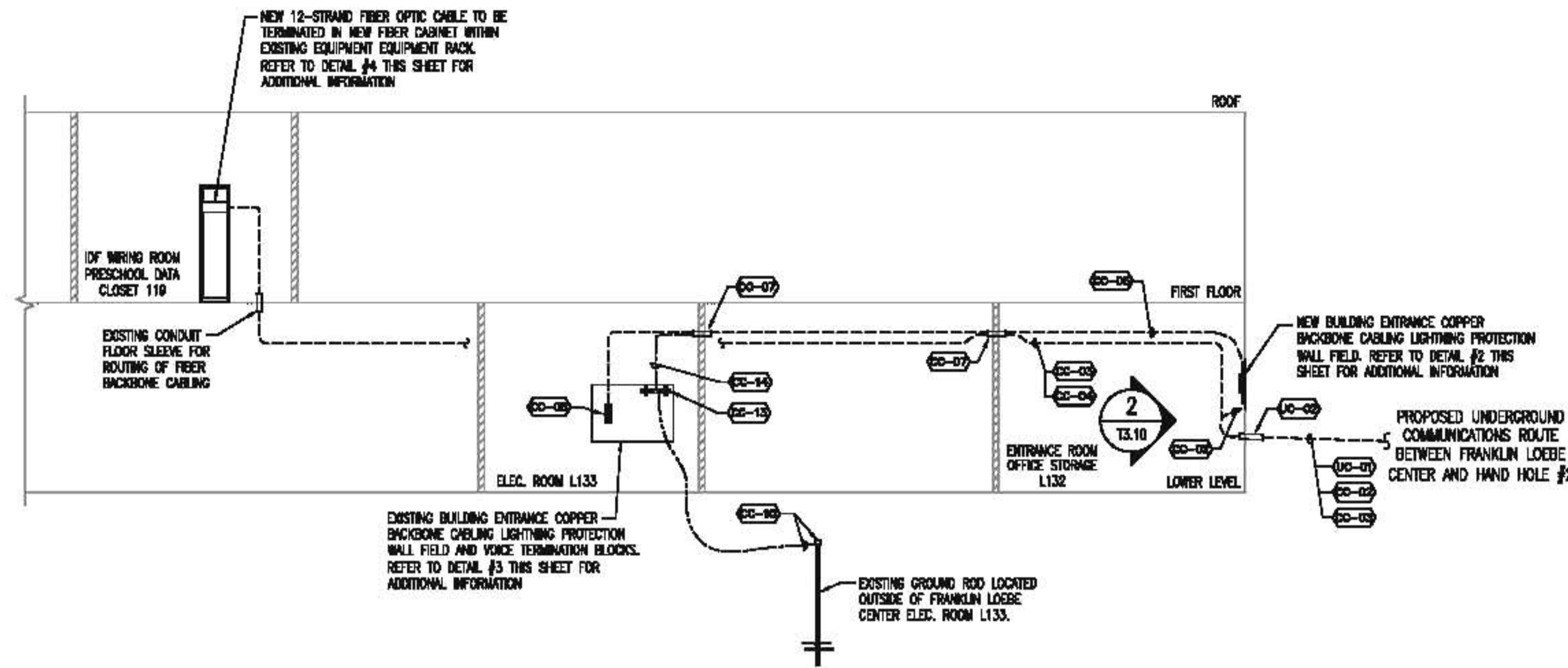
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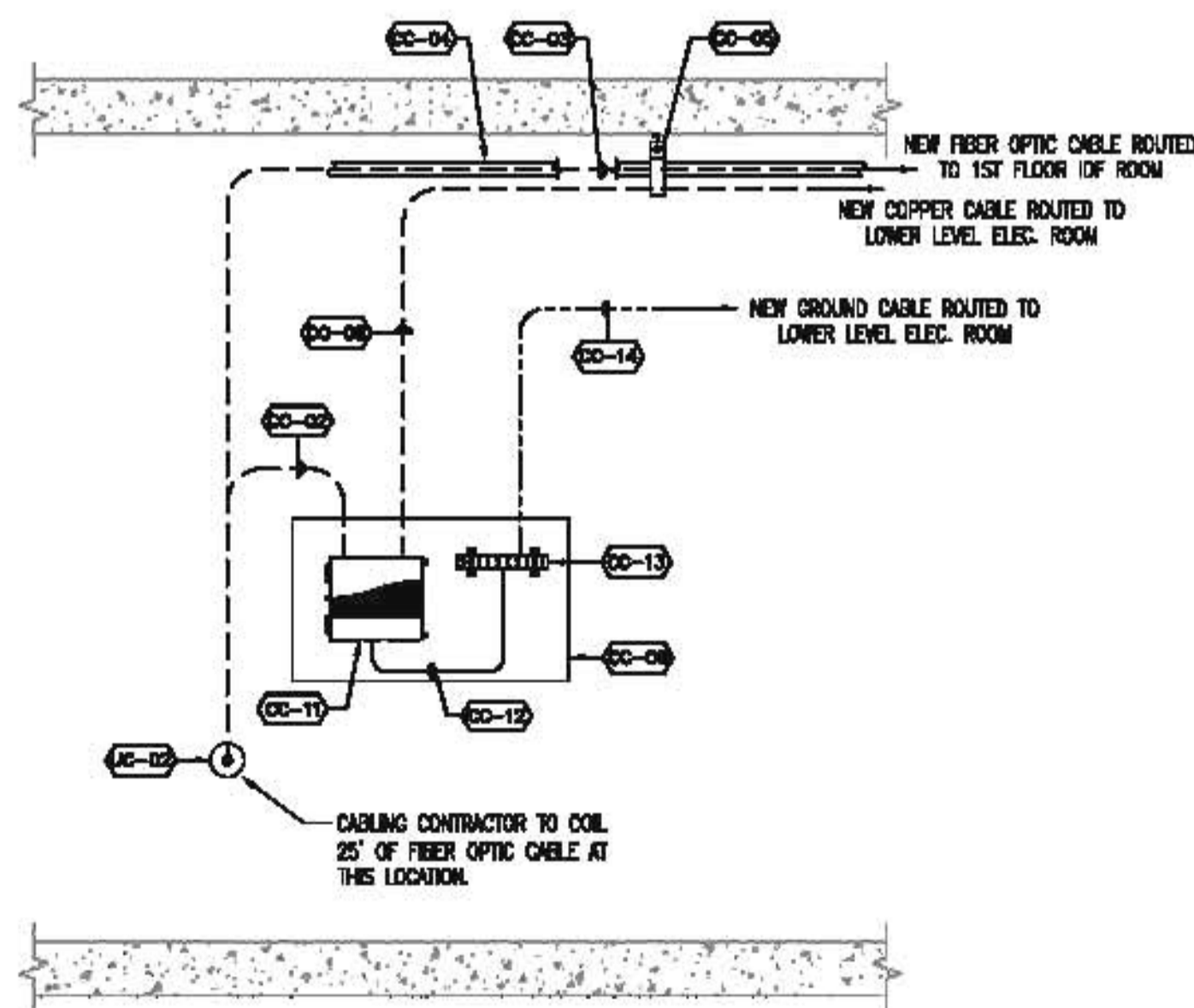
**FLC BUILDING INSTALLATION DETAILS**

Project 11133.1

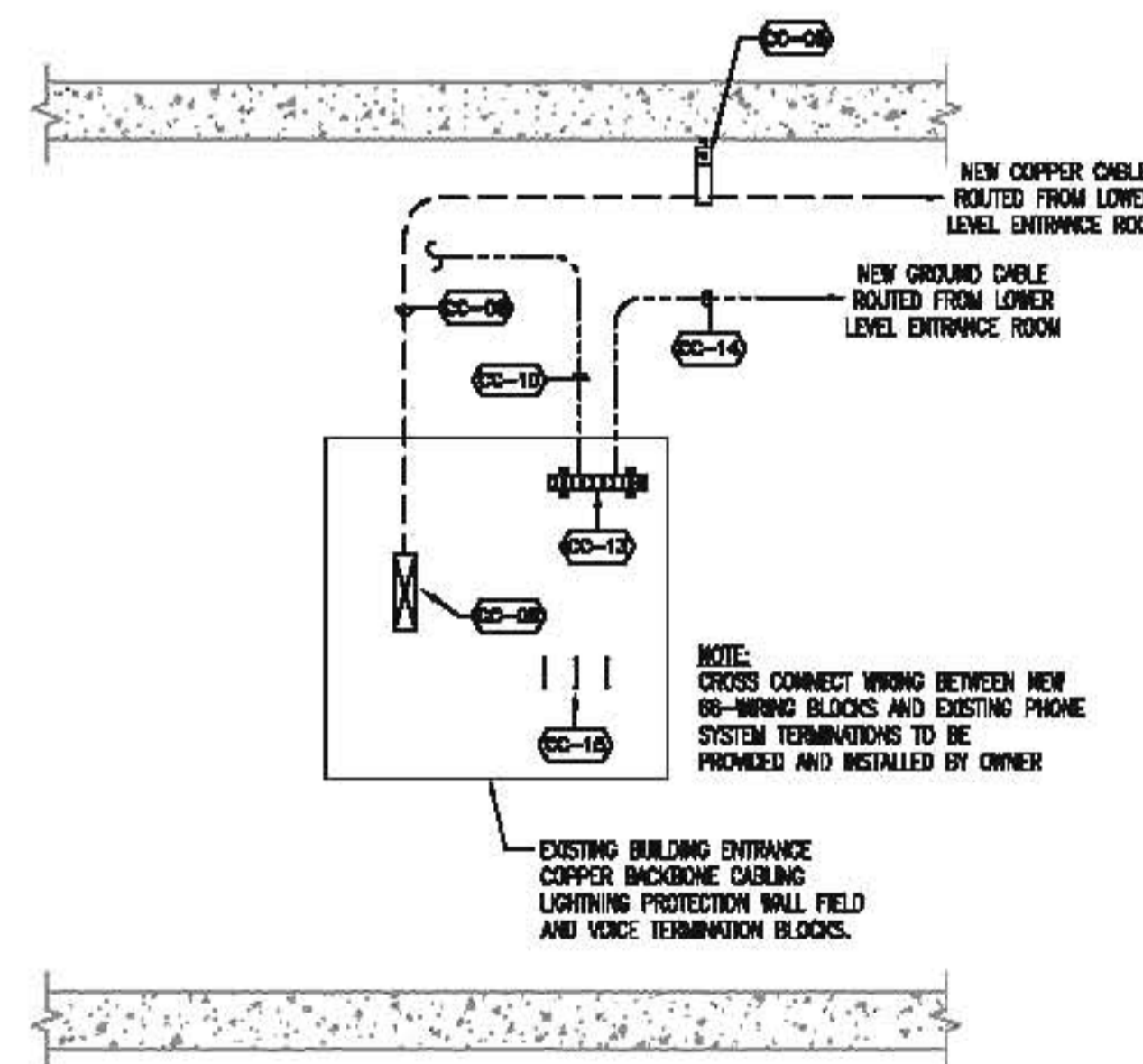
**T3.10**



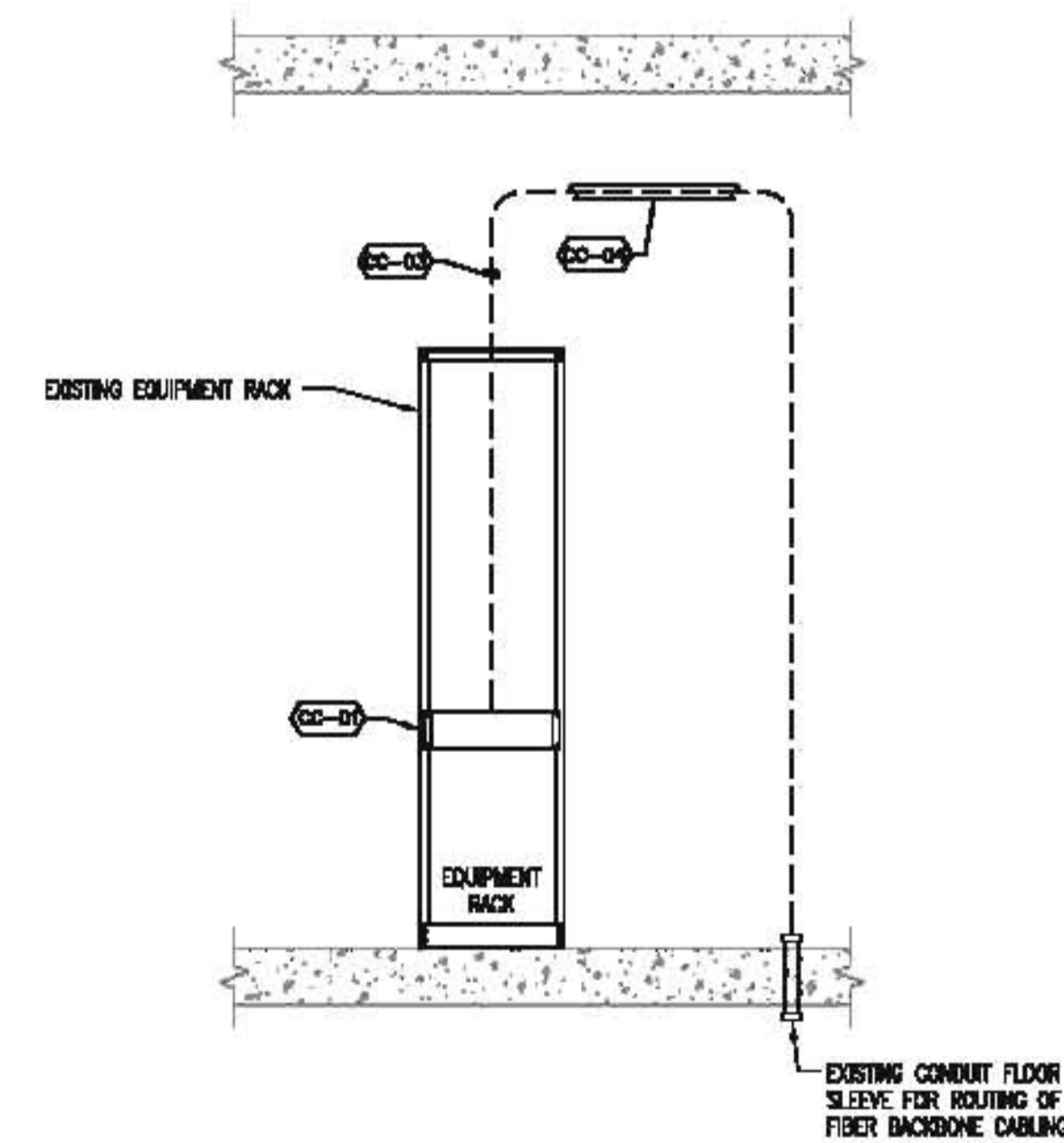
**1 FRANKLIN LOEBE CENTER - BACKBONE FISER DIAGRAM**  
T3.10 SCALE: NONE



**2 FRANKLIN LOEBE CENTER - ENTRANCE ROOM DETAIL**  
T3.10 SCALE: NONE



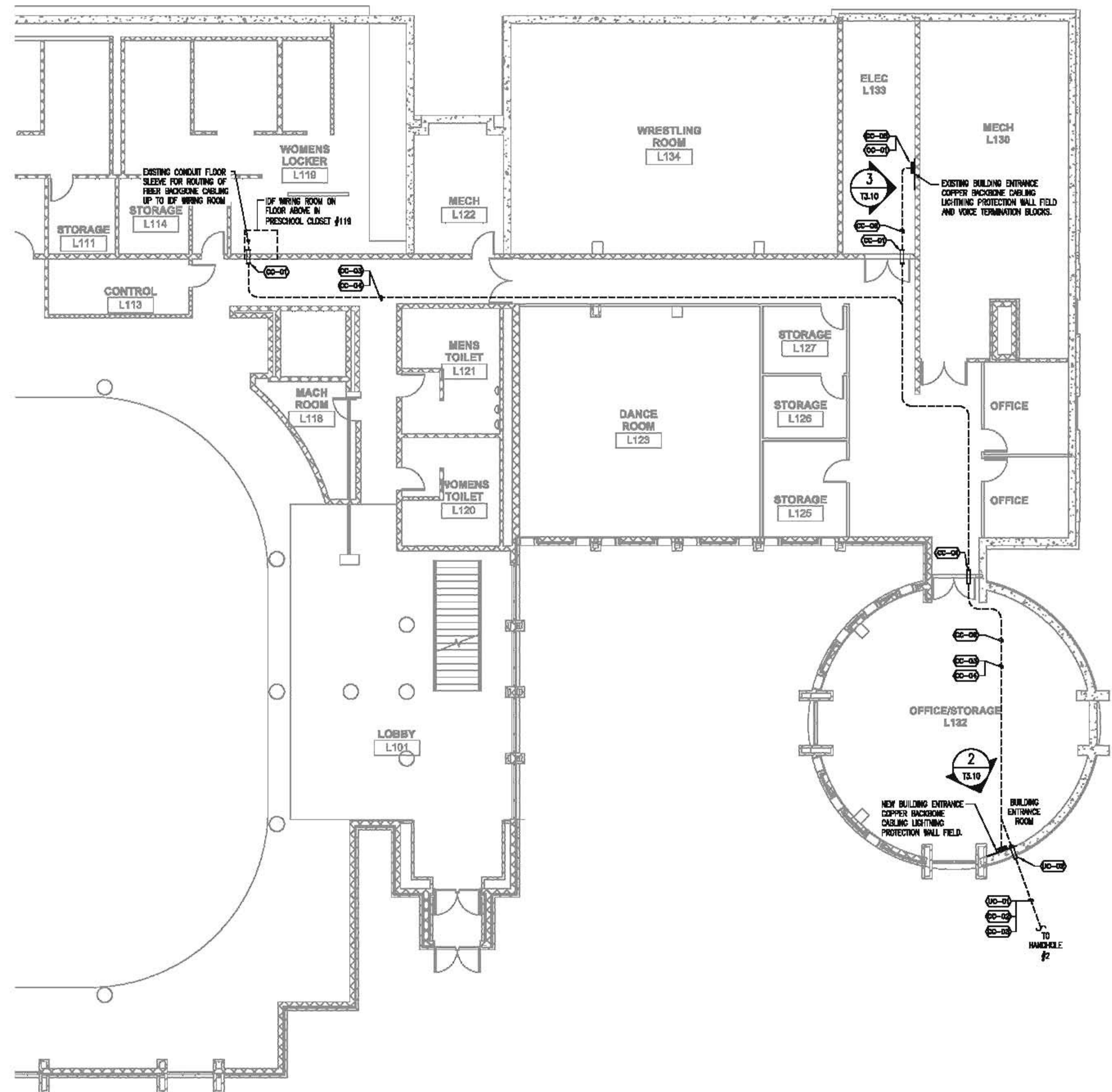
**3 FRANKLIN LOEBE CENTER - ELEC. ROOM DETAIL**  
T3.10 SCALE: NONE



**4 FRANKLIN LOEBE CENTER - IDF ROOM DETAIL**  
T3.10 SCALE: NONE

**TRADE SCOPE KEYED SHEET NOTES**

BY UNDERGROUND UTILITY CONTRACTOR	
CC-01	(1) NEW 2" SD-11 HOPE INNERDUCT (ORANGE IN COLOR), EQUIPPED WITH (1) 900-POUND PULL ROPE.
CC-02	CONTRACTOR TO PROVIDE ALL MATERIAL AND LABOR TO INSTALL ENTRANCE CONDUIT SLEEVE INTO BUILDING. COORDINATE EXACT LOCATION WITH OWNER'S PROJECT MANAGER PRIOR TO INSTALLATION.
BY CABLING CONTRACTOR	
CC-03	NEW 12-STRAND FIBER OPTIC CABLE TO TERMINATE ON "LC" CONNECTORS WITHIN NEW 1-RMU FIBER CABINET. COORDINATE EXACT INSTALLATION LOCATION WITHIN RACK WITH OWNER'S PROJECT MANAGER PRIOR TO INSTALLATION. CONTRACTOR TO PROVIDE AND INSTALL: • (1) CORNING LANDSCAPE RACK MOUNT FIBER HOUSING, CORNING #DCS-01U • (1) CORNING LANDSCAPE DUPLEX "LC" SINGLEMODE ADAPTER PANEL WITHIN EXISTING FIBER CABINET, CORNING #DCS-CP12-48 • (1) CORNING LANDSCAPE "BLANK ADAPTER PANEL".
CC-04	(1) NEW 50-PAIR 24 AWG. OUTDOOR RATED (FLOODED) SINGLE SHIELD PE-88 COPPER BACKBONE CABLE ROUTED BETWEEN VILLAGE HALL ENTRANCE ROOM AND FRANKLIN LOEBE CENTER ENTRANCE ROOM.
CC-05	(1) NEW 12-STRAND INDOOR/OUTDOOR PLENUM RATED SINGLEMODE FIBER OPTIC BACKBONE CABLE ROUTED BETWEEN VILLAGE HALL 1ST FLOOR IDF WIRING ROOM AND FRANKLIN LOEBE CENTER 1ST FLOOR IDF WIRING ROOM.
CC-06	(1) NEW 1" CORRUGATED PLENUM RATED INNERDUCT BETWEEN BUILDING ENTRANCE CONDUIT AND FIBER TERMINATION SHELF WITHIN 1ST FLOOR EQUIPMENT RACK. INNERDUCT TO BE SUPPORTED WITH NEW J-HOOKS ON ALL HORIZONTAL CABLE PATHWAYS.
CC-07	NEW CABLING TO BE SUPPORTED WITH J-HOOKS ON ALL HORIZONTAL CABLE PATHWAYS.
CC-08	(1) 50-PAIR 24 AWG. INDOOR PLENUM RATED COPPER BACKBONE CABLE ROUTED BETWEEN FRANKLIN LOEBE CENTER ENTRANCE ROOM AND LOWER LEVEL ELEC. ROOM. COPPER CABLE TO BE SUPPORTED WITH NEW J-HOOKS ON ALL HORIZONTAL CABLE PATHWAYS.
CC-09	(1) NEW 2" CONDUIT WALL SLEEVE FOR ROUTING OF NEW COMMUNICATIONS BACKBONE CABLING. COORDINATE EXACT INSTALLATION LOCATION WITH OWNER'S PROJECT MANAGER PRIOR TO INSTALLATION.
CC-10	NEW 66-WIRING BLOCKS AS REQUIRED FOR TERMINATION OF 100-PAIR COPPER BACKBONE CABLE. COORDINATE EXACT INSTALLATION LOCATION WITH OWNER'S PROJECT MANAGER PRIOR TO INSTALLATION.
CC-11	NEW 3/4" AC GRADE FIRE-RATED PLYWOOD BACKBOARD, GRADE "C" SIDE TO FACE WALL. PLYWOOD BACKBOARD SHALL BE TREATED WITH TWO COATS OF FIRE-RESISTANT PAINT. COORDINATE EXACT INSTALLATION LOCATION WITH OWNER'S PROJECT MANAGER PRIOR TO INSTALLATION.
CC-12	CONTRACTOR TO PROVIDE AND INSTALL NEW #4 AWG STRANDED COPPER GROUNDING CABLE BETWEEN EXISTING EXTERIOR GROUNDING ROD AND NEW GROUNDING BUSBAR LOCATED WITHIN ELEC. ROOM L133.
CC-13	486 STYLE 65-PAIR 66/66 BUILDING ENTRANCE PROTECTOR UNIT FOR OVER-VOLTAGE PROTECTION OF 50-PAIR COPPER BACKBONE CABLE FROM VILLAGE HALL.
CC-14	486 PROTECTOR UNIT TO BE GROUNDED WITH #8 AWG COPPER GROUNDING WIRE (GREEN IN COLOR).
CC-15	NEW TELECOMMUNICATIONS GROUNDING BUSBAR (TGB).
CC-16	CONTRACTOR TO PROVIDE AND INSTALL NEW #4 AWG STRANDED COPPER GROUNDING CABLE BETWEEN NEW GROUNDING BUSBAR LOCATED WITHIN ELEC. ROOM L133 AND NEW GROUNDING BUSBAR LOCATED WITHIN OFFICE STORAGE L132 ENTRANCE ROOM.
CC-17	CONTRACTOR TO PROVIDE AND INSTALL (10) METAL D-RINGS ON NEW AND EXISTING PLYWOOD WALL FIELDS FOR ROUTING OF NEW CROSS CONNECT WIRING. COORDINATE EXACT MOUNTING LOCATIONS WITH OWNER PRIOR TO INSTALLATION. CROSS CONNECT WIRING BY OWNER.



1 FRANKLIN LOEBE CENTER - PARTIAL LOWER LEVEL PLAN  
T3.11 SCALE: 1/8"=1'-0"

**SHEET NOTES**

1. ALL PENETRATIONS THROUGH FIRE RATED WALLS AND FLOORS SHALL BE FIRE STOPPED TO THE RATING OF THE ASSOCIATED WALL AND/OR FLOOR.
2. CORES AND OPENINGS THROUGH FIRE RATED WALLS SHALL BE TEMPORARILY FIRE STOPPED WHEN NOT BEING WORKED.
3. ALL WALL AND FLOOR CORES SHALL BE COORDINATED WITH THE OWNERS PROJECT MANAGER PRIOR TO INSTALLATION.
4. ALL WALL AND FLOOR OPENINGS ARE TO BE SLEEVED USING A METAL CONDUIT PROPERLY SEALED BETWEEN THE OUTER CONDUIT SURFACE AND THE HOLE. EACH END OF THE CONDUIT SLEEVE IS TO HAVE A STANDARD BUSHING FOR THE PROTECTION OF THE CABLES ROUTED WITHIN.
5. CABLE MANAGEMENT "J" HOOKS ARE TO BE SPACED WITHIN FOUR FEET OF EACH OTHER TO PREVENT EXCESSIVE CABLE DROOP BETWEEN SUPPORTS.
6. PRIMARY CABLE ROUTES ARE TO BE COORDINATED WITH THE OWNERS PROJECT MANAGER PRIOR TO INSTALLATION.
7. ALL CABLING IS TO BE ROUTED PARALLEL TO STRUCTURAL WALLS.
8. ALL INNERDUCTS ARE TO BE JOINED TOGETHER USING MANUFACTURER APPROVED COUPLINGS.
9. INNERDUCTS ARE TO BE CONNECTED TO JUNCTION BOXES AND TERMINATION CABINETS USING MANUFACTURER APPROVED FITTINGS.

**TRADE SCOPE KEYED SHEET NOTES**

BY UNDERGROUND UTILITY CONTRACTOR	
UC-01	(1) NEW 2" SDR-11 HIPS INNERDUCT (ORANGE IN COLOR), EQUIPPED WITH (1) 900-POUND PULL ROPE.
UC-02	CONTRACTOR TO PROVIDE ALL MATERIAL AND LABOR TO INSTALL ENTRANCE CONDUIT SLEEVE INTO BUILDING. COORDINATE EXACT LOCATION WITH OWNER'S PROJECT MANAGER PRIOR TO INSTALLATION.
BY CABLING CONTRACTOR	
CC-01	(1) NEW 2" CONDUIT WALL SLEEVE FOR ROUTING OF NEW COMMUNICATIONS BACKBONE CABLING. COORDINATE EXACT INSTALLATION LOCATION WITH OWNER'S PROJECT MANAGER PRIOR TO INSTALLATION.
CC-02	(1) NEW 50-PAIR 24 AWG. OUTDOOR RATED (FLOODED) SINGLE SHIELD PE-SB COPPER BACKBONE CABLE ROUTED BETWEEN VILLAGE HALL ENTRANCE ROOM AND FRANKLIN LOEBE CENTER ENTRANCE ROOM.
CC-03	(1) NEW 12-STRAND INDOOR/OUTDOOR PLENUM RATED SINGLEMODE FIBER OPTIC BACKBONE CABLE ROUTED BETWEEN VILLAGE HALL 1ST FLOOR IDF WIRING ROOM AND FRANKLIN LOEBE CENTER 1ST FLOOR IDF WIRING ROOM.
CC-04	(1) NEW 1" CORRUGATED PLENUM RATED INNERDUCT BETWEEN BUILDING ENTRANCE CONDUIT AND FIBER TERMINATION SHELF WITHIN 1ST FLOOR EQUIPMENT RACK. INNERDUCT TO BE SUPPORTED WITH NEW J-HOOKS ON ALL HORIZONTAL CABLE PATHWAYS.
CC-05	NEW 88-WIRING BLOCKS AS REQUIRED FOR TERMINATION OF 100-PAIR COPPER BACKBONE CABLE. COORDINATE EXACT INSTALLATION LOCATION WITH OWNER'S PROJECT MANAGER PRIOR TO INSTALLATION.
CC-06	(1) 50-PAIR 24 AWG. INDOOR PLENUM RATED COPPER BACKBONE CABLE ROUTED BETWEEN FRANKLIN LOEBE CENTER ENTRANCE ROOM AND LOWER LEVEL ELEC. ROOM. COPPER CABLE TO BE SUPPORTED WITH NEW J-HOOKS ON ALL HORIZONTAL CABLE PATHWAYS.



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**FRANKLIN LOEBE CENTER DATA/VOICE BACKBONE CABLING RENOVATIONS**

For  
**VILLAGE OF ORLAND PARK**  
At:  
14880 SOUTH RAVINIA AVENUE  
ORLAND PARK, IL 60462

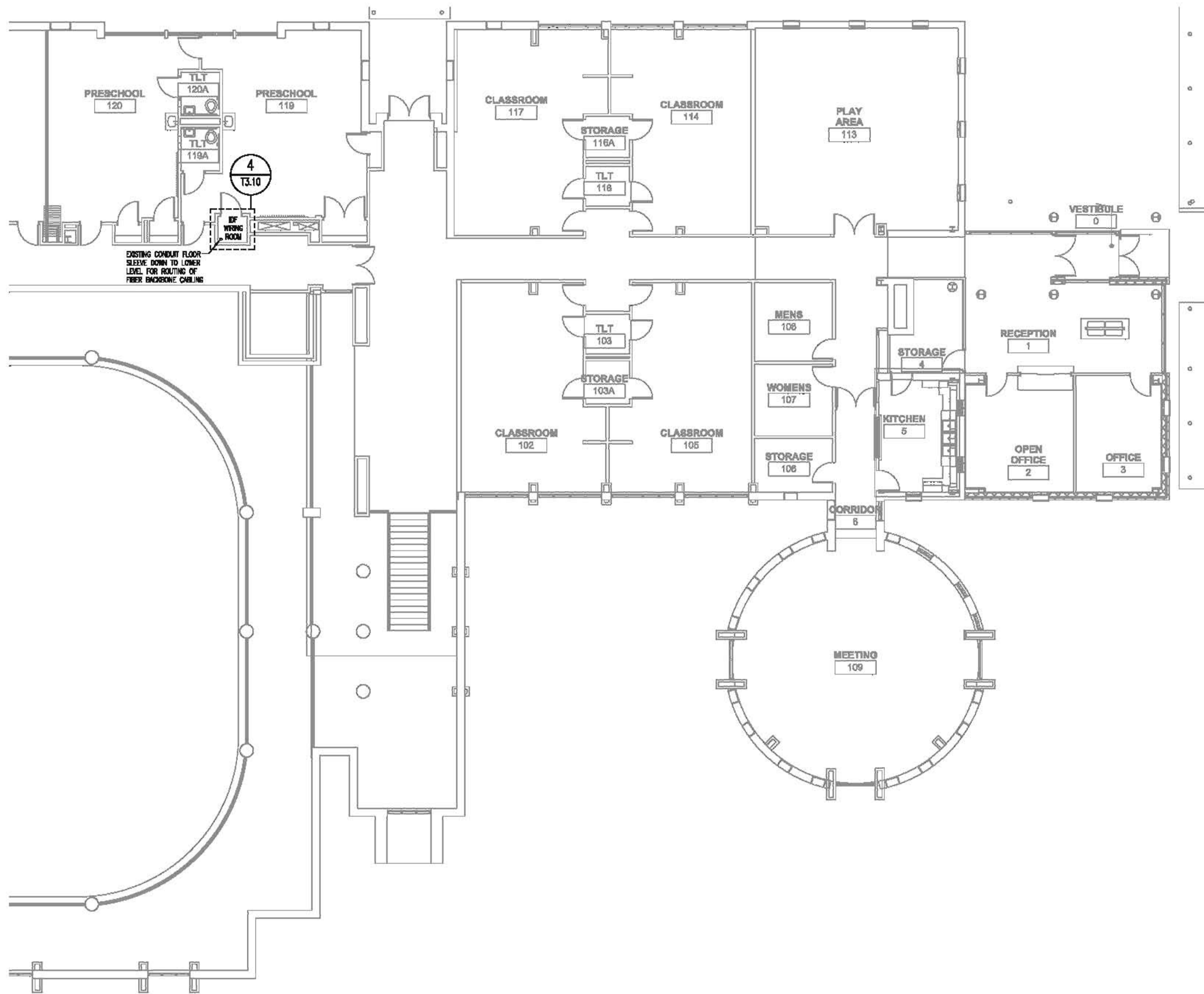
**TDS** Technology, Design, Services, Inc.  
Telecommunications Network Infrastructure Design & Consulting  
1874 SHORE ROAD SUITE A NAPERVILLE, IL 60563-8758 TEL: 630.944.9996 FAX: 630.944.9988 www.tdsinc.com

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**FLC BUILDING PARTIAL LOWER LEVEL PLAN**

Project 11133.1 **T3.11**



1 FRANKLIN LOEBE CENTER - PARTIAL 1ST FLOOR PLAN  
T3.12 SCALE: 1/8"=1'-0"

**SHEET NOTES**

1. ALL PENETRATIONS THROUGH FIRE RATED WALLS AND FLOORS SHALL BE FIRE STOPPED TO THE RATING OF THE ASSOCIATED WALL AND/OR FLOOR.
2. CORES AND OPENINGS THROUGH FIRE RATED WALLS SHALL BE TEMPORARILY FIRE STOPPED WHEN NOT BEING WORKED.
3. ALL WALL AND FLOOR CORES SHALL BE COORDINATED WITH THE OWNERS PROJECT MANAGER PRIOR TO INSTALLATION.
4. ALL WALL AND FLOOR OPENINGS ARE TO BE SLEEVED USING A METAL CONDUIT PROPERLY SEALED BETWEEN THE OUTER CONDUIT SURFACE AND THE HOLE. EACH END OF THE CONDUIT SLEEVE IS TO HAVE A STANDARD BUSHING FOR THE PROTECTION OF THE CABLES ROUTED WITHIN.
5. CABLE MANAGEMENT "J" HOOKS ARE TO BE SPACED WITHIN FOUR FEET OF EACH OTHER TO PREVENT EXCESSIVE CABLE DROOP BETWEEN SUPPORTS.
6. PRIMARY CABLE ROUTES ARE TO BE COORDINATED WITH THE OWNERS PROJECT MANAGER PRIOR TO INSTALLATION.
7. ALL CABLING IS TO BE ROUTED PARALLEL TO STRUCTURAL WALLS.
8. ALL INNERDUCTS ARE TO BE JOINED TOGETHER USING MANUFACTURER APPROVED COUPLINGS.
9. INNERDUCTS ARE TO BE CONNECTED TO JUNCTION BOXES AND TERMINATION CABINETS USING MANUFACTURER APPROVED FITTINGS.



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**FRANKLIN LOEBE CENTER  
DATA/VOICE  
BACKBONE  
CABLING  
RENOVATIONS**

For  
**VILLAGE OF ORLAND PARK**

At  
14880 SOUTH RAVINIA AVENUE  
ORLAND PARK, IL 60462

**TDS** Technology, Design, Services, Inc.  
Telecommunications Network  
Infrastructure Design & Consulting

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**FLC BUILDING PARTIAL  
1ST FLOOR PLAN**

Project 11133.1 **T3.12**

**SHEET NOTES**

1. ALL PENETRATIONS THROUGH FIRE RATED WALLS AND FLOORS SHALL BE FIRE STOPPED TO THE RATING OF THE ASSOCIATED WALL AND/OR FLOOR.
2. CORES AND OPENINGS THROUGH FIRE RATED WALLS SHALL BE TEMPORARILY FIRE STOPPED WHEN NOT BEING WORKED.
3. ALL WALL AND FLOOR CORES SHALL BE COORDINATED WITH THE OWNERS PROJECT MANAGER PRIOR TO INSTALLATION.
4. ALL WALL AND FLOOR OPENINGS ARE TO BE SLEEVED USING A METAL CONDUIT PROPERLY SEALED BETWEEN THE OUTER CONDUIT SURFACE AND THE HOLE. EACH END OF THE CONDUIT SLEEVE IS TO HAVE A STANDARD BUSHING FOR THE PROTECTION OF THE CABLES ROUTED WITHIN.
5. CABLE MANAGEMENT "J" HOOKS ARE TO BE SPACED WITHIN FOUR FEET OF EACH OTHER TO PREVENT EXCESSIVE CABLE DROOP BETWEEN SUPPORTS.
6. PRIMARY CABLE ROUTES ARE TO BE COORDINATED WITH THE OWNERS PROJECT MANAGER PRIOR TO INSTALLATION.
7. ALL CABLING IS TO BE ROUTED PARALLEL TO STRUCTURAL WALLS.
8. ALL INNERDUCTS ARE TO BE JOINED TOGETHER USING MANUFACTURER APPROVED COUPLINGS.
9. INNERDUCTS ARE TO BE CONNECTED TO JUNCTION BOXES AND TERMINATION CABINETS USING MANUFACTURER APPROVED FITTINGS.



**FRANKLIN LOEBE CENTER DATA/VOICE BACKBONE CABLING RENOVATIONS**

For  
**VILLAGE OF ORLAND PARK**  
At:  
14860 SOUTH RAVINA AVENUE  
ORLAND PARK, IL 60462

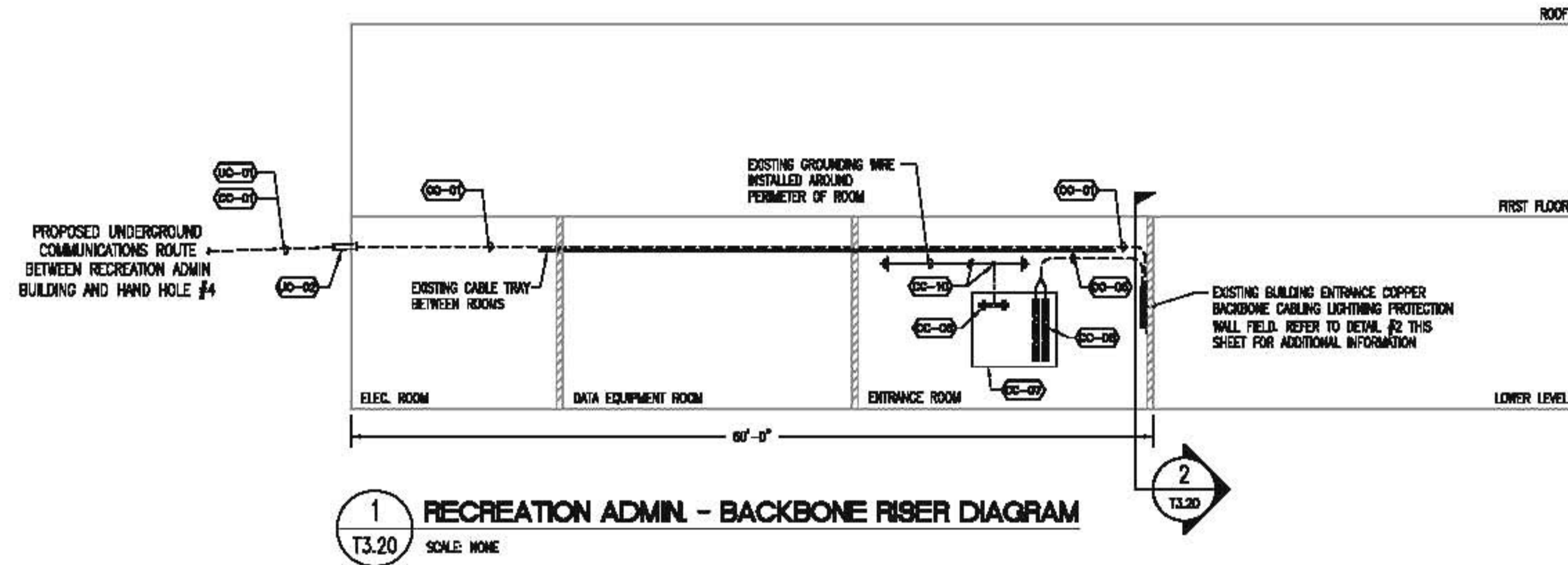
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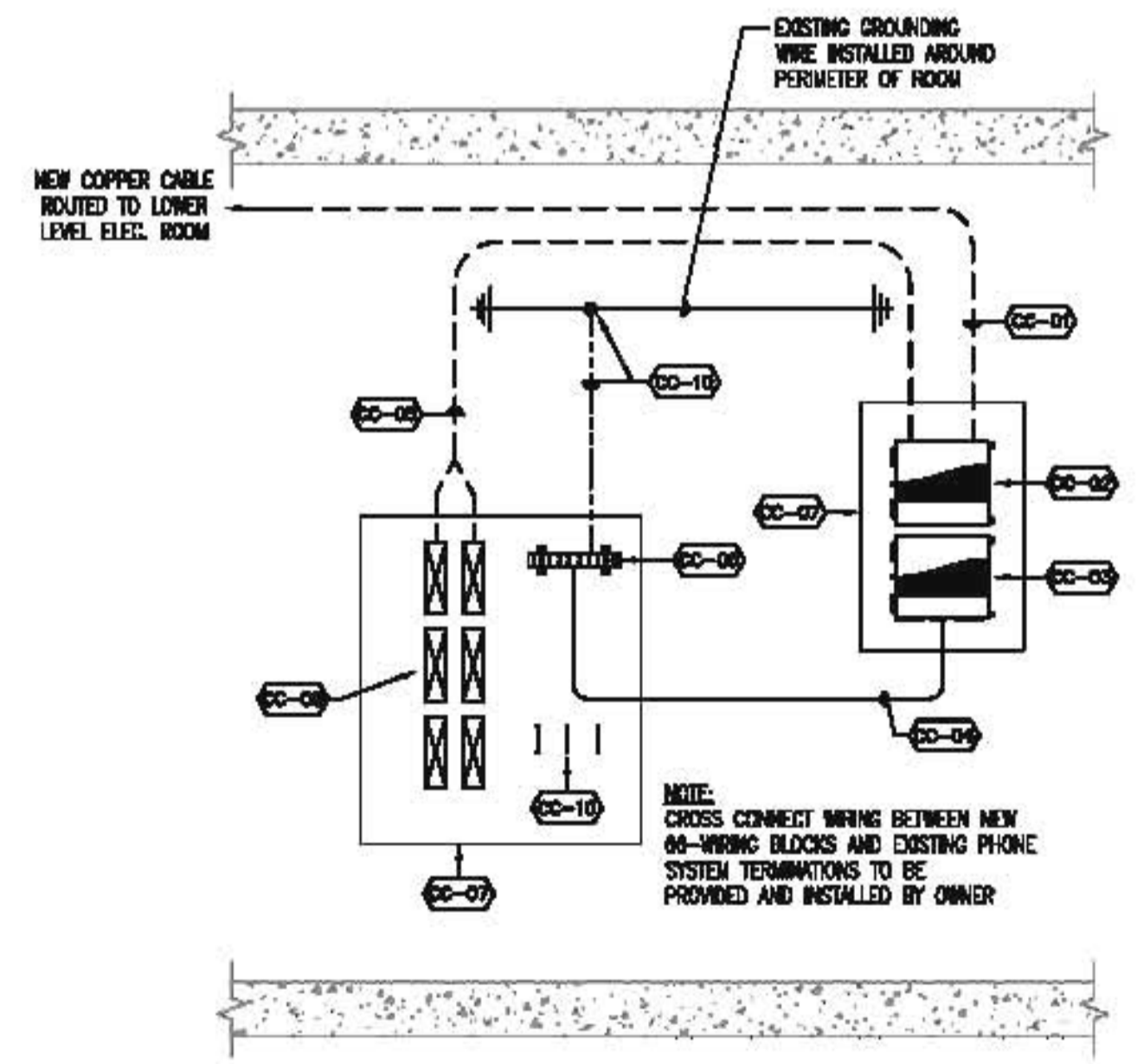
**REC ADMIN INSTALLATION DETAILS**

Project 11133.1

**T3.20**



**1 RECREATION ADMIN. - BACKBONE RISER DIAGRAM**  
T3.20 SCALE: NONE



**2 RECREATION ADMIN. - ENTRANCE ROOM DETAIL**  
T3.20 SCALE: NONE

**TRADE SCOPE KEYED SHEET NOTES**

BY UNDERGROUND UTILITY CONTRACTOR	
UC-01	(1) NEW 2" SDR-11 HIPS INNERDUCT (ORANGE IN COLOR), EQUIPPED WITH (1) 900-POUND PULL ROPE.
UC-02	CONTRACTOR TO PROVIDE ALL MATERIAL AND LABOR TO INSTALL ENTRANCE CONDUIT SLEEVE INTO BUILDING. COORDINATE EXACT LOCATION WITH OWNER'S PROJECT MANAGER PRIOR TO INSTALLATION.
BY CABLING CONTRACTOR	
CC-01	(1) 300-PAIR 24 AWG. OUTDOOR RATED (FLOORED) SINGLE SHIELD PE-89 COPPER BACKBONE CABLE ROUTED BETWEEN VILLAGE HALL ENTRANCE ROOM AND RECREATION ADMIN ENTRANCE ROOM.
CC-02	486 STYLE 200-PAIR 66/66 BUILDING ENTRANCE PROTECTOR UNIT FOR OVER-VOLTAGE PROTECTION OF 200-PAIR OF THE 300-PAIR COPPER BACKBONE CABLE FROM VILLAGE HALL.
CC-03	486 STYLE 100-PAIR 66/66 BUILDING ENTRANCE PROTECTOR UNIT FOR OVER-VOLTAGE PROTECTION OF 100-PAIR OF THE 300-PAIR COPPER BACKBONE CABLE FROM VILLAGE HALL.
CC-04	486 PROTECTOR UNIT TO BE GROUNDED WITH (6) AWG. COPPER GROUNDING WIRE (GREEN IN COLOR).
CC-05	(1) 300-PAIR 24 AWG. INDOOR RISER RATED COPPER BACKBONE CABLE ROUTED BETWEEN BUILDING ENTRANCE PROTECTOR UNITS AND NEW 66-WIRING BLOCKS.
CC-06	NEW TELECOMMUNICATIONS GROUNDING BUSBAR (TGB).
CC-07	NEW 3/4" AC GRADE FIRE-RATED PLYWOOD BACKBOARD, GRADE "C" SIDE TO FACE WALL. PLYWOOD BACKBOARD SHALL BE TREATED WITH TWO COATS OF FIRE-RESISTANT PAINT. COORDINATE EXACT INSTALLATION LOCATION WITH OWNER'S PROJECT MANAGER PRIOR TO INSTALLATION.
CC-08	NEW 66-WIRING BLOCKS AS REQUIRED FOR TERMINATION OF 300-PAIR COPPER BACKBONE CABLE. COORDINATE EXACT INSTALLATION LOCATION WITH OWNER'S PROJECT MANAGER PRIOR TO INSTALLATION.
CC-09	CONTRACTOR TO PROVIDE AND INSTALL NEW #4 AWG STRANDED COPPER GROUNDING CABLE BETWEEN EXISTING GROUNDING WIRE INSTALLED AROUND PERIMETER OF ROOM AND NEW GROUNDING BUSBAR.
CC-10	CONTRACTOR TO PROVIDE AND INSTALL (10) METAL D-RINGS ON NEW AND EXISTING PLYWOOD WALL FIELDS FOR ROUTING OF NEW CROSS CONNECT WIRING. COORDINATE EXACT MOUNTING LOCATIONS WITH OWNER PRIOR TO INSTALLATION. CROSS CONNECT WIRING BY OWNER.



**PROJECT TECHNICAL NOTES**

**UNDERGROUND UTILITY CONTRACTOR**

**CABLING CONTRACTOR**

- 1. DESIGN DRAWINGS**
- A. THE DRAWINGS REPRESENT THE DESIGN INTENT AS EXPRESSED BY THE OWNER. IN NO WAY ARE THEY MEANT TO DIRECT THE CONTRACTOR IN MATTERS PERTAINING TO STRUCTURAL PERFORMANCE. THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE STRUCTURAL SOUNDNESS OF ALL ITEMS CALLED FOR IN THE DRAWINGS FOR A COMPLETE INSTALLATION. ADDITIONAL COMPONENTS AND LABOR REQUIRED FOR STABILIZING THE INSTALLATION TO CONFORM TO PREVAILING BUILDING CODES AND REGULATIONS ARE TO BE INCLUDED IN THE BID RESPONSE.
- B. THE DRAWINGS ARE NOT TO BE SCALED TO DETERMINE LENGTHS REQUIRED, WHERE SPECIFIC PLACEMENTS OF ITEMS ARE REQUIRED, DIMENSIONS ARE SHOWN.

- 2. CHANGES AND DISCREPANCIES**
- A. ANY MINOR CHANGE IN THE LOCATION OF PATHWAYS, EQUIPMENT, ETC., FROM THAT INITIALLY INDICATED, IF DIRECTED BY THE OWNER'S PIA, PRIOR TO THE INSTALLATION OF THE LOCATION, SHALL BE MADE WITHOUT CHARGE. A "MINOR CHANGE" IS DEFINED AS "NOT ADDING ANY DEGREE OF DIFFICULTY TO THE ORIGINAL INSTALLATION REQUIREMENT".

- 3. CLEANING**
- A. THE CONTRACTOR SHALL, ONLY, AT THE COMPLETION OF THE WORK, REMOVE AND DISPOSE OF ALL DEBRIS, SURPLUS MATERIALS, EQUIPMENT, ETC., AND SHALL LEAVE THE PROJECT SITES ABSOLUTELY CLEAN AND IN GOOD ORDER TO THE SATISFACTION OF THE OWNER.

- 4. SAFETY**
- A. THE CONTRACTOR IS RESPONSIBLE FOR THE SAFE PASSAGE OF PEDESTRIAN TRAFFIC FOR THE DURATION OF THE JOB. ANY PRECAUTIONARY MEASURES NECESSARY SUCH AS WARNING SIGNS, ETC., REQUIRED TO ASSIST THE CONTRACTOR IN THE PERFORMANCE OF THE WORK SHALL BE AT THE CONTRACTOR'S EXPENSE AND PROVIDED FOR THEIR QUOTED PRICE.

- 5. USE OF THE SITE**
- A. USE OF THE SITE SHALL BE AT THE OWNER'S DISCRETION IN MATTERS IN WHICH THE OWNER DEEMS IT NECESSARY TO PLACE RESTRICTIONS.
- B. ACCESS TO BUILDING(S) WHEN THE WORK IS PERFORMED SHALL BE AS DIRECTED BY THE OWNER.
- C. SCHEDULE NECESSARY SHUTDOWNS OF PLANT SERVICES WITH THE OWNER, AND OBTAIN WRITTEN PERMISSION FROM THE OWNER.

- 6. CONTINUITY OF SERVICES**
- A. TAKE NO ACTION THAT WILL INTERFERE WITH OR INTERRUPT EXISTING BUILDING SERVICES UNLESS PREVIOUS ARRANGEMENTS HAVE BEEN MADE WITH THE OWNER'S REPRESENTATIVE. ADVANCE THE WORK TO MINIMIZE SHUTDOWN TIME.
- B. OWNER'S PERSONNEL WILL PERFORM SHUTDOWN OF OPERATING SYSTEMS. THE CONTRACTOR SHALL GIVE THREE (3) DAYS' ADVANCE NOTICE FOR SYSTEM SHUTDOWN.
- C. SHOULD SERVICES BE INADVERTENTLY INTERRUPTED, IMMEDIATELY FURNISH LABOR, INCLUDING OPERATIVE, MATERIAL, AND EQUIPMENT NECESSARY FOR PROMPT RESTORATION OF INTERRUPTED SERVICE.

- 7. HOURS OF WORK**
- A. CONTRACTOR IS TO COORDINATE HOURS OF WORK WITH THE OWNER. NO CONSTRUCTION WORK IS PERMITTED ON SUNDAYS OR HOLIDAYS. WORK REQUIRING ACCESS TO BUILDING FACILITIES WILL NEED TO BE SCHEDULED MONDAY - FRIDAY WITHIN REGULAR 1ST SHIFT WORK (7:00AM THRU 5:00PM).

- 8. UTILITIES**
- A. THE CONTRACTOR SHALL PROTECT ALL PUBLIC AND PRIVATE UTILITIES AND SHALL NOTIFY THE OWNER AT LEAST 48 HOURS PRIOR TO COMMENCING WORK AND/OR JAIL (000-002-0125) AND OBTAIN THE HORIZONTAL AND VERTICAL FIELD LOCATIONS FOR THESE UTILITIES WITHIN THE LIMITS OF THE PROPOSED CONSTRUCTION.

- 9. DEMONSTRATION - REMOVE AND DISPOSAL**
- A. ALL ITEMS REMOVED DURING THE CONSTRUCTION PROCESS SHALL BE PROPERLY DISPOSED INCLUDING OF POTENTIAL SPILLS AT A SUITABLE OFF-SITE LOCATION AND WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT. ALL WASTE MATERIAL IS TO BE DISPOSED OF BY THE CONTRACTOR AT THEIR EXPENSE.

- 10. MISCELLANEOUS INCIDENTAL RESTORATION**
- A. ANY FINISHING DAMAGED BY THE CONTRACTOR SHALL BE REFINISHED TO THE SATISFACTION OF THE OWNER. METHODS FOR REPAIR MUST BE APPROVED BY THE OWNER PRIOR TO THE CONTRACTOR MAKING THE REPAIRS. ALL OTHER DAMAGES TO PROPERTY WILL BE CORRECTED AND RESTORED TO ITS ORIGINAL CONDITION OR BETTER AS DIRECTED BEFORE CONSTRUCTION. THE CONTRACTOR MUST HAVE PROPER FORMER BEFORE MAKING ANY CONCRETE OR ASPHALT CUTS AND WILL BE RESPONSIBLE FOR ANY AND ALL RESTORATION COSTS. ALL GRASS AREAS DISTURBED SHALL BE REPLIED, PLOTTED AND COVERED WITH SEED BLANKET TO MATCH ORIGINAL GROUND COVER. WATERING OF SEED BLANKET AREAS WILL BE PERFORMED BY OWNER.
- B. ALL RESTORATION WORK SHALL BE COMPLETED WITHIN TWO (2) WEEKS FROM COMPLETION OF THE AFFECTED CONSTRUCTION AREA. THIS WORK WILL BE DONE AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL LEAVE ALL PROJECT SITES IN THE BEST POSSIBLE CONDITION AND TO THE COMPLETE SATISFACTION OF THE OWNER.

- 11. TRAFFIC CONTROL**
- A. THE CONTRACTOR SHALL COORDINATE ALL TRAFFIC CONTROL WORK ON THIS PROJECT WITH ADJOINING OR OVERLAPPING PROJECTS, INCLUDING BARRIERED PLACEMENT NECESSARY TO PROVIDE UNIFORM TRAFFIC DETOUR PATTERNS. ALL TRAFFIC CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL SPECIFIC AUTHORIZATION FOR RELOCATION OR REMOVAL IS RECEIVED FROM THE OWNER.
- B. THE CONTRACTOR SHALL ENSURE THAT ALL TRAFFIC CONTROL DEVICES INSTALLED ARE OPERATIONAL, FUNCTIONAL AND EFFECTIVE 24 HOURS A DAY, INCLUDING SUNDAYS AND HOLIDAYS.
- C. ALL BARRIERS SHALL BE EQUIPPED WITH A FLASHING LIGHT, AT EACH POINT OF CLOSURE, SUFFICIENT NUMBERS OF BARRIERS SHALL BE USED TO COMPLETELY CLOSE THE SIDEWALK TO PEDESTRIAN MOVEMENT. WHERE CONSTRUCTION ACTIVITIES INVOLVE SIDEWALKS ON BOTH SIDES OF THE STREET, THE WORK SHALL BE STRETTED SO THAT BOTH SIDEWALKS ARE NOT OUT OF SERVICE AT THE SAME TIME.

- 12. SUPPLIED PRODUCTS**
- A. ALL SUPPLIED PRODUCTS FOR THIS INSTALLATION SHALL BE NEW FROM VENDOR OR DISTRIBUTOR STOCK.
- B. USED OR DAMAGED PRODUCTS WILL NOT BE ACCEPTED. REMOVAL AND REPLACEMENT OF SUCH PRODUCTS WILL BE THE CONTRACTOR'S RESPONSIBILITY AND WILL BE DONE AT NO ADDITIONAL COST TO THE OWNER.
- C. WHERE EQUIPMENT AND MATERIALS HAVE INDUSTRY CERTIFICATION, LABELS, OR STANDARDS (I.E. NEMA - NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION), THIS EQUIPMENT SHALL BE LABELED AS CERTIFIED OR COMPLYING WITH STANDARDS.

- 1. DESIGN DRAWINGS**
- A. THE DRAWINGS REPRESENT THE DESIGN INTENT AS EXPRESSED BY THE OWNER. IN NO WAY ARE THEY MEANT TO DIRECT THE CONTRACTOR IN MATTERS PERTAINING TO STRUCTURAL PERFORMANCE. THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE STRUCTURAL SOUNDNESS OF ALL ITEMS CALLED FOR IN THE DRAWINGS FOR A COMPLETE INSTALLATION. ADDITIONAL COMPONENTS AND LABOR REQUIRED FOR STABILIZING THE INSTALLATION TO CONFORM TO PREVAILING BUILDING CODES AND REGULATIONS ARE TO BE INCLUDED IN THE BID RESPONSE.
- B. THE DRAWINGS ARE NOT TO BE SCALED TO DETERMINE LENGTHS REQUIRED, WHERE SPECIFIC PLACEMENTS OF ITEMS ARE REQUIRED, DIMENSIONS ARE SHOWN.

- 2. CHANGES AND DISCREPANCIES**
- A. ANY MINOR CHANGE IN THE LOCATION OF PATHWAYS, EQUIPMENT, ETC., FROM THAT INITIALLY INDICATED, IF DIRECTED BY THE OWNER'S PIA, PRIOR TO THE INSTALLATION OF THE LOCATION, SHALL BE MADE WITHOUT CHARGE. A "MINOR CHANGE" IS DEFINED AS "NOT ADDING ANY DEGREE OF DIFFICULTY TO THE ORIGINAL INSTALLATION REQUIREMENT".

- 3. CLEANING**
- A. THE CONTRACTOR SHALL, ONLY, AT THE COMPLETION OF THE WORK, REMOVE AND DISPOSE OF ALL DEBRIS, SURPLUS MATERIALS, EQUIPMENT, ETC., AND SHALL LEAVE THE PROJECT SITES ABSOLUTELY CLEAN AND IN GOOD ORDER TO THE SATISFACTION OF THE OWNER.

- 4. SAFETY**
- A. THE CONTRACTOR IS RESPONSIBLE FOR THE SAFE PASSAGE OF PEDESTRIAN TRAFFIC FOR THE DURATION OF THE JOB. ANY PRECAUTIONARY MEASURES NECESSARY SUCH AS WARNING SIGNS, ETC., REQUIRED TO ASSIST THE CONTRACTOR IN THE PERFORMANCE OF THE WORK SHALL BE AT THE CONTRACTOR'S EXPENSE AND PROVIDED FOR THEIR QUOTED PRICE.

- 5. USE OF THE SITE**
- A. USE OF THE SITE SHALL BE AT THE OWNER'S DISCRETION IN MATTERS IN WHICH THE OWNER DEEMS IT NECESSARY TO PLACE RESTRICTIONS.
- B. ACCESS TO BUILDING(S) WHEN THE WORK IS PERFORMED SHALL BE AS DIRECTED BY THE OWNER.
- C. SCHEDULE NECESSARY SHUTDOWNS OF PLANT SERVICES WITH THE OWNER, AND OBTAIN WRITTEN PERMISSION FROM THE OWNER.

- 6. CONTINUITY OF SERVICES**
- A. TAKE NO ACTION THAT WILL INTERFERE WITH OR INTERRUPT EXISTING BUILDING SERVICES UNLESS PREVIOUS ARRANGEMENTS HAVE BEEN MADE WITH THE OWNER'S REPRESENTATIVE. ADVANCE THE WORK TO MINIMIZE SHUTDOWN TIME.
- B. OWNER'S PERSONNEL WILL PERFORM SHUTDOWN OF OPERATING SYSTEMS. THE CONTRACTOR SHALL GIVE THREE (3) DAYS' ADVANCE NOTICE FOR SYSTEM SHUTDOWN.
- C. SHOULD SERVICES BE INADVERTENTLY INTERRUPTED, IMMEDIATELY FURNISH LABOR, INCLUDING OPERATIVE, MATERIAL, AND EQUIPMENT NECESSARY FOR PROMPT RESTORATION OF INTERRUPTED SERVICE.

- 7. HOURS OF WORK**
- A. CONTRACTOR IS TO COORDINATE HOURS OF WORK WITH THE OWNER. NO CONSTRUCTION WORK IS PERMITTED ON SUNDAYS OR HOLIDAYS. WORK REQUIRING ACCESS TO BUILDING FACILITIES WILL NEED TO BE SCHEDULED MONDAY - FRIDAY WITHIN REGULAR 1ST SHIFT WORK (7:00AM THRU 5:00PM).

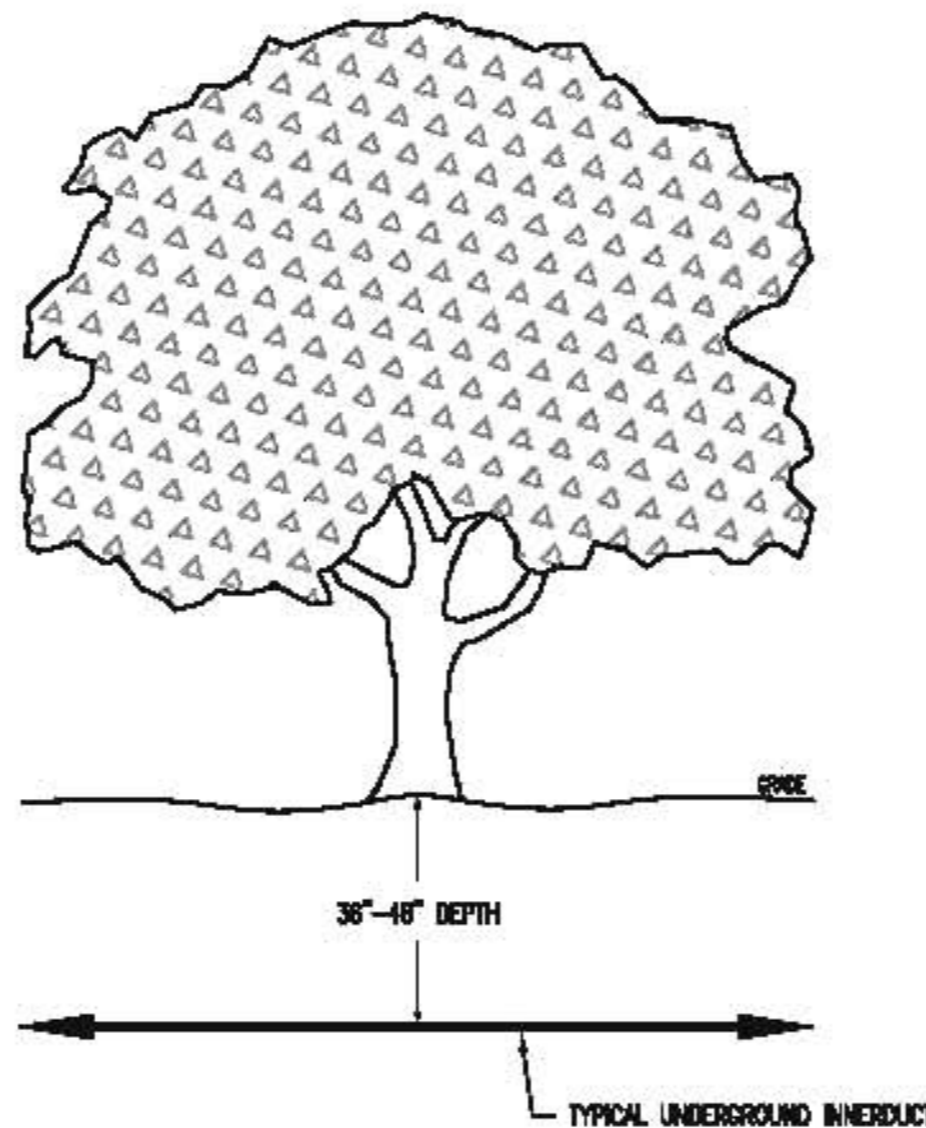
- 8. UTILITIES**
- A. THE CONTRACTOR SHALL PROTECT ALL PUBLIC AND PRIVATE UTILITIES AND SHALL NOTIFY THE OWNER AT LEAST 48 HOURS PRIOR TO COMMENCING WORK AND/OR JAIL (000-002-0125) AND OBTAIN THE HORIZONTAL AND VERTICAL FIELD LOCATIONS FOR THESE UTILITIES WITHIN THE LIMITS OF THE PROPOSED CONSTRUCTION.

- 9. DEMONSTRATION - REMOVE AND DISPOSAL**
- A. ALL ITEMS REMOVED DURING THE CONSTRUCTION PROCESS SHALL BE PROPERLY DISPOSED INCLUDING OF POTENTIAL SPILLS AT A SUITABLE OFF-SITE LOCATION AND WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT. ALL WASTE MATERIAL IS TO BE DISPOSED OF BY THE CONTRACTOR AT THEIR EXPENSE.

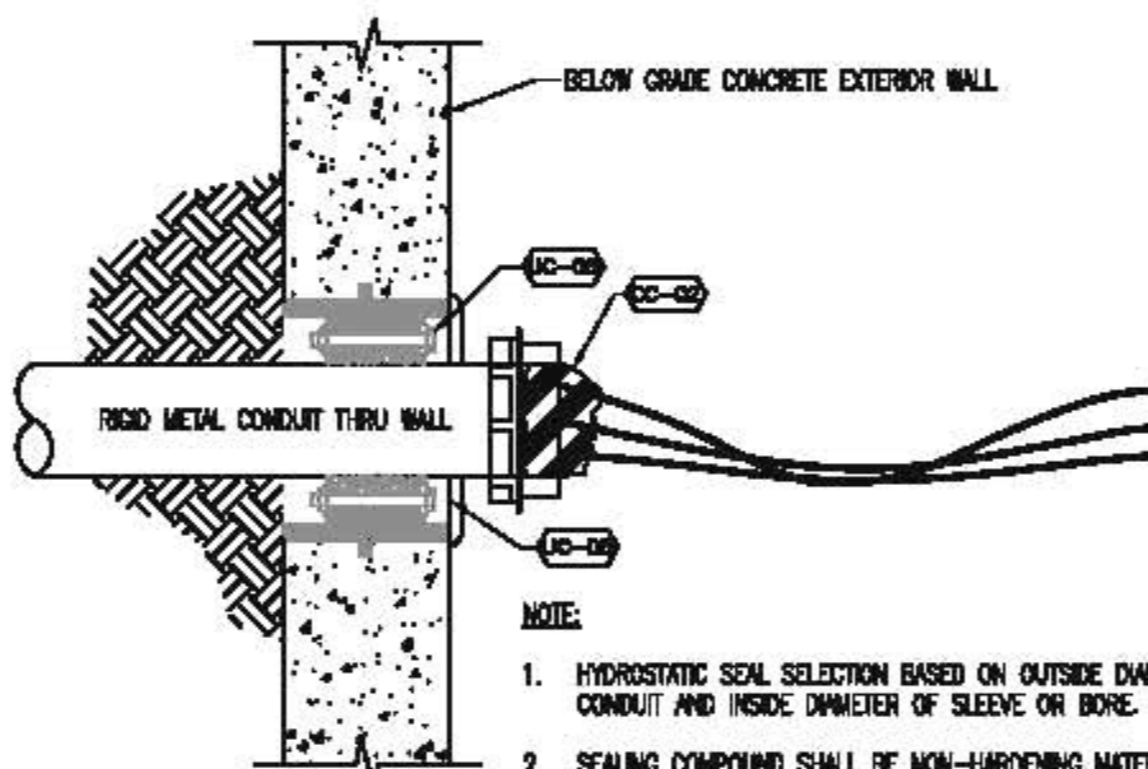
- 10. MISCELLANEOUS INCIDENTAL RESTORATION**
- A. ANY FINISHING DAMAGED BY THE CONTRACTOR SHALL BE REFINISHED TO THE SATISFACTION OF THE OWNER. METHODS FOR REPAIR MUST BE APPROVED BY THE OWNER PRIOR TO THE CONTRACTOR MAKING THE REPAIRS. ALL OTHER DAMAGES TO PROPERTY WILL BE CORRECTED AND RESTORED TO ITS ORIGINAL CONDITION OR BETTER AS DIRECTED BEFORE CONSTRUCTION. THE CONTRACTOR MUST HAVE PROPER FORMER BEFORE MAKING ANY CONCRETE OR ASPHALT CUTS AND WILL BE RESPONSIBLE FOR ANY AND ALL RESTORATION COSTS. ALL GRASS AREAS DISTURBED SHALL BE REPLIED, PLOTTED AND COVERED WITH SEED BLANKET TO MATCH ORIGINAL GROUND COVER. WATERING OF SEED BLANKET AREAS WILL BE PERFORMED BY OWNER.
- B. ALL RESTORATION WORK SHALL BE COMPLETED WITHIN TWO (2) WEEKS FROM COMPLETION OF THE AFFECTED CONSTRUCTION AREA. THIS WORK WILL BE DONE AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL LEAVE ALL PROJECT SITES IN THE BEST POSSIBLE CONDITION AND TO THE COMPLETE SATISFACTION OF THE OWNER.

- 11. TRAFFIC CONTROL**
- A. THE CONTRACTOR SHALL COORDINATE ALL TRAFFIC CONTROL WORK ON THIS PROJECT WITH ADJOINING OR OVERLAPPING PROJECTS, INCLUDING BARRIERED PLACEMENT NECESSARY TO PROVIDE UNIFORM TRAFFIC DETOUR PATTERNS. ALL TRAFFIC CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL SPECIFIC AUTHORIZATION FOR RELOCATION OR REMOVAL IS RECEIVED FROM THE OWNER.
- B. THE CONTRACTOR SHALL ENSURE THAT ALL TRAFFIC CONTROL DEVICES INSTALLED ARE OPERATIONAL, FUNCTIONAL AND EFFECTIVE 24 HOURS A DAY, INCLUDING SUNDAYS AND HOLIDAYS.
- C. ALL BARRIERS SHALL BE EQUIPPED WITH A FLASHING LIGHT, AT EACH POINT OF CLOSURE, SUFFICIENT NUMBERS OF BARRIERS SHALL BE USED TO COMPLETELY CLOSE THE SIDEWALK TO PEDESTRIAN MOVEMENT. WHERE CONSTRUCTION ACTIVITIES INVOLVE SIDEWALKS ON BOTH SIDES OF THE STREET, THE WORK SHALL BE STRETTED SO THAT BOTH SIDEWALKS ARE NOT OUT OF SERVICE AT THE SAME TIME.

- 12. SUPPLIED PRODUCTS**
- A. ALL SUPPLIED PRODUCTS FOR THIS INSTALLATION SHALL BE NEW FROM VENDOR OR DISTRIBUTOR STOCK.
- B. USED OR DAMAGED PRODUCTS WILL NOT BE ACCEPTED. REMOVAL AND REPLACEMENT OF SUCH PRODUCTS WILL BE THE CONTRACTOR'S RESPONSIBILITY AND WILL BE DONE AT NO ADDITIONAL COST TO THE OWNER.
- C. WHERE EQUIPMENT AND MATERIALS HAVE INDUSTRY CERTIFICATION, LABELS, OR STANDARDS (I.E. NEMA - NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION), THIS EQUIPMENT SHALL BE LABELED AS CERTIFIED OR COMPLYING WITH STANDARDS.



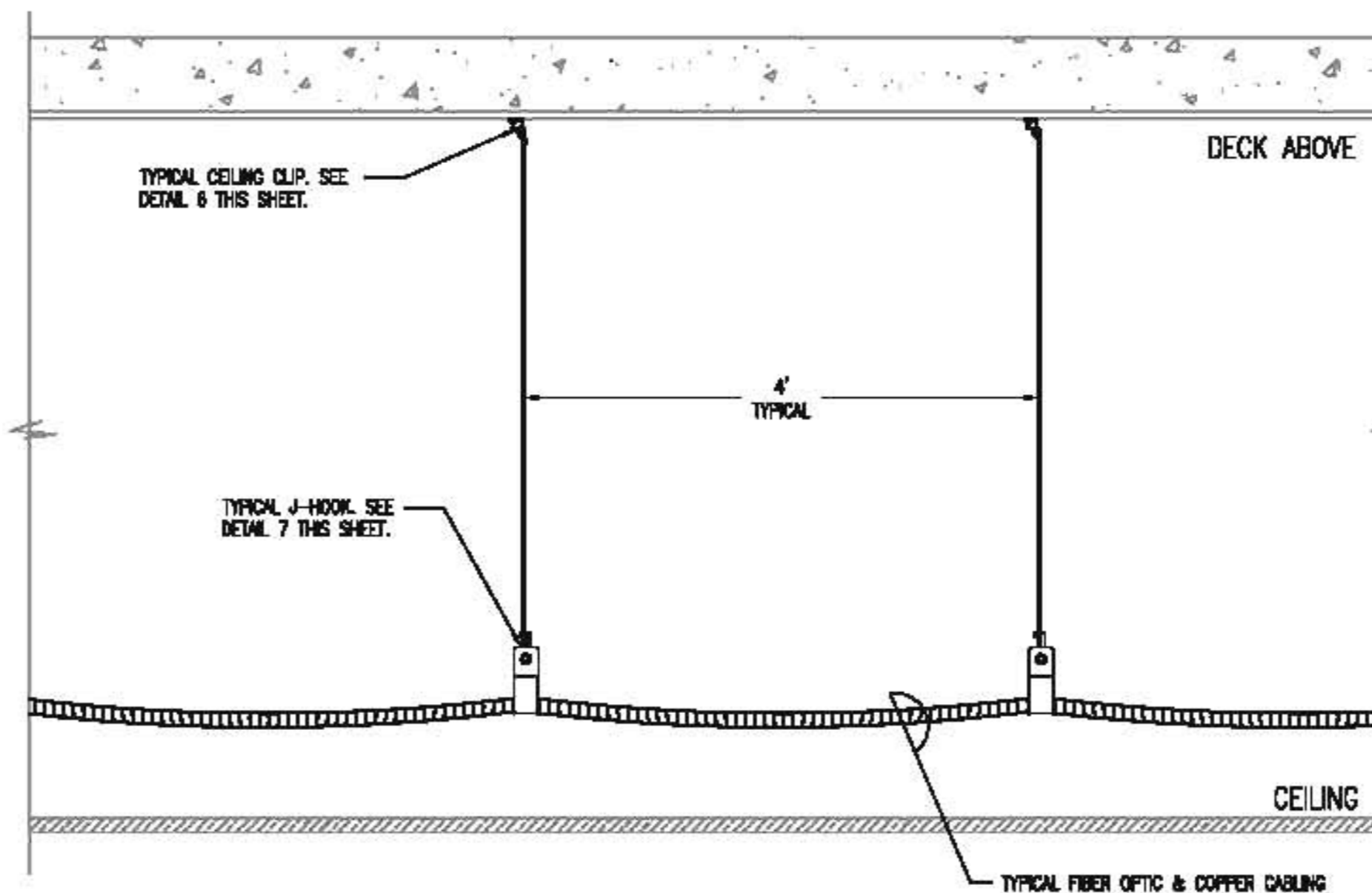
**1 TYPICAL PATHWAY ROUTING DETAIL**  
SCALE: NONE



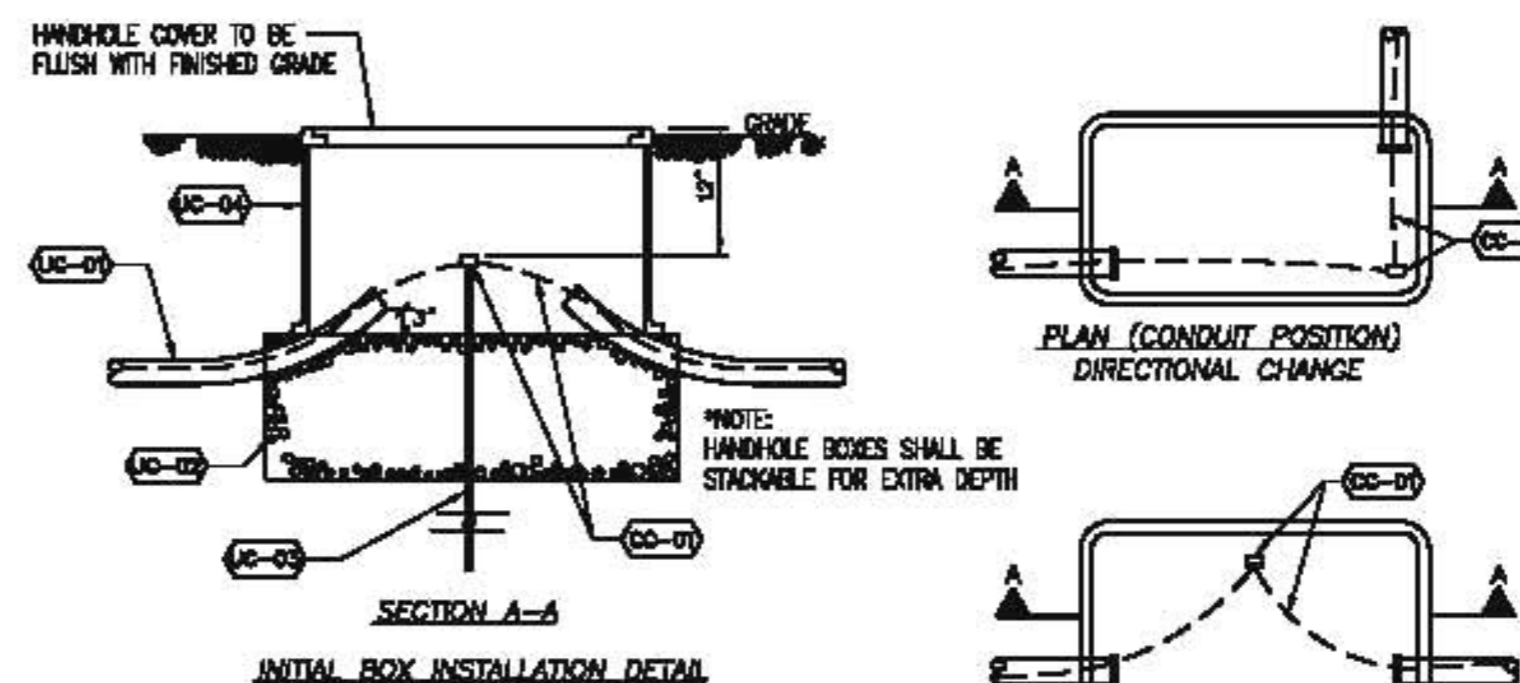
**4 TYPICAL BELOW GRADE CONDUIT DETAIL**  
SCALE: NONE

**TRADE SCOPE KEYED SHEET NOTES**

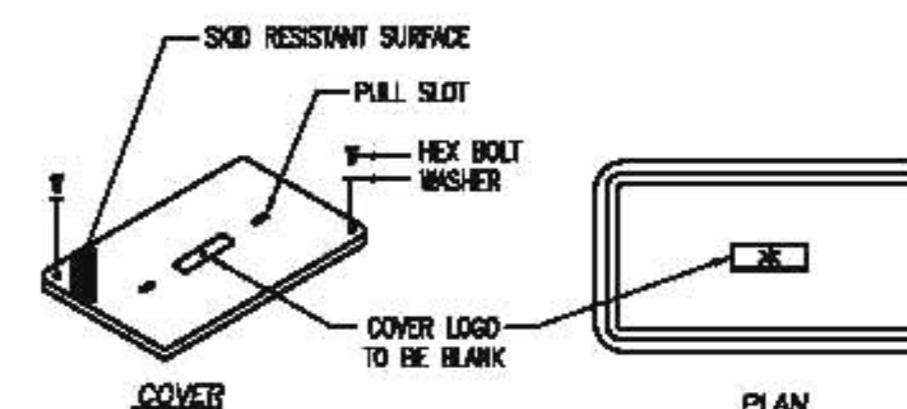
BY UNDERGROUND UTILITY CONTRACTOR	
UC-01	HOPE (ORANGE) INNERDUCT (SIZE PER PLAN) AS REQUIRED.
UC-02	1/2" MIN. LAYER OF 1/2" CLEAN CRUSHED ROCK SHALL BE CONSTRUCTED BELOW SERVICE BOX FOR DRAINAGE PURPOSES.
UC-03	1/2" x 8'-0" GROUND ROD WITH CLAMP.
UC-04	NEW HANDHOLE BOX.
UC-05	HYDROSTATIC SEAL ASSEMBLY. INSTALL ASSEMBLY SO BOLT HEADS ARE ACCESSIBLE FROM INTERIOR FOR DISASSEMBLY. PRODUCT MANUFACTURER SHALL BE LINK-SEAL.
UC-06	APPLY CHALK FLUSH WITH SURFACE AND PROVIDE CHROME ESCUTCHEON RING FOR FINISHED WALLS.
BY CABLING CONTRACTOR	
CC-01	#10 AWG STRANDED COPPER LOCKING CABLE TO BE INSTALLED WITHIN ALL UNDERGROUND PATHWAYS. LOCATE CABLE TO BE ATTACHED TO GROUND ROD WITHIN EACH HANDHOLE.
CC-02	DUCT SEALING COMPOUND IN INTERIOR OF CONDUIT AFTER FINAL CABLE INSTALLATION. CONTRACTOR SHALL MAINTAIN WATERPROOFING CONTROL DURING CABLE INSTALLATION.



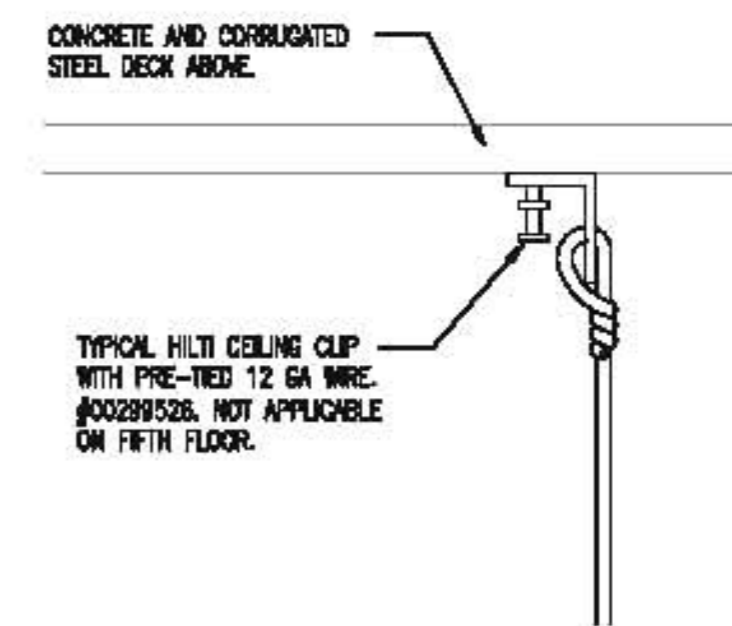
**5 INTRABUILDING CABLE SUPPORT DETAIL**  
SCALE: NONE



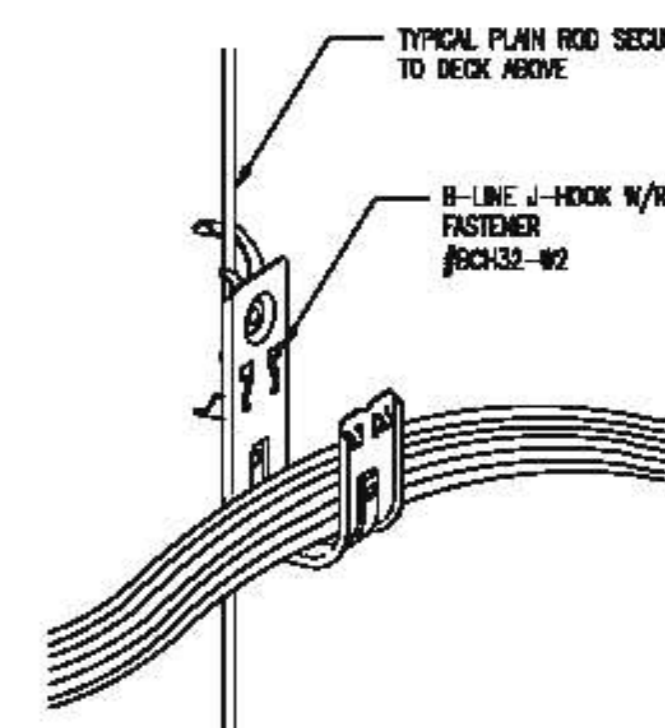
**2 TYPICAL HANDHOLE INSTALLATION DETAIL**  
SCALE: NONE



**3 TYPICAL HANDHOLE COVER DETAIL**  
SCALE: NONE



**6 HILTI CEILING CLIP**  
SCALE: NONE



**7 B-LINE J-HOOK**  
SCALE: NONE



**FRANKLIN LOEBE CENTER DATA/VOICE BACKBONE CABLING RENOVATIONS**

For **VILLAGE OF ORLAND PARK**

14890 SOUTH RAVINIA AVENUE  
ORLAND PARK, IL 60462

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NO.	ISSUED FOR	DATE
1	BIDDING	3.20.13

MISC. INSTALLATION DETAILS

Project: 11133.1 **T4.00**

**TRADE SCOPE KEYED SHEET NOTES**

**BY UNDERGROUND UTILITY CONTRACTOR**

CC-01 CONTRACTOR SHALL HAND EXCAVATE NEAR FOUNDATION WALL OF BUILDING TO LOCATE EXISTING COMMUNICATIONS CABLES AS NOTED SO THAT CABLING CONTRACTOR CAN CUT AND DEMO EXISTING CABLES AS REQUIRED. AT COMPLETION OF CABLING CONTRACTOR SCOPE THIS CONTRACTOR SHALL PROVIDE RESTORATION SERVICES PER SPECIFICATIONS.

**BY CABLING CONTRACTOR**

CC-02 (1) EXISTING 600-PAIR COPPER BACKBONE CABLE ROUTED BETWEEN VILLAGE HALL ENTRANCE ROOM AND RECREATION ADMIN ENTRANCE ROOM. CONTRACTOR TO CUT CABLE AT EXTERIOR FOUNDATION WALL SLEEVE AT COMPLETION OF PROJECT AND ABANDON UNDERGROUND CABLE IN PLACE.

CC-03 (1) EXISTING 200-PAIR COPPER BACKBONE CABLE ROUTED BETWEEN VILLAGE HALL ENTRANCE ROOM AND FRANKLIN LOEBE CENTER ELEC. ROOM L133. CONTRACTOR TO CUT CABLE AT EXTERIOR FOUNDATION WALL SLEEVE AT COMPLETION OF PROJECT AND ABANDON UNDERGROUND CABLE IN PLACE.

CC-04 (1) EXISTING 12-STRAND FIBER OPTIC BACKBONE CABLE ROUTED BETWEEN VILLAGE HALL 1ST FLOOR IDF WIRING ROOM AND FRANKLIN LOEBE CENTER 1ST FLOOR IDF WIRING ROOM. CONTRACTOR TO CUT CABLE AT EXTERIOR FOUNDATION WALL SLEEVE AT COMPLETION OF PROJECT AND ABANDON UNDERGROUND CABLE IN PLACE.

CC-05 (1) EXISTING 12-STRAND FIBER OPTIC BACKBONE CABLE ROUTED BETWEEN VILLAGE HALL 1ST FLOOR IDF WIRING ROOM AND RECREATION ADMIN DATA EQUIPMENT ROOM. CONTRACTOR TO CUT CABLE AT EXTERIOR FOUNDATION WALL SLEEVE AT COMPLETION OF PROJECT AND ABANDON UNDERGROUND CABLE IN PLACE.

CC-06 CONTRACTOR TO RE-SEAL EXISTING EXTERIOR WALL CONDUIT WITH WATERSTOP MOISTURE BARRIER SEAL. BOTH ENDS OF EXTERIOR CONDUIT ONCE EXISTING CABLING HAS BEEN REMOVED.

CC-08 CONTRACTOR TO REMOVE COMPLETE EXISTING 600-PAIR AND 200-PAIR COPPER BACKBONE CABLES AND ASSOCIATED LIGHTNING PROTECTION UNITS AT COMPLETION OF PROJECT.

CC-07 CONTRACTOR TO REMOVE COMPLETE EXISTING 600-PAIR AND 200-PAIR INDOOR COPPER BACKBONE CABLES BETWEEN EXISTING LIGHTNING PROTECTION UNITS AND EXISTING 68-WIRING BLOCKS LOCATED IN MDF ROOM AT COMPLETION OF PROJECT.

CC-09 CONTRACTOR TO REMOVE COMPLETE ALL 68-WIRING BLOCKS ASSOCIATED WITH EXISTING 600-PAIR AND 200-PAIR COPPER BACKBONE CABLES AT COMPLETION OF PROJECT.

CC-10 CONTRACTOR TO REMOVE COMPLETE EXISTING (2) 12-STRAND INDOOR FIBER OPTIC BACKBONE CABLES AND ASSOCIATED INNERDUCT BETWEEN EXTERIOR CONDUIT WALL SLEEVE AND DATA EQUIPMENT RACK LOCATED IN MDF ROOM.

CC-11 CONTRACTOR TO RE-FIRESTOP ALL CONDUIT SLEEVES ONCE EXISTING CABLING HAS BEEN REMOVED.

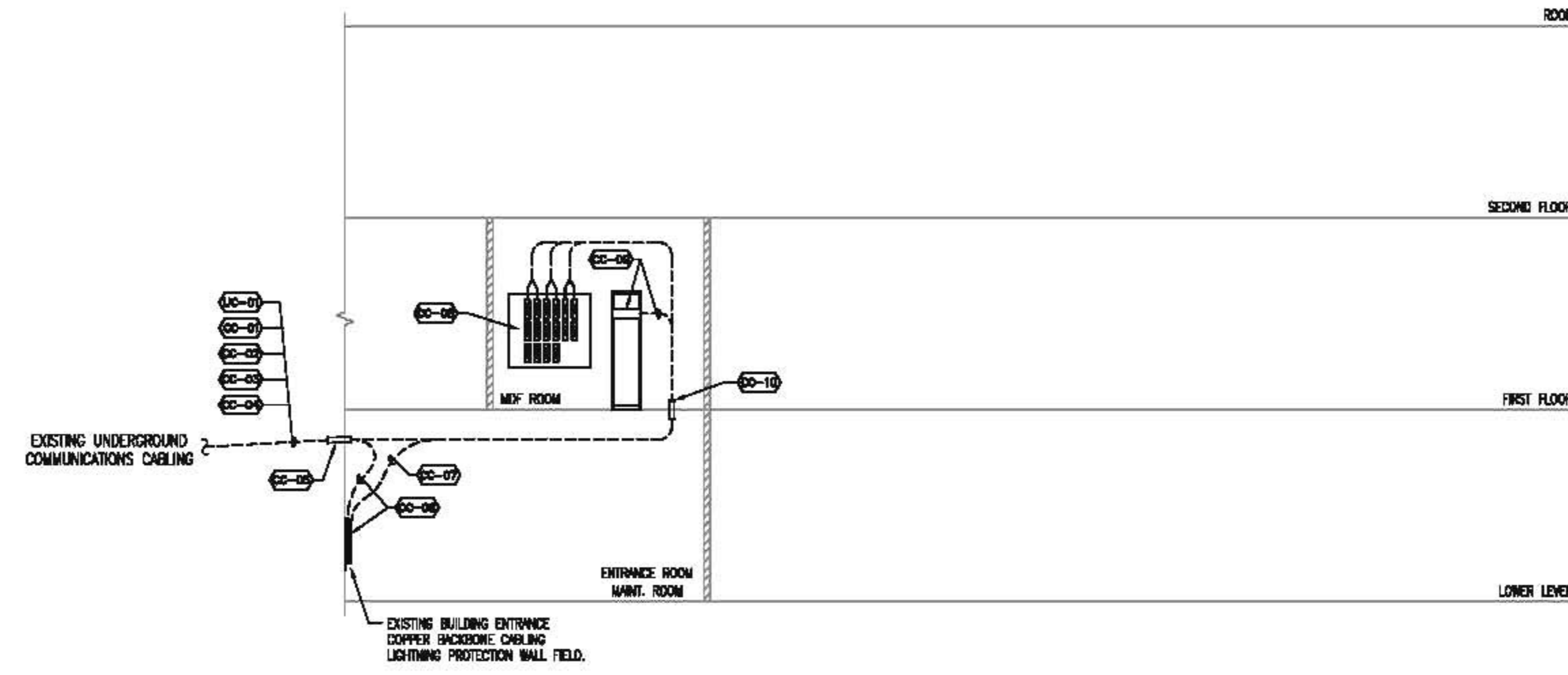
CC-12 CONTRACTOR TO REMOVE COMPLETE EXISTING 12-STRAND OUTDOOR RATED FIBER OPTIC BACKBONE CABLE AND ASSOCIATED WALL MOUNT FIBER SPLICE CABINET AT COMPLETION OF PROJECT.

CC-13 CONTRACTOR TO REMOVE COMPLETE EXISTING 12-STRAND INDOOR FIBER OPTIC BACKBONE CABLE BETWEEN ELEC. ROOM L133 WALL MOUNT FIBER SPLICE CABINET AND WALL MOUNT FIBER TERMINATION CABINET LOCATED IN IDF WIRING ROOM.

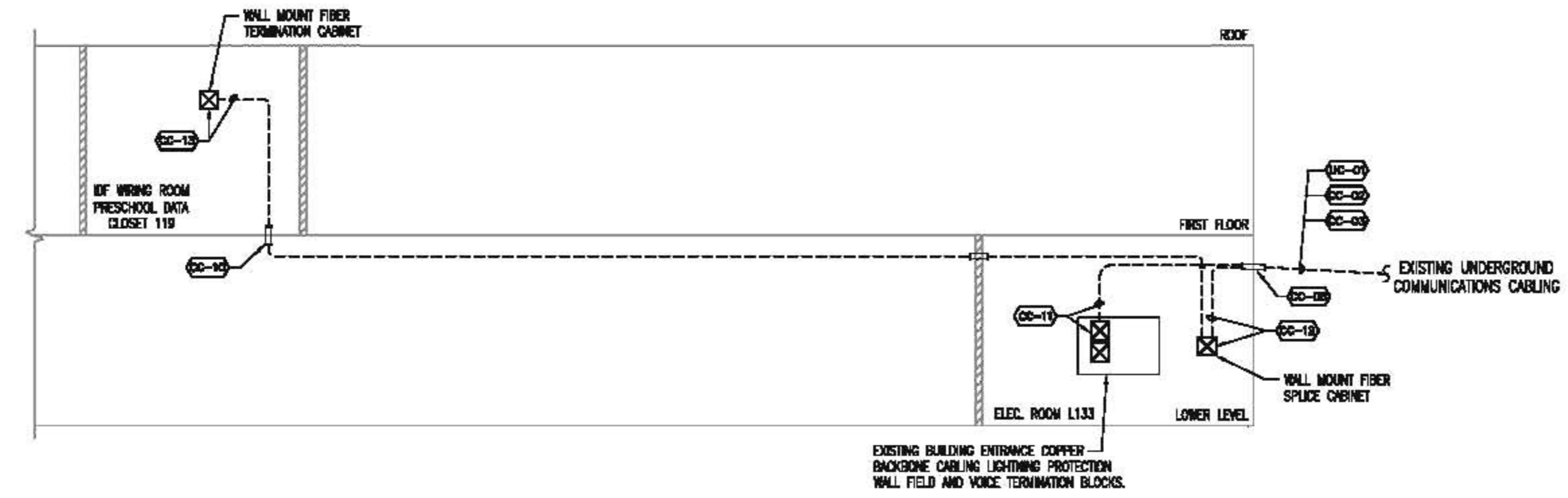
CC-14 CONTRACTOR TO REMOVE COMPLETE EXISTING 600-PAIR COPPER BACKBONE CABLE AND ASSOCIATED LIGHTNING PROTECTION UNITS AT COMPLETION OF PROJECT.

CC-15 CONTRACTOR TO REMOVE COMPLETE EXISTING 600-PAIR INDOOR COPPER BACKBONE CABLES BETWEEN EXISTING LIGHTNING PROTECTION UNITS AND EXISTING 68-WIRING BLOCKS AT COMPLETION OF PROJECT.

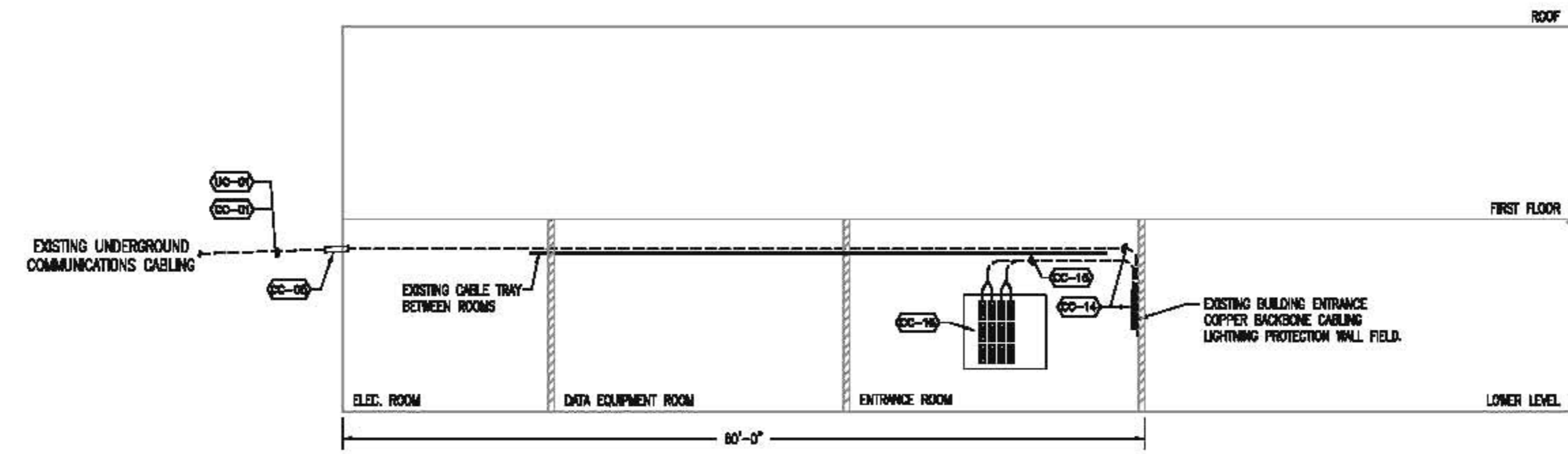
CC-16 CONTRACTOR TO REMOVE COMPLETE ALL 68-WIRING BLOCKS ASSOCIATED WITH EXISTING 600-PAIR COPPER BACKBONE CABLE AT COMPLETION OF PROJECT.



**1 VILLAGE HALL - BACKBONE RISER DEMO DIAGRAM**  
TDS.00 SCALE: NONE



**2 FRANKLIN LOEBE CENTER - BACKBONE RISER DEMO DIAGRAM**  
TDS.00 SCALE: NONE



**3 RECREATION ADMIN. - BACKBONE RISER DEMO DIAGRAM**  
TDS.00 SCALE: NONE

**SHEET NOTES**

1. ALL PENETRATIONS THROUGH FIRE RATED WALLS AND FLOORS THAT ARE IMPACTED BY CABLE REMOVAL SHALL BE FIRE STOPPED TO THE RATING OF THE ASSOCIATED WALL AND/OR FLOOR.
2. CORES AND OPENINGS THROUGH FIRE RATED WALLS SHALL BE TEMPORARILY FIRE STOPPED WHEN NOT BEING WORKED.
3. ALL DEMO WORK SHALL BE COORDINATED WITH OWNER'S PROJECT MANAGER AND HAVE OWNER APPROVAL PRIOR TO WORK COMMENCING.
4. ALL DEBRIS REMOVED DURING THE DEMO PROCESS SHALL BE PROPERLY DISPOSED INCLUSIVE OF POTHOLES SPOILS AT A SUITABLE OFF-SITE LOCATION AND WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT. ALL WASTE MATERIAL IS TO BE DISPOSED OF BY THE CONTRACTOR AT THEIR EXPENSE.
5. ANY EXCAVATION WORK PERFORMED BY THE CONTRACTOR SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER. METHODS FOR REPAIR MUST BE APPROVED BY THE OWNER PRIOR TO THE CONTRACTOR MAKING THE REPAIRS. ALL OTHER REPAIRS TO PROPERTY WILL BE CORRECTED AND RESTORED TO ITS ORIGINAL CONDITION OR BETTER AS EXISTED BEFORE CONSTRUCTION. THE CONTRACTOR MUST HAVE PROPER PERMITS BEFORE MAKING ANY CONCRETE OR ASPHALT CUTS AND WILL BE RESPONSIBLE FOR ANY AND ALL RESTORATION COSTS. ALL GRASSY AREAS DISTURBED SHALL BE REFILLED, PACKED AND COVERED WITH SEED BLANKET TO MATCH ORIGINAL GROUND COVER. WATERING OF SEED BLANKET AREAS WILL BE PERFORMED BY OWNER.
6. ALL RESTORATION WORK SHALL BE COMPLETED WITHIN TWO (2) WEEKS FROM COMPLETION OF THE AFFECTED CONSTRUCTION AREA. THIS WORK WILL BE DONE AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL LEAVE ALL PROJECT SITES IN THE BEST POSSIBLE CONDITION AND TO THE COMPLETE SATISFACTION OF THE OWNER.

**ALTERNATE #1**

ALL SCOPE OF WORK SHOWN ON THIS SHEET SHALL BE PRICED AS AN ALTERNATE TO THE BASE BID. THE SCOPE OF WORK ASSOCIATED WITH THIS ALTERNATE SHALL TAKE PLACE AT THE COMPLETION OF THE BASE BID PROJECT AND WILL REQUIRE RE-MOBILIZATION EFFORTS BY THE CONTRACTORS. IT IS ESTIMATED THAT THIS SCOPE OF WORK WILL TAKE PLACE WITHIN THE MONTH OF SEPTEMBER 2013.



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**FRANKLIN LOEBE CENTER DATAVOICE BACKBONE CABLING RENOVATIONS**

For  
**VILLAGE OF ORLAND PARK**  
At:  
14850 SOUTH RAVINIA AVENUE  
ORLAND PARK, IL 60462

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EXISTING BACKBONE CABLE DEMO DIAGRAMS ALTERNATE #1  
**TD5.00**  
Project: 11133.1