

VENDOR: \_\_\_\_\_



COMMUNITY COLLEGE DISTRICT NO. 502

RFP NUMBER: 2026-R0020

DIGITAL KIOSK DISPLAY SYSTEM

PROPOSALS DUE: THURSDAY, MAY 14, 2026, AT 1:00 P.M. CENTRAL TIME

In the event of College closure due to inclement weather, RFP deadline will be extended to the next business day at the same time.

**RETURN**  
**PROPOSALS TO: COLLEGE OF DUPAGE PROCUREMENT SERVICES**  
**INSTITUTIONAL RESOURCE CENTER (IRC), ROOM 1001**  
**425 FAWELL BLVD.**  
**GLEN ELLYN, ILLINOIS 60137**  
**ATTENTION: RFP NO. 2026-R0020**

<b>Issue Date:</b>	<b>April 22, 2026</b>
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ISSUED BY THE COLLEGE OF DUPAGE PROCUREMENT SERVICES

**Procurement Services**  
425 Fawell Boulevard  
Glen Ellyn, Illinois 60137-6599  
<http://www.cod.edu>  
PHONE (630) 942-2217

April 22, 2026

### **INVITATION FOR RFP**

Sealed proposals for a **Digital Kiosk Display System**, will be received between the hours of 8:00 a.m. to 5:00 p.m. Central Time by the College of DuPage, District 502, at the Office of the Procurement Manager, Institutional Resource Center (IRC) Building, Room 1001, 425 Fawell Blvd., Glen Ellyn, IL 60137, until **Thursday, May 14, 2026, at 1:00 p.m. Central Time**, at which time they will be publicly opened. In the event of College closure due to circumstance outside of the College's control, the RFP deadline will be extended to the next business day at the same time.

Any proposal received after the date and time stated above will be returned unopened. College of DuPage shall not be responsible for proposals that are not received at the specific office location indicated above by the stated deadline. Failure by a delivery service company or person to meet the deadline will not excuse the respondent from the deadline requirement. It is solely the vendor's responsibility to ensure that adequate time is allowed for timely and accurate delivery.

Prices offered shall be F.O.B. Destination, College of DuPage, 425 Fawell Blvd., Glen Ellyn, IL 60137. Prices must be firm. No proposals will be accepted on the basis of a price prevailing at the time of shipment.

The award(s) of the contract will be made to the highest scoring proposer whose proposal complies with all the requirements prescribed. Brand or trade names in RFP specifications are used for identification purposes only.

Respondents may download the RFP in addition to any future addenda from the College's Procurement website at the following URL address: <http://cod.edu/about/purchasing/requests/index.aspx>

No proposal shall be withdrawn for a period of ninety (90) days after the RFP opening date without the consent of the College.

## LEGAL NOTICE

### RFP NOTICE

#### No. 2026-R0020

The College of DuPage is accepting sealed proposals for a **Digital Kiosk Display System**. The RFP documents and Zoom meeting instructions may be downloaded from the Procurement Website at [www.cod.edu/about/purchasing/requests](http://www.cod.edu/about/purchasing/requests) by clicking on the link for this RFP and following the instructions.

Proposals will be received between the hours of 8:00 a.m. to 5:00 p.m. Central Time to the College of DuPage Procurement Services in the Institutional Resource Center (IRC) Building, Room 1001, 425 Fawell Blvd., Glen Ellyn, IL 60137 up to and no later than **Thursday, May 14, 2026, at 1:00 p.m. Central Time**, at which time they will publicly opened.

**A Pre-Proposal Conference is scheduled via Zoom for Wednesday, April 29, 2026, at 10:00 a.m. Central Time.** The Pre-Proposal Conference is not mandatory, but highly recommended.

The College of DuPage is committed to the economic development of disadvantaged business enterprises; qualified Minority, Women, and Persons with Disabilities Owned Businesses are highly encouraged to participate.

College of DuPage Board of Trustees Reserves the right to reject any and all responses. This invitation is issued in the name of the Board of Trustees of College of DuPage, Community College District 502, Glen Ellyn, Illinois.

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## RFP SUBMISSION CHECKLIST

### Things to Remember When Submitting a Response to a Request for Proposal for the College of DuPage

1.  **Read the *entire* document.** In your review, note critical items such as: blackout period, required goods and services, submittal dates, submission requirements, etc.
2.  **Note the contact information provided.** The Procurement Services Office Buyer at [purchasing@cod.edu](mailto:purchasing@cod.edu) is the single point of contact for this Request for Proposal and is the only person with whom you are allowed to communicate regarding this RFP. This person is an excellent source of information for any questions you may have.
3.  **Take advantage of the “question and answer” period.** Submit your questions to Procurement Services by the date in the RFP and view the answers given in the formal addenda issued for the RFP. All addenda issued for an RFP will be emailed to each company that downloaded the RFP documents and will include all questions asked and answered concerning the Invitation to RFP. Please ensure when downloading the RFP documents, you use a valid email address.
4.  **Do not alter, add to, or delete and part of the RFP documents without prior approval.** Please refer to the section titled *Exceptions* for instruction on how to request a deviation to the original Invitation to RFP.
5.  **Ensure all Addenda are signed.** Before submitting your response, check the College Procurement website at <http://www.cod.edu/about/purchasing/requests/index.aspx> to see whether any addenda were issued for this RFP request. If so, you must submit a signed copy of the addenda along with your response.
6.  **Review and read the RFP document again to make sure you have addressed all requirements.**  
\*Proposals will not be accepted if Sections 4, 5, 6, 7, and 8 are not completed. (*Please note there are two (2) signature lines in Section 8 that must be signed.*)  
\*If your company is a Certified Women-Owned, Minority-owned, or Persons with Disability-owned business, please include a copy of any and all certifications.
7.  **Submit your response on time.** Note the date and time listed on the front page of the RFP and be sure to submit all required items on time. **Late responses will not be accepted. It is the sole responsibility of the Respondent to ensure that adequate time is allowed for timely and accurate submission and that the proposal is received as required.**
8.  **Important dates to know:**
  - RFP Publication Date – Wednesday, April 22, 2026
  - Pre-Proposal Meeting – Wednesday, April 29, 2026, at 10:00 a.m. Central Time
  - Questions Due – Friday, May 1, 2026, by 12:00 p.m. Central Time
  - Proposals Due – Thursday, May 14, 2026, at 1:00 p.m. Central Time
  - Target Board Approval Date – Thursday, June 25, 2026

## 1.0 GENERAL INFORMATION

### 1.1 DEFINITIONS

- A. **VENDOR** shall mean the individual or business entity submitting a proposal to supply any or all of the services or goods required by the RFP Documents.
- B. **RFP** shall mean the Request for Proposal (RFP) Documents as completed by the Vendor which constitutes the Vendor's offer.
- C. **CONTRACT** shall mean the agreement between the College and Contractor as set forth in the Bid Documents and as awarded by the College of DuPage Board of Trustees.
- D. **RFP DOCUMENTS** shall mean collectively the Instructions to Vendors, General Conditions, Special Conditions, Specifications, Attachments, and Addenda, if any, Site Inspection Certificate, Contractor Certifications and Forms for Minority Participation. The above documents shall be considered as one integrated document setting forth the obligations of the parties.
- E. **CONTRACTOR** shall mean the individual or business entity submitting a proposal and to whom the College of DuPage Board of Trustees awards the Contract.
- F. **COLLEGE** shall mean the College of DuPage, Community College District No. 502, a body politic and corporate of the State of Illinois.
- G. **DIRECTOR** shall mean the person or persons authorized by the College to act in connection with this Contract. Such authorization shall not include any power to change the scope of the Contract or to obligate the College to pay additional sums beyond the amount of the Contract awarded by the College of DuPage Board of Trustees.
- H. **PROCUREMENT MANAGER** shall mean the Procurement Manager of the College of DuPage.
- I. **SPECIFICATIONS** shall mean the description of the required services, Contract Goods, equipment, personnel, volume and use statistics and all requirements for the scope of work set forth in the RFP Documents.

### 1.2 PROPOSALS TO CONFORM TO REQUIREMENTS OF LEGAL ADVERTISING

The College will not entertain or consider any RFP responses: (i) received after the exact time specified in the legal advertisements; (ii) not accompanied by the required bid deposit/bond, if required; or (iii) in any other way failing to comply fully with the conditions stated in the legal advertisement.

### 1.3 COMPLIANCE

Submissions under this Request for Proposal shall be for items at least equal to or better than the quality and performance characteristics stated herein. The burden of proof that product and services meet specifications shall be documented by the vendor and be provided as part of the submitted proposal. Failure to provide complete documentation of the product compliance with specifications required may result in proposal rejection.

### 1.4 COMPLIANCE WITH LAWS - PUBLIC CONTRACTS

This Contract is a competitively bid public contract of the College of DuPage subject to laws and ordinances governing public contracts. The Vendor shall at all times observe and comply with all laws, ordinances, regulations and codes of the Federal, State and other local government agencies which may in any manner affect the preparation of the proposal or the performance of the Contract. If the Vendor observes that any of the RFP Documents are at variance therewith, it shall promptly notify the Procurement Manager in writing and necessary changes shall be effected by appropriate modification.

## **1.5 REGULATIONS**

The Contractor or Subcontractor, warrants that they are familiar with and they shall comply with all Federal, State, and Local Laws, statutes, ordinances, rules and regulations and the orders and decrees of any courts or administrative bodies or tribunals in any manner affecting the performance of the Contract, including, without limitation, Workmen's Compensation Laws, minimum salary and wage statutes and regulations, laws with respect to permits and licenses and fees in connection therewith, laws regarding maximum working hours and regulations with respect to use of explosives. No plea of misunderstanding or ignorance thereof will be considered. Whenever required, the Contractor, or Subcontractor, shall furnish the college with satisfactory proof of compliance with said Federal, State and Local Laws, statutes, ordinances, rules, regulations, orders, and decrees.

## **1.6 PROPOSAL MODIFICATIONS**

Unless indicated, it is understood that proposals are in strict accordance with specification requirements. Proposals shall be deemed final, conclusive, and irrevocable. No proposal shall be subject to correction or amendment for any error or miscalculation. Prices shall include cost of materials as specified, any applicable discounts and shipping. Installation costs shall be included only when indicated on page one. Installation shall include, but is not limited to, all assembly required, setting in place, and mounting all materials at various campus locations.

## **1.7 PRICES FIRM**

All prices quoted in the proposal shall be firm and will not be subject to increase during the term of the Contract awarded to the Contractor, except as otherwise provided in the RFP Documents.

## **1.8 AWARD OF CONTRACT**

The award of the contract will be made within ninety (90) calendar days after the opening of proposals to the highest scoring responsible and qualified vendor whose proposal complies with all the requirements prescribed. The successful vendor will be notified by electronic mail that their proposal has been accepted and that they have been awarded the contract. Notification will also be posted on the College's Procurement website at <http://www.cod.edu/about/purchasing/>. Failure to execute performance as per accepted proposal may result in legal action by the College of DuPage to recover damages.

If a contract is not awarded within ninety (90) days after the opening of proposals, a vendor may file a written request with the Procurement Manager for the withdrawal of their proposal and the Procurement Manager will permit such withdrawal.

The bid security (if required) of all except the three (3) low vendors will be returned promptly after the proposals have been checked, tabulated, and the relation of the proposals established. Bid security of the three (3) lowest vendors, if required in legal notice, will be returned as soon as the contract and the bond of the successful vendor have been promptly executed and approved. If contracts cannot be awarded promptly, the College may permit the three (3) lowest vendors to substitute bid bonds for bank cashier's checks, bank drafts or certified checks submitted with their proposals. Bid bonds executed by corporate surety companies shall be satisfactory to the Owner, but such substitution shall not be made until a period of fifteen (15) days has elapsed after the date of opening of proposals and bond forms furnished by the College shall be used.

## **1.9 CONSIDERATION OF PROPOSALS**

The College reserves the right to reject or accept any or all proposal responses, to extend the bidding period, to waive technicalities in the documents and/or to direct that the solicitation be abandoned or rebid prior to award of the Contract.

### **1.10 COMPETENCY OF VENDOR**

No proposal will be accepted from, or Contract awarded to a Vendor that is in arrears or is in default to the College upon any debt or Contract, or that is a defaulter, as surety or otherwise upon any obligation to said College, or has failed to perform faithfully any previous contract with the College.

### **1.11 VENDOR WARRANTIES**

The submission of a proposal shall constitute a warranty that: (i) Vendor has carefully and thoroughly reviewed the RFP Documents and has found them complete and free from ambiguities and sufficient to describe the Contract work; (ii) Vendor and all workers and/or employees it intends to use in the performance of this Contract are skilled and experienced in the type of work or services called for by the RFP Documents; and (iii) neither the Vendor nor any of its employees, agents, suppliers or subcontractors have relied on any verbal representations from the College, or any of the College's employees, agents, or consultants, in preparing the RFP.

### **1.12 PAYMENT TERMS**

All invoices must be provided to the College for services rendered directly to the College. Undisputed invoices will be paid to the contractor within sixty (60) days of receipt of properly submitted invoices, in accordance with the Local Government Prompt Payment Act.

### **1.13 PAYMENT REMITTANCE**

All College vendors are required to receive payment from the College via an Automated Clearing House (ACH) transfer. Instructions to register for ACH payments will be sent, upon request, to successful vendors. Failure to comply with the ACH requirements may result in termination of the contract or purchase order. College ACH transfers typically occur the third week of each month. Invoices must be received at least 3 weeks prior to each ACH payment release. You are strongly encouraged to set up your account upon notice of award to avoid a delay payment.

### **1.14 CASH BILLING DISCOUNTS**

Cash billing or percentage discounts for payment will not be considered in evaluating proposals.

### **1.15 LOCAL BUSINESS PREFERENCE**

When two (2) or more responsible vendors submit the same low bid, the contract award will be determined by drawing lots in a public meeting unless one vendor is a local vendor within the District boundaries and one is a non-local vendor, in which event the local vendor will be awarded the contract.

### **1.16 EQUAL EMPLOYMENT OPPORTUNITY**

In the hiring of employees for the performance of work under the Contract and any subcontract thereunder, no Contractor or Subcontractor shall, by reason of race, color, sex, religion, national origin, ancestry, age, marital status, disability, unfavorable military discharge or sexual orientation discriminate against any citizen of the United States, in the employment of Labor or workers, who are qualified and available to perform work to which the employment is related. Neither shall any Contractor or Subcontractor, or any person on behalf of either, discriminate against or intimidate any employee hired for the performance of work under this Contract on account of race, color, sex, religion, national origin, ancestry, age, marital status, disability, unfavorable military discharge or sexual orientation.

**1.17 TAX EXEMPTION**

College of DuPage District #502 is exempt from Federal, State and Municipal taxes. Exemption certificates will be furnished upon request.

**1.18 HOLD HARMLESS CLAUSE**

Contractor shall indemnify, hold harmless and defend the College of DuPage, its officers, trustees, agents, servants, and employees, from and against any and all claims, lawsuits, demands, liabilities, and losses whatsoever occurring or resulting to any and all persons, firms or corporations furnishing or supplying work, services, materials, or supplies in connection with the performance of this agreement, and from any and all claims, liabilities, and losses occurring or resulting to any person, firm, or corporation for damage, injury, or death arising out of or connected with Contractor’s performance of this agreement, unless such claims, liabilities, or losses arise out of the sole negligence or willful misconduct of the College of DuPage.

“Contractor’s performance” includes Contractor’s action or inaction and the action or inaction of Contractor’s officers, employees, agents and Subcontractors.

**1.19 CONTRACTORS LIABILITY INSURANCE**

The Contractor shall not commence work under this contract until all insurance required herein is obtained and approved by the College. Nor shall the Contractor allow any subcontractor to commence work until all similar insurance required of the subcontractor has been so obtained.

The Contractor shall furnish the College of DuPage with a Certificate of Insurance, with College of DuPage, its trustees, officers, agents, employees, and any other parties designated by COD named as an additional insured for Commercial General and Automobile Liability, showing the minimum coverage indicated below. Insurance companies must have a Best Rating of at least A VI and otherwise be acceptable to the College. Workers’ compensation insurance shall include a waiver of subrogation in favor of the College of DuPage. The College will also be shown as the certificate holder. Further, the Certificate of Insurance shall state that coverage provided is primary to any other coverage available to College of DuPage. An endorsement page showing coverage must accompany the certificate of insurance. The foregoing certificate shall contain a provision that coverage afforded under the policies will not be cancelled or non-renewed until at least sixty (60) days prior written notice has been given to College of DuPage.

**TYPE OF INSURANCE**

**MINIMUM INSURANCE COVERAGE**

Combined Single Limit per Occurrence/Aggregate

**Commercial General Liability** including:

- |   |                           |
|---|---------------------------|
| 1. Premises – Operations                      | \$1,000,000 / \$2,000,000 |
| 2. Explosion, Underground and Collapse Hazard |                           |
| 3. Products/Completed Operations              |                           |
| 4. Contractual Insurance                      |                           |
| 5. Broad Form Property Damage                 |                           |
| 6. Independent Contractors                    |                           |
| 7. Bodily Injury                              |                           |

**Automobile Liability**

Owned, Non-owned, or Rented \$1,000,000 / \$2,000,000

**Workers’ Compensation and Employers’ Liability** As Required by Applicable Laws

**Professional Liability** If Performance Specifications are required by the Contract

## **1.20 PREVAILING WAGE ACT**

When applicable, and as a condition of receiving payment, Contractor must pay its employees prevailing wages in the locality in which the work is to be performed as establish for Public Works (construction and maintenance of a public work) prevailing wage and other requirements under Contract for Public Workers 820 ILCS 130/4. When required by the College Contractor shall provide a copy of the certified payroll on request. Contractor is responsible for contacting the Illinois Department of Labor to ensure understanding of prevailing wage requirements.

The prevailing rates of wages are determined by the Illinois Department of Labor and are available on the Department's official website: <https://www2.illinois.gov/idol/Laws-Rules/CONMED/Pages/prevailing-wage-rates.aspx> The College of DuPage has adopted the resolution regarding the prevailing wage rates for DuPage County in accordance with Illinois Prevailing Wage Act and are available the College's website: [http://www.cod.edu/about/purchasing/illinois\\_prevailing\\_wage\\_act.aspx](http://www.cod.edu/about/purchasing/illinois_prevailing_wage_act.aspx) .

## **1.21 BUSINESS ENTERPRISE PROGRAM**

The College of DuPage encourages the participation of qualified minorities, females, and persons with disabilities owned businesses in public contracts. It is the practice of the College to ensure full and equitable economic opportunities to persons and businesses that compete for business with the College of DuPage, including minorities, females, and persons with disabilities owned business enterprises The College is committed to the economic development of disadvantaged business enterprises and the award of contracts to businesses owned by minorities, females, and persons with disabilities for services to the extent provided by the Business Enterprise for Minorities, Females and Persons with Disabilities Act ("Act"), 30 ILCS 575.

**END OF SECTION**

## 2.0 INSTRUCTIONS TO VENDORS

### 2.1 OUTSIDE DOCUMENT DISCLAIMER

The College of DuPage cannot warrant, represent, or guarantee the accuracy or completeness of documents which have not been obtained directly from the College. If you have obtained these documents from a third-party source, the College is not responsible for any loss or damage including, but not limited to, time, money, or goodwill arising from errors, inaccuracies or omissions in any third-party bid documents.

To obtain official documents, please visit: <https://www.cod.edu/about/purchasing/requests/index.aspx> . Click on the link for this solicitation and follow the prompts to enter your information onto our vendor list and download the original documents. This will ensure your contact information is registered on our vendor list, and we can send you any addenda that may be issued. This website is the only official website for prospective vendors to obtain digital copies of RFP documents. It is the responsibility of each prospective vendor to verify the completeness of their printed RFP documents before submitting a proposal and accompanying executed addenda acknowledgement, and other required forms.

### 2.2 BLACKOUT PERIOD

Under no circumstances are respondents to contact or discuss this RFP, or any of the information contained herein or about this solicitation in general, with any College of DuPage trustee, employee, vendor, contractor, or subcontractor, other than using the methods outlined in this RFP. Respondents are strictly forbidden from visiting the College's locations or approaching any College trustee, employee, vendor, contractor, or subcontractor for any information related to this Request for Proposal or this solicitation without the direct knowledge and authorization in writing in advance from the Procurement Manager or Buyer. Violation of these provisions may subject the respondent to immediate disqualification.

### 2.3 PRE-PROPOSAL MEETING

- A. The College will hold a Non-Mandatory Zoom Pre-Proposal Meeting on **Wednesday, April 29, 2026, at 10:00 a.m. Central Time**. All parties interested in responding to the RFP are urged to attend the Zoom meeting. The College will clarify the objectives of the RFP and answer questions during the Pre-Proposal Meeting.

**B. Zoom Invite Meeting Information for the Pre-Proposal meeting.**

Topic: Pre-Proposal Meeting for 2026-R0020 - Digital Kiosk Display System  
Time: – Wednesday, April 29, 2026, at 10:00 a.m. Central Time (US and Canada)

Join Zoom Meeting: <https://cod.zoom.us/j/4032153786>

Meeting ID: 403 215 3786

One tap mobile  
+13126266799,,4032153786# US (Chicago)  
Dial by your location  
+1 312 626 6799 US (Chicago)  
+1 301 715 8592 US (Washington DC)  
+1 646 558 8656 US (New York)  
+1 669 900 6833 US (San Jose)

Meeting ID: 403 215 3786

Find your local number: <https://cod.zoom.us/u/kb8Pu8UUch>

## 2.4 REQUESTS FOR INFORMATION/CLARIFICATION

If any firm submitting a proposal for this solicitation is in doubt as to the true meaning of the specifications or other documents or any part thereof, vendor shall request clarification from the Procurement Services. Questions must be submitted in writing and be directed via email to the Procurement Services at [purchasing@cod.edu](mailto:purchasing@cod.edu) no later than **Friday, May 1, 2026, by 12:00 p.m. Central Time**. Questions for which answers are provided will be communicated to all registered recipients of RFP documents via addendum. All issued addenda must be signed and returned to the College as per the instructions in the addenda or proposal will not be accepted.

## 2.5 PROPOSAL DEADLINE AND SUBMISSION

**To be assured of consideration, Proposals must be received Monday through Friday, between the hours of 8:00 a.m. to 5:00 p.m. Central Time by the College of DuPage Procurement Services in the Institutional Resource Center (IRC) Building, Room 1001, 425 Fawell Blvd., Glen Ellyn, IL 60137, no later than Thursday, May 14, 2026, at 1:00 p.m. Central Time. See Attachment C for the location of the Institutional Resource Center (IRC) Building.**

Late proposals will not be considered. Failure by a delivery service company or person to meet the deadline will not excuse the vendor from the deadline requirement. It is solely the Vendor's responsibility to ensure that adequate time is allowed for timely, accurate delivery and that the Proposal is received as required.

All Vendors shall submit one (1) sealed original copy, and one (1) flash drive containing all completed documents of the Proposal.

Proposals must be in a sealed envelope and delivered to:

College of DuPage Procurement Services  
Institutional Resource Center (IRC) Building, Room 1001  
425 Fawell Blvd.  
Glen Ellyn, Illinois 60137  
**Attention: RFP No. 2026-R0020**

Proposals must be received by the date and hour of the RFP Opening as shown in the legal advertisement. The sealed envelope submitted by the Vendor shall carry the following information on the face of the envelope: Vendor's name, address, RFP Notice Number, advertised date of RFP Opening and the hour designated for Proposal Opening as shown in the legal advertisement. Unless otherwise stated, all blank spaces on the proposal forms shall be fully completed. Vendor bears all responsibility for error or omissions in the submission of the proposal.

## 2.6 EXCEPTIONS

If any Respondent intends to take any deviations or exceptions from the specifications or other RFP documents, Respondent shall submit to the Procurement Manager a written request for a deviation or exception at least ten (10) business days prior to the date and time of advertised RFP opening date. If the Procurement Manager considers such deviation or exception acceptable, the Procurement Manager shall issue an Addendum setting forth such deviation or exception from the specifications or other which shall be applicable to all Respondents submitting a response.

If no Addendum is issued by the Procurement Manager/Buyer, then such deviation or exception shall be deemed rejected.

The College may reject any response containing deviations or exceptions not previously accepted through a written Addendum. A copy of such Addendum will be e-mailed or delivered to each Respondent receiving a set of such RFP documents. Respondent shall acknowledge receipt of each Addendum issued via a signed addendum. Failure to acknowledge receipt of addenda may result in disqualification of the bid. All written requests for deviations or exceptions shall be sent to [purchasing@cod.edu](mailto:purchasing@cod.edu).

## **2.7 ERROR IN PROPOSAL**

Where a vendor claims to have made a mistake, such mistake must be called to the attention of the Procurement Manager within twenty-four (24) hours after the opening of proposals. Within forty-eight (48) hours of the RFP opening, vendor shall submit to the College's designated Procurement Manager original documentary evidence and a detailed explanation of how the mistake was made. Failure to conform to this requirement precludes the vendor from withdrawing its proposal based upon a mistake. If such notice, proof and explanations have been tendered, and the Procurement Manager is convinced that a bona fide mistake has been made, the Procurement Manager may recommend to the Board of Trustees that the vendor be allowed to withdraw its proposal and recommend that the RFP be awarded to the next highest scoring and responsible, responsive vendor. If the Board determines by majority vote, that the vendor has made a bona fide error, no award will be made upon such proposal and the bid security will be returned.

## **2.8 WITHDRAWAL OF PROPOSALS**

Vendors may withdraw their proposals at any time prior to the time specified in the legal advertisement as the date and hour set for the RFP Opening. However, no vendor shall withdraw, cancel or modify its proposal response for a period of ninety (90) calendar days after said advertised RFP Opening. Requests for withdrawal must be made in writing on the Vendor's letterhead to the College's Procurement Services. Vendors must make their own arrangements for the return of their proposal.

## **2.9 NOTICES**

All communications and notices between the College and Vendors regarding the RFP Documents shall be in writing via email. Notices to the Vendors shall be addressed to the email address provided by the Vendors; notices to the Procurement Manager shall be addressed to Procurement Services Department via-email at [purchasing@cod.edu](mailto:purchasing@cod.edu).

**END OF SECTION**

### **3.0 RFP SPECIFICATIONS FOR 2026-R0020 - DIGITAL KIOSK DISPLAY SYSTEM**

#### **3.1 INTRODUCTION AND BACKGROUND**

College of DuPage (hereinafter "the College") invites qualified vendors to submit proposals for the procurement and optional installation of a commercial-grade digital kiosk display system. The College is located in Glen Ellyn, IL and serves a student population of approximately 30,000 students across 12 buildings.

Currently, the College relies on static banner stands throughout its facilities to communicate information to students, faculty, staff, and visitors. These displays have become difficult to maintain, create a cluttered visual environment, and do not allow for timely content updates. The College seeks to modernize its visual communications infrastructure with networked, interactive digital kiosk displays.

The College has contracted with MazeMap ([www.mazemap.com](http://www.mazemap.com)) to provide a web-based indoor wayfinding system. The selected kiosk units must be capable of hosting and displaying the MazeMap application, which requires an active internet connection and a capable web browser running on a supported operating system.

#### **3.2 QUANTITY AND CONFIGURATION**

The College requires five (5) digital kiosk display units. Please provide the unit cost should the College decide to purchase more units.

We prefer freestanding units, but depending on the location and power/installation requirements a wall mounted unit may be more feasible. Please quote pricing for both freestanding and wall mounted units. If freestanding units can be 2-sided, please include pricing for 2-sided units provided that each side can be operated independently.

Off-the-shelf (non-custom) commercial products are acceptable to save expense.

Vendors must clearly specify which mounting configurations are being proposed for each unit.

#### **3.3 TECHNICAL REQUIREMENTS**

**All proposed units must meet the following minimum specifications:**

##### **Operating System**

- The College prefers Microsoft Windows or Apple macOS operating systems, but Android and Linux are acceptable.
- The operating system must be a currently supported version eligible for security updates.

##### **Display**

- Preferred screen size is 55"
- Portrait (vertical) aspect ratio orientation is preferred for all five (5) units.
- Touchscreen capability is required. Non-touch displays will disqualify the proposal.

- Commercial-grade display rated for continuous operation (16/7 or 24/7 as specified by vendor).
- Minimum brightness: 400 nits for indoor use.
- Anti-glare screen coating is preferred.

### **Enclosure and Durability**

- The College requires indoor installations only. Outdoor-rated enclosures are not required.
- Commercial-grade indoor enclosure suitable for high-traffic public environments.
- Vendors must specify the enclosure material, finish, and available color options.

### **Connectivity**

- Built-in Wi-Fi (802.11ac/Wi-Fi 5 minimum; Wi-Fi 6 preferred) is required.
- Wi-Fi connectivity is necessary for two purposes:
  - Hosting and displaying the MazeMap web-based wayfinding application.
  - Receiving remote content and software updates.
- Wired Ethernet port (RJ-45) is preferred as a secondary connectivity option.

### **ADA Compliance**

- All units must comply with applicable ADA accessibility standards.
- Interactive touchscreen elements must be within ADA reach range (maximum 48 inches above floor for a forward approach).
- Vendors must provide a written ADA compliance statement with their proposal.

### **Power Requirements**

- Vendors must specify all power requirements for each unit, including:
  - Input voltage and amperage (e.g., 120V/20A dedicated circuit).
  - Whether a standard grounded outlet (NEMA 5-15R) is sufficient or if a dedicated circuit is required.
  - Any conduit, junction box, or other electrical infrastructure requirements.
  - Estimated power consumption (watts) per unit.
- This information will be shared with the College's Facilities Department to ensure appropriate power availability at each installation location. The College's Facilities Department will be responsible for providing power to each location; the vendor is not required to perform electrical work unless specified in the optional installation scope.

### 3.4 MAZEMAP COMPATIBILITY

The College has an existing contract with MazeMap ([www.mazemap.com](http://www.mazemap.com)) for web-based indoor wayfinding. MazeMap integration is not optional - all proposed units must be fully compatible with and capable of hosting the MazeMap application. Vendors must:

- Confirm in writing that the proposed hardware and OS can host and display the MazeMap web application without restriction, additional plugin, or hardware modification.
- Specify the web browser(s) supported on the proposed OS and confirm MazeMap compatibility with each.
- Describe how the MazeMap application will be configured to launch automatically on startup (e.g., dedicated kiosk/browser mode, locked-down display).
- Proposals that cannot demonstrate MazeMap compatibility will be considered non-responsive.
- MazeMap provides the following Kiosk URLs to test for compatibility
  - <https://kiosk.mazemap.com/v2/?customerid=431&kioskid=d3622930-d393-4755-9c20-a3fc091f16b6>
  - <https://kiosk.mazemap.com/v2/?customerid=1539&kioskid=8e9b5cb2-1c3f-4e50-b8b0-a633440f21c8>
- MazeMap provides kiosk user guides for 'How to Build and Customize a Kiosk' and 'Kiosk Specifications' to support MazeMap kiosk URLs available:
  - <https://mazemap.atlassian.net/wiki/spaces/MCSH/pages/719519787/Kiosk+-+Setup+and+Configuration?src=search>
  - <https://mazemap.atlassian.net/wiki/spaces/MCSH/pages/1089044522/Kiosk+-+Overview+and+Hardware+Requirements?src=search>

### 3.5 CONTENT MANAGEMENT SYSTEM (CMS)

The College requires the ability to update and manage content remotely across all five units. The CMS must be compatible with Microsoft Windows or Apple iOS/macOS operating environments. Vendors must describe:

- The CMS platform included or recommended with the proposed hardware, including the operating system(s) it runs on or is accessed from.
- How content updates are pushed to individual or all units simultaneously over Wi-Fi.
- The interface and ease of use for non-technical staff to create, manage, and schedule content.
- CMS software licensing should be included in the purchase price for the five (5) years of the contract.
- Whether the CMS is cloud-based, on-premise, or both, and any associated hosting requirements.

### 3.6 INSTALLATION

Winning bidder must provide break out costs for electrical installation in accordance with COD specifications. See Attachment D for COD Electrical Specifications. The College reserves the right to self-perform the necessary electrical scope at each desired location. Vendors must provide a detailed installation plan for the proposed units, including:

- A step-by-step description of the installation process for each mounting type (freestanding and/or wall-mounted).
- All electrical requirements (outlet type, amperage, conduit requirements if any).
- All network/Wi-Fi requirements and any coordination needed with the College IT department.
- Any structural requirements for wall mounting (wall type, blocking, anchoring method).
- Estimated labor hours per unit and total installation time.

Based on this information, the College will determine whether to self-install or engage the vendor or a third party for installation.

### 3.7 WARRANTY AND ONGOING SUPPORT

The College expects a minimum 5-year total support lifecycle for all five (5) units, structured as follows:

#### Years 1–3: Warranty Period:

- Full hardware warranty covering parts and labor for all five (5) units.
- Software, operating system, and firmware support including security patches.
- On-site or depot repair as defined in the SLA, including:
  - Defined response time for warranty claims (e.g., within 4 business hours for acknowledgment; next business day for on-site response if required).
  - Repair or replacement timeline (e.g., within 5–10 business days).
  - Escalation procedures for unresolved issues.
  - Whether warranty service is on-site or depot (unit must be shipped in for repair).

#### Years 4–5: Post-Warranty Maintenance Contract

- Vendors must provide a separate, itemized cost for a maintenance and support contract covering Years 4 and 5. This must include:
  - Preventive maintenance visits (if applicable).
  - Hardware repair or replacement coverage.
  - Software and firmware updates.
  - Help desk / technical support access.

- This contract should include hardware repair/replacement coverage, continued software and OS updates, and help desk access.
- Pricing for Years 4 and 5 must be quoted at time of proposal submission and will be binding if the College elects to purchase.

### 3.8 TERM OF CONTRACT

The College anticipates engaging in a one-time purchase of the kiosks, with a five (5) year maintenance and support agreement.

### 3.9 EVALUATION CRITERIA

Proposals will be evaluated on the following criteria:

CRITERIA	WEIGHT
Functional and Technical Requirements, Content Management System (CMS), ADA Compliance, and Installation plan	40%
Warranty, SLA & Ongoing Support Services	15%
Vendor Experience & References	5%
Vendor Cost Proposal	35%
Proposer's demonstrated commitment to diversity/State of Illinois Business Enterprise Program (BEP)	5%
<b>Total</b>	<b>100%</b>

**END OF SECTION**

## 4.0 PROPOSAL SUBMISSION AND EVALUATION

### 4.1. PROPOSAL CONTENT AND FORMAT

The sections in the proposal should be tabbed or clearly labeled in the order shown below:

#### Tab 1: Transmittal Letter and Required Forms

- a) Transmittal Letter - signed by an individual authorized to legally bind the Respondent. The cover letter should contain the name of the firm, address, and the contact information for individual(s) authorized to answer technical, price, and contract questions. Contact information should include telephone number, fax number, mailing address, and email address. The cover letter must be signed by a person or persons authorized to bind the proposer(s). The cover letter must indicate whether any exceptions to specifications have been taken and reference the location in the proposal where these exceptions are detailed.
- b) Section 5.0 – BEP Utilization Plan.  
The College of DuPage encourages the participation of qualified minorities, females, and persons with disabilities owned businesses in public contracts and commits to the economic development of disadvantaged business enterprises and the award of contracts to businesses owned by minorities, females, and persons with disabilities for services to the extent provided by the Business Enterprise for Minorities, Females and Persons with Disabilities Act (“Act”), 30 ILCS 575. This solicitation contains an aspirational goal of 30% to include businesses owned and controlled by minorities, females and persons with disabilities in the procurement and contracting/subcontracting processes. Commitment to diversity considerations may include:
  - i. Business Enterprise Program (BEP) certification or utilization that meets or exceeds the college’s 30% goal.
  - ii. Assistance to BEP firms in obtaining lines of credit, insurance, equipment, supplies, or related services.
  - iii. Percentage of prior year revenues for projects that incorporate the involvement of BEP firms.
  - iv. Existence of a written supplier diversity plan or training/mentoring program for BEP firms.
  - v. Percentage of members serving the firm’s governing board, senior executive, and managers who are women, minorities, or persons with a disability.
- c) Section 6.0 - Certifications Page
- d) Section 7.0 - Signature Page
- e) Section 8.0 - Conflict of Interest Disclosure and Non-Collusion Form
- f) Any issued addenda, signed (if applicable)

## Tab 2: Company Profile and Overview

- a) Vendor Background/Qualifications
  1. Legal Name of Firm and Full Address
  2. Web site address
  3. Firm Telephone Number
  4. Primary Contact Person, Email, Phone
  5. Company History, Size, Relevant Experience

## Tab 3: Mazemap Compatibility Requirement

The College has an existing contract with MazeMap ([www.mazemap.com](http://www.mazemap.com)) for web-based indoor wayfinding. **MazeMap integration is a mandatory requirement.** All proposed units must be fully compatible with and capable of hosting the MazeMap application. Vendors must:

- a) Confirm in writing that the proposed hardware and OS can host and display the MazeMap web application without restriction, additional plugin, or hardware modification.
- b) Specify the web browser(s) supported on the proposed OS and confirm MazeMap compatibility with each.
- c) Describe how the MazeMap application will be configured to launch automatically on startup (e.g., dedicated kiosk/browser mode, locked-down display).

**Note: Proposals that cannot demonstrate MazeMap compatibility will be considered non-responsive.**

## Tab 4: Functional Responses

- a) Provide Technical Specifications, including detailed hardware specifications for proposed unit(s); OS confirmation (Windows or macOS only); screen size and type; enclosure/vandal resistance rating; mounting options
- b) Provide a description of the Content Management System (CMS) platform, including:
  - i. The CMS platform included or recommended with the proposed hardware, including the operating system(s) it runs on or is accessed from.
  - ii. How content updates are pushed to individual or all units simultaneously over Wi-Fi.
  - iii. The interface and ease of use for non-technical staff to create, manage, and schedule content.
  - iv. Whether CMS software licensing is included in the purchase price or is an ongoing annual cost (detail separately in pricing).
  - v. Whether the CMS is cloud-based, on-premise, or both, and any associated hosting requirements.
  - vi. remote update workflow; multi-unit management; ease of use

- c) Provide your ADA Compliance Statement, confirming Confirmation of ADA compliance; screen mounting height and reach range details
- d) Provide your Installation Plan, including step-by-step installation requirements for each mounting type proposed; electrical/network requirements; estimated labor hours per unit; optional installation cost quote

**Tab 5: Warranty and Support**

- a) Provide a clear description of your warranty terms (hardware and software); support SLA; and escalation procedures

**Tab 6: References**

- a) Provide three (3) to five (5) client references with contact information. Higher education institution references are strongly preferred. Include institution name, contact name and title, phone, email, and brief project description. References should be of similar size and scope to the College of DuPage.

**Tab 7: Cost Proposal**

- a) Provide itemized pricing in Attachment A for five (5) units including hardware, delivery, and optional installation, CMS licensing, and the Annual Cost maintenance pricing for the two (2) additional one-year renewal options. Costs shall be all inclusive.

**4.2. EVALUATION AND SELECTION PROCESS**

The College will appoint an Evaluation Committee whose responsibility will be to review all responses to this RFP. The College will consider the information provided in the response and the quality of that information when evaluating the Proposal. During the evaluation process, proposers may be requested to provide additional information and/or clarify contents of their proposal.

All proposals will be reviewed to determine if they contain all the required submittals specified in this RFP. Those not submitting all required information in the prescribed format may be rejected.

The Committee will review all responsive and responsible proposals based upon the criteria detailed herein. The selection process may include a request for additional data or oral presentations as deemed necessary by the College. The following criteria will be used in the evaluation of all proposals, not necessarily in level of importance:

- Functional and Technical Requirements, Content Management System (CMS), ADA Compliance, and Installation plan
- Warranty, SLA & Ongoing Support Services
- Vendor Experience & References
- Vendor Cost Proposal
- Proposer's demonstrated commitment to diversity/State of Illinois Business Enterprise Program (BEP)

After the evaluation, the top finalists may be requested to make a phone, webinar or in-person presentation, or to further negotiate the terms and conditions of the contract. If notified, the company must be prepared to present with three (3) business days from the date of email notification. Specific instructions regarding the presentation will be included in the notification.

#### **4.3. SELECTION OF AWARD**

##### **A. Basis of Award**

The award of the contract will be based on best-value to the College according to the evaluation criteria set forth in this document.

##### **B. Selection Process**

The award of the contract will be after the Evaluation Committee submits their Recommendation of Award of the selected Respondent(s) for approval by the College of DuPage Board of Trustees. The College of DuPage reserves the rights to award one (1) or more contracts to select Respondent(s) and/or to reject any and all responses when the best interest of the College will be served thereby. The successful Respondent(s) will be notified by electronic mail that their Proposal has been accepted and that they have been awarded the contract after the approval by the College of DuPage Board of Trustees. Notification will also be posted on the College's Procurement Service website at [http://www.cod.edu/about/Procurement Service/](http://www.cod.edu/about/Procurement%20Service/). Failure to execute performance as per accepted Proposal may result in legal action by the College of DuPage to recover damages.

**END OF SECTION**

## 5.0 BUSINESS ENTERPRISE PROGRAM

### STATE OF ILLINOIS BUSINESS ENTERPRISE PROGRAM MINORITIES, FEMALES, PERSONS WITH DISABILITY PARTICIPATION AND UTILIZATION PLAN

The Business Enterprise for Minorities, Females and Persons with Disabilities Act (BEP) establishes a goal for community colleges contracting with businesses that have been certified as owned and controlled by persons who are minorities (MBE), female (FBE/ also referred to as WBE), or persons with disabilities (PDBE) (collectively, BEP certified vendor(s)). 30 ILCS 575

**Contract Goal to be achieved by Vendor:** This solicitation includes an aspirational **BEP** participation goal of 30% based on the availability of BEP certified vendors to perform or provide the anticipated services and/or supplies required by this solicitation.

**The BEP participation goal is applicable to all bids or offers.** In addition to the award criteria established for this solicitation, the College will award this contract to a Vendor that meets the goal or demonstrates good faith efforts to meet the goal. This goal is applicable to change orders and allowances within the scope of work provided by the BEP certified vendors. **If Vendor is an MBE and FBE certified vendor, the entire goal is met and no subcontracting with a BEP certified vendors is required; however, Vendor must submit a Utilization Plan indicating that the goal will be met by self-performance.**

Following are guidelines for Vendor's completion of the Utilization Plan. The Utilization Plan must demonstrate that Vendor has either: (1) met the entire contract goal; or (2) made good faith efforts towards meeting the goal.

At the time of bid or offer, Vendor, or Vendor's proposed Subcontractor, must be certified with the Illinois Department of Central Management Services as a BEP certified vendor.

Failure to complete a Utilization Plan or provide Good Faith Effort documentation shall render the bid or offer non-responsive; and subject to rejection and/or disqualification in the College's sole discretion.

1. If applicable where there is more than one prime vendor, the Utilization Plan should include an executed Joint Venture Agreement specifying the terms and conditions of the relationship between the parties and their relationship and responsibilities to the contract. The Joint Venture Agreement must clearly evidence that the BEP certified vendor will be responsible for a clearly defined portion of the work and that its responsibilities, risks, profits and contributions of capital, and personnel are proportionate to its ownership percentage. It must include specific details related to the parties' contributions of capital, personnel, and equipment and share of the costs of insurance and other items; the scopes to be performed by the BEP certified vendor under its supervision; and the commitment of management, supervisory personnel, and operative personnel employed by the BEP certified vendor to be dedicated to the performance of the contract. Established Joint Venture Agreements will only be credited toward BEP goal achievements for specific work performed by the BEP certified vendor. **Each party to the Joint Venture Agreement must execute the bid or offer prior to submission of the bid or offer to the College.**

2. An agreement between a vendor and a BEP certified vendor in which a BEP certified vendor promises not to provide subcontracting or pricing quotations to other vendors is prohibited. The College may request additional information to demonstrate compliance. Vendor agrees to cooperate promptly with the College in submitting to interviews, allowing entry to places of business, providing further documentation, and to soliciting the cooperation of a proposed BEP certified vendor. Failure to cooperate by Vendor and BEP certified vendor may render the vendor or offeror non-responsive or not responsible. **The contract will not be awarded to Vendor unless Vendor's Utilization Plan is approved by the College.**
  
3. **BEP Certified Vendor Locator References:** Vendor may consult CMS' BEP Vendor Directory at <https://supplierdiversitymanagementportal.illinois.gov/VendorDirectory.aspx>, as well as the directories of other certifying agencies, but firms **must be certified with CMS as BEP certified vendors at the time of bid or offer.**
  
4. **Vendor Assurance:** Vendor shall not discriminate on the basis of race, color, national origin, sexual orientation or sex in the performance of this contract. Failure by Vendor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy, as the College deems appropriate. This assurance must be included in each subcontract that Vendor signs with a subcontractor or supplier.
  
5. **Calculating BEP Certified Vendor Participation:** The Utilization Plan documents work anticipated to be performed, or goods/equipment provided by all BEP certified vendors and paid for upon satisfactory completion/delivery. Only the value of payments made for the work actually performed by BEP certified vendors, by subcontractors or suppliers to such vendors, is counted toward the contract goal. Applicable guidelines for counting payments attributable to contract goals are summarized below:
  - 5.1 The value of the work actually performed or goods/equipment provided by the BEP certified vendor shall be counted towards the goal. The entire amount of that portion of the contract that is performed by the BEP certified vendor, including supplies purchased or equipment leased by the BEP certified vendor shall be counted, except supplies purchased and equipment rented from the Prime Vendor submitting this bid or offer.
  
  - 5.2 A vendor shall count the portion of the total dollar value of the BEP contract equal to the distinct, clearly defined portion of the work of the contract that the BEP certified vendor performs toward the goal. A vendor shall also count the dollar value of work subcontracted to other BEP certified vendor. Work performed by the non- BEP certified party shall not be counted toward the goal. **Work that a BEP certified vendor subcontracts to a non-BEP certified vendor will not count towards the goal.**
  
  - 5.3 A Vendor shall count toward the goal 100% of its expenditures for materials and supplies required under the contract and obtained from a BEP certified vendor manufacturer, BEP certified regular dealer, or BEP certified supplier. A Vendor shall count toward the goal the following expenditures to BEP certified vendors that are not manufacturers, regular dealers, or suppliers:

- 5.3.1** The fees or commissions charged for providing a bona fide service, such as professional, technical, consultant or managerial services and assistance in the procurement of essential personnel, facilities, equipment, materials or supplies required for performance of the contract, provided that the fee or commission is determined by College to be reasonable and not excessive as compared with fees customarily allowed for similar services.
- 5.3.2** The fees charged for delivery of materials and supplies required by the contract (but not the cost of the materials and supplies themselves) when the hauler, trucker, or delivery service is not also the manufacturer or a supplier of the materials and supplies being procured, provided that the fee is determined by the College to be reasonable and not excessive as compared with fees customarily allowed for similar services. The BEP certified vendor's trucking firm must be responsible for the management and supervision of the entire trucking operation for which it is responsible on the contract, and must itself own and operate at least one fully licensed, insured and operational truck used on the contract.
- 5.3.3** The fees or commissions charged for providing any bonds or insurance specifically required for the performance of the contract, provided that the fee or commission is determined by the College to be reasonable and not excessive as compared with fees customarily allowed for similar services.
- 5.4** BEP certified vendors who are performing on contract as second tier subcontractors may be counted in meeting the established BEP goal for this contract as long as the Prime Vendor can provide documentation indicating the utilization of these vendors.
- 5.5** A Vendor shall count towards the goal only expenditures to firms that perform a commercially useful function in the work of the contract.

  - 5.5.1** A firm is considered to perform a commercially useful function when it is responsible for execution of a distinct element of the work of a contract and carries out its responsibilities by actually performing, managing, and supervising the work involved. The BEP certified vendor must also be responsible, with respect to materials or supplies used on the contract, for negotiating price, determining quality and quantity, ordering the materials or supplies, and installing the materials (where applicable) and paying for the material or supplies. To determine whether a firm is performing a commercially useful function, the College shall evaluate the amount of work subcontracted, whether the amount the firm is to be paid under the contract is commensurate with the work it is actually performing and the credit claimed for its performance of the work, industry practices, and other relevant factors.
  - 5.5.2** A BEP certified vendor does not perform a commercially useful function if its role is limited to that of an extra participant in a transaction or contract through which funds are passed through in order to obtain BEP certified vendor participation. In determining whether a BEP certified vendor is such an extra participant, the College shall examine similar transactions, particularly those in which BEP certified vendors do not participate, and industry practices.

**5.6** A Vendor shall not count towards the goal expenditures that are not direct, necessary and related to the work of the contract. Only the amount of services or goods that are directly attributable to the performance of the contract shall be counted. Ineligible expenditures include general office overhead or other Vendor support activities.

**6. Good Faith Effort Procedures:** Vendor must submit Utilization Plans, subcontract documents, and/or Letters of Intent that meet or exceed the published goal. If Vendor cannot meet the stated goal, Vendor must document and explain within the Utilization Plan the good faith efforts it undertook to meet the goal. Utilization Plans are due at the time of and must be enclosed and sealed with the bid or offer submission. Copies of subcontract documents and/or Letters of Intent shall be due upon request.

**7. Contract Compliance:** Compliance with this section is an essential part of the contract. The following administrative procedures and remedies govern Vendor's compliance with the contractual obligations established by the Utilization Plan. **After approval of the Plan and award of the contract, the Utilization Plan becomes part of the contract.** If Vendor did not succeed in obtaining BEP certified vendor participation to achieve the goal and the Utilization Plan was approved and contract awarded based upon a determination of good faith, the total dollar value of BEP certified vendor work calculated in the approved Utilization Plan as a percentage of the awarded contract value shall become the contract goal.

**7.1.** The Utilization Plan may not be amended after contract execution without the College's prior written approval.

**7.2. Vendor may not make changes to its contractual BEP certified vendor commitments or substitute BEP certified vendors without the prior written approval of the College.** Unauthorized changes or substitutions, including performing the work designated for a BEP certified vendor with Vendor's own forces, shall be a violation of the utilization plan and a breach of the contract, and shall be cause to terminate the contract, and/or seek other contract remedies or sanctions.

**7.3.** If it becomes necessary to substitute a BEP certified vendor or otherwise change the Utilization Plan, Vendor must notify the College in writing of the request to substitute a BEP certified vendor or otherwise change the Utilization Plan. The request must state specific reasons for the substitution or change. The College shall notify the Council or its delegate of the request to substitute a BEP certified vendor or change the Utilization Plan. The College reserves the right to approve or deny a request for substitution or other change in the Utilization Plan.

**7.4.** Where Vendor has established the basis for the substitution to the College's satisfaction, it must make good faith efforts to meet the contract goal by substituting a BEP certified vendor. Documentation of a replacement BEP certified vendor, or of good faith efforts to replace the BEP certified vendor, must meet the requirements of the initial Utilization Plan. If the goal cannot be reached and good faith efforts have been made, Vendor may substitute with a non- BEP certified vendor or Vendor may perform the work.

- 7.5.** If a Vendor plans to hire a subcontractor for any scope of work that was not previously disclosed in the Utilization Plan, Vendor must obtain the approval of the College to modify the Utilization Plan and must make good faith efforts to ensure that BEP certified vendors have a fair opportunity to submit a bid or offer on the new scope of work.
- 7.6.** A new BEP certified vendor agreement must be executed and submitted to the College within five business days of Vendor's receipt of the College's approval for the substitution or other change.
- 7.7.** Vendor shall maintain a record of all relevant data with respect to the utilization of BEP certified vendors, including but without limitation, payroll records, invoices, canceled checks and books of account for a period of at least three years after the completion of the contract. Full access to these records shall be granted by Vendor upon 48 hours written demand by the College to any duly authorized representative thereof, or to any municipal, state or federal authorities. The College shall have the right to obtain from Vendor any additional data reasonably related or necessary to verify any representations by Vendor. After the performance of the final item of work or delivery of material by the BEP certified vendor and final payment to the BEP certified vendor by Vendor, but not later than 30 calendar days after such payment, Vendor shall submit a statement confirming the final payment and the total payments made to the BEP certified vendor under the contract.
- 7.8.** The College will periodically review Vendor's compliance with these provisions and the terms of its contract. Without limitation, Vendor's failure to comply with these provisions or its contractual commitments as contained in the Utilization Plan, failure to cooperate in providing information regarding its compliance with these provisions or its Utilization Plan, or provision of false or misleading information or statements concerning compliance, certification status or eligibility of the BEP certified vendor, good faith efforts or any other material fact or representation shall constitute a material breach of this contract and entitle the College to declare a default, terminate the contract, or exercise those remedies provided for in the contract or at law or in equity.
- 7.9.** The College reserves the right to withhold payment to Vendor to enforce these provisions and Vendor's contractual commitments. Final payment shall not be made pursuant to the contract until Vendor submits sufficient documentation demonstrating compliance with its Utilization Plan.

**UTILIZATION PLAN PART I: COMMITMENT AND SIGNATURE \*\*Required\*\***

**The Utilization Plan and either a Letter of Intent written by the Vendor or the Demonstration of Good Faith Efforts to Achieve Goal and Request for Waiver Form must be submitted with Proposal.**

\_\_\_\_\_ (Vendor) submits the following Utilization Plan as part  
Respondent Name  
of our bid or offer in accordance with the requirements of the BEP Program Status and Participation section of this solicitation.

We understand that all subcontractors must be certified with the CMS BEP Program at the time of submission of all bids and offers. **We understand that compliance with this section is an essential part of this contract and that the Utilization Plan will become a part of the contract, if awarded.**

Vendor submits the following statement:

- Vendor is a BEP certified firm and plans to fully meet the goal through self-performance.
- Vendor has identified BEP certified subcontractor(s) to fully meet the established goal and submits the attached executed Letter(s) of Intent; or
- Vendor has made good faith efforts towards meeting the entire goal as indicated on the attached Utilization Plan, or a portion of the goal, and hereby requests a waiver (complete checklist below).

Vendor's person responsible for compliance with this BEP goal:

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Telephone: \_\_\_\_\_

Email: \_\_\_\_\_

**UTILIZATION PLAN PART II: PARTICIPATION AGREEMENT (Letter of Intent)**

Instructions: The Prime Vendor is required to submit a separate, signed and fully completed Participation Agreement from each Business Enterprise Program (BEP) certified vendor or Veteran Small Business certified vendor (VSB). Once signed and submitted with the bid/offer, this Participation Agreement, along with the other Parts of this Utilization Plan, will become a mandated part of the contract, if awarded. The Prime Vendor shall not prohibit or otherwise limit the BEP/VSB certified vendor(s) from providing subcontractor quotes to other potential vendors/offerors.

Project Name: \_\_\_\_\_ Project/Solicitation Number: \_\_\_\_\_

Name of Prime Vendor: \_\_\_\_\_

Address: \_\_\_\_\_

City, State and Zip: \_\_\_\_\_

Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_ Email: \_\_\_\_\_

Vendor's Contact responsible for compliance with this Participation Agreement: \_\_\_\_\_

Name of BEP/VSB Certified Vendor: \_\_\_\_\_

Type of Certified Vendor:  MBE  WBE  DBE

Address: \_\_\_\_\_

City, State and Zip: \_\_\_\_\_

Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_ Email: \_\_\_\_\_

BEP Vendor's Contact responsible for compliance with this Participation Agreement: \_\_\_\_\_

Type of Agreement:  Services  Supplies  Both Services and Supplies

(a) Proposed % of Contract to be performed by the BEP Certified Vendor \_\_\_\_\_%  
NOTE: The Prime Vendor must indicate the percentage of the estimated contract award that will be subcontracted to the certified BEP Vendor.

(b) Anticipated start date of the Certified BEP Vendor: \_\_\_\_\_.

(c) This participation agreement shall have a term of \_\_\_\_\_ to \_\_\_\_\_, with a total period of years and months, including renewals, change orders or extensions to the underlying contract.



## DEMONSTRATION OF GOOD FAITH EFFORTS TO ACHIEVE GOAL AND REQUEST FOR WAIVER

If the BEP participation goal was not achieved, the vendor must provide documented evidence of good faith efforts to achieve the goal.

Below is a checklist of actions that will be used to evaluate a Vendor's Demonstration of Good Faith Efforts and Request for Waiver. **Please check the actions which you completed.** If any other efforts were made to obtain BEP participation in addition to the items listed below, attach a detailed description of such efforts. The College reserves the right to review and audit the results of the vendor's efforts as described below.

- Utilize the CMS' BEP Vendor Directory at <https://ceibep.diversitysoftware.com/?TN=ceibep> to identify BEP certified vendors within the respective commodity/service codes denoted above and at a minimum email all listed vendors and solicit quotes from all vendors who express an interest via follow-up emails or telephone calls.
- Solicit through all reasonable and available means (e.g., attendance at a vendor conference, advertising and/or written notices) the interest of BEP certified vendors that have the capability to perform the work of the contract. Vendor must solicit this interest within sufficient time to allow the BEP certified vendors to respond to the solicitation. Vendor must determine with certainty if the BEP certified vendors are interested by taking appropriate steps to follow up initial solicitations and encourage them to submit a bid or proposal. Vendor must provide interested BEP certified vendors with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding promptly to the solicitation.
- Select portions of the work to be performed by BEP certified vendors in order to increase the likelihood that the goal will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate BEP certified vendor participation, even when Vendor might otherwise prefer to perform these work items with its own forces.
- Make a portion of the work available to BEP certified vendors and selecting those portions of the work or material needs consistent with their availability, so as to facilitate BEP certified vendor participation.
- Negotiate in good faith with interested BEP certified vendors. Evidence of such negotiation must include the names, addresses, email addresses, and telephone numbers of BEP certified vendors that were considered and an explanation as to why an agreement could not be reached.
- Thoroughly investigate the capabilities of BEP certified vendors and not reject them as unqualified without sound reasons.
- Make efforts to assist interested BEP certified vendors in obtaining lines of credit or insurance as required by the College.
- Make efforts to assist interested BEP certified vendors in obtaining necessary equipment, supplies, materials, or related assistance or services.



**6.0 CERTIFICATIONS \*\*REQUIRED\*\***

**IMPORTANT:** All Respondents are required to complete this form. Completed form must be returned with response by the RFP deadline. **Failure to return this completed form will result in disqualification of response.**

THE UNDERSIGNED IS CAUTIONED TO CAREFULLY READ THESE CERTIFICATIONS PRIOR TO SIGNING THE SIGNATURE PAGE. SIGNING THE SIGNATURE PAGE SHALL CONSTITUTE A WARRANTY BY THE UNDERSIGNED THAT ALL THE STATEMENTS, CERTIFICATIONS AND INFORMATION SET FORTH WITHIN THESE CERTIFICATIONS ARE TRUE, COMPLETE AND CORRECT AS OF THE DATE THE SIGNATURE PAGE IS SIGNED. THE UNDERSIGNED IS NOTIFIED THAT IF THE COLLEGE LEARNS THAT ANY OF THE FOLLOWING CERTIFICATIONS WERE FALSELY MADE, THAT ANY CONTRACT ENTERED INTO WITH THE UNDERSIGNED SHALL BE SUBJECT TO TERMINATION.

- A. Prevailing Wage Act. To the extent required by law, Contractor shall not pay less than the prevailing wage as established pursuant to an Act Regulating the Wages of Laborers, Mechanics, and Other Workman employed under Contract for Public Workers 820 ILCS 130/1 *et seq.* Our company certifies that it is eligible for bidding on public contracts and has complied with section 11a of the Prevailing Wage Act, 820 ILCS 130.01-12.  
**Yes \_\_\_\_\_ No \_\_\_\_\_**
- B. Human Rights Act. To the extent required by law, Contractor shall abide by the Illinois Human Rights Act, 775 ILCS 10/0.01 *et seq.*
- C. Drug Free Workplace. To the extent required by law, Contractor shall abide with the requirements of the Drug Free Workplace Act 30 ILCS 580.1 *et seq.*
- D. Sexual Harassment Policy. Contractor represents by the signing of this agreement that it has a written sexual harassment policy that is in accordance with 775, ILCS 5/2-105 (A) (4).
- E. Non-debarment. By executing this agreement Contractor certifies that it has not been debarred from public contracts in the State of Illinois for violating either 33E-3 or 33E-4 of the Public Contracts Act, 720 ILCS 5/33E-1 *et seq.* (If Applicable)
- F. Fair Employment Practice: Contractor is in compliance with all State and Federal laws regarding Fair Employment Practice as well as all rules and regulations.  
**Yes \_\_\_\_\_ No \_\_\_\_\_**
- G. Our company has an Equal Employment Opportunity and Affirmative Action Program which complies with Executive Order 11246, the Vietnam Era Veterans' Readjustment Assistance Act of 1974, and the Rehabilitation Act of 1973.  
**Yes \_\_\_\_\_ No \_\_\_\_\_**
- H. When required by law, the Respondent and all Respondent's Subcontractors must participate in applicable apprenticeship and training programs approved by and registered with the United States Department of Labor's Bureau of Apprenticeship and Training as required by Illinois Public Act 093-0642.

**ADVICE**

- A. MINORITY/WOMAN-OWNED, DISADVANTAGED BUSINESS? **YES \_\_\_\_\_ NO \_\_\_\_\_.**  
If yes, please attach copy of certification and advise certification number and expiration date below:

Name of Certifying Entity: \_\_\_\_\_  
 Certification #: \_\_\_\_\_ Expiration Date: \_\_\_\_\_

- B. STATE NEGOTIATED COOPERATIVE AGREEMENT: YES \_\_\_\_\_ NO \_\_\_\_\_  
 Contract No. \_\_\_\_\_

**Signature**  
**Respondent/Company Official: \_\_\_\_\_ Date: \_\_\_\_\_**

**7.0 SIGNATURE PAGE \*\*REQUIRED\*\***

**IMPORTANT:** All Respondents are required to complete and sign this form. Completed form must be returned with proposal by the RFP deadline. **Failure to return this completed form will result in disqualification of proposal.**

Check One:

**SOLE PROPRIETOR**     **PARTNERSHIP** (and/or JOINT VENTURE)     **LIMITED LIABILITY COMPANY**  **CORPORATION**

The undersigned acknowledges receipt of a full set of RFP Documents and Addenda Numbers \_\_\_\_\_ (None unless indicated here). **All issued addenda must be signed and returned to the College as per the instructions in the addenda or response will not be accepted.**

The undersigned makes the foregoing response to RFP subject to all of the terms and conditions of the RFP Documents. The undersigned certifies that all of the foregoing statements of the Vendor Certifications are true and correct. The undersigned warrants that all of the facts and information submitted by the undersigned in connection with this response are true and correct.

BUSINESS NAME: \_\_\_\_\_

BUSINESS ADDRESS: \_\_\_\_\_

BUSINESS TELEPHONE: \_\_\_\_\_ FAX NUMBER: \_\_\_\_\_

EMAIL ADDRESS: \_\_\_\_\_

CELLULAR TELEPHONE NUMBER: \_\_\_\_\_

FEIN/SSN: \_\_\_\_\_

**AUTHORIZED SIGNATURE: \_\_\_\_\_**

PRINT NAME: \_\_\_\_\_ TITLE: \_\_\_\_\_ DATE: \_\_\_\_\_

Subscribed to and sworn before me this \_\_\_\_\_ day of \_\_\_\_\_, 2026.

My commission expires: \_\_\_\_\_

**Notary Public Signature**

**Notary Seal**

- \* Attach hereto a partnership resolution or other document authorizing the individual signing this Signature Page to so sign on behalf of the Partnership.
- \*\* If the LLC is not registered in the State of Illinois, a copy of a current Certificate of Good Standing from the state of incorporation must be submitted with this Signature Page.
- \*\*\* Attach either a certified copy of the by-laws, articles, resolution or other authorization demonstrating such persons to sign the Signature Page on behalf of the LLC.
- \*\*\* If the corporation is not registered in the State of Illinois, a copy of the Certificate of Good Standing from the state of incorporation must be submitted with this Signature Page.
- \*\*\*\*\* In the event that this Signature Page is signed by any persons other than the President and Secretary, attach either a certified copy of the corporate by-laws, a resolution or other authorization by the corporation, authorizing such persons to sign the Signature Page on behalf of the corporation.

**8.0 CONFLICT OF INTEREST DISCLOSURE AND NON-COLLUSION FORM \*\*REQUIRED\*\***

**IMPORTANT:** All Respondents are required to complete and sign this form. Completed form must be returned with proposal by the RFP deadline. **Failure to return this completed form will result in disqualification of proposal.**

RFP #: \_\_\_\_\_ DATE: \_\_\_\_\_

**CONFLICT OF INTEREST DISCLOSURE**

College of DuPage (COD) reserves the right, at its sole discretion, to reject any and all responses, revise the submission timeline as described in the solicitation, and to discontinue at any time the submission process as described in the solicitation. College of DuPage is requiring that any and all relationships with the College, its Administrators, Trustees, Committee members, COD Foundation Trustees, or any other Employee of the College be disclosed in writing as a part of any response submitted. Contact with any employee of the College of DuPage during the pre-award period, except as noted in the RFP documents, is strictly forbidden and is considered sufficient grounds for dismissal from the RFP process.

**VENDOR CONFLICT OF INTEREST DISCLOSURE**

Define the relationship with any College of DuPage Administrator, Trustee, Employee, COD Foundation Board member, Committee member, or their immediate family member, with which your company or any of its owners, officers, Trustees, employees, or their immediate family, does business or is likely to do business with, or for which there is an opportunity to influence a related College decision; include the name and relationship to any immediate family member.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Vendor certifies that there is no known conflict of interest with any COD Administrator, Employee, Trustee, Committee member, or COD Foundation Trustee, or their immediate family.

Vendor Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_

**Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**NON-COLLUSION STATEMENT**

The undersigned affirms that he/she is duly authorized to execute a contract and that this company, corporation, firm, partnership or individual has not prepared this response in collusion with any other Respondent, and that the contents of said response have not been communicated by the undersigned nor by any employee or agent to any other person engaged in this type of business prior to the official opening of this response.

Company Name: \_\_\_\_\_ Owners/Principal(s) Name(s)/Title(s): \_\_\_\_\_

Vendor Address: \_\_\_\_\_ City, State, Zip: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Fax Number: \_\_\_\_\_

Email Address: \_\_\_\_\_

**Signature**  
**Respondent/Company Official:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**ATTACHMENT A**  
**COST PROPOSAL**

The College is looking to procure five (5) digital kiosk display units. Please provide the unit cost should the College decide to purchase more units.

The College prefers freestanding units, but depending on the location and power/installation requirements, a wall mounted unit may be more feasible. Please quote pricing for both freestanding and wall mounted units, if available. If freestanding units can be 2-sided, please include pricing for 2-sided units provided that each side can be operated independently.

Off-the-shelf (non-custom) commercial products are acceptable to save expense.

Vendors must clearly specify which mounting configurations are being proposed for each unit:

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Vendors must provide a detailed installation plan for the proposed units

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Vendors must provide a complete, itemized pricing schedule including:

Line Item	Cost (USD)	Total Cost
One-Sided Freestanding Digital Kiosk Display System	\$ _____ (Per Unit)	\$ _____ (For 5 Units)
Double-Sided Freestanding Digital Kiosk Display System	\$ _____ (Per Unit)	\$ _____ (For 5 Units)
Wall Mounted Digital Kiosk Display System	\$ _____ (Per Unit)	\$ _____ (For 5 Units)
Installation, fully installed (Itemized Price per Unit)	\$ _____ (Per Unit)	\$ _____ (For 5 Units)
Annual Maintenance and Support Contract for Year 4 and 5 (Itemized cost per year; required quote)	\$ _____ (Per Unit)	\$ _____ (For 5 Units)
CMS licensing – Annual Cost	\$ _____ (Per Unit)	\$ _____ (For 5 Units)

Is the proposed system compatible with MazeMap? Yes \_\_\_\_\_ No \_\_\_\_\_

**ATTACHMENT B**  
**SAMPLE SERVICE AGREEMENT**



**SERVICE AGREEMENT ~ \$5000 AND OVER**  
**BETWEEN COLLEGE OF DUPAGE AND \_\_\_\_\_ (Vendor Name)**

This AGREEMENT (“Agreement”) is entered into on \_\_\_\_\_ by and between **College of DuPage, Community College District No. 502, Counties of DuPage, Cook and Will, and State of Illinois (“College”)** having its main address at 425 Fawell Blvd., Glen Ellyn IL 60137 and **(Vendor Name (“Contractor”))** having an address at Vendor Address.

The College and Contractor desire to enter into this Agreement, by which Contractor shall perform certain services in connection with the project as described below. In consideration of the performance of services by Contractor and the payment for those services by the College, the parties agree as follows:

**1. Scope of Services**

As directed by the College, Contractor will perform services for Description of Services in connection with the project, including, specifically, the matters set forth on Exhibit 1. Contractor will perform duties at the College using College facilities as appropriate.

**2. Performance of Services**

Contractor will perform the services with the highest professional standards as practiced in a timely manner and in accordance with any project schedule set forth in Exhibit 1. The parties agree that time is of the essence with respect to Contractor’s performance.

Contractor will assign qualified and experienced personnel to perform the services. Accordingly, all Contractor personnel performing work or services relating to this Agreement will be subject to the College’s approval. Where Exhibit 1 identifies specific Contractor personnel, these individuals will remain assigned to provide the services throughout the term of this Agreement, in accordance with their roles and responsibilities identified in Exhibit 1, unless otherwise approved in writing by the College. No provision of this Agreement (including any incorporated documents) will be effective to any extent that it abridges or abrogates the foregoing standard of care. Contractor will maintain a sufficient staff to perform all services in the most expeditious and economical manner consistent with the interests of the College. Contractor must promptly notify the College immediately in writing: (i) of any information required from the College so Contractor can complete their services in a timely manner; and (ii) of any work requested by the College that is not included in the scope of work provided in Exhibit 1.

Contractor will perform the services in accordance with all applicable laws, rules and regulations, including equal employment opportunity and import and export control laws and regulations. If services are funded through a government grant or contract, Contractor will comply with all laws, regulations, standards, and rules applicable to such grant or contract, as if they were fully set forth in this Agreement.

**3. Documents:**

All documents (including those in electronic form) prepared by Contractor under this Agreement are the property of the College; provided, however, that any use of such documents, drawings, and surveys, other than for this project, shall be at the College’s sole risk and without liability to Contractor. Among other things, the College will have the right to utilize such documents, drawings, and surveys in the event the

College expands the project, corrects any deficiencies, or makes any repairs or renovations to the project. Contractor shall submit any document, publication, brochure, electronic media, etc., which was developed for College of DuPage under this Agreement to the College for copyright or trademark by the College at its sole discretion.

Upon termination of this Agreement, or at any such time as the College may request, Contractor will deliver to College of DuPage all copies of documents relating to this Agreement in Contractor's possession.

#### 4. Term

The term of this Agreement is from     Date     to Date unless otherwise terminated in accordance with this Agreement. Services shall not begin, nor shall any payment to Contractor be made or authorized, before execution of this Agreement by an authorized signatory of the College.

The College has the option to extend the term of this Agreement for # of Years additional one-year terms. Before expiration of the then current term, the Purchasing Manager will give Contractor notice, in writing, that the College seeks to exercise its option to renew the Agreement for the approaching option period. The date on which the Purchasing Manager gives notice is the date the notice is mailed, if it is mailed, or the date the notice is delivered, if sent by courier or messenger service. After notification, the Agreement will be amended to reflect the term extension.

#### 5. Contractor

It is understood, acknowledged, and agreed by the Parties that neither Contractor, nor any employee or agent of Contractor, is an employee or agent of the College and thus shall not be entitled to any benefits provided to employees of the College. Contractor has no authority to employ/retain any person as an employee or agent for or on behalf of the College for any purpose. Contractor shall not represent to anyone that Contractor is an employee of the College.

#### 6. Payment

The College will pay Contractor for services properly performed and provided under this Agreement the amounts defined as fees. The fees represent the College's total financial commitment to Contractor for all services and deliverables, applicable taxes, and other obligations under this Agreement. The College is not subject to any sales or use taxes and such taxes will not be included in the fees charged by Contractor. The total amount due to Contractor under this Agreement shall not exceed the following total contract sum without the College's prior written approval:

**Total Contract Sum: \$Total Cost**

Contractor will provide invoices in a format acceptable to the College for services rendered directly to the Project Director identified in Section 7.

Undisputed invoices will be paid within sixty (60) days of receipt of properly submitted invoices to Contractor, in accordance with the Local Government Prompt Payment Act. Monthly statements shall detail "Current Amount Due," "Previous Amount Billed," and "Balance of Contract Outstanding." In the event the College terminates this Agreement as provided below, Contractor will be paid for services properly rendered before such termination. Reimbursement by the College of expenses and expendables incurred by Contractor will be limited as provided in Exhibit 1.

Contractor must agree to receive all payments from the College via an Automated Clearing House (ACH) transfer (CCD file format only). Instructions for registering for ACH payments are available on the College's Purchasing Department website: <http://www.cod.edu/about/purchasing/index.aspx>.

**7. College of DuPage Liaison**

While performing these services, it is understood that Contractor will coordinate with Project Manager's Name, Title, College of DuPage.

**8. Default**

If the Contractor fails to perform the required services within the specified time schedule, or if the Contractor shall become insolvent or be declared bankrupt and shall not cure said condition within seven days or shall make an assignment for the benefit of creditors, the College may give notice in writing to the Contractor and his surety of such default, specifying the same. If Contractor, within a period of seven days after such notice, does not proceed in accordance with the terms of this Agreement, the College shall have full power and authority to declare the forfeiture of this Agreement, and to forfeit any rights of Contractor(s) remaining under this Agreement.

Reliance upon the foregoing remedies, regardless of whether they are exercised by the College due to a default by Contractor, shall not exclude or constitute a waiver of any remedies otherwise provided by law or in equity.

**9. Indemnification**

To the fullest extent allowed by law, Contractor will indemnify and hold the College, its trustees, officers, agents, employees and any other parties designated by the College (hereinafter collectively called the "Indemnitees") harmless from all losses, claims, liabilities, injuries, damages and expenses, including but not limited to, all attorneys' fees, defense and court costs and expenses, that the Indemnitees may incur arising out of, or occurring in connection with, the acts or omissions by Contractor of its duties and obligations under or pursuant to this Agreement.

**10. Insurance**

The Contractor shall not commence work under this contract until all insurance required herein is obtained and approved by the Owner. Nor shall the Contractor allow any subcontractor to commence work until all similar insurance required of the subcontractor has been so obtained.

The Contractor shall furnish the College of DuPage with a Certificate of Insurance, with College of DuPage, its trustees, officers, agents, employees, and any other parties designated by COD named as an additional insured for Commercial General and Automobile Liability, showing the minimum coverage indicated below. Insurance companies must have a Best Rating of at least A VI and otherwise be acceptable to the College. Workers' Compensation insurance shall include a waiver of subrogation in favor of the College of DuPage. The College will also be shown as the certificate holder. Further, the Certificate of Insurance shall state that coverage provided is primary to any other coverage available to College of DuPage. An endorsement page showing coverage must accompany the certificate of insurance. The foregoing certificate shall contain a provision that coverage afforded under the policies will not be cancelled or non-renewed until at least sixty (60) days prior written notice has been given to College of DuPage.

**TYPE OF INSURANCE**

**MINIMUM INSURANCE COVERAGE**

Combined Single Limit Per Occurrence/Aggregate

**Commercial General Liability** including:

THIS AGREEMENT IS NOT LEGALLY BINDING UPON THE COLLEGE OF DUPAGE UNLESS AND UNTIL IT IS EXECUTED BY AN AUTHORIZED SIGNATORY OF THE COLLEGE OF DUPAGE. THE COLLEGE OF DUPAGE WILL HONOR NO OTHER APPROVAL OR AUTHORIZATION FOR PERFORMANCE OF OR PAYMENT FOR SERVICES BY THE SERVICE PROVIDER.	PAGE 3 OF 11
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- 1. Premises – Operations \$1,000,000 / \$2,000,000
- 2. Explosion, Underground and Collapse Hazard
- 3. Products/Completed Operations
- 4. Contractual Insurance
- 5. Broad Form Property Damage
- 6. Independent Contractors
- 7. Bodily Injury

**Automobile Liability**

Owned, Non-owned, or Rented \$1,000,000 / \$2,000,000

**Workers' Compensation and Employers' Liability**

As Required by Applicable Laws

**Professional Liability**

If Performance Specifications are Required by the Contract

**11. Business Enterprise Program**

The College of DuPage encourages the participation of qualified minorities, females, and persons with disabilities owned businesses in public contracts. It is the College's policy to promote and encourage the continuing economic development of businesses owned by minorities, females, and persons with disabilities by setting aspirational goals to award contracts to such businesses for certain services, and to award contracts to such businesses for certain services in accordance with the provisions of the Business Enterprise for Minorities, Females, and Persons with Disabilities Act, 30 ILCS 575/0.01 *et seq.*

**12. Warranty**

Contractor warrants all goods and/or services covered by this Agreement to be as specified, or in conformity with any sample provided by seller suitable for the purpose intended, of merchantable quality and free of defects in material, workmanship and design for a period of one year after being placed in service by the College, or two years from delivery to College, whichever is shorter. Contractor agrees to repair or replace (F.O.B. Contractor's original point of delivery and without expense to the College) any article or workmanship not conforming to this warranty.

**13. Compliance with All Laws**

Contractor agrees to comply with all applicable local, state, and federal laws, rules, regulations, and executive orders, including the following provisions, that relate to the manufacture, sale, and shipment of the goods covered by this Agreement.

- a. Human Rights Act: To the extent required by law, contractor shall abide by the Illinois Human Right Act, 775 ILCS 5/1-101 *et. seq.*
- b. Drug Free Workplace: To the extent required by law, Contractor shall abide with the requirements of the Drug Free Workplace Act 30 ILCS 580.1 *et. seq.*
- c. Sexual Harassment Policy: Contractor represents by the signing of this Agreement that it has a written sexual harassment policy that is in accordance with 775 ILCS 5/2-105.
- d. Equal Employment Opportunity: Contractor agrees to comply fully with the Federal Equal Employment Opportunities Act, including 29 C.F.R./Part 1609 "Guidelines on Harassment," the Illinois Human Rights Act, the Americans with Disabilities Act, and all applicable rules and regulations promulgated thereunder and all amendments made thereto, Title VII of the Civil Rights Act of 1964, as amended, and Section 504 of the Rehabilitation Act of 1973, and any additions or amendments, and Contractor represents certifies and agrees that it has implemented a sexual harassment policy pursuant to 775 ILCS 5/2-105 and that no person shall be denied or refused service or other full or equal use of Contractor services, or denied employment

opportunities by Contractor on the basis of race, creed, color, religion, sex, national origin or ancestry, age disability unrelated to ability, marital status, or unfavorable discharge from military service.

- e. Fair Employment Practice: Contractor represents it is in compliance with all State and Federal laws regarding Fair Employment Practice as well as all rules and regulations.
- f. Prevailing Wage Act: To the extent required by law, Contractor may not pay less than the prevailing wage as established pursuant to an Act regulating the wages of laborers, mechanics, and other workman employed under Contract for Public Workers 820 ILCS 130/1 *et seq.*
- g. Non-debarment: Contractor certifies that it has not been debarred from public contracts in the State of Illinois for violating either 33E-3 or 33E-4 of the Public Contracts Act, 720 ILCS 5/33E-1 *et seq.*

#### 14. Entire Agreement

This Agreement represents the entire agreement between Contractor and the College and supersedes all previous negotiations or agreements, written or oral, which are not included in this Agreement. This Agreement may only be amended by written instrument executed by the College and Contractor. In the event of a conflict between this Agreement and any proposal and related exhibits provided by Contractor, this Agreement shall control.

#### 15. Governing Law and Venue

This Agreement shall be governed by and construed in accordance with the laws of the State of Illinois, without regard to conflict of law provisions. Venue for any disputes arising under or in connection with this Agreement shall be in the Circuit Court of the Eighteenth Judicial Circuit of the State of Illinois, or in the United States District Court for the Northern District of Illinois, Eastern Division.

#### 16. Severability and Non-Waiver

If any provision of this Agreement is found to be unenforceable, the other provisions of this Agreement shall not be affected but shall remain in full force and effect. No waiver by either party of any breach or default by the other party shall be construed to be a waiver of any other breach or default by such other party.

#### 17. Notices

All communications and notices or matters relating to contract interpretation, a dispute, or indemnification obligations to the College from the Contractor must be faxed, delivered personally, electronically mailed or mailed first class, postage prepaid, to the using department that appears on the applicable purchase order, with a copy to the College of DuPage Purchasing Department. Contractor must include the College's contract number or relevant purchase order number in any notice.

Notice to:

**College of DuPage**

College of DuPage  
Procurement Department  
Institutional Resource Center  
IRC - Room 1001  
425 Fawell Blvd.  
Glen Ellyn, Illinois 60137  
Attention: Procurement Manager  
[purchasing@cod.edu](mailto:purchasing@cod.edu)

**Contractor**

**Vendor Name**  
Vendor Address  
City, State, Zip Code  
Attention: Contact Name  
Email: **Contact Email Address**

**18. No Assignment by Contractor**

Contractor may not, by operation of law, merger, or otherwise, assign any of its rights, agreements, or obligations under this Agreement without the prior written consent of the College. Any purported assignment by Contractor without the prior written consent of the College shall be null and void and shall not bind the College. Subject to the preceding sentence, all of the terms, agreements, covenants, representations, warranties, and conditions of this Agreement shall be binding upon, and inure to the benefit of and are enforceable by, the parties and their respective successors and assigns.

**19. Termination**

The College may terminate this Agreement and the services at any time, in whole or in part, with or without cause, upon written notice to Contractor. Five (5) days written notice is required in the event the contract is terminated with cause, and 30 days written notice is required in the event the contract is terminated without cause. In the event this Agreement is terminated under this paragraph, Contractor will be compensated for services properly rendered through the date of termination, as can be documented to the reasonable satisfaction of the College. The College shall not be responsible for any services or expenses incurred after the date of termination. In addition, should the College terminate this Agreement for cause, the College will be entitled to all direct, indirect, and consequential damages arising from the breach of Agreement that prompted the termination for cause.

**20. Arbitration**

At the College’s sole and exclusive option, all claims, controversies, and disputes between the College and Contractor arising out of or relating to this Agreement will be resolved in binding arbitration. Contractor agrees to be joined in any arbitration in which the College is a party to the extent that such arbitration relates to Contractor’s performance under this Agreement. In addition, the College shall have the sole and exclusive option to join as a party to such arbitration any entity that the College determines has an interest in the arbitration.

**21. Attorneys’ Fees**

In any action to enforce any of the provisions or rights arising under this Agreement, the prevailing party in such litigation, as determined by a court of proper jurisdiction in a final judgment or decree, shall be entitled to its costs, expenses and reasonable attorneys’ fees incurred therein.

**22. Conflicts of Interest**

Contractor represents that it, to the best of its knowledge, has no relationship or ownership interest and will not acquire any interest, direct or indirect, in any enterprise, which would conflict in any manner or degree with the performance of the services under this Agreement.

Contractor must disclose in writing as a part of any bid submitted or contract if a relationship or ownership interest exists; Contractor must define the relationship with any College of DuPage Administrator, Trustee, employee, Foundation Board Member, committee member, or their immediate family member, with which Contractor or any of its owners, officers, Trustees, employees, or their immediate family, does business or is likely to do business with, or for which there is an opportunity to influence a related College decision; include the name and relationship to any immediate family member.

Contractor certifies that it has no known conflict of interest with any College of DuPage Administrator, employee, Trustee, committee member, or College of DuPage Foundation Board Member, or their immediate family.

**Signature Page Follows**

THIS AGREEMENT IS NOT LEGALLY BINDING UPON THE COLLEGE OF DUPAGE UNLESS AND UNTIL IT IS EXECUTED BY AN AUTHORIZED SIGNATORY OF THE COLLEGE OF DUPAGE. THE COLLEGE OF DUPAGE WILL HONOR NO OTHER APPROVAL OR AUTHORIZATION FOR PERFORMANCE OF OR PAYMENT FOR SERVICES BY THE SERVICE PROVIDER.	PAGE 6 OF 11
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Contract Signature Page

SERVICE AGREEMENT

Department Name: COLLEGE OF DUPAGE - COD DEPARTMENT NAME

Vendor Name:

Description of Services:

Board Approval Required: Yes NO Date: Board Approval Date

In consideration thereof, both parties agree to the conditions set forth above. The undersigned, on behalf of the College of DuPage, a Body Politic and Corporate of the State of Illinois, this Agreement is hereby executed by:

Contractor: College of DuPage

Vendor Name

Print Name /Title

Vice President Administration / Chief Financial Officer

Signature

Signature

Tax ID or FEIN

Date

Date

Contractor and the College agree with the terms stated above and certify that Contractor has received a copy of the contract agreement.

**EXHIBIT 1**

May use template below to provide details regarding the work and specifications to be performed, milestones and deliverables for this Contract or attach Quote clearly detailing the services to be performed:

1. SCOPE OF WORK

**1. Description of Services:**

1.1. Provide a detailed explanation of the services to be performed (describe need and how the service provider will meet those needs):

1.2. Who will be responsible for performing the services? Please provide names of individuals who will be completing the services in connection with this Scope of Work.

1.3. Provide the name and contact information for the College project or program user.

1.4. What are the milestones and deliverables required during the project? Include a project schedule.

1.5. Where will the services be performed? What, if anything does the College have to provide for the services to be performed?

**2. Payment (Itemized):**

Contractor will perform and provide all the services and deliverables in accordance with this Agreement for a fixed amount or time and materials not to exceed \$Cost (the “fees”). The total fee includes all other expenses, including transportation and subsistence expenses.

Itemize all costs, time and material rates along with any expenses in connection with the fee or attached quote. Expenses and expendables shall be paid only with the prior written consent of the College.

**EXHIBIT 2**

Contractor may not commence work under this Agreement until all insurance required herein is obtained and approved by the College. Nor may the Contractor allow any subcontractor to commence work until all similar insurance required of the subcontractor has been so obtained.

*Affix Certificate of Insurance*

*(Sample Certificate Attached)*

## Exhibit 2: Insurance Certificate of Coverage

Named Insured: \_\_\_\_\_

Bid # /Contract #: \_\_\_\_\_

Address: \_\_\_\_\_  
(Number and Street)

(College)

(State)

(ZIP)

Description of Operation/Location
-----------------------------------

The insurance policies and endorsements indicated below have been issued to the designated named insured with the policy limits as set forth herein covering the operation described within the contract involving the named insured and the College of DuPage. The Certificate issuer agrees that in the event of cancellation, non-renewal or material change involving the indicated policies, the issuer will provide at least thirty (30) days prior written notice of such change to the College of DuPage at the address shown on this Certificate. This certificate is issued to the College of DuPage in consideration of the contract entered into with the named insured, and it is mutually understood that the College of DuPage relies on this certificate as a basis for continuing such agreement with the named insured:

Type of Insurance	Insurer Name	Policy Number	Expiration Date	Limits of Liability All Limits in Thousands
General Liability <input type="checkbox"/> Claims made <input type="checkbox"/> Occurrence <input type="checkbox"/> Premise-Operations <input type="checkbox"/> Explosion/Collapse Underground <input type="checkbox"/> Products/Completed-Operations <input type="checkbox"/> Blanket Contractual <input type="checkbox"/> Broad Form Property Damage <input type="checkbox"/> Independent Contractors <input type="checkbox"/> Personal Injury <input type="checkbox"/> Pollution				CSL Per Occurrence \$ _____  General Aggregate \$ _____  Products/Completed Operations Aggregate \$ _____
Automobile Liability				CSL Per Occurrence \$ _____
<input type="checkbox"/> Excess Liability <input type="checkbox"/> Umbrella Liability				Each Occurrence \$ _____
Worker's Compensation and Employer's Liability				Statutory/Illinois Employers Liability \$ _____
Builders Risk/Course of Construction				Amount of Contract
Professional Liability				\$ _____
Owner Contractors Protective				\$ _____
Other				\$ _____

- Each Insurance policy required by this agreement, excepting policies for worker's compensation and professional liability, will read: "The College of DuPage is an additional insured as respects operations and activities of, or on behalf of the named insured, performed under contract with or permit from the College of DuPage."
- The General, Automobile and Excess/Umbrella Liability Policies described provide for severability of Interest (cross liability) applicable to the named insured and the College.
- Workers Compensation and Property Insurers shall waive all rights of subrogation against the College of DuPage.
- The receipt of this certificate by the College does not constitute agreement by the College that the insurance requirements in the contract have been fully met, or that the insurance policies indicated by this certificate are in compliance with all contract requirements.

Name and Address of Certificate Holder and Recipient of Notice	
Certificate Holder/Additional Insured College of DuPage Purchasing Department 425 Fawell Boulevard, BIC1540 Glen Ellyn, IL 60137	Signature of Authorized Rep. _____ Agency/Company: _____ Address _____ Telephone _____

### For College use only

Name of College Department requesting certificate: (Using Dept.) \_\_\_\_\_

Attention: \_\_\_\_\_

THIS AGREEMENT IS NOT LEGALLY BINDING UPON THE COLLEGE OF DUPAGE UNLESS AND UNTIL IT IS EXECUTED BY AN AUTHORIZED SIGNATORY OF THE COLLEGE OF DUPAGE. THE COLLEGE OF DUPAGE WILL HONOR NO OTHER APPROVAL OR AUTHORIZATION FOR PERFORMANCE OF OR PAYMENT FOR SERVICES BY THE SERVICE PROVIDER.

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**ATTACHMENT C**

**CAMPUS MAP**



## College of DuPage

425 Fawell Boulevard  
 Glen Ellyn, Illinois  
 60137-6599  
 (630) 942-2800  
 www.cod.edu

## Buildings

BIC Rodney K. Berg Instructional Center  
 CHC Culinary & Hospitality Center  
 GH Greenhouse  
 HEC Robert J. Miller Homeland Security Education Center  
 HSC Health and Science Center  
 HTC Homeland Security Training Center

**IRC Institutional Resource Center**  
 MAC Harold D. McAninch Arts Center  
 PEC Physical Education and Community Recreation Center  
 SCC Seaton Computing Center  
 SRC Student Resource Center  
 SSC Student Services Center  
 TEC Technical Education Center

**Bids must be delivered to the College of DuPage Procurement Services between the hours of 8:00 a.m. to 5:00 p.m. Central Time, Monday through Thursday, in the Institutional Resource Center (IRC) Building, Room 1001, 425 Fawell Blvd., Glen Ellyn, IL 60137 by the due date and time.**

**Late Bids will not be accepted. Bids received after the deadline will not be accepted and will be returned to the vendor unopened.**

**ATTACHMENT D**  
**ELECTRIC SPECIFICATIONS**

**SECTION 26 00 00**  
**ELECTRICAL, GENERAL REQUIREMENTS AND COMMON WORK**

PART 1 - GENERAL

1.1 SUMMARY

- A. Provide and install a code compliant, fully functioning electrical system including but not limited to:
1. Service entrance.
  2. Power distribution system.
  3. Lighting fixtures and lamps, distribution and control.
  4. Emergency power system.
  5. Fire alarm system.
  6. Special systems.

1.2 QUALITY ASSURANCE

- A. Each major component of equipment shall have the manufacturer's name, address, model number and ratings on a plate securely affixed in a conspicuous place.
- B. Code ratings, labels or other data which are die-stamped or otherwise affixed to the surface of the equipment, shall be in label of Underwriter's Laboratories, Inc. (UL) or other nationally recognized testing laboratory per OSHA. Approval must be obtained for materials furnished as equals. All proposals shall be prepared on the basis of using exactly the materials and items specified. If the contractor wishes to have other items considered, he must submit these items with his proposal and state the amount to be added or deducted.
- C. Reference to a technical society, institution, association, or governmental authority is made in these specifications in accordance with the following abbreviations. All groups listed below do not necessarily apply to this project and are listed for informational purposes only:
1. ASE: Association of Safety Engineers
  2. ASME: American Society of Mechanical Engineers
  3. EPA: Environmental Protection Agency
  4. IEEE: Institute of Electrical and Electronics Engineers
  5. MCAA: Mechanical Contractor's Association of America
  6. NEMA: National Electrical Manufacturers Association
  7. NEC: National Electrical Code per city requirement incorporating all local amendments
  8. NFPA: National Fire Protection Agency
  9. ADA: Americans with Disabilities Act
  10. BOCA: Building Officials and Code Administrators
  11. IBC: International Building Code
  12. IFC: International Fire Code

- 13. IECC: International Energy Conservation Code
- 14. ICCEC: International Code Council Electrical Code
- 15. IAC: Illinois Accessibility Code

### 1.3 SUBMITTALS

- A. As-Built Documentation: At the completion of the work covered by this contract, this contractor shall be responsible for furnishing a complete set of certified as-built drawings showing the Electrical work as it was actually installed so as to make a permanent record. As-builts shall be furnished to Owner electronically in Revit format and PDF format. 3 Hardcopies shall also be provided.

### 1.4 CODE REQUIREMENTS AND INSPECTION AUTHORITIES

- A. All work shall be installed according to the rules and regulations of the National Electrical Code, IBC, the Occupational Safety and Health Act, IAC and ADA regulations, and the local inspection authorities. This shall include all written provisions and amendments to the electrical code and all interpretive provisions and directives of the chief electrical inspector, which may be in effect or enacted and in force until the final acceptance of the work.
- B. The quality and type of work referred to above shall be regarded as the minimum requirement and shall be exceeded where required by this specification.
- C. The contractor shall study the drawings and specifications prior to submitting his proposal and, if inspection authorities or labor conditions require work in addition to that specified or shown, the contractor shall state in his proposal the items involved and the additional amounts required for such items. After entering into a contract, the contractor agrees that all such items are included in his proposal and will not be cause for additional charges to the Owner.

### 1.5 COOPERATION AND COORDINATION

- A. Sequence, coordinate, and integrate installing electrical materials and equipment for efficient flow of the Work. Coordinate installing large equipment requiring positioning before closing in the building.
- B. Coordinate electrical service connections to components furnished by utility companies.
  - 1. **Coordinate installation and connection of exterior underground and overhead utilities and services, including provision for electricity-metering components.**
  - 2. **Comply with requirements of authorities having jurisdiction and of utility company providing electrical power and other services.**
- C. All fixtures, equipment, devices, switches and outlets shall be positioned to avoid all interferences with and to assure proper coordination with work of all other trades,

cases, partitions, wall, floor and ceiling patterns, architectural features, etc. All recessed devices, fixtures, etc. shall be coordinated to work out conflicts and adjustments where such adjustments are warranted.

- D. Contractor shall furnish and install all motor starters and disconnect switches for mechanical equipment installed under Divisions 21, 22, and 23 unless specifically called out for in mechanical contractor's scope of work. Coordinate starter and disconnect sizes with Divisions 21, 22, and 23 contractor(s) before ordering and installing. Install starters and disconnect switches for equipment per NEC, even if not indicated. Refer to mechanical and plumbing drawings. All 3-phase starters shall be furnished with phase loss/under-voltage protection.
- E. The contractor shall provide and install junction box and conduit stubbed up above ceiling for mechanical contractor's thermostat and all other associated sleeves to accommodate thermostat cabling. Mount at 56-1/2" to center. Refer to mechanical drawings and coordinate with temperature control contractor for all thermostat locations.

#### 1.6 TEST REQUIRED

- A. Any wiring devices, lighting fixtures or electrical apparatus in the contract, if grounded or shorted, shall be corrected or replaced at the contractor's expense.
- B. Test Owner's electricity-metering installation for proper operation, accuracy, and usability of output data.
  - 1. Connect a load of known kW rating, 1.5 kW minimum, to a circuit supplied by the metered feeder.
  - 2. Turn off circuits supplied by the metered feeder and secure them in the "off" condition.
  - 3. Run the test load continuously for eight hours, minimum, or longer to obtain a measurable meter indication. Use a test load placement and setting that ensure continuous, safe operation.
  - 4. Check and record meter reading at end of test period and compare with actual electricity used based on test load rating, duration of test, and sample measurements of supply voltage at the test load connection. Record test results.
  - 5. Repair or replace malfunctioning metering equipment or correct test setup; then retest. Repeat for each meter in installation until proper operation of entire system is verified.

#### 1.7 DEFECTIVE WORK AND MATERIAL

- A. All material or work found to be defective or not in strict conformity with drawings or different from requirements of drawings and specifications or defaced or injured through negligence of the contractor or his employees, through damage in shipments, or through action of fire or weather will be rejected and shall be immediately removed from premises by the contractor and satisfactory material and work substituted without delay.

- B. Any defective work or imperfect work shall be corrected immediately on notice from the architect. No previous inspection or certificate on account shall be held to relieve the contractor from his obligation to furnish sound material and to perform good and satisfactory work.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

**SECTION 26 10 00  
ELECTRICAL DISTRIBUTION**

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
1. Metal conduits and fittings.
  2. Surface raceways.
  3. Conductors and Cables
  4. Devices and trim.

1.2 DEFINITIONS

- A. EMT: Electric Metallic Tube.
- B. IMC: Intermediate Metal Conduit.
- C. LFMC: Liquid Tight Flexible Steel Conduit
- D. RGS: Rigid Steel Conduit.

1.3 INFORMATIONAL SUBMITTALS

- A. Coordination Drawings: Conduit routing plans, drawn to scale, on which the following items are shown and coordinated with each other, using input from installers of items involved:
1. Structural members in paths of conduit groups with common supports.
  2. HVAC and plumbing items and architectural features in paths of conduit groups with common supports.
- B. Qualification Data: For professional engineer.
- C. Source quality-control reports.

PART 2 - PRODUCTS

2.1 METAL CONDUITS AND FITTINGS

- A. Outdoors: Apply raceway products as specified below, unless otherwise indicated:
1. Exposed Conduit: Rigid steel conduit.
  2. Concealed Conduit, Aboveground: Rigid steel conduit.

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3. Underground Conduit: Rigid steel conduit or as indicated on drawings.
  4. In Slab Aboveground: Not allowed.
  5. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): LFMC.
  6. Boxes and Enclosures, Aboveground: NEMA 250, Type 3R.
- B. Comply with the following indoor applications, unless otherwise indicated:
1. Exposed, Not Subject to Physical Damage: EMT or IMC or RGS.
  2. Exposed, Not Subject to Severe Physical Damage: EMT or IMC or RGS.
  3. Exposed and Subject to Severe Physical Damage: Rigid steel conduit. Includes raceways in the following locations:
    - a. Loading dock.
    - b. Corridors used for traffic of mechanized carts, forklifts, and pallet-handling units.
    - c. Mechanical rooms.
  4. Installed Indoor, but Underground in Gravel Base Below Floor Slabs: RGS, as noted on drawings.
  5. Concealed in Ceilings and Interior Walls and Partitions: EMT or IMC or RGS.
  6. Install IMC and fittings except as follows:
    - a. Install EMT conduit and fittings if conduit size is 2 inches or smaller, unless another type of conduit and fittings are indicated.
    - b. Install RGS and fittings where noted or required by NFPA 70 or by federal state, and local governments or agencies having jurisdiction.
  7. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): FMC, except use LFMC in damp or wet locations (Boiler Rooms).
  8. Damp or Wet Locations: Rigid steel conduit.
  9. Boxes and Enclosures: NEMA 250, Type 1, except use NEMA 250, Type 3R in damp or wet locations. Use NEMA Type 4x in Kitchens and areas subject to corrosion.
- C. Minimum Raceway Size: 3/4-inch trade size. Size conduit for conductors installed per NEC fill requirements. 3/8-inch trade size flexible metal conduit can be used for light fixtures, not to exceed 6 feet in length.
- D. Listing and Labeling: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- E. Aluminum conduit shall not be permitted.
- F. Raceway Fittings: Compatible with raceways and suitable for use and location.
1. Rigid and Intermediate Steel Conduit: Use threaded rigid steel conduit fittings, unless otherwise indicated.
  2. PVC Externally Coated, Rigid Steel Conduits: Use only fittings listed for use with that material. Patch and seal all joints, nicks, and scrapes in PVC coating

after installing conduits and fittings. Use sealant recommended by fitting manufacturer.

3. EMT: Use compression fittings. Set screw type not allowed
- G. Conduit color coding scheme shall be adhered to for all projects without deviation as follows:
1. Power Branch Circuits: Blue conduit.
  2. Lighting 277V: Yellow conduit
  3. Low Voltage: Green conduit.
  4. Emergency: Orange Conduit.
  5. Fire Alarm: Red Conduit
  6. All Others: Standard Silver

## 2.2 SURFACE RACEWAYS

- A. Surface Metal Raceways: Galvanized steel with snap-on covers. Manufacturer's standard enamel finish (IVORY unless otherwise noted). Coordinate final color with Architect prior to ordering.
- B. Description: Sheet metal channel with fitted cover, suitable for use as surface metal raceway.
1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. Walker Systems, Inc.; Wiremold Company (The).

## 2.3 WIRING DEVICES

- A. Convenience Receptacles, 125 V, 20 A: Comply with NEMA WD 1, NEMA WD 6 configuration 5-20R, DSCC W-C-596G and UL 498, NEMA industrial heavy duty spec grade class (federal specification listed); 2-pole, 3-wire one piece integral grounding strap with green hexagonal equipment ground screw; ground terminal and poles internally connected to mounting yoke; rated at 20 amperes, 125 volts; back and side wiring, metal plaster ears; NEMA configuration 5-20R, unless otherwise indicated. Terminals must accept #10 AWG wire.
1. Hubbell HBL 5362
  2. Leviton 5362
  3. Pass and Seymour 5362A
- B. Tamper-Resistant Convenience Receptacles, 125 V, 20 A: Comply with NEMA WD 1, NEMA WD 6 configuration 5-20R, DSCC W-C-596G and UL 498, industrial heavy duty spec grade similar to convenience receptacle, but with T.R. feature.
1. Description: Labeled to comply with NFPA 70.
- C. Switched type receptacles for energy control.

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1. ASHRAE Energy Efficiency Standard 90.1: Standard 90.1 requires that 50 percent of all 125V, 20A receptacles in private offices, open offices, and computer classrooms be controlled by an automatic control device. Controlled receptacles need to be marked to differentiate them from non-controlled receptacles.
  2. Permanent power symbol remains clearly visible on front face of device after installation.
  3. Duplex, smooth nylon face, back and side wired. Hubbell #BR20C1.xx series, 125V, 20A.
- D. GFCI receptacles: Industrial heavy duty spec grade, feed-through type. Comply with NEMA WD 1, NEMA WD 6, UL 498, and UL 943, Class A, and include indicator light that is lighted when device is tripped, and meeting UL GFCI July 28, 2006, lock-out requirements and incorporates automatic self testing. Provide appropriate junction box size to fit receptacles.
1. Duplex GFCI Convenience Receptacles, 125 V, 20 A.
    - a. Hubbell GFR5352A
    - b. Leviton 7899
    - c. Pass and Seymour 2094
  2. Each receptacle required for GFCI protection shall be a Duplex GFCI Convenience Receptacles, 125 V, 20 A. Use of only one per circuit not permitted.
- E. Wall switches: NEMA industrial heavy-duty spec grade class (federal specification listed); rated at 20 amperes, 120/277 volts; AC quiet quick make, quick break design; toggle handle with totally enclosed case; mounting yoke insulated from mechanism with stainless steel grounding clip; single pole, side wiring, metal plaster ears. Terminals must accept #10 AWG wire. Motor rating – 80%, tungsten rating – 100%.
1. Single pole:
    - a. Hubbell HBL1221
    - b. Leviton 1221 – 2
    - c. Pass and Seymour PS20AC1I
  2. Two pole
    - a. Hubbell HBL 1222
    - b. Leviton 1222-2
    - c. Pass and Seymour PS20AC2I
  3. Three way
    - a. Hubbell 1223
    - b. Leviton 1223-2
    - c. Pass and Seymour PS20AC3I

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- F. Pilot light switches: NEMA industrial heavy-duty spec grade class (federal specification listed); rated at 20 amperes, 120/277 volts, AC quiet quick make, quick break design; lighted red polycarbonate toggle handle, when switch in on position; neon lamp; mounting yoke insulated from mechanism with stainless steel group clip; single pole; side wiring. Terminals must accept #10 AWG wire. Motor rating – 80%, tungsten rating – 100%:
  - 1. Description: Single pole, with neon-lighted handle, illuminated when switch is "ON."
- G. Key-Operated Switches, 120/277 V, 20 A: NEMA industrial heavy-duty spec grade class (federal specification listed); rated at 20 amperes, 120/277 volts; AC quiet quick make, quick break design; toggle handle with totally enclosed case; mounting yoke insulated from mechanism with stainless steel grounding clip; single pole, side wiring, metal plaster ears. Terminals must accept #10 AWG wire. Motor rating – 80%, tungsten rating – 100%.
  - 1. Description: Single pole, with factory-supplied key in lieu of switch handle.
- H. Single-Pole, Double-Throw, Momentary Contact, Center-Off Switches, 120/277 V, 20 A; for use with mechanically held lighting contactors.
- I. Key-Operated, Single-Pole, Double-Throw, Momentary Contact, Center-Off Switches, 120/277 V, 20 A; for use with mechanically held lighting contactors, with factory-supplied key in lieu of switch handle.
- J. Wall Plates: Single and combination types to match corresponding wiring devices.
  - 1. Plate-Securing Screws: Metal with head color to match plate finish.
  - 2. Material for Finished Spaces: Type 302/304, 0.040 inch thick, satin-finished stainless steel, non-magnetic. Coordinate exact finish with architect prior to ordering.
  - 3. Material for Unfinished Spaces: Galvanized steel.
  - 4. Material for Damp Locations: Cast aluminum with spring-loaded lift cover, and listed and labeled for use in "wet locations."
- K. Wet-Location, Weatherproof Cover Plates: NEMA 250, complying with type 3R weather-resistant, die-cast aluminum with lockable cover. Receptacle covers to be of the "in-use" type.
- L. Color: Wiring device catalog numbers in Section Text do not designate device color.
  - 1. Wiring Devices Connected to Normal Power System:
    - a. Ivory – For receptacles and switches.
    - b. Coordinate with Architect prior to ordering.
  - 2. Wiring Devices Connected to Emergency Power System: Red.
- M. Poke-Through Assemblies

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1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - a. Hubbell Incorporated; Wiring Device-Kellems.
  - b. Wiremold Company (The).
2. Description: Factory-fabricated and -wired assembly of below-floor junction box with multichanneled, through-floor raceway/firestop unit and detachable matching floor service outlet assembly.
  - a. Service Outlet Assembly: Flush type with receptacles and space for RJ-45 jacks and A/V devices..
  - b. Size: As required based on devices.
  - c. Fire Rating: Unit is listed and labeled for fire rating of floor-ceiling assembly.
  - d. Closure Plug: Arranged to close unused cored openings and reestablish fire rating of floor.
  - e. Wiring Raceways and Compartments: For a minimum of four No. 12 AWG conductors and a minimum of four, 4-pair, Category-6/-6A voice data communication and A/V cables.
  - f. Core floor at each location, size to be determined with manufacturer prior to coring holes. Protect all furnishings and area below from debris during coring.

#### 2.4 CONDUCTORS AND CABLES

- A. Copper conductors only, aluminum shall not be permitted.
- B. Feeders Concealed in Ceilings, Walls, and Partitions: Type THHN/THWN-2, single conductors in raceway
- C. Feeders Concealed below Slabs-on-Grade, and in Crawlspace: Type THWN-2, single conductors in raceway.
- D. Exposed Branch Circuits, including in Crawlspace: Type THWN-2, single conductors in raceway.
- E. Branch Circuits Concealed in Ceilings, Walls, and Partitions: Type THHN/THWN-2, single conductors in raceway.
- F. Branch Circuits Concealed below Slabs-on-Grade: Type THWN-2, single conductors in raceway.
- G. Cord Drops and Portable Appliance Connections: Type SO, hard service cord.
- H. Fire Alarm Circuits: Refer to drawings for requirements.
- I. Remote Control and Signal Cable:

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1. Control cable for Class I remote control and Signal circuits: Copper conductor, 600 volt THHN/THWN-2 insulation, rated 60 deg C, installed in raceway.
  2. Control cable for Class 2 or Class 3 remote control and Signal circuits: Copper conductor, 300 volt insulation, rated 60 deg C, individual conductors twisted together, shielded and covered with a PVC jacket; UL listed. Use plenum rated cable in plenum environments.
  3. Plenum cable for Class 2 or Class 3 remote control and Signal circuits: Copper conductor, 300 volt insulation, rated 60 deg C, individual conductors twisted together, shielded and covered with a nonmetallic jacket; UL listed for use in air handling ducts, hollow spaces used as ducts and plenums.
  4. Coordinate open cabling requirements with local jurisdiction prior to bidding.
- J. Connections to removal light fixtures in grid ceilings: FMC with THHN/THWN-2, maximum length 6'-0" whips, with ground wire. Provide plenum rated raceways when required by local codes.
- K. Utilize type THWN-2 for underground feeders or branch circuits subject to becoming wet.
- L. Grounding: Install solid copper conductor for No. 8 AWG and smaller, and stranded conductors for No. 6 AWG and larger, unless otherwise indicated.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Comply with NECA 1 and NECA 101 for installation requirements except where requirements on Drawings or in this article are stricter. Comply with NFPA 70 limitations for types of raceways allowed in specific occupancies and number of floors.
1. Comply with NECA 1, including the mounting heights listed in that standard, unless otherwise noted
- B. Arrangement of Devices: Unless otherwise indicated, mount flush. Group adjacent switches under single, multigang wall plates.
- C. Do not fasten conduits onto the bottom side of a metal deck roof.
- D. Keep raceways at least 6 inches away from parallel runs of flues and steam or hot-water pipes. Install horizontal raceway runs above water and steam piping.
- E. Arrange stub-ups so curved portions of bends are not visible above finished slab.
- F. Install no more than the equivalent of three 90-degree bends in any conduit run except for control wiring conduits, for which fewer bends are allowed. Support within 12 inches of changes in direction.

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- G. Make bends in raceway using large-radius preformed ells. Field bending shall be according to NFPA 70 minimum radii requirements. Use only equipment specifically designed for material and size involved.
- H. Conceal conduit within finished walls, ceilings, and floors unless otherwise indicated. Install conduits parallel or perpendicular to building lines.
- I. Support conduit within 12 inches of enclosures to which attached.
- J. Install pull wires in empty raceways. Use polypropylene or monofilament plastic line with not less than 200-lbtensile strength. Leave at least 12 inches of slack at each end of pull wire. Cap underground raceways designated as spare above grade alongside raceways in use.
- K. Surface Raceways:
  - 1. Install surface raceway with a minimum 2-inch radius control at bend points.
  - 2. Secure surface raceway with screws or other anchor-type devices at intervals not exceeding 48 inches and with no less than two supports per straight raceway section. Support surface raceway according to manufacturer's written instructions. Tape and glue are not acceptable support methods.

END OF SECTION

**SECTION 26 20 00  
ELECTRICAL EQUIPMENT**

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Service and distribution switchboards rated 600 V and less.
2. Disconnecting and overcurrent protective devices.
3. Panelboards
4. Variable frequency controllers
5. Full-voltage controllers
6. Fire Alarm

1.2 ACTION SUBMITTALS

A. Product Data: For each switchboard, overcurrent protective device, surge protection device, ground-fault protector, accessory, and component.

1. Include dimensions and manufacturers' technical data on features, performance, electrical characteristics, ratings, accessories, and finishes.

B. Delegated Design Submittal:

1. For arc-flash hazard analysis.
2. For arc-flash labels.

1.3 INFORMATIONAL SUBMITTALS

A. Field Quality-Control Reports:

1. Test procedures used.
2. Test results that comply with requirements.
3. Results of failed tests and corrective action taken to achieve test results that comply with requirements.

1.4 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For switchboards and components to include in emergency, operation, and maintenance manuals.

1. In addition to items specified in Section 01 78 23 "Operation and Maintenance Data," include the following:

- a. Routine maintenance requirements for switchboards and all installed components.
- b. Manufacturer's written instructions for testing and adjusting overcurrent protective devices.
- c. Time-current coordination curves for each type and rating of overcurrent protective device included in switchboards. Submit on translucent log-log graph paper; include selectable ranges for each type of overcurrent protective device.

#### 1.5 QUALITY ASSURANCE

- A. Installer Qualifications: An employer of workers qualified as defined in NEMA PB 2.1 and trained in electrical safety as required by NFPA 70E.
- B. Testing Agency Qualifications: Accredited by NETA.
  1. Testing Agency's Field Supervisor: Certified by NETA to supervise on-site testing.

### PART 2 - PRODUCTS

#### 2.1 SWITCHBOARDS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  1. Eaton.
  2. Schneider Electric USA (Square D).
  3. Siemens Industry, Inc., Energy Management Division.
- B. Multifunction Digital-Metering Monitor: BacNet compatible microprocessor-based unit suitable for three- or four-wire systems and with the following features:
  1. Switch-selectable digital display of the following values with maximum accuracy tolerances as indicated:
    - a. Phase Currents, Each Phase: Plus or minus 0.5 percent.
    - b. Phase-to-Phase Voltages, Three Phase: Plus or minus 0.5 percent.
    - c. Phase-to-Neutral Voltages, Three Phase: Plus or minus 0.5 percent.
    - d. Megawatts: Plus or minus 1 percent.
    - e. Megavars: Plus or minus 1 percent.
    - f. Power Factor: Plus or minus 1 percent.
    - g. Frequency: Plus or minus 0.1 percent.
    - h. Accumulated Energy, Megawatt Hours: Plus or minus 1 percent; accumulated values unaffected by power outages up to 72 hours.
    - i. Megawatt Demand: Plus or minus 1 percent; demand interval programmable from five to 60 minutes.
    - j. Contact devices to operate remote impulse-totalizing demand meter.

2. Mounting: Display and control unit flush or semiflush mounted in instrument compartment door.
3. Provide with independent surge suppression rated at 200ka per phase, 100ka per mode.

## 2.2 PANELBOARDS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  1. Eaton.
  2. Schneider Electric USA (Square D).
  3. Siemens Industry, Inc., Energy Management Division.
- B. NEMA PB 1, lighting and appliance branch-circuit type.
- C. Mains: Circuit breaker or lugs only.
- D. Branch Overcurrent Protective Devices: Bolt-on circuit breakers, replaceable without disturbing adjacent units.
- E. Provide with independent surge suppression rated at 120ka per phase, 60ks per mode.
- F. Doors: Heavy duty style with concealed hinges; secured with flush latch with tumbler lock; keyed alike. **Provide heavy duty type with door-within-door style cover.** For surface mounted panels, match box dimensions; for flush mounting, overlap box dimensions.

## 2.3 FUSIBLE SWITCHES

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  1. Eaton Electrical Inc.; Cutler-Hammer Business Unit.
  2. Siemens Energy & Automation, Inc.
  3. Square D; a brand of Schneider Electric.
- B. Type HD, Heavy Duty, Quick Make-Quick Break, Single Throw, 600-V ac, 1200 A and Smaller: UL 98 and NEMA KS 1, horsepower rated, with clips or bolt pads to accommodate specified fuses, lockable handle with capability to accept three padlocks, and interlocked with cover in closed position, with load interrupter enclosed visible blade knife switch.

## 2.4 NONFUSIBLE SWITCHES

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

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1. Eaton Electrical Inc.; Cutler-Hammer Business Unit.
  2. Siemens Energy & Automation, Inc.
  3. Square D; a brand of Schneider Electric.
- B. Type HD, Heavy Duty, Quick Make-Quick Break, Single Throw, 600-V ac, 1200 A and Smaller: UL 98 and NEMA KS 1, horsepower rated, lockable handle with capability to accept three padlocks, and interlocked with cover in closed position, with load interrupter enclosed visible blade knife switch

2.5 VARIABLE FREQUENCY CONTROLLERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. ABB Power Distribution, Inc.; ACH550 series. ABB Control, Inc. Subsidiary.
  2. Danfoss
  3. Yaskawa America, Inc
- B. Description: NEMA ICS 2, IGBT, PWM, VFC; listed and labeled as a complete unit and arranged to provide variable speed of an NEMA MG 1, Design B, 3-phase induction motor by adjusting output voltage and frequency.
1. Provide unit suitable for operation of premium-efficiency motor as defined by NEMA MG 1.
- C. Design and Rating: Match load type such as fans, blowers, and pumps; and type of connection used between motor and load such as direct or through a power-transmission connection.
- D. Output Rating: 3-phase; 0 to 500 Hz, with voltage and frequency parameters as required to match type of load.
- E. Unit Operating Requirements:
1. Input ac voltage tolerance as noted on drawing, plus or minus 10 percent.
  2. Input frequency tolerance of 48-63 Hz.
  3. Minimum Efficiency: 98 percent at 60 Hz, full load.
  4. Minimum Displacement Primary-Side Power Factor: 98 percent. The VFD shall include an input full-wave bridge rectifier and maintain a fundamental (displacement) power factor near unity regardless of speed or load.
  5. Overload Capability: 1.5 times the base load current for 60 seconds.
  6. Starting Torque: 100 percent of rated torque or as indicated.
  7. Speed Regulation: Plus or minus 1 percent.
  8. Integral 5% impedance via line reactors.
- F. Isolated control interface to allow controller to follow control signal over an 11:1 speed range.
1. Electrical Signal: 4 to 20 mA at 24 V.
- G. Internal Adjustability Capabilities:

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1. Minimum Speed: 5 to 25 percent of maximum rpm.
2. Maximum Speed: 80 to 100 percent of maximum rpm.
3. Acceleration: .1 to 1800 seconds, adjustable.
4. Deceleration: .1 to 1800 seconds, adjustable.
5. Current Limit: 50 to a minimum of 110 percent of maximum rating.

H. Self-Protection and Reliability Features:

1. Input transient protection by means of surge suppressors.
2. Under- and overvoltage trips; inverter overtemperature, overload, and overcurrent trips.
3. Motor Overload Relay: Adjustable electronic and capable of NEMA 250, Class 20 performance.
4. Notch filter to prevent operation of the controller-motor-load combination at a natural frequency of the combination.
5. Instantaneous line-to-line and line-to-ground overcurrent trips.
6. Loss-of-phase protection.
7. Reverse-phase protection.
8. Short-circuit protection.
9. Motor overtemperature fault.

I. Bypass: For critical equipment only confirm requirements with COD Staff.

J. Enclosure

1. Boiler Rooms, Chiller Rooms, and like areas shall be NEMA 3R.

2.6 FULL-VOLTAGE CONTROLLERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Eaton Electrical Inc.; Cutler-Hammer Business Unit.
2. Siemens Energy & Automation, Inc
3. Square D; a brand of Schneider Electric

B. General Requirements for Full-Voltage Controllers: Comply with NEMA ICS 2, general purpose, Class A.

C. Fractional Horsepower Rated Manual Controllers: NEMA ICS 2 Heavy Duty, Class A, "Quick-make, quick-break" toggle action; marked to show whether unit is off, on, or tripped.

1. Configuration: Nonreversing.
2. Overload Relays: Inverse-time-current characteristics; NEMA ICS 2, Class 10 tripping characteristics; heaters matched to nameplate full-load current of actual protected motor; external reset push button; bimetallic type.
3. Surface mounting.
4. Red pilot light.
5. Nameplates: Identifying unit name and number serving.

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- D. Integral Horsepower Manual Controllers: NEMA ICS 2 Heavy Duty, Class A, "Quick-make, quick-break" toggle action; marked to show whether unit is off, on, or tripped.
  - 1. Configuration: Nonreversing.
  - 2. Overload Relays: Inverse-time-current characteristics; NEMA ICS 2, Class 10 tripping characteristics; heaters and sensors in each phase, matched to nameplate full-load current of actual protected motor and having appropriate adjustment for duty cycle; external reset push button; bimetallic type.
  - 3. Surface mounting.
  - 4. Red pilot light.
  - 5. Additional Nameplates: Identifying unit name and number serving.
  - 6. N.O./N.C. auxiliary contact convertible.
  
- E. Magnetic Controllers: Full voltage, across the line, electrically held, NEMA ICS 2, Class A.
  - 1. Configuration: Nonreversing.
  - 2. Contactor Coils: Pressure-encapsulated type with coil transient suppressors.
    - a. Operating Voltage: Depending on contactor NEMA size and line-voltage rating, manufacturer's standard matching control power or line voltage.
  - 3. Power Contacts: Totally enclosed, double-break, silver-cadmium oxide; assembled to allow inspection and replacement without disturbing line or load wiring.
  - 4. Control Circuits: 120-V ac; obtained from integral CPT, with primary and secondary fuses, with sufficient capacity to operate integral devices and remotely located pilot, indicating, and control devices.
    - a. CPT Spare Capacity: 100 VA.
  - 5. Solid-State Overload Relay:
    - a. Switch or dial selectable for motor running overload protection.
    - b. Sensors in each phase.
    - c. Class 10/20 selectable tripping characteristic adjustable and selected to protect motor against voltage and current unbalance and single phasing.
    - d. Class II ground-fault protection, with start and run delays to prevent nuisance trip on starting.
    - e. Analog communication module.
  - 6. Two (2) N.C./N.O, NEMA ICS 2, isolated overload alarm convertible contact.
  - 7. External overload reset push button.
  - 8. Red pilot run light and green pilot stop light.
  - 9. With hand-off-auto selector switch.
  - 10. Control Relays: Auxiliary and adjustable time-delay relays as required.
  
- F. Combination Magnetic Controller: Factory-assembled combination of magnetic controller, OCPD, and disconnecting means. (To be used on all multi-pole phase motors requiring automatic starting means unless otherwise indicated.)

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1. Includes all components of magnetic controllers plus the following devices listed below.
2. MCP Disconnecting Means:
  - a. UL 489, NEMA AB 1, and NEMA AB 3, with interrupting capacity to comply with available fault currents, instantaneous-only circuit breaker with front-mounted, field-adjustable, short-circuit trip coordinated with motor locked-rotor amperes.
  - b. Lockable Handle: Accepts three padlocks and interlocks with cover in closed position.
  - c. Auxiliary contacts "a" and "b" arranged to activate with MCP handle.
  - d. N.C./N.O. alarm contact convertible that operates only when MCP has tripped.

2.7 FIRE ALARM

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  1. Notifier NFS2-3030 Series
- B. Non-coded, UL Listed intelligent analog addressable system, one-way digital voice communications with multiplexed signal transmission and survivable network nodes. The entire system shall be UL2572 Listed Mass Notification System.
- C. Provide with microphone at each panel.
- D. Fire alarm system must connect to existing campus fiber fire alarm loop.
- E. Fire alarm contractor shall NESCO certified, Notifier Engineered Systems Company.
- F. Integration of fire alarm system to be performed by COD fire alarm contractor. Confirm with COD staff.

PART 3 - PRODUCTS (NOT USED)

END OF SECTION

**SECTION 27 00 01**  
**COMMUNICATIONS – GENERAL**

PART 1 - GENERAL

1.1 SYSTEM DESCRIPTION

- A. The Owner has in place a state of the art cabling system that is supportive of the mission to provide voice, high speed data, video and multimedia services to the College of DuPage Main Campus and Satellite sites well into the future. The requirements for this cabling, its installation and termination equipment are very stringent to support these goals.
- B. This document describes the product and execution requirements relating to new Telecommunications Cabling System for the College of DuPage and Regional Campus Locations. If exceptions or changes to these requirements are desired by A/E, A/E shall discuss proposed changes and exceptions with Owner's Information Department.

1.2 QUALIFICATIONS/PERSONNEL

- A. A/E shall specify the following:
  - 1. The communications cabling system installation work detailed in these standards shall be carried out by a specialist installer with minimum (3) years experience, trained and certified by PANDUIT and capable of providing a system warranty as described herein.
  - 2. The Cabling Contractor shall have a Registered Communications Distribution Designer (RCDD) or equal as a permanent member of staff. The RCDD shall be in good standing with the Building Industry Consulting Service International (BICSI) and shall have a current registration.
  - 3. The Contractor shall hold a valid State Contractors License for the duration of the project. The installer shall be responsible for obtaining permits and other requirements for performing work on this project.
  - 4. The Cabling Contractor shall provide an on-site manager responsible for all Communication work. This individual shall be the single point of contact for the duration of the project.
  - 5. The Air Blown Fiber®, each bidder must submit current documentation signed by Sumitomo Electric Lightwave representative stating the Contractor is authorized and certified by Sumitomo Electric Lightwave to provide the FutureFLEX® Air Blown Fiber® cable products installation and warranty certification. Each bidder must also submit documentation with the bid, listing the names of employees that will be used on this project indicating their experience, level of expertise, and certificates of training signed by Sumitomo Electric Lightwave representatives.
  - 6. The Contractor shall furnish and install all Tube Cables, Tube Couplings, Tube Distribution Units (TDUs), Fiber Bundles, connectors, and equipment as shown on the drawings and per Sumitomo Recommended Procedures (SRP's).

### 1.3 Definitions

- A. Telecommunications Closet (TC): The generic term, this refers to the equipment rooms in which telecommunications cabling terminates. These rooms also house network, video and telephone electronics.
- B. Building Distribution Facility (BDF): The "Main wiring switching for the building
- C. Intermediate Distribution Facility (IDF): A secondary wiring switching room
- D. Horizontal Cabling: Cabling runs from Work Station to IDF or BDF.
- E. Backbone: Linkage from BDF to IDF.
- F. House Count: The Contractor shall cross-connect the first (BLUE) pair of each new workstation cable to the riser backbone to link the telecommunications closet to the next closet in the hierarchy. The cross connects wire of colors matching the color of the station cabling conductors (BLUE) shall be used for each cross connect.
- G. Backbone transmission media may be:
  - 1. Traditional and Air Blown Optical fiber
  - 2. Twisted-pair copper
  - 3. Coaxial copper
  - 4. A combination of the above
  - 5. Miscellaneous support facilities
- H. Material needed for the proper termination and installation of the backbone cables:
  - 1. Cable support hardware
  - 2. Firestopping equipment and supplies
  - 3. Grounding hardware (TIA-607-B 6.3.2)
  - 4. Protection and security
- I. Inter-Building Cabling – First Level Backbone: provides the transmission path between adjacent buildings. Includes Fiber Optic and copper cabling.
- J. Intra-Building Cabling – Second Level Backbone: Provides the transmission path to join the main Telecommunications Closet (or BDF) with other TC's (or IDF) located within the building. Includes Fiber Optic and copper cabling.
- K. Horizontal cabling and Work Station Cabling: Provides the link from offices, classrooms and common areas to the Telecommunications Closet (TC) serving the area and includes the following transmission media:
  - 1. 4-pair 100 Ohm Unshielded Twisted Pair (UTP) Category 6 or 6A
  - 2. Fiber Optic Cable (Multi-Mode and Single-Mode)
  - 3. RG-6 Coax

#### 1.4 QUALITY ASSURANCE

A. A/E shall specify work in accordance with the following:

1. Equipment and material shall be Underwriters Laboratories listed and labeled. The latest editions of the following codes, standards and guidelines are minimum requirements:
  - a. City, State, and Federal codes.
  - b. NFPA 70 National Fire Protection Agency
  - c. National Electric Code (latest version)
  - d. Institute of Electrical and Electronic Engineers (IEEE)
  - e. ANSI/TIA-568-D Series Standards for Commercial Building Telecommunication Cabling Standard.
  - f. ANSI/TIA-568-D Series Standards for Commercial Building Telecommunication Cabling Standard Category 6 and 6A and Optical Fiber Cabling.
  - g. ANSI/TIA-569-D Standards for Commercial Building Standard for Telecommunications Pathways and Spaces.
  - h. ANSI/TIA-606-C the Administration Standard for Telecommunications Infrastructure of Commercial Buildings.
  - i. ANSI/TIA-607-C Commercial Building Grounding and Bonding Requirements for Telecommunications.
  - j. TIA/EIA TSB-67 Transmission Performance specifications for Field Testing of Unshielded Twisted Pair Cabling Systems
  - k. ANSI/TIA-1152-A Requirements for Field Test Instruments and Measurements for Balanced Twisted-Pair Cabling
  - l. TIA/EIA TSB-72 Centralized Optical Fiber Cabling Guidelines.
  - m. TIA/EIA TSB-75 Additional Horizontal Cabling Practices for Open Offices.
  - n. Telecommunications Distribution Methods Manual, (BICSI).
  - o. Manufacture's recommendations and installation guidelines.

#### 1.5 WORK RESTRICTIONS AND PROCEDURES

A. General Requirements

1. The A/E shall specify the following:
  - a. The Cabling Contractor shall examine all drawings and specifications to familiarize themselves with the type of construction to be used, and the nature and extent of work provided by other trades.
  - b. Beginning installation means Contractor accepts existing conditions.
  - c. Contractor shall verify dimensions and the correct locations of hardware before proceeding with the installation of hardware, cabling and/or connections.
  - d. The Cabling Contractor shall be responsible for identifying and reporting to the Owner any existing damage to walls, flooring, tiles and furnishings in the work area prior to start of work. All damage caused by the cable, raceway, or miscellaneous material to the interior surfaces during the communication installation shall be repaired by the Contractor. The

repairs must match preexisting color and finish of walls, floors and ceilings. Any contractor damaged ceiling tiles are to be replaced to match color, size, style and texture and shall not be taken from Owner's attic stock.

- e. The Cabling Contractor shall be responsible for securing all Telecommunications Rooms and offices when not in use. At no time shall the Telecommunications Room be unattended if unsecured.
- f. Contractor should assume that all installation work including cable placement, termination and testing shall be performed between the hours of 7:00 a.m. to 5:00 p.m. Monday through Friday unless stated otherwise in the bid.
- g. Qualified personnel utilizing state-of-the-art equipment and techniques shall complete all installation work.
- h. The Cable system will be tested and documented upon completion of the installation as defined in the section below.
- i. Products selection, installation plans and termination layouts must be reviewed and approved by the Owner prior to construction. The review does not exempt the Contractor from meeting any of the requirements stated in this document.

#### 1.6 SUBMITTALS

A. The A/E shall specify the following requirements

- 1. At A/E option, Contractor shall submit a two-foot section of cable(s) of the type(s) to be sent to the site for final approval by the College. This two-foot section shall have the manufacturer's cable markings visible. Upon request, samples from every reel sent to the site shall be provided.
- 2. At A/E option, Contractor shall submit if requested, a full mockup of the proposed Information Outlet and Jack configuration with appropriate cabling for each of the installation environments described below. A/E shall discuss full mockup requirements with Owner prior to specifying.
- 3. Contractor shall submit house count table in spreadsheet/tabular format with shop drawing submittals. House count table shall include house count and location ID's.

#### 1.7 DELIVERY, STORAGE AND HANDLING

A. The A/E shall specify the following requirements:

- 1. The Cabling Contractor shall be responsible for all deliveries of material construction site. The Owner will not accept deliveries.
- 2. For purposes of bidding, it is to be assumed that the Owner will not provide storage facilities for material. Pending availability, however, this may be arranged subsequent to award.
- 3. Cable shall be stored according to manufacturer's recommendations at a minimum. Cable must be stored in a location protected from vandalism and weather. If cable is stored outside, it must be covered with opaque plastic or canvas with provision for ventilation to prevent condensation and for protection

from weather. Manufacturer's storage specifications - in particular, those relating to temperature - shall be followed. All storage costs shall be included in Contract price.

4. Tools, materials and equipment shall be confined to area designated by the Owner. The Contractor shall clean up and dispose of all debris and rubbish resulting from work on a daily basis.
5. The Contractor is responsible for the cleanup of the dust, debris, shipping and packaging material associated with their installation. The Owner's disposal containers shall not to be utilized without written authorization.

#### 1.8 BDF, IDF, AND TC CLOSET LAYOUT AND REQUIREMENTS

A. The A/E shall specify and design based on the following requirements:

##### 1. General Requirements:

- a. The assembly and installation of data racks, A/E shall confirm counts with Owner. These racks will be secured to the walls by a ladder rack to be provided and installed by the data contractor. This ladder will run across the racks from wall to wall and be attached to the data racks. There will also be a "t" section of this rack, running from the ladder rack to the wall behind the data racks to allow for the data cabling to be routed to the patch panels. The data racks will need to be fastened to the floor.
- b. Proper HVAC shall be provided in order to maintain operating temperature of 68 deg. F to 70 deg. F with humidity between 40-60 RH.
- c. Adequate lighting shall be provided in front and behind data racks and equipment.

##### 2. Telecommunications Closets, IDF, BDF (General):

- a. The dimensions of this closet should be 8' X 10', minimum or larger per Owner and design requirements.
- b. The communications closet shall have walls sealed or covered to reduce dust development.
- c. Suspended acoustical ceiling is required.
- d. Floor shall be sealed or tiled.
- e. General building storage or plumbing fixtures (e.g. janitor sinks) shall not be permitted.
- f. Each data rack will need a dedicated 110 V quad circuit with an additional twist lock in parallel. The outlets should be installed near the bottom of the rack. The twist lock specification is L5-20R NEMA 20A 125V 1HP.
- g. Security System equipment may be installed in this space. If so, one dedicated 20A circuit shall be provided. Verify location of outlet with Owner.
- h. Security System shall be mounted on 4' x 4' x 3/4" fire-rated plywood minimum.
- i. Telephone equipment may be installed in this space. If so, two dedicated 110 V circuits shall be provided. One circuit shall be used by the local PBX, one circuit shall be used by the service providers connecting equipment.

- j. Grounding bar shall be installed near the phone and data equipment.
- k. Wall phone jack is required. Verify location with Owner.
- l. Two data jacks required. Verify location with Owner.
- m. 4' x 8' x 3/4" fire-rated plywood shall be mounted horizontally at 6'-0" (to top of plywood) above finished floor for telephone and cabling equipment.
- n. Proximity reader controllers can be installed in this space.
- o. Room shall be secured with proximity card reader and electric lock.
- p. Adequate lighting shall be provided in front and behind data racks and equipment.

3. IDF Room:

- a. IDF: The dimensions of this room should be 8' x 10' minimum or larger per Owner and design requirements.
- b. Design requirements, at a minimum, similar to TC.

4. BDF Room:

- a. BDF: The dimensions of this room shall be determined by the A/E and will be dependent on equipment quantities and clearances. It shall be no smaller than 8' x 10'.
- b. Design requirements, at a minimum, similar to TC.

1.9 WARRANTY AND ATTIC STOCK

A. Warranty:

- 1. Provide a comprehensive cable/premise wiring device warranty from manufacturer of communication device system for no less than 25 years. This shall include a warranty on all parts and labor:
  - a. The cabling/premise wiring device warranty and system performance guarantee program shall warrant the structured cabling system is free from defects in material and workmanship and will support any current or future Category-6 and Category 6A system applications ratified by IEEE, ANSI or ISO that is developed for an ANSI/TIA/EIA-568-D compliant structured cabling system for a 25-year period from date of registered installation. This warranty shall also include a warranty covering all components (work area outlets, horizontal cable, connecting hardware in the horizontal cross-connect, and the equipment cord at the work area). All devices must be manufactured by warranty provider.
  - b. Contractor must be a Certified Installer and accredited Certified Installer for the manufacturer of product being installed, as approved by Owner.
- 2. Provide a one-year warranty on all other associated equipment not covered under warranty indicated above.

B. Attic Stock:

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1. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
2. Patch Cords: Refer to drawings for quantity, length and color.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

**SECTION 27 00 02**  
**COMMUNICATIONS – MATERIAL**

PART 1 - GENERAL

1.1 DATA/VOICE UTP STATION CABLE

A. The A/E shall specify the following requirements:

1. Transmission characteristics of the cable shall meet full Category 6 and 6A performance as defined by ANSI/TIA-568-D Series Standards. Cable shall be UL and/or ETL verified Category 6 or 6A (at owner's discretion).
2. Cables shall be Underwriters Laboratory (UL) listed, comply with Article 800 (Communications Circuits) of the National Electrical Code and shall meet the specifications of NEMA (low loss), UL 444, and ICEA.
3. The jacket color for Data Station Cables shall be BLUE.
4. Data Station Cables shall meet a CMR (Riser) or CMP (Plenum) rating depending on the particulars of the installation and be suitable for installation in the environments defined including free-air, in conduit, in cable tray and in modular furniture.
5. Cable shall be packaged in a way that minimizes tangling and kinking of the cable during installation. Examples are open reels or packages, which incorporate a rotating reel.
6. Data UTP Station Cables shall be Panduit PUP6004BU-WLP High Performance Category 6 plenum (CMP) Twisted 4-pair UTP copper cable or Panduit PUP6HXD04BU-G High Performance Category 6A plenum (CMP) Twisted 4-pair UTP copper cable (at owners discretion).

1.2 COAXIAL STATION CABLE

A. The A/E shall specify the following requirements:

1. Coaxial Station Cable shall be RG-6 coax.
2. Cables shall incorporate a 20-AWG solid center conductor and a tinned copper double braid shield (98% coverage). Conductors shall be separated by polyethylene core insulation.
3. Cables shall be suitable for installation "free-air" in COD building risers, above drop ceilings, in cable tray or in duct.
4. Coaxial cable shall have the following nominal transmission characteristics:
  - a. 75-Ohm Characteristic Impedance
  - b. 66% Propagation Velocity
  - c. 1-pf/ft Capacitance
5. Coaxial station cabling shall be continuous and splice free.
6. Coaxial Station Cable shall be Belden p/n 8281A (CMR), CommScope Catalog # 2227K (CMP).

### 1.3 TELECOMMUNICATIONS OUTLET

- A. The A/E shall specify the following requirements:
1. At the workstation location, Station Cables shall each be secured in a housing, which shall also accommodate the termination assemblies for those cables. The combined assembly, referred to as the Telecommunications Outlet (TO), shall be modular in design and allow for flexibility in integrating the different configurations required at the site.
  2. There shall be one (1) basic Telecommunications Outlet configuration:
    - a. The "Copper-Only" Communication outlet that is capable of supporting only UTP and Coaxial Cabling.
  3. Provide telephone cover plate as required for telephone locations.
  4. The color and material of the frame cover and inserts (if applicable) shall be Electric Ivory Plastic.
  5. The cover of the telecommunications outlet shall be secured to the base with a screw. The screw(s) shall, in turn, be hidden from view by a label or other covering to discourage casual access.

### 1.4 COPPER ONLY OUTLET

- A. The A/E shall specify the following requirements:
1. The Copper-Only Outlet shall comply with the general requirements defined above and with the following *additional* requirements:
    - a. The Copper-Only Outlet shall provide adequate capacity to accommodate the following maximum configurations:
      - 1) Two (2), four (4) or six (6) modular jacks
      - 2) The same as above but one (1) "F" Connector substituted for one (1) modular jack.
    - b. All jacks and couplings shall mount on either the base of the unit or the cover.
    - c. The Copper-Only Outlet shall be available in both "flush" and surface mount designs and shall be adaptable to mounting on cellular floor presets or post-tests poke thru or under floor wiring.
    - d. Where flush mounting is not possible, a Surface box shall be used. Surface Box shall be Panduit Single Gang One-piece Deep Box.
  2. Wall-Mounted Copper-Only Outlets
    - a. Wall mounted Copper-Only Telecommunications Outlets shall be Panduit CFPL2EIY 2 Port CFPL4 EIY 4 Port and CFPL6EIY 6 Port.
  3. Floor-mounted Copper Only Outlets

- a. Floor-mounted Data Outlets shall comply with the above general requirements plus the following:
  - 1) A protective bracket shall be available to guard against damage to the jack assemblies or patch cord plugs.
  - 2) Floor box shall be fitted with adapter(s) appropriate for the floor-type being accessed.
  - 3) Jack assemblies shall be compatible with floor boxes.
4. Copper Voice Outlets
  - a. Terminate in rack if space allows, otherwise utilize 110 style block.
  - b. The Wall Plate shall be of Stainless Steel construction, mount on a standard single gang outlet box or bracket and include mating lugs for wall phone mounting.
  - c. The wall plate shall be Panduit KWP6PY or equivalent and be fitted with one (1) data jack meeting the criteria defined below.
  - d. The interface between the jack and the station cable shall be a 110-Style block. Blocks shall be designed to maintain the cable's pair twists as closely as possible to the point of mechanical termination.
  - e. Data Termination hardware shall meet **Category 6/6A** performance specifications as defined by TIA TSB-116 specifications for connecting hardware.
  - f. Data Termination hardware shall meet full **Category 6/6A** performance specifications as defined by ANSI/TIA-568-D Series Standards and TSB-40A specifications for connecting hardware. All pair combinations must be considered, with the worst-case measurement being the basis for compliance. The Jack must be UL verified and listed. All pair combinations must be considered with the worse case measurement being the basis for compliance.
  - g. The color of the Data Jack shall be BLACK.

#### 1.5 BACKBONE COPPER CABLE

- A. A/E shall specify the following requirements:
  1. Backbone Cable shall incorporate 24 AWG solid annealed Copper Conductors. Conductors shall be insulated with a thermoplastic skin. Maximum diameter of the insulated conductor shall be 0.048 in (1.22 mm).
  2. Conductors shall be twisted to form pairs and fully color-coded. Conductor twists shall be of varying lay lengths in order to minimize crosstalk.
  3. All conductors shall be continuous and splice free. Bridge taps are not permitted.
  4. Cables shall be Underwriters Laboratory (UL) listed, comply with Article 800 (Communications Circuits) of the National Electrical Code and shall meet the specifications of NEMA (low loss), UL 444, and ICEA.
  5. Cable shall meet the physical and electrical requirements of 100 Ohm "Backbone Cable" as defined by the ANSI/TIA-568-D Standard for Commercial Building Wiring.

6. Inter-Building Cable shall conform to **Category 6/6A** performance specifications or better.
7. Intra-Building Cable shall conform to **Category 6/6A** performance specifications or better.
8. Conductors shall be identified by the insulation color of each conductor. The color code shall follow the industry standard composed of ten (10) distinctive colors to identify 25 pairs in accordance with ICEA publication S-80-576-1988. Marking of each mate of the primary conductor in a pair with the color of that primary conductor is optional.
9. When cables of larger than 25 pairs are required, the core shall be assembled into 25-pair sub-units, each color coded in accordance with ICEA publication S-80-576-1988. Cables with over 600 pairs shall have 25-pair binder groups combined into super units. These super units shall be wrapped with a solid color thread that follows the primary color scheme of white, red, black, Yellow and violet. Binder color code integrity shall be maintained wherever cables are spliced.
10. In exterior applications, the cables shall contain an overall corrugated, coated aluminum shield that is electrically continuous over its entire length.
11. The cables shall not incorporate a "T1" screen.
12. The cable core shall be protected by a uniform, continuous thermoplastic jacket (sheath) the types specified below. The cable jacket shall be sequentially printed with a footage marker at regular intervals along its length.
13. Backbone cabling (Copper/Fiber Optic) shall not share the same raceway or path with horizontal cabling.

#### 1.6 INTRA-BUILDING VOICE COPPER CABLE

A. The A/E shall specify the following requirements:

1. Where installed in conduit, cable tray and/or in building riser shafts, cables shall be suitable for such installation and comply with the following *additional* requirements:
  - a. Cables shall meet NEC Article 800 Type CMR.
  - b. Cables shall be Air Core with an 8-mil ALVYN Sheath
  - c. Cables shall be "ARMM" Series

#### 1.7 BACKBONE FIBER OPTIC

A. The A/E shall specify the following requirements:

1. The fiber optic backbone cable may be a multimode fiber (62.5/125 $\mu$ m unless otherwise noted), single-mode fiber (8.3/125 $\mu$ m) or a combination of both.
2. All indoor fiber shall have the designation of OFNR (Optical Fiber Non-conductive Riser for non-plenum environments and OFNP (Optical Fiber Non-conductive Plenum for plenum environments). The construction of all fiber optical cable shall be tight-buffered 900  $\mu$ m of distribution design.

3. When installing the fiber optic backbone cable, ensure that the minimum cable bend radius and maximum vertical rise recommended by the fiber manufacture is not exceeded.
4. All fiber shall be installed in the appropriately sized and correct environmental inner-duct system. No other fiber shall be installed in occupied inner-duct.
5. Contractor to provide sufficient quantity 'SC' connectors for both sides of new optical fiber runs.
6. Coordinate cable and jack colors with owner and drawings prior to ordering.

#### 1.8 INTER-BUILDING CABLING (COPPER AND FIBER)

A. The A/E shall specify the following requirements:

1. All communications cabling within buildings shall be placed in a rigid conduit system. The conduit system shall be suitable for direct burial or encased in concrete. The minimum requirements for the conduit system shall consist of one 4" conduit for copper environment and one 4" conduit for fiber environment.
2. The conduit system designed for the copper environment shall not exceed the 40% fill ratio. All cables shall be installed at the same time and no other cables shall be installed after cable installation.
3. The conduit system designed for the fiber environment shall have (3) one inch inner-duct installed the entire length of the system. Each inner-duct shall have pulling rope for fiber installation. All fiber shall be pulled in one continuous pull through inner-duct system and no other copper cable or fiber cable may be installed in the future.
4. Outdoor copper & optical fiber types shall be determined based on environmental and system applications at time of installation.

#### 1.9 MISCELLANEOUS MATERIALS

A. The A/E shall specify the following requirements:

1. Equipment Rack and Associated Hardware
  - a. Communications equipment rack and cabinets shall be properly anchored at top and bottom.
  - b. Racks shall be anchored to floor with properly sized drop-in anchors with appropriately sized bolts and washers. All racks and cabinets shall be attached to ladder rack system. If ladder rack system does exist, coordinate with project manager.
  - c. Horizontal cable management hardware shall be positioned on the equipment racks to allow for an orderly routing of copper and fiber optic jumpers.
  - d. Jumper Management Panels shall incorporate Horizontal and Vertical distribution rings to accommodate a defined routing of individual jumper cables. Horizontal distribution rings shall be 3" x 3.5" (minimum dimension) and mounted on a 3.5" painted steel plate.

- e. Each Jumper Management Panel shall be supplied with a minimum of ten (10) velcro ties. Ties shall be minimum 6-inches in length
  - f. Vertical Jumper Rings shall be positioned on each rack upright equidistant between each Horizontal Management Panel installed.
2. Surface Raceway
- a. The installation of surface mounted outlets and surface mounted station cable is anticipated at some locations where solid walls inhibit the installation of cable behind the wall. Nonmetallic surface raceway shall be used - no exposed cable shall be permitted.
  - b. The surface raceway shall have a screw-applied base and have a snap on cover. The use of double-sided tape to anchor the raceways will not be permitted.
  - c. Both the base and cover shall be manufactured of rigid PVC compounds and be suitable for painting.
  - d. The raceway shall be of a color fitting the decor of the area and be paintable (by others). Approval of samples by the Engineer prior to installation is required (Upon request by Owner). All fittings including, but not limited to, extension boxes, elbows, tees, fixture boxes and fittings shall match the color of the raceway.
  - e. Fittings and couplings shall be sized to ensure that **Category 6, 6A** and fiber optic cables that are routed through them do not exceed their recommended minimum bend radius requirements.
  - f. The raceway and all system devices must be UL Listed and exhibit nonflammable self-extinguishing characteristics, tested to specifications of the UL94V-0.
  - g. Raceway shall be sized to accommodate a 50% increase in the number of cables initially installed while maintaining a fill (ratio of cable area vs. raceway area) no greater than 60%. A nominal cable diameter of 0.2" for data cables should be assumed.
  - h. The non-metallic raceway shall be Panduit *Pan-way L Series*.
3. Bonding and Grounding
- a. All bonding conductors shall have green insulation and be copper. The minimum bonding conductor size shall be No. 6 AWG (TIA-607-B 6.3.2).
  - b. All Telecommunication Closets (TC) shall be equipped with a ground bus bar capable of terminating multiple #6 AWG ground cable conductors. All TC's ground bus bars shall be labeled TGB (Telecommunications Grounding Bulbar). TGB shall have a #6AWG cable conductor continuously run to the TMGB (Telecommunications Main Grounding Bulbar). The TMGB shall be bonded to the Main Building Grounding Electrode.

SPECIFICATION STANDARDS  
COLLEGE OF DUPAGE  
JUNE 30, 2020

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

**SECTION 27 00 03**  
**COMMUNICATIONS – TERMINATIONS**

PART 1 - GENERAL

1.1 COPPER TERMINATION HARDWARE AT TELECOMMUNICATIONS CLOSETS

- A. The A/E shall specify the following requirements:
1. At the Telecommunications Closet(s), all Copper Cables shall be organized in a fashion compliant with established cabling standards at the College. Where adding to an existing installation, termination components shall be integrated into the existing plan and consider equipment positioning and labeling.
  2. The Contractor shall cross-connect the first 1<sup>st</sup> (BLUE) pair of each new workstation cable to the riser backbone to link the telecommunications closet to the next closet in the hierarchy. The cross-connects wire of colors matching the color of the station cabling conductors (BLUE) shall be used for each cross-connect.
  3. Each 4- or 5-pair group shall be positioned on the terminating hardware in numerical order based on Pair Count or Telecommunications Outlet I.D. with the lowest I.D. Number or Pair first.
  4. Termination hardware shall be suitable for mounting on walls, in racks, or in distribution frames. Wall mounted cross-connect fields and frames shall be arranged to allow for easy expansion.
  5. The Contractor shall provide house count to Owner.

1.2 VOICE COPPER TERMINATION AT TC (BACKBONE & STATION)

- A. The A/E shall specify the following requirements:
1. At the Telecommunications Closet(s), each Voice "Backbone" Cable and 4-pair "Voice" Station cable shall be terminated on high-density horizontal blocks. Each horizontal row of the cross-connect block must be capable of terminating one (1) twenty-five pair binder group (Tie Cables) or six (6) four pair groups (Station Cables). Where station cables are installed on 110 blocks, the 25th position of each horizontal voice block shall remain vacant.
  2. Backbone and Station blocks shall be segregated clearly identifying their function.
  3. The blocks shall be designed to maintain the cable's pair twists as closely as possible to the point of mechanical termination. The installer shall ensure that the twists are preserved to within 1-inch if the termination.
  4. Blocks shall identify pair position by a color designation - Blue, Orange, Green, Brown and Slate (if applicable).
  5. The mechanical terminations shall:
    - a. Have the ability of terminating 22 - 26 AWG plastic insulated, solid and stranded copper conductors.
    - b. Provide a direct connection between the cable and jumper wires.

- c. Insert less than 0.02 dB of attenuation @ 100 MHz
6. Blocks shall be designed as to allow for cables to be fed from above or below.
7. The Voice Termination Hardware shall be Panduit PAN-Punch 110 Cross Connect System. Wall mounted hardware shall be equipped with legs and shall consist of 300- (P110BW300-X) Wiring Blocks configured with P110CB4-X (4-pair) or P110CB5-X (5-pair) Connecting Blocks for Station and Backbone cabling, respectively.

### 1.3 DATA PATCH PANEL

A. The A/E shall specify the following requirements:

1. Copper Data Station Cables shall each be terminated at their designated TC to eight-pin modular (e.g. RJ-45) jack Panduit patch panel. These modular jacks shall be positioned on rack mounted patch panels. The interface between horizontal data cabling and the modular panel shall be a 110-type block.
2. **Category 6 and 6A** performance per ANSI/TIA-568-D Series Standards must be maintained by the panel as a system and include this interface. All pair combinations must be considered, with the worst-case measurement being the basis for compliance.
3. Jacks are to be pinned per ANSI/TIA/EIA T568B with the pairing as follows:
  - a. Pair 1 - Pins 5&4
  - b. Pair 2 - Pins 1&2
  - c. Pair 3 - Pins 3&6
  - d. Pair 4 - Pins 7&8
4. Panels shall incorporate cable support and/or strain relief mechanisms to secure the horizontal cables at the termination block and to ensure that all manufacturers minimum bend radius specifications are adhered to.
5. When multiple floors are being serviced in a closet, each floor should have separate patch panels. Each patch panel should start with lowest sequential number starting with one per each floor, per each closet and then increment by one until each panel is full or no more drops available on that floor with its closest closet. If possible the patch panel for each floor should be installed on a separate rack.
6. Contractor shall discuss the use of 24 port patch panel with the owner before usage. Use of 24 port patch panel is discouraged.

### 1.4 COAXIAL PATCH PANEL

A. The A/E shall specify the following requirements:

1. All installed coaxial cables shall be terminated at both the TC and TO locations in a male "F"- Connector matched to the cable type. Connectors may be "Crimp" or "solder" type.
2. Each terminated coaxial cable shall be then mated with a female "F" Connector coupling which is, in turn, mounted on a rack-mountable panel.

3. Panels shall be of painted steel.
4. Coaxial Patch Panels shall be Semtron "JP" Series" or equivalent.

1.5 INTER-BUILDING CABLING (COPPER & FIBER)

A. The A/E shall specify the following requirements:

1. Fiber optic backbone shall be terminated as SC in accordance with approved materials list.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

**SECTION 27 00 04**  
**COMMUNICATIONS – INSTALLATION**

PART 1 - GENERAL

1.1 INSTALLATION

- A. The A/E shall specify the following requirements:
1. The installation shall follow recognized industry recommendations including those defined by the:
    - a. ANSI/TIA-568.0-D Generic Telecommunications Cabling for Customer Premises
    - b. ANSI/TIA-568.1-D Commercial Building Telecommunications Infrastructure Standard
    - c. ANSI/TIA-568.2-D Balanced Twisted-Pair Telecommunications Cabling and Components
    - d. ANSI/TIA-568.3-D Optical Fiber Cabling Components
    - e. ANSI/TIA-569-D Telecommunications Pathways and Spaces
    - f. ANSITIA-606-B Labeling Guidelines
    - g. ANSI/TIA-607-B Grounding
    - h. National Electrical Code (latest version)
    - i. BICSI TDM 2014 Manual
    - j. Applicable State and Local Codes
  2. Cable Pathways (Renovation Projects)
    - a. Renovation Projects: The Contractor is responsible for verifying the availability of riser access between floors. Where required, the contractor shall core new risers.
    - b. All Projects: All new riser holes shall be fitted with sleeves. All riser holes used for the installation, both new and existing, shall be firestopped upon completion of cable installation.
  3. Cable Installation
    - a. All cables, termination components and support hardware shall be furnished, tested, installed and wired by the Contractor.
    - b. During pulling operation an adequate number of workers shall be present to allow cable observation at all points of duct entry and exit as well as the feed cable and operate pulling machinery.
    - c. Cable pulling shall be done in accordance with cable manufacturer's recommendations and ANSI/IEEE C2 standards. Recommended pulling tensions shall not be exceeded.
    - d. Manufacturers minimum bend radius specifications shall followed in handling, installation and securing of all cables. Any cable bent or kinked to radius less than recommended dimension shall not be installed.
    - e. All cables shall be installed splice-free.

- f. Cable sheaths shall be protected from damage from sharp edges during and after installation.
- g. Where a cable passes over a sharp edge, a bushing or grommet shall be used to protect the cable.
- h. All cable shall be free of tension at both ends. In cases where the cable must bear some stress, Kellem grips may be used to spread the strain over a longer length of cable.
- i. All communication cabling to be plenum rated in CoD buildings.
- j. The contractor is responsible for verifying cabling requirements prior to construction to ensure that the installation is compliant with all code restrictions.
- k. All openings made to accommodate the installation of any cable shall be sleeved and fire stopped per prevailing code requirements upon completion of cable installation.
- l. At no time shall horizontal cabling share the same raceway or path with Backbone cabling.

## 1.2 HORIZONTAL CABLING STATION

### A. The A/E shall specify the following requirements:

- 1. All Cables and Termination hardware shall be technically compliant with and installed in accordance with ANSI/TIA-568-D Series Standards, ANSI/TIA-568.1-D (Standard for Commercial Building Wiring), ANSI/TIA-569-D, TSB 36 and TSB-40.
- 2. Where installed free-air, Station Cable shall run at right angles and be kept clear of other trades work. Cables shall be supported according to code utilizing Caddy type J-Hooks mountings and anchored to ceiling concrete, or structural steel beams. The Contractor shall not exceed the maximum cable limit of the cable supports. Cables shall not be attached to existing cabling, plumbing or steam piping, ductwork, ceiling supports or electrical or communications conduit. Supports should be spaced at a maximum 5-foot interval unless limited by building construction. Cable shall never be laid directly on the ceiling grid.
- 3. The maximum Station Cable length shall not exceed 295-feet (90-meters) in order to meet data communications performance specifications. This length is measured from the termination panel in the Telecommunications Closet to the Outlet and must include any slack required for the installation and termination. The Contractor is responsible for installing station cabling in a fashion as to avoid unnecessarily long runs. Any area that cannot be reached within the above constraints should be identified and reported to the College prior to installation. The College must approve any plan changes.
- 4. Slack cable shall be left above each Work Station to allow for repair and/or future office rearrangements without re-cabling. These "service loops" shall be secured at the last cable support (e.g. Caddy type J-Hook) before the cable leaves the ceiling and shall be coiled from 100% to 200% of the cable recommended minimum bend radius. Slack lengths are as follows:

- a. At any location where cables are installed into movable partition walls or modular furniture via a service Pole, approximately 6 feet of slack shall be left for each station cable under 250-feet in length.
5. To reduce or eliminate EMI, the following minimum distances shall be adhered to. In particular, regard must be paid to the routing of cable and avoidance of potentially disruptive sources of electrical noise such as motors and fluorescent lighting. The contractor shall notify the College if installation conditions inhibit these guidelines.
  - a. No less than (5) five inches from power lines of 2kVa.
  - b. No less than (30) thirty inches from high voltage lighting (including fluorescent lighting).
  - c. No less than (39) thirty-nine inches from power lines of 5kVa or greater.
  - d. No less than (39) thirty-nine inches from transformers and motors.
6. Care should be taken in the use of cable ties to secure and anchor the station cabling. Ties should not be over tightened as to compress the cable jacket. No sharp burrs should remain where excess length of the cable tie has been cut.

### 1.3 BACKBONE VOICE COPPER CABLE

- A. The A/E shall specify the following requirements:
  1. Backbone Voice Copper Cable shall be sized to provide a minimum of 2-pairs per outlet planned in the area plus 30% for growth.
  2. The outer metallic sheath of the Voice Backbone Cable shall be grounded to either (1) the Telecommunications Grounding Busbar (TGB) or (2) an existing backbone cable shield using a #6 AWG solid copper conductor (GREEN jacket). The grounding plan should be devised as to avoid the potential for ground loops through multiple ground points.

### 1.4 FIBER OPTIC CABLE

- A. The A/E shall specify the following requirements:
  1. At TC locations, provision shall be made to protect exposed fiber optic cables and secure the cable in the transition from cable tray, conduit and/or innerduct to the termination enclosure.
  2. A minimum of 5-meters (~ 15-feet) of slack Inter- and Intra-building Fiber Optic Cable shall be provided at each TC. This slack is exclusive of the length of fiber that is required to accommodate termination requirements and is intended to provide for cable repair and/or equipment relocation. The cable slack shall be stored in a suitable enclosure to protect the cable from damage.
  3. Where fiber optic cable is installed in innerduct, the innerduct(s) shall be secured in order to ensure their stability. This may be through fastening to the wall for the riser chase closet or through the installation of a small diameter rigid conduit. The only acceptable residual tension on the fiber optic cable is that due to its own weight.

## 1.5 TELECOMMUNICATIONS OUTLET

- A. The A/E shall specify the following requirements:
1. Telecommunications Outlets shall be positioned at a height matching existing services. Where no guide is available, outlets shall be mounted with the center of the outlet 18-inches above floor height unless instructed otherwise by the College.
  2. Positioning of wall-mounted telephone outlets should be in compliance with the provisions of the Americans with Disabilities Act (ADA).
  3. Outlets shall be securely mounted and level.
  4. All unused slots or positions in the Telecommunications Outlet shall be covered with blank inserts.
  5. At the Outlet location, subsurface routing of cables inside "fishable" walls is preferred. Where this cannot be accommodated, however, station cable shall be routed via surface raceway. Raceway should be of adequate dimensions to allow for installation of the cable in compliance with the manufacturers specification including bend radius, crush and tensile limits. Exposed surface raceway should be paintable and fit the decor of the space. Telecommunication Outlet installation on sheetrock walls shall be preceded by the installation of a bracket which mounts securely to the sheetrock (e.g. "Caddy" or "MPLS" Bracket). The Outlet Frame shall, in turn, be secured to the bracket. Telecommunications Outlets shall not be screwed directly to the sheetrock.

## 1.6 COPPER TERMINATION HARDWARE

- A. The A/E shall specify the following requirements:
1. Copper Termination Hardware at TC
    - a. At the Telecommunications Closets, all Data Cables shall be positioned on termination hardware in sequence of the Outlet I.D. starting with the lowest number. All four pairs, terminating on each modular jack shall appear on the Telecommunications Closet 110 blocks. Termination Hardware (Blocks and Patch Panels) Positioning and Layout must be reviewed and approved by the College prior to construction. The review does not exempt the Contractor from meeting any of the requirements stated in this document.
    - b. Except in the BIC Phone Room, Voice Termination Hardware shall be rack mounted if space allows, if not, shall be wall mounted on plywood board. The contractor shall neatly route and secure new cables via cable management hardware (e.g. D Rings and cable guides) from cable tray to the cable termination hardware. Old cable ties shall be removed and replaced with Velcro style cable wraps to maintain a tidy appearance. Cables shall be fed from below the Termination Hardware in a manner that will facilitate growth.
    - c. The Height of the Voice Termination Field shall not exceed 6-feet (72-inches) above floor level to facilitate cable maintenance. Backbone Cabling should be positioned to the Left; Station cabling to the Right.

- d. Where multiple floors are served from a single TC, the Termination Field for each floor shall be segregated from the others. Following the standard established at the site, each cross connect field for a given floor is positioned in a separate vertical column (Voice). Spare capacity should be considered in the design and be provided for each grouping.
- e. At the Voice Termination Blocks (all 110-type interface), the installer shall ensure that the twists in each Voice Cable pair are preserved to within 1.0-inch of the termination. The cable jacket shall be removed only to the extent required to make the termination.
- f. Where Voice Termination Hardware is wall mounted, Horizontal Troughs incorporating split plastic distribution rings shall be provided by the Contractor to accommodate routing of jumpers. Troughs shall be positioned at the top of each column of termination blocks and between each 300-pair wiring block. Troughs shall be Panduit P110JTW.
- g. The Contractor shall cross-connect the first 1<sup>st</sup> (BLUE) pair of each new workstation cable to the riser backbone to link the telecommunications closet to the next closet in the hierarchy. The cross-connects wire of colors matching the color of the station cabling conductors (BLUE) shall be used for each cross-connect.
- h. The Contractor shall provide house count to Owner

2. Data Patch Panel

- a. At the Data Patch Panel 110-type interface, the installer shall ensure that the twists in each Data Cable pair are preserved to within 0.5-inch of the termination. The cable jacket shall be removed only to the extent required to make the termination.

1.7 MISCELLANEOUS MATERIALS INSTALLATION

A. The A/E shall specify the following requirements:

1. Jumper Management Hardware

- a. Horizontal cable management hardware shall be positioned on the equipment racks to allow for an orderly routing of copper and fiber optic jumpers. At minimum, these Jumper Management Panels shall be positioned:
  - 1) Horizontal management shall be placed above and below each forty-eight (48) port Data Patch Panels.
  - 2) Horizontal management shall be placed above and below each fiber Optic HDC (Station fiber).
  - 3) Horizontal management shall be placed above and below each pair (2) of Fiber Optic Termination Panels (Backbone).

2. Surface Raceway

- a. Where Outlets are installed in areas where the walls cannot be fished, the Station Cabling serving these outlets shall be covered with raceways. No

exposed wire shall be permitted within offices, laboratories, conference rooms, classrooms, etc.

- b. The base and cover of the raceway shall be of PVC have a screw applied base and have a snap on cover. Both the base and cover shall be manufactured of rigid natural PVC compounds. The raceway must be UL Listed and exhibit nonflammable self-extinguishing characteristics.
- c. The raceway shall originate from a surface mounted Outlet box, have a screw-applied base and terminate above the ceiling. A fitting designed for the raceway shall be used to conceal the ceiling penetration.
- d. Surface mounting of an outlet intended for flush-mount installation shall be preceded by the installation of a Surface Box ("Back-box") onto which the outlet frame is mounted.
- e. The contractor shall be responsible for all penetrations required to accommodate the raceway in making any transitions between office areas and hallways or other common areas through which the raceway may be routed. All cut molding sections shall be patched and painted upon completion of the raceway installation.
- f. All cuts and penetrations must be patched and painted. Upon completion of installation, raceways must be cleaned of all fingerprints, soil, etc.

### 3. Firestop Systems

- a. All penetrations through fire rated building structures, walls, and floors; shall be sealed with an appropriate Firestop system. The requirements applies-to through penetrations (complete penetration) and membrane penetrations (through one side of a hollow fire rated structure). Any penetrating items i.e., riser slots and sleeves, cables, conduit, cable tray, and raceways, etc. shall be properly firestopped. All penetrations shall be made with metallic listed sleeves with end bushings and firestopped on both sides, around sleeves and at both ends of sleeves once cables are pulled. Interior fire proofing material must be removable. Size of sleeves must provide spare capacity for future cables.
- b. All Firestop systems shall be installed in accordance with the manufacture's recommendations and shall be completely installed and available for inspection by the College.

### 4. Bonding, Grounding and Electrical Protection

- a. All Telecommunications Equipment and raceways shall be properly bonded and grounded in accordance with ANSI/TIA-607-C the NFPA 70 (National Electrical Code), and all other applicable codes and regulations.
- b. The major components of the telecommunications grounding and bonding infrastructure are as follows:
  - 1) The bonding conductor for telecommunications
  - 2) The Telecommunications Main Grounding Busbar (TMGB)
  - 3) The Telecommunications Grounding Busbar (TGB)
  - 4) The Telecommunications Bonding Backbone (TBB)
  - 5) The Telecommunications Bonding Backbone Interconnecting Bonding Conductor (TBBIBC). The conductors used to bond the components to the TMGB &the TGB's

- c. All bonding conductors and connectors shall be listed for the purpose intended and approved by a Nationally Recognized Testing Laboratory (NRTL).
- d. Route ground conductors to provide the shortest, most direct path from point to point.
- e. Splices in bonding or grounding conductors are not allowed. The minimum bend radius of the conductors shall be eight inches (8").
- f. The TMGB and the TGB's shall be electro-tin plated and insulated from the supporting structure by at least two inches.
- g. If an electrical sub-panel resides in a Telecommunications Room, that panel must have a #6 AWG bonding conductor from the TGB to electrical panel ground bar.
- h. All Telecommunication Closets (TC) shall be equipped with a ground bus bar capable of terminating multiple #6 AWG ground cable conductors. All TC's ground bus bars shall be labeled TGB (Telecommunications Grounding Bulbar). TGB shall have a #6AWG cable conductor continuously run to the TMGB (Telecommunications Main Grounding Bulbar). This size is inadequate based on this Standards requirement. Sizes increase with distance from TMGB. The TMGB shall be bonded to the Main Building Grounding Electrode.
- i. All racks, metallic backboards, cable sheaths, metallic strength members, splice cases, cable trays, ladder racks, etc. entering or residing in all Telecommunications Rooms. Shall be grounded to the respective TGM or TMGB using a minimum #6 AWG stranded copper bonding conductor and 2 hole compression connectors. Provide a ground bar at the base of each rack for equipment connections.
- j. All incoming outdoor cables shall be terminated on the appropriate sized protector, and all protectors shall be attached to the TMGB via a #6 AWG stranded conductor.
- k. All TGB shall be install on ¾" fire rated plywood backboard. Apply plaque on backboard to read "DO NOT RMEOVE GROUND BAR OR ANY GROUND WIRE WITHOUT GETTING PRIOR APPROVAL FROM COD INFORMATION TECHNOLOGY DEPARTMENT"
- l. All ground cables shall be labeled with the proper FROM – TO (Origination Point to Destination Point) designation.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

**SECTION 27 00 05  
COMMUNICATIONS – LABELING**

PART 1 - GENERAL

1.1 LABELING

A. The A/E shall specify the following requirements:

1. The Telecommunications Administration System shall meet or exceed ANSI/TIA-606-B standards.
2. All Telecommunications Outlets, Data Patch Panel, Voice Termination Blocks AND AT EACH END OF CABLES shall be clearly labeled using a Code identifying each Information Outlet location as unique throughout the COD Campus. The font type shall be similar to **Arial, Bold faced with font size of 14**. All alternate font type and size must be approved by the owner. This code, which will identify cabling and terminations at both IDF and Media Outlet locations, shall be as follows:
  - a. BB-XCC-F-###A
    - 1) BB= the designation to identify the specific building
    - 2) XCC = the Telecommunications Closet (TC) serving that jack. The TC is designated by Floor (XX) and their geographic location on that floor (CC) (e.g. Northwest, Southeast, etc.).
    - 3) F = the Floor on which the jack is located.
    - 4) ### = a sequential number assigned to that jack.
    - 5) A = Alpha designation used ONLY if multiple jacks are housed in the same Outlet assembly.
    - 6) For example, "IC-2NW-3-123" designates the 123rd jack on the 3rd Floor served from the IDF in the Northwest area of the 2nd Floor of the IC building. If multiple Data cables would be contained in the outlet, they would be identified as "A", "B", "C", and so on.
3. This numbering sequence plus a two (2) character Building Designator shall be utilized in the Cable Management System for identification of station cabling. Building designations are as follows:
  - a. Arts Center (MAC)= AR
  - b. Instructional Center (BIC) = IC
  - c. Physical Education (PEC) = PE
  - d. Seaton Computing Center (SCC) = SC
  - e. Student Resource Center (SRC) = SR
  - f. Student Services Center (SSC) = SS
  - g. WDCB Tower = JJ
  - h. Westmont Center = WC
  - i. Naperville Center = NC
  - j. Addison = AD
  - k. Innovation Dupage = ID

- l. Carol Stream Community Education Center = CC
  - m. Institutional Resource Center (IRC) = AA
  - n. Technical Education Center (TEC) = TE
  - o. Health and Science Center (HSC) = HS
  - p. Culinary and Hospitality Center (CHC) = CH
  - q. Homeland Security Education Center (HEC) = HE
  - r. Homeland Training Center (HTC) = HT
4. Where adding to an existing installation, cable identification numbering must be integrated into the established plan and must be approved by the Owner.
5. ALL labeling shall be machine generated (Panduit) in black ink on white background tags and be permanent. NO HAND WRITTEN LABELS SHALL BE ALLOWED.
6. Cables
- a. ALL Cables shall be identified AT BOTH ENDS using a self-laminating tag wrapped around the cable (e.g. not a "flag"). The Contractor shall use labeler. Cable labels shall indicate cable designation and destination. In Station cables, for example, this designation shall be the Telecommunications Outlet identification.
7. Data Outlets
- a. Data Outlets are to be labeled (1) on the cover of the assembly, (2) on the base of the assembly (if applicable) and (3) on each cable terminated at that location.
  - b. Where multiple cables of a given type (e.g. "Data") are contained in a single outlet, the alpha-designator ("A", "B", "C", and so on) those jack positions shall be so labeled.
8. Data Patch Panels
- a. Data Patch panels shall be clearly labeled as to the destination and position of each cable terminated on that panel. Cables shall be positioned in sequence of Outlet I.D.
  - b. The TC designator may be omitted on each jack position provided that the panel itself includes the TC designator.
  - c. Station cables shall be labeled within 4-inches of the cable choke at Data Patch Panels.
9. Voice Termination Block
- a. Each horizontal row (in pairs) of the Voice Termination Block shall be labeled with "Designation Strips" which identify the destination and position of each cable terminated on that block.
  - b. Designation Strips shall be color coded to indicate the block's application. Color-coding shall be as follows:
    - 1) Inter-Building Cable (e.g. IC-PE) = Brown
    - 2) Intra-Building Cable (BDF-IDF) = White
    - 3) Station Cable = Blue

- c. Blocks on which "Station" Cabling is terminated will be labeled as to identify Telecommunications Outlet I.D.s. Voice termination blocks on which "Backbone" or "Tie" Cabling is terminated will be labeled to identify Pair Count are identified (e.g. 1-25, 26-50, etc.). Assignment of Pair Count(s) shall consider the existing count and must be approved by Owner.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

**SECTION 27 00 06**  
**COMMUNICATIONS – TESTING**

PART 1 - GENERAL

1.1 TESTING

A. The A/E shall specify the following requirements:

1. Upon completion of installation work, the contractor shall visually inspect all cabling and terminations to insure that they are complete and conform to the requirements defined herein.
2. The contractor shall provide to the College a written certification that this inspection has been made.
3. All cable sub-systems (e.g. Inter-building, Intra-Building and Station) must be tested independently. Testing of these sub-systems cannot be combined (e.g. through interconnection).
4. Contractor shall conduct acceptance testing according to a schedule coordinated with the College. Representatives of the College may be in attendance to witness the test procedures. The contractor shall offer adequate advance notice to the College as to allow for such participation.
5. The Contractor is responsible for supplying all test equipment and personnel to conduct acceptance test.
6. If any link is found to be outside the specification defined herein, that cable and the associated terminations (if applicable) shall be replaced at the expense of the contractor. The applicable tests shall then be repeated.
7. All backbone fiber must be tested bidirectional using OTDR. OTDR graphs and lengths of run must be included. Results shall be provided to Owner.
8. Voice Backbone Testing
  - a. All testing shall include the installed termination hardware as part of the test path. Length of the run must be given on test results. Backbone cables shall be tested between TC's and include termination blocks.
  - b. All cable pairs shall be verified for pair validity, continuity (opens/shorts), and polarity (tip/ring). Split or miss-positioned pairs must be identified and corrected.
  - c. Inter- and Intra-Building copper cables may have a maximum failure rate of 3% based on total pair count. All bad pairs must be identified and documented.
9. Data UTP Station Cable Testing
  - a. **Cat 6/6A** Installation: field test requirements upon completion of the installation.
    - 1) Every cabling link in the installation shall be tested in accordance with the Telecommunications Industry Association (TIA) standard ANSI/TIA/EIA-568.1-D, 568.2-D and ANSI/TIA-1152 (most current version. Length of the run must be given on test results.

- b. Optional Requirements:
    - 1) A representative of the end-user may select a random sample of 5% of the installed links. The Owner shall test these randomly selected links and the results shall be stored.
  - c. Field Test Specifications to the data provided by the installation contractor. If more than 2% of the sample results differ in terms of the pass/fail determination, the installation contractor under supervision of the end-user representative shall repeat 100% testing and the cost shall be borne by the installation contractor.
10. Optical Fiber and Air Blown Fiber Testing
- a. All fiber testing shall be performed on all fibers in the completed end to end system.
  - b. Testing shall consist of a bi-directional end to end OTDR trace performed or a bi-directional end to end power meter test performed. Reference ANSI/TIA-568.3-D Optical Fiber Cabling and Components Standard and ANSI/TIA-526-14 and 526-7 for multimode and single mode fiber respectively.
  - c. The system loss measurements shall be provided at 850 and 1310 nanometers for multimode fibers and 1310 and 1550 for single mode fibers.
  - d. Pre-installation cable testing
    - 1) The Contractor shall test all light guide cable prior to the installation of the cable.
    - 2) The Contractor shall assume all liability for the replacement of the cable should it be found defective at a later date.
  - e. Loss Budget
    - 1) Fiber links shall have a maximum loss of:
      - a) Allowable cable loss per km)(km of fiber in link) + (.4dB)(number of connectors) = maximum allowable loss
      - b) A mated connector to connector interface is defined as a single connector.
      - c) Loss numbers for the installed link shall be calculated by taking the sum of the bi-directional measurements and dividing that sum by two.
      - d) Any link not meeting the requirements of the standard shall be brought into compliance by the contractor, at no charge to Owner.
      - e) Documentation shall be provided in both hard copy and electronic, in a format as agreed by the Owner.
  - f. Air Blown Fiber Tube Cable Tests (Refer to Master Format Division 1-33-26)

- 1) Pressure Tests and Obstruction Tests shall be submitted to the Owner's Representative on appropriate forms. Forms are included in certified contractors manual. The form must be completed, signed and turned over to the Owner.
- 2) Sumitomo Electric - Bundled Fiber Optics Testing shall be submitted to the engineer and copies to the Owner's Representative. Submit manufacturer's test reports for each reel of fiber bundle provided prior to installation.
- 3) Submit Contractors on-reel test results at 850 and 1300 nm for multi-mode and 1310 and 1550nm for Single-mode.
- 4) Submit Contractor's test results after bundled fiber terminations are installed.
- 5) Submit soft copy bundled fiber optic cable OTDR test results on digital format, email or cloud drive. The test results will need to include all results including the fiber map (graph). Provide proprietary software if required to enable viewing of the test results.

#### 11. Station Coaxial Cable Testing

- a. Station Coaxial Cable Testing shall be tested to verify cable length and to test for cable faults and breaks. A step-function high resolution Time Domain Reflectometer shall be employed for this test. The results shall be automatically plotted on an X-Y plotter with a Y-axis voltage reflection coefficient resolution of .001 per division. The X-axis will resolve down to 1" of cable. The TDR will sweep the cable at a rate no greater than 50' per second, or such lower rate as necessary to resolve cable faults to the 1" and .001 VRC level.
- b. The cables shall be terminated with its characteristic impedance. Where required, an appropriate matching pad shall be used to match the analyzer to the cable.
- c. A Cable shall be rejected if any single fault is observed of amplitude greater than 0.003 voltage reflection coefficient. Characteristic impedance shall also be measured at 5% of nominal value.
- d. Cyclic faults (such as cable reel stress and die draw-down) shall be limited to a voltage reflection coefficient of 0.005.

#### 1.2 TEST RESULT DOCUMENTATION AND FOLLOW UP

##### A. The A/E shall specify the following requirements:

1. In system documentation, contractor shall provide test results and describe the conduct of the tests. Test documentation shall include a record of test frequencies or wavelengths, cable type, conductor pair and cable I.D. (e.g. Outlet I.D.), measurement direction, test equipment type, model and serial number, date, reference setup, and crewmember name(s) and the length of the run. Where applicable, printouts generated for each cable by the wire test instrument (e.g. Latest Fluke tester or equivalent for copper and fiber testing) shall be submitted as part of the documentation package.
2. At the request of the Owner, the contractor shall provide copies of original test results.

3. The Owner may request that a 10% random field re-test be conducted on the cable system - at no additional cost - to verify documented findings. If findings contradict the documentation submitted by the Contractor, additional testing can be requested to the extent determined necessary by the Owner, including a 100% re-test. This re-test shall be at no additional cost to the Owner.
4. Should it be determined by the Owner or A/E that the materials or any portion thereof furnished and installed fail to comply with the specifications defined herein, these materials and the related installation shall be rejected and replaced by the Contractor. All work disturbed by changes necessitated in consequence of said defects or imperfections shall be made good at the Contractor's expense. All replaced components shall be re-tested.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

**SECTION 27 00 07**  
**COMMUNICATIONS DOCUMENTATION AND CLOSEOUT**

PART 1 - GENERAL

1.1 DESCRIPTION

- A. The A/E shall specify the following requirements:
1. Upon completion of cable plant installation, the contractor shall provide a complete set of cable records documentation including:
    - a. Test Data as defined above
    - b. As-Built Drawings (where applicable)
    - c. Input Data for Facilities Management System
  2. As built drawings
    - a. See also Division 01 of the Design and Engineering Criteria
    - b. Contractor shall provide accurate as-built construction drawings.
    - c. The drawing package shall include one or more of the following:
      - 1) Floor plans showing (1) the location of all Telecommunications Outlets as installed and (2) paths by which all cables are routed.
      - 2) Cable lengths as obtained through review of sheath footage markings.
      - 3) Termination field, equipment rack and frame layouts.
    - d. Numbering and drawing conventions used shall be consistent throughout all documentation provided and comply with established standards at the College. Telecommunications Outlet locations shall be identified by their sequential number as defined elsewhere in this document and include the Building Designator.
    - e. All documentation, including hard copy and electronic forms (if applicable) shall become the property of the Owner.
    - f. Documentation shall be submitted within ten (10) working days of the completion of testing.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SPECIFICATION STANDARDS  
COLLEGE OF DUPAGE  
April 18, 2022 - REVISED

**SECTION 27 00 08  
COMMUNICATIONS – ACCEPTABLE MATERIAL LIST**

PART 1 - GENERAL

1.1 ACCEPTABLE MATERIAL LIST

A. The following products are acceptable to the Owner. Any variation shall be subject to review and acceptance by Owner.

B.

Mfgr	Mfgr PN	Description
Panduit	PUP6004BU-WLPZ	The TX6000™ Enhanced Category 6 U/UTP Copper Cable is constructed of 23 AWG conductors with FEP/polyolefin insulation. The copper conductors are twisted in pairs, separated by a cross-divider and covered by a low smoke, flame-retardant (CMP) blue jacket supplied 305m (1000 ft.) in a reel in a carton. The cable has been tested as part of the TX6000™ Enhanced Copper Cabling System and exceeds the ANSI/TIA-568.2-D and ISO 11801 Class E electrical channel requirements with guaranteed headroom.
Panduit	PUP6XHD04BU-G	The TX6A™ Enhanced Category 6A UTP Copper cable is constructed of 23 AWG conductors with FEP insulation. The copper conductors are twisted in pairs, separated by a cross-divider and covered by a low smoke, flame-retardant (CMP) blue jacket supplied 305m (1000 ft.) in a reel in a carton. Certified component performance up to 100 meters and exceeds the ANSI/TIA-568.2-D Category 6A and IEC 61156-5 Category 6A standards for supporting 10GBASE-T transmission over twisted-pair cabling systems
Panduit	CFPL2EIY	CLASSIC FACEPLATE W/LABEL
Panduit	CFPL4EIY	CLASSIC FACEPLATE W/LABEL
Panduit	CFPL6EIY	CLASSIC FACEPLATE W/LABEL
Panduit	CF1062EIY	106 FRAME - DATA - 2 PORT
Panduit	CF1064EIY	MINI-COM 106 FRAME
Panduit	JB1DEI-A	1 PCS DEEP JUNCTION BOX**
Panduit	CFFPL4BL	FURN. FACEPLATE 4 POS. W/LABEL&LABEL COV

SPECIFICATION STANDARDS  
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Mfgr	Mfgr PN	Description
Panduit	CJ688TGBL	MINICOM CAT6 JACK MODULE (Black)
Panduit	CJ6X88TGBL	MINICOM CAT6A JACK MODULE (Black)
Panduit	P110BW100-X	The 100 Pair 110 Punchdown Base With Legs is for use with Pan-Punch® 110-style Bases, Connectors and Systems.
Panduit	P110CB4-XY	110 CONNECTING BLOCK 4PR
Panduit	P110CB5-XY	110 CONNECTING BLOCK 5PR
Panduit	P110JTW-X	GIGA PUNCH JUMPER TROUGH
Panduit	DP48688TGY	CAT6 Punchdown Patch Panel, 48 Ports, 2RU, BL
Panduit	DP24688TGY	CAT6 Punchdown Patch Panel, 24 Ports, 1RU, BL
Panduit	DP486X88TGY	CAT6A Punchdown Patch Panel, 48 Ports, 2RU, BL
Panduit	DP246X88TGY	CAT6A Punchdown Patch Panel, 24 Ports, 1RU, BL
Panduit	CPPL48WBLY	Mini-Com Patch Panel w/labels, 48 Port, 2RU, BL
Panduit	CMPHH2	PANNET 2 RU HORZ. 3X5" D-RINGS FRONT
Panduit	R2P6S	Two Post Rack
Panduit	PR2VD08	Dual Sided Vertical Cable Management
Panduit	CMPH1	19" Manager, Front and Rear, 1 RU
Panduit	CMPH2	19" Manager, Front and Rear, 2 RU
Panduit	HLT2I-X0	TAK-TY LOOP TIE
Panduit	FRE1UBL	RACKMOUNT FIBER ENCLOSURE 1 RU
Panduit	FRE2UBL	RACKMOUNT FIBER ENCLOSURE 2 RU
Panduit	FRE4UBL	RACKMOUNT FIBER ENCLOSURE 3 RU
Panduit	FAPB	FIBER ADAPTER PANELS
Panduit	LCFAP6WBUDL CZ	Opticom Fiber Adapter Panel w/ 6 LC Duplex, Blue
Work Station Hardware		
Panduit	CFPL2EIY	Single gang, vertical faceplate accepts two <i>Mini-Com</i> ® Modules
Panduit	CFPL4EIY	Single gang, vertical faceplate accepts four <i>Mini-Com</i> ® Modules
Panduit	CFPL6EIY	Single gang, vertical faceplate accepts six <i>Mini-Com</i> ® Modules

SPECIFICATION STANDARDS  
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Mfgr	Mfgr PN	Description
Panduit	CFPE10EI-2GY	The Mini-Com® Executive Series Faceplate accepts ten Mini-Com Module. The faceplate is double gang and mounts to a NEMA standard double gang opening. The faceplate includes a raised rail design on the outer edge of the frame, has a label pocket for easy identification, and is electric ivory.
Panduit	JB1EI-A	Single gang one-piece outlet box with adhesive backing
Panduit	KWPK6	Stainless steel phone plate with Cat 6 Keystone Jack Module
Panduit	CFFP4BL	Faceplate snaps into industry standard knockouts found on modular furniture
Panduit	CMBEI-X	1-position, reserves space for future use

SPECIFICATION STANDARDS  
COLLEGE OF DUPAGE  
April 18, 2022 - REVISED

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION

SPECIFICATION STANDARDS  
COLLEGE OF DUPAGE  
JUNE 30, 2020

**ATTACHMENT E**

**NO BID FORM**

**College of DuPage**  
**NO-BID/RFP RESPONSE**  
2026-R0020  
Digital Kiosk Display System

In the event that your organization chooses not to submit a proposal for this solicitation, the College of DuPage Procurement Services Department is interested in the reasons why vendors/consultants have chosen not to submit a bid or proposal response in order to better serve the taxpayers of the College of DuPage. Please indicate your reason(s) by checking all applicable items below and return this form to the email address shown below.

- Could not meet the specifications
- Items or materials requested not manufactured by us or not available to our company
- Insurance requirements too restricting
- Bond requirements too restricting
- Scope of services not clearly understood or applicable (too vague, too rigid, etc.)
- Project not suited to our organization
- Quantities too small
- Insufficient time allowed for preparation of bid/proposal response
- Other (please specify):

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Vendor Name: \_\_\_\_\_

Contact Person: \_\_\_\_\_

Telephone: \_\_\_\_\_

Email: \_\_\_\_\_

If you are not bidding on this solicitation, please email this form to:  
College of DuPage Procurement Services  
Email: [purchasing@cod.edu](mailto:purchasing@cod.edu)