Project Manual

100% Construction Documents

Elevator Upgrades, Various Locations Grand Rapids Public Schools

Kent County, Michigan

25-0264

November 2025

c2ae

50 Louis St. NW
Suite 200 Grand
Rapids, MI 49503

COPYRIGHT STATEMENT

GRAND RAPIDS PUBLIC SCHOOLS

Elevator Upgrades, Various Locations

11/5/2025

GRPS Facilities & Operations
900 Union Avenue NE
Grand Rapids, MI 49503

Telephone (616) 819-3010

TABLE OF CONTENTS

INSTRUCTIONS TO BIDDERS

PROJECT:	**Elevator Upgrades, Various Location**
OWNER:	Grand Rapids Public Schools
Elevator Consultant:	Pete Long 517-604-8193 plong@vdassoc.com
BID DATE:	12/18/2025
BID TIME:	11:00am

LOCATION FOR RECEIVING BIDS: Grand Rapids Public Schools
Service Building
900 Union Avenue NE
Grand Rapids, MI 49503

SUMMARY OF WORK

Scope of Work: District Wide Elevator Upgrades

OBTAINING BID DOCUMENTS

Bid Documents may be obtained after 1:00 p.m. on 11/10/2025 on the GRPS website https://grps.org/departments/business-services/

EXAMINATION

Plans may be examined at the Plan Room noted.

Builders Exchange
678 Front Avenue NW Suite 330
Grand Rapids, MI 49546
(616) 949-8650
e-mail: projects@grbx.com

PRE-BID CONFERENCE

A pre-bid conference will be held at: Union High School. Enter building at door

"A". Meeting will be held in the Media Center.

ADDRESS:	Union School, 1800 Tremont Blvd. NW
DATE:	11/17/2025
TIME:	10:00am

Attendance at the pre-bid conference is ☒ MANDATORY ☐ NOT MANDATORY for those firms wishing to be considered for contract award.

CONTRACT DOCUMENTS

The Contract Documents, alone, detail the requirements of the project, and bids shall be based only on information presented there. Information obtained from others shall not affect the risks or obligations assumed the Constructor or relieve the Constructor from fulfilling any part of the contract.

SUBSTITUTIONS DURING THE BIDDING PERIOD

Unless otherwise noted, manufacturers and products not named in the specifications will be given consideration during the bidding period. Written approval from the Design Professional shall be obtained before a bidder uses substitute materials or manufacturers in its bid estimate. Bidders who base their bids on substitute materials or manufacturers without the Design Professional's written approval do so at their own risk.

Requests for substitutions during the bidding period must be received at least ten calendar days prior to bid date and may be emailed to the Design Professional at the email address noted above. The burden of showing the requested product is an adequate substitution for the specified product rests with the Bidder.

Substitution requests shall be reviewed by the Design Professional for quality and function, only. The Design Professional's approval of a substitution shall be communicated to all plan holders in an addendum. Bidders shall be responsible for any unforeseen costs that result from using an approved substitution.

TIME FOR COMPLETION

The Constructor shall be 100% complete with the work on or before 8/1/2028

See bid documents, and priority listing with details on each GRPS site.

Conditions precedent to establishing final completion include:

A. Final inspection and approval by all relevant agencies.
B. All punchlist items having been completed and accepted by Owner.
C. Manufacturer inspection, approval, and warranties.
D. Issuance of a Certificate of Occupancy, if necessary.

RESPONSIBILITY OF BIDDERS

Bidders shall study the bid documents and visit the site to satisfy themselves of all conditions before submitting a bid. It is incumbent upon bidders to reconcile any ambiguities, errors or omissions in the documents discovered during the bidding period.

It is the responsibility of each bidder to take those steps necessary to satisfy itself of the physical conditions under which the Work will be performed and the condition of the existing facilities, including those which may not be a part of the Work but could be affected by the performance of the Work, and (b) account for all general, local and prevailing conditions at or near the site that may in any manner affect the cost, schedule, progress or performance of the Work.

Questions about the bid documents, the intent of the design, or errors or omissions discovered in the documents shall be formally submitted to the Design Professional by email at the address given above not less than 10 calendar days prior to the date set for receipt of bids.

INSPECTION OF PREMISES

Most GRPS buildings are occupied Monday through Friday from 7:30 AM until 4:00 PM. Bidders may visit occupied buildings during those hours.

To maintain a safe and orderly environment, call Ronnie Sluiter at Facilities & Operations at (616) 819-3010, prior to visiting a secured site, to arrange for entry and to receive custodial assistance.

COST CONSIDERATIONS

Unless specifically noted otherwise, bids shall include the following costs:

1. Permits, fees, notices, etc. for any federal, state or local government agency having jurisdiction over the project.
2. Inspections by building authorities and other government agencies.
3. Maintaining an environment in compliance with all rules, statutes, regulations and codes covering an occupied school facility.
4. All equipment required to fully and safely complete the work. No equipment shall be furnished by or borrowed from Owner.
5. Unless otherwise noted, during Constructor's performance of the Work, Owner will continue to occupy the building. The Constructor shall provide labor, materials and equipment to construct, maintain and remove all temporary enclosures needed to comply with State of Michigan Fire Code and/or to prevent dust, noise, odors and debris in a construction area from entering the remainder of the building.
6. During the school day, construction operations shall be limited to those methods and procedures that do not adversely affect the environment of Owner's occupied space, including noise, odors, dust, lighting hazards and other undesirable effects and conditions.
7. Prevailing Wages ☐ DO, ☒ DO NOT apply to this Project.

BID SECURITY

Bid security shall be made payable to "Grand Rapids Public Schools" in the form of a certified or cashier's check or money order drawn upon a bank insured by an agency of the Federal government, or an executed Bid Bond on ConsensusDocs form 262, AIA form A310, or a substantially similar form in the amount of 5% of the bid. A bid bond shall be executed with a surety authorized to do business in the State. A certified or cashier's check or money order submitted as bid security shall be held by the Owner until a contract has been executed.

BIDDING PROCEDURES

1. Bids shall be submitted on the Bid Form included with this document. All blank spaces shall be printed in ink or typewritten. The Bid Form must be fully completed, signed and sealed. In the event of a discrepancy between the words and figures entered on the Bid Form, the written word shall take precedence over the numerical figures.

2. Three originals of the bid shall be submitted in a sealed, opaque envelope bearing the following information clearly marked on the outside:

   Grand Rapids Public Schools
   Attn: Mr. Marc Bennett, Director of Projects & Maintenance
   900 Union Avenue NE
   Grand Rapids, MI 49503

   Sealed bid for: Elevator Upgrades, Various Locations

   The envelope shall also bear, on the outside, the name of the bidding firm, its address and telephone number.

3. Include bid security in the amount identified above.

4. Include a completed and signed Statement of Familial Relationship or the bid may be disqualified.

5. Include a completed and signed Iran Business Relationship Affidavit or the bid may be disqualified.

6. Include completed DTMB documents: Demographics, Statistics and Certification and Certification of a Michigan-based business. These forms are collected for statistical purposes and will not affect award of the contract.

7. Include a completed and signed Debarment and Suspension Certification.

8. Bids will be received until the time and date noted above at the location noted above, unless modified by Addendum, at which time all bids will be opened and read aloud.

9. Bids received after the date and time set for receipt of bids will not be considered or accepted.

10. Bids transmitted by fax, telephone, or electronic mail will not be accepted.

EVALUATION AND AWARD

1. The Owner may waive informalities or minor defects in a bid, may reject any and all bids, or may award to any bidder, regardless of bid amount, when the Owner deems it is in its best interest.

2. Any bid that is incomplete, obscure, or irregular may be rejected. Bids having erasures or corrections may be rejected. Bids that omit a price on any item in the Bid Form may be rejected. A bid for which unit prices are omitted or for which unit prices are, in the sole opinion of GRPS, unbalanced may be rejected. Any bid accompanied by insufficient or unacceptable bid surety may be rejected. A conditional or qualified bid may be rejected.

3. The Owner reserves the right to reject all bids if all bids exceed its budget for contract award.

4. In accordance with GRPS Policy 3670, a bid discount will be applied to bids from bidders who qualify as a local vendor. Non-local bidders can obtain a bid discount based on the percentage of the bid price that will be awarded to local subcontractors. Certification of the amount to be subcontracted will be required prior to award. GRPS Policy 3670 is attached to the Bid Form.

5. Upon approval of contract award by the GRPS Board of Education, the Owner will issue a Notice of Award to that bidder making Grand Rapids Public Schools the most advantageous offer. Payment and performance bonds will be required if the award amount is $50,000 or more. Once Notice of Award has been issued, the prospective contractor shall obtain and submit payment and performance bonds, if necessary, insurance in accordance with the terms of the construction contract and any additional documentation requested by the Owner.

6. Upon receipt of acceptable payment and performance bonds, if necessary, an insurance certificate showing coverages and limits in accordance with the contract, and any additional documentation requested by the Owner, a contract will be forwarded for signature.

INSTRUCTIONS SUBSEQUENT TO AWARD

1. After executing a contract, the Owner will issue a Notice to Proceed identifying the agreed upon start date. No work shall be performed prior to the start date in the Notice to Proceed.

2. If requested, the Constructor will be furnished, free of charge, up to 3 copies of drawings and specifications, with Amendments current at time of award. Additional copies will be furnished, at cost, payable to the Owner.

BID PROPOSAL CHECKLIST

2025 District Wide Elevator Upgrades

GRAND RAPIDS PUBLIC SCHOOLS
KENT COUNTY, MICHIGAN

This checklist is for the bidder's convenience and Client use. It should be reviewed thoroughly before submitting a bid.

- ☐ Bid submitted on time.
- ☐ Bid surety properly completed and enclosed.
- ☐ Addenda, if applicable, has been acknowledged and any revisions to the proposal completed.
- ☐ DTMB Demographics, Statistics and Certification (If Applicable)
- ☐ DTMB Certification of a Michigan-Based Business (If Applicable)
- ☐ Statement of Familial Relationship
- ☐ Affidavit of Compliance – Iran Sanctions Act
- ☐ Debarment and Suspension Certification
- ☐ Non-Collusive Affidavit
- ☐ Criminal Background Affidavit
- ☐ Bid Form legally **Signed in ink**
- ☐ All unit prices are completed in ink
- ☐ Exhibits "A" & "B"
- ☐ Bid and Contract review comments. Submitted by contractor with bid
- ☐ Proposed project installation schedule by Contractor

GRPS Policy 3670 – Local Construction Contracting

The District provides a preference (bid discount) in construction contracts from local vendors, providing the quality and service are commensurate with the requirements set forth by the District as to satisfy the demands of the bid or proposal. Bids, or proposals when bids are not required, shall be accepted from non-local vendors in order to maintain a fair market price.

In determining the qualification for a Local Purchasing Preference for purposes of this policy, vendors must have obtained the Certification of a Michigan Based Business as determined by the Michigan Department of Technology, Management and Budget as well as meet one of the following criteria:

a. For at least the last six months had its primary business operations located within the municipality boundaries of the City of Grand Rapids, Michigan (Grand Rapids).

b. Be certified by the City of Grand Rapids, as a Micro-Local Business Enterprise and have its primary business operations within the municipality boundaries of the City of Grand Rapids.

A successful recipient of a contract and/or purchase order which has received a Local Purchasing Preference may be required to present proof of its status as a Michigan Based Business and documentation of its location within the City of Grand Rapids at any time upon request from an authorized District official. Failure to provide the requested information or failure to maintain business operations with the city of Grand Rapids for the duration of the contract will make the contract voidable at the District's discretion, and will result in disqualification from future consideration of a Local Purchasing Preference for a period of five years unless excused by the Superintendent or Designee.

Preference will be provided on the following basis:

a. Constructor Participation: Grand Rapids Public Schools will provide up to a 5% bid discount to prime contractors and/or construction managers who satisfy the criteria set forth for consideration as a Local Vendor.

b. Subcontractor Participation: Construction bids for non-local vendors may be discounted when a bidder on a Grand Rapids Public Schools' project voluntarily subcontracts with businesses meeting Local Vendor Criteria. Prime contractors and/or construction managers must submit affidavit(s) verifying Local Vendor subcontractor participation.

   Prime contractors and/or construction managers must require Local Vendor certification documentation to be submitted by each subcontract bidder with their sealed bid. The District at its discretion can request additional documentation for verification of the qualification of any Local Vendor subcontractor participating in a construction project.

c. The following is a schedule of discounted percentages based upon Local Vendor subcontractor participation achieved by the prime Constructor:

	LV Subcontractor Participation	Discount Percentage
i.	1.00% – 2.5%	1.0%
ii.	2.51% – 5.0%	1.5%
iii.	5.01% – 7.5%	2.0%
iv.	7.51% – 10.0%	2.5%
v.	10.01% – 15.0%	3.0%
vi.	15.01% – 18.0%	4.0%
vii.	18.01% +	5.0%

d. Prime contractors and/or construction managers may not terminate an approved Local Vendor subcontractor working on a Grand Rapids Public Schools construction project, and then perform the work on the terminated subcontract with its own forces or those of another subcontractor, without

prior written consent by the Grand Rapids Public Schools Executive Director of Facilities Planning and Management. If a Local Vendor subcontractor fails to complete its work on the contract for any reason, a prime Constructor/construction manager must notify the Grand Rapids Public Schools Executive Director of Facilities Planning and Management and make good faith efforts to find another approved Local Vendor subcontractor to substitute for the original Local Vendor subcontractor. Utilizing good faith efforts, and to the extent reasonable, the prime Constructor/construction manager shall substitute an approved Local Vendor subcontractor to perform the same amount of work under the contract as the Local Vendor subcontractor that was terminated.

e. Joint Venture Bidding: As an incentive to contractors engaging in activities that stimulate the growth and development of local, small emerging businesses as partners bidding as a joint venture, Grand Rapids Public School will apply up to a 5% bid discount for partnering with a qualified Local Vendor.

f. The Bid Discounts outlined above may not exceed 5% or $25,000 per bid, whichever is lower. Project bids from prime contractors and/or construction managers are considered a single bid for purposes of the Bid Discount consideration.

Grand Rapids Public Schools, Board of Education Members and employees are prohibited from having any financial interest or personal beneficial interest either directly or indirectly, in the award of any construction contracts, sub-contracts, or the recommendation/selection of any professional design service or construction manager, unless previously disclosed in writing to the Superintendent and approved in writing by the Superintendent.

This policy shall not apply to the extent that it would conflict with any provision of Michigan or federal law, regulation or constitution. The local preference shall not be applied to purchases of goods and services made with federal funds.

Policy Adopted: March 19, 2012

LEGAL Ref: MCL 380.1267; 380.1274
POLICY Ref: 3660 Bids and Quotation Requirements
3690 Local Purchasing
1900 Contracts and Board Member Disclosure Obligations

GRPS Policy Rules 3670R – Local Construction Contracting Regulations

Qualification for Local Construction Contracting Preference

On an annual basis beginning with July 1st of each fiscal year, a vendor desiring to receive a bid discount for local construction contracting may submit appropriate documentation to the Executive Director of Facilities and Operations. Appropriate documentation shall include the following:

a. Proof of completed submittal of Certification of a Michigan Based Business as determined by the Michigan Department of Technology, Management, and Budget

   and

b. Proof it has its primary business operations located within the municipality of the City of Grand Rapids, Michigan for the past six months (on company letterhead)

   or

   Proof it has been certified as a Micro-Local Business Enterprise by the City of Grand Rapids and has its primary business operations within the municipality boundaries of the City of Grand Rapids (on company letterhead)

A firm may submit the same documentation with its sealed bid or proposal in order to qualify for the bid discount.

Non-Local Vendors

A non-local vendor may qualify for a bid discount if it voluntarily subcontracts with businesses that meet the above documentation requirements. Proof of subcontractors meeting these requirements must be submitted with the sealed bid or proposal in order to qualify for the discount.

Local subcontractor participation will be based on the value of the local subcontracts as compared to the total bid or proposal

Joint Venture Bidding

Contractors that engage in joint venture bidding with a local, small emerging business partner will need to submit documentation of participation level with the sealed bid or proposal. The local bid discount will be based on the value of the local, small emerging business partner as compared to the total bid or proposal.

Eligibility/Verification

The District may request documentation at the conclusion of a project for which a bid discount was received verifying eligibility with local bid discount criteria. If it is determined that a vendor did not actually meet the terms of local preference, disqualification from future consideration of a local purchasing preference may occur for a period of five years unless excused by the Superintendent or Designee.

Dated: March 12, 2012
LEGAL REF: MCL 380.1267; 380.1274
3660- Bids and Quotation Requirements
3690- Local Purchasing
1900- Contracts and Board Member Disclosure Obligations

DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET
Facilities and Business Services Administration
Design & Construction Division

DEMOGRAPHICS, STATISTICS AND CERTIFICATION

1. Company Name: _____
2. Company Address: _____
   _____
   _____
3. Principal Place of Business: _____
   _____
4. Year of Establishment: _____

Woman-, Minority-, or Veteran-Owned Small Business Representation

(For Statistical Use Only)

DEFINITIONS:

"Woman-owned business" means a small business that is at least 51% owned by a woman or women who are US citizens and who control and operate the business.

The vendor represents that it ☐ IS ☐ IS NOT a woman-owned small business.

"Minority-owned business" means a small business that is at least 51% owned by a minority or minorities who are US citizens and who control and operate the business.

The vendor represents that it ☐ IS ☐ IS NOT a minority-owned small business.

☐ African-American ☐ Arab-American ☐ Asian-American ☐ Hispanic

☐ American Indian ☐ Eskimo

"Qualified Disabled Veteran" means a business entity that is 51% or more owned by one or more veterans with a service-connected disability.

"Qualified Disabled" means a business entity that is 51% or more owned by one or more with a service-connected disability.

The vendor represents that it ☐ IS ☐ IS NOT qualified disabled.

"Veteran -owned business" means a small business that is at least 51% owned by a veteran or veterans who are U.S. citizens and who control and operate the business.

The vendor represents that it ☐ IS ☐ IS NOT a veteran-owned small business.

The Constructor represents and warrants that the company meets the above (when checked) and can provide supportive documentation upon request.

Authorized Agent Name (print or type) _____

Authorized Agent Signature _____

Fraudulent Certification as a Qualified Disabled Veteran is subject to debarment under MCL 18.1264.

DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET

Certification of a Michigan-Based Business

(Information Required Prior to Contract Award
for Application of State Preference/Reciprocity Provisions)

DEFINITION: To qualify as a Michigan business, vendor must have, during the 12 months immediately preceding this bid deadline, or if the business is newly established, for the period the business has been in existence, it has (check all that apply):

Bidder shall also indicate one of the following:

☐ Bidder qualifies as a Michigan business (provide zip code): _____

☐ Filed a Michigan single business tax return showing a portion or all of the income tax base allocated or apportioned to the State of Michigan pursuant to the Michigan Single Business Tax Act, 1975 PA 228, MCL ˜208.1 – 208.145; or,

☐ Filed a Michigan income tax return showing income generated in or attributed to the State of Michigan; or,

☐ Withheld Michigan income tax form compensation paid to the bidder's owners and remitted the tax to the Department of Treasury; or

I certify that **I have personal knowledge** of such filing or withholding, that it was more than a nominal filing for the purpose of gaining the status of a Michigan business, and that it indicates a significant business presence in the state, considering the size of the business and the nature of its activities.

I authorize the Michigan Department of Treasury to verify that the business has or has not met the criteria for a Michigan business indicated above and to disclose the verifying information to the procuring agency.

☐ Bidder does not qualify as a Michigan business (provide name of State): _____

☐ Principal place of business is outside the State of Michigan, however service/commodity provided by a location within the State of Michigan (provide zip code): _____

Authorized Agent Name (print or type) _____

Authorized Agent Signature _____

Fraudulent Certification as a Michigan business is prohibited by MCL 18.1268 §268. A BUSINESS THAT PURPOSELY OR WILLFULLY SUBMITS A FALSE CERTIFICATION THAT IT IS A MICHIGAN BUSINESS OR FALSELY INDICATES THE STATE IN WHICH IT HAS ITS PRINCIPAL PLACE OF BUSINESS IS GUILTY OF A FELONY, PUNISHABLE BY A FINE OF NOT LESS THAN $25,000 and subject to debarment under MCL 18.1264

SWORN STATEMENT OF FAMILIAL RELATIONSHIP

As required by Section 1267 of the Revised School Code – MCL 380.1267

STATE OF MICHIGAN COUNTY

OF _____

_____, being duly sworn, deposes and says:

That _____ (The "Bidder") has bid for an improvement to the following described project located in Kent County, Michigan, which is owned by the Grand Rapids Public Schools:

Project Name: _____

That the following is a statement of disclosure of any familial relationship that exists between the owner or any employee of the Bidder and any member of the Grand Rapids Public Schools Board of Education or Superintendent, as required pursuant to Section 1267 of the Revised School Code, as amended.

1. ☐ That there are no such familial relationships existing at this time.

OR

2. ☐ That a familial relationship exists between

_____,

an ☐ owner ☐ employee of the Bidder who is the _____
relationship

of _____ , who is ☐ a member of the Board,

☐ the Superintendent.

Deponent _____

Subscribed and sworn to before me this _____ day of _____, 20_____

_____

Acting in: _____

My commission expires: _____

IRAN BUSINESS RELATIONSHIP AFFIDAVIT

Effective April 1, 2013 all bids, proposals, and/or qualification statements received in the State of Michigan must comply with the “Iran Economic Sanctions Act”. The following certification is to be signed and included at time of submittal.

Certification

Pursuant to the Michigan Iran Economic Sanctions Act, 2012 P.A. 517, by submitting a bid, proposal or response, Respondent certifies, under civil penalty for false certification, that it is fully eligible to do so under law and that it is not an “Iran linked business” as the term is defined in the Act.

_____	_____
Signature	Title
_____	_____
Company	Date

DEBARMENT AND SUSPENSION CERTIFICATION

The bidder, under penalty of perjury, certifies that, except as noted below, he/she or any other person associated therewith in the capacity of owner, partner, director, officer, manager:

- Is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any Federal agency;
- Has not been suspended, debarred, voluntarily excluded or determined ineligible by any Federal agency within the past 3 years;
- Does not have a proposed debarment pending; and,
- Is not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or Local) in any matter involving fraud or official misconduct within the past 3 years.

If there are any exceptions to this certification, insert the exceptions in the following space:

_____

_____

_____

_____

_____

_____

Exceptions will not necessarily result in denial or award, but will be considered in determining bidder responsibility. For any exception noted above, indicate below to whom it applies, initiating agency, and dates of action.

Notes: *Providing false information may result in criminal prosecution or administrative sanctions. The above certification is part of the Bid. Signing this document on the signature portion thereof shall also constitute signature of this Certification.*

_____ _____

Signature Title

_____ _____

Company Date

NON-COLLUSIVE AFFIDAVIT

STATE OF MICHIGAN)

) SS

COUNTY OF _____)

_____ , being duly sworn, deposes and says that:

1. The proposal has been arrived at by the contractor bidder independently and has been submitted without collusion with, and without any agreement, understanding, or planned common course of action with, any other vendor of materials, supplies, equipment, or services described in the request for proposals, designed to limit independent bidding or competition; and,

2. The contents of the proposal have not been communicated by the consultant or its employees or agents to any person not an employee or agent of the consultant or its surety on any bond furnished with the proposal and will not be communicated to any such person prior to the official opening of the proposal.

_____

Signature of Contractor Bidder

STATE OF _____)

)SS.

COUNTY OF _____)

This instrument was acknowledged before me on the _____ day of _____, 20__, by _____.

_____

_____, *Notary Public*

_____ *County* _____,

My Commission Expires: _____

Acting in the County of: _____

Criminal Background Affidavit

The undersigned, the owner or authorized officer of the below-named Firm, pursuant to the criminal background compliance certification requirements of Grand Rapids Public Schools (the "School District") hereby represents and warrants that the Firm has performed and/or will perform sufficient criminal background checks, including at a minimum, an Internet Criminal History Tool ("ICHAT") check, for all of its owners, employees, agents, representatives, contractors and/or other personnel who will be on any School District premises to carry out the services contemplated by the Contract Documents. The Firm further hereby certifies that no owner, employee, agent, representative, contractor and/or other personnel of the Firm will be on any School District premises if they are a registered criminal sexual offender under the Sex Offenders Registration Act, Public Act 295 of 1994, or have been convicted of "Listed Offense" as defined under Section 722 of the Sex Offenders Registration Act, MCL 28.722.

The Firm further acknowledges that if it is found to have submitted a false certification or otherwise fails to comply with the requirements of this certification, the School District may immediately terminate the Contract.

FIRM:

_____
Name of FIRM

By: _____

Its: _____

STATE OF _____)
)ss.

COUNTY OF _____)

This instrument was acknowledged before me on the _____ day of _____, 20__, by _____. ,

_____
Notary Public
_____ County _____, My
Commission Expires: _____
Acting in the County of: _____

REQUEST FOR INFORMATION

PROJECT: _____

COMPANY: _____

NAME: _____

PHONE: _____

E-MAIL: _____

DATE: _____

QUESTION:
(Type or print in box, or attach additional typed pages with this cover page.)

SEND TO:

Marc Bennett
Grand Rapids Public Schools
E-Mail: Bennettm@grps.org

SECTION 01000

GENERAL REQUIREMENTS

PART 1 – GENERAL

1.1 FIELD CONDITIONS AND DIMENSIONS

A. Prior to doing any work, verify all dimensions, details, quantities, and conditions which may affect the work. No allowance for additional compensation will be considered for discrepancies between dimensions indicated on the drawings and actual field dimensions.

1.2 SUBSTITUTIONS AFTER CONTRACT AWARD

A. The Owner will consider substitution requests only if the proposed substitute offers the Owner cost or schedule advantages. A request for a substitution shall include a proposal for adjustments to the contract price and/or time if the substitution is approved. The Constructor shall bear the burden of providing the Design Professional any technical, cost or schedule data needed to evaluate the proposed substitution.

B. The Design Professional shall review the substitution proposal for quality and function, only. The Constructor shall be responsible for any unforeseen costs associated with using an approved substitution.

1.3 CONTRACT DOCUMENTS

A. The Contract Documents, alone, detail the requirements of the project. Information obtained from an officer, agent, consultant or employee of the Owner or any other person shall not affect the risks or obligations assumed or relieve the Constructor from fulfilling any part of the contract.

1.4 ASBESTOS

A. All material to be used in the work shall be certified by the manufacturer to be free of any amount of asbestos. No material will be permitted on the site without such certification.

B. The Constructor should review the Owner's material management plan for their information regarding asbestos. The Constructor must provide an affidavit stating that no asbestos was used in the project. Any asbestos containing material installed under this Contract by the Constructor shall be removed and replaced with like asbestos-free materials, all at the cost of the Constructor.

1.5 LEAD PAINT

A. Lead Paint: This renovation project may involve activities that disturb lead-based paint. It is the responsibility of the Constructor to determine if the building to be renovated is a **Child-Occupied Facility** as defined under the EPA regulation **Renovation, Repair, and Painting Final Rule (RRP Rule)**. All covered renovations to a **Child-Occupied Facility** must be performed by Certified Firms, using Certified Renovators and other trained workers.

1.6 PROGRESS MEETINGS

A. The Owner may schedule progress meetings to be held on the jobsite whenever needed to supply information necessary to complete the work without interruptions.

B. The Constructor shall be represented at each progress meeting by persons with full authority to act for the Constructor in regard to all portions of the work.

1.7 WORKMANSHIP

A. Except when the Contract Documents note otherwise, the Constructor shall be fully responsible for all construction means, methods, techniques, sequences, and procedures and for coordinating all portions of the work under the Contract with the Owner.

The Constructor shall provide an authorized representative at the site – at all times during working hours – to receive and execute orders by the Owner. All such orders given to the Constructor's representative shall be deemed as given to and received by the Constructor.

B. The Constructor shall maintain a copy of the Contract Documents at the project site at all times.

1.8 LAWS

A. The Constructor shall comply with all applicable laws, ordinances, and the rules and regulations of all authorities having jurisdiction over the construction of the project.

1.9 CODE AND REGULATION COMPLIANCE

A. Comply with all applicable federal, state, and local codes and regulations relating to buildings, employment, the preservation of public health and safety, use of streets, and the performance of the work under this Contract. It shall be the responsibility of the Constructor to fully understand all such requirements and to ensure that the subject requirements are fully and faithfully enforced.

B. Any work performed that the Constructor knew or should have known was contrary to existing laws, rules and regulations, and for which the Constructor failed to give notice of such fact to the Owner, shall be the responsibility of the Constructor to correct. The Constructor shall bear all costs arising therefrom and hold the Owner harmless for any such violation.

C. Upon completion of the Work, the Constructor shall submit to the Owner a certificate of inspection by the governmental authority having jurisdiction, showing that all work subject to inspection has been properly inspected and approved to meet current code requirements.

D. Covid-19 Safety Update. In light of the Coronavirus Disease 2019 (COVID-19), GRPS is requiring special health and safety measures for everyone. All contractors must meet Federal, State, CDC and OSHA guidelines as it relates to Covid-19. Specifically, a safety plan that is in Compliance with OSHA 3990-3 2020 must be in place prior to work in any GRPS facilities.

1.10 PROJECT SAFETY

SAFETY IS OF ABSOLUTE IMPORTANCE. The Constructor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs associated with the Work. Under no circumstances shall the Constructor's activities jeopardize the safety of a building's occupants, construction workers or the general public.

A. All Work must be executed in accordance with applicable standards of the Construction Safety and Health Division of the State of Michigan Department of Licensing and Regulatory Affairs.

B. The requirements indicated in this section are to be considered the minimum. Where the requirements of any of the listed authorities having jurisdiction conflict with the requirements of this section, the maximum condition shall prevail.

C. The Constructor shall furnish, install and maintain as long as necessary and remove when no longer required, adequate barriers, warning signs and lights or other necessary or prudent safety measures at all dangerous locations during work operations for the protection of Constructor personnel, building occupants, and the general public. Provide and erect all such safety precautions in accordance with federal, state and local codes and other legal requirements.

D. Whenever lifting materials or equipment over or near existing or occupied buildings, provide advance notice of such activities and arrange to have any potentially endangered spaces vacated.

E. During work operations, provide temporary partitions, barriers, curtains, and guards as necessary to confine materials, dust and debris to the immediate work areas. Do not allow dust or debris to enter the building interior. Coordinate the location of temporary barriers or partitions with the Owner.

F. Remove all temporary protection when work is completed and restore disturbed areas to their original condition.

G. The Constructor shall hold the Owner harmless from damage or claims arising out of any injury or damage that may be sustained by any person or persons as a result of the work under the Contract.

1.11 PROTECTION OF PROPERTY

A. Coordinate all Work with the Owner so that adequate interior protection, as necessary, is provided and disruption to normal building operations is minimized. Repair all property damage caused by lack of such protection to the satisfaction of the Owner.

B. Confine equipment, storage of materials, debris, and the operation and movements of workmen within the physical limits and time limits directed by the Owner. Such activities are to be governed by applicable local building codes and the traffic regulation and safety and fire regulation of local authorities.

C. Document existing damage prior to the start of work to avoid responsibility for preexisting conditions. During work operations, provide protection for existing building, finishes, walks, drives, and landscaping in and adjacent to the work areas. Repair or replace building components or site property damaged during the work to match its condition before the damage. If the Constructor fails to repair or replace such damage, the Owner will have the work done by others and the costs of such work will be charged to the Constructor.

D. Do not store materials, tools, or equipment on any existing roof area adjacent to the work site unless proper protection of the existing roof is provided and the materials are spread out and located at column locations.

E. The Constructor shall hold the Owner harmless against all claims of damage or alleged damage to any such structure arising out of the work under this Contract.

1.12 FIRE SAFETY

A. No open fire is permitted on the building site at any time (except for torches to apply modified roof membrane).

B. Take all precautions to eliminate possible fire hazards at the site, including but not limited to the following:

1. Remove all combustible debris from the roof and storage areas on a daily basis.

2. Store highly flammable materials in well-ventilated areas; mixing and preparation of such materials is also restricted to such areas. Handle all such materials in accordance with safe practices and the requirements of authorities having jurisdiction.

3. The Constructor shall not store large quantities of flammable materials at the site.

1.13 VANDALISM

A. The cost for any damage by vandalism to material or equipment or that which occurs to items furnished or installed under this contract, is to be borne by the Constructor. The Constructor is responsible for such vandalism from the date of the Notice to Proceed until Final Completion.

1.14 TEMPORARY UTILITIES AND FACILITIES

A. Water and electricity may be available in the area where work will be performed. If so, the Constructor will not be charged for reasonable use of these services for construction operations. The Constructor shall pay costs for installation and removal of any temporary connections including necessary safety devices and controls.

1.15 MISCELLANEOUS FACILITIES AND CONTROLS

A. New materials delivered to and stored outdoors on the jobsite shall be fully protected from weather by placement on raised platforms and shall have secure waterproof plastic coverings or tarpaulins. The waterproof plastic coverings or tarpaulins shall not extend all the way to the ground surface. They shall terminate a few inches above the ground surface. Factory-provided plastic wrap is not an acceptable waterproof covering.

B. Contractors and their employees or suppliers will not use or interfere with existing public access, drives, roads or parking lots, except as specifically indicated by prior arrangement with the Owner.

C. Constructor's employee parking, delivery trucks and other construction vehicle parking will only be allowed in areas designated by the Owner.

D. The Constructor shall provide and regularly maintain portable sanitary facilities at the site. The contractors' employees shall not utilize the restrooms in the school buildings.

1.16 NO SMOKING POLICY

A. The use of tobacco products on school property is a misdemeanor under MCL 750.473. No tobacco products will be allowed anywhere on school property at any time.

1.17 REMOVAL OF DEBRIS

A. Remove all rubbish and debris from the site daily or more often if directed by the Owner. The premises shall be maintained as clean as practical, consistent with the neatness required for the Owner's normal operations.

B. No storage of removed items or debris will be permitted on the site unless so directed by the Owner.

C. The location of the trash containers is subject to the Owner's approval.

D. During non-construction hours, cover and seal trash containers to prevent wind-blown debris and access into trash containers.

MILESTONE DATES:

November 10, 2025:	Bid Package to Bidders
November 17, 2025:	Mandatory Pre Bid Meeting. (see Instructions to Bidders for time, date, and location)
November 17th-21st:	Time Frame for site visits.
November 26, 2025:	RFI Deadline
Decemberr 3, 2025	RFI Response, Addendum Issued
11:00am December 18, 2025:	Bid Opening at GRPS. 900 Union Avenue NE, Grand Rapids, MI
January 6-8, 2026:	Post Bid Interview window
January 12, 2026:	Bid Recommendation(s) Due
January 15, 2026:	GRPS APPROVAL
January 2026:	Award of project
January- December 2026:	Execution of Priority 1 Locations
January-December 2027:	Execution of Priority 2 and 3 Locations

BID FORM

Grand Rapids Public Schools

District Wide Elevator Upgrades

DATE: _____ (Bidder to enter date)

SUBMITTED BY: (Bidder to enter name and address)

Bidder's Full Name: _____

Address: _____

City, State, Zip: _____

Telephone: _____ Fax: _____

E-Mail: _____

OFFER

A. The undersigned, being familiar with the site, specifications, and related documents, propose to furnish all required labor, materials, tools, and equipment to execute the project in accordance with the unit prices on the following sheets.

B. **Summary of Bids by Location**:

Central High School Bid Sub Total:	$ _____
Cesar Chavez School Bid Sub Total:	$ _____
City High Middle School Bid Sub Total:	$ _____
Coit Elementary School Bid Sub Total:	$ _____
Dickenson School Bid Sub Total:	$ _____
Early Childhood School Bid Sub Total	$ _____
Franklin 4H School Bid Sub Total:	$ _____
Franklin Administration Bid Sub Total:	$ _____
Franklin Data Bid Sub Total:	$ _____
Franklin Elementary Bid Sub Total:	$ _____
SW Community Campus Sub Total:	$ _____
Houseman Field Bid Sub Total:	$ _____
Martin Luther King Bid Sub Total:	$ _____

North Park Elementary Bid Sub Total:	$
Ottawa Hills High School Bid Sub Total:	$
Sibley Elementary Bid Sub Total:	$
Union High School Bid Sub Total:	$
University-GRPS Bid Sub Total:	$
Buchanan Bid Sub Total:	$
Total Bid:	$
Reduction if selected for Multiple Site:	$

The Owner reserves the right to accept or reject any or all bids and to waive any irregularities in the bidding. The Owner reserves the right to award one or multiple sites of the overall project to a single bidder or to multiple bidders.

C. We have included bid security in the amount of 5% of the base bid as required by the Instructions to Bidders.

D. The cost of the 100% Payment and Performance Bonds included in the base bid is

$_____.

E. **Add Alternate**: Cost of Elevator Maintenance after completion of 12-month Warranty period. Warranty period to be part of base bid amount. In this space submit your price for an extended maintenance period of 36 Months. Also provide your Company proposed coverages for the maintenance period. Include all required Testing required by the AHJ.

$_____.

F. The base bid price includes all applicable taxes.

G. Voluntary Alternates per section 1.8.B.1a,b,c.: Provide written description of proposed voluntary alternates that meet the requirement of the specifications on a separate document and include with your bid.

$_____.

$_____.

ACCEPTANCE

A. This offer shall be open to acceptance and is irrevocable for sixty days from the date on which bids were opened.

B. If this bid is accepted by the Owner within the time period stated above, we will:

1. Furnish the required bonds and insurance certificates within ten days of receipt of Notice of Award.
2. Execute the Agreement immediately upon receipt from the Owner.
3. Commence work within ten days after written Notice to Proceed.

C. If this bid is accepted within the time stated, and we fail to commence the Work or we ail to provide the required bonds and insurance certificates, the bid security shall be forfeited as damages to Grand Rapids Public Schools by reason of our failure, limited in amount to the lesser of the face value of the bid security or the difference between this bid and the bid upon which a Contract is signed.

D.In the event our bid is not accepted within the time stated above, the bid security shall be returned to the undersigned, in accordance with the provisions of the Instructions to Bidders, unless a mutually satisfactory arrangement is made for its retention and validity for an extended period of time.

CONTRACT TIME

A. If this Bid is accepted, we will complete all work on or before Completion Date. See Milestone date document . We understand that conditions precedent to achieving Final Completion include:

1. Final inspection and approval by all relevant agencies.
2. All punchlist items having been completed and accepted by Owner.
3. Manufacturer inspection, approval, and warranties.
4. Issuance of a Certificate of Occupancy, if necessary.

ADDENDA

A. We acknowledge receipt of the following Addenda. These addenda have been evaluated and their effect on the cost of the Work has been incorporated into the base bid entered above.

Addendum # _____ Dated _____ Addendum # _____ Dated _____

Addendum # _____ Dated _____ Addendum # _____ Dated _____

BID FORM SUPPLEMENTS

A. As requested by the Owner, the following additional information is included:

   1. Exhibit “A” and Exhibit “B” completed and attached to the Bid Form.

B. We agree to submit the following Supplements to Bid Forms within 48 hours after receipt of a Notice of Award:

   1. Subcontractors: Include the names of all Subcontractors and the portions of the Work they will perform.

ACKNOWLEDGEMENTS

The Bidder acknowledges:

a. That this bid was developed without any collusion, undertaking, or agreement, either directly or indirectly, with any other bidder or bidders to maintain the prices of indicated Work or prevent any other bidder or bidders from bidding the Work.

b. That this bid shall not be withdrawn for a period of 60 calendar days after the date on which bids were opened.

c. That all work will be complete on or before the Final Completion date(s) identified in the bid documents.

d. That the following documents, identified in Instructions to Bidders, have been completed and are attached to this Bid Form:

   1. Bid Security in the amount of 5% of the base bid
   2. DTMB Demographics, Statistics and Certification (If applicable)
   3. DTMB Certification of a Michigan-Based Business (If applicable)
   4. Sworn Statement of Familial Relationship
   5. Iran Business Relationship Affidavit
   6. Debarment and Suspension Certification
   7. Non-Collusion Affidavit
   8. GRPS Criminal Background Affidavit
   9. Exhibit “A” & “B”
   10. Contractor submitted Schedule/Work Plan.

SIGNATURE(S)

The Corporate Seal of _____ was hereunto affixed

(Print the full name of your firm)

In the presence of:

_____
Signature

(Seal)

_____
Printed Name and Title

_____
Date

If the Bid is a joint venture or partnership, add additional forms of execution for each member of the joint venture as above.

AUTHORIZED CORPORATE OFFICER

_____
Signature

_____
Printed Name

_____
Title

_____
Date

DRAFT

AIA® Document A105® – 2017

Standard Short Form of Agreement Between Owner and Contractor

AGREEMENT made as of the «_____» day of «_____» in the year «Two Thousand Twenty _____.»
(In words, indicate day, month and year.)

BETWEEN the Owner:
(Name, legal status, address and other information)

Grand Rapids Public School District
1331 Martin Luther King Jr. Street SE
Grand Rapids, Michigan 49506

and the Contractor:
(Name, legal status, address and other information)

for the following Project:
(Name, location and detailed description)

«Grand Rapids Public School District – 2023 Bond Program
Construction and improvements related to District-Wide Elevator Upgrades at the following District Properties, as set forth in the Owner's RFP, and, in accordance with Owner-approved plans and specifications, all applicable laws, the Owner's fixed budget, and as otherwise approved by the Owner. The Contractor's services specifically include the following:

General Contractor Services at the following District Buildings:
_____
_____.

The Architect:
(Name, legal status, address and other information)

To be determined

The Owner and Contractor agree as follows.

ADDITIONS AND DELETIONS: The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

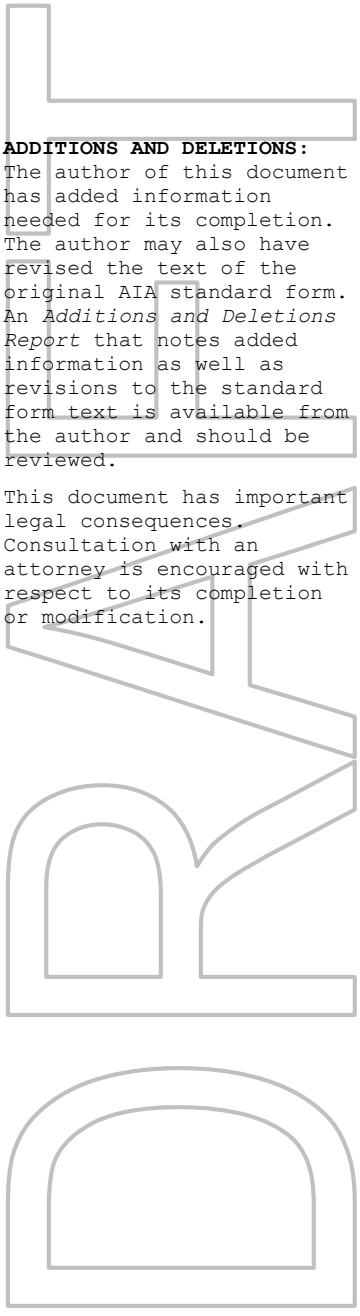

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TABLE OF ARTICLES

ARTICLE 1 THE CONTRACT DOCUMENTS

§ 1.1 The Contractor shall faithfully and competently complete the Work described in the Contract Documents, or as reasonably inferable, necessary, or incidental to produce the results intended by the Contract Documents for the Project. The Contract Documents consist of

.1 this Agreement signed by the Owner and Contractor, as modified;

.2 all drawings and specifications prepared by the Architect for construction of the Project, incorporated herein by this reference, and including but not necessarily limited to the following:

Drawings:

Number	Title	Date

Specifications:

Section	Title	Pages

.3 addenda prepared by the Architect as follows:

Number	Date	Pages

.4 written orders for changes in the Work, pursuant to Article 10, issued after execution of this Agreement; and

.5 other documents, if any, identified as follows:

Exhibit A – Schedule of Values
Exhibit B – Unit Prices
Exhibit C – Allowances included in the Contract Sum
Exhibit D - List of Major Subcontractors and Suppliers
Exhibit E – Project Preliminary Major Milestone Schedule
Exhibit F – Contractor's Certificate(s) of Insurance and Bonds»

«Project Manual, which is incorporated herein by this reference;

Bid specifications and accepted portions of the Contractor's bid response, to the extent not inconsistent with this Agreement.

If there should be conflict or ambiguity within, between, or among any Contract Document(s), the conflict or ambiguity shall be resolved by complying with the provision that is most beneficial to the Owner, as determined in the Owner's sole discretion. »

ARTICLE 2 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 2.1 The Contract Time is the number of calendar days available to the Contractor to substantially complete the Work.

§ 2.2 Date of Commencement:
Unless otherwise set forth below, the date of commencement shall be the date of this Agreement.
(Insert the date of commencement if other than the date of this Agreement.)

« »

§ 2.3 Substantial Completion:
Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion, as defined in Section 12.5, of the entire Work:
(Check the appropriate box and complete the necessary information.)

[« »] Not later than « » (« ») calendar days from the date of commencement.

[« X »] By the following dates: « _____, 20___»; Final Completion shall be on or before ____, 20__.

§ 2.3.1 If the Contractor fails to achieve Substantial Completion as provided in this Section 2.3, liquidated damages, if any, shall be assessed as set forth in Section 3.6.

ARTICLE 3 CONTRACT SUM

§ 3.1 The Contract Sum shall include all items and services necessary for the proper execution and completion of the Work. Subject to additions and deductions in accordance with Article 10, the Contract Sum is:

« A lump sum amount of _____, inclusive of all costs, taxes, fees, reimbursable expenses, and/or any other expenses.

§ 3.2 For purposes of payment, the Contract Sum includes the following values related to portions of the Work:
(Itemize the Contract Sum among the major portions of the Work.)

Portion of the Work	Value

§ 3.3 The Contract Sum is based upon, and includes, the following alternates, if any, which are described in the Contract Documents and hereby accepted by the Owner:
(Identify the accepted alternates. If the bidding or proposal documents permit the Owner to accept other alternates subsequent to the execution of this Agreement, attach a schedule of such other alternates showing the amount for each and the date when that amount expires.)

« »

§ 3.4 Allowances, if any, included in the Contract Sum are as follows:
(Identify each allowance.)

Item	Price

§ 3.5 Unit prices, if any, are as follows:
(Identify the item and state the unit price and quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price per Unit ($0.00)

§ 3.6 Liquidated damages, if any:
(Insert terms and conditions for liquidated damages, if any.)

Notwithstanding the fact that the Contract Time may be extended as approved by the Owner and Architect in accordance with the Contract Documents, time is of the essence for this Contract, and the Contractor shall begin work as directed by the Owner, shall furnish sufficient materials, and shall furnish a sufficient number of properly skilled workers so as not to delay its work, the work of any other contractor, or the completion of the Project.

Loss of use damage to the Owner, which will result from the failure of the Contractor to meet such contracted date or dates as possibly extended, will include items of loss or damage which are not susceptible to accurate evaluation or estimation. The damages for delay in the case of such failure to perform on the part of the Contractor shall be liquidated in the amount of $500 for each calendar day of the unexcused delay in meeting such completion date or dates.

Upon Final Completion of the Work, as determined by the Architect, the Contractor shall be given a "notice of substantial completion" and the liquidated damages shall cease to accrue. The Contractor shall be liable for any and all actual damages incurred by the Owner as a result of the Contractor's failure to complete all work (including punch list items) by the Contract final completion date or dates. Actual damages shall include, but not be limited to:

1. Engineering and consulting fees.
2. Legal fees and management fees.
3. Confirmed loss of revenue(s).

ARTICLE 4 PAYMENTS

§ 4.1 Based on Contractor's Applications for Payment certified by the Architect, the Owner shall pay the Contractor, in accordance with Article 12, as follows:
(Insert below timing for payments and provisions for withholding retainage, if any.)

« Applications for Payment shall be submitted to the Architect, certified by the Architect, and thereafter forwarded to the Owner. If a certified Application for Payment is received by the Owner by the 15th day of the month, the Owner will pay the certified amount to the Contractor by the last day of the next month, unless and to the extent the Owner reasonably disputes same in good faith. A 10% retention shall be withheld on all payments. »

§ 4.2 Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at the rate below, or in the absence thereof, at the legal rate prevailing at the place of the Project.
(Insert rate of interest agreed upon, if any.)

«Five percent (5%). See MCL 438.31. »

ARTICLE 5 INSURANCE

§ 5.1 The Contractor shall maintain the following types and limits of insurance until the expiration of the period for correction of Work as set forth in Section 14.2, subject to the terms and conditions set forth in this Section 5.1:

As set forth below and in the "Owner's Insurance Requirements", attached hereto as Attachment A.

§ 5.1.2 - **§ 5.1.5** Reserved

§ 5.1.6 The Contractor shall provide builder's risk insurance to cover the total value of the entire Project on a replacement cost basis.

§ 5.1.7 Other Insurance Provided by the Contractor

(List below any other insurance coverage to be provided by the Contractor and any applicable limits.)

Coverage	Limits
Bid Bond	5% of Bid Amount
Performance Bond	100% of Contract Sum
Payment Bond	100% of Contract Sum

The Contractor shall deliver the required performance/payment bonds to the Owner and Architect in accordance with MCL 129.201, et seq., at least three (3) days before the commencement of any Work at the Project site.

Contractor's insurances shall be obtained (and provided to the Owner's Designated Representative; see Section 17.8.2) prior to the commencement of Services and shall be maintained either: (a) if occurrence-based, for at least one year following final completion, and/or (b) if claims-made, for at least six years following final completion. The Owner, its Owner's Representative Consultant (see Section 17.8.2.1), and the Architect shall be identified as additional insureds on all applicable insurances. Contractor's insurance shall be primary and not contributory.

Insurance coverage and surety bond required under the Agreement shall be written with insurance and surety carriers authorized to do business in the State of Michigan. Insurance coverage and surety bonds shall be in a form and provided by an insurer acceptable to the Owner with an A.M. Best rating of A, XII or better and shall name the Owner, its Owner's Representative Consultant, and the Architect as "additional insured" on all applicable policies. The additional insured coverage shall be primary and non-contributory to any of the Owner's insurance policies and shall apply to both ongoing and completed operations. using the 2013 version of ISO forms CG 2010 07 04 or its equivalent.

The Contractor shall provide any other type or amount of insurance reasonably required by the Owner in good faith.

The Contractor's insurance shall not be eliminated, reduced or non-renewed without at least thirty (30) days' prior written notice to the Owner.

§ 5.2 The Owner shall be responsible for purchasing and maintaining the Owner's usual liability insurance and shall provide property insurance to cover the value of the Owner's property.

§ 5.3 The Contractor shall obtain an endorsement to its Commercial General Liability insurance policy to provide coverage for the Contractor's obligations under Section 8.12.

§ 5.4 Prior to commencement of the Work, the Contractor shall provide certificates of insurance showing coverages and stating that insurance coverages and limits shall not be reduced or eliminated without at least thirty (30) days prior written notice to the Owner. The Owner may require additional proof of coverage in the form of a true and

accurate copy of the policies of insurance themselves. The maintenance of insurance in strict compliance with the requirements of this Agreement shall be a condition precedent to the Owner's obligation to make any payments to Contractor.

§ 5.5 Superior to any other term in this Agreement, any reference in this document to waivers of subrogation shall be deemed to be deleted and of no effect.

ARTICLE 6 GENERAL PROVISIONS

§ 6.1 The Contract

The Contract represents the entire and integrated agreement between the parties and supersedes prior negotiations, representations or agreements, either written or oral. The Contract may be amended or modified only by a written modification in accordance with Article 10.

§ 6.2 The Work

The term "Work" means the construction and services required by the Contract Documents, and includes all other labor, materials, tools, transportation, equipment, and services provided, or to be provided, by the Contractor to fulfill the Contractor's obligations: (i) to be incorporated into the Project (or the Contractor's portion of the Project if the Contractor is not responsible for the entire Project), (ii) required of the Contractor under the Contract Documents, or (iii) necessary or appropriate to fully construct, operate and maintain the Project (or the Contractor's portion of the Project if the Contractor is not responsible for the entire Project). The Work shall be performed in accordance with the Contract Documents. Contractor agrees that it (and any individuals it assigns to perform the Work) shall adhere to professional standards and will perform all Work in a manner consistent with generally accepted proficiency and competency for the type and nature of work rendered. Contractor shall at all times comply with all applicable federal, state and local laws and regulations, including the Owner's policies.

The Contractor acknowledges that there may be items of the Work, which the Contractor is responsible to provide under the Agreement that are not drawn or specified, but are necessary for the proper execution and completion of the Work and are consistent with and reasonably inferable from the Drawings and Specifications. All such items shall be provided as part of the Work without delay in its progress and without any increase in the Contract Sum.

§ 6.3 Intent

The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all.

§ 6.4 Ownership and Use of Architect's Drawings, Specifications and Other Documents

Documents prepared by the Architect are instruments of the Architect's service for use solely with respect to this Project. Except as provided in the Agreement between the Owner and Architect, the Architect shall retain all common law, statutory, and other reserved rights, including the copyright. The Contractor, subcontractors, sub-subcontractors, and suppliers are authorized to use and reproduce the instruments of service solely and exclusively for execution of the Work. Except as provided in the Agreement between the Owner and Architect, the instruments of service may not be used by the Contractor or any subcontractor or material or equipment supplier for other Projects or for additions to this Project outside the scope of the Work without the specific written consent of the Owner.

§ 6.5 Electronic Notice

Written notice under this Agreement may be given by one party to the other by email as set forth below.
(Insert requirements for delivering written notice by email such as name, title, and email address of the recipient, and whether and how the system will be required to generate a read receipt for the transmission.)

ARTICLE 7 OWNER

§ 7.1 Information and Services Required of the Owner

§ 7.1.1 If requested by the Contractor, the Owner shall furnish all necessary surveys and a legal description of the site.

§ 7.1.2 Except for permits and fees that are the responsibility of the Contractor (including but not limited to as set forth in Section 8.7), the Owner shall obtain and pay for other necessary approvals, easements, assessments, and charges.

§ 7.1.3 Prior to commencement of the Work, at the written request of the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. The Contractor shall have no obligation to commence the Work until the Owner provides such evidence.

§ 7.2 Owner's Right to Stop the Work

If the Contractor fails to correct Work which is not in accordance with the Contract Documents, the Owner may direct the Contractor in writing to stop the Work until the correction is made. The rights of the Owner pursuant to this Section 7.2 shall be in addition to, and not in limitation of, the Owner's other rights under any other provision of the Contract Documents.

§ 7.3 Owner's Right to Carry Out the Work

If the Contractor fails, refuses, defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a seven day period after receipt of written notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies, including any claim against the Contractor's Performance Bond, correct such deficiencies. In such case, the Architect may withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the cost of correction.

§ 7.4 Owner's Right to Perform Construction and to Award Separate Contracts

§ 7.4.1 The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and to award separate contracts in connection with other portions of the Project.

§ 7.4.2 The Contractor shall coordinate and cooperate with the Owner's own forces and separate contractors employed by the Owner.

ARTICLE 8 CONTRACTOR

§ 8.1 Review of Contract Documents and Field Conditions by Contractor

§ 8.1.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents. Failure of Contractor to independently investigate and become fully informed will not relieve Contractor of its responsibilities under this Agreement.

§ 8.1.2 The Contractor shall carefully study and compare the Contract Documents with each other and with information furnished by the Owner. Before commencing activities, the Contractor shall (1) take field measurements and verify field conditions; (2) carefully compare this and other information known to the Contractor with the Contract Documents; and (3) promptly report errors, inconsistencies, or omissions discovered to the Architect and Owner. Failure to undertake these steps shall make the Contractor responsible for any additional costs associated with such conditions, errors, inconsistencies and omissions.

§ 8.2 Contractor's Construction Schedule

The Contractor, promptly after being awarded the Contract, shall prepare and submit for the Owner's and Architect's approval a Contractor's construction schedule for the Work, in accordance with, and as necessary to timely complete the Work as provided in Article 2.

§ 8.2.1 The Contractor shall cooperate with the Architect in scheduling and performing its Work to avoid conflict or interference with the Owner's school operations, and the Contractor shall be responsible for any conflict or interferences that it causes.

§ 8.3 Supervision and Construction Procedures

§ 8.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention, at all times work is being performed. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work. The Contractor shall

immediately notify the Architect in writing of delays or actions of other entities that could impact the timely coordination and completion of the Work.

§ 8.3.2 The Contractor, as soon as practicable after award of the Contract, shall furnish in writing to the Owner, through the Architect, the names of subcontractors or suppliers for each portion of the Work. The Contractor shall not contract with any subcontractor or supplier to whom the Owner or Architect have made a timely and reasonable objection. The Owner shall have the right to remove any employee of the Contractor or subcontractors upon two weeks' notice, if the Owner reasonably believes that such person may detrimentally reflect on the Owner and/or the Project (subject to the Contractor's status as independent contractor).

§ 8.4 Labor and Materials

§ 8.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work. Such provision of labor and materials shall occur in sufficient time to satisfy the existing Project schedule. The Contractor bears the risk of any failure to timely provide such labor and/or materials.

§ 8.4.2 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Contract Work. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them.

§ 8.4.3 Asbestos-Free Product Installation

1. It is hereby understood and agreed that no product and/or material containing asbestos, including chrysolite, crocidolite, temolite asbestos, anthosphyllite asbestos, actinolite asbestos and any combination of these materials that have been chemically treated and/or altered shall be installed or introduced into the Work by the Contractor or his employees, agents, subcontractors or other individuals or entities over whom the Contractor has control. The Contractor shall be required to sign a certification statement ensuring that all products or materials installed or introduced into the work will be asbestos-free.
2. The Contractor shall also be required to furnish certified statements from the manufacturers of supplied materials used during the construction verifying their products to be asbestos-free in accordance with the requirements of Section 8.4.3.1.
3. The Contractor shall complete and submit to the Owner a certification evidencing asbestos-free product installation prior to issuance of the final Certificate for Payment, in a form acceptable to Owner and Architect.

§ 8.4.4 The Contractor agrees that neither it nor its subcontractors will discriminate against any employee or applicant for employment, to be employed in the performance of this Contract, with respect to hire, tenure, conditions or privilege of employment, or any matter directly or indirectly related to employment, because of race, color, religion, national origin, age, sex, sexual orientation, gender identity or expression, height, weight, or marital status. Breach of this covenant may be regarded as a material breach of this Contract.

§ 8.5 Warranty

The Contractor warrants to the Owner and Architect that: (1) materials and equipment furnished under the Contract will be new and of good quality unless otherwise required or permitted by the Contract Documents; (2) the Work will be free from defects not inherent in the quality required or permitted; and (3) the Work will conform to the requirements of the Contract Documents. Any material or equipment warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 12.5.

§ 8.6 Taxes

The Contractor shall pay sales, consumer, use, and similar taxes that are legally required when the Contract is executed. The Contractor shall pay all state and federal taxes levied on its business, income or property and shall make all contributions for social security and other wage or payroll taxes. The Contractor shall be solely responsible for such payments and shall indemnify and hold the Owner harmless from same. All taxes are included in the Contract Sum.

§ 8.7 Permits, Fees, Licenses, and Notices

§ 8.7.1 The Contractor shall obtain and pay for the building permit and other permits and governmental fees, licenses, and inspections necessary for proper execution and completion of the Work. The Contractor, and all its Subcontractors of any tier, shall maintain at all times the required licenses and registrations required to perform the Work.

§ 8.7.2 The Contractor shall strictly comply with and give notices required by agencies having jurisdiction over the Work. If the Contractor performs Work contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume full responsibility for such Work and shall bear the attributable costs. The Contractor shall promptly notify the Architect and Owner in writing of any known inconsistencies in the Contract Documents with such governmental laws, rules, and regulations.

§ 8.8 Submittals

The Contractor shall promptly review, approve in writing, and submit to the Architect shop drawings, product data, samples, and similar submittals required by the Contract Documents. Shop drawings, product data, samples, and similar submittals are not Contract Documents.

§ 8.9 Use of Site

The Contractor shall confine operations at the site to areas permitted by law, ordinances, permits, the Contract Documents, and the Owner.

§ 8.10 Cutting and Patching

The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly.

§ 8.11 Cleaning Up

The Contractor shall keep the premises and surrounding area free from accumulation of debris and trash related to the Work. At the completion of the Work, the Contractor shall remove its tools, construction equipment, machinery, and surplus material; and shall properly dispose of waste materials. Failure of the Contractor to do any of the foregoing will result in the Owner's cleaning of the same at the expense of the Contractor.

§ 8.12 Indemnification

To the fullest extent permitted by law, the Contractor shall indemnify, defend, and hold harmless the Owner, Architect, Architect's consultants, and board members, officers, agents and employees of any of them, from and against claims, damages, losses and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, including, but not limited to, the injury to or destruction of tangible property, but only to the extent caused by the negligent acts or omissions of the Contractor, a subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder.

ARTICLE 9 ARCHITECT

§ 9.1 The Architect will provide administration of the Contract as described in the Contract Documents. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents and allowed by law.

§ 9.2 The Architect will visit the site at intervals appropriate to the stage of construction to become generally familiar with the progress and quality of the Work and shall provide all services required of it in the applicable Owner/Architect Agreement.

§ 9.3 The Architect will not have control over or charge of, and will not be responsible for, construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs in connection with the Work, since these are solely the Contractor's responsibility. The Architect will not be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents.

§ 9.4 Based on the Architect's observations and evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor.

§ 9.5 The Architect has authority to reject Work that does not conform to the Contract Documents with the Owner's prior consent.

§ 9.6 The Architect will promptly review and approve or take appropriate action upon Contractor's submittals, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

§ 9.7 On written request from the Owner, the Architect will promptly interpret matters concerning performance under, and requirements of, the Contract Documents.

§ 9.8 Interpretations of the Architect will be consistent with the intent of, and reasonably inferable from the Contract Documents, and will be in writing or in the form of drawings. When making such interpretations, the Architect will endeavor to secure faithful performance by Contractor and will not be liable for results of interpretations rendered in good faith and without negligence.

§ 9.9 The Architect's duties, responsibilities, and limits of authority as described in the Contract Documents shall not be changed without written consent of the Owner and Architect.

ARTICLE 10 CHANGES IN THE WORK

§ 10.1 After execution of the Contract, changes in the Work may be accomplished only by written Change Order, Construction Change Directive, or by order for a minor change in the Work. Change Orders require the written approval of the Owner, Contractor, and Architect. For a Construction Change Directive, the Owner, without invalidating the Contract, may order changes in the Work within the general scope of the Contract, consisting of additions, deletions or other revisions, and the Contract Sum and Contract Time shall be adjusted accordingly, in writing. If the Owner and Contractor cannot agree to a change in the Contract Sum, and the Owner desires to still use the Contractor for such Work, the Owner shall pay the Contractor its actual and reasonable cost plus reasonable overhead and profit not to exceed ten percent (10%). When directed by a Construction Change Directive signed by the Owner, the Contractor shall proceed with the change in the Work immediately, even in the absence of a formal agreement to change the Contract Sum or Contact Time.

§ 10.2 The Architect may authorize or order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. The Contractor shall proceed with such minor changes promptly.

§ 10.3 The requirements of Section 2 of 1998 PA 57, as amended, are hereby incorporated into this Agreement. The Contractor shall be alert to any indication or evidence of existing underground or concealed utilities or structures not shown on the Contract Documents and shall immediately notify the Owner of discovery of such evidence. If the Contractor encounters such utilities or structures, it shall cease operations immediately to minimize damage and shall notify the Owner and Architect. The Contractor shall bear the cost of damage resulting from its failure to exercise reasonable care in its construction activity or from continuing operations without notifying the Owner. If concealed or unknown physical conditions are encountered at the site that differ materially from those indicated in the Contract Documents or from those conditions ordinarily found to exist, the Contract Sum and Contract Time shall be subject to reasonable adjustment as permitted by law.

ARTICLE 11 TIME

§ 11.1 Time limits stated in the Contract Documents are of the essence of the Contract. The Contractor shall perform in accordance with the Project schedule, which may be changed from time to time, and also in accordance with the Contractor's provided schedule of performance (if it provides for earlier performance dates than are set forth in the latest Project schedule).

§ 11.2 If the Contractor is delayed at any time in progress of the Work by causes beyond the Contractor's control, the sole remedy of such an occurrence shall be the extension of the Contract Time for a reasonable amount of time agreed to by the Owner and Contractor and, if mutual agreement cannot be reached as reasonably determined by the Architect. The Contractor shall not be entitled to monetary damages for such an occurrence.

§ 11.3 Except as otherwise stated in this Agreement, costs caused by delays or by improperly timed activities or defective construction shall be borne by the responsible party.

§ 11.4 The Contractor shall provide notice in writing to the Owner of a potential claim for a delay related adjustment to the Contract Time within five (5) days of start of any delay and shall request in writing all changes to the Contract Time within twenty-one (21) days after cessation of the delay. The Contractor's failure to strictly comply with this Section 11.4 shall constitute a waiver of and shall forever bar any recover for additional time for the delay.

§ 11.5 No Damage for Delay. As provided in Section 11.2, in no event shall the Contractor be entitled to any compensation or recovery of any damages in connection with any delay. As provided in Section 11.4, Contractor is entitled only to an extension of time to perform in accordance with the procedures set forth therein. In no event shall the Contractor be entitled to recover special, incidental, or consequential damages including without limitation, loss of anticipated profits, revenue, or use of capital.

ARTICLE 12 PAYMENTS AND COMPLETION

§ 12.1 Contract Sum

The Contract Sum stated in this Agreement, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

§ 12.2 Applications for Payment

§ 12.2.1 The Contractor shall submit to the Architect an itemized Application for Payment for Work completed in accordance with the values stated in this Agreement and in accordance with Section 4.1. The Application shall be supported by data substantiating the Contractor's right to payment as the Owner or Architect may reasonably require, such as evidence of payments made to, and waivers of liens from, subcontractors and suppliers, and reflecting retainage. Payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, in writing, payment may similarly be made for materials and equipment stored, and protected from damage, off the site at a location agreed upon in writing.

§ 12.2.2 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment, all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information, and belief, be free and clear of liens, claims, security interests, or other encumbrances adverse to the Owner's interests, and that such Work is in full compliance with the Contract Documents.

§ 12.3 Certificates for Payment

The Architect will, within seven days after receipt of the Contractor's Application for Payment, either (1) issue to the Owner a Certificate for Payment in the full amount of the Application for Payment, with a copy to the Contractor; (2) issue to the Owner a Certificate for Payment for such amount as the Architect determines is properly due, and notify the Contractor and Owner in writing of the Architect's reasons for withholding certification in part; or (3) withhold certification of the entire Application for Payment, and notify the Contractor and Owner of the Architect's reason for withholding certification in whole. If certification or notification is not made within thirty (30) days after receipt by the Architect, the Contractor may, upon seven (7) additional days' written notice to the Owner and Architect, stop the Work until certification or notice is provided. The Contract Time and the Contract Sum shall be reasonably adjusted due to the delay in accordance with Section 11.4.

§ 12.4 Progress Payments

§ 12.4.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment for all undisputed sums in the manner provided in the Contract Documents.

§ 12.4.2 The Contractor shall promptly pay each subcontractor and supplier, upon receipt of payment from the Owner, an amount determined in accordance with the terms of the applicable subcontracts and purchase orders.

§ 12.4.3 Neither the Owner nor the Architect shall have responsibility for payments to a subcontractor or supplier.

§ 12.4.4 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the requirements of the Contract Documents.

§ 12.5 Substantial Completion

§ 12.5.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents and where all required occupancy permits, if any, have been issued so the Owner can occupy or utilize the Work for its intended use.

§ 12.5.2 When the Contractor believes that the Work or designated portion thereof is substantially complete, it will notify the Architect and the Architect will make an inspection to determine whether the Work is substantially complete. When the Architect determines that the Work is substantially complete, the Architect shall prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion, establish the responsibilities of the Owner and Contractor, and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 12.6 Final Completion and Final Payment

§ 12.6.1 Upon receipt of a final Application for Payment, the Architect will inspect the Work. When the Architect finds the Work acceptable and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment. In the event the Architect finds the Work unacceptable, the Architect shall issue a list of unsatisfactory items to the Contractor and the Owner, which the Contractor must complete prior to further payment on the Contract.

§ 12.6.2 Final payment shall not become due until the Contractor submits to the Architect releases and waivers of liens, consent of surety (if required), warranties, and any other data establishing payment or satisfaction of obligations or otherwise reasonably requested by Owner and/or Architect, such as receipts, claims, security interests, or encumbrances arising out of the Contract.

§ 12.6.3 Acceptance of final payment by the Contractor, a subcontractor or supplier in a written certification accompanying the final Application for Payment shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment. The making of final payment shall not be deemed a waiver of claims by the Owner.

§ 12.6.4 Amounts withheld from the final payment to cover any incomplete work are not considered retainage and shall not be paid to the Contractor until the Work is actually completed and accepted by the Owner. Such withholdings shall not be less than 150% of the estimated cost to the complete the Work.

ARTICLE 13 PROTECTION OF PERSONS AND PROPERTY

The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs, including all those required by law in connection with performance of the Contract. The Contractor shall take reasonable precautions to prevent damage, injury, or loss to employees on the Work and other persons who may be affected thereby, the Work and materials and equipment to be incorporated therein, and other property at the site or adjacent thereto. The Contractor shall promptly remedy damage and loss to property caused in whole or in part by the Contractor, or by anyone for whose acts the Contractor may be liable.

ARTICLE 14 CORRECTION OF WORK

§ 14.1 The Contractor shall promptly correct Work failing to conform to the requirements of the Contract Documents. The Contractor shall bear the cost of correcting such rejected Work, including the costs of uncovering, replacement, and additional testing.

§ 14.2 In addition to the Contractor's other obligations including warranties under the Contract, the Contractor shall, for a period of two (2) years after Substantial Completion, correct work not conforming to the requirements of the Contract Documents.

§ 14.3 If the Contractor fails to correct nonconforming Work within a reasonable time, the Owner may correct it in accordance with Section 7.3. The Contractor shall reimburse the Owner for the cost of correction and any related costs and fees, including, but not limited to attorney fees, incurred by the Owner in the pursuit of such correction or recovery of payment for such correction.

§ 14.4 If the Contractor or any subcontractor chooses to use any systems, equipment, facilities, or services which have been incorporated into the Project as a permanent part thereof, the Contractor shall assume full responsibility for damages caused to said systems, equipment, facilities or services, and have damages repaired as required, so that in no case will the performance of the used systems, equipment facilities or services be diminished from the specified criteria as a result of such use.

ARTICLE 15 MISCELLANEOUS PROVISIONS

§ 15.1 Assignment of Contract

Neither party to the Contract shall assign the Contract as a whole without written consent of the other.

§ 15.2 Tests and Inspections

§ 15.2.1 At the appropriate times, the Contractor shall arrange and bear cost of tests, inspections, and approvals of portions of the Work required by the Contract Documents or by laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities.

§ 15.2.2 If the Architect requires additional testing, the Contractor shall perform those tests.

§ 15.2.3 The Owner shall bear cost of tests, inspections, or approvals that do not become requirements until after the Contract is executed and are required through no fault or delay of the Contractor or others. The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.

§ 15.3 Governing Law

The Contract shall be governed by the law of the State of Michigan, except that no claim of the Owner shall be barred as untimely if filed within six (6) years of final completion of the Project. The Architect and Contractor agree to comply with all applicable laws, including laws related to public school construction, including but not limited to the Revised School Code, the School Building Construction Act, the State School Aid Act, and the Michigan Occupational Code.

ARTICLE 16 TERMINATION OF THE CONTRACT

§ 16.1 Termination by the Contractor

If the Work is stopped, unscheduled, under Section 12.3 for a period of ninety (90) days for reasons within the Owner's control and through no fault of the Contractor, the Contractor may, upon seven additional days' written notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work properly executed including reasonable overhead and profit on the portion of the Work completed to the date of termination.

§ 16.2 Termination by the Owner for Cause

§ 16.2.1 The Owner may terminate the Contract if the Contractor

- **.1** refuses or fails to supply enough properly skilled workers or proper materials;
- **.2** fails to make payment to subcontractors for materials or labor in accordance with the respective agreements between the Contractor and the subcontractors;
- **.3** disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority;
- **.4** otherwise commits a breach of a provision of the Contract Documents; or
- **.5** fails to prosecute the Work or any part thereof with promptness and diligence, fails to perform any provisions of this Agreement, goes into bankruptcy or liquidation, makes an assignment for the benefit of creditors, enters into a composition with its creditors or becomes insolvent.

§ 16.2.2 When any of the above reasons exist, the Owner may without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' written notice, terminate employment of the Contractor and may

- **.1** take possession of the site and of all materials thereon owned by the Contractor, and
- **.2** finish the Work by whatever reasonable method the Owner may deem expedient.

§ 16.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 16.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished and until sums due under Section 16.2.4 have been determined.

§ 16.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, such excess shall be paid to the Contractor. If such costs exceed the unpaid balance, the Contractor shall pay the difference to the Owner. This obligation for payment shall survive termination of the Contract.

§ 16.2.5 If the Owner erroneously or improperly terminates the Contractor for cause, then the Owner's action shall be deemed to be a termination for convenience, subject to the provisions of Section 16.3.

§ 16.3 Termination by the Owner for Convenience

The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause. The Contractor shall be entitled to receive payment for Work properly executed.

ARTICLE 17 OTHER TERMS AND CONDITIONS

(Insert any other terms or conditions below.)

«**§ 17.1** The Contractor shall inspect the Work on the Project as it is being performed until final completion and acceptance of the Project by the Owner to assure that the Work performed and the materials furnished are in accordance with the Contract Documents and that Work on the Project is progressing on schedule. In the event that the quality control testing should indicate that the Work, as installed, does not meet the requirements of this Project, the Contractor shall notify the Owner and Architect, the Owner and Architect shall determine the extent of the Work that does not meet the requirements, and the Contractor shall take appropriate corrective action, and advise the Owner of the corrective action.

§ 17.2 The Contractor shall provide daily full-time, on-site field supervision during the entire construction phase. The Contractor agrees to assign the following listed project team members, as listed in their respective capacities to the Project:

Staff Name	Assignment	Contact Information – Mobile Phone & Email

Contractor shall promptly notify the Owner if services of any one of the listed team members become unavailable due to circumstances beyond the Contractor's control, *e.g.*, extended illness or disability, death, termination of employment, etc. No substitution of any of the above listed project team members shall be made without the prior written consent of the Owner; and before any such substitution the Contractor shall submit to the Owner a detailed justification supported by the qualification of any proposed replacement. Contractor is not entitled to additional compensation for any such substitution(s) of the project team members. The Owner reserves the right to require the replacement of any or all of the above listed team members for cause; and the Contractor shall provide suitable replacement or replacements upon two (2) weeks' notice.

This Section 17.2 shall not be interpreted to eliminate or reduce the Architect's responsibilities under MCL 388.851, *et seq*. or MCL 339.2011, as applicable, or the Owner/Architect Agreement.

§ 17.3 The Owner, being a public body, shall render required decisions within a reasonable time after being requested to do so by the Contractor, taking into consideration its obligations under the Open Meetings Act and others. The Contractor, assisted by the Architect, shall prepare and submit all recommendations for which approval is required by Owner as soon as reasonably possible unless another schedule is agreed to by the Owner, in writing. The Contractor shall not cause unreasonable delays in the orderly progress of work.

§ 17.4 NOTICE OF CLAIMS

A claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, or other relief with respect to the terms of the Contract, including, but not limited to, additional sums, additional time for performance, or damages. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim. The Contractor shall not knowingly (as "knowingly" is defined in the Federal False Claims Act, 31 USC 3729, *et seq*.) present or cause to be presented a false or fraudulent Claim. As a condition precedent to making a Claim by the Contractor, the Claim shall be accompanied by an affidavit sworn to before a notary public

or other person authorized to administer oaths in the State of Michigan and executed by an authorized representative of the Contractor, which states that: "The Claim which is submitted herewith complies with subparagraph 17.5 of the Owner/Contractor Agreement, as amended, which provides that the Contractor shall not knowingly present or cause to be presented a false or fraudulent claim."

Claims by the Contractor must be initiated by written notice to the Owner and to the Architect. Claims by the Contractor must be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the Contractor first recognizes, or should have recognized, the condition giving rise to the Claim, whichever is later. Failure to timely and properly initiate a claim shall be an irrevocable waiver of such claim. Claims by the Owner shall be governed by the applicable statute of limitations period.

Pending final resolution of a Claim, including mediation and/or litigation, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make undisputed payments in accordance with the Contract Documents.

§ 17.5 If any provision of this Agreement shall be held to be illegal, invalid or otherwise unenforceable by law, the remainder of this Agreement shall not be affected thereby and each provision, term, covenant or condition of this Agreement shall be enforced to the fullest extent permitted.

§ 17.6 Dispute Resolution

The parties shall endeavor to resolve their disputes by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with their Construction Industry Mediation Procedures in effect on the date of this Agreement. A request for mediation shall be made, in writing, delivered to the other party to this Agreement, and filed with the person or entity administering the mediation. For any claim not resolved by mediation required herein, the parties shall pursue litigation as their method of binding dispute resolution.

§ 17.7 Nothing herein shall be deemed to eliminate or reduce the Owner's defense of governmental immunity. »

§ 17.8 Notice

§ 17.8.1 All notices or other communications hereunder to either party shall be (1) in writing, and, if mailed, shall be deemed to have been given on the earlier of actual receipt by the intended recipient or on the third business day after the date when deposited in the United States mail by registered or certified mail, postage pre-paid, or by personal delivery, Federal Express or other recognized and reputable overnight courier, addressed as hereinafter provided, and (2) addressed as follows:

§ 17.8.2 If to the Owner:
The Owner's Designated Representative:
(Name, address, email address, and other information)
«Alex Smart, Executive Director of Facilities and Operations»
«Grand Rapids Public School District
1331 Martin Luther King Jr. Street SE
«Grand Rapids, Michigan 49506»
« »
«The Owner may change the representative and the representative's authority in its sole discretion. The Owner will notify the Contractor of any such changes. »

§ 17.8.2.1 With a copy to the Owner's Representative Consultant:
The Owner has engaged Plante Moran Realpoint, LLC ("PMR") as an independent Owner's Representative Consultant ("Owner's Representative Consultant"). PMR shall have not authority, express or implied, to enter into agreements on behalf of the Owner, to modify or amend this Agreement, or to otherwise bind the Owner. The Construction Manager shall work cooperatively with PMR and shall keep PMR informed of matters concerning the Project. The following individual shall be the primary contact for the Owner's Representative Consultant, subject to change in the Owner's discretion:
Scott Weir
Plante Moran Realpoint, LLC
634 Front Avenue NW Suite 300

Grand Rapids, MI 49504
Scott.weir@plantemoran.com; (616) 643-4274

The Owner, Contractor, and PMR acknowledge and agree that the Owner's representative identified in Section 17.8.2 and the Owner's Representative Consultant identified in Section 17.8.2.1 are separate and distinct individuals with separate and distinct rights and responsibilities.

§ 17.8.3 If to the Contractor:
The Contractor's representative:
(Name, address, email address, and other information)

This Agreement entered into as of the day and year first written above.
(If required by law, insert cancellation period, disclosures or other warning statements above the signatures.)

« »

GRAND RAPIDS PUBLIC SCHOOL DISTRICT, _____,

OWNER *(Signature)*
«Alex Smart,
Executive Director of Facilities and Operations»
(Printed name and title)

CONTRACTOR *(Signature)*
« »« »
(Printed name and title)
LICENSE NO.:
JURISDICTION:

Modified: 04-03-25; 12:17pm

Guidelines for Contractors/Subcontractors – GRPS Bond Projects for Direct Contracts

	Projects Under $1MM – without structural revisions	Projects $1MM to $5MM without significant structural revisions	Projects over $5MM in value	Comments
Professional Liability				
Each Claim Made	$ 1,000,000	$ 1,000,000	$ 2,000,000	Larger exposure (over $10M) $2MM/$4MM
Aggregate	$ 2,000,000	$ 2,000,000	$ 2,000,000	
Contractors Pollution Liability-Policy limit:	$3,000,000	$3,000,000	$3,000,000	Exceptions for this requirement are to be requested and approved in writing to the construction manager and the owner.
Examples of Exposures – fuel tanks on site, large fleet/equipment, HVAC work, electrical work, abatement, chemical products onsite				
Commercial General Liability				
General Aggregate	$ 2,000,000	$ 3,000,000	$ 3,000,000	
Products/Completed Operations Aggregate	$ 2,000,000	$ 3,000,000	$ 3,000,000	
Each Occurrence Limit	$ 1,000,000	$ 1,000,000	$ 1,000,000	
Personal/Advertising Injury	$ 1,000,000	$ 1,000,000	$ 1,000,000	
Automobile Liability				
Bodily Injury/Property Damage (Each Accident)	$ 1,000,000	$ 1,000,000	$ 1,000,000	Combined Single Limit
Workers' Compensation				

Coverage A (Workers' Compensation)	Statutory	Statutory	Statutory	
Coverage B (Employers Liability) Per Accident	$ 1,000,000	$ 1,000,000	$ 1,000,000	Include waiver of subrogation endorsement
Per Disease Policy Limit	$ 1,000,000	$ 1,000,000	$ 1,000,000	
Per Disease per Employee	$ 1,000,000	$ 1,000,000	$ 1,000,000	
Umbrella Liability				
Each Occurrence Limit	$ 2,000,000	$ 3,000,000	$ 5,000,000	Limit suggestions are based on General Aggregate applying on a per project basis
General Aggregate Limit	$ 2,000,000	$ 3,000,000	$ 5,000,000	
Products/Completed Operations Aggregate	$ 2,000,000	$ 3,000,000	$ 5,000,000	

Additional Insurance Requirements:

(1) All insurance coverage is shall be issued by an insurance company authorized to do business in the State and which maintains an A.M. Best rating of A-X or better.

(2) The Contractor shall maintain the required insurance on an occurrence-basis for at least one year following the date of Substantial Completion and/or on a claims-made basis for at least six years following the date of Substantial Completion.

(3) Auto Liability Coverage shall be for all owned, non-owned or hired motor vehicles.

(4) Workers Compensation to include waiver of subrogation - Contractor hereby agrees to waive rights of subrogation, which any insurer of Contractor may acquire from Contractor by virtue of the payment of any loss. Contractor agrees to obtain any endorsement that may be necessary to affect this waiver of subrogation. The Workers' Compensation policy shall be endorsed with a waiver of subrogation in favor of Grand Rapids Public Schools its subsidiaries, affiliated entities, their officers, officials, employees, and volunteers for all work performed by the Contractor, its employees, agents and subcontractors.

(5) Additional Insured Provision for General Liability/Umbrella: To the extent commercially available, the additional insured coverage shall be no less than that provided by Insurance Services Office, Inc. (ISO) forms CG 20 10 07 04, CG 20 37 07 04, and, with respect to the Architect and the Architect's consultants, and the Construction Manager and the Construction Manager's consultants, CG 20 32 07 04. The Additional Insured status shall apply to the full limits of liability purchased by the Contractor, its Subcontractors and Vendors even if those limits of liability are in excess of those required by this Agreement. In respect to the Subcontractor's and Vendor's Commercial General Liability and Umbrella/Excess Liability policies

(6) For General Liability/Umbrella - General Aggregate limit must apply on a per project/per location aggregate basis; Exceptions for this requirement are to be requested and approved in writing to the construction manager and the owner.

(7) General Liability to include a minimum of $1,000,000 Abuse and Molestation coverage. Exceptions for this requirement are to be requested and approved in writing to Plante Moran Realpoint, LLC and Grand Rapids Public School District.

(8) Certificates of insurance must contain a clause stating that coverage afforded by the policies will not be canceled or materially altered without at least thirty (30) days' advanced written notice to the Owner and Architect. If requested, Contractor shall provide true and full copies of any or all required insurance policies.

(9) If there is a Drone Exposure also include : Insurance for the use or operation of manned or unmanned aircraft, if the Work requires such activities, with policy limits of not less than $1,000,000 per claim and $1,000,000 in the aggregate.

(10) If Asbestos Abatement Exposure must include requirements shown in the chart above for Contractors pollution liability.

EXHIBIT “A”

A. The Contractor, _____, confirms the modernization specification and contractual agreement have been carefully examined and a survey of the prevailing conditions has been performed at GRPS - Various Locations, Grand Rapids, MI, Various Locations, Grand Rapids, MI.

1. The undersigned proposes to furnish all labor, material and fees required for the project execution at GRPS - Various Locations, Grand Rapids, MI, in accordance with specifications, for the contract prices specified below.

☐ No exceptions or clarifications taken.

☐ See attachment for exceptions/clarifications.

SCHEDULE OF INITIAL BASE HOURLY RATES FOR CONTRACTOR'S PERSONNEL

VDA No. **76259**	Contractors Hourly Base Cost Including Fringe Benefits	Overhead and Profit Percentage	Straight Time Rate Hourly Selling Price	Time and Half Premium Rate Hourly Selling Price	Double Time Premium Rate Hourly Selling Price
Maintenance Mechanic					
Modernization Mechanic					
Helper					
Mechanic In Charge					

EXHIBIT “B”

REQUEST FOR BIDDER QUALIFICATIONS

1. Date _____

2. Firm Name _____

3. Address _____

_____

Telephone No. _____

4. Type of Company (Corporation, Partnership, Sole Proprietorship)

_____

5. Type of elevator work in which you specialize (Check one)

   a. New Installation _____

   b. Renovation/Alteration _____

   c. Maintenance _____

6. List all principals/officers with their titles and years of experience with this firm

   a. _____

   b. _____

   c. _____

7. List trade association memberships

   a. _____

   b. _____

   c. _____

8. List maintenance service references for similar elevator systems currently serviced by your company under a full comprehensive maintenance program in the same logistical area. Provide building address, contact name and telephone numbers. List number of elevator units in each contract.

   a. _____

   b. _____

   c. _____

9.

Field Union affiliation (if any) _____

10. Field Personnel & Device Count: Grand Rapids, Michigan

   a. Number of employees: _____

   b. Number of maintenance mechanics: _____

   c. Number of installation mechanics: _____

   d. Number of maintenance mechanics familiar with these types of elevators**:**

   _____.

   e. Number of field adjusters: _____

   f. Total number of devices in the _____ area: _____

11. Spare Parts

   a. Does Contractor have in-house inventory of parts and control boards to support the following control types in this portfolio:

   (1) _____: _____

   (2) _____: _____

(3) _____: _____

b. Where would general spare parts be stored: _____

12. After Hour / Overtime Callback Management

a. How many mechanics are on-call after hours:

i. Monday – Friday _____
ii. Saturday – Sunday _____

b. How many supervisors are on-call during overtime callback times _____

c. How are callbacks handled (i.e., Contractor Operator / Call Center) _____

PREPARED BY: _____

TITLE: _____

(Duly Authorized Principal Officer)

Multiple Unit Location Pricing Breakdown

Central High:

Unit #20849, Schindler Haughton:	$_____
Unit #20850, Schindler Haughton:	$_____
Unit #29483, Millar/Canton:	$_____
Unit #29484, Millar/Canton:	$_____

City High Middle:

Unit #19676-Creston, Montgomery:	$_____
Unit #18277-Gym, Otis:	$_____

Ottawa:

Unit #14525-PE2, Montgomery:	$_____
Unit #14524-PE3, Montgomery:	$_____
Unit #15240-Pole, Montgomery:	$_____

Union:

Unit #11080, Dover:	$_____
Unit #19654, Schindler Haughton:	$_____

END OF SECTION

SECTION 14 24 23 – HYDRAULIC PASSENGER ELEVATORS

PART 1 - GENERAL

1.1 SUMMARY AND DEFINITIONS

A. Related Documents

1. GRPS Bid Documents

A. Intent

1. This section includes:

   a. Hydraulic passenger Elevators

2. The following outlines the scope of work covered in this Section:

   a. Comprehensive “Turnkey” modernization of Twenty-Six (26) elevators district wide. The location details are listed further on in the Bid Documents.
   b. Completion of Related Work identified herein Item 1.5.A.
   c. This is a "TURN-KEY" project with the Elevator Contractor designated the "PRIME CONTRACTOR" for all related and non-related work specified and required unless specifically excluded or referenced to be done by others.

   As this is a “Turn-Key” project, with the Elevator Contractor being the “Prime” Contractor, it is the Elevator Contractor’s responsibility to perform a detailed survey of the existing jobsite conditions to determine applicability and detailed scope for related work completion.

   The Elevator Contractor is required to retain the services of trade sub-contractors that are either experienced in working as subcontractors on elevator modernization projects or that have relevant experience on similar projects. The trade sub-contractors shall be required to complete a detailed survey of related work / building conditions at this location(s) alongside the Elevator Contractor as a requirement to provide cost proposals for the related scope of work. At a minimum, trade sub-contractors that are required to be included on the Elevator Contractors project team should include:

   Electrical Contractor

   Mechanical Contractor

   Fire / Life Safety Contractor

   The Elevator Contractor is required to identify in their proposal the Trade sub-contractors utilized to compile their cost estimates included in their Base Bid.

It is the intent of this specification that the Elevator Contractor include in their Base Bid the cost to complete all elevator and related work that will be required to return each of the units to public use with no Code violations or punch-list items identified by the local Authority Having Jurisdiction (AHJ) as remaining to be completed. As such, the items Identified in Section 1.6.A of the Technical Specifications are intended to be as accurate a listing as can be complied at the time of preparation of these documents.

However, should other related building work items be necessary to be completed to meet the requirements of the AHJ for issuance of permanent elevator operating certificates / permits, it will be the responsibility of the Elevator Contractor to complete the additional items under the scope of their Base Bid amount, with no additional costs to the Owner.

3. Related equipment shall be designed, constructed, installed and adjusted to produce the highest results with respect to smooth, quiet, convenient and efficient operation, durability, economy of maintenance, and the highest standard of safety.
4. It is not the intent of these specifications to detail the construction and design of all parts of the equipment, but it is expected that the type, materials, design, quality of work and construction of each part shall be adequate for the service required, durable, properly coordinated with all other parts, and in accordance with the best commercial standards applicable and of the highest commercial efficiency possible.
5. Electric and magnetic circuits and related parts shall be of proper size, design and material to avoid heating and arcing, and all other objectionable effects which may reduce the efficiency of operation, economy of maintenance and/or net-useful life of the apparatus.
6. Minimum requirements for design, materials, etc., are for certain parts of the equipment. Equivalent requirements approved by the Consultant shall apply to such parts as are of special design, construction or material and to which the specified requirements are not directly applicable. These minimum requirements as a whole shall be considered as establishing proportionate general minimum standards for all parts of the equipment.
7. The Consultant may permit variations from the requirement of these specifications to permit use of the Contractor's standard equipment, provided such standard equipment is in every way adequate for the intended use and meets the full intent of these specifications. All such variations proposed by the manufacturer shall be called to the attention of the Consultant and shall only be made if approved in writing prior to the award of the contract.
8. General requirements for design, materials and construction are intended primarily to apply to the heavy-duty and important parts of the equipment specifically mentioned and to other parts of similar duty and importance. Less important and light-duty parts may be of the standard design, materials and construction provided that, in the opinion of the Consultant, such standards are in accordance with the best commercial practice and are fully adequate for the purpose of use. All such variations shall be made only on the Consultant's written approval.
9. All equipment and component parts installed, supplied or provided under this contract shall be manufactured and distributed by a third-party, non-installer company servicing the vertical transportation industry.

    a. Apparatus shall conform to the design and construction standards referenced herein and shall be rated the best commercial grade suitable for this application.
    b. Equipment and component systems shall not employ any experimental devices or proprietary designs that could hamper and/or otherwise prohibit subsequent maintenance repairs or adjustments by all qualified contractors.

c. Manufacturers of the apparatus shall provide technical support and parts replacements for their equipment and component systems for a minimum of twenty (20) years and issue such guarantee of support to the purchaser with written certification naming the final Owner of their product(s) to ensure the apparatus or systems remain maintainable regardless of who may be selected for future service.

10. All equipment provided shall be factory and field tested with a history of design reliability and net-useful life established.

    a. Contractor must be able to demonstrate the apparatus to be installed has been used successfully in a substantially similar manner under comparable conditions.
    b. If the apparatus proposed differs substantially in construction, material composition, design, size, capacity, duty or other such rating from the equipment previously used for the same purpose by the manufacturer, the Consultant may reject the apparatus or require the vendor test and demonstrate the adequacy and suitability for this particular situation. Any necessary tests shall be performed at the sole expense of the Contractor with no prior guarantee of acceptance after the testing procedure.

11. The Contractor shall not use as part of the permanent equipment any experimental devices, proprietary design, components, construction of materials which have not been fully tried out in at least substantially similar or under comparable service, except as may be especially approved by the Consultant. If any important equipment or devices to be used on this installation differ substantially in construction, materials, design, size, capacity or duty from corresponding items previously used for the same purpose by the manufacturer, they shall pass such tests as the Consultant may require to fully show their adequacy and suitability. These tests shall be in addition to tests herein specified and shall be made at the expense of the Contractor.
12. Certain design limitations, tests, etc., are herein specified as a partial check of the adequacy of design, construction and materials used. These requirements do not cover all features necessary to ensure satisfactory and approved operation, etc., of the equipment.
13. It is understood, the entire system shall be designed, fabricated, modified and/or upgraded in full compliance with applicable local laws and code standards. The absence of a particular item or requirement shall not relieve the Contractor of the full and sole responsibility for such equipment, features and/or procedures.
14. With the exception of only those items specifically identified as being performed by others, the Specifications are intended to include all engineering, material, labor, testing, and inspections needed to achieve work specified by the Contract Documents. Inasmuch as it is understood that any incidental work necessary to complete the project is also covered by the Specifications, bidders are cautioned to familiarize themselves with the existing job site conditions. Additional charges for material or labor shall not be permitted subsequent to execution of the Contract.
15. Bidders must report discrepancies or ambiguities occurring in the Specifications to the Consultant for resolution prior to the bidding deadline, otherwise the Specifications shall be deemed acceptable in their existing form.

B. Termination of Existing Agreement(s)

1. By submitting a bid, the existing maintenance provider agrees that any service contract(s) in effect shall be terminated by the Owner should the project be awarded to another vendor upon thirty (30) day written notice to the Contractor by the Owner.

a. The contract(s) shall be terminated with no penalty to the Owner or Contractor.
b. Owner will be responsible for money owed the Contractor for services provided and work performed up until the date of cancellation.

C. Abbreviations and Symbols

1. The following abbreviations, Associations, Institutions, and Societies may appear in the Project Manual or Contract Documents:

ADA	Americans with Disabilities Act
AHJ	Authority Having Jurisdiction
AIA	American Institute of Architects
ANSI	American National Standards Institute
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWS	American Welding Society
IBC	International Building Code
IEEE	Institute of Electrical and Electronics Engineers
NEC	National Electrical Code
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Agency
OSHA	Occupational Safety and Health Act

D. Codes and Ordinances / Regulatory Agencies

1. Work specified by the Contract Documents shall be performed in compliance with applicable Federal, State, and municipal codes and ordinances in effect at the time of Contract execution. Regulations of the Authority Having Jurisdiction shall be fulfilled by the Contractor and Subcontractors. The entire installation, when completed, shall conform with all applicable regulations set forth in the latest editions of:

a. Local and/or State laws applicable for logistical area of project work.
b. Building Code applicable to the AHJ.
c. Elevator Code applicable to the AHJ.
d. Safety Code for Elevators and Escalators, ASME A17.1 and all supplements as modified and adopted by the AHJ.
e. Safety Code for Elevators and Escalators, A17.1S supplement to A17.1 as modified and adopted by the AHJ for Machine Room Less installations (MRL).
f. Guide for Inspection of Elevators, Escalators, and Moving Walks, ASME A17.2.
g. Safety Code for Existing Elevators and Escalators, ASME A17.3 as modified and adopted by the AHJ.
h. Guide for emergency evacuation of passengers from elevators, ASME A17.4.
i. National Electrical Code (ANSI/NFPA 70).
j. American with Disabilities Act - Accessibility Guidelines for Building and Facilities and/or A117.1 Accessibility as may be applicable to the AHJ.
k. ASME A17.5/CSA-B44.1 - Elevator and escalator electrical equipment.
l. ECC (Energy Conservation Code) as may be applicable to the AHJ.

2. The Contractor shall advise the Owner's Representative of pending code changes that could be applicable to this project and provide quotations for compliance with related costs.

E. Reference Standards

1. AISC - Specification for the Design, Fabrication and Erection of Structural Steel for Buildings.
2. ANSI/AWS D1.1 - Structural Welding Code, Steel.
3. ANSI/NFPA 80 - Fire Doors and Windows.
4. ANSI/UL 10B - Fire Tests of Door Assemblies.
5. ASTM D1785 - PVC Pipe.
6. ASTM D2466 – PVC Pipe Fittings.
7. ASTM D2564 – Cement for PVC Pipe and Fittings.
8. ANSI/IEEE - 519-Latest Edition.
9. ANSI/IEEE - Guide for Surge Withstand Capability (SWC) Tests.
10. ANSI Z97.1 – Laminated/Safety Tempered Glass.

F. Definitions

1. Defective Work: Operation or control system failure, including excessive malfunctions; performances below specified ratings; excessive wear; unusual deterioration or aging of materials or finishes; unsafe conditions; need for excessive maintenance; abnormal noise or vibration; and similar unusual, unexpected, and unsatisfactory conditions.
2. Provide: Where used in this document, provide shall mean to install new device, apparatus, system, equipment or feature as specified in this document.
3. Definitions in ASME A17.1 as amended or modified by the AHJ apply to work of this Section.

1.2 PERMITS AND SUBMITTALS

A. Permits

1. Comply with the requirements of Division 01.
2. Prior to commencing work specified by the Contract Documents, the Contractor shall, at its own expense, obtain all permits or variances as may be required by the AHJ and provide satisfactory evidence of having obtained said permits and variances to both the Owner's Representative and Consultant.
3. File necessary drawings for approval of all Authorities Having Jurisdiction.
4. The Elevator Contractor shall undertake the necessary review and search procedure to identify open applications and/or outstanding violations for this property; and close-out such applications and/or expunge such violations relative to the project scope as required for final acceptance by the AHJ.

    a. Outstanding applications and violations must be indicated on the request for permit filing for this procedure to ensure such applications and/or violations are dismissed accordingly.
    b. All relative costs shall be included in the base bid proposal with the understanding that corrective actions are covered under the specified scope of work.

B. Submittals

1. Prior to beginning the work, the Contractor shall submit and have approved copies of shop drawings and standard cuts. These items shall include:

a. All accessories. Controller, Pump Unit, Door Operator, and Fixtures.

2. The Consultant and the Owner's Representative shall pass on the submittals with reasonable promptness and the Contractor shall be responsible for ensuring that there will be no delay in their work or that of any other trade involved.
3. Approved filing and submittal requirements must be completed before equipment and related materials are ordered.
4. Copies of Department of Buildings' permits and/or governing authority's documents will be posted at the job site with copies issued to the Owner's Agent, Owner's Representative and Consultant.
5. Samples of wood, metal, plastic, paint or other architectural finish material applicable to this project shall be submitted for approval by the Owner's designee.
6. It shall be understood that approval of the drawings and cuts by Owner's designee, Architect and/or Consultant shall be for general arrangement only and does not include measurements which are the Contractor's responsibility or approval of variations from the contract documents required by the AHJ.
7. The Contractor shall prepare a record log and maintain all submittals, shop drawings, catalog cuts and samples.

C. Measurements and Drawings

1. Drawings or measurements included with the bidding material shall be for the convenience of the bidders only and full responsibility for detailed dimensions lies with the Contractor.
2. In the execution of the work on the job, the Contractor shall verify all dimensions with the actual conditions.
3. Where the work of the Elevator Contractor is to join other trades, the shop drawings shall show the actual dimensions and the method of joining the work of the various trades.

D. Substitutions

1. Requests for substitutions will be considered under the following time limitations and situations:

   a. Not less than ten (10) calendar days before bids are due.
   b. Work or equipment specified becomes unavailable through unforeseen events such as strikes, loss of manufacturer's plant through fire, flood or bankruptcy.

2. Requested substitutions will be reviewed and adjudged. Failure of the Consultant to raise objection shall not constitute a waiver of any of the requirements of the Contract Documents.
3. Request for substitutions shall include complete data with drawings and samples as required, including the following:

   a. Quality Comparison - Proposed substitution versus the specified product.
   b. Changes required in other work because of the substitution.
   c. Effect on the construction schedule.
   d. Cost Data - Resulting from the proposed substitution versus the specified product. The Contractor shall certify that the cost data presented is complete and includes all related costs under this Contract.

4. When proposing a substitution, the Contractor represents that:

    a. They have investigated the proposed substitution and have determined that it is equal to or better than the product specified.
    b. They will guarantee the substitution in the same manner as the product specified.
    c. They will coordinate and make other changes as required in the work as a result of the substitution.
    d. They waive all claims for additional costs as a result of the substitution, with the exception of those identified above under "cost data".

5. The Consultant will be sole judge of the acceptability of the proposed substitution.
6. The Consultant will have authority to approve or reject substitutions or to change the specified standards of quality. However, neither this authority to act under this provision nor any decision made in good faith, either to exercise or not to exercise this authority, shall give rise to any duty or responsibility of the Consultant to the Contractor, any Subcontractor, any Sub-Subcontractor, any of their agents or employees or any other persons performing the work or offering to perform the work.

E. Changes in Scope and Extra Work

1. The Owner may at any time make changes in the specifications, plans and drawings, omit work, and require additional work to be performed by the Contractor.

    a. Each such addition or deletion to the Contract shall require the Owner and the Contractor to negotiate a mutually acceptable adjustment in the contract price, and, for the Contractor to issue a change order describing the nature of the change and the amount of price adjustment.
    b. The Contractor shall make no additions, changes, alterations or omissions or perform extra work except on written authorization of the Owner.
    c. Each change order shall be executed by the Contractor, Owner, and the Consultant.

F. Keys

1. Upon the initial acceptance of work specified by the Contract Documents on each unit, the Contractor shall deliver to the Owner, six (6) keys for each general key-operated device that is provided under these specifications in accordance with ASME A17.1, Part 8 standards as may be adopted and modified by the AHJ.
2. All other keying of access or operation of equipment shall be provided in accordance with ASME A17.1 Part 8 as may be adopted and modified by the AHJ.

G. Diagnostic Tools

1. Prior to seeking final acceptance of the project, the Contractor shall deliver to the Owner any specialized tools required to perform diagnostic evaluations, adjustments, and/or programming changes on any microprocessor-based control equipment installed by the Contractor. All such tools shall become the property of the Owner.

    a. Owner's diagnostic tools shall be configured to perform all levels of diagnostics, systems adjustment and software program changes which are available to the Contractor.

b. Owner's diagnostic tools that require periodic re-calibration and/or re-initiation shall be performed by the Contractor at no additional cost to the Owner for a period equal to the term of the maintenance agreement from the date of final acceptance of the project.
c. The Contractor shall provide a temporary replacement, at no additional cost to the Owner, during those intervals in which the Owner might find it necessary to surrender a diagnostic tool for re-calibration, re-initiation or repair.

2. Contractor shall deliver to the Owner, printed instructions, access codes, passwords or other proprietary information necessary to interface with the microprocessor-control equipment.

H. Service Support Requirements / Spare Parts

1. Software / Firmware Updates

a. During the life of the equipment and subject to the term of the maintenance agreement, where revisions to firmware and/or software are issued by the control manufacturer or manufacturer of solid state and microprocessor-based subsystems subsequent to the beneficial use of the equipment, updates shall be provided so that the installation and spare circuit boards are current with respect to software and firmware versions.

I. Wiring Diagrams, Operating Manuals and Maintenance Data

1. Comply with the requirements of Division 01.
2. Deliver to the Owner four (4) identical volumes of printed information organized into neatly bound manuals prior to seeking final acceptance of the project.
3. The manuals shall also be submitted in electronic format on non-volatile media, incorporating raw 'CAD' and/or Acrobat 'PDF' file formats.
4. Manuals, as well as electronic copies, shall contain the following:

a. Step-by-step adjusting, programming and troubleshooting procedures that pertain to the solid-state microprocessor-control and motor drive equipment.
b. Passwords or identification codes required to gain access to each software program in order to perform diagnostics or program changes.
c. A composite listing of the individual settings chosen for variable software parameters stored in the software programs of both the motion and dispatch controllers.
d. Method of control and operation.

5. Provide four (4) sets of "AS INSTALLED" straight-line wiring diagrams in both hard and electronic format in accordance with the following requirements:

a. Displaying name and symbol of each relay, switch or other electrical component utilized including identification of each wiring terminal.
b. Electrical circuits depicted shall include all those which are hard wired in both the machine room and hoistway.
c. Supplemental wiring changes performed in the field shall be incorporated into the diagrams in order to accurately replicate the completed installation.

6. Furnish four (4) bound instructions and recommendations for maintenance, with special reference to lubrication and lubricants.
7. Manuals or photographs showing controller repair parts with part numbers listed.

J. Training

1. Prior to seeking final acceptance of the project, the Contractor shall conduct a four (4) to eight (8) hour training program on-site with building personnel selected by the Owner.
2. The focus of the session shall include:

    a. Instructions on proper safety procedures and who to contact for the purpose of assisting passengers that may become entrapped inside an elevator car.
    b. Explain each control feature and its correct sequence of operation.

3. Control features covered shall include but not be limited to:

    a. Emergency Fire Recall Operation - Phase I.
    b. Emergency In-car Operation - Phase II.
    c. Emergency Communications Equipment.

K. Patents

1. Patent licenses which may be required to perform work specified by the Contract Documents shall be obtained by the Contractor at his own expense.
2. The Contractor agrees to defend and save harmless the Owner, Consultant and agents, servants, and employees thereof from any liability resulting from the manufacture or use of any patented invention, process or article of appliance in performing work specified in the Contract Documents.

L. Advertising

1. Advertising privileges shall be retained by the Owner.
2. It shall be the responsibility of the Contractor to keep the job site free of posters, signs, and/or decorations.
3. Contractor's logo shall not appear on faceplates or entrance sills without the approval of the Owner.

1.3 QUALITY ASSURANCE

A. Materials and Quality of Work

1. All materials are to be new and of the best quality of the kind specified.
2. Installation of such materials shall be accomplished in a neat manner and be of the highest quality.

    a. Should the Contractor receive written notification from the Owner stating the presence of inferior, improper, or unsound materials or quality of installation, the Contractor shall, within twenty-four (24) hours, remove such work or materials and make good all other work or materials damaged.

b. Should the Owner permit said work or materials to remain, the Owner shall be allowed the difference in value or shall, at its election, have the right to have said work or materials repaired or replaced as well as the damage caused thereby, at the expense of the Contractor, at any time within one (1) year after the completion of the work; and neither payment made to the Contractor, nor any other acts of the Owner shall be construed as evidence of acceptance and waiver.

B. Electrical Design Requirements (General)

1. The following typical requirements shall apply to all parts of the work and are supplementary to other requirements noted under the respective headings.

a. The design and construction of the motors shall conform to the requirements of these specifications and to the ASME Standards for Rotating Electrical Machinery with revisions issued to the first day when the work of this Contract was advertised.

1) Motors shall operate successfully under all loads and speeds and during acceleration and deceleration.
2) Motors shall be designed for quiet operation without excessive heat.
3) Insulation on motor coils and windings and on all insulated switch, relay, brake and other coils shall conform to the requirements of minimum Class "F" insulation, as defined in ANSI Standards for Rotating Electrical Machinery. All motors shall be impregnated twice.
4) Switches, relays, etc., on controller, starter and signal panels and similar items on other parts of the equipment shall be the latest improved type for the condition of use. They shall function properly in full accordance with the requirements of the machines controlled and with the specified operating requirements of the elevator. Any of these parts showing wear or other injurious effects during the guarantee period to the extent that abnormal maintenance is required or indicated shall be replaced with proper and adequate parts by the Contractor.
5) Contacts in elevator motor circuits which are intended to be opened by governors or other safety devices shall be copper to carbon or other approved non-fusing type.
6) Where required, controllers and other component parts of the installation shall be labeled in accordance with the latest codes and standards as adopted and/or otherwise modified by the AHJ.
7) Electrical equipment, motors, controllers, etc., installed under this contract shall have necessary CSA/US or UL/US listing as may be required by the AHJ. Equipment shall be labeled or tagged accordingly.

C. Materials, Painting and Finishes

1. Two (2) coats of rust inhibiting machinery enamel shall be applied to exposed ferrous metal surfaces in the pit that do not have a galvanized, anodized, baked enamel, or special architectural finishes.
2. Two (2) coats of rust inhibiting enamel paint to the machinery located within the machine room and secondary level (where applicable) as well as to the machine room floors.
3. Architectural metal surfaces of bronze or similar non-ferrous materials which are specified to be refinished, reclad and/or provided new, shall be sufficiently clear coated so as to resist

tarnishing during normal usage for a period of not less than twelve (12) months after final acceptance by the Owner.

4. Identify all equipment including buffers, crosshead, safety plank, machine, controller, drive, governor, disconnect switch, etc., by 4" high numerals which shall contrast with the background to which it is applied. The identification shall be either decalcomania or stencil type.
5. Paint or provide decal-type floor designation not less than six (6) inches high on hoistway doors (hoistway side), fascias and/or walls as required by Code at intervals not exceeding 7'-0". The color of paint used shall contrast with the color of the surface to which it is applied.

D. Accessibility Requirements

1. Locate the alarm button and emergency stop switch at 35", and floor and control buttons not more than 48" above the finished floor. The alarm button shall illuminate when pressed for visual acknowledgement to user.
2. Provide raised markings in the panel to the left of the car call and other control buttons. Letters and numbers shall be a minimum of 5/8" and raised .03" and shall be in contrasting color to the call buttons and cover plate.
3. The centerline of new hall push button shall be 42" above the finished floor.
4. The hall arrival lanterns, or cab direction lantern provided shall sound once for the "up" direction and twice for the "down" direction. Design and locate fixtures per Federal standards.
5. Provide floor designations at each entrance on both sides of jamb at a height of 60" above the floor.
6. Provide an audible signal within the elevator to tell passenger that the car is stopping or passing a floor served by the elevator.
7. Where elevators operate at a speed greater than 200 fpm, provide a verbal annunciator to announce the floor at which the elevator is stopping where required by the AHJ.
8. Provide signal control timing for passenger entry/exit transitions per Federal and/or Local standards.
9. Ensure sill-to-sill running clearances do not exceed 1-1/4" at all landings served.
10. Provide visual call acknowledgment signal for car emergency intercommunication device.

E. Qualifications

1. The work shall be performed by a company specialized in the business of manufacturing, installing and servicing conveying systems of the type and character required by these specifications with a minimum of ten (10) years of experience.
2. Prior written acceptance is required for manufacturers other than those listed, before quoting this project. Requests for acceptance will not be considered unless they are submitted before bid date and are accompanied by the following information:

    a. List of five (3) similar installations having exact equipment being proposed for this project arranged to show name of project, system description and date of completed installation. The list shall include the names, position and resumes of the construction team and field supervisor of the installations.
    b. Complete literature, performance and technical data describing the proposed equipment. Include the names, position and resumes of the proposed construction team and field supervisor.

c. List of ten (5) service accounts by building name, building manager or owner, including phone numbers.
d. Location of closest service office from which conveying system will be maintained.
e. Location of closest parts inventory for this installation.
f. List of the names, positions and resumes of the construction teams and field supervisor for the installation.

3. After the award, if the type of equipment provided requires structure, mechanical and electrical system changes and/or revisions, the Elevator Contractor shall be responsible for all additional design and construction costs.
4. Electrical equipment, motors, controllers, etc., installed under this contract shall have necessary CSA/US or UL listing as may be required by the AHJ. Equipment shall be labeled or tagged accordingly.

1.4 DELIVERY / STORAGE / HANDLING / COORDINATION

A. Delivery and Storage of Material and Tools

1. Comply with the requirements of Division 01.
2. Delivery, Storage and Handling:

a. Deliver materials to the site ready for use in the accepted manufacturer's original and unopened containers and packaging, bearing labels as to type of material, brand name and manufacturer's name. Delivered materials shall be identical to accepted samples.
b. Store materials under cover in a dry and clean location, off the ground.
c. Remove delivered materials which are damaged or otherwise not suitable for installation from the job site and replace with acceptable materials.

3. The Owner shall bear no responsibility for the materials, equipment or tools of the Contractor and shall not be liable for any loss thereof or damage thereto.
4. The Contractor shall confine storage of materials on the job site to the limits and locations designated by the Owner and shall not unnecessarily encumber the premises or overload any portion with materials to a greater extent than the structural design load of the Facility.

B. Work with Other Trades / Coordination

1. Coordinate installation of sleeves, block outs, equipment with integral anchors, and other items that are embedded in concrete or masonry for the applicable equipment. Furnish templates, sleeves, equipment with integral anchors, and installation instructions and deliver to Project site in time for installation.
2. Coordinate sequence of installation with other work to avoid delaying the Work.
3. Coordinate locations and dimensions of other work relating to the equipment scheduled for installation including pit ladders, sumps, and floor drains in pits; entrance subsills; machine beams; and electrical service, electrical outlets, lights, and switches in pits and machine rooms, secondary levels, overhead sheave rooms and hoistways as it relates to the specific equipment.

C. Removal of Rubbish and Existing Equipment

1. On a scheduled basis, the Contractor shall remove all rubbish generated in performing work specified in the Contract Documents from the job site.
2. Any component of the existing elevator plant that is not reused under the scope of work specified in the Contract Documents shall become property of the Contractor and, as such, shall be removed from the premises at the Contractor's sole expense.
3. The Contractor agrees to dispose of the aforementioned equipment and rubbish in accordance with any and all applicable Federal, State, and municipal environmental regulations, and further accepts all liability that may result from handling and/or disposing of said material.

D. Protection of Work and Property

1. The Contractor shall continuously maintain adequate protection of all their work from damage and shall protect the Owner's property from injury or loss arising out of this contract.
2. The Contractor shall make good any such damages, injury or loss, except such as may be directly caused by agents or employees of the Owner.
3. The Contractor shall provide all barricades required to protect open hoistways or shafts per OSHA regulations. Such protection shall include any necessary guards or other barricades for employee protections during and after the modernization procedure.

1.5 RELATED WORK

A. Work by Elevator Contractor Included in the Base Bid

1. The following requirements shall be applicable based on prevailing conditions at the site of work and/or mandated modifications for code compliance.

    a. Installation of new fully enclosed, externally operated, fused (or circuit breaker), main line and/or auxiliary disconnect switch(es), with 4th wire ground, properly located in accordance with local law that can be locked in the open (off) position.
    b. Provide remote/auxiliary disconnects where new (either by the Elevator Contractor or by others) or existing disconnect switches are not in line-of-sight of the controller.
    c. Installation of new electrical conduit and power feeders between the load side of existing and new main line disconnect switches and new elevator control equipment.
    d. Where there is an increase in HP of the elevator pump motor, Contractor shall conduct an investigation to determine if existing feeder wires and conduit / piping to the elevator machine room are adequate in size to supply the new pump motor. Where they are not adequate in size, or where power supply from the building distribution panel is not large enough for feeder size / motor HP rating, Contractor shall include in their Base Bid proposal the cost to provide new building distribution electrical distribution supply connections, feeder wires and conduit / piping to elevator machine room.
    e. Installation of battery lowering control interface provisions to interlock the mainline disconnect to prevent application of battery lowering operation when disconnect switch is turned to the "off" position. Provide auxiliary contacts and associated wiring and hardware in the existing or new mainline disconnect switch enclosure as required per Code.

f. Provide auxiliary power feeds with required distribution load center (circuit breaker panel) for intercommunication, CCTV systems, cab lighting or other specialty devices existing or to be provided by the Elevator Contractor.

1) Voltage shall be 120 VAC with one (1) 15-Amp circuit breaker or fuse for lighting of each individual elevator car enclosure.
2) Voltage shall be 120 VAC with one (1) 20-Amp circuit breaker or fuse for battery power lowering system.
3) Circuit breakers and/or fused disconnects shall be lockable in the "OFF" position in accordance with applicable code.

g. The top surface of any setback or projection in the hoistway that measures 2" or more in width shall be beveled at an angle of not less than seventy-five (75) degrees from horizontal. Each bevel plate shall be constructed from prime painted 14-gauge cold-rolled steel and installed so as to conform with ASME A17.1 elevator safety code as modified by, and/or in addition to codes and standards accepted by the AHJ.

h. Installation of new permanent dual lamp LED lighting fixtures with protective guards and 110-volt duplex GFI receptacles inside the machine room. Illumination shall be no less than thirty (30) foot-candles at floor level. A light control switch shall be provided immediately adjacent to the machine room entrance door. Provide necessary receptacles as required to supply power to auxiliary elevator equipment and/or remotely located monitors.

i. Provide each elevator pit with a 110-volt GFI duplex receptacle and a permanent dual lamp LED lighting fixture equipped with protective guard. Illumination shall be no less than ten (10) foot-candles at pit floor level. A light control switch must be provided and so positioned as to be readily accessible from the pit entrance door or ladder.

j. Provide the following signage, plates and tags:

1) Provide access doors to each electrical control room, with signs that read "ELEVATOR MACHINE ROOM". Letters shall be not less than 2" high.
2) Provide all required manufacturer data plates and installation-specific tags and signs of the types and styles containing information as required by applicable Codes and Standards as adopted and/or modified by the AHJ.

k. Where the pit extends more than three (3) feet below the sill of the pit access door, provide a permanent fixed metal ladder.

1) Ladder shall extend no less than 48" above the sill of the access door. Handgrips shall extend from the ladder to a point no less than 48" above the sill of the access door where the ladder does not comply.
2) The rungs shall be a minimum of 16" wide. Where prevailing conditions prevent a 16" wide rung, the rung may be reduced to no less than 9".
3) The rungs shall be spaced 12" on center.
4) A clear distance of no less than 4-½" from the centerline of the rungs and handgrips to the nearest permanent object in back of the ladder shall be provided.

a) Where prevailing conditions prohibit the installation of the required ladder as specified above, the Elevator Contractor shall coordinate

requirements necessary for compliance with the Authority Having Jurisdiction.

l. Provide a standard railing conforming to Code on the outside perimeter of the car top on all sides where the perpendicular distance between the edges of the car top and the adjacent hoistway enclosure exceeds 300 mm (12 in.) horizontal clearance or as otherwise required by the Authority Having Jurisdiction.

m. Provide necessary patching, repairing and installation of masonry and/or dry wall for smooth and legal elevator hoistways.

n. All smoke ventilation provisions, including duct work, dampers, fans, fire control interfaces, in accordance with local codes, shall be reviewed for proper operation.

o. Subsequent to the contract execution, the Contractor shall perform a Violation search and review of all open Applications in conjunction with the filing procedure. Subsequently, any and all outstanding Violations and/or open Applications shall be indicated on the Request for Permit; and such outstanding Violations shall be expunged, and open Applications closed out as part of this filing procedure.

1) If requirements and/or work necessary to satisfy outstanding Violation or Applications are <u>not</u> included in the contracted scope of work, the Elevator Contractor shall prepare an itemized listing with relative extra costs to cure the condition(s) and expunge and/or close out the Violation or Application for the Owners' and Consultants' review/approval prior to executing such work procedures.

p. Should the existing HVAC provisions not meet the manufactures ambient temperature and humidity levels, the installation of HVAC provisions inside the machine room so as to maintain ambient temperature and humidity levels that are within the range specified by the microprocessor-control equipment manufacturers.

q. Sumps in pits where provided, shall be covered. The cover shall be level with the pit floor so as not to produce a tripping hazard.

B. Work by Others

1. The following requirements shall be applicable based on prevailing conditions at the site of work and/or mandated modifications for code compliance.

a. Installation of new or modification of existing fire emergency control interface provisions for automatic recall of the elevator(s) through operation of the fire detection system. Provisions shall be made for primary, alternate and third-zone (Fire-Hat) designated fire recall landing with connection contingent on Codes recognized by the local governing authority. The interfacing contacts shall be wired to an electrical junction box located inside each elevator machine room for connection to the elevator control systems by the Elevator Contractor. Each wire shall be clearly labeled with its control function. Coordinate the type of interface required for the specific elevator control apparatus with the Elevator Contractor. Elevator contractor shall coordinate with the GRPS fire alarm company for specific fire alarm requirements to provide Phase I recall and Phase II operation for code compliance.

1) Installation of heat / smoke detecting devices in the elevator machine room, elevator lobbies, top of shaft and / or pit as required for elevator fire recall

operation to meet current requirements of A17.1 and/or the local Governing Authority. Connection and programming of these new devices to existing building fire alarm control panel.

2) Modification of existing fire alarm control panel and interface / wiring to panel as required to accommodate new heat / smoke detecting devices or new elevator fire recall zones, including installation of expansion panel and new power supply(s) (if required) to existing FACP.
3) Software modifications as required to the existing fire alarm control panel as required to accommodate new smoke / heat detecting devices, new elevator fire recall zones, or expansion panel (if required).
4) All wiring, piping, coring, cutting, patching, as required for new ducts / conduits to connect new or modified components of the fire alarm control system to operate elevator fire recall to meet current requirements of ASME A.17.1 and/or the local Governing Authority.

b. Where sprinkler fire protective systems are provided inside any elevator hoistway, machine room or associated machinery space, provisions shall be made for the disconnecting of the main line power supply from the affected elevator prior to activation. This means of disconnect shall be manually reset in accordance with code.
c. Provide a class "ABC" fire extinguisher in electrical machinery and control spaces. Locate the extinguisher in close proximity to the access door.
d. Provide necessary telephone wiring with connection to local telephone service for remote elevator monitoring and/or two-way voice emergency communications systems.

1) Terminate the telephone wiring in junction boxes or standard phone jack terminals in the machine room.
2) Coordinate the quantity and termination method of individual phone connections with the Elevator Contractor.
3) Identify each phone line for connection by the Elevator Contractor to the appropriate elevator device(s).
4) Telephone wiring, where required by applicable codes, shall be installed in conduit.

1.6 WARRANTY / MAINTENANCE SERVICES

A. Contract Close-Out, Guarantee and Warranties

1. The Contractor agrees to certify that work performed in accordance with the Contract Documents shall remain free of defects in materials and quality of work for a period of one (1) year after final acceptance of the completed project, or acceptance thereof by beneficial use on a unit-by-unit basis, whichever occurs first.
2. The sole duty of the Contractor under this warranty is to correct any non-conformance or defect and all damages caused by such defect without any additional cost to the Owner and within fifteen (15) days of notification.
3. The express warranty contained herein is in lieu of all other warranties, express or implied, including any warranty of merchantability or fitness for a particular purpose.
4. In the event the Contractor fails to fulfill its obligations defined herein, the Owner shall have the express right to perform the Contractor's obligations and to charge the Contractor

the cost of such performance or deduct an equal amount from any monies due the Contractor.

B. Maintenance Coverage

1. The following maintenance coverage apply:

a. Guarantee Maintenance

1) Provide full comprehensive preventative maintenance services for a period of twelve (12) months after the final completion and acceptance of the project.
2) Guarantee maintenance and related services shall be provided in accordance with maintenance outlined below and follow the Contractor's Form of Long-Term Full Maintenance Agreement provided in contractors proposal for modernization.
3) Costs related to guarantee maintenance shall be included in the lump sum base bid quotation indicated on the bid form in the space provided.
4) Maintenance/Service delivery must meet all requirements of the AHJ.

b. Long-Term Maintenance

1) Long-term full comprehensive maintenance and related services shall be provided in accordance with Elevator Contractors' standard maintenance agreement. The Contractor's Long-Term Full Maintenance Agreement must include all required Testing. The term of the Long-Term Maintenance Agreement will be for three years from the completion of the Guarantee Maintenance Agreement.
2) Costs related to long-term maintenance shall **not** be included in the lump sum base bid quotation indicated on the bid form in the space provided. A separate proposal document is the be submitted by the Elevator Contractor providing all Services included along with standard terms and conditions.

C. Maintenance

1. Provide full protective maintenance on the specified equipment for a period of twelve (12) months from the date of final acceptance of each elevator. Perform maintenance per the terms of Contractors form of full maintenance agreement as referenced herein.
2. Include regular time call backs in maintenance fee. (24) hour emergency callback service between regular examinations at approved rates. The response time shall not exceed two (2) hour.
3. Maintenance work shall be performed by personnel under supervision and in direct employ of manufacturer and installer.
4. Perform maintenance work during the regular working hours of regular working days of the trade.
5. Maintenance shall include systematic examination, adjustment and lubrication of all equipment and apparatus, including repair or replacement of electrical and mechanical parts of the equipment and apparatus. Repair equipment whenever required and use only genuine standard parts produced and manufactured for equipment concerned.
6. Supply all necessary lubricants, cleaning materials and repair parts required to keep installations in good working order during maintenance periods.

7. Adequate stock of spare parts for maintenance or repair work and minor callback service repairs shall be stocked within the confines of the building in areas designated and assigned by the Owner.
8. Additional parts of other equipment required for maintenance and repair of the systems may be stored at the Contractor's facilities with the understanding delivery of same for emergency procedures must be made within four (4) hours to the job site.
9. Other materials and equipment normally not stocked by the Contractor locally must be available within twenty-four (24) hours for delivery to the job site from remote facilities and/or Supplier Contractors responsible to the Contractor for stocking the materials or equipment.
10. If the requirements for stockade of parts as defined herein are not met on any item, the Contractor shall immediately notify the Owner in writing as to the circumstances and provide a confirmed delivery date for the required materials and equipment.
11. The performance of mandated inspections and tests of the equipment, as required by the AHJ, shall be included in this agreement.

    a. Where testing is required to be performed after normal business hours, Contractor shall invoice the after-hours work at the premium portion of the hourly billing rate only.

12. Spare parts and materials for preventive maintenance on site shall be cataloged and inventoried.

    a. Provide expanded parts list for approval.

1.7 ALTERNATES AND VALUE ENGINEERING:

The following alternatives are elective upgrades which constitute changes to the base scope of work specified. Pricing for each alternate upgrade is requested from the bidder with costs indicated in the appropriate space in the Request for Proposal (RFP). The contractor shall take into consideration, as part of the alternative pricing, alternate work that is required either in lieu of, or in addition to, work specified in the base scope and shall not duplicate costs.

A. Contractor’s Value Engineering Options

1. This alternative is provided for individual contractors to propose optional equipment or otherwise offer cost saving suggestions that will provide the same desired results or further enhance the safety, durability or performance of the elevator systems.
2. Each suggestion must be fully detailed on the contractor’s own letterhead with the associated price change specified on the form of proposal provided.

1.8 ALTERNATES / ALLOWANCES

1. Carry the following allowances each elevator:

    a. Passenger Cab Interior Remodel: $30,000 per cab (Includes new flooring)

2. The above allowances are exclusive of any handling charge, applicable sales and/or use taxes. Wiring, installation and coordination of allowance items shall be included in the base contract.

B. Alternates

1. Value Engineering Alternate

a. It is understood that the base specification reflects minimum standards. The above Value Engineering Alternate allows individual contractors to suggest special performance criteria which may be of interest to the Owner and may reflect a degree of quality above the requirements of the base specification.
b. Voluntary alternate prices may be acceptable as a deviation from, not a substitution for, the basis of bid work of this bid package.
c. In order to submit a voluntary alternate, the following must be provided at the time of the bid.

1) A complete bid reflecting the requirements of the base specification.
2) All alternates must be accompanied with pertinent data, technical documentation and reference/installation for review.
3) Along with the pricing for voluntary alternates submit the maintenance prices for each.

PART 2 - PRODUCTS

2.1 GENERAL DESCRIPTION

2.2 REFER TO SITE SPREADSHEET AND PRIORITIZATION TAB FOR LOCATION

LISTING, AND PRIORIZITATION

2.3 MANUFACTURERS

A. Pre-Approved Equipment Manufacturers

1. The following manufacturer's equipment and materials have been pre-approved for use on this project.
2. Other equipment not specifically mentioned shall be considered for approval on an individual basis.
3. Certain Original Equipment Manufacturers equipment is acceptable unless otherwise specified.

a. Controller - GAL (GALaxy), Motion Control Engineering, Elevator Controls Corporation, Elevator Systems, Inc. Alpha Controls Inc.
b. Tracks, Hangers, Interlocks and Door Operators - G.A.L., ECI.
c. Fixtures - G.A.L., Adams, EPCO, Monitor, E-Motive USA, C.E. Electronics, Innovation, PTL, MAD, National.

d. Door Protective Device - Janus, Adams, G.A.L., T.L. Jones, Tri-Tronics.
e. Cabs and Entrances/Entrance Door Panels - Accurate Elevator Door Corp, CEC Elevator Cab, EDI/ECI, Elite Elevator Cab, National Cab & Door, Tyler, Velis, Gunderlin, Premier, Prestige, Regency, Columbia Elevator Products, United Cabs.
f. Motors - Imperial Electric, General Electric, Baldor, Reuland Electric.
g. Battery Lowering Systems - MCE, Reynolds & Reynolds Electronics.
h. Electrical Traveling Cables - Draka, James Monroe.
i. Hydraulic Systems/Components - Canton, ECS Corporation, Elevator Equipment Corporation, Mongrain Vertical Transport (MVT), MEI, Schumacher.
j. Guide Shoes/Rollers – ELSCO, G.A.L.
k. Intercommunications/Telephones - Webb Electronics, K-Tec, Ring, Wurtec, Janus, approved equal.

4. Original Equipment Manufacturers may substitute their own branded equipment subject to the following: Approval must be given prior to bid.

a. All requirements of the specifications are met regarding performance, appearance, serviceability and support.
b. A full stock of all regular and critical replacement parts required for this project are maintained at a facility within fifty (50) miles of the project site.

1) Any parts not stocked at the above referenced facility shall be identified with the location of the nearest source and shall be available for next-day delivery upon demand.

c. All parts and software shall be made available for purchase to a qualified elevator maintenance firm with one (1) business day delivery without direct Owner involvement.

1) Provide details of parts supply facility and a list of current parts pricing for all major components required for the installation.

d. All specialized tools, equipment, software, and passwords, required to maintain, repair, adjust the operation, and perform code mandated inspections are provided to the Owner as part of the base installation.

1) Updates to these items shall be available via the parts supply facility referenced above.

e. Technical support of the product(s) shall be available to the Owner’s elevator service provider.

2.4 CONTROL FEATURES / OPERATION

A. Two-Stop Collective Operation

1. A car call or hall call registration will allow the car to proceed to the destination after the hoistway door and car door automatically close and the door and gate circuits are made.
2. Upon arrival at the landing, the doors will open automatically.

3. When the car is traveling away from a registered hall call, the call shall remain registered and the car shall respond on the next trip.
4. Car and hall calls shall cancel automatically as the car stops at the respective call.

B. Inspection Service Operation

1. Provide a key operated switch in the main car operating panel locked service panel that, when turned to the 'ON' position, shall cause the elevator to be removed from service and placed in Inspection Service Operation.
2. Limited operation of the car shall be provided through pressing the Attendant Service up and down push buttons (if provided) or the highest or lowest car call push buttons (if up and down buttons are not provided) in the main car operating panel only.
3. The car shall move at a speed not to exceed 150 feet per minute (0.75 meters per second) as per code with both the hall and car door panels in the closed and locked position.
4. The Inspection Service switch shall be keyed differently than other typical keys used in the operation of the elevator. Keying shall be in accordance with Security Group Classifications as required by applicable code.
5. The top of the elevator car shall be equipped with a control for limited operation of the car during repairs, maintenance and inspection conducted in the hoistway. The transfer of control to the top of car operating device shall cause that device to be the sole means of control for the elevator.

    a. Visual and audible indication shall be provided on the top of the car when Firefighters' Emergency Operation is initiated.

6. Power door operating equipment shall be rendered inoperative while the car is being operated in the Inspection Service mode with the exception of power closing of the door. The control system shall maintain closing power on the door while the elevator is moving under Inspection Service Operation.
7. The in-car Inspection Service switch shall be rendered ineffective when the top of car inspection control is activated.
8. Machine Room Inspection Operation and Inspection Operation with open door circuits shall be provided in accordance with A17.1 Safety Code, as modified and adopted, where required or allowed by the AHJ.

C. Hoistway Access Operation

1. Provisions shall be made to allow access to the hoistway through the use of hoistway access switches.
2. Operating the access switch shall permit the car to move at a speed not to exceed 150 feet per minute (0.75 meters per second) as per code with the hall and car doors in the open position to obtain access to the top of the car or climb-in pit.
3. The car shall automatically stop motion when the car top is level with the hoistway door sill for access to top of car.
4. The access key switch(es) shall be keyed differently than other typical keys used in the operation of the elevator. Keying shall be in accordance with Security Group Classifications as required by applicable code.
5. Access operation shall be disabled when top of car inspection operation is in effect.

D. Firefighters' Emergency Operation

1. Firefighters Service Operation and devices shall meet applicable code requirements of the AHJ.
2. Contractor shall be responsible for compliance in all aspects of Firefighters Service including, but not limited to the mode of operation, initiation of operation, operating control and signaling devices as well as fixture engraving including operating instructions applicable to and where required by the AHJ.

E. Low Oil Protection and Protective Device

1. Provide low oil protection operation and appropriate device(s) that will discontinue operation of the hydraulic elevator pump when:

    a. The elevator stalls due to a low oil condition.
    b. Fails to reach the landing in the up direction.

2. Pressure Switch:

    a. Where the top of the cylinder head is above the top of the tank, provide a pressure switch between the cylinder and the valve which shall be activated by the loss of pressure at the top of the cylinder, and control the operation of the elevator as required by Code.

3. Provide an additional protective device that shall automatically return the elevator to the bottom landing, open the door and shut down the system.
4. The protective device shall be an integral part of the control system.

F. Hydraulic Auto Lowering

1. Provide automatic battery powered lowering feature for the hydraulic elevator.

    a. In the event of building power loss all elevators not on emergency power generator power must return to the next lowest landing, open the doors, and remain inoperative until main building power is reestablished. All elevators that are currently connected to the emergency generator must operate as prescribed under the original provisions of the elevator system
    b. The door shall open automatically to discharge passengers.
    c. The elevator shall remain parked with its door closed and door open button operative until normal power is restored.

2. The control panel shall be located in the machine room or be an integral part of the control system.

    a. It shall include necessary batteries, solid-state controls, charger, monitor lights and a test button.
    b. It shall be fed by a 120-volt, 20 Ampere branch circuit from the emergency power source, provided.

3. Provide necessary circuitry within the controller to determine the difference between an “intentional” loss of power and an “actual” loss of power in order to prevent operation of the auto lowering unit when the main line disconnect has been opened for elevator servicing.

4. Provide necessary terminals for connection to an auxiliary switch in main line disconnect provided by others.

G. Door Operation

1. Car and hoistway doors shall be arranged to operate in unison without excessive noise or slamming in either direction of travel.

    a. Door opening speeds of two (2) feet per second shall be provided in conjunction with closing speeds of one (1) foot per second in accordance with governing code.

2. Where the hoistway door and the car door are mechanically coupled, the kinetic energy of the closing door system shall be based upon the sum of the hoistway and the car door weights, as well as all parts rigidly connected thereto, including the rotational inertia effects of the door operator and the connecting transmission to the door panels.
3. The force necessary to prevent closing of the car and hoistway door from rest shall not exceed thirty (30) lbf. This force shall be measured on the leading edge of the door with the door at any point between one-third and two-thirds of its travel.
4. Door open and door close time shall be measured between the moment car door operation in either direction begins and the instant at which that cycle is completed.
5. When responding to either a car or corridor call, the amount of time that the elevator door remains stationary in the open position shall be adjustable up to sixty (60) seconds.

    a. Door open dwell time for a corridor call shall be separate of that for a car call, and in both cases, dwell time shall be canceled whenever the car door protection device is momentarily interrupted by passenger transfers, followed by a reduced door open dwell time of approximately one (1) second (adjustable) after the door protection device is cleared of obstructions.

6. The operation of the door protective device by interruption of one or more infrared light beams (dual or multi-beam non-contact) during the close cycle shall cause the immediate reversing of the doors to the full open position.
7. The door closing cycle shall be arranged so that, in the event the door protective devices become continually obstructed after the normal door open dwell time has expired and following a time interval of approximately thirty (30) seconds (adjustable), a warning tone shall sound and the door closing cycle shall commence at reduced speed and torque per applicable Code requirements.
8. Each car operating station shall be provided with a “door open” and “door close” push button.

    a. Pressure on the “door open” button shall cause doors in the full open position to remain so, and doors engaged in the close cycle to reverse direction and assume the full open position so long as pressure remains applied to the button.
    b. The “door open” buttons shall also control the open cycle during Phase II - Emergency In-car Operation.
    c. The “door close” push button shall function on Independent Service, Attendant Service and Phase II - Emergency In-car Operation as well as during normal automatic operations.

9. Each car operating station shall be provided with a “door hold” push button.

a. Pressure on the “door hold” button shall cause doors in the full open position to remain in the open position and doors operating in the close cycle to reverse direction and travel to the full open position for an extended (adjustable) period of time to allow for loading and unloading.
b. The “door hold” feature shall be overridden when the elevator is on Fire Emergency Phase I and Phase II.
c. The “door hold” feature shall be canceled when the “door close” button is pressed.

10. Repeated attempts by the power door operator to open or close the door at any landing shall be monitored by the control system.

    a. In the event the door fails to cycle properly after a preset (adjustable) number of attempts, the car shall either travel to the next stop or remove itself from service, depending upon whether the malfunction is in the open or close cycle.

11. Each hoistway door shall be provided with an automatic self-closing mechanism arranged so that the door shall close and lock if the car should leave the landing while the hoistway door is unlocked.
12. Car doors shall be arranged to prevent their being manually opened from inside the car unless the elevator is positioned within a floor landing zone.

2.5 MACHINE ROOM

A. Control Equipment

1. Provide a microprocessor-based elevator control system.
2. Digital logic shall calculate optimum acceleration, deceleration and velocity patterns for the car to follow during each run.
3. Closed-loop distance and velocity feedback shall monitor the actual performance of the elevator car with the desired speed profile.
4. Solid-state electronic “soft-start: pump motor starter shall be furnished.
5. System operating software shall be stored in non-volatile memory.

    a. Elevator control relays, contactors, switches, capacitors, resistors, fuses, circuit breakers, overload relays, power supplies, circuit boards, static motor drive units, wiring terminal blocks and related components shall be totally enclosed inside a free-standing metal cabinet with hinged access doors.
    b. The motor drive may be located in its own cabinet where the physical size of the drive prohibits installation within the elevator signal controller cabinet.
    c. Mechanical ventilation of the cabinet shall be provided and shall be adequate to dispose of the full load heat losses without exceeding 40º C (104º F) ambient temperature.

        1) Control equipment cabinets shall be provided with forced air ventilation to prevent overheating of the electrical components housed therein.

    d. All electrical wiring inside the control equipment cabinet shall be performed in a neat manner with field wiring terminated at stud blocks provided inside the control cabinet.

e. Each wiring terminal shall be clearly identified according to the nomenclature used on the "as built" wiring diagrams. No more than two (2) field wires may be connected to any single terminal stud.
f. Spare wires shall be tagged according to their point of termination, bundled, and placed at the bottom of the control equipment cabinet.
g. Each electrical component within the cabinet shall be permanently identified with symbols identical to those used on the "as-built" wiring diagrams.
h. A data plate that indicates the edition of the Code in effect at the time of installation and/or alteration shall be provided in accordance with applicable code and requirements of ASME A17.1 Code. The data plate shall be in plain view and securely attached on the mainline disconnect or on the controller.
i. Control equipment shall comply with requirements of all applicable Sections of the ASME A17.1 Code as approved and adopted by the AHJ.
j. The manufacturer's standard on-board "LCD" display shall be incorporated on the main processor board and/or otherwise incorporated in the controller cabinet. The "LCD" shall be capable of providing alpha-numeric characters to view the operational status of the elevator and/or group functions depending on the application. The display shall provide the user with necessary information for troubleshooting and reprogramming of the basic system parameters.

1) Where the "LCD" is not an integral part of the controller and troubleshooting/reprogramming requires the use of a separate tool, the tool shall be maintained in the machine room and accessible to service personnel. This tool, along with all technical documentation for the correct use of the tool, shall remain the property of the Owner.
2) Password protection of critical programming features is required to prevent accidental changes to life-safety and other non-typical control settings.
3) Where a separate dispatch or group control panel is provided, a separate "LCD" display shall be provided to view group functions.

B. Equipment Isolation

1. Provide sound reducing vibration isolation elements at all support points of elevator controller and pump unit.
2. The elements for shall be similar to double deflection neoprene-in-shear mounts, as manufactured by Mason Industries, Type ND, with 0.35" static deflection under design load ratings.
3. All bolts through isolation elements, where necessary, are to incorporate resilient washers and bushings.

C. Sequential Transformer Contactor / Controller

1. Where step-up, step-down or isolation transformers are used, provide each elevator with an electrical disconnect panel located between the main line disconnect and the transformer.
2. The electrical disconnect panel shall have the following features:

a. A properly sized contactor to interrupt the main line wiring to the car transformer rated for a minimum of 500,000 operations.
b. An internal timer for contactor control adjustable from five (5) to thirty (30) seconds.
c. A push-activated emergency disconnect switch to deactivate the line contactor.
d. A timer bypass switch to manually bypass internal timer operation.

e. A jewel to indicate that the unit is active, and the contactor is engaged.
f. Terminals for external supervisory control to facilitate group to group sequencing as required.

3. Mount the components in a ventilated NEMA rated cabinet or in the controller.
4. Mount the sequence controller in close proximity to, or bundled with, the isolation transformer enclosure.

a. Where conditions allow, the contactor may be installed within the confines of the controller cabinet.
b. Timing and bypass circuitry shall be located within the cabinet and properly identified.

D. Hydraulic Power Unit / Motor

1. Provide a self-contained power unit which includes:

a. Structural steel outer base.
b. Tank support.
c. Oil tight drip pan.
d. Floating inner base to prevent metallic contact for mounting the motor pump assembly.
e. Sound isolation panels to enclose the unit and reduce airborne noise.

2. Provide a reinforced overhead oil reservoir with a tight-fitting tank over the oil control unit which includes:

a. An oil fill strainer with air filter.
b. An oil level gauge assembly.
c. A self-cleaning strainer in the suction line.

3. The pump shall be for oil hydraulic elevator service with positive displacement screw type design for steady discharge with minimum vibration.
4. The drive shall be by multiple V-Belts and sheaves or directly driven by a submersible pump depending on the HP requirements of the system.

a. The use of submersible pumps having more than a 40 HP motor is unacceptable.

5. Pump drive motor control shall utilize solid state motor starter circuitry to provide reduced current starting and maximum protection of the motor.
6. The oil control unit shall be of the manufacturer's own design but shall include relief, safety check, start and slow down valves.

a. Use lowering and leveling valves for drop away speed, lowering speed, leveling speed and stopping speed to ensure smooth down starts and stops.
b. Provide a valve for manual lowering of the elevator car in event of power failure and for use in servicing and adjusting the elevator mechanism.
c. Design the tank shut-off valve for isolating oil in the power unit tank to ensure servicing and adjusting the elevator mechanism without removing oil from the tank.
d. All valves shall be accessible for adjustment without removing the assembly from the oil line.

7. Manufacture the unit to operate under 600 psi (for dry units) / 700 psi (for submersible units) working pressure.
8. Provide a thermostatically controlled heater in the oil tank to maintain proper operating oil temperature.

E. Hydraulic Mainline Oil Strainer

1. Provide a mainline hydraulic oil strainer of the self-cleaning, compact type, equipped with a 40-mesh element and installed in the oil line.
2. Design the strainer for maximum system working pressure.

2.6 HOISTWAY EQUIPMENT

A. Guide Rails / Inserts / Brackets (Reuse)

1. Car guide rails, fishplates, rail brackets, backing support and related attachments shall be inspected to determine if unfavorable conditions exist that diminish the structural integrity of any component.

    a. In the event substandard conditions are disclosed by means of this inspection, the Contractor shall immediately inform the Consultant as to the exact nature of said problems and then undertake whatever repairs and/or replacements the Consultant may deem appropriate to remedy the situation.

2. Each stack of guide rails shall be individually examined to determine if excessive compression has occurred from building settlement.

    a. In the event such conditions are found to exist, each affected stack shall be cut off enough to relieve pressure.
    b. Jacking bolts shall be provided underneath each stack of both car and counterweight guide rails.

3. Each stack of guide rails shall be realigned so that total deviation from plumb in any direction does not exceed 1/8” over the entire length of the hoistway and that DBG measurements never vary more than .030”.
4. As required, car guide rails joints shall be individually filled, filed and sanded in order to eliminate minor variations in adjoining machined surfaces.

B. Slide Guides (Recondition)

1. Existing sliding type guide shoes shall be rebuilt and securely bolted to the top and bottom of each side of the car frame.
2. Provide new guide insert and insert retention hardware at all guide assemblies.
3. Contractor may provide new guide shoe assemblies, in lieu of rebuilding the existing, as part of the base bid work. Costs associated with new guides shall be included in the base bid cost.

C. Electrical Conduit / Wiring / Traveling Cable

1. Electrical wiring shall be provided.

a. All wiring shall be stranded copper conductors, manufactured in compliance with ANSI/ASTM B174-71 and UL 62 requirements, and polyvinyl chloride insulation complying with ETT requirements of UL 62 and Article 400 of the National Electric Code.
b. Electrical wiring provided for hoistway interlock shall be of a flame-retardant type, capable of withstanding temperatures of at least 392 degrees Fahrenheit. Conductors shall be Type SF or equivalent.
c. Each run of electrical conduit or duct shall contain no less than ten percent (10%) spare wires and, in any case, no fewer than two (2) spare wires.
d. Crimp-on type wire terminals shall be used where possible.

2. Traveling cable shall be provided.

a. Each traveling cable shall be provided with a flame-and water-resistant polyvinyl chloride jacket.
b. Electrical wiring shall consist of stranded copper conductors, manufactured in compliance with ANSI/ASTM B174-71 and UL 62 requirements, and polyvinyl chloride insulation complying with ETT requirements of UL 62 and Article 400 of the National Electric Code.
c. Each traveling cable shall contain no less than ten percent (10%) spare wires.
d. Traveling cable exceeding 100’ in length shall be provided with a steel wire rope support strand from which the cable shall be suspended.
e. Traveling cable must be contained within an approved electrical conduit to within 6’ of the final suspension point in the hoistway.
f. Each traveling cable shall be arranged to provide no fewer than six (6) individually shielded pairs of 20-gauge wire and arranged to contain no less than one (1) coaxial cable for CCTV remote monitoring or CAT6 cabling.
g. Traveling cable conductors that terminate at a hoistway center box shall be connected to stud blocks provided for that purpose.

1) Each wiring terminal shall be clearly identified by its nomenclature as shown on the “as built” wiring diagrams and solderless, crimp-on type wire terminals shall be used where possible.

h. The attachment of a traveling cable to the underside of the elevator car shall be performed so that a minimum loop diameter of thirty times (30x) the cable diameter is provided.
i. Pre-hang the cables for at least twenty-four (24) hours with ends suitably weighted to eliminate twisting during operation.

3. Rigidly supported EMT conduit, flexible metal conduit and galvanized steel trough shall be utilized throughout the hoistway.

a. Both EMT and flexible conduit shall be connected on either end by use of compression fittings and secured in place with metal clamps sized in accordance with the diameter of conduit utilized.

1) Wire or plastic wire ty-raps shall not constitute an acceptable means of fastening.

b. The use of flexible metal conduit shall be limited to runs not greater than three feet (3') in length.
c. All abandoned or unused electrical conduit shall be removed from the hoistway.
d. Existing conduit and wiring duct may be reused if suitable for the application.

1) Reuse of existing conduit/duct shall be at the discretion of the Consultant.

D. Normal and Final Terminal Stopping Devices

1. Provide normal terminal stopping devices to stop the car automatically from any speed obtained under normal operation within the top and bottom overtravel, independent of the operating devices, final terminal stopping device and the buffers.
2. Provide final terminal stopping devices to stop the car automatically from the speed specified within the top clearance and bottom overtravel.
3. The terminal stopping devices shall have rollers with rubber or other approved composition tread to provide silent operation when actuated by the cam fixed to the top of the car.

a. Terminal stopping devices that are not mechanically operated (i.e.: magnetic proximity) shall be provided by the manufacturer of the control equipment, intended for use as a terminal limit, and designed for reliable operation in the hoistway environment.

4. Final terminal limits shall be pinned so as to prevent movement after final adjustment where required by the AHJ.

2.7 PIT EQUIPMENT

A. Car Buffer (Reuse) (Recondition)

1. Existing car buffers shall be reused.

a. Pit channels, related supports and fastenings shall be inspected for damage and to determine if the structural integrity of any component is diminished by the effects of rust or other unfavorable conditions.

1) In the event defects are found, the Contractor shall immediately inform the Consultant and undertake whatever repair and/or replacement the Consultant may deem appropriate.

b. Surface rust shall be removed from all reused components and painted with rust inhibited paint.
c. Provide a permanent buffer marking plate which indicates the manufacturer's name, identification number, rated impact speed and stroke.
d. The buffer shall undergo testing in accordance with ASME A17.1 Code as modified by, and/or in addition to codes and standards accepted by the AHJ.

B. Ladders (New or Reuse as outlined below)

1. Provide a steel pit ladder. Reuse (Modify as necessary to Meet Code)

2. The pit ladder shall have continuous steel flat bar side rails 12 mm (1/2") x 75 mm (3"), with eased edges, spaced a minimum of 400 mm (16") apart. Rungs shall be steel bars 18 mm (3/4") in diameter, spaced 300 mm (12") apart with top to have a non-slip surface. Rungs shall be located along centerline of side rails, located not less than 180 mm (7") from the nearest permanent object or structure. Plug weld and grind smooth on outer rails faces. Support each ladder at top and bottom and at intermediate points spaced not more than 1500 mm (60"). Extend side rails 1200 mm (48") above top rung.
3. Prime paint and apply two (2) coats of rust inhibiting machinery enamel to metal work specified above as approved by the Consultant.

C. Jack Unit (Reuse) (Recondition with new Packing) **SEE JACK REPLACEMENT SPECIFICATION FOR ELEVATORS REQUIRING HYDRAULIC JACK REPLACEMENT**

1. The existing jack shall be reused.
2. The jack shall undergo the following work:

    a. Check plunger for smooth surface and eliminate burrs where necessary.
    b. Verify plunger sections are securely attached with minimum seam.
    c. Check stop-ring for proper fit.
    d. Renew internal babbitt-lined, guide bearing, packing or seals where necessary.
    e. Clean drip ring around cylinder top to provide adequate drainage.
    f. Check mounting hardware and welds where applicable.
    g. Check secure attachment of head.
    h. Remove rust and apply rust inhibiting paint.

3. Perform static load test of the jack unit to determine if there are any failures of the cylinder wall.

D. Overspeed (Rupture) Valve

1. Where required by Code, an overspeed valve shall be provided and installed so that it will cause the flow of oil from the hydraulic jack through the pressure piping to cease when such flow exceeds a preset value relative to car speed in accordance with applicable codes.

E. Pit Stop Switch

1. Where pit depth does not exceed 67", each elevator pit shall be provided with a push/pull or toggle switch that is conspicuously designated "EMERGENCY STOP" and located so as to be readily accessible from the hoistway entrance on the lowest landing served at a height of approximately 18" above the floor.

    a. This switch shall be arranged to prevent the application of power to the hoist motor and machine brake when placed in the "OFF" position.

    b. The stop switches shall be located immediately adjacent to the pit access ladder as required by code.

        1) Place one stop switch approximately 47" above the pit floor.
        2) Place the second stop switch 18" above the hoistway entrance sill on the lowest landing served.

3) These switches shall be arranged so as to prevent the application of power to the hoist motor or machine brake when either one is placed in the "OFF" position.

2.8 HOISTWAY ENTRANCES

A. Hoistway Entrances (Reuse/Recondition)

1. Hoistway entrance sills, sill supports, entrance frames, headers and header supports shall be reused and refurbished.

   a. Hoistway entrances that have become distorted or bent shall be straightened, plumbed, reset to the proper width dimension and reinforced, as necessary.
   b. Provide 14-gauge steel fascia plates that extend at least the full width of the door and be secured at hanger support and sill with oval head machine screws.

      1) Reinforce fascia to allow not more than ½" of deflection.
      2) Provide fascia plates where the clearance between the edge of the loading side of the platform and the inside face of the hoistway enclosure exceeds the code allowed clearance.

   c. Provide 14-gauge steel toe guards that extend 12" below any sill not protected by fascia.

      1) The toe guards shall extend the full width of the door and shall return to the hoistway wall at a fifteen (15) degree angle and be firmly fastened.

B. Slide Type Hoistway Entrance Door Panels (Reuse/Recondition)

1. Hoistway entrance door panels shall be reused and refurbished.

   a. Provide each door panel with two (2) removable laminated plastic composition guides, arranged to run in existing sill grooves with a minimum clearance.

      1) The guide mounting shall permit their replacement without removing the door from the hangers.
      2) A steel wear indicator shall be enclosed in each guide.

   b. Provide the meeting edge of center opening doors with necessary new continuous rubber astragal bumper strips.

      1) Astragal shall be relatively inconspicuous when the doors are closed.
      2) Provide rubber bumpers at the top and bottom of each section of door to stop them at their limit of travel in the opening direction.

2. In multi-speed door arrangements, provisions shall be made to interlock the individual panels so all panels close should the normal door panel relating means fail.
3. Provide a special key so that an authorized person can open any landing door when the car is elsewhere.

a. The keyhole shall be not less than 3/8" in diameter and shall be fitted with a stainless steel or bronze ferrule to match related equipment.
b. Where applicable, plug the abandoned hoistway door access hole in each door panel, secured from the hoistway side of the door, finished to match existing or as otherwise directed by the Owner/Architect.

4. Where conditions warrant, or where otherwise required by code, equipment at all hoistway landing doors with one (1) piece full height non-vision wings of material and finish to match hall side of door panels.

C. Interlocks / Unlocking Devices (New)

1. Each set of landing doors shall be provided with a complete electromechanical interlock assembly.

a. Each interlock assembly shall consist of:

1) A switch housing with contacts.
2) Lock keeper.
3) Clutch engagement/release subassembly.
4) Associated linkages.

b. Arrange the lock so that individual leading door panels (side slide or center opening) are locked when in the closed position.

2. Non-typical mounting arrangements for interlocks and/or related mechanisms must receive prior approval from the Consultant.
3. Each hoistway door interlock assembly shall be provided with an emergency release mechanism utilizing a drop-leaf type access key at all landings served.

a. Each hoistway door shall accommodate manufacturers standard lock release key with escutcheon.

1) The keyhole shall be fitted with a metal ferrule that matches the door finish.

D. Hoistway Door Bottom Guides / Safety Retainers (New)

1. The bottom of each side sliding type hoistway door panel shall be equipped with a minimum of two (2) guiding members.

a. Metal mounting angles shall be secured to the integral panel frame structure; and when conditions warrant, additional external metal support plates or angles shall be installed to ensure the integrity of the panel frame is not compromised.
b. Guides shall be manufactured of low friction non-metal material with sufficient strength to withstand forces placed on door panels per ASME A17.1 Standards.
c. Each guide assembly shall incorporate a steel wear indicator and be so designed to permit sliding member replacements without removal of door panel(s) from top hanger devices.
d. Panels shall be hung with a maximum vertical clearance of 3/8 inch between top of sill and bottom of panel and the guide shall engage the sill groove by not less than 1/4 inch.

2. The bottom of each side sliding type hoistway door panel shall be equipped with a guiding member safety retainer to prevent displacement in the event of primary guide means failure.

    a. A metal reinforcement (12 gauge stainless or galvanized steel) shall be installed between the two (2) primary guiding members (a.k.a. "Z" bracket).
    b. The reinforcement shall be designed with a minimum length of eight (8) inches or the maximum possible length that will fit between the primary members and a minimum overall height of two and one-half (2.5) inches secured on the internal face of the door panel. (Hoistway side)
    c. The retainer shall be set with the supplemental safety angle 3/8 inch into the corresponding sill groove; and be capable of preventing displacement of the panel no more than 3/4 inch with an applied force of 1125 lbf at right angles over an area twelve (12) inches x twelve (12) inches at the approximate center of the door panel.

2.9 CAR EQUIPMENT / FRAME

A. Car Frame (Reuse)

1. The existing car frame assembly shall be refurbished to as new condition and reused.
2. Individual car frame members, platform isolation framework, door operator support structure, related bracing and hardware shall be inspected for any indication of damage or distortion.

    a. Where damage is detected, the Contractor shall immediately inform the Consultant and then undertake corrective action deemed appropriate by the Consultant to remedy the condition.

3. Provide new elastomer isolation pads for all existing platforms where pads are presently installed.
4. The car frame, door operator support and related bracing shall be modified or reconfigured as necessary in order to accommodate new cab enclosure and/or master door operating equipment specified herein.
5. The elevator car shall undergo static balancing upon substantial completion of all work described in the project specifications and subsequent to any car interior refinishing or cab replacement work performed in conjunction with the project.

B. Automatic Leveling / Releveling / Positioning Device

1. Equip the elevator with a floor leveling device which shall automatically bring the car to a stop within 1/4" of any floor for which a stop has been initiated regardless of load or direction of travel.
2. This device shall also provide for releveling which shall be arranged to automatically return the elevator to the floor in the event the elevator should move below or above floor level in excess of 1/4".
3. This device shall be operative at all floors served and whether the hoistway or car door is open or closed provided there is no interruption of power to the elevator.
4. A positioning device shall be part of the controller microprocessor systems.

    a. Position determination in the hoistway may be through fixed tape in the hoistway or by sensors fitted on each driving machine to encode and store car movement.

b. Design the mechanical features and electrical circuits to permit accurate control and rapid acceleration and retardation without discomfort.

5. Where there are consecutive floors/stops that are short stops, the system shall be capable of distinguishing between the two (2) landing zones without error.
6. All equipment and logic required for leveling system to properly function with short stops shall be included.

C. Top-of-Car Inspection Operating Station (New)

1. An inspection operating station shall be provided on top of the elevator car.
2. This station shall be installed so that the controls are plainly visible and readily accessible from the hoistway entrance without stepping on the car.
3. When the station is operational, all operating devices in the car shall be inoperative.
4. Provide the following control devices and features:

   a. A push/pull or toggle switch designated "EMERGENCY STOP" shall be arranged so as to prevent the application of power to the hoist motor or machine brake when in the "off" position.
   b. A toggle switch designated "INSPECTION" and "NORMAL" to activate the top of car Inspection Service Operation.
   c. Push button designated "Up", "Down" and "Enable" to operate the elevator on Inspection Service (the "Enable" button shall be arranged to operate in conjunction with either the "Up" or "Down" button).
   d. An indicator light and warning buzzer that are subject to activation under Phase I - Fire Emergency Recall Operation.

D. Car Enclosure Work Light / Receptacle (New)

1. The top of each car shall be provided with a permanent lighting fixture and 110-volt GFI receptacle.
2. Light control switches shall be located for easy accessibility from the hoistway entrance.
3. Where sufficient overhead clearance exists, the car top lighting fixture shall be extended no less than 24" above the crosshead member of the car frame.
4. Light bulbs shall be guarded so as to prevent breakage or accidental contact.

E. Master Door Power Operator System – VVVF/AC

1. Provide a heavy-duty master door operator on top of the elevator car enclosure for power opening and closing of the cab and hoistway entrance door panels.
2. The operator may be of the pivot/lever or belted linear drive type.
3. Operator shall utilize an alternating current motor, controlled by a variable voltage, variable frequency (VVVF) drive and a closed-loop control with programmable operating parameters.

   a. System may incorporate an encoder feedback to monitor positions with a separate speed sensing device or an encoderless closed-loop VVVF-AC control to monitor motor parameters and vary power applied to compensate for load changes.

4. The type of system shall be designated as a high-speed operator, designed for door panel opening at an average speed of two (2.0) feet per second and closing at approximately one (1.0) foot per second.

    a. Reduce the closing speed as required to limit kinetic energy of closing doors to within values permitted by ASME A17.1 as may be adopted and/or modified by the AHJ.

5. The door shall operate smoothly without a slam or abrupt motion in both the opening and closing cycle directions.

    a. Provide nudging to limit speed and torque in conjunction with door close signaling/closing and timing devices as permitted by ASME A17.1 as may be adopted and/or modified by the AHJ. Nudging shall be initiated by the signal control system and not from the door protective device.

6. In case of interruption or failure of electric power from any cause, the door operating mechanism shall be so designed that it shall permit emergency manual operation of both the car and corridor doors only when the elevator is located in the floor landing unlocking zone.

    a. The hoistway door shall continue to be self-locking and self-closing during emergency operation.
    b. The door operator and/or car door panel shall be equipped with safety switches and electrical controls to prevent operation of the elevator with the door in the open position as per ASME A17.1 Code Standards.
    c. Provide zone-lock devices as required by ASME A17.1 as may be adopted and/or otherwise modified by the AHJ.

7. Construct all door operating levers of heavy steel or reinforced extruded aluminum members.
8. Belts shall be designed for long life and operate noise free.
9. All components shall be designed for stress and forces imposed on the related parts, linkages and fixed components during normal and emergency operation functions.

    a. All pivot points, pulleys and motors shall have either ball or roller-type bearings, oilite bronze bushings or other non-metallic bushings of ample size.

10. Provide operating data / data tag permanently attached to the operator as required by applicable code and standards.

F. Car Door Hangers / Tracks / Gate Switch (New)

1. Provide sheave type two-point suspension hangers and track for each car door.

    a. Sheaves shall be hardened steel, not less than 3-1/4 inches in diameter with sealed grease packed precision ball bearings.
    b. The upthrust shall be taken by a roller mounted on the hanger and arranged to ride on the underside of the track.

2. The track shall be of formed cold rolled steel or cold drawn steel and shall be rounded on the track surface to receive the hanger sheaves.

    a. The track shall be removable and shall not be integral with the header.

3. Provide a gate switch that mounts directly to the car door track.

    a. The gate switch shall prevent movement of the elevator until such time as it signals the control equipment that the car door has physically closed.

G. Car Door Panel(s) (New)

1. Provide standard 1" thick, 14-gauge hollow metal flush construction panel(s), reinforced for power operation and insulated for sound deadening.
2. Paint the hoistway side of each panel black and face the cab side with 16-gauge sheet steel matching the existing returns or in selected material and finish as otherwise directed by Owner/Architect.
3. The panels shall have no binder angles and welds shall be continuous, ground smooth and invisible.
4. Drill and reinforce panels for installation of door operator hardware, door protective device, door gibs, etc.

    a. Provide each door panel with two (2) removable laminated plastic composition guides, arranged to run in the sill grooves with minimum clearance.
    b. The guide mounting shall permit their replacement without removing the door from the hangers.

5. Provide the meeting edge of center opening doors with necessary continuous rubber astragal bumper strips.

    a. These strips shall be relatively inconspicuous when the doors are closed.

H. Door Reopening Device / "3D"

1. Provide a combination infrared curtain and 3D door protection system.
2. The door shall be prevented from closing and will reopen when closing if any one of the curtain light rays is interrupted or should an object enter the 3D detection zone.
3. The door shall start to close when the protection system is free of any obstruction.
4. The infrared curtain and 3D zone protective system shall provide:

    a. Protective curtain field not less than 71" above the sill.
    b. 3D protective zone field not less than 61" above the sill.
    c. Accurately positioned infrared lights to conform to the requirements of the applicable handicapped code.
    d. Modular design to permit on board test operation and replacement of all circuit boards without removing the complete unit.
    e. Self-contained, selectable 3D zone timeout feature to allow for closing at nudging speed with audible signal.
    f. Automatic turning-off of the 3D zone in the event of three (3) consecutive 3D triggers.

1) Light curtain shall continue to operate after 3D system timeout.

g. Selectable control of the 3D zone operation on an “always-on” or “as doors close” basis.
h. Controls to shut down the elevator when the unit fails to operate properly.
i. Provide audible and visual notification of pending door is closing.

2.10 FINISH / MATERIALS / SIGNAGE

A. Material, Finishes and Painting

1. General

a. Cold-rolled Sheet Steel Sections: ASTM A366, commercial steel, Type B
b. Rolled Steel Floor Plate: ASTM A786
c. Steel Supports and Reinforcement: ASTM A36
d. Aluminum-alloy Rolled Tread Plate: ASTM B632
e. Aluminum Plate: ASTM B209
f. Stainless Steel: ASTM A167 Type 302, 304 or 316
g. Stainless Steel Bars and Shapes: ASTM A276
h. Stainless Steel Tubes: ASTM A269
i. Aluminum Extrusions: ASTM B221
j. Nickel Silver Extrusions: ASTM B155
k. Bronze Sheet: ASTM B36(36M) alloy UNS No. C2800 (Muntz Metal)
l. Structural Tubing: ASTM A500
m. Bolts, Nuts and Washers: ASTM A325 and A490
n. Laminated / Safety Tempered Glass: ANSI Z97.1

2. Finishes

a. Stainless Steel

1) Satin Finish: No. 4 satin, long grain.
2) Mirror Finish: No. 8 non-directional mirror polished.

b. Sheet Steel:

1) Shop Prime: Factory-applied baked on coat of mineral filler and primer.
2) Finish Paint: Two (2) coats of low sheen baked enamel; color as selected by the Architect.
3) Steel Equipment: Two (2) coats of manufacturer’s standard rust-inhibiting paint to exposed ferrous metal surfaces in both the hoistway and pit that do not have galvanized, anodized, baked enamel, or special architectural finishes.

3. Painting

a. Apply two (2) coats of paint to the machine room floor.

b. Apply two (2) coats of clear lacquer to bronze or similar non-ferrous materials to prevent tarnishing during a period of not less than twelve (12) months after initial acceptance by the Owner or Agent.
c. Identify all equipment including buffers, car apron, crosshead, safety plank, machine, controller, drive, governor, disconnect switch, etc., by 4" high numerals which shall contrast with the background to which it is applied. The identification shall be either decalcomania or stencil type.
d. Paint or provide decal-type floor designation not less than four (4) inches high on hoistway doors (hoistway side), fascias and/or walls as required by A17.1 as may be adopted and/or modified by the AHJ. The color of paint used shall contrast with the color of the surface to which it is applied.

4. Entrance Sills:

1) Passenger Elevators – At Floors: Retain/recondition**.**

B. Car Interior Finishes

1. Car interior finishes shall be as selected by Owner.
2. Contractor shall provide samples of finishes as required for approval prior to fabrication.
3. Refer to specifications for other design requirements where provided.
4. Special attention shall be given to flooring materials and suitability for intended duty.

C. Designation and Data Plates, Labeling and Signage.

1. Provide an elevator identification plate on or adjacent to each entrance frame where required by the AHJ.
2. Provide floor designation cast plates at each elevator entrance, on both sides of the jamb at a height of sixty (60) inches to the baseline of floor indication.

a. Floor number designations and Braille shall be 2” high, 0.03” raised and stud mounted.

3. Identify the designated medical emergency services elevator with 3” high international symbol at each elevator entrance on both sides of the jamb.
4. Provide raised designations and Braille markings to the left of the car call and control buttons of the car operating panel(s).

a. Designations shall be a minimum of 5/8” high, 0.03” raised and stud mounted.

5. Provide elevators with data and marking plates, labels, signages and refuge space markings complying with A17.1 Elevator Safety Code as may be adopted and/or otherwise modified by the AHJ.
6. Architect shall select the designation and data plates from manufacturer’s premium line of plates.

2.11 FIXTURES / SIGNAL EQUIPMENT

A. General - Design and Finish

1. The design and location of the hall and car operating and signaling fixtures shall comply with the ADAAG and local requirements of the AHJ.
2. The operating fixtures shall be selected from the manufacturer's premium line of fixtures.
3. Custom designed operating and signaling fixtures shall be as shown on the drawings or as approved by the Owner / Architect.
4. The layout of the fixtures including all associated signage and engraving shall be as approved by the Owner.
5. Where no special design is shown on the drawings, the buttons shall be as follows:

    a. Stainless steel convex type as selected by the Owner from the manufacturer's premium line of push buttons.
    b. The button shall have a collar with LED call registered light.

6. Where no special design is shown on the drawings, the faceplates shall be as follows:

    a. Passenger Elevators

        1) Typical Floors: 1/8" thick stainless faceplate with No. 4 finish.

7. Mount passenger elevator fixtures with tamperproof fasteners and freight elevator fixtures with tamperproof screws. The screw/fastener and key switch cylinder finishes shall match faceplate finish.
8. Where key-operated switch and or key operated cylinder locks are furnished in conjunction with any component of the installation, four (4) keys for each individual switch or lock shall be furnished, stamped or permanently tagged to indicate function.
9. All caution signs, pictographs, code mandated instructions and directives shall be engraved and filled with epoxy in code required colors.

B. Main Car Operating Panel

1. Provide a main car operating push button panel on the inside front return panel of the car or in the side wall where front returns are narrow or, where there are no return panels in elevators utilizing bi-parting doors.
2. Car operating panel shall be flush mounted with swing type, one (1) piece faceplate with heavy-duty concealed hinges. (hinged opposite door open side on front return panels)

    a. Mount all key switches that are required to operate and maintain the elevators exposed on the car station except those specified within a locked service cabinet.

3. The push buttons shall become individually illuminated as they are pressed and shall extinguish as the calls are answered.
4. The operating panel shall include:

    a. A call button for each floor served, located not more than 48” above the cab floor.
    b. “Door open” / “Door close” / “Door Hold” buttons.
    c. “Alarm” button, interfaced with emergency alarm. The alarm button shall illuminate when pressed.
    d. “Emergency Stop” switch per local law located at 35” above the cab floor.
    e. Self-dialing, hands-free emergency communication system actuation button with call acknowledging feature and ASME A17.1. design provisions.

f. Three (3) position firefighter key operated switch, call cancel button and illuminated visual/audible signal system with mandated signage engraved per ASME A 17.1 Standards as modified by the AHJ.

5. Provide a locked service cabinet flush mounted and containing the key switches required to operate and maintain the elevator, including, but not limited to:

a. Light switch.
b. Fan switch.
c. G. F. I. duplex receptacle.
d. Emergency light test button and indicator.
e. Inspection Service Operation key switch.
f. Port for hand-held service tool where applicable.
g. Dimmer for cab interior lighting.

6. Car operating panel shall incorporate:

a. An integral (no separate faceplate) digital L.E.D. floor position indicator.
b. Black-filled engraved unit I.D. number or other nomenclature, as approved by Owner.
c. A “No Smoking” advisory.

7. Where posting of an advisory is permitted by the Governing Authority in lieu of the inspection certificate, engrave the following advisory on the hinged cover of the service cabinet, or where otherwise directed by the Owner.

a. Elevator Certificate is On File in Building Management Office.

C. Car Position Indicator

1. The position of the car in the hoistway shall be indicated by the illumination of the position indicator numeral corresponding to the floor at which the car has stopped or is passing.

a. Provide 2” high, ten (10) segment LED type position indicator with direction arrows, integral with the car operating panel.
a. Provide Lexan cover lens with hidden support frame behind fixture plate to protect the indicator readout.
b. Provide audible floor passing signal per ADA standards where not provided by the elevator signal control.
c. Flush mount fixture with cover to match selected car front or car operating panel finish as directed by the Owner.

D. Car Direction Lantern

1. Provide a car riding lantern with visual and audible signal in the edge of the strike and/or return post.
2. The lens shall project a minimum of 1/4” and shall be of solid Plexiglas.
3. Use tamperproof screws
4. Car lantern shall indicate the direction of travel when doors are 3/4 open.
5. The unit shall sound once for the “up” direction and twice for the “down” direction.

a. Provide an electronic chime with adjustable sound volume.

E. Voice Annunciator

1. Provide a voice annunciator in each elevator.
2. The device features shall comply with the requirements of ADAAG and local accessibility requirements.
3. Coordinate size, shape and design with Designer and other trades.
4. The system shall include, but not limited to:

    a. Solid state digital speech annunciator.
    b. A recording feature for customized messages.
    c. Playback option.
    d. Built-in voice amplifier.
    e. Master volume control.
    f. Audible indication for selected floor, floor status or position, direction of travel, floor stop, seismic operation, firefighter service and nudging.

5. Locate all associated equipment in a single, clearly labeled enclosure located either in the machine room and/or on car top.

F. Corridor Push Button Stations / Reuse Back Boxes

1. Push button signal fixtures shall be provided on each landing.
2. Each signal fixture shall consist of:

    a. Up and down illuminating push buttons measuring 3/4" at their smallest dimension as selected by the Owner.
    b. A recessed mounting box, electrical conduit and wiring.

3. Intermediate landings shall be provided with fixtures containing two (2) push buttons while terminal landings shall be provided with fixtures containing a single push button.
4. Include firefighter key switch in the main lobby level station or other designated recall landing.
5. Where existing fixtures are located greater than 48" above the floor:

    a. The existing back boxes shall be retained and used to attach the oversized fixture faceplate to locate the new buttons with a centerline of 42" above the finished floor.

        1) The Contractor has the option of providing a single oversized back box in lieu of retaining existing for faceplate attachment.

    b. Standardize the new centerline distance on all floors.

6. All cutting, patching, grouting and/or plastering of masonry walls resulting from the removal or installation of corridor fixtures shall be performed by the Contractor so as to maintain the fire rating of the hoistway.

    a. Finished painting or decorating of wall surfaces shall be by Others.

G. Floor Position Indicator

1. Remove existing floor position indicator at each landing and provide new digital LED type unit.
2. New plate shall completely cover the present cutout and provide 2" numerals located on center.
3. Provide integral direction arrows that will indicate the direction in which the elevator is traveling.

H. Hall Direction Lanterns

1. Provide a visual and audible signal at each entrance to indicate the direction of travel and, where applicable, which car shall stop in response to the hall call.

    a. Design the lantern with up and down indication at intermediate landings and a single indication at terminal landings.
    b. Lanterns shall sound once for the up direction and twice for the down direction.

        1) Provide an electronic chime with adjustable sound volume.

    c. Provide adjustable signal time (three (3) to ten (10) seconds, with one (1) second increments) to notify passengers which car shall answer the hall call and preset per ADAAG notification standards.

2. Locate the lantern above or adjacent to the corridor entrance.

I. Hoistway Access Switch

1. Install a cylindrical type keyed switch at top terminal in order to permit the car to be moved at slow speed with the doors open to allow authorized persons to obtain access to the top of the car.
2. Where there is no separate pit access door, a similar switch shall be installed at the lowest landing in order to permit the car to be moved away from the landing with the doors open in order to gain access to the pit.
3. Locate the switch in the hall call push button station at the top and bottom terminal landings where required if allowed by the Authority Having Jurisdiction.
4. This switch is to be of the continuous pressure spring-return type and shall be operated by a cylinder type lock having not less than a five (5) pin or five (5) disc combination with the key removable only in the "OFF" position.

    a. The lock shall not be operable by any key which operates locks or devices used for other purposes in the building and shall be available to and used only by inspectors, maintenance men and repairmen in accordance with A17.1 applicable Security Group.

5. Existing provisions that meet the aforementioned criteria may be updated with keyed switches to match new apparatus provided for uniformity of systems within the building.

2.12 CAR ENCLOSURES

A. Elevator Cab Remodel Allowance ($30,000 per passenger elevators.)

1. It is understood that if the selected manufacturer of the cab is not the same as the Elevator Supplier, all cab material will be constructed in a manner to accommodate the elevator manufacturer's associated equipment, such as operator, hangers, interlocks, etc., as purchased by the Owner or Owner's Agent.
2. The net allowance for the elevator cabs are to be exclusive of:

    a. Handling charges.
    b. Applicable sales and/or use taxes.
    c. Car door hangers, interlocks, exit contact locks.
    d. Platform, flooring, car door sill.
    e. Car installation, operating equipment, and such items are to be included by the Elevator Supplier in the base contract.

3. The net allowance covering the elevator cars of a design and material as selected shall include:

    a. Ventilation and lighting.
    b. Doors.
    c. Base wainscoting.
    d. Handrails.
    e. New flooring
    f. Entrance columns.
    g. Transoms as required.
    h. Necessary cutouts.
    i. Protection pads/button hooks
    j. All necessary cutouts and cab associated appurtenances that may be designed or required.

4. The Owner or Owner's authorized representative reserves the right to deduct the net allowances from the Elevator Contract and to purchase the elevator cabs separately.
5. The Owner retains the right to assign this purchase to the Elevator Supplier for coordination and receive the necessary credits or make the installation by an authorized representative of the Architect and/or Owner.
6. Contractor shall include all costs associated with coordination of cab-related work in the base modernization bid including static and dynamic balance of the system.

B. Elevator Cab / Refurbish / Remodel

1. Replace finished top floor covering using a commercial grade flooring approved by owner.
2. Replace car door entrance saddle using an extruded aluminum sill with necessary cradle supports.
3. Install new high speed exhaust fan with security protection off-set grill.

    a. Automatic operating controls to turn fan on/off when doors are in the open/closed position. (Override keyed control switch to be incorporated in new car operating panel for full time operation and disconnect).

4. Install new low voltage, low heat, recessed down-lights in the cab dome to maximize inside floor-to-ceiling clearance.

a. Minimum of four (4) to six (6) lighting fixtures with clear Halo lens trim and Lexan shields.

5. Installation of rear wall handrail thirty-two (32) inches above the finished floor with three (3) points of attachment designed for interior access servicing and support plates on the exterior of the enclosure.
6. Installation of protection pads for all walls and returns (floor to ceiling) using pad buttons permanently attached at top and ring or snap hardware at bottom to maintain hanging tension.
7. Flooring: Where finished flooring is provided under another section of these specifications, recess and prepare sub-flooring to accept the finished flooring.
8. Cab Doors: Standard 1" thick, 14-gauge hollow metal flush construction, reinforced for power operation and insulated for sound deadening. Paint hatch side of doors black and face cab side with 16-gauge sheet steel in selected material and finish.

    a. The door panels shall have no binder angles. All welds shall be continuous, ground smooth and invisible.
    b. Drill and reinforce doors for installation of door operator hardware, door protective device, door gibs, etc.

9. Ceiling: Construction techniques for wall panels shall apply to ceiling panel construction. Locate top emergency exit inconspicuously. Construct and mount the exit panel to prevent light leakage around the perimeter of panel.
10. Ventilation: The ventilation system of the exhaust type shall be provided in each elevator.

    a. The system shall include a blower driven by a direct connected motor and mounted on top of car with isolation to effectively prevent transmission of vibration to the car structure. The blower shall have not less than two (2) operating speeds. The ventilation system shall be sized to provide one (1) air change per minute at low speed and one and one-half (1.5) air changes per minute at high speed. The unit design and installation shall be such that the maximum noise level, when operating at high speed, shall not exceed 55 dBA approximately three (3) feet above the car floor. A three (3) position switch to control the blower shall be provided in the service panel.

11. Lighting: Arrange lighting fixtures and ceiling assembly to provide even illumination without hot spots and shadows.

    a. Design and configure lighting system to facilitate maintenance of the fixtures.
    b. freight elevators shall have not less than forty (40) foot candle illumination at 48" above the finished floor with the doors closed.

12. Handrails: All attachment hardware shall match the selected handrail and shall permit handrail removal from within the cab.

    a. Provide a minimum of 10-gauge plate at the hatch side of the shell, aligned with the handrail attachment points, to assure secure handrail mounting.
    b. Design handrail attachment system to support the weight of a person (two hundred fifty [250] pounds) sitting on it without any deflection and damage to the handrail, cab panel and the shell.

13. Protective Pads and Pad Hooks: Provide pad hooks at locations as directed by the Architect. Protective pads shall cover the front return panels, and the side and rear walls. Provide cutouts in pads for access to the cab operating and signaling devices. Pads shall be fire-resistant canvas with two (2) layers of cotton batting padding.

    a. Identify each pad by elevator number and wall location.

14. Accessories: Construct elevator cab to accommodate the door operator, hangers, interlocks and all accessory equipment provided under other sections of these specifications, including firefighter phones, card readers and CCTV.
15. All cab materials shall conform to the code prescribed flame spread rating and smoke development requirements.
16. Cab Finish Warranty Enhancement

    a. Contractor shall be responsible for engineering and installing interior cab finishes in a manner that will withstand all code mandated inspections and test procedures. Failure of finishes during testing shall be repaired by the contractor without expense to the owner. Any objections or qualifications to material selection or design shall be identified during the engineering of the cab interior drawings for review by the owner.

17. Cab Doors: Stainless steel with No. 4 finish.
18. Handrails:

    a. 2” inch flat 1/4" x 4" stainless steel handrail at the sides/rear wall(s).

19. Lighting:

    a. Fully recessed LED down light fixtures as approved by Owner. a light fixture in each ceiling panel.
    b. Securely fasten the lens to frame to prevent rattling.

20. Base: Provide a 4" high base in the material and finish selected by the architect at the sides and rear of the cab enclosure.

C. Elevator Cab Enclosure Fan

1. Provide an exhaust type two (2) speed fan unit with cover grill, mounting accessories and necessary cab enclosure modifications.

    a. Fan unit shall include self-lubricating motor with housing rubber mounted for sound vibration isolation.

2. Provide a key switch in the elevator cab enclosure for control of fan unit.
3. Provide necessary wiring and approved conduit to properly connect fan unit with power source and control key switch.

2.13 EMERGENCY LIGHTING / COMMUNICATIONS / SIGNALING

A. Battery Back Up Emergency Lighting Fixture and Alarm

1. Provide a self-powered emergency light unit.

    a. Arrange two (2) of the cab light fixtures to operate as the emergency light system.
    b. Where cab lighting is utilized for emergency lighting, Contractor shall coordinate the battery back-up equipment so that it is compatible with the type of cab lighting specified by the Owner or Architect.

2. Provide a car-mounted battery unit including solid-state charger and testing means enclosed in common metal container.

    a. The battery shall be rechargeable nickel cadmium with a ten (10) year minimum life expectancy. Mount the power pack on the top of the car.
    b. Provide a 6" diameter alarm bell mounted directly to the battery/charger unit and connected to sound when any alarm push button or stop switch in the car enclosure is operated.
    c. The bell shall be configured to operate from power supplied by the building emergency power generator. The bell shall produce a sound output of between 80-90 dBa (measured from a distance of 10') mounted on top of the elevator car.

        1) Activation of this bell shall be controlled by the stop switch and alarm button in the car operating station.
        2) The alarm button shall illuminate when pressed.

3. Where required by Code for the specific application, the unit shall provide mechanical ventilation for at least one (1) hour.
4. The operation shall be completely automatic upon failure of normal power supply.
5. Unit shall be connected to normal power supply for car lights and arranged to be energized at all times, so it automatically recharges battery after use.

B. Emergency Voice Communication / Telephone

1. A hands-free emergency voice communication system shall be furnished in each car mounted as an integral part of the car operating panel.

    a. Necessary wires shall be included in the car traveling cable and shall consist of a minimum of one (1) shielded pair of 20AWG conductors.
    b. 120V power shall be provided to power the hands-free device.

2. The telephone shall be equipped with an auto-dialer and illuminating indicator which shall illuminate when a call has been placed and begin to flash when the call has been answered.

    a. Engraving shall be provided next to the indicator which says, “When lit help is on the way".

3. In addition to the standard “Alarm” button, a separate activation button shall be provided on the car operating panel to initiate the emergency telephone and place a call.

    a. The telephone must not shut off if the activating button is pushed more than once.
    b. The telephone shall transmit a pre-recorded location message only when requested by the operator and be provided with an adjustable call time which can be extended on demand by the operator.

c. Once two-way communication has been established, voice prompts shall be provided which instruct the operator on how to activate these functions as well as alerting the operator when a call is being attempted from another elevator in the building.

4. The system shall be compatible with ring-down equipment and PBX switchboards.
5. The system shall be capable of serving as the audio output for an external voice annunciation system.

   a. Conversation levels shall measure 60 dbA or higher and measure 10 dbA above ambient noise levels.
   b. Each device shall be provided with a self-diagnostic capability in order to automatically alert building personnel should an operational problem be detected.

6. The phone shall be able to:

   a. Receive incoming calls from any On-Site Rescue Station (when provided or required).
   b. Receive incoming calls from other off-site locations via the public telephone system.
   c. Acknowledge incoming calls and automatically establishing hands-free two-way communications.

      1) If no On-Site Rescue Station is provided, each hands-free device shall have built in line consolidation which will allow up to six (6) elevators to be called individually from outside the building over a single telephone line and up to eighty (80) elevators if an On-Site Rescue Station is provided.

7. The emergency elevator communication system shall require a maximum of one (1) telephone line.

   a. The system must provide line sharing capability to eliminate the need for a dedicated telephone line.
   b. The line sharing function must ensure that the emergency telephones always receive dialing priority even if the line is in use and that the emergency telephones can be called into from an off-site location.

8. The system shall provide its own four-hour backup power supply in case of a loss of regular AC power.
9. The system must provide capability for building personnel to call into elevators and determine the charge state of any backup batteries provided for the emergency telephones.
10. Pushing the activation button in any of the elevator car stations will cause any on-site Rescue Station (where provided or required) or security telephone to ring.

    a. If the on-site call is not picked up within thirty (30) seconds, the call will be automatically forwarded to a twenty-four (24) hour off-site monitoring service.
    b. The arrangements and costs of the off-site monitoring and telephone line shall be by others.

11. All connections from the junction box to the telephone system shall be done by the Elevator Contractor where existing provisions can be reused.
12. New telephone lines, where required, shall be provided and interfaced by others.

13. All connections from the junction box to the security room's main telephone system shall be done by others.
14. Existing phone systems removed shall be returned to the Owners for installation by others in other areas.

C. Firefighters' Two-Way Telephone Communications System

1. Provide a complete two-way telephone communications system for point-to-point communications between authorized personnel.
2. Provide firefighter telephone box or telephone jack in the car operating panel in accordance with the requirements of the local authorities. The box shall be fitted with a flush mounted door having hairline joints.
3. Connection devices (jacks) and all associated wiring shall be provided by the elevator Contractor as part of the base bid.
4. The handsets shall be self-powered and not require an external power source for operation.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Inspection

1. Study the Contract Documents with regard to the work as specified and required so as to ensure its completeness.
2. Examine surface and conditions to which this work is to be attached or applied and notify the Owner in writing if conditions or surfaces are detrimental to the proper and expeditious installation of the work. Starting the work shall imply acceptance of the surfaces and conditions to perform the work as specified.
3. Verify, by measurements at the job site, dimensions affecting the work. Bring field dimensions which are at variance with those on the accepted shop drawings to the attention of the Owner. Obtain the decision regarding corrective measures before the start of fabrication of items affected.
4. Cooperate in the coordination and scheduling of the work of this section with the work of other sections so as not to delay job progress.

3.2 INSTALLATION / PROJECT PHASING

A. Installation

1. Modernize the elevators, using skilled personnel in strict accordance with the final accepted shop drawings and other submittals.
2. Comply with the code, manufacturer's instructions and recommendations.
3. Coordinate work with the work of other building functions for proper time and sequence to avoid delays and to ensure right-of-way of system. Use lines and levels to ensure dimensional coordination of the work.
4. Accurately and rigidly secure supporting elements within the shaft ways to the encountered construction within the tolerance established.

5. Provide and install motor, switch, control, safety and maintenance and operating devices in strict accordance with the submitted wiring diagrams and applicable codes and regulations having jurisdiction.
6. Ensure sill-to-sill running clearances do not exceed 1-¼" at all landings served.
7. Arrange door tracks and sheaves so that no metal-to-metal contact exists.
8. Reinforce hoistway fascias to allow not more than 1/2" of deflection.
9. Isolate cab fan from canopy to minimize vibration and noise.
10. Remove oil, dirt and impurities and give a factory coat of rust inhibitive paint to all exposed surfaces of struts, hanger supports, covers, fascias, toe guards, dust covers and other ferrous metal.
11. Prehang traveling cables for at least twenty-four (24) hours with ends suitably weighted to eliminate twisting after installation.
12. Pack openings around oil line with fire resistant, sound isolating glass or mineral wool.
13. Provide isolation pad between platen head and car structure.

3.3 FIELD QUALITY CONTROL

A. Inspection and Testing

1. Upon completion of each work phase or individual elevator specified herein, the Contractor shall, at its own expense, arrange and assist with inspection and testing as may be required by the A.H.J. in order to secure a Certificate of Operation.

B. Substantial Completion

1. The work shall be deemed "Substantially Complete" for an individual unit of units when, in the opinion of the Consultant, the unit is complete, such that there are no material and substantial variations from the Contract Documents, and the unit is fit for its intended purpose.
2. Governing authority testing shall be completed and approved in conjunction with inspection for operation of the unit; a certificate of operation or other required documentation issued; and remaining items mandated for final acceptance completion are limited to minor punch list work not incorporating any life safety deficiencies.
3. The issuance of a substantial completion notification shall not relieve the Contractor from its obligations hereunder to complete the work.
4. Final completion cannot be achieved until all deliverables, including but not limited to training, spare parts, manuals, and other documentation requirements, have been completed.

C. Contractor's Superintendent

1. The Contractor shall assign a competent project superintendent during the work progress and any necessary assistant, all satisfactory to the Owner. The superintendent shall represent the Contractor and all instructions given to him shall be as binding as if given to the Contractor.

3.4 PROTECTION / CLEANING

A. Protection and Cleaning

1. Adequately protect surfaces against accumulation of paint, mortar, mastic and disfiguration or discoloration and damage during shipment and installation.
2. Upon completion, remove protection from finished surfaces and thoroughly clean and polish surfaces with due regard to the type of material. Work shall be free from discoloration, scratches, dents and other surface defects.
3. The finished installation shall be free of defects.
4. Before final completion and acceptance, repair and/or replace defective work, to the satisfaction of the Owner, at no additional cost.
5. Remove tools, equipment and surplus materials from the site.

B. Barricades and Hoistway Screening

1. The Contractor shall provide barricades where necessary in order to maintain adequate protection of areas in which work specified by the Contract Documents is being performed, including open hoistway entrances. Fabrication and erection as all barricades shall be in compliance with applicable OSHA regulations.
2. As required, the Contractor shall provide temporary wire mesh screening in the hoistway and of any elevator undergoing work specified in the Contract Documents. This screening shall be installed in such a manner as to completely segregate the hoistway from that of adjacent elevators. Screening shall be constructed from .041" diameter wire in a pattern that rejects passage of a 1" diameter ball.

3.5 DEMONSTRATION

A. Performance and Operating Requirements

1. Passenger elevators shall be adjusted to meet the following performance requirements:

   a. Speed within five percent (5%) of rated speed in the up direction under any loading condition.
   b. Leveling: within ± 1/4" as measured between the car entrance threshold and the landing sill on any given floor under any loading condition.
   c. Typical Floor-to-Floor Time: (Recorded from the doors start to close on one (1) floor until they are 3/4 open at the next floor) under various loading conditions.

      15.0 – 17.0 seconds

   d. Passenger Door Operating Times

Door Type	Opening	Closing
36" side opening	2.8 sec.	3.4 sec.

   e. Door dwell time for hall calls: 4.0 sec with Advance lantern signals.
   f. Door dwell time for hall calls: 5.0 sec without Advance lantern signals.
   g. Door dwell time for car calls: 3.0 seconds.
   h. Reduced non-interference dwell time: 1.0 seconds.

2. Maintain the following ride quality requirements for the passenger elevators:

a. Noise levels inside the car shall not exceed the following:

1) Car at rest with doors closed and fan off - 40 dba.
2) Car at rest with doors closed, fan running - 55 dba.
3) Car running at high speed, fan off - 50 dba.
4) Door in operation - 60 dba.

b. Vertical accelerations shall not exceed 14 milli-g

1) The accelerometer used for this testing shall be capable of measuring and recording acceleration to nearest 0.01 m/s^2 (1 milli-g) in the range of 0-2 m/s^2 over a frequency range from 0-80 Hz with ISO 8041 filter weights applied. Accelerometer should provide contact with the floor similar to foot pressure, 60 kPA (8.7psi).

B. Acceptance Testing

1. Comply with the requirements of Division 01.
2. The Contractor shall provide at least five (5) days prior written notice to the Owner and Consultant regarding the exact date on which work specified in the Contract Documents will reach completion on any single unit of vertical transportation equipment.
3. In addition to conducting whatever testing procedures may be required by local inspecting authorities in order to gain approval of the completed work, and before seeking approval of said work by the Owner, the Contractor shall perform certain other tests in the presence of the Consultant.
4. The Contractor shall provide test instruments, test weights, and qualified field labor as required to safely operate the unit under load conditions that vary from empty to full rated load and, in so doing, to successfully demonstrate compliance with applicable performance standards set forth in the project specifications with regard to:

a. Operation of safety devices.
b. Sustained high-speed velocity of the elevator in either direction of travel.
c. Floor-to-floor time between adjacent floors.
d. Floor leveling accuracy.
e. Door opening/closing and dwell times.
f. Ride quality inside the elevator car.
g. Communication system.

5. Upon completion of work specified in the Contract Documents on the last car in any group of elevators, and in conjunction with the aforementioned testing procedures, the Contractor shall carry out additional testing of group dispatch/supervisory control features in the presence of the Consultant.
6. The Contractor shall provide test instruments and qualified field labor as required to successfully demonstrate:

a. .
b. Simulated and actual battery lowering operation.
c. Firefighter and independent service operations.
d. Restricted access security features and card reader controls.
e. Floor parking assignments.

7. After hour tests of systems such as emergency generators, fire service, and security systems shall be conducted at no extra cost to the Owner.

END OF SPECIFICATION

Building	Address	City	STATE NUMBER	Manufacturer	Condition	Age	Mod Needed < 5 Yrs	Priority Ranking & Year	
BUCHANAN ELEMENTARY	1775 BUCHANAN AVE SE, 49507	GR	61225	SCHINDLER	4	8	YES	Priority 3 2027	
CENTRAL HIGH	421 FOUNTAIN NE, 49503	GR	20849	SCHINDLER/HAUGHTON	3	42	YES	Priority 1 2026	*Must only have 1 elevator down at a time
CENTRAL HIGH	421 FOUNTAIN NE, 49503	GR	20850	SCHINDLER/HAUGHTON	3	42	YES	Priority 1 2026	
CENTRAL HIGH	421 FOUNTAIN NE, 49503	GR	29483	MILLAR/CANTON	3	42	YES	Priority 1 2026	
CENTRAL HIGH	421 FOUNTAIN NE, 49503	GR	29484	MILLAR/CANTON	3	42	YES	Priority 1 2026	
CESAR CHAVEZ ELEM	703 SHAMROCK ST SW, 49507	GR	48295	SCHINDLER	2.8	16	YES	Priority 3 2027	
CITY HIGH MIDDLE-CRESTON	1720 PLAINFIELD NE, 49505	GR	19676	MONTGOMERY	2.5	45	YES	Priority 1 2026	
CITY HIGH MIDDLE-GYM	1720 PLAINFIELD NE, 49505	GR	18277	OTIS	2.5	47	YES	Priority 1 2026	
COIT ELEMENTARY	617 COIT AVE NE, 49503	GR	39291	KONE	3	24	YES	Priority 1 2026	
DICKINSON	448 DICKENSON SE, 49507	GR	47105	SCHINDLER	3	17	YES	Priority 3 2027	
EARLY CHILDHOOD	1326 THOMAS ST SE, 49506	GR	30030	MONTGOMERY	3	30	YES	Priority 2 2027	
FRANKLIN 4H	710 BENJAMIN SE, 49506	GR	32970	DOVER	3.1	28	YES	Priority 2 2027	
FRANKLIN ADMIN	1331 FRANKLIN SE, 49506	GR	29145	MONTGOMERY	2.9	30	YES	Priority 2 2027	
FRANKLIN DATA	1331 FRANKLIN SE, 49506	GR	29146	MONTGOMERY	2.9	30	YES	Priority 2 2027	
FRANKLIN ELEMENTARY	1331 FRANKLIN SE, 49506	GR	30028	MONTGOMERY	2.9	30	YES	Priority 2 2027	
SOUTHWEST COMMUNITY CAMPUS	801 OAKLAND AVE., 49503	GR	39315	SCHINDLER	2.9	23	YES	Priority 1 2026	
HOUSEMAN FIELD	901 FOUNTAIN NE, 49503	GR	48838	SCHINDLER	2.4	16	YES	Priority 3-2027	
MLK	645 LOGAN, 49503	GR	44175	SCHINDLER	2.7	19	YES	Priority 3 2027	
NORTH PARK ELEMENTARY	3375 CHENEY AVE NE, 49505	GR	47912	SCHINDLER	3	17	YES	Priority 3 2027	
OTTAWA GRPS-PE2	1570 BURTON SE, 49506	GR	14525	MONTGOMERY	2.9	54	YES	Priority 1 2026	
OTTAWA GRPS-PE3	1571 BURTON SE, 49506	GR	14524	MONTGOMERY	3	54	YES	Priority 1 2026	*South House -- all need to happen over the summer
OTTAWA GRPS-POLE	1572 BURTON SE, 49506	GR	15240	MONTGOMERY	3	54	YES	Priority 1 2026	
SIBLEY ELEMENTARY	943 SIBLEY SW, 49504	GR	44182	SCHINDLER	3.8	19	YES	Priority 3 2027	
UNION	1800 TREMONT BLVD NW, 49506	GR	11080	DOVER	3	60	YES	Priority 1 2026	
UNION	1800 TREMONT BLVD NW, 49506	GR	19654	SCHINDLER/HAUGHTON	3	45	YES	Priority 1 2026	
UNIVERSITY	1400 FULLER, 49505	GR	29284	MONTGOMERY	3	32	YES	Priority 2 2027	

https://www.michigan.gov/lara/-/media/Project/Websites/lara/bcc-media/Rules-Info/Elevator/New-Elevator-Rules-Announcement.pdf?rev=69517991d28c4904a64142e6ecf08a63&hash=5C414830C7DE6808DF069F6C0E4A0D89

https://www.michigan.gov/lara/-/media/Project/Websites/lara/bcc-media/Licensing/Elevator-Forms/A173-Communication.pdf?rev=fcda7975db6a4b7fa673fe0c11a083f7&hash=D970D50B2889363CC95C9263C3BC01AD

Effective date of 1-1-2028

3.10.12 System to Monitor and Prevent Automatic Operation of the Elevator with Faulty Door Contact Circuits Means shall be provided to monitor the position of the power operated car doors that are mechanically coupled with the landing doors while the car is in the landing zone, in order (a) To prevent automatic operation of the car if the car door is not closed, regardless of whether the portion of the circuits incorporating the car door contact or the interlock contact of the landing door coupled with the car door, or both, are closed or open except as permitted in 3.10.7 (b) To prevent the poser closing of the doors during automatic operation if the car door is fully open and any of the following conditions exist: (1) The car door contact is closed, or the portion of the circuit incorporating this contact is bypassed. (2) The interlock contact of the landing door that is coupled to the opened car door is closed, or the portion of the circuit incorporating this contact is bypassed. (3) The car door contact and the interlock contact of the door that is coupled to the opened car door are closed, or the portions of the circuits incorporating these contacts are bypassed.

4.3.3 4.3.3 Hydraulic Elevators Hydraulic elevators that have any portion of the cylinder buried in the ground and that do not have a double cylinder or a cylinder with a safety bulkhead shall; (a) have the cylinder replaced with a double cylinder or a cylinder with a safety bulkhead protected from corrosion by one or more of the following methods: (1) monitored cathodic protection (2) a coating to protect the cylinder from corrosion that will withstand the installation process (3) a protective plastic casing immune to galvanic or electrolytic action, saltwater, and other known underground conditions, or (b) be provided with a device meeting the requirements of Section 3.5 or a device arranged to operate in the down direction at an overspeed not exceeding 125% of rated speed. The device shall mechanically act to limit the maximum car speed to the buffer striking speed, or stop the elevator car with rated load with a deceleration not to exceed 32.2 ft/sec2 (9.8 m/s 2) and shall not automatically reset. Actuation of the device shall cause power to be removed from the pump motor and control valves until manually reset, or (c) have other means acceptable to the authority having jurisdiction to protect against unintended movement of the car as a result of uncontrolled fluid loss.

Central High

Location:	GRPS - Central High, 421 Fountain NE, Grand Rapids, MI 49503			Device ID.	**PE1**
Building Type:	Education			Group Name:	Central High
Capacity (lbs.):	2000	Speed (fpm):	150	Loading:	Passenger
Power Supply:	480V-3-60		Drive Type:	Roped	
Device Type:	Hydraulic		Control Space Location:	Adjacent	
Machine Manufacturer / Model:	Other /		Operation:	Simplex	
No. of Floors Served Front:	4		Front Designations:	G, 1-3	
No. of Floors Served Side:	0		Side Designations:	N/A	
No. of Floors Served Rear:	0		Rear Designations:	N/A	
Front Door Config.:	2SSO		Front Door Size:	36" wide x 84" high	
Side Door Config.:	N/A		Side Door Size:	N/A	
Rear Door Config.:	N/A		Rear Door Size:	N/A	
Two-Way Communication:	N				
Fire Recall Phase I:	Y		Phase II:	Y	
O.E.M.:	Other ESI / CEMCO		Install Date:	1996	
Modernization Contractor:	N/A		Mod. Date:	N/A	
Controller Manufacturer / Model:	Vertitron / V100		Door Operator / Model:	Mechanical Linkage w/Chain & Drive Belt / GAL MOD	
Car and Cwt. Buffer Type:	Spring		Service Contractor:	ESI	

Location:	GRPS - Central High, 421 Fountain NE, Grand Rapids, MI 49503			Device ID.	**PE2**
Building Type:	Education			Group Name:	Central High
Capacity (lbs.):	2000	Speed (fpm):	150	Loading:	Passenger
Power Supply:	480V-3-60		Drive Type:	Roped	
Device Type:	Hydraulic		Control Space Location:	Adjacent	
Machine Manufacturer / Model:	Other /		Operation:	Simplex	
No. of Floors Served Front:	5		Front Designations:	G, 1-4	

Front Door Config.:	2SSO	Front Door Size:	42" wide x 84" high
Two-Way Communication:	N		
Fire Recall Phase I:	Y	Phase II:	Y
O.E.M.:	Other ESI / CEMCO	Install Date:	1996
Modernization Contractor:	N/A	Mod. Date:	N/A
Controller Manufacturer / Model:	Vertitron / V100	Door Operator / Model:	Mechanical Linkage w/Chain & Drive Belt / GAL MOD
Car and Cwt. Buffer Type:	Spring	Service Contractor:	ESI

Location:	GRPS - Central High, 421 Fountain NE, Grand Rapids, MI 49503			Device ID.	**PE3**
Building Type:	Education			Group Name:	Central High
Capacity (lbs.):	4000	Speed (fpm):	125	Loading:	Passenger
Power Supply:	480V-3-60		Drive Type:	Hydraulic	
Device Type:	Hydraulic		Control Space Location:	Adjacent	
Machine Manufacturer / Model:	Other /		Operation:	Simplex	
No. of Floors Served Front:	5		Front Designations:	L, *G, S, 1, 3	
Front Door Config.:	2SSO		Front Door Size:	48" wide x 84" high	
Two-Way Communication:	N				
Fire Recall Phase I:	Y		Phase II:	Y	
O.E.M.:	Other Haughton CEMCO		Install Date:	1983	
Modernization Contractor:	N/A		Mod. Date:	N/A	
Controller Manufacturer / Model:	Haughton		Door Operator / Model:	Mechanical Linkage w/Chain & Drive Belt / GAL MOD	
Car and Cwt. Buffer Type:	Spring		Service Contractor:	ESI	

Location:	GRPS - Central High, 421 Fountain NE, Grand Rapids, MI 49503			Device ID.	**4**
Building Type:	Education			Group Name:	Central High
Capacity (lbs.):	2500	Speed (fpm):	125	Loading:	Passenger

Power Supply:	480V-3-60	Drive Type:	Hydraulic
Device Type:	Hydraulic	Control Space Location:	Adjacent
Machine Manufacturer / Model:	Other	Operation:	Simplex
No. of Floors Served Front:	4	Front Designations:	L, G, (GAL), 1
Front Door Config.:	1SSS	Front Door Size:	42" wide x 84" high
Two-Way Communication:	N		
Fire Recall Phase I:	Y	Phase II:	Y
O.E.M.:	Other Haughton CEMCO	Install Date:	1983
Modernization Contractor:	N/A	Mod. Date:	N/A
Controller Manufacturer / Model:	Haughton	Door Operator / Model:	Mechanical Linkage w/Chain & Drive Belt / GAL MOD
Car and Cwt. Buffer Type:	Spring	Service Contractor:	ESI

City High Middle

Building Type:	Education			Group Name:	Creston
Capacity (lbs.):	3500	Speed (fpm):	125	Loading:	Passenger
Power Supply:	480V-3-60		Drive Type:	Inground	
Device Type:	Hydraulic		Control Space Location:	Adjacent	
Machine Manufacturer / Model:	Montgomery		Operation:	Simplex	
No. of Floors Served Front:	3		Front Designations:	1,2,3	
Front Door Config.:	2SSO		Front Door Size:	44" wide x 84" high	
Two-Way Communication:	N				
Fire Recall Phase I:	N		Phase II:	N	
O.E.M.:	Montgomery		Install Date:	1980	
Modernization Contractor:	N/A		Mod. Date:	N/A	
Controller Manufacturer / Model:	Montgomery / Relay		Door Operator / Model:	Mechanical Linkage w/Drive Belt / Old MAC	
Car and Cwt. Buffer Type:	Spring		Service Contractor:	ESI	

Location:	GRPS - City High Middle, 1720 Plainfield NE, Grand Rapids, MI 49505	Device ID.	**PE-1**
Building Type:	Education	Group Name:	GYM

Capacity (lbs.):	2500	Speed (fpm):	100	Loading:	Passenger
Power Supply:	480V-3-60		Drive Type:	Inground	
Device Type:	Hydraulic		Control Space Location:	Adjacent	
Machine Manufacturer / Model:	ESCO		Operation:	Simplex	
No. of Floors Served Front:	2		Front Designations:	G,*1	
No. of Floors Served Side:	0		Side Designations:	N/A	
No. of Floors Served Rear:	1		Rear Designations:	2	
Front Door Config.:	SSCO		Front Door Size:	42" wide x 84" high	
Side Door Config.:	N/A		Side Door Size:	N/A	
Rear Door Config.:	SSCO		Rear Door Size:	42" wide x 84" high	
Two-Way Communication:	N				
Fire Recall Phase I:	N		Phase II:	N	
O.E.M.:	Other ESCO		Install Date:	1978	
Modernization Contractor:	N/A		Mod. Date:	N/A	
Controller Manufacturer / Model:	Other / Relay		Door Operator / Model:	Mechanical Linkage w/Drive Belt / Old MAC	
Car and Cwt. Buffer Type:	Spring		Service Contractor:	ESI	

Coit Elementary

Location:	GRPS - Coit Elementary, 17 Coit Avenue NE, Grand Rapids, MI 49505			Device ID.	**PE1**
Building Type:	Education			Group Name:	COIT PE1
Capacity (lbs.):	2500	Speed (fpm):	100	Loading:	Passenger
Power Supply:	480V-3-60		Drive Type:	Hole-less	
Device Type:	Hydraulic		Control Space Location:	Adjacent	
Machine Manufacturer / Model:	Kone		Operation:	Simplex	
No. of Floors Served Front:	2		Front Designations:	*1, 2	
Front Door Config.:	SSSO		Front Door Size:	42" wide x 84" high	
Side Door Config.:	N/A		Side Door Size:	N/A	
Rear Door Config.:	N/A		Rear Door Size:	N/A	
Two-Way Communication:	N				
Fire Recall Phase I:	Y		Phase II:	Y	
O.E.M.:	Kone		Install Date:	2001	
Modernization Contractor:	N/A		Mod. Date:	N/A	

Controller Manufacturer / Model:	Kone / Miprom	Door Operator / Model:	Mechanical Linkage w/Chain & Drive Belt / MAC
Car and Cwt. Buffer Type:	Spring	Service Contractor:	Elevator Service

Location:	GRPS - Franklin SW C, 801 Oakland Avenue, Grand Rapids, MI 49503			Device ID.	**SE1**
Building Type:	Education			Group Name:	Franklin SW
Capacity (lbs.):	4500	Speed (fpm):	125	Loading:	Passenger / Service
Power Supply:	480V-3-60		Drive Type:	Inground	
Device Type:	Hydraulic		Control Space Location:	Adjacent	
Machine Manufacturer / Model:	Schindler /		Operation:	Simplex	
No. of Floors Served Front:	4		Front Designations:	B,*1,1R,2,3	
No. of Floors Served Side:	0		Side Designations:	N/A	
No. of Floors Served Rear:	1		Rear Designations:	1R	
Front Door Config.:	SSSO		Front Door Size:	48" x 84"	
Side Door Config.:	N/A		Side Door Size:	N/A	
Rear Door Config.:	SSSO		Rear Door Size:	48" x 84"	
Two-Way Communication:	N				
Fire Recall Phase I:	Y		Phase II:	Y	
O.E.M.:	Schindler		Install Date:	2002	
Modernization Contractor:	N/A		Mod. Date:	N/A	
Controller Manufacturer / Model:	Schindler / MPHII		Door Operator / Model:	Mechanical Linkage w/Chain & Drive Belt / ECI	
Car and Cwt. Buffer Type:	Spring		Service Contractor:	ESI	

Ottawa

Location:	GRPS - Ottawa, 1570 Burton SE, Grand Rapids, MI 49506			Device ID.	**PE2**
Building Type:	Education			Group Name:	GRPS-OTTAWA 14525
Capacity (lbs.):	4000	Speed (fpm):	100	Loading:	Passenger
Power Supply:	480V-3-60		Drive Type:	Inground	
Device Type:	Hydraulic		Control Space Location:	Adjacent	

Machine Manufacturer / Model:	Montgomery	Operation:	Simplex
No. of Floors Served Front:	3	Front Designations:	G, 1, *2
No. of Floors Served Side:	0	Side Designations:	N/A
No. of Floors Served Rear:	0	Rear Designations:	N/A
Front Door Config.:	SSSO	Front Door Size:	40" wide x 84" high
Two-Way Communication:	N		
Fire Recall Phase I:	N	Phase II:	N
O.E.M.:	Other Montgomery	Install Date:	1971
Modernization Contractor:	N/A	Mod. Date:	N/A
Controller Manufacturer / Model:	Montgomery / HY-11	Door Operator / Model:	Mechanical Linkage w/Drive Belt / MAC
Car and Cwt. Buffer Type:	Spring	Service Contractor:	Elevator Service

Location:	GRPS - Ottawa, 1570 Burton SE, Grand Rapids, MI 49506			Device ID.	**PE3**
Building Type:	Education			Group Name:	GRPS-OTTAWA 14524 South House
Capacity (lbs.):	4000	Speed (fpm):	100	Loading:	Passenger
Power Supply:	480V-3-60		Drive Type:	Inground	
Device Type:	Hydraulic		Control Space Location:	Adjacent	
Machine Manufacturer / Model:	Montgomery		Operation:	Simplex	
No. of Floors Served Front:	3		Front Designations:	G, *2, 3	
No. of Floors Served Side:	0		Side Designations:	N/A	
No. of Floors Served Rear:	0		Rear Designations:	N/A	
Front Door Config.:	SSSO		Front Door Size:	40" wide x 84" high	
Side Door Config.:	N/A		Side Door Size:	N/A	
Rear Door Config.:	N/A		Rear Door Size:	N/A	
Two-Way Communication:	N				
Fire Recall Phase I:	N		Phase II:	N	
O.E.M.:	Other Montgomery		Install Date:	1971	
Modernization Contractor:	N/A		Mod. Date:	N/A	
Controller Manufacturer / Model:	Montgomery / HY-11		Door Operator / Model:	Mechanical Linkage w/Drive Belt / MAC	

Car and Cwt. Buffer Type:	Spring	Service Contractor:	Elevator Service

Location:	GRPS - Ottawa, 1570 Burton SE, Grand Rapids, MI 49506			Device ID.	**OTTAWA HILLS POLE BLDG PE1**
Building Type:	Education			Group Name:	GRPS-OTTAWA HILLS 15240 POLE BLDG
Capacity (lbs.):	2500	Speed (fpm):	125	Loading:	Passenger
Power Supply:	480V-3-60		Drive Type:	Inground	
Device Type:	Hydraulic		Control Space Location:	Adjacent	
Machine Manufacturer / Model:	Montgomery		Operation:	Simplex	
No. of Floors Served Front:	2		Front Designations:	1, *2,	
Front Door Config.:	SSCO		Front Door Size:	42" wide x 84" high	
Two-Way Communication:	N				
Fire Recall Phase I:	N		Phase II:	N	
O.E.M.:	Other Montgomery		Install Date:	1970	
Modernization Contractor:	N/A		Mod. Date:	N/A	
Controller Manufacturer / Model:	Montgomery / HY-11		Door Operator / Model:	Mechanical Linkage w/Drive Belt / MAC	
Car and Cwt. Buffer Type:	Spring		Service Contractor:	Elevator Service	

Union

Location:	GRPS - Various Locations, Grand Rapids, MI, Various Locations, Grand Rapids, MI 49506			Device ID.	**Union Dover 11080**
Building Type:	Education			Group Name:	GRPS Union
Capacity (lbs.):	3500	Speed (fpm):	75	Loading:	Passenger / Service
Power Supply:	480V-3-60		Drive Type:	Inground	
Device Type:	Hydraulic		Control Space Location:	Adjacent	
Machine Manufacturer / Model:	Dover		Operation:	Simplex	
No. of Floors Served Front:	3		Front Designations:	*G, M, U	
No. of Floors Served Side:	0		Side Designations:	N/A	

No. of Floors Served Rear:	0	Rear Designations:	N/A
Front Door Config.:	2SSO	Front Door Size:	42" wide x 84" high
Two-Way Communication:	N		
Fire Recall Phase I:	N	Phase II:	N
O.E.M.:	Dover	Install Date:	1965
Modernization Contractor:	N/A	Mod. Date:	N/A
Controller Manufacturer / Model:	Dover / Relay	Door Operator / Model:	Mechanical Linkage w/Chain & Drive Belt / MOVFR2
Car and Cwt. Buffer Type:	Spring	Service Contractor:	Elevator Service

Location:	GRPS - Various Locations, Grand Rapids, MI, Various Locations, Grand Rapids, MI 49506			Device ID.	**Union Haughton 90244**
Building Type:	Education			Group Name:	GRPS Union
Capacity (lbs.):	2500	Speed (fpm):	100	Loading:	Passenger / Service
Power Supply:	480V-3-60		Drive Type:	Inground	
Device Type:	Hydraulic		Control Space Location:	Adjacent	
Machine Manufacturer / Model:	Haughton		Operation:	Simplex	
No. of Floors Served Front:	2		Front Designations:	*G, M, U	
No. of Floors Served Side:	0		Side Designations:	N/A	
No. of Floors Served Rear:	0		Rear Designations:	N/A	
Front Door Config.:	1SSO		Front Door Size:	42" wide x 84" high	
Two-Way Communication:	N				
Fire Recall Phase I:	N		Phase II:	N	
O.E.M.:	Dover		Install Date:	1980	
Modernization Contractor:	N/A		Mod. Date:	N/A	
Controller Manufacturer / Model:	Dover / Relay		Door Operator / Model:	Mechanical Linkage w/Chain & Drive Belt / MOVFR2	
Car and Cwt. Buffer Type:	Spring		Service Contractor:	Elevator Service	

Franklin 4H

Location:	GRPS - Various Locations, Grand Rapids, MI, Various Locations, Grand Rapids, MI 49506			Device ID.	**PE1**
Building Type:	Education			Group Name:	Franklin 4-H
Capacity (lbs.):	2500	Speed (fpm):	80	Loading:	Passenger
Power Supply:	480V-3-60		Drive Type:	Inground	
Device Type:	Hydraulic		Control Space Location:	Adjacent	
Machine Manufacturer / Model:	Dover /		Operation:	Simplex	
No. of Floors Served Front:	1		Front Designations:	*1,2	
No. of Floors Served Side:	0		Side Designations:	N/A	
No. of Floors Served Rear:	0		Rear Designations:	N/A	
Front Door Config.:	SSSO		Front Door Size:	42" x 84"	
Rear Door Config.:	SSSO		Rear Door Size:	SSSO	
Two-Way Communication:	N-Not working				
Fire Recall Phase I:	Y		Phase II:	N	
O.E.M.:	Dover		Install Date:	1997	
Modernization Contractor:	N/A		Mod. Date:	N/A	
Controller Manufacturer / Model:	Dover / DMC		Door Operator / Model:	Mechanical Linkage w/Drive Belt / HD-85	
Car and Cwt. Buffer Type:	Spring		Service Contractor:	Elevator Service	

Franklin Admin

Location:	GRPS - Various Locations, Grand Rapids, MI, Various Locations, Grand Rapids, MI 49506			Device ID.	**PE1**
Building Type:	Education			Group Name:	Franklin Admin
Capacity (lbs.):	2500	Speed (fpm):	125	Loading:	Passenger
Power Supply:	480V-3-60		Drive Type:	Hole-less	
Device Type:	Hydraulic		Control Space Location:	Adjacent	
Machine Manufacturer / Model:	Montgomery /		Operation:	Simplex	
No. of Floors Served Front:	3		Front Designations:	1,*2,3	

Front Door Config.:	SSSO	Front Door Size:	42" wide x 84" high
Two-Way Communication:	N		
Fire Recall Phase I:	Y	Phase II:	Y
O.E.M.:	Kone	Install Date:	1995
Modernization Contractor:	N/A	Mod. Date:	N/A
Controller Manufacturer / Model:	Montgomery / Uniprom	Door Operator / Model:	Mechanical Linkage w/Drive Belt / MAC104
Car and Cwt. Buffer Type:	Spring	Service Contractor:	Elevator Service

Franklin Data

Location:	GRPS - Various Locations, Grand Rapids, MI, Various Locations, Grand Rapids, MI 49506			Device ID.	**PE1**
Building Type:	Education			Group Name:	Franklin Data
Capacity (lbs.):	2000	Speed (fpm):	125	Loading:	Passenger
Power Supply:	480V-3-60		Drive Type:	Hole-less	
Device Type:	Hydraulic		Control Space Location:	Adjacent	
Machine Manufacturer / Model:	Montgomery		Operation:	Simplex	
No. of Floors Served Front:	2		Front Designations:	1.2	
Front Door Config.:	SSSO		Front Door Size:	36" wide x 84" high	
Two-Way Communication:	Y				
Fire Recall Phase I:	N		Phase II:	N	
O.E.M.:	Kone		Install Date:	1995	
Modernization Contractor:	N/A		Mod. Date:	N/A	
Controller Manufacturer / Model:	Montgomery / Uniprom		Door Operator / Model:	Mechanical Linkage w/Drive Belt / MAC104	
Car and Cwt. Buffer Type:	Spring		Service Contractor:	Elevator Service	

Franklin Elem

Location:	GRPS - Various Locations, Grand Rapids, MI, Various Locations, Grand Rapids, MI 49506	Device ID.	**PE1**
Building Type:	Education	Group Name:	Franklin Elem

Capacity (lbs.):	2000	Speed (fpm):	125	Loading:	Passenger
Power Supply:	480V-3-60		Drive Type:	Hole-less	
Device Type:	Hydraulic		Control Space Location:	Adjacent	
Machine Manufacturer / Model:	Montgomery		Operation:	Simplex	
No. of Floors Served Front:	3		Front Designations:	*1,2,3	
No. of Floors Served Side:	0		Side Designations:	N/A	
No. of Floors Served Rear:	0		Rear Designations:	N/A	
Front Door Config.:	SSSO		Front Door Size:	36" wide x 84" high	
Two-Way Communication:	N				
Fire Recall Phase I:	Y		Phase II:	Y	
O.E.M.:	Kone		Install Date:	1995	
Modernization Contractor:	N/A		Mod. Date:	N/A	
Controller Manufacturer / Model:	Montgomery / Uniprom		Door Operator / Model:	Mechanical Linkage w/Drive Belt / MAC 104	
Car and Cwt. Buffer Type:	Spring		Service Contractor:	Elevator Service	

University

Location:	GRPS - Various Locations, Grand Rapids, MI, Various Locations, Grand Rapids, MI 49506			Device ID.	**UNIVERSITY PE1**
Building Type:	Education			Group Name:	UNIVERSITY PE1
Capacity (lbs.):	2000	Speed (fpm):	80	Loading:	Passenger
Power Supply:	480V-3-60		Drive Type:	Hole-less	
Device Type:	Hydraulic		Control Space Location:	Adjacent	
Machine Manufacturer / Model:	Montgomery / Miprom		Operation:	Simplex	
No. of Floors Served Front:	2		Front Designations:	1, *2	
Front Door Config.:	SSSO		Front Door Size:	36" wide x 84" high	
Two-Way Communication:	Y				
Fire Recall Phase I:	Y		Phase II:	N	
O.E.M.:	Other Montgomery		Install Date:	1993	

Modernization Contractor:	N/A	Mod. Date:	N/A
Controller Manufacturer / Model:	Montgomery / Miprom	Door Operator / Model:	Mechanical Linkage w/Chain & Drive Belt / MAC
Car and Cwt. Buffer Type:	Spring	Service Contractor:	Elevator Service

Buchanan Elementary

Location:	GRPS - Buchanan Elementary, 1775 Buchanan Avenue SW, Grand Rapids, MI 49507			Device ID.	**PE1**
Building Type:	Education			Group Name:	Buchanan Elem PE1
Capacity (lbs.):	2100	Speed (fpm):	150	Loading:	Passenger
Power Supply:	480V-3-60		Drive Type:	Hole-less	
Device Type:	Hydraulic		Control Space Location:	Adjacent	
Machine Manufacturer / Model:	Schindler		Operation:	Simplex	
No. of Floors Served Front:	2		Front Designations:	*1,2	
No. of Floors Served Side:	0		Side Designations:	N/A	
No. of Floors Served Rear:	0		Rear Designations:	N/A	
Front Door Config.:	SSSO		Front Door Size:	36" wide x 84" high	
Side Door Config.:	N/A		Side Door Size:	N/A	
Rear Door Config.:	N/A		Rear Door Size:	N/A	
Two-Way Communication:	Y				
Fire Recall Phase I:	Y		Phase II:	Y	
O.E.M.:	Schindler		Install Date:	2017	
Modernization Contractor:	N/A		Mod. Date:	N/A	
Controller Manufacturer / Model:	Schindler / 330A		Door Operator / Model:	Linear/belt / IDD	
Car and Cwt. Buffer Type:	Spring		Service Contractor:	ESI	

Cesar E Chavez Elementary

Location:	GRPS - Cesar E Chavez Elementary, 703 Shamrock Street SW, Grand Rapids, MI 49507			Device ID.	**PE1**
Building Type:	Education			Group Name:	Cesar E Chavez
Capacity (lbs.):	2500	Speed (fpm):	150	Loading:	Passenger
Power Supply:	480V-3-60		Drive Type:	Telescopic Hole-less	
Device Type:	Hydraulic		Control Space Location:	Adjacent	
Machine Manufacturer / Model:	Schindler / HX		Operation:	Simplex	

No. of Floors Served Front:	3	Front Designations:	*1,2,3
No. of Floors Served Side:	0	Side Designations:	N/A
No. of Floors Served Rear:	0	Rear Designations:	N/A
Front Door Config.:	SSCO	Front Door Size:	42" wide x 84" high
Side Door Config.:	N/A	Side Door Size:	N/A
Rear Door Config.:	N/A	Rear Door Size:	N/A
Two-Way Communication:	Y		
Fire Recall Phase I:	Y	Phase II:	Y
O.E.M.:	Schindler	Install Date:	2009
Modernization Contractor:	N/A	Mod. Date:	N/A
Controller Manufacturer / Model:	Schindler / 330A	Door Operator / Model:	Linear/belt / IDD
Car and Cwt. Buffer Type:	Spring	Service Contractor:	ESI

Dickinson

Location:	GRPS - Dickinson, 448 Dickinson SE, Grand Rapids, MI 49507			Device ID.	**PE1**
Building Type:	Education			Group Name:	Dickinson
Capacity (lbs.):	3500	Speed (fpm):	100	Loading:	Passenger
Power Supply:	480V-3-60		Drive Type:	Telescopic Hole-less	
Device Type:	Hydraulic		Control Space Location:	Adjacent	
Machine Manufacturer / Model:	Schindler		Operation:	Simplex	
No. of Floors Served Front:	3		Front Designations:	*1,2,3	
No. of Floors Served Side:	0		Side Designations:	N/A	
No. of Floors Served Rear:	0		Rear Designations:	N/A	
Front Door Config.:	SSSO		Front Door Size:	42" wide x 84" high	
Side Door Config.:	N/A		Side Door Size:	N/A	
Rear Door Config.:	N/A		Rear Door Size:	N/A	

Two-Way Communication:	Y		
Fire Recall Phase I:	Y	Phase II:	Y
O.E.M.:	Schindler	Install Date:	2008
Modernization Contractor:	N/A	Mod. Date:	N/A
Controller Manufacturer / Model:	Schindler / 330A	Door Operator / Model:	Linear/belt / IDD
Car and Cwt. Buffer Type:	Spring	Service Contractor:	ESI

Houseman Field

Location:	GRPS - Various Locations, Grand Rapids, MI, Various Locations, Grand Rapids, MI 49506			Device ID.	**HOUSEMAN PE1**
Building Type:	Education			Group Name:	HOUSEMAN PE1
Capacity (lbs.):	2100	Speed (fpm):	125	Loading:	Passenger
Power Supply:	480V-3-60		Drive Type:	Inverted Telescopic Jacks	
Device Type:	Hydraulic		Control Space Location:	Adjacent	
Machine Manufacturer / Model:	Schindler		Operation:	Simplex	
No. of Floors Served Front:	2		Front Designations:	LL, *1	
Front Door Config.:	SSSO		Front Door Size:	36" wide x 84" high	
Two-Way Communication:	N				
Fire Recall Phase I:	Y		Phase II:	Y	
O.E.M.:	Schindler		Install Date:	2009	
Modernization Contractor:	N/A		Mod. Date:	N/A	
Controller Manufacturer / Model:	Schindler / 330A		Door Operator / Model:	Mechanical Linkage w/Chain & Drive Belt / IDD	
Car and Cwt. Buffer Type:	Spring		Service Contractor:	Elevator Service	

Martin Luther King

Location:	GRPS - Martin Luther King, 645 Logan, Grand Rapids, MI 49503			Device ID.	**PE1**
Building Type:	Education			Group Name:	MLK
Capacity (lbs.):	2500	Speed (fpm):	125	Loading:	Passenger
Power Supply:	480V-3-60		Drive Type:	Telescopic Hole-less	

Device Type:	Hydraulic	Control Space Location:	Adjacent
Machine Manufacturer / Model:	Schindler / 330A	Operation:	Simplex
No. of Floors Served Front:	3	Front Designations:	*1,2,3
No. of Floors Served Side:	0	Side Designations:	N/A
No. of Floors Served Rear:	0	Rear Designations:	N/A
Front Door Config.:	SSCO	Front Door Size:	42" wide x 84" high
Side Door Config.:	N/A	Side Door Size:	N/A
Rear Door Config.:	N/A	Rear Door Size:	N/A
Two-Way Communication:	Y		
Fire Recall Phase I:	Y	Phase II:	Y
O.E.M.:	Schindler	Install Date:	2006
Modernization Contractor:	N/A	Mod. Date:	N/A
Controller Manufacturer / Model:	Schindler / 330A	Door Operator / Model:	Linear/belt / IDD
Car and Cwt. Buffer Type:	Spring	Service Contractor:	ESI

North Park Elementary

Location:	GRPS - Various Locations, Grand Rapids, MI, Various Locations, Grand Rapids, MI 49506			Device ID.	**North Park PE1**
Building Type:	Education			Group Name:	GRPS-NORTH PARK ELEMENTARY
Capacity (lbs.):	2500	Speed (fpm):	100	Loading:	Passenger
Power Supply:	480V-3-60		Drive Type:	Telescopic Hole-less	
Device Type:	Hydraulic		Control Space Location:	Adjacent	
Machine Manufacturer / Model:	Schindler / 330A		Operation:	Simplex	
No. of Floors Served Front:	3		Front Designations:	G, *1, 2	
No. of Floors Served Rear:	1		Rear Designations:	ST	
Front Door Config.:	SSSO		Front Door Size:	42" wide x 84" high	

Rear Door Config.:	SSSO	Rear Door Size:	42" wide x 84" high
Two-Way Communication:	N		
Fire Recall Phase I:	Y	Phase II:	Y
O.E.M.:	Schindler	Install Date:	2008
Modernization Contractor:	N/A	Mod. Date:	N/A
Controller Manufacturer / Model:	Schindler / 330A	Door Operator / Model:	Linear/belt / IDD
Car and Cwt. Buffer Type:	Spring	Service Contractor:	Elevator Service

Sibley Elementary

Location:	GRPS - Sibley Elementary, 943 Sibley SW, Grand Rapids, MI 49504			Device ID.	**PE1**
Building Type:	Education			Group Name:	Sibley PE1
Capacity (lbs.):	2100	Speed (fpm):	100	Loading:	Passenger
Power Supply:	480V-3-60		Drive Type:	Telescopic Hole-less	
Device Type:	Hydraulic		Control Space Location:	Adjacent	
Machine Manufacturer / Model:	Schindler /		Operation:	Simplex	
No. of Floors Served Front:	3		Front Designations:	*1, 2, 3	
No. of Floors Served Side:	0		Side Designations:	N/A	
No. of Floors Served Rear:	0		Rear Designations:	N/A	
Front Door Config.:	SSSO		Front Door Size:	42" x 84"	
Two-Way Communication:	Y				
Fire Recall Phase I:	Y		Phase II:	Y	
O.E.M.:	Schindler		Install Date:	2006	
Modernization Contractor:	N/A		Mod. Date:	N/A	
Controller Manufacturer / Model:	Schindler / 330A		Door Operator / Model:	Linear/belt / IDD	
Car and Cwt. Buffer Type:	Spring		Service Contractor:	Elevator Service Inc.	

DIVISION 14

TECHNICAL SPECIFICATIONS FOR

HYDRAULIC CYLINDER REPLACEMENT

AT

GRPS - VARIOUS LOCATIONS, GRAND RAPIDS, MI

VARIOUS LOCATIONS

GRAND RAPIDS, MI

DATE: October 8, 2025

VDA NO. 2025-76259

DIVISION 14 – CONVEYING SYSTEMS

14 24 00 – Hydraulic Elevators

14 24 23 – Hydraulic Passenger Elevators

PART 1 - GENERAL

1.1 SUMMARY AND DEFINITIONS

A. Related Documents

1. 14 24 23 - Hydraulic Passenger Elevator
2. Supplemental General Conditions
3. Request for Proposal

1.2 Work Included:

A. Replacement of cylinder and piston assembly. List of locations and elevators provided under separate cover.

B. Work of this Section includes labor, materials, tools, equipment, appliances and services required to manufacture, deliver and install components complete as specified herein, and/or as required by job conditions.

C. The work and/or requirements specified in all sections is described in singular with the understanding that identical work shall be performed on all units or associated systems unless otherwise specified herein.

D. The work shall include, but is not limited to the following:

1. Removal and replacement of existing hydraulic cylinder and piston assembly, spring buffers, and pit channels.
2. Cleaning of the existing cylinder hole. Cleaning shall be by vacuum unit.
3. Removal and disposal of existing hydraulic oil and well-hole spoils in an enclosed container or truck mounted collection system. All removed spoils and oil shall be disposed of at a State of Michigan licensed Pollution Control Agency site and a copy of the disposal documents shall be provided to the Owner.
4. Contractor shall provide hoisting equipment and labor as necessary to remove the existing components or to install the new components in place.
5. Contractor shall be responsible for the removal and proper disposal of the existing hydraulic cylinder and piston assembly, pit channels, and spring buffers.

6. All in-ground components shall be plumbed, and any necessary back-fill provided and set in place by the contractor.
7. Contractor shall provide all tools, labor, material, and work procedures to fully protect all building walls, floors, and finishes from damage during performance of the work.
8. Contractor shall provide an active smoke control system for use during burning (torch) or welding operations. An active smoke control system is defined as a properly sized exhaust fan that utilizes a temporary duct to exhaust contaminated air or similar device.
9. Contractor shall be responsible for drilling of the jack hole and removal of resultant debris should the existing jack hole collapse.

E. Intent

1. This section includes:

   a. Hydraulic passenger

2. The following outlines the scope of work covered in this Section:
3. Replacement of cylinder and piston assembly. List of locations and elevators provided under separate cover.
4. Related equipment shall be designed, constructed, installed, and adjusted to produce the highest results with respect to smooth, quiet, convenient, and efficient operation, durability, economy of maintenance, and the highest standard of safety.
5. It is not the intent of these specifications to detail the construction and design of all parts of the equipment, but it is expected that the type, materials, design, quality of work, and construction of each part shall be adequate for the service required, durable, properly coordinated with all other parts, and in accordance with the best commercial standards applicable and of the highest commercial efficiency possible.
6. Minimum requirements for design, materials, etc., are for certain parts of the equipment. Equivalent requirements approved by the Consultant shall apply to such parts as are of special design, construction, or material and to which the specified requirements are not directly applicable. These minimum requirements as a whole shall be considered as establishing proportionate general minimum standards for all parts of the equipment.
7. The Consultant may permit variations from the requirement of these specifications to permit use of the Contractor's standard equipment, provided such standard equipment is in every way adequate for the intended use and meets the full intent of these specifications. All such variations proposed by the manufacturer shall be called to the attention of the Consultant and shall only be made if approved in writing prior to the award of the contract.
8. General requirements for design, materials and construction are intended primarily to apply to the heavy-duty and important parts of the equipment specifically mentioned and to other parts of similar duty and importance. Less important and light-duty parts may be of the standard design, materials and construction provided that, in the opinion of the Consultant, such standards are in accordance with the best commercial practice and are

fully adequate for the purpose of use. All such variations shall be made only on the Consultant's written approval.

9. All equipment and component parts installed, supplied or provided under this contract shall be manufactured and distributed by a third-party, non-installer company servicing the vertical transportation industry.

    a. Apparatus shall conform to the design and construction standards referenced herein and shall be rated the best commercial grade suitable for this application.
    b. Equipment and component systems shall not employ any experimental devices or proprietary designs that could hamper and/or otherwise prohibit subsequent maintenance repairs or adjustments by all qualified contractors.
    c. Manufacturers of the apparatus shall provide technical support and parts replacements for their equipment and component systems for a minimum of twenty (20) years and issue such guarantee of support to the purchaser with written certification naming the final Owner of their product(s) to ensure the apparatus or systems remain maintainable regardless of who may be selected for future service.

10. All equipment provided shall be factory and field tested with a history of design reliability and net-useful life established.

    a. Contractor must be able to demonstrate the apparatus to be installed has been used successfully in a substantially similar manner under comparable conditions.
    b. If the apparatus proposed differs substantially in construction, material composition, design, size, capacity, duty, or other such rating from the equipment previously used for the same purpose by the manufacturer, the Consultant may reject the apparatus or require the vendor test and demonstrate the adequacy and suitability for this particular situation. Any necessary tests shall be performed at the sole expense of the Contractor with no prior guarantee of acceptance after the testing procedure.

11. Certain design limitations, tests, etc., are herein specified as a partial check of the adequacy of design, construction and materials used. These requirements do not cover all features necessary to ensure satisfactory and approved operation, etc., of the equipment.
12. It is understood, the entire system shall be designed, fabricated, modified and/or upgraded in full compliance with applicable local laws and code standards. The absence of a particular item or requirement shall not relieve the Contractor of the full and sole responsibility for such equipment, features and/or procedures.
13. With the exception of only those items specifically identified as being performed by others, the Specifications are intended to include all engineering, material, labor, testing, and inspections needed to achieve work specified by the Contract Documents. Inasmuch as it is understood that any incidental work necessary to complete the project is also covered by the Specifications, bidders are cautioned to familiarize themselves with the

existing job site conditions. Additional charges for material or labor shall not be permitted subsequent to execution of the Contract.

14. Bidders must report discrepancies or ambiguities occurring in the Specifications to the Consultant for resolution prior to the bidding deadline, otherwise the Specifications shall be deemed acceptable in their existing form.

F. Abbreviations and Symbols

1. The following abbreviations, Associations, Institutions, and Societies may appear in the Project Manual or Contract Documents:

AHJ	Authority Having Jurisdiction
AIA	American Institute of Architects
ANSI	American National Standards Institute
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AWS	American Welding Society
IBC	International Building Code
IEEE	Institute of Electrical and Electronics Engineers
NEC	National Electrical Code
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Agency
OSHA	Occupational Safety and Health Act

G. Codes and Ordinances / Regulatory Agencies

1. Work specified by the Contract Documents shall be performed in compliance with applicable Federal, State, and municipal codes and ordinances in effect at the time of Contract execution. Regulations of the Authority Having Jurisdiction shall be fulfilled by the Contractor and Subcontractors. The entire installation, when completed, shall conform with all applicable regulations set forth in the latest editions of:

   a. Local and/or State laws applicable for logistical area of project work.
   b. Building Code applicable to the AHJ.
   c. Elevator Code applicable to the AHJ.
   d. Safety Code for Elevators and Escalators, ASME A17.1 and all supplements as modified and adopted by the AHJ.
   e. Safety Code for Elevators and Escalators, A17.1S supplement to A17.1 as modified and adopted by the AHJ for Machine Room Less installations (MRL).
   f. Guide for Inspection of Elevators, Escalators, and Moving Walks, ASME A17.2.
   g. Safety Code for Existing Elevators and Escalators, ASME A17.3 as modified and adopted by the AHJ.
   h. Guide for emergency evacuation of passengers from elevators, ASME A17.4.
   i. National Electrical Code (ANSI/NFPA 70).

j. Americans with Disabilities Act - Accessibility Guidelines for Building and Facilities and/or A117.1 Accessibility as may be applicable to the AHJ.
k. ASME A17.5/CSA-B44.1 - Elevator and escalator electrical equipment.

2. The Contractor shall advise the Owner's Representative of pending code changes that could be applicable to this project and provide quotations for compliance with related costs.

H. Reference Standards

1. AISC - Specification for the Design, Fabrication and Erection of Structural Steel for Buildings.
2. ANSI/AWS D1.1 - Structural Welding Code, Steel.
3. ANSI/NFPA 80 - Fire Doors and Windows.
4. ANSI/UL 10B - Fire Tests of Door Assemblies.
5. ASTM D1785 - PVC Pipe.
6. ASTM D2466 – PVC Pipe Fittings.
7. ASTM D2564 – Cement for PVC Pipe and Fittings.
8. ANSI/IEEE - 519-Latest Edition.
9. ANSI/IEEE - Guide for Surge Withstand Capability (SWC) Tests.
10. ANSI Z97.1 – Laminated/Safety Tempered Glass.

1.3 PERMITS AND SUBMITTALS

A. Permits

1. Prior to commencing work specified by the Contract Documents, the Contractor shall, at its own expense, obtain all permits or variances as may be required by the AHJ and provide satisfactory evidence of having obtained said permits and variances to both the Owner's Representative and Consultant.
2. File necessary drawings for approval of all Authorities Having Jurisdiction.
3. The Elevator Contractor shall undertake the necessary review and search procedure to identify open applications and/or outstanding violations for this property; and close-out such applications and/or expunge such violations relative to the project scope as required for final acceptance by the AHJ.

a. Outstanding applications and violations must be indicated on the request for permit filing for this procedure to ensure such applications and/or violations are dismissed accordingly.
b. All relative costs shall be included in the base bid proposal with the understanding that corrective actions are covered under the specified scope of work.

B. Submittals

1. Prior to beginning the work, the Contractor shall submit and have approved copies of , shop drawings, and standard cuts. These items shall include:

    a. All accessories.

2. The Consultant and the Owner's Representative shall pass on the submittals with reasonable promptness and the Contractor shall be responsible to ensure that there will be no delay in their work or that of any other trade involved.
3. Approved filing and submittal requirements must be completed before equipment and related materials are ordered.
4. Copies of Department of Buildings' permits and/or governing authority's documents will be posted at the job site with copies issued to the Owner's Agent, Owner's Representative and Consultant.
5. It shall be understood that approval of the drawings and cuts by Owner's designee, Architect and/or Consultant shall be for general arrangement only and does not include measurements which are the Contractor's responsibility or approval of variations from the contract documents required by the AHJ.
6. The Contractor shall prepare a record log and maintain all submittals, shop drawings, catalog cuts and samples.

C. Measurements and Drawings

1. Drawings or measurements included with the bidding material shall be for the convenience of the bidders only and full responsibility for detailed dimensions lies with the Contractor.
2. In the execution of the work on the job, the Contractor shall verify all dimensions with the actual conditions.
3. Where the work of the Elevator Contractor is to join other trades, the shop drawings shall show the actual dimensions and the method of joining the work of the various trades.

D. Changes in Scope and Extra Work

1. The Owner may at any time make changes in the specifications, plans and drawings, omit work, and require additional work to be performed by the Contractor.

    a. Each such addition or deletion to the Contract shall require the Owner and the Contractor to negotiate a mutually acceptable adjustment in the contract price, and, for the Contractor to issue a change order describing the nature of the change and the amount of price adjustment.
    b. The Contractor shall make no additions, changes, alterations or omissions or perform extra work except on written authorization of the Owner.
    c. Each change order shall be executed by the Contractor, Owner, and the Consultant.

1.4 QUALITY ASSURANCE

A. Materials and Quality of Work

1. All materials are to be new and of the best quality of per the specification.
2. Installation of such materials shall be accomplished in a neat manner and be of the highest quality.

    a. Should the Contractor receive written notification from the Owner stating the presence of inferior, improper, or unsound materials or quality of installation, the Contractor shall, within twenty-four (24) hours, remove such work or materials and make good all other work or materials damaged.
    b. Should the Owner permit said work or materials to remain, the Owner shall be allowed the difference in value or shall, at its election, have the right to have said work or materials repaired or replaced as well as the damage caused thereby, at the expense of the Contractor, at any time within one (1) year after the completion of the work; and neither payment made to the Contractor, nor any other acts of the Owner shall be construed as evidence of acceptance and waiver.

1.5 DELIVERY / STORAGE / HANDLING / COORDINATION

A. Delivery and Storage of Material and Tools

1. Delivery, Storage and Handling:

    a. Deliver materials to the site ready for use in the accepted manufacturer's original and unopened containers and packaging, bearing labels as to type of material, brand name and manufacturer's name. Delivered materials shall be identical to accepted samples.
    b. Store materials under cover in a dry and clean location, off the ground.
    c. Remove delivered materials which are damaged or otherwise not suitable for installation from the job site and replace with acceptable materials.

2. The Owner shall bear no responsibility for the materials, equipment or tools of the Contractor and shall not be liable for any loss thereof or damage thereto.
3. The Contractor shall confine storage of materials on the job site to the limits and locations designated by the Owner and shall not unnecessarily encumber the premises or overload any portion with materials to a greater extent than the structural design load of the Facility.

B. Removal of Rubbish and Existing Equipment

1. On a scheduled basis, the Contractor shall remove all rubbish generated in performing work specified in the Contract Documents from the job site.

2. Any component of the existing elevator plant that is not reused under the scope of work specified in the Contract Documents shall become property of the Contractor and, as such, shall be removed from the premises at the Contractor's sole expense.
3. The Contractor agrees to dispose of the aforementioned equipment and rubbish in accordance with any and all applicable Federal, State, and municipal environmental regulations, and further accepts all liability that may result from handling and/or disposing of said material.
4. Removal and disposal of existing hydraulic oil and well-hole spoils in an enclosed container or truck mounted collection system. All removed spoils and oil shall be disposed of at a State of Michigan licensed Pollution Control Agency site and a copy of the disposal documents shall be provided to the Owner.
5. Contractor shall be responsible for the removal and proper disposal of the existing hydraulic cylinder and piston assembly, pit channels and spring buffers.

C. Protection of Work and Property

1. The Contractor shall continuously maintain adequate protection of all their work from damage and shall protect the Owner's property from injury or loss arising out of this contract.
2. The Contractor shall make good any such damages, injury or loss, except such as may be directly caused by agents or employees of the Owner.
3. The Contractor shall provide all barricades required to protect open hoistways or shafts per OSHA regulations. Such protection shall include any necessary guards or other barricades for employee protections during and after the modernization procedure.
4. Contractor shall provide all tools, labor, material and work procedures to fully protect all building walls, floors and finishes from damage during performance of the work.

1.6 WARRANTY / MAINTENANCE SERVICES

A. Contract Close-Out, Guarantee and Warranties

1. Guarantee and Warranties:

a. Warrant the equipment installed under these specifications against defects in material and quality of installation and correct any defects not due to ordinary wear and tear or improper use of car which may develop within one (1) year from the date each unit is completed and placed in permanent operation and accepted by the Owner.
b. This warrantee shall be written and issued at the completion of each unit prior to final payment.

B. Maintenance Coverage

1. The following maintenance coverage apply: See Hydraulic Elevator Modernization Specification.

a. Interim Maintenance in accordance with Owners Form of Agreement.

1.7 ALTERNATES AND VALUE ENGINEERING:

The following alternatives are elective upgrades which constitute changes to the base scope of work specified. Pricing for each alternate upgrade is requested from the bidder with costs indicated in the appropriate space in the Request for Proposal (RFP). Contractor shall take into consideration, as part of the alternative pricing, alternate work that is required either in lieu of, or in addition to, work specified in the base scope and shall not duplicate costs.

A. Shift Work

1. Bidders are required to submit a separate price quotation to perform all work described in the Specification on a shift-work basis whereby two (2) consecutive eight (8) hour shifts of field installation labor shall be employed Monday through Friday for the entire length of the project.
2. Bidders are required to submit a separate price quotation to perform all work described in the Specification on a shift-work basis whereby six (6) consecutive ten (10) hour shifts of field installation labor shall be employed Monday through Saturday for the entire length of the project.
3. The bidder shall submit a revised project completion schedule based upon the use of shift work.

PART 2 - PRODUCTS

2.1 ELEVATOR Ottawa GRPS PE2 (14524), PE3 (14525), POLE (15240) Passenger/Service (Jack Replacement)

A.

1.	Quantity	One (4) hydraulic elevator with standard in-ground jack unit
2.	Type	Passenger/Service
3.	Capacity (lbs.)	*To be Field Verified*
4.	Speed (fpm)	*To be Field Verified*
5.	Travel in Feet	*To be Field Verified*
6.	Number of Landings	*To be Field Verified*
7.	Number of Openings	*To be Field Verified*
8.	Front Opening	All
9.	Rear Opening	N/A
10.	Operation	Simplex
11.	Control	Hydraulic
12.	Buffers	New - Spring
13.	Machine Type	Hydraulic pump
14.	Pump Location	Existing Location

2.2 MANUFACTURERS

A. Pre-Approved Equipment Manufacturers

1. The following manufacturers' equipment and materials have been pre-approved for use on this project.
2. Other equipment not specifically mentioned shall be considered for approval on an individual basis.
3. Certain Original Equipment Manufacturers equipment is acceptable unless otherwise specified.

    a. Hydraulic Systems/Components - Canton, ECS Corporation, Elevator Equipment Corporation, Mongrain Vertical Transport (MVT), MEI, Schumacher.

4. Original Equipment Manufacturers may substitute their own branded equipment subject to the following:

    a. All requirements of the specifications are met regarding performance, appearance, serviceability, and support.
    b. A full stock of all regular and critical replacement parts required for this project are maintained at a facility within fifty (50) miles of the project site.

1) Any parts not stocked at the above referenced facility shall be identified with the location of the nearest source and shall be available for next-day delivery upon demand.

c. All parts and software shall be made available for purchase to a qualified elevator maintenance firm with one-business day delivery without direct Owner involvement.

1) Provide details of parts supply facility and a list of current parts pricing for all major components required for the installation.

d. All specialized tools, equipment, software, and passwords, required to maintain, repair, adjust the operation, and perform code mandated inspections are provided to the Owner as part of the base installation.

1) Updates to these items shall be available via the parts supply facility referenced above.

e. Technical support of the product(s) shall be available to the Owner's elevator service provider.

2.3 PIT EQUIPMENT

A. Jack Assembly, Jack Hole, and Casing (New/Replacement)

1. Existing hydraulic cylinder, piston, pit channels and spring buffers shall be removed.

a. Contractor shall be responsible for drilling of the jack hole and removal of resultant debris should the existing jack hole collapse.

2. The jack hole shall be fitted with a schedule 40 waterproof PVC casing.
3. The jack assembly shall be of sufficient size to lift the gross load at the rated speed to the height specified and shall be factory tested to ensure adequate strength and freedom from leakage.

a. No brittle material, such as grey cast iron, shall be used in the jack construction.

4. The base components of this assembly shall be a cylinder, cylinder head, and plunger.
5. Installation shall be plumb and at the exact center of the car guide rail DBG.
6. Channel iron pit structure shall be provided as a means of support and attachment.
7. The hydraulic cylinder shall be constructed from heavy steel pipe meeting ASTM-A53, grade B standards with a forged seamless end cap, threaded inlet fitting, and brackets for pit channel attachment.

a. Outside walls of the cylinder shall receive no less than three (3) applications of an approved corrosion inhibiting compound.

8. The cylinder head and flange shall be machined from carbon steel and designed to provide a collision point for the plunger stop ring.

   a. The head shall be equipped with two (2) packing rings separated by a single lantern ring, an oil wiper ring, a bronze guide ring, and an air bleed port.
   b. The flange shall be arc welded to the upper end of the cylinder to provide a means of attachment and mating surface for the head.
   c. Immediately prior to seeking final acceptance of the completed project as specified herein, the Contractor shall renew both packing rings in the cylinder head.

9. The plunger shall be constructed from precision ground steel pipe meeting ASTM-A53, grade B standards.

   a. In cases where multiple plunger sections are necessary, threaded coupling with neoprene O-ring seals shall be provided.
   b. The upper end of the plunger shall be fitted with an inset steel plate that is fillet welded to the inner walls of the plunger and then drilled and tapped for platen plate attachment.
   c. A heavy steel stop ring shall be arc welded outside the plunger near the bottom end.

10. Should the existing well hole and or casing diameter be inadequate for installation of new cylinder and PVC liner. Contractor shall drill a larger well hole of sufficient diameter to accommodate the new equipment.

    a. Drill the jack hole by rotary drill. No hammer drilling or blasting shall be allowed.
    b. Provide a drill casing during the drilling. The bottom of casing shall have a twenty-four inch (24") thick concrete plug.
    c. Install a Schedule 40 PVC waterproof casing with a six inch (6") wide PVC water stop ring to be cast into the pit floor. Cap the waterproof casing until ready to be used.
    d. Use skid mounted drill rig where access is limited.
    e. Include removal of spoils, dirt and debris, back filling, and mounting.
    f. Should any annular space exist between the outside of casing and shaft hole, back fill space with sand to wedge casing in place. Then rod and water hose sand into space, while adding more sand, until refusal.
    g. Upon installation of PVC liner, back fill sand into space between drill casing and PVC liner. Rod and water hose sand into space, while adding more sand, and cast remainder of pit floor.
    h. Leave a roughened rebate in the top surface of the concrete fill where it meets liner for the insertion of non-shrink grout.
    i. Fill the water stopping rebate with equipment grout, make level with surrounding slab and tight against casing.

B. Car Buffers (New/Replacement)

1. Provide spring buffer with necessary blocking and horizontal steel braces under the car.
2. The buffer shall be tested and approved by a qualified testing laboratory.
3. Provide a permanent buffer marking plate which indicates the manufacturer's name, identification number, rated impact speed and stroke.
4. Support buffers from the pit floor level with all required blocking and bracing steel members.

PART 3 - EXECUTION

3.1 INSTALLATION / PROJECT PHASING

A. Installation

1. Install the components using skilled personnel in strict accordance with the final accepted shop drawings and other submittals.
2. Comply with the code, manufacturer's instructions and recommendations.
3. Coordinate work with the work of other building functions for proper time and sequence to avoid delays and to ensure right-of-way of system. Use lines and levels to ensure dimensional coordination of the work.
4. Accurately and rigidly secure supporting elements within the shaftways to the encountered construction within the tolerance established.
5. Ensure sill-to-sill running clearances do not exceed one and one-quarter inches (1-¼") at all landings served.
6. Pack openings around oil line with fire resistant, sound isolating glass or mineral wool.
7. Provide isolation pad between platen head and car structure.
8. Set jack unit plumb in waterproof hole and bolt it to mounting channels in the pit.
9. After installation, touch up in the field, surfaces of shop primed elements which have become scratched or damaged.
10. Lubricate operating parts of system as recommended by the manufacturer.

B. Project Phasing

1. Phase I - Final design development and contractors' preliminary work procedures to be completed within two (2) weeks from date of contract award.

    a. Prevailing conditions review and layout.
    b. Selection meeting for aesthetic design and finishes with Owners' designee.
    c. Filing for required permits or other governing authorities work procedure requirements.
    d. Delivery dates for major component suppliers.
    e. Proposed work implementation schedule procedures/confirmations

3.2 FIELD QUALITY CONTROL

A. Inspection and Testing

1. Upon completion of each work phase or individual elevator specified herein, the Contractor shall, at its own expense, arrange and assist with inspection and testing as may be required by the A.H.J. in order to secure a Certificate of Operation.

B. Substantial Completion

1. The work shall be deemed “Substantially Complete” for an individual unit or group of units when, in the opinion of the Consultant, the unit is complete, such that there are no material and substantial variations from the Contract Documents, and the unit is fit for its intended purpose.
2. Governing authority testing shall be completed and approved in conjunction with inspection for operation of the unit; a certificate of operation or other required documentation issued; and remaining items mandated for final acceptance completion are limited to minor punch list work not incorporating any life safety deficiencies.
3. The issuance of a substantial completion notification shall not relieve the Contractor from its obligations hereunder to complete the work.
4. Final completion cannot be achieved until all deliverables, including but not limited to training, spare parts, manuals, and other documentation requirements, have been completed.

C. Contractor’s Superintendent

1. The Contractor shall assign a competent project superintendent during the work progress and any necessary assistant, all satisfactory to the Owner. The superintendent shall represent the Contractor and all instructions given to him shall be as binding as if given to the Contractor.

3.3 PROTECTION / CLEANING

A. Protection and Cleaning

1. Adequately protect surfaces against accumulation of paint, mortar, mastic and disfiguration or discoloration and damage during shipment and installation.
2. Upon completion, remove protection from finished surfaces and thoroughly clean and polish surfaces with due regard to the type of material. Work shall be free from discoloration, scratches, dents and other surface defects.
3. The finished installation shall be free of defects.
4. Before final completion and acceptance, repair and/or replace defective work, to the satisfaction of the Owner, at no additional cost.
5. Remove tools, equipment and surplus materials from the site.

B. Barricades and Hoistway Screening

1. The Contractor shall provide barricades where necessary in order to maintain adequate protection of areas in which work specified by the Contract Documents is being performed, including open hoistway entrances. Fabrication and erection as all barricades shall comply with applicable OSHA regulations.
2. As required, the Contractor shall provide temporary wire mesh screening in the hoistway and of any elevator undergoing work specified in the Contract Documents. This screening shall be installed in such a manner as to completely segregate the hoistway from that of adjacent elevators. Screening shall be constructed from forty-one thousandths inch (.041”) diameter wire in a pattern that rejects passage of a one inch (1”) diameter ball.

3.4 DEMONSTRATION

A. Acceptance Testing

1. The Contractor shall provide at least five (5) business days prior written notice to the Owner and Consultant regarding the exact date on which work specified in the Contract Documents will reach completion on any single unit of vertical transportation equipment.
2. In addition to conducting whatever testing procedures may be required by local inspecting authorities in order to gain approval of the completed work, and before seeking approval of said work by the Owner, the Contractor shall perform certain other tests in the presence of the Consultant.
3. The Contractor shall provide test instruments, test weights, and qualified field labor as required to safely operate the unit under load conditions that vary from empty to full rated load and, in so doing, to successfully demonstrate compliance with applicable performance standards set forth in the project specifications.

END OF SPECIFICATION