PROJECT CRITERIA

Project:	**24th Street Shop Renovation** **2220 24th Street,** **Detroit, MI 48216**
Owner:	**Norcross Properties, LLC**
Contractor:	**TBD**

DIVISION 00 PROCUREMENT REQUIREMENTS

Drawing Sheets
The following drawings shall be used to aid in the outline of minimum requirements for the construction;

- Architectural Drawing Package, as prepared by FormSurfaces Design Group, dated 01-31-2025
- Site Plan, as prepared by Angle Design & Engineering, dated 01-31-2025

Where discrepancies occur between the Project Criteria, the Drawings, and/or applicable Code(s), the more stringent measure(s) shall apply.

00 10 00 Solicitation
The Drawings along with the Project Criteria (or "Specification") are intended to outline the Owner's minimum requirements for the Work; including but not limited to: site preparation, and procurement of all materials, labor and equipment to complete construction of the Project as generally described herein and on the Drawing Sheets. The Facility is to be delivered as a "lump sum" Project by Contractor and owned by Owner. The Contractor will be responsible for a turn-key construction of the proposed facility. The Contractor will be responsible for all impact fees, utility relocation fees, materials, labor, equipment, inspection, and testing fees, surveys, finance charges, taxes and insurance during construction as outlined herein.

00 11 00 Advertisements and Invitations
This Project Criteria and Drawings are designed to serve as a benchmark and should not be construed to represent final design solutions. Contractor is encouraged to submit cost reduction suggestions that do not alter the performance of the building/site or Specifications and that exceed normal local construction methods or for compliance to federal, state and local Code(s). Change requests must be submitted in writing and approved by Owner, prior to the commencement of Additional Work.

00 20 00 Instructions for Procurement
The Contractor shall provide, prior to the start of construction, final engineering and shop drawing documents for all trades based on the Project Criteria and Drawings. It is assumed that all utilities (water, sewer, power, telephone, and fiber optics) will be available at the property line of the proposed site; Contractor to verify availability of utilities and include cost(s) required to bring utilities into the site. Further, the Contractor will be required to connect to the utilities, as part of their proposal. Any utilities requiring relocation for construction of the proposed will be considered part of the Contractor's scope. Final geotechnical report has been completed by the Owner's consultant; topographical surveys shall be furnished by the Owner as needed for completion of the Work. Quality control testing, surveying and layout during construction will be coordinated and paid by the Contractor.
All aspects related to the site and improvements shall comply with local laws, ordinances and Code(s) including amendment(s) as related to the proposed use of the facility. All regulatory requirements and international codes such as the following:

- Any and all local / state / municipal Codes
- National Fire Protection Association ("NFPA")
- Uniform Fire Code ("UFC")
- Americans with Disability Act ("ADA")
- Occupational Safety and Health Administration ("OSHA")

- National Electrical Code 2017 / NFPA 70
- American Concrete Institute ("ACI")
- Other codes or ordinances as applicable, including stormwater and/or seismic codes

Some manufacturers' drawings or specification sheets may be included only to indicate quality of equipment required, not necessarily the manufacturer. Contractor must submit catalog information and descriptive information on equipment and materials prior to purchase for this purpose for Owner's approval. Calculations are required where appropriate. Voluntary alternates to equipment and methods are encouraged for cost reduction purposes. **These Project Criteria, Drawings and Owner's Terms & Conditions form the basis of the Work.**

00 22 00 Supplementary Instructions

Substantial Completion: the date when the Contractor satisfactorily completes 100% of the remaining construction items not listed in beneficial occupancy and the only remaining Work are the punch list items. Substantial Completion requires issuance of "Certificate of Occupancy" or similar from authorities having jurisdiction.

Final Completion: the date when the Contractor satisfactorily completes 100% the punch list items, and vacates site.

00 25 00 Procurement Instructions

As such, any reference to the term "Owner" or "Owner's Representative" is meant to mean an authorized representative of the firm named above. All questions or comments shall be made via email only to the following individual:

Nicola Taylor
Project Manager, Crown Enterprises LLC
nitaylor@gocrown.ws –email

00 31 00 Project Milestones

Contractor agrees to provide a fast-track schedule for the Work in accordance with the dates listed below,
Substantial Completion date: **08-01-2025**
Final Completion date: **09-01-2025**
Contractor understands there are financial implications to Owner for missing the Final Completion date.

00 31 32 Geotechnical Data

Soil borings and load bearing capability of soil and sub-terrain materials shall be as outlined in the geotechnical report, if available and/or applicable. Contractor shall follow geotechnical engineer's recommendation(s) for footing / foundation construction, foundation bearing strength, topsoil stripping depth, aggregate base depth and pavement section(s). Contractor, at their expense, can supplement said report as may be required to complete construction. For budgeting purposes, assume shallow foundation construction.

00 31 43 Permits, Taxes & Fees

- The Owner shall reimburse the building permit fee required for the construction of the Project, without mark-up.
- The Contractor shall pay for any and all trade permits and inspection fees as part of the Work.
- The Contractor shall pay all sales, use and payroll taxes as required by various governing authorities.
- The Contractor shall pay for all water and sewer tap fees, electrical fees, gas fees and other utility connection / relocations fees (including fiber optic / communication fees) as needed in the construction of the building; this includes all temporary service(s) and usage fee(s) utilized on the Project until Final Completion.
- The Owner shall be responsible for the utility usage only from the time after Final Completion.

00 45 00 Representations and Certifications

00 45 02 Worker's Compensation Certificate Schedule

All Workers must be registered and current with authorities having jurisdiction. It is the responsibility of the Contractor to insure their employees and the employees of their subcontractors meet all labor law requirements.

00 45 03 Governmental Certifications

Bidder must provide proof that Contractor and Subcontractors are certified and licensed by applicable government agencies to execute the Work. Copies of all licenses/permits shall be included as part of the Close-out Documents.

00 45 04 Contractor's Warranty
Contractor warrants to Owner that all Work shall be executed in accordance with the Contract Documents, complete in all parts and in accordance with approved practices and customs, and of the best finish and workmanship. All materials and equipment incorporated in the Work under the Contract shall be new. All workmanship, equipment and materials shall be guaranteed for a minimum period of two [2] year from the date of Substantial Completion. The following extended warranties shall be provided, at a minimum:

1) Building equipment: In accordance with equipment manufacturer, however HVAC equipment shall have a [5] year warranty, minimum.

00 80 00 Insurance
Contractor shall provide insurance coverages throughout the duration of the Project, as well as any subcontractor to Contractor providing Work at the Project. Prior to performing any Work, Contractor shall furnish to Owner the certificate(s) of insurance evidencing that insurance has been provided to meet, at a minimum, the following requirements:

TYPE OF INSURANCE	MINIMUM LIMITS OF COVERAGE
1. Workers' Compensation:	Statutory requirements for the jurisdiction where the Work will be performed.
2. Employers' Liability: (The limits required may be satisfied by a combination of primary and/or excess coverage):	$ 1,000,000 each person
3. Business Automobile Policy when applicable (see below). Applies to Owned, Non-Owned and Hired: (The limits required may be satisfied by a combination of primary and/or excess coverage): Combined Single Limit Bodily Injury and Property Damage	$1,000,000 combined single limit
4. Commercial General Liability (The limits required may be satisfied by a combination of primary and/or excess coverage): Combined Single Limit Bodily Injury and Property Damage	$1,000,000 each occurrence $2,000,000 general aggregate
5. Excess Liability, a.k.a. Umbrella Coverage	$10,000,000
6. Professional Liability and/or Errors & Omissions Coverage	$2,500,000 combined single limit
7. Builder's Risk	Policy limit to match Project cost / Contract amount; deductible shall not exceed $25,000.00.

Contractor's and/or subcontractor's coverage shall:

- Include Owner as noted on the Contract as the certificate holder; and
- Include Owner and all affiliates including the specific entity as noted on the Contract as additional insured. **Norcross Properties, LLC** shall be named as additional insured. Such additional insured status shall be provided by an endorsement at least as broad as the Insurance Services Office (ISO) endorsement CG 2010 or its equivalent;
- Include a cross liability clause;

- Provide that insurers who satisfy these requirements may not cancel, non-renew, materially alter or reduce coverage or limits unless they have delivered thirty [30] days prior written notice to the Company;
- Be primary to any potentially applicable insurance carried by or arranged for Owner and all affiliates;
- Provide that the Contractor's insurer shall have no rights of recovery, by subrogation or otherwise, against Owner and all affiliates;
- Include blanket contractual coverage;
- Include products and/or completed operations coverage for a period of at least two [2] years after the completion of the Work;
- Contain no exclusions for explosion, collapse or underground property damage hazards (XCU coverage);
- If it is applicable or becomes applicable to the Work under the Contract, Contractor to provide at its sole cost and expense, Pollution/Environmental Impairment Liability Insurance with limits of at least $5,000,000 per occurrence (satisfied by separate policy if needed);

Initial certificates of insurance and other evidence of coverage are to be provided to the Company and become a part of the Contract. All Contractor's certificates of insurance shall state on the certificate: ***"[Company Name] and all affiliates, including those noted in the Contract, are additional insureds, and the above listed liability insurance includes blanket contractual coverage***". All certificates must also state that no material change or cancellation can be effective without thirty [30] days prior written notice to the Owner. Immediately upon renewal, rewrite or new issue of its insurance coverage, Contractor shall provide to the Owner, all such certificates of insurance and other evidence of coverage to satisfy all of the provisions herein.
If requested by the Owner, Contractor shall provide a copy of its broad additional insured endorsement (or that section of its policy) that states that Company and all affiliates including the specific Company as noted on the Contract are additional insureds on Contractor's liability policies (see “Type of Insurance” No. 4, above).

Contractor expressly understands and agrees that any discussion, negotiation or acceptance of a certificate of insurance by Owner or an affiliate is expressly understood **not** to constitute a review or approval of the Contractor's or subcontractor's insurer, insurance coverage or available limits, or a waiver or modification of any of the insurance requirements described herein.
Should any of the Work:

- Be upon or contiguous to navigable bodies of water or subject to Admiralty jurisdiction, Contractor and/or its subcontractors shall also carry insurance covering their employees for benefits available and insurance against employer's liabilities under the Federal Longshoremen's and Harbor Workers' Act (44 U.S. Stat. 1424 [as amended]) and under the Jones Act (41 U.S. Stat. 988 (as amended)) or under the General Maritime Law.
- Involve watercraft owned, hired or operated by the Contractor and/or its subcontractors, Contractor and/or its subcontractors shall also provide coverage for liability arising out of such watercraft with a combined single limit not less than $2,500,000 each occurrence. If the hull is insured, such insurance shall contain the insurer's waiver of subrogation rights against Owner and all affiliates. All relevant provisions of these insurance requirements also apply to this specific requirement.
- Involve aircraft (fixed wing or helicopter) owned, hired or operated by the Contractor and/or its subcontractors, then Contractor and/or its subcontractors shall also provide coverage for liability arising out of such aircraft with a combined single limit of not less than $25,000,000 each occurrence and such limit shall apply to Bodily Injury (including passengers) and Property Damage. If the craft is insured, such insurance shall contain the insurer's waiver of subrogation rights against Owner and all affiliates. All relevant provisions of these insurance requirements also apply to this specific requirement.
- Involve licensed vehicle(s) utilized within the Scope of Work performed under the Contract, Contractor and/or its subcontractors shall provide evidence of Automobile Liability Insurance coverage as outlined in “Type of Insurance” No. 4, above.
- Involve interstate or intrastate transportation of hazardous cargoes as defined by the Motor Carrier Act of 1980 (as amended), Contractor and/or its subcontractors shall provide evidence of compliance with the financial responsibility requirements of the Motor Carrier Act (Form MCS-90 or guarantee bond (as amended)).

- Be within 50 feet of any railroad property, Contractor and its subcontractors shall each maintain a Railroad Protective Liability Insurance Policy naming the railroad(s) as named insured, for an amount of not less than the greater of $5,000,000 per occurrence or the limit of insurance required by the owner of the railroad property.

The provisions of the various insurance policies and the insurers issuing such policies are subject to Owner's and/or its affiliate's approval and a copy of the applicable insurance policies shall be furnished by the Contractor at the request of Owner and/or its affiliates.
All deductibles or retentions on any of the policies of insurance required herein shall be for the account of the Contractor or its subcontractors, as applicable.
It is expressly understood that the obtaining or maintenance of insurance as is herein required, shall in no way limit or release Contractor or its subcontractors under the indemnification provisions of the Contract.

00 95 00 Communication
All communication for this project will be in English using imperial units. All drawings, quotes, schedules, etc. communicated to the Owner shall be in English. Communication shall be done using the following programs: Microsoft Outlook, Microsoft Word, Microsoft Excel, Microsoft Project, Microsoft Power Point and AutoCAD.

DIVISION 01 – GENERAL REQUIREMENTS
- **Land Area:** +/- 4.93 AC (total Site)
- **Building Area:** refer to (conceptual) Drawings
    - Main Office 2,340 SF
    - Break Area 655 SF
    - Restrooms 1,848 SF
    - Shop 23,726 SF
- **Occupancy Information:**
    - Office / Administrative: 10 employees
    - Shop: 4 employees
    - Yard: 2 employees
- **Building Setback Requirements:**
    - Per Authorities Having Jurisdiction, with variance(s) as needed to comply with Site Plan.

01 11 00 Summary of Work
01 11 01 Layout of Work
Contractor shall locate all general reference points, layout the Work, and be responsible for all lines, levels, measurements, and all other Work executed under the Contract. Contractor shall have a registered surveyor provide benchmark(s) for the Project and lay out building corners.

01 11 02 Examination of the Site
Visit the site, and be aware of all existing conditions. Failure to do so will not relieve the Contractor from necessity of furnishing any materials, or performing any Work, in accordance with the Conceptual Drawings and Project Criteria (without additional cost to Owner).

01 11 03 Testing and Inspections
All sampling and testing called for shall be conducted by a testing laboratory pre-approved by the Owner. Cost of tests shall be borne by the Contractor. A copy of all test results shall be provided from the testing laboratory directly to Owner, electronically via email, in real time. Required testing services and observations shall include the following as per ASTM International standard(s):
- Soils Testing
    - Moisture/density curves.
    - Compaction testing of fill materials in preparation of sub-grade.
    - Inspection of (proof rolling) of final lift or grade and re-compaction of deficient area until proper compaction is obtained.
    - Continuous on-site observations of moisture conditioning during entire operation and testing of each lift.

    - On-site observations as required for placement of lime stabilization and/or select fill during select periods of the operation and associated compaction testing.
- Concrete Testing
    - Conduct slump test of batched concrete.
    - Conduct air entrainment test when applicable.
    - Casting of concrete cylinders for determining required compressive strength of concrete as specified elsewhere.
    - Conduct core testing as needed and where low cylinder breaks occur.
- Coring (Asphalt and concrete paving sections)
    - Provide coring of all concrete and asphalt paving sections as required to determine proper paving depths, compressive strength and proper size placement of reinforcing steel.
    - Concrete paving - take cores at the rate of one [1] core per 50,000 sq. ft. of all concrete paved areas or a minimum of one [1] core per paved area if under the 50,000 sq. ft. rule. If any placed pavement section is determined to be 1/2" or more in thickness less than that as specified and or as designed, provide additional testing as directed by Owner.
    - Asphalt paving - take cores at the rate of one [1] core per 25,000 sq. ft. of all asphalted paved areas. If it has been determined that any placed pavement section is determined to be 1/2" or more in thickness less than that as specified and or as designed, provide additional testing as directed by Owner.
    - Provide a full written report reporting findings.
- Concrete Test Cylinders - provide one [1] set of concrete cylinders, four [4] cylinders each for determining compressive strengths.
- Provide quantities based on the following:
    - Concrete paving: [1] set for every 120 cubic yards or one day's placements.
    - Floor slabs: [1] set for every 80 cubic yards or one day's placement.
    - Foundations: [1] set for every 100 cubic yards or one day's placement.
- Concrete cylinders shall be broken at the following cycles, with the minimum of design strength to be achieved:
    - Cylinder 1 @ 7 days, 85% of specified design strength
    - Cylinder 2 @ 28 days, 100% of specified design strength
    - Cylinder 3 @ 56 days, 105% of specified design strength
    - Cylinder 4 @ as required; cylinder can be discarded if 56 day break exceeds 100% of specified design strength
- Special inspections as required by authorities having jurisdiction.

Prior to casting cylinders, provide slump testing of concrete. It shall be the testing engineer's and/or field technician's responsibility to reject all materials that do not fall within maximum slump requirement of 4 inch +/- 1 inch slump. Loads with a slump greater than 5" shall be immediately rejected and promptly removed from the project site. It shall be the responsibility of the testing technician present at the job site and the Contractor's site superintendent to comply with these requirements. Provide other testing and inspections as required by governmental agencies having jurisdiction.

01 11 04 Enclosed Storage Areas

The Contractor and each subcontractor shall provide and maintain watertight storage areas for materials which might be damaged by weather. These storage areas shall be removed from site at completion of the Work.

01 11 05 Guard Service

The Contractor will be held responsible for loss or injury to persons or property where the Work is involved and shall take any and all precautionary measures as he may deem necessary to protect the Work and the Owner's interests. The Contractor, at its sole cost and discretion, may provide guard service during construction as an additional measure to maintain access and control to the site.

01 11 06 Daily Clean-Up

The Contractor is responsible for all periodic and final cleaning of the Project Site and work areas. This clean-up requirement includes broom-clean work areas at the end of every work day. A clean Project site is a safe Project Site. All debris must be legally disposed off-site.

01 11 07 Record Drawings
Maintain a clean, undamaged set of Contract Drawings and Shop Drawings at the site. Mark the set (a/k/a "red line") to show the actual installation where the installation varies substantially from the Work as originally shown and include any notes and revisions to the Scope of Work. Give particular attention to concealed elements that would be difficult to measure and record at a later date. The building location as prepared and provided by the registered land surveyor must also be included.

01 11 08 Site Supervision
The Contractor shall provide adequate and appropriate supervision in order to perform all Work in a quality-conscious manner, protect materials from damage, maintain a safe and secure jobsite, erect at its expense any and all safety barriers and measures and in general, conform to all applicable rules and regulations concerning employee safety and health. At a minimum, Contractor must have a full-time Site Superintendent on the Project Site during the construction of the Project.

The Site Superintendent must be fluent in English. The Contractor must also have a Project Manager and other staff as required for successful completion of the Project within the timelines as set forth in the Project Schedule. All persons interacting with the Owner or Owner's Representative shall be fluent in English.

The Contractor's Project Manager shall be responsible to serve as the gateway for all written and verbal correspondence between the Owner (or appointed Owner's Representative) and Contractor or vice versa. Duties shall include but not necessarily be limited to: emails, RFI's, construction reports, construction schedules, review of shop drawings prior to delivery of and review by Owner and any and all other correspondence, either written and/or spoken.

01 11 09 Project Close Out
Contractor must submit maintenance and operation manuals, final project photographs, damage or settlement survey, property survey, licenses / permits, and similar final record information. Submit record "As-Built" set of drawings in electronic format (PDF), as well as AutoCAD files, all in electronic format on a non-expiring "cloud" link, formatted in English, within [30] days of Final Completion. In addition:

- Deliver extra stock, a/k/a "attic stock" items.
- Discontinue or change over and remove temporary facilities from the site, along with construction tools, mock-ups, and similar elements.
- Complete final clean up requirements per Section 01 80 00, including touch-up painting as required after all Owner's furniture is installed.

01 12 16 Work Sequence
The Project may require phasing with respect to the components of the Work in terms of multiple mobilizations. All schedule(s) and sequencing shall be drawn up by the Contractor; the Contractor shall include all costs as required based upon the schedule as approved by the Owner.

01 21 00 Allowances
Not used.

01 26 63 Change Orders
When the changes in the Work are ordered which increase or decrease the Scope of Work, the Work shall be performed for the net cost to the Contractor plus a fee which shall include overhead and profit. It is the responsibility of the Contractor to ensure all costs as submitted are accurate, including verification of material and equipment costs; actual costs paid by the Contractor or its subcontractor in connection with the work shall be used, inclusive of all discounts, and not the "list" or "retail" pricing. Invoice detail and other supporting documentation shall be provided if requested by the Owner. Mark-up on self-performed work shall not exceed 10%, while mark-up on subcontracted work shall not exceed 5%.

01 29 00 Payment Procedures

- The Contractor will submit, prior to the commencement of Work, a Schedule of Values for review and approval by the Owner; this statement will be furnished by the Contractor allocating portions of the Contract Sum to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

- The Contractor shall submit Applications for Payment on a monthly basis, due on the 25th of the month. These Applications for Payment shall include the Work complete as of the 25th date for the previous month's progress in the Work. Each Application for Payment shall include a hold back of 10% retention, to be billed separately after Final Occupancy is achieved. All Applications for Payment shall be made using AIA forms G702 & G703, submitted via email to the Owner (or Owner's Representative, if applicable).
- The Contractor may bill for Stored Material in Applications for Payment, which includes materials or equipment purchased or fabricated and stored, but not yet installed. Differentiate between items stored on-site and items stored off-site. Provide certificates of insurance, evidence of transfer of title to Owner, and consent of surety to payment (if applicable), for stored materials. Provide supporting documentation that verifies amount requested, such as paid invoices and photographs. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials. All requested information must accompany Applications for Payment in order for Stored Material(s) to be considered for payment.
- The Contractor shall include an updated Sworn Statement with each Application for Payment; the Sworn Statement shall list any and all vendors / suppliers / subcontractors involved on the Project due and owing. Each Sworn Statement shall indicate (i) vendor name, (ii) work category description, (iii) total contract price inclusive of all changes, (iv) previous paid amount, (v) past due amount, (vi) current payment due amount, and (vii) balance to complete inclusive of retention. The Sworn Statement shall be prepared on a form in accordance with the Construction Lien Act of 1980, and shall be signed by an Officer of the Contractor and notarized by an official notary with the State.
- The Contractor shall also submit lien waivers for all entities lawfully entitled to file a mechanic's lien arising out of the Contract and related to the Work covered by the payment. Submit partial waivers on each item for amount requested in previous Application, after deduction for retainage, on each item. When an Application shows completion of an item, submit final or full waivers. The Owner reserves the right to designate which entities involved in the Work must submit waivers. All waivers shall be on forms acceptable under the Construction Lien Act of 1980.
- All Applications for Payment shall be submitted electronically (via email) to Owner or Owner's Representative as applicable.

01 30 00 Administrative Requirements

01 30 01 Project Management and Coordination

The Contractor will have weekly site meetings and as the need arises with all subcontractors and Owner's Project Management team. The Contractor shall establish a conference call-in line for those not present at the site. Video conferencing is also acceptable and encouraged. The Contractor shall maintain and electronically distribute written meeting minutes to Owner (template will be provided) and all subcontractors after each meeting. The Contractor's Project Manager shall attend, at least every other week, the weekly site meeting between the Site Superintendent and the Subcontractors.

01 30 03 Construction Progress Documentation

Contractor shall provide to the Owner, on a **weekly** basis via email, a Project Status Report with the following as a minimum:

- Project Name
- Date
- Report Number
- Work performed the previous week
- Work anticipated to be performed the following week.
- Schedule concerns / lead time items.
- Safety concerns / incidents.
- Percentage complete, by bid division categories, of the various Work items
- Action Items
- Photographs of current site conditions, minimum ten [10] photos per report

The Project Status Report shall be provided on Friday morning, in English, provided in PDF format, and be no larger than 1mb each.

01 30 04 Construction Schedule

The Contractor shall submit a fully developed Gantt chart construction schedule produced in electronic format. The schedule shall identify the jobsite critical path, planned Workdays/hours per week and include allotted time for weather related delays, etc. appropriate for the site area. The chart shall provide a separate bar for each construction activity and vertical lines identifying the first Working day of each week. Completion shall be indicated in advance of the date established for Substantial Completion (00 31 00). Include, but do not necessarily limit indicated activity to:

- Project mobilization
- Submittals / Shop Drawings submission
- Procurement of equipment and critical materials
- Fabrication of special material and equipment, and its installation and testing
- Progression of the Work amongst various trades
- Final inspection and testing in order to obtain Certificate of Occupancy
- Final cleaning
- Foundation Completion Date (as per Section 00 31 00)
- Beneficial Occupancy ["Fixturing'] Date (as per Section 00 31 00)
- Substantial Completion Date (as per Section 00 31 00)
- Final Completion Date (as per Section 00 31 00)
- Commissioning and training of equipment
- All activities that effect process, required start dates and completion dates.

Construction schedule shall be updated on a weekly basis, and submitted to Owner via email, accompanying Weekly Project Status Report. The Microsoft Project file shall be provided in addition to a PDF copy at each update to the schedule. Penalties will be assessed, if any, for every day past due, after the Substantial Completion Date as set forth in Section 00 31 00; the definition for Substantial Completion is found under Section 00 22 00. Further, if at any point during the Project, the Construction Schedule falls more than five [5] working days behind, the Contractor shall provide a Recovery Schedule to the Owner, showing all corrective action measures to be taken to meet the Substantial Completion Date as set forth in Section 00 31 00. The Recovery Schedule shall be due to Owner within seventy-two [72] hours of notice by Owner to Contractor, and shall contemplate overtime, additional crews, shift work, etc. at the Contractor's sole cost and expense as required to meet Milestone Date(s).

01 30 05 Governmental Safety Requirements
Contractor shall comply with all governmental safety requirements, including standards set forth by OSHA, NIOSH and other authorities having jurisdiction.

01 30 06 Cost Escalations
The Contractor assumes all risk for construction cost escalations beyond anticipated amounts during bidding and construction phases, except changes in specification submitted in writing and approved by Owner.

01 30 07 Project Accounting
As may be required, Contractor must assist Owner's financial staff in correctly allocating capitalized cost versus expenses. This may include providing back-up of invoices and other financial information associated with the Project.

01 40 00 Design Services – Not in Contract

01 40 50 Submittals and Shop Drawings
The Contractor shall submit as a minimum, **via electronic format only**, the following Shop Drawings and product data as applicable. The Owner reserves the right to require submittals for other items and/or equipment not listed below. Shop Drawings and product data submittals that deviate from the requirements of the Contract Documents shall be brought to the Owner's attention, in writing at the time of submission. Allow for seven [7] days Owner review of each submittal.

- Concrete mix designs for all types of concrete products including differing psi strengths
- Asphalt pavement design for Heavy Duty and Light Duty
- Engineering calculations for the paving design as set forth in the Project Criteria
- Landscaping / Irrigation Plan and proposed plant types and sizes
- Photometric study of proposed site lighting, including light fixture type

- Security Fencing & Gates
- Metal Fabrications in Division 5 of the Project Criteria
- Architectural Millwork drawings
- Hollow metal door and window frames
- Glazing Systems
- Overhead Coiling Doors
- Overhead Sectional Doors
- Finish Hardware and Keying Schedule
- Toilet Accessories
- Dock Equipment
- Pre-Engineered Metal Building Drawings
- Fire Protection system
- HVAC Equipment
- Fire Alarm System
- Electric Panels & Switchgear / ATS
- Light Fixtures
- Room Finish Color Selections
- Other items as determined by Owner

01 50 00 Temporary Facilities and Controls

01 51 13 Temporary Electricity

- Temporary electric service that is required in the performance of the Contract shall be paid for by the Contractor. This includes all setup charges; all temporary services shall be removed upon Final Completion of the Work.
- Provide temporary lighting as required for successful completion of the Work or per authority having jurisdiction.

01 51 36 Temporary Water

- Temporary water required in the performance of the Contract shall be paid for by the Contractor.

01 52 13 Field Office

- The Contractor shall provide during the entire period of construction, a field office with electrical power, wireless internet, HVAC (heat & cool), LED light fixtures, private restroom and daily clean-up for their use and to house the periodic construction progress meetings. All required permit(s) shall be prominently posted inside trailer for viewing.

01 52 19 Sanitary & Dining Facilities

- The Contractor shall provide suitable toilet facilities for all construction workers at the construction site. Comply with all building and sanitation ordinances, laws and codes, including OSHA, NIOSH and other authorities having jurisdiction. Remove all temporary sanitary facilities before final inspection(s).

01 56 00 Temporary Fence

- Contractor shall erect temporary fencing as needed to secure laydown area from Owner and/or Tenant's on-going operations.
- Additionally, Contractor shall be responsible to maintain security to the site at those locations where the Work breaches the existing fence perimeter.
- All temporary fencing is to be removed from the Project prior to Substantial Completion.

01 58 13 Temporary Project Signage

- Contractor shall erect a project sign, minimum 8' wide x 4' high surface area, installed on treated wood or steel poles 6' above ground.
- The sign shall have a white background with vinyl cut letters and graphics to include the project's name, Owner's name and corporate logo, Contractor's name and logo, architect's name and logo, professional engineer's name and registration number and building permit number.

01 60 00 Redline / As-Built Drawings

- During the construction process, the Contractor's site superintendent shall be fully responsible to keep one set of "Approved" construction documents (Drawings and Specifications) on-site in the job trailer which shall be used as a master set of "Redline" drawings reflecting all changes made in the specifications and Working drawings during the construction process, and shall show the exact dimensions, geometry, and location of all elements of the Work completed under the contract.
- This set of redline drawings shall be updated at a minimum once a week noting any change made during construction and exact location of concealed underground utilities, including plumbing and sewer lines and electrical conduits.
- Identifying marks shall be clouded, dated and initialed by person making the change or comment. During the construction process, the Owner's representative may periodically review the master redline set to determine mark-ups are being made and if the drawings are currently up to date.
- Once the project has been completed the set redline mark-ups and comments shall be incorporated into the final "As Built" drawings and these final As Built drawings shall be included in the close-out documents.

01 79 00 Demonstration and Training

- Contractor and/or subcontractors shall allocate time to provide training to Owner's and/or Tenant's personnel of all equipment and building systems. Training must include a written presentation, classroom session and a hands-on session.

01 80 00 Cleaning

- Contractor shall keep the premises free, at all times, from excess accumulations of waste and debris.
- Contractor shall present the completed project to the Owner at Final Occupancy in a "broom clean" condition. Office areas shall be thoroughly cleaned, dusted, glass and horizontal surfaces polished, floors damped mopped, VCT floors waxed and all tile properly sealed.
- Dock / warehouse floors shall be power swept and in dust and dirt free condition.
- Shop floors shall be power swept and in mop-clean condition.
- Exterior walls / doors shall be power-washed and in dust and dirt free condition.
- All exterior paved surfaces shall be mechanically swept of all dirt, mud, gravel and landscape material and left in a clean state. This includes all curb and gutter locations.

DIVISION 02 – SITE WORK – Not in Contract

DIVISION 03 – CONCRETE

All concrete work shall meet ACI specifications and requirements.

- Forms shall be provided as necessary to properly place all cast-in-place concrete to the sizes and dimensions required.
- Form work to meet the recommendation of ACI 347R as minimum requirements.
- All forms to be cleaned and a non-staining form oil applied before concrete placement.
- Install all pipe chases, conduits, electrical boxes, cavities, slots, sleeves, water stops, and other embedded parts as required.
- Exposed concrete formed surfaces shall receive a smooth flat-formed surface; all tie holes, honey combing and rough areas to be patched to match surrounding surfaces.
- Correction of flatness / levelness defects in the floor shall be corrected only be removal and replacement of the defective slabs. All areas requiring replacement will be identified by the testing laboratory and all corrected areas must be re-measured for final approval.
- Provide all material and equipment necessary to furnish the concrete reinforcement as shown on drawings.
- Reinforcing steel to be installed as per Architectural/Structural Engineer's drawings, specifications and ACI 315-65 requirements.
- Provide shop drawings for review by Owner. These shop drawings should also be reviewed by the structural engineer.

- Reinforcement to be free to excessive rust, loose scales or other coating of any character which would reduce or destroy the bond.
- Reinforcing shall be deformed bars, grade 60, ASTM A 615. Reinforcing shall be installed in all concrete footings, foundations, floors and stoops as noted on structural drawings per ASTM A 185. Provide appropriate metal or plastic chair for supporting of reinforcing.
- Reinforcement to be positioned to maximize for designed structural effect, and comply with CRSI Standards.
- Provide all material and equipment necessary to complete all cast-in-place concrete as shown on plans.
- Cast-in-place concrete to be installed as designed on the final architectural and structural engineer drawings.
- Concrete shall conform to ASTM C94 requirements.
- Concrete to be delivered by an approved redi-mix supplier and a design mix data sheet provided for each compressive strength used in work. Fly-ash permitted only at following exterior areas: sidewalks, dolly pads, aprons, curbs, fuel islands or pavement.
- Specified concrete compressive strength to be obtained during the 28 day cure period. Contractor to provide testing laboratories services.
- Exterior concrete (sidewalks, dolly pads, dock aprons and ramps) to receive a light broom finish at right angles to the traffic pattern and sloped as noted on the plans. Provide expansion joints and saw joints using good engineering practice.
- All exposed exterior concrete to be air-entrained.
- Provide saw joints at the dock warehouse immediately as possible to prevent shrinkage cracking of the slab, to depth per ACI Standard. Saw joints shall be placed at a maximum of 12-foot centers, each way. Note: use of metal formed keyways is not allowed. Load transfer shall be provided by the use of smooth metal dowels.
- Minor surface cracking of the building floor (i.e., office, dock and shop maintenance) concrete slabs caused by shrinkage and deemed to be acceptable by FX architect or project manager shall be thoroughly routed out, cleaned and properly sealed using Versa Flex 75, grey.

03 01 01 Shop floors – **Patch as required**

- Floors shall be minimum 8” thick, 4,000 psi compressive strength concrete.
- Include 10-mil vapor barrier with taped seams and all penetrations sealed, including perimeter of slab(s).
- Include minimum 6x6 welded-wire mesh (“WWM”) for reinforcing. Install WWM in middle of floor slab. Install slab reinforcing as recommended by Structural Engineer of record.
- Provide polyurea sealant, full depth, at all exposed concrete floor slab joints. Overfill joint as per manufacturer’s installation instructions and cut flush.
- Finish concrete floor shall be a polished concrete with sealer / densifier applied to have glossy look, and anti-slip in top coat; use L&M ‘Seal Hard’ (or similar product as pre-approved by Owner prior to application).

03 00 02 Office area floors - **Patch as required**

- Floors shall be minimum 4” thick, 4,000 psi compressive strength concrete.
- Include 10-mil vapor barrier with taped seams and all penetrations sealed, including perimeter of slab(s).
- Include minimum 6x6 welded-wire mesh (“WWM”) for reinforcing. Install WWM in middle of floor slab. Install slab reinforcing as recommended by Structural Engineer of record.
- Provide polyurea sealant, full depth, at all exposed concrete floor slab joints. Overfill joint as per manufacturer’s installation instructions and cut flush.
- Finish concrete floor shall be a polished concrete with sealer / densifier applied to have glossy look, and anti-slip in top coat; use L&M ‘Seal Hard’ (or similar product as pre-approved by Owner prior to application).

03 00 03 Column diamonds

- Wrap felt strips with removable cap (“zip strip”) around column diamonds; remove cap and install silicone sealant upon proper cure.

03 00 04 Shrinkage

- Concrete floors shall be saw-cut to control initial shrinkage per ACI recommendations and filled with a semi-rigid polyurea sealant, cut flush to finish floor slab.

- Construction / cold joints shall be smooth-doweled on 18" centers.

DIVISION 04 – MASONRY – As needed

- Provide for all unloading, staging, moving, and hoisting of material as required for a complete installation.
- Furnish and install all masonry materials as shown and/or noted, including but not limited to: regular block, split-face block, mortar, grout, reinforcing (horizontal and vertical), flashings, weep holes, cavity drainage material, termination bar, rigid insulation (in masonry cavity), wall ties, dampproofing / waterproofing, sealants / mastic, water repellents, fasteners, clips, ties etc. as required for a complete working installation.
- Provide special shapes as required for masonry units.
- All exposed joints are to be concave tool smooth, with no gaps or voids in mortar. All excess mortar to be removed from joint(s) for aesthetically pleasing appearance.
- Provide photographic documentation of all flashing system installation / locations. A copy of all photos should be provided via flash drive.
- Include air infiltration barrier system at shop cavity wall locations, per drawing sections.
- Include integral water repellent in all exterior block and mortar.
- Include masonry cleaning at architectural block locations.
- Include vertical dowels into slab / foundations (24" O.C.) at wall locations if dowels are not present. Epoxy set dowels at a 6" depth. Grout reinforced cells solid, typical. This does not apply to veneer locations.
- Include bond beam(s) at top of masonry wall locations. Reinforce with [2] #5 bar, grouted solid, continuous. This does not apply to veneer locations.
- Install hollow metal frames (provided BY OTHERS) in masonry walls. Ensure frames are square and plumb for door installation BY OTHERS. Grout frames solid and tie-in to adjacent masonry material(s).
- Install all imbeds in masonry walls (furnished BY OTHERS). Provide patching of beam pockets as required once structural steel is set in place.
- Install steel lintels at masonry openings as required (furnished BY OTHERS); include flashing system above all openings and lintel locations.
- Restore all disturbances resulting from this work.

DIVISION 05 – METALS

Seismic codes shall be utilized for the design of the building structure per local seismic codes.

05 00 01 Structural System

- Conventionally-framed steel structure using columns, joist girders and bar joists per Engineer's design (minimum bay spacing as shown on Conceptual Drawings) in accordance with the latest edition of AISC Steel Construction Manual (v15.1).
- Open web steel joists and joist girders shall be utilized and coordinated with MEP trades so as not to interfere with installation of these systems. Minimum clear height must be maintained through warehouse.
- Building fabrication and erection to be performed by AISC-Certified firm(s), unless alternative vendors pre-approved by Owner in writing.

05 00 03 Metal Paint

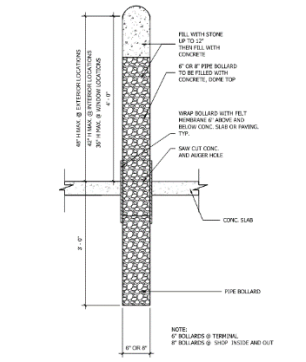
- Exposed structural elements throughout, consisting of columns, secondary wall framing (girts / purlins, etc.) and roof trusses (if used), must be factory-primed and subsequently field-finish painted with two [2] finish coats of Sherwin Williams Industrial Enamel paint (1-part) or similar, in white color.

05 00 04 Structural system for mezzanines

- See structural design

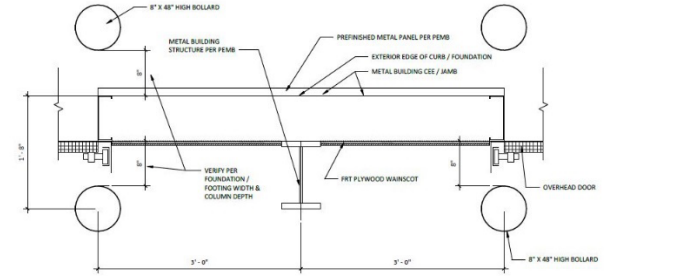
05 00 06 Bollards

- All bollards must be recessed through concrete slab; "bolt-in" type bollards will not be permitted.



4 TYPICAL BOLLARD DETAIL
1" = 1'-0"

- Provide [2] – 8" diameter SCH-80 by 48" high (above grade) concrete filled bollards at exterior locations as follows: ramp where fork lift traffic would occur, dock stairs, building corners exposed to yard traffic, either side of man doors, etc.; field-paint all bollards with two [2] finish coats in "safety yellow" color.
- Provide [2] – 8" diameter SCH-80 by 48" high (above grade) concrete filled bollards at interior and exterior side of each overhead door in shop; field-paint bollards with two [2] finish coats in "safety yellow" color.



8" BOLLARD PLAN DETAIL 1
1 1/2" = 1'-0"

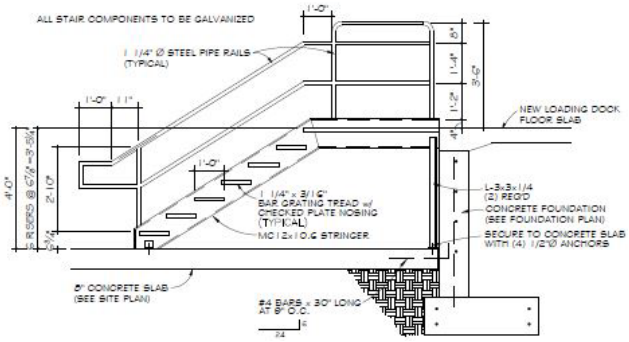
- Provide [4] – 8" diameter SCH-80 by 48" high (above grade) concrete filled bollards at fire hydrant locations and field-paint these bollards only in "safety red" color with two [2] finish coats.

05 00 07 Guard Rails

- Provide guard rail(s) on base plates (bolted to floor slab) at all locations where forklift or vehicular traffic has the possibility to damage walls; these areas could include, but are not limited to: building end walls or demising walls.
- Guard rail(s) should be of similar construction to "single-rail" highway style, or similar.
- All interior guard rails shall be field-painted with two [2] finish coats in "safety yellow" color; any exterior guard rail should be galvanized.

05 00 08 Steel framed stairs

- Provide 4'-0" (1.22m) wide stair at each dock door / elevated egress exit, with area of refuge if required by local Code, using steel grate for treads and landing areas.
- Provide guardrail(s) in configuration with local Code.
- All exterior stairs and handrails shall be galvanized.
- Provide bollard protection per 05 00 06.



DIVISION 06 – WOOD, PLASTICS, AND COMPOSITES

Construct wood laminate cabinets with hardware for Break Area(s) including sink, storage cabinets, microwave cabinets with dedicated electrical receptacles in each area for [1] coffee machine, [1] ice maker, [2] microwave ovens, [1] refrigerators, and [2] vending machines. Include sufficient base cabinets with countertop and wall cabinets for Break Area(s) as prescribed above; include separate laminate colors as selected by Owner.

- Millwork to be plastic laminate by WilsonArt "Dove Gray D92-60"
- Countertops to be plastic laminate by WilsonArt "Steel Mesh 4879-38"

DIVISION 07 – THERMAL AND MOISTURE PROTECTION

DIVISION 08 – OPENINGS

Refer to door schedule (if provided) or Drawings for location(s) for loading doors, overhead doors and exterior man doors. All exterior doors to meet egress per local Building Code.

08 00 01 Exterior service man doors

- Refer to (conceptual) Floor Plan(s) for location(s) and Door Schedule, if provided, for size(s).
- All exterior doors (except storefront locations) shall be weather-stripped, thermally broken hollow metal doors with welded frames. Provide ADA-accessible hardware.
- Include insulated glass where glazing as shown.
- Apply two coats of finish paint at doors and frames; exterior color to match PEMB color, and interior color as per DIVISION 09.
- Include opening(s) for access control at frames where may be required by Owner.

08 00 02 Interior metal doors

- Refer to Conceptual Floor Plan for location(s) and Door Schedule for size(s).
- All interior doors (except storefront locations) to be hollow metal doors with welded frames. Knock-down frames will not be allowed. Provide ADA-accessible hardware.
- Include safety window(s) in narrow lights for any and all employee entrances.
- Apply two [2] coats of finish paint (field-applied) at doors and frames; color to be selected by Owner.
- Include opening(s) for access control at frames where may be required by Owner.

08 00 03 Emergency (egress) doors

- All emergency doors must have panic bar and local alarm (UL listed).

08 00 04 Office doors

- Provide and install storefront-style wide stile glazed clear-anodized aluminum frames at office doors where shown. Include aluminum-framed doors in said framed openings. Provide lever-latch style locking hardware.

- Provide welded frames (painted) at stud/drywall openings. Include solid-core plastic laminate slabs at interior office door locations; provide 1/2-lite glass at private office and conference room doors. Provide locking hardware.
- Include opening(s) for access control at frames where may be required by Owner.

08 00 05 Main Entrance doors

- Clear-anodized aluminum wide stile wall/storefront system with 1" insulated, Low-E reflective, solar tint glass (SolarBan® 60, 'Solargray' color).
- Provide safety glazing as required by code. Provide bent tube pulls, with locking cylinder. Include thermally broken frame and door.

08 00 06 Windows in metal doors

- Provide hollow metal framed interior windows with 1/4" (6.35mm) clear glass at all interior doors;
- Provide safety glazing as required by Code.

08 00 07 Doors locksets

- Commercial grade, heavy duty, lever action locksets with standard master key locking system, "Best" cores or similar, with Schlage "S" Series (interior) and "D" Series (external) cylinders.
- Dull chrome finish.
- As an option, the Owner and/or Tenant, may wish to install access control at certain frames.
    - Electric Strike = Adams Rite 71-60 / 70 (depending on frame application)-3-1-0-628
    - Proximity Reader = Indala FP603BK
- Coordination with the Owner is needed prior to frame fabrication.

08 00 08 Door stops

- Install commercial-grade, floor-mounted door stops at all doors.

08 00 09 Window frames

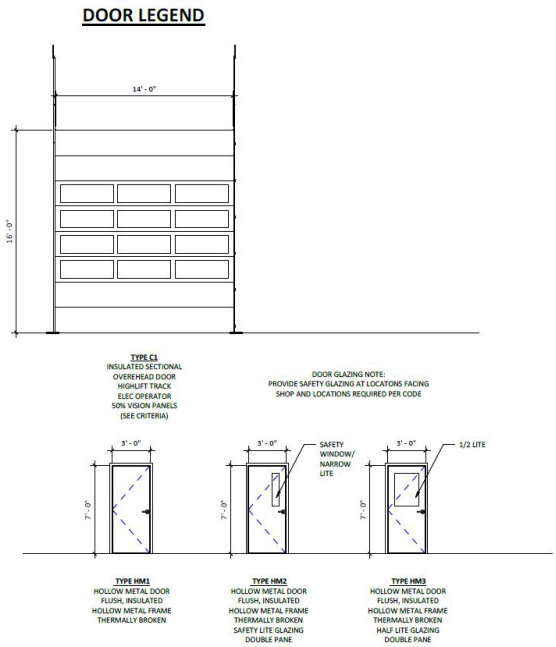
- Provide clear anodized aluminum window frames at all interior and exterior windows.
- Include thermally broken frames at all exterior openings.

08 00 10 Exterior windows

- Clear-anodized aluminum exterior window frame system with 1" double-panel, low-e insulated, reflective, solar tint glass (SolarBan® 60, 'Solargray' color). Provide sample for approval by Owner.
- Typical window sizes as shown on elevations; window locations to be coordinated with PEMB manufacturer to locate between wall girts.
- Install insulated glass for all locations where a conditioned space abuts an unconditioned or semi-heated space.

08 00 11 Interior windows

- Clear-anodized aluminum interior window frame system with 1/4" single pane clear glass.
- Typical window height on glass partitions to be from finish floor to ceiling height, typical at office area.



DIVISION 09 – FINISHES

Refer to Finish Schedule below.

- Office [Office]
  - Floors: Integral Colored Concrete polished throughout, see Section 03 00 02.
  - Walls: 20-ga. stud / drywall (09 00 05), painted (09 00 10) with 4" base (09 00 03), or aluminum framed + glass (09 00 06) – refer to (conceptual) Plans.
  - Insulation: at all walls (09 00 08) and ceilings (09 00 09), for sound and energy conservation.
  - Ceiling: acoustic lay-in (09 00 11), at 10'-0" height.
  - Doors: solid core plastic laminate or wide-stile (08 00 04) with hardware (08 00 07).
  - Lighting: see Section 16 50 02.
  - Provide aluminum storefront glazed wall with door at vestibule air lock.
- Restrooms [Office]
  - Floors: Integral Colored Concrete polished throughout, see Section 03 00 02.
  - Walls: porcelain tile from floor to ceiling (09 00 15) over 20-ga. stud / tile backer (09 00 05).
  - Insulation: at all walls (09 00 08) and ceilings (09 00 09), for sound and energy conservation.
  - Ceiling: stud / drywall with epoxy paint (09 00 12), at 10'-0" height.
  - Doors: hollow metal (08 00 02) with louvers and hardware (08 00 07).
  - Lighting: see Section 16 50 02.
- Break Area
  - Floors: Integral Colored Concrete polished throughout, see Section 03 00 02.
  - Walls: 20-ga. stud / drywall (09 00 05), painted (09 00 10) with 4" base (09 00 03), or aluminum framed + glass (09 00 06) – refer to (conceptual) Plans.
  - Insulation: at all walls (09 00 08) and ceilings (09 00 09), for sound and energy conservation.
  - Ceiling: acoustic lay-in (09 00 11), at 10'-0" height.
  - Doors: wide-stile aluminum (08 00 04) with hardware (08 00 07).
  - Lighting: see Section 16 50 02.
  - Provide millwork / electrical as per DIVISION 06.

09 00 03 Vinyl base

- Use commercial-grade vinyl wall base in 4" height and 1/8" thickness; provide at drywall locations only, as manufactured by Roppe 700-series with toe base. Use prefabricated/pre-formed pieces at all corner locations. Provide color chart for Owner's selection.
- Upon completion, provide a maintenance stock of ceiling panels equal to 3% of materials used. Material shall be from the same lot and dye number of the product installed.

09 00 04 Demising wall

- Install liner panel over metal stud construction at wall from office area(s) facing warehouse/shop space, on unconditioned/semi-conditioned side(s) only, in factory white finish, from 10'-0" AFF to underside of roof deck.
- Provide tight seal to underside of roof deck.

09 00 05 Interior (drywall) walls

- Use minimum 20-gauge metal stud framing with 5/8" (16mm) type "X" gypsum board on each side of stud/gypsum partitions, and tape/mud to Level 4 finish.
- Carry metal stud partitions to 12'-0" (3.66m) above finish floor, and gypsum board to 6" above ceiling, unless noted otherwise. Install supports as required tied to building structural components. Where rated, install wall assembly to underside of the roof deck with fire-safing as required per Code.
- Provide soundproof mineral wool insulation to all walls (09 00 08).
- Prepare and prime surfaces to receive paint finish.
- Apply two [2] coats finish paint to all exposed gypsum board locations (09 00 10).
- Finish paint color = Sherwin Williams "SW 7064 – Passive" satin finish—provide sample for approval.

09 00 06 Interior (glazed) walls

- Interior walls and partitions shall be either aluminum framed / glazed partitions or stud/gypsum partitions as shown on drawings.
- Use clear anodized framing with 1/4" (6.35mm) clear glass at glazed partitions, full height to underside of ceiling system.
- Provide 4.5" high base framing to allow for electrical / data outlet installation.

09 00 07 Restroom walls

- Restroom walls and partitions shall be 20-gauge metal stud with 5/8" moisture-resistant gypsum board; use tile backer board on tiled walls and prepare for ceramic tile.

09 00 08 Stud wall insulation

- Insulate all stud/gypsum partition walls with soundproof mineral wool insulation between studs, from floor to top of wall. At exterior walls, use insulation with R-value(s) per local Code(s).

09 00 09 Drop ceiling insulation

- Provide framed lid (dust cap) at 12'-0" above finished floor using metal studs at 2'-0" O.C. where applicable [inside shop building].
- Provide 8" thick batt insulation, continuous above ceiling, at all build-out areas.

09 00 10 Wall paint

- Walls shall receive satin-finish Sherwin Williams latex enamel paint (SuperPaint).
- Two (2) coats of finish paint over minimum one [1] coat of primer.
- Field paint color = Sherwin Williams "SW 7064 – Passive" satin finish—provide sample for approval.
- All materials to comply with ASTM, PDCA, and ASA Standards.
- Provide no visible brush or roller strokes or marks.
- Clean window glass and other paint splattered surfaces.
- Upon completion, provide partially used containers of paint and/or stain. Each container must contain no less than 3/4 volume of product from its original container.

09 00 11 Suspended acoustical ceiling

- Suspended ceiling system to be on 2'-0"x2'-0" grid, typical throughout, centered in room(s).
- Use standard 15-16" wide grid system as manufactured by USG or similar in "white" color; include all ties, clips, hold-downs, and/or fasteners as required for a complete installation.
- Ceiling pads to be 2'-0"x4'-0"x7/8" thick, USG "Radar Open Plan #22320" or similar, with square edge.
- Standard ceiling height to be 10'-0" high, above finished floor elevation.
- All materials to comply with ASTM, USDA and UL Standards.
- Space hangers no more than 4'-0" O.C. In project locations subject to seismic activity or as required by Code, provide extra hangers as required.
- Install tile hold-down clips in all vestibules and within a 20'-0" radius of doors to the exterior.
- Upon completion, provide a maintenance stock of ceiling panels equal to 3% of materials used. Material shall be from the same lot and dye number of the product installed.

09 00 12 Hard-lid ceiling

- Painted gypsum board ceiling at 10'-0" height, above finished floor elevation.
- Two [2] coats of Sherwin Williams's flat epoxy paint over primer on ceiling; provide for rated room(s) where required per Code(s).
- Hard-lid ceiling(s) required at all restrooms, and per Reflected Ceiling Plan (if provided).
- Finish paint color = Sherwin Williams "SW7006 – Extra White" epoxy.

09 00 13 Exterior hollow metal door and frames finishes

- Shall receive sprayed enamel paint finish, two [2] coats minimum, of Sherwin Williams Industrial Enamel paint (1-part) or similar over factory-applied primer.
- Provide no visible brush or roller strokes or marks.
- Do not paint over Code-required labels.
- Clean window glass and other paint splattered surfaces.
- (Interior side) finish paint color = Sherwin Williams "SW 7068 – Grizzle Gray" semi-gloss finish—provide sample for approval.
- (Exterior side) finish paint color = "match exterior color" semi-gloss finish.

09 00 14 Miscellaneous steel paint

- All steel railings, interior guard rails, protective pipe bollards, rooftop equipment supports, ladders, exposed gas piping, etc. shall receive a minimum of two [2] finish coats of Sherwin Williams Industrial Enamel paint (1-part) or similar over factory-applied primer.
- Provide no visible brush or roller strokes or marks.
- Finish paint color = Sherwin Williams "SW4084 – Safety Yellow" semi-gloss finish.

09 00 15 Porcelain tile

- All materials to comply with TLA and ANSI Standards.
- Porcelain tile shall be integrally colored throughout; ceramic tile will not be permitted for use in the facility.
- All restroom walls shall receive full height porcelain wall tile laid in a 1/3 running bond pattern; this includes full-height tile walls at shower rooms (if applicable).
- Utilize tile transition sanitary cove (by Schluter or similar) from tile wall to floor, typical for room perimeters. Include pre-fabricated corner pieces as needed.
- Porcelain tile to be as manufactured by Florida Tile, East Village Line "E. Houston Warm Grey" in 12"x24" size. (FTIEVG2012X24)
- Grout to be as manufactured by TEC Power Grout "#941—Raven."
- Porcelain tile to be installed using thin-set mortar; butt and fit all tile tight to openings.
- Grout all tile using manufacturer's recommended materials; install color grout at all tile joints.

- Clean all tile surfaces upon completion of work removing all residual grout from surface of tiles and leaving the tile surfaces polished. Apply one [1] coat of sealant at all tile walls with product as recommended and approved by tile manufacturer.
- Upon completion, provide a maintenance stock of ceiling panels equal to 3% of materials used. Material shall be from the same lot and dye number of the product installed.

09 00 16 Vestibule tile

- At entry vestibule, provide high-traffic stone tile as manufactured by Florida Tile "Lost River Rush Grey" in 12"x24" size. With walk-off mat in center of walk aisle, sized to approximately 40% of the total vestibule space.
- Grout to be as manufactured by TEC Power Grout "#941—Raven."
- Walk-off mat to be Pedimat® "M1" by Construction Specialties Inc. or similar, in mill finish, with heavy duty carpet for tread insert.
- Tread insert to be heavy duty carpet in "Wrought Iron" color.

09 00 17 FRP panel

- Wall areas immediately surrounding the janitor / utility sink(s) shall receive 72" high Fiber Reinforced Plastic panels for moisture protection, in "white" color. This should behind the sink as well as (minimum) 48" to either side.
- Seal perimeter and all seams with clear silicone sealant.

09 00 18 Steel paint

- All exposed building steel shall receive a minimum of two [2] coats semi-gloss Sherwin Williams Industrial Enamel paint (1-part) or similar, in "white" color over factory-applied primer, at all exposed locations.
- Provide no visible brush or roller strokes or marks.
- Finish paint color = Sherwin Williams "SW7006 – Extra White" semi-gloss finish.
- All columns at fire extinguisher locations shall be painted with 24" high band in "safety red" color, using semi-gloss Sherwin Williams Industrial Enamel paint (1-part) or similar, over factory-applied primer.

09 00 19 Exterior man doors

- Shall receive a minimum of two [2] coats semi-gloss Sherwin Williams Industrial Enamel paint (1-part) or similar, to doors and frames over factory-applied primer.
- Provide no visible brush or roller strokes or marks.
- Do not paint over Code-required labels.
- Clean window glass and other paint splattered surfaces.
- (Interior side) finish paint color = Sherwin Williams "SW7068 – Grizzle Gray" semi-gloss finish—color selection by Owner.
- (Exterior side) finish paint color = "match PEMB color" semi-gloss finish.

09 00 20 Paint all protective pipe bollards

- All bollards, with exception to hydrant locations, shall receive a minimum of two [2] coats semi-gloss Sherwin Williams Industrial Enamel paint (1-part) or similar, from floor to underside of deck, in "safety yellow" color, over factory-applied primer.
- Finish paint color = Sherwin Williams "SW4084 – Safety Yellow" semi-gloss finish.
- All bollards at hydrant locations shall receive a minimum of two [2] coats semi-gloss Sherwin Williams Industrial Enamel paint (1-part) or similar, from floor to underside of deck, in "safety red" color, over factory-applied primer.
- Provide no visible brush or roller strokes or marks.
- Finish paint color = Sherwin Williams "SW4081 – Safety Red" semi-gloss finish.

09 00 21 IT Room flooring

- At IT Room, utilize static dissipative vinyl-composition tile ("VCT").
- Tile shall be 12"x12" with 1/8" thickness.
- Material shall be Armstrong Flooring, Excelon SDT in "51959 Coal" color, or similar.
- Utilize vinyl base for room perimeters (09 00 03).

09 00 22 Plywood Panels

- At all shop and inspection areas, provide 3/4"-thick fire-rated plywood from finish floor to 10'-0" height at interior perimeter of room(s) where stud-framed walls are located, not required at masonry walls. Apply primer and two [2] finish coats in color as selected by Owner.
- Finish paint color = Sherwin Williams "SW7068 – Grizzle Gray" satin finish.

DIVISION 10 – SPECIALTIES

All materials to comply with ASTM, ADA Standards.
Provide concealed 2x solid fire-rated wood blocking and other reinforcement as needed, securely anchored to wall / ceiling framing for proper anchoring of specialties.

10 00 01 Partitions

- Solid phenolic core toilet partitions, doors/screens and urinal screens to be floor and/or wall mounted, with overhead bracing as required.
- Exposed manufacturer's markings or stamps are prohibited.
- Provide partitions by Bradley "Series 400 – Overhead Braced" in "Graphite Grafix – 006F" color.
- All hardware to be brushed / dull chrome finish.

10 00 02 Toilet accessories

- Provide grab bars and other handicapped accessories as required, in brushed / dull chrome finish.
- Provide one [1] manual-push foaming soap dispenser per each pair of sinks.
- Provide one [1] Kimberly-Clark Professional 39731 twin toilet tissue dispenser in each toilet compartment.
- Provide sanitary foot-operated door opener at interior side of each restroom / janitor room door if door swings open into room, similar to StepNpull, www.stepnpull.com.
- Provide one [1] electric "Xcelerator" hand dryer (stainless steel finish), with stainless wall guard for every sink in each restroom as per Code; minimum [1] hand dryer per restroom.
- Provide stainless steel framed, 18" wide x 42" high mirrors over each lavatory.

10 00 03 Signage

- Dock Doors: provide surface mounted signage above dock doors, inside and outside. 15"x15" 12-gauge aluminum plate in "white" color with 12" high vinyl cut numbers or letters in "black" color as sequenced by Owner.
- Restrooms: provide men/women signs at restroom entrance.
- Provide signage for electrical room, sprinkler room, etc. as required by Code Official.
- Include ADA-compliant signage, with braille as needed. Background color = yellow; lettering color = black.
- Include junction box for power / data at street-facing exterior wall, above storefront glazing, tied into site lighting circuit / timer – signage by others.

10 00 04 Fire Extinguisher Cabinets

- All semi-recessed fire extinguisher cabinets to meet NFPA regulations.
- Provide semi-recessed fire extinguisher cabinets at office areas.
- Cabinets shall have white enamel factory finish.
- Fire Extinguishers shall be dry chemical type (10 lb. ABC).
- Location(s) to be determined by use / construction type in conjunction with local Code and Fire Marshall.

10 00 05 Fire Extinguishers

- Provide surface mounted fire extinguishers for all warehouse / dock, and shop areas (as applicable) per local Code, at building columns. See Section 09 00 18 for painting requirements.
- Fire Extinguishers shall be dry chemical type (10 lb. ABC), or as required per local Code and Fire Marshall.

DIVISION 11 – EQUIPMENT – Not in Contract

DIVISION 12 – FURNISHINGS

12 21 01 Light Filtering Roller Shades

- Furnish and install roller shade style blinds at all insulated windows.
- Blinds to be manual in operation, with chain drive.
- Blinds to be provided inside each individual window, between window framing.
- Color / fabric to be selected by Owner, in 3% open.

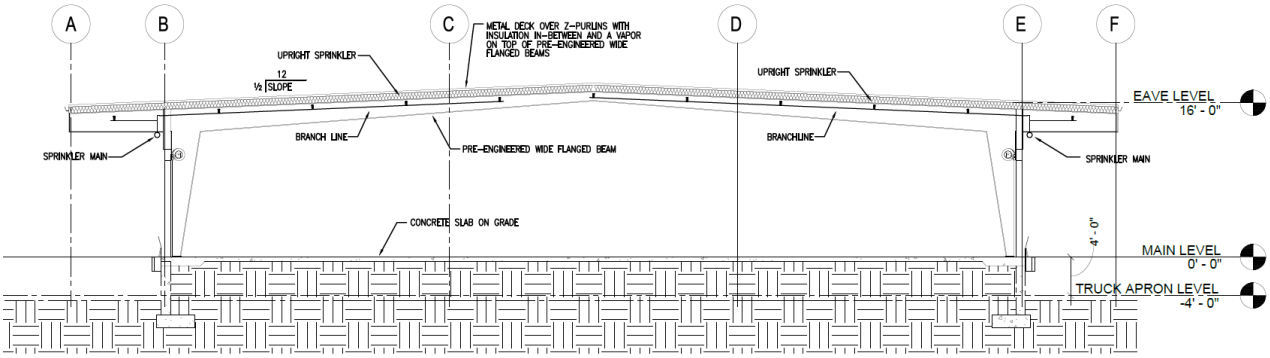
DIVISION 13 – SPECIAL CONSTRUCTION – Not in Contract

DIVISION 15 – MECHANICAL

15 30 00 Fire Suppression

The fire suppression system shall be designed by a licensed contractor (or engineer if required by authorities having jurisdiction); this includes the responsibility to provide all drawings prepared under their direct supervision.

- System design and installation shall comply with local, state and federal regulations as well as NFPA 13.
- All equipment shall be UL listed.
- Provide and install an approved, hydraulically-calculated "dry" automatic sprinkler throughout the building(s).
- Automatic sprinklers shall be installed throughout all required areas under roof, including but not limited to: warehouse, cross dock, shop, rail bay, restrooms, general office area(s), break area, overhangs, etc.
- Pipe runs shall be designed so as to be free from damage due to business operations (ie. forklift traffic or truck/trailer traffic).
- All piping shall be provided as SCH40 with MIC coating.
- Include booster pump, air compressor and / or storage tank(s) as part of fire suppression system, if required.
- Pump(s) to be diesel-powered, if required.
- All sprinkler mains shall be run on the exterior of all cross-dock loading dock areas, under overhang (per image below), no exceptions. Coordinate location of drum drips with Owner prior to installation.
- Branch line to have 3% pitch



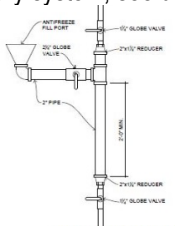
15 30 01 Office area fire protection system

- Administrative Offices and other service areas such as; restrooms, employee entrance, clinic, break area, etc. shall be concealed sprinkler heads with white flanges at T-bar ceiling.
- All sprinkler heads shall be centered in ceiling tiles throughout all finished spaces.

15 30 02 Shop / dock area fire protection system

- All other areas shall receive upright brass-finish sprinkler heads, using Schedule 40 piping (with MIC coating) throughout at branch and main lines.
- Roll-grooving of Schedule 40 is acceptable on piping 3" or larger. Note: no threadable thin wall piping shall be allowed.

- Sprinkler heads and associated branch piping shall be located 12" off the centerline of each overhead door to eliminate interference with overhead door operator.
- Any sprinkler piping supported from roof purlins shall be attached to the purlin web by use of side mounted beam brackets.
- Use of flange brackets on purlin flanges will not be allowed.
- Piping suspended from beam shaped structural members will be allowed to be supported from appropriate designed clamp type brackets.
- Provide drum drip(s) for all low points in dry system; see detail below,



- Branch line to have 3% pitch

15 30 03 Fire hydrants

- Install hydrants as required per Code / NFPA guidelines. Include all fittings, valves, and thrust block(s) as will be required for a complete and working installation. Assume utilization of existing infrastructure for installation of new hydrants.

15 30 04 Fire department connection & control valves

- Provide fire department connection and sectional post indicator valves, control and riser valves. All valves should be OS&Y. Provide connections as required per local jurisdiction.

15 30 05 Water storage tank (if required)

- If required due to local water pressure, provide and install steel, bolted above ground water storage tank, factory primed and painted with enough capacity to supply water for two [2] hours of continuous pump operation. A diesel fuel driven pump will be required as per hydraulic design.
- If required due to local water pressure, include the construction of a stand-alone fire pump house with appropriate dimension to include a hydro pneumatic system and inverse osmosis water treatment system.

15 30 06 Switches

- Provide and install the following alarm and supervisory switches of which each shall be connected to the building fire alarm control panel by the alarm contractor:
  (i) Tamper Supervisory Switches on all valves controlling water to fire sprinklers, and
  (ii) Water Flow Switches for each dry-pipe system using pressure-type water flow switch.

15 30 07 Drain Lines

- Drain pipes and valves shall be installed on each system to allow drainage.
- Each system shall drain to the maximum extent possible through the main drain valve.
- For dry systems, branch lines shall be pitched at least 1/2-inch per 10-feet and main lines shall pitch at least 1/4-inch per 10-feet.
- Coordinate location of drum drip(s) as required with Owner prior to construction.

15 30 08 Flow Test

- Contractor to establish system design based on water flow test conducted by municipal water utility or fire department at the effective point of city connection.

- Flow test must have been performed within the previous six [6] months. Include copy of flow test indicating static pressure, residual pressure and PSI with GPM flowing. Contractor or their subcontractor are responsible to obtain any and all flow test information.

15 30 09 System Test

- The entire fire suppression system shall be subject to inspection and acceptance by authorities having jurisdiction to determine in system(s) are in accordance with federal, state and local Codes.
- All underground piping shall be hydrostatically tested at not less than 200 PSI, or 50 PSI in excess of the maximum working pressure of the system (whichever is greater), for not less than two [2] hours in accordance with NFPA 24. Before testing the trench shall be backfilled between joints. All joints shall be left exposed during the test.
- Each fire hydrant shall be fully opened and closed under full pressure.
- All interior system piping shall be hydrostatically tested at not least than 200 PSI, or 50 PSI in excess of the maximum working pressure of the system, for not least than two [2] hours.
- Dry-Pipe System; an air pressure leakage test at 65 PSI shall be conducted for 24 hours. There shall be no drop in pressure in excess of 1.5 PSI for the 24 hour test. This air pressure test is in addition to the required hydrostatic test. Each dry-pipe valve shall be trip-tested by reducing normal air pressure through opening the Inspector's Test Connection. Systems equipped with quick opening devices shall be first tested without operation of the quick opening device and then tested again with the device in operation.
- All test results shall be witnessed and recorded. Test results shall include the number of seconds elapsed between the time the test valve is opened and tripping of the dry-pipe valve; trip-point air pressure of the dry-pipe valve; water pressure prior to valve tripping; and the number of seconds elapsed between the ITC valve is opened and the water reaches the ITC orifice.
- All field test performed by the Contractor shall be conducted in the presence of the design engineer, the authorities having jurisdiction and the Owner.
- Contractor to provide written notice to all persons concerned a minimum of two [2] weeks in advance of the tests.

15 40 00 Plumbing

The plumbing system shall be designed by a licensed Mechanical Engineer; this includes the responsibility to provide all drawings (conforming to all local, state and federal Codes) prepared under their direct supervision, receiving their signed stamp of state registration for professional engineers.

- Size water service to provide acceptable pressure to future building expansion, if desired.
- All plumbing fixtures installed shall meet ADA guidelines.
- All materials to comply with ASA, ASME, UL and MSVF Standards.
- All new urinals and new water closets shall have flush-valve operation, sensor touch-less and hard-wired; 1"-diameter minimum water supply to each valve location. All water closets shall be floor-mounted units.
- All new lavatory fixtures shall be sensor touch-less, and hard-wired.
- The quantity of restroom fixtures shall be governed by Code based on number of occupants.
- The location of restrooms shall be governed by Code with respect to travel distances.
- All interior supply piping shall be copper with soldered connections; use type L hard copper above grade and type K soft copper below grade or as per local Code. No flexible piping ("pex") will be allowed.
- Pipe insulation to be provided on all above grade hot and cold piping, whether concealed or exposed.
- Color of fixtures to be white unless otherwise noted.
- Finish of fixtures to be brushed chrome unless otherwise noted.
- Provide 277V electric hot water heater(s) as required, throughout building(s).
- All exposed gas piping shall be painted to prevent rust, two [2] coats minimum. Gas pipe shall be run on the interior of the building in lieu of on the roof.

15 40 04 Drinking fountains

- Provide and install one [1] ADA set (bi-level) drinking fountain at each set of restrooms.
- Include bottle-filler option at each new drinking fountain location.
- Include drinking fountain at remote toilet rooms as required per Code (travel distance).

15 40 11 Ice maker connection
- Include water line connection with shut-off for ice maker at each break area.

15 40 12 Floor drains
- Provide and install floor drains in all restrooms, janitor closets, and break areas (adjacent to vending machines). Include drain(s) in riser / meter rooms and other areas as may be required by Code.
- Provide trapped drains for sewer gas and connect to underground sanitary system.

15 40 13 Mop sinks
- Provide and install mop sink with threaded faucet, hose, and mop rack, in each janitor closet location. Include slop sink at open shop space, with threaded faucet.

15 70 00 Heating, Ventilating, and Air Conditioning (HVAC)
The design engineer shall be responsible for preparing construction drawings and sizing the capacity of all HVAC equipment based on geographic location of the facility, its orientation on the site, applicable Codes and design criteria given in this Project Criteria or Conceptual Drawings. A licensed engineer shall stamp final plans.
- Heating shall be based on using electric VRF system as a heat source. The same system will be used for cooling functions as well. All equipment shall be ground-mounted; no roof-mounted equipment will be permitted.
- All materials to comply with ASTM, UL, ANSI Standards.
- Submit shop drawings for review prior to ordering of equipment.
- All HVAC units shall be furnished with a minimum 16 SEER rating or 12.25 EER rating.
- Install all registers, grilles, diffusers, access doors, fan connections, dampers, fans, louvers, control devices, condensing units, hoods, chimneys (Class B), fire dampers, and hangers to provide a complete HVAC system.
- Paint inside of ductwork “flat black” for entire area visible through grille opening(s).
- Paint any hoods, vents, grilles, etc. that penetrate exterior wall in color(s) to match exterior finish color(s).
- Provide galvanized steel ducting for both diffusion and return; diffusion ducts shall be insulated, while both diffusion and return ducts shall have all joints sealed. Flexible duct will not be allowed.

15 70 01 Office areas
- Conditioned air supplied through overhead supply ductwork / VRF cartridges that will discharge into the office area through ceiling mounted diffusers.
    - Heat to 75°F inside when 5°F outside.
    - Cool to 70°F inside when 95°F outside.
- Provide independent VAV unit (heat and cooling) at each conference room, break area, IT Room, open office and private office(s); include restrooms on independent thermostat.
- Provide programmable thermostats at each unit.
- Provide independent slave units at each private office.
- Space above ceiling shall not be used as a return air plenum. All returns shall be ducted.

15 70 05 Restrooms exhaust fans
- Shall be side-wall mounted and sized appropriately per engineer for Code.
- The exhaust fans shall be run constantly on during business operating hours only.
- Provide timer control as required.

15 70 06 Low voltage controls and wiring
- Provide digital programmable thermostats (day, week, temp).
- Provide and install all low voltage controls and wiring in conduit for the HVAC system.
- Include low voltage wiring, relays, interlocks, transformers, sensors, guards at each thermostat, etc.

15 70 07 IT Room
- Provide independent, redundant split unit(s) as required to maintain temperature for Tenant’s IT equipment. This shall be required in addition to main HVAC system.

- The room requires a stable ambient temperature of 72°F.
- Temperature control of this room shall be independent of the main HVAC system.

DIVISION 16 – ELECTRICAL

The electrical system shall be designed by an Electrical Engineer; this includes the responsibility to provide all drawings (conforming to all local, state and federal Codes) prepared under their direct supervision, receiving their signed stamp of state registration for professional engineers.

- Main electric service shall be secondary, 480/277V 3-phase, sized appropriately based on building loads, including an additional 50% for future expansion.
- All electrical equipment shall be manufactured by Square D.
- All conductor shall be copper and enclosed in conduit. Conduit installed underground to be rigid steel or schedule 40 PVC material. Aluminum conductor will not be allowed.
- All materials to comply with UL, NEMA, ASTM, OSHA, IEEE, NEC and local Code / ordinances.

16 00 01 Incoming services

- The incoming service cable to the meter shall be run underground. All costs associated with this installation, from the grid into the site, are to be paid by Contractor.
- Include two [2] 4" conduits for data provider, from connection at street, landed in corner of IT Room.

16 00 02 Main switchboards

- Provide main switchboards for each substation transformer; the main circuit breaker for the basis of pricing shall be as needed for building addition with standard short circuit interrupting capacity.
- The main circuit breaker shall be electromechanical type, including ground fault protection, phase missing protection, trip unit or equal. Include metering equipment (voltage, 19 amp, kw, etc.).
- The final size of the service will be determined by the engineer and approved by the Owner.
- Provide a minimum of 20% spare space in main power distribution panel for future use.

16 00 03 Step-down transformers

- Provide step-down transformers with 110/220, 3 Phase panels as required for misc. power requirements.
- Single-phase panels will be provided for building receptacles as required.

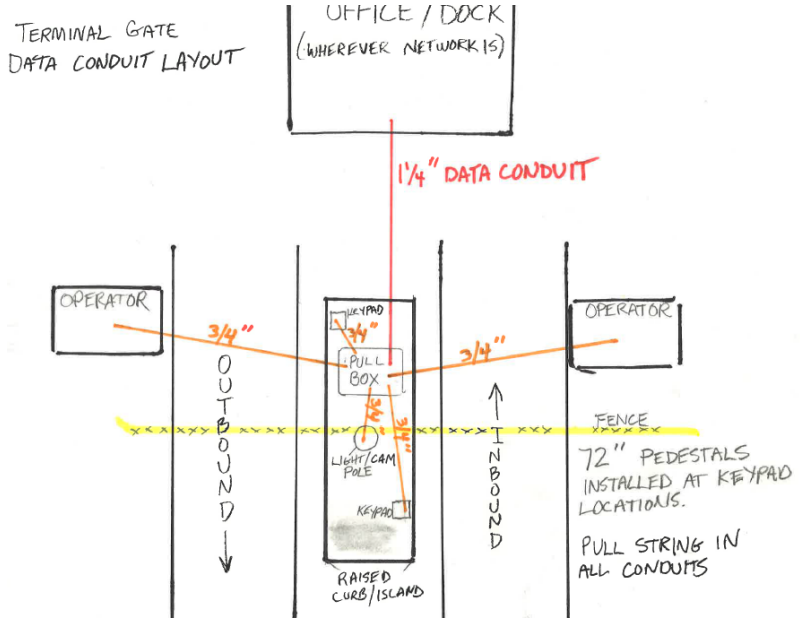
16 00 04 Electrical distribution

- Provide all conduit, boxes, plates, wiring, fuses, disconnect switches, wiring devices, metering, panel boards, fixtures, connection devices, and miscellaneous electrical components to furnish a complete system. Wiring devices shall match the amperage of the circuit being served. Coordinate all electrical signage requirements.
- All circuits within the building shall be run in thin-walled electrical metallic tubing ("EMT") conduit and shall be installed overhead. Under no circumstances, unless approved in writing in advance by the Owner, will circuits be allowed to be installed under concrete slabs.
- Panel boards to be installed as required; coordinate switching and final location with Owner. Each panel shall be designed to allow for 20% spare, unused circuit space. Include separate panel(s) within shop building to be fed from main switchboard within electrical room; the intent is for one electrical service to service the entire site.
- Provide 110V duplex outlets at all perimeter walls in the office open area at every 6'-0" maximum, and as per local Code; provide four [4] outlets at every private office in opposing walls, at a minimum. At private offices with aluminum framing for walls, utilize higher base framing to install outlets in base.
- Provide eleven [7] 110V GFCI duplex outlets as required in each break area, each outlet on a dedicated circuit. The purpose of these dedicated circuits is for [1] refrigerator(s), [1] ice maker(s), [2] microwave(s), [1] coffee maker(s), and [2] vending machine(s). These dedicated circuits may be direct wired to equipment, at Owner's option. Coordinate location of all items with Owner.
- Provide 110V GFCI duplex outlets as required by NEC in restrooms and wet areas, on dedicated circuit(s), minimum one location per restroom.

- Interior office and finished area receptacles to be “white” in color and switch wall plates to be manufactured from white Lexan, plastic or vinyl not acceptable, installed as per Code.

16 00 05 Phone / data outlets

- All low voltage cables shall be run in separate conduits and in separate pull boxes from all electrical power circuits. Installing both low voltage cables and power together in a common conduit or divided pull box is unacceptable.
- Provide all required data and phone outlets with pull wire. Provide 1” conduits up to 12” above ceiling with radius elbow ends and 4” by 4” boxes at all perimeter walls and private offices and open office areas. Locate boxes in open areas at every 10’-0” maximum between each other.
- Provide two [2] data and phone outlets at opposing walls in each private office.
- Provide two [2] data and phone outlets in each conference room, one [1] centered in the floor, and one [1] on wall at monitor height.
- Provide one [1] data drop at each individual work station. Coordinate locations with Owner and/or Tenant.
- All phone/data lines shall “home run” from IT Room to each data port location.
- Include empty data conduits with pull string from the main office area to the following locations, as applicable: (i) guard house(s), (ii) gates, (iii) turnstiles, and (iv) signage locations (if any). Coordinate quantities / sizes of conduits and location with Owner. Typical inbound / outbound gate layout shown in sketch below,



16 00 06 IT Room

- Provide two [2] 4” diameter conduit(s) for fiber optic connection for telephone/data company from property limit in to IT room.
- Provide one [1] – 3 phase, 42-circuit, 200-amp panel dedicated inside IT Room. All electric outlets at IT room and HVAC unit(s) must be connected directly to this dedicated panel. Panel and all outlets shall be fully surge-protected and provide “clean power” to IT room.
- Provide dedicated electric circuit(s); to IT room directly from substation main distribution panel.
- Provide wiring to connect dedicated mini-split unit(s) to dedicated panel.
- Provide and install six [6] double polarized outlets in three different circuits; connect to dedicated panel.
- Provide and independent ground systems, 5-ohm max., including a 12” cooper bar.

16 00 07 Fire alarm panel

- Provide dedicated circuit per NFPA guidelines.

16 00 10 Signage

- Include conduit and conductor for building mounted signage and/or monument signage at street frontage, per local ordinance. Install on astronomical timer along with exterior site lighting. Coordinate location(s) with Owner.

16 50 00 Lighting

- All lighting to be LED throughout the project
- Use 4000K color temperature for all interior lighting; use 5000K color temperature for all exterior lighting.
- Provide 120-277 MV fixtures for all lighting applications.
- All lighting panels shall be 277V.
- Light fixtures must be installed to maintain clear height.

16 50 02 Interior lighting

- Office & Break area(s); 50-FC average at 36" work surface, LED lay-in fixtures. Provide night and emergency lighting circuit. Quality of light shall be uniform throughout without "hot" spots. All private offices shall have Leviton brand lighting controls. Include occupancy and daylight sensors throughout.
- Restroom(s); 50-FC average at 36" work surface, LED recessed fixtures in conjunction with vanity fixtures at mirror locations. Provide night and emergency lighting circuit. Quality of light shall be uniform throughout without "hot" spots. Each restroom shall be controlled with heat-sensitive occupancy sensor, ceiling mounted.

16 50 03 Emergency and exit lighting

- Provide emergency and exit lighting according to local, state, federal as well as NFPA code(s).
- Provide surface mounted fixtures and/or lay-in LED fixtures with emergency back-up to provide 3-FC at emergency egress aisles, conference rooms, break area, open office areas, clinic and restrooms for no less than 90 minutes.
- All emergency light fixtures shall be on isolated independent circuit.
- Provide one (1) emergency light fixture at electrical room and riser room. Fixture shall be rated.

16 50 04 Exit Signs

- All exterior doors must have an electric exit sign with battery back-up.

16 70 00 Fire Detection and Alarm Annunciation Panels and Fire Stations

- Provide a fire alarm system consisting of manual pull stations, photoelectric smoke detector(s), water flow switches at risers, control valve supervision, and a remote slave enunciator panel.
- Provide and install horns and strobes to comply with NFPA and local Building Code. Include cellular dialer, with redundant cellular back-up, if allowed by local Fire Marshall. Fire alarm system shall be proprietary.

---------- END OF PROJECT CRITERIA ----------