



RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:
Public Works and Government Services Canada
ATB Place North Tower
10025 Jasper Ave./10025 ave. Jasper
5th floor/5e étage
Edmonton
Alberta
T5J 1S6
Bid Fax: (780) 497-3510

SOLICITATION AMENDMENT MODIFICATION DE L'INVITATION

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

Comments - Commentaires

Vendor/Firm Name and Address
Raison sociale et adresse du
fournisseur/de l'entrepreneur

Issuing Office - Bureau de distribution
Public Works and Government Services Canada
ATB Place North Tower
10025 Jasper Ave./10025 ave Jasper
5th floor/5e étage
Edmonton
Alberta
T5J 1S6

Title - Sujet Kitchen Modernization	
Solicitation No. - N° de l'invitation EW038-200245/A	Amendment No. - N° modif. 004
Client Reference No. - N° de référence du client PWGSC-EW038-200245	Date 2019-07-08
GETS Reference No. - N° de référence de SEAG PW-\$PWU-066-11642	
File No. - N° de dossier PWU-9-42025 (066)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2019-07-12	Time Zone Fuseau horaire Mountain Daylight Saving Time MDT
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Lee, Mony	Buyer Id - Id de l'acheteur pwu066
Telephone No. - N° de téléphone (780) 224-6675 ()	FAX No. - N° de FAX (780) 497-3510
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction:	

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée	Delivery Offered - Livraison proposée
Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur	
Telephone No. - N° de téléphone Facsimile No. - N° de télécopieur	
Name and title of person authorized to sign on behalf of Vendor/Firm (type or print) Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)	
Signature	Date

SOLICITAITON AMENDMENT No. 004

See attached addendum 01.

All other terms and conditions of the Invitation to Tender remain unchanged.

July 5, 2019

ADDENDUM No.:01

Project No.

R.077204.001

To

All Bidders of Record

Project Name

EMSI Kitchen Redevelopment

Attached is a copy of **Addendum No. 01, dated July 5, 2019**, consisting of **4 pages**, and including the following attachments:

SPECIFICATIONS: 21 Pages**Sections:**

- | | |
|---|---------|
| 1. Specification Section 00 01 10 Table of Contents | 3 Pages |
| 2. Specification Section 09 65 13 Resilient Base and Accessories | 3 Pages |
| 3. Specification Section 09 67 13 Seamless Epoxy Flooring | 4 Pages |
| 4. Specification Section 10 51 00 Lockers | 2 Pages |
| 5. Specification Section 10 51 53 Locker Room Benches | 1 Page |
| 6. Specification Section 11 41 50 Walk-in Boxes and Refrigeration Systems | 8 Pages |

ARCHITECTURAL: 3 Pages**Drawings:**

1. A00-02 – Door Schedule, Legends, and Keynotes
2. A20-02 – Demolition Floor Plan
3. A20-03 – New Floor Plan

MECHANICAL: 3 Pages**Drawings:**

1. M02 – Plumbing Demolition Plan
2. M04 – Mechanical New Plan

Sketches:

1. MSK-1 – Obsolete piping detail

ELECTRICAL: 1 Pages**Drawings:**

1. E3 – Electrical Power and Lighting Plan



The following items shall constitute an addendum to the Drawings and Specifications for the above noted project. Allow for and include in the Bid all costs/credits applicable to the noted clarifications.

Bidders are reminded that, with respect to the Bid Form, should any item be omitted or illegible, should any alteration be made to the text, or should any condition be added on or submitted with the Bid Form, the bid may be declared invalid and rejected by the Owner



This Addendum forms part of the Bid and Contract Documents and modifies them as follows:

SPECIFICATIONS:

1. The attached specification sections had been added to the originally published project manual.
 - 1) Section 00 01 10 – Table of Contents
REVISE: Section revised to show new sections added to project manual.
 - 2) Section 09 65 13 – Resilient Base and Accessories
ADD: Section provided for resilient base information in response to tender questions Q20
 - 3) Section 09 67 13 – Seamless Epoxy Flooring
ADD: Section provided for epoxy flooring information in response to tender questions Q18 and Q21
 - 4) Section 10 51 00 – Lockers
ADD: Section provided for locker information in response to tender questions Q10 and Q24
 - 5) Section 10 51 53 – Locker Room Benches
ADD: Section provided for floor mounted locker room bench information in response to tender questions Q10 and Q25
 - 6) Section 11 41 50 – Walk-in Boxes and Refrigeration Systems
ADD: Section provided for freezer/cooler unit information in response to tender question Q3

DRAWINGS:

ARCHITECTURAL:

Drawings:

1. A00-02 – Door Schedule, Legends, and Keynotes
 - REVISE:** Demolition keynote – D3 – to indicate existing epoxy bases to remain
 - REVISE:** Demolition keynote – D5 – to indicate existing flooring to remain and to repair all surfaces as needed
 - REVISE:** Demolition keynote – D8 – to remove existing access panel and repair wall to accept new access panel
 - REVISE:** New construction keynote – N7 – to indicate new rubber base
 - REVISE:** New construction keynote – N8 – to frame new opening and accept new access panel
 - REVISE:** New construction keynote – N9 – indicating full height metal corner guard
 - ADD:** New wall finish type – WF-1a – indicating additional abuse resistant panel finish matching existing construction assembly.
2. A20-02 – Demolition Floor Plan
 - REVISE:** Demolition keynote – D3 – to indicate existing epoxy bases to remain where it exists in dry goods storage area and existing staff lunch room
 - REVISE:** Demolition floor plan revised to indicate access panel wall location to remain.
 - REVISE:** Demolition keynote – D5 – to indicate existing flooring to remain in dry goods storage area
 - REVISE:** Demolition keynote – D8 – at existing access panel location
 - ADD:** Note to indicate concrete curb location



3. A20-03 – New Floor Plan.

REVISE: New floor plan revised to indicate access panel wall location to remain.

REVISE: New construction keynote – N7 – to indicate locations of new rubber base in new staff change room and existing lunchroom.

REVISE: New construction keynote – N8 – at new access panel location

REVISE: New construction keynote – N9 – to indicate locations of metal corner guards

MECHANICAL:

Drawings:

1. M02 – Plumbing Demolition Plan

REVISE: New keynote indicating removal of obsolete drainage piping inside closet added

2. M04 – Mechanical New Plan

REVISE: Keynote 7 regarding range hood fan updated

Sketches:

1. MSK-1 – Obsolete piping detail

CLARIFICATION: New sketch added for clarity for the demolition of obsolete drainage piping.

ELECTRICAL:

Drawings:

1. E3 – Electrical Power and Lighting Plan

REVISE: Electrical power and lighting plan revised to indicate existing electrical lines to remain at access panel closet location.

ADD: TV cable connection location added to existing staff lunch room.

CLARIFICATIONS & REVISIONS:

EMSI Tender Questions

(All questions received to date, 5:00pm July 2, 2019)

List of questions noted during Pre-Tender walkthrough:

Q1. Can an alternate products be considered for LED lights and exit signage?

A1. Successful bidder can submit alternates for mechanical review after tender award.

SPECIFICATIONS GROUP**GENERAL REQUIREMENTS SUBGROUP****DIVISION 01****GENERAL REQUIREMENTS**

01 11 00	Summary of Work.....	2
01 14 10	Security Requirements	5
01 31 19	Project Meetings	2
01 32 16.07	Construction Progress Schedule – Bar (GANTT) Chart	3
01 33 00	Submittal Procedures	3
01 35 29.06	Health and Safety Requirements	2
01 41 00	Regulatory Requirements.....	1
01 45 00	Quality Control.....	3
01 51 00	Temporary Utilities	2
01 52 00	Construction Facilities	2
01 61 00	Common Product Requirements	3
01 73 00	Execution.....	2
01 74 11	Cleaning	1
01 74 21	Construction Waste Management and Disposal	1
01 77 00	Closeout Procedures	1
01 78 00	Closeout Submittals	2
01 79 00	Demonstration and Training	2
01 91 13	Commissioning Plan.....	11

FACILITY CONSTRUCTION SUBGROUP**DIVISION 02****EXISTING CONDITIONS**

02 07 50	Cutting and Patching	5
02 41 19.16	Selective Interior Demolition.....	9

DIVISION 03**CONCRETE**

Not Used

DIVISION 04**MASONRY**

04 04 99	Masonry for Minor Works	3
----------	-------------------------------	---

DIVISION 05**METALS**

05 50 00	Metal Fabrications	5
----------	--------------------------	---

DIVISION 06**WOOD, PLASTICS AND COMPOSITES**

Not Used

DIVISION 07**THERMAL AND MOISTURE PROTECTION**

07 55 00	Membrane Roof Repair	6
07 84 00	Firestopping.....	4
07 92 00	Joint Sealing	4

		No. of Pages
DIVISION 08	OPENINGS	
08 11 00	Metal Doors and Frames	6
08 71 00	Door Hardware	4
DIVISION 09	FINISHES	
09 21 16	Gypsum Board Assemblies	8
09 22 16	Non-Structural Metal Stud Framing	5
09 65 13	Resilient Base and Accessories	3
09 67 13	Seamless Epoxy Flooring	4
09 91 10	Painting	8
DIVISION 10	SPECIALTIES	
10 26 00	Wall Protection	2
10 51 00	Lockers	2
10 51 53	Locker Room Benches	1
DIVISION 11	EQUIPMENT	
11 41 50	Walk-In Boxes and Refrigeration Equipment	8
FACILITY SERVICES SUBGROUP		
DIVISION 20	MECHANICAL	
20 05 01	Common Work Results for Mechanical	6
20 41 23	Mechanical Demolition and Renovation	4
DIVISION 23	HEATING, VENTILATION AND AIR CONDITIONING (HVAC)	
23 05 00	Common Work Results for HVAC	6
23 05 93	Testing, Adjusting and Balancing for HVAC	8
23 05 94	Pressure Testing of Ducted Air Systems	5
23 07 13	Duct Insulation	7
23 07 15	Thermal Insulation for Piping	11
23 33 00	Air Duct Accessories	5
23 33 14	Dampers – Balancing	4
23 33 46	Flexible Ducts	5
23 35 33	Duct Liners	5
23 37 13	Diffusers, Registers and Grilles	4
23 37 20	Louvers, Intakes and Vents	5
23 51 00	Breeching, Chimneys and Stacks	4
23 54 33	Gas Fired Heaters	4
DIVISION 26	ELECTRICAL	
26 05 01	Common Work Results for Electrical	14
DIVISION 32	EXTERIOR IMPROVEMENTS	
32 11 16.01	Granular Sub Base	4
32 11 23.00	Aggregate Base Courses	3
32 12 16.01	Asphalt Paving – Short Form	3
DIVISION 26	ELECTRICAL	
26 05 00	Common Work Results Electrical	

Project No. R.077204.001

26 05 21	Electrical Materials and Methods
26 05 28	Grounding
26 05 64	Identification for Electrical Systems
26 24 16	Panelboards
26 28 23	Disconnect Switches
26 50 00	Lighting
DIVISION 27	COMMUNICATIONS
27 05 00	Common Work Results for Communication
27 05 53	Identification for Communications
27 08 00	Commissioning and Testing for Communications
27 15 00	Communications Horizontal Wiring
DIVISION 28	ELECTRONIC SAFETY AND SECURITY
28 31 00	Fire Detection and Alarm System

END TABLE OF CONTENTS

1. General**1.1 QUALITY ASSURANCE**

- .1 Only fully experienced flooring mechanics shall install base.
- .2 Prepare surfaces and install base in strict accordance with the manufacturer's directions.
- .3 All products shall have a flame spread rating of 25 or less when tested in accordance with ASTM-E84 where installed in an exit stair

1.2 REFERENCES

- .1 ASTM-E84-98ae1, "Surface Burning Characteristics of Building Materials".

1.3 SUBMITTALS

- .1 Comply with requirements of Section 01 33 00.
- .2 Submit duplicate 300 mm long samples of base to be used, illustrating the range of colours available for each material.
- .3 Supply two copies of the flooring manufacturer's standard product data and printed maintenance instructions.

1.4 MAINTENANCE MATERIALS

- .1 Supply 2% (minimum one unopened container) of each base type and colour.
- .2 Package each type and identify contents of each package. Store as directed by the Consultant.

1.5 PRODUCT DELIVERY AND STORAGE

- .1 Deliver materials in unopened packages or containers, in original wrappings or containers, bearing manufacturer's labels and seals.
- .2 Store materials under cover and away from moisture. Keep materials dry at all times.
- .3 Store flooring materials in area of application and allow 3 days for material to reach same temperature as area. Store materials under cover and away from moisture. Keep materials dry at all times.
- .4 Do not stack tile goods over four cartons high.

1.6 PROJECT CONDITIONS

- .1 Maintain a minimum temperature of 18°C for 48 hours before, during, and for 7 days after resilient base application. Maintain a minimum temperature of 13°C thereafter.
- .2 Do not install base if moisture is detected.
- .3 Provide ventilation to remove solvent vapours.
- .4 Do not lay resilient base until the latest possible period before completion of project.

2. Products**2.1 APPROVED MANUFACTURERS**

- .1 Amtico
- .2 Flexco
- .3 Johnsonite
- .3 K. N. Crowder

2.2 MATERIALS

- .1 Coved base: Moulded 100% homogenous top set coved rubber to CAN/CSA-A126.5-M87, 100 mm high x 3.0 mm wall thickness uniform from end to end, supplied in rolls of maximum practical length, minimum 1220mm long lengths, including pre-moulded end and external corner pieces.
- .4 Adhesive: waterproof, heavy-bodied resin adhesive, as recommended by base manufacturer for intended application.
- .5 Reducer strip: 38 mm wide x resilient flooring thickness, solid rubber. One edge rounded or tapered to a thin edge.

2.3 FINISHES

- .1 Colours will be chosen from manufacturer's standard range.

3. Execution**3.1 INSPECTION**

- .1 Inspect floors and walls and report locations when specified flatness has not been achieved, do not lay bases until corrections have been made.
- .2 Inspect substrate and ensure surfaces are dry before beginning installation.

3.2 PREPARATION

- .1 Clean the subsurface prior to applying adhesive.
- .2 Ensure that bases are protected from moisture entry.

3.3 INSTALLATION

- .1 Layout base to keep number of joints at minimum.
- .2 Pre-prime surfaces to receive rubber base.
- .3 Install rubber cove base by spreading adhesive on back of base and pressing tightly against wall and floor surfaces.
- .4 Install rubber base on columns, built-in cabinets, cupboard, and inside closets in rooms where rubber base is indicated.
- .5 Fit joints tight and vertical.
- .6 Mitre internal corners. Use pre-moulded corner units for right angle external corners. Use formed straight base material for external corners of other angles.
- .7 Install base on solid backing. Adhere tightly to wall and floor surfaces.
- .8 Scribe and fit to door frames and other projections. Use pre-moulded end pieces at flush door frames and where base ends without butting against other materials.

- .9 Install base straight and level to variation of 1:1000.

3.4 CLEANING

- .1 Continuously, as work proceeds, remove excess adhesive from floor, flooring, base and wall surfaces or other surfaces.
- .2 When adhesive is thoroughly set, scrub lightly using a neutral detergent solution. (Do not flood with water). Rinse clean, dry.
- .3 Seal and finish base in accordance with the manufacturer's instructions and recommendations.
- .4 Follow manufacturer's instructions and recommendations for all cleaning procedures.
- .5 Remove all debris, dirt, tools, equipment and surplus materials from site.

3.5 PROTECTION

- .1 Maintain bases and accessories in good condition

END OF SECTION

1 General**1.01 SECTION INCLUDES**

- .1 Seamless epoxy floor coating with 200mm high covered base as indicated and specified.

1.02 REFERENCES

- .1 ASTM C811-98(2003) - Practise for Surface Preparation of Concrete for Application of Chemical-Resistant Resin Monolithic Surfacing.
- .2 ASTM D570-98(2005) - Water Absorption of Plastics.
- .3 ASTM D638-03 - Tensile Properties of Plastics.
- .4 ASTM D695-02a - Compressive Properties of Rigid Plastics
- .5 ASTM D905-03 - Strength Properties of Adhesive Bonds in Shear by Compression Loading.
- .6 ASTM D1044-05 - Resistance of Transparent Plastics to Surface Abrasion.
- .7 ASTM D 2047 - Static Coefficient of Friction of Polish-Coated Floor Surfaces as Measured by the James Machine.
- .8 CAN/ULC S102-03 - Test for Surface Burning Characteristics of Building Materials and Assemblies.

1.03 ADMINISTRATIVE REQUIREMENTS

- .1 Coordinate with other work having a direct bearing on work of this section
- .2 Prior to commencement of Work on site, convene a pre-installation conference to be attended by the Contractor, coating Subcontractor, manufacturer's technical representative, and Departmental Representative to review:
 - .1 Technical representative's schedule for reviewing Work.
 - .2 Product selections including colours, patterns, samples and mock-ups required, flooring accessories.
 - .3 Procedures and tests for verifying acceptability of substrate for application of products.
 - .4 Environmental requirements for installation
 - .5 Installation procedures
 - .6 Protection of finished Work.

1.04 SUBMITTALS

- .1 Comply with requirements of Section 01 33 00.
- .2 Submit copies of manufacturer's technical data, test reports, installation instructions and general recommendations.
- .3 Submit duplicate 300mm x 300mm colours samples from manufacturer's standard range.

- .4 Submit manufacturer's maintenance data for incorporation into Maintenance Manuals. Include manufacturer's printed data covering the care, cleaning and maintenance of epoxy finishes.

1.05 QUALITY ASSURANCE

- .1 Installer: Company licensed by the manufacturer for installation of their products, specializing in epoxy flooring application, including waterproof membrane, having trained applicators with minimum five (5) years proven experience for projects of similar size and complexity.
- .2 Manufacturer's Technical Representative: epoxy manufacturer shall provide a representative to inspect the surfaces to which the coatings will be applied and confirm with the Departmental Representative, in writing, that substrates are acceptable for application. This representative shall also carry out regular inspections to ensure installation meets manufacturer's requirements. Co-ordinate site inspections with Departmental Representative and provide written reports covering quality of installation and acceptance of completed work or corrections required. Manufacturer's representative shall visit site minimum of two times during installation and once upon completion.
- .3 Mock-up: prepare as 10 square meter mock-up of epoxy floor finish for review by Departmental Representative. Install in location indicated. Reviewed mock-up may be incorporated into final work.

1.06 PRODUCT DELIVERY, STORAGE AND HANDLING

- .1 Deliver all materials undamaged in original containers bearing manufacturer's seals and labels.
- .2 Store materials in a dry protected area, at a temperature of between 16° C and 32° C.

1.07 SITE CONDITIONS

- .1 Ensure all other finishing activities are completed prior to beginning any work.
- .2 Maintain ambient temperature of minimum 18° C and a floor temperature of minimum 16° C for at least seven (7) days prior to beginning installation and for at least 48 hours after completion of work. Maintain maximum relative humidity of 40%.
- .3 Take moisture readings to ensure that substrates are within limits prescribed by manufacturer.
- .4 Comply with requirements of Workplace hazardous Materials Information System (WHMIS) regarding the use, handling, storage and disposal of hazardous materials.
- .5 Provide adequate ventilation in areas of work during and for minimum 24 hours after completion.

2 Products**2.01 MATERIALS**

- .1 Seamless Epoxy: two-component flexible, flame retardant coating. Final floor finish to achieve a 0.6 minimum coefficient of friction, in both wet and dry conditions as tested in accordance with ASTM D2047.
- .2 Provide primers and accessories as required for a complete installation.
- .3 One colour will be chosen by the Departmental Representative from manufacturer's standard range.

3 Execution**3.01 INSPECTION / PREPARATION**

- .1 Inspect areas to receive epoxy flooring in conjunction with manufacturer's technical representative and ensure all substrates are acceptable to receive coatings. Provide written verification to Departmental Representative of acceptance or remedial work required. Do not begin any work until unacceptable conditions have been corrected.
- .2 Verify that concrete floors have cured for a minimum 28 days, are dry to a maximum moisture content of 7% and exhibit negative alkalinity, carbonization or dusting.
- .3 If curing compounds have been used, prepare concrete, including shot blasting if necessary, to remove bond inhibiting material.
- .4 Thoroughly clean all substrates to receive coatings of deleterious materials that would affect proper bonding and performance of floor coating.
- .5 Remove all fittings, fixtures, cover plates, surface hardware and other fastenings. Store items in secure location and re-install, undamaged, upon completion of installation.
- .6 Mask off and protect all adjacent surfaces and materials.
- .7 Ensure floor drains are set in correct elevations to provide flush finish with floor coating.

3.02 INSTALLATION

- .1 Apply primer to prepared substrates in accordance with manufacturer's instructions.
- .2 Prepare cracks in substrate as recommended by coating manufacturer.
- .3 Apply membrane in multiple coats to a dry thickness of between 2mm to 3mm. Provide an anti-slip finish.
- .4 Install 200mm coved base and return into wall.
- .5 Install all components in strict accordance with manufacturer's instructions and recommendations.

- .6 Follow all directions on inspection reports prepared by manufacturer's technical representative.

3.03 PROTECTION

- .1 Protect completed installation from all foot traffic for minimum 24 hours after completion of entire installation.
- .2 Monitor temperature and humidity to ensure conditions are within specified limits.

3.04 CLEANING

- .1 Clean adjacent surfaces and materials of excess floor material as recommended by flooring manufacturer. Ensure cleaners are compatible with surfaces being cleaned.
- .2 Clean flooring upon completion in accordance with manufacturer's instructions.
- .3 Remove all tools and equipment from site upon completion of work

END OF SECTION

1. General

1.1. REFERENCES

1. American Society for Testing and Materials (ASTM):
 1. ASTM A653/A653M04a, Steel Sheet, ZincCoated (Galvanized) or zinc iron alloy coated (galvannealed) by the HotDip Process, Structural (Physical) Quality.
2. Canadian General Standards Board (CGSB):
 1. CAN/CGSB 44.402001, Steel Clothing Locker

1.2. SUBMITTALS

1. Comply with requirements of Section 01 33 00.
2. Supply shop drawings indicating assembly and installation details and method and location of all exposed fastenings, proposed support system for sloping tops, and opening dimensions of recesses.

1.3. DELIVERY, STORAGE AND HANDLING

1. Wrap and protect lockers during transport and handling to prevent damage or marring of finish.
2. Store in a clean, dry location protected from abuse and the environment.

2. Products

2.1. MATERIALS

1. Body: 0.62 mm (0.023") locker bodies, provide concealed ventilation through body or door.
2. Frame: 1.51 mm (0.059") box channel frame, welded to form one piece construction back and sides provided with continuous lock forming, running complete height of locker.
3. Doors: Outer panel 0.91 mm (0.036") steel. Inner panel 0.62 mm (0.023") steel.
4. Hinges: Metal pivot hinges, 5 knuckle, not less than 1.89 mm (0.074") thick, 2 hinges each door up to 1200 mm (48") high, 3 hinges each door over 1200 mm (48") high.
5. Lock Pocket: Chrome plated steel pocket for use with padlock, insert flush with door, number plates inset in finger pull.
6. Locks supplied by user group.
7. Equipment: Three single wall hooks and shelf at 305 mm (12") from top of locker.
8. Numbering: Locker number, tamper and vandal proof.
9. Acceptable Manufacturers:
 1. GSW, Telephone: (403) 2558003 or (780) 4489970
 2. Canadian Locker Company Limited, Telephone: (403) 2212920

3. Duffern IS, Telephone: (403) 2212920
4. Shanahan's Manufacturing Ltd., Telephone: (403) 2792782 or (780) 4895444
5. Interior Steel Equipment Co., Telephone: (403) 2790654

2.2. FINISH

1. Two coats alkyd baked enamel. colours shall be selected by the Consultant from manufacturer's standard range; a maximum of four colours will be selected.

2.3. CONSTRUCTION

1. Types and Sizes: as indicated on drawings.
2. Provide metal trim where lockers abut walls.
3. Doors double panel construction fully welded complete with honeycomb core. Recessed handle box to accept locking device. Provide 2 rubber bumpers. Doors louvred to provide free flow ventilation top and bottom.
4. Factory assembled in single units only, body welded to form one piece construction. Shelf notched into frame.
5. Rivet locker number plates and rubber bumpers to door.
6. Provide 150mm high base formed from same material as lockers. Provide continuous wall edge support and cross support at 610 mm (24") maximum, apart.
7. Provide metal closure and end panels as required.

3. Execution

3.1. INSTALLATION OF LOCKERS

1. Co-ordinate installation of lockers with bases provided by others. Ensure all work on bases is complete prior to beginning any installation.
2. Install in accordance with the manufacturer's written instructions and the contract documents, plumb, true, level and rigid.
3. Align locker units in groups, securing together using pop rivets or other approved vandal resistant fasteners. Exposed nuts/bolt fastening not acceptable.
4. Apply trim and closure pieces, sloped tops and end fillers, to close off all spaces.
5. Fasten lockers securely to bases and walls.
6. Adjust locking mechanism for proper operation.

END OF SECTION

1. General

1.1. SUBMITTALS

- .1 Comply with requirements of Section 01 33 00.
- .2 Submit complete shop drawings for all items specified herein.
- .3 Clearly indicate component construction and installation details.

2. Products

2.1. MANUFACTURED PRODUCTS

- .1 Locker Room Benches:

1800mm long x 240mm wide x 400mm minimum high units with either chrome plated tubular steel pedestals or legs and 45mm nominal thickness solid cedar or maple seat secured to frame. Provide two pedestals or leg units per bench. Finish wood seat with one coat of sealer and one coat of lacquer, as manufactured by one of the following:

GSW Construction Products Company
Shanahan's Manufacturing Limited
List Industries Inc.

3. Execution

3.1. INSTALLATION

- .1 Place locker room benches in locations indicated, secure to concrete floor.

END OF SECTION

1. General

1.1. QUALITY ASSURANCE

- .1 Conform to requirements of CSA, UL, Provincial and Municipal Codes.
- .2 Materials in products of manufacturer regularly engaged in production of refrigeration units and who issues complete catalogue data on such products.

1.2. SUBMITTALS

- .1 Comply with requirements of Section 01 33 00.
- .2 Submit with shop drawings, schematic layouts showing condenser, refrigeration compressors, cooling coils, refrigerant piping and accessories required for complete system.
- .3 Submit complete pipe sizing data.

2. Products

2.1. SECTIONAL WALK-IN BOXES

- .1 Steel sheets for sectional wall panels and ceiling panels shall be 0.701mm thick galvanized steel conforming to ASTM-A446 Standards. Steel sheets, for insulated floor panels shall be 1.587mm thick galvanized steel conforming to ASTM-526/527 standards.
- .2 Sectional panels shall be designed for easy, accurate field assembly incorporating provisions to facilitate disassembly for the purpose of relocation and/or the addition of extra panel sections.
- .3 Panels shall be made in approximately 305mm, 610mm, 915mm and 1220mm widths and be interchangeable for fast, easy assembly. Panels shall consist of an exterior and interior pan precisely formed by metal dies. All vertical and horizontal panels shall be designed so as to form a radiused corner where they combine at a 90 degree angle.

- .4 Panel sections shall be assembled by means of "Cam-Action" locking devices with distances between such devices not exceeding 584mm horizontally and 940mm perpendicularly. Each locking arm shall be placed in one panel so that, by rotating the locking arm, the hook shall engage over a steel rod in the abutting panel and, by Cam-action, draw the panels tightly together. Both the locking arm and the matching steel rod shall be housed in a steel pocket set into each panel section. The locking arm pocket shall be connected, within the panel section, to the steel rod by means of a 51mm wide steel strap so that when the panels are assembled, the straps will form perimeter bands of steel for additional strength from lock to lock connection. The required locking wrench and press caps, for the wrench holes, shall be provided by the Manufacturer.
- .5 Panel section edges shall have a tongue and groove, poured-in place, foamed urethane face to ensure an air-tight, vermin proof joint.
- .6 Insulation for sectional panels, shall be as set forth under section 11400-2.2.1, which will tenaciously bind to the exterior and interior metal pan so as to form a rigid sectional panel without any wood structural backing or reinforcement. Overall thickness of sectional panels shall be 75mm.
- .7 Finish for all exterior and interior metal faces of the sectional panels with the white acrylic enamel.
- .8 Where designated under this section and/or shown on the drawings, filler capping strips, at abutting vertical walls or columns shall be supplied and installed, full height of box, as part of this section. Material and colour to match the panels.
- .10 Screeds shall be supplied and installed, under this section, for the full perimeter. Screeds shall be of the same construction, thickness and finish as for the sectional wall panels. After installation, seal the screeds on the interior and exposed exterior for the full perimeter.
 - .1 Where floors are designated as being insulated, Walk-In Freezer section, such floor panels shall be from 1.587mm thick galvanized steel with insulation and thickness being of the same as for the wall panels. All floor panels shall have curbs for interlocking with the wall panels.
- .11 Entrance doors shall not be less than 864mm wide x 1980mm high, infitting flush mounted type, constructed and finished same as wall panels. Doors hinged as shown on drawing #F1.
 - .1 The door panel shall include a heavy "U" channel, reinforced frame of 2.0mm thick steel around the total perimeter to prevent cracking or twisting as well as to serve for mounting door hardware. Hardware to be attached by means of machine screws.

- .2 Entrance door openings shall have a steel door frame and aluminum sill plate.
 - .3 Entrance doors shall have a 1.6mm thick stainless steel kick-plate, 851mm wide x 1371mm high, attached on the interior face by means of contact cement and metal screws. Entrance door, exterior face, shall have a 2.0mm thick stainless steel bumper channel.
 - .4 Door gaskets shall be accordion type replaceable magnetic gaskets. Gaskets shall be mounted across the top and full height of door (both sides). Door bottom shall have an adjustable rubber sweep gasket. Gaskets shall be resistant to oil, fats, water and sunlight. Gaskets shall be readily replaceable.
 - .5 Anti-sweat heater cables shall be concealed behind the metal edge of the door jamb top and for the full length of sides having sufficient heat capacity to prevent the formation of a condensation and frost build-up. Door frame, under the sill plate, shall have a double-loop of heater cable interwired with the door frame heater cable.
- .12 Each entrance door section shall have a light switch complete with pilot light mounted on the exterior face wired integrally to a common junction box.
- .1 Fluorescent light fixture shall be C & M Mfg. model #TLH-6924 HO-4 complete with fluorescent (metric) lamps having ballasts capable of withstanding a minus thirty degrees Celsius temperature.
 - .2 Fluorescent fixtures shall be ceiling mounted, as part of this section, in the location as shown on drawing #F2. Electrical wiring between each fixture and from fixtures to a common junction box shall be electrical contractor.
- .13 All hardware shall be heavy duty refrigerator type construction having a brushed aluminum finish. Each door shall have a minimum of two (2) self-closing action bearings. Latch shall have cylinder lock interior safety release. All door locks shall be keyed alike.
- .1 A foot operated treadle shall be installed on all cooler entrance doors. A door closing snubber shall be installed on all cooler and freezer section entrance doors to ensure a positive door closing action.
 - .2 All freezer section entrance doors shall have an electrically heated pressure relief port with a two way valve, mounted on the front face. Internal wiring of the pressure relief port to a common junction box shall be part of this section. If a different type of vacuum relief port is installed, elsewhere than in front face of the entrance doors, then the interwiring between the vacuum relief port and a common junction box shall be part of this section.
 - .3 Supply and mount, in each entrance door wall panel, one (1) exterior mounted, dial thermometer calibrated in Celsius degrees. Sensor bulb tubing shall be ceiling mounted.
 - .4 Ceiling supports and suspension rods shall be provided and installed, for all Walk-In Boxes having a ceiling span of 3951mm or greater in any direction as part of this section.

2.2. MATERIALS AND REFRIGERATION SYSTEMS

- .1 The work under this section sets forth the type of equipment, controls, refrigerant piping, fittings and accessories which are required to provide a completely integrated operational refrigeration system.
- .2 Any electrical disconnect switch required at the compressor location will be supplied and installed by the electrical contractor.
- .3 There shall be a separate refrigeration system for each Walk-in Box unit and where remote systems are specified, for standard (catalogue items) equipment and for custom fabricated refrigerated units.
- .4 Condensing units, for Walk-In Refrigerated Boxes, shall be heavy duty, semi-hermetic, air cooled units. Walk-in Cooler Boxes shall use #R-22 refrigerant. Walk-in Freezer Boxes shall use #R-404A refrigerant.
- .5 Condensing units for remote systems designated for Display Cases shall be semi-hermetic, air-cooled type using #R-22 refrigerant.
- .6 All condensing units shall be by Manufacturer whose products are stocked locally and who maintains an inventory of replacement units and repair parts within the geographical location of this project.
- .7 Evaporator Blower Coils for Refrigerated Walk-In Boxes shall be Bohn or Larkin manufacture to size, capacity, and rating as required. Such units shall meet A.R.A. code regulations and be complete with suction lines and heat exchangers.

2.3. REFRIGERATION SYSTEMS - ACCESSORIES

- .1 All refrigeration lines shall be type "L"-A.C.R. copper tubing to the size required. Cast brass or short radiused elbows are not acceptable.
- .2 Medium temperature systems for Refrigerated Walk-In Boxes shall include the following accessories furnished and installed:
 - .1 Thermostat expansion valves shall have replaceable temperature rated elements so as to provide peak performance and close control for each specific application.
 - .2 Penn or Ranco dual pressure control.
 - .3 Contactor - mounted and inter-wired.
 - .4 Water regulating valve.
 - .5 Filter drier unit shall be the moulded solid core type containing a crystalline form of activated aluminum and a molecular sieve for the elimination of water and acid from the system.
 - .6 Sporlan "See All" or "Alco" liquid and moisture indicator complete with a plastic protector cap.
 - .7 Penn or Ranco thermostat control.
 - .8 Vibrasorber connector and mounting pads for the condensers.

- .9 Refrigerant solenoid valve complete with a replaceable moulded coil at the evaporator blower coil.
- .3 Low temperature systems for Refrigerated Walk-In Boxes shall include the following accessories which shall be furnished and installed.
 - .1 Defrost timer and control kit.
 - .2 Penn or Ranco dual pressure control.
 - .3 Water regulating valve.
 - .4 Penn or Ranco Thermostat control.
 - .5 Thermostat expansion valve which shall have a replaceable temperature rated element so as to provide peak performance and close control for each specific application.
 - .6 Filter drier unit shall be the moulded solid core type containing a crystalline form of activated aluminum and a molecular sieve for the elimination of water and acid from the system.
 - .7 Sporlan "See All" or "Alco" liquid and moisture indicator complete with a plastic protection cap.
 - .8 Refrigerant solenoid valve complete with a moulded coil at the evaporator blower coil.
 - .9 Sporlan or Alco crank-case pressure regulator.
 - .10 Contactor - mounted and inter-wired.
 - .11 Accumulator control.
 - .12 Evaporator blower coil drain line heater cable shall be the type which internally controls its own heat output along the entire length.
 - .13 Vibrasorber connector and isolation mounting pads at the condenser.
- .4 Medium temperature systems for remote Cold Pan Unit for Salad Bar shall include the following accessories which shall be furnished and installed".
 - .1 Pressure control complete with power cord.
 - .2 Starters.
 - .3 Thermostat expansion valve which shall have replaceable temperature rated element so as to provide peak performance and close control for each specific installation.
 - .4 Each evaporator coil and cold pan refrigeration coil for a Display Case shall be controlled by a "White Roger" thermostat model #201-20 and a Sporlan solenoid valve model #A-3F-1.
 - .5 Filter drier unit shall be the moulded solid core type containing a crystalline form of activated aluminum and molecular sieve for the elimination of water and acid from the system.
 - .6 Sporlan "See All" or "Alco" liquid and moisture indicator complete with a plastic protection cap.
 - .7 Refrigerant solenoid valve complete with a replaceable moulded coil at the evaporator blower coil.
 - .8 Vibrasorber mounting pads for the condenser unit.
- .5 Air cooled refrigerant condenser system will be packaged, factory assembled, prewired unit, suitable for outdoor use consisting of casing, condensing coil and fans, controls, liquid accumulator, screens.

- .1 Cabinet construct of heavy gauge galvanized steel with baked enamel finish, easily removed access doors or panels with quick fasteners.
- .2 Condenser coils 13mm diameter O.D. seamless copper tubing in a staggered tube pattern with mechanically bonded aluminum fins.
- .3 Fans: propeller, draw-thru, direct drive, statically and dynamically balanced. Provide guards as required. Bearings shall be roller or ball type with grease fittings extended to outside of casing.
- .4 Motors: Permanently lubricated ball bearing motors with built-in current and overload protection.
- .5 Provide factory wired and mounted control panel containing fan motor contactors and fan cycling thermostats.
- .6 Provide controls to permit operation down to -37°C ambient temperature at maximum load.
- .7 Two fans adjacent control panel shall be complete with disconnect switch and operate continuous.
- .8 Two fans at the rear of unit shall operate above 0°C.

2.4. JACKETING SYSTEM

- .1 PVC jacketing system for insulated refrigeration lines, valves and freezer insulated drain line to have the following characteristics:
 - .1 Temperature limits PVC -18°C to 66°C
 - .2 Flame spread rating 25 or less
 - .3 Smoke developed 50 or less
 - .4 Grade Weatherable
 - .5 Colour White
 - .6 Finish Gloss
- .2 Fitting covers to be pre-formed in shape as required to fit elbows, tees, valves, flanges, reducers, endcaps, and other fittings and piping accessories used on the project. Fitting covers to be complete with a "Hi-Lo" temperature fibreglass insulation insert.
- .3 Jacketing for straight run piping to be factory cut and curled for snug and easy application to insulated piping. Thickness to be 20 mils.
- .4 Jacketing for equipment to be in roll form, thickness to be 20 mils.
- .5 Solvent welding adhesive to form permanent chemical bond between PVC members.
- .6 Annular serrated stainless steel thumb tacks, white in colour, for use on pipes without vapour barrier.
- .7 PVC tape to be flexible 10 mil thickness, coated with specially formulated adhesive.
- .8 Manufacturer's representative to provide on site instruction to the contractor in

the proper method of application of the PVC jacketing system.

- .9 Acceptable products:
PVC jacketing system: Zeston 2000

3. Execution

3.1. INSTALLATION B SECTIONAL WALK-IN BOXES

- .1 All sectional fabricated panels shall be erected in the location as shown on drawing #F1, in strict accordance with the Manufacturer's directions.
- .2 Panels which show colour changes, hair-line paint cracking and/or separation between the metal pans and the insulation shall be repaired or replaced within sixty (60) days after receiving a written request within a five (5) year warranty period without any cost to the Departmental Representative.
- .3 Damaged and/or faulty panels shall not be erected.

3.2. INSTALLATION B REFRIGERATION SYSTEMS

- .1 All refrigeration lines shall be furnished and installed in accordance with the C.S.A.-#B-52-M-1977 code regulations.
- .2 Connections shall be brazed with an alloy which meets local codes and regulations. Nitrogen shall be used to purge the lines during the brazing process.
- .3 The system shall be triple evacuated to 100 microns breaking the vacuum with clean dry refrigerant. The dehydrator shall be equal to or superior to the recommended selection designated on the Sporlan Chart #4-0-10 or Alco bulletin #14-21-T.
- .4 Provide a refrigerant metering device sized to meet the requirements of the particular system.
- .5 Where service lines, to accommodate electrical wiring conduits, refrigeration piping, water and drain penetrate through sectional box panels, such holes shall be filled with "Fomofil" or "Foamfix" sealant for the full depth. Holes on exposed faces of sectional panels shall be covered with 1.0mm thick stainless steel escutcheon plates.

- .6 All refrigeration liquid and suction lines which penetrate sectional panel ceilings and/or wall panels, as well as such lines between the evaporator coil and the condensing unit (full length), shall be insulated with 9mm wall thickness "Zip-Cote" insulation conforming to N.F.P.A.-101 and N.F.P.A.-255 code standards. In addition to or in lieu of the foregoing where refrigerant lines, suction and/or liquid, penetrate fire-separation walls, such lines shall be insulated with a fire-rated material of a type approved by the governing authority.
- .7 Heater cable shall be wrapped around the drain line from the evaporator coil (Freezer Sections) for a distance of 305mm beyond the sectional wall panel. Heater cable shall be wrapped around the drain line ten (10) turns per metre of length for the full length of the drain line. After the heater cable has been wrapped around the drain, cover completely with an externally mounted insulation. Final wiring connection of the heater cable at the evaporator coil shall be by electrical contractor.
- .8 All fittings, controls, valves and accessories shall be mounted and connected to a focal point ready for final service connections by mechanical and electrical contractors.

3.3. EXECUTION

- .1 Supply initial charge of refrigerant and oil for each refrigeration system. Losses of oil or refrigerant prior to acceptance of equipment or due to defects covered under guarantee shall be replaced. Supply to the Client, one complete charge of lubricating oil in addition to that placed in the system.
- .2 Charge the system with refrigerant and test entire system for leaks after completion of installation. Repair leaks, put system into operation, and test equipment performance.
- .3 Inspect and test for refrigerant leaks every 3 months during first year of operation.

3.4. ADJUSTING CONTROLS

- .1 The temperature controls, within the sectional Walk-In Boxes, shall be calibrated to maintain the following operating temperatures.

Item #87 - Cooler Refrigeration - 3.3 degrees C.
Item #89 - Freezer Refrigeration - minus 21 degrees C.
- .2 The above temperatures shall be measured as follows:
 - .1 Sectional Walk-In Boxes in the return air flow to the evaporator coil.

END OF SECTION

PRELIMINARY
NOT FOR CONSTRUCTION



PP-11944
2019-06-07

Run	Time (min)	Peak	Area	Height	Conc. (ppm)
1	1.21	CH ₃ OH	1.00	1.00	1.00
2	1.21	CH ₃ OH	1.00	1.00	1.00
3	1.21	CH ₃ OH	1.00	1.00	1.00
4	1.21	CH ₃ OH	1.00	1.00	1.00
5	1.21	CH ₃ OH	1.00	1.00	1.00

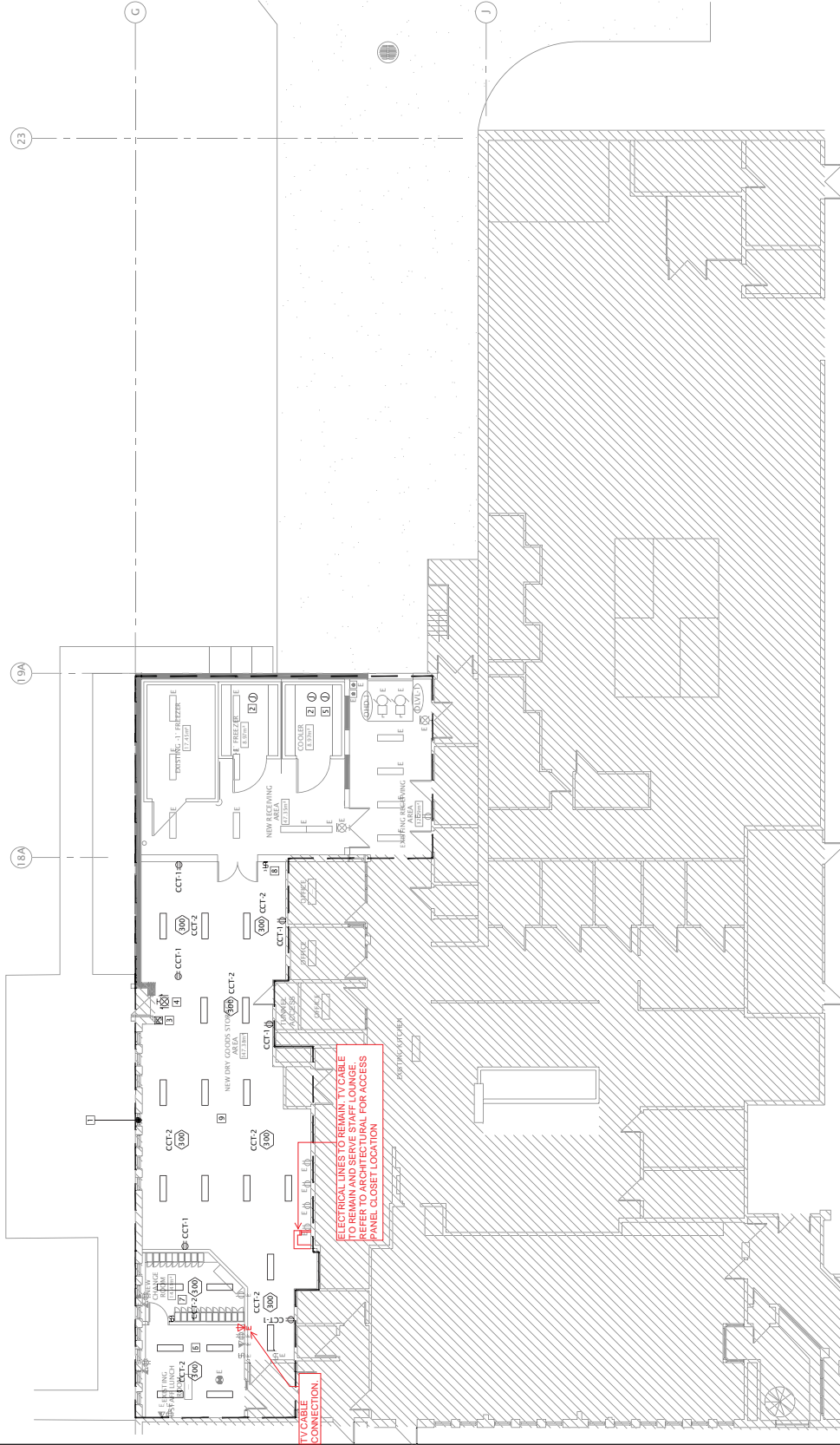
**CORRECTIONAL
SERVICES
CANADA**

Project #156/Vieux du projet
EDMONTON, ALBERTA
21611 MERIDIAN STREET
EDMONTON INSTITUTION
KITCHEN
REDEVELOPMENT

Approved by/Approved par	
DH	
Designed by/Conçue par	
RA	
Drawn by/Tracé par	
RA	
Project Manager/Administrateur de Projets	JAMES PATTERSON
Project Architect and Engineering Supervisor/Architecte et Directeur d'Ingénierie	PAUL GOSWAMI
Client/Client	CORRECTIONAL SERVICES CANADA

ELECTRICAL POWER AND LIGHTING PLAN

Project No./No. du projet R.077204.001	Sheet/Fauille E3	Revision no./ La Revision no. 1
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GENERAL NOTES:

- A. FOR CONNECTION OF NEW DEVICES TO EXISTING PANEL, CONTRACTOR TO CONFIRM LOADS AND CIRCUIT AVAILABILITY PRIOR TO CONNECTION. PROVIDE NEW CIRCUIT BREAKERS IN CORRESPONDING PANEL WHERE REQUIRED. CONTRACTOR TO PROVIDE UPDATED PANEL SCHEDULE UPON COMPLETION.

REFERENCES AND NOTES

- 1 AREA OF CONSTRUCTION
- 2 RECONNECT AT NEW LOCATION IF EXISTING EQUIPMENT IS TO BE RELOCATED. IF NEW EQUIPMENT IS TO BE ADDED, OR TO REPLACE EXISTING EQUIPMENT, MEET ALL CODE REQUIREMENTS PRIOR TO CONNECTION AND SUPPLY. INSTALL NEW BREAKERS AND WIRING AS REQUIRED.
- 3 RECONNECT PULLSTATION TO NEAREST EXISTING FIRE ALARM SIGNALING LOOP.
- 4 NEW EXIT SIGN IS LUMINANCE'S SERIES RUNNING MAN TYPE OR APPROVED ALIKE
- 5 SUPPLY AND INSTALL SELF LIMITING HEAT TAP ON CONDENSATE LINES IN FREEZER AND COOLER. PROVIDE 20A TP BREAKER IN EXISTING PANEL FOR CONNECTION TO EXISTING ELECTRICAL SERVICE. MECHANICAL WORK FOR COMPLETE REQUIREMENTS. FINISH AND INSTALL ALL NECESSARY COMPONENTS TO MAKE A COMPLETE AND FUNCTIONAL EXISTING MECHANICAL WORKING SYSTEM FOR EXACT LOCATION OF PIPING.

REFERENCES AND NOTES CONT.

- 6 NEW FIXTURES CONNECTED TO EXISTING LIGHT SWITCH.
- 7 NEW FIXTURES CONNECTED TO NEW LIGHT SWITCH WHERE SHOWN.
- 8 RELOCATED 3 WAY SWITCH.
- 9 NEW FIXTURES TO BE CONNECTED TO EXISTING/RELOCATED 3WAY LIGHT SWITCHES WHERE APPLICABLE.

1 POWER AND LIGHTING PLAN