ISSUED FOR PERMIT
JANUARY 18, 2020

INK BLOCK EXTERIOR COOLER
348 HARRISON AVE
BOSTON, MA 02118

Project Team:

Architect, Fire Protection, Plumbing, Mechanical and Electrical Engineer:

JACOBS
120 St. James Ave, 8th Floor
Boston, MA 02116
P 617.451.6100
F 617.451.7104
W www.jacobs.com

Project Owner:

WHOLE FOODS
North Atlantic Region
240 Forest St.
Marlborough, MA 01752
P 617.482.3500
F 617.482.3619
W www.wholefoodsmarket.com

General Contractor:

cmb
Construction Management & Builders, Inc.
75 Sylvan Street, Building C
Danvers, MA 01923
P 781.246.9400
F 781.246.9421
W www.cmbinc.com

Commissioning Consultant:

e²s
Energy Efficiency Services, LLC
P 603.736.7939
F 603.996.9943
W www.e2sllc.net

RESPONSIBILITY MATRIX

ITEM	FURNISHED BY:	SET / INSTALLED BY:	CONNECTION BY:
WALK-IN COOLERS AND FREEZERS	WHOLE FOODS MARKET	WFM COOLER BOX CONTRACTOR	WFM COOLER BOX CONTRACTOR
REFRIGERATION RACKS & EQUIPMENT	WHOLE FOODS MARKET	WFM REFRIGERATION CONTRACTOR	WFM REFRIGERATION CONTRACTOR
LIGHT FIXTURES	WHOLE FOODS MARKET	GENERAL CONTRACTOR	ELECTRICAL CONTRACTOR
STORE EQUIPMENT & FIXTURES	WHOLE FOODS MARKET	GENERAL CONTRACTOR	ELECTRICAL/ PLUMBING CONTRACTOR
DOORS & FRAMES	REFER TO SCHEDULE	REFER TO SCHEDULE	-

ARCHITECTURAL ABBREVIATIONS

&	AND	INSUL.	INSULATION, INSULATING, INSULATE(D)
@	AT	INT.	INTERIOR
ABV.	ABOVE		
A.T.C.	ACOUSTICAL TILE CEILING	JT.	JOINT
ADD'L.	ADDITIONAL	JST.	JOIST
ADJ.	ADJUSTABLE, ADJACENT	LAM.	LAMINATE(D)
A.F.F.	ABOVE FINISH FLOOR	LAV.	LAVATORY
ALT.	ALTERNATE	L.L.	LEASE LINE
ALUM.	ALUMINUM		
APPROX.	APPROXIMATE(LY)	MAS.	MASONRY
		MECH.	MECHANICAL
BD.	BOARD	MET.	METAL
BLDG.	BUILDING	MIN.	MINIMUM
BOT.	BOTTOM	MISC.	MISCELLANEOUS
		M.O.	MASONRY OPENING
C.G.	CORNER GUARD	MTD.	MOUNTED
C.J.	CONTROL JOINT	MTG.	MOUNTING, MEETING
CL.	CENTERLINE		
CLG.	CEILING	(N)	NEW
CMU	CONCRETE MASONRY UNIT	N.I.C.	NOT IN CONTRACT
CNTR.	COUNTER	NO., OR #	NUMBER
COL.	COLUMN	N.T.S.	NOT TO SCALE
CONC.	CONCRETE		
CONST.	CONSTRUCTION	O.C.	ON CENTER
CONTR.	CONTRACTOR	O.D.	OUTSIDE DIAMETER, OUTSIDE DIMENSION
COORD.	COORDINATE		
CORR.	CORRIDOR	O.F.C.I.	OWNER FURNISHED CONTRACTOR INSTALLED
C.T.	CERAMIC TILE		
DEPT.	DEPARTMENT	PERIM.	PERIMETER
DET.	DETAIL	PLUMB.	PLUMBING
D.F.	DRINKING FOUNTAIN	PLY.	PLYWOOD
DIA.	DIAMETER OR ROUND	P.T.	PRESSURE TREATED
DIFF.	DIFFUSER	PTD.	PAINTED
DIM.	DIMENSION		
DISP.	DISPENSER	QT.	QUARRY TILE
DWG(S).	DRAWING(S)		
		R.D.	ROOF DRAIN
(E)	EXISTING	REF.	REFER, REFERENCE
EA.	EACH	REINF.	REINFORCED
EL.	ELEVATION	REQ'D.	REQUIRED
ELEC.	ELECTRICAL	R.O.	ROUGH OPENING
EMER.	EMERGENCY	R.T.U.	ROOF TOP UNIT
EQ.	EQUAL		
EQUIP.	EQUIPMENT	SCH.	SCHEDULE
EXIST.	EXISTING	SECT.	SECTION
EXH.	EXHAUST	SERV.	SERVICE
EXT.	EXTERIOR	S.F.	SQUARE FEET
		SPEC.(S)	SPECIFICATION(S)
F.D.	FLOOR DRAIN, FIRE DAMPER	SQ.	SQUARE
F.F.	FINISH FLOOR	STL.	STEEL
F.G.	FINISH GRADE	S.S.	STAINLESS STEEL, SERVICE SINK
FIN.FL.F.F.	FINISH FLOOR	STOR.	STORAGE
FIXT.	FIXTURE	STRUCT.	STRUCTURAL
F.R.P.	FIBERGLASS REINFORCED PLASTIC	SUSP.	SUSPENDED(S)
F.R.	FIRE RETARDANT		
FT.	FOOT, FEET	TEMP.	TEMPERED
FURN.	FURNISHED(S)	T.O.S.	TOP OF STEEL
		T.O.W.	TOP OF WALL
GA.	GAUGE	TRANSF.	TRANSFORMER
GALV.	GALVANIZED	TYP.	TYPICAL
G.B.	GRAB BAR		
G.C.	GENERAL CONTRACTOR	U.C.	UNDERCUT
GEN.	GENERAL	U.O.N.	UNLESS OTHERWISE NOTED
G.W.B.	GYPSUM WALLBOARD		
		V.C.T.	VINYL COMPOSITION TILE
HDWE.	HARDWARE	VERT.	VERTICAL
H.M.	HOLLOW METAL	VEST.	VESTIBULE
HORIZ.	HORIZONTAL		
H.P.	HIGH POINT, HORIZ. POWER	WD.	WOOD
HT.	HEIGHT	W.M.	WIRE MESH
		W.P.	WORK POINT
IN.	INCH, INCHES	W.W.F.	WELDED WIRE FABRIC
INST.	INSTALLED	W.W.M.	WELDED WIRE MESH

SYMBOLS

- 2 / A-01 — DETAIL NUMBER / SHEET ON WHICH DETAIL IS DRAWN
- 3 / A-11 — SECTION INDICATOR / SHEET ON WHICH SECTION IS DRAWN
- A / B / C / D / A-6 — INTERIOR ELEVATION NUMBER / SHEET ON WHICH INTERIOR ELEVATION IS LOCATED
- 5 / X'-6" — PARTITION TYPE / PARTITION HEIGHT
- 01 — DOOR NUMBER
- MCAT. COOLER — ROOM NAME
- 10 — ROOM NUMBER
- 11 — EQUIPMENT NUMBER (SEE EQUIPMENT BOOK)
- WORK AREA

SCOPE OF WORK SUMMARY

WHOLE FOODS MARKET IS AN EXISTING TENANT WITHIN A MIXED-USE DEVELOPMENT. THE WHOLE FOODS MARKET BOX (2NN) ADDRESS IS 348 HARRISON AVE., BOSTON, MA.

THESE DOCUMENTS DEFINE THE WHOLE FOODS MARKET PROPOSED ADDITION OF AN 800 S.F. COOLER BUILDING TO THE EXISTING DEVELOPMENT, INCLUDING ENABLING WORK TO EXISTING ADJACENT CONDITIONS, IN ORDER TO ACCOMMODATE THE PROPOSED WORK.

THESE DOCUMENTS ALSO INCLUDE MODIFICATIONS TO THE EXISTING FIRE PROTECTION, PLUMBING, AND ELECTRICAL SYSTEMS IN SUPPORT OF THE PROPOSED WORK.

FIRE SPRINKLER SYSTEM

THE EXISTING BUILDING HAS A COMPLETE FIRE SPRINKLER SYSTEM INSTALLED. THE EXISTING SPRINKLER SYSTEM WILL BE MODIFIED TO ACCOMMODATE AND EXTEND INTO THE PROPOSED STORAGE COOLER ADDITION. THE EXISTING SPRINKLER SYSTEM MODIFICATION WILL BE DESIGNED BY THE FIRE PROTECTION SUBCONTRACTOR'S ENGINEER, LICENSED IN THE STATE OF MASSACHUSETTS. FULLY ENGINEERED, STAMPED SHOP DRAWINGS INCLUDING HYDRAULIC CALCULATIONS WILL BE SUBMITTED FOR APPROVAL PRIOR TO COMMENCEMENT OF FIRE SPRINKLER SYSTEM MODIFICATIONS.

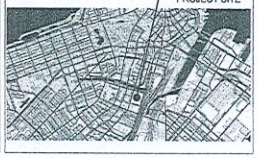
MATERIALS

STEEL; CONCRETE; 4" BRICK VENEER ON CONCRETE BLOCK BACKUP; CONCRETE BLOCK; BRICK; MARBLE; CERAMIC TILE; GLASS; FINISH WOOD; PLYWOOD; CONT. BLOCKING; INTERRUPTED BLOCKING; GYPSUM BOARD; CEILING TILE OR BITUMINOUS PAVING; RIGID INSULATION; BATT INSULATION; COMPACTED GRAVEL; EARTH

GENERAL NOTES

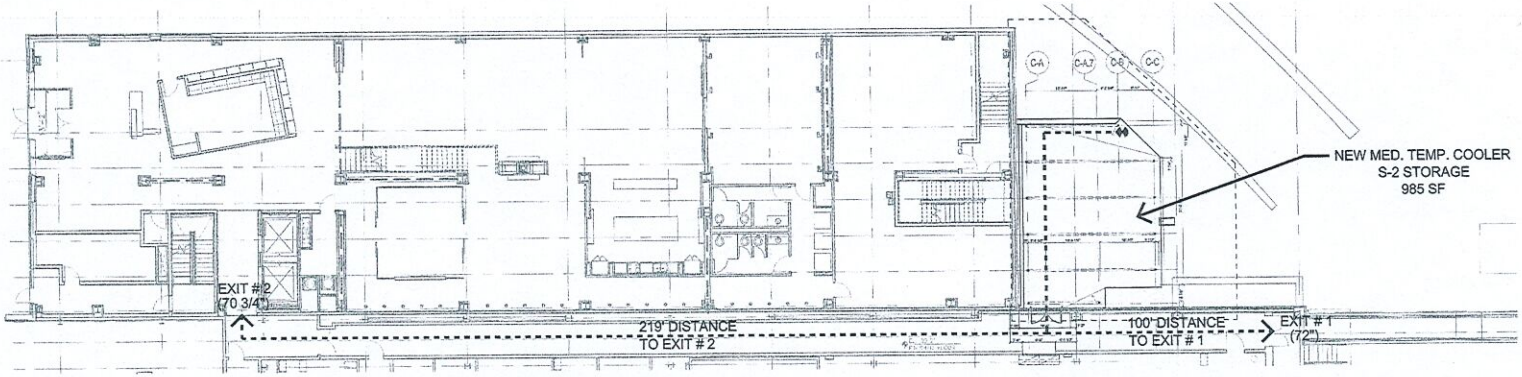
PRIOR TO COMMENCEMENT OF WORK OR FABRICATION OF COMPONENTS, CONTRACTOR SHALL INVESTIGATE AND VERIFY IN THE FIELD ALL CONDITIONS, DIMENSIONS, AND ELEVATIONS OF THE EXISTING CONSTRUCTION. ALL DIMENSIONS, ELEVATIONS, AND CONDITIONS SHOWN ON THE DRAWINGS (PLANS AND ELEVATIONS) AND THOSE INDICATED ON THE DRAWINGS SHALL BE IMMEDIATELY MADE KNOWN TO THE ARCHITECT IN WRITING. THE USE OF (V.I.F.) OR (H.I.C.) OR OTHER SIMILAR NOTES AT CERTAIN LOCATIONS ON THE DRAWINGS DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR VERIFYING ALL CONDITIONS AS DESCRIBED ABOVE.

VICINITY MAP



PROJECT NUMBER L1009417
INK BLOCK EXTERIOR COOLER

	SHEET NUMBER	DRAWING TITLE	ISSUED FOR PRICING 09/05/19					
ARCH.	G-000	COVERSHEET	●					
	G-001	CODE ANALYSIS AND EGRESS PLAN						
	D-100	DEMOLITION PLAN AND ELEVATIONS	●					
	A-100	FLOOR PLAN, REFLECTED CEILING PLAN AND ROOF PLAN	●					
	A-400	SECTIONS AND ELEVATIONS	●					
	A-800	PLAN DETAILS	●					
	A-810	SECTION DETAILS	●					
STRUC.	S-100	FLOOR PLAN, REFLECTED CEILING PLAN & ROOF PLAN	●					
F.P.	FP-100	FIRE PROTECTION FLOOR PLAN NOTES & DETAIL	●					
PLUMB.	P-1	COOLER BOX PLUMBING PLAN	●					
ELECT.	E-1	COOLER GENERAL NOTES, LEGEND, LIGHTING, & POWER PLAN	●					
	E-2	PANEL & LIGHTING SCHEDULES & RACK D EQUIPMENT	●					



1 EGRESS PLAN
SCALE: 1/8" = 1'-0"

JACOBS
JACOBS CONSULTANTS, INC.
100 St. James Ave, 5th Floor
Boston, MA 02116
P 617.491.6450
F 617.491.7104
W www.jacobs.com

Consultants:

Seals:

General Notes:

(Major Code Considerations Narrative – 2020) Whole Foods Cooler Addition Ink Block Development – Boston, MA

1.0 Introduction

JACOBS NUSHKA (JN) prepared the code narrative regarding the proposed Whole Foods cooler addition at the Ink Block Development located in Boston, Massachusetts.

The Ink Block Development is a four building mixed occupancy complex. The existing Whole Foods building at 349 Harrison Ave is a 1-story above grade (plus basement) building of Type IA construction with a 3-hour horizontal "deck". A 4-story building of Type VA construction is constructed above the 3-hour deck. The building is fully sprinklered and separated from the adjacent high-rise 360 Harrison Ave building by a fire-rated 2-hour fire wall assembly.

The Whole Foods building includes Group M, Mercantile (Retail) and Group S-1/S-2, Group R-2, Residential (apartments and condos), Group A-2, Assembly (cafe), and Group S-2, Storage (parking garage).

The information in this report is based on the following:

- Site visit on September 17, 2019, attended by Ted Doe and Tanya Gomes of Jensen Hughes and Stefan Chaires of Jacobs
- Review of parking set project drawings dated August 23, 2019
- Review of original building code conformance drawings dated April 22, 2015
- Various project related project discussions with Jacobs

Please note that the following document reflects the major design requirements that implicate fire protection, life safety, and accessibility only. Specific items such as structural, plumbing, electrical, mechanical, etc. and matters pertaining to energy conservation, food handling and zoning code compliance are not intended to be addressed by this narrative in detail. Throughout the report, code reference sections are provided in parenthesis to facilitate review of the provisions in detail.

2.0 Project Description

The Project includes the addition of an approximately 1,000 sf single story Group S-2 cooler on the northeast side of the Whole Foods building. The cooler will be constructed as an addition to the Whole Foods building at 349 Harrison Ave which is of Type IA, protected noncombustible construction.

The existing building areas will be predominantly maintained and occupied during construction, as feasible.

3.0 Executive Summary

The cooler addition is assumed to be of Type IA construction and will require a 3-hour rated fire wall construction separating the cooler from the residential high-rise building. The sprinkler and fire alarm system from the Whole Foods building must be extended into the addition.

(Major Code Considerations Narrative – 2020) Whole Foods Cooler Addition Ink Block Development – Boston, MA

4.0 Applicable Codes

The following table summarizes the major codes applicable to the Project:

Table 1 - Applicable Codes

Code Type	Applicable Code
Building	Massachusetts State Building Code (780 CMR) 9th Edition (amended version of the 2015 International Building Code (IBC))
	780 CMR Chapter 34, Existing Structures which adopts amends the 2015 International Existing Building Code (IEBC) are designated as the Massachusetts Existing Building Code (MA IEBC).
Fire Prevention	527 CMR – Massachusetts Comprehensive Fire Safety Code, which is an amended version of the 2015 NFPA 1.
Accessibility	521 CMR – Massachusetts Architectural Access Board Regulations
	2010 Americans with Disabilities Act Standards for Accessible Design (ADA)
Electrical	Massachusetts Electrical Code: 527 CMR 12.00. The Massachusetts Electrical Code is an amended version of the 2017 National Electrical Code (NFPA 70).
Elevators	524 CMR – Massachusetts Elevator Regulations (based on the 2015 ANSI/ASME A17.1)
Mechanical	2015 International Mechanical Code (IMC) as adopted and amended by 780 CMR 28
Plumbing	248 CMR – Massachusetts Fuel Gas and Plumbing Code
Energy	Energy – 2015 International Energy Conservation Code (IECC) and ASHRAE 90.1-2016 as amended by 780 CMR 11th edition Chapter 13 and Appendix AA – Stretch Energy Code (though amended and approved March 13, 2019 and be actively effective in 2020, with a date to be determined).
	(NOTE: Appendix AA – Stretch Energy Code SAA102 New Buildings, SAA103.1 R-Use Buildings, SAA103.2 Large Area and High Energy Use Buildings and SAA103.3 Other New Buildings claim:
	All buildings over 100,000 sq. ft. and new requirements, laboratory and conditioned warehouses over 40,000 sq. ft. shall comply with 780 CMR 513 and shall demonstrate energy use per square foot at least 10% below the energy requirements of ANSI/ASHRAE/IESNA 90.1 Appendix G Performance Rating Method on either a site or source energy basis. The additional efficiency percentage options referred in accordance with CASE 1 shall be included in calculating the baseline building performance value (780 CMR SAA103.2).
	Other new buildings (not covered in SAA103.1 and SAA103.2 shall comply with 780 CMR 513.00 Energy Efficiency as amended or Chapter 11 of 780 CMR §51.00 as amended based on the use and occupancy of the building.)
Other	National Fire Protection Association (NFPA) Standards, as referenced by the 780 CMR and 527 CMR, including:
	- NFPA 10, 2013 Edition, Standard for Portable Fire Extinguishers
	- NFPA 13, 2013 Edition, Standard for the Installation of Sprinkler Systems

[1] The 10th edition of 780 CMR is currently in development without a set date for adoption. JN will continue to monitor the development process and update the project team as updates become available.
[2] Mandatory items is currently in the process of adopting proposed amendments to 521 CMR. JN will continue to monitor the proposed changes and notify the project team if changes are adopted.

(Major Code Considerations Narrative – 2020) Whole Foods Cooler Addition Ink Block Development – Boston, MA

- Inadequate lighting and ventilation.

Where full compliance for means of egress, lighting and ventilation are not practical, the Building Official may accept compliance alternatives, engineering, or other evaluations that adequately address the deficiency.

It is our understanding that there are no outstanding Abatement Orders or Notices of Violation issued against the 349 Harrison Ave Whole Foods building. The existing building's means of egress, lighting, and ventilation systems are not "dangerous or hazardous to life and limb" and are (have been) acceptable to the Building Official as existing conditions.

Unless otherwise required by the Code (as stipulated below), all altered alterations to the building's existing energy conservation, structural, means of egress, fire protection, and/or lighting/ventilation systems are required to be made in conformance with the applicable new construction requirements of the Code.

5.0 Workforce Method Project Classification

780 CMR 34 offers multiple compliance methods to evaluate the code triggers for the project. Based on the scope of work to the existing building, the work area method has been selected as the compliance method. The following definitions apply to the work area method.

5.1 DEFINITIONS

- Repairs – The reconstruction or renewal of any part of an existing building for the purpose of its maintenance or to correct damage (MA IEBC 202). Repairs include the patching or restoration or replacement of damaged materials, elements, equipment, or fixtures for the purpose of maintaining such components in good or sound condition with respect to existing lawful or performance requirements. Repairs must comply with the provisions of MA IEBC Chapter 4 (MA IEBC 502.1).
- Alterations – Alteration is defined as any construction or renovation to an existing structure other than a repair or an addition. Alterations are classified as Level 1, Level 2 and Level 3 as follows (MA IEBC 202).
  - Level 1 – The removal and replacement or the covering of existing materials, elements, equipment, or fixtures using new materials, elements, equipment, or fixtures that serve the same purpose. Level 1 alterations must comply with the provisions of MA IEBC Chapter 7 (MA IEBC 701).
  - Level 2 – The reconfiguration of space, the addition or elimination of any door or window, or the reconfiguration or extension of any system, or the installation of any additional equipment (MA IEBC 604.1). Level 2 alterations must comply with the provisions of MA IEBC Chapter 7 and Chapter 8 (MA IEBC 804). Level 2 alterations apply where the work area is 50 percent or less of the building area. If the work area exceeds 50 percent of the building area, a Level 3 alteration classification is triggered.
  - Level 3 – Alteration where the work area exceeds 50% of the building area.
- Change of Occupancy – A change in the use of the building or a portion of a building. A change of occupancy shall include any change of occupancy classification, any change from one group to another group within an occupancy classification or any change in use within a group for a specific occupancy classification.
- Work Area – That portion or portions of a building consisting of all reconfigured spaces as indicated on the construction documents. Work area excludes other portions of the building where incidental work related by the mechanical work must be performed and portions of the building where work not initially intended by the owner is specifically required by this code (MA IEBC 202).

(NOTE: Not all work includes reconfiguration of space. For example, the addition or elimination of any door or window, the reconfiguration or extension of any system, or the installation of any additional equipment do not in and of themselves create a Work Area.)

5.2 PROJECT WORK

The Project includes the addition of an approximately 1,000 sf single story cooler on the northeast side of the Whole Foods building with necessary modifications to the existing building to provide electrical and fire protection systems to the addition. The work area within the existing building areas is not expected to exceed 50% of the total existing building area.

The proposed work is classified as Addition and Level 2 Alterations.

(Major Code Considerations Narrative – 2020) Whole Foods Cooler Addition Ink Block Development – Boston, MA

- NFPA 72, 2013 Edition, National Fire Alarm and Signaling Code

6.0 Code Compliance Approach

The following information describes the specifics associated with the code compliance evaluation performed. The evaluation considers the requirements of the 780 CMR, 527 CMR, and various referenced codes and standards.

6.1 ADDITION

The addition must comply with the new construction provisions of 780 CMR.

6.2 CODE APPLICATION TO THE EXISTING BUILDING

780 CMR §34.00 adopts the MA IEBC. MA IEBC § 804.2.1 requires that any proposed work regulated by 780 CMR §34.00 be investigated and evaluated in a manner sufficient detail to ascertain the effects of the proposed work on at least three systems: structural, means of egress fire protection, energy conservation, lighting, hazardous materials, accessibility and ventilation for the space under consideration and, where necessary, the entire building or structure and its foundation if impacted by the proposed work. This report serves to address this requirement, including identifying requirements for certain systems that the design team must evaluate.

The provisions of 780 CMR 34.00 apply to the repair, alteration, change of occupancy, addition and relocation of all existing buildings, regardless of occupancy, subject to the following criteria (780 CMR 101.2, MA IUBC 101.2). The purpose of the code is to establish the minimum requirements to safeguard the public health, safety and general welfare through structural strength, means of egress facilities, stability, sanitation, adequate light and ventilation, energy conservation, and safety to life and property from fire and other hazards attributed to the built environment, and to provide safety to fire fighters and emergency responders during emergency operations (780 CMR 101.3).

- Buildings Previously Occupied – The legal occupancy of any structure existing on the date of adoption of the code (780 CMR) shall be permitted to continue, without change, except as is specifically covered in 780 CMR 34.00 or as is deemed necessary by the Building Official for the general safety and welfare of the occupants and the public (780 CMR 102.6).
- Laws in Effect – Unless specifically provided otherwise in this code (780 CMR), and except for the provisions of 780 CMR, any existing building or structure shall meet and shall be presumed to meet the provisions of the applicable laws, codes, rules or regulations, bylaws or ordinances in effect at the time such building or structure was constructed or altered and shall be allowed to continue to be occupied pursuant to its use and occupancy, provided that the building or structure shall be maintained by the Owner in accordance with 780 CMR (780 CMR 103.5.1).
- Laws Stringent – In cases where the provisions of the code (780 CMR) are less stringent than the applicable codes, rules or regulations, bylaws or ordinances at the time of such construction or substantial alterations, the applicable provisions of 780 CMR shall apply, provided such application can be reasonably demonstrated to not result in danger to the public, as determined by the Building Official (780 CMR 103.5.2).
- Maintenance – All buildings and structures and all parts thereof, both existing and new, and all systems and equipment therein which are regulated by this code (780 CMR) shall be maintained in a safe, operable and sanitary condition. All service equipment, means of egress, devices and safeguards within any building or structure, or which were required by a previous statute in a building or structure, when erected, altered or repaired, shall be maintained in good working order (780 CMR 102.5).
- Owner Responsibility – The Owner shall be responsible for compliance with the provisions of this Code (780 CMR 102.4.1).

5.2.1 Existing Means of Egress, Lighting and Ventilation

Means of egress in existing buildings, whether or not undergoing repairs, alterations, changes of occupancy, are subject to the provisions of 780 CMR 102.6.4, which states:

Regardless of work performed, the Building Official may rate the following condition in writing as a violation and order the abatement within a time frame deemed necessary by the Building Official to make the building environment safe, healthy or otherwise comply with 780 CMR (780 CMR 102.6.4):

- Inadequate number of means of egress;
- Egress components with modifications which or are arranged to be inadequate, including signage and lighting.

(Major Code Considerations Narrative – 2020) Whole Foods Cooler Addition Ink Block Development – Boston, MA

7.0 Construction Classification

7.1 EXISTING BUILDING SECTION

The existing building is constructed of concrete and fireproofed steel. Per the original building code nonframeable drawings, the Whole Foods building is of Type IA, protected noncombustible construction.

Type IA construction consists of the following ratings for building elements (780 CMR §601):

Table 2 - Fire Resistance Rating Requirements for Building Elements

Building Element	Type IA Construction
Primary Structural Frame	3[a]
Exterior Bearing Walls	3[a]
Exterior Non-Bearing Walls and Partitions	See 780 CMR Table 602
Interior Bearing Walls	3
Interior Non-Bearing Walls and Partitions	0[c]
Floor Construction and Secondary Members	2
Roof Construction and Secondary Members	1½ [b]

The Addition will be constructed of Type IA construction.

7.2 FIRE WALL SEPARATION

An existing fire wall separating all two (2) back-to-back 2-hour walls separates the residential high rise and Whole Foods building, expected by the blue line in Figure 1.

Figure 1 Separation Details

Because the cooler will be an addition to the Whole Foods building, the separation between the cooler and residential high rise building must be constructed as 3-hour fire wall, expected by the green line in Figure 1.

(Major Code Considerations Narrative – 2020) Whole Foods Cooler Addition Ink Block Development – Boston, MA

The (green) fire wall is permitted to terminate at the under-side of the cooler roof sheathing, deck or slab of the lower roof, provided the following are met (780 CMR §705.8.5 Exception):

1. The cooler roof assembly within 10 feet, horizontally, of the (blue) fire wall has not less than a 1-hour fire-resistance rating and the entire length and span of supporting elements for the rated roof assembly has a fire-resistance rating of not less than 1 hour.
2. Openings in the cooler roof shall not be located within 10 feet horizontally of (blue) the fire wall.

8.0 Occupancy Classification

The existing Whole Foods building includes Group M, Mercantile (Retail) and Group S-1/S-2, Group R-2, Residential (apartments, and condos), Group A-2, Assembly (cafe), and Group S-2, Storage (parking garage).

The proposed addition will be a cooler for the storage of food products (Group S-2, Storage).

The Project is classified as an Addition and related Level 2 Alterations with no change of occupancy classification.

9.0 Interior Finishes

New interior finishes and the existing interior finish of walls and ceilings in exits and corridors in any work area should comply with the code for new construction (MA IEBC §803.6). Existing materials that do not comply with the interior finish requirements of 780 CMR are permitted to be treated with an approved fire-retardant coating in accordance with the manufacturer's instructions to achieve the required rating.

ASTM E84, Test Methods for Surface Burning Characteristics of Building Materials classifies the burning characteristics of building materials using flame spread and smoke development properties. Performance characteristics and classifications are developed in accordance with the following Table (780 CMR §803.5).

The following table summarizes the interior finish requirements for fully sprinklered new construction (780 CMR Table 803.13).

Table 3 – Interior Finish Requirements

Group	Exit Enclosures and Exit Passageways	Rooms and Enclosed Spaces
S	Class A, B or C	Class A, B or C

10.0 Fire Protection Systems

10.1 FIRE SPRINKLER

The existing building is fully sprinklered. The sprinkler system is assumed to be compliant with codes applicable at the time of construction is assumed to have been appropriately maintained.

The proposed sprinkler protection for the cooler addition is an extension loop fed from the existing sprinkler system in the Whole Foods building.

10.2 FIRE ALARM

The existing building is provided with a fire alarm system. The existing fire alarm system in the Whole Foods building must be extended into the cooler addition.

[a] Approach assumed.

(Major Code Considerations Narrative – 2020) Whole Foods Cooler Addition Ink Block Development – Boston, MA

11.0 Means of Egress

Regardless of work performed, the building is required to be provided with a sufficient number of exits and means of egress capacity (780 CMR § 102.6.4). Means of egress components are subject to compliance with the requirements of Chapter 10 in 780 CMR. The following sections outline the major means of egress requirements per 780 CMR §10.00. It should be recognized that where multiple occupancies share the same portions of a means of egress system, more egress components must meet the more stringent requirements of the occupancies served.

11.1 EGRESS CAPACITY AND NUMBER OF EXITS

Each floor of the building is required have a number of exits based on the calculated occupant load of each floor (780 CMR §1006). The following table outlines the minimum number of exits required for every floor:

Table 4 - Minimum Number of Exits

Occupant Load	Minimum Number of Exits
1-500	2
501-1,000	3
More than 1,000	4

Rooms or spaces in Group E occupancies with an occupant load greater than 25 people must be served by minimum two (2) remote means of egress. (780 CMR §1006.2.1).

Portions of Group S occupancies with common path of travel greater than 100 feet must be served by minimum two (2) remote means of egress (780 CMR §1006.2.1).

Where an emergency or secondary system is not provided, the total width of means of egress in inches must not be less than the total required level served by the means of egress multiplied by 0.3 inches per occupant for stairways and by 0.2 inches per occupant for other egress components (780 CMR 1005.3.1, 1005.3.2).

11.2 ALLOWABLE TRAVEL DISTANCES

The following table summarizes the maximum allowable dead-end corridor length, common path of travel and exit access travel distance per occupancy for a fully sprinklered building based on 780 CMR requirements (780 CMR Table 1020.2.1, Table 1017.2, 1020.4 Exception 2)

Table 5 - Maximum Allowable Travel Distance Requirements

Occupancy	Dead-End Corridor	Common Path of Travel	Exit Access Travel Distance
S-2	50 feet	100 feet	400 feet

12.0 Structural

MA IEBC 807, 807, 807 and §1007 contain structural requirements that are applicable to the project. A structural evaluation of these requirements should be performed by the project structural engineer.

13.0 Accessibility

521 CMR contains the following cost thresholds as applying for alteration work within existing buildings:

- If the construction cost of the work amounts to less than $100,000, then only the work being performed is required to comply with 521 CMR (521 CMR 3.3.1 a).

(Major Code Considerations Narrative – 2020) Whole Foods Cooler Addition Ink Block Development – Boston, MA

- If the construction cost of the work amounts to $100,000 or more, but is less than 20% of the full and fair cash value of the building, then the work being performed is required to comply with 521 CMR plus an accessible entrance, bathroom, drinking fountain and telephone (if provided) must be provided (521 CMR 3.3.1 b).
- If the work performed, including the overall work, amounts to 20% or more of the full and fair cash value of the building, the entire building is required to comply with 521 CMR (521 CMR 3.3.2).

2010 ADA requires that alterations to an existing building where the scope of work includes an area of primary function, up to 20% of the construction cost is required to be spent on improving the accessibility with in the building (28 CFR Part 36.403(f), ADA Section 202.4). This includes providing an accessible route to the work area, access to accessible sanitary facilities, accessible drinking fountain and accessible public phones (where provided). Accessibility upgrades in excess of 20% of the cost of the renovation project are considered disproportionate and would not be required by the ADA Accessible route.

All new work must comply with 521 CMR and ADA.

The construction cost of the Cooler Addition will exceed $100,000 but not exceed 20% of the full and fair cash value of the existing building. As such, the work being performed is required to comply with 521 CMR plus an accessible entrance, bathroom, drinking fountain and telephone (if provided) are required and already provided. Improvements are not required to occur within existing downstream spaces of the building.

The scope of the Project does not include an area of primary function, thus, no additional accessibility improvements to existing building areas are required by the ADA.

"End of Report"

Project Client:

WHOLE FOODS
North Atlantic Region
250 Forest Street
Marlborough, MA 01752
P 617.482.2600
F 617.482.5815
W www.wholefoodsmarket.com

WHOLE FOODS MARKET
EXTERIOR COOLER

Ink Block
Boston, MA

Number	Description	Date
00	ISSUED FOR PERMIT	10-21-2020
01	ISSUED FOR PERMIT	11-12-2020

Key Plan:

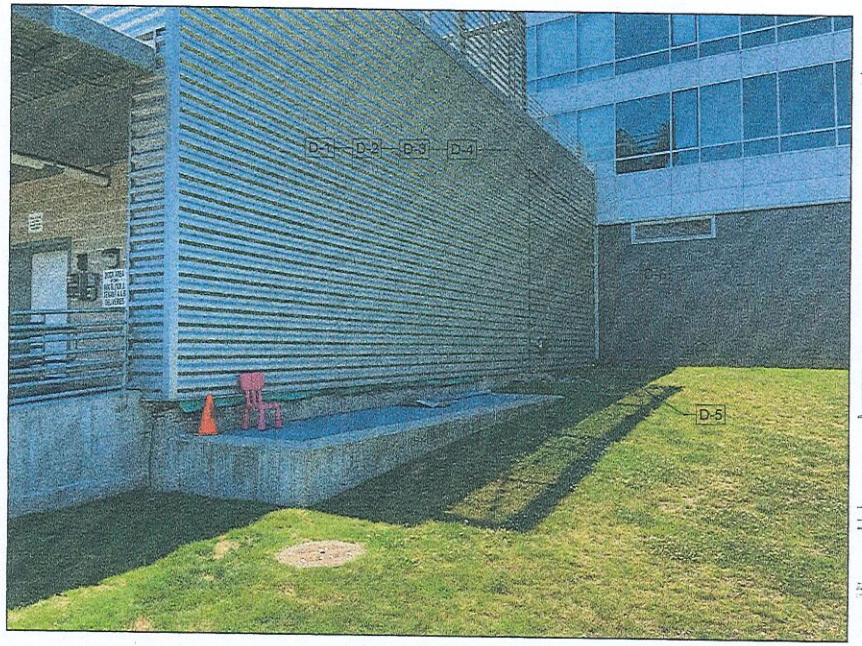
Project North

CAD File:
Project No.: L150047.17
Copyright: 2019 Jacobs Engineering Group, Inc.

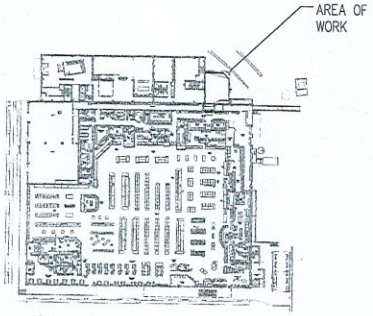
Drawing Sheet Title:
CODE ANALYSIS AND
EGRESS PLAN

Drawing Sheet Number:
G-001

Owner's Drawing Sheet No.:



② DEMOLITION PHOTO
SCALE: N.T.S.



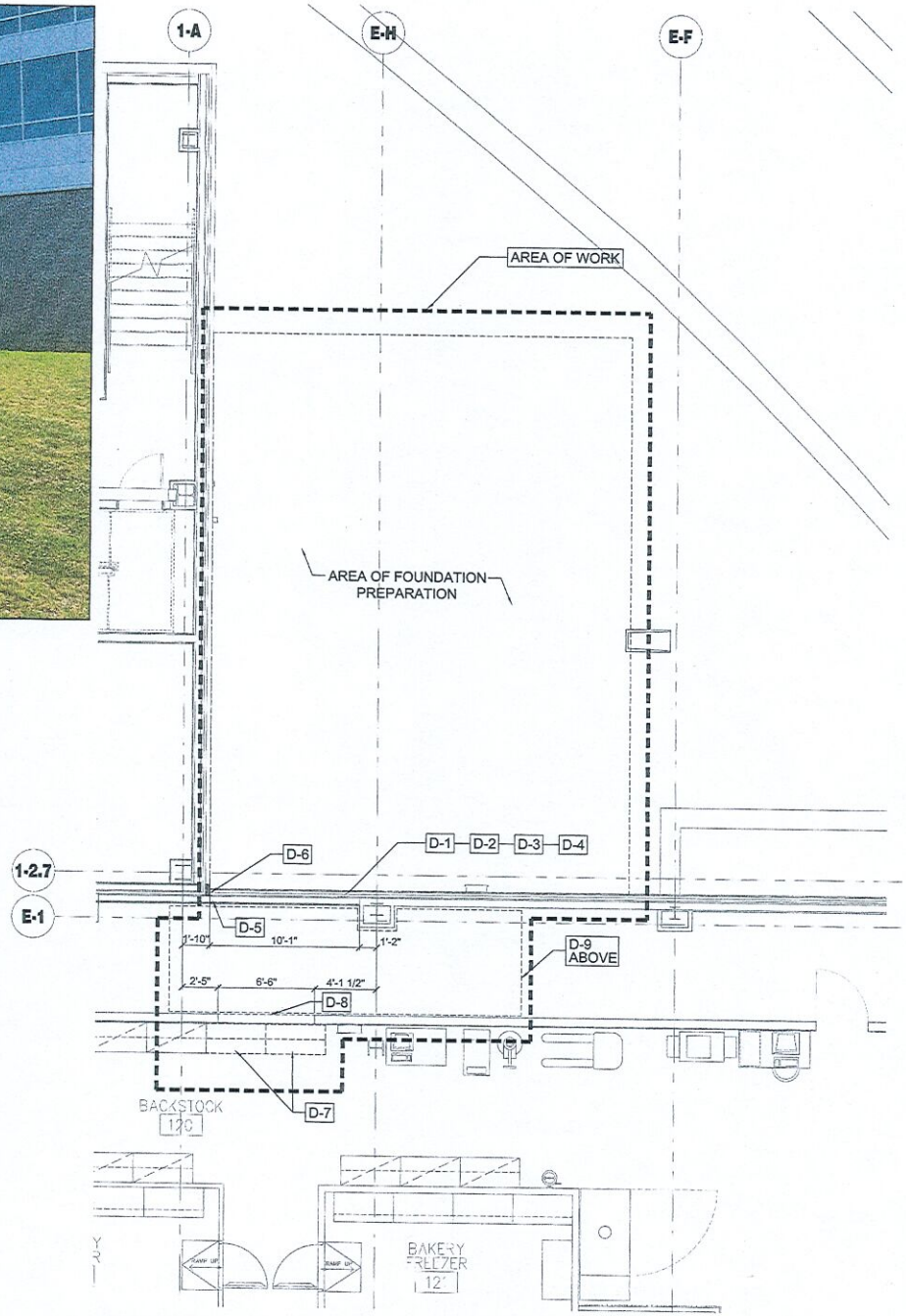
KEY PLAN
N.T.S.

DEMOLITION NOTES:

1. PRIOR TO COMMENCEMENT OF WORK OR FABRICATION OF COMPONENTS CONTRACTOR SHALL INVESTIGATE AND VERIFY IN THE FIELD ALL CONDITIONS, DIMENSIONS AND ELEVATIONS OF THE EXISTING CONDITIONS. ANY DISCREPANCIES BETWEEN FIELD VERIFIED CONDITIONS, DIMENSIONS AND ELEVATIONS AND THOSE INDICATED ON THE DRAWINGS SHALL BE IMMEDIATELY MADE KNOWN TO THE ARCHITECT IN WRITING. THE USE OF (V.I.F.) OR (+/-) OR OTHER SIMILAR NOTES ON THE DRAWINGS DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR VERIFYING ALL CONDITIONS AS DESCRIBED ABOVE.
2. CONDITION OF ALL EXISTING EQUIPMENT REMOVED TO BE VERIFIED WITH WHOLE FOODS PROJECT REP. PRIOR TO STORAGE / DEPOSAL.
3. CONTRACTOR SHALL PROVIDE ALL MEANS OF PROTECTION OF THE PUBLIC, EMPLOYEES AND SUBCONTRACTORS AND EXISTING CONSTRUCTION AND WORK IN PLACE DURING CONSTRUCTION.

DEMOLITION LEGEND:

- D-1 REMOVE TO NEAREST PANEL JOINT AND SALVAGE EXIST. METAL SIDING IN FULL PANELS, ASSOCIATED ATTACHMENT CLIPS. SIDING TO BE CUT/MODIFIED AFTER REMOVAL AND REINSTALLED TO ENABLE NEW COOLER INTERFACE WORK.
- D-2 REMOVE EXISTING INSULATION, AIR/VAPOR BARRIER (AVB) AND SHEATHING.
- D-3 EXIST. LIGHT GAUGE METAL FRAMING (LGMF) IN THIS AREA TO REMAIN. MODIFY EXIST. FRAMING TO ENABLE NEW DOOR OPENING.
- D-4 REINSTALL AVB AND INSULATION TO REPLACE IN KIND AND INTERFACE ADJACENT CONDITIONS.
- D-5 REMOVE EXIST. EXPANSION JOINT COVER ONLY AS REQUIRED TO ENABLE THE PROPOSED COOLER WORK.
- D-6 REMOVE PORTION OF EXIST. MASONRY VENEER TO ENABLE CONTINUATION OF EXISTING RATED WALL.
- D-7 REMOVE AND SALVAGE EXIST. STORAGE SHELVING.
- D-8 REMOVE PORTION OF EXISTING METAL STUD AND GWB INTERIOR WALL TO ENABLE THE INSTALLATION OF PROPOSED COOLING DOOR.
- D-9 REMOVE, SALVAGE AND REINSTALL EXISTING ACT CEILING AS REQUIRED TO ENABLE PROPOSED COOLER WORK.



① DEMOLITION PLAN
SCALE: 1/2" = 1'-0"

JACOBS
JACOBS CONSULTANTS, INC.
120 St. James Ave, 5th Floor
Boston, MA 02116
P 617.491.6600
F 617.491.7104
W www.jacobs.com

Consultants:

Seals:

General Notes:

Project Client:
WHOLE FOODS
North Atlantic Region
280 Forest Street
Marlborough, MA 01752
P 617.482.9600
F 617.482.5910
W www.wholefoodsmarket.com

WHOLE FOODS MARKET
EXTERIOR COOLER

Ink Block
Boston, MA

Number	Description	Date
01	ISSUED FOR REVIEW	10-04-2019
02	ISSUED FOR PERMIT	10-18-2019

Key Plan:

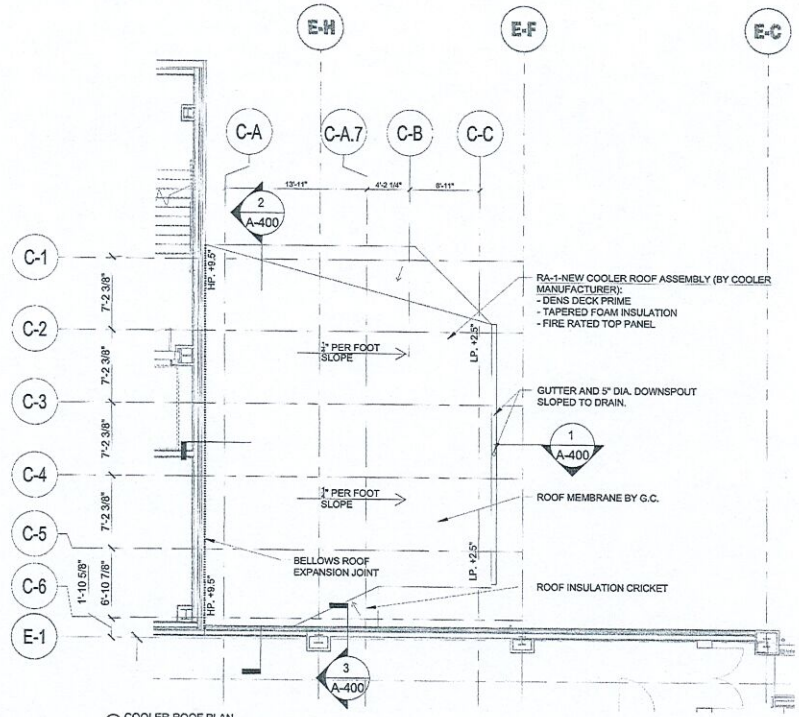
Project North

CAD File:
Project No.: L1009417
Copyright: 2019 Jacobs Engineering Group, Inc.

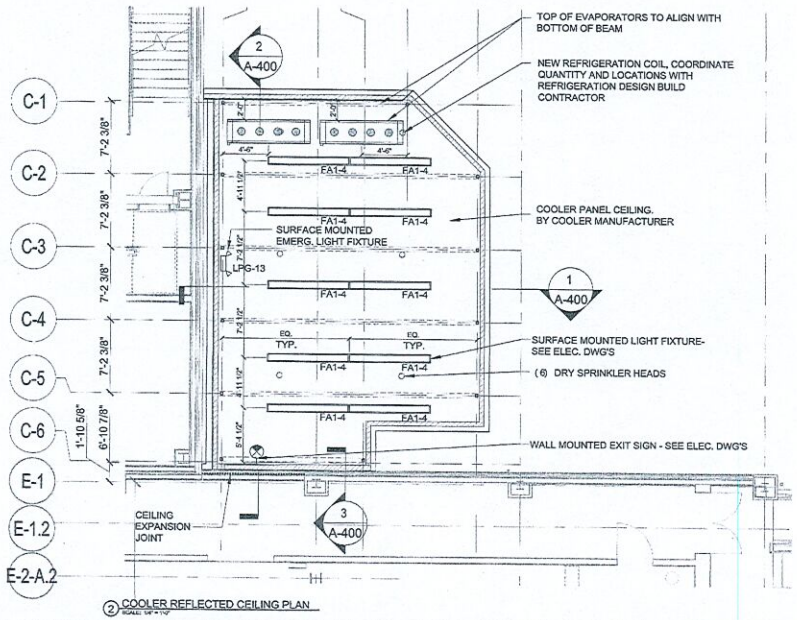
Drawing Sheet Title:
DEMOLITION AND ENABLING PLAN

Drawing Sheet Number:
D-100

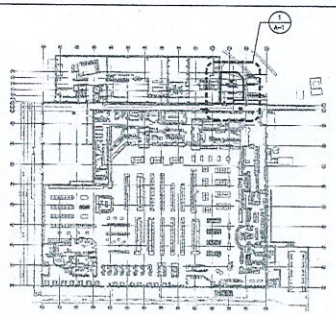
Owner's Drawing Sheet No.:



3 COOLER ROOF PLAN
SCALE: 1/4" = 1'-0"



2 COOLER REFLECTED CEILING PLAN
SCALE: 1/4" = 1'-0"



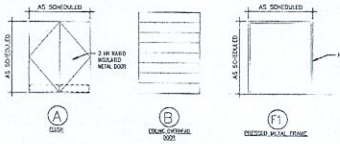
KEY PLAN
SCALE: 1" = 50'-0"

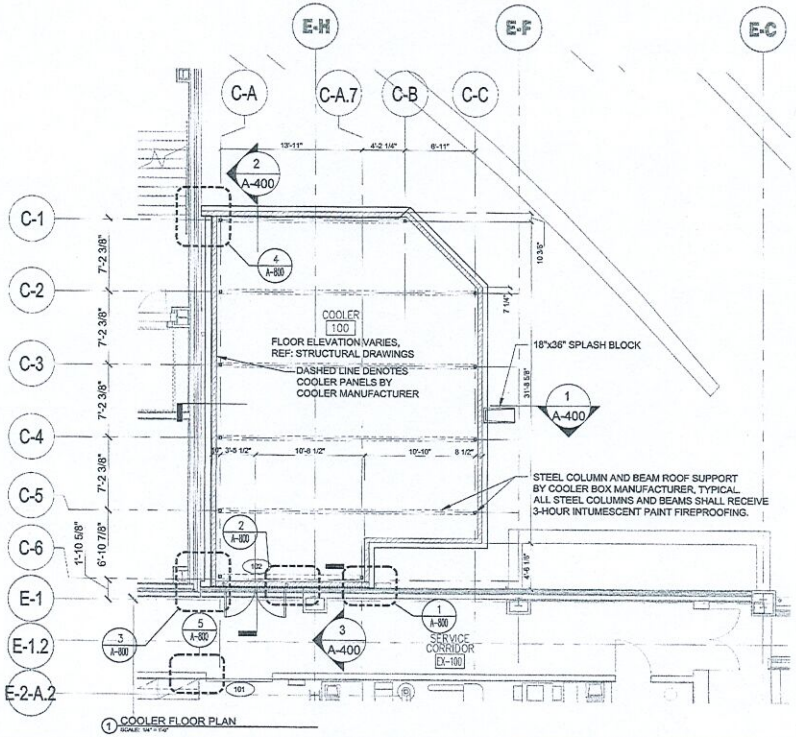
GENERAL NOTES:

1. CONTRACTOR TO COORDINATE ALL WORK WITH WFM PROJECT REP. INCLUDING SCHEDULE OF WORK- WORK TAKES PLACE WITHIN AN OPERATING FACILITY.
2. CONTRACTOR TO PROVIDE ALL DUST PROTECTION AS REQ'D.- COORDINATE DUST PROTECTION MATERIALS AND LOCATIONS WITH WFM PROJECT REP.
3. ALL REFRIGERATION WORK IS TO BE DESIGN/BUILD BY THE CONTRACTOR.
4. G.C. TO PATCH/PAINT TO MATCH ALL EXISTING AREAS TO REMAIN THAT HAVE BEEN DISTURBED BY CONSTRUCTION.
5. G.C. TO FIELD VERIFY AND PROVIDE ALL UTILITIES AS REQUIRED FOR ALL NEW AND RELOCATED DUCTS AND EQUIPMENT.
6. CONTRACTOR SHALL PROVIDE ALL MEANS OF PROTECTION OF THE PUBLIC, EMPLOYEES AND SUBCONTRACTORS AND EXISTING CONSTRUCTION AND WORK IN PLACE DURING CONSTRUCTION.

DOOR SCHEDULE

DOOR #	LOCATION	DOOR SIZE	DOOR TYPE	HARDWARE SET	DOORS: SOLID CORE WOOD DOOR	SOLID CORE WOOD DOOR SEMI-VISION 1/2 LITE (SEE SPEC.)	SOLID CORE WOOD DOOR SEMI-VISION FULL LITE	ALUM. CORE SYSTEMS	EXISTING DOOR	FRAME (EXISTING - NO DOOR)	FRAME (NEW - NO DOOR)	FIRE RATED DOOR	FIRE RATED DOOR	24" x 36" SUN BOXES	24" x 36" SUN BOXES	VISION PANEL (LOCATED UNDERSIDE)	60" x 84" SUN BOXES	60" x 84" SUN BOXES	FRAME TYPE	FRAME MATERIAL	THRESHOLD	REMARKS
101	NEW / EXIT CORRIDOR	6'-4" X 6'-0"	B	2						●									-	-	-	POWER OPERATED (HARDWARE) SECTIONAL DOOR W/ VISION SEATS
102	OUT CORRIDOR / COOLER	PAIR 3'-0" X 7'-0"	A	1	●												●	F1	HM		●	1 1/2 HR RATED INSULATED METAL DOOR W/ LOW VOLTAGE OPERATOR





1 COOLER FLOOR PLAN
SCALE: 1/4" = 1'-0"

JACOBS
JACOBS CONSULTANTS, INC.
120 St. James Ave, 8th Floor
Boston, MA 02116
P 617.451.6400
F 617.451.7124
W www.jacobs.com

Consultants:

Seals:

General Notes:

Project Client:

WHOLE FOODS
North Atlantic Region
250 Forest Street
Marlborough, MA 01752
P 617.482.5600
F 617.482.5610
W www.wholefoodsmarket.com

WHOLE FOODS MARKET
EXTERIOR COOLER

Ink Block
Boston, MA

Number	Description	Date
001	ISSUED FOR PROGRESS	10-29-2010
002	ISSUED FOR PERMIT	11-15-2010

Key Plan:

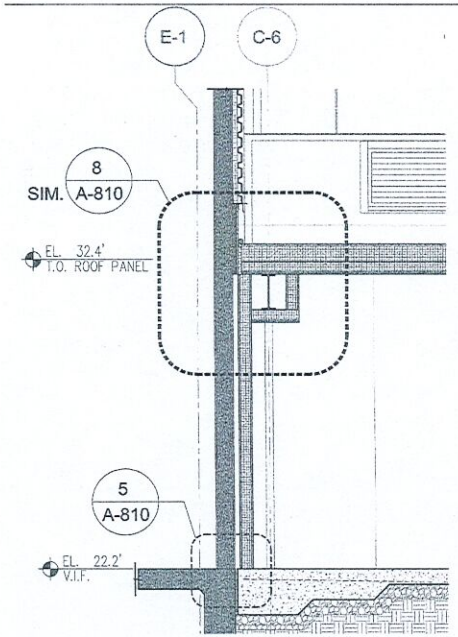
Project North:

CAD File:
Project No.: L10003417
Copyright: 2010 Jacobs Engineering Group, Inc.

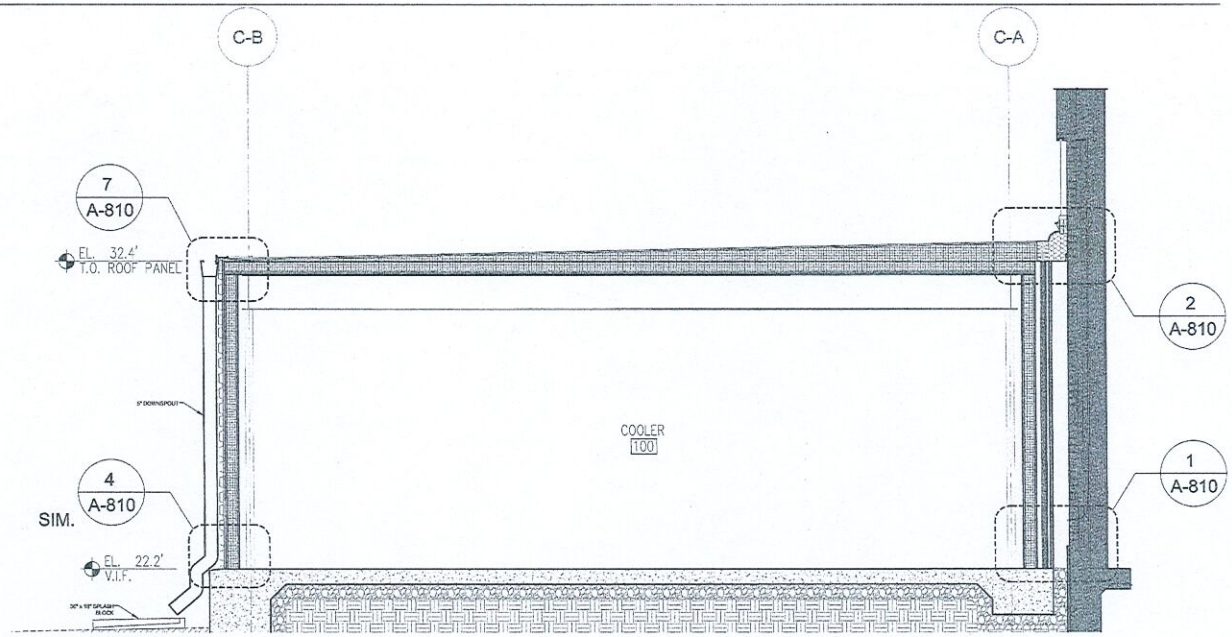
Drawing Sheet Title:
FLOOR PLAN
REFLECTED CEILING PLAN
& ROOF PLAN

Drawing Sheet Number:
A-100

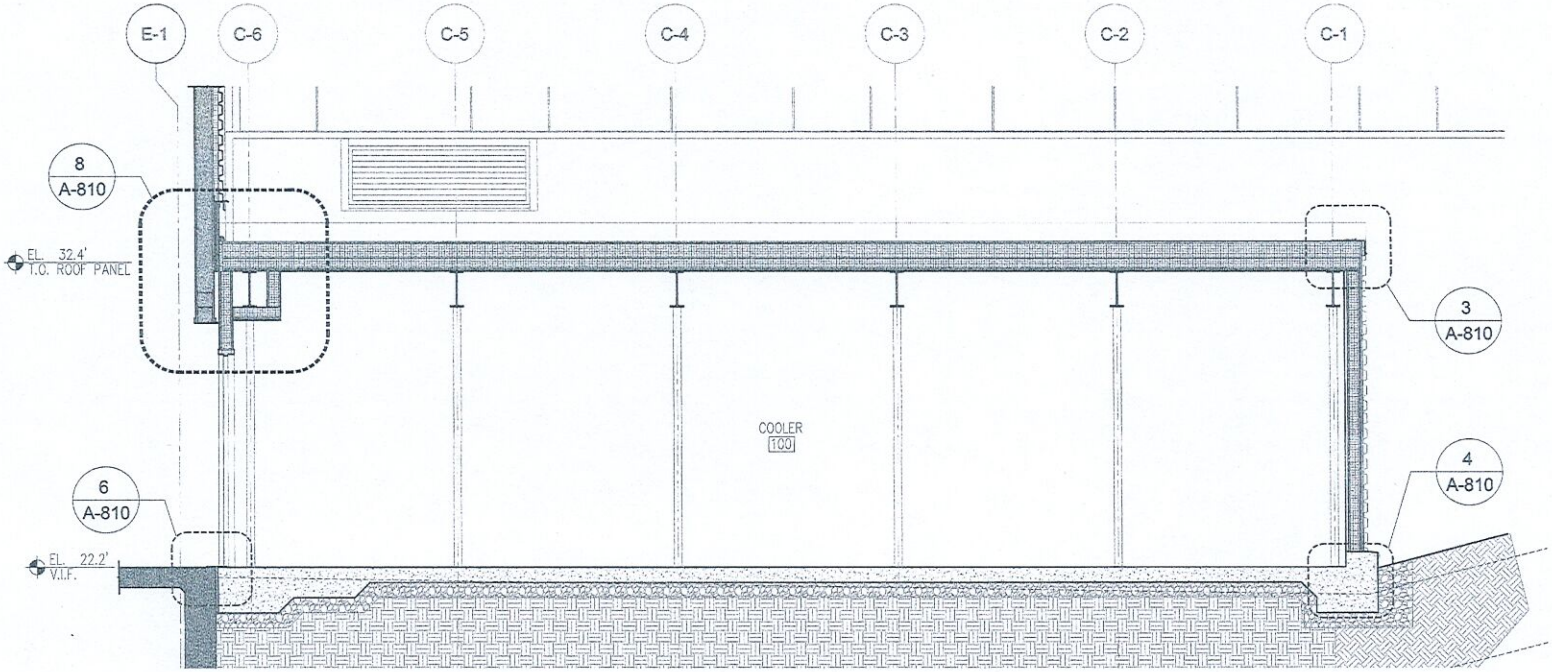
Owner's Drawing Sheet No.:



3 COOLER SECTION
SCALE: 3/4" = 1'-0"



1 COOLER SECTION
SCALE: 3/4" = 1'-0"



2 COOLER SECTION
SCALE: 3/4" = 1'-0"

JACOBS
JACOBS CONSULTANTS, INC.
133 St. James Ave, 5th Floor
Boston, MA 02116
P 617.451.5430
F 617.451.7104
W www.jacobs.com

Consultants:

Seals:

General Notes:

Project Client:

WHOLE FOODS
North Atlantic Region
250 Forest Street
Marlborough, MA 01752
P 617.422.5620
F 617.422.5618
W www.wholefoodsmarket.com

WHOLE FOODS MARKET
EXTERIOR COOLER

Ink Block
Boston, MA

Number	Description	Date
01	ISSUED FOR PERMITS	[illegible]
02	ISSUED FOR BIDDING	[illegible]

Key Plan:

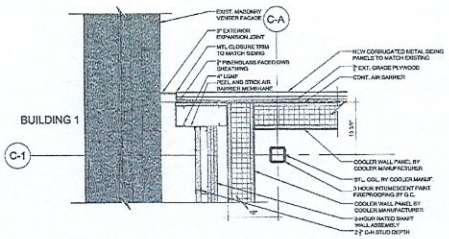
Project North

CAD File:
Project No.: L1000417
Copyright: 2010 Jacobs Engineering Group, Inc.

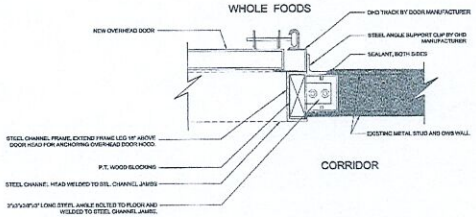
Drawing Sheet Title:
SECTIONS

Drawing Sheet Number:
A-400

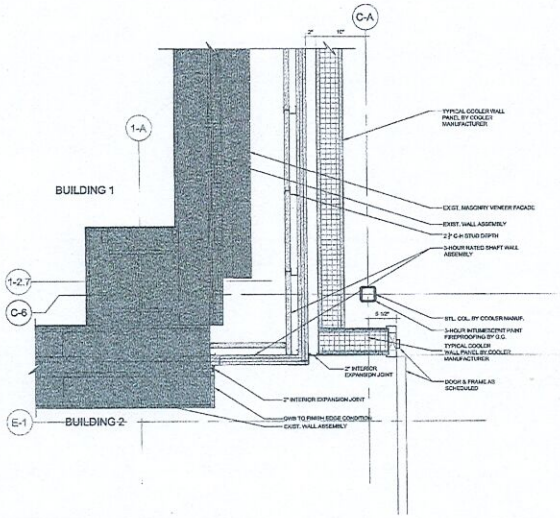
Owner's Drawing Sheet No.:



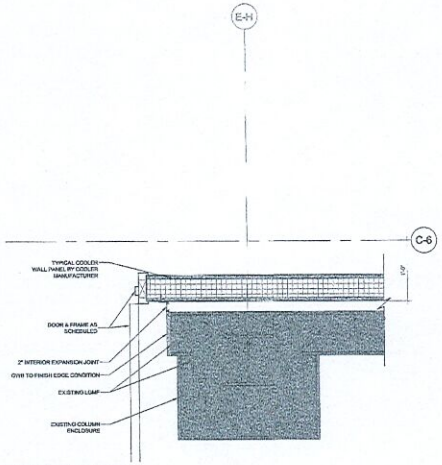
4 COOLER AT EXISTING BRICK FACADE
SCALE: 1 1/2" = 1'-0"



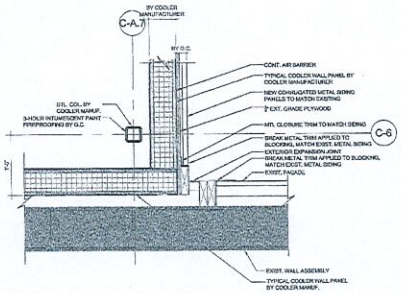
5 OVERHEAD DOOR JAMB
SCALE: 6" = 1'-0"



3 COOLER AT BUILDINGS 1 & 2 CORNER
SCALE: 1 1/2" = 1'-0"



2 COOLER AT EXISTING COLUMN
SCALE: 1 1/2" = 1'-0"



1 COOLER AT BUILDING 2 FACADE
SCALE: 1 1/2" = 1'-0"

JACOBS
JACOBS CONSULTANTS, INC.
103 St. James Ave, 5th Floor
Boston, MA 02116
P 617.451.5553
F 617.451.7104
W www.jacobs.com

Consultants:

Seal:

General Notes:

Project Owner:

WHOLE FOODS

North Atlantic Region
250 Forest Street
Marlborough, MA 01752
P 617.482.5200
F 617.482.5213
W www.wholefoodsmarket.com

WHOLE FOODS MARKET
EXTERIOR COOLER

Ink Block
Boston, MA

Number	Description	Date
01	[illegible]	[illegible]
02	[illegible]	[illegible]

Key Plan

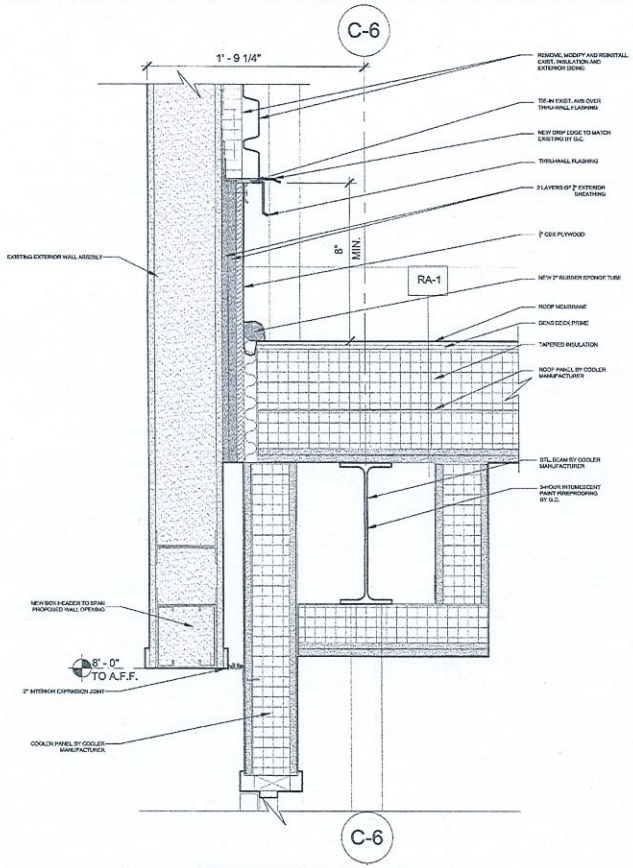
Project North

CAD File:
Project No.: L100047
Copyright: 2010 Jacobs Engineering Group, Inc.

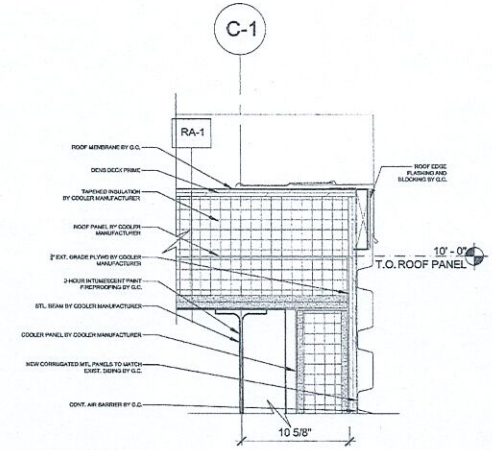
Drawing Sheet Title:
PLAN DETAILS

Drawing Sheet Number:
A-800

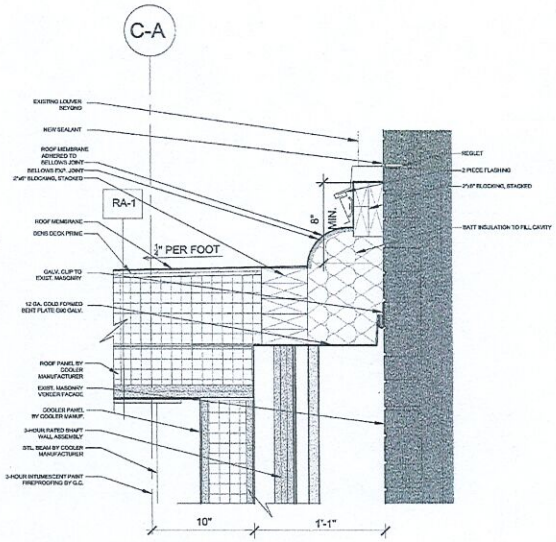
Owner's Drawing Sheet No.:



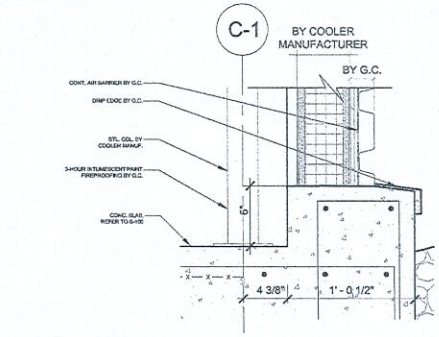
8 COOLER ROOF AT ENTRANCE
SCALE: 3" = 1'-0"



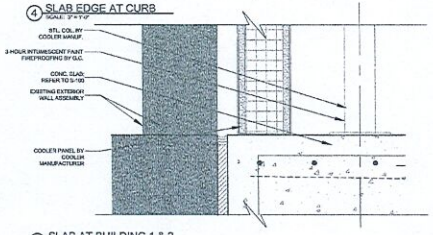
3 BACK ROOF EDGE
SCALE: 3" = 1'-0"



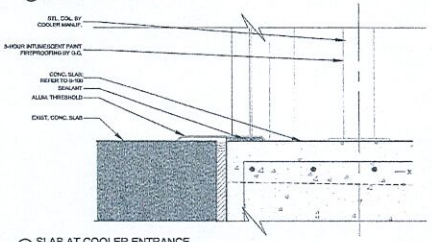
2 COOLER ROOF AT BUILDING 1
SCALE: 3" = 1'-0"



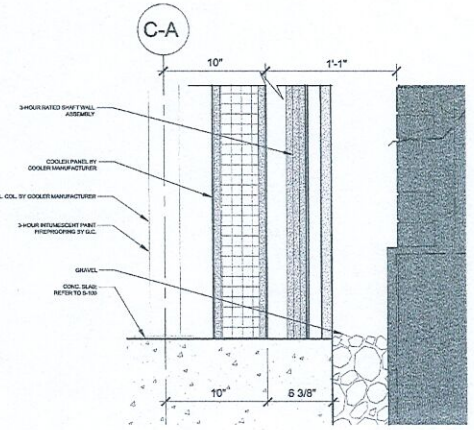
4 SLAB EDGE AT CURB
SCALE: 3" = 1'-0"



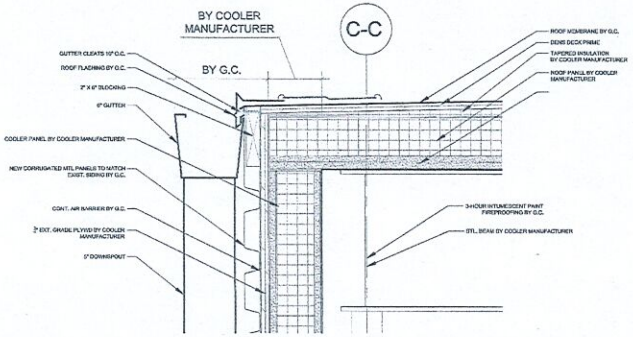
5 SLAB AT BUILDING 1 & 2
SCALE: 3" = 1'-0"



6 SLAB AT COOLER ENTRANCE
SCALE: 3" = 1'-0"



1 SLAB EDGE AT COOLER/BUILDING 1 WALL CAVITY
SCALE: 3" = 1'-0"



7 ROOF SIDE EDGE AT GUTTER
SCALE: 3" = 1'-0"

JACOBS
JACOBS CONSULTANTS, INC.
120 St. James Ave, 5th Floor
Boston, MA 02116
P 617.451.6420
F 617.451.7131
W www.jacobs.com

Consultants:

Seals:

General Notes:

Project Client:

WHOLE FOODS
North Atlantic Region
250 Forest Street
Marlborough, MA 01752
P 617.482.5000
F 617.482.5010
W www.wholefoodsmarket.com

WHOLE FOODS MARKET
EXTERIOR COOLER

Ink Block
Boston, MA

Number	Description	Date
01	ISSUED FOR PERMITTING	12-19-2016
02	ISSUED FOR PERMIT	01-18-2017

Key Plan:

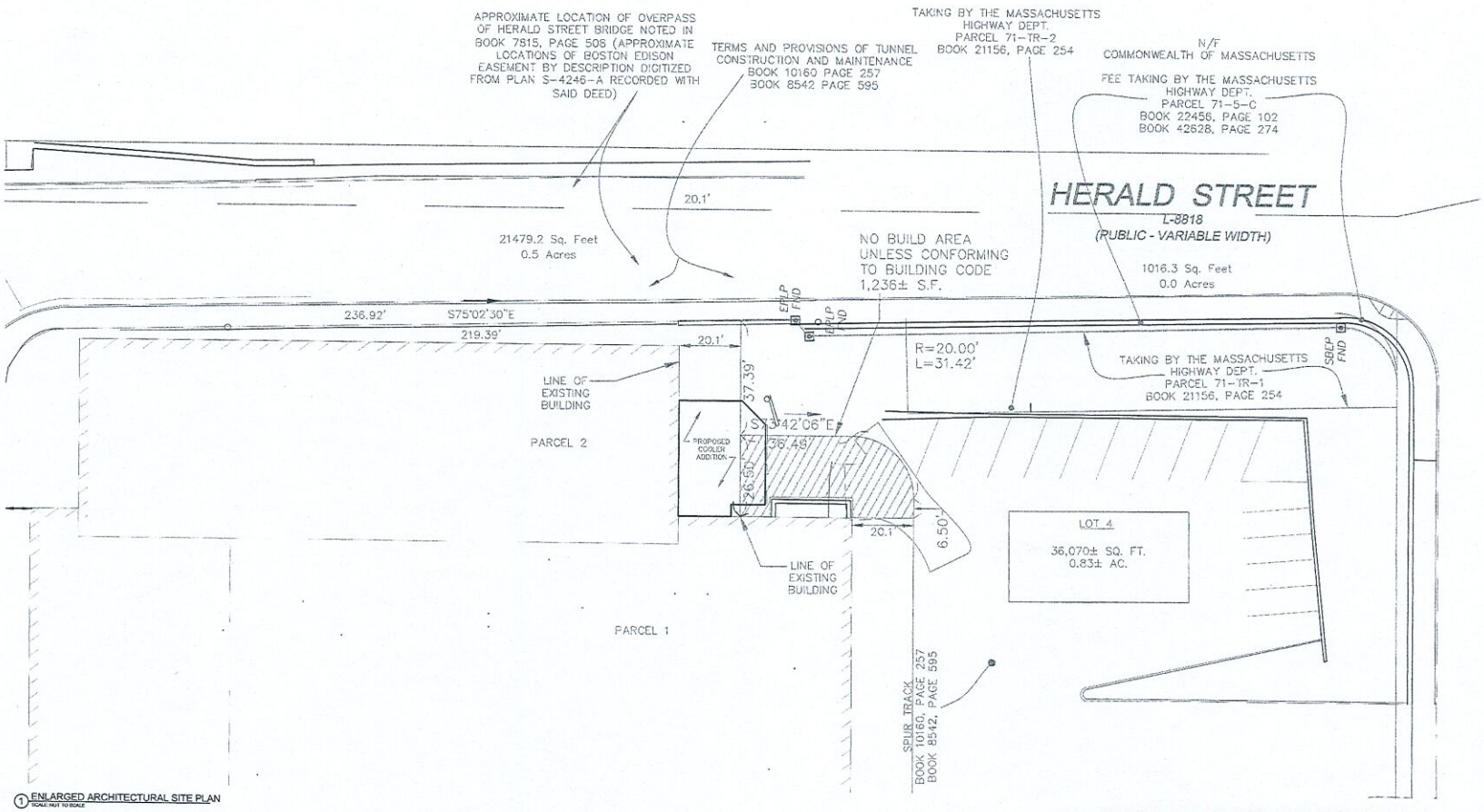
Project North

CAD File:
Project No.: L1009417
Copyright: 2016 Jacobs Engineering Group, Inc.

Drawing Sheet Title:
SECTION DETAILS

Drawing Sheet Number:
A-810

Owner's Drawing Sheet No.:



1 ENLARGED ARCHITECTURAL SITE PLAN
SCALE: NOT TO SCALE

KEY PLAN
NOT TO SCALE

JACOBS
JACOBS CONSULTANTS, INC.
122 St. James Ave, 5th Floor
Boston, MA 02116
P 617.451.6400
F 617.451.7150
W www.jacobs.com

Consultants:

Seals:

General Notes:

Project Client:
WHOLE FOODS
North Atlantic Region
250 Forest Street
Marlborough, MA 01752
P 617.482.5400
F 617.482.5810
W www.wholefoodsmarket.com

WHOLE FOODS MARKET
EXTERIOR COOLER

Ink Block
Boston, MA

Number	Description	Date
01	ISSUED FOR PERMIT	06-26-2019
02	ISSUED FOR BID SET	10-11-2019

Key Plan:

Project North

CAD File:
Project No.: L1000417
Copyright: 2019 Jacobs Engineering Group, Inc.

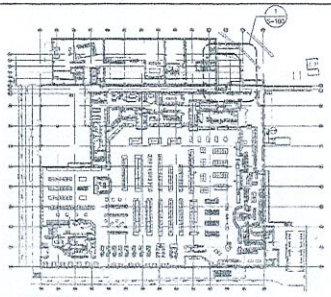
Drawing Sheet Title:
ARCHITECTURAL SITE PLAN

Drawing Sheet Number:
A-900

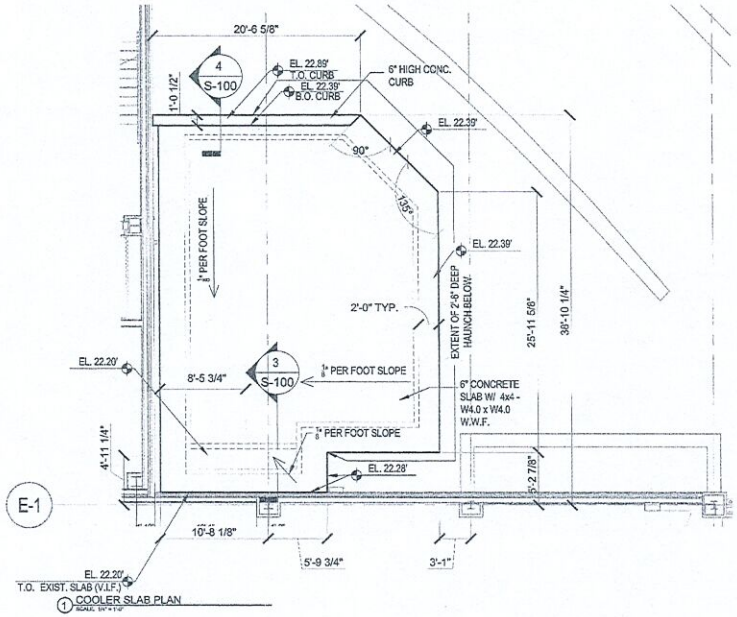
Owner's Drawing Sheet No.:

GENERAL NOTES:

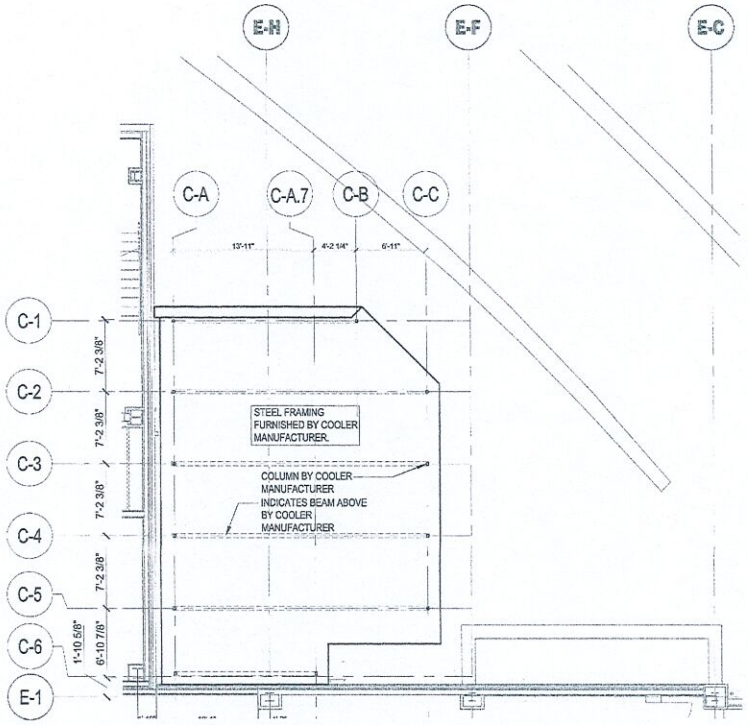
1. CONTRACTOR TO COORDINATE ALL WORK WITH WFM PROJECT REP. INCLUDING SCHEDULE OF WORK. WORK TAKES PLACE WITHIN AN OPERATING FACILITY.
2. CONTRACTOR TO PROVIDE ALL DUST PROTECTION AS REQUIRED. COORDINATE DUST PROTECTION MATERIALS AND LOCATIONS WITH WFM PROJECT REP.
3. ALL MECHANICAL, FIRE PROTECTION, PLUMBING, HVAC, ELECTRICAL AND REFRIGERATION WORK IS TO BE DESIGN/BUILT BY THE CONTRACTOR.
4. CONTRACTOR SHALL PROVIDE ALL MEANS OF PROTECTION OF THE PUBLIC, EMPLOYEES AND SUBCONTRACTORS AND EXISTING CONSTRUCTION AND WORK IN PLACE DURING CONSTRUCTION.
5. CONTRACTOR TO PATCH TO MATCH ALL AREAS DISTURBED BY CONSTRUCTION INCLUDING BUT NOT LIMITED TO: WALLS, FLOOR AND CEILINGS.
6. ALL EQUIPMENT INCLUDING FIXTURES AND MILLWORK IS OWNER (WHOLE FOODS MARKET) FURNISHED AND CONTRACTOR INSTALLED.



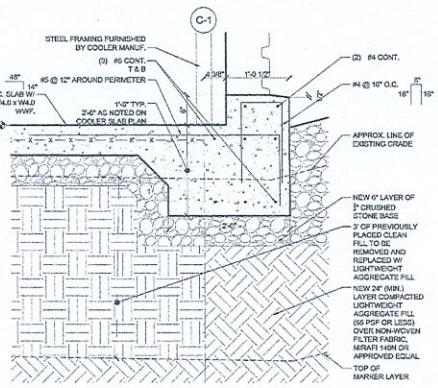
KEY PLAN



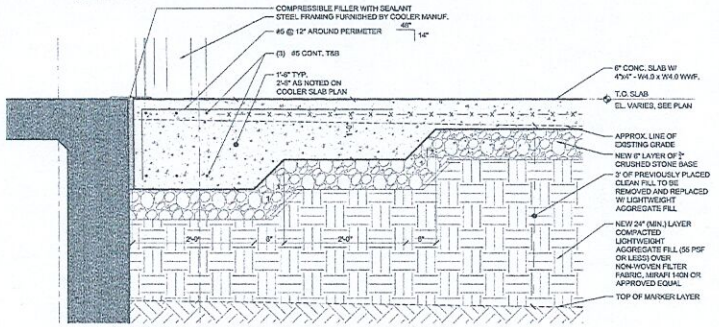
1 COOLER SLAB PLAN
SCALE: 3/4" = 1'-0"



2 COOLER FRAMING PLAN
SCALE: 3/4" = 1'-0"



4 NORTH SLAB EDGE AT CONC. CURB
SCALE: 1 1/2" = 1'-0"



3 SOUTH SLAB EDGE
SCALE: 1 1/2" = 1'-0"

BUILDING FOUNDATIONS

THE PROPERTY HAS AN ACTIVITY AND USE LIMITATION (AUL) DEED RESTRICTION THAT, AMONG OTHER CONDITIONS, PLITS SUITABLE RESTRICTIONS ON EXCAVATION BELOW A MARKER LAYER THAT WAS PLACED DURING THE INK BLOCK CONSTRUCTION. THE MARKER LAYER SEPARATES SOILS THAT MAY BE DISTURBED WITHOUT ADDITIONAL MEASURES FROM SOILS THAT MUST BE TREATED AS CONTAMINATED. CONSTRUCTION, THE MARKER LAYER SHOULD BE 3 FEET BELOW EXISTING GRADES IN LANDSCAPED AREAS. A RELEASE ABATEMENT MEASURE (RAM), PREPARED BY A LICENSED SITE PROFESSIONAL (LSP), IS REQUIRED IF SOIL BELOW 3' TO MARKER LAYER IS EXCAVATED OR DISTURBED. IN ADDITION, SOILS BELOW THE MARKER LAYER MUST BE TREATED AS CONTAMINATED UNLESS TESTING SHOWS OTHERWISE.

THE PROPOSED REFRIGERATION UNIT SHALL BE SUPPORTED ON A REINFORCED CONCRETE SLAB ON GRADE OVER 6 INCH LAYER OF ¾ INCH CRUSHED STONE SO PROVIDED AS BASE COURSE BELOW THE SLAB. A 24 INCH MINIMUM LAYER OF LIGHTWEIGHT AGGREGATE FILL SAT SHOULD BE PROVIDED BELOW THE STONE TO REPLACE EXISTING MARKER LAYER (SEE AUL REMOVED HALFWAY THE MARKER LAYER AND ADDITIONAL MATERIAL ; THE LAP THICKNESS WILL BE GRADATION WHICH THE RANGE IN GRADE IS GREATER THAN 2.5 FEET.

SUBGRADE PREPARATION

PRIOR TO PLACEMENT OF THE LAP, THE EXISTING TOPSOIL AND CLEAN OUTER SHOULD BE REMOVED, LEAVING APPROXIMATELY 6 INCHES OF CLEAN COVER OVER THE MARKER LAYER, AND THE EXPOSED SOIL SUBGRADE SHOULD BE PROOF-COMPACTED WITH A MINIMUM OF TEN PASSES OF A HAND-OPERATED VIBRATORY ROLLER OR HEAVY PLATE COMPACTOR. ONCE PROOF COMPACTED, A LAYER OF NON-WOVEN FILTER FABRIC, SUCH AS MIRAFI 140N, SHOULD BE PLACED OVER THE EXISTING FILL BEFORE PLACING THE LAP.

PROTECT SUBGRADES FROM FROST AT ALL TIMES DURING CONSTRUCTION. FROZEN SOIL SHOULD NOT BE PLACED AS FILL. FURTHERMORE, FILL SHOULD NOT BE PLACED OVER FROZEN SOIL.

REUSE OF EXISTING MATERIALS

THE EXISTING CLEAN FILL AND TOPSOIL, THAT IS EXCAVATED MAY BE REUSED ON SITE ON STOCKPILED FOR FUTURE USE.

FILL MATERIAL AND COMPACTION

THE LAP SHALL MEET THE FOLLOWING GRADATION REQUIREMENTS:

SIEVE DESIGNATION (STANDARD)	PERCENTAGE PASSING BY WEIGHT
1 INCH	100
3/4 INCH	90-100
3/8 INCH	10-50
NO 4	0-10
NO 100	0-5

THE DRY LOOSE UNIT WEIGHT OF THE LAP SHALL BE NOT LESS THAN 55 POUNDS PER CUBIC FOOT (PCF). THE LIGHTWEIGHT AGGREGATE PRODUCER SHALL SUBMIT VERIFICATION OF A COMPACTED DENSITY OF LESS THAN 55 PCF WHEN MEASURED BY A 2-NO-POINT TEST CONDUCTED IN ACCORDANCE WITH ASTM D-698 "THE STANDARD TEST METHODS OF MOISTURE-DENSITY RELATIONS OF SOIL AND SOIL-AGGREGATE MIXTURES USING A 5.5 LB. HAMMER AND 12-INCH DROP" (ASSTD 7-98).

WHEN PLACED, THE AGGREGATE SHOULD BE PLACED IN LIFTS NOT EXCEEDING 12 INCHES. EACH LIFT SHOULD BE UNIFORMLY DISTRIBUTED AND COMPACTED WITH AT LEAST TWO PASSES AND A MAXIMUM OF FOUR PASSES OF HAND-OPERATED VIBRATORY COMPACTION EQUIPMENT. UNTIL THE FILL APPEARS STABLE. EXCESSIVE COMPACTION SHOULD BE AVOIDED TO AVOID CRUSHING OF THE AGGREGATE. CONSTRUCTION TRAFFIC SHOULD BE LIMITED TO COMPACTION EQUIPMENT ONLY TO LIMIT DISTURBANCE TO THE LAP SUBGRADE.

THE CRUSHED STONE SHOULD CONSIST OF DURABLE CRUSHED ROCK OR GRAVEL, BE FREE FROM ICE AND SNOW, CLAY, LOAM AND OTHER OBJECTIONABLE MATERIAL AND MEET THE FOLLOWING GRADATION REQUIREMENTS:

SIEVE DESIGNATION (STANDARD)	PERCENTAGE PASSING BY WEIGHT
1 INCH	100
3/4 INCH	90-100
1/2 INCH	10-50
3/8 INCH	0-10
NO 4	0-5

CRUSHED STONE SHOULD BE COMPACTED WITH AT LEAST 2 PASSES OF A VIBRATORY PLATE COMPACTOR TO AN UNYIELDING SURFACE.

CONCRETE

SLABS-ON-GRADE: NORMAL-WEIGHT CONCRETE:

1. MINIMUM COMPRESSIVE STRENGTH: 4000 PSI AT 28 DAYS.
2. MAXIMUM W/C RATIO: 0.50
3. MINIMUM CEMENTITIOUS MATERIALS CONTENT: 470 LB/CU. YD.
4. SLUMP LIMIT: 4 INCHES ± 1 INCH
5. AIR CONTENT: 3% NON-AIR ALLOW AIR CONTENT OF 1% WILL BE REQUIRED FLOCKS TO EXCEED 3 PERCENT.

REINFORCING BARS: ASTM A 615, GRADE 60, DEFORMED.

PLAIN STEEL WELDED WIRE REINFORCEMENT: ASTM A 185, PLAIN, FABRICATED FROM ASD/ASRN STEEL WIRE INTO FLAT SHEETS.

FLOAT FINISH: CONSOLIDATE SURFACE WITH HONEYCOMB/NON-FLOATS ON 5/7 WHO FLOATING IF AREA IS SMALL OR INACCESSIBLE TO POWER-DRIVEN FLOATS. RESTRAIGHTEN, CUT DOWN HIGH SPOTS, AND FILL LOW SPOTS. REPEAT FLOAT PASSES AND RESTRAIGHTENING UNTIL SURFACE IS LEFT WITH A UNIFORM, SMOOTH, GRANULAR TEXTURE.

BROOM FINISH: APPLY A BROOM FINISH TO EXTERIOR CONCRETE AND ELSEWHERE AS INDICATED.

- IMMEDIATELY AFTER FLOAT FINISHING, SLIGHTLY ROUGHEN TRAWELED SURFACE BY BROOMING WITH FIBER-BRISTLE BROOM PERPENDICULAR TO MAIN TRAFFIC ROUTE. COORDINATE REQUIRED FINAL FINISH WITH ARCHITECT BEFORE APPLICATION.

JACOBS
JACOBS CONSULTANTS, INC.
120 St. James Ave, 8th Floor
Boston, MA 02116
P 617.488.5450
F 617.491.7594
W www.jacobs.com

Consultants:

Seal:

General Notes:

Prepared Client:

WHOLE FOODS
North Atlantic Region
105 Trowbridge Street
Marlborough, MA 01752
P 617.482.5500
F 617.482.0010
W www.wholefoodsmarket.com

WHOLE FOODS MARKET
EXTERIOR COOLER

Ink Block
Boston, MA

Number	Description	Date
00	FOR CONSTRUCTION	06/29/2017
01	REVISED FOR CONSTRUCTION	10/18/2017

Key Plan:

Project North:

CAD File:

Project No.: L1020417

Copyright: 2016 Jacobs Engineering Group, Inc.

Drawing Sheet Title:

FLOOR PLAN
REFLECTED CEILING PLAN
& ROOF PLAN

Drawing Sheet Number:

S-100

Owner's Drawing Sheet No.:

SPRINKLER NOTES

1.1 CODE REQUIREMENTS:

1. THE CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES, OBTAIN ALL PERMITS AND PAY ALL FEES, IN ORDER THAT THE WORK HEREIN SPECIFIED MAY BE CARRIED OUT, AND SHALL FURNISH ANY CERTIFICATES NECESSARY AS EVIDENCE THAT THE WORK INSTALLED COMPLIES WITH ALL LOCAL, STATE AND INSURANCE AUTHORITIES.
2. THE CONTRACTOR SHALL VISIT THE SITE TO DETERMINE THE CONDITIONS AND EXTENT OF THE WORK.
3. ALL WORK SHALL CONFORM TO ALL APPLICABLE LOCAL CODES AND THE FOLLOWING NATIONAL FIRE PROTECTION CODES AND STANDARDS AS MODIFIED BY FACTORY MUTUAL AND ANY OTHER PREVAILING CODES:
   c. NFPA-13 (2017).
4. INSTALL A COMPLETE ANTIFREEZE LOOP UPON THE NEW COOLER CONNECTING TO THE EXISTING WET SPRINKLER SYSTEM.

1.2 DESIGN CRITERIA

A. GENERAL:

1. COORDINATE LOCATION OF SPRINKLER HEADS WITH DIFFUSER AND LIGHTING LAYOUT.
2. ALL SPRINKLER DEVICES ARE TO BE U.L. LISTED AND APPROVED BY INSURANCE CARRIER FOR FIRE PROTECTION.
3. SPRINKLER PIPING 2" AND SMALLER SHALL BE SCHEDULE 40 BLACK STEEL PIPE WITH SCREWED 175 PSI FITTINGS.

1.3 HYDRAULIC DESIGN DATA:

1. WATER DENSITY AND SQUARE FOOT REQUIREMENTS: CALCULATION TO MODEL THE MOST REMOTE AREA REFER TO SPRINKLER SYSTEMS DESIGN CRITERIA THIS SHEET. THESE REQUIREMENTS, SHALL BE USED TO CALCULATE THE SYSTEM. CALCULATION TO BE PROVIDED UNDER THE SUPERVISION OF A PROFESSIONAL ENGINEER AND BE STAMPED AND SUBMITTED WITH WORKING PLANS/SHOP DRAWINGS FOR REVIEW.

1.4 SPRINKLER HEADS

1. SPRINKLER HEADS PROVIDED SHALL BE CHROME PLATED PENDANT SPRINKLER AND SHALL MATCH SPRINKLERS IN STORE FOR TEMP RATING AND MANUFACTURER

1.5 GENERAL

1. WORKING PLANS/SHOP DRAWINGS INDICATING THE FINAL DESIGN LAYOUT ARE REQUIRED AND SHALL BE DRAWN NO SMALLER THAN 1/8"=1'-0" AND ALL WALLS, PARTITIONS, DOFFITS, CEILING PATTERNS, DUCTS OR OTHER MAJOR MECHANICAL EQUIPMENT, FLUORESCENT LIGHTS, STRUCTURAL MEMBERS, ETC. SHALL BE INDICATED OUT OF FUNCTION ON THE SHOP DRAWINGS TO SHOW PROPER RELATIONSHIP OF THE SPRINKLER PIPING TO THE BUILDING. DRAWINGS SHALL BE STAMPED AND SEALED BY A FIRE PROTECTION ENGINEER REGISTERED IN THE STATE OF MASSACHUSETTS. DRAWINGS TO BE PROVIDED FOR FIRE DEPARTMENT PLANS REVIEW, OWNER INSURANCE CARRIER, AND BUILDING DEPARTMENT.
2. NO WORK SHALL COMMENCE UNTIL SPRINKLER SUBCONTRACTOR HAS AN "APPROVED AS NOTED" SET OF DRAWINGS STAMPED BY THE ENGINEER, BUILDING DEPARTMENT, AND THE INSURANCE CARRIER.
3. PROVIDE NEW HYDRANT FLOW TEST AT THE TWO NEAREST HYDRANTS FOR USE IN THE DESIGN. THE CONTRACTOR SHALL PERFORM THE VERIFYING FLOW TEST AND PROVIDE INFORMATION TO THE ENGINEER, THE FIRE DEPARTMENT AND THE INSURANCE UNDERWRITER.
4. HYDRANT FLOW TEST FOR THE DESIGN SHALL BE TAKEN AT WORST DAY OF THE WEEK AT WORST TIME OF DAY AS DETERMINED BY LOCAL WATER DEPARTMENT. DESIGN SHALL HAVE A 10% P.S.I. SAFETY FACTOR ON THE WORST DAY, WORST TIME.
5. THE SPRINKLER SYSTEMS SHALL BE HYDRAULICALLY DESIGNED TO NFPA-13, USING THE MOST CURRENT HYDRANT FLOW TEST DATA, (NOT MORE THAN ONE YEAR AGO).
6. THE LATEST DATA AVAILABLE TO DATE IS AS FOLLOWS:

   1-DATE: 00-00-00 3-RESIDUAL: 00 P.S.I.
   2-STATIC: 00 P.S. 4-FLOW: 0000 GPM

7. ANY DAMAGE DONE TO THE BUILDING AS A RESULT OF THE CONTRACTOR'S OPERATIONS, SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO COST TO THE OWNER.
8. STEEL PIPE SLEEVES TO BE INSTALLED WHERE PIPING PASSES THROUGH MASONRY OR CONCRETE WALLS W/1/4" CLEARANCE BETWEEN PIPE AND SLEEVE. FIRE STOP BETWEEN SLEEVE AND PIPE AT EXTERIOR WALL AND MAKE WATERTIGHT.

1.6 VALVE CLOSURES

1. THE SPRINKLER CONTRACTOR SHALL COORDINATE ALL VALVE CLOSURES WHICH MAY IMPAIR BUILDING FIRE PROTECTION SYSTEMS WITH THE LOCAL FIRE DEPARTMENT AND GENERAL CONTRACTOR. PROVIDE FOR FIRE WATCH AS REQUIRED BY FIRE DEPARTMENT.

1.7 CONTRACT DOCUMENTS

1. THE SHOP DRAWINGS SHALL CONTAIN NAMES OF ALL AREAS AND ROOMS.
2. THE SPRINKLER CONTRACTOR SHALL PREPARE A WORKING PLAN SHOWING THE EXACT LOCATION OF ALL NEW SPRINKLER HEADS AND PIPING.

1.8 FLUSHING AND TESTING PIPE (ABOVE GRADE)

A. ABOVE GRADE.

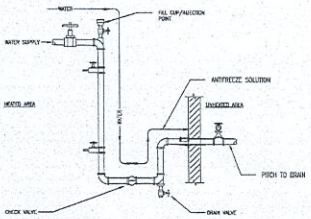
1. TEST ALL OVERHEAD SPRINKLER PIPING FOR A PERIOD OF 2 HOURS AT WORKING PRESSURE, IN ACCORDANCE WITH NFPA #13.
2. CONDITIONS THAT MAY INDICATE THE NEED OF INVESTIGATION INCLUDE THE FOLLOWING:
   a. DISCHARGE OF OBSTRUCTIVE MATERIAL DURING ROUTINE WATER TESTS.
   b. HEAVY DISCOLORATION OF WATER DURING DRAIN TESTS OR PLUGGING OF INSPECTOR'S TEST CONNECTIONS.
3. ALL ABOVE GROUND PIPING SHALL BE FLUSHED AND TESTED PRIOR TO THE INSTALLATION OF CEILING TO NEW CONCEALING ANY SECTION OF PIPE FROM VIEW.
4. PROVIDE CONTRACTOR'S MATERIAL AND TEST CERTIFICATES FOR ABOVE GROUND PIPING ACCORDANCE WITH NFPA-13.

SPRINKLER NOTES

1.9 EARTHQUAKE PROTECTION:

1. PROVIDE SEISMIC RESTRAINTS IN ACCORDANCE WITH NFPA-13 AND THE STATE BUILDING CODE.
2. LISTED FLEXIBLE PIPE COUPLINGS JOINING GROOVED END PIPE.

   b. NEAR BUILDING EXPANSION JOINTS.
3. SWAY BRACING.
   a. SYSTEM PIPING TO RESIST BOTH LATERAL AND LONGITUDINAL HORIZONTAL LOADS.
   b. SWAY BRACES ARE TO BE DESIGNED TO WITHSTAND FORCES IN TENSION AND COMPRESSION.
   c. ASSIGNED LOAD VALUES FOR BOTH LATERAL AND LONGITUDINAL SWAY BRACING SHALL BE DETERMINED USING TABLE IN NFPA-13,BASED ON A HORIZONTAL FORCE OF Fp=0.3Wp .
4. LONGITUDINAL SWAY BRACING.
   a. 80 FEET MAXIMUM CENTERS FOR FEED AND CROSS MAINS.
5. LATERAL SWAY BRACING.
   a. WHERE FLEXIBLE COUPLINGS ARE INSTALLED ON MAINS, BRACE SHALL BE WITHIN 24 INCHES OF EVERY OTHER COUPLING BUT NOT MORE THAN 40 FEET ON CENTER.
6. WHEN "C" CLAMPS ARE USED, LISTED RETAINING STRAPS ARE REQUIRED.



DETAIL-GLYCOL LOOP
SCALE: NONE

NOTES:

1. SPRINKLER CONTRACTOR SHALL PROVIDE PREMIXED ANTIFREEZE SOLUTION MIXED BY THE MANUFACTURER TO ENSURE THAT THE CORRECT SOLUTION IS USED PER NFPA-13-AB.6. (2019).
2. PROVIDE A DRAIN/TEST CONNECTION AT THE MOST REMOTE TEST PORTION OF THE SYSTEM
3. FILL SYSTEM PER NFPA GUIDELINES AND RECOMMENDATIONS. TEST PIPING TO ENSURE SYSTEM IS COMPLETELY FILLED.
4. CHECK VALVE NOT REQUIRED WHEN SPRINKLER PIPING IN UNHEATED SIDE IS INSTALLED BELOW VALVE A

SPRINKLER SYSTEMS DESIGN CRITERIA

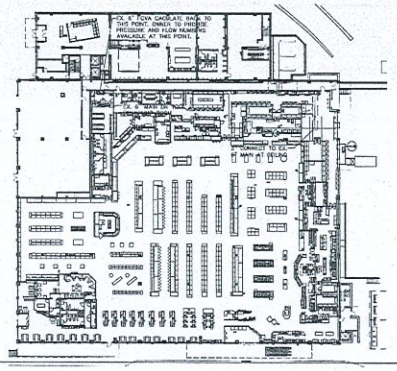
TYPE OF SYSTEM	AREA PROTECTED FLOOR OR ZONE
WATER DENSITY GPM/SQ FT	DESIGN AREA
TYPE OF SPKR SEE SPKR SCH FOR DESCRIPTION	MAX SQUARE FT PER SPRINKLER HEAD

LEGEND

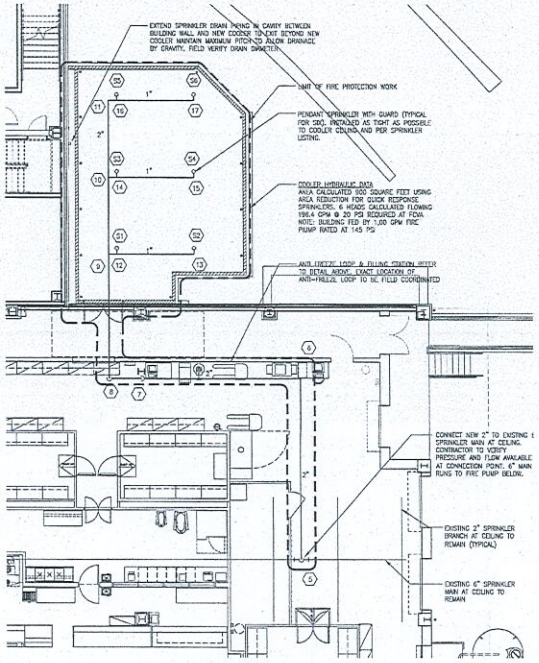
ITEM	ABBREVIATION	DESCRIPTION
(E)	EXIST. (E)	FIRE PROTECTION WATER SUPPLY EXIST.
F		FIRE PROTECTION WATER SUPPLY
OSWY		OUTSIDE SCREW AND YOKE VALVE
TS		OUTSIDE SCREW AND YOKE VALVE WITH TAMPER SWITCH.
		FLOOR CONTROL VALVE
		CHECK VALVE
		FLOW-IN DIRECTION OF ARROW
		BALL VALVE
		GATE VALVE
		UNION
		RISER UP (ELBOW)
		RISER DOWN (ELBOW)
		RISER OR DROP
		BRANCH-BOTTOM CONNECTION
		PIPE PLUG CONNECTION
		PENDENT SPRINKLER HEAD
		UPRIGHT SPRINKLER HEAD
		SIDEWALL SPRINKLER HEAD
		FLOW SWITCH
		FIRE HOSE
	FDC	FIRE DEPARTMENT CONNECTION
		FIRE PUMP
		FIRE HEADER
	TAP	TEMPERATURE & PRESSURE
	EC	ELECTRICAL CONTRACTOR
	SC	SPRINKLER CONTRACTOR
	GC	GENERAL CONTRACTOR
	D.S.STAND.	DRY SYSTEM STANDPIPE
	AFF	ABOVE FINISH FLOOR
	CTE	CONNECT NEW TO EXISTING

SPRINKLER SCHEDULE

STYLE SPRINKLER	MANUF.	MODEL	K-FACT.	ORIFICE	ESCUTCHEON	REMARKS
PENDENT	VIKING VK102 OR VK302	STANDARD OR QUICK RESPONSE	5.6	1/2"	NOT APPLICABLE	PENDENT, TEMP. RATING 155°F AND MAX. AMBIENT CEILING TEMP. 100°F, APPROVALS: UL, C-UL, NYC, MAXIMUM WORKING PRESSURE: 250 PSI, MIN. OPERATING PRESSURE: 7 PSI, THREAD SIZE: 1/2" NPT, SPRINKLER MATERIALS: CHROME PLATED BRASS CASTINGS.



1 KEY PLAN
SCALE: 2" = 100'



1 COOLER FLOOR PLAN
SCALE: 1/4" = 1'-0"

JACOBS
JACOBS CONSULTANTS, INC.
100 St. James Ave, 5th Floor
Boston, MA 02116
P 617.451.5400
F 617.451.7104
W www.jacobs.com

Consultants:

Seals:

1/28/2020

General Notes:

Project Client:

WHOLE FOODS

North Atlantic Region
200 Forest Street
Marlborough, MA 01752
P 617.462.5500
F 617.462.5510
W www.wholefoodsmarket.com

WHOLE FOODS MARKET
EXTERIOR COOLER

Ink Block
Boston, MA

Number	Description	Date
01	ISSUED FOR PRICING	09-23-2019
02	ISSUED FOR PERMIT	01-28-2020

Key Plan:

Project North:

CAD File:

Project No.: L1006417

Copyright: 2019 Jacobs Engineering Group, Inc.

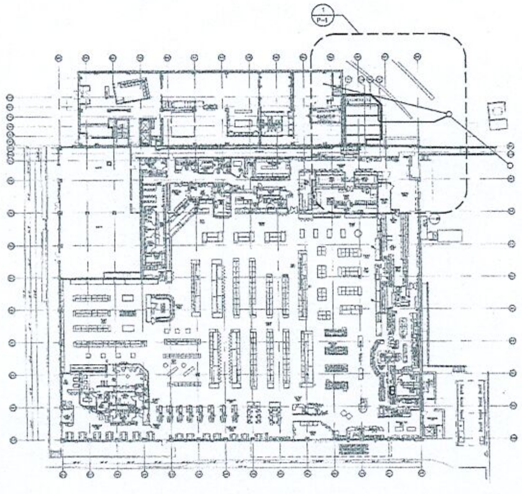
Drawing Sheet Title:

FIRE PROTECTION
FLOOR PLAN
NOTES & DETAIL

Drawing Sheet Number:

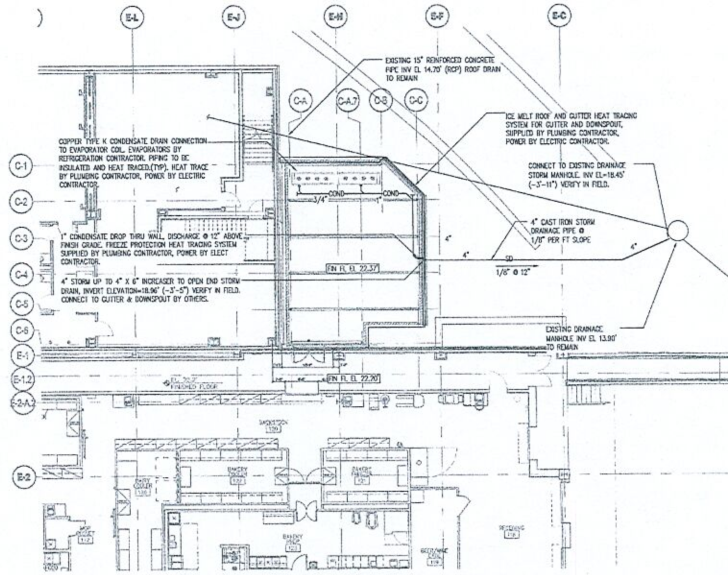
FP-100

Owner's Drawing Sheet No.:



KEY PLAN

SCALE: 1" = 30'-0"



1 COOLER BOX PLUMBING PLAN

SCALE: 1/8" =1'-0"

PLUMBING NOTES

1. THE WORK SHALL BE EXECUTED IN STRICT CONFORMITY WITH BASE BUILDING SPECIFICATION AND WITH THE LATEST EDITION OF THE PREVAILING STATE PLUMBING AND BUILDING CODES AND ALL LOCAL REGULATIONS THAT MAY APPLY. IN CASE OF CONFLICT BETWEEN THE CONTRACT DOCUMENTS AND A GOVERNING CODE OR ORDINANCE THE MORE STRINGENT STANDARD SHALL APPLY.
2. ALL PLUMBING WORK SHALL BE COORDINATED WITH ALL OTHER TRADES BEFORE PROCEEDING WITH INSTALLATION.
3. CHECK INVERT ELEVATIONS AND EXACT LOCATIONS OF ALL OUTSIDE UTILITIES BEFORE INSTALLING ANY UNDERGROUND STORM & SANITARY LINES.
4. NO CHANGES ARE TO BE MADE IN PLUMBING LAYOUT WITHOUT A WRITTEN PERMISSION OF PLUMBING ENGINEER.
5. NO PIPING SHALL RUN EXPOSED IN FINISHED AREAS.
6. ROUGHING DIMENSIONS OF TOILET FIXTURES MUST BE COORDINATED WITH FIELD SUPERVISOR.
7. PLUMBING JOB TERMINATES 10'-0" FROM THE BUILDING UNLESS OTHERWISE NOTED. LANDLORD SHALL COORDINATE CONTINUATION ON SITE WITH SPECIFIC CIVIL DRAWINGS.
8. WALL HYDRANT LOCATIONS ARE TO BE COORDINATED IN FIELD WITH OWNER AND ARCHITECT.
9. INSTALL BALL VALVES ON ALL BRANCH SUPPLY LINES.
10. INSTALL SLEEVES AT LEAST 2 PIPE SIZES LARGER FOR ALL PIPES PASSING THRU MASONRY WALLS. CAULK ALL EXTERIOR SLEEVES WATER TIGHT.
11. ALL ACCESS PANELS SHALL BE BY PLUMBING CONTRACTOR.
12. INSTALL ALL FLOOR CLEANOUTS TO CLEAR EQUIPMENT AND FIXTURES.
13. ALL WORK SHALL BE PROPERLY TESTED, BALANCED AND CLEANED. PROVIDE A ONE YEAR WARRANTY FROM DATE OF SUBSTANTIAL COMPLETION ON ALL PARTS AND LABOR.
14. ALL SANITARY AND STORM DRAIN PIPING SHALL BE INSTALLED WITH A PITCH OF 1/8" PER FOOT

GENERAL NOTES:

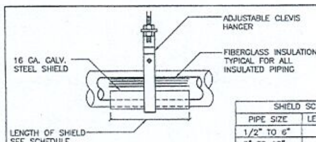
1. ALL WORK SHALL COMPLY WITH STATE AND LOCAL CODE REQUIREMENTS AS APPROVED AND AMENDED BY THE GOVERNING CITY, INCLUDING APPLICABLE SECTIONS OF ANY INTERIM AMENDMENTS AT THE TIME OF THE PROPOSAL PURCHASE ALL PERMITS ASSOCIATED WITH THE WORK. OBTAIN ALL INSPECTIONS REQUIRED BY CODE.
2. CONTRACTOR SHALL PAY ALL FEES AND OBTAIN ALL PERMITS.
3. REFER TO PLUMBING SPECIFICATIONS AND ELSEWHERE IN DRAWINGS FOR FURTHER INFORMATION AND REQUIREMENTS FOR PLUMBING CONTRACTOR.
4. CONTRACTORS AND SUB-CONTRACTORS SHALL CAREFULLY REVIEW THE CONSTRUCTION DOCUMENTS. INFORMATION REGARDING THE COMPLETE WORK IS DISPERSED THROUGHOUT THE DOCUMENT SET AND CANNOT BE ACCURATELY DETERMINED WITHOUT REFERENCE TO THE COMPLETE DOCUMENT SET.
5. DRAWINGS FOR PLUMBING WORK ARE DIAGRAMMATIC, SHOWING THE GENERAL LOCATION, TYPE, LAYOUT, AND EQUIPMENT REQUIRED. THE DRAWINGS SHALL NOT BE SCALED FOR MEASUREMENT. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS. REFER TO MANUFACTURER'S STANDARD INSTALLATION DRAWINGS FOR EQUIPMENT CONNECTIONS AND INSTALLATION REQUIREMENTS. PROVIDE PIPING, CONNECTIONS, FITTINGS, VALVES, OFFSETS, ETC. AND ALL MATERIALS NECESSARY FOR A COMPLETE SYSTEM. SUBMIT SHOP DRAWINGS PER THE SPECIFICATIONS.
6. CONTRACTOR SHALL COORDINATE WORK WITH ALL OTHER TRADES.
7. PLUMBING CONTRACTOR SHALL VERIFY ALL INVERTS, LOCATE FLOOR PENETRATIONS AND UTILITIES, AND COORDINATE CONDITIONS PRIOR TO THE INSTALLATION OF THE WORK. CONTRACTOR SHALL NOTIFY ENGINEER IF INSTALLATION OF WORK CAN NOT BE MET.
8. PLUMBING CONTRACTOR SHALL PROVIDE FINAL CONNECTION TO ALL EQUIPMENT REQUIRING PLUMBING CONNECTIONS.
9. ALL ITEMS TO BE REMOVED ARE TO REMAIN THE PROPERTY OF THE OWNER. DISPOSE OF ANY UNWANTED MATERIALS AS DIRECTED BY THE OWNERS.
10. AT THE END OF EACH DAY, BROOM SWEEP ALL WORK AREAS AND REMOVE ALL EQUIPMENT AND DISCARD.

PIPING NOTES:

1. VERIFY SERVICE CONNECTION POINTS, SIZES, ELEVATIONS AND METERING LOCATIONS FOR PROJECT WITH LOCAL UTILITIES CO. AND/OR CIVIL ENGINEER. SERVICES TO INCLUDE BUT NOT LIMITED TO (DOMESTIC WATER, FIRE, SANITARY SEWER, STORM SEWER, GAS, ETC.)
2. COORDINATE WITH THE WORK OF OTHER SECTIONS, EQUIPMENT FURNISHED BY OTHERS, REQUIREMENTS OF THE OWNER, AND WITH THE CONSTRAINTS OF THE EXISTING CONDITIONS OF THE PROJECT SITE. PROVIDE PIPE RISES, DROPS, AND OFFSETS, AS REQUIRED FOR FIELD INSTALLATION AND TRADE COORDINATION. NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE STARTING WORK.
3. SUSPEND ALL HORIZONTAL SERVICE PIPING SHOWN ON THIS PROJECT SUCH AS, BUT NOT LIMITED TO, WATER, SANITARY, WASTE/VENT, STORM WATER, GAS, ETC. FROM EXISTING STRUCTURAL MEMBERS, UNLESS OTHERWISE NOTED OR INDICATED. NO ATTACHMENT TO THE ROOF DECK IS PERMITTED. HOLD SUCH PIPING AS HIGH AS POSSIBLE. EXTEND PIPING DOWN IN WALLS, PARTITIONS, CHASES, ETC. TO SERVE FIXTURES AND EQUIPMENT AS SHOWN ON PLANS.
4. PROVIDE ITEMS AND WORK AS REQUIRED TO COMPLETE THE INSTALLATION OF PLUMBING SYSTEMS TO FIXTURES AND EQUIPMENT: TRAPS, STRAINERS, GAUGES, GAS AND WATER PRESSURE REGULATORS, FLEXIBLE CONNECTIONS, STOP VALVES, UNIONS, ETC. PROVIDE AND CONNECT PLUMBING PIPE FROM ROUGH-INS TO ITEMS AS SHOWN, SPECIFIED AND REQUIRED.
5. ALL PIPING TO BE CONCEALED UNLESS OTHERWISE NOTED.
6. PROVIDE & INSTALL SERVICE CHECK, SHUT-OFF VALVES, COCKS STOPS, AIR CUSHIONS, VACUUM BREAKERS & SAFETY SERVICES AS REQUIRED BY CODE, SPECIFICATIONS AND DRAWINGS FOR ALL EQUIPMENT & FIXTURES.
7. ALL PIPE PENETRATIONS THROUGH SLAB SHALL BE SLEEVED. ALL PIPE PENETRATIONS THROUGH ROOF MUST BE BY LANDLORD'S ROOFER AT TENANT'S EXPENSE.
8. CONTRACTOR SHALL PROVIDE 3M FIRE STOPPING MATERIAL AT ALL CORE DRILLED LOCATIONS.
9. PERFORM ALL CUTTING & PATCHING REQUIRED FOR INSTALLATION OF THE WORK, INCLUDING CUTTING & PATCHING OF DRAINS.
10. CAP ALL OPENINGS THAT CANNOT BE REUSED.

PLUMBING SPECIFICATIONS

1. PIPING SYSTEMS – GENERAL: ALL PIPING SHALL BE RUN PARALLEL TO BUILDING LINES AND SUPPORTED AND ANCHORED AS REQUIRED BY CODE AND TO FACILITATE EXPANSION AND CONTRACTION. ALL PIPING SHALL BE CONNECTED EXCEPT IN UNFINISHED SPACES. INSTALL AS REQUIRED TO MEET ALL CONSTRUCTION CONDITIONS AND TO ALLOW FOR INSTALLATION OF OTHER WORK SUCH AS DUCTS AND ELECTRICAL CONDUIT. AT ALL CONNECTIONS BETWEEN FERROUS PIPING AND NONFERROUS PIPING, PROVIDE AN ISOLATING DIELECTRIC UNION. ALL HANGERS SHALL BE COMPATIBLE WITH PIPING MATERIAL TO PREVENT CORROSION.
2. STORM PIPING: PROVIDE ALL DRAINS AND SEWERS WITHIN THE PROJECT SPACE WITH CONNECTION TO THE EXISTING DRAINAGE SYSTEM ON-SITE. STORM DRAINAGE PIPING BELOW GRADE SHALL BE SERVICE-WEIGHT HUB AND SPIGOT TYPE CAST-IRON WITH NEOPRENE GASKET JOINT SYSTEM. ALL DRAINAGE PIPING SHALL BE UNIFORMLY PITCHED, 1/4" PER FOOT FOR PIPE SIZE 3" AND SMALLER, 1/8" PER FOOT FOR PIPE SIZES 4" AND LARGER, UNLESS OTHERWISE REQUIRED BY EXISTING CONDITIONS, OR INDICATED ON THE DRAWINGS. ALL FLOOR PENETRATIONS MUST BE SLEEVED AND SEALED LIQUID TIGHT.
3. CLEANOUTS: PROVIDE CLEANOUTS AT THE END OF EACH HORIZONTAL RUN, AND AT THE BASE OF ALL VERTICAL WASTE AND DRAIN PIPES. CLEANOUTS SHALL BE OF THE SAME SIZE AS THE PIPES THEY SERVE, CONFORMING TO CODE REQUIREMENTS.
4. PIPE INSULATION ABOVE GRADE: RIGID ONE-PIECE FIBERGLASS PIPE INSULATION WITH REQUIREMENTS COMPLYING WITH ASTM C 547, SELF-SEALING ADHESIVE LAP LONGITUDINAL JOINTS AND BUTT STRIPS FOR TRANSVERSE JOINTS. JACKETING SHALL CONFORM TO ASTM C 1136, TYPE 1, MAXIMUM VAPOR TRANSMISSION RATING OF 0.02 PERM WHEN TESTED ACCORDING TO ASTM E 96, PROCEDURE A. (K VALUE) 0.25 BTU * IN. / HR. * FT2 * °F AT 75°F MEAN TEMPERATURE. PROVIDE INSULATION THICKNESS AS INDICATED. CONDENSATE PIPING: 1" THICKNESS
5. TEST STORM DRAINAGE SYSTEM BY FILLING WITH WATER, WITH ALL POINTS IN THE SYSTEM BEING SUBJECT TO PRESSURE OF AT LEAST 10' OF WATER. WATER LEVEL SHALL REMAIN STATIONARY FOR A PERIOD OF ONE HOUR, WITHOUT ANY PIPE OR JOINT LEAKAGE. IF TESTING INDICATES DEFICIENCIES REPLACE OR REPAIR AS REQUIRED, AND REPEAT TEST UNTIL STANDARDS ARE ACHIEVED.



SHIELD SCHEDULE	
PIPE SIZE	LENGTH OF SHIELD
1/2" TO 6"	8"
8" TO 12"	12"

SEISMIC NOTES:

1. SEISMIC BRACING SHALL BE INSTALLED UNDER THE FOLLOWING CONDITIONS:
   1.1. GAS PIPING 1" DIAMETER AND GREATER.
   1.2. ALL PIPING 2-1/2" DIAMETER AND GREATER.
   1.3. EXCEPTION: ALL PIPING SUSPENDED BY INDIVIDUAL HANGERS 12" OR LESS IN LENGTH FROM THE TOP OF PIPE TO THE POINT OF ATTACHMENT OF THE HANGER TO THE STRUCTURE DOES NOT REQUIRE SEISMIC BRACING.
2. THE SIZE, TYPE, SPACING, AND METHOD OF INSTALLATION OF SEISMIC BRACING SHALL BE IN ACCORDANCE WITH THE LATEST "SMACNA SEISMIC RESTRAINT MANUAL-GUIDELINES FOR MECHANICAL SYSTEMS". GAS PIPING IS TO BE CLASSIFIED UNDER "SEISMIC HAZARD LEVEL A" AND ALL OTHER PIPING SYSTEMS "SEISMIC HAZARD LEVEL C" IN THE SMACNA MANUAL.

DETAIL–PIPE HANGER

NO SCALE

GUTTER HEAT TRACE SYSTEM COMPONENTS (SUPPLIED BY PLB. CONTR.)

TAG	TYPE	LOCATION	MANUFACTURER	MODEL NO.	REMARKS
GHT-1	GUTTER HEAT TRACE	ROOF	RAYCHEM	GM2X	SELF REGULATING ROOF AND GUTTER DE-ICING HEATING CABLE,208 – 277V
				APS-4C	AUTOMATIC SNOW / ICE MELTING SYSTEM CONTROL PANEL277 / 480VAC, 50/60 HZ, THREE PHASE
				GIT-1	GUTTER ICE SENSOR
				FTC-P	POWER CONNECTION KIT WITH END SEAL
				960-DSH	DOWNSPOUT HANGER
				DSH-90	CABLE SPACER

PIPE HEAT TRACE SYSTEM COMPONENTS (SUPPLIED BY PLB. CONTR.)

TAG	TYPE	LOCATION	MANUFACTURER	MODEL NO.	REMARKS
PHT-1	PIPE HEAT TRACE	VARIES	RAYCHEM	5XL2-CR	XL-TRACE SELF REGULATING HEATING CABLE, COVERED RUBBER,,208 – 277V
				RAYCLIC	CONNECTION KITS AND ACCESSORIES, CATALOG #'S PC,PS, PT, T, SB-04, AS REQUIRED
				ACCESSORIES	GT-66 GLASS TAPE, PS-10 & PS-20 PIPE STRAPS, ETL ELECTRIC TRACED LABEL, AS REQUIRED
				RTD4AL	RESISTANCE TEMPERATURE DETECTOR
				RMM2	HEAT TRACING REMOTE MONITORING MODULE
				ACS-UIT-2	REMOTE USER INTERFACETERMINAL FOR RAYCHEM ACS-30 SYSTEMS
				ACS-PCM2-5	POWER CONTROL MODULE FOR USE WITH RAYCHEM ACS-UIT-2
				ACS-30	ADVANCED HEAT TRACING CONTROL SYSTEM

PLUMBING LEGEND

——SD——	STORM
——COND——	CONDENSATE
— — — — —	VENT (V)
——SAN——	SANITARY
BFP	BACK FLOW PREVENTER
FCO	FLOOR CLEANOUT
DW	DISHWASHER
INV. EL	INVERT ELEVATION
⨂	CONNECT TO EXISTING

CONTRACTOR NOTES:

PRIOR TO COMMENCEMENT OF WORK OR FABRICATION OF COMPONENTS, CONTRACTOR SHALL INVESTIGATE AND VERIFY IN THE FIELD ALL CONDITIONS, DIMENSIONS, AND ELEVATIONS OF THE EXISTING CONSTRUCTION. ALL DISCREPANCIES BETWEEN FIELD-VERIFIED CONDITIONS, DIMENSIONS AND ELEVATIONS AND THOSE INDICATED ON THE DRAWINGS SHALL BE IMMEDIATELY MADE KNOWN TO THE ARCHITECT IN WRITING. THE USE OF (V.I.F.) OR (+/–) OR OTHER SIMILIAR NOTES AT CERTAIN LOCATIONS ON THE DRAWINGS DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR VERIFYING ALL CONDITIONS AS DESCRIBED ABOVE.

JACOBS
JACOBS CONSULTANTS, INC.
120 St. James Ave, 5th Floor
Boston, MA 02116
P 617.491.8450
F 617.491.7104
W www.jacobs.com

Consultants:

Seals:

1/28/2020

General Notes:

Project Client:

WHOLE FOODS

North Atlantic Region
250 Forest Street
Marlborough, MA 01752
P 617.492.5500
F 617.492.5510
W www.wholefoodsmarket.com

WHOLE FOODS MARKET
EXTERIOR COOLER

Ink Block
Boston, MA

Number	Description	Date
01	ISSUED FOR PRICING	[illegible]
02	ISSUED FOR PERMIT	[illegible]

Key Plan: Project North

CAD File:
Project No.: L1009417
Copyright: 2019 Jacobs Engineering Group, Inc.

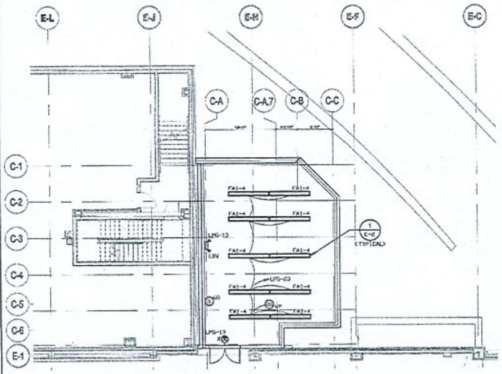
Drawing Sheet Title:

COOLER BOX PLUMBING PLAN

Drawing Sheet Number:

P-1

Owner's Drawing Sheet No.:



LIGHTING GENERAL NOTES

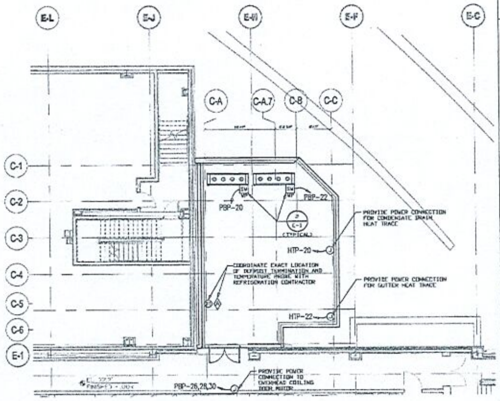
1. EXISTING BRANCH CIRCUIT LPG-23 IS TO BE USED. CIRCUIT IS TO BE VERIFIED AS A SPARE.
2. ALL BRANCH CIRCUITS MORE THAN
   - A. 75 FEET IN LENGTH FOR 120 VOLT CIRCUITS SHALL BE A MINIMUM #10AWG.
   - B. 200 FEET IN LENGTH FOR 277 VOLT CIRCUITS SHALL BE A MINIMUM #10AWG.
   - C. 150 FEET IN LENGTH FOR 120 VOLT CIRCUITS SHALL BE A MINIMUM #8AWG.
   - D. 400 FEET IN LENGTH FOR 277 VOLT CIRCUITS SHALL BE A MINIMUM #8AWG.
   - E. 225 FEET IN LENGTH FOR 120 VOLT CIRCUITS SHALL BE A MINIMUM #6AWG.
   - F. 350 FEET IN LENGTH FOR 120 VOLT CIRCUITS SHALL BE A MINIMUM #4AWG.
3. CIRCUIT LPG-23 SHALL BE CONTROLLED BY EXISTING CONTACTOR C14.
4. THE E.C. SHALL PROVIDE AND INSTALL WEATHERPROOF AND RAINTIGHT MOTION SENSOR WATTSTOPPER WEN-100-277-W (OR APPROVED EQUAL) IN WALK-IN COOLER. EXACT LOCATION OF WATERPROOF SENSOR TO BE VERIFIED IN THE FIELD.

FIRE ALARM GENERAL NOTES

1. ALL WIRING FOR THE FIRE ALARM SYSTEM SHALL BE TWISTED PAIR, IN CONDUITS, IN CONFORMANCE WITH SYSTEM MANUFACTURER'S REQUIREMENTS.
2. ALL WALL MOUNTED DEVICES SHALL BE INSTALLED BETWEEN 80"-96" AND MOUNT DEVICES ON A MANUFACTURER'S PROVIDED STEEL BACK BOX.
3. MOUNTING HEIGHT AND CANDELA RATING OF FIRE ALARM DEVICES HALL BE IN COMPLETE COMPLIANCE WITH THE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD REGULATIONS (MAAB 521 CMR).
4. PRIOR TO FURNISHING AND INSTALLING FIRE ALARM SYSTEM EQUIPMENT, DEVICES AND WIRING, THE ELECTRICAL CONTRACTOR SHALL CONFER WITH LOCAL FIRE AUTHORITY FOR ALL REQUIREMENTS.
5. FURNISH AND INSTALL NEW DEVICES AND WIRE TO EXISTING FIRE ALARM CONTROL PANEL. NEW DEVICES SHALL BE COMPATIBLE WITH EXISTING FIRE ALARM SYSTEM.
6. CONTRACTOR IS RESPONSIBLE FOR ENSURING ALL NEW VISUAL NOTIFICATION DEVICES ARE SYNCHRONIZED WITH EXISTING DEVICES.
7. CONTRACTOR IS PROHIBITED FROM ADDING ANY NEW DETECTION OR NOTIFICATION DEVICES TO EXISTING BY MEANS OF T-TAPPING.
8. PROVIDE NEW POWER SUPPLIES AS NEEDED TO ADD NEW DEVICES TO THE EXISTING FIRE ALARM SYSTEM.

1 NEW COOLER BOX LIGHTING AND FIRE ALARM PLAN

SCALE: 1/8" =1'-0"



GENERAL NOTES

1. THE E.C. SHALL VERIFY WITH THE REFRIGERATION CONTRACTOR THE ELECTRICAL REQUIREMENTS FOR THE EVAPORATOR UNITS, AND CONDENSER UNITS. (NOTE: THE E.C. SHALL NOT INSTALL ANY CONDUITS, FEEDERS, IN-LINE FUSES, ETC. PRIOR TO THE VERIFICATION OF THE ELECTRICAL REQUIREMENTS FOR THE REFRIGERATION EQUIPMENT.) THE DESIGN INFORMATION IS BASED UPON PRELIMINARY DATA PRIOR TO THE PURCHASE OF THE EQUIPMENT.
2. THE E.C. SHALL NOT USE MC CABLE, AX OR BX CABLE TO PENETRATE THE WALK-IN COOLER/FREEZER. THE E.C. SHALL USE PVC OR EMT FOR THE PENETRATION OF THE WALK-IN COOLER/FREEZER.
3. ALL CONDUITS WHICH PENETRATE THE WALK-IN COOLERS/FREEZERS SHALL BE SEALED WITH SILICONE. E.C. SHALL REFER TO DETAIL 1 ON THIS DRAWING.
4. THE EMT CONNECTORS & COUPLINGS INSTALLED IN THE WALK-IN COOLERS/FREEZERS SHALL BE COMPRESSION TYPE.
5. EXPOSED CONDUIT OR CONDUIT INSTALLED INSIDE THE WALK-IN COOLERS/FREEZERS SHALL HAVE A 1/4" AIR SPACE BETWEEN THE CONDUIT AND THE WALL OR THE CEILING. USE GALVANIZED BACK SPACERS OR MINERALAC CLIPS.
6. ALL PENETRATIONS THROUGH FIRE-RESISTANT/RATED WALLS, PARTITIONS, FLOORS AND CEILINGS SHALL BE FIRE STOPPED USING APPROVED METHODS AND U.L. LISTED MATERIALS TO MAINTAIN THE FIRE RESISTANCE RATING AS APPROVED BY THE ARCHITECT. SEE DRAWING A-8.

EMS GENERAL NOTES

1. EACH CABLE SHALL BE EXTENDED OUT 15'-0" FROM EACH ELECTRICAL PENETRATION OR TERMINATED AT SENSOR PROVIDED BY REFRIGERATION CONTRACTOR. LEAVE 15'-0" OF SLACK AT EACH RACK OR EMS CONTROL PANEL.
2. ALL MULTI-CONDUIT CABLES SHALL BE NUMBER TAGGED AT EACH END. REFRIGERATION CABLES SHALL BE NUMBERED WITH REFRIGERATION SYSTEM NUMBER. COORDINATE WITH REFRIGERATION CONTRACTOR.
3. ALL EXPOSED RACEWAYS SHALL BE 3/4" EMT AND TERMINATED WITH INSULATED BUSHINGS UNLESS SPECIFICALLY INDICATED OTHERWISE. EXPOSED CONDUITS SHALL RUN UP TO BAR JOISTS. ALL WIRING BELOW 16' AFF SHALL BE ROUTED IN CONDUIT. PROVIDE AND INSTALL BLANK COVERS ON ALL JUNCTION BOXES AND LABEL FOR USE.
4. SEAL ALL CONDUIT PENETRATIONS (INSIDE AND OUTSIDE) AT COOLER/FREEZER WALLS.
5. ALL CABLES SHALL BE TERMINATED WITH 10' WHIPS AT SPECIFIED LOCATION IN METALLIC BOXES, UNLESS SPECIFICALLY INDICATED OTHERWISE.
6. ALL JUNCTION BOXES SHALL BE PROVIDED WITH BLANK COVERS AND LABELED PER WHOLE FOODS REQUIREMENTS.
7. ALL FREE AIR CABLES SHALL BE RUN PARALLEL OR AT RIGHT ANGLES TO THE BUILDING STRUCTURE, FASTENED AT INTERVALS NOT TO EXCEED FIVE FEET, TO THE BOTTOM SIDE OF THE TOP CHORD OF BAR JOISTS WITH THE TIE-WRAPS.
8. ALL WIRING IN THE ELECTRICAL, MECHANICAL, AND REFRIGERATION AREAS SHALL BE EMT TERMINATED IN INSULATING TYPE BUSHINGS.
9. FURNISH AND INSTALL ALL CONDUIT, RACEWAYS, AND WIREWAYS AT EMS BACKBOARD, RACKS AND CONDENSERS AS REQUIRED.

2 NEW COOLER POWER AND EMS PLAN

SCALE: 1/8" =1'-0"

GENERAL ELECTRICAL NOTES

RESPONSIBILITIES

ALL CONDUIT, WIRE AND ELECTRICAL EQUIPMENT SHALL BE INSTALLED AND GROUNDED IN ACCORDANCE WITH THE LATEST RULES AND REGULATIONS OF THE NATIONAL ELECTRICAL CODE AND PER THE REQUIREMENTS OF THE LOCAL POWER COMPANY AND ALL AGENCIES HAVING JURISDICTION.

PROVIDE SEISMIC BRACING FOR LUMINOUS CEILING LIGHTING FIXTURE SUPPORTS.

COORDINATION

COORDINATE WITH REFRIGERATION CONTRACTOR FOR EXACT SIZE AND LOCATION OF EQUIPMENT TO BE INSTALLED.

CONDUIT RUNS ARE SHOWN DIAGRAMMATICALLY AND SHALL BE INSTALLED IN A MANNER TO PREVENT CONFLICTS WITH EQUIPMENT AND STRUCTURAL CONDITIONS. EXPOSED CONDUIT SHALL BE INSTALLED PARALLEL TO BEAMS AND WALLS.

CONSTRUCTION - MATERIALS

OUTLET BOXES EXPOSED AND CONCEALED IN DRY LOCATIONS MAY BE GALVANIZED PRESSED STEEL, IN WET LOCATIONS, BOXES SHALL BE CAST ALUMINUM TYPE WITH THREADED HUBS.

PLATES FOR FLUSH DEVICES SHALL BE BRUSHED STAINLESS STEEL. EXPOSED DEVICES SHALL HAVE GALVANIZED STEEL PLATES.

CONSTRUCTION - INSTALLATION

CONDUITS SHALL BE TERMINATED SO AS TO PERMIT NEAT CONNECTIONS TO MOTORS AND EQUIPMENT.

CONDUITS AND FIXTURES SHALL NOT BE HUNG OR SUPPORTED FROM THE STEEL ROOF DECK OR THE BOTTOM CHORD OF THE STEEL JOIST.

ALL CHEST WIRING SHALL BE CONCEALED ABOVE. DO NOT LAY CONDUITS DIRECTLY ON TOP OF COOLER AND FREEZER BOXES.

SECURE ALL FLOOR MOUNTED ELECTRICAL TO FLOOR.

ALL 15 AND 20 AMPERE RECEPTACLE DEVICES 125 VOLT THROUGH 250 VOLTS INSTALLED OUTDOORS AND IN OTHER WET AND DAMP LOCATION AREAS SHALL BE U.L. LISTED WEATHER-RESISTANT TYPE. NOTE: RECEPTACLE DEVICES INSTALLED IN THE MEAT PREP ROOM, BAKERY, SERVICE FISH, PRODUCE PREP ROOM AND OUTDOORS SHALL BE GROUND FAULT CIRCUIT-INTERRUPTER AS WELL. IN ADDITION, OUTDOOR RECEPTACLE DEVICES INSTALLED WITHIN A HEIGHT OF 6FT FROM GRADE LEVEL SHALL ALSO BE TAMPER RESISTANT.

PROVIDE CONDUIT BUSHINGS FOR ALL CONDUIT NIPPLES, SLEEVES AND RUNS FROM WALL BOXES TO ABOVE CEILING.

ANY DISTURBANCE OF THE FIREPROOFING MATERIAL ONCE IT HAS BEEN INSTALLED WILL BE THE SOLE RESPONSIBILITY AND REMEDY BY THIS SUB-CONTRACTOR.

GROUNDING

ALL DEVICES, EQUIPMENT, FIXTURES, AND THE LIKE SHALL BE GROUNDED BY USE OF A PROPERLY SIZED GROUNDING CONDUCTOR. MECHANICAL/ELECTRICAL BONDS OF THE METALLIC RACEWAY SYSTEM SHALL ALSO BE MAINTAINED.

GROUND WIRES SHALL BE PROVIDED AS FOLLOWS:

EQUIPMENT GROUND WIRES (INSULATED GREEN CONDUCTORS) SHALL BE PROVIDED IN ALL FEEDERS AND ALL BRANCH CIRCUITS.

ALL FLEXIBLE METAL OR LIQUID-TIGHT CONDUIT CONNECTIONS TO EQUIPMENT MOTORS, TRANSFORMERS, LIGHTING FIXTURES, ETC. SHALL CONTAIN EQUIPMENT GROUND WIRES. FLEXIBLE METAL CONDUIT SHALL NOT BE USED AS AN EQUIPMENT GROUND CONDUCTOR.

WHERE TYPE "MC" METAL CLAD CABLE IS SPECIFIED, THE CABLE SHALL BE EQUIPPED WITH AN INSULATED (GREEN) COPPER EQUIPMENT GROUND WIRE, EQUAL IN SIZE TO THE INSULATED CIRCUIT CONDUCTORS.

WIRING METHODS

GENERAL

ALL CONDUCTORS SHALL BE COPPER.

IN FINISHED AREAS, CONCEAL ALL WIRING IN BUILDING WALLS, FLOORS, AND ABOVE CEILINGS. CONDUITS MAY BE RUN EXPOSED ONLY WHERE SHOWN SPECIFICALLY ON THE DRAWINGS OR INSTRUCTED OTHERWISE.

THE EMS SYSTEM WIRING AND DATA CABLING MAY BE RUN ABOVE FINISHED CEILING IN SALES AREAS AND ABOVE RECEIVING/STOCK AREAS WITHOUT CONDUIT. IT MUST BE ROUTED IN A NEAT AND ORDERLY FASHION UTILIZING BRIDLE CLIPS THAT ARE FASTENED TO BOTTOM CHORD OF CONSECUTIVE ROOF BAR JOISTS/GIRDERS.

THE CABLES SHALL BE SUPPORTED USING BRIDLE RINGS CLIPPED TO THE BOTTOM OF EACH JOIST. USE SEPARATE RINGS FOR EACH SYSTEM AND RUN ALL CABLES AT RIGHT ANGLES.

ALL WIRES AND CABLES FOR COMPUTER SYSTEMS AND EMS SYSTEMS SHALL BE TAGGED WITH THEIR ENTRANCE AND EXIT ADDRESSES.

NO WIRING SHALL BE INSTALLED EXPOSED ON THE OUTSIDE SURFACES OF THE BUILDING(S).

FINAL CONNECTIONS TO MECHANICAL EQUIPMENT, FIXTURES, MOTORS, TRANSFORMERS, INSTRUMENTS, AND CONTROL DEVICES SHALL BE FLEXIBLE CONDUIT.

PAINT EXPOSED CONDUIT IN COLOR TO BE SELECTED BY THE ARCHITECT.

BELOW GRADE (UNDERGROUND IN EARTH OR FILL): (NOT USED).

INDOORS (UNCLASSIFIED).

EXPOSED: EMT CONDUIT.

IN DRY WALLS/ABOVE CEILINGS: EMT CONDUIT. METAL CLAD (MC) CABLE.

IN CONCRETE WALLS/FLOORS: RGS CONDUIT.

FINAL CONNECTIONS: FLEXIBLE METAL CONDUIT (LIQUID-TIGHT FLEXIBLE CONDUIT IN DAMP OR WET AREAS).

INDOORS CLASSIFIED "DAMP" OR "WET" LOCATIONS.

ALL AREAS: FEEDERS AND BRANCH CIRCUITS SHALL CONSIST OF PULLED CONDUCTORS IN EMT CONDUIT. CONNECTIONS TO VIBRATING EQUIPMENT SHALL BE LIQUID TIGHT FLEXIBLE CONDUIT, MAXIMUM 18" IN LENGTH.

OUTDOORS.

EXPOSED: RGS CONDUIT.

UNDERGROUND: SCHEDULE 40 PVC CONDUIT.

FINAL CONNECTIONS: LIQUID-TIGHT FLEXIBLE CONDUIT, MAXIMUM 18" IN LENGTH.

CORROSIVE AREAS.

ALL AREAS: PVC COATED RGS CONDUIT.

FINAL CONNECTIONS: LIQUID-TIGHT FLEXIBLE CONDUIT, MAXIMUM 18" IN LENGTH.

CLASSIFIED "HAZARDOUS" AREAS (NEC 500).

ALL AREAS: RGS CONDUIT WITH CONDUIT SEALS.

ELECTRICAL EQUIPMENT ENCLOSURES

SHALL BE PROVIDED AS LISTED BELOW UNLESS NOTED OTHERWISE.

INDOORS UNCLASSIFIED:	NEMA 1
INDOORS CLASSIFIED "DAMP":	NEMA 1
INDOORS CLASSIFIED "WET":	NEMA 4
CLASSIFIED "CORROSIVE":	NEMA 4X
CLASSIFIED "HAZARDOUS":	LISTED AND APPROVED FOR SPECIFIC AREA
OUTDOORS:	NEMA 3R

STARTERS & DISCONNECT SWITCHES

DISCONNECT SWITCHES SHALL BE HEAVY-DUTY TYPE WITH LOCKABLE HANDLE UNLESS OTHERWISE INDICATED. ONE MANUFACTURER SHALL BE USED THROUGHOUT THE PROJECT. ACCEPTABLE MANUFACTURERS ARE SQUARE D, GENERAL ELECTRIC, SIEMENS, AND CUTLER HAMMER.

STARTERS SHALL BE NEMA COMBINATION MAGNETIC STARTERS SIZED PER MOTOR HP, WITH INTEGRAL RED RUN PILOT LIGHT SWITCH. COORDINATE MOTOR STARTER TYPE AND FEATURES WITH THE REQUIREMENTS OF THE MECHANICAL EQUIPMENT AND THE CONTROL SYSTEM. PROVIDE OVERLOAD, UNDER VOLTAGE AND PHASE LOSS PROTECTION IN ALL STARTERS. STARTERS FOR MOTORS 50 HP AND LARGER SHALL BE REDUCED VOLTAGE. ONE MANUFACTURER SHALL BE USED THROUGHOUT THE PROJECT. ACCEPTABLE MANUFACTURERS ARE SQUARE D, GENERAL ELECTRIC, SIEMENS, AND CUTLER HAMMER.

WHERE STATE & LOCAL CODES AND ORDINANCES REQUIRE A DISCONNECTING MEANS BEYOND WHAT IS REQUIRED BY THE NATIONAL ELECTRICAL CODE, CONTRACTOR SHALL PROVIDE IT AS PART OF THE BASE CONTRACT. FOR EXAMPLE, SOME CODES REQUIRE A LOCAL (WITHIN SIGHT) DISCONNECT SWITCH ON MECHANICAL EQUIPMENT EVEN IF THE EQUIPMENT HAS INTEGRAL, FACTORY-INSTALLED SERVICE DISCONNECTING MEANS. IN THIS CASE EXAMPLE, PROVIDE A PROPERLY SIZED DISCONNECT SWITCH MOUNTED AT OR NEAR THE EQUIPMENT. THIS EXTRA MEANS OF DISCONNECT NEED NOT BE FUSED UNLESS INDICATED ON THE DRAWINGS OR IF OTHER REQUIREMENTS DICTATE.

VOLTAGE DROP AND DERATING

FEEDER AND BRANCH CIRCUIT WIRE SIZES SHALL BE SIZED TO PREVENT EXCESSIVE VOLTAGE DROP. FEEDERS SHALL NOT EXCEED 2% VOLTAGE DROP, BRANCH CIRCUITS SHALL NOT EXCEED 3%.

CIRCUITS MAY BE COMBINED IN CONDUITS AND RACEWAYS PROVIDED THAT THE WIRE IS PROPERLY DERATED AND CONDUIT SIZED PER CODE. UNDER NO CIRCUMSTANCES SHALL MORE THAN NINE (9) CURRENT CARRYING CONDUCTORS BE RUN IN A SINGLE CONDUIT.

PLANS REFLECT CONDUCTOR SIZE INCREASES AS REQUIRED FOR DERATING OF CONDUCTORS AS A RESULT OF STANDARD ENGINEERING PRACTICE AND ESTIMATED CONDUCTOR LENGTH. ELECTRICAL SUB-CONTRACTOR SHALL VERIFY ADEQUACY OF CONDUCTOR SIZES BASED ON ACTUAL INSTALLATION, ROUTING AND FIELD CONDITIONS AND MODIFY ACCORDINGLY. SUCH MODIFICATIONS SHALL BE INCLUDED IN THE CONTRACT.

WHERE CIRCUIT CONDUCTORS ARE INCREASED IN SIZE FOR VOLTAGE DROP, THE GROUND WIRE SIZE SHALL BE INCREASED PROPORTIONATELY (ACCORDING TO CIRCULAR MIL AREA) FROM THE SIZE REQUIRED BY NEC.

MISCELLANEOUS

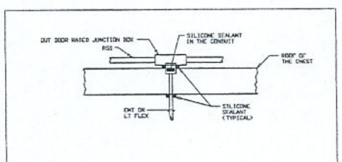
TERMINATION'S (LUGS, TERMINALS, ETC.) ON ALL EQUIPMENT SHALL BE RATED FOR USE WITH 75°C CONDUCTORS.

ELECTRICAL SYMBOLS LIST

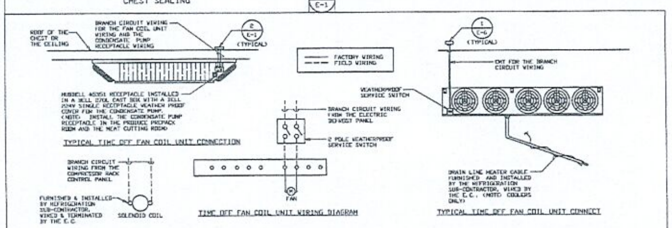
SYMBOL	DESCRIPTION
	ELECTRICAL CONDUIT
	ELECTRICAL CONDUIT RUN CONCEALED VIA FLOORS, WALLS, UNDERGROUND
	CONDUIT TURNED UP
	CONDUIT TURNED DOWN
	CONDUIT END (CAPPED)
	FLEXIBLE CONDUIT OR CABLE
	FLUORESCENT LIGHTING FIXTURE (LETTER DESIGNATES LIGHTING FIXTURE TYPE)
	WALL LIGHTING FIXTURE OUTLET (LETTER DESIGNATES LIGHTING FIXTURE TYPE)
	EXIT LIGHT FIXTURE (CEILING OR PENDANT MOUNT)
	EMERGENCY LIGHT FIXTURE
WP	WEATHERPROOF AND RAINTIGHT MOTION SENSOR WATTSTOPPER #EN-100-120-W, #EN-100-277-W (OR APPROVED EQUAL)
	JUNCTION BOX
SW	FAN SWITCH ELECTRICAL CONNECTION
	GROUND ROD
60	WEATHERPROOF STROBE LIGHT, NUMERAL INDICATES CANDELA RATING
	DEFROST TERMINATION THERMOSTAT
	TEMPERATURE PROBE DESIGNATION

ABBREVIATIONS LIST

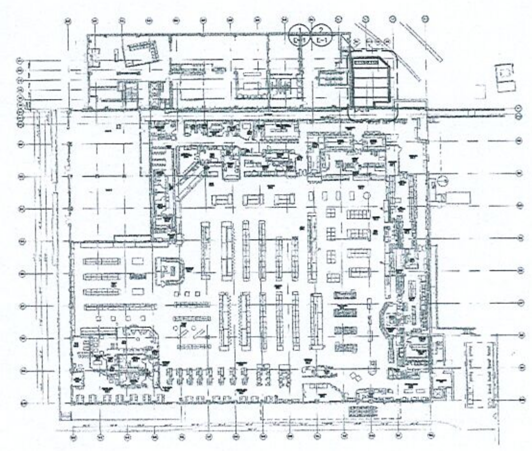
IDENTIFIER	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	INTERRUPTING CAPACITY (RMS SYMMETRICAL AMPERES)
BLDG	BUILDING
C	CONDUIT
CB	CIRCUIT BREAKER
C.C.	CONTROL'S SUB-CONTRACTOR
CL	CENTERLINE
CLG	CEILING
CO	COMPANY
CONTR	CONTRACTOR
DLH	DRAIN LINE HEATER
DN	DOWN
DWG(S)	DRAWING(S)
E.C.	ELECTRICAL SUB-CONTRACTOR
EM	EMERGENCY
EMS	ENERGY MANAGEMENT SYSTEM
EMT	ELECTRICAL METALLIC TUBING
EQUIP	EQUIPMENT
FLA	FULL LOAD AMPS
FS	FLOW SWITCH
G OR GND	GROUND
G.C.	GENERAL CONTRACTOR
GFI	GROUND FAULT CIRCUIT INTERRUPTER
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
HC	HVAC CONTRACTOR
HVAC	HEATING, VENTILATION AND AIR CONDITIONING
HP	HORSEPOWER
I/O	INPUT/OUTPUT
JB	JUNCTION BOX
KCMIL	THOUSAND CIRCULAR MIL (ALSO KCM OR MCM)
LT(S)	LIGHT(S) (LTG - LIGHTING)
LRA	LOCKED ROTOR AMPS
MAX	MAXIMUM
M.C.	MECHANICAL SUB-CONTRACTOR
MCA	MINIMUM CIRCUIT AMPS
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MDP	MAIN DISTRIBUTION PANEL
MDS	MAIN DISTRIBUTION SWITCHBOARD
MFR	MANUFACTURER
MH	MOUNTING HEIGHT
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MOCP	MAXIMUM OVERCURRENT PROTECTION
MTD	MOUNTED
N	NEUTRAL (GROUNDED CIRCUIT CONDUCTOR)
NEC	NATIONAL ELECTRIC CODE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
O.C.	ON CENTER
OEM	ORIGIONAL EQUIPMENT MANUFACTURER
P.C.	PLUMBING SUB-CONTRACTOR
PNL	PANEL
PVC	POLYVINYL CHLORIDE
R.C.	REFRIGERATION SUB-CONTRACTOR
RGS	RIGID GALVANIZED STEEL
RLA	RUNNING LOAD AMPS
RT	RAIN TIGHT - RATED FOR WET LOCATION
RTU	ROOF TOP UNIT
SQ	SQUARE FEET
STP	SHIELDED TWISTED PAIR
TMCC	TEMPERATURE MOTOR CONTROL CENTER
TYP	TYPICAL
UPS	UNINTERRUPTED POWER SOURCE
UTP	UNSHIELDED TWISTED PAIR
WP LOCATION	WEATHERPROOF (WATERPROOF) - RATED FOR WET



CHEST SEALING (1/E-1)



FAN COIL UNIT WITH TIME OFF DEFROST CONNECTIONS (2/E-1)



KEY PLAN

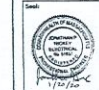
SCALE: 1" = 30'-0"

No.	Date	Revision
4	01/10/20	ISSUED FOR PERMIT
3	08/23/19	RE-ISSUED FOR PRICING
2	12/19/18	RE-ISSUED FOR PRICING
1	11/26/18	ISSUED FOR PRICING

Project Title: WHOLE FOODS

WHOLE FOODS MARKET - INK BLOCK
348 HARRISON AVENUE,
BOSTON, MASSACHUSETTS

Seal:



Prepared By:

JACOBS
JACOBS CONSULTANTS, INC.
One Broadway Cambridge, MA 02142

COOLER GENERAL NOTES, LEGEND, LIGHTING, & POWER PLAN

Designed by : NMB
Drawn by : NMB
Checked by : NMB
Scale : AS NOTED
Date : 08/23/2019

Drawing No.

E 1

Project No. F6W70100 INK BLOCK WFM

SCHEDULE FOR PANEL: LPG													
VOLTAGE: 480/277V, 3Ø, 4W													
MAIN BUS: 125A													
CKT #	SERVICE	LOAD VA	BREAKER P	TRIP	PHASE A	PHASE B	PHASE C	BREAKER P	TRIP	LOAD VA	SERVICE	CKT #
1	EXT FACE LIGHTS (ROOF LIGHTS)	1474	1	20	2529			1	20	1101	HEAT & SPEC. STORE LIGHTS	2
3	SIGNAGE (BACK LIGHTS)	534	1	20		2473		1	20	1939	NURSERY AREA LIGHTS	4
5	PRODUCE PREP AREA LIGHTS	792	1	20			1616	1	20	702	PRODUCE PREP AREA TOUCH	6
7	PRODUCE PREP AREA LIGHTS	540	1	20	1188			1	20	594	PRODUCE PREP AREA LIGHTS	8
9	BACK STOCK & CORR. LIGHTS	273	1	20		665		1	20	90	LIGHTS ONLY CORRIDOR	10
11	SALES AREA EXTRA LIGHTS	540	1	20			792	1	20	792	CHEMICAL SHED & EXISTING LIGHTS	12
13	DRY GOODS & BACK STOCK EM LIGHTS	198	1	20	343			1	20	145	FOOD FOODS AREA EMER. LIGHTS	14
15	EXTERIOR SIGNS	306	1	20		432		1	20	306	EXTERIOR SIGNS	16
17	BATHROOM SIGNS	252	1	20			432	1	20	108	BATHROOM SIGNS	18
19	PRODUCE TOUR LIGHTS	1728	1	20	1728			1	20		PRODUCE TOUR LIGHTS	20
21	EXTERIOR SIGNS	217	1	20		217		1	20		EXTERIOR SIGNS	22
23	EXTERIOR COOLER LIGHTS	417	1	20			3450	1	20	3047	IMPULSE MOTION HOOD SERVER	24
25	SPARE		1	20	0			1	20		SPARE	26
27	SPARE		1	20		0		1	20		SPARE	28
29	SPARE		1	20			0	1	20		SPARE	30
31	SPACE		1								SPACE	32
33	SPACE		1								SPACE	34
35	SPACE		1								SPACE	36
37	SPACE		1								SPACE	38
39	SPACE		1								SPACE	40
41	SPACE		1								SPACE	42
	TOTAL CONNECTED LOAD (VA)	16027			21330VA	14402VA	21797VA	(AMPS/PHASE)				
	TOTAL CONNECTED LOAD (AMPS)	167.52/277V										

1 PANEL LPG
SCALE: NO SCALE

SCHEDULE FOR PANEL: PBP - BAKERY PREP AREA													
VOLTAGE: 1Ø+2Ø 120/240V, 3W, 4W													
MAIN BUS: 200A													
CKT #	SERVICE	LOAD VA	BREAKER P	TRIP	PHASE A	PHASE B	PHASE C	BREAKER P	TRIP	LOAD VA	SERVICE	CKT #
1	SPARE	1440	1	15	1440			1	20	1800	HOT LINES	2
3	EXT. RECEPTACLES (ROOF TOP)	1800	1	20		1800		1	20		SPARE	4
5	EXT. RECEPTACLES	1800	1	20			1800	1	20	1200	ICE MAKER (ROOF)	6
7	EXT. RECEPTACLES	1200	1	20	1800			1	20	1440		8
9	COMPRESSOR (ROOF)	1440	1	20		1440		1	20		1440	10
11	SIGNAGE (ROOF)	600	1	20			1440	1	20		1440	12
13	HOT TREATS SIGNS	1440	1	20	1440			1	20	240		14
15	HOT TREATS SIGNS	1440	1	20		1440		1	20	240		16
17	BAKERY PREP BACK WALL RECEPT.	540	1	20			1440	1	20	240		18
19	BOOK LIGHTS & RECEPTACLES (TOP)	540	1	20	1440			1	20	1920	EXTERIOR COOLER EVAP.	20
21	BAKERY PREP	1440	1	15		2400		1	20	1920	EXTERIOR COOLER EVAP.	22
23	BAKERY PREP (FRONT TRACK)	2400	1	20			2400	1	15		BAKERY FOOD CORRIDOR	24
25	HOT HOLD BETWEEN CTRL PANELS	1200	1	15						0.7		26
27	SPARE	0	1					2	20	0.7	COOLING DOOR	28
29	SPARE	0	1							0.7		30
31	SPACE							1	20	400	BAKERY FOOD CORRIDOR	32
33	SPACE							1	20	520	DOOR HEATER	34
35	SPACE											36
37	SPARE		2	20	0			1	15	410	DOOR HEATER	38
39						0						40
41							0	2	20	100	EXTRACTORS (ROOF)	42
	TOTAL CONNECTED LOAD (VA)	20240			8640VA	8640VA	3040VA	(VA/PHASE)				
	TOTAL CONNECTED LOAD (AMPS)	84.09AMPS			36.00	36.00	12.67	(AMPS/PHASE)				

NOTES:
1. PROVIDE GFI

REMOVE 15A-2P BREAKER, INSTALL 20A/2P CIRCUIT BREAKERS TO MATCH EXISTING PANEL

2 PANEL PBP
SCALE: NO SCALE

SCHEDULE FOR NEW PANEL: HTP (DISTRIBUTION BYPASS)													
VOLTAGE: 480Y/277V, 3Ø, 4W													
MAIN BUS: 400A													
CKT #	SERVICE	LOAD VA	BREAKER P	TRIP	PHASE A	PHASE B	PHASE C	BREAKER P	TRIP	LOAD VA	SERVICE	CKT #
1	PD1	2162	1	20	4274			1	30	3106	PD1	2
3	PD2	2382	1	30		1965		1	30	1218	PD2	4
5	PD4	2127	1	20			5281	1	50	2584	PD3	6
7	SPARE				1872			1	30	1281	PD7	8
9	PD8	1984	1	20		2182		1	20	1367	PD10	10
11	PD9	2238	1	30			4631	1	20	1751	PD12	12
13	PD11	2673	1	30	4941			1	20	2160	PD13	14
15	PD15	2987	1	30		4989		1	20	1462	PD16	16
17	PD18	3430	1	20			3014	1	20	1880	PD19	18
19		11666			11666			1	15	175	COOLER DRAIN HEAT TRACE	20
21	AMBIENT PANEL	13541	3	100		13585		1	15	444	COOLER GUTTER HEAT TRACE	22
23		13538					13538				SPACE	24
25	SPACE				0						SPACE	26
27	SPACE					0					SPACE	28
29	SPACE						0				SPACE	30
31	SPACE				0						SPACE	32
33	SPACE					0					SPACE	34
35	SPACE						0				SPACE	36
37	SPACE				0						SPACE	38
39	SPACE					0					SPACE	40
41	SPACE						0				SPACE	42
	TOTAL CONNECTED LOAD (VA)	70933			29179	27436	26170	(VA/PHASE)				
	TOTAL CONNECTED LOAD (AMPS)	84.94AMPS			60.96(3)	96.11(1)	94.34(2)	(AMPS/PHASE)				

INSTALL NEW 15A/1P CIRCUIT BREAKER TO MATCH EXISTING PANEL.

3 PANEL HTP
SCALE: NO SCALE

GENERAL NOTES:

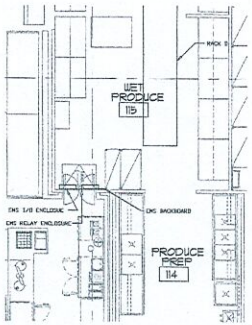
1. EXISTING CIRCUIT DESIGNATIONS AND BREAKER INFORMATION ARE SHOWN FOR INFORMATION ONLY. EC SHALL FIELD VERIFY ALL EXISTING CIRCUITS PRIOR TO COMMENCING WORK.
2. ALL CIRCUITS SHOWN AS GRAY ARE EXISTING TO REMAIN. UNLESS OTHER WISE NOTED. EC TO FIELD SURVEY ALL EXISTING CIRCUITS AND RE-LABELED AS REQUIRED.
3. EC SHALL VERIFY EXISTING PANELBOARDS LOAD CAPACITY PRIOR TO CONNECTING NEW LOADS. ADDITIONAL LOADS SHALL NOT EXCEED 80% OF CIRCUIT BREAKER CAPACITY.
4. ALL ADDITIONAL CIRCUIT BREAKERS SHALL MATCH EXISTING PANEL.
5. PROVIDE HACR RATED BREAKERS FOR ALL HEATING AND REFRIGERATION EQUIPMENT CIRCUITS.

	CONDUCTOR
N. CIRCUITS	
	2 #12 & 1 #12 GND. – 1/2"C.
	2 #10 & 1 #10 GND. – 3/4"C.
	2 #8 & 1 #10 GND. – 3/4"C.
	2 #6 & 1 #10 GND. – 3/4"C.
	2 #4 & 1 #10 GND. – 1"C.
N. CIRCUITS	
	2 #12 & 1 #12 GND. – 3/4"C.
	2 #10 & 1 #10 GND. – 3/4"C.
	2 #8 & 1 #10 GND. – 3/4"C.
	2 #6 & 1 #10 GND. – 3/4"C.
	2 #4 & 1 #10 GND. – 1"C.
	2 #4 & 1 #8 GND. – 1"C.
	2 #3 & 1 #8 GND. – 1"C.
ø, 3W. CIRCUITS	
	3 #12 & 1 #12 GND. – 3/4"C.
	3 #10 & 1 #10 GND. – 3/4"C.
	3 #8 & 1 #10 GND. – 3/4"C.
	3 #6 & 1 #10 GND. – 3/4"C.
	3 #4 & 1 #10 GND. – 1"C.
N. CIRCUITS	
	3 #12 & 1 #12 GND. – 3/4"C.
	3 #10 & 1 #10 GND. – 3/4"C.
	3 #8 & 1 #10 GND. – 3/4"C.
	3 #6 & 1 #10 GND. – 3/4"C.
	3 #4 & 1 #10 GND. – 1"C.
	3 #4 & 1 #8 GND. – 1"C.
3ø, 4W. CIRCUITS	
	4 #12 & 1 #12 GND. – 3/4"C.

LIGHTING FIXTURE SCHEDULE

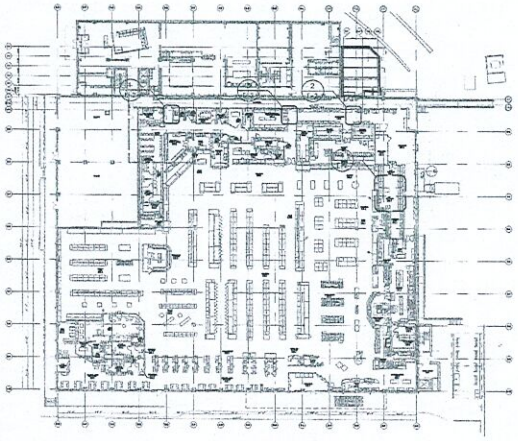
TYPE	MANUFACTURER	CATALOG NO.	NO.	LAMP/WATTS	VOLTS	FINISH	MOUNTING	LOCATION	DESCRIPTION	NOTES
F41-4	LITHONIA	F28 LAR 32000LM MD INSLT 20K 80CRI 0WFL W/EFAH	10	LED 39W	INSLT	WHITE	SURFACE 7'-6" AFF	COOLER	HEIGHT SENSITIVE LINEAR FLUSH	1
X	LITHONIA	EWI LED 6LWR	1	INTEGRATED LED, 5W	120/ 277	WHITE	SURFACE, PENDANT	COOLER	EXIT SIGN W/ LED LAMP & BATTERY	
EW	LITHONIA	ULTRAM	1	COMPLETE WITH UNIT 6.2	INSLT	GREY	SURFACE 7'-6" AFF	COOLER	EMERGENCY LIGHT FOR WET LOCATION	

NOTES:
1. OCCUPANCY SENSOR CONTROLLED.
2. COORDINATE EXACT FIXTURE TYPE WITH THE OWNER PRIOR TO ORDERING.



NOTES:
1. EC SHALL INSTALL 3/4" EMT CONTAINING SENSOR CABLE 3C-#18, TWISTED PAIR, STRANDED, SHIELDED, BROWN JACKET. BELDEN CABLES MUST BE USED. SUBSTITUTION, ALTERNATES, OR EQUIVALENTS WILL NOT BE ACCEPTED.
2. EMT SHALL BE TERMINATED AT DMS BACK BOARD. LEAVE 10'-0" OF CABLE SLACKED.

4 RACK D LOCATION
1/4"=1'-0"



KEY PLAN
SCALE: 1" = 30'-0"

No.	Date	Revision
4	8/15/19	ISSUE FOR PERMIT
3	05/31/19	RE-ISSUE FOR PRICING
2	03/15/19	RE-ISSUE FOR PRICING
1	01/25/19	ISSUE FOR PRICING

Project Title:
WHOLE FOODS MARKET – INK BLOCK
348 HARRISON AVENUE,
BOSTON, MASSACHUSETTS

Seal:

Prepared by:
JACOBS
Jacobs Engineering Group Inc.
One Boston Corporate Center, Suite 2100
Boston, MA 02116
617-241-8000

PANEL & LIGHTING SCHEDULES & RACK D EQUIPMENT

Designed by : NMB
Drawn by : NMB
Checked by : NMB
Scale : AS SHOWN
Date : 8/23/2019

Drawing No.
E-2

Project No. P6W701000

INK BLOCK BTA