



CAPITOL PARK DECK LLC  
401 S. WASHINGTON SQ., SUITE 102  
LANSING, MI 48933

City of Detroit  
Buildings, Safety, Engineering, and Environmental Dept.  
Plan Review Division

RE: BLD2021-04620

To Whom it May Concern,

This letter serves to provide more detail on the one for one replacement of a roof and storefront system located at 1405 Griswold Street, Detroit, MI 48226. The scope of work completed includes:

1. Scope Item #1: A one for one replacement of metal roof deck and rubber membrane roof as the old roof was leaking and needed replaced. This scope of this work was reviewed and authorized by a licensed structural engineer. Please see letter included here that further describes scope and specifications.
2. Scope Item #2: A one for one replacement of an aluminum storefront system. The old system was leaking water and needed replaced. The new system was installed in the exact same location with the same configuration as the previous system. Included with this letter are the engineered drawings completed by the storefront manufacturer.
3. Also included in this letter is a letter from Kraemer Design Group responding to additional plan review questions that were presented.

We hope this satisfies the plan review questions and allows the permit to be issued. Please let us know if there is anything further needed.

Sincerely,

A handwritten signature in blue ink, appearing to read 'William Goldberg', with a long horizontal flourish extending to the right.

William Goldberg  
[wgoldberg@buildtech.com](mailto:wgoldberg@buildtech.com)  
248-505-3042



Consulting  
Engineers and  
Scientists

November 29, 2021  
Project Number 2001817

Mr. Richard Karp  
Mr. Kevin Prater  
Buildtech, Ltd.  
401 South Washington Square  
Lansing, MI 48933

**RE: Capitol Park Deck, 1411 Griswold St., Detroit, MI Coffee Shop Reroof Project**

Dear Messrs. Karp and Prater:

GEI Consultants reviewed the reroofing performed on the coffee shop area connected to the Capitol Park Garage. In particular, we reviewed the structural capacity of the new roof deck to carry applied roof loading. As shown in the attachments, the roof deck material is 1-1/2", 22 Ga., Type B roof deck material. This is a common product for this type of application. Per the attached Type B allowable load tables, the three-span deck condition allows for up to 68 pounds per square foot (psf) of additional insulation, roofing and snow/live load on the largest span at the 4-foot-wide end. The majority of the roof has 61-inch spans which can carry 129 psf of additional loading. Allowance is made for 10 psf to cover insulation, roofing and some miscellaneous hanging weight from the deck. This results in over 50 psf remaining capacity for live load on the longest end bay and over 110 psf capacity for the remainder of the roof. Per the 2015 IBC Code, currently adopted in the State of Michigan, ground snow load in the Detroit area is 20 psf, which is below the roof deck allowable load described above. Flat roofs are also to be designed for a live load of 20 psf, which can be carried by the new roof deck as installed.

Based upon the above discussion, the new 1-1/2", 22 Ga, Type B roof deck is structurally capable of carrying the code prescribed live and snow loading requirements.

Please let me know if you have further questions on this project.

Sincerely,

GEI CONSULTANTS, INC.

Steven A. Elver, P.E., S.E.  
Senior Consultant



Jamie S. Matus, P.G., CPG  
Sr. Vice President/Principal

Attachments: Roof Deck Quote and Measurements  
Roof Deck Load Capacity Chart

## QUOTATION

DATE: 6/30/21

ATTENTION: **BILL GOLDBERG**

COMPANY: **BUILD TECH**

PROJECT:

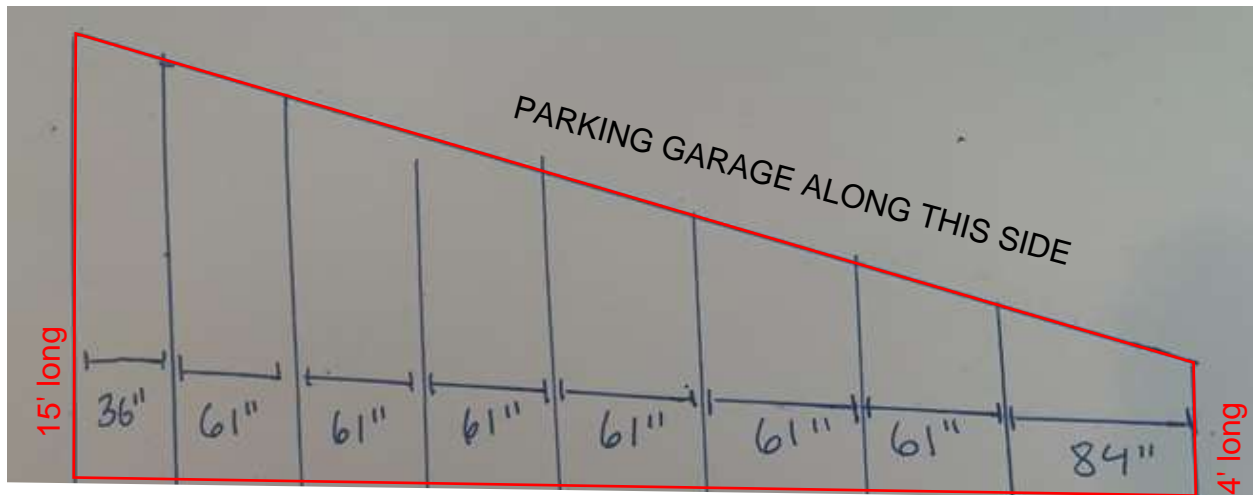
LOCATION: **DETROIT, MI (DELIVERED)**

WE PROPOSE TO FURNISH THE FOLLOWING MATERIAL:

**1 1/2" TYPE 'B' 22 GAGE PRIME PAINTED ROOF DECK**

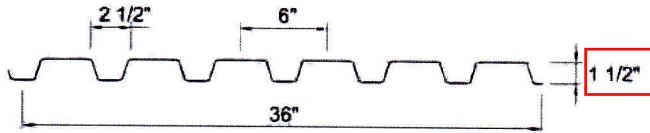
**6 PCS. 36" WIDE x 18'-2" LONG**

**5 PCS. 36" WIDE x 15'-2" LONG**



ROOF PLAN VIEW SHOWING DECK SPANS BETWEEN ORIGINAL BEAM LINES

# B, BA, BV DECK



Height	1 1/2 in.
Fy (minimum)	33 ksi
Modulus of Elasticity	29500 ksi

### SECTION PROPERTIES

Gage	Fy (ksi)	Coverage (in)	Thickness (in)	Weight (psf)	I (in <sup>4</sup> /ft)	Sp (in <sup>3</sup> /ft)	Sn (in <sup>3</sup> /ft)
22	33	36	0.0295	1.63	0.177	0.189	0.198
20	33	36	0.0358	1.96	0.213	0.235	0.247
18	33	36	0.0474	2.57	0.290	0.315	0.316

### ALLOWABLE UNIFORM LOADS

Span Condition	Gage	Allowable Total (Dead + Live) Uniform Load (psf)										Max. Constr. Span (ctr. to ctr.)
		Center to Center Span (ft. - in.)										
		5 - 0	5 - 6	6 - 0	6 - 6	7 - 0	7 - 6	8 - 0	8 - 6	9 - 0	9 - 6	
Single	22	91	71	57	47	40	34	30	27	24	22	5 - 8
	20	111	86	69	56	47	40	35	31	27	25	6 - 7
	18	156	119	94	76	63	53	46	40	35	31	8 - 2
Double	22	107	88	74	63	54	47	42	37	33	30	6 - 8
	20	133	110	92	79	68	59	52	46	41	37	7 - 10
	18	170	140	118	101	87	76	66	59	53	47	9 - 6
Triple	22	133	129	110	93	79	68	59	50	44	38	6 - 9
	20	166	137	115	98	84	70	59	51	45	39	7 - 11
	18	213	176	146	125	107	93	78	67	58	51	9 - 8

### Notes

- Section properties are calculated using the AISI Cold Formed Steel Design Specifications, 1996 Edition.
- Loads and maximum construction spans are based on the SDI Design Manual for Composite Decks, Form Decks and Roof Decks, Publication No. 30.
- Maximum cantilever spans are based on SDI criteria and are sensitive to adjacent spans. For this table, adjacent span is assumed to be at least 1.5 times longer than the cantilever span.
- Minimum end bearing length shall be 1 1/2".
- Loads shown in RED are governed by the live load deflection not in excess of 1/240 of span. 10 psf dead load has been included.
- Perforations which are placed in the vertical ribs of type BA deck reduce the strength less than 5%.

### FACTORY MUTUAL SPANS

Gage	Max. Ctr. to Ctr. Span (ft.-in.)
22	6 - 0
20	6 - 6
18	7 - 5

### CANTILEVER SPANS

Gage	Maximum Cantilever Span (ft.-in.)
22	2 - 0
20	2 - 4
18	2 - 8

- Type B deck provides the best balance of strength and economy of all the 1 1/2" deep roof decks. 1" (minimum) rigid roofing insulation is required to be used with type B deck.
- Available with nested side laps only.
- Available as an acoustic deck. Type BA deck is manufactured with perforations in the vertical ribs, having a NRC rating of 0.60 with 1 1/2" (minimum) rigid roofing insulation.
- Available as a vented deck. Type BV deck is manufactured with slot vents in the bottom flutes. The openings equal 0.5% of total surface. Type BV deck is to be specified when venting is required for cementitious insulation fills. Type BV deck is manufactured at our Lake City, FL facility only.
- Type B deck is Factory Mutual approved. Type BA and BV decks are not Factory Mutual approved.
- Type B, BA and BV decks are manufactured from steel conforming to ASTM A1008-00 Grades C, D or E or from A653/A653M-00 structural quality grade SQ33 or higher. The minimum yield strength used by NMBS is 33 KSI.
- Minimum attachment to supporting structural members requires connections at all side lap ribs plus a sufficient number of interior ribs to limit the spacing between connections to 18". Side laps are to be fastened together between supports, at a maximum spacing of 36" o.c. whenever the deck span exceeds 5'-0". Connections can be made either by welding using a minimum 5/8" diameter puddle weld or properly designed mechanical fasteners.

# EXHIBIT A

## Products Used & Notes

Framing System: 200CW  
Frame Profile: 2" x 6"

## Design Criteria




**WIND LOAD CRITERIA:**  
Wind Speed: 115 mph  
Risk Category: II  
Exposure: B  
Building Height: 25' - 0"  
Corner WL: 16.3 psf  
Interior Vestibule WL: 10 psf  
Interior WL: 5 psf

**DEFLECTION CRITERIA:**  
LATERAL DEFLECTION:  
L1/175 for spans less than 13' - 6"  
L/240 + 1/4" for spans greater than 13' - 6"  
LATERAL CANTILEVER DEFLECTION:  
2L/175  
DEFLECTION PARALLEL TO GLAZING PLANE:  
1/8" Maximum

## Project Notes

- 1) Wind load conditions assumed based on general project location. If actual wind pressure is greater than the assumed then noted systems will have to be re-evaluated. Wind load calculations in accordance with ASCE 7-10. Building height assumed to be 25'-0".
- 2) Wind load taken from previous review dated 4/9/2020

## Symbol / Note Key

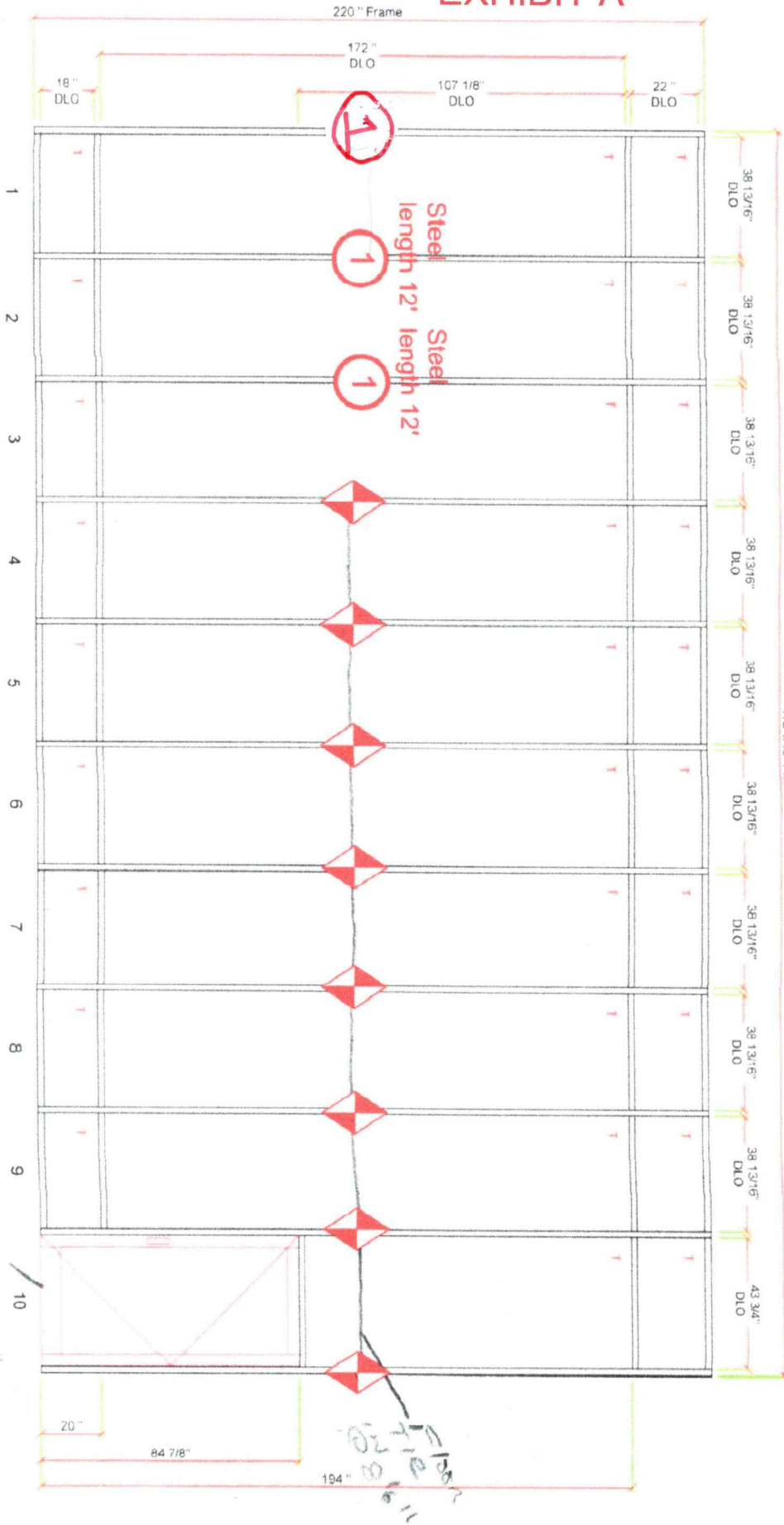
-  1-1/2" x 3-1/2" steel bar centered on span
-  Wind load anchor
-  Perimeter "F" Anchor

**TUBELITE**  
DEPENDABLE  
LEADERS IN ECO-EFFICIENT STOREFRONT CURTAINWALL AND ENTRANCE SYSTEMS

<b>Project:</b>	Urban Bean
<b>Reviewed By:</b>	Carlos Soto
<b>Date:</b>	8/19/2020

**DISCLAIMER:**  
THIS REVIEW BY TUBELITE INC. SHALL NOT BE CONSIDERED AS AN ENDORSEMENT OR APPROVAL BY A PROFESSIONAL ENGINEER.  
THIS REVIEW IS PROVIDED FOR THE PURPOSES OF ESTIMATING ONLY. REFER TO THE MANUFACTURER'S INSTRUCTIONS FOR THE PROPER ANCHORING, SPLICE JOINTS, REINFORCEMENT, BACKSTAYS OR THERMAL EXPANSION ARE PROVIDED AS A GUIDELINE FOR INSTALLATION. IT IS THE RESPONSIBILITY OF THE INSTALLER TO VERIFY THE INSTALLATION. ALL APPLICABLE LOCAL, STATE AND FEDERAL CODES SHALL BE FULLY APPLIED. A REGISTERED PROFESSIONAL ENGINEER IS RECOMMENDED.

# EXHIBIT A

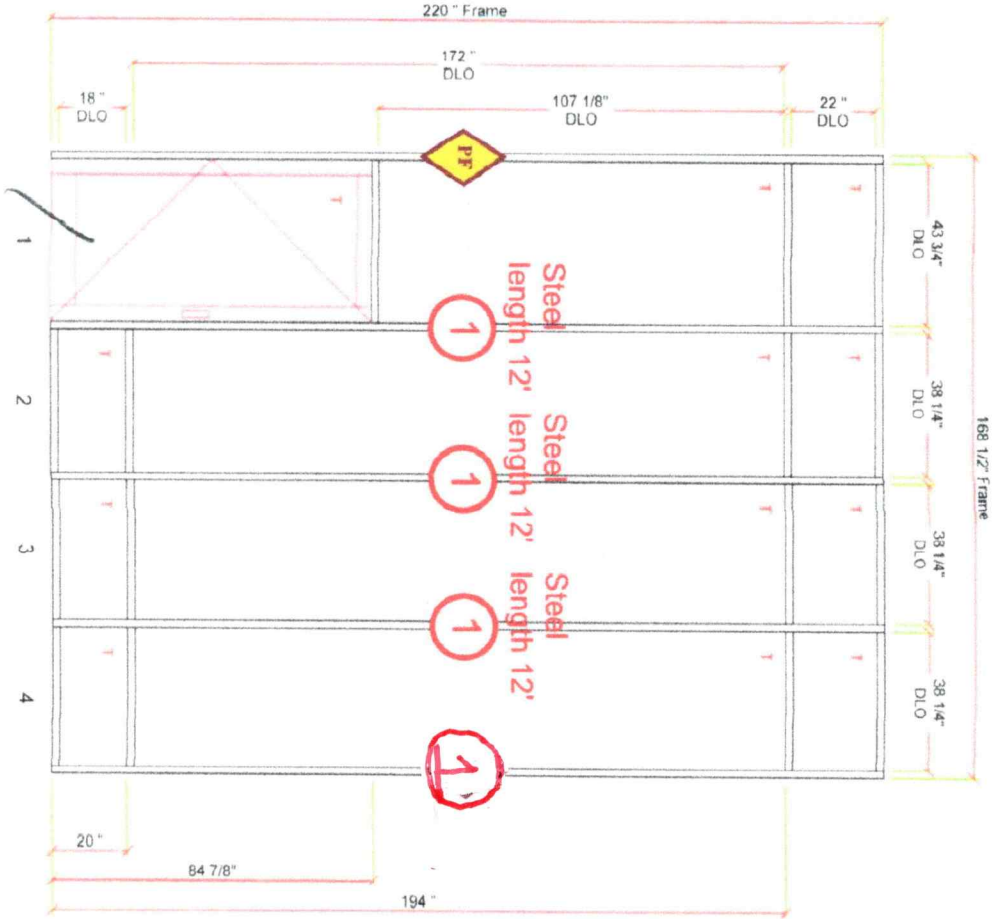


American Gem Services  
 O-Ring Bearings

E1199 OK as noted  
 Use F&T anchors

*EAT Bearings and  
 42 3/4" dia  
 4" COMPANION  
 5/8" FRAME*

# EXHIBIT A



*42 X 54"  
Punch  
Steel  
Superframe*

*SOON Elevator*

**E1199 OK as noted  
Use F&T anchors**

*American Gen Services  
UPRAN BEAM*

November 22, 2021

Mr. Imad Baiyasi  
Buildings, Safety Engineering, and Environmental Department  
City of Detroit  
Coleman A Young Municipal Center  
4<sup>th</sup> Floor  
Woodward Avenue, Detroit, MI 48226

**RE: BLD2021-04620**

Dear Mr. Baiyasi:

The following is in response to the Checklist Comments Report for project BLD2021-04620. For ease of reference, the city comments have been copied from the aforementioned Report into the body of the message below. The responses listed below are in responses to the original Report, refer to ProjectDox for any clarifications in language or intent.

As a general clarification – the scope of work for this project includes general maintenance repair/replacement of the roof and storefront curtainwall system, both of which were leaking and were replaced one for one with like materials and design.

1. CITY COMMENT: PROVIDE THE USE OF CURRENT APPLICABLE CODE, MBC OR MRBEC.
  - a. RESPONSE: Current applicable code is MRBEC Prescriptive Method. Scope falls under Chapter 7, Alterations - Level 1.
2. CITY COMMENT: PROVIDE USE GROUP CLASSIFICATION MBC 2015, CHAPTER 3.
  - a. RESPONSE: The building Use Group Classification is A-2.
3. CITY COMMENT: PROVIDE CONSTRUCTION TYPE MBC 2015, CHAPTER 6.
  - a. RESPONSE: The building Construction Type is IIB.

Sincerely,

**Kraemer Design Group, LLC**



Laura Mitchell, RA, NCARB  
Project Architect | Team Lead

