

### **Planning Commission**

Jeff Newsom, Vice-Chairperson Michael Mitchell, Commissioner

Larry Fox, Chairperson Joseph W. Colaianne, Trustee Keith Voight, Secretary Sue Grissim, Commissioner Tom Murphy, Commissioner

**Planning Commission Meeting Agenda Hartland Township Hall** Thursday, November 07, 2019 7:00 PM

- 1. Call to Order
- Pledge of Allegiance
- 3. Roll Call
- Approval of the Agenda
- Approval of Meeting Minutes
  - a. Planning Commission Minutes of September 26, 2019
- Call to Public
- Old and New Business
  - a. Site Plan #19-009 Burger King Remodel
- 8. Call to Public
- 9. Planner's Report
- 10. Committee Reports
- 11. Adjournment

### 1. Call to Order - Combined Meeting with Township Board

### 2. Roll Call

PRESENT: Joe Colaianne, Thomas Murphy, Larry Fox, Sue Grissim, Michael Mitchell

ABSENT: Jeff Newsom, Keith Voight

#### 3. Call to Public

None

### 4. Workshop

The Hartland Township Board and the Hartland Township Planning Commission discussed the following items:

### a. Residential Market Analysis

Planning Director Langer gave a brief overview of the Residential Market Analysis of August 2014 and recent work that a sub-committee of the Planning Commission has done with regards to the multi-family land use designation on the Future Land Use Map. The group discussed the following designated multi-family areas:

- 1) South of Clyde Road, East of US-23
  - 2) East of Hartland Road, South of Dunham Road
    - 3) North of M-59
    - 4) South of M-59

The Planning Commission will have further discussions on multi-family needs of the township before making a recommendation on changes to the Future Land Use Map.

### b. Retail Market Analysis

Planning Director Langer gave a brief overview of the recent Retail Market Analysis prepared by the Gibbs Planning Group, which stated the township could support an additional 20-25 acres of retail business after the full build out of current developments in the township. The group discussed the following locations: 1) Clyde Road and 2) M-59 and Old US-23, where there was undeveloped commercial land that has no current site plan. The Clyde Road land has the potential to be reclassified to light industrial, but after further discussions, it was recommended that the Planning Commission re-evaluate the permitted uses of the light industrial classification before recommending any rezoning of this area. The result of the discussions on the M-59 and Old US-23 land was to leave this area zoned commercial, but to consider mixed use developments and possible marketing of this area as a special use area.

#### c. Comprehensive Plan

The group discussed updates to the Comprehensive Plan with a potential full revision within the next couple of years.

### 5. Adjournment

The meeting was adjourned at 8:20 PM

Submitted by,

Keith Voight Planning Commission Secretary

### Hartland Township Planning Commission Meeting Agenda Memorandum

**Submitted By:** Troy Langer, Planning Director

**Subject:** Site Plan #19-009 Burger King Remodel

**Date:** October 31, 2019

#### **Recommended Action**

### Recommended motion for Site Plan Application #19-009 (Burger King Remodel)

Move to approve Site Plan Application #19-009, a request to amend the original site plan and remodel the existing Burger King building at 10382 Highland Road. The renovations include changes to the architecture of the building, new façade finishes on the building's exterior, and installation of additional landscaping on the site. Approval is subject to the following conditions:

- 1. The applicant shall adequately address the outstanding items noted in the Planning Department's memorandum, dated October 31, 2019, on the Construction Plan set, subject to an administrative review by the Planning staff prior to the issuance of a land use permit.
- 2. The building elevations shall be revised to show the parapet wall being extended, in a similar manner to the current building elevation plans, and on all four (4) sides) to sufficiently screen all rooftop equipment in compliance with the Zoning Ordinance.
- 3. Applicant complies with any requirements of the Department of Public Works Director and Hartland Deerfield Fire Authority and all other government agencies, as applicable.
- 4. (Any other conditions the Planning Commission deems necessary)

### **Discussion**

**Applicant:** Carrols Restaurant Group Inc.

### **Site Description**

The subject site, addressed as 10382 Highland Road, is located on the south side of Highland Road (M-59) and bounded on the west side by Blaine Road, in Section 28 of Hartland Township (Tax ID #4708-28-201-061). Burger King has occupied the site since approximately 1986. The approximate 1.66 acre site is zoned GC-General Commercial. Access is provided via Highland Road, Blaine Road and the internal drive/ring road associated with Hartland Marketplace commercial center.

#### **Overview and Background Information**

Site Plan Applications #22 and #25; Special Use Application #134

Plans for a Burger King restaurant were reviewed under Site Plan Application #22 (1981), Site Plan Application #25 (1981), and Special Use Application #134 (1982). Each application was denied.

### ZBA Application #159

On April 14, 1981 the Zoning Board of Appeals denied a request for variances to locate parking (for Burger King) within the required setbacks; and also denied a variance to install a pylon sign (80 feet in height) that exceeded the maximum allowed sign height.

### Sign Permit Application #109

A pylon sign was approved for Burger King on September 9, 1982 under Sign Permit Application #109. The sign dimensions are listed as 8 feet in width by 8 feet in length (64 sq. ft.) and the overall height of the pylon sign as 25 feet. Sign drawings were not found in the file information. The site plan approved for Burger King under SP #58 shows a pylon sign on the north side of the building.

### Site Plan Application #41

This was a request to construct a gas station and convenience store on the subject site. The Planning Commission recommended approval on February 21, 1984, however the project was deemed null and void on August 21, 1984 as the required permits were not obtained; thus the project did not move forward.

### Site Plan Application #58

On January 9, 1986 the Planning Commission recommended approval of Site Plan Application #58 for the construction of an approximate 3,300 square foot Burger King restaurant with drive-through service. The project was approved by the Township Board on January 21, 1986. The site plan shows an area on the north side of the building that is labeled as "greenhouse" (12 feet by 29 feet in size). Building elevations were not included with the site plans.

### Site Plan Application #59

On February 13, 1986 the Planning Commission approved Site Plan Application #59, a minor amendment to the plans approved under SP #58. The changes included moving the coolers outside, behind the building, constructing a wall around them, and moving the dumpster enclosure 10 feet to the south. The Burger King restaurant was constructed in 1986 under Land Use Permit #1536.

### Fourth Amendment to Hartland Marketplace Planned Development Agreement (2008)

The Hartland Marketplace Planned Development (PD) was approved by the Township in 2007 under SP #424. Four amendments to the PD Agreement occurred between 2007 and 2008. As part of the overall plan for the PD, off-site road improvements to Highland Road (M-59) were proposed. The Fourth Amendment to Hartland Marketplace Planned Development amended Section 12 of the original PD Agreement (entitled "Off-site Road Improvements for M-59"), "to conform with the proposed M-59 improvements and to reflect the change in the cost related thereto." In addition the Fourth Amendment amended Section 6.7, "Signs" of the Agreement, to add subsection 6.7.6., which reads as follows:

6.7.6. The Township shall permit the relocation of the existing Burger King pole sign ("Burger King Sign") that is immediately adjacent to the Development on Tax Parcel Number 4708-28-201-061 and held by Fitzpatrick Properties, LLC (The Fitzpatrick Property") to the location described and depicted as the "Proposed Relocated Burger King Sign" on Exhibit J, attached hereto, which relocation is necessary for the Final M-59 Improvements as defined and discussed in Section 12 of this Agreement. The Township shall issue a land use permit for the relocation of the Burger King Sign on the Fitzpatrick Property, including relocation of related utilities serving the Burger King Sign, but shall not require any additional review, comment, permits or approval from the Township. The Township acknowledges and agrees that the Burger King Sign is a legal non-conforming sign and that the relocation as contemplated herein shall have no effect on the Burger King Sign's legal non-conforming status. Notwithstanding the preceding sentence, nothing herein shall be construed to limit or prevent the Township from eliminating non-

conforming uses or signs as permitted by law or from enforcing the Hartland Township Zoning Ordinance, as amended. The relocated Burger King Sing shall in all respects, including height and width, be identical to the existing Burger King Sign.

Based on notes found in the site plan file, the Burger King pylon sign was moved in 2008 to its current location, however the land use permit was not found in the file.

#### **Request**

The applicant is proposing an extensive remodeling project at Burger King and is requesting to amend the originally approved site plan. The project includes removal of the greenhouse portion on the north side of the building; removal of the mansard roof; removal of the parapet walls; new entrance door at the northwest corner of the building; new façade finishes on the building's exterior; metal canopies over the windows and new entrance door; new light fixtures on the building; ADA site improvements; landscape improvements; and interior remodeling. New parapet walls are proposed.

Currently the building is painted beige and brown, including the brick. The dumpster enclosure is painted brown (brick walls and wood gates). Staff was unable to determine when the brick was painted as the original building elevations were not found under SP #58. The applicant intends to use a brick product (face brick) that is a suitable match to the existing brick, and weave it into the existing brick where necessary, plus use the new brick product on the new parapet wall sections. The brick will be painted with two different tones of taupe, with a darker taupe band on the bottom of each elevation and a lighter taupe on top. A stacked stone product is used around the two building/customer entrances and on the wall with the drive-through window. Red accent tile is used as a surround on the main entrance door (northwest corner of the building). New down-lit wall sconce/lights are shown on the east and west elevations.

The plans show repairs to the curb and gutter in several areas as well as repairs to the parking lot asphalt. Sidewalk repairs are noted for the sidewalk on the west side of the building. New wooden gates, which are steel reinforced, are proposed for the existing dumpster enclosure. The gates and dumpster enclosure walls will be painted to match the building.

The number of parking spaces will remain the same, with a total of 48 parking spaces, 2 of which are barrier-free (van accessible).

A landscape plan is provided showing a mix of existing and proposed landscaping.

The existing pole sign (or free-standing sign) is currently considered non-conforming. As part of the 4<sup>th</sup> Amendment to the Hartland Marketplace Planned Development Agreement, the sign was relocated to provide adequate room for a drive access. This is outlined in more detail in the 4<sup>th</sup> Amendment, starting at the bottom of page 5 (see attached). The current project only involves a remodel of the interior and building façade of the existing Burger King restaurant. However, in the future, if the applicant desires to make site improvements to the layout of the drive-through lanes, or any other site improvements, the Planning Commission may consider bringing the existing pole sign into compliance.

The current wall signs will be removed and new wall signs are proposed. Any proposed signs will be reviewed administratively via the sign permitting process.

### **Approval Procedure**

Due to the proposed exterior renovations to the existing building, a site plan application is required, to be reviewed by the Planning Commission, who will make a final decision on the site plan. Changes to the landscaping are proposed as part of this project, as well as new exterior lighting on the building.

Since the exterior modifications, landscaping and lighting are the only items to be reviewed as part of this request, the site plan review will be limited in scope in this memorandum.

Applicable development standards of the GC-General Commercial zoning district (Section 3.1.16) and all applicable zoning standards in the Zoning Ordinance will be reviewed for the proposed project.

### SITE PLAN REVIEW – Applicable Site Standards

### **Site Description**

The subject site is located east of Old US-23 and Blaine Road and south of Highland Road in Section 28 of Hartland Township, at 10382 Highland Road.

The site is served by public sanitary sewer and water. The remodeling project requires a land use permit from the Township and applicable approvals from other state and county agencies.

### **Impact Assessment**

An Impact Assessment was not required.

### **Traffic Generation**

A Traffic Generation report was not required.

#### **Site Requirements**

It should be noted that the submitted civil plans and landscape plan do not show the correct footprint of the building as those plans do not show the proposed removal of the greenhouse on the north end of the building. The greenhouse footprint is approximately 12 feet in length by 29 feet in width, thus the overall footprint of the building is reduced by those dimensions. Staff has conveyed this information to the applicant and requested the construction set of plans be revised to show the correct building footprint on all applicable sheets.

The previously approved plan from Site Plan Application #58 provided parking calculations for Burger King when the project was approved in 1986. The 1986 plans state 50 parking spaces are required and 50 parking spaces are provided, with an additional ten (10) parking spaces for RV and truck parking shown. An additional eleven (11) stacking spaces are shown for the drive-through lane. The proposed plan maintains the current parking layout, which has 48 parking spaces. Improvements/repairs are proposed to the parking lot and two (2) barrier-free parking spaces. Although shown on the 1986 plan, staff is unsure if the RV and truck parking spaces were ever provided. Those spaces are not striped on the site currently and are not shown on the proposed plan.

**Off-Street Parking** (Sec. 5.8, parking standards for fast-food restaurant with drive-through; and stacking at drive-through)

• Required – 22 spaces per 1,000 sq. ft. usable + 1 space per employee at peak shift ( 9 employees), + 10 additional stacking spaces, 5 of which are in advance of order station

EQUATES TO: 31 parking spaces (1,064 SF dining area = 22 spaces + 9 employees)

- Existing parking 48 spaces + 11 stacking spaces
- Meets Requirement? yes
- Comment (none)

### **Barrier-Free Parking**

- Required barrier-free spaces in a location most accessible to the building entrance, with at least 1 space van-accessible (1 barrier-free space required per 25 parking spaces)
- Proposed 2 barrier-free spaces, both van accessible, nearest the new entrance door
- Meets Requirement? Yes
- Comment (none)

### **Landscaping and Screening (Sec. 5.11)**

A landscape plan was submitted showing existing and proposed landscaping. As a reminder, the landscape plan does not show the building footprint correctly, as the greenhouse portion is still shown; thus the landscape plan will have to be revised.

Existing landscaping will be preserved as noted on the plan. New plantings are proposed throughout the site and plant calculations are provided on the plan; however, staff felt the calculations were not correct. A full analysis of the landscaping requirements is not necessary as the current project is focused on the renovation of the building's exterior and additional site work is not proposed. If site work is proposed in the future, such as a second drive-through or a building expansion, a detailed review of the landscaping may be required. Following is a summary of the proposed landscape plan.

### Greenbelt

The proposed landscaping includes new deciduous (canopy and ornamental trees) and evergreen trees generally located in the greenbelt areas associated with the Highland Road and Blaine Road frontages. The following trees are proposed: 8 canopy trees; 6 ornamental trees; and 7 evergreen trees.

### Foundation Landscaping

Four (4) existing ornamental trees (north and west sides of the building) are to be preserved in their current locations. The proposed plan shows a mix of existing and new plantings in existing planting beds along the building foundation, on the north, east, and west sides. Additional plantings are proposed in planting beds south of the building.

#### Parking Lot Landscaping

The proposed plan shows three (3) new canopy trees in existing parking islands. Ornamental grasses are proposed in the landscaped area by the entrance to the drive-through lane, in place of the existing daylilies.

### Parking Lot Screen

Currently deciduous shrubs (9 shrubs) are planted along the west side of the parking lot which are to be removed per the proposed plan. A deciduous shrub hedgerow is proposed. An evergreen screen of the parking lot is required in this area, thus an evergreen shrub species (3-foot tall) should be used in place of the proposed deciduous shrub. Staff would recommend using a salt-tolerant evergreen shrub species.

A 3-foot high evergreen screen is required for the parking island at the northwest corner of the building. The plan shows lawn and daylilies; therefore the plan should be revised to comply.

### **Lighting** (Section 5.13 of the Zoning Ordinance)

A proposed photometric plan is not required at this time. New wall mounted light fixtures are shown on the east, west, and south building elevations. Lights are proposed under each canopy/awning, although the building elevations do not state this information.

Sheet A-2.1 (Lighting Fixtures-Exterior) is intended to serve as a boiler-plate listing of all light fixtures that could be used on a Burger King project. Per the applicant only two (2) new light fixtures are proposed for this project: LED wall sconce light fixture "L Down Only" and light fixture "M", which appears to be a light strip installed under the canopies/awnings. The applicant noted to staff the light strip will be flush-mounted on the underside of each canopy, and a specification sheet will be submitted.

Staff asked the applicant to provide a revised version of Sheet A-2.1 with the construction set of drawings that would specifically list only the light fixtures to be used for this proposed remodeling project. Specification sheets could be submitted as well.

- A. Intensity NA, as a photometric plan was not required
- B. Fixture Height NA, as changes to the existing parking lot lighting are not proposed
- C. Fixture Type
  - Required details of all lighting fixtures needed including specifications for shielding, wattage and illumination
  - Proposed several options (Manufacturer and model number) are listed for the proposed wall mounted light fixture (fixture "L-Down Only") and light fixture "M" (underside of canopy/awnings) on Sheet A-2.1. A specification sheet is provided for the wall sconce "L Down Only". A specification sheet is required for light fixture "M", including information on the type of lamp.
  - Meets Requirement? Additional information is required.
  - Comment LED lighting should be used where possible. Sheet A-2.1 should be revised to provide the requested information, or a specification sheet for each light fixture should be submitted with the construction set of plans. Additionally, any existing non-compliant wall mounted light fixture (south side of the building) shall be removed and replaced with a compliant light fixture. The building elevations shall be revised to reflect this.

### **Architecture / Building Materials** (Sec. 5.24)

#### **Architecture Comments:**

As staff reviewed the plans provided by Interplan, it was noted that the product and color designations stated on the scaled building elevations (Sheet A-3.0, A-3.1, and A-3.2) and the Exterior Materials &

Finishing Schedule (Sheet A-4.0), do not match the information on the color version of the building elevations. Staff spoke with the applicant about this matter and he responded that the construction set of drawings would be revised so that the specific product name and color are consistently listed on all relevant sheets.

Sheet A-1.2 (Interplan set of plans) includes references to a new light band to be installed on the proposed parapet walls. A light band is similar in nature to outline tubing/neon sign which is listed as a prohibited sign per the Sign regulations in the Zoning Ordinance (Section 5.26). All light band references should be removed from the plans.

Also to be noted, the applicant has provided revised elevation drawings, dated October 29, 2019, showing the physical roofline and the outline of each rooftop unit. The four (4) rooftop units are shown in plan view on the first sheet.

Based on the elevations drawings the rooftop units protrude above the parapet walls. Per Section 5.24.4., "All roof appurtenances shall be screened from view by use of a parapet wall....".

The applicant has provided an email, dated October 30, 2019, stating the rooftop units will be screened as required per the Ordinance regulations in Section 5.24.4., by raising the parapet wall heights and using the same proposed exterior finishes. This is required for all four (4) sides of the building. Revised elevations will be required with the construction set of plans that show the parapet wall being extended, on all four (4) sides, to sufficiently screen all rooftop equipment, using the same exterior finishes. The percentage of each façade material for each elevation should also be revised and shown on the plans.

• Façade Materials Calculation – façade materials must comply with the specifications for Façade Materials Group #1; percentages are proposed as follows:

Materials Group #1:	Proposed Fac	çade Materials b	y Percentage	by Elevation
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Group	Brick 100%	Ceramic Tile	Stone	Flat Metal	Glass
#1	(30% Min)	10%	50%	Panels	50%
	Face brick	(Max)	(Max)	20%	(Max)
	proposed			(Max)	
North	47.2%	4.4%	29.9%	3.1%	15.4%
South	79.3%	NA	12.7%	1.0%	NA
West	62.8%	2.2%	22.7%	2.3%	10.0%
East	74.8%	NA	12.5%	2.1%	10.6%

- Colors: the color renderings illustrate earth tone colors as required, with red tile used at the building's main entrance
- Materials: percentages are listed for each elevation side as indicated by the table
- Meets Requirement? Yes
- Comment the construction set of plans shall provide all product specifications (product name, manufacturer, and color) and shall match the products listed on the color renderings. Revised

elevation drawings will be required to show screening of the rooftop units with an increased height of the parapet walls.

### **Other Requirements-Zoning Ordinance Standards/Other Comments**

The existing sidewalk located along Blaine Road, extending southerly from M-59, currently ends in the middle of the site. This sidewalk doesn't connect to a sidewalk at the southwest corner of the Burger King site. A goal of the Township is to provide a more walkable community and when future site improvements are proposed, the Planning Commission should give consideration to a requirement to extend this sidewalk to connect to the sidewalk further to the south.

### **Hartland Township DPW Review**

No comments at this time.

### Hartland Township Engineer's Review (HRC)

The request does not require review by the Township's Engineer (Hubbell, Roth, and Clark).

### **Hartland Deerfield Fire Authority Review**

Hartland Deerfield Fire Authority provided comments in their letter dated October 23, 2019 and approves the project subject to the contingencies in the review letter.

#### **Attachments**

- 1. Hartland Deerfield Fire Authority Review Letter dated October 23, 2019-PDF version
- 2. Applicant email 10.30.2019- PDF version
- 3. Executed 4th Amendment Hartland Marketplace-PDF version
- 4. Light Fixture L- Down only-PDF version
- 5. Revised Elevations with Rooftop Units dated 10.29.2019-PDF version
- 6. Color Building Elevations dated 10.29.2019-PDF version
- 7. Civil and Landscape Plans by MEGA dated 10.08.2019
- 8. Interior Plans & Building Elevations by Interplan, LLC, dated 10.04.2019

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### HARTLAND DEERFIELD FIRE AUTHORITY



### FIRE MARSHALS OFFICE

Hartland Area Fire Dept.
3205 Hartland Road
Hartland, MI. 48353-1825

E-Mail: jwhith

Fax: (810) 632-2176 E-Mail: jwhitbeck@hartlandareafire.com

Voice: (810) 632-7676

October 23, 2019

TO: Planning Commission
Attn: Zoning Department
Hartland Township
2655 Clark Road
Hartland, MI 48353

RE: Burger King's request for <u>Site Plan Remodel Interior/Exterior</u>.

We have reviewed the conceptual layout plans for the above project as prepared by Monument Engineering Group Assoc, Inc. (plans dated October 9, 2019). We have the following comments:

- 1. An address visible from the center of Highland Road. (Ordinance #77-505.1)
- 2. All emergency lighting shall be on dedicated circuit(s) so they may be tested without disrupting business. The circuit(s) shall be labeled in the breaker box(es). (AHJ Requirement)
- 3. A fire alarm system is required for this building.
- 4. Duct Detectors shall report as a supervisory or trouble
- 5. A strobe or horn strobe shall be located on the exterior of the building, and visible from the centerline of Highland Road. (**AHJ Requirements**)
- 6. A remote enunciation sub panel shall be located at the main entrance of the building if the main panel is not easily accessible. (**AHJ Requirement**)
- 7. A Supra brand lock box to be installed prior to obtaining the certificate of occupancy from Livingston County Building Department. An order form has been attached with this review. (Hartland Township Ordinance #77-506.1.1)
- 8. A LadderPort™ Ladder Receiver (Type 1, Type 2, Type 3 or Type 4), if not already, is to be installed for equipment and/or appliances are installed on the roof top, on the North facing side of the occupancy with year round accessibility by ground ladders. A catalog and order form has been attached with this review. (MBC 306.5 & Hartland Twp. Ordinance #77-504.1.1)
- 9. If the interior plans are to move the Commercial Hood Suppression Systems then those changes shall be submitted to our third party reviewer, Brighton Fire Dept. and reviewed. Once reviewed the prints will be available for pick-up and taken to the Livingston County Building Department so a permit can be pulled. \*NOTE: UL 300 system tests will be conducted using a "wet test" using an agent recommended by the manufacturer. (Hartland Twp. Ordinance #77-105.7.1.1)
- 10. Service drives shall meet 33,000lbs per axle. Weight and turning radius performance cut sheet for our most restrictive apparatus has been attached with this review. Please see that all turning radiuses and clearances are met. (County and Local Requirement)
- 11. Locations and quantities of Hazardous Materials (if any) shall be included. An HMIS form is included with this letter. (**AHJ Requirement**)

- 12. A Contact Sheet and a map of the occupancy shall be filled out and provided to the AHJ along with a key to be kept inside the Rapid Entry box on the building. (AHJ Requirement)
- 13. A site inspection upon completion is required before calling in for Certificate of Occupancy (**Zoning Ordinance Requirement**)

The Fire Marshals Office approves with the above contingencies the submittal. Any revised drawings affecting the Fire Department must be submitted for review.

Yours In Fire Safety,

Jenn Whitbeck Fire Inspector

### **Martha Wyatt**

From: Martha Wyatt

Sent: Wednesday, October 30, 2019 4:17 PM

To: Martha Wyatt

**Subject:** FW: Burger King Application (#1019)

Importance: High

From: Gama, Irwing

Sent: Wednesday, October 30, 2019 3:07 PM

To: Martha Wyatt

**Subject:** RE: Burger King Application (#1019)

**Importance:** High

Martha,

I spoke with our client (Carrols Restaurant Group, Inc.) and am confirming in writing (via this email) that they will screen the roof top units as required per Ordinance regulations in Section 5.24.4.

More specifically, they will be raising the parapet wall heights to screen any of the existing units in full. This will involve raising the heights at the front portion of the building approximately 15" and 24" at the rear portion of the building and will utilize the same proposed exterior finishes. Due to the additional structural review / revisions required, we will NOT have revised roof plans and elevations by today but can provide those after the public hearing in the record set of construction plans.

Please let me know if you need anything further.

### Irwing Gama | Project Manager

www.sevansolutions.com

Chicago, IL 60641

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### FOURTH AMENDMENT TO HARTLAND MARKETPLACE PLANNED DEVELOPMENT AGREEMENT

Between

### HARTLAND TOWNSHIP

and

# HARTLAND 23 RETAIL DEVELOPMENT COMPANY PARCEL I, LLC

and

# HARTLAND 23 RETAIL DEVELOPMENT COMPANY PARCEL II, LLC

and

### WAL-MART REAL ESTATE BUSINESS TRUST

(Text Amendment)

### HARTLAND MARKETPLACE FOURTH AMENDMENT TO PLANNED DEVELOPMENT AGREEMENT

This Fourth Amendment is made this	_ day of	, 2008, by and
among the Township of Hartland, a Michiga	an municipal corporation ("	'Township"), 2655
Clark Road, Hartland, Michigan 48353, and	Hartland 23 Retail Develo	pment Company
Parcel I, LLC, a Michigan limited liability of	company, 28470 13 Mile Ro	oad, Suite 220,
Farmington Hills, Michigan 48334, Hartlan	d 23 Retail Development C	Company Parcel II,
LLC, 28470 13 Mile Road, Suite 220, Farm	ington Hills, Michigan 483	34, a Michigan
limited liability company, (Hartland 23 Reta	ail Development Company	Parcel I and Parcel
II are collectively referred to as "23-RDC")	as successors or assigns of	Hartland 23 Retail
Development Company, L.L.C. ("Hartland	Retail Development Compa	any") and Wal-
Mart Real Estate Business Trust, a Delawar	e statutory trust ("Wal-Mar	t"), whose mailing
address is 2001 S.E. Tenth Street, Bentonvi	lle, Arkansas 72716-0550.	

#### RECITALS

- A. On October 31, 2007, Township and Hartland 23 Retail Development Company entered into a Planned Development Agreement (the "Agreement") for the real property located in Hartland Township, Livingston County, Michigan described in the attached Exhibit A, which is made a part of this document (the "Land").
- B. The Agreement was recorded as Instrument No. 2007R-036785 Livingston County Records, on November 9, 2007.
- C. On December 18, 2007, the Township and Hartland Retail Development Company executed a First Amendment to the Agreement, which was recorded as Instrument No. 2008R-000932, Livingston County Records, on January 10, 2008.
- D. On May 21, 2008, the Township, Hartland Retail Development Company and Wal-Mart executed a Second Amendment to the Agreement, which was recorded as Instrument No. 2008R-021399, Livingston County Records, on July 11, 2008.
- E. On \_\_\_\_\_\_, the Township, Hartland Retail Development Company and Wal-Mart executed a Third Amendment to the Agreement, which was recorded as Instrument No. \_\_\_\_\_\_, Livingston County Records, on \_\_\_\_\_\_.
- F. Township, 23-RDC, and Wal-Mart have agreed to amend the Agreement, as amended, to conform with the proposed M-59 road improvements and to reflect the change in cost related thereto.

G. Township, 23-RDC and Wal-Mart are executing and will record this document to evidence and memorialize this Fourth Amendment to the Agreement.

NOW, THEREFORE, it is hereby agreed as follows:

- 1. Section 12 of the Agreement shall be amended to read as follows:
  - 12. Off-Site Road Improvements for M-59.
  - 12.1 The Owners of the Land shall contribute money for certain off-site road improvements (the "Final M-59 Improvements") in order to meet the "recognizable benefit" qualifying criterion for establishment of the Development as a Planned Development ("PD") under Article 29 of the Hartland Township Zoning Ordinance. This is not an offer by the Owners or Developer for conditional rezoning. The Final M-59 Improvements, and the costs related thereto, shall be defined more specifically in the Special Assessment Contract contemplated by this Agreement, including but not limited to Exhibits A and C thereto.
  - In the event PD approval for the Development is terminated or lapses or the parcel is not developed pursuant to this Agreement, the Owners of the Land shall not be required to contribute any money to the Township or any other person or entity for the Final M-59 Improvements necessary to achieve a total and final traffic solution and to mitigate the affect on public services in substantial compliance with the proposed Traffic Impact Study developed by Metro Transportation Group, Inc. The foregoing sentence notwithstanding and in accordance with the commencement of payments as contemplated by section 12.3 below, the Owners of the Land shall be deemed to have irrevocably agreed to financially contribute to the contemplated Final M-59 Improvements in the manner provided in this Agreement if (a) a contract for the Final M-59 Improvements is awarded prior to the Township's receipt of written notice from the Owners of the Land that the Land will not be developed pursuant to this Agreement; or (b) the commencement of vertical construction on the Land, whichever occurs first.
  - 12.3 The Owners of the Land shall not be required to pay any money until the Michigan Department Of Transportation ("MDOT") and the Livingston County Road Commission (the "Road Commission") approve the plans for the Final M-59 Improvements and the Township and all other public agencies having jurisdiction award(s) a contract for the Final M-59 Improvements, including landscaping as approved by the Township and permitted by MDOT, to M-59 located east of U.S. 23 to approximately Clark Rd to achieve a total and final traffic solution in accordance with MDOT and Road Commission approval. The Owners of the Land shall

not be required to pay any money if such a bid is accepted, but the Final M-59 Improvements are not thereafter made.

- 12.4 The monetary contribution shall be used solely for the Final M-59 Improvements and all related costs to achieve a final traffic solution as approved by MDOT and the Road Commission taking into account all of the commercial development located along M-59 from U.S. 23 in an easterly direction to approximately Clark Rd.
- The maximum amount payable by the Owners of the Land for improvements to M-59 shall not exceed the lesser of: (a) \$2,415,000.00 or (b) 35% of the estimated cost of the Final M-59 Improvements as contemplated by the Township and as permitted by MDOT (hereinafter the "Maximum Recognizable Benefit Contribution"). Notwithstanding the Maximum Recognizable Benefit Contribution and paragraph 12.7 of this Agreement, nothing in this Agreement shall be interpreted or construed as limiting the Township's authority to make additional special assessments against the Parcels pursuant to the paragraph three (3) of the Special Assessment Contract. The Maximum Recognizable Benefit Contribution shall not be reduced for any required present or future improvements to Blaine Road, as shown in the approved Final Plan. The Township currently estimates the total cost of the Final M-59 Improvements to be \$6,900,000.00, inclusive of the cost of issuance of the municipal financing, costs for design, engineering and planning, other preparatory costs, review costs, construction costs, landscaping, legal costs, bond costs, administrative costs, contingency, hard costs, soft costs, right of way costs and other similar expenses. The actual Maximum Recognizable Benefit Contribution payable by the Owners of the Land may be reduced actual cost of the Final M-59 Improvements is less than if the \$6,900,000.00. The Maximum Recognizable Benefit Contribution may also be reduced by the cost of improvements to M-59 (excluding any present or future improvements to Blaine Road, shown on the approved Final Plan) made by the Owners of the Land to achieve an interim traffic solution as approved by MDOT and the Road Commission, provided those improvements are coordinated to work with the final traffic solution contemplated by MDOT, the Road Commission and the Township.
- 12.6 If the Township, in its sole discretion, determines that the Final M-59 Improvements are in the best interest of the public health, safety and welfare, and the Township determines to undertake the Final M-59 Improvements contemplated by MDOT and the Township, the Township shall finance the Maximum Recognizable Benefit Contribution and establish a special assessment district to spread the Maximum Recognizable Benefit Contribution over a minimum period of 25 years. The Owners of the Land agree to be specially assessed in an amount not to exceed the Maximum Recognizable Benefit Contribution as described and

limited herein and shall execute any and all documents necessary to establish a special assessment in accordance with terms of this Agreement. The Owners of the Land may, if they so choose, pay such assessment in advance and/or early, without penalty.

- 12.7 The Maximum Recognizable Benefit Contribution and associated terms and conditions shall be considered separate from and shall not affect or modify any existing special assessments or agreements applicable to the Land, including, but not limited to, existing or future sewer or water special assessments. Except as otherwise specifically described or contemplated herein, nothing in this Agreement shall be construed to prevent the Township from subjecting the parcels to additional special or other assessments as permitted by law, provided however, that there shall be no other or additional special assessments against the Land or Development for the Final M-59 Improvements and related costs for which the Maximum Recognizable Benefit Contribution is being or will be paid.
- 12.8 The Township and the Owners of the Land acknowledge and agree that the Final M-59 Improvements are a collaborative endeavor by the Township, the Owners of the Land and developers currently proposing a development on the North side of M-59 (being the former Oasis Truck Stop parcel, referred to herein as the "Oasis Parcel"). As part of that collaborative endeavor, the Township intends to enter into a similar agreement with the owners of the Oasis Parcel for a financial contribution to the Final M-59 Improvements as contemplated by this Agreement and the Township agrees to use its best efforts to ensure that the Owners of the Land and the owners of the Oasis Parcel are treated substantially similar.
- 12.9 The Township shall not oppose the issuance of a Temporary Certificate of Occupancy to the Owners of the Land for the Development, or any portion thereof, provided the following conditions are met:
- (a) completion of north and south entry drives to the Development from Blaine Road:
- (b) completion of a temporary unsignalized drive approach from the eastern-most access drive of the Development to M-59; and
- (c) compliance with all other existing requirements for the issuance of a Temporary Certificate of Occupancy.
- 2. Section 6.7, "Signs", of the Agreement shall be amended to add subsection 6.7.6 which shall read as follows:
  - 6.7.6. The Township shall permit the relocation of the existing Burger King pole sign ("Burger King Sign") that is immediately adjacent to the Development on Tax Parcel Number 4708-28-201-061 and held by Fitzpatrick Properties, LLC (the "Fitzpatrick Property") to

the location described and depicted as the "Proposed Relocated Burger King Sign" on Exhibit J, attached hereto, which relocation is necessary for the Final M-59 Improvements as defined and discussed in Section 12 of this Agreement. The Township shall issue a land use permit for the relocation of the Burger King Sign on the Fitzpatrick Property, including relocation of related utilities serving the Burger King Sign, but shall not require any additional review, comment, permits or approval from the Township. The Township acknowledges and agrees that the Burger King Sign is a legal non-conforming sign and that the relocation as contemplated herein shall have no effect on the Burger King Sign's legal nonconforming status. Notwithstanding the preceding sentence, nothing herein shall be construed to limit or prevent the Township from eliminating non-conforming uses or signs as permitted by law or from enforcing the Hartland Township Zoning Ordinance, as amended. The relocated Burger King Sign shall in all respects, including height and width, be identical to the existing Burger King Sign.

- 3. The other provisions of the Agreement as previously amended shall remain in full force and effect.
- 4. The Agreement, as previously amended and as amended by this document, shall be the Planned Development Agreement for the Land.
- 5. The Township and 23-RDC and Wal-Mart, as successors or assigns to Hartland 23 Retail Development Company expressly reaffirm, acknowledge and agree that they are bound by the terms and conditions of the Planned Development Agreement, as amended.

In witness whereof, we have signed this document on the date appearing in the first paragraph, above.

(Signatures appear on following pages)

Hartland Township

William J. Fountain, its Supervisor

Ann Ulrich, CMC, its Clerk

STATE OF MICHIGAN ) SS **COUNTY OF LIVINGSTON** 

The foregoing instrument was acknowledged before me on December 2008, by William J. Fountain, the Supervisor, and Ann Ulrich, CMC, the Clerk of Hartland Township, on behalf of the Township, to me known as the persons who executed the foregoing and who stated that they did so as their free act and deed.

My Commission Expires 07/31/2012

Notary Public Ohland County, Michigan

Acting in Livingston County

My Commission Expires: 07-31-2012

### Hartland 23 Retail Development Company Parcel I, LLC a Michigan limited liability company

	By: William Eisenberg Its: Authorized Representative
STATE OF MICHIGAN COUNTY OF OAKLAND	) SS
by William Eisenberg, the	vas acknowledged before me on
	Notary Public, Oakland County, Michigan Acting in Oakland County, Michigan My Commission Expires:

### Hartland 23 Retail Development Company Parcel II, LLC a Michigan limited liability company

	By: William Eisenberg Its: Authorized Representative
STATE OF MICHIGAN COUNTY OF OAKLAND	) SS
by William Eisenberg, the	vas acknowledged before me on
	Notary Public, Oakland County, Michigan Acting in Oakland County, Michigan My Commission Expires:

# Wal-Mart Real Estate Business Trust, a Delaware statutory trust

	By:	
	Michael E. Gardner	
	Its: Regional Vice-President	
	Design and Real Estate	
STATE OF ARKANSAS )		
( ( COUNTY OF BENTON	SS	
,		
The foregoing instrument v	vas acknowledged before me on	2008,
by Michael E. Gardner, the	Regional Vice-President, Desig	gn and Real Estate of Wal-
Mart Real Estate Business	Trust, a Delaware statutory trust	, on behalf of the trust.
		<del></del>
	Notary Public,	County, Arkansas
	Acting in	•
	My Commission Expires:	

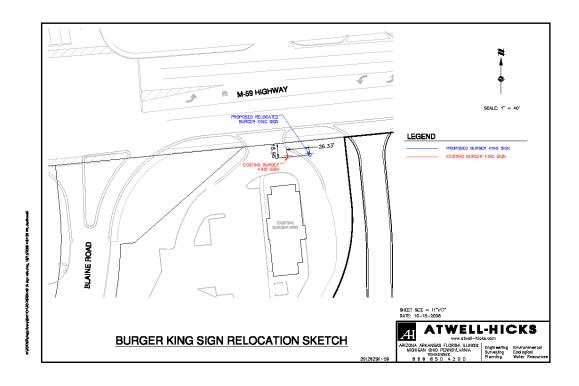
Prepared by and when recorded return to: Michael D. Homier, Esq. (P60318) 1700 E. Beltline Ave NE Suite 200 Grand Rapids, Michigan 49525 (616) 726-2200

### EXHIBIT "A"

#### OVERALL DEVELOPMENT (PARCEL "D"):

Commencing at the North 1/4 corner of Section 28, T3N, R6E, Hartland Township, Livingston County, Michigon; thence S00°38'57"W 31.57 feet along the North—South 1/4 line of said Section 28 to a Property Controlling corner; thence S04°49'58"E 124.92 feet along the North—South 1/4 line of said Sectlon 28 per affidavit by John C. Miller, recorded in Liber 395. Page 144, Livingston County Records for a PLACE OF BEGINNING; thence continuing S04°49'58"E 394.15 feet along the North—South 1/4 line of said Section 28 per said affidavit by John C. Miller; thence the following three (3) courses along the Southerly right—of—way line of Blaine Road (70 feet wide): 107.95 feet along the arc of a 1110.92 foot radius non—tangential circular curve to the right, with a central angle of 05°34'03", having a chord which bears N34°22'08"E 107.91 feet; N37°09'10"E 306.02 feet and 69.57 feet along the arc of a 416.97 foot radius circular curve to the left, with a central angle of 09°33'33", having a chord which bears N32°22'22"E 69.49 feet; thence S81°02'19"E 213.29 feet; thence 40.13 feet along the arc of a 257.22 foot radius non-tangential circular curve to the right, with a central angle of 08°56'21", having a chord which bears N25°59'59"E 40.09 feet; thence N30°10'23"E 131.40 feet; thence 125.54 feet along the arc of a 196.34 foot radius circular curve to the left, with a central angle of 36°38'08", having a chord which bears N12°01'34"E 123.41 feet; thence N06°18'25"W 76.35 feet; thence N84°26'03"E 60.00 feet along the South right-of-way line of M-59 (variable width) and the North line of "Glen Meadows No. 1" as recorded in Liber 9 of Plats, Pages 35-36, Livingston County Records; thence S06°20'39"E 255.99 feet along the East line of said "Glen Meadows No. 1"; thence N84°26'03"E 236.19 feet; thence N06°20'39"W 316.00 feet; thence N84°26'03"E 207.82 feet along the centerline of said M-59; thence S06°24'46"E 360.19 feet; thence N84°26'03"E 160.00 feet; thence NO6°24'46"W 360.19 feet; thence N84°26'03"E 168.03 feet along the centerline of said M-59; thence S00°29'31"E 1263.43 feet; thence S58°46'30"W 708.95 feet; thence S06°20'39"E 89.45 feet along the East line of said "Glen Meadows No. 1"; thence S83°38'09"W 754.16 feet along the South line of said "Glen Meadows No. 1"; thence S04°49'58"E 1203.86 feet along the North—South 1/4 line of said Section 28 per said affidavit by John C. Miller; thence N86°58'11"W 534.08 feet along the North line of "Hartland Shores Estates No. 1", as recorded in Liber 12 of Plats, Page 8, Livingston County Records; thence NO4\*10'52"E 1638.36 feet along the West right-of-way line of said Blaine Road and the East right-of-way line of US-23 (variable width); thence 530.90 feet along the arc of a 1180.92 foot radius circular curve to the right, with a central angle of 25°45'29", having a chord which bears N17°03'36"E 526.44 feet along the West right-of-way line of said Blaine Road; thence N85°49'29"W 40.56 feet; thence N12°25'31"E 391.45 feet to the Place of Beginning, being a part of the North 1/2 of said Section 28 and the Southeast 1/4 of Section 21, T3N, R6E, Hartland Township, Livingston County, Michigan containing 59.12 acres of land, more or less, subject to easements, conditions, restrictions and exceptions of record, if any.

### EXHIBIT J



Full Cut Radius Wall Sconce HID / LED RS Series





### **CATALOG** #

RS

### LAMP

100PMH - 100W Pulse Start Metal Halide

30WLED - 30W LED 42WLED - 42W LED

### **DISTRIBUTION**

UD - Uplight / Downlight
(available for PSMH lamps & 42W LED only)

DO - Downlight only

### **FINISH**

DB - Dark Bronze SV - Platinum Silver

### **VOLTAGE**

MT - Multi-Tap 120 - 277V (available for PSMH lamps only) 120 - 120V

(available for LED lamps only)

### **FEATURES**

- Clear Tempered Glass Lens
- Die cast aluminum housing
- Single piece gasket

### **COMPLIANCE**

UL Listed for Wet Locations. IP66 Rated

### **DIMENSIONS**

18"W x 7"H x 9"D

### **WARRANTY**

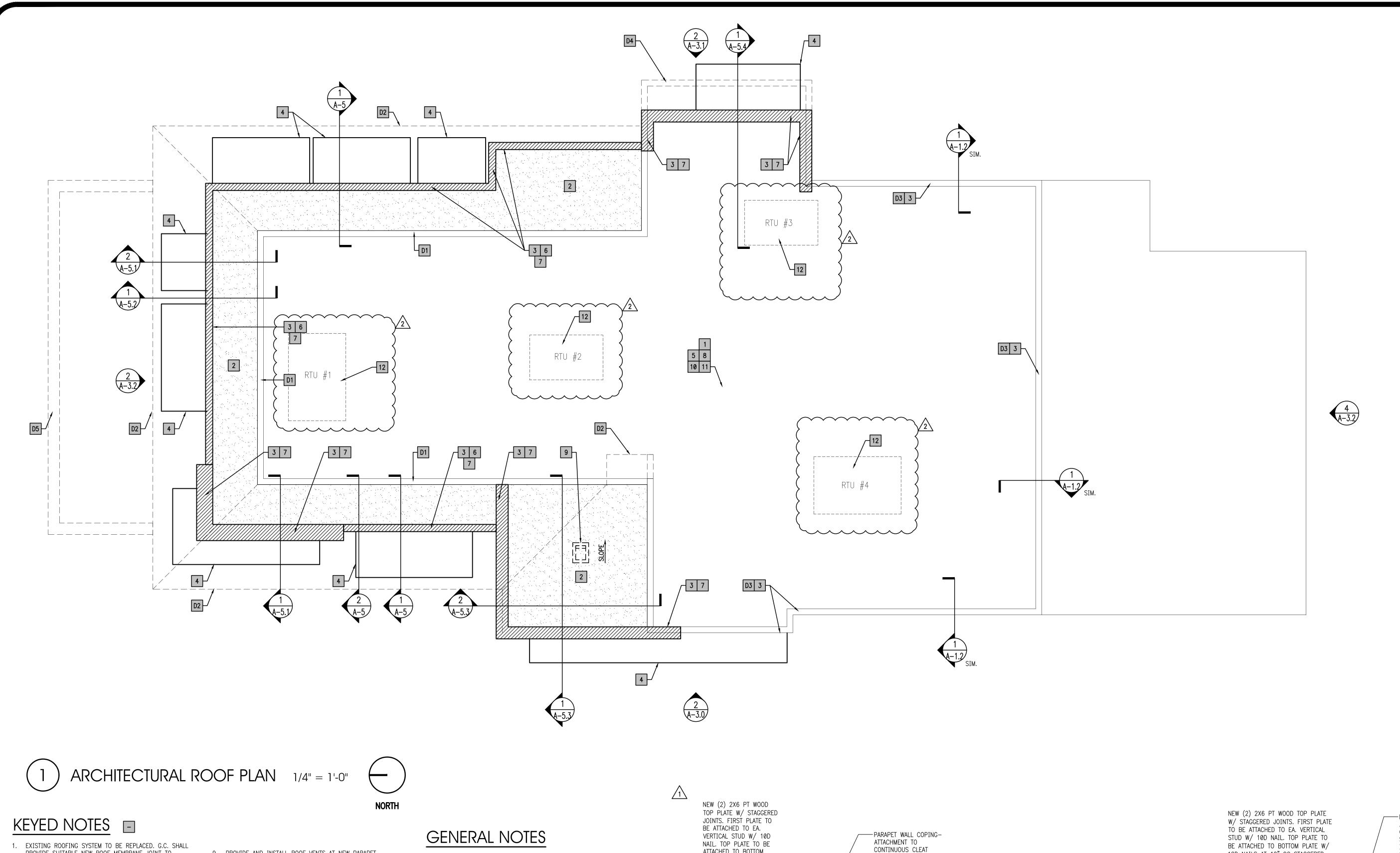
Five-year limited warranty. Certain exclusions apply. For details, see warranty document attached.



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Cree Integrated Lighting Solutions offers a full line of quality lighting products from

Cree, Inc. and other manufacturers, including the product depict



- PROVIDE SUITABLE NEW ROOF MEMBRANE JOINT TO MAINTAIN WATERTIGHT SEAL. G.C TO PROVIDE 15 YEAR WARRANTY ON NEW ROOF.
- NEW ROOFING SYSTEM TO MATCH EXISTING AT NEW ROOF CONSTRUCTION. G.C. SHALL PROVIDE SUITABLE PATCH AT EXISTING TO NEW ROOF MATERIAL JOINT TO MAINTAIN WATERTIGHT SEAL. G.C. SHALL SUPPLY NEW ROOF, INCLUDING ALL FLASHING AND ACCESSORIES AS REQUIRED TO MAINTAIN EXISTING EQUIPMENT/LOCATIONSS, OVER ENTIRE BUILDING. SEE PRODUCT APPROVAL SPECIFICATION THIS
- 3. NEW METAL COPING. REFER TO ELEVATIONS FOR COLOR OF
- 4. NEW PREFABRICATED METAL CANOPY. REFER TO DETAILS ON SHEET A-5.5. G.C. TO PROVIDE BLOCKING FOR CANOPY
- 5. EXISTING ROOF TOP EQUIPMENT TO REMAIN.
- 6. NEW LIGHT BAND. SEE DETAIL ON THIS SHEET AND EXTERIOR ELEVATIONS.
- NEW PARAPET CONSTRUCTION/EXTENSION. SEE WALL
- 8. VERIFY ALL THE ROOF DRAINS ARE CLEAN AND IN WORKING CONDITION.

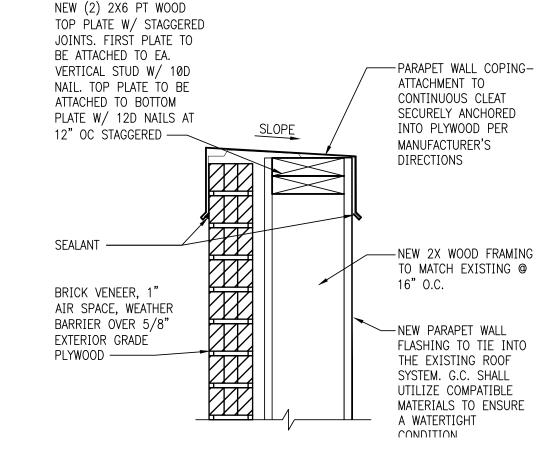
- 9. PROVIDE AND INSTALL ROOF VENTS AT NEW PARAPET CONSTRUCTION. INSTALL A FLAT "OFF-RIDGE ROOF VENT" A MINIMUM OF 6" FROM TOP OF RIDGE. ROOF VENT: OWENS CORNING VTS455-GR (N.F.V.A.= 50 SQ. IN.) OR EQUAL.
- 10. RELOCATE EXISTING EQUIPMENT (SUCH AS SECURITY CAMERAS, SATELLITE DISH) AS REQUIRED.
- 11. INSTALL NEW ROOFTOP FRYER EXHAUST FAN PER BK SPEC. 12. EXISTING RTU TO REMAIN. 🗸

# DEMO KEYED NOTES: 🕞

- D1. REMOVE EXISTING LIGHT BAND AND PARAPET CAP.
- D2. REMOVE EXISTING MANSARD ROOF FINISH & FRAMING. REFER
- TO WALL SECTIONS AND EXTERIOR ELEVATIONS. D3. REMOVE EXISTING METAL COPING. PATCH AND REPAIR AS
- REQUIRED AND PREP PER NEW ROOF SYSTEM AND WALL
- D4. REMOVE PORTION OF EXISTING ROOF STRUCTURE FRAMING AND FINISHES. PREP FOR NEW ARCHON CONSTRUCTION.
- D5. REMOVE EXISTING GREEN HOUSE IN ITS ENTIRELY. REFER TO

WALL SECTIONS AND EXTERIOR ELEVATIONS.

- A. ROOFING SUBCONTRACTOR TO COORDINATE LOCATION OF EXISTING H.V.A.C. UNITS AND ROOF TOP ACCESSORIES WITH STRUCTURAL DRAWINGS FOR PLACEMENT AND TAPERED RIGID BOARD INSULATION LAY-OUT AND SUBSEQUENT INSTALLATION IN ORDER TO AVOID PONDING WATER CONDITIONS ATTRIBUTABLE TO BOARD LAY-OUT ISSUES.
- B. ROOF SYSTEMS SPECIFIED SHALL BE APPLIED ONLY BY MANUFACTURER APPROVED APPLICATOR IN ORDER TO MEET GUARANTEE REQUIREMENTS.
- C. PONDING WATER IS DEFINED AS WATER THAT DOES NOT DRAIN OR DISSIPATE FROM THE ROOF WITHIN 48 HOURS AFTER PRECIPITATION.
- D. CONTRACTOR SHALL "SUGAR-IN" ALL ASPHALT. BLEED-OUT ON PILES WITH ADDITIONAL GRANULES TO MATCH EXISTING COLORATION OF THE MINERAL SURFACE CAP SHEET.
- E. ALL FLASHING CEMENTS, ASPHALTS, PRODUCTS AND ACCESSORIES SHALL BE APPROVED BY ROOFING MANUFACTURER WITH THE MANUFACTURER'S BRAND. ALL ASPHALTS SHALL BE AMERICAN MANUFACTURED PRODUCTS.
- F. THE ROOF STRUCTURE SHALL NOT BE USED FOR STOCKPILING OF EQUIPMENT
- G. THE ROOFING SYSTEM SHALL BE AS PER DRAWINGS AND PER MANUFACTURER'S SPECIFICATIONS.
- H. COORDINATE ROOF ELEVATIONS WITH ELEVATION DRAWINGS. I. HVAC CONDENSATE LINES TO TERMINATE AT ROOF DRAIN OR AS REQUIRED.
- J. CONTRACTOR TO PROVIDE 15 YEAR WARRANTY FOR NEW ROOF AREA.



TYPICAL PARAPET DETAIL

——PARAPET WALL COPING-ATTACHMENT TO CONTINUOUS CLEAT SECURELY ANCHORED INTO PLYWOOD PER 12D NAILS AT 12" OC STAGGERED— MANUFACTURER'S DIRECTIONS SEALANT — STONE VENEER IN A BED OF MORTAR 0 0 0 OVER SCRATCH COAT ON GALVANIZED METAL LATH OVER (2) LAYERS OF WATER — ROOFING MEMBRANE RESISTIVE BARRIER

TYPICAL PARAPET DETAIL

ON NEW 3/4" EXT./

GRD. SHEATHING

3'' = 1'-0''

1-1/2"- 1'-0"

OVER NEW 3/4" EXT.

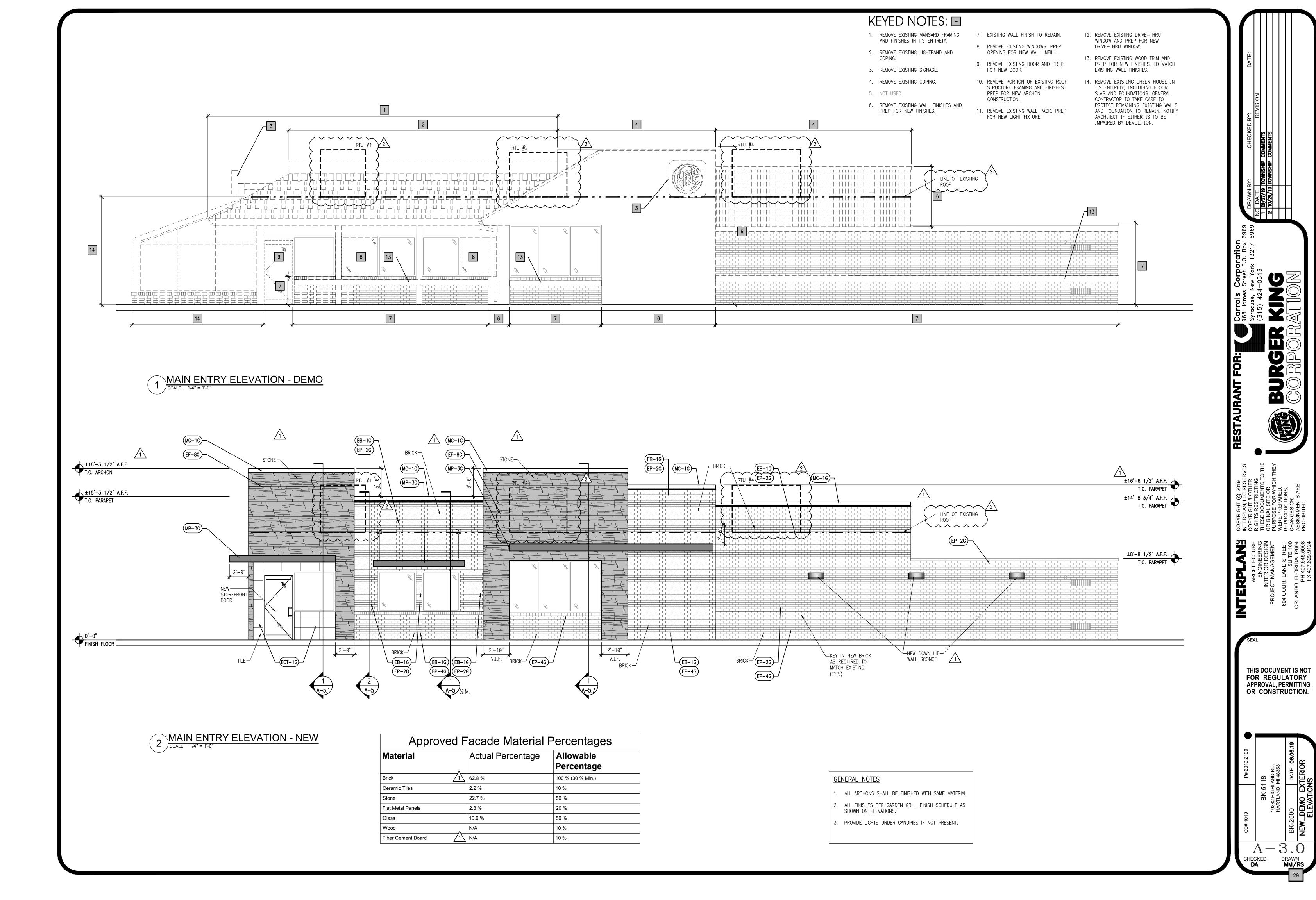
GRD. SHEATHING AND

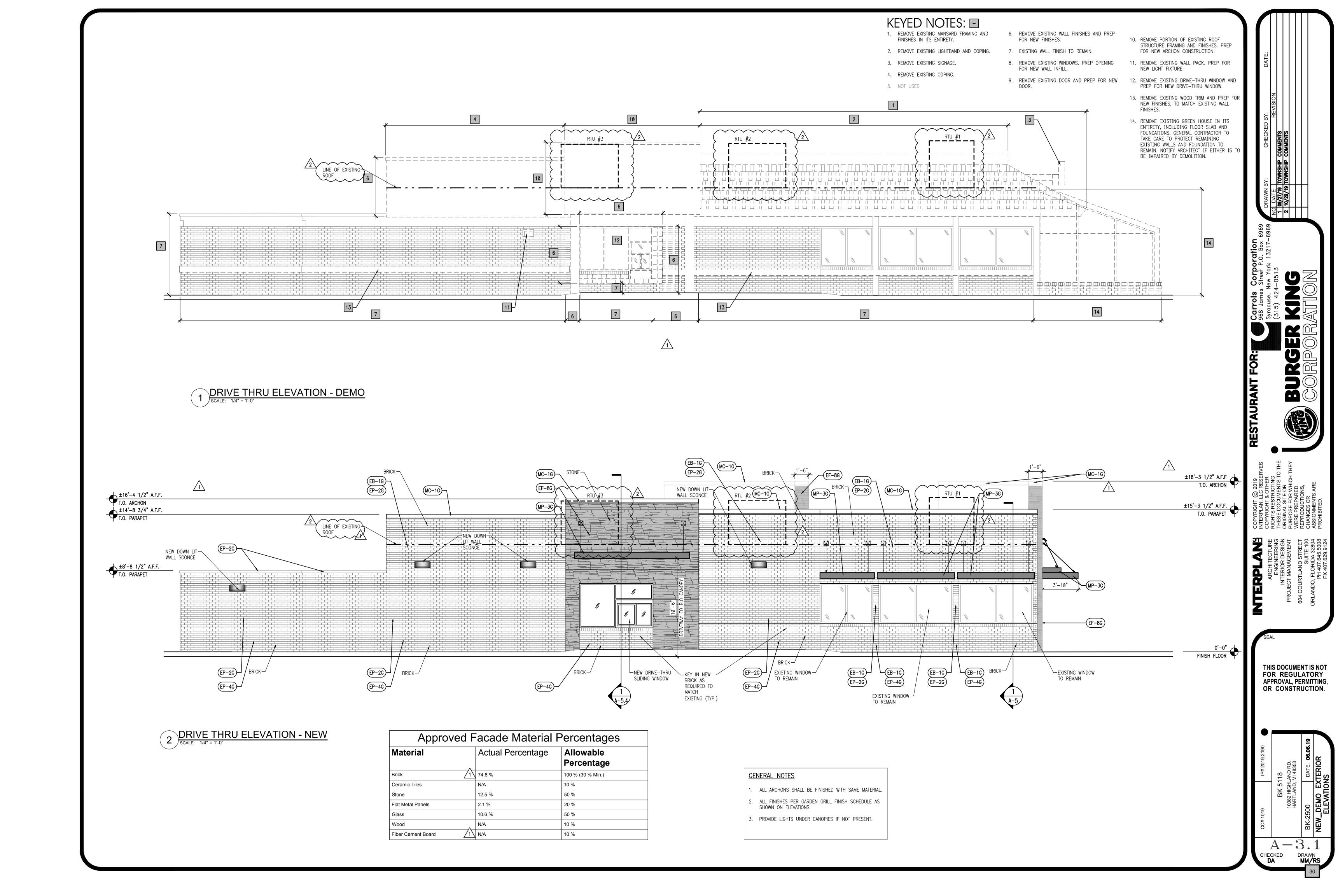
OVER TOP OF PARAPET

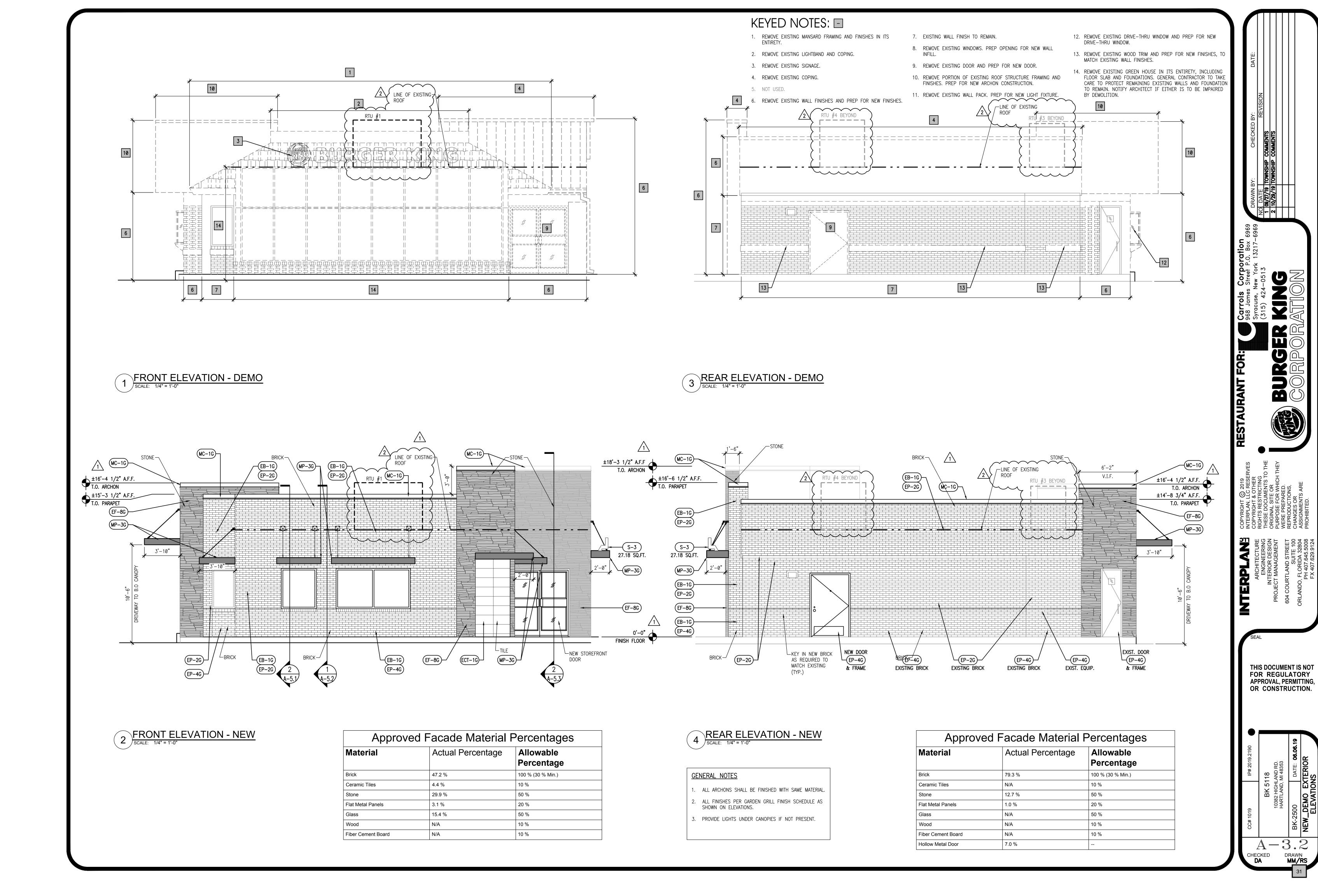
APPROVAL, PERMITTING, OR CONSTRUCTION.

THIS DOCUMENT IS NOT

FOR REGULATORY





















FRONT ELEVATION



Approved Facade Material Percentages Material Actual Percentage Allowable Percentage 100 % (30 % Min.) Ceramic Tiles 4.4 % 29.9 % 50 % 20 % 15.4 % 50 % 10 % Fiber Cement Board 10 %







# BURGER KING 5118

10382 HIGHLAND RD HARTLAND, MI





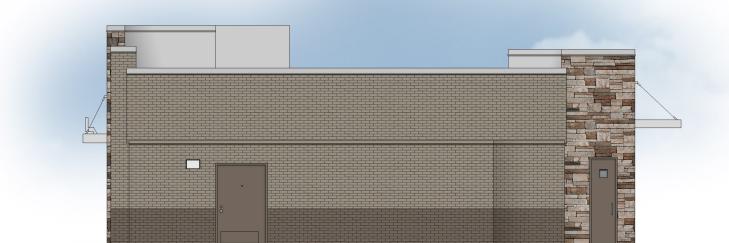












Approved Facade Material Percentages Material Actual Percentage Allowable Percentage 100 % (30 % Min.) 10 % N/A 12.7 % 50 % 1.0 % 20 % 50 % 10 % 10 % 7.0 %

**REAR ELEVATION** 

Approv	ed Facade Material	Percentages
terial	Actual Percentage	Allowable Percentage
ck	74.8 %	100 % (30 % Min.)
eramic Tiles	N/A	10 %
Stone	12.5 %	50 %
Flat Metal Panels	2.1 %	20 %
Glass	10.6 %	50 %
Wood	N/A	10 %
Fiber Cement Board	N/A	10 %

DRIVE THRU ELEVATION



# BURGER KING 5118

10382 HIGHLAND RD HARTLAND, MI



# PRELIMINARY SITE PLAN FOR

# BURGER KING #1019

LEGAL DESCRIPTION

PARCEL TAX NUMBER: 4708-28-201-061

(PER WARRANTY DEED AS RECORDED IN INSTRUMENT #2015R-037447, LIVINGSTON COUNTY RECORDS)

PARCEL 6A:

LOT 1 AND PARTS OF LOTS 2, 3, 4, AND 5 OF GLEN MEADOWS NO. 1, AS RECORDED IN LIBER 9, PAGES 35 AND 36 OF PLATS, LIVINGSTON COUNTY RECORDS, AND PART OF THE SOUTHWEST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 21, AND PART OF THE NORTHWEST 1/4 OF THE NORTHEAST CORNER OF SECTION 28, TOWN 3 NORTH, RANGE 6 EAST, MICHIGAN, DESCRIBED AS FOLLOWS: BEGINNING AT THE NORTHEAST CORNER OF SAID LOT 1 AND PROCEEDING THENCE ALONG THE EASTERLY LINES OF LOTS 1 AND 4 AND WESTERLY LINE OF GLEN MEADOWS DRIVE (60 FEET WIDE) ON THE FOLLOWING THREE COURSES: SOUTH 6 DEGREES 20 MINUTES 00 SECONDS EAST 76.30 FEET AND 125.65 FEET ALONG THE ARC OF A CURVE TO THE RIGHT (RADIUS 196.34 FEET, CENTRAL ANGLE 36 DEGREES 20 MINUTES 00 SECONDS, CHORD SOUTH 12 DEGREES 00 MINUTES 00 SECONDS WEST 123.52 FEET), AND SOUTH 30 DEGREES 20 MINUTES 00 SECONDS WEST 6.98 FEET; THENCE SOUTH 84 DEGREES 31 MINUTES 00 SECONDS WEST 259.19 FEET; THENCE 103.00 FEET ALONG THE EASTERLY LINE OF BLAIN ROAD (70 FEET WIDE) ON THE ARC OF A CURVE CONCAVE TO THE WEST (RADIUS 416.97 FEET, CENTRAL ANGLE 14 DEGREES 09 MINUTES 12 SECONDS, CHORD NORTH 08 DEGREES 03 MINUTES 06 SECONDS EAST 102.74 FEET); THENCE NORTH 84 DEGREES 31 MINUTES 00 SECONDS EAST 16.28 FEET TO A POINT ON THE WESTERLY LINE OF LOT 3; THENCE NORTH 48 DEGREES 48 MINUTES 07 SECONDS EAST 171.11 FEET; THENCE NORTH 84 DEGREES 31 MINUTES 00 SECONDS EAST 120.00 FEET ALONG THE NORTHERLY LINES OF LOTS 1 AND 2 AND SOUTHERLY LINE OF M-59 HIGHWAY (120 FEET WIDE) TO THE POINT OF BEGINNING.

PARCEL 6B:

PART OF LOTS 4 AND 5, OF GLEN MEADOWS NO. 1, AS RECORDED IN LIBER 9, PAGES 35 AND 36 OF PLATS, LIVINGSTON COUNTY RECORDS, AND PART OF THE NORTHWEST 1/4 OF THE NORTHEAST 1/4 OF SECTION 28, TOWN 3 NORTH, RANGE 6 EAST, MICHIGAN, DESCRIBED AS: BEGINNING AT A POINT ON THE WESTERLY LINE OF GLEN MEADOWS DRIVE (60 FEET WIDE) SAID POINT BEING SOUTH 06 DEGREES 20 MINUTES 00 SECONDS EAST 76.30 FEET AND ALONG A CURVE TO THE RIGHT RADIUS 196.34 FEET, CENTRAL ANGLE 36 DEGREES 40 MINUTES 00 SECONDS AN ARC DISTANCE OF 125.65 FEET AND WHOSE CHORD BEARS SOUTH 12 DEGREES 00 MINUTES 00 SECONDS WEST A DISTANCE OF 123.52 FEET AND SOUTH 30 DEGREES 20 MINUTES 00 SECONDS WEST 6.98 FEET FROM THE NORTHEAST CORNER OF LOT 1 OF SAID GLEN MEADOWS NO. 1 SUBDIVISION AND PROCEEDING THENCE ALONG WESTERLY LINE OF GLEN MEADOWS DRIVE, SOUTH 30 DEGREES 20 MINUTES 00 SECONDS WEST 124.42 FEET; THENCE ALONG A CURVE TO THE LEFT RADIUS 257.22 FEET, CENTRAL ANGLE 8 DEGREES 54 MINUTES 36 SECONDS AN ARC DISTANCE OF 40.00 FEET AND WHOSE CHORD BEARS SOUTH 25 DEGREES 52 MINUTES 42 SECONDS WEST A DISTANCE OF 39.96 FEET; THENCE NORTH 80 DEGREES 34 MINUTES 00 SECONDS 213.10 FEET; THENCE ALONG THE EASTERLY RIGHT-OF-WAY LINE OF BLAINE ROAD (70 FEET WISE) ALONG A CURVE TO THE LEFT, RADIUS 416.97 FEET, CENTRAL ANGLE 12 DEGREES 21 MINUTES 19 SECONDS AN ARC DISTANCE OF 89.90 FEET AND WHOSE CHORD BEARS NORTH 21 DEGREES 13 MINUTES 40 SECONDS EAST A DISTANCE OF 89.73 FEET; THENCE NORTH 84 DEGREES 31 00 EAST 259.19 FEET TO THE POINT OF BEGINNING.

### **BEARING REFERENCE**

BEARINGS ARE BASED ON PROJECT COORDINATE SYSTEM: MICHIGAN STATE PLANE COORDINATE SYSTEM, NAD83 (CONUS) (MOL) (GRS80), SOUTH ZONE 2113, INTERNATIONAL FEET, GROUND (LAT: N 42°37'59.81", LON: W 83°44'45.13", ELEV: 984, SCALE FACTOR: 1.0001304809).

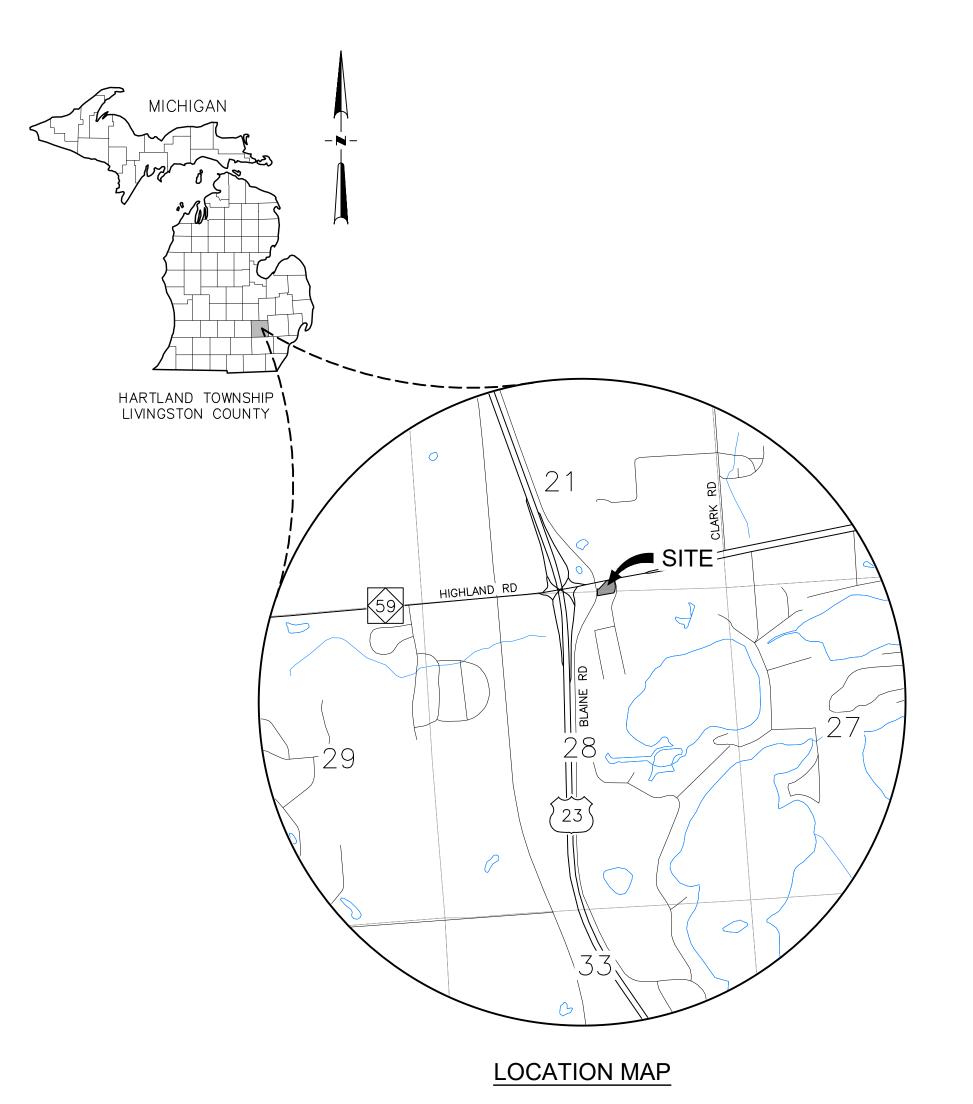
### DESIGN ENGINEER/SURVEYOR



MONUMENT ENGINEERING GROUP ASSOCIATES, INC

INNOVATIVE GEOSPATIAL & ENGINEERING SOLUTIONS

298 VETERANS DRIVE, FOWLERVILLE, MI 48836 ALLAN W PRUSS, PE, PS PHONE: 517-223-3512



CLIENT



# PLAN SUBMITTALS SHEET INDEX GENERAL SHEET G-1.0 COVER $\bullet$ SHEET V-1.0 TOPOGRAPHIC SURVEY AND DEMOLITION PLAN SHEET C-1.0 DIMENSION & PAVING $\bullet$ GRADING AND SOIL EROSION & SEDIMENTATION PLAN SHEET C-7.0 GRADING PLAN, SOIL EROSION & SEDIMENTATION PLAN **SPECIFICATIONS** SHEET C-12.0 SPECIFICATIONS SHEET C-12.1 SPECIFICATIONS $\bullet$ $\bullet$ $\bullet$ LANDSCAPE SHEET LS-1 LANDSCAPE IMPROVEMENT PLAN HARTLAND TOWNSHIP STANDARD DETAILS

LANDSCAPE ARCHITECT

FELINO A. PASCUAL AND ASSOCIATES

24333 ORCHARD LAKE RD, SUITE G FARMINGTON HILLS, MI 48336 (248) 557-5588



P:\Projects\2019\19-076 BK Hartland\Dwg\Engineering\19-076\_G-1.0\_Cover.dwg

10/08/2019

ISSUE DATE:

7/29/2019

**REVISIONS** 

9/25/2019



CONT. INT.: 1 FOOT DRWG. by : BN/DC DSGN. by : MN CHECK : AP

SCALE: N/A

PROJECT NUMBER 19-076

G-1.0

## **BENCHMARKS**

DATUM: NAVD88

60D NAIL IN LIGHT POLE, 72'± WEST & 22'± SOUTH FROM THE SOUTHWEST BUILDING CORNER FOR BURGER KING. ELEV = 976.19

60D NAIL IN LIGHT POLE, 31' EAST & 25'± SOUTH FROM THE SOUTHEAST BUILDING CORNER FOR BURGER KING. ELEV = 976.52

### STRUCTURE SCHEDULE

EX	. SANITARY	SEWER
STRUCTURE	RIM ELEV.	PIPES
(25102)	975.67	12" SW IE= 964.29 12" E IE= 964.26
(25312)	975.32	GREASE TRAP — PER LIV. CO. HEALTH DEPT.
(25313)	975.16	NOT INVENTORIED AT TIME OF SURVEY
(25412)	975.95	12" NE IE= 964.60 12" W IE= 964.68 18" N IE= 967.36 10" SW IE= 965.52

EX. STORM SEWER			
STRUCTURE	RIM ELEV.	PIPES	
(25003) CBB	971.51	12" SE IE= 968.34	
(25046) CBS	972.87	12" N IE= 967.48 12" NW IE= 968.69	
(25279) CBS	972.82	12" SE IE= 968.43 12" W IE= 967.31	
(25284) CBS	972.87	12" E IE= 968.20 12" NW IE= 968.14	
(25458) CBS	973.21	12" S IF= 967.48	

### UTILITY REFERENCE

WM: HARTLAND TWP. ~ HEALTH DEPT. RECEIVED: 7/10/19 ~ 7/18/19

SAN: LIV. CO. DRAIN COMM. ~ HEALTH DEPT. RECEIVED: 6/21/19 ~ 7/18/19

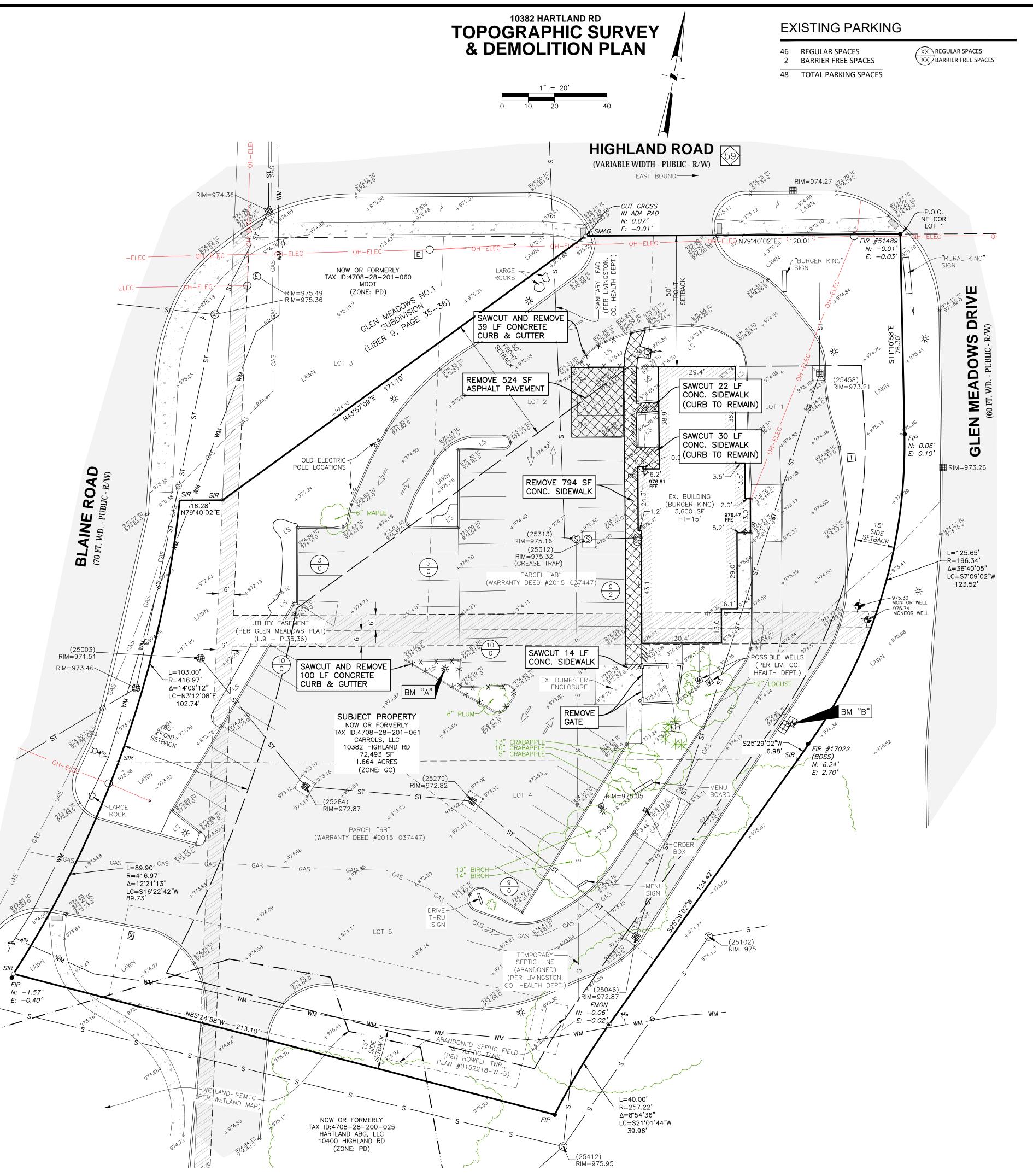
STORM: LIV. CO. RD. COMM. (BLAINE RD) RECEIVED: 7/11/19

CONSUMERS ENERGY RECEIVED: ELEC: DTE ENERGY

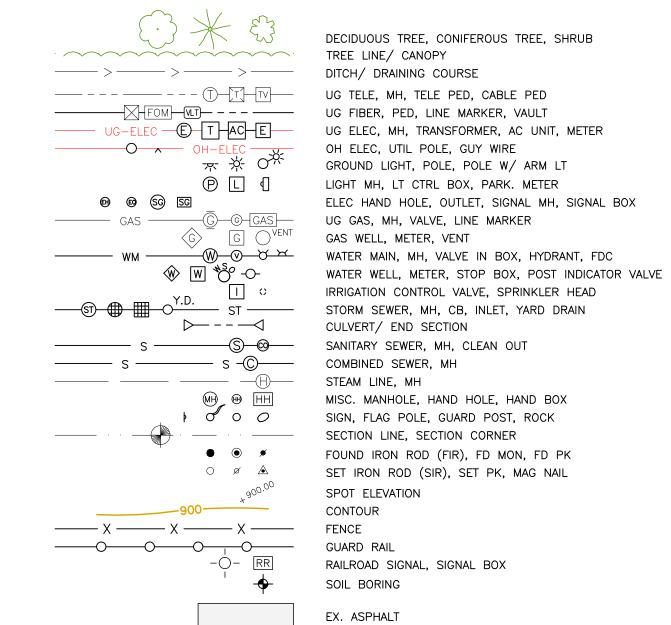
**RECEIVED:** 7/2/19 AT&T PHONE/CABLE: RECEIVED: 6/18/19 MDOT ROW/MDOT: 6/22/19 RECEIVED:

### UTILITY NOTE

- 1. ALL FRANCHISE UTILITIES (GAS, FIBER, CABLE, UG ELEC., TELE.) SHOW ARE BASED ON MISS DIG MARKINGS LOCATED AT TIME OF SURVEY UNLESS NOTED OTHERWISE.
- 2. THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.
- PER THE LIVINGSTON COUNTY HEALTH DEPARTMENT, THE SEPTIC LINE, TANK AND FIELD WERE USED AS A TEMPORARY SOURCE DURING THE LATE 80's. IN THE 90'S, A NEW SANITARY LEAD WAS PLACED IN CONNECTION TO THE MAIN LINE.
- 4. PER THE LIVINGSTON COUNTY HEALTH DEPARTMENT, THE TWO (2) WELLS MAY POSSIBLY BE STILL ACTIVE. NO INFORMATION WAS GIVEN FOR A WATER LEAD IN CONNECTION TO THE CITY'S



### **EXISTING LEGEND**



### **FLOOD ZONE**

FEMA MAP SCALES DO NOT SUPPLY SUFFICIENT LEVEL OF DETAIL TO PLOT ACCURATELY. ZONES IF PLOTTED HEREIN ARE APPROXIMATE

EX. CONCRETE

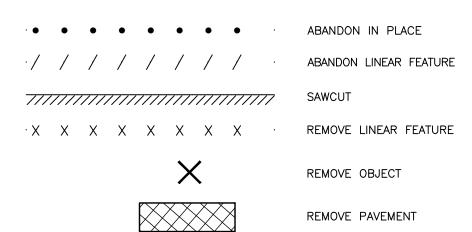
EX. GRAVEL

BY SCALED MAP LOCATION AND GRAPHIC PLOTTING ONLY, THE SUBJECT PROPERTY APPEARS TO LIE ENTIRELY IN ZONE (X) AREA OF MINIMAL FLOOD HAZARD ACCORDING TO THE FLOOD INSURANCE RATE MAP FOR THE COUNTY OF LIVINGSTON, COMMUNITY PANEL NO. (26093C0125D), EFFECTIVE DATE SEPTEMBER, 17, 2008.

### WETLAND NOTE

ACCORDING TO THE NATIONAL WETLAND INVENTORY WEBSITE (HTTP:WWW.FWS.GOVWETLANDSDATAMAPPER.HTML), THERE ARE NOTED WETLANDS ON THE SUBJECT PARCEL. WETLAND FLAGGING WAS NOT OBSERVED DURING THE FIELD SURVEY. AN OFFICIAL STUDY FOR THE PRESENCE OF WETLANDS WAS NOT CONDUCTED BY MONUMENT ENGINEERING GROUP ASSOCIATES.

### DEMOLITION LEGEND



ISSUE DATE 7/29/2019

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PREP/

PRUSS **ENGINEER** 

CONT. INT.: 1 FOOT

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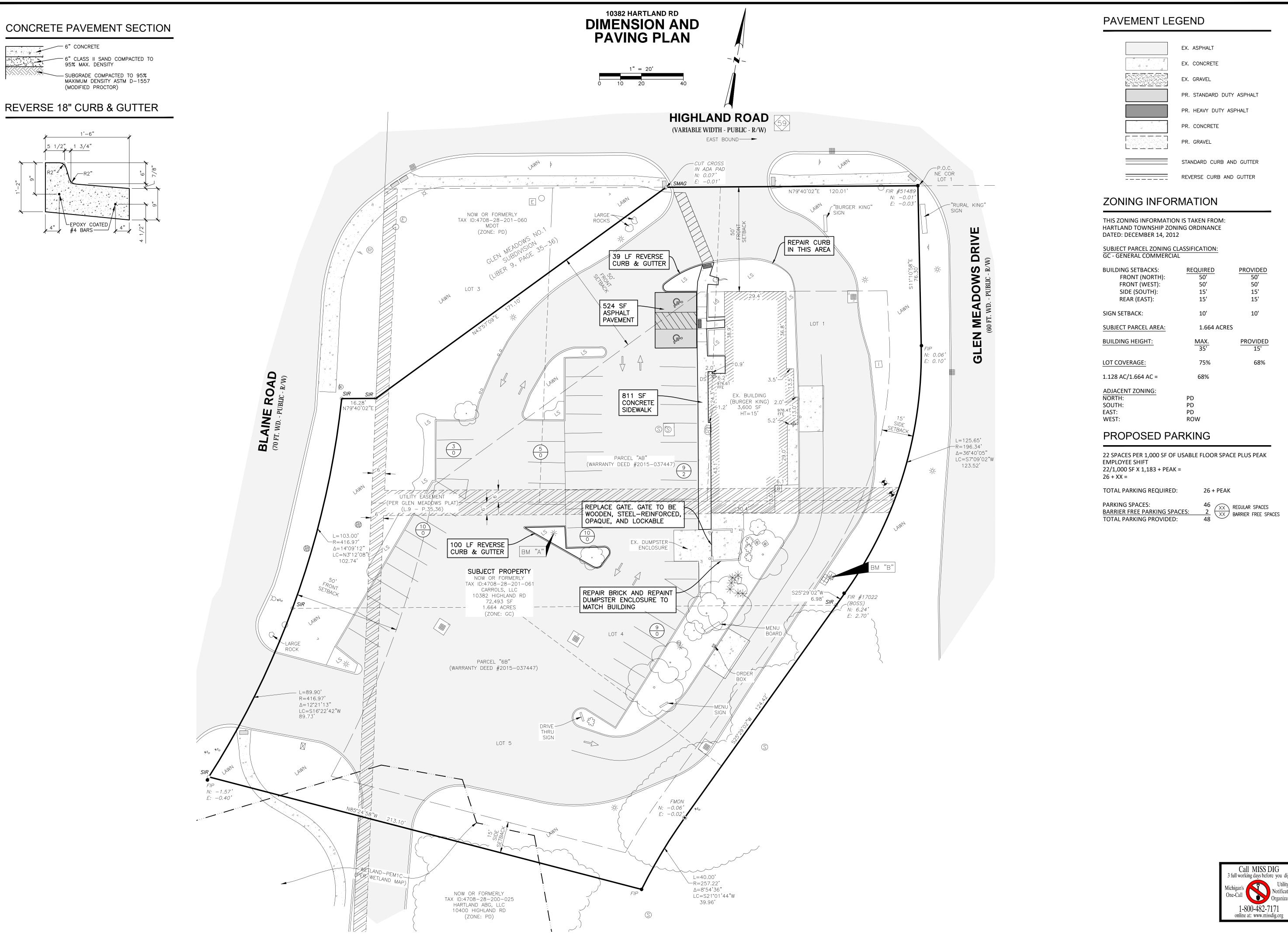
PROJECT NUMBER 19-076

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online at: www.missdig.org

SHEET NUMBER **V-1.0** 



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9/25/2019

10/08/2019

7/29/2019

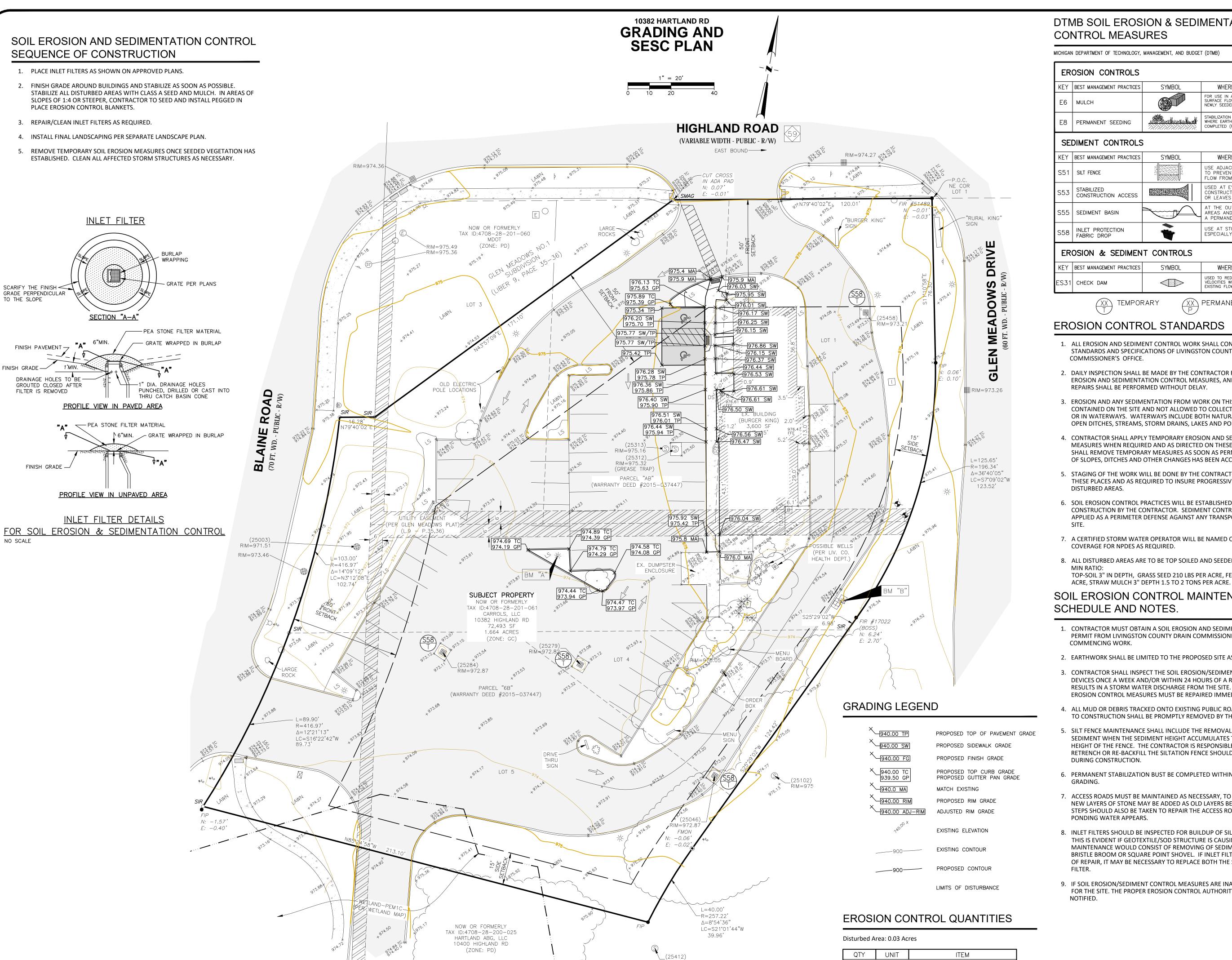
X

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CONT. INT.: 1 FOOT DRWG. by : BN/DC DSGN. by : MN CHECK : AP SCALE: 1" = 20'

PROJECT NUMBER 19-076

SHEET NUMBER **C-1.0** 



RIM=975.95

#### DTMB SOIL EROSION & SEDIMENTATION **CONTROL MEASURES**

MICHIGAN DEPARTMENT OF TECHNOLOGY, MANAGEMENT, AND BUDGET (DTMB)

KEY	BEST MANAGEMENT PRACTICES	SYMBOL	WHERE USED
E6	MULCH		FOR USE IN AREAS SUBJECT TO E SURFACE FLOWS OR SEVERE WIND NEWLY SEEDED AREAS.
E8	PERMANENT SEEDING	xit in the state of the state o	STABILIZATION METHOD UTILIZED ON WHERE EARTH CHANGE HAS BEEN COMPLETED (FINAL GRADING ATTAIN
SEI	DIMENT CONTROLS		
KEY	BEST MANAGEMENT PRACTICES	SYMBOL	WHERE USED
S51	SILT FENCE		USE ADJACENT TO CRITICAL TO PREVENT SEDIMENT LADEN FLOW FROM ENTERING THESE
S53	STABILIZED CONSTRUCTION ACCESS		USED AT EVERY POINT WHER CONSTRUCTION TRAFFIC ENTE OR LEAVES A CONSTRUCTION
S55	SEDIMENT BASIN		AT THE OUTLET OF DISTURBE AREAS AND AT THE LOCATION A PERMANENT DETENTION BA
S58	INLET PROTECTION FABRIC DROP		USE AT STORMWATER INLETS, ESPECIALLY AT CONSTRUCTIO
ER	OSION & SEDIMEN	T CONTROLS	
KEY	BEST MANAGEMENT PRACTICES	SYMBOL	WHERE USED
ES31	CHECK DAM		USED TO REDUCE SURFACE FLOW VELOCITIES WITHIN CONSTRUCTED A EXISTING FLOW CORRIDORS.

#### **EROSION CONTROL STANDARDS**

(XX) TEMPORARY

- 1. ALL EROSION AND SEDIMENT CONTROL WORK SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF LIVINGSTON COUNTY DRAIN COMMISSIONER'S OFFICE.
- 2. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR FOR EFFECTIVENESS OF EROSION AND SEDIMENTATION CONTROL MEASURES, AND ANY NECESSARY REPAIRS SHALL BE PERFORMED WITHOUT DELAY.

XX PERMANENT

- . EROSION AND ANY SEDIMENTATION FROM WORK ON THIS SITE SHALL BE CONTAINED ON THE SITE AND NOT ALLOWED TO COLLECT ON ANY OFF-SITE AREAS OR IN WATERWAYS. WATERWAYS INCLUDE BOTH NATURAL AND MAN-MADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES AND PONDS.
- CONTRACTOR SHALL APPLY TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES WHEN REQUIRED AND AS DIRECTED ON THESE PLANS. CONTRACTOR SHALL REMOVE TEMPORARY MEASURES AS SOON AS PERMANENT STABILIZATION OF SLOPES, DITCHES AND OTHER CHANGES HAS BEEN ACCOMPLISHED.
- 5. STAGING OF THE WORK WILL BE DONE BY THE CONTRACTOR AS DIRECTED IN THESE PLACES AND AS REQUIRED TO INSURE PROGRESSIVE STABILIZATION OF
- 6. SOIL EROSION CONTROL PRACTICES WILL BE ESTABLISHED IN EARLY STAGES OF CONSTRUCTION BY THE CONTRACTOR. SEDIMENT CONTROL PRACTICES WILL BE APPLIED AS A PERIMETER DEFENSE AGAINST ANY TRANSPORTING OF SILT OFF THE
- 7. A CERTIFIED STORM WATER OPERATOR WILL BE NAMED ON THE MDEQ NOTICE OF COVERAGE FOR NPDES AS REQUIRED.
- 8. ALL DISTURBED AREAS ARE TO BE TOP SOILED AND SEEDED WITH THE FOLLOWING TOP-SOIL 3" IN DEPTH, GRASS SEED 210 LBS PER ACRE, FERTILIZER 150 LBS PER

#### SOIL EROSION CONTROL MAINTENANCE SCHEDULE AND NOTES.

- 1. CONTRACTOR MUST OBTAIN A SOIL EROSION AND SEDIMENTATION CONTROL PERMIT FROM LIVINGSTON COUNTY DRAIN COMMISSIONER'S OFFICE PRIOR TO COMMENCING WORK.
- 2. EARTHWORK SHALL BE LIMITED TO THE PROPOSED SITE AS SHOWN ON THE PLAN.
- 3. CONTRACTOR SHALL INSPECT THE SOIL EROSION/SEDIMENTATION CONTROL DEVICES ONCE A WEEK AND/OR WITHIN 24 HOURS OF A RAINFALL EVENT WHICH RESULTS IN A STORM WATER DISCHARGE FROM THE SITE. ANY DAMAGE TO EROSION CONTROL MEASURES MUST BE REPAIRED IMMEDIATELY.
- 4. ALL MUD OR DEBRIS TRACKED ONTO EXISTING PUBLIC ROADS FROM THE SITE DUE TO CONSTRUCTION SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR.
- 5. SILT FENCE MAINTENANCE SHALL INCLUDE THE REMOVAL OF ANY BUILT-UP SEDIMENT WHEN THE SEDIMENT HEIGHT ACCUMULATES TO 1/3 TO 1/2 OF THE HEIGHT OF THE FENCE. THE CONTRACTOR IS RESPONSIBLE TO REMOVE, REPLACE, RETRENCH OR RE-BACKFILL THE SILTATION FENCE SHOULD IT FAIL OR BE DAMAGED DURING CONSTRUCTION.
- 6. PERMANENT STABILIZATION BUST BE COMPLETED WITHIN 30 DAYS OF FINAL GRADING.
- 7. ACCESS ROADS MUST BE MAINTAINED AS NECESSARY, TO KEEP THEM EFFECTIVE, NEW LAYERS OF STONE MAY BE ADDED AS OLD LAYERS BECOME COMPACTED. STEPS SHOULD ALSO BE TAKEN TO REPAIR THE ACCESS ROADS IF RUTS OR PONDING WATER APPEARS.
- 8. INLET FILTERS SHOULD BE INSPECTED FOR BUILDUP OF SILT AND OTHER DEBRIS. THIS IS EVIDENT IF GEOTEXTILE/SOD STRUCTURE IS CAUSING FLOODING. MAINTENANCE WOULD CONSIST OF REMOVING OF SEDIMENTS WITH A STIFF BRISTLE BROOM OR SQUARE POINT SHOVEL. IF INLET FILTER IS BEYOND THIS LEVEL OF REPAIR, IT MAY BE NECESSARY TO REPLACE BOTH THE SOD AND GEOTEXTILE
- 9. IF SOIL EROSION/SEDIMENT CONTROL MEASURES ARE INADEQUATE FOR THE SITE. THE PROPER EROSION CONTROL AUTHORITY MUST BE

INLET FILTER

4 EA



ISSUE DATE 7/29/2019

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CONT. INT.: 1 FOOT DRWG. by : BN/DC

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PROJECT NUMBER 19-076

SHEET NUMBER **C-7.0** 

#### **GENERAL NOTES**

- 1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE LOCAL MUNICIPALITY, THE COUNTY D.P.W., THE COUNTY DRAIN COMMISSIONER, DETROIT METRO WATER & SEWERAGE DEPARTMENT, MICHIGAN DEPARTMENT OF TRANSPORTATION, MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY, THE STATE OF MICHIGAN, AND THE COUNTY ROAD COMMISSION WHERE APPLICABLE.
- 2. RULES, REGULATIONS OR LAWS OF ANY CONTROLLING GOVERNMENTAL AGENCY SHALL GOVERN, WHEN THEY ARE MORE STRINGENT THAN THE REQUIREMENTS OF THESE SPECIFICATIONS.
- SHOULD THE CONTRACTOR ENCOUNTER A CONFLICT BETWEEN THESE PLANS AND SPECIFICATIONS, EITHER AMONG THEMSELVES OR WITH THE REQUIREMENTS OF ANY AND ALL REVIEWING AND PERMIT-ISSUING AGENCIES, HE SHALL SEEK CLARIFICATION IN WRITING FROM THE ENGINEER BEFORE COMMENCEMENT OF CONSTRUCTION. FAILURE TO DO SO SHALL BE AT SOLE EXPENSE TO THE
- 4. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR AND EQUIPMENT TO COMPLETE THE TYPE OF WORK WHICH IS BID, IN ACCORDANCE WITH THE PLANS, SPECIFICATIONS, DETAILS AND TO THE SATISFACTION OF THE OWNER AND OWNER'S REPRESENTATIVE.
- 5. CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.
- ANY WORK WITHIN STREET OR HIGHWAY RIGHT-OF-WAYS SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE GOVERNMENTAL AGENCIES HAVING JURISDICTION AND SHALL NOT BEGIN UNTIL PERMITS HAVE BEEN ISSUED BY THESE GOVERNING AUTHORITIES.
- ALL NECESSARY PERMITS, BONDS, INSURANCES, ETC., SHALL BE PAID FOR BY THE CONTRACTOR.
- 8. ALL ELEVATIONS SHOWN ARE BASED ON BENCHMARKS PROVIDED BY THE LOCAL MUNICIPALITY UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- 9. ALL ITEMS OF WORK NOT SPECIFICALLY INDICATED AS PAY ITEMS ON THE DRAWINGS OR IN THE BID PACKAGE SHALL BE CONSIDERED INCIDENTAL ITEMS.
- 10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL DURING THE

PERIODS OF CONSTRUCTION.

- 11. AT LEAST THREE (3) WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CONTACT MISS DIG (1-800-482-7171) TO VERIFY THE LOCATION OF ANY EXISTING UNDERGROUND UTILITIES AND SHALL NOTIFY REPRESENTATIVES OF OTHER UTILITIES IN THE VICINITY OF THE WORK.
- 12. ALL PROPERTIES OR FACILITIES IN THE SURROUNDING AREAS, PUBLIC OR PRIVATE, DESTROYED OR OTHERWISE DISTURBED DUE TO CONSTRUCTION, SHALL BE REPLACED AND/OR RESTORED TO THE ORIGINAL CONDITION BY THE CONTRACTOR, AT NO ADDITIONAL COST TO THE OWNER.
- 13. MANHOLE, CATCH BASIN, GATE WELL RIMS AND HYDRANT FINISH GRADE ELEVATIONS MUST BE AS-BUILT AND APPROVED BY THE ENGINEER BEFORE THE CONTRACTOR'S WORK IS CONSIDERED COMPLETE. AGENCY REQUIREMENTS FOR RECORD DRAWINGS
- 14. CONTRACTOR SHALL REMOVE AND DISPOSE OF OFF-SITE ANY TREES. BRUSH. STUMPS, TRASH OR OTHER UNWANTED DEBRIS, AT THE OWNER'S DIRECTION, INCLUDING OLD BUILDING FOUNDATIONS AND FLOORS. THE BURNING OR BURYING OF TRASH, STUMPS OR OTHER DEBRIS WILL NOT BE ALLOWED.
- 15. ALL REFERENCES TO M.D.O.T. SPECIFICATIONS REFER TO THE MOST CURRENT STANDARD SPECIFICATIONS FOR CONSTRUCTION.
- 16. ALL CONTRACTORS BIDDING THIS PROJECT SHALL HAVE VISITED THE SITE TO BECOME THOROUGHLY FAMILIAR WITH THE SITE AND THE CONDITIONS IN WHICH THEY WILL BE CONDUCTING THEIR OPERATIONS. ANY VARIANCE FOUND BETWEEN THE PLANS AND EXISTING CONDITIONS SHALL BE REPORTED IMMEDIATELY TO THE
- 17. THE LOCATIONS AND DIMENSIONS SHOWN ON THE PLANS FOR EXISTING UNDERGROUND FACILITIES ARE IN ACCORDANCE WITH AVAILABLE INFORMATION PROVIDED BY THE UTILITY COMPANIES AND GOVERNMENTAL AGENCIES WITHOUT UNCOVERING AND MEASURING. THE DESIGN ENGINEER DOES NOT GUARANTEE THE ACCURACY OF THIS INFORMATION OR THAT ALL EXISTING UNDERGROUND FACILITIES ARE SHOWN.
- 18. THE OWNER MAY EMPLOY AND PAY FOR THE SERVICES OF A ENGINEER TO PROVIDE ON-SITE INSPECTION AND VERIFY IN THE FIELD THAT ALL BACKFILL, PAVEMENTS AND CONCRETE CURB AND GUTTER HAVE BEEN PLACED AND COMPACTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. IF, IN THE OPINION OF THE ENGINEER, THE WORK DOES NOT MEET THE TECHNICAL OR DESIGN REQUIREMENTS STIPULATED FOR THE WORK, THE CONTRACTOR SHALL MAKE ALL NECESSARY ADJUSTMENTS AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL MAKE NO DEVIATIONS FROM THE CONTRACT DOCUMENTS WITHOUT SPECIFIC WRITTEN APPROVAL OF THE OWNER.
- 19. ALL EXCAVATED MATERIAL REMOVED FROM THE SANITARY SEWER, STORM SEWER AND WATER MAIN TRENCHES UNDER, THROUGH AND WITHIN 3 FEET OF THE 45° ZONE OF INFLUENCE LINE OF EXISTING OR PROPOSED PAVING, SIDEWALK AREAS AND PER PLANS, NOT SUITABLE FOR BACKFILL, SHALL BE REMOVED FROM THESE AREAS AND DISPOSED OF.
- 20. THE CONTRACTOR SHALL RESTORE TO THEIR PRESENT CONDITIONS ANY PAVEMENT OR PUBLIC RIGHTS-OF-WAY THAT IS DISTURBED BY THE OPERATIONS OF THE CONTRACTOR. ALL RESTORATION WORK IN PUBLIC RIGHTS-OF-WAY SHALL BE PERFORMED TO THE SATISFACTION OF THE GOVERNMENT AGENCIES HAVING
- 21. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BARRICADES, SIGNAGE AND LIGHTS TO PROTECT THE WORK AND SAFELY MAINTAIN TRAFFIC, IN ACCORDANCE WITH LOCAL REQUIREMENTS AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (LATEST EDITION).
- 22. O.S.H.A. SAFETY REQUIREMENTS ALL WORK, WORK PRACTICE, AND MATERIALS SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL SAFETY, OCCUPATIONAL, HEALTH AND ENVIRONMENTAL REGULATIONS AND ALSO NFPA AND ANSI CODES AS APPLICABLE. ALL WORK INSIDE A CONFINED SPACE SUCH AS MANHOLES OR UNDERGROUND STRUCTURES SHALL BE COORDINATED WITH UTILITY OWNER AND ALL WORKER SAFETY REQUIREMENTS STRICTLY ENFORCED. LAND SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- 23. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ARRANGE FOR OR SUPPLY TEMPORARY WATER SERVICE, SANITARY FACILITIES AND ELECTRICITY.
- 24. CONTRACTOR SHALL PROVIDE FOR THE CONTINUOUS OPERATION OF EXISTING FACILITIES WITHOUT INTERRUPTION DURING CONSTRUCTION UNLESS SPECIFICALLY AUTHORIZED OTHERWISE BY THE RESPECTIVE AUTHORITY.
- 25. THE CONTRACTOR SHALL NOTE EXISTING UNDERGROUND UTILITIES IN THE PROJECT PLANS. BACKFILL TRENCHES FOR EXISTING UTILITIES SHALL BE EXAMINED CRITICALLY. ANY TRENCH WHICH, IN THE OPINION OF THE SOILS ENGINEER ARE FOUND TO BE SOFT, UNSTABLE, OR UNSUITABLE MATERIAL SHALL BE COMPLETELY EXCAVATED AND BACKFILLED WITH SUITABLE MATERIAL. SAND BACKFILL SHALL BE USED UNDER PAVEMENT OR WITHIN THE 1 ON 1 LAND INFLUENCE OF PAVEMENT OR STRUCTURES.

#### **EROSION CONTROL STANDARDS**

- 1. ALL EROSION AND SEDIMENT CONTROL WORK SHALL CONFORM TO STANDARDS AND SPECIFICATIONS OF THE JURISDICTIONAL AGENCY UNDER PART 91 OF ACT 451 OF
- STORM WATER DISCHARGE COVERAGE PERMIT IS REQUIRED FOR ANY CONSTRUCTION ACTIVITY THAT DISTURBS 1 ACRES OR MORE OF LAND. A CERTIFIED STORM WATER OPERATOR IS REQUIRED FOR THE SUPERVISION AND INSPECTION OF THE SOIL EROSION CONTROL MEASURES AT THE CONSTRUCTION SITE IN ACCORDANCE
- 3. DAILY INSPECTIONS SHALL BE MADE BY CONTRACTOR WHILE WORKING TO DETERMINE THE EFFECTIVENESS OF EROSION AND SEDIMENT CONTROL MEASURES. ANY NECESSARY REPAIRS SHALL BE PERFORMED WITHOUT DELAY. ALL SOIL EROSION CONTROL PROVISIONS SHALL BE PROPERLY MAINTAINED DURING
- 4. EROSION AND ANY SEDIMENTATION FROM WORK ON THIS SITE SHALL BE CONTAINED ON THE SITE AND NOT ALLOWED TO COLLECT ON ANY OFF-SITE AREAS OR IN WATERWAYS. WATERWAYS INCLUDE BOTH NATURAL AND MAN-MADE OPEN
- 5. CONTRACTOR SHALL APPLY TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES WHEN REQUIRED AND AS DIRECTED ON THESE PLANS. CONTRACTOR SHALL REMOVE TEMPORARY MEASURES AS SOON AS PERMANENT STABILIZATION OF
- 7. SOIL EROSION CONTROL PRACTICES WILL BE ESTABLISHED IN EARLY STAGES OF CONSTRUCTION BY THE CONTRACTOR. SEDIMENT CONTROL PRACTICES WILL BE APPLIED AS A PERIMETER DEFENSE AGAINST ANY TRANSPORTING OF SILT OFF THE
- 8. DUST SHALL BE CONTROLLED BY WATERING OR BY OTHER APPROVED MEANS THROUGHOUT ALL CONSTRUCTION OPERATIONS.
- 9. PERMANENT SOIL EROSION CONTROL MEASURES FOR SLOPES, CHANNELS, DITCHES AFTER FINAL GRADING OR THE FINAL EARTH CHANGE HAS BEEN COMPLETED. MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND ESTABLISHED BEFORE A CERTIFICATE OF COMPLIANCE IS

7/29/2019 REVISIONS

ISSUE DATE

9/25/2019 10/08/2019

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PROJECT NUMBER 19-076

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- UNDER "MICHIGAN'S PERMIT-BY-RULE FOR CONSTRUCTION ACTIVITIES", PROMULGATED UNDER ACT 245, PUBLIC ACTS OF 1929 AS AMENDED, AN NPDES WITH THE PROVISIONS OF THESE RULES.
- DITCHES, STREAMS, STORM DRAINS, LAKES, AND PONDS.
- SLOPES, DITCHES, AND OTHER EARTH CHANGE AREAS HAVE BEEN COMPLETED.
- 6. STAGING THE WORK WILL BE DONE BY THE CONTRACTOR AS DIRECTED IN THESE PLANS AND AS REQUIRED TO ENSURE PROGRESSIVE STABILIZATION OF DISTURBED

- OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN 5 CALENDAR DAYS WHEN IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE A DISTURBED AREA AFTER AN EARTH CHANGE HAS BEEN COMPLETED OR WHERE SIGNIFICANT EARTH CHANGE HAS BEEN COMPLETED OR WHERE SIGNIFICANT EARTH CHANGE ACTIVITY CEASES. TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED WITHIN 5 CALENDAR DAYS. ALL TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE

#### GRADING AND EARTHWORK **SPECIFICATIONS**

- ALTHOUGH A SUB-SURFACE INVESTIGATION MAY HAVE BEEN MADE BY THE OWNER, THE BIDDER AND ANY SUB-CONTRACTORS SHALL MAKE A PERSONAL INVESTIGATION OF SITE AND EXISTING SURFACE AND SUB-SURFACE CONDITIONS. THE CONTRACTOR IS RESPONSIBLE TO ACQUAINT HIMSELF WITH CONDITIONS OF THE WORK AREA. THE CONTRACTOR IS ADVISED TO DETERMINE THE SUB-SURFACE SOIL CONDITIONS AND GROUND WATER CONDITIONS TO HIS OWN SATISFACTION PRIOR TO BIDDING. NO MODIFICATIONS TO THE UNIT PRICES BID FOR ANY ITEM WILL BE MADE DUE TO VARIABLE SUB-SURFACE CONDITIONS. DEWATERING, IF DETERMINED NECESSARY BY THE CONTRACTOR, BY WELL POINTING OR DEEP WELLS WILL BE INCIDENTAL TO THE INSTALLATION COST OF THE ITEM.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING DETERMINED TO HIS SATISFACTION PRIOR TO THE SUBMISSION OF HIS BID THE CONFIRMATION OF THE GROUND. THE CHARACTER AND QUALITY OF THE SUBSTRATA, THE TYPES AND QUANTITIES OF MATERIALS TO BE ENCOUNTERED. THE NATURE OF THE GROUNDWATER CONDITIONS. THE PROSECUTION OF THE WORK, THE GENERAL AND LOCAL CONDITIONS INCLUDING RECENT CLIMATIC CHANGES. THE TIME OF YEAR IN WHICH CONSTRUCTION WILL TAKE PLACE AND ALL OTHER MATTERS WHICH CAN IN ANY WAY AFFECT THE WORK UNDER THIS CONTRACT.
- PRIOR TO COMMENCING THE EXCAVATION THE CONTRACTOR SHALLSUBMIT A PLAN OF HIS PROPOSED OPERATIONS AND TIME SCHEDULE TO THE OWNER & OWNERS REPRESENTATIVE FOR THEIR APPROVAL
- THE CONTRACTOR SHALL CONSIDER, AND HIS PLAN FOR EXCAVATION SHALL REFLECT, THE EQUIPMENT AND METHODS TO BE EMPLOYED IN THE EXCAVATION AND WHAT METHODS WILL BE USED WHEN WET CONDITIONS ARE ENCOUNTERED REQUIRING GROUNDWATER CONTROL OR OTHER MOISTURE CONDITIONING. TH CONTRACTOR SHALL SUBMIT AN OUTLINE OF HIS EARTHWORK METHODS WHICH SHALL TAKE INTO ACCOUNT THE OVERALL CONSTRUCTION SCHEDULE. THE PRICES ESTABLISHED IN THE PROPOSAL FOR THE WORK TO BE DONE SHALL REFLECT ALL COSTS PERTAINING TO THE WORK. NO CLAIMS FOR EXTRAS BASED ON SUBSTRATA OR GROUNDWATER TABLE CONDITIONS OR MOISTURE CONDITIONING
- THE CONTRACTOR SHALL KEEP INFORMED AND THE OWNER'S REPRESENTATIVE INFORMED AT ALL TIMES AS TO A "FILL SURPLUS OR SHORTAGE" SITUATION. SHORTAGE OR SURPLUS OF SUITABLE MATERIAL AT THE CONCLUSION OF THE GRADING AND EARTHWORK OPERATION SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND HE WILL BE REQUIRED TO SUPPLY THE DEFICIENCY OR DISPOSE OF THE SURPLUS WITHOUT ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL REMOVE VEGETATION, DEBRIS, UNSATISFACTORY SOIL MATERIALS, OBSTRUCTIONS, AND OTHER DELETERIOUS MATERIALS FROM GROUND SURFACE PRIOR TO CUT OR FILL OPERATIONS.
- MATERIALS FOR FILL OR BACKFILL REQUIRED TO GRADE THE SITE AND ACHIEVE DESIGN ELEVATIONS SHALL BE EITHER ON OR OFF-SITE SOILS WHICH ARE FREE OF ORGANIC MATTER AND DEBRIS. NO TOPSOIL SHALL BE USED AS ENGINEERED
- 8. NO FILL MAY BE PLACED UNTIL THE EXPOSED SURFACES HAVE BEEN APPROVED BY THE GEOTECHNICAL ENGINEER. ALL FILL MATERIALS SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.
- 9. IF ANY UNKNOWN SUBSURFACE STRUCTURES ARE ENCOUNTERED DURING CONSTRUCTION, THEY SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE AND DESIGN ENGINEER PRIOR TO PROCEEDING.
- 10. ALL FILL MATERIAL SHALL BE PLACED AND COMPACTED AT THE OPTIMUM MOISTURE CONTENT OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
- 11. NO FROZEN MATERIAL SHALL BE USED AS FILL NOR WILL ANY FILL BE PLACED ON A FROZEN BASE.
- 12. NO ROCK OR SIMILAR MATERIAL GREATER THAN 6" DIAMETER SHALL BE PLACED IN THE FILL UNLESS RECOMMENDATIONS FOR SUCH PLACEMENT HAVE BEEN SUBMITTED BY THE GEOTECHNICAL ENGINEER IN ADVANCE AND APPROVED BY THE OWNER AND OWNER'S REPRESENTATIVE.
- 13. COMPACT FILL MATERIAL TO AT LEAST THE FOLLOWING PERCENTAGE OF MAXIMUM DRY DENSITY, AS DETERMINED BY ASTM D-1557 (MODIFIED PROCTOR). NO DEVIATION FROM THESE COMPACTION DENSITIES WILL BE ALLOWED UNLESS SPECIFICALLY RECOMMENDED BY THE GEOTECHNICAL ENGINEER AND APPROVED BY THE OWNER AND OWNER'S REPRESENTATIVE.

•	FILL AREAS	% OF MAXIMUM DRY DENSITY
•	FILL UNDER BUILDING (EXTENDING 5' BEYOND FOOTINGS AT A SLOPE OF 1 ON 1)	95%
•	FILL IN THE UPPER 18" UNDER PAVEMENT OR SIDEWALKS	95%
•	FILL PLACED UNDER OR BEHIND RETAINING WALLS	95%
•	ALL OTHER FILL	90%

- 14. ALL FILL MATERIAL SHALL BE PLACED AND COMPACTED IN LIFTS, THAT WILL NOT EXCEED THE DEPTH IN WHICH THE COMPACTION EQUIPMENT CAN ACHIEVE THE MAXIMUM DENSITY REQUIRED FOR THE ENTIRE DEPTH OF THE MATERIAL PLACED IN
- 15. ALL AREAS WHERE FILL HAS BEEN PLACED OR THE EXISTING SOILS HAVE BEEN DISTURBED SHALL BE SUBJECT TO COMPACTION TESTING BY THE GEOTECHNICAL WNER AND OWNER'S REPRESENTATIVE.
- 16. FILL MATERIAL UNDER PAVEMENTS OR STRUCTURES SHALL BE FREE OF ORGANIC OR DELETERIOUS MATERIALS. IT SHALL BE SUITABLE FOR SUPPORTING PAVEMENTS AND STRUCTURES WITHOUT ADVERSE SHRINKING OR SWELLING.
- SUPPORT GROWTH OF THE LANDSCAPING MATERIALS (TYPICAL FOR THE LOCAL CLIMATE) AND AS PROPOSED BY THE LANDSCAPE ARCHITECT.
- 18. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF, IN A LEGAL MANNER, ANY TREES, BRUSH OR DEBRIS THAT ARE WITHIN THE DESIGNATED CUTTING AND FILLING AREAS TO BRING THE SITE TO PROPOSED
- AREAS AS DIRECTED BY THE OWNER OR OWNER'S REPRESENTATIVE
- BE EXAMINED CRITICALLY, AND ANY AREAS DISCOVERED WHICH, IN THE OPINION OF THE OWNER'S REPRESENTATIVE OR GEOTECHNICAL ENGINEER, ARE SOFT AND UNSTABLE, SHALL BE EXCAVATED TO SUCH DEPTHS AS MAY BE NECESSARY TO INSURE SATISFACTORY SUPPORTING PROPERTIES AS DETERMINED BY THE GEOTECHNICAL ENGINEER. THESE AREAS OF EXCAVATION SHALL BE BACKFILLED IMMEDIATELY AND SHALL BE BROUGHT BACK TO THE ELEVATION OF THE SURROUNDING AREAS WITH APPROVED FILL MATERIAL AND IN ACCORDANCE WITH THE EARTH FILL CONSTRUCTION PROCEDURE.
- ELEMENTS. ANY SETTLEMENT, DISPLACEMENT, PONDING OR WASHING OUT THAT MAY OCCUR PRIOR TO COMMENCING THE NEXT PHASE OF CONSTRUCTION SHALL BE REPAIRED, AND GRADES REESTABLISHED TO THE REQUIRED ELEVATIONS AND
- 22. THE FINISHED SUBGRADE SURFACE SHALL BE SHAPED TO INDICATED PROFILES AND SHALL BE REASONABLY SMOOTH AND FREE FROM IRREGULAR SURFACE CHANGES AND SHALL BE NO MORE THAN 1 INCH ABOVE OR BELOW THE NDICATED SUBGRADE ELEVATIONS.
- 23. THE GRADING CONTRACTOR SHALL BACKFILL ALL PARKING LOT PLANTERS AND LAWN AREAS TO WITHIN 2 INCHES OF THE TOP ADJACENT CURB GRADES. THE TOP 4 INCHES MINIMUM SHALL BE TOPSOIL, FREE FROM DEBRIS AND STONES LARGER THAN 1 INCH IN DIAMETER
- SYSTEMS AND OTHER MEANS FOR REMOVING WATER FROM EXCAVATIONS, TRENCHES. SUBGRADES AND OTHER PARTS OF THE WORK. THE CONTRACTOR SHALL CONTINUE DE-WATERING OPERATIONS UNTIL THE WATER HAS BEEN REMOVED ENTIRELY. UPON COMPLETION OF WATER REMOVAL THE CONTRACTOR ELEVATIONS AND COMPACT SOILS TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER AND OWNER'S REPRESENTATIVE.
- 25. THE CONTRACTOR SHALL DISPOSE OF WATER IN A SAFE AND SANITARY WAY TO PREVENT FLOODING OR INJURY TO PUBLIC OR PRIVATE PROPERTY AND SHALL OBTAIN APPROVAL OF THE LOCAL GOVERNING AUTHORITY BEFORE DISCHARGING RUN-OFF WATER TO THEIR SYSTEM.
- 26. THE CONTRACTOR SHALL PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING GRADES AND NEW GRADES.

#### BITUMINOUS PAVING SPECIFICATIONS

- 1. REFERENCE SPECIFICATIONS WHERE APPLICABLE TO WORK UNDER THIS SECTION ARE REFERRED TO BY ABBREVIATION AS FOLLOWS:
  - A. AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO).
- B. THE ASPHALT INSTITUTE (TAI)
- C. MICHIGAN DEPARTMENT OF TRANSPORTATION / CURRENT STANDARD SPECIFICATIONS FOR CONSTRUCTION (M.D.O.T.)
- D. AMERICAN SOCIETY FOR TESTING MATERIALS (ASTM)
- CRUSHED AGGREGATE BASE COURSE (CABC) SHALL MEET THE REQUIREMENTS OF SECTION 8.02 OF THE MDOT STANDARD SPÉCIFICATION FOR CONSTRUCTION AND SHALL CONSIST OF 21AA CRUSHED AGGREGATE. THE USE OF SLAG IS
- 3. TACK COAT SHALL BE EMULSIFIED ASPHALT MEETING REQUIREMENTS OF AASHTO M140 AND TAI SS-1H.
- AGGREGATE SHALL CONSIST OF CRUSHED STONE, CRUSHED GRAVEL, A MIXTURE OF UNCRUSHED GRAVEL WITH EITHER CRUSHED STONE OR CRUSHED GRAVEL, OR OTHER INERT MATERIAL HAVING SIMILAR CHARACTERISTICS. IT SHALL BE COMPOSED OF CLEAN, TOUGH, DURABLE FRAGMENTS FROM AN EXCESS OF FLAT OR ELONGATED PIECES, AND SHALL BE FREE OF ORGANIC MATTER AND DELETERIOUS SUBSTANCES AND MEET THE REQUIREMENTS OF MOOT STANDARD SPECIFICATIONS, SECTION 8.02.
- 5. FINE AGGREGATE SHALL BE WELL GRADED FROM COARSE TO FINE AND CONSIST OF NATURAL SAND. STONE SCREENINGS, OR A BLEND OF NATURAL SAND AND STONE SCREENINGS. IT SHALL BE COMPOSED OF ROUGH SURFACED AND ANGULAR GRAINS OF QUARTZ OR OTHER HARD DURABLE ROCK AND MEET THE
- 6. ASPHALT CEMENT SHALL COMPLY WITH THE REQUIREMENTS OF AASHTO M226 (ASTM 3381) FOR BITUMINOUS CONCRETE SURFACE COURSE AND SURFACE
- BITUMINOUS CONCRETE SHALL COMPLY WITH MDOT SECTION 7.10 OF STANDARD
- 8. BITUMINOUS LEVELING COURSE SHALL BE MDOT 1100L, 20AA MIX.
- 9. BITUMINOUS WEARING COURSE SHALL BE MDOT 1100T, 20AA MIX.
- 10. THE CONTRACTOR SHALL SUBMIT, TO THE OWNER, TWO COPIES OF MATERIALS CERTIFICATES SIGNED BY MATERIAL PRODUCER AND CONTRACTOR. CERTIFICATES
- 11. THE CONTRACTOR SHALL SUBMIT TO THE GEOTECHNICAL ENGINEER, JOB-MIX FORMULAS FOR EACH REQUIRED ASPHALT AGGREGATE MIXTURE. MIX DESIGNS
- 12. SUBGRADE PREPARATIONS SHALL CONSIST OF THE FINAL MACHINING OF THE SUBGRADE IMMEDIATELY PRIOR TO PLACING THE BITUMINOUS BASE COURSE. THE
- 13. CRUSHED AGGREGATE BASE COURSE SHALL BE COMPACTED TO A DENSITY EQUAL TO AT LEAST 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY
- ASTM D-1557 (MODIFIED PROCTOR). 14. BITUMINOUS CONCRETE PAVEMENT CONSTRUCTION METHODS SHALL CONFORM TO APPLICABLE PORTIONS OF SECTION 4.00 OF THE MDOT STANDARD SPECIFICATIONS
- FOR CONSTRUCTION. 15. THE CONTRACTOR SHALL NOT PLACE THE AGGREGATE BASE COURSE OR THE
- 16. EACH LIFT AND COURSE OF BITUMINOUS CONCRETE SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER, PRIOR TO THE PLACEMENT OF A SUCCEEDING COURSE
- 17. APPLY BITUMINOUS TACK COATS ONLY WHEN TEMPERATURE HAS NOT BEEN BELOW 35 DEGREES F. FOR 12 HOURS IMMEDIATELY PRIOR TO APPLICATION CONSTRUCT BITUMINOUS CONCRETE WEARING COURSE ONLY WHEN ATMOSPHERIC TEMPERATURE IS ABOVE 40-DEGREES F. AND PROCEEDING COURSE OR LIFT IS CLEAN AND DRY. BASE COURSE MAY BE LAID WHEN TEMPERATURE IS ABOVE 35
- 18. THE BITUMINOUS CONCRETE SHALL BE TRANSPORTED FROM THE MIXING PLANT TO THE POINT OF USE IN VEHICLES CONFORMING TO THE REQUIREMENTS OF SECTION 4.00 OF THE MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION. DELIVERIES SHALL BE SCHEDULED SO THAT SPREADING AND ROLLING OF ALL BITUMINOUS CONCRETE PREPARED FOR ONE DAY'S RUN CAN BE COMPLETED DURING DAYLIGHT UNLESS ADEQUATE ARTIFICIAL LIGHTING IS PROVIDED. HAULING OVER FRESHLY PLACED BITUMINOUS MAT SHALL NOT BE PERMITTED UNTIL THE BITUMINOUS CONCRETE HAS BEEN COMPACTED, AS SPECIFIED, AND ALLOWED TO COOL TO
- NOT TO EXCEED 3-INCHES AND TO THE FULL WIDTH BY AN APPROVED BITUMINOUS PAVER. IT SHALL BE STRUCK OFF IN A UNIFORM LAYER OF SUCH DEPTH THAT, WHEN THE WORK IS COMPLETED, IT SHALL HAVE THE REQUIRED OF THE PAVER SHALL BE REGULATED TO ELIMINATE PULLING AND TEARING OF THE BITUMINOUS MAT. UNLESS OTHERWISE DIRECTED, PLACEMENT OF THE BITUMINOUS CONCRETE SHALL BEGIN ALONG THE CENTERLINE OF A CROWNED SECTION OR ON THE HIGH SIDE OF AREAS WITH A ONE-WAY SLOPE. THE BITUMINOUS CONCRETE SHALL BE PLACED IN CONSECUTIVE ADJACENT STRIPS HAVING A MINIMUM WIDTH OF 10 FEET, EXCEPT WHERE EDGE LANES REQUIRE LESS WIDTH TO COMPLETE THE AREA. TRANSVERSE JOINTS IN ADJACENT LANES SHALL BE OFFSET A MINIMUM OF 10 FEET.
- 20. ON AREAS WHERE IRREGULARITIES OR UNAVOIDABLE OBSTACLES MAKE THE USE OF MECHANICAL SPREADING AND FINISHING EQUIPMENT IMPRACTICAL, THE BITUMINOUS CONCRETE MAY BE SPREAD AND RAKED BY HAND TOOLS.
- 21. THE BITUMINOUS CONCRETE SHALL BE PLACED AT A TEMPERATURE OF NOT LESS THAN 250 NOR HIGHER THEN 350 DEGREES F OR AS DIRECTED BY THE
- 22. THE BITUMINOUS CONCRETE MIXTURE SHALL BE THOROUGHLY AND UNIFORMLY COMPACTED BY ROLLING. THE SURFACE SHALL BE ROLLED WHEN THE BITUMINOUS MAT HAS ATTAINED SUFFICIENT STABILITY SO THAT THE ROLLING DOES NOT CAUSE UNDUE DISPLACEMENT, CRACKING AND SHOVING. THE SEQUENCE OF ROLLING OPERATIONS SHALL BE AT THE DISCRETION OF THE
- 23. THE SPEED OF THE ROLLER SHALL, AT ALL TIMES, BE SUFFICIENTLY SLOW TO AVOID DISPLACEMENT OF THE HOT BITUMINOUS CONCRETE. ANY DISPLACEMENT OCCURRING AS A RESULT OF REVERSING THE DIRECTION OF THE ROLLER, OR FROM ANY OTHER CAUSE, SHALL BE CORRECTED AT ONCE.
- 24. SUFFICIENT ROLLERS SHALL BE FURNISHED TO HANDLE THE OUTPUT OF THE PLANT. ROLLING SHALL CONTINUE UNTIL ALL ROLLER MARKS ARE ELIMINATED, THE SURFACE IS OF UNIFORM TEXTURE AND TRUE TO GRADE AND CROSS-SECTION, AND THE REQUIRED FIELD DENSITY IS OBTAINED.
- 25. TACK COAT SHALL BE APPLIED TO THE SURFACE OF PREVIOUS LIFTS AND COURSES OF BITUMINOUS CONCRETE AND TO SURFACES ABUTTING OR PROJECTING
- 26. IMMEDIATELY BEFORE PLACING A SUCCEEDING LIFT OR COURSE OF BITUMINOUS CONCRETE THE PRECEDING LIFT OR COURSE SHALL BE CLEARED OF ANY DEBRIS BY APPROPRIATE METHODS.
- 27. TO PREVENT ADHESION OF THE BITUMINOUS CONCRETE TO THE ROLLER, THE WHEELS SHALL BE KEPT PROPERLY MOISTENED, BUT EXCESSIVE WATER WILL NOT
- 28. IN AREAS NOT ACCESSIBLE TO THE ROLLER, THE BITUMINOUS CONCRETE SHALL BE THOROUGHLY COMPACTED WITH HOT HAND TAMPERS.
- 29. ANY BITUMINOUS CONCRETE THAT BECOMES LOOSE AND BROKEN, MIXED WITH DIRT, OR IN ANY WAY DEFECTIVE SHALL BE REMOVED AND REPLACED WITH FRESH HOT BITUMINOUS CONCRETE AND IMMEDIATELY COMPACTED TO CONFORM TO THE SURROUNDING AREA. THIS WORK SHALL BE DONE AT THE CONTRACTOR'S EXPENSE. SKIN PATCHING SHALL NOT BE ALLOWED.
- 30. THE CONTRACTOR SHALL PROVIDE AT LEAST TWO ROLLERS FOR EACH PAVER OPERATING ON THE WORK. THE CONTRACTOR SHALL USE ADDITIONAL ROLLERS AS REQUIRED TO OBTAIN THE SPECIFIED PAVEMENT DENSITY.
- PAVEMENT, IN A CATCH BASIN OR SEWER MANHOLE, OR IN ANY PUBLIC
- 24. REINFORCEMENT BARS SHALL BE PER ASTM A615-84A, GRADE 60 DEFORMED BILLET - STEEL BARS.
- 25. TIE WRE SHALL BE BLACK, ANNEALED STEEL WIRE, NOT LESS THAN 16 GAUGE.

# BITUMINOUS PAVING SPECIFICATIONS,

- 31. THE CONTRACTOR SHALL CAREFULLY MAKE JOINTS BETWEEN OLD AND NEW PAVEMENTS, OR BETWEEN SUCCESSIVE DAYS' WORK, TO ENSURE A CONTINUOUS BOND BETWEEN ADJOINING WORK. CONSTRUCT JOINTS TO HAVE THE SAME TEXTURE. DENSITY AND SMOOTHNESS AS OTHER SECTIONS OF THE BITUMINOUS CONCRETE COURSE. THE CONTRACTOR SHALL CLEAN CONTACT SURFACES OF SAND, DIRT, OR OTHER OBJECTIONABLE MATERIAL BEFORE MAKING THE JOINT.
- 32. THE CONTRACTOR SHALL TEST THE FINISHED SURFACE OF EACH BITUMINOUS CONCRETE COURSE FOR SMOOTHNESS, USING A 10 FOOT STRAIGHTEDGE APPLIED PARALLEL WITH AND AT RIGHT ANGLES TO CENTERLINE OF PAVED AREA. SURFACE SHALL NOT BE ACCEPTABLE IF EXCEEDING THE FOLLOWING TOLERANCES FOR SMOOTHNESS.
  - A. LEVELING COURSE SURFACE: 1/4 INCH, PLUS OR MINUS 1/4 INCH.
- B. SURFACE COURSE: 1/4 INCH 33. THE CONTRACTOR SHALL TEST CROWNED SURFACES WITH A CROWN TEMPLATE, CENTERED AND AT RIGHT ANGLES TO THE CROWN. SURFACES WILL NOT BE ACCEPTABLE IF THE FINISHED CROWN SURFACES VARY MORE THAN 1/4 INCH
- FROM THE CROWN TEMPLATE. 34. AFTER FINAL ROLLING, THE CONTRACTOR SHALL NOT PERMIT VEHICULAR TRAFFIC ON THE BITUMINOUS CONCRETE PAVEMENT UNTIL IT HAS COOLED AND HARDENED, AND IN NO CASE SOONER THAN SIX HOURS OR AS DIRECTED BY THE
- 35. THE AGGREGATE BASE MUST EXTEND A MINIMUM OF 1' BEHIND THE BACK-OF-CURB AROUND THE PERIMETER OF THE PARKING LOT AND DRIVES.

#### CONCRETE CURB, SIDEWALK AND PAVEMENT SPECIFICATIONS

- THESE SPECIFICATIONS SHALL GOVERN THE CONSTRUCTION OF ALL PAVEMENTS, CURB AND GUTTER, SIDEWALKS, SERVICE WALKS, DRIVEWAY APPROACHES, AND LOADING DOCK AREAS, AS INDICATED ON THE DRAWINGS.
- REFERENCE SPECIFICATIONS WHERE APPLICABLE TO WORK UNDER THIS SECTION ARE REFERRED BY ABBREVIATION AS FOLLOWS:
  - A. AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO).
  - B. AMERICAN CONCRETE INSTITUTE (ACI)

GEOTECHNICAL ENGINEER.

- C. MICHIGAN DEPARTMENT OF TRANSPORTATION/ CURRENT STANDARD SPECIFICATIONS FOR CONSTRUCTION (M.D.O.T.)
- D. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)
- 3. THE FINE AGGREGATE SHALL MEET ALL REQUIREMENTS OF SECTION 8.02 OF OF MDOT SPECIFICATION FOR NO. 2NS NATURAL SAND.
- 4. THE COARSE AGGREGATE SHALL MEET ALL REQUIREMENTS OF SECTION 8.02 OF M.D.O.T. SPECIFICATIONS FOR NO. 6AA COARSE AGGREGATE.
- 5. THE CONTRACTOR SHALL SUBMIT, TO THE OWNER, TWO COPIES OF MATERIALS CERTIFICATES SIGNED BY MATERIAL PRODUCER AND CONTRACTOR. CERTIFICATES
- SHALL STATE THAT EACH MATERIAL ITEM MEETS SPECIFIED REQUIREMENTS. 6. THE CONTRACTOR SHALL SUBMIT, TO THE GEOTECHNICAL ENGINEER, JOB
- MIX-FORMULAS FOR EACH REQUIRED CEMENT-AGGREGATE MIXTURE. MIX DESIGNS SHALL BE WITHIN ALLOWABLE TOLERANCES AS SPECIFIED FOR THE PARTICULAR
- CONCRETE MIX SHALL BE AIR-ENTRAINED AND PROPORTIONED TO PROVIDE THE FOLLOWING:
  - A. COMPRESSIVE STRENGTH AT 28 DAYS: 3500 PSI MIN., OR AS INDICATED
- B. TOTAL AIR CONTENT BY VOLUME: 5% TO 8%. C. SLUMP 3 INCH MAXIMUM, OR AS INDICATED ON PLANS.
- 8. THE CONTRACTOR SHALL AT HIS EXPENSE FURNISH SAMPLES OF FRESH CONCRETE AND PROVIDE SAFE AND SATISFACTORY FACILITIES FOR OBTAINING THE
- 9. CONSTRUCT CONCRETE CURBING ONLY WHEN GROUND TEMPERATURE IS ABOVE 35
- 10. ALL CEMENT USED IN CURB CONSTRUCTION SHALL BE PORTLAND CEMENT, TYPE I OR IA ASTM C-150. 11. WATER USED IN CONCRETE SHALL BE CLEAN, FREE FROM OIL, ACIDS, STRONG

ALKALIS OR VEGETABLE MATTER AND POTABLE. IF MUNICIPAL WATER IS USED IN

MUNICIPAL WATER DEPARTMENT. 12. AIR ENTRAINING ADMIXTURE SHALL BE IN ACCORDANCE WITH ASTM C-260.

THE CONCRETE, ALL NECESSARY PERMITS SHALL BE OBTAINED FROM THE

- 13. ALL READY-MIXED CONCRETE SUPPLIERS MUST BE APPROVED BY THE OWNER. CONCRETE SHALL BE MANUFACTURED AND DELIVERED TO THE JOB SITE BY A READY MIXED CONCRETE MANUFACTURER THOROUGHLY EXPERIENCED IN READY-MIXED CONCRETE. IF REQUESTED BY THE OWNER. SUBMIT A WRITTEN DESCRIPTION OF PROPOSED READY-MIXED CONCRETE MANUFACTURER, GIVING QUALIFICATIONS OF PERSONAL, LOCATION OF BATCHING PLANT, LIST OF PROJECTS SIMILAR IN SCOPE OF SPECIFIED WORK, AND OTHER INFORMATION AS MAY BE REQUESTED BY THE OWNER.
- 14. THE CONTRACTOR SHALL SUBMIT A STATEMENT OF PURCHASE FOR READY-MIXED CONCRETE: PRIOR TO ACTUAL DELIVERY OF CONCRETE, SUBMIT TO TH GEOTECHNICAL ENGINEER FOUR COPIES OF STATEMENT OF PURCHASE, GIVING THE DRY WEIGHTS OF CEMENT AND SATURATED SURFACE DRY WEIGHTS OF FINE AND COARSE AGGREGATES AND QUANTITIES, TYPE AND NAME OF ADMIXTURES (IF ANY) AND OF WATER PER CU.YD., THAT WILL BE USED IN THE MANUFACTURE OF THE CONCRETE. THE CONTRACTOR SHALL ALSO FURNISH EVIDENCE SATISFACTORY TO THE GEOTECHNICAL ENGINEER THAT THE MATERIALS TO BE USED AND PROPORTIONS SELECTED WILL PRODUCE CONCRETE OF THE QUALITY SPECIFIED. WHATEVER STRENGTHS ARE OBTAINED, THE QUANTITY OF CEMENT USED SHALL
- 15. READY-MIXED CONCRETE DELIVERY TICKETS: SUBMIT ONE COPY OF EACH DELIVERY TICKET TO THE GEOTECHNICAL ENGINEER AND CONTRACTOR IN ACCORDANCE WITH SECTION 16 OF ASTM C94.
- 16. READY-MIXED CONCRETE SHALL BE BATCHED, MIXED AND TRANSPORTED IN ACCORDANCE WITH ASTM C94, AND COMPLY WITH ACI 304 "RECOMMENDED PRACTICE FOR MEASURING, MIXING, TRANSPORTING AND PLACING CONCRETE, EXCEPT AS OTHERWISE SPECIFIED HEREIN.
- 17. READY-MIXED CONCRETE SHALL BE MIXED AND DELIVERED TO THE POINT OF DISCHARGE AT THE JOB BY MEANS OF A READY MIX CONCRETE TRUCK.
- 18. NO WATER FROM THE TRUCK WATER SYSTEM OR ELSEWHERE SHALL BE ADDED AFTER THE INITIAL INTRODUCTION OF THE MIXING WATER FOR THE BATCH. UNDER NO CIRCUMSTANCES SHALL THE APPROVED MAXIMUM WATER CONTENT BE
- 19. DISCHARGE OF THE CONCRETE SHALL BE COMPLETED WITHIN 1-1/2 HOURS OR BEFORE THE DRUM HAS REVOLVED 300 REVOLUTIONS, WHICHEVER COMES FIRST, AFTER THE INTRODUCTION OF THE MIXING WATER TO THE CEMENT AND AGGREGATES OR THE INTRODUCTION OF THE CEMENT TO THE AGGREGATES.
- 20. IN HOT WEATHER (AIR TEMPERATURE 80-DEGREES F. AND ABOVE) OR UNDER CONDITIONS CONTRIBUTING TO QUICK STIFFENING OF THE CONCRETE, THE TIME SHALL BE REDUCED TO ONE HOUR.
- 21. CONCRETE DELIVERED IN COLD WEATHER (AIR TEMPERATURE 45-DEGREES F. AND LOWER) SHALL HAVE A TEMPERATURE NOT LESS THAN 60-DEGREES F. AT THE POINT OF DISCHARGE AT THE JOB, AND IN COMPLIANCE WITH ACI 306R "COLD WEATHER CONCRETING". CONCRETE PLACING WILL NOT BE PERMITTED WHEN THE AIR TEMPERATURE IS 35-DEGREES F. OR LOWER.
- 22. CONCRETE DELIVERED UNDER HOT WEATHER CONDITIONS CONTRIBUTING TO QUICK STIFFENING OF CONCRETE, OR IN AIR TEMPERATURE OF 80-DEGREES F. AND OVER, SHALL HAVE A TEMPERATURE BETWEEN 60- AND 80-DEGREES F. AT THE POINT OF DISCHARGE AT THE JOB, AND IN ACCORDANCE WITH ACI 305R "HOT WEATHER CONCRETING."

#### CONCRETE CURB, SIDEWALK AND PAVEMENT SPECIFICATIONS. CONTINUED

- 26. BAR SUPPORTS SHALL CONFORM TO "BAR SUPPORT SPECIFICATIONS" CONTAINED IN ACI "MANUAL OF STANDARD PRACTICE." PROVIDE CHAIRS, SPACERS AND OTHER DEVICES SUITABLE FOR PROPER SPACING SUPPORTING AND FASTENING REINFORCING BARS.
- 27. WHEN FORMS ARE USED AND THE CURB RADIUS IS LESS THAN 200 FEET, THE CURVED ALIGNMENT SHALL BE PROVIDED FOR BY EITHER STANDARD STEEL FORMS EQUIPPED WITH FLEXIBLE LINES OR BY FLEXIBLE FORMS. THE FORMS SHALL BE OF THE FULL DEPTH OF THE SECTION. CURB AND GUTTER FORMS SHALL BE SO CONSTRUCTED AS TO PERMIT THE INSIDE OF THE FORMS TO BE SECURELY FASTENED TO THE OUTSIDE FORMS.
- 28. ALL NEW CURB SHALL BE PLACED ONLY ON A PREPARED SUBGRADE, SMOOTH AND LEVELED TO THE GRADES ESTABLISHED BY THE ENGINEER.

29. COMPACT AND CUT-TO-GRADE SUBGRADE UNDER FORMS SO THAT FORMS WHEN

- SET WILL BE UNIFORMLY SUPPORTED FOR THE ENTIRE LENGTH. SECURELY STAKE AND BRACE OR TIE FORMS TO PREVENT LEAKAGE OF MORTAR. BRACING WITH EARTH WILL NOT BE PERMITTED.
- 30. COAT SURFACES OF FORMS TO BE IN CONCRETE WITH A LIGHT CLEAR PARAFFIN OIL OR PARTING COMPOUND WHICH WILL NOT STAIN THE CONCRETE.
- 31. THE INTERIOR SURFACES OF CONCRETE CONVEYING EQUIPMENT SHALL BE MAINTAINED FREE OF HARDENED CONCRETE, DEBRIS, WATER, SNOW, ICE AND OTHER DELETERIOUS MATERIALS.
- 32. CURBING MAY BE CONSTRUCTED EITHER BY USE OF FORMS OR BY A MECHANICAL CURB AND GUTTER PAVER, PROVIDED THE REQUIRED FINISH, AND CROSS-SECTION, AS SHOWN ON DRAWINGS ARE OBTAINED. CONCRETE SHALL BE PLACED TO PROVIDE ONE COURSE MONOLITHIC STRUCTURE WITHOUT THE USE OF MORTAR TOPPING OR SAND-CEMENT DRIER. CONCRETE SHALL BE SPADED OR VIBRATED SUFFICIENTLY TO ENSURE SATISFACTORY CONSOLIDATION.
- 33. PROVIDE REINFORCEMENT FOR CONCRETE CURB AS SHOWN ON THE DRAWINGS. REINFORCEMENT SHALL BE KEPT CLEAN AND FREE FROM OBJECTIONABLE RUST BENDS OR KINKS IN REINFORCING BARS SHALL BE CORRECTED BEFORE PLACING ALL REINFORCEMENT SHALL BE ACCURATELY LOCATED IN FORMS AND SECURELY HELD IN PLACE BEFORE AND DURING CONCRETE PLACING, BY SUPPORTS ADEQUATE TO PREVENT DISPLACEMENT DURING THE COURSE OF CONSTRUCTION.
- 34. THE CONCRETE CURB SURFACE SHALL BE STRUCK OFF THE REQUIRED CROSS-SECTION WITH A TEMPLATE. AFTER THE CONCRETE CURB HAS BEEN FLOATED TO AN EVEN SURFACE, THE CONTRACTION JOINT SHALL BE CUT AND ALL SLAB EDGES ROUNDED WITH A 1/2 INCH RADIUS EDGING TOOL THAT WILL FINISH TO A WIDTH OF 2 INCHES. AFTER THE CONCRETE HAS SLIGHTLY SET, A BROOM SHALL BE BRUSHED LIGHTLY ACROSS THE SURFACE PARALLEL TO FORMS SO AS TO IMPART A ROUGH FINISH.
- 35. CONTRACTION JOINTS SHALL BE CUT IN CONCRETE CURBING AT 10' INTERVALS. THE JOINT SHALL CUT 1/4 INCH WIDE BY 1/3 THE DEPTH OF THE CONCRETE
- 36. ISOLATION JOINTS SHALL BE PLACED IN CURBING AT TANGENT POINTS IN CURB RETURNS AT INTERSECTIONS. AT BOTH SIDES OF STRUCTURES LOCATED IN THE LINE AND IN RUNS OF CURB AT INTERVALS NOT EXCEEDING 400 FEET. ISOLATION JOINTS SHALL BE 1" THICK PRE-FORMED JOINT FILLER STRIPS. THE STRIPS SHALL EXTEND THE FULL DEPTH OF THE CONCRETE CURB SECTION. ISOLATION JOINTS SHALL BE PLACED IN CURB AT THE END OF EACH DAYS POUR AND WHEN ABUTTING PREVIOUSLY POURED CURB.
- 37. THE CURING COMPOUND SHALL BE WHITE MEMBRANE TYPE AND COMPLY WITH ASTM C-309. IT SHALL NOT ALLOW A MOISTURE LOSS OF MORE THAN 0.055 GR/SQ/CM WHEN APPLIED AT 200 SQ/FT/GAL
- 38. ALL CONTRACTION JOINTS IN CONCRETE CURB SECTIONS SHALL BE SEALED WITH EITHER HOT POURED JOINT SEALER OR COLD APPLIED JOINT SEALER.
- 39. SLIGHTLY UNDERFILL JOINT GROOVE WITH JOINT SEALER TO PREVENT EXTRUSION OF THE SEALER. REMOVE EXCESS JOINT SEALER MATERIALS AS SOON AFTER SEALING AS POSSIBLE.

40. FRESHLY PLACED CONCRETE SHALL BE PROTECTED AS REQUIRED TO MAINTAIN

MORE THAN 80 DEGREES F. AND IN A MOIST CONDITION CONTINUOUSLY FOR THE PERIOD OF TIME NECESSARY FOR THE CONCRETE TO CURE. CHANGES IN TEMPERATURE OF THE CONCRETE DURING CURING SHALL BE AS UNIFORM AS POSSIBLE AND SHALL NOT EXCEED 5 DEGREES F. IN ANY ONE HOUR, NOR 50 DEGREES F. IN ANY 24 HOUR PERIOD. 41. COLD WEATHER PROTECTION: WHEN THE TEMPERATURE OF THE ATMOSPHERE IS 40-DEGREES F. AND BELOW, THE CONCRETE SHALL BE PROTECTED BY HEATING,

THE TEMPERATURE OF THE CONCRETE AT NOT LESS THAN 50 DEGREES F. NOR

CONDITION CONTINUOUSLY FOR THE CONCRETE CURING PERIOD. COLD WEATHER PROTECTION SHALL MEET THE REQUIREMENTS OF ACI 306R "COLD WEATHER 42. HOT WEATHER PROTECTION: WHEN THE TEMPERATURE OF THE ATMOSPHERE IS 90-DEGREES F. AND ABOVE, OR DURING OTHER CLIMATIC CONDITIONS WHICH WILL CAUSE TOO RAPID DRYING OF THE CONCRETE, THE CONCRETE SHALL BE PROTECTED BY WINDBREAKS. SHADING, FOG SPRAYING LIGHT COLORED MOISTURE RETAINING COVERING, OR A COMBINATION OF THEREOF AS REQUIRED TO MAINTAIN

THE TEMPERATURE OF THE CONCRETE BELOW 80-DEGREE F. AND IN A MOIST

CONDITION CONTINUOUSLY FOR THE CONCRETE CURING PERIOD. HOT WEATHER

EMPERATURE OF THE CONCRETE AT OR ABOVE 50-DEGREES F. AND IN A MOIST

43. ALL FORMS, RAILS AND STAKES SHALL BE REMOVED WITHIN 24 HOURS AFTER

PROTECTION SHALL MEET THE REQUIREMENTS OF ACI 305R "HOT WEATHER

- PLACING THE CURB. 44. AFTER COMPLETION OF CONCRETE CURBING IN AN AREA, REMOVE ALL WEATHER PROTECTION MATERIALS, RUBBISH AND DEBRIS RESULTING FROM SPECIFIED WORK, SWEEP CONCRETE CURBS CLEAN, AND SEAL JOINTS.
- 45. ALL CEMENT USED IN SIDEWALK CONSTRUCTION SHALL BE PORTLAND CEMENT, TYPE I OR IA ASTM C-150.
- 46. ALL NEW WALKS AND CONCRETE PAVEMENTS SHALL BE PLACED ONLY ON A PREPARED SUBGRADE, SMOOTHED AND LEVELED TO THE GRADES ESTABLISHED BY THE ENGINEER. IN CLAY SOILS THE SUBGRADE SHALL BE EXCAVATED 2-INCHES BELOW THE SIDEWALK BASE AND FILLED WITH APPROVED SAND MEETING MOOT CLASS II, SAND DESIGNATION.
- 47. CONSTRUCT CONCRETE SURFACE COURSE ONLY WHEN GROUND TEMPERATURE IS
- 48. SIDEWALKS SHALL PITCH TOWARD THE STREET OR AWAY FROM BUILDINGS WITH A REQUIRED CROSS SLOPE OF 1/4-INCH PER FOOT OF WIDTH. IN SOME EXTREME CASES, AS DETERMINED BY THE ENGINEER, THE CROSS-SLOPE MAY BE INCREASED BUT IN NO CASE SHALL IT BE LESS THAN 3/16-INCH PER FOOT OF

ABOVE 35 DEGREES F. AND BASE IS DRY.

- 49. PRIOR TO PLACING THE CONCRETE, ALL DEBRIS, STONES, DIRT, ETC., SHALL BE REMOVED FROM THE SUBGRADE. THE SUBGRADE SHALL BE MOISTENED WITH WATER IN SUCH A MANNER AS TO THOROUGHLY WET THE MATERIAL WITHOUT FORMING PUDDLES OR POCKETS OF WATER. NO CONCRETE SHALL BE PLACED ON
- 50. FORMS SHALL BE METAL OR WOOD AND OF AN APPROVED SECTION. THEY SHALL BE STRAIGHT, FREE FROM DISTORTION AND SHALL SHOW NO VERTICAL VARIATION GREATER THAN 1/8-INCH IN 10-FOOT LENGTHS FROM THE TRUE PLANE SURFACE ON THE TOP OF THE FORMS WHEN TESTED WITH A 10-FOOT STRAIGHTEDGE, AND SHALL SHOW NO LATERAL VARIATION GREATER THAN 1/4-INCH IN 10-FEET FROM THE TRUE PLANE SURFACE OF THE LATERAL FACE OF THE FORM WHEN TESTED WITH A 10-FOOT STRAIGHTEDGE. THEY SHALL BE OF THE DEPTH SPECIFIED FOR THE SIDEWALK, OR CONCRETE PAVEMENT PER PLANE AND DETAILS, AND BE
- 51. THE CONCRETE SHALL BE DEPOSITED CONTINUOUSLY IN THE FORMS IN SUCH MANNER AS TO AVOID SEGREGATION AND IT SHALL BE THOROUGHLY TAMPED OR VIBRATED SO THAT THE FORMS ARE ENTIRELY FILLED AND THE CONCRETE THOROUGHLY CONSOLIDATED. THE SLABS SHALL BE PLACED IN SECTIONS OR BLOCKS IN ONE OPERATION AS A MONOLITH.

SECURELY HELD IN PLACE AND TRUE TO LINE AND GRADE.

- 52. THE CONCRETE SURFACE SHALL BE STRUCK OFF TO A PLANE SURFACE WITH A STRAIGHTEDGE. AFTER THE CONCRETE HAS BEEN FLOATED TO AN EVEN SURFACE, THE CONTRACTION JOINT SHALL BE CUT AND ALL SLAB EDGES ROUNDED WITH A 1/2-INCH RADIUS EDGING TOOL THAT WILL FINISH TO A WIDTH OF 2-INCHES. AFTER THE CONCRETE HAS SLIGHTLY SET, A BROOM SHALL BE BRUSHED LIGHTLY ACROSS THE SURFACE AT RIGHT ANGLES TO FORMS SO AS TO MPART A ROUGH FINISH.
- 53. CONTRACTION JOINTS SHALL BE PLACED AT RIGHT ANGLES TO THE EDGE OF THE SIDEWALK OR CONCRETE PAVEMENT AND PERPENDICULAR TO THE SURFACE AND AT A DEPTH OF AT LEAST 1/4 THE SLAB THICKNESS WITH A MINIMUM DEPTH OF 1-1/4-INCHES FOR SIDEWALKS AND 3-INCHES FOR CONCRETE PAVEMENT SLABS.
- 54. CONTRACTION JOINTS IN SIDEWALKS SHALL BE SPACED AT A MINIMUM OF EVERY 5-FEET, OR AS SHOWN ON THE PLANS.

#### CONCRETE CURB, SIDEWALK AND PAVEMENT SPECIFICATIONS. CONTINUED

- 55. ISOLATION PAPERS SHALL BE OF THE PRE-MOLDED, NON-EXTRUDING, ASPHALT EQUAL TO THE WIDTH OF THE SLAB, AND THE DEPTH EQUAL TO THE THICKNESS
  - A. AT THE BACK OF THE CURB AND FRONT EDGE OF THE SIDEWALKS AND PAVEMENT SLABS ADJACENT TO EACH DRIVEWAY APPROACH AND SERVICE

  - C. AT THE BACK OF THE CURB WHERE THE RAMPS EXTEND FROM THE KEY FLAG TO THE PAVEMENT.
  - D. BETWEEN THE KEY FLAG AND THE RAMP IN ALL CASES, EXCEPT WHERE
  - F. AT ANY OTHER LOCATIONS INDICATED ON THE PLAN.
- 57. CONTRACTION JOINTS IN THE CONCRETE PAVEMENT IN THE LOADING AREA WILL BE
  - A. TRANSVERSE JOINTS SHALL BE AT 10-FOOT INTERVALS OR AS SHOWN ON PLANS AND DETAILS.
  - B. LONGITUDINAL JOINTS SHALL BE AT 12-FOOT INTERVALS OR AS SHOWN ON
- 58. PRIOR TO APPLYING JOINT SEALER, CLEAN JOINT GROOVE OF FOREIGN MATTER AND LOOSE PARTICLES, AND DRY SURFACE.
- TRAFFIC LANE AND PARKING LOT MARKING

CONSTRUCTION DOCUMENTS.

OTHERWISE.

- THE PAINT SHALL MEET THE REQUIREMENTS OF FEDERAL SPECIFICATION TT-P-115C(3), WITH OR WITHOUT REFLECTORIZED BEADS AS REQUIRED ON THE
- 4. COLOR SHALL BE AS SPECIFIED ON THE PLANS OR AS FOLLOWS:
  - B. TRAFFIC MARKING AND CURB FACES SHALL BE WHITE UNLESS NOTED
- C. PARKING LOT STRIPING SHALL BE WHITE, UNLESS NOTED OTHERWISE.
- BLUE UNLESS NOTED OTHERWISE. THE PAINTING SHALL BE PERFORMED ONLY WHEN THE EXISTING SURFACE IS DRY AND CLEAN, WHEN THE ATMOSPHERIC TEMPERATURE IS ABOVE 40-DEGREES F.
- SURFACE. A MECHANICAL MARKING MACHINE. AND SUCH AUXILIARY HAND PAINTING EQUIPMENT AS MAY BE NECESSARY TO SATISFACTORILY COMPLETE THE THE MECHANICAL MARKER SHALL BE AN APPROVED ATOMIZING SPRAY-TYPE MARKING MACHINE SUITABLE FOR APPLICATION OF TRAFFIC PAINT. IT SHALL

- 10. EXISTING MARKINGS OR STRIPES WHICH ARE TO BE ABANDONED OR REMOVED SHALL BE OBLITERATED OR OBSCURED BY THE BEST METHODS SUITED FOR THE PURPOSE AND TO THE SATISFACTION OF THE OWNER OR OWNERS
- 11. THE CONTRACTOR IS RESPONSIBLE FOR LAYING OUT A SAMPLE SECTION OF STRIPING WHICH IS TO BE APPROVED BY THE OWNER OR OWNERS
- MARKINGS, OR STRIPES ARE AVAILABLE TO SERVE AS A GUIDE, SUITABLE LAYOUTS AND LINES OF PROPOSED STRIPES SHALL BE SPOTTED IN ADVANCE OF THE PAINT APPLICATION. CONTROL POINTS SHALL BE SPACED AT SUCH NTERVALS AS WILL ENSURE ACCURATE LOCATION OF ALL MARKINGS.
- 15. THE PAINT SHALL BE MIXED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS BEFORE APPLICATION. THE PAINT SHALL BE THOROUGHLY MIXED AND APPLIED TO THE SURFACE OF THE PAVEMENT WITH THE MARKING MACHINE AT ITS ORIGINAL CONSISTENCY WITHOUT THE ADDITION OF THINNER. IF THE PAINT IS APPLIED BY BRUSH. THE SURFACE SHALL RECEIVE TWO (2) COATS:
- BITUMINOUS SEAL COAT, SLURRY SEAL OR THE PLACEMENT OF THE BITUMINOUS SURFACE COURSE AND THE MARKING OF THE PAVEMENT. THE PAINT SHALL NOT BLEED EXCESSIVELY, CURL, OR DISCOLOR WHEN APPLIED TO BITUMINOUS OR CONCRETE SURFACES. 17. IN THE APPLICATION OF STRAIGHT STRIPES, ANY DEVIATION IN THE EDGES
- 19. AFTER APPLICATIONS OF THE PAINT, ALL MARKINGS SHALL BE PROTECTED WHILE THE PAINT IS DRYING. THE FRESH PAINT SHALL BE PROTECTED FROM INJURY OR DAMAGE OF ANY KIND. THE CONTRACTOR SHALL BE DIRECTLY RESPONSIBLE AND SHALL ERECT OR PLACE SUITABLE WARNING SIGNS, FLAGS, OR BARRICADES, PROTECTIVE SCREENS OR COVERINGS AS REQUIRED. ALL SURFACES SHALL BE PROTECTED FROM DISFIGURATION BY

- IMPREGNATED TYPE, NOT LESS THAN 1/2-INCH THICK. THE LENGTH SHALL BE
- OF THE SLAB PLUS 1-INCH. 56. ISOLATION JOINTS SHALL BE PLACED AT THE FOLLOWING LOCATION FOR SIDEWALKS AND CONCRETE PAVEMENTS:
- B. AT INTERVALS NOT TO EXCEED 50-FEET IN ALL PUBLIC SIDEWALKS.
- THERE ARE EXISTING EXPANSION JOINTS AT THE INTERSECTIONS OF THE SIDEWALKS AND THE KEY FLAG.
- E. AT ANY PLACE WHERE A SIDEWALK OR CONCRETE PAVEMENT ABUTS A BUILDING OR FIXED STRUCTURE.

- PLANS AND DETAILS.
- PROVIDE ALL MATERIALS, LABOR, EQUIPMENT, AND SERVICES NECESSARY TO COMPLETE ALL TRAFFIC LANE AND PARKING LOT MARKINGS AS INDICATED IN THE
- WORK INCLUDES, BUT NOT LIMITED TO PAINTING OF LETTERS, MARKINGS, STRIPES AND ISLANDS ON THE PAVEMENT SURFACE APPLIED IN ACCORDANCE WITH THIS SPECIFICATION AND AT THE LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- A. TRAFFIC LANE STRIPING SHALL BE WHITE OR YELLOW REFLECTORIZED, AS SHOWN ON THE PLANS.
- D. HANDICAP STALL STRIPING MEETING CURRENT ADA REQUIREMENTS SHALL BE
- AND WHEN THE WEATHER IS NOT EXCESSIVELY WINDY, DUSTY OR FOGGY. 6. ALL EQUIPMENT FOR THE WORK SHALL BE APPROVED BY THE CONTRACTOR AND SHALL INCLUDE THE APPARATUS NECESSARY TO PROPERLY CLEAN THE EXISTING
- PRODUCE AN EVEN AND UNIFORM FILM THICKNESS AT THE REQUIRED COVERAGE AND SHALL BE DESIGNED SO AS TO APPLY MARKINGS OF UNIFORM CROSS-SECTIONS AND CLEAR-CUT EDGES WITHOUT RUNNING OR SPATTERING AND WITHIN THE L LIMITS FOR STRAIGHTNESS SET FORTH HEREIN. WHEN NEEDED, A DISPENSER SHALL BE FURNISHED, WHICH IS PROPERLY DESIGNED FOR
- ATTACHMENT TO THE MECHANICAL MARKER AND SUITABLE FOR DISPENSING THE REQUIRED QUANTITY OF REFLECTIVE BEADS. 8. SUITABLE ADJUSTMENTS SHALL BE PROVIDED ON THE SPRAYER/SPRAYERS OF A SINGLE MACHINE OR BY FURNISHING ADDITIONAL EQUIPMENT FOR PAINTING THE
- IMMEDIATELY BEFORE APPLICATION OF THE PAINT, THE EXISTING SURFACE SHALI BE DRY AND ENTIRELY FREE FROM DIRT, GREASE, OIL, ACIDS, DEBRIS, OR OTHER FOREIGN MATTER WHICH WOULD REDUCE THE BOND BETWEEN THE COAT OF PAINT AND THE PAVEMENT. THE SURFACE SHALL BE THOROUGHLY CLEANED BY SWEEPING AND BLOWING AS REQUIRED TO REMOVE ALL DIRT, DEBRIS AND LOOSE MATERIALS. AREAS WHICH CANNOT BE SATISFACTORILY CLEANED BY BROOMING AND BLOWNG SHALL BE SCRUBBED AS DIRECTED WITH A WATER SOLUTION OF TRI-SODIUM PHOSPHATE (10%NA3PO4 BY WEIGHT) OR AN APPROVED EQUAL
- SOLUTION. AFTER SCRUBBING, THE SOLUTION SHALL BE RINSED OFF AND THE SURFACE DRIED PRIOR TO PAINTING.
- REPRESENTATIVE AS TO QUALITY BEFORE THE CONTRACTOR MAY PROCEED WITH THE STRIPING. THE CONTRACTOR IS TO INSURE THAT ALL SUBSEQUENT STRIPING MEETS THE QUALITY OF THE APPROVED SAMPLE APPLICATION.

12. ON THOSE SECTIONS OF PAVEMENTS WHERE NO PREVIOUSLY APPLIED FIGURES,

- 13. THE CONTRACTOR SHALL PROVIDE AN EXPERIENCED TECHNICIAN TO SUPERVISE THE LOCATION ALIGNMENT, LAYOUT, DIMENSIONS AND APPLICATION OF THE PAINT. 14. MARKINGS SHALL BE APPLIED AT THE LOCATIONS AND TO THE DIMENSIONS AND SPACING INDICATED ON THE PLANS OR AS SPECIFIED. PAINT SHALL NOT BE APPLIED UNTIL THE INDICATED ALIGNMENT IS LAID OUT AND THE CONDITIONS OF THE EXISTING SURFACE HAVE BEEN APPROVED BY THE OWNER OR OWNERS
- THE FIRST COAT SHALL BE THOROUGHLY DRY BEFORE THE SECOND COAT IS 16. A MINIMUM OF ONE (1) WEEK SHALL ELAPSE BETWEEN APPLICATION OF THE
- EXCEEDING 1/2-INCH IN 50-FEET SHALL BE OBLITERATED AND THE MARKING CORRECTED. THE WIDTH OF THE MARKINGS SHALL BE AS DESIGNATED WITHIN A TOLERANCE OF 5 PERCENT (5%). ALL PAINTING SHALL BE PERFORMED TO THE SATISFACTION OF THE OWNER OR OWNERS REPRESENTATIVE BY COMPETENT AND EXPERIENCED EQUIPMENT OPERATORS, LABORERS, AND ARTISANS IN A NEAT AND
- 18. PAINT SHALL BE APPLIED UNIFORMLY BY SUITABLE EQUIPMENT AT A RATE OF 0.0094 GAL./S.F. FOR STENCILS AND 0.00313 GAL./FT. FOR STRIPING. PAINT APPLICATION SHALL PRODUCE AN AVERAGE WET FILM THICKNESS OF
- SPATTER, SPLASHES, SPILLAGE, DRIPPINGS OF PAINT OR OTHER MATERIAL.



3 full working days before you di

SSUE DATE 7/29/2019

9/25/2019

10/08/2019

**REVISIONS** 

2

PRUSS

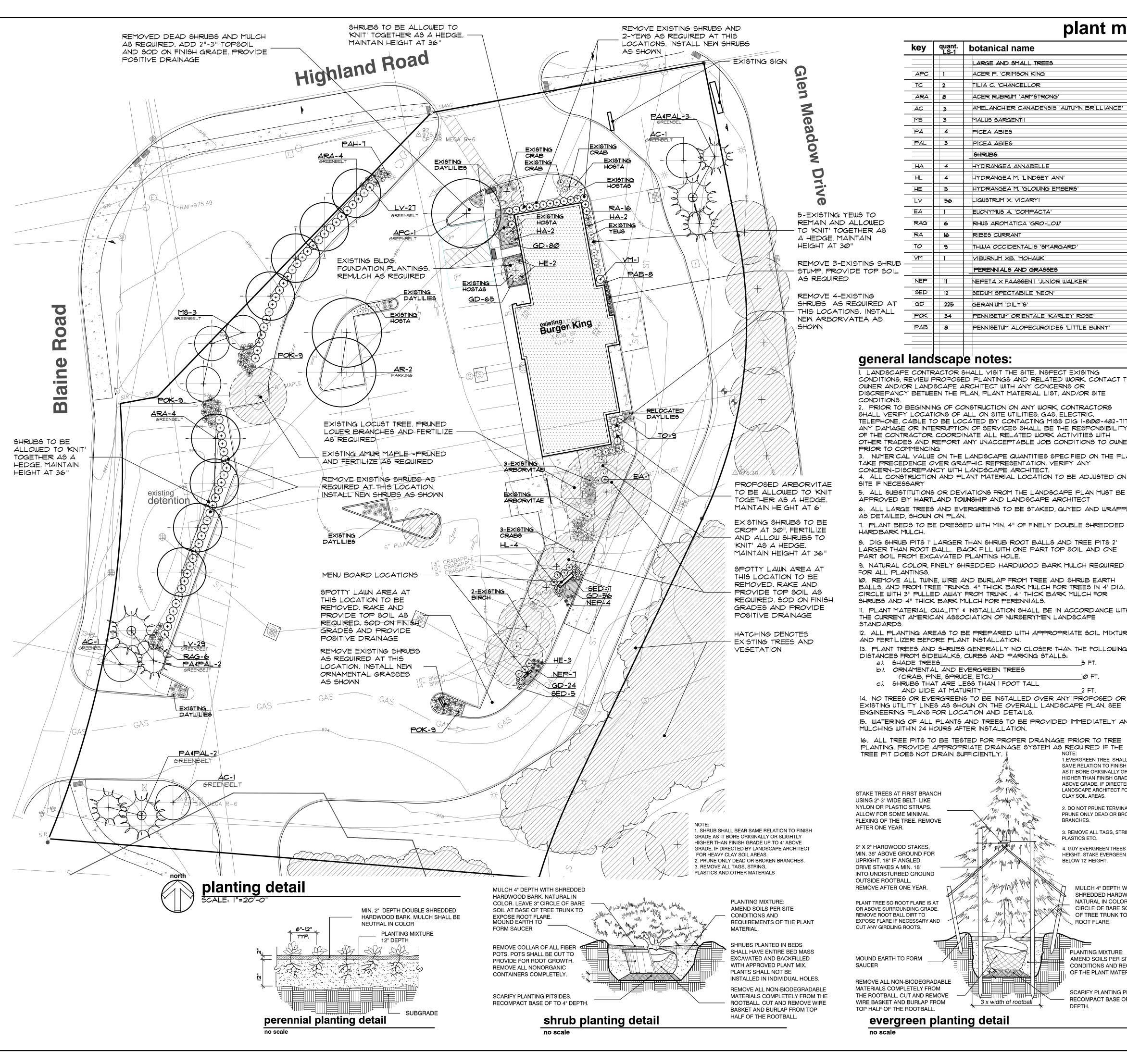
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CONT. INT.: 1 FOOT DRWG. by : BN/DC DSGN. by : MN

CHECK : AP

- ENGINEER AND SHALL BE TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER,
- 17. FILL MATERIAL IN BERMS AND LANDSCAPE AREAS SHALL BE SUITABLE TO
- 19. THE CONTRACTOR SHALL STOCKPILE EXCAVATED MATERIAL ONLY IN DESIGNATED 20. DURING THE PERFORMANCE OF SITE GRADING OPERATIONS, THE SUBGRADE SHALL
- 21. NEWLY GRADED AREAS SHALL BE PROTECTED FROM THE ACTION OF THE
- 24. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY PUMPS, DITCHING, WELL POINT SHALL TAKE APPROPRIATE ACTION TO DRY THE SOILS, REGRADE TO PROPOSED

- REQUIREMENTS OF MDOT STANDARD SPECIFICATIONS, SECTION 8.02.
- SPECIFICATIONS FOR CONSTRUCTION.
- SHALL STATE THAT EACH MATERIAL ITEM MEETS SPECIFIED REQUIREMENTS.
- SHALL BE WITHIN ALLOWABLE TOLERANCES AS SPECIFIED FOR THE PARTICULAR
- SUBGRADE SHALL BE COMPACTED PER PLANS AND DETAILS. THE SUBGRADE SHALL BE TRUE TO LINE AND GRADE
- BITUMINOUS BASE COURSE PRIOR TO THE APPROVAL OF THE SUBGRADE BY THE GEOTECHNICAL ENGINEER.
- DEGREES F. AND RISING AND APPROVED BY THE GEOTECHNICAL ENGINEER.
- 19. UPON ARRIVAL, THE BITUMINOUS CONCRETE SHALL BE SPREAD TO A THICKNESS THICKNESS AND CONFORM TO THE GRADE AND CONTOUR INDICATED. THE SPEED
  - - NOT BE LESS THAN THE MINIMUM SPECIFIED.
      - EXCEEDED NOR SHALL THE SLUMP EXCEED THE MAXIMUM SPECIFIED.
    - 23. IN NO CASE SHALL THE MIXER OR TRUCK BE FLUSHED OUT ONTO THE STREET



# plant material list

key	quant. LS-1	botanical name	common name	size	comments
		LARGE AND SMALL TREES			
APC	1	ACER P. 'CRIMSON KING	CRIMSON KING NORWAY MAPLE	3" BB	
TC	2	TILIA C. 'CHANCELLOR	CHANCELLOR LINDEN	3" BB	
ARA	8	ACER RUBRUM 'ARMSTRONG'	ARMSTRONG MAPLE	3" BB	
AC	3	AMELANCHIER CANADENSIS 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE SERVIBERRY	10' BB	MULTI-STEM
MS	3	MALUS SARGENTII	SARGENT CRABAPPLE	2" BB	
PA	4	PICEA ABIES	NORWAY SPRUCE	8' BB	
PAL	3	PICEA ABIES	NORWAY SPRUCE	1Ø' BB	
		SHRUBS			
НД	4	HYDRANGEA ANNABELLE	ANNABELLE HYDRANGEA	#3 CONT	
HL	4	HYDRANGEA M. 'LINDSEY ANN'	LA DREAMIN HYDRANGEA	#3 CONT	
HE	5	HYDRANGEA M. 'GLOWING EMBERS'	GLOWING EMBERS HYDRANGEA	#3 CONT.	
LV	56	LIGUSTRUM X. VICARYI	GOLDEN VICARY PRIVET	3' BB	42" O.C. SPACINO
EA	1	EUONYMUS A. 'COMPACTA'	DWARF BURNINGBUSH	3' CONT.	
RAG	6	RHUS AROMATICA 'GRO-LOW'	GRO-LOW FRAGRANT SUMAC	*3 CONT.	36" O.C. SPACIN
RA	16	RIBES CURRANT	ALPINE CURRANT	*3 CONT.	36" O.C. SPACIN
то	9	THUJA OCCIDENTALIS 'SMARGARD'	EMERALD GREEN ARBORVITAE	6' BB	36" O.C. SPACIN
M	1	VIBURNUM XB. 'MOHAWK'	MOHAWK VIBURNUM	3' BB	
		PERENNIALS AND GRASSES			
NEP	11	NEPETA X FAASSENII 'JUNIOR WALKER'	JUNIOR WALKER NEPETA	#I CONT.	
SED	12	SEDUM SPECTABILE 'NEON'	NEON SEDUM	#I CONT.	
GD	225	GERANIUM 'DILY'S'	DILY'S HARDY GERANIUM	8/FLAT	10" O.C. SPACING
POK	34	PENNISETUM ORIENTALE "KARLEY ROSE"	KARLEY ROSE ORIENTAL FOUNTAIN GRASS	#3 CONT.	36" O.C. SPACINO
PAB	8	PENNISETUM ALOPECUROIDES 'LITTLE BUNNY'	LITTLE BUNNY FOUNTAIN GRASS	#I CONT.	12" O.C. SPACING

#### general landscape notes:

. LANDSCAPE CONTRACTOR SHALL VISIT THE SITE, INSPECT EXISITING CONDITIONS, REVIEW PROPOSED PLANTINGS AND RELATED WORK. CONTACT THE OWNER AND/OR LANDSCAPE ARCHITECT WITH ANY CONCERNS OR DISCREPANCY BETWEEN THE PLAN, PLANT MATERIAL LIST, AND/OR SITE

2. PRIOR TO BEGINNING OF CONSTRUCTION ON ANY WORK, CONTRACTORS SHALL VERIFY LOCATIONS OF ALL ON SITE UTILITIES. GAS, ELECTRIC, TELEPHONE, CABLE TO BE LOCATED BY CONTACTING MIGS DIG 1-800-482-7171. ANY DAMAGE OR INTERRUPTION OF SERVICES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. COORDINATE ALL RELATED WORK ACTIVITIES WITH OTHER TRADES AND REPORT ANY UNACCEPTABLE JOB CONDITIONS TO OWNER PRIOR TO COMMENCING

3. NUMERICAL VALUE ON THE LANDSCAPE QUANTITIES SPECIFIED ON THE PLAN TAKE PRECEDENCE OVER GRAPHIC REPRESENTATION, VERIFY ANY CONCERN-DISCREPANCY WITH LANDSCAPE ARCHITECT

4. ALL CONSTRUCTION AND PLANT MATERIAL LOCATION TO BE ADJUSTED ON SITE IF NECESSARY

5. ALL SUBSTITUTIONS OR DEVIATIONS FROM THE LANDSCAPE PLAN MUST BE APPROVED BY HARTLAND TOWNSHIP AND LANDSCAPE ARCHITECT

6. ALL LARGE TREES AND EVERGREENS TO BE STAKED, GUYED AND WRAPPED AS DETAILED, SHOWN ON PLAN. 1. PLANT BEDS TO BE DRESSED WITH MIN. 4" OF FINELY DOUBLE SHREDDED

8. DIG SHRUB PITS I' LARGER THAN SHRUB ROOT BALLS AND TREE PITS 2' LARGER THAN ROOT BALL. BACK FILL WITH ONE PART TOP SOIL AND ONE PART SOIL FROM EXCAVATED PLANTING HOLE.

9. NATURAL COLOR, FINELY SHREDDED HARDWOOD BARK MULCH REQUIRED FOR ALL PLANTINGS. 10. REMOVE ALL TWINE, WIRE AND BURLAP FROM TREE AND SHRUB EARTH

BALLS, AND FROM TREE TRUNKS. 4" THICK BARK MULCH FOR TREES IN 4' DIA. CIRCLE WITH 3" PULLED AWAY FROM TRUNK , 4" THICK BARK MULCH FOR SHRUBS AND 4" THICK BARK MULCH FOR PERENNIALS.

11. PLANT MATERIAL QUALITY & INSTALLATION SHALL BE IN ACCORDANCE WITH THE CURRENT AMERICAN ASSOCIATION OF NURSERYMEN LANDSCAPE STANDARDS.

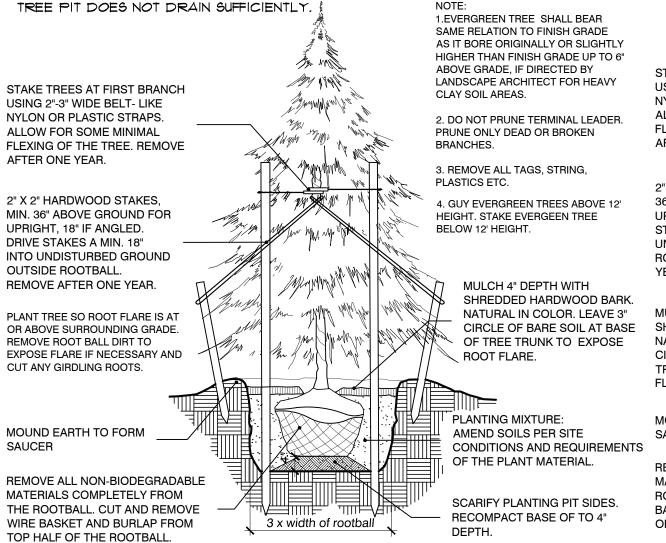
12. ALL PLANTING AREAS TO BE PREPARED WITH APPROPRIATE SOIL MIXTURES AND FERTILIZER BEFORE PLANT INSTALLATION. 13. PLANT TREES AND SHRUBS GENERALLY NO CLOSER THAN THE FOLLOWING

a). SHADE TREES\_ b). ORNAMENTAL AND EVERGREEN TREES (CRAB, PINE, SPRUCE, ETC.)\_ c). SHRUBS THAT ARE LESS THAN I FOOT TALL AND WIDE AT MATURITY\_

ENGINEERING PLANS FOR LOCATION AND DETAILS. 15. WATERING OF ALL PLANTS AND TREES TO BE PROVIDED IMMEDIATELY AND

MULCHING WITHIN 24 HOURS AFTER INSTALLATION.

16. ALL TREE PITS TO BE TESTED FOR PROPER DRAINAGE PRIOR TO TREE PLANTING. PROVIDE APPROPRIATE DRAINAGE SYSTEM AS REQUIRED IF THE



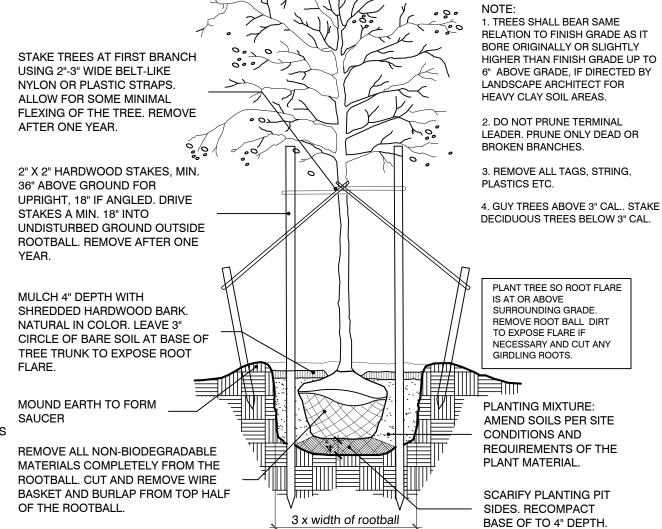
evergreen planting detail

17. PROVIDE IRRIGATION NEW MENU BOARD ISLAND AS REQUIRED AND REALIGN EXISTING IRRIGATION TO PROVIDE IRRIGATION COVERAGE TO NEW LANDSCAPE BEDS AND LAWN AREAS

18. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL LANDSCAPE PLANT MATERIALS AND IRRIGATION INSTALLATION FOR A PERIOD OF TWO YEAR BEGINNING AFTER THE COMPLETION OF LANDSCAPE INSTALLTION DATE APPROVED BY THE CITY OR LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL REPLACE DURING AND AT THE END OF THE GUARANTEE PERIOD, ANY DEAD OR UNACCEPTABLE PLANTS, AS DETERMINED BY THE CITY OR LANDSCAPE ARCHITECT, WITHOUT COST TO THE OWNER.

#### landscape requirements:

greenbelt	REQUIRED	PROVIDED
TOTAL LIN.FT. OF HIGHLAND ROAD FRONTAGE		
ONE (I) DECIDUOUS OR EVERGREEN TREE PER 30'		7
(197 / 30' = 6.56 TREES)		
THREE (3) ORNAMENTAL TREES OR LARGE SHRUBS FOR THE		
FIRST 40' PLUS I-ORNAMENTAL TREE OR LARGE SHRUBS PER 20' FOR FRONTAGE BALANCE	II	11+
(197-40'= 157' / 20' = 7.85 ORNAMENTAL TREES +		
3-ORNAMENTAL TREES)= 10.87 TREES		,
		PROVIDED
TOTAL LIN.FT. OF BLAINE ROAD FRONTAGE 260	_	
ONE (I) DECIDUOUS OR EVERGREEN TREE PER 30'	9	9
(260 / 30' = 8.67 TREES)		
THREE (3) ORNAMENTAL TREES OR LARGE SHRUBS FOR THE FIRST 40' PLUS I-ORNAMENTAL TREE OR LARGE SHRUBS		
PER 20' FOR FRONTAGE BALANCE	14	14 +
(260-40'= 220' / 20' =    ORNAMENTAL TREES OR SHUBS	+	
3-ORNAMENTAL TREES OR SHRUBS)= 14		
building foundation	REQUIRED	PROVIDE
60% OF THE FRONT AND SIDES OF BLDG. LENGHT159.6		
(266' (BLDG. FRONT AND SIDES LENGTH) $\times$ .6=159.6)		
ONE (I) ORNAMENTAL TREE PER 30'	5	EXISTING
(159.6 / 30'=5.32)		
6 (SIX) MEDIUM SHRUBS OR 8(EIGHT) SMALL SHRUBS PER 30'	32	32+EXIST
$(159.6 / 30' = 5.32 \times 6 \text{ SHRUBS} = 31.92 \text{ SHRUBS})$		!
parking	REQUIRED	PROVIDE
TOTAL NO. OF PARKING SPACES PROVIDED 49		
ONE (1) 3"DECIDUOUS OR EVERGREEN TREE PER 15-SPACES	3	2+EXISTING
(49-SPACES / 15 SPACES = 3.3 TREES)		
SHRUBS HEDGE ALONG PUBLIC ROAD		PROVIDED
STIRODS TIEDOL ALONO TUDLIO ROAD		



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project:

**BURGER KING** (HARTLAND TWP.)

project location: 10382 Highland Road Hartland, Michigan 48353

sheet title: LANDSCAPE **IMPROVEMENT** 

PLAN

job no./issue/revision date: LS19.100.08 REVIEW 8-13-2019 LS19.100.08 SPA 8-28-2019 LS19.100.08 SPA 9-30-2019 LS19.100.10 SPA 10-2-2019

checked by:

8-8-2019 notice:

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nderground utilities as shown on this s either expressed or implied as to the completeness of accuracy. contractor shall be exclusively responsible for determining the exact location and elevation prior to the start

project no: LS19.100.08

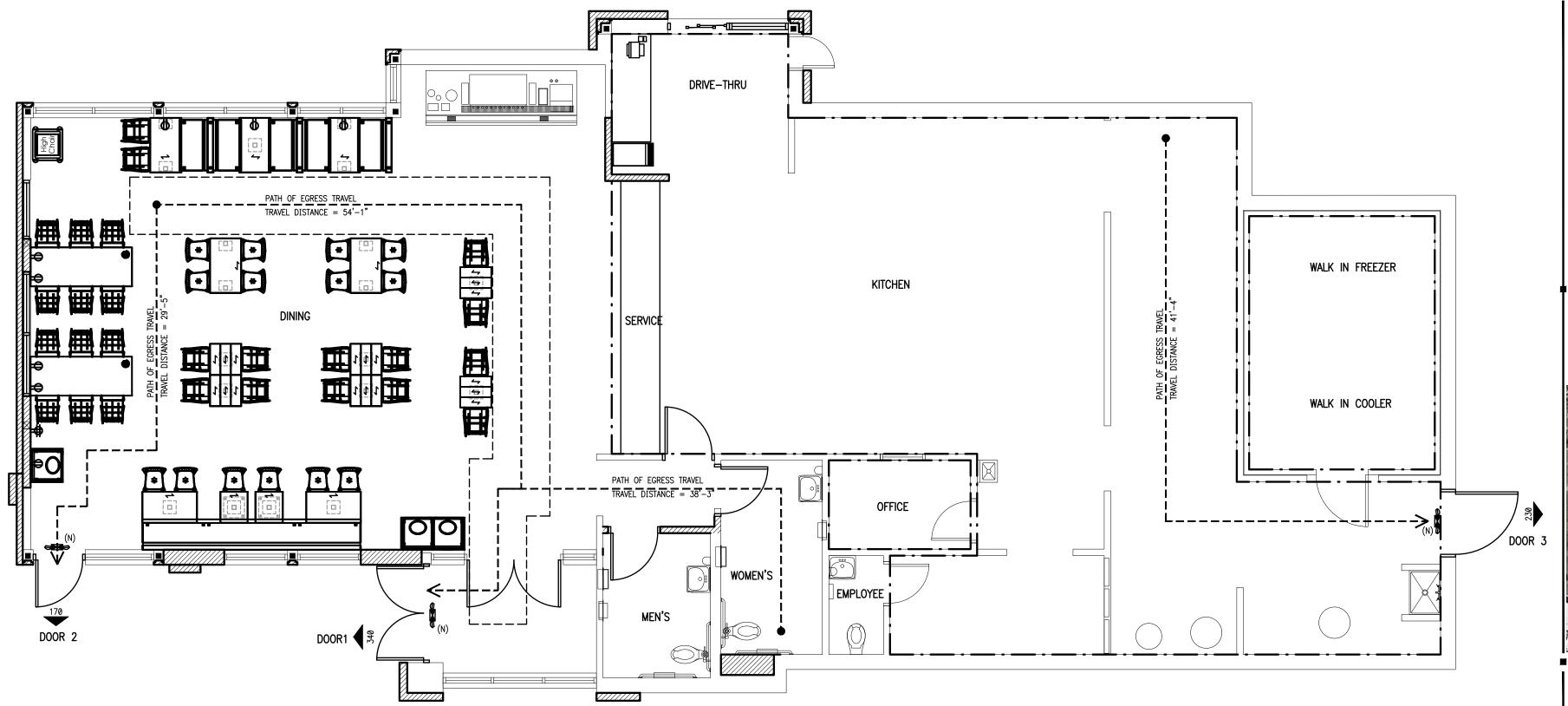
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of construction



# BURGER KING

EXTERIOR & DINING REMODEL 10382 HIGHLAND ROAD HARTLAND, MI 48353



# LIFE SAFETY NOTES

- A. GENERAL CONTRACTOR SHALL PROVIDE FIRE EXTINGUISHERS PER BURGER KING SPECIFICATIONS IN LOCATIONS NO FURTHER THAN 75' FROM ANY LOCATION IN THE CUSTOMER SERVICE AREA. FINAL LOCATIONS AS DIRECTED BY THE FIRE MARSHALL PER
- B. FURNITURE LAYOUT IS NOT IN WORK SCOPE. LIFE SAFETY COORDINATION BASED ON PROTO TYPICAL LAYOUT ONLY.
- C. PER THE 2015 MICHIGAN BUILDING CODE, MAXIMUM EXIT ACCESS TRAVEL DISTANCE

# SHALL NOT EXCEED 200 FEET.

REINFORCING BAR

REFERENCE

SPLASHBLOCK SHELVES

SPECIFICATION STAINLESS STEEL

REINFORCE

REQUIRED ROUGH OPENING

SIMILAR

STORAGE SUSPENDED TREAD

TELEPHONE

TYPICAL

VERTICAL VINYL THRESHOLD

WOOD

WATER CLOSET

WATERPROOF

TOILET PAPER DISPENSER

UNLESS NOTED OTHERWISE VINYL COMPOSITION TILE

WELDED WIRE FABRIC

REINF

SIM SPEC

#### SHEET INDEX SHT. NO. DESCRIPTION ITLE SHEET AND CODE REVIEW ARCHITECTURAL DRAWINGS CCESSIBILITY NOTES AND DETAILS A-ADAD-1EMOLITION PLAN A-1OOR PLAN NLARGED RESTROOM PLANS - DEMO & NEW A - 1.2A - 2.0EFLECTED CEILING PLAN A - 2.1GHTING SCHEDULE A - 3.0DEMO AND NEW EXTERIOR ELEVATIONS DEMO AND NEW EXTERIOR FLEVATIONS A - 3.1A - 3.2DEMO AND NEW EXTERIOR ELEVATIONS A-4TERIOR FINISH SCHEDULE A - 5ALL SECTIONS A - 5.1VALL SECTIONS A - 5.2VALL SECTIONS A - 5.3VALL SECTIONS A - 5.4ALL SECTIONS 'ALL SECTION DETAILS A - 5.5OOR AND WINDOWS SCHEDULES AND DETAILS STRUCTURAL DRAWINGS FOUNDATION PLAN ROOF AND FRAMING PLAN S - 3.0SECTIONS ELECTRICAL DRAWINGS ELECTRICAL PLAN CHEDULE AND DETAILS ENERGY COMPLIANCE CERTIFICATE

# LOCATION MAP

ENERGY COMPLIANCE CERTIFICATE



## LIFE SAFETY KEY — — — — 44" WIDE PRIMARY PATH OF EGRESS

**EXIT ACCESS TRAVEL DISTANCE** ---- EXISTING KITCHEN

— · · — DINING ROOM

EMERGENCY/EXIT SIGN (E) INDICATES EXISTING TO REMAIN (N) INDICATES NEW — NUMBER INDICATES OCCUPANT EGRESS CAPACITY OF DOOR

# GENERAL NOTES

- IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL DRAWINGS PRIOR
- VISITS. THE DRAWINGS INCLUDE ONLY THOSE ELEMENTS AND SYSTEMS EXPOSI
- DIFFICULTIES ENCOUNTERED WHICH COULD HAVE BEEN FORESEEN HAD AN EXAMINATION BEEN MADE, WILL NOT BE ALLOWED.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ARCHITECT
- CONTRACTOR, DURING PRE-BID SITE VISIT, SHALL TAKE NOTICE OF ANY VISUALLY APPARENT CODE VIOLATIONS AND ALLOW IN HIS/HER BID FOR CORRECTING SUCH VIOLATIONS.
- CONTRACTORS ARE CAUTIONED TO COORDINATE ITEMS IN THEIR SCOPE OF
- THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY CONFLICTS AND/OR DISCREPANCIES DISCOVERED DURING DEMOLITION AND CONSTRUCTION PHASES
- H. THESE NOTES APPLY TO ALL SHEETS.

#### CODE / PROJECT DATA

CONSTRUCTION CLASSIFICATION:

2015 MICHIGAN BUILDING CODE PLUMBING CODE: 2015 MICHIGAN PLUMBING CODE, 2015 IPC 2014 NATIONAL ELECTRIC CODE 2015 MICHIGAN MECHANICAL CODE, 2015 IMC MECHANICAL CODE: FIRE CODE: 2015 INTERNATIONAL FIRE CODE AND CHAPTER 11 OF THE 2015 MICHIGAN BUILDING CODÉ **ENERGY CODE** 2015 MICHIGAN UNIFORM CODE, 2015 IECC

BUILDING OCCUPANT LOAD: SEATING + EMPLOYEES OCCUPANCY GROUP: ASSEMBLY, SMALL A-2

### OCCUPANCY LOAD:

FIXED SEATING (BY COUNT) LOOSE SEATING 1317 S.F. / 200 = KITCHEN 52 S.F. / 100 =

DOOR 1 @ 6'-0" = 68"DOOR 2 @ 3'-0" = 34"DOOR 3 @ 4'-0" =  $\frac{46"}{148"}$ ACTUAL EXIT WIDTH

90 X .2" PER OCCUPANT = 18" REQ'D EXIT WIDTH

#### EXIT ACCESS TRAVEL DISTANCE

ASSEMBLY (W/O SPRINKLER SYSTEM): 200 FT. MAXIMUM COMMON PATH OF TRAVEL

TABLE 1029.8 ASSEMBLY, 30 FT. MAXIMUM 75 FT. MAX. FOR AREAS SERVING LESS

THAN 50 OCCUPANTS

#### PLUMBING FIXTURES

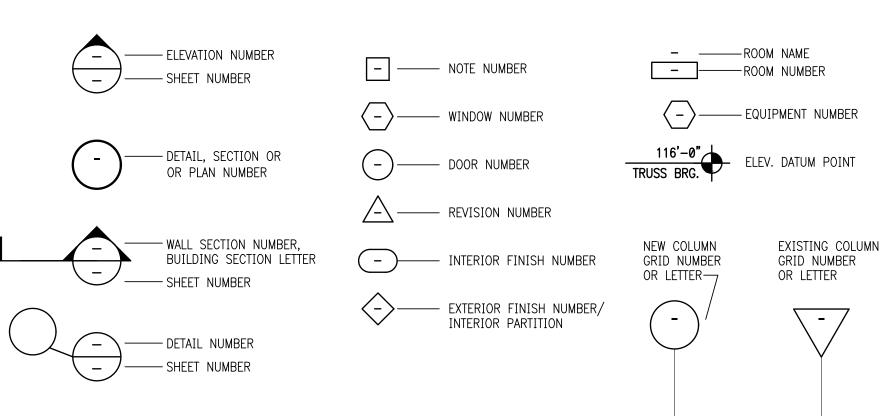
PROVIDED EXISTING		
	<u>REQ</u>	UIRE
MEN WOMEN MEN WOMEN	MEN	WC
1 1 1 2	1	
1 1 1 1	1	
– N/A 1 N/A	_	1

# URINAL

N/A

# SYMBOLOGY / LEGEND

LIFE SAFETY PLAN



1/8" = 1'-0"

NORTH

# **ABBREVIATIONS**

ELEV / EQ EXIST

	AIR CONDITIONING	FF	FINISH FLOOR
	ABOVE FINISH FLOOR	FR	FIRE RATED
	AIR HANDLING UNIT	GALV	GALVANIZED
	ALUMINUM	GYPBD	GYPSUM BOARD
	ASPHALT	HC	HANDICAPPED
	ALUMINUM THRESHOLD	HDW	HARDWARE
	BOARD	НМ	HOLLOW METAL
	BLANKET	HVAC	HEATING, AIR CONDITIONING, & VENT
	CONTROL JOINT	INFO	INFORMATION
	CEILING	INSUL	INSULATION
	CONCRETE MASONRY UNIT		LAY-IN ACOUSTICAL CEILING
	COLUMN	MAS	MASONRY
	CONCRETE	MAX	MAXIMUM
	CONTINUOUS	MECH	
	CARPET		MANUFACTURER
	CERAMIC TILE	MIN	MINIMUM
	CENTER LINE	MO	MASONRY OPENING
	DOUBLE	MR	MIRROR/MOISTURE RESISTANT
	DRINKING FOUNTAIN	MT	MARBLE THRESHOLD
	DIAMETER	MTL	METAL
	DIMENSION	NA	NOT APPLICABLE
	DOWN	NIC	NOT IN CONTRACT
	DOWN SPOUT	NOM	NOMINAL
	EACH	NTS	NOT TO SCALE
	EXPANSION JOINT	OC	ON CENTER
	ELECTRICAL	OPP	OPPOSITE
/ EL	ELEVATION	PLYWD	PLYWOOD
	EQUAL	PREFAB	PREFABRICATED
	EXISTING	PSF	POUNDS PER SQUARE FOOT
	FLOOR DRAIN	PT	PAINT / PRESSURE TREATED
	FIRE EXTINGUISHER	QT	QUARRÝ TILE
		r.	DICED /DADILIC

RISER/RADIUS

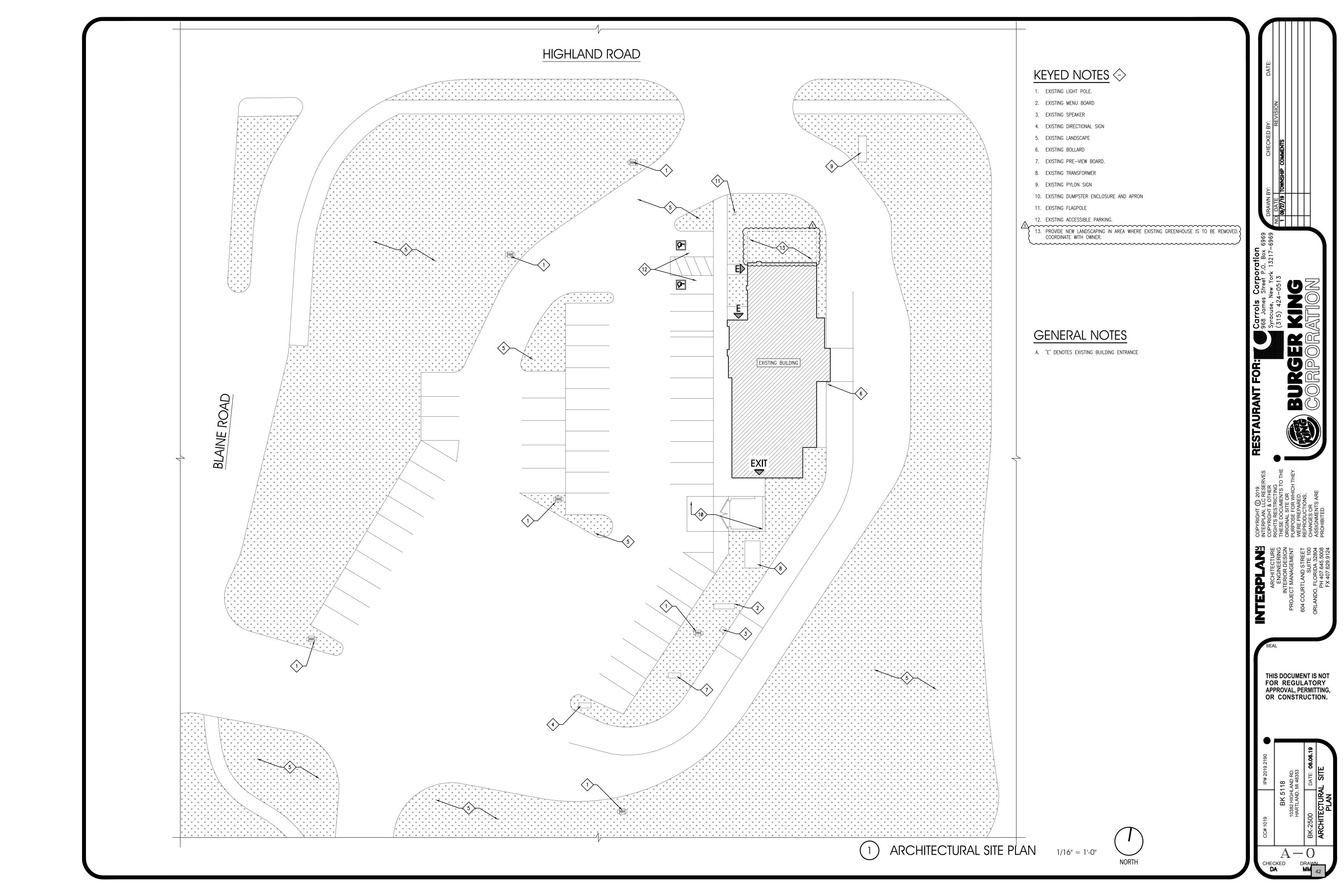
# REVISION ISSUE LOG

KEV #	ISSUE DATE	DESCRIPTION	AFFECIED SHEETS	REMARKS	RA BA
1	09/27/19	TOWNSHIP COMMENTS	A-0, A-1.2, A-3.0, A-3.1, A-3.2, A-5, A-5.1, A-5.2, A-5.3, A-5.4, A-5.5, S2.0 & S3.0		JMA
					_
					-
					1

115 MPH

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## ENTRANCES / DOORS:

- PROVIDE METALLIC SIGN OVER EACH STOREFRONT DOOR STATING: "THIS DOOR MUST REMAIN UNLOCKED DURING BUSINESS HOURS". LETTERS SHALL NOT BE LESS THAN 1-INCHES HIGH ON A CONTRASTING BACKGROUND. THE SIGN SHALL BE INSTALLED BY THE GENERAL CONTRACTOR ON THE STOREFRONT ALUMINUM HEADER FRAME.
- 2. WHERE NOT ALL ENTRANCES ARE ACCESSIBLE, THOSE THAT ARE SHALL BE IDENTIFIED WITH AN INTERNATIONAL SYMBOL OF ACCESSIBILITY (ISA) SYMBOL, WITH DIRECTIONAL SIGNAGE FROM NOT ACCESSIBLE ENTRANCES AS NECESSARY.
- 3. EVERY REQUIRED ENTRANCE OR PASSAGE DOORWAY SHALL BE OF A SIZE AS TO PERMIT THE INSTALLATION OF A DOOR NOT LESS THAN 3 FEET IN WIDTH AND NOT LESS THAN 6 FEET-8 INCHES IN HEIGHT. DOORS SHALL BE CAPABLE OF OPENING AT LEAST 90 DEGREES AND SHALL BE SO MOUNTED THAT THE CLEAR WIDTH OF DOORWAY IS NOT LESS THAN 32-INCHES.
- 4. WHERE PAIR OF DOORS IS UTILIZED AT LEAST ONE OF THE DOORS SHALL PROVIDE A CLEAR UNOBSTRUCTED OPENING WIDTH OF 32-INCHES WITH THE LEAF POSITIONED AT AN ANGLE OF 90 DEGREES FROM ITS CLOSED POSITION.
- LATCHING AND LOCKING DOORS THAT ARE HAND ACTIVATED AND WHICH ARE IN PATH OF TRAVEL SHALL BE OPENABLE WITH A SINGLE EFFORT BY LEVER TYPE HARDWARE, THAT DOES NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF WRIST TO OPERATE. PANIC BARS, PUSH-PULL ACTIVATING BARS, OR OTHER HARDWARE DESIGNED TO PROVIDE PASSAGE WITHOUT REQUIRING THE ABILITY TO GRASP THE OPENING HARDWARE ARE
- 6. HAND ACTIVATED DOOR OPENING HARDWARE SHALL BE INSTALLED WITH OPERABLE PART BETWEEN 34-INCHES MIN AND 48-INCHES MAX. ABOVE THE FLOOR.
- THE FLOOR AND LANDING ON EACH SIDE OF AN ENTRANCE OR PASSAGE DOOR SHALL BE LEVEL AND CLEAR. THE LEVEL AND CLEAR AREA SHALL HAVE A LENGTH OF 60 INCHES IN THE DIRECTION OF TRAVEL AND THE LENGTH OF 48 INCHES IN OPPOSITE DIRECTION OF TRAVEL. SEE DIAGRAM "MANEUVERING CLEARANCE"
- 8. THE WIDTH OF THE LEVEL AND CLEAR AREA ON THE SIDE TO WHICH THE DOOR SWINGS SHALL EXTEND 24-INCHES PAST THE STRIKE EDGE OF THE DOOR FOR EXTERIOR DOORS AND 18-INCHES PAST THE STRIKE EDGE FOR THE INTERIOR DOORS.
- 9. THE FLOOR OR LANDING SHALL BE NOT MORE THAN 1/2-INCH LOWER THAN THE THRESHOLD OF THE DOORWAY. CHANGE IN LEVEL BETWEEN 1/4- INCH AND 1/2-INCH SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1:2.
- 10. THE BOTTOM 10-INCHES OF ALL DOORS EXCEPT AUTOMATIC AND SLIDING DOORS SHALL HAVE A SMOOTH UNINTERRUPTED SURFACE TO ALLOW THE DOOR TO BE OPENED BY A WHEELCHAIR FOOTREST WITHOUT CREATING A TRAP OR HAZARDOUS CONDITION. WHERE NARROW FRAME DOORS ARE USED, A 10-INCH HIGH SMOOTH PANEL SHALL BE INSTALLED ON THE PUSHED SIDE OF THE DOOR, WHICH WILL ALLOW THE DOOR TO BE OPENED BY A WHEELCHAIR FOOTREST WITHOUT CREATING A TRAP OR HAZARDOUS CONDITION.
- 11. A NARROW FRAME WITH A BEVELED TOP (30 DEGREES MAX. BEVEL TO VERTICAL PLANE) INSTALLED AT THE BOTTOM OF THE GLASS DOOR (WITH NO SIDE FRAMES) MAY BE USED IN LIEU OF PROVIDING THE REQUIRED 10-INCH UNINTERRUPTED SURFACE AT THE BOTTOM OF
- MAXIMUM EFFORT TO OPERATE DOORS SHALL NOT EXCEED 5 LBS. FOR INTERIOR DOORS. SUCH PULL OR PUSH EFFORT BEING APPLIED AT RIGHT ANGLES TO HINGED DOORS AND AT THE CENTER PLANE OF SLIDING OR FOLDING DOORS. COMPENSATING DEVICES OR AUTOMATIC DOOR OPERATORS MAY BE UTILIZED TO MEET THE ABOVE STANDARDS.

#### CORRIDORS AND AISLE:

- 13. FLOOR SURFACES SHALL BE SLIP-RESISTANT.
- 14. EVERY PORTION OF EVERY BUILDING IN WHICH ARE INSTALLED SEATS, TABLES, MERCHANDISE, EQUIPMENT OR SIMILAR MATERIALS SHALL BE PROVIDED WITH AISLES LEADING TO AN EXIT.

#### SANITARY FACILITIES:

NO GREATER THAN 5 POUNDS.

- 15. ACCESSIBLE SIGN CONTAINING TACTILE CHARACTER SHALL BE PROVIDED AT DOOR. THE SIGN SHALL BE ALONGSIDE THE DOOR ON LATCH SIDE AND AT DOUBLE DOORS, THE SIGN SHALL BE RIGHT OF THE RIGHT HANDED DOOR. THE SIGN CONTAINING TACTILE CHARACTERS SHALL HAVE 18-INCHES MIN BY 18-INCHES MIN. CLEAR FLOOR SPACE LOCATED BEYOND THE ARC OF ANY DOOR SWING AND CENTERED ON THE TACTILE CHARACTERS. THE TACTILE CHARACTERS SHALL BE 48-INCHES MIN AND 60-INCHES MAX FROM BASELINE OF THE TACTILE CHARACTERS ABOVE FLOOR.
- 16. CLEARANCE AROUND THE WATER CLOSET SHALL BE 60-INCHES MIN MEASURED PERPENDICULAR FROM THE SIDEWALL, AND 56-INCHES MIN. MEASURED PERPENDICULAR FROM REAR WALL. NO OTHER FIXTURES OR OBSTRUCTION SHALL BE WITHIN WATER CLOSET CLEARANCE
- 17. WATER CLOSET COMPARTMENTS SHALL BE EQUIPPED WITH A DOOR THAT HAS AN AUTOMATIC CLOSING DEVICE, WITH DOOR PULL ON BOTH SIDES OF THE DOOR NEAR THE LATCH, AND SHALL HAVE A CLEAR UNOBSTRUCTED OPENING WIDTH OF 32-INCHES. DOOR HINGE SHALL BE LOCATED NOT MORE THAN 4-INCHES FROM SIDE WALL. WATER CLOSET COMPARTMENTS SHALL PROVIDE TOW CLEARANCE (9-INCHES HIGH MIN. AND 6-INCHES BEYOND THE COMPARTMENT) AT FRONT AND ONE SIDE PARTITION. TOE CLEARANCE IS UNNECESSARY IN COMPARTMENT: AT FRONT IN COMPARTMENTS GREATER THAN 62-INCHES DEEP FOR WALL HUNG WATER CLOSET/65-INCHES DEEP FLOOR MOUNTED WATER CLOSET, AT SIDE IN COMPARTMENTS GREATER THAN 66-INCHES WIDE.
- 18. EXCEPT FOR DOOR OPENING WIDTH AND DOOR SWINGS, A CLEAR UNOBSTRUCTED ACCESS NOT LESS THAN 42-INCHES SHALL BE PROVIDED TO WATER CLOSET COMPARTMENTS DESIGNED FOR USE BY THE DISABLED. REFER TO MANEUVERING CLEARANCE AT SWINGING DOORS - FIGURE 2 FOR ALTERNATE APPROACHES.
- 19. THE HEIGHT OF ACCESSIBLE WATER CLOSETS SHALL BE A MINIMUM OF 17-INCHES AND A MAXIMUM OF 19-INCHES MEASURED TO THE TOP OF TOILET SEAT.
- 20. TOILET FLUSH CONTROLS SHALL BE OPERABLE WITH ONE HAND, AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST. CONTROLS FOR THE FLUSH VALVES SHALL BE MOUNTED ON THE WIDE SIDE OF THE TOILET AREAS, NO MORE THAN 44-INCHES ABOVE THE FLOOR. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE
- 21. WHERE URINALS ARE PROVIDED, AT LEAST ONE SHALL HAVE A CLEAR SPACE 30-INCHES WIDE X 48-INCHES LONG IN FRONT OF THE URINAL.
- 22. WHERE URINALS ARE PROVIDED, AT LEAST ONE WITH A RIM PROJECTING A MINIMUM OF 13 1/2 INCHES FROM BACK OF FIXTURE TO OUTER FACE OF URINAL RIM AND A MINIMUM OF 17-INCHES ABOVE THE FLOOR SHALL BE PROVIDED.
- 23. A CLEAR FLOOR SPACE 30-INCHES WIDE X 48-INCHES LONG SHALL BE PROVIDED IN FRONT OF A LAVATORY TO ALLOW A FORWARD APPROACH. SUCH CLEAR FLOOR SPACE SHALL ADJOIN OR OVERLAP AN ACCESSIBLE ROUTE AND SHALL EXTEND INTO KNEE AND TOE SPACE UNDERNEATH THE LAVATORY.
- 24. LAVATORIES SHALL BE MOUNTED WITH A CLEARANCE OF AT LEAST 27-INCHES UNDER FROM THE FLOOR WITH KNEE CLEARANCE UNDER THE FRONT LIP EXTENDING A MINIMUM OF 8-INCHES IN DEPTH AT THE TOP. TOE CLEARANCE SHALL BE A MINIMUM OF 9-INCHES HIGH FROM THE FLOOR AND A MINIMUM OF 17-INCHES DEEP FROM THE FRONT OF THE LAVATORY. SEE FIGURE 11
- 25. LAVATORY BOWL SHALL NOT PROJECT AND REDUCE THE CLEAR HEIGHT BELOW THE LAVATORY TO LESS THAN 27-INCHES AT 8-INCHES BACK FROM THE LAVATORY FRONT.
- 26. HOT WATER AND DRAIN PIPES UNDER LAVATORIES SHALL BE INSULATED OR OTHERWISE COVERED. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES.
- 27. FAUCET CONTROLS AND OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST, THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 LBS. LEVER-OPERATED, PUSH-TYPE AND ELECTRONICALLY CONTROLLED MECHANISMS ARE EXAMPLES OF ACCEPTABLE DESIGN. SELF-CLOSING VALVES ARE ALLOWED IF THE FAUCET REMAINS OPEN FOR AT LEAST 10 SECONDS.

- 28. MIRRORS SHALL BE MOUNTED WITH THE BOTTOM OF THE REFLECTIVE SURFACE NOT MORE THAN 40-INCHES FROM THE FLOOR.
- 29. LOCATE TOWEL, SANITARY NAPKIN, AND WASTE RECEPTACLES WITH ALL OPERABLE PARTS NOT MORE THAN 40-INCHES FROM THE FLOOR.
- 30. LOCATE TOILET TISSUE DISPENSERS ON THE WALL WITHIN 7-9 INCHES IN FRONT OF THE WATER CLOSET MEASURED TO THE CENTERLINE OF THE DISPENSER. THE OUTLET SHALL BE 15 INCHES MINIMUM AND 48 INCHES MAXIMUM ABOVE THE FLOOR, AND SHALL NOT BE LOCATED BEHIND THE GRAB BARS. DISPENSERS SHALL NOT BE OF A TYPE THAT CONTROL DELIVERY, OR DO NOT ALLOW CONTINUOUS PAPER FLOW.

#### GRAB BARS:

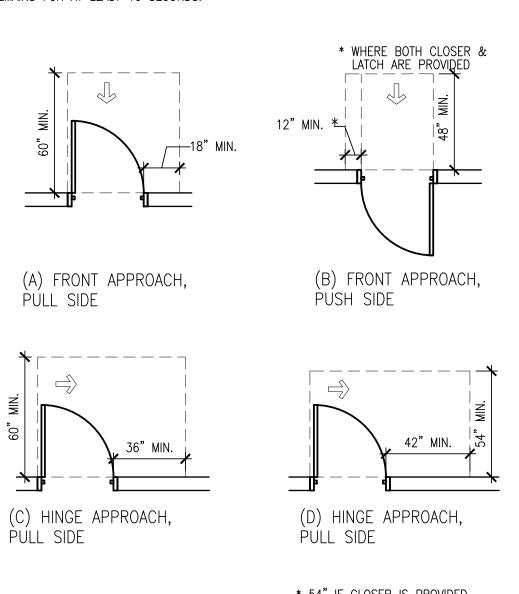
- 31. GRAB BARS, FASTENERS AND MOUNTING DEVICES SHALL BE DESIGNED FOR 250 LBS. PER LINEAR FEET LOAD.
- 32. GRAB BARS SHALL BE LOCATED ON ONE SIDE AND THE BACK OF THE ACCESSIBLE WATER CLOSET AND SHALL BE SECURELY ATTACHED BETWEEN 33-INCHES MIN. ABOVE AND 36-INCHES MAX. TO THE TOP OF THE GRIPPING SURFACE AND PARALLEL TO THE FLOOR.
- 33. GRAB BARS AT THE SIDE SHALL BE AT LEAST 42-INCHES LONG MOUNTED AT 12-INCHES FROM THE REAR WALL AND GRAB BARS AT THE BACK SHALL BE NOT LESS THAN 36-INCHES LONG AND EXTEND FROM THE CENTERLINE OF THE WATER CLOSET 12-INCHES MIN. TO ONE SIDE & 24-INCHES TO THE OTHER.
- 34. THE DIAMETER OR WIDTH OF THE GRIPPING SURFACES OF A GRAB BAR SHALL BE 1-1/4 INCHES TO 1-1/2 INCHES OR THE SHAPE SHALL PROVIDE AN EQUIVALENT GRIPPING
- 35. IF THE GRAB BAR IS MOUNTED ADJACENT TO A WALL, THE SPACE BETWEEN THE WALL AND THE GRAB BAR SHALL BE 1-1/2 INCHES. SPACE BETWEEN THE GRAB BAR AND PROTRUDING OBJECTS BELOW SHALL BE 1-1/2 INCHES. SPACE BETWEEN THE GRAB BAR AND PROTRUDING OBJECTS ABOVE SHALL BE 12" MIN.
- 36. A GRAB BAR AND ANY WALL OR OTHER SURFACE ADJACENT SHALL BE FREE OF ANY SHARP OR ABRASIVE ELEMENTS.
- 37. GRAB BARS SHALL NOT ROTATE WITHIN THEIR FITTINGS.
- 38. EDGES SHALL HAVE MINIMUM RADIUS OF 1/8-INCH.

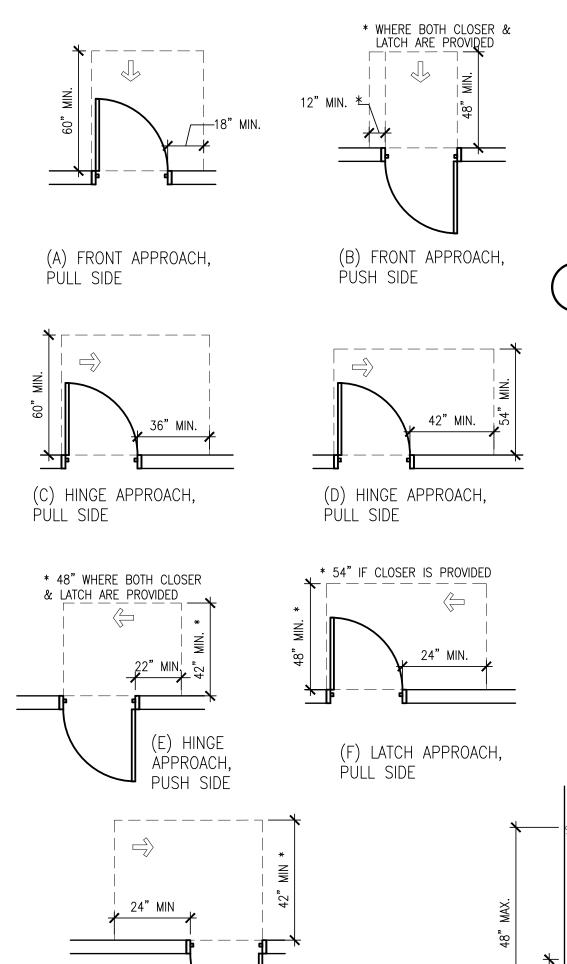
#### TFI FPHONES:

39. IF PUBLIC TELEPHONES ARE EXISTING, IT'S THE OWNER'S RESPONSIBILITY TO NOTIFY THE TELEPHONE COMPANY TO GUARANTEE/CERTIFY THAT TELEPHONES ARE ADA COMPLIANT.

### ADDITIONAL REQUIREMENTS:

- 40. THE CENTER OF RECEPTACLE OUTLETS SHALL BE NOT LESS THAN 15- INCHES ABOVE THE FLOOR OR WORKING PLATFORMS,
- 41. THE TOP OF ANY OPERATING HANDLE/ SWITCH INTENDED TO CONTROL OR DISPENSE, SHALL BE PER DIAGRAM 12.
- 42. THE INTERNATIONAL SYMBOL OF ACCESSIBILITY SHALL BE THE STANDARD USED TO IDENTIFY FACILITIES THAT ARE ACCESSIBLE TO AND USABLE BY PHYSICALLY DISABLED PERSONS. THE SYMBOL SPECIFIED ABOVE SHALL CONSIST OF A WHITE FIGURE ON A BLUE BACKGROUND. THE BLUE SHALL BE EQUAL TO COLOR NO. 15090 IN FEDERAL STANDARD 595A.
- 43. AT KITCHEN: SINKS, FAUCET CONTROLS AND OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO GREATER THAN 5 LBS. LEVER- OPERATED, PUSH-TYPE AND ELECTRONICALLY CONTROLLED MECHANISMS ARE EXAMPLES OF ACCEPTABLE DESIGN. SELF-CLOSING VALVES ARE ALLOWED IF THE FAUCET REMAINS FOR AT LEAST 10 SECONDS.





\*48" MIN WHERE

MANEUVERING CLEARANCE

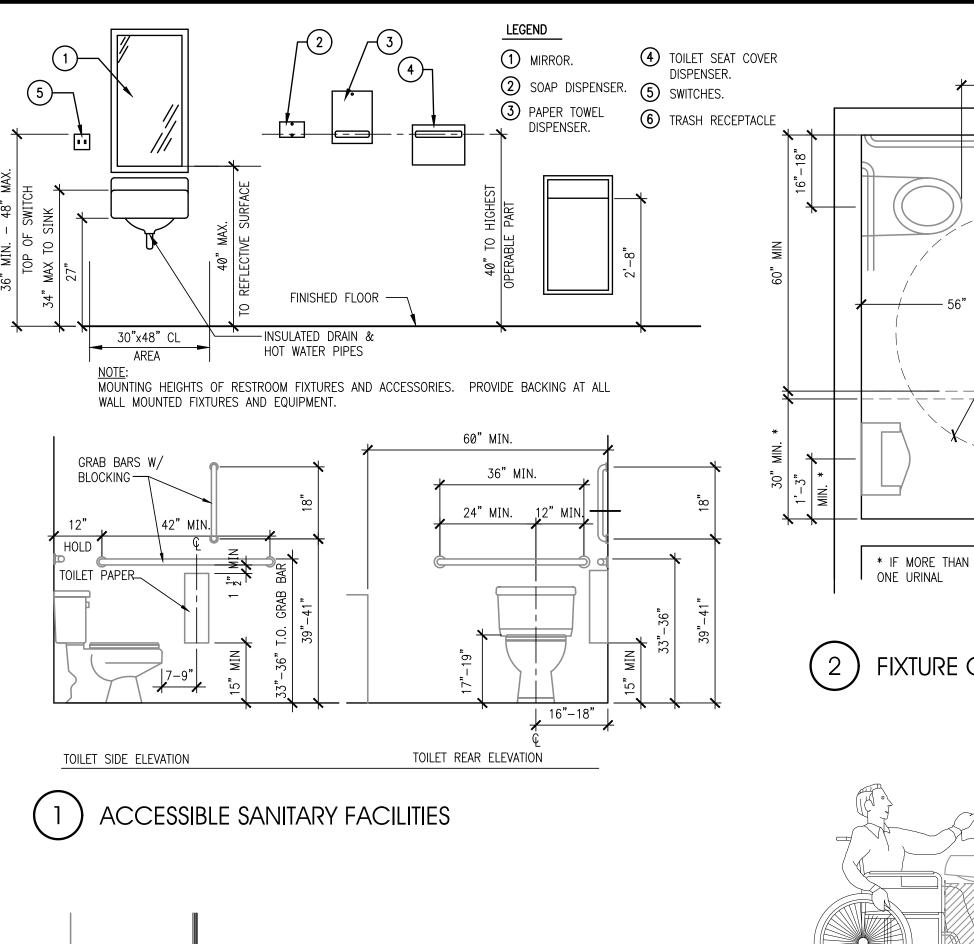
AT SWINGING DOORS

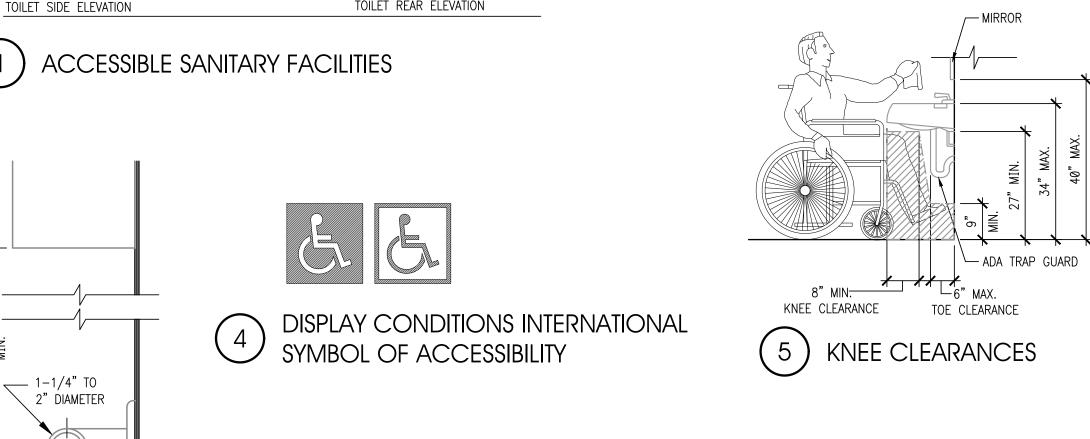
CLOSER IS PROVIDED

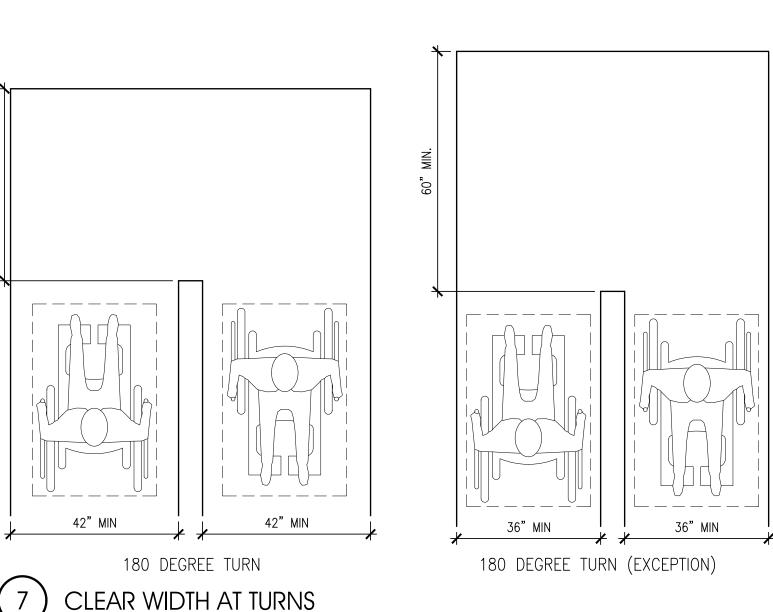
(G) LATCH

APPROACH,

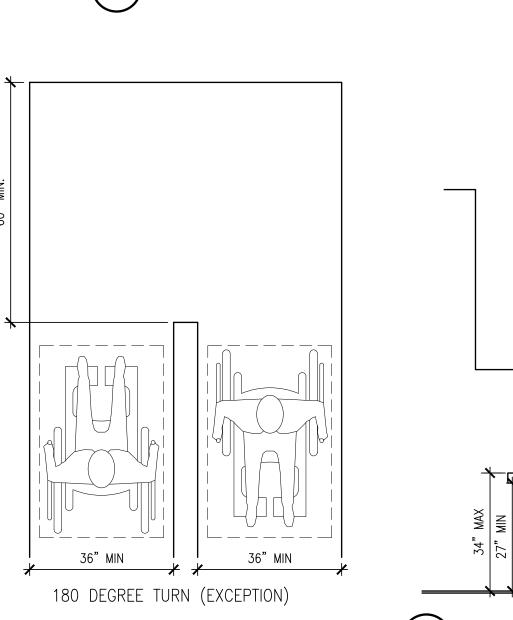
PUSH SIDE

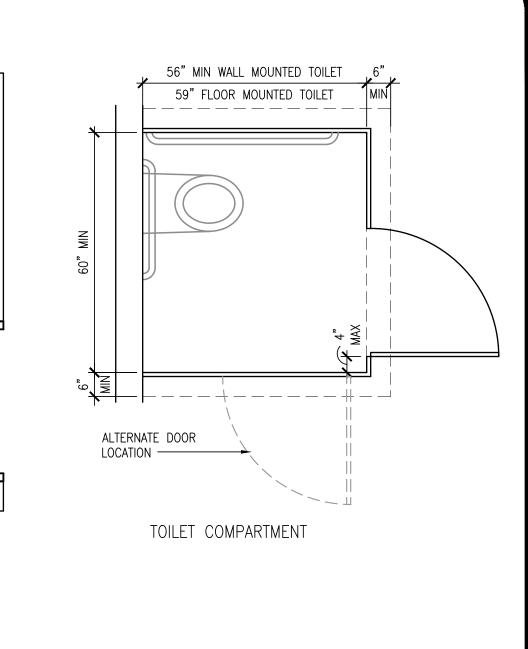








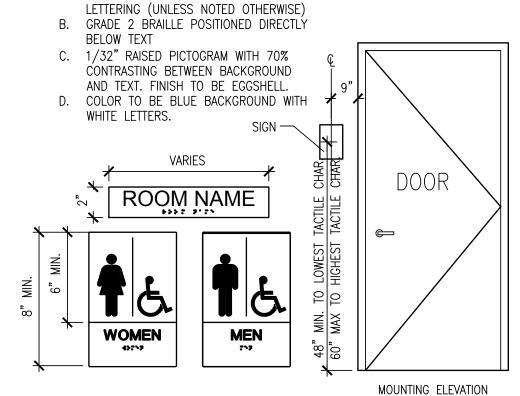




FIXTURE CLEARANCES

TOILET ROOM

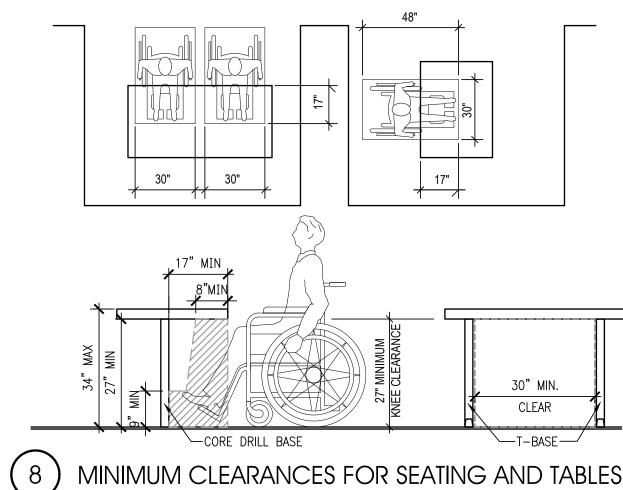
48" CLR.

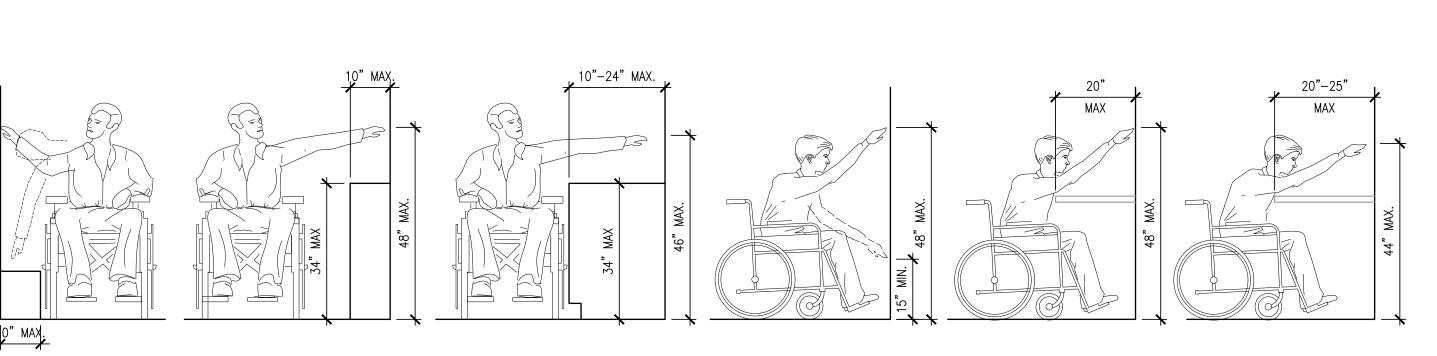


A. 5/8" HIGH BY 1/32" RAISED

ACCESSIBILITY SIGNAGE MOUNTING DETAILS

(MOUNT ON LATCH SIDE)





MINIMUM CLEARANCES FOR FRONT AND SIDE REACH

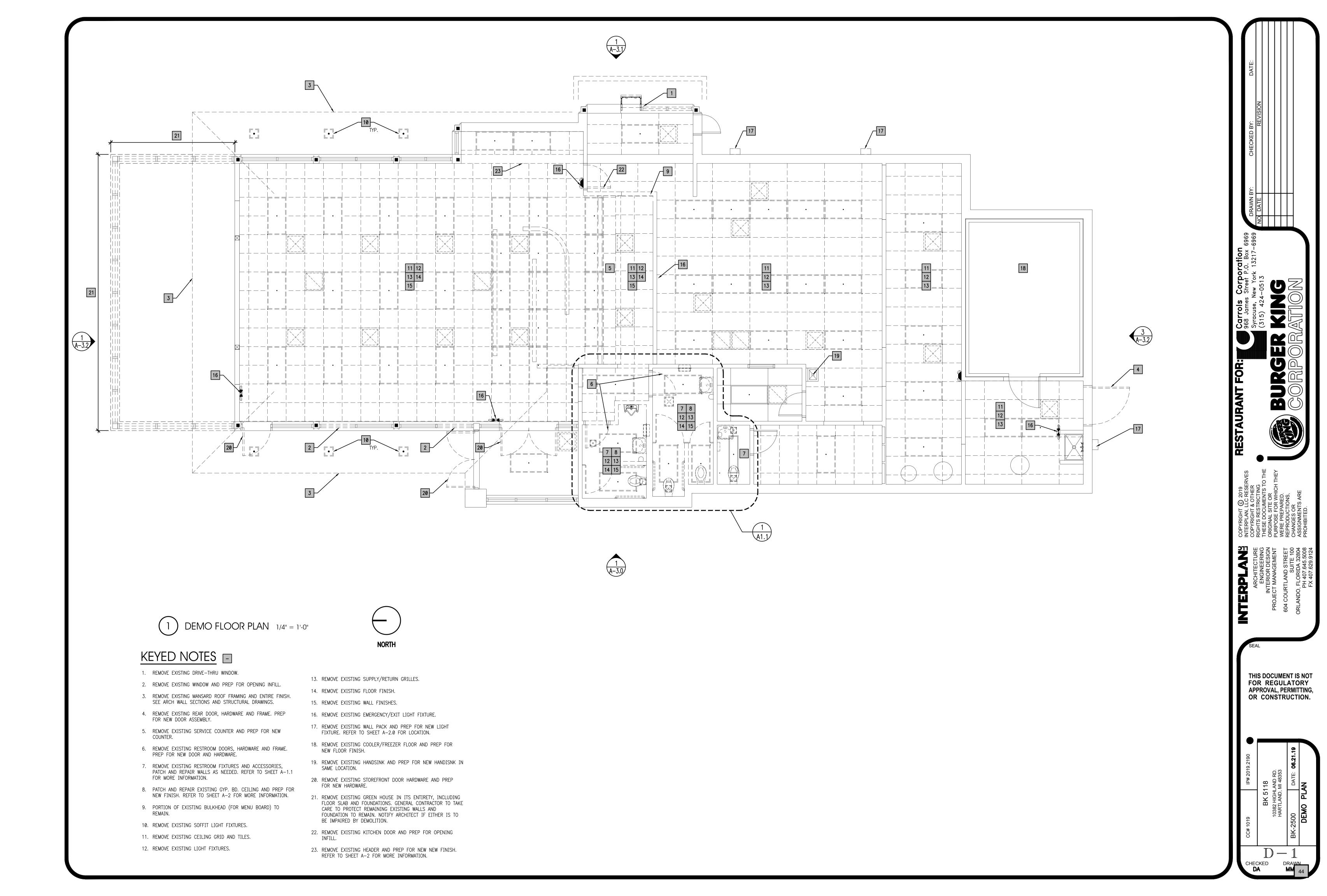
1-1/2"

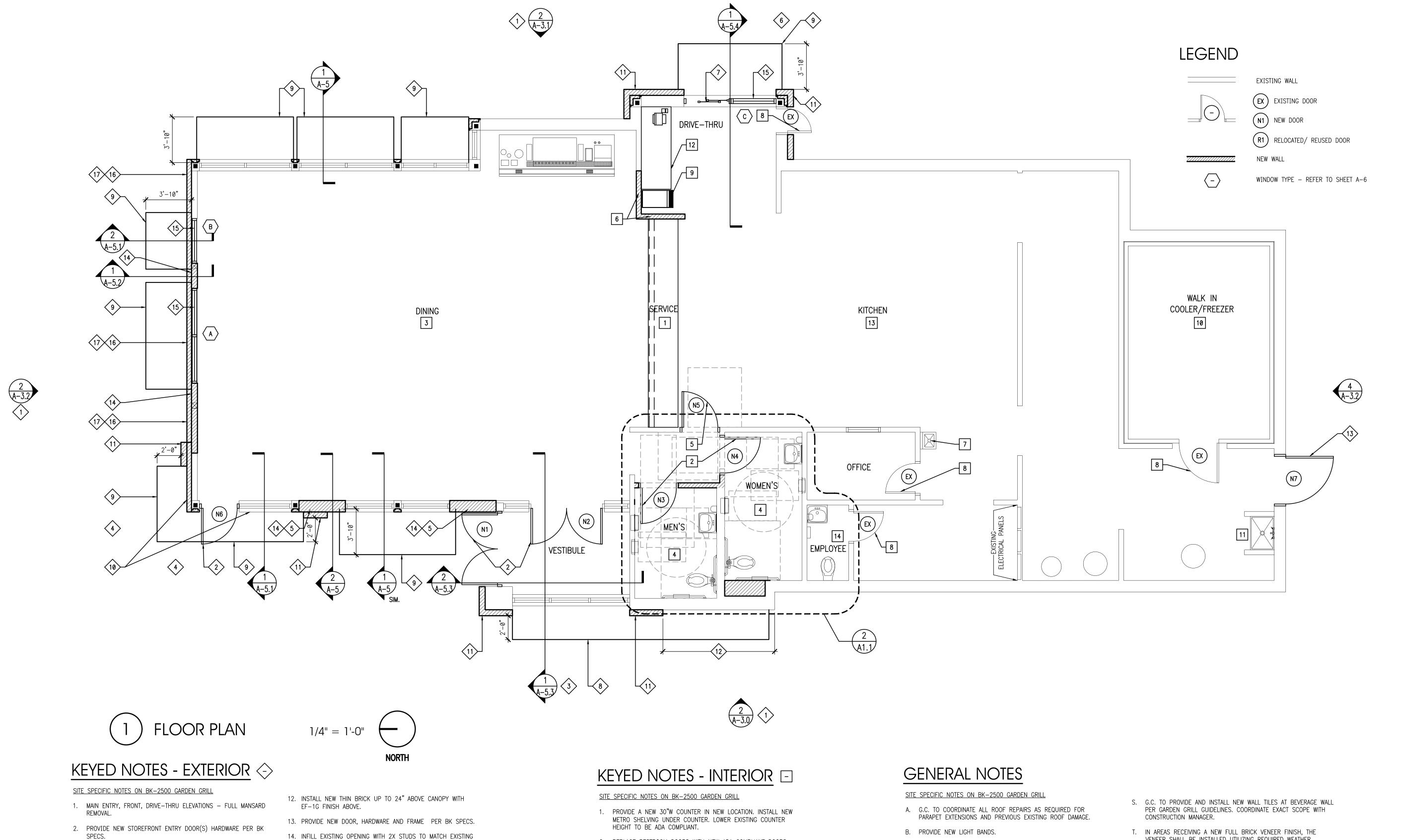
GRAB BAF

GRAB BAR DTL.

INTERPLANS

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- 3. NEW ARCHON AT MAIN ENTRY DOUBLE DOORS.
- 4. NEW CORNER ARCHON.
- 5. INFILL WINDOW.
- 6. NEW DRIVE-THRU ARCHON.
- 7. PROVIDE NEW DRIVE—THRU WINDOW. G.C. TO COORDINATE SIZE
  OF NEW UNIT WITH OWNER AND PROVIDE NEW ROUGH OPENING

  16. NICHIHA FIBER CEMENT (
  SHEATHING OVER 2X WOC
  FOR EXTENT.
- 8. NEW CANOPY ABOVE WITH "HOME OF THE WHOPPER" SIGNAGE. CANOPY TO EXTEND TO COVER MERCHANDISING FOR LIGHTING.

AS NECESSARY. (INSTALL ORIENTATION RIGHT TO LEFT)

- 9. NEW CANOPY ABOVE.
- 10. CERAMIC TILE TO BE APPLIED TO NEW CONSTRUCTION AND EXISTING WALL FINISH.
- STONE VENEER FINISH OVER SCRATCH COAT ON PAPER BACKED METAL LATH OVER 3/4" EXT. GRD. SHEATHING ON 2X6 FURRING.

- 14. INFILL EXISTING OPENING WITH 2X STUDS TO MATCH EXISTING CONSTRUCTION WITH R-13 BATT, 1/2" SHEATHING BOTH SIDES, 5/8" GYP. BD. INSIDE AND REFER TO EXTERIOR ELEVATIONS FOR EXTERIOR FINISH.
- 15. PROVIDE NEW STOREFRONT WINDOW WITHIN EXISTING/NEW
- 16. NICHIHA FIBER CEMENT ON BLDG. WRAP ON 1/2" EXT. GRD. SHEATHING OVER 2X WOOD FRAMING. REFER TO SHEET A-5.2 FOR EXTENT.
- 17. BRICK VENEER OVER 1" AIR SPACE OVER WEATHER BARRIER OVER 5/8" EXTERIOR GRADE PLYWOOD OVER 2X WOOD FRAMING. REFER TO SHEET A-5.2 FOR EXTENT.

- 2. REPLACE RESTROOM DOORS WITH NEW ADA COMPLIANT DOORS, HARDWARE AND FRAME PER LOCAL REQUIREMENTS.
- 3. PROVIDE DECOR GARDEN GRILL OPTION.
- 4. PROVIDE SINGLE USER ADA COMPLIANT RESTROOMS.
- 5. PROVIDE NEW DOOR PER BK SPECS.
- 6. G.C. TO CONSTRUCT NEW WALL TO MATCH EXISTING
- CONSTRUCTION. NEW WALL TO ALIGN WITH BULKHEAD ABOVE.7. PROVIDE NEW HAND SINK IN SAME LOCATION AS EXISTING.
- 8. EXISTING DOOR TO REMAIN.
- 9. RELOCATE ICEE MACHINE TO NEW LOCATION. PROVIDE ELECTRICAL.
- 10. REPLACE COOLER/FREEZER FLOOR.
- 11. EXISTING MOP SINK TO REMAIN. REPAIR AS NEEDED. INSTALL STAINLESS STEEL LINER PANELS ON WALLS.
- 12. PROVIDE NEW 83" TABLE
- 13. DEGREASE, GROUT AND REPAIR BROKEN FLOOR TILE AND COVE BASE TILE THROUGHOUT. (\$2,000 ALLOWANCE)
- 14. G.C TO FURNISHED AND INSTALL NEW FIXTURES IN EMPLOYEE

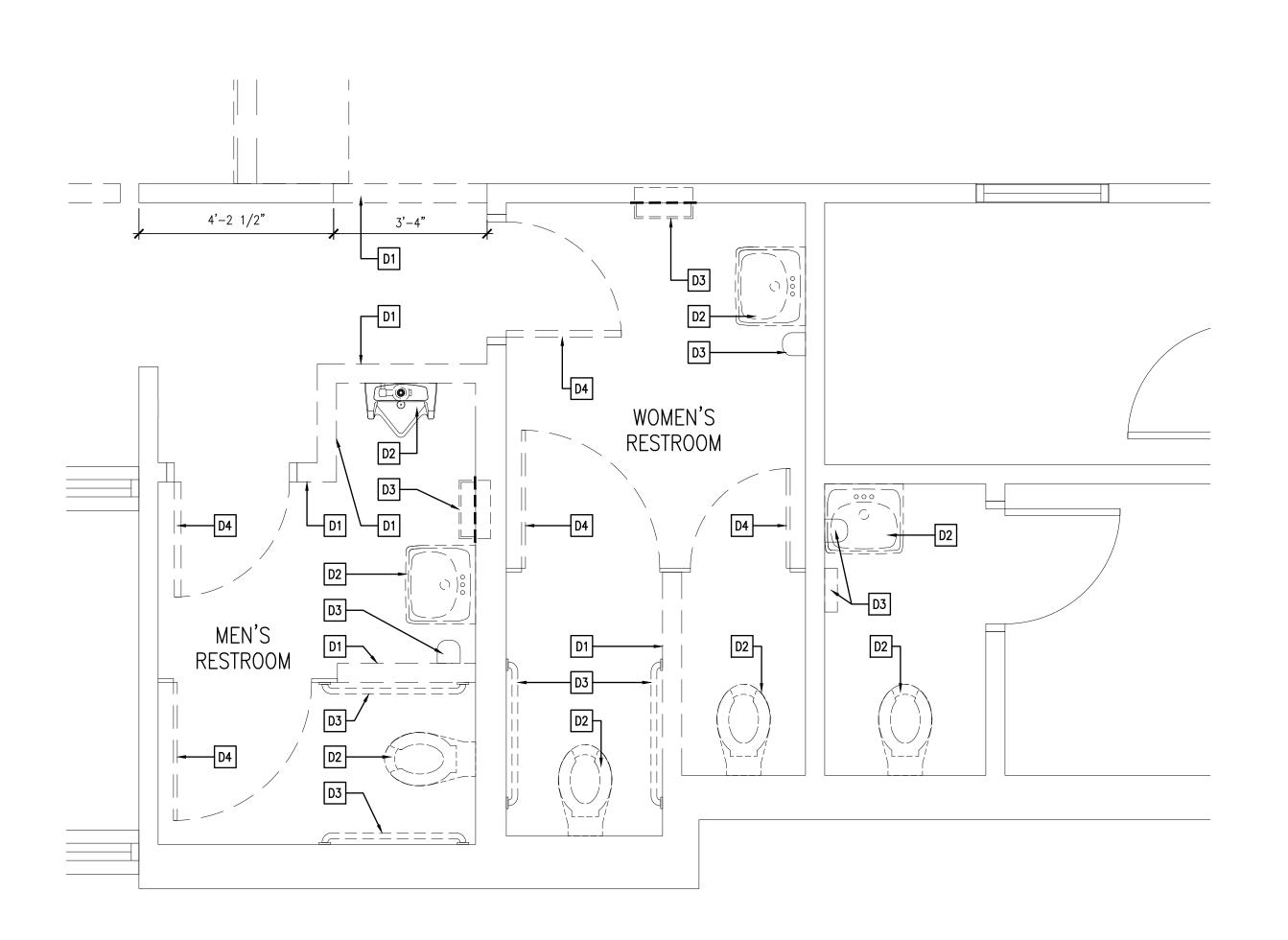
- C. REPLACE CEILING GRID AND TILE IN DINING. PATCH AND REPAIR RESTROOM CEILING. EXISTING KITCHEN CEILING GRID TO REMAIN AND TILES TO BE REPLACED.
- D. REPLACE RETURNS AND REGISTERS THRU-OUT.
- E. NEW LED LIGHT FIXTURES IN DINING, KITCHEN AND RESTROOMS.
- F. NEW FLOOR TILE THROUGHOUT DINING AND RESTROOMS.
- G. PAINT INTERIOR WALLS TO MATCH GARDEN GRILL OPTION PROTO
- H. PATCH & REPAIR/PAINT INTERIOR DRYWALL WHERE REQ'D
- J. PATCH, REPAIR AND RE-GROUT KITCHEN FLOOR TILES AS REQUIRED. COORDINATE EXACT SCOPE WITH CONSTRUCTION MANAGER.
- K. G.C. TO PROVIDE NEW ADA COMPLIANT SIGNAGE THROUGHOUT AND MOUNT AS REQUIRED PER CODE.
- L. ALL SEATING AND RELATED ITEMS BY OWNER APPROVED VENDOR.
- M. ANY STUCCO/EIFS SYSTEMS SHALL BE INSTALLED OVER A DRAINABLE SYSTEM AS REQUIRED PER MANUFACTURER'S
- P. RESTROOMS: PROVIDE NEW WALL TILES. COORDINATE WITH CONSTRUCTION MANAGER.

INSTRUCTIONS.

R. PROVIDE NEW WAINSCOT IN DINING AREA. COORDINATE SCOPE WITH CONSTRUCTION MANAGER.

- T. IN AREAS RECEIVING A NEW FULL BRICK VENEER FINISH, THE VENEER SHALL BE INSTALLED UTILIZING REQUIRED WEATHER BARRIER, AIR SPACE, GALVANIZED METAL TIES, THRU WALL FLASHING AND WEEP HOLES AS IDENTIFIED IN THE BUILDING CODE AND MANUFACTURER'S REQUIREMENTS.
- U. G.C. TO COORDINATE WITH CONSTRUCTION MANAGER AND DECOR VENDOR SCOPE OF NEW INTERIOR FINISHES, CEILING AND FLOOR.
- V. G.C. TO PROVIDE AND INSTALL EIGHTEEN (18) NEW EXTERIOR WALL SCONCES AND TWO (2) NEW WALL PACKS. G.C. TO COORDINATE EXACT SCOPE WITH CONSTRUCTION MANAGER.
- W. G.C. TO REPAIR AND PAINT EXISTING DUMPSTER ENCLOSURE.
- X. G.C. TO PROVIDE AND INSTALL FRP ON ALL KITCHEN WALLS. COORDINATE EXACT SCOPE WITH CONSTRUCTION MANAGER.
- Y. G.C. TO COORDINATE WITH CONSTRUCTION MANAGER OF NEW WHITE TILE WALL FINISH BEHIND SERVICE COUNTER.
- Z. G.C. TO CONFIRM WITH CONSTRUCTION MANAGER FOR LOCATION OF COLLAGE WALL. G.C. TO RELOCATE THERMOSTAT AS REQUIRED AT CONSTRUCTION MANAGER DESIGNATED COLLAGE WALL.
- AA. G.C. TO FURNISH AND INSTALL 55" TV. PROVIDE ELECTRICAL AND DATA/CABLE.
- AB. CARROLS TO SUPPLY FOUR (4) DIGITAL MENU BOARDS.
- AC. G.C. TO PROVIDE ADA SIGNAGE FOR BATHROOM HALLWAYS. PICTURE TO BE WHITE WITH BLACK BACKGROUND.

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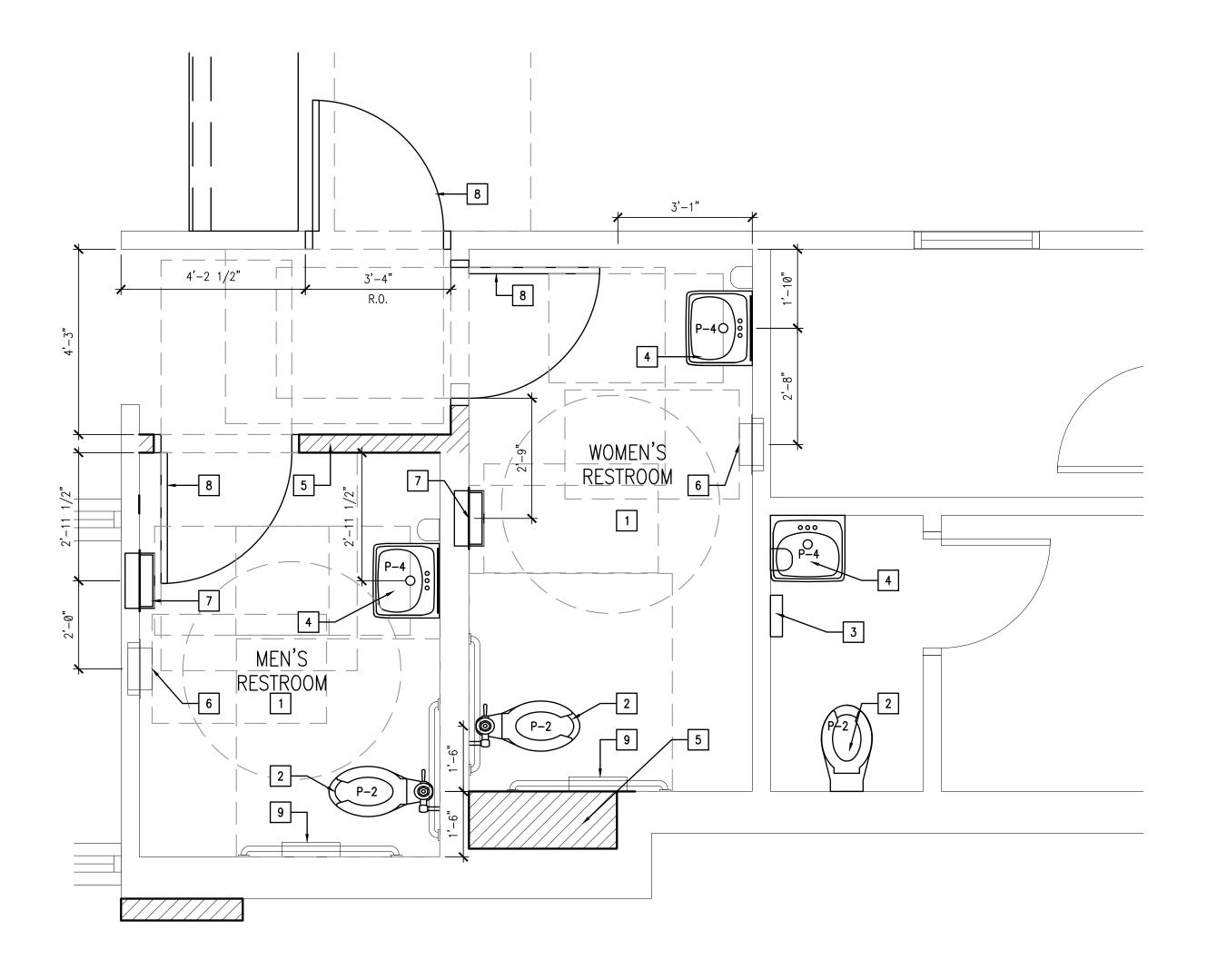
1 ENLARGED RESTROOM PLAN - DEMO

1/2" = 1'-0"

KEYED NOTES - DEMO 🕞

SITE SPECIFIC NOTES ON BK-2500 GARDEN GRILL

- G.C. TO REMOVE PORTION OF EXISTING WALL. PATCH AND REPAIR AS NEEDED.
- 2. G.C. TO REMOVE EXISTING PLUMBING FIXTURE. PATCH FLOOR AND WALL AS REQUIRED AND PREP FOR NEW FINISHES.
- 3. G.C. TO REMOVE EXISTING ACCESSORIES. PATCH WALL AND FLOOR AS REQUIRED AND PREP FOR NEW FINISHES.
- 4. G.C. TO REMOVE EXISTING DOOR AND HARDWARE.



2 ENLARGED RESTROOM PLAN - NEW

1/2" = 1'-0"

# 

- SITE SPECIFIC NOTES ON BK-2500 GARDEN GRILL
- 1. PROVIDE NEW ACCESSORIES (36" & 42" HORIZONTAL GRAB BARS, 18" VERTICAL GRAB BAR, SOAP DISPENSER, MIRROR, TOILET PAPER DISPENSER, HAND DRYER, TRASH RECEPTACLE, AND COAT HOOK) PER BK SPECS. REFER TO ADA SHEET (A-ADA) FOR MOUNTING HEIGHTS, INSTALLATION REQUIREMENTS AND ALL OTHER ADA REQUIRED CODE ITEMS.
- 2. G.C. TO PROVIDE NEW ADA COMPLIANT WATER CLOSET, REFER TO SHEET A-ADA TO FOR INSTALLATION REQUIREMENTS.
- 3. G.C TO PROVIDE NEW ADA PAPER TOWEL DISPENSER.
- 4. G.C. TO PROVIDE AND INSTALL NEW ADA COMPLIANT LAVATORY.
  INSULATE LAVATORY PIPING AS REQUIRED. REFER TO SHEET A—ADA
  FOR INSTALLATION REQUIREMENTS.
- 5. NEW WALL CONSTRUCTION TO MATCH EXISTING CONSTRUCTION. COORDINATE WITH CONSTRUCTION MANAGER.
- 6. NEW XLERATOR HAND DRYER WITH ADA SEMI-RECESSED KIT. PROVIDE CORIAN UNDER HAND DRYER. REFER TO A-ADA SHEET FOR ADA MOUNTING REQUIREMENTS.

- 7. G.C. TO PROVIDE AND INSTALL NEW ADA COMPLIANT SEMI-RECESSED TRASH RECEPTACLE. REFER TO SHEET A-ADA FOR INSTALLATION REQUIREMENTS.
- 8. G.C. TO PROVIDE AND INSTALL NEW ADA COMPLIANT DOOR AND HARDWARE AS REQUIRED BY CODE.
- 9. G.C. TO INSTALL NEW TOILET PAPER DISPENSER BOBRICK B-3888, REFER TO SHEET A-ADA FOR MOUNTING HEIGHTS.

PLUMBING FIXTURE SCHEDULE						
MARK	FIXTURE	MANUFACTURER	MODEL NUMBER	MODEL NAME	VALVE	
P-1	WATER CLOSET	AMERICAN STANDARD		MADERA FLOWISE 15" HEIGHT ELONGATED FLUSHOMETER		
P-2	WATER CLOSET – ADA	AMERICAN STANDARD		MADERA FLOWISE 16 1/2" HEIGHT 1.6 GPF FLUSHOMETER		
P-3	URINAL – ADA	AMERICAN STANDARD	6590001EC.020	WASHBROOK FLOWISE UNIVERSAL	EXPOSED SELECTRONIC BATTERY URINAL 1.0 gpf FLUSH VALVE (6063101)	
P-4	LAVATORIES	COOL	RDINATE WITH OWNER		WATERFRONT MODEL: 300988 SINGLE LEVER HANDLE LAVATORY FAUCET, CHROME-PLATED FINISH	

 Is Corporation
 CHECKED BY:
 DATE:

 mes Street P.O. Box 6969
 DRAWN BY:
 CHECKED BY:
 DATE:

 424-0513
 NO DATE
 REVISION

 IOI
 IOI

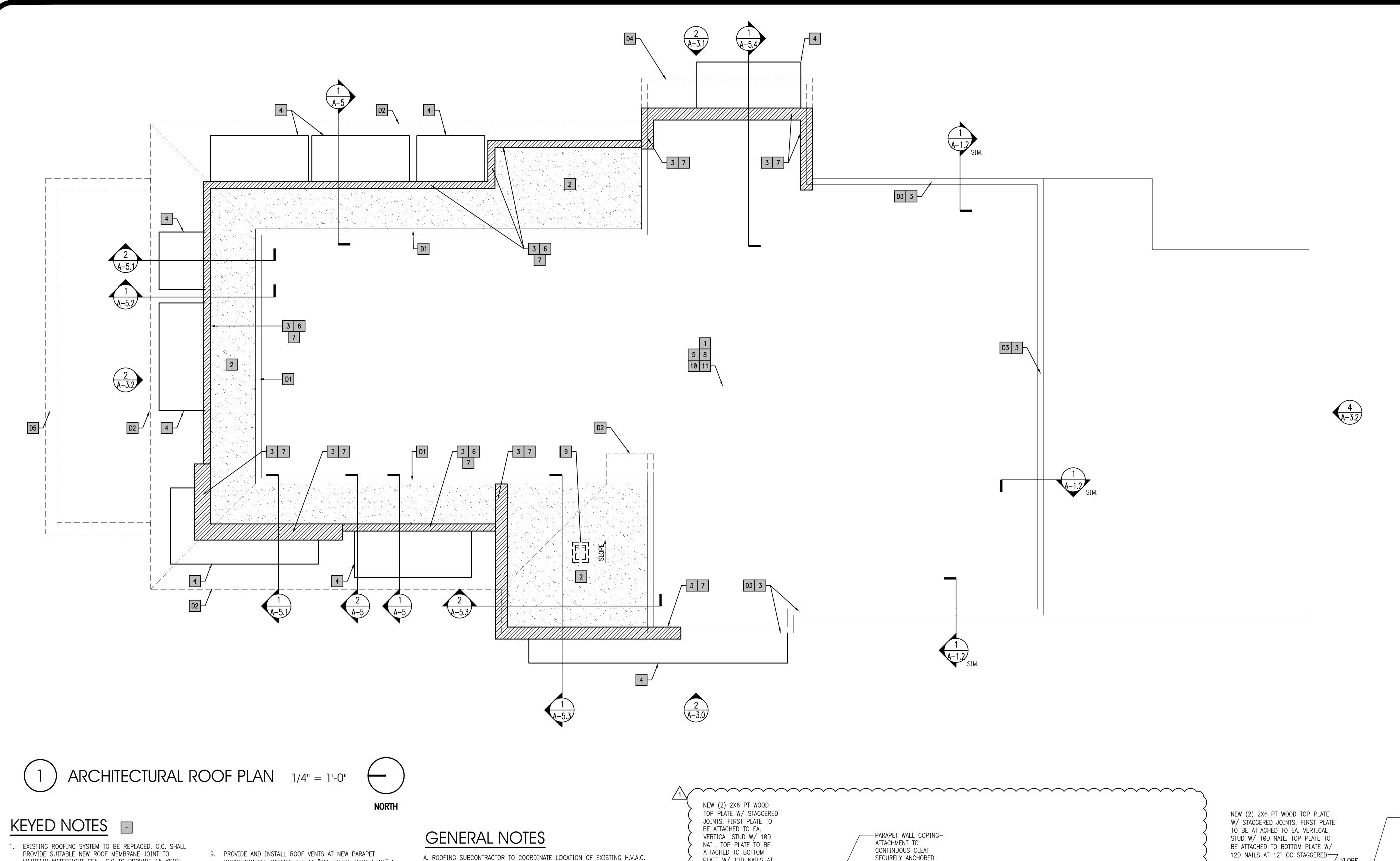
BURGER KING

IGHTS RESTRICTING
HESE DOCUMENTS TO THE
SRIGINAL SITE OR
URPOSE FOR WHICH THEY
VERE PREPARED.
REPRODUCTIONS,

ENGINEERING
INTERIOR DESIGN
PROJECT MANAGEMENT
04 COURTLAND STREET
SUITE 100
RLANDO, FLORIDA 32804

THIS DOCUMENT IS NOT FOR REGULATORY APPROVAL, PERMITTING, OR CONSTRUCTION.

IP# 2019.2190	118	-AND RD. MI 48353	DATE: <b>06.21.19</b>	NEW PLANS
CC# 1019	BK 5118	10382 HIGHLAND RD. HARTLAND, MI 48353	BK-2500	DEMO AND NEW ENLARGED RR PLANS
	<u>A</u> -	<b>-</b> 1	_ •	1



- MAINTAIN WATERTIGHT SEAL. G.C TO PROVIDE 15 YEAR WARRANTY ON NEW ROOF.
- NEW ROOFING SYSTEM TO MATCH EXISTING AT NEW ROOF CONSTRUCTION. G.C. SHALL PROVIDE SUITABLE PATCH AT EXISTING TO NEW ROOF MATERIAL JOINT TO MAINTAIN WATERTIGHT SEAL. G.C. SHALL SUPPLY NEW ROOF, INCLUDING ALL FLASHING AND ACCESSORIES AS REQUIRED TO MAINTAIN EXISTING EQUIPMENT/LOCATIONSS, OVER ENTIRE BUILDING. SEE PRODUCT APPROVAL SPECIFICATION THIS
- 3. NEW METAL COPING. REFER TO ELEVATIONS FOR COLOR OF
- 4. NEW PREFABRICATED METAL CANOPY. REFER TO DETAILS ON SHEET A-5.5. G.C. TO PROVIDE BLOCKING FOR CANOPY
- 5. EXISTING ROOF TOP EQUIPMENT TO REMAIN.
- 6. NEW LIGHT BAND. SEE DETAIL ON THIS SHEET AND EXTERIOR ELEVATIONS.
- NEW PARAPET CONSTRUCTION/EXTENSION. SEE WALL
- 8. VERIFY ALL THE ROOF DRAINS ARE CLEAN AND IN WORKING CONDITION.

- CONSTRUCTION. INSTALL A FLAT "OFF-RIDGE ROOF VENT" A MINIMUM OF 6" FROM TOP OF RIDGE. ROOF VENT: OWENS CORNING VTS455-GR (N.F.V.A.= 50 SQ. IN.) OR EQUAL.
- 10. RELOCATE EXISTING EQUIPMENT (SUCH AS SECURITY CAMERAS, SATELLITE DISH) AS REQUIRED.
- 11. INSTALL NEW ROOFTOP FRYER EXHAUST FAN PER BK SPEC.

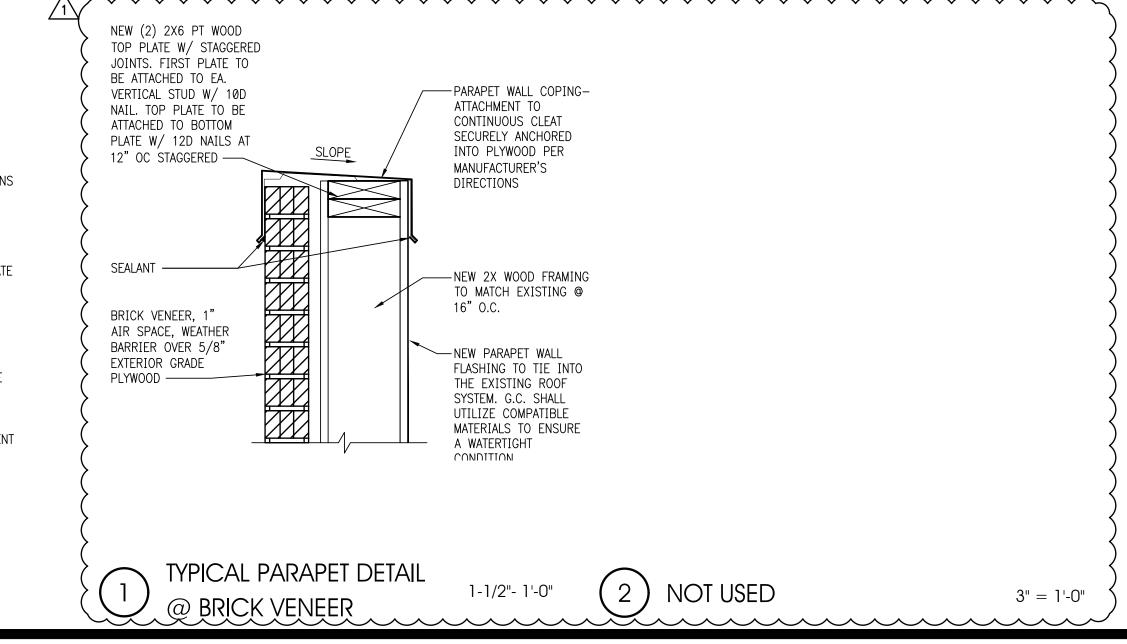
- D1. REMOVE EXISTING LIGHT BAND AND PARAPET CAP.
- D2. REMOVE EXISTING MANSARD ROOF FINISH & FRAMING. REFER
- TO WALL SECTIONS AND EXTERIOR ELEVATIONS. D3. REMOVE EXISTING METAL COPING. PATCH AND REPAIR AS
- REQUIRED AND PREP PER NEW ROOF SYSTEM AND WALL
- D4. REMOVE PORTION OF EXISTING ROOF STRUCTURE FRAMING AND FINISHES. PREP FOR NEW ARCHON CONSTRUCTION.
- D5. REMOVE EXISTING GREEN HOUSE IN ITS ENTIRELY. REFER TO WALL SECTIONS AND EXTERIOR ELEVATIONS.

- A. ROOFING SUBCONTRACTOR TO COORDINATE LOCATION OF EXISTING H.V.A.C. UNITS AND ROOF TOP ACCESSORIES WITH STRUCTURAL DRAWINGS FOR PLACEMENT AND TAPERED RIGID BOARD INSULATION LAY-OUT AND SUBSEQUENT INSTALLATION IN ORDER TO AVOID PONDING WATER CONDITIONS ATTRIBUTABLE TO BOARD LAY-OUT ISSUES.
- B. ROOF SYSTEMS SPECIFIED SHALL BE APPLIED ONLY BY MANUFACTURER APPROVED APPLICATOR IN ORDER TO MEET GUARANTEE REQUIREMENTS.
- C. PONDING WATER IS DEFINED AS WATER THAT DOES NOT DRAIN OR DISSIPATE FROM THE ROOF WITHIN 48 HOURS AFTER PRECIPITATION.
- D. CONTRACTOR SHALL "SUGAR-IN" ALL ASPHALT. BLEED-OUT ON PILES WITH ADDITIONAL GRANULES TO MATCH EXISTING COLORATION OF THE MINERAL SURFACE CAP SHEET.
- E. ALL FLASHING CEMENTS, ASPHALTS, PRODUCTS AND ACCESSORIES SHALL BE APPROVED BY ROOFING MANUFACTURER WITH THE MANUFACTURER'S BRAND. ALL ASPHALTS SHALL BE AMERICAN MANUFACTURED PRODUCTS.
- F. THE ROOF STRUCTURE SHALL NOT BE USED FOR STOCKPILING OF EQUIPMENT
- G. THE ROOFING SYSTEM SHALL BE AS PER DRAWINGS AND PER MANUFACTURER'S SPECIFICATIONS.

H. COORDINATE ROOF ELEVATIONS WITH ELEVATION DRAWINGS.

OR MATERIALS.

- I. HVAC CONDENSATE LINES TO TERMINATE AT ROOF DRAIN OR AS REQUIRED.
- J. CONTRACTOR TO PROVIDE 15 YEAR WARRANTY FOR NEW ROOF AREA.



——PARAPET WALL COPING-ATTACHMENT TO CONTINUOUS CLEAT SECURELY ANCHORED INTO PLYWOOD PER MANUFACTURER'S DIRECTIONS SEALANT ———

STONE VENEER IN A BED OF MORTAR 0 0 0 OVER SCRATCH COAT ON GALVANIZED METAL LATH OVER (2) LAYERS OF WATER — ROOFING MEMBRANE RESISTIVE BARRIER OVER NEW 3/4" EXT. ON NEW 3/4" EXT./ GRD. SHEATHING AND GRD. SHEATHING → OVER TOP OF PARAPET

TYPICAL PARAPET DETAIL

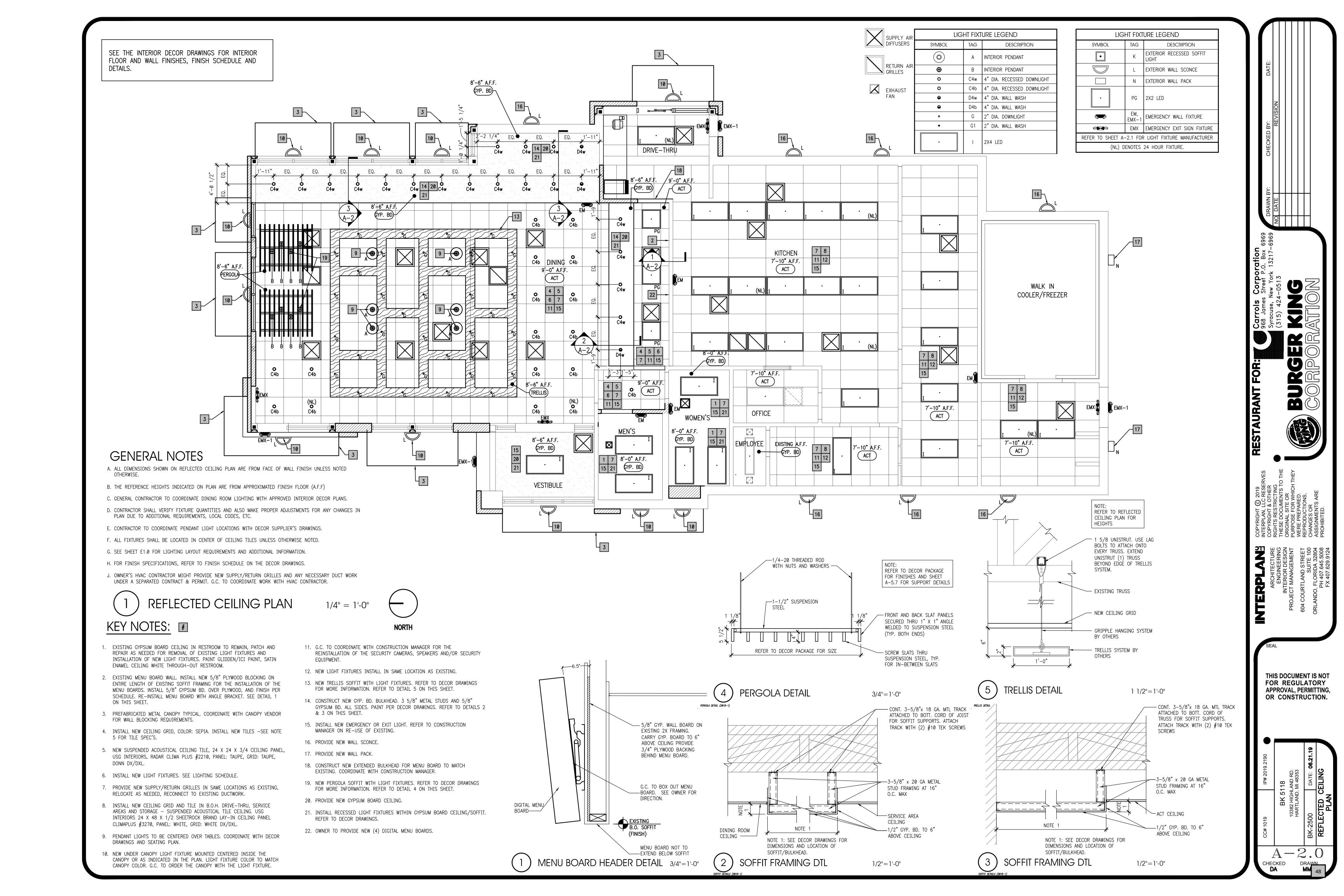
1-1/2"- 1'-0"

THIS DOCUMENT IS NOT

FOR REGULATORY

APPROVAL, PERMITTING,

OR CONSTRUCTION.



#### BURGER KING 20/20 GARDEN GRILL EXTERIOR EXTERIOR LIGHT FIXTURE SCHEDULE ALL REMODELS & NEW CONSTRUCTION

11/7/2017			ALL REWODELS			
TYPE		VENDOR	CATALOG No.	WATTAGE	COLOR TEMP.	REMARKS
		CREE				RECESSED SOFFIT LIGHT
K (NEW		SECURITY	851/852-60-U-WH	42	5000	
CONST.)	8	LSI	XSPS S LED SS CW 120 GWT DFL	43	5000	
		VAOPTO				
		CREE				1. FOR REMODELS ONLY
K	A	SECURITY	851/852-60-U-WH	42	5000	2. RECESSED SOFFIT LIGHT
(REMODELS)	0	LSI	XSPS S LED SS CW 120 GWT DFL	43	5000	
		VAOPTO				
		CREE	RS-30WLED-DO-SV-120-5300K	30	5300	1. OPTIONAL CLOSED CANOPY FIXTURE
		SECURITY	RWSC30LED-WD-PS-MT	30	5000	2. PROVIDED BY SIGN SUPPLIER WITH CANOPY
L (DOM/N)		LSI	WP35LF3X9U57KMSV	12	5700	
(DOWN ONLY)		KONTECH	KON-40-WS	40	5000	
J		VAOPTO	VO-WS-DW40D	40	5000	
		ENERGYWISE	EWKON-40-WS	40	5000	
		CREE	RS-42WLED-UD-SV-120-5300K	30	5300	1. EXTERIOR WALL FIXTURE
		SECURITY	RWSC30LED-UD-PS-MT	30	5000	2. OPEN CANOPY FIXTURE  3. PROVIDED BY SIGN SUPPLIER WITH CANOPY
L	wn)	LSI	WP36LF13X9U57KMSV	12 UP / 12 DOWN	5700	
(UP/DOWN)		KONTECH	KON-60-WS-DU	60	5000	
		VAOPTO	VO-WS-DW60UD	60	5000	
		ENERGYWISE	EWKON-60-WS-DU	60	5000	
	£ 1.5	KONTECH	KON-DVP-182-14-JY	40	5000	1. TO BE USED AT AWNINGS
M	25	VAOPTO	VO-RP-40DW277-4	40	5000	2. OPTIONAL CLOSED CANOPY FIXTURE  3. PROVIDED BY SIGN SUPPLIER WITH AWNING/CANOPY
		CREE	E.WP1X031Z7	27	4000	1. WALL MOUNTED SECURITY LIGHT
		SECURITY	WGH-1LU-M	41	5000	2. BRONZE FINISH
N		LSI	SFCMWBLEDPL150UEBRZ	33	5000	
		VAOPTO	VO-WP-DW-N50	50	5000	
		ENERGYWISE	EWALED-WPDS240	40	5000	
		CREE	LFL-A-(3,4,6,8)-DO-UL-BZ-53K-EA	3'-26 / 4'-35 6'-52 / 8'-70	5300	1. CONTINUOUS ARCHON TOWER LIGHTING
0	ALE S	SECURITY	HIRAF-HE-LED(96,72, 48,36)DO-120-DB	8.5 / FT.	5200	2. DOWNLIGHT ONLY
	1					3. TO BE PLACED AT TOP OF ARCHON TOWER
						4. TO BE BRONZE FINISH
		CREE	LFL-A-(3,4)-UO-UL-BZ-53K	3'-18 / 4'-23	5300	1. CONTINUOUS ARCHON TOWER LIGHTING
Р		SECURITY	HIRAF-HE-LED(48,36)UO-120-DB	50	5200	2. UPLIGHT ONLY
•						3. TO BE PLACED ABOVE ARCHON TOWER CANOPY
						4. TO BE BRONZE FINISH
		CREE	OSQ-A-DA AA-X-T-57K-UL-COLOR	166	5700	1. FINISH TO BE BLACK, BRONZE OR SILVER
		SECURITY	VP-L-80NB-180-5K-T4-UNV-RA-COLOR	180	5000	
POLE		LSI	XLCMFTLEDHOCWUE-COLOR	276	5104	
		VAOPTO	VO-SL-NW-A56	120	5000	
		ENERGYWISE	EWEC724M2	209	5000	

CONTACT INFORMATION							
<u>CREE</u>	HERMITAGE "MASTER CONSOLIDATOR"	<u>ENERGYWISE</u>	<u>KONTECHUSA</u>				
STEVE FRIEDMAN	WYATT CULVER	JENNIFER WADDICK	MIGUEL MARTINEZ				
847-830-1444	615-843-3379	877-225-1336	866-236-8701				
steve.friedman@cree.com	wyatt@hlg.co	jennifer@energywisemail.com					
SECURITY LIGHTING		<u>VaOpto</u>	DAVE VAN DER BEEK				
ERIC HILLESLAND		ERIC DE RAMOS	727-919-1816				
630-636-8493		702-517-5789	DAVIDV2009@ATT.NET				
quotations@securitylighting.com		eric@vaopto.com					
<u>LSI</u>			JIM MILES				
CURT GOOD			727-560-7985				
404-655-8440			JIM@FLORIDAELECTRONIC.NET				
curt.good@lsi-industries.com							

## **NOTES**

1. NOT ALL LIGHT FIXTURES TYPES SHOWN ON SCHEDULE MAY BE USED ON THIS PROJECT. REFER TO LIGHTING PLAN FOR PROJECT SPECIFIC TYPES AND QUANTITIES. 1. NOT ALL LIGHT FIXTURES TYPES SHOWN ON SCHEDULE MAY BE USED ON THIS PROJECT. REFER TO LIGHTING PLAN FOR PROJECT SPECIFIC TYPES AND QUANTITIES.

#### BURGER KING 20/20 GARDEN GRILL INTERIOR INTERIOR LIGHT FIXTURE SCHEDULE

			LOW PROFILE TF	ELLIS		
TYPE		VENDOR	CATALOG No.	WATTAGE	COLOR TEMP	REMARKS
	À	NAUTICAL	BK304 & SP30S-18-60D-927-03	10	2700	SHAKER PENDANT LAMP
Α	-		LED EDISON STYLE 10 WATT			
		NAUTICAL	BK305 & LED 8W EDISON INCANDESCENT	6	2700K	BRONZE CAGE PENDANT LIGHT
В			LED CLEAR ANTIQUE STYLE 6 WATT			
	$\overline{\Box}$					
		NAUTICAL	BK305 & LED 8W EDISON INCANDESCENT	6	2700K	BRONZE CAGE WALL SCONCE LIGHT
B1			LED CLEAR ANTIQUE STYLE 6 WATT			1
	5					
		JUNO	SP36671-WHTRM	15	3000	1. 4" DIAMETER, WHITE, RECESSED DOWN LIGHT
	1	CREE	CR4-575L-27K-12-E26	9.5	2700	2. TO BE USED WITH GWB CEILING
C4w		ENERGYWISE	EWMLEDDL4IN	11	2700	
		SECURITY	LB4A 6L 30K 9 WH / IBXQL	9	3000	
		JUNO	SP36671-BLTRM		3000	1. 4" DIAMETER, BLACK, RECESSED DOWN LIGHT
C4b				0.5	2700	TO BE USED WITH ACOUSTICAL CEILING TILES
		CREE	CR4-575L-27K-12-E26-MODBLK	9.5	2700	1. 4" DIAMETER, WHITE, RECESSED DOWN LIGHT
5.	0	JUNO	SP36671G2 / 39 WWH	12.5	3000	WALL WASHER
D4w	[c.=	SECURITY	LBE4A 6L 30K 9 WH / IBXQL	9	3000	2. TO BE USED WITH GWB CEILING
		JUNO	SP36671G2 / 39C BL RFD44875	12.5	3000	1. 4" DIAMETER, BLACK, RECESSED DOWN LIGHT WALL WASHER
D4b						2. TO BE USED WITH ACOUSTICAL CEILING TILES
		JUNO	R600L3KNBZ	10	2700	TRACK LIGHT
E	10					
	, j	JUNO	SP34378B-9-F1-SSN	10	3000	2" DIAMETER DOWN LIGHT, SATIN NICKEL FINISH
G		ZANIBONI	D2LUNA20930A3CSNP0BK0P	9	3000	
-						
		JUNO	SP34378A-930-F1-SN	10	3000	2" DIAMETER WALL WASHER, SATIN NICKEL FINISH
G1		ZANIBONI	D2LUN2O0930A3CSNP0BK0D	9	3000	,
91		ZANIBONI	DZLUNZOU9SUASCSNPUBKUD	9	3000	-
	= =	CDEE	CL E TEACAA DAD AON	42	4000	4. TO DE LIGED IN KITCHEN
		CREE	CL-E-TFA04A-24R-40N	42	4000	1. TO BE USED IN KITCHEN
_		SECURITY	LJT24-40-MLG-FSA-12-EU-C388	45	-	2. 2x4 RECESSED
I		LSI	SFP24 LED 50 UE DIM 40	50	4000	
	ار ا	VAOPTO	VO-PL-2NW4-60	60	4100	
		ENERGYWISE	EWMLFP24EP4841	48	4100	
		CREE	CL-E-TR14L2404U	42	3500	1. FOR REMODELS ONLY
		SECURITY	LJT14-35LWG-FSA12-EDU-C388	27	3500	2. TO BE USED IN RESTROOMS
J	f	LSI	SFP14 LED 40 UE DIM 35 FK14	40	3500	3. 1x4 RECESSED
		VAOPTO	VO-PL-1XWW4-50	50	3000	
	الناجب:	ENERGYWISE	EWMLFP14EP3535	35	3500	1
		CREE	CL-E-TFA03A-22R-40N	32	3500	1. TO BE USED IN PLAYGROUND
		SECURITY	LJT22-35MLG-FSA12 EU	35	3500	2. 2x2 RECESSED
PG		LSI	SFP22 LED 30 UE DIM 35 FK22	30	3500	1
		VAOPTO	VO-PL-2XWW2-36	36	3000	1
		ENERGYWISE	EWMLFP22EP3535	36	3500	1
		CREE	EM22RWH	11		EMERGENCY LIGHT
		SECURITY	CU2	1	3000	1
EM		LSI	LTEMWH	(2) 1 LED		1
-		VAOPTO	VO-EM	2	5000	1
	·····i	ENERGYWISE	EWCU2	1	3000	1
		CREE	EXDMBRWH	11	1 222	EXIT / EMERGENCY LIGHT
		SECURITY	CCRRC	4	1	1
EMX	FYIT	LSI	LPRXRUWBWHLD11R	(2) 1 LED	1	1
		VAOPTO	VO-EMX-R1	2	5000	1
EMX-1 REMOTE HEAD)		ENERGYWISE	EWCCR	4	3000	1
		CREE		55	5300	TO BE USED IN WALK IN BOX ONLY
	Z - C (- 2)		WS4-50L-57K-10V-FD  LXEM4-50ML-RFA-EU	53	5000	- SE SEE IN WALKING BOX GIVE!
		SECURITY		53	5300	1
1A/ID		LSI	EG34SLEDHOCWUE	J 52	3300	1
WIB		VAOPTO	VO-TF-14W	32	5000	1

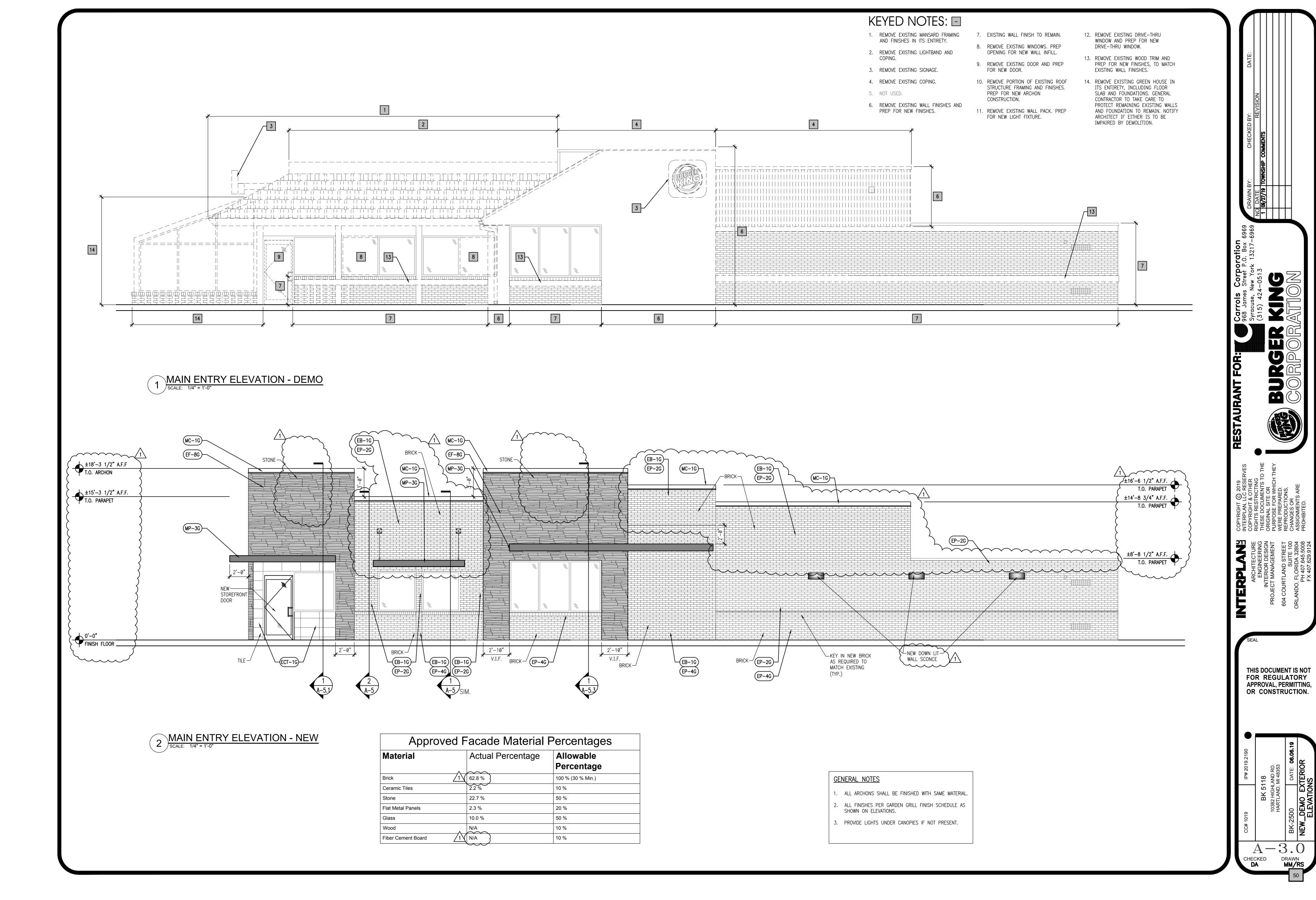
CONTACT INFORMATION								
CREE	HERMITAGE "MASTER CONSOLIDATOR"	ENERGYWISE	JUNO / ACUITY BRANDS					
STEVE FRIEDMAN	WYATT CULVER	JENNIFER WADDICK	BRETT D KINZLER					
847-830-1444	615-843-3379	877-225-1336	o 847-813-8350 m 847-312-1578					
steve.friedman@cree.com	wyatt@hlg.co	jennifer@energywisemail.com	brett.kinzler@acuitybrands.com					
SECURITY LIGHTING	NAUTICAL FURNISHINGS	<u>VaOpto</u>	ZANIBONI LIGHTING					
ERIC HILLESLAND	MICHAEL HOGLUND	ERIC DE RAMOS	JENNIFER MORRIS					
630-636-8493	954-771-1100	702-517-5789	727-213-0410					
quotations@securitylighting.com	mhoglund@nauticalfurnishings.com	eric@vaopto.com	southeastusa@zanibonilighting.com					
<u>LSI</u>								
CURT GOOD								
404-655-8440								
curt.good@lsi-industries.com								

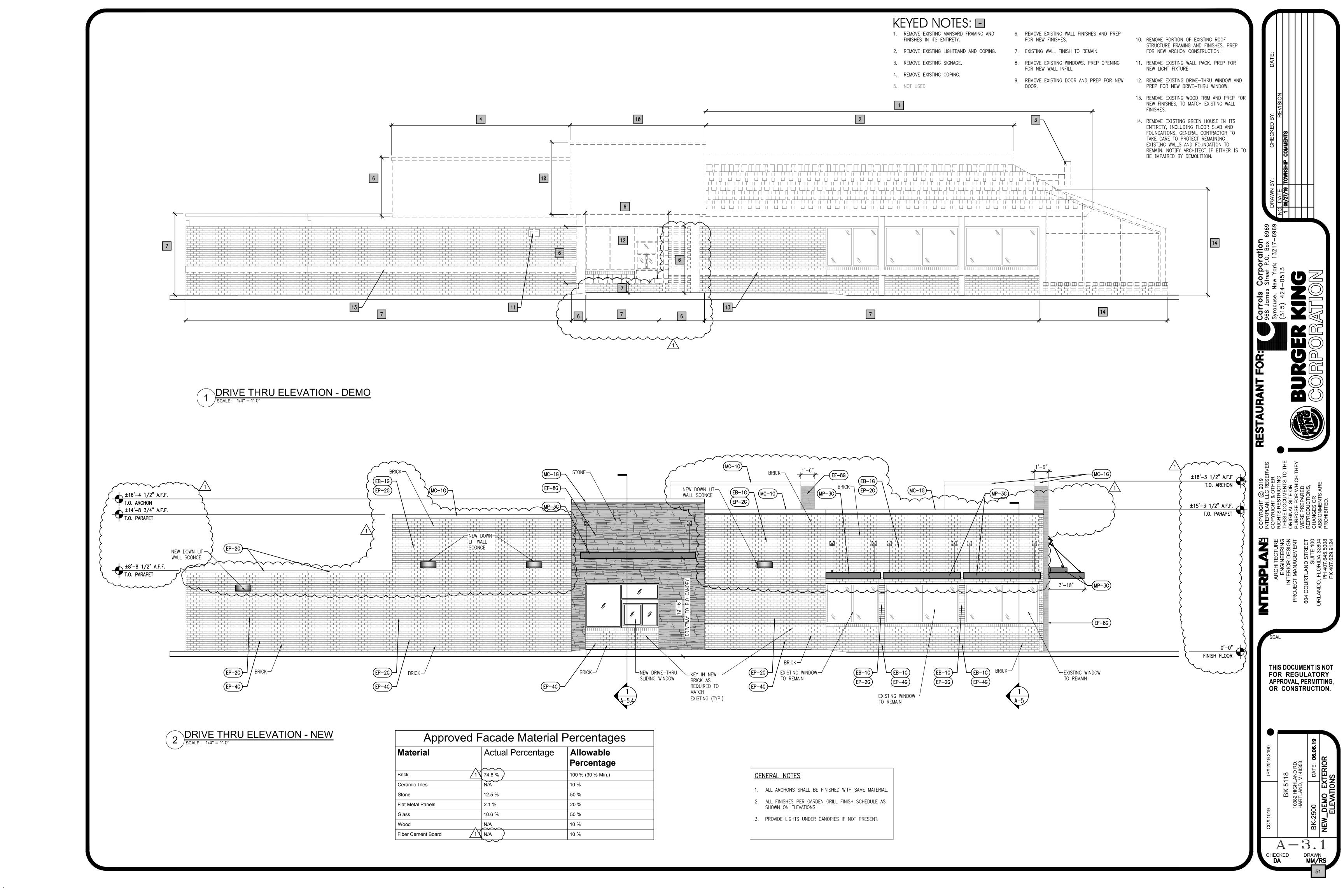
- 1. NOT ALL LIGHT FIXTURES TYPES SHOWN ON SCHEDULE MAY BE USED ON THIS PROJECT. REFER TO LIGHTING PLAN FOR PROJECT SPECIFIC TYPES AND QUANTITIES.
- 2. PENDANT FIXTURES "A" MUST BE CENTERED OVER TABLE TOPS. COORDINATE WITH DÉCOR DRAWINGS.
- 3. EXCEPT FOR DROPPED CEILING OPTION, ALL LIGHT FIXTURES IN DINING ROOM AREA & RESTROOM CORRIDOR ARE TO BE SUPPORTED FROM EXPOSED ROOF TRUSSES.
- 4. CONTRACTOR TO NOTIFY LIGHTING SUPPLIER OF THE FOLLOWING: FIXTURE TYPES "C" AND "D" WILL BE REQUIRED TO BE LENS AT THE LOCATIONS OVER THE SERVICE

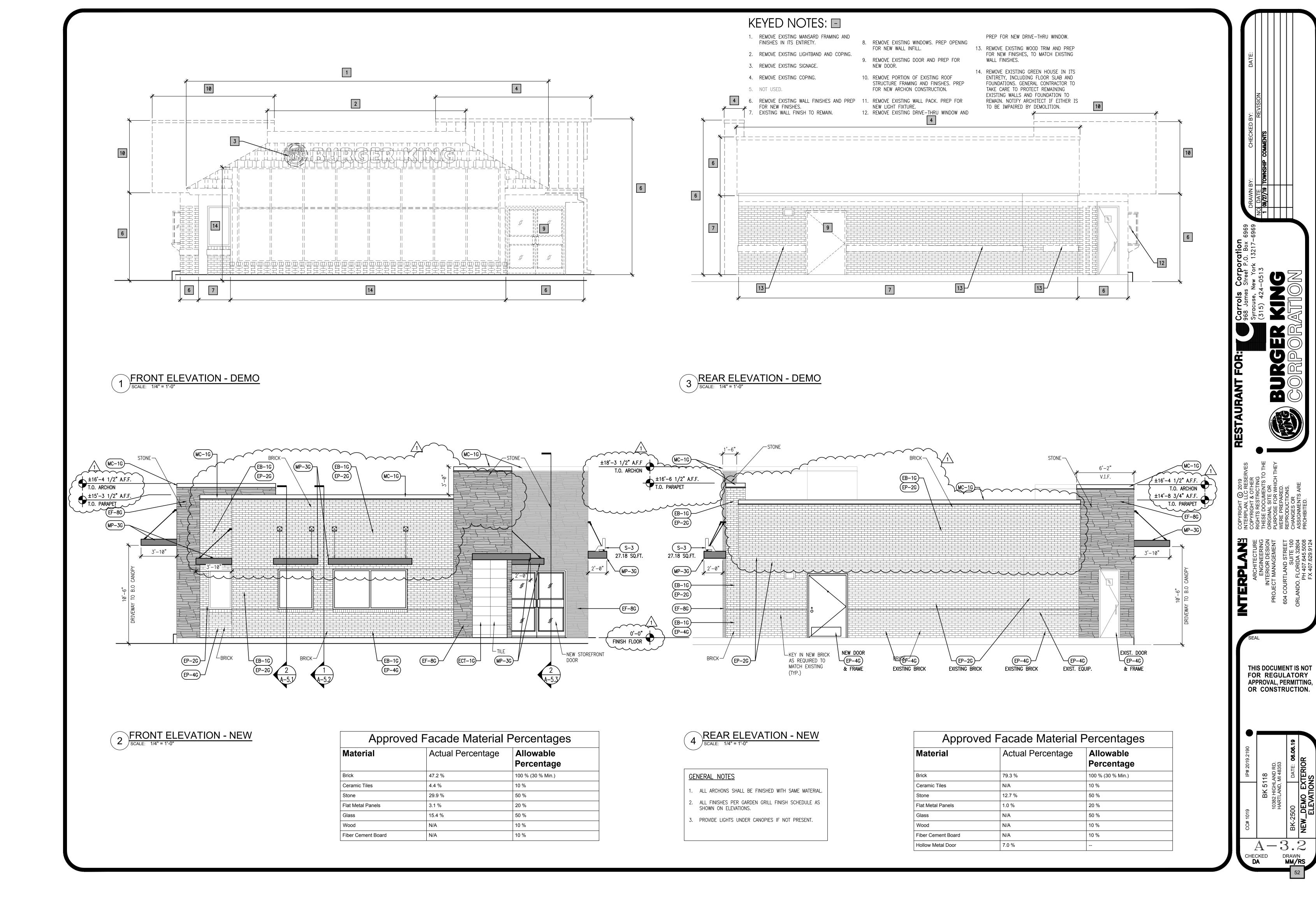
AREA AND OVER THE SELF-SERVE DRINK AREA. FIXTURE TYPE "I" WILL REQUIRE A LENS OR TUBE GUARD AT THOSE LOCATIONS.

		PROJEC 604 COL	ORLANDO
FO AP	IS DOC R RE PROVA	GUL L, PE	NT IS N ATOR RMITTI UCTIO

<u> </u>	BK 5118	118
	10382 HIGHLAND RD. HARTLAND, MI 48353	.AND RD. MI 48353
	BK-2500	DATE: <b>06.21.19</b>
1	TICHLING SCHEDNIE	EDULE



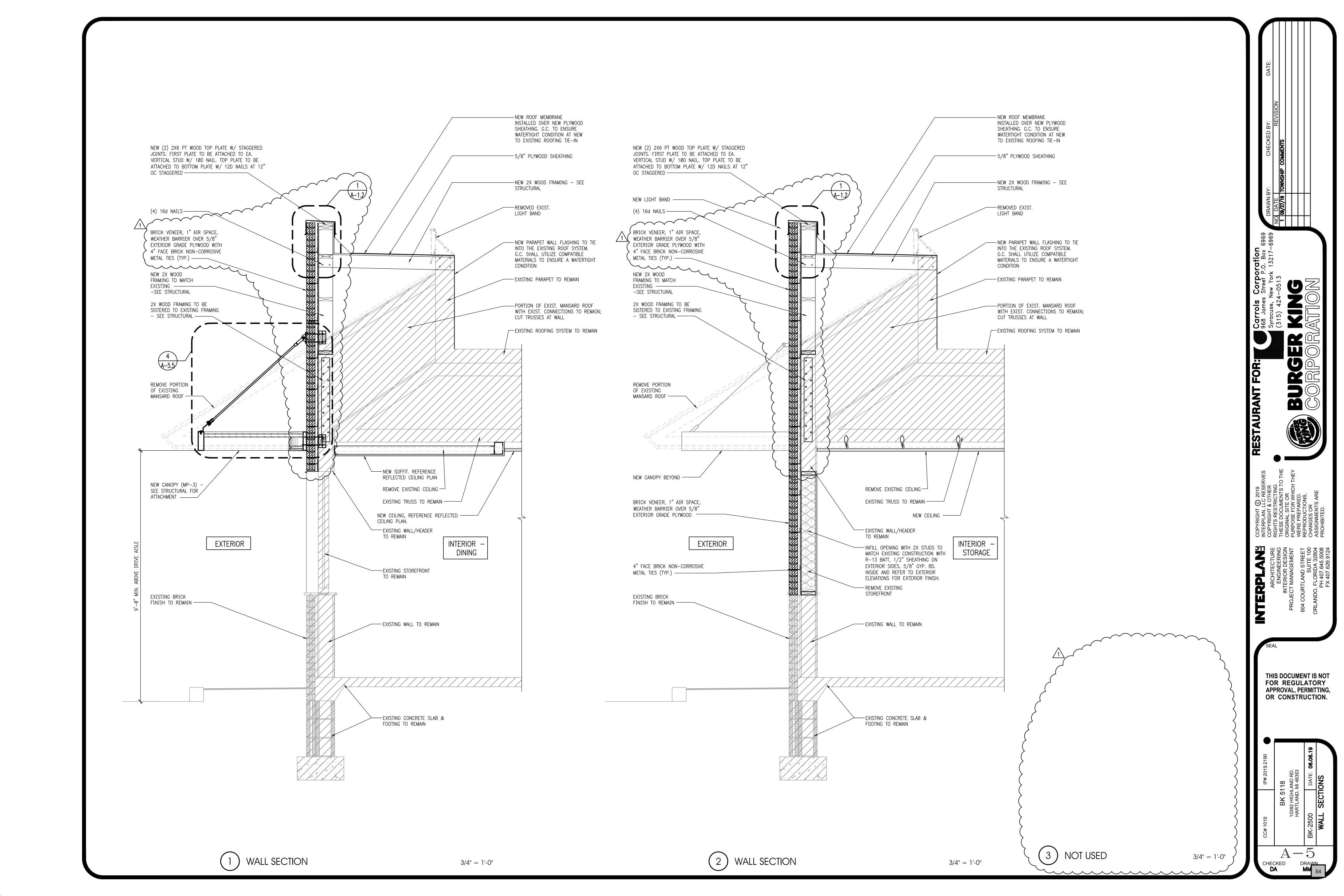


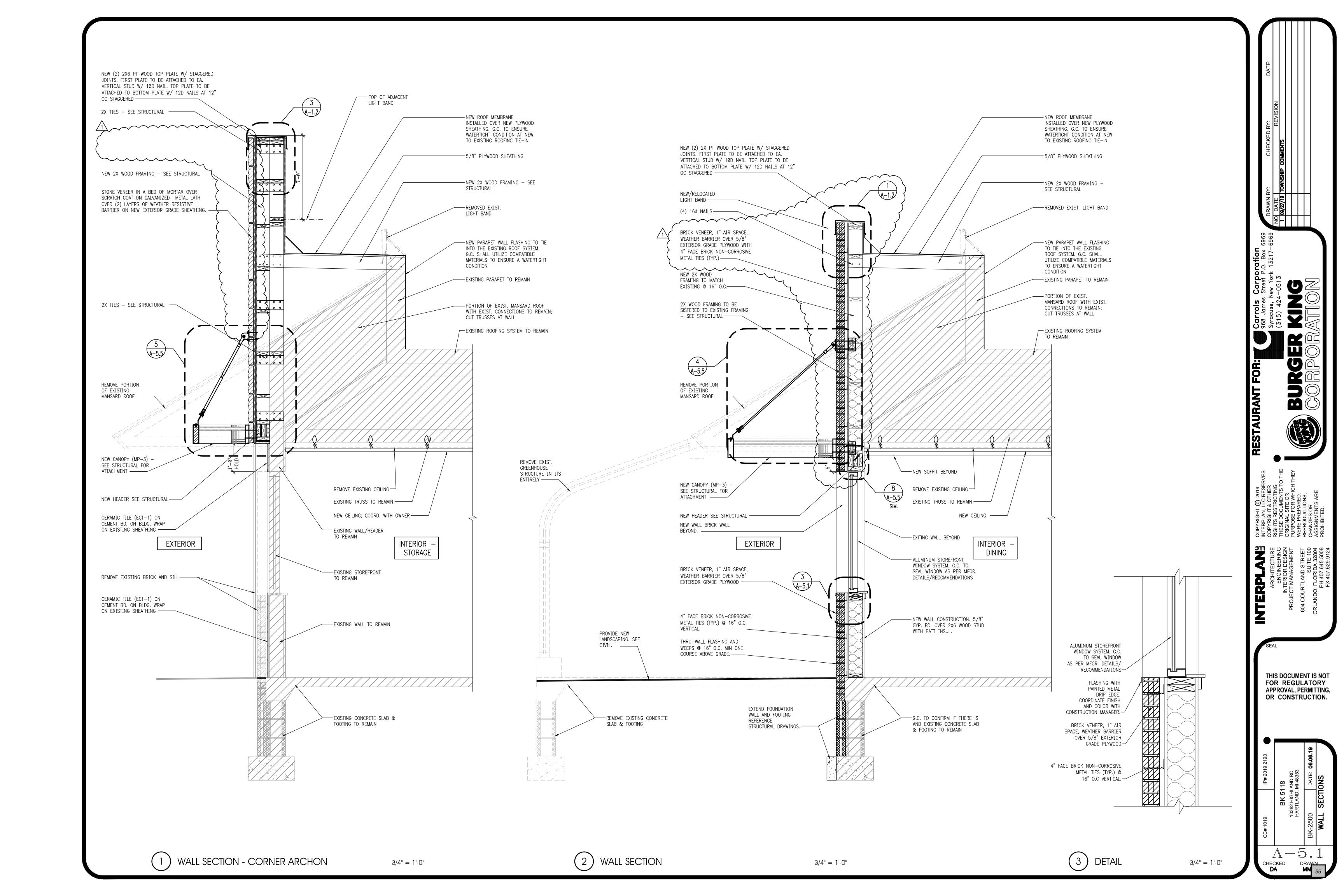


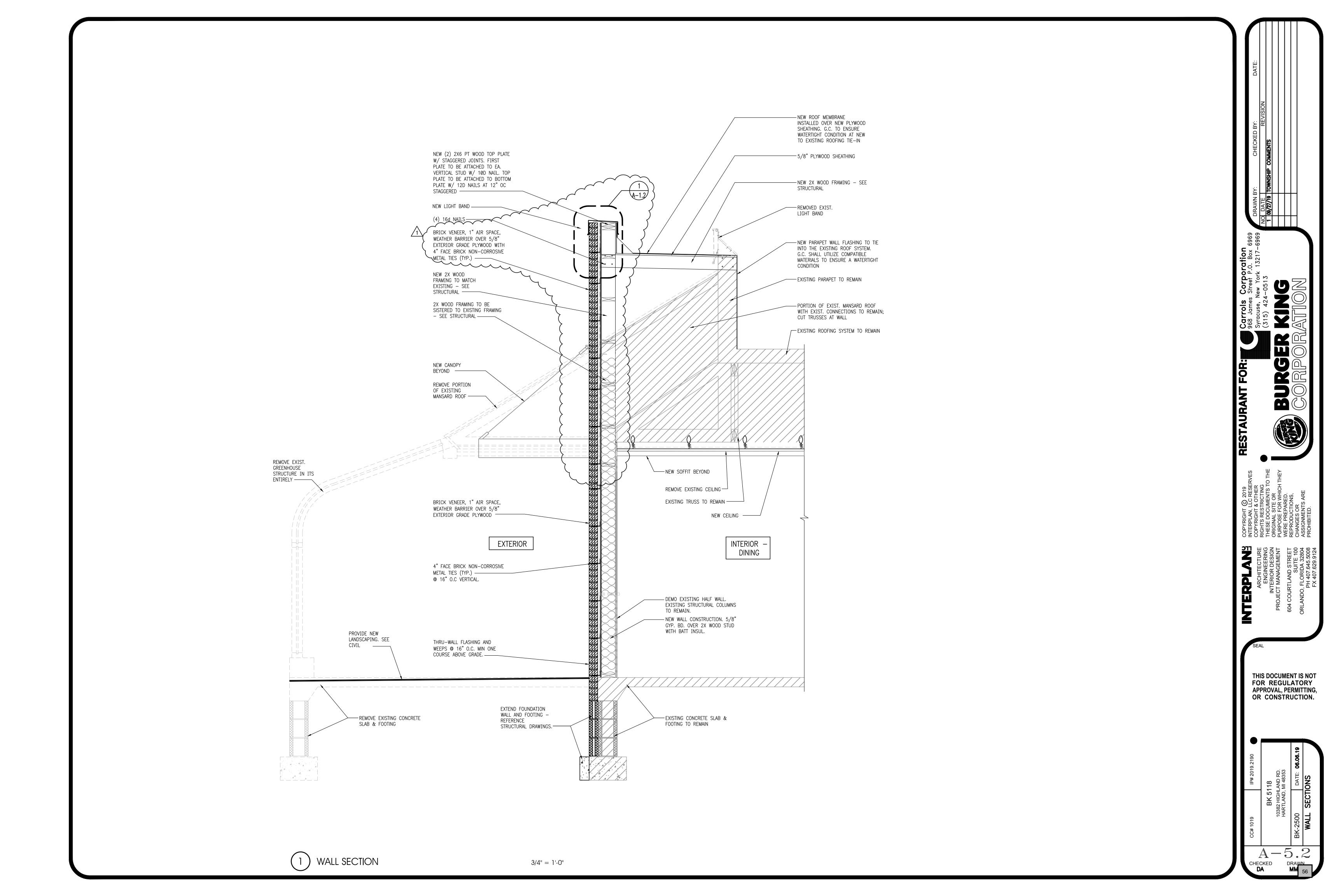
				BURGER KING - 20/20 GARD EXTERIOR MATERIALS & FINISH SCHEDULE (1				
11/ 16/ 17 CODE	MATERIAL	LOCATION	MANUFACTURER		DESCRIPTION		ADDITIONAL INFORMATION	
CODE	MATERIAL	LOCATION	MANUFACTURER	PRODUCT	COLOR	DIMENSION	CONTACT: GABE POWERS (502) 558-4612	
			EVOLUTION BRICK	MOD / QS TUMBLED (FULL BRICK)  (THIN BRICK)	OLDE HILLSBORO SIERRA TUMBLED		NOTE: USE WITH EGR-3G	
EB-1G	EXTERIOR BRICK	GENERAL	PINE HALL BRICK	FACE BRICK	OLD IRVINGTON O/S		CONTACT: THERESA BEANE (800) 334-8689 - tbeane@pinehallbrick.com NOTE: USE WITH EGR-3G	
			H.C. MUDDOX BRICK	THIN BRICK	BK WEST COAST BLEND		CONTACT: ED PEREZ (916) 917-7196 NOTE: USE WITH EGR-3G	
EB-1AG (ALTERNATE FOR EB-1G)	EXTERIOR FINISH FIBER CEMENT BRICK PANELS	GENERAL	NICHIHA FIBER CEMENT	NICHIHA CANYON BRICK PANELS	"SHALE BROWN" - STAGGERED JOINTS - UNPAINTED IF NO OTHER BRICK IS PRESENT. (ON REMODELS, IF THERE IS ANY EXISTING BRICK ON THE BUILDING, THE EXISTING BRICK AND THE NICHIHA	18" X 6'	CONTACT NICHIHA CUSTOMER SERVICE (770) 805-9466 BK@NICHIHA.COM INSTALL PER MANUFACTURER'S SPECIFICATIONS VERTICAL APPLICATIONS ONLY (NOT FOR USE ON SOFFITS)	
ECT-1G	EXTERIOR CERAMIC TILE	ACCENT AT BUILDING FRONT	GRANITI GIANDRE / EUROWEST	SENSIBLE STONE ED5052	BRICK MUST BE PAINTED TO MATCH EP-4G)  "RED NATURAL"  STACKED BOND PATTERN	CONTACT: JOY DETER AT EUROWEST (714) OR JOY KLEIN (813) 334-3302 jklein@transamerica.com NOTE: USE WITH EGR-4G		
ECT-18G	EXTERIOR CERAMIC TILE	INLINE RESTAURANTS ONLY	GRANITI GIANDRE / EUROWEST	ROVERE ANTICO LEGNI HIGH TECH	PAR 15334 "ROVERE" STACKED BOND PATTERN	6" X 36"	CONTACT: JOY DETER AT EUROWEST (714) 309-9551 OR JOY KLEIN (813) 334-3302 jklein@transamerica.com NOTE: USE WITH EGR-9G	
FF 16	EXTERIOR FINISH - STUCCO, STO, FIBER	CENEDAL	STO OR APPROVED EQUAL	STO POWERWALL STUCCO SYSTEM TEXTURE: FINE SAND OR STO THERM CI EIFS SYSTEM	COLOR TO MATCH EP-2G PPG "TANNERS TAUPE"		CONTACT: TIM SALERNO AT STO CORP (407) 466-5371	
EF-1G	CEMENT SIDING PANELS	GENERAL	NICHIHA FIBER CEMENT	NICHIHA TUFFBLOCK	PREPAINTED TO MATCH EP-2G - PPG "TANNERS TAUPE" STACKED BOND PATTERN	18" X 6'	CONTACT NICHIHA CUSTOMER SERVICE (770) 805-9466 BK@NICHIHA.COM INSTALL PER MANUFACTURER'S SPECIFICATIONS VERTICAL APPLICATIONS ONLY (NOT FOR USE ON SOFFITS)	
EF-4G	EXTERIOR FINISH STUCCO	GENERAL	STO OR APPROVED EQUAL	STO POWERWALL STUCCO SYSTEM	STUCCO SYSTEM COLOR TO MATCH EP-4G PPG "MONTEREY CLIFFS" CONTACT: TIM SA		CONTACT: TIM SALERNO AT STO CORP (407) 466-5371	
EF-8G (ALTERNATE FOR EF-9G)	EXTERIOR FINISH STONE	EXTERIOR SIGN ARCHONS	BORAL STONE PRODUCTS	COUNTRY LEDGESTONE	"ASPEN"		CONTACT:800-255-1727 Diane.Clark@boral.com culturedstone@boral.com CONTACT NICHIHA CUSTOMER SERVICE (770) 805-9466	
EF-9G	EXTERIOR FINISH FIBER CEMENT						BK@NICHIHA.COM INSTALL PER MANUFACTURER'S SPECIFICATIONS. VERTICAL	
TR-1G	ALUMINUM TRIMS	EXTERIOR SIGN ARCHONS	NICHIHA FIBER CEMENT	VINTAGE WOOD EF762	"CEDAR"	18" X 10'	SEAMS SHALL BE MINIMIZED. ALL SPANS OF 10' OR MORE SHALL HAVE VERTICAL SEAMS ALIGNED IN THE CENTER OF THE ARCHON. SEAMS TO BE CAULKED WITH EC-1G OR USE "H-MOLD" FACTORY TRIMS. ALL TRIMS SHALL BE FACTORY PAINTED TO MATCH PANELS.  VERTICAL APPLICATIONS ONLY (NOT FOR USE ON SOFFITS)	
EC-1G	EXTERIOR CAULK		ADSEAL PRODUCTS	ADSEAL 458-63	"VINTAGE WOOD CEDAR"		CONTACT: MATT KLINGE AT ADFAST (314) 753-0964 matt.klinge@adfastcorp.com  NOTE: USE WITH EF-9G	
EP-2G	EXTERIOR PAINT	EXTERIOR GENERAL		PRIMER: 17-921 PAINT: 6-2045XI	"TANNERS TAUPE"  Custom Formula		CONTACT: KEVIN LASTACY @ PPG Corporate National Accounts Manager (616) 335-3259	
EP-4G	EXTERIOR PAINT	EXTERIOR WAINSCOT	-	PRIMER: 17-921 PAINT: 6-2045XI	"MONTERREY CLIFFS"  10YY 14/080		klastacy@ppg.com	
EP-6G	EXTERIOR PAINT	LOGO SIGN CABINETS & BURGER KING CHANNEL LETTER CABINETS		PRIMER: 6-212 PAINT: 6-230	"BURGER KING SILVER" Custom Formula		NOTE: FOR REMODELS ONLY NOT FOR USE ON ROOFS. SEE EP-6AG & EP-6BG	
EP-6AG	EXTERIOR PAINT	EXISTING MANSARD ROOFS, SHINGLES & BARREL TILE	PPG	PRIMER: 17-921 PAINT: 90-1110	"GRIMMY'S GREY" 00NN 20/000		NOTE: BY EXCEPTION FOR REMODELS ONLY	
EP-6BG	EXTERIOR PAINT	EXISTING STANDING SEAM  METAL ROOF		PRIMER: 90-712 PAINT: 90-1110	"MARCH WIND" Custom Formula		NOTE: BY EXCEPTION FOR REMODELS ONLY	
EP-8BG	EXTERIOR PAINT	METAL COPING AT ARCHON TOWERS		PRIMER: 17-921 PAINT: 6-2045XI	"CEDAR" Custom Formula			
EXT-1G	EXTERIOR PAINT	POLES & POLE SIGN		PRIMER: 90-712 PAINT: 90-353	"BLACK"			
EXT-2G	EXTERIOR PAINT	SIGNS		PRIMER: 90-712 PAINT: 90-375	Tint to match PPG 1006-6 "DECONSTRUCTION"			
EP-2G	EXTERIOR PAINT	EXTERIOR GENERAL		PRIMER: Loxon Concrete & Masonry A24W300 PAINT: Superpaint Ext Satin A89 Series Satin	"TAUPE TONE" SW 7633		Contact: GLENN REMLER, ARCHITECTURAL ACCOUNT EXECUTIVE phone: (954) 547-1217 email: Glenn.J.Remler@Sherwin.com	
EP-4G	EXTERIOR PAINT	EXTERIOR WAINSCOT		PRIMER: Loxon Concrete & Masonry A24W300 PAINT: Superpaint Ext Satin A89 Series	"HOMESTEAD BROWN" SW 7515			
EP-6G	EXTERIOR PAINT	LOGO SIGN CABINETS & BURGER KING CHANNEL	-	Satin PRIMER: Kem Bond HS B50A28 PAINT:	FACTORY FINISH SILVER		NOTE: FOR REMODELS ONLY  NOT FOR USE ON ROOFS.	
		LETTER CABINETS	-	Silver Brite B59S11 PRIMER:	"WESTCHESTER GRAY"		NOTE: BY EXCEPTION FOR REMODELS ONLY	
EP-6AG	EXTERIOR PAINT	EXISTING MANSARD ROOFS, SHINGLES & BARREL TILE		Pro Industrial Pro-Cryl Primer B66-310 <b>PAINT:</b> Pro Industrial High Performance Acrylic B66-660  Eggshell	SW 2849			
EP-6BG	EXTERIOR PAINT	EXISTING STANDING SEAM METAL ROOF	SHERWIN-WILLIAMS	PRIMER: Pro Industrial Pro-Cryl Primer B66-310 PAINT: Pro Industrial High Performance Acrylic B66-660	"MARCH WIND" Custom Formula		NOTE: BY EXCEPTION FOR REMODELS ONLY	
EP-8G	EXTERIOR PAINT	METAL COPING AT ARCHON TOWERS	-	Eggshell  PRIMER:  Pro Industrial Pro-Cryl Primer B66-310  PAINT:  Pro Industrial High Performance Acrylic B66-650	"CEDAR" Custom Formula			
EXT-1G	EXTERIOR PAINT	POLES & POLE SIGN		Semi-Gloss PRIMER: Pro Industrial Pro-Cryl Primer B66-310 PAINT:	FACTORY FINISH BLACK			
EXT-2G	EXTERIOR PAINT	SIGNS		Pro Industrial High Performance Acrylic B66-600  Gloss  PRIMER:  Pro Industrial Pro-Cryl Primer B66-310  PAINT:	FACTORY FINISH TO MATCH SW 6075 "GARRET GRAY"			
EGR-3G	GROUT	BRICK	MAPEI	Pro Industrial High Performance Acrylic B66-600 Gloss	#5 "CHAMOIS"		NOTE: USE WITH EB-1G	
EGR-4G	GROUT	CERAMIC TILE	CUSTOM BUILDING PRODUCTS	POLYBLEND SANDED	#335 "WINTER GRAY"		NOTE: USE WITH ECT-1G  *** FOR SETTING MATERIALS USE COMPLETE CONTACT RAPID SET  *** SEAL GROUT WITH AQUAMIX SEALERS CHOICE GOLD	
EGR-9G	GROUT	INLINE RESTAURANTS ONLY CERAMIC TILE	LATICRETE	POLYBLEND SANDED	#66 "CHESTNUT BROWN"		NOTE: USE WITH ECT-18G  *** CONTRACTOR TO ALLOW 1/16" MAX FOR GROUT JOINT  *** FOR SETTING MATERIALS USE COMPLETE CONTACT RAPID SET	
		TOP OF LIGHT BAND					*** SEAL GROUT WITH AQUAMIX SEALERS CHOICE GOLD Contact: Kirby Davis at Laticrete (203) 671-7210  CONTACT: W.P. HICKMAN COMPANY (828)676-1700 - WWW.WPH.COM	
MC-1G	METAL CORING	WALL CAP	 	PERMA SNAP PLUS	A-30 "SILVERSMITH"  FACTORY FINISH TO MATCH EP-2G			
MC-2G	METAL COPING	BELOW LIGHT BAND	W.P. HICKMAN SYSTEMS, INC.	PERMA SNAP PLUS	PPG "TANNERS TAUPE"  TO BE PAINTED TO MATCH EP-8G			
MC-3G	METAL COPING	TOP OF ARCHON	LEKTRON	PERMA SNAP PLUS	PPG "CEDAR"		PRODUCT INFORMATION: KEVIN RUBOTTOM AT LEKTRON (800) 634-4059 OR (918) 622-4978	
MP-1G		PARAPET LIGHT BAND	*SEE APPROVED  *SEE APPROVED	LED LIGHT BAND		*SEE PLANS	Email: KRubottom@lektroninc.com	
MP-3G	METAL CANOPY	ABOVE DOORS AND WINDOWS	*SEE APPROVED CANOPY SUPPLIERS	CUSTOM METAL CANOPY  STANDING SEAM METAL ROOF	COLOR: CLEAR ANODIZED	*SEE PLANS	CONTACT: YUSUKE KOREEDA (615) 945-9991	
MP-4G	METAL AWNING / SSM ROOFING	ABOVE WINDOWS / MANSARD ROOFING		UC-4 PROFILE	SILVER METALLIC SR	*SEE PLANS	Email: koreedayusuke@firestonebp.com	
	KOOLING	KOOFING	BERRIDGE ROOFING METAL PRODUCTS	STANDING SEAM METAL ROOF CEE-LOCK	PREMIUM METALLIC - ZINC COTE	*SEE PLANS	CONTACT: (210) 650-7047	

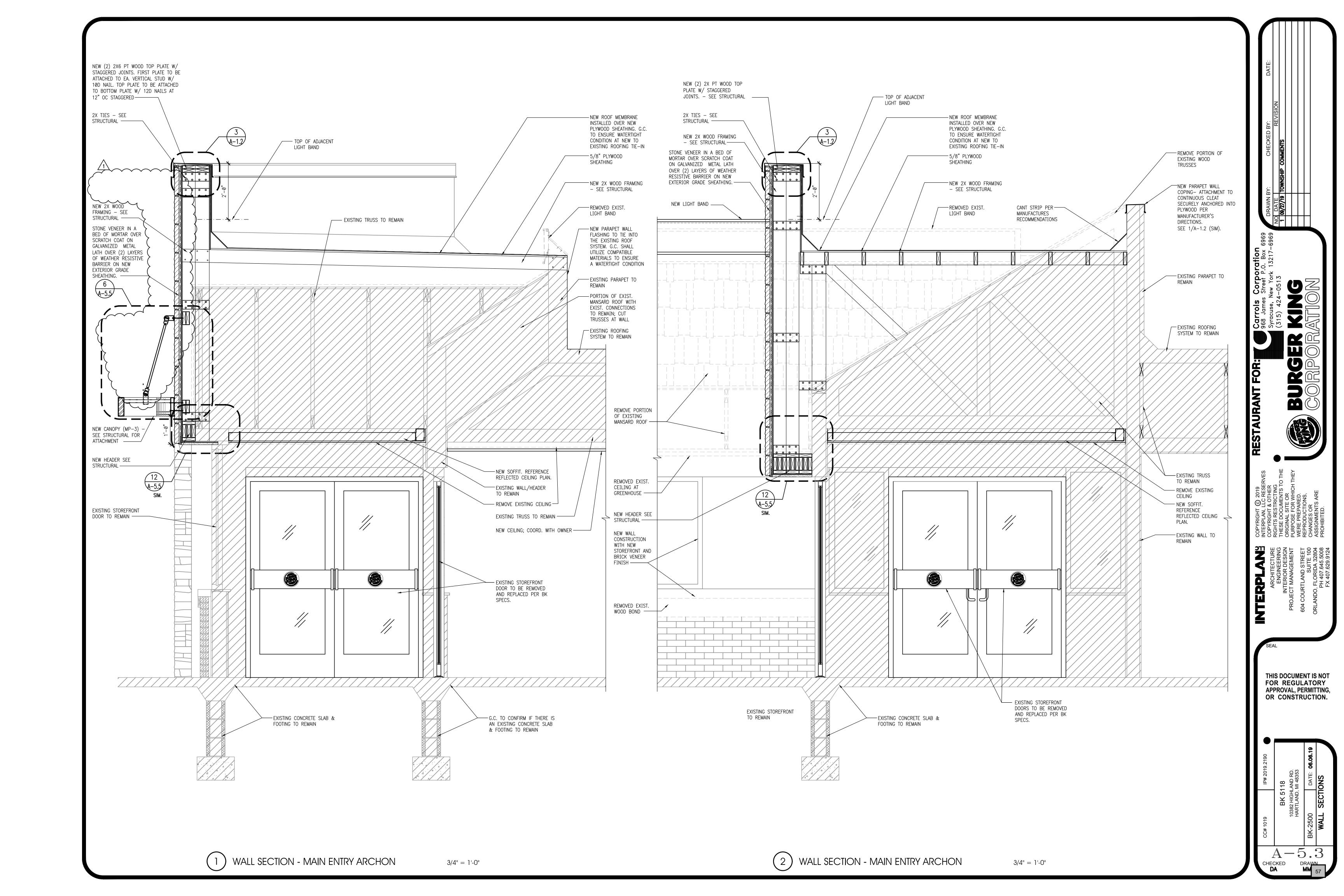
INTERPLANS

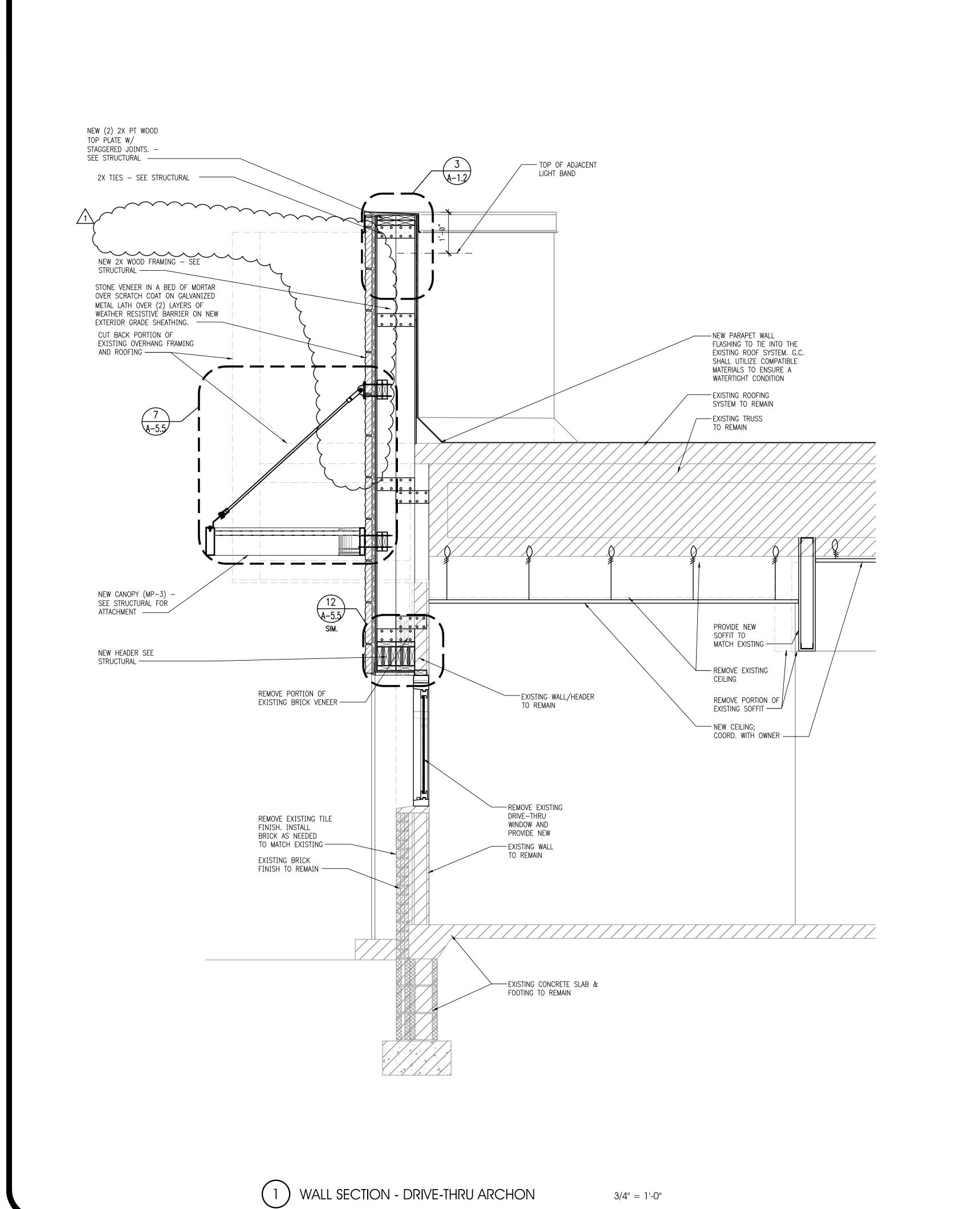
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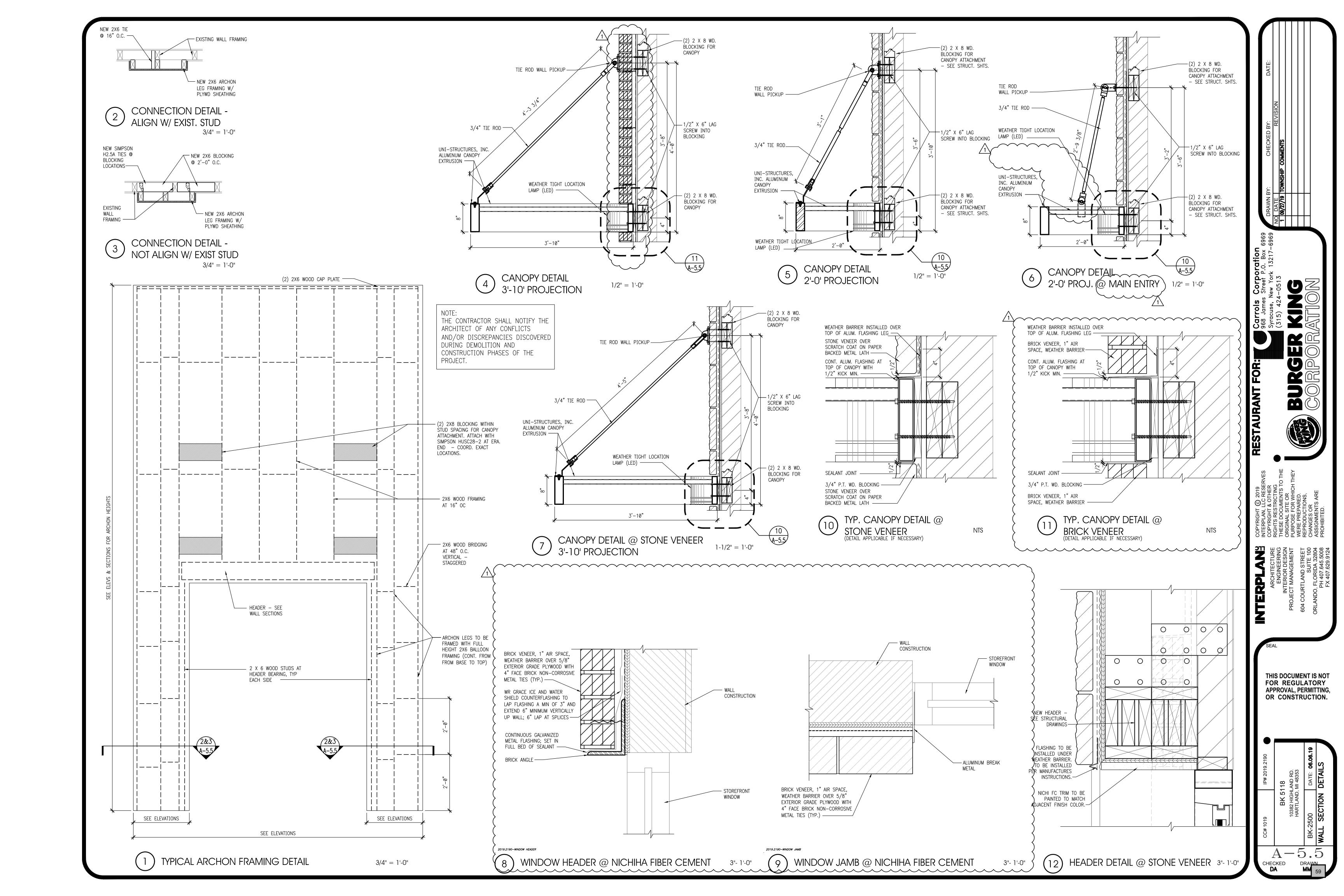


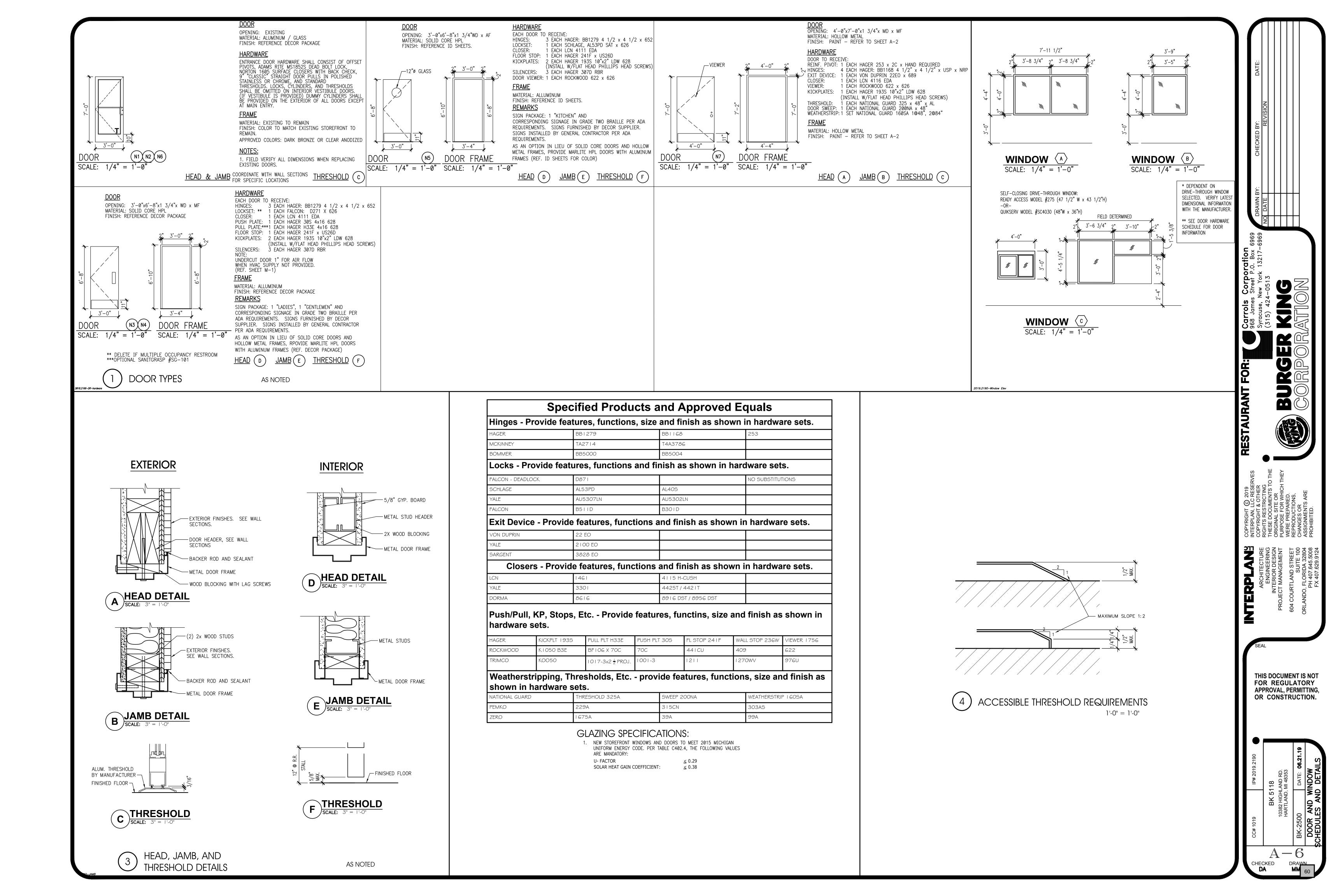


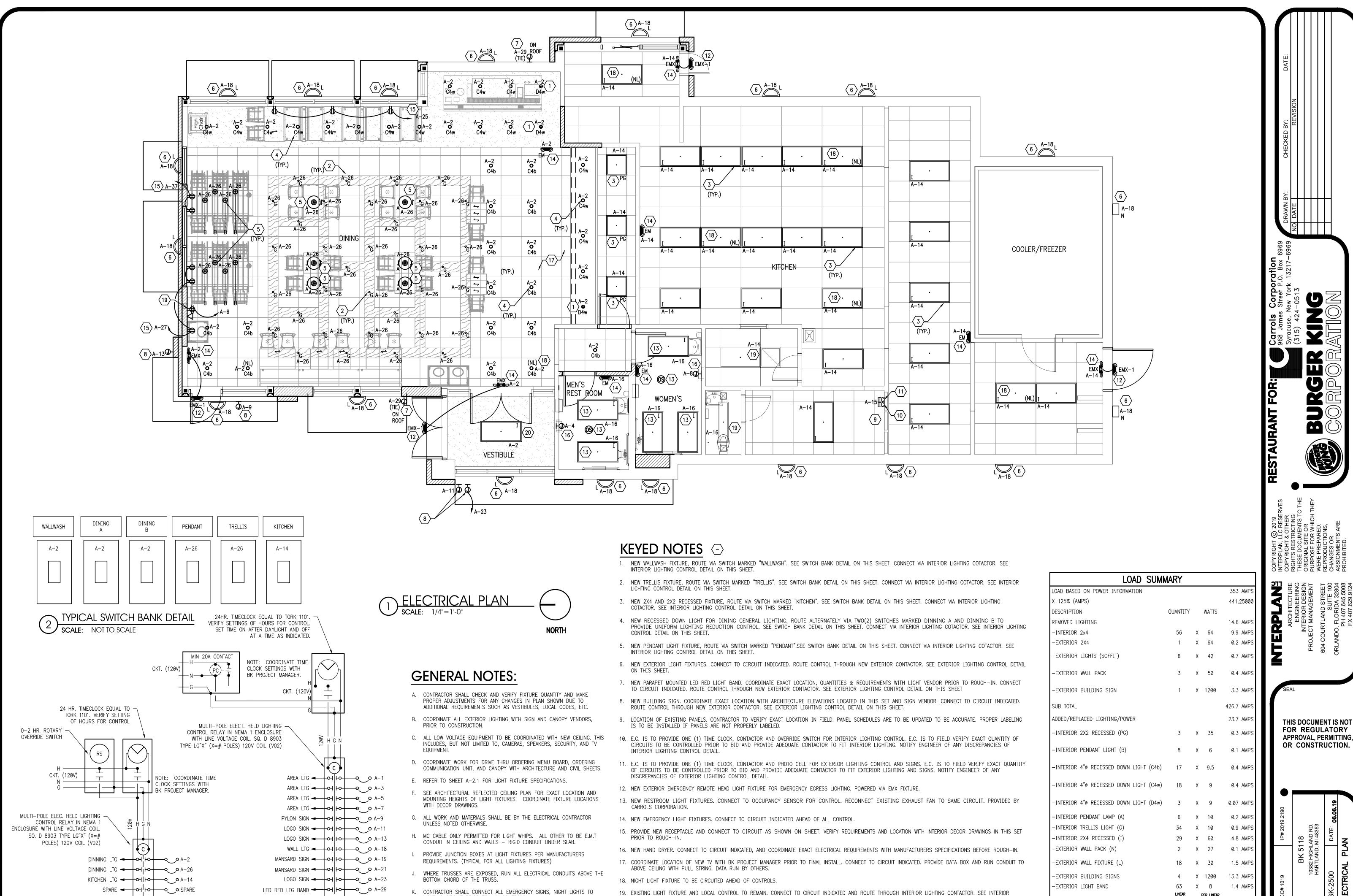


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3/4" = 1'-0"







LIGHTING CONTROL DETAIL ON THIS SHEET.

CONTROL DETAIL ON THIS SHEET.

20. NEW 2X4 RECESSED FIXTURE FOR DINING GENERAL LIGHTING. ROUTE ALTERNATELY VIA TWO(2) SWITCHES MARKED DINNING A AND DINNING B TO

PROVIDE UNIFORM LIGHTING REDUCTION CONTROL. SEE SWITCH BANK DETAIL ON THIS SHEET. CONNECT VIA INTERIOR LIGHTING COTACTOR. SEE INTERIOR LIGHTING

LIGHTING CIRCUIT PRIOR TO ANY CONTROLS.

ABBREVIATIONS:

ETR - EXISTING TO REMAIN.

EC - ELECTRICAL CONTRACTOR

NL - NIGHT LIGHT.

EXTERIOR LIGHTING CONTROL

**SCALE**: NOT TO SCALE

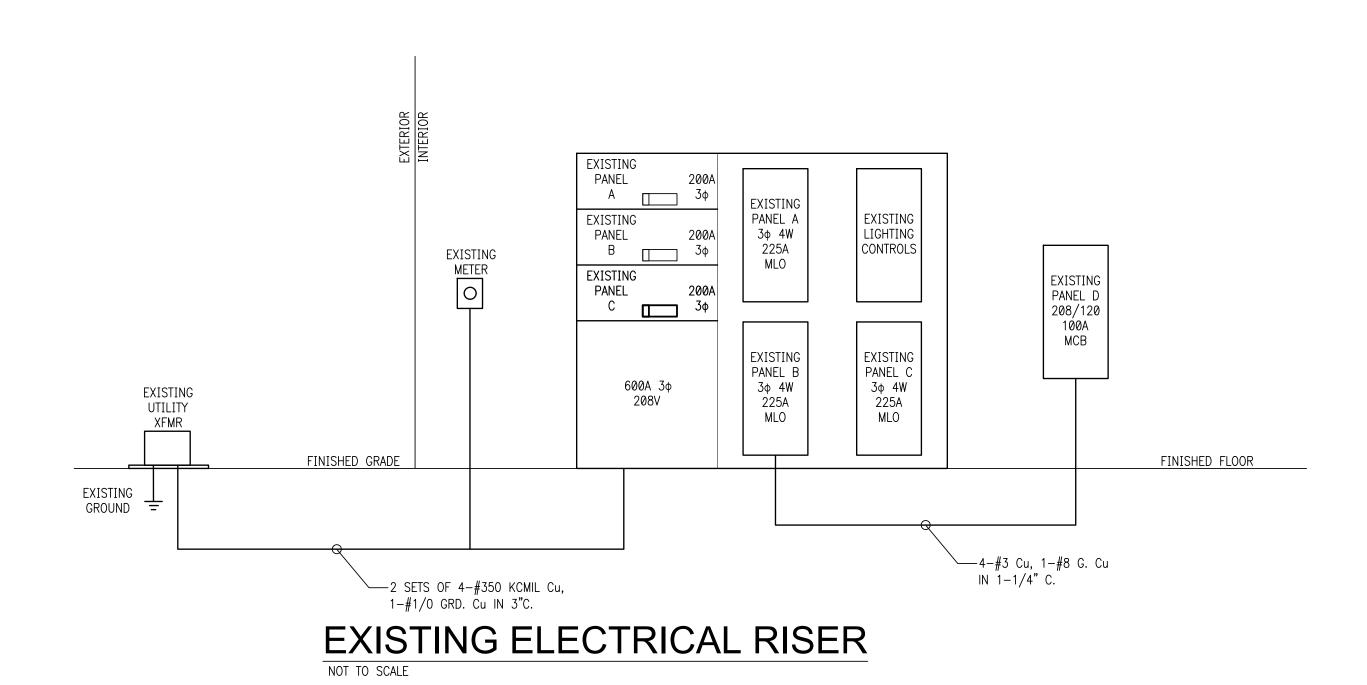
, INTERIOR LIGHTING CONTROL

SCALE: NOT TO SCALE

NEW TOTAL CONNECTED LOAD 450.4 AMF

EXISTING SERVICE SIZE IS 600 AMPS BASED ON EXISTING MDP

EX X

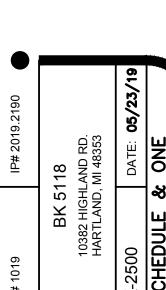


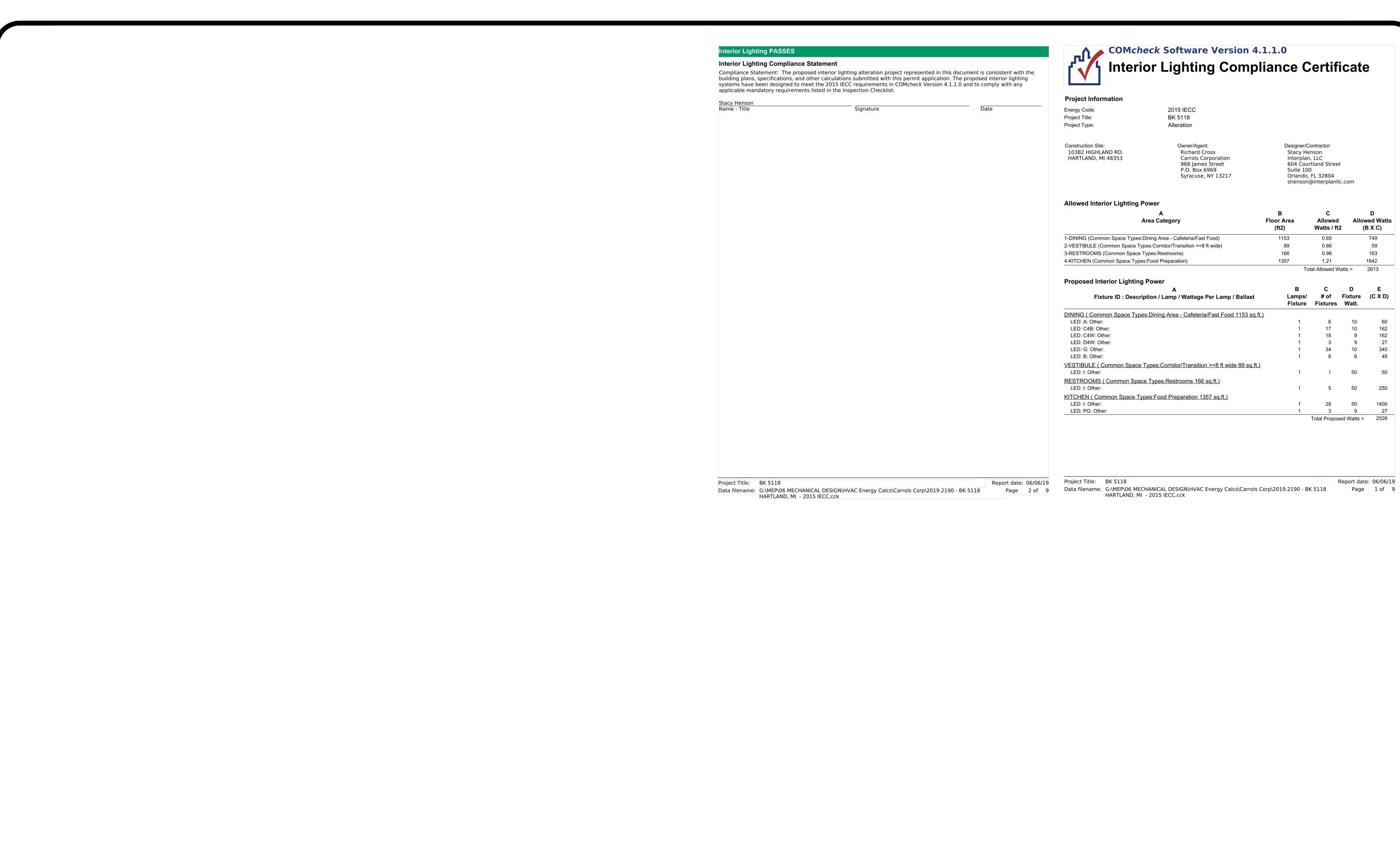
		ion: See Ge: 208' Flu:	Y/120						SYSTE	225A M: 3ø, RATING	4W	\		FEI	NN. L ED: T OUND	0P	13.5 KVA YES		
СКТ	LOAD SERVED	COND	PHASE	NEUT	GND	BKR	DMD	L1	L2	L3	DMD	BKR	COND	PHASE	NEUT	GND	LOAD SERVED	Ск	
1	AREA LITE	3/4"	#14	#12	#4	30/2	L	 351			L	20/1	3/4"	#12	#12	#12	DINING DOWNLIGHT	2	
3	11		#14				L		_ 1000		М	20/1	3/4"	#12	#12	#12	R.R. HAND DRYER	7	
5	AREA LITE	3/4"	#14	#12	#3	30/2	_			360	R	20/1	3/4"	#12	#12	#12	TV	1	
7	"		#14				_	1000			М	20/1	3/4"	#12	#12	#12	R.R. HAND DRYER	[ [	
9	LOGO SIGN	3/4"	#12	#12	#12	20/1	L		1200		L	20/1	3/4"	#14	#12	#4	MENU BOARD	1	
11	LOGO SIGN	3/4"	#12	#12	#12	20/1	L			1200	N	20/1	3/4"	#14	#12	#4	REF. ON WHEELS	1	
13	LOGO SIGN	3/4"	#12	#12	#12	20/1	L	1200 1485			L	20/1	3/4"	#12	#12	#12	KITCHEN LIGHTING	1	
15	TIME CLOCKS	3/4"	#12	#12	#12	20/1	R		600 300		L	20/1	3/4"	#12	#12	#12	RESTROOMS LIGHTING	1	
17	ROOF FLOODS	3/4"	#14	#12	#4	20/1	L			_ 564	L	20/1	3/4"	#12	#10	#8	EXTERIOR LIGHTS	1	
19	MANSARD SIGN	3/4"	#14	#12	#6	20/2	_	=			L	20/1	3/4"	#14	#12	#4	KIT. STORE & EMP BR LITES	2	
21	11		#14				_				L	/2	3/4"	#14	#12	#1	SECURITY/STORAGE & WIB LITES	2	
23	LOGO SIGN	3/4"	#12	#12	#12	20/1	L			1200	L			#14			"	2	
25	DINING RECEPTACLES	3/4"	#12	#12	#2/0	20/1	R	540 448			L	20/1	3/4"	#12	#12	#12	#12 DINING PENDANT, TRELLIS, PERGOLA		
27	DINING RECEPTACLES	3/4"	#12	#12	#10	20/1	R		540		-	20/1	3/4"	#12	#12	#12	,,	2	
29	RED PARAPET LED BAND	3/4"	#12	#12	#12	20/1	L			1200	R	20/1	3/4"	#14	#12	#4	#4 ROOF RECPTS		
31	FREEZER	3/4"	#14	#12	#2	30/3	N	=			N	20/3	3/4"	#14	#12	#4	RELAY PNL	3	
33	"		#14				N				N			#14			"	3	
35	"		#14				N				N			#14			,,	3	
37	DINING RECEPTACLES	3/4"	#12	#12	#10	20/1	R	360			N	20/3	3/4"	#14	#12	#1	RELAY PNL	3	
39	COOLER	3/4"	#14	#12	#3	20/2	С				N			#14			"	4	
41	"		#14				С				N			#14			"	4	
	INTERRU	PT RATING	G: 10,	.000	AIC			5384	3640	4524				FR	OM: E	XISTIN	IG LANDLORD SERVICE		
LOAD	S (IN VA ) CONNECTED [	DEMAND FACTOR	MINIM FEED		LOAD	os		COI	NNECTE	D DEM	AND TOR	MININ	IUM DER	REMA CONT		S LO	ADS <u>0</u> 1.25 <u>0</u>		
LIGHT RECE	TING 9148 PTS TO 10 KVA 2400	1.25 1.0	1143 240		мото			_	2000_	1.		200	_	REMA NON- MISC.	-CONT		US LOADS <u>0</u> 1.0 <u>0</u> 0.0ADS 0 1.0 0		
	PTS REMAINING 0	0.5	0	_		EST N			0	0.2	23	0	—						
	E HEATINGO	0.0	0		WATE	R HE	ATING	• _	0	1.	0	0	_	TOTAL	CON	NECT	ED LOAD <u>13.5</u> KVA <u>37.6</u>	AMF	
AIR C	CONDITIONINGO	1.0	0		KITC	HEN E	QUIF	· _	0	1.	0	0		TOTAL	. DEM	AND I	_OAD	ΑМ	

BURGER

INTERPLAN

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ORLANDO, FLORIDA 32804

ΞAL

INTERPLANS

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C# 1019

BK 5118

10382 HIGHLAND RD.
HARTLAND, MI 48353

K-2500

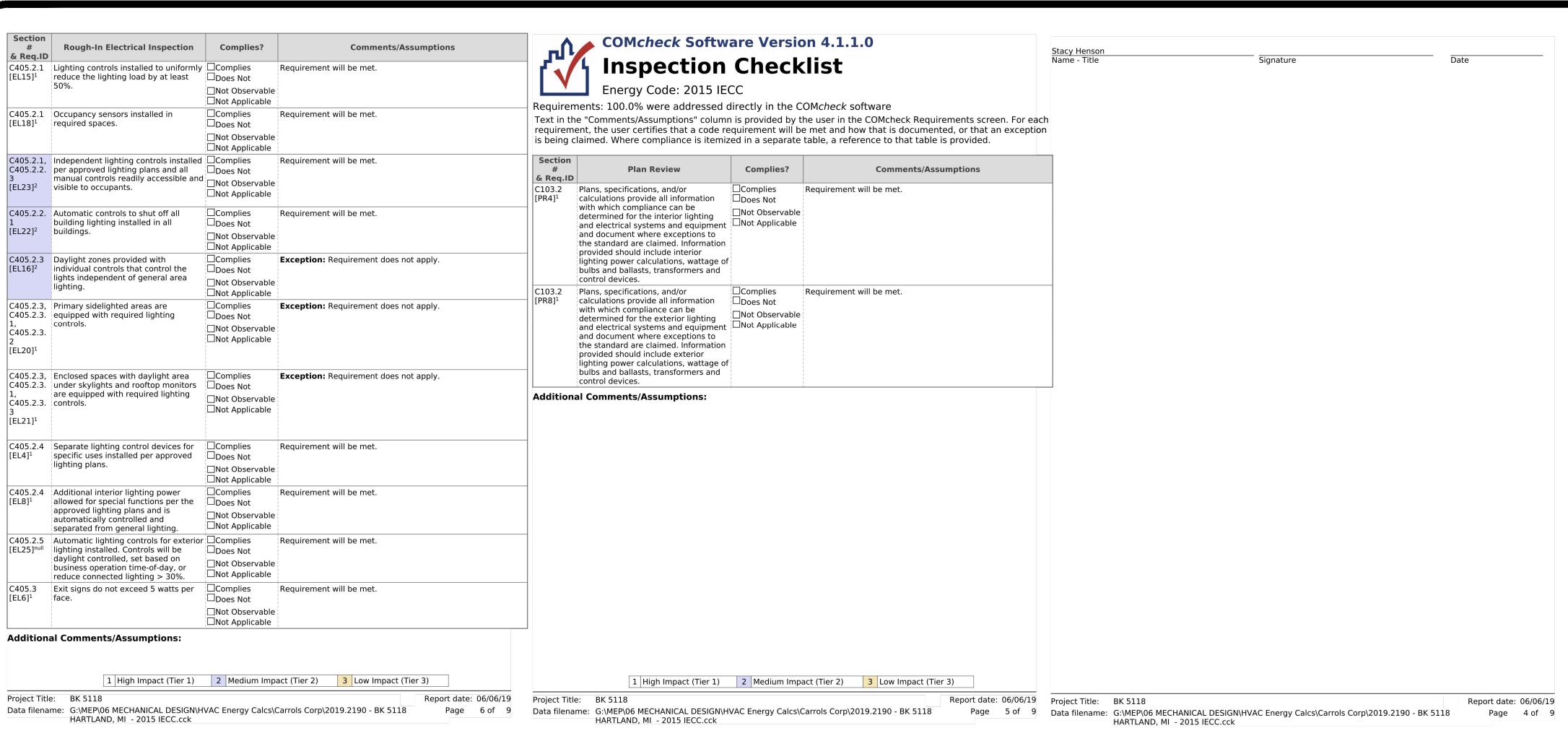
DATE: 05/23/19

NERGY COMPLIANCE

E-3

CHECKED

DRAWN RL 63



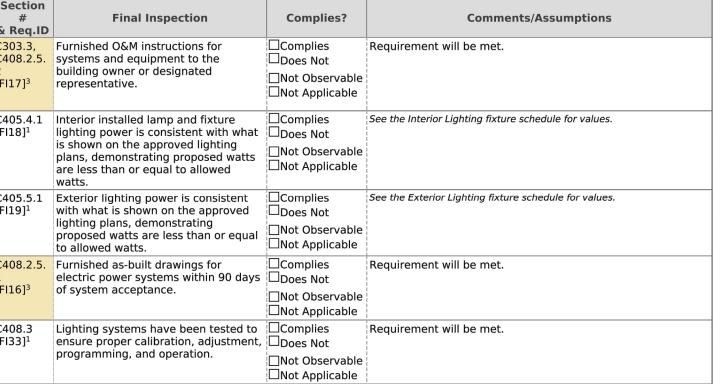
Energy Code: Project Title: Project Type: Exterior Lighting Zone	2015 IECC BK 5118 Alteration 3 (Other)					
Construction Site: 10382 HIGHLAND RD. HARTLAND, MI 48353	Owner/Agent: Richard Cross Carrols Corporation 968 James Street P.O. Box 6969 Syracuse, NY 13217		Suite 100 Orlando,	nson , LLC tland Stree )		
Allowed Exterior Lighting I	Power	В	С	D		E
Area/Surface Ca	ategory	Quantity	Allowed Watts / Unit	Tradable Wattage		ed Wat
Illuminated area of facade wall or s Free standing/attached sales canon		240 ft2 275 ft2	0.15 0.8 Total Tradab	No Yes		36 220 220
(a) Wattage tradeoffs are only a	llowed between tradable areas/surfaces.	Total All	Total All owed Supplement	owed Watts :		256 750
(b) A supplemental allowance ed	qual to 750 watts may be applied toward o	compliance of b	oth non-tradable a	and tradable a	areas/surfa	ces.
	g rowei		В	C # of	D Fixture	(C X
Proposed Exterior Lighting	A ption / Lamp / Wattage Per Lamp / I	Ballast	Lamps/ Fixture	Fixtures	Watt.	
Proposed Exterior Lighting  Fixture ID : Descrip  Illuminated area of facade wall of LED: L: Other:	A ption / Lamp / Wattage Per Lamp /   or surface (240 ft2): Non-tradable Wa		Fixture 1	Fixtures 7	30	2
Proposed Exterior Lighting Fixture ID : Descrip	or surface (240 ft2): Non-tradable Wa		Fixture	Fixtures		2 Exen
Fixture ID : Descrip	or surface (240 ft2): Non-tradable Wa		Fixture  1 1	Fixtures 7 2	30 27	

Data filename: G:\MEP\06 MECHANICAL DESIGN\HVAC Energy Calcs\Carrols Corp\2019.2190 - BK 5118

Section # Req.ID	Final Inspection	Complies?	Comments/Assumptions
303.3, 408.2.5. <sup>-</sup> 117] <sup>3</sup>	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
405.4.1 - 118] <sup>1</sup>	Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	□Complies □Does Not □Not Observable □Not Applicable	See the Interior Lighting fixture schedule for values.
405.5.1 [19] <sup>1</sup>	Exterior lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	□Complies □Does Not □Not Observable □Not Applicable	See the Exterior Lighting fixture schedule for values.
408.2.5. FI16] <sup>3</sup>	Furnished as-built drawings for electric power systems within 90 days of system acceptance.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.
408.3 - [33] <sup>1</sup>	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	□Complies □Does Not □Not Observable □Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

HARTLAND, MI - 2015 IECC.cck



1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3) Project Title: BK 5118 Data filename: G:\MEP\06 MECHANICAL DESIGN\HVAC Energy Calcs\Carrols Corp\2019.2190 - BK 5118 HARTLAND, MI - 2015 IECC.cck

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3) Project Title: BK 5118

Report date: 06/06/19

Page 3 of 9

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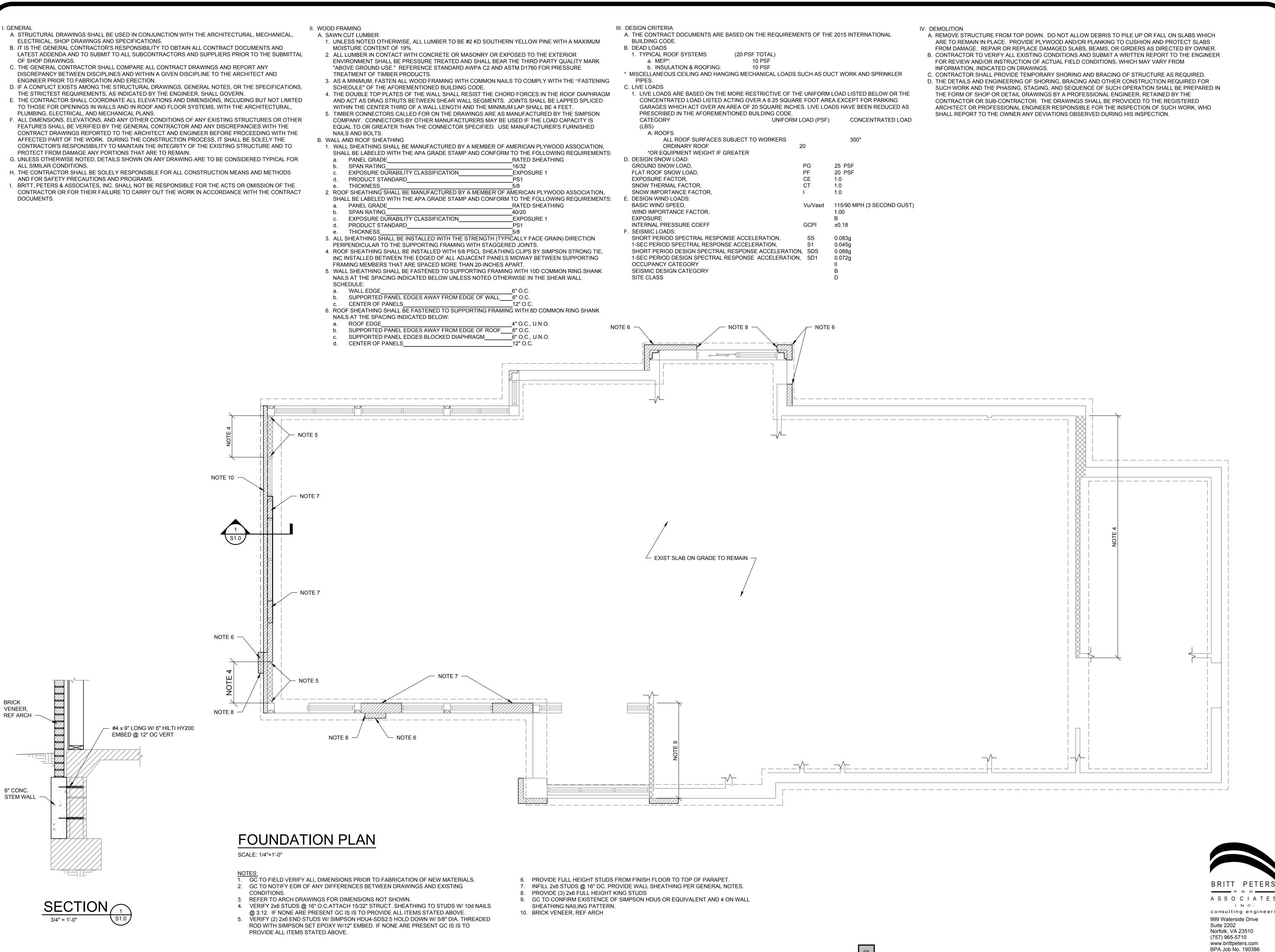
Report date: 06/06/19 Page 8 of 9

Project Title: BK 5118

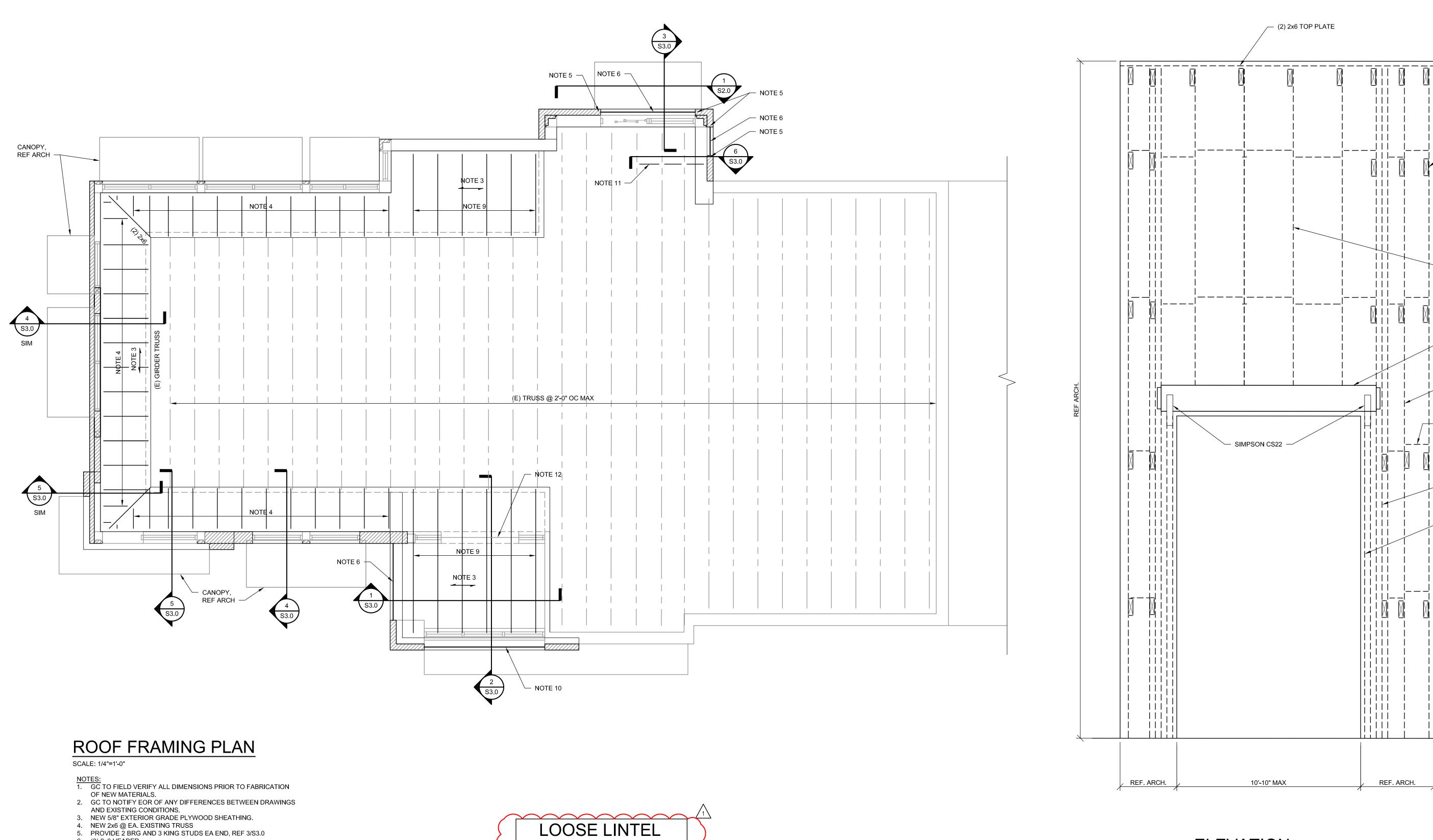
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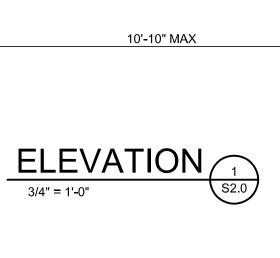
CHECKED



- 6. (3) 2x6 HEADER
- 7. NÓT USED 8. NOT USED
- 9. NEW 2x12 @ EA EXISTING TRUSS
- 10. (3) 2x12 HEADER11. (3) 2x4 BLOCKING AT BAYS SHOWN 12. GC TO CONFIRM (E) HEADER IS (3) 2x10 MIN

ANGLE SCHEDULE						
ANGLE SIZE	SPAN					
L 3 1/2 x 3 1/2 x 1/4 LLV	UP TO 4'-0"					
L6 x 3 1/2 x 3/8 LLV	UP TO 10'-0"					

NOTE: PROVIDE 8" BEARING (MIN.) EACH END OF LINTEL. STEEL IS HOT-DIP GALVANIZED.





2x6 STUD TIES (TYP.) 2x6 FRAMING@ 16" O.C. – HEADER REF PLAN @ 16" O.C. - 2x6 BRIDGING @ 32" O.C. STAGGERED - (2) 2x6 KING STUDS FULL HEIGHT (2) 2x6 JACK
 STUDS EA.
 END OF
 HEADER (TYP.)

(TYP.)



