

Director's Report

Project Name: Culver's
 Description: Preliminary site plan approval
 Date on Agenda this packet pertains to: May 2, 2024

- Public Hearing
- Initial Submittal
- Revised Plans
- Preliminary Approval
- Final Approval
- Special Land Use
- Rezoning
- Other:

Contact	Consultants & Departments	Approval	Denial	Approved w/Conditions	Other	Comments
Sean O'Neil	Planning Director	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
DLZ	Engineering Consultant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	See letter dated 03/03/2024.
Justin Quagliata	Staff Planner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	See letter dated 04/03/2024.
Jason Hanifen	WLT Fire Marshal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	See letter dated 04/02/2024.



INNOVATIVE IDEAS
EXCEPTIONAL DESIGN
UNMATCHED CLIENT SERVICE

March 3, 2024

Sean O' Neil
Community Development Department
Charter Township of White Lake
7525 Highland Road
White Lake, Michigan 48383

RE: Culver's- Preliminary Site Plan Review – 2nd Review

Ref: DLZ No. 2445-7696-04

Design Professional: Griggs Quaderer, Inc.

Dear Mr. O' Neil,

Our office has performed a Preliminary Site Plan review for the above-mentioned revised plan dated March 18, 2024. The plans were reviewed for feasibility based on general conformance with the Township Engineering Design Standards.

General Site Information

This 1.69 acre site is located north of M-59, west of Bogie Lake Road, and southeast of Meijer.

Site Improvement Information:

- Construction of a 4,085 square foot drive thru restaurant.
- Associated paved and curbed parking area, including three (3) ADA parking spaces.
- Two entrances off Meijer Service Drive.
- Water and sanitary sewer service.
- Storm water management facilities.

The following items should be noted with respect to Planning Commission review:

Please note that comments from our February 26, 2024 review are in *italics*. Responses to those comments are in **bold**. New comments are in standard font.

- a) *Cover sheet C000- Correct spelling of Bogie Lake Road. Currently spelled "Boagie."* **Comment addressed. Spelling has been corrected.**

- b) *Sheet C100- Show existing watermain easement for watermain along Bogie Lake Road frontage. In addition, any work within the existing easement shall require permission from the Township. **Comment addressed and remains as a notation regarding permission for work within the existing easement. The 20' wide recorded watermain easement along Bogie Lake Road has now been shown.***
 - c) *Sheet C100- Indicate whether there is an existing easement for the existing on site electric/power line. If so, permission from DTE shall be required for work within this easement. **Comment addressed. Per the design engineer, no DTE easement was found during the title search.***
 - d) *Sheet C100- Indicate whether there is an existing easement for the existing on site storm sewer (EX1 to EX2). **Comment addressed. Per the design engineer, no easement for storm sewer was found during title search. This portion of the existing storm sewer shall require an easement since it is outside of the existing ROW.***
 - e) *Sheet C100- Storm MH EX1- Verify rim and invert elevations. Per attached Meijer storm sewer as built plan, rim and invert as built elevations shown on the Culver's survey differ by approximately 2-3 feet. **Comment addressed; grades were confirmed by surveyor.***
 - f) *Sheet C100- Storm MH EX2- The following pipe sizes appear in error based on attached Meijer storm sewer as built plan a) 24" should be 21" diameter b) 15" should be 18" diameter. **Comment addressed. Pipe sizes have been revised.***
 - g) *Sheet C100- It appears that the existing storm sewer in Bogie Lake Road to the east is also mislabeled in terms of pipe diameter. Meijer as built plan shows 21" and 36" diameters respectively. Please verify. **Comment addressed. Pipe sizes have been revised.***
 - h) *Sheet C100-Benchmark #2 elevation (1003.52) shown appears to deviate by approximately 1.05' versus the identical benchmark (1004.57') provided on the survey(attached) for the adjacent (proposed Panera Bread) property to the southwest. Please clarify. **Comment addressed; grades were confirmed by surveyor.***
 - i) *Sheet C100- The following three distances in the Property Description are missing from the property metes and bounds sketch: a) Second paragraph- Line 1-331.37'; b) Second paragraph-Line 4-51.59'; c) Second paragraph-Line 8-90.99'. **Comment addressed. Lengths of curves have now been added to the property metes and bounds sketch.***
 - j) *Sheet C200- It is not clear why bumper blocks are being proposed where the ADA parking + one regular parking space abut the proposed sidewalk. Although the sidewalk abutting the spaces with bumper blocks will not be raised, the sidewalk to the south at a point would still need a sloped sidewalk/ramp up to allow ADA customers access to the restaurant door since the southern portion of this sidewalk does indicate a 6" raised sidewalk. Please review. **Comment addressed and remains as a notation. The design engineer notes the sidewalk adjacent to the bumper blocks shall be flush with the pavement area, with a ramp up to the main entrance proposed. Details for ramp up to main entrance along with proposed grades (meeting ADA requirements) shall be provided on the FSP/FEP.***
 - k) *Sheet C200-The 15' wide one way driveway on the south side of the restaurant does not meet the Township minimum 20' width requirement for one way drives. We defer to the Township Planning*
-

Department regarding this item. Comment addressed and remains as a notation. Per the design engineer, Culver's shall be requesting a variance for the reduced drive width. We continue to defer to the Township regarding this item.

- l) *Sheet C200- Clarify the sidewalk easement intent for the existing sidewalks along the Meijer Service Drive and Bogie Lake Road. Is the easement proposed or existing? In addition, we defer to the Township Planning Department as to whether the existing sidewalk along Bogie Lake Road shall be required to be extended to the northwest along the Bogie Lake Road frontage per Township Zoning Ordinance requirements. Comment addressed and remains as a notation. A portion of the existing sidewalk is within the Culver's property and the design engineer has stated the intent to grant pedestrian access along the existing sidewalk to allow for continued use. We continue to note the requirement for a sidewalk easement for the portion of sidewalk on the Culver's property that is outside the Bogie Lake Road ROW. We continue to defer to the Township as to whether the existing sidewalk along Bogie Lake Road shall be required to be extended to the northwest along the Bogie Lake Road frontage.*
- m) *Provide plan indicating standard length fire truck access and turning radii so as to demonstrate adequate fire truck accessibility to and within the site. Comment addressed. A fire truck accessibility plan has now been provided.*
- n) *Sheet C300- A note shall be added to the proposed retaining wall to reference the wall detail on Sheet C501. Comment addressed. References to the detail on Sheet C501 have now been added to the requested sheets.*
- o) *Sheet C300- Add note to ends of proposed sidewalk replacement sections to match existing sidewalk grades. Comment addressed. Notes have been added.*
- p) *Sheet C301- Based on the existing storm sewer invert (per Meijer storm sewer as built plan) for EX1 of 984.85, storm drainage would back up in proposed Stormceptor (MH1) and remainder of proposed pipe (CB2 -EX1) and into CB2. Please review and revise, including storm sewer calculations, as necessary. In addition, please reference comment e) above. Comment addressed, grades were confirmed by surveyor and positive drainage is anticipated.*
- q) *Sheet C301-The proposed storm sewer is too close to the proposed retaining wall. Please shift sewer further to the east. Comment addressed. Storm sewer layout has been revised such that storm sewer is now shifted away from proposed retaining wall.*
- r) *Sheet C400-The proposed sanitary sewer pipe diameter shall be required to be 8" diameter (8" required if pipe length > 150'). Comment addressed. 6" lead will suffice based on conversation with our office.*
- s) *Sheet C400- The proposed sanitary sewer lead will be required to be lowered at water service crossing UC3 to achieve the minimum required 18" vertical pipe separation. Comment addressed. The water lead has been lowered and placed a minimum of 18" vertical separation under the sanitary lead.*
- t) *The applicant will need to provide information detailing whether this site falls under the Meijer Storm Water Management Facilities Easement, Maintenance Agreement and Lien document or if a new agreement will be required for this development. Likely a new agreement in the form of a*

nonexclusive stormwater discharge agreement (see attached sample) will be required and supporting exhibits will need to be provided. Comment addressed and remains as a notation. The engineer notes that no information was found as to whether the site falls under the Meijer agreement and has thus indicated that a new agreement will be drafted and finalized during the FSP/FEP phase.

- u) *ADA parking spaces will need to meet ADA standards in terms of slopes and dimensions; further details will be required at the time of Final Site Plan/Final Engineering Plan submittal/review. Comment remains as a notation.*
- v) *Preliminary grading of the site has been proposed and demonstrates general drainage patterns. A more detailed grading review will be provided at the time of Final Engineering Plan submittal/review. Comment remains as a notation.*
- w) *We defer to the Township Fire Department regarding hydrant coverage. Comment addressed. Per the design engineer, all fire department requirements including for hydrant coverage have been met per the Fire Marshall.*
- x) *Sheet C500- There are several locations where proposed trees are shown too close to proposed sanitary sewer, water service, and storm sewer. Please provide a minimum of 10' horizontal separation between trees and these utilities. We have attached a red lined copy of this plan sheet for exact locations. Comment addressed. Landscape plan has now been revised. All proposed trees are now shown a minimum of 10' away from proposed sanitary sewer, water service, and storm sewer.*

Recommendation

The plan now demonstrates feasibility, and we recommend approval subject to any remaining above comments being addressed on the Final Site Plan/ Final Engineering Plan.

Please feel free to contact our office should you have any questions.

Sincerely,

DLZ Michigan



Michael Leuffgen, P.E.
Department Manager



Victoria Loemker, P.E.
Senior Engineer



INNOVATIVE IDEAS
EXCEPTIONAL DESIGN
UNMATCHED CLIENT SERVICE

WLT-Culver's- PSP Review.02

March 3, 2024

Page 5 of 5

Cc: Justin Quagliata, Community Development, *via email*
Hannah Kennedy-Galley, Community Development, *via email*
Aaron Potter, DPS Director, White Lake Township, *via email*
Jason Hanifen, Fire Marshall, White Lake Township, *via email*

<X:\Projects\2024\2445\769604 WLT Culvers\PSP-Review.02\Review.02.docx>

WHITE LAKE TOWNSHIP PLANNING COMMISSION

REPORT OF THE COMMUNITY DEVELOPMENT DEPARTMENT

TO: Planning Commission

FROM: Sean O'Neil, AICP, Community Development Director
Justin Quagliata, Staff Planner

DATE: April 3, 2024

RE: Culver's
Preliminary Site Plan – Review #2

Staff reviewed the revised site plan prepared by Griggs Quaderer, Inc. (revision date March 18, 2024). The following comments from the first review dated February 26, 2024 are listed below. Responses to those comments are provided in **(red)**.

Katie Schmitt has requested preliminary site plan approval to construct a 4,085 square foot drive-thru Culver's restaurant on 1.69 acres of Parcel Number 12-20-276-035. The subject site is part of a Meijer outlot, zoned PB (Planned Business), and located north of Highland Road (M-59) and west of Bogie Lake Road. **Prior to final site plan submission, a land division application shall be submitted to the Assessing Department to separate the proposed outlot from the remaining Meijer property.** **(Comment remains as a notation. This requirement has been acknowledged by the Applicant's engineer in the response letter provided to the first review).**

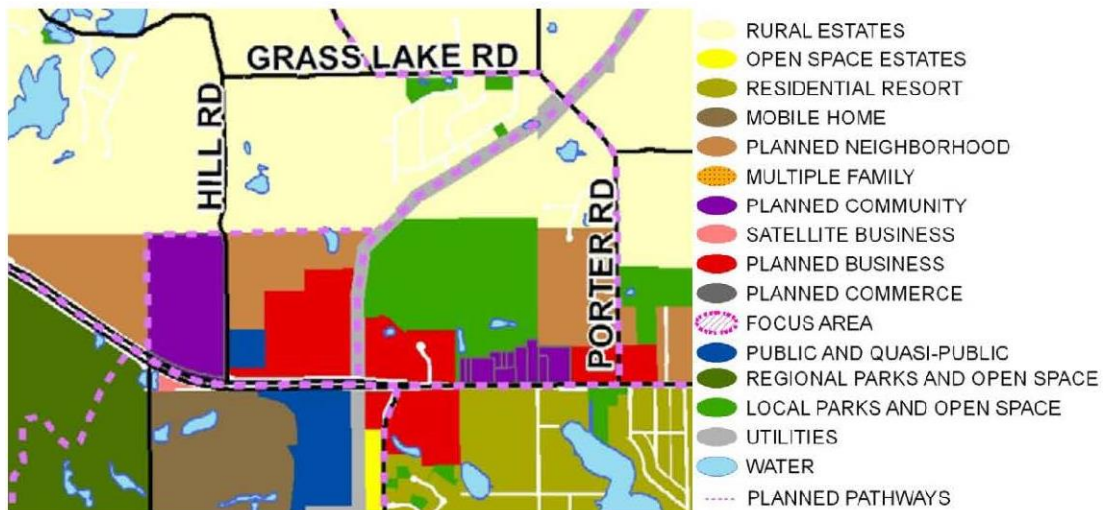
Meijer must provide a letter of authorization allowing the Applicant to submit a site plan application on their behalf, or, a Meijer representative must sign the application. A letter of authorization must include a legal description for the area of the proposed land division, as the parcel of land (outlot) for the project has not yet been created. **(Comment addressed. A letter of authorization from Meijer has been provided).**

Master Plan

The Future Land Use Map from the Master Plan designates the subject site in the Planned Business category. All development in Planned Business is required to adhere to strict access management principles in order to minimize traffic conflict and maximize safety throughout the M-59 corridor. Connections to and segments of the Township community-wide pathway system are required as an integral part of all Planned Business development.

The Future Land Use Map from the draft 2024 Master Plan designates the subject site in the Commercial Corridor category, which is intended to provide regional goods and services (such as large box-stores and drive-thrus) to residents and non-residents.

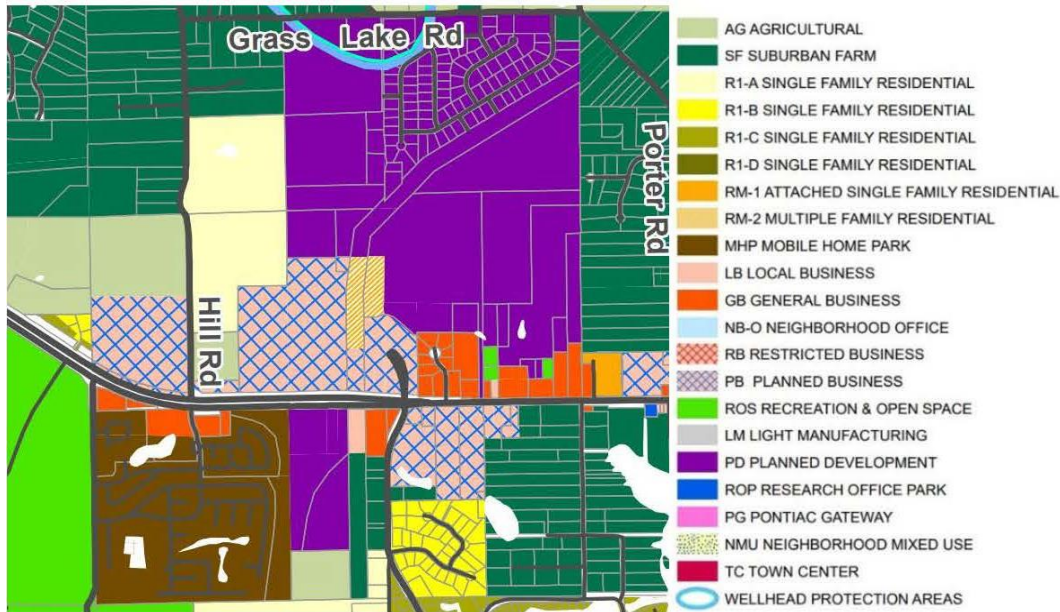
FUTURE LAND USE MAP



Zoning

Drive-thru restaurants are principal permitted uses with site plan review and approval in the PB zoning district. A minimum lot area of 10 acres is required in the PB District (the PB district does not have a minimum lot width requirement). **Label the dimensions of the proposed property lines on Sheet C200.** (Comment addressed. The property dimensions are now labeled on Sheet C200). The subject site (proposed parcel) contains 1.69 acres of lot area. While the lot area does not meet the minimum requirement, the Meijer outlots were contemplated at the time of the initial development. A waiver from the minimum area requirement is not necessary.

ZONING MAP



Physical Features

Currently the site is undeveloped. The Michigan Department of Environment, Great Lakes, and Energy (EGLE) Wetland Map and the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map indicate neither wetlands nor floodplain are present on or near the site.

Access

Two proposed driveways to the Meijer private drive would provide access to the site. The Zoning Ordinance states the number of driveways permitted for a site shall be the minimum number necessary to provide safe and efficient access for regular traffic and emergency vehicles. **The westerly driveway should be eliminated. Revise accordingly. (Comment remains as a notation. The Applicant is requesting a secondary driveway be allowed on the west side of the site. Staff defers to the Planning Commission on this request. It should be noted the Applicant is also requesting a waiver to reduce the required drive aisle width for a one-way drive along the south side of the building from 20 feet to 15 feet). If not removed, the westerly driveway is deficient in width (one-way undivided driveways must have a width of 20 feet) and shall be widened accordingly (dimension this driveway width on Sheet C200). (Comment addressed. The drive width has been labeled with dimensions on Sheet C200).**

Staff discussed with the Applicant's engineer aligning (centerline-to-centerline) the proposed Culver's driveway with the proposed project driveway to the south. The driveways have not been aligned. The latest conceptual final site plan for the project to the south will be provided to the Applicant's engineer for reference. Revise accordingly.

Sidewalk along portions of the property frontage were constructed by Meijer at the time of the initial development. The Applicant shall be required to repair/replace any broken sections of concrete within the frontage sidewalk, as determined by the Township Engineering Consultant; this is noted on Sheet C200.

Utilities

Municipal water and sanitary sewer are available to serve the site. The Township Engineering Consultant will perform an analysis of utilities, stormwater, and grading to ensure compliance with all applicable ordinances as well as the Township Engineering Design Standards.

Staff Analysis

When reviewing the preliminary site plan, the Planning Commission should consider if the project meets the design standards for Planned Business developments found in Article 6, Section 7 of the Zoning Ordinance, the appropriateness of the requested waivers, and the site standards and development procedures for a PB development as outlined in Articles 5 and 6, respectively, of the Zoning Ordinance.

The Planned Business development review process is summarized by the following steps:

1. Preliminary Site Plan: During this review, the site layout and use(s) are established, the amount of open space is determined, and other project details are decided upon. The Planning Commission holds a public hearing, reviews the PB proposal, and makes a recommendation to the Township Board. The Township Board takes final action, approving or denying the preliminary site plan.
2. Final Site Plan: At this time building materials and colors, landscaping, and outdoor lighting are finalized and all conditions of preliminary site plan approval must be satisfied. The Planning Commission reviews and takes action to approve or deny the final site plan, and also reviews the proposed Development Agreement and makes a recommendation to the Township Board.
3. Development Agreement: Upon recommendation by the Planning Commission, the Township Board takes final action on the Development Agreement.

The following standards for drive-thrus found in Section 4.17 of the Zoning Ordinance must also be utilized:

- A. *A front yard setback of at least sixty (60) feet shall be required.* The proposed front yard setback from the south property line is 85.3 feet. **The building setback (at its closest point) from the north (front) property line shall be dimensioned on the site plan. Also, revise the required front yard building setback from 50 feet to 60 feet on Sheet C200. (Comment addressed. The building to property line dimension on the north side of the building has been added to the plan. The front yard building setback is now shown and labeled as 60 feet).**

- B. *Entrance and exit drives shall be at least one hundred (100) feet from any street intersection and two hundred (200) feet from any residential district. The nearest street intersection (Bogie Lake Road and Meijer private drive – to the east) is approximately 125 feet from the proposed easterly driveway. Additionally, the proposed driveways exceed the minimum 200-foot setback from a residential zoning district.*
- C. *An outdoor lighting plan shall specify the type of fixtures to be used, light intensity, and method of shielding the fixtures so that light does not project onto adjoining properties or on any public or private street or right-of-way. Dropped fixtures shall not be allowed. The site plan shall include a photometric plan and catalog details for all proposed fixtures. Outdoor lights must meet the performance standards of Section 5.18. See the Outdoor Lighting section of this review.*
- D. *An obscuring fence, screen wall, or land form buffer shall be provided in accordance with the provisions of Section 5.19 on all sides abutting a residential district. The property does not abut a residential district.*
- E. *Adequate off-street waiting space shall be provided to prevent drive-through customers from waiting on a public or private street. Fast food restaurants with indoor seating require minimum stacking (per lane) of eight (8) vehicles inclusive of the vehicle at the window. The site plan shows 13 stacking spaces and seven (7) order waiting spaces.*

Building Architecture and Design

Exterior building materials should be comprised primarily of high quality, durable, low maintenance material, such as masonry, stone, brick, glass, or equivalent materials. Buildings should be completed on all sides with acceptable materials **(consideration shall be given to all four facade designs as each side of the building would be visible from a street).** (See response to following comment in this paragraph). The proposed materials for the 18-foot-tall building (23-foot-tall parapets) are a mix of EFIS (exterior insulation finishing system) and stone veneer, with canvas awnings. **A majority of the building material is EFIS, with stone veneer as an accent around the base of the building. EFIS is not considered a high-quality building material. Staff recommends 70 percent of all elevations of the building be covered with some type of brick or stone veneer product.** (Comment addressed. In the response letter provided to the first review, the Applicant's engineer stated all building faces have a minimum of 70% brick and/or stone veneer product. Percentage of EFIS has been provided for each of the building elevations).

The Zoning Ordinance states all buildings should have windows at eye level covering at least 30 percent of the front facade. The exterior elevations should be revised to provide the required windows, and a window coverage calculation shall be provided on the building elevations at final site plan. (Comment outstanding. A waiver is required because 30% window coverage on front facades is not provided. The east and north elevations are also considered front facades (due to fronting on roads) and shall be labeled as such on Sheet A-3, with window coverage calculations provided for those facades. Also, revise requested waiver seven on Sheet C000 to reflect the three affected facades).

Note the exterior elevations and site details shall be sealed by the registered architect who prepared the plans. (Comment addressed. The floor plan, exterior elevations, and site details sheet have been sealed by the architect).

A sample board of building materials to be displayed at the Planning Commission meeting and elevations in color are required by the Zoning Ordinance and must be submitted at final site plan. (Comment remains as a notation). Additionally, the address (street number) location shall be shown on the building. Six-inch-tall numbers visible from the street shall be required. (Comment addressed. Address location has been depicted on the south building elevation). The address location is subject to approval of the Fire Marshal. (Comment remains as a notation. This requirement is noted on Sheet A-3).

Parking

In addition to the required stacking spaces (which must be provided as described on Page 4 of this review), one parking space per 75 square feet of gross floor area is required for the drive-thru restaurant (54 spaces). 55 parking spaces are proposed east of the building. The required number of barrier-free parking spaces are also provided.

Off-Street Loading Requirements

The Zoning Ordinance requires one loading space for a development of this size. Such loading and unloading space must be an area 10 feet by 50 feet, with a 15-foot height clearance. One loading space is proposed. General Note 5 on Sheet C200 states deliveries would occur off-hours as to not conflict with customer traffic flow.

Trash Receptacle Screening

The Zoning Ordinance requires dumpsters to be surrounded by a six-foot-tall wall (but not more than eight feet high) on three sides and an obscuring wood gate on a steel frame on the fourth side, located on a six-inch concrete pad extending 10 feet in front of the gate, with six-inch concrete-filled steel bollards to protect the rear wall and gates. Furthermore, the Zoning Ordinance states dumpsters and trash storage enclosures shall be constructed of the same decorative masonry materials as the buildings to which they are accessory. Brickform concrete (simulated brick pattern) or stained, decorative CMU block are not permitted where the principal building contains masonry. Plain CMU block is also prohibited. Dumpster enclosure and elevations details were provided on Sheet C-1. The proposed enclosure is located adjacent to the north side of the building. An 8'-6" wall (stone veneer over CMU screen wall) is proposed on the sides of the dumpster enclosure, with an aluminum-backed synthetic wood gate on the east side of the enclosure **(the color of the gate shall be provided at final site plan).** **(Comment remains as a notation. This requirement has been acknowledged by the Applicant's engineer in the response letter provided to the first review).** **The screen wall shall be reduced six inches in height or a waiver is required. (Comment addressed. The screen wall height has been reduced to meet the eight-foot maximum height).**

The proposed enclosure is located north of the building. The Zoning Ordinance prohibits trash enclosures within a required front yard setback, and does not allow enclosures closer to the front lot line than the principal building. The proposed dumpster enclosure is located closer to the Meijer private drive than the building. **A waiver is required to allow the dumpster enclosure to project into the front yard.** (Comment remains as a notation. This requirement has been acknowledged by the Applicant's engineer in the response letter provided to the first review).

Landscaping and Screening

Landscaping must comply with the provisions of the Zoning Ordinance and should be designed to preserve existing significant natural features and to buffer service areas, parking lots, and dumpsters. A mix of evergreen and deciduous plants and trees are preferred, along with seasonal accent plantings. A landscape plan is not required as part of the preliminary site plan, but was provided for consideration and will be reviewed in detail during final site plan review if the preliminary site plan is approved. Following are initial comments on the landscape plan:

- All required landscape areas in excess of 200 square feet shall be irrigated to assist in maintaining a healthy condition for all plantings and lawn areas. **An irrigation plan shall be provided at final site plan.** (Comment remains as a notation. This requirement has been acknowledged by the Applicant's engineer in the response letter provided to the first review).
- Transformer and Mechanical Equipment Screening: all ground mounted transformers, climate control, and similar equipment shall be screened from view from any street or adjacent property by a wall constructed of the same decorative exterior materials as the building and not less than the height of the equipment to be screened. As an alternative, the equipment may be screened by landscaping approved by the Planning Commission. All rooftop climate control equipment, transformer units, and similar equipment shall be screened. The materials used to screen the equipment shall be compatible in color and type with exterior finish materials of the building. All rooftop equipment shall conform to the maximum height regulations of the Zoning Ordinance. **The plans do not show proposed locations for mechanical units or provide the method of screening. The plans shall be revised accordingly to provide the location(s) and method of screening at final site plan.** (Comment addressed. The mechanical units are located on the roof of the building (see Sheet A-3) and screened by parapet walls).
- Note areas for snow storage are depicted on Sheet C200.
- Trees shall not be planted closer than four feet to a property line. **Add note to landscape plan at final site plan.** (Comment addressed. Note 19 has been added to Sheet C500).

- **The Planting Requirements Table on Sheet C500 shall be revised. The minimum requirement listed for the west side buffer is incorrect. A greenbelt 10 feet in width planted with 1 large deciduous or evergreen tree and 8 shrubs for every 30 linear feet is required. Revise accordingly. (Comment partially addressed. While the greenbelt requirement has been added, the following wording still needs to be removed: “Land Form Buffer A-2 =”)**
- **18 trees are required for interior landscaping and 7 trees are proposed. Therefore, a waiver is required. (Comment outstanding. A waiver is required. Note 10 trees are now proposed, so the waiver requested is for eight trees).**
- **Unless waived by the Planning Commission, the landscape plan shall be prepared by a landscape architect registered in the State of Michigan. The landscape plan is signed and sealed by a professional engineer. Revise accordingly, or a waiver is required. (Comment outstanding. However, a waiver is being requested).**

Outdoor Lighting

Site lighting is required to comply with the Zoning Ordinance. Information on site lighting was provided and will be reviewed in detail during final site plan review. Following are initial comments on the lighting (photometric) plan:

- Lighting shall be shielded from adjacent properties and designed to reflect continuity with the pedestrian orientation of the area. Floodlights, wall pack units, and other types of unshielded lights, and lights where the lens or bulb is visible outside of the light fixture are not permitted except in service areas where the lights will not generally be visible by the public or adjacent residential properties. Lights underneath canopies must be fully recessed into the canopy to minimize glare from the light source.
- **Complete catalog details (lighting fixture specification sheets) for all proposed fixtures shall be provided at final site plan. Light fixture selections and colors are subject to review and approval by the Township. (Comment remains as a notation. This requirement has been acknowledged by the Applicant’s engineer in the response letter provided to the first review).**
- **Revise the Lighting Statistics Table to include footcandle information at the building, driveway, and parking. It appears the information provided is only for the general site. (Comment outstanding. The table has not been updated as required. Separate rows with data for each of the aforementioned areas shall be provided in the table. This revision can be made at final site plan).** The allowable average footcandle for the entire site is 0.5, which is currently proposed.
- Note no wall pack units are currently proposed on the building. ***(The building wall sconces have been added to the photometric plan).***

Signs

Per the Meijer Development Agreement, freestanding signs are prohibited from being located on any individual outlot. If allowed by Meijer, Culver's may be identified on the freestanding sign at the northwest corner of Bogie Lake Road and Highland Road.

A maximum of one wall sign is permitted for each principal building. In instances where a parcel has frontage on two streets, an additional wall sign may be permitted on the building facing the secondary thoroughfare, which is no greater than five percent of the wall area on which the sign is placed. Where permitted, wall signs must be located flat against the building's front facade or parallel to the front facade on a canopy. The exterior elevations show four wall signs on the building (one sign on the north, south, east, and west facades). **The wall sign on the west elevation and the wall sign on the north elevation shall be removed, or waivers are required.** (Comment addressed. Wall signs on the west and north elevations have been removed). Additionally, wall signs cannot extend above the roofline of a building. **Waivers are required to install wall signs above the roofline of the building.** (Comment outstanding. Contrary to the response letter, the two wall signs shown on Sheet A-3 are above the roofline. At this time, waivers are still required. However, the Planning Commission should note per the proposed Zoning Ordinance amendment to the definition of above-the-roof signs, a waiver for the sign locations would not be required). Staff does not support signage waivers. The exterior elevations should be revised to comply with the sign standards.

The exterior elevations of all four sides of the building indicate the cornice contains optional blue LED accent lighting. Trim accent lighting at or above the roofline is prohibited signage and a waiver would be required to install such lighting. Staff suggests Sheet A-3 be revised to remove the optional blue LED accent lighting. (Comment addressed. The blue LED accent lighting has been removed from the building elevations).

Outdoor Dining

Outdoor dining is subject to the following standards found in Section 4.18 of the Zoning Ordinance:

A. *The Planning Commission shall determine that the use is designed and will be operated so as not to create a nuisance to property owners adjacent to or nearby the eating establishment. As such, the proposed use shall meet the following minimum criteria:*

- i. *The establishment may operate only during the following hours:*
 - *Monday thru Thursday: 8:00 a.m. – 12:00 midnight*
 - *Friday: 8:00 a.m. – 2:00 a.m.*
 - *Saturday: 10:00 a.m. – 2:00 a.m.*
 - *Sunday: 10:00 a.m. – 10:00 p.m.*

The hours of operation pertain to the outdoor dining hours, not hours of operation for the restaurant. Outdoor dining at Culver's would be limited to said hours of operation.

- ii. *The use of exterior loudspeakers is prohibited where the site abuts a residential district or use. The noise level at the lot line shall not exceed 70 dB.*

Culver's would be required to adhere to said performance standard.

- iii. *An outdoor lighting plan shall specify the type of fixtures to be used, light intensity, and method of shielding the fixtures so that light does not project onto adjoining properties or on any public or private street or right-of-way. Dropped fixtures shall not be allowed. The site plan shall include a photometric plan and catalog details for all proposed fixtures. Outdoor lights must meet the performance standards of Section 5.18.*

Information on site lighting was provided and will be reviewed in detail during final site plan if the preliminary site plan is approved. Initial comments on the lighting (photometric) plan were previously provided in this report.

B. Additional parking spaces must be provided according to the following:

- i. *Outdoor dining areas for more than 30 people or which include either permanent or seasonal structures, such as awning, roofs, or canopies, may be required to provide additional parking according to the following:*
 - a. *If the outdoor seating is 25% of the indoor seating or less, no additional parking is necessary.*
 - b. *If the outdoor seating is 26%-50% of the indoor seating, the restaurant may be required to provide up to 125% of the parking required for the indoor space.*
 - c. *If the outdoor seating is over 50% of the indoor seating capacity, the restaurant may be required to provide up to 150% of the parking required for the indoor space.*

An outdoor patio with 20 seats (five tables) is proposed on the south side of the building. **Label the size (square footage) of the patio on Sheet C200. (Comment addressed. A note has been added to Sheet C200 indicating the patio is 675 square feet in size).**

Community/Public Benefit

A waiver from the Community Impact Statement (CIS) requirement should be requested. (Comment addressed. This request has been noted on Sheet C000). While staff supports waiving submission of a CIS, **a community/public benefit must be provided to qualify for development in the PB district. (See response to following comment in this paragraph).** For PB developments, a public benefit(s) must be provided to offset the impact(s) of development on the Township. Community benefits are intended to be for the use and enjoyment of the public-at-large and must be commensurate with the waivers requested for the project. Note donations to charitable organizations do not constitute a Township community/public benefit. **A community/public benefit has not been proposed. (Comment addressed. The Applicant is proposing to donate \$10,000 to the Corridor Improvement Authority. The Township Board must determine if the proposed donation is acceptable).**

Planning Commission Options / Recommendation

The Planning Commission may recommend approval, approval with conditions, or denial of the preliminary site plan to the Township Board. ~~Staff recommends the plans be revised and resubmitted to address the items identified in this memorandum. A response letter detailing changes made to the plan shall be provided upon resubmission. A list of requested waivers shall also be provided, along with a proposed community/public benefit.~~ **The majority of staff comments have been addressed. While there are waivers required, the plan demonstrates land use feasibility. Concerns remain regarding the proposed secondary driveway on the west side of the site, and coordinating alignment of driveways with the project south of this site. These items should be resolvable during final site plan. Staff recommends approval of the preliminary site plan subject to the items identified in this memorandum being addressed at final site plan.**



Fire Department
Charter Township of White Lake

7420 Highland Road
White Lake, MI 48383
Office (248) 698-3993
www.whitelaketwp.com/fire

Site / Construction Plan Review

To: Sean O'Neil, Planning Department Director

Date: 4/2/2024

Project: Culver's

Job #: 230601

Date on Plans: 3/18/2024

The Fire Department has the following comments with regards to the 2nd review of the site plans for the project known as Culver's.

1. The Fire Dept. has no further comments at this time

Jason Hanifen
Fire Marshal
Charter Township of White Lake
(248)698-3993
jhanifen@whitelaketwp.com

Plans are reviewed using the International Fire Code (IFC), 2015 Edition and Referenced NFPA Standards.

CULVER'S RESTAURANT

NEW RESTAURANT

PRELIMINARY SITE PLAN APPROVAL

BOGIE LAKE ROAD
WHITE LAKE, MI

PART OF THE NORTHEAST 1/4 OF SECTION 20
TOWNSHIP 3N NORTH, RANGE 8E EAST
WHITE LAKE TOWNSHIP, COUNTY OF OAKLAND, STATE OF MICHIGAN

REQUESTED WAIVERS:

1. A WAIVER TO REMOVE THE REQUIREMENT OF A COMMUNITY IMPACT STATEMENT (CIS)
2. A WAIVER TO ALLOW THE DUMPSTER ENCLOSURE TO PROJECT INTO THE FRONT YARD
3. A WAIVER TO ALLOW A SECONDARY ACCESS POINT TO MEIJER DRIVE
4. A WAIVER TO REDUCE THE REQUIRED DRIVE AISLE WIDTH FROM 20' TO 15' ALONG THE FRONT OF THE BUILDING
5. A WAIVER TO REDUCE THE AMOUNT OF INTERIOR TREE REQUIREMENT FROM 18 TREES TO 10 TREES
6. A WAIVER TO REMOVE THE REQUIREMENT OF A LANDSCAPE ARCHITECT TO SIGN THE LANDSCAPING PLANS AND ALLOW A PROFESSIONAL ENGINEER TO SIGN THE PLAN.
7. A WAIVER TO REDUCE THE REQUIRED AMOUNT OF WINDOW COVERAGE ALONG THE FRONT FACADE FROM 30% TO 13%.

PROPERTY DESCRIPTION:

LAND SITUATED IN THE TOWNSHIP OF WHITE LAKE, COUNTY OF OAKLAND, STATE OF MICHIGAN, DESCRIBED AS FOLLOWS: COMMENCING AT THE CENTER POST OF SECTION 20, TOWN 3 NORTH, RANGE 8 EAST, WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN; SAID POINT BEING SOUTH 89 DEGREES 59 MINUTES 45 SECONDS WEST, 2635.27 FEET FROM THE EAST 1/4 CORNER OF SAID SECTION 20; THENCE NORTH 00 DEGREES 31 MINUTES 08 SECONDS EAST, 198.92 FEET ALONG THE NORTH-SOUTH 1/4 LINE OF SAID SECTION 20; THENCE NORTH 89 DEGREES 58 MINUTES 09 SECONDS EAST, 519.78 FEET ALONG THE NORTHERLY RIGHT-OF-WAY LINE OF M-59 (HIGHLAND ROAD, VARIABLE WIDTH); THENCE 513.35 FEET ALONG THE ARC OF A 5821.58 FOOT RADIUS CIRCULAR CURVE TO THE RIGHT, CHORD BEARING SOUTH 87 DEGREES 30 MINUTES 22 SECONDS EAST, 513.19 FEET ALONG THE NORTHERLY RIGHT-OF-WAY LINE OF SAID M-59; THENCE NORTH 00 DEGREES 39 MINUTES 06 SECONDS EAST, 370.03 FEET TO THE PLACE OF BEGINNING;

THENCE NORTH 00 DEGREES 39 MINUTES 06 SECONDS EAST, 292.32 FEET; THENCE 331.37 FEET ALONG AN ARC OF A 534.00 FOOT RADIUS CIRCULAR CURVE TO THE RIGHT, CHORD BEARING SOUTH 63 DEGREES 18 MINUTES 30 SECONDS EAST, 326.08 FEET; THENCE SOUTH 24 DEGREES 21 MINUTES 04 SECONDS EAST, 65.40 FEET; THENCE 51.59 FEET ALONG AN ARC OF A 514.00 FOOT RADIUS CIRCULAR CURVE TO THE RIGHT, CHORD BEARING SOUTH 35 DEGREES 50 MINUTES 29 SECONDS EAST, 51.57 FEET; THENCE SOUTH 13 DEGREES 28 MINUTES 42 SECONDS WEST, 6.80 FEET; THENCE SOUTH 60 DEGREES 22 MINUTES 37 SECONDS WEST, 29.73 FEET; THENCE 90.99 FEET ALONG AN ARC OF 175.00 FOOT RADIUS CIRCULAR CURVE TO THE RIGHT, CHORD BEARING SOUTH 75 DEGREES 06 MINUTES 16 SECONDS WEST, 89.97 FEET; THENCE NORTH 90 DEGREES 00 MINUTES 00 SECONDS WEST, 237.44 FEET TO SAID PLACE OF BEGINNING.

DRAWING INDEX:

DATE	DESCRIPTION
03-18-2024	C000 - COVER SHEET
03-18-2024	C100 - TOPOGRAPHIC SURVEY PLAN
-	C101 - SITE REMOVAL PLAN
03-18-2024	C200 - SITE LAYOUT PLAN
01-30-2024	C300 - SITE GRADING PLAN
03-18-2024	C301 - SITE STORM SEWER PLAN
03-18-2024	C302 - SOIL EROSION CONTROL PLAN
01-30-2024	C303 - DRAINAGE AREA MAP & STORM CALCULATIONS
03-18-2024	C400 - SITE UTILITY PLAN
03-18-2024	C401 - SITE PHOTOMETRIC PLAN
01-30-2024	C500 - SITE LANDSCAPE PLAN
03-18-2024	C501 - SITE LANDSCAPE DETAILS
03-18-2024	C600 - SITE DETAILS
-	- SANITARY SEWER DETAILS (COUNTY)
-	- PRESSURE PIPE DETAILS (COUNTY)
-	- GENERAL CONSTRUCTION NOTES (COUNTY)
03-18-2024	A-2 - DIMENSIONED FLOOR PLAN
03-18-2024	A-3 - EXT. ELEVATIONS, DOOR & WINDOW SCHEDULE
03-18-2024	AC-1 - ARCHITECTURAL SITE DETAILS

DATE MOST RECENT ISSUE / REVISION DATE
FILLED CIRCLE INDICATES SUBMITTED DRAWING

BENCHMARKS (DATUM: NAVD88)

- BM#1: TOP ARROW ON FIRE HYDRANT LOCATED APPROXIMATELY 37' SOUTH OF @ BOGIE LAKE ROAD, 35' WEST OF THE BEGINNING OF THE BOULEVARD, 790' NORTH OF @ M-59 & HIGHLAND ROAD AND 250' EAST OF @ OF EASTERLY TOWERED ELECTRICAL TRANSFORMER LINES. ELEVATION = 1003.87
- BM#2: TOP ARROW ON FIRE HYDRANT LOCATED APPROXIMATELY 18' SOUTH OF @ MEIJER SERVICE DRIVE, 370' WEST OF @ BOGIE LAKE ROAD, 180' EAST OF @ OF EASTERLY TOWERED ELECTRICAL TRANSFORMER LINES. ELEVATION = 1003.52

NPDES STATEMENT:

THE OWNER WILL NOT NEED TO OBTAIN AN NPDES STORM WATER DISCHARGE PERMIT FROM THE MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY (EGLE). TOTAL DISTURBED AREA: 1.62 ACRES

TOPOGRAPHIC SURVEY STATEMENT:

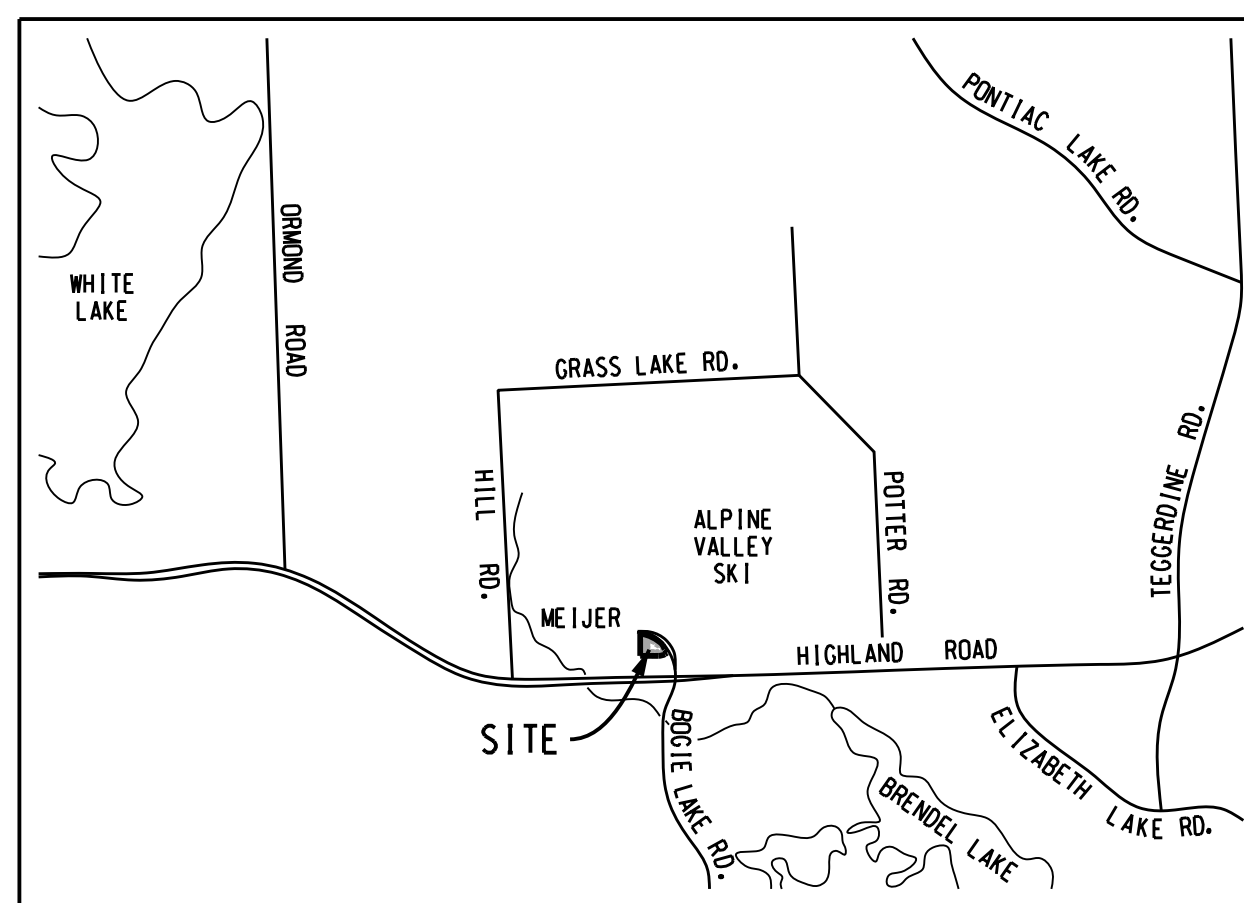
THE EXISTING FEATURES SHOWN ON THIS PLAN ARE FROM AN ACTUAL TOPOGRAPHIC SURVEY PERFORMED BY GRIGGS QUADERER, INC. IN SEPTEMBER OF 2023. THE UNDERGROUND UTILITIES SHOWN WERE EITHER VERIFIED BY THIS SURVEY OR WERE PLOTTED IN ACCORDANCE WITH THE BEST INFORMATION AVAILABLE. NO EXISTING UTILITIES WERE EXPOSED FOR VERIFICATION OF LOCATION AND ELEVATION. NO GUARANTEES ARE GIVEN THAT THE LOCATIONS ARE ABSOLUTELY ACCURATE OR THAT UTILITIES OTHER THAN THOSE SHOWN ARE NOT PRESENT.

OWNER: KATIE SCHMITT
7734 SOMERHILL LANE
CLARKSTON, MI 48438
(248) 953-5150
KATIESCHMITT4@GMAIL.COM

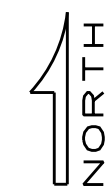
CONTRACTOR: KEVIN JOHNSON
RHODS & JOHNSON
285 N. ALLOY DR.
FENTON, MI 48430
(810) 750-7630
KEVIN@RHODSJOHNSON.COM

ARCHITECT: RAY EMBACH
AMAG, INC.
SUITE 200
4488 W. BRISTOL ROAD
FLINT, MI 48507
(810) 230-9311
REMBACH@AMAGARCH.COM

ENGINEER: CHRIS BRZEZINSKI, PE, PS
GRIGGS QUADERER, INC.
8308 OFFICE PARK DRIVE
GRAND BLANC, MI 48439
PHONE: (810) 695-0154
EMAIL: CHRIS@GQINCORP.COM



LOCATION MAP
NOT TO SCALE



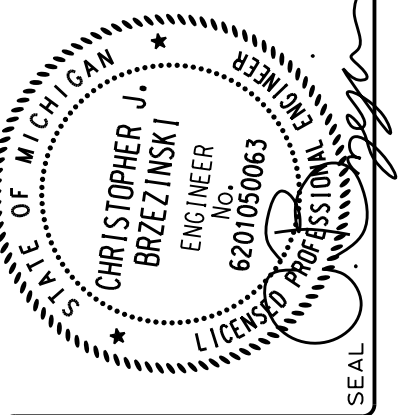
STANDARD LEGEND		
DESCRIPTION	PROPOSED	EXISTING
BUILDING	[Symbol]	[Symbol]
STORM SEWER	--- ST ---	--- ST ---
SANITARY SEWER	--- S ---	--- S ---
WATER	--- W ---	--- W ---
GAS LINE	--- G ---	--- G ---
ELECTRIC LINE	--- E ---	--- E ---
TELEPHONE LINE	--- T ---	--- T ---
MANHOLE	[Symbol]	[Symbol]
CATCH BASIN	[Symbol]	[Symbol]
FIRE HYDRANT	[Symbol]	[Symbol]
GATE VALVE & WELL	[Symbol]	[Symbol]
POWER POLE	[Symbol]	[Symbol]
LIGHT POLE	[Symbol]	[Symbol]
CURB & GUTTER	[Symbol]	[Symbol]
FENCE	[Symbol]	[Symbol]
DECIDUOUS TREE	[Symbol]	[Symbol]
EVERGREEN TREE	[Symbol]	[Symbol]
EASEMENT	[Symbol]	[Symbol]
SIGN	[Symbol]	[Symbol]
ASPHALT SURFACE	[Symbol]	ASPH.
CONCRETE SURFACE	[Symbol]	CONC.
SOIL BORING	[Symbol]	[Symbol]
SPOT ELEVATION	+336.45	+336.45
CONTOUR LINE	736	-736

GENERAL NOTES:

1. STANDARD SPECIFICATIONS: ALL MATERIALS AND CONSTRUCTION METHODS FOR THIS PROJECT SHALL CONFORM WITH THE REQUIREMENTS OF ALL GOVERNING AGENCIES HAVING JURISDICTION (LOCAL, COUNTY, STATE). UNLESS OTHERWISE NOTED, CONSTRUCTION MATERIALS SHALL COMPLY WITH THE LATEST EDITION OF THE STATE OF MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND PROJECT SPECIFICATIONS. IN CASE OF DISCREPANCIES BETWEEN REQUIREMENTS, THE MOST STRINGENT SHALL APPLY.
2. EXISTING BACKGROUND INFORMATION: THE EXISTING FEATURES SHOWN ON THESE DOCUMENTS ARE FROM AN ACTUAL TOPOGRAPHIC SURVEY PERFORMED BY GRIGGS QUADERER INC. IN JUNE OF 2021. THE UNDERGROUND UTILITIES SHOWN WERE EITHER VERIFIED BY THIS SURVEY OR WERE OBTAINED FROM THE BEST AVAILABLE DOCUMENT INFORMATION. NO GUARANTEES ARE GIVEN TO THE ACCURACY OF ALL UTILITY INFORMATION SHOWN OR THAT ALL UTILITIES ARE INDICATED ON THIS DOCUMENT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY ALL EXISTING UTILITY LOCATIONS AND ELEVATIONS BEFORE COMMENCING WORK AND TO NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
3. MISS DIG UTILITY PROTECTION SERVICE: THE CONTRACTOR SHALL CONTACT MISS DIG UTILITY SERVICES (811) THREE (3) WORKING DAYS PRIOR TO BEGIN OF CONSTRUCTION TO VERIFY LOCATIONS OF UTILITIES. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR THE PROTECTION OF ALL EXISTING UTILITIES DURING CONSTRUCTION. ANY UTILITY DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED WITH THE IDENTICAL MATERIAL IN ACCORDANCE WITH THE UTILITY OWNERS REQUIREMENTS. THE CONTRACTOR SHALL VERIFY THE DEPTH AND HORIZONTAL LOCATION OF ALL EXISTING UTILITIES AND NOTIFY ENGINEER OF ANY DISCREPANCIES.
4. SUBSURFACE SOIL CONDITIONS: A SOIL INVESTIGATION FOR THIS SITE IS AVAILABLE FOR REVIEW. THE CONTRACTOR IS RESPONSIBLE TO ACQUAINT HIMSELF WITH CURRENT SOIL AND GROUNDWATER CONDITIONS FOR HIS OWN INFORMATION PRIOR TO BIDDING. NO MODIFICATIONS TO UNIT PRICES OR FINAL BID WILL BE MADE DUE TO VARIABLE SUBSURFACE CONDITIONS, Dewatering, IF DETERMINED NECESSARY BY THE CONTRACTOR, WILL BE CONSIDERED INCIDENTAL TO THE INSTALLATION COST OF UTILITIES OR STRUCTURES.
5. PERMITS: THE CONTRACTOR IS RESPONSIBLE FOR SECURING ALL PERMITS REQUIRED TO PERFORM ALL WORK SHOWN ON THESE DOCUMENTS. THE CONTRACTOR SHALL PAY FOR AND OBTAIN ALL PERMITS REQUIRED BY FEDERAL, STATE, LOCAL OR PRIVATE AGENCIES INCLUDING REQUIRED BOND, COSTS INSPECTION AND TESTING SERVICES SHALL BE PAID FOR BY THE CONTRACTOR.
6. SOIL EROSION CONTROL: CONTRACTOR SHALL OBTAIN SOIL EROSION CONTROL PERMIT PRIOR TO BEGIN OF CONSTRUCTION. THE CONTRACTOR SHALL COMPLY WITH ALL PROVISIONS OF ACT 451, PART 91 FOR SOIL EROSION & SEDIMENTATION CONTROL, AND WILL BE RESPONSIBLE FOR ALL MAINTENANCE UNTIL THE FINAL ACCEPTANCE OF THE PROJECT. CONTRACTOR SHALL PROTECT ALL EXISTING AND PROPOSED STORM WATER FACILITIES ON SITE DURING CONSTRUCTION.
7. MIOSHA SAFETY REQUIREMENTS: ALL WORK, CONSTRUCTION METHODS AND MATERIALS SHALL COMPLY WITH ALL APPLICABLE STATE AND FEDERAL SAFETY, OCCUPATIONAL, HEALTH AND ENVIRONMENTAL REGULATIONS AS WELL AS NFPA AND ANSI CODES AS APPLICABLE.
8. PRE-CONSTRUCTION MEETING: CONTRACTOR SHALL ATTEND PRE-CONSTRUCTION MEETING FOR COORDINATION WITH MUNICIPALITY, AGENCIES AND UTILITY COMPANIES. ITEMS FOR DISCUSSION WILL INCLUDE SCHEDULE, INSPECTION SERVICES, TESTING OF PUBLIC UTILITIES AND FINAL AS-BUILT DOCUMENTS.
9. CONSTRUCTION INSPECTIONS & FINAL TESTING: CONTRACTOR IS RESPONSIBLE TO NOTIFY ALL INSPECTION AGENCIES THREE (3) WORKING DAYS PRIOR TO START OF CONSTRUCTION AND ARRANGE FOR ON-SITE INSPECTION. PUBLIC UTILITIES SHALL BE TESTED PER LOCAL AND COUNTY AGENCY REQUIREMENTS WITH INSPECTORS FROM BOTH AGENCIES PRESENT. THE CONTRACTOR SHALL NOT CONNECT TO THE EXISTING PUBLIC UTILITY UNTIL THE NEW UTILITY IS TESTED AND APPROVED BY THE AGENCIES.

WHITE LAKE TOWNSHIP STANDARD NOTES:

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TOWNSHIP'S CURRENT STANDARDS AND SPECIFICATIONS.
2. THE CONTRACTOR SHALL NOTIFY THE TOWNSHIP ENGINEER AND/OR THE AUTHORITY HAVING JURISDICTION, 48 HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION.
3. CONTRACTOR SHALL CONTACT MISS DIG AT 800-482-7171, 72 HOURS IN ADVANCE OF CONSTRUCTION, FOR EXISTING UNDERGROUND UTILITY LOCATIONS.
4. IN ORDER TO VERIFY COMPLIANCE WITH APPROVED PLANS, FULL-TIME CONSTRUCTION OBSERVATION WILL GENERALLY BE REQUIRED DURING ALL PHASES OF UNDERGROUND SITE CONSTRUCTION INCLUDING INSTALLATION OF SANITARY SEWER, STORM SEWERS, DRAINAGE WATER MAINS AND APPURTENANCES AS WELL AS PRIVATE STREET CURBING AND PAVING CONSTRUCTION. INTERMITTENT OBSERVATIONS WILL BE MADE FOR SITE GRADING, PARKING LOT CURBING AND PAVING, RETAINING WALL CONSTRUCTION AND OTHER SURFACE ACTIVITY.



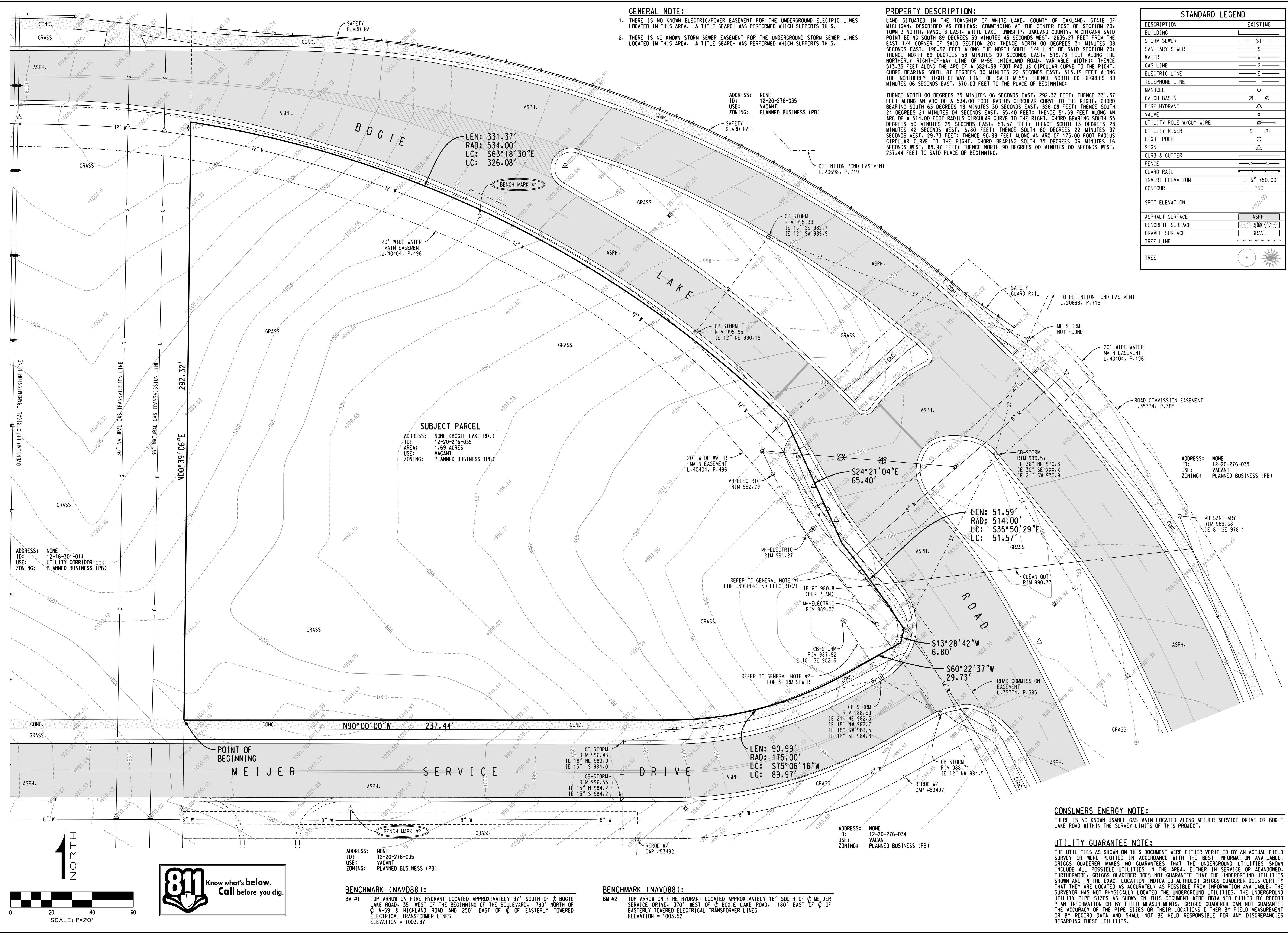
NO.	DATE	REVISION OR ISSUE
03-18-24		PRELIMINARY SPA
02-08-24		PRELIMINARY SPA
01-04-24		PRE APPLICATION MEETING
10-19-23		PRE APPLICATION MEETING

DRAWN	DESIGNED	CHECKED	FIELD CREW
	BRZEZINSKI	QUADERER	CB / RO

CULVER'S
NORTHEAST 1/4 SEC. 20
TOWNSHIP 3N, RANGE 8E
BOGIE LAKE ROAD
WHITE LAKE TWP., MI
COVER SHEET

Griggs Quaderer, Inc.
8308 OFFICE PARK DRIVE
GRAND BLANC, MI 48439
WWW.GQINCORP.COM
PH: (810) 695-0154
FX: (810) 695-0158
CIVIL ENGINEERING · LAND SURVEYING
SITE PLANNING
10th ANNIVERSARY 2004 - 2023

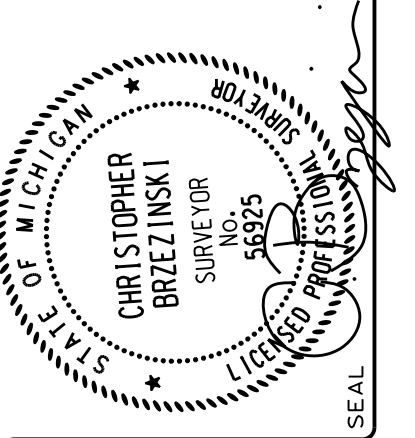
JOB NO.: 230601
PHASE: P-SPA
C000



GENERAL NOTE:
 1. THERE IS NO KNOWN ELECTRIC/POWER EASEMENT FOR THE UNDERGROUND ELECTRIC LINES LOCATED IN THIS AREA. A TITLE SEARCH WAS PERFORMED WHICH SUPPORTS THIS.
 2. THERE IS NO KNOWN STORM SEWER EASEMENT FOR THE UNDERGROUND STORM SEWER LINES LOCATED IN THIS AREA. A TITLE SEARCH WAS PERFORMED WHICH SUPPORTS THIS.

PROPERTY DESCRIPTION:
 LAND SITUATED IN THE TOWNSHIP OF WHITE LAKE, COUNTY OF OAKLAND, STATE OF MICHIGAN, DESCRIBED AS FOLLOWS: COMMENCING AT THE CENTER POST OF SECTION 20, TOWN 3 NORTH, RANGE 8 EAST, WHITE LAKE TOWNSHIP, OAKLAND COUNTY, MICHIGAN; SAID POINT BEING SOUTH 89 DEGREES 59 MINUTES 45 SECONDS WEST, 2635.27 FEET FROM THE EAST 1/4 CORNER OF SAID SECTION 20; THENCE NORTH 00 DEGREES 31 MINUTES 08 SECONDS EAST, 198.92 FEET ALONG THE NORTH-SOUTH 1/4 LINE OF SAID SECTION 20; THENCE NORTH 89 DEGREES 58 MINUTES 09 SECONDS EAST, 519.78 FEET ALONG THE NORTHERLY RIGHT-OF-WAY LINE OF M-59 (HIGHLAND ROAD, VARIABLE WIDTH); THENCE 513.35 FEET ALONG THE ARC OF A 5821.58 FOOT RADIUS CIRCULAR CURVE TO THE RIGHT, CHORD BEARING SOUTH 87 DEGREES 30 MINUTES 22 SECONDS EAST, 513.19 FEET ALONG THE NORTHERLY RIGHT-OF-WAY LINE OF SAID M-59; THENCE NORTH 00 DEGREES 39 MINUTES 06 SECONDS EAST, 370.03 FEET TO THE PLACE OF BEGINNING;
 THENCE NORTH 00 DEGREES 39 MINUTES 06 SECONDS EAST, 292.32 FEET; THENCE 331.37 FEET ALONG AN ARC OF A 534.00 FOOT RADIUS CIRCULAR CURVE TO THE RIGHT, CHORD BEARING SOUTH 65 DEGREES 18 MINUTES 30 SECONDS EAST, 326.08 FEET; THENCE SOUTH 24 DEGREES 21 MINUTES 04 SECONDS EAST, 65.40 FEET; THENCE 51.59 FEET ALONG AN ARC OF A 514.00 FOOT RADIUS CIRCULAR CURVE TO THE RIGHT, CHORD BEARING SOUTH 35 DEGREES 50 MINUTES 29 SECONDS EAST, 51.57 FEET; THENCE SOUTH 13 DEGREES 28 MINUTES 42 SECONDS WEST, 6.80 FEET; THENCE SOUTH 60 DEGREES 22 MINUTES 37 SECONDS WEST, 29.73 FEET; THENCE 90.99 FEET ALONG AN ARC OF 175.00 FOOT RADIUS CIRCULAR CURVE TO THE RIGHT, CHORD BEARING SOUTH 75 DEGREES 06 MINUTES 16 SECONDS WEST, 89.97 FEET; THENCE NORTH 90 DEGREES 00 MINUTES 00 SECONDS WEST, 237.44 FEET TO SAID PLACE OF BEGINNING.

STANDARD LEGEND	
DESCRIPTION	EXISTING
BUILDING	—
STORM SEWER	— ST —
SANITARY SEWER	— S —
WATER	— W —
GAS LINE	— G —
ELECTRIC LINE	— E —
TELEPHONE LINE	— T —
MANHOLE	○
CATCH BASIN	⊗
FIRE HYDRANT	△
VALVE	●
UTILITY POLE W/GUY WIRE	⊕
UTILITY RISER	⊞
LIGHT POLE	⊠
SIGN	△
CURB & GUTTER	—
FENCE	— x —
GUARD RAIL	— x —
INVERT ELEVATION	IE 6" 750.00
CONTOUR	--- 750 ---
SPOT ELEVATION	+750.00
ASPHALT SURFACE	ASPH.
CONCRETE SURFACE	CONC.
GRAVEL SURFACE	GRAV.
TREE LINE	—
TREE	⊙



DRAWN	03-18-24	PRELIMINARY SPA
DESIGNED	02-08-24	PRELIMINARY SPA
CHECKED	01-04-24	PRE APPLICATION MEETING
FIELD CREW	10-19-23	PRE APPLICATION MEETING
NO.	DATE	SUBJECT
		REVISION OR ISSUE

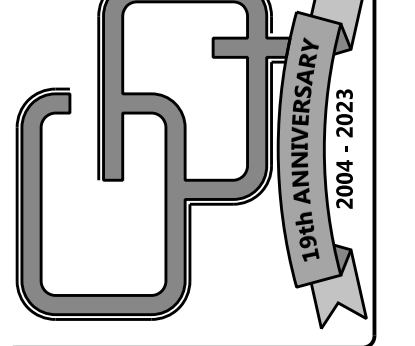
DRAWN	BRZEZINSKI
DESIGNED	QUADERER
CHECKED	QUADERER
FIELD CREW	CB / RO

CULVER'S
 NORTH EAST 1/4 SEC. 20
 TOWNSHIP 3N, RANGE 8E
 BOGIE LAKE ROAD
 WHITE LAKE TWP., MI

BOUNDARY & TOPOGRAPHIC SURVEY PLAN

Griggs Quaderer, Inc.
 8308 OFFICE PARK DRIVE
 GRAND BLANC, MI 48499
 WWW.GQINCORP.COM
 PH: (810) 695-0154
 FX: (810) 695-0158

CIVIL ENGINEERING · LAND SURVEYING
 SITE PLANNING



PHASE: P. SPA
 JOB NO.: 230601
 C100

SUBJECT PARCEL
 ADDRESS: NONE (BOGIE LAKE RD.)
 ID: 12-20-276-035
 AREA: 1.69 ACRES
 USE: VACANT
 ZONING: PLANNED BUSINESS (PB)

ADDRESS: NONE
 ID: 12-16-301-011
 USE: UTILITY CORRIDOR
 ZONING: PLANNED BUSINESS (PB)

ADDRESS: NONE
 ID: 12-20-276-035
 USE: VACANT
 ZONING: PLANNED BUSINESS (PB)

ADDRESS: NONE
 ID: 12-20-276-034
 USE: VACANT
 ZONING: PLANNED BUSINESS (PB)

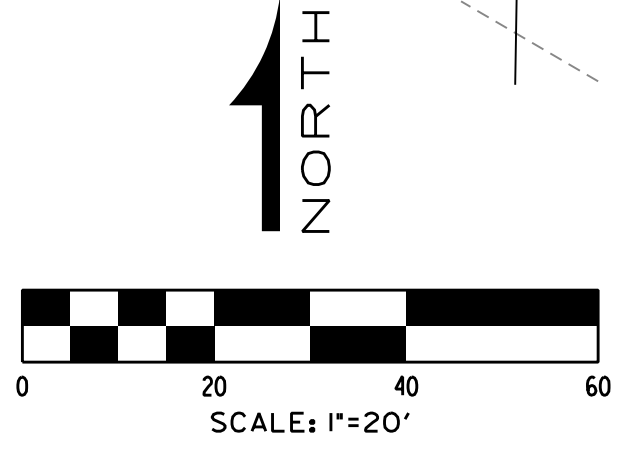
ADDRESS: NONE
 ID: 12-20-276-035
 USE: VACANT
 ZONING: PLANNED BUSINESS (PB)

BENCHMARK (NAVD88):
 BM #1 TOP ARROW ON FIRE HYDRANT LOCATED APPROXIMATELY 37' SOUTH OF Q BOGIE LAKE ROAD, 35' WEST OF THE BEGINNING OF THE BOULEVARD, 190' NORTH OF Q M-59 & HIGHLAND ROAD AND 250' EAST OF Q OF EASTERLY TOWERED ELECTRICAL TRANSFORMER LINES
 ELEVATION = 1003.87

BENCHMARK (NAVD88):
 BM #2 TOP ARROW ON FIRE HYDRANT LOCATED APPROXIMATELY 18' SOUTH OF Q MEIJER SERVICE DRIVE, 370' WEST OF Q BOGIE LAKE ROAD, 180' EAST OF Q OF EASTERLY TOWERED ELECTRICAL TRANSFORMER LINES
 ELEVATION = 1003.52

CONSUMERS ENERGY NOTE:
 THERE IS NO KNOWN USABLE GAS MAIN LOCATED ALONG MEIJER SERVICE DRIVE OR BOGIE LAKE ROAD WITHIN THE SURVEY LIMITS OF THIS PROJECT.

UTILITY GUARANTEE NOTE:
 THE UTILITIES AS SHOWN ON THIS DOCUMENT WERE EITHER VERIFIED BY AN ACTUAL FIELD SURVEY OR WERE PLOTTED IN ACCORDANCE WITH THE BEST INFORMATION AVAILABLE. GRIGGS QUADERER MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN INCLUDE ALL POSSIBLE UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. FURTHERMORE, GRIGGS QUADERER DOES NOT GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH GRIGGS QUADERER DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. THE UNDERGROUND UTILITY PIPE SIZES AS SHOWN ON THIS DOCUMENT WERE OBTAINED EITHER BY RECORD PLAN INFORMATION OR BY FIELD MEASUREMENTS. GRIGGS QUADERER CAN NOT GUARANTEE THE ACCURACY OF THE PIPE SIZES OR THEIR LOCATIONS EITHER BY FIELD MEASUREMENT OR BY RECORD DATA AND SHALL NOT BE HELD RESPONSIBLE FOR ANY DISCREPANCIES REGARDING THESE UTILITIES.





GENERAL SITE / LAYOUT NOTES:

- COORDINATES AND/OR DIMENSIONS SHOWN ON THIS DOCUMENT ARE TO EDGE OF METAL (GUTTER PAN), OUTSIDE FACE OF BUILDING FOUNDATIONS, EDGE OF PAVEMENT, CENTER OF STRUCTURE, CENTERLINE OF STRIPING UNLESS NOTED OTHERWISE.
- NO DIMENSIONS SHALL BE SCALED OFF THE DOCUMENTS. REFER UNCLEAR ITEMS TO THE ENGINEER FOR INTERPRETATION.
- REFER TO ARCHITECTURAL PLANS FOR BUILDING DIMENSIONS, SLAB AND UNDERBED THICKNESS.
- CULVER'S (OWNER) SHALL BE REQUIRED TO REPAIR/REPLACE ANY BROKEN SECTIONS OF CONCRETE WITHIN THE FRONTAGE SIDEWALK ADJACENT TO THE SITE ALONG MEIJER DR. AND BOGIE LAKE RD. AS DETERMINED BY THE TOWNSHIP ENGINEERING CONSULTANT.
- DELIVERIES TO THE STORE WILL BE MADE DURING OFF HOURS TO NOT CONFLICT WITH DAILY CUSTOMER TRAFFIC FLOW.

LAND USE INFORMATION:

CURRENT ZONING: PLANNED BUSINESS (PB)
 PROPOSED ZONING: PLANNED BUSINESS (PB)
 CURRENT USE: VACANT
 PROPOSED USE: FAST FOOD RESTAURANT
 TOTAL SITE AREA: 73,495 SF, 1.69 AC.
 TOTAL BUILDING AREA: 4,085 SF
 LOT COVERAGE BY BLDG: 5.6%

BUILDING		PARKING	
FRONT YARD	50LF	FRONT YARD	20LF
SIDE YARD	20LF	SIDE YARD	10LF
REAR YARD	NA	REAR YARD	NA

NOTE: SIDE AND REAR SETBACKS ARE NOT FIXED IN THE ZONING ORDINANCE AND ARE TO BE DETERMINED/APPROVED BY THE PLANNING COMMISSION. THE SETBACKS LISTED ABOVE ARE ESTIMATED FOR THIS PROJECT AND MEET THE MINIMUM ZONING CODE.

PARKING DATA:			
USE	REQUIREMENTS	PARKING REQUIRED	PARKING PROVIDED
FAST FOOD RESTAURANT	1 SPACES PER 75 SF GFA 4,085 SF / 75 =	54 SPACES	55 SPACES
BARRIER FREE	51 - 75 SPACES	3 SPACES	3 SPACES
TOTAL		54 SPACES	55 SPACES

PAVEMENT LEGEND:

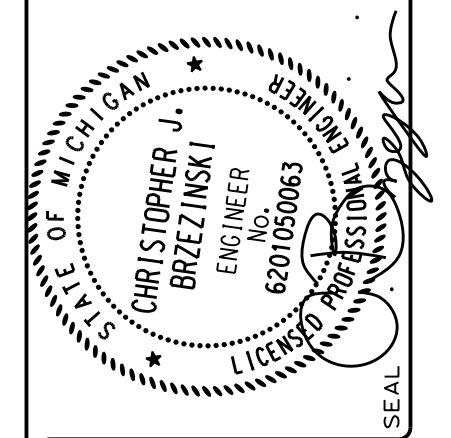
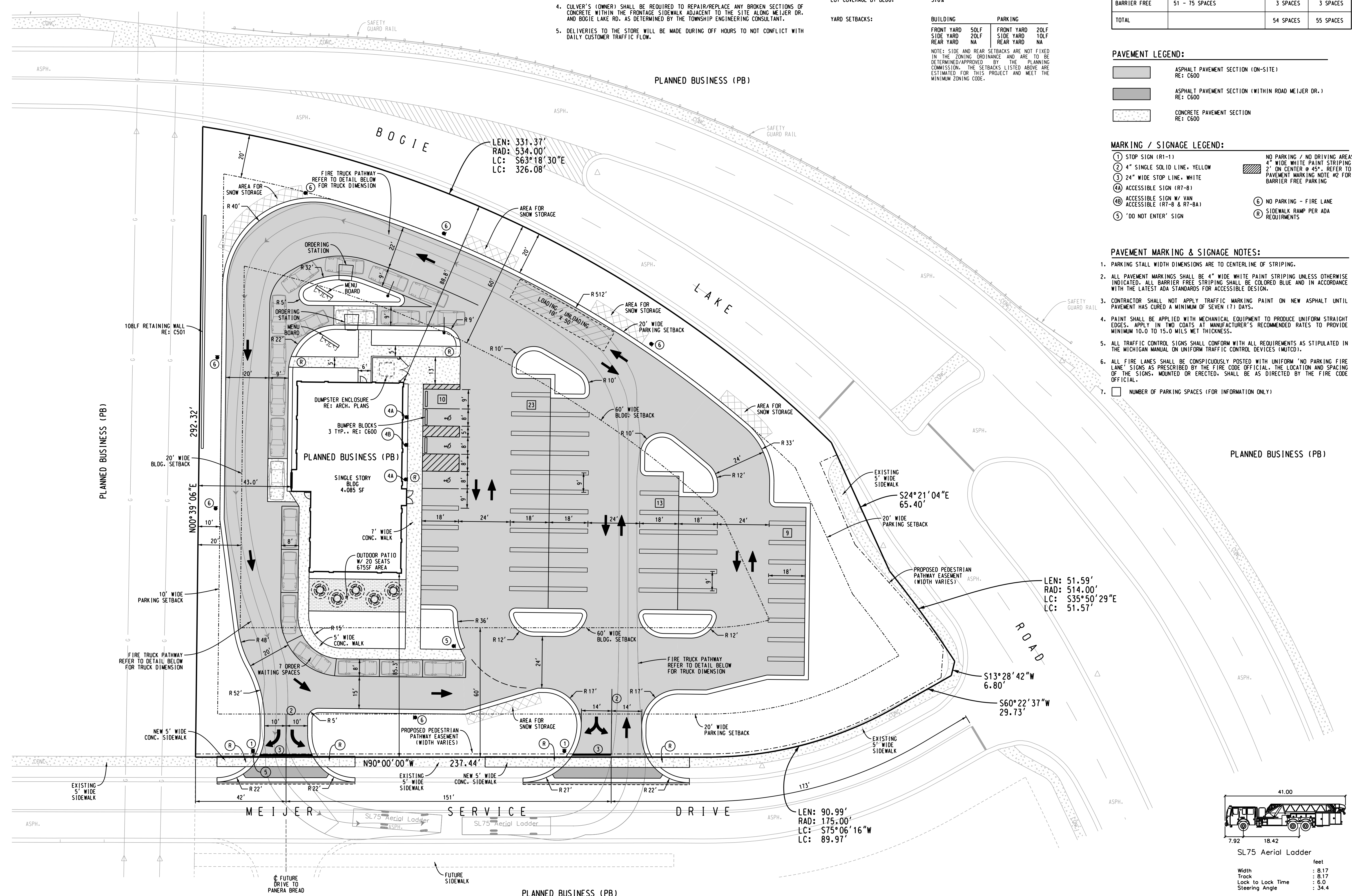
- ASPHALT PAVEMENT SECTION (ON-SITE)
RE: C600
- ASPHALT PAVEMENT SECTION (WITHIN ROAD MEIJER DR.)
RE: C600
- CONCRETE PAVEMENT SECTION
RE: C600

MARKING / SIGNAGE LEGEND:

- ① STOP SIGN (R1-1)
- ② 4" SINGLE SOLID LINE, YELLOW
- ③ 24" WIDE STOP LINE, WHITE
- ④ ACCESSIBLE SIGN (R7-B)
- ⑤ ACCESSIBLE SIGN W/ VAN ACCESSIBLE (R7-B & R7-BA)
- ⑥ NO PARKING - FIRE LANE
- ⑦ 'DO NOT ENTER' SIGN
- ⑧ NO PARKING / NO DRIVING AREAS
- ⑨ 4" WIDE WHITE PAINT STRIPING
- ⑩ 2" ON CENTER @ 45°. REFER TO PAVEMENT MARKING NOTE #2 FOR BARRIER FREE PARKING
- ⑪ SIDEWALK RAMP PER ADA REQUIREMENTS

PAVEMENT MARKING & SIGNAGE NOTES:

- PARKING STALL WIDTH DIMENSIONS ARE TO CENTERLINE OF STRIPING.
- ALL PAVEMENT MARKINGS SHALL BE 4" WIDE WHITE PAINT STRIPING UNLESS OTHERWISE INDICATED. ALL BARRIER FREE STRIPING SHALL BE COLORED BLUE AND IN ACCORDANCE WITH THE LATEST ADA STANDARDS FOR ACCESSIBLE DESIGN.
- CONTRACTOR SHALL NOT APPLY TRAFFIC MARKING PAINT ON NEW ASPHALT UNTIL PAVEMENT HAS CURED A MINIMUM OF SEVEN (7) DAYS.
- PAINT SHALL BE APPLIED WITH MECHANICAL EQUIPMENT TO PRODUCE UNIFORM STRAIGHT EDGES. APPLY IN TWO COATS AT MANUFACTURER'S RECOMMENDED RATES TO PROVIDE MINIMUM 10.0 TO 15.0 MILS WET THICKNESS.
- ALL TRAFFIC CONTROL SIGNS SHALL CONFORM WITH ALL REQUIREMENTS AS STIPULATED IN THE MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- ALL FIRE LANES SHALL BE CONSPICUOUSLY POSTED WITH UNIFORM "NO PARKING FIRE LANE" SIGNS AS PRESCRIBED BY THE FIRE CODE OFFICIAL. THE LOCATION AND SPACING OF THE SIGNS, MOUNTED OR ERECTED, SHALL BE AS DIRECTED BY THE FIRE CODE OFFICIAL.
- NUMBER OF PARKING SPACES (FOR INFORMATION ONLY)



NO.	DATE	SUBJECT	REVISION OR ISSUE
03-18-24		PRELIMINARY SPA	
02-08-24		PRELIMINARY SPA	
01-04-24		PRE APPLICATION MEETING	
10-19-23		PRE APPLICATION MEETING	

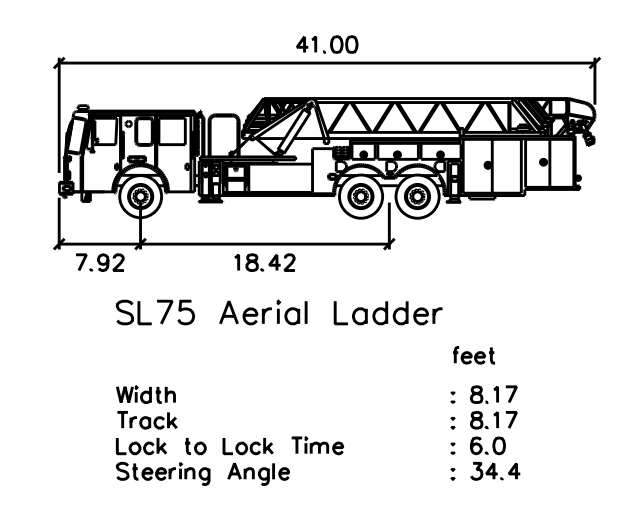
DRAWN	BRZEZINSKI
DESIGNED	QUADERER
CHECKED	QUADERER
FIELD	CREW CB / RO

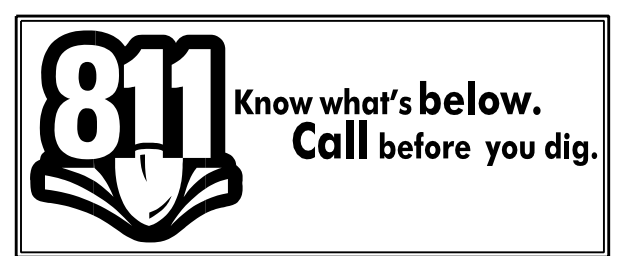
NORTH EAST 1/4 SEC. 20
 TOWNSHIP RANGE-BE
 BOGIE LAKE ROAD
 WHITE LAKE TWP., MI

CULVER'S
 SITE LAYOUT PLAN

Griggs Quaderer, Inc.
 8308 OFFICE PARK DRIVE
 GRAND BLANC, MI 48439
 WWW.GQINCORP.COM
 PH: (810) 695-0154
 FX: (810) 695-0158
 CIVIL ENGINEERING - LAND SURVEYING
 SITE PLANNING

PHASE: P. SPA
 JOB NO.: 230601
 10th Anniversary 2004-2023
C200





BARRIER FREE RAMP LEGEND:

- (R) TYPE R PER MDT DETAIL R-28-K
- (F) TYPE F PER MDT DETAIL R-28-K
- (P) TYPE P PER MDT DETAIL R-28-K

CURB & GUTTER LEGEND:

- (A) STANDARD CURB AND GUTTER.
- (B) STANDARD CURB AND GUTTER WITH REVERSE SLOPE.
- (C) 10 FOOT TRANSITION BETWEEN TYPE (A) AND TYPE (B)
- (D) 5 FOOT CURB END TRANSITION.
- (E) MATCH EXISTING PAVEMENT OR CURB ELEVATION.

REAR BUILDING DETAILED GRADING

SCALE: 1" = 10'

GRADING NOTES:

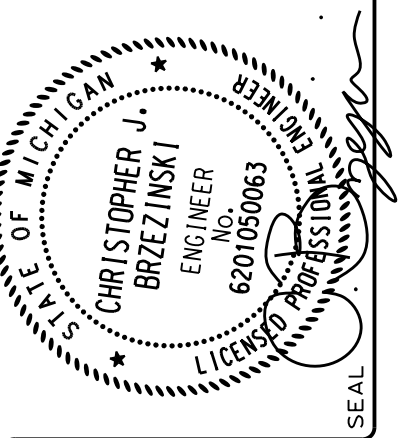
1. ALL PROPOSED SPOT ELEVATIONS IN PAVED AREAS ARE TO TOP OF PAVEMENT UNLESS NOTED OTHERWISE.
2. CONTOURS SHOWN ARE FOR REFERENCE ONLY. BASE CONSTRUCTION EFFORTS ON PROPOSED SPOT ELEVATIONS ONLY.
3. "BARRIER FREE" PARKING AND SIDEWALK RAMP SHALL CONFORM IN ALL RESPECTS TO THE MICHIGAN ADA (AMERICANS WITH DISABILITIES ACT) REQUIREMENTS.
4. CONTRACTOR SHALL ADJUST ANY UTILITY ELEMENT/STRUCTURE MEANT TO BE FLUSH WITH GRADE (CLEAN OUT, VALVE BOXES, MANHOLES, CATCH BASINS, INLETS, ETC.) WHICH ARE AFFECTED BY SITE WORK OR GRADE CHANGES, WHETHER SPECIFICALLY NOTED ON PLANS OR NOT. NO ADDITIONAL COSTS FOR THIS WORK WILL BE ACCEPTED. THE CONTRACTOR SHALL OBTAIN ANY NECESSARY PERMITS FOR ADJUSTMENT AT THE CONTRACTOR'S EXPENSE.
5. CONTRACTOR IS RESPONSIBLE FOR CUT AND FILL QUANTITIES. ADDITIONAL COMPENSATION WILL NOT BE ACCEPTED FOR HAULING OF EXCESS AND BORROW MATERIAL TO AND FROM SITE AS WELL AS LABOR COSTS FOR PLACEMENT AND/OR REMOVAL OF OFF-SITE BORROW MATERIAL WHICH BE CLEAN COMPACTIBLE STRUCTURAL FILL MATERIAL (NO ORGANIC MATERIAL) WHICH WILL BE INSPECTED PRIOR TO USE FOR ON-SITE FILL MATERIAL.
6. SITE CONTRACTOR IS RESPONSIBLE TO PROVIDE A STABLE SUBGRADE AT DESIGN ELEVATIONS. ALL PAVED AREAS INCLUDING BUILDING PAD SHALL BE PRODFOLLED & COMPACTED TO MEET 95% OF MAXIMUM DENSITY IN ACCORDANCE WITH ANSI/ASTM D1557.
7. CONTRACTOR SHALL STORE SUFFICIENT TOPSOIL MATERIAL ON-SITE FOR RE-USE IN ALL DISTURBED GREEN AREAS AND NEW LANDSCAPE AREAS.
8. PROVIDE POSITIVE DRAINAGE AT ALL TIMES TO ENSURE NO STANDING WATER. MAINTAIN A MINIMUM SLOPE OF 1.00% IN ALL NEW BITUMINOUS AREAS.

STORM SEWER NOTES:

1. ALL MATERIALS SHALL COMPLY WITH MDT STANDARD SPECIFICATIONS AND/OR LOCAL GOVERNING AGENCIES.
2. STORM SEWER CONVEYANCE: STORM SEWER PIPE 12" AND LARGER SHALL BE C76 CLASS IV RCP. ALL CONVEYANCE SEGMENTS PARTIALLY OR COMPLETELY UNDER PAVEMENT SHALL HAVE FLEXIBLE RUBBER COMPRESSION GASKETS CONFORMING TO ASTM C443 PREMIUM JOINTS. STORM SEWER PIPE 10" AND SMALLER SHALL BE PVC SDR 26 OR AS REQUIRED BY LOCAL GOVERNING AGENCY.
3. STORM SEWER STRUCTURES: REINFORCED CONCRETE IN CONFORMANCE WITH ASTM C478. DEPTH AS INDICATED ON DOCUMENTS. IF MASONRY STRUCTURES ARE ALLOWED, CONCRETE BLOCKS SHALL BE STANDARD 6" x 8" x 12" CURVED UNITS FOLLOWING ASTM C139. CONCRETE BRICK UNITS SHALL BE 2" x 4" x 8" AND FOLLOW ANSI/ASTM C55. GRADE N, TYPE 1.
4. FRAME & COVERS: ALL CATCH BASINS & MANHOLES SHALL BE MANUFACTURED BY EAST JORDAN IRON WORKS (UNLESS ALTERNATE IS APPROVED BY ENGINEER)
 - CATCH BASIN - CURB LINE - EJIW #7045 TYPE M2 GRATE W/ T1 BACK
 - CATCH BASIN - PAVEMENT AREA - EJIW #1040 TYPE M1 GRATE
 - CATCH BASIN - GRASS AREA - EJIW #1130 TYPE O2 BEEHIVE GRATE
 - INLET - GRASS AREA - EJIW #1040 TYPE O2 BEEHIVE GRATE
 - MANHOLE - ALL AREAS - EJIW #1040 TYPE A SOLID COVER
5. UNDERDRAIN: 4" PERFORATED, FLEXIBLE HDPE TUBING. COUPLING BAND. PIPE SHALL BE FILTER SOCK WRAPPED AND FITTED WITH END CAPS. PERFORATIONS SHALL BE UNIFORMLY DISTRIBUTED ALONG THE TOP OF THE BOTTOM SECTION IN ACCORDANCE WITH AASHTO M252 PERFORATION REQUIREMENTS.

STORM SEWER NOTES:

1. ALL MATERIALS SHALL COMPLY WITH MDT STANDARD SPECIFICATIONS AND/OR WHITE LAKE TOWNSHIP STANDARD DETAILS. REFER TO WHITE LAKE TOWNSHIP STANDARD STORM SEWER DETAIL SHEET ATTACHED WITH THIS SET OF DOCUMENTS FOR DETAILS AND STANDARD NOTES.
2. CONTACT TOWNSHIP ENGINEER 48 HOURS PRIOR TO CONSTRUCTION TO SCHEDULE INSPECTION. FULL TIME INSPECTION WILL BE REQUIRED FOR ALL UNDERGROUND STORM SEWER CONSTRUCTION. PHONE: (248) 334-9901.
3. THE CONTRACTOR SHALL CONTACT MISS DIG 72 HOURS BEFORE CONSTRUCTION AT (800) 482-1171 TO LOCATE EXISTING UNDERGROUND UTILITIES.
4. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL HAVE IN HIS POSSESSION A CURRENT SOIL EROSION CONTROL PERMIT AS ISSUED BY WHITE LAKE TOWNSHIP.
5. FOR MATERIAL NOTES, SIZING AND CONSTRUCTION PRACTICES, CONTRACTOR SHALL REFER TO WHITE LAKE TOWNSHIP STANDARD STORM SEWER DETAIL SHEET.



NO.	DATE	SUBJECT
03-18-24	02-08-24	PRELIMINARY SPA
01-04-24	01-04-24	PRELIMINARY SPA
10-19-23	10-19-23	PRE APPLICATION MEETING
		REVISION OR ISSUE

DRAWN	DESIGNED	CHECKED	FIELD CREW
	BRZEZINSKI	QUADERER	CB / RO

CULVER'S

NORTHEAST 1/4 SEC. 20
TOWNSHIP 3N, RANGE 8E

BOGIE LAKE ROAD
WHITE LAKE TWP., MI

SITE GRADING PLAN

Griggs Quaderer, Inc.

8308 OFFICE PARK DRIVE
GRAND BLANC, MI 48499

WWW.GQINCORP.COM
PH: (810) 695-0154
FX: (810) 695-0158

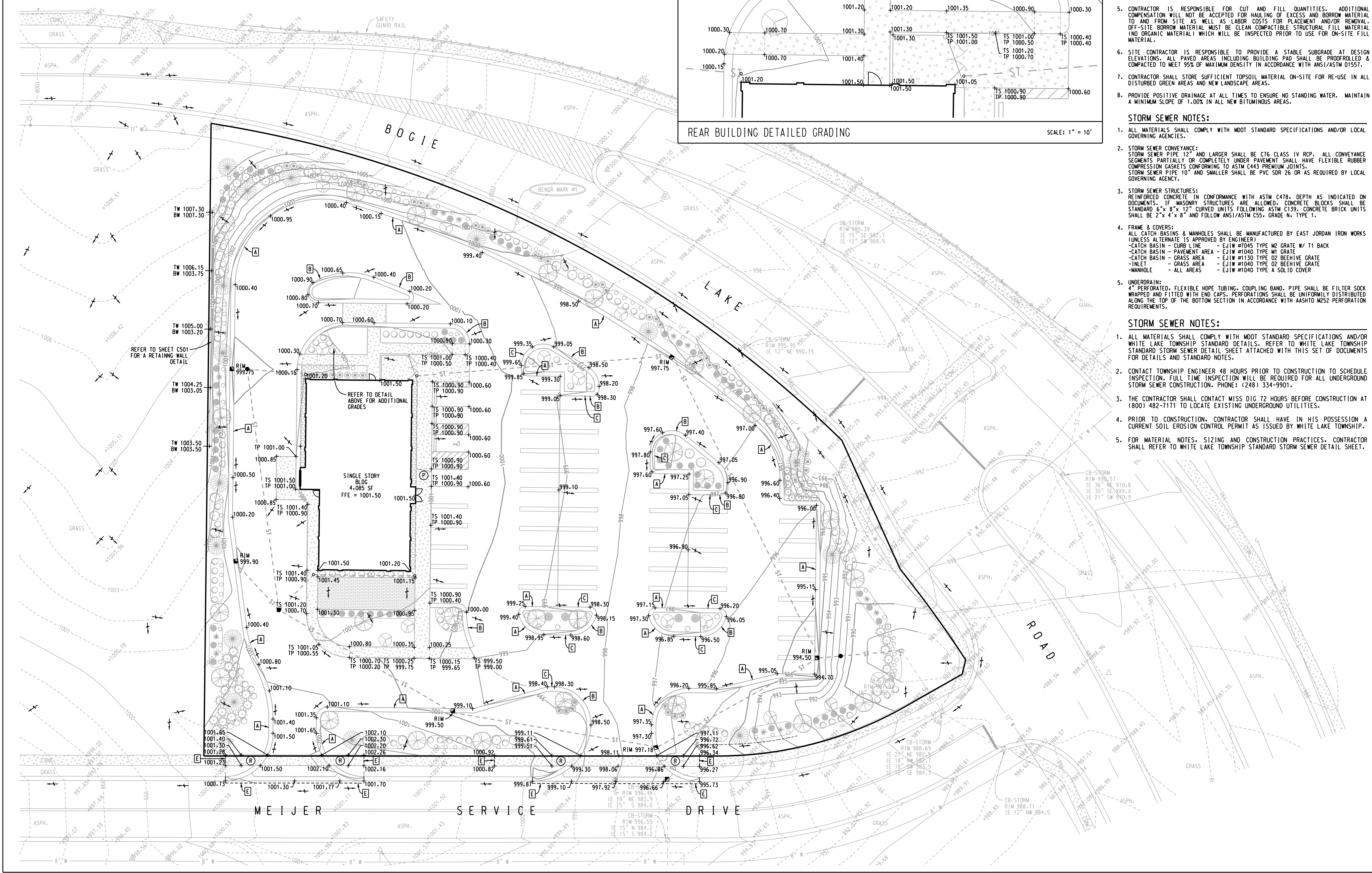
**CIVIL ENGINEERING - LAND SURVEYING
SITE PLANNING**

10th ANNIVERSARY 2004 - 2023

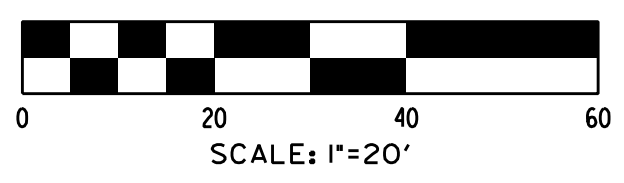
PHASE: P. SPA

JOB NO.: 230601

C300



NORTH

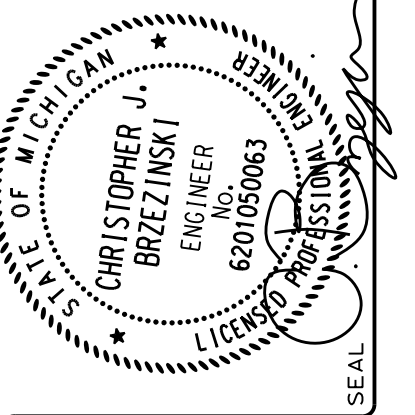


STORM SEWER NOTES:

1. ALL MATERIALS SHALL COMPLY WITH MDT STANDARD SPECIFICATIONS AND/OR WHITE LAKE TOWNSHIP STANDARD DETAILS. REFER TO WHITE LAKE TOWNSHIP STANDARD STORM SEWER DETAIL SHEET ATTACHED WITH THIS SET OF DOCUMENTS FOR DETAILS AND STANDARD NOTES.
2. CONTACT TOWNSHIP ENGINEER 48 HOURS PRIOR TO CONSTRUCTION TO SCHEDULE INSPECTION. FULL TIME INSPECTION WILL BE REQUIRED FOR ALL UNDERGROUND STORM SEWER CONSTRUCTION. PHONE: (248) 334-9901.
3. THE CONTRACTOR SHALL CONTACT MISS DIG 72 HOURS BEFORE CONSTRUCTION AT (800) 482-7171 TO LOCATE EXISTING UNDERGROUND UTILITIES.
4. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL HAVE IN HIS POSSESSION A CURRENT SOIL EROSION CONTROL PERMIT AS ISSUED BY WHITE LAKE TOWNSHIP.
5. FOR MATERIAL NOTES, SIZING AND CONSTRUCTION PRACTICES, CONTRACTOR SHALL REFER TO WHITE LAKE TOWNSHIP STANDARD STORM SEWER DETAIL SHEET.

STORM SEWER NOTES:

1. ALL MATERIALS SHALL COMPLY WITH MDT STANDARD SPECIFICATIONS AND/OR LOCAL GOVERNING AGENCIES.
2. STORM SEWER CONVEYANCE: STORM SEWER PIPE 12" AND LARGER SHALL BE C76 CLASS IV RCP. ALL CONVEYANCE SEGMENTS PARTIALLY OR COMPLETELY UNDER PAVEMENT SHALL HAVE FLEXIBLE RUBBER COMPRESSION GASKETS CONFORMING TO ASTM C443 PREMIUM JOINTS. STORM SEWER PIPE 10" AND SMALLER SHALL BE PVC SDR 26 OR AS REQUIRED BY LOCAL GOVERNING AGENCY.
3. STORM SEWER STRUCTURES: REINFORCED CONCRETE IN CONFORMANCE WITH ASTM C478. DEPTH AS INDICATED ON DOCUMENTS. IF MASONRY STRUCTURES ARE ALLOWED, CONCRETE BLOCKS SHALL BE STANDARD 6" x 8" x 12" CURVED UNITS FOLLOWING ASTM C139. CONCRETE BRICK UNITS SHALL BE 2" x 4" x 8" AND FOLLOW ANSI/ASTM C55. GRADE N, TYPE 1.
4. FRAME & COVERS: ALL CATCH BASINS & MANHOLES SHALL BE MANUFACTURED BY EAST JORDAN IRON WORKS (UNLESS ALTERNATE IS APPROVED BY ENGINEER)
 - CATCH BASIN - CURB LINE - EJIW #1045 TYPE M2 GRATE W/ T1 BACK
 - CATCH BASIN - PAVEMENT AREA - EJIW #1040 TYPE M1 GRATE
 - CATCH BASIN - GRASS AREA - EJIW #1130 TYPE O2 BEEHIVE GRATE
 - INLET - GRASS AREA - EJIW #1040 TYPE O2 BEEHIVE GRATE
 - MANHOLE - ALL AREAS - EJIW #1040 TYPE A SOLID COVER
5. UNDERDRAIN: 4" PERFORATED, FLEXIBLE HOPE TUBING, COUPLING BAND. PIPE SHALL BE FILTER SOCK WRAPPED AND FITTED WITH END CAPS. PERFORATIONS SHALL BE UNIFORMLY DISTRIBUTED ALONG THE TOP OF THE BOTTOM SECTION IN ACCORDANCE WITH AASHTO M252 PERFORATION REQUIREMENTS.



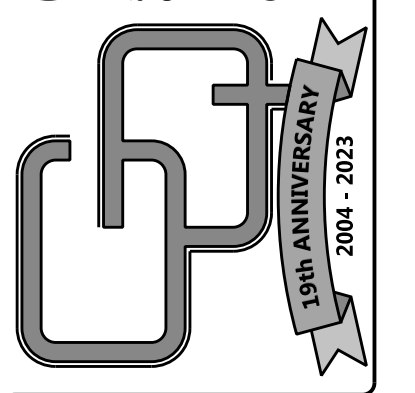
NO.	DATE	REVISION OR ISSUE
03-18-24	PRELIMINARY SPA	
02-08-24	PRELIMINARY SPA	
01-04-24	PRE APPLICATION MEETING	
10-19-23	PRE APPLICATION MEETING	

DRAWN	BRZEZINSKI
DESIGNED	QUADERER
CHECKED	QUADERER
FIELD CREW	CB / RO

NORTH EAST 1/4 SEC. 20
TOWNSHIP 3N, RANGE 8E

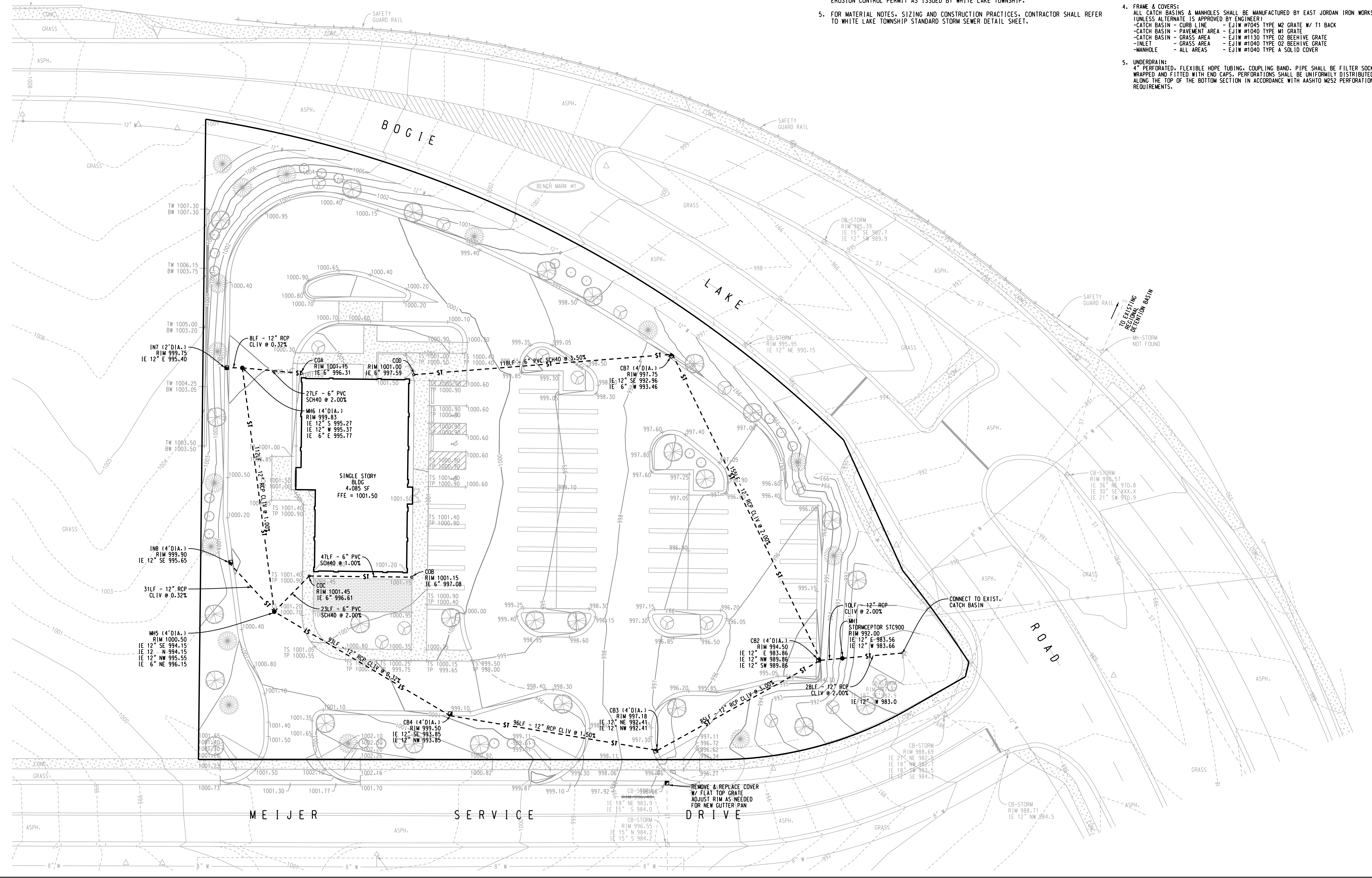
CULVER'S
BOGIE LAKE ROAD
WHITE LAKE TWP., MI

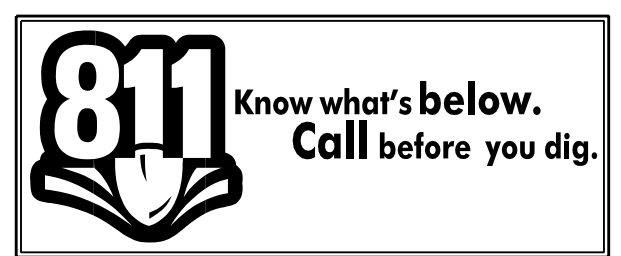
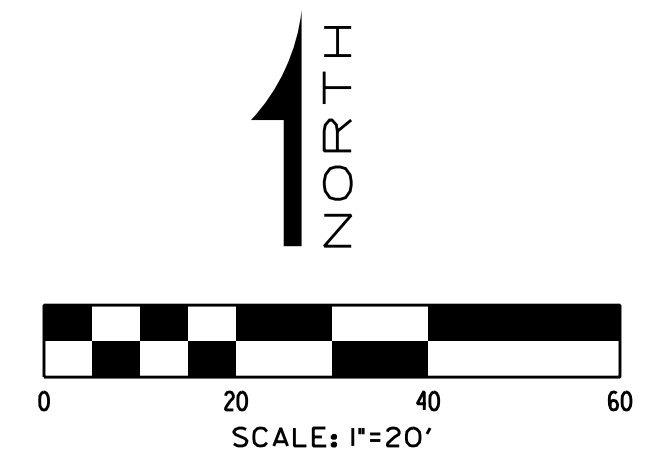
Griggs Quaderer, Inc.
8308 OFFICE PARK DRIVE
GRAND BLANC, MI 48409
WWW.GQINCORP.COM
PH: (810) 695-0154
FX: (810) 695-0158



PHASE: P. SPA
JOB NO.: 230601
C301

SITE STORM SEWER PLAN





CONSTRUCTION SEQUENCE:

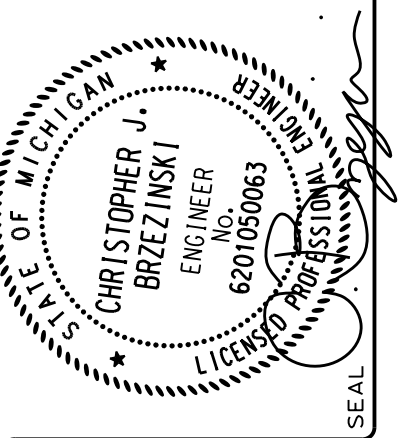
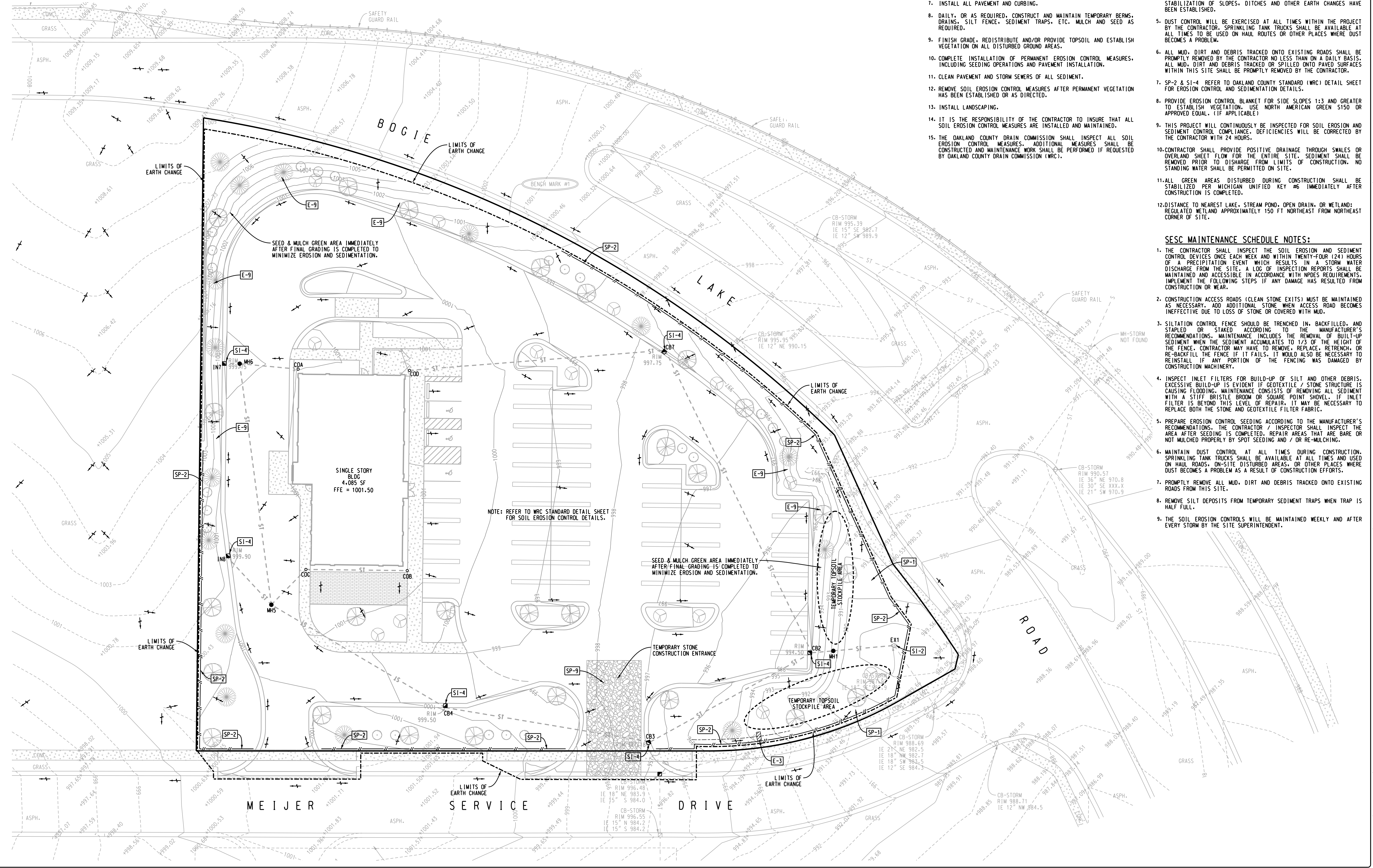
1. PROVIDE EROSION CONTROL MEASURES THAT WILL BE USED AS PART OF THIS WORK. INSTALL ADDITIONAL MEASURES AS REQUIRED BY THESE DRAWINGS AND AS FIELD CONDITIONS DICTATE IN ACCORDANCE WITH OAKLAND COUNTY DRAIN COMMISSION STANDARDS AND SPECIFICATIONS.
2. STRIP TOPSOIL. STOCKPILE ON SITE FOR LATER REUSE.
3. PERFORM MASS GRADING OPERATIONS.
4. BEGIN CONSTRUCTION OF BUILDING PAD AND FOUNDATION.
5. CONSTRUCT STORM SEWER SYSTEM COMPLETE. IMMEDIATELY INSTALL STONE FILTERS ON ALL CATCH BASINS AND INLETS.
6. INSTALL ALL UTILITIES.
7. INSTALL ALL PAVEMENT AND CURBING.
8. DAILY, OR AS REQUIRED, CONSTRUCT AND MAINTAIN TEMPORARY BERMS, DRAINS, SILT FENCE, SEDIMENT TRAPS, ETC. MULCH AND SEED AS REQUIRED.
9. FINISH GRADE. REDISTRIBUTE AND/OR PROVIDE TOPSOIL AND ESTABLISH VEGETATION ON ALL DISTURBED GROUND AREAS.
10. COMPLETE INSTALLATION OF PERMANENT EROSION CONTROL MEASURES, INCLUDING SEEDING OPERATIONS AND PAVEMENT INSTALLATION.
11. CLEAN PAVEMENT AND STORM SEWERS OF ALL SEDIMENT.
12. REMOVE SOIL EROSION CONTROL MEASURES AFTER PERMANENT VEGETATION HAS BEEN ESTABLISHED OR AS DIRECTED.
13. INSTALL LANDSCAPING.
14. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSURE THAT ALL SOIL EROSION CONTROL MEASURES ARE INSTALLED AND MAINTAINED.
15. THE OAKLAND COUNTY DRAIN COMMISSION SHALL INSPECT ALL SOIL EROSION CONTROL MEASURES. ADDITIONAL MEASURES SHALL BE CONSTRUCTED AND MAINTENANCE WORK SHALL BE PERFORMED IF REQUESTED BY OAKLAND COUNTY DRAIN COMMISSION (WRC).

SOIL EROSION CONTROL NOTES:

1. ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE OAKLAND COUNTY DRAIN COMMISSION (WRC) REQUIREMENTS AND SPECIFICATIONS.
2. DAILY INSPECTIONS SHALL BE MADE BY THE CONTRACTOR TO DETERMINE EFFECTIVENESS OF EROSION AND SEDIMENT CONTROL MEASURES, AND ANY NECESSARY REPAIRS SHALL BE PERFORMED WITHOUT DELAY.
3. ANY EROSION OR SEDIMENT FROM WORK ON THIS SITE SHALL BE CONTAINED ON THE SITE AND NOT BE ALLOWED TO COLLECT ON ANY OFF-SITE AREAS OR IN WATERWAYS. WATERWAYS INCLUDE BOTH NATURAL AND MANMADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES AND PONDS.
4. CONTRACTOR SHALL APPLY TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES AS REQUIRED AND AS DIRECTED ON THESE PLANS. CONTRACTOR SHALL REMOVE TEMPORARY MEASURES AS SOON AS PERMANENT STABILIZATION OF SLOPES, DITCHES AND OTHER EARTH CHANGES HAVE BEEN ESTABLISHED.
5. DUST CONTROL WILL BE EXERCISED AT ALL TIMES WITHIN THE PROJECT BY THE CONTRACTOR. SPRINKLING TANK TRUCKS SHALL BE AVAILABLE AT ALL TIMES TO BE USED ON HAUL ROUTES OR OTHER PLACES WHERE DUST BECOMES A PROBLEM.
6. ALL MUD, DIRT AND DEBRIS TRACKED ONTO EXISTING ROADS SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR NO LESS THAN ON A DAILY BASIS. ALL MUD, DIRT AND DEBRIS TRACKED OR SPILLED ONTO PAVED SURFACES WITHIN THIS SITE SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR.
7. SP-2 & SI-4 REFER TO OAKLAND COUNTY STANDARD (WRC) DETAIL SHEET FOR EROSION CONTROL AND SEDIMENTATION DETAILS.
8. PROVIDE EROSION CONTROL BLANKET FOR SIDE SLOPES 1:3 AND GREATER TO ESTABLISH VEGETATION. USE NORTH AMERICAN GREEN S150 OR APPROVED EQUAL. (IF APPLICABLE)
9. THIS PROJECT WILL CONTINUOUSLY BE INSPECTED FOR SOIL EROSION AND SEDIMENT CONTROL COMPLIANCE. DEFICIENCIES WILL BE CORRECTED BY THE CONTRACTOR WITH 24 HOURS.
10. CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE THROUGH SWALES OR OVERLAND SHEET FLOW FOR THE ENTIRE SITE. SEDIMENT SHALL BE REMOVED PRIOR TO DISCHARGE FROM LIMITS OF CONSTRUCTION. NO STANDING WATER SHALL BE PERMITTED ON SITE.
11. ALL GREEN AREAS DISTURBED DURING CONSTRUCTION SHALL BE STABILIZED PER MICHIGAN UNIFIED KEY #6 IMMEDIATELY AFTER CONSTRUCTION IS COMPLETED.
12. DISTANCE TO NEAREST LAKE, STREAM POND, OPEN DRAIN, OR WETLAND: REGULATED WETLAND APPROXIMATELY 150 FT NORTHEAST FROM NORTHEAST CORNER OF SITE.

SESC MAINTENANCE SCHEDULE NOTES:

1. THE CONTRACTOR SHALL INSPECT THE SOIL EROSION AND SEDIMENT CONTROL DEVICES ONCE EACH WEEK AND WITHIN TWENTY-FOUR (24) HOURS OF A PRECIPITATION EVENT WHICH RESULTS IN STORM WATER DISCHARGE FROM THE SITE. A LOG OF INSPECTION REPORTS SHALL BE MAINTAINED AND ACCESSIBLE IN ACCORDANCE WITH NPDES REQUIREMENTS. IMPLEMENT THE FOLLOWING STEPS IF ANY DAMAGE HAS RESULTED FROM CONSTRUCTION OR WEAR.
2. CONSTRUCTION ACCESS ROADS (CLEAN STONE EXITS) MUST BE MAINTAINED AS NECESSARY. ADD ADDITIONAL STONE WHEN ACCESS ROAD BECOMES INEFFECTIVE DUE TO LOSS OF STONE OR COVERED WITH MUD.
3. SILTATION CONTROL FENCE SHOULD BE TRENCHED IN, BACKFILLED, AND STAPLED OR STAKED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS. MAINTENANCE INCLUDES THE REMOVAL OF BUILT-UP SEDIMENT WHEN THE SEDIMENT ACCUMULATES TO 1/3 OF THE HEIGHT OF THE FENCE. CONTRACTOR MAY HAVE TO REMOVE, REPLACE, RETRENCH, OR RE-BACKFILL THE FENCE IF IT FAILS. IT WILL ALSO BE NECESSARY TO REINSTALL IF ANY PORTION OF THE FENCING WAS DAMAGED BY CONSTRUCTION MACHINERY.
4. INSPECT INLET FILTERS FOR BUILD-UP OF SILT AND OTHER DEBRIS. EXCESSIVE BUILD-UP IS EVIDENT IF GEOTEXTILE / STONE STRUCTURE IS CAUSING FLOODING. MAINTENANCE CONSISTS OF REMOVING ALL SEDIMENT 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 STONE AND GEOTEXTILE FILTER FABRIC.
5. PREPARE EROSION CONTROL SEEDING ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS. THE CONTRACTOR / INSPECTOR SHALL INSPECT THE AREA AFTER SEEDING IS COMPLETED. REPAIR AREAS THAT ARE BARE OR NOT MULCHED PROPERLY BY SPOT SEEDING AND / OR RE-MULCHING.
6. MAINTAIN DUST CONTROL AT ALL TIMES DURING CONSTRUCTION. SPRINKLING TANK TRUCKS SHALL BE AVAILABLE AT ALL TIMES AND USED ON HAUL ROADS, ON-SITE DISTURBED AREAS, OR OTHER PLACES WHERE DUST BECOMES A PROBLEM AS A RESULT OF CONSTRUCTION EFFORTS.
7. PROMPTLY REMOVE ALL MUD, DIRT AND DEBRIS TRACKED ONTO EXISTING ROADS FROM THIS SITE.
8. REMOVE SILT DEPOSITS FROM TEMPORARY SEDIMENT TRAPS WHEN TRAP IS HALF FULL.
9. THE SOIL EROSION CONTROLS WILL BE MAINTAINED WEEKLY AND AFTER EVERY STORM BY THE SITE SUPERINTENDENT.



NO.	DATE	SUBJECT	REVISION OR ISSUE
03-18-24	03-18-24	PRELIMINARY SPA	
02-08-24	02-08-24	PRELIMINARY SPA	
01-04-24	01-04-24	PRE APPLICATION MEETING	
10-19-23	10-19-23	PRE APPLICATION MEETING	

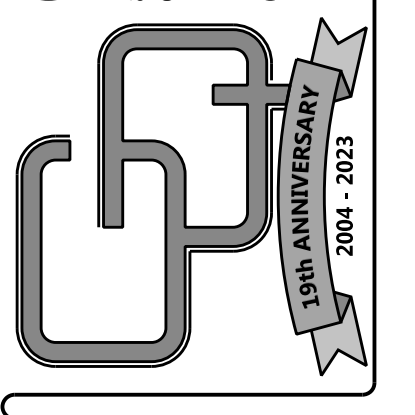
DRAWN	BRZEZINSKI
DESIGNED	BRZEZINSKI
CHECKED	QUADERER
FIELD CREW	CB / RO

NORTHWEST 1/4 SEC 20
TOWNSHIP 3N, RANGE 8E
BOGIE LAKE ROAD
WHITE LAKE TWP., MI

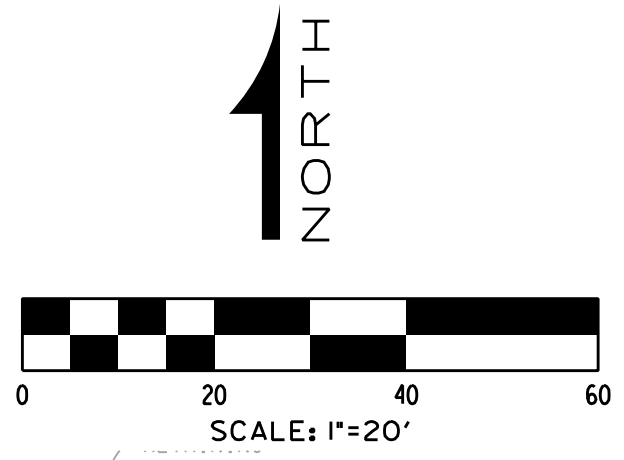
CULVER'S
SOIL EROSION CONTROL PLAN

Griggs Quaderer, Inc.
8308 OFFICE PARK DRIVE
GRAND BLANC, MI 48409
PH: (810) 695-0154
FX: (810) 695-0158

WWW.GQINCORP.COM
CIVIL ENGINEERING · LAND SURVEYING
SITE PLANNING



PHASE: P. SPA
JOB NO.: 230601
C302



Runoff Coefficient Calculations													
Drainage Area	Pervious			Impervious			Roof Top		Runoff		Drainage Area		
	Area (ft²)	Area (Acre)	C	Area (ft²)	Area (Acre)	C	Area (ft²)	Area (Acre)	Area (ft²)	Area (Acre)			
A	0.0	0.00	0.25	0.0	0.00	0.95	1290.1	0.03	0.95	1290.1	0.03	0.95	A
B	9495.9	0.22	0.25	4209.4	0.10	0.95	0.0	0.00	0.95	13705.3	0.31	0.46	B
C	0.0	0.00	0.25	0.0	0.00	0.95	737.7	0.02	0.95	737.7	0.02	0.95	C
D	0.0	0.00	0.25	0.0	0.00	0.95	946.5	0.02	0.95	946.5	0.02	0.95	D
E	4495.3	0.10	0.25	2841.2	0.07	0.95	0.0	0.00	0.95	7336.5	0.17	0.52	E
F	4303.5	0.10	0.25	3816.1	0.09	0.95	0.0	0.00	0.95	8119.6	0.19	0.58	F
G	0.0	0.00	0.25	400.9	0.01	0.95	0.0	0.00	0.95	400.9	0.01	0.95	G
H	0.0	0.00	0.25	0.0	0.00	0.95	1112.0	0.03	0.95	1112.0	0.03	0.95	H
I	5145.2	0.12	0.25	7704.7	0.18	0.95	0.0	0.00	0.95	12849.9	0.29	0.67	I
J	3127.3	0.07	0.25	25138.2	0.58	0.95	1.0	0.00	0.95	28266.5	0.65	0.87	J
K	10277.4	0.24	0.25	0.0	0.00	0.95	0.0	0.00	0.95	10277.4	0.24	0.25	K
Total	36844.6	0.85	0.25	44110.5	1.01	0.95	4087.3	0.09	0.95	85042.4	1.95	0.65	Total

Oakland County Storm Design												
Runoff Entering Manhole No.	To Downstream Manhole No.	Area Designated For Added Area	Increment of Area (acres) Added	Imperviousness	Equivalent Area	Accumulative Totals of Equivalent Areas	Time of Concentration (min)	Rainfall Rate (Intensity) 15 min	Rainfall Rate (Intensity) 10 yr.	Quantity of Rainfall (cfs)	Diameter (inch) of Pipe Out of Manhole	Q
												D
COA	MH6	A	0.03	0.95	0.03	0.03	16.00	2.29	0.07	6 in.	2.00%	0.79
IN7	MH6	B	0.31	0.46	0.15	0.15	15.00	2.29	0.34	12 in.	0.32%	2.02
MH6	MH5	-	-	-	-	0.18	15.11	2.28	0.41	12 in.	1.00%	3.56
COB	COC	C	0.02	0.95	0.02	0.02	16.00	2.29	0.05	6 in.	1.00%	0.56
COC	MH5	D	0.02	0.95	0.02	0.04	15.27	2.27	0.09	6 in.	2.00%	0.79
IN8	MH5	E	0.17	0.52	0.09	0.09	15.00	2.29	0.21	12 in.	0.32%	2.02
MH5	CB4	-	-	-	-	0.31	15.52	2.25	0.70	12 in.	0.32%	2.02
CB4	CB3	F	0.19	0.58	0.11	0.42	16.13	2.21	0.93	12 in.	1.50%	4.36
CB3	CB2	G	0.01	0.95	0.01	0.43	16.41	2.19	0.94	12 in.	3.00%	6.17
COB	CB7	H	0.03	0.95	0.02	0.02	15.00	2.29	0.05	6 in.	3.50%	1.05
CB7	CB2	I	0.29	0.67	0.20	0.22	15.37	2.26	0.50	12 in.	2.00%	5.04
CB2	MH1	J	0.65	0.87	0.57	1.22	16.60	2.17	2.65	12 in.	2.00%	5.04
MH1	EX1	-	-	-	-	1.22	16.62	2.17	2.65	12 in.	2.00%	5.04
EX1	EX2	K	0.24	0.25	0.06	1.28	16.69	2.17	2.77	18 in.	0.61%	8.20

Part D: Water Quality Control (Rate)

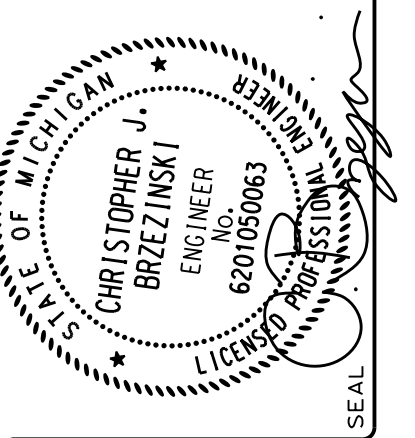
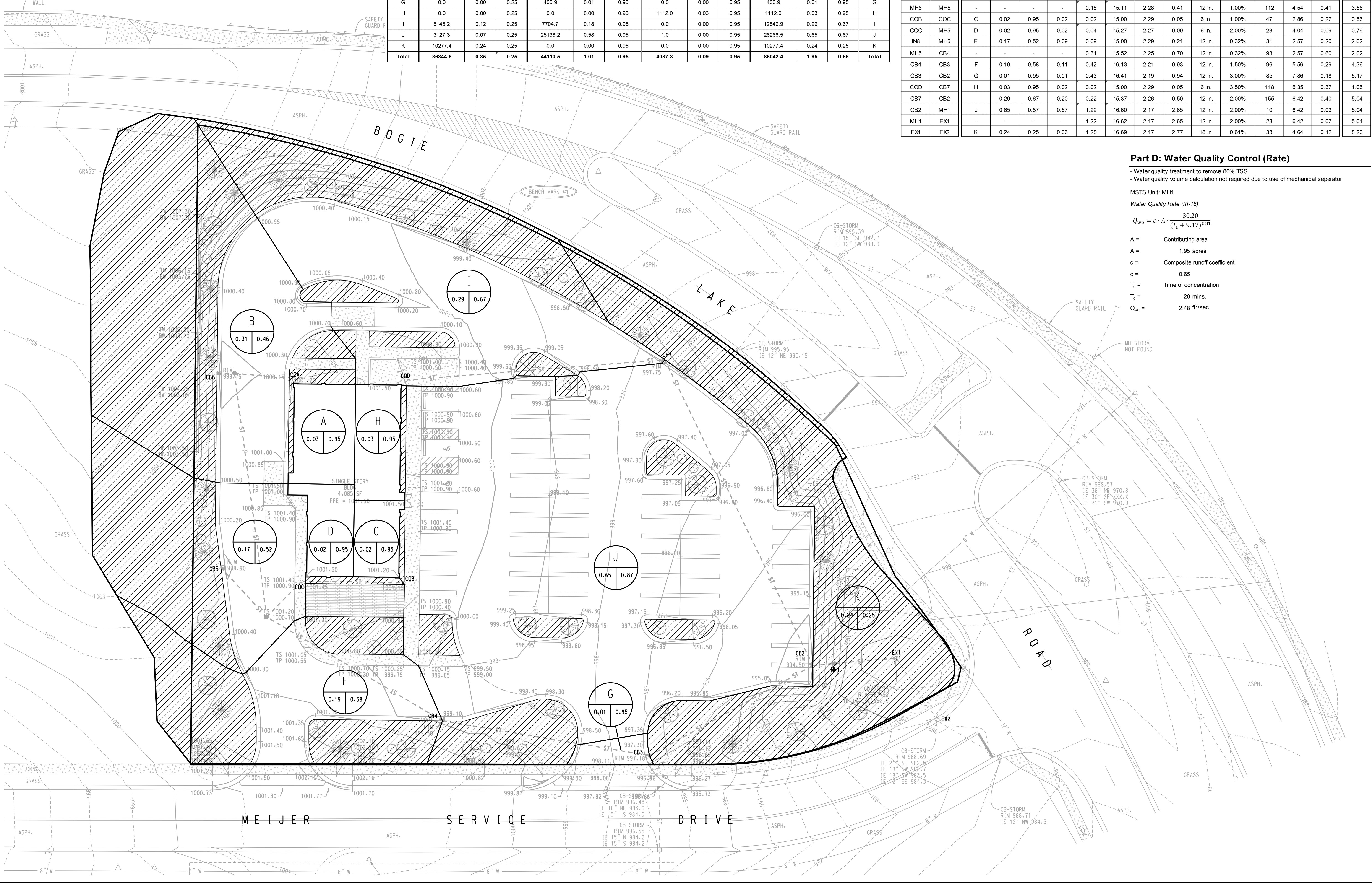
- Water quality treatment to remove 80% TSS
- Water quality volume calculation not required due to use of mechanical separator

MSTS Unit: MH1

Water Quality Rate (III-18)

$$Q_{WQ} = c \cdot A \cdot \frac{30.20}{(T_c + 9.17)^{0.81}}$$

- A = Contributing area = 1.95 acres
- c = Composite runoff coefficient = 0.65
- T_c = Time of concentration = 20 mins.
- Q_{WQ} = 2.48 ft³/sec

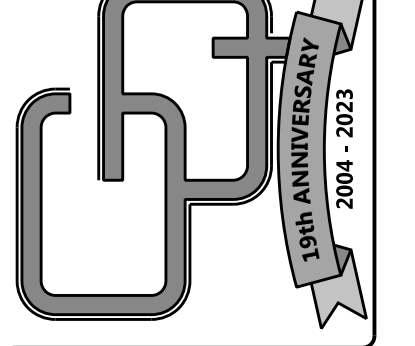


NO.	DATE	REVISION OR ISSUE
03-18-24		PRELIMINARY SPA
02-08-24		PRELIMINARY SPA
01-04-24		PRE APPLICATION MEETING
10-19-23		PRE APPLICATION MEETING

DRAWN	BRZEZINSKI
DESIGNED	QUADERER
CHECKED	FIELD CREW CB / RO

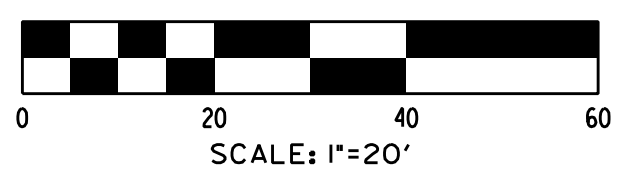
CULVER'S
 BOGIE LAKE ROAD
 WHITE LAKE TWP., MI
 DRAINAGE AREA MAP

Griggs Quaderer, Inc.
 8308 OFFICE PARK DRIVE
 GRAND BLANC, MI 48439
 PH: (810) 695-0154
 FX: (810) 695-0158
 CIVIL ENGINEERING · LAND SURVEYING
 SITE PLANNING



PHASE: P. SPA
 JOB NO.: 230601
 C303

1 NORTH



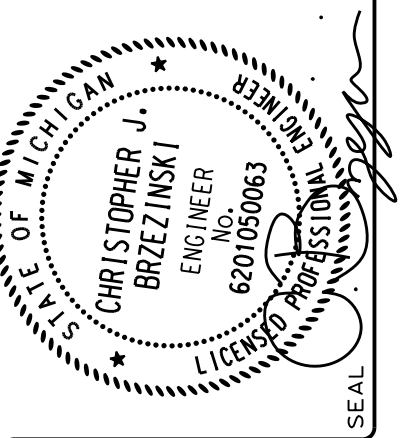
WATER MAIN QUANTITIES:		
ITEM	UNIT	QUANTITY
2" TYPE 'K' COPPER PIPE	LF	96
2" CORPORATION STOP	EA	1
2" CURB STOP	EA	1

UTILITY CROSSING SCHEDULE:			
UC1	F.I.N. GRADE: 995.73 BOT STORM: 990.51 TOP SAN: 988.55	UC3	F.I.N. GRADE: 1000.43 BOT SAN: 993.42 TOP WATER: 991.92
UC2	F.I.N. GRADE: 1000.30 BOT STORM: 996.55 TOP SAN: 993.65	UC4	F.I.N. GRADE: 1000.62 BOT STORM: 996.96 TOP WATER: 994.62

- SANITARY SEWER NOTES:**
1. MATERIAL AND CONSTRUCTION METHODS FOR THE INSTALLATION OF SANITARY SEWER SHALL BE IN ACCORDANCE WITH WHITE LAKE TOWNSHIP STANDARD DETAILS FOR SANITARY SEWER ATTACHED TO THIS SET OF DOCUMENTS FOR REFERENCE.
 2. ALL SANITARY SEWER PIPE SHALL BE PVC SDR 26 AND MEET OR EXCEED ASTM D-3034 FOR HEAVY WALL PIPE UNLESS OTHERWISE NOTED.
 3. TESTING PROCEDURE OF NEW SANITARY LINE SHALL BE IN ACCORDANCE WITH WHITE LAKE TOWNSHIP REQUIREMENTS. CONTRACTOR TO COORDINATE INSPECTIONS WITH AGENCIES.
 4. CONTACT MISS DIG (811) 72 HOURS BEFORE CONSTRUCTION FOR LOCATION OF ALL UNDERGROUND UTILITIES.

- WATER MAIN NOTES:**
1. MATERIAL AND CONSTRUCTION METHODS FOR THE INSTALLATION OF WATER MAIN SHALL BE IN ACCORDANCE WITH WHITE LAKE TOWNSHIP STANDARD DETAILS FOR WATER MAIN ATTACHED TO THIS SET OF DOCUMENTS FOR REFERENCE.
 2. INSTALL WATER MAIN WITH A MINIMUM OF 6' OF COVER.
 3. PROVIDE A MINIMUM OF 18" OF VERTICAL SEPARATION AND 10' OF HORIZONTAL SEPARATION BETWEEN WATERMAIN AND ALL SANITARY AND STORM SEWERS.
 4. PROVIDE THRUST BLOCKS AT ALL WATER MAIN BENDS, PLUGS, AND TEES PER WHITE LAKE TOWNSHIP DESIGN STANDARDS.
 5. THE WATER MAIN SHALL BE TESTED IN ACCORDANCE WITH WHITE LAKE TOWNSHIP REQUIREMENTS. THE INSPECTOR OF THE MUNICIPALITY SHALL BE PRESENT DURING THE TESTING PROCEDURE. CONTRACTOR SHALL COORDINATE INSPECTIONS WITH AGENCIES.
 6. CONTRACTOR SHALL PROVIDE AS-BUILT NOTES FOR LOCATION AND MATERIAL OF ALL UNDERGROUND WATER MAIN AND PROVIDE THIS INFORMATION TO THE DESIGN ENGINEER FOR FINAL PREPARATION OF AS-BUILT DOCUMENTS.

- GENERAL UTILITY NOTES:**
1. ALL WORKMANSHIP AND MATERIALS FOR WATER MAIN, SANITARY, AND STORM SEWER SHALL CONFORM TO THE LATEST STANDARDS AND SPECIFICATIONS OF ALL LOCAL GOVERNING AGENCIES HAVING JURISDICTION. IN CASE OF DISCREPANCIES, THE CONTRACTOR SHALL COORDINATE WITH THE AGENCIES TO RESOLVE THESE ISSUES.
 2. CONTRACTOR SHALL CONTACT "MISS DIG" (811) FOR LOCATION OF EXISTING UTILITIES WITHIN THE WORK AREA THREE (3) WORKING DAYS PRIOR TO START OF CONSTRUCTION.
 3. CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING AND STABILIZING (IF REQUIRED) ALL TRENCH EXCAVATIONS TO ACCOMPLISH WORK INDICATED ON PLANS AND TO ACHIEVE REQUIRED COMPACTION OPERATIONS AS INDICATED IN THE PROJECT SPECIFICATIONS OR ON THESE DOCUMENTS. DEWATERING, IF DETERMINED NECESSARY BY THE CONTRACTOR, WILL BE CONSIDERED INCIDENTAL TO THE INSTALLATION COST OF UTILITIES OR STRUCTURES.
 4. UTILITY SERVICE LEADS SHALL END 5 FEET FROM THE BUILDING UNLESS NOTED OTHERWISE. COORDINATE WITH BUILDING CONTRACTOR (IF NECESSARY).
 5. PROTECT AND MAINTAIN 18 INCH CLEARANCE AT ALL UTILITY CROSSINGS.
 6. REFER TO TRENCH DETAIL(S) SHOWN ON THESE DOCUMENTS FOR BEDDING AND BACKFILL MATERIAL REQUIREMENTS.
 7. TRENCH EXCAVATIONS SHALL BE COMPACTED IN CONTINUOUS LAYERS NOT EXCEEDING 8 INCH LOOSE LIFTS, COMPACTED TO 95 PERCENT OF MAXIMUM DENSITY IN ACCORDANCE WITH ANSI/ASTM D 1557 MODIFIED PROCTOR.
 8. ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER ARE PROHIBITED.
 9. CONTRACTOR SHALL COORDINATE INSTALLATION OF GAS, ELECTRIC, AND TELEPHONE WITH THE APPROPRIATE UTILITY COMPANIES.
 10. TESTING PROCEDURES FOR SANITARY AND WATER MAIN SHALL BE IN ACCORDANCE WITH LOCAL GOVERNING AGENCY REQUIREMENTS. CONTRACTOR SHALL COORDINATE WITH ALL GOVERNING AGENCIES AND HAVE INSPECTORS PRESENT DURING THE TESTING PROCEDURES. ALL TESTING MUST BE APPROVED BY ALL GOVERNING AGENCIES PRIOR TO CONNECTION INTO EXISTING UTILITIES.
 11. CONTRACTOR SHALL VERIFY EXACT LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION. REPORT ANY DISCREPANCIES TO THE ENGINEER.
 12. CONTRACTOR SHALL ADJUST ANY UTILITY ELEMENT MEANT TO BE FLUSH WITH NEW GRADE (CLEAN OUT, VALVE BOXES, MANHOLES, CATCH BASINS, INLETS, ETC.) THAT ARE AFFECTED BY SITE WORK OR GRADE CHANGES, WHETHER SPECIFICALLY NOTED ON PLANS OR NOT. THE CONTRACTOR SHALL OBTAIN ANY NECESSARY PERMITS FOR ADJUSTMENT AT THE CONTRACTOR'S EXPENSE (IF APPLICABLE).
 13. THE CONTRACTOR SHALL PAY FOR AND OBTAIN ALL PERMITS REQUIRED BY FEDERAL, STATE, LOCAL, OR PRIVATE AGENCIES AND PAY ALL CHARGES FOR INSPECTION AND TESTING.
 14. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL CONSTRUCTION LAYOUT AND GRADE ELEVATIONS FOR THEIR WORK IN ACCORDANCE WITH DATA SHOWN ON THESE DOCUMENTS.
 15. THE CONTRACTOR SHALL CONTROL NOISE AND LIMIT WORKING HOURS TO TIMES AS ESTABLISHED BY THE LOCAL MUNICIPALITY.
 16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEAN-UP OF WORK AREA AT COMPLETION OF THE PROJECT AND LEAVE THE SITE IN AN ACCEPTABLE CONDITION AS DETERMINED BY THE ENGINEER/INSPECTOR AND/OR OWNER.



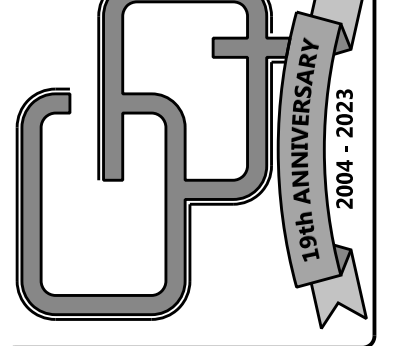
NO.	DATE	REVISION OR ISSUE
03-18-24		PRELIMINARY SPA
02-08-24		PRELIMINARY SPA
01-04-24		PRE APPLICATION MEETING
10-19-23		PRE APPLICATION MEETING

DRAWN	BRZEZINSKI
DESIGNED	QUADERER
CHECKED	QUADERER
FIELD CREW	CB / RO

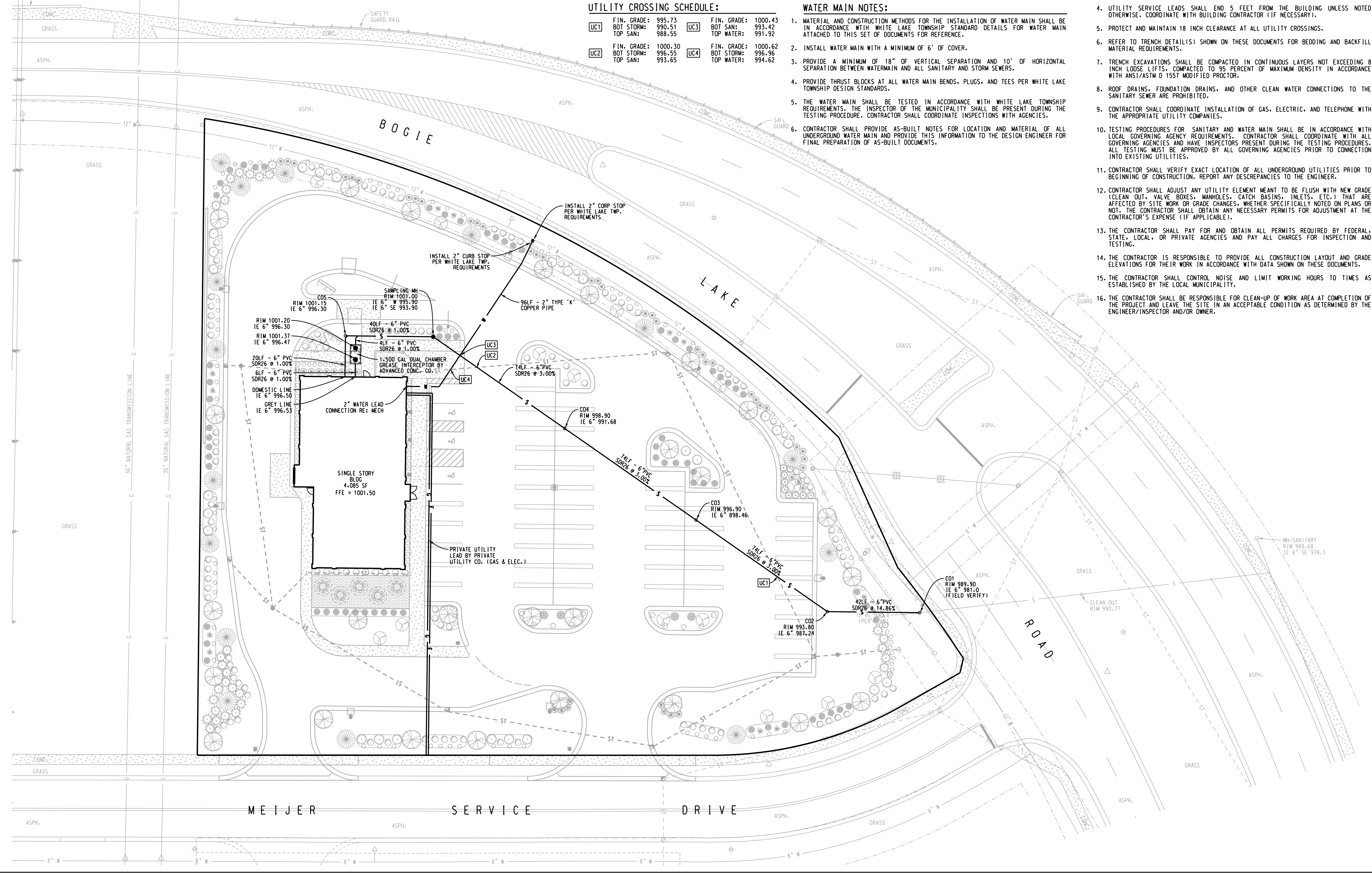
CULVER'S
 BOGIE LAKE ROAD
 WHITE LAKE TWP., MI
 NORTH EAST 1/4 SEC 20
 TOWNSHIP RANGE SE

SITE UTILITY PLAN

Griggs Quaderer, Inc.
 8308 OFFICE PARK DRIVE
 GRAND BLANC, MI 48439
 WWW.GQINCORP.COM
 PH: (810) 695-0154
 FX: (810) 695-0158



PHASE: P. SPA
 JOB NO.: 230601
 C400

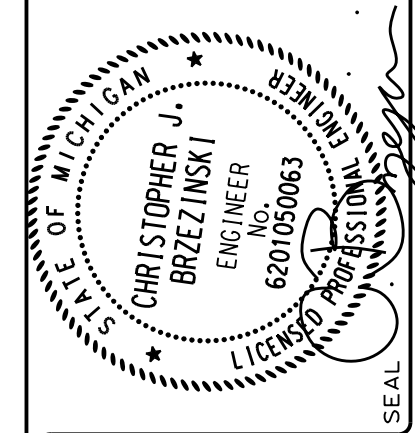
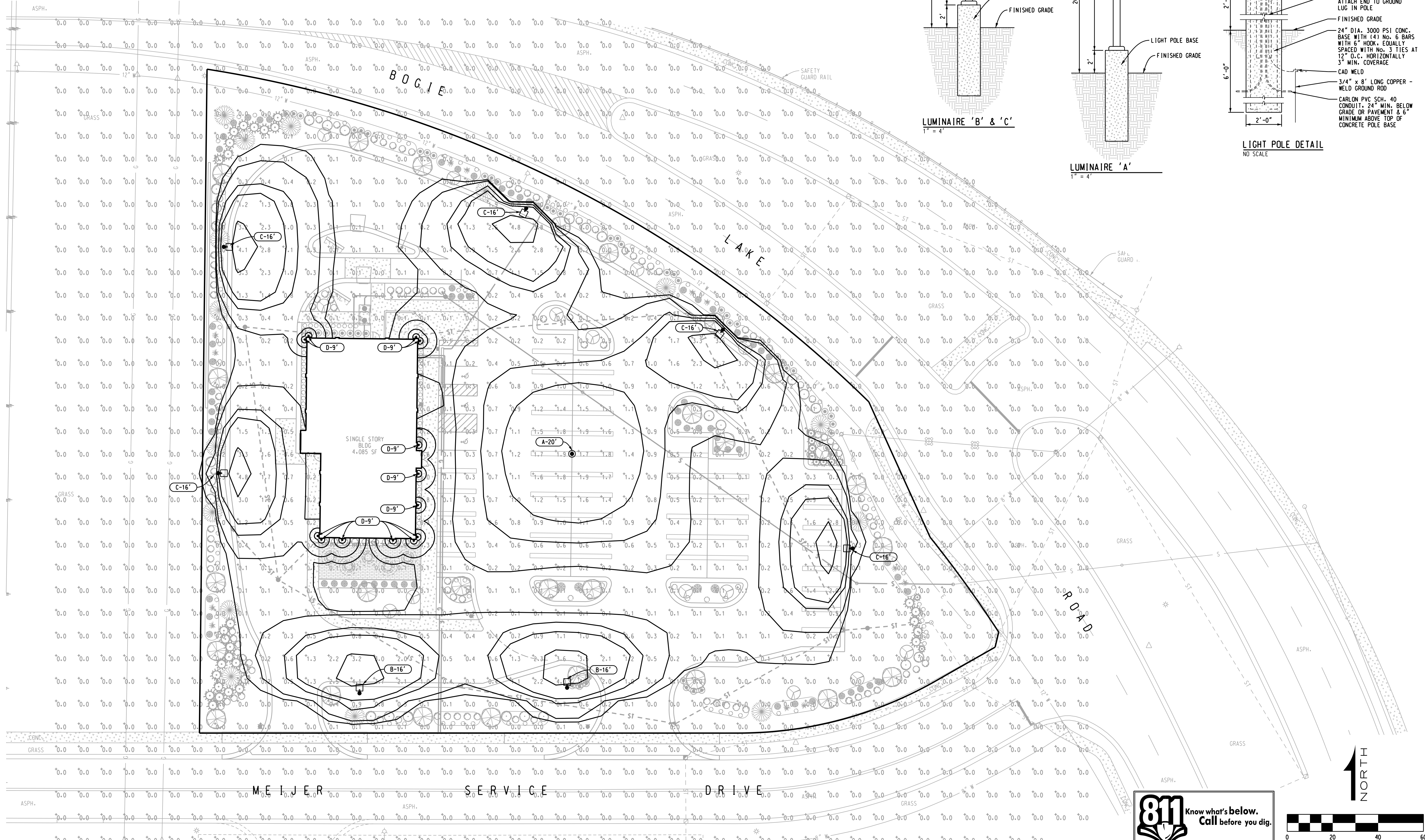
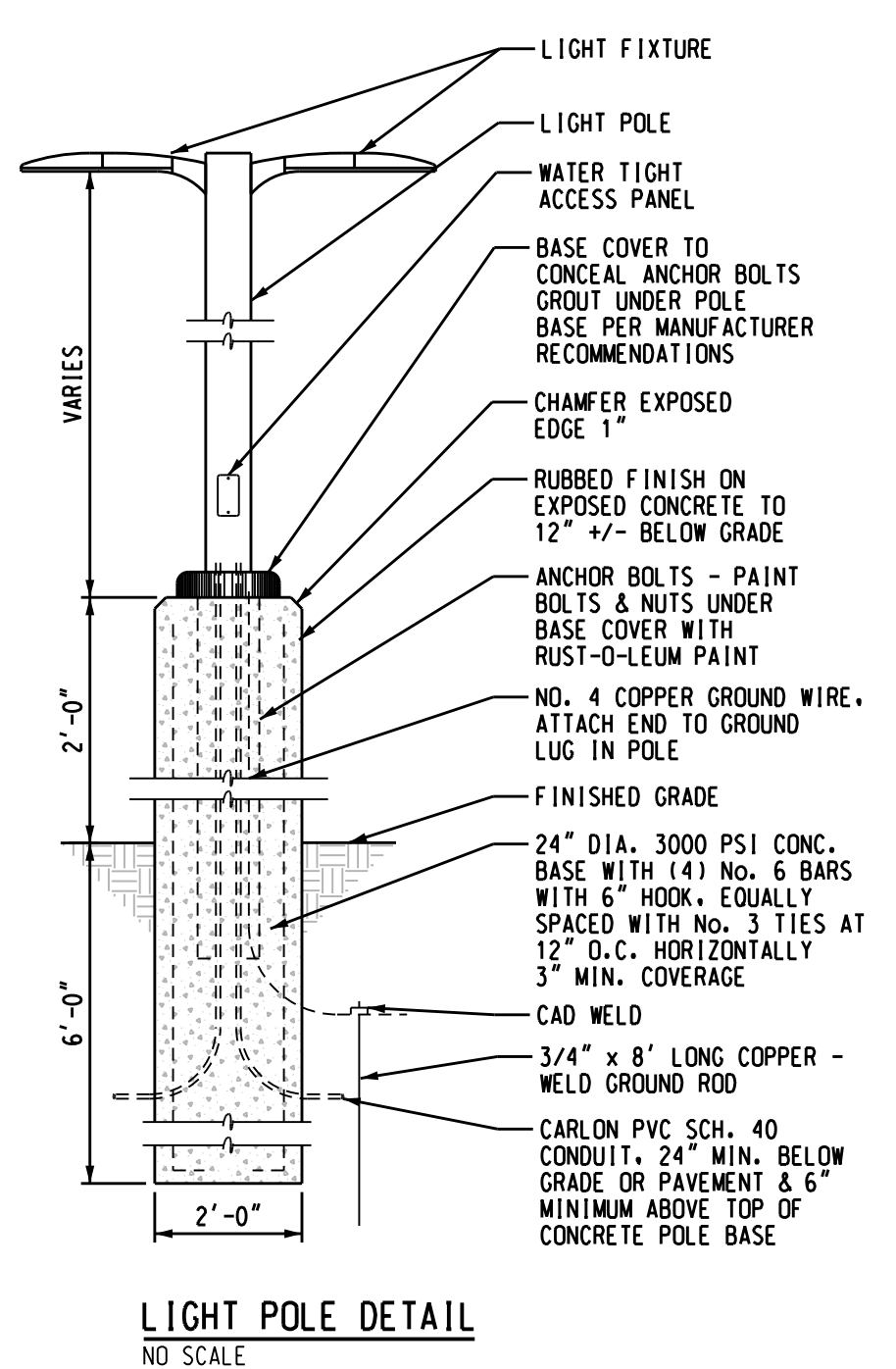
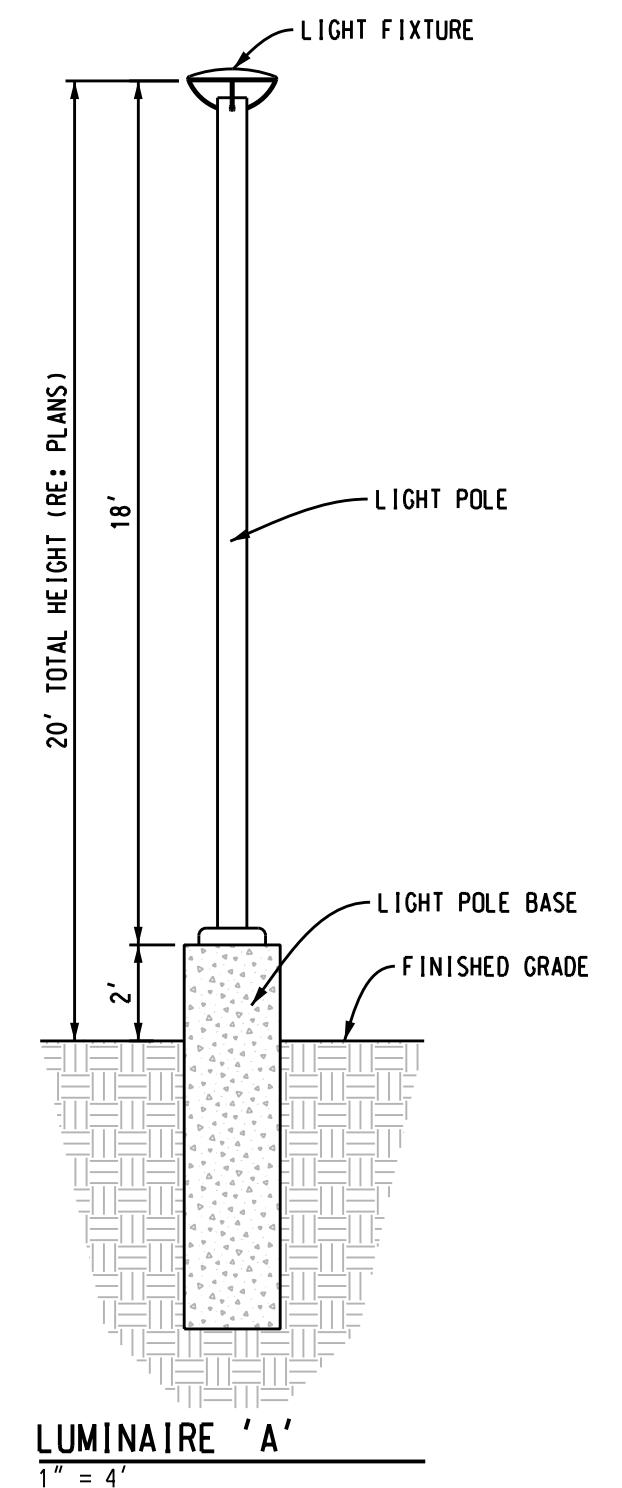
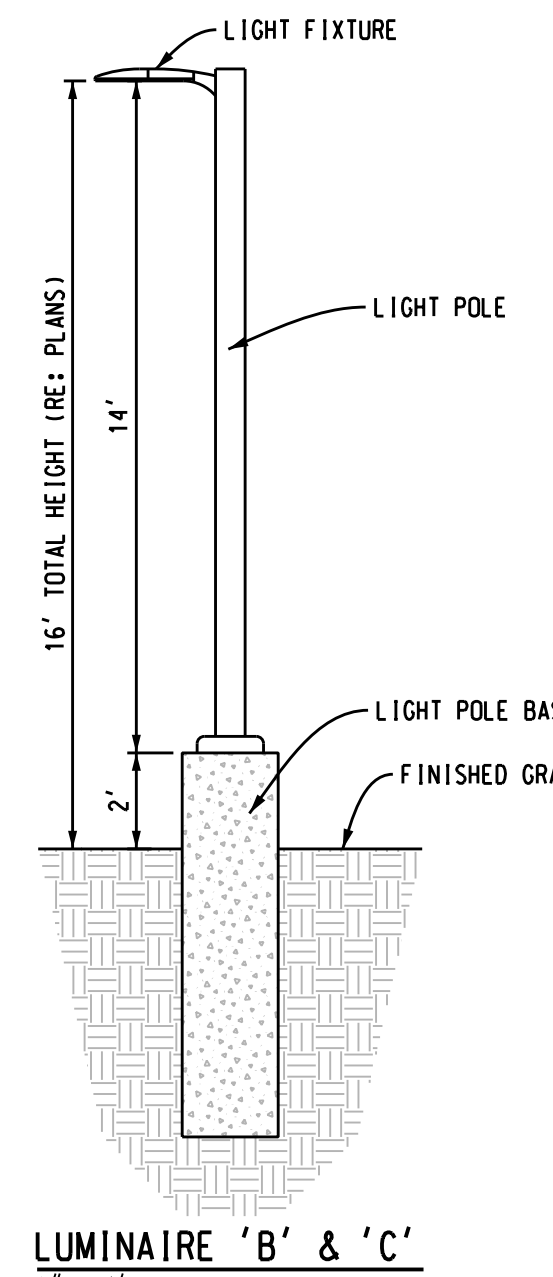
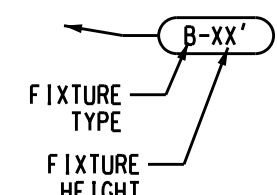


LUMINAIRE SCHEDULE						
QTY	LABEL	ARRANGEMENT	MANUFACTURER	CATALOG NO.	DESCRIPTION	LAMP WATTAGE
1	A	SINGLE	LITHONIA	DSXO LED P3 30K 70CRI T5M	D-SERIES AREA SIZE 0. POLE MOUNTED, SINGLE (ONE) LIGHT FIXTURE, YOKE STYLE	LED 69
2	B	SINGLE	LITHONIA	DSXO LED P1 30K 70CRI T3M HS	D-SERIES AREA SIZE 0. POLE MOUNTED, SINGLE (ONE) LIGHT FIXTURE, W/ HOUSE SIDE SHIELD	LED 33.2
5	C	SINGLE	LITHONIA	DSXO LED P1 30K 70CRI BLC4	D-SERIES AREA SIZE 0. POLE MOUNTED, SINGLE (ONE) LIGHT FIXTURE, W/ HOUSE SIDE SHIELD	LED 33.2
13	D	SINGLE	LITHONIA	OLLWU LED P1 40K 120 DDB	D-OUTDOOR LED WALL CYLINDER, WALL MOUNTED, SINGLE (ONE) LIGHT FIXTURE, UP/DOWN LIGHT	LED 13.8

LIGHTING NOTES:

- THE FOOTCANDLES SHOWN HEREON HAVE BEEN CALCULATED AT APPROXIMATELY SIX FEET ABOVE GRADE.
- THE CATALOG DETAILS OF THE LIGHTING FIXTURE HAVE BEEN PROVIDED IN FULL BUT SEPARATELY FROM THESE SITE PLAN DOCUMENTS.

STATISTICAL AREA SUMMARY				
AVG	MAX	MIN	AVG/MIN	MAX/MIN
0.5	5.0	0.0	-	-

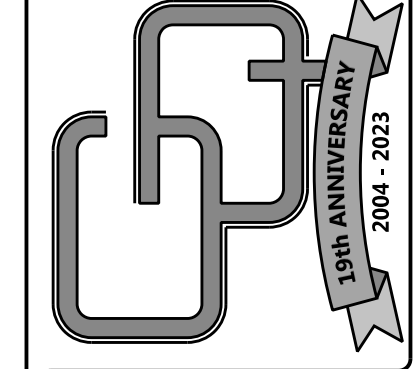


NO.	DATE	SUBJECT	REVISION OR ISSUE
03-18-24	PRELIMINARY SPA		
02-08-24	PRELIMINARY SPA		
01-04-24	PRE APPLICATION MEETING		
10-19-23	PRE APPLICATION MEETING		

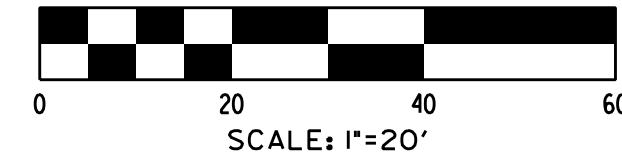
DRAWN	BRZEZINSKI
DESIGNED	BRZEZINSKI
CHECKED	QUADERER
FIELD	CREW CB / RO

CULVER'S
 BOGIE LAKE ROAD
 WHITE LAKE TWP., MI
 NORTH EAST 1/4 SEC. 20
 TOWNSHIP 36N, RANGE 8E

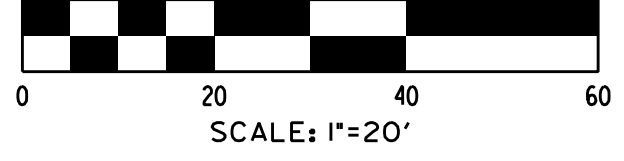
Griggs Quaderer, Inc.
 8308 OFFICE PARK DRIVE
 GRAND BLANC, MI 48439
 WWW.GQINCORP.COM
 PH: (810) 695-0154
 FX: (810) 695-0158



PHASE: P. SPA
 JOB NO.: 230601
 CIVIL ENGINEERING · LAND SURVEYING
 SITE PLANNING
 C401



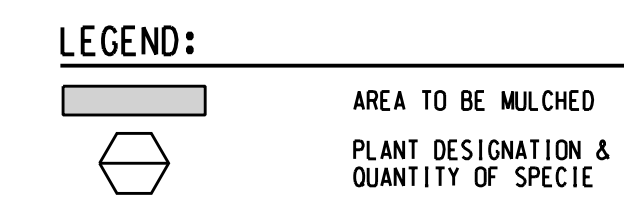
NORTH



TREE SCHEDULE				
KEY	BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY
AJ	ACER X FREEMANII 'JEFFERSRED'	AUTUMN BLAZE MAPLE	2.5" CAL	4
AS	ACER SACCHARUM 'COMMEMORATION'	COMMEMORATION SUGAR MAPLE	2.5" CAL	4
BC	BETULA NIGRA 'CULLY'	HERITAGE RIVER BIRCH	8' HT	2
CA	CARPINUS CAROLINIANA	AMERICAN HORNBEAM	2.5" CAL	2
CS	LIQUIDAMBAR STYRACIFLUA 'GODUZAM'	GOLD DUST AMERICAN SWEETGUM	2.5" CAL	3
MS	MALUS 'SNOWDRIFT'	SNOWDRIFT CRABAPPLE	2" CAL	5
MU	MALUS 'SPRING SNOW'	SPRING SNOW CRABAPPLE	2" CAL	6
PG	PICEA GLAUCA	WHITE SPRUCE	8' HT	15
PR	PYRUS CALLARYANA 'REDSPIRE'	REDSPIRE PEAR	2.5" CAL	5
DD	QUERCUS RUBRA	NORTHERN RED OAK	2.5" CAL	2
TC	TILIA CORDATA 'GREENSPIRE'	GREENSPIRE LINDEN	2.5" CAL	3

SHRUB SCHEDULE				
KEY	BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY
AC	AMELANCHIER LAEVIS 'CUMULUS'	CUMULUS SERVICEBERRY	4' HT	23
BA	BERBERIS ATROPURPUREA 'CRIRUZAM'	CRIMSON RUBY BARBERRY	30" HT	11
BX	BUXUS X 'GREEN GEM'	GREEN GEM BOXWOOD	12" HT	49
CB	CORNUS ALBA 'BAILHALD'	IVORY HALD RED TWIG DOGWOOD	24" HT	15
EA	EUONYMUS ALATUS 'COMPACTUS'	COMPACT BURNING BUSH	30" HT	34
FI	FORSYTHIA INTERMEDIA 'NORTHERN GOLD'	NORTHERN GOLD FORSYTHIA	30" HT	14
HA	HAMAMELIS VERNALIS	VERNAL WITCHHAZEL	30" HT	40
HN	HIBISCUS SYRIACUS 'NOTWOODONE'	LAV. CHIFFON ROSE OF SHARON	30" HT	24
HS	HYDRANGEA MAC. H. SERRATA 'PREZIOSA'	PINK BEAUTY HYDRANGEA	30" HT	10
IA	ILEX VERTICILLATA 'AFTERGLOW'	AFTERGLOW MICHIGAN HOLLY	30" HT	35
JC	JUNIPERUS CHINENSIS 'GOLD COAST'	GOLD COAST JUNIPER	24" SPR.	21
ND	PHYSOCARPUS OPULIFOLIUS 'MONLO'	DIABOLO NINEBARK	24" HT	17
PB	POTENTILLA FRUTICOSA 'GOLDFINGER'	GOLDFINGER POTENTILLA	30" HT	36
SF	SPIREA JAPONICA 'GOLDMOUND'	GOLD MOUND SPIREA	30" HT	28
SL	SYRINGA PATULA 'MISS KIM'	MISS KIM LILAC	30" HT	28
SV	SYRINGA X 'PENDA' PPAF	BLOOMERANG PURPLE LILAC	24" HT	13
TD	TAXUS X MEDIA 'DENSIFORMIS'	DENSIFORMIS SPREADING YEW	30" HT	10
VC	VIBURNUM X BURKWOODII	BURKWOOD VIBURNUM	30" HT	18

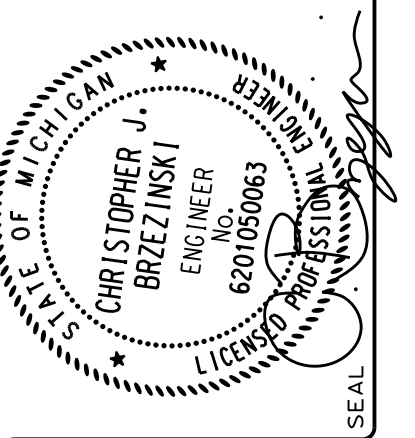
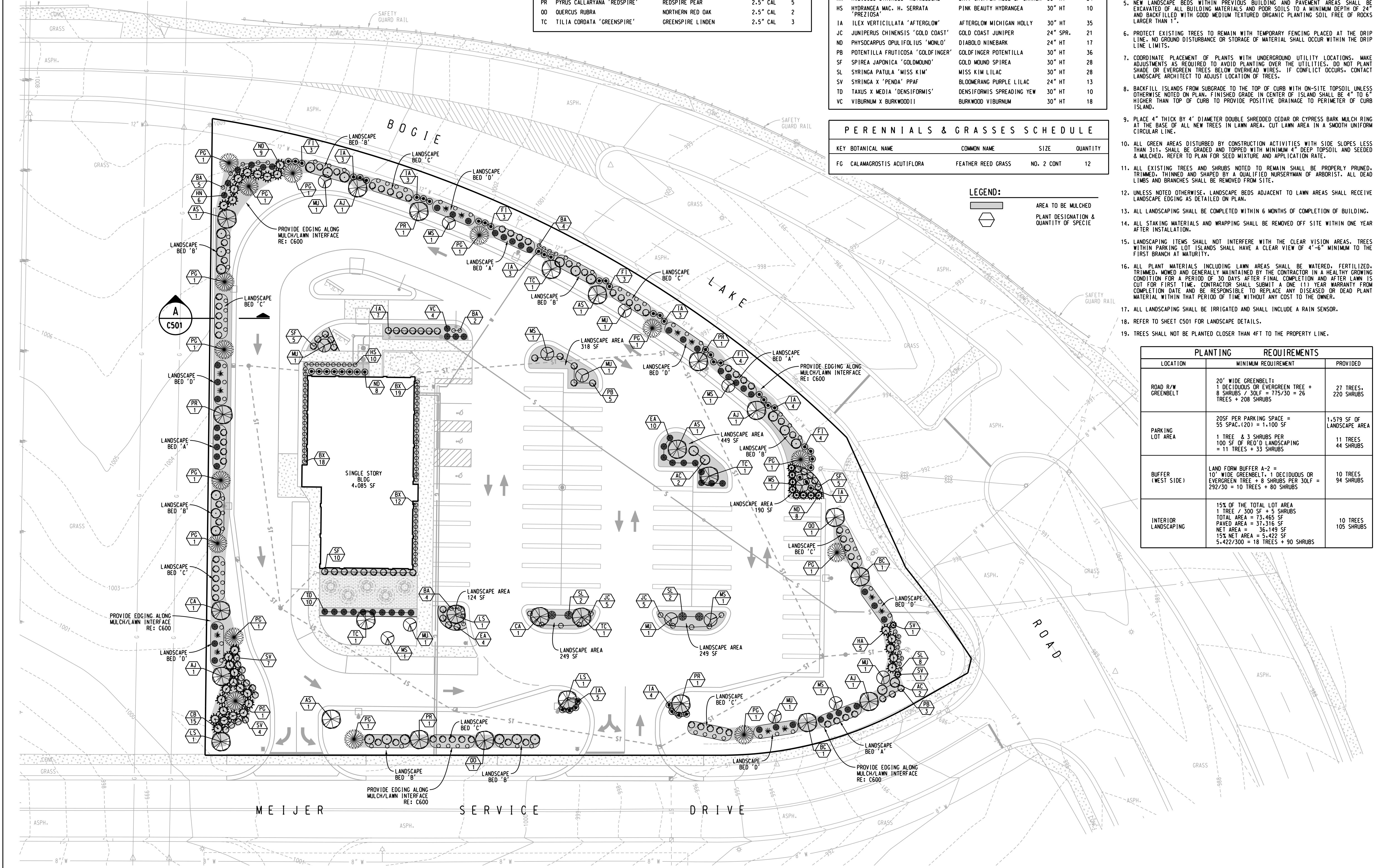
PERENNIALS & GRASSES SCHEDULE				
KEY	BOTANICAL NAME	COMMON NAME	SIZE	QUANTITY
FG	CALAMAGROSTIS ACUTIFLORA	FEATHER REED GRASS	NO. 2 CONT	12



LANDSCAPING NOTES:

- INSTALLATION OF PLANT MATERIAL SHALL BE IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF NURSERYMEN LANDSCAPE STANDARDS LATEST EDITION.
- PRIOR TO BEGIN OF LANDSCAPE WORK, CONTRACTOR SHALL VERIFY LOCATIONS OF ALL ON-SITE UTILITIES. CONTRACTOR SHALL CONTACT MISS DIG (811) FOR LOCATIONS OF ALL PRIVATE UTILITIES. ANY DAMAGE OR INTERRUPTIONS OF SERVICES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. COORDINATE ALL RELATED WORK ACTIVITIES WITH OTHER TRADES AND REPORT ANY UNACCEPTABLE WORK CONDITIONS TO OWNER PRIOR TO COMMENCING WORK.
- NUMERICAL VALUE OF PLANT MATERIAL SHOWN SHALL TAKE PRECEDENCE OVER GRAPHIC REPRESENTATION. VERIFY AND REPORT ANY DISCREPANCIES WITH LANDSCAPE ARCHITECT.
- SUBSTITUTIONS OR DEVIATIONS FROM THE LANDSCAPE PLAN MUST BE APPROVED BY THE MUNICIPALITY AND/OR GOVERNING AGENCY PRIOR TO COMMENCING.
- NEW LANDSCAPE BEDS WITHIN PREVIOUS BUILDING AND PAVEMENT AREAS SHALL BE EXCAVATED OF ALL BUILDING MATERIALS AND POOR SOILS TO A MINIMUM DEPTH OF 24" AND BACKFILLED WITH GOOD MEDIUM TEXTURED ORGANIC FREE SOIL FREE OF ROCKS LARGER THAN 1".
- PROTECT EXISTING TREES TO REMAIN WITH TEMPORARY FENCING PLACED AT THE DRIP LINE. NO GRADE DISTURBANCE OR STORAGE OF MATERIAL SHALL OCCUR WITHIN THE DRIP LINE LIMITS.
- COORDINATE PLACEMENT OF PLANTS WITH UNDERGROUND UTILITY LOCATIONS. MAKE ADJUSTMENTS AS REQUIRED TO AVOID PLANTING OVER THE UTILITIES. DO NOT PLANT SHADE OR EVERGREEN TREES BELOW OVERHEAD WIRES. IF CONFLICT OCCURS, CONTACT LANDSCAPE ARCHITECT TO ADJUST LOCATION OF TREES.
- BACKFILL ISLANDS FROM SUBGRADE TO THE TOP OF CURB WITH ON-SITE TOPSOIL UNLESS OTHERWISE NOTED ON PLAN. FINISHED GRADE IN CENTER OF ISLAND SHALL BE 4" TO 6" HIGHER THAN TOP OF CURB TO PROVIDE POSITIVE DRAINAGE TO PERIMETER OF CURB ISLAND.
- PLACE 4" THICK BY 4" DIAMETER DOUBLE SHREDED CEDAR OR CYPRESS BARK MULCH RING AT THE BASE OF ALL NEW TREES IN LAWN AREA, CUT LAWN AREA IN A SMOOTH UNIFORM CIRCULAR LINE.
- ALL GREEN AREAS DISTURBED BY CONSTRUCTION ACTIVITIES WITH SIDE SLOPES LESS THAN 3:1, SHALL BE GRADED AND TOPPED WITH MINIMUM 4" DEEP TOPSOIL AND SEEDED & MULCHED. REFER TO PLAN FOR SEED MIXTURE AND APPLICATION RATE.
- ALL EXISTING TREES AND SHRUBS NOTED TO REMAIN SHALL BE PROPERLY PRUNED, TRIMMED, THINNED AND SHAPED BY A QUALIFIED NURSERYMAN OR ARBORIST. ALL DEAD LIMBS AND BRANCHES SHALL BE REMOVED FROM SITE.
- UNLESS NOTED OTHERWISE, LANDSCAPE BEDS ADJACENT TO LAWN AREAS SHALL RECEIVE LANDSCAPE EDGING AS DETAILED ON PLAN.
- ALL LANDSCAPING SHALL BE COMPLETED WITHIN 6 MONTHS OF COMPLETION OF BUILDING.
- ALL STAKING MATERIALS AND WRAPPING SHALL BE REMOVED OFF SITE WITHIN ONE YEAR AFTER INSTALLATION.
- LANDSCAPING ITEMS SHALL NOT INTERFERE WITH THE CLEAR VISION AREAS. TREES WITHIN PARKING LOT ISLANDS SHALL HAVE A CLEAR VIEW OF 4'-6" MINIMUM TO THE FIRST BRANCH AT MATURITY.
- ALL PLANT MATERIALS INCLUDING LAWN AREAS SHALL BE WATERED, FERTILIZED, TRIMMED, MOWED AND GENERALLY MAINTAINED BY THE CONTRACTOR IN A HEALTHY GROWING CONDITION FOR A PERIOD OF 30 DAYS AFTER FINAL COMPLETION AND AFTER LAWN IS CUT FOR FIRST TIME. CONTRACTOR SHALL SUBMIT A ONE (1) YEAR WARRANTY FROM COMPLETION DATE AND BE RESPONSIBLE TO REPLACE ANY DISEASED OR DEAD PLANT MATERIAL WITHIN THAT PERIOD OF TIME WITHOUT ANY COST TO THE OWNER.
- ALL LANDSCAPING SHALL BE IRRIGATED AND SHALL INCLUDE A RAIN SENSOR.
- REFER TO SHEET C501 FOR LANDSCAPE DETAILS.
- TREES SHALL NOT BE PLANTED CLOSER THAN 4 FT TO THE PROPERTY LINE.

PLANTING REQUIREMENTS		
LOCATION	MINIMUM REQUIREMENT	PROVIDED
ROAD R/W GREENBELT	20' WIDE GREENBELT: 1 DECIDUOUS OR EVERGREEN TREE + 8 SHRUBS 30LF = 775/30 = 26 TREES + 208 SHRUBS	27 TREES, 220 SHRUBS
PARKING LOT AREA	20SF PER PARKING SPACE = 55 SPAC.(20) = 1,100 SF 1 TREE & 3 SHRUBS PER 100 SF OF RED'D LANDSCAPING = 11 TREES + 33 SHRUBS	1,579 SF OF LANDSCAPE AREA 11 TREES, 44 SHRUBS
BUFFER (WEST SIDE)	LAND FORM BUFFER A-2 = 10' WIDE GREENBELT, 1 DECIDUOUS OR EVERGREEN TREE + 8 SHRUBS PER 30LF = 292/30 = 10 TREES + 80 SHRUBS	10 TREES, 94 SHRUBS
INTERIOR LANDSCAPING	15% OF THE TOTAL LOT AREA 1 TREE / 300 SF + 5 SHRUBS TOTAL AREA = 73,465 SF PAVED AREA = 37,316 SF NET AREA = 36,149 SF 15% NET AREA = 5,422 SF 5,422/300 = 18 TREES + 90 SHRUBS	10 TREES, 105 SHRUBS



DRAWN	DESIGNED	CHECKED	FIELD CREW
BRZEZINSKI	BRZEZINSKI	QUADERER	CB / RO
03-18-24	02-08-24	01-04-24	10-19-23
PRELIMINARY SPA	PRELIMINARY SPA	PRELIMINARY SPA	PRELIMINARY SPA
DATE	DATE	DATE	DATE
NO.	NO.	NO.	NO.
REVISION OR ISSUE	SUBJECT		

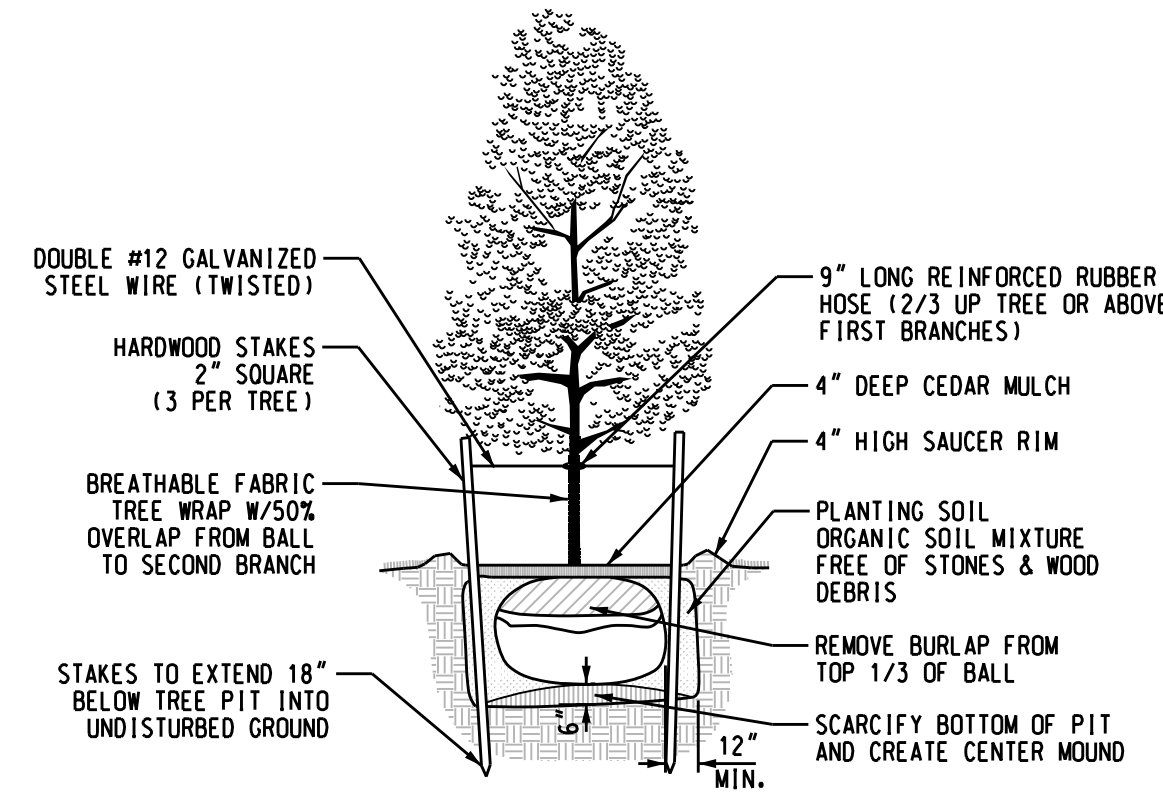
CULVER'S
 NORTH EAST 1/4 SEC. 20
 TOWNSHIP RANGE-BE
 BOGIE LAKE ROAD
 WHITE LAKE TWP., MI
 PHONE: 878-2624 FAX: 878-2624
 TIME: 8:30AM - 5:00PM

Griggs Quaderer, Inc.
 8308 OFFICE PARK DRIVE
 GRAND BLANC, MI 48499
 WWW.GQINCORP.COM
 PH: (810) 695-0154
 FX: (810) 695-0158

**CIVIL ENGINEERING · LAND SURVEYING
 SITE PLANNING**

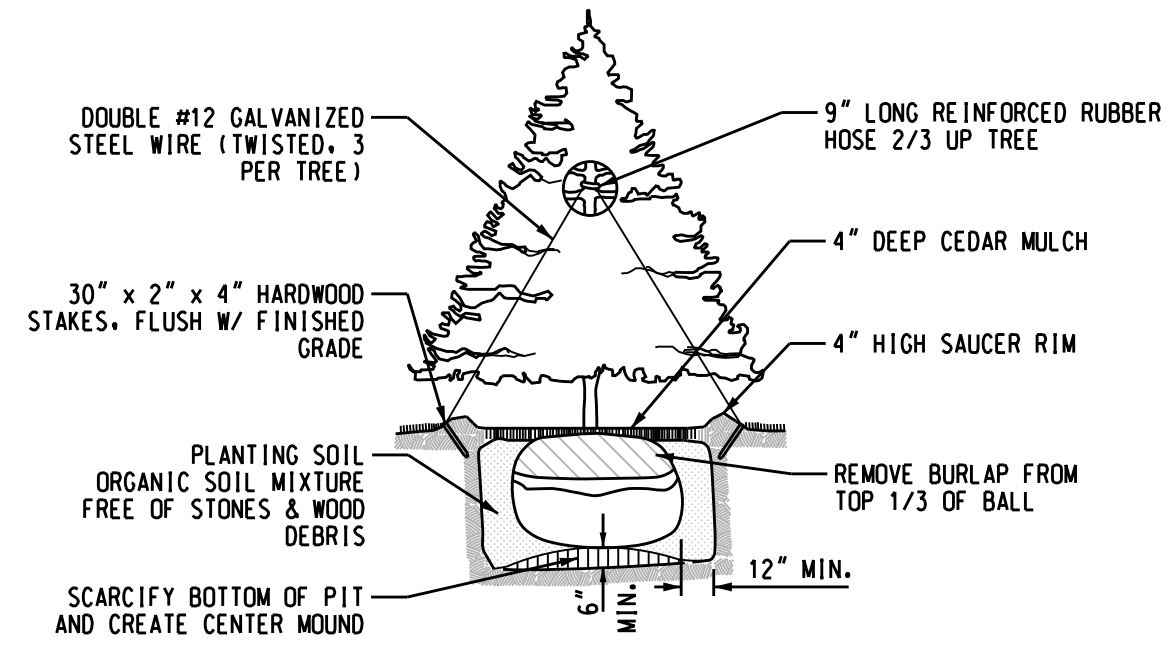
19th ANNIVERSARY
 2004 - 2023

PHASE: P. SPA
 JOB NO.: 230601
 C500



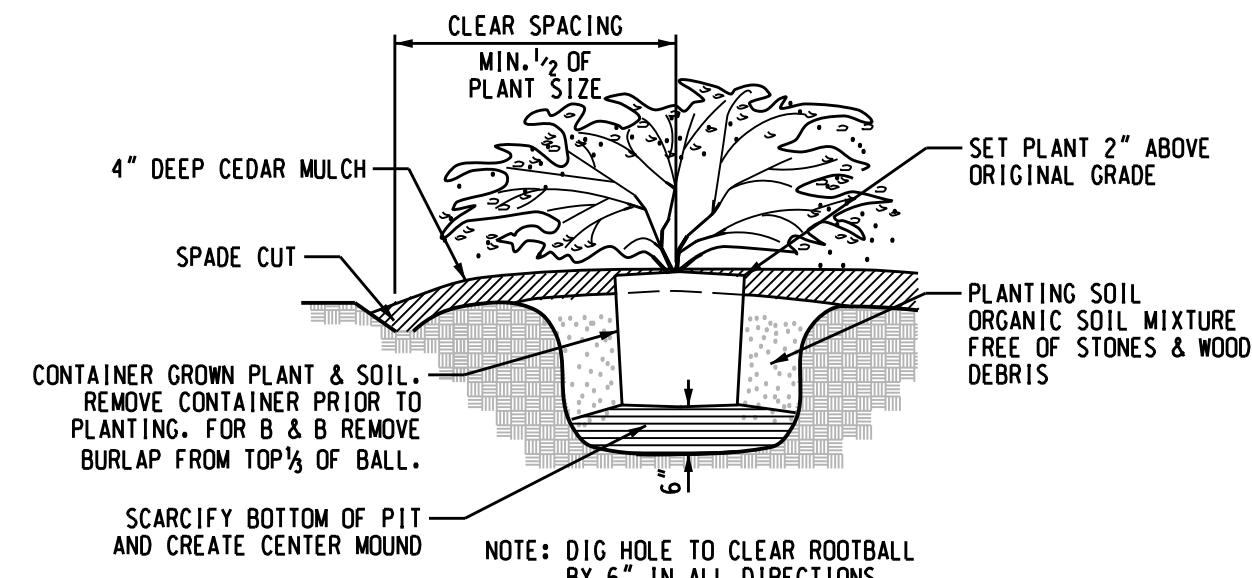
NOTE: TREE SHALL BEAR SAME RELATION TO FINISHED GRADE AS IT BORE TO PREVIOUS GRADE. RAISE ROOT BALL 1/3 HIGHER IN CLAY SOILS - BACKFILL & COVER ENTIRE BALL W/ TOPSOIL & MULCH.

TREE PLANTING DETAIL
NO SCALE

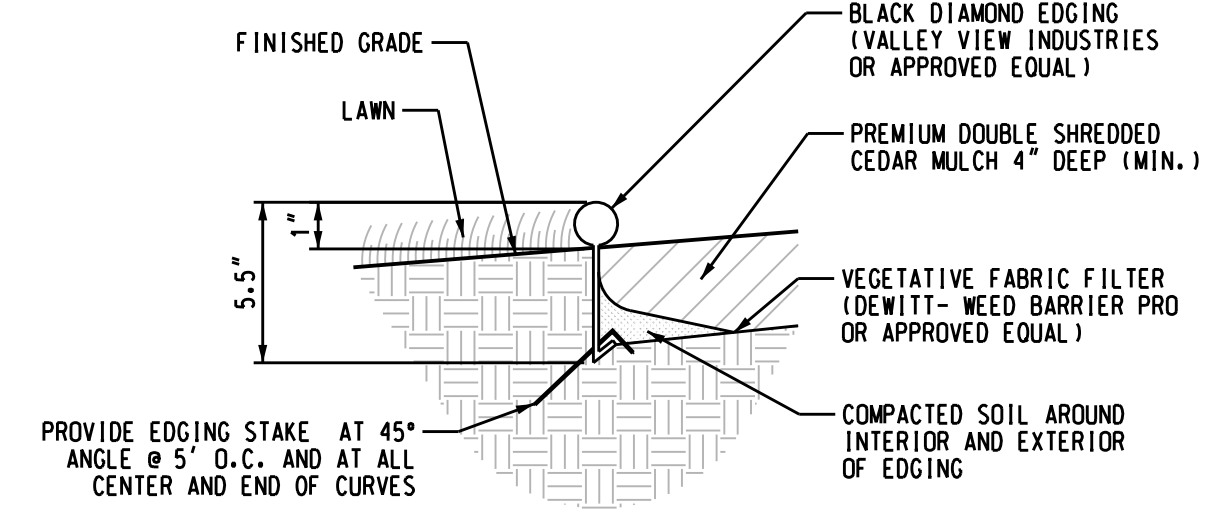


NOTE: TREE SHALL BEAR SAME RELATION TO FINISHED GRADE AS IT BORE TO PREVIOUS GRADE. RAISE ROOT BALL 1/3 HIGHER IN CLAY SOILS - BACKFILL & COVER ENTIRE BALL W/ TOPSOIL & MULCH.

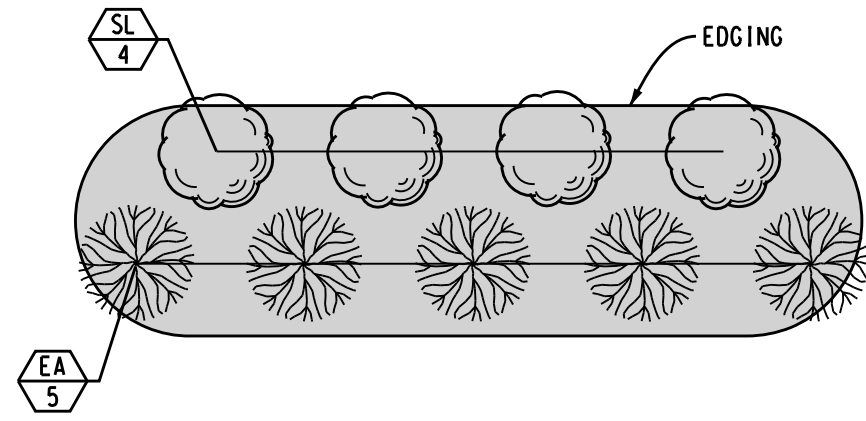
EVERGREEN TREE DETAIL
NO SCALE



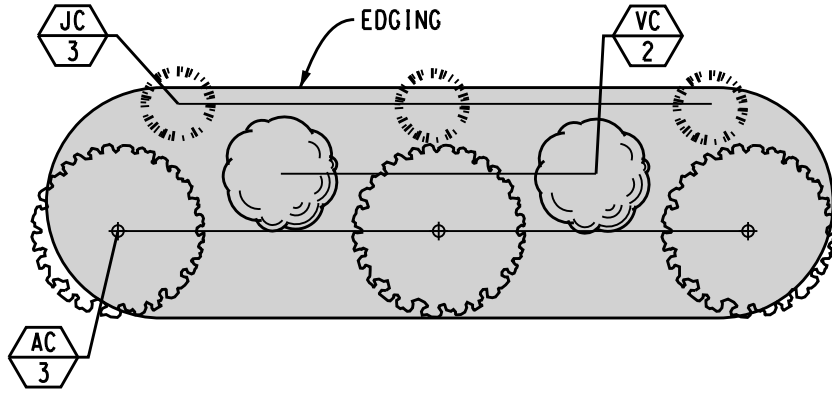
SHRUB PLANTING DETAIL
NO SCALE



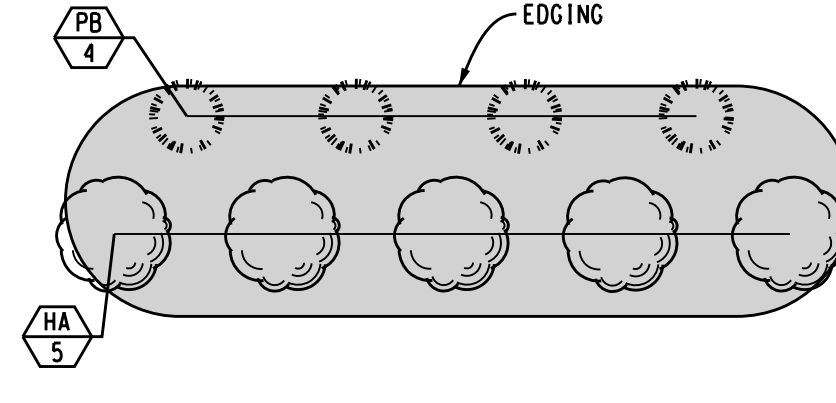
CEDAR MULCH AND EDGING DETAIL
NO SCALE



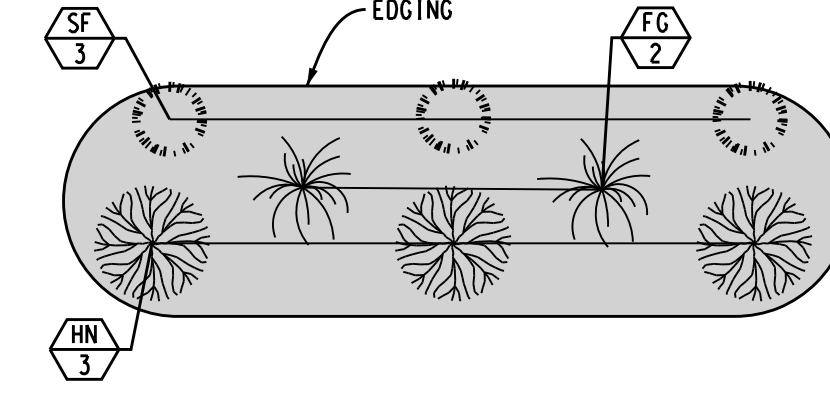
LANDSCAPE BED 'A' DETAIL
NO SCALE (TYP. 4 PLACES)



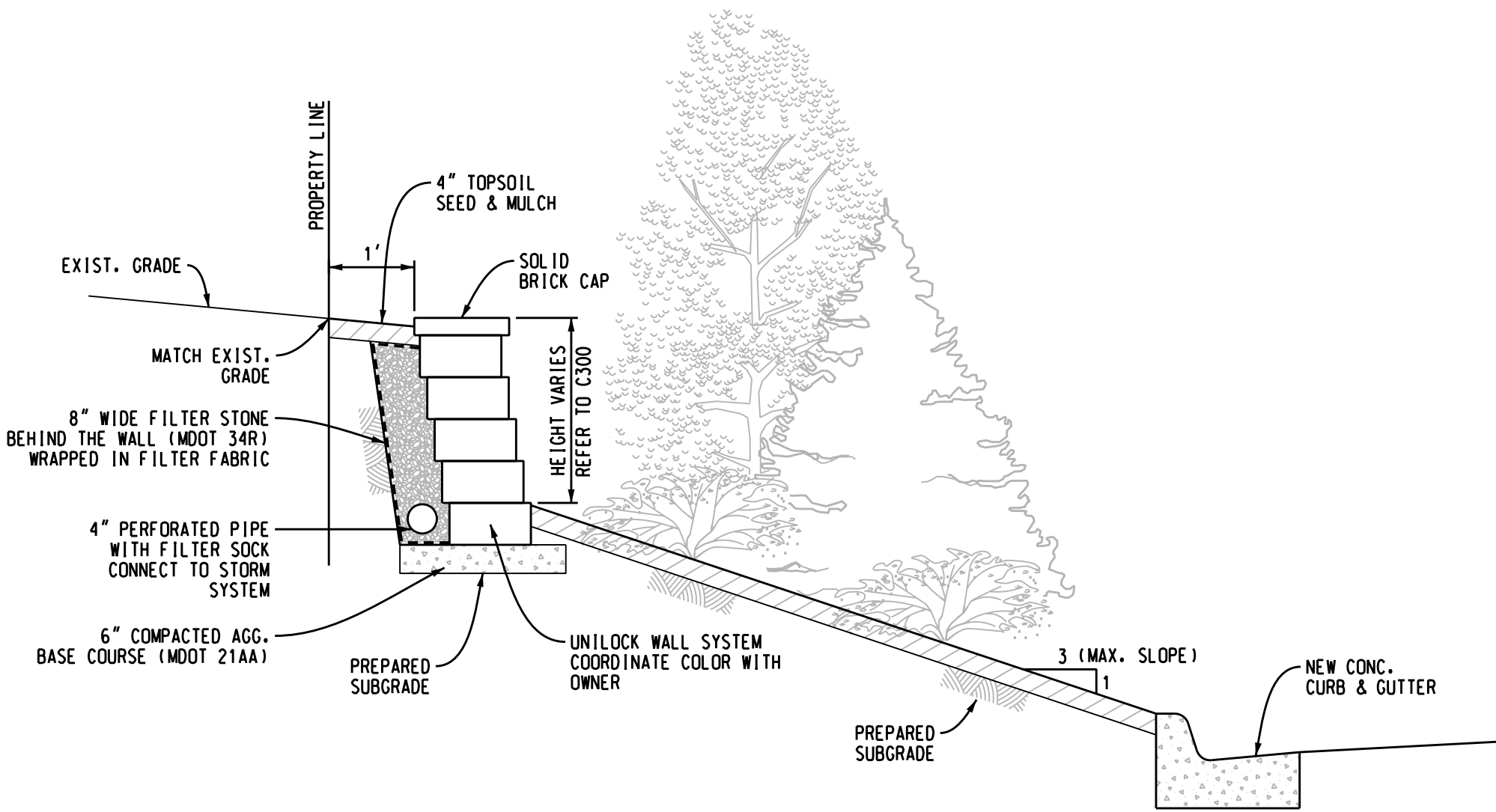
LANDSCAPE BED 'B' DETAIL
NO SCALE (TYP. 7 PLACES)



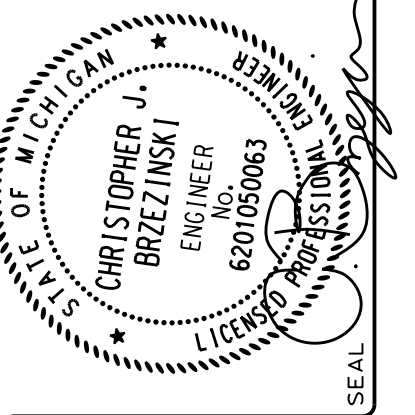
LANDSCAPE BED 'C' DETAIL
NO SCALE (TYP. 7 PLACES)



LANDSCAPE BED 'D' DETAIL
NO SCALE (TYP. 6 PLACES)



CROSS SECTION A
NO SCALE C500



NO.	DATE	SUBJECT	REVISION OR ISSUE
03-18-24	PRELIMINARY SPA		
02-08-24	PRELIMINARY SPA		
01-04-24	PRE APPLICATION MEETING		
10-19-23	PRE APPLICATION MEETING		

DRAWN	BRZEZINSKI
DESIGNED	BRZEZINSKI
CHECKED	QUADERER
FIELD	GREW CB / RO

CULVER'S
 NORTH EAST 1/4 SEC. 20
 TOWNSHIP, RANGE-BE
 BOGIE LAKE ROAD
 WHITE LAKE TWP., MI

Griggs Quaderer, Inc.
 8308 OFFICE PARK DRIVE
 GRAND BLANC, MI 48439
 WWW.GQINCORP.COM
 PH: (810) 695-0154
 FX: (810) 695-0158

CIVIL ENGINEERING · LAND SURVEYING
SITE PLANNING

19th ANNIVERSARY
 2004 - 2023

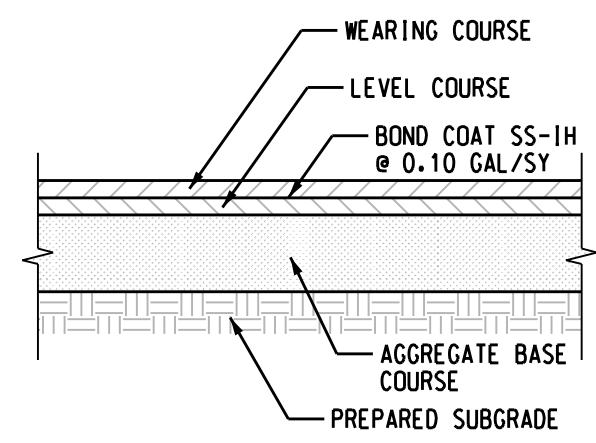
SITE LANDSCAPE DETAILS

DATE: 04/26/2024 TIME: 1:53:23 PM

PHASE: P. SPA

JOB NO.: 230601

C501



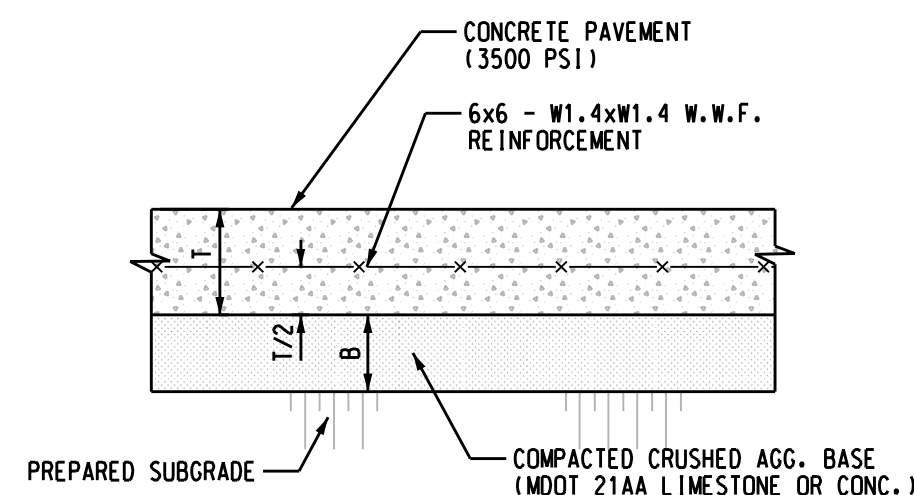
ON-SITE PAVEMENT SECTION
NO SCALE

WEARING COURSE - 1.5" MDOT 13A
 LEVEL COURSE - 3" MDOT 3C
 AGGREGATE BASE - 8" MDOT 21AA CRUSHED LIMESTONE

MEIJER DRIVE PAVEMENT SECTION
NO SCALE

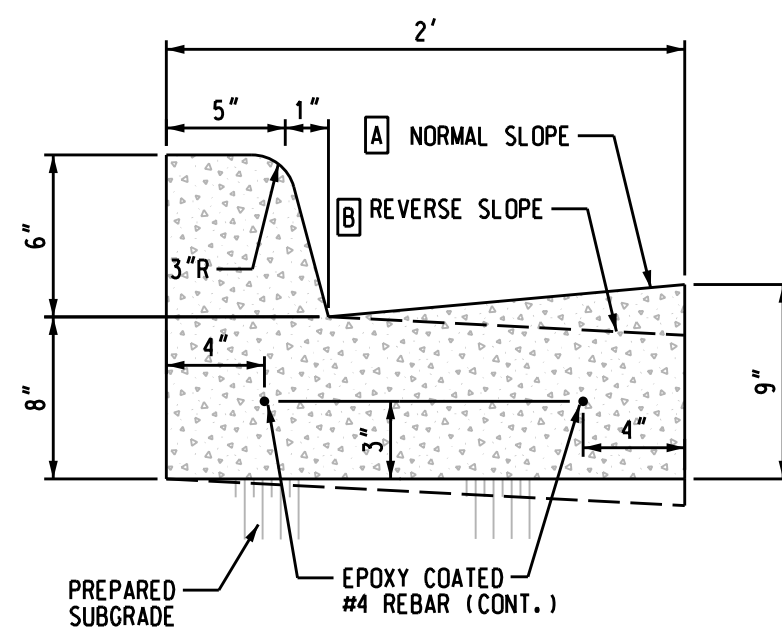
(9" OF DEEP STRENGTH ASPHALT SECTION)
 WEARING COURSE - 2" MDOT 4C
 LEVEL COURSE - 3" MDOT 3C
 LEVEL COURSE - 4" MDOT 2C (FIRST LIFT)

NOTE:
 AS AN ALTERNATE, CONTRACTOR IS ALLOWED TO SUBSTITUTE MDOT 21AA CRUSHED CONCRETE FOR ON-SITE AGGREGATE BASE.



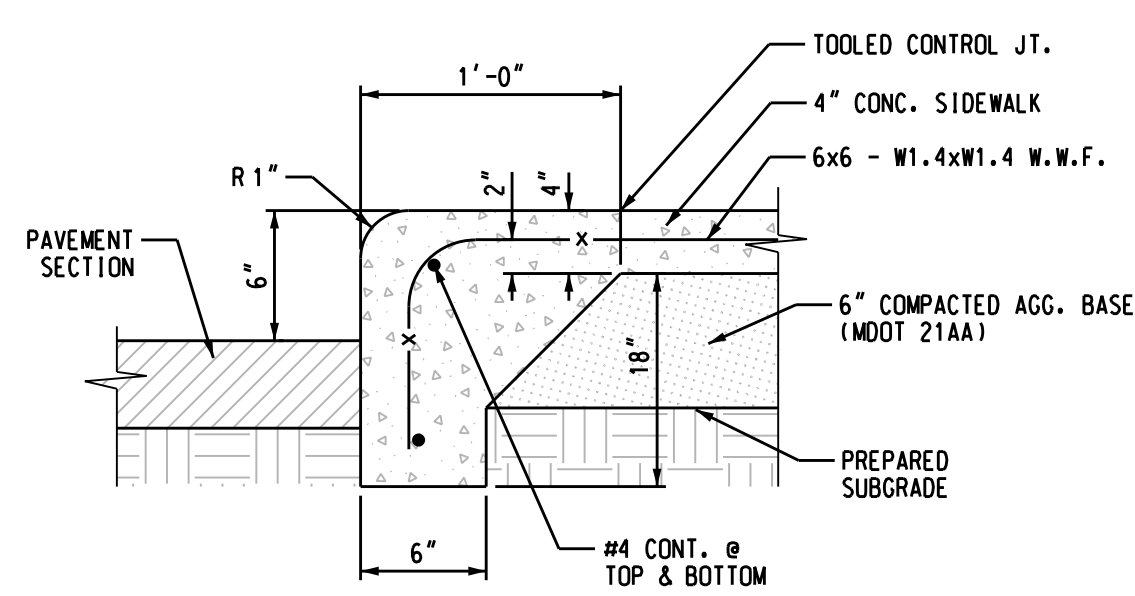
CONCRETE PAVEMENT SECTION
NO SCALE

DESIGN:
 DRIVABLE AREAS 8" 8" YES
 DUMPSTER ENCLOSURE 8" 8" YES
 SIDEWALK (PEDS ONLY) 4" 6" YES

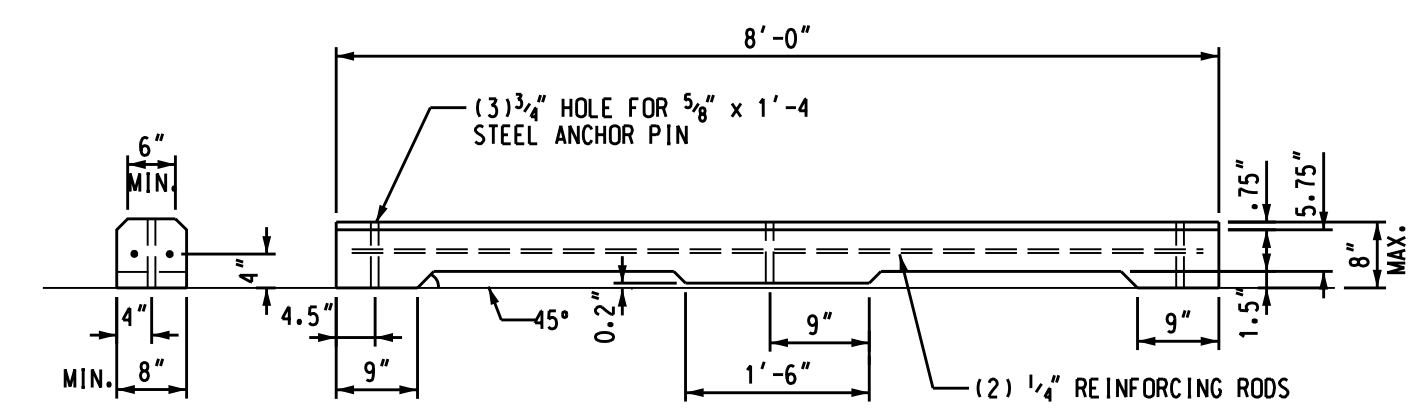


CURB & GUTTER DETAIL
NO SCALE

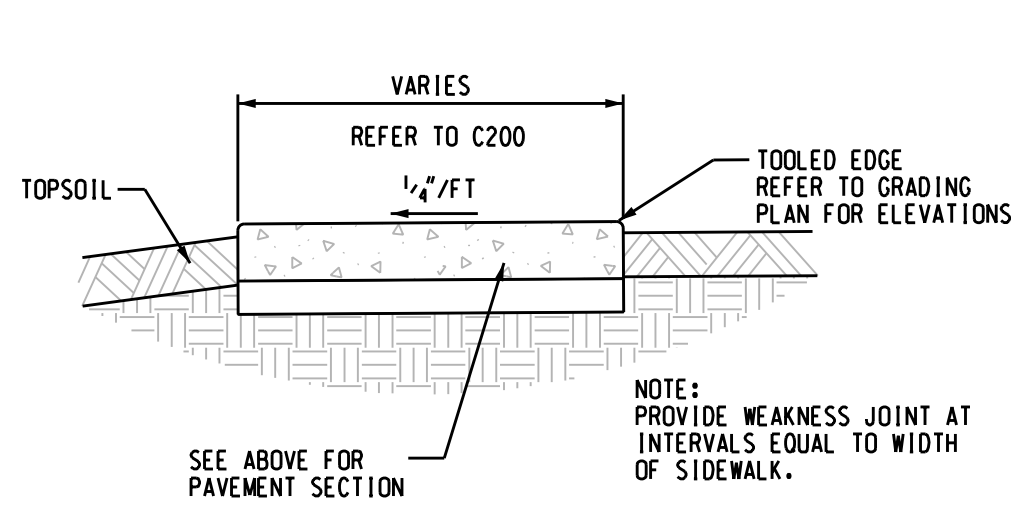
PROVIDE CONTROL JOINTS AT 10 FEET MAXIMUM SPACING AND DOWNED EXPANSION JOINTS AT 10 FEET MAXIMUM INTERVALS AND AT RADIUS POINTS



INTEGRAL CURB & SIDEWALK DETAIL
NO SCALE

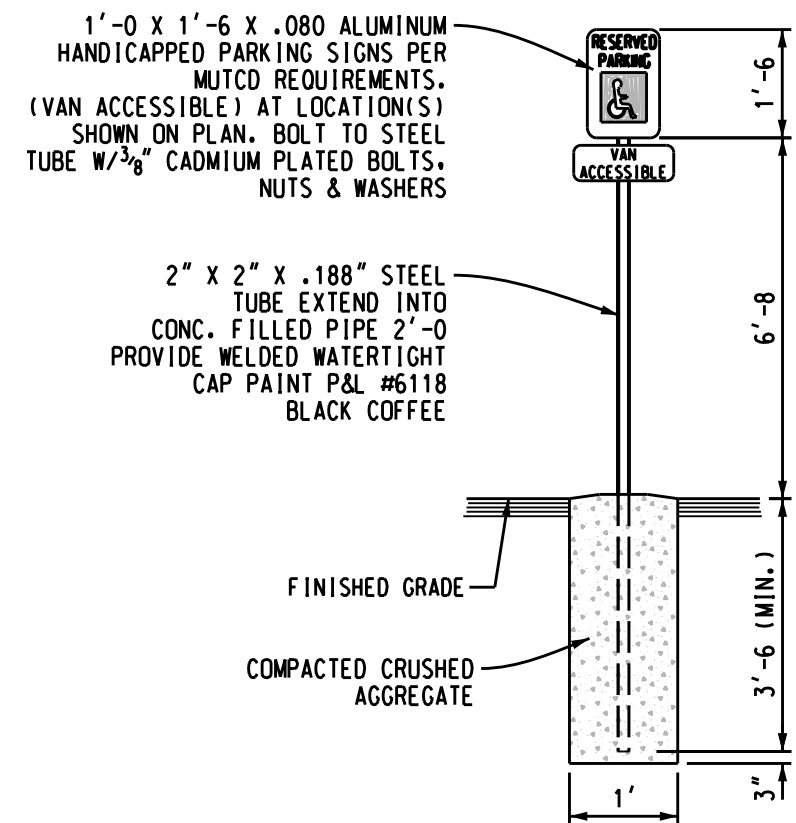


PRECAST CONCRETE BUMPER BLOCK
NO SCALE

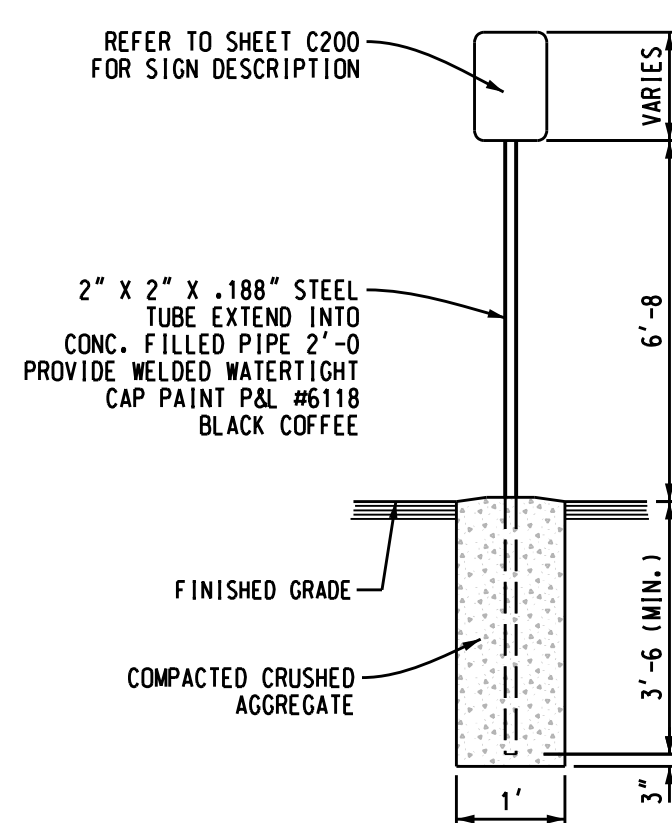


TYP. SIDEWALK DETAIL
NO SCALE

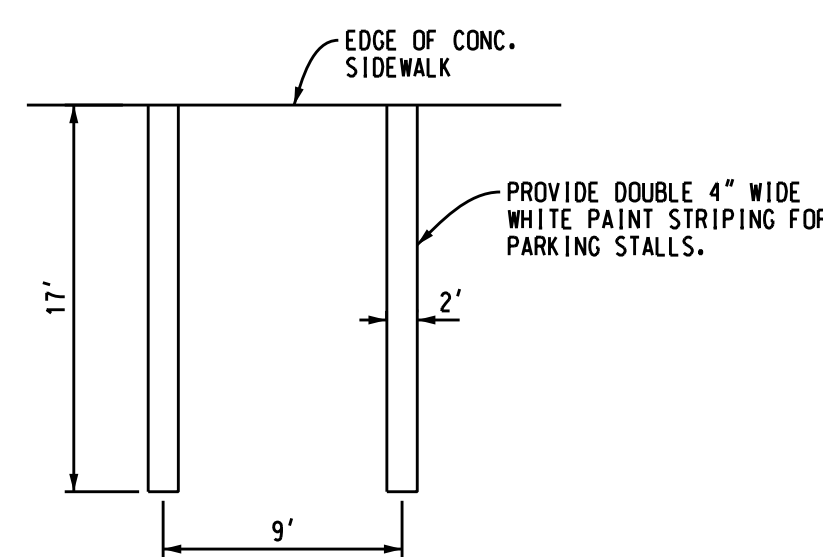
NOTE:
 PROVIDE WEAKNESS JOINT AT INTERVALS EQUAL TO WIDTH OF SIDEWALK.



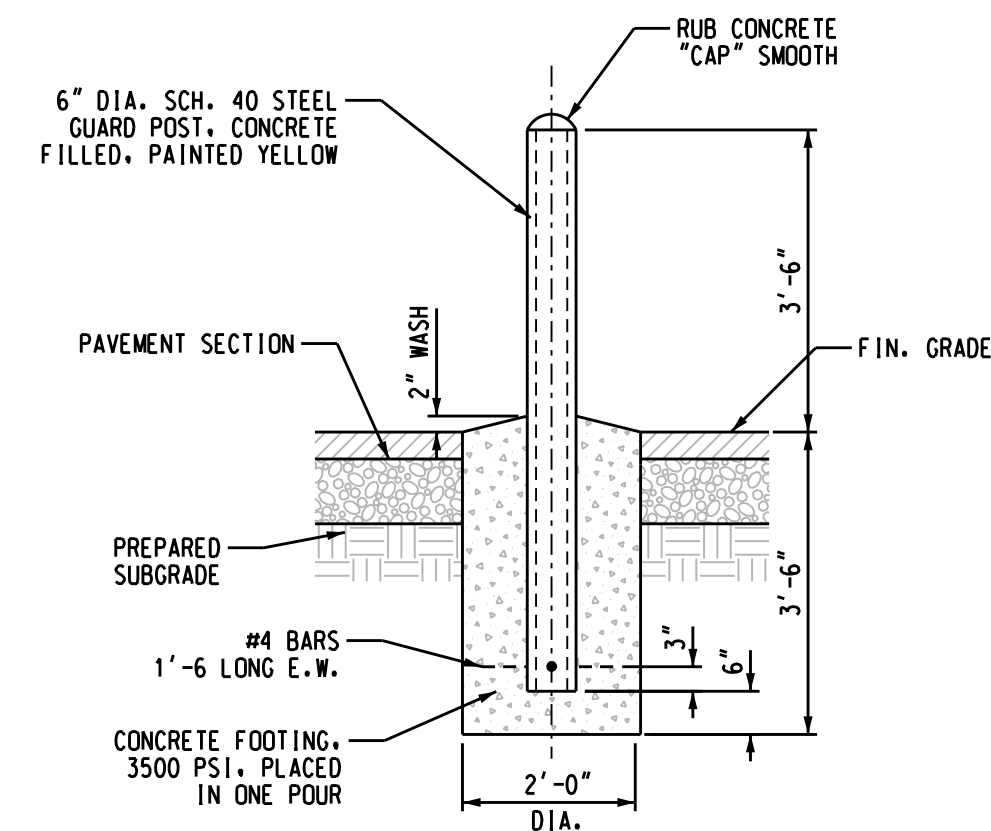
BARRIER FREE PARKING SIGN
NO SCALE



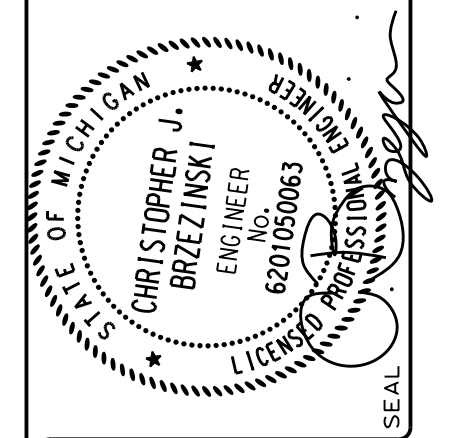
GENERAL SIGN DETAIL
NO SCALE



PARKING STALL PAINT STRIPING DETAIL
NO SCALE



GUARD POST DETAIL
NO SCALE



NO.	DATE	REVISION OR ISSUE
03-18-24	PRELIMINARY SPA	
02-08-24	PRELIMINARY SPA	
01-04-24	PRE APPLICATION MEETING	
10-19-23	PRE APPLICATION MEETING	

DRAWN	BRZEZINSKI
DESIGNED	BRZEZINSKI
CHECKED	QUADERER
FIELD	CREW CB / RO

CULVER'S
 NORTH EAST 1/4 SEC. 20
 TOWNHIP 3N, RANGE 8E
 BOGIE LAKE ROAD
 WHITE LAKE TWP., MI

SITE DETAILS

Griggs Quaderer, Inc.
 8308 OFFICE PARK DRIVE
 GRAND BLANC, MI 48439
 WWW.GQINCORP.COM
 PH: (810) 695-0154
 FX: (810) 695-0158

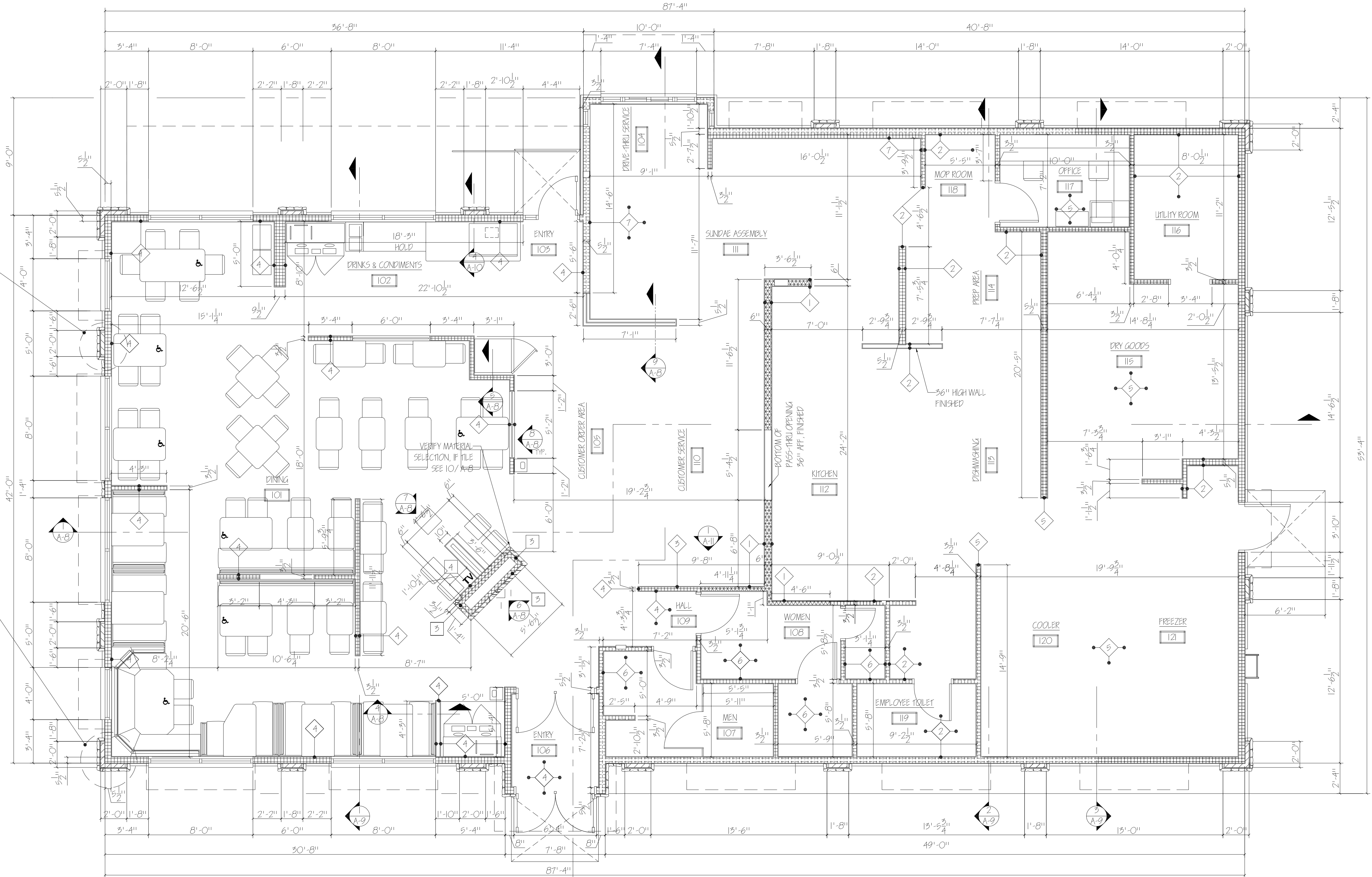
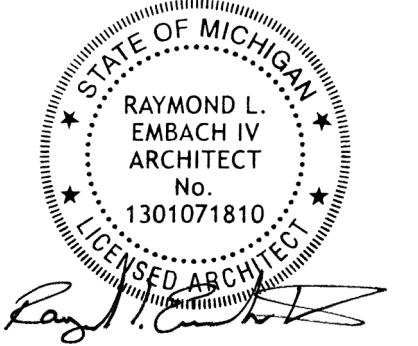
CIVIL ENGINEERING · LAND SURVEYING
SITE PLANNING

19th ANNIVERSARY
 2004 - 2023

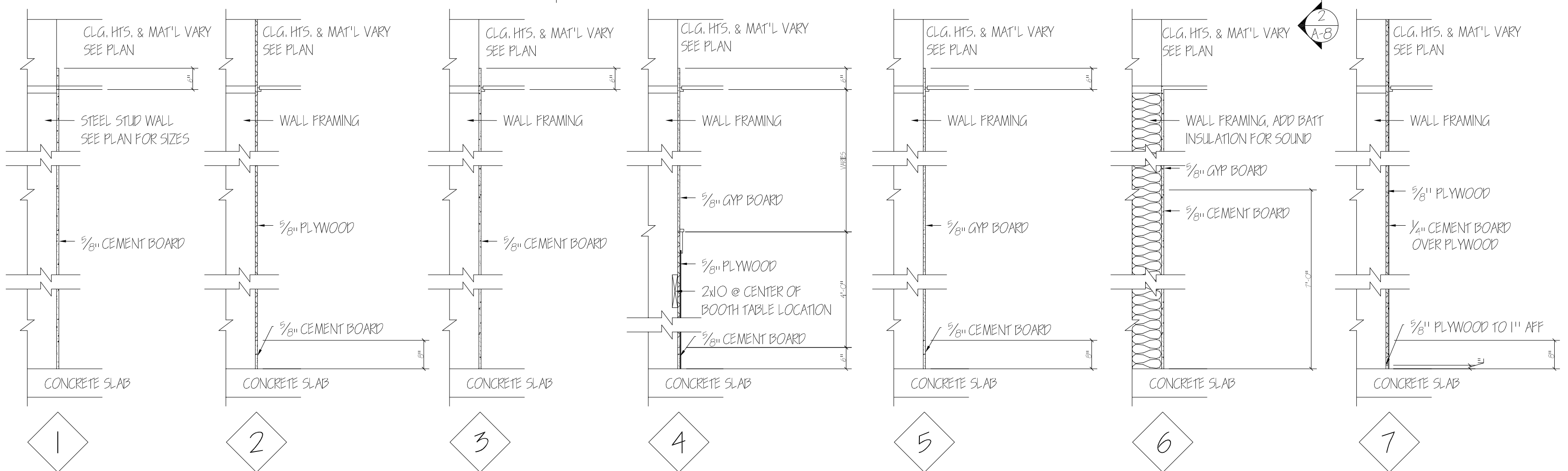
PHASE:
P. SPA

JOB NO.:
230601

C600



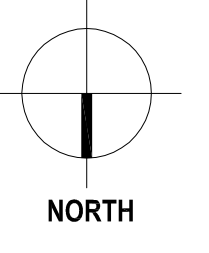
WALL TYPE DETAILS
 SCALE: 1/2" = 1'-0"



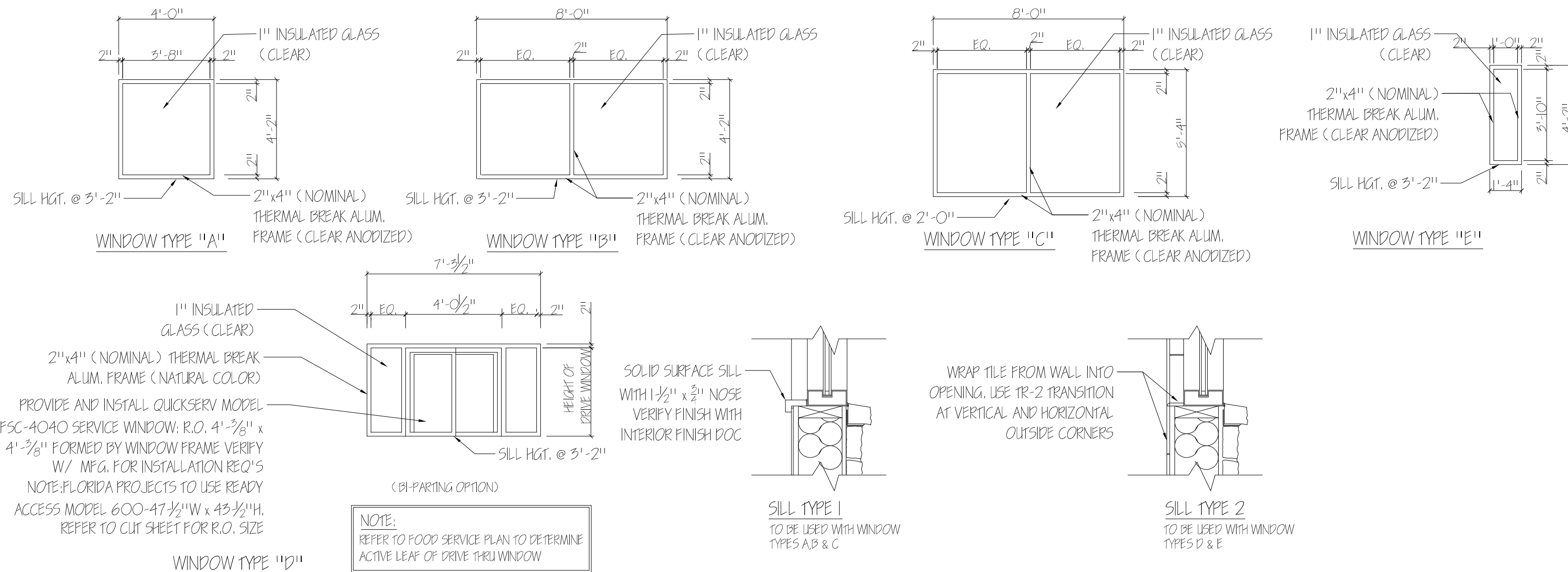
GENERAL NOTES:

- DIMENSIONS SHOWN ARE TO FACE OF STUD UNLESS NOTED OTHERWISE.
- ALL INTERIOR GYPSUM TO RECEIVE PAINT OR VWC SHOULD BE TAPED, SEALED, AND SANDED TO RECEIVE FINISH.

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



WINDOW TYPES



DOOR SCHEDULE

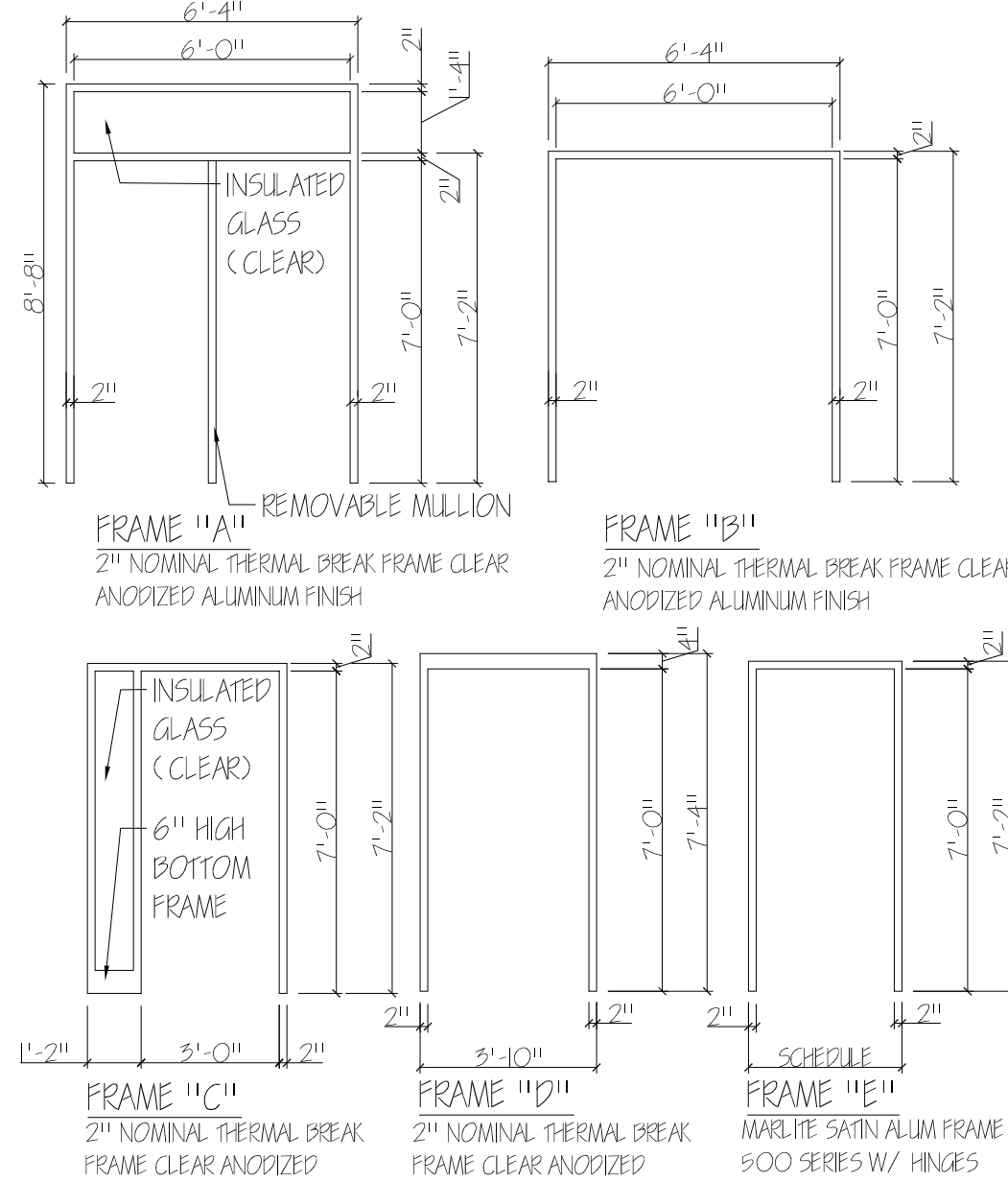
DOOR:				FRAME:				HARDWARE GROUP	NOTES
NO.	WIDTH	HGT.	MAT'L	TYPE	MATERIAL	TYPE			
1	2 @ 36"	84"	ALUM	A	ALUM	A	1		
2	2 @ 36"	84"	ALUM	A	ALUM	B	2		
3	36"	84"	ALUM	A	ALUM	C	3		
4	42"	84"	ALUM	B	ALUM	D	4		
5	36"	84"	HPL	C	ALUM	E	5	OPTIONAL ARM PULL	
6	36"	84"	HPL	C	ALUM	E	5	OPTIONAL ARM PULL	
7	28"	60"	HPL	E	ALUM	E, 2'-8"	6		
8	36"	60"	HPL	E	ALUM	E, 3'-4"	6		
9	36"	84"	HPL	D	ALUM	E	7	GLASS FOR DOOR PROVIDED BY GC	
10	34"	84"	HPL	C	ALUM	E	8		
11	-	-	-	-	ALUM	E	-	DOOR OPTIONAL	

NOTE: SEE PROTOTYPE SHEET T-1 FOR NATIONAL ACCOUNT INFORMATION

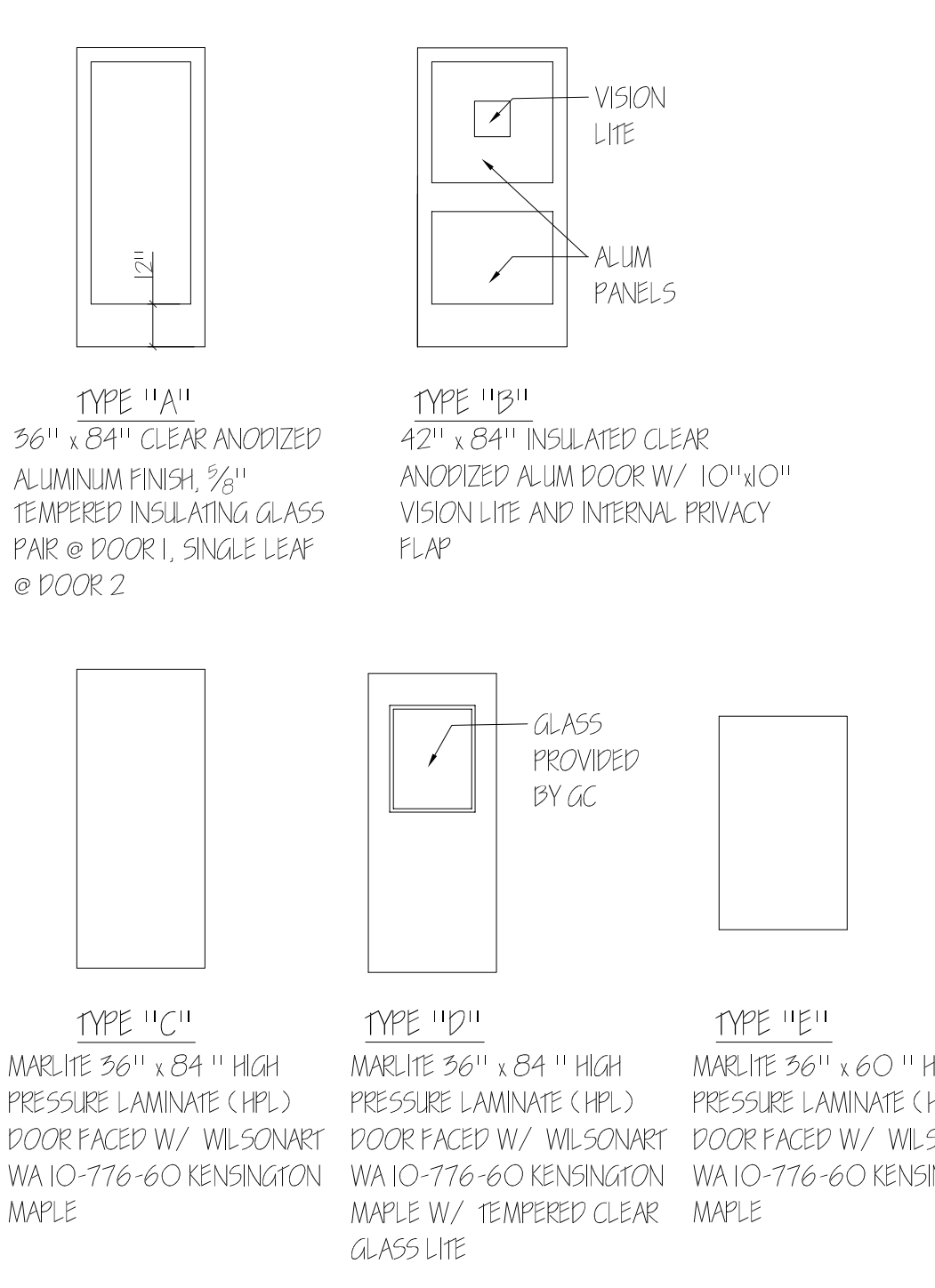
HARDWARE GROUPS

GROUP #	DOOR	QTY	DESCRIPTION	CATALOG #	FINISH	MFG		
EXTERIOR DOUBLE DOOR	1	2	CONT. HINGE	112HD	628	INES		
		1	REMOVABLE MULLION	5654	628	VON DUPRIN		
		2	PANIC HARDWARE	35A-NL-OP-388-299	628	VON DUPRIN		
		2	RIM CYLINDER	20-097	628	SCHLAGE		
		2	90 DEG OFFSET PULL	819CHD 10" O	630	INES		
		2	OH STOP	1005	630	GLYNN		
		2	SURFACE CLOSER	4111 EDA	689	LCN		
		2	MOUNTING PLATE	4110-1B	689	LCN		
		2	BLADE STOP SPACER	4110-61	689	LCN		
		2	MEETING STILE	8193AA	AA	ZERO		
		2	DOOR SWEEP	39A	A	ZERO		
		1	THRESHOLD	629A-MSLA-10	A	ZERO		
INTERIOR DOUBLE DOOR	2	2	CONT. HINGE	112HD	628	INES		
		2	PUSH/PULL BAR (SET)	819CHD 10" N5	630	INES		
		2	OH STOP	1005	630	GLYNN		
		2	SURFACE CLOSER	4111 EDA	689	LCN		
		2	MOUNTING PLATE	4110-1B	689	LCN		
		2	BLADE STOP SPACER	4110-61	689	LCN		
		SECONDARY ENTRY DOOR	3	1	CONT. HINGE	112HD	628	INES
				1	PANIC HARDWARE	35A-NL-OP-388-299	628	VON DUPRIN
				1	RIM CYLINDER	20-097	628	SCHLAGE
				1	90 DEG OFFSET PULL	819CHD 10" O	630	INES
				1	OH STOP	1005	630	GLYNN
				1	SURFACE CLOSER	4111 EDA	689	LCN
1	MOUNTING PLATE			4110-1B	689	LCN		
1	BLADE STOP SPACER			4110-61	689	LCN		
1	DOOR SWEEP			39A	A	ZERO		
1	THRESHOLD			629A-MSLA-10	A	ZERO		

FRAME TYPES



DOOR TYPES



EXTERIOR MATERIAL OPTIONS: SEE EXTERIOR FINISH DOCUMENT FOR SELECTIONS

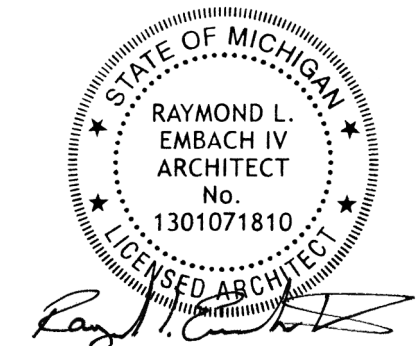
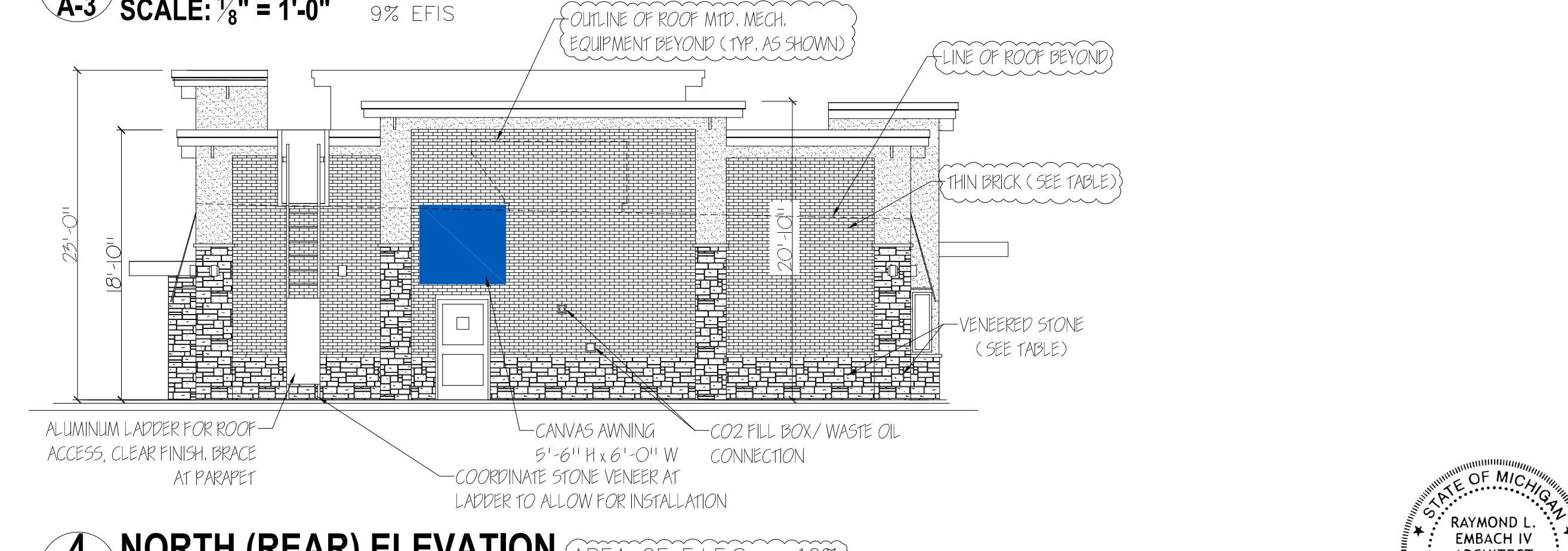
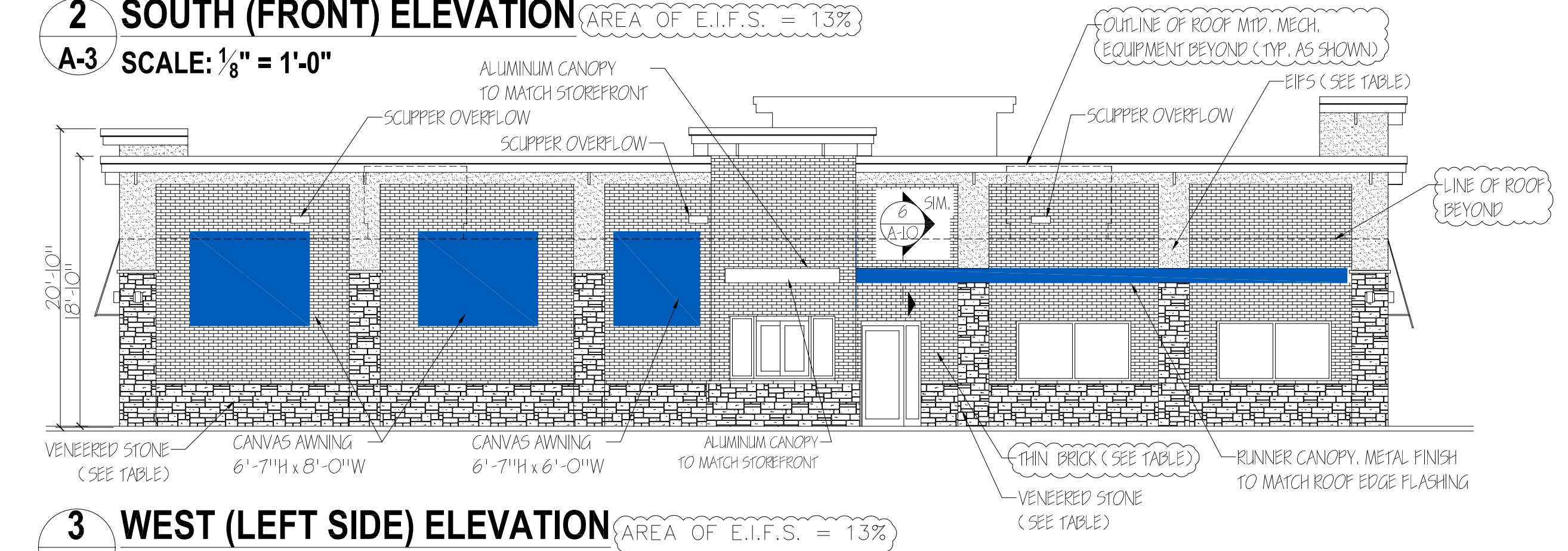
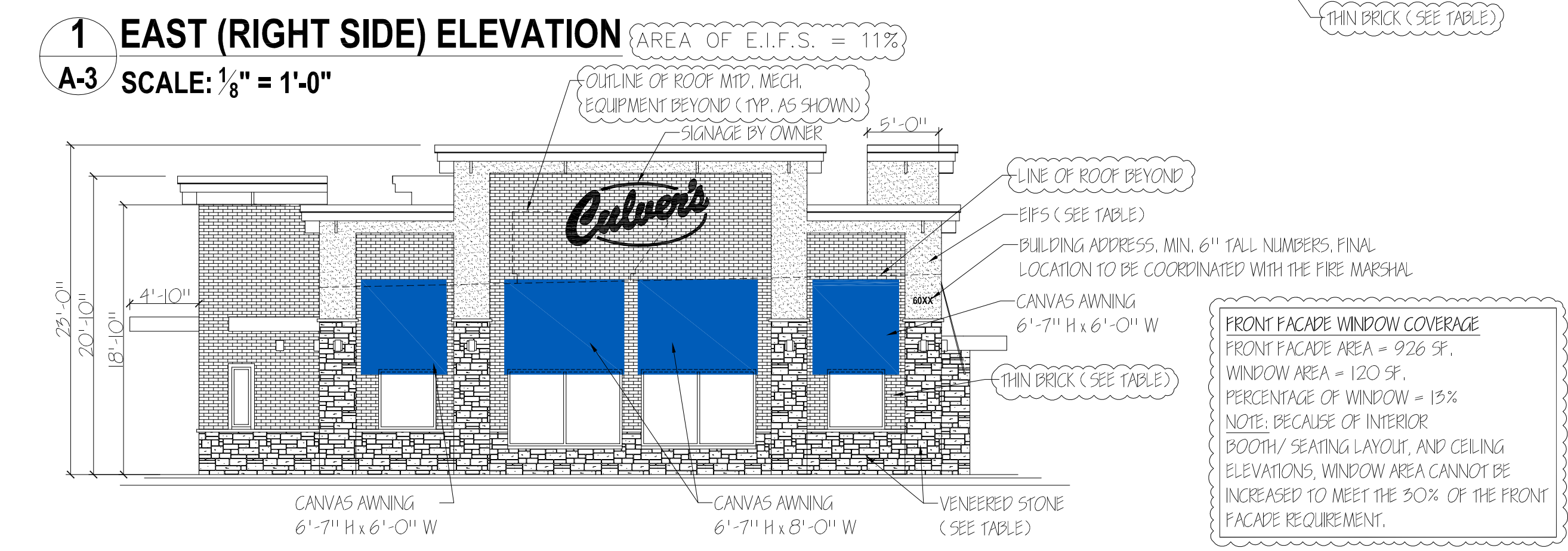
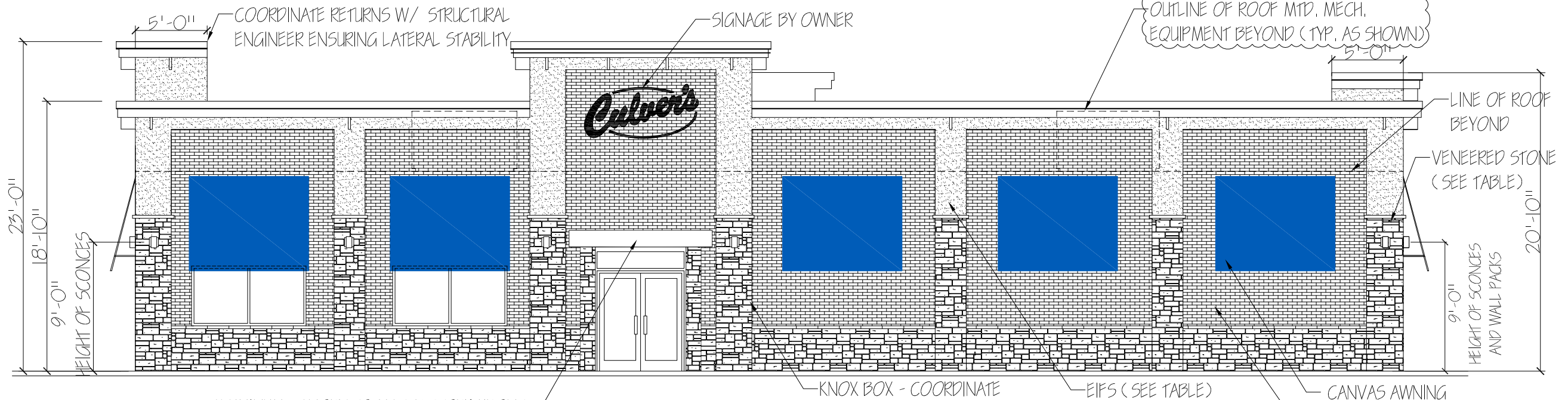
GENERAL NOTES:
1. METAL COMPRESSION EDGE AT PARAPET TO MATCH COLOR SPECIFIED IN EXTERIOR FINISH DOCUMENT
2. DO NOT DRYSTACK CULTURED STONE

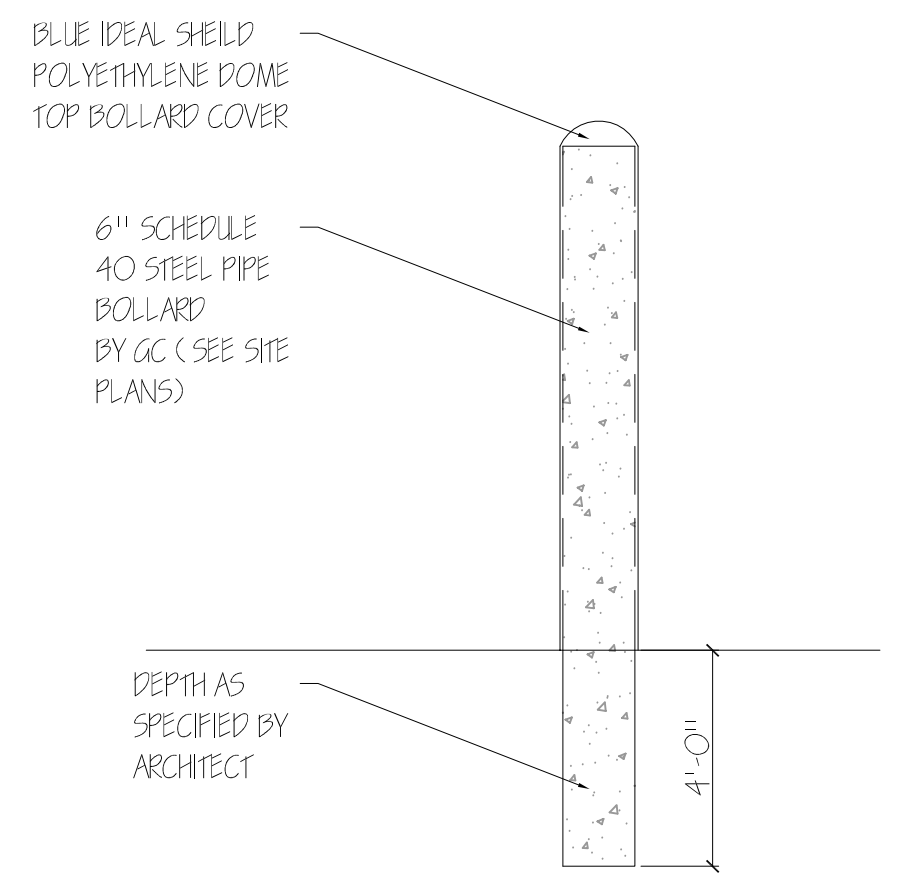
MATERIAL OPTIONS:
STONE:
• ENVIRONMENTAL STONEMWORKS, STYLE: TUSCAN LEDGE, COLOR: SEE EXTERIOR FINISH DOCUMENT
THIN BRICK:
• BELDEN, STYLE: MODULAR 5/8 FLAT BACK, 481-483 VELOUR
SILL & ACCESSORIES:
• COORDINATE COLOR PER MFG. RECOMMENDATION. FLAT LIGHT STONES TO BE USED AT SCIENCE FIXTURES
FILASTERS:
• EIFS: MEDIUM SAND FINISH, COLOR: SEE EXTERIOR FINISH DOCUMENT FOR COLORS OR ALTERNATE MATERIALS
MAIN FIELD MATERIAL:
• EIFS: MEDIUM SAND FINISH, COLOR: SEE EXTERIOR FINISH DOCUMENT FOR COLORS OR ALTERNATE MATERIALS

STANDARD PROTOTYPE AWNINGS (OWNER SUPPLIED/ VENDOR INSTALLED)

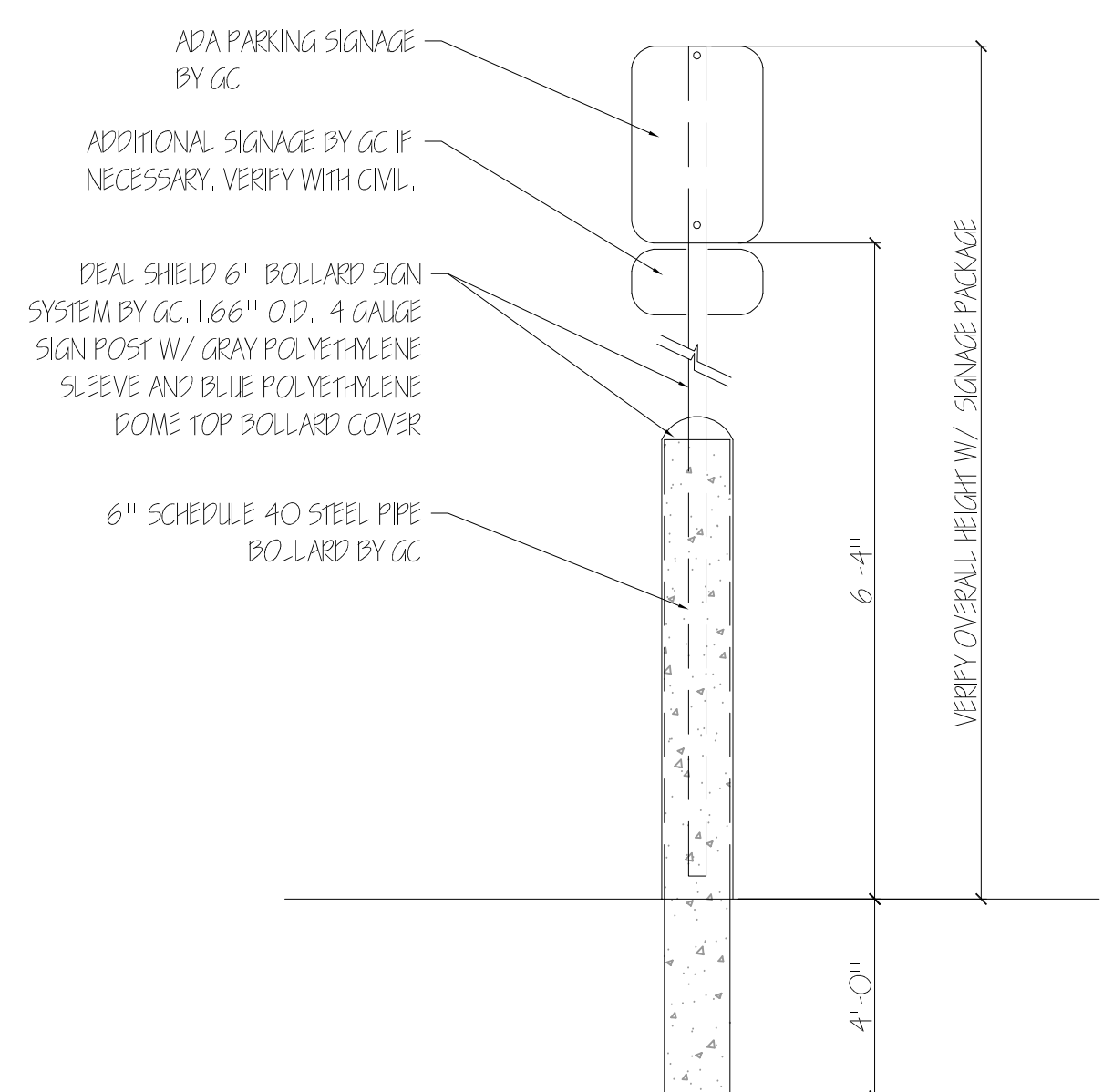
QUANTITIES:
1 - CANVAS AWNINGS @ 6'-7" H x 8'-0" W x 2'-0" D
3 - CANVAS AWNINGS @ 8'-7" H x 6'-0" W x 2'-0" D
2 - CANVAS AWNINGS @ 5'-6" H x 6'-0" W x 2'-0" D
16 - TOTAL

CANVAS AWNING COLOR SPECIFICATIONS:
• SUNBRELLA, ROYAL BLUE, STYLE 4617

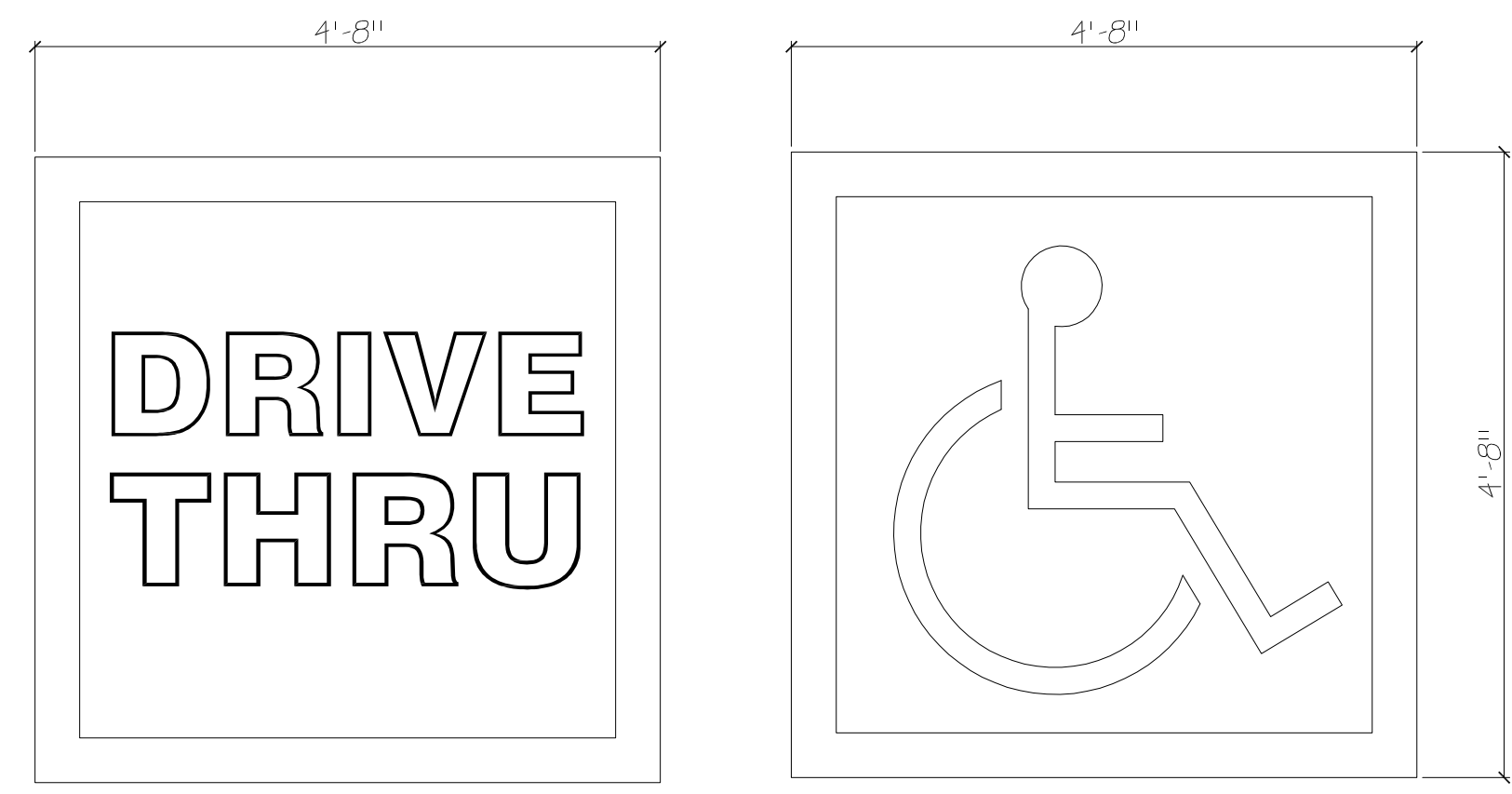




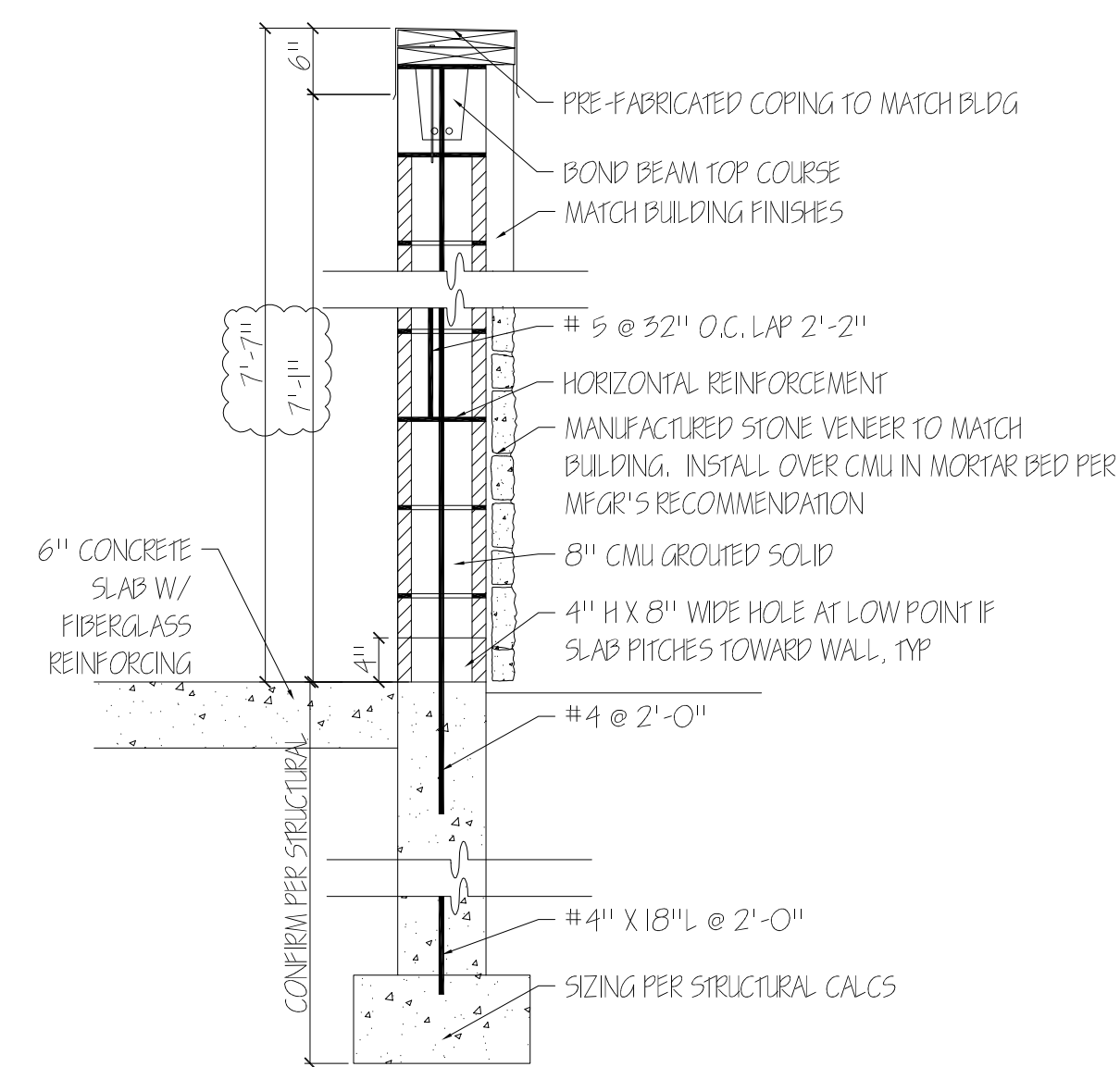
1 BOLLARD (TYP.)
C-1 SCALE: 3/4" = 1'-0"



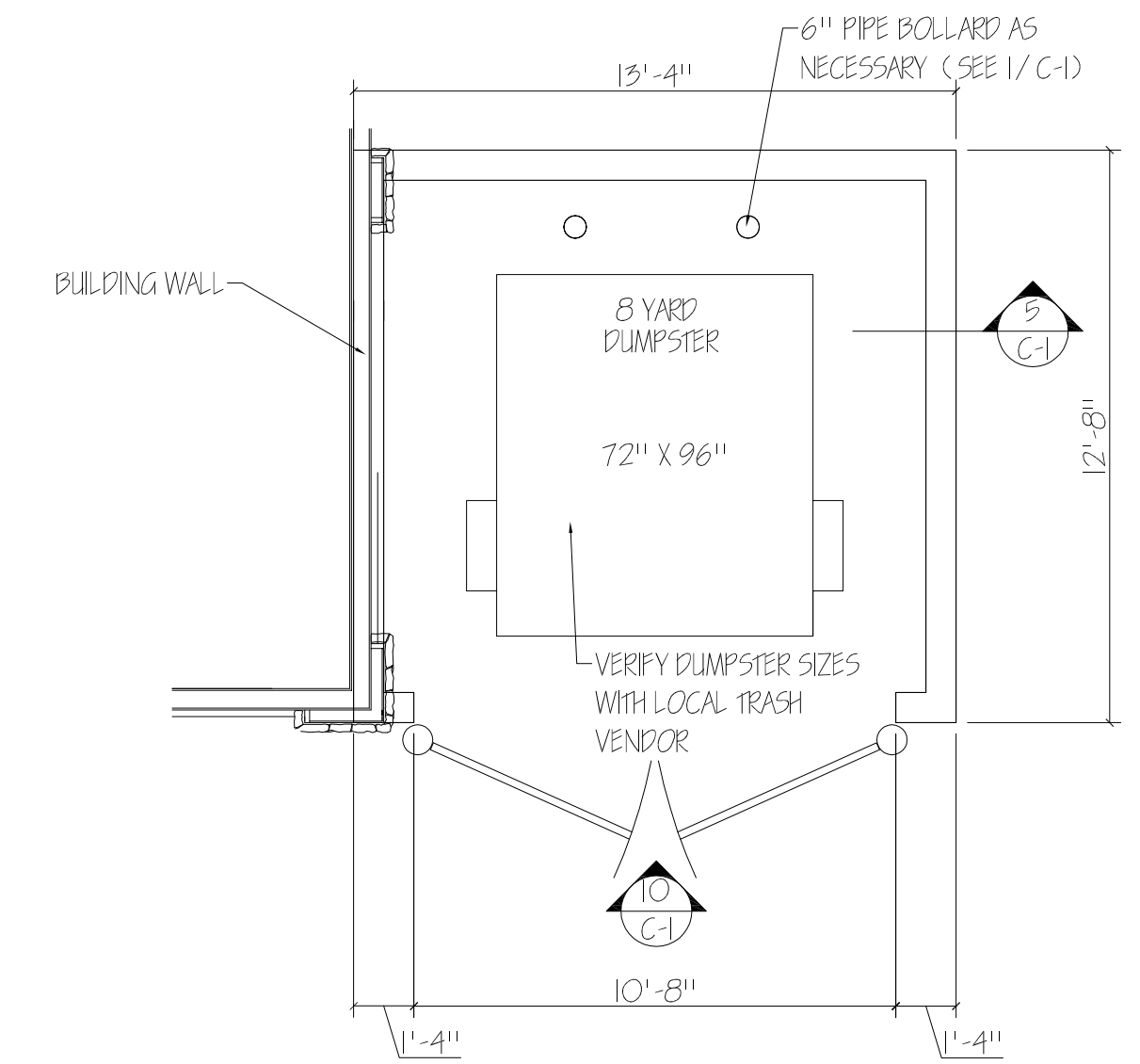
3 BOLLARD SIGN SYSTEM
C-1 SCALE: 3/4" = 1'-0"



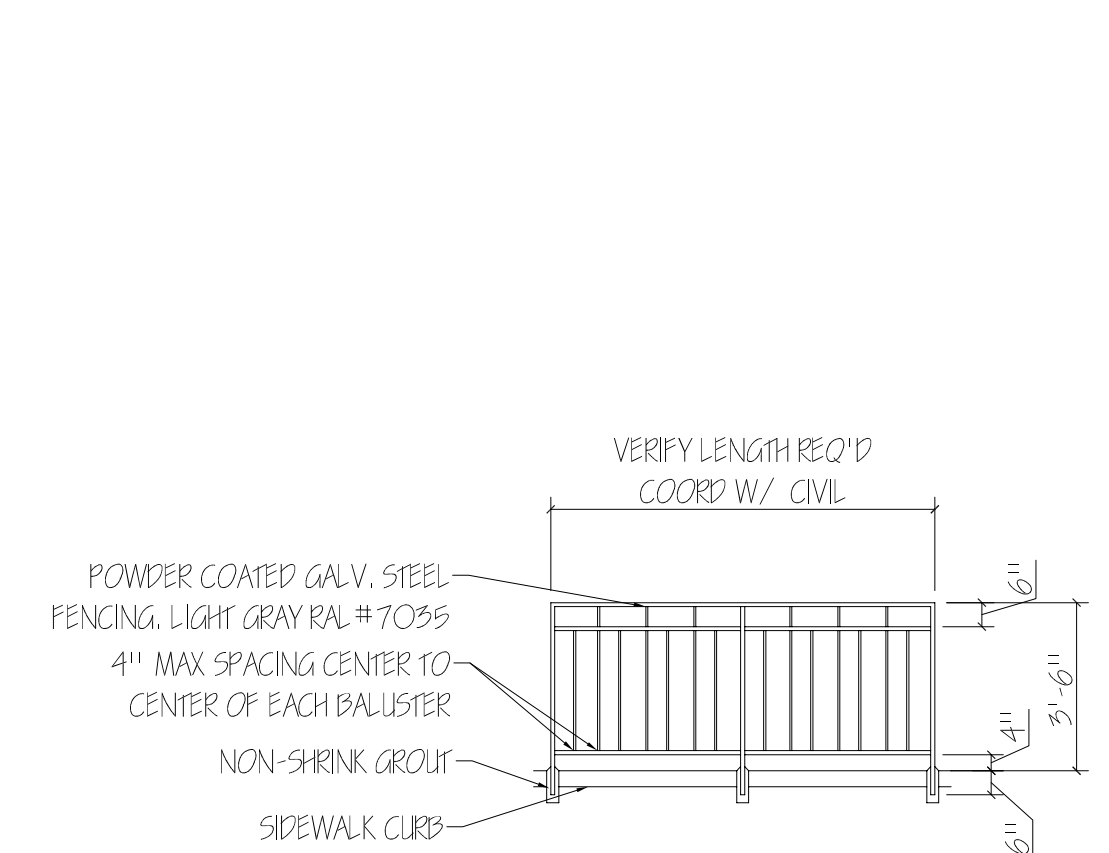
2 PAINTED SYMBOL STANDARDS
C-1 SCALE: 3/4" = 1'-0"
 NOTE: ALL PARKING LOT SYMBOLS TO HAVE WHITE TEXT AND BORDER WITH BLUE BACKGROUND



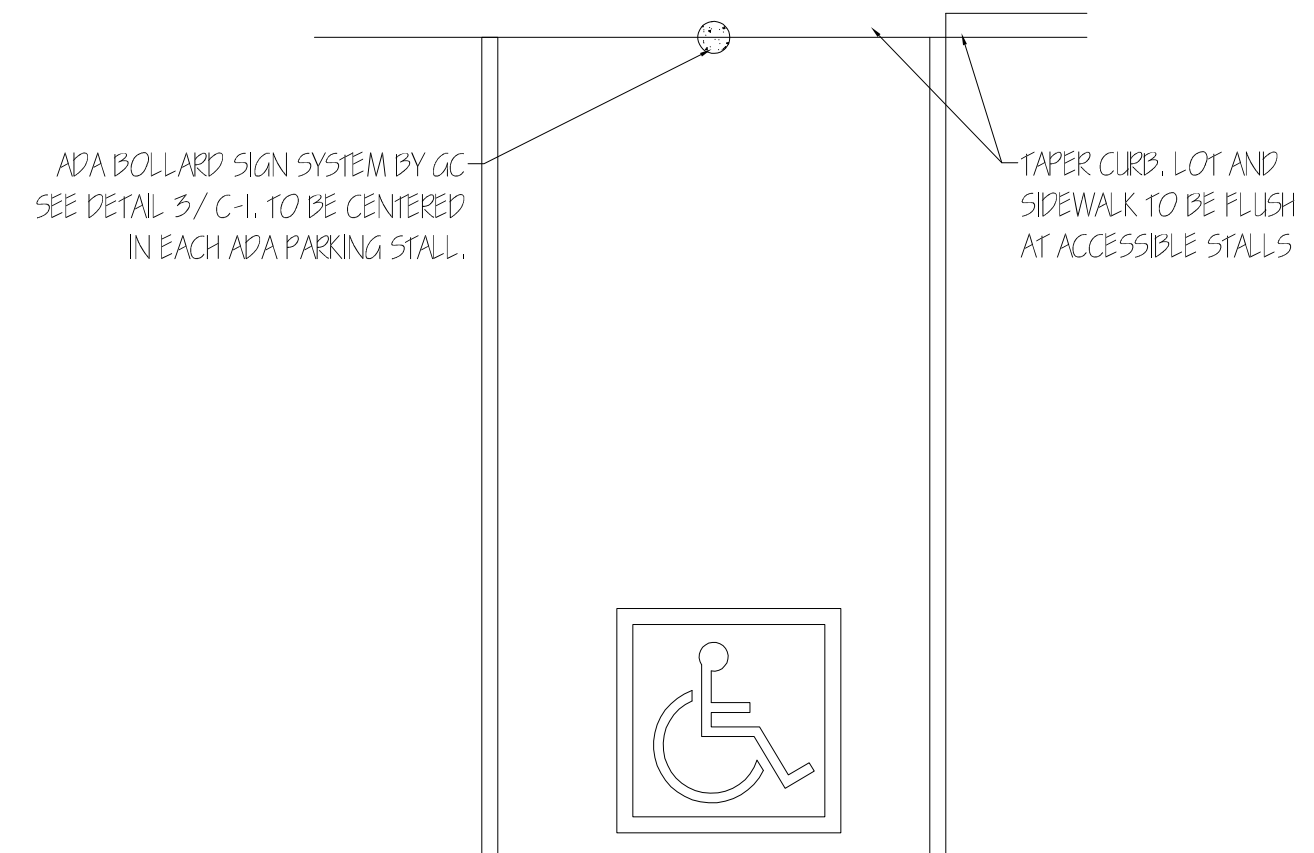
5 SECT. - DUMPSTER ENCLOSURE
C-1 SCALE: 3/4" = 1'-0" (ATTACHED TO BUILDING)



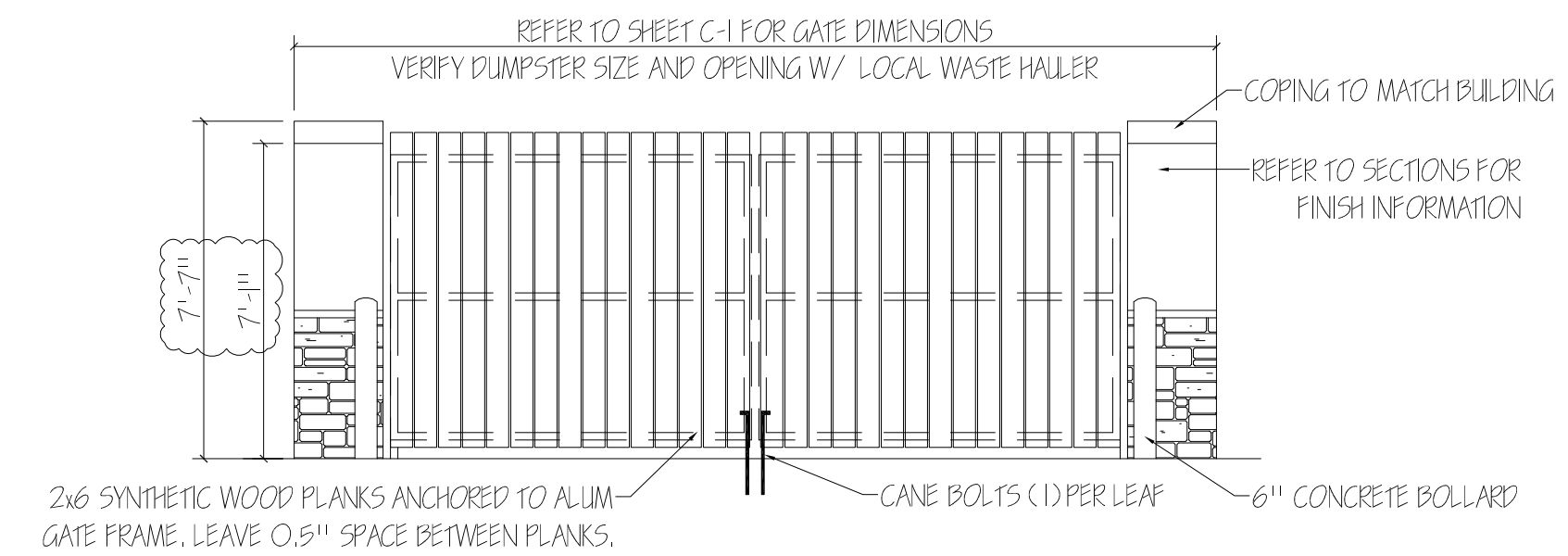
6 DUMPSTER PLAN - ATTACHED
C-1 SCALE: 1/4" = 1'-0"



8 ELEV. GUARD RAIL
C-1 SCALE: 1/4" = 1'-0"

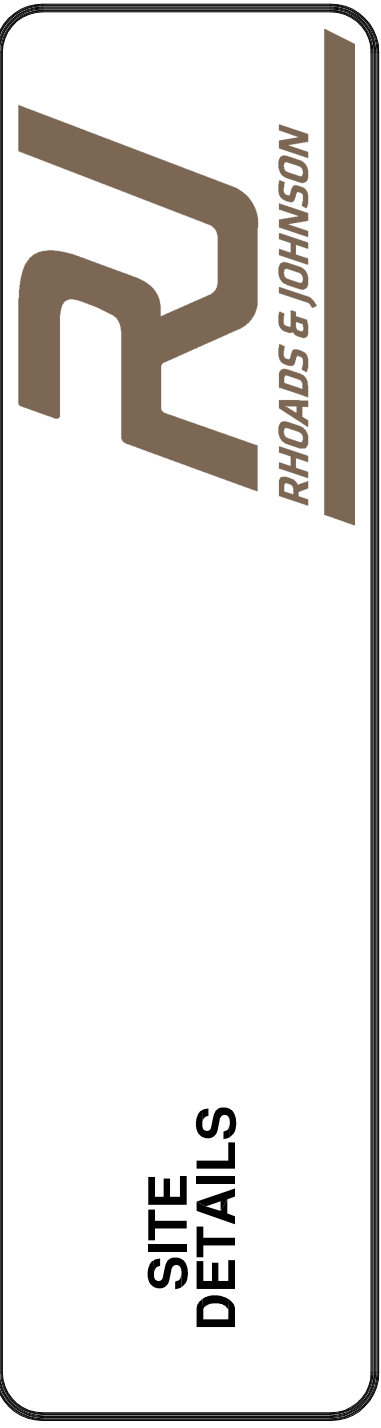
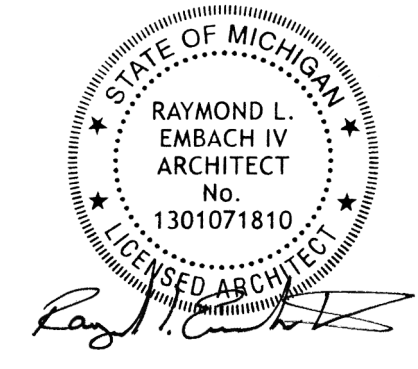


9 TYP. ADA STALL
C-1 SCALE: 1/4" = 1'-0"



10 ELEV. DUMPSTER ENCLOSURE
C-1 SCALE: 1/4" = 1'-0"

NATIONAL ACCOUNTS PROGRAM:	GENERAL NOTES:	SUGGESTED LANDSCAPE GUIDELINES:
1. CRESCENT ELECTRIC SUPPLY COMPANY: INTERIOR AND EXTERIOR LIGHTING, LIGHTING CONTROLS, DISTRIBUTION GEAR, DEVICES, COVER PLATES, AND LIGHT POLES/ HEADS. NATIONAL ACCOUNT SUPPORT: cshers@cesco.com CONTACT FOR SITE PHOTOMETRIC PLAN TYPICAL SITE LIGHTING SPECS: LA ○ LITHONIA D-SERIES SIZE 3 LED FLOOD LIGHT. (FOR OPTIONAL FLAG POLE) TYPICAL PARKING LOT LIGHTING SPECS: PL □ PARKING LOT FIXTURE LITHONIA D-SERIES SIZE 1, DSOILED, VERIFY EXACT SPECS AND POLE HEIGHT WITH SITE PHOTOMETRICS AND CITY REQUIREMENTS NOT SHOWN. VERIFY WITH CIVIL PLANS	GENERAL NOTES: 1. SEE PROJECT SPECIFIC SITE, BUILDING, AND CIVIL PLANS FOR ACTUAL CONDITIONS AND SIGNAGE LOCATIONS. 2. COORDINATE PATIO AND LANDSCAPE LIGHTING WITH OWNER. 3. CONTRACTOR TO VERIFY SIGNAGE REQUIREMENTS WITH ASSIGNED SIGN VENDOR PRIOR TO ROUGH-INS. 4. PARKING LOT LIGHTING, MAIN BUILDING SIGNAGE, AND MENU BOARD SIGNAGE TO BE CONTROLLED SEPARATELY. SEE SHEET E-6 FOR EXTERIOR LIGHT SWITCHING 5. DETAILS LISTED ARE SUGGESTED STANDARD DETAILS. ARCHITECT AND ENGINEER FOR EACH PROJECT ARE RESPONSIBLE TO MODIFY AS NECESSARY TO COMPLY WITH LOCAL CODES OR CONDITIONS.	SUGGESTED LANDSCAPE GUIDELINES: 1. LANDSCAPING SHOULD UTILIZE PLANTINGS NATIVE TO THE LOCATION AND BLEND WITH THE DOMINANT EXISTING OR PLANNED CHARACTER OF THE SITE. 2. LANDSCAPING SHOULD BE PROVIDED AT PERIMETER OF BUILDING TO HELP ANCHOR STRUCTURE TO SITE AND SCREEN MATERIAL TRANSITION TO FOUNDATION. 3. SHRUBS OR TREES THAT ARE LOCATED IN FRONT OF THE BUILDING OR SITE SIGNAGE SHOULD BE NO TALLER THEN 4 FEET IN HEIGHT. 4. DRIVE THRU AREAS WITH SITE LINES TO UTILITY BOXES OR OTHER SIMILAR ELEMENTS SHOULD BE SCREENED WITH PLANTINGS. 5. GRASS, VEGETATIVE GROUND COVER, MULCH, OR ROCK SHALL BE USED IN ALL OPEN SPACE INCLUDING PARKING LOT BUMPOUTS AND ISLANDS. 6. PERIMETER OF PATIO SHOULD HAVE PLANTINGS OR LANDSCAPE FEATURE TO HELP SCREEN VIEW OF PARKING LOT. 7. ANY WATER FEATURES SHOULD BE PONDLESS AND POTENTIAL LIABILITY SHOULD BE CONSIDERED FOR ANY SIMILAR LANDSCAPE FEATURES.



PROPOSED NEW BUILDING FOR:
CULVER'S RESTAURANT
 BOOGIE LAKE ROAD, WHITE LAKE TWP., MI
 NORTHEAST 1/4, SEC. 20, TOWN-3N, RANGE-8E

drawn by: RLE
 date: 02-08-24
 job number: 2345
 approved by: RLE
 revisions: 03-15-24
 sheet: **AC-1**
 of:

WHITE LAKE TOWNSHIP NOTICE OF PUBLIC HEARING

Notice is hereby given of a public hearing by the White Lake Township Planning Commission on **Thursday, May 2, 2024**, at **6:30 P.M.** at the White Lake Township Annex, 7527 Highland Road, White Lake, Michigan, 48383 to consider an additional building to be constructed within the **Planned Business Development District**.

Property described as parcel number 12-20-276-035, located on the north side of Highland Road (M-59) and west of Bogie Lake Road, with a project area on the parcel consisting of approximately 1.69 acres, currently zoned (PB) Planned Business District.

The purpose of this public hearing is to receive public comment on the proposed preliminary site plan for the above Planned Business District zoned property, consisting of a 4,085 square foot building with a drive thru restaurant.

Persons interested are requested to be present. Pertinent information relative to this rezoning request is on file at the Community Development Department and may be examined at any time during the Township's regular business hours; Monday through Friday, 8:00 a.m. through 5:00 p.m. Persons interested may visit the Community Development Department, contact the Community Development Department by telephone at 248-698-3300, ext. 5, or attend the Public Hearing on the date specified. Written comments are also welcome at 7525 Highland Road, White Lake, MI 48383. Individuals with disabilities requiring auxiliary aids or services should contact the Clerk's Office at least 5 days before the hearing.

Sean O'Neil, AICP
Community Development Director