

**GENOA CHARTER TOWNSHIP
PLANNING COMMISSION PUBLIC HEARING
APRIL 8, 2024
MONDAY
6:30 P.M.
AGENDA**

CALL TO ORDER:

PLEDGE OF ALLEGIANCE:

APPROVAL OF AGENDA:

DECLARATION OF CONFLICT OF INTEREST:

CALL TO THE PUBLIC: *(Note: The Board reserves the right to not begin new business after 10:00 p.m.)*

OLD BUSINESS:

OPEN PUBLIC HEARING #1...Consideration of special land use application, environmental impact assessment and site plan to convert the use and expand an existing building for an office use and event facility with outdoor entertainment. The property is located at 5311 Brighton Road, north side of Brighton Road, between Clifford Road and Oak Pointe Drive. The request is petitioned by David Richardson, Lindhout Associates.

- A. Recommendation of Special Use.
- B. Recommendation of Environmental Impact Assessment (3-10-24)
- C. Recommendation of Site Plan (3-12-24)

OPEN PUBLIC HEARING #2...Consideration of a site plan amendment for revisions to the previously approved site grading on a 4.32-acre parcel (4711-06-200-101) on the north side of Grand River Avenue, just west of Char-Ann Drive. The request is petitioned by Chestnut Development.

- A. Recommendation of Environmental Impact Assessment (9-20-23)
- B. Disposition of Amended Site Plan (3-19-24)

NEW BUSINESS:

OPEN PUBLIC HEARING #3...Consideration of a site plan application and environmental impact assessment for a proposed façade improvement and addition to an existing multi-tenant shopping center. The property is located at 3599 and 3669 Grand River Avenue, north side of Grand River Avenue, west of Latson Road. The request is petitioned by Symmetry Management.

- A. Recommendation of Environmental Impact Assessment (3-19-24)
- B. Recommendation of Site Plan (3-19-24)

ADMINISTRATIVE BUSINESS:

- Staff Report
- Approval of March 11, 2024 Planning Commission meeting minutes
- Member discussion
- Adjournment

<p>*Citizen's Comments- In addition to providing the public with an opportunity to address the Township Board at the beginning of the meeting, opportunity to comment on individual agenda items may be offered by the Chairman as they are presented. Anyone speaking on an agenda item will be limited to 2 minutes.</p>
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GENOA CHARTER TOWNSHIP Application for Site Plan Review

TO THE GENOA TOWNSHIP PLANNING COMMISSION AND TOWNSHIP BOARD:

APPLICANT NAME & ADDRESS: David Richardson, AIA. Lindhout Associates. 10465 Citation Dr.
If applicant is not the owner, a letter of Authorization from Property Owner is needed. Brighton, 48116

OWNER'S NAME & ADDRESS: Andrew Perri, Pinnacle Wealth and Tax Service.
7600 Grand River, ste. 220. Brighton, 48114

SITE ADDRESS: 5311 Brighton Road PARCEL #(s): _____

APPLICANT PHONE: (810) 227-5668 OWNER PHONE: (586) 707-0182

OWNER EMAIL: aperri
aperri@pinnaclewealthonline.com

LOCATION AND BRIEF DESCRIPTION OF SITE: Next to the Oak Pointe Country Club, this is
an adaptive reuse and small additions to the former Burroughs Tavern. The charm of the
Burroughs Farms will be brought back, commercial kitchen rooftop equipment removed, roof
cleaned up and new landscaping added.

BRIEF STATEMENT OF PROPOSED USE: Financial planning and tax services office use.
A small event planner business will use the reduced size banquet room, patio and a warming
kitchen.

THE FOLLOWING BUILDINGS ARE PROPOSED: Refurbishment of the existing
5,440 sq.ft. building into an office building. Two small additions are proposed on the
north side of the building, 350 sq.ft. and 240 sq.ft. A small event planner will use the
reduced sized banquet room as noted above.

I HEREBY CERTIFY THAT ALL INFORMATION AND DATA ATTACHED TO AND MADE PART OF THIS APPLICATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

BY: David Richardson, AIA. Lindhout Associates

ADDRESS: 10465 Citation Drive, Brighton 48116

Contact Information - Review Letters and Correspondence shall be forwarded to the following:

1.) David Richardson of Lindhout Associates at dar@lindhout.com
 Name Business Affiliation E-mail Address

FEE EXCEEDANCE AGREEMENT

As stated on the site plan review fee schedule, all site plans are allocated two (2) consultant reviews and one (1) Planning Commission meeting. If additional reviews or meetings are necessary, the applicant will be required to pay the actual incurred costs for the additional reviews. If applicable, additional review fee payment will be required concurrent with submittal to the Township Board. By signing below, applicant indicates agreement and full understanding of this policy.

on behalf of Pinnacle Wealth and Tax Service:

SIGNATURE: *David Richardson* DATE: 7-31-23

PRINT NAME: David Richardson, Lindhout Associates PHONE: 810-227-5668

ADDRESS: 10465 Citation Dr., Brighton 48116



GENOA CHARTER TOWNSHIP Special Land Use Application

This application **must** be accompanied by a site plan review application and the associated submittal requirements. (The Zoning Official may allow a less detailed sketch plan for a change in use.)

APPLICANT NAME & ADDRESS: Andrew Perri, 7600 Grand River Rd., Ste 220, Brighton, MI 48114
Submit a letter of Authorization from Property Owner if application is signed by Acting Agent.

APPLICANT PHONE: (586) 707-0182 EMAIL: aperri@pinnaclewealthonline.com

OWNER NAME & ADDRESS: 7600 Grand River Rd., Ste 220, Brighton, MI 48114

SITE ADDRESS: 5311 Brighton Rd, Brighton PARCEL #(s): 4711-27-300-013

OWNER PHONE: (586)707-0182 EMAIL: aperri@pinnaclewealthonline.com

Location and brief description of site and surroundings:

The site is located on the North side of Brighton Rd. The site is in between Bauer Rd and Chilson Rd. The site is part of Oak Point PUD.

The site is the former Burroughs Roadhouse.

Proposed Use:

The use on the interior will be financial planning, tax preparation and small events with a warming kitchen. The exterior patio proposed use is small events which will include catered food and music (live and digital).

Describe how your request meets the Zoning Ordinance General Review Standards (section 19.03):

- a. Describe how the use will be compatible and in accordance with the goals, objectives, and policies of the Genoa Township Comprehensive Plan and subarea plans, and will promote the Statement of Purpose of the zoning district in which the use is proposed.

Please see attached supplement A

- b. Describe how the use will be designed, constructed, operated, and maintained to be compatible with, and not significantly alter, the existing or intended character of the general vicinity.

The facility will be renovated with a new roof line and trusses, removal of kitchen equipment through the roof, and new landscaping.

- c. How will the use be served adequately by essential public facilities and services such as highways, streets, police and fire protection, drainage structures, water and sewage facilities, refuse disposal and schools?

The building has water and sewer hook up. The building fronts Brighton Rd. The drainage is not changing. The refuse will be part of the golf course maintenance shed.

d. Will the use involve any uses, activities, processes, or materials potentially detrimental to the natural environment, public health, safety, or welfare by reason of excessive production of traffic, noise, vibration, smoke, fumes, odors, glare, or other such nuisance? If so, how will the impacts be mitigated?

The patio venue is a smaller venue and due to the compact size will be limited as to the overall occupant load.

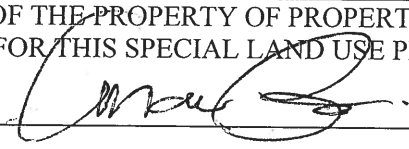
The facility manager will be on site to manage such nuisances at the venue during operation. The limited seasonal patio operation will likely only be 14 to 18 weeks a year. Thursday & Friday's 4pm-10pm, Saturday 11am-10pm, Sundays 10am-5pm

e. Does the use have specific criteria as listed in the Zoning Ordinance (sections 3.03.02, 7.02.02, & 8.02.02)? If so, describe how the criteria are met.

#2 Parking is available through the PUD agreement with Oak Point. The buffer between the facility and the residents is the golf course. #3 The building is located on a paved road. #4 An application to the ZBA is being submitted to request a variance of the 100 foot property setback requirement. #5 The site will be cleaned up after every event.

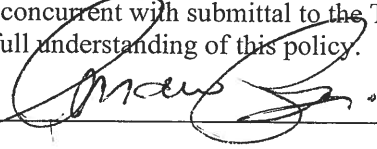
I HEREBY CERTIFY THAT ALL INFORMATION AND DATA ATTACHED TO AND MADE PART OF THIS APPLICATION ARE TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF. I AGREE TO DESIGN, CONSTRUCT AND OPERATE, AND MAINTAIN THESE PREMISES AND THE BUILDINGS, STRUCTURES, AND FACILITIES WHICH ARE GOVERNED BY THIS PERMIT IN ACCORDANCE WITH THE STATED REQUIREMENTS OF THE GENOA TOWNSHIP ZONING ORDINANCE, AND SUCH ADDITIONAL LIMITS AND SAFEGUARDS AS MAY BE MADE A PART OF THIS PERMIT.

THE UNDERSIGNED Andrew Perri STATES THAT THEY ARE THE FREE OWNER OF THE PROPERTY OF PROPERTIES DESCRIBED ABOVE AND MAKES APPLICATION FOR THIS SPECIAL LAND USE PERMIT.

BY: 

ADDRESS: 7600 Grand River Rd., Ste 220, Brighton, MI 48114

Contact Information - Review Letters and Correspondence shall be forwarded to the following:		
Andrew Perri	of Pinnacle Wealth Management Partners, Inc	at aperri@pinnaclewealthonline.com
Name	Business Affiliation	Email
<u>Dave Richardson, Todd TNT</u>		

FEE EXCEEDANCE AGREEMENT	
As stated on the site plan review fee schedule, all site plans are allocated two (2) consultant reviews and one (1) Planning Commission meeting. If additional reviews or meetings are necessary, the applicant will be required to pay the actual incurred costs for the additional reviews. If applicable, additional review fee payment will be required concurrent with submittal to the Township Board. By signing below, applicant indicates agreement and full understanding of this policy.	
SIGNATURE: <u></u>	DATE: <u>August 3, 2023</u>
PRINT NAME: <u>Andrew Perri</u>	PHONE: <u>586-707-0182</u>

Supplement A

Describe how your request meets the Zoning Ordinance General Review Standards (section 19.03):

a. Describe how the use will be compatible and in accordance with the goals, objectives, and policies of the Genoa Township Comprehensive Plan and subarea plans, and will promote the Statement of Purpose of the zoning district in which the use is proposed.

The outdoor small event gatherings on the patio caters on smaller gatherings. The events will be seasonal and primarily on the weekends. The goals of the community, objectives are that the impacts of a business or it's use does not have adverse effect on the community, essential services, infrastructure, and neighborhoods in which they operate. The events on the patio will have low impacts due to it limited use. The use is consistent with previous uses of the property on a much-reduced scale and will meet the spirit of the ordinance.



Date : July 1, 2023
 From : Andrew S. Perri- CEO and President Pinnacle Wealth
 / Member and President of 5311 Brighton Rd, LLC
 Regarding : Authorization

LETTER OF AUTHORIZATION

Effective immediately, David Richardson- AIA , architect with Lindhout Associates has authority in dealing on our behalf with Genoa Township and any/all planning committees related to the property and proposed project design and development located at:

5311 Brighton Rd, Brighton, MI 48116.

These activities may include and are not limited to ; represent our interest and intent in design & developing the property, submitting payments on our behalf for services related to reviewing the project. Pinnacle Wealth & 5311 Brighton Rd , LLC. will be responsible for paying SPA fees including additional reviews if needed.

Andrew Perri

7/1/2023

Andrew Perri

July 1, 2023

7600 Grand River Ave / Suite 220/ Brighton, MI 48114
 Toll Free 800-650-6322/ P 810-220-6322 / F 810- 220-8415
www.pinnaclewealthonline.com

**GENOA CHARTER TOWNSHIP
PLANNING COMMISSION
PUBLIC HEARING
September 25, 2023**

MINUTES

CALL TO ORDER: Chairman Grajek called the meeting of the Genoa Charter Township Planning Commission to order at 6:30 p.m. Present were Chris Grajek, Diana Lowe, Marianne McCreary, Eric Rauch, Tim Chouinard, and Greg Rassel. Absent was Glynis McBain. Also present was Planning Director Amy Ruthig, Brian Borden of Safebuilt and Shelby Byrne of Tetra Tech.

PLEDGE OF ALLEGIANCE: The pledge of allegiance was recited.

Chairman Grajek welcomed Greg Rassel to the Planning Commission. He was previously the chairman of the Zoning Board of Appeals.

APPROVAL OF AGENDA:

Moved by Commissioner Rauch, seconded by Commissioner Lowe, to approve the agenda as presented. **The motion carried unanimously.**

DECLARATION OF CONFLICT OF INTEREST:

Mr. Rauch stated he has a conflict of interest for Open Public Hearing #1. The applicant leases office space at a property where he is part owner. He will benefit if the applicant remains in their current office and does not relocate. All Commissioners agree this is a conflict of interest.

CALL TO THE PUBLIC:

The call to the public was made at 6:33 pm with no response.

Commissioner Rauch exited the meeting room.

OPEN PUBLIC HEARING #1...Consideration of special land use application, environmental impact assessment and site plan to convert the use and expand an existing building for an office use and event facility with outdoor entertainment. The property is located at 5311 Brighton Road, north side of Brighton Road, between Clifford Road and Oak Pointe Drive. The request is petitioned by David Richardson, Lindhout Associates.

- A. Recommendation of Special Use.
- B. Recommendation of Environmental Impact Assessment (8-24-23)
- C. Recommendation of Site Plan (8-28-23)

Mr. Andrew Perri, his business partner, Sherry Young, Todd Arnold, the construction manager, and Brent LaVanway of Boss Engineering were present.

Mr. Arnold stated they will be repaving the parking lot, upgrading the outdoor lighting to meet the township's requirements, the patio will be redeveloped, they will be removing the commercial equipment from the kitchen, upgrading the office area, redesigning the entrance, updating the roof and exterior of the building, and upgrading the landscaping.

Mr. Borden reviewed his letter dated September 19, 2023.

He stated the Special Land Use is needed due to the outdoor recreational uses being proposed. Additionally, township staff notified him that there have been noise issues with this site with past owners; however, the applicant has advised in the Impact Assessment and their response letter how they will be monitoring the noise to ensure they are not negatively impacting the surrounding properties.

Use Conditions (Section 7.02.02(q))

In general, these conditions have been met; however, he has two comments:

- a. He is requesting the applicant update the Environmental Impact Assessment to clarify that most of the outdoor commercial recreational uses listed are not proposed.
- b. The applicant has applied for and received a variance from the ZBA for dimensional variances from the 100-foot setback requirement.

Site Plan Review

- a. Building materials and design are subject to review and approval by the Planning Commission.
- b. The Township may require pathway construction along Brighton Road or accept a performance guarantee for future construction. He noted there are no other sidewalks along the roadway in this area.
- c. The applicant is deficient on the number of parking spaces. The Commission may allow the total amount of parking provided, based on different peak hours between the uses (Section 14.02.04).
- d. A portion of an existing drive aisle is deficient in width for two-way travel. The Commission could require that the parking lot be reconfigured for compliance or allow this to remain as it is an existing nonconforming condition. The applicant is requesting to allow the existing drive aisle to remain.
- e. The Commission may accept the lighting information provided, or require submittal of a full lighting plan in accordance with Section 12.03.
- f. The revised submittal does not include a landscape plan.
- g. The applicant must obtain authorization from the property owner for the parking lot islands and trees depicted on the plan as the parking lot is an easement from the adjacent property.

- h. The applicant has indicated that one additional greenbelt tree will be provided and that required canopy trees will be 2.5" caliper; however, these details are not depicted on the plan.
- i. The Commission may require improvement to the waste receptacle and enclosure or allow it to remain as an existing nonconforming condition.

Ms. Byrne stated they have addressed all of her previous comments and due to the small size of the patio and the elimination of the commercial kitchen, the proposed use will be less intense than the previous restaurant bar facility and this would result in a lower use of the existing parking lot and utilities.

The Brighton Area Fire Marshal's letter dated September 14, 2023 advised that most of his concerns have been met. Mr. LaVanway noted that they will address the outstanding items.

Commissioner Rassel asked if there was an estimate for occupancy. Mr. Perri stated that at maximum capacity for the office use, there would be nine employees. The maximum occupancy is 150 for both private events and those open to the public.

Mr. Perri stated they have spoken to the general manager of the golf course, and he was encouraged with the improvements to the parking lot. He did not obtain permission to repave the parking lot or install the landscape islands. Chairman Grajek advised Mr. Perri that the township will need their approval.

The applicant will address the comment from Mr. Borden regarding the allowable uses and amending the Environmental Impact Assessment. Mr. LavanWay stated they do not want to put in a sidewalk that leads to nowhere. The Planning Commission will be recommending a performance guarantee be provided.

The applicant stated the entrance and exit drives will each be 20 feet wide and there will be signage added.

The Commission will be requiring a photometric plan be provided for the lighting.

Commissioner McCreary questioned if golfers will be driving up to the patio bar requesting to purchase a drink. Mr. Perri stated this will not be a full scale restaurant. If these requests are being made, they will be denied.

Commissioner McCreary is concerned about the noise negatively affecting the surrounding neighbors. The hours of operation for the patio state 7 am to 10 pm, and 7 am is too early so she would like that changed. Ms. Ruthig stated the ordinance states 80 decibels are allowed from 7 am to 10 pm and 50 decibels is the maximum from 10 pm to 7 am.

Mr. Perri stated that some of their events will have food trucks. Ms. Ruthig stated that the township does not allow food trucks. There is currently no ordinance for them. Ms. Young

clarified the type of food trucks they would have. They are called “movable feasts” where the caterer would prepare the food in the truck, then bring it into the building and serve it from there. They will not be serving or selling food out of the truck. This allows for high-quality food to be served. Mr. Perri stated some events may have the type of food trucks where food is served or sold from the food truck. Ms. Ruthig stated a 28-day special event permit would be needed.

The call to the public was made at 7:29 pm.

Ms. Kristi Hill of 5139 Milroy is requesting that the special land use be denied as it pertains to the outdoor entertainment portion. This is in the middle of a residential area. She did not move to the country to have parties with music four nights a week. There were many issues with the previous establishment.

Ms. Evelyn Dionise of 5038 Ashton Court was the most affected over the last 18 years by the previous owners. The behavior that occurred at this location was disgraceful. She has been able to live peacefully for the six years since that business has closed. She complained to the township many times and no action was taken.

The call to the public was closed at 7:34 pm.

Commissioner McCreary asked where the restrooms will be for the outside entertainment. Mr. Perri stated they will be bringing in quality portable facilities.

Commissioner Lowe asked how the applicant will address the noise issue. Mr. Perri stated he and his wife live in Oak Point and are aware of the entertainment at the previous facility. They will not be having that type of music that attracts that age group. They will have one or two people with a guitar, a three-piece string band, etc. They want to attract people who are 50 or older. Commissioner Lowe stated she would not want this in her backyard.

Chairman Grajek feels there are items missing from the proposal, such as the details of what will be allowed, the lighting plan, the entertainment, etc. He suggested that the discussions this evening be incorporated and resubmitted to the township. He advised the applicant to keep open communication with the neighbors and listen to their concerns.

Commissioner McCreary agrees that there is not enough information to move forward this evening. The applicant should provide an operations manual that outlines the days and times of the events, how they will be managed, etc.

Moved by Commissioner Lowe, seconded by Commissioner Rassel, to table Open Public Hearing #1. **The motion carried unanimously.**

Commissioner Rauch returned to the meeting room at 8:05 pm.

- The proposed variance would have little or no impact on appropriate development, continued use or value of adjacent properties and surrounding neighborhood.

The motion carried unanimously.

5. 23-28...A request by Andrew Perri, 5311 Brighton Road, for setback variances and any other variance deemed necessary by the Zoning Board of Appeals to allow for outdoor commercial recreation at an existing commercial building.

Mr. Andrew Perri, his business partner, Sherry Young, and Todd Arnold, the construction manager, were present.

Mr. Arnold stated they are requesting a variance to maintain the existing patio at the old Burroughs building to use for entertainment. They will also be using a small portion of the building for entertainment and the rest of it will be used for Mr. Perri's business. They will be making modifications to the building also. They will be requesting approval for this from the township.

Mr. Perri stated this will be used from Memorial Day to Labor Day. He will be using the area for entertainment as well as leasing it to companies for them to use for entertainment. They do not intend to have the same entertainment that was at this location previously.

Vice Chairperson McCreary requested to have the patio area cleaned up and the debris and trash removed between now and when the construction will begin.

The call to the public was made at 9:04 pm.

Ms. Evelyn Dionise of 5038 Ashton Court is scared about whatever will be done with that property. The township has failed her on numerous occasions. She has lived in this area for 40 years and at her current home for 18 years. The last two owners of this property have allowed inappropriate behavior here. She will not live across from entertainment that she can hear from her home; she will be forced to move.

The call to the public was closed at 9:08 pm.

Mr. Perri stated he and his wife live on Clifford Road and he understands Ms. Dionise's frustration. He has been able to hear the music and the motorcycles. He can promise that it will not be the same entertainment as before. Mr. Arnold stated there will be an event manager that will oversee the events. They will monitor the decibel levels so they do not exceed the ordinance. Ms. Young stated they want to create good will and be good neighbors.

Moved by Board Member Kreutzberg, seconded by Board Member Fons, to approve Case #23-28 for Pinnacle Wealth and Andrew Perri of 5311 Brighton Road a front yard variance of 55 feet from the required 100 feet for a setback of 45 feet, a side yard setback variance of 46 feet from

the required 100 feet for a setback of 54 feet, a side yard variance of 65 feet from the required 100 feet for a setback of 35 feet, and a rear yard variance of 17 feet from the required 100 feet for a setback of ~~setback of~~ 83 feet, for redevelopment of a commercial office and event facility, based on the following findings of fact:

- Strict compliance with the setbacks would unreasonably prevent or restrict the intended use of the property.
- This variance will provide substantial justice, is the least necessary and as proposed, will maintain the current footprint with minimum change to the permitted land use.
- The variance is necessary due to the extraordinary circumstance of the age of the existing building and location on the property and the original manner for which the property was intended remains along with a change in the proposed use.
- Granting this variance will not impair adequate light or air to adjacent properties, would not increase congestion or increase danger of fire or threaten public safety or welfare.
- The proposed variance would have little or no impact on appropriate development, continued use or value of adjacent properties and surrounding neighborhood.

This approval is conditioned upon the following:

1. The noise ordinance shall be complied with.
2. Approval of the Special Land Use and Site Plan from the Planning Commission

The motion carried unanimously.

6. 23-29...A request by Matt DeLapp/Faulkwood Shores Singh LLC, 300 S. Hughes, for a front yard setback variance and any other variance deemed necessary by the Zoning Board of Appeals to construct the new Faulkwood Shores Golf Course Clubhouse.

Mr. Mat DeLapp and Mr. Mike Moles, the engineer for the project, were present. Mr. DeLapp stated the old clubhouse burned down last year. It was over 100 years old. For golf courses, the ordinance requires a 75 foot setback; however, they are requesting a 35 foot setback, which is where the previous structure was located.

Mr. DeLapp stated the practical difficulty is that if they complied with the ordinance, it would impact the parking lot and the putting green. This is the least necessary and there will be no adverse effects to public safety and welfare or on the surrounding neighborhood. They will be requesting site plan approval from the township.

Mr. Moles stated that this request meets all four of the criteria for granting a variance. There is practical difficulty, extraordinary circumstances, it is not self-created, and will not adversely affect the neighborhood.

Board Member Fons does not believe that the least amount necessary is being requested. The building can be moved about 15 feet back. Mr. Moles stated that if it is moved, it will encroach on the parking and the putting green so this request is to allow for the least amount of disruption of the entire golf course.



April 4, 2024

Planning Commission
Genoa Township
2911 Dorr Road
Brighton, Michigan 48116

Attention:	Amy Ruthig, Planning Director
Subject:	Pinnacle Wealth Management – Special Land Use and Site Plan Review #3
Location:	5311 Brighton Road – north side of Brighton Road, between Chilson and Bauer Roads
Zoning:	MUPUD Mixed Use Planned Unit Development

Dear Commissioners:

At the Township’s request, we have reviewed the revised submittal from Pinnacle Wealth Management to convert the use of and expand the existing building, and to hold events with music on an outdoor patio for the property at 5311 Brighton Road (cover sheet dated 3/12/24).

A. Summary

1. Special Land Uses (Section 19.03):

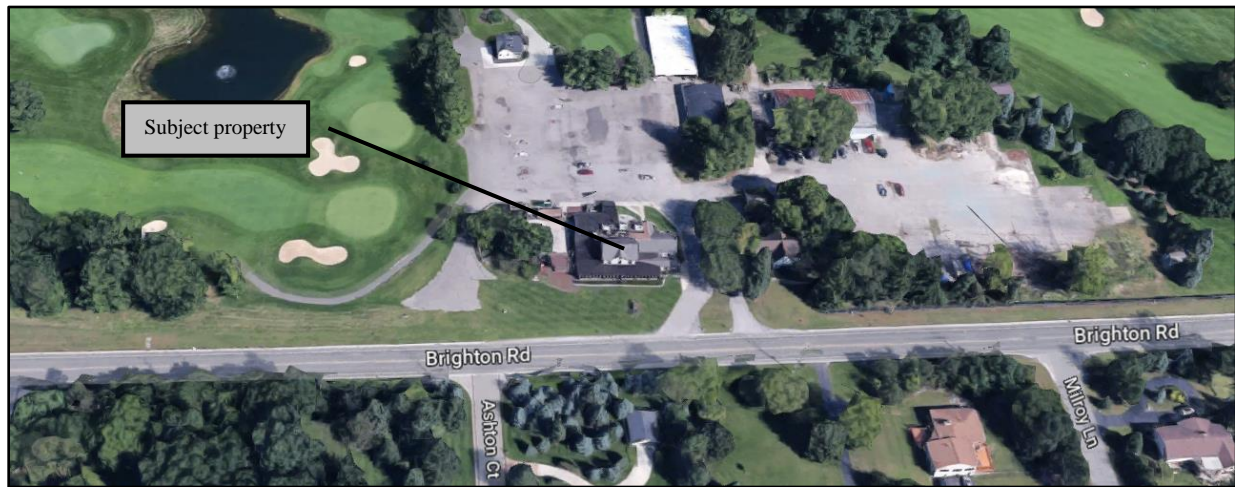
- a. In order to make favorable findings related to compatibility and impacts, mitigation of off-site impacts and the use conditions of Section 7.02.02(q) need to be met to the Commission’s satisfaction.
- b. The applicant must address any comments provided by the Township Engineer or Brighton Area Fire Authority regarding public facilities and services.

2. Use Conditions (Section 7.02.02(q)):

- a. The Procedures Manual must be completed and inconsistencies corrected with respect to allowable times for outdoor events (in the Manual and on the site plan).
- b. Variances were granted for the setback deficiencies.
- c. Clean-up provisions for public access events need to be added to the Procedures Manual.

3. Site Plan Review:

- a. Building materials and design are subject to review and approval by the Planning Commission.
- b. The site plan and floor plan drawings note different square footage for the building additions and should be corrected for consistency.
- c. The applicant has indicated that they will provide a performance guarantee for future pathway construction.
- d. We suggest the applicant relocate barrier-free parking spaces for better access to/from their building.
- e. We suggest the applicant provide their shared parking agreement with the adjacent property.
- f. The parking lot includes parallel spaces, which we typically advise against for circulation purposes (though they comply with Ordinance standards).
- g. We request the applicant confirm that the fixtures are downward directed and cut-off.
- h. If lighting is proposed for the outdoor patio area, details must be added to the lighting plan.
- i. Ornamental wall mounted fixtures noted in the Impact Assessment must be added to the lighting plan.
- j. There are inconsistencies between the landscape plan and plant list that need to be corrected.
- k. We suggest the applicant provide additional landscaping around the waste receptacle/enclosure.



Aerial view of site and surroundings (looking north)

B. Proposal/Process

The applicant proposes to establish an office use and small event facility with outdoor entertainment space, including music, within the existing building at 5311 Brighton Road. The property was previously used as a restaurant.

The revised proposal includes 4 building additions totaling just over 1,074 square feet, as follows:

- Addition A – 445 square feet on north side of existing building;
- Addition B – 240 square feet on north side of existing building;
- Addition C – 234 square feet west of existing building; and
- A 155-square foot bathroom building southwest of proposed Addition C.

This area of the MUPUD is regulated by standards for the GCD. As such, the office use and indoor event facility are permitted by right; however, given the proposal for outdoor music, special land use review/approval is required based on the standards for commercial outdoor recreation. Such uses are also subject to the conditions of Section 7.02.02(q).

Procedurally, the Planning Commission is to review the special land use, site plan, and Environmental Impact Assessment, and put forth recommendations to the Township Board following a public hearing.

C. Special Land Use Review

Section 19.03 of the Zoning Ordinance identifies the review criteria for Special Land Use applications as follows:

- 1. Master Plan.** The Township Master Plan identifies the subject site as Neighborhood Commercial, which is planned for “retail and service establishments whose primary market area includes residents and employees from within a two-mile radius.”

Generally speaking, the proposal may be viewed as compatible with this classification.

- 2. Compatibility.** Surrounding properties are generally limited to the golf course (north, east and west) and single-family residential (south).

The primary concerns with outdoor music/entertainment are noise generation and lighting.

The submittal notes that outdoor entertainment will end by 10PM (though there are inconsistencies that need to be corrected) and that sound levels will not exceed that allowed by Township's Noise Ordinance. A graphic sound study is also included with the current submittal.

The use conditions of Section 7.02.02(q) are also intended to help mitigate potential impacts of such uses. These conditions, as well as mitigation of potential off-site impacts, must be met to the Commission's satisfaction.

- 3. Public Facilities and Services.** As a previously developed site along a main roadway, we anticipate that necessary public facilities and services are already in place.

However, the applicant must address any comments provided by the Township Engineer and/or Brighton Area Fire Authority related to this criterion.

- 4. Impacts.** Similar to the comments above, in order to make a favorable finding, the use conditions must be met to the Commission's satisfaction.
- 5. Mitigation.** If further concerns arise as part of the review process, the Township may require additional efforts to mitigate potential adverse impacts.

D. Use Conditions

Commercial outdoor recreation is subject to the subject to the use conditions of Section 7.02.02(q), as follows:

- 1. Such uses shall include, but need not be limited to, the following: recreational fields, rinks or courts, including football, softball, soccer, tennis, basketball, ice skating, and similar activities, swimming pools open to the general public or operated by a private non-profit organization, archery and shooting ranges, animal racing, go-cart, automobile or motorcycle tracks, music concert pavilions and band shells, amusement parks and uses accessory to the above uses, such as refreshment stands, retail shops selling items related to the above uses, maintenance buildings, office for management functions, spectator seating and service areas, including locker rooms and rest rooms.**

The only use/structures requested under this criterion are related to providing music on the outdoor patio space.

- 2. The site shall be adequate to accommodate the intended use(s), parking and adequate buffer areas without significant impact on nearby properties in terms of noise, traffic, lighting glare, views, odors, trespassing, dust or blowing debris, as determined by the Planning Commission. The applicant shall provide documentation the site size is adequate using national facility standards.**

The revised submittal includes a procedural manual with operational restrictions.

Public access events will occur between May 1st and September 15th, though private events will be allowed outside of this time frame. (There is an inconsistency in the dates, as Page 8 identifies the "on-season" as ending September 1st. The site plan also notes Memorial Day to Labor Day.)

Outdoor events will be limited to Thursday to Sunday with end times of 10PM (Thursday to Saturday) and 2PM (Sunday). However, the site plan notes that patio music will be off at 10:45PM.

The manual notes that they will be closed Monday to Wednesday, but that private events may be reserved from 5PM to 10PM. There are no time frames noted for off-season use (September 16th to April 30th). This information needs to be added (Page 5).

We also request the applicant indicate whether private events would include the use of outdoor audio equipment.

A maximum occupancy of 130 people is also noted for “public space,” though the maximum occupancy for a “private event” is left blank (Page 5). This information needs to be added.

The applicant must complete this document and correct the inconsistencies.

3. The site shall be located on a paved street which is classified as a Primary Route by the Livingston County Road Commission.

Vehicular access is provided via Brighton Road, which is a paved Minor Arterial roadway.

4. No building or spectator seating facility shall be located within one hundred (100) feet of a property line.

The existing building, proposed additions and outdoor patio area are within 100 feet of each lot line. At their September 19, 2023 meeting, the ZBA granted variances from each lot line.

5. The site shall be periodically cleared of debris.

The procedures manual includes provisions for clean up and take down for private events (Page 9); however, the time must be identified. A similar provision should also be added for public access events.

E. Site Plan Review

1. Dimensional Requirements. Aside from the 100-foot setback required by Section 7.02.02(q), the applicable dimensional requirements are met.

As previously noted, the applicant obtained variances from the ZBA for the setback deficiencies.

2. Building Design and Materials. The existing building is primarily faced with horizontal siding.

The smaller addition matches the existing building, though the larger addition provides a different type of siding.

Building materials and colors are subject to review and approval by the Planning Commission. As such, we request the applicant be prepared to present material and color samples to the Commission for this consideration.

Lastly, the site plan and floor plan drawings identify different sizes for the proposed additions. The plans should be corrected for consistency.

3. Pedestrian Circulation. The site plan provides internal pedestrian walkways/connections between the parking lot and building entrances.

Section 12.05 requires an 8-foot wide bike path along County primary roads where designated on the Township’s Pathways Plan. The Non-Motorized Plan contained in the Township Master Plan identifies the Brighton Road frontage as a “proposed County priority route.”

The applicant has indicated that they will provide a performance guarantee for future construction since the pathway will not connect to anything at this time.

4. Vehicular Circulation. No changes are proposed to existing site circulation, though the project does include resurfacing and striping of the existing parking lot/spaces.

- 5. Parking.** Per Section 14.04, the office component requires 20 spaces, while the event/banquet use requires 44 spaces based on maximum occupancy (130).

In total, the shared parking lot provides 69 spaces, while the office and event uses are expected to occur at different peak times. The Township does not have a shared parking agreement on file. As such, we request the applicant provide this information.

The plan provides 4 barrier-free parking spaces, which meets Ordinance requirements; however, we suggest these spaces are located near the building on the adjacent property. As such, we suggest the applicant relocate at least some of the barrier-free parking for better access to/from their building.

Aside from the existing ingress/egress drive (20' wide), the parking lot complies with dimensional standards for drive aisles and parking spaces. It is worth noting that the parking lot includes 3 parallel spaces, which are typically inadvisable for a commercial development. However, the spaces comply with Ordinance standards.

- 6. Exterior Lighting.** The lighting plan identifies 9 light poles in the parking lot and along the east side of the building. Mounting heights and light intensities comply with Ordinance standards; however, the fixture detail sheets are for a somewhat unusual decorative fixture. We request the applicant confirm that the fixtures are downward directed and cut-off.

It is also worth noting that the lighting plan does not show any illumination for the outdoor patio area. If lighting is proposed for this area, it must be added to the lighting plan.

Lastly, the Impact Assessment notes ornamental wall mounted lighting; however, the lighting plan does not identify any wall mounted fixtures. These details must also be added to the plan.

- 7. Landscaping.** The landscape plan includes the required greenbelt trees, provides for some parking lot landscaping (where there currently is none), and maintains/supplements landscaping around the building and outdoor patio area.

We are unable to locate the 13 Birdsnest Spruce noted on the plant list and the plan provides more Red Rose Shrubs than noted.

Given the location of the waste receptacle/enclosure, we suggest the applicant increase landscaping along the south and east sides.

Lastly, evergreen trees must be a minimum of 6 feet in height at the time of planting.

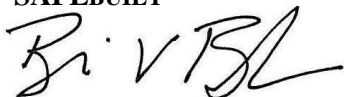
- 8. Waste Receptacle/Enclosure.** The revised plan includes a new receptacle/enclosure west of the building.

The location (non-required side yard), concrete base pad, and masonry enclosure comply with Ordinance standards.

Should you have any questions concerning this matter, please do not hesitate to contact our office.

Respectfully,

SAFE BUILT



Brian V. Borden, AICP
Michigan Planning Manager



March 18, 2024

Ms. Amy Ruthig
Genoa Township
2911 Dorr Road
Brighton, MI 48116

**Re: Pinnacle Wealth Outdoor Events
Site Plan Review No. 3**

Dear Ms. Ruthig:

Tetra Tech conducted a third review of the special land use and site plan submittal for Pinnacle Wealth Outdoor Events last dated March 12, 2024. The site plan was prepared by Boss Engineering on behalf of Pinnacle Wealth and Tax Service. The improvements include updates to the existing 5,440 square foot building previously called “Burroughs Roadhouse” in order to use the building for office use and small event space. Updates since our last review include three additions to the north side of the building with a total added area of 929 square feet of building space, two barrier free unisex bathrooms, a dumpster pad and enclosure and site improvements.

We offer the following comments for your consideration:

GENERAL

1. The Petitioner should obtain approval from the Brighton Area Fire Authority prior to Township Approval.
2. A new fence is shown north of the proposed dumpster location. The fence detail provided on sheet 7 does not appear to meet the existing fence type.

DRAINAGE AND GRADING

1. The Site Data on sheet 5 has the same data as in the submittal dated August 1, 2023. The site data should be updated to show the bathrooms and surrounding concrete pavement, the new pavement in the boulevard, the removal of the pavement at the southwest corner of the site (which does not appear to be existing on Google Earth), the dumpster pad, the proposed landscape island, and addition C (the proposed new bar).
2. As stated in our August 16, 2023, letter, the Petitioner should offset any increase in impervious area by decreasing the amount of pavement/pervious area on the site. The Site Data should be updated to reflect this
3. Additional silt fence should be shown on the SESC plan where pavement is to be removed and new pavement is proposed.
4. The architectural drawings should be revised to show the additional concrete pavement to access the bathrooms

We recommend the petitioner address the above comments prior to approval.

Sincerely,

John Y. Barber, P.E.
Project Engineer



BRIGHTON AREA FIRE AUTHORITY

615 W. Grand River Ave.
Brighton, MI 48116
o: 810-229-6640 f: 810-229-1619

March 27, 2024

Amy Ruthig
Genoa Township
2911 Dorr Road
Brighton, MI 48116

RE: Pinnacle Wealth Outdoor Events
5311 Brighton Rd.
Genoa Twp., MI

Dear Amy,

The Brighton Area Fire Department has reviewed the above-mentioned site plan. The plans were received for review on March 19, 2024 and the drawings are dated July 31, 2023 with latest revisions dated March 12, 2024. The project is based on an existing 1.42-acre parcel with a 5,732 square foot A-2 , two story occupancy with a basement. The plan is to renovate the building which includes small additions to increase square footage to 6,166 square feet and modify to a mixed-use A-2 & B. The plan review is based on the requirements of the International Fire Code (IFC) 2021 edition.

All previous comments and site access requirements have been addressed in the most recent submittals.

Additional comments will be given during the building plan review process (specific to the building plans and occupancy). The applicant is reminded that the fire authority must review the fire protection systems submittals (sprinkler & alarm) prior to permit issuance by the Building Department and that the authority will also review the building plans for life safety requirements in conjunction with the Building Department.

If you have any questions about the comments on this plan review please contact me at 810-229-6640.

Cordially,

A handwritten signature in black ink, appearing to read "R. Boisvert".

Rick Boisvert, CFPS
Fire Marshal

Environmental Impact Assessment, Pinnacle Wealth Management

Preparer(s): Todd Arnold for Andrew Perri
7600 Grand River, Suite 220, Brighton, MI 48114



Architect: Lindhout Associates, 10465 Citation Dr., Brighton, MI 48116

Engineer: Boss Engineering, 3121 E Grand River, Howell, MI 48843

Sound Engineer: E2i Design, Brighton, MI

Prepared on: March 10, 2024

Location:

The site address is 5311 Brighton Rd., Brighton, MI.

The proposed use under the zoning ordinance section 7.0 2.02 used conditions subsection q. Require special use approval for entertainment on the patio. The 5700 square-foot historic restaurant will be fully renovated with details of the historic architecture captured in the restoration. The majority of the building will be utilized for wealth management, and tax preparation services.

We are proposing to renovate the patio and stage area to freshen them up during the renovation of the building. Additional bathroom facilities are being added adjacent to the patio which will match the building architecture. The occupant load of the patio and banquet area have been carefully matched to all of the components of the site including parking, restrooms, and the business plan to cater to smaller groups needing a space to gather. The commercial kitchen will be removed from the building and a warming kitchen will replace it in a smaller area.

Impact on natural features: there will be no impact.

Impact on stormwater management: there will be no impact

Impact on surrounding land use: Renovating the building to restore some of the historic features of this significant landmark building restoring its luster. The renovation will remove the blight and have a positive effect on the surrounding area.

Addressing the noise ordinance: *Most of the approved outdoor uses listed in section 7.02.02 (q) 1. are not proposed.*

Andrew Perri and Cheri Young have contracted E2i Design to perform a sound study based on equipment type, location of speakers (specified by E2i Design) and the topography of the land. The sound study covers all sound transmission on the patio projected to the property lines of the facility. The sound study plan was designed and provided to show strict compliance with the noise ordinance covering all noise generated from the sound system from the patio to all property lines at the facility.

The following excerpt is from E2i Design-
Audio Systems Control and Normal Operations

PWM indoor and outdoor AV systems are not only robust but also feature finite controls that allow for operational flexibility while restricting certain actions, such as volume control, outside of preset limits. Preset limits will meet township guidelines for lot line decibel requirements during specific hours of use. Volume control limits allow for flexibility of staff to raise and lower volume to meet the conditions of the designated spaces while maintaining high quality audio and strict adherence to ordinance. Control options are available through digital control mediums such as phone or tablet. Additional physical control hardware is wall mounted and located inside the indoor events space. Both physical and electronic control interfaces are password protected to limit access to trained operations personnel.

The sound level will be maintained below 80 Decibels between the hours of 7AM and 10PM. The music hours will vary from the ordinance requirements which will typically be from 11 AM to 10 PM but fall in line with the ordinance time frame. The noise shall not exceed 80 db from 7 am to 10 PM at the property line in accordance to Ordinance No. #011203: Noise Ordinance

Parking Lot Lighting: A photometric plan and specifications have been provided to show compliance with the ordinance. Coach lighting will be installed on the building. Light shall not exceed more than 0.5 footcandles at a residential lot line. The maximum light level on the site shall be ten (10) footcandles. The lights shall be shielded to reduce glare at the parking lot. We request that the Planning Commissioner's approve ornamental lighting on the building which is part of the overall architectural theme and waive downward directed lighting requirement.

Impact on public facilities and services:

The impact will be reduced from a restaurant operation. Pinnacle Wealth Management and tax preparation. I have a significantly lower occupant load than the daily operations of the restaurant. The small event center will also keep the occupant load and overall traffic/noise/sewer, usage, and water usage much lower than the previous restaurant.

Impact on public utilities:

The water and sewer usage will be at a lower use than the previous restaurant.

Storage and handling of any hazardous materials:

There will be no hazardous materials.

Impact on traffic and pedestrians:

Minor improvements to the entry with designated entrance and exit signs are planned. Brighton Road is a main Thorofare, and the overall traffic impact will be less than when it was a Restaurant. There is no potential for pedestrian impact.

Special provisions:

There are no known deed restrictions at this time.

Attachments:

- Site plan
- Floorplan
- 3-D renderings
- Parking lot agreement
- Engineered sound study



Date : February 1, 2024
 From : Andrew S. Perri- CEO and President Pinnacle Wealth
 / Member and President of 5311 Brighton Rd, LLC
 Regarding : Performance Guarantee- Sidewalks/ walkway

PERFORMANCE GAURANTEE

We will make any/all improvements regarding a walkway/ sidewalks that could be required in the future at 5311 Brighton Road. This pertains to sidewalks and walk ways between the building structure and Brighton road. I will personally guarantee we will make and fund 100% of these proposed improvements if required in the future.

Andrew Perri

February 1, 2024

7600 Grand River Ave / Suite 220/ Brighton, MI 48114
 Toll Free 800-650-6322/ P 810-220-6322 / F 810- 220-8415
www.pinnaclewealthonline.com

Investment advisory services offered through Pinnacle Wealth Management Partners, Inc.
 Pinnacle Wealth Management Partners is an SEC Registered Investment Advisor

Burroughs Social Procedures Manual

Burroughs Hospitality Group, LLC

5311 Brighton Rd. Brighton, MI 48116

Updated: March 8, 2024-**working rough draft**

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Procedures Manual –working rough draft

The purpose of this procedures manual is to offer a thorough and systematically organized reference guide for all owners, employees, and contracted event vendors of **Burroughs Hospitality Group, LLC**. It serves to delineate precise step-by-step processes, protocols, and optimal practices. This ensures unwavering compliance with all pertinent regulations, operational guidelines, and functions across a diverse spectrum of tasks and operations.

Description/Summary

Burroughs Social is a venue offering both private event rentals and seasonal public access events. This venue caters to a diverse range of public and private event types. All operations will take place from Thursdays through Sundays during designated seasonal hours and remain closed Mondays through Wednesdays. The days of operation will be primarily reserved for private event rentals. In the event a day does not have an event booked, a public access event¹ may take place.

Burroughs Social undergoes two seasons: the "on-season" from May 1st to September 15, and the "off-season" from September 16 to April 30th. Public access events will only take place during the on-season if the conditions are met; they will never occur during the off-season. During the off-season, Burroughs Social operates exclusively for private events.

If there is not an event booked on a day Thursday through Saturday, a public access event may take place. On Thursdays through Saturdays, these events will feature live music² on the patio accompanied by food³ and drinks from **5 PM – 10 PM**. On Sundays, there may be a brunch menu available from 10:00 AM – 2:00 PM. See next page for more specific proposed hours of operation.

The venue demographic encompasses individuals residing within a 3–5-mile radius, notably emphasizing residents of the Oak Pointe neighborhood. Our target demographic typically comprises individuals and families aged between 40-75, seeking a refined and intimate setting to celebrate their special life events. Additionally, we welcome individuals and groups who appreciate upscale experiences, personalized service, and a sophisticated ambiance.

A manager will be present on-site at all times during operating hours to ensure smooth venue operations and address any concerns. Burroughs Social is committed to delivering a picturesque community events space, exceptional service, and memorable experiences for all guests.

¹ A public access event is open to the public and the event type will vary depending on the day of operation.

- a. Thursdays through Saturdays: The event will feature live music on the patio accompanied by food and drinks from **5:00 PM – 10:00 PM**.
- b. Sundays: A brunch menu is offered from 10:00 AM - 2:00 PM.

² Prior to hosting live music, thorough sound studies are being conducted to minimize disruptions to the surrounding areas. Once the results are gathered, the music-type selection will be gathered. All music will be played on equipment owned and operated by Burroughs Social to ensure compliance with required decibel levels and timing regulations.

³ Food items that require commercial-grade kitchen preparation will be supplied by external catering services.

Hours of Operation

Monday to Wednesdays- Closed to public- private events may be reserved from 5-10PM

On-Season Hours:

(5/1 – 9/15)

Thursday 5:00 PM – 10:00 PM

Friday 5:00 PM – 10:00 PM

Saturday 11:00 AM – 10:00 PM

Sunday 10:00 AM – 2:00 PM [Need to specify hours for private vs. public access events]

Off-Season Hours:

(9/16 – 4/30)

Thursday 0:00 PM – 0:00 PM

Friday 0:00 PM – 0:00 PM

Saturday 0:00 PM – 0:00 PM

Sunday 0:00 PM – 0:00 PM

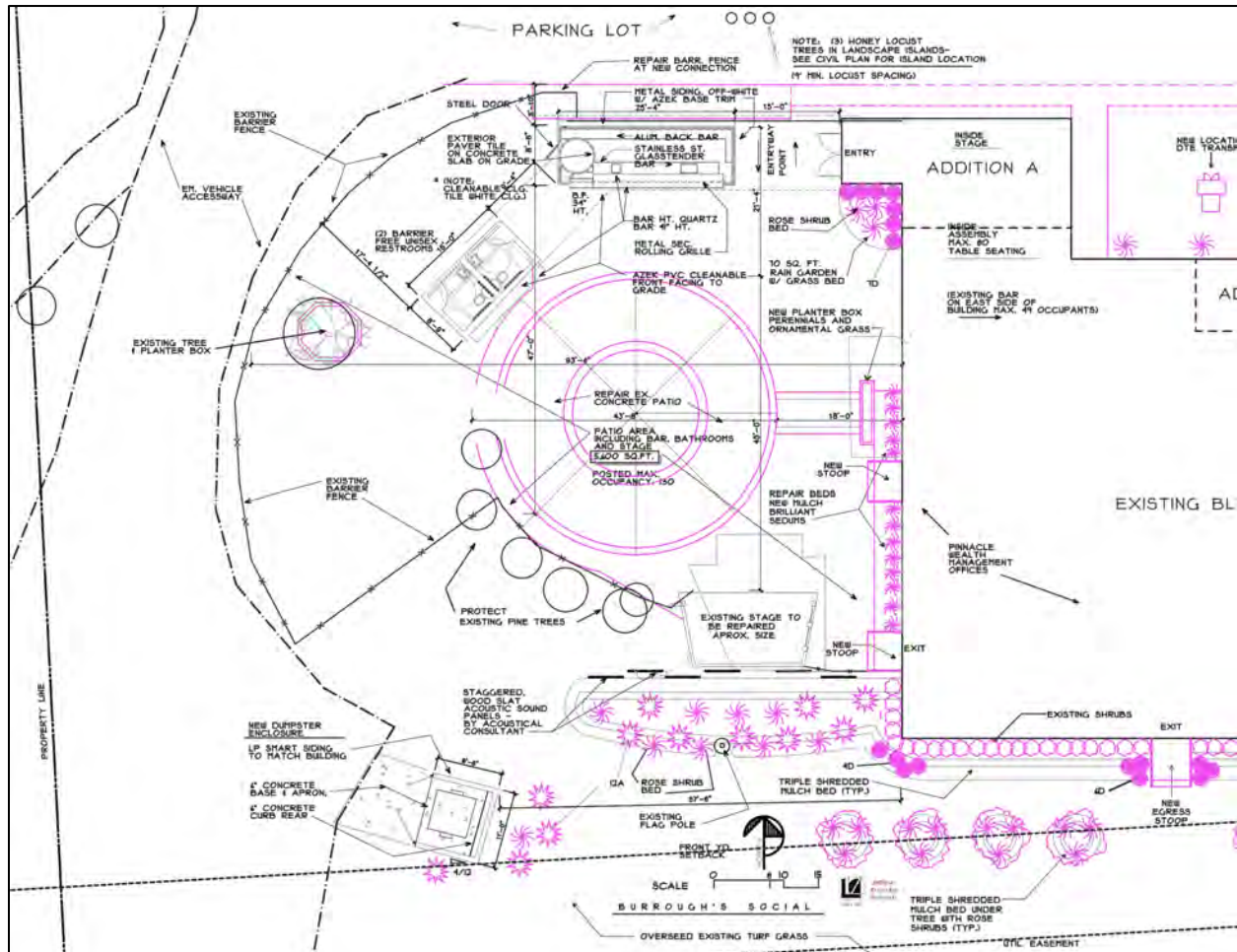
Maximum Occupancy

Maximum occupancy for this space reflects our commitment to ensuring a safe and enjoyable experience for all guests. By carefully considering factors such as space layout, public safety regulations, and comfort levels, we aim to establish a limit that optimizes both convenience and security. This figure will be determined per local regulations and venue specifications to accommodate the diverse range of events we host while prioritizing the well-being of our patrons. The on-site manager will ensure the maximum occupancy is not surpassed. The maximum occupancy at all events will be posted at the entry.

- [Public Space] Maximum Occupancy: 130
- [Private Event] Maximum Occupancy: [Insert Number]
- 130 maximum people at events.
- For banquets, sales, and weddings, 70 people maximum per potty.
- Bar-type events, 40 people maximum per potty.

- And with 80 max. at tables in the dining area in addition to 49 max. in the existing bar area, an outdoor event could be moved indoors.

Burroughs Social Location Diagram



Location – Bar

Location – Restrooms

Seasonal Calendar of Events

Sample Calendar:

The calendar provided below is purely a sample intended for illustrative purposes and does not represent actual or current scheduling at Burroughs Social.

MAY 2024

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			1 Closed	2 Public Access Event: Live Patio Music	3 Private Event: Retirement Celebration	4 Private Event: Retirement Celebration
5 Public Access Event: Cinco De Mayo Brunch	6 Closed	7 Closed	8 Closed	9 Private Event: Corporate Gathering	10 Private Event: Family Reunion	11 Private Event: Birthday Celebration
12 Public Access Event: Mother's Day Brunch	13 Closed	14 Closed	15 Closed	16 Private Event: Retirement Celebration	17 Private Event: Birthday Celebration	18 Private Event: Engagement Celebration
19 Private Event: Bridal Shower	20 Closed	21 Closed	22 Closed	23 Public Access Event: Live Patio Music	24 Public Access Event: Live Patio Music	25 Private Event: Intimate Wedding Reception
26 Public Access Event: Brunch	27 Closed	28 Closed	29 Closed	30 Private Event: Corporate Gathering	31 Private Event: Graduation Party	

KEY:
 : Closed
 : Private Event
 : Public Access Event

PUBLIC ACCESS EVENT DETAILS

Rules for Public Access Events:

1. **Operating Days and Hours:** Burroughs Social will operate from Thursdays through Sundays during designated seasonal hours. Public access events will only take place within hours of operation during the on-season, from May 1st to September 1st.
2. **Description:** A public access event is open to the public and the event type will vary depending on the day of operation. These events will only take place during the on-season if the conditions are met; they will never occur during the off-season.
 - a. Thursdays through Saturdays: The event will feature live music on the patio accompanied by food and drinks from 0:00 PM – 0:00 PM.
 - b. Sundays: A brunch menu is offered from 10:00 AM - 2:00 PM
3. **Maximum Occupancy:** [Insert Number]
4. **Managerial Presence:** A manager will be present on-site at all times during public access event hours to ensure smooth venue operations and promptly address any concerns.
5. **Community Engagement:** Burroughs Social is committed to providing a picturesque community events space for public enjoyment, fostering connections, and creating memorable experiences for all guests.

PRIVATE EVENT DETAILS

Rules for Private Events:

1. **Operating Days and Hours:** Burroughs Social will operate from Thursdays through Sundays during designated seasonal hours. Private events will take place during the on-season from May 1st to September 1st and the off-season from September 2nd to April 30th.
2. **Description:** Private events can be reserved during any of the days of operation, Thursdays through Sundays. If a private event is not booked on a day of operation during the on-season, a public access event may take place. Our policy stipulates that only one private event is eligible for booking per day.
3. **Maximum Occupancy:** [Insert Number]
4. **Managerial Presence:** A manager will be present on-site at all times during private event hours to ensure smooth venue operations and promptly address any concerns.

5. **Reservation Policy:** Private events will be scheduled on a first-come, first-served basis, provided they adhere to all rules and guidelines set forth for the venue space. To book a private event at Burroughs Social, interested parties must contact our events management team to discuss details, availability, pricing, and any special requirements.
6. **Event Types:** Approved private event types at Burroughs Social include but are not limited to corporate gatherings, graduation parties, baby showers, bridal showers, engagement parties, retirement celebrations, family reunions, birthday celebrations, holiday celebrations, and intimate weddings.
7. **Customization:** Clients renting the venue for private events have the flexibility to tailor their experience to suit their specific needs and preferences, with support from our dedicated team, basis, provided they adhere to all rules and guidelines set forth for the venue space.
8. **Clean Up and Take Down:** After your event, it is required that all decorations, personal belongings, and any additional items brought in for the event are removed from the premises by **0:00 PM**. Burroughs Social is not responsible for storing any items left behind. Additionally, clients are responsible for ensuring that the rented venue space is left in its original condition, free from damage or excessive mess. Failure to comply with the clean-up and take-down requirements may result in additional fees or penalties.

[Once we have the information regarding hours for the on and the off seasons, we will need to add what times the venue can be rented for and if prices vary, etc. e.g. if you rent the venue on this date you have it from X time to X time and your event must be cleaned up and concluded by X. time]

EVENT TYPES

Burroughs Social welcomes a diverse array of approved events, each meticulously tailored to ensure a seamless and memorable experience for all guests. Our venue serves as an ideal space for a variety of occasions, including but not limited to corporate gatherings, graduation parties, baby showers, engagement parties, bridal showers, retirement parties, family reunions, birthday celebrations, holiday celebrations, and intimate wedding receptions. With our versatile space and dedicated support team, we strive to accommodate the needs of each event while ensuring they meet all rules and guidelines for the venue space.

Standard Operating Procedures (SOPs)

EVENT PROTOCOL

Scheduling An Event:

- Upon scheduling an event, exclusive access to both indoor and outdoor spaces is granted, ensuring a singular focus on each occasion. Additionally, provisions can be made for relocating indoors in the event of adverse weather conditions.
- Establish a weather-related decision timeline, with assessments conducted at least 6 hours prior to the event.
- Conduct a risk assessment based on event complexity.

Event Contingency Plan | Indoor Relocation and Postponement:

- In the event of severe weather necessitating relocation, promptly notify all relevant parties (staff, artists, and vendors.)
- Update the scheduling system to reflect any changes made.
- Ensure guests are directed to a secure location during severe weather.
- Continuously reassess the decision to resume or cancel the event.

Event Cancellation:

- Notify staff and related personnel promptly.
- Communicate the cancellation to artists, vendors, and attendees in a timely manner.
- Implement cancellation fee protocol to client. **[Need to add cancellation fee section to this manual once we have the numbers and info]**

Event Set Up | Equipment Set and Protection:

- For outdoor venues, ensure adequate protection of equipment from the elements.
- Coordinate with vendors, talent, and the venue to determine setup and breakdown times, power requirements, and special access needs in advance.

Event Communication | Protocol and Organization:

- Maintain detailed records and document all aspects of planning and execution, maintaining a comprehensive log of schedules, vendors, performers, and payments.
- Establish regular communication channels with staff, artists, vendors, and other stakeholders to ensure smooth operations.

LIQUOR LICENSE – ALCOHOL POLICY AND SAFETY PLAN

Burroughs Hospitality Group, LLC Alcohol Policy and Safety Plan:

As a holder of a Class C and SDM licenses issued by the Michigan Liquor Control Commission, Burroughs Hospitality Group LLC is cognizant of its responsibilities and duties to comply with all MLCC rules and regulations to promote the safe service of alcohol, and to ensure the health, safety and well-being of its patrons.

To better serve these goals, Burroughs Hospitality Group will implement the following policies and procedures to ensure compliance with MLCC rules and regulations and promote and the safety and wellness of all patrons, especially those who choose to purchase and consume alcohol in our Outdoor Service Area.

Overview:

- The Burroughs Hospitality Group LLC will be operating an event space known as “Burroughs Social.” It will feature a full-service kitchen and a dining and event space.
- In addition to the indoor event space, Burroughs Social will feature a large outdoor service area with an outdoor bar and stage.

General Alcohol Policies:

- Employees understand and acknowledge that the sale of alcoholic beverages is strictly regulated by state law and the rules of the Michigan Liquor Control Commission (“MLCC”).
- All employees shall be aware of, and follow, all local and state laws, rules, and regulations associated with the sale of alcoholic beverages. Employees shall not sell alcoholic beverages to a person less than 21 years of age, and will always make diligent inquiry as to whether the customer is of legal drinking age.
- It is our policy to request identification from anyone who appears to be under 35 years old.
- Employees will not serve alcoholic beverages to an intoxicated person.
- Employees will not knowingly allow anyone on our staff that is under the legal drinking age to sell alcoholic beverages.

- Any violation of these policies will result in immediate termination of employment.

Outdoor Service Area:

- The Outdoor Service Area will be enclosed by a split rail wooden fence that will form a complete barrier around the perimeter of the outdoor service area. The fence is pre-existing and was approved for its previous use as a restaurant.
- The wooden fence is approximately 48” inches high and completely encloses the ODS.
- Access to the outdoor service area is limited. The ODS can only be reached from the interior of the Burroughs Social space. There is no direct access from the outside to the ODS. The ODS will be staffed by employees.
- All alcoholic beverages must be purchased from Burroughs Social, and no outside beer, wine or liquor is permitted. The staff is trained and instructed to remind guests that no outside alcohol is permitted and to check for the presence of outside alcohol.
- Signage will be clearly displayed at each exit on the ODS clearly stating that no alcohol is to be removed from the premises: “NO ALCOHOL BEYOND THIS POINT.” .

Employee Monitoring:

- Employees will be specifically instructed to pay special attention to the outdoor service area to ensure continued monitoring and supervision, in particular, to ensure that all points of entry and exit to the outdoor service area will be monitored in order to enforce compliance with Michigan Liquor Control Commission regulations.
- Employees will be trained to utilize approved techniques to ensure that alcohol remains in the licensed areas only, and will not be removed from the Outdoor Service Area.
- Signs prohibiting alcohol from leaving the outdoor service area will be posted at each entry/exit point.
- Each person serving alcohol will be properly trained before they can serve on their own.
- Beverage service will follow all TIPS required procedures when identifying the signs of intoxication and how to manage alcohol sale and consumption for guests.

Checking Identification:

- Burroughs Hospitality Group has an ID Checking Procedure that is used when training all employees who serve alcohol.
- It is the Employee's responsibility to make sure that customers who buy alcohol are of legal drinking age (21 years old). Identification (with proof of age) is required from any person who appears to be age 35 or younger. The only acceptable forms of identification are:
 - Valid photo driver's license or government issued identification card from any state or province of Canada;
 - Valid military identification card issued by the U.S. Department of Defense;
 - Valid United States passport;
 - Tribal identification;
 - In the case of foreign nationals, passports with photo from a nation other than Canada.
- In Michigan, a minor's license is **vertical**, while the license of a person over 21 is horizontal. Employees should pay particularly close attention when presented with a **vertical license**.
- Adequately checking identification means:
 - Comparing the picture on the identification with the customer;
 - Checking the birth date; and
 - Examining the card for signs of falsification or tampering; and
- If the customer does not have any of these forms of identification you cannot sell him/her alcoholic beverages.
- Employees must check ID even if you have sold alcoholic beverages to that customer on a previous occasion.
- If you doubt the validity of the ID presented to you, you are encouraged to ask for further identification. We are not required to sell alcohol to anyone if the validity of their identification is in question. If you have any doubt about the age or identity of a customer, do not sell alcohol to that customer.
- Expired driver's licenses are not valid forms of identification.
- Employees shall refuse to sell alcohol to any person of legal age it is suspected that the alcohol is being furnished to an underage person.

- If you have any questions about the validity of an ID, contact the manager on duty.

Intoxicated Customers:

- Alcoholic beverages may never be sold to an intoxicated person. If there is any question as to the sobriety of the customer, the alcoholic beverages must not be sold.
- Employees should be attentive to the common signs of intoxication which may include:
 - Loud speech;
 - Drinking fast;
 - Slurred speech;
 - Stumbling;
 - Overly friendly behavior;
 - Sleepiness;
 - Glassy or bloodshot eyes;
 - Inability to complete sentences.
- Employees should make reasonable efforts to ensure that all intoxicated persons have access to safe transportation, and shall make reasonable efforts to prevent an intoxicated person from driving.

Management:

- Burroughs Hospitality Group management is fully committed to supporting all Employees in upholding and promoting these policies.
- Burroughs Hospitality Group management will support an Employee's decision to refuse a sale or terminate service to any customer.

NOISE ORDINANCE PLAN**Burroughs Hospitality Group, LLC Noise Ordinance Plan:**

Audio Systems Control and Normal Operations:

Burroughs Social indoor and outdoor AV systems are not only robust but also feature finite controls that allow for operational flexibility while restricting certain actions, such as volume control, outside of preset limits. Preset limits will meet [Genoa] Township guidelines for lot line decibel requirements during specific hours of use. Volume control limits allow for flexibility of staff to raise and lower volume to meet the conditions of the designated spaces while maintaining high-quality audio and adherence to code. Control options are available through digital control mediums such as phones or tablets. Additional physical control hardware is wall-mounted and located inside the indoor events space. Both physical and electronic control interfaces are password protected to limit access to trained operations personnel.

Frequently Asked Questions (FAQs)

[Let me know what questions are necessary/unnecessary and then I will begin crafting appropriate answers to each one]

Venue Facilities:

- What amenities are included in the venue rental?
 - *Amenities included within the venue rental include:*
- Is there access to both outdoor and indoor spaces?
 - *Yes, our venue provides access to both outdoor and indoor spaces for private events. We adhere to a policy of booking only one event per day, ensuring exclusive access to both areas. Additionally, in the event of adverse weather conditions, outdoor events can seamlessly transition to our indoor facilities.*
- Can I bring in outside vendors for my private event?
 - *Yes, outside vendors are welcome provided they adhere to all rules and guidelines set forth for the venue space. In particular, outside caterers are required if you plan to serve food that must be prepared in a commercial-grade kitchen as our facilities only feature a warming kitchen.*
- Is there parking available onsite?
 - *Yes, onsite parking is available for up to XYZ vehicles.*
- Are there any restrictions on decorations or setup for private events?
 - *While we encourage event personalization, we do have certain guidelines to ensure the safety and integrity of our venue. Please consult with our event coordinator to discuss any specific decorations or set-up plans. We're here to assist you in creating a memorable and enjoyable experience within our venue's parameters.*

Booking and Reservations:

- How far in advance should I book my private event?
 - *We recommend booking your event as far in advance as possible to secure your desired date and ensure ample time for planning and coordination. Popular dates and venues tend to book quickly, so the sooner you make your reservation, the better. Typically, booking your event several months in advance is advisable.*
- What is the booking process like for a private event?
 - *To initiate an event request, please reach out to our event coordinator either by phone or email. They will guide you through the process, discuss available dates,*

and address any questions or concerns. Please note that a deposit is required to reserve your event date. Additionally, we encourage you to refer to our cancellation policy before finalizing your booking to ensure you are aware of any terms or conditions that may apply.

- Is there a deposit required to secure a private event reservation?
 - *Yes, a deposit of **XZY** is required to secure your private event date. This deposit is integral to formalizing your commitment to the event and ensures the exclusivity of the chosen date.*
- What is the cancelation policy?
 - ***Burroughs Social Cancelation Policy: [Add information on if it is refundable or nonrefundable and how many days notice required]***

Accessibility and Amenities:

- Is the venue wheelchair accessible?
 - *Yes, our venue is fully wheelchair accessible. We have taken measures to ensure that all guests, regardless of mobility, can comfortably and safely navigate our facilities. If you have specific accessibility needs or require further accommodation, please let us know, and we will do our utmost to accommodate them.*
- Are there restroom facilities available onsite?
 - *Yes, restrooms are available onsite, both indoors and outdoors, for your convenience. Find the indoor restroom **[insert location]** and find the outdoor restroom **[insert location]**.*
- Is there air conditioning or heating available?
 - ***For indoor events, yes. For outdoor events [Insert response]** Outdoor heaters are not supplied but are approved to be rented and set up at the venue site, should the heaters meet all safety requirements.*

Maximum Occupancy:

- What is the maximum capacity of the venue, and how is it determined?
 - ***The maximum capacity of the venue depends on the event type. [Insert more info]** The maximum capacity of our venue is determined in accordance with public health and safety guidelines. No exceptions are made to this count. We prioritize the well-being of our guests and adhere strictly to regulations to ensure a safe and enjoyable experience for everyone attending events hosted at our venue.*
- Are there different occupancy limits for indoor and outdoor spaces?
 - ***[Insert response]***

Noise Levels:

- Are there any restrictions on noise levels or amplified music during events?
 - *To ensure a pleasant experience for all guests and comply with local regulations, we have specific guidelines regarding noise levels and amplified music during events. All outside artists, music, and other noise that will be amplified must utilize our provided equipment. Our equipment is calibrated to adhere to permitted decibel levels and is programmed to adjust according to time-of-day regulations.*
- Do you have soundproofing measures in place to minimize noise disturbance to neighboring areas?
 - *[Insert response]*
- Are there specific hours during which noise must be kept to a minimum?
 - *[Insert hours and decibel rules here]*

Security and Safety Measures:

1. What security measures are in place to ensure the safety of guests and belongings?
 - *The safety and security of our guests and their belongings are of utmost importance to us. To ensure a secure environment, we have implemented several measures, including but not limited to:*
 1. *On-Site Manager: A manager will be present on-site at all times during operating hours to ensure smooth venue operations and address any concerns.*
 2. *Surveillance Cameras: We have surveillance cameras strategically placed throughout the venue to monitor activity and deter unauthorized behavior.*
 3. *Access Control: We regulate access to certain areas of the venue to authorized personnel only, minimizing the risk of unauthorized entry.*
 4. *Emergency Procedures: Our staff is trained in emergency procedures and evacuation protocols to handle any unforeseen situations swiftly and effectively.*
2. How do you handle situations involving unruly guests or disturbances?
 - *Ensuring the safety and comfort of all guests is our top priority. In the event of unruly guests or disturbances, [Insert protocol.....]
If you encounter any concerns during your event, please alert a staff member immediately.*

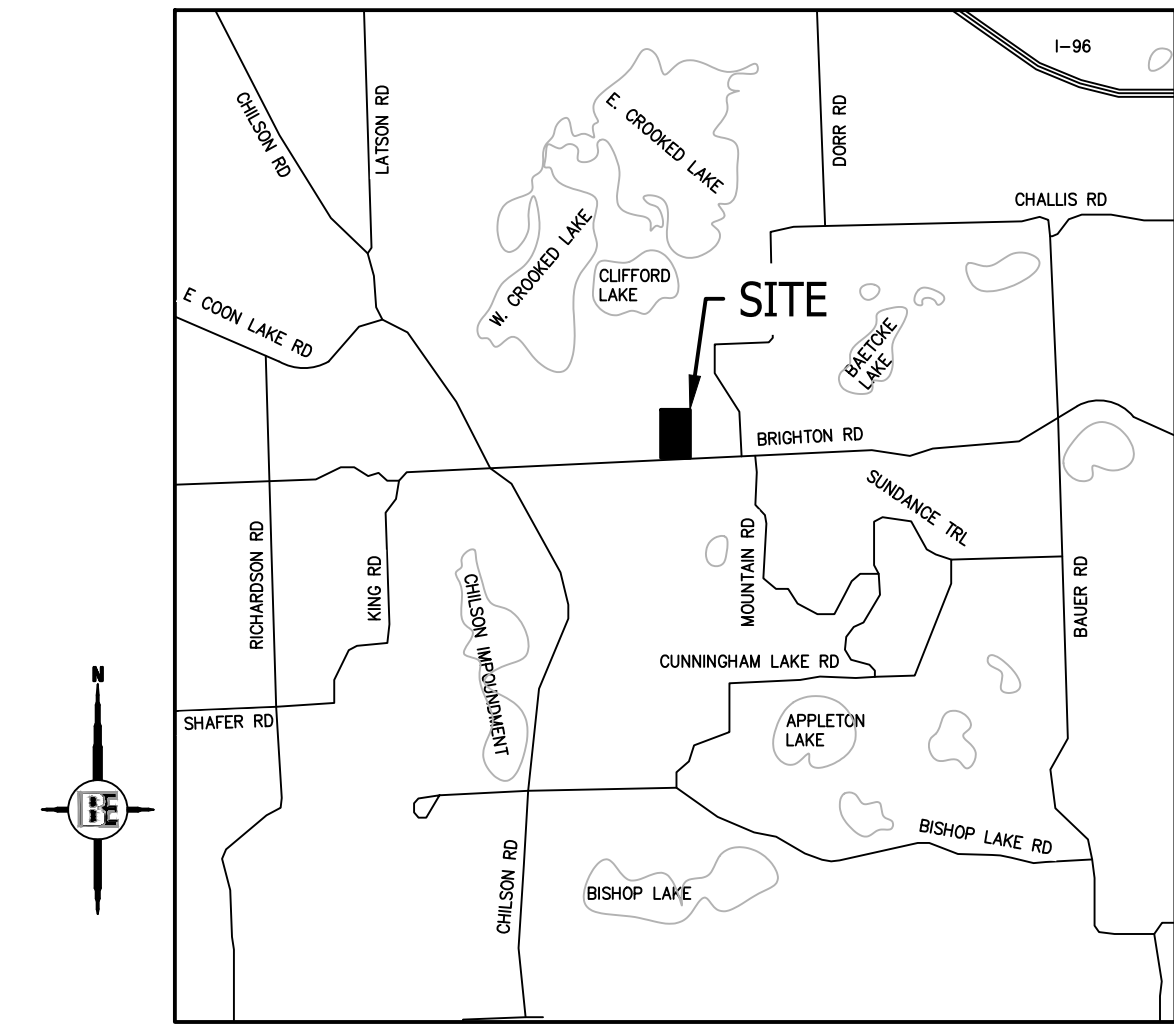
PROPERTY DESCRIPTION:

LEGAL DESCRIPTION PER TITLEAMERICA, COMMITMENT NO: 110960, REVISION NO. 3, (EFFECTIVE DATE: June 23, 2004 @ 8:00 A.M.) AS SHOWN ON BOSS ENGINEERING SURVEY, JOB NO. 04422, DATED 9-9-04.

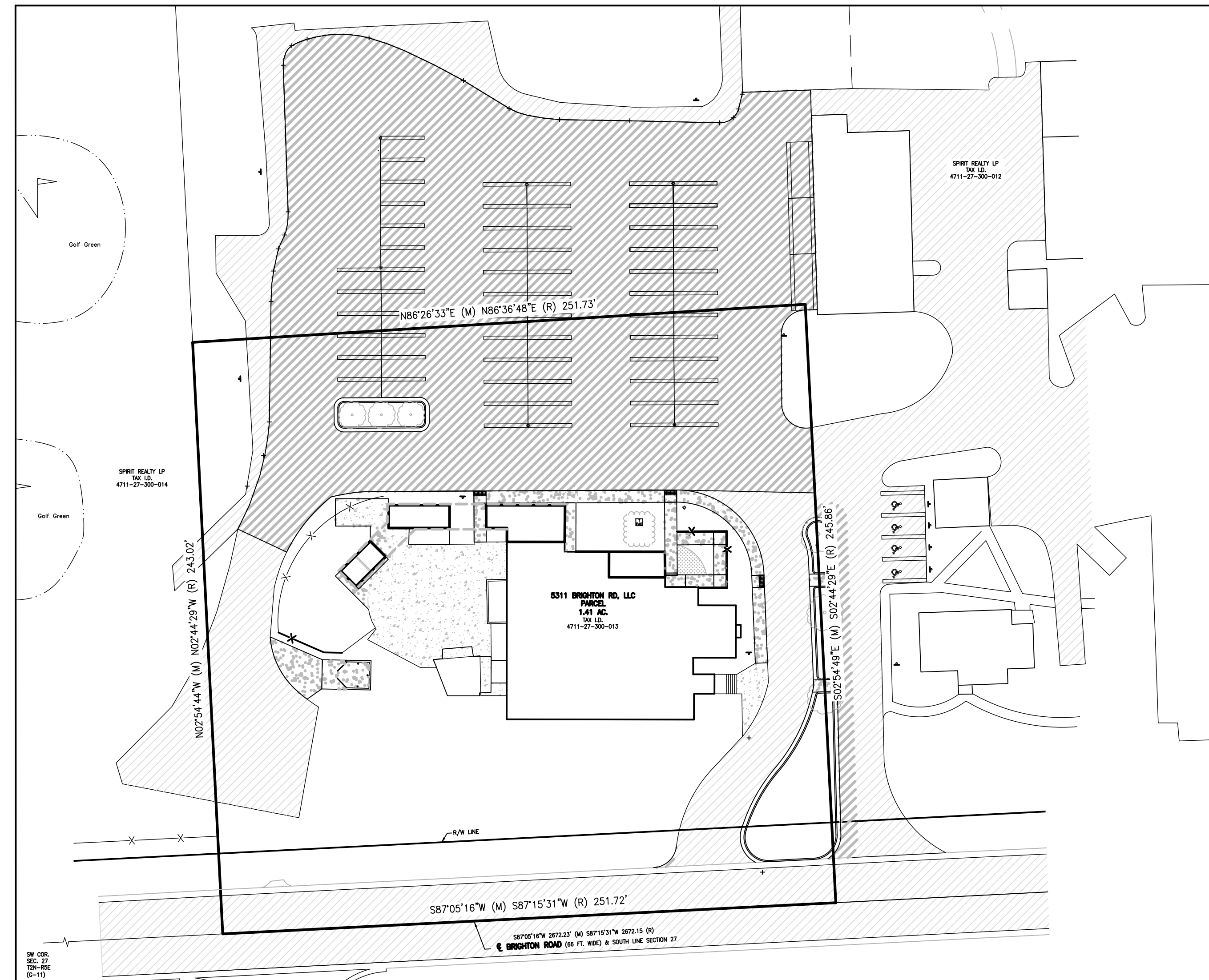
Land situated in the Township of Genoa, County of Livingston, State of Michigan, described as follows:

Part of the Southwest 1/4 of Section 27, Town 2 North, Range 5 East, Genoa Township, Livingston County, Michigan, more particularly described as follows: Commencing at the South 1/4 corner of said Section 27; thence along the South line of said Section 27 and the centerline of Brighton Road, South 87 degrees 15 minutes 31 seconds West, 935.84 feet to the point of beginning of the Parcel to be described; thence continuing along the South line of said Section 27 and the centerline of Brighton Road, South 87 degrees 15 minutes 31 seconds West, 251.72 feet; thence North 02 degrees 44 minutes 29 seconds West, 243.02 feet; thence North 86 degrees 36 minutes 48 seconds East, 251.73 feet; thence South 02 degrees 44 minutes 29 seconds East, 245.86 feet to the point of beginning

SITE PLAN/CONSTRUCTION PLAN FOR 5311 BRIGHTON ROAD FACILITY UPDATE PART OF SW QUARTER, SECTION 27 GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN 48116



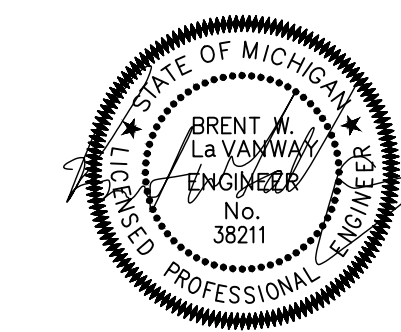
LOCATION MAP
NO SCALE



OVERALL SITE MAP
NO SCALE

CONTRACTOR:
TNT INSPECTION SERVICES
234 MEADOW POINTE DR.
FENTON, MI 48430
CONTACT: TODD ARNOLD
PHONE: (810) 772-1090
EMAIL: todd@tntinspectionsservices.com

ARCHITECT:
LINDHOUT ASSOCIATES
10465 CITATION DRIVE
BRIGHTON, MI 48116
CONTACT: DAVE RICHARDSON, AIA
PHONE: (810) 227-5668
EMAIL: dar@lindhout.com



PREPARED FOR:
5311 BRIGHTON ROAD, LLC
4684 CLIFFORD ROAD
BRIGHTON, MI 48116
CONTACT: ANDREW PERRI
PHONE: (586)-707-0182
EMAIL: aperrri@pinnaclewealthonline.com

PREPARED BY:
BEBOSS
Engineering
Engineers Surveyors Planners Landscape Architects
3121 E. GRAND RIVER AVE.
HOWELL, MI. 48843
517.546.4836 FAX 517.548.1670
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SHEET INDEX	
SHEET NO.	DESCRIPTION
1	COVER SHEET
2	GENERAL NOTES & LEGEND
3	EXISTING CONDITIONS & DEMOLITION PLAN
4	NATURAL FEATURES PLAN
5	SITE PLAN
6	GRADING, DRAINAGE, & SESC PLAN
7	CONSTRUCTION DETAILS
PLANS BY OTHERS	
LINDHOUT ASSOCIATES	
A1.0-MOD2 L1 L201 AVL11.1-12.2	BUILDING ARCHITECTURAL PLANS SITE LANDSCAPE PLANS SITE PHOTOMETRIC PLANS ACOUSTIC STUDY PLANS

UTILITY CONTACTS

CABLE/FIBER OPTIC/TELEPHONE AT&T 1251 LAWSON DRIVE HOWELL, MI 48843 (800) 464-7928	ELECTRIC DTE 1095 LAWSON DRIVE HOWELL, MI 48843 (800) 477-4747
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SEWER AND WATER DEPARTMENT OF PUBLIC WORKS 2911 DORR ROAD BRIGHTON, MI 48116 (800) 881-4109	GAS CONSUMERS ENERGY 1000 GRAND OAKS DRIVE HOWELL, MI 48843 (800) 477-5050
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INDEMNIFICATION STATEMENT

THE CONTRACTOR SHALL HOLD HARMLESS THE DESIGN PROFESSIONAL, MUNICIPALITY, COUNTY, STATE AND ALL OF ITS SUB CONSULTANTS, PUBLIC AND PRIVATE UTILITY COMPANIES, AND LANDOWNERS FOR DAMAGES TO INDIVIDUALS AND PROPERTY, REAL OR OTHERWISE, DUE TO THE OPERATIONS OF THE CONTRACTOR AND/OR THEIR SUBCONTRACTORS.

7	JP	BL	SITE PLAN REVISION PER CLIENT	03/12/24
6	JP	BL	SITE PLAN REVISION PER CLIENT	02/05/24
5	JP	BL	SITE PLAN REVISION PER CLIENT	12/11/23
4	JP	BL	SITE PLAN REVISION PER CLIENT	11/14/23
3	JP	BL	SITE PLAN REVISION PER CLIENT	10/23/23
2	JP	BL	SITE PLAN REVISION PER TOWNSHIP	08/28/23
1	JP	BL	ZONING VARIANCE PER TOWNSHIP	08/17/23
NO	BY	CK	REVISION	DATE

GENERAL NOTES

- 1. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED TOWNSHIP, COUNTY, AND STATE OF MICHIGAN PERMITS.
2. A GRADING PERMIT FOR SOIL EROSION--SEDIMENTATION CONTROL SHALL BE OBTAINED FROM THE GOVERNING AGENCY PRIOR TO THE START OF CONSTRUCTION.
3. IF DUST PROBLEM OCCURS DURING CONSTRUCTION, CONTROL WILL BE PROVIDED BY AN APPLICATION OF WATER, EITHER BY SPRINKLER OR TANK TRUCK.
4. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH LOCAL MUNICIPAL STANDARDS AND SPECIFICATIONS.
5. PAVED SURFACES, WALKWAYS, SIGNS, LIGHTING AND OTHER STRUCTURES SHALL BE MAINTAINED IN A SAFE, ATTRACTIVE CONDITION AS ORIGINALLY DESIGNED AND CONSTRUCTED.
6. ALL BARRIER-FREE FEATURES SHALL BE CONSTRUCTED TO MEET ALL LOCAL, STATE AND A.D.A. REQUIREMENTS. WHERE EXISTING CONDITIONS AND/OR THE REQUIREMENTS OF THE PLANS WILL RESULT IN FINISHED CONDITIONS THAT DO NOT MEET ADA REQUIREMENTS, THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER PRIOR TO WORK COMMENCING.
7. ANY DISCREPANCY IN THIS PLAN AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE DESIGN ENGINEER PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL SETBACKS, EASEMENTS AND DIMENSIONS SHOWN HEREON PRIOR TO BEGINNING CONSTRUCTION.
8. THE CONTRACTOR SHALL CONTACT ALL OWNERS OF EASEMENTS, UTILITIES AND RIGHT-OF-WAY, PUBLIC OR PRIVATE, PRIOR TO THE START OF CONSTRUCTION.
9. THE CONTRACTOR SHALL COORDINATE WITH ALL OWNERS TO DETERMINE THE LOCATION OF EXISTING LANDSCAPING, IRRIGATION LINES & PRIVATE UTILITY LINES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING LANDSCAPING, IRRIGATION LINES, AND PRIVATE UTILITY LINES.
10. THE CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE UPON COMPLETION OF THE PROJECT.
11. THE CONTRACTOR SHALL MAINTAIN THE SITE IN A MANNER SO THAT WORKMEN AND PUBLIC SHALL BE PROTECTED FROM INJURY, AND ADJOINING PROPERTY PROTECTED FROM DAMAGE.
12. THE CONTRACTOR SHALL KEEP THE AREA OUTSIDE THE "CONSTRUCTION LIMITS" BROOM CLEAN AT ALL TIMES.
13. THE CONTRACTOR SHALL CALL MISS DIG A MINIMUM OF 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
14. ALL PAVEMENT REPLACEMENT AND OTHER WORKS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE TOWNSHIP, INCLUDING THE LATEST MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
15. THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO EXISTING UTILITIES.
16. NO ADDITIONAL COMPENSATION WILL BE PAID TO THE CONTRACTOR FOR ANY DELAY OR INCONVENIENCE DUE TO THE MATERIAL SHORTAGES OR RESPONSIBLE DELAYS DUE TO THE OPERATIONS OF SUCH OTHER PARTIES DOING WORK INDICATED OR SHOWN ON THE PLANS OR IN THE SPECIFICATION OR FOR ANY REASONABLE DELAYS IN CONSTRUCTION DUE TO THE ENCOUNTERING OR EXISTING UTILITIES THAT MAY OR MAY NOT BE SHOWN ON THE PLANS.
17. DURING THE CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL NOT PERFORM WORK BY PRIVATE AGREEMENT WITH PROPERTY OWNERS ADJACENT TO THE PROJECT.
18. IF WORK EXTENDS BEYOND NOVEMBER 15, NO COMPENSATION WILL BE DUE TO THE CONTRACTOR FOR ANY WINTER PROTECTION MEASURES THAT MAY BE REQUIRED BY THE ENGINEER.
19. NO TREES ARE TO BE REMOVED UNTIL MARKED IN THE FIELD BY THE ENGINEER.
20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE PROPERTY BEYOND THE CONSTRUCTION LIMITS INCLUDING BUT NOT LIMITED TO EXISTING FENCE, LAWN, TREES AND SHRUBBERY.
21. TRAFFIC SHALL BE MAINTAINED DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL SIGNS AND TRAFFIC CONTROL DEVICES. FLAG PERSONS SHALL BE PROVIDED BY THE CONTRACTOR IF DETERMINED NECESSARY BY THE ENGINEER. ALL SIGNS SHALL CONFORM TO THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AT NO COST TO THE TOWNSHIP. NO WORK SHALL BE DONE UNLESS THE APPROPRIATE TRAFFIC CONTROL DEVICES ARE IN PLACE.
22. ALL DEMOLISHED MATERIALS AND SOIL SPOILS SHALL BE REMOVED FROM THE SITE AT NO ADDITIONAL COST, AND DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.
23. ANY EXISTING APPURTENANCES SUCH AS MANHOLES, GATE VALVES, ETC. SHALL BE ADJUSTED TO THE PROPOSED GRADE AND SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
24. ALL PERMANENT SIGNS AND PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST REVISION OF THE MICHIGAN MUTCD MANUAL AND SHALL BE INCIDENTAL TO THE CONTRACT.
25. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL ITEMS REQUIRED FOR CONSTRUCTION OF THE PROJECT ARE INCLUDED IN THE CONTRACT, ANY ITEMS NOT SPECIFICALLY DESIGNATED IN THE PLANS SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
26. THE CONTRACTOR IS RESPONSIBLE FOR HAVING A SET OF APPROVED CONSTRUCTION PLANS, WITH THE LATEST REVISION DATE, ON SITE PRIOR TO THE START OF CONSTRUCTION, IN THE EVENT OF ANY QUESTIONS PERTAINING TO THE INTENT OF THE CONSTRUCTION PLANS OR SPECIFICATIONS, THE CONTRACTOR SHALL CONTACT THE DESIGN ENGINEER FOR A FINAL DETERMINATION FROM THE DESIGN ENGINEER.
27. THE CONTRACTOR, NOT THE OWNER OR THE ENGINEER, ARE RESPONSIBLE FOR THE MEANS, METHODS, AND SEQUENCE OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR SAFE EXECUTION OF THE PROJECT SCOPE IN ACCORDANCE WITH THE APPROVED CONSTRUCTION PLANS.
28. THE CONTRACTOR IS RESPONSIBLE FOR PRESERVING CONSTRUCTION STAKING AS NECESSARY. CONTRACTOR TO NOTIFY CONSTRUCTION SURVEYOR OF REPLACEMENT STAKES NEEDED WHICH SHALL BE AT THE CONTRACTORS EXPENSE.
29. THE OWNER AND/OR CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING FRANCHISE UTILITY SERVICES (CABLE, ELECTRIC, GAS, ETC.) OWNER AND/OR CONTRACTOR SHALL WORK WITH UTILITY COMPANIES ON FURNISHING SITE UTILITY LAYOUTS AND PROVIDING CONDUIT CROSSINGS AS REQUIRED.
30. DAMAGE TO ANY EXISTING UTILITIES OR INFRASTRUCTURE (INCLUDING PAVEMENT, CURB, SIDEWALK, ETC.) SHALL PROMPTLY BE REPLACED IN KIND AND SHALL BE AT THE CONTRACTORS EXPENSE.
31. COORDINATION OF TESTING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND PER ALL CITY/TOWNSHIP/COUNTY REQUIREMENTS. COPIES OF ALL TEST REPORTS SHALL BE FURNISHED TO THE DESIGN ENGINEER.
32. PRIOR TO THE START OF CONSTRUCTION, PROTECTION FENCING SHALL BE ERECTED AROUND THE TREE DRIPLINE OF ANY TREES INDICATED TO BE SAVED WITHIN THE LIMITS OF DISTURBANCE.
33. THE CONTRACTOR SHALL MAINTAIN DRAINAGE OF THE PROJECT AREA AND ADJACENT AREAS. WHERE EXISTING DRAINAGE FACILITIES ARE IMPACTED/DISTURBED DUE TO CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE ANY NECESSARY TEMPORARY DRAINAGE DUECTIONS.
34. SOIL BORING LOGS ARE REPRESENTATIVE OF SPECIFIC POINTS ON THE PROJECT SITE, AND IF PROVIDED TO THE CONTRACTOR ARE FOR INFORMATIONAL PURPOSES ONLY.
35. WHERE CITY/TOWNSHIP STANDARD CONSTRUCTION DETAILS/SPECIFICATIONS ARE PROVIDED AND ARE IN CONFLICT WITH NOTES AND SPECIFICATIONS HEREIN, THE CITY/TOWNSHIP STANDARD SHALL GOVERN.

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GENERAL GRADING & SESC NOTES

- 1. THE CONTRACTOR SHALL HAVE IN PLACE ALL REQUIRED EROSION CONTROL METHODS AS INDICATED ON THE CONSTRUCTION PLANS AND AS REQUIRED BY GENERAL PRACTICE. SPECIFIC MEANS, METHODS AND SEQUENCES OF CONSTRUCTION MAY DICTATE ADDITIONAL SOIL EROSION CONTROL MEASURES BE NEEDED. THE CONTRACTOR SHALL COORDINATE WITH THE DESIGN ENGINEER ON THESE ANTICIPATED METHODS. ADDITIONAL SOIL EROSION CONTROL METHODS SHALL BE INCIDENTAL TO THE SCOPE OF WORK.
2. ACTUAL FIELD CONDITIONS MAY DICTATE ADDITIONAL OR ALTERNATE SOIL EROSION CONTROL MEASURES BE UTILIZED. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DEFICIENCIES OR FIELD CONDITIONS THAT WARRANT ADDITIONAL AND/OR ALTERNATIVE SESC MEASURES BE UTILIZED.
3. AT THE CLOSE OF EACH DAY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL CONSTRUCTION OPERATIONS, MATERIALS, DEBRIS, ETC ARE CONTAINED ON-SITE.
4. AT THE CLOSE OF EACH WORKING DAY, ALL DRAINAGE STRUCTURES SHALL BE FREE OF DIRT AND DEBRIS AT THE FLOW LINE.
5. ALL SOIL EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE PER MDEGLE REGULATIONS AND BEST PRACTICES, ALL SOIL EROSION CONTROL MEASURES SHALL BE MAINTAINED BY THE CONTRACTOR.
6. THE SOIL EROSION CONTROL MEASURES SHALL BE KEPT IN PLACE UNTIL SUCH A TIME THAT THE SITE IS DETERMINED TO BE ESTABLISHED WITH ACCEPTABLE AMOUNT OF VEGETATIVE GROUND COVER.
7. ALL AREAS DISTURBED BY THE CONTRACTOR BEYOND THE NORMAL CONSTRUCTION LIMITS OF THE PROJECT SHALL BE SODDED OR SEEDED AS SPECIFIED OR DIRECTED BY THE ENGINEER.
8. AFTER REMOVAL OF TOPSOIL, THE SUBGRADE SHALL BE COMPACTED TO 95% OF ITS UNIT WEIGHT.
9. ALL GRADING IN THE PLANS SHALL BE DONE AS PART OF THIS CONTRACT. ALL DELETERIOUS MATERIAL SHALL BE REMOVED FROM THE SUBGRADE PRIOR TO COMPACTING.
10. ALL ROOTS, STUMPS AND OTHER OBJECTIONABLE MATERIALS SHALL BE REMOVED AND THE HOLE BACKFILLED WITH SUITABLE MATERIAL. WHERE GRADE CORRECTION IS REQUIRED, THE SUBGRADE SHALL BE CUT TO CONFORM TO THE CROSS-SECTION AS SHOWN IN THE PLANS.
11. ALL EXCAVATION UNDER OR WITHIN 3 FEET OF PUBLIC PAVEMENT, EXISTING OR PROPOSED SHALL BE BACKFILLED AND COMPACTED WITH SAND (MDOT CLASS II).

GENERAL LANDSCAPE NOTES

- 1. ALL PLANT MATERIAL SHALL CONFORM TO THE REQUIREMENTS AND SPECIFICATIONS OF THE GOVERNING MUNICIPALITY. ALL STOCK SHALL BE NURSERY GROWN, CONFORMING TO ANSI Z60.1 "AMERICAN STANDARD FOR NURSERY STOCK", AND IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICE. STOCK SHALL EXHIBIT NORMAL GROWTH HABIT AND BE FREE OF DISEASE, INSECTS, EGGS, LARVAE, & DEFECTS SUCH AS KNOTS, SUN-SCALD, INJURIES, ABRASIONS, OR DISFIGUREMENT. ALL PLANT MATERIAL SHALL BE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT.
2. ALL PLANT MATERIALS SHALL BE BALLED AND BURLAPPED OR CONTAINER STOCK. NO BARE ROOT STOCK IS PERMITTED. ALL PLANT BALLS SHALL BE FIRM, INTACT, AND SECURELY WRAPPED AND BOUND.
3. ALL PLANT BED MATERIALS SHALL BE EXCAVATED OF ALL BUILDING MATERIALS, OTHER EXTRANEANEOUS OBJECTS, AND POOR SOILS TO A MINIMUM DEPTH OF 12-INCHES AND BACKFILLED TO GRADE WITH SPECIFIED PLANTING MIX (SEE BELOW).
4. PLANTING MIXTURE SHALL CONSIST OF 5 PARTS TOPSOIL FROM ON-SITE (AS APPROVED), 4 PARTS COARSE SAND, 1 PART SPHAGNUM PEAT MOSS (OR APPROVED COMPOST), AND 5 LBS OF SUPERPHOSPHATE FERTILIZER PER CU. YD. OF MIX. INGREDIENTS SHALL BE THOROUGHLY BLENDED FOR UNIFORM CONSISTENCY.
5. ALL PLANT BEDS AND INDIVIDUAL PLANTS, NOT OTHERWISE NOTED SHALL BE MULCHED WITH A 4-INCH LAYER OF SHREDED BARK MULCH. EDGE OF MULCH BEDS AS SHOWN. DECIDUOUS TREES IN LAWN AREAS SHALL RECEIVE A 5-FT DIAMETER CIRCLE OF MULCH AND CONIFER TREES 8-FT (PLANTED CROWN OF TREE) UNLESS OTHERWISE NOTED.
6. LANDSCAPE STONE SHALL BE INSTALLED WHERE NOTED OR INDICATED (HATCHED). STONE SHALL BE 3/4"-1-1/4" WASHED RIVER GRAVEL OR AS SELECTED AND SHALL BE INSTALLED TO A MINIMUM DEPTH OF 3-INCHES.
7. ALL LANDSCAPE BEDS, UNLESS OTHERWISE NOTED SHALL BE INSTALLED OVER WEED BARRIER FABRIC - WATER PERMEABLE FILTRATION FABRIC OF NON-WOVEN POLYPROPYLENE OR POLYESTER FABRIC. FABRIC SHALL BE OF SUITABLE THICKNESS FOR APPLICATION.
8. ALL PLANTS AND PLANT BEDS SHALL BE THOROUGHLY WATERED UPON COMPLETION OF PLANTING AND STAKING OPERATIONS.
9. THE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIALS FOR A PERIOD OF 1 YEAR FROM THE DATE THE WORK IS ACCEPTED, IN WRITING, BY THE LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL REPLACE, WITHOUT COST TO THE OWNER, WITHIN A SPECIFIED PERIOD OF TIME, ALL DEAD PLANTS, AND ALL PLANTS NOT IN A VIGOROUS, THRIVING CONDITION, AS DETERMINED BY THE LANDSCAPE ARCHITECT, DURING AND AT THE END OF THE GUARANTEE PERIOD. REPLACEMENT STOCK SHALL CONFORM TO THE ORIGINAL SPECIFICATIONS.
10. EDGING SHALL BE PROVIDED FOR ALL LANDSCAPE BEDS NOT ADJACENT TO CONCRETE PAVEMENT. EDGING SHALL BE BLACK ALUMINUM EDGING, 3/16-INCH X 4-INCH. INSTALL PER MANUFACTURER'S INSTRUCTIONS, ALL EDGING SHALL BE INSTALLED IN STRAIGHT LINES OR SMOOTH CURVES WITHOUT IRREGULARITIES.
11. SOD SHALL BE DENSE, WELL ROOTED TURF, FREE OF WEEDS. IT SHALL BE COMPRISED OF A BLEND OF AT LEAST TWO KENTUCKY BLUE GRASSES AND ONE FESCUE. IT SHALL HAVE A UNIFORM THICKNESS OF 3/4-INCH AT TIME OF PLANTING, AND CUT IN UNIFORM STRIPS NOT LESS THAN 10-INCHES BY 18-INCHES. SOD SHALL BE KEPT MOIST AND LAID WITHIN 36-HOURS AFTER CUTTING.
12. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH A DENSE LAWN OF PERMANENT GRASSES, FREE OF LUMPS AND DEPRESSIONS. ALL SODDED AREAS THAT BROWN-OUT OR HAVE NOT FIRMLY KNITTED TO THE SOIL BASE WITHIN A PERIOD OF 1 MONTH SHALL BE REPLACED BY THE CONTRACTOR, AT NO COST TO THE OWNER.
13. SEED MIXTURE SHALL BE AS FOLLOWS:
KENTUCKY BLUEGRASS (CHOOSE 3 VARIETIES - ADELPHI, RUGBY, GLADE, OR PARADE) 30%
RUBY RED OR DAWSON RED FINE FESCUE 30%
ATLANTA RED FESCUE 20%
PENNFINE PERENNIAL RYE 20%
14. THE ABOVE SEED MIXTURE SHALL BE SOWN AT A RATE OF 250 LBS PER ACRE. PRIOR TO SEEDING, THE TOPSOIL SHALL BE FERTILIZED WITH A COMMERCIAL FERTILIZER WITH A 10-0-10 ANALYSIS:
10% NITROGEN - MIN 25% FROM A UREA FORMALDEHYDE SOURCE
0 % PHOSPHATE
10% POTASH - SOURCE POTASSIUM SULFATE OR POTASSIUM NITRATE
15. THE FIRST FERTILIZER APPLICATION SHALL BE AT A RATE OF 10 LBS PER 1000 SQ FT OF BULK FERTILIZER.
16. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH A DENSE LAWN OF PERMANENT GRASSES, FREE OF LUMPS AND DEPRESSIONS. ANY PART OF THE AREA THAT FAILS TO SHOW A UNIFORM GERMINATION SHALL BE RE-SEEDED AND SUCH RE-SEEDED SHALL CONTINUE UNTIL A DENSE LAWN IS ESTABLISHED. DAMAGE TO SEEDED AREAS RESULTING FROM EROSION SHALL BE REPAIRED BY THE CONTRACTOR.

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0 % PHOSPHATE
10% POTASH - SOURCE POTASSIUM SULFATE OR POTASSIUM NITRATE

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ALL AREAS OF THE SITE SCHEDULED FOR SEEDING OR SODDING SHALL FIRST RECEIVE A 6-INCH LAYER OF CLEAN, FRIABLE TOPSOIL. THE SOIL SHALL BE DISCED AND SHALL BE GRADED IN CONFORMANCE WITH THE GRADING PLAN.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES AND TO INFORM THE LANDSCAPE ARCHITECT OF ANY CONFLICTS PRIOR TO COMMENCING LANDSCAPING.

GENERAL UTILITY NOTES

- 1. BEDDING SHALL EXTEND A MINIMUM OF 4" BELOW THE PIPE. UNLESS OTHERWISE NOTED ON THE PLANS, BEDDING SHALL BE OF UNIFORM GRADATION MDOT 6A4 STONE OR MDOT CLASS II GRANULAR MATERIAL FOR SANITARY AND STORM PIPE AND MDOT CLASS II GRANULAR MATERIAL ONLY FOR WATERMAIN.
2. WHERE UNSTABLE GROUND CONDITIONS ARE ENCOUNTERED, STONE BEDDING SHALL BE USED AS DIRECTED BY THE ENGINEER.
3. BACKFILL SHALL BE OF A SUITABLE MATERIAL AND SHALL BE FREE OF ANY ORGANIC MATERIALS AND ROCKS.
4. BACKFILL ABOVE THE PIPE SHALL BE OF GRANULAR MATERIAL MDOT CLASS II TO A POINT 12" ABOVE THE TOP OF THE PIPE, WHERE THE TRENCH IS NOT WITHIN THE INFLUENCE OF THE ROAD. SUITABLE SITE MATERIAL MAY BE COMPACTED AND UTILIZED FROM A POINT 12" ABOVE THE PIPE TO GRADE, WHERE THE TRENCH IS WITHIN A 1:1 INFLUENCE OF THE ROAD, GRANULAR MATERIAL, MDOT CLASS II OR III, IS TO BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 12" IN THICKNESS. COMPACTION SHALL BE 95% AS DETERMINED BY AASHTO T99.
5. 18" MINIMUM VERTICAL SEPARATION AND 10' HORIZONTAL SEPARATION IS TO BE MAINTAINED BETWEEN WATERMAIN AND SANITARY/STORM SEWER TO THE MAXIMUM EXTENT POSSIBLE.

GENERAL SANITARY NOTES

- 1. ALL SANITARY PIPE LENGTHS ARE SHOWN FROM C/L OF STRUCTURE TO C/L OF STRUCTURE.
2. SANITARY PIPE MATERIALS SHALL BE AS FOLLOWS:
2.1. PVC SDR-23.5 (SANITARY LEADS)
3. ALL PVC SDR SANITARY SEWER PIPE SHALL MEET THE REQUIREMENTS OF ASTM D3034 AND D2241. PVC SCH 40 PIPE SHALL MEET THE REQUIREMENTS OF ASTM D1785. GASKET JOINTS FOR SANITARY PIPE SHALL MEET THE REQUIREMENTS OF ASTM D3139 AND D3212.
4. SANITARY SEWER LATERALS SHALL HAVE A MINIMUM SLOPE OF 1.0%.

GENERAL WATERMAIN NOTES

- 1. WATERMAIN PIPE MATERIALS SHALL BE AS FOLLOWS:
1.1. TYPE 'K' COPPER (WATER LATERAL - MAIN TO CURB STOP)
1.2. HDPE DR-9 (WATER LATERAL - CURB STOP TO STUB)
2. WATERMANS SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA C651. BAC-T SAMPLES SHALL BE TAKEN IN ACCORDANCE WITH R235.11110 OF THE ADMINISTRATIVE RULES PROMULGATED UNDER MICHIGAN SAFE DRINKING WATER ACT, 1976 PA 399, AS AMENDED.
3. WATERMAIN SHALL BE INSTALLED WITH A MINIMUM OF 5.5' OF COVER FROM FINISHED GRADE TO TOP OF PIPE AND NO MORE THAN 8' OF COVER, UNLESS SPECIAL CONDITIONS WARRANT.
4. WATERMAIN VALVES SHALL BE IRON BODY RESILIENT WEDGE GATE VALVES, NON-RISING STEMS, COUNTERCLOCKWISE OPEN, AWWA C509.

LINES & HATCHES LEGEND

Table with columns for PROPOSED (PR) and EXISTING (EX) lines and hatches. Includes symbols for SAN, FM, PS, ST, WM, WL, FO, OH, C, E, G, T, X and descriptions for SANITARY SEWER, FORCE MAIN, PRESSURE SEWER, STORM SEWER, WATER MAIN, WATER LEAD, FIBER OPTIC, OVERHEAD WIRE, CABLE, ELECTRIC, GAS, TELEPHONE, FENCE, SILT FENCE, WETLAND BOUNDARY, LIMITS OF GRADING/CLEARING, LIMITS OF DRAINAGE, MODIFIED CURB, CONCRETE, HIGH STRENGTH CONCRETE, ASPHALT, HIGH STRENGTH ASPHALT, WETLAND, SANITARY SEWER LABEL, STORM SEWER LABEL, WATER MAIN LABEL, SOIL EROSION CONTROL MEASURE (P=PERMANENT, T=TEMPORARY).

LIGHTING LEGEND

Table with columns for PROPOSED (PR) and EXISTING (EX) lighting fixtures. Includes symbols for double and single fixture light poles, wall mounted light fixture, ground light fixture, foot candles on site, foot candles off site, foot candles contours, and canopy mounted light fixture.

LANDSCAPE LEGEND

Table with columns for EXISTING and PROPOSED landscape elements. Includes symbols for existing and proposed conifer trees, deciduous trees, ornamental trees, shrubs, grasses & perennials, and landscape boulders.

SYMBOL LEGEND

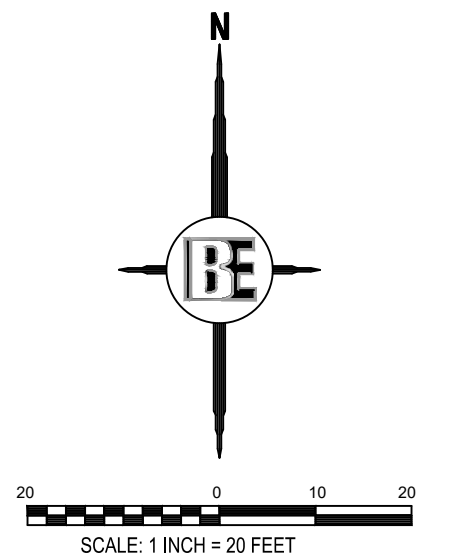
Table with columns for symbols and descriptions. Includes symbols for storm drainage flow, guy wire, power pole, transformer pad, electrical riser, U.G. electrical marker, electrical meter, air conditioning unit, telephone riser, U.G. telephone marker, gas riser, U.G. gas marker, gas meter, cable TV riser, U.G. cable TV marker, mailbox, well, water manhole, gate valve (existing), gate valve (proposed), hydrant (existing), hydrant (proposed), catch basin (existing), yard catch basin (existing), catch basin (proposed), storm manhole (existing), storm manhole (proposed), end section (existing), end section (proposed), sanitary manhole (existing), sanitary manhole (proposed), pump chamber, traffic sign, sign (existing), sign (proposed), soil boring, steel rod set, steel rod or pipe found, wood lath set, hub set, monument found, section corner, gas pump, antenna, satellite dish, newspaper box, parking meter, phone booth, handicap symbol, benchmark, and light pole.

ABBREVIATIONS

Table of abbreviations including FFE (finished floor elevation), BFE (basement floor elevation), GFE (garage floor elevation), FG (finished grade), T/A (top of asphalt), T/C (top of concrete/curb), T/W (top of walk), T/P (top of pipe), B/P (bottom of pipe), F/L (flow line), RIM (rim elevation at flow line), INV (invert elevation), MH (manhole), CB (catch basin), RY (rear yard), YD (yard drain), RD (roof drain), FES (flared end section), CMP (corrugated metal pipe), CPP (corrugated plastic pipe), RCP (reinforced concrete pipe), HDPE (high density polyethylene), PVC (polyvinyl chloride), DIP (ductile iron pipe), GV (gate valve), GVB (gate valve in well), HYD (hydrant), FDC (fire department connection), UP (utility pole), NFV (not field verified to be removed), L (liber), F (face), L.C.R. (livingston county records), (M&R) (measured and record), L.O.B. (point of beginning).

Project information block for 5311 BRIGHTON ROAD FACILITY UPDATES. Includes BEBOSS Engineering logo, contact information (3121 E. GRAND RIVER AVE., HOWELL, MI. 48843), project details (5311 BRIGHTON ROAD, LLC, 4684 CLIFFORD ROAD, BRIGHTON, MI 48116), and a revision table with columns for SITE PLAN REVISION PER CLIENT, DATE, and REVISION PER.

SEE SHEET 2 FOR GENERAL NOTES AND LEGEND



THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. NO BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION, DEPTH, OR CHARACTER OF ANY UTILITIES. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE, AND FEDERAL AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL UTILITIES AND STRUCTURES NOT TO BE DEMOLISHED OR MOVED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE, AND FEDERAL AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL UTILITIES AND STRUCTURES NOT TO BE DEMOLISHED OR MOVED.

GENERAL SURVEY NOTES:

- 1. BEARINGS ARE BASED ON MICHIGAN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE.
2. SUBSURFACE UTILITIES NOT LOCATED FOR THIS SURVEY MAY EXIST. IT IS THE RESPONSIBILITY OF THE OWNER OF THE RESPECTIVE UTILITY TO ACCURATELY LOCATE SUCH UTILITIES.
3. EASEMENTS OR RESTRICTIONS OF RECORD NOT DEPICTED ON THIS DRAWING MAY EXIST.
4. ELEVATIONS WERE ESTABLISHED WITH GPS USING OPUS GPS POST-PROCESSING. (NAVD88 DATUM)
5. CONTOURS ARE SHOWN AT 1 FOOT INTERVALS.
6. THE LOCATIONS OF UNDERGROUND UTILITIES, AS SHOWN ON THIS DRAWING ARE APPROXIMATE. THE LOCATIONS ARE BASED ON PHYSICAL FIELD LOCATIONS OF STRUCTURES ALONG WITH PREVIOUS DRAWINGS PREPARED BY BOSS ENGINEERING.
7. ALL WORK SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE MUNICIPALITY, THE COUNTY, AND THE STATE OF MICHIGAN.
8. ALLOW THREE WORKING DAYS BEFORE YOU DIG, CALL MISS DIG TOLL FREE 1-800-482-7171.

NRCS EXISTING SOILS DATA:
FoA FOX SANDY LOAM 0-2% SLOPES
FD FOX-BOYER COMPLEX 12-18% SLOPES

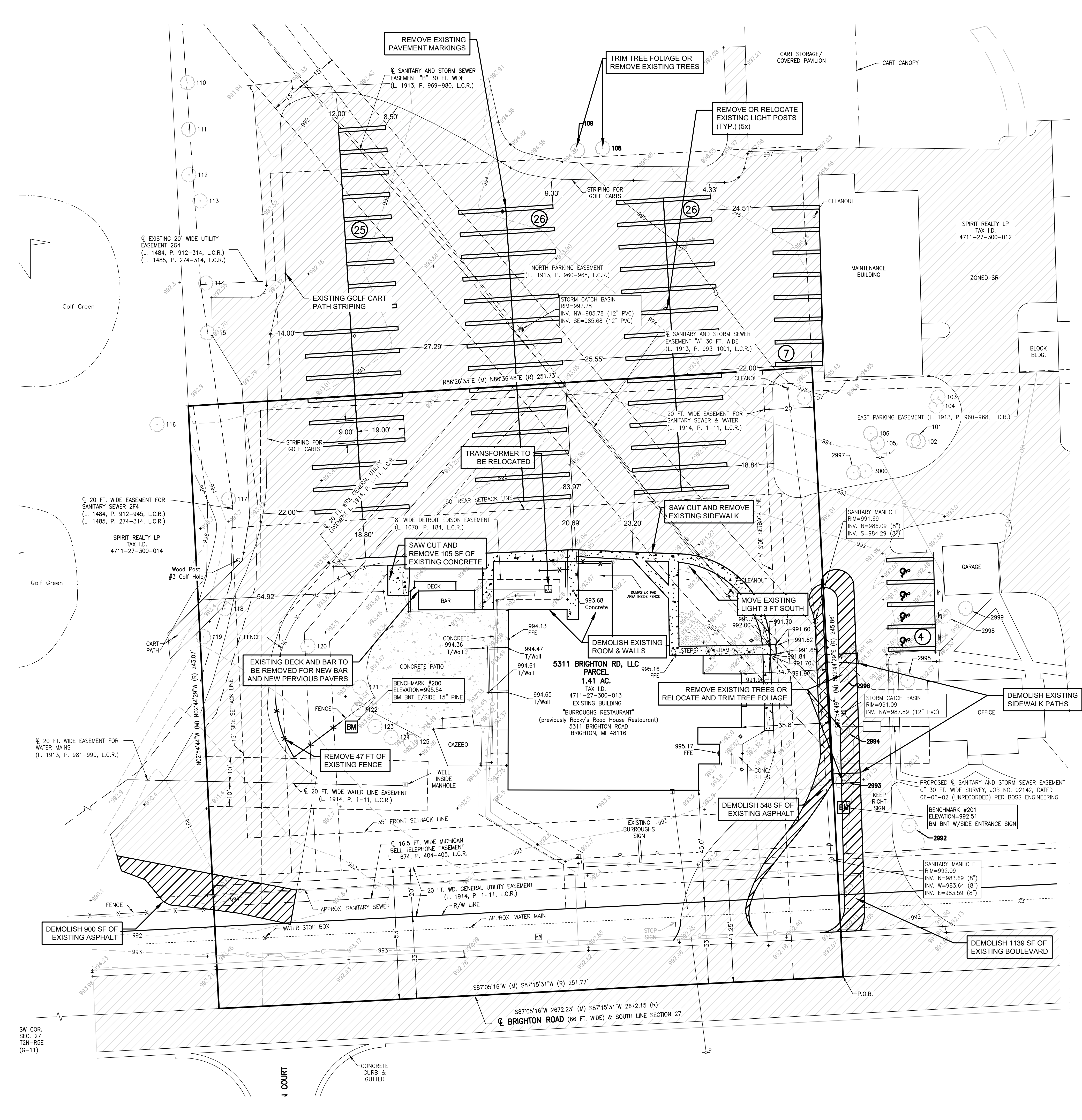
PARCEL INFORMATION:
PARCEL ID: #4711-27-300-013
ZONING: MUPUD
ADDRESS: 5311 BRIGHTON ROAD, BRIGHTON, MI 48116

PROPERTY DESCRIPTION PER LIVINGSTON COUNTY TAX ROLL:
LAND SITUATED IN THE TOWNSHIP OF GENOA, COUNTY OF LIVINGSTON, STATE OF MICHIGAN, DESCRIBED AS FOLLOWS:
SEC 27 T2N R5E COMM S 1/4 COR SEC TH S87°W 935.84 FT TO POB TH S87°W 251.72 FT TH N02°W 243.02 FT TH N86°E 251.73 FT TH S02°E 245.86 FT TO POB CONT 1.41 AC M/L SPLIT 5/92 FR 003

SITE BENCHMARKS (NAVD88 DATUM):
-BM #200 = BM BNT E/SIDE 15" PINE ELEV.=995.54
-BM #201 = BM BNT W/SIDE ENTRANCE SIGN ELEV.=992.51

EXISTING PARKING SPACE INFORMATION:
(2) STANDARD 9' x 19' SPACES
(4) BARRIER-FREE HANDICAP 9' x 19' SPACES

Tree Inventory List table with columns: Tree #, Botanical Name, Common Name, Dia., Other Dia., Condition. Lists trees 2992 through 125 with details on species and health.



BOSS Engineering
Engineers Surveyors Planners Landscape Architects
3121 E. GRAND RIVER AVE.
HOWELL, MI. 48843
517.546.4836 FAX 517.548.1670

5311 BRIGHTON ROAD FACILITY UPDATES
5311 BRIGHTON ROAD, LLC
4684 CLIFFORD ROAD
BRIGHTON, MI 48116
(586) 707-0182

Revision table with columns: No., Date, Description. Lists revisions 1 through 7, including 'SITE PLAN REVISION PER CLIENT' and 'ZONING VARIANCE PER TOWNSHIP'.

DESIGNED BY: BL
DRAWN BY: JP
CHECKED BY:
SCALE: 1" = 20'
JOB NO: 23-201
DATE: 07/31/23
SHEET NO. 3

SEE SHEET 2 FOR GENERAL NOTES AND LEGEND

LEGEND

- NATURAL FEATURE TYPE BOUNDARY
- EXISTING DRAINAGE FLOW
- EXISTING 1-FT CONTOURS
- EXISTING TREES

BE

SCALE: 1 INCH = 20 FEET

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- ALLOW THREE WORKING DAYS BEFORE YOU DIG, CALL MISS DIG TOLL FREE 1-800-482-7171.

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FoA FOX SANDY LOAM 0-2% SLOPES
 FfD FOX-BOYER COMPLEX 12-18% SLOPES

PARCEL INFORMATION:
 PARCEL ID: #4711-27-300-013
 ZONING: MUPUD
 ADDRESS: 5311 BRIGHTON ROAD, BRIGHTON, MI 48116

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NATURAL FEATURES NARRATIVE:

NATURAL FEATURES WERE IDENTIFIED DURING AN ON-SITE VISIT TO THE PROPERTY ON JUNE 29, 2023. SITE IS DEVELOPED AS A PRIVATE GOLF COURSE RESTAURANT AND MAINTENANCE AREA PARKING LOT. TREES IN THIS AREA ARE PART OF A PLANTED LANDSCAPE. ARE IDENTIFIED IN THE TREE INVENTORY LIST, AND NONE ARE PLANNED TO BE REMOVED.
 THIS PARCEL IS FLAT WITH SOILS IDENTIFIED BY USDA NRCS AS MAINLY FOX SANDY LOAM AND A SMALL AREA OF FOX-BOYER COMPLEX AT THE WEST PROPERTY LINE.

Tree Inventory List

Job Number: 23-201
 Job Location: 5311 Brighton Road Brighton, MI 48116
 Date: Wednesday, June 28, 2023
 Performed By: Jennifer M. Austin, PLA

Condition Description Notes:
 Good - no observed structural defects*
 Fair - minor structural defects, marginal form, or some insect activity noted*
 Poor - major structural defects, poor form, or insect infested*

*Structural defects may include decayed wood, cracks, root problems, weak branch unions cankers, poor tree architecture, dead/failed branches due to various causes.

Tree #	Botanical Name	Common Name	Dia.	Other Dia.	Condition
2992	Abies Concolor	White Fir	19"		Good
2993	Gleditsia Triacanthos	Honey Locust	19"		Good
2994	Gleditsia Triacanthos	Honey Locust	19"		Good
2995	Acer Rubrum	Red Maple	9.5"		Good
2996	Gleditsia Triacanthos	Honey Locust	23"		Good
2997	Pinus Strobus	Eastern White Pine	60" Tall		Good
2998	Thuja occidentalis	Arborvitae	10.5"		Fair
2999	Thuja occidentalis	Arborvitae	9"		Fair
3000	Pinus Strobus	Eastern White Pine	65" Tall		Good
101	Pinus Strobus	Eastern White Pine	65" Tall		Good
102	Pinus Strobus	Eastern White Pine	65" Tall		Poor
103	Pinus Strobus	Eastern White Pine	65" Tall		Good
104	Pinus Strobus	Eastern White Pine	65" Tall		Good
105	Pinus Strobus	Eastern White Pine	65" Tall		Good
106	Pinus Strobus	Eastern White Pine	65" Tall		Good
107	Pinus Sylvestris	Scotch Pine	60" Tall		Good
108	Pinus Strobus	Eastern White Pine	65" Tall		Good
109	Pinus Strobus	Eastern White Pine	65" Tall		Good
110	Pinus Strobus	Eastern White Pine	65" Tall		Good
111	Pinus Strobus	Eastern White Pine	65" Tall		Good
112	Pinus Strobus	Eastern White Pine	65" Tall		Good
113	Pinus Strobus	Eastern White Pine	65" Tall		Good
114	Pinus Strobus	Eastern White Pine	65" Tall		Good
115	Pinus Strobus	Eastern White Pine	65" Tall		Good
116	Acer Rubrum	Red Maple	10"		Good
117	Acer Platanoides	Norway Maple	12"		Good
118	Acer Rubrum	Red Maple	13"		Good
119	Acer Rubrum	Red Maple	12"		Good
120	Gleditsia Triacanthos	Honey Locust	21"		Good
121	Pinus Strobus	Eastern White Pine	65" Tall		Good
122	Pinus Strobus	Eastern White Pine	65" Tall		Good
123	Pinus Strobus	Eastern White Pine	65" Tall		Good
124	Pinus Strobus	Eastern White Pine	65" Tall		Good
125	Pinus Strobus	Eastern White Pine	65" Tall		Good

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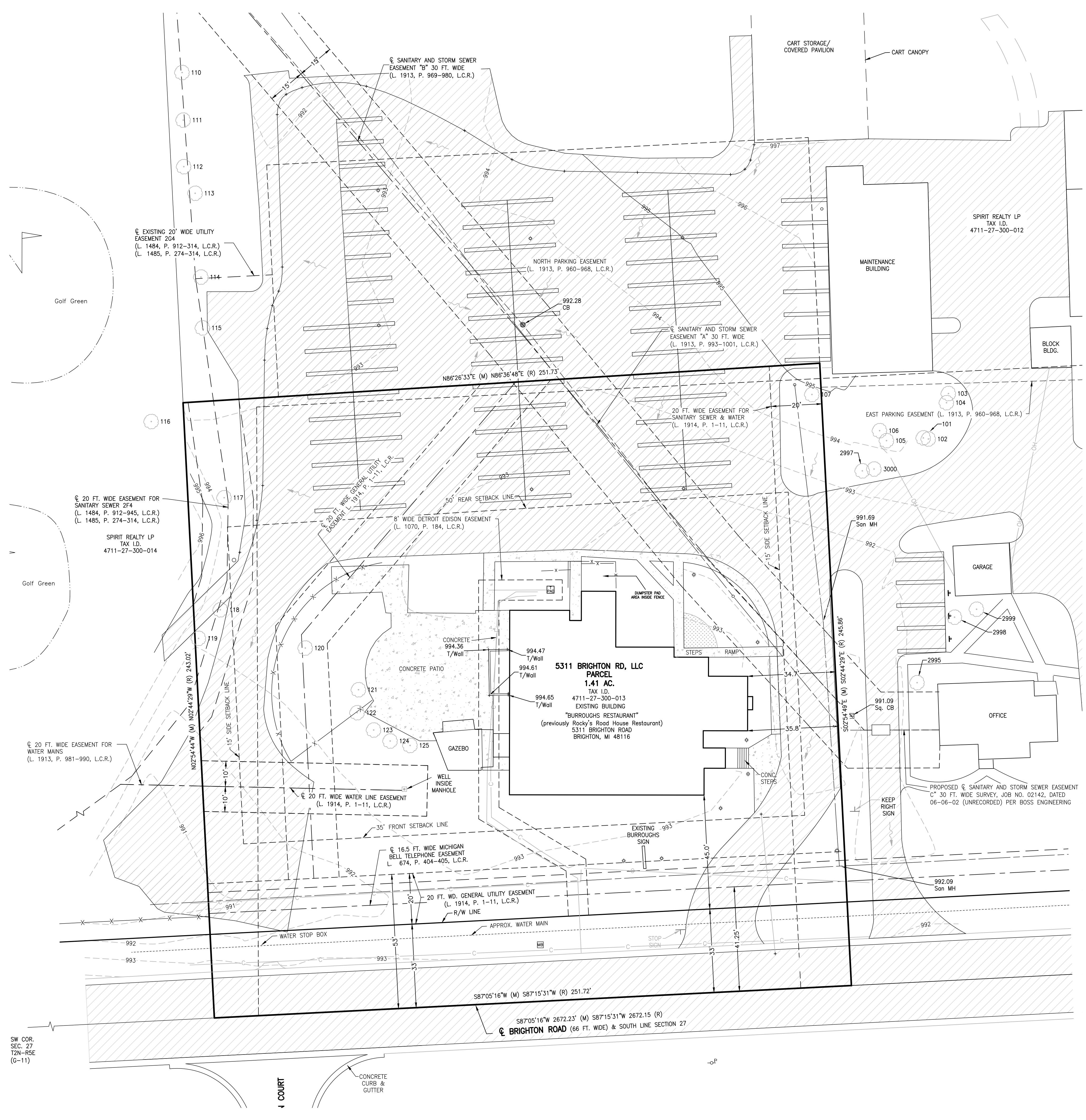
BEBOSS
 BE Engineering
 Engineers Surveyors Planners Landscape Architects
 3121 E. GRAND RIVER AVE.
 HOWELL, MI. 48843
 517.546.4836 FAX 517.548.1670

5311 BRIGHTON ROAD FACILITY UPDATES
 PREPARED FOR:
 5311 BRIGHTON ROAD, LLC
 4684 CLIFFORD ROAD
 BRIGHTON, MI 48116
 (981)707-0182

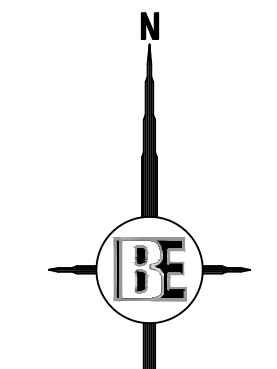
NATURAL FEATURES PLAN

NO	BY	REVISION PER	DATE
7	JP	SITE PLAN REVISION PER CLIENT	03/12/24
6	JP	SITE PLAN REVISION PER CLIENT	02/05/24
5	JP	SITE PLAN REVISION PER CLIENT	12/17/23
4	JP	SITE PLAN REVISION PER CLIENT	11/14/23
3	JP	SITE PLAN REVISION PER TOWNSHIP	10/23/23
2	JP	SITE PLAN REVISION PER TOWNSHIP	08/28/23
1	JP	ZONING VARIANCE PER TOWNSHIP	08/17/23
NO	BY	REVISION PER	DATE

DESIGNED BY: BL
 DRAWN BY: JP
 CHECKED BY:
 SCALE: 1" = 20'
 JOB NO: 23-201
 DATE: 07/31/23
 SHEET NO. 4



SEE SHEET 2 FOR GENERAL NOTES AND LEGEND



SCALE: 1 INCH = 20 FEET

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OWNER IS AGREEING TO A PERFORMANCE GUARANTEE FOR FUTURE PROPOSED SIDEWALK ALONG BRIGHTON ROAD.

PARKING DEMAND STATEMENT:
THE REQUIRED PARKING CALCULATIONS ARE EXCLUSIVE TO EACH USE. THE DAILY DEMAND IS THE OFFICE USE WITH 20 SPACES. ONLY DURING THE MEMORIAL DAY TO LABOR DAY SEASON WOULD A MAXIMUM DEMAND OF 44 SPACES EXIST. THE PROVIDED NUMBER OF SPACES IS 69 WITH 65 TYPICAL PARKING SPACES AND 4 ADA ACCESSIBLE SPACES ONSITE.

SEE LANDSCAPE PLANS FOR NEW SIGN DETAIL.

SITE DATA:

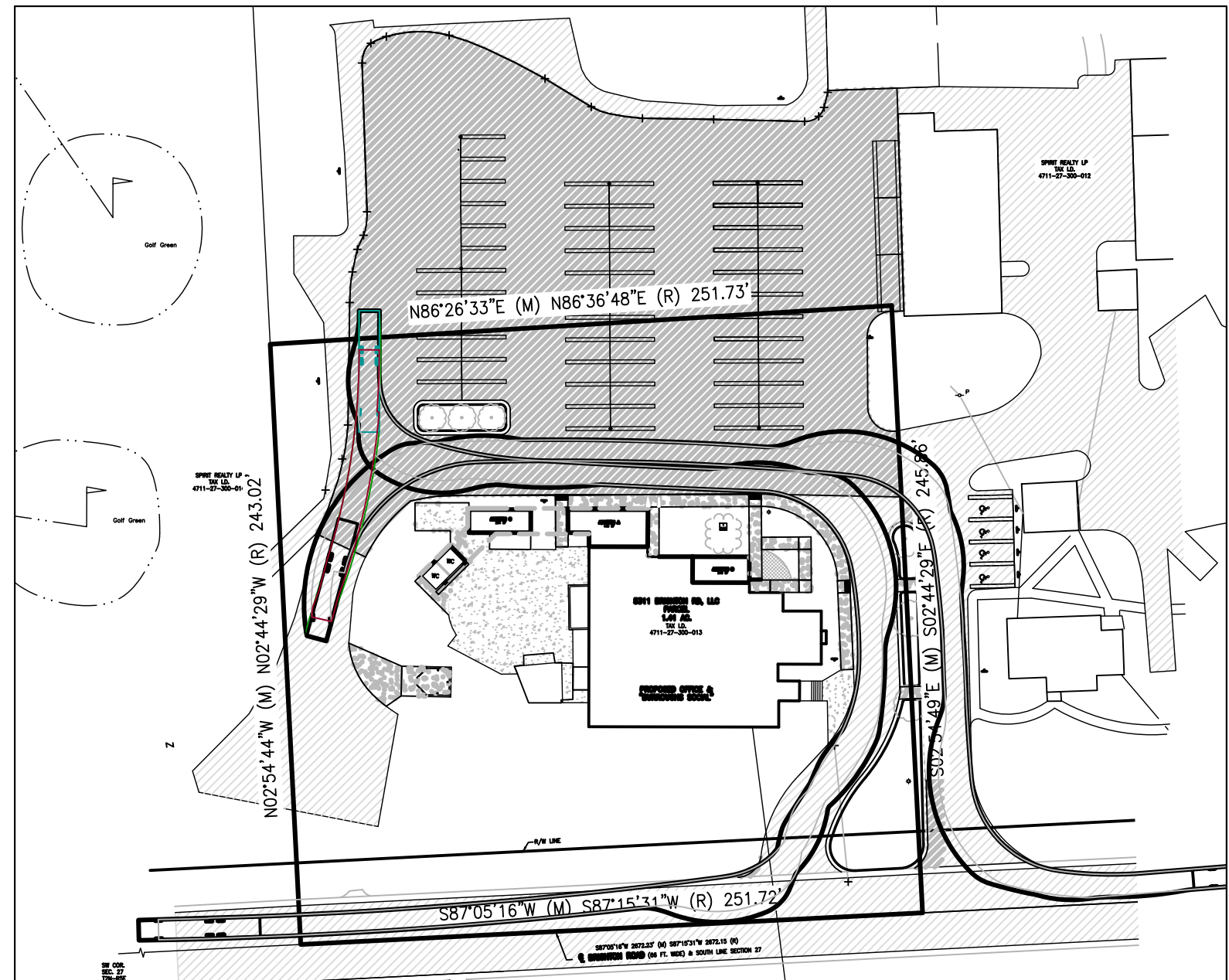
GENOA TOWNSHIP
PARCEL # 4711-27-300-013
5311 BRIGHTON ROAD, BRIGHTON, MI 48116
1.42 AC ±
ZONING: MIXED USE PLANNED URBAN DEVELOPMENT (MUPUD)
EXISTING OFFICE BUILDING SF: 5,732 GSF ±
EXISTING BUILDING USE: RESTAURANT
PROPOSED OFFICE & BANQUET BUILDING SF: 6,166 GSF ±
PROPOSED BUILDING USE: OFFICE & BANQUET BUILDING
LIVE ENTERTAINMENT (BANQUET ROOM & PATIO TITLED, "BURROUGHS SOCIAL") BETWEEN MEMORIAL DAY & LABOR DAY. THURSDAY - SATURDAY
PATIO MUSIC OFF AT 10:45PM
PATIO LIGHTS OFF AT 11:00PM
MIN. LOT AREA REQUIRED FOR ZONING: 1 ACRE
EX. LOT AREA: 1.42 AC ± (61,856 SQ FT)
TOTAL EX. WORKING AREA: 1.91 AC ± (83,069 SQ FT)
MIN. LOT WIDTH: 150 FT TOTAL EXISTING LOT WIDTH: 251.73 FT
MAX. LOT COVERAGE: 40.0% BLDG, 85.0% IMPERVIOUS
EXISTING LOT COVERAGE: 6.90% BLDG, 66.6% IMPERVIOUS
PROPOSED LOT COVERAGE: 7.42% BLDG, 77.7% IMPERVIOUS
IMPERVIOUS AREAS =
EXISTING ASPHALT PARKING 16,905 SF (0.39 AC)
PROPOSED ASPHALT PARKING 36,250 SF (0.83 AC)
EXISTING CONCRETE WALK 3,021 SF (0.07 AC)
PROPOSED CONCRETE WALK 1,847 SF (0.04 AC)
PROPOSED BUILDING 6,166 SF (0.14 AC)
PERVIOUS AREAS =
EXISTING LAWN/VEGETATION 19,186 SF (.44 AC)

MIN. SETBACKS REQUIRED:
RIGHT-OF-WAY: 33-FT
FRONT: 35-FT
SIDE: 15-FT
REAR: 50-FT
MAX BLDG HGT: 30-FT (ND)
EXISTING SETBACKS:
33-FT
35-FT
15-FT
50-FT
30-FT (2-STORY)

PARKING CALCULATION:
BANQUET AREA WILL INCLUDE A LIVE ENTERTAINMENT COMPONENT. MAXIMUM OCCUPANCY FOR BANQUET ROOM & PATIO IS 130 PEOPLE. REQUIRED PARKING FOR RESTAURANT/SOCIAL ROOM USE IS 1 SPACE PER 3 OCCUPANTS = 44 SPACES REQUIRED INCLUDING 2 BARRIER-FREE SPACES. (THIS USE WILL OCCUR DURING HOURS THE OFFICE IS NOT OCCUPIED.)

PROFESSIONAL OFFICE = 1 SPACE + BLDG / 300 GSF = 1 + 5,732 / 300 = 20 TOTAL SPACES REQUIRED INCLUDING 1 BARRIER-FREE SPACE.

PROVIDED PARKING: 69 SPACES INCLUDING 4 BARRIER-FREE SPACES (PER TOWNSHIP REQUIREMENTS)



EMERGENCY VEHICLE CIRCULATION PATH

(SCALE: 1" = 60')

SCALE: 1 INCH = 60 FEET

DEAD-END FIRE APPARATUS ACCESS ROAD TURNAROUND (120' HAMMERHEAD)
201 FC APPENDIX D-1

FOR SITE PLAN APPROVAL ONLY!
NOT FOR CONSTRUCTION

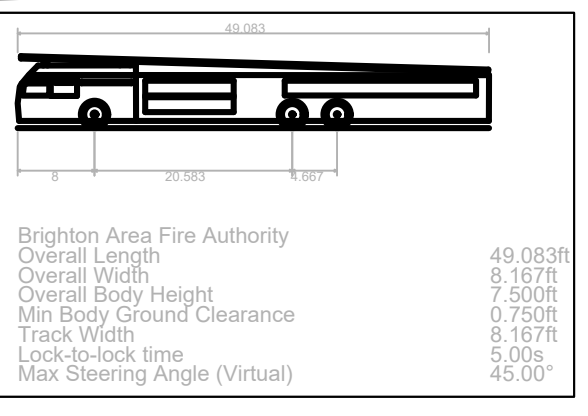
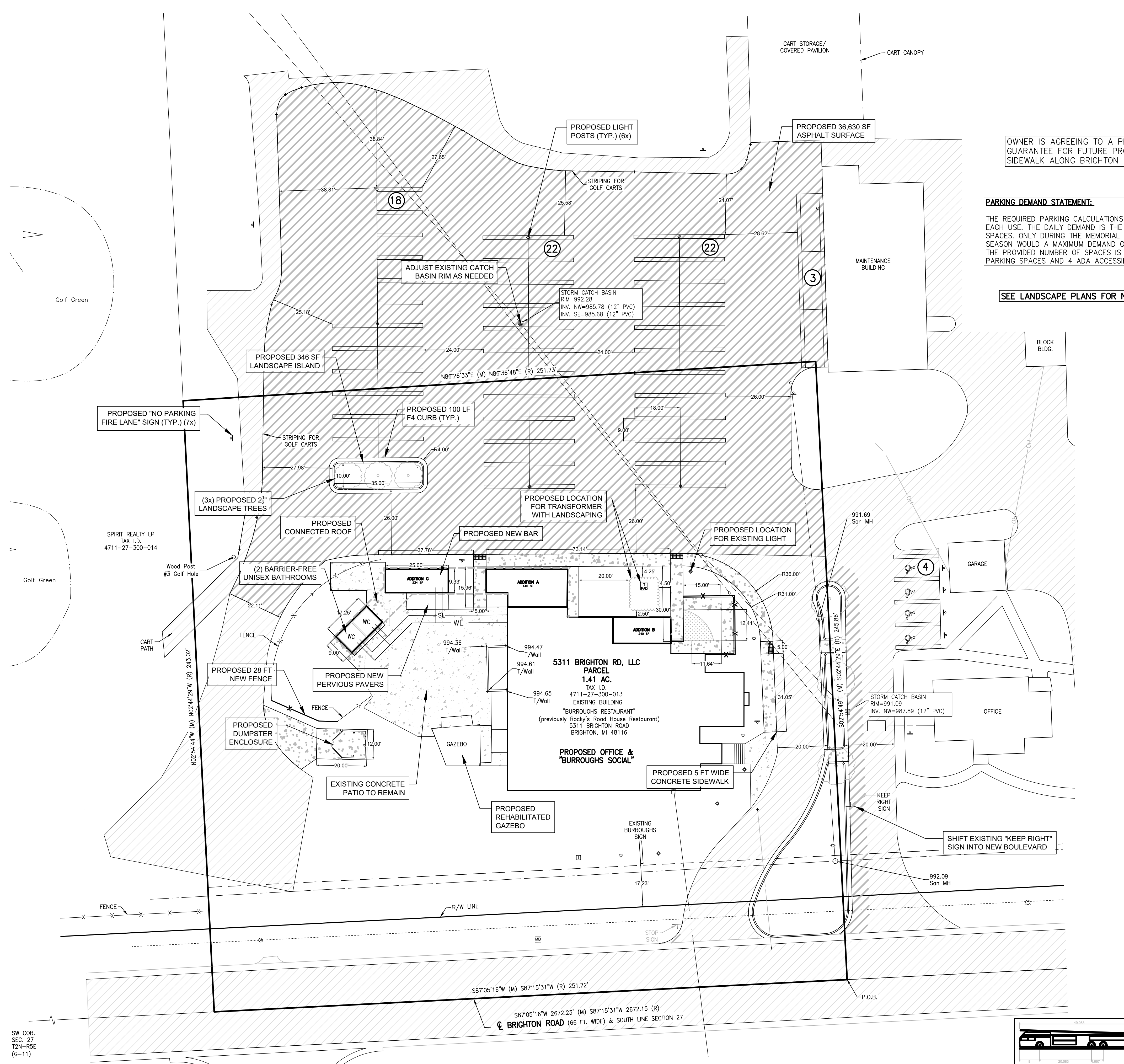
PROJECT: 5311 BRIGHTON ROAD FACILITY UPDATES
PREPARED FOR: 5311 BRIGHTON ROAD, LLC
4684 CLIFFORD ROAD
BRIGHTON, MI 48116
(981) 707-0182

TITLE: SITE PLAN

NO	BY	DATE	REVISION PER
7	JP	03/12/24	SITE PLAN REVISION PER CLIENT
6	JP	02/05/24	SITE PLAN REVISION PER CLIENT
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1	JP	08/17/23	ZONING VARIANCE PER TOWNSHIP

DESIGNED BY: BL
DRAWN BY: JP
CHECKED BY:
SCALE: 1" = 20'
JOB NO: 23-201
DATE: 07/31/23

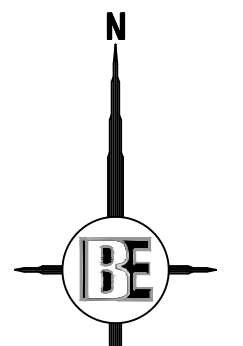
SHEET NO. 5
BOSS ENGINEERING



SW. COR. SEC. 27 12N-R5E (6-11)

I COURT

SEE SHEET 2 FOR GENERAL NOTES AND LEGEND



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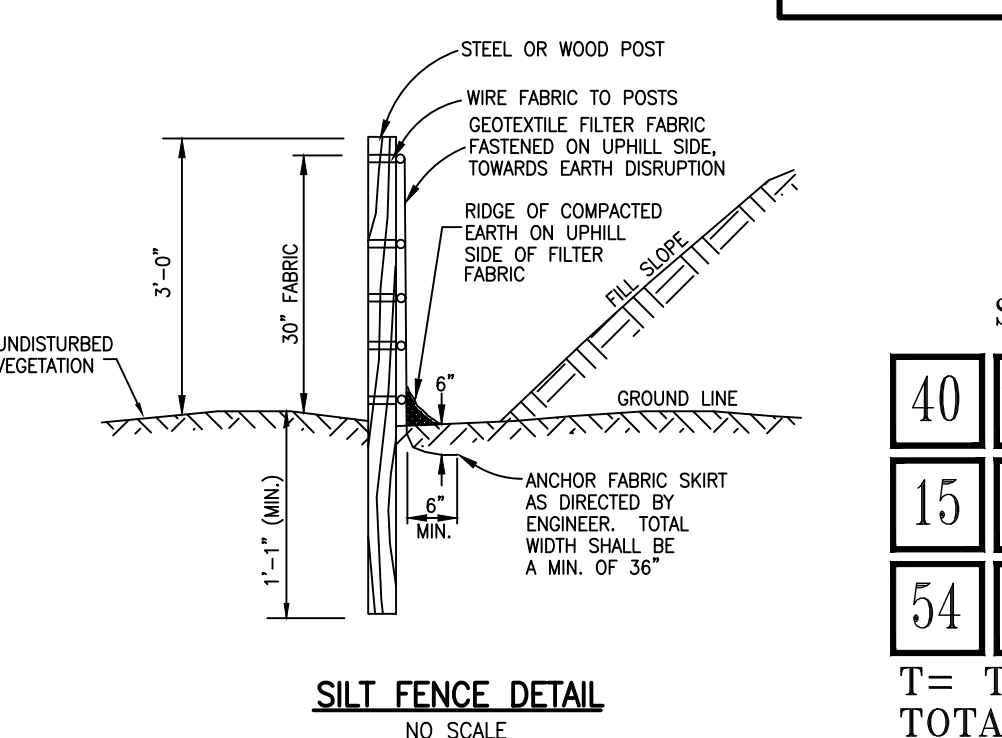
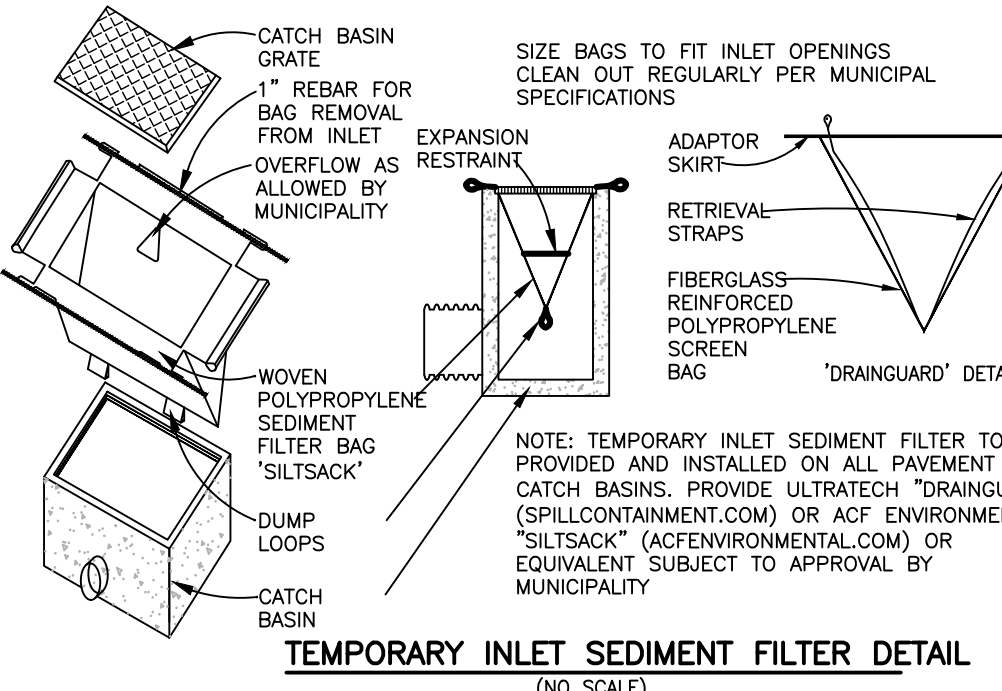
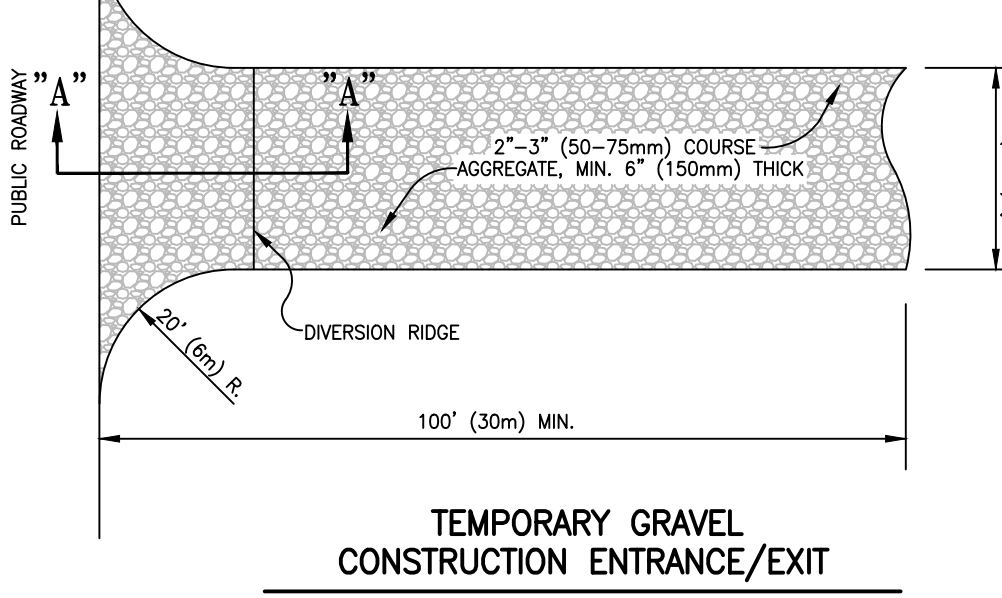
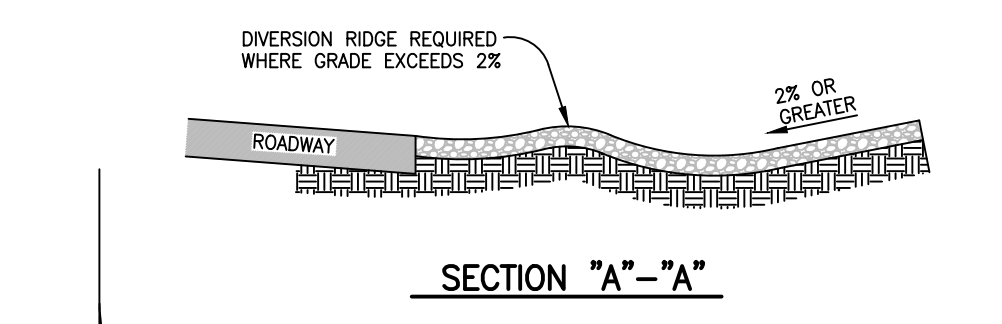
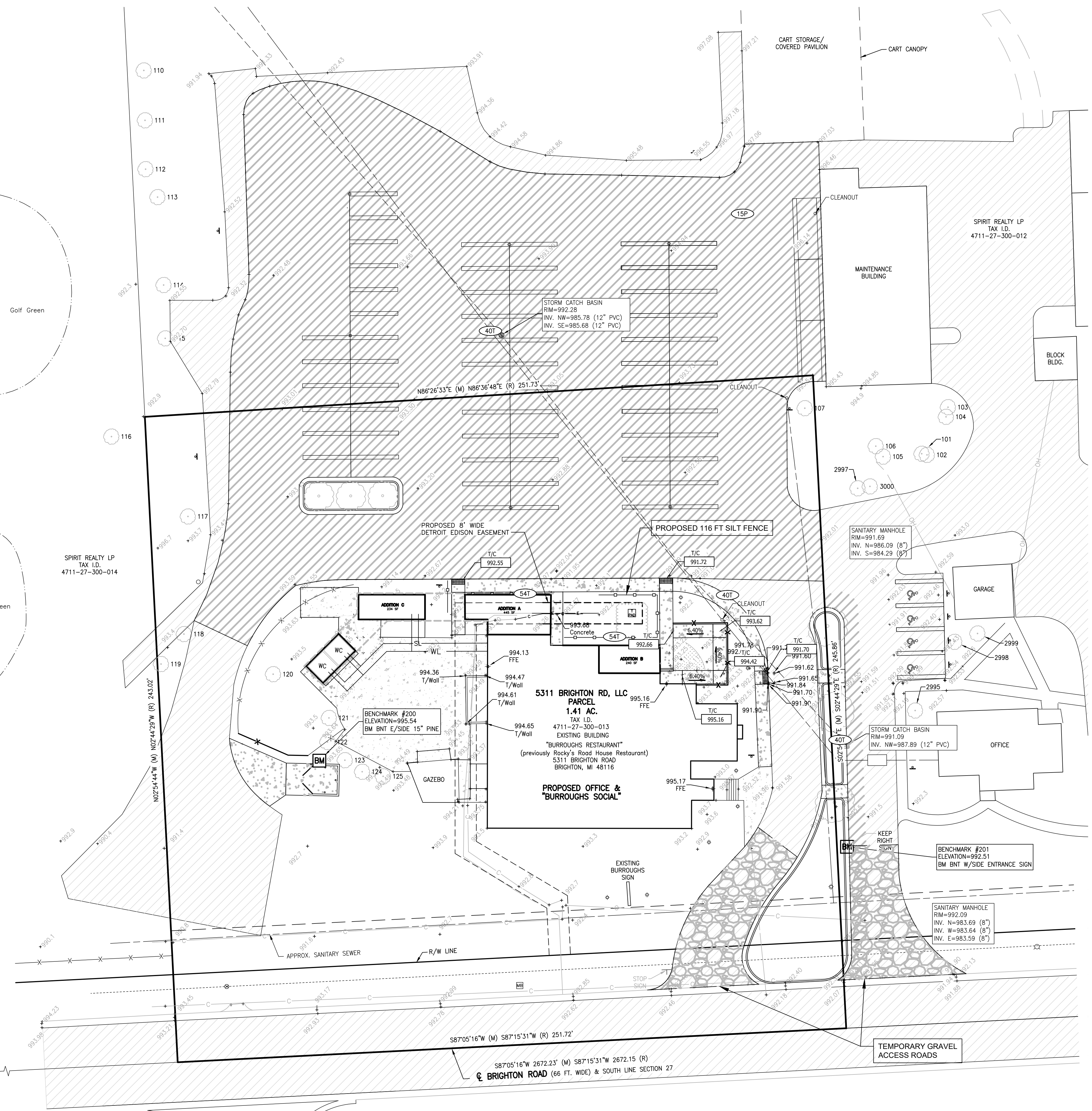
BEBOSS
Engineering
Engineers Surveyors Planners Landscape Architects
3121 E. GRAND RIVER AVE.
HOWELL, MI. 48843
517.546.4836 FAX 517.548.1670

5311 BRIGHTON ROAD FACILITY UPDATES
PROJECT PREPARED FOR
5311 BRIGHTON ROAD, LLC
4684 CLIFFORD ROAD
BRIGHTON, MI 48116
(980) 707-0182

GRADING, DRAINAGE, & SECC PLAN

NO	REVISION	DATE
1	DATE	08/17/23
2	TOWNSHIP	08/28/23
3	PER CLIENT	10/23/23
4	PER CLIENT	11/14/23
5	PER CLIENT	12/11/23
6	PER CLIENT	02/05/24
7	PER CLIENT	03/12/24

DESIGNED BY: BL
DRAWN BY: JP
CHECKED BY:
SCALE: 1" = 20'
JOB NO: 23-201
DATE: 07/31/23
SHEET NO. **6**



STORMWATER NARRATIVE:
BASED ON THE PROPOSED CHANGES, THERE WILL BE A NEGLIGIBLE INCREASE TO THE IMPERVIOUS SURFACE.

PROPOSED CONST. SCHEDULE FOR THE YEAR 2024

ACTIVITY	FEB	MAR	MAY	JUNE	JULY	AUG
DEMO & CLEAR						
BLDG RENOV CONSTRUCTION						
PAVING						
FINAL GRADING						
SEED & MULCH						

CONTROLS & MEASURES NARRATIVE

ACTIVITY	DESCRIPTION
MAINTAIN LANDSCAPING, REPLACE MULCH	COLLECT GRASS, TREE, AND SHRUB CLIPPINGS, DISPOSE IN APPROVED CONTAINER, REPLACE DEAD SOD, TREES AND SHRUBS.
CLEAN INLETS	REMOVE LITTER, SEDIMENT, AND DEBRIS, DISPOSE OF IN APPROVED LANDFILL.
COLLECT LITTER	DISPOSE OF WITH INLET DEBRIS.
SWEEP PARKING LOT	REMOVE MUD, DIRT, GREASE AND OIL WITH PERIODIC SWEEPING.
DUST CONTROL	SPRINKLE WATER AS NEEDED.

CONTROLS & MEASURES POST CONSTRUCTION SEQUENCE

ACTIVITY	WEEKLY	MONTHLY	AS REQUIRED
MAINTAIN LANDSCAPING, REPLACE MULCH	X	X	X
CLEAN INLETS		X	X
COLLECT LITTER	X		X
SWEEP PARKING LOT		X	X

SURFACE WATER & COUNTY DRAINS
WETLAND - APPROXIMATELY 2000 FT NORTHEAST TO SCRUB WETLAND
LAKES - APPROXIMATELY 3000 FT NORTHWEST TO WEST CROOKED LAKE
STREAMS - APPROXIMATELY 1900 FT SOUTHWEST TO MYSTIC LAKE DR
BASINS - APPROXIMATELY 1300 FT WEST TO 4981 BRIGHTON ROAD
DRAINS - APPROXIMATELY 1150 FT EAST TO OAK POINTE HILLS
PONDS - APPROXIMATELY 170 FT NORTHWEST TO FOUNTAIN

CONSTRUCTION SEQUENCE

THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT EROSION IS MINIMIZED AND THAT COMPLIANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS, REGULATIONS, AND ORDINANCES IS MAINTAINED THROUGHOUT EXECUTION OF THIS PROJECT.

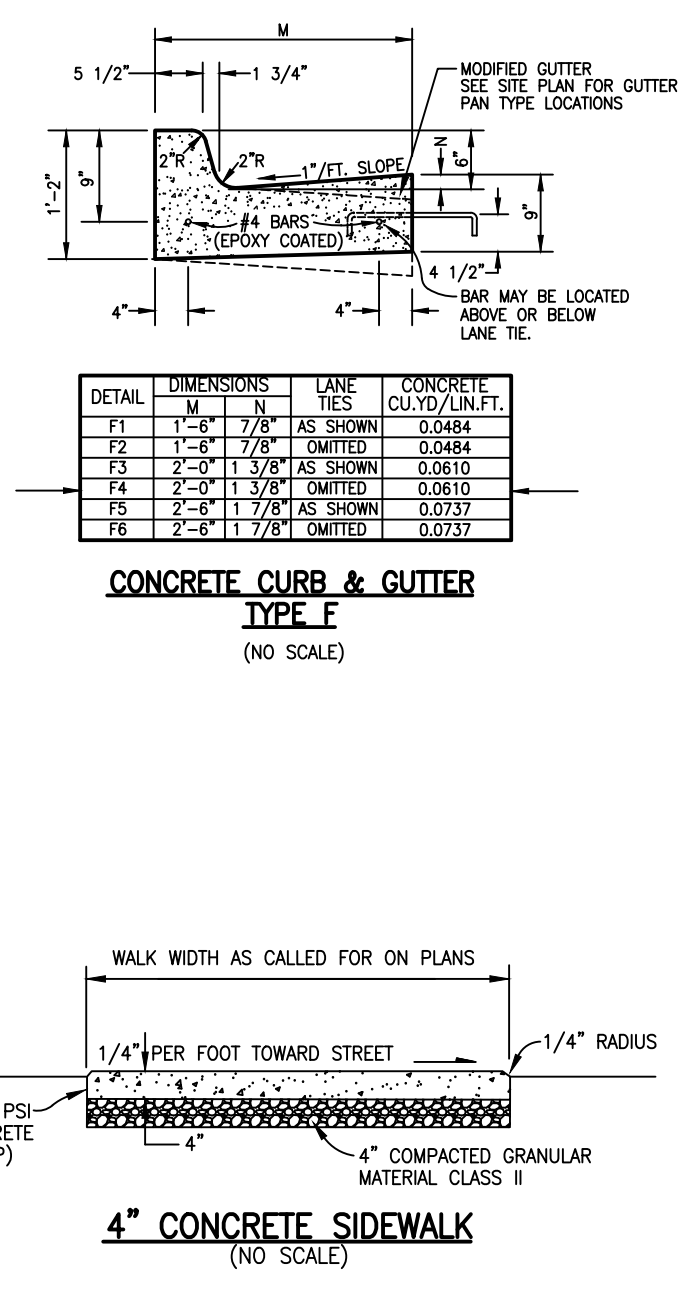
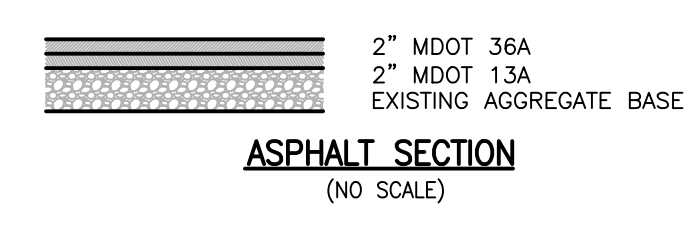
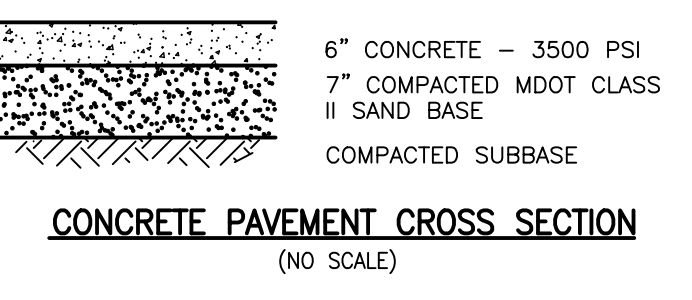
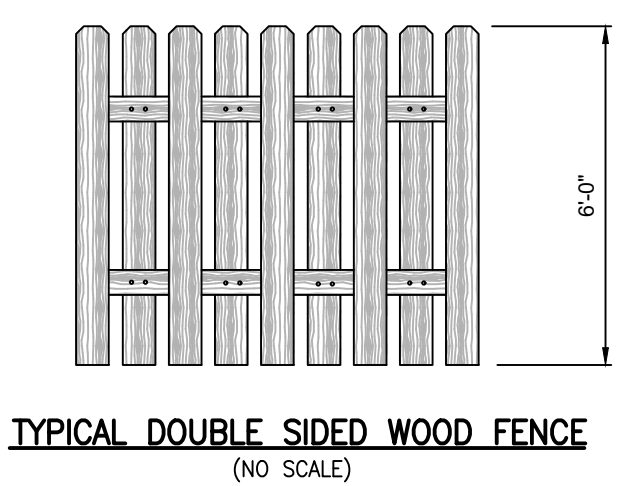
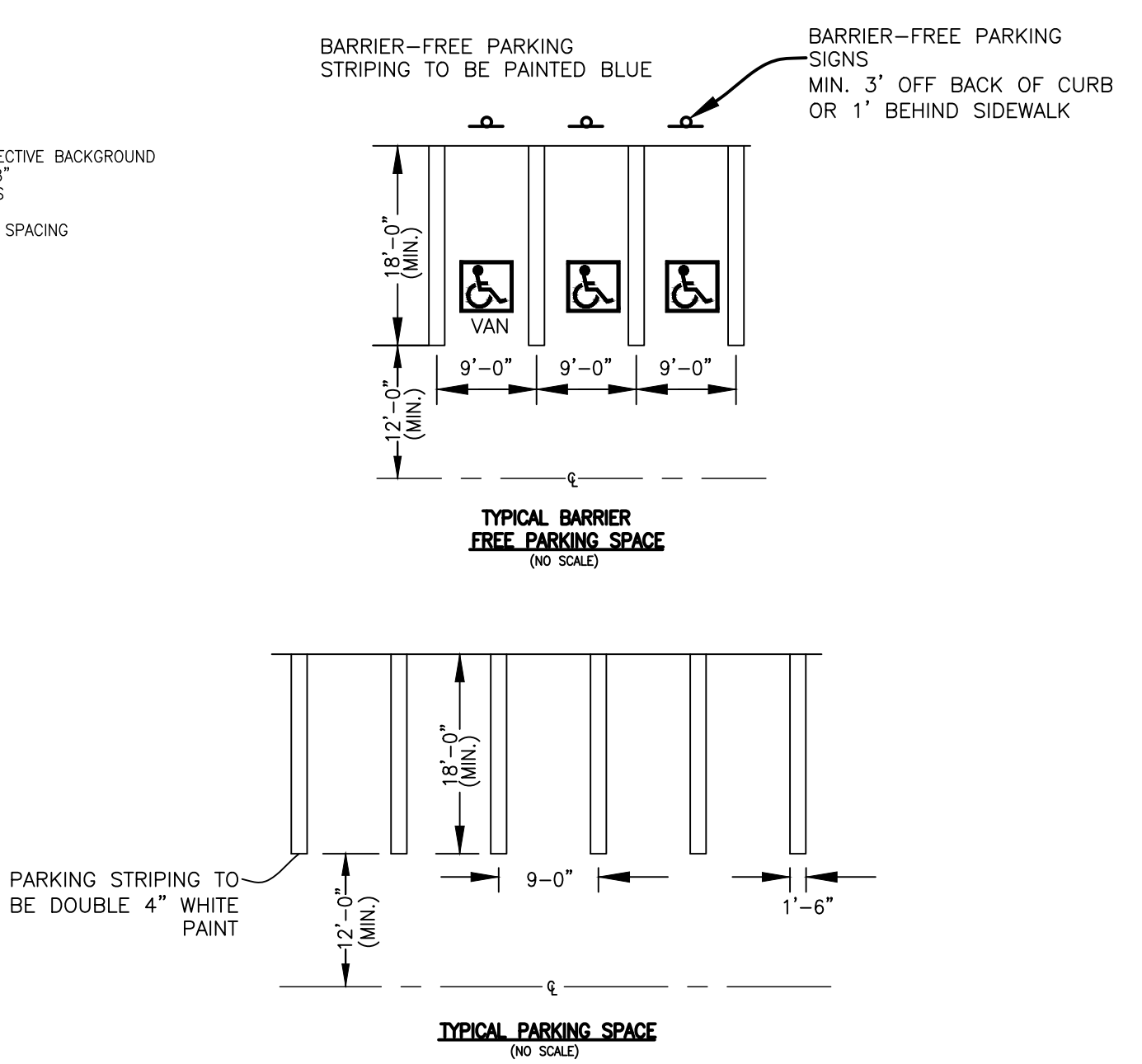
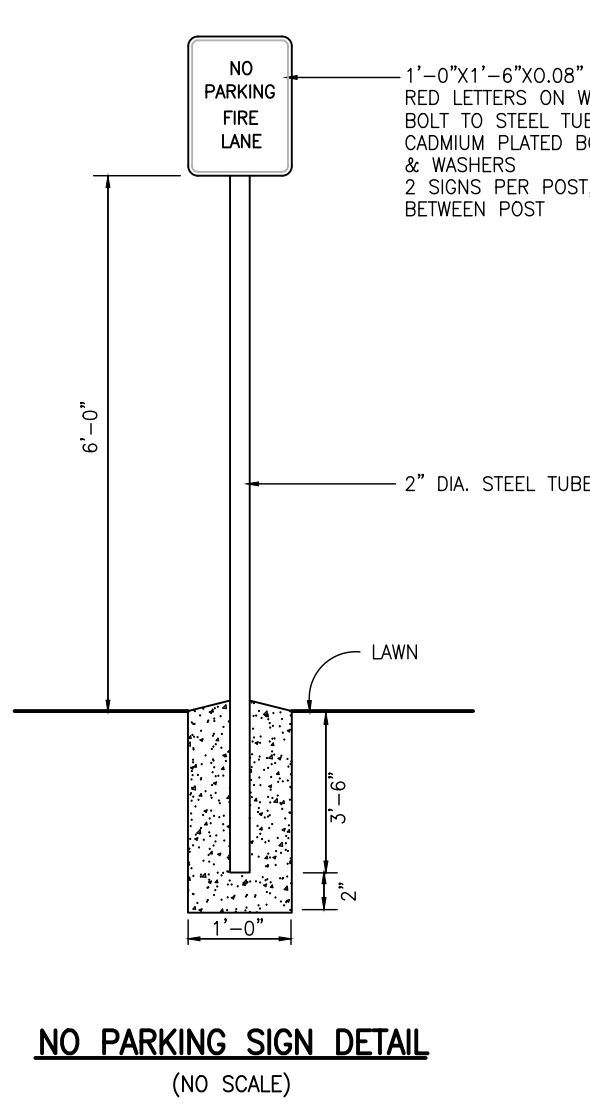
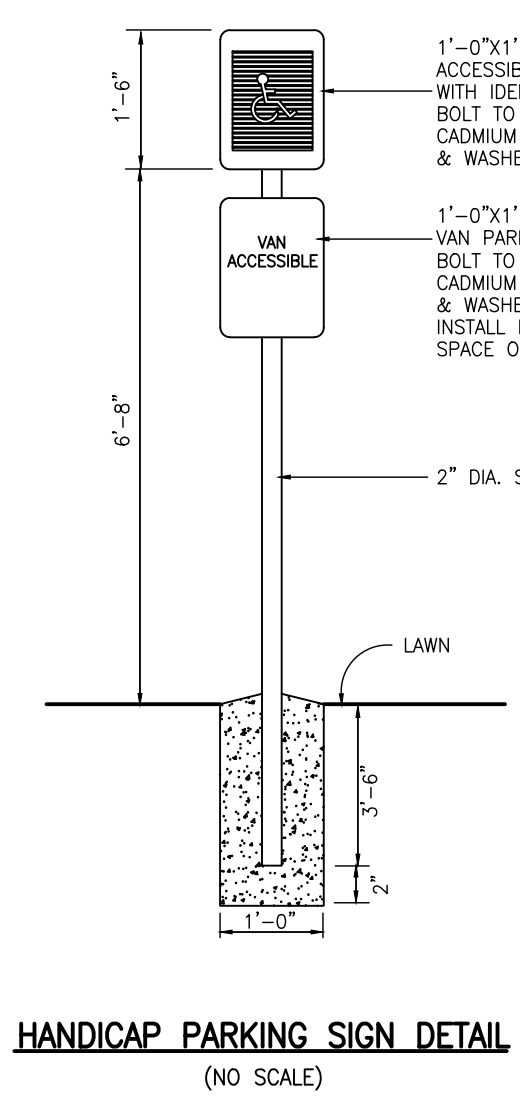
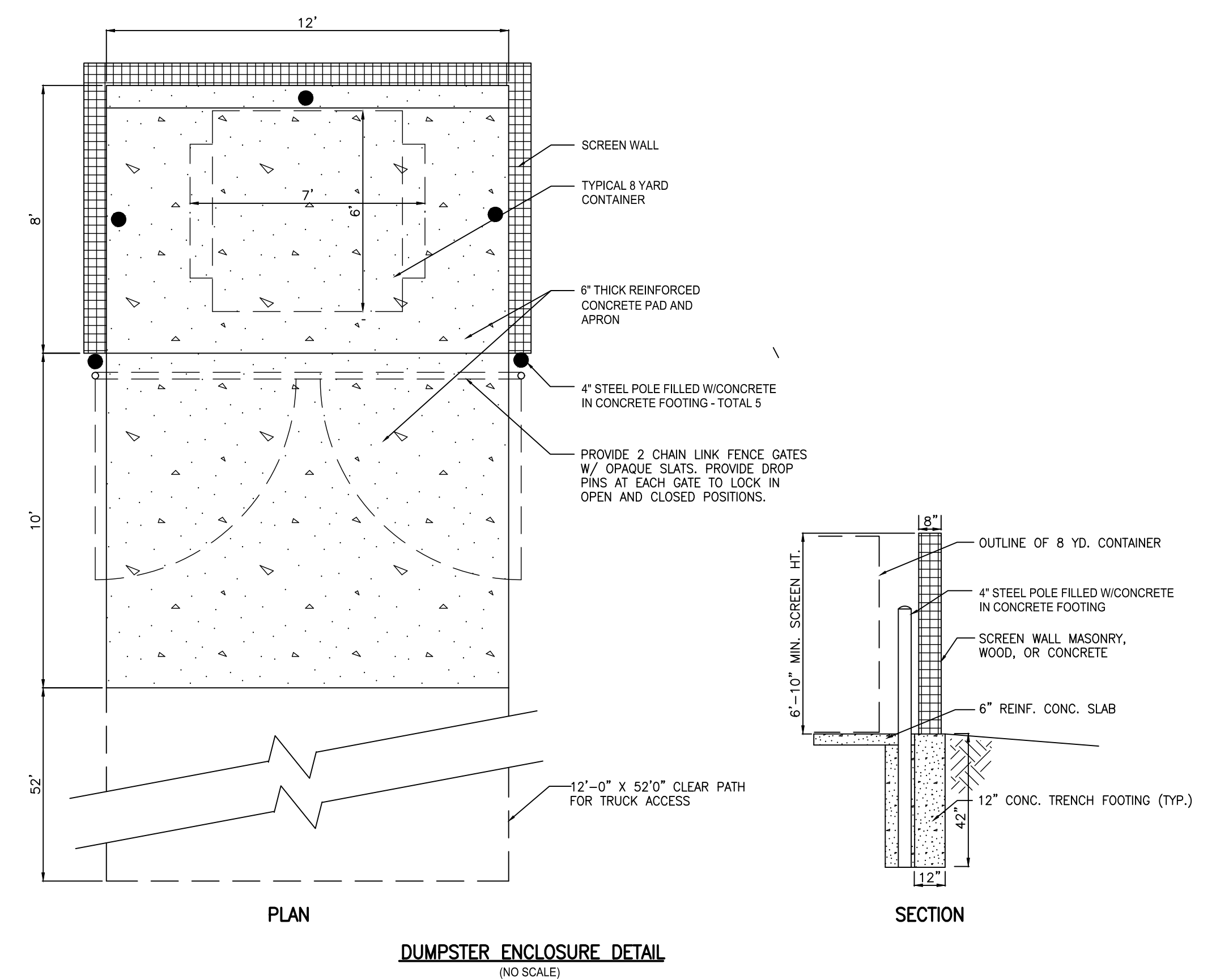
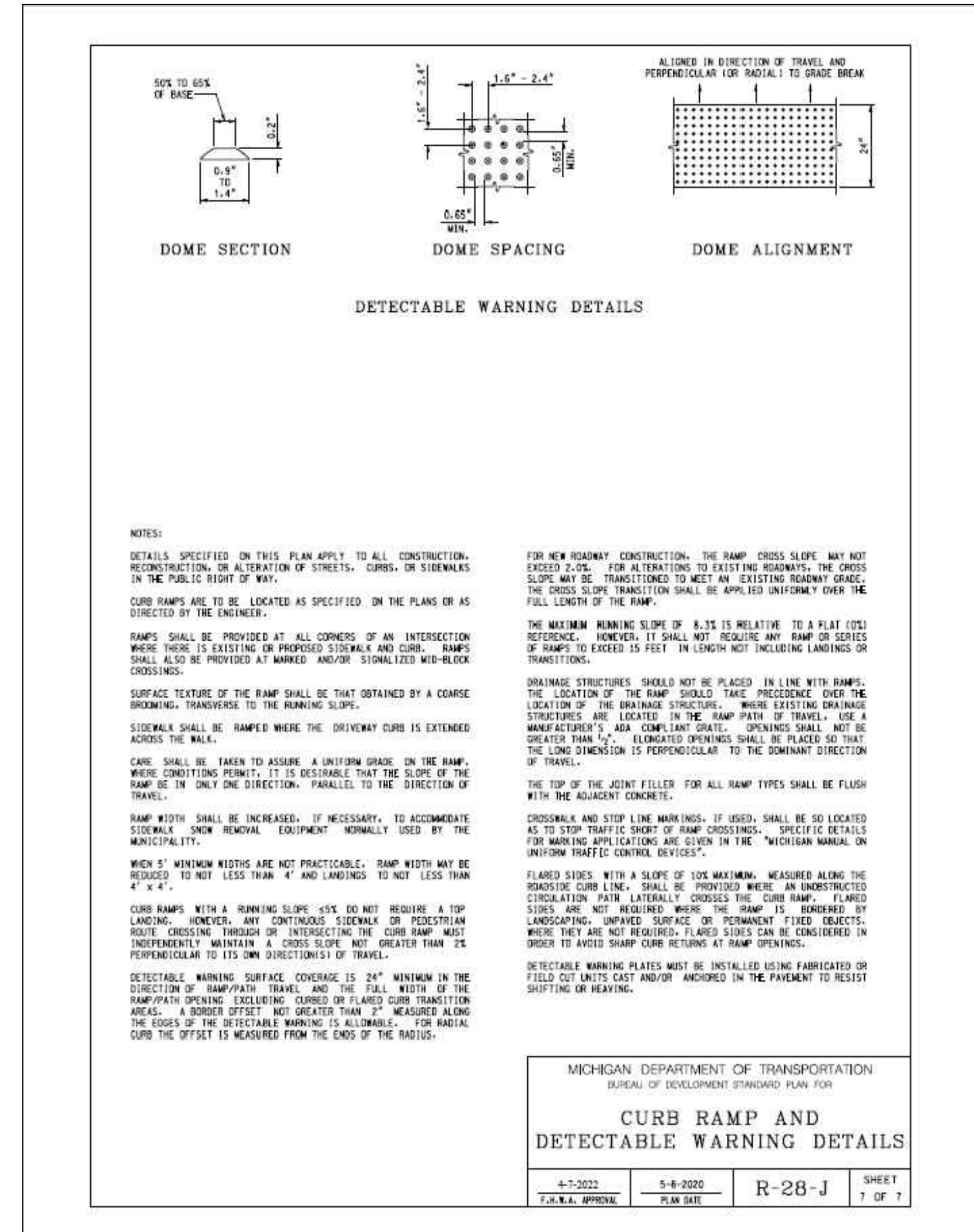
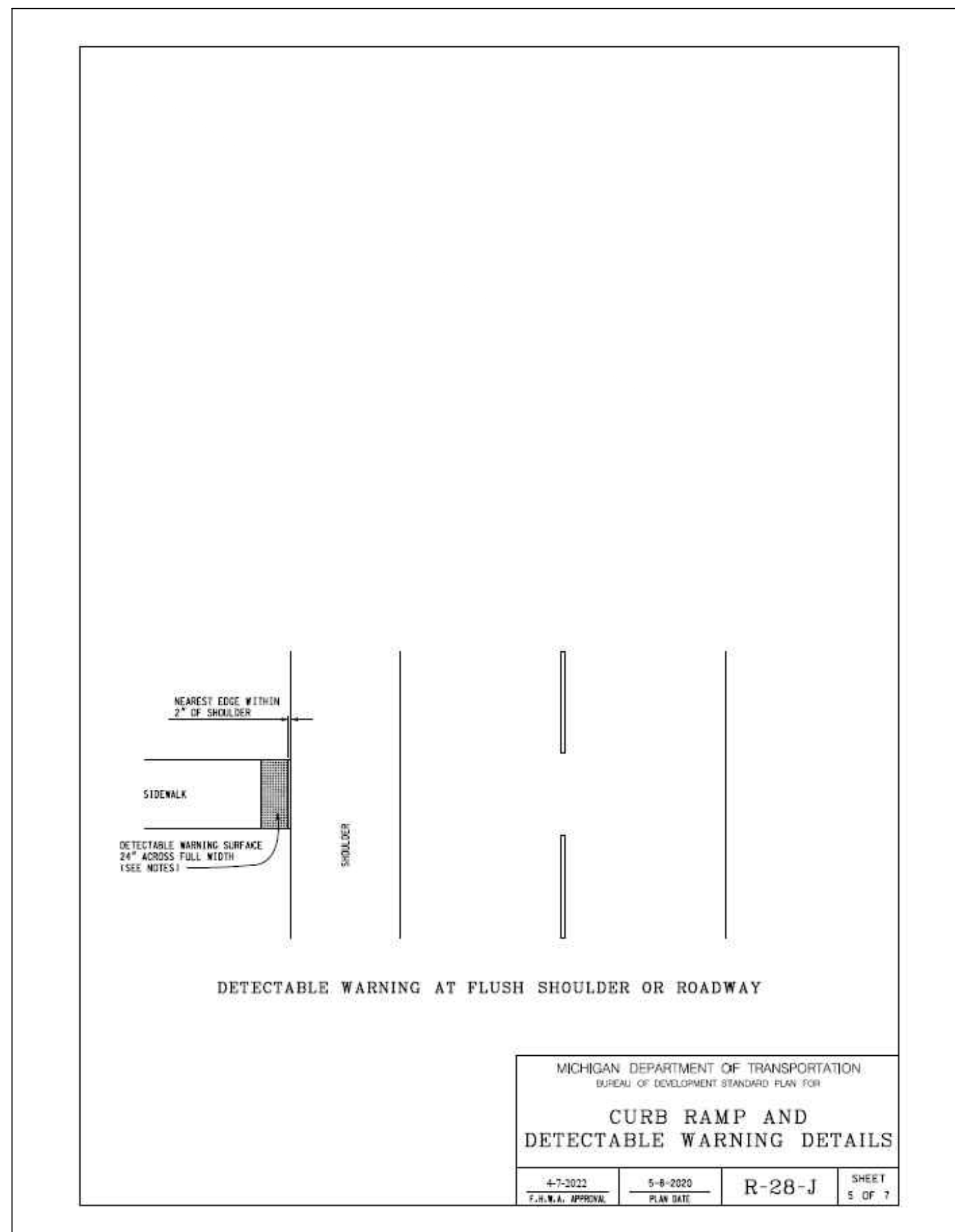
1. INSTALL SILT FENCE AS SHOWN ON PLANS.
2. REMOVAL OF EXISTING PARKING LOT PAVEMENT.
3. INSTALL NEW PARKING LOT ASPHALT.
4. FINE GRADE AROUND BUILDING, SPREAD TOPSOIL, SEED OR SOD AS APPLICABLE.
5. REMOVE ALL EROSION CONTROL STRUCTURES.
6. REMOVE ACCUMULATED SILT FROM ALL EXISTING DRAINAGE.

SOIL EROSION CONTROL MEASURES

40	INLET SEDIMENT FILTER	GOY TO SHAPE COLLECTS SEDIMENT MAY BE CLEANED AND EXTENDED AS NEEDED.
15	FRANC	PROTECTS AREAS WHICH CANNOT OTHERWISE BE PROTECTED, BUT INCREASES RUNOFF VELOCITY. IRREGULAR SURFACE WILL HELP SLOW VELOCITY.
54	SILT FENCE	USES GEOTEXTILE FABRIC AND POSTS OR POLES. EASY TO CONSTRUCT AND LOCATE AS NECESSARY. (SEE DETAIL THIS SHEET)

T = TEMPORARY, P = PERMANENT
TOTAL DISTURBED AREA = 0.92 AC.

SEE SHEET 2 FOR GENERAL NOTES AND LEGEND



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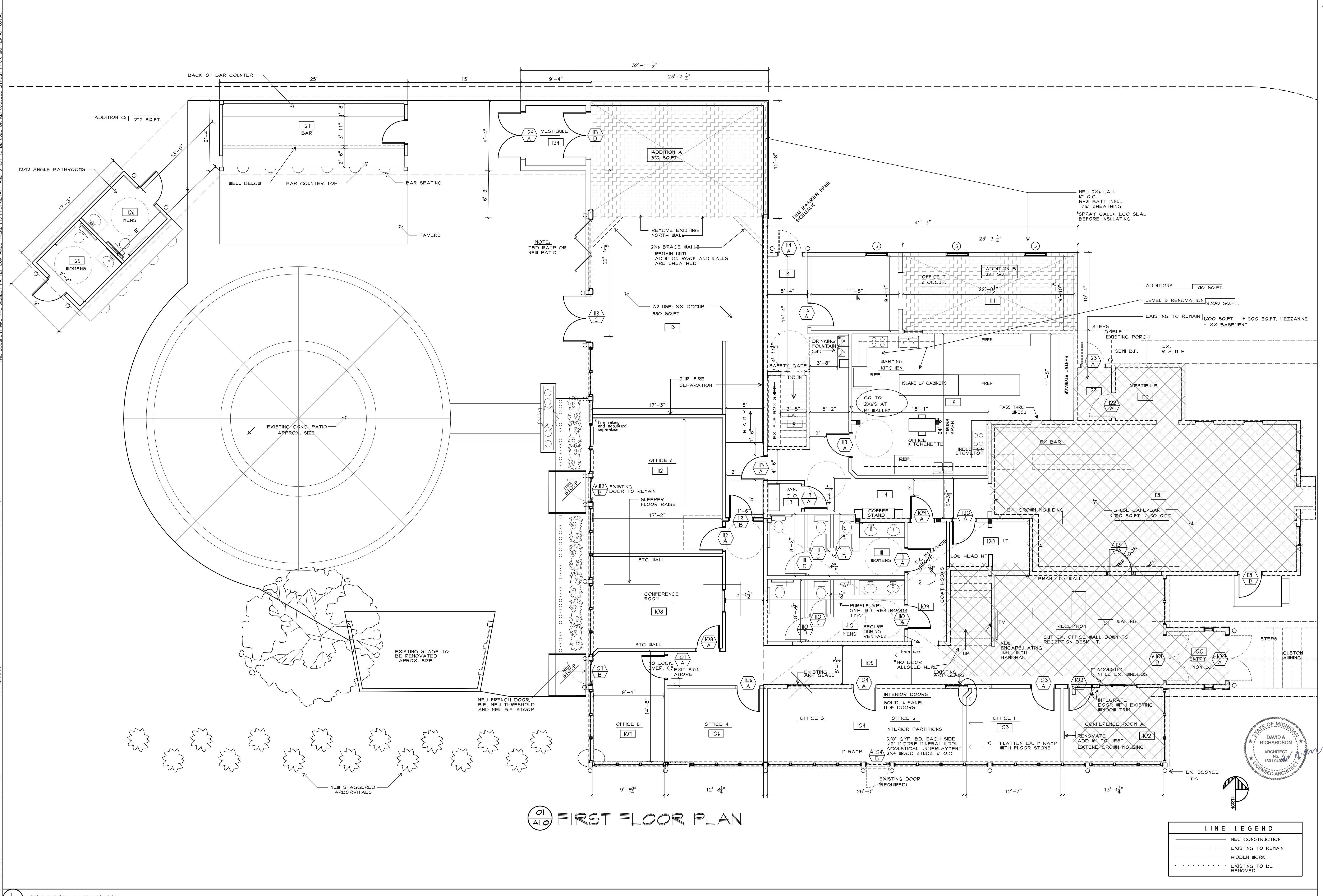
PROJECT: 5311 BRIGHTON ROAD FACILITY UPDATES
PREPARED FOR: 5311 BRIGHTON ROAD, LLC
4684 CLIFFORD ROAD
BRIGHTON, MI 48116
(981) 707-0182

NO.	DATE	REVISION
1	03/12/24	SITE PLAN REVISION PER CLIENT
2	02/05/24	SITE PLAN REVISION PER CLIENT
3	12/11/23	SITE PLAN REVISION PER CLIENT
4	11/14/23	SITE PLAN REVISION PER CLIENT
5	10/23/23	SITE PLAN REVISION PER CLIENT
6	08/28/23	SITE PLAN REVISION PER CLIENT
7	08/17/23	ZONING VARIANCE PER TOWNSHIP
8		ZONING VARIANCE PER TOWNSHIP
9		ZONING VARIANCE PER TOWNSHIP
10		ZONING VARIANCE PER TOWNSHIP

DESIGNED BY: BL
DRAWN BY: JP
CHECKED BY:
SCALE: NO SCALE
JOB NO: 23-201
DATE: 07/31/23
SHEET NO. 7

BOSS Engineering

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DATE PLOTTED: 11/9/2023

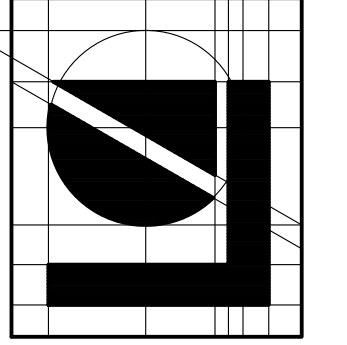


01 FIRST FLOOR PLAN

LINE LEGEND	
	NEW CONSTRUCTION
	EXISTING TO REMAIN
	HIDDEN WORK
	EXISTING TO BE REMOVED

SCALE: 3/16" = 1'-0"

01 FIRST FLOOR PLAN



Lindhout Associates
architects aia pc

10465 Clinton Drive
Brighton, Michigan 48116-9510
www.lindhout.com
Tel: (810)227-5855 Fax: (810)227-5668

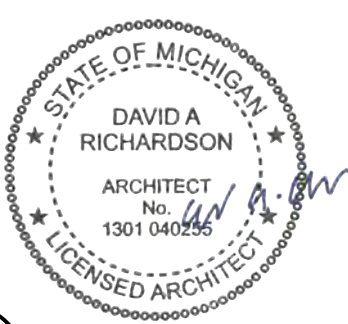
consultant

SPECIAL USE REVIEW
OWNER REVIEW
ISSUED FOR

dr: ARP
ck d: DAR
app d: xxx
03-08-24
11-9-23
date

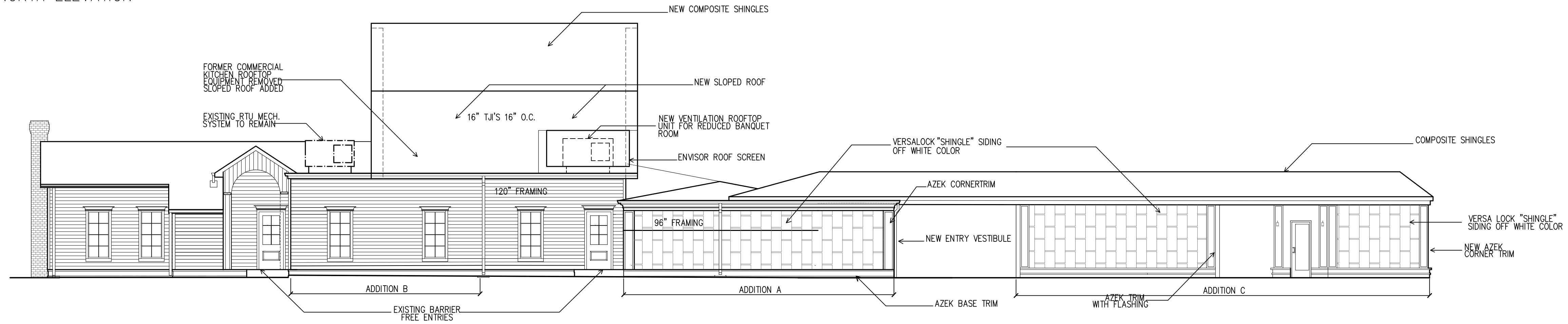
New Offices and Renovation for:
PINNACLE WEALTH MANAGEMENT
HOWELL, MICHIGAN
FIRST FLOOR PLAN

A1.0
21114

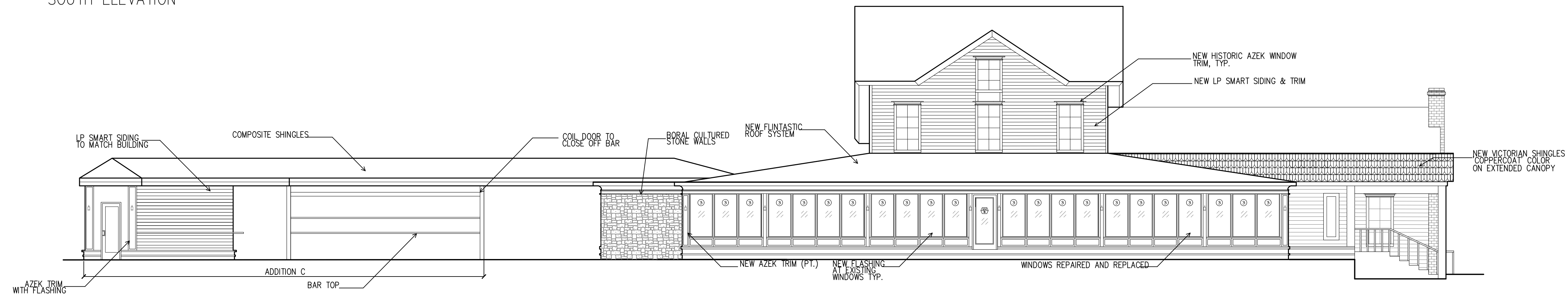


FILE LOCATION: H:\21114 - Pinnacle Wealth Burroughs Farms\dwg\cd\Exterior Elevations.dwg
 DATE PLOTTED: 11/16/2023
 PLOTTED BY: intern
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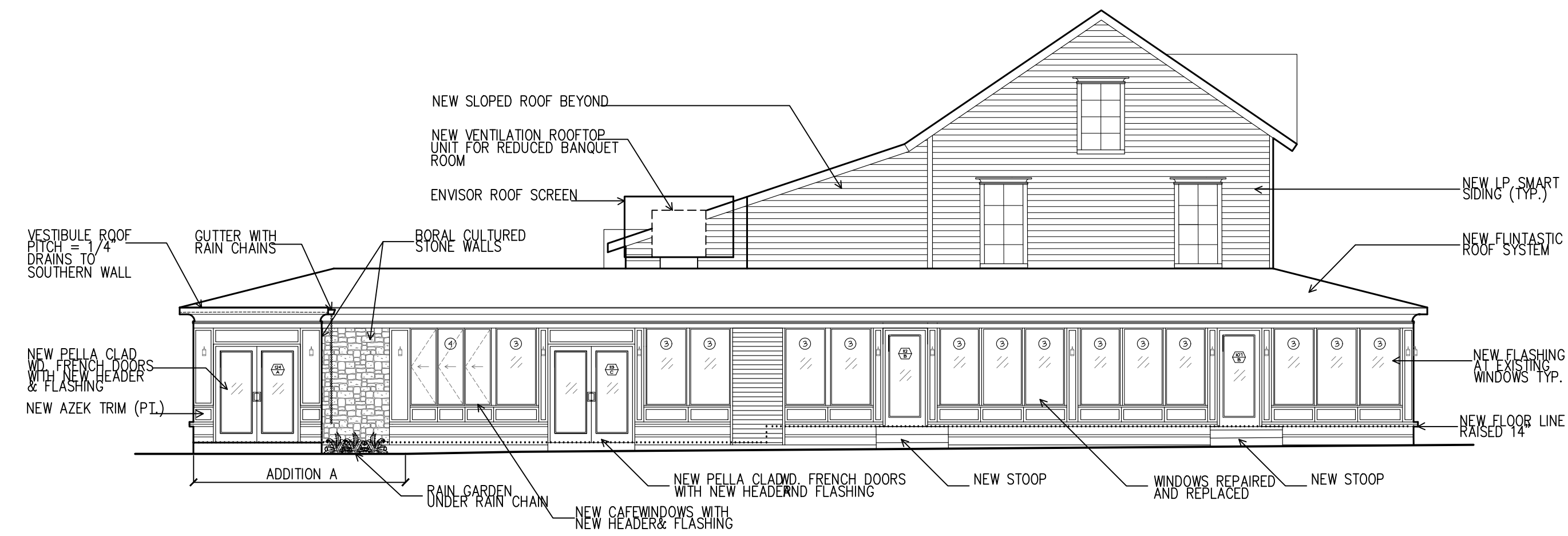
NORTH ELEVATION



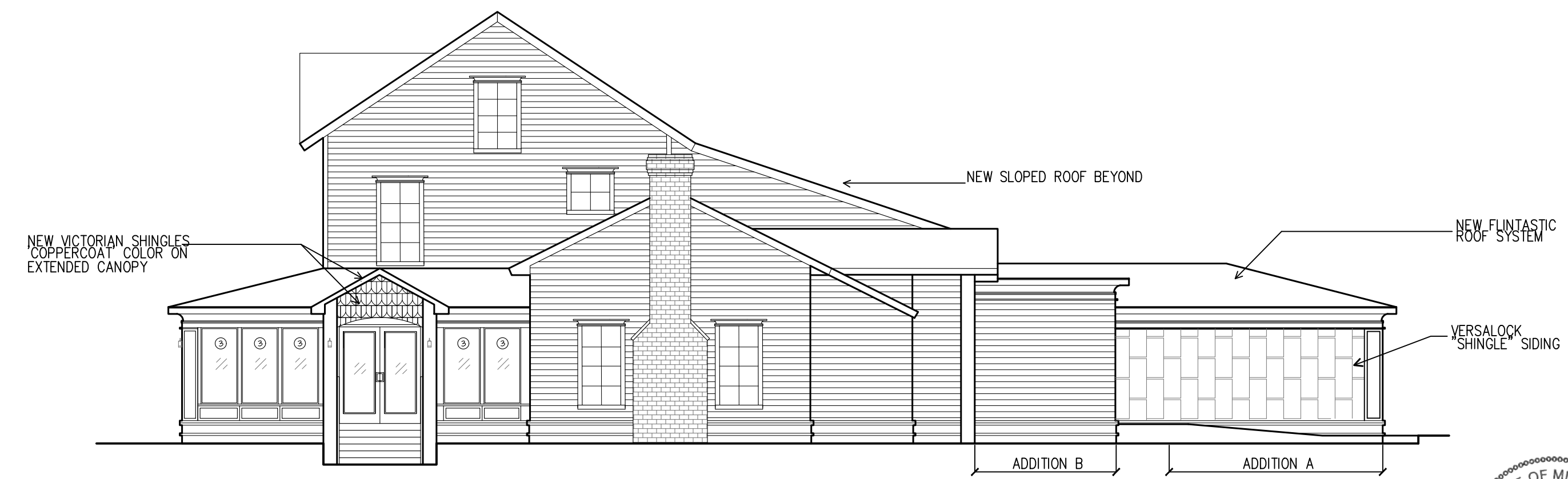
SOUTH ELEVATION



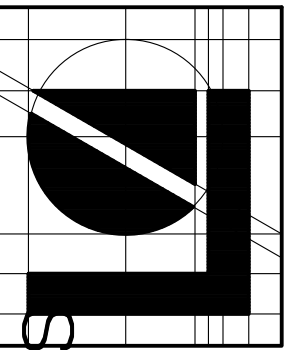
WEST ELEVATION



EAST ELEVATION



LINE LEGEND	
	NEW CONSTRUCTION
	EXISTING TO REMAIN
	HIDDEN WORK
	EXISTING TO BE REMOVED



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SPECIAL USE REVIEW
 SPA REVIEW
 PLOTTING
 issued for

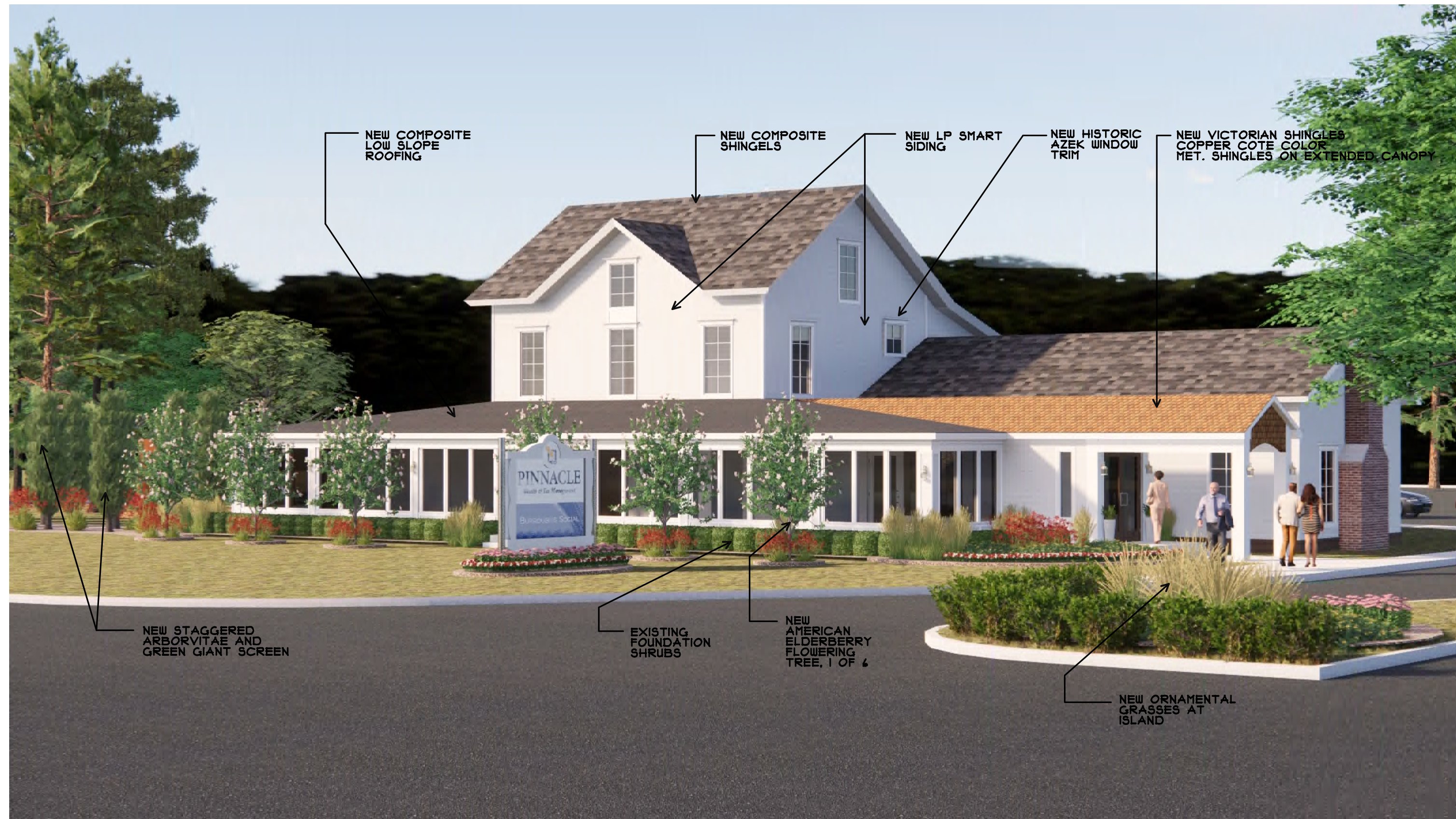
03-08-24
 11-16-23
 08-01-23
 05-14-22
 date

NEW OFFICES AND RENOVATION FOR:
PINNACLE WEALTH MANAGEMENT
 BRIGHTON, MICHIGAN
EXTERIOR ELEVATIONS

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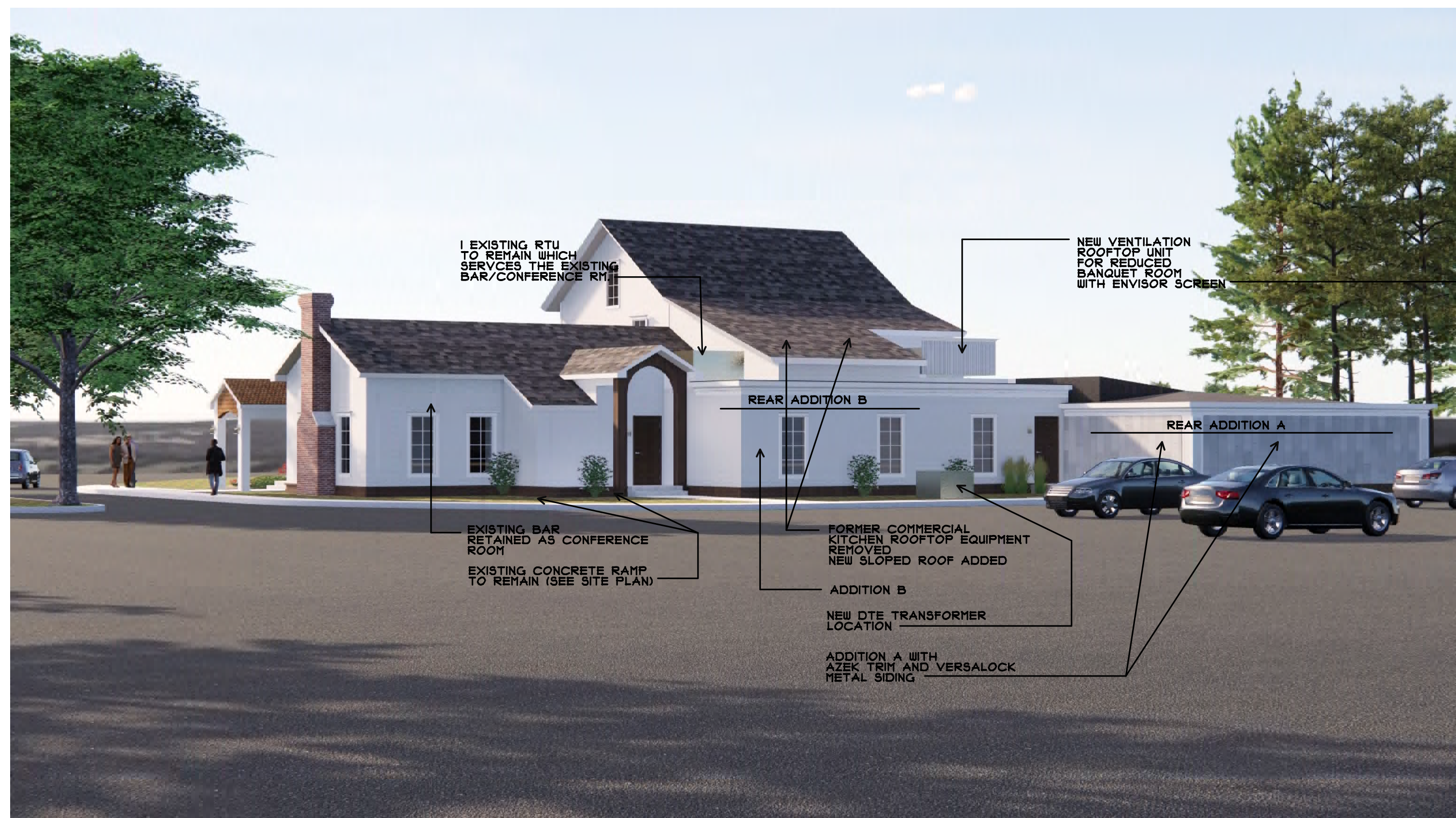
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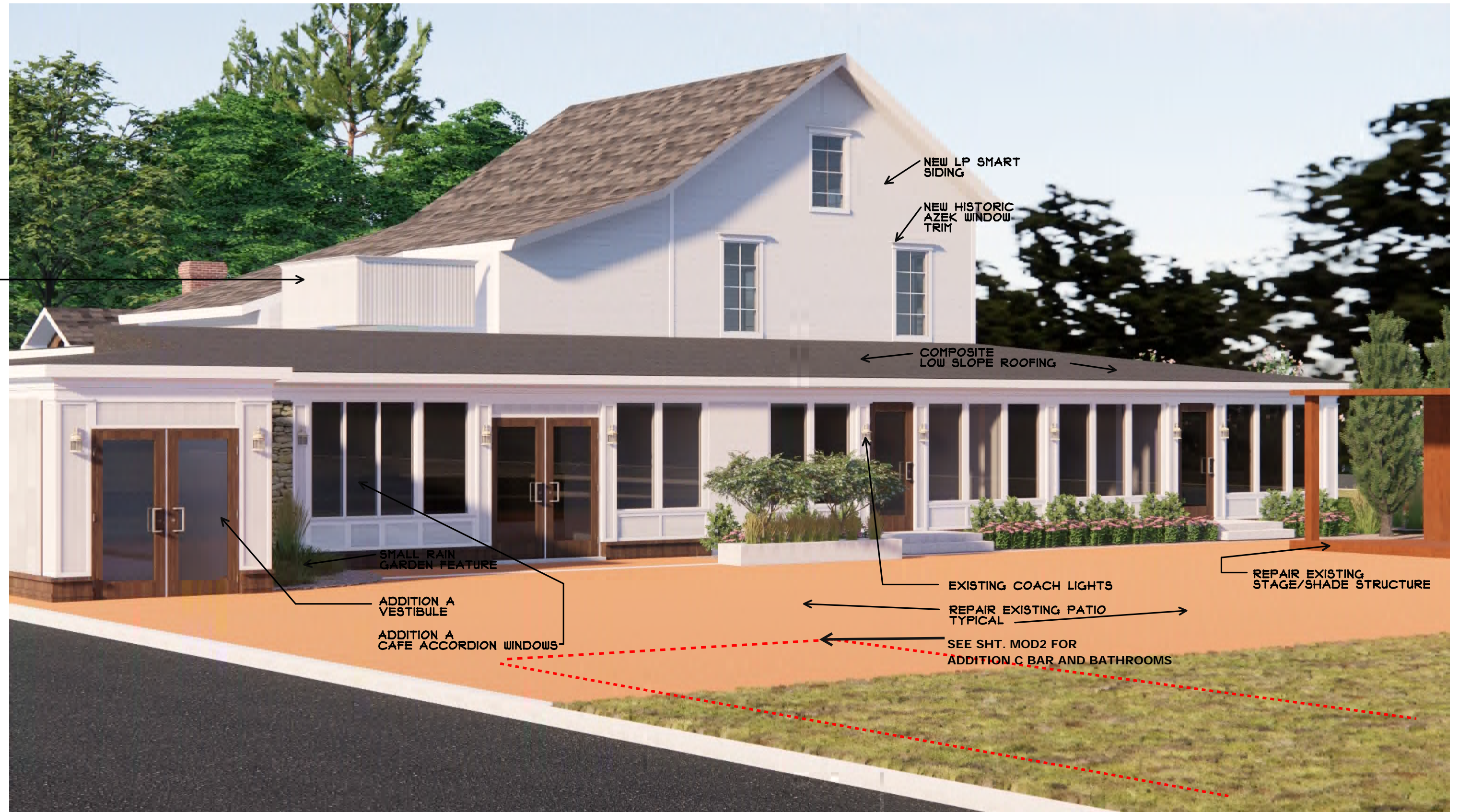
VIEW FROM BRIGHTON ROAD



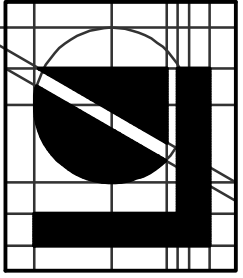
VIEW OF ENTRY FROM ENTRY DRIVE



VIEW OF NORTH ELEVATION FROM PARKING LOT



VIEW OF PATIO AND WEST ELEVATION



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 www.lindhout.com

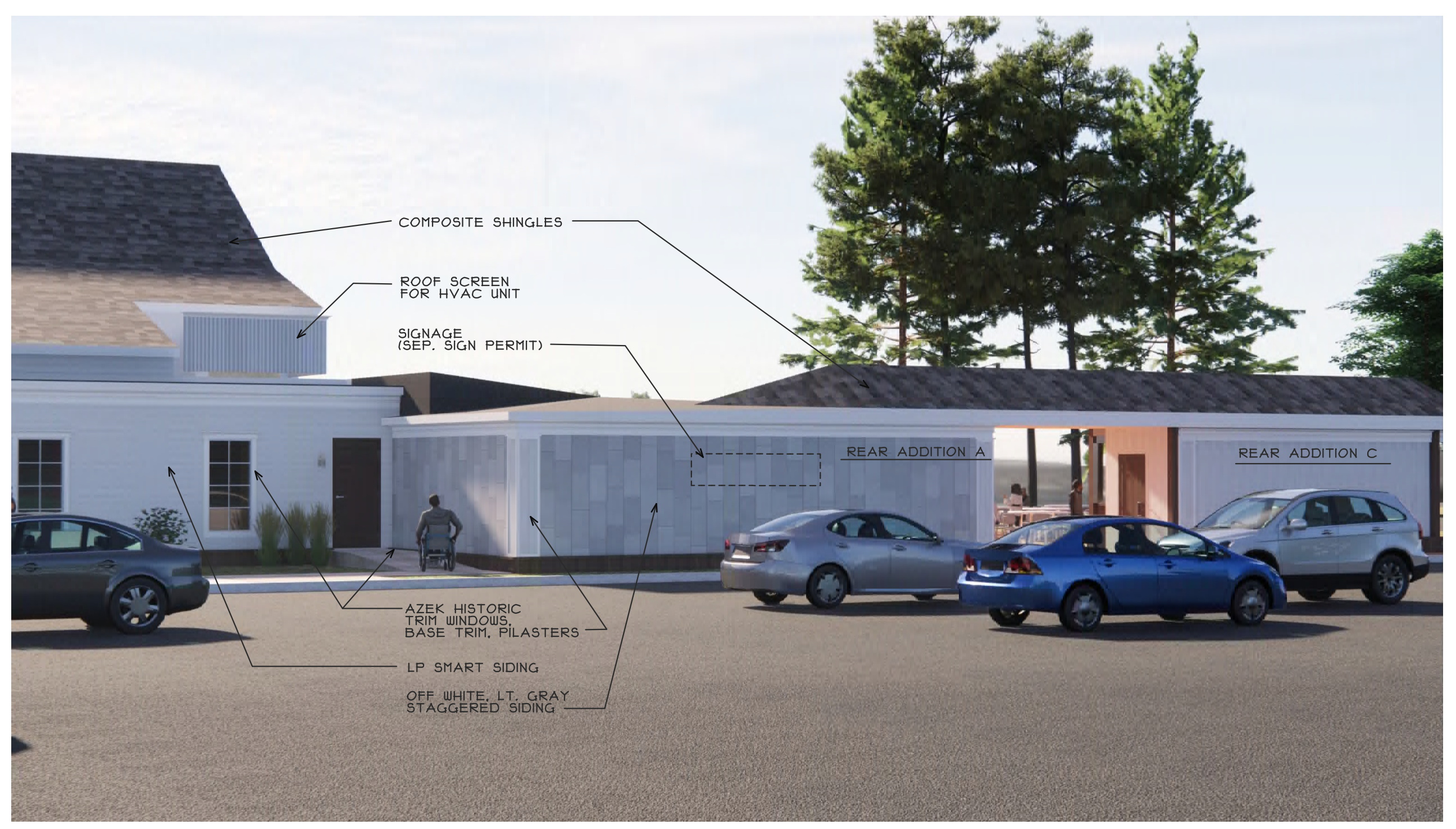
consultant

dt: HRL, ARF
 dk: DAR
 03-08-24
 08/09/2023
 app: dc
 date

Special Use Review
 Site Plan Review
 Issued for

New Offices & Renovation for:
PINNACLE HEALTH MANAGEMENT
 5911 BRIGHTON RD, BRIGHTON, MI 48116

MOD
21114



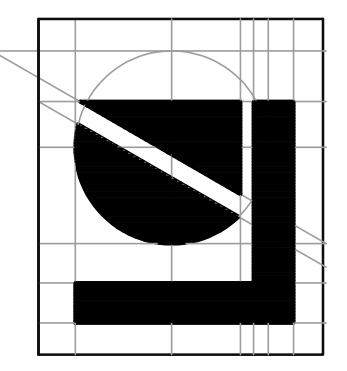
VIEW FROM PARKING LOT



VIEW FROM ACROSS BRIGHTON RD.



VIEW FROM WEST AT BRIGHTON RD.



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10465 citation drive, brighton, michigan 48116-9510
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consultant

SPECIAL USE REVIEW
EASEMENTS, C. ADD. AUDIO STUDY
issued for

3-26-24
2-14-24
date

dr: ARP

ck'd: DAR

app'd:

NEW OFFICES AND RENOVATION for:
PINNACLE WEALTH MANAGEMENT
BRIGHTON, MICHIGAN
MODEL VIEWS 2 PATIO

MOD2

21114

DATE PLOTTED: 4/2/2003 TIME PLOTTED: 3:48 PM FILE LOCATION: J:\FREED\DEF\ARCHITECT\1-2\ARC\DCS COPYRIGHT ©2010 LINDHOUT ASSOCIATES architects aia pc THIS DOCUMENT AND THE SUBJECT MATTER CONTAINED THEREIN IS PROPRIETARY AND IS NOT TO BE USED OR REPRODUCED WITHOUT PRIOR WRITTEN APPROVAL

NOTE:

TREE SHALL BEAR SAME RELATIONSHIP TO FINISHED GRADE AFTER SETTLING AS IT BORE TO PREVIOUS EXISTING GRADE

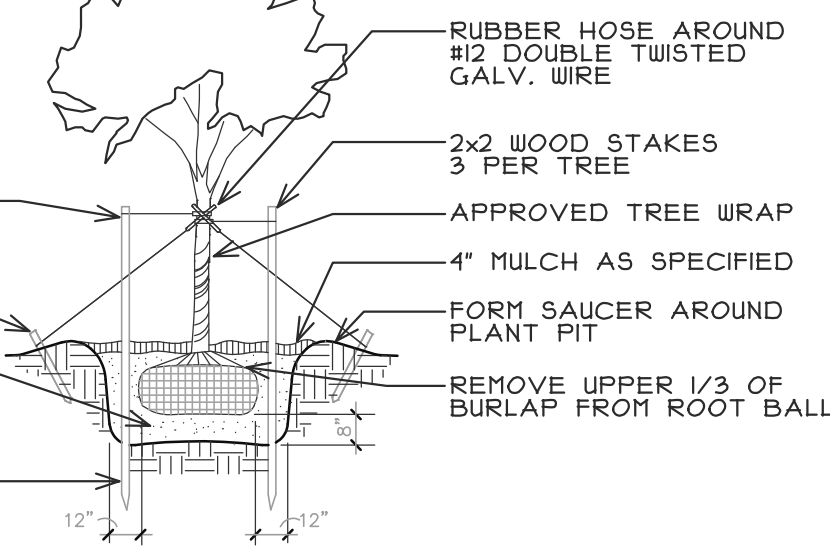
DELETE EARTH SAUCERS WITHIN ISLAND PLANTERS STAKE TREES UNDER 4" CAL. GUY TREES OVER 4" CAL.

ALL STAKES SHALL BE PLACED EVENLY AROUND TREE

2x2 GUY STAKE

PLANT SOIL MIX

STAKE TO EXTEND 18" BELOW PLANT PIT IN UNDISTURBED SOIL



2 DECIDUOUS TREE DETAIL

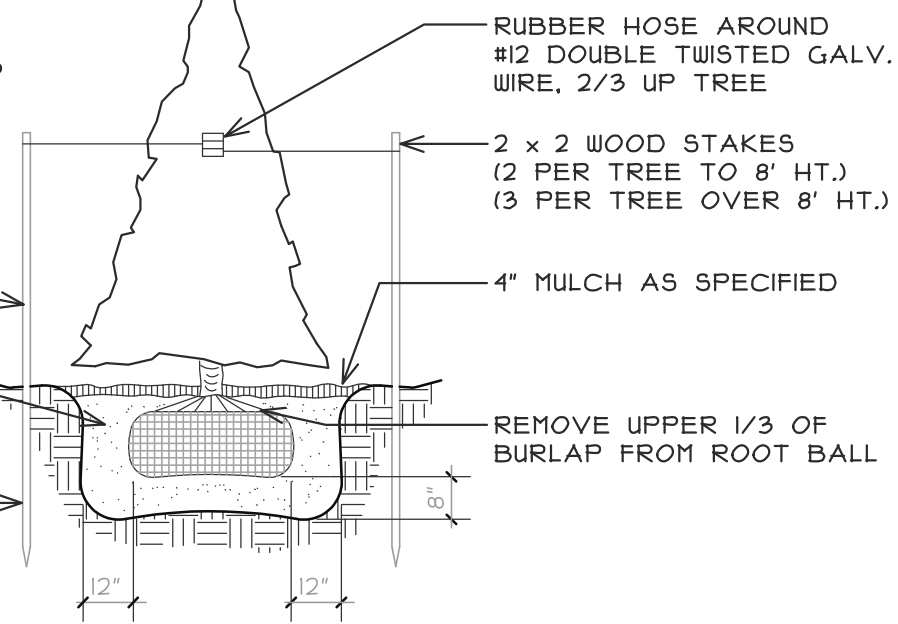
NOTE:

TREE SHALL BEAR SAME RELATIONSHIP TO FINISHED GRADE AFTER SETTLING AS IT BORE TO PREVIOUS EXISTING GRADE

ALL STAKES SHALL BE PLACED EVENLY AROUND TREE

PLANT SOIL MIX

STAKES TO EXTEND 18" BELOW PLANT PIT IN UNDISTURBED SOIL



3 EVERGREEN TREE DETAIL

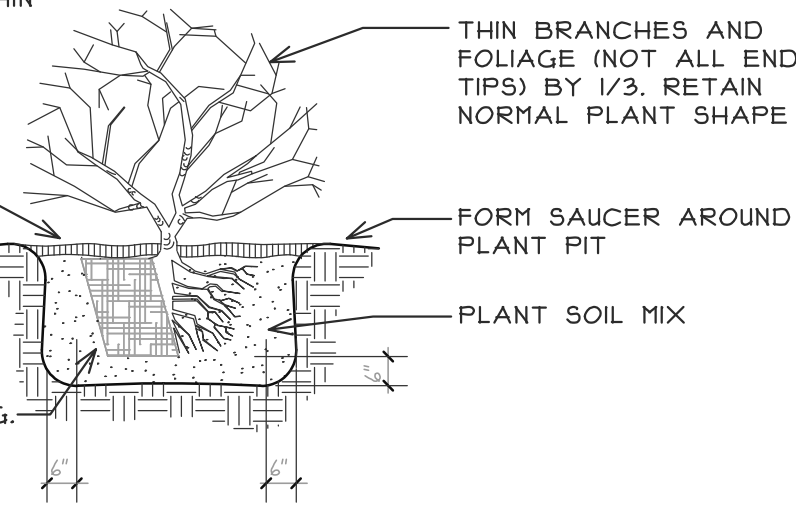
NOTE:

SHRUB SHALL BEAR SAME RELATIONSHIP TO FINISHED GRADE AFTER SETTLING AS IT BORE TO PREVIOUS EXISTING GRADE

DELETE EARTH SAUCERS WITHIN ISLAND PLANTERS.

4" MULCH AS SPECIFIED

REMOVE COLLAR FROM FIBER POT & PUNCTURE TO ALLOW ROOT GROWTH - ALL METAL AND PLASTIC CONTAINERS REMOVED PRIOR TO PLANTING.

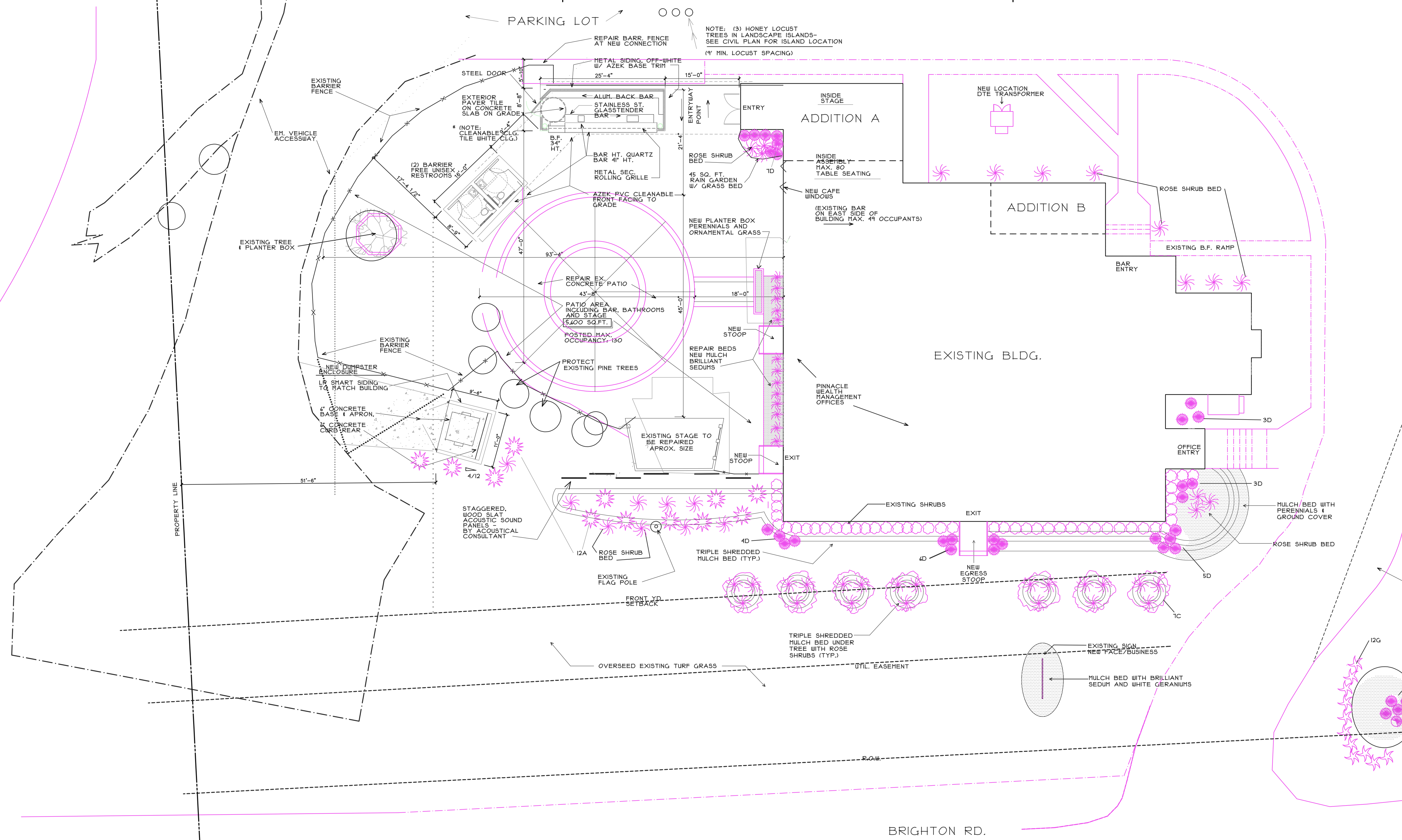


4 SHRUB DETAIL

NOTES:

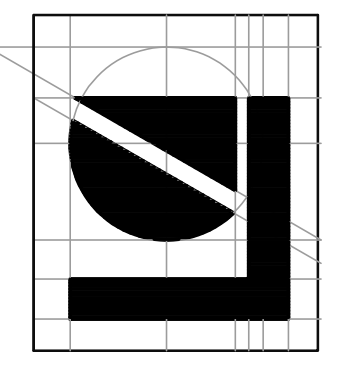
ALL PLANT MATERIAL SHALL CONFORM TO AMERICAN STANDARDS FOR NURSERY STOCK

ALL BEDS NOT BORDERED BY PAVING OR BUILDING SHALL BE EDGED WITH HEAVY DUTY BLACK DIAMOND EDGING



MK	QTY	COMMON NAME	BOTANICAL NAME	SIZE	ROOT
A	12	GREEN GIANT ARBORVITAE	THUJA STANDISHII X PLICATA	5' HT.	B I B
B	(45)	EXISTING FDN. SHRUBS			
C	1	AMERICAN BLACK ELDERBERRY	SAMBUCUS CANADENSIS	2.5' C.	B I B
D	35	FEATHER REED GRASS	CALAMAGROSTIS X ACUTIFLORA	1.5 GA	
E	41	RED ROSE SHRUB	ROSA HEIPEPORIA	1 GA	
F	13	BIRDNEST SPRUCE	PICEA ABIES 'NIDIFORMIS'	2.5 GA	
G	12	DAYLILY	HEMEROCALLIS	1 GA	
H	3	HONEY LOCUST	GLEDTISIA TRIACANTHOS	2.5' C.	B I B
123 NEW ITEMS					

Symbol	Plant Name
(A)	DK. GREEN ARBORVITAE
(B)	BOXWOOD SHRUB
(C)	AMERICAN BLACK ELDERBERRY
(D)	FEATHER REED GRASS
(E)	RED ROSE SHRUB
(F)	BIRDNEST SPRUCE
(G)	DAYLILY
(H)	HONEY LOCUST

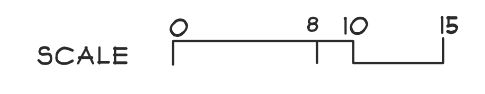
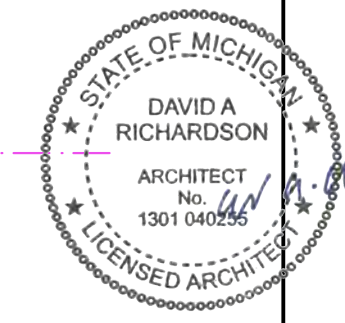


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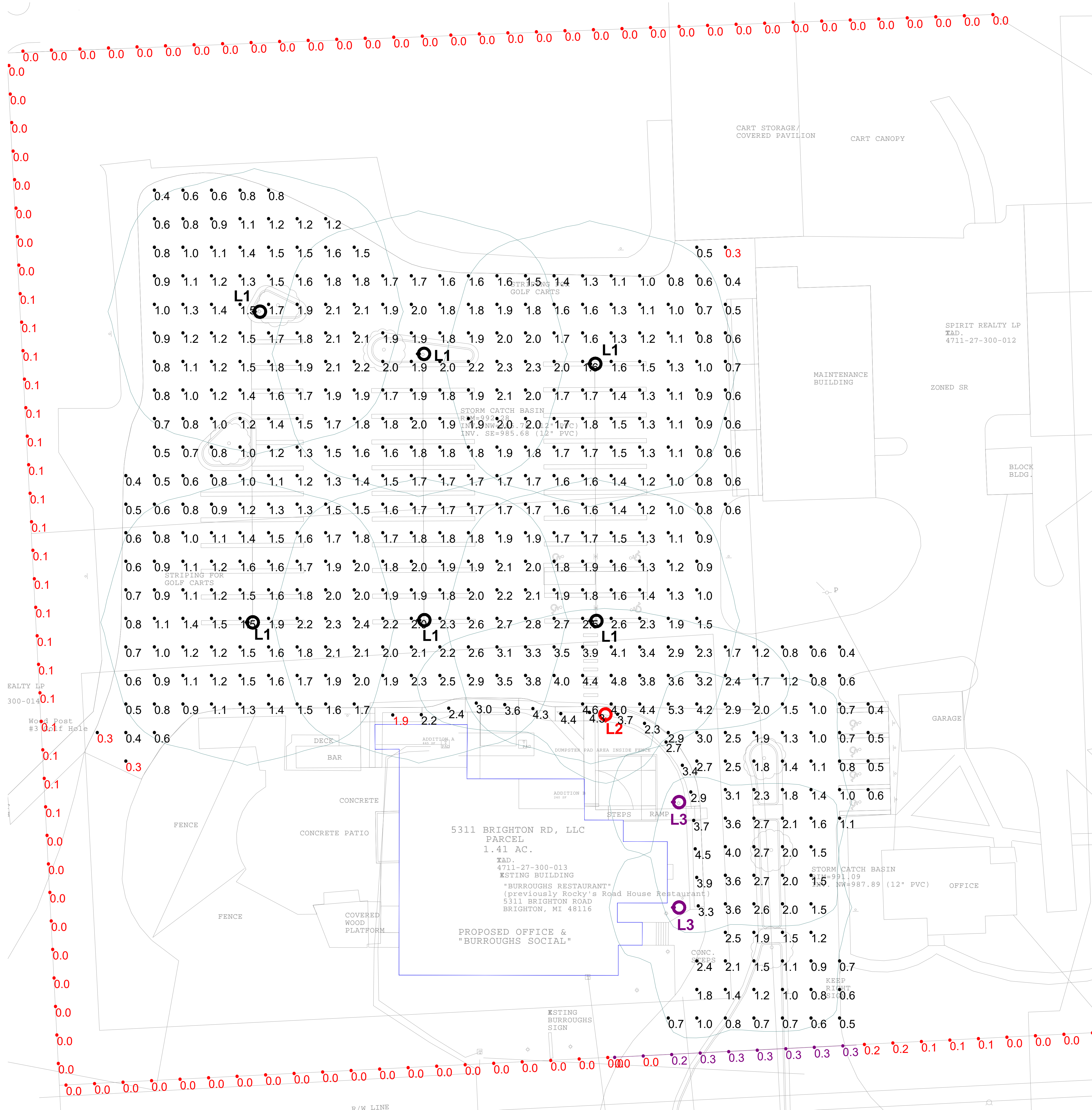
consultant

DATE: 2-14-24 3-14-24 8-24-23 8-02-23
APP: ARP DAR
CK'D: SPA RE-REVIEW
ISSUED FOR: PLOTTING

NEW OFFICES AND RENOVATION for: PINNACLE WEALTH MANAGEMENT BRIGHTON, MICHIGAN PATIO & LANDSCAPE PLAN



1 LANDSCAPE PLAN

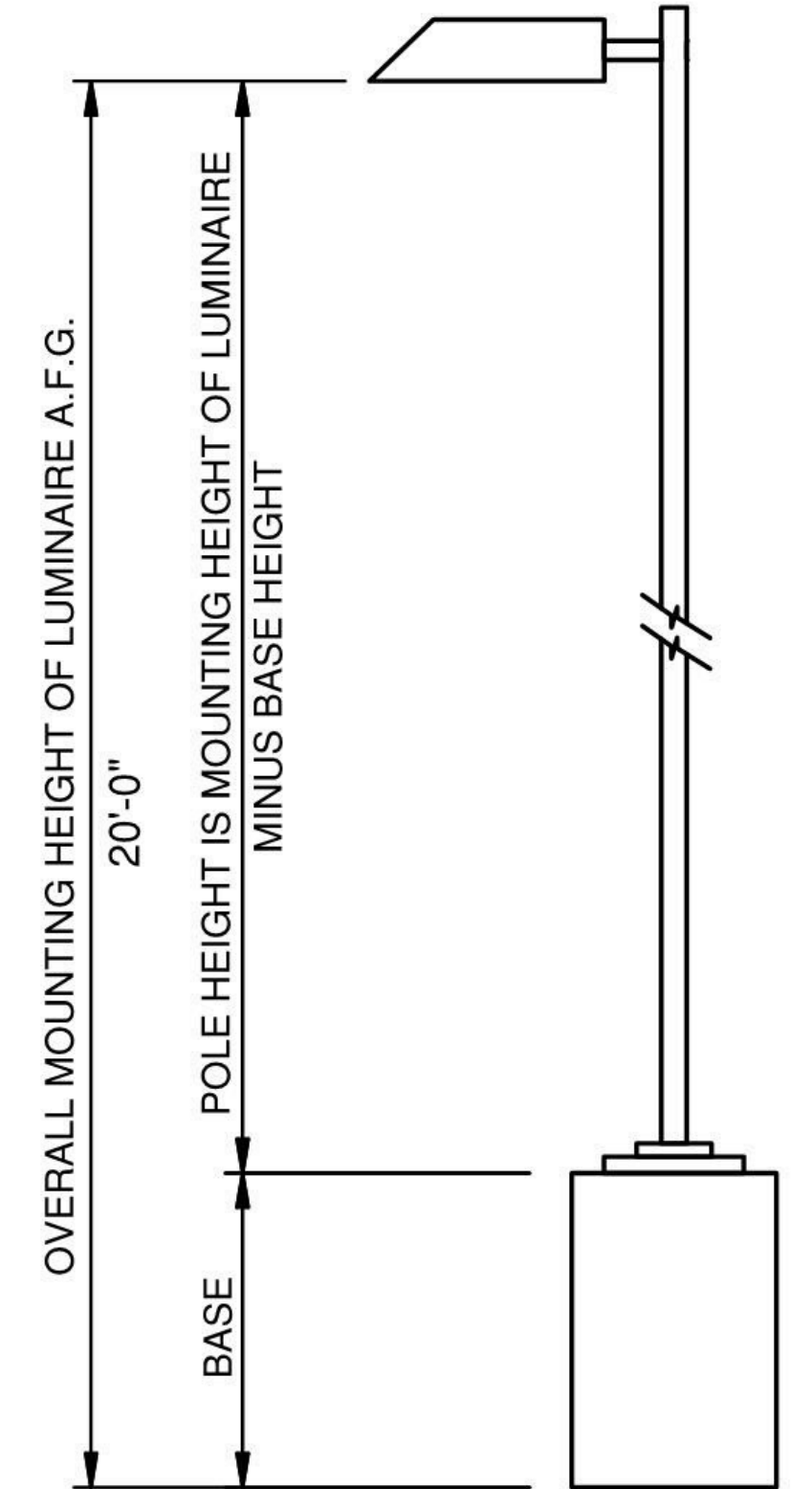


Scale: 1 inch= 16 Ft.

Symbol	Qty	Label	LLF	Description	Lum. Watts	Lum. Lumens	Mounting Height
○	6	L1	0.900	INVUE MSA-SA2C-730-U-5WQ	113	12052	20
●	1	L2	0.900	INVUE MSA-SA2C-730-U-T2	113	11205	20
○	2	L3	0.900	INVUE MSA-SA2C-730-U-T4FT	113	11261	20

Calculation Summary		Units	Avg	Max	Min	Max/Min	Avg/Min
Label		Fc	1.60	5.3	0.3	17.67	5.33
Parking Lot and Drive		Fc	0.02	0.2	0.0	N.A.	N.A.
Property Line		Fc	0.22	0.3	0.0	N.A.	N.A.
Property Line at Road Entrance		Fc	0.22	0.3	0.0	N.A.	N.A.
Sidewalk		Fc	3.32	4.5	1.9	2.37	1.75

CALCULATION POINTS ARE TAKEN AT GRADE.

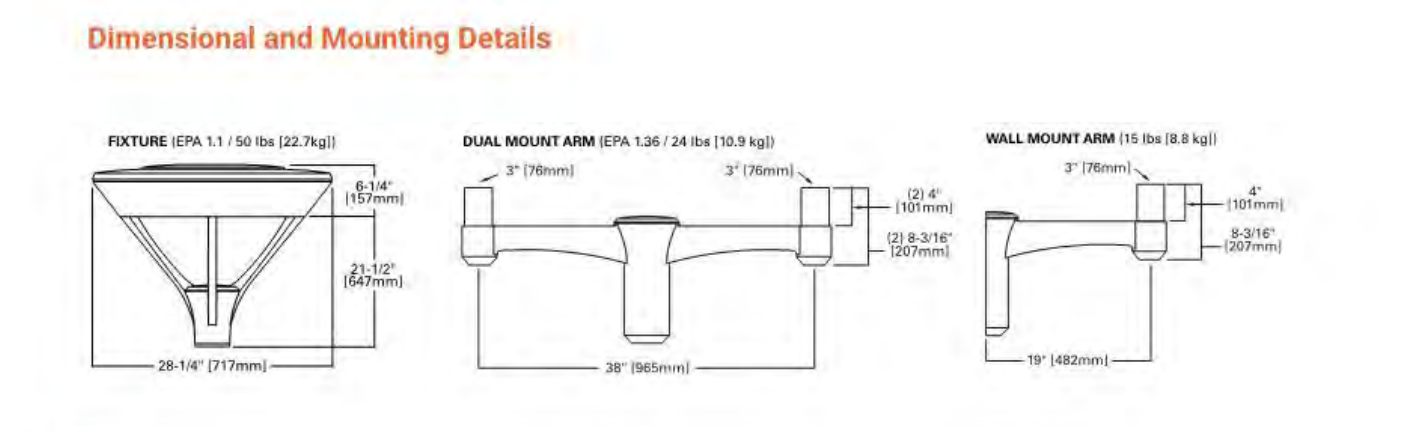


Project	Collaborator	Type	L1, L2, L3
Prepared by	Notes	Date	



- Interactive Menu**
- Order Information page 2
 - Optical Distributions page 3
 - Product Specifications page 4
 - Energy & Performance data page 5
 - Control Options page 13
- Product Certifications**
- UL LISTED
 - ETL
 - DLC
 - DMG
 - IP66
 - 5 YEAR WARRANTY
 - FC

- Quick Facts**
- Die-cast aluminum housing and door
 - Lumens packages ranging from 3,000 - 29,000 lumens
 - Choice of 13 high-efficiency patented AccuLED Optics™
 - Base casting slip fits over a standard 3" O.D. tenon
 - Wall, single and dual-mount configurations available
 - 10kV/10vKA surge protection standard
 - LED fixture features a five-year warranty



NOTES:

THE ENGINEER AND/OR ARCHITECT MUST DETERMINE APPLICABILITY OF LAYOUT TO EXISTING/FUTURE FIELD CONDITIONS AND ALL MANDATORY BUILDING AND LIFE SAFETY CODES AND COMPLIANCE.

LIGHTING LAYOUT REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMP/LEDS AND OTHER VARIABLE FIELD CONDITIONS.

MOUNTING HEIGHTS INDICATED ARE FROM GRADE TO BOTTOM OF LUMINAIRE LENS OR FROM FLOOR TO BOTTOM OF LUMINAIRE LENS, UNLESS OTHERWISE NOTED.

CLARUS DOES NOT ACT AS THE ELECTRICAL, CIVIL OR STRUCTURAL ENGINEER AND DOES NOT DETERMINE BASE REQUIREMENTS AND APPLICABLE CODE COMPLIANCE. CLARUS IS NOT LIABLE FOR ANY CODE COMPLIANCE DISCREPANCY.

LIGHTING CALCULATIONS ARE NOT A SUBSTITUTE FOR INDEPENDENT ENGINEERING ANALYSIS OF LIGHTING SYSTEM SUITABILITY AND SAFETY. THE ENGINEER AND/OR ARCHITECT OF RECORD IS RESPONSIBLE TO REVIEW FOR CODE COMPLIANCE, INCLUDING AND NOT LIMITED TO: NFPA 101 LIFE SAFETY CODE, MICHIGAN ENERGY CODE, MICHIGAN BUILDING CODE AND/OR IECC CODE, LIGHTING QUALITY COMPLIANCE AND LOCAL LIGHTING ORDINANCES.

FOR SITE PLAN PHOTOMETRICS, THE USE OF ALTERNATES MUST BE RESUBMITTED TO THE CITY FOR APPROVAL.

REVISION
XX

DATE
30775 Barrington St.
Madison Heights, MI 48071
P: 248.677.0850
F: 248.677.0512
E: info@clarus-lighting.com

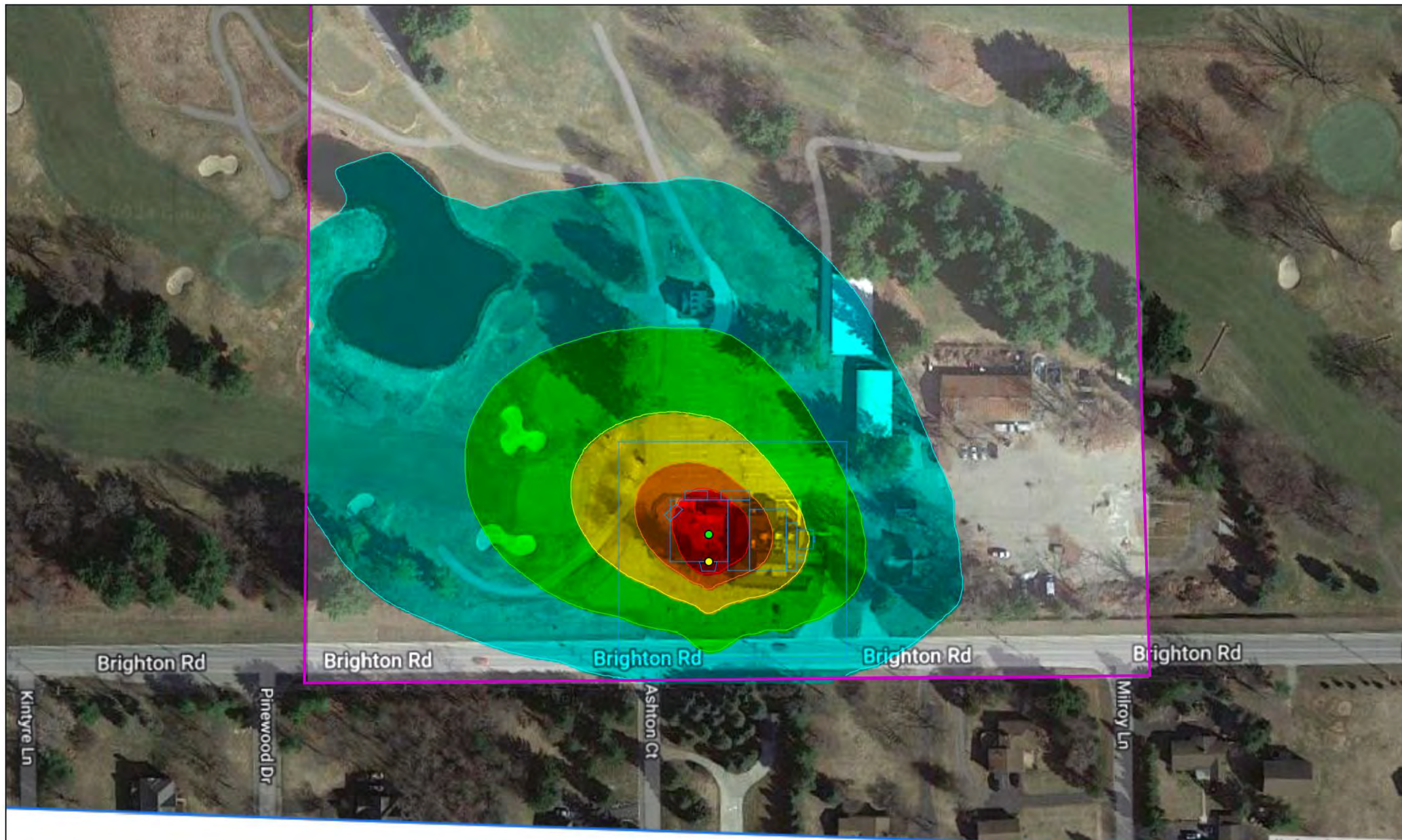


PROJECT TITLE
BURROUGHS FARMS
5311 BRIGHTON ROAD
FACILITY UPDATES
BRIGHTON, MI

SHEET TITLE
PHOTOMETRIC CALCULATION
SITE

DATE
10-02-23
PROJECT No.
CLC23-110503
SHEET No.

L201



Stages with d&b audio systems:

Pinnacle Wealth Management
 Spectrum: Rock/Pop
 SPL at reference point: 92.0 dB(A)

Signs and symbols

Building	>84.6	■
Calculation area	79.7 - 84.6	■
Stage origin	74.8 - 79.7	●
Reference point	69.9 - 74.8	●
Loudspeaker	65.0 - 69.9	■
Audience area	<65.0	■

Levels in dB(A)

■ ■ d&b
 ● ● audiotechnik



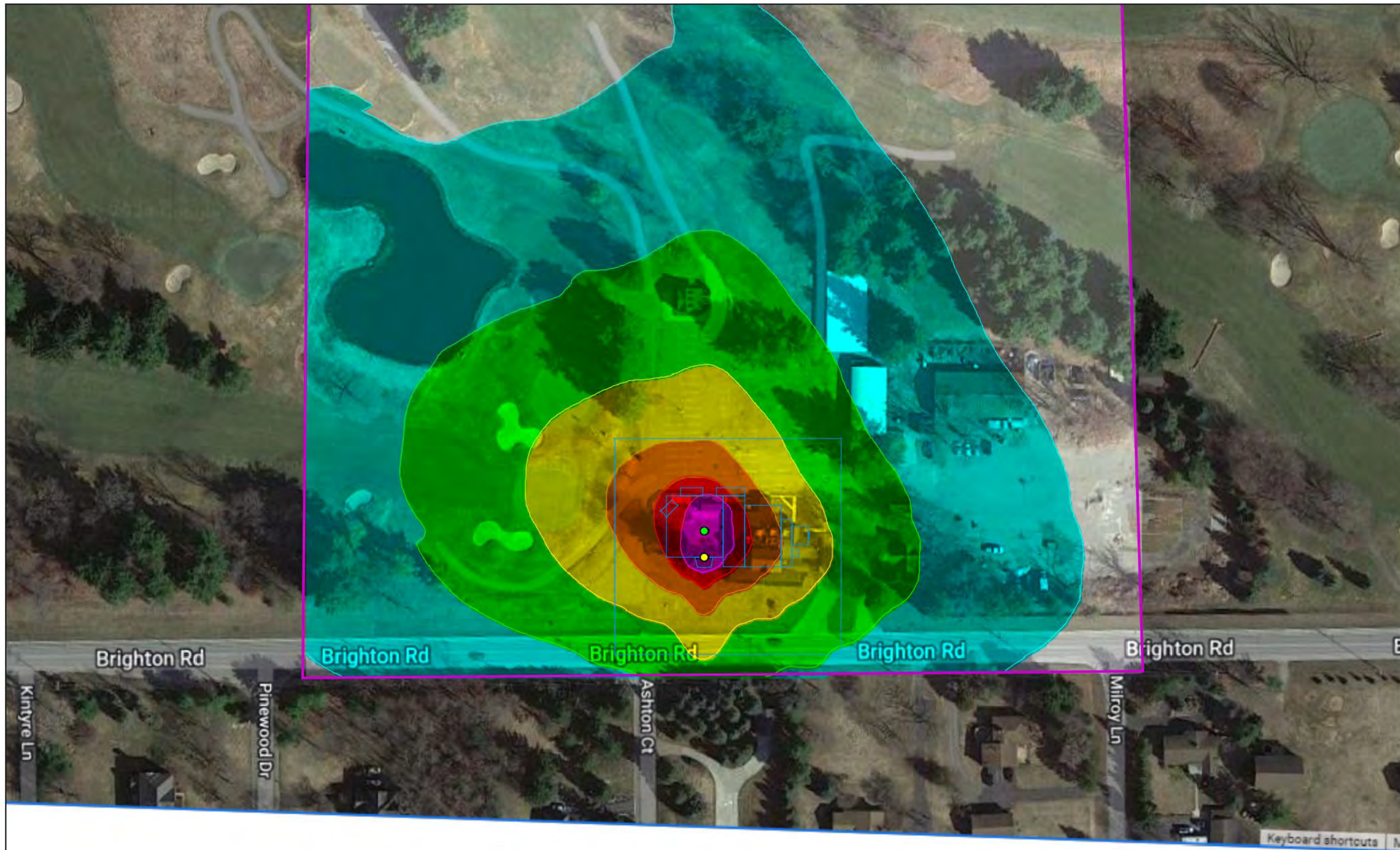
General Notes
 OUTDOOR DB(A) STUDY
 BACKGROUND MUSIC



No.	Revision/Issue	Date

Drawn By:
 Evan Hamilton
 734.547.3707 ext. 1002
 evan.hamilton@e2design.com

Sheet
AVL 11.1



Stages with d&b audio systems:

Pinnacle Wealth Management
 Spectrum: Electronic
 SPL at reference point: 94.0 dB(A)

Signs and symbols

- Building
- Calculation area
- Stage origin
- Reference point
- Loudspeaker
- Audience area

Levels in dB(A)

- > 89.5
- 84.6 - 89.5
- 79.7 - 84.6
- 74.8 - 79.7
- 69.9 - 74.8
- 65.0 - 69.9
- < 65.0

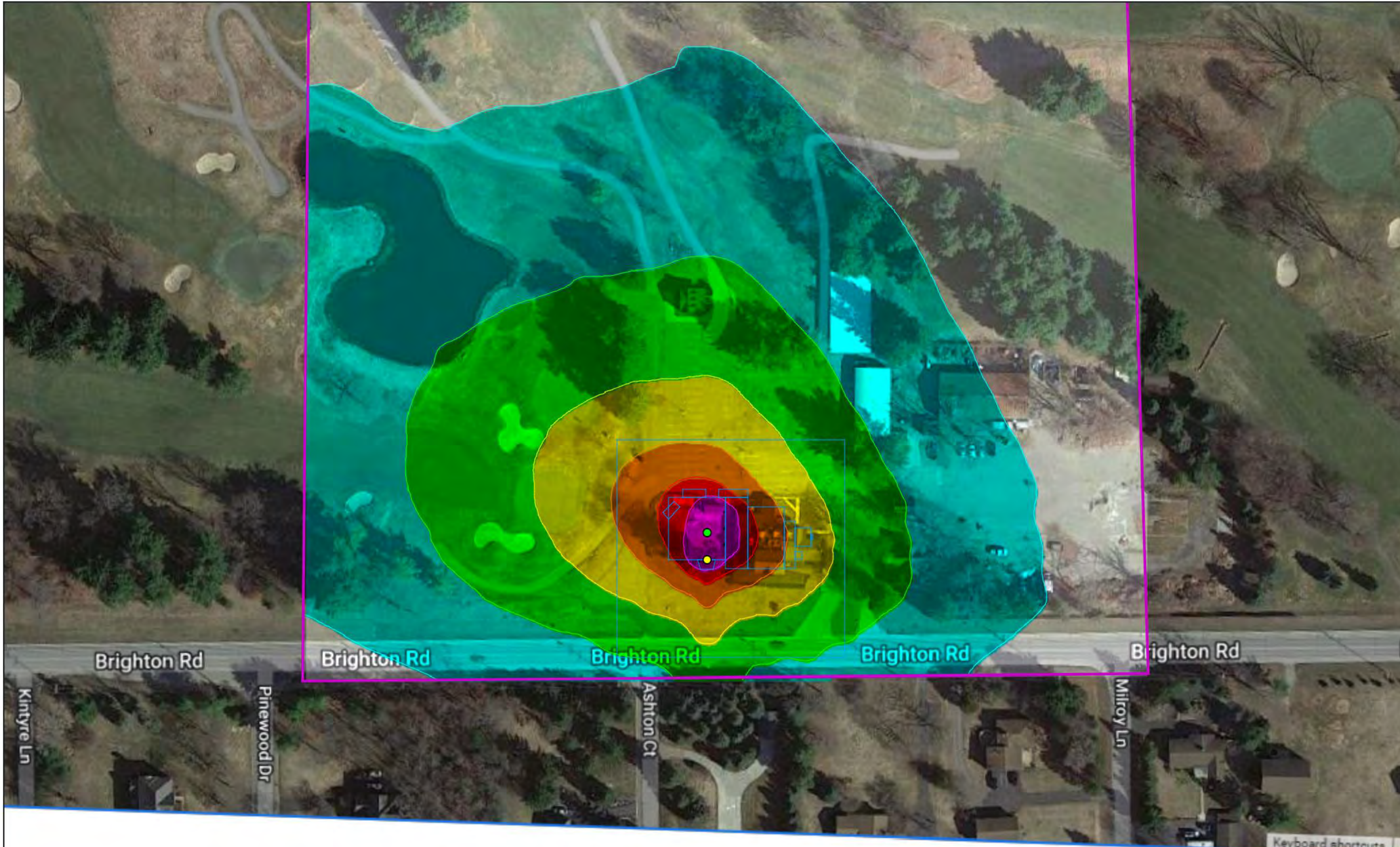
General Notes
 OUTDOOR DB(A) STUDY
 DJ



No.	Revision/Issue	Date

Drawn By:
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 evan.hamilton@e2design.com

Sheet
AVL 11.2



Stages with d&b audio systems:

Pinnacle Wealth Management

Spectrum: Live bands
SPL at reference point: 94.0 dB(A)

Signs and symbols

Signs and symbols	Levels in dB(A)
	>89.5
	84.6 - 89.5
	79.7 - 84.6
	74.8 - 79.7
	69.9 - 74.8
	65.0 - 69.9
	<65.0



OUTDOOR DB(A) STUDY
LIVE BANDS



No.	Revision/Issue	Date

Drawn By:
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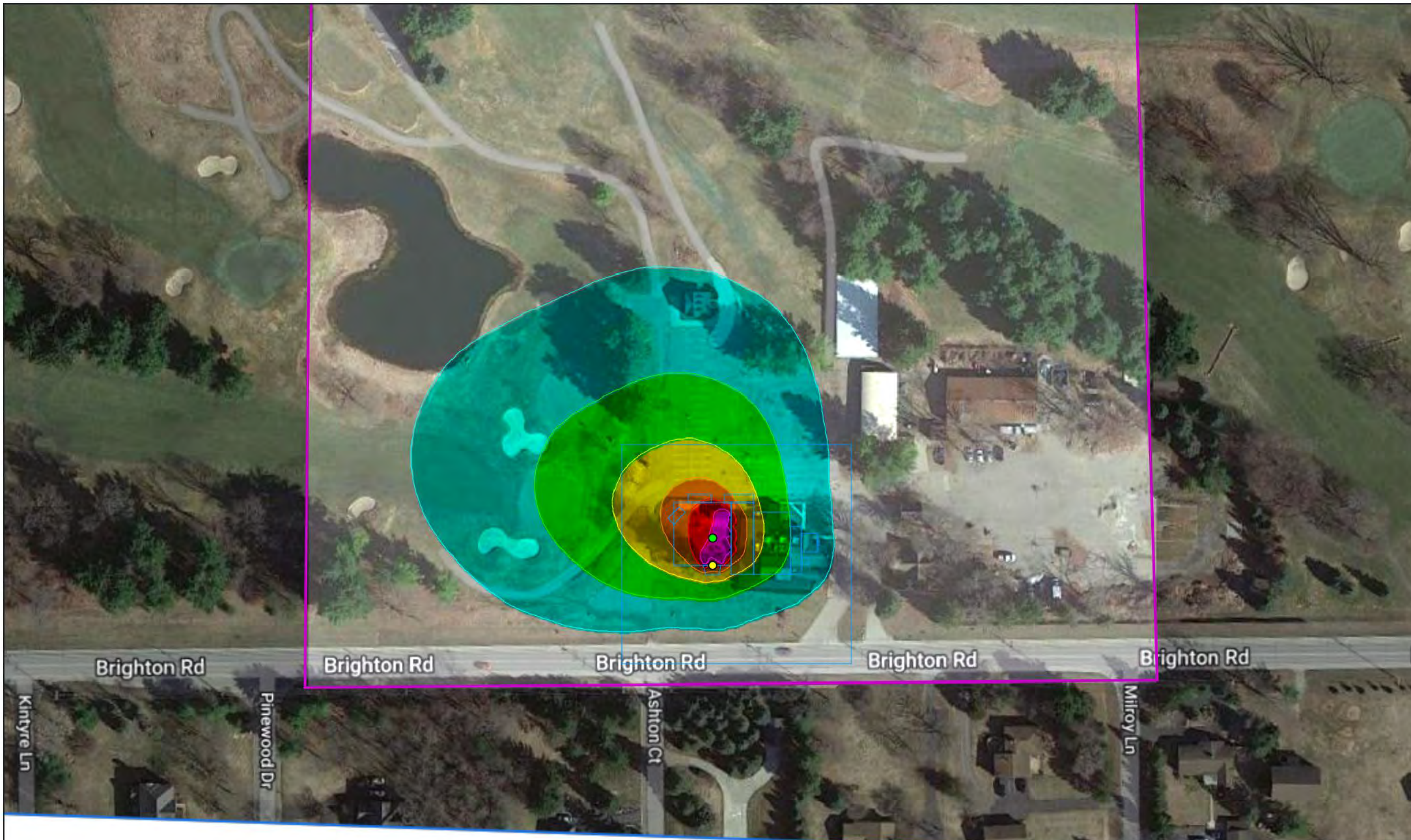
Sheet

AVL 11.3



OUTDOOR DB(A) STUDY - LIVE BANDS

SCALE: N/A



Stages with d&b audio systems:
Pinnacle Wealth Management
 Spectrum: Spoken Word
 SPL at reference point: 90.0 dB(A)

Signs and symbols

	Building	>89.5	
	Calculation area	84.6 - 89.5	
	Stage origin	79.7 - 84.6	
	Reference point	74.8 - 79.7	
	Loudspeaker	69.9 - 74.8	
	Audience area	65.0 - 69.9	
		<65.0	

Levels in dB(A)

General Notes
 OUTDOOR DB(A) STUDY
 SPOKEN WORD



No.	Revision/Issue	Date

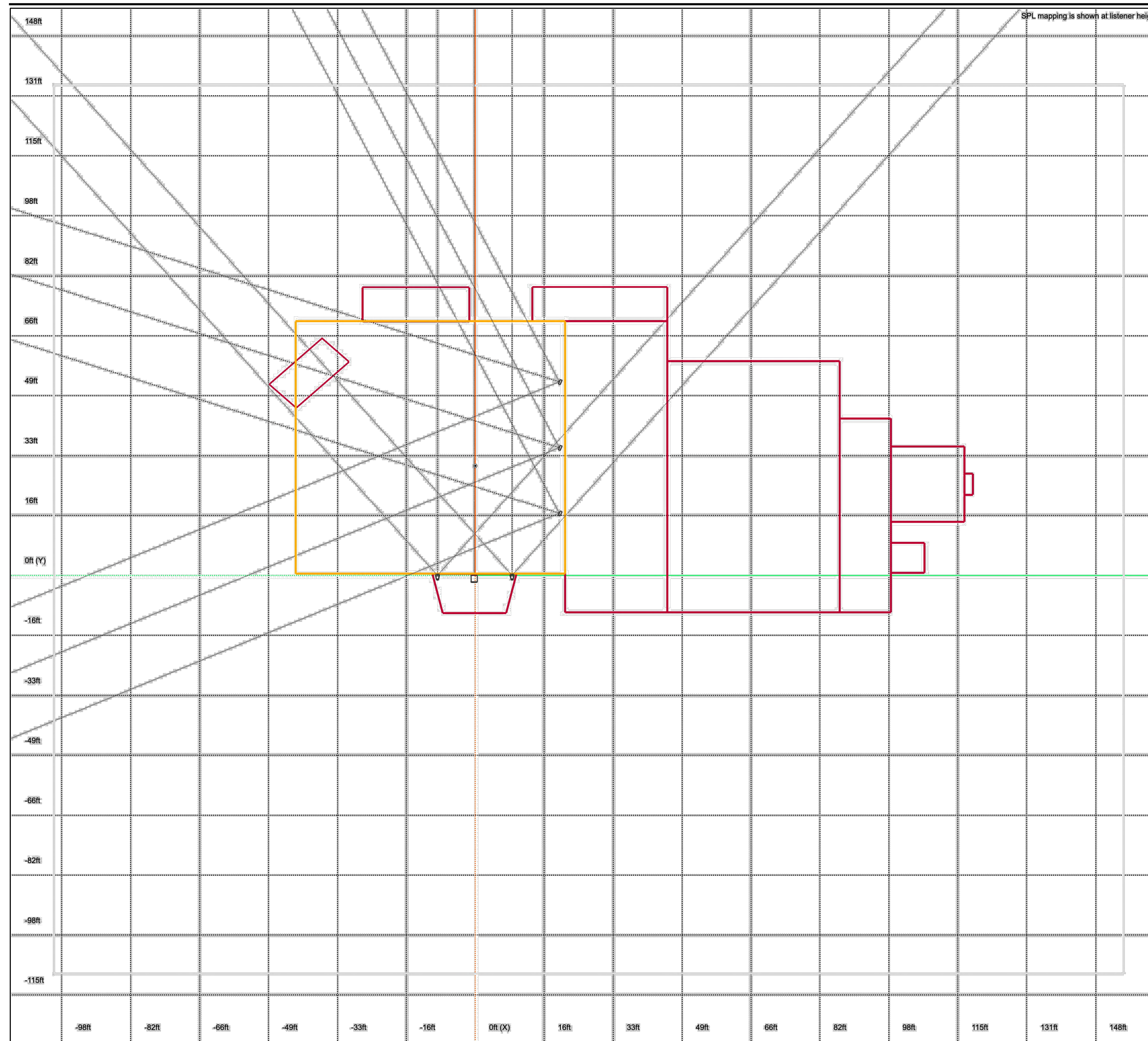
Drawn By:
 Evan Hamilton
 734.547.3707 ext. 1002
 evan.hamilton@e2design.com

Sheet
AVL 11.4



3D plot

Live



SPL calculation

Resolution:	High (3ft)
Highest SPL:	101.1 dB

Simulated signal

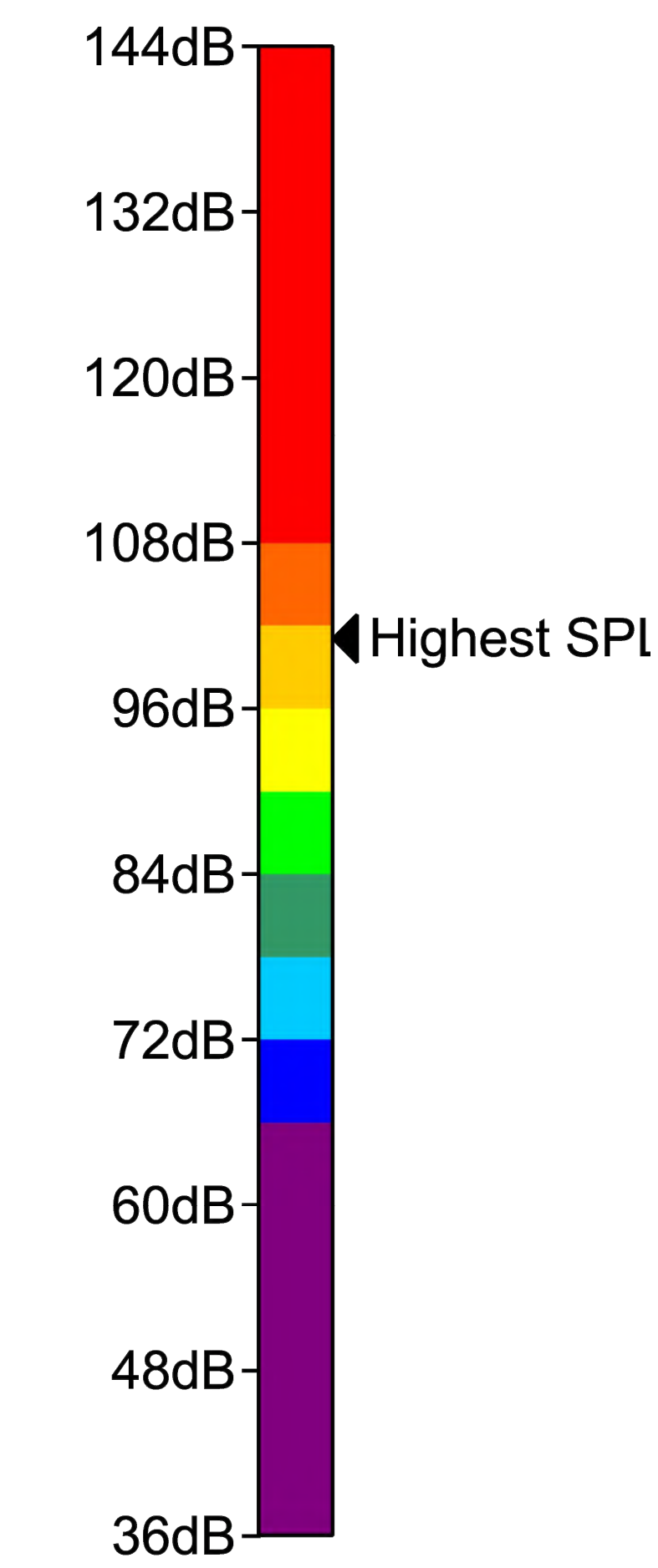
Level:	0.0 dBu
Signal:	2500 Hz (1/1 oct.)
Show interferences:	Off

Air absorption

On/Off:	On
Temperature:	68 °F
Humidity:	60.0 %

NoizCalc reference point

x:	0.0 ft
y:	30.0 ft
z:	5.0 ft
SPL:	96.9 dB



01 / 01 3D plot

General Notes

AUDIO SYSTEM DISPERSION
COVERAGE ANGLES



No.	Revision/Issue	Date

Drawn By:
 Evan Hamilton
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 evan.hamilton@e2idesign.com

Sheet

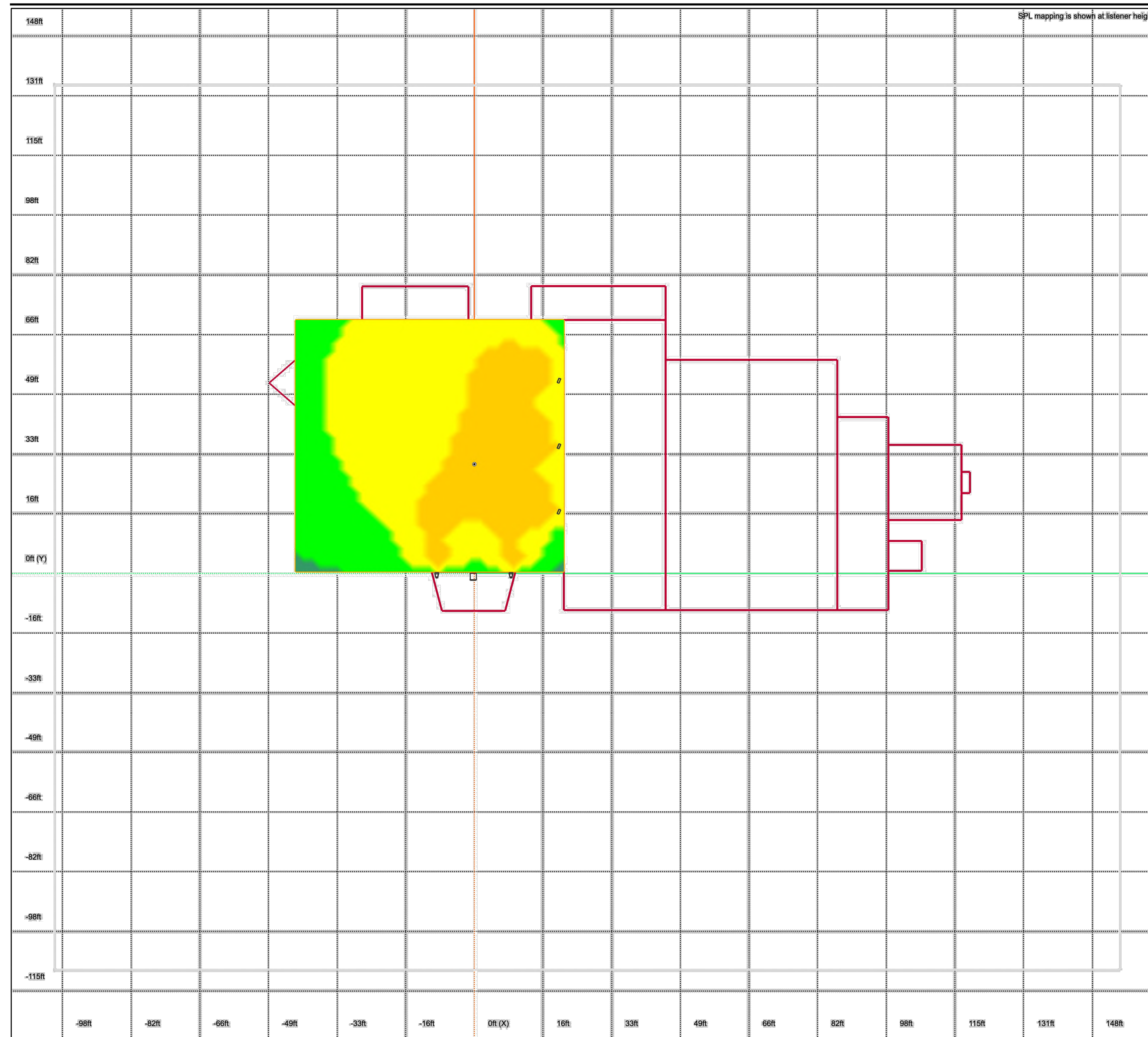
AVL 12.1





3D plot

Live (2500 Hz, 1/1 oct., 0.0 dBu)



SPL calculation

Resolution:	High (3ft)
Highest SPL:	101.1 dB

Simulated signal

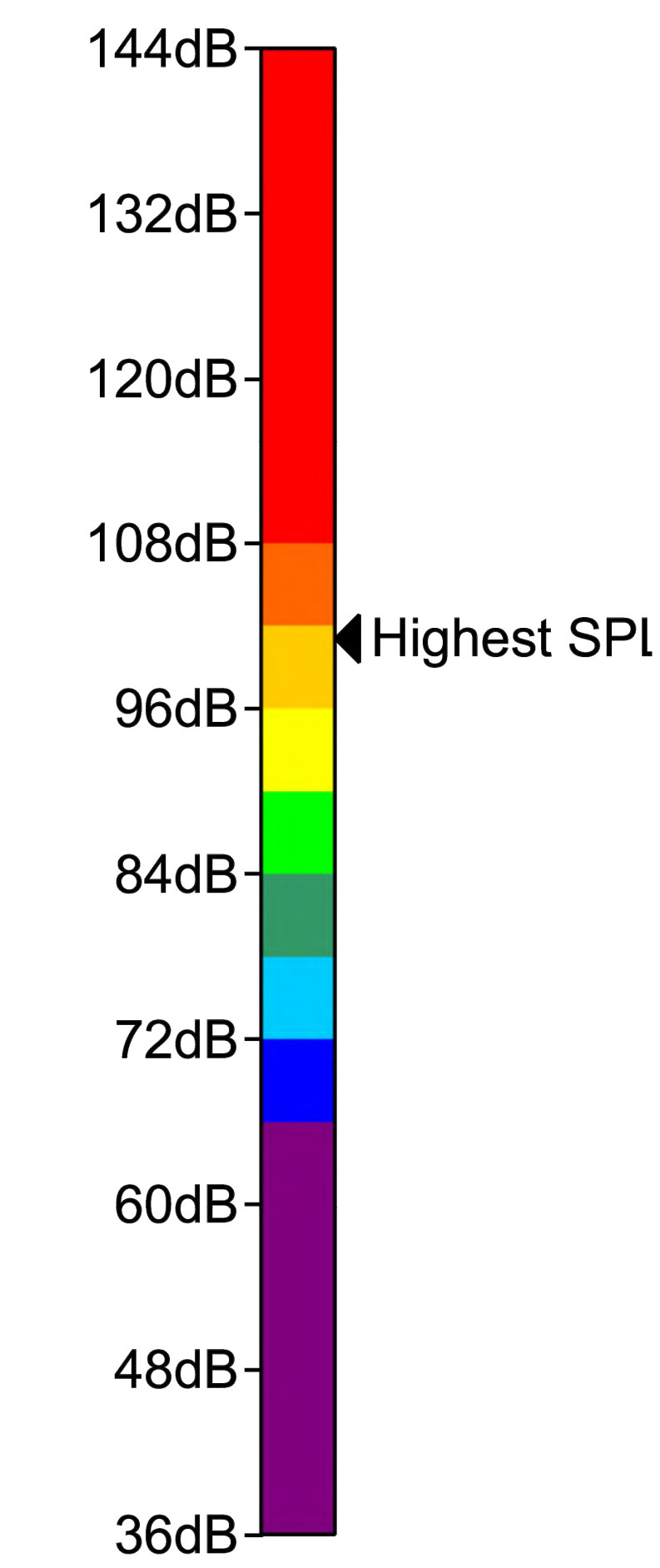
Level:	0.0 dBu
Signal:	2500 Hz (1/1 oct.)
Show interferences:	Off

Air absorption

On/Off:	On
Temperature:	68 °F
Humidity:	60.0 %

NoizCalc reference point

x:	0.0 ft
y:	30.0 ft
z:	5.0 ft
SPL:	96.9 dB



01 / 01 3D plot

AUDIO SYSTEM 3D SPL PLOT



No.	Revision/Issue	Date

Drawn By:
 Evan Hamilton
 734.547.3707 ext. 1002
 evan.hamilton@e2design.com

Sheet

AVL 12.2





GENOA CHARTER TOWNSHIP
Application for Site Plan Review

TO THE GENOA TOWNSHIP PLANNING COMMISSION AND TOWNSHIP BOARD:

APPLICANT NAME & ADDRESS: CHESTNUT DEVELOPMENT LLC. 6253 GRAND RIVER AVE STE 700 BRIGHTON, MI 48116

If applicant is not the owner, a letter of Authorization from Property Owner is needed.

OWNER'S NAME & ADDRESS: CHESTNUT DEVELOPMENT LLC. 6253 GRAND RIVER AVE STE 700 BRIGHTON, MI 48116

SITE ADDRESS: Grand River Ave PARCEL #(s): 11-06-200-101

APPLICANT PHONE: (734)679-4356 OWNER PHONE: (888)825-1420

OWNER EMAIL: permits@chestnutdev.com

LOCATION AND BRIEF DESCRIPTION OF SITE: North side of Grand River Ave.
Just west of Char-Ann Drive.

BRIEF STATEMENT OF PROPOSED USE: Grading preparation for future development. Replacement of trees that were inadvertently removed by contractor.

Please see letter from MEGA Engineering dated 9-20-23 and revised site plans showing proposed mitigation.

THE FOLLOWING BUILDINGS ARE PROPOSED: None

I HEREBY CERTIFY THAT ALL INFORMATION AND DATA ATTACHED TO AND MADE PART OF THIS APPLICATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

BY: Steve Gronow, Owner

ADDRESS: 6253 GRAND RIVER AVE STE 700 BRIGHTON, MI 48116

Contact Information - Review Letters and Correspondence shall be forwarded to the following:

1.) Kelly Ralko _____ of Chestnut Development, LLC. _____ at permits@chestnutdev.com
 Name Business Affiliation E-mail Address

FEE EXCEEDANCE AGREEMENT

As stated on the site plan review fee schedule, all site plans are allocated two (2) consultant reviews and one (1) Planning Commission meeting. If additional reviews or meetings are necessary, the applicant will be required to pay the actual incurred costs for the additional reviews. If applicable, additional review fee payment will be required concurrent with submittal to the Township Board. By signing below, applicant indicates agreement and full understanding of this policy.

SIGNATURE: Steve Gronow, Owner of Chestnut DATE: 9/20/23

PRINT NAME: Steve Gronow, Owner PHONE: 888-825-1420

ADDRESS: 6253 GRAND RIVER AVE STE 700 BRIGHTON, MI 48116

**GENOA CHARTER TOWNSHIP
PLANNING COMMISSION
PUBLIC HEARING
March 11, 2024**

MINUTES

CALL TO ORDER: Chairman Grajek called the meeting of the Genoa Charter Township Planning Commission to order at 6:30 p.m. Present were Eric Rauch, Tim Chouinard, Marianne McCreary, Greg Rassel and Jeff Dhaenens. Absent was Glynis McBain. Also present were Planning Director Amy Ruthig, Brian Borden of Safebuilt, and John Barber of Tetra Tech.

PLEDGE OF ALLEGIANCE: The pledge of allegiance was recited.

APPROVAL OF AGENDA:

Moved by Commissioner McCreary, seconded by Commissioner Rassel, to approve the agenda as presented. **The motion carried unanimously.**

DECLARATION OF CONFLICT OF INTEREST:

None

CALL TO THE PUBLIC:

The call to the public was made at 6:31 pm with no response.

OLD BUSINESS:

OPEN PUBLIC HEARING #1...Consideration of a site plan amendment for revisions to the previously approved site grading on a 4.32-acre parcel (4711-06-200-101) on the north side of Grand River Avenue, just west of Char-Ann Drive. The request is petitioned by Chestnut Development.

- A. Recommendation of Environmental Impact Assessment (9-20-23)
- B. Disposition of Amended Site Plan (10-17-23)

Mr. Steve Gronow has a non-profit organization that is interested in building on the entire property; however, they are also looking at other sites. He wanted to make the property more attractive to developers by clearing the brush and removing debris on the site. He acknowledges that the contractor removed the trees that were not to be removed, even though it was clearly marked. Since he is not sure how the property will be developed, he would like to build an eight-foot-high berm on the rear of the site between the trees and plant the appropriate number of evergreens to screen the homes on Turning Leaf from Grand River and complete the grading that was originally proposed and approved.

Mr. Borden suggested the applicant submit a drawing of what is being proposed, including the number of trees that will be planted. Commissioner McCreary agrees. She would like to see a visual of where on the site the berm and trees will be placed. Mr. Gronow stated this will be temporary.

Commissioner Rauch asked Mr. Gronow if there is a long-term screening plan for this area. He stated that the entire rear of the site contains scrub trees, so when the property is developed, he would like to remove those and have a landscape architect develop a permanent plan.

Commissioner Dhaenens suggested leaving the existing plantings as the permanent buffer and these new trees could remain. Mr. Gronow does not want to do that. He stated that the original requirement to have those trees remain should not have been made. They were within the building envelope and there is nothing in the ordinance that requires that. This property was commercial when the homes on Turning Leaf were built, so there was never a guarantee those trees would remain.

Ms. Ruthig stated that if trees are removed that were supposed to remain, they must be replaced by two, so since 19 trees were removed, 38 trees must be replaced.

The call to the public was made at 6:54 pm.

Ms. Melanie Johnson of 3990 Chilson Road lives next to one of Mr. Gronow's other properties. She believes that a temporary solution would work. If the new trees are not maintained, they could die.

Mr. Dan Hassett of 2955 Turning Leaf stated a berm all the way across with 19 trees planted would be acceptable. He knows it was an accident. He wants to ensure that a plan is submitted and approved.

Mr. Chris Mammoser of 2757 Turning Leaf is the secretary for the homeowners association impacted by this area. He is speaking as an individual, not representing the association. He would like to see a thoughtful and agreed to temporary solution while the property is waiting to be developed. He suggested leaving the tall scrub trees.

Mr. Phil Brown of 2933 Turning Leaf stated that his home and the one next to his are exposed. He is concerned with his property values and security.

The call to the public was closed at 7:08 pm.

Mr. Gronow believes he can create a permanent landscape berm across the entire property and plant the required number of trees. He would submit a plan for review and approval. The future engineering of the property would be done around that.

Commissioner Dhaenens suggested that Mr. Gronow consider the ordinance requirements for buffers and landscaping when determining how many trees should be planted. He agrees and will have the engineer use this information.

Moved by Commissioner Rassel, supported by Commissioner Rauch, to table Open Public Hearing #1 until on or before the May 13, 2024 Planning Commission meeting. **The motion carried unanimously.**

OPEN PUBLIC HEARING #2...Consideration of a special land use application, environmental impact assessment and site plan to allow for a proposed automatic car wash located on vacant parcels #4711-04-300-017 and 4711-09-100-017 Latson Road, east side of Latson Road, south side of Grand River Avenue. The request is petitioned by CWP West, LLC.

- A. Recommendation of Special Use Application.
- B. Recommendation of Environmental Impact Assessment (1-16-24)
- C. Recommendation of Site Plan (1-16-24)

Mr. Scott Tousignant of Boss Engineering and Nicole Castern of Mister Car Wash were present. Ms. Tousignant stated they have received MDOT approval for the stormwater discharge. He provided a review of the changes, specifically the color scheme, additional landscaping has been added to the front, the number of signs have been reduced, the building lighting has been changed, the cross access easement has been obtained, and they have added the screening fence. Also, they have changed the entrance drive to show the right in/right out.

Mr. Borden reviewed his letter dated February 6, 2024.

- 1. Special Land Use (Section 19.03)
 - a. The special land use standards of Section 19.03 are generally met.
 - b. In order to make favorable findings related to compatibility and impacts, the conditions of Section 7.02.02(l) need to be met to the Commission's satisfaction.
 - c. The submittal shows that they would not be in compliance with the noise ordinance after 10 pm. He suggests the applicant restrict the hours of operation to ensure compliance with the Township's Noise Ordinance.
 - d. The applicant must address any comments provided by the Township Engineer or Brighton Area Fire Authority regarding public facilities and services.
- 2. Use Conditions (Section 7.02.02(1))
 - a. The use conditions are met.
- 3. Site Plan Review
 - a. The revised building elevations comply with the material standards of Section 12.01.
 - b. Building materials, design and color scheme are subject to review and approval by the Planning Commission.
 - c. The landscape plan is deficient in width for the Latson Road greenbelt.
 - d. The waste receptacle details must identify the required concrete base pad.

**GENOA CHARTER TOWNSHIP
PLANNING COMMISSION
PUBLIC HEARING
December 11, 2023**

MINUTES

CALL TO ORDER: Chairman Grajek called the meeting of the Genoa Charter Township Planning Commission to order at 6:30 p.m. Present were Chris Grajek, Eric Rauch, Tim Chouinard, Glynis McBain, Marianne McCreary, and Greg Rassel. Absent was Jeff Dhaenens. Also present were Planning Director Amy Ruthig, Brian Borden of Safebuilt, and Shelby Byrne of Tetra Tech.

PLEDGE OF ALLEGIANCE: The pledge of allegiance was recited.

APPROVAL OF AGENDA:

Moved by Commissioner Rauch, seconded by Commissioner Chouinard, to approve the agenda as presented. **The motion carried unanimously.**

DECLARATION OF CONFLICT OF INTEREST:

None

CALL TO THE PUBLIC:

The call to the public was made at 6:31 pm with no response.

OLD BUSINESS:

OPEN PUBLIC HEARING #1... Consideration of a site plan amendment for revisions to the previously approved site grading on a 4.32-acre parcel (4711-06-200-101) on the north side of Grand River Avenue, just west of Char-Ann Drive. The request is petitioned by Chestnut Development.

- A. Recommendation of Environmental Impact Assessment (9-20-23)
- B. Disposition of Amended Site Plan (10-17-23)

Mr. Steve Gronow, the applicant, and Mr. Allan Pruss with Monument Engineering Group were present. Mr. Pruss requested to have their item tabled this evening as they will have a complete site plan forthcoming.

Commissioner McCreary questioned what is to prohibit the applicant from removing additional trees at this time. Ms. Ruthig stated that the applicant is not in site plan compliance so they are not allowed to do any work. She asked the applicant when they anticipate having the site plan ready for review. Mr. Gronow stated he has someone who is interested in the property. He anticipates being before the Planning Commission in June or July.

The call to the public was made at 6:33 pm.

Mr. Dan Hassett of 2955 Turning Leaf stated 40-50 trees were removed. He showed and submitted pictures of the tree density before and after the trees were removed. He is hoping that a berm and pine trees can be planted.

The call to the public was closed at 6:35 pm

Moved by Commissioner Rauch, supported by Commissioner Rassel, to postpone Agenda Item #1 for Parcel #4711-06-200-101 until the March 11, 2024 Planning Commission Meeting per the applicant's request. **The motion carried unanimously.**

NEW BUSINESS:

OPEN PUBLIC HEARING # 2... Consideration of a special use application, environmental Impact assessment and site plan for a commercial stable located at 7318 Herbst Road, south Side of Herbst Road, east of Hubert Road. The request is petitioned by the Nancy Merlo, Brighton Equestrian Club.

- A. Recommendation of Special Use Application
- B. Recommendation of Environmental Impact Assessment (4-22-22)
- C. Recommendation of Site Plan (4-21-22)

Ms. Kathy Riesterer, who represents the applicant, and Mr. Ray Merlo were present. Ms. ~~Riesterer Rister~~ stated this was approved in 2022 with certain conditions but those conditions were not met, so the prior approval lapsed. They are requesting the same approval, and they have now completed the conditions of the previous approval.

She noted allowing the gravel was approved previously, instead of asphalt, as gravel is more advantageous for horses. The applicant agrees to limit the equipment to equestrian use. Mr. Merlo runs a construction company and he stores his equipment and trucks at a property near this site, but it is not stored there. Neighbors have noted that these trucks are on the site. She stated this is true; however, they are there to make deliveries or for construction purposes for the equestrian center or if Mr. Merlo visits the site in one of his work vehicles. They would like to reinstitute the fundraisers.

Mr. Borden reviewed his letter dated November 13, 2023:

- 1. Special Land Uses (Section 19.03):
 - a. The special land use standards of Section 19.03 are generally met.
 - b. Though the Zoning Map (AG) and Future Land Use Map (Low Density Residential) do not align, the proposal is compatible with the goals of the Master Plan.
 - c. In order to make favorable findings related to compatibility and impacts, the use conditions of Section 3.03.02(h) must be met to the Commission's satisfaction.
- 2. Commercial Stable Use Conditions (Section 3.03.02(h)):
 - a. The submittal demonstrates compliance with the applicable use conditions.

Moved by Commissioner Rauch, seconded by Commissioner Chouinard, to recommend to the Township Board approval of the Environmental Impact Assessment dated September 20, 2023 for two contiguous parcels (4711-09-200-006 and 008) at 4675 Grand River Avenue to allow for trailer sales and storage. **The motion carried unanimously.**

OPEN PUBLIC HEARING #3...Consideration of a site plan amendment for revisions to the previously approved site grading on a 4.32-acre parcel (4711-06-200-101) on the north side of Grand River Avenue, just west of Char-Ann Drive. The request is petitioned by Chestnut Development.

- A. Disposition of amended Site Plan (9-1-23)
- B. Recommendation of Environmental Impact Assessment (9-20-23)

Ms. Brittney Shay of Monument Engineering was present. She advised that grading plans were previously approved by the township in preparation for future development. There were 19 trees that were required to be saved; however, when the project started, those trees were removed. They are proposing a new plan to establish screening due to the removal of these trees.

Mr. Borden reviewed his letter dated October 3, 2023.

1. In accordance with Section 13.01, the Planning Commission has review and approval authority over the site plan for grading and tree removal.
2. The approved site plan included a condition for additional tree preservation in the northerly portion of the site; however, those trees were removed, and the applicant now seeks approval of an amended site plan.

The applicant has addressed some of their concerns; however, his additional comments are:

3. There is a discrepancy between the notes and plan with respect to the number of new trees proposed. The plan depicts 20 trees, while the notes say 19. This must be corrected.
4. The size of the new trees proposed is not identified.
5. In his opinion, if the new trees are to be treated as replacement for what was removed, the new trees need to be much larger than Ordinance minimums of six feet in height at the time of planting. The trees removed were well above 20 feet in height. Alternatively, the Commission could require an increase in the number of trees to be planted to help offset what was removed.
6. The silt fence line should be adjusted to ensure protection of the tree along the west side of the limits of disturbance.
7. The applicant must address any comments provided by the Township Engineer.

Ms. Byrne has no engineering issues. She stated that the berm or plantings will not affect the drainage or underground utilities.

The Fire Marshal had no issues.

Commissioner Rauch is disappointed that the petitioner is not present this evening. He would like to know what happened. This is a significant oversight. He is not in favor of replacing what was removed with 19 six-foot trees. He would request that they be replaced with something much more robust. Also, to ensure that the new plantings grow, it would require irrigation.

Commissioner McBain is not in favor of a berm because that suggests manicured landscaping. She would like to have more natural plantings, such as trees, bushes, brush, etc.

Ms. Ruthig stated that when staff was made aware of the trees being removed, they were concerned with the location the applicant proposed to place the berm because it is in the 50-foot wide buffer that was supposed to remain natural. This could compromise some of the existing trees inside that 50-foot buffer.

Commissioner Rauch reiterated Commissioner McBain's comments that it should look natural and not manicured.

After discussion, it was determined that a landscape architect needs to provide a plan for approval by the township.

The call to the public was made at 7:16 pm.

Mr. Dan Hassett of 2955 Turning Leaf stated there was an approximate 300-foot-wide area of trees removed. His house can now be seen from Grand River. He would suggest the applicant bring in a lot of dirt to make a 10-12-foot-high berm, and then plant 30-40 white pines.

Mr. Chris Mammoser of 2757 Turning Leaf is the secretary of the homeowner's association. He thanked Ms. Ruthig for all of her help with this issue. They have purchased much larger trees than what is being proposed so the developer can also.

The call to the public was closed at 7:22 pm.

Commissioner Lowe would like to request that the developer or his representative be present at all future meetings.

Moved by Rauch, supported by Lowe, to table Open Public Hearing #3 for a site plan amendment for revisions to the previously approved site grading on a 4.32-acre parcel, #4711-06-200-101. **The motion carried unanimously.**

ADMINISTRATIVE BUSINESS:

Staff Report

Ms. Ruthig stated there will be a Planning Commission meeting next month.

Moved by Skolarus, supported by Ledford, to approve Resolution #4 Acknowledging the filing of the Special Assessment Roll, Scheduling the Second Hearing for May 15, 2023, and Directing the Issuance of Statutory Notices for the Stillriver Drive Road Rehabilitation Special Assessment Project (Summer Tax 2023). **The motion carried unanimously with a roll call vote (Ledford - yes, Croft - yes, Hunt - yes, Lowe - yes, Mortensen- absent, Skolarus - yes, and Rogers - yes).**

Ms. Skolarus stated that an appeal of the Pine Creek Road Improvement Special Assessment District has been filed so township counsel has asked for a temporary postponement of agenda items #6, 7 and 8 to allow the attorneys to review the appeals and advise staff on the next steps.

Moved by Skolarus, supported by Lowe, to postpone Agenda Items #6, 7, and 8 as requested by the Township Attorney. **The motion carried unanimously,**

6. Request for approval of Resolution #6 Bond Authorizing Resolution for the Pine Creek Ridge Road Improvement Special Assessment District. (Roll Call)
7. Request to approve the Memorandum of Understanding with the Lake Villas of Pine Creek for their contribution to the 2023 Pine Creek Ridge Road Improvement Project.
8. Request to approve a project agreement with the Livingston County Road Commission to reconstruct the roads within the Pine Creek Ridge Subdivision consisting of approximately 5.45 miles with the Township's cost not to exceed \$4,210,000.
9. Consideration of a recommendation for approval of an environmental impact assessment corresponding to the site plan for proposed site grading on a 4.32-acre vacant parcel (4711-06-200-101) on the north side of Grand River Avenue, just west of Char-Ann Drive. The request is petitioned by Chestnut Development.

Mr. Allan Pruss of Monument Engineering, representing Chestnut Development, provided a review of the project. They will be grading the property and removing the guard rail to prepare it for future development. They will be preserving the trees as requested by the Planning Commission.

Mr. Mortensen arrived at 6:51 pm.

Moved by Hunt, supported by Lowe, to approve the Environmental Impact Assessment dated April 24, 2023 for Chestnut Development site grading project located on a 4.32-acre vacant parcel (4711-06-200-101) with the following conditions:

1. The silt fence line shall be adjusted to ensure protection of trees that are to be preserved per Planner's review letter dated April 4, 2023
2. MDOT approval for the removal of the guard rail shall be submitted to Township staff prior to issuance of land use permit.

The motion carried unanimously.

4. The proposal will result in the removal of several trees, though the submittal does not identify the exact (or estimated) quantity.
5. The submittal notes a potential location for structures that are not described/depicted in the PUD Agreement or the approved PUD plans. As suggested by Mr. Lekas , he recommends removing it from the plans.
6. The proposed construction road likely requires approval from the Road Commission.
7. Given the nature of the project, the plans need to be signed/sealed by a professional engineer.

Ms. Byrne has no engineering-related concerns with the project.

The Brighton Area Fire Authority Fire Marshal has no concerns regarding this project.

Ms. Spano stated Trinity has community farms at their other facilities. They use it as a community garden, patients use it for rehabilitation, the vegetables are served to the patients in the hospital, and it helps with their carbon footprint.

Commissioner Chouinard complimented the applicant for keeping the material on site.

The call to the public was made at 8:15 pm with no response.

Commissioner McCreary would like the applicant to add a tree buffer between this area and the adjacent residential property. Ms. Spano agrees. She recommended determining what should be planted after the grading has been completed. Commissioners agreed and recommended it be approved by Township Staff.

Moved by Commissioner Lowe, seconded by Commissioner Dhaenens, to recommend to the Township Board approval of the Environmental Impact Assessment dated February 24, 2023 for site grading for Trinity Health. **The motion carried unanimously.**

Moved by Commissioner McCreary, seconded by Commissioner McBain, to approve the Amendment to the approved Final PUD Site Plan dated February 24, 2023 for site grading for Trinity Health conditioned upon staff approval of additional tree plantings on the eastern side to buffer the neighboring property. **The motion carried unanimously.**

OPEN PUBLIC HEARING #5...Consideration of an environmental impact assessment and site plan for proposed site grading on a 4.32-acre vacant parcel (4711-06-200-101) on the north side of Grand River Avenue, just west of Char-Ann Drive. The request is petitioned by Chestnut Development.

- A. Recommendation of Environmental Impact Assessment (3-2-23)
- B. Disposition of Site Plan (2-10-23)

Mr. Allan Pruss of Monument Engineering Group and Brad Opfer of Chestnut Development were present. Mr. Pruss provided a review of the project, which will be to regrade the site and remove the guardrail along Grand River. The comments noted by the Township Planner will be addressed on the grading plan. They do not anticipate the need for stockpiling and staging; however, if it is, they have shown it on the plans.

The call to the public was made at 8:31 pm with no response.

Mr. Borden reviewed his letter dated April 4, 2023.

1. In accordance with Section 13.01, the Planning Commission has review and approval authority over the site plan for grading and tree removal.
2. Since the project only entails site engineering at this time, the applicant must address any comments provided by the Township Engineer.
3. He noted that the applicant has provided details of the stockpile and staging areas.
4. The silt fence line may need to be slightly adjusted to ensure protection of three trees that are to be preserved along the west and north sides of the limits of disturbance. Mr. Pruss advised that he will address these concerns.

Ms. Byrne reviewed her letter dated March 30, 2023.

1. The grading plan appears to be filling in an existing detention pond area and adjusting the outlet rim elevation. As the site is currently undeveloped, this change won't have a major impact on the downstream storm system. When the site is developed in the future it will need to have a new storm management system designed and would need MDOT approval to outlet to the Grand River storm sewer.
2. She noted the applicant has addressed the existing storm pipes shown on the survey plan but missing on the proposed grading plan.
3. The existing water main is shown on the survey plan but should also be clearly shown on the grading plan.

The Brighton Area Fire Authority Fire Marshal has no concerns regarding this project.

Commissioner McCreary questioned the trees along Char-Ann and Turning Leaf that have blue tags. Mr. Pruss stated there is 20 feet of greenspace from the end of pavement on Char-Ann to their property line and they will not be grading within the first 50 feet of their property, so this is almost 80 feet of trees and brush that will remain. She does not want to see those trees removed now since there is no plan to develop the site at this time. Mr. Pruss and Mr. Opfer agreed not to remove the trees.

Moved by Commissioner Lowe, seconded by Commissioner Dhaenens, to recommend to the Township Board approval of the Environmental Impact Assessment submitted by Chestnut Development dated March 2, 2023 for proposed site grading on a 4.32-acre vacant parcel

(4711-06-200-101) on the north side of Grand River Avenue, just west of Char-Ann Drive. **The motion carried unanimously.**

Moved by Commissioner Lowe, seconded by Commissioner Dhaenens, to approved the Site Plan submitted by Chestnut Development dated February 10, 2023 for site grading on a 4.32-acre vacant parcel (4711-06-200-101) on the north side of Grand River Avenue, just west of Char-Ann Drive, conditioned upon the trees to the north side of the property as discussed this evening shall not be removed per the revised diagram submitted this evening and final approval to be done by Township Staff. **The motion carried unanimously.**

ADMINISTRATIVE BUSINESS:

Staff Report

Ms. Ruthig stated there will be May and June Planning Commission meetings.

She advised that Staff may begin requesting demarcation signs be installed for wetlands in new developments. The developer does not encroach into the wetlands per the plans, but homeowners are not aware where the wetlands are adjacent to their property and sometimes mow their lawn into them, etc.

Approval of the February 13, 2022 Planning Commission meeting minutes

Needed changes were noted.

Moved by Commissioner McCreary, seconded by Commissioner Lowe, to approve the minutes of the February 13, 2022 Planning Commission Meeting as corrected. **The motion carried unanimously.**

Member Discussion

There were no items to discuss this evening.

Adjournment

Moved by Commissioner McCreary, seconded by Commissioner Lowe, to adjourn the meeting at 9:02 pm. **The motion carried unanimously.**

Respectfully Submitted,

Patty Thomas, Recording Secretary

April 2, 2024

Planning Commission
Genoa Township
2911 Dorr Road
Brighton, Michigan 48116

Attention:	Amy Ruthig, Planning Director
Subject:	Chestnut Development site grading and tree removal – Amendment to Approved Site Plan (3 rd Review)
Location:	Vacant parcel – north side of Grand River, west of Char-Ann Drive
Zoning:	OSD Office Service District

Dear Commissioners:

At the Township’s request, we have reviewed the revised submittal proposing an amendment to a previously approved site plan.

At their April 10, 2023 meeting, the Planning Commission granted conditional approval to allow site grading and tree removal, per Section 13.01 of the Township Zoning Ordinance.

The condition was that the (19) existing trees on the north side of the property were to be preserved.

Subsequent to that approval, grading activities commenced, and the trees subject to the Commission’s condition were removed.

The applicant has appeared before the Commission on multiple occasions to resolve this matter, and has provided a revised plan in response to the most recent discussion (cover sheet most recently dated 3/19/24).

A. Summary

1. In accordance with Section 13.01, the Planning Commission has review and approval authority over the amended site plan.
2. We are unable to identify 4 of the 16 trees that are to be preserved.
3. The northerly buffer zone provides 45 new evergreen trees atop a landscaped berm and protection of 3 large canopy trees (which count as 6 trees, by Ordinance).
4. The proposal is essentially consistent with buffer zone “B” planting requirements of the Ordinance.
5. The silt fence line should be adjusted to ensure protection of the 14-inch tree along the west side of the limits of disturbance.
6. The applicant must address any comments provided by the Township Engineer.

B. Background/Proposal/Process

The applicant proposed site grading and tree removal in anticipation of future development of the property.

Per Section 13.01, grading that changes the topography of the site by more than 3 feet on average or removal of more than 25% of existing trees with a diameter of 8 inches or more is subject to review by the Zoning Administrator, though it may be forwarded to the Planning Commission for their consideration (as is the case in this instance).

The project entailed filling to level the parcel, which has/had approximately 20’ of elevation change from the northwest (high ground) to the southeast.



Aerial view of site and surroundings (looking north)

The current plan includes the removal of 58 trees with a diameter of 8 inches or more (78% of such trees on site). It is important to note that we are only able to identify 12 trees to be preserved (as opposed to the 16 noted in the calculations).

Procedurally, the Planning Commission has review and approval authority over the amended site plan.

C. Review

We provide the following comments for the Commission's consideration:

- The amended plan maintains 20' side yard buffer zones, and a 50' rear buffer zone from the LDR property to the north.
- 45 new evergreen trees are proposed along the northerly property line atop a landscaped berm.
- The proposal includes 4 types of evergreen trees (Norway Spruce, Black Hill Spruce, Colorado Blue Spruce, and Eastern White Pine).
- A buffer zone "B" would entail 16 canopy trees, 16 evergreen trees, and 64 shrubs atop a berm. The proposed buffer zone includes 45 evergreen trees atop a berm and preservation of 3 existing canopy trees (which count as 6 trees, per Ordinance standards).
- The silt fence line should be adjusted to ensure protection of the 14-inch tree along the west side of the limits of disturbance.
- The Commission should consider any comments provided by the Township engineering consultant.

Should you have any questions concerning this matter, please do not hesitate to contact our office.

Respectfully,

SAFE BUILT

A handwritten signature in black ink that reads 'Brian V. Borden'.

Brian V. Borden, AICP
Michigan Planning Manager

From: [Barber, John](#)
To: [Amy Ruthig](#)
Subject: Chestnut Site Grading Amendment
Date: Monday, April 1, 2024 3:41:45 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)

Hi Amy,

I looked at the revised plan dated 3/19/2024 showing the berm along the north side of the site.

While the berm and plantings should not impact the existing sanitary or water main easements, storm water runoff from the site into the Turning Leaf Drive right-of-way will be increased. No calculations are provided. The petitioner should verify that runoff will not be increased.

Thank you,

John

John Y. Barber, PE | Project Manager

Direct +1 (810) 956-9324 | Business +1 (734) 665-6000 | Cell +1 (810) 986-4570 | john.barber@tetrattech.com

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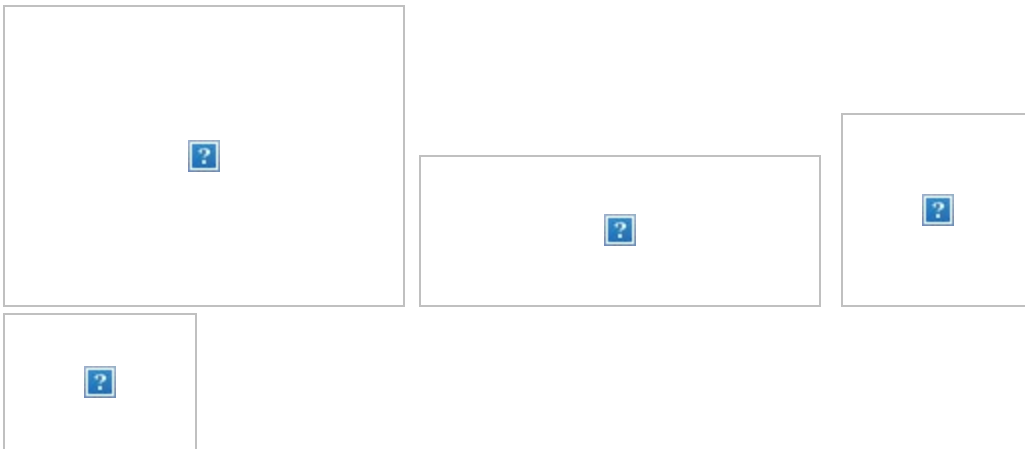
From: [Rick Boisvert](#)
To: [Amy Ruthig](#)
Cc: [Kelly VanMarter](#)
Subject: Plans
Date: Friday, November 3, 2023 4:48:03 PM
Attachments: [7075 McClements Rd. Fillmore Park Mountain Bike GT \(Site\) 11032023.pdf](#)
[1015 S. Latson Rd - Mister Car Wash GT \(Site\) 11032023.pdf](#)
[1111 S Latson Rd South Latson Commercial Development GT \(Site\) 11032023.pdf](#)
[3639 E Grand River Ave - Arby's \(Site\) \(GT\) 11032023.pdf](#)

Amy,
Attached are review letters for those who need them from us.

We have no new comments on the Chestnut Site Grading and No issues with the Woodland Village Parking plans. I don't see a need for a letter unless you would like one for these two.

Cordially,

Rick Boisvert, FM, CFPS
Fire Marshal
Brighton Area Fire Authority
615 W. Grand River
Brighton, MI 48116
O: (810)229-6640 D: (810)299-0033
F: (810)229-1619 C: (248)762-7929
rboisvert@brightonareafire.com





Monument Engineering Group Associates, Inc.

Developing Lifelong Relationships

monumentengineering.com

298 Veterans Drive, Fowlerville, MI 48836 (HQ)
(517) 223-3512



IMPACT ASSESSMENT

VACANT LAND GRAND RIVER AVE.
SECTION 6, GENOA TOWNSHIP

PREPARED BY:

Monument Engineering Group Associates, Inc.
298 Veterans Drive
Fowlerville, MI 48836

PREPARED FOR:

Chestnut Development
6253 Grand River Avenue
Suite 750
Brighton, MI 48114

March 2, 2023

Revised April 24, 2023

Updated September 20, 2023

- *Fowlerville*
- *Northern Michigan*
- *Portage*

IMPACT ASSESSMENT

Revised Plans:

Plans were revised on September 1, 2023, to show new trees (19) replacing trees originally identified to be saved that were inadvertently removed during grading operations. These revisions have no impact on the Impact Assessment previously submitted.

18.07.01 Preparer:

Prepared by: Monument Engineering Group Associates, Inc.

298 Veterans Drive, Michigan 48836

Allan W Pruss, PE, PS

Mr. Pruss has over 30 years of land development experience as an engineer and project manager.

Project Description:

This project entails filling the site in preparation for future development. Currently the site has approximately 20' of fall from the northwest corner to the southeast corner of the site. Some clearing of the site (tree removal) will take place as part of the earthmoving operations.

Landscape setbacks will be adhered to around the perimeter of the site so as to not affect the adjoining parcels.

18.07.02 Location:

The site is in Section 6 T02N, R05E on the north side of Grand River Avenue. Just west of Char Ann Drive and east of Tahoe Blvd. Parcel ID 4711-06-200-101. See location map.

The site is a 4.34 acres parcel of vacant land with some trees mainly on the north side of the property. There is approximately 20' of vertical relief from the northwest corner of the property to the southeast corner. There are no structures on the site.

The property to the north is a residential neighborhood with Turning Leaf Drive adjacent to the property. To the east is an office building with access off Char Ann Drive. To the south is Grand River Avenue with vacant land (wetlands) to the south of Grand River Ave. To the west is a single-family structure located +/-350' from Grand River Ave.

See Location Map and aerial photo for specific location and description of the property.

IMPACT ASSESSMENT



18.07.03 Impact on natural features:

The site is a 4.34 acres parcel of vacant land with some trees mainly on the north side of the property. There is approximately 20' of vertical relief from the northwest corner of the property to the southeast corner. There are no structures on the site. There are approximately 70 trees on site with a diameter breast height (DBH) of 8" or greater. Per the soil survey mapper, soil characteristics are mainly loam with some Carlisle muck. No soils investigation has been conducted as part of this project. There are no known wetlands (regulated or non-regulated) on the site. See site plan for existing conditions survey of the site.

18.07.04 Impact on stormwater management:

The site drains from northwest to southeast with approximately 20' of fall. The plan for this project is to prepare the site for future development by bringing fill to the site and creating a more level site. There will be no increase in impervious area. Soil erosion control measures will be implemented, and a soil erosion sediment control (SESC) permit will be applied for with the Livingston County Drain Commission (LCDC). There will be no impact on stormwater management nor the surrounding stormwater facilities.

18.07.05 Impact on surrounding land uses:

The proposed use will remain unchanged from current use (Vacant Land) as this is a site preparation project only. There will be no increase in noise, light or pollutants when this project is finished. Construction activities will take place during normal business hours, Monday through Saturday, 8 am until 6 pm. Dust control during construction will be handled by utilizing water buffalos during dry periods to keep moisture in the soils and minimize dust to adjoining parcels.

IMPACT ASSESSMENT

Included as part of the soil erosion permit will be a tracking mat designed to knock mud off equipment and vehicles leaving the site. Any mud tracked onto any adjoining roads will be cleaned up daily or as needed during the day.

18.07.06 Impact on public facilities and services:

The proposed use will remain unchanged from current use (Vacant Land) as this is a site preparation project only. There will be no increase in activity on this site after the project is completed. There will be no impact on public facilities or services after the project is completed.

18.07.07 Impact on public utilities:

The proposed use will remain unchanged from current use (Vacant Land) as this is a site preparation project only. Although all public and private utilities are available to service this site, no new utility connections are proposed, therefore there will be no impact on public utilities. There is an existing connection to the public storm sewer system connecting into the Grand River right of way (ROW). This connection will remain in place and the current drainage patterns on the site will be maintained.

A SESC permit will be applied for from LCDC which will have erosion control measures implemented on the site throughout construction. These measures require them to be inspected on a weekly basis, or within 24 hours of a rain event, to ensure their integrity and that they are working properly.

18.07.08 Storage and handling of any hazardous materials:

There will be no storage or handling of any hazardous materials on this site during or after construction.

18.07.09 Traffic Impact Study:

As the property will remain vacant after construction activities, there will be no increase in directional trips to or from the site. Therefore, no traffic impact study will be required.

18.07.10 Historic and Cultural Resources:

The site is currently vacant land with no structures.

18.07.11 Special Provisions:

No special provisions are being requested.

18.07.12 A list of all sources shall be provided:

No sources cited herein.

18.07.13 Any impact assessment previously submitted:

There are no previous impact assessments previously submitted that we are aware of.

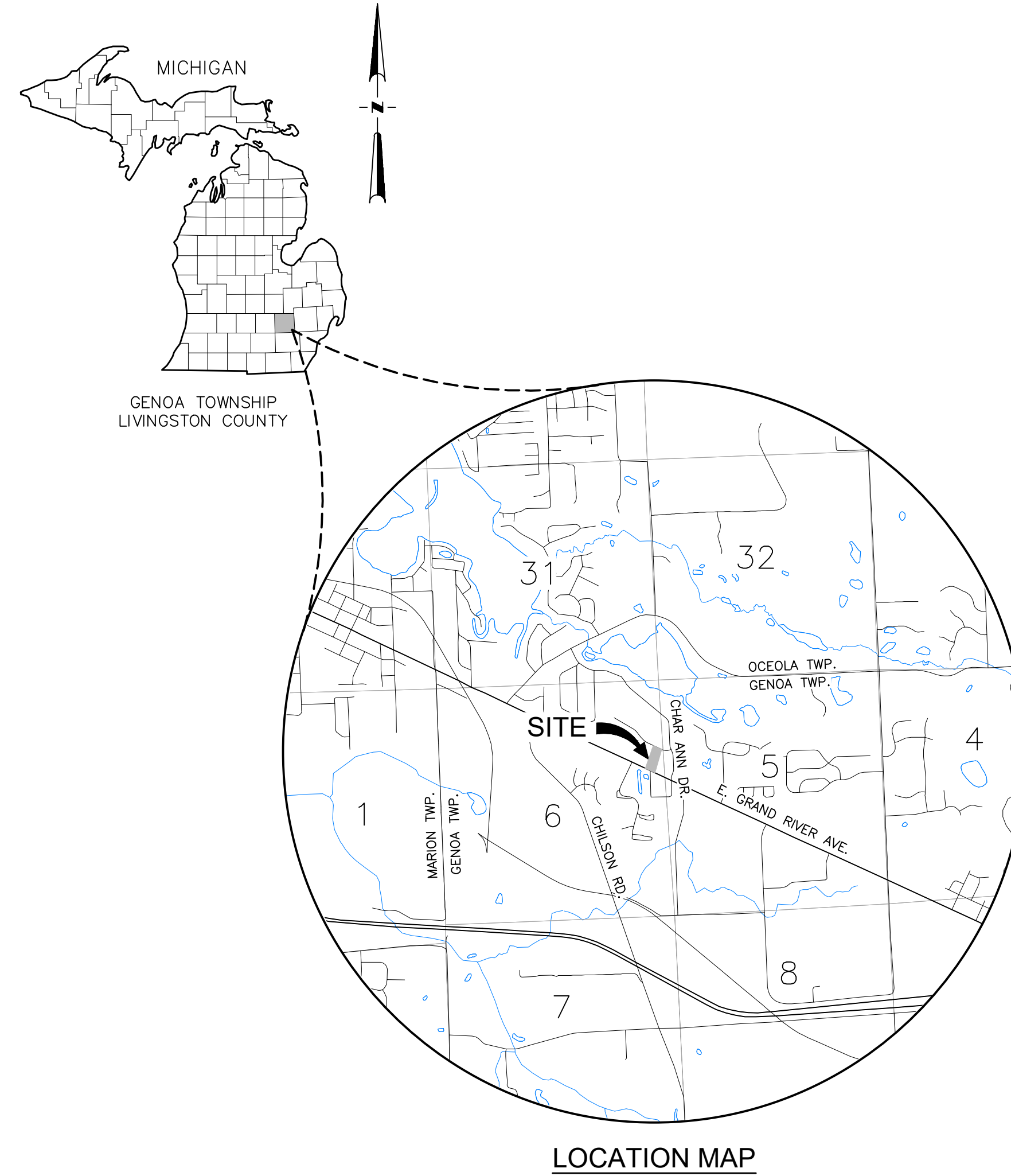
LEGAL DESCRIPTION (AS PROVIDED)

(PER TAX DESCRIPTION PROVIDED BY LIVINGSTON COUNTY GEOSPATIAL INFORMATION SYSTEM (GIS) MAPPING)

TAX NUMBER: 4711-06-200-101

SEC 6 T2N 55E COMM E 1/4 COR SEC TH N01°17'20"E 674.10 FT TH N61°41'16"W 330 FT FOR POB TH CONT N61°40'16"W 398.16 FT TH N21°00'11"E 424.64 FT TH N62°52'38"W 100.58 FT TH N20°45'29"E 50.12 FT TH S62°41'43"E 483.35 FT TH S19°15'30"W 483.42 FT TO POB CORR LEGAL 10/01 CONT. 4.37 AC.

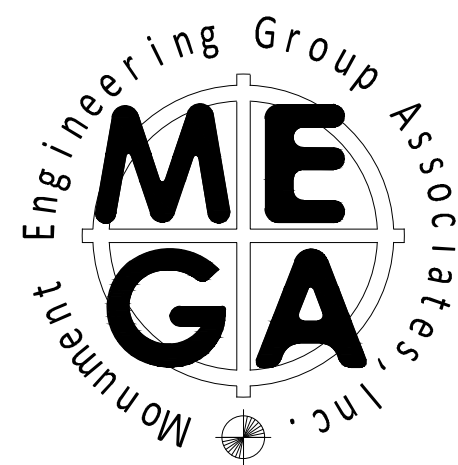
PRELIMINARY SITE PLAN DRAWING FOR CHESTNUT E. GRAND AVE



BEARING REFERENCE

BEARINGS ARE BASED ON PROJECT COORDINATE SYSTEM: MICHIGAN STATE PLANE COORDINATE SYSTEM, NAD83 (CONUS) (MOL) (GRS80), SOUTH ZONE 2113, INTERNATIONAL FEET, GROUND (LAT: 42°35'46.85" N, LON: 83°53'42.74" W, ELEV: 800.00', SCALE FACTOR: 1.00003817).

DESIGN ENGINEER/SURVEYOR



MONUMENT ENGINEERING GROUP ASSOCIATES, INC

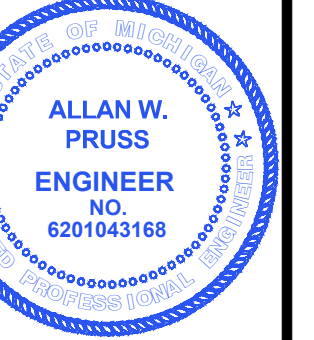
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298 VETERANS DRIVE, FOWLERVILLE, MI 48836 ALLAN W PRUSS, PE, PS PHONE: 517-223-3512

CLIENT

CHESTNUT DEVELOPMENT 6253 GRAND RIVER AVENUE SUITE 750 BRIGHTON, MICHIGAN 48114 POC: STEVE GRONOW PHONE: 517-552-2489

Table with columns for PLAN SUBMITTALS (SHEET, DATE) and INCLUDED SHEETS (GENERAL, SURVEY, GRADING AND SOIL EROSION & SEDIMENTATION CONTROL (SESC), ROAD PLANS, DETAILS, SPECIFICATIONS). Includes a 'SHEET INDEX' label and 'GENOA TOWNSHIP, LIVINGSTON COUNTY STANDARD DETAILS' at the bottom.



Call MISS DIG 3 full working days before you dig.



THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE INDIVIDUALLY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

CLIENT: CHESTNUT DEVELOPMENT 6253 GRAND RIVER AVE. SUITE 750 BRIGHTON, MI 48114 POC: STEVE GRONOW 517-552-2489

COVER PARCEL 4711-06-200-101 PART OF NE 1/4, SEC. 6, T2N-R5E, GENOA CHARTER TOWNSHIP LIVINGSTON COUNTY, MICHIGAN

Table with columns: PLAN SUBMITTALS/REVISIONS, DATE. Rows include: REVISED TREE REMOVAL CALC (03/22/2023), SITE PLAN SUBMITTAL (03/01/2023), SITE PLAN REVIEW COMMENTS (04/24/2023), REVISED MDOT SUBMITTAL (06/30/2023), REVISED MDOT SUBMITTAL (07/07/2023), REVISED SITE PLAN SUBMITTAL (10/17/2023), REVISED SITE PLAN SUBMITTAL (3/19/2024).

CURRENT ISSUE DATE: 4/24/2023

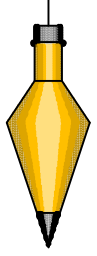
PROJECT NO: 22-168

SCALE: N/A 0 1/2" 1"

FIELD: RZ DRAWN BY: MV/MN DESIGN BY: BS CHECK BY: MAJAP

G-10

NOT FOR CONSTRUCTION



STRUCTURE SCHEDULE

EX. STORM SEWER		
STRUCTURE	RIM ELEV.	PIPES
(50412) CBB	953.05	24" NW IE= 943.90 24" SE IE= 944.03
(60196) CBS	961.31	UNABLE TO ACCESS
(60290) CBR	949.74	12" SE IE= 944.52
(60291) STMH	952.44	UNABLE TO ACCESS
(60295) CBB	951.48	24" NW IE= 944.03 24" SE IE= 945.23
(60342) CBS	952.91	12" N IE= 950.69
(60375) CBS	955.08	10" NE IE= 952.87

EXISTING PARKING

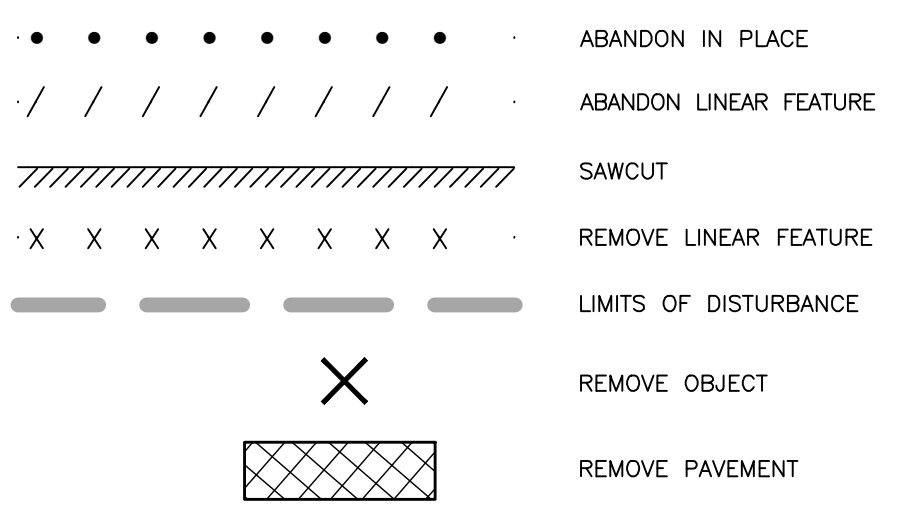
THERE ARE NO STRIPED PARKING SPACES ON THE SUBJECT PROPERTY.

SOILS INFO

SOIL TYPES ARE ACCORDING TO THE USDA SOIL SURVEY WEB SITE (https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm)

- Caraba: CARLISLE MUCK, 0-2% SLOPES
- MoA: WAWASEE LOAM, 0-2% SLOPES
- MoB: WAWASEE LOAM, 2-6% SLOPES
- MoD: MIAMI LOAM, 12-18% SLOPES

DEMOLITION LEGEND



DEMOLITION NOTES

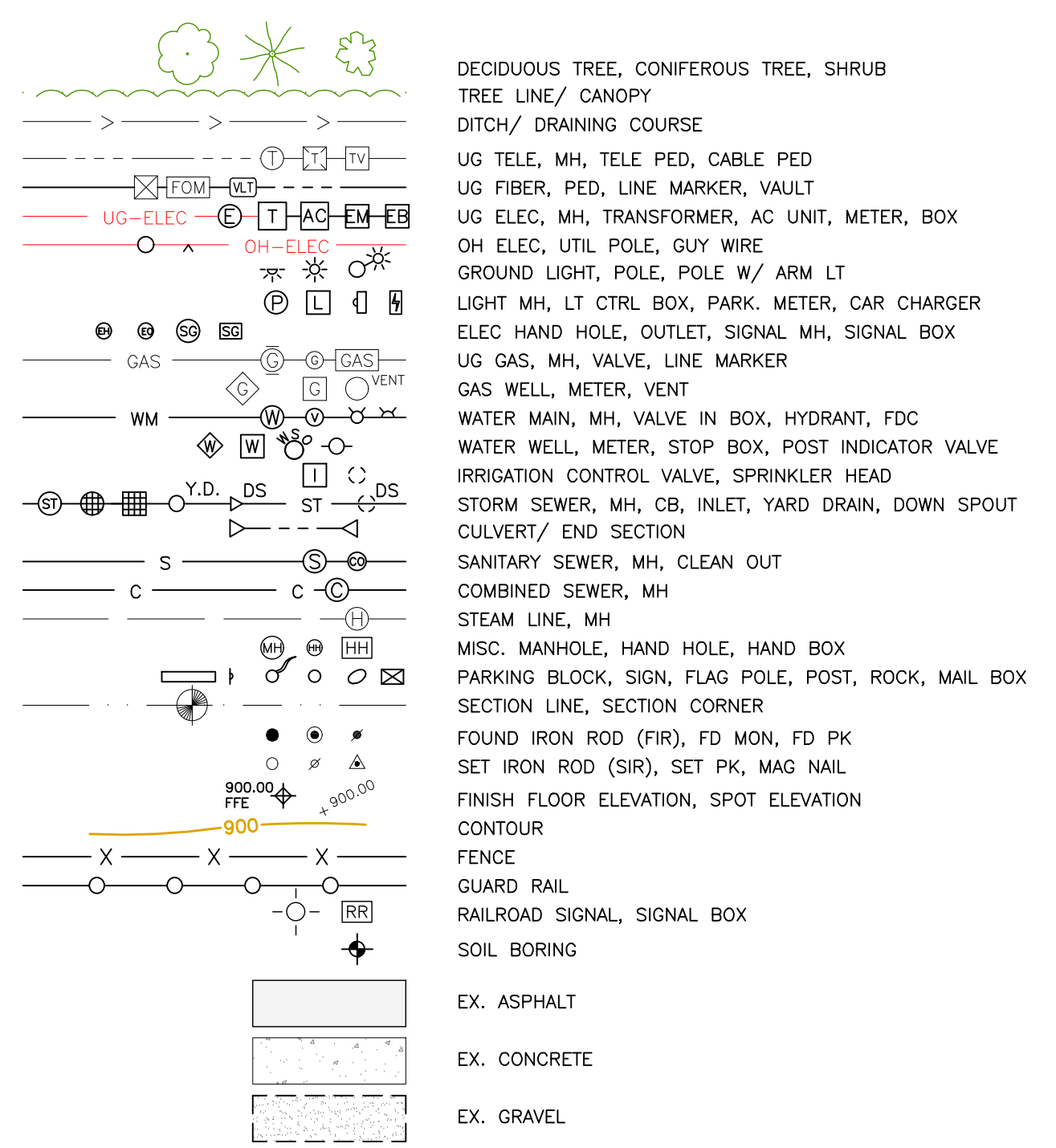
- UTILITY OBJECTS SUCH AS GAS METER, TRANSFORMER, TELEPHONE PEDESTAL, UTILITY POLE & WIRES ARE TO BE REMOVED BY OTHERS IF APPLICABLE.
- ANY TREES NOT MARKED PER PLAN ARE TO BE PROTECTED & PRESERVED DURING CONSTRUCTION.
- ALL EXISTING MDOOT SIGNS DAMAGED OR LOST BY THE CONTRACTOR MUST BE REPLACED IN KIND ON NEW SUPPORTS AT THE CONTRACTOR'S EXPENSE.
- ALL EXISTING PAVEMENT MARKINGS THAT ARE REMOVED FOR TRAFFIC CONTROL OR OBLITERATED DURING CONSTRUCTION OPERATIONS MUST BE REPLACED WITH WATERBORNE FOR THE LONGITUDINAL, LANE LINES.

TREE REMOVAL CALCS

74 TREES ON-SITE WITH A DIAMETER 8" OR LARGER
NUMBER OF TREES PROPOSED TO BE REMOVED: 58

58/74 x 100 = 78% OF TREES 8" OR LARGER BEING REMOVED

EXISTING LEGEND



WETLAND NOTE

ACCORDING TO THE NATIONAL WETLAND INVENTORY WEBSITE (HTTP://WWW.FWS.GOV/WETLANDSDATAMAPPER.HTML), THERE ARE NO NOTED WETLANDS ON THE SUBJECT PARCEL.

WETLAND FLAGGING WAS NOT OBSERVED DURING THE FIELD SURVEY. AN OFFICIAL STUDY FOR THE PRESENCE OF WETLANDS WAS NOT CONDUCTED BY MONUMENT ENGINEERING GROUP ASSOCIATES.

FLOOD ZONE

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

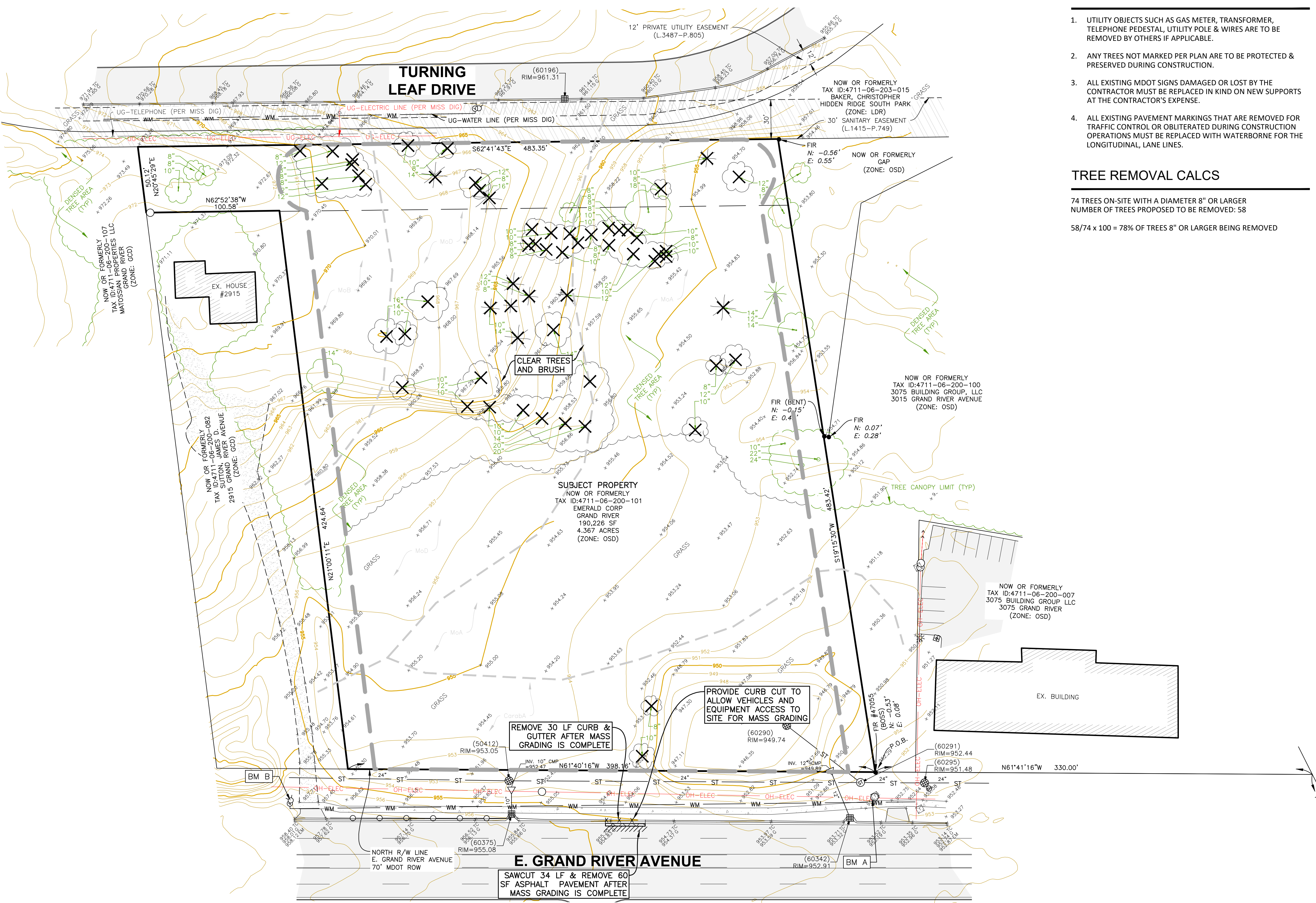
BY SCALED MAP LOCATION AND GRAPHIC PLOTTING ONLY, THE SUBJECT PROPERTY APPEARS TO LIE ENTIRELY IN ZONE (X) AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN ACCORDING TO THE FLOOD INSURANCE RATE MAP FOR THE COUNTY OF LIVINGSTON, COMMUNITY PANEL NO. (26093C0307D), EFFECTIVE DATE 9/17/2008.

UTILITY NOTES

- ALL FRANCHISE UTILITIES (GAS, FIBER, CABLE, UG ELEC., TELE.) SHOWN ARE BASED ON MISS DIG MARKINGS LOCATED AT TIME OF SURVEY UNLESS NOTED OTHERWISE.
- THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

BENCHMARKS

- DATUM: NAVD88
- BM A:
DESC. BENCH TIE ON SOUTH SIDE OF UTILITY POLE
ELEV = 952.871'
- BM B:
DESC. TOP ARROW OF HYDRANT
ELEV = 960.727'



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ALLAN W. PRUSS
ENGINEER
NO. 6201043168

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CLIENT :

CHESTNUT DEVELOPMENT
6253 GRAND RIVER AVE.
SUITE 750
BRIGHTON, MI 48114
POC: STEVE GRONOW
517-552-2489

TOPOGRAPHIC SURVEY & DEMO PLAN

PARCEL 4711-06-200-101
PART OF NE 1/4, SEC. 6, T2N-R5E,
GENOA CHARTER TOWNSHIP
LIVINGSTON COUNTY, MICHIGAN

DATE	DESCRIPTION
03/23/2023	PLAN SUBMITTALS/REVISIONS
03/01/2023	REVISED TREE REMOVAL CALC
04/24/2023	SITE PLAN SUBMITTAL
06/30/2023	SITE PLAN REVIEW COMMENTS
07/07/2023	REVISED MDOOT SUBMITTAL
09/01/2023	REVISED SITE PLAN SUBMITTAL
10/17/2023	REVISED SITE PLAN SUBMITTAL
3/19/2024	REVISED SITE PLAN SUBMITTAL

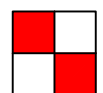
CURRENT ISSUE DATE:
4/24/2023

PROJECT NO: 22-168

SCALE: 1" = 40'

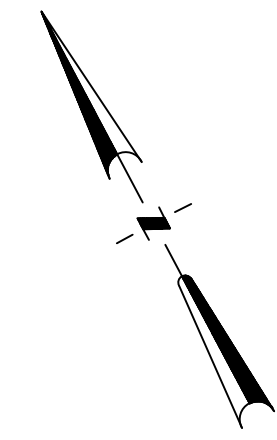
FIELD:
DRAWN BY: RZ
DESIGN BY: MV/MN
CHECK BY: MAJAP

V-10



AERIAL SOURCE

AERIAL IMAGE PER ESRI/DIGITAL GLOBE
DATE: UNKNOWN



TURNING LEAF DRIVE

E. GRAND RIVER AVENUE

INNOVATIVE GEOSPATIAL & ENGINEERING SOLUTIONS

298 VETERANS DRIVE
FOWLERVILLE, MICHIGAN 48836
(OFFICE) 517-223-3512
MONUMENTENGINEERING.COM

SERVICE DISABLED VETERAN OWNED
SMALL BUSINESS (SDVOSS)

ALLAN W. PRUSS
ENGINEER
NO. 6201043168

Allan W. Pruss

Call MISS DIG
3 full working days before you dig:

Michigan's Utility One-Call Notification Organization

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THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITIES, LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

CLIENT :

CHESTNUT DEVELOPMENT
6253 GRAND RIVER AVE.
SUITE 750
BRIGHTON, MI 48114
POC: STEVE GRONOW
517-552-2489

AERIAL VIEW

PARCEL 4711-06-200-101
PART OF NE 1/4, SEC. 6, T2N-R5E,
GENOA CHARTER TOWNSHIP
LIVINGSTON COUNTY, MICHIGAN

PLAN SUBMITTALS/REVISIONS	DATE
REVISED TREE REMOVAL CALC	03/22/2023
SITE PLAN SUBMITTAL	03/01/2023
SITE PLAN REVIEW COMMENTS	04/24/2023
REVISED WOOD SUBMITTAL	06/30/2023
REVISED SITE PLAN SUBMITTAL	07/07/2023
REVISED SITE PLAN SUBMITTAL	09/01/2023
REVISED SITE PLAN SUBMITTAL	10/17/2023
REVISED SITE PLAN SUBMITTAL	3/19/2024

CURRENT ISSUE DATE: 4/24/2023

PROJECT NO: 22-168

SCALE: 1" = 40'

FIELD: RZ
DRAWN BY: MV,MN
DESIGN BY: BS
CHECK BY: MA,AP

V-2.0

NOT FOR CONSTRUCTION

BENCHMARKS

DATUM: NAVD88

BM A:
DESC. BENCH TIE ON SOUTH SIDE OF UTILITY POLE
ELEV = 952.871'

BM B:
DESC. TOP ARROW OF HYDRANT
ELEV = 960.727'

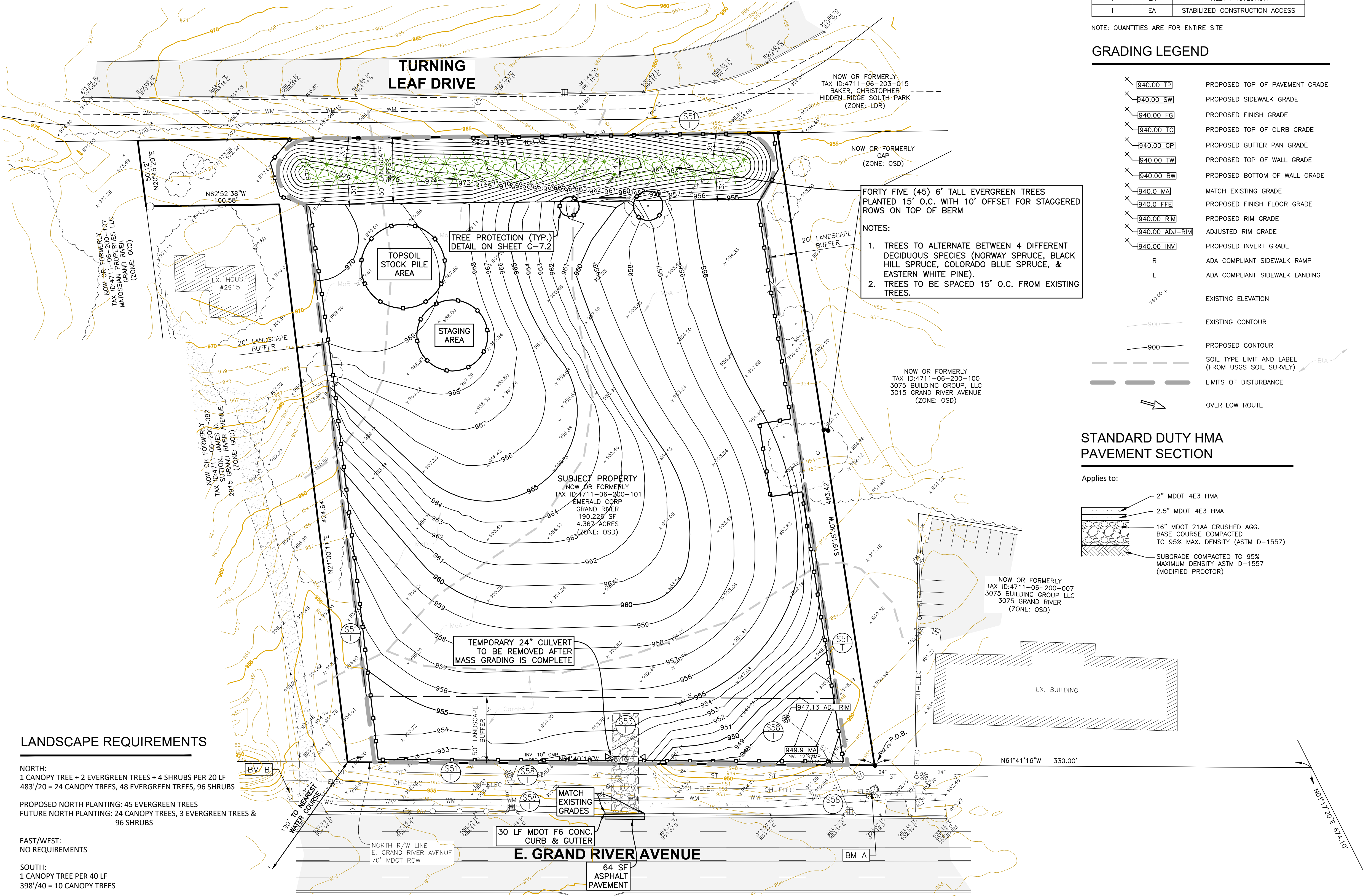
SOILS INFO

SOIL TYPES ARE ACCORDING TO THE USDA SOIL SURVEY WEB SITE
(<https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>)

SOIL TYPE LIMIT AND LABEL

- CarabA: CARLISLE MUCK, 0-2% SLOPES
- MoA: WAWASEE LOAM, 0-2% SLOPES
- MoB: WAWASEE LOAM, 2-6% SLOPES
- Mod: MIAMI LOAM, 12-18% SLOPES

CONSTRUCTION SEQUENCE	OPERATION TIME SCHEDULE - BEGINNING		
	APR	MAY	JUN
1 CONTRACTOR SHALL INSTALL SILT FENCE AS SHOWN ON APPROVED PLANS.			
2 REMOVE ALL TOPSOIL AND ORGANIC MATTER. TOPSOIL MAY BE STORED ON SITE IN DESIGNATED AREA TO BE USED FOR FUTURE PLANTING AND FILL AREAS. TRUCK REMAINING TOP SOIL OFFSITE AND PROPERLY DISPOSE.			
3 PLACE INLET FILTERS AT CATCH BASINS THROUGHOUT SITE.			
4 FINISH GRADE AND STABILIZE AS SOON AS POSSIBLE. STABILIZE ALL DISTURBED AREAS WITH CLASS A SEED AND MULCH. IN AREAS OF SLOPES OF 1:4 OR STEEPER, CONTRACTOR TO SEED AND INSTALL PEGGED IN PLACE EROSION CONTROL BLANKETS.			
5 REPAIR/CLEAN INLET FILTERS AS REQUIRED.			
6 REMOVE TEMPORARY SOIL EROSION MEASURES ONCE SEEDED VEGETATION HAS BEEN ESTABLISHED. CLEAN ALL AFFECTED STORM STRUCTURES AS NECESSARY.			



LANDSCAPE REQUIREMENTS

NORTH:
1 CANOPY TREE + 2 EVERGREEN TREES + 4 SHRUBS PER 20 LF
483'/20 = 24 CANOPY TREES, 48 EVERGREEN TREES, 96 SHRUBS

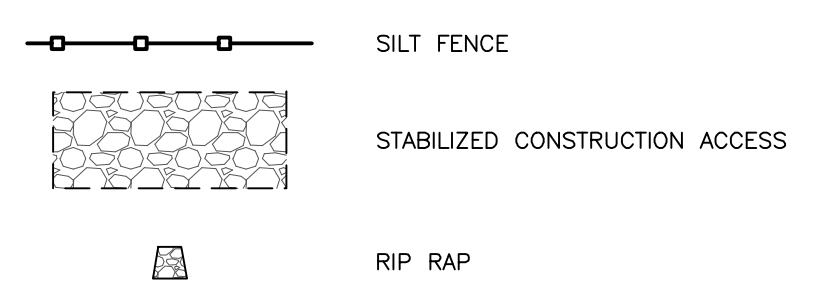
PROPOSED NORTH PLANTING: 45 EVERGREEN TREES
FUTURE NORTH PLANTING: 24 CANOPY TREES, 3 EVERGREEN TREES & 96 SHRUBS

EAST/WEST:
NO REQUIREMENTS

SOUTH:
1 CANOPY TREE PER 40 LF
398'/40 = 10 CANOPY TREES

PROPOSED SOUTH PLANTING: 0 CANOPY TREES
FUTURE SOUTH PLANTING: 10 CANOPY TREES

SESC LEGEND

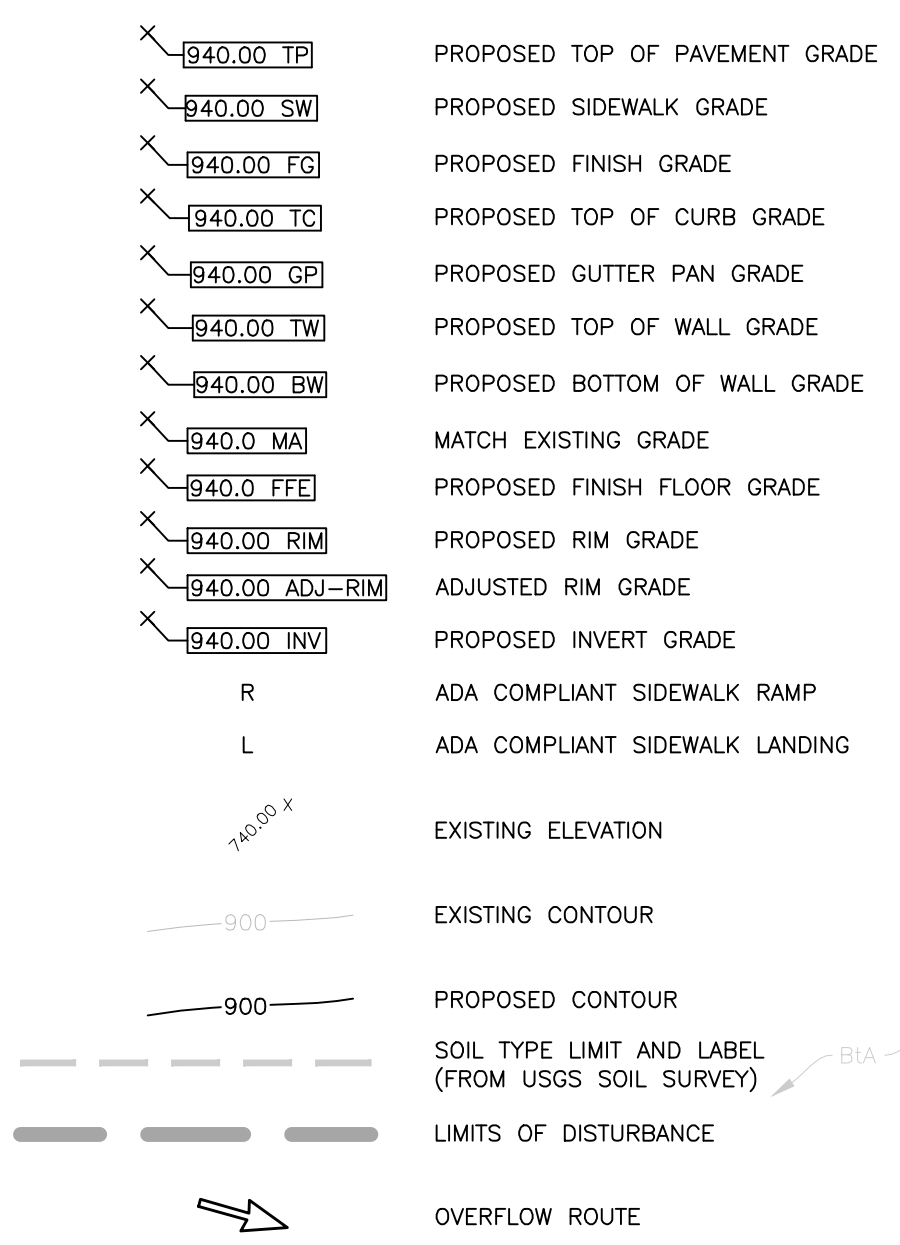


EROSION CONTROL QUANTITIES

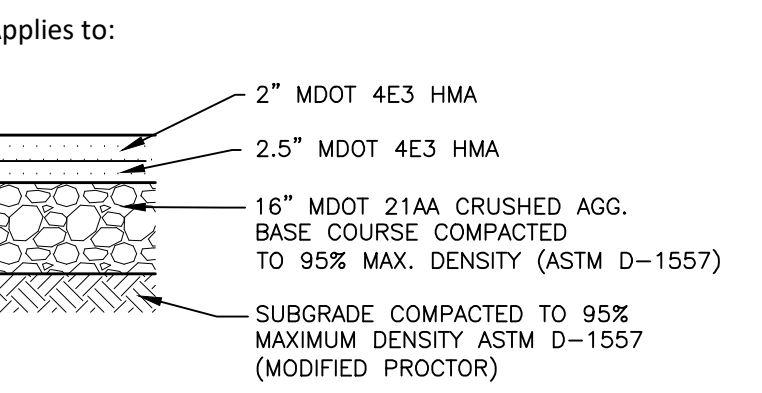
Disturbed Area: 3.84 Acres

QTY	UNIT	ITEM
1724	LF	SILT FENCE
4	EA	INLET PROTECTION
1	EA	STABILIZED CONSTRUCTION ACCESS

GRADING LEGEND



STANDARD DUTY HMA PAVEMENT SECTION



DTMB SOIL EROSION & SEDIMENTATION CONTROL MEASURES

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

EROSION CONTROLS			
KEY	BEST MANAGEMENT PRACTICES	SYMBOL	WHERE USED
E6	MULCH		FOR USE IN AREAS SUBJECT TO ERODING SURFACE FLOWS OR SEVERE WIND OR ON NEWLY SEEDED AREAS.
E8	PERMANENT SEEDING		STABILIZATION METHOD UTILIZED ON SITES WHERE EARTH CHANGE HAS BEEN COMPLETED (FINAL GRADING ATTAINED).

SEDIMENT CONTROLS			
KEY	BEST MANAGEMENT PRACTICES	SYMBOL	WHERE USED
S51	SILT FENCE		USE ADJACENT TO CRITICAL AREAS, TO PREVENT SEDIMENT LADEN SHEET FLOW FROM ENTERING THESE AREAS.
S53	STABILIZED CONSTRUCTION ACCESS		USED AT EVERY POINT WHERE CONSTRUCTION TRAFFIC ENTERS OR LEAVES A CONSTRUCTION SITE.
S55	SEDIMENT BASIN		AT THE OUTLET OF DISTURBED AREAS AND AT THE LOCATION OF A PERMANENT DETENTION BASIN.
S58	INLET PROTECTION FABRIC DROP		USE AT STORMWATER INLETS, ESPECIALLY AT CONSTRUCTION SITES.

EROSION & SEDIMENT CONTROLS			
KEY	BEST MANAGEMENT PRACTICES	SYMBOL	WHERE USED
ES31	CHECK DAM		USED TO REDUCE SURFACE FLOW VELOCITIES WITHIN CONSTRUCTED AND EXISTING FLOW CORRIDORS.

TEMPORARY (X/T) PERMANENT (X/P)

EROSION CONTROL STANDARDS

- ALL EROSION AND SEDIMENT CONTROL WORK SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE LIVINGSTON COUNTY DRAIN COMMISSIONER'S OFFICE.
- DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR FOR EFFECTIVENESS OF EROSION AND SEDIMENTATION CONTROL MEASURES, AND ANY NECESSARY REPAIRS SHALL BE PERFORMED WITHOUT DELAY.
- EROSION AND ANY SEDIMENTATION FROM WORK ON THIS SITE SHALL BE CONTAINED ON THE SITE AND NOT ALLOWED TO COLLECT ON ANY OFF-SITE AREAS OR IN WATERWAYS. WATERWAYS INCLUDE BOTH NATURAL AND MAN-MADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES AND PONDS.
- CONTRACTOR SHALL APPLY TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES WHEN REQUIRED AND AS DIRECTED ON THESE PLANS. CONTRACTOR SHALL REMOVE TEMPORARY MEASURES AS SOON AS PERMANENT STABILIZATION OF SLOPES, DITCHES AND OTHER CHANGES HAS BEEN ACCOMPLISHED.
- STAGING OF THE WORK WILL BE DONE BY THE CONTRACTOR AS DIRECTED IN THESE PLACES AND AS REQUIRED TO INSURE PROGRESSIVE STABILIZATION OF DISTURBED AREAS.
- SOIL EROSION CONTROL PRACTICES WILL BE ESTABLISHED IN EARLY STAGES OF CONSTRUCTION BY THE CONTRACTOR. SEDIMENT CONTROL PRACTICES WILL BE APPLIED AS A PERIMETER DEFENSE AGAINST ANY TRANSPORTING OF SILT OFF THE SITE.
- A CERTIFIED STORM WATER OPERATOR WILL BE NAMED ON THE MDEQ NOTICE OF COVERAGE FOR NPDES AS REQUIRED.
- ALL DISTURBED AREAS ARE TO BE TOP SOILED AND SEEDED WITH THE FOLLOWING MIN RATIO:
TOP-SOIL 3" IN DEPTH, GRASS SEED 218 LBS PER ACRE, FERTILIZER 150 LBS PER ACRE, STRAW MULCH 3" DEPTH 1.5 TO 2 TONS PER ACRE.
- HYDRO-SEEDING IS NOT ACCEPTABLE FOR SLOPES EXCEEDING 1%. ON SLOPES OVER 1%, STABILIZATION SHALL BE DONE WITH SEED AND STRAW MULCH WITH A TACKIFIER, OR STRAW BLANKETS PEGGED IN PLACE.

SOIL EROSION CONTROL MAINTENANCE SCHEDULE AND NOTES.

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

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ENGINEER
NO. 6201043168

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CLIENT :

CHESTNUT DEVELOPMENT
6253 GRAND RIVER AVE.
SUITE 750
BRIGHTON, MI 48114
POC: STEVE GRONOW
517-552-2489

GRADING AND SESC PLAN

PARCEL 4711-06-200-101
PART OF NE 1/4, SEC. 6, T2N-R5E,
GENOA CHARTER TOWNSHIP
LIVINGSTON COUNTY, MICHIGAN

DATE	DESCRIPTION
02/22/2023	PLAN SUBMITTALS/REVISIONS
03/01/2023	REVISED TREE REMOVAL CALC
04/24/2023	SITE PLAN SUBMITTAL
06/30/2023	REVISED MDOT COMMENTS
07/07/2023	REVISED MDOT SUBMITTAL
09/01/2023	REVISED SITE PLAN SUBMITTAL
10/17/2023	REVISED SITE PLAN SUBMITTAL
3/19/2024	REVISED SITE PLAN SUBMITTAL

CURRENT ISSUE DATE: 4/24/2023

PROJECT NO: 22-168

SCALE: 1" = 40'

0 1/2" 1"

FIELD: RZ
DRAWN BY: MV/MN
DESIGN BY: BS
CHECK BY: MA/AP

C-7.0

NOT FOR CONSTRUCTION

LCDC NOTES

Top Soil & Soil Storage Areas:

- Top soil or soil storage areas shall be seeded and mulched, or matted with straw, immediately after the stripping process is completed, to prevent wind and water erosion.

Slopes and Ditches:

- On-site ditches shall be of the flat bottom type, minimum width of 2' with a minimum of 3' horizontal to 1' vertical side slopes, 3:1.
- Side slopes in excess of 3' horizontal to 1' vertical shall not be used except with a mechanical device such as a retaining wall, or terracing.
- Ditches with steep grades will need "stone flow checks" to prevent scouring of the ditch bottoms. They may be used as a temporary measure and removed once sufficient stabilization has been established. These shall be depicted on plans by the engineer. Indicate flow checks on all slopes 3.00% and greater.

Detention/Retention, Sedimentation Ponds:

- New land developments within Livingston County shall be equipped with detention/retention facilities for storm water in accordance with the Drainage Policies of the Livingston County Drain Commissioner.
- Inlets into detention ponds must not discharge at the same location as the outlet structure.
- Detention Pond Stand Pipe Outlet Detail must be the Livingston County Drain Commissioner's standard Detention Pond outlet, e.g. orifice outlets without sedimentation control devices are prohibited.
- Stand pipe structure must have a 2 ft. sump.
- Detention Pond stand pipe structure shall show staggering of outlet holes at different elevations. This will minimize plugging and provide for more effective filtering.
- The stone around the stand pipe structure shall be refreshed with clean stone prior to completion of the project.
- Detention/Retention, Sedimentation Ponds shall be excavated, top soiled, seeded, mulched and tacked prior to the start of massive earth disruption.
- Inlets into Detention/Retention Ponds must be located within two feet of the bottom floor of the pond.

Detention Pond Spillway:

- Rip-rap proposed in the construction of the emergency spillway must be placed over keyed-in geo-fabric blanket.

Silt Fence:

- All commercial projects constructed in Livingston County shall install 36" high silt fence.

Inlet Protection:

- Sedimentation protection for catch-basin inlets. Silt sacks are the preferred choice in the winter months, because they are less likely to be disturbed by the process of snow plowing.
- Open-Pipe, inlet protection must be provided with straw bales, stone or geo-fabric.

Outlet Protection:

- All storm drains 15" in diameter or larger shall have animal guards installed to prevent entrance to the system.
- All rip-rap must be placed over keyed in geo-fabric.
- Storm drain outlets that do not empty into the retention/detention pond shall have a temporary 5'x10'x3' sump installed at the termination of the storm sewer. Upon completion of the stabilization work the sump area shall be filled and rip-rapped with cobble stone over keyed in filter fabric. Silt traps shall be inspected after each storm.
- Splash blocks may be required depending on the outley flow rate or velocity.

Tracking onto public roadway:

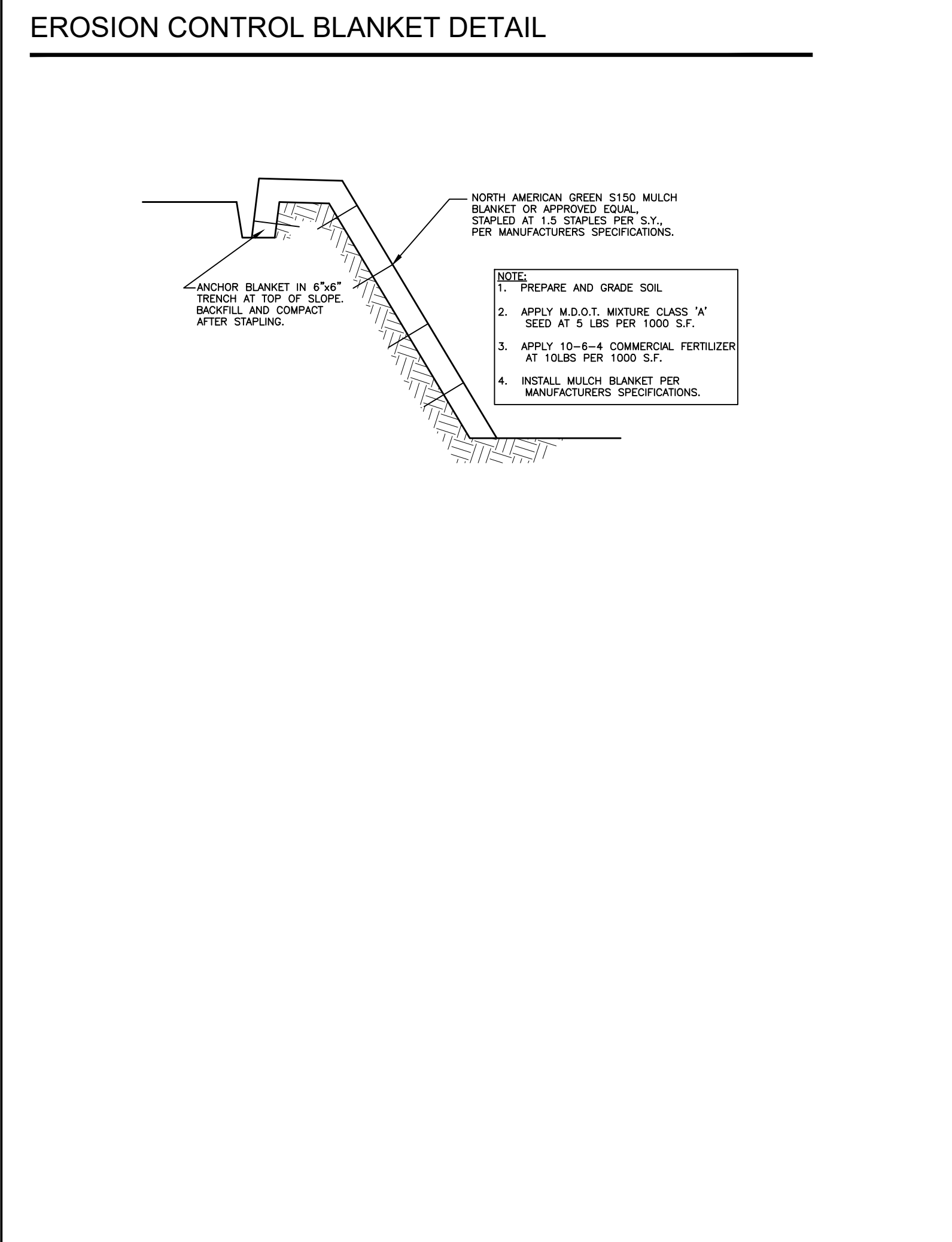
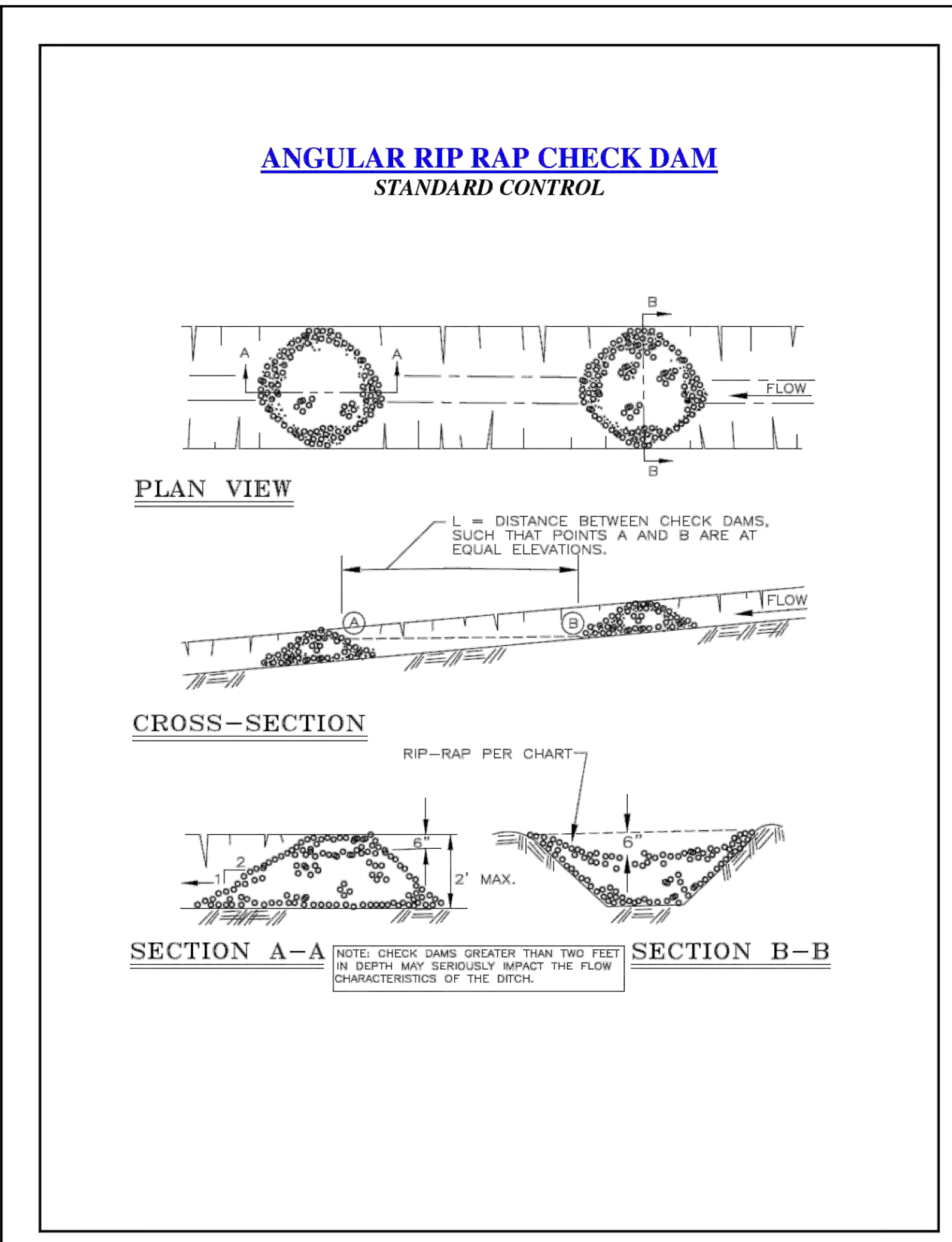
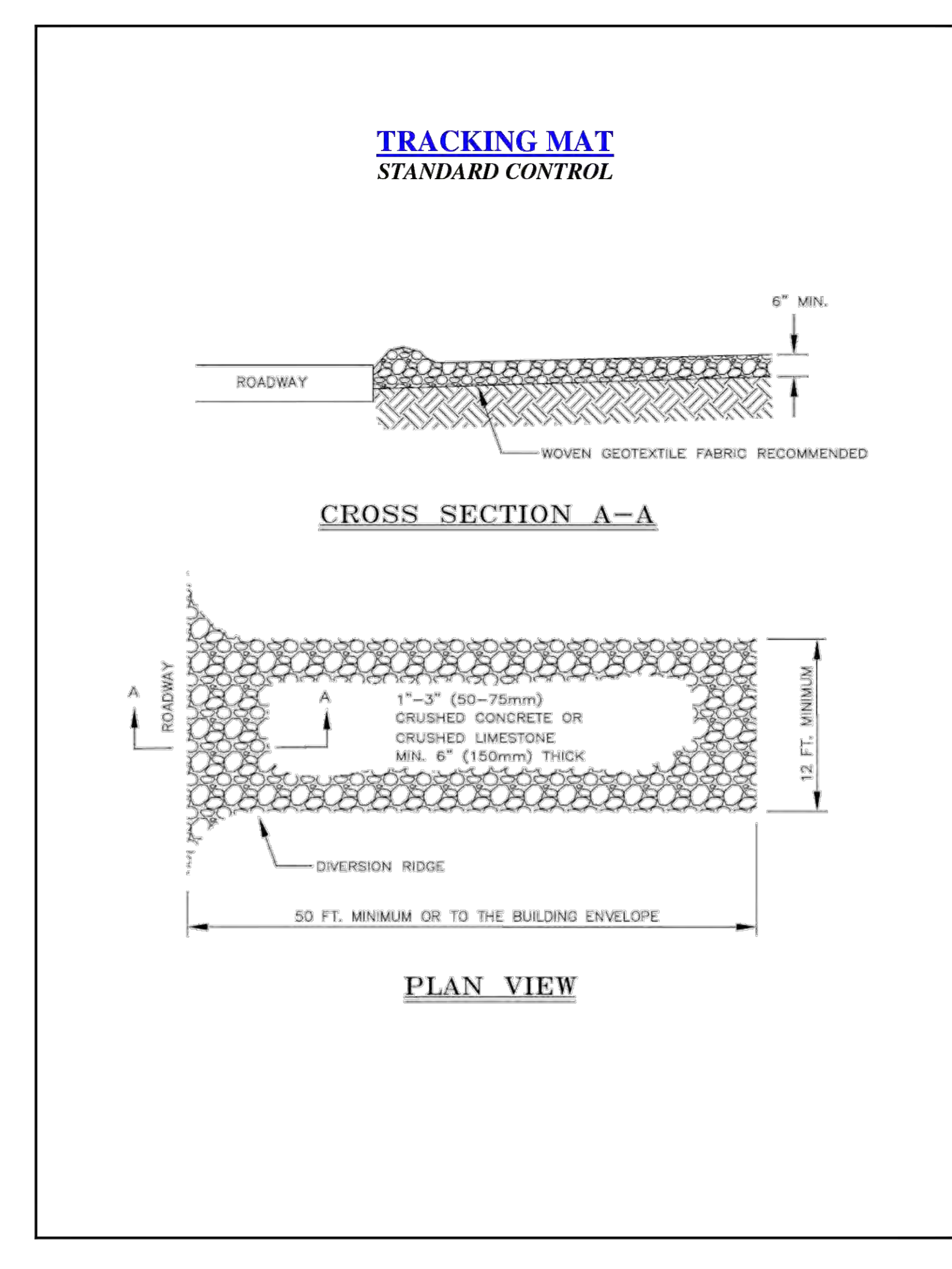
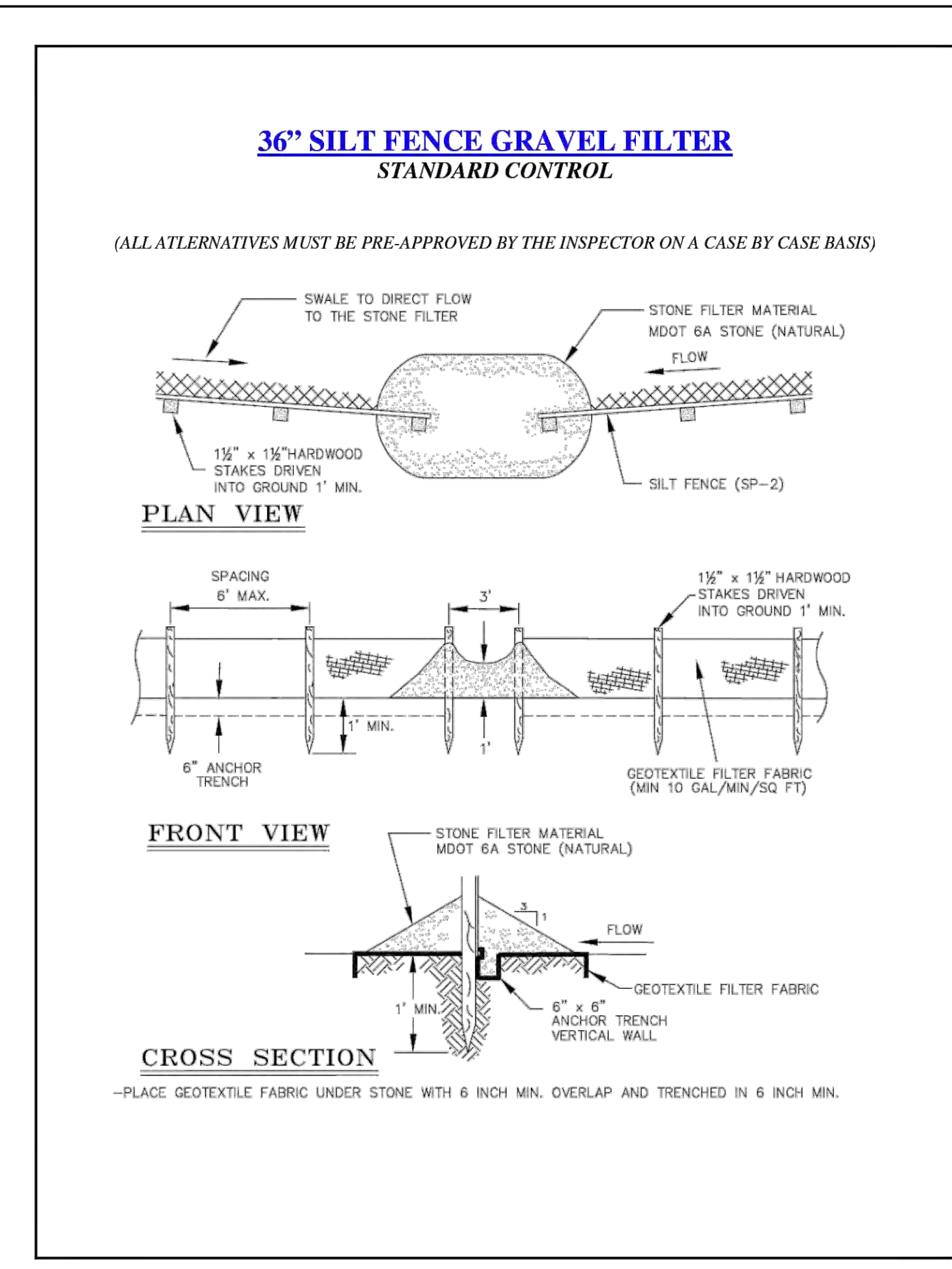
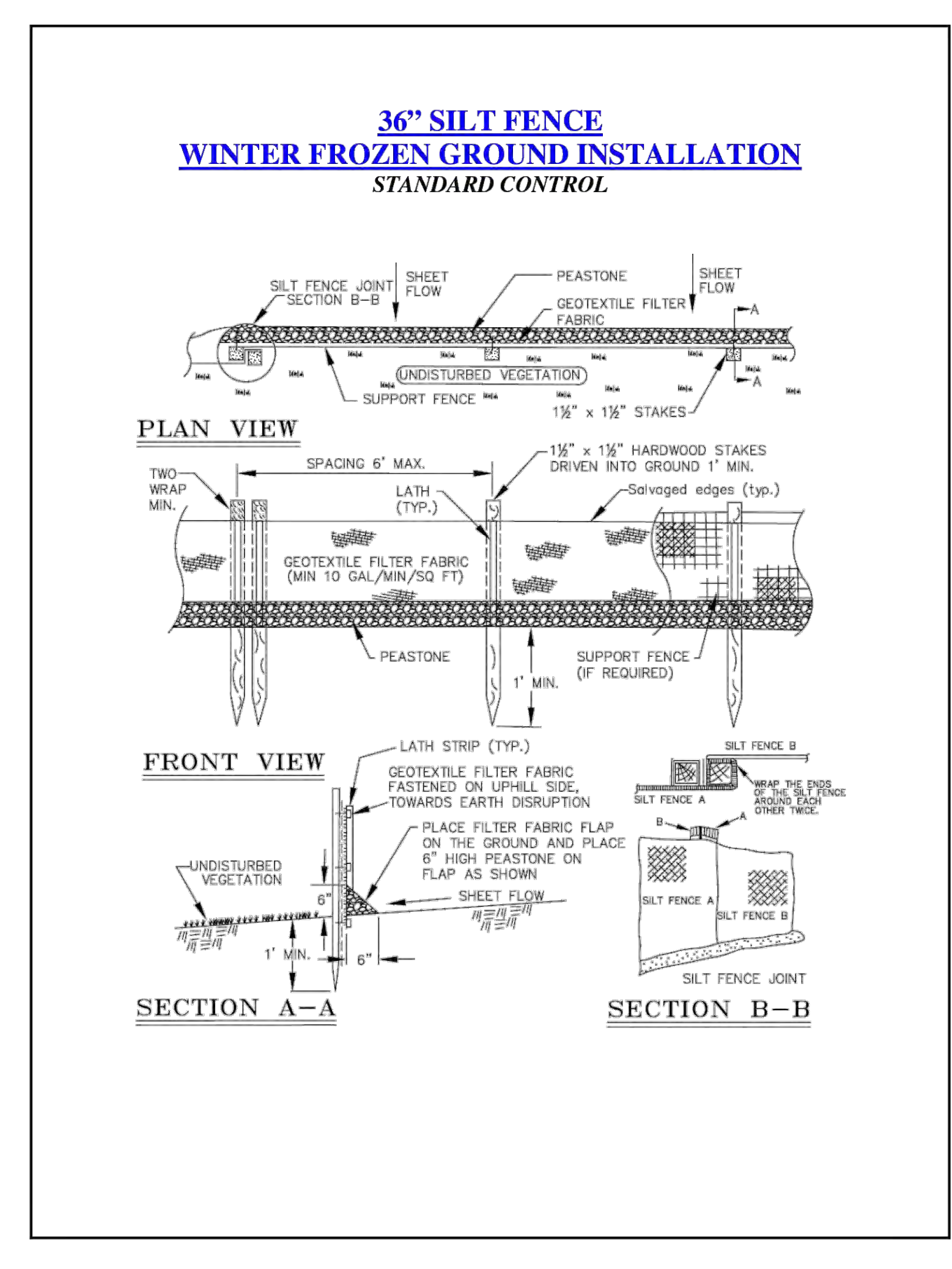
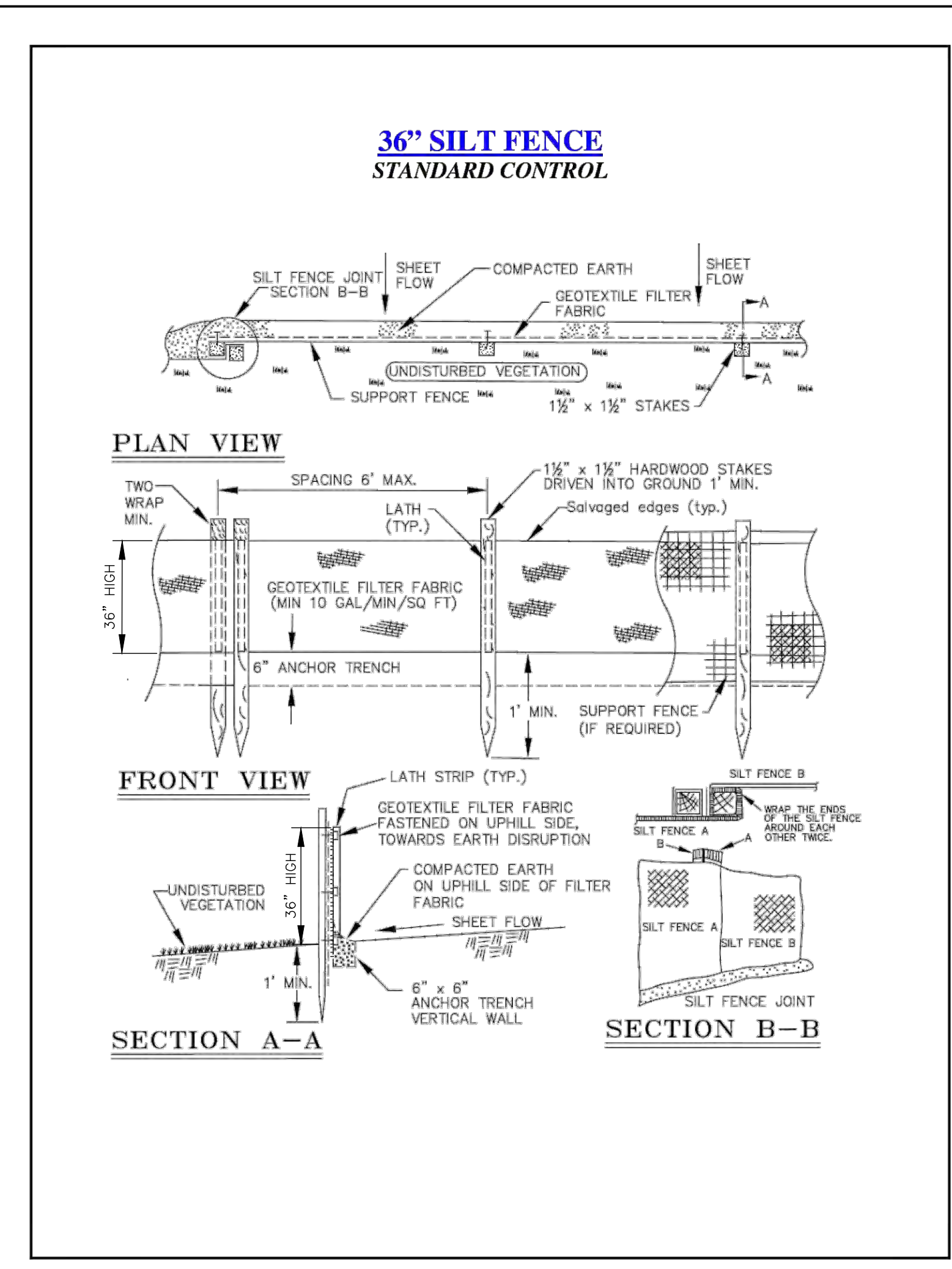
- It is required that each development have an ingress/egress of crushed stone to restrict tracking of material onto the Public Roadway. All commercial construction sites require a minimum 75-foot tracking mat shown at ingress/egress.

Stabilization Standards:

- For subdivision and site condominium developments: As of May 01, 2000, it is required that temporary stabilization of the entire site be completed and approval from the Livingston County Drain Commissioner's Office obtained prior to the issuance of single family dwelling permits.
- For commercial or industrial sites, common areas shall be called out on plans, in accordance with Part 17, prescribed by R 323.1709 and R 323.1710, pursuant to PART 91, Soil Erosion and Sedimentation Control, of the Natural Resources and Environmental Protection Act (Previously known as P.A. 347 of 1972) of Act 347, Public Acts OF 1972, as amended) indicating areas to be stabilized after 15 days of grade work. Areas to be outlined are as follows: detention/retention, drainage easements, utility easements, boulevards, etc.

Seeding, Fertilizer and Mulch Bare Ground Ratio:

- This information shall be detailed on the construction plans.
- Top Soil 3" in depth
- Grass Seed 217.84 lbs per acre
- Fertilizer 150 lbs per acre
- Straw Mulch 3" in depth (All mulching must have a tie down)
- Hydroseeding is not acceptable for slopes exceeding 1%, in such cases stabilization shall be done with seed and and straw mulch with a tackifier.



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CHESTNUT DEVELOPMENT

6253 GRAND RIVER AVE.
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BRIGHTON, MI 48114
POC: STEVE GRONOW
517-552-2489

LCDC SECC NOTES AND DETAILS

PARCEL 4711-06-200-101
PART OF NE 1/4, SEC. 6, T2N-R5E,
GENOA CHARTER TOWNSHIP
LIVINGSTON COUNTY, MICHIGAN

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04/24/2023	SITE PLAN REVIEW COMMENTS
06/30/2023	REVISED MDOT SUBMITTAL
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10/17/2023	REVISED SITE PLAN SUBMITTAL
3/19/2024	REVISED SITE PLAN SUBMITTAL

CURRENT ISSUE DATE: 4/24/2023

PROJECT NO: 22-168

SCALE: N/A

0 1/2" 1"

FIELD: RZ
DRAWN BY: MV/MN
DESIGN BY: BS
CHECK BY: MA/JP

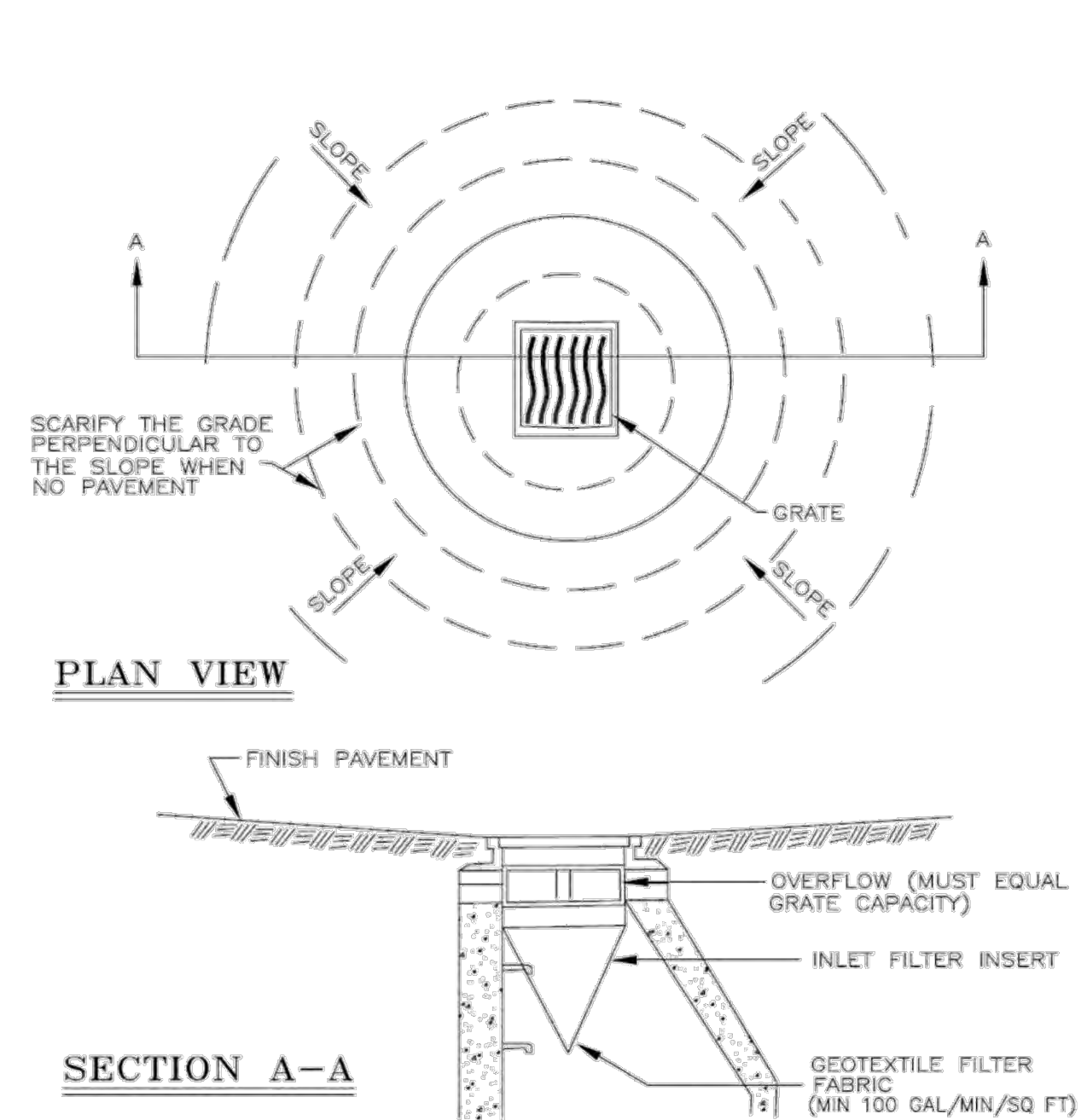
C-7.1

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SILT SACK OR APPROVED EQUAL LOW POINT/YARD INLET FILTER

STANDARD CONTROL YEAR ROUND OR WINTER USE

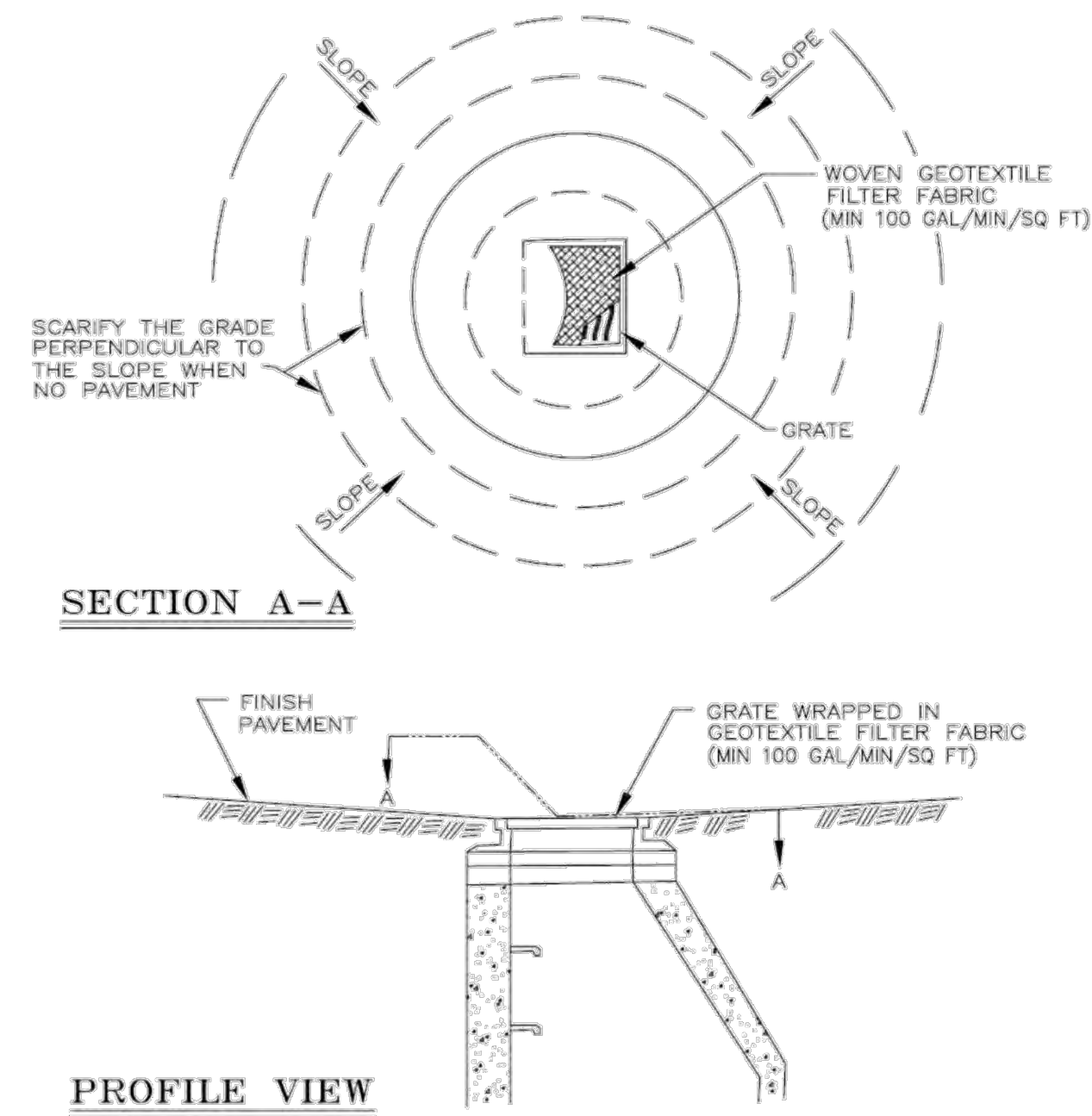
APPROVED FOR USE DURING WINTER MONTHS OR IN AREAS THAT MAY BECOME A SAFETY HAZARD DUE TO FLOODING OR FREEZING



GEOTEXTILE FABRIC LOW POINT/YARD INLET FILTER

STANDARD CONTROL NON-WINTER USE

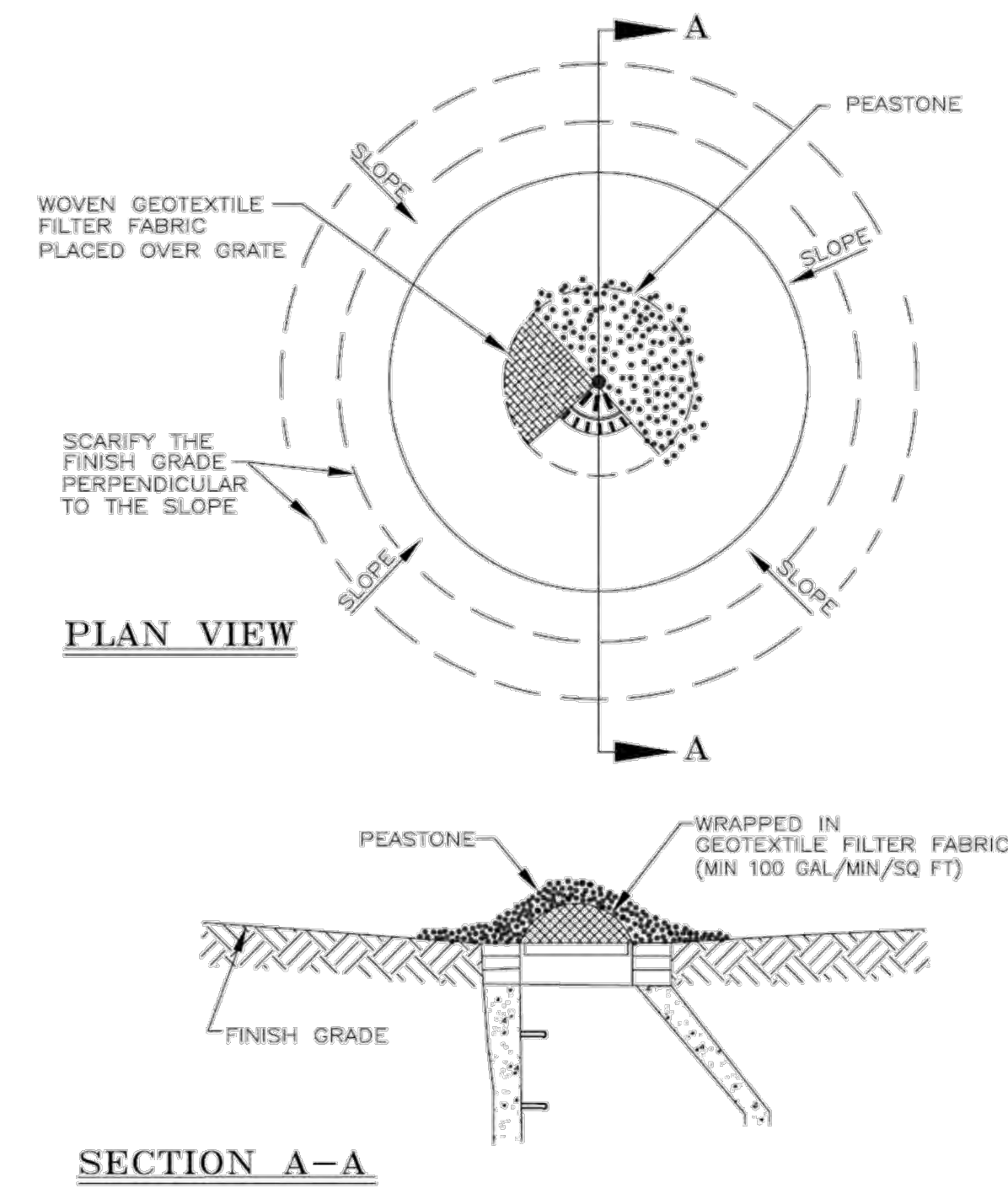
NOT FOR USE IN WINTER MONTHS OR IN AREAS THAT MAY BECOME A SAFETY HAZARD DUE TO FLOODING OR FREEZING



GEOTEXTILE & PEASTONE LOW POINT/YARD INLET FILTER

STANDARD CONTROL NON-WINTER USE

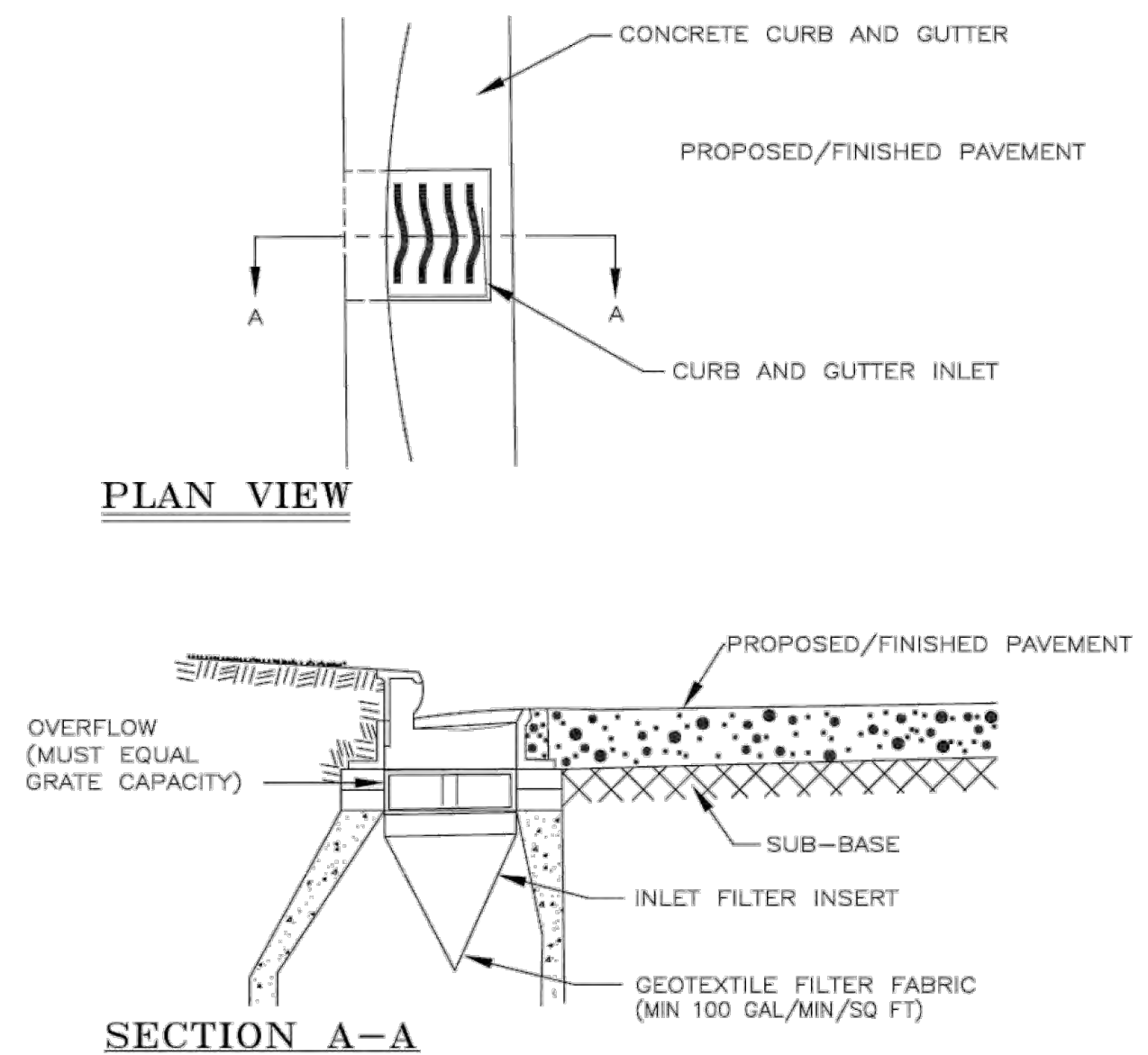
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SILT SACK OR APPROVED EQUAL CURB AND GUTTER INLET FILTER

STANDARD CONTROL YEAR ROUND OR WINTER USE

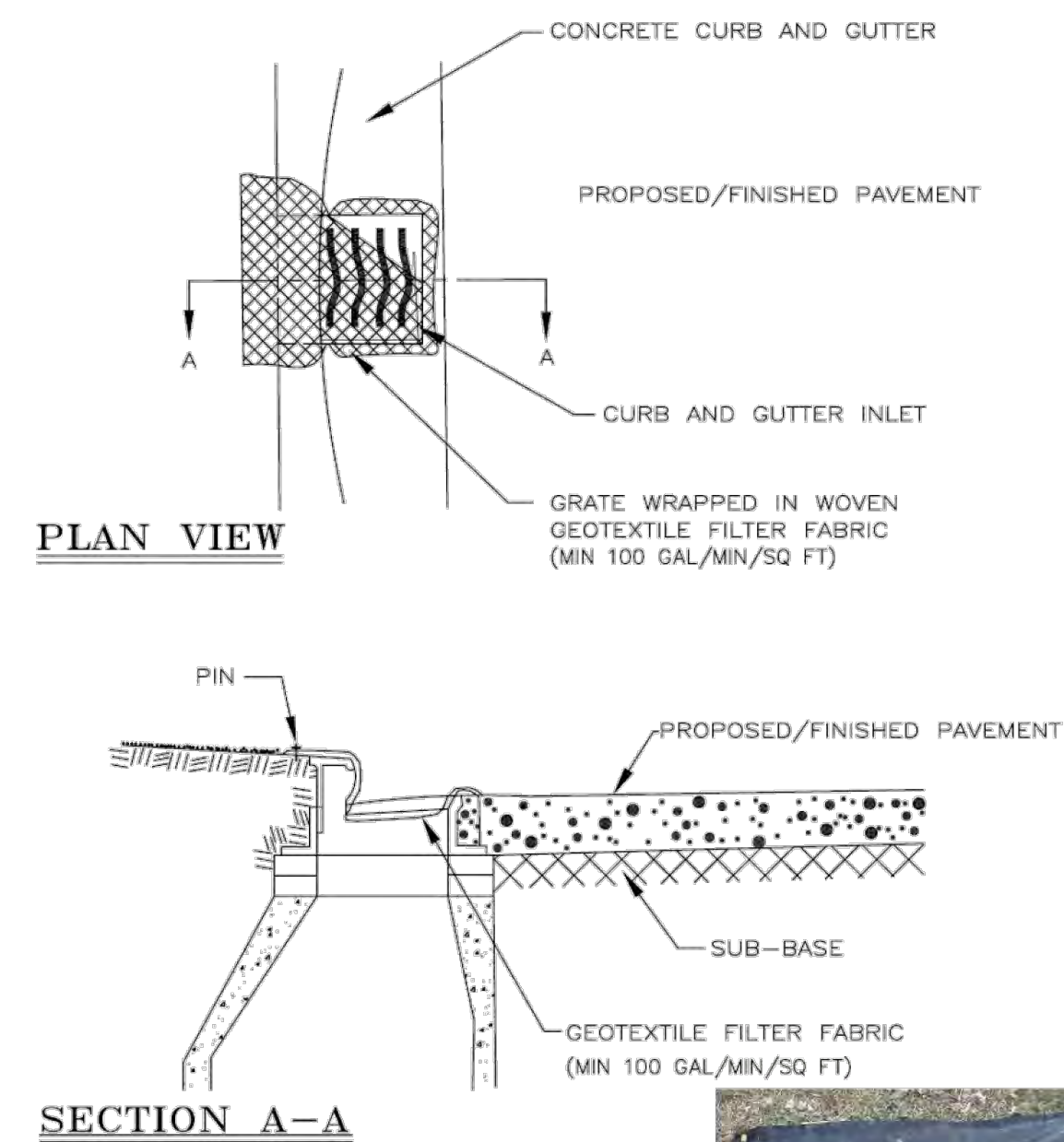
APPROVED FOR USE DURING WINTER MONTHS OR IN AREAS THAT MAY BECOME A SAFETY HAZARD DUE TO FLOODING OR FREEZING



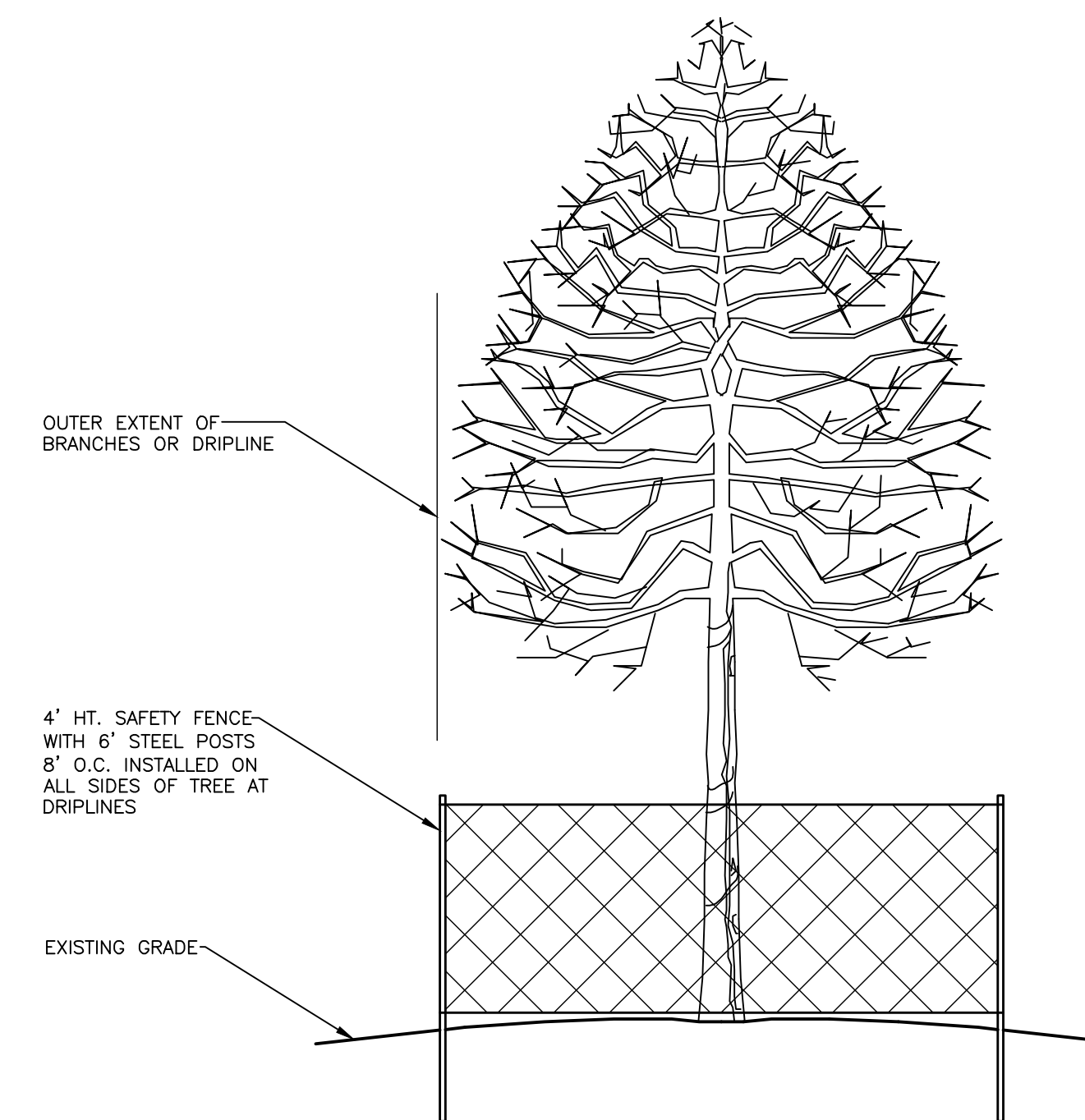
GEOTEXTILE FABRIC CURB AND GUTTER INLET FILTER

STANDARD NON-WINTER USE

NOT FOR USE IN WINTER MONTHS OR IN AREAS THAT MAY BECOME A SAFETY HAZARD DUE TO FLOODING OR FREEZING



FENCE DETAIL - TREE PROTECTION



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LIVINGSTON COUNTY, MICHIGAN

PLAN SUBMITTALS/REVISIONS	DATE
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SITE PLAN SUBMITTAL	03/01/2023
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CURRENT ISSUE DATE: 4/24/2023

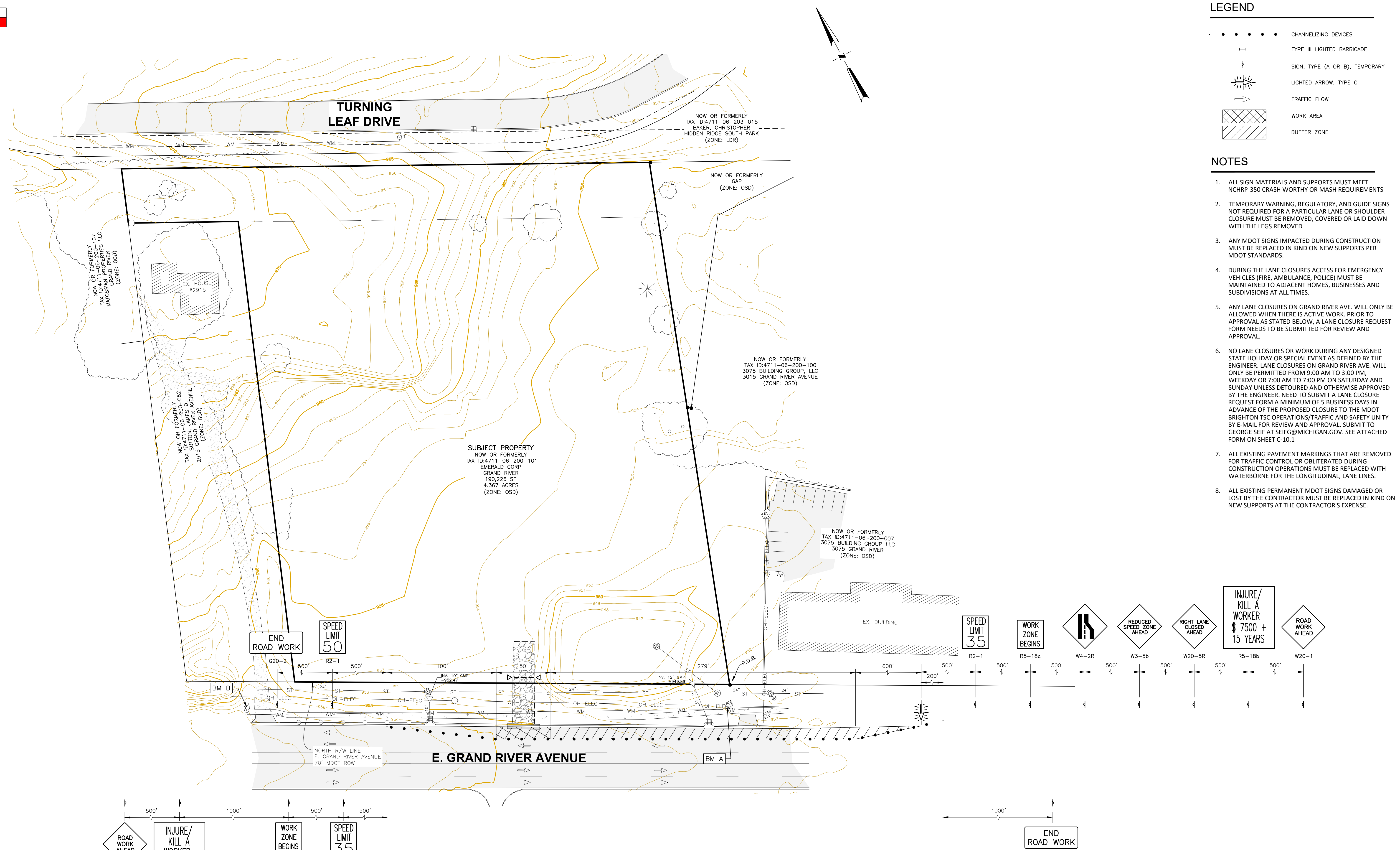
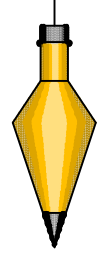
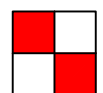
PROJECT NO: 22-168

SCALE: N/A
0 1/2" 1"

FIELD: RZ
DRAWN BY: MY/MN
DESIGN BY: BS
CHECK BY: MAJAP

C-7.2

NOT FOR CONSTRUCTION



LEGEND

- CHANNELIZING DEVICES
- TYPE III LIGHTED BARRICADE
- ⊥ SIGN, TYPE (A OR B), TEMPORARY
- ☀ LIGHTED ARROW, TYPE C
- TRAFFIC FLOW
- ▨ WORK AREA
- ▩ BUFFER ZONE

- ### NOTES
1. ALL SIGN MATERIALS AND SUPPORTS MUST MEET NCHRP-350 CRASH WORTHY OR MASH REQUIREMENTS
 2. TEMPORARY WARNING, REGULATORY, AND GUIDE SIGNS NOT REQUIRED FOR A PARTICULAR LANE OR SHOULDER CLOSURE MUST BE REMOVED, COVERED OR LAID DOWN WITH THE LEGS REMOVED
 3. ANY MDOT SIGNS IMPACTED DURING CONSTRUCTION MUST BE REPLACED IN KIND ON NEW SUPPORTS PER MDOT STANDARDS.
 4. DURING THE LANE CLOSURES ACCESS FOR EMERGENCY VEHICLES (FIRE, AMBULANCE, POLICE) MUST BE MAINTAINED TO ADJACENT HOMES, BUSINESSES AND SUBDIVISIONS AT ALL TIMES.
 5. ANY LANE CLOSURES ON GRAND RIVER AVE. WILL ONLY BE ALLOWED WHEN THERE IS ACTIVE WORK. PRIOR TO APPROVAL AS STATED BELOW, A LANE CLOSURE REQUEST FORM NEEDS TO BE SUBMITTED FOR REVIEW AND APPROVAL.
 6. NO LANE CLOSURES OR WORK DURING ANY DESIGNATED STATE HOLIDAY OR SPECIAL EVENT AS DEFINED BY THE ENGINEER. LANE CLOSURES ON GRAND RIVER AVE. WILL ONLY BE PERMITTED FROM 9:00 AM TO 3:00 PM, WEEKDAY OR 7:00 AM TO 7:00 PM ON SATURDAY AND SUNDAY UNLESS DETOURED AND OTHERWISE APPROVED BY THE ENGINEER. NEED TO SUBMIT A LANE CLOSURE REQUEST FORM A MINIMUM OF 5 BUSINESS DAYS IN ADVANCE OF THE PROPOSED CLOSURE TO THE MDOT BRIGHTON TSC OPERATIONS/TRAFFIC AND SAFETY UNIT BY E-MAIL FOR REVIEW AND APPROVAL. SUBMIT TO GEORGE SEIF AT SEIFG@MICHIGAN.GOV. SEE ATTACHED FORM ON SHEET C-10.1
 7. ALL EXISTING PAVEMENT MARKINGS THAT ARE REMOVED FOR TRAFFIC CONTROL OR OBLITERATED DURING CONSTRUCTION OPERATIONS MUST BE REPLACED WITH WATERBORNE FOR THE LONGITUDINAL, LANE LINES.
 8. ALL EXISTING PERMANENT MDOT SIGNS DAMAGED OR LOST BY THE CONTRACTOR MUST BE REPLACED IN KIND ON NEW SUPPORTS AT THE CONTRACTOR'S EXPENSE.

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MOT PLAN

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PART OF NE 1/4, SEC. 6, T2N-R5E,
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LIVINGSTON COUNTY, MICHIGAN

PLAN SUBMITTALS/REVISIONS	DATE
REVISED TREE REMOVAL CALC	02/22/2023
SITE PLAN SUBMITTAL	03/01/2023
SITE PLAN REVIEW COMMENTS	04/24/2023
REVISED MDOT SUBMITTAL	06/30/2023
REVISED MDOT SUBMITTAL	07/07/2023
REVISED SITE PLAN SUBMITTAL	09/01/2023
REVISED SITE PLAN SUBMITTAL	10/17/2023
REVISED SITE PLAN SUBMITTAL	3/19/2024

CURRENT ISSUE DATE:
4/24/2023

PROJECT NO: 22-168

SCALE: 1" = 40'
0 1/2" 1"

FIELD: RZ
DRAWN BY: MV/MN
DESIGN BY: BS
CHECK BY: MAJAP

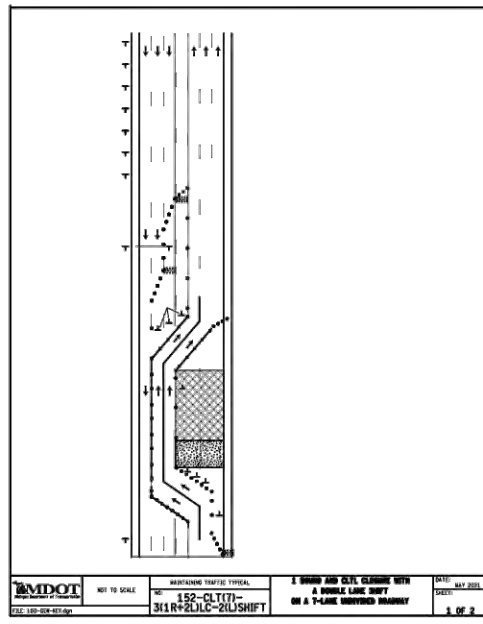
C-10.0

NOT FOR CONSTRUCTION

TYPICAL NUMBER KEY

CODES

AB = ARROW BOARD	LD = LANE OPEN
AW = ADVANCE WARNING	O = OUTSIDE (LANE CLOSURE)
C = CLOSURE	OUT = OUTSIDE OF SHOULDER
CLT = CENTER LEFT TURN LANE	MID = MIDDLE OF INTERSECTION OR ROAD
CROSS = CROSSOVER	NFW = NON-FREEWAY
Crusho = CRUSH AND SHAPE	PARK = PARKING LANE
EM = EARLY MERGE	PCMS = PORTABLE CHANGEABLE MESSAGE SIGN
ENR = ENTRANCE RAMP	(R) = RIGHT
EXR = EXIT RAMP	ROLL = ROLLING ROADBLOCK
FW = FREEWAY	RUM = RUMBLE STRIP
GEN = GENERAL INFORMATION	SD = SHORT DURATION
GORE = FREEWAY GORE AREA	SHL = SHOULDER CLOSURE
IN = INSIDE	SIGN = SIGN
INT = INTERSECTION	SPEED = SPEED
L = LANE	STA = STOPPED TRAFFIC ADVISORY
(L) = LEFT	TR = TRAFFIC REGULATOR
LC = LANE CLOSURE	TS = TEMPORARY SIGNAL
LD = LONG DURATION	ZIP = ZIPPER MERGE



EXAMPLE TYPICAL

CODE: 152-CTL(7)-31R+2LIC-2(L)SHIFT

152 - TYPICAL NUMBER
 CTL(7) = CENTER LEFT TURN LANE, 7 LANES TOTAL
 31R+2LIC = 3 LANES CLOSED, 1 RIGHT LANE AND 2 LEFT LANES,
 2(L)SHIFT = 2 LANES SHIFTED TO THE LEFT.

NOT TO SCALE	MAINTAINING TRAFFIC TYPICAL	DATE: MAY 2021
MDOT	100-GEN-KEY	SHEET: 1 OF 1

THE FOLLOWING NOTES APPLY IF CALLED FOR ON THE TRAFFIC TYPICAL

GENERAL NOTES

G1: SEE GEN-SPACING-CHARTS FOR COMMON VALUES INCLUDING: DISTANCE BETWEEN TRAFFIC CONTROL DEVICES
 L = MINIMUM LENGTH OF LANE
 B = LENGTH OF LONGITUDINAL BUFFER ROLL AHEAD DISTANCE

G2: DISTANCE BETWEEN SIGNS: "D" VALUES FOR WHICH ARE SHOWN IN TYPICAL CHARTS ARE APPROXIMATE AND MAY NEED ADJUSTING AS DIRECTED BY THE ENGINEER.

G3: ALL TEMPORARY SIGNS, TYPE III BARRICADES, THEIR SUPPORT SYSTEMS AND LIGHTING MUST MEET NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM REPORT 350 (NCHRP 350) TEST LEVEL 3, OR MANUAL FOR ASSESSING SAFETY AND PERFORMANCE FOR TRAFFIC CONTROL DEVICES, THE CURRENT EDITION OF THE NATIONAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION, THE STANDARD PLANS AND APPLICABLE SPECIAL PROVISIONS. ONLY DESIGNS AND MATERIALS APPROVED BY MUTCD WILL BE ALLOWED.

G4: DO NOT STORE EQUIPMENT, MATERIALS OR PERFORM WORK IN ESTABLISHED BUFFER AREAS.

G5: ALL EXISTING PAVEMENT MARKINGS WHICH ARE IN CONFLICT WITH EITHER PROPOSED CHANGES IN TRAFFIC PATTERNS OR PROPOSED TEMPORARY TRAFFIC MARKINGS SHALL BE REMOVED BEFORE ANY CHANGE IS MADE IN THE TRAFFIC PATTERN. EXCEPTION WILL BE MADE FOR TRAFFIC PATTERNS FOR WORK LESS THAN THREE DAYS THAT ARE ADEQUATELY DELINEATED BY OTHER TRAFFIC CONTROL DEVICES.

SIGN NOTES

S1: ALL NON-APPLICABLE SIGNING WITHIN THE CIA MUST BE MODIFIED TO FIT CONDITIONS, COVERED, OR REMOVED. FOR GUIDANCE SEE THE WORK ZONE SAFETY AND MOBILITY MANUAL, SECTIONS 6.01.09 AND 6.01.10.

S2: R5-10 SIGNS ARE ONLY REQUIRED ON FREEWAY PROJECTS WITH A DURATION OF 15 DAYS OR LONGER OR NON-FREEWAY PROJECTS WITH A DURATION OF 90 DAYS OR LONGER. TO APPLY THIS TYPICAL WITHOUT R5-10 SIGNS, REMOVE THE SIGNS AND CONSOLIDATE THE MESSAGE AS APPROPRIATE.

S3: R5-10s IS ONLY REQUIRED IN THE INITIAL SIGNING SEQUENCE IN THE WORK ZONE. OMIT THIS SIGN IN SUBSEQUENT SEQUENCES IN THE SAME WORK ZONE.

S4: ADDITIONAL SIGNING AND/OR ELONGATED SIGNING SEQUENCES SHOULD BE USED WHEN TRAFFIC VOLUMES ARE SIGNIFICANT ENOUGH TO CREATE BACKUPS BEHIND THE W0-S SIGNS.

S5: PLACE ADDITIONAL SPEED LIMIT SIGNS REFLECTING THE WORK ZONE SPEED AFTER EACH MAJOR CROSSROAD THAT INTERSECTS THE WORK ZONE, OR AFTER EACH ENTRANCE RAMP THAT COMES ONTO THE FREEWAY WHERE THE REDUCED SPEED IS IN EFFECT. PLACE ADDITIONAL SPEED LIMIT SIGNS AT INTERVALS ALONG THE ROADWAY SUCH THAT NO SPEED LIMIT SIGNS ARE MORE THAN 2 MILES APART. WHEN REDUCED SPEED LIMIT SIGNS ARE UTILIZED IN THE WORK AREA, PLACE ADDITIONAL SPEED LIMIT SIGNS RETURNING TRAFFIC TO ITS NORMAL SPEED BEYOND THE LIMITS OF THE WORK AREA AS INDICATED. IF PERMANENT SIGNS DISPLAYING THE CORRECT SPEED LIMIT ARE POSTED, OMIT ALL W0-50 AND R2-1 SIGNS AND REDUCE SPACING ACCORDINGLY.

S6: FABRICATE SPECIAL SIGNS IN ACCORDANCE WITH CURRENT SIGNING DESIGN STANDARDS.

S7: PLACE ADDITIONAL R8-3 SIGNS AT A MAXIMUM 500' SPACING THROUGHOUT THE WORK ZONE.

S8: WHEN SPEED LIMIT SIGNS CANNOT BE PLACED SIDE BY SIDE AS SHOWN, PLACE THEM "D" DISTANCE APART.

S9: STOP SIGNS NOT REQUIRED IF SIGNALS ARE ON 4-WAY FLASHING RED. STOP AHEAD SIGNS ARE NOT REQUIRED IF THERE IS ADEQUATE VISIBILITY OF THE STOP SIGN OR IF SIGNALS ARE BEING USED TO CONTROL TRAFFIC.

S10: PLACE REDUCED SPEED ZONE AHEAD SIGN (W3-50) HERE WHEN USING A SPEED REDUCTION IN THIS DIRECTION.

S11: THE NUMBER OF W1-4 SHIFT SIGNS TO PLACE FOR A SHIFT IS AS FOLLOWS: SHIFTS 4FT OR LESS, PLACE ONE (W1-60RLL) SHIFTS 5FT TO 12FT, PLACE TWO (W1-60RLL) SHIFTS MORE THAN 12FT, PLACE THREE OR MORE (W1-60RLL) SIGNS DEPENDING UPON LENGTH OF SHIFT AND AS PER THE ENGINEER.

S12: PLACE R2-1 SIGNS AS DETAILED IN NOTE S5 WHEN THERE IS A SPEED REDUCTION IN THIS DIRECTION.

TRAFFIC REGULATOR NOTES

TR1: TRAFFIC REGULATORS MUST FOLLOW ALL THE REQUIREMENTS IN THE STANDARD SPECIFICATIONS, THE STANDARD PLANS AND APPLICABLE SPECIAL PROVISIONS. THE CURRENT EDITION OF THE NATIONAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION, THE STANDARD PLANS AND APPLICABLE SPECIAL PROVISIONS IS DETERMINED BY THE ROADWAY AGENCY, GEOMETRICS, AND AS DIRECTED BY THE ENGINEER.

TR2: PROVIDE APPROPRIATE BALLOON LIGHTING TO SUFFICIENTLY ILLUMINATE TRAFFIC REGULATORS STATIONS WHEN TRAFFIC REGULATING IS ALLOWED DURING THE HOURS OF DARKNESS.

TEMPORARY TRAFFIC CONTROL DEVICE NOTES

T01: THE MAXIMUM DISTANCE IN FEET BETWEEN CHANNELIZING DEVICES IN A TAPER SHOULD NOT EXCEED 1.0 TIMES THE WORK ZONE SPEED LIMIT IN MPH FOR ROADWAYS WITH A POSTED WORK ZONE SPEED LIMIT LESS THAN 45 MPH AND SHOULD NOT EXCEED 50 FEET ON ROADWAYS WITH A POSTED WORK ZONE SPEED LIMIT OF 45 MPH OR GREATER. THE SPACING FOR 42 INCH CHANNELIZING DEVICE TAPERS ARE NOT TO EXCEED 25 FEET AT NIGHT.

T02: THE MAXIMUM DISTANCE IN FEET BETWEEN CHANNELIZING DEVICES IN A TANGENT SHOULD NOT EXCEED TWICE THE WORK ZONE SPEED LIMIT IN MPH FOR ROADWAYS WITH A POSTED WORK ZONE SPEED LIMIT LESS THAN 45 MPH AND SHOULD NOT EXCEED 100 FEET ON ROADWAYS WITH A POSTED WORK ZONE SPEED LIMIT OF 45 MPH OR GREATER. THE SPACING FOR 42 INCH CHANNELIZING DEVICE TANGENTS ARE NOT TO EXCEED 50 FEET AT NIGHT.

T03: TYPE III BARRICADES MUST BE LIGHTED FOR OVERNIGHT CLOSURES.

T04: WHEN THE HAUL ROAD IS NOT IN USE, PLACE LIGHTED TYPE III BARRICADES WITH "ROAD CLOSED" EXTENDING COMPLETELY ACROSS THE HAUL ROAD.

T05: USE VERTICAL PANELS IN LIEU OF THE TYPE B HIGH INTENSITY LIGHT SHOWN IN THE STANDARD PLAN FOR TEMPORARY CONCRETE BARRIER (R-3), AND (R-2) WHEN USED WITH A TEMPORARY SIGNAL SYSTEM.

T06: PLACE LIGHTED ARROW PANELS AS CLOSE TO THE BEGINNING OF TAPERS AS PRACTICAL, BUT NOT IN A MANNER THAT WILL OBSCURE OR CONFUSE APPROACHING MOTORISTS WHEN PHYSICAL LIMITATIONS RESTRICT PLACEMENT. IN CURVED SECTIONS, IF ARROW BOARD CANNOT BE PLACED BEHIND GORE, PLACE ARROW BOARD IN THE CLOSED LANE AS CLOSE TO THE BEGINNING OF TAPER AS POSSIBLE.

T07: ADDITIONAL TYPE III BARRICADES MAY BE REQUIRED TO COMPLETELY CLOSE OFF ROAD FROM EDGE OF PAVEMENT TO EDGE OF PAVEMENT.

T08: WHERE THE SHIFTED SECTION IS SHORTER THAN 600 FEET, A DOUBLE REVERSE CURVE SIGN (W2-1) CAN BE USED INSTEAD OF THE FIRST REVERSE CURVE SIGN, AND THE SECOND REVERSE CURVE SIGN CAN BE OMITTED.

T09: RUMBLE STRIPS ARE TO BE PLACED AS SPECIFIED IN THE CONTRACT. IF NOT SPECIFIED IN THE CONTRACT, PLACE RUMBLE STRIPS AS SHOWN IN ACCORDANCE WITH THE RUMBLE STRIP MANUFACTURER'S RECOMMENDATIONS. AN ARRAY OF RUMBLE STRIPS CONTAINS THREE RUMBLE STRIPS. PLACE THE RUMBLE STRIPS IN THE ARRAY AT A CONSISTENT DISTANCE, BETWEEN 10 AND 20' APART.

T10: SEE THE WORK ZONE SAFETY AND MOBILITY MANUAL, PORTABLE CHANGEABLE MESSAGE SIGN GUIDELINES FOR RECOMMENDED AND CORRECT PDM MESSAGING. STAGGER PDM THAT ARE ON OPPOSING SIDES OF THE ROAD 1500 FEET FROM EACH OTHER.

RAMP NOTES

RMP1: WHEN CONDITIONS ALLOW, R5-1 SIGNS MUST BE REMOVED OR COVERED AND CHANNELIZING DEVICES MUST BE REPOSITIONED TO ENABLE RAMP TRAFFIC TO DIVERGE IN A FREE MANNER.

RMP2: STOP AND YIELD CONDITIONS SHOULD BE AVOIDED WHENEVER PRACTICAL. WHEN CONDITIONS WARRANT, R5-1 SIGNS MAY BE USED IN PLACE OF R5-2 SIGNS. WHEN R5-1 SIGNS ARE USED, R5-1 SIGNS MUST BE USED IN PLACE OF R5-2 SIGNS. CONSIDERATION SHOULD BE GIVEN TO CLOSING THE RAMP TO COMPLETE WORK TO ALLOW AN ADEQUATE MERGE DISTANCE. WORK SHOULD BE EXPEDITED TO AVOID THE STOP AND/OR YIELD CONDITIONS.

NOT TO SCALE	MAINTAINING TRAFFIC TYPICAL	DATE: MAY 2021
MDOT	102-GEN-NOTES	SHEET: 1 OF 2

THE FOLLOWING NOTES APPLY IF CALLED FOR ON THE TRAFFIC TYPICAL

SIGNAL NOTES

SIG1: EXISTING SIGNAL MUST BE EITHER 4-WAY FLASHING RED, BAGGED, OR TURNED OFF.

SIG2: SIGNAL IS IN OPERATION.

SIG3: DELINEATE THE WORK ZONE AREA WITH 36 INCH CONES FOR DAYTIME WORK, OR 42 INCH CHANNELIZING DEVICES FOR NIGHTTIME WORK.

SIG4: THE CONTRACTOR MUST HAVE A DESIGNATED SPOTTER IF THE AERIAL BUCKET TRUCK IS LOCATED OVER ACTIVE TRAVEL LANES.

SIG5: THE LOWEST POINT OF THE BUCKET MAY NOT TRAVEL BELOW 14 FOOT VERTICAL CLEARANCE. THE CONTRACTOR MUST UTILIZE AN ALTERNATE SET UP OR PLACE THE INTERSECTION IN A 4 WAY STOP IF THE 14 FOOT VERTICAL CLEARANCE IS COMPROMISED. USE TRAFFIC REGULATORS TO CONTROL TRAFFIC THROUGH THE INTERSECTION WHEN TRAFFIC IS PLACED IN A 4 WAY STOP.

SIG6: DELINEATE THE TRUCK WITH CHANNELIZING DEVICES. THE POSITION OF THE TRUCK MAY BE MOVED TO FACILITATE WORK.

MAINTENANCE AND SURVEYING NOTES

MS1: WHENEVER STOPPING SIGHT DISTANCE EXISTS TO THE REAR, THE SHADOW VEHICLES SHOULD MAINTAIN THE RECOMMENDED DISTANCE FROM THE WORK AREA AND PROCEED AT THE SAME SPEED. THE SHADOW VEHICLE SHOULD SLOW DOWN AND TRAVEL AT A FARTHER DISTANCE TO PROVIDE ADEQUATE SIGHT DISTANCE IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES.

MS2: WORKERS OUTSIDE OF VEHICLES SHOULD WORK WITHIN 150' OF WORK VEHICLES WITH AN ACTIVATED BEACON, BETWEEN THE "BEGIN WORK CONVOY" SIGN AND THE "END WORK CONVOY" SIGN, OR BETWEEN THE "WORK ZONE BEGINS" AND "END ROAD WORK" SIGN.

MS3: WORK ON SHADOW VEHICLES WITH OR WITHOUT A YAO MAY BE USED TO SEPARATE THE WORK SPACE FROM TRAFFIC. IF USED, THE VEHICLES SHOULD BE PARKED ACCORDING TO THE ROLL AHEAD DISTANCE TABLES.

MS4: WORK AND SHADOW VEHICLES SHALL BE APPROPRIATELY EQUIPPED WITH AN ACTIVATED AMBER BEACON.

MS5: WHEN WORKERS ARE OUTSIDE THEIR VEHICLES IN AN EXISTING LANE WHILE A MOBILE OPERATION IS OCCURRING DURING THE NIGHTTIME HOURS, CHANNELIZING DEVICES TO DELINEATE OPEN OR CLOSED LANES AT 50 FT SPACING MUST BE USED. AN EXAMPLE OF AN OPERATION (BUT NOT LIMITED TO) IS THE LAYOUT OF CONCRETE PATCHES.

MS6: W2-6 AND W0-1 SIGNS MAY BE SUBSTITUTED AS DETERMINED BY THE TYPE OF WORK TAKING PLACE AS PER THE ENGINEER.

NOT TO SCALE	MAINTAINING TRAFFIC TYPICAL	DATE: MAY 2021
MDOT	102-GEN-NOTES	SHEET: 2 OF 2

DISTANCE BETWEEN TRAFFIC SIGNS, "D"

"D" DISTANCES	25	30	35	40	45	50	55	60	65	70	75
D (FEET)	250	300	350	400	450	500	550	600	650	700	750

GUIDELINES FOR LENGTH OF LONGITUDINAL BUFFER SPACE, "B"

"B" LENGTHS	SPEED, MPH (PRIOR TO WORK AREA)											
B (FEET)	20	25	30	35	40	45	50	55	60	65	70	75
	33	50	83	132	181	230	279	329	411	476	542	625

* POSTED SPEED, OFF-PEAK 85TH PERCENTILE SPEED PRIOR TO WORK STARTING, OR THE ANTICIPATED OPERATING SPEED.

MINIMUM MERGING TAPER LENGTH, "L" (FEET)

OFFSET (FEET)	POSTED SPEED LIMIT, MPH (PRIOR TO WORK AREA)											
	25	30	35	40	45	50	55	60	65	70	75	
1	11	15	21	27	45	50	55	60	65	70	75	
2	21	30	41	54	90	100	110	120	130	140	150	
3	32	45	62	80	135	150	165	180	195	210	225	
4	42	60	82	107	180	200	220	240	260	280	300	
5	53	75	103	134	225	250	275	300	325	350	375	
6	63	90	123	160	270	300	330	360	390	420	450	
7	73	105	143	187	315	350	385	420	455	490	525	
8	84	120	164	214	360	400	440	480	520	560	600	
9	94	135	184	240	405	450	495	540	585	630	675	
10	105	150	205	267	450	500	550	600	650	700	750	
11	115	165	225	294	495	550	605	660	715	770	825	
12	125	180	245	320	540	600	660	720	780	840	900	
13	136	195	266	347	585	650	715	780	845	910	975	
14	146	210	286	374	630	700	770	840	910	980	1050	
15	157	225	307	400	675	750	825	900	975	1050	1125	

NOT TO SCALE	MAINTAINING TRAFFIC TYPICAL	DATE: MAY 2021
MDOT	101-GEN-SPACING-CHARTS	SHEET: 1 OF 3

THE FORMULAS FOR THE MINIMUM LENGTH OF A MERGING TAPER IN DERIVING THE "L" VALUES SHOWN IN THE ABOVE TABLES ARE AS FOLLOWS:

$L = \frac{W \times S^2}{60}$ WHERE POSTED SPEED PRIOR TO THE WORK AREA IS 40 MPH OR LESS

$L = \frac{W \times S}{S}$ WHERE POSTED SPEED PRIOR TO THE WORK AREA IS 45 MPH OR GREATER

L = MINIMUM LENGTH OF MERGING TAPER
 S = POSTED SPEED LIMIT IN MPH PRIOR TO WORK AREA
 W = WIDTH OF OFFSET

TYPES OF TAPERS

UPSTREAM TAPERS
 MERGING TAPER
 SHIFTING TAPER
 SHOULDER TAPER
 2 TO 1 LANE ROAD TAPER

DOWNSTREAM TAPERS
 (USE IS RECOMMENDED) 100' (PER LANE)

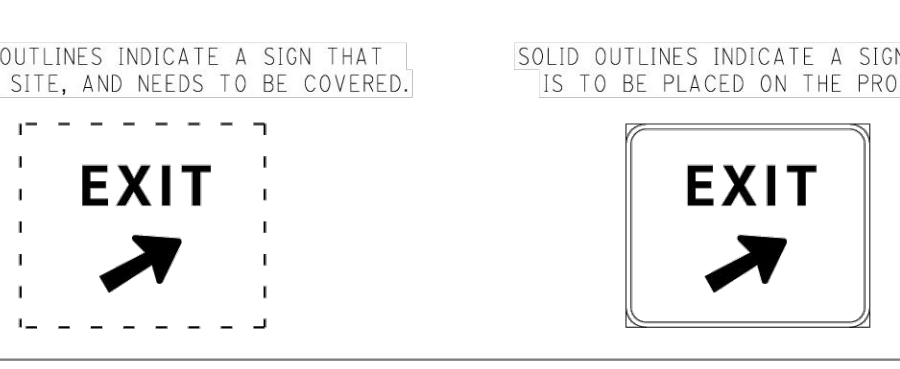
MAXIMUM SPACING FOR CHANNELIZING DEVICES

WORK ZONE (SPEED LIMIT)	DRUM AND 42" DEVICE SPACING (FT)	NIGHTTIME 42" DEVICE SPACING (FT)
< 45 MPH	1 x SPEED LIMIT	2 x SPEED LIMIT
> 45 MPH	50 FEET	100 FEET

SIGN OUTLINE KEY

DASHED OUTLINES INDICATE A SIGN THAT EXISTS ON SITE, AND NEEDS TO BE COVERED.

SOLID OUTLINES INDICATE A SIGN THAT IS TO BE PLACED ON THE PROJECT.



NOT TO SCALE	MAINTAINING TRAFFIC TYPICAL	DATE: MAY 2021
MDOT	101-GEN-SPACING-CHARTS	SHEET: 2 OF 3

GUIDELINES FOR ROLL-AHEAD DISTANCES FOR TMA VEHICLES - TEST LEVEL 2

WEIGHT OF TMA (VEHICLE)	PREVAILING SPEED (POSTED SPEED PRIOR TO WORK ZONE)	ROLL-AHEAD DISTANCE* (DISTANCE FROM FRONT OF TMA VEHICLE TO WORK AREA)
5.5 TONS (STATIONARY)	40 MPH OR LESS	25 FT

* ROLL-AHEAD DISTANCES ARE CALCULATED USING A 4,410 POUND IMPACT VEHICLE WEIGHT.

GUIDELINES FOR ROLL-AHEAD DISTANCES FOR TMA VEHICLES - TEST LEVEL 3

WEIGHT OF TMA (VEHICLE)	PREVAILING SPEED (POSTED SPEED PRIOR TO WORK ZONE)	ROLL-AHEAD DISTANCE* (DISTANCE FROM FRONT OF TMA VEHICLE TO WORK AREA)
5 TONS (MOBILE)	45 MPH	100 FT
	50-55 MPH	150 FT
	60-75 MPH	175 FT
12 TONS (STATIONARY)	45 MPH	25 FT
	50-55 MPH	25 FT
	60-75 MPH	50 FT

* ROLL-AHEAD DISTANCES ARE CALCULATED USING A 10,000 POUND IMPACT VEHICLE WEIGHT.

NOT TO SCALE	MAINTAINING TRAFFIC TYPICAL	DATE: MAY 2021
MDOT	101-GEN-SPACING-CHARTS	SHEET: 3 OF 3

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CLIENT :

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 POC: STEVE GRONOW
 517-552-2489

DETAILS

PARCEL 4711-06-200-101
 PART OF NE 1/4, SEC. 6, T2N-R5E,
 GENOA CHARTER TOWNSHIP
 LIVINGSTON COUNTY, MICHIGAN

DATE	REVISIONS
03/22/2023	REVISED TREE REMOVAL CALC
03/01/2023	SITE PLAN SUBMITTAL
04/24/2023	SITE PLAN REVIEW COMMENTS
06/30/2023	REVISED MOOT SUBMITTAL
07/07/2023	REVISED MOOT SUBMITTAL
09/01/2023	REVISED SITE PLAN SUBMITTAL
10/17/2023	REVISED SITE PLAN SUBMITTAL
3/19/2024	REVISED SITE PLAN SUBMITTAL

CURRENT ISSUE DATE:
4/24/2023

PROJECT NO: 22-168

SCALE: N/A

FIELD:
 DRAWN BY: RZ
 DESIGN BY: MV/MN
 CHECK BY: BS
 MA/MP

C-11.0



Local Agency Programs Hot Mix Asphalt (HMA) Selection Guidelines

The following guidelines have been developed at the request of Local Agency Engineers for use on Local Agency projects.

A. HMA Mixture Type and Binder Selection

Selection is based on present day two-way commercial ADT. The commercial ADT ranges for each of the mixture types have taken into account an assumed future traffic growth rate.

Table with columns for Com. ADT and Mixture Type (Top, Leveling, Base) and Binder Grades by Region (Superior, Metro, All Other).

Note 1: If the designer wishes to reduce the target air voids on projects to 3.5%, a note needs to be added to the plans on the HMA Application Table stating that the air voids have been changed to 3.5% for that particular project for top and leveling courses.

Note 2: The mixture type in each traffic category listed in the above table is specifically designed to perform under their respective Commercial ADT.

Note 3: One course overlays on composite pavements where the prevention of cold temperature related thermal cracking is not as much of a concern, the cold temperature number of the PG binder may be decreased by one grade to help reduce costs.

Example: For a one course overlay in the Superior Region on a composite project, the recommended PG binder would be a PG58-28 instead of a PG58-34.

Note 4: To address traffic areas that are more susceptible to rutting early in pavements life such as signalized intersections and other areas of stop/start traffic use the pay item entitled High Stress Hot Mix Asphalt Mixture.

Example: For a high stress application for a mixture type 5E3 placed in an intersection the recommended binder grade would be a PG70-28P instead of a PG64-28.

- a. Use this pay item 1000 feet on either side of the center of signalized intersections and other areas where stop/start traffic occurs on the mainline (for quantity calculations use 1100 feet).
- b. There are cases where the signalized intersections are spaced 1 mile or less over the entire length of the project.
- c. All HMA approaches that are adjacent to the High Stress HMA Mixture areas should be specified using this pay item.
- d. Use of the Pay Item High Stress HMA (mix), should not be used unless it is to be distinguished from the same mix with a different PG grade.

B. Application Rates

HMA application rates shown in the table below are the required minimum and maximum rates for each of the specific mixtures.

Table showing Mixture Type (Marshall Mixture and Superpave Mixture) with columns for 36A, 13A, 2C, 3C, 4C, LVSP, 3E, 4E1, 4E3+, 5E.

Note 1: Application rate of 110 #/syd. per 1-inch thickness.

Note 2: When shoulders of 8 ft. or greater are being paved as a separate operation on a project, the following note should be added to the plans near the HMA Application Table.

C. Aggregate Wear Index (All Projects)

Aggregate Wear Index (AWI) is required for all aggregates used in HMA top course mixtures. The following table identifies the required minimum AWI, based on the present average daily traffic (vehicular and commercial) per lane (ADT/Lane):

Table with columns ADT/Lane and Minimum AWI. Values: <100 (None), 100-2000 (220), >2000 (260).

D. Alternative Mixes

These guidelines provide for the selection of Hot Mixed Asphalt (HMA) and application rates utilizing the Superpave mix design system along with the Marshall Mix design system.

E. Non-Motorized Path Mixes

When designing a Non-Motorized Path, recommended HMA Mixes that have historically worked well include:

Superpave mixes:

HMA, LVSP

HMA, 5E

Shared Use Path, HMA Snowmobile Wearing Cse - Special (See: 12DS806(F355))

Marshall mixes:

HMA, 13A

HMA, 36A

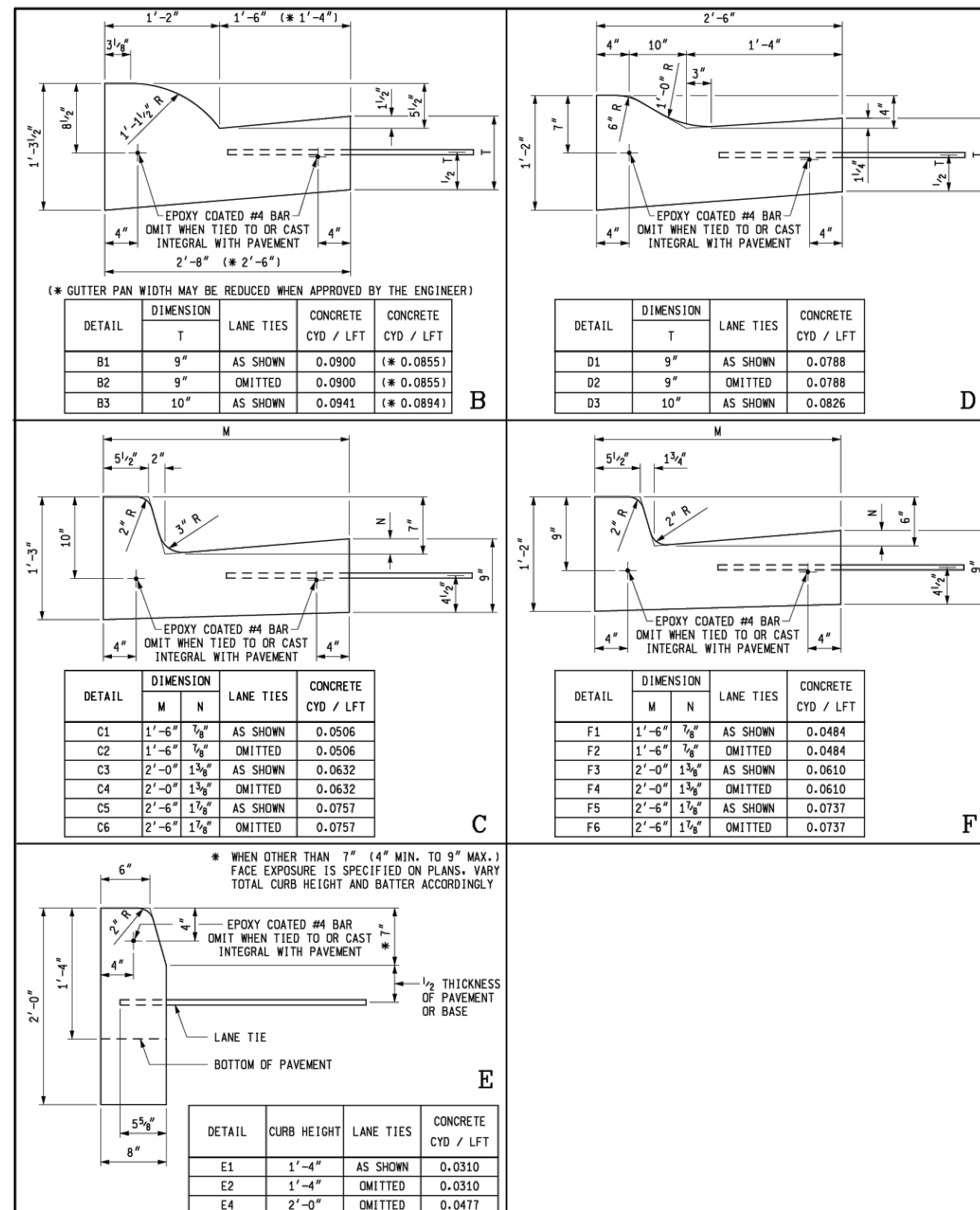
No AWI is required on the top course, however, if the designer wishes, he or she can use the Aggregate Wear Index (AWI) of 220 minimum.

Use PG 58-28 for all mixes, except for HMA, 5E, which should be PG 64/28.

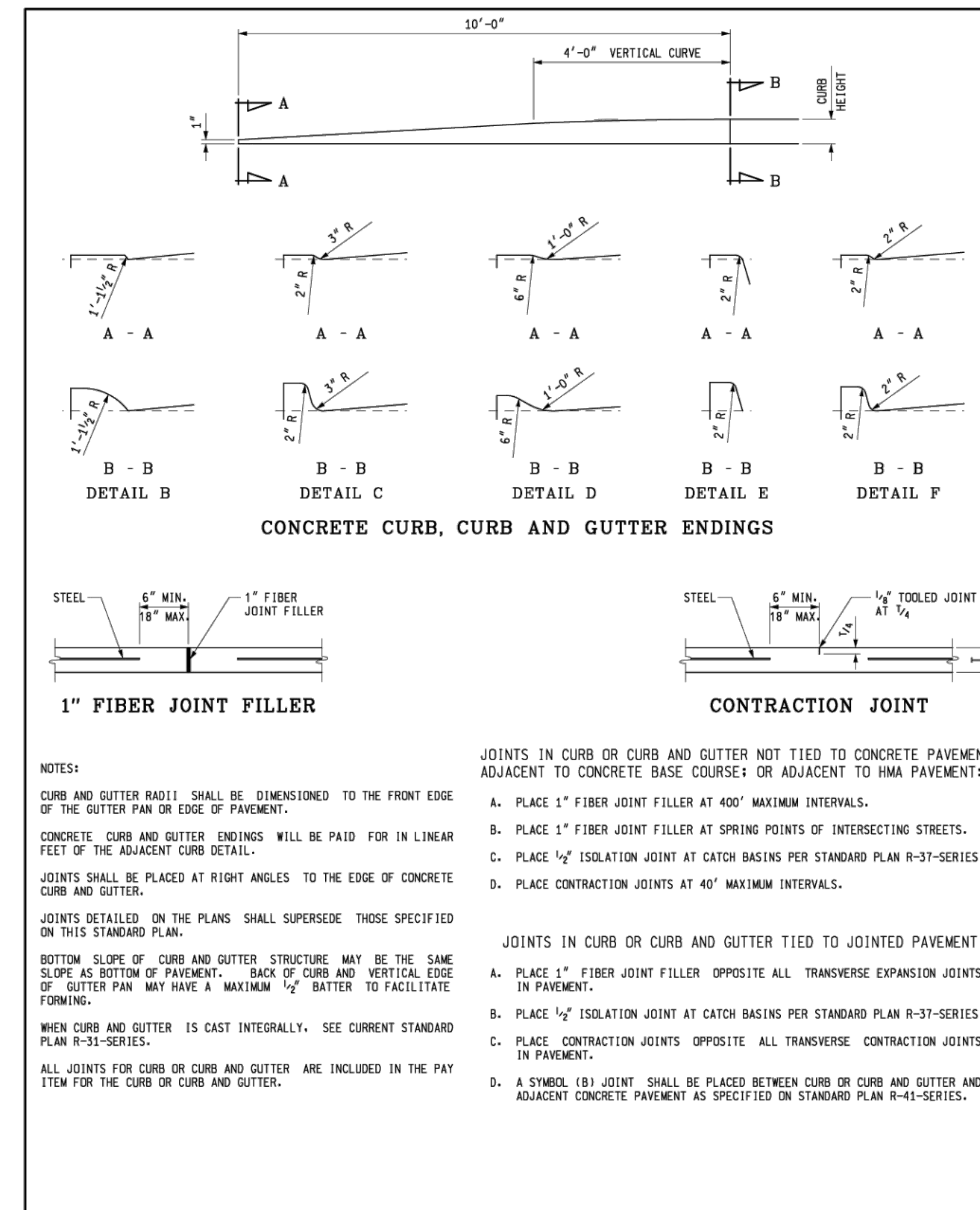
Application rates should match the chart on the previous page (page 3 of 4).

F. Non-Motorized Path Alternative Mixes

If a local agency desires to use an HMA mixture or grade of binder other than what is contained within this guide, or if they propose another pavement treatment or type, they must submit the change request to the LAP Staff Engineer in writing.



Approval stamps and titles for Michigan Department of Transportation, including 'CONCRETE CURB AND GUTTER' and 'R-30-G'.



Approval stamps and titles for Michigan Department of Transportation, including 'CONCRETE CURB AND GUTTER' and 'R-30-G'.

Logo for MEGA Engineering Group Associates, Inc. with contact information for 298 Veterans Drive, Fowlerville, Michigan.

Professional Engineer seal for Allan W. Pruss, No. 6201043168.

Logo for MISS DIG utility notification organization with contact information: 1-800-482-7171, www.missdig.org.

Client information for Chestnut Development, 6253 Grand River Ave., Suite 750, Brighton, MI 48114.

Project details: Parcel 4711-06-200-101, Part of NE 1/4, Sec. 6, T2N-R5E, Genoa Charter Township, Livingston County, Michigan.

Table with columns: DATE, PLAN SUBMITTALS/REVISIONS, and a list of revision dates from 02/22/2023 to 3/19/2024.

Project information: PROJECT NO: 22-168, SCALE: N/A, FIELD: RZ, DRAWN BY: MV/MN, DESIGN BY: BS, CHECK BY: MA/AP.

C-11.1

NOT FOR CONSTRUCTION



SIGN NUMBER KEY

151-1 48" x 48"	152-1 48" x 36"	153-1 48" x 36"	154-1 48" x 36"	30-1 36" x 24"	20-1 36" x 24"	RW-1 60" x 24"	ERW-1 48" x 24"
FM-1 36" x 18"	XX-1 18" x 18"	XXX-1 22.5" x 18"	XXX-2 24" x 24"	XXX-3 22.5" x 18"	XXX-4 24" x 24"	XXX-5 22.5" x 18"	XXX-6 24" x 24"
N-1 18" x 18"	W-1 18" x 18"	S-1 18" x 18"	E-1 18" x 18"	ALT-1 12" x 6"	ALT-2 12" x 6"	BP-1 12" x 6"	B-1 12" x 6"
TR-1 12" x 6"	TO-1 12" x 6"	DNP-1 12" x 6"	PWC-1 12" x 6"	S-1 12" x 6"	WW-1 12" x 6"	P-1 12" x 6"	P-2 12" x 6"
WZB-1 12" x 6"	BWC-1 12" x 6"	EWC-1 12" x 6"	S-1 36" x 36"	RC-1 36" x 36"	BO-1 36" x 36"	RC-2 36" x 36"	RC-3 36" x 36"

SEE MDT SHS 13-WORK ZONE FOR SIGN DETAILS

MDOT Michigan Department of Transportation

NOT TO SCALE

NO: 103-GEN-SIGN

TRAFFIC TYPICALS SIGN SHEET

DATE: JUNE 2021

SHEET: 1 OF 5

SIGN NUMBER KEY

101-1 36" x 36"	271-1 36" x 36"	102-1 36" x 36"	272-1 36" x 36"	S-1 36" x 36"	S-2 36" x 36"	S-3 36" x 36"	S-4 36" x 36"
NLT-1 24" x 18"	NRT-1 24" x 18"	NUT-1 24" x 18"	NUT-2 24" x 18"	NUT-3 24" x 18"	NUT-4 24" x 18"	NUT-5 24" x 18"	NUT-6 24" x 18"
LLTL-1 30" x 30"	RLTR-1 30" x 30"	LLTL-2 30" x 30"	RLTR-2 30" x 30"	LLTL-3 30" x 30"	RLTR-3 30" x 30"	LLTL-4 30" x 30"	RLTR-4 30" x 30"
DNP-1 12" x 6"	PWC-1 12" x 6"	S-1 12" x 6"	WW-1 12" x 6"	P-1 12" x 6"	P-2 12" x 6"	P-3 12" x 6"	P-4 12" x 6"
WZB-1 12" x 6"	BWC-1 12" x 6"	EWC-1 12" x 6"	S-1 36" x 36"	RC-1 36" x 36"	BO-1 36" x 36"	RC-2 36" x 36"	RC-3 36" x 36"

SEE MDT SHS 13-WORK ZONE FOR SIGN DETAILS

MDOT Michigan Department of Transportation

NOT TO SCALE

NO: 103-GEN-SIGN

TRAFFIC TYPICALS SIGN SHEET

DATE: JUNE 2021

SHEET: 2 OF 5

SIGN NUMBER KEY

W1-1 24" x 24"	W1-2 24" x 24"	W1-3 24" x 24"	W1-4 24" x 24"	W1-5 24" x 24"	W1-6 24" x 24"	W1-7 24" x 24"	W1-8 24" x 24"
W2-1 18" x 18"	W2-2 18" x 18"	W2-3 18" x 18"	W2-4 18" x 18"	W2-5 18" x 18"	W2-6 18" x 18"	W2-7 18" x 18"	W2-8 18" x 18"
W3-1 12" x 12"	W3-2 12" x 12"	W3-3 12" x 12"	W3-4 12" x 12"	W3-5 12" x 12"	W3-6 12" x 12"	W3-7 12" x 12"	W3-8 12" x 12"
W4-1 18" x 18"	W4-2 18" x 18"	W4-3 18" x 18"	W4-4 18" x 18"	W4-5 18" x 18"	W4-6 18" x 18"	W4-7 18" x 18"	W4-8 18" x 18"
W5-1 12" x 12"	W5-2 12" x 12"	W5-3 12" x 12"	W5-4 12" x 12"	W5-5 12" x 12"	W5-6 12" x 12"	W5-7 12" x 12"	W5-8 12" x 12"

SEE MDT SHS 13-WORK ZONE FOR SIGN DETAILS

MDOT Michigan Department of Transportation

NOT TO SCALE

NO: 103-GEN-SIGN

TRAFFIC TYPICALS SIGN SHEET

DATE: JUNE 2021

SHEET: 3 OF 5

SIGN NUMBER KEY

D-1 18" x 18"	S-1 18" x 18"	W-1 24" x 24"	LR-1 24" x 24"	RR-1 24" x 24"	LO-1 24" x 24"
SR-1 24" x 24"	FR-1 24" x 24"	SMO-1 24" x 24"	SMO-2 24" x 24"	SMO-3 24" x 24"	SMO-4 24" x 24"
RA-1 24" x 24"	NO-1 24" x 24"	SR-2 24" x 24"	WF-1 24" x 24"	R-1 24" x 24"	LLE-1 24" x 24"
RLE-1 24" x 24"	LA-1 24" x 24"	RW-1 36" x 36"	RW-2 36" x 36"	RW-3 36" x 36"	RW-4 36" x 36"
RW-5 36" x 36"	RW-6 36" x 36"	RW-7 36" x 36"	RW-8 36" x 36"	RW-9 36" x 36"	RW-10 36" x 36"

SEE MDT SHS 13-WORK ZONE FOR SIGN DETAILS

MDOT Michigan Department of Transportation

NOT TO SCALE

NO: 103-GEN-SIGN

TRAFFIC TYPICALS SIGN SHEET

DATE: JUNE 2021

SHEET: 4 OF 5

SIGN NUMBER KEY

RC-1 36" x 36"	RC-2 36" x 36"	RC-3 36" x 36"	RC-4 36" x 36"	RC-5 36" x 36"	RC-6 36" x 36"
CC-1 48" x 24"	CC-2 48" x 24"	CC-3 48" x 24"	CC-4 48" x 24"	CC-5 48" x 24"	CC-6 48" x 24"
LL-1 36" x 36"	LL-2 36" x 36"	LL-3 36" x 36"	LL-4 36" x 36"	LL-5 36" x 36"	LL-6 36" x 36"
LL-7 36" x 36"	LL-8 36" x 36"	LL-9 36" x 36"	LL-10 36" x 36"	LL-11 36" x 36"	LL-12 36" x 36"
LL-13 36" x 36"	LL-14 36" x 36"	LL-15 36" x 36"	LL-16 36" x 36"	LL-17 36" x 36"	LL-18 36" x 36"

SEE MDT SHS 13-WORK ZONE FOR SIGN DETAILS

MDOT Michigan Department of Transportation

NOT TO SCALE

NO: 103-GEN-SIGN

TRAFFIC TYPICALS SIGN SHEET

DATE: JUNE 2021

SHEET: 5 OF 5

INNOVATIVE GEOSPATIAL & ENGINEERING SOLUTIONS

MEGA

298 VETERANS DRIVE
FOWLERVILLE, MICHIGAN 48836
(OFFICE) 517-223-3512
MONUMENTENGINEERING.COM

SERVICE DISABLED VETERAN OWNED
SMALL BUSINESS (SDVOBS)

ALLAN W. PRUSS
ENGINEER
NO. 6201043168

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Michigan's One-Call Utility Notification Organization

1-800-482-7171
www.missdig.org

THE LOCATIONS AND UTILITIES SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE RESPONSIBLY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

CLIENT:

CHESTNUT DEVELOPMENT
6253 GRAND RIVER AVE.
SUITE 750
BRIGHTON, MI 48114
POC: STEVE GROW
517-552-2489

DETAILS

PARCEL 4711-06-200-101
PART OF NE 1/4, SEC. 6, T2N-R5E,
GENOA CHARTER TOWNSHIP
LIVINGSTON COUNTY, MICHIGAN

DATE	DESCRIPTION
02/22/2023	PLAN SUBMITTALS/REVISIONS
03/01/2023	REVISED TREE REMOVAL CALC
04/24/2023	SITE PLAN SUBMITTAL
06/30/2023	REVISED MDT COMMENTS
07/07/2023	REVISED MDT SUBMITTAL
09/01/2023	REVISED MDT SUBMITTAL
10/17/2023	REVISED SITE PLAN SUBMITTAL
3/19/2024	REVISED SITE PLAN SUBMITTAL

CURRENT ISSUE DATE:
4/24/2023

PROJECT NO: 22-168

SCALE: N/A

FIELD:
DRAWN BY: RZ
DESIGN BY: MV/MN
CHECK BY: MA/P

C-11.2

NOT FOR CONSTRUCTION

GENERAL NOTES

- 1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE LOCAL MUNICIPALITY, THE LOCAL WATER AND/OR SEWER AUTHORITY, THE COUNTY D.P.W., THE COUNTY DRAIN COMMISSIONER, MICHIGAN DEPARTMENT OF TRANSPORTATION, MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES AND ENERGY, THE STATE OF MICHIGAN, AND THE COUNTY ROAD COMMISSION WHERE APPLICABLE.

EROSION CONTROL STANDARDS

- 1. ALL EROSION AND SEDIMENT CONTROL WORK SHALL CONFORM TO STANDARDS AND SPECIFICATIONS OF THE JURISDICTIONAL AGENCY UNDER PART 91 OF ACT 451 OF 1994, AS AMENDED.

EROSION CONTROL STANDARDS CONTINUED

- 6. STAGING THE WORK WILL BE DONE BY THE CONTRACTOR AS DIRECTED IN THESE PLANS AND AS REQUIRED TO ENSURE PROGRESSIVE STABILIZATION OF DISTURBED EARTH.

GRADING AND EARTHWORK SPECIFICATIONS

- 1. ALTHOUGH A SUB-SURFACE INVESTIGATION MAY HAVE BEEN MADE BY THE OWNER, THE BIDDER AND ANY SUB-CONTRACTORS SHALL MAKE A PERSONAL INVESTIGATION OF SITE AND EXISTING SURFACE AND SUB-SURFACE CONDITIONS.

GRADING AND EARTHWORK SPECIFICATIONS CONTINUED

- 21. NEWLY GRADED AREAS SHALL BE PROTECTED FROM THE ACTION OF THE ELEMENTS, ANY SETTLEMENT, DISPLACEMENT, PONDING OR WASHING OUT THAT MAY OCCUR PRIOR TO COMMENCING THE NEXT PHASE OF CONSTRUCTION SHALL BE REPAIRED, AND GRADES REESTABLISHED TO THE REQUIRED ELEVATIONS AND SLOPES.

TRAFFIC LANE AND PARKING LOT MARKING

- 1. PROVIDE ALL MATERIALS, LABOR, EQUIPMENT, AND SERVICES NECESSARY TO COMPLETE ALL TRAFFIC LANE AND PARKING LOT MARKINGS AS INDICATED IN THE CONSTRUCTION DOCUMENTS.

GRADING AND EARTHWORK SPECIFICATIONS

- 1. ALTHOUGH A SUB-SURFACE INVESTIGATION MAY HAVE BEEN MADE BY THE OWNER, THE BIDDER AND ANY SUB-CONTRACTORS SHALL MAKE A PERSONAL INVESTIGATION OF SITE AND EXISTING SURFACE AND SUB-SURFACE CONDITIONS.

Table with 2 columns: FILL AREAS and % OF MAXIMUM DRY DENSITY. Lists various fill types and their required percentages.

- 14. ALL FILL MATERIAL SHALL BE PLACED AND COMPACTED IN LIFTS, THAT WILL NOT EXCEED THE DEPTH IN WHICH THE COMPACTION EQUIPMENT CAN ACHIEVE THE MAXIMUM DENSITY REQUIRED FOR THE ENTIRE DEPTH OF THE MATERIAL PLACED IN THE LIFT.

INNOVATIVE GEOSPATIAL & ENGINEERING SOLUTIONS logo and contact information.

Professional Engineer Seal for Allan W. Pruss, No. 6201043168.

Utility Notification Organization logo and contact info for Miss Dig.

CHESTNUT DEVELOPMENT project location and contact details.

PARCEL 4711-06-200-101 PART OF NE 1/4, SEC. 6, T2N-R5E, GENOA CHARTER TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN.

SPECIFICATIONS

Table showing revision history with columns for DATE, REVISIONS, and PLAN SUBMITTALS/REVISIONS.

PROJECT NO: 22-168, SCALE: N/A, and C-12.0 label.

NOT FOR CONSTRUCTION



GENOA CHARTER TOWNSHIP
Application for Site Plan Review

TO THE GENOA TOWNSHIP PLANNING COMMISSION AND TOWNSHIP BOARD:

APPLICANT NAME & ADDRESS: Symmetry Management, 812 South Main St, Ste 200, Royal Oak, MI 48067
If applicant is not the owner, a letter of Authorization from Property Owner is needed.

OWNER'S NAME & ADDRESS: Howell Family Ventures LLC, 29592 Beck Road, Wixom, MI 48393

SITE ADDRESS: 3599 & 3669 Grand River Ave PARCEL #(s): 4711-05-400-031 & -032

APPLICANT PHONE: (248) 465-0200 OWNER PHONE: ()

OWNER EMAIL: fjarbou@symmetrymgmt.com

LOCATION AND BRIEF DESCRIPTION OF SITE: The site is currently known as the Grand River Plaza and sits on the north side of Grand River just west of Latson Road, adjacent to Meijer. Plaza contains a mixed use of big box stores and smaller retail/commercial spaces.

BRIEF STATEMENT OF PROPOSED USE: Site and facade improvements are proposed for the existing portion of the Plaza. A building addition is also proposed on the west side of the plaza. A future development area is also indicated near the Grand River frontage.

THE FOLLOWING BUILDINGS ARE PROPOSED: A 23,715 sft building addition at the west side of the existing shopping plaza as well as building facade improvements.

I HEREBY CERTIFY THAT ALL INFORMATION AND DATA ATTACHED TO AND MADE PART OF THIS APPLICATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

BY: Frank Jarbou

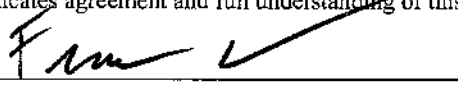
ADDRESS: 812 South Main Street, Suite 200, Royal Oak, MI 48067

Contact Information - Review Letters and Correspondence shall be forwarded to the following:

1.) Scott Tousignant, PE of Boss Engineering at scottt@bosseng.com
Name Business Affiliation E-mail Address

FEE EXCEEDANCE AGREEMENT

As stated on the site plan review fee schedule, all site plans are allocated two (2) consultant reviews and one (1) Planning Commission meeting. If additional reviews or meetings are necessary, the applicant will be required to pay the actual incurred costs for the additional reviews. If applicable, additional review fee payment will be required concurrent with submittal to the Township Board. By signing below, applicant indicates agreement and full understanding of this policy.

SIGNATURE:  DATE: 2/15/2024
PRINT NAME: Frank Jarbou PHONE: 248-465-0200
ADDRESS: 812 South Main Street, Suite 200, Royal Oak, MI 48067

April 2, 2024

Planning Commission
Genoa Township
2911 Dorr Road
Brighton, Michigan 48116

Attention:	Amy Ruthig, Planning Director
Subject:	Grand River Plaza – Site Plan Review #2
Location:	3599 and 3669 Grand River Avenue – north side of Grand River Avenue, west of Latson Road
Zoning:	RCD Regional Commercial District

Dear Commissioners:

At the Township’s request, we have reviewed the revised site plan submittal for site and façade improvements, as well as a building addition, to the existing multi-tenant commercial center (plans dated 3/19/24).

A. Summary

1. The 2 separate parcels should be combined as part of this project; however, the applicant seeks to keep them separate.
2. The façade improvements do not include 3 of the existing tenant spaces. Future changes to these spaces will be subject to review and approval by the Township.
3. Building design, including materials and color, are subject to review and approval by the Planning Commission.
4. Crosswalk striping should be added across the drive aisle connection to Dave’s Hot Chicken.
5. The Commission may reduce the amount of parking required based on different peak usage for the variety of businesses included in the development.
6. The 3 light poles in the northwest corner of the property must reduced in height to not more than 20’ (currently 30’).
7. The landscape plan is slightly deficient in greenbelt and buffer zone plantings; however, the Commission may modify requirements since numerous existing, mature trees are being preserved.
8. There are 3 evergreen trees on the landscape plan that are unaccounted for in the plant list.
9. The gate on the waste receptacle enclosure must be changed from chain link fencing to wood.
10. The applicant must address any comments provided by the Township Engineer or Brighton Area Fire Authority, including any comments on the traffic study.

B. Proposal/Process

The applicant proposes site improvements (to the property and building) and a building expansion (20,600 square feet) for the existing multi-tenant shopping center.

Table 7.02 allows retail and shopping centers with uses up to 60,000 square feet of area as principal permitted uses in the RCD. (The largest use in the existing center is 55,110 square feet.)

As a side note, the plans also identify a future outlot development area; however, development in this area is not part of the current project or this review.

Procedurally, the Planning Commission is to review the site plan and Environmental Impact Assessment. The Commission has review/approval authority over the site plan, though the Township Board has approval authority over the Impact Assessment.



Aerial view of site and surroundings (looking north)

C. Site Plan Review

1. Dimensional Requirements. The site plan has been reviewed for compliance with the with the dimensional requirements of the RCD, as follows:

	Min. Lot Req.		Minimum Yard Setbacks (feet)				Max. Lot Coverage (%)	Max. Height
	Area (acres)	Width (feet)	Front Yard	Side Yard	Rear Yard	Parking Lot		
RCD	2	200	75	20	50	20 front 10 side/rear	35% building 75% impervious	45' 3 stories
Proposal	26.6 (2 parcels)	455 (total)	305	50 (E) 89 (W)	49.5	150 front 25 side (E) 43 side (W) 20 rear	21% building 75% impervious	32' 1 story

The development site is comprised of 2 separate parcels. Our initial review suggested combination of these parcels to mitigate nonconforming conditions – the common side lot line between the 2 parcels runs directly through one of the main access points, the parking lot/drive aisles and the building.

The revised submittal materials state that the applicant wishes to maintain the 2 separate parcels. This warrants further discussion, in our opinion.

The drawing depicts a slightly deficient rear yard setback for the existing building (49.5’ provided; 50’ required); however, the proposed building expansion and site improvements comply with current standards, and the established nonconformity is not being altered.

2. Building Design and Materials. Much of the building will be re-faced with new materials (3 tenant spaces are not included in the façade improvements, though painting and work consistent with the rest of the building are noted for these spaces).

It is important to note that any changes proposed for the 3 tenant spaces not included in the current proposal, are subject to review and approval by the Township.

New materials include a mix of brick, split-faced CMU, EIFS, metal panels and engineered wood siding. Calculations on the revised plans demonstrate compliance with the material requirements of Section 12.01.

Building materials and colors are subject to review and approval by the Planning Commission. The applicant should be prepared to present material and color samples at the Commission meeting.

- 3. Pedestrian Circulation.** There is an existing sidewalk along Grand River that crosses the site and adjacent properties.

The site plan includes a connection between the public sidewalk and developed portion of the property within the easterly frontage. Crosswalk striping has been added across one of the drive aisles; however, additional striping should be added across the other drive aisle (connection to Dave's Hot Chicken).

The development currently provides a large sidewalk along the front of the building, including an extension in front of the building addition.

- 4. Vehicular Circulation.** The existing site has 3 drive connections to/from Grand River. Other than improvement to the existing pavement, no changes to these drives are proposed.

Nearly all of the pavement will be replaced, which is a significant improvement to the property.

Internally, drive aisles meet or exceed the minimum width for two-way travel.

There is also an emergency access drive behind the building in the northwest portion of the property that will provide one-way circulation.

The plan also identifies a future drive connection between the subject site and the adjacent Meijer development.

The submittal includes a traffic impact study, which includes recommendations on signal timing.

The applicant must address any comments provided by the Township Engineer and/or the Brighton Area Fire Authority with respect to vehicular circulation, including any comments on the traffic study.

- 5. Parking.** Based on parking requirements for shopping centers, the project requires 900 parking spaces, while 680 are provided.

Section 14.02.04 allows the Planning Commission to reduce the parking requirement by up to 30% for shared usage since peak usage will occur at different periods of time given the variety of businesses included in the shopping center.

Based on gross floor area, the proposal entails a reduction of approximately 25%, though the case can be made that the overall parking requirement is less than 900 on a tenant by tenant basis (which would lessen the extent of the reduction needed).

The design and dimensions of the main drive aisles and parking spaces comply with Ordinance standards, and the number of barrier-free spaces is more than met.

- 6. Exterior Lighting.** The lighting plan identifies 39 light poles (with 1, 2, 3, and 4 fixtures) and 6 wall mounted fixtures.

The revised plan includes fixture details, which note the use of downward directed, cut-off LEDs, save for 6 ornamental fixtures along the main drive aisle.

Mounting heights range from 15' to 30'. Per Section 12.03.03, mounting height cannot exceed 20' where adjacent to residential. As such, the 3 light poles (labeled "D") must be reduced in height to not more than 20'. The applicant has acknowledged this and is currently preparing a revised lighting plan to address this requirement.

Maximum photometric readings (both on-site and along property lines) comply with Ordinance standards, including 0.0 readings adjacent along the northerly property line, which is adjacent to residential.

7. Landscaping. The landscape plan has been reviewed for compliance with the standards of Section 12.02, as follows:

Standard	Required	Proposed	Comments
Front yard greenbelt	20' width 12 canopy trees	25' width 6 existing trees 2 canopy trees (new) 2 evergreen trees (new)	Deficient by 2 trees
Buffer Zone B (N)	20' width 6' wall OR 3' berm 43 canopy trees 43 evergreen trees 172 shrubs	20' width Partial 6' screen fence 34 existing trees* 18 evergreen trees (new) 80 shrubs	Deficient by full wall/berm
Buffer Zone B (NE)	20' width 6' wall OR 3' berm 12 canopy trees 12 evergreen trees 46 shrubs	20' width Existing berm 4 canopy trees (new) Existing canopy trees* 19 existing evergreen trees 46 shrubs	In compliance
Buffer Zone C (E)	10' width 46 trees OR 183 shrubs	10' width 15 existing trees* 6 evergreen trees (new) 44 shrubs	In compliance; however, 3 new evergreen trees are not accounted for in the plant list
Buffer Zone C (W)	10' width 27 trees OR 108 shrubs	10' width 8 existing trees* 2 evergreen trees (new) 36 shrubs	In compliance
Parking lot	50 canopy trees 5,000 SF landscaped area	49 canopy trees 30,325 SF landscaped area	In compliance
Detention pond	21 trees 210 shrubs	Existing mature vegetation	PC may allow existing plantings to remain

* Preservation of existing mature trees within buffer zones count as 2 trees in terms of planting requirements.

The Commission has the authority to modify landscaping requirements based on existing vegetation, topography, and adjacent land uses, per Section 12.02.13.

8. Waste Receptacle. The site plan notes a “dumpster enclosure” in the northwest corner of the property, as well as a trash compactor within the truck loading dock area.

Details include the required masonry enclosure and concrete base pad; however, a chain link fence gate is noted, while Section 12.04 requires a wooden gate.

Should you have any questions concerning this matter, please do not hesitate to contact our office.

Respectfully,
SAFE BUILT



Brian V. Borden, AICP
 Michigan Planning Manager



April 1, 2024

Ms. Amy Ruthig
Genoa Township
2911 Dorr Road
Brighton, MI 48116

**Re: Grand River Plaza
Site Plan Review No. 2**

Dear Ms. Ruthig:

Tetra Tech conducted a review of the proposed Grand River Plaza site plan last dated March 19, 2024. The plan was prepared by Boss Engineering on behalf of Symmetry Management. The development is located on the north side of Grand River Avenue west of the Meijer store. The Petitioner is proposing to demolish the existing parking lot and parking islands, provide new pavement and parking lot configuration, a 20,600 square foot building addition, modifications to the storm sewer system, water and sewer lead to the building addition and enlarging the existing detention basin.

The Petitioner submitted site plan drawings on February 20, 2024, and we prepared a site plan review letter dated March 12, 2024. The drawings have been revised to address each of our comments. The Petitioner has met with the Livingston County Drain Commission and has made the recommended improvements to the stormwater management system. Additionally, the Petitioner has appeared to address the review comments from the Brighton Area Fire Authority.

The concern about runoff from the north side of the parking lot entering into the Rolling Ridge #1 Subdivision will be alleviated with curb and gutter and a storm drainage system.

The Petitioner has indicated that they will continue to coordinate with MHOG for the abandonment of fire pump as part of this project and shall meet any of their requirements.

After final site plan approval, the water main and sanitary sewer construction plans should be provided to MHOG Sewer and Water Authority for their review and approval and permitting with EGLE.

In our review of the Traffic Impact Study, although the pass-by rates used in the trip generation forecast are not the latest information available from ITE (pass-by rates within the 11th edition of *Trip Generation* should be used, not those from the Handbook which is older information), the trip generation forecast for the site would be considered conservative, as it does not take into account internal capture reductions. We do not see much gain from a corrected report and find this to be acceptable.

We have no further engineering related concerns regarding the proposed site plan documents. If you have any questions please call us.

Sincerely,

A handwritten signature in blue ink that reads 'John Y. Barber'.

John Y. Barber, PE
Project Engineer



BRIGHTON AREA FIRE AUTHORITY

615 W. Grand River Ave.
Brighton, MI 48116
o: 810-229-6640 f: 810-229-1619

March 27, 2024

Amy Ruthig
Genoa Township
2911 Dorr Road
Brighton, MI 48116

RE: Grand River Plaza Redevelopment
3599 & 3669 Grand River
Genoa Twp., MI

Dear Amy,

The Brighton Area Fire Department has reviewed the above-mentioned site plan. The plans were received for review on March 20, 2024 and the drawings are dated February 20, 2024 with latest revisions dated March 19, 2024. The project is based on the proposed site improvements, 27,715 square foot addition and two future planned outlot concepts to an existing commercial complex. The plan review is based on the requirements of the International Fire Code (IFC) 2021 edition.

Based on the submitted documents, all required revisions have been corrected for compliance except for the clear width dimension of the rear access drive. The applicant is field verifying the bollard and transformer pad locations along with drive dimensions. They have committed to making the appropriate revisions to provide the proper clear 20' width along the rear.

Additional comments will be given during the building plan review process (specific to the building plans and occupancy). The applicant is reminded that the fire authority must review the fire protection systems submittals (sprinkler & alarm) prior to permit issuance by the Building Department and that the authority will also review the building plans for life safety requirements in conjunction with the Building Department.

If you have any questions about the comments on this plan review please contact me at 810-229-6640.

Cordially,

A handwritten signature in black ink, appearing to read "R. Boisvert".

Rick Boisvert, CFPS
Fire Marshal

cc: Amy Ruthig amy@genoa.org

**GENOA TOWNSHIP IMPACT ASSESSMENT
Grand River Plaza – Shopping Center**

Prepared for:

**Applicant
Symmetry Management
812 S Main St., Suite 200
Royal Oak, MI 48067**

Prepared by:

Scott Tousignant, P.E.



3121 E. Grand River Howell, MI 48843
517.546.4836 fax 517.548.1670
www.bosseng.com

**February 20, 2024
Revised: March 19, 2024**

DISCUSSION ITEMS

- A. Name(s) and address(es) of person(s) responsible for preparation of the Impact Assessment and a brief statement of their qualifications.

Prepared by:

Scott Tousignant, P.E.
Professional Engineer/Project Manager
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Prepared for:

Owner:

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Applicant:

Howell Family Ventures, LLC
29592 Beck Road
Wixom, MI 48393

- B. Description of the site, including existing structures, man-made facilities, and natural features, all-inclusive to within 10' of the property boundary.***

The project site is on parcels # 4711-05-400-031 and # 4711-05-400-032 in Section 5, Genoa Township, Livingston County, MI.

The subject site is bordered:

- On the north is the Rolling Ridge #1 Subdivision which is zoned MUPUD.
- On the east is a MUPUD zoned property containing Meijers and other MUPUD outlots as well as a single RCD zoned parcel along Grand River containing McDonalds.
- On the west is GCD zoned parcels containing "Dog Town & Kitty City".
- On the south of the subject parcels are additional RCD zoned outlots fronting Grand River Ave (on the north side of Grand River Ave). These are Mattress Firm, Arby's, Taco Bell and Dave's Hot Chicken. On the south side of Grand River Avenue are additional RCD zoned parcels containing uses such as Speedway, Harbor Freight Tools, and Belle Tire.

MHOG sanitary currently services the shopping plaza. The sanitary main is located at the southern portion of the site within the parking lot. See the Existing Conditions for locations.

The subject site is the Grand River Plaza. The site is primarily building and paved parking spaces. The parking lot will be reconfigured to add additional landscape islands and provide improved circulation within the site. There are currently three commercial drive approaches accessing Grand River, one of which is signalized. All three approaches will remain.

C. *Impact on natural features: A written description of the environmental characteristics of the site prior to development, i.e., topography, soils, vegetative cover, drainage, streams, creeks or ponds.*

The site currently sits developed as a shopping plaza. The southern half of the site is primarily all paved parking surfaces. The north half of the site is the shopping plaza and there is an existing detention basin at the northeast corner of the site.

The soils consist of Miami Loam with 2 to 6% slopes. The site drains via surface flow and subsurface storm pipe from south to north to the existing development detention basin. No wetlands/streams/creeks or other water bodies are located on site.

D. *Impact on storm water management: description of soil erosion control measures during construction.*

The existing shopping plaza currently has a stormwater management system. The site stormwater management system consists of an existing detention basin at the northeast corner of the site as well as a network of storm structures and pipes facilitating the drainage for the existing buildings and parking lots. The proposed plan maintains the amount of impervious surface on the site, so as to not have any volume impact on the existing detention system. The existing detention basin is proposed to be regraded on the east side which would provide approximately an additional 40,000 cft of basin storage.

Detailed construction plans will be reviewed by the Township Engineer and the Soil Erosion Control plans will be reviewed and permit issued by the Livingston County Drain Commissioners office prior to construction commencing. Ongoing/periodic soil erosion inspections will occur per County requirements to ensure soil erosion is managed proactively.

E. *Impact on surrounding land use: Description of proposed usage and other man-made facilities; how it conforms to existing and potential development patterns. Effects of added lighting, noise or air pollution which could negatively impact adjacent properties.*

Proposed uses on this Regional Commercial site are consistent with its current shopping plaza use. The building currently has a number of vacancies and the aim is to rejuvenate the site with improved parking areas and a building facelift to attract new tenants to occupy the space. Additionally, a building addition on the west side of the shopping plaza is proposed. The shopping plaza provides a mix of big box leasable space as well as smaller tenant spaces for a mix of users. The proposed uses conform to existing and potential development patterns and will not negatively impact adjacent properties with added lighting, noise or air pollution. The uses proposed do not impact adjacent properties with noise, light or air pollution as the proposed use is consistent with the current use. The proposed project will improve the function and appearance of the existing shopping plaza.

No proposed modifications are proposed along Grand River or on the east side of the site, simply selective site repaving. The only modification to the north side of the site is the paving of a fire access and truck circulation drive between the northern face of the building and the northern property line. There currently is a gravel drive in this location. The current access drive at the rear of the building does currently attract loiterers. Filling the plaza vacancies will provide relief on that condition. A retaining wall with a 6' high screen fence is proposed at the north side of the site to help screening adjacent to the residences to the north. The retaining

wall will aid in preserving existing trees along the northern property line. The west side of the site is currently a dilapidated parking lot and a green space containing the original water supply system for the shopping plaza. The parking lot will be replaced and the certain unused components of the original water supply system will be properly abandoned and other components reconfigured to accommodate the proposed site modifications.

F. Impact on public facilities and services: Description of number of residents, employees, patrons, and impact on general services, i.e., schools, police, fire.

There is no impact to schools, police or fire as this is a redevelopment of an existing shopping plaza. These site improvements will improve tenant occupancy and increase jobs within the Township. Fire truck circulation is improved with these proposed site improvements, with the primary improvement being a paved fire access drive at the rear(north) of the site.

G. Impact on public utilities: description of public utilities serving the project, i.e., water, sanitary sewer, and storm drainage system. Expected flows projected in residential units.

Storm water will be detained on-site via the use of existing at-grade detention system. The storm water will be discharged through an existing outlet control structure. There is no change to the sites impervious surfaces due to this redevelopment as well as plans to expand the basin volume which improves the downstream conditions. Detailed construction plans would be reviewed by the Township Engineer and the Soil Erosion Control permit would be reviewed and issued by the Livingston County Drain Commissioner. MHOG sanitary sewer runs along the south side of the site and services the existing shopping plaza. There is a building addition that will send additional wastewater to the existing sanitary sewer. The proposed use of the additional spaces is a larger retail space which has minimal wastewater generated.

MHOG water currently runs around the entire site. The domestic water is hooked up to MHOG water. The building fire suppression system is currently a private system and utilizes a fire booster pump within the existing wellhouse at the northwest corner of the site. There are a number of public fire hydrants surrounding the site that are on MHOG water. The fire suppression system will be evaluated for possible dedication to MHOG's system. The shopping plaza already utilizes the MHOG water and the only anticipated change is additional flow for the additional building space on the west side of the plaza. There is no anticipated water supply issues with this proposed project. Additional fire hydrants are being added to improve the hydrant coverage of the building which is an improvement on the public utilities and overall safety of the site.

H. Storage or handling of any hazardous materials: Description of any hazardous materials used, stored, or disposed of on-site.

No storing or handling of any hazardous materials is expected for this development.

I. Impact on traffic and pedestrians: Description of traffic volumes to be generated and their effect on the area.

A traffic study has been performed. It is prepared under separate cover and submitted to the Township and Livingston County Road Commission. In summary of the Traffic Impact Study performed by Colliers Engineering & Design, the three existing commercial drives on Grand River Ave adequately support the existing shopping plaza and proposed improvements for the site. Signal timing improvements can be made at the Grand River Ave and Latson Road signal as well as at the Grand River Avenue and Grand River Plaza Drive signal. Coordination and permitting will occur through MDOT for any proposed signal timing improvements or any additional ROW improvements MDOT may require for this project.

J. Special provisions: Deed restrictions, protective covenants, etc.

See existing conditions sheet for any existing easements on site.

K. Description of all sources:

- Genoa Township Zoning Ordinance
- “Soil Survey of Livingston County Michigan” Soil Conservation Services, USDA
- Traffic Impact Study by Colliers Engineering & Design dated February 16, 2024



Engineering
& Design

Traffic Impact Study

February 16, 2024

**Grand River Plaza Redevelopment
Genoa Township, Livingston County, Michigan**

Prepared for:

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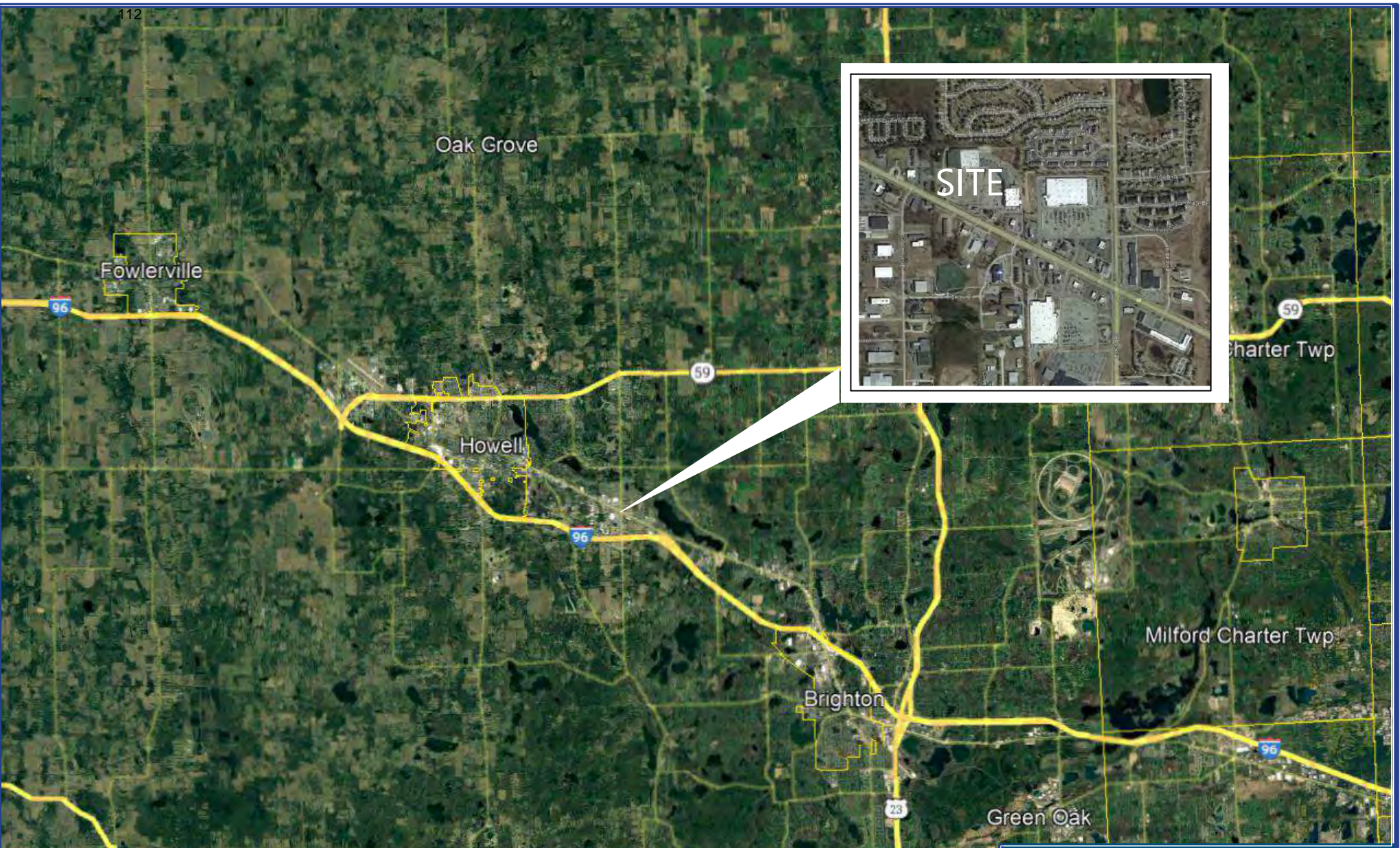
Introduction

This report presents the methodologies, analyses, results, and recommendations of a Traffic Impact Study (TIS) for the proposed Grand River Plaza redevelopment project in Genoa Township, Livingston County, Michigan. The project site is located on the north side of Grand River Avenue (I-96 BL) approximately ½ mile west of Latson Road as shown on **Figure 1** and currently includes approximately 225,000 square feet (SF) of retail and restaurant space. The proposed redevelopment plans would construct two new fast-food with drive-through uses within the existing parking lot, along with 20,600 SF of additional retail space.

Site access is currently provided via three driveways to Grand River Avenue with the middle site driveway operating under signalized control and is not proposed to change as part of the redevelopment plans. A representation of the site plan is shown on **Figure 2**. Grand River Avenue is under jurisdiction of the Michigan Department of Transportation (MDOT); whereby access permitting will be subject to MDOT review and standards. In accordance with Section 1.2.4 of the MDOT *Geometric Design Guidance*, a Traffic Impact Study (TIS) is required for site access permitting and project approvals. Additionally, the project is subject to Township review and approval as part of the site plan review process.

The purpose of this study is to identify the traffic related impacts, if any, of the proposed project on the adjacent road network. This study therefore includes analysis of the site access points as well as key off-site intersections surrounding the site. Analysis of the site access points will determine appropriate lane configurations as well as traffic control to process site traffic safely and efficiently. Key off-site intersections are analyzed to determine if new site-generated traffic passing through these locations would require improvements to mitigate any impacted traffic operations.

The scope of this study was developed based on Colliers Engineering & Design (CED) knowledge of the study area, understanding of the development program, accepted traffic engineering practice, and information published by the Institute of Transportation Engineers (ITE). Additionally, CED solicited input regarding the proposed scope of work from MDOT. The study analyses were completed using Synchro and SimTraffic, Version 11 traffic analysis software and in accordance with the methodologies and practices published by ITE and the applicable requirements of MDOT and the Township. This report is intended for use by MDOT and the Township to guide decisions related to development project approvals, access permitting, and identifying future roadway improvement needs.



Grand River Plaza TIS
Genoa Township, MI

Figure 1
Study Area Map





- GENERAL NOTES:**
1. THIS PLAN IS TO BE USED FOR THE DEVELOPMENT OF THE PROJECT AND IS NOT TO BE USED FOR ANY OTHER PURPOSE.
 2. THE DEVELOPER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL GOVERNMENT AND STATE AGENCIES.
 3. THE DEVELOPER SHALL MAINTAIN ALL EXISTING UTILITIES AND STRUCTURES UNLESS OTHERWISE SPECIFIED.
 4. THE DEVELOPER SHALL MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES AND PUBLIC UTILITIES.
 5. THE DEVELOPER SHALL MAINTAIN ALL EXISTING TREES AND LANDSCAPING UNLESS OTHERWISE SPECIFIED.
 6. THE DEVELOPER SHALL MAINTAIN ALL EXISTING DRIVEWAYS AND SIDEWALKS UNLESS OTHERWISE SPECIFIED.
 7. THE DEVELOPER SHALL MAINTAIN ALL EXISTING FENCES AND BARRIERS UNLESS OTHERWISE SPECIFIED.
 8. THE DEVELOPER SHALL MAINTAIN ALL EXISTING SIGNAGE UNLESS OTHERWISE SPECIFIED.
 9. THE DEVELOPER SHALL MAINTAIN ALL EXISTING LIGHTING UNLESS OTHERWISE SPECIFIED.
 10. THE DEVELOPER SHALL MAINTAIN ALL EXISTING SECURITY SYSTEMS UNLESS OTHERWISE SPECIFIED.

- GENERAL NOTES:**
1. THE DEVELOPER SHALL MAINTAIN ALL EXISTING UTILITIES AND STRUCTURES UNLESS OTHERWISE SPECIFIED.
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 8. THE DEVELOPER SHALL MAINTAIN ALL EXISTING SECURITY SYSTEMS UNLESS OTHERWISE SPECIFIED.

Grand River Plaza TIS
Genoa Township, MI

Figure 2
Site Plan



Roadway Data

Road Network

Vehicle transportation for the proposed development will be provided primarily via Grand River Avenue and Latson Road. The study intersections are identified below, and further details on the study roadways are summarized in **Table 1**.

Table 1: Roadway Summary

Roadway Data	Grand River Avenue	Latson Road
Functional Class	Principal Arterial	Minor Arterial
Direction	E-W	N-S
Speed Limit (mph)	50	50
Jurisdiction	MDOT	LCRC
Cross Section	5-Lane	5-Lane
AADT	31,000	22,000
AM Peak Hour Volume	1,525	995
PM Peak Hour Volume	2,505	1,880

Study Intersections

Grand River Avenue & Latson Road

At the intersection of Grand River Avenue & Latson Road, all approaches have dual left-turn lanes, two through lanes, and an exclusive right-turn lane. The intersection is traffic signal controlled with leading protected only left-turn phasing, and right-turn overlap phasing provided for all approaches. Dynamic “No Turn on Red” signs are also provided for all approaches to prohibit right-turns during the opposing approaches protected left-turn phase. Vehicle and pedestrian actuation are provided for all approaches and movements and marked crosswalks are provided for crossing all legs.

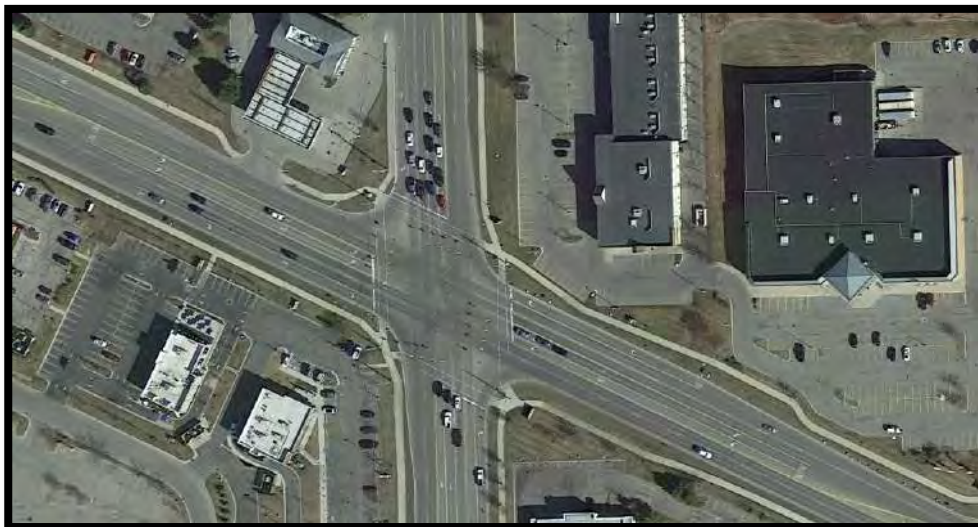


Figure 3: Grand River Avenue & Latson Road Intersection

Grand River Avenue & Meijer Drive / Wal-Mart Drive

Grand River Avenue & Meijer Drive / Wal-Mart Drive has an exclusive left-turn lane and shared through/right-turn lane on the NB and SB approaches while the EB and WB approaches have an exclusive left-turn lane, two through lanes, and exclusive right-turn lane. The intersection is traffic signal controlled with a two-phase operation. Vehicle actuation is provided for the minor driveway approaches. No marked crosswalks or pedestrian signals are provided at the intersection.



Figure 4: Grand River Avenue & Meijer Drive / Wal-Mart Drive Intersection

Grand River Avenue & Grand River Plaza Drive

Grand River Avenue & Grand River Plaza Drive has an exclusive left-turn lane and shared through/right-turn lane on the NB and SB approaches while the EB and WB approaches have an exclusive left-turn lane, two through lanes, and exclusive right-turn lane. The intersection is traffic signal controlled with a two-phase operation. Vehicle actuation is provided for the minor driveway approaches. There are no marked crosswalks at the intersection; however, pedestrian signals are provided for all legs of the intersection with pushbuttons provided for crossing Grand River Avenue.



Figure 5: Grand River Avenue & Grand River Plaza Drive Intersection

Grand River Avenue & Grand Oaks Drive

Grand River Avenue & Grand Oaks Drive has an exclusive left-turn lane and shared through/right-turn lane on the NB and SB approaches while the EB approach has an exclusive left-turn lane, two through lanes, and exclusive right-turn lane and WB approach has an exclusive left-turn lane, through lane, and shared through/right-turn lane. The intersection is traffic signal controlled with a two-phase operation. Vehicle actuation is provided for the minor road and driveway approaches. There are marked crosswalks and pedestrian signals provided for all legs of the intersection with pushbuttons provided for crossing Grand River Avenue.

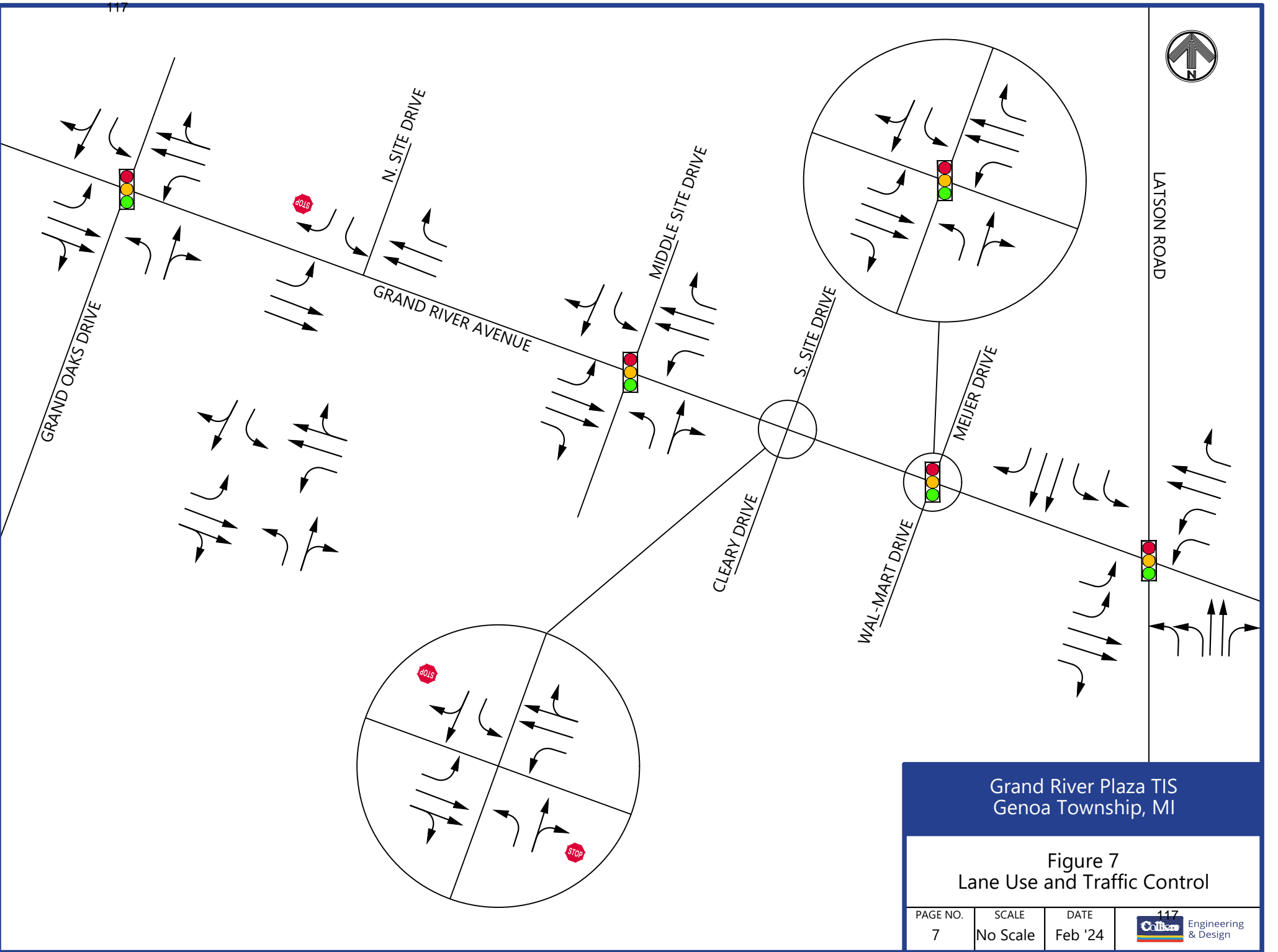


Figure 6: Grand River Avenue & Grand Oaks Drive Intersection

Existing Traffic Data

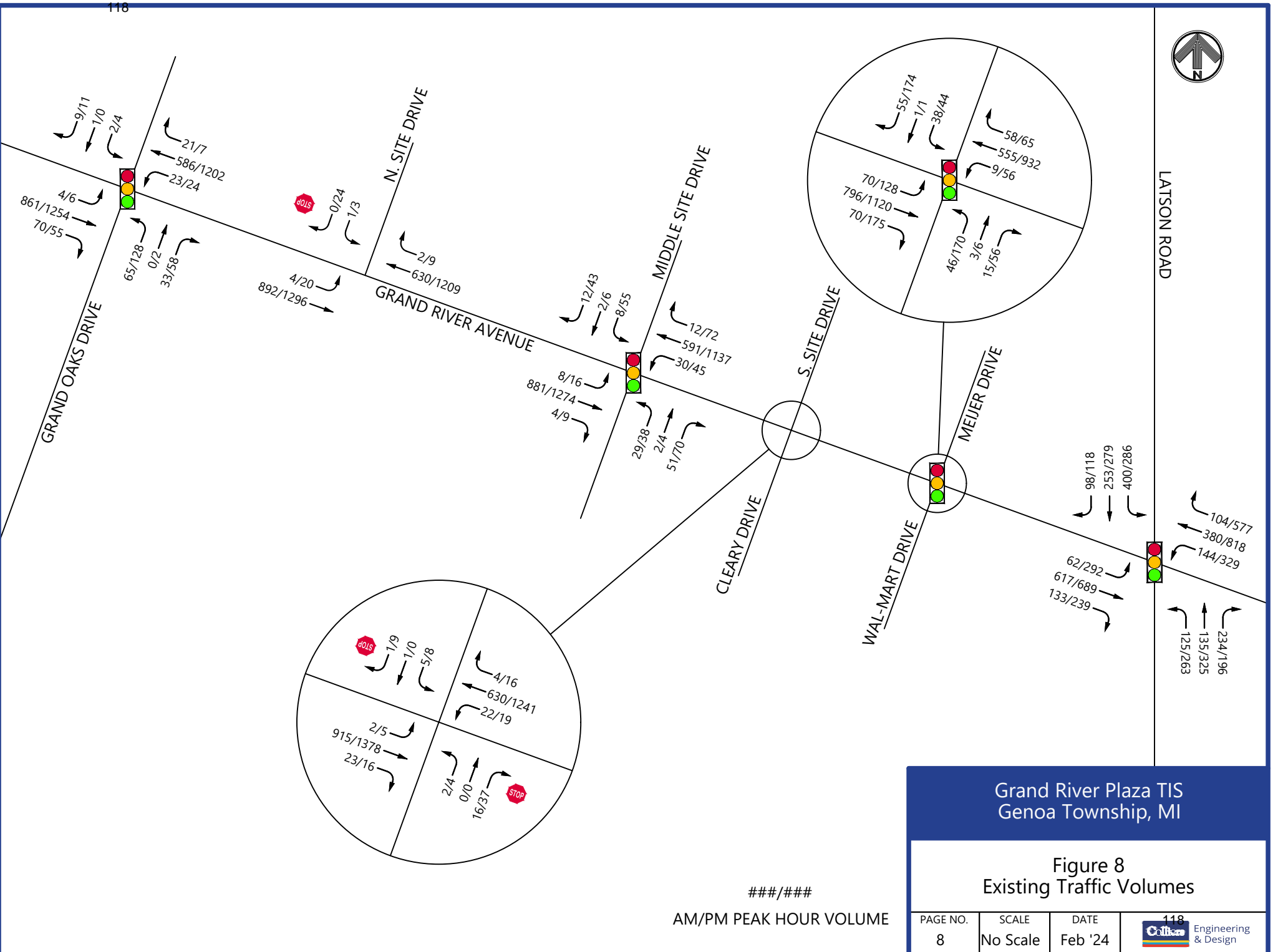
Existing weekday AM (7:00 to 9:00) and PM (4:00 to 6:00) peak hour turning movement counts were collected by CED subconsultant Quality Counts (QC) at the study intersections on Tuesday January 30th, 2024, and Thursday February 1st, 2024. Data were collected in 15-minute intervals to establish the current peak hour traffic volumes. Major weather events, holidays, and other local special events were avoided.

During collection of the manual intersection turning movement counts, pedestrian data and commercial truck percentages were also recorded and used in the traffic analysis. Peak hour factors (PHFs) and commercial truck percentages were calculated by approach based on the requirements of MDOT's *Electronic Traffic Control Device Guidelines*. Traffic volumes along Grand River Avenue were balanced upward between Grand Oaks Drive and the Meijer / Wal-Mart intersection. Between Latson Road and the Meijer / Wal-Mart intersection, a dummy node was utilized to account for the large amount of traffic that turns in and out of the commercial driveways located between the intersections. All relevant traffic volume data are included in **Appendix A** and the resulting 2024 baseline peak hour volumes utilized for this study are summarized on **Figure 8**.



Grand River Plaza TIS
Genoa Township, MI

Figure 7
Lane Use and Traffic Control



###/###

AM/PM PEAK HOUR VOLUME

Grand River Plaza TIS
Genoa Township, MI

Figure 8
Existing Traffic Volumes

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2024 Existing Conditions

Analysis Methodologies

The performance of the study intersections was evaluated through a qualitative measure of operating conditions called Levels of Service (LOS). Six LOS are defined with letter designations from A to F with LOS A representing minimal delay, and LOS F indicating failing conditions. Typically, LOS D is considered acceptable in suburban/urban areas.

The LOS measurement for both signalized and unsignalized intersections is average control delay, which is quantified in terms of seconds of delay per vehicle. Control delay includes deceleration delay, stopped delay, queue move-up delay, and acceleration delay. The LOS criteria for unsignalized and signalized intersections taken from the HCM are included in Appendix B.

The LOS and delay calculations are based on the procedures and methodologies outlined in the Transportation Research Board's Highway Capacity Manual, 6th Edition (HCM6) which sets forth nationally accepted standards regarding traffic operations and capacity analysis. Traffic signal timings were modeled per traffic signal timing permits provided by LCRC.

Simulations of the study network were also observed using SimTraffic in order to identify potential issues related to vehicle queuing, traffic flow between intersections, and the overall study network. The existing conditions SimTraffic models were calibrated in accordance with the procedures outlined in the MDOT *Electronic Traffic Control Device Guidelines*.

Existing Traffic Conditions

Existing peak hour vehicle delays and LOS were calculated at the study intersections based on the existing lane configurations and traffic control shown on **Figure 7**, the existing traffic volumes shown on **Figure 8**, and the methodologies presented in the HCM. The results of the analysis of existing conditions are presented in **Appendix B**, summarized in **Table 2** and described in further detail below.

The results of the existing conditions analysis indicate that all approaches and movements at the study intersections are currently operating acceptably at a LOS D or better with the exception of the NB and SB left-turn movements at the signalized intersection of Grand River Avenue & Latson Road which currently operate at a LOS E during the AM peak hour. Additionally, the STOP controlled Cleary Drive and E. Grand River Plaza Drive currently operate at a LOS E or F during both peak hours.

Observation of peak hour simulations indicates acceptable traffic operations during both peak hours and significant vehicle queues are not observed. At the signalized intersections, vehicle queues are observed to be processed during each signal cycle with minimal residual queueing or backups. On the STOP controlled E. Grand River Plaza Drive and Cleary Drive approaches, 95th percentile queue lengths are calculated to be 55 feet (2 vehicles) or less during the peak periods, which is not significant.

Table 2: Existing Conditions

Intersection	Control	Approach	Movement	AM Peak Hour		PM Peak Hour	
				Delay	LOS	Delay	LOS
Latson Road & Grand River Avenue (I-96 BL)	Signal	EB	Left	43.5	D	40.8	D
			Thru	27.4	C	18.8	B
			Right	19.4	B	12.5	B
		WB	Left	48.2	D	45.8	D
			Thru	23.2	C	32.8	C
			Right	12.5	B	41.9	D
		NB	Left	45.7	D	56.1	E
			Thru	35.8	D	37.7	D
			Right	47.9	D	29.1	C
		SB	Left	40.5	D	60.0	E
			Thru	29.3	C	35.8	D
			Right	26.0	C	26.3	C
		Overall				32.4	C
Grand River Avenue & Meijer Drive / Wal-Mart Drive	Signal	EB	Left	12.1	B	25.9	C
			Thru	15.7	B	26.4	C
			Right	10.3	B	18.5	B
		WB	Left	2.3	A	13.8	B
			Thru	0.2	A	0.7	A
			Right	0.1	A	0.1	A
		NB	Left	42.1	D	49.3	D
			Thru/Right	35.5	D	25.9	C
		SB	Left	38.0	D	28.1	C
			Thru/Right	37.9	D	28.5	C
		Overall				12.4	B
Grand River Avenue & Grand River Plaza Middle Drive	Signal	EB	Left	0.0	A	3.0	A
			Thru	0.3	A	0.7	A
			Right	0.0	A	0.0	A
		WB	Left	0.2	A	8.0	A
			Thru	0.2	A	10.7	B
			Right	0.0	A	6.2	A
		NB	Left	41.1	D	39.3	D
			Thru/Right	43.4	D	38.7	D
		SB	Left	42.3	D	42.2	D
			Thru/Right	39.6	D	37.0	D
Overall				3.2	A	8.0	A
Grand River Avenue & Grand Oaks Drive	Signal	EB	Left	2.2	A	3.4	A
			Thru	3.1	A	5.8	A
			Right	2.3	A	3.4	A
		WB	Left	0.5	A	2.3	A
			Thru/Right	0.4	A	1.1	A
		NB	Left	42.0	D	39.9	D
			Thru/Right	40.8	D	36.4	D
		SB	Left/Thru/Right	38.8	D	34.6	C
Overall				4.9	A	6.3	A
Grand River Avenue & Grand River Plaza W. Drive	STOP (Minor)	EB	Left	9.2	A	12.1	B
			Thru/Right	Free		Free	
		WB	Thru/Right	Free		Free	
		SB	Left	16.6	C	30.0	D
Right	0.0		A	14.4	B		

Table 2: Existing Conditions (continued)

Intersection	Control	Approach	Movement	AM Peak Hour		PM Peak Hour	
				Delay	LOS	Delay	LOS
Grand River Avenue & Grand River Plaza E. Drive / Cleary Drive	STOP (Minor)	EB	Left	9.2	A	12.0	B
			Thru/Right	Free		Free	
		WB	Left	10.5	B	13.8	B
			Thru/Right	Free		Free	
		NB	Left	43.4	E	242.1	F
			Thru/Right	12.2	B	17.7	C
		SB	Left/Thru/Right	47.1	E	184.7	F

No-Build Conditions

No-Build Traffic Volumes

Traffic impact studies typically include an evaluation of traffic operations in the future as they would be without the proposed development. This no-build condition serves to identify any mitigation that may be required, regardless of the project, and as a baseline for comparison of future buildout conditions. This scenario is comprised of existing traffic conditions, plus ambient traffic growth, plus traffic from approved developments in the study area that have yet to be constructed. At the time of this study the following developments were identified within the study area and immediate vicinity that have yet to be constructed or were currently under construction:

1. Versa Mixed-Use Development
2. Westbury Phase II Residential Development
3. SJMHS Hospital Expansion
4. Latson Road Retail Development (Mister Car Wash)
5. Forest Ridge Residential Development
6. Pine Creek Residential Development

The vehicle trips that would be generated by the background developments were assigned to the study intersections based on the respective traffic study completed for each development. Where a traffic study was not completed for the development or the traffic study did not include the same intersections or time periods as this study, the number of vehicle trips was forecast based on data published by ITE in *Trip Generation, 11th Edition* and assigned to the study road network based on existing traffic patterns.

In addition to background developments, an ambient growth factor is applied to existing traffic volumes to account for future projects in the study area and population increases, as well as growth in regular traffic volumes due to development projects outside the study area. The recent construction of the I-96 & Latson Road interchange has resulted in significant changes in traffic patterns throughout the study area. As a result, historical traffic volumes do not provide an accurate representation of traffic growth in the area. Therefore, publicly available data from the Southeast Michigan Council of Governments (SEMCOG), including population and employment forecasts for Genoa Township were referenced.

The SEMCOG data indicates annual population and employment growths ranging from 0.35% to 1.64% between 2015 and 2045 as shown in **Table 3**. Therefore, an ambient background growth rate of 0.75% per year will be utilized for this study. The ambient growth rate and trips from the background developments were applied to the existing 2024 traffic volumes for a period of one year to forecast the no-build traffic volumes **without the proposed development**. The resultant 2025 no-build traffic volumes are summarized on **Figure 9**.

Table 3: Community Annual Growth Rate

Community	Measure	Growth
Genoa Township	Employment	0.38%
	Population	1.54%
Howell	Employment	0.35%
	Population	0.57%
Brighton	Employment	0.47%
	Population	0.69%
Brighton Township	Employment	0.63%
	Population	1.64%
Average		0.78%

No-Build Traffic Conditions

No-build peak hour vehicle delays and LOS were calculated at the study intersections based on the existing lane configurations and traffic control shown on **Figure 7**, the no-build traffic volumes shown on **Figure 9**, and the methodologies presented in the HCM. The results of the analysis of no-build conditions are presented in **Appendix C**, summarized in **Table 4**, and described in further detail below.

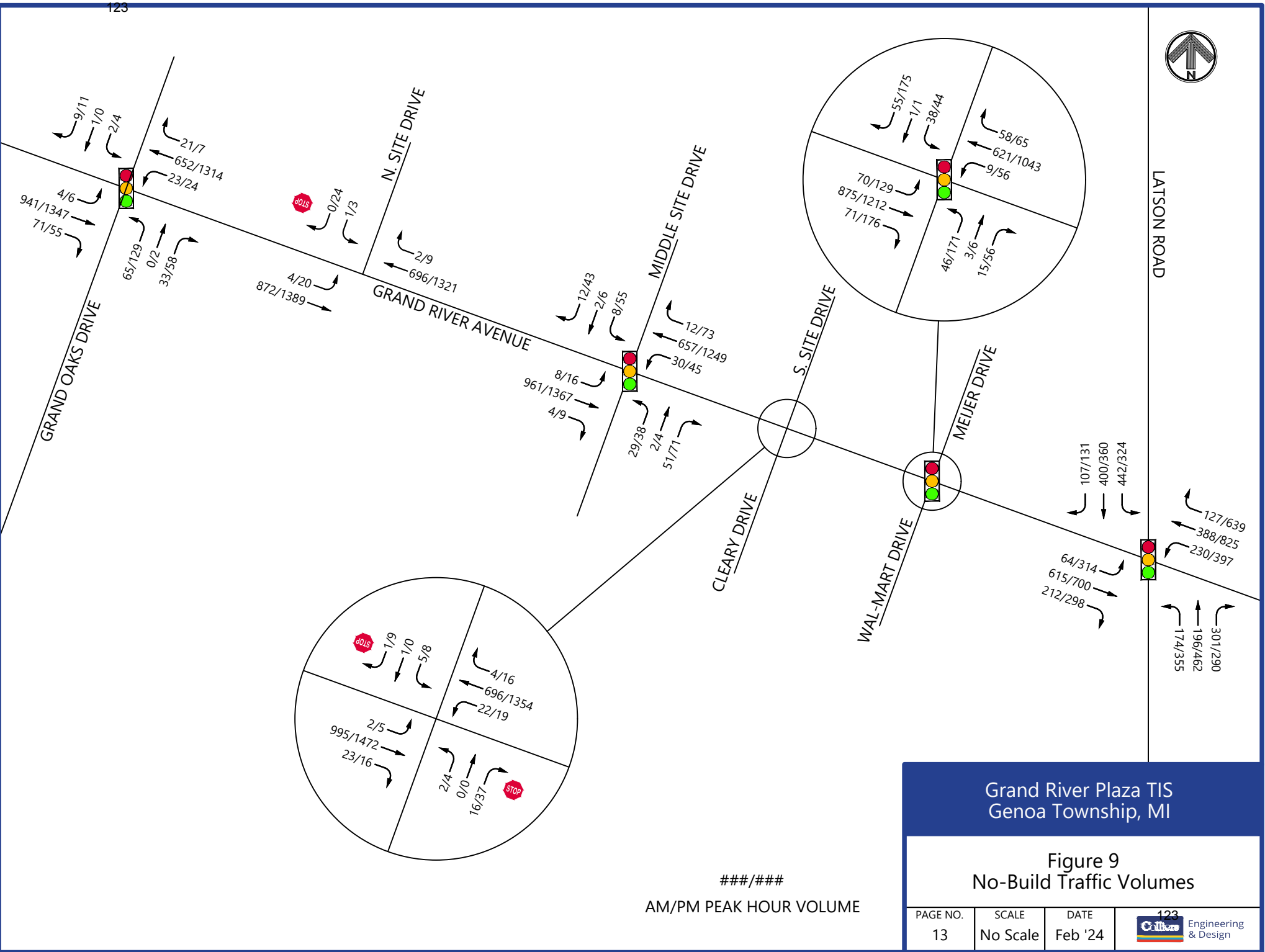
The results of the no-build conditions analysis indicate that all approaches and movements would continue to operate similar to existing conditions during both peak hours with the exception of the following:

- The WB left-turn movement and NB right-turn movement at the signalized intersection of Grand River Avenue & Latson Road which would be reduced to a LS F and LOS E during the AM peak hour, respectively. Additionally, the WB right-turn movement and NB and SB left-turn movements will be reduced to a LOS F during the PM peak hour.

Review of network simulations continue to indicate acceptable traffic operations during the AM peak hour and significant vehicle queues are not observed. During the PM peak hour, brief periods of long vehicle queues and cycle failures occur are observed for the NB left-turn movement and WB right-turn movement at the intersection of Grand River Avenue & Latson Road. On the STOP controlled E. Grand River Plaza Drive and Cleary Drive approaches, 95th percentile queue lengths are calculated to be 60 feet (2-3 vehicles) or less during the peak periods, which is not significant.



LATSON ROAD



###/###

AM/PM PEAK HOUR VOLUME

Grand River Plaza TIS
Genoa Township, MI

Figure 9
No-Build Traffic Volumes

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Table 4: No-Build Traffic Conditions

Intersection	Control	Approach	Movement	AM Peak Hour				PM Peak Hour			
				Existing		No-Build		Existing		No-Build	
				Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Latson Road & Grand River Avenue (I-96 BL)	Signal	EB	Left	43.5	D	43.5	D	40.8	D	41.7	D
			Thru	27.4	C	29.4	C	18.8	B	27.4	C
			Right	19.4	B	21.3	C	12.5	B	18.5	B
		WB	Left	48.2	D	99.8	F	45.8	D	49.2	D
			Thru	23.2	C	24.2	C	32.8	C	39.0	D
			Right	12.5	B	12.9	B	41.9	D	85.2	F
		NB	Left	45.7	D	44.3	D	56.1	E	124.8	F
			Thru	35.8	D	37.6	D	37.7	D	39.6	D
			Right	47.9	D	70.3	E	29.1	C	29.6	C
		SB	Left	40.5	D	40.5	D	60.0	E	82.0	F
			Thru	29.3	C	32.6	C	35.8	D	35.1	D
			Right	26.0	C	26.9	C	26.3	C	24.4	C
		Overall				32.4	C	40.1	D	35.5	D
Grand River Avenue & Meijer Drive / Wal-Mart Drive	Signal	EB	Left	12.1	B	12.4	B	25.9	C	27.9	C
			Thru	15.7	B	16.4	B	26.4	C	27.7	C
			Right	10.3	B	10.3	B	18.5	B	18.6	B
		WB	Left	2.3	A	2.8	A	13.8	B	17.6	B
			Thru	0.2	A	0.2	A	0.7	A	0.9	A
			Right	0.1	A	0.1	A	0.1	A	0.1	A
		NB	Left	42.1	D	42.1	D	49.3	D	49.9	D
			Thru/Right	35.5	D	35.5	D	25.9	C	25.9	C
		SB	Left	38.0	D	38.0	D	28.1	C	28.1	C
			Thru/Right	37.9	D	37.9	D	28.5	C	28.5	C
		Overall				12.4	B	12.5	B	18.7	B
Grand River Avenue & Grand River Plaza Middle Drive	Signal	EB	Left	0.0	A	0.0	A	3.0	A	3.9	A
			Thru	0.3	A	0.3	A	0.7	A	0.8	A
			Right	0.0	A	0.0	A	0.0	A	0.0	A
		WB	Left	0.2	A	0.3	A	8.0	A	8.4	A
			Thru	0.2	A	0.2	A	10.7	B	11.4	B
			Right	0.0	A	0.0	A	6.2	A	6.3	A
		NB	Left	41.1	D	41.1	D	39.3	D	39.2	D
			Thru/Right	43.4	D	43.4	D	38.7	D	38.7	D
		SB	Left	42.3	D	42.3	D	42.2	D	42.2	D
			Thru/Right	39.6	D	39.6	D	37.0	D	36.9	D
		Overall				3.2	A	2.9	A	8.0	A
Grand River Avenue & Grand Oaks Drive	Signal	EB	Left	2.2	A	2.2	A	3.4	A	3.4	A
			Thru	3.1	A	3.2	A	5.8	A	6.2	A
			Right	2.3	A	2.3	A	3.4	A	3.5	A
		WB	Left	0.5	A	0.7	A	2.3	A	2.9	A
			Thru/Right	0.4	A	0.5	A	1.1	A	1.3	A
		NB	Left	42.0	D	42.0	D	39.9	D	39.8	D
			Thru/Right	40.8	D	40.8	D	36.4	D	36.4	D
		SB	Left/Thru/Right	38.8	D	38.8	D	34.6	C	34.6	C
		Overall				4.9	A	4.7	A	6.3	A

Table 4: No-Build Traffic Conditions (continued)

Intersection	Control	Approach	Movement	AM Peak Hour				PM Peak Hour				
				Existing		No-Build		Existing		No-Build		
				Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	
Grand River Avenue & Grand River Plaza W. Drive	STOP (Minor)	EB	Left	9.2	A	9.5	A	12.1	B	12.9	B	
			Thru/Right	Free		Free		Free		Free		
		WB	Thru/Right	Free		Free		Free		Free		
			SB	Left	16.6	C	17.8	C	30.0	D	34.3	D
				Right	0.0	A	0.0	A	14.4	B	15.3	C
Grand River Avenue & Grand River Plaza E. Drive / Cleary Drive	STOP (Minor)	EB	Left	9.2	A	9.5	A	12.0	B	12.8	B	
			Thru/Right	Free		Free		Free		Free		
		WB	Left	10.5	B	11.0	B	13.8	B	14.7	B	
			Thru/Right	Free		Free		Free		Free		
		NB	Left	43.4	E	52.6	F	242.1	F	342.5	F	
			Thru/Right	12.2	B	12.7	B	17.7	C	19.0	C	
		SB	Left/Thru/Right	47.1	E	59.9	F	184.7	F	292.1	F	

Build Conditions

The proposed development plan includes construction of two new fast-food with drive-through uses totaling 5,900 SF and 20,600 SF of new retail space. Site access is currently provided via three driveways to Grand River Avenue with the middle site driveway operating under signalized control and is not proposed to change as part of the redevelopment plans.

Site Trip Generation

The number of AM and PM peak hour vehicle trips that will be generated by the proposed development expansion will be forecast based on the rates and equations published by ITE in *Trip Generation, 11th Edition*. In addition, to the new proposed retail and fast-food with drive-through uses, approximately 87,000 SF of the existing shopping center is currently vacant. Therefore, this space was also included in the trip generation forecast for build conditions.

The existing/proposed uses were matched to the ITE land use category that most closely matches their proposed operation. For this study, ITE *Land Use #821, Shopping Plaza* was utilized for the retail space and *Land Use #934, Fast-Food Restaurant with Drive-Through*, was utilized for the proposed fast-food restaurants.

As is typical of most retail and restaurant uses, a portion of the site-generated trips are already present on the adjacent road network and are interrupted to visit the site. These trips are known as 'pass-by' trips, which create turning movements at the site driveways, but do not increase traffic volumes on the adjacent road network or off-site intersections. ITE publishes pass-by rates for various commercial land uses in the *Trip Generation Handbook*. For Land Use #821 and #934, 34% and 50% of trips are expected to be pass-by in nature. The number of pass-by vehicle trips was subtracted from the total number of site-generated trips to determine the number of new peak hour trips for the overall development. The resultant trip generation forecast for the proposed development is shown in Table 5.

Table 5: Site Trip Generation

Land Use	ITE Code	Amount	Units	ADT	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Shopping Plaza	821	107,793	SF	7,278	115	71	186	274	285	559
		<i>Pass-By (34% PM)</i>		2,475	0	0	0	95	95	190
		New Trips		4,803	115	71	186	179	190	369
High-Turnover (Sit-Down) Restaurant	934	5,900	SF	2,758	134	129	263	101	94	195
		<i>Pass-By (49% AM, 50% PM)</i>		1,379	64	64	128	49	49	98
		New Trips		1,379	70	65	135	52	45	97
Total		Total Trips		10,036	249	200	449	375	379	754
		Pass-By Trips		3,854	64	64	128	144	144	288
		New Trips		6,182	185	136	321	231	235	466

Trip Distribution

The vehicle trips that would be generated by the proposed development were assigned to the study road network based on existing peak hour traffic patterns at the site driveways, local population densities, and ITE methodologies. These methods indicate that pass-by trips enter and exit the development in their original direction of travel and new trips will return to their direction of origin. Peak hour traffic volumes on Grand River Avenue and Latson Road were reviewed together with local population densities to determine the origin and destinations of new site-generated traffic. Pass-by traffic was assumed to follow existing traffic patterns along Grand River Avenue. The resultant site trip distribution is summarized in **Table 6**. Site-generated trips were assigned to the site driveways based on the existing traffic percentages at each driveway summarized in **Table 7**.

Table 6: Site Trip Distribution

NEW TRIPS			PASS-BY TRIPS				
To/From	Via	AM/PM	From	To	Via	AM	PM
North	Latson Road	15%	East	West	Grand River Avenue	40%	47%
South	Latson Road	10%	West	East	Grand River Avenue	60%	53%
East	Grand River Avenue	35%					
West	Grand River Avenue	40%					
Total		100%	Total			100%	100%

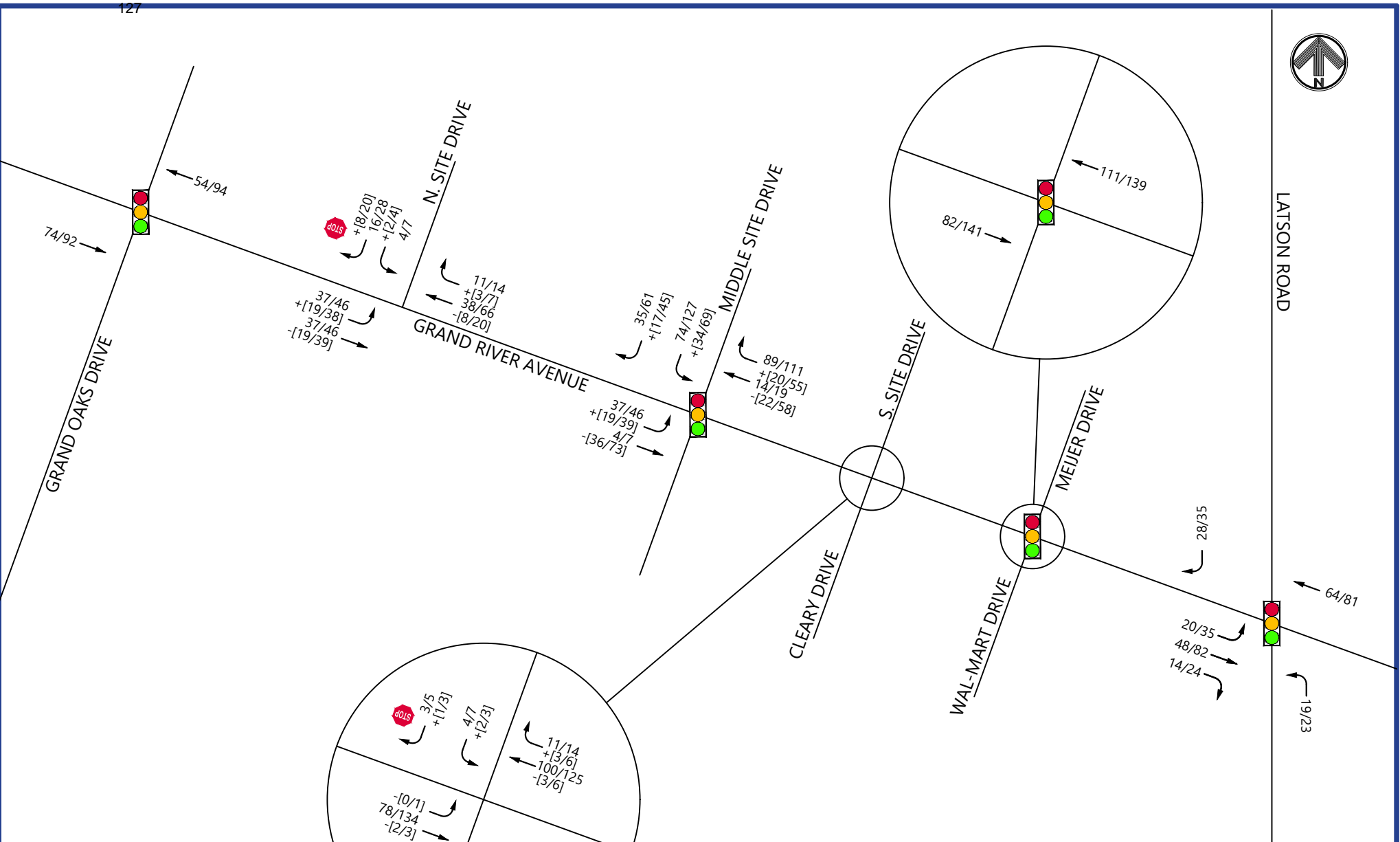
Table 7: Site Driveway Percentages

To/From	Via	AM/PM	
		In	Out
East	N. Site Drive	10%	5%
	Middle Site Drive	80%	90%
	S. Site Drive	10%	5%
West	N. Site Drive	50%	30%
	Middle Site Drive	50%	65%
	S. Site Drive	0%	5%

The site-generated vehicle trips were assigned to the study network as shown on **Figure 10**. These trips were added to the 2025 no-build traffic volumes shown on **Figure 9** to calculate the future build traffic volumes shown on **Figure 11**.



LATSON ROAD

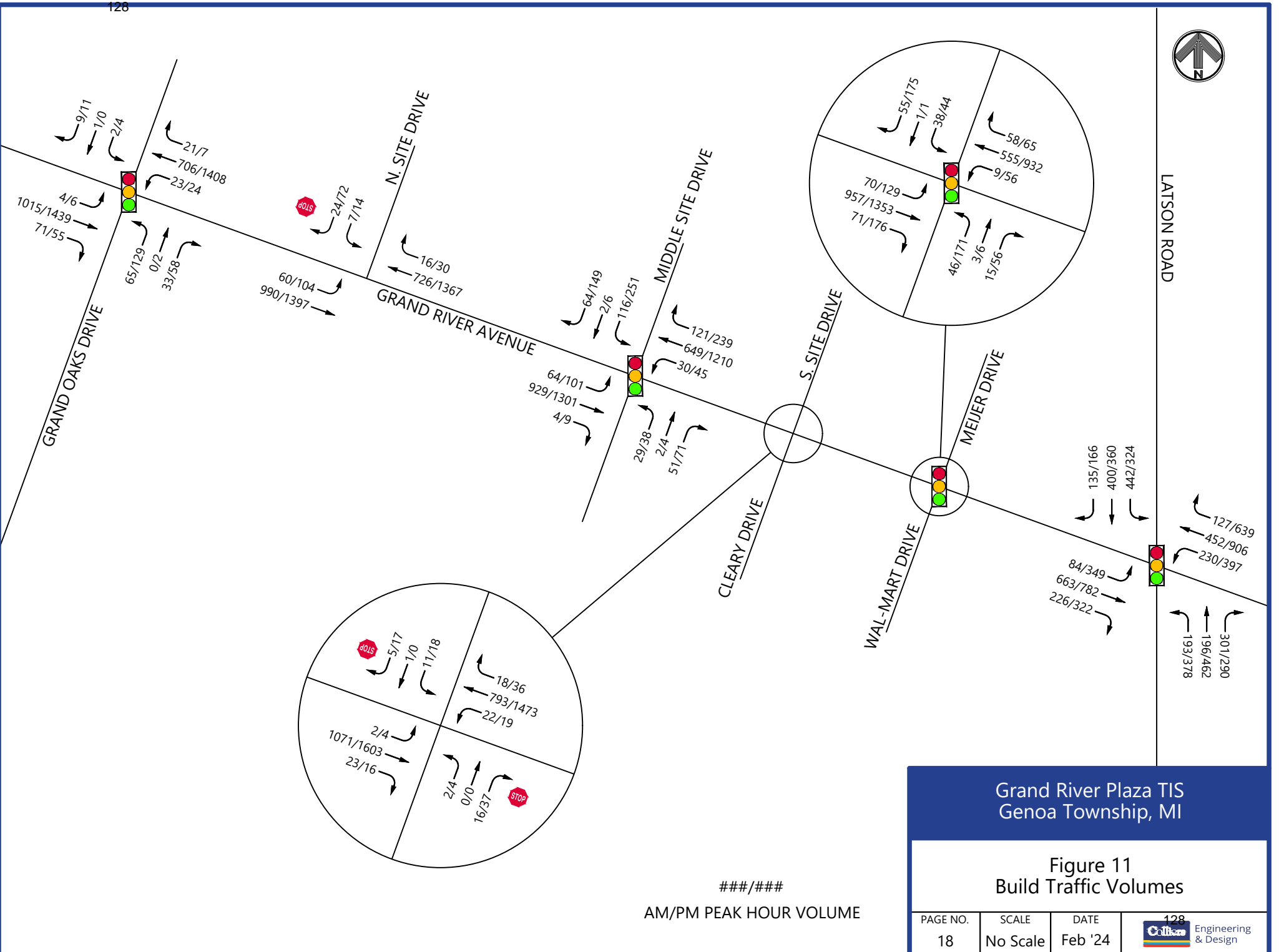


###/###
 NEW AM/PM PEAK HOUR TRIPS
 +/-[###/###]
 PASS-BY AM/PM PEAK HOUR TRIPS

Grand River Plaza TIS
 Genoa Township, MI

Figure 10
 Site-Generated Traffic Volumes

PAGE NO.	SCALE	DATE	
17	No Scale	Feb '24	



###/###
AM/PM PEAK HOUR VOLUME

Grand River Plaza TIS
Genoa Township, MI

Figure 11
Build Traffic Volumes

PAGE NO.	SCALE	DATE	
18	No Scale	Feb '24	

Build Conditions

Future build peak hour vehicle delays and LOS with the proposed development were calculated based on existing lane configurations and traffic control shown on **Figure 7**, build traffic volumes shown on **Figure 11**, and HCM methodologies. SimTraffic simulations were also utilized to evaluate traffic flow and vehicle queues throughout the study network. The build conditions results are included in **Appendix D** and summarized in **Table 8**.

Table 8: Build Traffic Conditions

Intersection	Control	Approach	Movement	AM Peak Hour				PM Peak Hour			
				No-Build		Build		No-Build		Build	
				Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Latson Road & Grand River Avenue (I-96 BL)	Signal	EB	Left	43.5	D	43.8	D	41.7	D	43.3	D
			Thru	29.4	C	30.3	C	27.4	C	34.5	C
			Right	21.3	C	21.1	C	18.5	B	19.7	B
		WB	Left	99.8	F	99.8	F	49.2	D	49.2	D
			Thru	24.2	C	25.5	C	39.0	D	52.5	D
			Right	12.9	B	13.1	B	85.2	F	95.8	F
		NB	Left	44.3	D	43.8	D	124.8	F	151.4	F
			Thru	37.6	D	37.6	D	39.6	D	39.6	D
			Right	70.3	E	70.3	E	29.6	C	29.6	C
		SB	Left	40.5	D	40.5	D	82.0	F	82.0	F
			Thru	32.6	C	33.4	C	35.1	D	35.1	D
			Right	26.9	C	28.2	C	24.4	C	24.7	C
		Overall				40.1	D	40.0	D	50.5	D
Grand River Avenue & Meijer Drive / Wal-Mart Drive	Signal	EB	Left	12.4	B	12.9	B	27.9	C	30.8	C
			Thru	16.4	B	17.2	B	27.7	C	29.7	C
			Right	10.3	B	10.3	B	18.6	B	18.6	B
		WB	Left	2.8	A	3.4	A	17.6	B	25.1	C
			Thru	0.2	A	0.3	A	0.9	A	1.1	A
			Right	0.1	A	0.1	A	0.1	A	0.1	A
		NB	Left	42.1	D	42.1	D	49.9	D	49.9	D
			Thru/Right	35.5	D	35.5	D	25.9	C	25.9	C
		SB	Left	38.0	D	38.0	D	28.1	C	28.1	C
			Thru/Right	37.9	D	37.9	D	28.5	C	28.5	C
		Overall				12.5	B	12.3	B	19.1	B
Grand River Avenue & Grand River Plaza Middle Drive	Signal	EB	Left	0.0	A	0.4	A	3.9	A	20.3	C
			Thru	0.3	A	0.3	A	0.8	A	0.9	A
			Right	0.0	A	0.0	A	0.0	A	0.0	A
		WB	Left	0.3	A	0.2	A	8.4	A	15.1	B
			Thru	0.2	A	0.2	A	11.4	B	21.4	C
			Right	0.0	A	0.2	A	6.3	A	15.1	B
		NB	Left	41.1	D	46.0	D	39.2	D	40.7	D
			Thru/Right	43.4	D	42.7	D	38.7	D	33.6	C
		SB	Left	42.3	D	202.3	F	42.2	D	140.1	F
			Thru/Right	39.6	D	62.9	E	36.9	D	37.9	D
		Overall				2.9	A	19.3	B	8.2	A

Table 8: Build Traffic Conditions (continued)

Intersection	Control	Approach	Movement	AM Peak Hour				PM Peak Hour			
				No-Build		Build		No-Build		Build	
				Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Grand River Avenue & Grand Oaks Drive	Signal	EB	Left	2.2	A	2.2	A	3.4	A	3.4	A
			Thru	3.2	A	3.4	A	6.2	A	6.6	A
			Right	2.3	A	2.3	A	3.5	A	3.5	A
		WB	Left	0.7	A	0.8	A	2.9	A	3.6	A
			Thru/Right	0.5	A	0.5	A	1.3	A	1.5	A
		NB	Left	42.0	D	42.0	D	39.8	D	39.8	D
			Thru/Right	40.8	D	40.8	D	36.4	D	36.4	D
		SB	Left/Thru/Right	38.8	D	38.8	D	34.6	C	34.6	C
		Overall				4.7	A	4.6	A	6.3	A
Grand River Avenue & Grand River Plaza W. Drive	STOP (Minor)	EB	Left	9.5	A	10.1	B	12.9	B	15.9	C
			Thru/Right	Free		Free		Free		Free	
		WB	Thru/Right	Free		Free		Free		Free	
		SB	Left	17.8	C	21.0	C	34.3	D	53.8	F
			Right	0.0	A	11.5	B	15.3	C	18.3	C
Grand River Avenue & Grand River Plaza E. Drive / Cleary Drive	STOP (Minor)	EB	Left	9.5	A	10.0	A	12.8	B	13.9	B
			Thru/Right	Free		Free		Free		Free	
		WB	Left	11.0	B	11.4	B	14.7	B	16.2	C
			Thru/Right	Free		Free		Free		Free	
		NB	Left	52.6	F	68.5	F	342.5	F	555.3	F
			Thru/Right	12.7	B	13.3	B	19.0	C	21.3	C
		SB	Left/Thru/Right	59.9	F	84.3	F	292.1	F	1,144.8	F

The results of the build conditions analysis indicate that all approaches and movements at the study intersections will continue to operate in a manner similar to no-build conditions with the exception of the following:

- The signalized intersection of Grand River Avenue & Latson Road which will be reduced to a LOS E during the PM peak hour; however, LOS for all individual movements at the intersection will remain unchanged during both peak hours.
- The SB left-turn movement at the signalized intersection of Grand River Avenue & Grand River Plaza Drive which will be reduced to a LOS F during both peak hours.
- The STOP controlled left-turn movement from the W. Grand River Plaza Drive to Grand River Avenue which will be reduced to a LOS F during the PM peak hour.

Review of peak hour simulations indicate future build traffic operations which are similar to no-build conditions. Acceptable traffic operations are continued to be observed during the AM peak hour with no significant vehicle queues. During the PM peak hour, brief periods of long vehicle queues and cycle failures are continued to be observed at the intersection of Grand River Avenue & Latson Road for the NB left-turn movement and WB right-turn movement. However, these queues dissipate and are not present throughout the duration of the peak hour. On the STOP controlled E. Grand River Plaza Drive and Cleary Drive approaches, 95th percentile queue lengths are calculated to be 62 feet (2-3 vehicles) or less during the peak periods, which is not significant.

Build Improvements

In order to improve traffic operations in the build conditions, mitigation measures were investigated. At the intersection of Grand River Avenue & Latson Road, recent improvements were made as part of the I-96 & Latson Road interchange project to provide dual left-turn lanes and right turn overlap phasing on all approaches, as well as additional travel lanes along Latson Road. The intersection of Grand River Avenue & Latson Road is considered to be built out, and additional physical capacity improvements (i.e., additional lanes) are constrained by available right-of-way. Therefore, further geometric improvements at the intersection to mitigate all movements to a LOS D or better are considered to be regional and beyond the scope and context of this study.

As a result, improvements at Grand River Avenue & Latson Road are limited to signal timing and traffic control modifications. Signal cycle length and timing changes were therefore evaluated. The results of this analysis indicate that optimized timings with a 90 second cycle length during both peak hours would result in improved traffic operations; however, several intersection approaches and movements would continue to operate at a LOS E or F during the peak hours. At the intersection of Grand River Avenue & Grand River Plaza Drive, signal timing optimization during the peak hours would result in all approaches and movements operating at a LOS D or better during both peak hours. The results of the build conditions analysis with the optimized signal timings are summarized in Table 9.

Table 9: Build Traffic Conditions with Improvements

Intersection	Control	Approach	Movement	AM Peak Hour				PM Peak Hour					
				Build		Build IMP		Build		Build IMP			
				Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS		
Latson Road & Grand River Avenue (I-96 BL)	Signal	EB	Left	43.8	D	43.8	D	43.3	D	49.2	D		
			Thru	30.3	C	32.8	C	34.5	C	26.7	C		
			Right	21.1	C	22.7	C	19.7	B	14.3	B		
		WB	Left	99.8	F	51.6	D	49.2	D	65.4	E		
			Thru	25.5	C	25.3	C	52.5	D	46.2	D		
			Right	13.1	B	13.1	B	95.8	F	63.7	F		
		NB	Left	43.8	D	44.0	D	151.4	F	51.2	D		
			Thru	37.6	D	37.6	D	39.6	D	49.7	D		
			Right	70.3	E	53.9	D	29.6	C	36.0	D		
		SB	Left	40.5	D	41.3	D	82.0	F	47.3	D		
			Thru	33.4	C	33.5	C	35.1	D	43.5	D		
			Right	28.2	C	28.4	C	24.7	C	29.2	C		
		Overall				40.0	D	35.7	D	56.5	E	44.4	D
		Grand River Avenue & Grand River Plaza Middle Drive	Signal	EB	Left	0.4	A	0.5	A	20.3	C	27.9	C
Thru	0.3				A	0.4	A	0.9	A	1.2	A		
Right	0.0				A	0.0	A	0.0	A	0.0	A		
WB	Left			0.2	A	0.3	A	15.1	B	18.2	B		
	Thru			0.2	A	0.3	A	21.4	C	24.9	C		
	Right			0.2	A	0.2	A	15.1	B	18.2	B		
NB	Left			46.0	D	35.2	D	40.7	D	34.1	C		
	Thru/Right			42.7	D	31.6	C	33.6	C	28.2	C		
SB	Left			202.3	F	39.9	D	140.1	F	51.5	D		
	Thru/Right			62.9	E	32.6	C	37.9	D	30.0	C		
Overall				19.3	B	5.9	A	22.5	C	17.4	B		

Access Management

MDOT standards for the spacing of commercial drives outlined in Section 1.2.2 of Geometric Design Guidance were reviewed with respect to the existing site driveways along Grand River Avenue. These standards are summarized in **Table 10** and indicate that the driveway spacing between the existing driveways currently meets MDOT standards; however, it does not meet MDOT requirements from other driveways along the corridor including the Meijer / Wal-Mart Drives to the east and the Warehouse Rocks Drive to the west.

Table 10: Driveway Spacing Summary

Driveway	Adjacent Driveway	Distance	MDOT Requirement
W. Grand River Plaza Drive	Middle Grand River Plaza Drive	512	455
	Warehouse Rocks Drive	395	455
Middle Grand River Plaza Drive	E. Grand River Plaza Drive	612	455
E. Grand River Plaza Drive	Meijer Drive	302	455

Conclusions

The Conclusions related to this Traffic Impact Study and relative analyses are as follows:

1. All study intersection approaches and movements currently operate acceptably at a LOS D or better during both peak hours with the exception of the following:
 - a. The NB and SB left-turn movements at the intersection of Grand River Avenue & Latson Road which operate at a LOS E during the PM peak hour.
 - b. The STOP controlled E. Grand River Plaza Drive and Cleary Drive approaches which currently operate at a LOS E or F during both peak hours.
2. Ambient traffic growth of 0.75% was applied to establish 2025 no-build traffic volumes without the proposed development. Several background developments were also identified in the study area and included in this study.
3. No-build conditions analyses indicate that several movements at the intersection of Grand River Avenue & Latson Road will experience degraded operations.
4. Future build conditions analyses indicate that most study intersection approaches and movements will continue to operate acceptably; however, there are several movements with undesirable or failing conditions at the intersection of Grand River Avenue & Latson Road that are expected to worsen in the future if those movements operating at a LOS E or F are not improved under no-build conditions.
5. With the improvements outlined below, all study network intersections and site driveways will operate acceptably, or in a manner similar or improved compared to no-build conditions during the peak hours.

Based on the results of this study, the following should be considered to provide acceptable traffic operations with the proposed development project:

1. Optimize signal timings at the intersection of Grand River Avenue & Latson Road.
2. Optimize signal timings at the intersection of Grand River Avenue & Grand River Plaza Drive.



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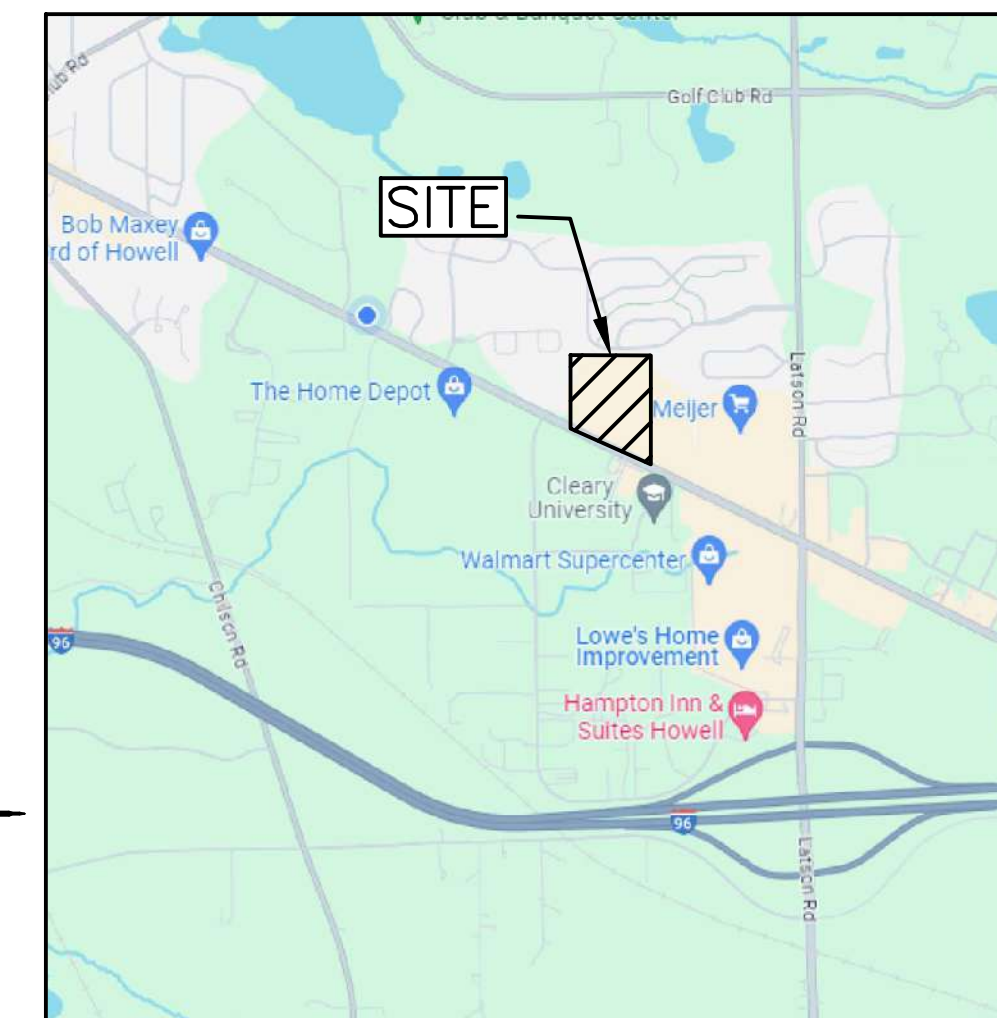
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PER BOSS ENGINEERING MORTGAGE SURVEY, JOB NO. 90542-B, LAST REVISED 7-11-91:

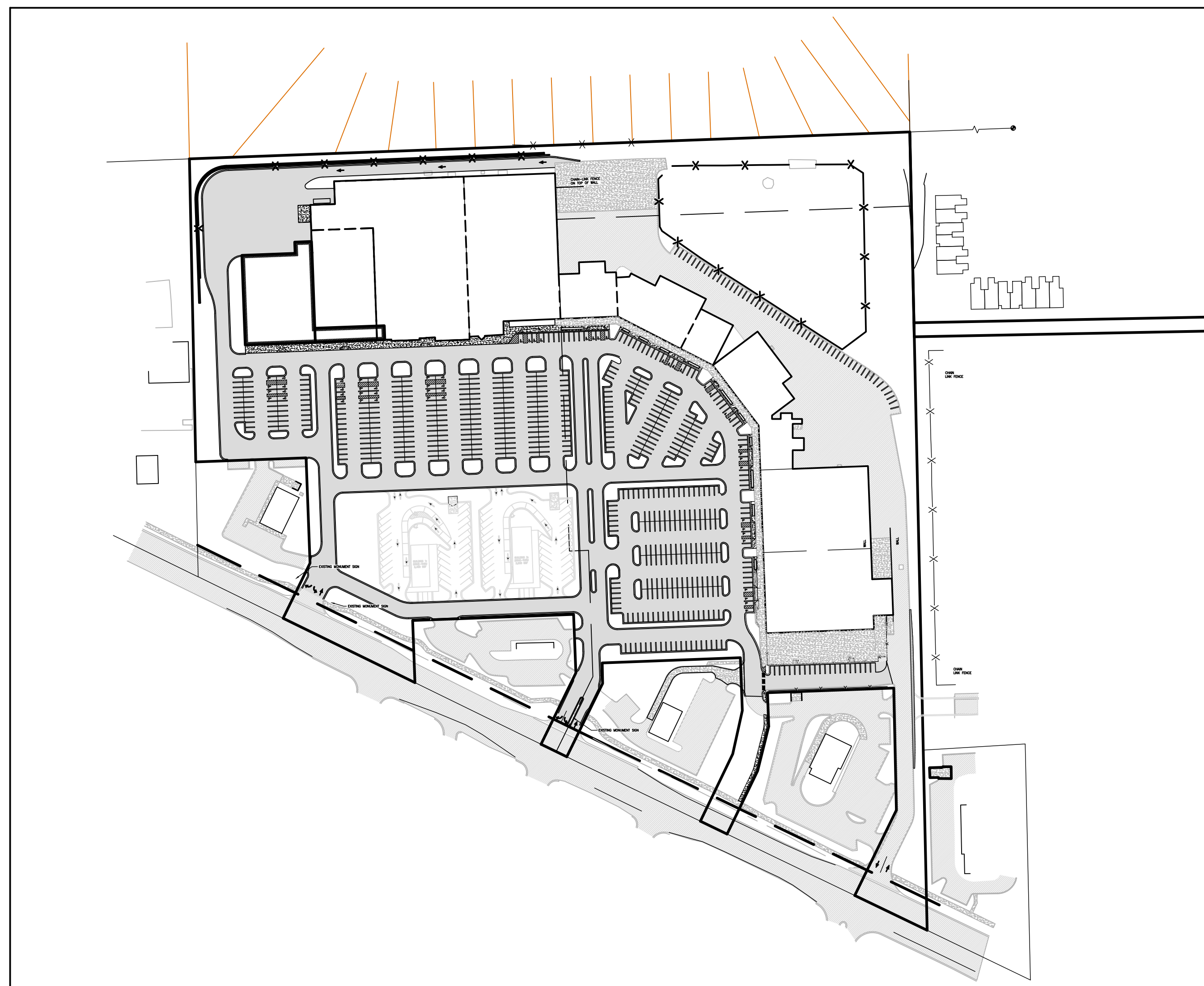
26.62 ACRE PARCEL (REVISED 6/20/91): A part of the West 1/2 of the Southeast 1/4 of Section 5, T2N-R5E, Genoa Township, Livingston County Michigan, more particularly described as follows: Commencing at the South 1/4 Corner of said Section; thence along the North-South 1/4 line of said Section 5, N 02°00'53" W, 1927.04 feet; thence along the centerline of Grand River Ave, S 64°46'02" E (previously recorded as S 60°26'30" E), 168.42 feet to the Point of Beginning of the Parcel to be described; thence N 25°13'58" E, 109.22 feet; thence N 02°56'41" W, 187.64 feet; thence S 87°03'19" W, 196.72 feet; thence along the North-South 1/4 line of said Section 5, N 02°00'53" W, 540.07 feet to the Center of Section 5; thence along the East-West 1/4 line of said Section 5 (as previously surveyed) N 87°03'19" E, 1284.64 feet (previously recorded as East 1320± feet); thence along the East line of the West 1/2 of the Southeast 1/4 of said Section 5, S 02°02'30" E, 1422.56 feet (previously recorded as South, 1405.00 feet); thence along the centerline of Grand River Avenue N 65°06'26" W, 143.10 feet; thence N 25°14'17" E, 169.26 feet; thence N 02°02'30" W, 217.61 feet; thence S 87°03'19" W, 225.17 feet; thence S 02°56'41" E, 60.00 feet; thence S 13°16'24" W, 81.74 feet; thence S 24°53'34" W, 125.00 feet; thence along said centerline of Grand River Avenue, N 65°06'26" W, 53.00 feet; thence N 24°53'34" E, 132.65 feet; thence N 11°43'57" E, 79.42 feet; thence N 02°56'41" W, 94.14 feet; thence S 87°03'19" W, 246.93 feet; thence S 02°56'41" E, 36.62 feet; thence S 25°13'58" W, 145.40 feet; thence along said centerline of Grand River Avenue N 64°46'02" W (previously recorded as N 60°26'30" W), 51.00 feet; thence N 25°13'58" E, 141.07 feet; thence N 02°56'41" W, 104.48 feet; thence S 87°03'19" W, 287.12 feet; thence N 25°13'58" E, 110.70 feet; thence along said centerline of Grand River Avenue N 64°46'02" W (previously recorded as N 60°26'30" W), 261.42 feet to the Point of Beginning, containing 26.62 acres, more or less, and subject to the rights of the public over the existing Grand River Avenue (100 Feet Wide Right-of-Way). Also subject to other easements or restrictions of record, if any.

SITE PLAN FOR GRAND RIVER PLAZA

PART OF T2N R5E S 1/4 CORNER, SECTION 5 GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN



LOCATION MAP
NO SCALE



OVERALL SITE MAP
NO SCALE

SHEET INDEX	
SHEET NO.	DESCRIPTION
1	COVER SHEET
2	GENERAL NOTES & LEGEND
3	EXISTING CONDITIONS
4	NATURAL FEATURES PLAN
5	DEMOLITION PLAN
6	SITE PLAN
7	SIGNAGE PLAN
8	FIRE TRUCK CIRCULATION PLAN
9	TRUCK CIRCULATION PLAN
10	GRADING & DRAINAGE PLAN
11	SOIL EROSION & SEDIMENTATION CONTROL PLAN
12	UTILITY PLAN
13	LANDSCAPE PLAN
14	LANDSCAPE DETAILS
15	BASIN DETAILS
16	CONSTRUCTION DETAILS
17	CONSTRUCTION DETAILS
18	LIGHTING DETAILS
PLANS BY OTHERS	
1	PHOTOMETRIC PLANS (GASSER BUSH)
A-200	COMPOSITE PLAN
A-210	FLOOR PLAN
A-301	EXISTING EXTERIOR ELEVATIONS
A-302	PROPOSED EXTERIOR ELEVATIONS
A-303	PROPOSED EXTERIOR ELEVATIONS
	HOBBY LOBBY EXTERIOR ELEVATION

PERMITS & APPROVALS		
AGENCY	DATE SUBMITTED	DATE APPROVED
• TOWNSHIP ENGINEERING APPROVAL	-	-
• LCDC	-	-
• MDOT	-	-
• SESC	-	-
• NPDES SESC NOC	-	-
• EGLE - ACT 399	-	-

INDEMNIFICATION STATEMENT

THE CONTRACTOR SHALL HOLD HARMLESS THE DESIGN PROFESSIONAL, MUNICIPALITY, COUNTY, STATE AND ALL OF ITS SUB CONSULTANTS, PUBLIC AND PRIVATE UTILITY COMPANIES, AND LANDOWNERS FOR DAMAGES TO INDIVIDUALS AND PROPERTY, REAL OR OTHERWISE, DUE TO THE OPERATIONS OF THE CONTRACTOR AND/OR THEIR SUBCONTRACTORS.

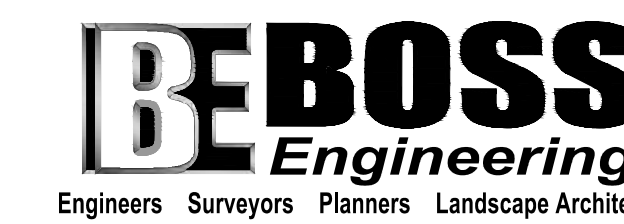
LIGHTING:
GASSER BUSH ASSOCIATES
30984 INDUSTRIAL RD
LIVONIA, MI 48150
PHONE: 734-266-6705
EMAIL: QUOTES@GASSERBUSH.COM

ARCHITECT:
SERENITY ARCHITECTURE COMPANY
5232 GREAT OAKS CT
WEST BLOOMFIELD, MI 48323
CONTACT: ROBERT JORDAN
PHONE: 248-830-3311
EMAIL: RJORDAN@SERENITYARCHITECTURE.COM

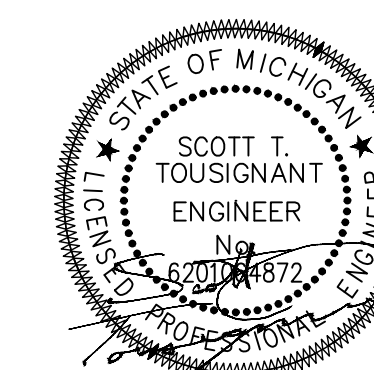
APPLICANT:
SYMMETRY MANAGEMENT
812 SOUTH MAIN STREET, SUITE 200
ROYAL OAK, MI 48067
CONTACT: FRANK JARBOU
PHONE: 248-465-0200
EMAIL: FJARBOU@SYMMETRYMGMT.COM

OWNER:
HOWELL FAMILY VENTURES, LLC
29592 BECK ROAD
WIXOM, MI 48393

PREPARED BY:



3121 E. GRAND RIVER AVE.
HOWELL, MI. 48843
517.546.4836 FAX 517.548.1670
CONTACT: SCOTT TOUSIGNANT
EMAIL: SCOTT@BOSSENG.COM



FOR SITE PLAN APPROVAL ONLY!
NOT FOR CONSTRUCTION

		1				
1	DH	ST	PER TOWNSHIP REVIEW		3-19-24	ISSUE DATE: 02/20/24
			NO BY CK REVISION		DATE	JOB NO: 22-262-1

GENERAL NOTES

- 1. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED TOWNSHIP, COUNTY, AND STATE OF MICHIGAN PERMITS.
2. A GRADING PERMIT FOR SOIL EROSION-SEDIMENTATION CONTROL SHALL BE OBTAINED FROM THE GOVERNING AGENCY PRIOR TO THE START OF CONSTRUCTION.
3. IF DUST PROBLEM OCCURS DURING CONSTRUCTION, CONTROL WILL BE PROVIDED BY AN APPLICATION OF WATER, EITHER BY SPRINKLER OR TANK TRUCK.
...
35. WHERE CITY/TOWNSHIP STANDARD CONSTRUCTION DETAILS/SPECIFICATIONS ARE PROVIDED AND ARE IN CONFLICT WITH NOTES AND SPECIFICATIONS HEREIN, THE CITY/TOWNSHIP STANDARD SHALL GOVERN.

INDEMNIFICATION STATEMENT

THE CONTRACTOR SHALL HOLD HARMLESS THE DESIGN PROFESSIONAL, MUNICIPALITY, COUNTY, STATE, AND ALL OF ITS SUB CONSULTANTS, PUBLIC AND PRIVATE UTILITY COMPANIES, AND LANDOWNERS FOR DAMAGES TO INDIVIDUALS AND PROPERTY, REAL OR OTHERWISE, DUE TO THE OPERATIONS OF THE CONTRACTOR AND/OR THEIR SUBCONTRACTORS.

CONTRACTOR TO FOLLOW MANUFACTURER SPECS/RECOMMENDATIONS THAT SUPERCEDE PLANS

GENERAL GRADING & SESC NOTES

- 1. THE CONTRACTOR SHALL HAVE IN PLACE ALL REQUIRED EROSION CONTROL METHODS AS INDICATED ON THE CONSTRUCTION PLANS AND AS REQUIRED BY GENERAL PRACTICE. SPECIFIC MEANS, METHODS AND SEQUENCES OF CONSTRUCTION MAY DICTATE ADDITIONAL SOIL EROSION CONTROL MEASURES BE NEEDED. THE CONTRACTOR SHALL COORDINATE WITH THE DESIGN ENGINEER ON THESE ANTICIPATED METHODS. ADDITIONAL SOIL EROSION CONTROL METHODS SHALL BE INCIDENTAL TO THE SCOPE OF WORK.
2. ACTUAL FIELD CONDITIONS MAY DICTATE ADDITIONAL OR ALTERNATE SOIL EROSION CONTROL MEASURES BE UTILIZED. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DEFICIENCIES OR FIELD CONDITIONS THAT WARRANT ADDITIONAL AND/OR ALTERNATIVE SESC MEASURES BE UTILIZED.
...
11. ALL EXCAVATION UNDER OR WITHIN 3 FEET OF PUBLIC PAVEMENT, EXISTING OR PROPOSED SHALL BE BACKFILLED AND COMPACTED WITH SAND (MDOOT CLASS II).

GENERAL LANDSCAPE NOTES

- 1. ALL PLANT MATERIAL SHALL CONFORM TO THE REQUIREMENTS AND SPECIFICATIONS OF THE GOVERNING MUNICIPALITY. ALL STOCK SHALL BE NURSERY GROWN, CONFORMING TO ANSI Z60.1 "AMERICAN STANDARD FOR NURSERY STOCK", AND IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICE. STOCK SHALL EXHIBIT NORMAL GROWTH HABIT AND BE FREE OF DISEASE, INSECTS, EGGS, LARVAE, & DEFECTS SUCH AS KNOTS, SUN-SCALD, INJURIES, ABRASIONS, OR DISFIGUREMENT. ALL PLANT MATERIAL SHALL BE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT.
2. ALL PLANT MATERIALS SHALL BE BALLED AND BURLAPPED OR CONTAINER STOCK. NO BARE ROOT STOCK IS PERMITTED. ALL PLANT BALLS SHALL BE FIRM, INTACT, AND SECURELY WRAPPED AND BOUND.
...
12. ALL AREAS OF THE SITE THAT BECOME DISTURBED DURING CONSTRUCTION AND ARE NOT TO BE PAVED, STONED, LANDSCAPED, OR SODDED SHALL BE SEEDED AND MULCHED.
SEED MIXTURE SHALL BE AS FOLLOWS:
KENTUCKY BLUEGRASS (CHOOSE 3 VARIETIES - ADLPHI, RUGBY, GLADE, OR PARADE) 30%
RUBY RED OR DAWSON RED FINE FESCUE 30%
ATLANTA RED FESCUE 20%
PENNFINE PERENNIAL RYE 20%

GENERAL UTILITY NOTES

- 1. BEDDING SHALL EXTEND A MINIMUM OF 4" BELOW THE PIPE, UNLESS OTHERWISE NOTED ON THE PLANS. BEDDING SHALL BE OF UNIFORM GRADATION MDOOT GRAK STONE OR MDOOT CLASS II GRANULAR MATERIAL FOR SANITARY AND STORM PIPE AND MDOOT CLASS II GRANULAR MATERIAL ONLY FOR WATERMAIN.
2. WHERE UNSTABLE GROUND CONDITIONS ARE ENCOUNTERED, STONE BEDDING SHALL BE USED AS DIRECTED BY THE ENGINEER.
3. BACKFILL SHALL BE OF A SUITABLE MATERIAL AND SHALL BE FREE OF ANY ORGANIC MATERIALS AND ROCKS.
...
5. 18" MINIMUM VERTICAL SEPARATION AND 10' HORIZONTAL SEPARATION IS TO BE MAINTAINED BETWEEN WATERMAIN AND SANITARY/STORM SEWER TO THE MAXIMUM EXTENT POSSIBLE.

GENERAL STORM NOTES

- 1. ALL STORM PIPE LENGTHS ARE SHOWN FROM C/L TO C/L OF STRUCTURE OR FROM C/L OF STRUCTURE TO DISCHARGE END OF FLARED END SECTION.
2. STORM PIPE MATERIALS SHALL BE AS FOLLOWS:
2.1. RCP(REINFORCED CONCRETE PIPE); SHALL MEET THE REQUIREMENTS OF ASTM C76 WITH MODIFIED GROOVED TONGUE AND RUBBER GASKETS MEETING THE REQUIREMENTS OF ASTM C443. RCP TO BE EITHER CLASS IV OR V AS CALLED OUT ON THE PLANS.
2.2. HDPE(HIGH DENSITY POLYETHYLENE); SHALL MEET THE REQUIREMENTS OF ASTM F2648.
2.3. PP(POLYPROPYLENE); SHALL MEET THE REQUIREMENTS OF ASTM F2881.
2.4. PVC(POLYVINYL CHLORIDE); SHALL MEET THE REQUIREMENTS OF ASTM D3034.
...
9. STORM DRAINAGE STRUCTURE COVERS SHALL BE OF THE FOLLOWING (OR APPROVED EQUAL):
COVER USE FRAME GRATE/BACK TYPE 'B'
'A' MANHOLE 1040 TYPE 'B'
'B' TYPE B2 CURB 7085 TYPE 'M1'
'C' VALLEY CURB 7065 7045 TYPE 'M1' GRATE/7060 TYPE 'T1' BACK
'D' PARKING LOTS 1040/5100 TYPE 'M1' GRATE OR 5105 TYPE 'M1' GRATE
'E' LAWN 1040 TYPE 'O2' GRATE
'K' TYPE C & F CURB 7045 TYPE 'M1' GRATE/7050 TYPE 'T1' BACK

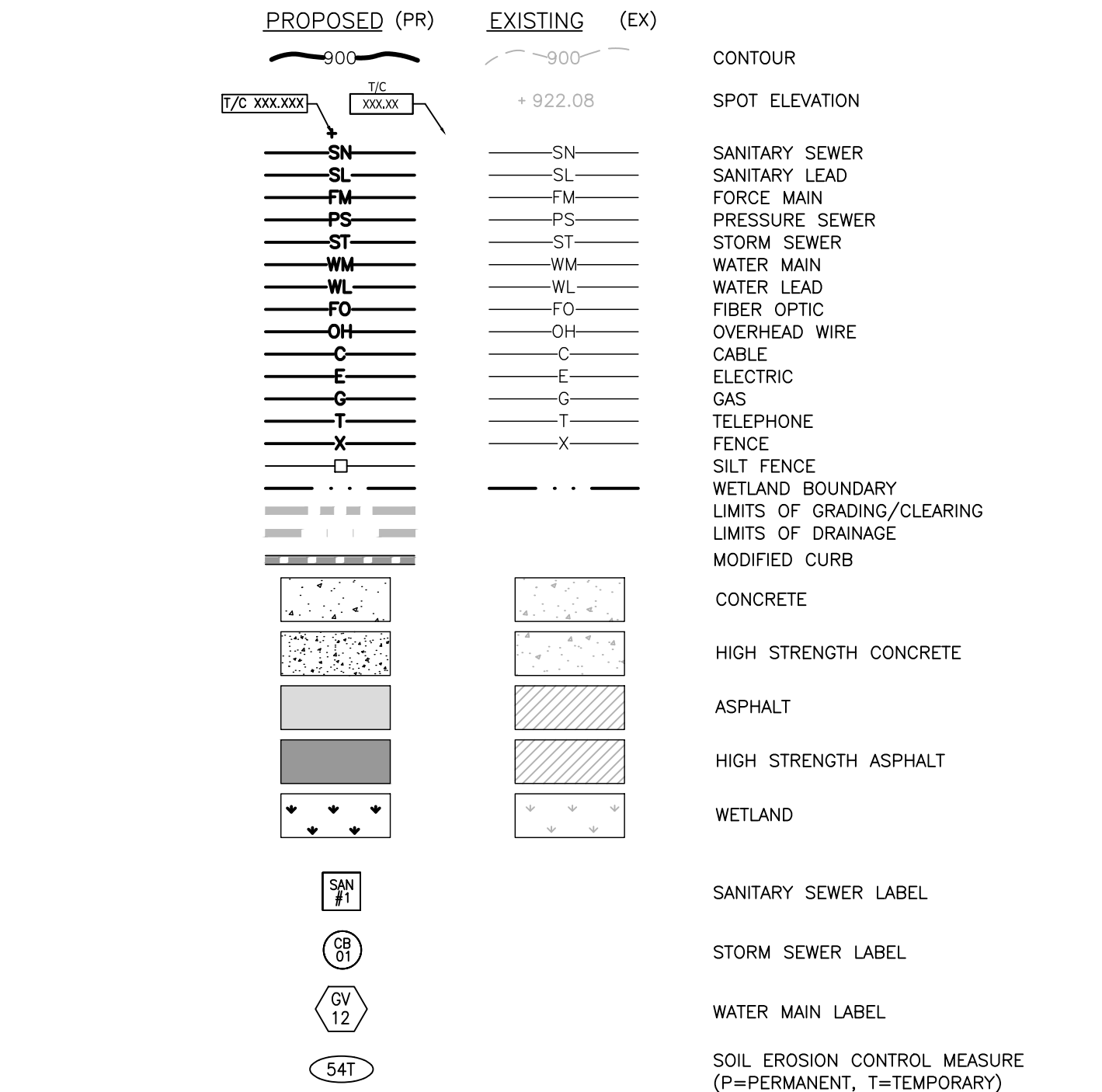
GENERAL SANITARY NOTES

- 1. ALL SANITARY PIPE LENGTHS ARE SHOWN FROM C/L OF STRUCTURE TO C/L OF STRUCTURE.
2. SANITARY PIPE MATERIALS SHALL BE AS FOLLOWS:
2.1. PVC SDR-26 (SANITARY MAIN)
2.2. PVC SDR-23.5 (SANITARY LEADS)
2.3. HDPE DR-11 (SANITARY FORCEMAIN)
3. ALL PVC SDR SANITARY SEWER PIPE SHALL MEET THE REQUIREMENTS OF ASTM D3034 AND D2241. PVC SCHD 40 PIPE SHALL MEET THE REQUIREMENTS OF ASTM D1785. GASKET JOINTS FOR SANITARY PIPE SHALL MEET THE REQUIREMENTS OF ASTM D3139 AND D3212.
4. SANITARY STRUCTURES SHALL BE FURNISHED WITH STEPS WHICH SHALL BE STEEL ENCASED WITH POLYPROPYLENE PLASTIC OR EQUIVALENT. STEPS SHALL BE SET AT 16" CENTER TO CENTER.
...
13. PUBLIC SANITARY SEWER SHALL BE CENTERED WITHIN A 20 FOOT WIDE SANITARY SEWER EASEMENT.

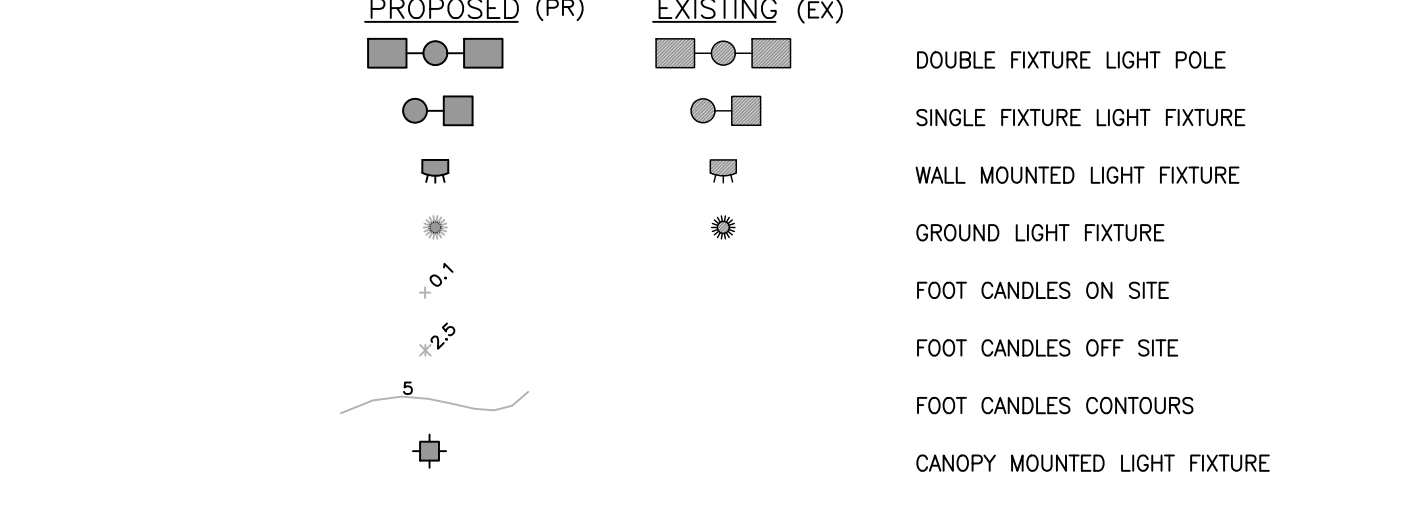
GENERAL WATERMAIN NOTES

- 1. WATERMAIN PIPE MATERIALS SHALL BE AS FOLLOWS:
1.1. D.I.P. CL52 (WATERMAIN)
1.2. TYPE 'K' COPPER (WATER LATERAL - MAIN TO CURB STOP)
1.3. HDPE DR-9 (WATER LATERAL - CURB STOP TO STUB)
2. WATERMAIN FITTINGS SHALL BE OF DUCTILE IRON WITH CEMENT MORTAR LINING AND MECHANICAL JOINTS CONFORMING TO AWWA C110.
3. WATERMANS SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA C651. BAC-T SAMPLES SHALL BE TAKEN IN ACCORDANCE WITH R235.11110 OF THE ADMINISTRATIVE RULES PROMULGATED UNDER MICHIGAN SAFE DRINKING WATER ACT, 1976 PA 399, AS AMENDED.
...
11. PUBLIC WATERMAIN SHALL BE CENTERED WITHIN A 25 FOOT WIDE WATERMAIN EASEMENT.

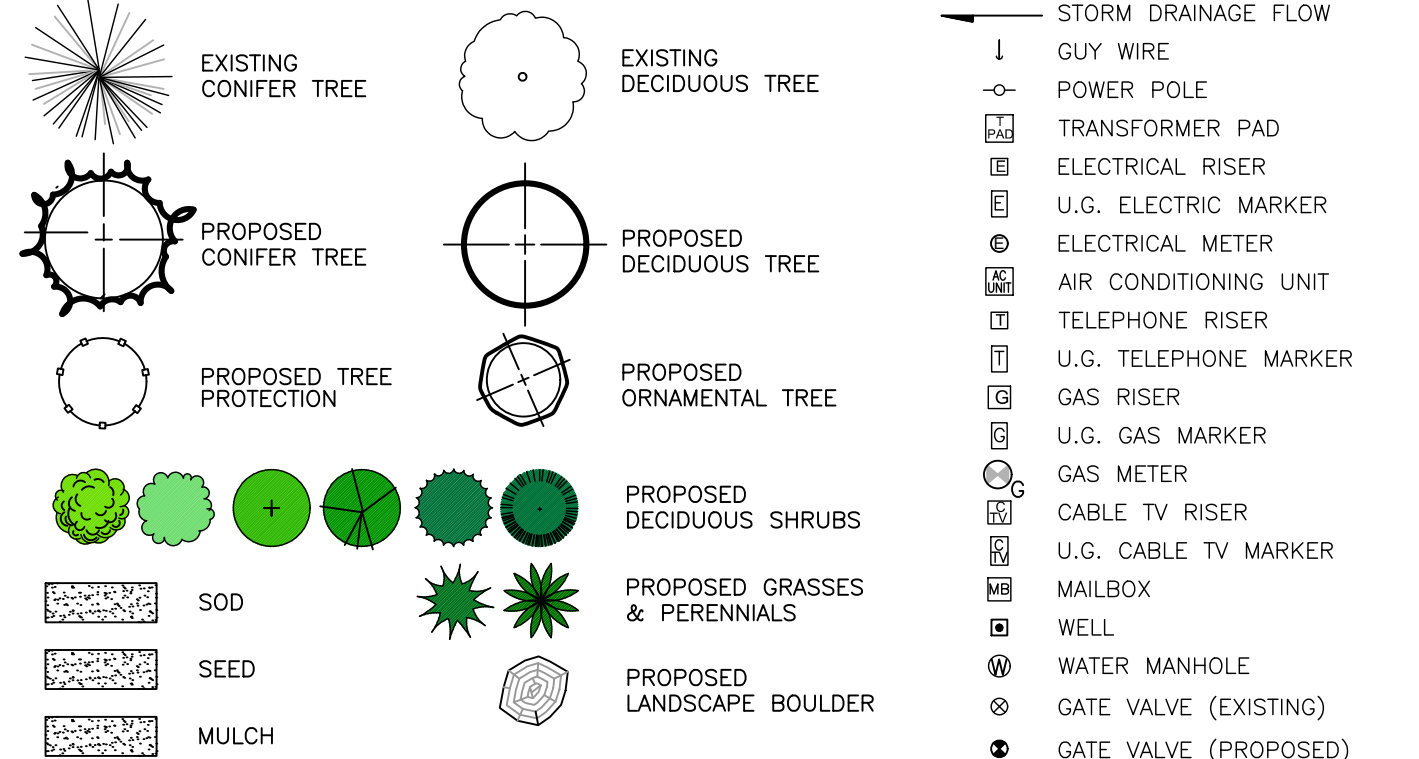
LINES & HATCHES LEGEND



LIGHTING LEGEND



LANDSCAPE LEGEND



ABBREVIATIONS

Table listing abbreviations and their meanings: FFE FINISHED FLOOR ELEVATION, BFE BASEMENT FLOOR ELEVATION, GFE GARAGE FLOOR ELEVATION, FG FINISHED GRADE, T/A TOP OF ASPHALT, T/C TOP OF CONCRETE/CURB, T/W TOP OF WALK, T/P TOP OF PIPE, B/P BOTTOM OF PIPE, F/L FLOW LINE, RIM RIM ELEVATION (AT FLOW LINE), INV INVERT ELEVATION, MH MANHOLE, CB CATCH BASIN, RY REAR YARD, YD YARD DRAIN, RD ROOF DRAIN, FES FLARED END SECTION, CMP CORRUGATED METAL PIPE, CPP CORRUGATED PLASTIC PIPE, RCP REINFORCED CONCRETE PIPE, HDPE HIGH DENSITY POLYETHYLENE, PVC POLYVINYL CHLORIDE, DI DUCTILE IRON PIPE, GV GATE VALVE, GW GATE VALVE IN WELL, GVB GATE VALVE IN BOX, HYD HYDRANT, FDC FIRE DEPARTMENT CONNECTION, UP UTILITY POLE, NFV NOT FIELD VERIFIED TO BE REMOVED, L LIBER, P PAGE, L.C.R. LIVINGSTON COUNTY RECORDS, (M&R) MEASURED AND RECORD, L.O.B. POINT OF BEGINNING.

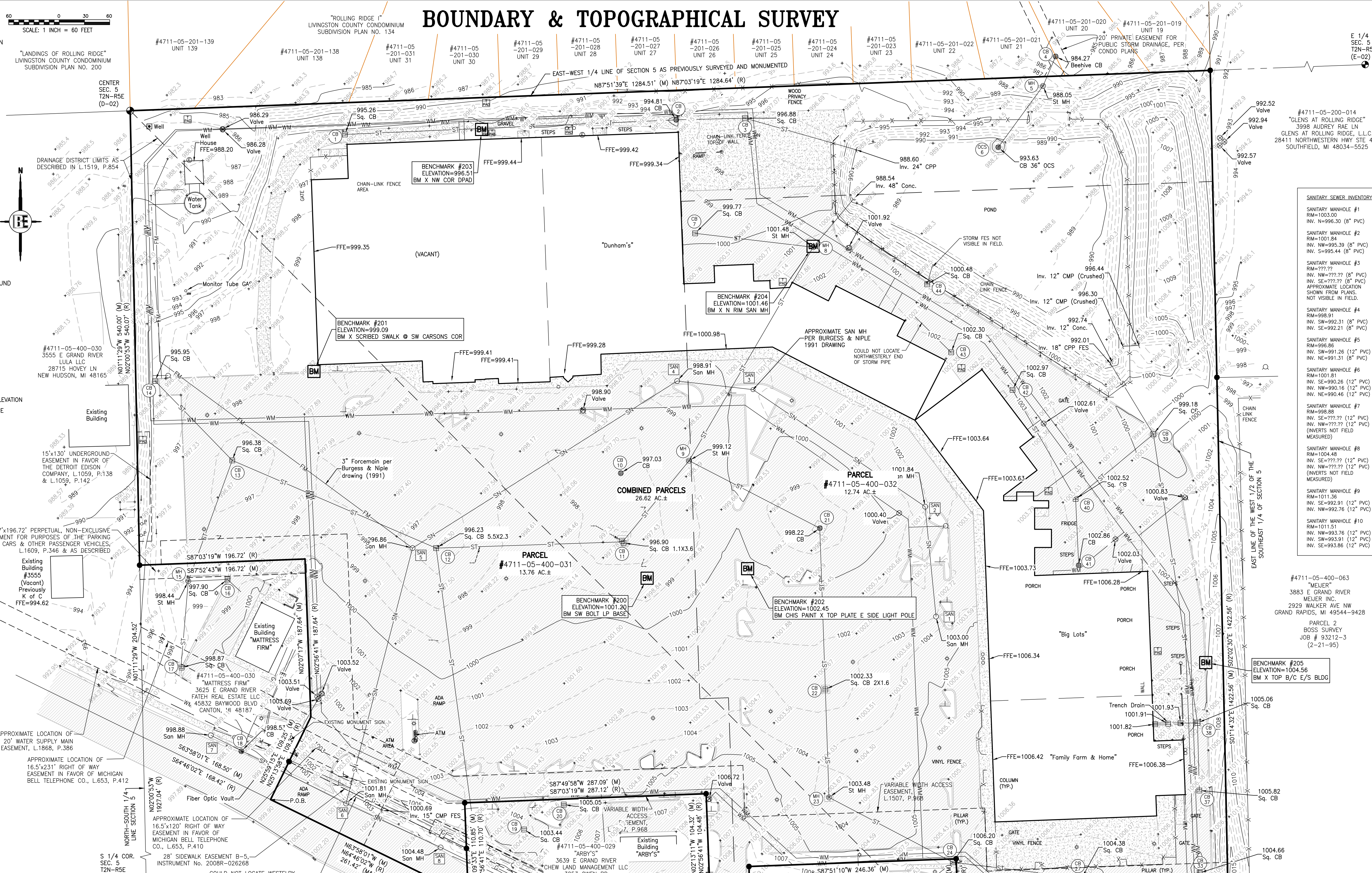
THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. NO FIELD SURVEY OR GROUND PENETRATING RADAR (GPR) SHALL BE CONDUCTED TO VERIFY THE LOCATION OR DEPTH OF UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE LOCAL, STATE, AND FEDERAL AGENCIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE LOCAL, STATE, AND FEDERAL AGENCIES PRIOR TO CONSTRUCTION.

BEBOSS Engineering Planners Landscape Architects 3121 E. GRAND RIVER AVE. HOWELL, MI. 48843 517.546.4836 FAX 517.548.1670

PROJECT: GRAND RIVER PLAZA PREPARED FOR: SYMMETRY MANAGEMENT 812 SOUTH MAIN STREET, SUITE 200 ROYAL OAK, MI 48067 248-465-0200 TITLE: GENERAL NOTES & LEGEND PER TOWNSHIP REVIEW DATE: 3-19-2024 NO BY: 1 ST DATE: 3-19-2024 DESIGNED BY: ST DRAWN BY: DH CHECKED BY: SCALE: NO SCALE JOB NO: 22-262-1 DATE: 02/20/24 SHEET NO. 2 BOSS Engineering

BOUNDARY & TOPOGRAPHICAL SURVEY

- STORM SEWER INVENTORY:**
- STORM CB #1 RIM=995.26 INV. E=772.79 (24" CPP) (COULD NOT REMOVE COVER)
 - STORM CB #2 RIM=994.81 INV. E=772.79 (24" CPP) (FULL OF DEBRIS/WATER) (BURIED UNDER GRAVEL)
 - STORM CB #3 RIM=996.88 INV. E=988.88 (24" CPP)
 - STORM CB #4 RIM=984.27 INV. E=979.07 (18" RCP) INV. N=(978.97) (18" RCP)
 - STORM MH #5 RIM=988.05 INV. E=(985.55) (12" CPP) INV. N=(980.55) (18" RCP)
 - STORM OCS #6 RIM=993.63 (MULTIPLE 1" & 2" HOLES)
 - STORM CB #7 RIM=999.77 INV. SE=995.62 (12" CPP)
 - STORM MH #8 RIM=1001.48 INV. NE=987.43 (48" CONC.) E=993.43 (12" CPP) SW=987.43 (48" CONC.) INV. W=993.48 (12" CPP)
 - STORM MH #9 RIM=999.12 INV. SE=989.12 (24" CPP) INV. NE=987.67 (48" CONC.) SW=987.37 (48" CONC.)
 - STORM CB #10 RIM=997.03 (FULL OF DEBRIS/WATER)
 - STORM CB #11 (3'x1.1') RIM=996.83 (AT NW CORNER STRUCTURE) INV. NE=777.77 (48" CONC.) W=777.77 (48" CONC.) (COULD NOT REMOVE COVER)
 - STORM CB #12 (5'x2.3') RIM=996.23 INV. E=772.79 (48" CONC.) INV. W=777.77 (48" CONC.) INV. NW=777.77 (24" CPP) (COULD NOT REMOVE COVER)
 - STORM CB #13 RIM=996.38 INV. SE=989.78 (24" CPP) INV. SW=990.48 (24" CPP) INV. N=989.88 (24" CPP)
 - STORM CB #14 RIM=995.95 INV. SE=990.85 (24" CPP)
 - STORM MH #15 RIM=998.44 INV. NE=992.54 (12" CPP) E=993.94 (12" CPP) INV. S=993.94 (12" CPP)
 - STORM CB #16 RIM=997.90 INV. W=994.40 (12" CPP) INV. SE=994.40 (6" PVC)
 - STORM CB #17 RIM=998.57 INV. N=994.37 (12" CPP)
 - STORM CB #18 RIM=998.53 INV. S=1002.35 (12" RCP) INV. NW=1002.35 (12" RCP)
 - STORM CB #19 RIM=1003.44 (FULL OF DEBRIS)
 - STORM CB #20 RIM=1005.05 (FULL OF DEBRIS)
 - STORM CB #21 RIM=998.22 INV. S=990.57 (24" CPP) INV. NE=990.47 (24" CPP) (COULD NOT REMOVE COVER)
 - STORM MH #23 RIM=1003.48 INV. SE=777.77 (24" CPP) (COULD NOT REMOVE COVER)
 - STORM CB #24 RIM=1006.20 INV. SE=1001.42 (12" RCP) INV. SW=1001.32 (12" RCP) INV. N=999.72 (15" CPP)
 - STORM CB #25 RIM=1007.35 INV. NE=1002.65 (12" RCP) S=1002.75 (12" RCP)
 - STORM CB #26 RIM=1006.21 (CEMENTED SHUT)
 - STORM CB #27 RIM=1004.38 INV. S=999.93 (15" CPP) W=998.38 (15" CPP) INV. E=998.68 (15" CPP)
 - STORM MH #28 RIM=1008.22 INV. SE=1001.42 (12" RCP) INV. SW=1001.32 (12" RCP) INV. N=999.72 (15" CPP)
 - STORM CB #29 RIM=1007.35 INV. NE=1002.65 (12" RCP) S=1002.75 (12" RCP)
 - STORM CB #30 RIM=1009.83 INV. N=1006.03 (12" RCP)
- LEGEND**
- EXISTING CONTOUR
 - EXISTING SPOT ELEVATION
 - BENCHMARK
 - POWER POLE
 - GUY WIRE
 - TRANSFORMER PAD
 - ELECTRICAL RISER
 - ELECTRICAL METER
 - AIR CONDITIONING UNIT
 - LIGHT POLE
 - WELL
 - HYDRANT
 - WATER GATE VALVE
 - WATER MANHOLE
 - MANHOLE
 - STORM MANHOLE
 - STORM CATCH BASIN
 - STORM INVERT
 - TELEPHONE RISER
 - GAS METER
 - GAS RISER
 - CABLE TV RISER
 - MAILBOX
 - SIGN
 - STEEL ROD SET
 - STEEL ROD OR PIPE FOUND
 - SANITARY SEWER (FULL OF DEBRIS/WATER)
 - WATER MAIN
 - STORM SEWER
 - GAS MAIN
 - CABLE
 - TELEPHONE
 - OVERHEAD WIRES
 - FENCE (M&R)
 - MEASURED AND RECORD
 - POINT OF BEGINNING
 - DISHED BENCH MARK OR ELEVATION
 - CORRUGATED PLASTIC PIPE
 - ASPHALT
 - CONCRETE
 - GRAVEL
- SCALE: 1" = 60 FEET**
- CENTER SEC. 5 T2N-R5E (D-02)**
- DRAINAGE DISTRICT LIMITS AS DESCRIBED IN L.1519, P.854**
- 15'x130' UNDERGROUND EASEMENT IN FAVOR OF THE DETROIT EDISON COMPANY, L.1059, P.138 & 1059, P.142**
- 17'x196.72' PERPETUAL, NON-EXCLUSIVE EASEMENT FOR PURPOSES OF THE PARKING OF CARS & OTHER PASSENGER VEHICLES, L.1609, P.346 & AS DESCRIBED**
- EXISTING BUILDING #3555 (VACANT) PREVIOUSLY (FLOWING NORTH)**
- APPROXIMATE LOCATION OF 20' WATER SUPPLY MAIN EASEMENT, L.1868, P.386**
- APPROXIMATE LOCATION OF 16.5'x231' RIGHT OF WAY EASEMENT IN FAVOR OF MICHIGAN BELL TELEPHONE CO., L.653, P.412**
- APPROXIMATE LOCATION OF 16.5'x122' RIGHT OF WAY EASEMENT IN FAVOR OF MICHIGAN BELL TELEPHONE CO., L.653, P.410**
- 28' SIDEWALK EASEMENT B-5, INSTRUMENT No. 2008R-026268**
- COULD NOT LOCATE WESTERLY END OF 15" CMP STORM SEWER**
- 30' SIDEWALK EASEMENT B-2, INSTRUMENT No. 2008R-026268**
- 30'x65' SIDEWALK EASEMENT B-3, INSTRUMENT No. 2008R-026268**
- 47'x51' SIDEWALK EASEMENT B-4, INSTRUMENT No. 2008R-026268**
- 20'x100' HIGHWAY EASEMENT RELEASE, L.1676, P.932**



- SANITARY SEWER INVENTORY:**
- SANITARY MANHOLE #1 RIM=1003.00 INV. N=996.30 (8" PVC)
 - SANITARY MANHOLE #2 RIM=1001.81 INV. SE=995.39 (8" PVC) INV. S=995.44 (8" PVC)
 - SANITARY MANHOLE #3 RIM=999.99 INV. NW=777.77 (8" PVC) INV. SE=777.77 (8" PVC) APPROXIMATE LOCATION SHOWN FROM LAND NOT VISIBLE IN FIELD.
 - SANITARY MANHOLE #4 RIM=998.91 INV. SW=991.26 (8" PVC) INV. SE=992.21 (8" PVC)
 - SANITARY MANHOLE #5 RIM=996.88 INV. NE=991.16 (12" PVC) INV. NW=991.16 (12" PVC)
 - SANITARY MANHOLE #6 RIM=1001.81 INV. SE=990.26 (12" PVC) INV. NW=991.16 (12" PVC) INV. NE=990.46 (12" PVC)
 - SANITARY MANHOLE #7 RIM=998.88 INV. SE=777.77 (12" PVC) INV. NW=777.77 (12" PVC) (INVERTS NOT FIELD MEASURED)
 - SANITARY MANHOLE #8 RIM=1004.49 INV. SE=777.77 (12" PVC) INV. NW=777.77 (12" PVC) (INVERTS NOT FIELD MEASURED)
 - SANITARY MANHOLE #9 RIM=1011.36 INV. SE=992.91 (12" PVC) INV. NW=992.76 (12" PVC)
 - SANITARY MANHOLE #10 RIM=1011.51 INV. NW=991.76 (12" PVC) INV. SW=993.91 (12" PVC) INV. SE=993.86 (12" PVC)

PROPERTY DESCRIPTION PER BOSS ENGINEERING MORTGAGE SURVEY, JOB NO. 90542-B, LAST REVISED 7-11-91:
 26.62 ACRE PARCEL (REVISED 6/20/91):
 A part of the West 1/2 of the Southeast 1/4 of Section 5, T2N-R5E, Genoa Township, Livingston County Michigan, more particularly described as follows: Commencing at the South 1/4 Corner of said Section; thence along the North-South 1/4 line of said Section 5, N 02°00'53" W, 1927.04 feet; thence along the centerline of Grand River Ave, S 64°46'02" E (previously recorded as S 60°26'30" E), 168.42 feet to the Point of Beginning of the Parcel to be described; thence N 25°13'58" E, 109.22 feet; thence N 02°56'41" W, 187.64 feet; thence S 87°03'19" W, 196.72 feet; thence along the North-South 1/4 line of said Section 5, N 02°00'53" W, 540.07 feet to the Center of Section 5; thence along the East-West 1/4 line of said Section 5 (as previously surveyed) N 87°03'19" E, 1284.51 feet (previously recorded as East 1/2 of the West 1/2 of the Southeast 1/4 of said Section 5, S 02°02'30" E, 1422.56 feet (previously recorded as South, 1405.00 feet); thence along the centerline of Grand River Avenue N 65°06'26" W, 143.10 feet; thence N 25°14'17" E, 169.26 feet; thence N 02°02'30" W, 217.61 feet; thence S 87°03'19" W, 225.17 feet; thence S 02°56'41" E, 60.00 feet; thence S 13°16'24" W, 81.74 feet; thence S 24°53'34" W, 125.00 feet; thence along said centerline of Grand River Avenue, N 65°06'26" W, 53.00 feet; thence N 24°53'34" E, 132.65 feet; thence N 11°43'57" E, 79.42 feet; thence N 02°56'41" W, 94.14 feet; thence S 87°03'19" W, 246.93 feet; thence S 02°56'41" E, 36.62 feet; thence S 23°13'58" E, 145.40 feet; thence along said centerline of Grand River Avenue N 64°46'02" W (previously recorded as N 60°26'30" W), 51.00 feet; thence along said centerline of Grand River Avenue N 02°56'41" W, 104.48 feet; thence S 87°03'19" W, 287.12 feet; thence S 02°56'41" E, 110.70 feet; thence along said centerline of Grand River Avenue N 64°46'02" W (previously recorded as N 60°26'30" W), 261.42 feet to the Point of Beginning, containing 26.62 acres, more or less, and subject to the rights of the public over the existing Grand River Avenue (100 Feet Wide Right-of-Way). Also subject to other easements or restrictions of record, if any.

GENERAL SURVEY NOTES:

- BEARINGS ARE BASED ON MICHIGAN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE.
- SUBSURFACE UTILITIES NOT LOCATED FOR THIS SURVEY MAY EXIST. IT IS THE RESPONSIBILITY OF THE OWNER OF THE RESPECTIVE UTILITY TO ACCURATELY LOCATE SUCH UTILITIES.
- EASEMENTS OR RESTRICTIONS OF RECORD NOT DEPICTED ON THIS DRAWING MAY EXIST.
- ELEVATIONS WERE ESTABLISHED WITH GPS USING OPUS GPS POST-PROCESSING. (NAD83 DATUM)
- THE LOCATIONS OF STORM SEWER, SANITARY SEWER & WATERMAIN, AS SHOWN ON THIS DRAWING ARE APPROXIMATE. THE LOCATIONS ARE BASED ON PHYSICAL FIELD LOCATIONS OF STRUCTURES ALONG WITH RECORD DRAWINGS AND MISS DIG MARKINGS.

BEBOSS Engineering
 Engineers Surveyors Planners Landscape Architects
 3121 E. GRAND RIVER AVE.
 HOWELL, MI. 48843
 517.546.4836 FAX 517.548.1670

STATE OF MICHIGAN
CHRISTOPHER S. FERGUS
 License No. 4001047055
REGISTERED PROFESSIONAL SURVEYOR

PROJECT: GRAND RIVER PLAZA
PREPARED FOR: SYMMETRY MANAGEMENT
 812 SOUTH MAIN STREET, SUITE 200
 SOUTH OAK, MI 48067
TITLE: EXISTING CONDITIONS

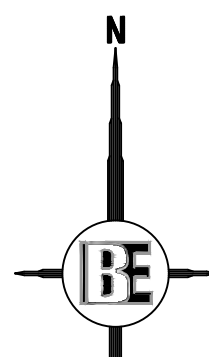
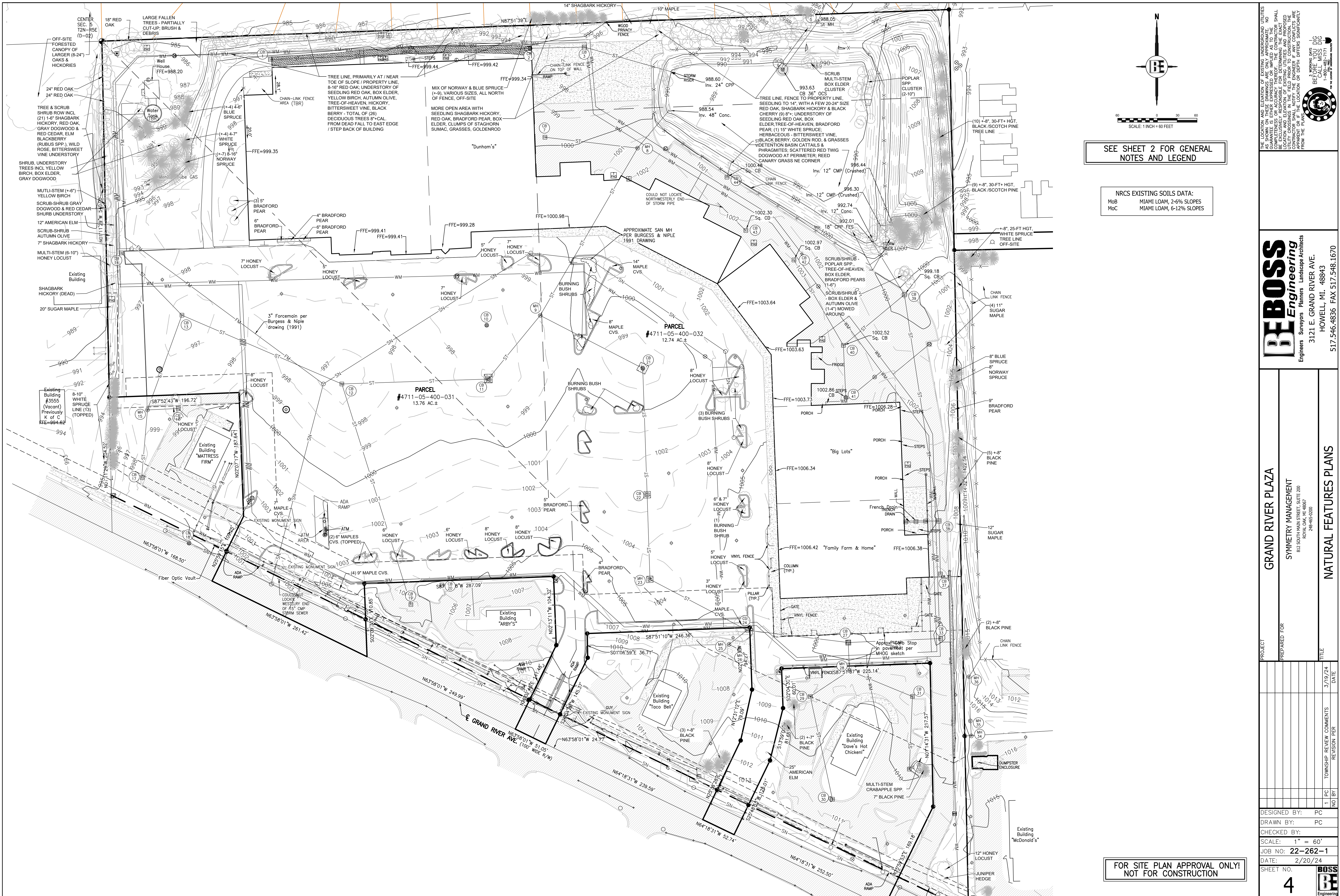
SCALE: 1" = 60'
JOB NO. 22-262-1
DATE: 2-13-24
SHEET NO. 3

DRAWN BY: AEB
FIELD CREW: CE/PB/RW/SS/CZ/EL
DATE: 2-13-24
SHEET NO. 3

REVISION PER:

NO. BY DATE

4711-05-400-037
 MC DONALD'S*
 3781 E GRAND RIVER
 MC DONALD'S CORP. 21-1123
 PO BOX 182571
 COLUMBIUS, OH 43218-2571
 Ex. Building
 McDonald's*



SCALE: 1 INCH = 60 FEET

SEE SHEET 2 FOR GENERAL NOTES AND LEGEND

NRCS EXISTING SOILS DATA:
 MoB MIAMI LOAM, 2-6% SLOPES
 MoC MIAMI LOAM, 6-12% SLOPES

FOR SITE PLAN APPROVAL ONLY!
 NOT FOR CONSTRUCTION

THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. NO CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION AND DEPTH OF UTILITIES CROSSINGS IN THE FIELD PRIOR TO CONSTRUCTION. THE APPROPRIATE AGENCIES SHOULD BE CONTACTED TO OBTAIN THE LOCATION OR DEPTH DATA FROM THE PLANS.

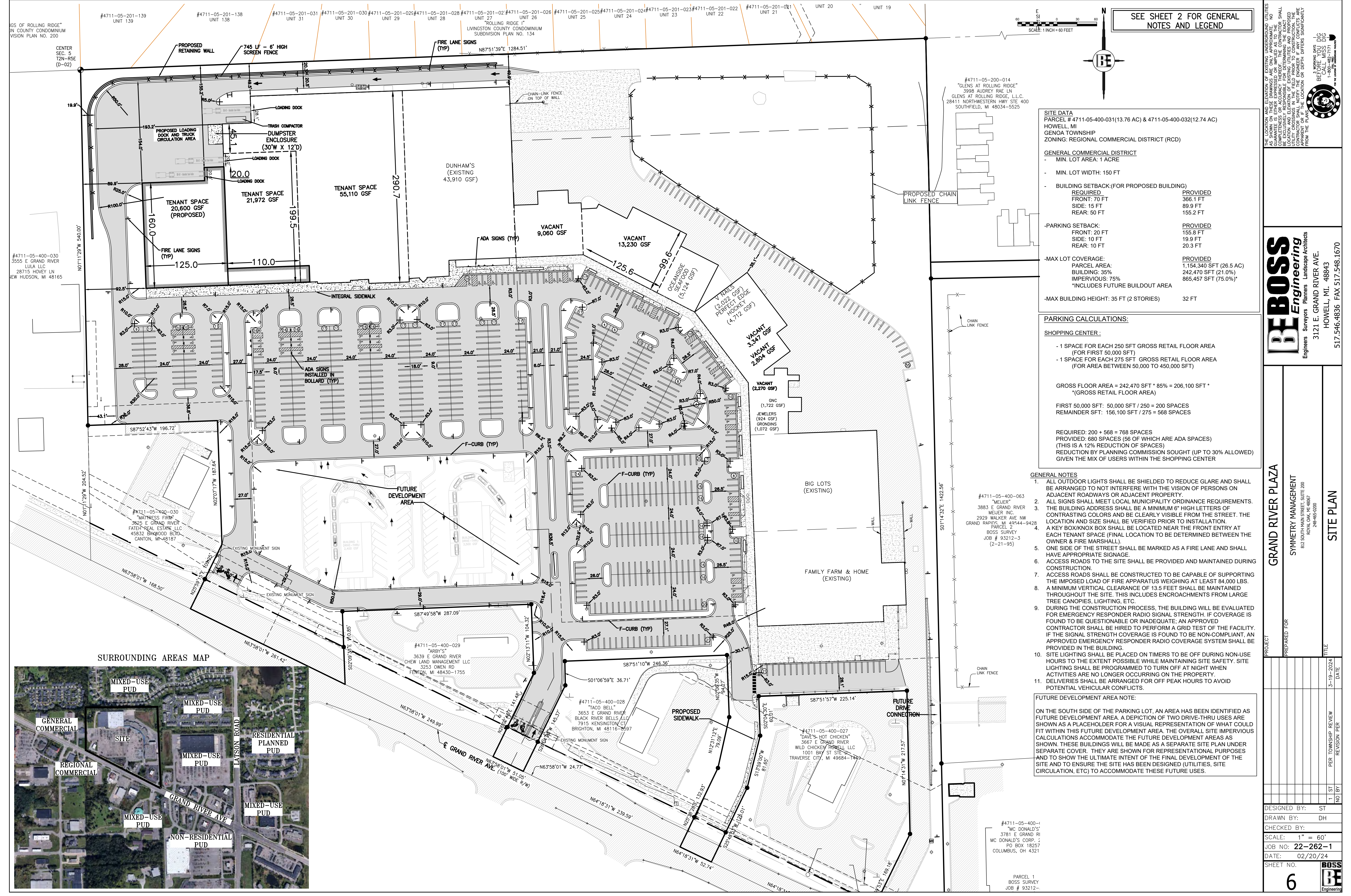
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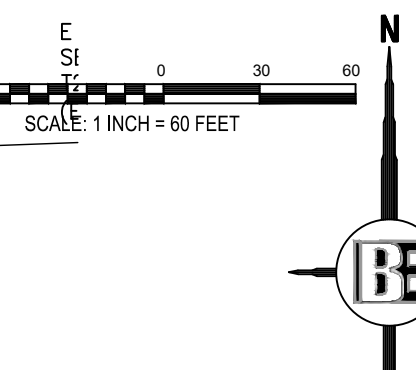
GRAND RIVER PLAZA
 SYMMETRY MANAGEMENT
 813 SOUTH MAIN STREET, SUITE 200
 ROYAL OAK, MI 48067
 248-655-0200

NATURAL FEATURES PLANS

PROJECT	GRAND RIVER PLAZA
PREPARED FOR	SYMMETRY MANAGEMENT
TITLE	NATURAL FEATURES PLANS
DATE	3/19/24
DESIGNED BY:	PC
DRAWN BY:	PC
CHECKED BY:	
SCALE:	1" = 60'
JOB NO.:	22-262-1
DATE:	2/20/24
SHEET NO.:	4



SEE SHEET 2 FOR GENERAL NOTES AND LEGEND



SITE DATA
 PARCEL # 4711-05-400-031 (13.76 AC) & 4711-05-400-032 (12.74 AC)
 HOWELL, MI
 GENOA TOWNSHIP
 ZONING: REGIONAL COMMERCIAL DISTRICT (RCD)

GENERAL COMMERCIAL DISTRICT

- MIN. LOT AREA: 1 ACRE
- MIN. LOT WIDTH: 150 FT
- BUILDING SETBACK (FOR PROPOSED BUILDING)

REQUIRED	PROVIDED
FRONT: 70 FT	366.1 FT
SIDE: 15 FT	89.9 FT
REAR: 50 FT	155.2 FT

- PARKING SETBACK:

REQUIRED	PROVIDED
FRONT: 20 FT	155.8 FT
SIDE: 10 FT	19.9 FT
REAR: 10 FT	20.3 FT

- MAX LOT COVERAGE:

REQUIRED	PROVIDED
PARCEL AREA:	1,154,340 SFT (26.5 AC)
BUILDING: 35%	242,470 SFT (21.0%)
IMPERVIOUS: 75%	865,457 SFT (75.0%)*
*INCLUDES FUTURE BUILDOUT AREA	

- MAX BUILDING HEIGHT: 35 FT (2 STORIES) 32 FT

PARKING CALCULATIONS:

SHOPPING CENTER:

- 1 SPACE FOR EACH 250 SFT GROSS RETAIL FLOOR AREA (FOR FIRST 50,000 SFT)
- 1 SPACE FOR EACH 275 SFT GROSS RETAIL FLOOR AREA (FOR AREA BETWEEN 50,000 TO 450,000 SFT)

GROSS FLOOR AREA = 242,470 SFT * 85% = 206,100 SFT *
 *(GROSS RETAIL FLOOR AREA)

FIRST 50,000 SFT: 50,000 SFT / 250 = 200 SPACES
 REMAINDER SFT: 156,100 SFT / 275 = 568 SPACES

REQUIRED: 200 + 568 = 768 SPACES
 PROVIDED: 680 SPACES (68 OF WHICH ARE ADA SPACES)
 (THIS IS A 12% REDUCTION OF SPACES)
 REDUCTION BY PLANNING COMMISSION SOUGHT (UP TO 30% ALLOWED)
 GIVEN THE MIX OF USERS WITHIN THE SHOPPING CENTER

- GENERAL NOTES**
1. ALL OUTDOOR LIGHTS SHALL BE SHIELDED TO REDUCE GLARE AND SHALL BE ARRANGED TO NOT INTERFERE WITH THE VISION OF PERSONS ON ADJACENT ROADWAYS OR ADJACENT PROPERTY.
 2. ALL SIGNS SHALL MEET LOCAL MUNICIPALITY ORDINANCE REQUIREMENTS.
 3. THE BUILDING ADDRESS SHALL BE A MINIMUM 6" HIGH LETTERS OF CONTRASTING COLORS AND BE CLEARLY VISIBLE FROM THE STREET. THE LOCATION AND SIZE SHALL BE VERIFIED PRIOR TO INSTALLATION.
 4. A KEY BOXING BOX SHALL BE LOCATED NEAR THE FRONT ENTRY AT EACH TENANT SPACE. FINAL LOCATION TO BE DETERMINED BETWEEN THE OWNER & FIRE MARSHALL.
 5. ONE SIDE OF THE STREET SHALL BE MARKED AS A FIRE LANE AND SHALL HAVE APPROPRIATE SIGNAGE.
 6. ACCESS ROADS TO THE SITE SHALL BE PROVIDED AND MAINTAINED DURING CONSTRUCTION.
 7. ACCESS ROADS SHALL BE CONSTRUCTED TO BE CAPABLE OF SUPPORTING THE IMPOSED LOAD OF FIRE APPARATUS WEIGHING AT LEAST 84,000 LBS.
 8. A MINIMUM VERTICAL CLEARANCE OF 13.5 FEET SHALL BE MAINTAINED THROUGHOUT THE SITE. THIS INCLUDES ENCROACHMENTS FROM LARGE TREE CANOPIES, LIGHTING, ETC.
 9. DURING THE CONSTRUCTION PROCESS, THE BUILDING WILL BE EVALUATED FOR EMERGENCY RESPONDER RADIO SIGNAL STRENGTH. IF COVERAGE IS FOUND TO BE QUESTIONABLE OR INADEQUATE, AN APPROVED CONTRACTOR SHALL BE HIRED TO PERFORM A GRID TEST OF THE FACILITY. IF THE SIGNAL STRENGTH COVERAGE IS FOUND TO BE NON-COMPLIANT, AN APPROVED EMERGENCY RESPONDER RADIO COVERAGE SYSTEM SHALL BE PROVIDED IN THE BUILDING.
 10. SITE LIGHTING SHALL BE PLACED ON TIMERS TO BE OFF DURING NON-USE HOURS TO THE EXTENT POSSIBLE WHILE MAINTAINING SITE SAFETY. SITE LIGHTING SHALL BE PROGRAMMED TO TURN OFF AT NIGHT WHEN ACTIVITIES ARE NO LONGER OCCURRING ON THE PROPERTY.
 11. DELIVERIES SHALL BE ARRANGED FOR OFF PEAK HOURS TO AVOID POTENTIAL VEHICULAR CONFLICTS.

FUTURE DEVELOPMENT AREA NOTE:

ON THE SOUTH SIDE OF THE PARKING LOT, AN AREA HAS BEEN IDENTIFIED AS FUTURE DEVELOPMENT AREA. A DEPICTION OF TWO DRIVE-THRU USES ARE SHOWN AS A PLACEHOLDER FOR A VISUAL REPRESENTATION OF WHAT COULD FIT WITHIN THIS FUTURE DEVELOPMENT AREA. THE OVERALL SITE IMPERVIOUS CALCULATIONS ACCOMMODATE THE FUTURE DEVELOPMENT AREAS AS SHOWN. THESE BUILDINGS WILL BE MADE AS A SEPARATE SITE PLAN UNDER SEPARATE COVER. THEY ARE SHOWN FOR REPRESENTATIONAL PURPOSES AND TO SHOW THE ULTIMATE INTENT OF THE FINAL DEVELOPMENT OF THE SITE AND TO ENSURE THE SITE HAS BEEN DESIGNED UTILITIES, SITE CIRCULATION, ETC) TO ACCOMMODATE THESE FUTURE USES.

THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. NO ASSURANCE IS MADE THAT THE UTILITIES SHOWN ARE COMPLETELY ACCURATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OR DEPTH DIFFERS SIGNIFICANTLY FROM THE PLANS.

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 1-800-488-7171
 www.bosseng.com

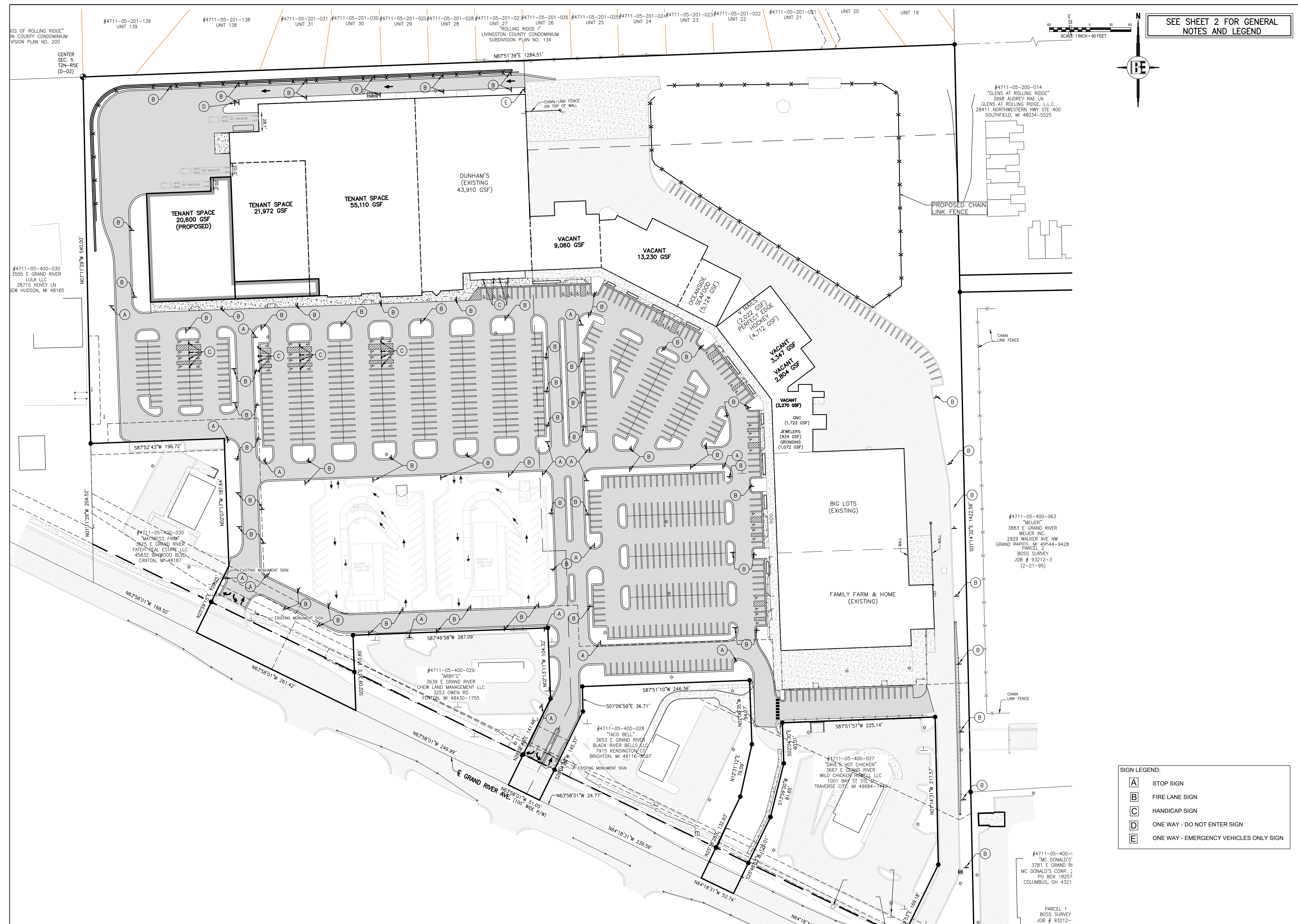
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 HOWELL, MI. 48843
 517.546.4836 FAX 517.548.1670

GRAND RIVER PLAZA
 SYMMETRY MANAGEMENT
 812 SOUTH MAIN STREET, SUITE 200
 ROYAL OAK, MI 48067
 248-654-0200

SITE PLAN

PROJECT	GRAND RIVER PLAZA
PREPARED FOR	SYMMETRY MANAGEMENT
TITLE	SITE PLAN
DATE	3-19-2024
REVISION PER	1 ST
NO BY	NO BY
DESIGNED BY:	ST
DRAWN BY:	DH
CHECKED BY:	
SCALE:	1" = 60'
JOB NO:	22-262-1
DATE:	02/20/24
SHEET NO.	6





SEE SHEET 2 FOR GENERAL NOTES AND LEGEND

- SIGN LEGEND:
- A** STOP SIGN
 - B** FIRE LANE SIGN
 - C** HANDICAP SIGN
 - D** ONE WAY - DO NOT ENTER SIGN
 - E** ONE WAY - EMERGENCY VEHICLES ONLY SIGN

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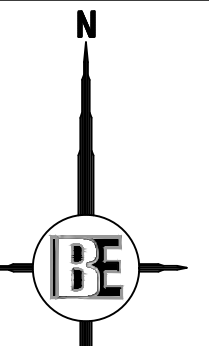
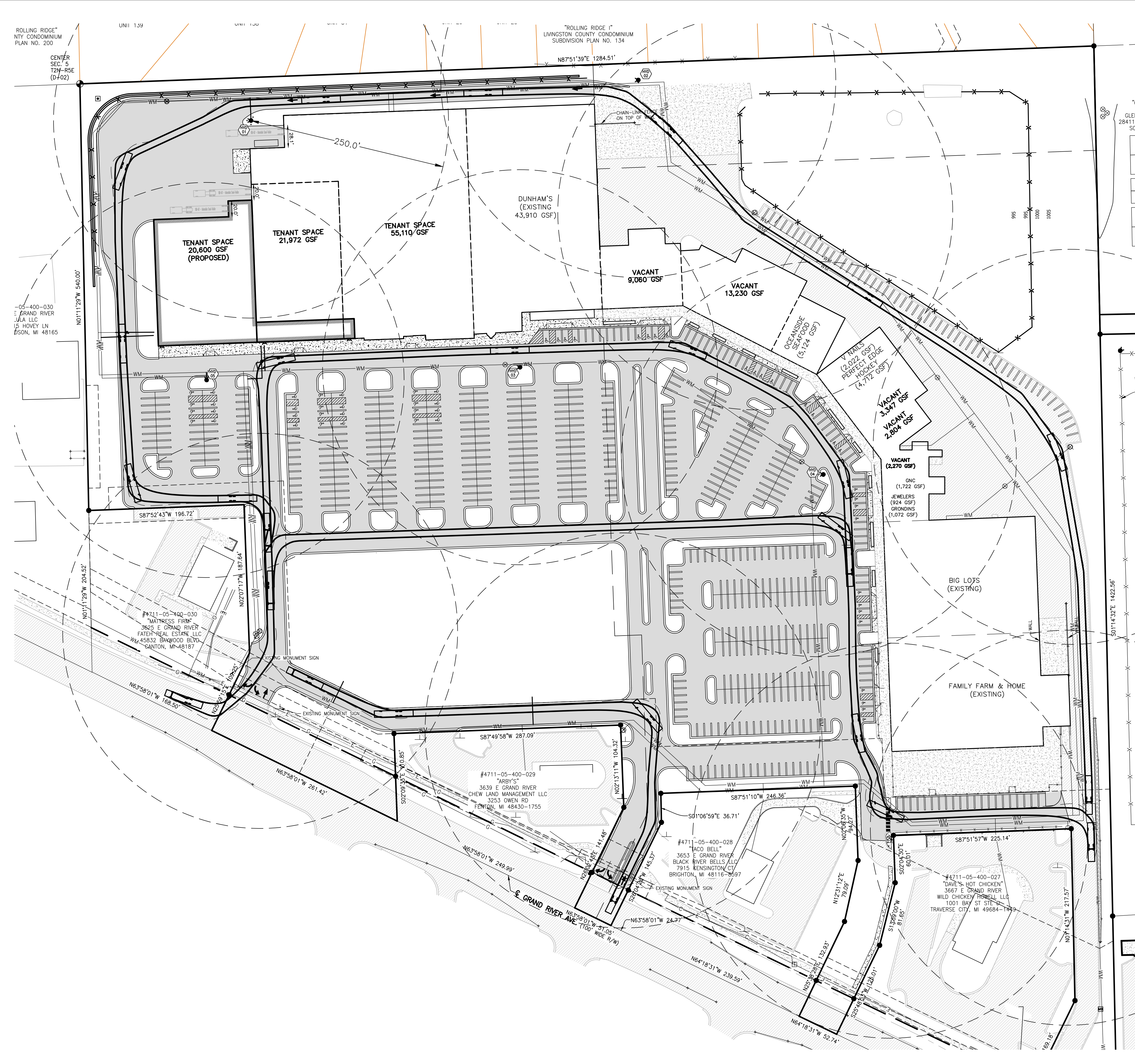
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GRAND RIVER PLAZA
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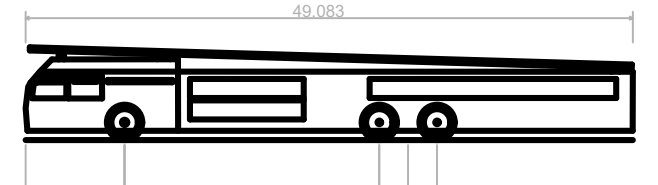
NO	BY	REVISION	DATE
1	ST	PER TOWNSHIP REVIEW	3-19-2024

DESIGNED BY: ST
 DRAWN BY: DH
 CHECKED BY:
 SCALE: 1" = 60'
 JOB NO: 22-262-1
 DATE: 02/20/24
 SHEET NO. **7**





SEE SHEET 2 FOR GENERAL NOTES AND LEGEND



Brighton Area Fire Authority
 Overall Length 49.083ft
 Overall Width 8.167ft
 Overall Body Height 7.500ft
 Min Body Ground Clearance 0.750ft
 Track Width 8.167ft
 Lock-to-lock time 5.00s
 Max Steering Angle (Virtual) 45.00°

THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. NO BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION, DEPTH, OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY CROSSINGS IN THE FIELD PRIOR TO CONSTRUCTION. THE APPARENT OR IF THE LOCATION OR DEPTH DIFFERS SIGNIFICANTLY FROM THE PLANS.

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 BE CALL MSS DIG
 1-800-462-7171
 517-548-1670

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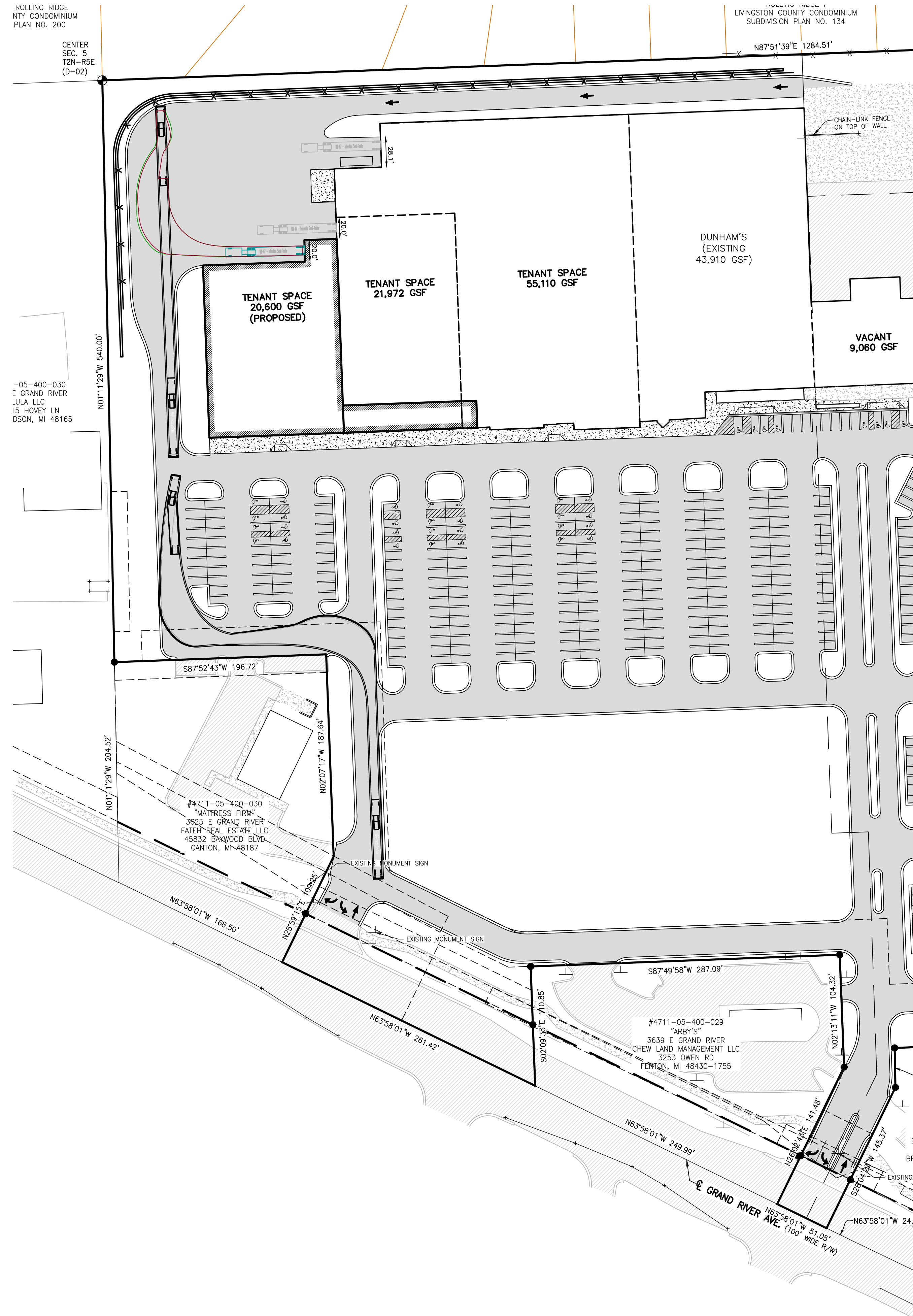
PROJECT: GRAND RIVER PLAZA
 PREPARED FOR: SYMMETRY MANAGEMENT
 813 SOUTH MAIN STREET, SUITE 200
 ROYAL OAK, MI 48067
 248-655-0200

TITLE: FIRE CIRCULATION PLAN

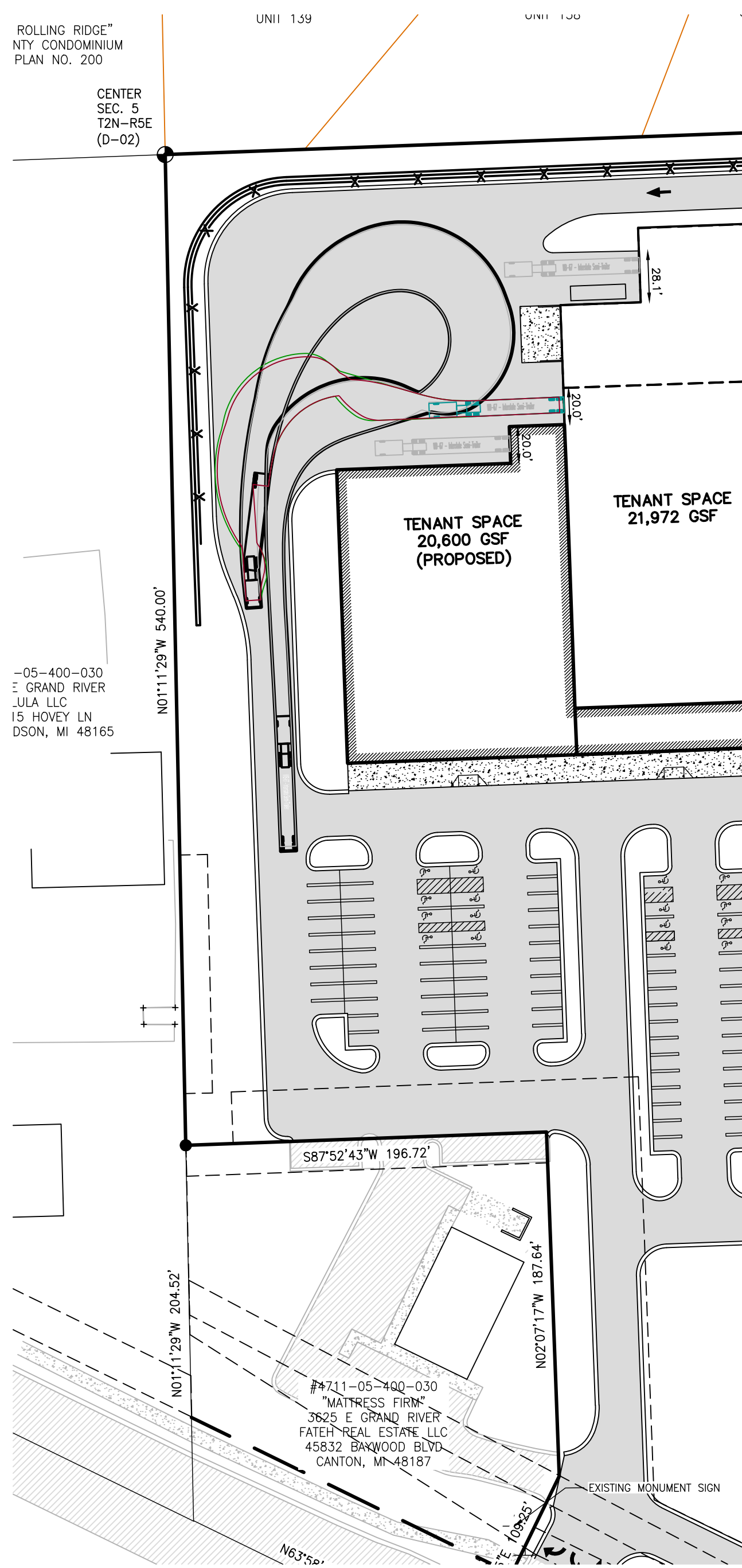
NO	BY	PER TOWNSHIP REVIEW	REVISION PER	DATE
1	ST			3-19-2024

DESIGNED BY: ST
 DRAWN BY: DH
 CHECKED BY:
 SCALE: 1" = 60'
 JOB NO: 22-262-1
 DATE: 02/20/24

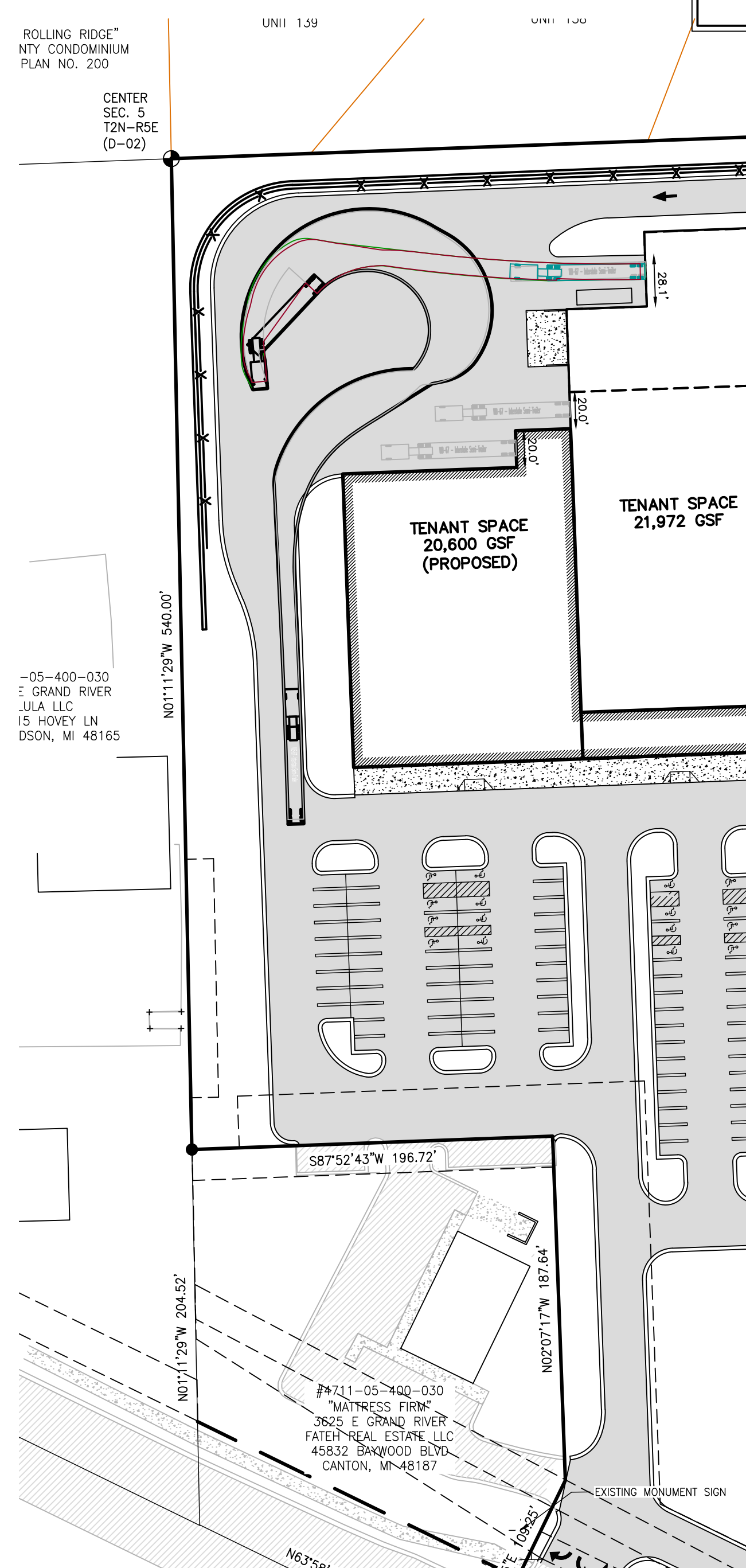
SHEET NO. 8



TRUCK DOCK #1 CIRCULATION
SCALE: 1" = 60'



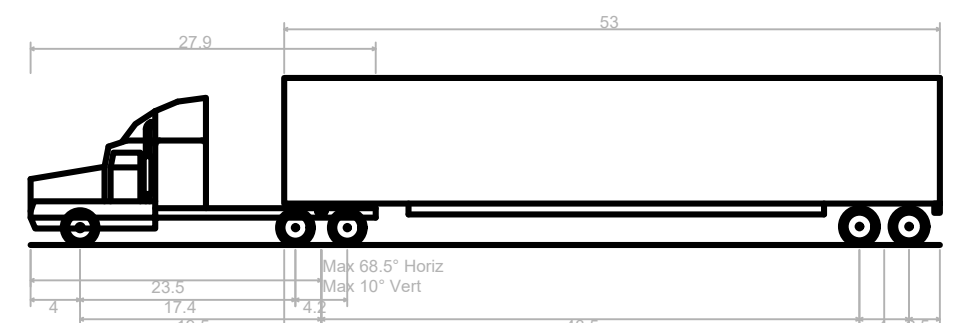
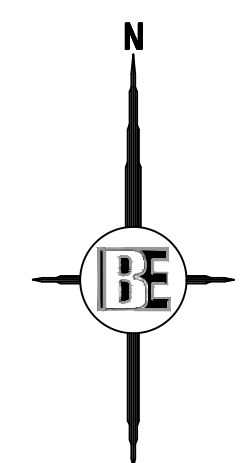
TRUCK DOCK #2 CIRCULATION
SCALE: 1" = 60'



TRUCK DOCK #3 CIRCULATION
SCALE: 1" = 60'

SEE SHEET 2 FOR GENERAL NOTES AND LEGEND

SCALE: 1 INCH = 60 FEET



WB-67 - Interstate Semi-Trailer
Overall Length: 73.501ft
Overall Width: 8.500ft
Overall Body Height: 13.500ft
Min Body/Ground Clearance: 1.334ft
Max Track Width: 8.500ft
Lock-to-lock time: 6.00s
Max Steering Angle (Virtual): 28.40°

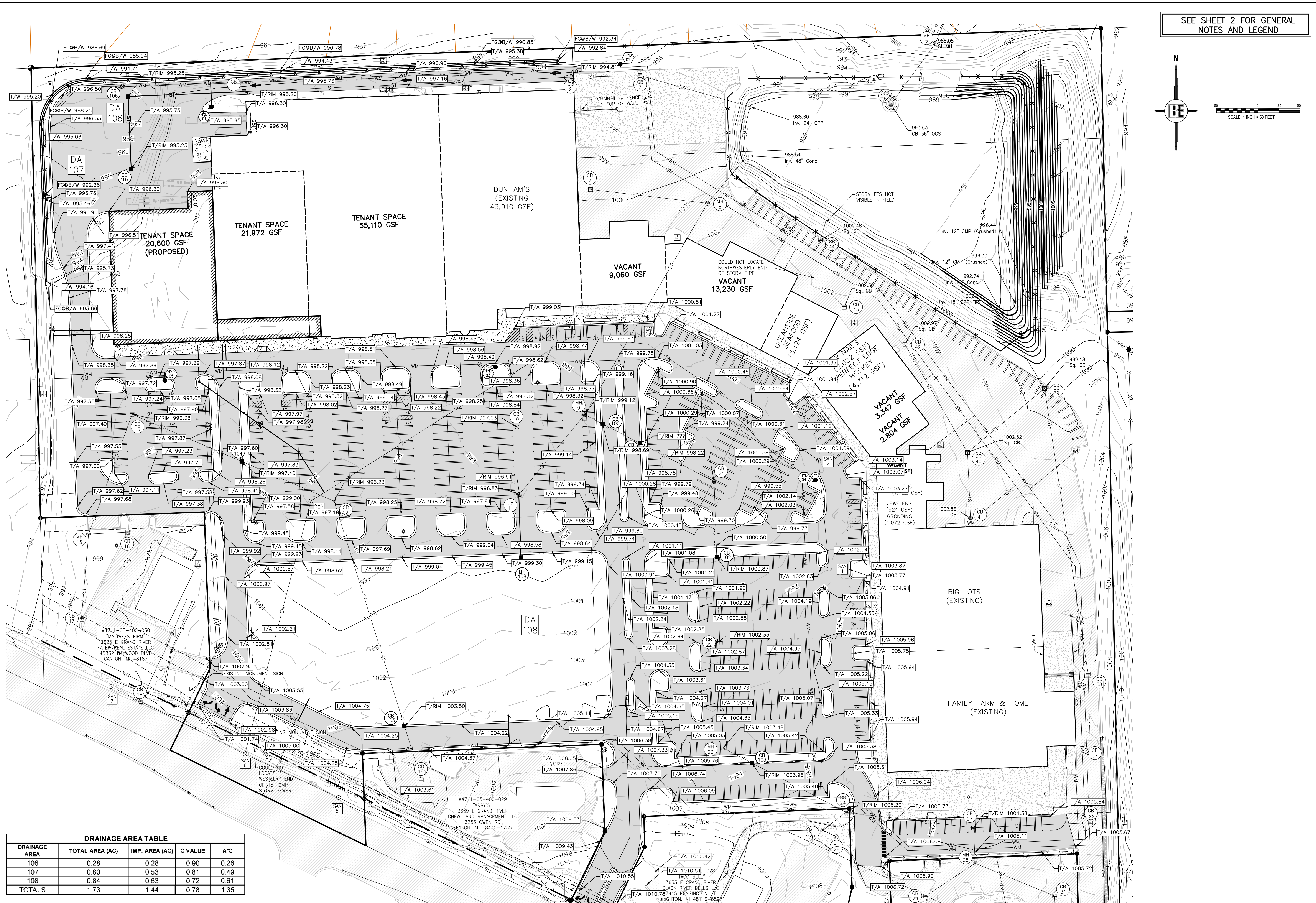
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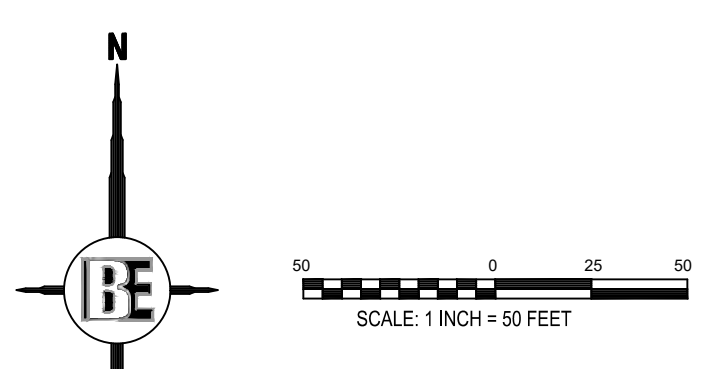
GRAND RIVER PLAZA
SYMMETRY MANAGEMENT
813 SOUTH MAIN STREET, SUITE 200
ROYAL OAK, MI 48067
248-465-0200

NO	BY	DATE	REVISION
1	ST	3-19-2024	DESIGNED BY
	DH		DRAWN BY
			CHECKED BY
			SCALE: 1" = 60'
			JOB NO: 22-262-1
			DATE: 02/20/24
			SHEET NO.
			9





SEE SHEET 2 FOR GENERAL NOTES AND LEGEND



DRAINAGE AREA	TOTAL AREA (AC)	IMP. AREA (AC)	C VALUE	A ^c
106	0.28	0.28	0.90	0.26
107	0.60	0.53	0.81	0.49
108	0.84	0.63	0.72	0.61
TOTALS	1.73	1.44	0.78	1.35

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PROJECT: GRAND RIVER PLAZA
PREPARED FOR: SYMMETRY MANAGEMENT
813 SOUTH MAIN STREET, SUITE 200
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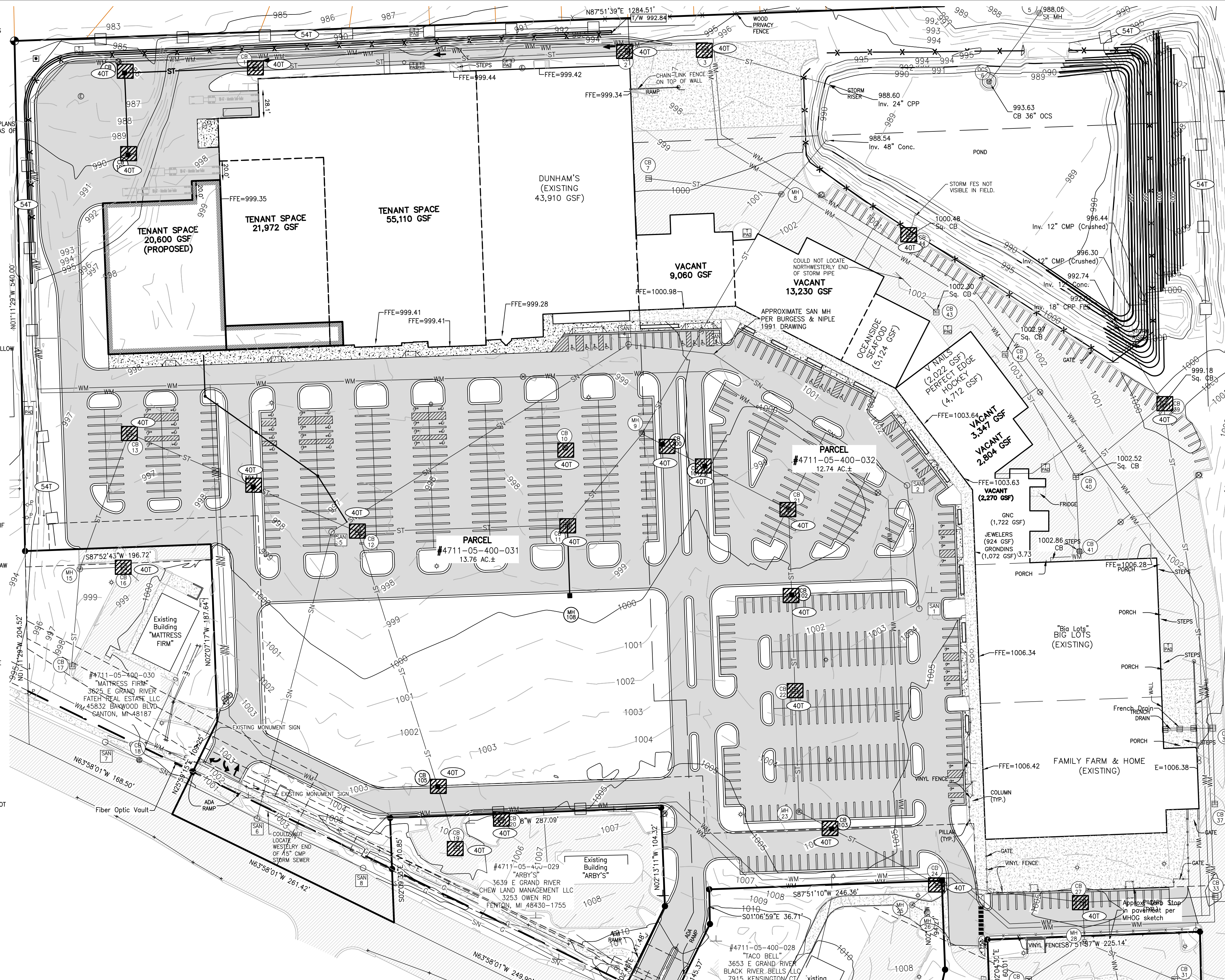
TITLE: GRADING & DRAINAGE PLAN

NO	BY	PER TOWNSHIP REVIEW	REVISION PER	DATE
1	ST			3-19-2024

DESIGNED BY: ST
DRAWN BY: DH
CHECKED BY:
SCALE: 1" = 50'
JOB NO: 22-262-1
DATE: 02/20/24
SHEET NO. 10

LIVINGSTON COUNTY SOIL EROSION PERMIT TEMPLATE
TEMPORARY CONTROLS AND SEQUENCE

- NOTIFY LIVINGSTON COUNTY DRAIN COMMISSIONER'S OFFICE 24 HOURS PRIOR TO START OF GRADE WORK.
- IN ACCORDANCE WITH PUBLIC ACT NO. 53, OF 1974 THE PERMIT HOLDER SHALL CALL MISS DIG FOR STAKING AND LOCATING OF UTILITIES, AT LEAST 72 HOURS IN ADVANCE OF THE START OF ANY WORK.
- (IMPORTANT NOTICE) RETENTION/DETENTION PONDS SHALL BE EXCAVATED, TOPSOILED, SEEDED, MULCHED AND TACKED PRIOR TO THE START OF MASSIVE EARTH DISRUPTION. INGRESS/EGRESS MUST HAVE LARGE CRUSHED ROCK TO REDUCE THE TRACKING OF SOIL ONTO THE PUBLIC TRAFFIC AREAS. SEE DETAIL ITEMS BELOW.
 - 36" M.D.O.T SPECIFICATION TYPE SILT FABRIC FENCE AS SHOWN ON PLANS SHALL BE PLACED AND MAINTAINED ALONG PERIMETER ON ALL LOW LYING AREAS OF THE CONSTRUCTION SITE TO FILTER RUNOFF BEFORE LEAVING PROJECT SITE.
 - ALL TEMPORARY EROSION CONTROL DEVICES AS NOTED ON PLANS SHALL BE INSTALLED PRIOR TO THE START OF MASSIVE EARTH DISTRIBUTION.
 - PLAN DOES DENOTE A DETAILED EROSION CONTROL DEVICE TO RESTRICT TRACKING OF MATERIAL ONTO THE HIGHWAY. STONE DIAPHRAGMS SHALL BE INSTALLED AT ALL INGRESS/EGRESS AREAS OF THE SITE PRIOR TO THE START OF MASSIVE EARTH DISRUPTION. DIAPHRAGMS SHALL BE OF CRUSHED STONE AND SHALL HAVE A MINIMUM LENGTH OF 100' LINEAL FEET.
- RETENTION PONDS
 - RETENTION/DETENTION/SEDIMENTATION PONDS SHALL BE EXCAVATED, TOPSOILED, SEEDED, MULCHED AND TACKED PRIOR TO THE START OF MASSIVE EARTH DISRUPTION.
 - DETENTION POND OUTLETS SHALL BE OF THE STANDPIPE AND STONE FILTER SYSTEM WITH TRASH SCREEN. OUTLET FLOW SHALL NOT EXCEED 0.20 CUBIC FEET OF WATER PER SECOND/PER ACRE. POND DIKES SHALL HAVE A MINIMUM OF ONE (1) FOOT OF FREEBOARD. AN EMERGENCY SPILLWAY SHALL BE CONSTRUCTED WITHIN THE FREEBOARD LEVEL.
 - THE EMERGENCY SPILLWAY FROM THE DETENTION POND SHALL BE SLOTTED AND PEGGED, OR RIP RAPPED, 15 FEET PAST THE TOE OF THE SLOPE OF THE BERM.
 - DIKES AND BERMS SHALL BE FREE OF ALL ORGANIC MATTER.
 - RETENTION/DETENTION PONDS SHALL BE FENCED WITH A 4" CHAIN LINK FENCE, INCLUDING A 12" ACCESS GATE FOR MAINTENANCE UNLESS MINIMUM 5 FT. HORIZONTAL TO 1 FT. VERTICAL SLOPES ARE PROVIDED. THE FENCE SHALL BE INSTALLED AT THE OUTER PORTION OF THE BERM, TO ALLOW FOR MAINTENANCE WORK TO BE DONE INSIDE THE FENCE.
 - ALL UNIMPROVED DISTURBED AREAS SHALL BE STRIPPED OF TOPSOIL WHICH WILL BE STORED ON-SITE DURING THE EXCAVATING STAGE. TOPSOIL PILES SHALL BE SEEDED AND MULCHED, OR MATTED WITH STRAW IN THE NON-GROWING SEASON, IMMEDIATELY AFTER THE STRIPPING PROCESS IS COMPLETED, TO PREVENT WIND AND WATER EROSION.
 - SOIL EROSION CONTROLS SHALL BE MONITORED DAILY BY THE ON-SITE ENGINEER, OR CONTRACTOR, WHICHEVER CASE APPLIES.
- SLOPES AND DITCHES
 - ON SITE DITCHES SHALL BE OF THE FLAT BOTTOM TYPE MINIMUM WIDTH OF 2' WITH A MINIMUM OF 3 HORIZONTAL TO 1 VERTICAL SIDE SLOPES. 3:1.
 - DITCHES WITH STEEP SLOPES WILL NEED FLOW CHECKS TO PREVENT SCOURING OF THE DITCH BOTTOM. THESE SHALL BE INSTALLED AS DIRECTED BY THE ENGINEER OR INSPECTOR.
 - SLOPES IN EXCESS OF 3 HORIZONTAL TO 1 VERTICAL SHALL NOT BE USED EXCEPT WITH A MECHANICAL DEVICE SUCH AS A RETAINING WALL, TERRACING, OR OTHER PRIOR APPROVED DEVICE.
- STORM DRAINS
 - ALL STORM WATER STRUCTURES, CATCH BASINS AND/OR MANHOLES, IF BLOCK, SHALL BE PLASTERED ON BOTH THE INSIDE AND OUTSIDE OF THE STRUCTURES. GROUTING AND POINTING WILL BE NECESSARY AT THE CASTING AND STRUCTURE JOINT TO PREVENT LEAKAGE AND THE RESULTING SOIL MOVEMENT, AROUND THE STRUCTURE.
 - STORM WATER INLETS SHALL HAVE AS A TEMPORARY CONTROL A STRAW BALE BARRIER AND STONE FILTER INSTALLED AROUND THE INLET DURING CONSTRUCTION. AS AN ALTERNATIVE TO THE STRAW BALE BARRIER, A BURLAP AND PEA STONE FILTER MAY BE USED. THREE LAYERS OF BURLAP FIBER AND A FILTER OF PEA STONE MINIMUM 1 FT. IN DEPTH CAN BE USED. DUE TO THE POROSITY OF THE BURLAP FILTER THE MINIMUM OF 1 FT. OF STONE IS VERY IMPORTANT. THE CONTROL SHALL BE INSTALLED AS SOON AS THE STRUCTURE IS BUILT AND INSPECTED DAILY.
 - BURLAP AND PEA STONE FILTERS WILL NEED TO BE CHANGED AFTER EACH RAINFALL.
 - COUNTY CODE REQUIRES A MINIMUM PIPE SIZE OF 12" IN DIAMETER. IF SMALLER PIPE IS NEEDED FOR OUTLET PURPOSES THE 12" CAN BE ADAPTED TO THE CORRECT SIZE. ALL PIPE SHALL MEET THE COUNTY DIAMETER CODE SIZE.
 - ALL STORM DRAIN OUTLETS 15" IN DIAMETER OR LARGER SHALL HAVE ANIMAL GUARDS INSTALLED TO PREVENT ENTRANCE TO SYSTEM.
 - ALL STORM DRAINAGE PIPE 30" IN DIAMETER OR LARGER SHALL BE POINTED, AT THE JOINTS ON THE INSIDE WITH MORTAR, AFTER BACKFILLING.
 - ALL STORM DRAIN OUTLETS THAT DO NOT EMPTY INTO THE RETENTION/DETENTION POND SHALL HAVE A TEMPORARY 5'X10'X3' SUMP INSTALLED AT THE TERMINATION OF THE STORM SEWER. UPON COMPLETION OF THE STABILIZATION WORK THE SUMP AREA SHALL BE FILLED AND RIP RAPPED WITH COBBLE STONE. SILT TRAPS SHALL BE INSPECTED AFTER EACH STORM.
 - STORM WATER OUTLETS DO DENOTE RIP RAP. ALL OUTLETS SHALL BE RIP RAPPED OVER KEVED FILTER FABRIC WITH A MINIMUM OF 15.00 YARDS OF 6" OR LARGER COBBLE STONE.
 - RIP RAP AS NOTED ON THE PLAN SHALL BE OF A FUNNEL SHAPE CONSTRUCTION, WIDTH SHALL INCREASE AS DISTANCE FROM THE OUTLET POINT INCREASES AT A 3:1 RATIO.
 - RIP RAP SHALL BE OF COBBLE STONE, 6" IN DIAMETER OR LARGER. GROUTING MAY BE NECESSARY, AND SHALL BE A MINIMUM OF 6" IN DEPTH WITH THE COBBLE SET IN THE CEMENT SLURRY.
 - STORM WATER OUTLET IS IN NEED OF A SPLASH BLOCK WHICH IS NOT NOTED ON THE PLAN. INSTALL SPLASH BLOCK IF SLOPE OF THE PIPE IS 4% OR GREATER.
 - IT WILL BE NECESSARY FOR THE DEVELOPER TO HAVE THE STORM DRAINAGE LINES CLEANED PRIOR TO FINAL INSPECTION BY THE LIVINGSTON COUNTY DRAIN COMMISSIONER'S OFFICE. IF REQUIRED, THIS WORK SHALL BE DONE BY A PROFESSIONAL SEWER CLEANING FIRM AND CERTIFIED IN WRITING BY THE PROJECT ENGINEER. ALL SUMPS AND TEMPORARY SILT TRAPS SHALL ALSO BE CLEANED AT THIS TIME.
- STABILIZATION
 - ALL UNIMPROVED DISTURBED AREAS SHALL BE RE-TOP SOILED, WITH A MINIMUM OF 3" OF MATERIAL, SEEDED, MULCHED AND TACKED WITHIN 15 DAYS OF THE COMPLETION OF THE MASSIVE EARTH DISRUPTION. IN THE NON-GROWING SEASON STRAW MATTING WILL SUFFICE. HYDROSEEDING WILL BE AN ACCEPTABLE ALTERNATE FOR MULCHING. EXTREME CARE SHOULD BE EXERCISED IN SPRING AND FALL PERIODS AS A FROST WILL BREAK THE BOND OF THE HYDROSEEDING, WHICH WILL AFFECT THE EFFECTIVENESS OF THIS PROCEDURE.
 - IN THE NON-GROWING SEASON, TEMPORARY STABILIZATION OF MASSIVELY EXPOSED AREAS FOR WINTER STABILIZATION SHALL BE DONE WITH STRAW MATTING.
 - PERIODIC INSPECTIONS WILL BE MADE THROUGHOUT THE COURSE OF THE PROJECT. IT WILL BE THE RESPONSIBILITY OF THE MANAGERS OF THE PROJECT TO CONTACT THIS OFFICE FOR THE FINAL INSPECTION AT THE END OF THE PROJECT.
 - THIS COMMONWEALTH PERMIT IS VALID FOR THE MASS EARTH MOVEMENT, THE INSTALLATION OF ROADS, DRAINS, AND UTILITIES AND IS NOT FOR ANY SINGLE FAMILY RESIDENCE. ALL RESIDENTIAL BUILDERS WILL NEED TO SECURE MARKERS AND OR PERMITS AS NECESSARY FOR EACH LOT IN THIS DEVELOPMENT AT THE TIME APPLICATION FOR SINGLE FAMILY RESIDENCE IS MADE.
 - THE ISSUING BUILDING DEPARTMENT SHALL NOT ISSUE THE CERTIFICATE OF OCCUPANCY UNTIL THE FINAL INSPECTION LETTER FROM THE LIVINGSTON COUNTY DRAIN COMMISSIONER'S OFFICE HAS BEEN OBTAINED.
 - PER THE LIVINGSTON COUNTY DRAIN COMMISSIONER THE SEEDING, FERTILIZER AND MULCH MINIMUM QUANTITIES SHALL BE AS FOLLOWS:
 TOP-SOIL 3" IN DEPTH
 GRASS SEED 218 LBS. PER ACRE
 FERTILIZER 150 LBS. PER ACRE
 STRAW MULCH 3" IN DEPTH 1.5 TO 2 TONS PER ACRE (ALL MULCHING MUST HAVE A TIE DOWN, SUCH AS TACKIFIER, NET BINDING, ETC.)
 HYDRO-SEEDING HYDRO-SEEDING IS NOT ACCEPTABLE FOR SLOPES EXCEEDING 1%, IN SUCH CASES STABILIZATION SHALL BE DONE WITH SEED AND STRAW MULCH WITH A TACKIFIER.
 - MAINTENANCE SCHEDULE FOR SOIL EROSION CONTROLS
 - SILT FENCE SHALL BE INSPECTED WEEKLY AND AFTER EACH MAJOR STORM EVENT. MAINTENANCE SHALL INCLUDE REMOVAL OF ACCUMULATED SILT AND REPLACEMENT OF TORN SECTIONS. SILT FENCE SHALL BE REMOVED WHEN ALL CONTRIBUTING AREAS HAVE BEEN STABILIZED.
 - TRACKING PAD SHALL BE INSPECTED MONTHLY FOR ACCUMULATED DIRT. TRACKING PAD SHALL BE REPLACED WHEN THE STONES ARE CHOKED WITH DIRT. TRACKING PAD SHALL BE REMOVED IMMEDIATELY PRIOR TO THE FIRST COURSE OF ASPHALT BEING LAID.
 - DETENTION/RETENTION POND SHALL BE INSPECTED QUARTERLY ON A PERMANENT BASIS. MAINTENANCE SHALL INCLUDE SEDIMENT REMOVAL, EMBANKMENT STABILIZATION AND MAINTAINING THE OUTLET STRUCTURE IN GOOD CONDITION. NO TREES SHALL BE ALLOWED TO GROW ON THE EMBANKMENT.
 - CATCH BASINS SHALL BE INSPECTED ANNUALLY FOR ACCUMULATION OF SEDIMENT. ALL SEDIMENT MUST BE REMOVED AND DISPOSED OF PROPERLY WHEN THE SUMP IS FULL.
 - COMMON AREAS SHALL BE STABILIZED NO LATER THAN 15 DAYS AFTER GRADE WORK, PURSUANT TO RULE 1709 (5).



SEE SHEET 2 FOR GENERAL NOTES AND LEGEND

SOIL EROSION CONTROL MEASURES

6	SEEDING WITH MULCH AND/OR MATTING	STABILIZES SOIL SURFACE, PREVENTS EROSION
14	AGGREGATE COVER	STABILIZES SOIL SURFACE, PREVENTS EROSION
15	PAVING	PROTECTS AREAS WHICH CANNOT OTHERWISE BE PROTECTED, BUT INCREASES RUNOFF VELOCITY
16	CURB & GUTTER	KEEPS HIGH VELOCITY RUNOFF ON PAVED AREAS FROM LEAVING PAVED SURFACE
35	CATCH BASIN	SYSTEM REMOVES COLLECTED RUNOFF FROM SITE, PARTICULARLY FROM PAVED AREAS
36	CATCH BASIN, DEBRIS INLET	COLLECTS HIGH VELOCITY CONCENTRATED RUNOFF
40	INLET SEDIMENT FILTER	EASY TO SHAKE
54	SILT FENCE	USES SELENIUM FABRIC AND POSTS OR PILES. EASY TO CONSTRUCT AND LOCATE AS NECESSARY.

T = TEMPORARY, P = PERMANENT
TOTAL DISTURBED AREA = 15.34 AC.

CONSTRUCTION SEQUENCE

- THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT EROSION IS MINIMIZED AND THAT COMPLIANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS, REGULATIONS, AND ORDINANCES IS MAINTAINED THROUGHOUT EXECUTION OF THIS PROJECT.
- | | |
|---------|--|
| 1 DAY | 1. INSTALL SILT FENCE AS SHOWN ON PLANS. |
| 45 DAYS | 2. ROUGH GRADE AND INSTALL STORM DRAINAGE. |
| 180 DAY | 3. INSTALL INLET PROTECTION ON STORM INLETS. |
| 60 DAYS | 4. START BLDG. CONSTRUCTION |
| 15 DAYS | 5. INSTALL PAVEMENT |
| 1 DAY | 6. FINE GRADE AROUND BUILDING, SPREAD TOPSOIL, SEED AS APPLICABLE. |
| 1 DAY | 7. REMOVE ALL EROSION CONTROL STRUCTURES. |
| 1 DAY | 8. REMOVE ACCUMULATED SILT FROM ALL EXISTING DRAINAGE. |

CONTROLS & MEASURES POST CONSTRUCTION SEQUENCE

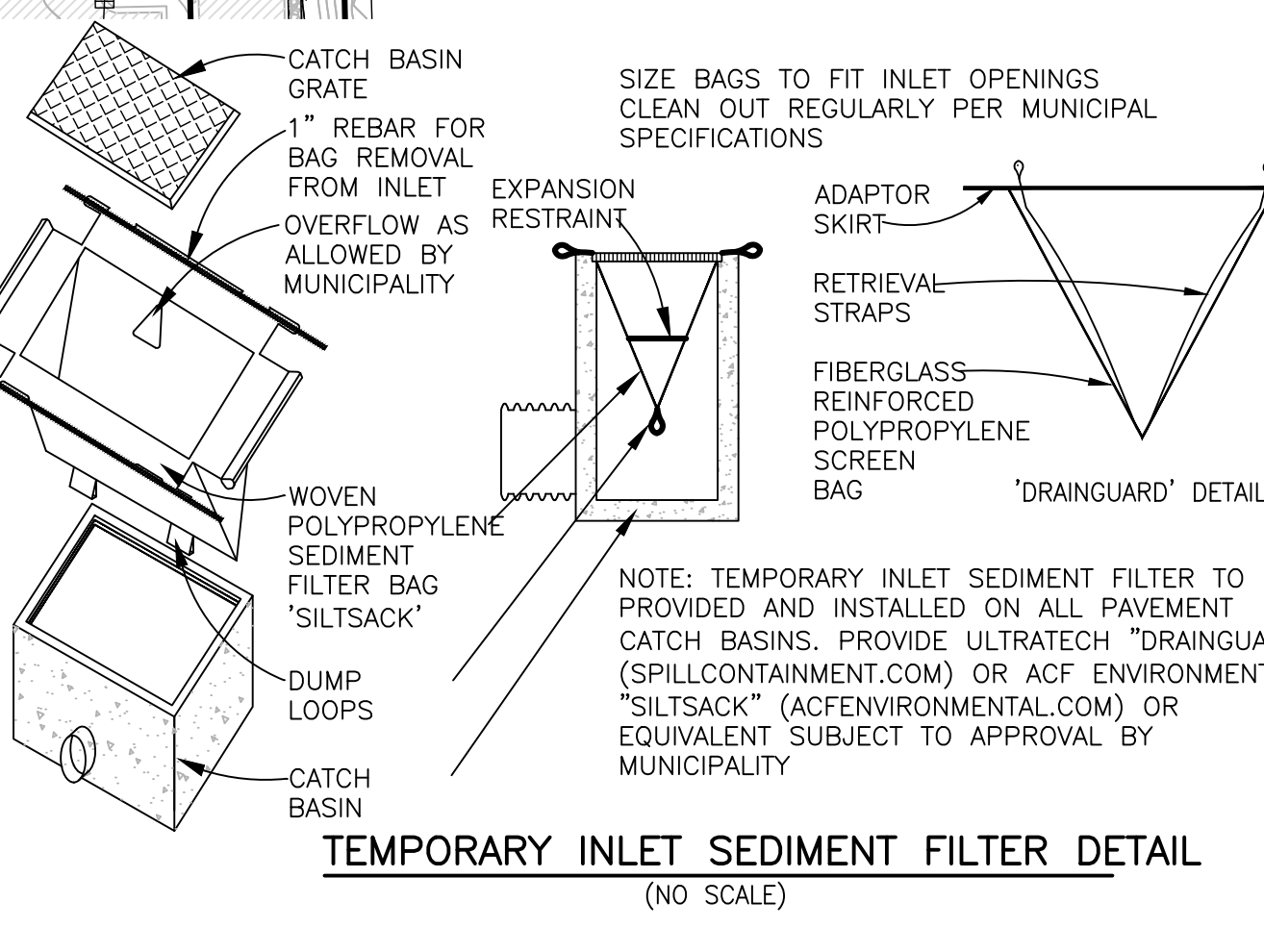
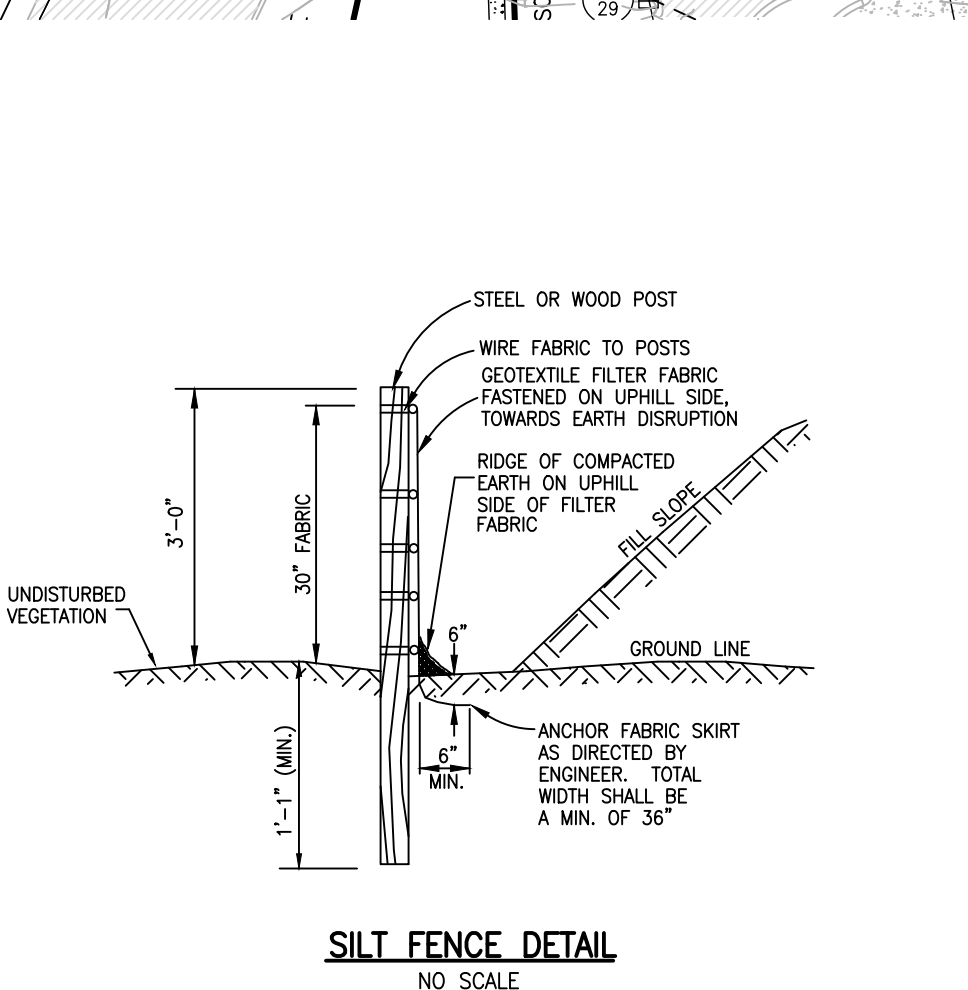
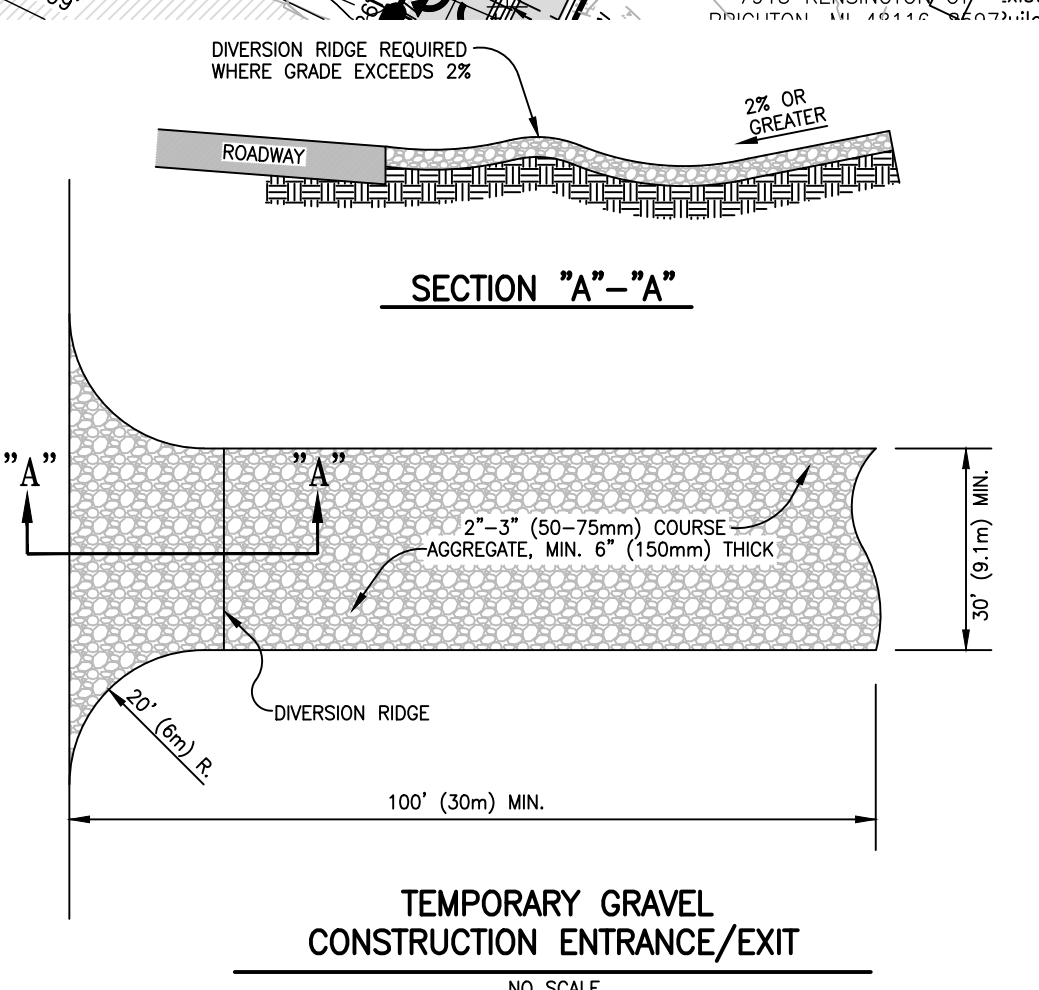
ACTIVITY	WEEKLY	MONTHLY	AS REQUIRED
MAINTAIN LANDSCAPING, REPLACE MULCH	X	X	X
CLEAN INLETS		X	X
COLLECT LITTER	X	X	X
SWEEP PARKING LOT		X	X

CONTROLS & MEASURES NARRATIVE

ACTIVITY	DESCRIPTION
MAINTAIN LANDSCAPING, REPLACE MULCH	COLLECT GRASS, TREE, AND SHRUB CLIPPINGS. DISPOSE IN APPROVED CONTAINER. REPLACE DEAD SOO, TREES AND SHRUBS
CLEAN INLETS	REMOVE LITTER, SEDIMENT, AND DEBRIS. DISPOSE OF IN APPROVED LANDFILL.
COLLECT LITTER	DISPOSE OF WITH INLET DEBRIS.
SWEEP PARKING LOT	REMOVE MUD, DIRT, GREASE AND OIL WITH PERIODIC SWEEPING
DUST CONTROL	SPRINKLE WATER AS NEEDED

PROPOSED CONST. SCHEDULE FOR THE YEAR 2024-2025

ACTIVITY	AUG	SEPT	OCT	NOV	DEC	APRIL
DEMO & CLEAR						
MASS GRADING						
UNDERGROUND UTILITY						
FINAL GRADING						
SEED & MULCH						



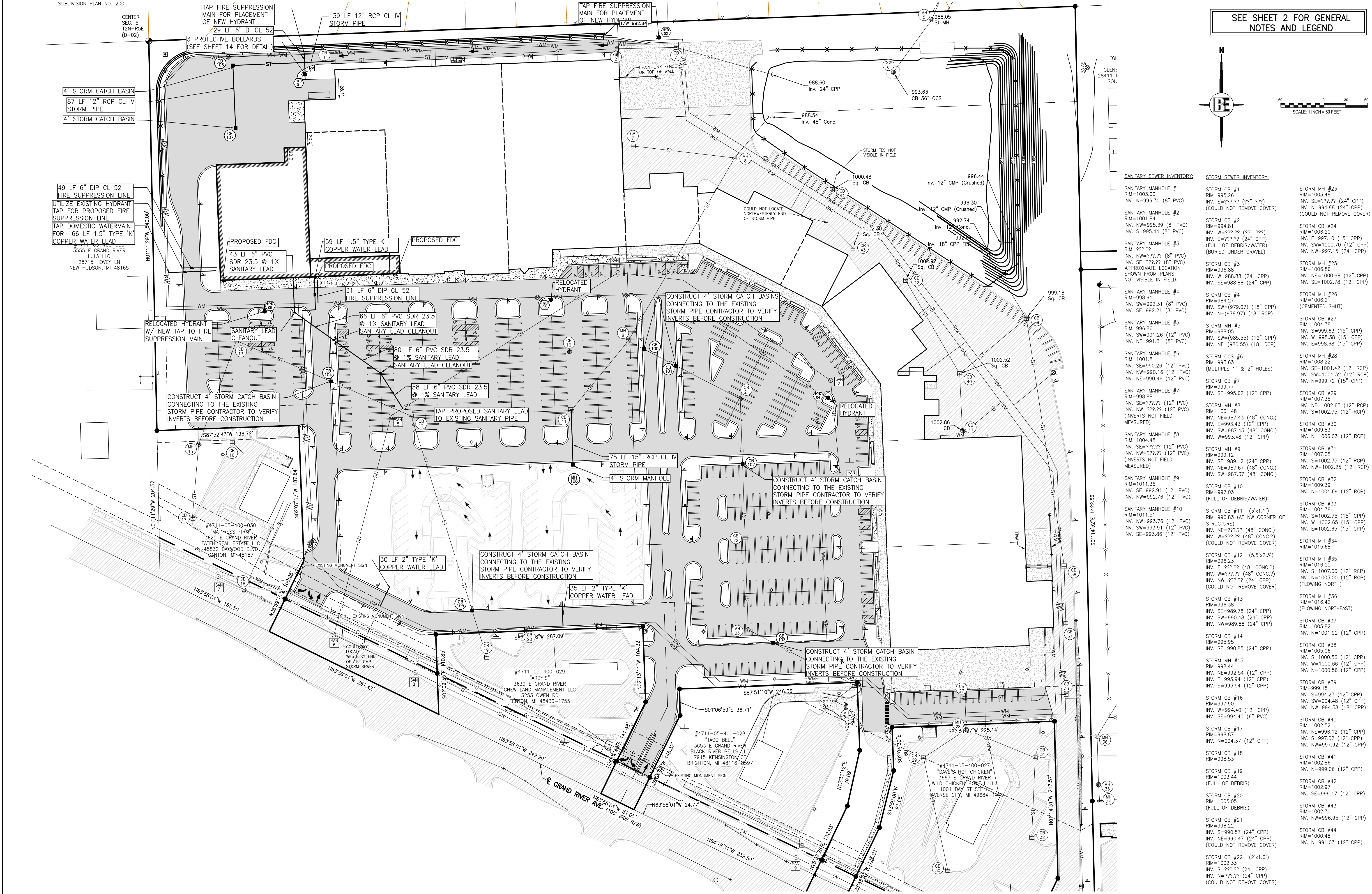
BEBOSSE Engineering
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3121 E. GRAND RIVER AVE.
HOWELL, MI. 48843
517.546.4836 FAX 517.548.1670

PROJECT: GRAND RIVER PLAZA
PREPARED FOR: SYMMETRY MANAGEMENT
813 SOUTH MAIN STREET, SUITE 200
ROYAL OAK, MI 48067
248-465-0200

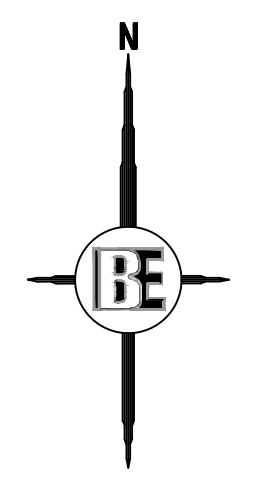
TITLE: SOIL EROSION AND SEDIMENTATION PLAN

DESIGNED BY:	ST
DRAWN BY:	DH
CHECKED BY:	
SCALE:	1" = 60'
JOB NO:	22-262-1
DATE:	02/20/24
SHEET NO.	11

DATE: 3-19-2024
PER TOWNSHIP REVIEW: 1 BY
REVISION PER: NO BY



SEE SHEET 2 FOR GENERAL NOTES AND LEGEND



SANITARY SEWER INVENTORY:		STORM SEWER INVENTORY:	
SANITARY MANHOLE #1 RIM=1003.00 INV. N=996.30 (8" PVC)	SANITARY MANHOLE #2 RIM=1001.84 INV. NW=995.39 (8" PVC) INV. S=995.44 (8" PVC)	SANITARY MANHOLE #3 RIM=997.77 INV. NW=997.77 (8" PVC) INV. SE=997.77 (8" PVC)	SANITARY MANHOLE #4 RIM=998.91 INV. SW=992.31 (8" PVC) INV. SE=992.21 (8" PVC)
SANITARY MANHOLE #5 RIM=996.86 INV. SW=991.26 (12" PVC) INV. NE=991.31 (8" PVC)	SANITARY MANHOLE #6 RIM=1001.81 INV. SE=990.26 (12" PVC) INV. NW=990.16 (12" PVC) INV. NE=990.46 (12" PVC)	SANITARY MANHOLE #7 RIM=998.88 INV. SW=997.22 (12" PVC) INV. NW=997.22 (12" PVC)	SANITARY MANHOLE #8 RIM=1004.49 INV. SE=997.22 (12" PVC) INV. NW=997.22 (12" PVC)
SANITARY MANHOLE #9 RIM=1011.36 INV. SE=992.91 (12" PVC) INV. NW=992.76 (12" PVC)	SANITARY MANHOLE #10 RIM=1011.51 INV. NW=993.76 (12" PVC) INV. SW=993.91 (12" PVC) INV. SE=993.86 (12" PVC)	SANITARY MANHOLE #11 RIM=996.23 INV. E=997.44 (48" CONC.) INV. W=997.44 (48" CONC.)	SANITARY MANHOLE #12 RIM=996.23 INV. E=997.44 (48" CONC.) INV. W=997.44 (48" CONC.)
SANITARY MANHOLE #13 RIM=996.38 INV. SE=989.78 (24" CPP) INV. SW=990.48 (24" CPP) INV. NW=989.88 (24" CPP)	SANITARY MANHOLE #14 RIM=995.95 INV. SE=990.85 (24" CPP)	SANITARY MANHOLE #15 RIM=998.44 INV. NE=992.54 (12" CPP) INV. E=993.94 (12" CPP) INV. S=993.94 (12" CPP)	SANITARY MANHOLE #16 RIM=997.90 INV. W=994.40 (12" CPP) INV. SE=994.40 (6" PVC)
SANITARY MANHOLE #17 RIM=998.87 INV. NE=996.12 (12" CPP) INV. S=997.02 (12" CPP) INV. NW=997.92 (12" CPP)	SANITARY MANHOLE #18 RIM=998.53 INV. N=999.06 (12" CPP)	SANITARY MANHOLE #19 RIM=1003.44 INV. (FULL OF DEBRIS)	SANITARY MANHOLE #20 RIM=1005.05 INV. (FULL OF DEBRIS)
SANITARY MANHOLE #21 RIM=998.22 INV. S=990.57 (24" CPP) INV. NE=990.47 (24" CPP) INV. NW=990.47 (24" CPP)	SANITARY MANHOLE #22 RIM=1002.33 INV. S=997.77 (24" CPP) INV. NW=997.77 (24" CPP)	SANITARY MANHOLE #23 RIM=1003.48 INV. SE=997.77 (24" CPP) INV. NW=994.88 (24" CPP)	SANITARY MANHOLE #24 RIM=1006.20 INV. E=997.10 (15" CPP) INV. SW=1000.70 (12" CPP) INV. NW=997.15 (24" CPP)
SANITARY MANHOLE #25 RIM=998.88 INV. NE=1000.98 (12" CPP) INV. SE=1002.78 (12" CPP)	SANITARY MANHOLE #26 RIM=1006.21 INV. SW=997.07 (18" RCP) INV. N=997.97 (18" RCP)	SANITARY MANHOLE #27 RIM=1004.38 INV. S=999.63 (15" CPP) INV. W=998.38 (15" CPP) INV. E=998.68 (15" CPP)	SANITARY MANHOLE #28 RIM=993.63 INV. (MULTIPLE 1" & 2" HOLES)
SANITARY MANHOLE #29 RIM=1007.35 INV. SE=997.44 (48" CONC.) INV. E=993.43 (12" CPP) INV. SW=987.43 (48" CONC.) INV. W=993.48 (12" CPP)	SANITARY MANHOLE #30 RIM=1009.83 INV. N=1006.03 (12" RCP)	SANITARY MANHOLE #31 RIM=1007.05 INV. S=1002.35 (12" RCP) INV. NW=1002.25 (12" RCP)	SANITARY MANHOLE #32 RIM=1009.39 INV. N=1004.69 (12" RCP)
SANITARY MANHOLE #33 RIM=1004.38 INV. S=1002.75 (15" CPP) INV. W=1002.65 (15" CPP) INV. E=1002.65 (15" CPP)	SANITARY MANHOLE #34 RIM=1015.68 INV. S=1007.00 (12" RCP) INV. NW=1003.00 (12" RCP)	SANITARY MANHOLE #35 RIM=1016.00 INV. S=1007.00 (12" RCP) INV. NW=1003.00 (12" RCP)	SANITARY MANHOLE #36 RIM=1016.42 INV. (FLOWING NORTH)
SANITARY MANHOLE #37 RIM=1005.82 INV. N=1001.92 (12" CPP)	SANITARY MANHOLE #38 RIM=1005.06 INV. S=1000.56 (12" CPP) INV. W=1000.66 (12" CPP) INV. N=1000.56 (12" CPP)	SANITARY MANHOLE #39 RIM=999.18 INV. S=994.23 (12" CPP) INV. SW=994.48 (12" CPP) INV. NW=994.38 (18" CPP)	SANITARY MANHOLE #40 RIM=1002.52 INV. NE=996.12 (12" CPP) INV. S=997.02 (12" CPP) INV. NW=997.92 (12" CPP)
SANITARY MANHOLE #41 RIM=1002.86 INV. N=999.06 (12" CPP)	SANITARY MANHOLE #42 RIM=1002.97 INV. SE=999.17 (12" CPP)	SANITARY MANHOLE #43 RIM=1002.30 INV. NW=996.95 (12" CPP)	SANITARY MANHOLE #44 RIM=1000.48 INV. N=991.03 (12" CPP)

UTILITY NOTES

- THE EXISTING SHARED FIRE RISER BETWEEN TENANT #3 AND DUNHAM'S SHALL BE SEPARATED. FIRE SUPPRESSION CONTRACTOR TO COORDINATE SEPARATION OF FIRE RISER FOR THESE TENANTS WITH THE BRIGTON AREA FIRE AUTHORITY.
- ALL STORM STRUCTURES THAT ARE FULL OF DEBRIS ARE TO BE CLEANED OUT AS PART OF THE CONSTRUCTION PROJECT.

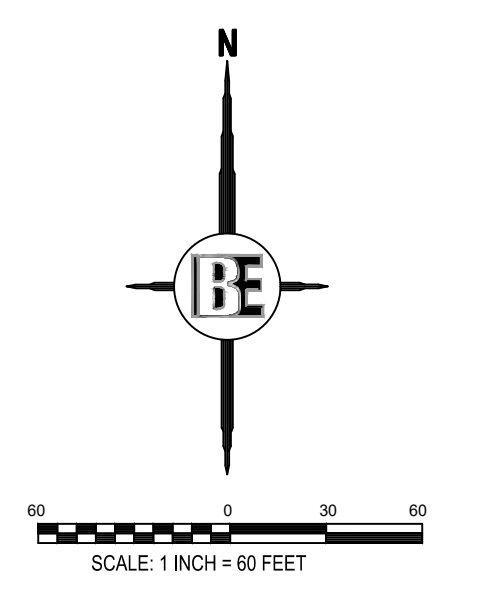
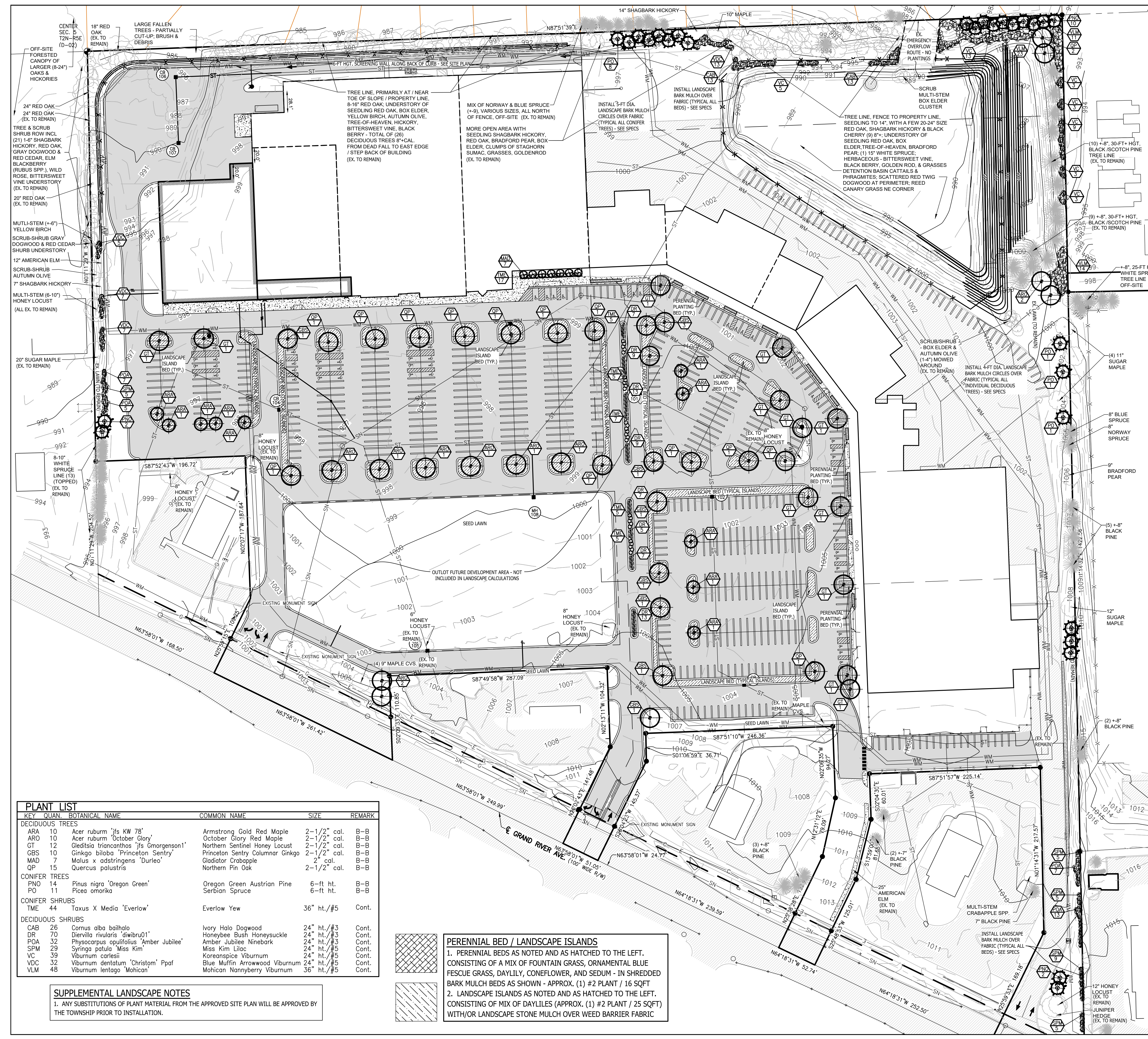
FROM	TO	DRAIN AREA	ACRES	RUNOFF COEFF	EQUIV. AREA	INTEN-SITY	TIME OF CONC.	ADD'L RUNOFF	RUNOFF (CFS)	PIPE LENGTH (LF)	PIPE DIA. (IN)	VELOCITY FLOWING (FPS)	HYDRAULIC GRADIENT SLOPE %	ACTUAL SLOPE USED	MANNING COEFFICIENT	MANNING FLOW CAPACITY	MANNING'S VELOCITY (FT/SEC)	TIME (MIN)	HG ELEV UPPER END	HG ELEV LOWER END	RIM ELEV UPPER END	RIM ELEV LOWER END	INVERT UPPER END	INVERT LOWER END
107	106	107	0.60	0.81	0.49	4.38	15.00	2.14	87	12	3.34	0.54%	0.32%	0.013	2.02	2.57	0.56	991.88	991.41	995.25	995.25	990.58	990.30	
106	1	106	0.28	0.90	0.26	4.31	15.56	3.24	139	12	3.34	0.54%	0.32%	0.013	2.02	2.57	0.90	991.41	990.66	995.25	-	990.30	989.86	
108	11	108	0.84	0.72	0.61	4.38	15.00	0.00	2.65	75	15	2.84	0.29%	0.24%	0.013	3.17	2.59	0.48	991.22	991.00	999.20	-	990.18	990.00

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Engineers Surveyors Planners Landscape Architects
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517.546.4836 FAX 517.548.1670

GRAND RIVER PLAZA
SYMMETRY MANAGEMENT
813 SOUTH MAIN STREET, SUITE 200
ROYAL OAK, MI 48067
248-465-0200

UTILITY PLAN

PROJECT	PREPARED FOR	TITLE
DATE	PER	TOWNSHIP REVIEW
NO BY	1 ST	DATE
DESIGNED BY: ST	DRAWN BY: DH	CHECKED BY:
SCALE: 1" = 60'	JOB NO: 22-262-1	DATE: 02/20/24
SHEET NO. 12	BOSS Engineering	



SEE SHEET 2 FOR GENERAL NOTES AND LEGEND

LANDSCAPE CALCULATIONS / NARRATIVE:

PROJECT INFORMATION:
 SITE SIZE: 26.50 ACRES TOTAL
 ZONED: 'RCD' REGIONAL COMMERCIAL DISTRICT
 ADJACENT ZONING / USES: NORTHWEST: 'MUPUD' (APARTMENTS) EAST: 'MUPUD' (MEIJER GROCERY) SOUTHWEST: 'RCD' (FAST FOOD - MCDONALD'S) SOUTH: GRAND RIVER AVE. / 'RCD' OUTLOTS (FAST FOOD) SOUTHWEST: 'RCD' OUTLOT (RETAIL) WEST: 'SCD' (COMMERCIAL) NORTH: 'MUPUD' (SINGLE-FAMILY RESIDENTIAL) SHOPPING CENTER GENERAL: 748 PROVIDED SPACES (2 INTERNAL AREAS DESIGNATED FOR FUTURE DEVELOPMENT NOT INCLUDED IN THE CALCULATIONS)

PARKING:
 REQUIRED: GREENBELT - PUBLIC R.O.W. (GRAND RIVER AVE.): 1 CANOPY TREE / 40 LFT FRONTAGE, MIN 20-FT WIDTH 455.88 / 40 = 11.40 = 12 CANOPY TREES
 BUFFER - EAST DIVIDED INTO 2 CATEGORIES - RESIDENTIAL (APARTMENTS) (R) & COMMERCIAL (C): NORTHWEST: ADJ. TO APARTMENTS - TYPE 'B': 1 CANOPY TREE + 1 CONIFER TREE + 4 SHRUBS / 30-LFT + 6-FT WALL OR 3-FT BERM, MIN. 20-FT WIDTH 339.86 / 30 = 11.33 = 12 CANOPY TREES + 12 CONIFERS + 46 SHRUBS
 EAST / SOUTHWEST ADJ. TO COMMERCIAL - TYPE 'C': 1 CANOPY OR CONIFER TREE OR 4 SHRUBS / 20 LFT MIN. 10 FT WIDTH 1,026.46 / 20 = 51.32 = 52 CANOPY TREES + 210 SHRUBS
 BUFFER - WEST ADJ. TO COMMERCIAL - TYPE 'C': 1 CANOPY OR CONIFER TREE OR 4 SHRUBS / 20 LFT MIN. 10 FT WIDTH 540.00 / 20 = 27 TREES OR 108 SHRUBS OR COMBINATION
 BUFFER - NORTH ADJ. TO SF RESIDENTIAL - TYPE 'B': 1 CANOPY TREE + 1 CONIFER TREE + 4 SHRUBS / 30 LFT + 6-FT WALL OR 3-FT BERM, MIN. 20 FT WIDTH 1,284.51 / 30 = 42.82 = 43 CANOPY TREES + 43 CONIFER TREES + 172 SHRUBS
 PARKING AREA (201 SPACES+): 1 CANOPY TREE & 100 SF OF LANDSCAPE AREA / 15 SPACES. 1/3 OF TREES MUST BE ON THE INTERIOR OF THE PARKING 748 SPACES / 15 = 50 CANOPY TREES + 5,000 SQFT OF LANDSCAPE AREA
 DETENTION BASIN: 1 DECIDUOUS TREE + 10 SHRUBS / 50 LFT OF BASIN PERIMETER AT TOP EX. BASIN 1,052 LFT / 50 = 21 DECIDUOUS TREES + 210 SHRUBS
 ACCESSORY STRUCTURES: WASTE RECEPTACLES, A/C CONDENSERS, ELEC. TRANSFORMERS, ETC. IN VISIBLE LOCATIONS LANDSCAPED WITH SHRUBS
 PROVIDED: GREENBELT - PUBLIC R.O.W. (GRAND RIVER AVE.): WITHIN 20-FT OF R.O.W. EXISTING (4) 9-IN DBH MAPLES + (3) 8-IN DBH BLACK PINE + (1) 12" DBH HONEY LOCUST = TOTAL OF (8) MATURE TREES TO REMAIN TO MEET INTENT OF REQUIREMENTS
 BUFFER - NORTHEAST ADJ. TO APARTMENTS - TYPE 'B': WITHIN 20-FT OF PROP. LINE, EXISTING 15-17-FT HGT BERM (6x MIN HGT.) + (10) 8-IN DBH, +30-FT HGT PINE + DEVELOPMENT FURTHER SERVED BY EX. BASIN + ADDT. MATURE PERIMETER TREES, PROPOSED EX. TO REMAIN (EQUIV. TO 20 REQ'D TREES) + 4 CANOPY TREES + 46 INFILL SHRUBS
 BUFFER - EAST / SOUTHWEST ADJ. TO COMMERCIAL - TYPE 'C': WITHIN 10-FT OF PROP. LINE, EX. (11) MIN 8-IN DBH DECIDUOUS & CONIFEROUS TREES + EX. BERM / (DEPRESSED BUILDING & DRIVE AREA / RETAINING WALL - 4-FT TO 10-FT IN HGT. ADJ. AREA ALSO INCLUDES + 114-FT WIDE UNUSED ACCESS EASEMENT / DEAD-END ROAD & 655-LFT ADJ. TO STORM DETENTION BASIN (MEIJER). PROPOSED EX. TREES TO REMAIN (EQUIV. TO 22 REQ'D TREES) + 6 CONIFER TREES SUPPLEMENTED BUFFER TO ADJ. MCDONALD'S OUTLOT ONLY (257.88 / 20 = 12.89 = 13 CANOPY TREES + 44 SHRUBS - NOTE SPACE LIMITED BY EX. WATERMAIN & EASEMENT.
 BUFFER - WEST ADJ. TO COMMERCIAL - TYPE 'C': WITHIN 10-FT OF PROP. LINE, EX. (8) MIN 8-IN DBH DECIDUOUS & CONIFEROUS TREES INCL. APPROX. 325-LFT OF TREE LINE CONSISTING OF 14-5-IN DBH TREES, PROPOSED EX. TREES TO REMAIN (EQUIV. TO 16 REQ'D TREES) + SUPPLEMENTED BUFFER (2 CONIFER TREES + 36 LARGE SHRUBS) - NOTE SPACE LIMITED BY STEEP SLOPES (3:1) AT SOUTHERN END & UTILITIES AT NORTHERN END
 BUFFER - NORTH ADJ. TO SF RESIDENTIAL - TYPE 'B': WITHIN 20-FT OF PROP. LINE, EX. (34) MIN 8-IN DBH DECIDUOUS & CONIFEROUS TREES (AN ADJT. 4-5 WITHIN 49-FT) AND APPROX. 250-LFT OF 49-FT WIDE TREE LINE CONSISTING OF 1-7-IN DBH TREES, PROPOSED EX. TO REMAIN (EQUIV. TO MIN. 68 REQ'D TREES) + 6-FT HGT. (560-LFT) WALL BEHIND BLDG. PORTION PARALLEL TO PROPERTY LINE + SUPPLEMENTED BUFFER IN OPEN AREAS (LOADING DOCKS & EAST END) (18 CONIFER SCREENING TREES + 80 LARGE SHRUBS)
 ADJACENT OUTLOTS: 4 EXISTING OUTLOTS INTERNAL TO OVERALL DEVELOPMENT - NO ADDITIONAL BUFFERING PROPOSED. PROPOSED 2 INTERNAL OUTLOTS TO BE DEVELOPED IN A LATER PHASE. LANDSCAPE REQUIREMENTS WILL BE CALCULATED & LANDSCAPING PROVIDED UNDER SEPARATE SITE PLAN APPROVAL PROCESS(ES).
 PARKING AREA (201 SPACES+): WITHIN EX. PARKING LOT ISLANDS (4) MIN 8-IN DBH DECIDUOUS TREES, PROPOSED EX. TO REMAIN (EQUIV. TO 8 REQ'D TREES) + 50 NEW CANOPY TREES + 30,325 SQFT OF INTERNAL LANDSCAPE ISLANDS + ADDT. LANDSCAPE AREAS BETWEEN PERIMETER PARKING & BUILDING (2,280 SQFT).
 DETENTION BASIN: PROPOSED EXISTING TO REMAIN. BASIN IS LOCATED IN SERVICE AREA AT THE NORTHEAST CORNER OF THE DEVELOPMENT OUTSIDE OF PUBLIC VIEW. IT IS ALREADY SUBSTANTIALLY VEGETATED. IT IS AND WILL BE SCREENED FROM ADJACENT PROPERTIES THROUGH EXISTING & PROPOSED LANDSCAPE BUFFER SCREENING.
 ACCESSORY STRUCTURES: WASTE RECEPTACLES, A/C CONDENSERS, & ELEC. TRANSFORMERS ARE / TO BE LOCATED IN SERVICES AREAS OUTSIDE OF PUBLIC VIEW AND/OR SCREENED FROM ADJACENT PROPERTIES THROUGH EXISTING & PROPOSED LANDSCAPE BUFFER SCREENING.

PLANT LIST

KEY	QUAN.	BOTANICAL NAME	COMMON NAME	SIZE	REMARK
DECIDUOUS TREES					
ARA	10	Acer rubrum 'Jfs KW 78'	Armstrong Gold Red Maple	2-1/2" cal.	B-B
ARO	10	Acer rubrum 'October Glory'	October Glory Red Maple	2-1/2" cal.	B-B
GT	12	Gleditsia triacanthos 'Jfs Gmorgenson1'	Northern Sentinel Honey Locust	2-1/2" cal.	B-B
GBS	10	Ginkgo biloba 'Princeton Sentry'	Princeton Sentry Columnar Ginkgo	2-1/2" cal.	B-B
MAD	7	Malus x adstringens 'Durelo'	Gladiator Crabapple	2" cal.	B-B
QP	15	Quercus palustris	Northern Pin Oak	2-1/2" cal.	B-B
CONIFER TREES					
PNO	14	Pinus nigra 'Oregon Green'	Oregon Green Austrian Pine	6-ft ht.	B-B
PO	11	Picea omorika	Serbian Spruce	6-ft ht.	B-B
CONIFER SHRUBS					
TME	44	Taxus X Media 'Everlow'	Everlow Yew	36" ht./#5	Cont.
DECIDUOUS SHRUBS					
CAB	26	Cornus alba bailhola	Ivory Halo Dogwood	24" ht./#3	Cont.
DR	70	Diervilla rivularis 'diwibr01'	Honeybee Bush Honeysuckle	24" ht./#3	Cont.
POA	32	Physocarpus opulifolius 'Amber Jubilee'	Amber Jubilee Ninebark	24" ht./#3	Cont.
SPM	29	Syringa patula 'Miss Kim'	Miss Kim Lilac	24" ht./#5	Cont.
VC	39	Viburnum carlesii	Koreanspice Viburnum	24" ht./#5	Cont.
VDC	32	Viburnum dentatum 'Christom' Ppaf	Blue Muffin Arrowwood Viburnum	24" ht./#5	Cont.
VLM	48	Viburnum lentago 'Mohican'	Mohican Nannyberry Viburnum	36" ht./#5	Cont.

SUPPLEMENTAL LANDSCAPE NOTES

1. ANY SUBSTITUTIONS OF PLANT MATERIAL FROM THE APPROVED SITE PLAN WILL BE APPROVED BY THE TOWNSHIP PRIOR TO INSTALLATION.

PERENNIAL BED / LANDSCAPE ISLANDS

1. PERENNIAL BEDS AS NOTED AND AS HATCHED TO THE LEFT. CONSISTING OF A MIX OF FOUNTAIN GRASS, ORNAMENTAL BLUE FESCUE GRASS, DAYLILY, CONEFLOWER, AND SEDUM - IN SHREDDED BARK MULCH BEDS AS SHOWN - APPROX. (1) #2 PLANT / 16 SQFT

2. LANDSCAPE ISLANDS AS NOTED AND AS HATCHED TO THE LEFT. CONSISTING OF MIX OF DAYLILIES (APPROX. (1) #2 PLANT / 25 SQFT) WITH/OR LANDSCAPE STONE MULCH OVER WEED BARRIER FABRIC

THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. NO COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION AND DEPTH OF ALL UTILITIES IN THE FIELD PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OR DEPTH DIFFERS SIGNIFICANTLY FROM THE PLANS.

BEBOSS Engineering
 Engineers Surveyors Planners Landscape Architects
 3121 E. GRAND RIVER AVE.
 HOWELL, MI. 48843
 517.546.4836 FAX 517.548.1670

GRAND RIVER PLAZA

SYMMETRY MANAGEMENT
 812 SOUTH MAIN STREET, SUITE 200
 ROYAL OAK, MI 48067
 248-665-0200

PROJECT: GRAND RIVER PLAZA
 PREPARED FOR: SYMMETRY MANAGEMENT
 TITLE: LANDSCAPE PLAN
 DATE: 3/19/24
 TOWNSHIP REVIEW COMMENTS: NO BY
 REVISION PER: NO
 DESIGNED BY: PC
 DRAWN BY: PC
 CHECKED BY:
 SCALE: 1" = 60'
 JOB NO: 22-262-1
 DATE: 2/20/24
 SHEET NO. 13

SEE SHEET 2 FOR GENERAL NOTES AND LEGEND

THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. NO CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION, DEPTH, OR COMPLETENESS OF ANY UTILITIES. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL UTILITIES FROM DAMAGE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE LOCAL, STATE, AND FEDERAL GOVERNMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE LOCAL, STATE, AND FEDERAL GOVERNMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE LOCAL, STATE, AND FEDERAL GOVERNMENTS.

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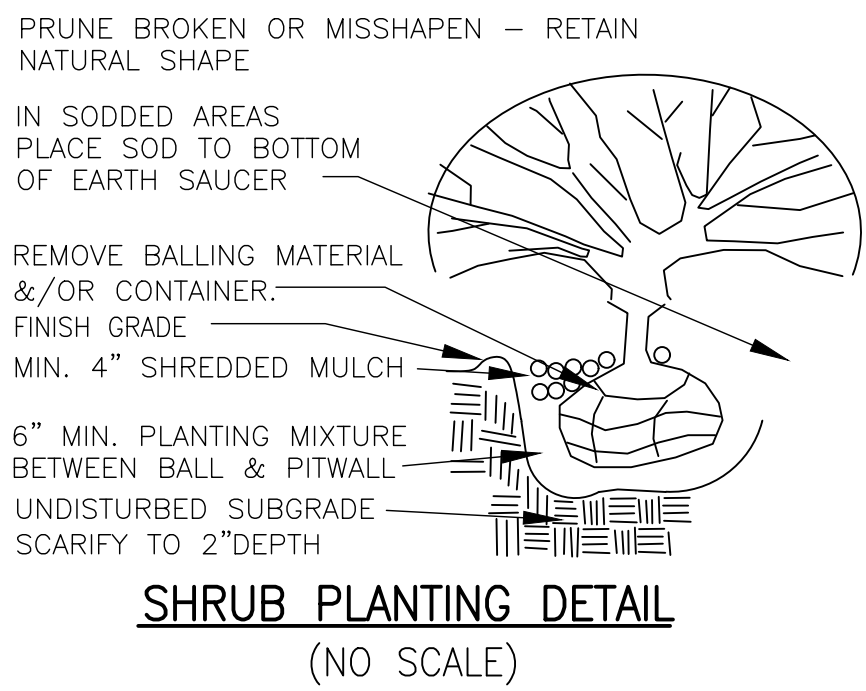
PROJECT: GRAND RIVER PLAZA
 PREPARED FOR: SYMMETRY MANAGEMENT
 813 SOUTH MAIN STREET, SUITE 200
 ROYAL OAK, MI 48067
 248-655-0200

TITLE: LANDSCAPE DETAILS

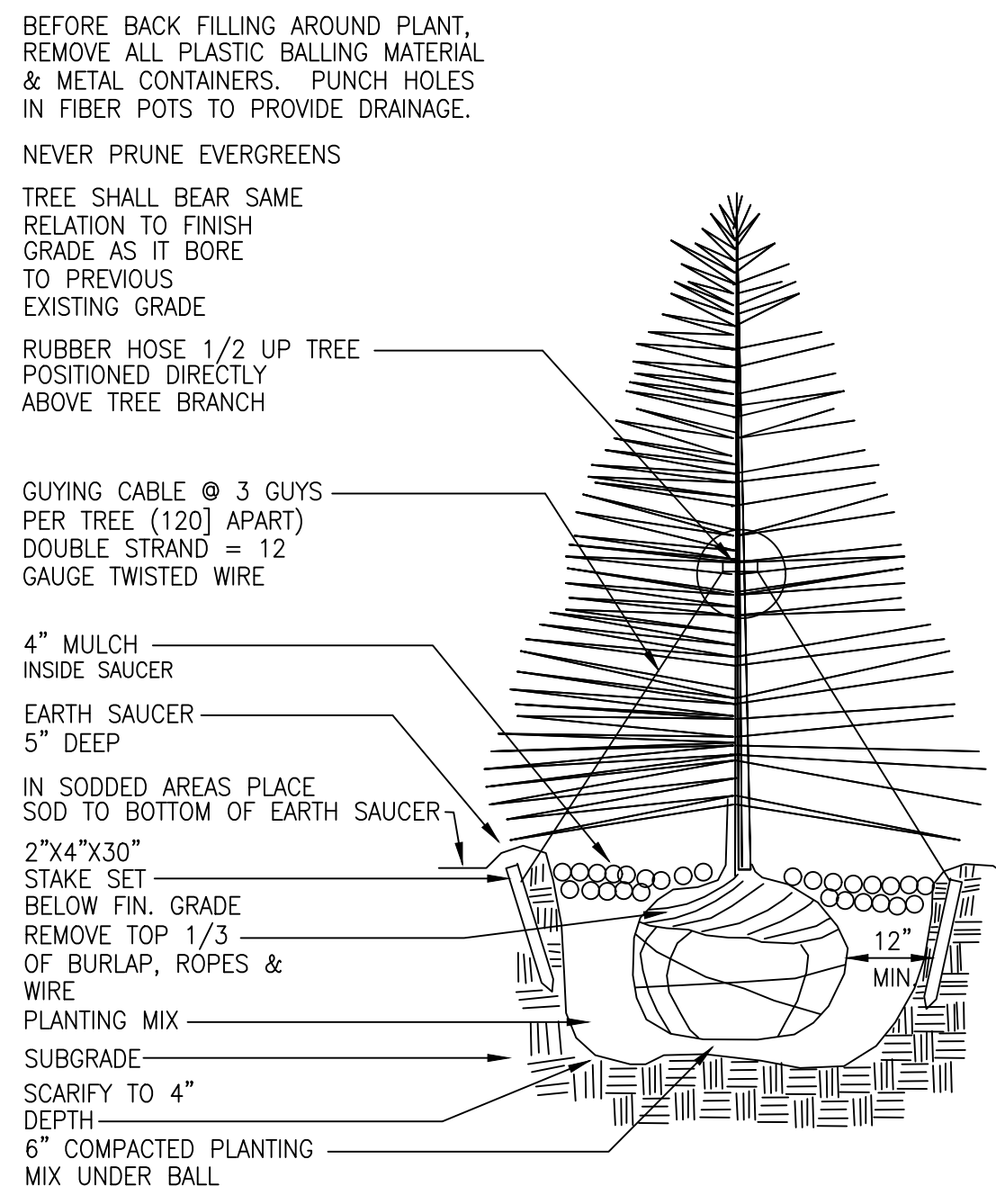
NO	BY	DATE	REVISION PER	COMMENTS
1	PC	3/19/24		TOWNSHIP REVIEW

DESIGNED BY: PC
 DRAWN BY: PC
 CHECKED BY:
 SCALE: AS NOTED
 JOB NO: 22-262-1
 DATE: 2/20/24

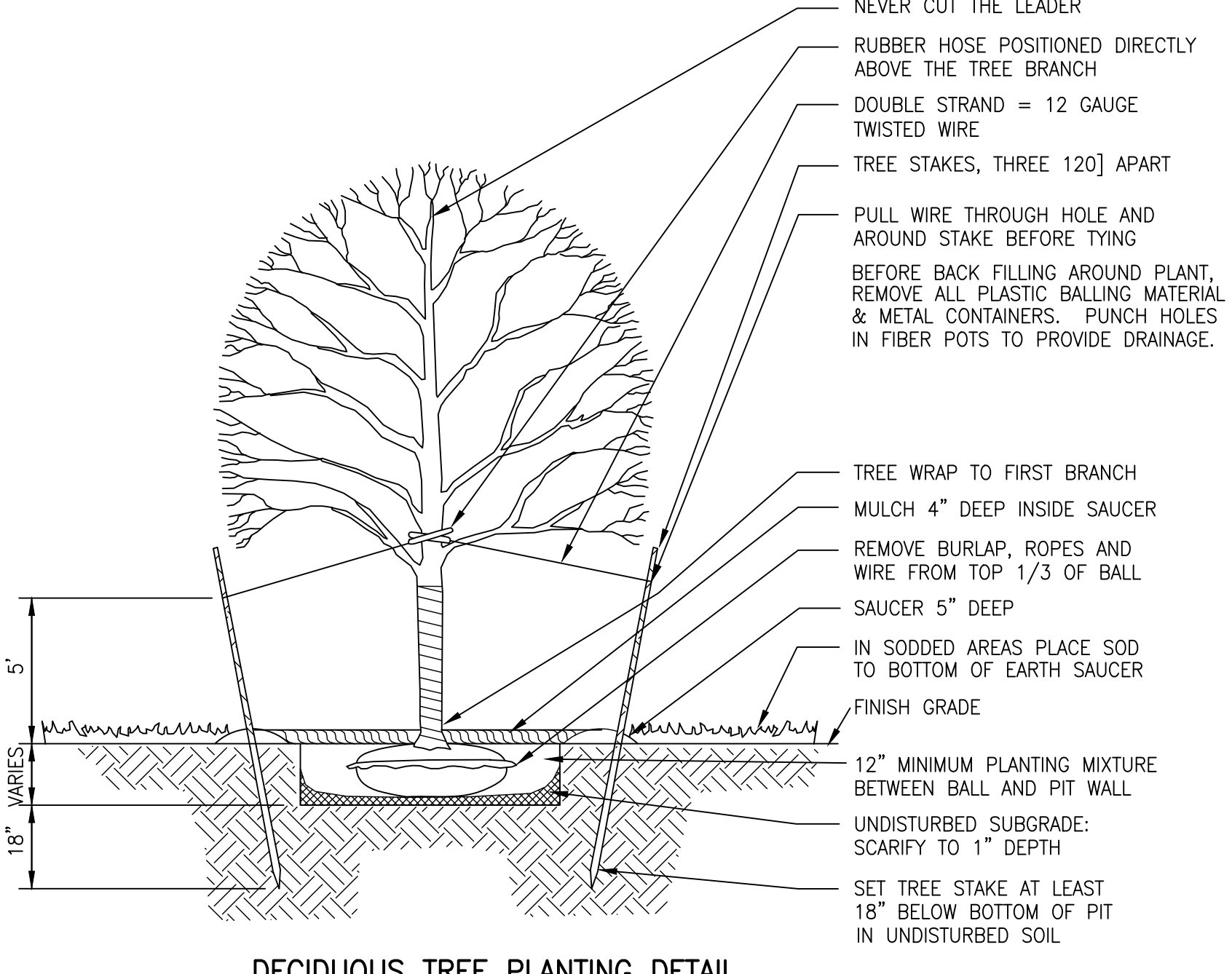
SHEET NO. 14



SHRUB PLANTING DETAIL
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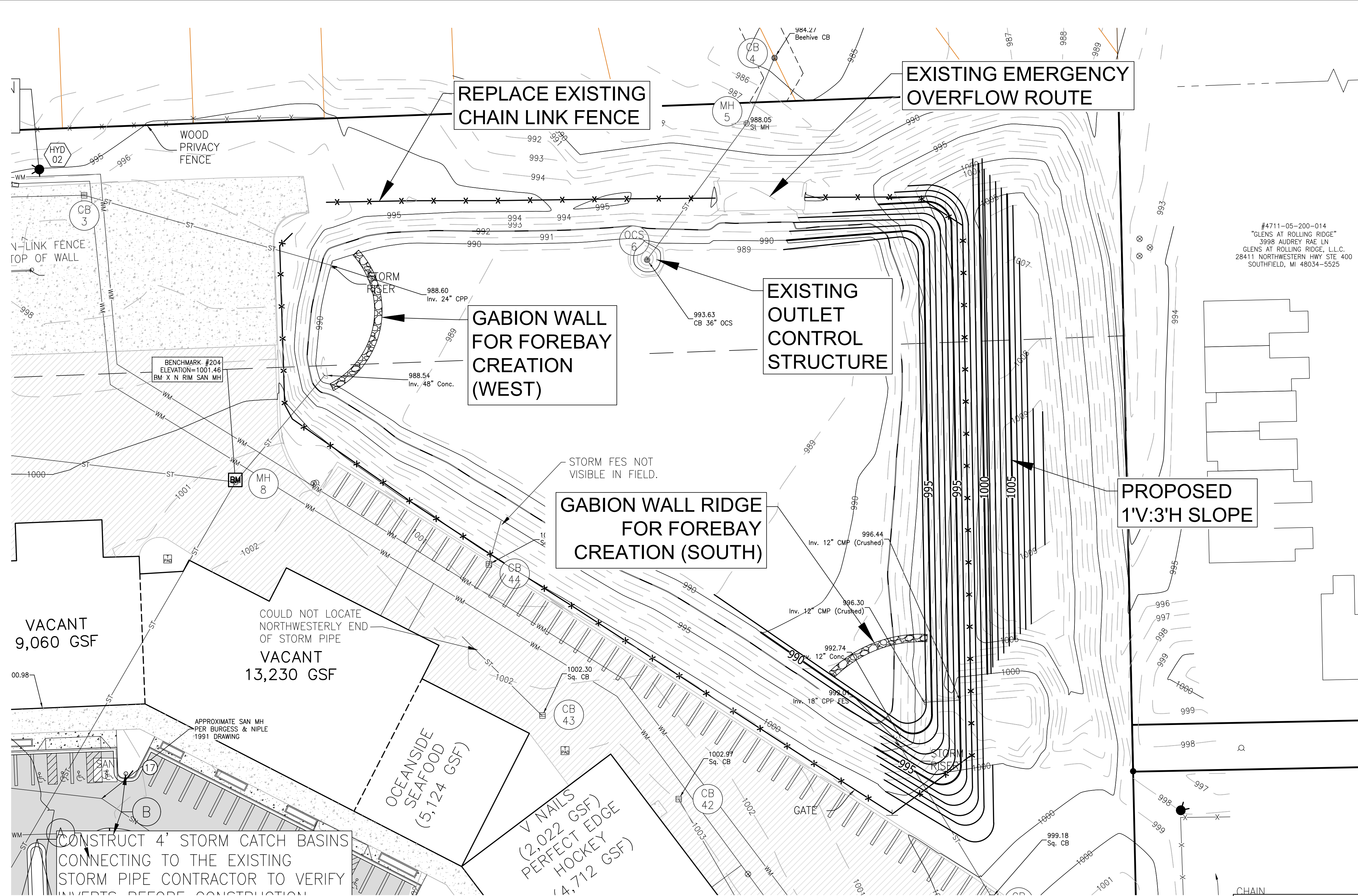


EVERGREEN TREE PLANTING DETAIL
 (NO SCALE)

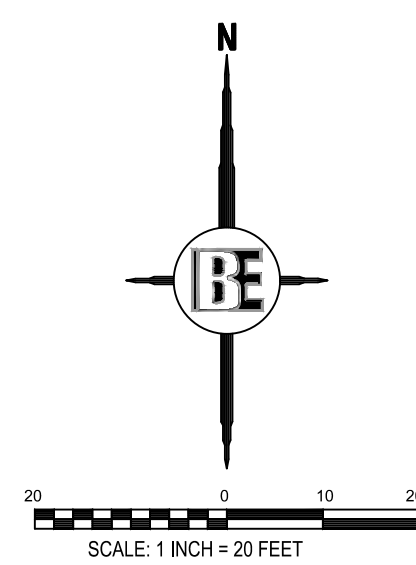


DECIDUOUS TREE PLANTING DETAIL
 (NO SCALE)

FOR SITE PLAN APPROVAL ONLY!
 NOT FOR CONSTRUCTION



SEE SHEET 2 FOR GENERAL NOTES AND LEGEND



STORM WATER NARRATIVE

THE EXISTING SHOPPING PLAZA CONTAINS AN EXISTING DETENTION BASIN IN THE NORTHEAST CORNER OF THE SITE. THERE IS AN EXISTING STORM SYSTEM NETWORK DIRECTING THE SITE'S STORM WATER TO THE EXISTING DETENTION BASIN. THE PROPOSED PROJECT DOES NOT HAVE ANY INCREASE IN IMPERVIOUS SURFACES AND THUS THERE IS NO NEGATIVE IMPACT THE DEVELOPMENT HAS ON THE EXISTING BASIN. THE BASIN SIDE SLOPE GOES TO THE EDGE OF PAVEMENT ON THE SOUTH SIDE, AND APPROACHES THE PROPERTY LINE ON THE NORTH SIDE. THERE IS ADDITIONAL SPACE ON THE EAST SIDE OF THE BASIN TO GRADE AND OBTAIN ADDITIONAL BASIN VOLUME. THE PROPOSED GRADING OBTAINS AN ADDITIONAL 40,000 CFT OF BASIN STORAGE WHICH IS AN IMPROVEMENT ON THE EXISTING BASIN.

THE BASIN CURRENTLY OUTLETS THROUGH AN OUTLET CONTROL STRUCTURE TO THE NORTH THROUGH AN EASEMENT IN THE ROLLING RIDGE SUBDIVISION. THERE ARE NO PROPOSED CHANGES TO THE OUTLET OR DRAINAGE PATH.

OVERALL THERE IS A POSITIVE STORM WATER IMPACT ON THE SITE DUE TO THIS PROPOSED DEVELOPMENT...PRIMARILY IN THE FORM OF ADDITIONAL BASIN VOLUME AND THE CREATION OF STORM WATER PRETREATMENT FOREBAYS.

#4711-05-200-014
 "GLENS AT ROLLING RIDGE"
 3998 AUDREY RAE LN
 GLENS AT ROLLING RIDGE, L.L.C.
 28411 NORTHWESTERN HWY STE 400
 SOUTHFIELD, MI 48034-5525

THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. NO GUARANTEE IS MADE FOR THE ACCURACY OF THESE UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE PLANS. BE ENGINEERING AND DESIGN CONSULTANTS
 1-800-487-7171
 3121 E. GRAND RIVER AVE.
 HOWELL, MI 48843

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 HOWELL, MI. 48843
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VACANT 9,060 GSF
 VACANT 13,230 GSF
 COULD NOT LOCATE NORTHWESTERLY END OF STORM PIPE

OCEANSIDE SEAFOOD (5,124 GSF)
 V NAILS (2,022 GSF) PERFECT EDGE HOCKEY (4,712 GSF)

CONSTRUCT 4' STORM CATCH BASINS CONNECTING TO THE EXISTING STORM PIPE CONTRACTOR TO VERIFY INVERTS BEFORE CONSTRUCTION

LIVINGSTON COUNTY DETENTION BASIN CALCULATIONS

EXISTING			PROPOSED		
AREA (ACRES)	IMPERVIOUS FACTOR	ACRE IMPERVIOUS	AREA (ACRES)	IMPERVIOUS FACTOR	ACRE IMPERVIOUS
21.79	0.9	19.61	21.79	0.9	19.62
0.00	0.7	0.00	0.00	0.7	0.00
6.63	0.2	1.33	6.63	0.2	1.33

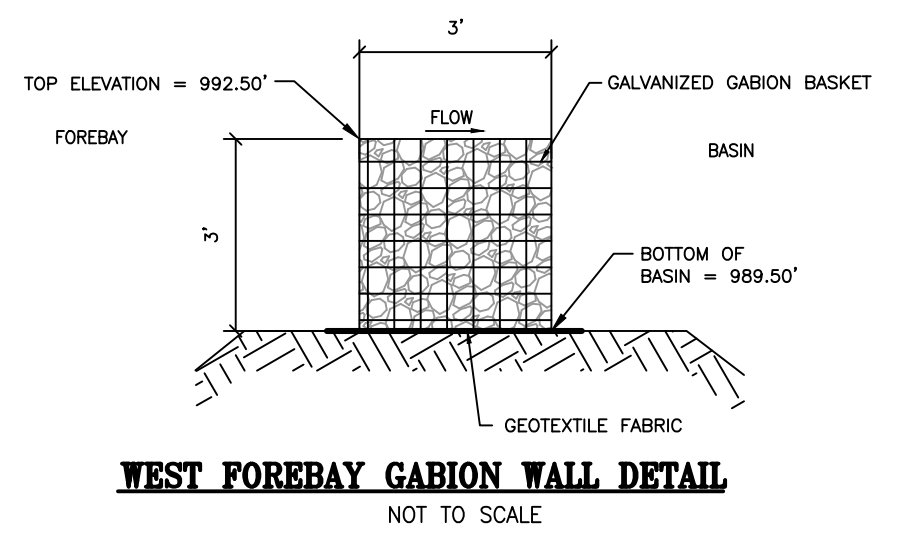
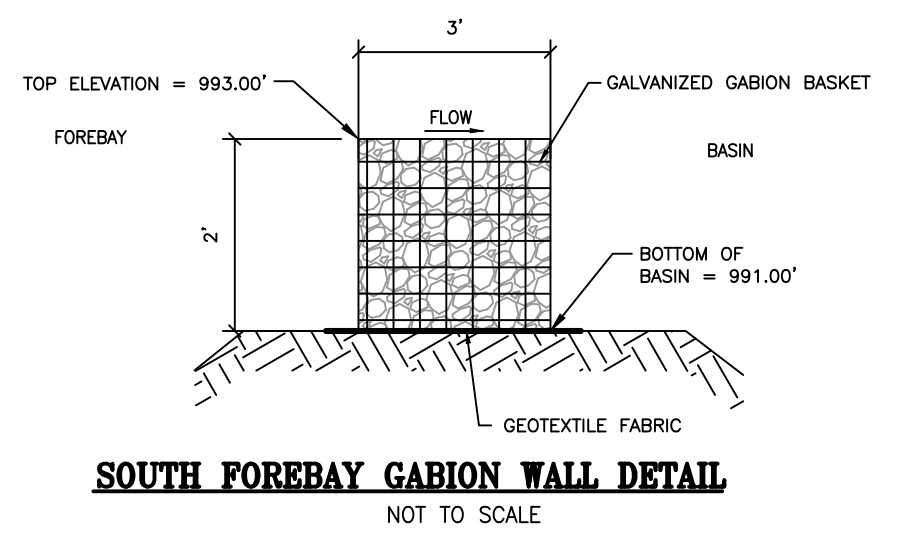
COMPOUND C: 0.74
 TOTAL DRAINAGE AREA: 28.42 ACRES

EXISTING BASIN STORAGE PROVIDED

ELEVATION	AREA (FT ²)	DEPTH (FT)	VOLUME (FT ³)	TOTAL VOLUME (FT ³)	
994	61662	0.37	22,545	252,532	FREEBOARD
993.63	60203	0.63	37,251	229,987	DHWL
993	58054	1	56,293	192,736	
992	54532	1	52,139	136,443	
991	49746	1	46,880	84,303	
990	44014	1	37,423	37,423	
989	30832				BOTTOM OF STORAGE

STORAGE VOLUME PROVIDED:

ELEVATION	AREA	VOLUME	TOTAL VOLUME	
994	68524	0.37	25,137	295,554
993.63	67354	0.63	41,806	270,416
993	65362	1	63,387	228,611
992	61411	1	59,589	165,224
991	57767	1	55,923	105,635
990	54079	1	49,712	49,712
989	45346			



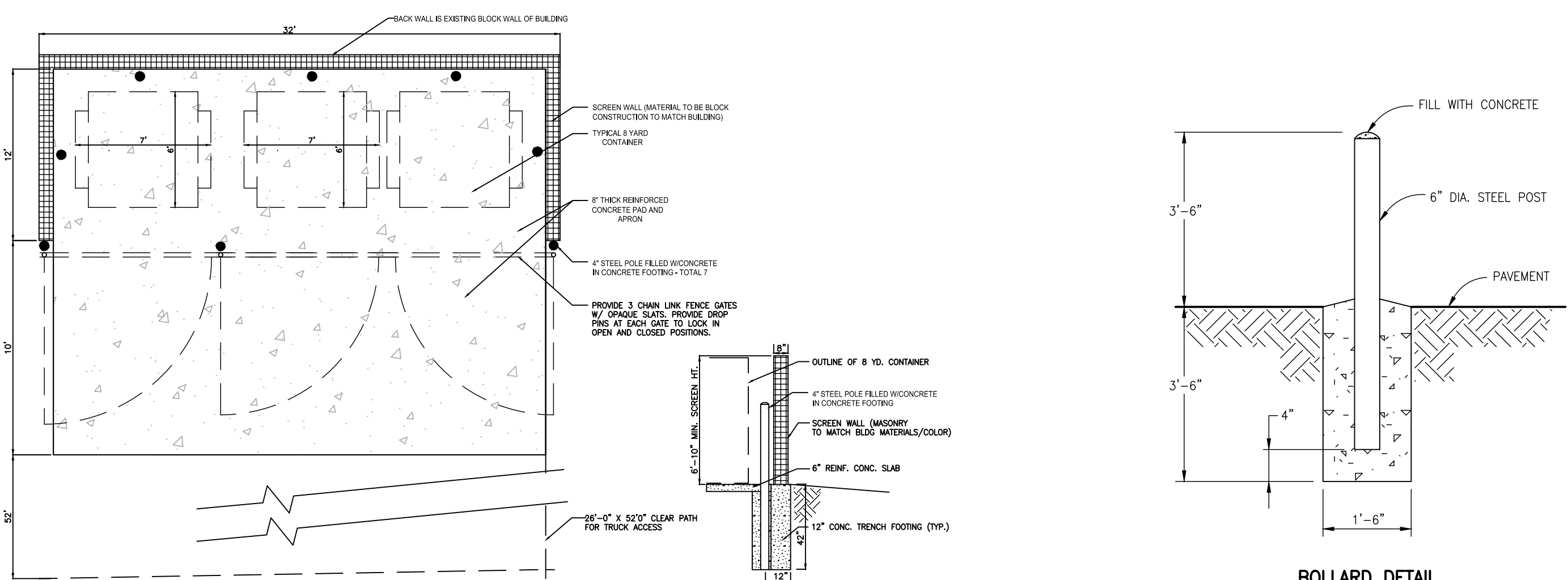
PROJECT: GRAND RIVER PLAZA
 PREPARED FOR: SYMMETRY MANAGEMENT
 813 SOUTH MAIN STREET, SUITE 200
 ROYAL OAK, MI 48067
 248-465-0200

TITLE: BASIN DETAILS
 DATE: 3-19-2024

NO	BY	REVISION	PER	TOWNSHIP	DATE
1	ST				02/20/24

DESIGNED BY:
 DRAWN BY:
 CHECKED BY:
 SCALE: 1" = 30'
 JOB NO: 22-262-1
 DATE: 02/20/24
 SHEET NO. 15

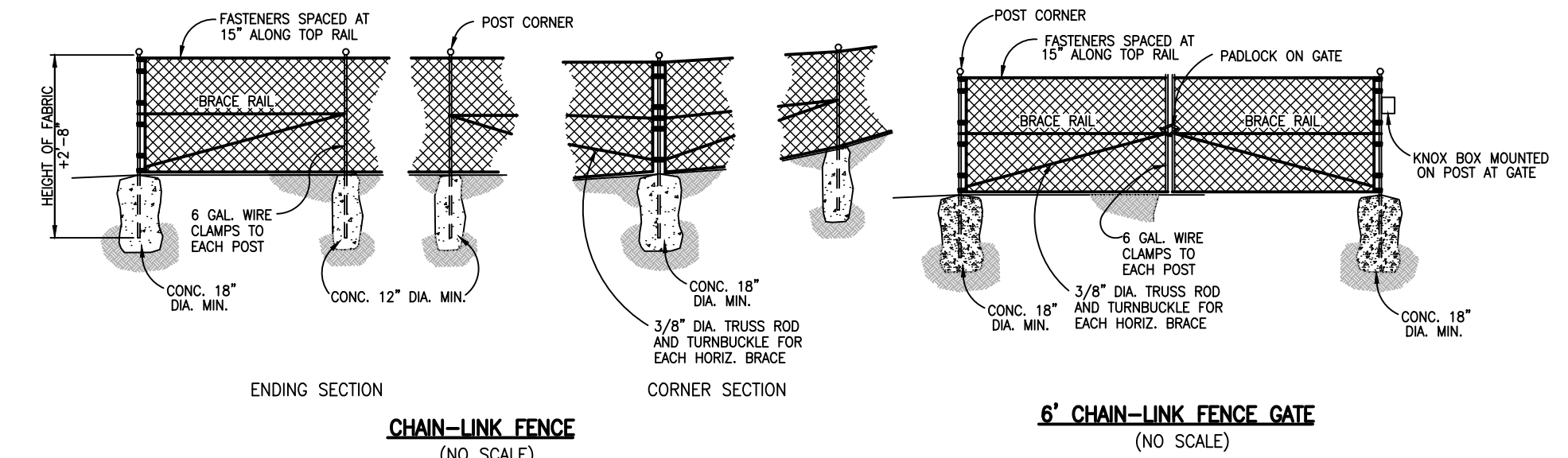




DUMPSTER ENCLOSURE DETAIL (NO SCALE)

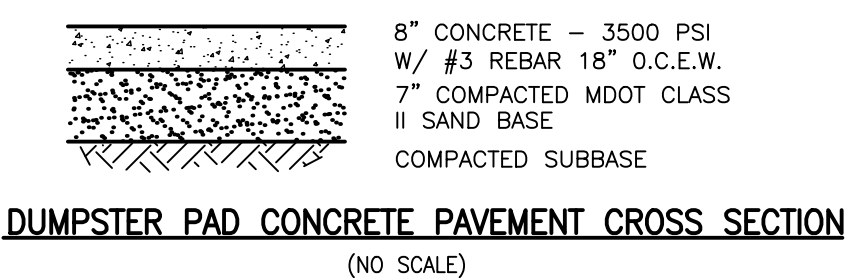
BOLLARD DETAIL (NO SCALE)

SEE SHEET 2 FOR GENERAL NOTES AND LEGEND

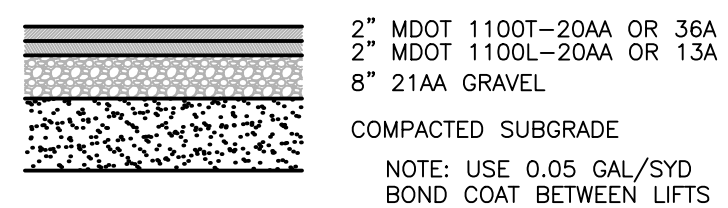


CHAIN-LINK FENCE (NO SCALE)

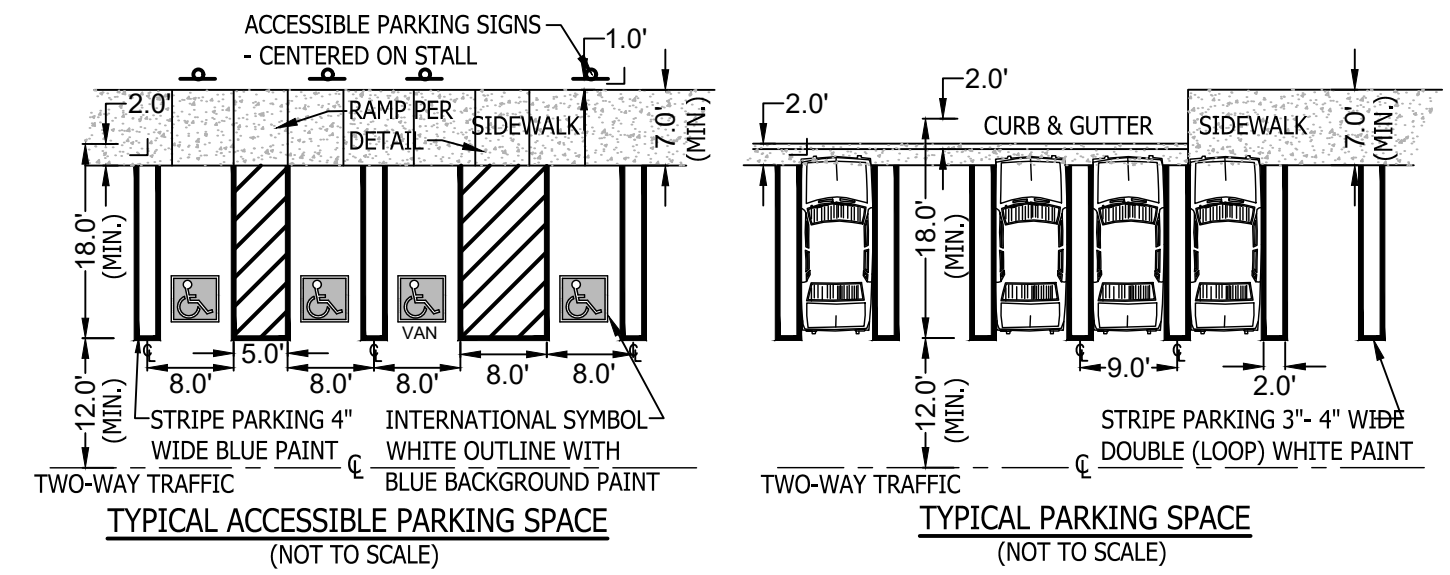
6' CHAIN-LINK FENCE GATE (NO SCALE)



DUMPSTER PAD CONCRETE PAVEMENT CROSS SECTION (NO SCALE)

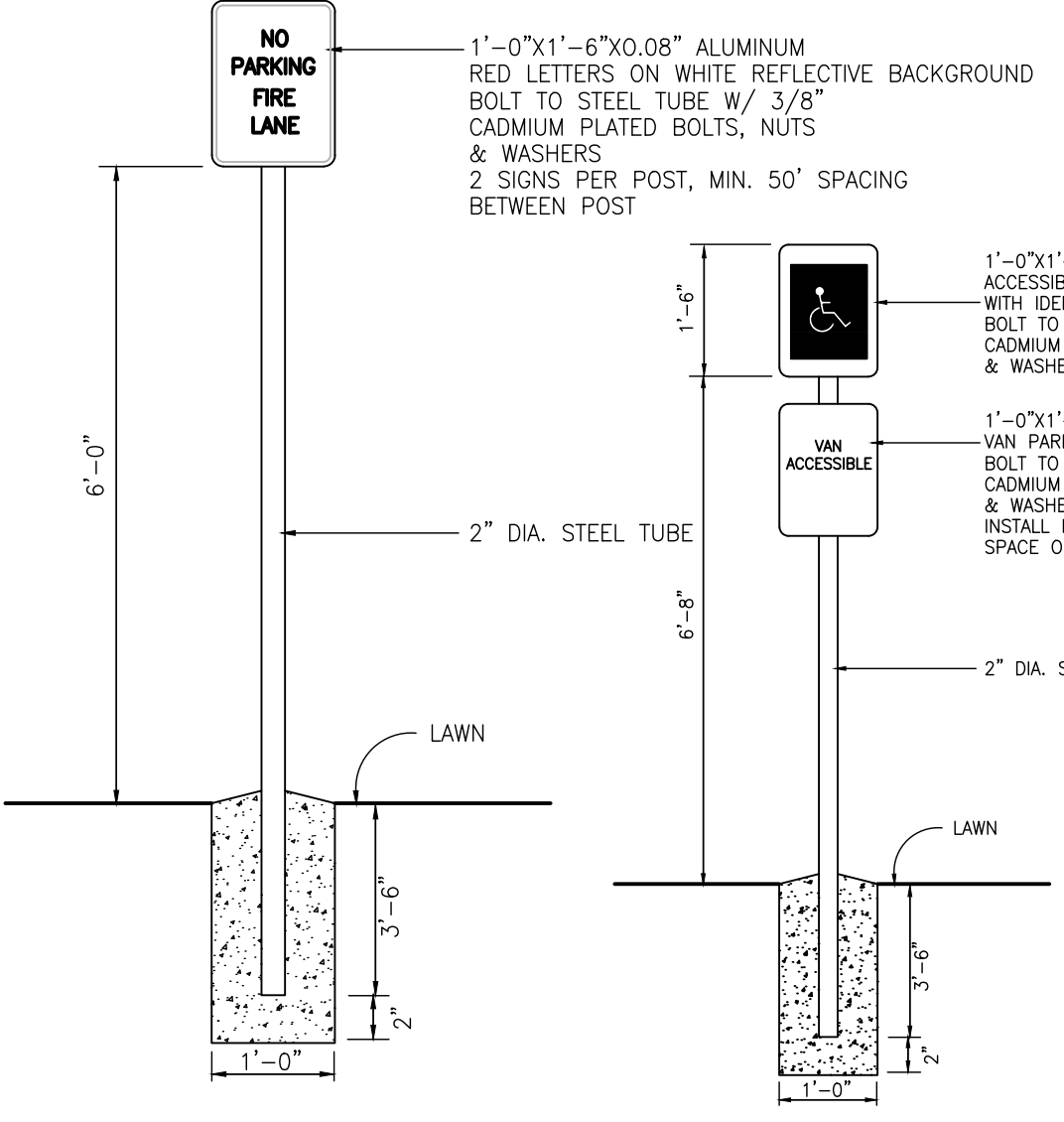


ASPHALT SECTION (NO SCALE)

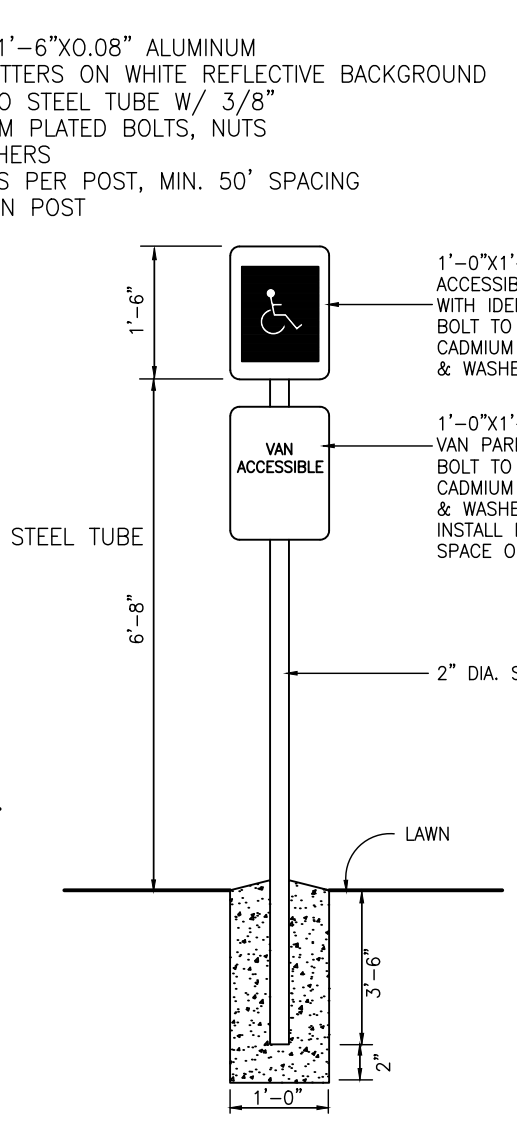


TYPICAL ACCESSIBLE PARKING SPACE (NOT TO SCALE)

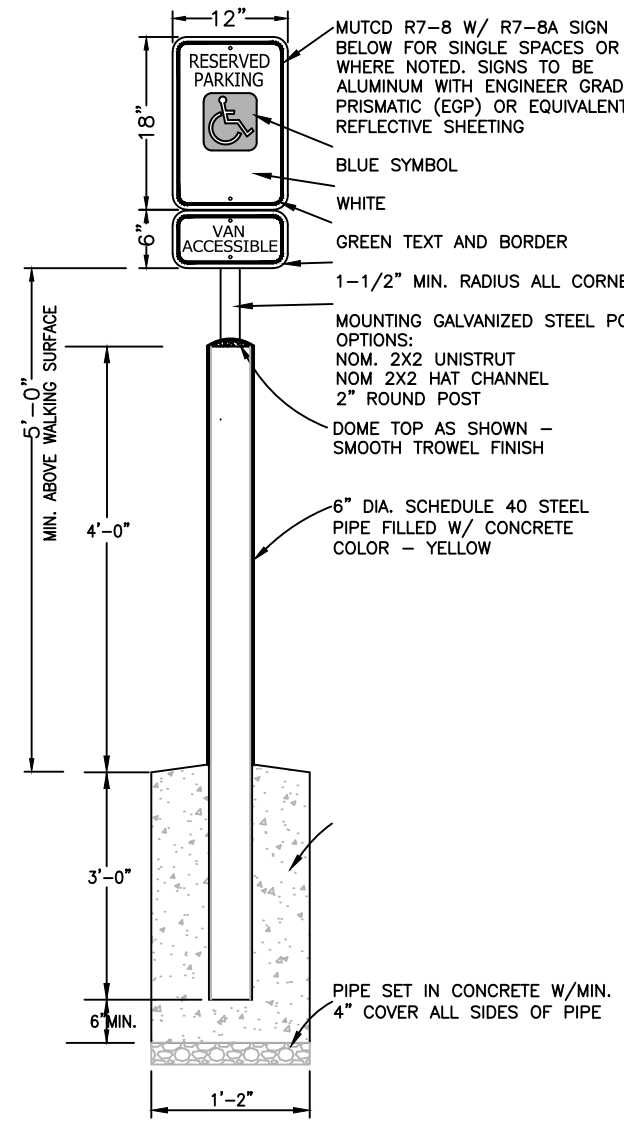
TYPICAL PARKING SPACE (NOT TO SCALE)



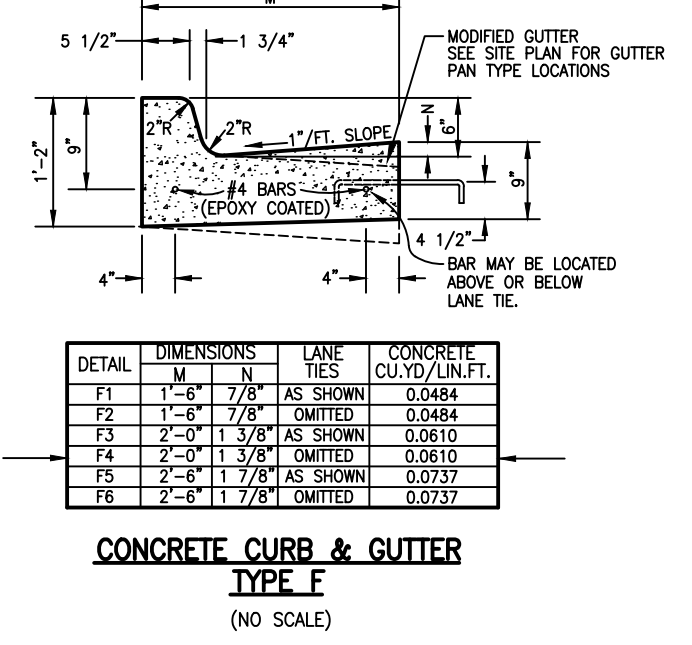
NO PARKING SIGN DETAIL (NO SCALE)



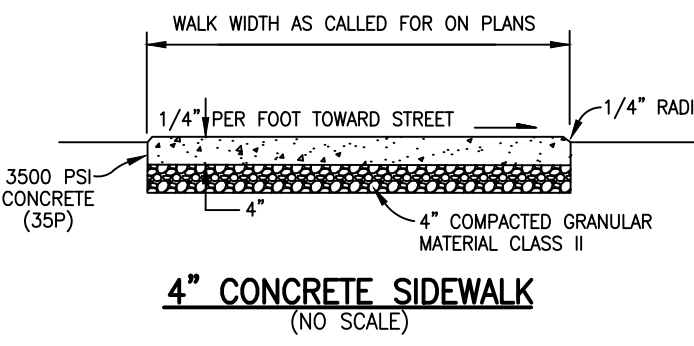
HANDICAP PARKING SIGN DETAIL (NO SCALE)



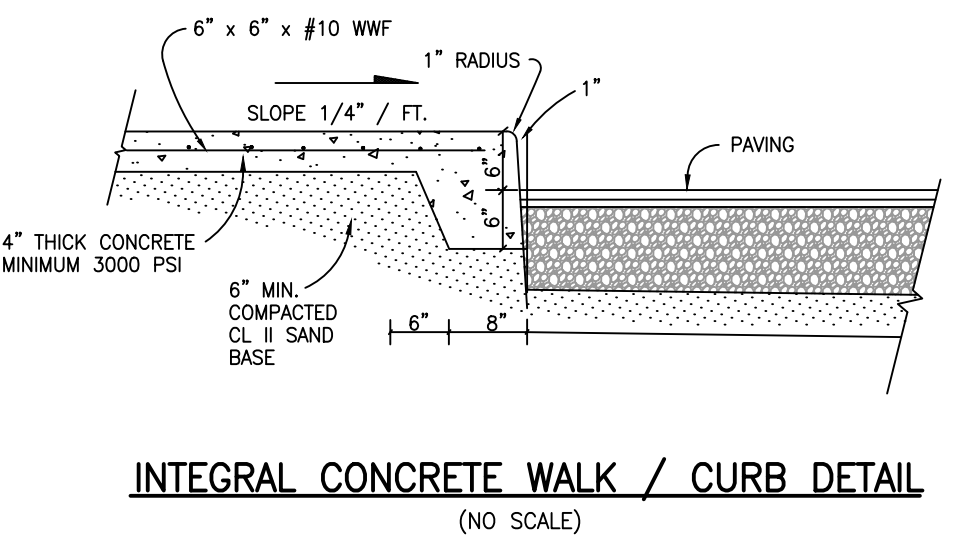
ADA ACCESSIBLE SPACE SIGN DETAIL (NOT TO SCALE)



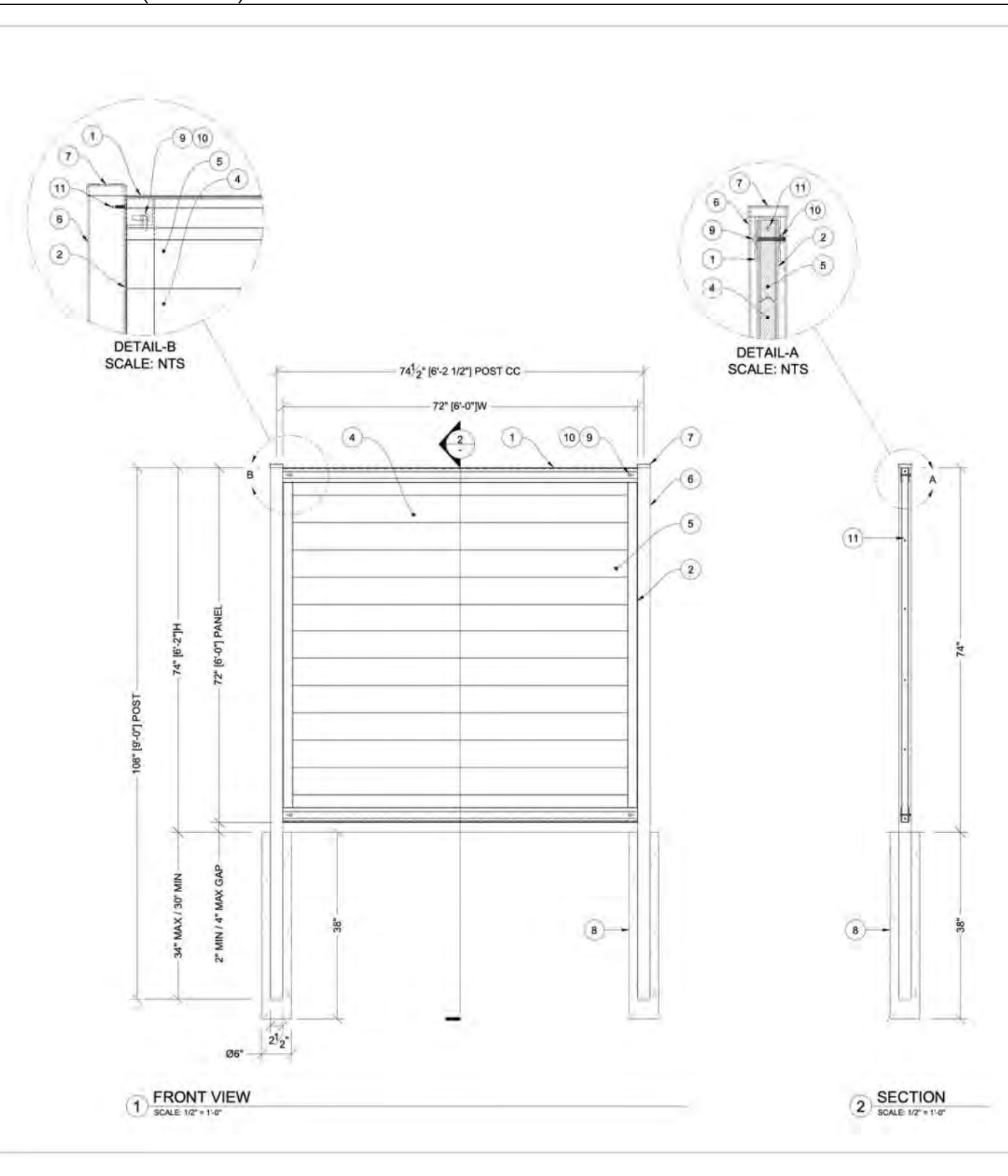
CONCRETE CURB & GUTTER TYPE F (NO SCALE)



4" CONCRETE SIDEWALK (NO SCALE)



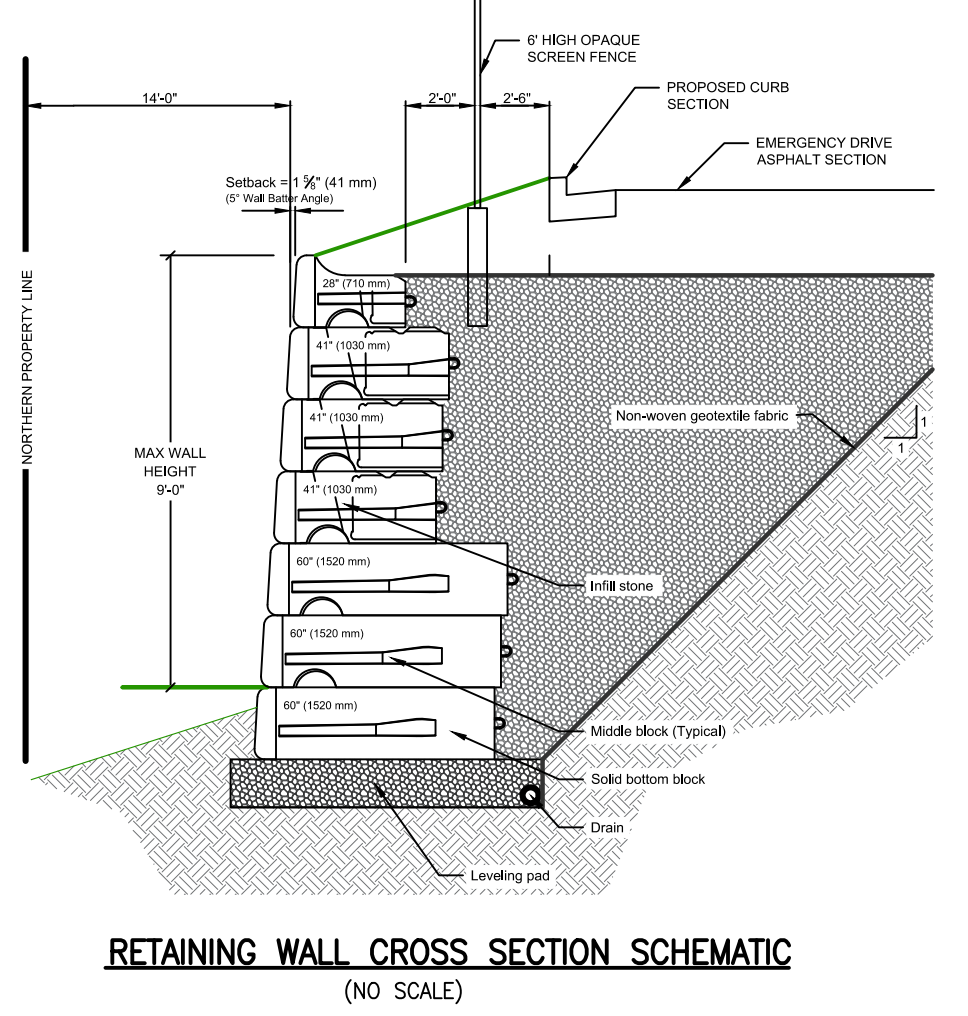
INTEGRAL CONCRETE WALK / CURB DETAIL (NO SCALE)



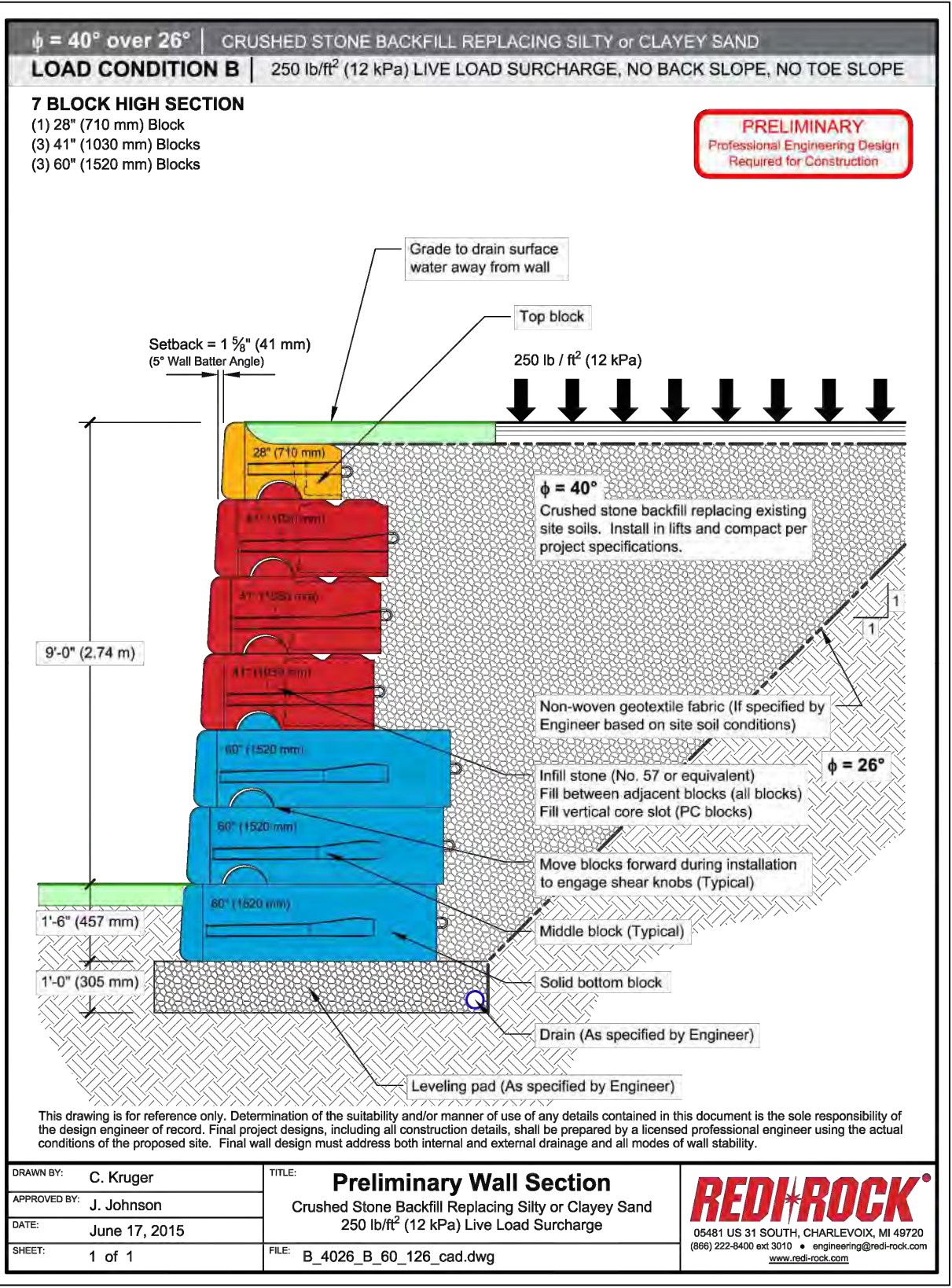
SCREEN FENCE DETAIL (COMES IN 6' HIGH AND 8' HIGH OPTIONS) (NO SCALE)

BILL OF MATERIALS			
ITEM	QTY	PART NUMBER	DESCRIPTION
1	2	2" X 6" CHANNEL	HORIZONTAL (TOP/BTM) GALVANIZED STEEL CHANNEL RAIL
2	2	2" X 4" CHANNEL	VERTICAL GALVANIZED STEEL CHANNEL RAIL
3	NA	CHANNELS ALLOW FOR UP TO 1" THK INFILL MATERIAL	INFILL QUANTITY MAY VARY DEPENDING ON TYPE SELECTED
4	11	1" X 4" X 1/2" BOARD	INFILL BOARD ILLUSTRATED: HORIZONTAL BOARD
5	2	1" X 8" X 1/2" NOTCHED INFILLBOARDS	TWO BOARDS TO BE NOTCHED FOR BOLT CLEARANCE AT TOP AND BTM CHANNEL
6	2	2 1/2" X 2 1/2" X 1/2" GALV. POST	STANDARD FENCE POST
7	2	2 1/2" X 3 1/2" CAP	2 1/2" DIA. POST CAP STANDARD
8	2	6" DIA. CONCRETE PIER	POST PIER SIZE AND DEPTH TO BE SPECIFIED BY THE PROJECT'S EOR
9	4	ANSI B18.5 - 1/4-20 X 1 1/2" UNC CARTRIDGE BOLT	ROUND HEAD SQUARE NECK CARTRIDGE BOLT
10	4	3/4" 100TPI 1/4-20 HEX HEAD FLANGE NUT	PREVALING TORQUE TYPE HEX HEAD FLANGE NUT
11	12	ANSI B18.6.4 - NO.10 X 5/8" SELF-TAPPING SCREW	VERTICAL CHANNEL, RECESSED HEAD SELF-TAPPING SCREW, TYPE:BT, TYPE1

MANUFACTURED BY: **PERIMTEC**
 DISTRIBUTED BY:
PERIMTEC
 TITLE: HORIZONTAL 6'X8' PANEL
 SIZE: DWG. NO. B 22-0530-002
 SCALE: SEE DRAWING SHEET 1 OF 1



RETAINING WALL CROSS SECTION SCHEMATIC (NO SCALE)



REDHOCK
 250 lb/ft² (12 kPa) Live Load Surcharge
 3541 US 31 SOUTH, CHARLEVON, ME 04723
 206.225.4000 FAX: 206.225.4001
 www.redhock.com

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 HOWELL, MI. 48843
 517.546.4836 FAX 517.548.1670

GRAND RIVER PLAZA
 SYMMETRY MANAGEMENT
 813 SOUTH MAIN STREET, SUITE 200
 ROYAL OAK, MI 48067
 248-655-0200

PROJECT	PREPARED FOR	TITLE	DATE
GRAND RIVER PLAZA <td>SYMMETRY MANAGEMENT</td> <td>CONSTRUCTION DETAILS</td> <td>3-19-2024</td>	SYMMETRY MANAGEMENT	CONSTRUCTION DETAILS	3-19-2024
DESIGNED BY:	ST	PER TOWNSHIP REVIEW PER	NO BY
DRAWN BY:	ST	REVISION PER	
CHECKED BY:			
SCALE:	NO SCALE		
JOB NO.:	22-262-1		
DATE:	02/20/24		
SHEET NO.:	16		

SEE SHEET 2 FOR GENERAL NOTES AND LEGEND

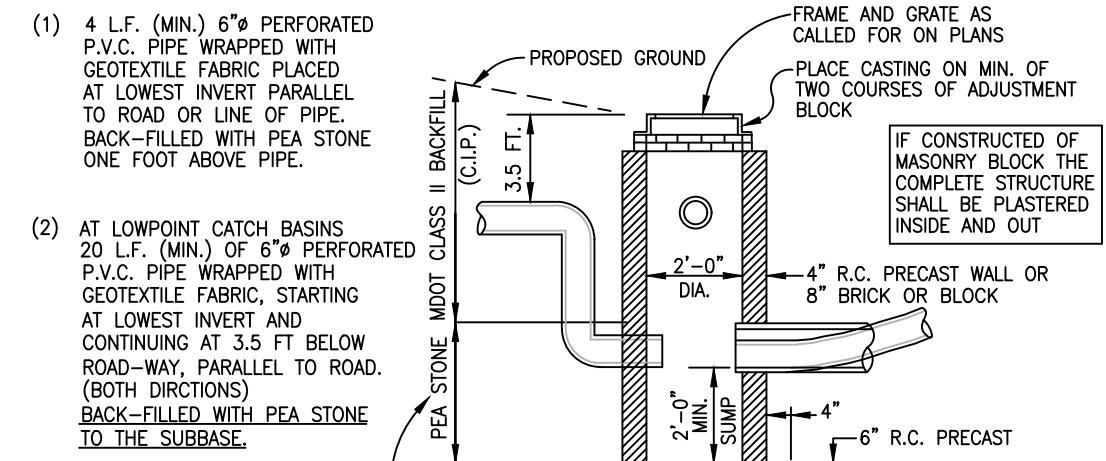
THE LOCATION AND ELEVATION OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. NO CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION, DEPTH, OR CHARACTER OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT LOCATION, DEPTH, OR CHARACTER OF EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE, AND FEDERAL AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE, AND FEDERAL AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE, AND FEDERAL AGENCIES.

BEFORE ANY WORK BEGINS, THE CONTRACTOR SHALL CALL 811 TO LOCATE ALL EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE, AND FEDERAL AGENCIES.

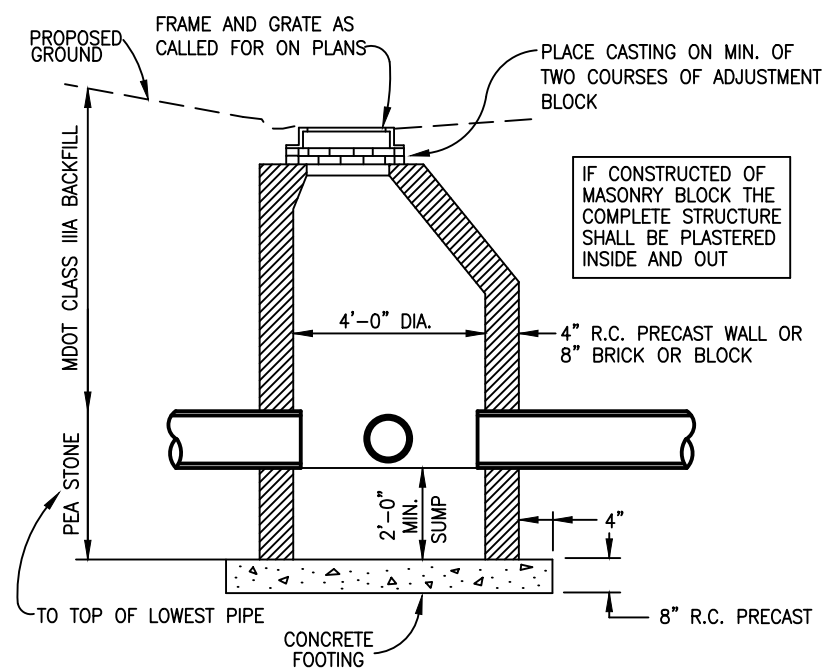
BEFORE ANY WORK BEGINS, THE CONTRACTOR SHALL CALL 811 TO LOCATE ALL EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE, AND FEDERAL AGENCIES.

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HOWELL, MI. 48843
517.546.4836 FAX 517.548.1670

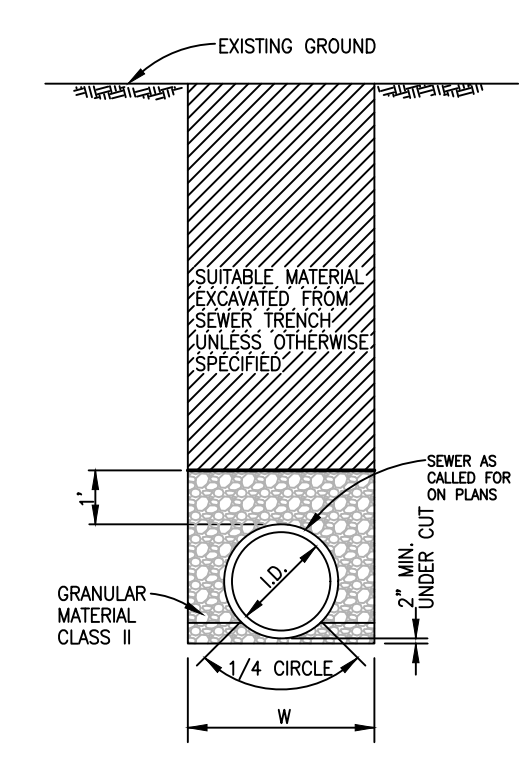
INSTALL SUBDRAINS AT ALL CATCH BASINS LOCATED WITHIN ROADWAY



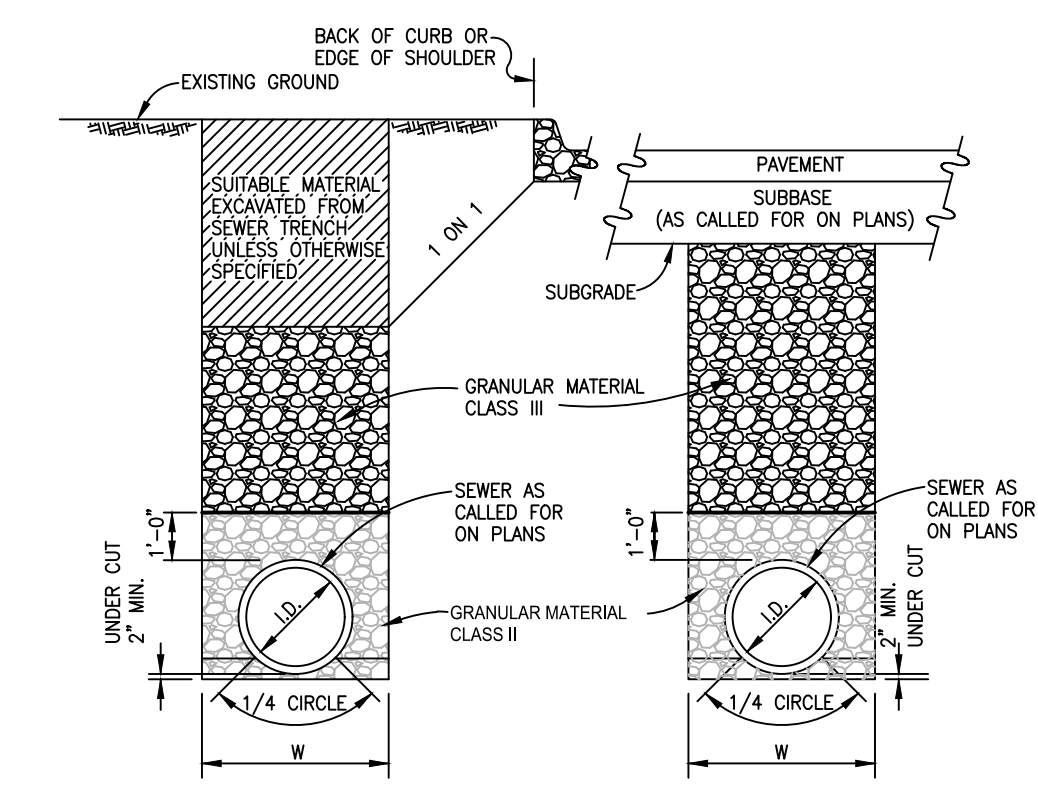
2 FT. DIA. CATCH BASIN W/SUMP
NO SCALE



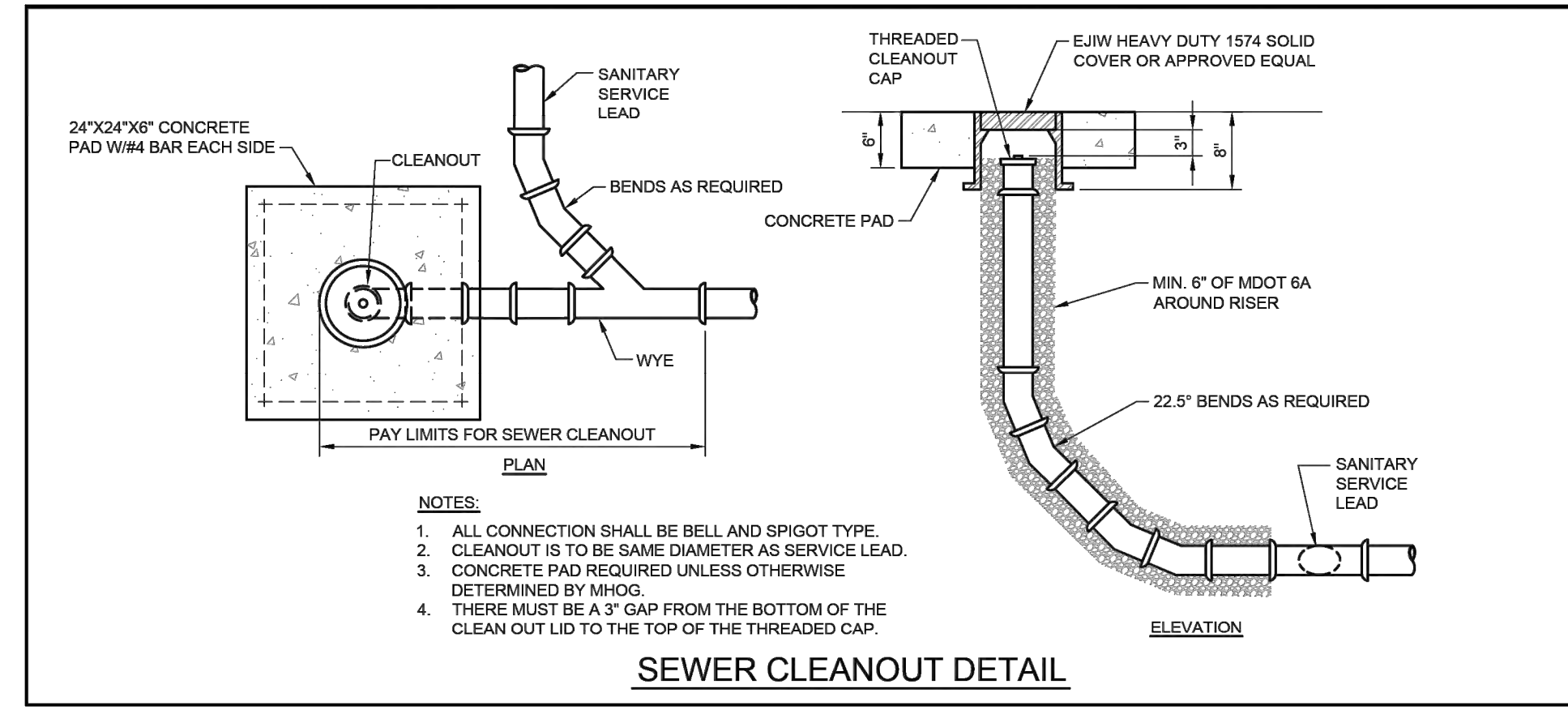
4 FT. DIA. CATCH BASIN W/SUMP
NO SCALE



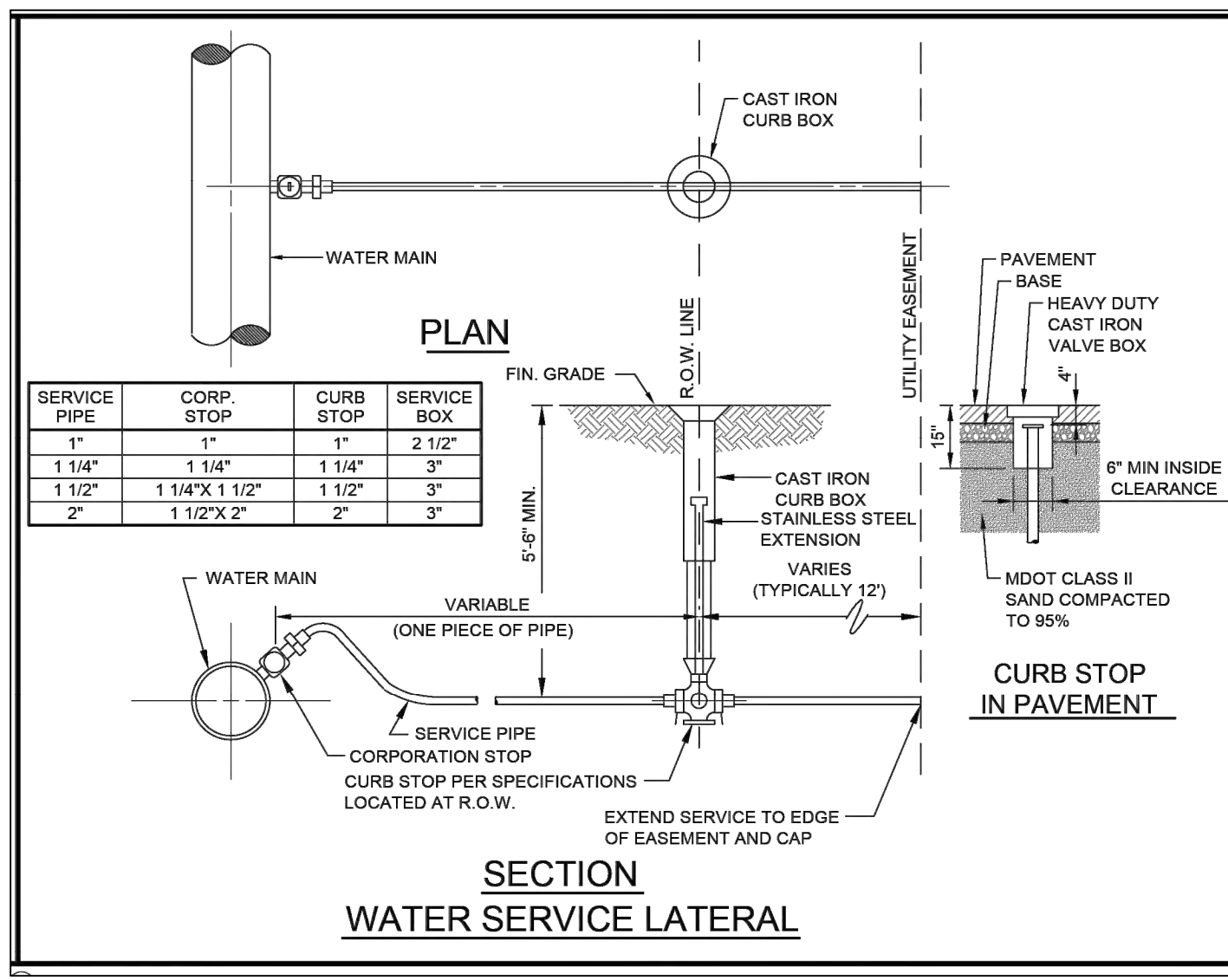
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(REF. MDO DETAIL IV-830)
NO SCALE



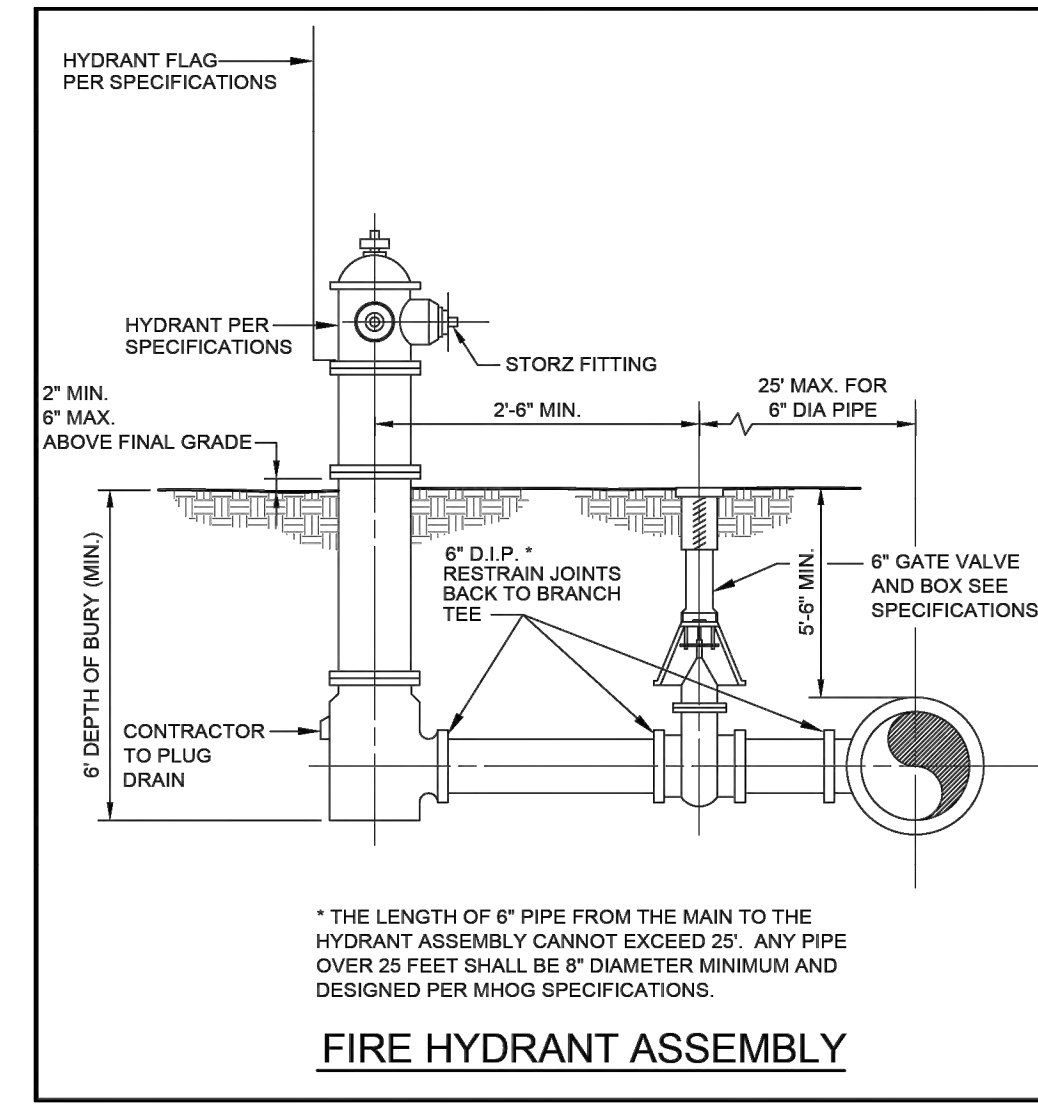
SEWER UNDER ROADBED OR WITHIN INFLUENCE OF ROADBED
(REF. MDO DETAIL IV-830)
NO SCALE



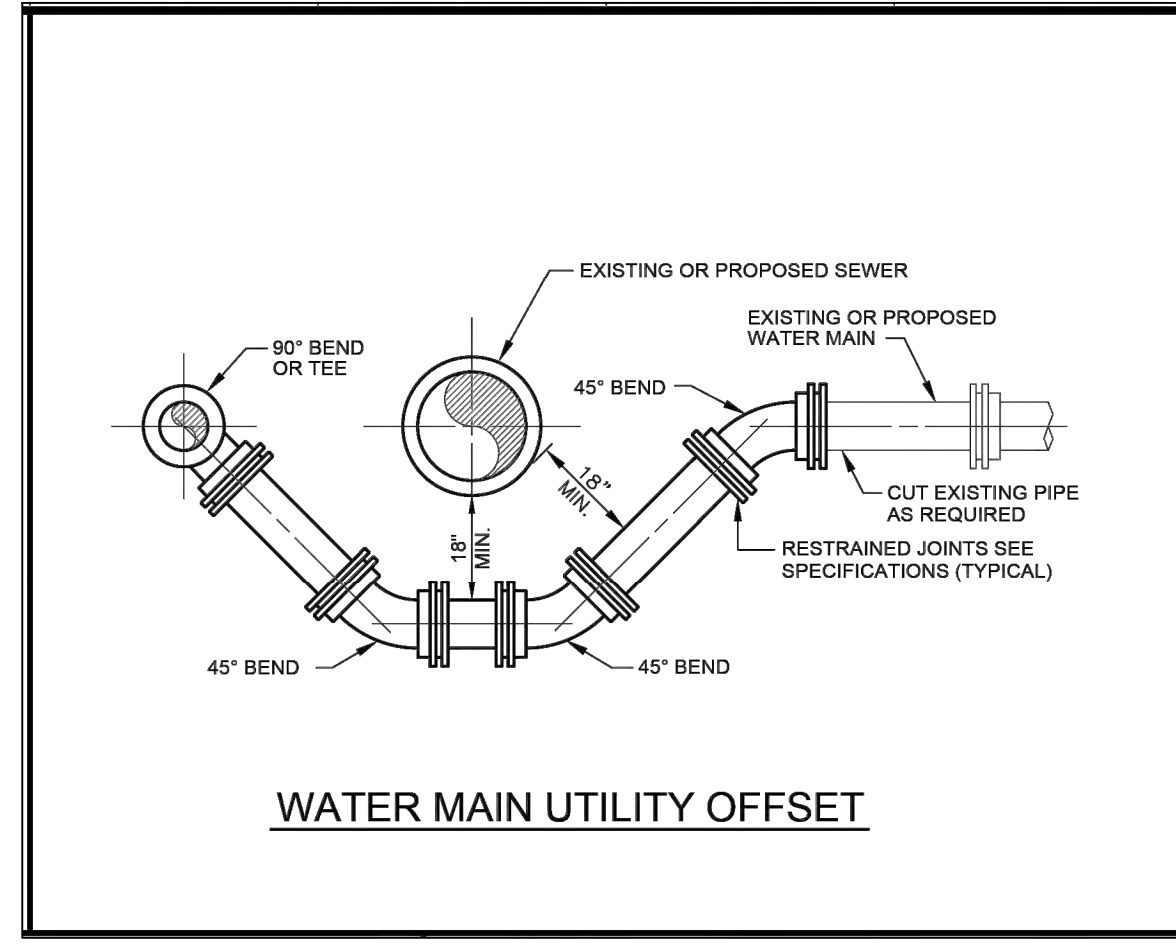
SEWER CLEANOUT DETAIL



SECTION WATER SERVICE LATERAL



FIRE HYDRANT ASSEMBLY



WATER MAIN UTILITY OFFSET

PROJECT: GRAND RIVER PLAZA
PREPARED FOR: SYMMETRY MANAGEMENT
813 SOUTH MAIN STREET, SUITE 200
ROYAL OAK, MI 48067
248-655-0200

TITLE: CONSTRUCTION DETAILS

NO	BY	DATE	REVISION
1	ST	3-19-2024	PER TOWNSHIP REVIEW

DESIGNED BY: ST
DRAWN BY: ST
CHECKED BY:
SCALE: NO SCALE
JOB NO: 22-262-1
DATE: 02/20/24
SHEET NO. 17



SEE SHEET 2 FOR GENERAL NOTES AND LEGEND

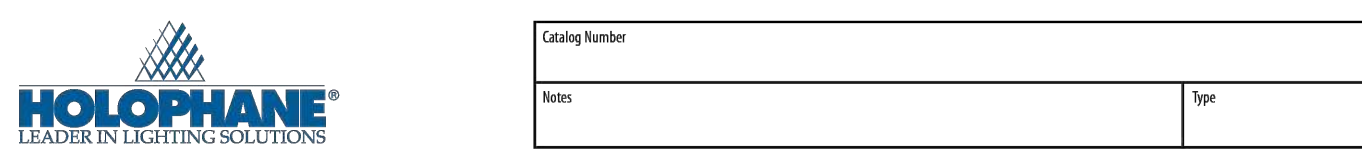
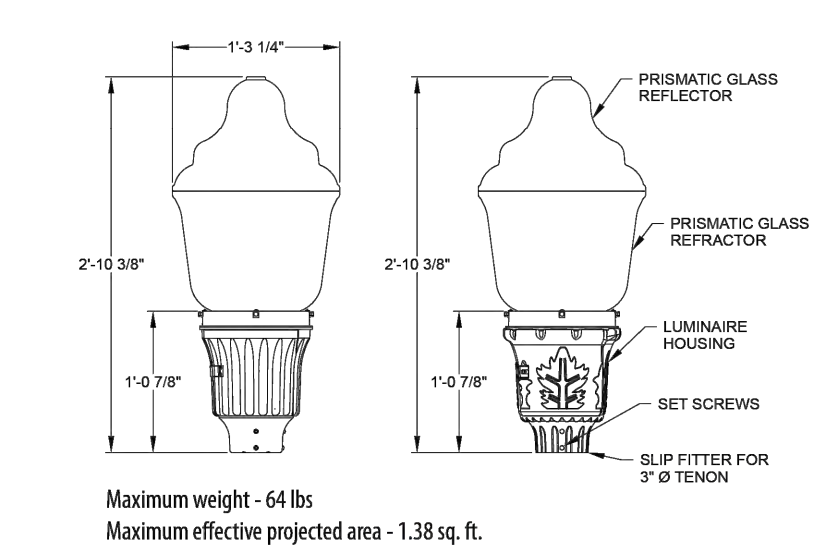


Table with 2 columns: Notes, Type



GP3D Granite Premier LED3

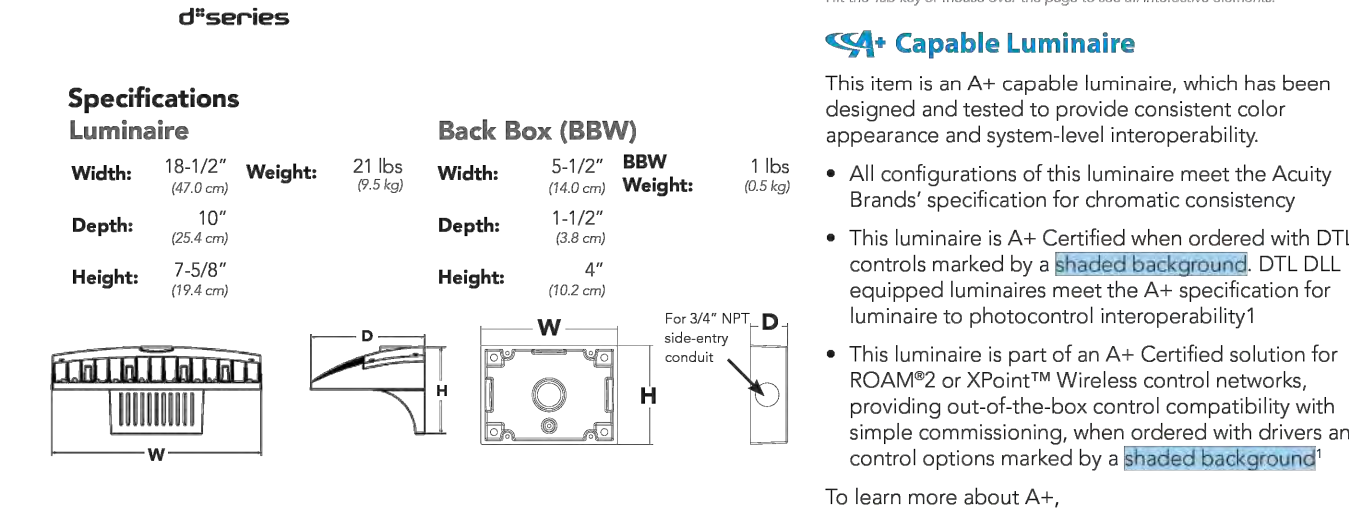
Specifications, General Description, Mechanical Specifications, Electrical Specifications, and other technical details for the GP3D luminaire.

Acuity Brands logo and contact information for the GP3D luminaire.

FIXTURE 'A' SPEC SHEET (NO SCALE)



D-Series Size 2 LED Wall Luminaire



Specifications Luminaire, Back Box (BBW, E20WC)

Capable Luminaire, This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and system-level interoperability.

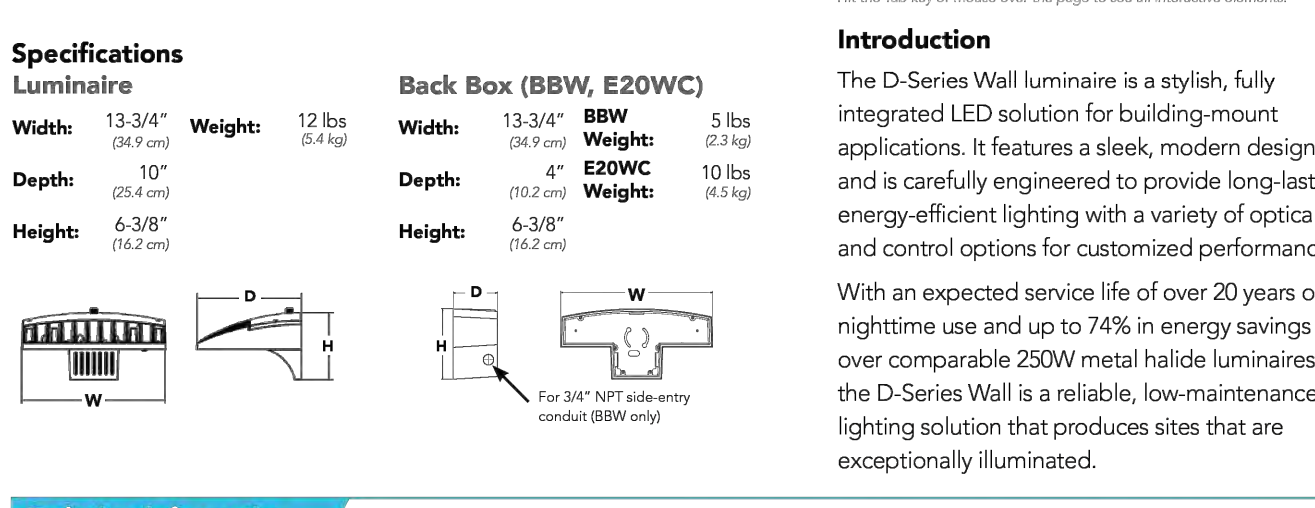
Ordering Information table for D-Series Size 2 luminaire with columns for Series, LED, Drive Current, Color Temperature, Distribution, Voltage, Mounting, Control Options, and Shipped/Installed options.

Lithonia Lighting logo and contact information for the D-Series Size 2 luminaire.

FIXTURE 'B' SPEC SHEET (NO SCALE)



D-Series Size 1 LED Wall Luminaire



Specifications Luminaire, Back Box (BBW, E20WC)

Introduction, The D-Series Wall Luminaire is a stylish, fully integrated LED solution for building-mount applications.

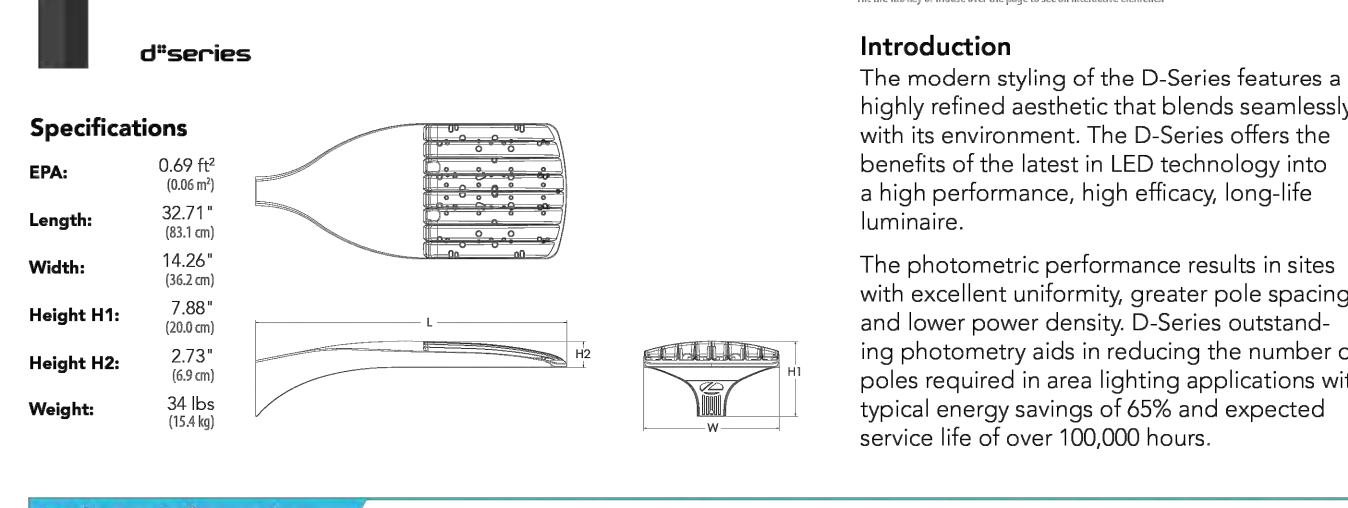
Ordering Information table for D-Series Size 1 luminaire with columns for Series, LED, Drive Current, Color Temperature, Distribution, Voltage, Mounting, Control Options, and Shipped/Installed options.

Lithonia Lighting logo and contact information for the D-Series Size 1 luminaire.

FIXTURE 'C' SPEC SHEET (NO SCALE)



D-Series Size 1 LED Area Luminaire



Specifications, Back Box (BBW, E20WC)

Introduction, The modern styling of the D-Series features a highly refined aesthetic that blends seamlessly with its environment.

Ordering Information table for D-Series Size 1 Area luminaire with columns for Series, LED, Drive Current, Color Temperature, Distribution, Voltage, Mounting, Control Options, and Shipped/Installed options.

Lithonia Lighting logo and contact information for the D-Series Size 1 Area luminaire.

FIXTURE 'D'/'E'/'F'/'G' SPEC SHEET (NO SCALE)

BEBOSS Engineering logo and contact information for Grand River Plaza project.

Project details table including Project Name, Date, Reviewer, and Designer information.

Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
DRIVE-THRU BUILDING #1	+	1.4 Fc	2.1 Fc	0.9 Fc	2.3:1	1.6:1
DRIVE-THRU BUILDING #2	+	1.7 Fc	3.5 Fc	0.3 Fc	11.7:1	5.7:1
LOADING DOCK AND TRUCK CIRCULATION	+	1.7 Fc	4.3 Fc	0.3 Fc	14.3:1	5.7:1
NEW BOULEVARD	+	3.2 Fc	4.8 Fc	1.5 Fc	3.2:1	2.1:1
PARKING LOT	+	2.5 Fc	5.7 Fc	0.4 Fc	14.3:1	6.3:1
RESIDENTIAL PROPERTY LINE	+	0.0 Fc	0.0 Fc	0.0 Fc	N/A	N/A

Schedule				
Symbol	Label	QTY	Manufacturer	Description
A	A	7	Hoopshane	GP03 P30 40K XXXX G15
B	B	6	Lithonia Lighting	DSXW2 LED 30C 1000 40K T1M HVOLT
C	C	3	Lithonia Lighting	DSXW1 LED 30C 700 40K T1M HVOLT
D	D	3	Lithonia Lighting	DSX1 LED P5 40K 70CRI
E	E	6	Lithonia Lighting	DSX1 LED P5 40K 70CRI TSW
F	F	4	Lithonia Lighting	DSX1 LED P5 40K 70CRI TSW
G	G	14	Lithonia Lighting	DSX1 LED P5 40K 70CRI TSW

Ordering Note
FOR INQUIRIES CONTACT GASSER BUSH AT QUOTES@GASSERBUSH.COM OR 734-266-6705.

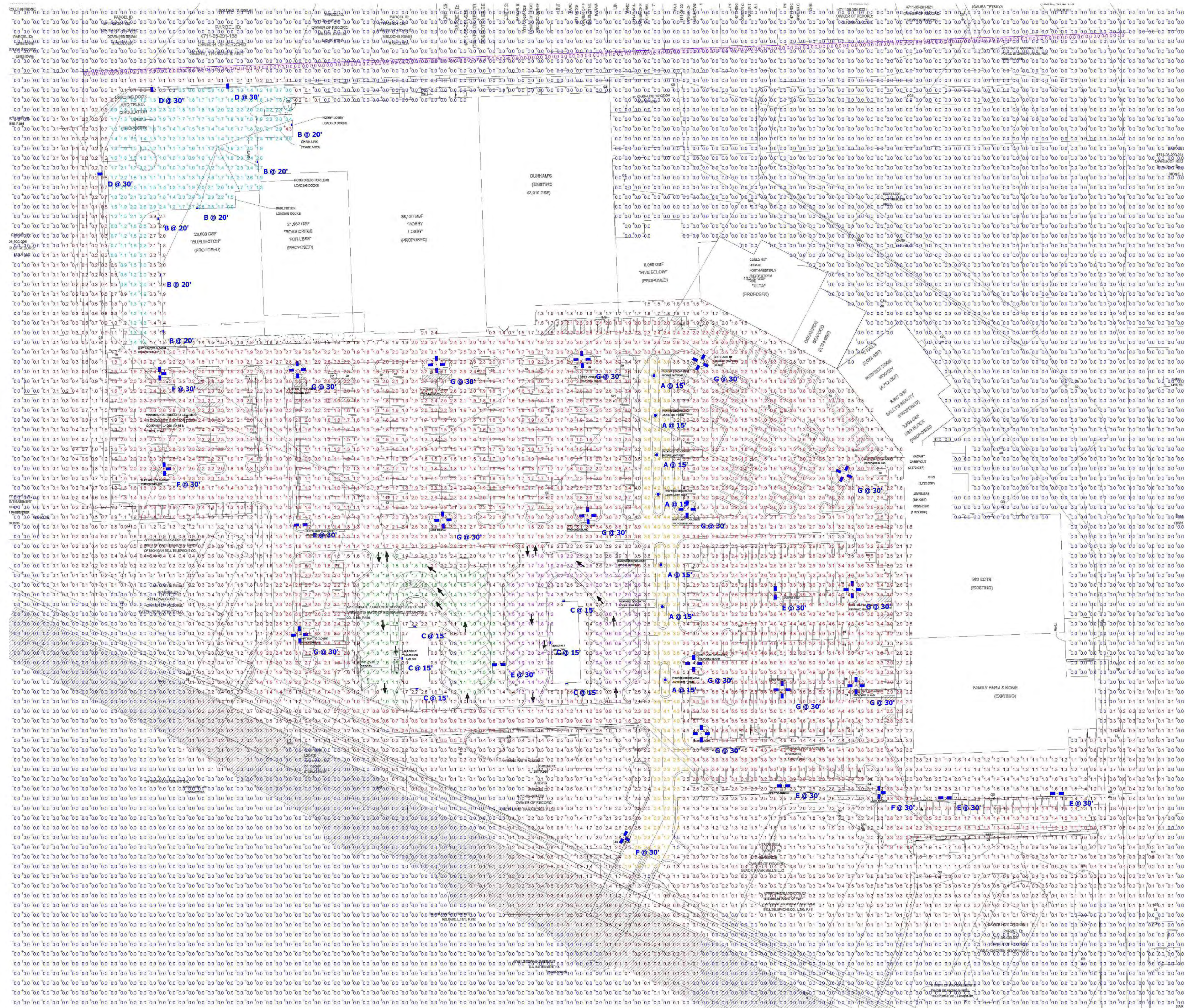
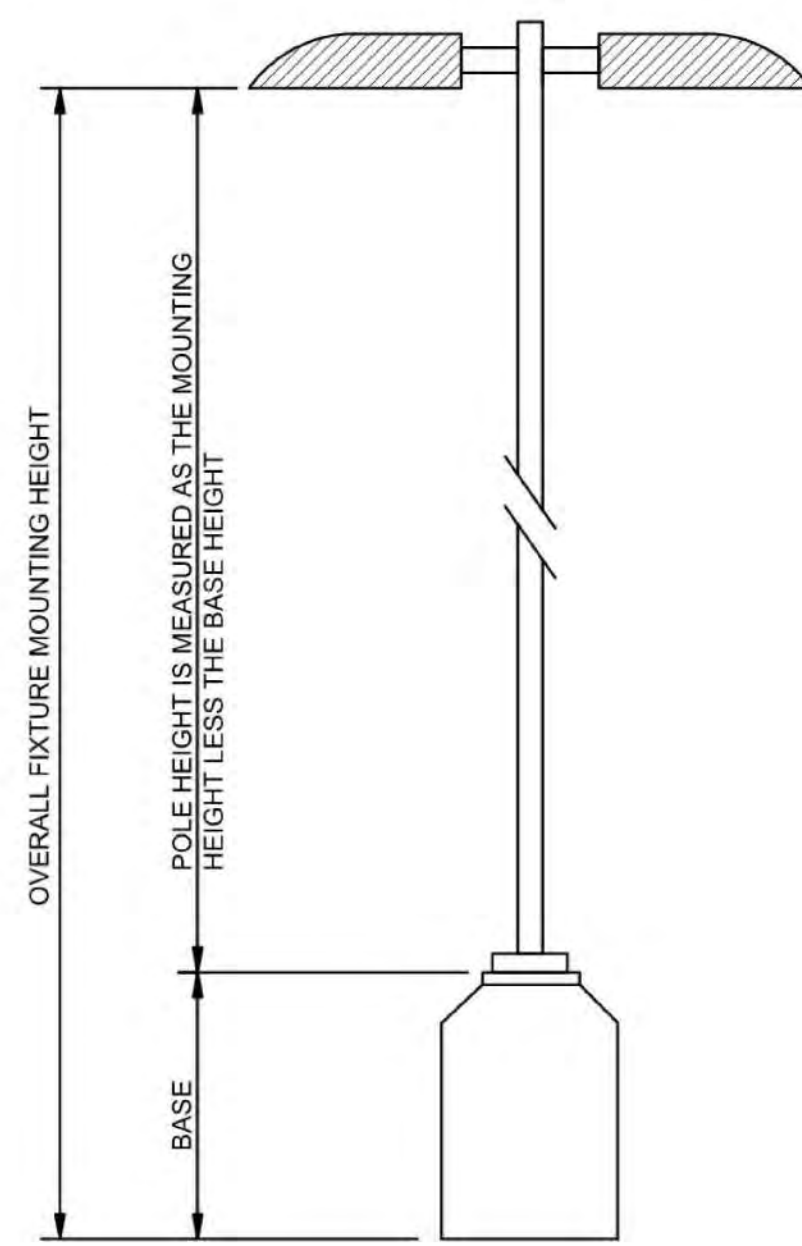
Drawing Note
THIS DRAWING WAS GENERATED FROM AN ELECTRONIC IMAGE FOR ESTIMATION PURPOSE ONLY. LAYOUT TO BE VERIFIED IN FIELD BY OTHERS.

General Note
1. SEE SCHEDULE FOR LUMINAIRE MOUNTING HEIGHT.
2. SEE LUMINAIRE SCHEDULE FOR LIGHT LOSS FACTOR.
3. CALCULATIONS ARE SHOWN IN FOOTCANDLES AT: 0' - 0".

THE ENGINEER AND/OR ARCHITECT MUST DETERMINE APPLICABILITY OF THE LAYOUT TO EXISTING / FUTURE FIELD CONDITIONS. THIS LIGHTING LAYOUT REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS. MOUNTING HEIGHTS INDICATED ARE FROM GRADE AND/OR FLOOR UP.

THESE LIGHTING CALCULATIONS ARE NOT A SUBSTITUTE FOR INDEPENDENT ENGINEERING ANALYSIS OF LIGHTING SYSTEM SUITABILITY AND SAFETY. THE ENGINEER AND/OR ARCHITECT IS RESPONSIBLE TO REVIEW FOR MICHIGAN ENERGY CODE AND LIGHTING QUALITY COMPLIANCE.

UNLESS EXEMPT, PROJECT MUST COMPLY WITH LIGHTING CONTROLS REQUIREMENTS DEFINED IN ASHRAE 90.1 2013. FOR SPECIFIC INFORMATION CONTACT GBA CONTROLS GROUP AT ASG@GASSERBUSH.COM OR 734-266-6705



Plan View
Scale - 1" = 60ft

GRAND RIVER PLAZA - GENOA TOWNSHIP
PHOTOMETRIC SITE PLAN
GASSER BUSH ASSOCIATES
PREPARED FOR: BOSS ENGINEERING
WWW.GASSERBUSH.COM

Designer
DB/KB
Date
02/15/2024
Scale
Not to Scale
Drawing No.
#24-25837-V1
1 of 1

Serenity
Architecture Co.

5232 Great Oaks Ct.
West Bloomfield, Michigan
48323

(248)830-3311
www.serenityarchitecture.com

Consultant:

Key Plan: NO SCALE

Client:

Project:

Seal:



Date Issued For

01/24/24	OWNER REVIEW
02/08/24	OWNER REVIEW
02/15/24	SPA
03/19/24	SPA

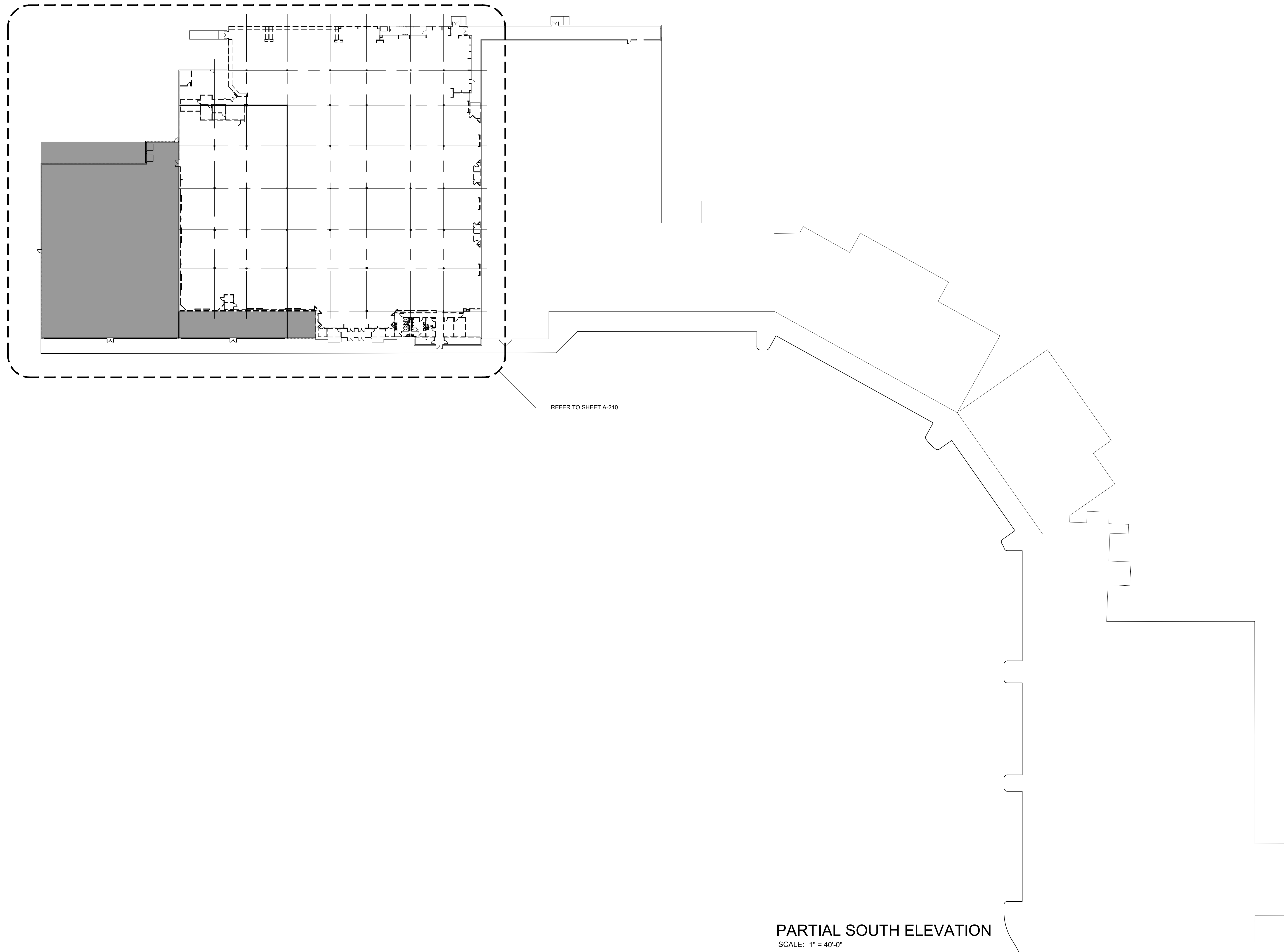
Drawn:	RLJ
Checked:	RLJ
Approved:	RLJ

Sheet Title:
**COMPOSITE
PLAN**

Project No.:

Sheet Number: **A-200**

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REFER TO SHEET A-210

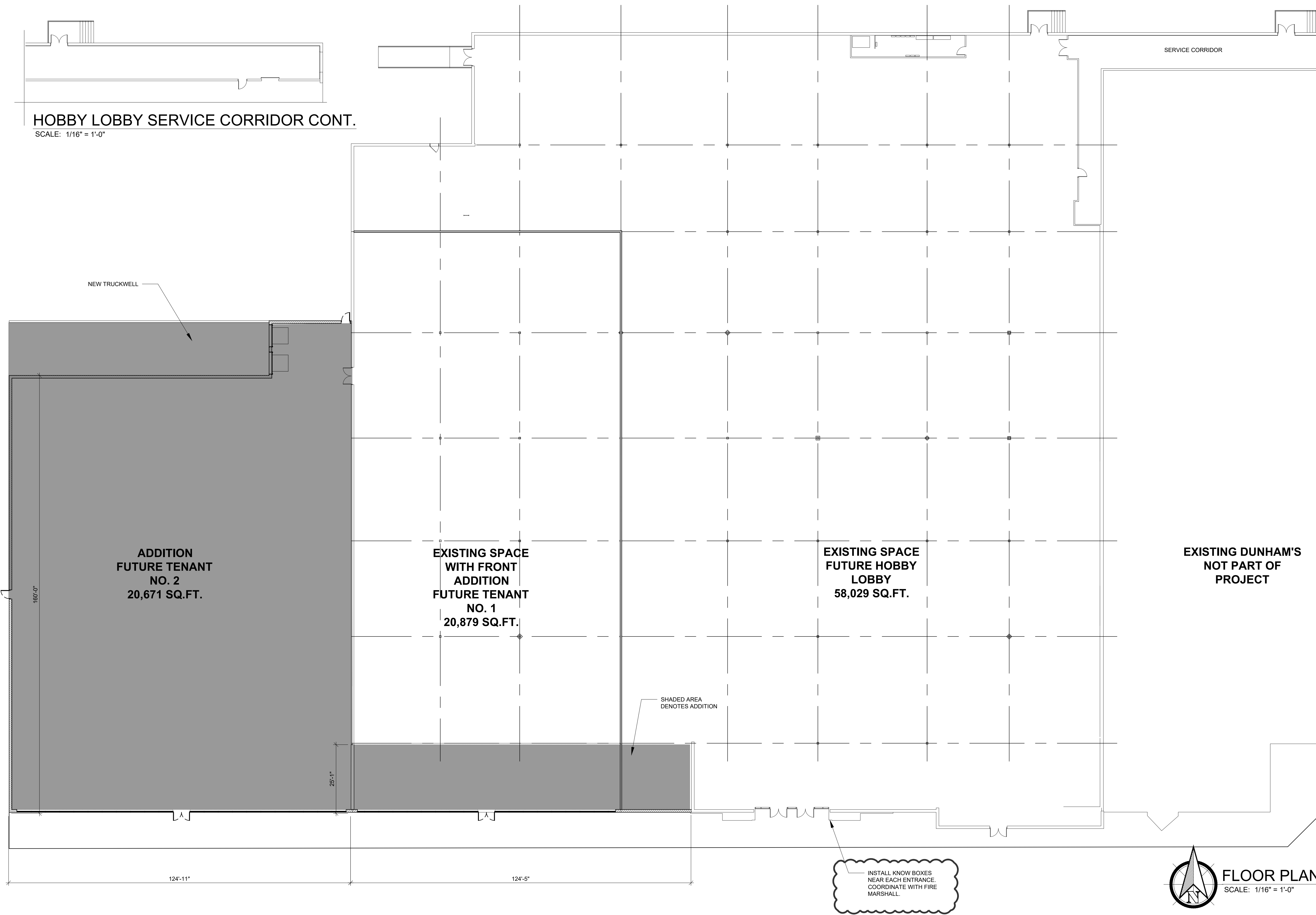
PARTIAL SOUTH ELEVATION
SCALE: 1" = 40'-0"



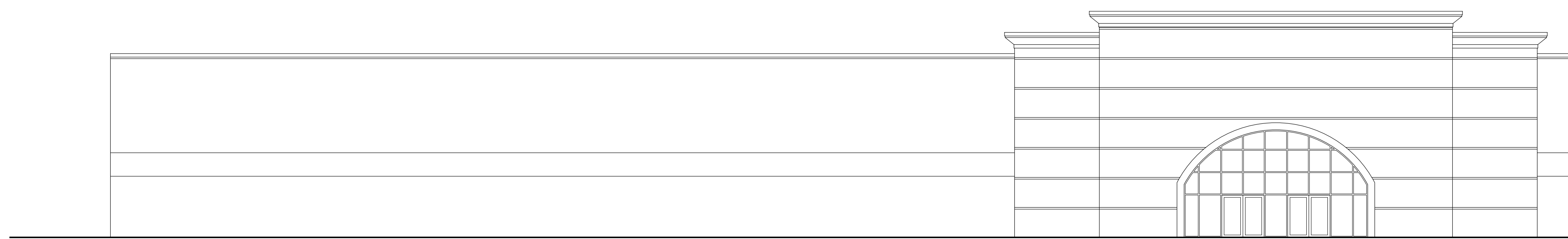
01/24/24	OWNER REVIEW
02/08/24	OWNER REVIEW
02/15/24	SPA
03/19/24	SPA

HOBBY LOBBY SERVICE CORRIDOR CONT.

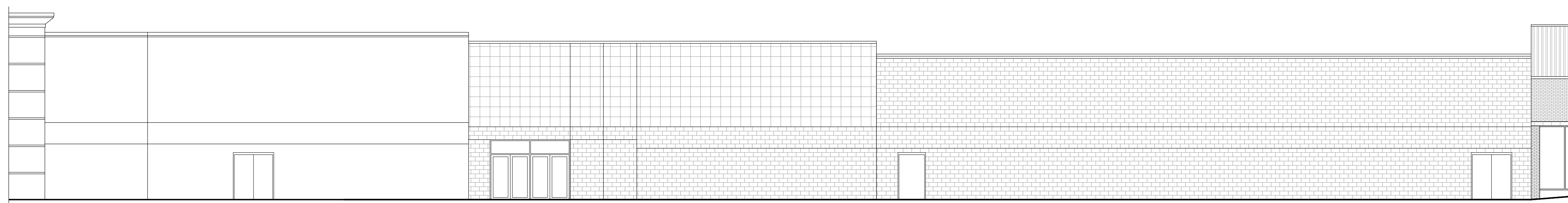
SCALE: 1/16" = 1'-0"



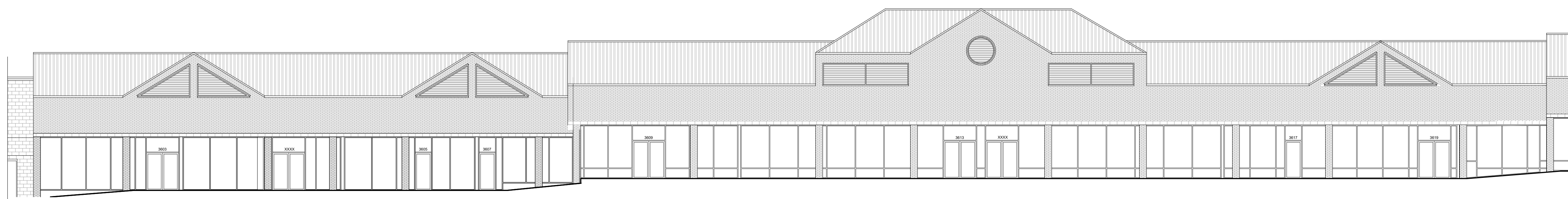
Consultant:



PARTIAL SOUTH ELEVATION
SCALE: 3/32" = 1'-0"



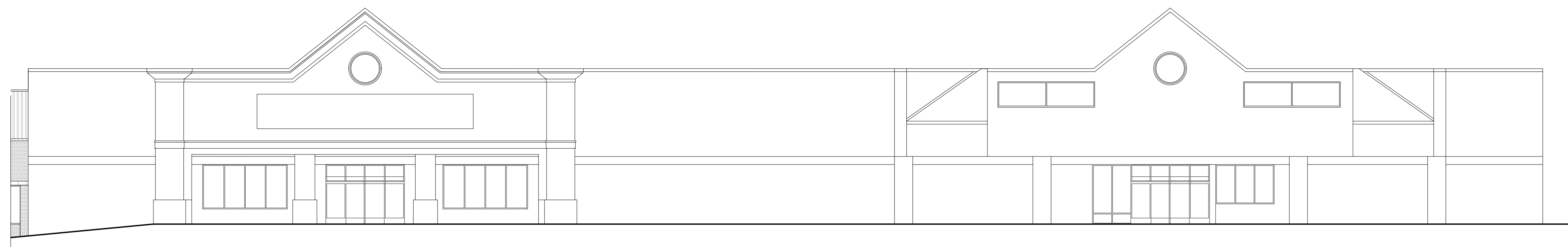
PARTIAL SOUTH ELEVATION
SCALE: 3/32" = 1'-0"



PARTIAL SOUTH/ SOUTHWEST ELEVATION
SCALE: 3/32" = 1'-0"



PARTIAL WEST/SOUTHWEST ELEVATION
SCALE: 3/32" = 1'-0"



PARTIAL WEST ELEVATION
SCALE: 3/32" = 1'-0"

Key Plan: NO SCALE

Client:

Project:

Seal:



Date Issued For

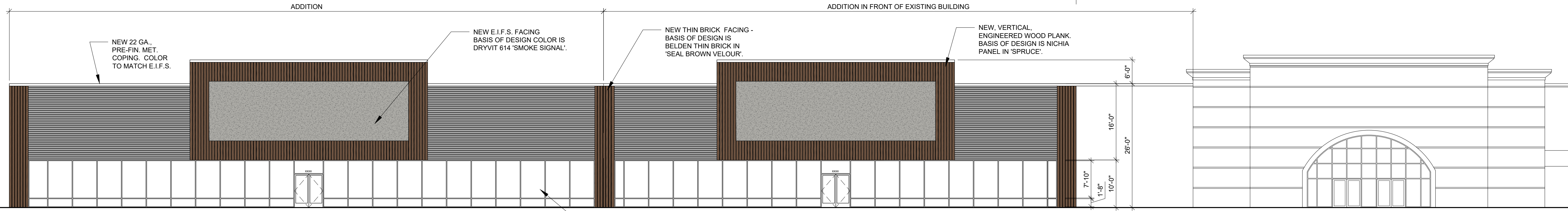
01/24/24	OWNER REVIEW
02/08/24	OWNER REVIEW
02/15/24	SPA
03/19/24	SPA

Drawn: RLJ
Checked: RLJ
Approved: RLJ

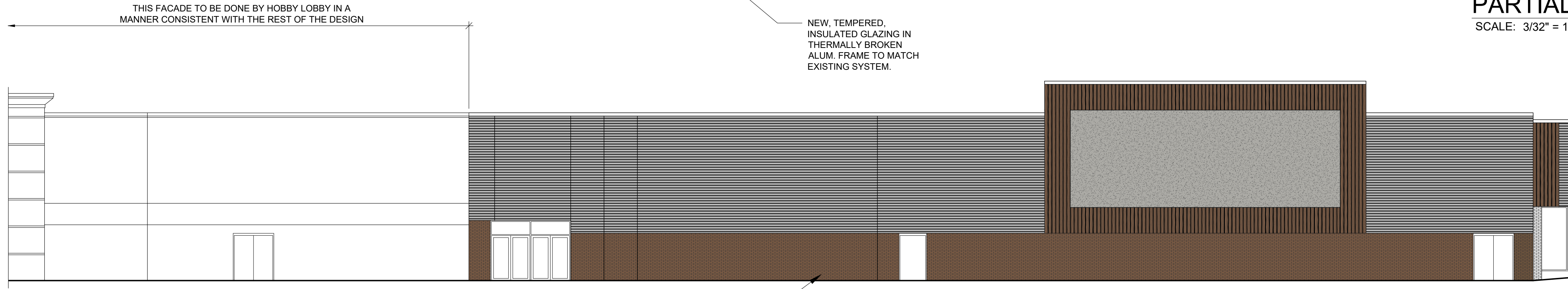
Sheet Title:
**EXISTING
EXTERIOR
ELEVATIONS**

Project No.:

Sheet Number: **A-301**

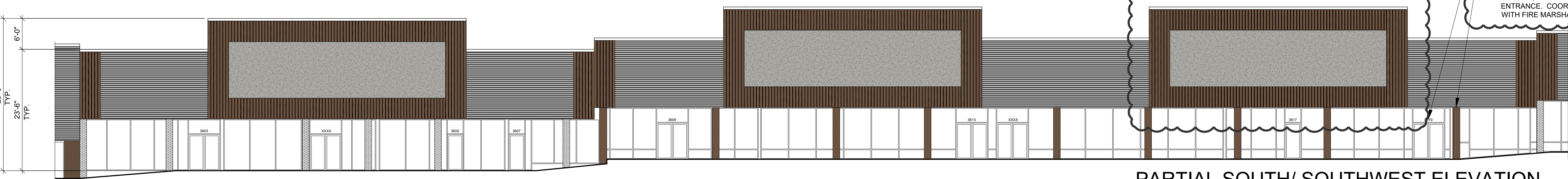


PARTIAL SOUTH ELEVATION
SCALE: 3/32" = 1'-0"

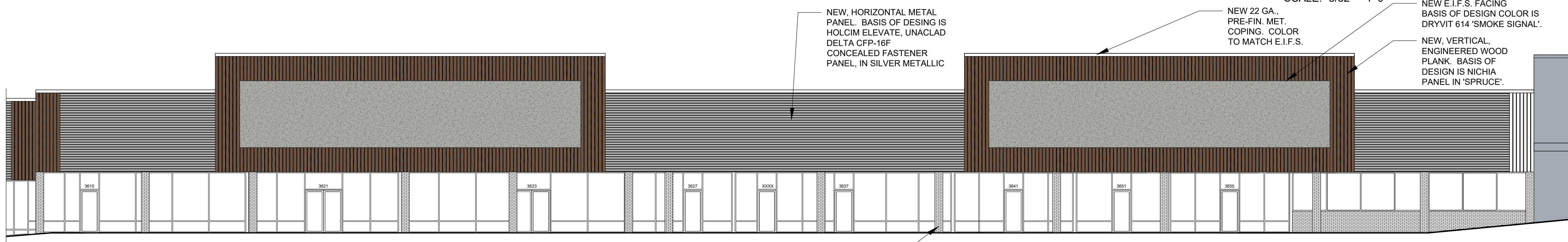


PARTIAL SOUTH ELEVATION
SCALE: 3/32" = 1'-0"

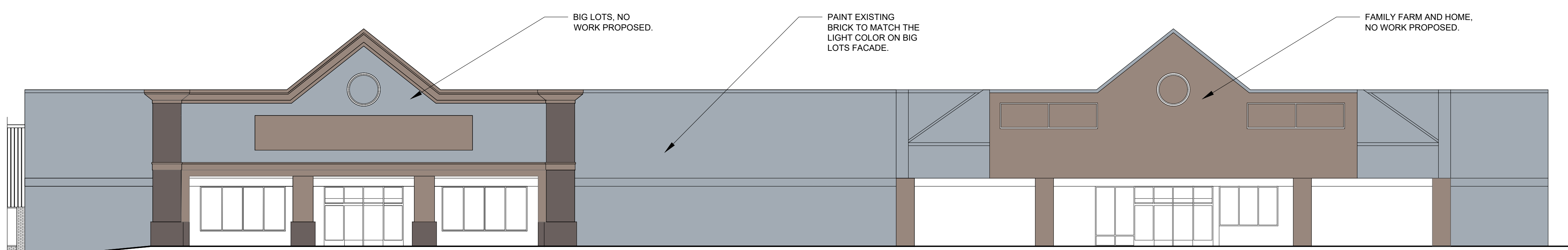
REVISED FAÇADE DESIGN, TYP.
ADDRESS ARE OVER EACH SUITE ENTRANCE.
INSTALL KNOW BOXES, ON BACKSIDE OF COLUMN, NEAR EACH ENTRANCE. COORDINATE WITH FIRE MARSHALL.



PARTIAL SOUTH/ SOUTHWEST ELEVATION
SCALE: 3/32" = 1'-0"



PARTIAL WEST/SOUTHWEST ELEVATION
SCALE: 3/32" = 1'-0"



PARTIAL WEST ELEVATION
SCALE: 3/32" = 1'-0"

GRAND RIVER PLAZA FAÇADE MATERIAL PERCENTAGES			
MATERIAL	FAÇADE AREA (SQ. FT.)	ALLOWED PERCENTAGE	ACTUAL PERCENTAGE
TOTAL	36,922	-	-
BRICK	5,808	100 ¹	16
SPLIT FACED CMU	2,361	25	6
EIFS	8,638	25	23
METAL PANEL	6,821	25	18
ENGINEERED WOOD PLANK	4,431	25	12
NONREFLECTIVE STOREFRONT/DOORS	8,862	-	24

1 - in the RCD district all façade facing a road must be 75% brick.



Consultant:

Key Plan: NO SCALE

Client:

Project:

Seal:



Date Issued For

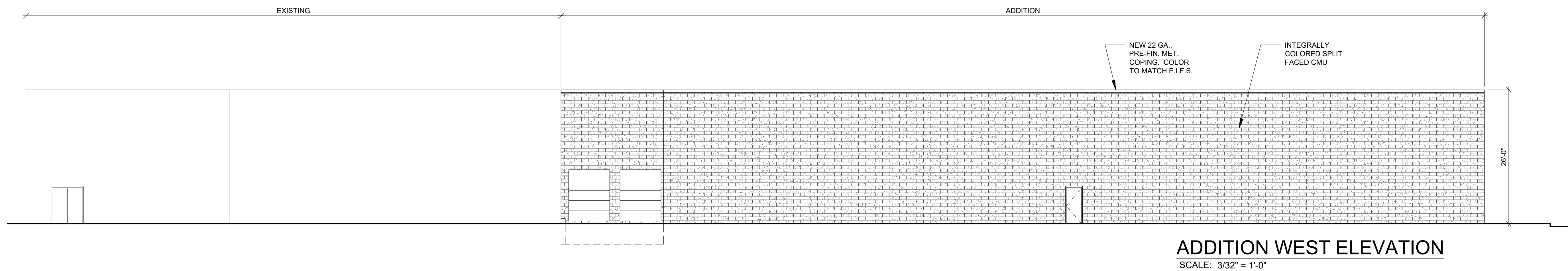
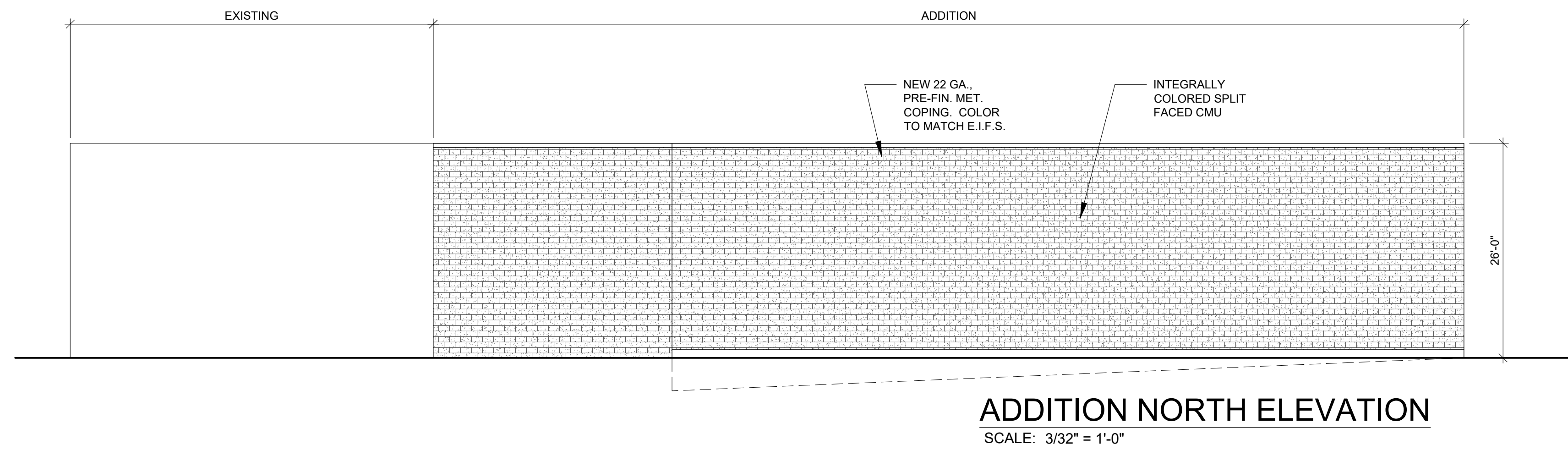
01/24/24	OWNER REVIEW
02/08/24	OWNER REVIEW
02/15/24	SPA
03/19/24	SPA

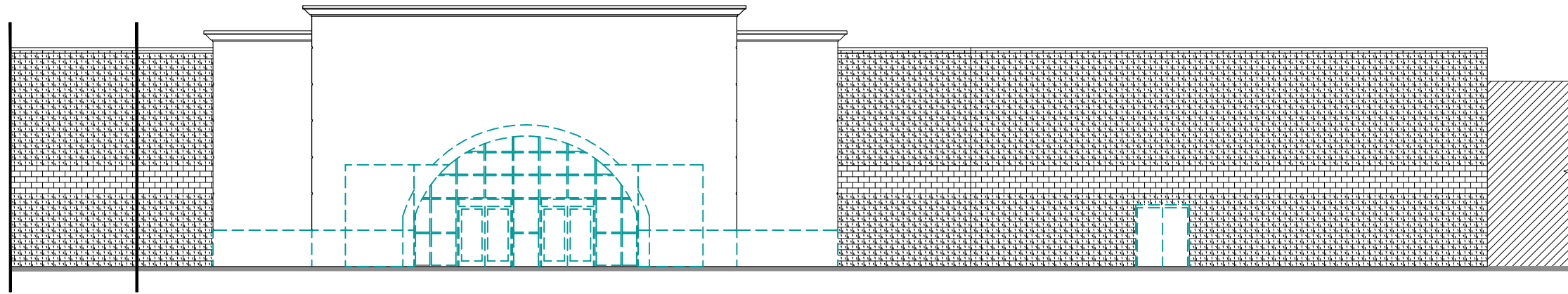
Drawn: RLJ
 Checked: RLJ
 Approved: RLJ

Sheet Title:
PROPOSED
EXTERIOR
ELEVATIONS

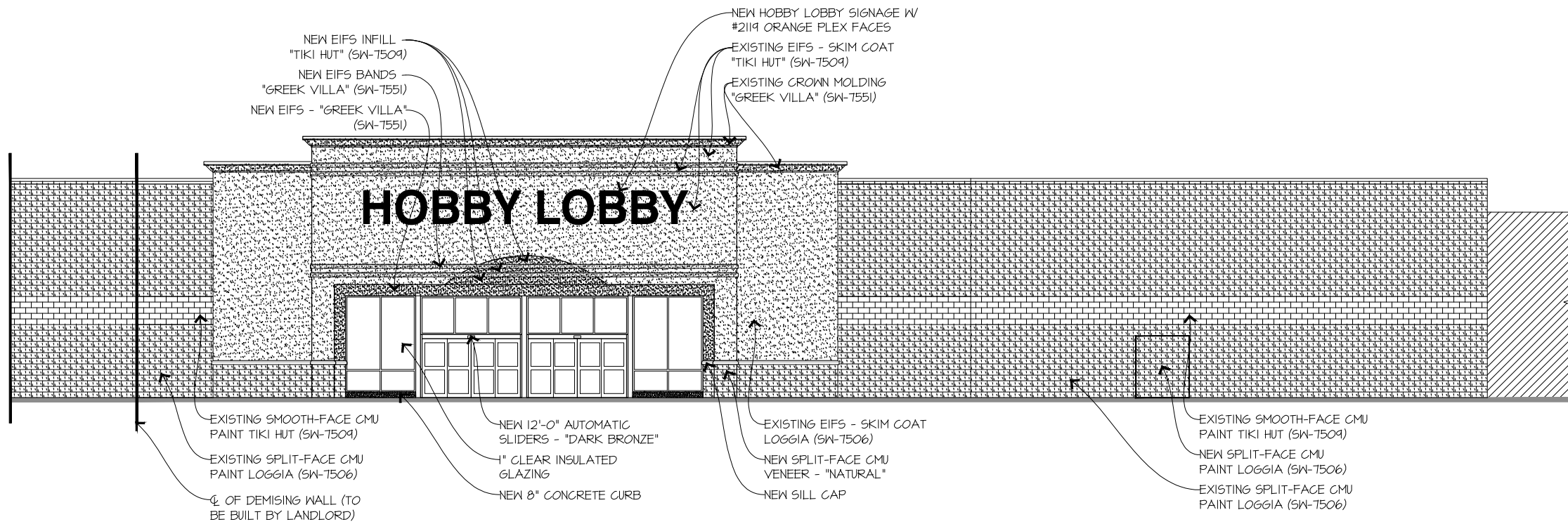
Project No.:

Sheet Number: A-303





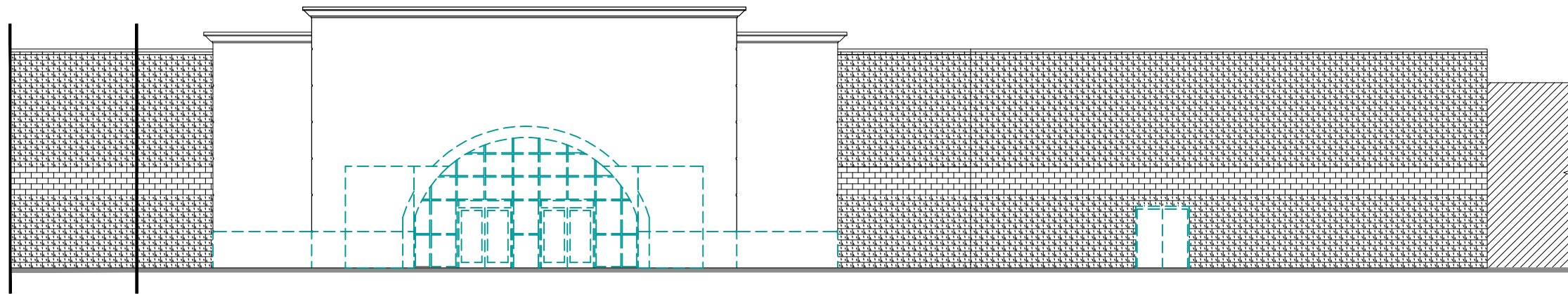
EXISTING FRONT ELEVATION
(SOUTH ELEVATION)



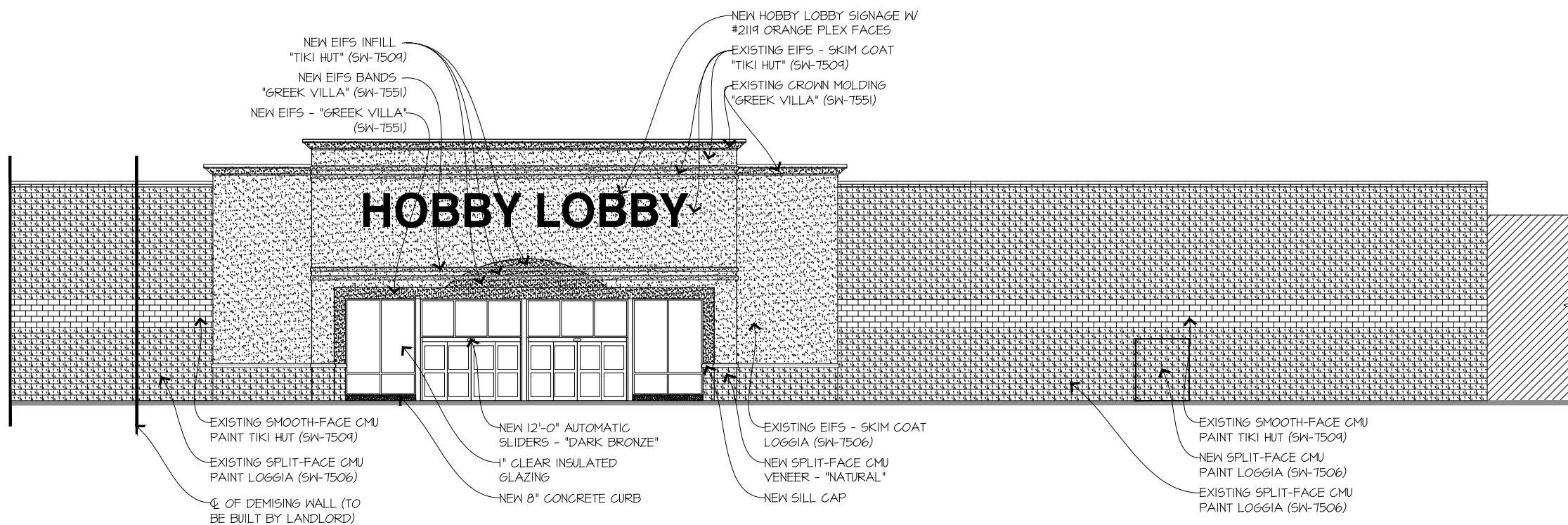
- NEW EIFS INFILL
"TIKI HUT" (SW-7509)
- NEW EIFS BANDS
"GREEK VILLA" (SW-7551)
- NEW EIFS - "GREEK VILLA"
(SW-7551)
- NEW HOBBY LOBBY SIGNAGE W/
#2119 ORANGE PLEX FACES
- EXISTING EIFS - SKIM COAT
"TIKI HUT" (SW-7509)
- EXISTING CROWN MOLDING
"GREEK VILLA" (SW-7551)

- EXISTING SMOOTH-FACE CMU
PAINT TIKI HUT (SW-7509)
- EXISTING SPLIT-FACE CMU
PAINT LOGGIA (SW-7506)
- NEW 12'-0" AUTOMATIC
SLIDERS - "DARK BRONZE"
- 1" CLEAR INSULATED
GLAZING
- NEW 8" CONCRETE CURB
- EXISTING EIFS - SKIM COAT
LOGGIA (SW-7506)
- NEW SPLIT-FACE CMU
VENEER - "NATURAL"
- NEW SILL CAP
- EXISTING SMOOTH-FACE CMU
PAINT TIKI HUT (SW-7509)
- NEW SPLIT-FACE CMU
PAINT LOGGIA (SW-7506)
- EXISTING SPLIT-FACE CMU
PAINT LOGGIA (SW-7506)

CL OF DEMISING WALL (TO
BE BUILT BY LANDLORD)



EXISTING FRONT ELEVATION
(SOUTH ELEVATION)



- NEW EIFS INFILL
"TIKI HUT" (SW-7509)
- NEW EIFS BANDS
"GREEK VILLA" (SW-7551)
- NEW EIFS - "GREEK VILLA"
(SW-7551)
- NEW HOBBY LOBBY SIGNAGE W/
#2119 ORANGE PLEX FACES
- EXISTING EIFS - SKIM COAT
"TIKI HUT" (SW-7509)
- EXISTING CROWN MOLDING
"GREEK VILLA" (SW-7551)

- EXISTING SMOOTH-FACE CMU
PAINT TIKI HUT (SW-7509)
- EXISTING SPLIT-FACE CMU
PAINT LOGGIA (SW-7506)
- NEW 12'-0" AUTOMATIC
SLIDERS - "DARK BRONZE"
- 1" CLEAR INSULATED
GLAZING
- NEW 8" CONCRETE CURB
- EXISTING EIFS - SKIM COAT
LOGGIA (SW-7506)
- NEW SPLIT-FACE CMU
VENEER - "NATURAL"
- NEW SILL CAP
- EXISTING SMOOTH-FACE CMU
PAINT TIKI HUT (SW-7509)
- NEW SPLIT-FACE CMU
PAINT LOGGIA (SW-7506)
- EXISTING SPLIT-FACE CMU
PAINT LOGGIA (SW-7506)

CL OF DEMISING WALL (TO
BE BUILT BY LANDLORD)

**GENOA CHARTER TOWNSHIP
PLANNING COMMISSION
PUBLIC HEARING
March 11, 2024**

MINUTES

CALL TO ORDER: Chairman Grajek called the meeting of the Genoa Charter Township Planning Commission to order at 6:30 p.m. Present were Eric Rauch, Tim Chouinard, Marianne McCreary, Greg Rassel and Jeff Dhaenens. Absent was Glynis McBain. Also present were Planning Director Amy Ruthig, Brian Borden of Safebuilt, and John Barber of Tetra Tech.

PLEDGE OF ALLEGIANCE: The pledge of allegiance was recited.

APPROVAL OF AGENDA:

Moved by Commissioner McCreary, seconded by Commissioner Rassel, to approve the agenda as presented. **The motion carried unanimously.**

DECLARATION OF CONFLICT OF INTEREST:

None

CALL TO THE PUBLIC:

The call to the public was made at 6:31 pm with no response.

OLD BUSINESS:

OPEN PUBLIC HEARING #1...Consideration of a site plan amendment for revisions to the previously approved site grading on a 4.32-acre parcel (4711-06-200-101) on the north side of Grand River Avenue, just west of Char-Ann Drive. The request is petitioned by Chestnut Development.

- A. Recommendation of Environmental Impact Assessment (9-20-23)
- B. Disposition of Amended Site Plan (10-17-23)

Mr. Steve Gronow has a non-profit organization that is interested in building on the entire property; however, they are also looking at other sites. He wanted to make the property more attractive to developers by clearing the brush and removing debris on the site. He acknowledges that the contractor removed the trees that were not to be removed, even though it was clearly marked. Since he is not sure how the property will be developed, he would like to build an eight-foot-high berm on the rear of the site between the trees and plant the appropriate number of evergreens to screen the homes on Turning Leaf from Grand River and complete the grading that was originally proposed and approved.

Mr. Borden suggested the applicant submit a drawing of what is being proposed, including the number of trees that will be planted. Commissioner McCreary agrees. She would like to see a visual of where on the site the berm and trees will be placed. Mr. Gronow stated this will be temporary.

Commissioner Rauch asked Mr. Gronow if there is a long-term screening plan for this area. He stated that the entire rear of the site contains scrub trees, so when the property is developed, he would like to remove those and have a landscape architect develop a permanent plan.

Commissioner Dhaenens suggested leaving the existing plantings as the permanent buffer and these new trees could remain. Mr. Gronow does not want to do that. He stated that the original requirement to have those trees remain should not have been made. They were within the building envelope and there is nothing in the ordinance that requires that. This property was commercial when the homes on Turning Leaf were built, so there was never a guarantee those trees would remain.

Ms. Ruthig stated that if trees are removed that were supposed to remain, they must be replaced by two, so since 19 trees were removed, 38 trees must be replaced.

The call to the public was made at 6:54 pm.

Ms. Melanie Johnson of 3990 Chilson Road lives next to one of Mr. Gronow's other properties. She believes that a temporary solution would work. If the new trees are not maintained, they could die.

Mr. Dan Hassett of 2955 Turning Leaf stated a berm all the way across with 19 trees planted would be acceptable. He knows it was an accident. He wants to ensure that a plan is submitted and approved.

Mr. Chris Mammoser of 2757 Turning Leaf is the secretary for the homeowners association impacted by this area. He is speaking as an individual, not representing the association. He would like to see a thoughtful and agreed to temporary solution while the property is waiting to be developed. He suggested leaving the tall scrub trees.

Mr. Phil Brown of 2933 Turning Leaf stated that his home and the one next to his are exposed. He is concerned with his property values and security.

The call to the public was closed at 7:08 pm.

Mr. Gronow believes he can create a permanent landscape berm across the entire property and plant the required number of trees. He would submit a plan for review and approval. The future engineering of the property would be done around that.

Commissioner Dhaenens suggested that Mr. Gronow consider the ordinance requirements for buffers and landscaping when determining how many trees should be planted. He agrees and will have the engineer use this information.

Moved by Commissioner Rassel, supported by Commissioner Rauch, to table Open Public Hearing #1 until on or before the May 13, 2024 Planning Commission meeting. **The motion carried unanimously.**

OPEN PUBLIC HEARING #2...Consideration of a special land use application, environmental impact assessment and site plan to allow for a proposed automatic car wash located on vacant parcels #4711-04-300-017 and 4711-09-100-017 Latson Road, east side of Latson Road, south side of Grand River Avenue. The request is petitioned by CWP West, LLC.

- A. Recommendation of Special Use Application.
- B. Recommendation of Environmental Impact Assessment (1-16-24)
- C. Recommendation of Site Plan (1-16-24)

Mr. Scott Tousignant of Boss Engineering and Nicole Castern of Mister Car Wash were present. Ms. Tousignant stated they have received MDOT approval for the stormwater discharge. He provided a review of the changes, specifically the color scheme, additional landscaping has been added to the front, the number of signs have been reduced, the building lighting has been changed, the cross access easement has been obtained, and they have added the screening fence. Also, they have changed the entrance drive to show the right in/right out.

Mr. Borden reviewed his letter dated February 6, 2024.

- 1. Special Land Use (Section 19.03)
 - a. The special land use standards of Section 19.03 are generally met.
 - b. In order to make favorable findings related to compatibility and impacts, the conditions of Section 7.02.02(l) need to be met to the Commission's satisfaction.
 - c. The submittal shows that they would not be in compliance with the noise ordinance after 10 pm. He suggests the applicant restrict the hours of operation to ensure compliance with the Township's Noise Ordinance.
 - d. The applicant must address any comments provided by the Township Engineer or Brighton Area Fire Authority regarding public facilities and services.
- 2. Use Conditions (Section 7.02.02(1))
 - a. The use conditions are met.
- 3. Site Plan Review
 - a. The revised building elevations comply with the material standards of Section 12.01.
 - b. Building materials, design and color scheme are subject to review and approval by the Planning Commission.
 - c. The landscape plan is deficient in width for the Latson Road greenbelt.
 - d. The waste receptacle details must identify the required concrete base pad.

Mr. Barber reviewed Ms. Byrne's letter dated February 6, 2024.

1. The Petitioner should obtain approval from the Livingston County Road Commission (LCRC) for the proposed site driveway prior to final site plan approval.
2. The impact assessment provides a predicted water and sewer usage based on the Township's REU table, which provides 25.2 REUs per car wash with recycle. Historic water usage was also provided from other Mister Car Wash facilities with an average usage of 21,277 gallons per day. This average water usage from similar facilities should be considered when calculating the REU amount for the proposed development.
3. The petitioner is proposing a closed pipe type underground detention basin comprised of four 48-inch diameter pipes to provide 12,489 cubic feet of storage. The current car wash, site drive, and parking improvements do not allow enough space for any at grade stormwater detention or retention.
4. The proposed underground detention basin will tie into the existing storm sewer on Latson Road. The LCRC has indicated that the existing storm sewer is under MDOT jurisdiction and approval from MDOT will be required to connect to it. If approval from MDOT cannot be obtained the proposed site layout and storm management plan would change significantly, therefore we recommend that approval from MDOT be obtained prior to bringing the site plan before the Township Planning Commission.
5. The LCRC completed a review of the traffic impact study and plans, and the study was revised per their recommendation. The study recommended signal modifications at the Grand River Avenue and Latson Road intersection, which would need to be reviewed and discussed with MDOT. The study also recommended restricting the northernmost site driveway to right-in-right-out and aligning the southernmost site driveway to align directly with the existing Lowes driveway. Both site driveway recommendations have been addressed on the revised plans.

The Brighton Area Fire Authority Fire Marshal's letter dated February 2, 2024 states "One-way emergency vehicle access roads shall be a minimum of 20-feet wide. With a width of 20-feet, this includes the one-way in/out entry to the property. Access roads to the site shall be provided and maintained during construction. Access roads shall be constructed to be capable of supporting the imposed load of fire apparatus weighing at least 84,000 pounds, this includes over the underground retention." Mr. Tousignant will address this with the Fire Marshal as they have the cross access drive that will be the emergency access, and not the right in/right out drive.

Commissioner Rauch thanked the applicant for making the changes that were discussed and requested. He asked that the blue framing shown on the fence be changed to the bronze color that is on the building. He asked about the noise ordinance issue noted by Mr. Borden. Ms. Castern stated they have submitted revised hours of operation, which are 7 am to 7 pm in the winter and 7 am to 8 pm in the winter, so they meet the ordinance.

Commissioner McCreary asked if the engineer's comment regarding the storm sewer has been addressed. Mr. Tousignant stated they have received MDOT's approval. She questioned

LCRC's request for the signal changes. Mr. Tougissant stated they will be working with MDOT to modify the signalization as requested.

Commissioner Dhaenens is satisfied with the landscaping provided and would not require the petitioner to add additional trees.

The call to the public was made at 7:36 pm with no response.

Moved by Commissioner Rassel, supported by Commissioner Chouinard, to recommend to the Township Board approval of the Special Use Application to allow for a proposed automatic car wash located on vacant parcels #4711-04-300-017 and 4711-09-100-017 Latson Road, east side of Latson Road, south side of Grand River Avenue as this Commissioner finds that the special land use standards of Section 19.03 are generally met and the conditions of Section 7.02.02(l) have been met. **The motion carried unanimously.**

Moved by Commissioner Rassel, supported by Commissioner Chouinard, to recommend to the Township Board approval of the Environmental Impact Assessment dated January 16, 2024 to allow for a proposed automatic car wash located on vacant parcels #4711-04-300-017 and 4711-09-100-017 Latson Road, east side of Latson Road, south side of Grand River Avenue. **The motion carried unanimously.**

Moved by Commissioner Rassel, supported by Commissioner Rauch, to recommend to the Township Board approval of the Site Plan dated January 16, 2024 to allow for a proposed automatic car wash located on vacant parcels #4711-04-300-017 and 4711-09-100-017 Latson Road, east side of Latson Road, south side of Grand River Avenue, with the following conditions:

- The color of the fencing shall be changed from blue to a dark bronze or black color.
- The required concrete pad at the Dumpster enclosure shall be installed.
- The Planning Commission approves the landscape deficiency.
- The property split of this parcel shall be approved.

The motion carried unanimously.

OPEN PUBLIC HEARING #3...Consideration of a special land use application, environmental impact assessment and site plan to allow for a proposed multi-tenant commercial center including a drive through coffee shop and outdoor seating restaurant located on vacant parcels#:4711-04-300-017 and 4711-09-100-017 Latson Road, east side of Latson Road, south side of Grand River Avenue. The request is petitioned by Kevin Bahnam, 1015 Latson Road LLC.

- A. Recommendation of Special Use Application.
- B. Recommendation of Environmental Impact Assessment (1-16-24)
- C. Recommendation of Site Plan (1-16-24)

Mr. Scott Tousignant of Boss Engineering and Jeff Klatt, the architect, were present. Mr. Tousignant stated that MDOT's approval for the stormwater discharge applies to this site as well. He provided the changes made to the previous plans after discussions with the Planning Commission. They have relocated the access drive further to the north per the LCRC's request, moved the building closer to the access drive, relocated a bank of parking spaces, eliminated the site access from the right side of the property, and added the sidewalk.

Mr. Borden reviewed his letter dated February 6, 2024.

1. Special Land Uses (Section 19.03):
 - a. The special land use standards of Section 19.03 are generally met.
 - b. In order to make favorable findings related to compatibility and impacts, the conditions of Sections 7.02.02(i) and (j) and the buffer zone requirements of Section 12.02.03 must be met to the Commission's satisfaction.
 - c. If a favorable recommendation is made, the Commission may wish to include a condition that a sound study be provided for the drive-through speaker system when the tenant is known.
 - d. The applicant must address any comments provided by the Township Engineer or Brighton Area Fire Authority regarding public facilities and services.
2. Drive-Through Use Conditions (Section 7.02.02(j)):
 - a. The 500-foot spacing between drive-throughs is not met (approximately 120 feet). The applicant notes that they will seek a variance from ZBA.
3. Site Plan Review:
 - a. Building materials and color scheme are subject to review and approval by the Planning Commission.
 - b. The landscape plan is deficient in width and a full screen wall for the easterly buffer zone; there is only a partial screen wall.

Mr. Barber reviewed Ms. Byrne's letter dated February 6, 2024 states:

1. The petitioner should obtain approval from the Livingston County Road Commission (LCRC) for the proposed site driveway prior to final site plan approval.
2. The petitioner is proposing a closed pipe type underground detention basin comprised of five 42-inch diameter pipes to provide 16,890 cubic feet of storage. The proposed building, site drive, and parking improvements do not allow enough space for any at-grade stormwater detention or retention.
3. Soil borings and infiltration testing should be provided within the proposed detention basin footprint and should show the documented high groundwater elevation. Soil borings shall be provided to a depth of at least 20 feet. The petitioner has noted that no geotechnical work has been completed for the site yet, but the geotechnical from the northern parcel was used for the current design. The infiltration rate and soil borings being used for the current design should be confirmed prior to construction of the storm system. Mr. Tousignant stated they will obtain those.

4. The proposed underground detention basin will tie into the existing storm sewer on Latson Road. The LCRC has indicated that the existing storm sewer is under MDOT jurisdiction and approval from MDOT will be required to connect to it. If approval from MDOT cannot be obtained the proposed site layout and storm management plan would change significantly, therefore we recommend that approval from MDOT be obtained prior to bringing the site plan before the Township Planning Commission.
5. The LCRC completed a review of the traffic impact study and plans, and the study was revised per their recommendation. The study recommended signal modifications at the Grand River Avenue and Latson Road intersection, which would need to be reviewed and discussed with MDOT. The study also recommended restricting the northernmost site driveway to right-in-right-out and aligning the southernmost site driveway to align directly with the existing Lowes driveway. Both site driveway recommendations have been addressed on the revised plans.

The Brighton Area Fire Authority Fire Marshal's letter dated February 2, 2024 states "The East drive clear width has been reduced to 23.5-feet and shall be increased to 26-feet as required. West drive fire lane signs are facing the incorrect direction." Mr. Tousignant stated they will amend the plans to meet the

Commissioner Rauch thanked the applicant for making the revisions. He is very happy with the building colors and materials. He noted that the color of the fencing should be changed as requested in the previous project.

Commissioner McCreary questioned the traffic impact study. Mr. Tousignant stated the changes to the signalization at Grand River and Latson Road will be made to improve the peak hour grades. This will be done at the time the project is developed.

Commissioner Dhaenens questioned Mr. Borden's suggestion regarding the noise ordinance and the drive thru speaker. Mr. Borden stated that since we do not know what is being built there, the Commission may wish to include a condition that a sound study be provided for the drive-through speaker system when the tenant is known.

The call to the public was made at 8:00 pm with no response.

Moved by Commissioner Chouinard, supported by Commissioner Rassel, to recommend to the Township Board approval of the Special Use Application to allow for a proposed multi-tenant commercial center including a drive through coffee shop and outdoor seating restaurant located on vacant parcels#:4711-04-300-017 and 4711-09-100-017 Latson Road, east side of Latson Road, south side of Grand River Avenue. **The motion carried unanimously.**

Moved by Commissioner Chouinard, supported by Commissioner Rassel, to recommend to the Township Board approval of the Environmental Impact Assessment dated January 16, 2024 to allow for a proposed multi-tenant commercial center including a drive through coffee shop and

outdoor seating restaurant located on vacant parcels#:4711-04-300-017 and 4711-09-100-017 Latson Road, east side of Latson Road, south side of Grand River Avenue. **The motion carried unanimously.**

Moved by Commissioner Chouinard, supported by Commissioner Rauch to recommend to the Township Board approval of the Site Plan dated January 16, 2024 to allow for a proposed multi-tenant commercial center including a drive through coffee shop and outdoor seating restaurant located on vacant parcels#:4711-04-300-017 and 4711-09-100-017 Latson Road, east side of Latson Road, south side of Grand River Avenue, with the following conditions:

- The color of the fencing shall be changed from blue to a dark bronze or black color.
- The ZBA's approval of the future drive thru uses.
- The required concrete pad at the Dumpster enclosure shall be installed.
- The property split of this parcel shall be approved.
- All conditions by other agencies shall be met.

The motion carried unanimously.

NEW BUSINESS:

OPEN PUBLIC HEARING #4...Consideration of a special land use application, environmental impact assessment and site plan to allow for temporary boat sales and service at an existing commercial site located at 5776 Grand River Avenue, south side of Grand River Avenue, west of Dorr Road. The request is petitioned by Wonderland Marine West.

- A. Recommendation of Special Use Application
- B. Recommendation of Environmental Impact Assessment (11-29-23)
- C. Recommendation of Site Plan (2-16-24)

Mr. Gary Mitter, Sr. stated they are in the process of renovating their existing building, and during construction, they need a temporary building. They purchased the building next to their business. They will be remodeling it and it will match the same style as their renovated existing building.

Mr. Borden reviewed his letter dated March 5, 2024.

1. Special Land Uses (Section 19.03):

- a. The special land use standards of Section 19.03 are generally met.
- b. In order to make favorable findings related to compatibility and impacts, the use requirements of Section 7.02.02(c) must be met to the Commission's satisfaction.
- c. The applicant must address any comments provided by the Township Engineer or Brighton Area Fire Authority regarding public facilities and services.

2. Use Requirements (Section 7.02.02(c)):

- a. The majority of the use conditions are met; however, the buffer zone/screen fence requirement for outdoor storage is not fully met at the rear of the site. They are proposing

a six-foot-high decorative aluminum fence. He noted that the adjacent uses can be used as a reason to waive this requirement.

3. Site Plan Review:

- a. The building front setback will no longer be compliant with the introduction of front yard parking. The applicant must either relocate the three front yard parking spaces or obtain a variance for the deficient building front setback. He suggested relocating the parking to the side of the building.
- b. There are parking spaces located behind gates, so the applicant must explain how the rear parking spaces will be accessed or if they will be identified as employee parking.
- c. Bumper blocks are prohibited unless deemed necessary by the Planning Commission.
- d. The Commission may wish to require new/modified light fixtures that meet current standards.
- e. The front yard greenbelt is deficient in tree plantings and a hedgerow/wall.
- f. He encourages removal of the nonconforming pole sign and replaced with a ground sign.

Mr. Barber reviewed Ms. Byrne's letter dated February 23, 2024 states;

1. The existing parking lot does not include concrete curb and gutter as required by Genoa Township's Zoning Ordinance. The Township may wish to require the addition of curb and gutter as part of this project.
2. Bumper blocks are being proposed on the rear parking spaces, but Genoa Township's Zoning Ordinance does not allow bumper blocks unless the Planning Commission deems them necessary. It does not appear that the bumper blocks are necessary where proposed.
3. The petitioner is proposing a temporary access drive to the property to the east, which will be removed before either parcel is sold in the future. A note should be added to the site plan explaining that the drive will be removed prior to sale of the property for documentation, since there will be no shared use agreement in place.
4. The proposed improvements will increase the total impervious surface of the site. It appears that the existing site does not include any storm sewer, and all storm flow from the parking lot is conveyed as sheet flow across the site towards the Grand River Avenue right-of-way. Although the additional impervious surface and drainage pattern are not ideal, there does not appear to be a feasible alternative for stormwater management for the site.

The Brighton Area Fire Authority Fire Marshal's letter dated March 1, 2024 states all of his previous comments have been addressed.

Commissioner Rassel asked how long the building will be used and what will be done with it afterward. Mr. Mitter stated approximately one year. He is not sure what will be done with it when their new building is complete. Mr. Borden stated that a Special Land Use ties to the property, so if that is approved it will be permanent.

Commissioner Dhaenens asked why they are proposing parking in the front. Mr. Mitter stated they need to have the spaces in the front for handicap access to enter the building. He added that there is front parking all along Grand River in this area.

Commissioner Rauch stated this shouldn't be reviewed by the Planning Commission until it has been before the ZBA. The site design could change depending on the outcome of that meeting. He is also concerned about the increased stormwater runoff as noted by the township engineer. He would not support approving this item without further information.

There was a discussion regarding moving the parking to the rear of the site. Mr. Mitter would consider that if it would meet the handicap requirements. This would eliminate the applicant needing to obtain a variance from the ZBA.

It was noted that a 30-foot drive is proposed from this property to the existing Wonderland site to the east, but there is not enough room because of the pole barn on that property. Mr. Mitter stated they removed part of the pole barn to accommodate that driveway. Ms. Ruthig stated that change to the pole barn was not included in the site plan approval for the existing Wonderland site.

The call to the public was made at 8:45 pm with no response.

Moved by Commissioner Dhaenens, supported by Commissioner Rassel, to table Open Public Hearing #4 of a special land use application, environmental impact assessment and site plan to allow for temporary boat sales and service at an existing commercial site located at 5776 Grand River Avenue until on or before the May 13, 2024 Planning Commission meeting. **The motion carried unanimously.**

The Planning Commission took a five-minute break from 8:50 pm - 8:55 pm.

OPEN PUBLIC HEARING #5...Consideration of a special land use application, environmental impact assessment and site plan to allow for outdoor RV/camper storage at 2630 Grand River Avenue, south side of Grand River Avenue, east of Chilson Road. The request is petitioned by Schafer Construction.

- A. Recommendation of Special Use Application
- B. Recommendation of Environmental Impact Assessment (1-16-24)
- C. Recommendation of Site Plan (2-19-24)

Mr. Luke Wenger of Greentech Engineering stated they are requesting approval to allow for the storage of RV's and campers.

Mr. Borden reviewed his letter dated March 5, 2024.

- 1. Special Land Uses (Section 19.03):
 - a. The special land use standards of Section 19.03 are generally met.

- b. In order to make favorable findings related to compatibility and impacts, the conditions of Section 7.02.02(d) must be met to the Commission's satisfaction.
 - c. The applicant must address any comments provided by the Township Engineer or Brighton Area Fire Authority regarding public facilities and services.
2. Outdoor Commercial Storage (Section 7.02.02(d)):
- a. The Commission may require improvements to the paved surfacing of the outdoor storage area.
 - b. The plan does not fully provide the required buffer zones; however, the Planning Commission has the authority to waive or modify these requirements. He noted there is existing vegetation.
 - c. He suggests the chain link fencing utilize a screen fabric, instead of privacy slats, if the Commission is amenable to this option.
3. Site Plan Review:
- a. The applicant must coordinate refuse removal since the waste receptacle is behind a security gate.
 - b. The applicant must address any comments provided by the Township Engineer and/or the Brighton Area Fire Authority, particularly with respect to the security gate.

Mr. Barber stated that all of Ms. Byrne's previous concerns have been addressed.

The Brighton Area Fire Authority Fire Marshal's letter dated March 1, 2024 states all of his previous comments have been addressed.

Commissioner Dhaenens questioned the condition of the pavement where this storage is proposed. Mr. Wegner stated they do not believe the pavement needs to be replaced. He also stated that they will coordinate trash pickup with the contractor. He added they can accommodate the request to change the screening on the fence.

The call to the public was made at 9:12 pm with no response.

Moved by Commissioner Rauch, supported by Commissioner Rassel, to recommend to the Township Board approval of the Special Land Use Application to allow for outdoor RV/camper storage at 2630 Grand River Avenue. **The motion carried unanimously.**

Moved by Commissioner Rauch, supported by Commissioner McCreary, to recommend to the Township Board approval of the Environmental Impact Assessment dated January 16, 2024 to allow for outdoor RV/camper storage at 2630 Grand River Avenue. **The motion carried unanimously.**

Moved by Commissioner Rauch, supported by Commissioner Rassel, to recommend to the Township Board approval of the Site Plan dated February 19, 2024 to allow for outdoor

RV/camper storage at 2630 Grand River Avenue, south side of Grand River Avenue, east of Chilson Road, with the following condition:

- The slat material shown on the details of the fencing shall be switched for a fabric material to be attached to the existing chain link fence.

The motion carried unanimously.

ADMINISTRATIVE BUSINESS:

Staff Report

Ms. Ruthig stated there will be four items on the April Planning Commission agenda..

Approval of the February 12 and February 13, 2024 Planning Commission meeting minutes

One needed change was noted for the February 12 minutes.

Moved by Commissioner McCreary, seconded by Commissioner Dhaenens, to approve the minutes of the February 12, 2024 Planning Commission Meeting as amended. **The motion carried unanimously.**

Moved by Commissioner McCreary, seconded by Commissioner Rassel, to approve the minutes of the February 13, 2024 Planning Commission Meeting as presented. **The motion carried unanimously.**

Member Discussion

Commissioner Rauch noted that some of the items on tonight's agenda were not ready to be before the Planning Commission. Commissioner Dhaenens stated that the car wash and the retail building on Latson Road were successful this evening because of them coming before the Planning Commission previously and us working with them.

Commissioner McCreary requested to have a list of the meetings and the submittal deadlines on the table.

Adjournment

Moved by Commissioner McCreary, seconded by Commissioner Rassel, to adjourn the meeting at 9:24 pm. **The motion carried unanimously.**

Respectfully Submitted,

Patty Thomas, Recording Secretary