

AGENDA
CITY OF KENTWOOD PLANNING COMMISSION
TUESDAY, JULY 11, 2023
KENTWOOD COMMISSION CHAMBERS
4900 BRETON AVENUE, SE
7:00 P.M.

- A. Call to Order
- B. Pledge of Allegiance (Dan Holtrop)
- C. Roll Call
- D. Declaration of Conflict of Interest
- E. Approval of the Minutes of June 27, 2023 and Findings of Fact for: **Case#13-23** – Request of Bigg Architecture on behalf of Huntington Bank for a Special Land Use Freestanding Drive Through ATM at 2956 – 28th Street SE (Zoned C-2 Community Commercial)
- F. Approval of the Agenda for July 11, 2023
- G. Acknowledge visitors and those wishing to speak to non- agenda items.
- H. Old Business
- I. Public Meeting

Case#14-23 – Storage Five Kentwood - Change in the Master Planned Land Use Designation from Commercial to Industrial for an 8.2 acre area of the property located at 1800-1900 44th Street SE;
- J. Public Hearing

Case#15-23 – EquipmentShare- Zoning Ordinance Text Amendment(Consideration of Special Land Use Open Air Heavy and Industrial Equipment Sales, Rental and Service)
- K. Work Session

Case#16-23 – Kum & Go – Special Land Use and Site Plan Review for a Vehicle Fuel Station located at 2975 and 2995 28th Street SE
- L. New Business

Agenda - Planning Commission

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Set public hearing date of August 9, 2023, for: **Case#17-23** –Change in the Master Planned Land Use Designation from Low Density Residential to Medium Density Residential – Bosgraff Walma 44th – 2802 – 44th Street SE; **Case#18-23** - EquipmentShare – Special Land Use and Site Plan Review for an Open Air Construction and Industrial Equipment Sales and Rental located at 4250 – 52nd Street SE; **Case#19-23** – EquipmentShare – Final Site Plan Review of a PUD

M. Other Business

1. Commissioners' Comments
2. Staff's Comments

N. Adjournment

*Public Hearing Format:

1. Staff Presentation – Introduction of project, Staff Report and Recommendation
Introduction of project representative
2. Project Presentation – By project representative
3. Open Public Hearing (please state name, address and speak at podium. Comments are limited to five minutes per speaker; exceptions may be granted by the chair for representative speakers and applicants.)
4. Close Public Hearing
5. Commission Discussion – Requests for clarification to project representative, public or staff
6. Commission decision – Options
 - a. postpone decision – table to date certain
 - b. reject proposal
 - c. accept proposal
 - d. accept proposal with conditions.

PROPOSED MINUTES OF THE REGULAR MEETING
OF THE KENTWOOD PLANNING COMMISSION
JUNE 27, 2023, 7:00 P.M.
COMMISSION CHAMBERS

- A. Vice-Chair Holtrop called the meeting to order at 7:00 p.m.
- B. The Pledge of Allegiance was led by Commissioner Porter.
- C. Roll Call:
Members Present: Bill Benoit, Dan Holtrop, Sandra Jones, Alex Porter, Darius Quinn, Doug VanderMeer, Sarah Weir
Members Absent: Ed Kape and Ray Poyner (with notification)
Others Present: Community Development Director Terry Schweitzer, Economic Development Planner Lisa Golder, Senior Planner Joe Pung, Planning Assistant Monique Collier, and the applicants.

Motion by Benoit, supported by Quinn, to excuse Kape and Poyner from the meeting.

- Motion Carried (7-0) –
- Kape and Poyner absent -

- D. Approval of the Minutes and Findings of Fact

Motion by Commissioner Benoit, supported by Commissioner Quinn, to approve the Minutes of June 13, 2023.

- Motion Carried (7-0) –
- Kape and Poyner absent -

- E. Approval of the Agenda

Schweitzer stated that Case#15-23 should not have an address specified for the proposed change. It is a proposed amendment to the text that would apply to any industrial property.

Motion by Commissioner Quinn, supported by Commissioner Porter, to approve the agenda for the June 27, 2023 meeting with change noted.

- Motion Carried (7-0) –
- Kape and Poyner absent -

- F. Declaration of Conflict of Interest

There was no conflict of interest statement expressed.

- G. Acknowledge visitors wishing to speak to non-agenda items.

There was no public comment.

H. Old Business

There was no Old Business

I. Public Hearing

Case#13-23 – Request of Bigg Architecture on behalf of Huntington Bank for a Special Land Use Freestanding Drive Through ATM at 2956 – 28th Street SE (Zoned C-2 Community Commercial)

Schweitzer stated the request involves the South Ridge Center a multi-tenant retail building. He stated a freestanding ATM is being proposed. He stated that 28th Street is a five-lane arterial roadway with two through lanes in each direction and a center turn lane. He stated the posted speed limit along 28th Street is 45 miles per hour. The 2018 traffic count was 32,147. He stated there is a deceleration lane as eastbound motorists approach the boulevard access into the property.

Schweitzer stated on the initial plan it showed the ATM to be closer to the driveway and the concern was with stacking. He stated the ATM was too close to the boulevard entrance and staff felt that it should move to the west to allow for proper circulation in that area.

Schweitzer stated the second concern relates to parking. He stated the building is over 30,000 square foot. He stated in the front currently there are as many as 79 striped parking spaces; which is about two thirds of what our ordinance specifies as minimum for this particular site. He stated the ATM is going to displace as many as 10 of those parking spaces. There was concern if there will be sufficient parking on the property to accommodate employees and patrons. He stated with further discussion staff observed that at the rear of the building, there is some striped parking. The applicant provided staff with a revised plan that shows expanded striped behind the building. He stated from a staff standpoint it appears to be responsive to that concern.

Schweitzer stated the third concern pertained to the traffic circulation in the front. He stated by taking out the 10 spaces further to the west it still may have some stacking, but the relative location to the driveway entrance he feels would be sufficient to address stacking. The applicant provided information regarding the frequency averaged throughout the day, the amount of time it takes for a particular transaction and stats from other locations where they have similar set up for an ATM. He stated the fact that the entrance into the ATM area is consistent with the right hand side of the road for the traffic to go to the west and then the left hand side would go to the east it was consistent. The exit where the ATM comes out, lends itself to someone coming out to either make a quick right or they can come around the double tier that is in the front to exit the site.

Schweitzer stated based upon the modifications and concerns, from a staff perspective he is recommending conditional approval of the special land use. He stated the revised recommendation for conditional site plan approval was based upon feedback that was received from the City Attorney. He stated the conditions read as follows: 1. Re-stripe parking spaces in the rear as depicted on the revised site plan, which includes two carry out only spaces for the current Mexican restaurant tenant on the southwest corner of the multi-tenant building. 2. Provide a cross-access easement to the property to the east as depicted on the revised site plan. 3. Documentation of the property owner's acceptance of conditions 1 and 2.

Schweitzer stated there is a licensed agreement that has been agreed upon between a representative of Huntington and the property ownership. He stated we want to make sure that the property ownership is aware of and accepting of the conditions that are recommended.

Schweitzer stated, as it relates to the prospect of having cross access to the south of the building, there is a comparable grading between the two but there is a stand up curb as part of the consideration of cross access. That is where the owner of this property and the owner of the property to the east have to come to an agreement on how that might be accomplished if at all.

Clare DeGraaf, owner of Southridge Center was present. He stated the restriping is not an issue, they are happy to do that. He stated nobody ever parks in the back.

DeGraaf stated the Huntington ATM is going to displace 6 parking spaces, the same 5 or 6 cars parked there are employees of El Arriero Restaurant who are parking in the front because it is far away from where their customers park. He stated that all the leases require that all employees park in the back, however, they have never enforced that. He stated it will be a matter of the tenants working with their staff to determine where their employees park. He stated as long as he has owned the center, they have never run out of parking or he's never had a complaint. He stated they have notified all their tenants of the proposed change. He stated they had one objection that said they are concerned about traffic with El Arriero and whether they going to pay their share of common area maintenance.

DeGraaf stated the bigger issue is the interconnection all the way across the south end of the property. He stated right now you can exit through a two lane well paved well marked driveway all the way to 29th Street that they share with Burger King. He stated if they require people to go all the way across to Radcliff it would be counterintuitive. 28th street is about ¼ mile away from his corner of the building all the way to Radcliff.

DeGraaf stated the other issue is that there are 4 properties that he would need to get easement approval from all 4 properties and not just a curb cut. He stated he would have to get approval from 5 people. He stated he also spoke to one of the property owners that lives in Las Vegas and he said it is not a problem for him. He stated it could be months

for them to get an easement to Radcliff which he doesn't think anyone is ever going to use. Discussion ensued.

Jones opened the public hearing.

There was no public comment.

Motion by Benoit, supported by Quinn, to close the public hearing.

- Motion Carried (7-0) –
- Kape and Poyner absent -

Porter stated regarding cross access easement, he can see that if someone knows that the ATM is there, they could go get cash out of the ATM and then go back through to get to one of the other stores. He stated that would be the reason they would want to grant that access.

Weir stated she had a concern at the work session regarding whether or not the tenants had been notified. She stated she is glad to hear that the owner notified the tenants regarding the request.

Holtrop stated that it appears that 3 of the 4 businesses already have the cross access easement in place. DeGraff stated the easement as he understands is across the front of these stores. He stated it isn't just a straight shot. Schweitzer stated he isn't familiar with the easement, and it could be a complicated factor. Discussion ensued regarding the easement. Holtrop stated his only comment is if you can get access to the east he would think they can keep going. He stated we want to prevent this from being a problem and would be in favor of the easement.

Rod Alderink, 4508 East Shore Dr Caledonia, commercial realtor representing Mr. DeGraff was present. He stated regarding the easement law, the parties to the easement all have to agree if you are going to add traffic volume to another easement. He stated in order for them to go to the east across any of these properties they can't just get permission from the first owner because the common driveway and cross parking access easement is all 5 of the properties. Discussion ensued.

Schweitzer stated in this case maybe it would be sufficient if there are willing that they add a condition of approval allow for cross access to the east. That would leave an opportunity for the City to ask the properties further to the east out to Radcliff if they would be willing to grant an easement. Then we have them in line to provide a cross access if they want to provide if from their end.

Benoit questioned if he has cross access agreement with Burger King. DeGraff stated that he does. Discussion ensued regarding cross access.

DeGraaf stated he would be happy to put a curb cut in the future if they can actually get easements all the way across.

Quinn questioned how the lighting is in the rear of the building that they are going to stripe. Schweitzer stated there are wall packs on the west elevation and along the back and there are a number of wall packs and flood lights. Schweitzer stated there appears to be sufficient lighting.

VanderMeer stated he is in favor of the curb cut. Schweitzer stated if the property owner is willing to allow for access there and to seal the deal that we contact the properties to the east to verify whether they would be opposed to that, we can take that forward and work with the property owner to accomplish that if there was a willingness amongst all parties to do so. VanderMeer stated he is in favor of this.

Jones questioned if there is an entrance to the Southridge center from the back. Schweitzer stated there is a door out the back of the building for at least the restaurant.

Motion by Holtrop, supported by Quinn, to grant Conditional approval of the request of Bigg Architecture on behalf of Huntington Bank for a Special Land Use Freestanding Drive Through ATM at 2956 – 28th Street SE (Zoned C-2 Community Commercial) Approval is conditioned on condition 1 and basis points 1-2 as described in In Schweitzer's memo dated June 22, 2023.

- Motion Carried (7-0) –
- Kape and Poyner absent -

Motion by Holtrop, supported by Beoint, to grant Conditional approval of the revised site plan dated 06-15-23, for the Huntington Bank ATM at 2956 28th Street, SE as described in Case # 13-23. Approval is conditions 1-3 with condition 2 modified to read "provide a cross access easement to the property to the east as depicted on their revised site plan along with City promotion of continued access to Radcliff drive when opportunity allows" and basis points 1 – 5 as described in Schweitzer memo dated June 22, 2023.

- Motion Carried (7-0) –
- Kape and Poyner absent -

J. Work Session

Case#14-23 – Storage Five Kentwood - Change in the Master Planned Land Use Designation from Commercial to Industrial for an 8.2 acre area of the property located at 1800-1900 44th Street SE

Golder stated this is a master plan amendment for the former Kentwood Village Mall and also trinity Health billing. She stated the applicant wishes to use 8.2 acres of the overall 13.30 acre property as industrial. The applicant intends to divide 3.32 acres along the 44th Street frontage into four new commercial outlots. A fifth outlot is proposed on the

southeast corner of the site, also intended to remain as a commercial parcel. Since the subject parcel is a platted lot, additional approvals for the land divisions will be required.

Golder stated in order to accommodate the change in use/rezoning, the Kentwood Master Plan must be amended to allow for the proposed industrial use. The change in use would only affect the 8.2 acres that includes the existing building; four retail pads would remain along 44th Street. Another 1.77 acres on Bowen Boulevard would remain for commercial use.

Golder stated the owner said that there has been no interest in the property for 3 years. The building located on the property is 116,057 square feet in area and has been most recently used as a medical call center.

Golder stated the applicant would like to use the building for climate controlled self-storage, requiring industrial zoning.

Golder stated the applicant approached the Master Plan Committee in 2023 to seek feedback on the amendment to the Master Plan. While the proposed self-storage use would generate very little traffic, concern was raised regarding rezoning to an industrial district, and whether permitted industrial uses (other than the storage) would be allowed. The Committee was concerned that variances would be needed to address the required separation of industrial uses from adjacent residential uses. Finally, concern was raised as to whether more self-storage is needed in the community, and whether the proposed use will be a detriment to the vitality of the area.

Golder stated In accordance with Section 10.3 C 4 of the Zoning Ordinance, no industrial building or storage can be located closer than 100 feet to a residential district or boundary. She stated the proposed is 34 feet from a residential use and would require a variance. A building may be permitted as close as 50 feet if that area between the building and the boundary is an unlighted landscaped buffer used for no other purpose. Further, no entrance other than a required emergency door can enter upon the area. In addition, an industrial rear yard adjoining a residential district must comply with Chapter 19 setback and screening provisions. Chapter 19 requires a 50 foot minimum wide buffer zone, with a 6-foot vertical screen with specific required planting materials within the screening area.

Golder stated the other issue is parking. If the property is rezoned for industrial use, 77 parking spaces would be required to be retained. The applicant could provide deferred parking. The applicant indicated that their parking need would only be 30 spaces. The 8.2 acre parcel proposed for industrial use includes 391 parking spaces. Since most of these spaces will not be needed, the applicant may wish to propose some alternate use that may be of some benefit to the neighborhood. She stated what we don't want it Uhaul rentals and people parking their RV's.

Chris Katanya, 40 Glimlock Ct. Sugarland TX 77479 was present. He stated his idea is to rezone the 8.2 acres to industrial. He stated if the back parking lot does remain he can develop it into more self storage. He stated he has Jiffy Lube under contract to purchase parcel 4, but it only happens if the master plan amendment goes through and rezoning. VanderMeer questioned if there are other facilities the commissioners can look at similar to the propeosed. Katanya stated he would be happy to provide addresses of other storage facilities. He doesn't own one in town, but they do have a development project going on right now in downtown Grand Rapids; a conversion of an existing building.

Vandermeer questioned if a door in the back would help. Golder stated the doors would be more on the east part of the back of the building. Katanya stated there are no doors other than an emergency exit. Golder stated there is still going to be a variance required. She stated the reduction to 50 feet can still be applied if it is all going to be landscaped where it abuts residential use. Golder stated there is also fire lane going around the building. Fire is going to have to agree to give up part of the fire lane if it is going to be landscaped. Katanya stated they spoke to fire there could be a case where they can landscape part of the fire lane but fire can still access the building. Golder stated a self-storage is quiet and there will be less activity than there was with all the various uses that have occurred over the years.

Vandermeer questioned if we can change the recommendation so that the special land use would only pertain to self-storage. Therefore, that if they sold it or closed it, that it would revert back to commercial versus industrial. Golder stated only if it was a conditional rezoning, or a PUD can we do that. We are only looking at the Master Plan amendment right now.

Vandermeer stated it would be a nice gesture if we turn the back into some greenspace. Golder stated the city doesn't want to have to maintain a park. Golder stated we have a housing shortage so maybe housing is the answer.

Quinn questioned if we have any other industrial zoned properties in close proximity to residential. Golder stated the only one she can think of is near Division and 54th Street. Quinn stated he struggles with this proposal.

Benoit stated we are talking about master planning the property for industrial. He stated when someone comes in with an industrial use it will be hard to say no. He stated he struggles with getting this to industrial for this reason.

Katanya questioned if he could do a Master Plan amendment with a condition that it will only be a certain use. Golder stated we have used that in the Master Plan off of 36th Street. The only way to ensure that you get something you don't want is conditional zoning or PUD. She thinks we can put that as a condition.

Holtrop stated his biggest hurdle is guaranteeing what type of industrial. He stated his only comfort is the variances, we would have that to be able to prevent and block some sort of use that we don't want.

Holtrop questioned what would a PUD look like. Golder stated they would have to come in with a description of what they are doing. He stated he can see a change in the Master Plan. However, it seems kind of strange to put storage spot right in the middle, but with the variances and things in place for what you can do in industrial he thinks we will still have some control over it. Golder stated it does limit any future use of that property should the self-storage not work out. Discussion ensued.

Porter stated the lot in back is up against residential and we would have to control that in the PUD when that comes up. He stated he likes the idea of greenspace too bad Park and Rec can't do it. He stated the applicant mentioned residential but is there access. Katanya stated he drove it and there is access but once you're in there it would have to be something creative maybe make a cul-de-sac into the property. He stated it hasn't been explored yet.

Schweitzer stated if you are inclined to feel that this might be a good fit for this location there is another option. Instead of going through a master plan change to industrial; another alternative will be to consider whether or not self-storage should be an allowed use in the commercial zone and amend the ordinance. If they are going to consider allowing it, he would suggest that it be a special land use to make sure it is a good fit for the particular location. Schweitzer stated he doesn't like it either way, but he thinks this might be less stretching out zoning and master planning for the community. Golder stated if we went this route, she thinks that every vacant commercial building would consider self-storage use and she would be concerned. Pung stated it would be a special land use for climate control self-storage with no unit having exterior access. That would eliminate the industrial district where each one has a sliding door. It would have to be climate controlled, and all access is from inside the building. It would not be as easy to convert a commercial building. Discussion ensued.

VanderMeer suggested checking with the City Attorney to see which route would be the better route to go to protect the City.

Jones stated she has a little heartburn turning this into self-storage because of the high visibility of that building with the potential of Jiffy Lube.

Case#15-23 – EquipmentShare- Zoning Ordinance Text Amendment(Consideration of Special Land Use Open Air Heavy and Industrial Equipment Sales, Rental and Service)

Pung stated the applicant is requesting amending the zoning ordinance to add construction and industrial equipment sales and rental as a special land use in the industrial district. He stated currently there is allowance for an indoor sale of such equipment as a permitted use. They also wish to display their equipment outdoors. This

will be an open air business and open air businesses are not currently allowed within the industrial district.

Pung stated open air businesses are currently limited to the following zoning districts as special land uses:

- C2 Community Commercial
- C3 Regional Commercial
- C-PUD Commercial Planned Unit Development
- M-PUD Mixed Use Planned Unit Development
- FBC Form Based Code

Based on the type of equipment that is proposed for sale or rent it would be reasonable to locate such a use in an industrial district as opposed to a commercial location.

Pung stated right now they have it worded construction and equipment sales and rental, with no distinction of inside versus outside. He stated because we have allowance for interior they need to specify that this will be outdoor storage/display of construction and equipment rental.

Pung stated the applicant has not offered any specific site design criteria that would apply to *Construction and Industrial Equipment Sales and Rental*. If it is deemed necessary to apply specific standards (limit to height of displayed equipment, screening requirements, limits to front yard display, etc.), they should be identified within Section 15.04 of the Zoning Ordinance.

Pung stated the general special land uses would still apply but if there are specific standards we would like to see, we need to address this through special land use.

Brian Sikkema, Highpointe Real Estate, on behalf of Steelcase 5500 Cascade Rd SE was present. He stated this request is more of an industrial fix, it is business to business sales and rental. He stated they feel like this is a great use, it is a unique site and fits within very well. It is already screened well with buffers. He stated they are open to ideas. They believe it is going to be a good neighbor. He stated EquipmentShare is proposing one curb cut, they do not have a plan for the vacant land next to them yet.

Sikkema stated the traffic is limited. They are delivering to the customer larger items. He stated they believe it is more appropriate in the industrial district than the commercial district. He stated they plan to locate some smaller equipment along the front and larger equipment in the back. He stated they will temporarily be using Steelcase's drive. He stated there will be fencing around the site between EquipmentShare and Steelcase.

Porter stated having this use in the industrial zone is valuable. He stated his concern is the aesthetics. He questioned if there is a way you can determine what it will look like and how tall things can be. Kent Fleet, 2842 Ardella, Hudsonville, MI was present. He stated

the equipment they have stored will not be taller than the berm. He stated you won't see it from the road.

Sikkema stated for EquipmentShare this is a unique site with the big berms and the setbacks they have, they are not going to make it tough for the next guy to put one next door. They have some good berming.

Holtrop questioned regarding text amendments how and when would we do specific site design standards. Pung stated under the special land use, there is a section that deals with site design criteria. Pung stated the applicant is willing to offer some site design standards. Discussion ensued. Holtrop stated he is ok with the request but wants to tighten up when the time comes what can be done on the site as a special land use. Schweitzer assured the commissioners that Pung's staff recommendation would include site design standards.

Benoit, Quinn, VanderMeer concurred with Holtrop.

Jones stated the only thing she was concerned about was the visibility and was happy to hear they have berms.

K. New Business

Motion by Holtrop, supported by Benoit, to set public hearing date of July 25, 2023, for: Case#16-23 – Kum & Go – Special Land Use and Site Plan Review for a Vehicle Fuel Station located at 2975 and 2995 28th Street SE

- Motion Carried (7-0) –
- Kape and Poyner absent -

L. Other Business

1. Commissioners' Comments

2. Staff's Comments

M. Adjournment

Motion by Commissioner Benoit, supported by Commissioner Quinn, to adjourn the meeting.

- Motion Carried (7-0) –
- Kape and Poyner absent -

Meeting adjourned at 8:45pm.

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Respectfully submitted,
Ed Kape, Secretary



**CITY OF KENTWOOD
PLANNING COMMISSION
PROPOSED
FINDINGS OF FACT
JULY 11, 2023**

Schweitzer 6-22-2023

PROJECT: Huntington Bank ATM

APPLICATION: 13-23

LOCATION: 2956 28th Street, SE

HEARING DATE: June 27, 2023

REVIEW TYPE: Special Land Use Review

MOTION: **Motion by Holtrop, supported by Quinn, to grant Conditional approval of the request of Bigg Architecture on behalf of Huntington Bank for a Special Land Use Freestanding Drive Through ATM at 2956 – 28th Street SE (Zoned C-2 Community Commercial) Approval is conditioned on condition 1 and basis points 1-2 as described in In Schweitzer's memo dated June 22, 2023.**

- Motion Carried (7-0) –
- Kape and Poyner absent -

CONDITION: 1. Conditional approval of the revised site plan dated 6-15-2023.

BASIS: 1. The conditional approval of the revised site plan is intended to address parking and traffic circulation issues associated with the ATM as it impacts the existing multi-tenant retail development.
2. Applicant's presentation and discussion at the Planning Commission work session and public hearing.



**CITY OF KENTWOOD
PLANNING COMMISSION
PROPOSED
FINDINGS OF FACT
JULY 11, 2023**

Schweitzer 6-22-2023

PROJECT: Huntington Bank ATM

APPLICATION: 13-23

LOCATION: 2956 28th Street, SE

HEARING DATE: June 27, 2023

REVIEW TYPE: Site Plan Review

MOTION: **Motion by Holtrop, supported by Benoit, to grant Conditional approval of the revised site plan dated 06-15-23, for the Huntington Bank ATM at 2956 28th Street, SE as described in Case # 13-23. Approval is conditions 1-3 with condition 2 modified to read “provide a cross access easement to the property to the east as depicted on their revised site plan along with City promotion of continued access to Radcliff drive when opportunity allows” and basis points 1 – 5 as described in Schweitzer memo dated June 22, 2023.**

- Motion Carried (7-0) –
- Kape and Poyner absent -

CONDITIONS:

1. Re-stripe parking spaces in the rear as depicted on the revised site plan, which includes two carry out only spaces for the current Mexican restaurant tenant on the southwest corner of the multi-tenant building.
2. Provide a cross-access easement to the property to the east as depicted on the revised site plan.
3. Documentation of the property owner’s acceptance of conditions 1 and 2.

BASIS:

1. The additional re-striping of the parking spaces and take-out only spaces south of the building should help compensate for the

loss of parking in front of the building and provide more definition of parking and circulation.

2. Given the relative grade of the shopping center to the east, it would be desirable to also establish a new interconnection from the parking area south of the existing shopping center building at 2956 28th Street, SE over to the shopping center parking area at 2978 28th Street, SE.

3. The proposed location of the ATM has been adjusted further to the west to provide greater queuing space away from the 28th Street access drive and more desirable traffic circulation.

4. The revised plans otherwise comply with the Site Plan review standards Section 14.05 of the Zoning Ordinance.

5. Applicant's presentation and discussion at the Planning Commission work session and public hearing.

STAFF REPORT: July 3, 2023

PREPARED FOR: Kentwood Planning Commission

PREPARED BY: Lisa Golder

CASE NO.: 14-23 1800-1900 44th Street Master Plan Amendment

GENERAL INFORMATION

APPLICANT: Chris Catania
Storage Five Development
PO Box 1942
Seabrook, TX 77586

STATUS OF
APPLICANT: Option holder

REQUESTED ACTION: Change in the Master Plan Land Use Designation from
Commercial to Industrial

EXISTING ZONING OF
SUBJECT PARCEL: C-2 Commercial

GENERAL LOCATION: 1800-1900 44th Street SE

PARCEL SIZE: 8.2 Acres

EXISTING LAND USE
ON THE PARCEL: Existing office space/call center

ADJACENT AREA
LAND USES:
N: 44th Street ROW
S: Residential—Tamarisk Apartments, multifamily
E: Commercial (gas station, daycare)
W: Restaurant, office

ZONING ON ADJOINING
PARCELS:
N-NOS Neighborhood Office Service and LDR Low Density
Residential--City of Grand Rapids
S: C-2 Commercial, R-3 Medium Density Residential, R-4 High
Density Residential
E: C-2 Commercial

W:C-2 Commercial

Compatibility with Master Plan:

The Kentwood 2020 Master Plan recommends Commercial use of this site.

Zoning and Land Use History:

The site has been zoned for commercial use since at least 1976. The property has been used as a grocery store, bowling alley, and mall before being used as a call center.

Project Overview:

In November of 2022, the applicant appeared before the Land Use and Zoning (LUZ) Subcommittee seeking feedback on the potential for rezoning of 8.2 acres of property located at 1800-1900 44th Street from Commercial to Industrial. The building located on the property is 116,057 square feet in area and has been most recently used as a medical call center. The applicant would like to use the building for climate controlled self-storage, requiring industrial zoning.

The applicant has indicated that the call center was refurbished prior to the pandemic and then was never fully re-occupied since due to the popularity of work from home. The building has been largely vacant for three years; there has been little or no interest in leasing the building.

In order to accommodate the change in use/rezoning, the Kentwood Master Plan must be amended to allow for the proposed industrial use. The change in use would only affect the 8.2 acres that includes the existing building; four retail pads would remain along 44th Street. Another 1.77 acres on Bowen Boulevard would remain for commercial use.

The applicant approached the Master Plan Committee in 2023 to seek feedback on the amendment to the Master Plan. While the proposed self-storage use would generate very little traffic, concern was raised regarding rezoning to an industrial district, and whether permitted industrial uses (other than the storage) would be allowed. The Committee was concerned that variances would be needed to address the required separation of industrial uses from adjacent residential uses. Finally, concern was raised as to whether more self-storage is needed in the community, and whether the proposed use will be a detriment to the vitality of the area.

Staff Analysis:

1. The applicant has requested an amendment to the Master Plan to allow the existing 116,057 square foot building to be used as a self-storage facility. Self-storage facilities are considered industrial warehouses in the City of Kentwood, and therefore a use permitted by right in the I-1 and I-2 zones.
2. The applicant wishes to use 8.2 acres of the overall 13.30 acre property as industrial. The applicant intends to divide 3.32 acres along the 44th Street frontage into four new commercial outlots. A fifth outlot is proposed on the southeast corner of the site, also

intended to remain as a commercial parcel. Since the subject parcel is a platted lot, additional approvals for the land divisions will be required.

3. If the property is rezoned for industrial use, 77 parking spaces would be required to be retained; alternatively, the applicant could provide deferred parking. The 8.2 acre parcel proposed for industrial use includes 391 parking spaces. Since most of these spaces will not be needed, the applicant may wish to propose some alternate use that may be of some benefit to the neighborhood.
4. In accordance with Section 10.3 C 4 of the Zoning Ordinance, no industrial building or storage can be located closer than 100 feet to a residential district or boundary. A building may be permitted as close as 50 feet if that area between the building and the boundary is an unlighted landscaped buffer used for no other purpose. Further, no entrance other than a require emergency door shall enter upon the area. In addition, an industrial rear yard adjoining a residential district must comply with Chapter 19 setback and screening provisions. Chapter 19 requires a 50 minimum width buffer zone, with a 6-foot vertical screen with specific required planting materials within the screening area.

The southwest corner of the existing Trinity Health call center is 34 feet from the common property line for Tamarisk Apartments. Therefore, in order to rezone the property for industrial use, the applicant will have to receive Zoning Board variances to resolve these issues, or otherwise find some way to comply with the zoning regulations.

5. The conversion of commercial space to industrial space may be a concern due to the future uses of industrial property. Self storage and manufacturing are uses permitted by right. If the storage use is not successful there may be pressure to convert the building into an industrial use that is inappropriate when adjacent to residences.
6. According to the Institute of Traffic Engineers report Trip Generation, 11th Edition, a mini warehouse can generate 168 trips per day. The use can generate 10.41 trips in the AM peak hour, and 17.4 trips in the PM peak hour.
7. The City Engineer will determine how storm water management will be accommodated on the site. This may affect the developable area of the industrial use or the outlots.
8. Planning Commission comments at the work session include:
 - Want to look at other facilities by Storage Five
 - Revert back to commercial use if storage facility is closed or sold?
 - Greenspace would be a positive on the site
 - Possibility of housing on site in order to eliminate unneeded parking
 - Other industrial in close proximity to residential?
 - Concern about other industrial uses if we change the master plan to Industrial, although the city has specified certain conditions as part of a master plan amendment
 - Variances would have to be obtained

- Interest in a PUD so the city has control
- Discussion as to whether to amend C-2 zone to allow self storage as a Special Land Use; how it could be incorporated in the Zoning Ordinance and whether we will end up with self storage in big boxes throughout the city.
- Desire to seek City Attorney opinion on options

Attributes:

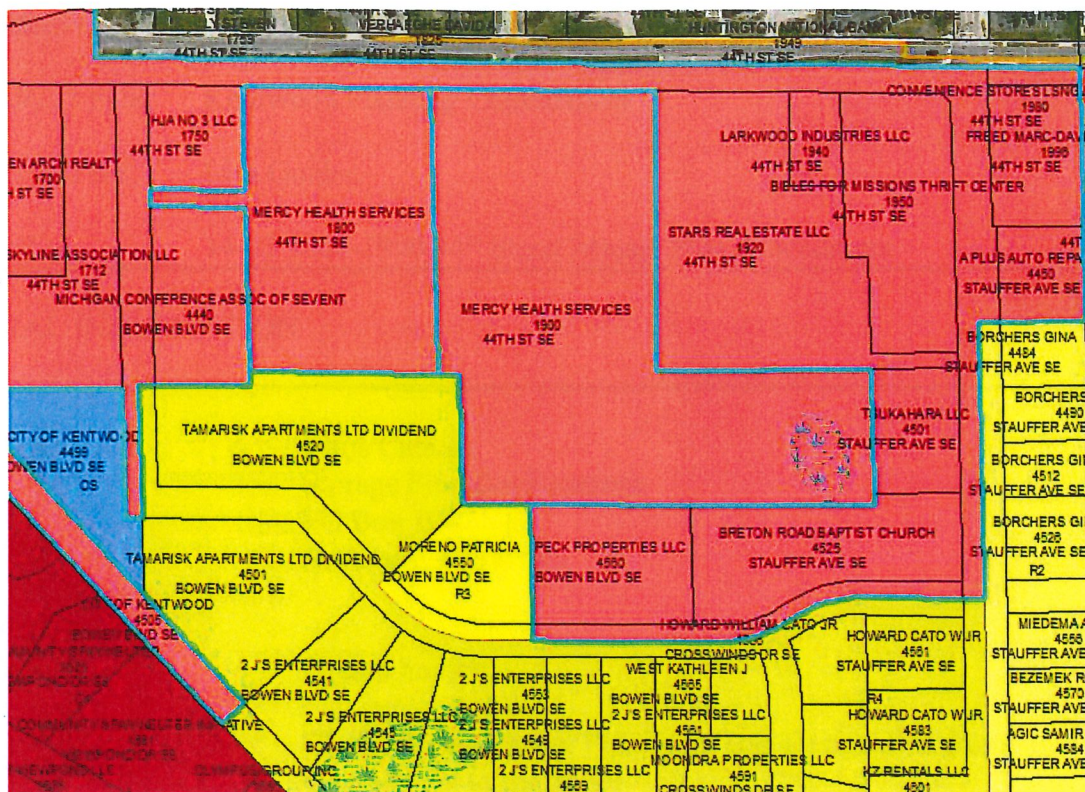
- Re-use of a large vacant building
- Additional commercial uses on frontage will minimize vacant parking lot
- Building exterior will be updated

Issues:

- Limiting industrial use in future
- Variances required for proximity to residential
- Self storage adds no vitality to area; only benefit to those who need storage, otherwise limited benefit to businesses or residences



1800-1900 44th Street SE



Zoning: 1800-1900 44th Street and vicinity
 Property is zoned C-2 Commercial



PLANNING STAFF RECOMMENDATION

Pung 07/06/23

PROJECT: Zoning Ordinance Text Amendments

APPLICATION: 15-23

HEARING DATE: July 11, 2023

REVIEW TYPE: Zoning Ordinance Amendments Relating to Open Air Construction and Industrial Equipment Sales and Rental

RECOMMENDATION: Recommend to the City Commission to amend the Kentwood Zoning Ordinance No. 9-02 as follows:

Amended Section 10.2.A Table of Use to add:

Open Air Construction and Industrial Equipment Sales and Rental as a special land use in the I1 Light Industrial and I2 Heavy Industrial districts.

Amend Section 15.03 Special Land Use Specific Approval Standards to add the following:

KK: Open Air Construction and Industrial Equipment Sales and Rental

Amend Section 15.04 Site Design Standards to add the following:

KK: Open Air Construction and Industrial Equipment Sales and Rental

1. There shall be a minimum front yard landscaped setback of thirty-five (35) feet. No parking, storage, or display is permitted within the required landscaped setback.
2. The maximum height of equipment stored or display in the front yard shall be no more than ten (10) feet.
3. A landscaped berm or solid wall at least three (3) feet in height may be required in the front yard.
4. All equipment shall be stored in the configuration used for transportation of the equipment.
5. A six-foot high vertical screen and/or a buffer zone may be required along the side and rear lot lines to enclose and screen the open air storage area.
6. The lot areas used for parking, display, or storage shall be provided with a bituminous or Portland cement binder so as to provide a permanent, durable, and dustless surface and shall be graded and drained so as to dispose of all surface water.

Basis:

- 1) The proposed amendments would make allowance for Open Air Construction and Industrial Equipment Sales and Rental in industrial districts.
- 2) The proposed use is an appropriate use for industrial districts.
- 3) Storage of equipment in transport configuration would prevent storage of equipment in a manner to increase its visibility; for example, construction lifts stored or displayed with extended booms or work platforms.

STAFF REPORT: June 29, 2023
PREPARED FOR: Kentwood Planning Commission
PREPARED BY: Lisa Golder
CASE NO.: 16-23 Kum and Go SLU and Site Plan Review Vehicle Fuel Station

GENERAL INFORMATION

APPLICANT: Kum & Go L.C. rep by: Michael McPherson, Atwell LLC
Ryan Halder 12745 23 Mile Road Suite 200
1459 Grand Ave Shelby Twp MI 48315
Des Moines IA 50309

STATUS OF
APPLICANT: Owner and owner's representative

REQUESTED ACTION: Applicant is requesting Special Land Use approval and Site Plan Review of a vehicle fuel station located at Avenue.

EXISTING ZONING OF
SUBJECT PARCEL: C-2 Commercial

GENERAL LOCATION: Northeast corner of 28th Street and Ridgemoor Avenue

PARCEL SIZE: 1.496 Acres

EXISTING LAND USE
ON THE PARCEL: Existing retail

ADJACENT AREA
LAND USES: N: Non-conforming accessory building
S: 28th Street
E: Retail (Dollar General)
W: Ridgemoor Avenue, retail

ZONING ON ADJOINING
PARCELS: N, S, E, W: C-2 Commercial

Compatibility With Master Plan

The Master Plan recommends commercial use for this location.

Relevant Zoning Ordinance Sections

Chapter 15.04 D lists the Special Land Use requirements for Vehicle Fuel Stations. General standards for Special Land Uses are found in Section 15.02. Site plan review standards are found in Section 14.05.

Zoning History

The site has zoned for commercial use since at least 1970.

TECHNICAL INFORMATION

Street and Traffic

The site is located at the northeast corner of 28th Street and Ridgemoor Avenue. 28th Street has two lanes in each direction with a center turn lane. The existing businesses (West Marine and a second hand store) are served by a 28th Street driveway shared by the adjacent Dollar General store. The 28th Street right of way in this area is approximately 130'. Ridgemoor Avenue is a 30 foot paved road within an 80 foot right of way. The speed limit on 28th Street is 45 mph.

The existing businesses are served by a driveway on 28th Street as well as two driveways on Ridgemoor Avenue. The 28th Street driveway is divided with a median and shared with the adjacent Dollar General store. The driveway is full service and is located approximately 292 feet from Woodland Mall Drive. The property to the east of the Dollar General store (Batteries Plus and Sleep Doctor) have two driveways to 28th Street. There does not appear to be restrictions of left turn movements out of the property, and cross access is permitted to Ridgemoor Avenue.

The site's two existing Ridgemoor driveways do not currently align with the driveways on the west side of Ridgemoor. The proposed Kum and Go development proposes the alignment of the southern driveway with an existing driveway that serves the alterations shop on the west side of Ridgemoor, 154' north of 28th Street. The proposed new curb cut is 46' wide at the Ridgemoor right of way; 30' is the maximum permitted as per Section 54-194 of the Kentwood Code of Ordinances. The proposed curb cut onto 28th Street is also approximately 46'; the width of this driveway is being reviewed by MDOT.

The existing northernmost driveway on Ridgemoor Avenue also does not align with the driveway on the west side of Ridgemoor Avenue. An access easement exists on the property that serves Dollar General. The easement extends from Ridgemoor Avenue to the east, then turns south along the common property line between the site and Dollar General. The joint easement would be used for deliveries to the respective sites, with the exception of fuel delivery for the proposed Kum and Go.

Trip Generation and Traffic Analysis

The applicant has submitted a Traffic Impact Study as required by the Zoning Ordinance. The analysis reviewed current conditions, and then estimated future conditions, given the proposed gas station use. The study concluded that the "28th Street/East site driveway" (the shared driveway with Dollar General) operates currently at a LoS of B-C currently during the AM and the PM peak

hour. With the addition of the Kum and Go, this driveway is expected to continue to operate at the same LoS B and C. Only the southbound left turn movement degraded from LoS B to C with the addition of the proposed gas station.

The driveway on the site with the most turning movement delay was the Ridgemoor and 28th Street intersection. Currently the PM peak hour operates at a LoS D; however, the level of service will not degrade further with the addition of the gas station. The AM peak at this driveway will degrade from LoS B to C in the AM peak.

The most congested nearby intersection is the 28th Street and Radcliff/Woodland Mall intersection. This is the signalized intersection that serves Woodland Mall. The LoS for this intersection ranges from A to E. Future conditions suggest that the LoS for this intersection will largely remain the same with the addition of the proposed Kum and Go gas station.

Since 28th Street (M-11) is a state route, the Michigan Department of Transportation (MDOT) reviewed the traffic study. They have indicated in their letter of June 29, 2023 their concerns regarding the full access driveway proposed on 28th Street, indicating that lefts in and out of the driveway would potentially conflict with queues at the signal of Woodland Drive. As a result, MDOT expressed a preference that the east driveway to the proposed Kum and Go be converted to a right-in, right-out only driveway. As a shared driveway it is unclear whether the city can require the right-in, right-out driveway without evidence that the intersection is unsafe.

The traffic study indicates a right turn deceleration lane is warranted along westbound 28th Street at the East driveway.

Staff Review

1. The proposed Kum and Go development is located on a 1.496 acre property at the northeast corner of Ridgemoor Avenue and 28th Street. The station is proposed to be open 24 hours a day. Six gas pumps (12 pumping stations) are proposed. The convenience store is 3,968 square feet in area. Restrictions on servicing the facility were not noted in the applicant's description of operation. Up to five employees may occupy the convenience store.

Special Land Use

2. Fuel stations are permitted in the C-2 zone with Special Land Use, meeting the general requirements and the requirements of Section 15.04D, as follows:
 1. A vehicle fuel station building and its accessory uses and buildings shall be located not less than fifty (50) feet from any right-of-way line or from any side or rear lot line abutting a Residential District. This setback requirement shall not apply to accessory parking.

The proposed fuel station is located 50' from the Ridgemoor right of way and 150 feet from the 28th Street right of way.

2. Where adjoining a residential use or Residential District, Buffer Zone "B" is required (see Chapter 19, Landscaping). In addition, the Planning Commission may require a solid wall or solid fence along the lot line having a maximum height of six (6) feet.

The use does not abut a residential district.

3. The minimum frontage shall be one hundred fifty (150) feet and the minimum lot area of one (1) acre.

The fuel station meets this requirement.

4. Accessory auto related facilities located on the premises such as wash facilities, vehicle rental and vehicle repair are allowed however must obtain separate special land use permits as provided for in this Chapter.

These accessory uses are not proposed.

5. The lot shall be located so that at least one (1) side abuts an arterial street.

The lot abuts 28th Street, an arterial street.

6. The site shall be limited to no more than one (1) driveway for each street on which it has frontage.

The applicant is proposing one driveway on 28th Street. Two driveways are proposed on Ridgemoor Avenue. A variance from the Zoning Board of Appeals will have to be obtained.

7. All storage of material, merchandise and equipment shall be within the building.

The applicant's statement of operations indicates the desire to sell merchandise outside of the building. The location of the outdoor sales shall be indicated on the site plan as the storage of these materials could be considered contrary to this requirement.

8. Gasoline or other flammable mixtures shall not be used to wash down the premises.

9. In the event that a Vehicle Fuel station has been abandoned or not used as a Vehicle Fuel station for a period of more than one (1) year, any application to operate the premises as a Vehicle Fuel station shall be considered as an application for a new Vehicle fuel station.

10. The applicant shall comply with Michigan Department of Environmental Quality (EGLE) requirements.

General Special Land Use Standards

3. As a Special Land Use, the proposed fuel station must also comply with the standards of Section 15.02, as follows:

- A. Be designed, constructed, operated and maintained so as to be harmonious and appropriate in appearance, with the existing or intended character of the general vicinity and that a use will not change the essential character of the area in which it is proposed.

The area is zoned and intended for commercial use. The proposed gas station and convenience store is consistent with this intent of the general vicinity.

- B. Be served adequately by essential public facilities and services such as highways, streets, police and fire protection, drainage structures, refuse disposal, water and sewage facilities or schools.

The use is adequately served by public facilities

- C. Not create excessive additional requirements at public cost for public facilities and services.

The use will not create additional requirements at public cost.

- D. Not involve uses, activities, processes, materials, and equipment or conditions of operation that will be detrimental to any persons, property, or the general welfare by reason of excessive production of traffic, noise, smoke, fumes, glare, electrical or electromagnetic interference or odors.

The applicant has submitted a traffic impact study for the proposed K&G location, and the analysis was reviewed by the city and by the Michigan Department of Transportation. MDOT noted in their letter of June 29, 2023 that the driveway is located only 250 feet from the signal at Woodland Drive/Radcliff, and that left turns into and out of the driveway would conflict with the queues at the signal. They are therefore recommending a right in, right-out from the driveway shared with Dollar General (currently a full service driveway). Left turns out of the development would have access via Ridgemoor Drive, which is 592 feet west of the Woodland Drive/Radcliff intersection. However, the driveway is shared with Dollar General, and it is unclear whether the City could require a change in the operation of the driveway without amending the access easement.

- E. Be compatible and in accordance with the goals, objectives and policies of the Master Plan and promote the Intent and Purpose of the zoning district in which it is proposed to locate.

The use is consistent with the Master Plan.

- F. Be subject to stipulations by the Planning Commission of additional conditions and safeguards deemed necessary for the general welfare, for the protection of individual

property rights, and for ensuring that the intent and objectives of this Ordinance will be observed. The breach of any condition, safeguard, or requirement shall automatically invalidate the granting of the Special Land Use.

G. Comply with all applicable licensing ordinances

Site Plan Review

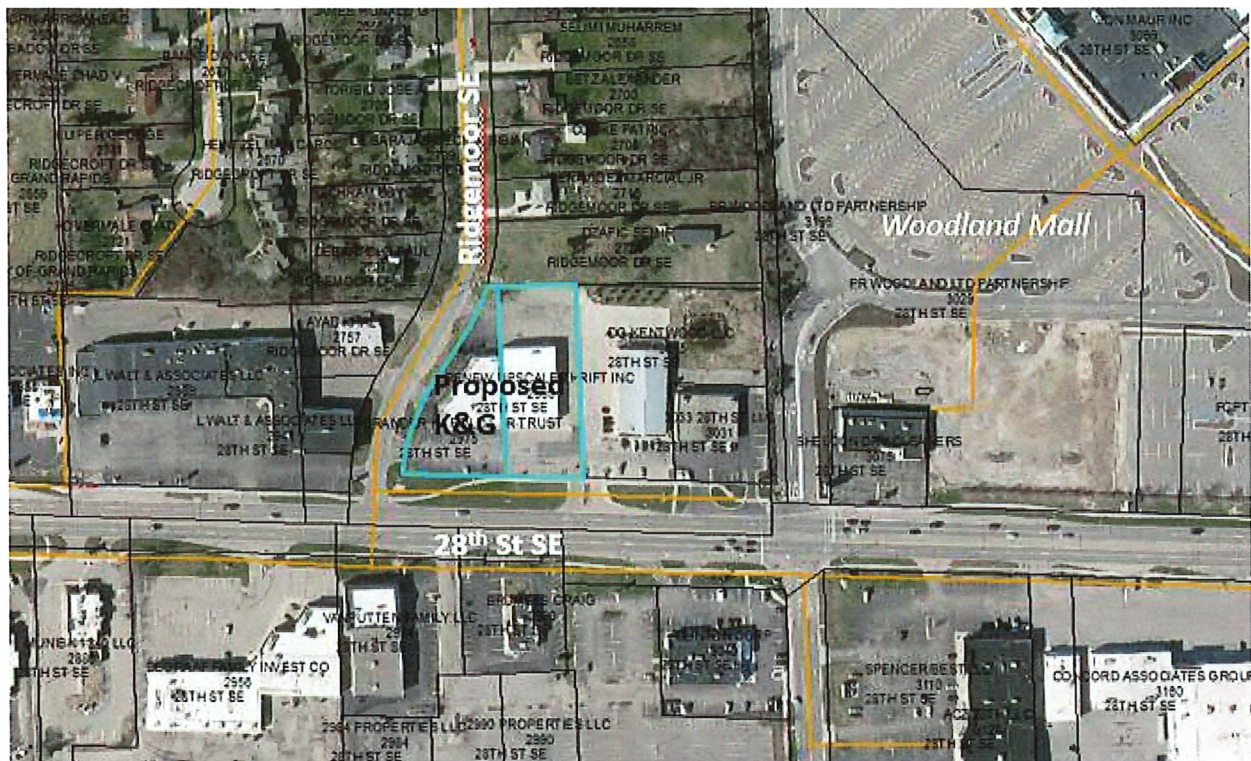
4. The proposed convenience store building will be 3,968 square feet in area. The use will require 16 parking spaces; 20 spaces are provided on the proposed plan. The parking lot requirements of the zoning ordinance require one canopy tree and 100 square feet of landscaped area per ten parking spaces.
5. Building materials percentages must be provided to determine compliance with Section 8.03 B 2 of the Zoning Ordinance.
6. Proposed wall signage on the east side of the building exceeds the allowances of the Zoning ordinance.

Attributes:

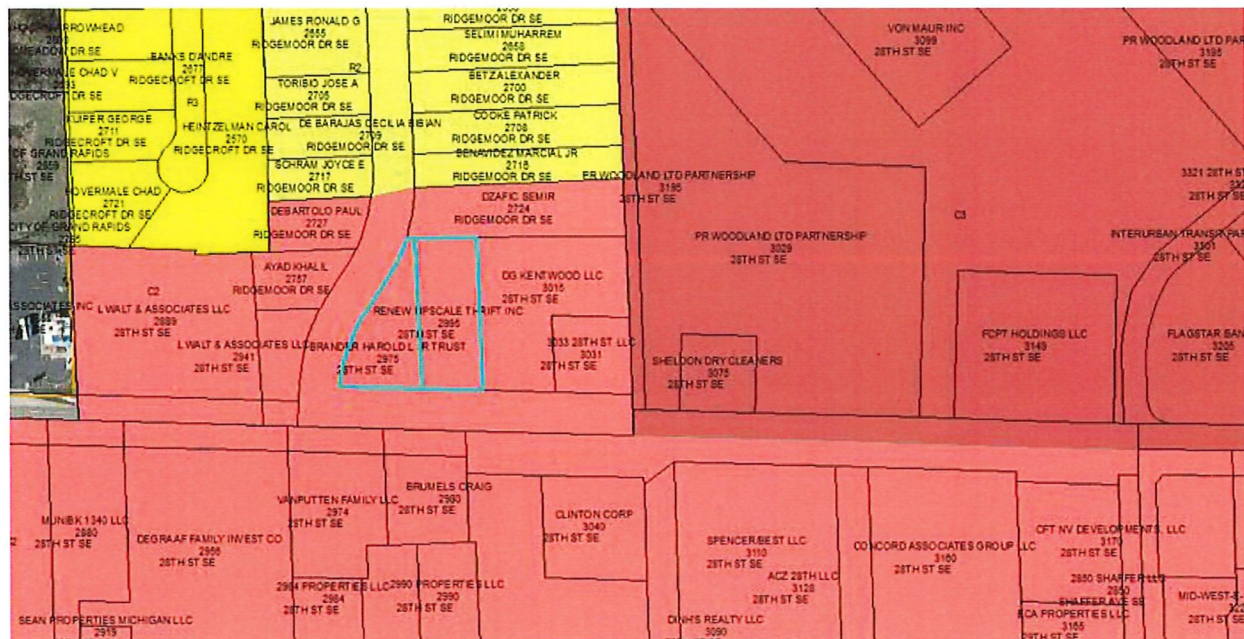
- Meets most of Special Land Use Standards
- Commercial use in commercial zone
- Setbacks met for building and accessory

Issues:

- MDOT requesting right in, right-out driveway on 28th Street
- Merchandise being sold outside building
- Driveways too wide



Kum and Go, proposed location



Zoning, proposed Kum and Go



Existing uses



CONSULTING. ENGINEERING. CONSTRUCTION.

June 12, 2023

City of Kentwood
4900 Breton Ave SE
Kentwood, MI 49508

Subject: Kum & Go 2627 - Site Plan and Special Land Use Review
Applicant: Kum & Go, L.C.

INTRODUCTION

Kum & Go, L.C. (The developer) has an option to purchase a +/-1.496-acre property at the northeast corner of 28th Street SE and Ridgemoor Drive SE. The developer proposes to construct a convenience store with vehicle fueling to include alcohol sales. The parcels are within a C-2 zoned area of Kentwood and will remain as such and will be combined as part of the development. A Special Land Use (SLU) approval for vehicle fueling will be required. The following is a written description to be included as part of the supporting application materials for the development including commentary on SLU standards.

NATURE OF PROPOSED USE

The proposed development will include the sale of typical package convenience store items, preparation and sale of food, and alcohol sales. Exterior sales may include ice, propane, firewood, packaged water, road salt, and other similar items typical of exterior sales at a convenience store with vehicle fueling. The vehicle fueling is proposed with six fuel dispensers in a can accommodate up to twelve vehicles. The development is proposed to have 24 hours of operations. Up to five employees may occupy the facility. Vehicular traffic will consist of typical passenger traffic with corresponding peaks during morning, lunch, and afternoon commutes.

SITE AND BUILDING LAYOUT

The proposed development sites the convenience store building centrally. Six fuel dispensers under a canopy will be centrally located to the south of the building. Parking is located to the east and south of the building totaling 20 parking spaces with one space being designated as an ADA space. Driveway entrances are proposed along 28th Street SE and Ridgemoor Avenue SE. The drive to 28th Street SE is shared with the property to the east.

The proposed floor plan includes food preparation and sales, a seating area, and retail area for typical convenience store items in the front of the building. Storage areas are located in the rear of the building.

Landscaped areas are proposed along each of the street frontages and along property boundaries abutting adjacent commercial areas. The dumpster area is located on the north side of the building and will be screened in accordance with applicable ordinances.

Adjacent property uses include Dollar General to the east, 28th St SE to the south with commercial uses to the south, commercial use to the west, and residential to the north.

SITE PLANS, BUILDING ELEVATIONS AND FLOOR PLAN

Please refer to the enclosed site plan set. This set contains all the information required per the City site plan review information requests within the city zoning ordinance.

SPECIAL LAND USE STANDARDS

Per section 15.04.D (Auto Related: Vehicle Fuel Stations) of the City of Kentwood Zoning Ordinance relating to Special Land Use standards, there are certain standards that must be met for vehicle fueling stations. The standards and their associated responses are listed and outlined below. City of Kentwood standards are numbered and Atwell's response and explanation as to how those standards are met are in bold beneath each line item:

1. A vehicle fuel station building and its accessory uses and buildings shall be located not less than fifty (50) feet from any right-of-way line or from any side or rear lot line abutting a Residential District. This setback requirement shall not apply to accessory parking.

The fueling dispensers as well as the proposed convenience store building are both located more than 50' away from right of way lines.

2. Where adjoining a residential use or Residential District, Buffer Zone "B" is required (see Chapter 19, Landscaping). In addition, the Planning Commission may require a solid wall or solid fence along the lot line having a maximum height of six (6) feet.

Required landscaping is provided along the north side of the property that abuts residential zoning.

3. The minimum frontage shall be one hundred fifty (150) feet and the minimum lot area one (1) acre.

The total area of the combined parcels of land is approximately 1.496 acres which exceeds the minimum lot size for a proposed fueling station. The frontage of the parcels along 28th St SE is approximately 282' and the frontage along Ridgemoor Ave SE is approximately 329', both exceeding the noted minimum frontage lengths for a fueling station.

4. Accessory auto related facilities located on the premises such as wash facilities, vehicle rental and vehicle repair are allowed however must obtain separate special land use permits as provided for in this Chapter.

Accessory auto facilities are not proposed as part of this development and therefore this standard does not apply.

5. The lot shall be located so that at least one (1) side abuts an arterial street.

28th St SE is considered to be arterial roads. The proposed development abuts at least (1) arterial street and meets the standard.

6. The site shall be limited to no more than one (1) driveway for each street on which it has frontage.

Per the attached site plans, there is one driveway entrance on abutting 28th St SE. We are requested two drives along Ridgemoor Dr SE consistent with existing conditions to facilitate deliveries associated with the proposed K&G and the Dollar General to the east that has an easement for access through the existing northern driveway. The second drive will allow truck circulation while minimizing disruption to customer movements.

7. All storage of material, merchandise and equipment shall be within the building. City of Kentwood Zoning Ordinance Chapter 15 15-4 Approval Standards for Special Land Uses

Noted. The proposed development only proposes the outdoor displays of certain items listed above in the section, "Nature of Proposed Use".

8. Gasoline or other flammable mixtures shall not be used to wash down the premises.

Noted. Gasoline and other flammable mixtures will be expressly prohibited for the use of washing the premises.

9. In the event that a Vehicle Fuel station has been abandoned or not used as a Vehicle Fuel station for a period of more than one (1) year, any application to operate the premises as a Vehicle Fuel station shall be considered as an application for a new Vehicle fuel station.

Noted.

10. The applicant shall comply with Michigan Department of Environmental Quality (MDEQ) requirements.

Noted. All MDEQ (now EGLE) requirements given in writing will be followed and conformed to.



GRETCHEN WHITMER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF TRANSPORTATION
GRAND RAPIDS TRANSPORTATION SERVICE CENTER

BRADLEY C. WIEFERICH, P.E.
DIRECTOR

June 29, 2023

Lisa Golder
Economic Development Planner
City of Kentwood
4900 Breton Ave SE
Kentwood, Michigan 49508

Dear Lisa:

We have reviewed the proposed site plan and related traffic impact study for the Kum & Go Store #2627 at M-11 (28th St)/Ridgemoor Dr in Kentwood. While we find the study to be complete and accurate, we have concerns with the full-access driveway they are proposing on M-11. With the signalized intersection of M-11/Radcliff Ave/Woodland Dr only about 250 ft east of the driveway, left turns into and out of the driveway would potentially conflict with the queues at the signal. We would therefore prefer if the driveway (that is shared with Dollar General) be converted to right-in/right-out only operation. The left turns into and out of the site would have access via Ridgemoor Dr. Please pass along these concerns to the Planning Commission for use in their site plan review.

If you have any questions, please contact either me or Kerwin Keen, Grand Rapids Transportation Service Center Permits Engineer at 616-464-1800.

Sincerely,

Jason E.

Cole, P.E.

Jason E. Cole, P.E.

Assistant Operations Engineer

Digitally signed by: Jason E. Cole,
P.E.
DN: CN = Jason E. Cole, P.E., email
= colej@michigan.gov C = AD O =
MI/OT OU = Grand Rapids TSC
Date: 2023.06.29 15:56:56 -0400

Cc:

K. Keen

MEMO

VIA EMAIL jantoniewicz@atwell-group.com

To: Jamie Antoniewicz
Atwell, LLC

From: Jacob Swanson, PE
Fleis & VandenBrink Engineering

Date: March 22, 2023

Re: Proposed Convenience Store with Fuel
Kentwood, Michigan
Traffic Impact Study

1 INTRODUCTION

This memorandum presents the results of the Traffic Impact Study (TIS) for a proposed commercial development in the City of Kentwood, Michigan. The project site is located in the northeast quadrant of the 28th Street (M-11) & Ridgemoor Drive intersection, as shown in the attached **Figure 1**. The proposed development plan includes the construction of a convenience store with fueling stations. There are existing and operational businesses on the project site (West Marine – a marine supply store and ReNew – an upscale thrift store); both of which will be razed with the construction of the proposed development. The existing site access will be maintained via the two (2) driveways on Ridgemoor Drive and the one (1) shared access driveway with Dollar General, on 28th Street (M-11); however, the southern driveway along Ridgemoor Drive will be relocated further north from the intersection with 28th Street (M-11). Additional roadway information is summarized in **Table 1**.

Table 1: Roadway Information

Roadway Segment	28 th Street (M-11)	Radcliff Avenue	Woodland Drive	Ridgemoor Drive
Number of Lanes	5 (TWLTL)	4	5 (3 SB & 2 NB)	2
Functional Classification	Other Principal Arterial	Major Collector	Local Road	Local Road
Speed Limit	45 mph	25 mph	25 mph	25 mph
Roadway Jurisdiction	MDOT	Kentwood	Private	Kentwood
Traffic Volumes (2018)	32,147 vpd	N/A	N/A	N/A

The scope of the study was developed based on Fleis & VandenBrink's (F&V) understanding of the development program, accepted traffic engineering practice, and methodologies published by the Institute of Transportation Engineers (ITE). The study analyses were completed using Synchro/SimTraffic (Version 11) traffic analysis software.

2 DATA COLLECTION

F&V subconsultant Gewalt Hamilton Associates, Inc. (GHA) performed 24-hour turning movement counts at the study intersection of 28th Street (M-11) & Ridgemoor Avenue on Thursday, December 15, 2022. Additionally, AM (7:00 AM-9:00 AM) and PM (4:00 PM- 6:00 PM) peak period turning movement counts were collected on Tuesday, February 14th, 2023, at 28th Street (M-11) & Radcliff Avenue / Woodland Drive and at the site driveways along 28th Street (M-11) and Ridgemoor Drive. The AM and PM peak hours were identified to generally occur between 7:30 AM to 8:30 AM and 4:30 PM to 5:30 PM for a typical weekday.

2960 Lucerne Dr. SE
Grand Rapids, MI 49546
P: 616.977.1000
F: 616.977.1001
www.fveng.com

During collection of the turning movement counts, Peak Hour Factors (PHFs), pedestrian and bicycle volumes, and commercial truck percentages were recorded and used in the traffic analysis. The peak hours of the study intersections were utilized and the through volumes were carried through the roadway network and balanced upwards at the proposed site driveway. Therefore, the traffic volumes used in the analysis and shown on the attached traffic volume figures may not match the raw traffic volumes shown in the data collection. F&V collected an inventory of existing lane use and traffic controls, as shown on the attached **Figure 2**. Additionally, F&V obtained the current signal timing permits from MDOT for the signalized study intersection of 28th Street (M-11) & Radcliff Avenue / Woodland Drive. The existing 2023 peak hour traffic volumes used in the analysis are shown on the attached **Figure 3**.

3 EXISTING CONDITIONS

Existing peak hour vehicle delays and Levels of Service (LOS) were calculated at the study intersections using Synchro/SimTraffic (Version 11) traffic analysis software. This analysis was based on the existing lane use and traffic control shown on the attached **Figure 2**, the existing peak hour traffic volumes shown on the attached **Figure 3**, and the methodologies presented in the *Highway Capacity Manual 6th, Edition* (HCM6).

Descriptions of LOS "A" through "F" as defined in the HCM6, are attached. Typically, LOS D is considered acceptable, with LOS A representing minimal delay, and LOS F indicating failing conditions. Additionally, SimTraffic network simulations were reviewed to evaluate network operations and vehicle queues. The results for the existing conditions analysis are attached and shown in **Table 2**.

Table 2: Existing Intersection Operations

Intersection	Control	Approach	Existing Conditions			
			AM Peak		PM Peak	
			Delay (s/veh)	LOS	Delay (s/veh)	LOS
1 28 th Street (M-11) & Radcliff Avenue / Woodland Drive	Signalized	EBL	9.3	A	41.3	D
		EBT	23.5	C	21.9	C
		EBR	13.7	B	13.1	C
		WBL	15.8	B	29.2	C
		WBT	18.7	B	23.4	C
		WBR	13.4	B	12.9	B
		NBL	52.3	D	59.1	E
		NBTR	49.8	D	45.9	D
		SBL	0.0	A	49.6	D
		SBT	49.1	D	45.6	D
		SBR	26.2	C	41.1	D
		Overall	22.6	C	27.7	C
2 28 th Street & E. Site Drive / Driveway	Stop (Minor)	EBL	8.4	A	11.6	B
		WB	Free			
		NBR	15.5	C	18.5	C
		SBL	11.1	B	17.8	C
		SBR	10.1	B	15.5	C
3 28 th Street & Ridgemoor Drive	Stop (Minor)	EBL	8.3	A	11.6	B
		WB	Free			
		SB	14.8	B	25.2	D
4 Ridgemoor Drive & S. Site Drive	Stop (Minor)	WB	8.9	A	9.5	A
		NB	Free			
		SBL	7.3	A	0.0*	A
5 Ridgemoor Drive & N. Site Drive	Stop (Minor)	WB	0.0*	A	0.0*	A
		NB	Free			
		SBL	0.0*	A	0.0*	A

* Indicates no vehicle volume present

The results of the existing conditions analysis indicates that all approaches and movements at the study intersections are currently operating acceptably, at LOS D or better during both the AM and PM peak periods, with the exception of the following:

28th Street (M-11) & Radcliff Avenue / Woodland Drive

- During the PM peak hour: The northbound left-turn movement is currently operating at LOS E.

Although the Synchro LOS analysis indicates poor operations for the northbound left-turn movement, review of SimTraffic network simulations indicates acceptable operations; all vehicle queues were observed to be serviced within each cycle length, leaving minimal residual queueing. The poor LOS and delay reported for this movement is primarily the result of the long cycle length (130 seconds) at this signalized study intersection, in conjunction with the random arrival of vehicles for this movement. The consequence of this is that vehicles will often arrive at the intersection on a red signal and have to wait throughout the majority of the cycle length to receive a green signal. The existing intersection delays can be decreased by reducing the cycle length; however, this modification would have cascading impacts to all of the other traffic signals that are coordinated along 28th Street (M-11) and is therefore not recommended.

Review of SimTraffic microsimulations at the remaining study intersections indicates generally acceptable operations; however, egress left-turn traffic at Ridgemoor Drive and E. Site Drive were observed to experience some delay in finding gaps within the through traffic along 28th Street (M-11) during the PM peak hour. These vehicle queues were often observed to persist throughout the PM peak hour.

4 SITE TRIP GENERATION

The number of weekday peak hour (AM and PM) and daily vehicle trips that would be generated by the proposed development was forecast based on data published by ITE in the *Trip Generation Manual, 11th Edition*. The proposed development includes the construction of a convenience store with 12 vehicle fueling positions (VFP). There are existing and operational businesses on the project site, which will be razed with the construction of the proposed development; however, the associated trips that were included within the data collection were assumed to remain within the study network, in order to provide a conservative evaluation. The trip generation used in the analysis is summarized in **Table 3**.

Table 3: Site Trip Generation Summary

Land Use	ITE Code	Amount	Units	Average Daily Traffic (vpd)	AM Peak Hour (vph)			PM Peak Hour (vph)		
					In	Out	Total	In	Out	Total
Gas Station with Convenience Market	945	12	VFP	2,750	97	96	193	111	110	221
Pass-By	76% AM, 75% PM			2,076	73	73	146	83	83	166
New Trips				674	24	23	47	28	27	55

As is typical of commercial developments, a portion of the trips generated are from vehicles that are already on the adjacent roadways and will pass the site on the way from an origin to their ultimate destination. Therefore, not all traffic at the site driveways is necessarily new traffic added to the street system. This percentage of the trips generated by the development are considered "pass-by" trips, which are already present within the adjacent street system. These trips are therefore reduced from the total external trips generated by a study site. The percentage of pass-by trips used in this analysis was determined based on the rates published by ITE in the *Trip Generation Manual, 11th Edition*.

5 SITE TRIP DISTRIBUTION

The vehicular trips that would be generated by the proposed development were assigned to the study roads based on the site access plan and driveway configurations, the existing traffic patterns, and the methodologies published by ITE. The ITE trip distribution methodology assumes that new trips will enter the network and access the development, then leave the development and return to their direction of origin, whereas pass-by trips will enter and exit the development in their original direction of travel.

In order to determine the trip distribution along 28th Street (M-11), F&V staff collected local peak hour traffic volume data at a nearby Shell Gas Station (3960 28th Street). The existing Shell location was selected in an effort to represent similar characteristics of the proposed development and within close proximity to the project site. This local data was then utilized to calculate the "new" and "pass-by" trip distributions, based on the congestion and ease of access to the existing gas station driveways along 28th Street (M-11) during the peak periods. The site trip distributions used in the analysis are summarized in **Table 4**.

Table 4: Site Trip Distribution

New Trips					Pass-By Trips	
AM	PM	To/From	Via	Direction (To)	AM	PM
3%	2%	North	Ridgemoor Drive	Northbound	2%	4%
N/A		South	Ridgemoor Drive	Southbound	4%	2%
3%	10%	North	Woodland Drive	Northbound	N/A	
3%	7%	South	Radcliff Avenue	Southbound	N/A	
44%	32%	East	28 th Street (M-11)	Eastbound	22%	9%
47%	49%	West	28 th Street (M-11)	Westbound	72%	85%
100%	100%	Total			100%	100%

The vehicular traffic volumes shown in **Table 3** were distributed to the roadway network according to the distribution shown in **Table 4**. The proposed development is anticipated to be open and operation within the next 12 months; therefore, the existing conditions traffic volumes were assumed to be equal to the background traffic volumes *without the proposed development*. Therefore, the site-generated trips shown on the attached **Figure 4** were added to the existing peak hour traffic volumes shown on the attached **Figure 3**, in order to calculate the future peak hour traffic volumes, with the addition of the proposed development. Future peak hour traffic volumes are shown on the attached **Figure 5**.

6 FUTURE CONDITIONS

The future peak hour vehicle delays and LOS *with the proposed development* were calculated at the study intersections using Synchro (Version 11) traffic analysis software. This analysis was based on the proposed lane use and traffic control shown on the attached **Figure 2**, proposed site access plan, the future peak hour traffic volumes shown on the attached **Figure 5**, and the methodologies presented in the HCM6. The results of the future conditions analysis are attached and summarized in **Table 5**.

The results of the future conditions analysis indicates that all study intersection approaches and movements will continue to operate in a manner similar to the existing conditions, with only minor increases in delays. Additionally, review of SimTraffic microsimulations indicates generally acceptable operations throughout the study roadway network, during both peak periods; however, egress left-turn traffic from the proposed development were observed to experience some delay in finding gaps within the through traffic along 28th Street (M-11) during the PM peak hour. Nevertheless, traffic exiting the proposed development has the ability to redistribute between the site driveway and the Ridgemoor Drive connections to 28th Street (M-11), based on the current delays and vehicle queueing being observed at that time.

Table 5: Future Intersection Operations

Intersection	Control	Approach	Existing Conditions				Future Conditions				Difference			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS
1 28 th Street (M-11) & Radcliff Avenue / Woodland Drive	Signal	EBL	9.3	A	41.3	D	9.5	A	42.3	D	0.2	-	1.0	-
		EBT	23.5	C	21.9	C	23.7	C	22.0	C	0.2	-	0.1	-
		EBR	13.7	B	13.1	C	13.7	B	13.1	B	0.0	-	0.0	C→B
		WBL	15.8	B	29.2	C	16.1	B	29.8	C	0.3	-	0.6	-
		WBT	18.7	B	23.4	C	18.8	B	23.6	C	0.1	-	0.2	-
		WBR	13.4	B	12.9	B	13.4	B	12.9	B	0.0	-	0.0	-
		NBL	52.3	D	59.1	E	52.2	D	59.4	E	-0.1	-	0.3	-
		NBTR	49.8	D	45.9	D	49.7	D	45.4	D	-0.1	-	-0.5	-
		SBL	0.0	A	49.6	D	0.0	A	49.1	D	0.0	-	-0.5	-
		SBT	49.1	D	45.6	D	49.0	D	45.1	D	-0.1	-	-0.5	-
		SBR	26.2	C	41.1	D	26.2	C	41.4	D	0.0	-	0.3	-
		Overall	22.6	C	27.7	C	22.7	C	27.9	C	0.1	-	0.2	-

Intersection	Control	Approach	Existing Conditions				Future Conditions				Difference				
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak		
			Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	
2	28 th Street & E. Site Drive / Driveway	Stop (Minor)	EBL	8.4	A	11.6	B	8.3	A	11.3	B	-0.1	-	-0.3	-
			WB	Free				Free				N/A			
			NBR	15.5	C	18.5	C	15.4	C	18.5	C	-0.2	-	0.0	-
			SBL	11.1	B	17.8	C	15.8	C	18.7	C	4.7	B→C	0.9	-
			SBR	10.1	B	15.5	C	10.3	B	17.3	C	0.2	-	1.8	-
3	28 th Street & Ridgemoor Drive	Stop (Minor)	EBL	8.3	A	11.6	B	8.4	A	11.5	B	0.1	-	-0.1	-
			WB	Free				Free				N/A			
			SB	14.8	B	25.2	D	15.0	C	27.2	D	0.2	B→C	2.0	-
4	Ridgemoor Drive & S. Site Drive	Stop (Minor)	WB	8.9	A	9.5	A	9.6	A	10.4	B	0.7	-	0.9	A→B
			NB	Free				Free				N/A			
			SBL	7.3	A	0.0*	A	7.4	A	7.6	A	0.1	-	7.6	-
5	Ridgemoor Drive & N. Site Drive	Stop (Minor)	WB	0.0*	A	0.0*	A	8.5	A	8.9	A	8.5	-	8.9	-
			NB	Free				Free				N/A			
			SBL	0.0*	A	0.0*	A	7.3	A	7.5	A	7.3	-	7.5	-

* Indicates no vehicle volume present

7 ACCESS MANAGEMENT

7.1 Auxiliary Lanes

The MDOT auxiliary turn lane warranting criteria thresholds were evaluated at the proposed site driveway on 28th Street (M-11). 28th Street (M-11) currently has an existing center two-way left-turn lane (TWLTL) adjacent to the project site; therefore, the left-turn lane warrant was not evaluated at the proposed site driveway location. This analysis was based on the future peak hour traffic volumes shown on the attached **Figure 5**. The results of the analysis are shown on the attached MDOT warranting charts and summarized in **Table 6**.

Table 6: Auxiliary Turn Lane Summary

Site Driveway Intersection	Right-Turn Treatment	Left-Turn Treatment
28 th Street (M-11) & E. Site Drive	Right-Turn Lane	N/A

The results of the MDOT auxiliary turn lane evaluation indicates that a right-turn deceleration lane is warranted along westbound 28th Street (M-11) at the proposed E. Site Drive.

7.2 Driveway Spacing

The MDOT Geometric Design Guidance (Section 1.2.2) was utilized to evaluate the location of the proposed site driveway on 28th Street (M-11), in relation to nearby intersections and driveways within close proximity to the project site. The AASHTO intersection corner clearance criteria were evaluated for the 45-mph section of 28th Street (M-11). The proposed development plans include one (1) access point on 28th Street (M-11). The distance of the proposed site driveways from nearby access points and the warranting criteria are summarized in **Table 7** and displayed in **Exhibit 1**.

Table 7: Desirable Driveway Spacing Summary

Adjacent Driveways & Intersections				Distance	Criteria	Meets
E. Site Drive	To	Ridgemoor Drive		280 feet	230 feet	YES
E. Site Drive	To	Arby's Driveway		210 feet	630 feet	NO
E. Site Drive	To	Whole Foods Driveway		90 feet	630 feet	NO
E. Site Drive	To	Batteries+ Driveway		175 feet	350 feet	NO
E. Site Drive	To	Woodland Drive		275 feet	460 feet	NO

Exhibit 1: Driveway Spacing



The results of the analysis indicates that the proposed E. Site Drive is not expected to meet the desirable driveway spacing criteria in relation to the nearby access points; however, the proposed development will be utilizing an existing curb cut that is a shared access point with the operational Dollar General business. Additionally, the proposed E. Site Drive will be aligned opposite the existing Whole Foods ingress driveway, which follows best access management practices.

8 CONCLUSIONS

The conclusions of this TIS are as follows:

1. **Existing Conditions:** All study intersection approaches and movements are operating acceptably, at a LOS D or better during both the AM and PM peak periods, with the exception of the following:
 - 28th Street (M-11) & Radcliff Avenue / Woodland Drive: The NBL movement is currently operating at LOS E during the PM peak hour.

Review of SimTraffic network simulations indicates acceptable operations, with all vehicle queues observed to be serviced within each cycle length. The poor LOS is due to the long cycle length (130 seconds), in conjunction with the random arrival of vehicles; which results in vehicles that will often arrive at the intersection on a red signal and have to wait throughout the majority of the cycle length to receive a green signal. The existing intersection delays can be decreased by reducing the cycle length; however, modification would have cascading impacts to all of the other traffic signals that are coordinated along 28th Street (M-11).
 - Review of SimTraffic microsimulations for the remaining study roadway network indicates generally acceptable operation during both peak periods. However, egress left-turn traffic at Ridgemoor Drive and E. Site Drive were observed to experience some delay in finding gaps within the through traffic along 28th Street (M-11) during the PM peak hour.
2. **Site Distribution:** Local peak hour traffic volume data was collected at a nearby Shell Gas Station, in an effort to represent similar characteristics to the proposed development and within close proximity to the project site. This was utilized to calculate the trip distributions, based on the congestion and ease of access to the existing gas station driveways along 28th Street (M-11) during the peak periods.
3. **Future Conditions:** With the addition of the site-generated trips, all of the approaches and movements at the study intersections are expected to continue operating in a manner similar to existing conditions, with only minor increases in delay.
 - Review of SimTraffic microsimulations indicates generally acceptable operations and minimal vehicle queuing at the signalized intersection. Egress left-turn traffic from the project site were observed to experience some delay in finding gaps along 28th Street (M-11) during the PM peak hour. Nevertheless, traffic exiting the proposed development has the ability to redistribute between the site driveway and the Ridgemoor Drive connections to 28th Street (M-11), based on the current delays and vehicle queueing being observed at that time.

4. **Access Management:**

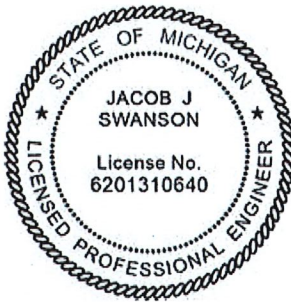
- The results of the auxiliary turn lane warrant evaluation indicates that a right-turn deceleration lane warranted along westbound 28th Street at the proposed E. Site Drive.
- The results of the driveway spacing analysis indicate the proposed E. Site Drive does not meet the MDOT desirable spacing requirements; however, the existing curb cut that is a shared access point with the operational Dollar General business will be utilized. Additionally, the proposed E. Site Drive will be aligned opposite the existing Whole Foods ingress driveway, which follows best access management practices.

RECOMMENDATIONS

The recommendations of this TIS are summarized below.

Recommended Improvements	
28th Street (M-11) & E. Site Drive	
<ul style="list-style-type: none">• Construct a westbound right-turn lane at the proposed E. Site Drive.	

Any questions related to this memorandum, study, analysis, and results should be addressed to Fleis & VandenBrink.



I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Michigan.

A handwritten signature in black ink that reads "Jacob Swanson".

Digitally signed by
Jacob Swanson
Date: 2023.03.22
17:28:22 -04'00'

Attached: Figures 1-5
 Proposed Site Plan
 Traffic Volume Data
 Signal Timing Permit
 Local Trip Generation Data
 Synchro / SimTraffic Results
 Auxiliary Turn Lane Warrant

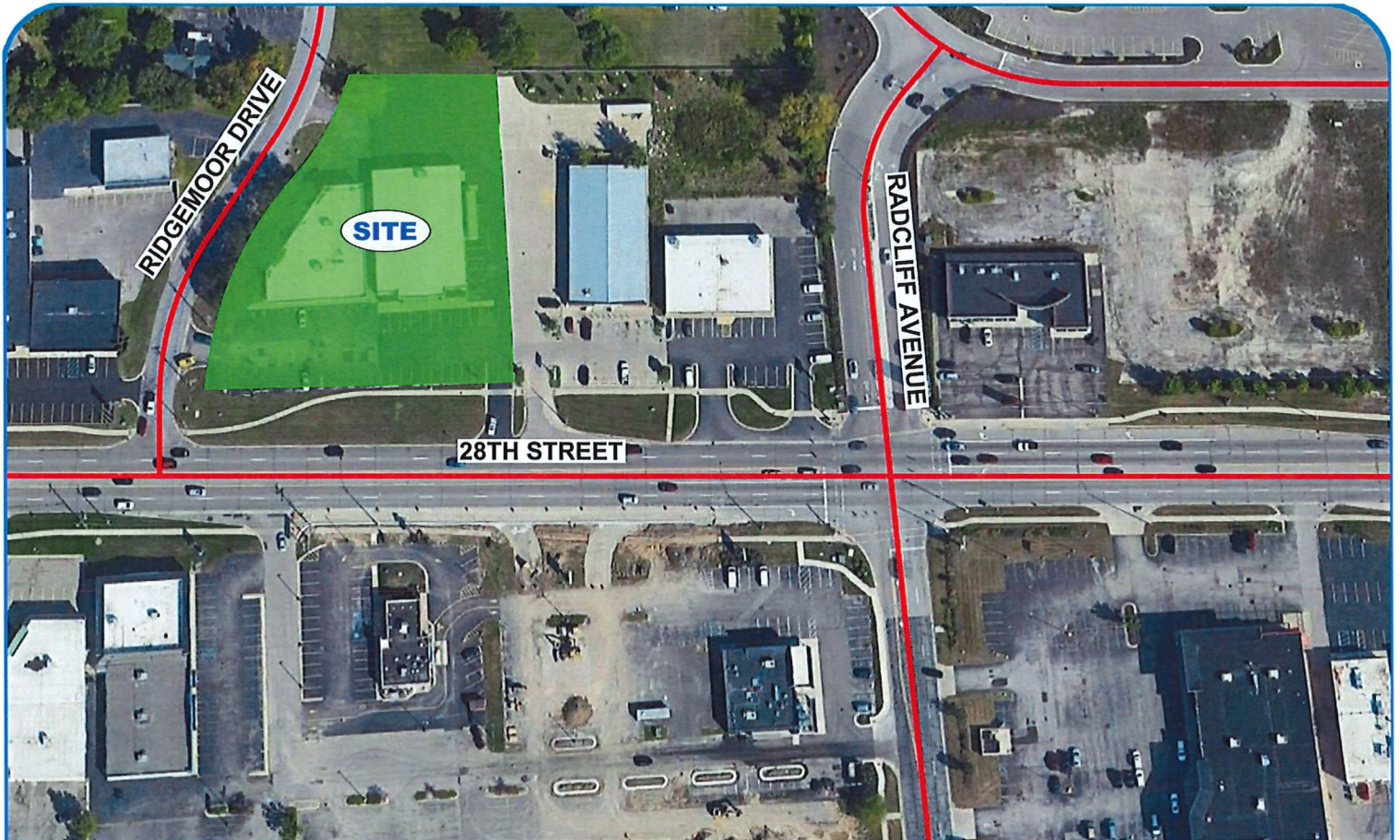


FIGURE 1 SITE LOCATION

KG-2627 - GRAND RAPIDS, MI

LEGEND

 SITE LOCATION



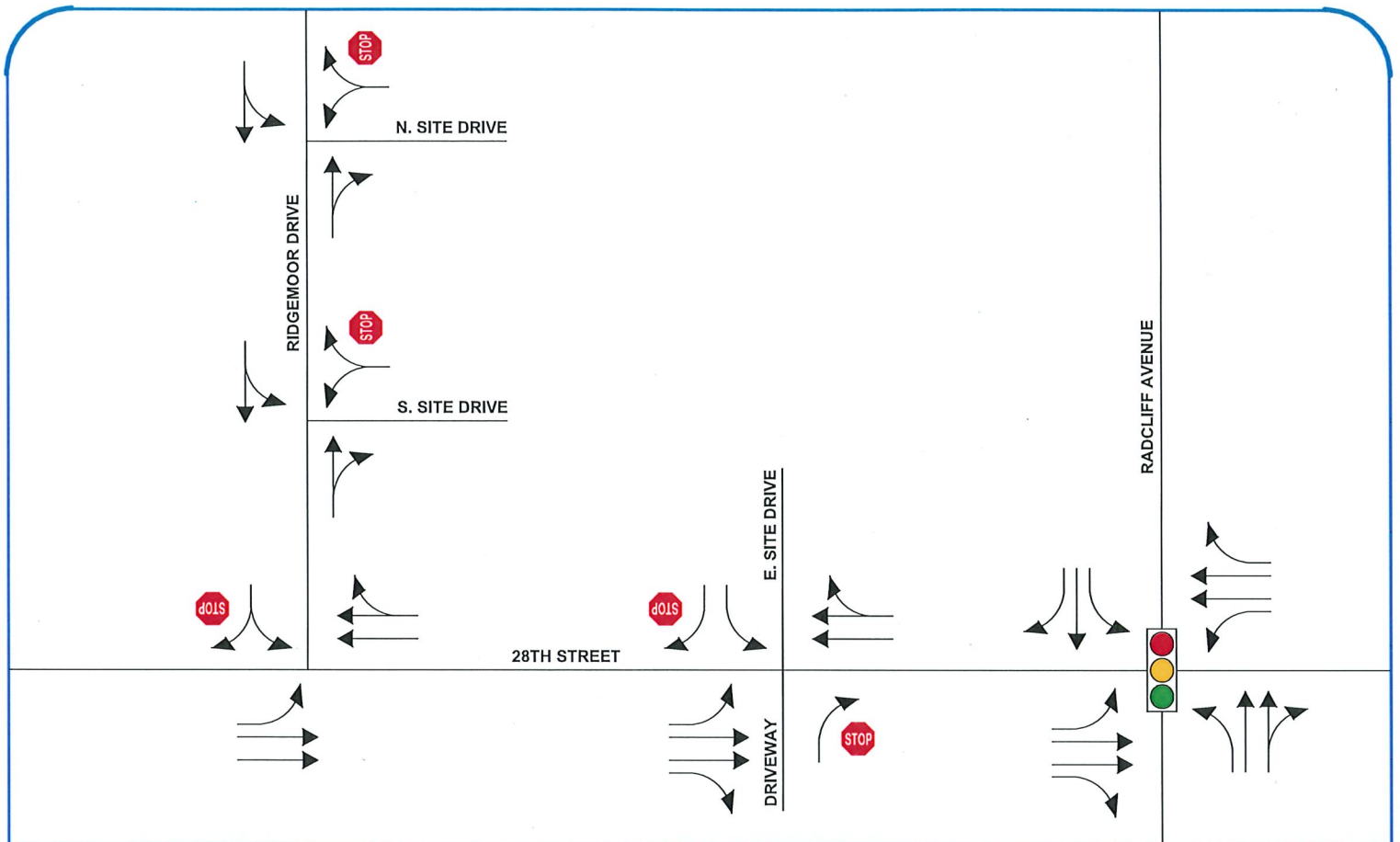


FIGURE 2

LANE USE AND TRAFFIC CONTROL

KG-2627 - GRAND RAPIDS, MI

LEGEND

	ROADS		PROPOSED ROADS
	LANE USE		PROPOSED LANE USE
	SIGNALIZED INTERSECTION		
	UNSIGNALIZED INTERSECTION		
	ROUNDBOUT INTERSECTION		
			NORTH SCALE: NOT TO SCALE

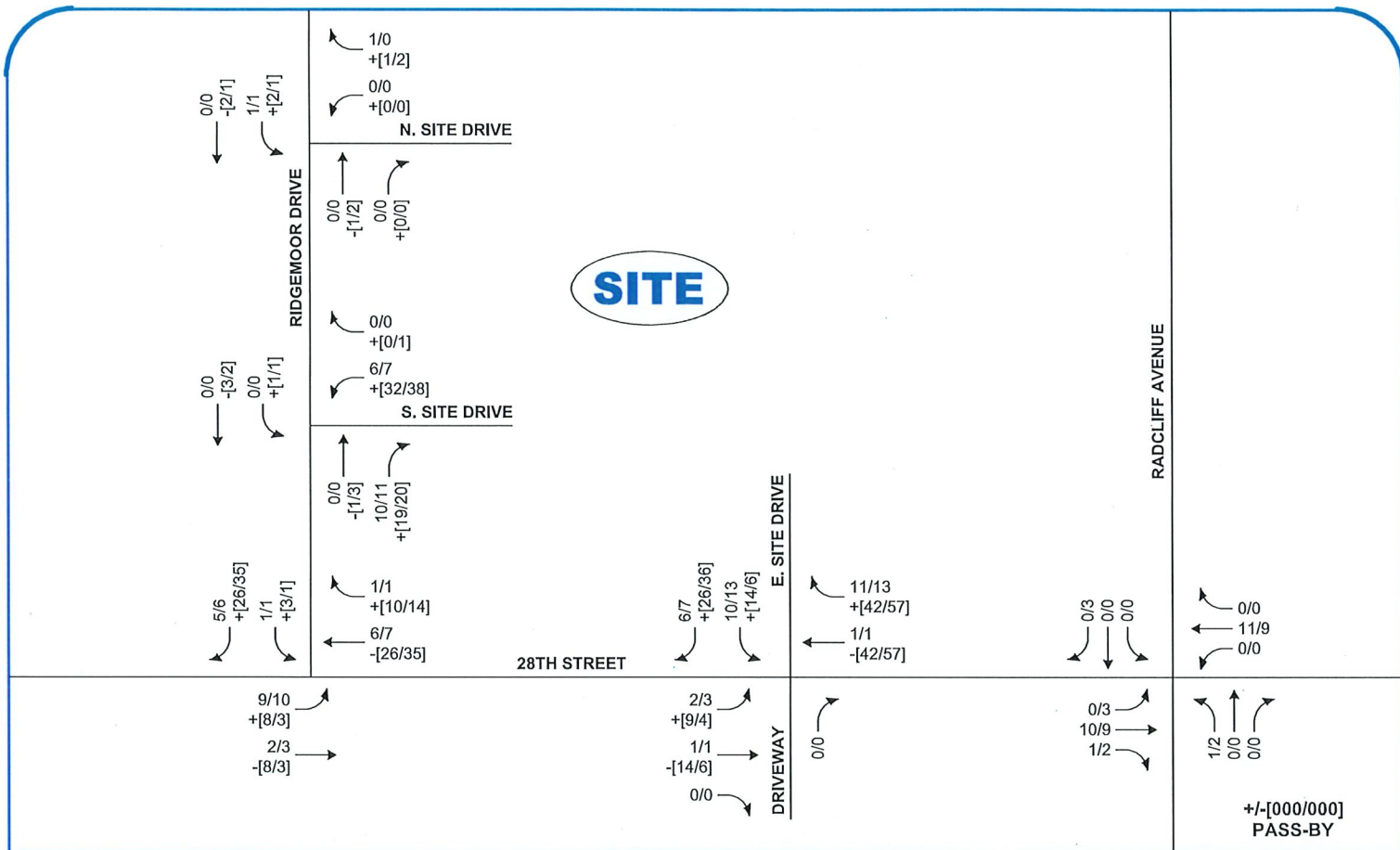


FIGURE 4

SITE-GENERATED TRAFFIC VOLUMES

KG-2627 - GRAND RAPIDS, MI

LEGEND

- ROADS
- PROPOSED ROADS
- TRAFFIC VOLUMES (AM/PM)



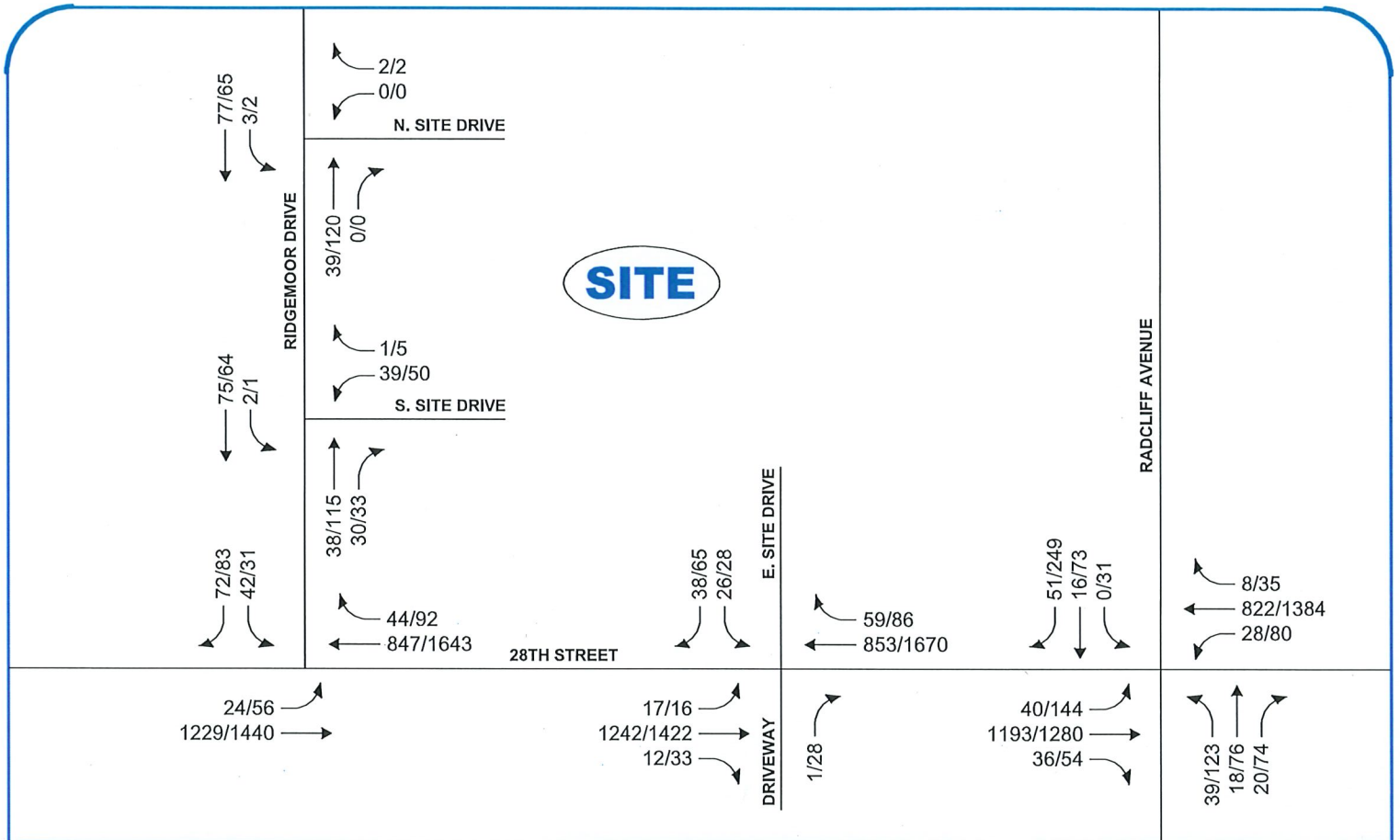


FIGURE 5
FUTURE TRAFFIC VOLUMES

KG-2627 - GRAND RAPIDS, MI

LEGEND

- ROADS
- PROPOSED ROADS
- TRAFFIC VOLUMES (AM/PM)



Table 4: Site Trip Distribution

New Trips					Pass-By Trips	
AM	PM	To/From	Via	Direction (To)	AM	PM
3%	2%	North	Ridgemoor Drive	Northbound	2%	4%
N/A		South	Ridgemoor Drive	Southbound	4%	2%
3%	10%	North	Woodland Drive	Northbound	N/A	
3%	7%	South	Radcliff Avenue	Southbound	N/A	
44%	32%	East	28 th Street (M-11)	Eastbound	22%	9%
47%	49%	West	28 th Street (M-11)	Westbound	72%	85%
100%	100%	Total			100%	100%

The vehicular traffic volumes shown in **Table 3** were distributed to the roadway network according to the distribution shown in **Table 4**. The proposed development is anticipated to be open and operation within the next 12 months; therefore, the existing conditions traffic volumes were assumed to be equal to the background traffic volumes *without the proposed development*. Therefore, the site-generated trips shown on the attached **Figure 4** were added to the existing peak hour traffic volumes shown on the attached **Figure 3**, in order to calculate the future peak hour traffic volumes, with the addition of the proposed development. Future peak hour traffic volumes are shown on the attached **Figure 5**.

6 FUTURE CONDITIONS

The future peak hour vehicle delays and LOS *with the proposed development* were calculated at the study intersections using Synchro (Version 11) traffic analysis software. This analysis was based on the proposed lane use and traffic control shown on the attached **Figure 2**, proposed site access plan, the future peak hour traffic volumes shown on the attached **Figure 5**, and the methodologies presented in the HCM6. The results of the future conditions analysis are attached and summarized in **Table 5**.

The results of the future conditions analysis indicates that all study intersection approaches and movements will continue to operate in a manner similar to the existing conditions, with only minor increases in delays. Additionally, review of SimTraffic microsimulations indicates generally acceptable operations throughout the study roadway network, during both peak periods; however, egress left-turn traffic from the proposed development were observed to experience some delay in finding gaps within the through traffic along 28th Street (M-11) during the PM peak hour. Nevertheless, traffic exiting the site has the ability to redistribute between the site driveway and the Ridgemoor Drive (M-11), based on the current delays and vehicle queueing being observed at that time.

Why did this go from C to B?
The delay didn't change in either peak hour?

Table 5: Future Intersection Operations

Intersection	Control	Approach	Existing Conditions				Future Conditions				Difference			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS
28 th Street (M-11) & Radcliff Avenue / Woodland Drive	Signal	EBL	9.3	A	41.3	D	9.5	A	42.3	D	0.2	-	1.0	-
		EBT	23.5	C	21.9	C	23.7	C	22.0	C	0.2	-	0.1	-
		EBR	13.7	B	13.1	C	13.7	B	13.1	B	0.0	-	0.0	C→B
		WBL	15.8	B	29.2	C	16.1	B	29.8	C	0.3	-	0.6	-
		WBT	18.7	B	23.4	C	18.8	B	23.6	C	0.1	-	0.2	-
		WBR	13.4	B	12.9	B	13.4	B	12.9	B	0.0	-	0.0	-
		NBL	52.3	D	59.1	E	52.2	D	59.4	E	-0.1	-	0.3	-
		NBTR	49.8	D	45.9	D	49.7	D	45.4	D	-0.1	-	-0.5	-
		SBL	0.0	A	49.6	D	0.0	A	49.1	D	0.0	-	-0.5	-
		SBT	49.1	D	45.6	D	49.0	D	45.1	D	-0.1	-	-0.5	-
		SBR	26.2	C	41.1	D	26.2	C	41.4	D	0.0	-	0.3	-
		Overall	22.6	C	27.7	C	22.7	C	27.9	C	0.1	-	0.2	-

Authority: 1949 PA 300, Sec.257.622
Compliance: Required MSP UD-10E
Penalty: \$100 and/or 90 days (Rev 01/2016)

External # 0201025
Crash ID 1668156

Page 01 of 01
File Class 54001

STATE OF MICHIGAN TRAFFIC CRASH REPORT

ORI MI 4185000		Department Name Kentwood Police Department		Incident # 2019006119	
Crash Date 04/01/2019	Crash Time 12:49	No. of Units 02	Crash Type Sideswipe-Same	Special Circumstances <input type="checkbox"/> None <input type="checkbox"/> Fleeing Police <input checked="" type="checkbox"/> Hit and Run <input type="checkbox"/> Unknown <input type="checkbox"/> School Bus <input type="checkbox"/> Animal	Special Checks <input type="checkbox"/> Fatal <input type="checkbox"/> Non-Traffic Area <input type="checkbox"/> ORV/Snowmobile
County 41 - Kent	Traffic Control None	Relation to Roadway On the Road		Weather Cloudy	Area NON-FRWY Driveway Related
City/Twp 68 - Kentwood	Contributing Circumstances 1st None		2nd	Light Daylight	Road Surface Condition Dry
Work Zone (if applicable) Type		Workers Present	Activity	Location	

LOCATION	Prefix	Primary Road Name 28TH/M11	Road Type ST	Suffix SE	Divided Roadway
	Distance / Direction 300 Feet E				
	Trafficway Not Physically Divided				
LOCATION	Prefix	Intersecting Road Name RIDGEMOOR	Road Type DR	Suffix SE	Divided Roadway

UNIT / DRIVER	Unit Number 01	Unit Known No	State Driver License Number #####	Date of Birth (Age) #####	License Type <input type="checkbox"/> Operator <input type="checkbox"/> Chauffeur <input type="checkbox"/> Moped	Endorsements <input type="checkbox"/> Cycle <input type="checkbox"/> Farm <input type="checkbox"/> Recreation	Sex F	Total Occupants 01	Hazardous Action Failed to Yield
	Unit Type MV	Driver Information ##### ##### (###) ###-####			Driver is Owner No	Injury	Position	Restraint Restraint Use Unknown	
	Driver Condition at Time of Crash 1st			2nd	Driver Distracted By Unknown		Ejected	Trapped	Airbag Deployed Unknown
	Hospital NONE				Ambulance NONE				
	Alcohol Suspected No	Contributing Factor No	Alcohol Test Type <input type="checkbox"/> Breath <input type="checkbox"/> Blood <input type="checkbox"/> Urine <input type="checkbox"/> Field <input type="checkbox"/> PBT <input type="checkbox"/> Refused <input type="checkbox"/> Not Offered		Alcohol Test Results <input type="checkbox"/> Pending		Test Results:	Interlock Device No	
	Drug Suspected No	Contributing Factor No	Drug Test Type <input type="checkbox"/> Blood <input type="checkbox"/> Urine <input type="checkbox"/> Field <input type="checkbox"/> Refused <input type="checkbox"/> Not Offered		Drug Test Results <input type="checkbox"/> Pending		Test Results:	Citation Issued <input type="checkbox"/> Hazardous <input type="checkbox"/> Other	
	Vehicle Registration	State	Vehicle Description Year	Make DODGE	Model STRATUS	Color WHI			
	VIN	Vehicle Type		Special Vehicles Not Applicable	Private Trailer Type	Vehicle Defect			
	Automation System(s) in Vehicle No		Automation System Level in Vehicle Unknown			Automation System Level Engaged at Time of Crash Unknown			
	Insurance Company #####		Insurance Policy # #####		Towed By		Towed To		
	Location of Greatest Damage 02	First Impact 02	Extent of Damage (Power Unit and/or Trailers) Unknown		Vehicle Direction	Vehicle Use	Action Prior Entering Roadway		
	Sequence of Events (● Indicates MOST harmful event) First ● 17 - Motor Veh in Transport Second Third Fourth								

PASSENGERS	Passenger Information		Date of Birth (Age)	Sex	Position	Restraint
			Injury	Ejected	Trapped	Airbag Deployed
	Hospital		Ambulance			
	Passenger Information		Date of Birth (Age)	Sex	Position	Restraint
		Injury	Ejected	Trapped	Airbag Deployed	
Hospital		Ambulance				

TRUCK/BUS	Carrier Information		USDOT	MC	MPSC
			Driver's CDL Type	Endorsements <input type="checkbox"/> H <input type="checkbox"/> P <input type="checkbox"/> T <input type="checkbox"/> N <input type="checkbox"/> S <input type="checkbox"/> X	CDL Exempt <input type="checkbox"/> Farm <input type="checkbox"/> Other
	GVWR/GCWR <input type="checkbox"/> 10,000 lbs. or Less <input type="checkbox"/> 10,001 - 26,000 lbs. <input type="checkbox"/> Greater than 26,000 lbs.	Vehicle Configuration	Cargo Body Type	Medical Card	Hazardous Material <input type="checkbox"/> Placard <input type="checkbox"/> Cargo Spill

OWNERS	Owner Information		Owner Information	
Damaged Property		Public	Owner & Phone	

UNIT DRIVER	Unit Number 02	Unit Known Yes	State MI	Driver License Number #####	Date of Birth (Age) ##### (56)	License Type <input checked="" type="radio"/> Operator <input type="radio"/> Chauffeur <input type="radio"/> Moped	Endorsements <input type="radio"/> Cycle <input type="radio"/> Farm <input type="radio"/> Recreation	Sex F	Total Occupants 01	Hazardous Action None	
	Unit Type MV	Driver Information ##### ##### ROCKFORD, MI 49341 (###) ###-####				Driver is Owner Yes	Injury O	Position Front - Left	Restraint Shoulder and Lap Belt		
	Driver Condition at Time of Crash 1st Appeared Normal					Driver Distracted By Not Distracted		Ejected	Trapped	Airbag Deployed Not Deployed	
	Hospital NONE					Ambulance NONE					
	Alcohol Suspected No	Contributing Factor No	Alcohol Test Type <input type="radio"/> Breath <input type="radio"/> Blood <input type="radio"/> Urine <input type="radio"/> Field <input type="radio"/> PBT <input type="radio"/> Refused <input checked="" type="radio"/> Not Offered			Alcohol Test Results <input type="radio"/> Pending	Test Results:	Interlock Device No			
	Drug Suspected No	Contributing Factor No	Drug Test Type <input type="radio"/> Blood <input type="radio"/> Urine <input type="radio"/> Field <input type="radio"/> Refused <input checked="" type="radio"/> Not Offered			Drug Test Results <input type="radio"/> Pending	Test Results:	Citation Issued <input type="radio"/> Hazardous <input type="radio"/> Other			
	Vehicle Registration AJF100	State MI	Vehicle Description 2018	Year 2018	Make GMC	Model YUKON	Color SIL				
	VIN 1GKS2CKJ9JR354515	Vehicle Type Passenger Car, SUV, Van		Special Vehicles Not Applicable		Private Trailer Type	Vehicle Defect				
	Automation System(s) in Vehicle No		Automation System Level in Vehicle No Automation				Automation System Level Engaged at Time of Crash No Automation				
	Insurance Company #####			Insurance Policy # #####			Towed By		Towed To		
Location of Greatest Damage 08	First Impact 08	Extent of Damage (Power Unit and/or Trailers) Functional Damage		Vehicle Direction E	Vehicle Use Private		Action Prior Going Straight Ahead				
Sequence of Events (● indicates MOST harmful event)		First ● 17 - Motor Veh in Transport		Second		Third		Fourth			

PASSENGERS	Passenger Information				Date of Birth (Age)	Sex	Position	Restraint
					Injury	Ejected	Trapped	Airbag Deployed
	Hospital				Ambulance			
PASSENGERS	Passenger Information				Date of Birth (Age)	Sex	Position	Restraint
					Injury	Ejected	Trapped	Airbag Deployed
	Hospital				Ambulance			

TRUCK/BUS	Carrier Information				USDOT	MC	MPSC
					Driver's CDL Type	Endorsements <input type="radio"/> H <input type="radio"/> P <input type="radio"/> T <input type="radio"/> N <input type="radio"/> S <input type="radio"/> X	CDL Exempt <input type="radio"/> Farm <input type="radio"/> Other
	GVWR/GCWR <input type="radio"/> 10,000 lbs. or Less <input type="radio"/> 10,001 - 26,000 lbs. <input type="radio"/> Greater than 26,000 lbs.		Vehicle Configuration	Cargo Body Type	Medical Card	Hazardous Material <input type="radio"/> Placard <input type="radio"/> Cargo Spill	ID #

OWNERS	Owner Information				Owner Information			

WITNESS	Witness Information ##### ##### #####, ## ##### (###) ###-####				Witness Information			

Investigated at Scene Yes	Reported Date (Time) 04/01/2019 (12:55)	1st Investigator Name (Badge) CINDY KEATON (44)	2nd Investigator Name (Badge)	Photos No
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<p>Narrative</p> <p>V2 was in the left through lane of e/b 28th St SE east of Ridgemoor Dr SE. V1 was leaving the parking lot of 2995 28th St SE. V1 was going to turn left onto e/b 28th St SE. The witness was behind V1. V1 made a left turn onto 28th St SE and drove right into V2. After the crash, V1 sped off and continued e/b on 28th St SE. V1 is described as a white Dodge Stratus with a black female driver. The driver of V2 gave a plate of MI/EAP213. There is no record of the plate for the Secretary of State. There is no further information about the fleeing vehicle.</p>	<p>Diagram</p> <p style="text-align: center;">← Ridgemoor Dr SE</p>
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Authority: 1949 PA 300, Sec.257.622
Compliance: Required MSP UD-10E
Penalty: \$100 and/or 90 days (Rev 01/2016)

External # 0083668
Crash ID 1579923

Page 01 of 01
File Class 93001

Incident #
2018028303

Reviewer
Timothy Wierenga

STATE OF MICHIGAN TRAFFIC CRASH REPORT

ORI MI 4185000		Department Name Kentwood Police Department							
Crash Date 12/30/2018	Crash Time 16:29	No. of Units 02	Crash Type Angle	Special Circumstances <input checked="" type="checkbox"/> None <input type="checkbox"/> Fleeing Police <input type="checkbox"/> Hit and Run <input type="checkbox"/> Unknown <input type="checkbox"/> School Bus <input type="checkbox"/> Animal		Special Checks <input type="checkbox"/> Fatal <input type="checkbox"/> Non-Traffic Area <input type="checkbox"/> ORV/Snowmobile			
County 41 - Kent	Traffic Control None		Relation to Roadway On the Road		Weather Clear	Area INTR Driveway Related			
City/Twp 68 - Kentwood	Contributing Circumstances 1st Backup - Reg. Congestion 2nd		Light Daylight		Road Surface Condition Dry	Total Lanes 06	Speed Limit 45	Posted Yes	
Work Zone (if applicable) Type Workers Present Activity Location									

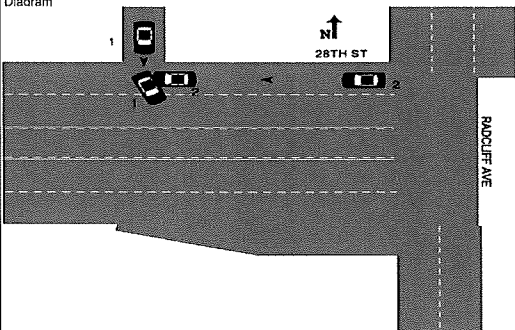
LOCATION	Prefix	Primary Road Name 28TH	Road Type ST	Suffix SE	Divided Roadway
	Distance / Direction 200 Feet NW				
	Trafficway Not Physically Divided				
LOCATION	Prefix	Intersecting Road Name RADCLIFF	Road Type AVE	Suffix SE	Divided Roadway

UNIT / DRIVER	Unit Number 01	Unit Known Yes	State MI	Driver License Number #####	Date of Birth (Age) ##### (34)	License Type <input checked="" type="checkbox"/> Operator <input type="checkbox"/> Chauffeur <input type="checkbox"/> Moped	Endorsements <input type="checkbox"/> Cycle <input type="checkbox"/> Farm <input type="checkbox"/> Recreation	Sex M	Total Occupants 01	Hazardous Action Failed to Yield
	Unit Type MV	Driver Information ##### ##### GRAND RAPIDS, MI 49505 (###) ###-####				Driver is Owner No	Injury C	Position Front - Left	Restraint Shoulder and Lap Belt	
	Driver Condition at Time of Crash 1st Appeared Normal 2nd				Driver Distracted By Not Distracted		Ejected	Trapped	Airbag Deployed Not Deployed	
	Hospital NONE				Ambulance LIFE EMS INC					
	Alcohol Suspected No	Contributing Factor No	Alcohol Test Type <input type="checkbox"/> Breath <input type="checkbox"/> Blood <input type="checkbox"/> Urine <input type="checkbox"/> Field <input type="checkbox"/> PBT <input type="checkbox"/> Refused <input checked="" type="checkbox"/> Not Offered			Alcohol Test Results <input type="checkbox"/> Pending Test Results:		Interlock Device No		
	Drug Suspected No	Contributing Factor No	Drug Test Type <input type="checkbox"/> Blood <input type="checkbox"/> Urine <input type="checkbox"/> Field <input type="checkbox"/> Refused <input checked="" type="checkbox"/> Not Offered			Drug Test Results <input type="checkbox"/> Pending Test Results:		Citation Issued <input checked="" type="checkbox"/> Hazardous FAIL TO YIELD <input checked="" type="checkbox"/> Other NO INSURANCE		
	Vehicle Registration DGF3266		State MI	Vehicle Description 2006	Make CHEVROLET	Model TRAILBLAZER		Color BLK		
	VIN 1GNDT13S662319905		Vehicle Type Passenger Car, SUV, Van		Special Vehicles Not Applicable		Private Trailer Type	Vehicle Defect		
	Automation System(s) in Vehicle No		Automation System Level in Vehicle No Automation				Automation System Level Engaged at Time of Crash No Automation			
	Insurance Company #####		Insurance Policy # #####				Towed By		Towed To	

PASSENGERS	Passenger Information				Date of Birth (Age)	Sex	Position	Restraint
					Injury	Ejected	Trapped	Airbag Deployed
	Hospital				Ambulance			
	Passenger Information				Date of Birth (Age)	Sex	Position	Restraint
					Injury	Ejected	Trapped	Airbag Deployed
	Hospital				Ambulance			

TRUCK/BUS	Carrier Information				USDOT	MC	MPSC
					Driver's CDL Type	Endorsements <input type="checkbox"/> H <input type="checkbox"/> P <input type="checkbox"/> T <input type="checkbox"/> N <input type="checkbox"/> S <input type="checkbox"/> X	CDL Exempt <input type="checkbox"/> Farm <input type="checkbox"/> Other
	GVWR/GCWR <input type="checkbox"/> 10,000 lbs. or Less <input type="checkbox"/> 10,001 - 26,000 lbs. <input type="checkbox"/> Greater than 26,000 lbs.		Vehicle Configuration	Cargo Body Type	Medical Card	Hazardous Material <input type="checkbox"/> Placard <input type="checkbox"/> Cargo Spill	ID #

OWNERS	Owner Information		Owner Information	
Damaged Property		Public	Owner & Phone	

UNIT/DRIVER	Unit Number 02	Unit Known Yes	State MI	Driver License Number #####	Date of Birth (Age) ##### (20)	License Type ● Operator ○ Chauffeur ○ Moped	Endorsements ○ Cycle ○ Farm ○ Recreation	Sex F	Total Occupants 01	Hazardous Action None	
	Unit Type MV	Driver Information ##### ##### CEDAR SPRINGS, MI 49319 (###) ###-####				Driver is Owner No	Injury O	Position Front - Left		Restraint Shoulder and Lap Belt	
	Driver Condition at Time of Crash 1st Appeared Normal				2nd		Driver Distracted By Not Distracted		Ejected	Trapped	Airbag Deployed Deployed - Front
	Hospital NONE					Ambulance NONE					
Alcohol Suspected No		Contributing Factor No		Alcohol Test Type ○ Breath ○ Blood ○ Urine ○ Field ○ PBT ○ Refused ● Not Offered		Alcohol Test Results ○ Pending Test Results:		Interlock Device No			
Drug Suspected No		Contributing Factor No		Drug Test Type ○ Blood ○ Urine ○ Field ○ Refused ● Not Offered		Drug Test Results ○ Pending Test Results:		Citation Issued ○ Hazardous ○ Other			
Vehicle Registration DGU6833		State MI	Vehicle Description	Year 2005	Make CHEVROLET	Model MALIBU		Color SIL			
VIN 1G1ZT54805F158475		Vehicle Type Passenger Car, SUV, Van		Special Vehicles Not Applicable		Private Trailer Type		Vehicle Defect			
Automation System(s) in Vehicle No		Automation System Level in Vehicle No Automation				Automation System Level Engaged at Time of Crash No Automation					
Insurance Company #####			Insurance Policy # #####			Towed By MERLS		Towed To MERLS			
Location of Greatest Damage 08	First Impact 08	Extent of Damage (Power Unit and/or Trailers) Disabling Damage		Vehicle Direction W	Vehicle Use Private		Action Prior Going Straight Ahead				
Sequence of Events ● 17 - Motor Veh in Transport (● indicates MOST harmful event)											
PASSENGERS	Passenger Information				Date of Birth (Age)	Sex	Position		Restraint		
					Injury	Ejected	Trapped	Airbag Deployed			
	Hospital				Ambulance						
	Passenger Information				Date of Birth (Age)	Sex	Position		Restraint		
				Injury	Ejected	Trapped	Airbag Deployed				
Hospital				Ambulance							
TRUCK/BUS	Carrier Information					USDOT		MC	MPSC		
						Driver's CDL Type		Endorsements OH OP OT ON OS OX	CDL Exempt ○ Farm ○ Other		
	GVWR/GCWR ○ 10,000 lbs. or Less ○ 10,001 - 26,000 lbs. ○ Greater than 26,000 lbs.			Vehicle Configuration		Cargo Body Type	Medical Card	Hazardous Material ○ Placard ○ Cargo Spill		ID #	Class #
OWNERS	Owner Information					Owner Information					
WITNESS	Witness Information					Witness Information					
Investigated at Scene Yes		Reported Date (Time) 12/30/2018 (16:45)		1st Investigator Name (Badge) JACOB CONNER (2374)		2nd Investigator Name (Badge)		Photos No			
Narrative Driver of V1 was pulling out of Dollar General located at 3015 28th St. Driver of V1 stated that he attempting to turn East onto 28th St. which had heavy traffic and he was waived through. Driver of V2 was traveling West on 28th St. in the right hand lane. She stated that she went through the light at 28th St. and Radcliff Ave. and Driver of V1 pulled out in front of her. She was unable to avoid the accident. Driver of V1 was cited for failure to Yield Right of Way, and also for No Insurance. Driver of V1 complained of Shoulder Pain, but refused Medical Treatment, Driver of V2 complained of Wrist Pain, but also refused Treatment.						Diagram 					

Authority: 1949 PA 300, Sec.257.622
Compliance: Required MSP UD-10E
Penalty: \$100 and/or 90 days (Rev 11/2020)

External # 0218389
Crash ID 2236335

Page 01 of 01
File Class 54001

STATE OF MICHIGAN TRAFFIC CRASH REPORT

ORI MI 4185000		Department Name Kentwood Police Department		Incident # 2021005571	
Crash Date 03/21/2021	Crash Time 19:21	No. of Units 02	Crash Type Angle	Special Circumstances <input type="checkbox"/> None <input type="checkbox"/> Fleeing Police <input checked="" type="checkbox"/> Hit and Run <input type="checkbox"/> Unknown <input type="checkbox"/> School Bus <input type="checkbox"/> Animal	Special Checks <input type="checkbox"/> Fatal <input type="checkbox"/> Non-Traffic Area <input type="checkbox"/> ORV/Snowmobile
County 41 - Kent	Traffic Control None	Relation to Roadway On the Road		Weather Clear	Area INTR Driveway Related
City/Twp 68 - Kentwood	Contributing Circumstances 1st Backup - Reg. Congestion 2nd		Light Dusk	Road Surface Condition Dry	Total Lanes 05
Work Zone (if applicable) Type		Workers Present	Activity	Location	

LOCATION	Prefix	Primary Road Name 28TH	Road Type ST	Suffix SE	Divided Roadway
	Distance / Direction 200 Feet W				
	Trafficway Not Physically Divided				
	Prefix	Intersecting Road Name RADCLIFF	Road Type AVE	Suffix SE	Divided Roadway

UNIT / DRIVER	Unit Number 01	Unit Known Yes	State MI	Driver License Number #####	Date of Birth (Age) ##### (17)	License Type <input checked="" type="checkbox"/> Operator <input type="checkbox"/> Chauffeur <input type="checkbox"/> Moped	Endorsements <input type="checkbox"/> Cycle <input type="checkbox"/> Farm <input type="checkbox"/> Recreation	Sex F	Race W	Total Occupants 01	Hazardous Action None	
	Unit Type MV	Driver Information ##### ##### COMSTOCK PARK, MI 49321 (###) ###-####				Driver is Owner No	Injury O	Position Front - Left	Restraint Shoulder and Lap Belt			
	Driver Condition at Time of Crash 1st Appeared Normal 2nd					Driver Distracted By Not Distracted		Ejected	Trapped	Airbag Deployed Not Deployed		
	Hospital NONE					Ambulance NONE						
	Alcohol Suspected No	Contributing Factor No	Alcohol Test Type <input type="checkbox"/> Breath <input type="checkbox"/> Blood <input type="checkbox"/> Urine <input type="checkbox"/> Field <input type="checkbox"/> PBT <input type="checkbox"/> Refused <input type="checkbox"/> Not Offered			Alcohol Test Results <input type="checkbox"/> Pending		Test Results:	Interlock Device No			
	Drug Suspected No	Contributing Factor No	Drug Test Type <input type="checkbox"/> Blood <input type="checkbox"/> Urine <input type="checkbox"/> Field <input type="checkbox"/> Refused <input type="checkbox"/> Not Offered			Drug Test Results <input type="checkbox"/> Pending		Test Results:	Citation Issued <input type="checkbox"/> Hazardous <input type="checkbox"/> Other			
	Vehicle Registration DUS7332	State MI	Vehicle Description 2014	Make JEEP	Model GRAND CHEROKEE	Color BLK						
	VIN 1C4RJFAG0EC324560	Vehicle Type Passenger Car, SUV, Van	Special Vehicles Not Applicable		Private Trailer Type	Vehicle Defect						
	Automation System(s) in Vehicle No		Automation System Level in Vehicle No Automation				Automation System Level Engaged at Time of Crash No Automation					
	Insurance Company #####		Insurance Policy # #####				Towed By		Towed To			

PASSENGERS	Passenger Information				Date of Birth (Age)	Sex	Race	Position	Restraint
					Injury	Ejected	Trapped	Airbag Deployed	
	Hospital				Ambulance				
	Passenger Information				Date of Birth (Age)	Sex	Race	Position	Restraint
					Injury	Ejected	Trapped	Airbag Deployed	
	Hospital				Ambulance				

TRUCK/BUS	Carrier Information		USDOT	MC	MPSC
			Driver's CDL Type	Endorsements <input type="checkbox"/> H <input type="checkbox"/> P <input type="checkbox"/> T <input type="checkbox"/> N <input type="checkbox"/> S <input type="checkbox"/> X	CDL Exempt <input type="checkbox"/> Farm <input type="checkbox"/> Other
	GVWR/GCWR <input type="checkbox"/> 10,000 lbs. or Less <input type="checkbox"/> 10,001 - 26,000 lbs. <input type="checkbox"/> Greater than 26,000 lbs.	Vehicle Configuration	Cargo Body Type	Medical Card	Hazardous Material <input type="checkbox"/> Placard <input type="checkbox"/> Cargo Spill

OWNERS	Owner Information		Owner Information	

Damaged Property	Public	Owner & Phone

UNIT / DRIVER	Unit Number	02	Unit Known	No	State - Driver License Number	#####	Date of Birth (Age)	####/####/####	License Type	<input type="radio"/> Operator <input type="radio"/> Chauffeur <input type="radio"/> Moped	Endorsements	<input type="radio"/> Cycle <input type="radio"/> Farm <input type="radio"/> Recreation	Sex		Race		Total Occupants	00	Hazardous Action	Failed to Yield
	Unit Type	MV	Driver Information						Driver is Owner		Injury	Position		Restraint						
	#####						No					Restraint Use Unknown								
	(###) ###-####																			
	Driver Condition at Time of Crash								Driver Distracted By				Ejected	Trapped	Airbag Deployed					
	1st								Unknown						Unknown					
	Hospital								Ambulance											
	NONE								NONE											
	Alcohol Suspected	No	Contributing Factor	No	Alcohol Test Type				Alcohol Test Results				Interlock Device							
					<input type="radio"/> Breath <input type="radio"/> Blood <input type="radio"/> Urine <input type="radio"/> Field <input type="radio"/> PBT <input type="radio"/> Refused <input type="radio"/> Not Offered				<input type="radio"/> Pending Test Results:				No							
Drug Suspected	No	Contributing Factor	No	Drug Test Type				Drug Test Results				Citation Issued								
				<input type="radio"/> Blood <input type="radio"/> Urine <input type="radio"/> Field <input type="radio"/> Refused <input type="radio"/> Not Offered				<input type="radio"/> Pending Test Results:				<input type="radio"/> Hazardous <input type="radio"/> Other								
Vehicle Registration		State	Vehicle Description		Year	Make		Model		Color										
VIN			Vehicle Type			Special Vehicles			Private Trailer Type			Vehicle Defect								
			Passenger Car, SUV, Van			Not Applicable														
Automation System(s) in Vehicle			Automation System Level in Vehicle			Automation System Level Engaged at Time of Crash														
No			Unknown			Unknown														
Insurance Company				Insurance Policy #				Towed By				Towed To								
#####				#####																
Location of Greatest Damage	11	First Impact	11	Extent of Damage (Power Unit and/or Trailers)			Vehicle Direction		Vehicle Use			Action Prior								
				Unknown								Entering Roadway								
Sequence of Events		First		Second		Third		Fourth												
		● 17 - Motor Veh in Transport																		
		(● indicates MOST harmful event)																		
PASSENGERS	Passenger Information								Date of Birth (Age)		Sex	Race	Position		Restraint					
	Hospital								Ambulance											
	Passenger Information								Date of Birth (Age)		Sex	Race	Position		Restraint					
	Hospital								Ambulance											
TRUCK/BUS	Carrier Information								USDOT				MC		MPSC					
	GVWR/GCWR								Vehicle Configuration				Cargo Body Type		Medical Card		Hazardous Material		ID #	Class #
	<input type="radio"/> 10,000 lbs. or Less <input type="radio"/> 10,001 - 26,000 lbs. <input type="radio"/> Greater than 26,000 lbs.																<input type="radio"/> Placard <input type="radio"/> Cargo Spill			
OWNERS	Owner Information								Owner Information											
WITNESS	Witness Information								Witness Information											
Investigated at Scene	Yes	Reported Date (Time)	03/21/2021 (20:24)		1st Investigator Name (Badge)				2nd Investigator Name (Badge)				Photos							
						TYLER SMITH (2543)								No						
Narrative																				
The driver of Unit #1 was going West on 28th passing Radcliff when she saw a car pulling into the road slowly. The driver of Unit #1 got into the turning lane to avoid Unit #2 but was still struck by Unit #2. The driver of Unit #2 briefly stopped but then fled after giving the driver of Unit #1 their phone number. As of 03/26/2021, there are no updates to the Hit & Run investigation. See Case under #2021-5571. The driver of Unit #1 described the suspect car as a black SUV. A Volvo grill was recovered from the turning lane.																				
Diagram																				
3015 28th St SE 																				

Authority: 1949 PA 300, Sec.257.622
Compliance: Required MSP UD-10E
Penalty: \$100 and/or 90 days (Rev 01/2016)

External # 0212229
Crash ID 2042046

Page 01 of 01
File Class

STATE OF MICHIGAN TRAFFIC CRASH REPORT

Incident #
2020010539

Reviewer
James Connell

ORI MI 4185000	Department Name Kentwood Police Department				
Crash Date 07/18/2020	Crash Time 09:48	No. of Units 02	Crash Type Sideswipe-Opposite	Special Circumstances <input checked="" type="checkbox"/> None <input type="checkbox"/> Fleeing Police <input type="checkbox"/> Hit and Run <input type="checkbox"/> Unknown <input type="checkbox"/> School Bus <input type="checkbox"/> Animal	Special Checks <input type="checkbox"/> Fatal <input type="checkbox"/> Non-Traffic Area <input type="checkbox"/> ORV/Snowmobile
County 41 - Kent	Traffic Control None	Relation to Roadway On the Road		Weather Clear	Area NON-FRWY Driveway Related
City/Twp 68 - Kentwood	Contributing Circumstances 1st None	2nd	Light Daylight	Road Surface Condition Dry	Total Lanes 05 Speed Limit 45 Posted Yes
Work Zone (if applicable) Type Workers Present Activity Location					

LOCATION	Prefix 28TH 9M-110	Primary Road Name 28TH 9M-110	Road Type ST	Suffix SE	Divided Roadway
	Distance / Direction 306 Feet E				
	Trafficway Not Physically Divided				
LOCATION	Prefix RIDGEMOOR	Intersecting Road Name RIDGEMOOR	Road Type DR	Suffix SE	Divided Roadway
	Distance / Direction				
	Trafficway				

Unit Number 01	Unit Known Yes	State MI	Driver License Number #####	Date of Birth (Age) ##### (79)	License Type <input checked="" type="checkbox"/> Operator <input type="checkbox"/> Chauffeur <input type="checkbox"/> Moped	Endorsements <input type="checkbox"/> Cycle <input type="checkbox"/> Farm <input type="checkbox"/> Recreation	Sex M	Total Occupants 02	Hazardous Action Failed to Yield
Unit Type MV	Driver Information ##### ##### KENTWOOD, MI 49512 (###) ###-####				Driver is Owner No	Injury O	Position Front - Left	Restraint Shoulder and Lap Belt	
Driver Condition at Time of Crash 1st Appeared Normal					2nd Driver Distracted By Not Distracted		Ejected	Trapped	Airbag Deployed Not Deployed
Hospital NONE					Ambulance NONE				
Alcohol Suspected No	Contributing Factor No	Alcohol Test Type <input type="checkbox"/> Breath <input type="checkbox"/> Blood <input type="checkbox"/> Field <input type="checkbox"/> PBT <input type="checkbox"/> Urine <input type="checkbox"/> Refused <input checked="" type="checkbox"/> Not Offered			Alcohol Test Results <input type="checkbox"/> Pending Test Results:		Interlock Device No		
Drug Suspected No	Contributing Factor No	Drug Test Type <input type="checkbox"/> Blood <input type="checkbox"/> Urine <input type="checkbox"/> Field <input type="checkbox"/> Refused <input checked="" type="checkbox"/> Not Offered			Drug Test Results <input type="checkbox"/> Pending Test Results:		Citation Issued <input checked="" type="checkbox"/> Hazardous <input type="checkbox"/> Other #1116004 - FAIL TO YIELD		
Vehicle Registration 4MTT11	State MI	Vehicle Description 2008	Make HYUNDAI	Model AZERA	Color WHI				
VIN KMHFC46F48A265719	Vehicle Type Passenger Car, SUV, Van	Special Vehicles Not Applicable	Private Trailer Type	Vehicle Defect					
Automation System(s) in Vehicle No		Automation System Level in Vehicle No Automation			Automation System Level Engaged at Time of Crash No Automation				
Insurance Company #####		Insurance Policy # #####			Towed By N/A		Towed To N/A		
Location of Greatest Damage 01	First Impact 01	Extent of Damage (Power Unit and/or Trailers) Functional Damage		Vehicle Direction E	Vehicle Use Private	Action Prior Turning Left			
Sequence of Events ● 17 - Motor Veh in Transport (● Indicates MOST harmful event)									

PASSENGERS	Passenger Information			Date of Birth (Age)	Sex	Position	Restraint
	Injury			Ejected	Trapped	Airbag Deployed	
	Hospital						
PASSENGERS	Passenger Information			Date of Birth (Age)	Sex	Position	Restraint
	Injury			Ejected	Trapped	Airbag Deployed	
	Hospital						

TRUCK/BUS	Carrier Information			USDOT	MC	MPSC		
	Driver's CDL Type			Endorsements <input type="checkbox"/> H <input type="checkbox"/> P <input type="checkbox"/> T <input type="checkbox"/> N <input type="checkbox"/> S <input type="checkbox"/> X	CDL Exempt <input type="checkbox"/> Farm <input type="checkbox"/> Other			
	GVWR/GCWR O 10,000 lbs. or Less O 10,001 - 26,000 lbs. O Greater than 26,000 lbs.			Vehicle Configuration	Cargo Body Type	Medical Card	Hazardous Material O Placard O Cargo Spill	ID #

Owner Information	Owner Information
-------------------	-------------------

Damaged Property	Public	Owner & Phone
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UNIT / DRIVER	Unit Number 02	Unit Known Yes	State MI	Driver License Number #####	Date of Birth (Age) ##### (49)	License Type <input checked="" type="radio"/> Operator <input type="radio"/> Chauffeur <input type="radio"/> Moped	Endorsements <input type="radio"/> Cycle <input type="radio"/> Farm <input type="radio"/> Recreation	Sex M	Total Occupants 01	Hazardous Action None	
	Unit Type MV	Driver Information ##### KENTWOOD, MI 49508 (###) ###-####				Driver is Owner No	Injury O	Position Front - Left	Restraint Shoulder and Lap Belt		
	Driver Condition at Time of Crash 1st Appeared Normal				2nd		Driver Distracted By Not Distracted		Ejected	Trapped	
	Hospital NONE				Ambulance NONE						
	Alcohol Suspected No	Contributing Factor No	Alcohol Test Type <input type="radio"/> Breath <input type="radio"/> Blood <input type="radio"/> Urine <input type="radio"/> Field <input type="radio"/> PBT <input type="radio"/> Refused <input checked="" type="radio"/> Not Offered			Alcohol Test Results <input type="radio"/> Pending		Test Results:	Interlock Device No		
	Drug Suspected No	Contributing Factor No	Drug Test Type <input type="radio"/> Blood <input type="radio"/> Urine <input type="radio"/> Field <input type="radio"/> Refused <input checked="" type="radio"/> Not Offered			Drug Test Results <input type="radio"/> Pending		Test Results:	Citation Issued <input type="radio"/> Hazardous <input type="radio"/> Other		
	Vehicle Registration 016D961	State MI	Vehicle Description 2017	Year	Make TOYOTA	Model RAV4	Color WHI				
	VIN JTMRFREV0HD206101	Vehicle Type Passenger Car, SUV, Van		Special Vehicles Not Applicable		Private Trailer Type		Vehicle Defect			
	Automation System(s) in Vehicle No		Automation System Level in Vehicle No Automation				Automation System Level Engaged at Time of Crash No Automation				
	Insurance Company #####			Insurance Policy # #####			Towed By N/A		Towed To N/A		
Location of Greatest Damage 03	First Impact 03	Extent of Damage (Power Unit and/or Trailers) Minor Damage		Vehicle Direction W	Vehicle Use Private		Action Prior Going Straight Ahead				
Sequence of Events First ● 17 - Motor Veh in Transport Second Third Fourth (● Indicates MOST harmful event)											
PASSENGERS	Passenger Information				Date of Birth (Age)	Sex	Position	Restraint			
					Injury	Ejected	Trapped	Airbag Deployed			
	Hospital				Ambulance						
	Passenger Information				Date of Birth (Age)	Sex	Position	Restraint			
					Injury	Ejected	Trapped	Airbag Deployed			
	Hospital				Ambulance						
TRUCK/BUS	Carrier Information				USDOT		MC	MPSC			
					Driver's CDL Type	Endorsements OH OP OT ON OS OX	CDL Exempt <input type="radio"/> Farm <input type="radio"/> Other				
	GVWR/GCWR <input type="radio"/> 10,000 lbs. or Less <input type="radio"/> 10,001 - 26,000 lbs. <input type="radio"/> Greater than 26,000 lbs.		Vehicle Configuration		Cargo Body Type	Medical Card	Hazardous Material <input type="radio"/> Placard <input type="radio"/> Cargo Spill		ID #	Class #	
OWNERS	Owner Information				Owner Information						
WITNESS	Witness Information				Witness Information						
Investigated at Scene Yes	Reported Date (Time) 07/18/2020 (09:48)	1st Investigator Name (Badge) DAVID ROBERTSON (1531)			2nd Investigator Name (Badge)			Photos No			
Narrative Driver #1 was making a left turn out of 3015 28th St SE to head E/B. Driver #1 stated he miss timed pulling out and sideswiped Driver #2 who was W/B on 28th St SE in the curb lane. Driver #2 stated he saw Driver #1 start to pull out and he attempted to change lanes to avoid the collision but could not avoid the collision. Driver #1 was cited for failure to yield.					Diagram 						



To: Kentwood Planning Department
From: Brad Boomstra, P.E.
City Engineer
Date: July 6, 2023
Re: **Kum & Go**
2975 & 2995 28th Street SE
41-18-10-476-021 & -018
Review of Site Plan Received 6-23-2023

We have completed our preliminary review of the proposed site plans dated 6-7-2023 and received in our office on 6-23-2023 for the above referenced project.

Detailed review and comment will be done when Site Construction Plan Approval is applied for. However, we do offer the following initial comments.

Overall Plan Comments:

1. Concrete curb and gutter per MDOT standard plan R-30 series (Detail F4, as modified for the tilt of the gutter pan), and a commercial drive opening per MDOT standard plan R-29 series (Detail M) are required for the proposed drive approach entrance within the Ridgemoor Drive right-of-way.
2. The pavement within the commercial drive approach between the sidewalk and the gutter pan must be concrete at least 6 inches thick.
3. For any curb cut which terminates less than five (5) feet from a construction joint, the contractor shall remove and replace the existing curb to the next joint.
4. The sidewalk must be carried across the commercial drives. Where it crosses, it must be at least 6 inches thick.
5. Pavement section details must be shown on the plans for all pavement types.
6. The Michigan Department of Transportation (MDOT) has jurisdiction over 28th Street (M-11) for the proposed driveway to 28th Street.
7. Include the City of Kentwood General Notes on the plan(s). These notes are required for the work being performed in the Ridgemoor Drive right-of-way. Highway permit conditions, specifications and required general plan notes are posted on the City's website, and can be accessed at <http://www.ci.kentwood.mi.us> (hover over "CITY SERVICES" and "DEPARTMENTS" then click "ENGINEERING", then click the "RIGHT-OF-WAY" link near the top of the page).
8. In the area of the former building, there may be disturbed/loose soil remaining from the previous construction. Be sure the specifications require that an independent testing

laboratory be on site to perform compaction testing during site grading. We want to be sure that all backfill soils are properly placed and compacted prior to new foundation construction.

9. Provide a tributary area map and calculations to verify the capacity of the proposed and existing storm pipes to carry a 10-year storm (or a 100-year event if no overland floodway is provided). Use the Kentwood Storm Sewer Design Standards available on the City's website; they contain a Kentwood-specific IDF curve and time of concentration (T_c) nomograph. Use a minimum initial T_c of 10 minutes. Maintain a minimum cleansing velocity of 2.5 ft/sec in the pipes. Calculations must be sealed by a registered engineer.
10. On-site stormwater detention will be required for this parcel. Section 78-123 of the City of Kentwood Ordinance requires that the new detention facility be sized for the entire parcel in a *fully developed condition*. We will need to see these calculations.
11. The amount of detention volume required may be based on an estimate of the percentage of impervious surface area based on the Kent County Subdivision Drainage Rules (short method #1), on the basis of 0.1 acre-ft per acre for the entire parcel (short method #2) or, alternately, a tabulation of actual reservoir routing (long method). Routing calculations usually result in the lowest required volume. The detention sizing must be based on a 25-year storm. We will need to see detention sizing and release calculations.
12. Kentwood allows a maximum detention release rate of 0.33 cfs/acre, based on the total parcel size.

Soil Erosion and Sediment Control:

1. We will need to see some additional soil erosion control measures as part of the plan review. Section 78-62 of the City of Kentwood Ordinance (posted on the City's website) contains minimum requirements for information that shall be included on the plan. Go to: <http://www.ci.kentwood.mi.us> (hover over "CITY SERVICES" and "DEPARTMENTS" then click "ENGINEERING", then click the "SOIL EROSION AND STORMWATER" link near the top of the page). Please review this ordinance carefully.
2. Per the requirements of Part 91 of Public Act 451, all proposed grading and soil erosion controls must be shown on a sheet(s) titled, at least in part, "SOIL EROSION AND SEDIMENTATION CONTROL PLAN". This plan should show surface features related to grading and soil erosion and sediment control. The SESC Plan may be combined with other plans and improvements as long as clarity is retained. Two (2) copies of this sheet, once approved, will need to accompany the application for an earth change.
3. Include a written description of the soil types of the exposed land area contemplated for an earth change.
4. Place a note on the soil erosion control plan to indicate that existing and new catch basins shall be protected with an inlet filter drop (silt sack). Straw bales or fabric placed under the grate are NOT acceptable, and sediment traps alone are not sufficient to provide adequate sediment filtration. Such a note might read, "EXISTING AND NEW CATCH BASINS SHALL BE PROTECTED WITH AN INLET FABRIC DROP (SILT SACK)." Include a

simple detail of the proposed silt sack on the Soil Erosion and Sediment Control plan. We can provide you with an acceptable CAD detail upon request.

5. Place the following notes on the soil erosion control plan:
 - ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL COMPLY WITH ARTICLE 2 OF CITY OF KENTWOOD ORDINANCE 78 AND PART 91 OF PUBLIC ACT 451.
 - ALL SOIL EROSION AND SEDIMENT CONTROLS SHALL BE INSPECTED AND MAINTAINED ON A DAILY BASIS AND IMMEDIATELY FOLLOWING EVERY SIGNIFICANT RAINFALL EVENT.
 - ALL EXCESS SPOILS ARE TO BE REMOVED FROM THE SITE. OTHERWISE, STOCKPILES MUST BE PROVIDED WITH TEMPORARY AND PERMANENT STABILIZATION MEASURES.
 - EXCESS DIRT IS NOT TO BE PLACED ON ANY AREAS ON OR ADJACENT TO THE SITE WHERE THE PLAN DOES NOT SHOW THE AREA BEING DISTURBED. (This area of disturbance, or grading limits, must be clearly shown on the site plan.)
 - SILT FENCING IS REQUIRED ALONG ALL DOWNSTREAM EDGES OF THE GRADING LIMITS AND MUST REMAIN IN PLACE UNTIL VEGETATION IS UNIFORMLY RE-ESTABLISHED. THE SILT FENCE MUST BE TOED IN A MINIMUM OF 6 INCHES ALONG ITS BASE. (Remember that silt fences are intended to intercept *sheet flow* only and must always be installed *parallel* with the ground contours. Silt fences must not cross ravines, overland floodways, ditches, swales, etc. where concentrated flows occur.)
 - ALL DISTURBED BANKS EQUAL TO OR GREATER THAN 4:1 AND THE DETENTION BASIN BANKS AND BOTTOM MUST BE COVERED WITH TOPSOIL, SEED AND NORTH AMERICAN GREEN S-150 (OR APPROVED EQUAL) EROSION CONTROL BLANKET. THIS BLANKET, ALONG WITH THE NECESSARY STAPLES OR WOOD PEGS, SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS. SEAMS SHALL BE PLACED PARALLEL TO THE DIRECTION OF SURFACE RUNOFF. (Indicate such areas with shading or hatching on the plan.) [*This includes the slopes created along the center of the lots for the proposed walkouts.*]
 - ALL SOIL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY EARTH MOVING OPERATIONS AND SHALL BE MAINTAINED UNTIL VEGETATION IS UNIFORMLY RE-ESTABLISHED AND THE SITE IS PERMANENTLY STABILIZED.
 - NO SEDIMENT SHALL BE TRACKED ONTO THE ADJACENT PUBLIC STREET AND IF IT DOES OCCUR, IT SHALL BE CLEANED DAILY.
 - THE STORMWATER DETENTION BASIN IS TO BE THE FIRST ITEM OF EARTH MOVING AND SHALL BE CONSTRUCTED IN CONJUNCTION WITH THE INSTALLATION OF SOIL EROSION CONTROL MEASURES.
6. Per the requirements of Part 91 of P.A. 451, place on the soil erosion control plan a bar graph or chart showing the proposed timing and sequence of each proposed earth change. It must include the installation of both permanent and temporary soil erosion and sedimentation controls, as well as the removal of temporary controls. It must also show the sequence of any construction phases.
7. A stone construction exit must also be included as part of the soil erosion control plan. Indicate the location of this exit on the plan, along with a detail. The length of the rock construction exit shall be at least 50 feet and shall consist of a 6-inch minimum layer

crushed rock or stone on top of non-woven geosynthetic fabric (MDOT "Heavy Geotextile Liner"). The size of the stone shall be selected so that it cannot get caught between dual truck tires.

Utilities (Sanitary & Water):

1. The City of Grand Rapids owns, operates and maintains the sanitary sewer collection and water distribution systems in this portion of Kentwood. Any alterations, extensions or new connections to either of these systems will require approval from Grand Rapids. Construction plans (drafting standards) and specifications for the proposed watermain and sanitary sewer must conform to Grand Rapids requirements.

Required Permits, Bonds, Fees [and Escrow]:

1. Because this parcel is adjacent to a public street, over one (1) acre is being disturbed, or is within 500 feet of a lake or stream, a Permit for an Earth Change (fee \$400) and a \$5,000 soil erosion control performance bond or an irrevocable letter of credit using the City of Kentwood format will be required through Kentwood Engineering. The Owner/Developer must sign the Permit for an Earth Change. Both the Owner/Developer and the Contractor must be named on the bond. Please contact us if you need a permit and/or a bond template form, or one can be accessed on the City's website at <http://www.ci.kentwood.mi.us> (hover over "CITY SERVICES" and "DEPARTMENTS" then click "ENGINEERING", then click the "SOIL EROSION AND STORM WATER" link near the top of the page). There is a 365-day limit to complete the work under this permit.
2. Your contractor will need a Drive Permit from Kentwood Engineering for the proposed commercial drives into the Ridgemoor Drive right-of-way. A \$10,000 annual ROW bond or an irrevocable letter of credit using the City of Kentwood format and a certificate of insurance (with the City of Kentwood named as additional insured) will also be required. We will need to see a plan of the proposed commercial driveway at a plan scale no greater than 1" = 50'. Contact us if you need a permit and/or bond form, or they can be accessed on the City's website. Highway specifications, general conditions and required plan notes are also posted on the City's website.
3. A highway permit (\$800) will also be needed for any utility work in the Ridgemoor Drive right-of-way. A \$20,000 right-of-way bond or an irrevocable letter of credit using the City of Kentwood format and a certificate of insurance (with the City of Kentwood named as additional insured) will also be required. We will also require that a traffic plan be submitted to us for road closure, signage and detours. Kentwood Engineering must be notified at least two (2) working days prior to making the open street cut so that Kentwood Police and the Kentwood Public Schools can be properly notified.
4. A \$30,000 Site Grading and Stormwater Management Bond or an irrevocable letter of credit using the City of Kentwood format and an administrative fee of \$600 will be required through Kentwood Engineering. This bond is posted to assure that the plan, once approved, is constructed in the field according to that plan. Both the

Owner/Developer and the Contractor must be named on the bond. Let us know if you need our bond template, or it can be accessed on the City's website.

5. Please note that all required bonds and permit applications and fees must be submitted to, and accepted by, Kentwood Engineering *before any permits can be issued!* There will be no "partial" or "conditional" permits issued.

Miscellaneous / Reminders:

1. Please be advised that at the completion of construction, a civil engineer or surveyor will need to provide an as-built plan to the City of Kentwood with a certification by a registered engineer stating that the site grading and the stormwater system were constructed in accordance with the approved plans. A copy of the certification form is available upon request or on the City's website.

2. Remember that, for a Building Permit to be issued, other City departments (fire, assessor, treasurer, water, planning) may have comments regarding this plan. Contact Kentwood Inspections (Renee Hargrave, 554-0781) regarding building permit application procedures, fees, plan requirements and approval status.

3. Once final approval by all departments has been granted, make sure the contractor has the latest approved set of plans before beginning construction!

Should you have any questions regarding this department's review, please feel free to contact our office.

cc: Kentwood Engineering Permit Staff

PROJECT TEAM:

DEVELOPER

KUM & GO
1459 GRAND AVE.
DES MOINES, IA 50309
CONTACT: RYAN HALDER
PHONE: 515-457-6232
EMAIL: ryan.halder@kumandgo.com

ARCHITECT

BRR ARCHITECTURE, INC.
8131 METCALF AVE., SUITE 300
OVERLAND PARK, KS 66204
PHONE: (913) 262-9095

CIVIL ENGINEER

ATWELL, LLC
12745 23 MILE ROAD, SUITE 200
SHELBY TOWNSHIP, MI 48315
CONTACT: JAMIE ANTONIEWICZ
PHONE: (586) 786-9800
EMAIL: jantoniewicz@atwell-group.com

PLANNING

KENTWOOD - PLANNING DEPT.
4900 BRETON AVE, SE
P.O. BOX 8848
KENTWOOD, MI 49518
PHONE: (616) 554-0810
EMAIL: PungJ@kentwood.us
CONTACT: JOE PUNG

BUILDING

KENTWOOD - BUILDING DEPT.
4900 BRETON AVE, SE
KENTWOOD, MI 49518
PHONE: (616) 554-0781
EMAIL: N/A
CONTACT: JIM KIRKWOOD

BENCHMARKS

BENCHMARK #1: CHISELED "X" ON SOUTH SIDE OF LIGHT POLE BASE IN NORTH RIGHT OF WAY OF 28TH STREET SE
ELEVATION: 757.19 (NAVD88)

BENCHMARK #2: TOP NUT ON FIRE HYDRANT IN WEST RIGHT OF WAY OF RIDGEMOOR DRIVE SE
ELEVATION: 754.19 (NAVD88)

LEGAL DESCRIPTION

LAND IN THE CITY OF KENTWOOD, KENT COUNTY, MI, DESCRIBED AS FOLLOWS:

THAT PART OF LOTS 2 AND 3, SLATER HEIGHTS (PLAT), SECTION 10, TOWN 6 NORTH, RANGE 11 WEST, CITY OF KENTWOOD, KENT COUNTY, MICHIGAN, DESCRIBED AS: COMMENCING ON THE EAST LINE OF SLATER HEIGHTS (PLAT) AT A POINT 80 FEET (PERPENDICULAR MEASUREMENT) NORTH FROM THE CENTERLINE OF 28TH STREET, THENCE NORTH 86 DEGREES 27 MINUTES WEST 290.3 FEET ALONG THE NORTH LINE OF SAID STREET TO THE PLACE OF BEGINNING OF THIS DESCRIPTION, THENCE NORTH 86 DEGREES 27 MINUTES WEST 282.1 FEET ALONG THE NORTH LINE OF SAID STREET TO THE EAST LINE OF RIDGEMOOR DRIVE, THENCE NORTHEASTERLY 156.13 FEET ALONG THE EAST LINE OF SAID DRIVE ON A 270.92 FEET RADIUS CURVE TO THE RIGHT, THE CHORD OF WHICH BEARS NORTH 21 DEGREES 15 MINUTES EAST 153.97 FEET, THENCE NORTH 37 DEGREES 45 MINUTES EAST (RECORD 37 DEGREES 50 MINUTES EAST) 50.0 FEET, THENCE NORTHEASTERLY 123.18 FEET ON A 373.36 FOOT RADIUS CURVE TO THE LEFT, THE CHORD OF WHICH BEARS NORTH 28 DEGREES 19 MINUTES EAST 122.63 FEET, THENCE SOUTH 86 DEGREES 27 MINUTES EAST 137.50 FEET PARALLEL WITH THE NORTH LINE OF 28TH STREET, TO A POINT WHICH IS 290.3 FEET NORTH 86 DEGREED 27 MINUTES WEST FROM THE PLACE OF BEGINNING, EXCEPT THE EASTERLY 120.6 FEET MEASURED ALONG THE NORTH LINE OF 28TH STREET.

FLOOD ZONE:

THE SITE SHOWN HEREON IS LOCATED WITHIN ZONE C (AREAS OF MINIMAL FLOODING) ACCORDING TO COMMUNITY-PANEL NUMBER 260107 0010 B OF THE FLOOD INSURANCE RATE MAP, EFFECTIVE DATE: NOVEMBER 18, 1981.

WETLANDS

NO WETLANDS IDENTIFIED ON THE SITE.

WATER

GRAND RAPIDS UTILITY ENGINEERING
1120 MONROE AVE NW, 3RD FLOOR
GRAND RAPIDS, MI 49503
PHONE: (616) 456-4074
EMAIL: lolson@grcity.us
CONTACT: LAWRENCE M. OLSON

STORMWATER

KENTWOOD ENGINEERING DEPT
4900 BRETON AVE SE
KENTWOOD, MI 49518
PHONE: (616) 554-0737
EMAIL: Bekej@ci.kentwood.mi.us
CONTACT: JIM BEKE

MICHIGAN DOT

18101 W. NINE MILE RD
SOUTHFIELD, MI 48075
PHONE: (248) 483-51557
EMAIL: dortmand@michigan.gov
CONTACT: DAVE DORTMAN

ACCESS & ROAD

KENTWOOD ENGINEERING DEPT
4900 BRETON AVE, SE
KENTWOOD, MI 49518
PHONE: (616) 554-0737
EMAIL: Bekej@ci.kentwood.mi.us
CONTACT: JIM BEKE

MICHIGAN DOT

1420 FRONT AVENUE NW
GRAND RAPIDS, MI 49504
CONTACT: ERICK KIND, PE
PHONE: (616) 451-3091
EMAIL: kinde@michigan.gov

GAS

DTE GAS COMPANY
ONE ENERGY PLAZA
DETROIT, MI 48226
PHONE: (800) 533-6220
CONTACT: N/A

ELECTRIC

CONSUMERS ENERGY
ONE ENERGY PLAZA
JACKSON, MI 49201
PHONE: (800) 805-0490
CONTACT: N/A

SIGNAGE

KENTWOOD - PLANNING DEPT.
4900 BRETON AVE, SE
P.O. BOX 8848
KENTWOOD, MI 49518
PHONE: (616) 554-0810
EMAIL: PungJ@kentwood.us
CONTACT: JOE PUNG

SANITARY SEWER

GRAND RAPIDS UTILITY ENGINEERING
1120 MONROE AVE NW, 3RD FLOOR
GRAND RAPIDS, MI 49503
PHONE: (616) 456-4074
EMAIL: lolson@grcity.us
CONTACT: LAWRENCE M. OLSON



WHERE & MEANS MORE!



VICINITY MAP

NOT TO SCALE

PRELIM. SITE PLAN DRAWINGS
K&G STORE #2627
STREET ADDRESS T.B.D
KENTWOOD, MICHIGAN 49508

SHEET INDEX		
REV		
	01	COVER
	02	ALTA SURVEY (1 OF 2)
	03	ALTA SURVEY (2 OF 2)
	04	LAYOUT PLAN
	05	TRUCK CIRCULATION PLAN
	06	DEMOLITION PLAN
	07	PRELIMINARY GRADING PLAN
	08	PRELIMINARY UTILITY PLAN
	09	LANDSCAPING PLAN
	10	LANDSCAPING DETAILS
	11	EXTERIOR BUILDING ELEVATIONS
	12	CANOPY ELEVATIONS
	13	FLOOR PLAN
	14	ROOF PLAN
	15	TRASH ENCLOSURE DETAILS
	16	SIGNAGE DETAILS
	17	PHOTOMETRIC PLAN

SITE DATA			
STORE TYPE		BISTRO	
CANOPY / DISPENSER ARRANGEMENT		6 DISPENSERS (SINGLE ARRANGEMENT)	
TYPE OF USE		CONVENIENCE STORE WITH FUEL	
HEIGHT	BUILDING		18'-0"
	TOP OF BLADE WALL		21'-8"
	CANOPY		18'-6" (MIN)
GROSS FLOOR AREA		3,968.00 S.F.	
GROSS CANOPY AREA		3,936.00 S.F.	
GROSS LOT AREA		±65,178.00 S.F. ± 1.496 ACRES	
FAR (INCLUDING CANOPY)		N/A	
BUILDING COVERAGE		3,968.00 S.F. (6.09%)	
LANDSCAPE COVERAGE		22,215.00 S.F. (34.08%)	
PARKING/DRIVE/SIDEWALK COVERAGE		38,995.00 S.F. (59.83%)	
BICYCLE PARKING		2 SPACES	
REQUIRED PARKING	STANDARD		STANDARD: 15
	ADA		ADA: 1
	TOTAL		TOTAL: 16
	PARKING RATIO = 4/1000 G.F.A.		
PROVIDED PARKING	STANDARD		STANDARD: 19
	ADA		ADA: 1
	TOTAL		TOTAL: 20
	PARKING RATIO = 4/1000 G.F.A.		

ZONING INFORMATION	
ZONE	C-2
MINIMUM LOT AREA	N/A
MINIMUM LOT WIDTH (FEET)	N/A
PARKING SETBACK (FEET)	SAME AS FRONT/SIDE
CANOPY SETBACK (FEET)	SAME AS BUILDING
FRONT YARD SETBACK (FEET)	35'
SIDE YARD SETBACK (FEET)	30'(LEFT) / 0'(RIGHT)
REAR YARD SETBACK (FEET)	50' BLDG 45' PARKING
MAXIMUM HEIGHT (FEET)	60'
MAXIMUM BUILDING COVERAGE	N/A
MAXIMUM IMPERVIOUS COVERAGE	N/A
MAXIMUM FLOOR AREA	N/A



CONFIDENTIAL DOCUMENT:
INFORMATION CONTAINED IN THIS DOCUMENT IS PROPRIETARY TO KUM & GO, L.C. AND SHALL NOT BE DISTRIBUTED.



1459 Grand Ave
Des Moines, IA 50309
P: 888-458-6646

2627 - KENTWOOD, MI
NEC OF 28TH STREET SE &
RIDGEMOOR DRIVE SE

COVER

KG PROJECT TEAM:
RDM: DAVE LEMONS
SDM: RYAN HALDER
CRM: SCOTT NEWBURY

REVISION DESCRIPTION	DATE	DATE	DATE	DATE	DATE

DATE: 06-07-2023

SHEET NUMBER:

01 OF 17

REVISIONS

CAD FILE: \\MSH\CIVIL\22006923\DWG\PLAN SETS\SITE-PRELIMINARY\22006923-000-C

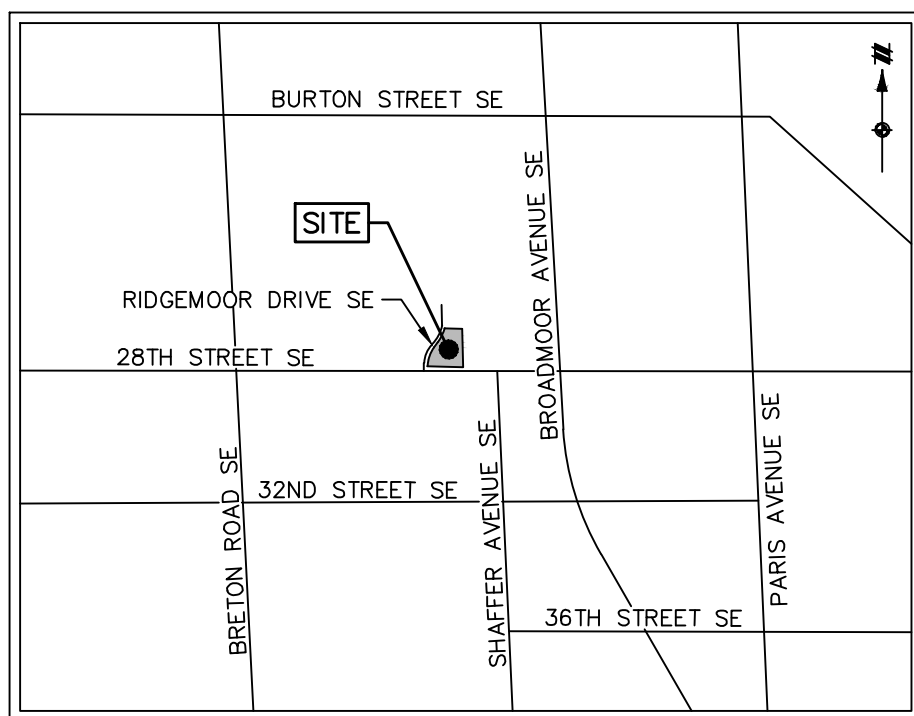
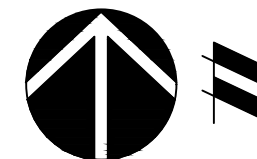
ALTA/NSPS LAND TITLE SURVEY

SITE BENCHMARKS

BENCHMARK #1: CHISELED "X" ON SOUTH SIDE OF LIGHT POLE BASE IN NORTH RIGHT OF WAY OF 28TH STREET SE
ELEVATION: 757.19 (NAVD88)

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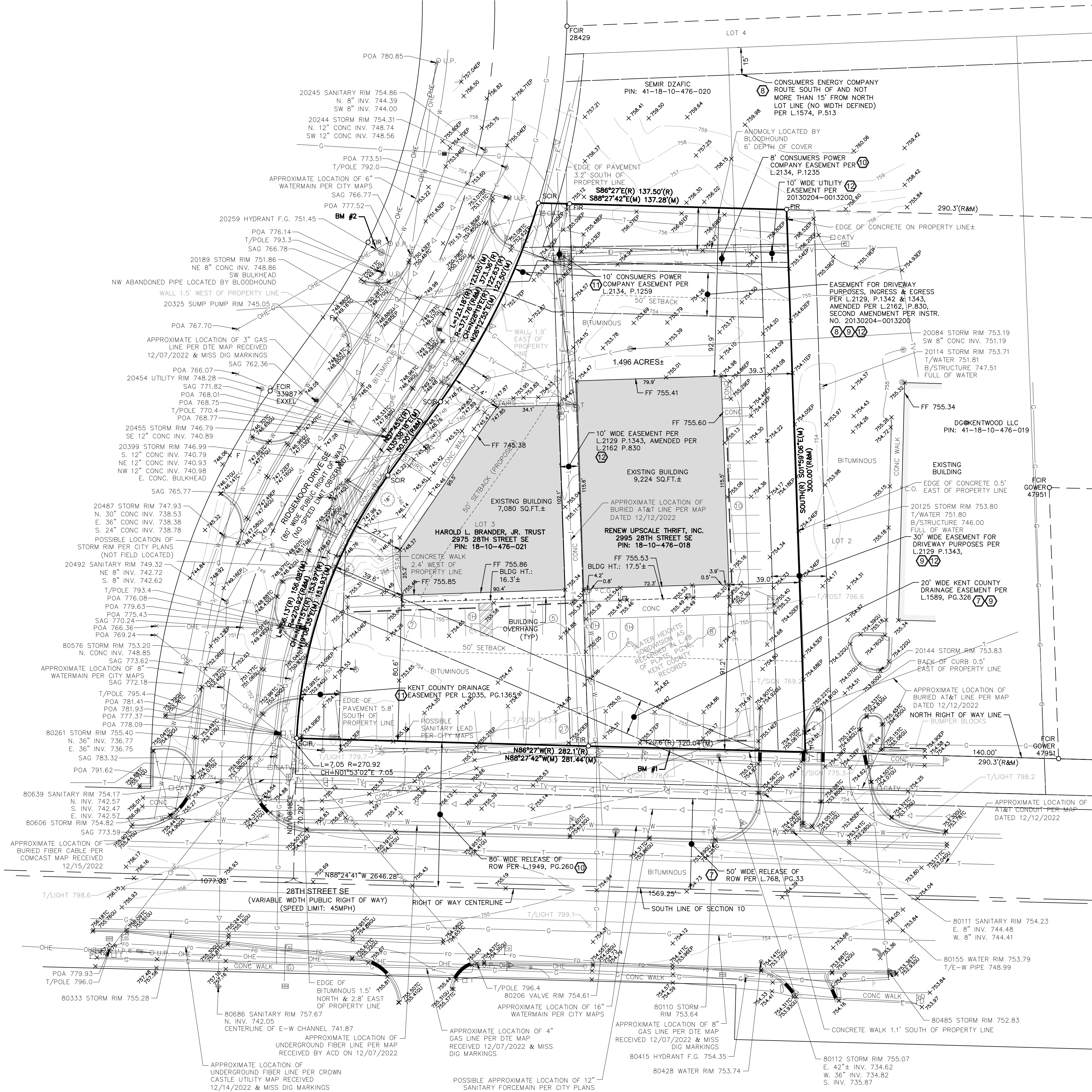
SCALE: 1"=30'



VICINITY MAP
NOT TO SCALE

LEGEND

	SECTION CORNER
	FOUND CAPPED IRON ROD
	FOUND IRON ROD
	FOUND MAG NAIL
	SET CAPPED IRON ROD
	EXISTING TREE
	EXISTING UTILITY POLE
	EXISTING GUY ANCHOR
	EXISTING SIGN
	EXISTING LIGHT POLE
	EXISTING MAIL BOX
	EXISTING CATCH BASIN/MANHOLE
	EXISTING ELECTRIC TRANSFORMER
	EXISTING GAS VALVE
	EXISTING BOLLARD
	EXISTING ELECTRIC METER
	EXISTING CABLE RISER
	EXISTING FIRE DEPARTMENT CONNECTION
	EXISTING CLEAN OUT
	EXISTING TELEPHONE RISER
	EXISTING VALVE
	EXISTING FIRE HYDRANT
	EXISTING GAS METER
	EXISTING HANDHOLE
	EXISTING FLAG POLE
	EXISTING FIBER OPTIC MARKER
	EXISTING CABLE MARKER
	EXISTING GAS MARKER
	EXISTING TELEPHONE MARKER
	EXISTING ELECTRIC MARKER
	EXISTING WATER MARKER
	BOUNDARY LINE
	EASEMENT LINE
	SECTION LINE
	BOUNDARY ADJACENT LINE
	RIGHT OF WAY CENTERLINE
	BUILDING SETBACK LINE
	UNDERGROUND UNKNOWN UTILITY LINE
	UNDERGROUND WATER LINE
	UNDERGROUND FIBER OPTIC LINE
	UNDERGROUND STORM LINE
	OVERHEAD UTILITY LINE
	UNDERGROUND ELECTRIC LINE
	UNDERGROUND GAS LINE
	UNDERGROUND SANITARY LINE
	UNDERGROUND TELEPHONE LINE
	UNDERGROUND CABLE LINE
	EXISTING FENCE
	EXISTING CURB AND GUTTER
	EXISTING GROUND CONTOUR
	SCHEDULE B, PART II EXCEPTION
	EXISTING GROUND ELEVATION
	EXISTING TOP OF CURB ELEVATION
	EXISTING GUTTER ELEVATION
	EXISTING EDGE OF PAVEMENT ELEVATION
	MEASURED RECORD
	TOP ELEVATION
	WIRE POINT OF ATTACHMENT ELEVATION
	WIRE SAG ELEVATION
	EXISTING BUILDING



ATWELL
866.850.4200 www.atwell-group.com
12745 23 MILE ROAD, SUITE 200
SHARON, MA 01946
(508) 786-9800



Kum & Go
1459 Grand Ave
Des Moines, IA 50309
P: 888-458-6646

2627 - KENTWOOD, MI
NEC OF 28TH STREET SE &
RIDGEMOOR DRIVE SE
ALTA SURVEY (2 OF 2)

KG PROJECT TEAM:
RDM: DAVE LEMONS
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CRM: SCOTT NEWBURY

DATE: 06-07-2023

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03 OF 17

REVISIONS

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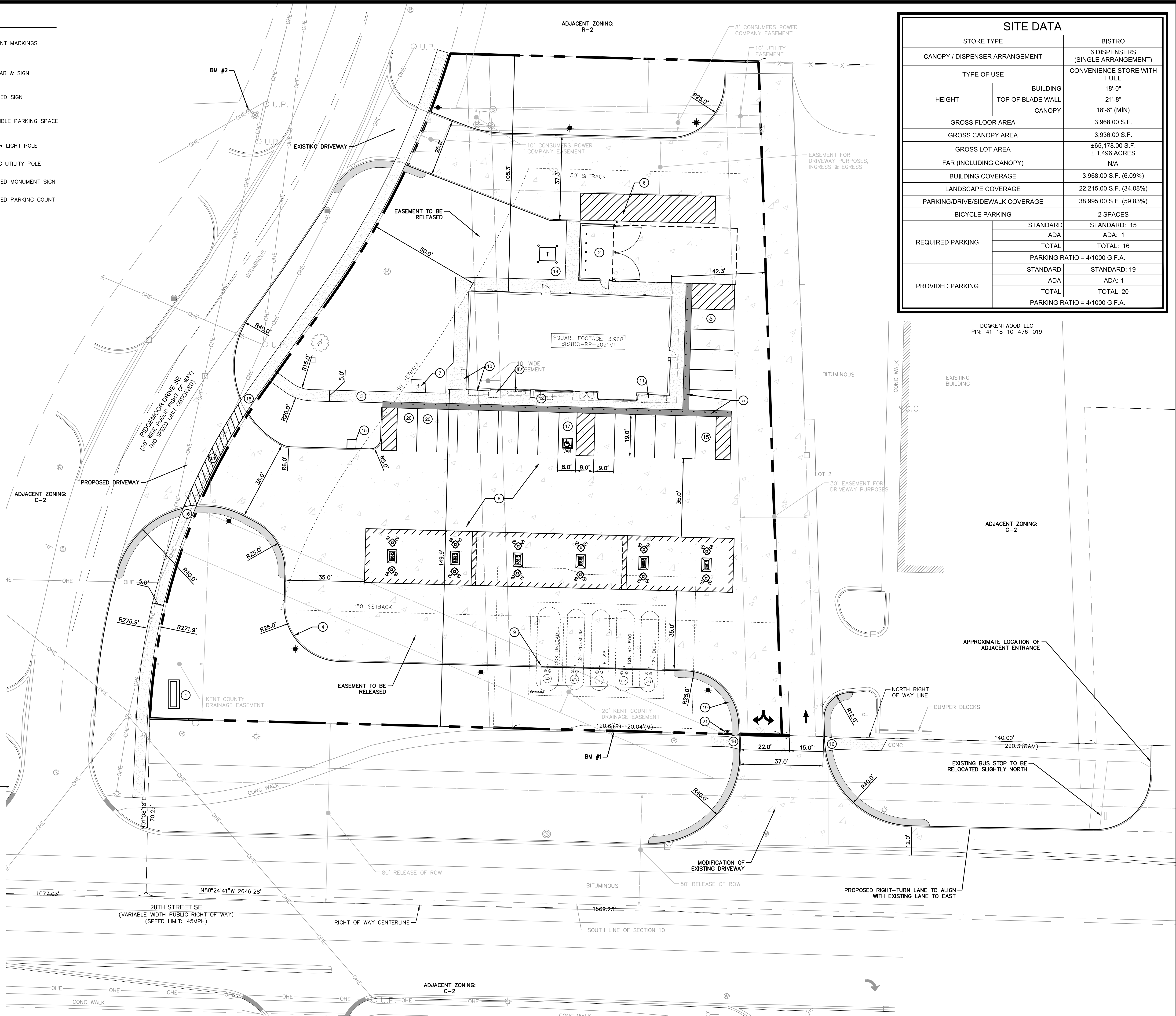
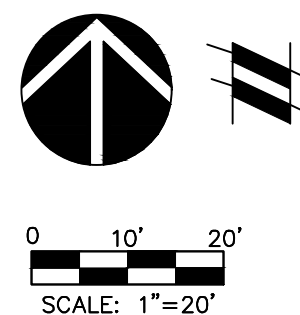
	PROPERTY LINE		PROPOSED CURB & GUTTER		EXISTING CURB & GUTTER		CONCRETE SIDEWALK		CONCRETE		CONCRETE ROLLOVER CURB		COLORED CONCRETE		OVERHEAD ELECTRIC		
	FLAG NOTE		PROPOSED PAVEMENT MARKINGS		STOP BAR & SIGN		PROPOSED SIGN		ACCESSIBLE PARKING SPACE		EX / PR LIGHT POLE		EXISTING UTILITY POLE		PROPOSED MONUMENT SYMBOL		PROPOSED PARKING COUNT

- 1 PROPOSED 8" MONUMENT SIGN
- 2 14'-8" X 24'-8" TRASH ENCLOSURE WITH NICHIA
- 3 PROPOSED 4" SIDEWALK
- 4 PROPOSED INTEGRAL CURB
- 5 PROPOSED ZERO CURB WITH BOLLARDS
- 6 PROPOSED LOADING ZONE
- 7 PROPOSED BIKE RACK
- 8 PROPOSED CONCRETE PAVEMENT
- 9 PAINT CURB YELLOW ALONG FRONT OF TANKS
- 10 PROPANE CAGE
- 11 ICE MERCHANDISE
- 12 FIREWOOD
- 13 MISC. MERCHANDISE
- 14 PROPOSED CROSSWALK
- 15 PROPOSED AIR MACHINE ON 4'X4' PAD
- 16 PROPOSED ADA RAMP
- 17 ACCESSIBLE PARKING SPACE
- 18 PAD-MOUNTED TRANSFORMER
- 19 ROLLOVER CURB
- 20 DESIGNATED FUTURE EV STALLS
- 21 STOP SIGN

1. REFER TO THE ALTA/ACSM LAND TITLE SURVEY FOR ADDITIONAL EXISTING FEATURES AND PROPERTY BOUNDARY INFORMATION.
2. ALL DIMENSIONS ARE TO EDGE OF BUILDING, FACE OF CURB, OR EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED.
3. REFER TO ARCHITECTURAL / FOUNDATION PLANS FOR BUILDING DIMENSIONS.
4. ALL RADII ARE MEASURED AT BACK OF CURB AND ARE 5' UNLESS OTHERWISE NOTED.
5. A SEPARATE SIGN APPLICATION TO THE **CITY OF KENTWOOD** IS REQUIRED FOR ALL SIGNS.

BENCHMARK #1: CHISELED "X" ON SOUTH SIDE OF
LIGHT POLE BASE IN NORTH RIGHT OF WAY OF
28TH STREET SE
ELEVATION: 757.19 (NAVD88)

BENCHMARK #2: TOP NUT ON FIRE HYDRANT IN
WEST RIGHT OF WAY OF RIDGEMOOR DRIVE SE
ELEVATION: 754.19 (NAVD88)



SITE DATA			
STORE TYPE		BISTRO	
CANOPY / DISPENSER ARRANGEMENT		6 DISPENSERS (SINGLE ARRANGEMENT)	
TYPE OF USE		CONVENIENCE STORE WITH FUEL	
HEIGHT	BUILDING	18'-0"	
	TOP OF BLADE WALL	21'-8"	
	CANOPY	18'-6" (MIN)	
GROSS FLOOR AREA		3,968.00 S.F.	
GROSS CANOPY AREA		3,936.00 S.F.	
GROSS LOT AREA		±65,178.00 S.F. ± 1.496 ACRES	
FAR (INCLUDING CANOPY)		N/A	
BUILDING COVERAGE		3,968.00 S.F. (6.09%)	
LANDSCAPE COVERAGE		22,215.00 S.F. (34.08%)	
PARKING/DRIVE/SIDEWALK COVERAGE		38,995.00 S.F. (59.83%)	
BICYCLE PARKING		2 SPACES	
REQUIRED PARKING	STANDARD	STANDARD: 15	
	ADA	ADA: 1	
	TOTAL	TOTAL: 16	
	PARKING RATIO = 4/1000 G.F.A.		
PROVIDED PARKING	STANDARD	STANDARD: 19	
	ADA	ADA: 1	
	TOTAL	TOTAL: 20	
	PARKING RATIO = 4/1000 G.F.A.		



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2027 - KLENWOOD, MI
NEC OF 28TH STREET SE &
RIDGEMOOR DRIVE SE

התאריך:

PROJECT TEAM:
M: DAVE LEMONS
M: RYAN HALDER
M: SCOTT NEWBURY

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E: 06-07-2023

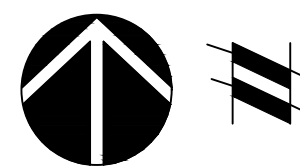
HEET NUMBER:

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SITE BENCHMARKS

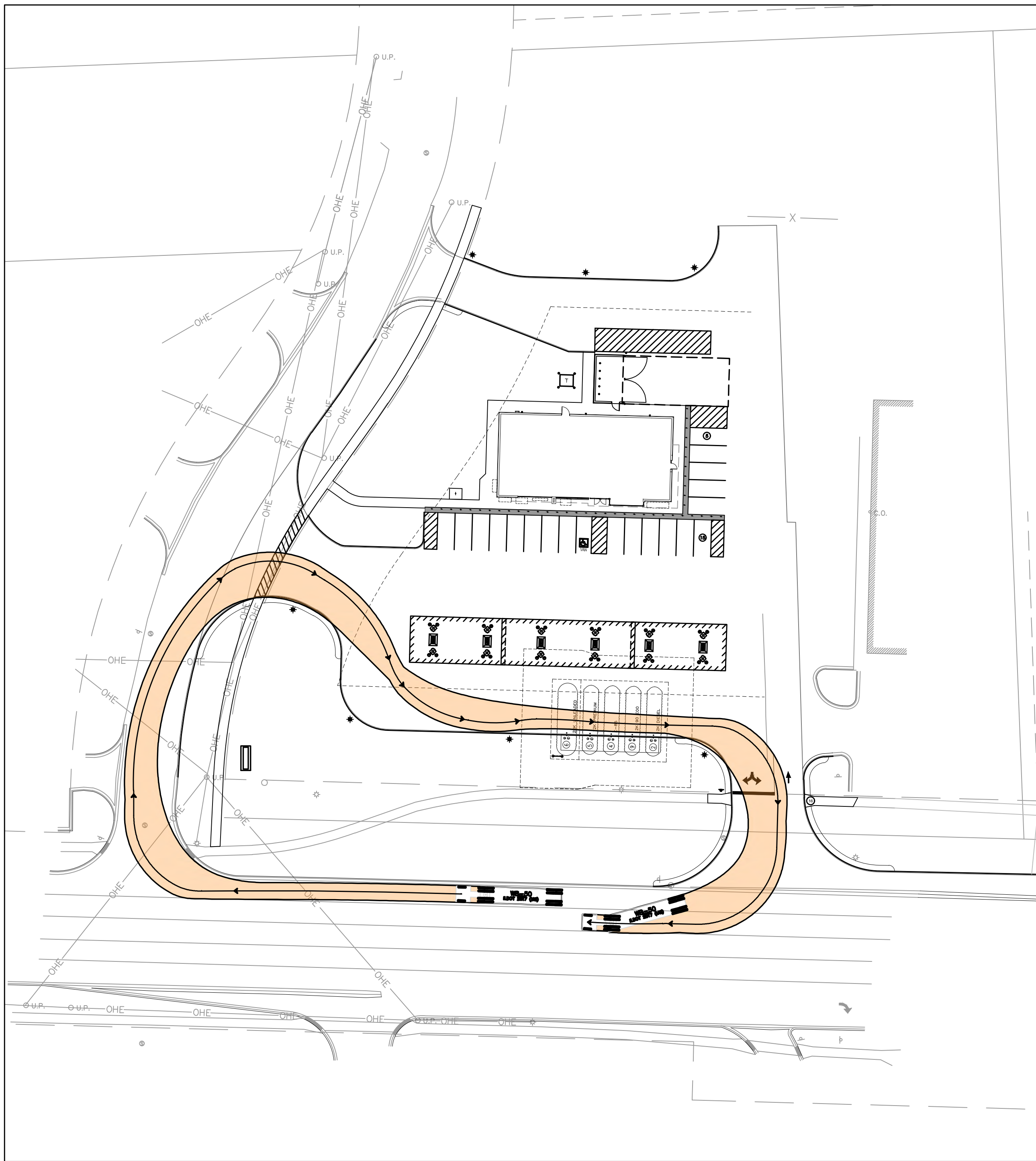
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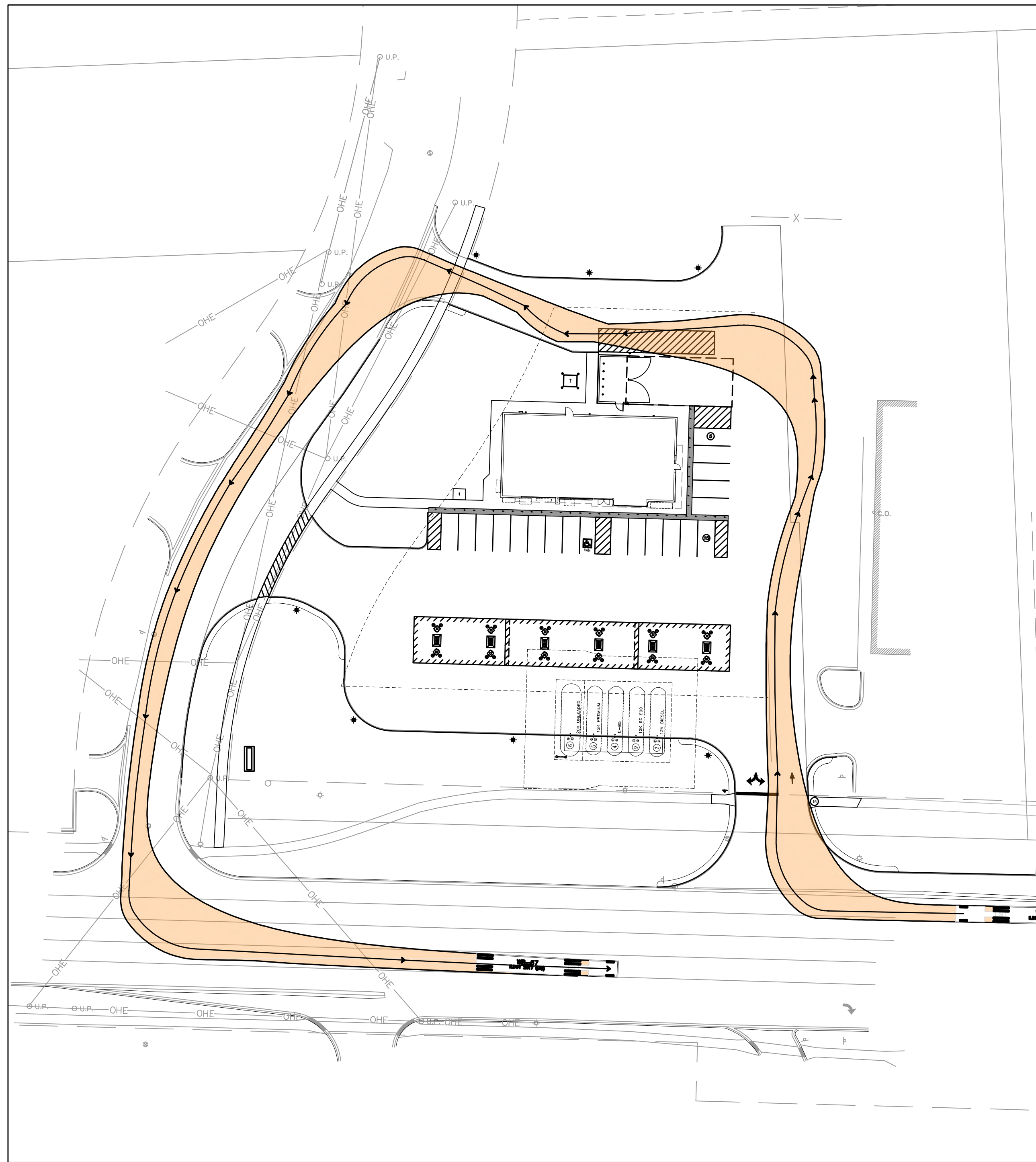
WB-50 ROUTING

SCALE: 1" = 40'



WB-67 ROUTING

SCALE: 1" = 40'



REVISIONS

DATE	REVISION DESCRIPTION

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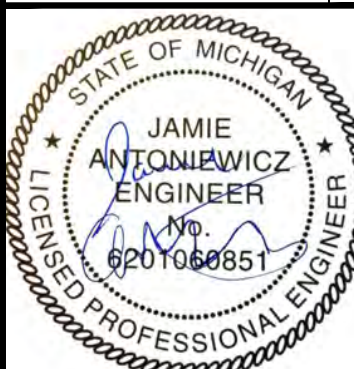
2627 - KENTWOOD, MI
NEC OF 28TH STREET SE &
RIDGEMOOR DRIVE SE

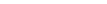
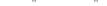
TRUCK CIRCULATION PLAN

KG PROJECT TEAM:
RDM: DAVE LEMONS
SDM: RYAN HALDER
CPM: SCOTT NEWBURY



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	PROPERTY LINE
	STORM SEWER
	SANITARY SEWER
	WATERMAIN
	UNDERGROUND DATA/TELE
	GAS
	ASPHALT TO BE REMOVED
	CONCRETE TO BE REMOVED
	BUILDING TO BE REMOVED
	ITEM TO BE REMOVED
	PROP. LIMITS OF DISTURBANCE

1. ANY ITEM NOT INDICATED AS BEING REMOVED SHALL REMAIN.
2. FOR ADDITIONAL INFORMATION REFERENCE THE STANDARD NOTES SHEET, STANDARD DETAILS SHEET(S), AND ANY MUNICIPALITY AND/OR JURISDICTIONAL DETAILS ATTACHED TO THIS PLAN SET.
3. CONTRACTOR SHALL CALL "MISS DIG" AT LEAST THREE (3) WORKING DAYS PRIOR TO CONSTRUCTION/DEMOLITION.
4. CONTRACTOR SHALL COORDINATE ALL UTILITY REMOVAL AND ABANDONMENT ACTIVITIES WITH LOCAL GOVERNING AGENCY OR UTILITY COMPANY PRIOR TO STARTING DEMOLITION TO INSURE COMPLIANCE WITH GOVERNING AGENCY AND LOCAL GOVERNING AGENCY REMOVAL AND ABANDONMENT STANDARDS.
5. CONTRACTOR RESPONSIBLE FOR COORDINATING UTILITY TERMINATIONS & OBTAINING DEMOLITION PERMIT FROM THE CITY OF KENTWOOD PRIOR TO BEGINNING CONSTRUCTION.



LEGEND

- PROPERTY LINE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- LIMIT OF DISTURBANCE
- RIDGE LINE
- EXISTING MANHOLE/CATCH BASIN
- PROPOSED MANHOLE/CATCH BASIN

NOTES

- ALL ELEVATIONS SHOWN ARE TOP OF PAVEMENT/FINISH GRADE UNLESS OTHERWISE NOTED.
- STORM DETENTION TO BE DESIGNED TO MEET SATISFY MDOT & CITY DESIGN REQUIREMENTS.

STORMWATER NARRATIVE

ON-SITE STORMWATER WILL GENERALLY SHEET FLOW TO A SERIES OF CATCH BASINS WHERE IT WILL BE CONVEYED TO AN UNDERGROUND DETENTION BASIN. STORMWATER WILL ULTIMATELY OUTLET TO AN EXISTING STORM SEWER NEAR THE INTERSECTION OF 28TH ST SE AND RIDGEMOOR DRIVE SE.

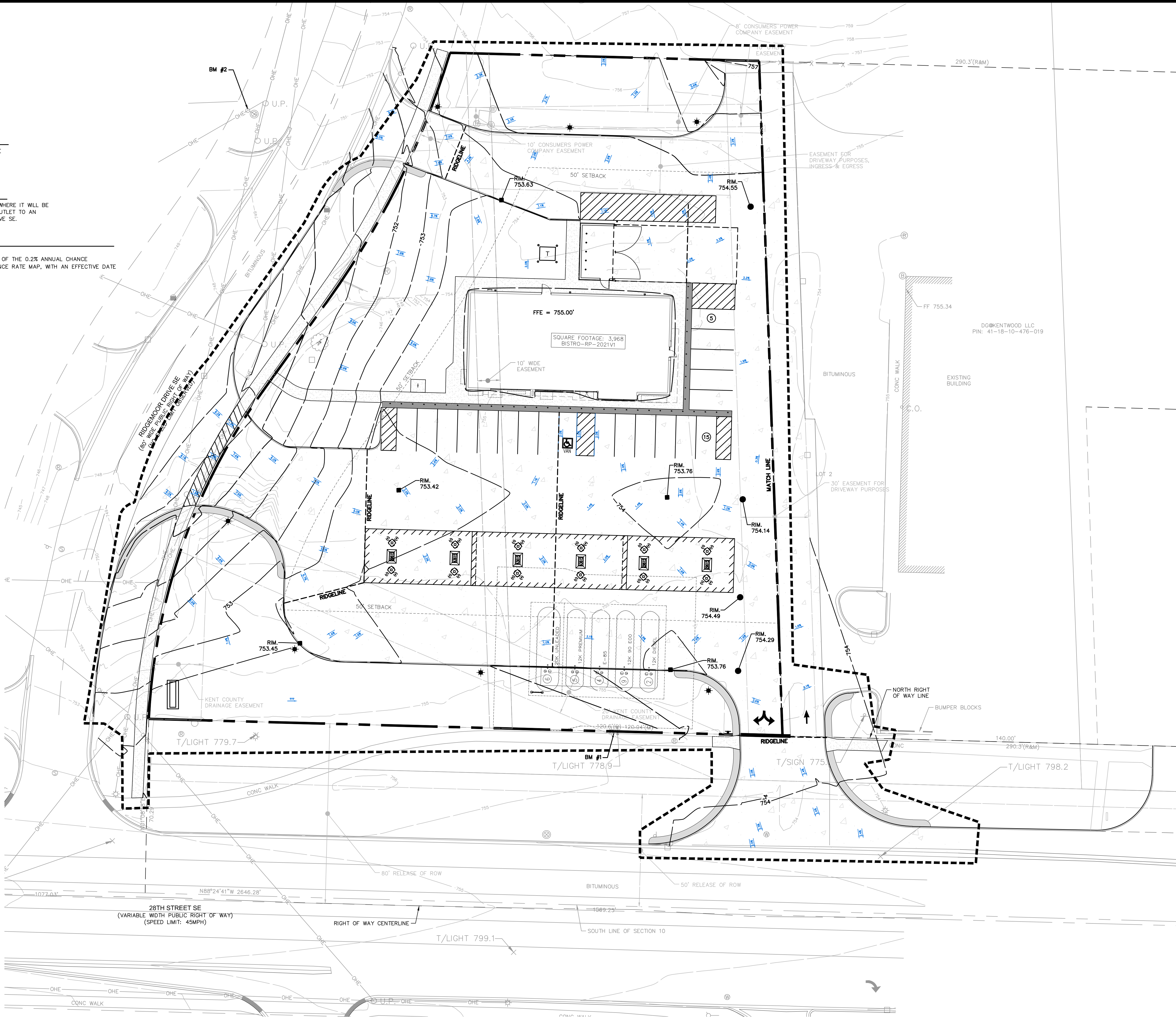
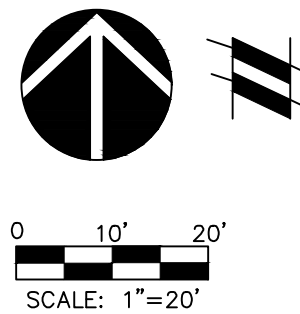
FLOOD ZONE:

PROPOSED LOCATION IS LOCATED WITHIN ZONE X (AREAS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN) ACCORDING TO MAP NUMBER 26163C0413E OF THE FEMA FLOOD INSURANCE RATE MAP, WITH AN EFFECTIVE DATE OF FEBRUARY 2ND, 2012.

SITE BENCHMARKS

BENCHMARK #1: CHISELED "X" ON SOUTH SIDE OF LIGHT POLE BASE IN NORTH RIGHT OF WAY OF 28TH STREET SE
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No. 8201068851
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2627 - KENTWOOD, MI
NEC OF 28TH STREET SE &
RIDGEMOOR DRIVE SE
PRELIMINARY GRADING PLAN

KG PROJECT TEAM:
RDM: DAVE LEMONS
SDM: RYAN HALDER
CPM: SCOTT NEWBURY

REVISIONS	
△	DATE
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LEGEND

	PROPERTY LINE		PAVEMENT MARKINGS
	PROPOSED CURB & GUTTER		STOP BAR & SIGN
	EXISTING CURB & GUTTER		PROPOSED SIGN
	CONCRETE SIDEWALK		ACCESSIBLE PARKING SPACE
	CONCRETE		EX / PR LIGHT POLE
	CONCRETE ROLLOVER CURB		U.P. EXISTING UTILITY POLE
	COLOR CONCRETE		
	OVERHEAD ELECTRIC		

NOTES

- FOR ADDITIONAL INFORMATION REFERENCE THE STANDARD NOTES SHEET, STANDARD DETAILS SHEET(S), AND ANY MUNICIPALITY AND/OR JURISDICTIONAL NOTES/DETAILS INCLUDED WITH THIS PLAN SET.
- ALL 6" DIAMETER SANITARY SEWER SHALL BE PVC SDR 23.5.
- NO FOOTING DRAINS SHALL BE CONNECTED TO THE BUILDING SEWER.
- NO CONNECTION RECEIVING STORM SEWER, SURFACE WATER OR GROUND WATER SHALL BE MADE TO THE SANITARY SEWER.
- ELECTRIC, TELEPHONE, AND DATA CONDUIT SHALL BE SCHEDULE 40 PVC OR TYPE DB DIRECT BURY TELEPHONE DUCT.
- A GALVANIZED PULL WIRE OR PURPLE PROPYLETHYLENE ROPE WITH A MINIMUM PULLING TENSION OF 100 POUNDS SHALL BE INSTALLED IN THE CONDUIT.
- PULL BOX SIZE SHALL BE 17"x30"x28" "QUAZITE" OR APPROVED EQUAL.
- THE MINIMUM CONDUIT BURIAL DEPTH SHALL BE 24".
- AN ORANGE DETECTABLE HAZARD TAPE WITH INTEGRAL "BURIED CABLE" WORDING, SHALL BE INSTALLED 12" ABOVE CONDUIT.

SANITARY NARRATIVE

THE PROPOSED DEVELOPMENT WILL CONNECT TO AN EXISTING SANITARY STUB LOCATED NEAR THE SOUTHWEST PROPERTY CORNER. PRIOR TO CONNECTION, THE EXISTING STUB WILL BE INSPECTED TO DETERMINE THAT IT IS IN SERVICEABLE CONDITION. ON-SITE SANITARY WILL CONSIST OF A 1,000 GALLON GREASE INTERCEPTOR AND 6" PVC SDR23.5 PIPE. CLEANOUTS WILL BE INSTALLED AT ALL CHANGES IN DIRECTION & ON RUNS OVER 100'.

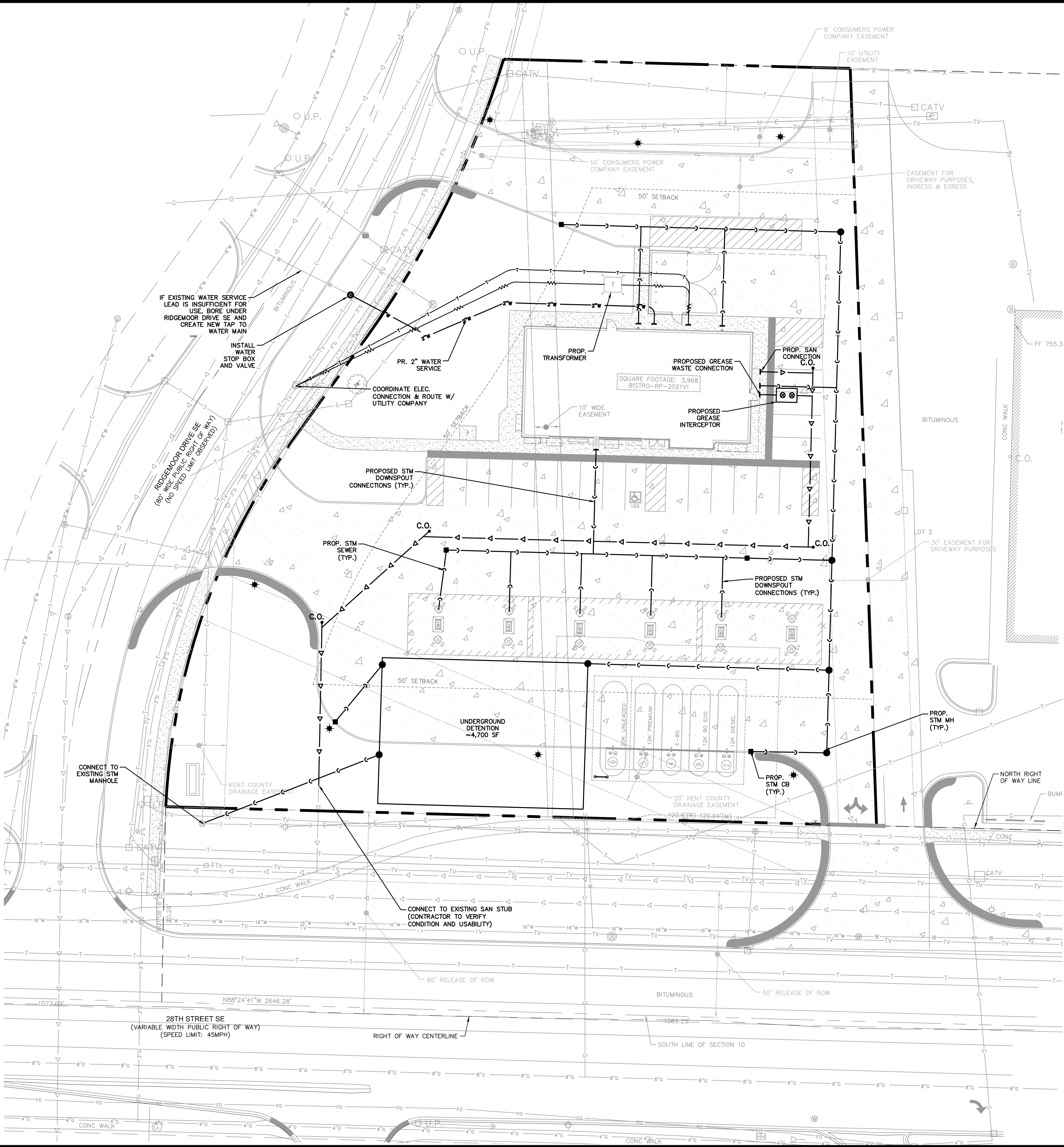
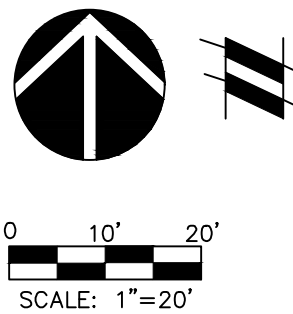
WATER NARRATIVE

ON-SITE WATER SERVICE WILL BE SUPPLIED VIA 2" TYPE 'K' COPPER LEAD. THE PROPOSED CONNECTION WILL TIE INTO AN EXISTING SERVICE STUB FROM A 8" WATER MAIN SOUTH OF THE PROPERTY ALONG RIDGEMOOR DRIVE SE. PRIOR TO CONNECTION, THE EXISTING STUB WILL BE INSPECTED TO DETERMINE THAT IT IS IN SERVICEABLE CONDITION. IF CONNECTION AT THIS POINT IS NOT FEASIBLE, A SEPARATE TAP FROM THE MAIN MAY BE REQUIRED.

SITE BENCHMARKS

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2627 - KENTWOOD, MI
NEC OF 28TH STREET SE &
RIDGEMOOR DRIVE SE

PRELIMINARY UTILITY PLAN

KG PROJECT TEAM:
RDM: DAVE LEMONS
SDM: RYAN HALDER
CRM: SCOTT NEWBURY

REVISIONS	
DATE	REVISION DESCRIPTION
△	

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LEGEND

	PROPERTY LINE		TRAFFIC FLOW ARROWS
	PROPOSED PROPERTY BOUNDARY		PROPOSED SIGN
	EXISTING CURB & GUTTER		PARKING ROW COUNT
	PROPOSED CURB & GUTTER		ACCESSIBLE PARKING SPACE
	4'-6" GRAVEL IN PLANTING BEDS MIN. DEPTH OF 8"		EXISTING / PROPOSED LIGHT POLE
	PROPOSED TOPSOIL AND SOD LOCATIONS		PROPOSED RAMP

NOTES TO CONTRACTOR

- ALL DISEASED, DAMAGED, OR DEAD PLANTING MATERIALS SHALL BE REMOVED IN ACCORDANCE WITH STANDARDS OF THE CITY OF KENTWOOD ZONING ORDINANCE.
- ALL PLANTS SHALL CONFORM TO THE CURRENT ISSUE OF THE AMERICAN STANDARD FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN AND SHALL HAVE PASSED INSPECTIONS REQUIRED UNDER STATE REGULATIONS.
- MULCH MATERIAL: ALL MULCH TO BE 4"-6" ROUNDED RIVER BED GRAVEL WITH 8" MIN. DEPTH WITH WEED PREVENTION FABRIC. MULCH ALL PLANTING BEDS, 2'-0" STRIP ADJACENT TO LANDSCAPED AREA AROUND BUILDING AND TRASH ENCLOSURE. ALL EVERGREEN AND DECIDUOUS TREES TO RECEIVE 6" DEEP STONE MULCH WITH NO STONE IN DIRECT CONTACT WITH TREE TRUNK. EXTENT OF MULCH TO BE 4'-0" DIA. AT TREES.
- SITE IRRIGATION TO BE PROVIDED FOR ALL PROPOSED LANDSCAPE IMPROVEMENT AREAS AND LAWN AREAS

PLANTS LIST

KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	COMMENTS
TREES						
PO	7	PLANTANUS OCCIDENTALIS	AMERICAN SYCAMORE	2.5" CAL	AS SHOWN	WELL BALANCED HEAD
TC	18	TILIA CORDATA	LITTLE LEAF LINDEN	1.5" CAL	AS SHOWN	WELL BALANCED HEAD
SHRUBS						
TMD	109	TAXUS x MEDIA 'DENSIFORMIS'	DENSE YEW	24" HT. MIN.	3.5' O.C.	WELL BALANCED, FULL, MATCHED
TURF						
PPK	18,960	POA PRATENSIS	KENTUCKY BLUEGRASS	SOD		2 YEAR CERTIFIED, SEASON PERMITTING
RR	2,502	RIVER ROCK		4-6" ROUNDED		MIN. 8" DEPTH WITH WEED BARRIER BLANKET

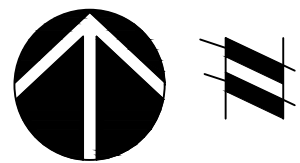
LANDSCAPE REQUIREMENTS SUMMARY

ITEM	REQUIREMENT	QTY. REQUIRED	QTY. PROVIDED	FORMULA
BUFFER	10' WIDE - TYPE (C) 1 CANOPY TREE, 5 SHRUBS PER 40 LF	NORTH= 3 CANOPY TREES AND 15 SHRUBS	8 TREES AND 21 SHRUBS	NORTH 138 LF/40=3.45 = 3 TREES AND 15 SHRUBS
PARKING LOT LANDSCAPE	1 CANOPY TREE AND 100 SF OF LANDSCAPE AREA FOR EVERY 10 SPACES	2 TREES AND 200 SF OF LANDSCAPING	3 TREES AND >200 SF OF LANDSCAPING	20 SPACES =20/10=2.0=2 TREES 20 X 100 SF=200SF LANDSCAPING
OPENSOURCE	MAXIMUM LOT COVERAGE 75%	25% OPENSOURCE = 18,425 SF MIN.	OPEN SPACE PROVIDED= 22,953 SF (31.1%)	73,678.73 SF SITE X 25% = 18,425 SF
GREEN BELT RIDGEMOOR DR. SE 28TH STREET SE	10' WIDE - 1 CANOPY TREE AND 7 SHRUBS FOR EVERY 40 LF OF FRONTAGE	RIDGEMOOR DR. = 7 TREES, 46 SHRUBS 28TH ST SE = 6 TREES, 42 SHRUBS	RIDGEMOOR DR. = 7 TREES, 47 SHRUBS 28TH ST SE = 6 TREES, 42 SHRUBS	RIDGEMOOR DR. = 279 LF-17 DRIVEWAY=262 / 40 = 6.55 = 7 TREES, 6.55 X 7 = 46 SHRUBS 28TH ST SE = 258 LF/40 = 6.45 =6 TREES, 7 X 6 = 42 SHRUBS

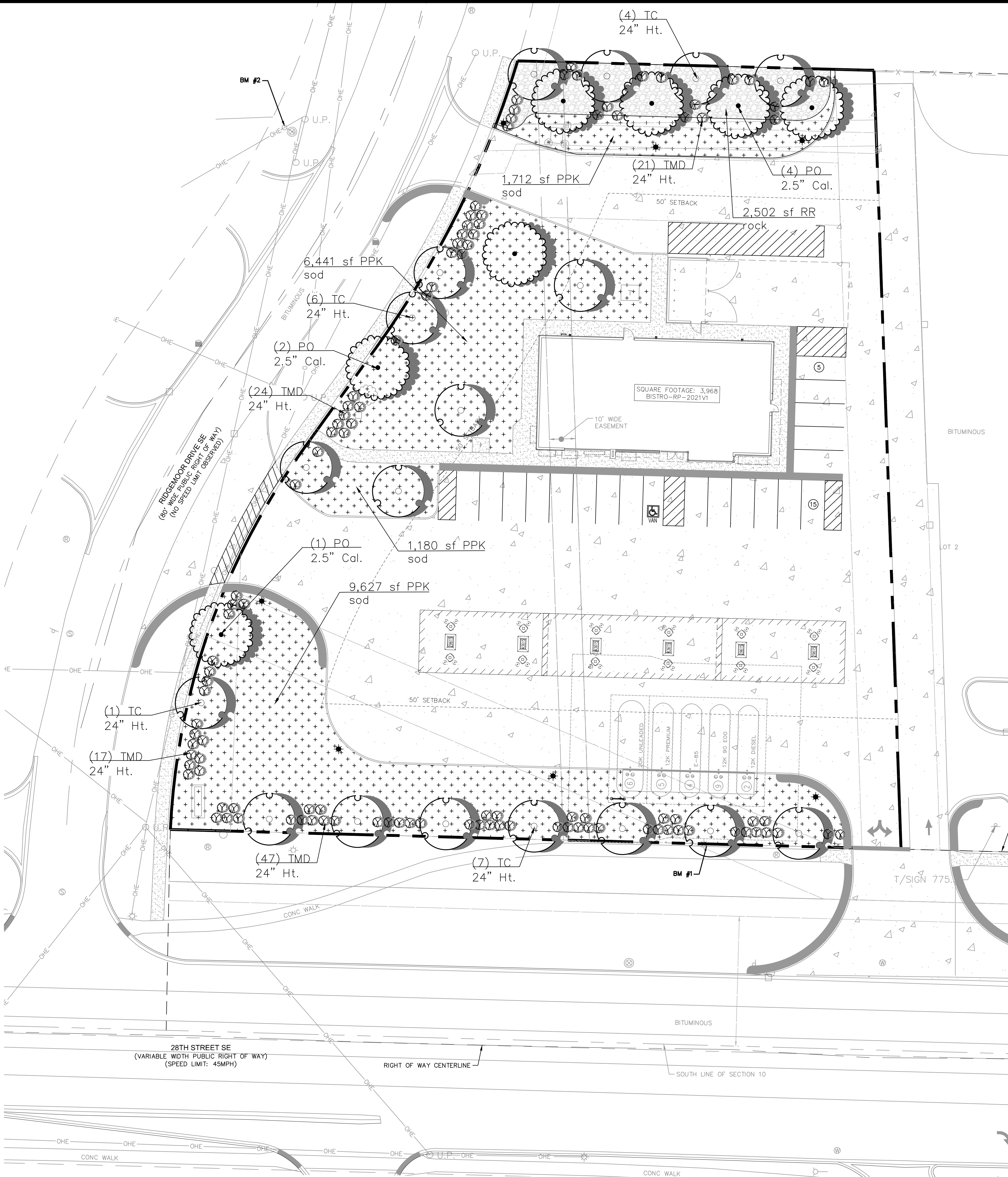
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00 100' 200'
SS&ME:1"=200'



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2627 - KENTWOOD, MI
NEC OF 28TH STREET SE &
RIDGEMOOR DRIVE SE

LANDSCAPING PLAN

KG PROJECT TEAM:
RDM: DAVE LEMONS
SDM: RYAN HALDER
CPM: SCOTT NEWBURY

REVISIONS

DATE	REVISION DESCRIPTION

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GENERAL NOTES

1. LANDSCAPE CONTRACTOR (CONTRACTOR) SHALL VISIT SITE, INSPECT EXISTING CONDITIONS AND REVIEW PROPOSED PLANTINGS AND RELATED WORK. LANDSCAPE CONTRACTOR TO VERIFY ALL UTILITY LOCATIONS ON PROPERTY WITH THE GENERAL CONTRACTOR AND BY CALLING 811 PRIOR TO STAKING PLANT LOCATIONS. IN CASE OF DISCREPANCY BETWEEN PLAN AND PLANT LIST, PLAN SHALL GOVERN. QUANTITIES CONTACT LANDSCAPE ARCHITECT AND/OR OWNER'S REPRESENTATIVE WITH ANY CONCERNS. SIZES SPECIFIED IN THE PLANT LIST ARE MINIMUM SIZES TO WHICH THE PLANTS ARE TO BE INSTALLED.

2. PRIOR TO ANY LAND CLEARING OR CONSTRUCTION, TREE PROTECTION FENCING IS TO BE INSTALLED BY THE CONTRACTOR. THIS FENCING SHALL BE INSTALLED AT THE DRIP LINE OF ALL TREES AND SHRUBS AND MUST BE MAINTAINED AS APPROVED FOR THE DURATION OF THE PROJECT. NO CUTTING, FILLING OR TRESPASSING SHALL OCCUR INSIDE THE FENCED AREAS.

3. LANDSCAPE CONTRACTOR SHALL COORDINATE THE PHASES OF CONSTRUCTION AND PLANTING INSTALLATIONS WITH OTHER CONTRACTORS WORKING ON SITE.

4. WHERE EXISTING TREES AND/OR SIGNIFICANT SHRUBS MASSINGS ARE FOUND ON SITE, WHETHER SHOWN ON THE DRAWING OR NOT, THEY SHALL BE PROTECTED AND SAVED UNLESS NOTED TO BE REMOVED AND/OR ARE IN AN AREA TO BE GRADED. ANY QUESTION REGARDING WHETHER PLANT MATERIAL SHOULD REMAIN OR NOT SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT AND/OR OWNER'S REPRESENTATIVE PRIOR TO REMOVAL.

5. ALL EXISTING TREES TO REMAIN TO BE FERTILIZED AND PRUNED TO REMOVE DEAD WOOD AND DAMAGED OR RUBBING BRANCHES.

6. NO PLANT MATERIAL SUBSTITUTIONS WILL BE ACCEPTED UNLESS APPROVAL IS REQUESTED OF THE LANDSCAPE ARCHITECT AND OWNER BY THE LANDSCAPE CONTRACTOR PRIOR TO INSTALLATION.

7. ALL PLANT MATERIAL SHALL COMPLY WITH THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, AMERICAN ASSOCIATION OF NURSERYMEN. ALL LANDSCAPING SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE STANDARDS OF THE AUTHORITY HAVING JURISDICTION AND IN ACCORDANCE WITH CURRENT INDUSTRY STANDARDS IN A NEAT, HEALTHY AND WEED FREE CONDITION.

8. CONTRACTOR WILL SUPPLY FINISHED GRADE AND EXCAVATE AS NECESSARY TO SUPPLY 4" TOPSOIL DEPTH IN ALL PLANTING BEDS AND 4" TOPSOIL DEPTH IN ALL LAWN AREAS. BACKFILL AND CROWN PARKING LOT ISLANDS 6" ABOVE ADJACENT CURBS WITH TOPSOIL. BACKFILL DIRECTLY BEHIND ALL CURBS AND ALONG SIDEWALKS AND COMPACT TO TOP OF CURB OR WALK TO SUPPORT VEHICLE AND PEDESTRIAN WEIGHT WITHOUT SETTLING.

9. ACCEPTANCE OF GRADING AND SOD/SEED SHALL BE BY LANDSCAPE ARCHITECT AND/OR PROJECT REPRESENTATIVE. THE LANDSCAPE CONTRACTOR SHALL ASSUME MAINTENANCE RESPONSIBILITY UNTIL FINAL ACCEPTANCE HAS BEEN RECEIVED. MAINTENANCE SHALL INCLUDE WATERING, WEEDING, REPLACEMENT OF WASH-OUTS AND OTHER OPERATIONS NECESSARY TO KEEP SOD/SEED IN A THRIVING CONDITION. UPON FINAL ACCEPTANCE BY LANDSCAPE ARCHITECT AND/OR OWNER'S REPRESENTATIVE, THE OWNER WILL ASSUME ALL MAINTENANCE RESPONSIBILITIES.

10. PLANT MATERIAL LOCATIONS SHOWN ARE DIAGRAMMATIC AND MAY BE SUBJECT TO CHANGE IN THE FIELD AS REQUIRED.

11. REPAIR ALL DAMAGE TO PROPERTY FROM PLANTING OPERATIONS AT NO COST TO THE OWNER.

12. OWNER OR OWNER'S REPRESENTATIVE SHALL INSPECT LANDSCAPE INSTALLATION AND HAVE THE RIGHT TO REJECT AND WITHHOLD PAYMENT ON ANY PLANT MATERIAL(S) OF DAMAGED OR POOR QUALITY OR NOT MEETING SPECIFICATIONS.

13. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEAN-UP OF SITE AT THE COMPLETION OF LANDSCAPING EACH DAY. AT ALL TIMES THE SIDEWALKS SHALL BE MAINTAINED CLEAN AND FREE OF DEBRIS. REMOVE SURPLUS SOIL AND WASTE MATERIAL, TRASH AND DEBRIS FROM THE SITE AND LEGALLY DISPOSE OF SAME IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL CODES AND REGULATIONS.

14. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR SOIL EROSION AND DUST CONTROL MEASURES PRIOR TO AND DURING CONSTRUCTION. THE LANDSCAPE CONTRACTOR SHALL PREVENT EROSION OF SOIL AND ENTRY OF SOIL-BEARING WATER AND ADJACENT DUST ONTO ADJACENT PROPERTIES AND INTO THE PUBLIC STORMWATER FACILITIES. REFER TO EROSION CONTROL PLANS FOR DETAILS.

MANUFACTURER'S INSTRUCTIONS UNLESS NOTED OTHERWISE.

4. MULCH MATERIAL: ALL MULCH TO BE 4"-6" ROUNDED RIVER BED GRAVEL WITH 8" MIN. DEPTH WITH WEED PREVENTION FABRIC. MULCH ALL PLANTING BEDS. 2"-0" STRIP ADJACENT TO LANDSCAPED AREA AROUND BUILDING AND TRASH ENCLOSURE. ALL EVERGREEN AND DECIDUOUS TREES TO RECEIVE 8" DEEP STONE MULCH WITH NO STONE IN DIRECT CONTACT WITH TREE TRUNK. EXTENT OF MULCH TO BE 4'-0" DIA. AT TREES.

5. TREE STAKING: IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO STAKE AND/OR GUY THE TREES ACCORDING TO THE DETAILS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO TAKE EVERY STEP NECESSARY TO MAINTAIN THE TREES AND SHRUBS IN AN UPRIGHT AND PLUMB CONDITION AT ALL TIMES UNTIL THE END OF THE PLANT GUARANTEE PERIOD. ESPECIALLY WHERE VANDALISM, SOIL OR WEED CONDITIONS ARE A PROBLEM. AT END OF GUARANTEE PERIOD ALL STAKES SHALL BE REMOVED BY LANDSCAPE CONTRACTOR. ALL STAKES USED FOR TREE SUPPORTS SHALL POINT AWAY FROM ANY AND ALL CIRCULATION ROUTES.

6. TREE WRAPPING: WRAPPING MATERIAL SHALL BE QUALITY, HEAVY WATERPROOF CREPE PAPER MANUFACTURED FOR THIS PURPOSE. WRAP ALL DECIDUOUS TREES PLANTED IN THE FALL PRIOR TO 12-1 AND REMOVE ALL WRAPPING AFTER 5-1.

7. EDGING: EDGING SHALL BE METAL OR SPADE EDGE. REFER TO KUM & GO SPECIFICATION SECTION 329300.

8. FERTILIZER: JUMP-SHOT ROOT STIMULATOR AS MANUFACTURED BY AOME, OR APPROVED EQUAL, SHALL BE APPLIED TO THE SOIL BACKFILL OF EACH PLANT DURING INSTALLATION.

9. PLANT SIZING: MEASURE TREES AND SHRUBS ACCORDING TO ANSI Z60.1 STANDARDS. TAKE CALIPER MEASUREMENTS 6 INCHES ABOVE GROUND FOR TREES UP TO 4" CALIPER AND 12 INCHES ABOVE GROUND FOR LARGER TREES. ALWAYS HANDLE BALLED AND BURLAPPED MATERIAL BY THE ROOT BALL. PLANT MATERIAL SHALL BE DELIVERED TO THE SITE AND PLANTED THE SAME DAY.

10. PLANTING PLAN: ALL PROPOSED PLANTS SHALL BE LOCATED CAREFULLY AS SHOWN ON THE PLANS. PLAN TAKES PRECEDENCE OVER PLANT SCHEDULE IF DISCREPANCIES IN QUANTITIES EXIST. SPECIFICATIONS TAKE PRECEDENCE OVER NOTES. RESPECT STATED DIMENSIONS. DO NOT SCALE DRAWINGS.

MAINTENANCE / WARRANTY

1. MAINTENANCE OF PLANT MATERIALS AND LAWN AREAS SHALL BEGIN IMMEDIATELY AFTER INSTALLATION AND SHALL CONTINUE UNTIL FINAL ACCEPTANCE, BUT IN NO CASE, LESS THAN THE PERIOD STATED IN KUM & GO SPECIFICATION SECTION 329200.

2. AFTER REQUIRED MAINTENANCE PERIOD, THE OWNER, UPON REQUEST, WILL MAKE AN INSPECTION TO DETERMINE ACCEPTABILITY. UNACCEPTABLE WORK SHALL BE REPAIRED OR REPLACED AND INSPECTED BEFORE FINAL ACCEPTANCE IS GRANTED.

3. A WRITTEN WARRANTY SHALL BE PROVIDED TO THE OWNER GUARANTEEING THAT ALL PLANT MATERIALS, SOD, AND/OR SEEDED AREAS WILL BE THRIVING FOR THE FOLLOWING STATED PERIODS: TREES, SHRUBS, AND GROUND COVERS - ONE YEAR AFTER FINAL ACCEPTANCE. SOD AND SEEDED AREAS - 90 DAYS AFTER FINAL ACCEPTANCE. PERENNIALS - 90 DAYS AFTER FINAL ACCEPTANCE.

4. THE CONTRACTOR SHALL PROVIDE THE OWNER WITH WRITTEN INSTRUCTIONS REGARDING MAINTENANCE OF EACH TYPE OF VEGETATION. THE OWNER IS RESPONSIBLE FOR PROPER MAINTENANCE OF THE MATERIALS DURING THE WARRANTY PERIOD AS OUTLINED IN THE MAINTENANCE INSTRUCTIONS. THE CONTRACTOR SHALL MAKE PERIODIC INSPECTIONS OF THE SITE AND WILL INFORM THE OWNER OF ANY LACK OF PROPER MAINTENANCE IN WRITING. OWNER'S FAILURE TO COMPLY WITH THE MAINTENANCE PROGRAM SHALL RENDER THE WARRANTY NULL AND VOID.

5. THE CONTRACTOR IS NOT RESPONSIBLE FOR ACTS OF NATURE INCLUDING ABNORMAL WEATHER CONDITIONS, EROSION, VANDALISM, NOR DAMAGES BY OTHERS. IF ANY CONDITIONS OR ACTS OF THE CONTRACTOR OF THE CONTRACTOR SHOULD OCCUR, THE MATERIALS AFFECTED WILL NO LONGER BE COVERED BY THE WARRANTY.

PLANT MATERIALS

1. PROVIDE PLANTS OF QUANTITY, SIZE, GENUS, SPECIES, AND VARIETY SHOWN AND SCHEDULED AND IN CONFORMANCE WITH THE REQUIREMENTS OF ANSI Z60.1 "AMERICAN STANDARD FOR NURSERY STOCK". PLANTS SHALL HAVE BEEN GROWN IN A RECOGNIZED NURSERY IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICE.

2. ALL PLANTS SHALL BE FULL, WELL-BRANCHED PLANTS CHARACTERISTIC OF THE SPECIES. PLANTS SHALL BE FREE OF DISEASE, INSECTS, EGGS, LARVAE, AND DEFECTS SUCH AS KNOTS, SUN-SCALD, INJURIES, ABRASIONS, OR DISFIGUREMENT.

3. PLANT STOCK SHALL HAVE BEEN GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO CONDITIONS IN THE LOCALITY OF THE PROJECT.

4. LABEL AT LEAST ONE PLANT OF EACH KIND WITH A SECURELY ATTACHED WATERPROOF TAG BEARING LEGIBLE DESIGNATION OF BOTANICAL AND COMMON NAME.

5. PROVIDE FRESHLY DUG BALLED & BURLAPPED PLANT MATERIALS. DO NOT DROP BALLED & BURLAPPED STOCK DURING DELIVERY.

6. DO NOT REMOVE CONTAINER-GROWN STOCK FROM CONTAINERS UNTIL PLANTING TIME.

INSTALLATION

1. INSTALL TREES AND SHRUBS ACCORDING TO STANDARD DETAILS SHOWN ON THE PLAN.

2. ALL TREE SAUCERS SHALL BE SOAKED WITH WATER AND MULCHED IMMEDIATELY FOLLOWING PLANTING.

3. ALL TREE SAUCERS AND SHRUB BEDS SHALL BE MULCHED WITH A 3-INCH LAYER OF ORGANIC TRIPLE SHREDDED HARDWOOD BARK MULCH. NON-ORGANIC MULCHES SUCH AS GRAVEL, CRUSHED BRICK, LAVA ROCK, ETC. ARE UNACCEPTABLE.

4. TREE GUYING SHALL BE REMOVED AFTER ONE FULL GROWING SEASON.

5. APPLY 12 CUBIC FEET OF PEAT MOSS PER 100 SQUARE FEET AND 20 POUNDS OF 8-8-8 FERTILIZER PER 100 SQUARE FEET OF GROUND COVER PLANTING BEDS. ROTOTILL THE BEDS TO A DEPTH OF 8 INCHES AND SMOOTH TO AN EVEN AND UNIFORM SURFACE. PLANT GROUND COVER MATERIALS, APPLY 2 INCHES OF ORGANIC MULCH, AND WATER.

PLANTING NOTES

1. NO PLANTING TO BE INSTALLED UNTIL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.

2. SEE CIVIL/SITE PLAN FOR ALL SITE DIMENSIONS, SQUARE FOOTAGES, PARKING CALCULATIONS, AND DETAILS OF ALL SITE IMPROVEMENTS.

3. IF THE LANDSCAPE CONTRACTOR PERCEIVES ANY DEFICIENCIES IN THE PLANT SELECTIONS, SOIL CONDITIONS, OR ANY OTHER SITE CONDITION WHICH MIGHT NEGATIVELY AFFECT PLANT MATERIAL ESTABLISHMENT, SURVIVAL, OR GUARANTEE, THEY SHALL BRING THESE DEFICIENCIES TO THE ATTENTION OF THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

4. PRIOR TO ANY LAND CLEARING OR CONSTRUCTION, TREE PROTECTION FENCING IS TO BE INSTALLED BY THE CONTRACTOR. THIS FENCING SHALL BE INSTALLED AT THE DRIP LINE OF ALL TREES AND SHRUBS (TO BE PROTECTED) ACCORDING TO THE TREE PROTECTION DETAIL AND MUST BE MAINTAINED FOR THE DURATION OF THE PROJECT. NO CUTTING, FILLING OR TRESPASSING SHALL OCCUR INSIDE THE FENCED AREAS WITHOUT APPROVAL.

5. ALL PLANTS TO BE INSTALLED AS PER PLANTING DETAILS. PLANT MATERIALS ARE TO BE PLANTED IN THE SAME RELATIONSHIP TO GRADE AS WAS GROWN IN NURSERY CONDITIONS. IF WET, CLAY SOILS OR POOR DRAINING SOILS ARE EVIDENT, PLANT HIGHER. REMOVE ALL TWINE, WIRE AND BURLAP FROM TOP 1/3 OF ROOT BALL AND FROM TREE TRUNKS.

6. ONE SHRUB PER TYPE AND SIZE IN EACH PLANTING BED AND EVERY TREE SHALL BE CLEARLY IDENTIFIED (COMMON OR LATIN NOMENCLATURE) WITH A PLASTIC TAG WHICH SHALL NOT BE REMOVED PRIOR TO OWNER ACCEPTANCE.

7. SEED AND/OR SOD ALL AREAS DISTURBED DUE TO GRADING AND CONSTRUCTION ACTIVITIES. WHERE SOD/SEED ABUTS PAVED SURFACES, FINISHED GRADE OF SOD/SEED SHALL BE HELD 1" BELOW SURFACE ELEVATION OF TRAIL, SLAB, CURBS, ETC. SOD SHALL BE LAID PARALLEL TO THE CONTOURS AND SHALL HAVE STAGGERED JOINTS. ON SLOPES STEEPER THAN 3:1 OR IN DRAINAGE SWALES, THE SOD SHALL BE STAKED TO THE GROUND, REFER TO PLAN FOR SOD/SEED LOCATIONS.

8. PRUNE, THIN AND SHAPE TREES AND SHRUBS ACCORDING TO STANDARD HORTICULTURAL PRACTICES. APPLY MINIMUM 4" MULCH CUP AT ALL TREES NOT PLANTED IN PLANTING BEDS.

9. EXISTING LAWN AREAS TO BE SAVED AND AREAS THAT ARE DAMAGED DURING CONSTRUCTION MUST BE INSPECTED TO DETERMINE VIABILITY. IF THE EXISTING LAWN IS FOUND TO BE LEVEL, HEALTHY, DENSE & FREE FROM WEEDS, LAWN MAY NOT REQUIRE REPLACEMENT OR RENOVATION. IF RENOVATION IS REQUIRED OR IS PART OF THE APPROVED PLAN, THEN THE FOLLOWING REQUIREMENTS WILL APPLY.

EXISTING LAWN FOUND TO BE IN POOR CONDITION MUST FIRST BE SPRAYED WITH ROUND-UP (OR EQUAL) TO KILL THE EXISTING LAWN AND WEED AREAS. WAIT A MIN. OF (10) DAYS FOR THE HERBICIDE TO TAKE EFFECT, THEN REMOVE ALL DEAD SOD & WEEDS TO A MIN. DEPTH OF (2) INCHES. ADD A MIN. OF 6 INCHES OF NEW TOPSOIL TO ALL LAWN AREAS. BACKFILL AND COMPACT TOPSOIL TO THE TOP OF ALL CURBS & WALKS PRIOR TO SODDING. REGRADE TO ELIMINATE ALL BUMPS & DEPRESSIONS AND RESOD ALL AREAS.

EXISTING LAWN FOUND TO BE IN GOOD CONDITION, BUT WITH BARE, SPARSE OR WEEDY AREAS MUST BE RENOVATED BY FILLING IN LOW AREAS, RAKING, OVERSEEDING AND TOP DRESSING ALL SPARSE AND BARE SPOTS AND BY INITIATING A WEED AND FEED PROGRAM.

10. CONVERSION OF ALL ASPHALT AND GRAVEL AREAS TO LANDSCAPE SHALL BE DONE IN THE FOLLOWING MANNER:

A. REMOVE ALL ASPHALT, GRAVEL AND COMPACTED EARTH TO A DEPTH OF 24"-30" DEPENDING ON THE DEPTH OF SUB BASE AND DISPOSE OF OFF SITE.

B. REPLACE EXCAVATED MATERIAL W/ GOOD, MEDIUM TEXTURED PLANTING SOIL (LOAM OR LIGHT YELLOW CLAY) TO A MIN. OF 2" ABOVE TOP OF CURB AND SIDEWALK. ADD 4"-6" OF TOPSOIL AND CROWN TO A MIN. OF 6" ABOVE ADJACENT CURB AND WALK AFTER EARTH SETTLING, UNLESS NOTED OTHERWISE ON THE PLANS.

IF CONVERSION TO LANDSCAPE OCCURS IN AN EXISTING (OR BETWEEN) LANDSCAPE AREAS, REPLACE EXCAVATED MATERIAL TO 4"-6" BELOW ADJACENT EXISTING GRADE W/ GOOD MEDIUM TEXTURED PLANTING SOIL (LOAM OR LIGHT YELLOW CLAY) AND ADD 4"-6" OF TOPSOIL TO MEET EXISTING GRADES AFTER EARTH SETTLING.

11. ALL TREE PITS MUST BE TESTED FOR PROPER DRAINAGE PRIOR TO PLANTING TREES. A DRAINAGE SYSTEM MUST BE INSTALLED IF PLANTING PIT DOES NOT DRAIN SUFFICIENTLY. (REQUIRED IN HEAVY CLAY SOILS)

12. ALL LANDSCAPE AREAS SHALL HAVE PROPER DRAINAGE THAT PREVENTS EXCESS WATER FROM STANDING ON LAWN AREAS OR AROUND TREES & SHRUBS.

13. ALL MULCH RINGS AND SHRUB BEDS IN LAWN AREAS SHALL BE EDGED WITH A MANICURED EDGE OR WITH MANUFACTURED EDGING AS INDICATED.

14. MULCHING AND WATERING OF ALL PLANTS & TREES SHALL BE IMMEDIATELY OR WITHIN 16 HOURS AFTER INSTALLATION.

LAWN INSTALLATION

1. LAWN AREAS SHALL BE PREPARED ACCORDING TO THE SECTION BELOW ENTITLED "SEEDBED PREPARATION".

2. LOCALLY-GROWN SOD SHALL BE PROVIDED IN AREAS WHERE SEEDING IS NORMALLY UNSUCCESSFUL OR WILL BE UNSUCCESSFUL DUE TO CLIMATE, SEASON, OR OTHER TEMPORARY CONSTRAINT. SOD SHALL BE STRONGLY ROOTED, FREE OF WEEDS, AND OF UNIFORM THICKNESS WITH NO MORE THAN 1.5 INCHES OR LESS THAN 1 INCH OF SOIL.

3. SOD SHALL BE TIGHTLY-FITTED TOGETHER. ENDS AND EDGES SHALL MEET WITHOUT OVERLAP AND JOINTS SHALL BE STAGGERED WITH ADJACENT ROWS. AFTER INSTALLATION, SOD SHALL BE THOROUGHLY WATERED. ON SLOPES STEEPER THAN 2:1, SOD SHALL BE HELD IN PLACE WITH WOODEN STAKES MEASURING 1 INCH SQUARE BY 6 INCHES LONG. STAKES SHALL BE DRIVEN FLUSH WITH THE TOP OF THE SOD'S SOIL LAYER.

4. PROVIDE GRASS SEED THAT IS FRESH, CLEAN, NEW-DROP SEED COMPLYING WITH TOLERANCE FOR PURITY AND GERMINATION ESTABLISHED BY OFFICIAL SEED ANALYSTS OF NORTH AMERICA. PROVIDE SEED TYPE OR SEED MIX WITH BEST RECORD OF SUCCESS IN LOCALITY OF PROJECT OR PER PROJECT SPECIFICATIONS. REFER TO PLAN.

5. APPLY SEED AT THE APPROPRIATE RATE, PER M.D.O.T. SPECIFICATIONS, FOR ESTABLISHING A NEW LAWN. SOW SEED USING A SPREADER OR SEEDING MACHINE. DISTRIBUTE SEED EVENLY OVER ENTIRE AREA BY SOWING EQUAL QUANTITY IN 2 DIRECTIONS AT RIGHT ANGLES TO EACH OTHER. RAKE SEED LIGHTLY INTO TOP 1/8-INCH OF SOIL, ROLL LIGHTLY, AND WATER WITH A FINE SPRAY.

6. PROTECT ALL SEEDED AREAS AGAINST EROSION BY SPREADING A CLEAN, SEED FREE SALT MAY OR THRESHED STRAW OF WHEAT, RYE, OATS, OR BARLEY. SPREAD UNIFORMLY TO FORM A CONTINUOUS BLANKET NOT LESS THAN 1.5 INCHES LOOSE MEASUREMENT OVER SEEDED AREA.

7. TREATMENTS SUCH AS JUTE MESH, EXCelsior MATTING, OR FIBERGLASS ROWING SHALL BE USED TO STABILIZE DITCHES OR STEEP SLOPES SUSCEPTIBLE TO EROSION. THE TREATMENT SHALL BE INSTALLED PRIOR TO THE MULCHING OPERATION.

SEEDBED PREPARATION

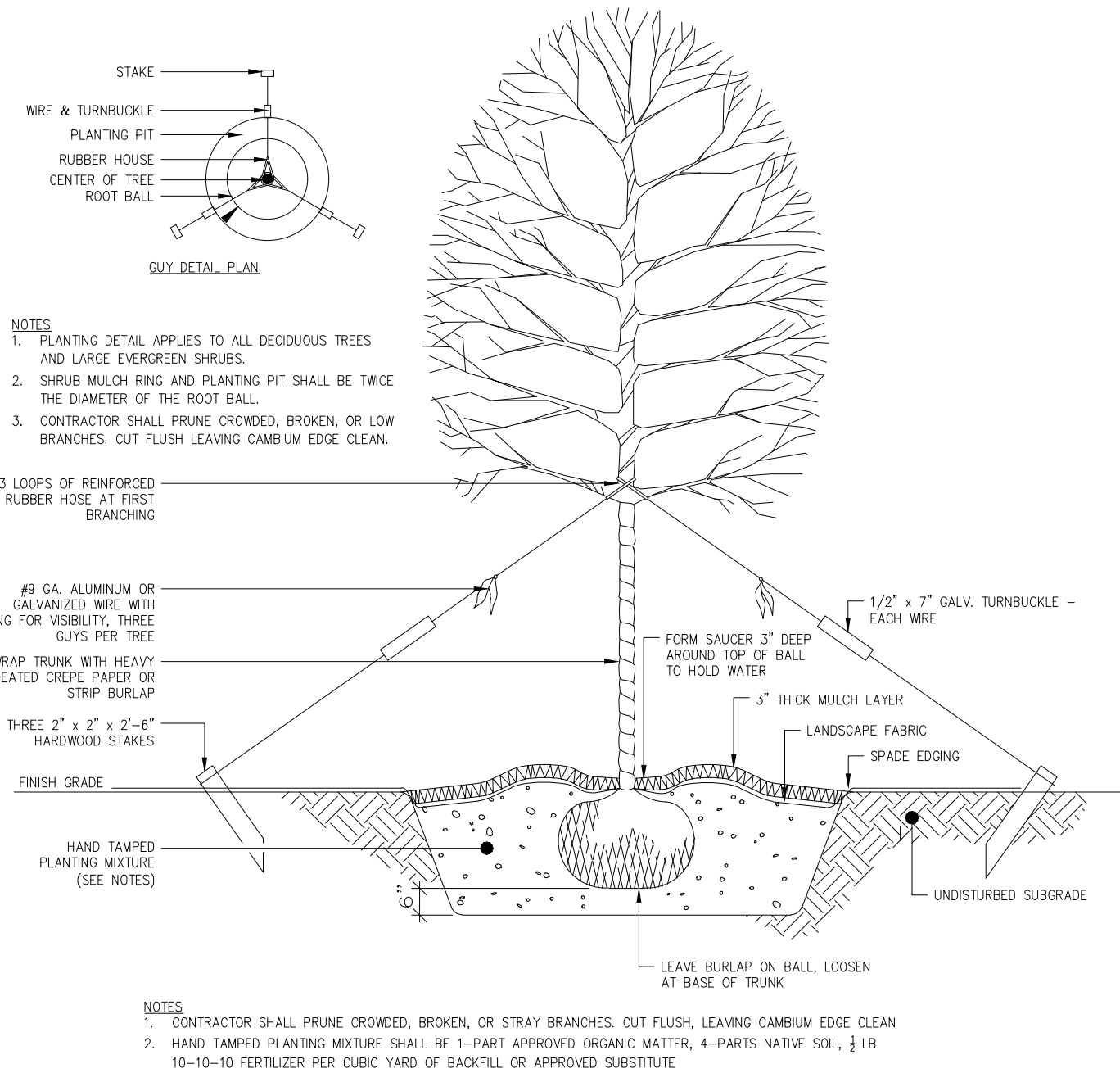
1. ALL DISTURBED AREAS SHALL BE DRESSED TO THE TYPICAL SECTIONS AND/OR GRADES SHOWN AND FLOWED TO A DEPTH OF 9 INCHES. THE TOP 2 INCHES SHALL BE PULVERIZED TO PROVIDE A UNIFORM SEEDBED.

2. REMOVE ALL LOOSE ROCK, ROOTS, AND OTHER DEBRIS LEAVING SURFACE REASONABLY SMOOTH AND UNIFORM. SOIL LEVEL SHALL BE APPROXIMATELY 1 INCH BELOW ALL TOPS OF CURBS AND WALKWAYS.

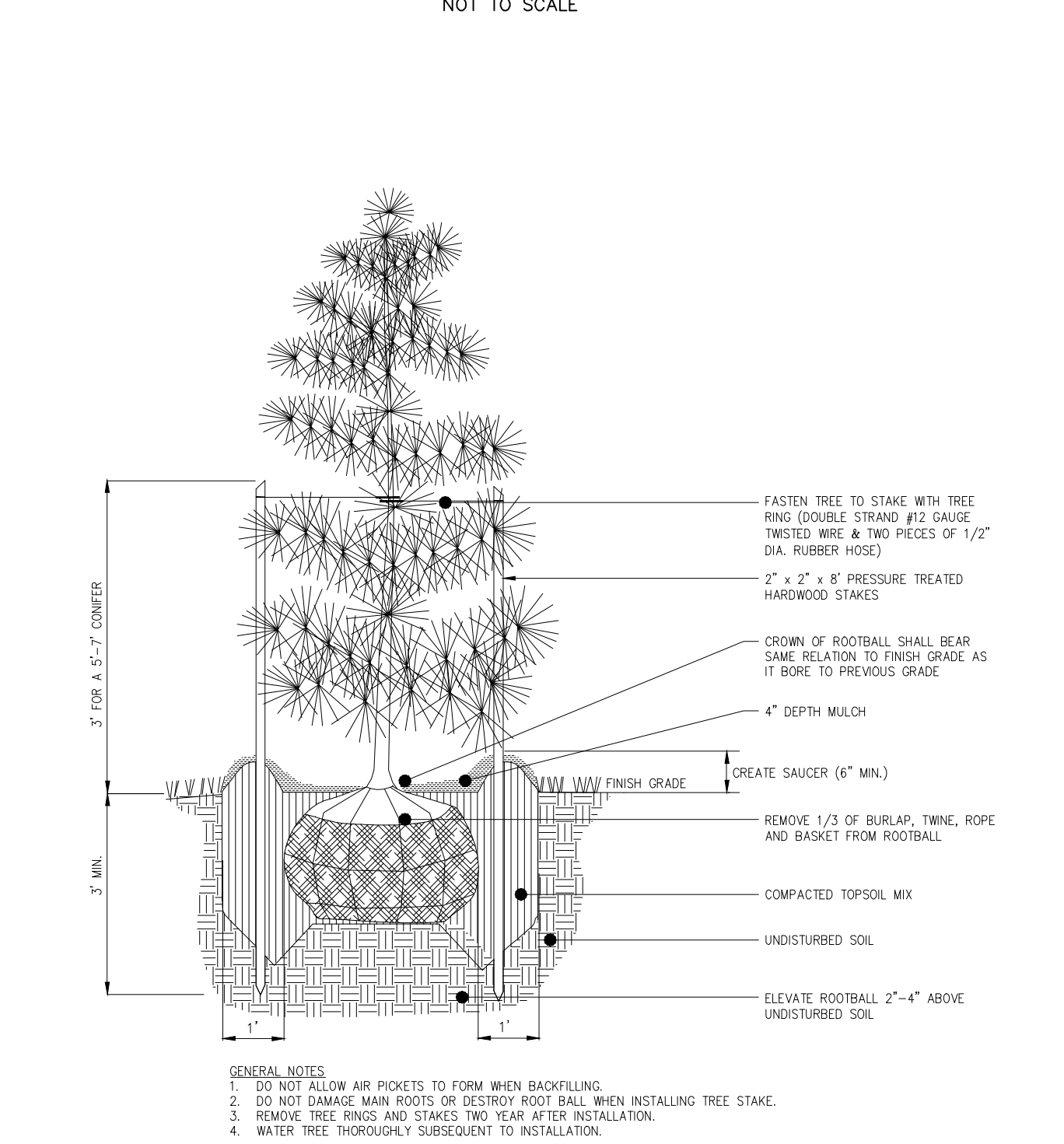
3. APPLY LIME AND FERTILIZER WITH NECESSARY EQUIPMENT TO ENSURE UNIFORM DISTRIBUTION OF THE MATERIALS. THE HAND/BUCKET METHOD IS NOT ACCEPTABLE. THE RATES AND TYPES OF MATERIALS TO BE APPLIED ARE AS FOLLOWS:

TURFGRADE FERTILIZER WITH SLOW RELEASE NITROGEN (E.G. 18-24-10) - RATE THAT WILL PROVIDE 5 LBS. OF PHOSPHORUS PER 1000 SQUARE FEET
LIMESTONE - 75 LBS. PER 1000 SQUARE FEET
(LIMESTONE MAY BE WAIVED IF EXISTING PH IS GREATER THAN 5.5.)

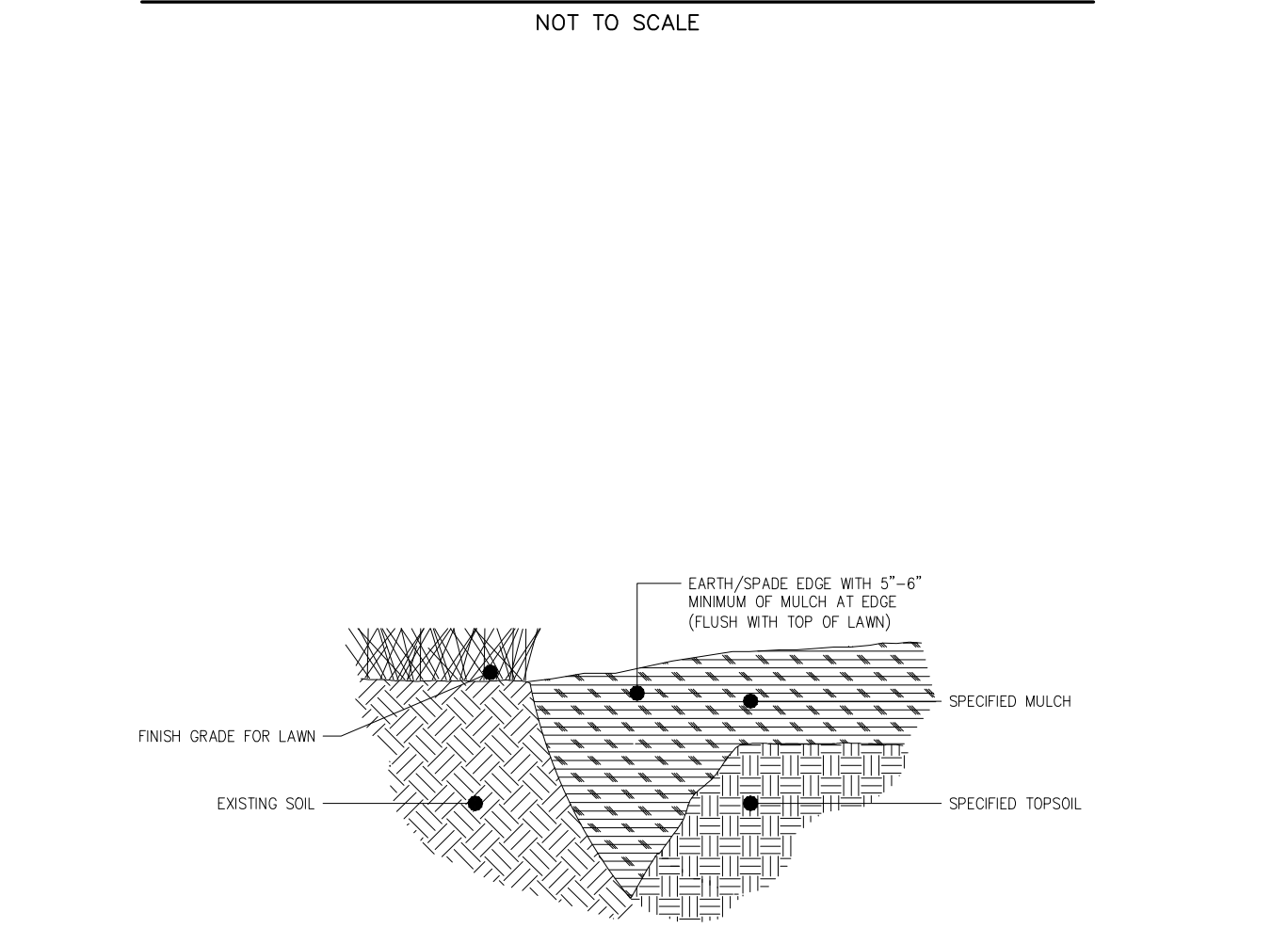
4. MOISTEN PREPARED LAWN AREAS BEFORE PLANTING IF SOIL IS DRY. ALLOW SURFACE MOISTURE TO DRY BEFORE PLANTING LAWNS. DO NOT CREATE A MUDDY SOIL CONDITION.



DECIDUOUS CANOPY TREE PLANTING DETAIL



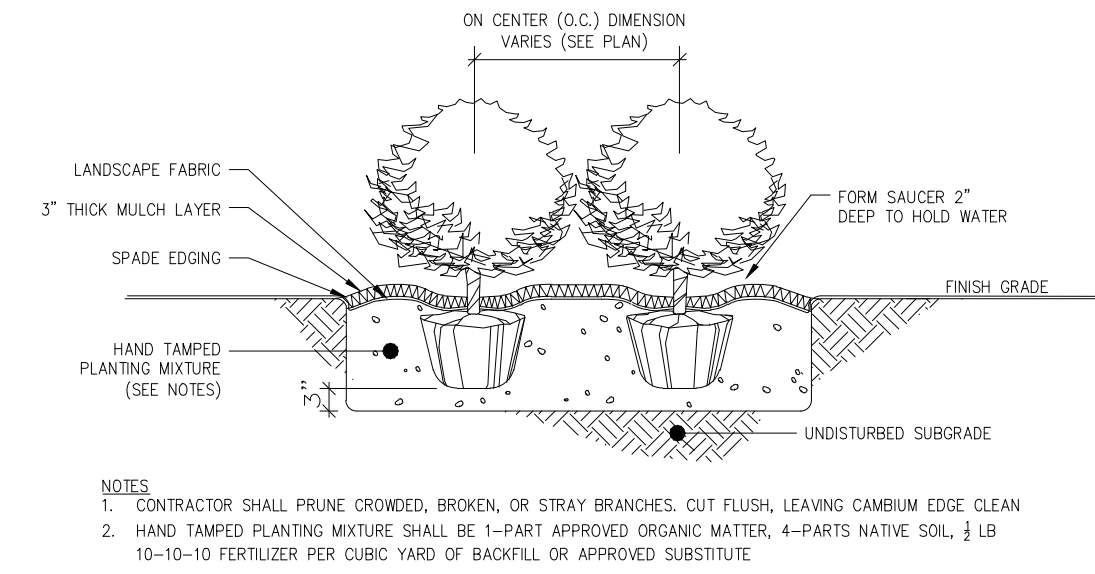
CONIFEROUS TREE PLANTING DETAIL



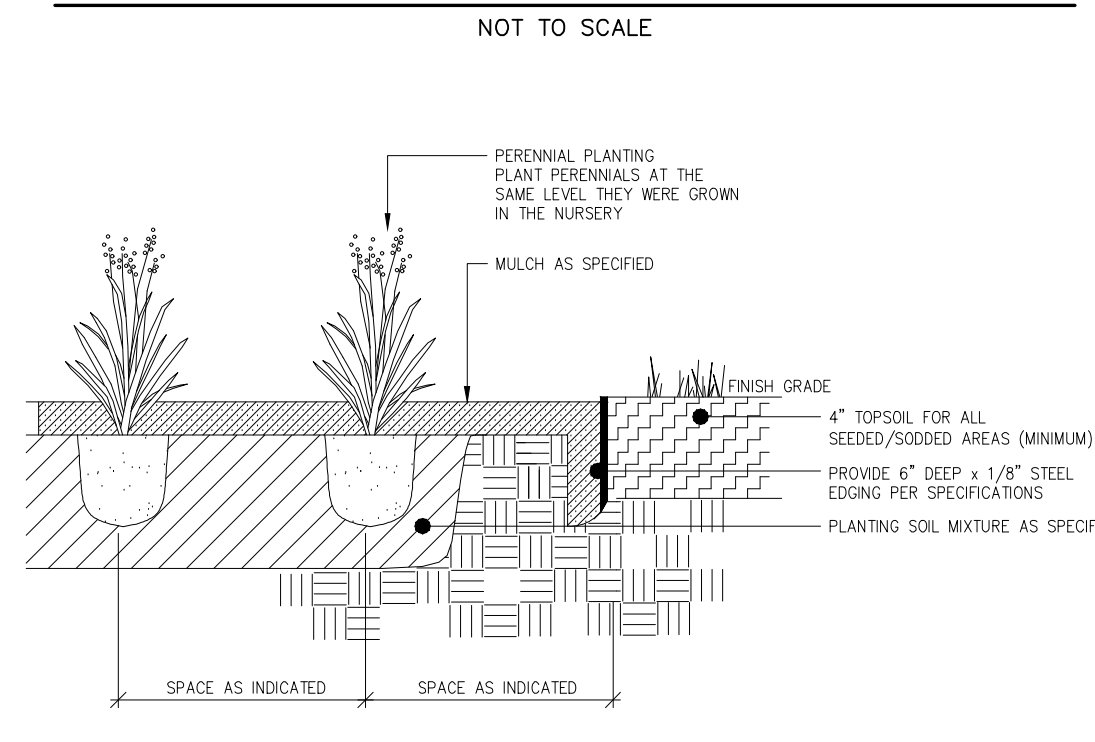
GENERAL NOTES:
1. USE WHEREVER MULCHED PLANTINGS TRANSITION TO TURN AREAS, INCLUDING ALL AIR POCKETS. PLACE SECOND LIFT AND REPEAT. CONTINUE TO PUDDLE AND FILL AS NECESSARY.

EARTH/SPADE EDGE DETAIL

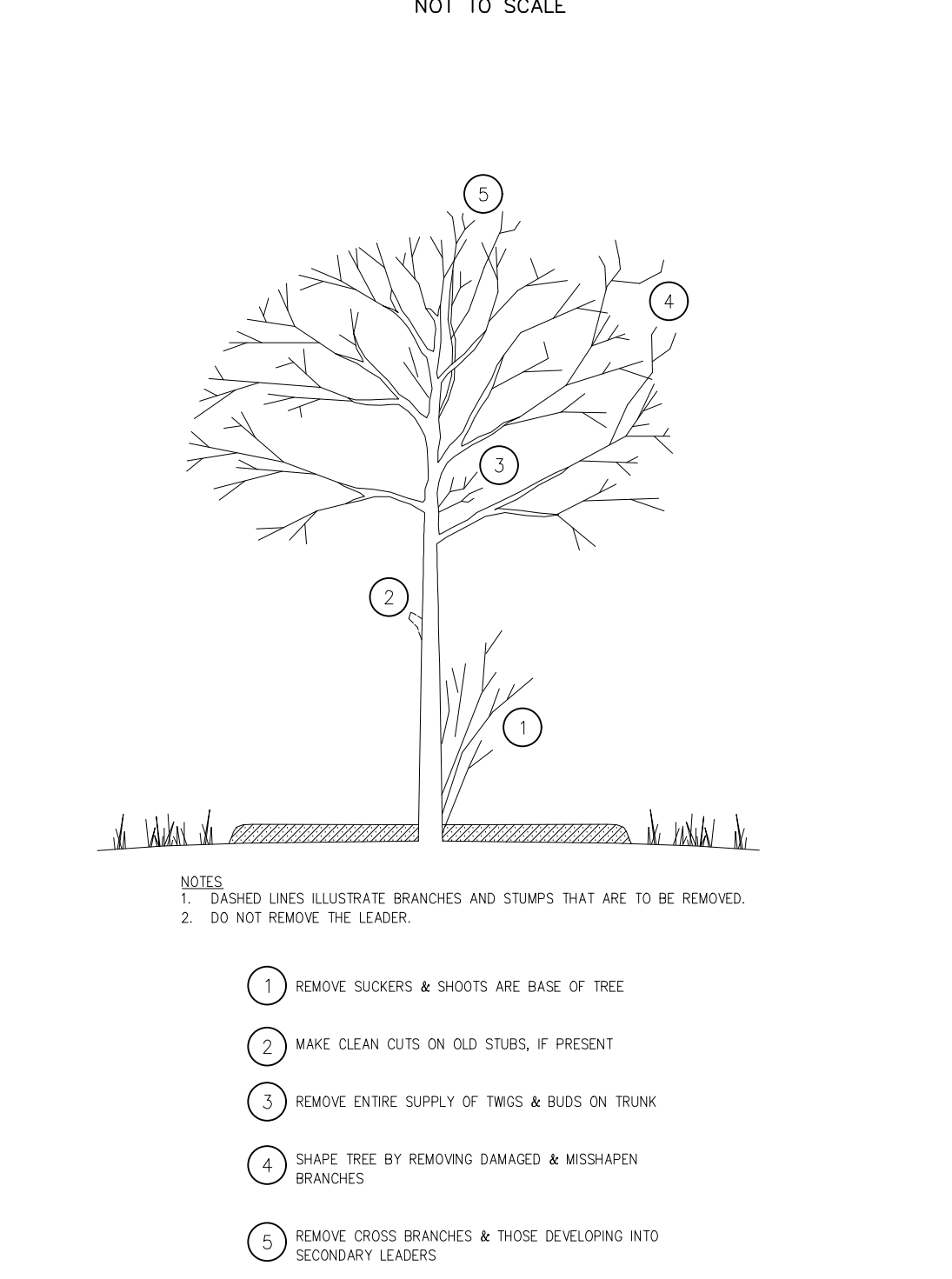
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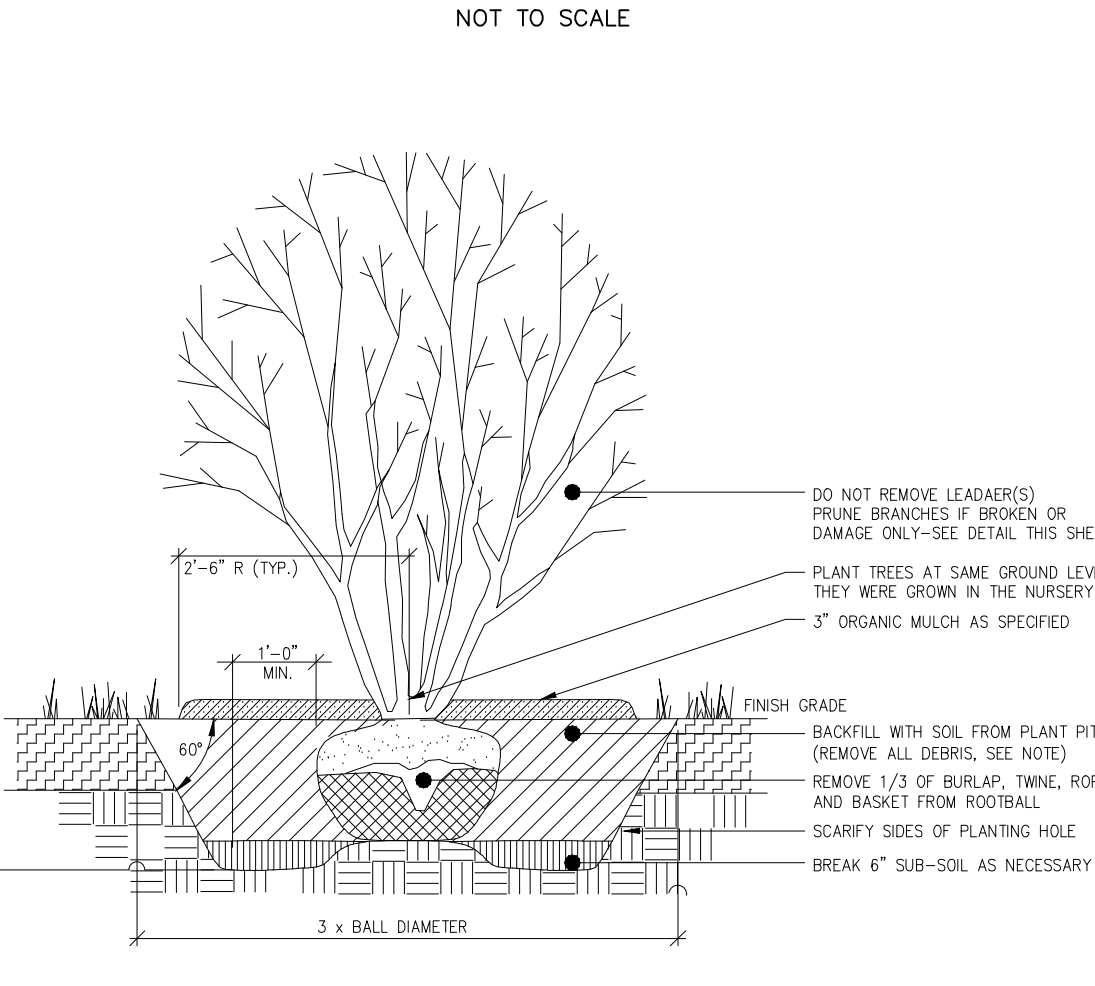
CONTAINER SHRUB PLANTING DETAIL



SHRUB/PERENNIAL BED DETAIL



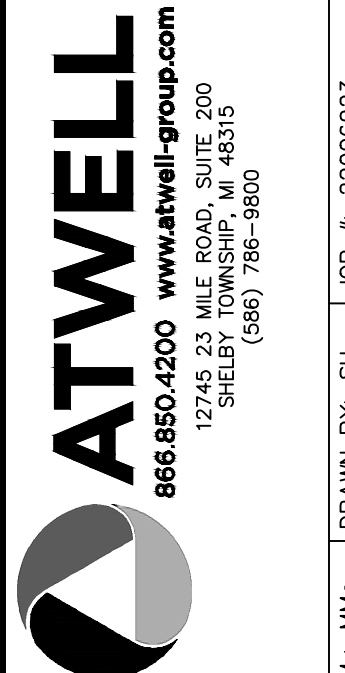
DECIDUOUS TREE PRUNING DETAIL



GENERAL NOTES:
IF ROOT BALL IS WRAPPED IN NON-Biodegradable BURLAP, REMOVE ENTIRE WRAP AFTER PLACED IN PIT. WHEN BACKFILLING PLANT PIT, PLACE PLANTING CL IN TWO LIFTS. AFTER FIRST LIFT, PUDDLE SOIL IN WITH WATER TO REMOVE ALL AIR POCKETS. PLACE SECOND LIFT AND REPEAT. CONTINUE TO PUDDLE AND FILL AS NECESSARY.

MULTI-STEMMED PLANTING DETAIL

NOT TO SCALE



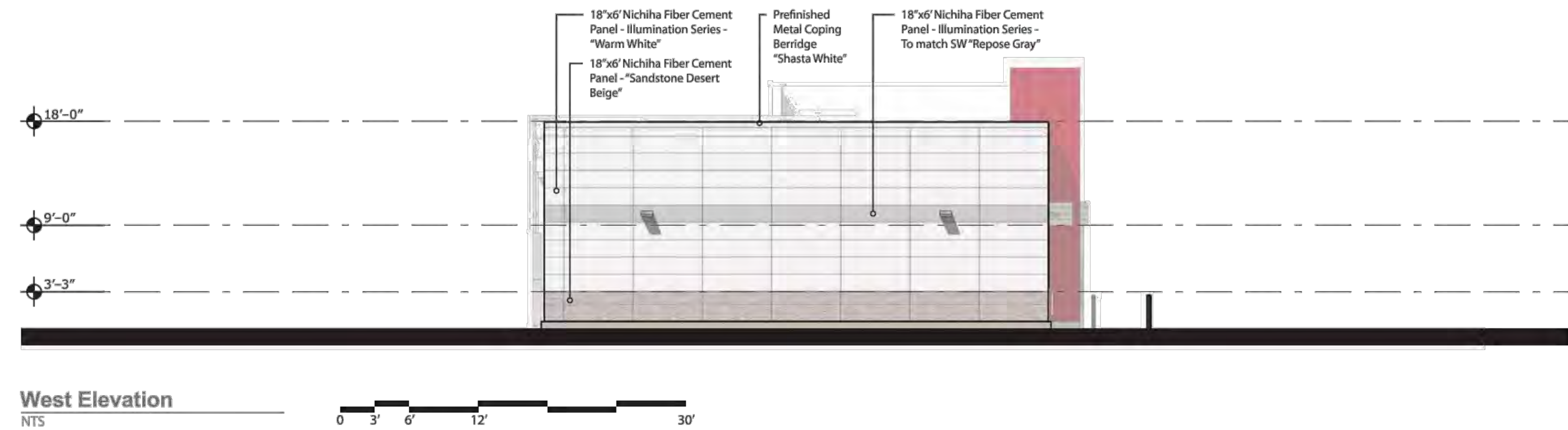
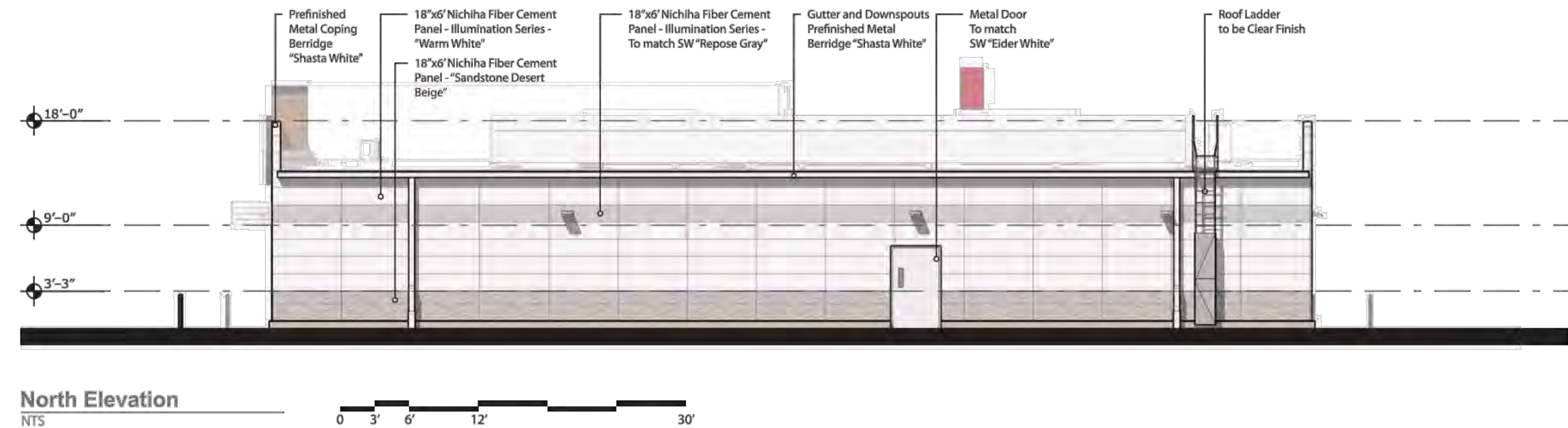
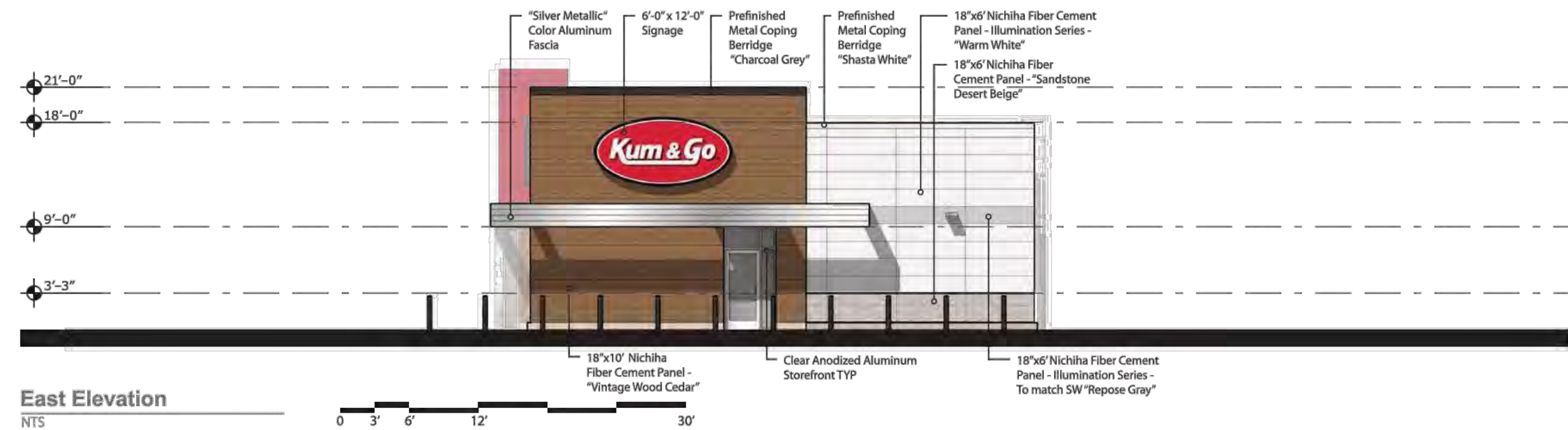
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2627 - KENTWOOD, MI
NEC OF 28TH STREET SE &
RIDGEMOOR DRIVE SE

KG PROJECT TEAM:
RDM: DAVE LEMONS
SDM: RYAN HALDER
CPM: SCOTT NEWBURY

REVISIONS	DATE	REVISION DESCRIPTION
1	06-07-2023	DATE
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Proposed Building Signage			
Location	Sign	Size	Area
South Elevation	"Kum & Go" Sign	6' x 12'	72 SF
	"Go Fresh Market" Sign	5' x 9'	45 SF
East Elevation	"Kum & Go" Sign	6' x 12'	72 SF
North Elevation	No Signage	---	0 SF
West Elevation	No Signage	---	0 SF
Total			189 SF

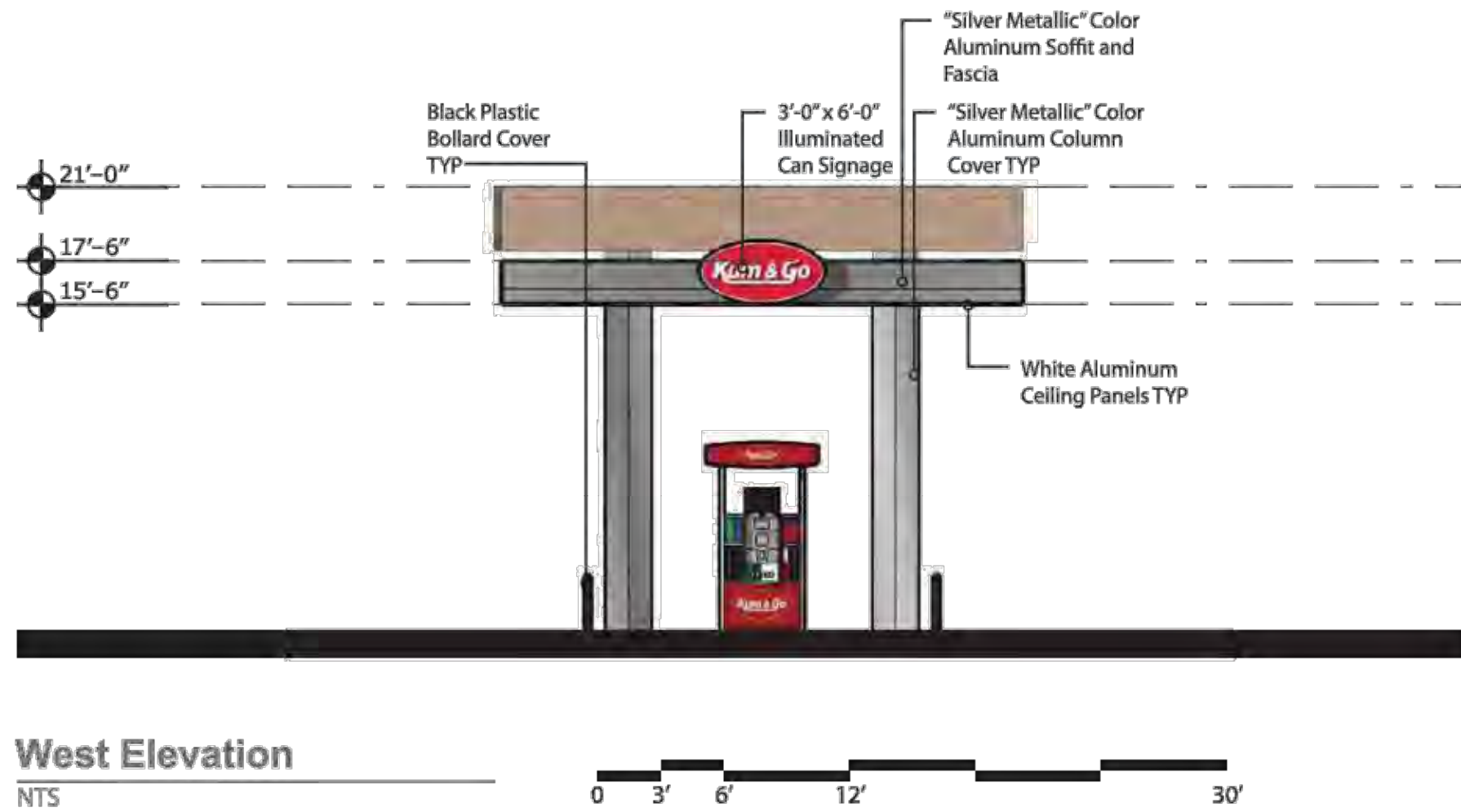
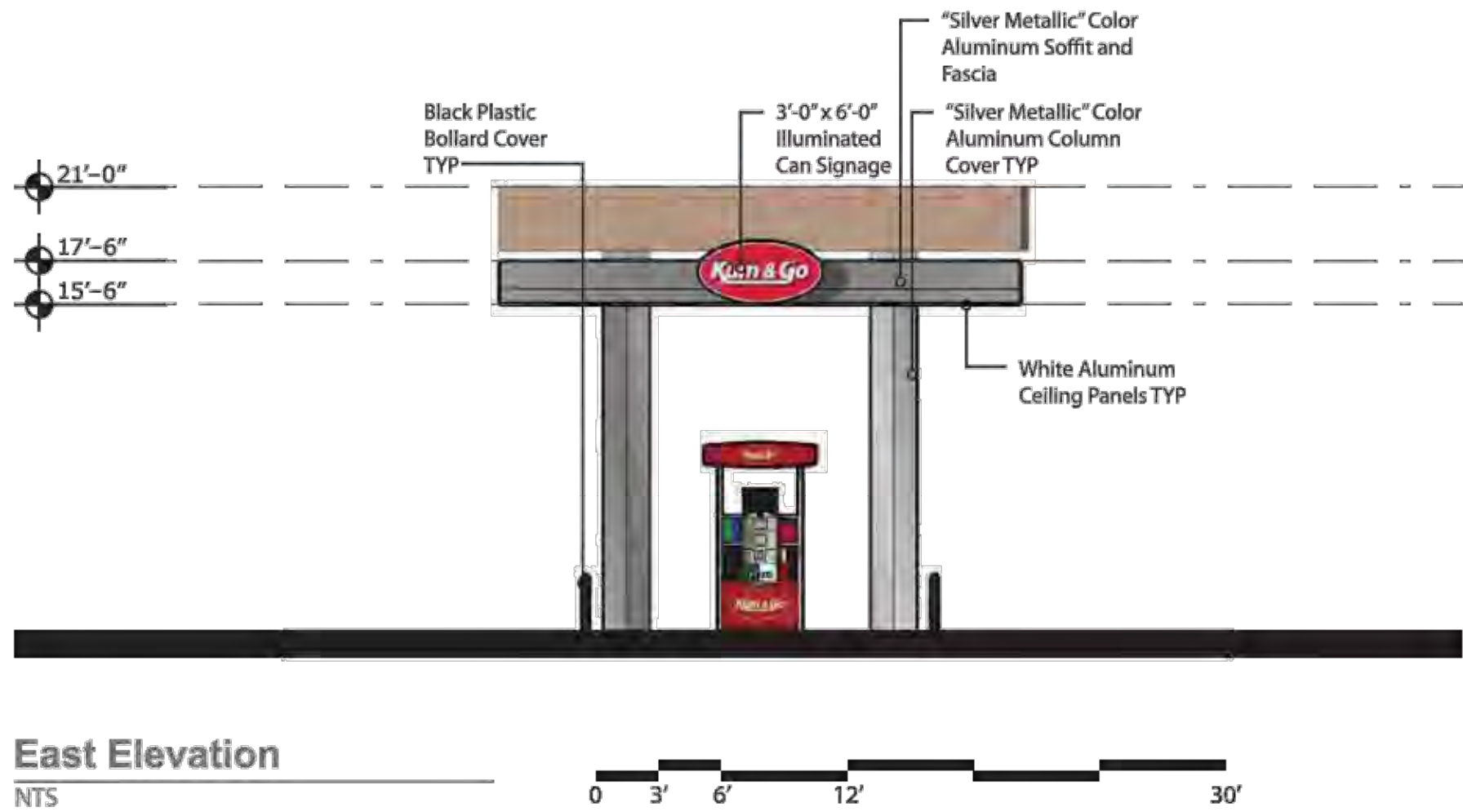
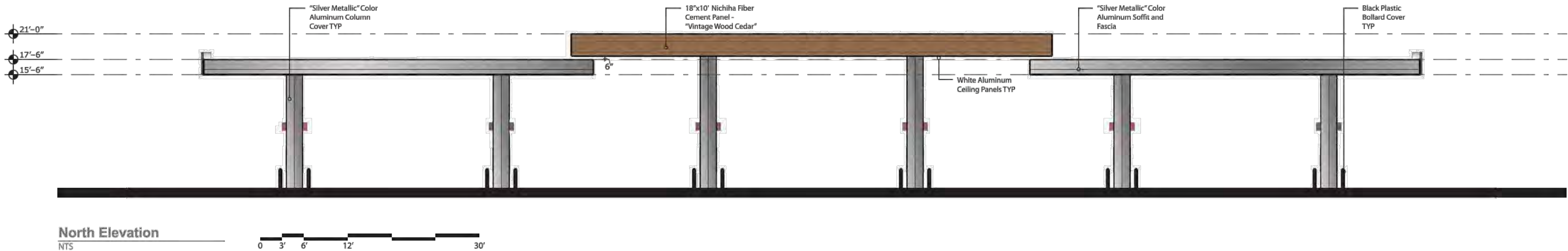
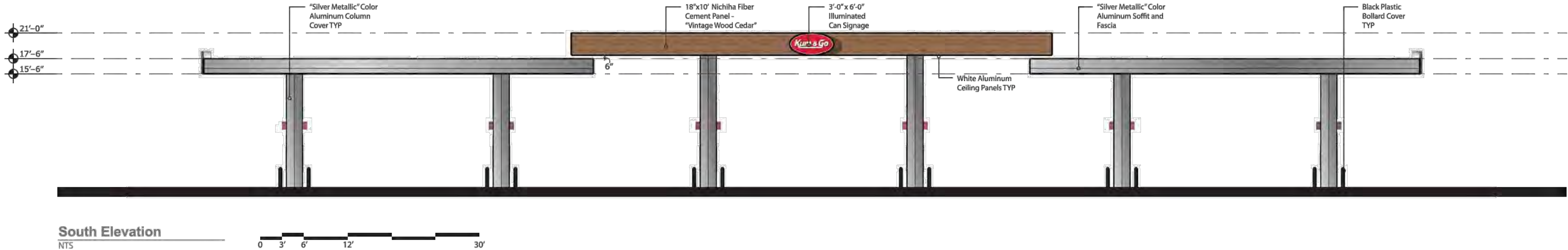


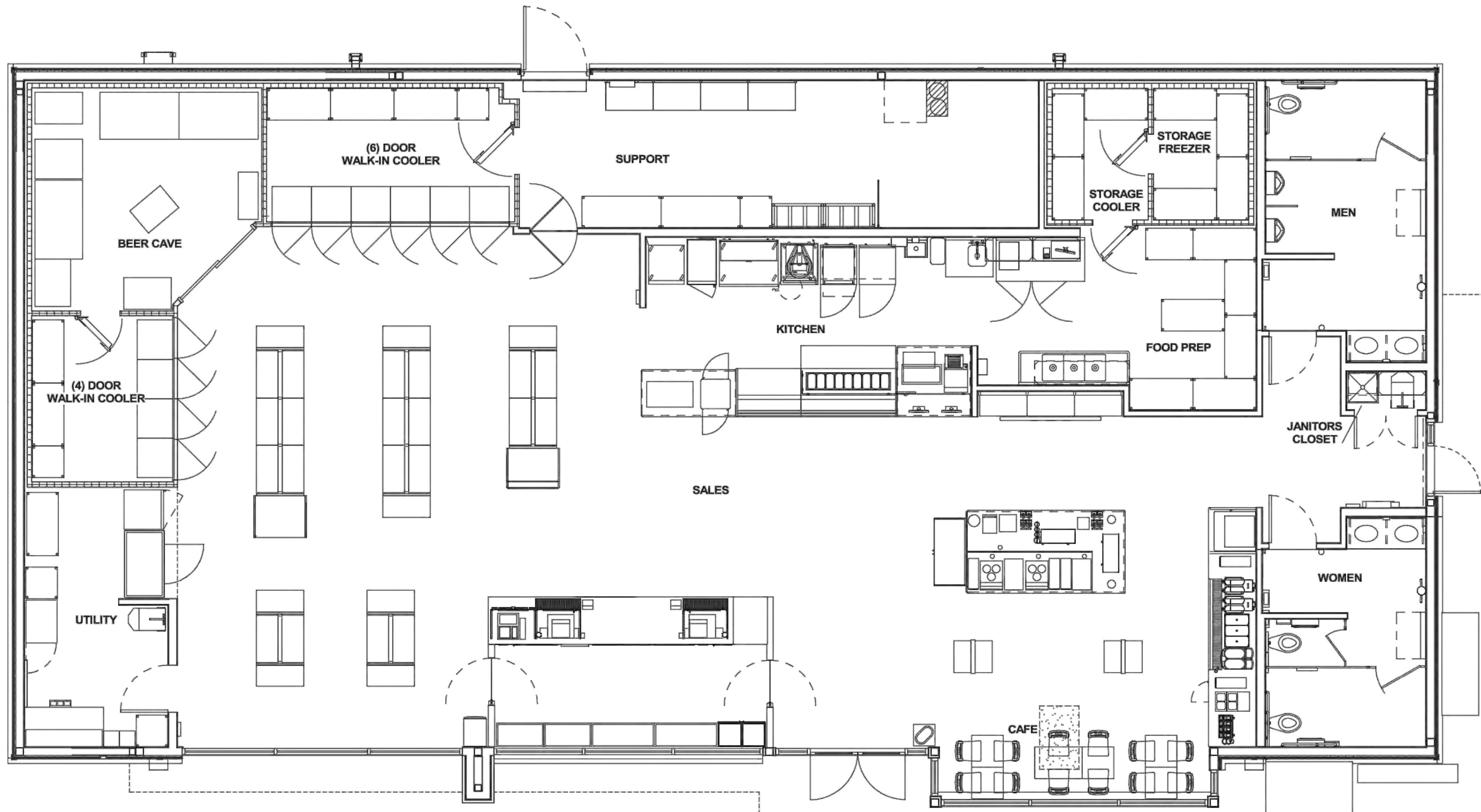
REVISIONS	
DATE	REVISION DESCRIPTION

DATE: 06-07-2023

SHEET NUMBER:

Proposed Canopy Signage			
Location	Sign	Size	Area
South Elevation	"Kum & Go" Sign	3'x 6'	18 SF
North Elevation	No Signage	---	0 SF
East Elevation	"Kum & Go" Sign	3'x 6'	18 SF
West Elevation	"Kum & Go" Sign	3'x 6'	18 SF
Total			54 SF



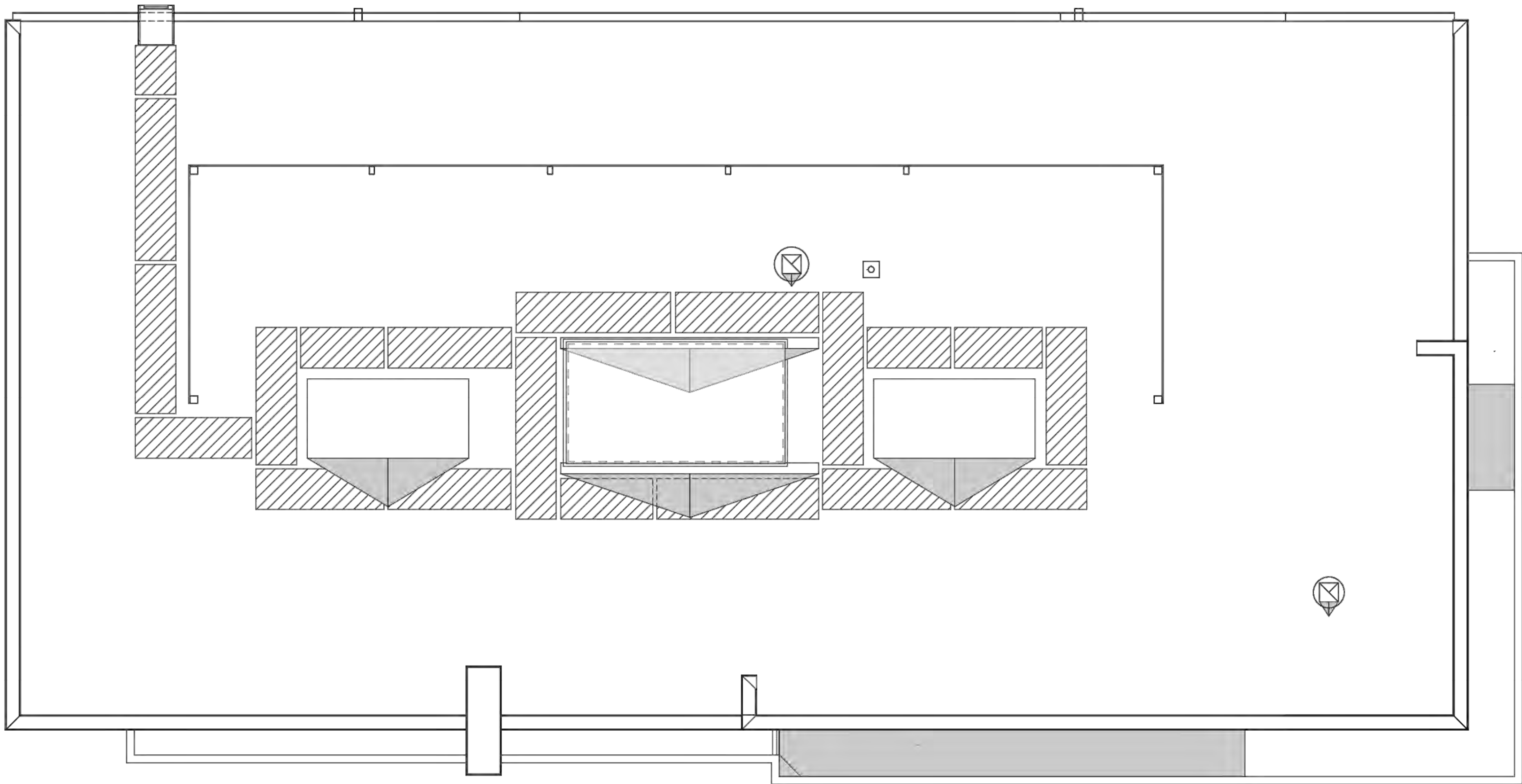


1 **FIXTURE PLAN**
1/4" = 1'-0"

DATE	REVISION DESCRIPTION

DATE: 06-07-2023

SHEET NUMBER:



1 ROOF PLAN
1/4" = 1'-0"

DATE	REVISION DESCRIPTION

DATE: 06-07-2023

SHEET NUMBER:

14 OF 17

KG PROJECT TEAM:
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2627 - KENTWOOD, MI
NEC OF 28TH STREET SE &
RIDGEMOOR DRIVE SE

ROOF PLAN

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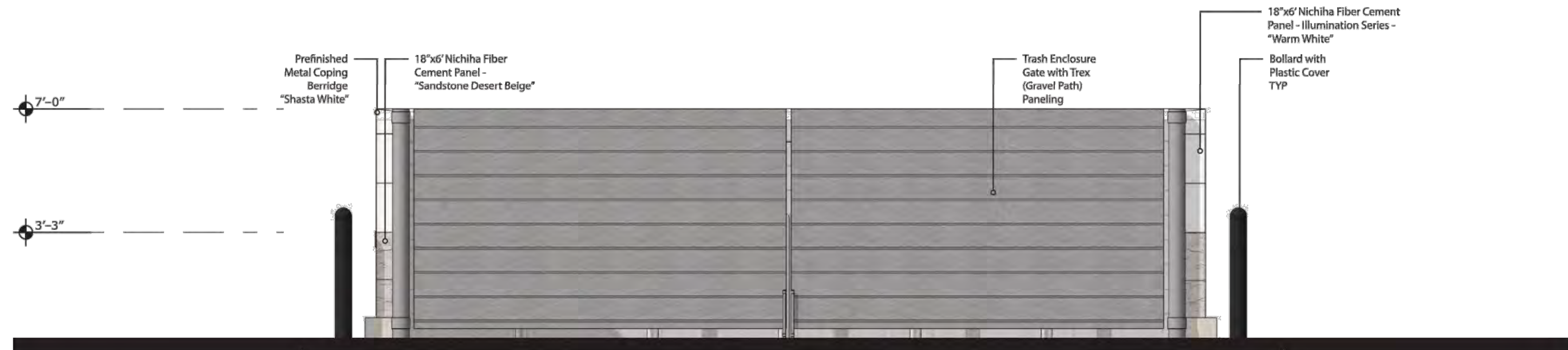


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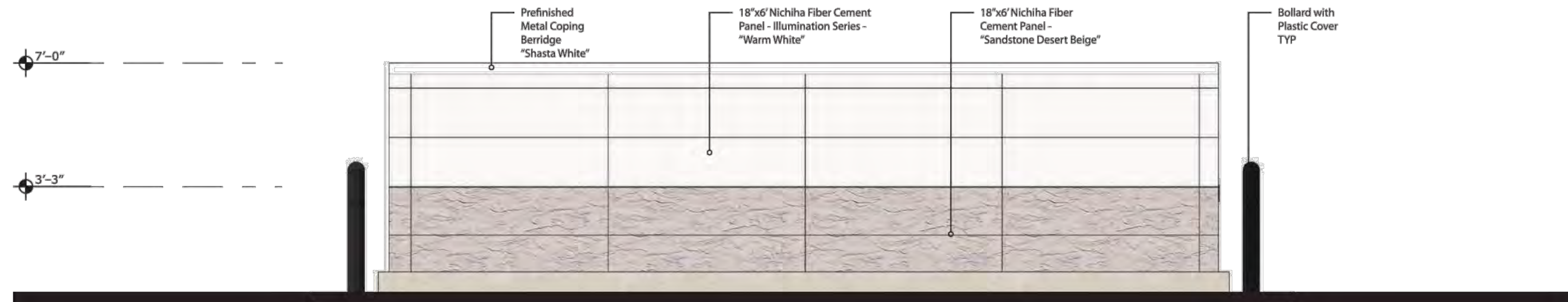
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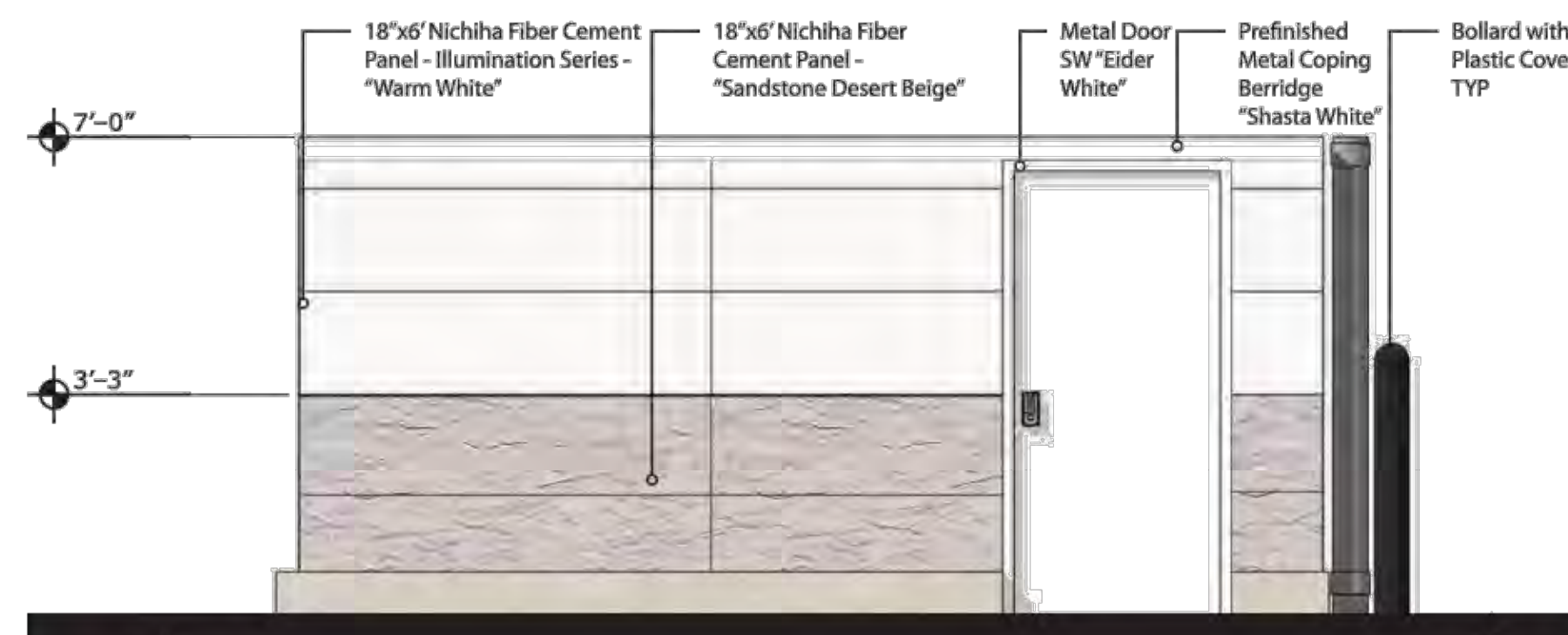
East Elevation

NTS



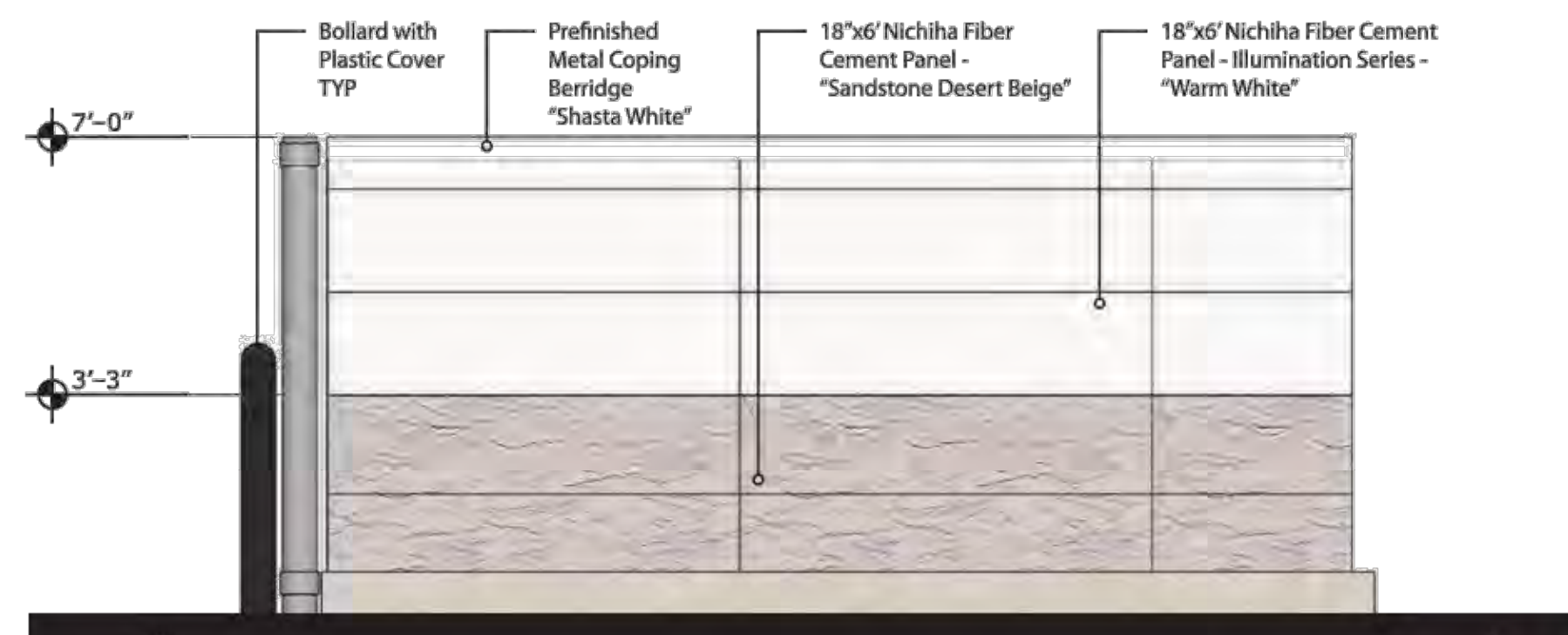
West Elevation

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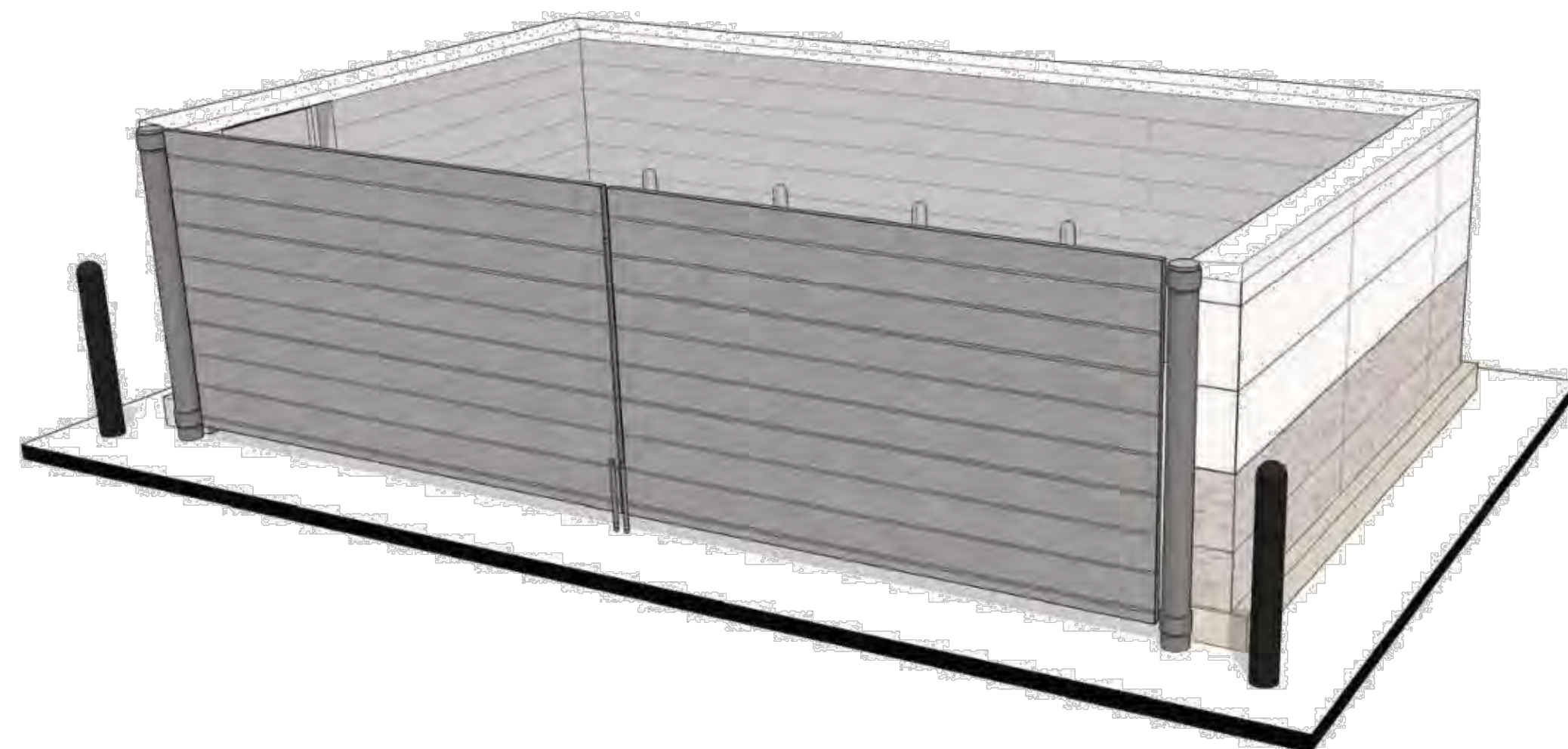
South Elevation

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North Elevation

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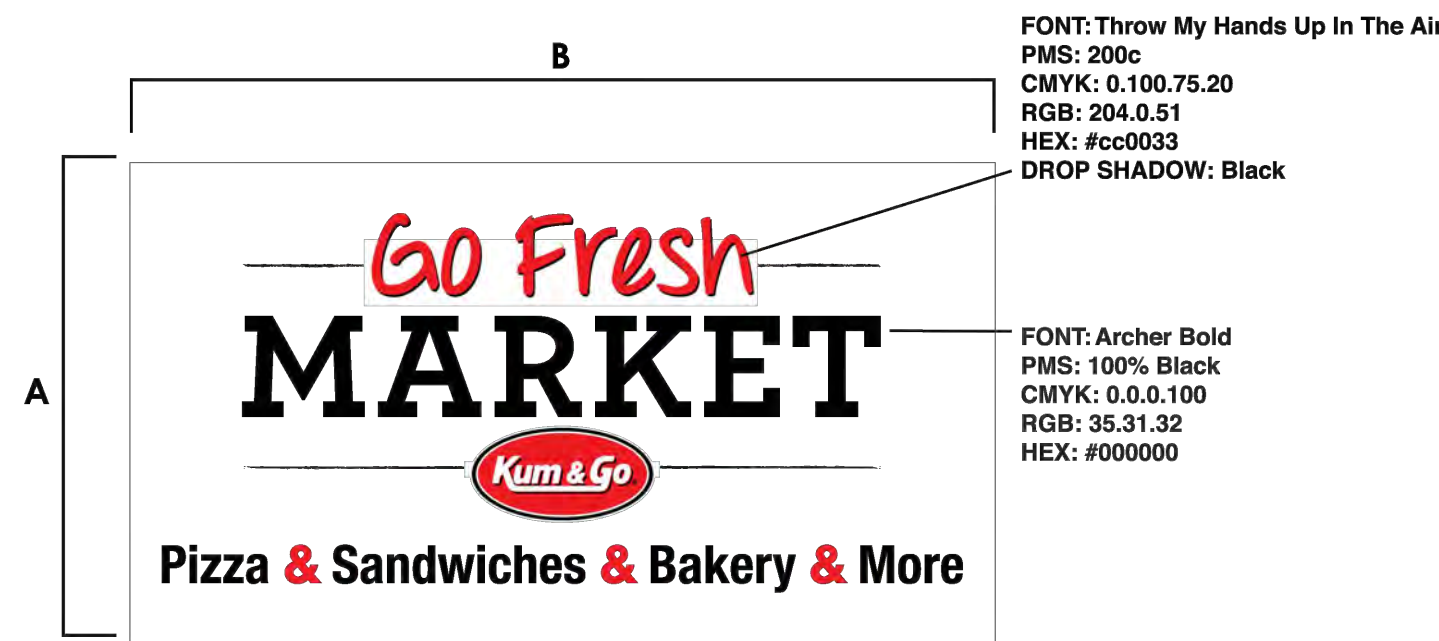


Perspective

NTS

REVISIONS	REVISION DESCRIPTION	DATE

Kum & Go 5' x 9' GO FRESH BUILDING SIGN

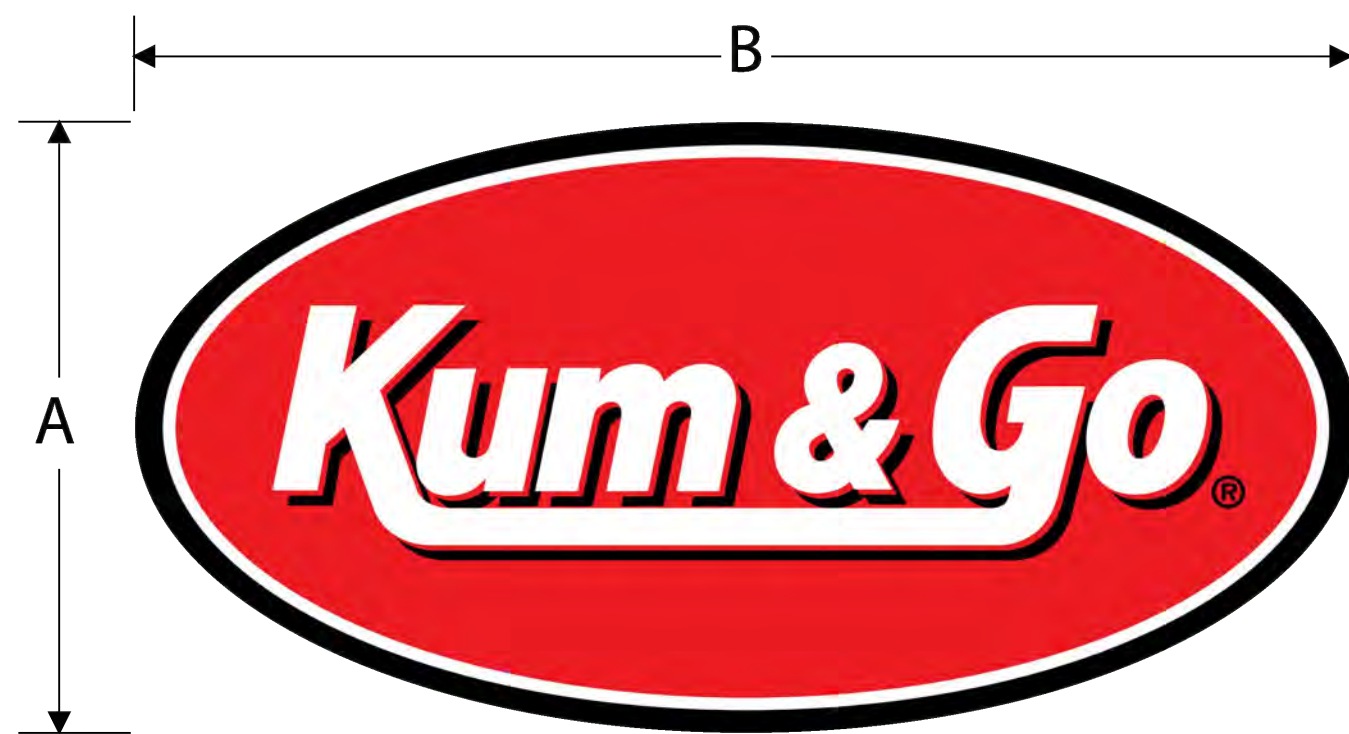


A - HEIGHT	B - WIDTH	AREA
5 FT	9 FT	45

TYPICAL CONSTRUCTION OF MARKET FRESH SIGNS:

- FLEX FACE WITH DIGITAL PRINT UV Coating
- ALUMINUM CABINET BLEED FACE RETAINER PAINTED BLACK
- INTERNAL LED ILLUMINATION UL WIRED
- PMS 200 (RED)

Kum & Go 3' x 6' OVAL CANOPY SIGN

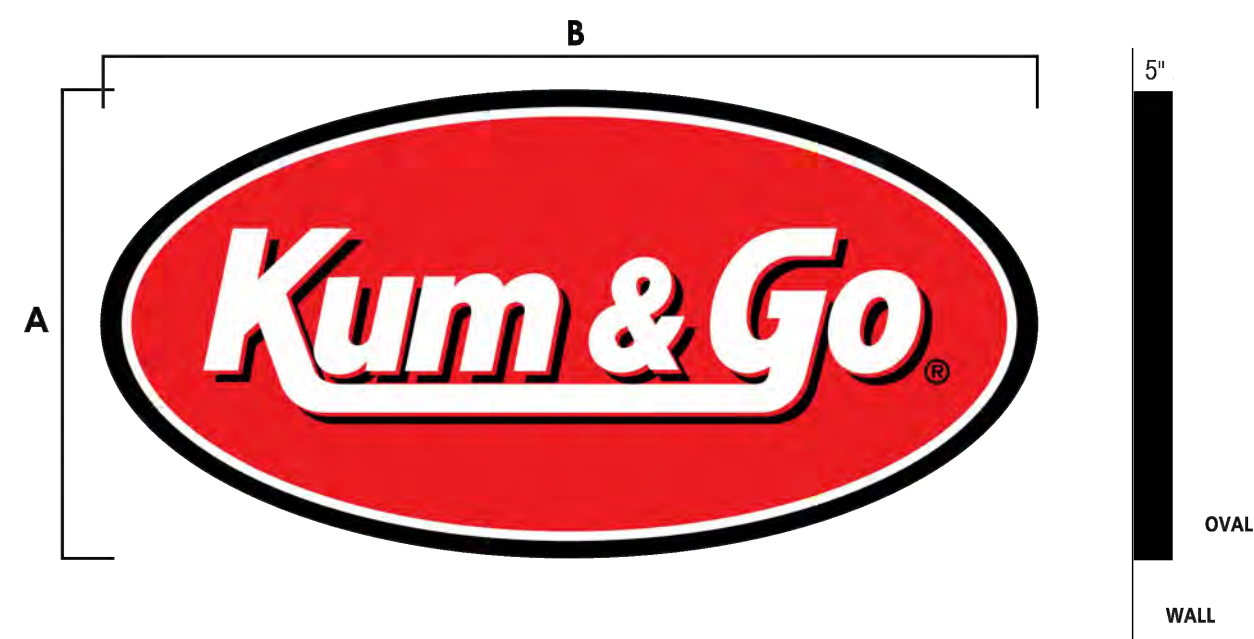


A - HEIGHT	B - WIDTH	AREA	AREA
3 FT	6 FT	14.4 SQ FT	18 SQ FT

TYPICAL CONSTRUCTION OF KUM & GO FLEX FACE OVAL:

- FLEX FACE WITH DIGITAL PRINT UV Coating
- ALUMINUM CABINET BLEED FACE RETAINER PAINTED BLACK
- INTERNAL LED ILLUMINATION UL WIRED

Kum & Go 6' x 12' OVAL WALL SIGN



OVAL MEASUREMENTS & SQUARE FOOTAGES

A - HEIGHT	B - WIDTH	AREA	AREA
6 FT	12 FT	56.52 SQ FT	72 SQ FT

TYPICAL CONSTRUCTION:

- FLEX FACE WITH DIGITAL PRINT UV Coating
- ALUMINUM CABINET BLEED FACE RETAINER PAINTED BLACK
- INTERNAL LED ILLUMINATION UL WIRED
- PMS 200 (RED)



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2627 - KENTWOOD, MI
NEC OF 28TH STREET SE &
RIDGEMOOR DRIVE SE

SIGNAGE DETAILS

KG PROJECT TEAM:
RDM: DAVE LEMONS
SDM: RYAN HALDER
CPM: SCOTT NEWBURY

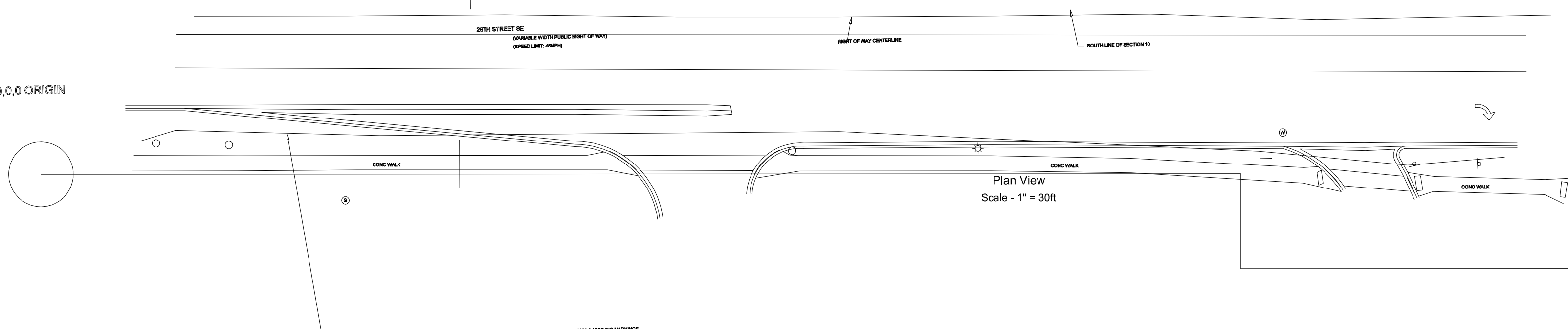
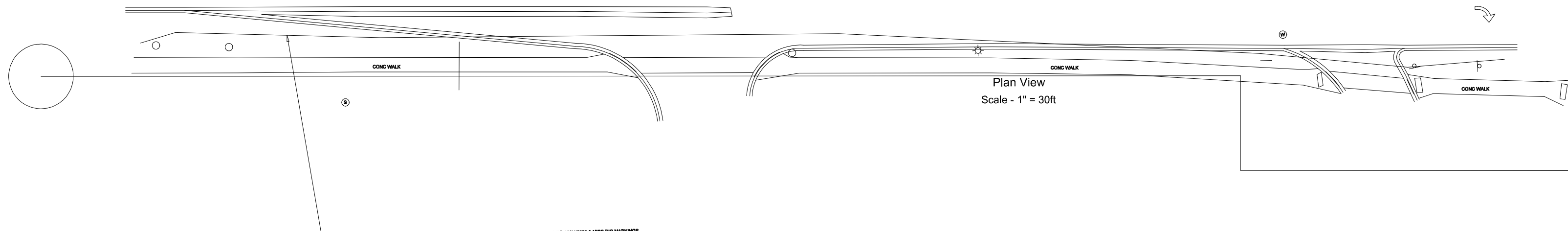
REVISION DESCRIPTION	DATE	BY	APP

DATE: 06-07-2023

SHEET NUMBER:

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Statistics						
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
ALL POINTS @ GRADE	+	0.3 fc	6.4 fc	0.0 fc	N/A	N/A
CANOPY SUMMARY @ GRADE	+	9.4 fc	13.2 fc	5.8 fc	2.3:1	1.6:1
PARKING AND DRIVE SUMMARY @ GRADE	+	2.8 fc	9.9 fc	0.0 fc	N/A	N/A



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RIDGEMOOR DRIVE SE