



7275 W. MAIN STREET, KALAMAZOO, MI 49009-9334  
269-216-5220 Fax 375-7180 TDD 375-7198  
www.oshtemo.org

**NOTICE  
OSHTEMO CHARTER TOWNSHIP  
ZONING BOARD OF APPEALS - REGULAR MEETING**

**MEETING WILL BE HELD IN PERSON  
AT OSHTEMO TOWNSHIP HALL  
7275 W MAIN STREET**  
Masks Are Now Optional in Oshtemo Township Buildings

*(Meeting will be available for viewing through <https://www.publicmedianet.org/qavel-to-qavel/oshtemo-township>)*

**TUESDAY, AUGUST 23, 2022  
3:00 P.M.**

**AGENDA**

1. Call to Order
2. Pledge of Allegiance
3. Approval of Agenda
4. Public Comment on Non-Agenda Items
5. Approval of Minutes: July 26<sup>th</sup>, 2022
6. **Site Plan – FlavorSum Building Addition**  
On behalf of the owner, HCD Properties LLC, is requesting site plan approval to construct a 30,084 SF building addition, a 749 SF building addition, and a 1,023 SF building addition onto the existing building located at 3680 Stadium Park Way.
7. Other Updates and Business
8. Adjournment

**Policy for Public Comment  
Township Board Regular Meetings, Planning Commission & ZBA Meetings**

All public comment shall be received during one of the following portions of the Agenda of an open meeting:

a. Citizen Comment on Non-Agenda Items or Public Comment – while this is not intended to be a forum for dialogue and/or debate, if a citizen inquiry can be answered succinctly and briefly, it will be addressed or it may be delegated to the appropriate Township Official or staff member to respond at a later date. More complicated questions can be answered during Township business hours through web contact, phone calls, email ([oshtemo@oshtemo.org](mailto:oshtemo@oshtemo.org)), walk-in visits, or by appointment.

b. After an agenda item is presented by staff and/or an applicant, public comment will be invited. At the close of public comment there will be Board discussion prior to call for a motion. While comments that include questions are important, depending on the nature of the question, whether it can be answered without further research, and the relevance to the agenda item at hand, the questions may not be discussed during the Board deliberation which follows.

Anyone wishing to make a comment will be asked to come to the podium to facilitate the audio/visual capabilities of the meeting room. Speakers will be invited to provide their name, but it is not required.

All public comment offered during public hearings shall be directed, and relevant, to the item of business on which the public hearing is being conducted. Comment during the Public Comment Non-Agenda Items may be directed to any issue.

All public comment shall be limited to four (4) minutes in duration unless special permission has been granted in advance by the Supervisor or Chairperson of the meeting.

Public comment shall not be repetitive, slanderous, abusive, threatening, boisterous, or contrary to the orderly conduct of business. The Supervisor or Chairperson of the meeting shall terminate any public comment which does not follow these guidelines.

(adopted 5/9/2000)  
(revised 5/14/2013)  
(revised 1/8/2018)

Questions and concerns are welcome outside of public meetings during Township Office hours through phone calls, stopping in at the front desk, by email, and by appointment. The customer service counter is open from Monday-Thursday 8:00 am- 5:00 pm, and on Friday 8:00 am-1:00 pm. Additionally, questions and concerns are accepted at all hours through the website contact form found at [www.oshtemo.org](http://www.oshtemo.org), email, postal service, and voicemail. Staff and elected official contact information is provided below. If you do not have a specific person to contact, please direct your inquiry to [oshtemo@oshtemo.org](mailto:oshtemo@oshtemo.org) and it will be directed to the appropriate person.

Oshtemo Township Board of Trustees		
<b><u>Supervisor</u></b>		
Libby Heiny-Cogswell	216-5220	<a href="mailto:libbyhc@oshtemo.org">libbyhc@oshtemo.org</a>
<b><u>Clerk</u></b>		
Dusty Farmer	216-5224	<a href="mailto:dfarmer@oshtemo.org">dfarmer@oshtemo.org</a>
<b><u>Treasurer</u></b>		
Clare Buszka	216-5221	<a href="mailto:cbuszka@oshtemo.org">cbuszka@oshtemo.org</a>
<b><u>Trustees</u></b>		
Cheri L. Bell	372-2275	<a href="mailto:cbell@oshtemo.org">cbell@oshtemo.org</a>
Kristin Cole	375-4260	<a href="mailto:kcole@oshtemo.org">kcole@oshtemo.org</a>
Zak Ford	271-5513	<a href="mailto:zford@oshtemo.org">zford@oshtemo.org</a>
Kizzy Bradford	375-4260	<a href="mailto:kbradford@oshtemo.org">kbradford@oshtemo.org</a>

<b>Township Department Information</b>			
<b><u>Assessor:</u></b>			
Kristine Biddle	216-5225	<a href="mailto:assessor@oshtemo.org">assessor@oshtemo.org</a>	
<b><u>Fire Chief:</u></b>			
Mark Barnes	375-0487	<a href="mailto:mbarnes@oshtemo.org">mbarnes@oshtemo.org</a>	
<b><u>Ordinance Enf:</u></b>			
Rick Suwarsky	216-5227	<a href="mailto:rsuwarsky@oshtemo.org">rsuwarsky@oshtemo.org</a>	
<b><u>Parks Director:</u></b>			
Karen High	216-5233	<a href="mailto:khigh@oshtemo.org">khigh@oshtemo.org</a>	
Rental Info	216-5224	<a href="mailto:oshtemo@oshtemo.org">oshtemo@oshtemo.org</a>	
<b><u>Planning Director:</u></b>			
Iris Lubbert	216-5223	<a href="mailto:ilubbert@oshtemo.org">ilubbert@oshtemo.org</a>	
<b><u>Public Works:</u></b>			
Marc Elliott	216-5236	<a href="mailto:melliott@oshtemo.org">melliott@oshtemo.org</a>	

**OSHTEMO CHARTER TOWNSHIP  
ZONING BOARD OF APPEALS**

**DRAFT MINUTES OF A REGULAR MEETING HELD JULY 26, 2022 AT  
OSHTEMO TOWNSHIP HALL, 7275 WEST MAIN STREET**

---

**Agenda**

**PUBLIC HEARING – VARIANCE, HARDING’S FRIENDLY MARKET (WITHDRAWN)**  
Sign Art, Inc. on behalf of Meyer C. Weiner, Co., was requesting a variance in order to install three wall signs where one is allowed at 5161 West Main Street.

**SITE PLAN – H & K EXCAVATING**

H & K Excavating was requesting site plan approval to expand their building at 7504 Stadium Drive by 5,450 square feet and place a 5,000 square foot accessory building onsite. Parcels #05-34-180-059 and #05-34-205020.

---

A meeting of the Oshtemo Charter Township Zoning Board of Appeals was held Tuesday, July 26, 2022, beginning at approximately 3:00 p.m.

ALL MEMBERS PRESENT WERE: Anita Smith, Chair  
Dusty Farmer  
Fred Gould  
Harry Jachym  
Micki Maxwell  
Louis Williams, Vice Chair

Also present were Iris Lubbert, Planning Director, Jim Porter, Township Attorney and Martha Coash, Recording Secretary.

The three guests present included Kyle Mucha of McKenna and Alex Frazier of H & K.

**Call to Order and Pledge of Allegiance**

Chairperson Smith called the meeting to order and invited those present to join in reciting the “Pledge of Allegiance.”

**Approval of Agenda**

The Chair noted agenda item 6, a variance request from Harding’s should be withdrawn at the applicant’s request, and “Other Business” should be included following the H & K item on the agenda. She asked for a motion to make those changes.

Ms. Farmer made a motion to revise the meeting agenda as requested. Ms. Maxwell seconded the motion. The motion was approved unanimously.

Chairperson Smith moved to the next agenda item.

### **Public Comment on Non-Agenda Items**

As the Chair determined there were no comments, she moved to the next item.

### **Approval of the Minutes of April 26, 2022**

Chairperson Smith asked for any corrections to the minutes. Hearing none she asked for a motion of approval.

Ms. Maxwell made a motion to approve the Minutes of April 26, 2022, as presented. Mr. Williams seconded the motion. The motion was approved unanimously.

Chairperson Smith moved to the next agenda item.

### **SITE PLAN – H & K EXCAVATING**

**H & K Excavating was requesting site plan approval to expand their building at 7504 Stadium Drive by 5,450 square feet and place a 5,000 square foot accessory building onsite. Parcels #05-34-180-059 and #05-34-205020, Zoned I-1.**

Mr. Kyle Mucha, Senior Planner for McKenna, the consultant on this project, said on behalf of the Oshtemo Planning Department, they reviewed the site plan resubmission for the proposed office expansion, site improvements, future addition to the existing garage space, new storm water management system and erection of a standalone accessory building. He said the review was based on the resubmitted site plan dated 5/4/2022 and accompanying response letter from the applicant's engineer, Hurley & Stewart, dated 6/22/2022. Additionally, previous site plans did not indicate the placement of a 50' x 100' accessory structure: the supplemental plans dated 7/12/2022 corrected this missing information.

He indicated the primary development site is approximately 7.763-acres and is located on the north side of Stadium Drive, east of Stadium Parkway. The secondary site, located to the immediate east, is 13.5 acres in size.

The site is mostly wooded with one (1) existing commercial/industrial building located on the northern portion of the site. The applicant proposed to construct an additional 1,400 sq ft of office space on the southern portion of the existing building, and an additional 4,050 (50' x 81') of garage/warehouse space on the northern portion of the existing building. The applicant also proposed to utilize the parcel located directly east for storm water management and retention. The proposal includes the permanent placement of a 5,000 (50' x 100') accessory building (hoop structure): insufficient details were provided

on this structure at this time. The proposed office, accessory building and warehouse expansion of the existing contractor/landscape business is a permitted use in the I-1, Industrial District, as defined in Section 27.20 of the Township Zoning Ordinance.

#### RECOMMENDATION:

Mr. Mucha noted the site plan was amended to address the concerns outlined in their review memo dated 4/19/2022 and 6/13/2022. Based on these revisions, McKenna supported approval of the site plan subject to the applicant meeting the following conditions outlined below:

1. Clarification as to the loading/unloading space placed on the western portion of the property: will this space be used to unload equipment and landscaping material or used for non-material delivery.
2. Clarification as to the loading/unloading of landscaping materials.
3. Clarification to access drive/pathway to accessory building (hoop structure).
4. Use statement related to the accessory building (hoop structure): is this a temporary structure as indicated on the site plan or permanent. If permanent, footing and foundation details will need to be provided.
5. Accessory structure (hoop building) to meet the minimum setback distance of 25 feet from the east property line.
6. Site plan to be scaled at a 1:20 ratio. Site plan to show entire property and all existing and proposed structures.
7. Any other comments provided by additional reviewing agencies. (Ms. Lubbert noted both the Township Engineer and Fire Marshall had reviewed the application and had no concerns.)

#### SITE DESCRIPTION:

Mr. Mucha provided comments on specific site plan requirements and indicated that other than the conditions listed above, the applicant's amended plan meets requirements.

#### ACCESSORY STRUCTURE (§50.60.C.)

Mr. Mucha said the applicant amended the site plan, dated 7/12/2022, to include a 50-foot by 100-foot (5,000 square feet) accessory building (hoop structure) in the rear of the subject site. Section 50.60.C. of the Township Zoning Ordinance requires *the minimum setback distance between any accessory building and any rear or interior side property line in the I-2 Industrial District, shall be 20 feet or the height of the accessory building at its highest point as measured from the grade of the property line, whichever is greater.*

The applicant indicates the structure is 20 feet from the east property line, and 35 feet from the north property line. The structure height is approximately 25 feet tall. Based on this information, the structure does not meet the required setbacks.

In addition, the applicant has not provided details pertaining the intended use of the structure. The site plan notes it is temporary in nature. If the structure is permanent, footings and foundation details will need to be provided. Based on a use statement, the Township will determine if this is an accessory or principal structure. Access and site circulation will need to be reviewed based on the statement of use. Further, based on the plan not including the full extent and property lines, they were unable to determine if its location is acceptable and meets the Zoning Ordinance.

Chairperson Smith thanked Mr. Mucha for his comments and asked if there were questions from Board members.

Mr. Maxwell asked for clarification on how stormwater would be handled.

Ms. Lubbert said there would be a retention basin on the south side of the property and that the design was approved by the Township Engineer.

The Chair asked if the applicant wished to speak.

Mr. Alex Frazier, H & K, addressed the six specific conditions set forth for approval:

1. He said the intent for loading/unloading is to unload equipment and materials
2. Landscaping materials would involve maybe topsoil and equipment on a trailer to head out for the day
3. Currently the access driveway will be gravel; they will update the site plan to show the connection to the paved drive.
4. The hoop structure will be placed temporarily with the intention of moving it around the property as needed for flexibility; no footings are necessary
5. They will check and review the setback internally
6. They will provide a 1:20 site plan

Mr. Frazer said it was their intent to comply with all conditions as requested.

Ms. Lubbert indicated Township staff will work with the applicant to explore options in order to achieve the required 25 foot setback requirement for the accessory building. She noted when talking about loading and unloading, limited outdoor storage is allowed in I-1.

Hearing nothing further, the Chair moved to Board Deliberations.

The Chair was concerned about how the 25 foot setback would be achieved.

Ms. Lubbert said if the Board approves the site plan with the conditions outlined by staff, the applicant will have to meet all of the conditions before a building permit is approved.

Mr. Williams noted the applicant has agreed to meet all seven conditions.

Ms. Maxwell asked if the Planning Dept. can work with the applicant to take care of the 25 foot setback issue.

Ms. Lubbert said the setback will need to be met by either relocating the building or the adjoining property that the applicant owns will need to be combined with this site so there will no longer be an setback issue.

Ms. Lubbert noted both the Township Engineer and Fire Marshall had reviewed the application and had no concerns.

Ms. Farmer made a motion to approve the site plan as requested with the seven conditions set forth by McKenna:

1. Clarification as to the loading/unloading space placed on the western portion of the property: will this space be used to unload equipment and landscaping material or used for non-material delivery.
2. Clarification as to the loading/unloading of landscaping materials.
3. Clarification to access drive/pathway to accessory building (hoop structure).
4. Use statement related to the accessory building (hoop structure): is this a temporary structure as indicated on the site plan or permanent. If permanent, footing and foundation details will need to be provided.
5. Accessory structure (hoop building) to meet the minimum setback distance of 25 feet from the east property line.
6. Site plan to be scaled at a 1:20 ratio. Site plan to show entire property and all existing and proposed structures.
7. Any other comments provided by additional reviewing agencies.

Mr. Williams seconded the motion. The motion was approved unanimously.

### **Other Updates and Business**

Chairperson Smith introduced and the group welcomed new ZBA board member Mr. Harry Jachym.

In response to questions about the site plan request, it was noted this was the first site plan request to come before the ZBA this year. Ms. Lubbert explained that the Township's ordinance is currently set up so that the more 'straightforward' site plans come to the ZBA, a process specific to the Township, not the State of Michigan.

Attorney Porter reaffirmed that though most site plan requests go to the Planning Commission, some of the more routine ones come to the ZBA.

Ms. Farmer said they are more used to solving problems posed in variance requests than with site plans.

Ms. Lubbert said she could work with McKenna on future site plan requests to provide a format the Board is more used to seeing.

**Adjournment**

Chairperson Smith noted the Zoning Board of Appeals had exhausted its agenda. There being no other business, she adjourned the meeting at approximately 3:30 p.m.

Minutes prepared:  
July 27, 2022

Minutes approved:  
\_\_\_\_\_, 2022

DRAFT



August 17, 2022



**Mtg Date:** August 23, 2022

**To:** Oshtemo Township Zoning Board of Appeals

**From:** Colten Hutson, Zoning Administrator

**Applicant:** Elaine Westhouse, Comprehensive Engineering

**Owner:** HCD Properties, LLC

**Property:** 3680 Stadium Park Way, Parcel Number 05-34-155-050

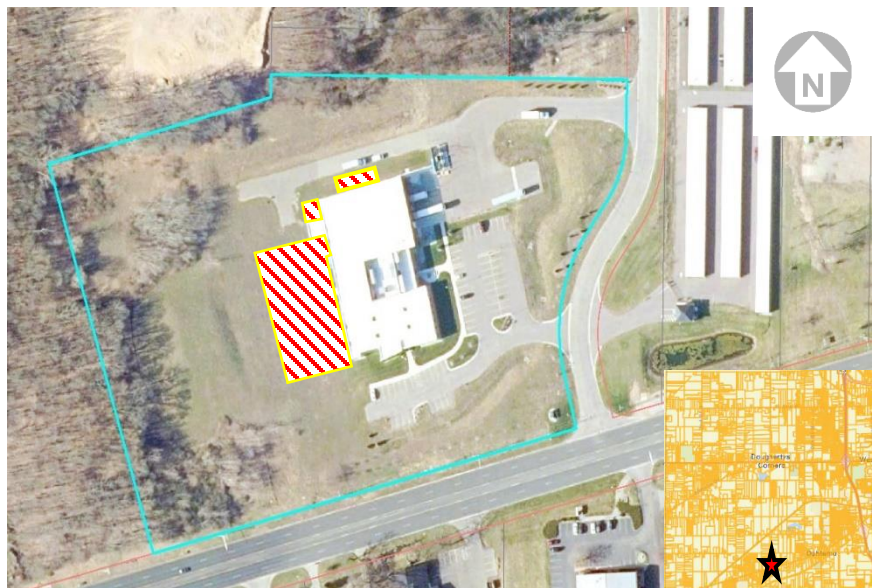
**Zoning:** I-1: Industrial District

**Request:** Site plan approval to construct a 30,084 SF building addition, a 749 SF building addition, and a 1,023 SF building addition onto the existing 34,989 SF building on-site.

**Section(s):** Section 64: Site Plan Review  
Section 48.70: Manufacturing, Compounding, Assembling, or Treatment of Merchandise  
Section 27: I-1 Industrial District

**PROJECT SUMMARY:**

Comprehensive Engineering, on behalf of the owner, HCD Properties LLC, is requesting site plan approval to construct a 30,084 SF building addition, a 749 SF building addition, and a 1,023 SF building addition onto the existing building located at 3680 Stadium Park Way. Currently serving as an office and a manufacturing facility for food flavorings, the applicant is seeking to expand their business operations. The expansion will provide additional space for



warehouse and cold storage. The project area under consideration is outlined in light blue on the map above with the subject building additions illustrated through the red and white hatch marks.

3680 Stadium Park Way falls within the I-1: Industrial District zoning classification. The existing manufacturing use is a permitted use with conditions within the I-1: Industrial District. The proposed warehouse and cold storage uses are permitted by right within the I-1: Industrial District.

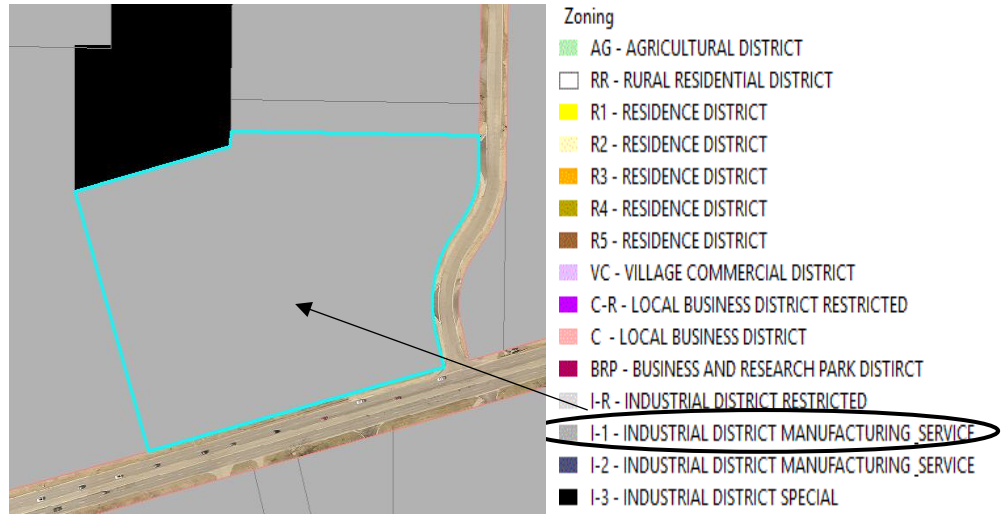
**ANALYSIS:**

When reviewing this site plan review request, there are two sets of criteria that need to be considered: the general site plan review criteria outlined in Section 64, and the conditions for specific permitted use requirements outlined in Section 48.70. Below is an analysis of the proposal against these two code sections. Overall, most of the requirements of Section 64 and Section 48.70 have been met.

**Section 64: Site Plan Review**

**General Zoning Compliance:**

*Zoning:* 3680 Stadium Parkway is zoned I-1: Industrial District and is located within the southwest quadrant of the Township. The subject property abuts an undeveloped parcel to its west, a food packaging company and a concrete materials recycling yard to the north, a



self-storage facility to the east, and other various industrial land uses to its south. All uses above are also zoned I-1: Industrial District except for the concrete materials recycling yard use to the north which is zoned I-3: Industrial District. The proposed warehouse and cold storage uses are permitted uses by right within the I-1: Industrial District. The existing manufacturing component of this proposal is a permitted use with conditions within the mentioned zoning district. With the proposed additions, the percentage of land covered by buildings will increase to 14%. 66% of the site will remain as open space.

**Access and Circulation**

*Access:* The site under consideration already possesses two access drives adjacent to Stadium Park Way. The site is designed to accommodate two-way travel throughout the site. All circulation aisles on-site are a minimum of 24 Ft in width. Other than the additional bituminous pavement to accommodate parking and site circulation on the north and south sides of the building, all circulation aisles will remain unchanged. The Fire Marshal has reviewed the site plan and found it adequate to service emergency vehicle circulation.

*Parking:* The site currently has 60 parking spaces in total, four of which are ADA accessible. All existing and proposed parking stalls are 10 Ft x 20 Ft. Office uses are allowed one parking space for every 150 square feet of net floor area (4,987 SF in total). Manufacturing/processing is allowed 1.5 spaces for every 1,000 square feet of net floor area (17,332 SF in total). Warehousing/distribution is one space for each 1,500 square feet of net floor area (36,197 SF in total). After calculating the parking needed for the various uses proposed to occupy the site, a total of 84 parking spaces would be required. The applicant was able to meet such parking

requirements by proposing a total of 85 parking spaces, which is well under the maximum number of spaces allowed for sites of this nature.

*Easements:* There is a 20 Ft wide water easement proposed to run along the north side of the building. The easement will need to be dedicated to Oshtemo Township. Such an extension will require coordination with the Public Services Department at the City of Kalamazoo. Other than the proposed watermain easement, there are no changes to the current easements on-site.

*Shared Use Path:* The Township’s Non-motorized Plan does identify a non-motorized facility adjacent to the subject site on the north side of Stadium Drive. A 6 Ft wide concrete sidewalk in said location is currently proposed on the site plan and will be required to be installed prior to releasing a certificate of occupancy. It should be noted that Oshtemo Public Works has been in communication with the applicant and is currently working on a final design plan on the sidewalk. If any portion of the sidewalk is required to be located outside of the public right-of-way in order to avoid safety concerns and utility conflicts, a sidewalk easement will be required to be recorded at the Kalamazoo County Register of Deeds Office.

### Building Design

*Building Information:* The 34,989 SF building was originally constructed in 2017 and is approximately 26 Ft tall. The proposed building additions will be located on the north and west ends of the existing building, combining for a total of 31,856 SF in additional square footage. The exterior material proposed for the addition is an insulated metal panel siding that is gray in color. The elevation sheet that was submitted with the site plan shows that the addition will match the existing façade and architectural features of the existing portion of the building. See images of the building’s elevations below.



*Lot Dimensions:* The site under consideration is about 11 Acres (474,525 SF) and has approximately 1,266 Ft of road frontage adjacent to public roadway. The parcel exceeds both the property area (50,000 SF minimum) and frontage (200 Ft minimum) requirements of the I-1: Industrial District. The site's dimensions satisfy zoning ordinance requirements.

*Setbacks:* Properties located within Industrial zoning districts are required to have a minimum front yard setback of 70 Ft. If properties are located along a designated highway within the Township, they are subject to additional setback requirements if greater than what is outlined for the underlying zoning district. The subject property possesses two front yards, one along Stadium Park Way, and the other along Stadium Drive, which happens to be a designated highway. The minimum front yard setback from Stadium Park Way is 70 Ft. The minimum setback requirement from Stadium Drive is 120 Ft from the center of the street right-of-way. The building is setback approximately 200 Ft from the front property line along Stadium Park Way and 215 Ft from the center of the street right-of-way on Stadium Drive. Properties zoned as Industrial are also subject to have a minimum side and rear yard setback of 20 Ft or equal to the height of the abutting side of the building at its highest point as measured from the grade of the property line, whichever is greater. The height of the building is 37 Ft tall, which requires a minimum setback in the side and rear yards of 37 Ft, which is proposed. The minimum setbacks for the front yard, side yard, and rear yard have all been met.

*Waste Disposal Container:* No changes to the current on-site waste disposal container is proposed. This portion of the review is not applicable.

*Fencing:* No changes to the current on-site fencing is proposed. This portion of the review is not applicable.

*Lighting:* A photometric plan has been provided. Several new pole mounted lights and building mounted lights are proposed. All lighting ordinance requirements have been met.

*Signs:* No changes to the current on-site signage is proposed. This portion of the review is not applicable.

### **Landscaping**

The landscaping plan that was submitted is satisfactory as the applicant is proposing to preserve a number of existing trees in addition to planting several different tree species on-site. Such plantings are proposed to be installed between Stadium Drive and the parking lot on the south side of the building, providing a streetscape type aesthetic. All landscaping requirements within the Zoning Ordinance have been met.

### **Engineering**

Prein & Newhof and the Oshtemo Public Works Department have reviewed the project site plan and overall are happy with the proposal. Oshtemo Public Works is coordinating with the applicant on the final design plans for the non-motorized facility adjacent to Stadium Drive. It is suggested that any further review and approvals on this item be handled administratively with Oshtemo Public Works.

### **Fire Department**

The Fire Marshal has reviewed the site plan and is satisfied with the proposal. The Fire Marshal expressed that the on-site circulation for fire apparatus on the south side of the building has significantly improved with the proposed site modifications.

### Section 48.70: Conditions for Specific Permitted Uses - Manufacturing, Compounding, Assembling, or Treatment of Merchandise

#### **Specific Use Requirements: The Conditions for Specific Permitted Use development requirements of Article 48.**

Per Section 48.70 of the Zoning Ordinance, there are two specific requirements that must be met for manufacturing type uses within the Township. Each requirement is outlined below. Staff have confirmed that such requirements outlined under Section 48.70 of the Zoning Ordinance will be met.

- A. All work must be carried on within an enclosed building.  
**Requirement Satisfied. Please see Note 15 on Sheet C101 of Site Plan.**
- B. Work carried on must not emanate noise, smoke, odor, dust, dirt, noxious gases, glare, heat, vibration or psychological ill effects to such an extent as will be a nuisance or annoyance to owners or occupants of surrounding premises.  
**Requirement Satisfied. Please see Note 16 on Sheet C101 of Site Plan.**

### RECOMMENDATION:

Planning Department staff recommend the approval of the proposed Site Plan for a 30,084 SF building addition, a 749 SF building addition, and a 1,023 SF building addition at 3680 Stadium Park Way with the following conditions.

- 1) A Soil Erosion and Sedimentation Control (SESC) permit from the Kalamazoo County Drain Commissioner's Office will be required prior to building permit issuance.
- 2) A permit by the Road Commission of Kalamazoo County authorizing work within the public right-of-way will be required prior to building permit issuance.
- 3) An 8" watermain connection is proposed on the north side of the building. All watermain connections shall be coordinated with the City of Kalamazoo Department of Public Services. Water Fees for additional usage shall be paid to the Township prior to building permit issuance. Acceptance of watermain construction and testing must be provided prior to issuing a certificate of occupancy.
- 4) A 6" sanitary sewer connection is proposed to an existing lead off of Stadium Drive. Sewer Fees for additional connection shall be paid to the Township prior to building permit issuance. Prein & Newhof shall be notified in advance for inspection of this connection for any work in the public right-of-way or easements.
- 5) Finalization for the design of the non-motorized facility or any other engineering details shall be subject to the administrative review and approval of the Township Engineer prior to building permit issuance.
- 6) An updated planning and zoning application with the applicant's signature as well as the property owner's signature will be required to be submitted prior to building permit issuance.
- 7) Copies of the necessary recorded easements shall be provided to the Township prior to issuing a certificate of occupancy.

- 8) All non-motorized facilities on the approved site plan shall be installed prior to issuing a certificate of occupancy.

Attachments: Application, Letter of Intent, Site Plan, and Stormwater Calculations.



7275 W. Main Street, Kalamazoo, Michigan 49009-9334  
Phone: 269-216-5223 Fax: 269-375-7180

**PLEASE PRINT**

**PROJECT NAME & ADDRESS** FLAVORSUM, 3680 STADIUM PARK WAY

**PLANNING & ZONING APPLICATION**

Applicant Name : HDC PROPERTIES LLC & FLAVORSUM, LLC  
Company FLAVORSUM  
Address 3680 STADIUM PARK WAY  
KALAMAZOO, MI  
E-mail KKERNER@FLAVORSUM.COM  
Telephone 800-525-2431 Fax \_\_\_\_\_  
Interest in Property DIRECTOR OF OPERATIONS & SITE LEADER

THIS  
SPACE  
FOR  
TOWNSHIP  
USE  
ONLY

Fee Amount \_\_\_\_\_  
Escrow Amount \_\_\_\_\_

**OWNER\*:**

Name HCD PROPERTIES LLC  
Address 3680 STADIUM PARK WAY  
KALAMAZOO, MI  
Email HINKLE.DAN@GMAIL.COM  
Phone & Fax 269-720-3135

**NATURE OF THE REQUEST:** (Please check the appropriate item(s))

- |   |   |
|---|---|
| <input type="checkbox"/> Planning Escrow-1042                 | <input type="checkbox"/> Land Division-1090           |
| <input checked="" type="checkbox"/> Site Plan Review-1088     | <input type="checkbox"/> Subdivision Plat Review-1089 |
| <input type="checkbox"/> Administrative Site Plan Review-1086 | <input type="checkbox"/> Rezoning-1091                |
| <input type="checkbox"/> Special Exception Use-1085           | <input type="checkbox"/> Interpretation-1082          |
| <input type="checkbox"/> Zoning Variance-1092                 | <input type="checkbox"/> Text Amendment-1081          |
| <input type="checkbox"/> Site Condominium-1084                | <input type="checkbox"/> Sign Deviation-1080          |
| <input type="checkbox"/> Accessory Building Review-1083       | <input type="checkbox"/> Other: _____                 |

**BRIEFLY DESCRIBE YOUR REQUEST** (Use Attachments if Necessary): \_\_\_\_\_

WE ARE REQUESTING SITE PLAN APPROVAL FOR A 30,084SF, 749 SF AND 1,023SF COLD STORAGE BUILDING ADDITIONS,

PARKING AREA AND SIDEWALKS TO THE EXISTING FACILITY LOCATED AT THE ADDRESS REFERENCED ABOVE.

THE PROPOSED BUILDING WILL INCLUDE A NEW WATER AND SANITARY SERVE AND STORMWATER MANAGEMENT IMPROVEMENTS.

**LEGAL DESCRIPTION OF PROPERTY** *(Use Attachments if Necessary):*

[SEE DRAWINGS](#)

**PARCEL NUMBER:** 3905- [05-34-155-050](#)

**ADDRESS OF PROPERTY:** [3680 STADIUM PARK WAY](#)

**PRESENT USE OF THE PROPERTY:** \_\_\_\_\_

**PRESENT ZONING** [I-1 INDUSTRIAL](#) **SIZE OF PROPERTY** [10.9ACRES](#)

**NAME(S) & ADDRESS(ES) OF ALL OTHER PERSONS, CORPORATIONS, OR FIRMS  
HAVING A LEGAL OR EQUITABLE INTEREST IN THE PROPERTY:**

Name(s)	Address(es)
_____	_____
_____	_____

***SIGNATURES***

*I (we) the undersigned certify that the information contained on this application form and the required documents attached hereto are to the best of my (our) knowledge true and accurate. I (we) acknowledge that we have received the Township’s Disclaimer Regarding Sewer and Water Infrastructure. By submitting this Planning & Zoning Application, I (we) grant permission for Oshtemo Township officials and agents to enter the subject property of the application as part of completing the reviews necessary to process the application.*

*Daniel Hinkle*  
\_\_\_\_\_  
**Owner’s Signature** (\* If different from Applicant)

07/18/2022  
**Date**

\_\_\_\_\_  
**Applicant’s Signature**

\_\_\_\_\_  
**Date**

- Copies to:
- Planning –1
- Applicant -1
- Clerk –1
- Deputy Clerk –1
- Attorney-1
- Assessor –1
- Planning Secretary - Original

\*\*\*\*

**PLEASE ATTACH ALL REQUIRED DOCUMENTS**



June 2, 2022

Mr. Colten Hutson  
Zoning Administrator  
Oshtemo Charter Township  
7275 W. Main St.  
Kalamazoo, MI 49009

Re: Flavorsum  
3680 Stadium Parkway  
Kalamazoo, MI 49009

Dear Mr. Colten Hutson,

This letter is to request site plan approval for the proposed addition to the existing Flavorsum facility located at the location referenced above. The existing facility has area for manufacturing of food flavorings and office space. The owner is proposing to construct a 29,800SF warehouse building addition with loading docks. The building addition is intended to be fully sprinkled with a new water service. The proposed site modification includes additional paved surface for parking and loading dock access, pedestrian sidewalks, new water and sanitary sewer services, stormwater management features and landscaping as shown on the site plan review set of drawings submitted for review.

If you have any questions or concerns, please feel free to contact me.

Sincerely,

COMPREHENSIVE ENGINEERING, PC

Elaine Westhouse, P.E.  
Senior Civil Engineer

This page has been intentionally left blank for printing purposes.

**LEGAL DESCRIPTION**

Commencing at the Northwest corner of Section 34, T. 2 S., R. 12 W.; thence North 89°-14'-37" East, 1313.54 feet to the Northwest corner of the East 1/2 of the Northwest 1/4 of said Section; thence South 00°-34'-58" East along the West line of said East 1/2 of said Section, 1329.03 feet for the place of beginning of the land hereinafter described; thence North 89°-14'-37" East, 200.00 feet; thence South 00°-34'-58" East, 73.90 feet; thence Southwesterly 106.89 feet, along a curve to the right with a radius of 167.00 feet and a chord bearing South 17°-45'-10" West, 105.07 feet; thence South 36°-05'-19" West, 55.00 feet; thence Southwesterly 210.48 feet along a curve to the left with a radius of 233.00 feet and a chord bearing South 10°-12'-32" West, 203.40 feet; thence South 15°-40'-15" East, 79.75 feet to the Northerly right-of-way of Stadium Drive (formerly known as West Michigan Avenue, also formerly US 12 Highway); thence South 74°-30'-07" West along said Northerly right-of-way, 737.25 feet; thence North 19°-16'-38" West, 581.05 feet; thence North 74°-30'-07" East parallel with the Northerly right-of-way of Stadium Drive, 390.80 feet; thence North 00°-34'-58" West, 31.51 feet; thence North 89°-14'-37" East, 404.25 feet to the place of beginning.

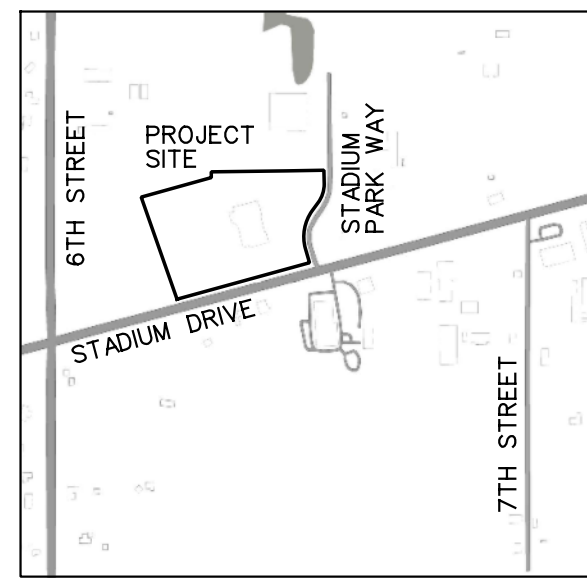
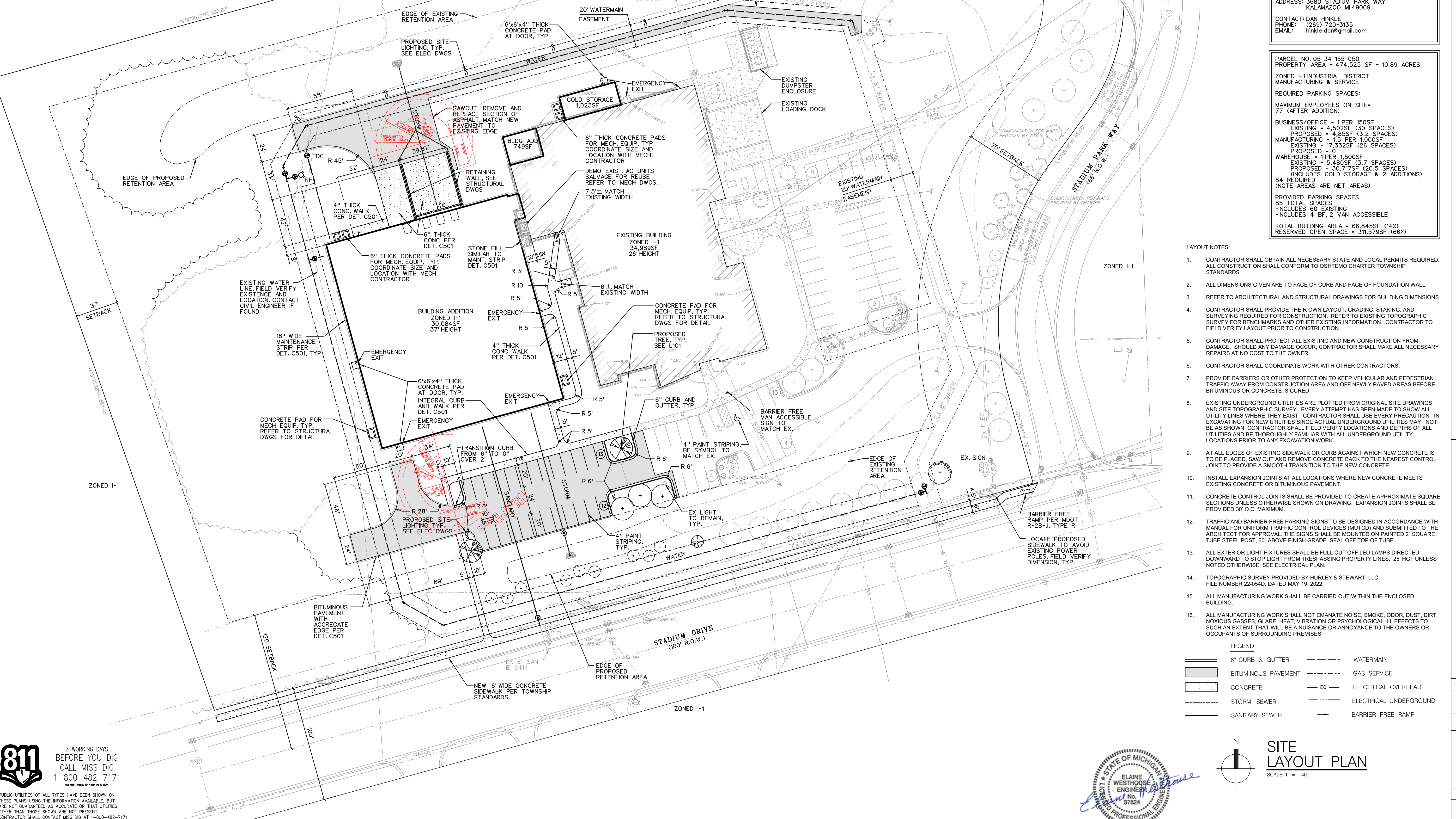
**BENCHMARKS**

ELEVATIONS OF THIS SURVEY ARE BASED ON GPS

BM#1 EL = 958.82  
MAG NAIL IN NORTH FACE OF UTILITY POLE,  
NORTH SIDE OF STADIUM DR., WEST SIDE OF SITE.

BM#2 EL = 956.14  
MAG NAIL IN NORTH FACE OF UTILITY POLE,  
NORTH SIDE OF STADIUM DR., CENTER OF SITE.

BM#3 EL = 952.85  
MAG NAIL IN NORTH FACE OF UTILITY POLE,  
NORTH SIDE OF STADIUM DR., EAST SIDE OF SITE.



**COMPREHENSIVE ENGINEERING**  
4650 Plainfield Avenue NE, Suite A  
Grand Rapids, MI 49525  
Phone (616) 365-9733  
comeng.com  
CE #22083  
Designed By: EOW  
Drawn By: LCF  
7/29/2022

**Schley Nelson Architects**  
4200 S 9th Street,  
P.O. Box 239,  
Oshtemo, Michigan 49077  
(269) 375-8360

OWNER: HDC PROPERTIES LLC & FLAVORSUM LLC  
ADDRESS: 3680 STADIUM PARK WAY  
KALAMAZOO, MI 49009  
CONTACT: DAN HINKLE  
PHONE: (269) 720-3135  
EMAIL: hinkle.dan@gmail.com

PARCEL NO. 05-34-155-050  
PROPERTY AREA = 474,525 SF = 10.89 ACRES  
ZONED I-1 INDUSTRIAL DISTRICT  
MANUFACTURING & SERVICE  
REQUIRED PARKING SPACES:  
MAXIMUM EMPLOYEES ON SITE -  
77 (AFTER ADDITION)  
BUSINESS/OFFICE - 1 PER 1500SF  
EXISTING - 4,502SF (30 SPACES)  
PROPOSED - 4,855SF (32 SPACES)  
MANUFACTURING - 1.5 PER 1,000SF  
EXISTING - 17,332SF (26 SPACES)  
PROPOSED - 0  
WAREHOUSE - 1 PER 1,500SF  
EXISTING - 5,480SF (3.7 SPACES)  
PROPOSED - 30,717SF (20.5 SPACES)  
(INCLUDES COLD STORAGE & 2 ADDITIONS)  
84 REQUIRED  
(NOTE AREAS ARE NET AREAS)  
PROVIDED PARKING SPACES  
85 TOTAL SPACES  
-INCLUDES 60 EXISTING  
-INCLUDES 4 BF, 2 VAN ACCESSIBLE  
TOTAL BUILDING AREA = 66,845SF (14%)  
RESERVED OPEN SPACE = 311,579SF (66%)

- LAYOUT NOTES:**
- CONTRACTOR SHALL OBTAIN ALL NECESSARY STATE AND LOCAL PERMITS REQUIRED. ALL CONSTRUCTION SHALL CONFORM TO OSHTEMO CHARTER TOWNSHIP STANDARDS.
  - ALL DIMENSIONS GIVEN ARE TO FACE OF CURB AND FACE OF FOUNDATION WALL.
  - REFER TO ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR BUILDING DIMENSIONS.
  - CONTRACTOR SHALL PROVIDE THEIR OWN LAYOUT, GRADING, STAKING, AND SURVEYING REQUIRED FOR CONSTRUCTION. REFER TO EXISTING TOPOGRAPHIC SURVEY FOR BENCHMARKS AND OTHER EXISTING INFORMATION. CONTRACTOR TO FIELD VERIFY LAYOUT PRIOR TO CONSTRUCTION.
  - CONTRACTOR SHALL PROTECT ALL EXISTING AND NEW CONSTRUCTION FROM DAMAGE. SHOULD ANY DAMAGE OCCUR, CONTRACTOR SHALL MAKE ALL NECESSARY REPAIRS AT NO COST TO THE OWNER.
  - CONTRACTOR SHALL COORDINATE WORK WITH OTHER CONTRACTORS.
  - PROVIDE BARRIERS OR OTHER PROTECTION TO KEEP VEHICULAR AND PEDESTRIAN TRAFFIC AWAY FROM CONSTRUCTION AREA AND OFF NEWLY PAVED AREAS BEFORE BITUMINOUS OR CONCRETE IS CURED.
  - EXISTING UNDERGROUND UTILITIES ARE PLOTTED FROM ORIGINAL SITE DRAWINGS AND SITE TOPOGRAPHIC SURVEY. EVERY ATTEMPT HAS BEEN MADE TO SHOW ALL UTILITY LINES WHERE THEY EXIST. CONTRACTOR SHALL USE EVERY PRECAUTION IN EXCAVATING FOR NEW UTILITIES SINCE ACTUAL UNDERGROUND UTILITIES MAY NOT BE AS SHOWN. CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND DEPTHS OF ALL UTILITIES AND BE THOROUGHLY FAMILIAR WITH ALL UNDERGROUND UTILITY LOCATIONS PRIOR TO ANY EXCAVATION WORK.
  - AT ALL EDGES OF EXISTING SIDEWALK OR CURB AGAINST WHICH NEW CONCRETE IS TO BE PLACED, SAW CUT AND REMOVE CONCRETE BACK TO THE NEAREST CONTROL JOINT TO PROVIDE A SMOOTH TRANSITION TO THE NEW CONCRETE.
  - INSTALL EXPANSION JOINTS AT ALL LOCATIONS WHERE NEW CONCRETE MEETS EXISTING CONCRETE OR BITUMINOUS PAVEMENT.
  - CONCRETE CONTROL JOINTS SHALL BE PROVIDED TO CREATE APPROXIMATE SQUARE SECTIONS UNLESS OTHERWISE SHOWN ON DRAWING. EXPANSION JOINTS SHALL BE PROVIDED 30' O.C. MAXIMUM.
  - TRAFFIC AND BARRIER FREE PARKING SIGNS TO BE DESIGNED IN ACCORDANCE WITH MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND SUBMITTED TO THE ARCHITECT FOR APPROVAL. THE SIGNS SHALL BE MOUNTED ON PAINTED 2" SQUARE TUBE STEEL POST, 60" ABOVE FINISH GRADE. SEAL OFF TOP OF TUBE.
  - ALL EXTERIOR LIGHT FIXTURES SHALL BE FULL CUT OFF LED LAMPS DIRECTED DOWNWARD TO STOP LIGHT FROM TRESPASSING PROPERTY LINES. 25' HG UNLESS NOTED OTHERWISE. SEE ELECTRICAL PLAN.
  - TOPOGRAPHIC SURVEY PROVIDED BY HURLEY & STEWART, LLC. FILE NUMBER 22-054D, DATED MAY 19, 2022.
  - ALL MANUFACTURING WORK SHALL BE CARRIED OUT WITHIN THE ENCLOSED BUILDING.
  - ALL MANUFACTURING WORK SHALL NOT EMANATE NOISE, SMOKE, ODOR, DUST, DIRT, NOXIOUS GASSES, GLARE, HEAT, VIBRATION OR PSYCHOLOGICAL ILL EFFECTS TO SUCH AN EXTENT THAT WILL BE A NUISANCE OR ANNOYANCE TO THE OWNERS OR OCCUPANTS OF SURROUNDING PREMISES.

**LEGEND**

6" CURB & GUTTER	WATERMAIN
BITUMINOUS PAVEMENT	GAS SERVICE
CONCRETE	ELECTRICAL OVERHEAD
STORM SEWER	ELECTRICAL UNDERGROUND
SANITARY SEWER	BARRIER FREE RAMP

**SITE LAYOUT PLAN**  
SCALE 1" = 40'



CIVIL  
7/29/22

**811**  
3 WORKING DAYS  
BEFORE YOU DIG  
CALL MISS DIG  
1-800-482-7171  
OR THE OWNER OF PUBLIC UTILITY

PUBLIC UTILITIES OF ALL TYPES HAVE BEEN SHOWN ON THESE PLANS USING THE INFORMATION AVAILABLE, BUT ARE NOT GUARANTEED AS ACCURATE OR THAT UTILITIES OTHER THAN THOSE SHOWN ARE NOT PRESENT. CONTRACTOR SHALL CONTACT MISS DIG AT 1-800-482-7171 FOR INFORMATION AND NOTIFY UTILITY COMPANIES THREE WORKING DAYS PRIOR TO COMMENCING WORK.

Architect Seal

Project:

**FlavorSum**  
FACILITY EXPANSION PROJECT  
3680 Stadium Park Way, Kalamazoo, MI 49009

**REVISIONS**

NO.	ISSUE DATE	DESCRIPTION
1	06/13/2022	20% REVIEW
2	06/21/22	30% CD
3	07/06/22	20% REVIEW
4	07/19/22	50% CD
5	07/29/22	20% REVIEW

Issue Date: 07/29/2022  
Schley Nelson Architects  
Project No.

**22-107**  
Sheet Name:  
SITE LAYOUT PLAN

Sheet No.

**C 101**

Copyright © 2022  
Schley Nelson Architects, Inc.

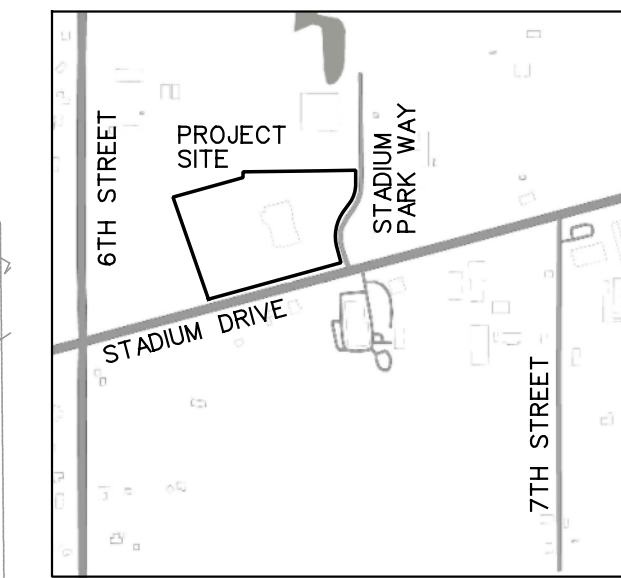
**LEGAL DESCRIPTION**

Commencing at the Northwest corner of Section 34, T. 2 S., R. 12 W.; thence North 89°-14'-37" East, 1313.54 feet to the Northwest corner of the East 1/2 of the Northwest 1/4 of said Section; thence South 00°-34'-58" East along the West line of said East 1/2 of said Section, 1329.03 feet for the place of beginning of the land hereinafter described; thence North 89°-14'-37" East, 200.00 feet; thence South 00°-34'-58" East, 73.90 feet; thence Southwesterly 106.89 feet, along a curve to the right with a radius of 187.00 feet and a chord bearing South 17°-45'-10" West, 105.07 feet; thence South 36°-05'-19" West, 55.00 feet; thence Southwesterly 210.48 feet along a curve to the left with a radius of 233.00 feet and a chord bearing South 10°-12'-32" West, 203.40 feet; thence South 15°-40'-15" East, 79.75 feet to the Northerly right-of-way of Stadium Drive (formerly known as West Michigan Avenue, also formerly US 12 Highway); thence South 74°-30'-07" West along said Northerly right-of-way, 737.25 feet; thence North 19°-16'-38" West, 581.05 feet; thence North 74°-30'-07" East parallel with the Northerly right-of-way of Stadium Drive, 390.80 feet; thence North 00°-34'-58" West, 31.51 feet; thence North 89°-14'-37" East, 404.25 feet to the place of beginning.

**BENCHMARKS**

ELEVATIONS OF THIS SURVEY ARE BASED ON GPS

- BM#1 EL = 958.82  
MAG NAIL IN NORTH FACE OF UTILITY POLE,  
NORTH SIDE OF STADIUM DR., WEST SIDE OF SITE.
- BM#2 EL = 956.14  
MAG NAIL IN NORTH FACE OF UTILITY POLE,  
NORTH SIDE OF STADIUM DR., CENTER OF SITE.
- BM#3 EL = 952.85  
MAG NAIL IN NORTH FACE OF UTILITY POLE,  
NORTH SIDE OF STADIUM DR., EAST SIDE OF SITE.



OWNER: HDC PROPERTIES LLC & FLAVORSUM LLC  
ADDRESS: 3680 STADIUM PARK WAY  
KALAMAZOO, MI 49009

CONTACT: DAN HINKLE  
PHONE: (269) 720-3135  
EMAIL: hinkle.dan@gmail.com

PARCEL NO. 05-34-165-050  
PROPERTY AREA = 474,525SF = 10.89 ACRES  
ZONED I-1 INDUSTRIAL DISTRICT  
MANUFACTURING & SERVICE

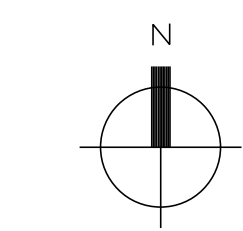
EXISTING SITE  
IMPERVIOUS AREA = 108,614SF (23%)  
PERVIOUS AREA = 365,912SF (77%)

PROPOSED SITE  
IMPERVIOUS AREA = 162,947SF (34%)  
PERVIOUS AREA = 311,579SF (66%)  
RESERVED OPEN SPACE = 311,579SF (66%)

- GRADING AND UTILITY NOTES:**
- CONTRACTOR SHALL OBTAIN ALL NECESSARY STATE AND LOCAL PERMITS REQUIRED. ALL CONSTRUCTION SHALL CONFORM TO OSHTEMO CHARTER TOWNSHIP STANDARDS.
  - CONTRACTOR TO INCLUDE ALL WATER, SANITARY AND STORM SERVICE TAP AND INSPECTION FEES REQUIRED BY THE MUNICIPALITY.
  - CALL "MISS DIG", 1-800-482-7171, 72 HOURS PRIOR TO THE START OF ANY WORK.
  - CONTRACTOR SHALL COORDINATE WORK WITH OTHER CONTRACTORS ON SITE.
  - CONTRACTOR SHALL PROTECT ALL EXISTING AND NEW CONSTRUCTION FROM DAMAGE. SHOULD ANY DAMAGE OCCUR, CONTRACTOR SHALL MAKE ALL NECESSARY REPAIRS AT NO COST TO THE OWNER.
  - PROVIDE BARRIERS OR OTHER PROTECTION TO KEEP PARKING AND PEDESTRIAN TRAFFIC AWAY FROM THE WORK AREA AND OFF VEHICULAR AREAS BEFORE BITUMINOUS PAVING OR CONCRETE IS CURED.
  - ALL UTILITY WORK SHALL BE COMPLETED, INCLUDING TRENCH BACKFILL AND COMPACTION, PRIOR TO PLACEMENT OF ANY GRAVEL BASE.
  - CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR OWN SURVEYING AND LAYOUT WORK. CONCRETE INSTALLER SHALL COORDINATE THEIR WORK WITH UTILITY CONTRACTOR FOR PROPER PLACEMENT OF FRAMES AND COVERS IN THE PAVEMENT OR CURB AREA. REFER TO EXISTING TOPOGRAPHIC SURVEY FOR BENCHMARKS AND OTHER EXISTING INFORMATION.
  - EXISTING UNDERGROUND UTILITIES ARE PLOTTED FROM ORIGINAL SITE DRAWINGS AND SITE TOPOGRAPHIC SURVEY. EVERY ATTEMPT HAS BEEN MADE TO SHOW ALL UTILITY LINES WHERE THEY EXIST. CONTRACTOR SHALL USE EVERY PRECAUTION IN EXCAVATING FOR NEW UTILITIES SINCE ACTUAL UNDERGROUND UTILITIES MAY NOT BE AS SHOWN. CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND DEPTHS OF ALL UTILITIES AND BE THOROUGHLY FAMILIAR WITH ALL UNDERGROUND UTILITY LOCATIONS PRIOR TO ANY EXCAVATION WORK.
  - EXCEPT FOR THOSE UTILITIES NOTED TO BE PLUGGED OR REMOVED, RECONNECT ALL LINES ENCOUNTERED DURING CONSTRUCTION.
  - UTILITY CONTRACTOR SHALL BE RESPONSIBLE FOR THE RAISING OR LOWERING OF ALL EXISTING MANHOLES AND CATCH BASINS, FRAMES AND COVERS, VALVE BOXES, AND CLEAN-OUTS TO MEET THE FINISH GRADES.
  - IN ALL AREAS OF NEW GRADING OR CONSTRUCTION, STRIP AND STOCKPILE EXISTING TOPSOIL AND PERFORM ALL GRADING AND EARTHWORK TO THE ELEVATION POINTS SHOWN. TOPSOIL SHALL BE RESPAILED ON DESIGNATED AREAS OUTSIDE OF BUILDING AND PAVEMENT AREAS. TOPSOIL SHALL BE SEEDED AND MULCHED.
  - ALL SITE UTILITIES SHALL BE STUBBED AND PLUGGED TO WITHIN FIVE FEET OF THE OUTSIDE BUILDING FOUNDATION WALL UNLESS OTHERWISE NOTED.
  - CROSS SLOPES ON ALL SIDEWALKS SHALL NOT BE GREATER THAN 1 VERTICAL TO 48 HORIZONTAL OR 2% SLOPES ALONG THE LENGTH OF THE SIDEWALK SHALL NOT BE GREATER THAN 1 VERTICAL TO 20 HORIZONTAL OR 5% EXCEPT AT BARRIER FREE RAMPS WHICH SHALL NOT BE GREATER THAN 1 VERTICAL TO 12 HORIZONTAL OR 8.33%.
  - WHERE DOWNSPOUTS DISCHARGE AT GRADE CONTRACTOR TO PROVIDE 12"x36"x4" THICK PRECAST CONCRETE SPLASH BLOCKS.
  - WORK WITHIN THE PUBLIC RIGHT OF WAY SHALL CONFORM TO KALAMAZOO COUNTY ROAD COMMISSION REQUIREMENTS.
  - PROPOSED WATERMAIN PIPING SHALL BE DUCTILE IRON, CLASS 52. PIPING AND FITTINGS SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF KALAMAZOO STANDARD SPECIFICATIONS FOR WATER MAIN AND SERVICE INSTALLATION, 2021. COORDINATE WATER SERVICE CONNECTION WITH CITY OF KALAMAZOO PUBLIC SERVICES STEVE SKALSKI (269) 337-8601.
  - ANY REMOVAL OF SOIL OR GROUNDWATER FROM THE SITE MUST FOLLOW THE DUE CARE PLAN BY STOLZ ENVIRONMENTAL SOLUTIONS, LLC DATED 5/10/2013. THE CONTRACTOR IS TO PROVIDE THE APPROPRIATE TESTING, CHARACTERIZE AND PROPERLY DISPOSE OF THE EXCESS SOIL MATERIAL IN ACCORDANCE WITH THIS PLAN.
  - PROPOSED NEW SANITARY SEWER CONNECTION TO EXISTING SANITARY LATERAL ALONG STADIUM DRIVE. COORDINATE WITH PRECN & NEWHOFF FOR CONNECTION INSPECTION, CONTACT RYAN RUSSELL 269-372-1158.

**LEGEND**

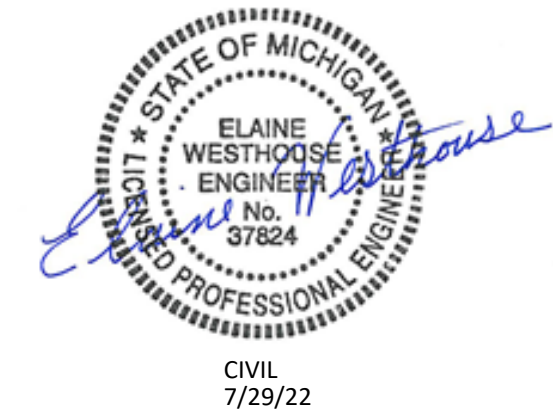
6" CURB & GUTTER	WATERMAIN
BITUMINOUS PAVEMENT	GAS SERVICE
CONCRETE	E0 - ELECTRICAL OVERHEAD
STORM SEWER	ELECTRICAL UNDERGROUND
SANITARY SEWER	BARRIER FREE RAMP



**SITE GRADING & UTILITIES PLAN**  
SCALE 1" = 40'

**PROPOSED STORM/SANITARY STRUCTURES**  
STRUCTURES ARE 4' DIAMETER UNLESS NOTED OTHERWISE

ST MH#1 RIM 955.27 12" IE NW 951.94 12" IE SE 951.06	SAN MH#10 RIM 958.25 6" IE NW 944.50 6" IE SE FIELD VERIFY PROVIDE DROP MANHOLE FOR VERTICAL DIFF > 2'
---	---



**811**  
3 WORKING DAYS  
BEFORE YOU DIG  
CALL MISS DIG  
1-800-482-7171  
OR THE OWNER OF PUBLIC UTILITY

PUBLIC UTILITIES OF ALL TYPES HAVE BEEN SHOWN ON THESE PLANS USING THE INFORMATION AVAILABLE, BUT ARE NOT GUARANTEED AS ACCURATE OR THAT UTILITIES OTHER THAN THOSE SHOWN ARE NOT PRESENT. CONTRACTOR SHALL CONTACT MISS DIG AT 1-800-482-7171 FOR INFORMATION AND NOTIFY UTILITY COMPANIES THREE WORKING DAYS PRIOR TO COMMENCING WORK.

Project:

**FlavorSum**  
FACILITY EXPANSION PROJECT  
3680 Stadium Park Way, Kalamazoo, MI 49009

ISSUE DATE	DESCRIPTION
05/11/2022	ZBA REVIEW
06/01/22	15% CD
07/06/22	ZBA REVIEW
07/19/22	50% CD
07/29/22	ZBA REVIEW

Issue Date: 07/29/2022

Schley Nelson Architects  
Project No.

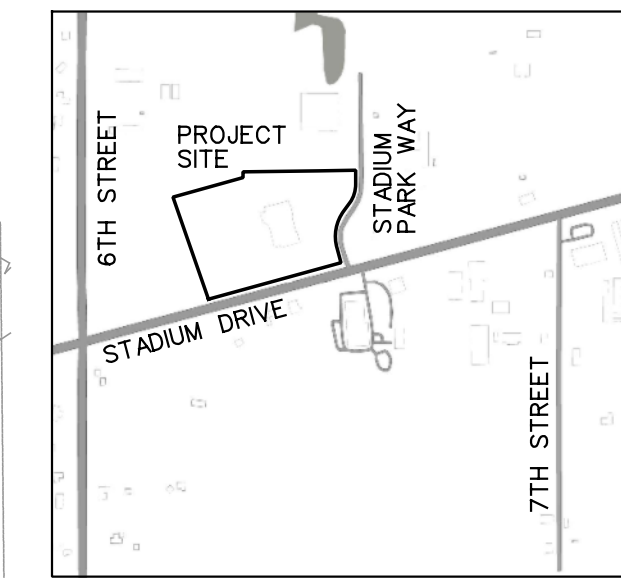
**22-107**

SITE GRADING & UTILITIES PLAN

Sheet No.

**C 201**

Copyright © 2022  
Schley Nelson Architects, Inc.



**LOCATION MAP**  
 NO SCALE

OWNER: HDC PROPERTIES LLC & FLAVORSUM LLC  
 ADDRESS: 3680 STADIUM PARK WAY  
 KALAMAZOO, MI 49009  
 CONTACT: DAN HINKLE  
 PHONE: (269) 720-3135  
 EMAIL: hinkle.dan@gmail.com

PARCEL NO. 05-34-155-050  
 PROPERTY AREA - 10.89 ACRES  
 ZONED I-1 INDUSTRIAL DISTRICT  
 MANUFACTURING & SERVICE

- SOIL EROSION CONTROL NOTES:**
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING SOIL EROSION CONTROL PERMIT AND PAYING ALL FEES. THE CONTRACTOR IS RESPONSIBLE TO INSTALL & MAINTAIN SESC MEASURES IN ACCORDANCE WITH OSHTEMO CHARTER TOWNSHIP STANDARDS.
  - ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION ON SITE.
  - INSPECT AND MAINTAIN EROSION CONTROL MEASURES AS NECESSARY TO INSURE PROPER FUNCTION. INSPECT SILT SACKS, SEDIMENT TRAPS, SILT FENCING, AND TREE PROTECTION FENCES WEEKLY TO ENSURE PROPER FUNCTION. CLEAN SILT SACKS WEEKLY AND AFTER EACH RAIN EVENT.
  - PLACE SILT FENCE ALONG DISTURBED AREAS WHERE SURFACE WATER WILL FLOW INTO EXISTING SWALES AND DITCHES. PLACE SILT FENCE ACROSS NEWLY GRADED OVERLAND FLOW PATHS AND SWALES. ANCHOR FENCE TO PREVENT UNCONTROLLED RELEASE OF SILT LADEN WATER. PLACE SILT SACKS FILTERS AS MANUFACTURED BY ACF WEST, INC. ON ALL CATCH BASINS AND CURB INLETS.
  - TEMPORARY SEEDING FOR EROSION CONTROL CONSISTS OF THE FOLLOWING MIX:  
 35% CREEPING RED FESCUE  
 15% KENTUCKY BLUEGRASS  
 50% PERENNIAL RYE GRASS  
 SEED & MULCH ALL DISTURBED AREA. USE 5 POUNDS OF SEED PER 1000SF.
  - EROSION CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL VEGETATION IS UNIFORMLY ESTABLISHED. REGRADE, RESEED AND PLACE ADDITIONAL TOPSOIL AS NECESSARY UNTIL FINAL LANDSCAPING IS UNIFORMLY ESTABLISHED.
  - THE CONTRACTOR IS RESPONSIBLE FOR SWEEPING OF TRACKED MATERIALS ONTO ALL PUBLIC ROADWAYS. IT IS NOT AN ACCEPTABLE PRACTICE TO WAIT TO THE END OF THE DAY TO SWEEP OFF-SITE TRACKING. OFF-SITE TRACKING SHOULD BE SWEEP IMMEDIATELY.
  - SOIL DESCRIPTION: LOOSE GOLD BROWN TO YELLOW FINE SAND (SP).
  - NEAREST BODY OF WATER IS A COUNTY ROAD COMMISSION LAKE, APPROX. 580LF SOUTH OF SITE.
  - AREA OF DISTURBANCE IS APPROX. 4.3 ACRES
  - CONTRACTOR SHALL REMOVE TEMPORARY EROSION CONTROL MEASURES AFTER VEGETATION IS UNIFORMLY ESTABLISHED.

**S.E.S.C. KEY:**

3	SEEDING	INEXPENSIVE AND VERY EFFECTIVE STABILIZES SOIL. THESE MEASURES PERMITS RUNOFF TO INFILTRATE SOIL, REDUCING RUNOFF VOLUME SHOULD INCLUDE PREPARED TOPSOIL BED
7	RIPRAP	USED WHERE VEGETATION CANNOT BE ESTABLISHED. VERY EFFECTIVE IN PROTECTING AGAINST HIGH VELOCITY FLOWS. SHOULD BE PLACED OVER A GEOTEXTILE LINER. PERMANENT MEASURE.
26	GEOTEXTILE SILT FENCE	USES GEOTEXTILE FABRIC AND POSTS OR POLES. EASY TO CONSTRUCT AND LOCATE AS NECESSARY.
29	CATCH BASIN, DRAIN INLET	COLLECTS HIGH VELOCITY CONCENTRATION RUNOFF USE "SILT SACK" INSIDE CATCH BASIN UNTIL AREA IS STABILIZED
33	SEEDING WITH MULCH AND/OR MATING	FACILITATES ESTABLISHMENT OF VEGETATIVE COVER EFFECTIVE FOR DRAINAGE WAYS WITH LOW VELOCITY SHOULD INCLUDE PREPARED TOPSOIL BED

CONTRACTOR IS RESPONSIBLE FOR THE DAILY SWEEPING OF TRACKED MATERIAL ONTO THE PUBLIC ROADWAY.

**SCHEDULE**

SCHEDULE SEQUENCE	2022	2023
TEMP. SESC MEASURES	OCT NOV DEC	JAN FEB MAR APR MAY JUN JUL AUG SEP OCT
SITE DEMOLITION		
RELOCATE/INSTALL UTILITIES		
BUILDING CONSTRUCTION		
NEW SIDEWALK, CURB & PAVING		
SEEDING & STABILIZATION		
REMOVE TEMP. SESC MEASURES		

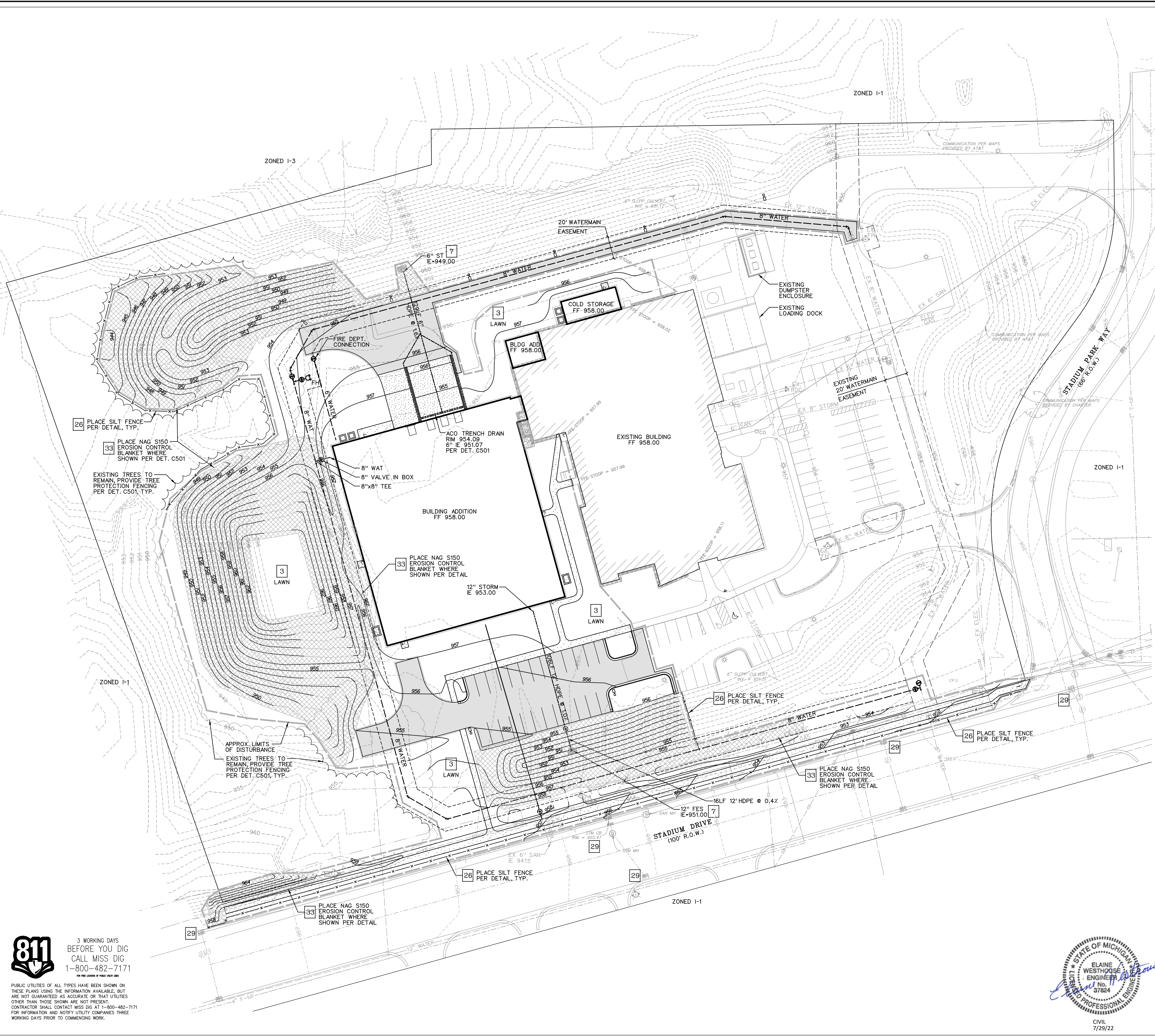
**LEGEND**

6" CURB & GUTTER	WATERMAIN
BITUMINOUS PAVEMENT	GAS SERVICE
CONCRETE	ELECTRICAL OVERHEAD
STORM SEWER	ELECTRICAL UNDERGROUND
SANITARY SEWER	BARRIER FREE RAMP

**SESC PLAN**  
 SCALE 1" = 40'



CIVIL  
 7/29/22



**811**  
 3 WORKING DAYS BEFORE YOU DIG  
 CALL MISS DIG  
 1-800-482-7171  
 FOR THE LOCATION OF PUBLIC UTILITY LINES

PUBLIC UTILITIES OF ALL TYPES HAVE BEEN SHOWN ON THESE PLANS USING THE INFORMATION AVAILABLE, BUT ARE NOT GUARANTEED AS ACCURATE OR THAT UTILITIES OTHER THAN THOSE SHOWN ARE NOT PRESENT. CONTRACTOR SHALL CONTACT MISS DIG AT 1-800-482-7171 FOR INFORMATION AND NOTIFY UTILITY COMPANIES THREE WORKING DAYS PRIOR TO COMMENCING WORK.

Project: \_\_\_\_\_

Architect Seal: \_\_\_\_\_

**FlavorSum**  
 FACILITY EXPANSION PROJECT  
 3680 Stadium Park Way, Kalamazoo, MI 49009

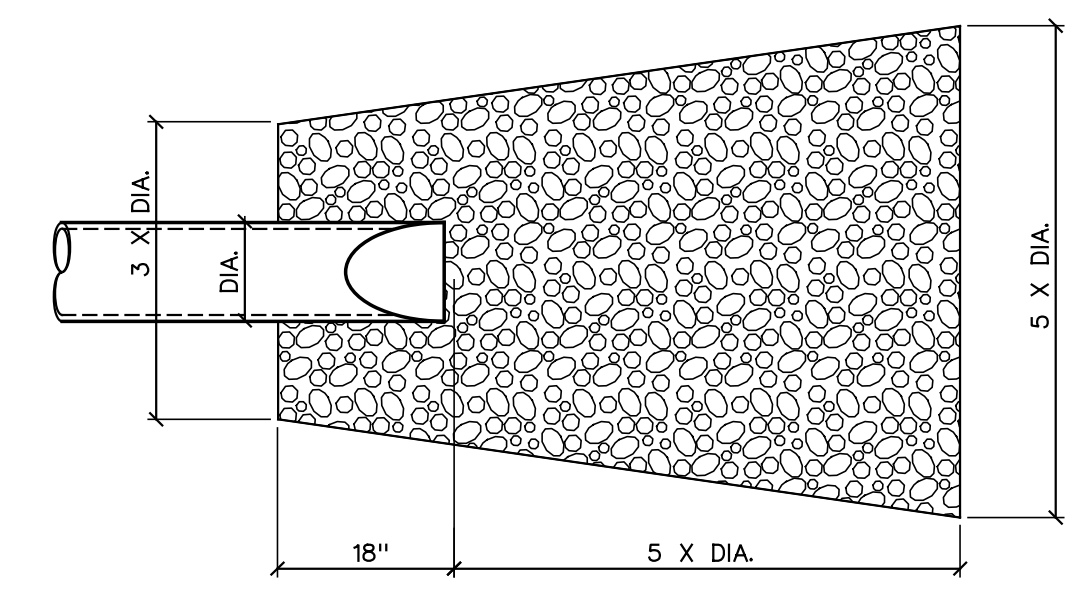
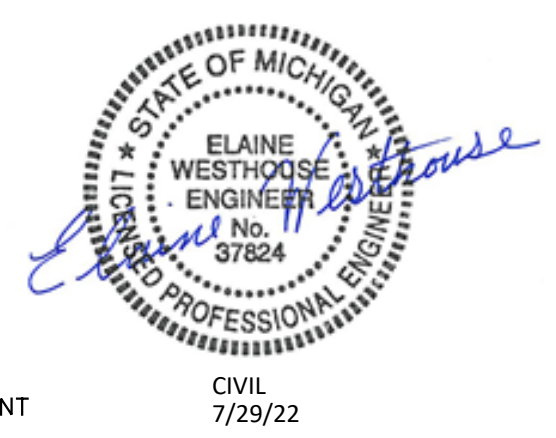
REVISIONS	ISSUE DATE	DESCRIPTION
1	05/11/2022	ZDA REVIEW
2	06/21/22	15% CD
3	07/08/22	ZDA REVIEW
4	07/19/22	50% CD
5	07/29/22	ZDA REVIEW

Issue Date: 07/29/2022  
 Schley Nelson Architects  
 Project No. \_\_\_\_\_

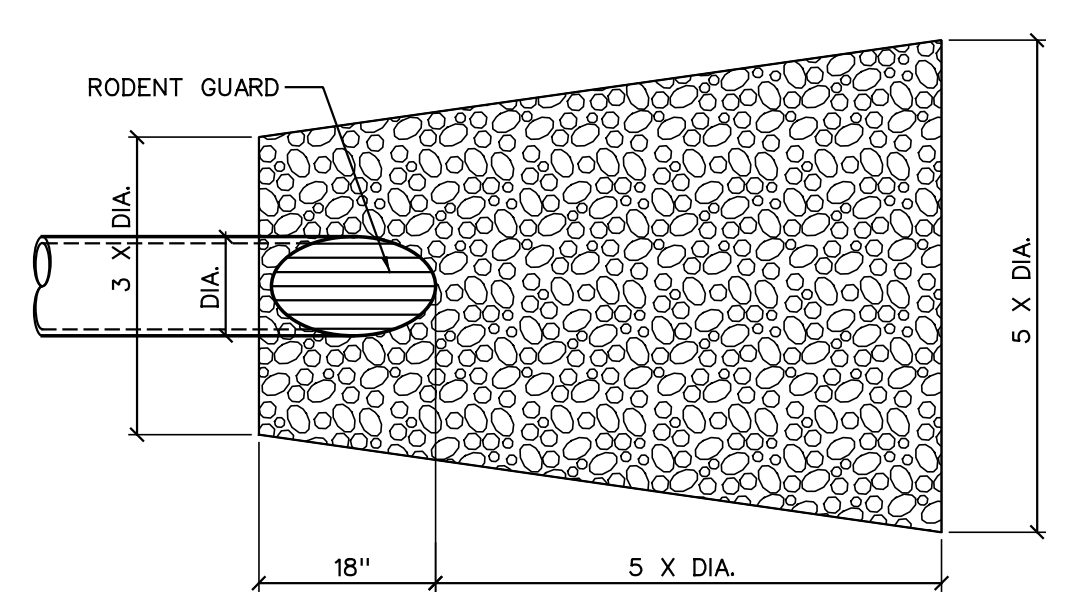
**22-107**  
 Sheet Name:  
 SESC PLAN

Sheet No. \_\_\_\_\_

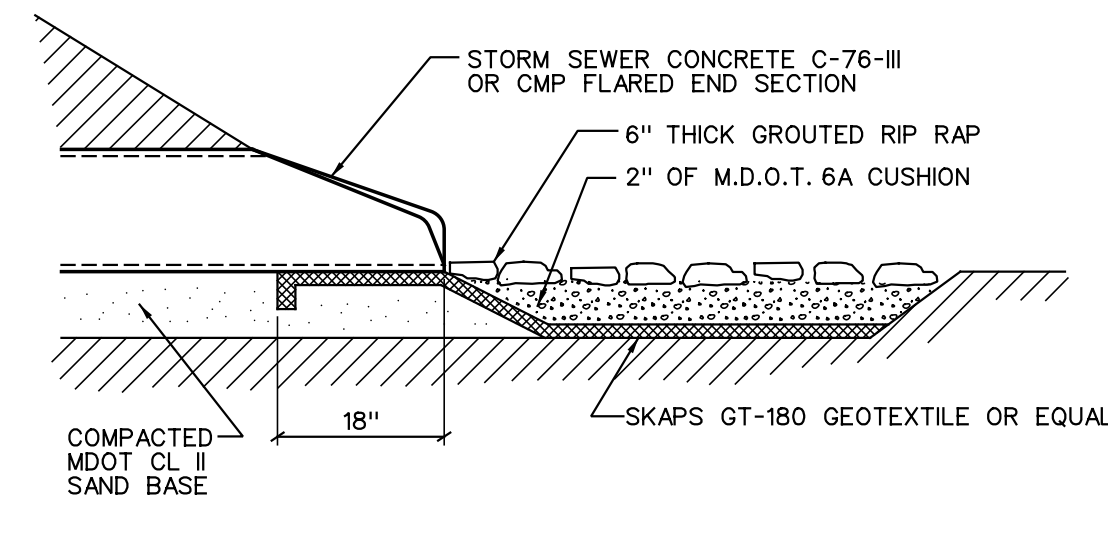
**C 301**  
 Copyright © 2022  
 Schley Nelson Architects, Inc.



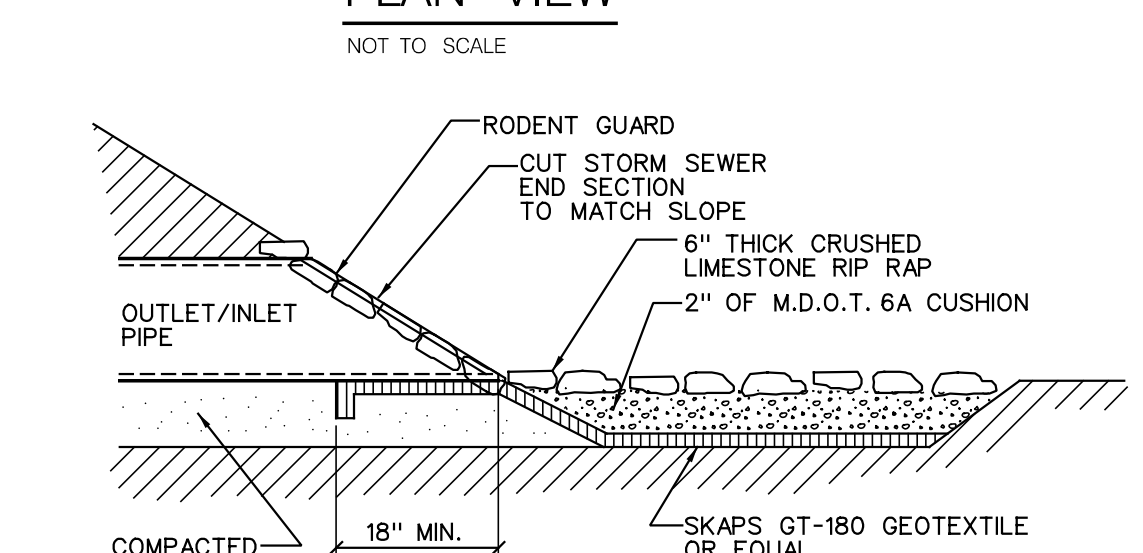
**PLAN VIEW**  
NOT TO SCALE



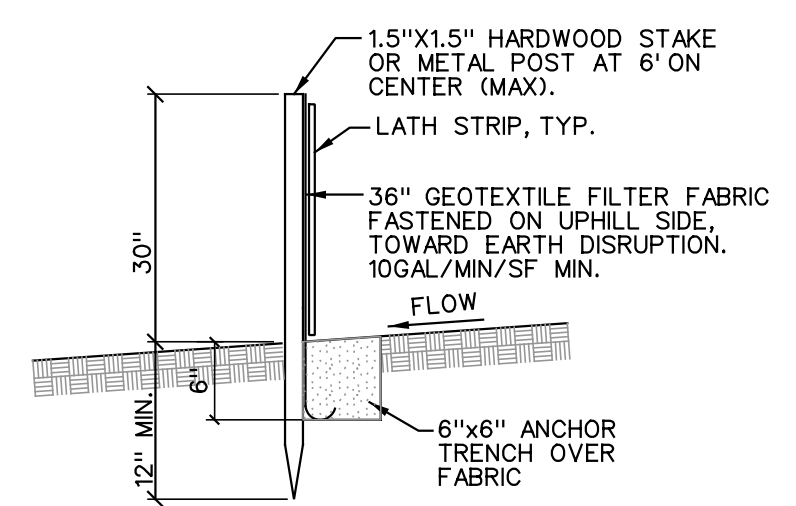
**PLAN VIEW**  
NOT TO SCALE



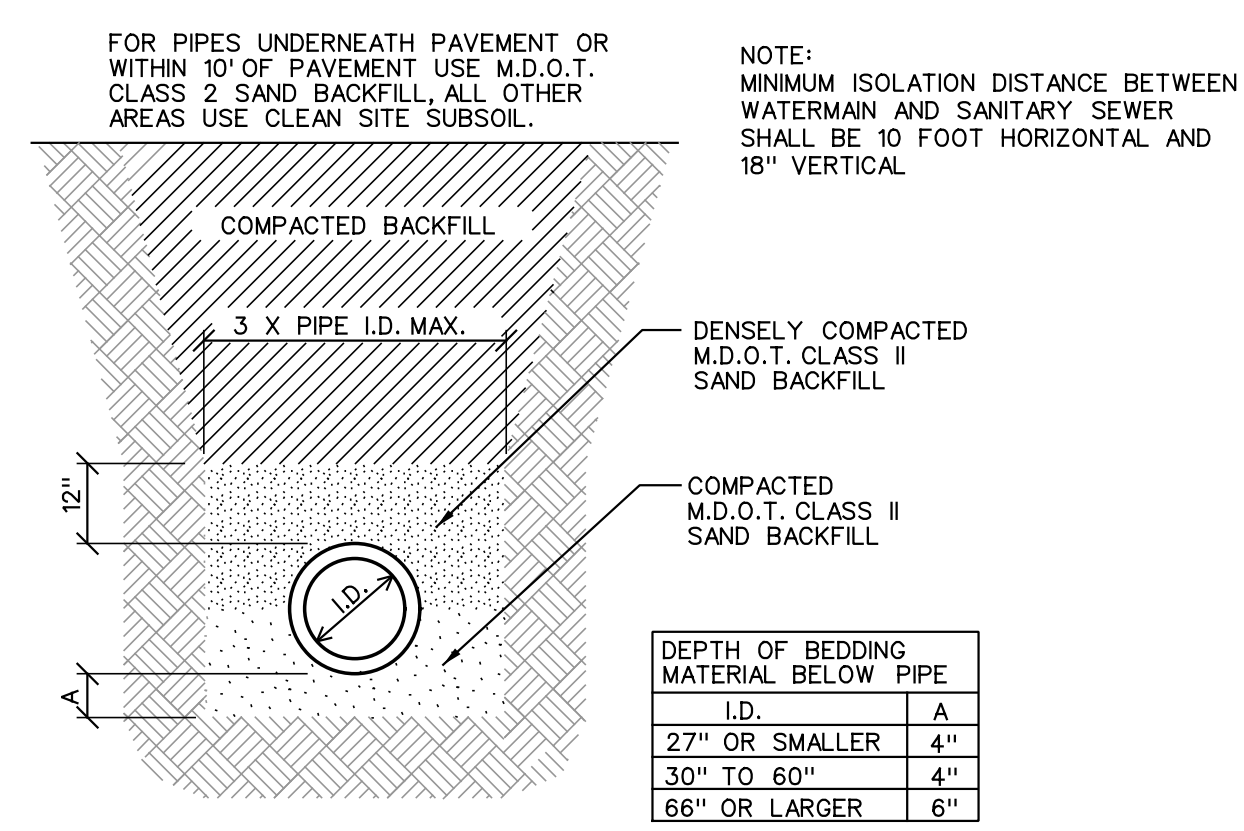
**STORM SEWER FLARED END SECTION**  
NOT TO SCALE



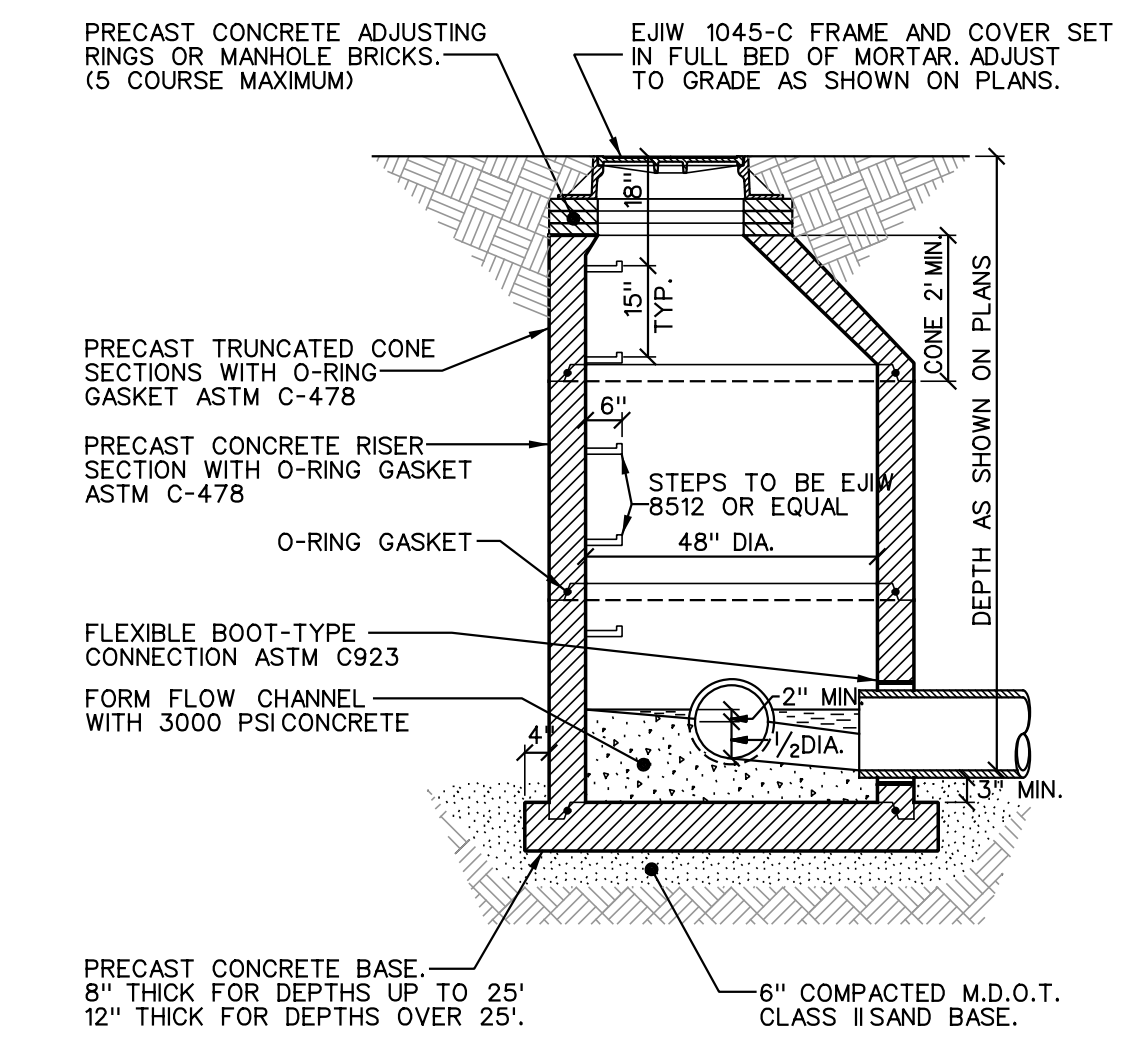
**STORM SEWER INLET/OUTLET SECTION**  
NOT TO SCALE



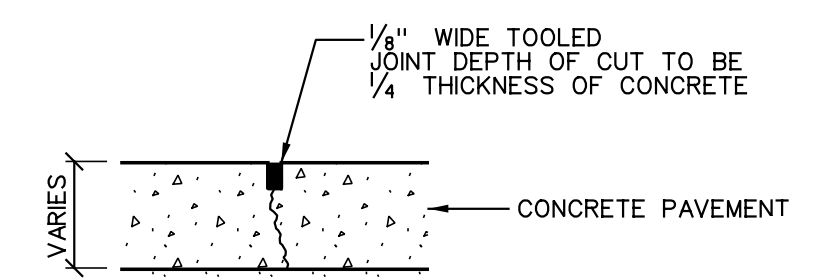
**SILT FENCE**  
NOT TO SCALE



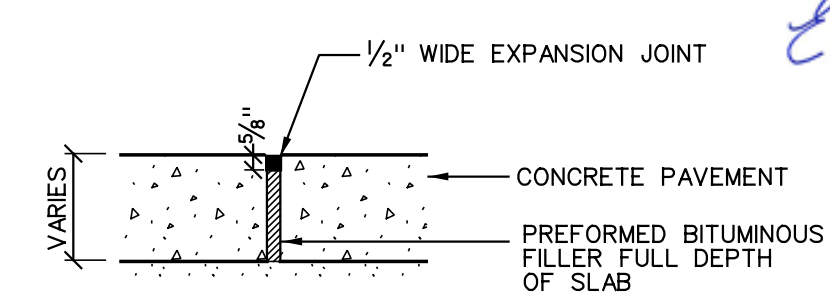
**PIPE BEDDING**  
NOT TO SCALE



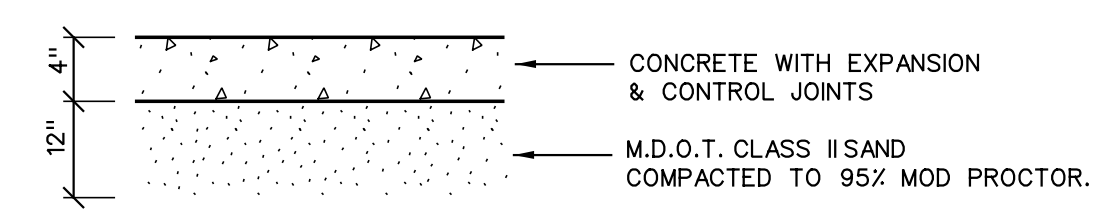
**STORM SEWER MANHOLE**  
NOT TO SCALE



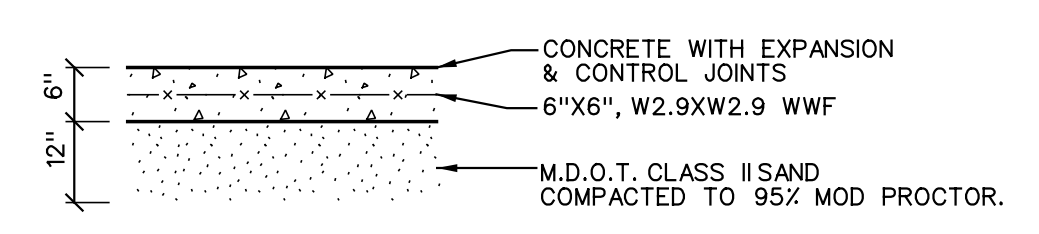
**TYPICAL CONTROL JOINT**  
NOT TO SCALE



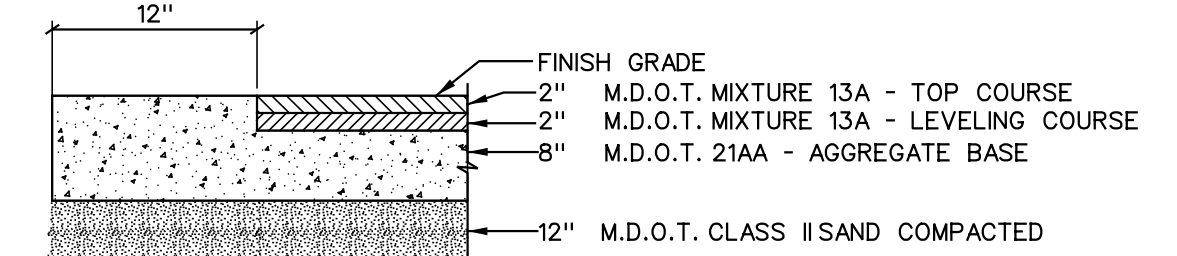
**TYPICAL EXPANSION JOINT**  
NOT TO SCALE



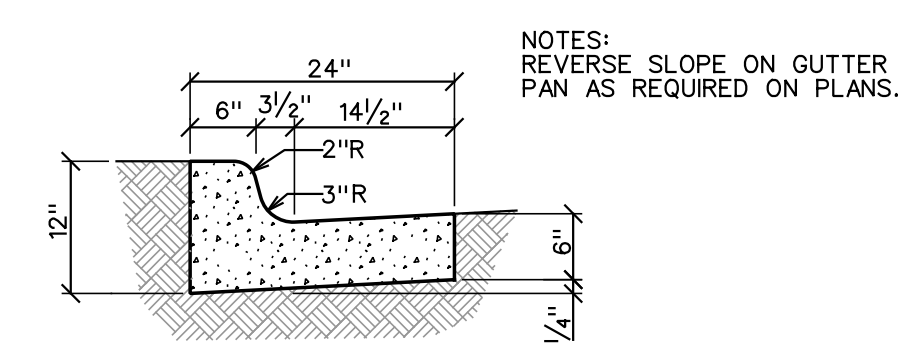
**TYPICAL 4" CONCRETE SIDEWALK**  
NOT TO SCALE



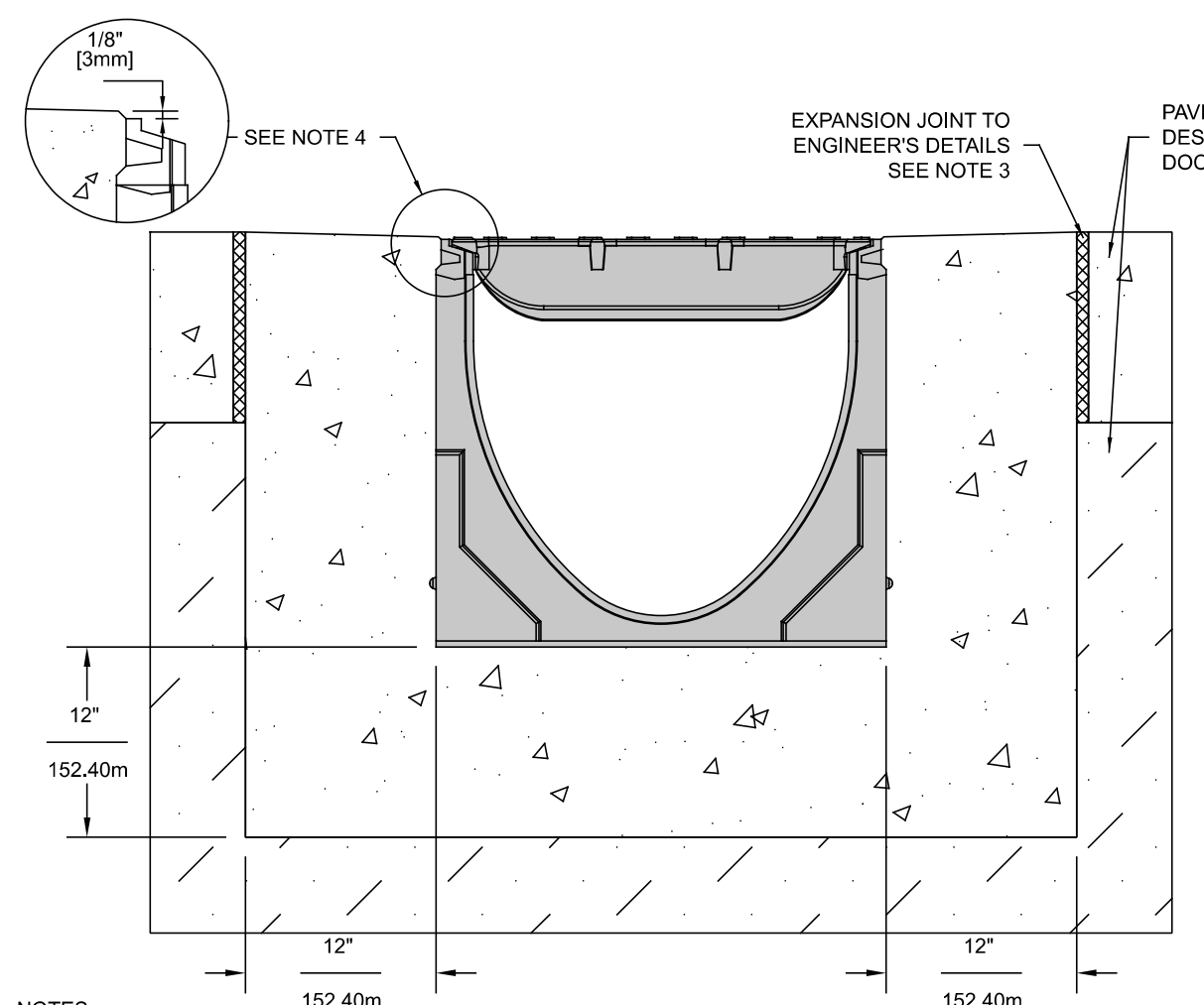
**TYPICAL 6" CONCRETE SLAB**  
NOT TO SCALE



**BITUMINOUS PAVEMENT W/AGGREGATE EDGE**  
NOT TO SCALE

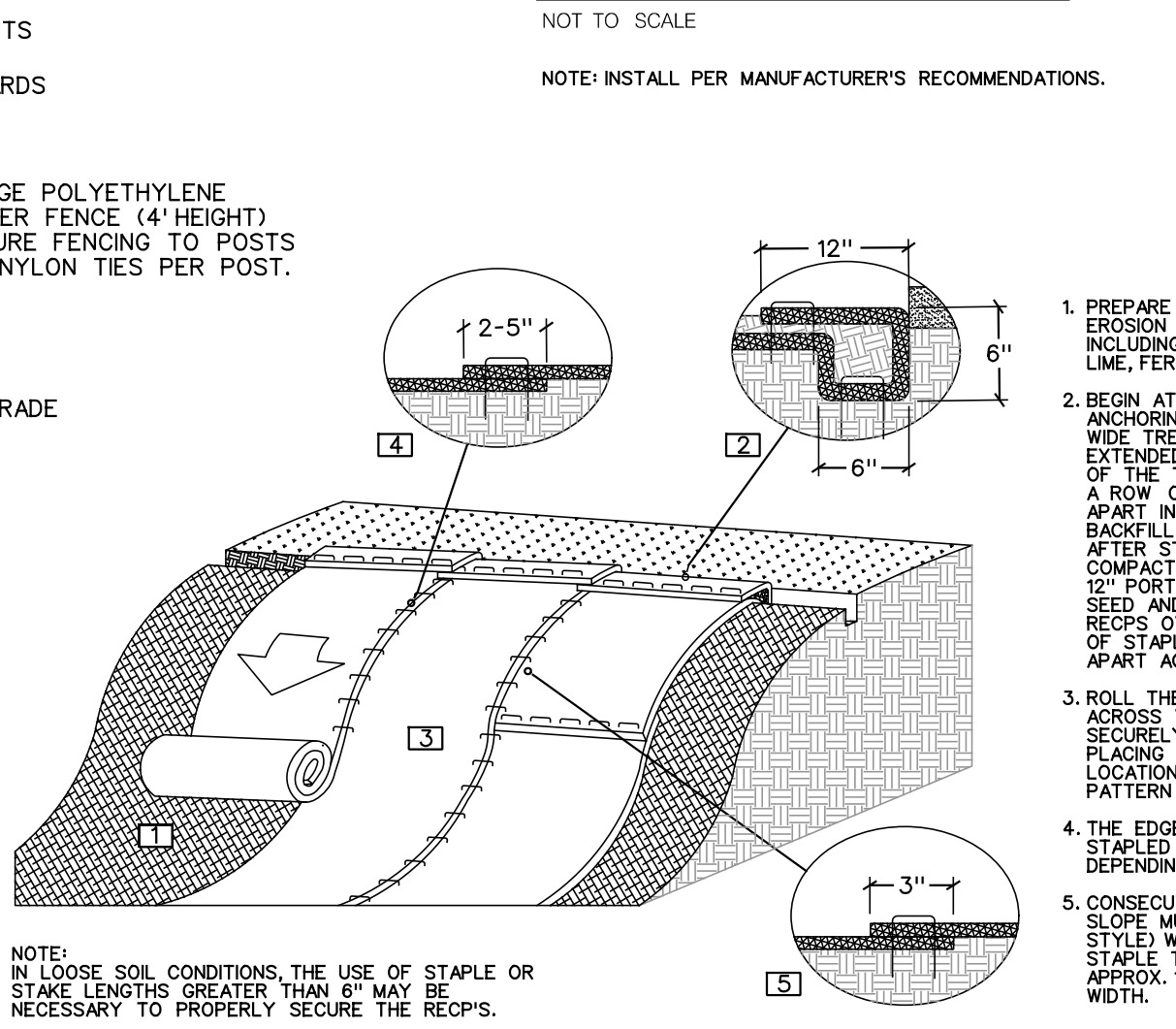


**6" CONCRETE CURB & GUTTER**  
NOT TO SCALE



- NOTES:**
- IT IS NECESSARY TO ENSURE MINIMUM DIMENSIONS SHOWN ARE SUITABLE FOR EXISTING GROUND CONDITIONS. ENGINEERING ADVICE MAY BE REQUIRED.
  - MINIMUM CONCRETE STRENGTH OF 4,000 PSI IS RECOMMENDED. CONCRETE SHOULD BE VIBRATED TO ELIMINATE AIR POCKETS.
  - EXPANSION AND CONTRACTION CONTROL JOINTS AND REINFORCEMENT ARE RECOMMENDED TO PROTECT CHANNEL AND CONCRETE SURROUND. ENGINEERING ADVICE MAY BE REQUIRED.
  - THE FINISHED LEVEL OF THE CONCRETE SURROUND MUST BE APPROX. 1/8" (3mm) ABOVE THE TOP OF THE CHANNEL EDGE.
  - CONCRETE BASE THICKNESS SHOULD MATCH SLAB THICKNESS. ENGINEERING ADVICE MAY BE REQUIRED TO DETERMINE PROPER LOAD CLASS.
  - REFER TO ACO'S LATEST INSTALLATION INSTRUCTIONS FOR FURTHER DETAILS.
  - PROVIDE SK3-903D INLINE CATCH BASIN IN CENTER OF TRENCH SLOPE TRENCH TOWARD INLINE CATCH BASIN.

**ACO TRENCH DRAIN**  
NOT TO SCALE



**SOIL EROSION CONTROL SLOPE INSTALLATION**  
NOT TO SCALE

**SPECIFICATION CLAUSE**  
**S300K POWERDRAIN - LOAD CLASS E**

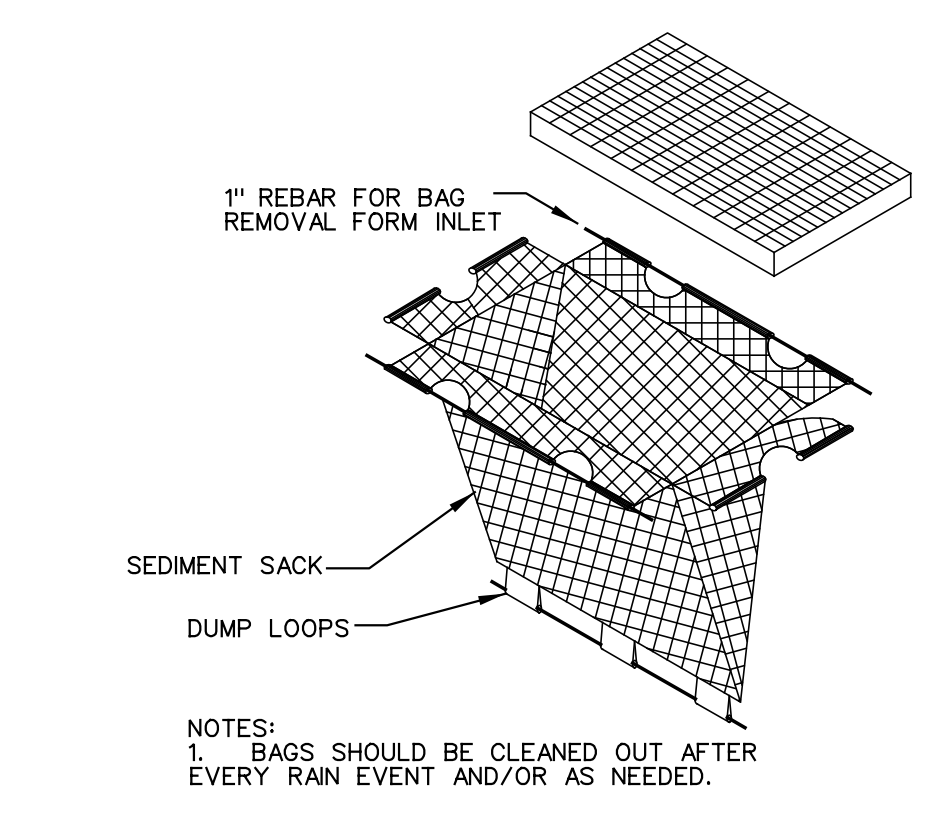
**GENERAL:**  
 THE SURFACE DRAINAGE SYSTEM SHALL BE POLYMER CONCRETE S300K CHANNEL SYSTEM WITH DUCTILE IRON EDGE RAILS AS MANUFACTURED BY ACO POLYMER PRODUCTS, INC.

**MATERIALS:**  
 CHANNELS SHALL BE MANUFACTURED FROM POLYESTER RESIN POLYMER CONCRETE WITH AN INTEGRALLY CAST-IN DUCTILE IRON EDGE RAIL. MINIMUM PROPERTIES OF POLYMER CONCRETE WILL BE AS FOLLOWS:  
 COMPRESSIVE STRENGTH: 14,000 PSI  
 FLEXURAL STRENGTH: 4,000 PSI  
 TENSILE STRENGTH: 1,500 PSI  
 WATER ABSORPTION: 0.07%  
 FROST PROOF: YES  
 DILUTE ACID AND ALKALI RESISTANT: YES  
 B117 SALT SPRAY TEST COMPLIANT: YES

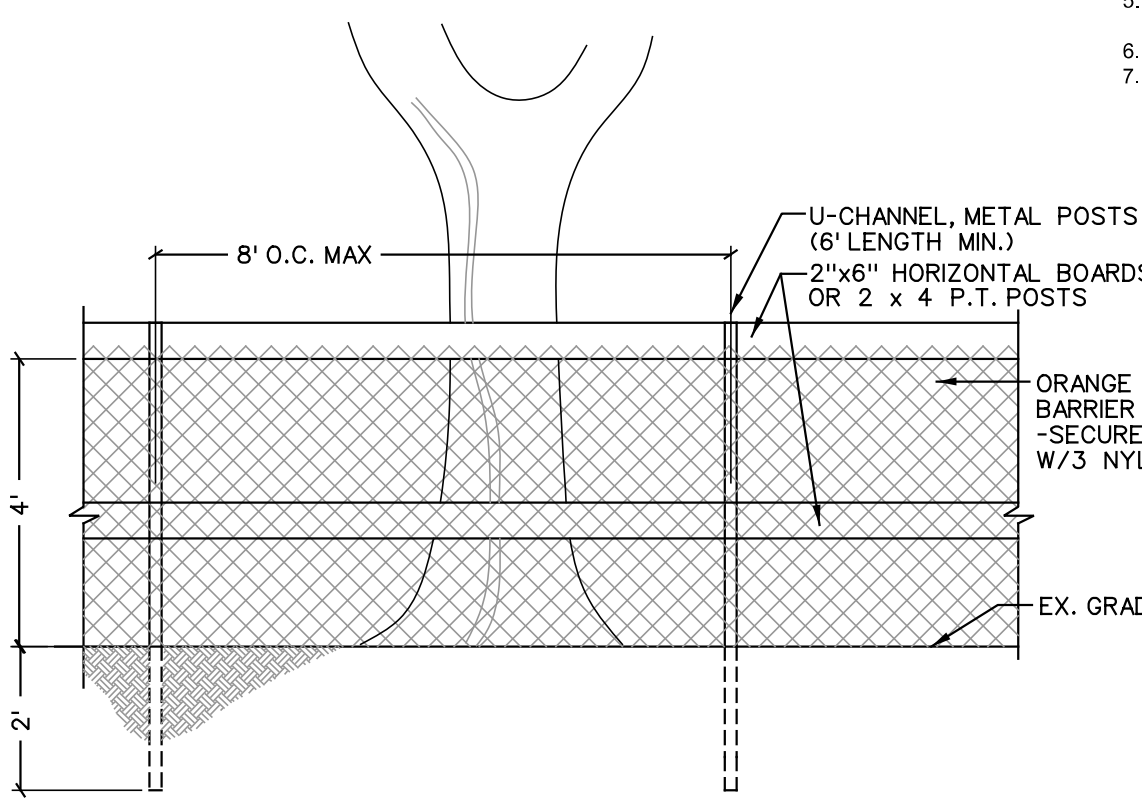
THE SYSTEM SHALL BE 12" (300mm) NOMINAL INTERNAL WIDTH WITH A 14.2" (360mm) OVERALL WIDTH AND A BUILT-IN SLOPE OF 0.5%. CHANNEL INVERT SHALL HAVE DEVELOPED "Y" SHAPE. ALL CHANNELS SHALL BE INTERLOCKING WITH A MALE/FEMALE JOINT.

THE COMPLETE DRAINAGE SYSTEM SHALL BE BY ACO POLYMER PRODUCTS, INC. ANY DEVIATION OR PARTIAL SYSTEM DESIGN AND/OR IMPROPER INSTALLATION WILL VOID ANY AND ALL WARRANTIES PROVIDED BY ACO POLYMER PRODUCTS, INC.

CHANNEL SHALL WITHSTAND LOADING TO PROPER LOAD CLASS AS OUTLINED BY EN 1433. GRATE TYPE SHALL BE APPROPRIATE TO MEET THE SYSTEM LOAD CLASS SPECIFIED AND INTENDED APPLICATION. GRATES SHALL BE SECURED USING EITHER THE "POWERLOCK" BOLTLESS LOCKING SYSTEM OR THE 4 BOLT LOCKING OPTION. CHANNEL AND GRATE SHALL BE CERTIFIED TO MEET THE SPECIFIED EN 1433 LOAD CLASS. THE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND RECOMMENDATIONS.

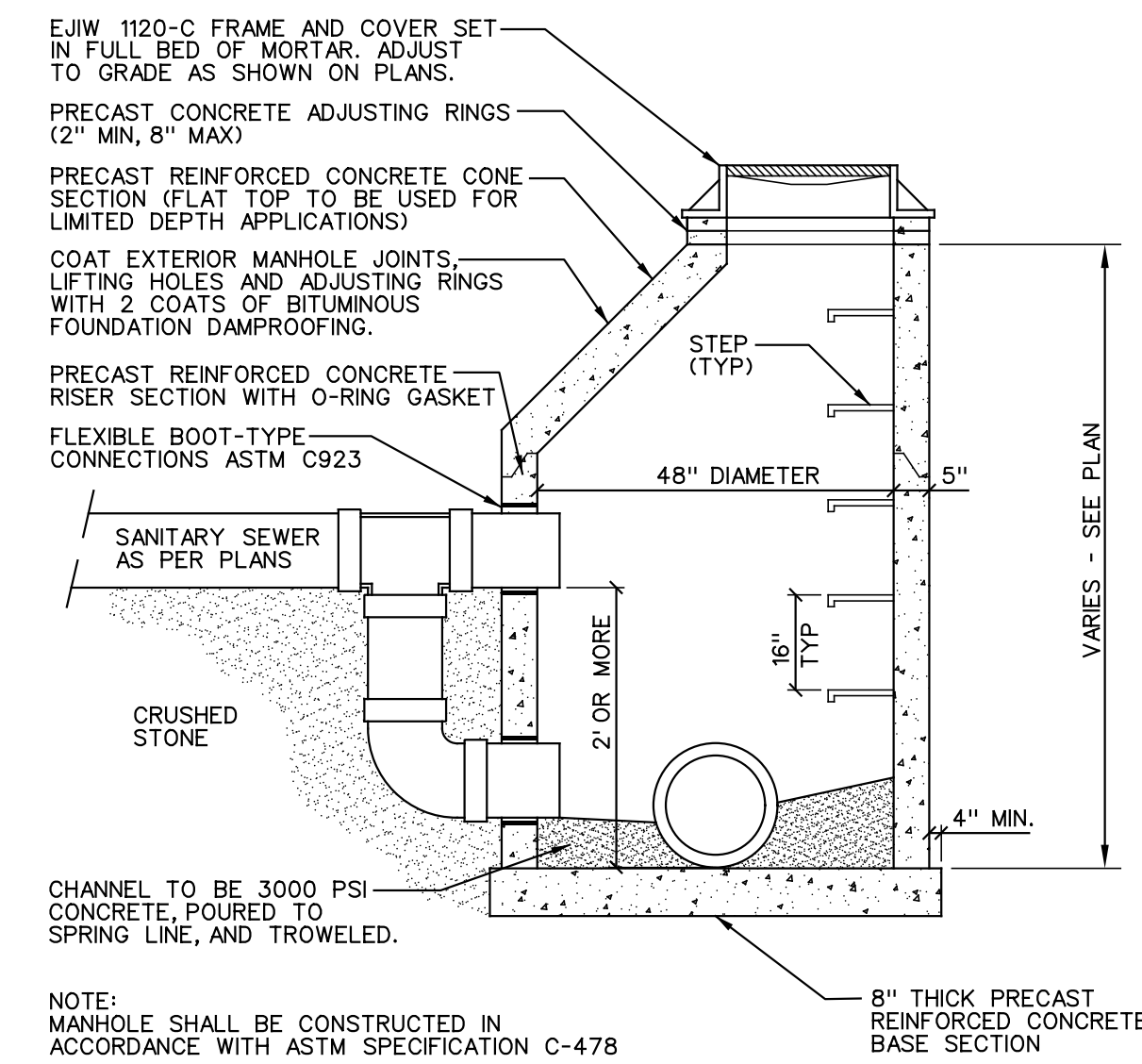


**SILT SACK**  
NOT TO SCALE

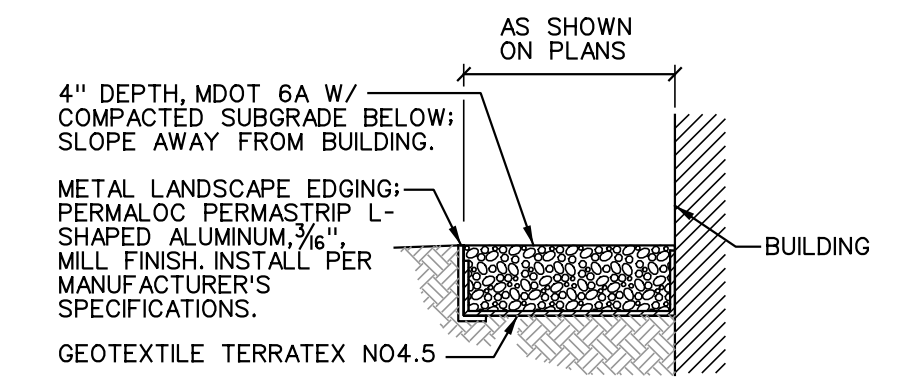


**TREE PROTECTION FENCING**  
NOT TO SCALE

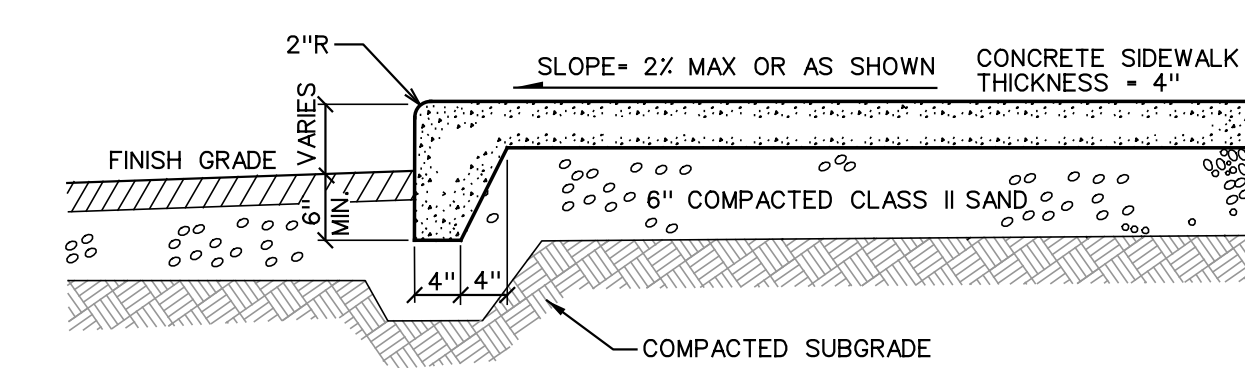
**NOTE:**  
 ALL TREE PROTECTION SHALL BE INSTALLED AND MAINTAINED BY THE CONTRACTOR AND APPROVED BY LANDSCAPE ARCHITECT PRIOR TO COMMENCEMENT OF SITE CONSTRUCTION. BARRIERS SHALL BE 12 X 6 MINIMUM CENTERED ON TREES & AS SHOWN ON DRAWINGS.



**SANITARY SEWER DROP MANHOLE**  
NOT TO SCALE



**MAINTENANCE STRIP**  
NOT TO SCALE



**CONCRETE SIDEWALK WITH INTEGRAL CURB**  
NOT TO SCALE

**SITE DETAILS**  
SCALE AS SHOWN

Architect Seal

Project:

**FlavorSum**  
 FACILITY EXPANSION PROJECT  
 3680 Stadium Park Way, Kalamazoo, MI 49009

REVISIONS	DESCRIPTION
1	ISSUE DATE
2	ISSUE DATE
3	ISSUE DATE
4	ISSUE DATE

Issue Date: 07/29/2022  
 Schley Nelson Architects  
 Project No.

**22-107**

SITE DETAILS

Sheet No.

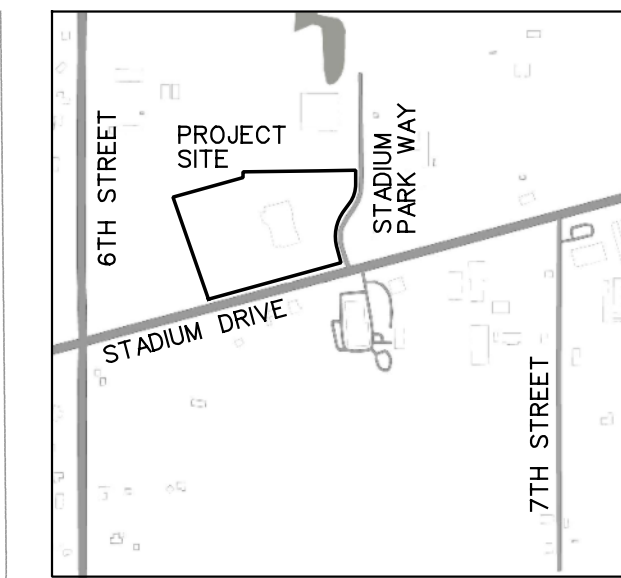
**C 501**

Copyright © 2022  
 Schley Nelson Architects, Inc.

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	COMMENTS
<b>TREES</b>					
BET	3	BETULA NIGRA 'CULLY HERITAGE'	HERITAGE RIVER BIRCH	2" CAL.	B&B
CAR	1	CARPINUS CAROLINIANA	AMERICAN HORNBEAM	2" CAL.	B&B
TIL	1	TILIA CORDATA 'GREENSPIRE'	GREENSPIRE LINDEN	2" CAL.	B&B
GIN	2	GINKGO BILOBA 'PRINCETON SENTRY'	PRINCETON SENTRY GINKGO	2" CAL.	B&B
<b>SHRUBS</b>					
CEA	15	CEANOTHUS AMERICANUS	NEW JERSEY TEA	24" HT.	4" OC
JUN	12	JUNIPERUS HORIZONTALIS 'BAR HARBOR'	BAR HARBOR CREEPING JUNIPER	#3 CONT.	5" OC

**COMPREHENSIVE ENGINEERING**  
 4650 Plainfield Avenue NE, Suite A  
 Grand Rapids, MI 49525  
 Phone: (616) 345-9933  
 comprehensive.com  
 CE #22083  
 Designed By: LCF  
 Drawn By: LCF  
 7/29/2022

**Schley Nelson Architects**  
 4200 S 9th Street,  
 P.O. Box 239,  
 Oshtemo, Michigan 49077  
 (269) 375-8360



OWNER: HDC PROPERTIES LLC & FLAVORSUM LLC  
 ADDRESS: 3680 STADIUM PARK WAY  
 KALAMAZOO, MI 49009

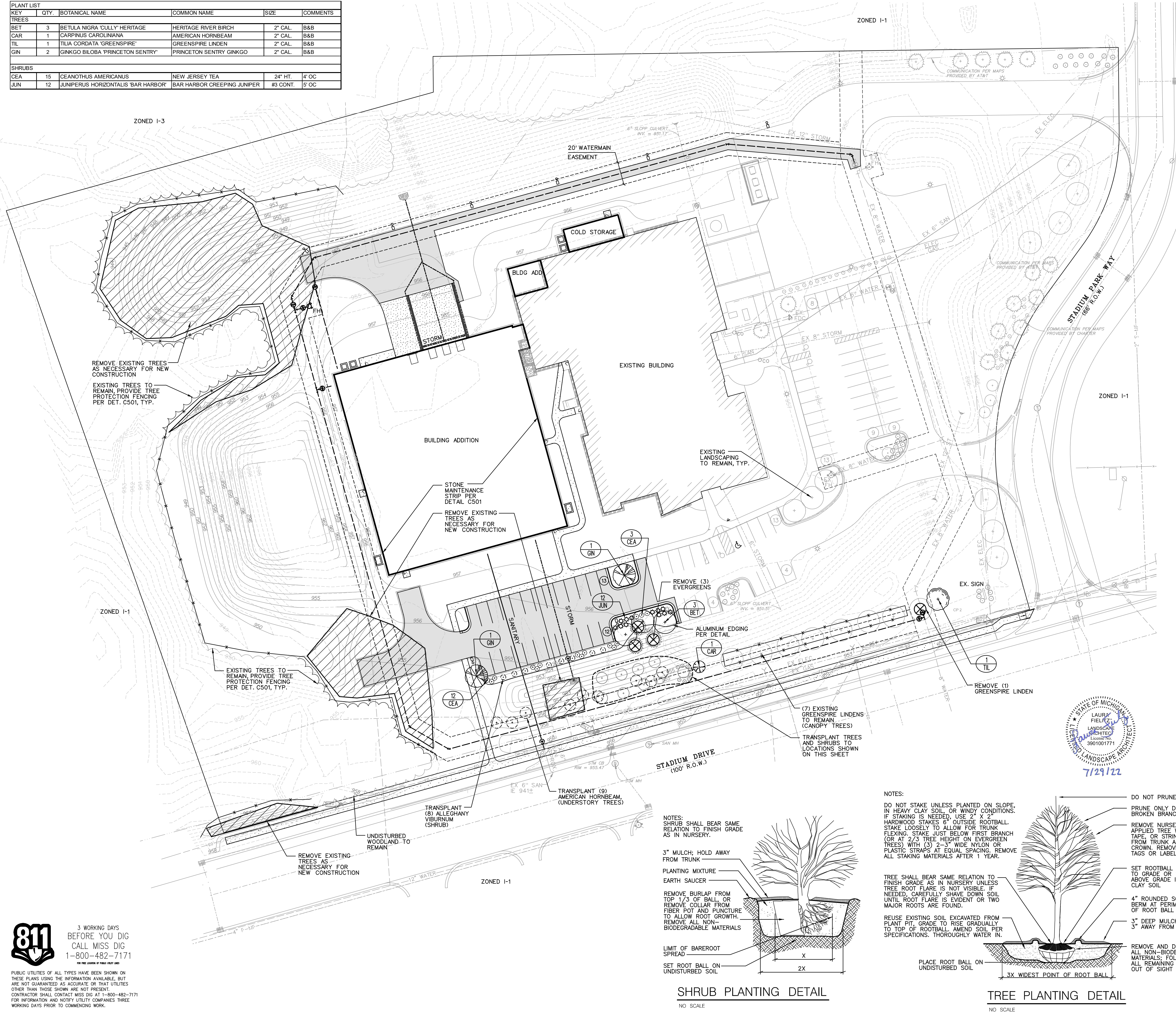
CONTACT: DAN HINKLE  
 PHONE: (269) 720-3135  
 EMAIL: hinkle.dan@gmail.com

PARCEL NO. 05-34-155-050  
 PROPERTY AREA - 10.89 ACRES  
 ZONED I-1 INDUSTRIAL DISTRICT  
 MANUFACTURING & SERVICE

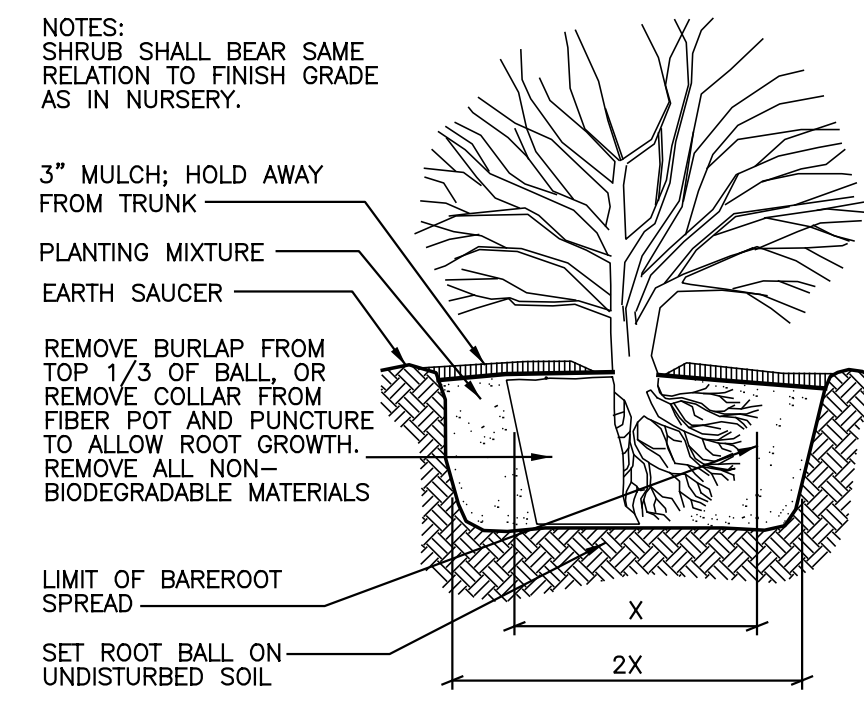
PARKING LOT LANDSCAPING  
 25SF ISLAND PER PARKING SPACE  
 85 SPACES \* 25SF = 2,125SF REQUIRED  
 4,893SF PROVIDED

1 TREE + 3 SHRUBS PER 200SF  
 2,125/200 = 10.6 TREES, 31.8 SHRUBS  
 11 TREES PROVIDED (INCLUDES 6 EXISTING)  
 31 SHRUBS PROVIDED (INCLUDES 16 EXISTING)  
 1.5 SHRUBS PER 1 PARKING SPACE ALONG ROW  
 12 SPACES \* 1.5 = 18 SHRUBS  
 20 SHRUBS PROVIDED  
 (8 EXISTING, TRANSPLANTED)

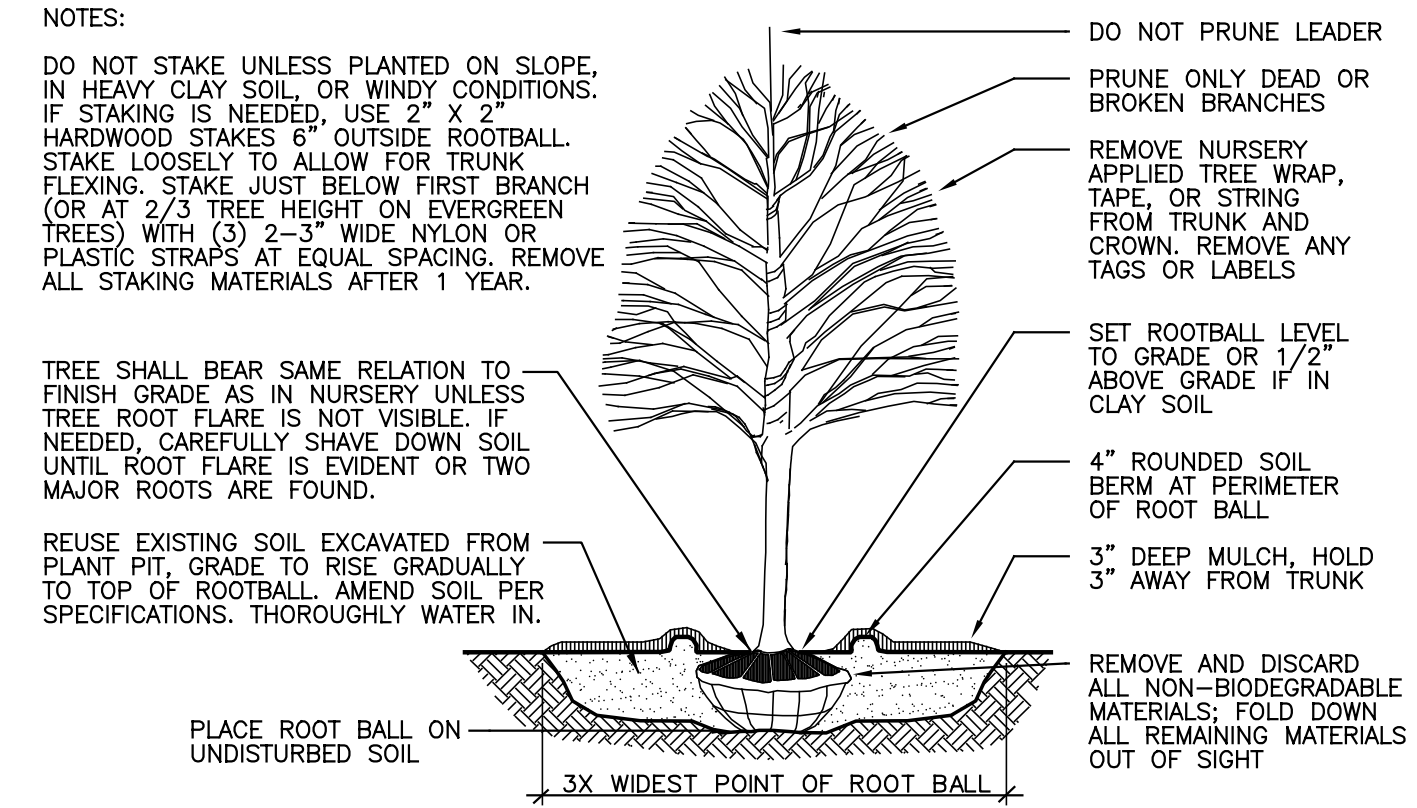
RIGHT-OF-WAY GREENBELT  
 20' WIDE, 1 CANOPY TREE AND  
 2 UNDERSTORY TREES PER 100LF  
 575LF ALONG STADIUM DRIVE (EXCLUDES  
 UNDISTURBED TREES)  
 575/100 = 5.75 CANOPY TREES,  
 11.5 UNDERSTORY TREES (18 TOTAL)  
 8 CANOPY TREES AND 10 UNDERSTORY  
 TREES PROVIDED (18 TOTAL - 2 NEW,  
 OTHERS EXISTING OR TRANSPLANTED)



- PLANTING NOTES:**
- ALL PLANTING BEDS SHALL RECEIVE 3" OF EVENLY SPREAD FINELY SHREDDED HARDWOOD BARK MULCH. HOLD MULCH AWAY FROM TRUNKS OF TREES AND SHRUBS 3" TO PREVENT ROT.
  - EXISTING TREES TO REMAIN SHALL BE PROTECTED BY TREE PROTECTION FENCING PER THE PROVIDED DETAIL. NO CONSTRUCTION ACTIVITY OR EQUIPMENT STORAGE SHALL TAKE PLACE WITHIN ROOT ZONES. TREES TO REMAIN DAMAGED BY CONSTRUCTION ACTIVITY SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT AND AT NO COST TO THE OWNER.
  - CONTRACTOR SHALL PROVIDE SPECIFIED TREES, SHRUBS, GROUNDCOVERS AND OTHER PLANT MATERIALS THAT COMPLY WITH ALL RECOMMENDATIONS AND REQUIREMENTS OF THE INTERNATIONAL SOCIETY OF ARBORCULTURE STANDARDS. PLANT MATERIAL SHALL BE HEALTHY, WIGOROUS STOCK, GROWN WITH GOOD HORTICULTURAL PRACTICE AND INSTALLED IN ACCORDANCE WITH PROJECT DRAWINGS, DETAILS AND SPECIFICATIONS.
  - TREES PLANTED ADJACENT TO PEDESTRIAN AND VEHICULAR CIRCULATION ROUTES SHALL BE SELECTED FROM HIGH BRANCHED STOCK WITH APPROPRIATE CLEARANCE FOR THE ADJACENT USE.
  - DO NOT USE "TREE WOUND PAINT" UNLESS WORKING WITH OAKS AND ELMS. WRAP AND STAKE TREES ONLY WHERE REQUIRED PER DETAILS AND SPECIFICATIONS.
  - TOPSOIL SHALL BE INSTALLED EIGHT (8) INCHES DEEP WITHIN PLANTING BEDS. INCORPORATE TOPSOIL INTO EXISTING SITE SOILS TO 12" DEPTH TO PROVIDE A GRADUAL CHANGE FROM MODIFIED TO EXISTING SITE SOILS AND ENSURE PROPER DRAINAGE.
  - SEED SHALL BE PLACED OVER 4" TOPSOIL IN ALL PROPOSED LAWN AREAS AND ALL AREAS DISTURBED BY CONSTRUCTION. SEED MIXES SHALL BE AS FOLLOWS:  
 LAWN (BURNING SLOW GROW MIX OR APPROVED EQUAL)  
 40% VAR CHEWINGS FESCUE  
 35% CR- RED FESCUE  
 25% VAR HARD FESCUE  
 AT 6 LBS. PER 1000 S.F.
  - CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY IRRIGATION MEASURES, E.G. WATERING BAGS, PER SPECIFICATIONS.
  - ADDITIONAL ORNAMENTAL LANDSCAPING AROUND BUILDINGS MAY BE PROVIDED AT OWNER'S DISCRETION.
  - LANDSCAPE CONTRACTOR SHALL COORDINATE ALL THEIR WORK WITH SITE AND IRRIGATION CONTRACTORS.
  - LANDSCAPE CONTRACTOR SHALL VERIFY LOCATION OF ALL NEW AND EXISTING UTILITIES PRIOR TO ANY GRADING OR PLANTING WORK.



**SHRUB PLANTING DETAIL**  
NO SCALE



**TREE PLANTING DETAIL**  
NO SCALE

**LEGEND**

6" CURB & GUTTER
BITUMINOUS PAVEMENT
CONCRETE
STORM SEWER
SANITARY SEWER
WATERMAIN
GAS SERVICE
ELECTRICAL OVERHEAD
ELECTRICAL UNDERGROUND
BARRIER FREE RAMP

**LANDSCAPE PLAN**  
SCALE 1" = 40'

**811** 3 WORKING DAYS BEFORE YOU DIG  
 CALL MISS DIG 1-800-482-7171  
 FOR THE LOCATION OF PUBLIC UTILITIES

PUBLIC UTILITIES OF ALL TYPES HAVE BEEN SHOWN ON THESE PLANS USING THE INFORMATION AVAILABLE, BUT ARE NOT GUARANTEED AS ACCURATE OR THAT UTILITIES OTHER THAN THOSE SHOWN ARE NOT PRESENT. CONTRACTOR SHALL CONTACT MISS DIG AT 1-800-482-7171 FOR INFORMATION AND NOTIFY UTILITY COMPANIES THREE WORKING DAYS PRIOR TO COMMENCING WORK.

**FlavorSum**  
 FACILITY EXPANSION PROJECT  
 3680 Stadium Park Way, Kalamazoo, MI 49009

ISSUE DATE	DESCRIPTION
05/11/2022	ZDA REVIEW
06/01/2022	15% CD
07/06/22	ZDA REVIEW
07/19/22	50% CD
07/29/22	ZDA REVIEW

Issue Date: 07/29/2022  
 Schley Nelson Architects  
 Project No.  
**22-107**  
 Sheet Name:  
 LANDSCAPE PLAN  
 Sheet No.  
**L 101**  
 Copyright © 2022  
 Schley Nelson Architects, Inc.

Architect Seal

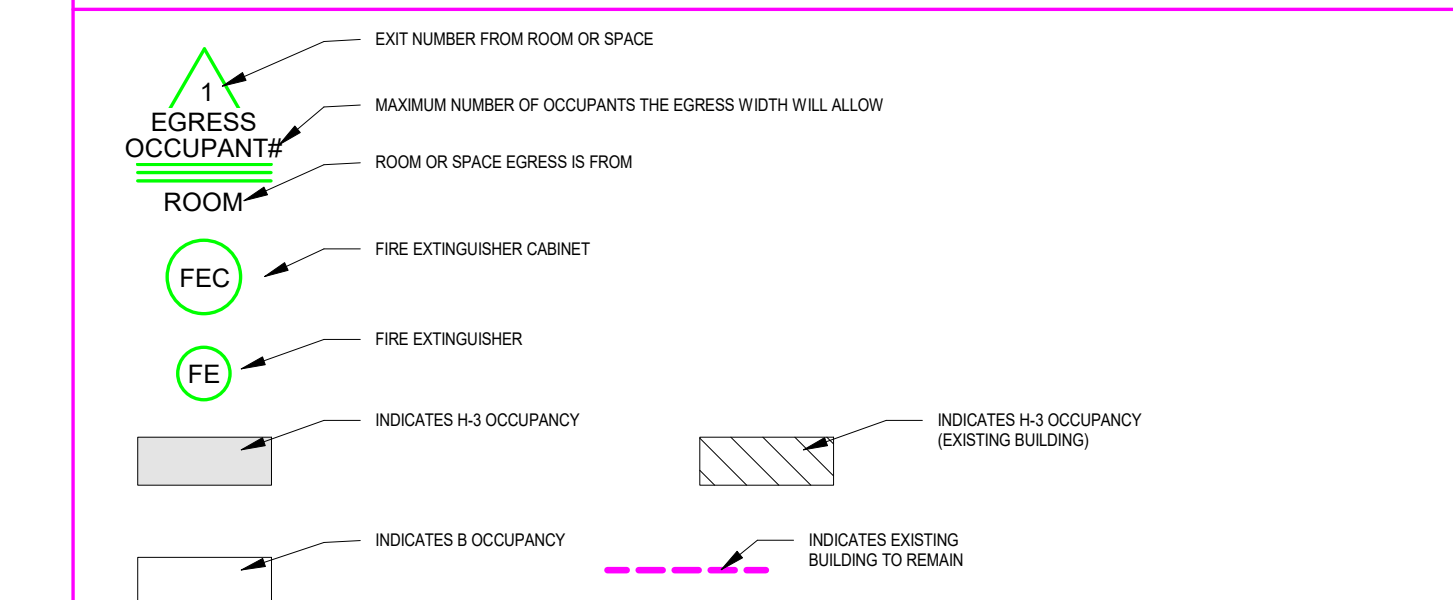
Project:

### FLOOR AREA SCHEDULE

Rm. No.	Name	Occupancy Type	Area
124	STORAGE	(Existing) Accessory storage areas, mech. equip. room	70 SF
122	STORAGE	(Existing) Accessory storage areas, mech. equip. room	70 SF
126	I.T. SERVER	(Existing) Accessory storage areas, mech. equip. room	155 SF
402	MAINTENANCE	(Existing) Accessory storage areas, mech. equip. room	143 SF
303	HSKP.	(Existing) Accessory storage areas, mech. equip. room	51 SF
300	GENERAL STORAGE	(Existing) Accessory storage areas, mech. equip. room	230 SF
306	MECHANICAL / ELECTRICAL	(Existing) Accessory storage areas, mech. equip. room	343 SF
409	ELEC.	(Existing) Accessory storage areas, mech. equip. room	90 SF
409A	MECH.	(Existing) Accessory storage areas, mech. equip. room	90 SF
(Existing) Accessory storage areas, mech. equip. room: 9 Areas			1243 SF
202	MEN	(Existing) Business Areas	264 SF
203	WOMEN	(Existing) Business Areas	264 SF
200	CONFERENCE ROOM	(Existing) Business Areas	294 SF
204	WORK ROOM	(Existing) Business Areas	119 SF
205	FLAVOR LAB	(Existing) Business Areas	176 SF
206	FLAVOR LAB	(Existing) Business Areas	176 SF
207	FLAVOR LAB	(Existing) Business Areas	176 SF
208	FLAVOR LIBRARY / EVALUATION ROOM	(Existing) Business Areas	251 SF
209	GENERAL FLAVOR COMPOUNDING	(Existing) Business Areas	252 SF
112	CONFERENCE ROOM	(Existing) Business Areas	190 SF
211	FLAVOR LAB	(Existing) Business Areas	176 SF
212	APPS LAB	(Existing) Business Areas	649 SF
213	ANALYTICS	(Existing) Business Areas	347 SF
214	KITCHENETTE	(Existing) Business Areas	206 SF
215	FUTURE OFFICE	(Existing) Business Areas	155 SF
301	BREAK ROOM	(Existing) Business Areas	627 SF
120	OFFICE	(Existing) Business Areas	136 SF
119	COO OFFICE	(Existing) Business Areas	136 SF
118	PRESIDENT OFFICE	(Existing) Business Areas	188 SF
216	RECEPTION	(Existing) Business Areas	93 SF
111	OFFICE	(Existing) Business Areas	161 SF
110	OFFICE	(Existing) Business Areas	159 SF
102A	WAITING	(Existing) Business Areas	101 SF
217	VEST.	(Existing) Business Areas	65 SF
218	OPEN OFFICE	(Existing) Business Areas	1985 SF
125	I.T. OFFICE	(Existing) Business Areas	161 SF
127	SENSORY	(Existing) Business Areas	117 SF
123	PROD. COORD. OFFICE	(Existing) Business Areas	137 SF
121	PROD. COORD. OFFICE	(Existing) Business Areas	137 SF
100	CONFERENCE ROOM	(Existing) Business Areas	330 SF
308A	W. LOCKER	(Existing) Business Areas	73 SF
308B	W. TOILET	(Existing) Business Areas	133 SF
307B	M. TOILET	(Existing) Business Areas	133 SF
307A	M. LOCKER	(Existing) Business Areas	225 SF
302	QC LAB	(Existing) Business Areas	726 SF
302C	TEST SAMPLE STORAGE	(Existing) Business Areas	391 SF
302E	OFFICES	(Existing) Business Areas	143 SF
302D	WORKSTATIONS	(Existing) Business Areas	126 SF
302A	MICRO TEST ROOM	(Existing) Business Areas	100 SF
302B	SENSORY ROOM	(Existing) Business Areas	101 SF
304	VESTIBULE	(Existing) Business Areas	93 SF
219	LOBBY	(Existing) Business Areas	455 SF
220	CORRIDOR	(Existing) Business Areas	347 SF
305	CORRIDOR	(Existing) Business Areas	638 SF
221	CORRIDOR	(Existing) Business Areas	1665 SF
(Existing) Business Areas: 45 Areas			12954 SF
210	RAW MATERIALS STORAGE	(Existing) Warehouses	178 SF
400A	PILOT PLANT (A)	(Existing) Warehouses	1003 SF
401B	PRODUCTION	(Existing) Warehouses	1478 SF
407	FREEZER	(Existing) Warehouses	571 SF
401	PRODUCTION	(Existing) Warehouses	8573 SF
408	SHIPPING/RECEIVING	(Existing) Warehouses	5303 SF
405	LOW FLASH ROOM	(Existing) Warehouses	733 SF
400B	PILOT PLANT (B)	(Existing) Warehouses	438 SF
(Existing) Warehouses: 8 Areas			18275 SF
(Existing) Accessory storage areas, mechanical equipment room: 3 Areas			969 SF
101	WAITING RM	Business Areas	142 SF
102	TLT. RM 1	Business Areas	72 SF
103	TLT. RM 2	Business Areas	65 SF
105	SHIPPING OFFICE	Business Areas	321 SF
Business Areas: 4 Areas			600 SF
106	WAREHOUSE	Warehouses	28159 SF
107	BLDG. CONNECTION	Warehouses	586 SF
108	LOW-FLASH RM. EXPANSION	Warehouses	651 SF
109	NEW COLD STORAGE	Warehouses	912 SF
Warehouses: 4 Areas			30308 SF
Grand total: 73 Areas			64349 SF

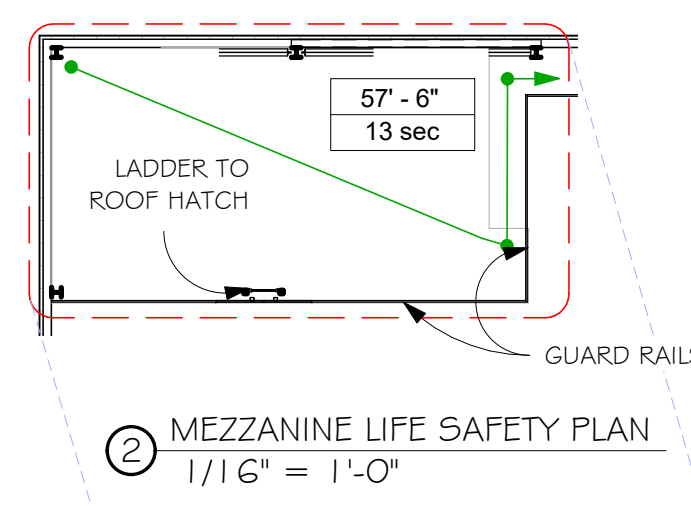
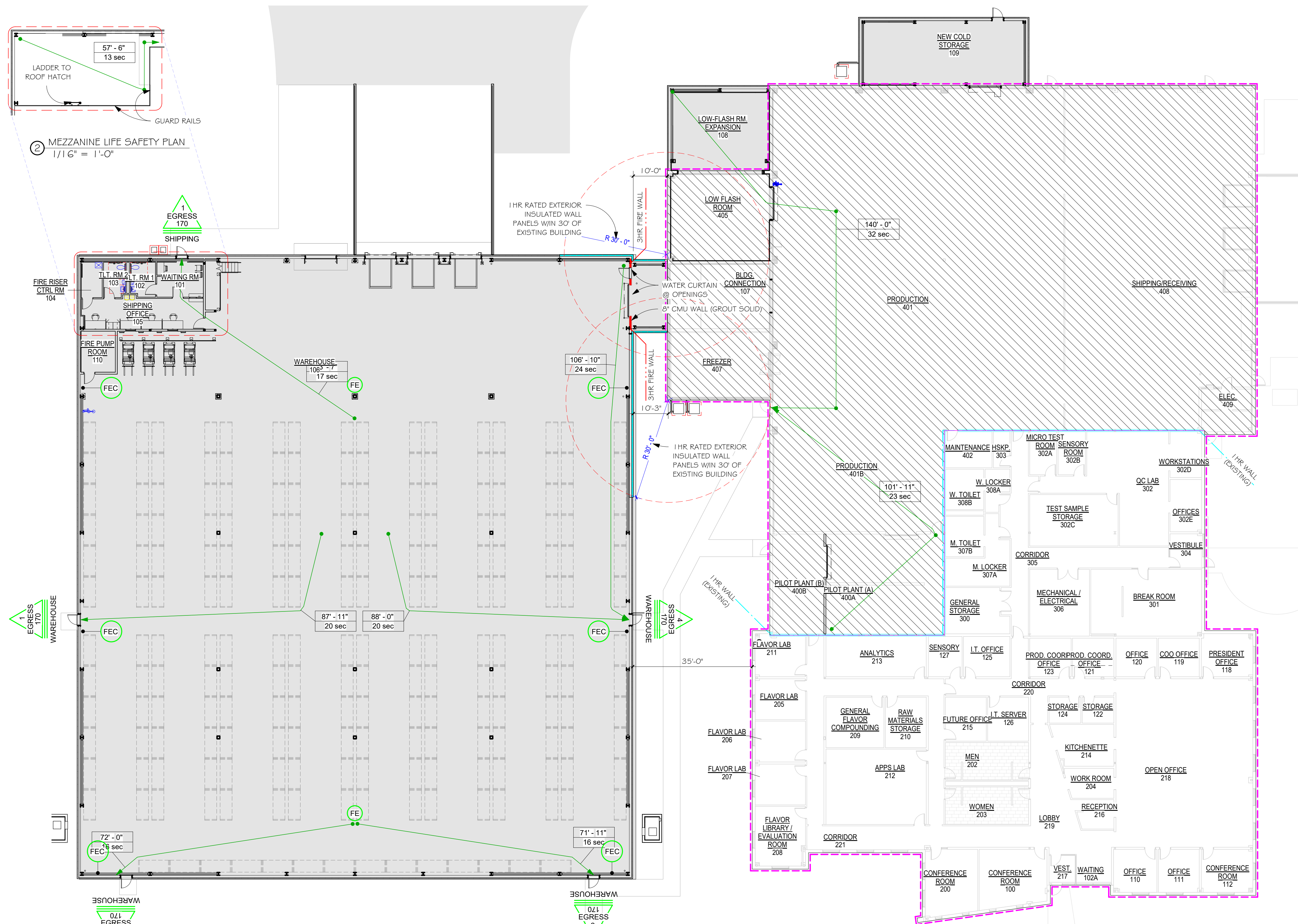
Total Net SF (EXISTING): 32,495 SF  
 Total Net SF (NEW): 32,856 SF  
 Total Gross SF (EXISTING): 34,908 SF  
 Total Gross SF (NEW): 31,803 SF  
 TOTAL BUILDING SF: 66,711 SF

#### SYMBOLS KEY



ISSUE DATE	DESCRIPTION
1/16/2022	15% CONSTRUCTION DOCUMENTS
7/6/2022	15% PLAN REVIEW
7/28/2022	30% CONSTRUCTION DOCUMENTS

Issue Date: 07/28/2022  
 Schley Nelson Architects  
 Project No.  
**22-107**  
 Sheet Name:  
 OVERALL FIRST FLOOR LIFE SAFETY PLAN  
 Sheet No.  
**LS 101**  
 Copyright © 2022  
 Schley Nelson Architects, Inc.



OVERALL FLOOR LIFE SAFETY PLAN  
 1/16" = 1'-0"



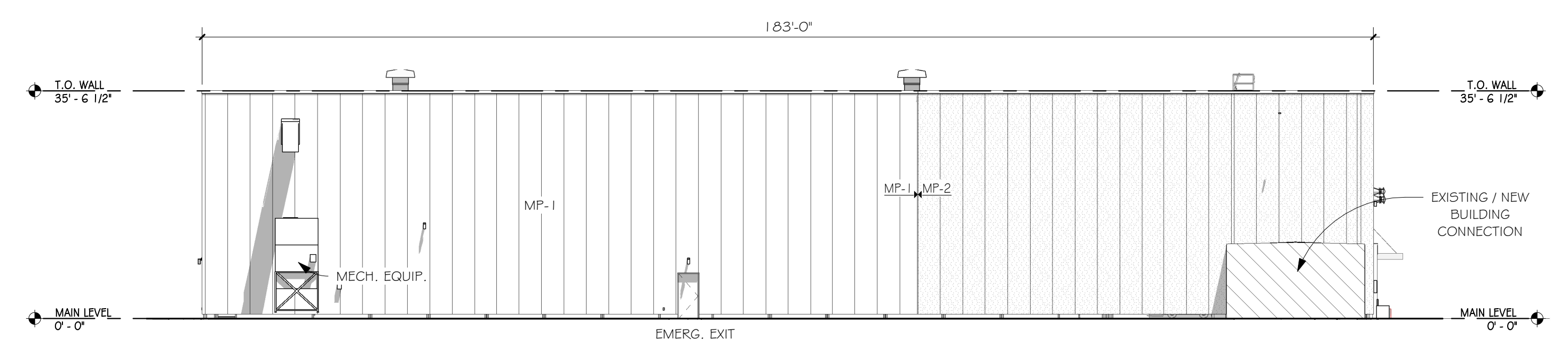


STREET VIEW OF EXISTING FACILITY

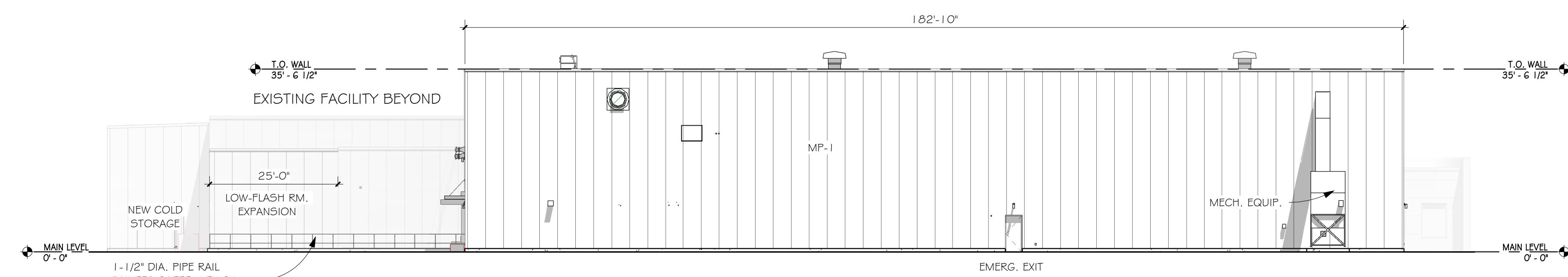
MP-1: INSULATED METAL PANEL (TO MATCH EXISTING)  
 MP-2: 1 HR. RATED INSULATED PANEL (TO MATCH EXISTING)



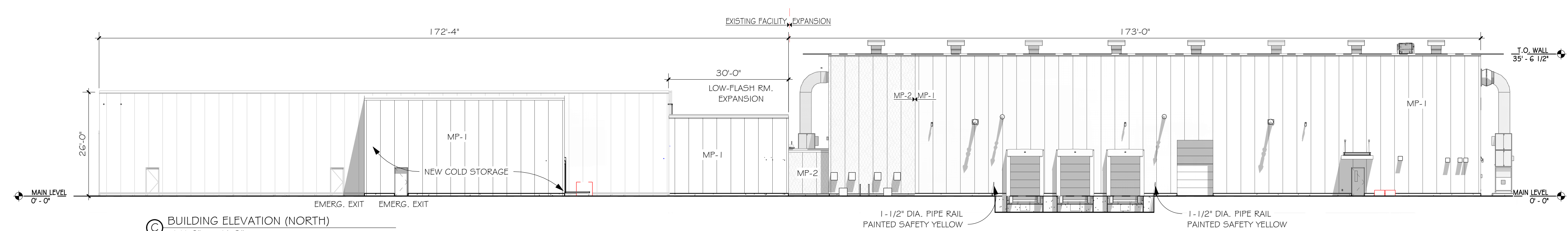
EXISTING EXTERIOR METAL PANELS (NEW FACILITY EXPANSION TO MATCH)



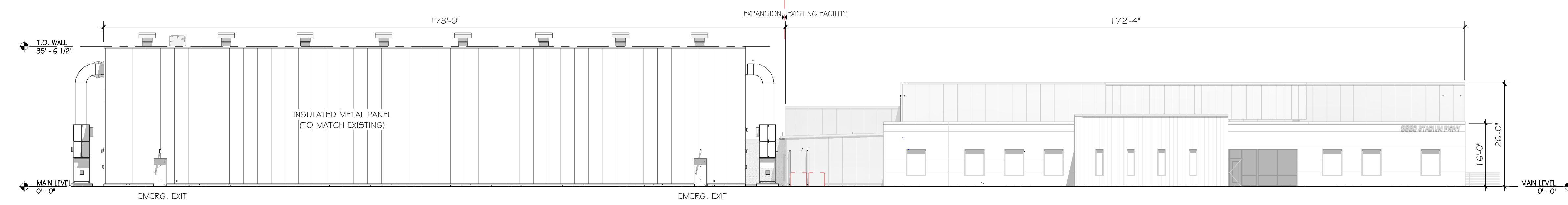
**(A) BUILDING ELEVATION (EAST)**  
 1/16" = 1'-0"



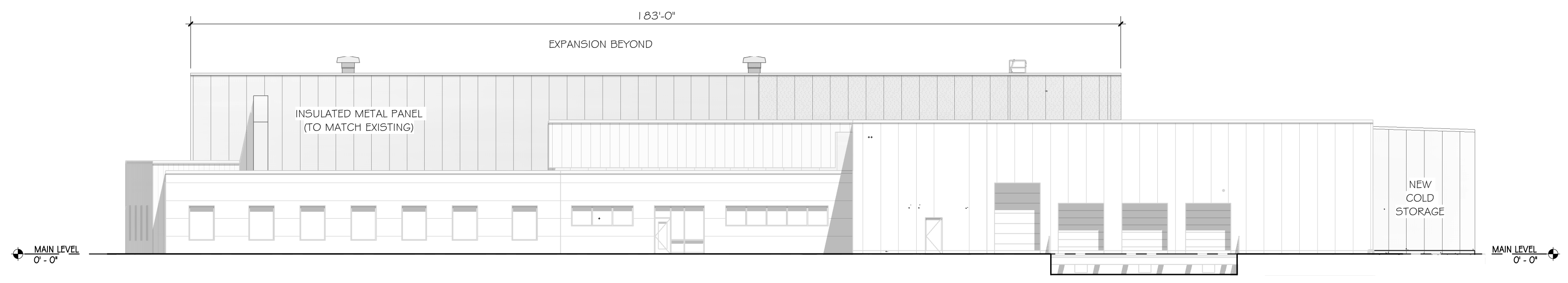
**(B) BUILDING ELEVATION (WEST)**  
 1/16" = 1'-0"



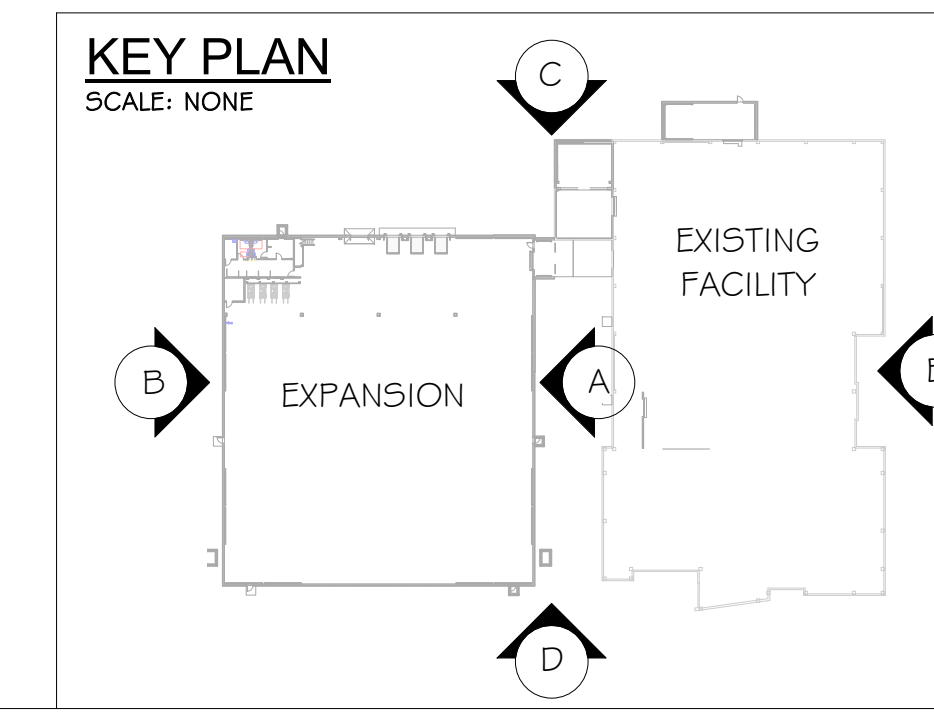
**(C) BUILDING ELEVATION (NORTH)**  
 1/16" = 1'-0"



**(D) BUILDING ELEVATION (SOUTH)**  
 1/16" = 1'-0"



**(E) BUILDING ELEVATION (EAST EXISTING)**  
 1/16" = 1'-0"



REVISIONS	
#	DESCRIPTION
1	SCHEMATIC DESIGN PACKAGE
2	50% CONSTRUCTION DOCUMENTS
3	SITE PLAN REVIEW
4	50% CONSTRUCTION DOCUMENTS

ISSUE DATE	05/13/2022
ISSUE DATE	06/16/2022
ISSUE DATE	07/06/2022
ISSUE DATE	07/28/2022
Issue Date:	07/28/2022
Schley Nelson Architects Project No.	
<b>22-107</b>	
Sheet Name: EXTERIOR ELEVATIONS	
Sheet No.	
<b>A 301</b>	
Copyright © 2022 Schley Nelson Architects, Inc.	







**D-Series Size 1 LED Area Luminaire**

**Specifications**  
 Effic: 124 lm/W  
 Length: 23"  
 Width: 13"  
 Height H1: 7-1/2"  
 Height H2: 3-1/2"  
 Weight (max): 27 lbs

**Introduction**  
 The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment. The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. It is ideal for replacing up to 750W metal halide in pedestrian and area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

**Ordering Information** EXAMPLE: DSX1 LED P7 40K T3M MVOLT SPA NLAIR2 PIRHN DDBXD

Series	LEDs	Color temperature	Distribution	Voltage	Mounting	
DSX1 LED	Forward optics P1 P1 P2 P2 P3 P3 P4 P4 P5 P5 P6 P6 P7 P7 P8 P8 P9 P9 P10 P10 P11 P11	3000 K 4000 K 5000 K	T15 T25 T35 T45 T55 T65 T75 T85 T95 T105 T115	T15 T25 T35 T45 T55 T65 T75 T85 T95 T105 T115	MVOLT 277V-480V 120V 208V 240V 277V 347V 480V	Shipped included SPA Square pole mounting RPA Roundpole mounting WPA Wall Mount SFRMA Square pole arm mounting adapter RFRMA Roundpole arm mounting adapter Shipped separately NMA 3000DU Most arm mounting socket adapters (open & closed)

Control options	Other options	Finish (color)
<b>Shipped installed</b> NLAIR2 Night-RIG generation 2 model PRN Network, high flow, maintenance-free PRS Non-remote supply (remote ordered separately) PRF Free pole-mount only (remote ordered separately) PRG Remote supply (remote ordered separately) PRH High flow, maintenance-free, 15-30' mounting height, ambient sensor enabled at 15-30' PRJ High flow, maintenance-free, 15-30' mounting height, ambient sensor enabled at 15-30' PRK High flow, maintenance-free, 15-30' mounting height, ambient sensor enabled at 15-30' PRM High flow, maintenance-free, 15-30' mounting height, ambient sensor enabled at 15-30' PRN High flow, maintenance-free, 15-30' mounting height, ambient sensor enabled at 15-30' PRP High flow, maintenance-free, 15-30' mounting height, ambient sensor enabled at 15-30' PRQ High flow, maintenance-free, 15-30' mounting height, ambient sensor enabled at 15-30' PRR High flow, maintenance-free, 15-30' mounting height, ambient sensor enabled at 15-30' PRS High flow, maintenance-free, 15-30' mounting height, ambient sensor enabled at 15-30' PRT High flow, maintenance-free, 15-30' mounting height, ambient sensor enabled at 15-30' PRU High flow, maintenance-free, 15-30' mounting height, ambient sensor enabled at 15-30' PRV High flow, maintenance-free, 15-30' mounting height, ambient sensor enabled at 15-30' PRW High flow, maintenance-free, 15-30' mounting height, ambient sensor enabled at 15-30' PRX High flow, maintenance-free, 15-30' mounting height, ambient sensor enabled at 15-30' PRY High flow, maintenance-free, 15-30' mounting height, ambient sensor enabled at 15-30' PRZ High flow, maintenance-free, 15-30' mounting height, ambient sensor enabled at 15-30'	PR High flow, maintenance-free, 15-30' mounting height, ambient sensor enabled at 15-30' PRH High flow, maintenance-free, 15-30' mounting height, ambient sensor enabled at 15-30' PRJ High flow, maintenance-free, 15-30' mounting height, ambient sensor enabled at 15-30' PRK High flow, maintenance-free, 15-30' mounting height, ambient sensor enabled at 15-30' PRM High flow, maintenance-free, 15-30' mounting height, ambient sensor enabled at 15-30' PRN High flow, maintenance-free, 15-30' mounting height, ambient sensor enabled at 15-30' PRP High flow, maintenance-free, 15-30' mounting height, ambient sensor enabled at 15-30' PRQ High flow, maintenance-free, 15-30' mounting height, ambient sensor enabled at 15-30' PRR High flow, maintenance-free, 15-30' mounting height, ambient sensor enabled at 15-30' PRS High flow, maintenance-free, 15-30' mounting height, ambient sensor enabled at 15-30' PRT High flow, maintenance-free, 15-30' mounting height, ambient sensor enabled at 15-30' PRU High flow, maintenance-free, 15-30' mounting height, ambient sensor enabled at 15-30' PRV High flow, maintenance-free, 15-30' mounting height, ambient sensor enabled at 15-30' PRW High flow, maintenance-free, 15-30' mounting height, ambient sensor enabled at 15-30' PRX High flow, maintenance-free, 15-30' mounting height, ambient sensor enabled at 15-30' PRY High flow, maintenance-free, 15-30' mounting height, ambient sensor enabled at 15-30' PRZ High flow, maintenance-free, 15-30' mounting height, ambient sensor enabled at 15-30'	ZBRD Dark bronze BRD Black DBRD Dark bronze DRD White WBRD White BRD Black DRD White WBRD White BRD Black DRD White WBRD White



**D-Series Size 1 LED Wall Luminaire**

**Specifications**  
 Luminaire  
 Width: 13-3/4"  
 Depth: 10"  
 Height: 6-3/8"

**Back Box (BBW, E20WC)**  
 Width: 13-3/4"  
 Depth: 4"  
 Height: 6-3/8"

**Introduction**  
 The D-Series Wall Luminaire is a stylish, fully integrated LED solution for building-mount applications. It features a sleek, modern design and is carefully engineered to provide long-lasting, energy-efficient lighting with a variety of optical and control options for customized performance.

With an expected service life of over 20 years of nighttime use and up to 74% in energy savings over comparable 250W metal halide luminaires, the D-Series Wall is a reliable, low-maintenance lighting solution that produces sites that are exceptionally illuminated.

**Ordering Information** EXAMPLE: DSWX1 LED 20C 1000 40K T3M MVOLT DDBXTD

Series	LEDs	Drive Current	Color temperature	Distribution	Voltage	Mounting	Control Options
DSWX1 LED	10 LEDs 20 LEDs 30 LEDs 40 LEDs 50 LEDs 60 LEDs 70 LEDs 80 LEDs 90 LEDs 100 LEDs 110 LEDs 120 LEDs 130 LEDs 140 LEDs 150 LEDs 160 LEDs 170 LEDs 180 LEDs 190 LEDs 200 LEDs	350 350mA 500 500mA 700 700mA 1000 1000mA 1300 1300mA 1700 1700mA 2100 2100mA 2500 2500mA 3000 3000mA 3500 3500mA 4000 4000mA 4500 4500mA 5000 5000mA 5500 5500mA 6000 6000mA 6500 6500mA 7000 7000mA 7500 7500mA 8000 8000mA 8500 8500mA 9000 9000mA 9500 9500mA 10000 10000mA	3000 K 4000 K 5000 K	T25 T35 T45 T55 T65 T75 T85 T95 T105 T115	MVOLT 277V-480V 120V 208V 240V 277V 347V 480V	Shipped included SPA Square pole mounting RPA Roundpole mounting WPA Wall Mount SFRMA Square pole arm mounting adapter RFRMA Roundpole arm mounting adapter Shipped separately NMA 3000DU Most arm mounting socket adapters (open & closed)	

Other Option	Finish (color)
<b>Shipped installed</b> SF Single face (130, 277, 347V) DF Double face (240, 240, 240V) SF Single face (130, 277, 347V) DF Double face (240, 240, 240V) SF Single face (130, 277, 347V) DF Double face (240, 240, 240V) SF Single face (130, 277, 347V) DF Double face (240, 240, 240V)	DBRD Dark bronze BRD Black DRD White WBRD White BRD Black DRD White WBRD White

**MOONLITE LED®**  
**Series MUE**  
 REV #: MUE-11.20.17

PROJECT: \_\_\_\_\_  
 TYPE: \_\_\_\_\_  
 CATALOG #: \_\_\_\_\_

**Mullion Mount Outdoor Emergency Egress Lighting**

**OVERVIEW**  
 Linear LED outdoor egress with both emergency lighting and night lighting function. The MUE series is designed to mount directly on mullion frames used in typical glass panel entrance structures, with vertical mounting surface as small as 2". High efficiency LEDs and full 90° cut-off provide uniform emergency and night lighting on the extended egress pathway. All models are outdoor rated, UL wet location, ADA compliant, and exceed requirements of UL Standard 524 and NFPA 101. Designed and manufactured in the USA, complies with ARRA (American Recovery and Reinvestment Act) and Buy American requirements.

**SPECIAL FEATURES**

- Very low profile extruded aluminum housing and mount bracket blend seamlessly with structural metal frames
- Remote power supply for 10W and 20W BB and AC model single fixtures, or Central Battery System power for RE model multiple fixtures.
- Option for 20 watt models to operate for 2 hours in emergency mode
- Options for mount bracket height, from 2" to 5"
- Standard finishes include Brushed Aluminum, Satin White, Bronze or Black. Custom colors available on request
- Custom satin finishes for extended outdoor use are available to match any surface
- IP68 housing seals against heavy water spray and fine dust
- Universal side or top mount
- Wide lighting distribution designed for entrance walkways
- 10W or 20W emergency power models
- Optional normal-on switch allows timed control of night lighting
- Self-Test Diagnostics is standard for central battery models and optional for integral battery models
- Certified IP68 housing withstands multi direction water spray and fine dust ingress
- Wall mount version available (see Series MAE)
- Standard CRI 5000K, with optional color correction filters for 2900K, 3200K and 3800K.
- Code compliant emergency lighting layouts provided

**FIXTURE ORDERING INFORMATION** EXAMPLE: MUEBB10AW-DG

MODEL SERIES	OPTION	POWER	HOUSING COLOR	MOUNT	OPTIONS
MUE	RE Central Battery BB Battery backup (includes RPS) AC No battery (includes RPS)	10 10 Watts emergency and normal on power 20 20 Watts emergency and normal on power	W Satin White A Aluminum B Dark Bronze X Custom	T Top W Wall	DG Self-test diagnostics (BB models only) SD Night Lighting Control Switch for models with DG option (120/277VAC) SB120 Night Lighting Control Switch for standard SB models (120VAC) SB277 Night Lighting Control Switch for standard SB models (277VAC) REC 20W RPS panel recessed mount 2EM 2 hrs emergency operation for BB models CW1 Color temp. ~3800K CW2 Color temp. ~3200K CW3 Color temp. ~2900K DAC Dual AC Input 2HT 2" Mount Bracket height 5HT 5" Mount Bracket height

**D-Series Size 2 LED Wall Luminaire**

PROJECT: \_\_\_\_\_  
 TYPE: \_\_\_\_\_  
 CATALOG #: \_\_\_\_\_

**Mullion Mount Outdoor Emergency Egress Lighting**

**OVERVIEW**  
 Linear LED outdoor egress with both emergency lighting and night lighting function. The MUE series is designed to mount directly on mullion frames used in typical glass panel entrance structures, with vertical mounting surface as small as 2". High efficiency LEDs and full 90° cut-off provide uniform emergency and night lighting on the extended egress pathway. All models are outdoor rated, UL wet location, ADA compliant, and exceed requirements of UL Standard 524 and NFPA 101. Designed and manufactured in the USA, complies with ARRA (American Recovery and Reinvestment Act) and Buy American requirements.

**SPECIAL FEATURES**

- Very low profile extruded aluminum housing and mount bracket blend seamlessly with structural metal frames
- Remote power supply for 10W and 20W BB and AC model single fixtures, or Central Battery System power for RE model multiple fixtures.
- Option for 20 watt models to operate for 2 hours in emergency mode
- Options for mount bracket height, from 2" to 5"
- Standard finishes include Brushed Aluminum, Satin White, Bronze or Black. Custom colors available on request
- Custom satin finishes for extended outdoor use are available to match any surface
- IP68 housing seals against heavy water spray and fine dust
- Universal side or top mount
- Wide lighting distribution designed for entrance walkways
- 10W or 20W emergency power models
- Optional normal-on switch allows timed control of night lighting
- Self-Test Diagnostics is standard for central battery models and optional for integral battery models
- Certified IP68 housing withstands multi direction water spray and fine dust ingress
- Wall mount version available (see Series MAE)
- Standard CRI 5000K, with optional color correction filters for 2900K, 3200K and 3800K.
- Code compliant emergency lighting layouts provided

**FIXTURE ORDERING INFORMATION** EXAMPLE: DSWY2 LED 30C 700 40K T3M MVOLT DDBXTD

Series	LEDs	Drive Current	Color temperature	Distribution	Voltage	Mounting	Control Options
DSWY2 LED	20 LEDs 30 LEDs 40 LEDs 50 LEDs 60 LEDs 70 LEDs 80 LEDs 90 LEDs 100 LEDs 110 LEDs 120 LEDs 130 LEDs 140 LEDs 150 LEDs 160 LEDs 170 LEDs 180 LEDs 190 LEDs 200 LEDs	350 350mA 500 500mA 700 700mA 1000 1000mA 1300 1300mA 1700 1700mA 2100 2100mA 2500 2500mA 3000 3000mA 3500 3500mA 4000 4000mA 4500 4500mA 5000 5000mA 5500 5500mA 6000 6000mA 6500 6500mA 7000 7000mA 7500 7500mA 8000 8000mA 8500 8500mA 9000 9000mA 9500 9500mA 10000 10000mA	3000 K 4000 K 5000 K	T25 T35 T45 T55 T65 T75 T85 T95 T105 T115	MVOLT 277V-480V 120V 208V 240V 277V 347V 480V	Shipped included SPA Square pole mounting RPA Roundpole mounting WPA Wall Mount SFRMA Square pole arm mounting adapter RFRMA Roundpole arm mounting adapter Shipped separately NMA 3000DU Most arm mounting socket adapters (open & closed)	

**FlavorSum**  
**FACILITY EXPANSION PROJECT**  
 3680 Stadium Park Way, Kalamazoo, MI 49009

REVISIONS

#	ISSUE DATE	DESCRIPTION
1	05/11/2022	ZBA REVIEW
2	06/17/2022	50% CD
3	07/06/2022	ZBA REVIEW
4	07/28/2022	90% REVIEW
5	07/29/2022	ZBA REVIEW

LUMINAIRE LEGEND			22083 FLAVORSUM WAREHOUSE ADDITION				
MARK	DESCRIPTION	MANUFACTURER	MODEL NUMBER	APPROVED EQUALS	LAMP	MOUNTING	COMMENTS
DA	LOADING DOCK LIGHT	PHOENIX	DLAW2-12LED-SP-60	BY APPROVAL ONLY	1200LM 400K 9W	WALL MT @ 7'-0" AFF	
HA	NORMAL HIGH-BAY LIGHT FIXTURE	LITHONIA	XB-L24-2400LM-FRGL-MVOLT- GZ10-40K-80CRI-SBGR6-DNA-D	HUBBELL COOPER	2400LM 5000K 80CRI 155W	STEM @ 30'-0" AFF U.N.O.	INTEGRAL MOTION SENSOR CONTROL
HB	EMERGENCY HIGH-BAY LIGHT FIXTURE CLASS I, DIVISION I RATED	SOLAS RAY	H122-175-50-EX-UJ-GR-U8	HUBBELL COOPER	21150LM 5000K 80CRI 175W	STEM @ 30'-0" AFF U.N.O.	
IA	INDUSTRIAL STRIP FIXTURE	LITHONIA	CLX-LED LINEAR-148-3000LM-FDL- MVOLT-40K-80CRI-VH-H3CM12	COLUMBIA COOPER	3000LM 400K 80CRI 20.3W	CHAIN @ 8'-0" AFF	
RA	2x4 LED FLAT PANEL	LITHONIA	CPANL-2X4-AL08-SWW7-M2	COLUMBIA COOPER	4000LM 4000K 80CRI 36W	RECESSED	
XA	EMERGENCY EXIT SIGN	LITHONIA	EXRG-ELM6	COMPASS COOPER	N/A N/A 1W	WALL MT @ 9' AFF	FACES AND ARROWS PER PLAN
XB	EMERGENCY EXIT SIGN CLASS I, DIVISION I RATED	SOLAS RAY	HLWLEZU1-R-G-EM-SDT	HUBBELL COOPER	N/A N/A 3W	WALL MT @ 9' AFF	FACES AND ARROWS PER PLAN

# ELECTRICAL SYMBOL LEGEND

**LIGHT FIXTURES**

- CEILING SURFACE MOUNT
- WALL SURFACE MOUNT
- PENDANT MOUNT
- RECESSED DOWNLIGHT
- RECESSED WALLWASH
- RECESSED FIXTURE
- SURFACE MOUNT FIXTURE
- NIGHT LIGHT OR EM FIXTURE
- INDUSTRIAL OR STRIP FIXTURE
- DIRECTIONAL FLOOD
- BATTERY OPERATED EMERG. LIGHT
- POLE LIGHT
- POLE LIGHT- DECORATIVE
- UNDERCABINET LIGHT
- WALL SURFACE MOUNT LINEAR TYPE
- LINEAR PENDANT
- RECESSED WALLMOUNT
- EXIT LIGHT- WALL
- EXIT LIGHT- CEILING
- (ARROW INDICATES DIRECTION, SHADING INDICATES FACES)
- LETTER ADJACENT INDICATES FIXTURE TYPE

**POWER/COMM.**

- ⊖ SPECIAL RECEPTACLE AS NOTED
- ⊖ DUPLICATION RECEPT. 20A, 125V, MOUNT 18" A.F.F.
- ⊖ COMBINATION SWITCH AND RECEPTACLE MOUNT 48" A.F.F.
- ⊖ DOUBLE DUPLEX RECEPT. 20A, 125V, MOUNT 18" A.F.F. DOUBLE GANG PLATE
- ⊖ ELECTRIC WATER COOLER RECEPT. 20A, 125V, COORDINATE MOUNTING HEIGHT WITH EWC
- ⊖ COUNTERTOP DUPLEX RECEPTACLE 20A, 125V U.O.N.
- ⊖ COUNTERTOP DOUBLE DUPLEX RECEPTACLE 20A, 125V U.O.N.
- ⊖ ISOLATED GROUND RECEPTACLE 20A, 125V, MOUNT AT 18" A.F.F. U.N.O.
- ⊖ PEDESTAL DUPLEX RECEPTACLE 20A, 125V
- ⊖ SPLIT WIRED DUPLEX RECEPTACLE 20A, 125V, MOUNT AT 18" A.F.F. U.N.O.
- ⊖ TAMPER RESISTANT RECEPTACLE 20A, 125V, MOUNT AT 18" A.F.F. U.N.O.
- ⊖ 3 GA USB PORTS
- ⊖ DUPLEX FLOOR RECEPTACLE 20A, 125V, FLUSH IN FLOOR
- ⊖ COMBINATION DUPLEX FLOOR RECEPTACLE & TELE./DATA OUTLET, FLUSH IN FLOOR, ROUTE 1" C. TO ACCESSIBLE CEILING SPACE FOR TELE. FLOORBOX WITH FURNITURE WHIPS FOR POWER AND DATA, FLUSH IN FLOOR, ROUTE 1" C. TO ACCESSIBLE CEILING SPACE FOR TELE. SEE PLANS OR SPECS FOR DETAILS
- ⊖ DUPLEX RECEPTACLE MOUNTED FLUSH IN CEILING FACING DOWN
- ⊖ CEILING MOUNT RETRACTABLE CORD REEL (RECEPT TYPE AS SHOWN ON PLAN) RIGID MOUNT TO STRUCTURE VIA INSTRUT, RETRACTED RECEPT HEIGHT = 6'-6" AFF
- ⊖ POWER POLE
- ⊖ SPECIAL CONNECTION AS NOTED
- ⊖ TELEPHONE/DATA OUTLET (MOUNT ABOVE COUNTERTOP, PROVIDE 4-SQUARE BOX WITH SINGLE-GANG MUD RING AND 1 1/2" INTO ACCESSIBLE CEILING SPACE, U.N.O.)
- ⊖ MOUNTED ABOVE COUNTER (MOUNT ABOVE COUNTERTOP, PROVIDE 4-SQUARE BOX WITH SINGLE-GANG MUD RING AND 1 1/2" INTO ACCESSIBLE CEILING SPACE, U.N.O.)
- ⊖ TELEPHONE/DATA OUTLET MOUNTED FLUSH IN CEILING FACING DOWN
- ⊖ SINGLE PHASE MOTOR
- ⊖ THREE PHASE MOTOR
- ⊖ THERMOSTAT
- ⊖ PUSH BUTTON STATION AS NOTED
- ⊖ EXISTING PANELBOARD SEE ONE-LINE DIAGRAM (480/277V) OR (480V)
- ⊖ EXISTING PANELBOARD SEE ONE-LINE DIAGRAM (240/120V OR 208/120V)
- ⊖ NEW PANELBOARD SEE ONE-LINE DIAGRAM (480/277V) OR (480V)
- ⊖ NEW PANELBOARD SEE ONE-LINE DIAGRAM (240/120V OR 208/120V)
- ⊖ CONTACTOR, MOUNT AT 5'-0" A.F.F., U.N.O.
- ⊖ DRY TYPE TRANSFORMER
- ⊖ NON-FUSIBLE DISCONNECT SWITCH
- ⊖ FUSIBLE DISCONNECT SWITCH
- ⊖ MAGNETIC STARTER
- ⊖ COMBINATION STARTER-DISCONNECT

**FIRE ALARM**

- ⊖ FAAP WALL MOUNTED FIRE ALARM ANNUNCIATOR PANEL, MOUNT AT 5'-0" TO CENTER OF BOX
- ⊖ NAC WALL MOUNTED FIRE ALARM NOTIFICATION APPLIANCE CIRCUIT PANEL, MOUNT AT 5'-0" TO CENTER OF BOX, 120V POWER RECD.
- ⊖ FACP WALL MOUNTED SEMI-FLUSH MAIN CONTROL PANEL, MOUNT AT 5'-0" TO CENTER OF BOX, 120V POWER RECD.
- ⊖ AM INDIVIDUAL ADDRESSABLE MODULE (AM)
- ⊖ SD DUCT SMOKE DETECTOR
- ⊖ CD CEILING MOUNTED PHOTOELECTRIC SMOKE DETECTOR
- ⊖ PD MANUAL PULL STATION MOUNT AT 48" A.F.F. TO CENTER OF BOX
- ⊖ FS SPRINKLER VALVE FLOW SWITCH
- ⊖ HD CEILING MOUNTED HEAT DETECTOR
- ⊖ PD WALL MOUNTED FIRE ALARM HORN, MOUNT AT 6'-8" A.F.F. TO CENTER OF BOX
- ⊖ PD WALL MOUNTED FIRE ALARM STROBE, MOUNT AT 6'-8" A.F.F. TO CENTER OF BOX
- ⊖ PD CEILING MOUNTED FIRE ALARM STROBE
- ⊖ PD WALL MOUNTED COMBINATION FIRE ALARM HORN/STROBE, MOUNT AT 6'-8" A.F.F. TO CENTER OF BOX
- ⊖ PD CEILING MOUNTED COMBINATION FIRE ALARM HORN/STROBE
- ⊖ PD FIRE ALARM CONNECTION TO SMOKE/FIRE DAMPER
- ⊖ PD FIRE ALARM SPECIAL CONNECTION

**SOUND**

- ⊖ S SPEAKER- CLG FLUSHMOUNT
- ⊖ S SPEAKER- WALLMOUNT, MOUNT AT 7'-0" A.F.F., U.N.O.
- ⊖ M MICROPHONE INPUT
- ⊖ A AUXILIARY INPUT
- ⊖ O HEADSET OUTLET
- ⊖ V VOLUME CONTROL
- ⊖ S SPEAKER- CLG FLUSHMOUNT VANDAL-RESISTANT
- ⊖ S CLOCK/SPEAKER WALLMOUNT SEMI-FLUSH

**SYMBOL LEGEND NOTES:**

- PROVIDE CONTINUOUS GREEN GROUND WIRE FROM RECEPTACLES TO PANEL. COMMON GROUND WIRE MAY BE USED FOR RECEPTACLES ON THE SAME CIRCUIT.
- DO NOT USE BACK WIRE TERMINALS (SPRING CONNECTION) ON WIRING DEVICES. USE SIDE SCREW TERMINALS FOR CONDUCTOR CONNECTION.
- VERIFY DEVICE AND/OR COVER PLATE COLOR WITH ARCHITECT.

**ONE-LINE DIAGRAM**

- ⊖ AUTOMATIC TRANSFER SWITCH
- ⊖ BYPASS ISOLATION AUTOMATIC TRANSFER SWITCH
- ⊖ CAPACITOR
- ⊖ 3P CIRCUIT BREAKER
- ⊖ FUSED SWITCH
- ⊖ GROUND CONNECTION
- ⊖ NON-FUSIBLE DISCONNECT SWITCH X=SW, SIZE, Z=NO. OF POLES, MT. AT 5'-0" A.F.F., U.N.O.
- ⊖ FUSIBLE DISCONNECT SWITCH X=SW, SIZE, Y=FUSE SIZE, Z=NO. OF POLES, MT. AT 5'-0" A.F.F., U.N.O. N=STARTER SIZE, MT. AT 5'-0" A.F.F., U.N.O. N=STARTER SIZE, Y=FUSE, MT. AT 5'-0" A.F.F., U.N.O.
- ⊖ MAGNETIC STARTER
- ⊖ COMBINATION STARTER-DISCONNECT
- ⊖ TRANSFORMER
- ⊖ CURRENT TRANSFORMER (RATIO INDICATED)
- ⊖ POTENTIAL TRANSFORMER (RATIO INDICATED)
- ⊖ UTILITY METER
- ⊖ CUSTOMER METER
- ⊖ SURGE PROTECTION DEVICE

**CONDUIT/WIRE**

- NEW
- - - UNDERGROUND
- NEW POWER HOMERUN
- EXISTING TO REMAIN
- WIRE LINE- CONTINUES
- CONDUIT STUB (W/MARKER)
- VERTICAL CONDUIT RUN
- FLEXIBLE CONNECTION
- LOW VOLTAGE
- INDICATES LINE CONTINUES
- CORD W/PLUG

**SWITCHES**

- ⊖ SPST, 20A, 120/277V
- ⊖ DIMMER SWITCH
- ⊖ FUSED SWITCH
- ⊖ LOW VOLTAGE SWITCH (SINGLE ON/OFF/DIM)
- ⊖ LOW VOLTAGE ON/OFF/DIM SCENE SWITCH, # INDICATES NUMBER OF SCENES
- ⊖ MANUAL MOTOR STARTER W/THERMAL OVERLOAD FOR FRAC. HP MOTORS
- ⊖ LOW VOLTAGE SWITCH, 1-BUTTON (ON/OFF)
- ⊖ LOW VOLTAGE SWITCH, 3-BUTTON (ON/OFF, RAISE, LOWER)

**OCCUPANCY SENSOR**

- ⊖ DUAL-TECHNOLOGY OCCUPANCY SENSOR (CEILING MOUNTED)
- ⊖ INFRARED OCCUPANCY SENSOR (CEILING MOUNTED)
- ⊖ LINE-VOLTAGE INFRARED OCCUPANCY SENSOR (CEILING MOUNTED)
- ⊖ OCCUPANCY SENSOR POWER PACK
- ⊖ PHOTOCELL
- ⊖ PARTITION SENSOR
- ⊖ ULTRASONIC OCCUPANCY SENSOR (CEILING MOUNTED)
- ⊖ VACANCY SENSOR (WALL SWITCH SENSOR, DUAL TECHNOLOGY), WALL MOUNT @ 48" A.F.F.
- ⊖ VACANCY SENSOR WALL SWITCH, DUAL-TECH W/ 0-10VDC DIMMING, WALL MOUNT @ 48" AFF

SITE LUMINAIRE LEGEND			JOB NAME AND NUMBER					
MARK	DESCRIPTION	MANUFACTURER	MODEL NUMBER	MOUNTING	MOUNTING MODEL NUMBER	APPROVED EQUALS	LAMP	COMMENTS
EXBA	BUILDING MOUNT EGRESS DOOR WALL PACK	LITHONIA	DSXV1-LED-300-530-40K-T3M-MVOLT-PPE-CDOBXD	WALL MT @ 8'-6"		BY APPROVAL ONLY	4288LM 4000K 70 CRI 35W	INTEGRAL PHOTOCCELL DUSK-TO-DAWN CONTROL
EXMUE	MULLION MOUNT EGRESS DOOR FIXTURE	SGNTEX	MUE-AC-10A-W	MULLION MT @ 9'-6"			494LM 5000K 70CRI 10W	
EXSA2 HS	POLE MOUNT TYPE II LIGHT FIXTURE	LITHONIA	DSXI-LED-P6-40K-T2M-MVOLT-RPA-PIRH1FC3V-HS-CDOBXD	POLE MT @ 25'-0"	RTA-25'-6E-OM19-CDOBXD	HUBBELL COOPER	19999LM 4000K 70 CRI 155W	INTEGRAL PHOTOCCELL DUSK-TO-DAWN CONTROL AND MOTION SENSOR FOR OCCUPANCY, BASED AUTOMATIC DIMMING
EXSA4	POLE MOUNT TYPE IV LIGHT FIXTURE	LITHONIA	DSXI-LED-P6-40K-T4M-MVOLT-RPA-PIRH1FC3V-CDOBXD	POLE MT @ 25'-0"	RTA-25'-6E-OM19-CDOBXD	HUBBELL COOPER	19635LM 4000K 70 CRI 155W	INTEGRAL PHOTOCCELL DUSK-TO-DAWN CONTROL AND MOTION SENSOR FOR OCCUPANCY, BASED AUTOMATIC DIMMING
EXSA5	POLE MOUNT TYPE V LIGHT FIXTURE	LITHONIA	DSXI-LED-P6-40K-T5M-MVOLT-RPA-PIRH1FC3V-CDOBXD	POLE MT @ 25'-0"	RTA-25'-6E-OM19-CDOBXD	HUBBELL COOPER	20000LM 4000K 70 CRI 207W	INTEGRAL PHOTOCCELL DUSK-TO-DAWN CONTROL AND MOTION SENSOR FOR OCCUPANCY, BASED AUTOMATIC DIMMING
EXSB	BUILDING MOUNT AREA LIGHT WALL PACK	LITHONIA	DSXV2-LED-300-700-40K-TF3M-MVOLT-PPE-CDOBXD	WALL MT @ 17'-6"		HUBBELL COOPER	6062LM 4000K 70 CRI 71W	INTEGRAL PHOTOCCELL DUSK-TO-DAWN CONTROL
BA	BUILDING MOUNT EGRESS DOOR WALL PACK	LITHONIA	DSXV1-LED-300-530-40K-T3M-MVOLT-PPE-CDOBXD	WALL MT @ 8'-6"		HUBBELL COOPER	416LM 4000K 70 CRI 35W	INTEGRAL PHOTOCCELL DUSK-TO-DAWN CONTROL
SB	BUILDING MOUNT AREA LIGHT WALL PACK	LITHONIA	DSXV2-LED-300-700-40K-TF3M-MVOLT-PIRH1FC3V-CDOBXD	WALL MT @ 17'-6"		HUBBELL COOPER	8000LM 4000K 70CRI 71W	INTEGRAL PHOTOCCELL DUSK-TO-DAWN CONTROL AND MOTION SENSOR FOR OCCUPANCY, BASED AUTOMATIC DIMMING
SA2HS	POLE MOUNT TYPE II LIGHT FIXTURE	LITHONIA	DSXI-LED-P6-40K-T2M-MVOLT-RPA-PIRH1FC3V-HS	POLE MT @ 25'-0"	RTA-25'-6E-OM19-CDOBXD	HUBBELL COOPER	19999LM 4000K 70 CRI 155W	INTEGRAL PHOTOCCELL DUSK-TO-DAWN CONTROL AND MOTION SENSOR FOR OCCUPANCY, BASED AUTOMATIC DIMMING
SA3HS	POLE MOUNT TYPE III LIGHT FIXTURE	LITHONIA	DSXI-LED-P6-40K-T3M-MVOLT-RPA-PIRH1FC3V-HS	POLE MT @ 25'-0"	RTA-25'-6E-OM19-CDOBXD	HUBBELL COOPER	19635LM 4000K 70 CRI 155W	INTEGRAL PHOTOCCELL DUSK-TO-DAWN CONTROL AND MOTION SENSOR FOR OCCUPANCY, BASED AUTOMATIC DIMMING
SA4HS	POLE MOUNT TYPE IV LIGHT FIXTURE	LITHONIA	DSXI-LED-P6-40K-T4M-MVOLT-RPA-PIRH1FC3V-HS	POLE MT @ 25'-0"	RTA-25'-6E-OM19-CDOBXD	HUBBELL COOPER	4000K 70 CRI 155W	INTEGRAL PHOTOCCELL DUSK-TO-DAWN CONTROL AND MOTION SENSOR FOR OCCUPANCY, BASED AUTOMATIC DIMMING.

LIGHTING CONTROLS				JOB NAME AND NUMBER	
MARK	EQUIPMENT	DESCRIPTION	DETAIL	COMMENTS	COMMENTS
⊖	MANUAL SWITCH	MANUAL ON/MANUAL OFF	N/A	MANUAL CONTROL ONLY FOR SAFETY, ROOM CONTAINS ELECTRICAL AND MECHANICAL EQUIPMENT	
⊖	WALL BOX SENSOR SWITCH	MANUAL ON/AUTO OFF	1/E601		
⊖	POWER PACKS W/ DIMMING	MANUAL ON/AUTO OFF, 0-10VDC DIMMING	2/E601	MANUAL ON AND DIMMING VIA SWITCHES, AUTO OFF VIA SENSORS	
⊖	TIMELCLOCK	AUTO ON/OFF	N/A	AUTO ON/OFF VIA MECHANICAL TIMELCLOCK SCHEDULE	
⊖	INTEGRAL MOTION SENSOR	AUTO ON/OFF	N/A	AUTO ON/OFF VIA INTEGRAL MOTION SENSOR	

**NOTES:**

- SENSOR TECHNOLOGY PER PLANS
- DO NOT DIM UNDERCABINET LIGHTING

# ABBREVIATIONS

Ø PHASE	FS FUSIBLE SWITCH	OH OVERHEAD
A AMP	FVNR FULL VOLTAGE NON-REVERSING	OVLD OVERLOAD
AB AMP BREAKER	G GROUNDING CONDUCTOR	P POLE
ABV ABOVE	GC GENERAL CONTRACTOR	PA PUBLIC ADDRESS
AC ALTERNATING CURRENT	GD GARBAGE DISPOSAL	PB PULLBOX
AC-# AIR CONDITIONER	GFCI/GFI GROUND FAULT CIRCUIT INTERRUPTER	PC PHOTOCELL
ADJ ADJACENT	GFI GROUND FAULT CIRCUIT INTERRUPTER	PC PLUMBING CONTRACTOR
AF AMP FUSE, AMP FRAME	GND GROUND	PH PHASE
AFF ABOVE FINISH FLOOR	GRS GALVANIZED RIGID STEEL	PNL PANEL
AIC AMPERES INTERRUPTING CAPACITY	H HEIGHT, HIGH	POC POINT OF CONNECTION
AL ALUMINUM	HACR HEATING, AC & REFRIG	(R) RELOCATE(D)
ASR AMP SWITCH RATING	HD HIGH INTENSITY DISCHARGE	RECEPT RECEPTACLE
ATS AUTOMATIC TRANSFER SWITCH	HOA HAND-OFF-AUTO	REQD REQUIRED
AV AUDIBLE/AUDIO VISUAL	HP HORSEPOWER	RLA RATED LOAD AMPS
AWG AMERICAN WIRE GAGE	IC INTERCOM	RM ROOM
BFG BELOW FINISH GRADE	ID IDENTIFICATION	RMC RIGID METAL CONDUIT
BIL BASIC IMPULSE LEVEL	IG ISOLATED GROUND	RMV REMOVE
BLDG BUILDING	JBOX JUNCTION BOX	RPLC REPLACE
C CONDUIT	KVA KILOWATTAMPS	RST RAPID START
CATV CABLE TELEVISION	KW KILOWATT	SCC SHORT CIRCUIT CURRENT
CB CIRCUIT BREAKER, CODE BLUE	LC LIGHTING CONTACTOR	SCCR SHORT CIRCUIT CURRENT RATING
CLG CEILING	LRA LOCKED ROTOR AMPS	SFM STATE FIRE MARSHAL
CL CENTER LINE	LS LIFE SAFETY BRANCH	SHT SHEET
CKT CIRCUIT	LT LIGHT	SIM SIMILAR
C.O. CONDUIT ONLY (W/PULLROPE)	LTG LIGHTING	SPEC SPECIFICATION
COND CONDUCTOR	LV LOW VOLTAGE	SPST SINGLE POLE SINGLE THROW
CR CRITICAL BRANCH	MC MECHANICAL CONTRACTOR	SQ SQUARE
CT CURRENT TRANSFORMER	MCA MINIMUM CKT AMPS	SEC SECURITY
COPPER COPPER	MCB MAIN CIRCUIT BREAKER	STB SURFACE SYSTEM TELEPHONE BOARD
D DEPTH	MCH MECHANICAL	SURF SURFACE
DC DIRECT CURRENT	MFR MANUFACTURER	SW SWITCH
DIA DIAMETER	MFS MAIN FUSIBLE SWITCH	T TERMINAL
DISC DISCONNECT	ML MAIN LUGS ONLY	TC TIME CLOCK
DIST DISTRIBUTION	MOC Maximum Overcurrent Protection	TELECO TELEPHONE COMPANY
DPST DOUBLE POLE SINGLE THROW	MSB MAIN SWITCHBOARD	TS TIME SWITCH
DW DISHWASHER	MOUNT MOUNTING HEIGHT	TSD TIME SWITCH OVERRIDE
EM EMERGENCY	MT MOUNTING HEIGHT	TX TRANSFORMER
(E) EXISTING	MTS MANUAL TRANSFER SWITCH	TYP TYPICAL
EA EACH	MW MICROVAPE	UC UNDERCABINET, UNDERCOUNTER
EC ELECTRICAL CONTRACTOR	N NEUTRAL (GROUNDED CONDUCTOR)	UG UNDERGROUND
ELEC ELECTRICAL	(N) NEW	UGPS UNDERGROUND FULL SECTION
EM EMERG BATTERY BACKUP	NEMA 3R	UL UNDERWRITERS LABORATORIES
EOL END OF LINE	NC NORMALLY CLOSED	UNO UNLESS NOTED OTHERWISE
EQUIP EQUIPMENT	NEC NATIONAL ELECTRICAL CODE	V VOLT
ES ENERGY SAVING	NEMA MANUFACTURER'S ASSOCIATION	VAC VOLT AMPERES
(EXR) (E) TO BE (R)	NIC NOT IN CONTRACT	VLT VOLT ALTERNATING CURRENT
EXT EXTERIOR	NL NIGHT LIGHT	VOL VOLTAGE
(F) FUTURE	NO NORMALLY OPEN	VANDL VANDAL-RESISTANT
FA FIRE ALARM	NTS NOT TO SCALE	WR WIDHT, WATT, WIRE
FBO FURNISHED BY OTHERS	OC ON CENTER	WTR WEATHERPROOF
FLA FULL LOAD AMPS	ODP OVERCURRENT PROTECTION	#F INDICATES MOUNTING HEIGHT AFF
FLR FLOOR	OD OUTSIDE DIAMETER	

REVISIONS					
NO.	ISSUE DATE	DESCRIPTION	100% CD	50% CD	100% REVIEW SET
1	06/17/2022	PLAN REVIEW SET			
2	06/27/2022	2DA REVIEW			
3	07/06/2022	90% REVIEW			
4	07/26/2022	100% REVIEW			
5	07/29/2022	2DA REVIEW			

Issue Date: 07/28/2022  
Schley Nelson Architects  
Project No.

22-107

Sheet Name:  
ELECTRICAL SYMBOL FIXTURE LEGEND

Sheet No.  
E100

Copyright © 2022  
Schley Nelson Architects, Inc.

FlavorSum

FACILITY EXPANSION PROJECT

3680 Stadium Park Way, Kalamazoo, MI 49009

This page has been intentionally left blank for printing purposes.

COMPREHENSIVE ENGINEERING  
 4650 Plainfield Avenue, NE  
 Grand Rapids, MI 49525  
 616-365-9933

**FLAVORSUM**

Project No. 22083  
 July 5, 2022

PROPERTY AREA      474,525 SF                      10.89 ACRES                      (EXCLUDING ROW)

**Proposed Retention Basin Volume**

	<u>Area (sf)</u>	<u>Area (acres)</u>	<u>'C' factor</u>	<u>Imp. Area (sf)</u>
BLDG Roof =	66,845	1.53	0.95	63,502
Pavement/Sidewalk	96,102	2.21	0.95	91,297
Turf	311,579	7.15	0.10	31,158
Total Site Area =	474,525	10.89		185,957
Weighted Site 'C' factor =			<b>0.39</b>	

**Allowable Discharge**

Permeability Rate (K)	<b>7.8 in/hr</b>
Adjusted Perm. Rate (50% decrease)	3.9 in/hr
Length of Infiltration Area	
Width of Infiltration Area	
Effective Infiltration Area	24,299 sft
<b>Infiltration out =</b>	<b>2.19 cft/sec</b>
<b>Total Qout =</b>	<b>2.19 cft/sec</b>

**Detention Basin Sizing**

<b>Time</b>	<b>Time</b>	<b>I<sub>100-yr</sub></b>	<b>CI<sub>100A</sub></b>	<b>Allowable Discharge</b>	<b>CI<sub>100A</sub>- Dis.</b>	<b>Storage</b>
(min)	(hr)	(in/hr)	(cfs)	(cfs)	(cfs)	(cubic feet)
10.0	0.17	7.62	32.8	2.19	30.6	18,358
20.0	0.33	5.60	24.1	2.19	21.9	26,285
30.0	0.50	4.40	18.9	2.19	16.7	30,132
40.0	0.67	3.95	17.0	2.19	14.8	35,529
50.0	0.83	3.50	15.1	2.19	12.9	38,602
60.0	1.00	3.05	13.1	2.19	10.9	39,351
70.0	1.17	2.87	12.3	2.19	10.1	42,597
80.0	1.33	2.68	11.5	2.19	9.4	44,895
90.0	1.50	2.50	10.8	2.19	8.6	46,247
120.0	2.00	1.95	8.4	2.19	6.2	44,622
180.0	3.00	1.49	6.4	2.19	4.2	45,694
270.0	4.50	1.18	5.1	2.19	2.9	47,060
360.0	6.00	0.88	3.8	2.19	1.6	34,105

**Required Pond Volume:**

NOAA ATLAS 14, VOL 8, VERSION 2, KALAMAZOO, 100 YEAR STORM EVENT	
Total Storage Required	= 47,060 cubic feet

**AVAILABLE RETENTION POND STORAGE:**

**SOUTH POND ENLARGED**

OVERFLOW ELEVATION = 953.50				
100YR ELEV = 952.34				
<u>ELEVATION</u>	<u>AREA(SF)</u>	<u>AVE(SF)</u>	<u>DEPTH(FT)</u>	<u>VOLUME(CF)</u>
951	2,502			0
952	5,902	4,202	1	4,202
953	9,429	7,666	1	7,666
<b>AVAILABLE POND VOLUME =</b>				<b>11,868 CF</b>

**EAST POND**

OVERFLOW ELEVATION = 953.50				
100YR ELEV = 952.34				
<u>ELEVATION</u>	<u>AREA(SF)</u>	<u>AVE(SF)</u>	<u>DEPTH(FT)</u>	<u>VOLUME(CF)</u>
950	4,313			
951	5,636	4,975	0.5	2,487
952	8,360	6,998	1	6,998
953	11,188	9,774	1	9,774
<b>AVAILABLE POND VOLUME =</b>				<b>19,259 CF</b>

**NORTH POND ENLARGED**

OVERFLOW ELEVATION = 953.50				
100YR ELEV = 952.34				
<u>ELEVATION</u>	<u>AREA(SF)</u>	<u>AVE(SF)</u>	<u>DEPTH(FT)</u>	<u>VOLUME(CF)</u>
				0
949	3250			
950	7088	5,169	1	5,169
951	11,053	9,071	1	9,071
952	15,144	13,099	1	13,099
953	19,360	17,252	1	17,252
<b>AVAILABLE POND VOLUME =</b>				<b>44,590 CF</b>

**TOTAL AVAILABLE STORAGE VOLUME:**

TOTAL VOLUME = 75,717 CF