



CITY OF ROOSEVELT PARK
City of Roosevelt Park
PLANNING COMMISSION
AGENDA
September 25, 2023
6:00 p.m.

1. Call to Order
2. Roll Call
3. Approve minutes of the May 22, 2023 regular meeting

4. Public Hearing-None
5. Unfinished Business-None

6. New Business
 - a. Site Plan Review-3145 Henry Street-Consumers Credit Union

7. Commission Members Questions/Comments

8. Public Comment

9. Adjournment

American Disability Act Compliance: For access to open meetings of the City Council and any of its committees or subcommittees, the City of Roosevelt Park will provide necessary reasonable auxiliary aids and services, to individuals with disabilities who want to attend the meeting, upon twenty-four hour notice to the City of Roosevelt Park. Individuals with disabilities requiring auxiliary aids or services should contact the City of Roosevelt Park, City Clerk by writing or calling, 231-755-3721 or call the following: TDD: Dial 7-1-1 and request a representative to dial 231-755-3721.



City of Roosevelt Park
Planning Commission
Meeting Minutes
May 22, 2023
6:00 pm

This meeting was called to order by Commissioner Bob Jakubowski at 6:00 p.m.

PRESENT: Commissioners: Mayor Aaron Langlois, Michael Sutton, Richard Isacson, City Manager Jared Olson, Amber Weerstra-Berdinski, Joshua Ohst, Donald Nilson-Hinton

ABSENT: Tyra Jonas

2023-034 **Roll Call**
City Clerk Ann Wisniewski called roll.

2023-035 **APPROVAL OF MINUTES:**
Mayor Langlois moved to accept the minutes of the April 24, 2023, meeting. This motion was supported by Mayor Pro-Tem Sutton and carried unanimously.

2023-036 **PUBLIC HEARING:**
4A. SLU Request – 980 W Broadway
City Manager Olson moved to open the public hearing on a commercial Day care operation at 980 W Broadway. This was supported by Commissioner Bob Jakubowski and carried unanimously. City Manager Olson explained the purpose for the rezoning request.
Roll Call: 8 Ayes, 0 Nays, 1 Absent (Jonas) Motion Carries

- 2023-037** **PUBLIC COMMENT:** on SLU request -980 W. Broadway
Sheryl Miller owner of Explorers Learning Center shared comments.
- 2023-038** **CLOSE PUBLIC HEARING: SLU** Request 980 W Broadway
Mayor Langlois moved to close the public hearing on the SLU request,
of 980 W Broadway. This was supported by Commissioner Isacson.
Roll Call: 8 Ayes, 0 Nays, 1 Absent (Jonas) Motion Carries
- 2023-039** **NEW BUSINESS:**
6A. Planning Commission Decision- SLU Request -980 W Broadway
Mayor Langlois moved to recommend the SLU request be
forwarded to the City Council for consideration as written. This
motion was supported by Mayor Pro Tem Sutton.
Roll Call: 8 Ayes, 0 Nays, 1 Absent (Jonas) motion carries.
- 6B. Site Plan Review – 3145 Henry Street – Taco Johns**
Chris Khorey from McKenna and Associates, Jeff Miller from Prein &
Newhof and Ana Pelhank from Meritage Hospitality Group presented site
plan and answered questions.
Commissioner Jakubowski moved to accept the site plan for 3145 Henry
Street Taco Johns as written. This motion was supported by Mayor
Langlois.
Roll Call: 8 Ayes, 0 Nays, 1 Absent (Jonas) motion carries.
- 2023-040** **COMMISSION MEMBERS QUESTIONS/COMMENTS:**
Commissioners asked questions.
City Manager Olson shared city updates.
- 2023-041** **PUBLIC COMMENT:**
None
- 2023-042** **ADJOURNMENT:**
The meeting was adjourned at 6:43 p.m.

Ann Wisniewski, City Clerk

FOR CITY USE

P.C. Date: Sept.25,2023
Date and Time Received 9-1-23
Received By: JDO
Date Returned if Incomplete: _____
Returned By: _____
Revised Application Recd: _____
Received By: _____

SITE PLAN REVIEW REQUEST

NOTE TO APPLICANT:

The Roosevelt Park Planning Commission meetings are held on the fourth Monday of each month at 7 p.m. at the City Hall. All applications must be submitted **30 days** prior to the next regularly scheduled Planning Commission meeting to allow City staff sufficient opportunity to conduct an administrative review prior to submission to the Planning Commission. Any application received without sufficient time for City staff to conduct review will be held until the next regularly scheduled Planning Commission meeting. An application fee of \$100.00 must be paid at the time of application.

The Planning Commission has the right to request additional information from an applicant prior to making a decision regarding the site plan application. The Planning Commission may table or hold a request for a reasonable period of time until the requested information is provided. Applicants are expected to attend the Planning Commission meeting to explain their request and to answer questions or comments from the Planning Commission or others who may be present. All meetings of the Planning Commission are open to the public.

GENERAL REQUIREMENTS:

The Planning Commission will be reviewing the proposed development's site plan to ensure conformance with the City's guidelines and regulations. The purpose of this review is to protect the health, safety and welfare of Roosevelt Park's residents and to ensure the compatible, logical development of property. The criterion that may be used in performing this review is outlined in the City's Zoning Ordinance.

In order to process a request, the applicant must submit a completed application form with the detailed information specified in Chapter 9 of the City's Zoning Ordinance. Twelve (12) copies of the application and accompanying plans/details must be submitted. This information will be forwarded to the Planning Commission with notes and comments from the City staff regarding the City's review of the application.

After completing their review of the proposed site plan, the Planning Commission will take one of the following actions:

- They will approve the proposed site plan subject to the terms, conditions and restrictions outlined in the application;
- They will approve the proposed site plan with additional terms, conditions and restrictions as determined by the Planning Commission;
- The Planning Commission will deny the proposed site plan. An explanation for the Planning Commission's denial will be provided to the applicant.

Persons aggrieved by the decision of the Planning Commission may file an appeal to have the decision reviewed by the Roosevelt Park Zoning Board of Appeals. Application forms for the Zoning Board of Appeals are available at City Hall.

**SITE PLAN REVIEW APPLICATION
REQUIRED INFORMATION:**

I. Name of Applicant/Owner requesting Planning Commission Review and Opinion.

A. Applicant

1. Name(s) CONSUMERS CREDIT UNION
2. Address(s) 7200 ELM VALLEY DR, KALAMAZOO, MI 49009
3. Phone(s) 1-800-991-2221

B. Owner of property if different than above.

1. Name(s) _____
2. Address(s) _____
3. Phone(s) _____

II. Location of Property – If a Specific Site is involved.

A. Parcel number, street name and number if assigned:

3145 HENRY ST 61-25-164-000-0041-00

B. For final site plan review, a drawing(s) indicating the all of the following information shall also be submitted with the application (such drawing shall be to scale). For preliminary site plan review, not all of the items may be required:

1. Small scale sketch of an area within one quarter (1/4) mile of the subject property showing the property location;
2. Date of preparation/revision;
3. Name, address, and professional seal of the preparer;
4. The topography of the site at a minimum of five (5) foot intervals and its relationship to adjoining land;
5. Existing man-made features;
6. Dimensions of setbacks, locations, heights and size of buildings and structures, including the locations of existing buildings or structures within one-hundred (100) feet of the property;
7. Street rights-of-way, indicating proposed access routes, internal circulation, relationship to existing rights-of-way, and curb cuts within one-hundred (100) feet of the property;
8. Proposed grading;

9. Location, sizes, and type of drainage, sanitary sewers, water services, storm sewers, and fire hydrants;
10. Location, sizes, and type of fences, landscaping, buffer strips and screening;
11. Location, sizes and type of signs and on-site lighting, including information regarding lighting levels at the edges of the site;
12. Proposed parking areas and drives. Parking areas shall be designated by lines showing the individual spaces and shall conform with the provisions of the Zoning Ordinance on parking;
13. Any public and private easements;
14. Dimensions and number of proposed lots;
15. Significant natural features, and other natural characteristics, including but not limited to open space, stands of trees, flood plains, lakes and other significant natural features;
16. Building elevations.

C. You may also include photographs or other exhibits if you feel they aid in clarifying your request.

III. Nature of Request

A detailed description of the proposed project should be provided in the space below. Be very specific in describing the project, referring to applicable sections of the Zoning Ordinance when possible. The description should include a detailed timeline for the implementation of the project. Attach additional sheets if necessary.

REDEVELOPMENT OF EXISTING PARKING INTO 2217 SF
CREDIT UNION W/ (2) DRIVE THRU LANES

IV. Basis for Approving the proposed site plan

In the space below, the applicant should outline how the proposed site plan complies with the standards for site plan approval. Attach additional sheets if necessary.

ALL STANDARDS ARE MET FOR C-R ZONING DISTRICT

V. Effect of Request on Other Properties

1. If the site plan is approved, what effect will there be regarding the increased population density thus generated on available governmental facilities?

SCREENING PROVIDED PER ORDINANCE TO ADJACENT
RESIDENTIAL PARCELS

2. Will a substantial change be effected in the character of the neighborhood or will a substantial detriment be created for adjoining properties?

NO - LESS INTENSE THAN PREVIOUS USE

PROCESSING PROCEDURE:

- I. Upon completion of the above information and submission of the application and related materials and/or exhibits, the request will be scheduled to appear before the Planning Commission. This meeting will only be scheduled when it is found that your application is complete and all information is included.

- II. The Planning Commission will consider the request at their next scheduled meeting. The applicant will be given an opportunity to explain their request to the Planning Commission. It will be at the discretion of the Chair of the Planning Commission whether or not to allow or hear public comments or questions regarding the proposed site plan. The Planning Commission will consider all the information provided to them regarding the request. This will include staff reports and advisories. Once the Planning Commission has gathered all of the information necessary to make a decision, they may take the following actions:
 - A. Approve the proposed site plan subject to the terms and conditions set forth in the application.
 - B. Approve the proposed site plan subject to amended and/or additional terms and conditions they feel are reasonable and appropriate to maintain the public health, safety and welfare. This may also include financial or other guarantees that will ensure compliance with the stated terms of approval.
 - C. Deny the request as not being in the public interest and as being contrary to the basic spirit and intent of the Zoning Ordinance. An explanation for the denial will be provided to the applicant.
 - D. Table the request pending clarification of any additional problems or questions that may arise as a result of the proposed site plan.

ACKNOWLEDGEMENT AND CERTIFICATION:

It is hereby acknowledged that the applicant(s) has fully read and completed the above application. It is also understood that any approval of the Planning Commission involving site improvement use and/or construction does not relieve the applicant from obtaining other applicable authorization, (for example: site plan, building and safety and engineering approval, etc.).

The applicant(s) also understands that the submission of incomplete or inaccurate information will only result in delays.



Signature of Petitioner

9/11/2023

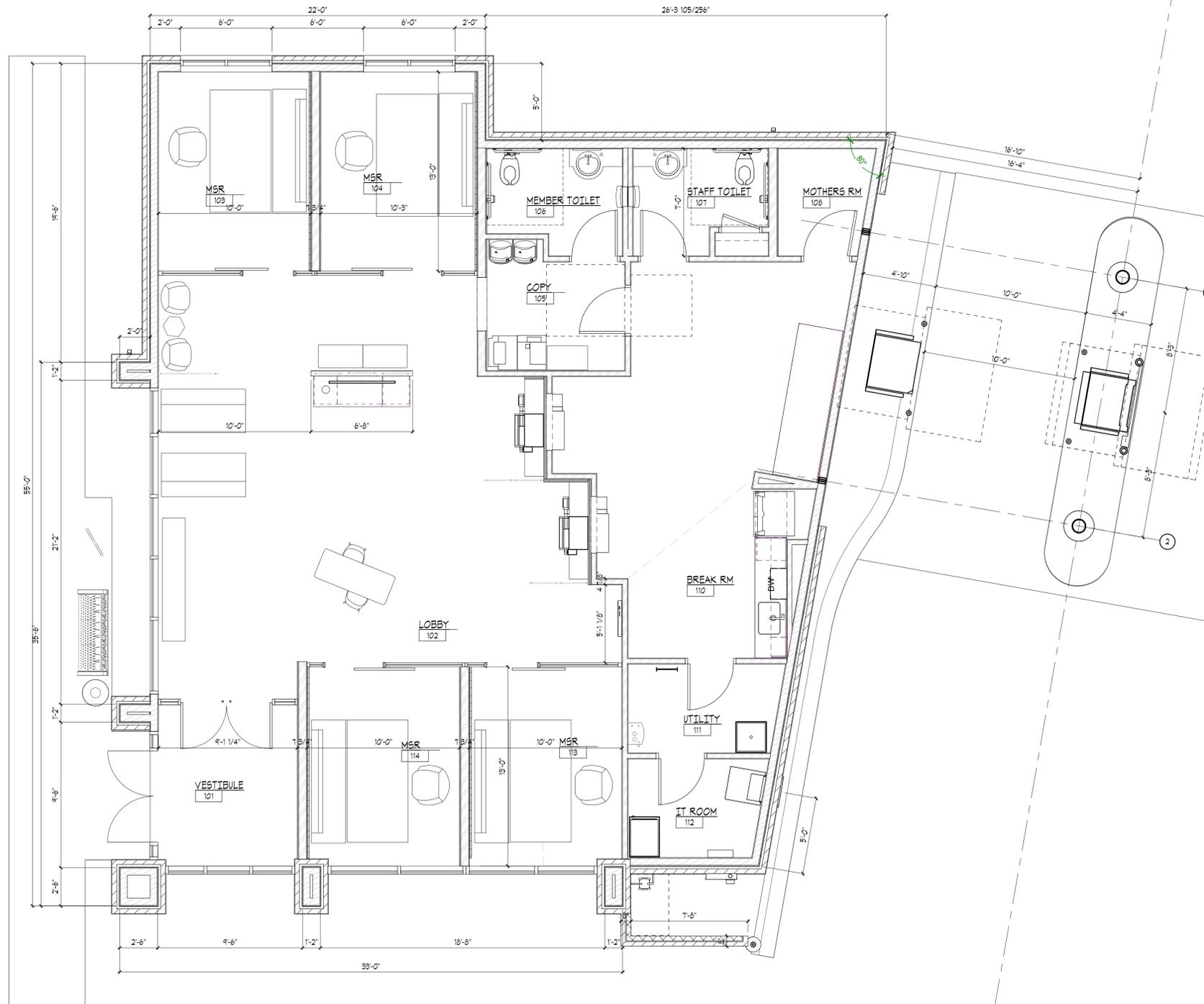
Date

Signature of Petitioner

Date

Signature of Owner if different that petitioner

Date



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

- GENERAL NOTES**
1. ALL WORK SHALL COMPLY WITH THE RULES AND REGULATIONS OF LOCAL TOWNSHIP, THE STATE OF MICHIGAN, AND ALL OTHER AUTHORITIES HAVING JURISDICTION. THIS PROJECT SHALL FULLY COMPLY WITH MICHIGAN BUILDING CODE INCORPORATING THE ADOPTED EDITION OF THE MICHIGAN BUILDING CODE.
 2. ALL WORK IS TO BE PERFORMED IN ACCORDANCE WITH THE AIA GENERAL CONDITIONS FOR CONSTRUCTION.
 3. SHOULD THE GENERAL CONTRACTOR (G.C.) DISCOVER ANY DISCREPANCIES OR AMBIGUITIES OF INFORMATION THAT CAUSE DOUBT AS TO THE MEANINGS OF ANY DRAWING OR SPECIFICATION, THE G.C. SHALL NOTIFY THE ARCHITECT, AND REQUEST CLARIFICATION PRIOR TO PROCEEDING.
 4. THE G.C. WILL BE RESPONSIBLE FOR OBTAINING ALL PERMITS, CERTIFICATES, GUARANTEES, ETC., AS REQUIRED BY LOCAL AUTHORITIES HAVING JURISDICTION, AND DELIVER THESE TO THE OWNER UPON COMPLETION OF THE WORK. THE OWNER SHALL PAY FOR ALL BUILDING PERMITS. THE G.C. SHALL ARRANGE AND COORDINATE INSPECTION OF ALL WORK BY BUILDING OFFICIALS. HE SHALL BE HELD RESPONSIBLE FOR ANY VIOLATIONS ARISING FROM LACK OF PERMIT, CONDEMNED WORK, OR FINES. EACH TRADE OR CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED LICENSES AND CERTIFICATIONS NECESSARY TO WORK ON THIS PROJECT.
 5. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL LABOR AND MATERIALS AND MAKE GOOD OF ANY DEFECTS THEREIN WHICH ARE DISCOVERED OR OCCUR WITHIN ONE YEAR AFTER THE COMPLETION OF THE PROJECT. HE SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY MATERIAL OF EQUIPMENT CONSIDERED PART OF THE CONTRACT AND UNDER GUARANTEE PERIODS SPECIFICALLY NOTED BY THE MANUFACTURER THEREOF.
 6. ALL WORKMEN EMPLOYED BY THE G.C. OR ANY SUBCONTRACTORS SHALL BE SKILLED AT THE WORK TO WHICH HE IS ASSIGNED. ALL TRADES MUST PROVIDE EVIDENCE OF WORKMAN'S COMPENSATIONS AND LIABILITY INSURANCE IN FORCE.
 7. ALL MATERIAL STORED ON THE SITE SHALL BE ADEQUATELY PROTECTED AGAINST DAMAGE FROM OTHER WORK IN PROGRESS. REPAIR OF COMPLETED WORK DAMAGED IN THE COURSE OF THE PROJECT WILL BE THE G.C.'S RESPONSIBILITY AT NO COST TO THE OWNER.
 8. THE PROJECT SITE IS TO BE KEPT REASONABLY CLEAN AT ALL TIMES. LOOSE TRASH IS TO BE CONTAINED AND EMPTIED OFF THE SITE WHEN FULL. PAINT SPOTS AND EXCESS CAULKING ARE TO BE REMOVED.
 9. UPON COMPLETION OF THE WORK, THE G.C. IS RESPONSIBLE FOR THE FINAL ADJUSTMENTS OR WINDOWS, DOORS, HARDWARE, DEVICES, AND THOSE ITEMS DEEMED BY THE ARCHITECT TO MAKE THE PROJECT HABITABLE.
 10. THOSE ITEMS NOT NOTED, BUT IMPLIED AS NECESSARY FOR THE COMPLETION OF THE WORK ARE TO BE PART THEREOF. THE G.C. SHALL VERIFY ALL DIMENSIONS, QUANTITIES, AND ALL DETAILS IN THE FIELD.
 11. APPROVAL OF MINOR CHANGES OR CLARIFICATION TO PLANS MAY BE ACCOMPLISHED BY ISSUANCE OF REVISED PLANS, PARTIAL SKETCH, OR INITIALING AND DATING OF CHANGE BY THE ARCHITECT ON THE EXISTING PLANS.
 12. THE ARCHITECT AND/OR DESIGNER SHALL HAVE NO CONTROL OVER AND SHALL HAVE NO RESPONSIBILITY FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, OR PROCEDURES.
 13. THE ARCHITECT AND/OR DESIGNER HAS NO RESPONSIBILITY FOR ANY ACTIONS OR OMISSIONS OF THE G.C., OR HIS SUBCONTRACTORS, OR THE FAILURE OF THEM TO PERFORM WORK ACCORDING TO THE CONTRACT DOCUMENTS.
 14. NO CHANGE BY THE ARCHITECT WILL BE MADE BY THE G.C. UNLESS AUTHORIZED BY AN AIA CHANGE ORDER, AND SIGNED BY ALL PARTIES, PRIOR TO AFFECTING THE CHANGE.
 15. UNLESS OTHERWISE NOTED, ALL EXPOSED ELECTRICAL, MECHANICAL, PLUMBING AND COMMUNICATIONS LINES, DUCTS, PIPES, UNITS AND DEVICES ARE TO BE PRIMED AND PAINTED THE SAME COLOR AS THE WALL AND/OR CEILING SURFACE ON WHICH THEY RUN, OR ARE TO BE LOCATED ON. IN ORDER TO BLEND IN, TENANT REQUIREMENTS WILL DICATE AND MAY REQUIRE DUCTS, PIPES, ETC. ARE TO REMAIN UN-PRIMED. CONSULT TENANT REQUIREMENTS PRIOR TO PRIMING.
 16. ALL NOTES ON ALL DRAWINGS OF THE ARCHITECT, ENGINEER, AND DESIGNER'S DRAWINGS AND PLANS ARE TO BE CONSIDERED PART OF THE CONTRACT DOCUMENTS.

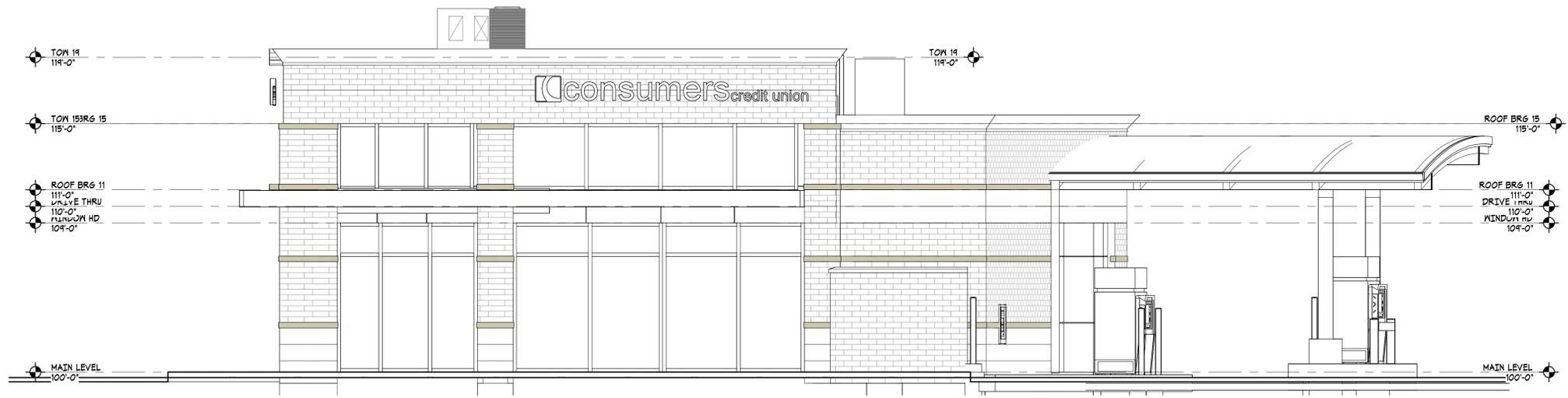
Consumers CU Roosevelt Park
3145 Henry Street, Muskegon, Michigan

2023-09-01
NOT FOR CONSTRUCTION
09/01/2023
ISSUED

bosch
ARCHITECTURE
ENGINEERING & INTERIOR DESIGN

PN 23053
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Bosch, Vincent Pasko, Kelly
Kalamazoo, MI 49009
(269) 321-5151
Boscharch.com

A101
FIRST LEVEL FLOOR PLAN



NORTH ELEVATION

SCALE: 1/4" = 1'-0"



EAST ELEVATION

SCALE: 1/4" = 1'-0"

Consumers CU Roosevelt Park
3145 Henry Street, Muskegon, Michigan

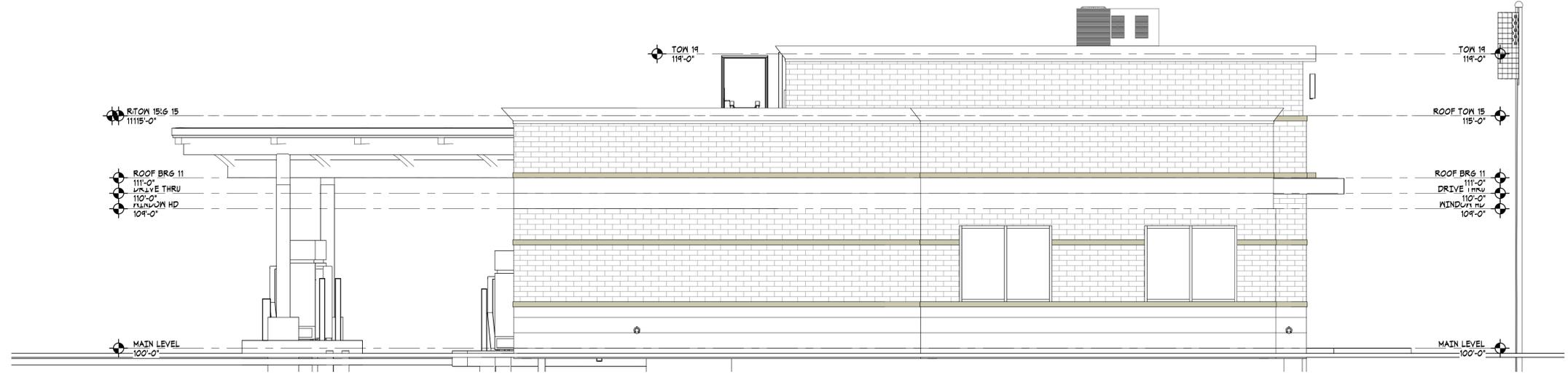
NOT FOR CONSTRUCTION
09/01/2023

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bosch
ARCHITECTURE
ENGINEERING & INTERIOR DESIGN

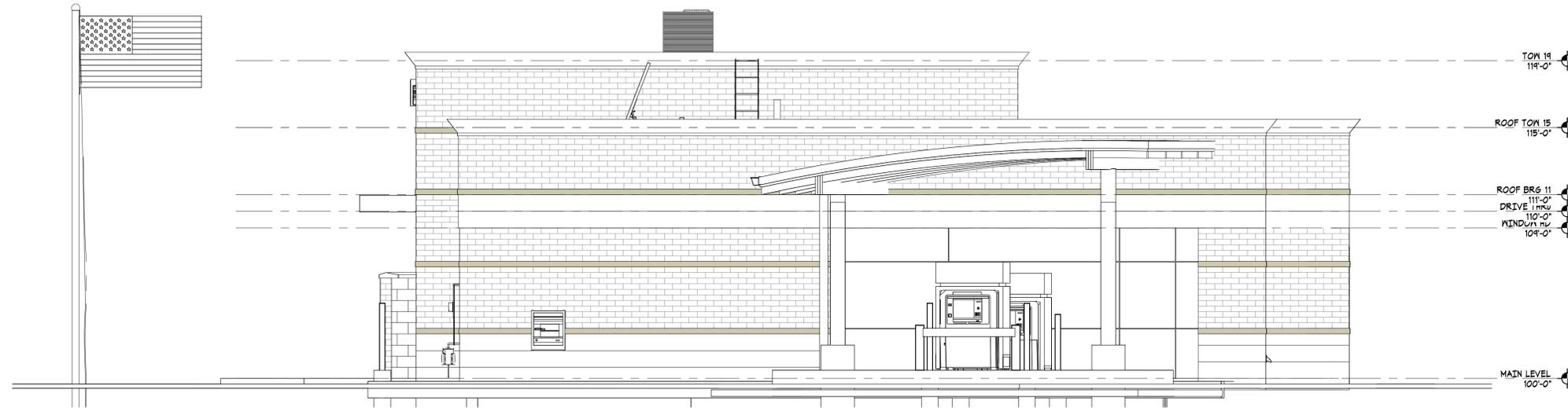
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8045 Vineyard Parkway
Kalamazoo, MI 49009
(269) 321-5151
BoschArch.com

A201
EXTERIOR ELEVATIONS



SOUTH ELEVATION

SCALE: 1/4" = 1'-0"



WEST ELEVATION

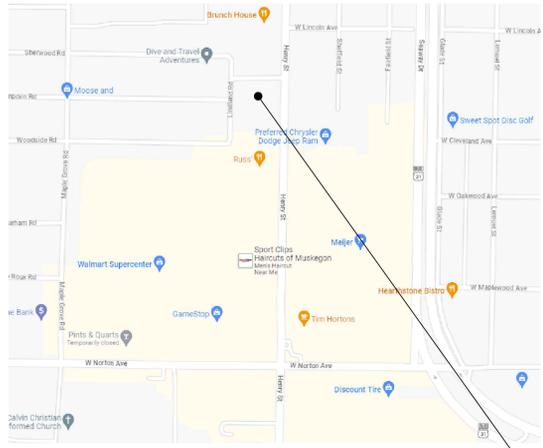
SCALE: 1/4" = 1'-0"

NOT FOR
CONSTRUCTION
09/01/2023

ISSUED

bosch
ARCHITECTURE
ENGINEERING & INTERIOR DESIGN

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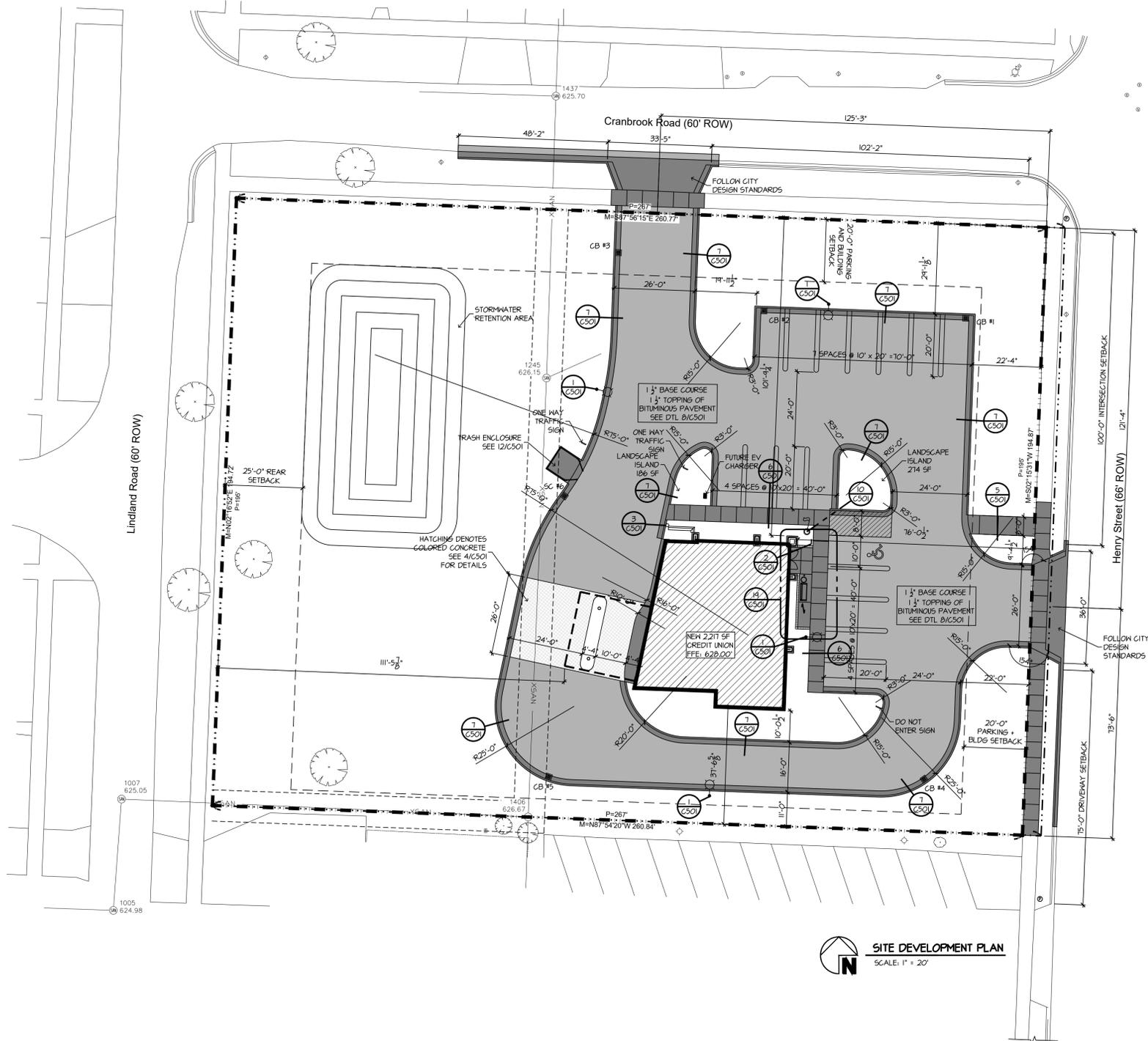


LOCATION MAP
NOT TO SCALE

SCHEDULE "A" LEGAL DESCRIPTION
FROM: SUN TITLE AGENCY OF MICHIGAN, LLC
COMMITMENT NO.: 223675 (EFFECTIVE DATE: JULY 26, 2023)

THE LAND REFERRED TO IN THIS COMMITMENT IS DESCRIBED AS FOLLOWS: LAND SITUATED IN THE CITY OF ROOSEVELT PARK, MUSKEGON COUNTY, MICHIGAN:

LOTS 41, 42, 43, 44, 45 AND 46, CRANBROOK ADDITION, ACCORDING TO THE PLAT THEREOF, AS RECORDED IN LIBER 15 OF PLATS, PAGE 62.



SITE DEVELOPMENT PLAN
SCALE: 1" = 20'

- SITE INFORMATION**
1. PARCEL ADDRESS: 3145 HENRY STREET MUSKEGON, MI 49441 P#: 61-25-164-000-0041-00
 2. OWNER: CONSUMERS CREDIT UNION 1200 ELM VALLEY DRIVE KALAMAZOO, MI 49004
 3. ARCHITECT: BOSCH ARCHITECTURE 3065 VINEYARD FRAY KALAMAZOO, MI 49004 (264) 321-5151
 4. SURVEY: PREIN 4 NEHNOF
 5. ZONING: C-1 ZONING
 6. PROPOSED LAND USE: CREDIT UNION
 7. TOTAL SITE AREA: 50,803.52 SF
 8. LAND USE PERCENT (%): OPEN: 60.3% BUILD: 4.5% PAVEMENT: 35.3%
 9. BUILDING TYPE(S): 2,217 SF CREDIT UNION
 10. MAXIMUM BUILDING HEIGHT: 40' MAXIMUM 21' ACTUAL
 11. REQUIRED PARKING: BANK: (1) STALL REQUIRED PER 200 SF FLOOR AREA PLUS (4) VEHICLE STACKING SPACES AT ATM AND EACH DRIVE UP WINDOW. 2,217 SF / 200 = 11 SPACES REQUIRED. 16 SPACES PROVIDED + 4 STACKING SPACES AT EACH DRIVE THRU LAINE
 12. LANDSCAPING: SEE LOOI
 13. LEGAL DESCRIPTION: SEE THIS SHEET
 14. OCC. CLASSIFICATION: B - BUSINESS
 15. CONSTRUCTION TYPE: 5B
 16. ALL SITE PARKING STRIPING, ARROWS, CROSSWALKS AND LINES TO BE YELLOW PAINT. ALL BARRIER FREE MARKINGS, LINES AND SYMBOLS TO BE BLUE.

- GENERAL NOTES (SITE WORK)**
1. SITE PREPARATION:
 - a. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE PERFORMED BY THE CONTRACTOR IN COMPLIANCE WITH PART 91 OF PUBLIC ACT 451 OF 1994.
 - b. ORGANIC TOPSOIL SHALL BE STRIPPED FROM THE CONSTRUCTION AREA AND STOCKPILED AS INSTRUCTED BY THE G.C. FOR LATER USE.
 2. EARTHWORK:
 - a. CALL MISS DIG AT 1-800-482-7111 BEFORE BEGINNING EXCAVATION.
 - b. EXCAVATION SHALL BE LEVEL TO EXACT DEPTHS AND DIMENSIONS INDICATED ON DRAWINGS.
 - c. CONSTRUCTION OF FOUNDATIONS AND SLABS-ON-GRADE WILL BE ON COMPACTED FILL IN MOST AREAS. LAYERED CONSTRUCTION SHALL BE PERFORMED TO A MINIMUM DENSITY OF 45 MAXIMUM DRY DENSITY AS DETERMINED BY ASTM DESIGNATION D-1551 VALUES.
 - d. PLACE A MIN. 6 INCHES OF BANK RUN SAND COMPACTED TO 95% OF MAXIMUM DENSITY UNDER ALL FLOOR SLABS ON GRADE.
 - e. SOIL TESTING WILL BE CONTRACTED AND PAID FOR BY THE GENERAL CONTRACTOR.
 - f. SITE SHALL BE FINE GRADED BEFORE PLACING TOP SOIL OR GRANULAR BASE MATERIAL.
 - g. EXTERIOR SURFACE DRAINAGE SHALL BE AWAY FROM BUILDINGS, 36" TO 48" OUT FROM BLDG.
 - h. ALL TOPOGRAPHICAL INFORMATION WAS FURNISHED BY EXCEL AND ASSUMED CORRECT. THE CONTRACTOR SHALL VERIFY ALL EXISTING AND NEW GRADES PRIOR TO COMMENCEMENT OF ANY WORK. THIS OFFICE SHALL NOT BE HELD RESPONSIBLE FOR ANY MISSING OR ERRONEOUS INFORMATION.

GEN CONTR WILL PROVIDE NECESSARY SOIL BORINGS AS DIRECTED BY THE CITY OF ROOSEVELT PARK. GEN CONTR WILL ALSO PROVIDE PERMEABILITY TESTS IF REQUIRED, WHICH WILL INCLUDE GROUNDWATER INFORMATION.

ALL PAVEMENT MARKINGS AND TRAFFIC SIGNS MUST CONFORM TO THE STANDARDS SET FORTH IN THE CURRENT EDITION OF THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

REQUIRED LANDSCAPE IS SHOWN ON LANDSCAPE PLAN. SEE LOOI FOR PLANTING DETAILS.

APPROPRIATE PERMITS TO BE OBTAINED FROM THE CITY OF ROOSEVELT PARK.

AN EMERGENCY KNOX BOX FOR FIRE DEPARTMENT ACCESS WILL BE PROVIDED IF REQUIRED. KNOX BOX LOCATION TO BE DETERMINED UPON SUBMITTAL OF BUILDING PLANS, IF REQUIRED.

A FIREFIGHTER RIGHT-TO-KNOW AND HAZARDOUS MATERIALS RIGHT-TO-KNOW FORMS TO BE SUBMITTED PRIOR TO ISSUANCE OF A BUILDING PERMIT, IF REQUIRED.

Consumers Roosevelt Park
3145 Henry Street, Muskegon, MI 49441

ISSUED



PN: 23053
File Name: 23053001.dwg
8065 Vineyard Parkway
Kalamazoo, MI 49009
(269) 351-5151
Boscharch.com

Cool
SITE DEVELOPMENT PLAN

SOIL EROSION CONTROL NOTES

1. ALL SITE INFRASTRUCTURE WILL BE CONSTRUCTED AT ONCE. PHASING OF THE OVERALL DEVELOPMENT WILL NOT OCCUR DURING THIS APPROVAL. NO TEMPORARY RETENTION AREAS WILL BE USED ON THIS SITE. DURING CONSTRUCTION, RUNOFF WILL INFILTRATE THROUGH THE GROUND SURFACE.
2. PERMANENT SPOIL PILES WILL NOT BE NEEDED FOR THIS PROJECT. CONTRACTOR TO VERIFY CUT/FILL WITH EXCAVATOR. ALL CUT TO BE TAKEN OFF SITE AT THE TIME OF EXCAVATION, IF REQUIRED.
2. EXIST CATCH BASINS AS NOTED ON THIS PLAN WILL BE PROTECTED WITH NOVEN GEOTEXTILE FILTER FABRIC DURING CONSTRUCTION. SEE PLAN FOR CATCH BASIN LOCATIONS, REFER TO DTL 16/C501.
3. A SILT FENCE WILL BE USED WHERE ELEVATIONS WITHIN THE PROPERTY LINE WILL TEMPORARILY BE HIGHER OR LOWER THAN NEIGHBORING PROPERTIES IN ORDER TO CONTAIN SOIL. APPROPRIATELY, SEE PLAN FOR APPROXIMATE LOCATIONS. SILT FENCE LOCATIONS TO BE VERIFIED BY ON SITE CONTRACTOR. REFER TO DETAIL 17/C501 FOR SILT FENCE DETAILS.
4. A CONSTRUCTION ACCESS DRIVE SHOULD BE USED TO ACCESS THE SITE FROM THE EXISTING DRIVEWAY AS TO HELP RETAIN SOIL ON SITE AND REDUCE AMOUNT OF SOIL TRACKED OFF SITE BY CONSTRUCTION VEHICLES. REFER TO DETAILS 14 & 15/C501.

STORM SEWER STRUCTURES

- CB #1 RIM = 625.50'
W INV 12" SOLID PIPE = 623.10'
- CB #2 RIM = 625.50'
E INV 12" SOLID PIPE = 622.75'
NW INV 12" SOLID PIPE = 622.75'
SW INV 12" SOLID PIPE = 622.75'
- CB #3 RIM = 626.00'
SE INV 12" SOLID PIPE = 623.00'
- CB #4 RIM = 625.10'
W INV 12" SOLID PIPE = 623.35'
- CB #5 RIM = 626.00'
E INV 12" SOLID PIPE = 622.75'
N INV 12" SOLID PIPE = 622.75'
6" ROOF DRAIN = 623.00'
- SC #6 BARRACUDA TREATMENT UNIT
RIM = 625.50'
NE INV 12" SOLID PIPE = 622.30'
S INV 12" SOLID PIPE = 622.30'
W INV 12" SOLID PIPE = 622.30'
4" CANOPY DRAIN = 624.00'

STORM WATER DESIGN

1. SITE RISK ZONE DESIGNATION - COMMON STORAGE
2. BUILDING RISK DESIGNATION - "LOW RISK"
3. SITE SIZE - LESS THAN 5 ACRES.
4. STORM WATER STRATEGY - RETENTION ON SITE WITH INFILTRATION
5. SITE USE:

OVERALL DRAINAGE AREA	50,804 SF
BUILDINGS	2,211 SF
IMPERVIOUS PAVING	17,933 SF
LAWN/LANDSCAPE AREA	30,634 SF

25 YR - 24 HR STORM (4.94")
 C VALUES
 ROOF - 0.90
 IMPERVIOUS AREAS - 0.90
 LAWN - 0.10

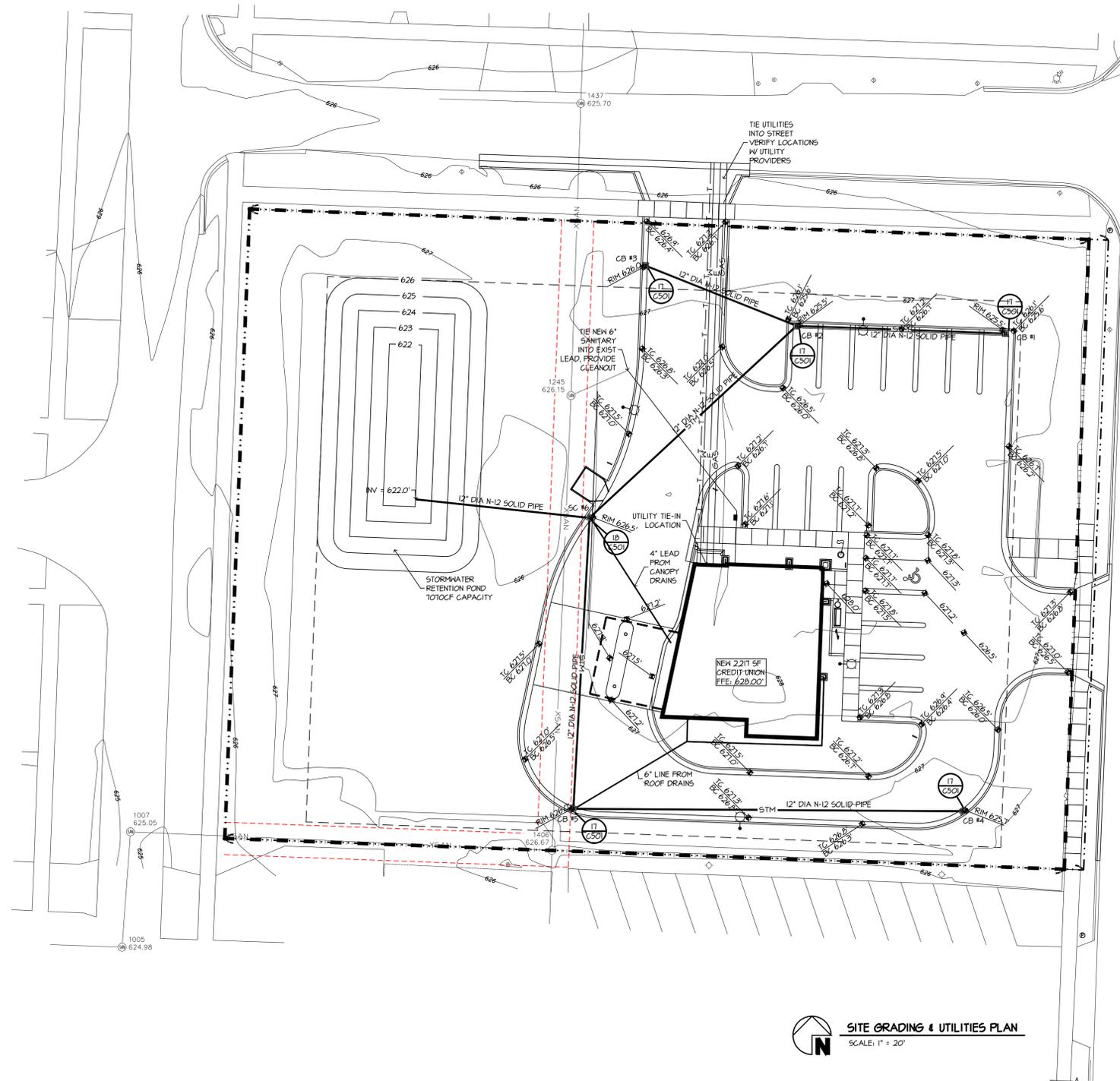
WEIGHTED C
 $0.9(2211) + 0.9(17933) + 0.1(30634) = 0.4193$

CALCULATED RUNOFF
 $0.25 * 0.4193 * (4.94)/12 * 50804 = 7,453 CF$

STORAGE PROVIDED
 POND (10'625.5' ELEVATION) = 7070 CF
 12" STORM PIPES = 0.185 CF/FT x 455 FT = 84 CF
 (5) 4' DIA BASINS x 6' TALL = 50 CF/BASIN = 250 CF

TOTAL STORAGE PROVIDED = 7671 CF + 7453 CF

ALL WORK IN PUBLIC RIGHT-OF-WAYS WILL REQUIRE PERMITS FROM CITY OF ROOSEVELT PARK.



TYPICAL MATERIALS, SYMBOLS AND INDICATIONS

- | | |
|--------------------------------|--------------------------|
| ⊕ MANHOLE | - - - EXIST SPOT GRADE |
| ⊕ STORM SEWER MANHOLE | ◆ FINISH GRADE |
| ⊕ SANITARY SEWER MANHOLE | ◆ FIRE HYDRANT |
| ⊕ PHONE CO MANHOLE | ⊕ WATER VALVE |
| ⊕ ELEC CO MANHOLE | ⊕ WATER METER |
| ⊕ WATER MANHOLE | ⊕ GAS VALVE |
| ■ CATCH BASIN/CURB INLET | ⊕ UNDERGROUND GAS MARKER |
| ⊕ UTILITY POLE W/ LIGHT | ⊕ GAS METER |
| ⊕ UTILITY POLE | ⊕ BASKETBALL NET |
| ⊕ LIGHT POLE | P MAIL BOX |
| ⊕ FLAG POLE | ⊕ PARKING METER |
| ⊕ YARD LAMP + POLE | ⊕ SIGN |
| ⊕ PHONE BOOTH | ⊕ SOIL BORING |
| ⊕ MONITOR WELL | ⊕ CONCRETE BOLLARD |
| ⊕ ELECTRIC BOX / TRANSFORMER | ⊕ EXIST TREE TO REMAIN |
| ⊕ AIR CONDITIONING UNIT | ⊕ NEW TREE |
| ⊕ UNDERGROUND TELEPHONE MARKER | ⊕ TREE TO BE REMOVED |
| ⊕ UNDERGROUND TELEPHONE MARKER | |

- | | |
|---|-----------------------------|
| — OE — | OVERHEAD ELEC LINE |
| — E — | UNDERGROUND ELEC LINE |
| — GAS — | GAS LINE |
| — W — | WATER LINE |
| — X — X — X — X — X — X — X — X — | FENCE LINE |
| — — — — — | CENTER LINE |
| — — — — — | PROPERTY LINE |
| — STM — | STORM LINE |
| — SAN — | SANITARY LINE |
| — T — T — T — T — T — T — T — T — | TELEPHONE LINE |
| — XOE — | EXIST OVERHEAD ELEC LINE |
| — XE — | EXIST UNDERGROUND ELEC LINE |
| — XGAS — | EXIST GAS LINE |
| — XW — | EXIST WATER LINE |
| — XT — XT — XT — XT — XT — XT — XT — XT — | EXIST TELEPHONE LINE |
| — XSTM — | EXIST STORM LINE |
| — XSAN — | EXIST SANITARY LINE |

SITE GRADING & UTILITIES PLAN
 SCALE: 1" = 20'



ISSUED

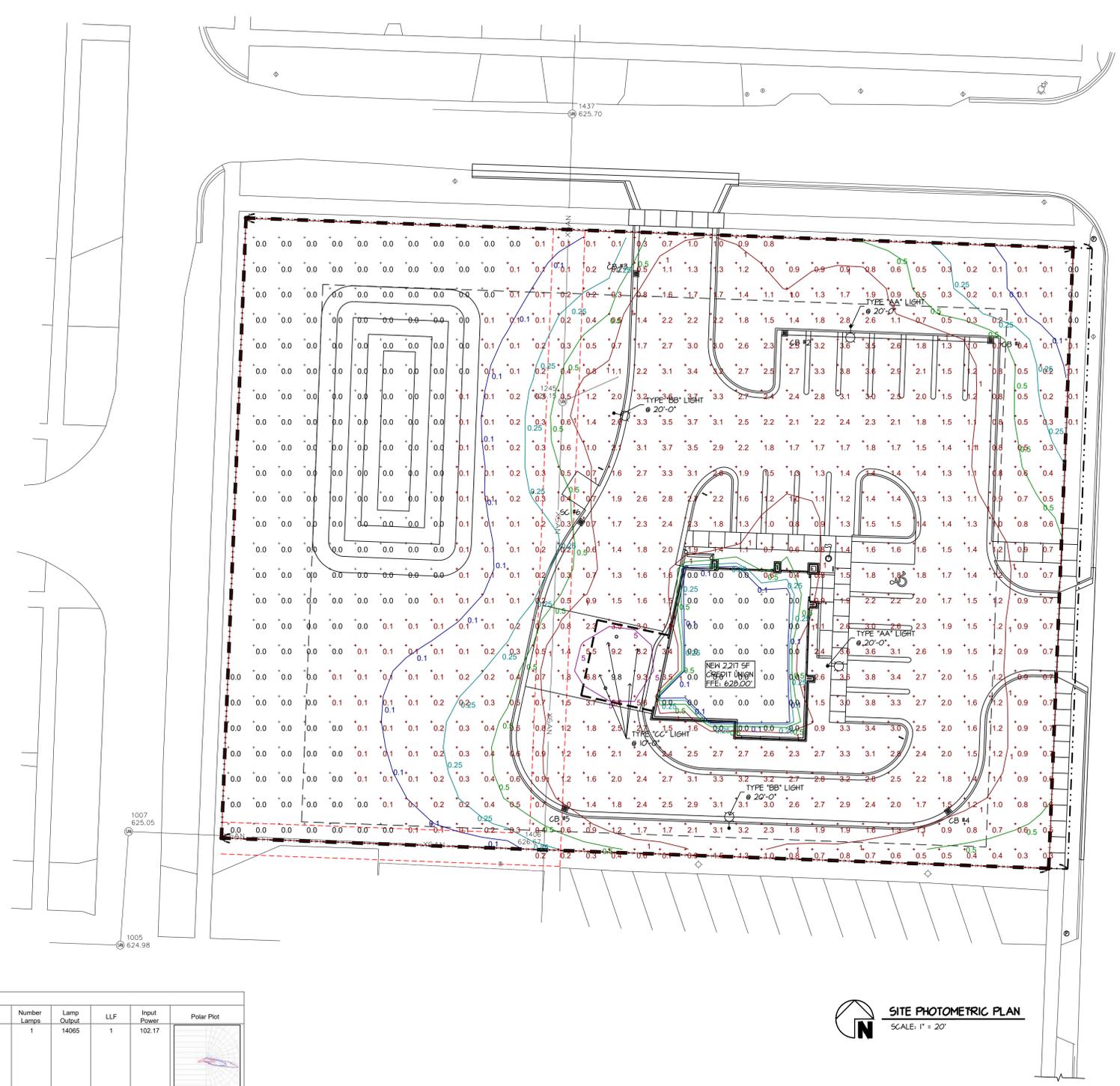


PN: 23053
 File Name:
 23053C00a.dwg
 8066 General Pathway
 Kalamazoo, MI 49009
 (269) 351-5151
 BoschArch.com

ISSUED

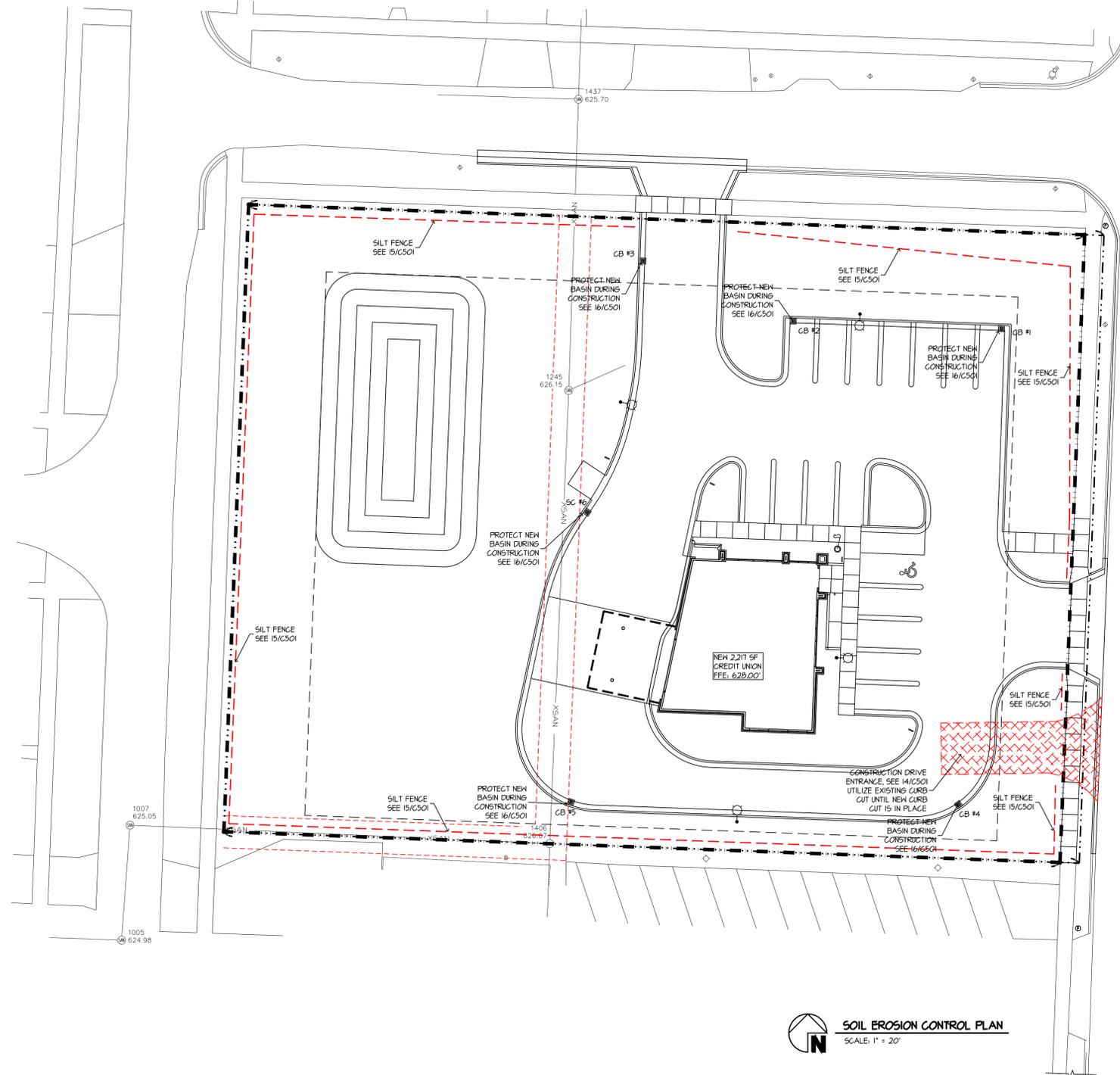


PN: 23053
File Name:
23053C003.dwg
8066 General Package
Kalamazoo, MI 49009
(269) 551-5151
Boscharch.com



SITE PHOTOMETRIC PLAN
SCALE: 1" = 20'

Symbol	Label	Image	QTY	Manufacturer	Catalog	Description	Number Lamps	Lamp Output	LLF	Input Power	Polar Plot
□	AA		2	Lithonia Lighting	DSX1 LED P3 40K 70CRI TFTM	D-Series Size 1 Area Luminaire P3 Performance Package 4000K CCT 70 CRI Forward Throw	1	14065	1	102.17	
□	BB		2	Lithonia Lighting	DSX1 LED P3 40K 70CRI T2M	D-Series Size 1 Area Luminaire P3 Performance Package 4000K CCT 70 CRI Type 2 Medium	1	13605	1	102.17	
○	CC		4	Lithonia Lighting	WF8 LED 30K MVOLT 90CRI	8" ROUND WAFER 3000K 120-277V	1	1571	1	19.68	



SOIL EROSION CONTROL PLAN
SCALE: 1" = 20'

Consumers Roosevelt Park

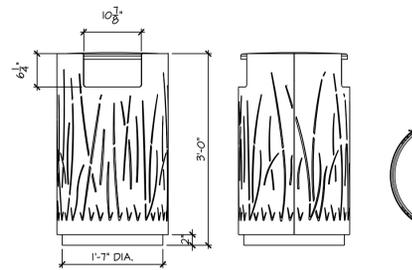
3145 Henry Street, Muskegon, MI 49441

ISSUED

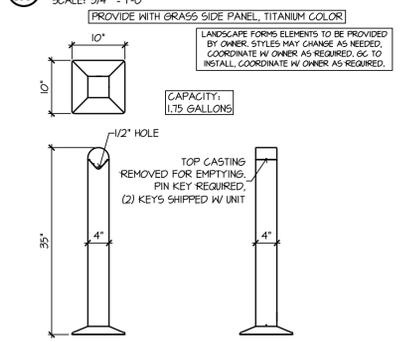
17



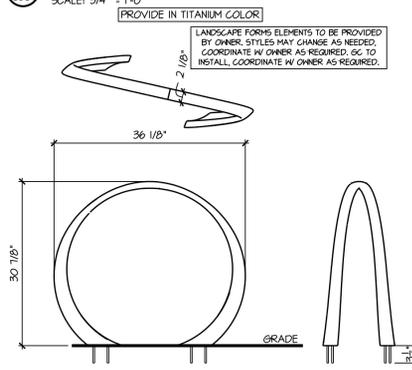
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File Name:
23053C004.dwg
8066 General Pathway
Kalamazoo, MI 49009
(269) 351-5151
Boscharch.com



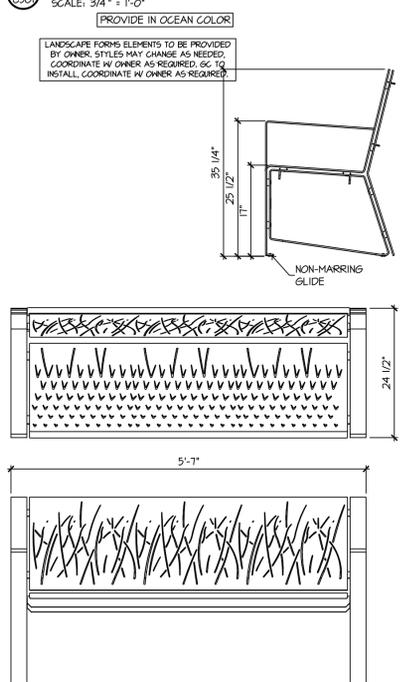
20 LANDSCAPE FORMS LAKESIDE LITTER RECEPTACLE
SCALE: 3/4" = 1'-0"



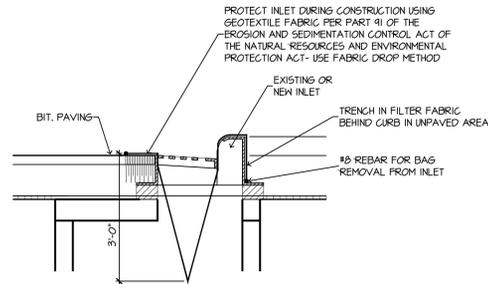
21 LANDSCAPE FORMS GRENADEIER ASH URN
SCALE: 3/4" = 1'-0"



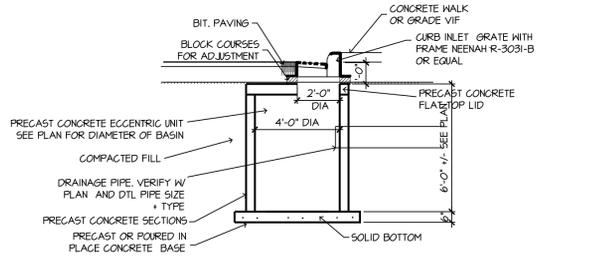
22 LANDSCAPE FORMS LOOP BIKE RACK
SCALE: 3/4" = 1'-0"



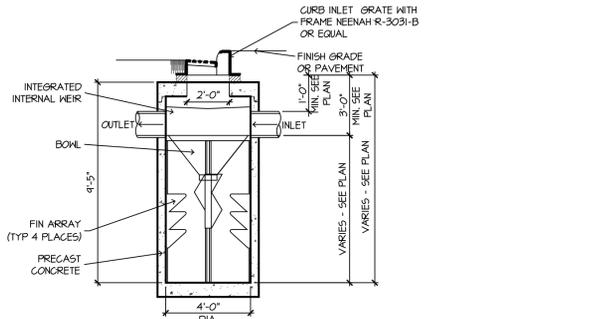
23 LANDSCAPE FORMS LAKESIDE BENCH
SCALE: 3/4" = 1'-0"



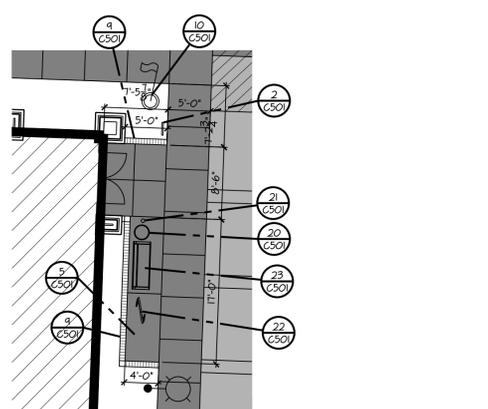
16 TYPICAL INLET PROTECTION - FABRIC DROP
SCALE: 1/2" = 1'-0"



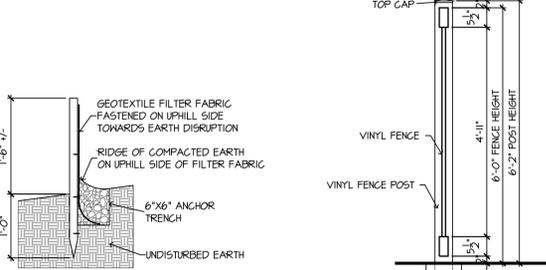
17 CURB BASIN DETAIL
SCALE: 1/4" = 1'-0"



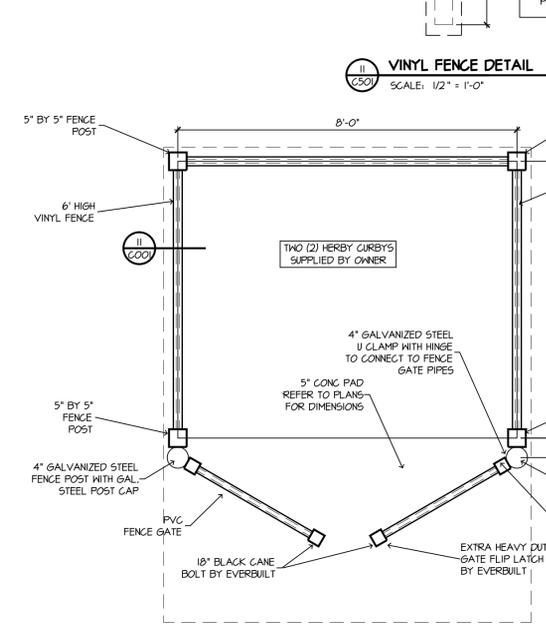
18 ADS BARRACUDA 54 STORMCEPTOR
SCALE: 1/4" = 1'-0"



19 ENTRY ENLARGEMENT
SCALE: 1" = 1'-0"



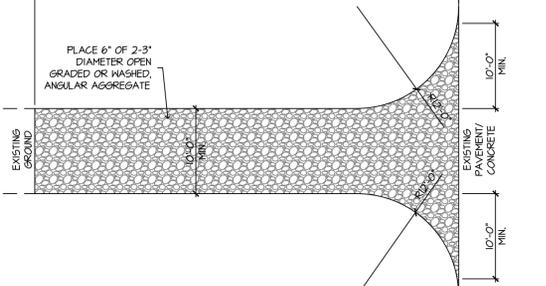
15 SILT FENCE
SCALE: 3/4" = 1'-0"



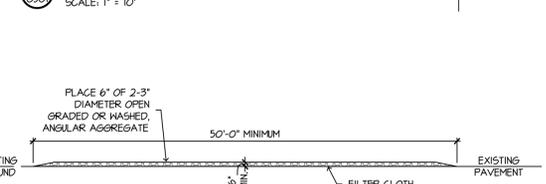
11 VINYL FENCE DETAIL
SCALE: 1/2" = 1'-0"



12 DUMPSTER ENCLOSURE
SCALE: 1/2" = 1'-0"

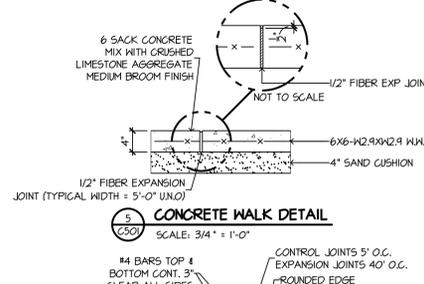


13 STANDARD PLAN VIEW CONSTRUCTION ACCESS ROAD
SCALE: 1" = 1'-0"

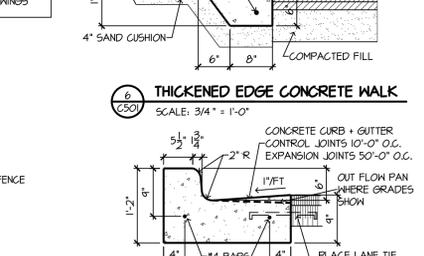


14 STANDARD PROFILE VIEW CONSTRUCTION ACCESS ROAD
SCALE: 1" = 1'-0"

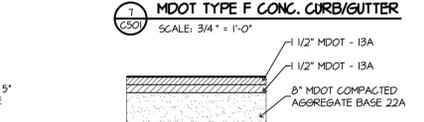
CONSTRUCTION ACCESS ROAD NOTES
SIDE SLOPES TO BE NO STEEPER THAN 2H:1V
UNDERLAY ACCESS ROAD WITH NONWOVEN GEOTEXTILE FABRIC



5 CONCRETE WALK DETAIL
SCALE: 3/4" = 1'-0"



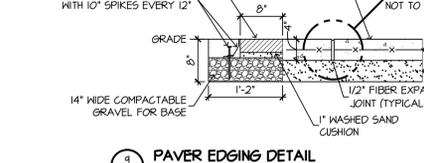
6 THICKENED EDGE CONCRETE WALK
SCALE: 3/4" = 1'-0"



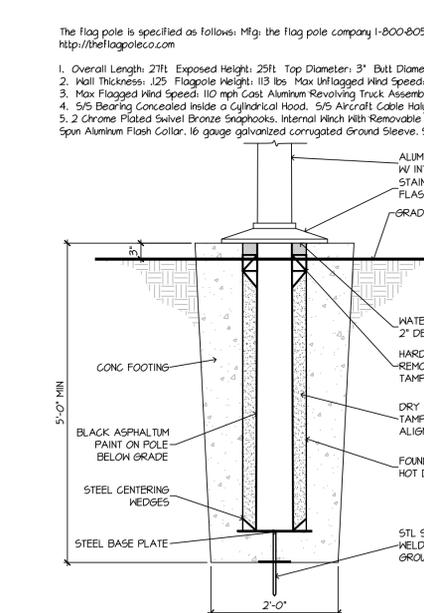
7 MDOT TYPE F CONG. CURB/GUTTER
SCALE: 3/4" = 1'-0"



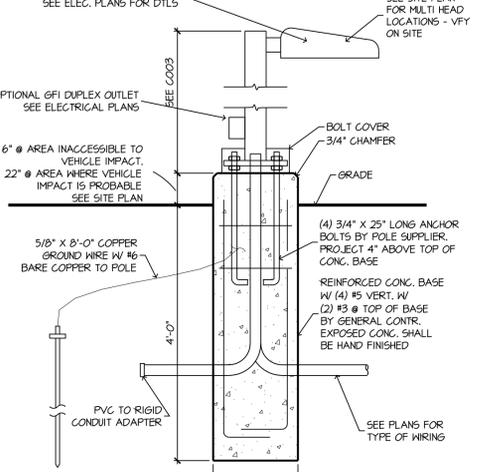
8 SITE BITUMINOUS ASPHALT PAVING
SCALE: 3/4" = 1'-0"



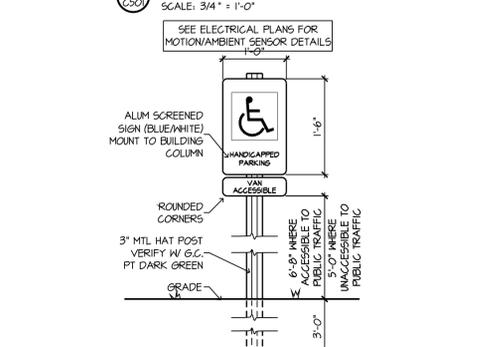
9 PAVER EDGING DETAIL
SCALE: 3/4" = 1'-0"



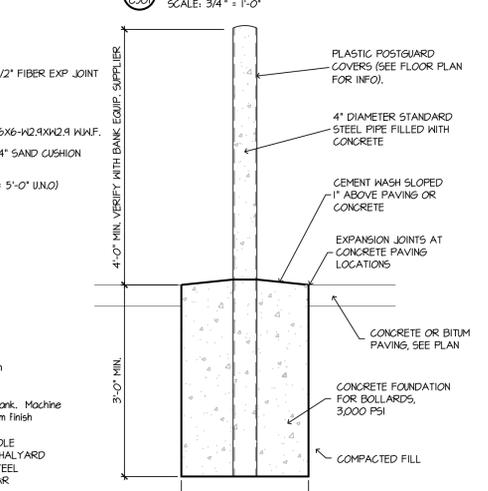
10 FLAG POLE BASE DETAIL
SCALE: 3/4" = 1'-0"



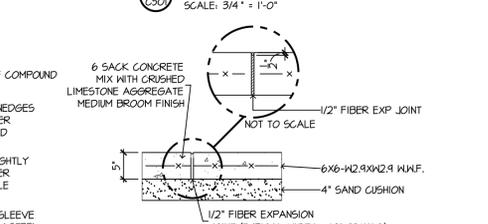
1 POLE BASE DETAIL AT GRADE
SCALE: 3/4" = 1'-0"



2 TYPICAL B.F. PARKING SIGN
SCALE: 3/4" = 1'-0"



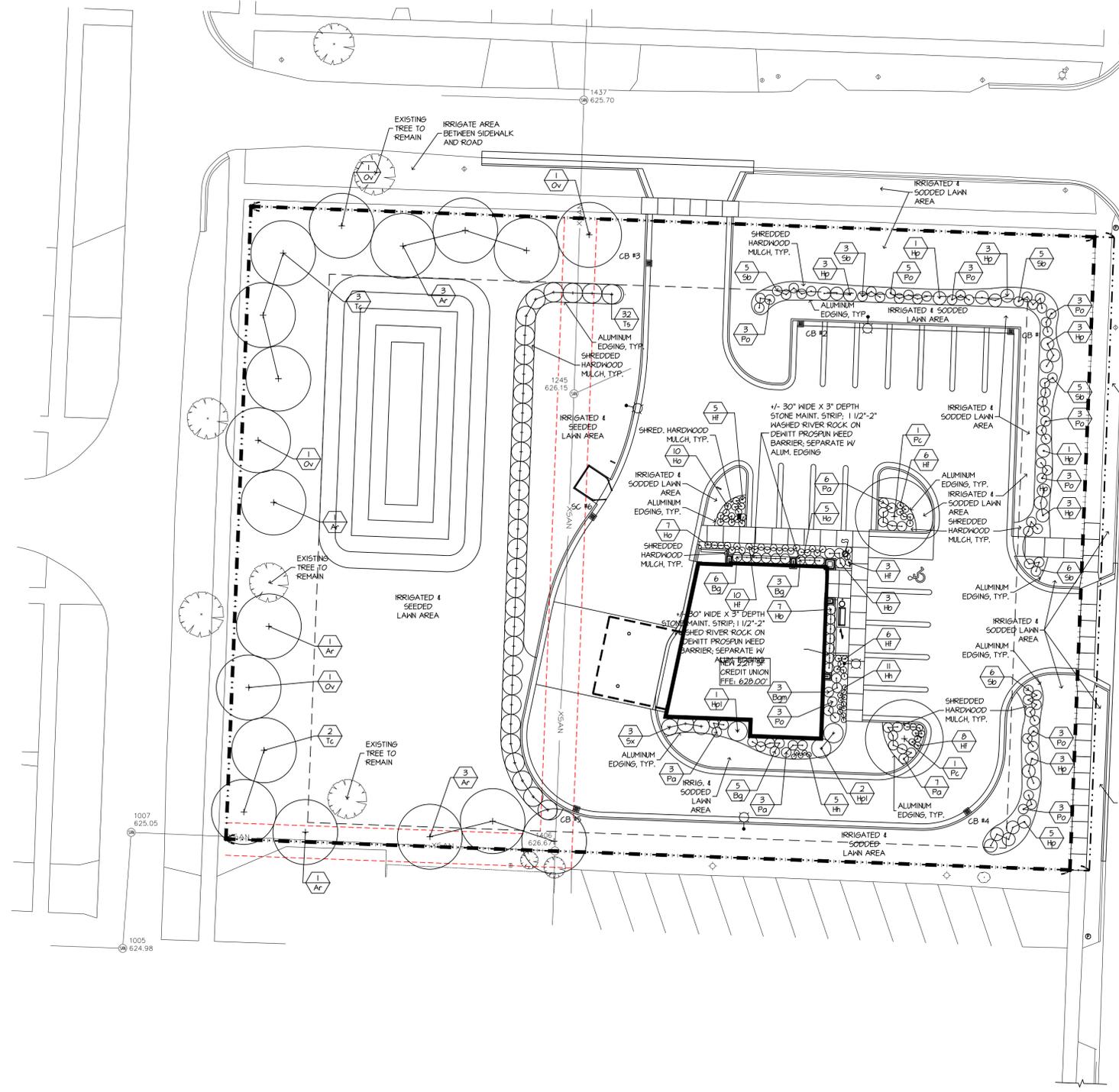
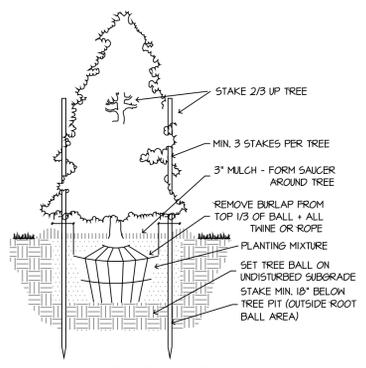
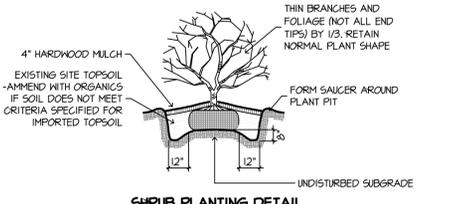
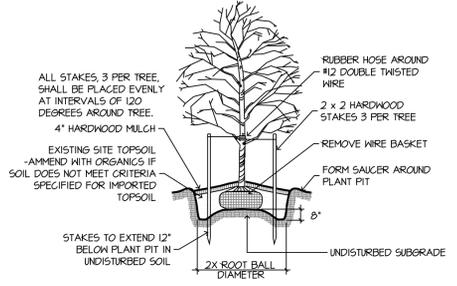
3 PIPE BOLLARD DETAIL
SCALE: 3/4" = 1'-0"



4 5' CONCRETE APRON DETAIL
SCALE: 3/4" = 1'-0"

CONCRETE SLAB FOR CANOPIES TO BE FRIGH CORP. SYNERGY INTEGRAL COLORS: COAL DARK. ALLOW TO CURE FOR 30 DAYS, THEN ACID AND POWER WASH AND SEAL. CONCRETE ISLANDS & CURBS TO BE NATURAL CONCRETE COLOR.

KEY	BOTANIC NAME	COMMON NAME	SIZE	QTY
PLANT LIST				
CANOPY TREES				
Ar	Acer x Freemanii 'Armstrong'	Armstrong Red Maple	2 1/2" cal. mh.	10
Ov	Ostrya virginiana	American Hopbloom	2 1/2" cal. mh.	4
Pc	Pinus calthogena 'Redspire'	Redspire Pine	2 1/2" cal. mh.	2
Tc	Tilia cordata 'Corzam'	Common Littleleaf Linden	2 1/2" cal. mh.	6
EVERGREEN TREES				
Tp	Thuja plicata x standishii 'Green Giant'	Green Giant Arborvitae	6' ht. min.	32
EVERGREEN SHRUBS				
Bg	Buxus 'Green Velvet'	Green Velvet Boxwood	3 gallon	14
Bgm	Buxus 'Green Mountain'	Green Mountain Boxwood	3 gallon	3
DECIDUOUS SHRUBS				
Hb	Hydrangea paniculata 'Bobo'	Bobo Hydrangea	24" ht. min.	10
Hpl	Hydrangea paniculata 'Limelight'	Limelight Hydrangea	5 gallon	3
Hp	Hydrangea paniculata 'Little Quickfire'	Little Quickfire Hydrangea	5 gallon	22
Pa	Physocarpus opulifolius 'Tiny Wine'	Tiny Wine Dwarf Ninebark	24" ht. min.	26
Sb	Spiraea x bumalda 'Solidlame'	Solidlame Spiraea	24" ht. min.	30
Sv	Syringa x SPS-BFT	Bloomerang Dark Purple Lilac	5 gallon	3
PERENNIALS/ORNAMENTAL GRASSES				
Hr	Hemerocallis 'Happy Returns'	Happy Returns Daylily	1 gallon	16
Hf	Heuchera 'Forever Red'	Forever Red Coral Belts	1 gallon	31
Ho	Hosta 'Patriot'	Patriot Hosta	1 gallon	22
Pa	Pennisetum alopecuroides 'Hornet'	Dwarf Fountain Grass	1 gallon	22



- LANDSCAPING NOTES**
- COMPLY WITH ALL CITY OF ROOSEVELT PARK STANDARDS.
 - ALL LANDSCAPING TO BE INSTALLED BY A QUALIFIED LANDSCAPE CONTRACTOR.
 - ALL PLANTINGS, INCLUDING TREES IN LAWN AREAS, SHALL BE MULCHED WITH 3" DEPTH SHREDDED HARDWOOD MULCH.
 - 6" MINIMUM TOPSOIL DEPTH IN ALL SEEDED AREAS AND 10-12" DEPTH IN PLANTING BEDS. AMEND EXISTING SITE TOP SOIL WITH ORGANICS FOR STANDARD PLANTING MIX.
 - SEED MIX TO BE 60% BLUEGRASS, 30% PERENNIAL RYE AND 10% FESCUE.
 - WHERE NEW SOD IS ADJUTING EXISTING LAWN, CUT EXISTING SOD IN STRAIGHT LINE AND LAY NEW SOD TIGHT TO EXISTING.
 - ONE YEAR WARRANTY ON LAWN AND PLANTS/TREES.
 - 4" x 3/8" MILL FINISH ALUMINUM EDGING AT ALL PLANTING BEDS AND TREE RINGS. UNLESS OTHERWISE NOTED, USE 5 STAKES PER 16' SECTION.
 - ALL LAWN AND SHRUB AREAS SHALL BE IRRIGATED. IRRIGATION SYSTEM SHALL BE DESIGNED AND INSTALLED BY THE LANDSCAPE CONTRACTOR IN ACCORDANCE WITH CITY AND TOWNSHIP ORDINANCES AND THE MICHIGAN PLUMBING CODE. SHRUB AREAS SHALL HAVE DRIP IRRIGATION. TIE TO PLUMBER SUPPLIED WATER METER IN THE BUILDING.
 - PLANT MATERIALS SHALL BE CHOSEN AND INSTALLED IN ACCORDANCE WITH STANDARDS RECOMMENDED BY THE AMERICAN NURSERY ASSOCIATION.
 - ALL DISEASED, DAMAGED OR DEAD PLANT MATERIAL SHALL BE REPLACED PER CITY OF ROOSEVELT PARK ZONING ORDINANCE.

LANDSCAPING REQUIREMENTS

BUFFER ZONE:
C-E ZONE ADJUTING R-I DISTRICT REQUIRES A MODERATE BUFFER ZONE, MINIMUM 20' WIDTH WITH THE EQUIVALENT OF 2 ROWS OF CANOPY TREES STAGGERED AT A MAXIMUM OF 20' INTERVAL AND A CONTINUOUS 6' HT. OBLSCURING SCREEN COMPRISED OF PLANT MATERIAL, BERNING, SCREEN WALLS OR FENCES OR ANY COMBINATION OF THESE ELEMENTS. IF 2 ZONING DISTRICTS REQUIRING A BUFFER ZONE ARE SEPARATED BY A STREET, THE BUFFER ZONE MAY BE REDUCED ONE LEVEL.

MODERATE BUFFER IS REQUIRED AND PROVIDED ALONG RESIDENTIAL PROPERTY ALONG SOUTHERN PROPERTY LINE AT SOUTHWEST CORNER OF PROPERTY.

MINOR BUFFER ZONE IS REQUIRED ALONG WEST PROPERTY LINE (LINDLAND ROAD) AND NORTH PROPERTY LINE AT NORTHWEST CORNER OF PROPERTY TO ENTRANCE DRIVE ALONG GRANBROOK ROAD. MODERATE BUFFER ZONE IS PROVIDED.

PARKING LOT FRONTAGE:
PARKING LOTS TO BE SCREENED FROM PUBLIC STREET VIEW WITH EITHER A MINIMUM 5' WIDE STRIP OF LAND WITH SOLID SCREEN COMPRISED OF A HEDGE OR DECORATIVE WALL WITH A MINIMUM HEIGHT OF 36" OR A STRIP OF LAND A MINIMUM OF 10' WIDE CONTAINING LANDSCAPING EQUIVALENT TO A MINOR BUFFER ZONE (EQUIVALENT OF 2 ROWS OF CANOPY TREES STAGGERED A MAXIMUM OF 30' INTERVALS).

FRONTAGE LANDSCAPING IS REQUIRED ON THE NORTH AND EAST SIDES OF THE PARKING LOT AND PROVIDED WITH A MIN. HT. SHRUB HEDGE.

PARKING LOT INTERIOR LANDSCAPING:
INTERIOR LANDSCAPE ISLANDS ARE REQUIRED IN PARKING LOTS WITH 12 OR MORE PARKING SPACES. (1) ISLAND WITH A MINIMUM OF 40 SF WITH NO SINGLE DIMENSION LESS THAN 4' IS REQUIRED FOR EACH 12 SPACES.

16 SPACES PROPOSED / 12 SPACES = 2 ISLANDS REQUIRED / 4 ISLANDS PROVIDED

Consumers Roosevelt Park
3145 Henry Street, Muskegon, MI 49441

ISSUED

DATE: 08/14/2024

PROJECT: 23053

FILE NAME: 23053.L001.dwg

8066 General Parkway
Kalamazoo, MI 49009
(269) 351-5151
Boscharch.com



PN: 23053
File Name: 23053.L001.dwg
8066 General Parkway
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(269) 351-5151
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Provide a complete site lawn and planting bed irrigation system, consisting of valves, water lines, sprinkler heads, drip tubing, and controller to adequately cover all lawn and plant beds. Plant beds to be in-line, drip irrigation tubing, valved separately from the lawn zones. Controller to be installed on the exterior wall with the ability to be locked, with outlet supplied by electrician. Need to have the ability for all winterization to be done completely from the exterior of the building. The system into 1" backflow prevention device supplied and installed by plumber. Poly pipe MAY be substituted for PVC pipe specified in details. Sleeves not in irrigation contract, sleeves installed by Electrical contractor. Irrigation to be installed from back of curb to curb around entire site including right of way areas.

ELECTRO-MECHANICAL CONTROLLERS

Model ESP-4
The controller shall be of a hybrid type that combines electro-mechanical and microelectronic circuitry capable of fully automatic or manual operation. The controller shall be housed in a wall-mountable, weather resistant plastic cabinet with a key-locking cabinet door (outdoor models only) suitable for either indoor or outdoor installation.

The controller shall have a base unit with 4 stations as well as three expansion slots capable of receiving station modules of three stations each to create a controller of up to 13 stations. Station 13 shall be called an "auxiliary station" and shall have the capability of bypassing an active rain sensor or of functioning as a normal station output. Station timing shall be from 0 minutes to 6 hours. Run time resolution shall be in 1-minute increments from 0 to 54 minutes and 10 minutes from 1 to 6 hours. The LCD shall display "No Run Times" or equivalent icon for 230 VAC models if no run time has been entered for any station in any program.

The controller shall have three separate and independent programs which can have different start times, station timing and watering days. Each program shall have up to 4 start times available. The controller shall stack multiple start times in sequence to prevent hydraulic overload. The LCD shall display "No Start Times" or the equivalent icon for 230VAC models if no start time has been entered for any program. The controller shall be capable of operating two 24 VAC solenoid valves per station plus a master valve or remote pump start relay. The controller shall operate on 120 VAC ± 20% at 60Hz (230VAC ± 20% at 50Hz for international models). The controller shall have an electronic, diagnostic, circuit breaker that shall sense a station with an electrical overload or short circuit and shall bypass that station and continue operating all other stations.

The controller shall have a 365-day calendar with a permanent day off feature that allows a day(s) of the week to be turned OFF on any cycle (odd/even/1-3/day cycle). A day set to "Permanent Off" shall override the normal repeating schedule and shall display the words "Day Always Off/Day Off" in the LCD screen.

The controller shall have a seasonal adjust feature adjustable from 0% to 200% in increments of 10%. Seasonal adjust shall affect all programs simultaneously. If seasonal adjust is set to 0% the LCD shall display "SEASONAL ADJ." (equivalent icon for 230 VAC models).

The controller shall have a 12-hour AM/PM or 24 hour military (for 230VAC models) clock with a midnight day change over. The controller shall have a sensor circuit for connection to a rain sensor or to an underground moisture sensor system that will interrupt a scheduled watering under "wet" or "moist" conditions. The controller shall have an indicator on the LCD screen and one LED light to indicate that a sensor is connected and active and that watering has been temporarily disabled.

The controller shall have access to a variety of "hidden features" by turning the dial to a specific location on the dial and pushing the ON/OFF buttons simultaneously. These features shall include 1) save a custom default program 2) retroactive or manual start program 3) bypass active rain sensor on the Auxiliary Station 4) allow the Auxiliary Station to be interrupted by an active rain sensor 5) Clear memory 6) Set a day to "Permanently Off" 7)Set master valve/pump start circuit by station 8) Set programmable delay between station.

The controller shall have the following manual operations and manual advances for semi-automatic control:

1. Run a single valve
2. Run multiple manually stacked valves
3. Run a semi-automatic program
4. Run a test on all valves (all stations with any time assigned regardless of the program) from 1 to 10 minutes

The controller shall have a removable, battery programmable front panel (uses a 9 volt battery [not included]) for conveniently programming the controller away from the installation site or for teaching irrigation scheduling.

The controller shall have the capacity for the program to be erased allowing the user to start programming with a blank controller. The controller shall have multiple knockouts, sizes and locations, including the back of the cabinet, to facilitate installation and provide a clean professional look. The controller shall have a factory default program that runs 10 minutes every day beginning 8 hours after power resumption.

The controller shall have a reset button to reset the controller in the case of micro-controller block-up due to power surges or frequent interruption to the power supply.

The controller shall be as manufactured by Rain Bird Corporation, Azusa, California.

5000 Plus Series Full and Reversing Full Port Circle Sprinkler Specifications

The full and/or part circle sprinkler shall be a single stream, water lubricated, gear drive type. The sprinkler shall have a flow shut-off device that is integrated into the flow path of the rotor as well as adjustable arc coverage of 40 to 360 degrees. Arc adjustment can be performed with or without the sprinkler in operation and shall require only a flat-blade screwdriver.

The sprinkler shall have a smoothed flow path entrance to enhance the flow characteristics of the rotor. In addition, the sprinkler shall feature a flow path to nozzle bore transition radius to minimize pressure loss and assure peak nozzle radius is achieved.

The sprinkler shall have a pressure activated multi-function wiper seal that positively seals against the pop-up stem to keep debris out of the rotor and to clean debris from the pop-up stem as it retracts. This wiper seal shall prevent sprinkler from sticking up, and be capable of sealing the sprinkler cap to sprinkler body under normal operating pressures.

The sprinkler shall have a screen installed in the pop-up stem to filter inlet water, protect the drive from clogging and simplify its removal for cleaning and flushing of the system. It shall have a 3/4" (FNT) bottom inlet.

The sprinkler shall have a standard green rubber cover and a strong stainless steel retract spring for positive pop down. Pop-up height as measured from the top of the cap at normal installation to the middle of the nozzle orifice shall be 4".

The sprinkler shall have 12 interchangeable nozzles. 8 Rain Curtain nozzles for superior coverage and 4 Low Angle nozzles for reduced radius of throw and superior wind resistance with all nozzles containing Micro-Ramp for superior close-in watering. The angle of trajectory shall be 25 degrees for the Rain Curtain nozzles and 10 degrees for the low angle nozzles. The sprinkler shall come with a stainless steel adjusting screw capable of reducing the radius up to 25%.

The sprinkler shall be as manufactured by Rain Bird Corporation, Azusa, California.

SPRAY HEADS

1802, 1803, 1804, 1806, and 1812 Pop-up Full or Part Circle Spray Sprinkler

The sprinkler body, stem, nozzle, and screen shall be constructed of heavy-duty ultra-violet resistant plastic. It shall have a heavy-duty stainless steel retract spring for positive pop-down and a ratcheting system for easy alignment of the pattern. The sprinkler shall have a soft elastomer pressure activated co-molded wiper seal for cleaning debris from the pop-up stem as it retracts into the case to prevent the sprinkler from sticking up and to minimize "blow-by".

The sprinkler shall have a matched precipitation rate (MPR) plastic or brass nozzle with an adjusting screw capable of regulating the radius and flow. The sprinkler shall be capable of housing protective, non-clogging filter screens or pressure compensating screens (PCS) under the nozzles. The filter screen shall be used in conjunction with the adjusting screw for regulating. The 6" (15 cm) and 12" (30 cm) models shall have both a side and bottom 1/2" (19/32) Female National Pipe Thread inlet (FNPT) for ease of installation.

The sprinkler shall have a Pop-Top (TM) Flush Plug pre-installed. The plug shall prevent debris from clogging the sprinkler during installation and allow for system to be flushed before nozzle. The plug shall be bright orange in color and constructed of polypropylene material.

The sprinkler shall be as manufactured by Rain Bird Corporation, Azusa, California

ELECTRIC REMOTE CONTROL VALVES

100-PGA 150-PGA 200-PGA Electric Remote Control Plastic Globe/Angle Valve With Optional PRS-D Pressure Regulating Feature

The electric remote control valve shall be a normally closed 24 VAC 50/60 Hz (cycles/second) solenoid actuated globe/angle pattern design.

The valve pressure rating shall not be less than 150 PSI (10.35 Bars).

The valve body and bonnet shall be constructed of high impact, weather resistant PVC with stainless steel screws.

The valve shall have manual open/close control (internal bleed) for manually opening and closing the valve without electrically energizing the solenoid. The valve's internal bleed shall prevent flooding of the valve box.

The valve shall have a fully-encapsulated, one-piece solenoid. The solenoid shall have a captured plunger with a polypropylene frame and a leverage handle for easy turning. This 24 VAC 50/60 Hz solenoid shall open with 11.6 VAC minimum at 150 psi (10.35 bar). At 24 VAC, average inrush current shall not exceed 0.41 amps. Average holding current shall not exceed 0.28 amps.

The valve shall have a flow control stem for accurate manual regulation and/or shut off of outlet flow. The valve must open or close in less than 1 minute at 150 PSI (10.35 bar), and less than 30 seconds at 20 PSI (1.38 bar).

The valve construction shall provide for all internal parts to be removable from the top of the valve without disturbing the valve installation. The body shall have a removable O-ringed plug for installation in either globe or angle configuration.

The valve shall be as manufactured by Rain Bird Corporation, Azusa, California.

DRIP IRRIGATION COMPONENTS

A. Rain Bird Control Zone Kits

1. General Information
 - a. Provide control zone kits manufactured by Rain Bird as indicated on construction drawings.
 - b. Control zone kit assemblies for drip/line irrigation zones must include control valve, filtration, and pressure regulation components sized to meet the hydraulic demands and flow requirements of the zones that they service.
2. Rain Bird Low Flow Control Zone Kit for drip/line zones with flows from 0.2 to 5.0 GPM (0.8 to 18.8 lpm), including low flow valve (LFV) and pressure regulating filter (PRF).
 - a. Available model numbers:
 - 1) XCZ-015-PRF [3/4" (19 mm) Low Flow valve and 3/4" (19 mm) PR Filter]
 - 2) XCZ-LF-100-PRF 1" (25 mm) Low Flow valve and 3/4" (19 mm) PR Filter]
 - 3) XACZ-015-PRF [3/4" (19 mm) Low Flow Anti-siphon valve and 3/4" (19 mm) PR Filter]
 - b. Low Flow Valve (LFV) component specifications include:
 - 1) Valve body and bonnet constructed of high impact, weather-resistant plastic, stainless steel and other chemical/UV resistant materials
 - 2) Diaphragm with a double-knife seal, constructed of durable Buna-N rubber with a clog-resistant metering orifice
 - 3) Energy-efficient, low-power encapsulated solenoid with captured plunger and 40 mesh (200 micron) solenoid filter
 - 4) External bleed for manual system flushing during start-up, internal bleed for manual zone activation during maintenance operations
 - 5) Inlet pressure rating: 20 to 120 PSI (1.4 to 8.3 bar)
 - 6) Female threaded inlet and outlet connections
 - 7) Anti-siphon valve configuration includes listed features and incorporates atmospheric vacuum breaker with I.A.P.M.O. and A.S.S.E. listing approval

- c. Pressure Regulating Filter (PRF) combines filtration and pressure regulation in one integrated unit for protection of downstream components of drip irrigation system. PRF component specifications include:
 - 1) Compact "Y" filter body and cap configuration constructed of glass-filled, UV-resistant polypropylene, with 120 PSI (8.3 bar) operating pressure rating. Maximum dimensions of filter body: Height: 4 1/2" (11.4 cm), Length: 5 1/2" (14 cm), Width: 2" (5.1 cm)
 - 2) Standard 200 mesh (75 micron) filter screen constructed of durable polyester fabric attached to propylene frame. Screen is serviceable for cleaning purposes by unscrewing cap from filter body and removing filter element.
 - 3) Normally-open pressure regulating device with preset outlet pressure of approximately 30 PSI (2.1 bar). Pressure regulating device allows full flow with minimal pressure loss unless inlet pressure is greater than preset level. As inlet pressure increases above preset level, internal spring compresses to reduce downstream pressure.
 - 4) Male threaded 3/4" (19 mm) inlet and outlet connections.

3. Rain Bird Medium Flow Control Zone Kit for drip/line zones with flows from 3.0 to 15.0 GPM (11.4 to 56.8 lpm), including Rain Bird DV or ASVF valve and pressure regulating filter (PRF).
 - a. Available model numbers:
 - 1) XCZ-100-PRF 1" (25 mm) DV valve and 1" (25 mm) PR Filter]
 - 2) XACZ-100-PRF 1" (25 mm) Anti-siphon Valve and 1" (25 mm) PR Filter]
 - b. DV Valve component specifications include:
 - 1) Valve body and bonnet constructed of high impact, weather-resistant plastic, stainless steel and other chemical/UV resistant materials
 - 2) Diaphragm with a double-knife seal, constructed of durable Buna-N rubber with a clog-resistant metering orifice
 - 3) Energy-efficient, low-power encapsulated solenoid with captured plunger and 40 mesh (200 micron) solenoid filter
 - 4) External bleed for manual system flushing during start-up, internal bleed for manual zone activation during maintenance operations
 - 5) Inlet pressure rating: 20 to 120 PSI (1.4 to 8.3 bar)
 - 6) Female threaded inlet and outlet connections
 - 7) Anti-siphon valve configuration includes listed features and incorporates atmospheric vacuum breaker with I.A.P.M.O. and A.S.S.E. listing approval

- c. Pressure Regulating Filter (PRF) combines filtration and pressure regulation in one integrated unit for protection of downstream components of drip irrigation system. PRF component specifications include:
 - 1) Compact "Y" filter body and cap configuration constructed of glass-filled, UV-resistant polypropylene, with 120 PSI (8.3 bar) operating pressure rating. Maximum dimensions of filter body: Height: 4 1/2" (11.4 cm), Length: 5 1/2" (14 cm), Width: 2" (5.1 cm)
 - 2) Standard 200 mesh (75 micron) filter screen constructed of durable polyester fabric attached to propylene frame. Screen is serviceable for cleaning purposes by unscrewing cap from filter body and removing filter element.
 - 3) Normally-open pressure regulating device with preset outlet pressure of approximately 40 PSI (2.8 bar). Pressure regulating device allows full flow with minimal pressure loss unless inlet pressure is greater than preset level. As inlet pressure increases above preset level, internal spring compresses to reduce downstream pressure.
 - 4) Male threaded 1" (25 mm) inlet and outlet connections.

4. Rain Bird Medium Flow Commercial Control Zone Kit for drip/line zones with flows from 3.0 to 20.0 GPM (11.4 to 75.7 lpm), including PVC ball valve, Rain Bird PESB valve, and Rain Bird pressure regulating quick-check basket filter.
 - a. Available model numbers:
 - 1) XCZ-100-B-COM 1" (25 mm) PVC ball valve, 1" (25 mm) Rain Bird PESB valve, and 1" (25 mm) PRB-QKCHK pressure regulating basket filter]

- b. PESB valve assembly component specifications include:
 - 1) 1" (25 mm) PVC full-port ball valve with female threaded inlet and outlet connections
 - 2) PESB valve body and bonnet constructed of durable glass-filled nylon, stainless steel and other chemical/UV resistant materials
 - 3) Diaphragm constructed of a durable Buna-N rubber material reinforced with nylon
 - 4) One-piece solenoid with captured plunger and 40 mesh (200 micron) solenoid filter
 - 5) External bleed for manual system flushing during start-up, internal bleed for manual zone activation during maintenance operations
 - 6) Inlet pressure rating: 20 to 200 PSI (1.4 to 13.8 bar)
 - 7) Female threaded inlet and outlet connections

- c. Pressure Regulating Quick Check Basket Filter combines filtration and pressure regulation in one integrated unit for protection of downstream components of drip irrigation system. Pressure regulating basket filter component specifications include:

- 1) Basket style body and jar-top cap constructed of heavy-duty glass-filled, UV-resistant polypropylene, with 150 PSI (10.3 bar) operating pressure rating. Maximum dimensions of filter body: Height: 6 1/2" (16.5 cm), Length: 6 1/2" (16.5 cm), Width: 3 1/2" (8.9 cm)
- 2) Indicator incorporated into filter cap that changes color from green to red during operation when the filter element requires cleaning.
- 3) Standard 200 mesh (75 micron) filter screen constructed of stainless steel attached to propylene frame. Screen is serviceable for cleaning purposes by unscrewing cap from filter body and removing filter element.
- 4) Normally-open in-line pressure regulating device, constructed of durable, UV resistant non-corrosive material able to accommodate an inlet pressure rating of not less than 150 PSI (10.3 bar), with preset outlet pressure of approximately 40 PSI (2.8 bar). Pressure regulating device allows full flow with minimal pressure loss unless inlet pressure is greater than preset level. As inlet pressure increases above preset level, internal spring compresses to reduce downstream pressure.
- 5) Male threaded 1" (25 mm) inlet and outlet connections.

- B. Rain Bird XF Series Drip/line Components
 - I. General Information
 - a. Provide flexible dual-layered pressure-compensating inline XF Series Drip/line manufactured by Rain Bird, with emitter spacing and drip/line row spacing as indicated on construction drawings.
 - b. Provide insert or compression fittings manufactured by Rain Bird that are compatible with inline emitter tubing as indicated on construction drawings.
 2. Rain Bird XFD On-Surface Drip/line with pressure-compensating inline emitters.
 - a. Available Rain Bird XFD On-Surface Drip/line model numbers for POTABLE water systems; brown colored drip/line tubing with emitter flow rates and spacing as shown:
 - 1) Rain Bird XFD-06-12; 0.6 GPM (2.3 lph) emitters spaced 12" (30.5 cm) on-center
 - 2) Rain Bird XFD-06-18; 0.6 GPM (2.3 lph) emitters spaced 18" (45.7 cm) on-center
 - 3) Rain Bird XFD-06-24; 0.6 GPM (2.3 lph) emitters spaced 24" (61 cm) on-center
 - 4) Rain Bird XFD-09-12; 0.9 GPM (3.4 lph) emitters spaced 12" (30.5 cm) on-center
 - 5) Rain Bird XFD-09-18; 0.9 GPM (3.4 lph) emitters spaced 18" (45.7 cm) on-center
 - 6) Rain Bird XFD-09-24; 0.9 GPM (3.4 lph) emitters spaced 24" (61 cm) on-center
 - b. Available Rain Bird XFDP On-Surface Drip/line model numbers for NON-POTABLE water systems; purple colored drip/line tubing with emitter flow rates and spacing as shown:
 - 1) Rain Bird XFDP-06-12; 0.6 GPM (2.3 lph) emitters spaced 12" (30.5 cm) on-center
 - 2) Rain Bird XFDP-06-18; 0.6 GPM (2.3 lph) emitters spaced 18" (45.7 cm) on-center
 - 3) Rain Bird XFDP-06-24; 0.6 GPM (2.3 lph) emitters spaced 24" (61 cm) on-center
 - 4) Rain Bird XFDP-09-12; 0.9 GPM (3.4 lph) emitters spaced 12" (30.5 cm) on-center
 - 5) Rain Bird XFDP-09-18; 0.9 GPM (3.4 lph) emitters spaced 18" (45.7 cm) on-center
 - 6) Rain Bird XFDP-09-24; 0.9 GPM (3.4 lph) emitters spaced 24" (61 cm) on-center
 3. Drip/line tubing material specifications and features include:
 - 1) XFD tubing: brown in color, conforming to an outside diameter (O.D.) of 0.634 inches (16 mm) and an inside diameter (I.D.) of 0.536 inches (13.6 mm) and wall thickness of 0.044 inches (1.2 mm)
 - 2) XFDP tubing: purple in color, conforming to an outside diameter (O.D.) of 0.634 inches (16 mm) and an inside diameter (I.D.) of 0.536 inches (13.6 mm) and wall thickness of 0.044 inches (1.2 mm)
 - 3) Factory installed, pressure-compensating, inline emitters welded to the inner circumference of the polyethylene tubing at spacing specified by model number
 - 4) Inline emitters designed to pressure-compensate by lengthening the emitter's turbulent flow path (Rain Bird patent pending)
 - 5) Consistent flow rate from each installed inline emitter when emitter inlet pressure is supplied between recommended operating range of 8.5 to 60 PSI (0.7 to 4.1 bar)
 - 6) Required filtration for XF Series drip/line tubing and emitters is 120 mesh (125 micron)

PART 3 - EXECUTION

3.01 INSPECTIONS AND REVIEWS

- A. Pre-construction Site Inspection
 1. Verify construction site conditions and note irregularities affecting work of this section. Report irregularities in writing to Owner's Representative prior to beginning work. Commencement of work implies acceptance of existing site conditions.
- B. Utility Locates ("Call Before You Dig")
 1. Arrange and coordinate Utility Locates with local authorities prior to construction.
 2. Repair underground utilities that are damaged during construction. Make repairs at no additional cost to the contractor.

- 3.02 DRIP/LINE LAYOUT OF WORK
 - A. Stake out drip/line irrigation system. Items staked include manifold/header pipe and tubing, steves, control zone assemblies, flush valves, air relief valves, and check valves.
 - B. Drip/line Irrigation System Layout Review: Drip/line irrigation system layout review will occur after staking has been completed. Notify Owner's Representative one week in advance of review. Modifications will be identified by Owner's Representative at this review.

- 3.03 DRIP/LINE EXCAVATION, TRENCHING, AND BACKFILL
 - A. Excavate and install pipes at minimum cover indicated in drawings or specifications. Excavate trenches at appropriate width for connections and fittings.
 - B. Minimum cover for drip/line components (distance from top of pipe to finish grade):
 1. Buried PVC manifold and supply header pipe to drip/line grid layouts: 12" (30.5 cm) to top of pipe.
 2. Buried drip/line lateral pipe downstream PVC manifold and supply header pipe: 4" (10 cm) to top of pipe.
 3. On-grade drip/line lateral pipe downstream PVC manifold and supply header pipe: Secure to finish grade with approved tubing stakes. Install and test prior to installation of landscape fabric and mulch.
 - C. Backfill only after buried lines have been reviewed, tested, and approved.
 - D. Excavated material is generally satisfactory for backfill. Use backfill free from rubbish, vegetable matter, frozen materials, and stones larger than 1" (50 mm) in maximum diameter. Remove material not suitable for backfill. Use backfill free of sharp objects next to pipe.
 - E. Dress backfilled areas to original grade. Incorporate excess backfill into existing site grades. Dispose of excess backfill off site.
 - F. Contact Owner's Representative for trench depth adjustments where utilities conflict with irrigation trenching and pipe work.

- 3.04 ASSEMBLING PIPE AND FITTINGS
 - A. General:
 1. Keep pipe free from dirt and debris. Cut pipe ends square, deburr and clean as recommended by pipe manufacturer.
 2. Keep ends of assembled pipe capped. Remove caps only when necessary to continue assembly.
 - B. PVC Pipe and Fittings:
 1. Use only strap-type friction wrenches for threaded plastic pipe.
 2. PVC Solvent Weld Pipe and Fittings:
 - a. Use appropriate primer and solvent cement. Join pipe in manner recommended by pipe and fitting manufacturers and in accordance with accepted industry practices.
 3. Cure for thirty (30) minutes before handling and twenty-four (24) hours before pressurizing or installing with vibratory plow.
 4. Snake pipe from side to side within trench.
 3. PVC Threaded Connections:
 - a. Use only factory-formed threads. Field-cut threads are not permitted.
 - b. Apply thread sealant in manner recommended by component, pipe and sealant manufacturers and in accordance with accepted industry practices.

- C. Drip/line Tubing and Fittings:
 1. Use only Rain Bird XF-Series Insert Fittings or Rain Bird Easy Fill Compression Fittings for Rain Bird XF-Series drip/line tubing connections or transitions as recommended by the Manufacturer's representative for the specific site and system conditions.
 2. Drip/line Insert Fittings:
 - a. Install drip/line tubing and fittings in manner recommended by manufacturer and in accordance with accepted industry practices.
 3. Drip/line Compression Fittings:
 - a. Install drip/line tubing and fittings in manner recommended by manufacturer and in accordance with accepted industry practices.

- 3.05 INSTALLATION OF DRIP/LINE IRRIGATION COMPONENTS
 - A. General:
 1. Keep pipe free from dirt and debris. Cut pipe ends square, deburr and clean as recommended by pipe manufacturer.
 2. Keep ends of assembled pipe capped. Remove caps only when necessary to continue assembly.
 - B. PVC Pipe and Fittings:
 1. Use only strap-type friction wrenches for threaded plastic pipe.
 2. PVC Solvent Weld Pipe and Fittings:
 - a. Use appropriate primer and solvent cement. Join pipe in manner recommended by pipe and fitting manufacturers and in accordance with accepted industry practices.
 3. Cure for thirty (30) minutes before handling and twenty-four (24) hours before pressurizing or installing with vibratory plow.
 4. Snake pipe from side to side within trench.
 3. PVC Threaded Connections:
 - a. Use only factory-formed threads. Field-cut threads are not permitted.
 - b. Apply thread sealant in manner recommended by component, pipe and sealant manufacturers and in accordance with accepted industry practices.

- A. Control Zone Kit Assembly:
 1. Flush mainline pipe before installing Control Zone Kit assembly.
 2. Locate where shown on drawings. Connect control wires to remote control valve wires using specified wire connectors and waterproof sealant. Provide connectors and sealant per manufacturer's recommendations.
 3. Install a maximum of four (4) Low Flow or Medium Flow Control Zone Kits per standard rectangular valve box. Install a maximum of one (1) Medium Flow Commercial Control Zone Kits per standard rectangular valve box. Install a maximum of one High Flow Commercial Control Zone Kits per jumbo rectangular valve box.
 - a. Locate valve boxes at least 1' (30.5 cm) from, and align with, nearby walls or edges of paved areas.
 - b. Group Control Zone Kit assemblies together where practical. Align grouped valve boxes in uniform patterns. Allow at least 12" (30.5 cm) between valve boxes.
 - c. Brand controller letter and station numbers on valve box lid in 2" (50 mm) high letters.
 - d. Lateral Piping and Drip/line Tubing:
 - I. Install lateral piping and drip/line tubing at locations and in grid patterns as indicated on drawings and installation details, and in strict accordance with manufacturer recommendations.
 2. Thoroughly flush PVC lateral piping, supply headers, and drip/line tubing immediately upon installation.
 - e. Air-Relief Valve Kit Assembly: Install at all high points in drip/line tubing grid as shown and directed on drawings and installation details.
 - f. Flush Point Assembly: Install in flush header or at ends of each drip/line zone segment as shown and directed on drawings and installation details. Install at least 12-inches from and align with adjacent walls or edges of paved areas.

- 3.06 PROJECT RECORD (AS-BUILT) DRAWINGS
 - A. Document field changes from original design and construction documents. Maintain on-site and separate from original construction documents, one complete set of documents labeled "Project Field Documents." Keep documents current. Do not permanently cover work until accurate "record drawings" information is recorded.
 - B. Record pipe network alterations on a daily basis. Record work that is installed differently than shown on construction documents. Record accurate reference dimensions, measured from at least two permanent reference points, of each control zone kit assembly, each drip/line zone boundary, each air relief valve assembly, each flush point assembly, and other drip/line irrigation components enclosed within valve box.
 - C. Obtain from Owner's Representative one set of drawings or CAD files prior to construction completion. Duplicate information contained on "Record Documents" maintained on-site using technical drafting pen or AutoCAD. Label each sheet "Record Drawing".

- 3.07 WINTERIZATION AND SPRING START-UP
 - A. Winterize irrigation system in full following completion, or partial completion, of irrigation system construction. Start-up irrigation system in spring following completion, or partial completion, of irrigation system construction. Repair any damage caused in improper winterization at no additional cost to Owner. Coordinate winterization and start-up with landscape maintenance personnel.
 - B. Following completion of Contractor's maintenance period, Owner will be responsible for maintaining system in working order during remainder of guarantee/warranty period, for performing necessary minor maintenance, for protecting against vandalism, and for preventing damage over landscape maintenance operation.

- 3.08 MAINTENANCE
 - A. Maintain irrigation system for duration of 30 calendar days from formal written acceptance by Owner's Representative. Make periodic examinations and adjustments to irrigation system components in order to achieve the most efficient and uniform application of water.
 - B. Following completion of Contractor's maintenance period, Owner will be responsible for maintaining system in working order during remainder of guarantee/warranty period, for performing necessary minor maintenance, for protecting against vandalism, and for preventing damage over landscape maintenance operation.

- 3.09 CLEANUP
 - A. Remove from site machinery, tools, excess materials, and rubbish upon completion of work.

- 3.10 MAINTENANCE
 - A. Maintain irrigation system for duration of 30 calendar days from formal written acceptance by Owner's Representative. Make periodic examinations and adjustments to irrigation system components in order to achieve the most efficient and uniform application of water.
 - B. Following completion of Contractor's maintenance period, Owner will be responsible for maintaining system in working order during remainder of guarantee/warranty period, for performing necessary minor maintenance, for protecting against vandalism, and for preventing damage over landscape maintenance operation.

- 3.11 MAINTENANCE
 - A. Maintain irrigation system for duration of 30 calendar days from formal written acceptance by Owner's Representative. Make periodic examinations and adjustments to irrigation system components in order to achieve the most efficient and uniform application of water.
 - B. Following completion of Contractor's maintenance period, Owner will be responsible for maintaining system in working order during remainder of guarantee/warranty period, for performing necessary minor maintenance, for protecting against vandalism, and for preventing damage over landscape maintenance operation.

- 3.12 MAINTENANCE
 - A. Maintain irrigation system for duration of 30 calendar days from formal written acceptance by Owner's Representative. Make periodic examinations and adjustments to irrigation system components in order to achieve the most efficient and uniform application of water.
 - B. Following completion of Contractor's maintenance period, Owner will be responsible for maintaining system in working order during remainder of guarantee/warranty period, for performing necessary minor maintenance, for protecting against vandalism, and for preventing damage over landscape maintenance operation.

- 3.13 MAINTENANCE
 - A. Maintain irrigation system for duration of 30 calendar days from formal written acceptance by Owner's Representative. Make periodic examinations and adjustments to irrigation system components in order to achieve the most efficient and uniform application of water.
 - B. Following completion of Contractor's maintenance period, Owner will be responsible for maintaining system in working order during remainder of guarantee/warranty period, for performing necessary minor maintenance, for protecting against vandalism, and for preventing damage over landscape maintenance operation.

- 3.14 MAINTENANCE
 - A. Maintain irrigation system for duration of 30 calendar days from formal written acceptance by Owner's Representative. Make periodic examinations and adjustments to irrigation system components in order to achieve the most efficient and uniform application of water.
 - B. Following completion of Contractor's maintenance period, Owner will be responsible for maintaining system in working order during remainder of guarantee/warranty period, for performing necessary minor maintenance, for protecting against vandalism, and for preventing damage over landscape maintenance operation.

- 3.15 MAINTENANCE
 - A. Maintain irrigation system for duration of 30 calendar days from formal written acceptance by Owner's Representative. Make periodic examinations and adjustments to irrigation system components in order to achieve the most efficient and uniform application of water.
 - B. Following completion of Contractor's maintenance period, Owner will be responsible for maintaining system in working order during remainder of guarantee/warranty period, for performing necessary minor maintenance, for protecting against vandalism, and for preventing damage over landscape maintenance operation.

- 3.16 MAINTENANCE
 - A. Maintain irrigation system for duration of 30 calendar days from formal written acceptance by Owner's Representative. Make periodic examinations and adjustments to irrigation system components in order to achieve the most efficient and uniform application of water.
 - B. Following completion of Contractor's maintenance period, Owner will be responsible for maintaining system in working order during remainder of guarantee/warranty period, for performing necessary minor maintenance, for protecting against vandalism, and for preventing damage over landscape maintenance operation.

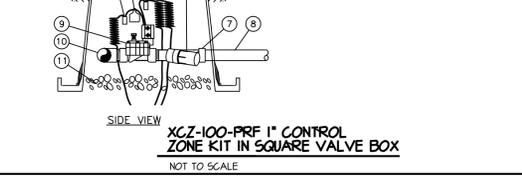
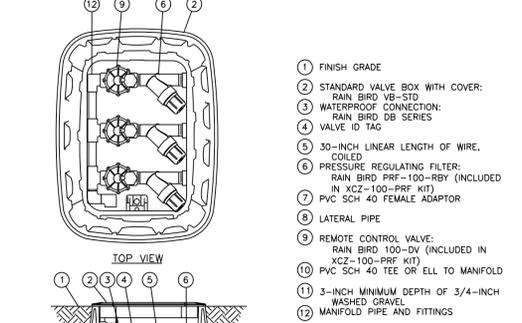
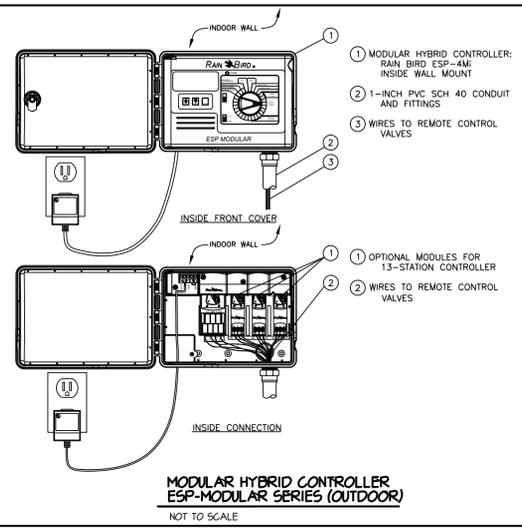
- 3.17 MAINTENANCE
 - A. Maintain irrigation system for duration of 30 calendar days from formal written acceptance by Owner's Representative. Make periodic examinations and adjustments to irrigation system components in order to achieve the most efficient and uniform application of water.
 - B. Following completion of Contractor's maintenance period, Owner will be responsible for maintaining system in working order during remainder of guarantee/warranty period, for performing necessary minor maintenance, for protecting against vandalism, and for preventing damage over landscape maintenance operation.

- 3.18 MAINTENANCE
 - A. Maintain irrigation system for duration of 30 calendar days from formal written acceptance by Owner's Representative. Make periodic examinations and adjustments to irrigation system components in order to achieve the most efficient and uniform application of water.
 - B. Following completion of Contractor's maintenance period, Owner will be responsible for maintaining system in working order during remainder of guarantee/warranty period, for performing necessary minor maintenance, for protecting against vandalism, and for preventing damage over landscape maintenance operation.

- 3.19 MAINTENANCE
 - A. Maintain irrigation system for duration of 30 calendar days from formal written acceptance by Owner's Representative. Make periodic examinations and adjustments to irrigation system components in order to achieve the most efficient and uniform application of water.
 - B. Following completion of Contractor's maintenance period, Owner will be responsible for maintaining system in working order during remainder of guarantee/warranty period, for performing necessary minor maintenance, for protecting against vandalism, and for preventing damage over landscape maintenance operation.

- 3.20 MAINTENANCE
 - A. Maintain irrigation system for duration of 30 calendar days from formal written acceptance by Owner's Representative. Make periodic examinations and adjustments to irrigation system components in order to achieve the most efficient and uniform application of water.
 - B. Following completion of Contractor's maintenance period, Owner will be responsible for maintaining system in working order during remainder of guarantee/warranty period, for performing necessary minor maintenance, for protecting against vandalism, and for preventing damage over landscape maintenance operation.

ROTOR POP-UP SPRINKLER - 5004
NOT TO SCALE

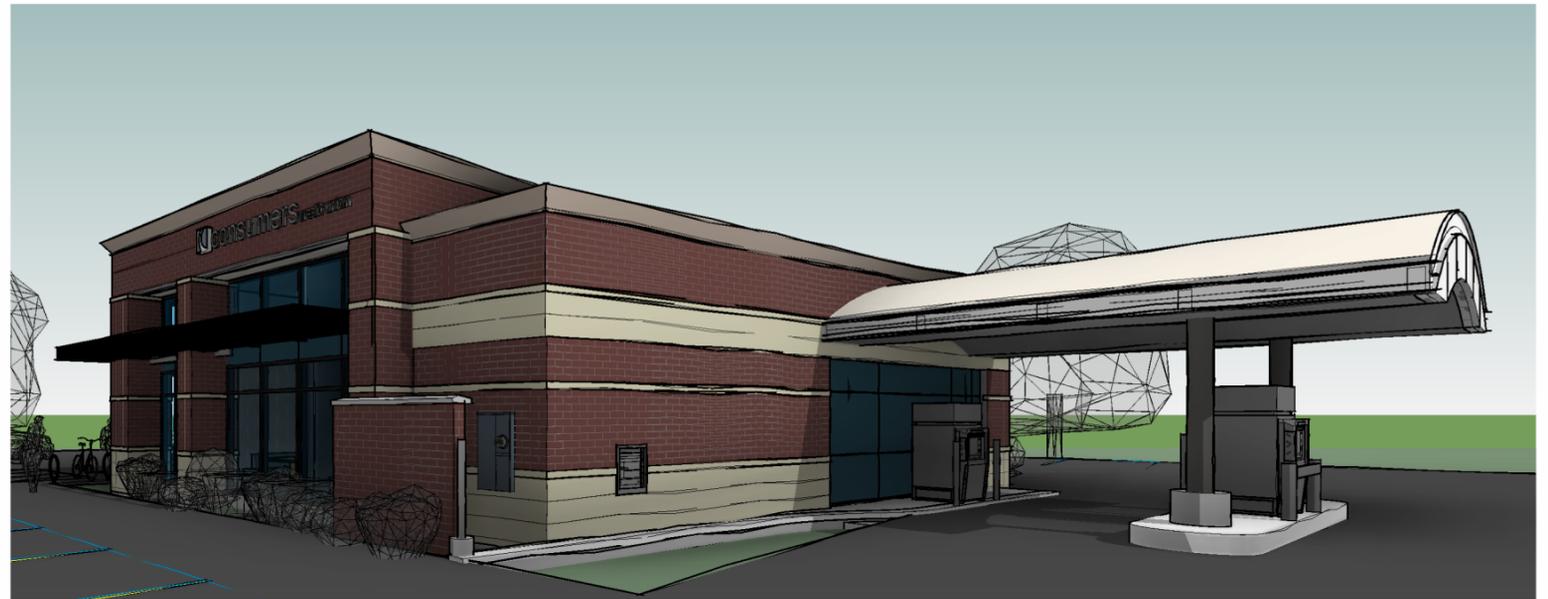




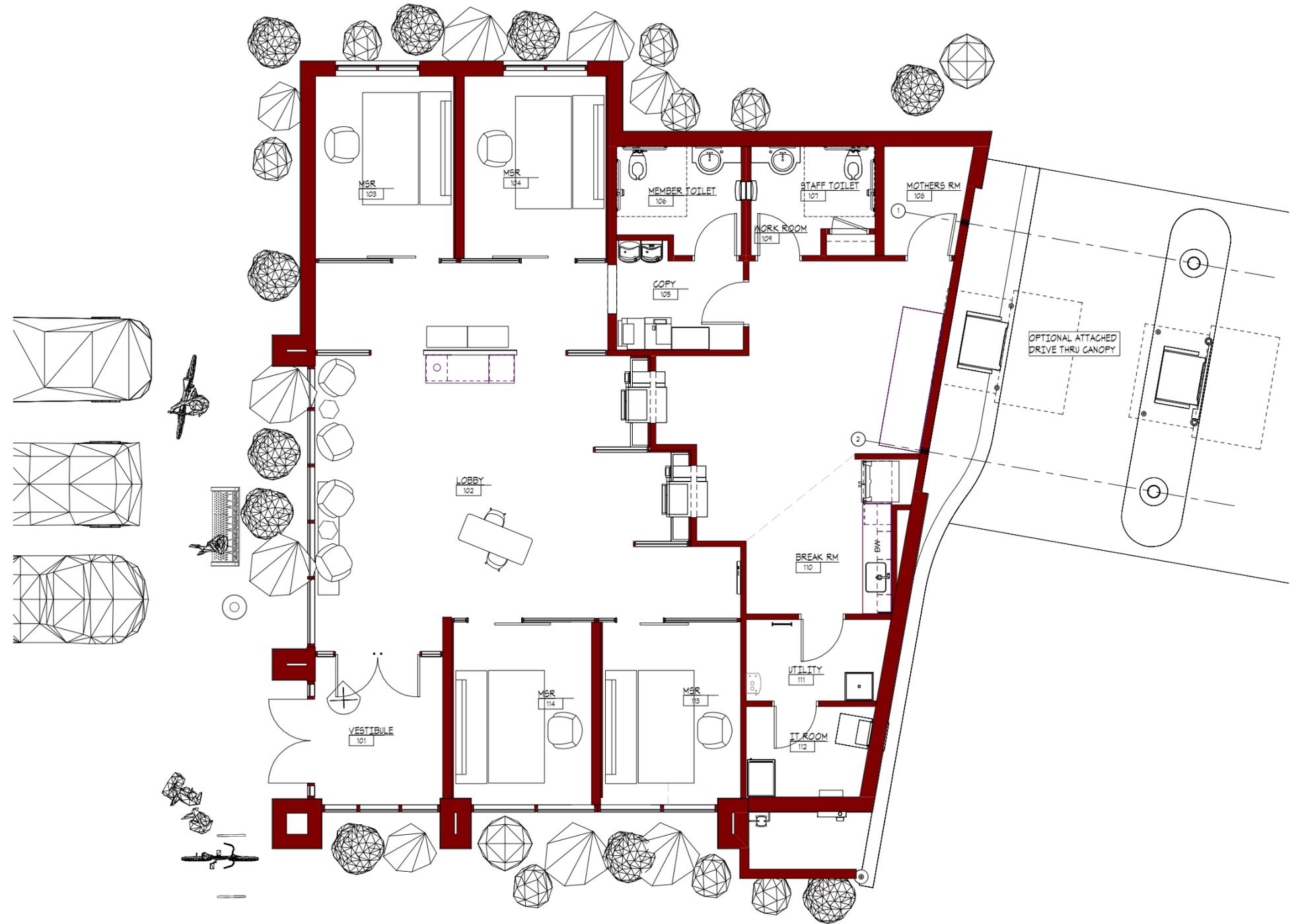
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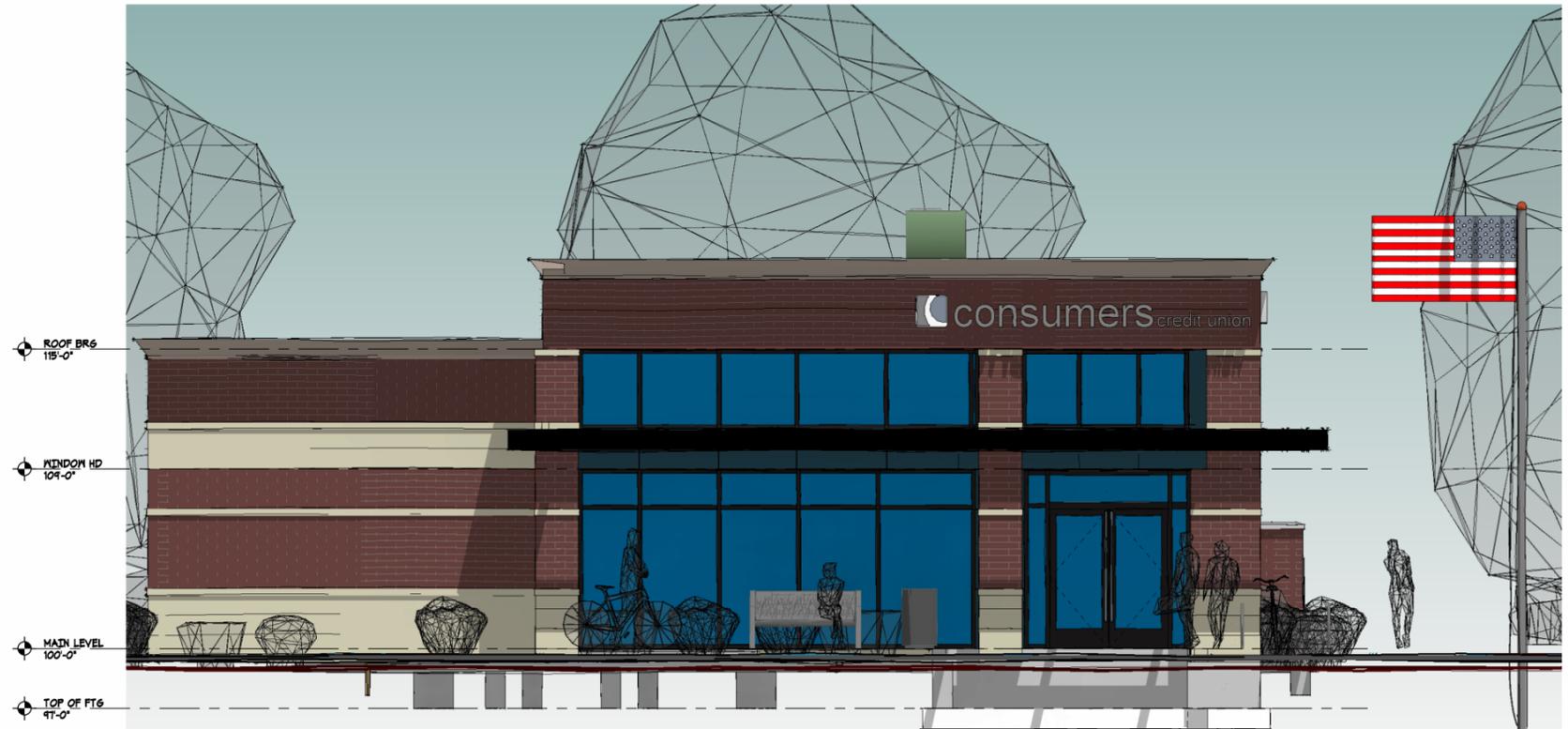
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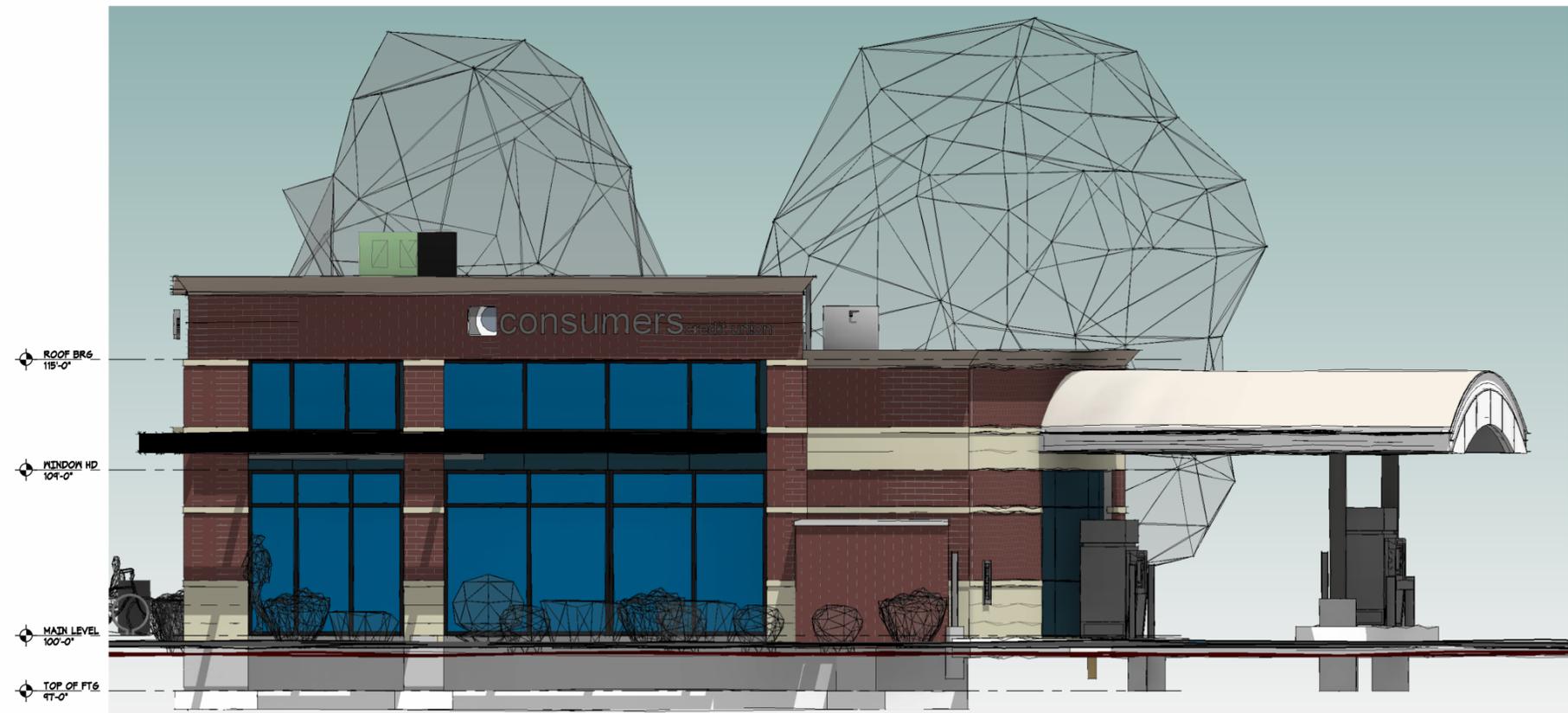
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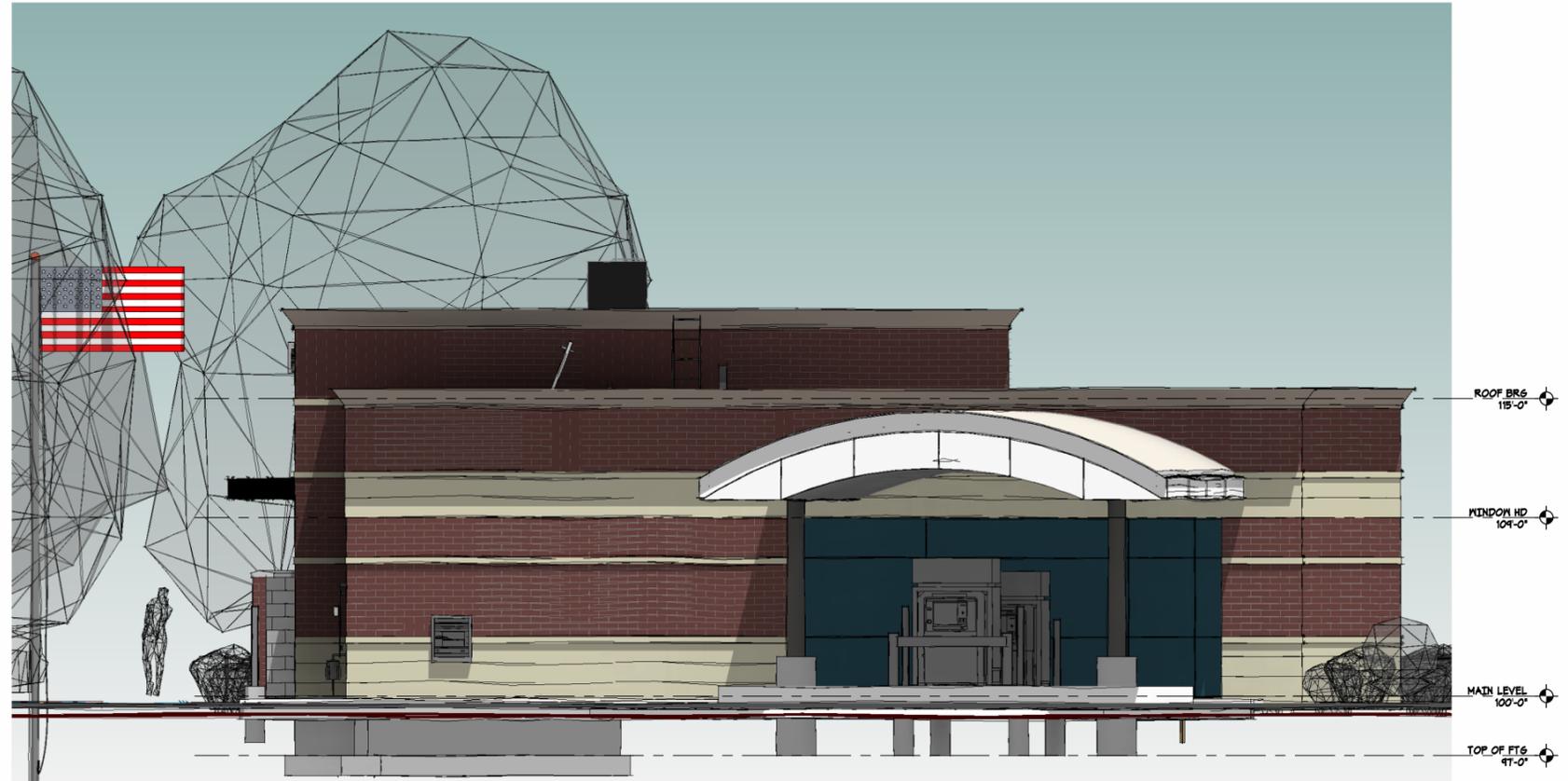
MAIN LEVEL DESIGN PLAN
SCALE: 1/4" = 1'-0"
BUILDING SF: 2,219 GROSS



LEFT SIDE ELEVATION DESIGN
SCALE: 1/4" = 1'-0"



FRONT ELEVATION DESIGN
SCALE: 1/4" = 1'-0"



RIGHT SIDE ELEVATION DESIGN
SCALE: 1/4" = 1'-0"



BACK ELEVATION DESIGN
SCALE: 1/4" = 1'-0"



September 18, 2023

Planning Commission
City of Roosevelt Park
900 Oak Ridge Road
Roosevelt Park, MI 49441

**Subject: Consumers Credit Union Branch, 3145 Henry Street
Site Plan Review**

Dear Commissioners:

The applicant, Consumers Credit Union, has submitted for Site Plan Approval to demolish the existing office building at 3145 Henry Street, and replace it with a Consumers Credit Union branch location, to include two drive-thru Integrated Teller Machines (ITMs) and a reduced parking lot area. McKenna has been asked by the City Manager to review the proposal against the City’s Zoning Ordinance and provide a recommendation to the Planning Commission.

The lot in question is zoned within the C-E Henry Commercial East Zoning District. The lot was recently rezoned to be entirely within the C-E district, as the rear of the site (approx. 112 feet extending from Lindland Road) was previously within the R-1 Single Family District.

Credit unions, including drive through facilities, are permitted by right in the C-E district. A Site Plan Review is required for all uses in the district.

Our Site Plan comments follow:

1. Dimensional Requirements.

- a. **Lot width: The minimum lot width is 50 feet.** The principal front lot line (determined in accordance with Sections 3.7.B and 3.9) is the shorter lot line, along Henry Street. The lot is 195 feet wide, and complies with the requirements.
- b. **Front Setback: 20 feet** The minimum front setback is 20 feet. As it is a corner lot, both the East and North sides of the property must comply with the front setback. The site plan demonstrates a 22’ setback from Henry Street and a 29’ setback from Cranbrook Road, and complies with the requirements.
- c. **Rear Setback: 25 feet** Because the lot is a corner/through lot along three streets, the remaining West lot line will be considered a rear lot line according to Section 3.9.C. The site plan shows compliance with this setback requirement.
- d. **Side Setback:** The maximum side setback is 6 feet. The demonstrated side setback is 11 feet, and is in compliance with the side setback requirement.



- e. **Building Height. The maximum building height is 35 feet.** The building elevations demonstrate a roof height of 15 feet and an additional 4-foot-tall parapet, for a total of 19 feet. The elevations comply with this requirement.
- f. **Lot Coverage. The maximum lot coverage is 35%.** The total lot area as stated on the plan is 50,803.52 sf. 4.5% (2,217 sf) will be building area, so the lot coverage standard is met.

2. Parking, Loading, and Access.

- a. **Number of Parking Spaces.** The parking standard for “business or professional offices and banks not including medical offices” is one space per 200 square feet of floor area. With 2,217 square feet of floor area, 1 space per 200 feet would require 11 parking spaces. The Consumers Credit Union will include 16 spaces, including 1 barrier-free space. The parking space requirements are met.
- b. **Parking and Access Dimensions.** All parking spaces are angled at 90 degrees and are 20 feet deep by 10 feet wide, within the City’s requirement of 20 feet x 9.5 feet.

The two-way aisles are 24 feet wide, meeting City requirements. The one-way aisles for drive-through access are required to be a minimum of 12 feet wide, and the site plan indicates they will be 16 feet wide at their narrowest point. The access drive dimensional requirements are met.

Section 10.6.B requires that parking areas shall have a front yard setback of twenty feet and side and rear setbacks of 10 feet. The parking area is setback 22 feet from Henry Street, 29 feet from Cranbrook Road, well over 10 feet from Lindland Road, and 11 feet from the adjacent property to the south. The parking lot setback requirements are met.

- c. **Barrier-Free Parking.** One barrier-free space is required. The required space is included on the plan and conforms with state requirements for dimensions and location.
- d. **Loading Docks.** According to Section 12.13, office uses with more than 2,000 feet of floor area are required to provide one loading and unloading space, at least 12 feet wide, 40 feet long, and with 15 feet of overhead clearance. The Credit Union will be 2,217 square feet, and therefore must include a loading and unloading area, which may not occupy required parking spaces. The applicant must also submit specifications showing required loading space and the means of ingress, egress, and interior circulation. This requirement has not been met. No loading area is identified on the site plan.

As the site currently has five more parking spaces than the required 11, the applicant may consider replacing the four parking spaces North of the building with a loading area, or any other location that conforms to the requirements of Section 12.13.

- e. **Pedestrian Access.** Section 6.3.E requires a sidewalk to be constructed along all public road frontages. The sidewalks are already in place.

Section 11.6.G requires a continuous pedestrian walkway from *all* adjacent street sidewalks to access building entrances, to incorporate a mix of landscaping, benches, and bicycle facilities for at least fifty percent of the length of the walkway.



A walkway is provided from the Henry Street sidewalk to the parking lot and includes a curb ramp for access to the site. The walkway from Henry Street does not connect to the building entrance. The walkway should be visibly connected to the paths surrounding the building through special pavers, bricks, raised elevation, or scored concrete.

No walkway is provided from Cranbrook Road or Lindland Road. We would support the Planning Commission considering a walkway from Cranbrook sufficient to meet the requirement for both Lindland and Cranbrook, since residents on Lindland can easily walk to Cranbrook to access the site, and an additional walkway to the rear of the building is not desirable for Consumers or for the nearby residents. A sidewalk along the east side of the driveway to Cranbrook, with a crosswalk to the building, would allow for efficient and safe pedestrian access from the north and west.

Section 11.6.G also requires internal pedestrian walkways from parking areas to building entrances. Five-foot-wide walkways are provided along the building's North and East sides, between the building and the parking area. No pathway is provided from the northernmost parking spaces to the building entrance.

f. Driveways.

The site currently includes three driveways. There are two driveways on Cranbrook street which are three feet apart. The closest driveway to the intersection (the northeast driveway) is approximately 35 feet wide. This driveway will be altered to meet current City standards. The adjacent western driveway is 20 feet wide and the developer has proposed removing this driveway and closing the existing curb cut.

The third existing driveway (the southeast driveway) is 20 feet wide and has two turning lanes. This driveway is used only for exit onto Henry street. The developer proposes removing the southeast driveway and replacing it with a 26-foot wide driveway on Henry street which will be 60 feet closer to the Cranbrook-Henry intersection than the existing drive. The existing southeast driveway is approximately 45 feet from a one-way driveway into the adjacent Arby's location, while the new proposed driveway would be 75 feet from the adjacent drive.

Section 11.9.1.4 requires that parking lots and driveways providing access to corner lots shall be required to gain *sole access* from the lesser traveled of the two (2) intersecting streets, but allows the Planning Commission to waive that limitation, and we recommend that they do so in this case, because there is already an existing driveway to Henry Street, and the new one will be more conforming than the old one (see below).

Please note that Section 3.7.B.4 states that corner lots may have a secondary driveway on the secondary street. While the conflict will not impact this approval, the Planning Commission should review the Ordinance for potential amendment.



Section 10.6.B.3 requires all driveways to be at least 100 feet from an intersection and 75 feet from any driveway throat edge. The driveway to Cranbrook is 102 feet from Henry Street and approximately 130 feet from Lindland. The proposed driveway to Henry would be 100 feet from Cranbrook street and 75 feet from the Arby's driveway. The requirements for driveway distances from intersections have been met.

- g. Drive-Through Requirements.** Section 10.6.B.1 requires a minimum of four stacking spaces for each drive-through teller operation on site. Consumers Credit Union will have two drive-through ITMs. The site plan does not specifically identify stacking spaces. Based on the dimensions provided by the site plan it appears that there will be sufficient stacking space.

3. Signage.

- a. Wall signs.** In commercial districts, buildings are permitted one wall sign per street frontage occupying no more than 10% of the wall area. Based on approximate wall areas measured using provided elevations, there should be no more than 62.7 square feet of signage on the North wall and 104.5 square feet of signage on the East wall.

The applicant proposes two identical wall signs on the north and east sides of the building which will be mounted on the roof parapet. The elevations do not provide the exact dimensions of the signage. Based on other dimensions provided the signage appears to be compliant, but the applicant should either provide the dimensions of the signage to be approved with the Site Plan, or should submit for a sign permit separately from the Site Plan Approval.

- b. Freestanding sign.** There is an existing freestanding sign on the property. The sign does not appear on the Site Plan. Will the sign be re-used for the Consumer's Credit Union? Is another freestanding sign proposed?

4. Landscaping.

The following landscaping requirements apply to the site:

- a. Street Frontage Landscaping:** The following landscaping requirements apply to any parking area that is substantially altered, according to Section 12.16.C.

Screening is required between the parking area and the road right-of-way in accordance with Section 12.16.E. Between the parking lot and the street frontage, the landscaping should comply with one of the following two options:

- i. A strip of land at least 5 feet wide and a solid screen comprised of a hedge or decorative wall at least 3 feet tall.*
- ii. A strip of land at least 10 feet wide containing landscaping equivalent to a minor buffer ... except that the obscuring screen need not be provided. (11.2.F) A minor buffer involves a 10-foot-wide strip containing 2 rows of canopy trees staggered at a max 30-foot distance.*

The front screening proposed by Consumers Credit Union is a mulched area containing shrub plantings between the parking area and the road. The remainder of the space to the right-of-way would be grass lawn. The site plan describes the provided landscape screening as a "shrub hedge"



with a row of shrubs of varying heights and densities, rather than a hedge wall. We recommend that this be considered acceptable.

The area provided is sufficient, but the landscaping should include two rows of approved canopy trees no more than 30 feet apart, or an opaque hedge or decorative wall.

Additionally, all landscaped areas, including perimeter areas, shall be protected by a raised or rolled concrete curb. This requirement has been met by the proposed landscape plan.

- b. Buffer Landscaping.** According to Section 11.2, buffer zones are required to screen the more intensive C-E district from the R-1 district. The required buffer zone can be reduced by one level when separated from the district by a street. With this in mind, a moderate buffer zone is required to the Southwest to provide screening between the site and a single-family home. A minor buffer zone is required along the east side of the property and the northeast corner of the property.

According to 11.2.F a moderate buffer consists of: *a minimum 20-foot-wide buffer containing 2 rows of canopy trees staggered at 20-foot intervals, and a 6-foot-tall continuous obscuring screen. A minor buffer requires a 10-foot-wide area with canopy trees spaced at 30-foot intervals, as well as a 6-foot tall obscuring screen.*

To fulfill the 6-foot obscuring screen requirement, the applicant proposes a row of 32 evergreen trees spaced approximately 10 feet apart. The row of trees will be along the drive-through lanes in the rear, 100-feet from Lindland. The applicant plans to use *green giant arborvitae* trees, which are dense evergreens that create a solid screen. Along the sidewalk, the applicant proposes planting 17 new canopy trees across (there are two existing trees which will remain). In the area between the canopy trees and the sidewalk the applicant proposes a retention pond

The rear landscaping plan meets the requirements of the Ordinance. However, we recommend that more of the existing trees be saved, rather than replacing them with younger, less mature trees.

A 20-foot buffer zone is required between the single-family home to the southwest, to include two rows of canopy trees staggered at a maximum 20-foot interval and a 6-foot tall continuous obscuring screen (11.2.F). The required trees are included on the plan, but there is no obscuring screen, unless the Planning Commission counts the arborvitaes along the edge of the parking lot. The Commission should determine whether those are sufficient.

- c. Parking Lot Landscaping:** Section 12.16.F requires interior landscape islands in any parking lot with more than 12 spaces. The interior landscaping must meet the following requirements:
- **One island per 12 parking spaces:** Landscape requirements are generally rounded up, for a requirement of two islands. Three islands are provided, exceeding this requirement.
 - **Minimum Island Size: 90 square feet.** All islands meet this requirement.



- d. Pedestrian Walkway Landscaping:** Section 11.6.G.1.b requires at least 50% of the length of pedestrian walkways from the sidewalk to building entrances to be lined with “landscaping, benches, and bicycle facilities.” This standard is met for the walkway from Henry Street (though only with landscaping, not amenities). Additional landscaping will be required for the walkway from Cranbrook.
 - e. Dumpster Landscaping:** Section 11.3.E requires a continuous opaque screen (berming, plant material, screen walls or fences) to surround all dumpsters. We recommend that the proposed dumpster enclosure and the row of evergreens west of the parking lot be considered sufficient to meet this requirement.
- 5. Building Design.** Building elevations have been submitted. The building design must meet the requirements of Section 11.6.
- a. Building Walls (11.6.A.1).** *Buildings with exterior walls greater than fifty (50) feet in horizontal length shall be constructed using a combination of architectural features and a variety of building materials and landscaping near the walls.*

 - i. Walls which can be viewed from public streets shall be designed using architectural features and landscaping (abutting the building) for at least thirty percent (30%) of the wall length. This standard is met.*
 - ii. Other walls shall incorporate architectural features and landscaping for at least twenty percent (20%) of the wall length. This standard is met.*
 - iii. Window areas shall cover twenty percent (20%) or more of the exterior wall area facing the principal street(s) from which access is gained. This standard is met.*
 - b. Architectural Features (11.6.A.2.a).** *Architectural features include, but are not limited to the following: recesses, projections, wall insets, arcades, window display areas, awnings, balconies, window projections, landscape structures or other features that complement the design intent of the structure and are acceptable to the review authority. The façade is a modern re-conception of a classic bank façade, and includes several of these features.*
 - c. Wall Landscaping (11.6.A.2.b).** *In addition, a portion of the on-site landscaping shall abut the walls so that the vegetation combined with the architectural features significantly reduce the visual impact of the building mass as viewed from the street. Landscaping has been provided along the northern, southern and eastern walls. This standard is met.*
 - d. Building Materials (11.6.A.3).** *The predominant building materials should be materials that are characteristic of Michigan such as brick, decorative tilt-up panels, wood, native stone and tinted/textured concrete masonry units and/or glass products. Other materials such as smooth-faced concrete block, undecorated tilt-up concrete panels, or pre-fabricated steel panels should only be used as accents and not dominate the building exterior of the structure. This standard is met.*
 - e. Roof Design (Flat Roofs) (11.6.A.4.c).** *Architectural methods shall be used to conceal flat roof tops. This standard is met with the proposed parapet.*



- f. **Customer Entrances (11.6.A.5).** *Clearly defined, highly visible customer entrances using features such as canopies, porticos, arcades, arches, wing walls, and integral planters are highly encouraged. This standard is met.*
- g. **Community Amenities (11.6.B).** *Community amenities such as patio/seating areas, water features, art work or sculpture, clock towers, pedestrian plazas with park benches or other features located adjacent to the primary entrance to the building(s) are highly encouraged and may be calculated as part of the landscaping requirement. The design does not include any of the listed amenities. The Planning Commission should discuss options for amenities with the applicant.*
- h. **Building and Sign Colors (11.6.C).** *Exterior colors shall be of low reflectance, subtle, neutral or earth tone colors. The use of high intensity colors such as black, neon, metallic or fluorescent for the facade and/or roof of the building are prohibited except as approved for building trim. The use of trademark colors will require approval. The colors meet this requirement.*
- i. **Lighting and Flag Poles (11.6.D).**
 - i. *On site lighting shall be shielded with cut-off fixtures that direct light downward and onto the site and not shine or glare onto adjacent property or streets. See below.*
 - ii. *Light poles and/or fixtures and flag poles shall not exceed thirty (30) feet in height. The Planning Commission may permit a higher light fixture in selected locations for larger parking lots where existing or planned residential areas will not be affected. A flag pole is proposed, and will comply with the height limit. See below.*
 - iii. *Lighting shall not be attached to buildings or other structures that permit light to be directed horizontally. See below.*
- j. **Natural Features (11.6.E).** *There are no existing natural features on the site, which was graded for the previous development.*
- k. **Building Location and Orientation (11.6.F).** *New buildings shall have at least one principal building entrance oriented toward the front lot line. This standard is met along both lot lines.*

6. Lighting. The following lighting requirements must be met:

- a. **Lighting provided for security or visibility on any site shall be shielded to reduce glare and shall be so arranged and maintained as to direct the light away from any Residential District or use.** *The fixture design meets this requirement. According to the photometric plan submitted by the applicant, the design will hit 0.0 footcandles along Lindland and the portion of Cranbrook where the house is across the street. The lot line abutting the home to the southwest includes some areas as high as 0.2 footcandles and must be reduced to 0.0.*
- b. **Light fixtures shall be no higher than twenty (30) feet and shall be provided with light cut-off fixtures that direct light downward.** *The fixtures meet the height and design requirement.*



- c. **Lighting shall not be attached to buildings or other structures that permit light to be directed horizontally.** This requirement is met.

RECOMMENDATION

At the September 25 meeting, the Planning Commission should discuss the following items:

- The future of the existing freestanding sign, and whether a new freestanding sign is proposed.
- Whether more existing trees can be saved along the Lindland Road frontage.
- Whether the design of the buffer zone adjacent to the house to the southwest is sufficient.

If the Planning Commission finds those items satisfactory, we recommend approval of the Site Plan, with the following conditions to be addressed on a revised site plan.

1. A walkway must be added from Cranbrook Road, including meeting all required landscaping requirements for the walkway.
2. The applicant must submit the dimensions of the proposed wall signage, or must submit a separate sign permit application.
3. A community amenity, as required by Section 11.6.B, must be added to the plans.
4. The light trespass in the southwest corner of the site must be corrected.

Separately, the Planning Commission may wish to discuss correcting the conflict in the Ordinance regarding driveways on corner lots.

Please do not hesitate to contact us with any questions.

Respectfully submitted,
McKENNA

Christopher Khorey, AICP
West Michigan Manager

Maya Baker
Assistant Planner

September 20, 2023

Jared Olson
City of Roosevelt Park
900 Oak Ridge Road
Roosevelt Park, MI 49441

Re: Consumers Credit Union
Site Plan Review Response

Dear Mr. Olson,

Bosch Architecture has reviewed the site plan review letter prepared by McKenna & Associates and we have the following responses (in red) to listed deficiencies:

1. According to Section 12.13, office uses with more than 2,000 feet of floor area are required to provide one loading and unloading space, at least 12 feet wide, 40 feet long, and with 15 feet of overhead clearance. The Credit Union will be 2,217 square feet, and therefore must include a loading and unloading area, which may not occupy required parking spaces. The applicant must also submit specifications showing required loading space and the means of ingress, egress, and interior circulation. This requirement has not been met. No loading area is identified on the site plan.
A loading area will be identified in the parking area at the northeast corner. The site contains 5 parking spaces above the required number. 4 spaces will be shown as dual use (parking and loading). It is our opinion this loading area will be sparsely used based on other locations.
2. No walkway is provided from Cranbrook Road or Lindland Road. We would support the Planning Commission considering a walkway from Cranbrook sufficient to meet the requirement for both Lindland and Cranbrook, since residents on Lindland can easily walk to Cranbrook to access the site, and an additional walkway to the rear of the building is not desirable for Consumers or for the nearby residents. A sidewalk along the east side of the driveway to Cranbrook, with a crosswalk to the building, would allow for efficient and safe pedestrian access from the north and west.
A walkway as described can be added to access Cranbrook Road. This will also provide access to the northern parking spaces. Landscaping will also be added to this walkway to meet the ordinance.
3. The applicant proposes two identical wall signs on the north and east sides of the building which will be mounted on the roof parapet. The elevations do not provide the exact dimensions of the signage. Based on other dimensions provided the signage appears to be compliant, but the applicant should either provide the dimensions of the signage to be approved with the Site Plan, or should submit for a sign permit separately from the Site Plan Approval.

Signage will be handled under a separate permit with the city. Consumers contracts with SignArt on the signage package and they submit all required drawings meeting ordinance requirements.

4. There is an existing freestanding sign on the property. The sign does not appear on the Site Plan. Will the sign be re-used for the Consumer's Credit Union? Is another freestanding sign proposed?

The existing sign will be demolished, and a new sign will be placed as described in item #3 above.

5. A 20-foot buffer zone is required between the single-family home to the southwest, to include two rows of canopy trees staggered at a maximum 20-foot interval and a 6-foot tall continuous obscuring screen (11.2.F). The required trees are included on the plan, but there is no obscuring screen, unless the Planning Commission counts the arborvitaes along the edge of the parking lot. The Commission should determine whether those are sufficient.

A 6' high fence will be added at the southwest corner of the site to obscure the adjacent residential property.

6. Community amenities such as patio/seating areas, water features, art work or sculpture, clock towers, pedestrian plazas with park benches or other features located adjacent to the primary entrance to the building(s) are highly encouraged and may be calculated as part of the landscaping requirement. The design does not include any of the listed amenities. The Planning Commission should discuss options for amenities with the applicant.

A bike rack and seating bench are located to the left of the main entrance and detailed on sheet C501. Our hope is these items can be counted for the community amenities.

7. Lighting provided for security or visibility on any site shall be shielded to reduce glare and shall be so arranged and maintained as to direct the light away from any Residential District or use. The fixture design meets this requirement. According to the photometric plan submitted by the applicant, the design will hit 0.0 footcandles along Lindland and the portion of Cranbrook where the house is across the street. The lot line abutting the home to the southwest includes some areas as high as 0.2 footcandles and must be reduced to 0.0.

The new fence along the southwest property line will reduce the footcandles to 0.0 at the property line. Also, the lights specified, auto dim to 30% of full power when motion is not present on the site.

Please let this office know if you have any questions regarding this information.

Sincerely,



Nicholas J. Loeks, PE