PLANNING COMMISSION AGENDA

Regular Meeting

December 13, 2023 at 7:00 PM

1) **CALL TO ORDER**
2) **ROLL CALL**
3) **APPROVAL OF MINUTES** - Items can be added or deleted from the Agenda by board action.
   - A. **MINUTES OF SEPTEMBER 13, 2023 PLANNING COMMISSION MEETING**
4) **APPROVAL OF AGENDA** - Items can be added or deleted from the Agenda by board action.
   - A. **APPROVE DECEMBER 13, 2023 AGENDA**
5) **PUBLIC COMMENT ON AGENDA ITEMS** Persons addressing the board are required to give their name and address for the record when called upon by the Chair. Members of the public shall be limited to speaking for a maximum of five (5) minutes. Comments should address AGENDA ITEM topics. Public Hearing items should be addressed during the PUBLIC HEARING portion of the meeting agenda. Non-Agenda items should be addressed during the PUBLIC COMMENT-NON-AGENDA ITEMS portion of the meeting agenda.
6) **PUBLIC HEARINGS & SUBSEQUENT BOARD ACTION**
   - A. **2024-2029 CAPITAL IMPROVEMENT PLAN**
7) **OLD BUSINESS**
8) **REPORTS AND RECOMMENDATIONS/NEW BUSINESS**
   - A. **SP# 23.09 1114 WEST MICHIGAN AVENUE- CONSUMERS CREDIT UNION**
9) **PUBLIC COMMENT ON NON-AGENDA ITEMS** Persons addressing the board are required to give their name and address for the record when called upon by the Chair. Members of the public shall be limited to speaking for a maximum of five (5) minutes. Comments should address NON-AGENDA ITEM topics. Public Hearing items should be addressed during the PUBLIC HEARING portion of the meeting agenda. Agenda items should be addressed during the PUBLIC COMMENT-AGENDA ITEMS portion of the meeting agenda.
10) **BOARD REPORTS**
11) **ADJOURNMENT**

PLANNING COMMISSION MINUTES

September 13, 2023
Regular Meeting - 7:00 PM

1) CALL TO ORDER

IN A REGULAR SESSIONS held on Wednesday, September 13, 2023 at 7:00 PM in the Council Chambers of Town Hall, 323 West Michigan Ave, Marshall, MI 49068, the Marshall Planning Commission was called to order by Chair Banfield

2) ROLL CALL

Roll was called:

Present: Chair Banfield, Commissioner Burke-Smith, Commissioner Fitzgerald, Commissioner Reed, Commissioner Zuck, Commissioner Hall arrived late at 7:03PM

Also Present: Council Liason Wolfersberger

Absent: Commissioner Longyear, Commissioner McNiff, Commissioner Zuzga

3) APPROVAL OF AGENDA - Items can be added or deleted from the Agenda by Board action.

A. APPROVAL OF SEPTEMBER 13, 2023 PLANNING COMMISSION MEETING

Moved Commissioner Zuck, supported Reed to approve the agenda as submitted . On a voice vote: **Motion carried.**

4) APPROVAL OF MINUTES

A. MINUTES OF JULY 12, 2023 PLANNING COMMISSION MEETING.

Moved Reed, supported Zuck to approve the minutes of July 12,2023 as presented. On a voice vote: **Motion carried.**

5) PUBLIC COMMENT ON AGENDA ITEMS Persons addressing the board are required to give their name and address for the record when called upon by the Chair. Members of the public shall be limited to speaking for a maximum of five (5) minutes. Comments should address AGENDA ITEM topics. Public Hearing items should be addressed during the PUBLIC HEARING portion of the meeting agenda. Non-Agenda items should be addressed during the PUBLIC COMMENT-NON-AGENDA ITEMS portion of the meeting agenda.

Barry Wayne Adams of 622 W Green Street spoke in opposition of zoning. Spoke on corporate fascism as it applies to zoning, that zoning land and traffic enforcement is a violation of rights, and that the board members are public servants.

Lee Rockwell of Ceresco showed concern over JPC recommendation to rezone and how that will affect traffic flow. Concluding with lack of completed studies and pertinent info.

6) PUBLIC HEARINGS & SUBSEQUENT BOARD ACTION

A. RZ# 23-02 913 INDUSTRIAL ROAD REZONING

Chair Banfield opened the public hearing RZ#23-02 at 7:12PM

Joe Ellias of Grand City Capital spoke on the goal and process of development. Concluding by explaining the multi-phase over a 5-9 year period to be absorbed.

Chair Banfield explained he process to rezone and how development must stay within terms of rezoning.
Joe explained that that over 30 acres are not buildable due to wetland and flood plain status.

Barry Wayne Adams of 622 W Green Street voiced in opposition of rezoning crediting the continuing degradation of the local community. Spoke on retaliation to those speaking in opposition to BOBPM, quoting MCO10.31 Article 5 Section 12 regarding military authority.
Lee Rockwell of Ceresco spoke in opposition citing impact to traffic, effect on existing homesteads, and concern over population density.

Chair Banfield closed public hearing 7:26PM

Chair Banfield questioned the size of the parcel Confirming with Staff the ±30 acres.
Staff Zuzga Explained the need for housing detailed in the 2016 Masterplan has not been met. Further clarified the nearby utilities and landlocked location around 425.
Chair Banfield Confirmed that only access would be easement or bridge starting over the river.
Commissioner Hall agrees with need for housing but questioned location as neighbors feel pressed by MegaSite nearby.
Chair Banfield spoke on other areas of development in the area and their compatibility and availability.
Commissioner Reed spoke on factors being proposed and how each factor is individual and the decisions by the board should fit within the parameters in front of them.
Commissioner Zuck showed agreement with statement by Reed as well as questions proposed by Hall.
Commissioner Reed spoke on the process and language the board is to follow when considering rezoning and the boards job to follow accordingly.
Chair Banfield and Commissioner Reed both spoke about the importance of the considering all the factors and their impact on the community.
Staff Zuzga explained the road authorities of Hughes and S Kalamazoo.
Chair Banfield stated that in the next part of the process there will be results of area studies, site plans, and road improvement plans presented.
Commissioner Reed added the MFRD housing is not detrimental or incompatible with the area
Chair Banfield confirmed that the safety of Marshall is at the forefront of the Boards concern.
Staff Zuzga impact will be seen however the area is designed to absorb the impact. All three entities will address impact (County, City, and State).
Staff Zuzga explained all requirements will need to be met.
Staff Zuzga spoke on the other areas of development however the lack of owner involvement at other sites.
Commissioner Hall asked if we know the development (site plan).
Chair Banfield and Staff Zuzga verified the total acreage of the development of just over 100 acres.
Counsel Liaison Wolfersberger spoke on development expansion in the future and how lack of available space prevents the expansion of the development.
Chair Banfield spoke on density stipulation on MFRD.
Staff Zuzga verified that developers will submit plans to both boards and have possible

community engagement moving forward.

Moved Commissioner Fitzgerald, supported Commissioner Reed to recommend approval of the proposed rezoning request of 913 Industrial Road (Parcel #53-002-562-00) to Multiple Family Residential (MFRD) based on the findings included in the staff report on this matter. On a roll call vote:

Ayes:Chair Banfield, Commissioner Burke-Smith, Commissioner Fitzgerald, Commissioner Hall, Commissioner Reed, Commissioner Zuck
Nays: None
Abstain: None
Motion carried.

B. RZ #23-03 - 14555 18 1/2 MILE ROAD REZONING

Staff Zuzga spoke on the current R-2 zoning but PSP is more correct for it's use.
Chair Banfield opened public hearing 7:52PM
Barry Wayne Adams of 622 W Green Street quoted Article 9 Section 18 of the Michigan Constitution in opposition of the zoning. Concluding the community opposition to further development.
Chair Banfield closed public Hearing 08:00PM
Moved Commissioner Reed, supported Commissioner Zuck to recommend to the City Council adoption of the Rezoning Application #RZ23-03 from Public/Semi-Public (PSP). If the Planning Commission agrees with the findings presented by staff, the following motion could be used."

The Planning Commission recommends approval of the proposed rezoning request of 14555 18 1/2 Mile Road (Parcel #53-003-306-00) to Public/Semi-Public (PSP) based on the findings included in the staff report on this matter.

If the Planning Commission finds that the criteria above are not met, and chooses to deny the rezoning, statements related to the above criteria justifying how this request does not meet the rezoning standards must be made.. On a roll call vote:

Ayes: Chair Banfield, Commissioner Burke-Smith, Commissioner Fitzgerald, Commissioner Reed, Commissioner Zuck
Nays: Commissioner Hall
Abstain: None

7) OLD BUSINESS

8) REPORTS AND RECOMMENDATIONS/NEW BUSINESS

A. SP #23-06 14555 18 1/2 MILE ROAD SITE PLANS- EXPANSION

Dave Bennett, architect of CCYC described plan to expand the Youth Center and parking area to be more residential and less intimidating. He advised that safety is at the forefront of the design and asked for a slight variation to parking are per staff size of facility.
Commissioner Reed questioned the year of the original building construction.
Dave Bennett clarified the new construction in 1957 and the addition in 1967.
Staff Zuzga questioned the availability of handicap spaces.

Dave Bennett verified placement of 1 space in both public and staff parking.

Moved by Zuck, supported by Burke-Smith to Approve SP #23-06 with the condition that the City Council approves the rezoning of the parcel to Public/Semi-Public Zoning District (PSP), the Planning Commission accept the proposed parking plan and that the area of deferred parking be added to the site plan, and that the Planning Commission waive the sidewalk requirement.

On a voice vote: **MOTION CARRIED**

B. SP #23-07 14555 18 1/2 MILE ROAD SITE PLAN- SOLAR

Steve Patterson of Hughes St representing Harvest Solar presented the solar plan for the CCYC. Mr. Patterson spoke on the strict site usage and no generation of solar power to be distributed; seeking a variance for privacy screening for array and ROW. Wanting to matching the employee parking fence and vegetation.
Chair Banfield suggested vine on fence for vegetation
Steve Patterson spoke on meeting with County at 11am tomorrow and will propose the changes of the vine.
Staff Zuzga summarized with condition of adding vine to the 6' chain fence to match the employee parking lot and placement of vines every 5ft for a total of 10 vines.

Moved by Zuck, supported by Burke-Smith to Approve SP #23-07 with the condition that a buffering strip be installed and the City Council approves the rezoning of the parcel to Public/Semi-Public Zoning District (PSP).

On a voice vote: **MOTION CARRIED**

C. SP #23-08 343 SOUTH MULBERRY AMENDED SITE PLAN

Doug Stewart of Delta One spoke on the use of the Mulberry Street gate for limited once per week deliveries lasting 5-10 minutes in box trucks or vans. Adamantly denying use of semis in the area. Mr. Stewart expanded his request to utilize the gate for building repairs citing the location of the loading dock.
Chair Banfield spoke on the stipulations placed previously and how those no fulfillment of those stipulations have been completed, as well as, stating that a letter of opposition was received from neighbor.
Doug Stewart that the landscaping was not completed because the area is still under construction from other projects.
Commissioner Fitzgerald agreed with the need to access the loading dock for maintenance
Commissioner Burke-Smith agreed with Fitzgerald about needing access for maintenance but not for the weekly deliveries as proposed.
Doug Stewart spoke on previous plan being secured by Mike Johnson and that, at the time, deliveries were to divert to out front stating pallets must be dropped in parking lot due to no access to the loading dock from any other entrance. Requests strict variance for 2 pallet deliveries once per week.
Chair Banfield spoke on other points of approval not being met.

Moved by Burke-Smith, supported by Fitzgerald to Approve the use of the Mulberry

Street gates for maintenance of the facility only. Truck traffic/deliveries would still need to use the Kalamazoo/Spruce Street entrance as required by the zoning ordinance and original site plan approval.

On a voice vote: **MOTION CARRIED**

9) PUBLIC COMMENT ON NON-AGENDA ITEMS Persons addressing the board are required to give their name and address for the record when called upon by the Chair. Members of the public shall be limited to speaking for a maximum of five (5) minutes. Comments should address NON-AGENDA ITEM topics. Public Hearing items should be addressed during the PUBLIC HEARING portion of the meeting agenda. Agenda items should be addressed during the PUBLIC COMMENT-AGENDA ITEMS portion of the meeting agenda.

Barry Wayne Adams of 622 W Green Street spoke in opposition to Megasite citing it being unsafe for the community and tactics to buy land being unconstitutional and immoral. Concluding that any money being used in construction of Blue Oval is unconstitutional with ties to the CCP.

10) BOARD REPORTS

Staff Zuzga spoke on the impending resignation of Commissioner Zuzga

11) ADJOURNMENT

The meeting was adjourned at 8:47PM

Respectfully submitted by,

Jennifer Pickford
Deputy Clerk

TO: Planning Commission
FROM: Eric Zuzga, Director of Community Services
William Dopp, Finance Director/ City Treasurer
DATE: December 13, 2023
SUBJECT: **2024-2029 CAPITAL IMPROVEMENT PLAN**

Attached is the proposed 2024-2030 Capital Improvement Plan that has been developed over the last two months by City staff. This plan covers all City operations and is the first step in our budget process. The document covers all capital requests over $25,000.

The Michigan Planning Enabling Act charges the Planning Commission with reviewing the CIP against the Master Plan to ensure that proposed investments meet the goals and objectives established in the Master Plan. Your review and recommendation for approval is the next step in the process. If there are any questions, please send them my way.

BUDGET IMPACT:

RECOMMENDATION:
Recommend approval of the 2024-2030 Capital Improvement Plan to the City Council.

FUND	Department	Project Title	Priority Ranking	Estimated Useful Life	Source of Funding	Project Narrative/Purpose	2024-2025 Expenditure	2025-2026 Expenditure	2026-2027 Expenditure	2027-2028 Expenditure	2028-2029 Expenditure	2029-2030 Expenditure	City Expenditure	Other Funds or Grant Share	Total Expenditure
101	DPW	DPW building master plan	2	10	General Fund	I would like to add a DPW building master plan, to maximize space for the building at 619 Homer Rd. This will help the city understand the changes needed to maximize space.	$40,000						$40,000		$40,000
101	DPW	South Driveway Improvements	1	30	General Fund	The south door out of the DPW garage is narrow and the driveway has a small radius curve immediately outside the building which prevents the door from being used by some DPW equipment. This project would include widening the north (entry) and south (exit) door of the DPW garage and installing a new driveway connecting the south door to Homer Road. This would allow all vehicles to use the south door safely. This would prevent the vehicles that currently don't fit from having to back up 200' inside the building to exit the building after loading/washing. Currently, 1 vehicle doesn't fit out the south door. In the future, however, plow trucks are expected to get wider and will not be able to fit out the door.		$75,000					$75,000		$75,000
101	PSB	Carpet Replacement	2	12	General Fund	Replace approx. 9,786 sq. ft. of carpet on the 1st and 2nd floors of PSB including lobby and hallways.	$25,000	$25,000					$50,000		$50,000
101	PSB	Asphalt Mill and Pave			General Fund	Mill and Pave sections of asphalt behind fence		$25,000				$25,000	$50,000		$50,000
101	City wide	Sidewalk repairs		20	General Fund	Sidewalk Repairs	$25,000	$25,000	$25,000	$25,000	$25,000		$125,000		$125,000
						TOTAL	**$90,000**	**$150,000**	**$25,000**	**$25,000**	**$25,000**	**$25,000**	**$340,000**	**$0**	**$340,000**
101	Parks	Stuarts Landing Improvements	3	30	Grants & other	Rehabilitation of Stuart's Landing including the following updates: replace canoe/kayak launch, a new shelter, a linear path around the site, improved shoreline and river access, and related improvements.			$910,000				$0	$910,000	$910,000
101	Parks	Repair Brooks Fountain	1	25	General Fund	The Brooks Fountain is in need structural repairs	$750,000						$750,000		$750,000
101	Parks	Carver Park Fountain Replacement/Repair	2	30	General Fund	Carver Park Fountain has been deteriorating for several years. After a review of the fountain and discussions with Council the decision was made to utilize the fountain until the end of it's useful life and then execute a complete replacement.	$40,000						$40,000		$40,000
101	Parks	Riverwalk Repairs Phase 1	1	30	General Fund	Replace structural beams along riverwalk. Fix and replace fencing and deckboards. Trim and remove trees throughout riverwalk.	$350,000						$350,000		$350,000
101	Parks	Riverwalk Repairs Phase 1B			General Fund	Replace structural beams along riverwalk. Fix and replace fencing and deckboards. Trim and remove trees throughout riverwalk.		$200,000					$200,000	$150,000	$350,000
101	Parks	Riverwalk Repairs Phase 2			General Fund	Replace structural beams along riverwalk. Fix and replace fencing and deckboards. Trim and remove trees throughout riverwalk.			$200,000				$200,000	$150,000	$350,000
101	Parks	Riverwalk Repairs Phase 2B			General Fund	Replace structural beams along riverwalk. Fix and replace fencing and deckboards. Trim and remove trees throughout riverwalk.				$500,000			$500,000		$500,000
101	Parks	Riverwalk Repairs Phase 3			General Fund	Replace structural beams along riverwalk. Fix and replace fencing and deckboards. Trim and remove trees throughout riverwalk.					$500,000		$500,000		$500,000
101	Parks	Riverwalk Repairs Phase 3B			General Fund	Replace structural beams along riverwalk. Fix and replace fencing and deckboards. Trim and remove trees throughout riverwalk.						$500,000	$500,000		$500,000
101	Parks	Riverwalk Extension	3	30	General Fund	Extend Riverwalk west of Kalamazoo towards Historic Bridge Park, partner with County						$3,500,000	$0	$3,500,000	$3,500,000
101	Parks	Athletic Field Renovations	2	7	General Fund	Athletic Field Resurface, clay replacement for pitching areas and batters boxes, level outfield with sand, replace all base pegs, new bases for all fields, fencing repairs		$100,000					$100,000	$75,000	$175,000
101	Parks	Ketchum Park Great Lawn	2	50	General Fund	LOWER KETCHUM COMMONS AND PROMENADE Work related to the establishment of the lower lawn commons, drainage system, and its perimeter pedestrian walkway. Also included is the main path between parking on Montgomery Street and the Rotary Bridge. Construction Cost: $143,000 Construction and Soft Costs: $185,900						$1,285,900	$0	$1,285,900	$1,285,900
101	Parks	Ketchum Park Parking Lot	4	15	General Fund	Mill and repave parking lot/paint parking spots				$35,000			$35,000		$35,000
101	Parks	Sand Volleyball Court Renovations	2	20	General Fund	Replace all fencing at Volleyball courts, remove current sand and equipment. Replace with sugar sand. Replace post with new. Replace nets.		$100,000					$100,000	$100,000	$200,000

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101	Parks	Skate Park Equipment	2	30	General Fund	Adding up to date & safe skateboard equipment to existing skatepark	$100,000						$100,000	$100,000	$200,000
101	Parks	Kids Kingdom Renovation	2	30	General Fund	Replace dilapidated equipment with new equipment @ Kids Kingdom. Update with state of the art play structure with accessible equipment for all.				$1,000,000			$0	$1,000,000	$1,000,000
						TOTAL	**$1,240,000**	**$400,000**	**$1,110,000**	**$1,535,000**	**$500,000**	**$5,285,900**	**$3,375,000**	**$7,270,900**	**$10,645,900**
101	Fire	Storage Shed	2	20	General Fund	Fire Department has very little storage area for maintenance equipment. We are currently using an old trailer to store lawn equipment and other limited use items. Marshall High School wood shop teacher has volunteered to build shed if we buy materials. I have material list for a 12X20 storage shed with an overhead door to store all this equipment.	$25,000						$25,000		$25,000
101	Fire	Self-Contained Breathing Apparatus	3	10	General Fund/Grants	Our current Self Contained Breathing Apparatus was purchased in the beginning of 2018. They have a life expectancy of 10 to 15 years. This is mandated by MIOSHA and is National Fire Protection Association and Manufactures recommendations. We will need to replace these by the end of 2031.						$250,000	$250,000		$250,000
101	Fire	Auxiliary Fire Equipment	4	25	General Fund	We have auxiliary equipment such as compressor and fill station for SCBA Bottles and Oxygen Bottles and a hose washer for cleaning soiled fire hose after fires. These are items that will eventually need replaced in the future. They last a long time be we need to plan for replacement through the CIP. Is it better to plan a yearly contribution to CIP or just fund we needed if they need replaced.						$75,000	$75,000		$75,000
101	Fire	Staff Vehicles	2	10	General Fund	Replace a 2013 and 2015 Ford Inceptor former MPD Vehicle with a Pickup Truck or SUV that is better suited for Fire Dept. needs. These vehicles were hard use as MPD vehicles before MFD received them. Average life span as a MPD vehicle is 5 years and then re-purposed or sold to another department or outside buyer for lighter use. Would like a Pickup to replace vehicle currently used by MFD Fire Inspection Division. This pickup could serve multi purposes for MFD. Of course to be used by Inspection Division to conduct inspections and respond to emergencies if needed during this time, used as a plow truck to keep parking lot and front ramp cleared of snow, used to pick up and transport equipment after a fire or when needed. Fire Chief vehicle could be replaced with either a truck or suv for use by Chief and be set up as a command and control vehicle for emergency scenes.	$60,000		$60,000				$120,000		$120,000
101	Fire	Replace Fire Engine	1	20	General Fund	Replace Fire Engine	$800,000						$800,000		$800,000
101	Fire	Audio Visual Upgrades	2	10	General Fund	Audio visual upgrades to the Training Room	$25,000						$25,000		$25,000
						TOTAL	**$910,000**	**$0**	**$60,000**	**$0**	**$0**	**$325,000**	**$1,295,000**	**$0**	**$1,295,000**
101	Police	Taser Upgrade	3	5-7 years	General Fund	The Police Department issues each sworn officer the Axon Taser X-2 weapon as a less than lethal use of force option. National studies have shown the Taser as an effective means of applying force at a distance, thus minimizing the risks of injury to patrol officers from a physical altercation. Axon only warranties their devices for 5 years, and have typically phased in a newer model every five years. As they are a weapon that can cause injury or death, we should strive to keep the warranty in place. This is both for officer safety (if Taser malfunctions due to age), and to some degree of liability mitigation, as Taser may not legally support us if we are using an out of warranty device.				$35,000			$35,000		$35,000
101	Police	Vehicle Changeover	2	5	General Fund	Cover labor to outfit all equipment to new vehicle, buy emergency lighting, radio and equipment console, weapons rack, video camera and radio upgrades, radars, bumpers, cage with restraints, and decal the vehicle for police use.	$30,000	$30,000	$30,000				$90,000		$90,000

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101	Police	Firearm Replacement	3	10-15 years	General Fund	Replacement of glock pistols and shot guns. Includes red dot sights, holsters and accessories.			$30,000				$30,000		$30,000
101	Police	Community Camera Project	2	5-7 years	General Fund	A community camera program is an integrated camera system that will improve the safety of the Marshall Community. The program includes surveillance cameras at the city parks, traffic cameras to monitor high traffic areas, and software that will use LPR, AI, and dispatch integration to assist law enforcement and first responders.		$250,000						$250,000	$250,000
101	Police	MVR/Body Camera Change Over	1	5-7 years	General Fund	Moble Car Camera and Body Camera replacement.	$140,000						$140,000		$140,000
						TOTAL	**$170,000**	**$280,000**	**$60,000**	**$35,000**	**$0**	**$0**	**$295,000**	**$250,000**	**$545,000**
202	Major Streets	West Drive and Verona Road Reconstruction	2	15	Small Urban Grant/Act 51	Reconstruction of West Dr. from W. Michigan Ave. to Verona and Verona Rd. from West Dr. to W. Mansion St. and the extension of sidewalk routes on the south side of Verona. Project has been designated as an MDOT Small Urban Proj. with $385,000 in federal funding allocated.	$385,000						$0	$385,000	$385,000
203	Local Streets	Replace and Mill/Pave High St	2	25	Act 51	Part of the Watermain Replacement Project for High St between Michigan Ave. and Forest St. The watermain replacement will be resurfaced, remaining area will be mill and pave. Sidewalks and ADA ramps will be installed as needed.	$330,000						$330,000		$330,000
203	Local Streets	Fountain St. Paving	2	25	Act 51	Part of the Watermain Replacement Project for Fountain St between W. Hanover to Arms St. The watermain replacement will be resurfaced, remaining area will be mill and pave. Sidewalks and ADA ramps will be installed as needed.	$183,000						$183,000		$183,000
						TOTAL	**$898,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$513,000**	**$385,000**	**$898,000**
207	MRLEC	MRLEC Flooring	3	10	MRLEC Operations	MRLEC building has several capeted areas that are highly trafficked, The carpet will be 10 years old in 2025	$50,000						$50,000		$50,000
207	MRLEC	Front Parking Lot Expansion	3	40	MRLEC Operations	A need for additional parking has been identified at MRLEC. There are numerous times each month where the parking lot is overflowing because of trainings or events at MRLEC. The expansion will help solve this issue. The estimated cost (with assistance of the Marshall DPW) of expanding the parking lot is $50,000. The new section will be added to the 5 year maintenance schedule for resurfacing.		$100,000					$100,000		$100,000
207	MRLEC	MRLEC Barn Expansion	1	40	MRLEC Operations	The MRLEC agencies have identified a need for an added secured storage area for vehicles held for evidence. Currently we are all being asked to hold vehicles for evidence when involved in major crimes. The delayed time frame is leading to vehicles being parked in the storage area of our shared barn. An addition is being proposed to be added to the MRLEC barn to individually secure 8-10 vehicles. The building would be on the east side of the building and would require new construction.			$250,000				$250,000		$250,000
						TOTAL	**$50,000**	**$100,000**	**$250,000**	**$0**	**$0**	**$0**	**$400,000**	**$0**	**$400,000**
208	Recreation	Replacement of Athletic Field Light System	3	30	Recreation Fund	The current lights on diamond #1 & #2 are approaching the end of their expected life. The entire system should be replaced.				$300,000			$300,000		$300,000
208	Recreation	Seal Coating Athletic Field Parking Lot & Pathways. Striping of Parking Lot	4	12	Recreation Fund	Seal Coating Athletic Field Parking Lot & Pathways is considered routine maintenance.	$50,000					$50,000	$100,000		$100,000
208	Recreation	Athletic Fields- Batting Cages	2	15	Recreation Fund	Two batting cages-35'x70'			$30,000				$30,000		$30,000
208	Recreation	Eaton Park Development	2	30	Recreation Fund/Local Grants	Construction of a new park facility that would provide pickle ball courts, splash pad, bathroom facility, new ADA improvements for accessing the athletic fields from the south, new playground, parking lots, and a basketball court.	$3,000,000						$0	$3,000,000	$3,000,000
208	Recreation	Recreation Athletic Facility	4	30	Grants/Fund Raising	Construction of a Recreation Center that would include 2 basketball courts, community room, etc					$6,000,000		$6,000,000		$6,000,000
						TOTAL	**$3,050,000**	**$0**	**$30,000**	**$300,000**	**$6,000,000**	**$50,000**	**$6,430,000**	**$3,000,000**	**$9,430,000**

FUND	Department	Project Title	Priority Ranking	Estimated Useful Life	Source of Funding	Project Narrative/Purpose	2024-2025 Expenditure	2025-2026 Expenditure	2026-2027 Expenditure	2027-2028 Expenditure	2028-2029 Expenditure	2029-2030 Expenditure	City Expenditure	Other Funds or Grant Share	Total Expenditure
211	Farmer's Market	Farmer's Market Pavilion	3	40	Farmer's Market/Donations	Farmer's Market pavilion will include a covered area for the farmer's market. The space design will consider supporting a winter market, event space (in conjunction with social district), and maintaining parking.			$500,000				$500,000	$500,000	$1,000,000
						TOTAL	**$0**	**$0**	**$500,000**	**$0**	**$0**	**$0**	**$500,000**	**$500,000**	**$1,000,000**
247	NE NIA	Eastside Redevelopment Infrastructure	1	20	NIA TIF Capture	Infrastructure necessary to allow the redevelopment of the Land Bank property off of East Dr/Mann. Extension of water, sewer, storm sewer, roads, and sidewalks for the development. Does not include electric or fiber extension at this time.			$1,341,900				$1,341,900		$1,341,900
247	NE NIA	Mann Extension	3	20	NIA TIF Capture	Infrastructure necessary to allow the extension of Mann to O'Keefe allowing the development of 10 acres for additional housing opportunities. Extension of water, sewer, storm sewer, roads, and sidewalks for the development.	$1,520,700						$1,520,700		$1,520,700
247	NE NIA	Pratt Park Future Phases	3	20	NIA TIF Capture	Infrastructure necessary to allow for the development of future phases of Pratt Park for housing opportunities. Extension of water, sewer, storm sewer, roads, and sidewalks for the development.					$3,172,800		$3,172,800		$3,172,800
247	NE NIA	Briarwood Extension	1	20	NIA TIF Capture	Infrastructure necessary to allow the development of Briarwood and the extension of Forest to O'Keefe. Extension of water, sewer, storm sewer, roads, and sidewalks for the development.	$547,100						$547,100		$547,100
						TOTAL	**$2,067,800**	**$0**	**$1,341,900**	**$0**	**$3,172,800**	**$0**	**$6,582,500**	**$0**	**$6,582,500**
248	Downtown Development Authority	South Activation Zone	2	30	General fund Loan/RAP Grant	The City and DDA have embarked on design for a Activation Zone in the area including parking lots 9, 10, and 11 as well as improved garbage management and a social area within Lot 10. On street parking is also part of the project in the 200 block of West Green Street and the 100 block of South Jefferson Street.	$300,000						$300,000	$654,400	$954,400
248	Downtown Development Authority	North Activation Zone	2	30	DDA Revenues/Grants	The proposed Social Area will be a 4,000 square foot community area with tables and chairs in the northern portion of lot 10 along the south alley. The proposed trash component will be a coral for business use. The businesses to be served are those located along Michigan Avenue between Eagle Street and Jefferson Streets.				$500,000	$100,000		$600,000		$600,000
248	Downtown Development Authority	DDA Parking Lots (8,13,14,15)	2	15	DDA Revenues	Mill and pave downtown parking lots #8, 13, 14, 15			$78,400				$78,400		$78,400
248	Downtown Development Authority	DDA Parking Lots (1, 4, 5, 6, 7)	2	20	DDA Revenues	Mill and pave downtown parking lots #1, 4, 5, 6, 7	$115,200						$115,200		$115,200
248	Downtown Development Authority	Sound System Upgrades	3	15	DDA Revenues	Improve the downtown sound system and incorporate cameras for events and securoty. This is an estimate as this has not been explored with vendors at this time.		$90,000					$90,000		$90,000
						TOTAL	**$415,200**	**$90,000**	**$78,400**	**$500,000**	**$100,000**	**$0**	**$1,183,600**	**$654,400**	**$1,838,000**
250	LDFA	Oliver Drive Extension	3	30	LDFA reserves and possible Bond	Extension of Oliver Drive, water, and sewer infrastructure to serve over 100 acres of undeveloped Industrial zoned property					$550,000		$550,000		$550,000
250	LDFA	Udell Property Lift Station	3	30	LDFA reserves and possible Bond	Addition of a new sanitary lift station to serve 100+ acres of industrial zoned property. Exact location of station on property to be determined.				$400,000			$400,000		$400,000
250	LDFA	Land Acquisition	2	50	LDFA reserves and possible Bond	Explore land acuisition possibilities.	$500,000						$500,000		$500,000
250	LDFA	Pedestrian Path LDFA	2	15	LDFA reserves and possible Bond	Construction of an 8' wide patch connecting the Industrial Park to the south NIA and rest of town. Council has made a goal of increased walkability and we have seen an increased level of pedestrian activity to and from the Industrial Park.			$166,700				$166,700		$166,700
250	LDFA	Pratt Avenue Rehabilitation	2	15	LDFA reserves and possible Bond	Mill and overlay of Pratt Avenue as it will be in need of maintenance due to age and condition.		$413,500					$413,500		$413,500
						TOTAL	**$500,000**	**$413,500**	**$166,700**	**$400,000**	**$550,000**	**$0**	**$2,030,200**	**$0**	**$2,030,200**

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251	S NIA	Hughes Street Infrastructure Extension	3	30	S NIA TIF Capture	Extension of sewer, electric, fiber, streets, etc. to add or create buildable lots	TBD						TBD		TBD
251	S NIA	Emerald Hills Phase 2	1	20	S NIA TIF Capture	Extension of sewer, electric, fiber, streets, etc. to add or create buildable lots		$2,161,700					$2,161,700		$2,161,700
251	S NIA	Emerald Hills Phase 3	1	20	S NIA TIF Capture	Infrastructure necessary to allow the construction of the third phase of the emerald hills subdivision which includes the planned multi-family units (6 buildings). Extension of water, sewer, storm sewer, roads, and sidewalks for the development.		$780,000					$780,000		$780,000
251	S NIA	Emerald Hills Phase 4	1	20	S NIA TIF Capture	Infrastructure necessary to allow the construction of the fourth phase of the emerald hills subdivision which includes 42 housing units. Extension of water, sewer, storm sewer, roads, and sidewalks for the development.				$1,142,100			$1,142,100		$1,142,100
251	S NIA	Emerald Hills Phase 5	1	20	S NIA TIF Capture	Infrastructure necessary to allow the construction of the second phase of the emerald hills subdivision which is 98 housing units. Extension of water, sewer, storm sewer, roads, and sidewalks for the development.						$3,550,600	$3,550,600		$3,550,600
251	S NIA	Emerald Hills Pedestrian Path	3	15	S NIA TIF Capture	8' wide path built between Circle Drive and the Airport on the east side of South Kalamazoo. This would improve walkability for the proposed development, Fairway meadows, and the surrounding neighborhood. This would be a connection between downtown and the extension of a path from the airport to the industrial park (which is included in LDFA CIP).			$118,300				$118,300		$118,300
						TOTAL	**$0**	**$2,941,700**	**$118,300**	**$1,142,100**	**$0**	**$3,550,600**	**$7,752,700**	**$0**	**$7,752,700**
295	Airport	Pavement Marking and Crack Sealing	1	10	General Fund 5%, FAA Allocation 90%, State 5%	Replacement of pavement markings and crack sealing as necessary. Participation in the MDOT crack sealing program to prolong the life of the airport runway and taxiways.		$1,500			$1,100		$2,600	$61,750	$64,350
295	Airport	North Perimeter Fence	2	20	General Fund 5%, FAA Allocation 90%, State 5%	Design and installation of a fence on the north perimeter of the airport property for safety reasons (wildlife and proximity to new Emerald Hills Development.				$1,500	$17,500		$19,000	$352,500	$371,500
295	Airport	North Apron and West Parallel Taxiway Rehabilitation	1	15	General Fund 5%, FAA Allocation 90%, State 5%	Engineering and Construction of North Apron and West Parallel Taxiway	$39,500						$39,500	$750,500	$790,000
295	Airport	Airport Master Plan (ALP Update)	2	20	General Fund 5%, FAA Allocation 90%, State 5%	Update of the Airport Master Layout Plan which is used as a guide for future development on the airport grounds. Funding is $225,000 Federal, $12,500 State, and $12,500 City.			$12,500				$12,500	$237,500	$250,000
295	Airport	Construction Hangar Taxiway	3	20	General Fund 5%, FAA Allocation 90%, State 5%	Construct a new hangar taxiway to provide access to new T-hangar buildings east of the current buildings. New hangars would be a partnership with a third party. Project would only move forward if hangars were constructed.	$1,250	$11,250					$12,500	$237,500	$250,000
295	Airport	Main Hangar Improvements	1	25	General Fund 5%, FAA Allocation 90%, State 5%	The roof over the main hangar and the space leased by Griswold Aviation is nearing the end of life and needs to be replaced. The City would need to fund $13,000 (2023 $1250 and 2024 $11,750) of the improvements and the Feds/State $247,000 (2023 $23,750 and 2024 $223,250).	$1,500	$13,500					$15,000	$285,000	$300,000
295	Airport	Land Acquisition	3	50	General Fund/LDFA	Purchase of 66.34 acres from the Udell Trust for airport and Industrial Park expansion. Purchase would have to be funded by City/LDFA and reimbursement for portion used by airport can be pursued using our annual allocation.		$35,000	($25,000)				$10,000	$590,000	$600,000
						TOTAL	**$42,250**	**$61,250**	**($12,500)**	**$1,500**	**$18,600**	**$0**	**$111,100**	**$2,514,750**	**$2,625,850**

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582	Electric	Replace Tie 1 and 2 underground cable	4	40 years	Electric Fund	A portion of the two main express feeder cables from Pearl St. Substation to the Powerhouse are underground and in a duct system. They have been in service for 35 years and have met their life expectancy. The feeder cables are the main source of power to the City's electric load and are the connection to the grid for the City's internal generation. Because they are a critical component of the electric system the cables should be modernized.			$2,500,000				$2,500,000		$2,500,000
582	Electric	Replace Windows	3	50	Electric Fund	Existing windows are the original single pane steel framed and not energy efficient. Many of the window sills and frames are deteriorated to the point that water is coming in and further damaging the building.	$25,000	$50,000	$50,000	$50,000	$50,000		$225,000		$225,000
582	Electric	Pearl St. Substation 7.2/12.5 KV Upgrade	1	40	Electric Fund - Revenue Bond	Modernize obsolete 7.2/12.5 KV cubicle breaker and bus systems with open-air system to improve operations and increase safety	$1,000,000						$1,000,000		$1,000,000
582	Electric	Pole Replacement and Line Reconstruction	2	40	Electric Fund	Wooden poles have an estimated service life of 33-40 years. To maintain safe, reliable electric service, replacement of old and unsafe poles must be performed on an annual basis.	$82,400	$84,872	$87,418	$90,041			$344,731		$344,731
582	Electric	AMI Project	2	20	Electric Fund - Bond	The Automated Metering Infrastructure (AMI) Project consists of hardware, software, communications and metering that will allow electric meters to be read remotely, in the same manner that water meters are now read. The system is designed to reduce operating expenses and provide additional services to customers.	$206,000	$212,180	$218,545	$229,475			$866,200		$866,200
582	Electric	Underground Cable Replacement	2	40	Electric Fund	Replace 40 year old underground electric system in the Waldon Pond Apartment Complex, Homer Road, Circle/Rose/Lowe Subdivision & Polo Club Apartments	$515,000	$530,450	$546,365				$1,591,815		$1,591,815
582	Electric	Additional Local Generating Resources	3	50	Bond	The Power Plant's primary functions include emergency backup power in the event of a transmission system or substation failure, as well as helping meet Midcontinent Independent System Operator (MISO) capacity requirements that are based on the City's peak electric demand. The City's average demand is approximately 20 MW, and 2022 peak demand exceeded 29 MW. CAT Generators are being added in 2024, but the need will continue. Additional generation should be planned for 2027/2028 to continue to help meet the City's MISO capacity obligations while also providing additional emergency backup service.				$3,600,000			$3,600,000		$3,600,000
582	Electric	Distribution Tranformer Replacements	3	40	Electric Fund	The estimated service life of electric distribution system transformers is 25-40 years. The City has numerous electric distribution system transformers that are approaching or exceed 40 years of service. Some are live-front transformers with exposed cable and terminals, which are dangerous to staff and the public. In addition to new growth and voltage conversion, proactively replacing old transformers rather than running to failure is a goal of the department.	$200,000	$210,000	$220,500	$231,525	$243,100		$1,105,125		$1,105,125

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582	Electric	Rewind Hydroelectric Generating Units #1 and #3	1	50	Electric Fund	Hydroelectric Generating Unit #3 was installed in 1919. Unit #1 was installed in 1928. Neither unit appears to have been rewound since they were installed. Unit #1 generator windings were tested and inspected earlier this year. Visual inspection shows insulating material flaking off of the generator windings. Based on megger tests, the windings insulation appears to be failing. The City received two 2023 quotes for rewinding Hydroelectric Unit #1 generator at a cost of approximately $250,000. Rewinding the generator will improve its reliability and also result in increased capacity, and energy and Renewable Energy Credits/Certificates (RECs) production. Unit #1 generator rewind is scheduled for FY2025, followed by Unit #3 rewind in FY2026.	$250,000	$250,000					$500,000		$500,000
582	Electric	Plant 2 Space Heater Replacements	1	20	Electric Fund	Plant 2, which houses Generator #6, has five electric heaters that provide building space heat. Only one of the five heaters, installed in 1977, still works, making it difficult to effectively heat Plant 2 during cold weather.		$75,000					$75,000		$75,000
582	Electric	Circuit Upgrade / Voltage Upgrade	2	50	Electric Fund	The municipal electric distribution system currently has two operating voltages, 4,160 volts and 12,470 volts. Circuits on each system cannot be directly tied together for maintenance and reliability purposes, limiting operational flexibility and reliability. The 4,160-volt system has greater resistance losses and less power-carrying capability than if its circuits were operated at 12,470 volts. Staff estimates approximately one-half of the electric distribution system operates at 4,160 volts. These 4,160-volt circuits should be upgraded to 12,470-volt operation as time and funds allow.	$400,000	$412,000	$424,360	$437,091	$450,204		$2,123,654		$2,123,654
						TOTAL	**$2,678,400**	**$1,824,502**	**$4,047,188**	**$4,638,132**	**$743,304**	**$0**	**$13,931,525**	**$0**	**$13,931,525**
588	DART	Bus Replacement		7	Federal, State, City	Replacment of Two Busses each year			$260,000	$260,000			$0.00	$520,000	$520,000
						TOTAL			**$260,000**	**$260,000**				**$520,000**	**$520,000**
590	Wastewater	Wastewater Rate Study	1	4	Wastewater Fund	It has been several years since the City has commissioned a rate study from a consultant. The past few years our rate reviews have been a collaboration between Michigan Rural Water Association and City Staff. MRWA no longer provides this service due to staffing levels. City Staff will be involved with the process but a consultant with appropriate experience will be hire to perform the evaluation and provide rate recommendations.			$35,000				$35,000		$35,000
590	Wastewater	Wastewater Laboratory Remodel	3	25	Wastewater Fund	Full remodel of outdated laboratory built in 1975, including cabinets, counter tops, fixtures, flooring, lighting, and lab safety equipment. We plan on retaining much of the existing lab equipment as that has been updated regularly.			$250,000				$250,000		$250,000
590	Wastewater	Channel Monster Cartridge Replacement	2	5	Wastewater Fund	Replace the cutter cartridge in the Channel Monster as recommended by the manufacture.		$40,000					$40,000		$40,000
590	Wastewater	WW Superintendent Vehicle	1	15	Wastewater Fund	Wastewater Superintendent does not currently have a vehicle assigned. He typically has to use his personal vehicle for City business throughout the day due to Staff utilizing the Departments other two trucks for maintenance work. This presents a liability issue for the City. Superintendent's personal vehicle does not have emergency lighting, so safety is a concern when visiting job sites around the City.	$50,000						$50,000		$50,000
590	Wastewater	Muffin Monster cartridge replacement	2	5	Wastewater Fund	Replace the cutter cartridge in the in-line Muffin Monsters as recommended by the manufacture.				$30,000			$30,000		$30,000
590	Wastewater	Aeration Blower Replacement	1	15	MEDC - Wastewater Fund - SRF Bonds	The current aeration blowers were installed in 1999. Since that time our aeration needs have changed and these blowers provide more air than necessary. Technology has advanced to a level that we can meet today's needs and retain the ability to meet future needs by replacing our current centrifugal blower with one that may be controlled by VFD. The current blowers cannot by controlled by a VFD and must run and full speed.		$100,000					$100,000		$100,000
590	Wastewater	Headworks & Equalization Basin Improvements	1	20	MEDC - Possible SRF Bonds	Headworks improvements including grit removal and fine screening will extend the life of the downstream equipment.		$20,000,000					$20,000,000		$20,000,000
590	Wastewater	Master Plan	2	10	Wastewater Fund	Update the 2008 Master Plan	$25,000						$25,000		$25,000

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590	Wastewater	Sewer Lining	1	30	Wastewater Fund	Project will line sewers which have experienced failure and root penetration.	$60,000	$60,000	$60,000	$60,000	$60,000	$60,000	$360,000		$360,000
590	Wastewater	New Sludge Thickening/De-watering Process	2	20	Wastewater Fund	The current equipment wil be 20 years old and the polymer agent used in the process is no longer produced. A suitable replacement is not expected. We have enough polymer to last about 4 years. With a new system, Class A biosolids may be achieved.			$500,000				$500,000		$500,000
590	Wastewater	Clarifier Rehabilitation	3	25	Wastewater Fund	Rehabilitate concrete and steel structures in each of 4 clarifiers due to age and corrosion. Rehab/Replace clarifier drive mechanisms due to age and wear. Coat all concrete surfaces with marine grade coating.							$0		$0
						TOTAL	**$135,000**	**$20,200,000**	**$845,000**	**$90,000**	**$60,000**	**$60,000**	**$21,390,000**	**$0**	**$21,390,000**
591	Water	S. Marshall Ave. Water Main Replacement (Michigan to Spruce)	2	100	Water Fund	Replace undersized 6" cast iron water main on S. Marshall from Michigan to Spruce St. This main was installed in 1958 and will be past it's useful life.						$600,000	$600,000		$600,000
591	Water	S. Marshall Ave. Water Main(Spruce to Clinton), line Clinton to Powerhouse	2	100	Water Fund	Replace 4" main on S. Marshall from Spruce to Clinton. This main is undersized and past its useful life. Line water main from Clinton to the Powerhouse. This main can be structurally lined under the railroad tracks and spillway to keep the project cost down.						$700,000	$700,000		$700,000
591	Water	Replace Filter Media in Water Treatment Plant	1	15	Water Fund	The current media in each of the 4 filters in the water plant is past its useful life. The media was replaced in 2006 and had a useful life of 15 years. Testing on the existing media shows significant failure. This media needs to be replaced to help keep the water for the City safe to drink.	$315,000						$315,000		$315,000
591	Water	S. Kalamazoo water main lining	2	50	Water Fund	Line water main from Brooks Fountain south to Railroad tracks. Replacement of valves, hydrants and services through the entire area.					$550,000		$550,000		$550,000
591	Water	Cosmopolitan Water Main Lining	1	25	Water Fund	The current water main on Cosmopolitan has very poor water quality and flow. This technology of lining a water main can extend the useful life of the infrastructure, increase the structural integrity of the pipe, increase the flow, and help solve the water quality issue in the area.	$400,000						$400,000		$400,000
591	Water	Hanover St. water main replacement/water main lining	2	100		Replace/line aging 6" water main on Hanover from S. Marshall to S. Kalamazoo. This main is past it's useful life and is known to be in poor condition.					$1,110,200		$1,110,200		$1,110,200
591	Water	Replace 10" Cast Iron Water Main on High St.	2	100	Water Fund	Replace 10" water main on High St. from Michigan Ave. to Forest St. Also replace all lead services, hydrants, valves, and connections. The size of the water main and amount of flow is causing water quality issues.				$901,000			$901,000		$901,000
591	Water	Replace 6" Water Main on Fountain St.	2	100	Water Fund	Replace 6" water main on Fountain St. from Hanover to Arms St. Currently 6" cast iron with poor water quality.				$563,000			$563,000		$563,000
591	Water	500,000 Tower Maintenance	1	25	Water Fund	2019 Maintenance Inspection identified several items that needed to be addressed. These were not critical issues so we have decided to lump them into the 200,000 tower project in 2026.	$35,000						$35,000		$35,000
591	Water	200,000 Water Tower Painting	1	15	Water Fund	2019 Water Tower inspection identified that the water tower would need an exterior overcoat in approximately 5-6 years.	$120,000						$120,000		$120,000
591	Water	Replace Water Main on N. Gordon	2	100		Replace aging 6" water mian on N. Gordon from Mansion to Forest. Increase size to 8" for better fire flow and water quality.			$963,300				$963,300		$963,300
591	Water	New Water Treatment Plant	1	60	Water Fund Bond	Replace Water Treatment Plant. Build new iron removal plant on North side of E. Green St. across from existing plant.					$5,000,000		$5,000,000		$5,000,000
591	Water	Replace 6" water main on E. Michigan between Gordon and Marshall	1	100	Water Fund	Replace 6" water main on E. Michigan with 8". This is the only section of Michigan Ave that has not been replaced. This replaceent would complete the Michigan Ave loop through the City. The existing water main was installed in 1950, and is past its useful life.		$330,300					$330,300		$330,300
591	Water	Replace 6" water main on Rose St. and Oak	1	100	Water Fund	Replace 6" water main on Rose St and Oak. This section of water main was built in 1959 and is known to have low water quality. This is the only section in that area that has not been replaced, and will significantly improve water flow and quality with a new 8" water main.		$503,100					$503,100		$503,100

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591	Water	Replace 6" water main at Walden Pond Apartments	2	100	Water Fund	Replace 6" cast iron water main at Walden Pond Apts. from Verona to Arms. This section of water main is known to have poor water quality and is aging past it's useful life.				$527,700			$527,700		$527,700
591	Water	Water Withdrawal	1	N/A	Water Fund	Per America's Water Infrastructure Act of 2018 The City of Marshall Water Department is required to complete a Reliability Study every 5 years. The Department completed their first study in 2020. This report was required to analyze 20 year water demand versus 20 year water supply for the community. The results are that the Water Department's water supply is not adequate for the anticipated future demand.	$75,000	$75,000					$150,000		$150,000
591	Water	Replace Water Main on Sibley Ln	1	100	Water Fund	Replace 6" water main on Sibley Ln. with new 8" water main. The existing water main is cast iron built in 1956 and is at its useful life. Although we don't have water main breaks on this section, it is time to replace this water main and upgrade the infrastructure to improve water quality and water flow.			$650,000				$650,000		$650,000
591	Water	Replace Water Main on Mulberry St	1	100	Water Fund	Replace 6" water main on Mulberry from Hanover to Prospect. The existing water main was installed in 1957 and is at its useful life. The water main also has a history of water main breaks through the replacement area. The new water main would upsize to 8", and replace all lead connections to residents.			$650,000				$650,000		$650,000
						TOTAL	**$945,000**	**$908,400**	**$2,263,300**	**$1,991,700**	**$6,660,200**	**$1,300,000**	**$14,068,600**	**$0**	**$14,068,600**
661	Motor Pool	2024 Purchases	1	Variable	Motor Pool	Replace 5 units							$0		$0
661	Motor Pool	2025 Purchases	1	Variable	Motor Pool	Replace 6 units	$203,000						$203,000		$203,000
661	Motor Pool	2026 Purchases	1	Variable	Motor Pool	Replace 1 unit		$254,000					$254,000		$254,000
661	Motor Pool	2027 Purchases	1	Variable	Motor Pool	Replace 1 unit			$500,000				$500,000		$500,000
						TOTAL	**$203,000**	**$254,000**	**$500,000**				**$957,000**		**$957,000**
711	Cemetery	Cemetery Road Paving Project	2	20	Cemetery Trust Fund	Finishing the drives in the cemetery will provide a clean and solid surface during inclement weather for those visiting their loved ones during a funeral service.	$18,000						$18,000		$18,000
711	Cemetery	Cemetery Expansion to Meet Future Demand	2	150	Cemetery Trust Fund	Cemetery has two sections left holding 500 spaces for purchase. The number available will shrink exponentially as families begin having trouble finding blocks of spaces available for family plots. This will drive many to seek alternate locations. $35,000 Design - $100,000 Construction.		$35,000	$100,000				$135,000		$135,000
						TOTAL	**$18,000**	**$35,000**	**$100,000**	**$0**	**$0**	**$0**	**$153,000**	**$0**	**$153,000**
						GRAND TOTAL	**$13,412,650**	**$27,658,352**	**$11,743,288**	**$10,918,432**	**$17,829,904**	**$10,596,500**	**$81,308,225**	**$15,095,050**	**$96,403,275**
						GENERAL FUND TOTALS	**$2,410,000**	**$830,000**	**$1,255,000**	**$1,595,000**	**$525,000**	**$5,635,900**	**$5,305,000**	**$7,520,900**	**$12,825,900**

TO:	Planning Commission
FROM:	Eric Zuzga, Director of Community Services
DATE:	December 13, 2023
SUBJECT:	**SP# 23.09 1114 WEST MICHIGAN AVENUE- CONSUMERS CREDIT UNION**

Case #:	SP #23.
Address:	1114 West Michigan Avenue
Parcel #:	53-004-912-01
Zoning District:	Regional Commercial (B-4)
Surrounding Zoning:	PSP to South, B-4 in all other directions
Surrounding Uses:	CIty Athletic Fields to South, Commercial uses in all other directions
Previous Action:	ZBA considering sign dimensional and use variance requests at 12/14/23 meeting

City staff have been working with Consumers Credit Union on the construction of a new 1185 square foot building with a drive-through ATM detached from the building. The parcel is 0.66 acres and is the site of the former Pizza Hut.

Dimensional Requirements (Setback, lot coverage, etc)
The site meets all of the dimensional requirements of the zoning ordinance.

Parking Requirements
The site requires a minimum of 5 parking spaces, with a maximum of 6 spaces allowed by the zoning ordinance. The applicant is requesting 11 parking spaces to provide adequate space for employees and customers. The Planning Commission has the ability to allow the additional parking requested by the applicant.

Landscape Plan
A landscape plan has been submitted as required. As the site is below 1 acre, it is not required to be signed by a landscape architect.

Sidewalks
Sidewalks already exist on the site and a connection from the building to the existing sidewalk system has been included.

Exterior Lighting
The required photometric plan was included with the submitted plans showing compliance across

the site with no light trespass issues.

PLANNING COMMISSION CONSIDERATIONS
Staff have reviewed the site plan based on the requirements of the PSP Zoning District and related sections of the zoning ordinance. As part of our review, we evaluated the proposed facility through the following standards that the Planning Commission will use in the process of reviewing any site plan for approval:

1. Adequacy of information. The site plan information is complete, accurate, and in an understandable form that accurately depicts and describes the proposed development.

The site plan submitted was complete and accurate.

2. Site appearance and preservation. The site layout promotes the normal and orderly development of surrounding lots, and the development layout preserves, to the extent feasible, the site's natural, cultural, and historical features, such as but not limited to significant buildings, wetlands, topography, and woodlands.

The previous building was demolished earlier this year and the site is currently vacant. The proposed building will fit in to the current development pattern. There are no known cultural or historical features on the site. Some of the existing trees will be maintained on site and the proposed landscape improvements will provide an improved site for the area.

3. Pedestrian access. Existing and proposed sidewalks or pedestrian pathways connect to existing and planned public sidewalks and pathways in the area, and comply with applicable barrier-free access standards.

The site is served by sidewalks that connect to properties to the west and to downtown. The site is ADA compliant and includes a connection to the existing sidewalk along West Michigan. The site has the required number of handicap parking spaces.

4. Vehicular circulation. Drives, streets, parking, site access and other vehicle-related elements are designed to minimize traffic conflicts on adjacent streets, and to promote safe and efficient traffic circulation.

The applicant plans to reuse the existing driveway to Michigan Avenue and will also maintain the existing connection with the parcel to the east. The site as proposed should have sufficient room for efficient traffic circulation.

5. Parking and loading. Off-street parking lots and loading areas are arranged and located to accommodate the intensity of proposed uses, minimize conflicts with adjacent uses, and promote shared-use of common facilities where feasible.

The minimum parking required for a financial institution with a building of 1185 square feet is 5 spaces and a maximum of 6 spaces. The applicant is requesting that 11 spaces be allowed to satisfy the number of employees and customers expected. The Planning Commission has the ability to allow the additional parking to meet the needs outlined by the applicant. Staff believes that this is a reasonable request and is recommending planning commission approval of the request.

The existing driveway to the neighboring property to the east will be maintained to avoid any conflicts with the use of the property to the east.

6. Building composition. Building design and architecture are harmonious with the

surrounding neighborhood with regard to scale, mass, proportion, and materials.

The design and architecture of the building have been submitted and are attached. The proposed design is an improvement over the former old Pizza Hut and the current vacant lot. The design fits in to the surrounding development and is a nice addition to the West Michigan corridor.

7. Screening. Adequate screening elements have been provided to buffer or separate unlike or conflicting land uses, and to screen off-street parking, mechanical appurtenances, loading and unloading areas and storage areas from abutting residential districts and street rights-of-way.

Required green belts, street tree planting, and parking lot screening meet the requirements in the ordinance.

8. Exterior lighting. All exterior lighting fixtures are designed and arranged to minimize glare and light trespass, prevent vision impairments, and maximize security.

The site meets the standards of the zoning ordinance per the submitted photometric plan. There are no light trespass issues on the site.

9. Impact upon public services. The impact upon public services (including utilities, streets, police and fire protection, emergency access, and public sidewalks and pathways) will not exceed the existing or planned capacity of such services.

We expect no impact on public services. All departments have reviewed the site plan and have no concerns with the design proposed.

BUDGET IMPACT:

RECOMMENDATION:
Approve SP #23-09 with the condition that the ZBA approve the use variance for the drive-through ATM and the parking request for additional spaces is approved.

CITY OF MARSHALL

SITE PLAN APPLICATION

SITE PLAN REVIEW PROCESS

THE CITY NOW REQUIRES ALL SITE SUBMISSIONS IN ELECTRONIC .PDF FORMAT, ACCOMPANIED BY TWO (2) LARGE SIZE PAPER COPIES.

Plans can be emailed to: EZuzga@cityofmarshall.com

1. Site plan application and fee are submitted to the Department of Community Services at City Hall, 323 W. Michigan Ave., Marshall, MI from the hours of 8:00 a.m.-5:00 p.m. Applications and fees may be submitted by mail or in person. Site plan submissions are **required electronically with 2 large size paper copies**.

2. The initial site plan submission is dedicated to internal City staff review. The developer is welcome to attend this meeting. If the developer does not attend, revisions will be suggested in a letter.

4. A deadline is given to the developer to prepare revisions and re-submit by the corresponding Planning Commission "Submission Date" (dates attached).

5. At their next regular meeting, Planning Commission accepts the site plan. If the plan is complete, upon request, the Planning Commission may also move to approve. If the plan is not complete or there is no request, the Planning Commission will move to approve at their next regularly scheduled meeting.

Site Plan Submission Requirements (Review Zoning Ordinance for all requirements)

1. Complete the Application.

2. Review and follow the Site Plan Review checklist.

3. Go to www.cityofmarshall.com - Planning and Zoning and click on "Zoning Ordinance" under Helpful Link.

4. Submit a certified survey of the property with the site plan.

5. Submit a copy of the deed showing ownership

City Departments

Web site: www.cityofmarshall.com

City Manager Derek Perry	269.558.0315 DPerry@cityofmarshall.com
Planning and Zoning Eric Zuzga	269.558.0354 EZuzga@cityofmarshall.com
Chief of Police Josh Lankerd	269.781.9810 JLankerd@cityofmarshall.com
Director of Public Services Marguerite Davenport	269.558.0323 MDavenport@cityofmarshall.com
Director of Electric Utilities Kevin Maynard	269.558.0329 KMaynard@cityofmarshall.com
Building Official Tim Musser	269.781.3985 x1507 TMusser@cityofmarshall.com
Water Dept. Supervisor Aaron Ambler	269.558.0338 AAmbler@cityofmarshall.com
Wastewater Dept. Supervisor Alec Egnatuk	269.558.0337 AEgnatuk@cityofmarshall.com
Fire Department Chief Martin Erskine	269.558.0339 MErskine@cityofmarshall.com

County Department

www.calhouncountymi.gov

Health Department – Food Services- Battle Creek	269-969-6373
Road Department – Soil and Erosion Permits - Marshall	269-781-9841

Michigan Department of Transportation

www.michigan.gov 269-789-0560 or toll free 1-877-324-6368

City of Marshall
Application for Site Plan Review

Attn: Planning and Zoning Administrator
323 W Michigan Ave.
Marshall, Michigan, 49068

The following application is made to the City of Marshall Planning Commission in accordance with the provisions of the Planning and Zoning Department.

1. Applicant Information

Address of property being developed:

1114 W. MICHIGAN AVENUE

Owner of property being developed:

CONSUMERS CREDIT UNION

Owner's Address:

7200 ELM VALLEY DR, KALAMAZOO, MI 49009
City State Zip

Owner's Phone Number:

800-991-2221

2. Owner's Agent if working for property owner.

Name and Title:

BOSCH ARCHITECTURE - NICK LOEKS, PE

Address:

8065 VINEYARD PKWY, KALAMAZOO, MI 49009
City State Zip

Phone Number:

269-321-5151

City of Marshall
Application for Site Plan Review

3. Brief description of proposed project

REDEVELOPMENT OF OLD PIZZA HUT PARCEL INTO NEW 1200 SF BANK W/ (1) DRIVE THRU ATM

4. Property Information

Is this property located in a floodplain?	NO
Is this property located in a wetland?	NO
Land area in square feet?	28,770
Proposed building area in square feet?	1185
Proposed paved area in square feet?	10271
Existing paved area in square feet?	12060
Lake or stream within 500 feet?	
Any other agencies contacted for approvals?	

If so, please list:

MDOT - IF PROJECT IS APPROVED

City of Marshall
Application for Site Plan Review

5. Authorization (Must be signed by the owner of the property)

I am the owner of record for this property for which this application is being filed and as such, I am familiar with the development being proposed to be carried out on my property.

I hereby, give permission for this application to be filed with the full understanding that certain restriction may be placed on the property relative to the approval of the proposed work.

I further certify that under penalties of perjury, I am to sign this application.

Name (Please Print)_____

Title: _____ Date: _____

Signature:_____

Note: If there are multiple owners of the property or you are representing a group, corporation, or other organization attach a copy of a certified letter authorizing you to sign this application for the proposed development.

LAND USE AND DEVELOPMENT FEES	
PLATS	
Up to 30 Lots	$550.00
Over 30 Lots	$750.00
SITE CONDOMINIMUMS	
Up to 30 Lots	$450.00
Over 30 Lots	$650.00
SITE PLANS	
Professional Fees for Consultants	As billed
Commercial and Industrial	$350.00
Special Land Use	$400.00
Planned Unit Development	$500.00
Amend a PUD	$150.00
Multiple Family Developments (Apartment &	$50 plus $5.00 per unit or lot
Additions to existing Site Plans if Planning Commission Review is required	$100.00
Extending Site Plan with Planning Commission	$200.00

City of Marshall
Grease Discharge Control Policy

All non-residential establishments that prepare, cook, or dispense food and discharge wastewater to the City of Marshall sanitary sewer system, are required to install and maintain an appropriately sized grease trap/grease interceptor. These establishments include but are not limited to restaurants, school kitchens, hotel kitchens, hospitals, church kitchens, bars, clubs, grocery stores, etc.

The City of Marshall Sewer Use Ordinance prohibits the discharge of grease in amounts that could cause interference or obstruction of wastewater flow. The Sewer Use Ordinance establishes the City's authority to enforce this policy and to impose fines and penalties for non-compliance, and to recover costs associated with enforcement & non -compliance.

Owners are required to contract a licensed plumber to install a properly sized grease trap/interceptor in accordance with the State of Michigan Plumbing Code. The grease trap or interceptor shall be certified by and/or designed according to the Plumbing and Drainage Institute standards. Prior to final connection to the City's sanitary sewer, the owner must notify the City Plumbing Inspector for inspection. The City of Marshall Wastewater Treatment Department must also be notified. Grease trap/interceptor location and specifications must be provided along with a written employee grease handling policy and an appropriate grease trap/interceptor maintenance schedule. Failure to meet code requirements, or provide required information will result in a denial to connect.

City personnel will inspect grease trap/interceptors and maintenance records on a regular basis. Failure to appropriately maintain a grease trap/interceptor may result in fines and/or disruption of service.

Cross Connections

In an effort to eliminate cross connections, the applicant needs to install backflow prevention devices in accordance with the Michigan Plumbing Code. For non-residential water users, backflow prevention devices for facility containment are preferred. Prior to connecting to water services, a cross connection inspection must be scheduled with the Water Superintendent.

Water Superintendent: Aaron Ambler 269.558.0328

Building Official: Tim Musser 269.781.3985

CITY OF MARSHALL

Site Plan Review Checklist for General Development

Date: 11/1/2023

Zoning District B-4

Proposed Use: CREDIT UNION w/ (1) DRIVE-THRU

Is this a Permitted Use? ☒ Yes ☐ No
If yes list section number:_____

Is the property in the Well Head Protection Area? ☐ Yes ☒ No ☐ NA

Property Address: 1114 WEST MICHIGAN AVENUE

Information of Responsible Party that prepared plans

Name: NICK LOEKS, PE

Company Name: BOSCH ARCHITECTURE

Company Address: 8065 VINEYARD PKWY

KALAMAZOO, MI 49009

CITY OF MARSHALL

Zoning Ordinance, Article 6: Development Procedures: Section 6:3 - Site Plan Review is needed when:

☐ (A) - Any use or development stipulated elsewhere in the ordinance.

☐ (B) - All uses subject to land approval.

☐ (C) - Any areas for which off-street parking is required except for single- and two-family dwellings on a single lot.

☐ (D) - All permitted use, new construction, or any change of use lying contiguous to or across the street from a residential district.

☐ (E) - All residentially related uses permitted in a one-family district such as, but not limited to, institutional uses, churches, or public facilities.

☐ (F) - Any new use, addition or accessory structure that requires additional off-street parking to that already provided.

☐ (G) - Site plans for subdivisions and site condo developments.

☐ (H) - All uses not otherwise included within a specific use district.

☐ (I) - Any use for which the zoning administrator determines that PC review is necessary to determine compliance with the zoning ordinance.

☐ (J) - Amendments to approve site plans, except that the City Manager may approve minor modifications.

Note: Staff will review all plans prior to submitting them to Planning Commission.

Development Procedures: 6.3 – Site Plan Review: The following information should be included in your site plan:

☒ Plans submitted for site plan review shall be stamped by a design professional licensed by the State of Michigan such as a landscape architect, architect, or civil engineer.

☒ Site plans shall be drawn to an engineer's scale appropriate for a sheet size of at least 24 by 36 inches, not to exceed one (1) inch equals 50 feet. If a large development must be depicted in sections on multiple sheets, then an overall composite sheet shall be provided.

☒ Date, north arrow scale, existing zoning, zoning of adjacent properties, legal description of the property, easements, and the names and addresses of the

architect, planner, designer, or civil engineer responsible for the preparation of the site plan.

☒ The dimensions of all lot and property lines, showing the relationship of the subject property to abutting properties and a boundary survey of the parcel.

☒ The location, height and dimensions of all existing and proposed structures on the subject property and all existing structures within 100 feet of the subject property.

☒ A finished floor elevation and exterior building elevation drawing shall be submitted with the site plan.

☒ The location of all existing and proposed drives, walks and parking areas.

☒ The location and right-of-way widths of all abutting streets and alleys.

☒ The location and size of all existing and proposed sanitary sewer lines, water lines, and storm drainage facilities must be shown.

☒ The location and size of all existing and proposed electric, natural gas, telephone, cable TV and solid waste disposal facilities must be shown.

☒ The location, height area of illumination and fixture details of all existing and proposed lighting shall be provided. All lighting shall be located and oriented to have a minimal impact on adjacent properties.

☒ The size, height, location and illumination of all existing and proposed signs shall be provided to insure ordinance compliance.

☒ The location of existing natural features such as wooded areas, floodplains, wetlands, drainage courses, and a topographic survey of spot elevations of the site.

☒ Other information as requested by the Zoning Administrator or Planning Commission to verify that the site and use follow the Ordinance.

☒ The Planning Commission may waive any of the foregoing requirements determined unnecessary for site plan review purposes.

PLANNING COMMISSION CONSIDERATIONS

The Planning Commission shall consider the following standards in the process of reviewing any site plan for approval:

1. **Adequacy of information.** The site plan information is complete, accurate, and in an understandable form that accurate depicts and describes the proposed development.

2. **Site appearance and preservation.** The site layout promotes the normal and orderly development of surrounding lots, and the development layout preserves, to the extent feasible, the site's natural, cultural, and historical features, such as but not limited to significant buildings, wetlands, topography, and woodlands.

3. **Pedestrian access.** Existing and proposed sidewalks or pedestrian pathways connect to existing and planned public sidewalks and pathways in the area, and comply with applicable barrier-free access standards.

4. **Vehicular circulation.** Drives, streets, parking, site access and other vehicle-related elements are designed to minimize traffic conflicts on adjacent streets, and to promote safe and efficient traffic circulation.

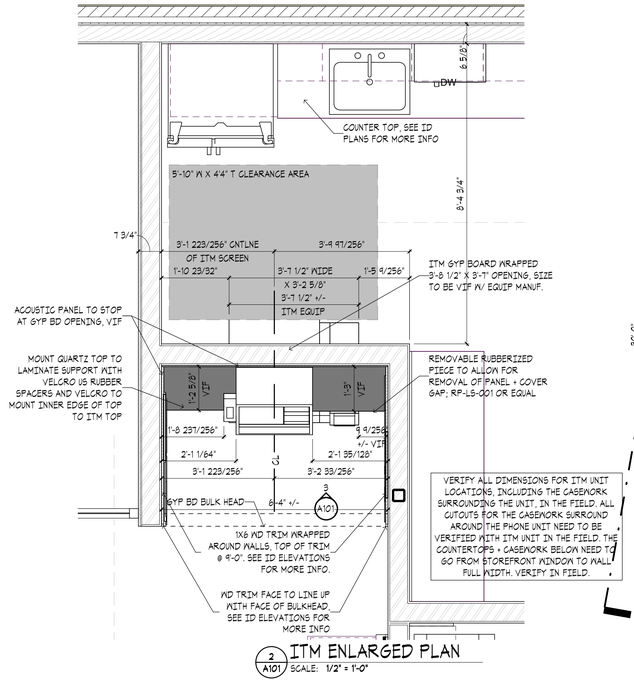
5. **Parking and loading.** Off-street parking lots and loading areas are arranged and located to accommodate the intensity of proposed uses, minimize conflicts with adjacent uses, and promote shared-use of common facilities where feasible.

6. **Building composition.** Building design and architecture are harmonious with the surrounding neighborhood with regard to scale, mass, proportion, and materials.

7. **Screening.** Adequate screening elements have been provided to buffer or separate unlike or conflicting land uses, and to screen off-street parking, mechanical appurtenances, loading and unloading areas and storage areas from abutting residential districts and street rights-of-way.

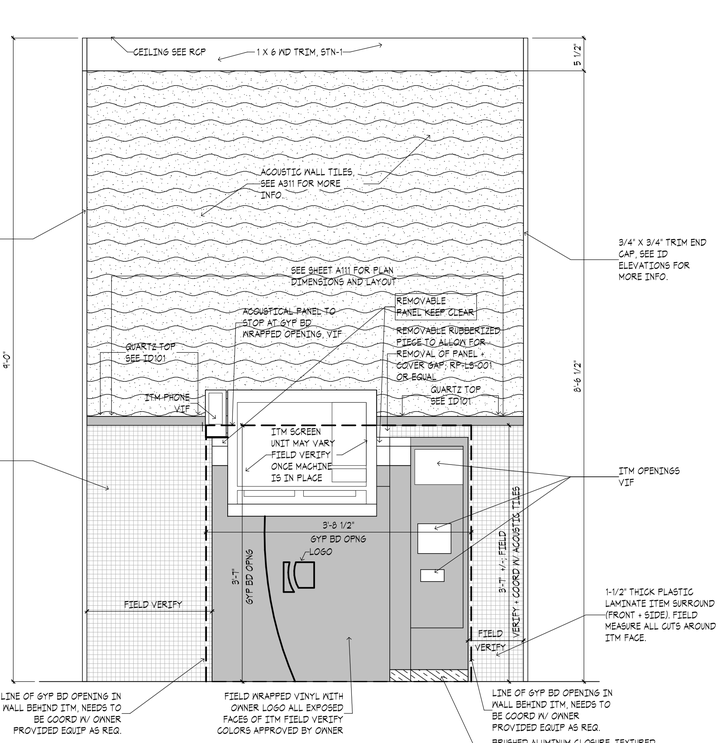
8. **Exterior lighting.** All exterior lighting fixtures are designed and arranged to minimize glare and light trespass, prevent vision impairments, and maximize security.

9. **Impact upon public services.** The impact upon public services (including utilities, streets, police and fire protection, emergency access, and public sidewalks and pathways) will not exceed the existing or planned capacity of such services

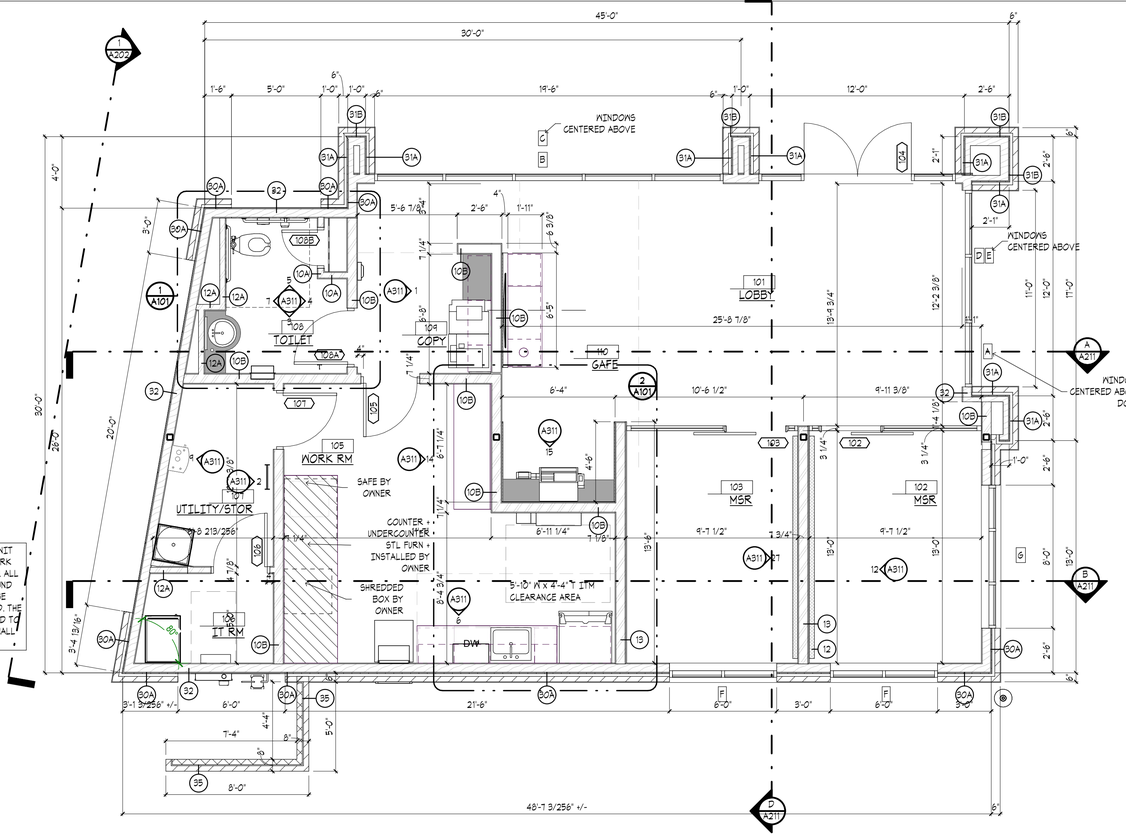


2 A101 ITM ENLARGED PLAN
SCALE: 1/2" = 1'-0"

VERIFY ALL DIMENSIONS FOR ITM UNIT LOCATIONS, INCLUDING THE CASEWORK SURROUNDING THE UNIT, IN THE FIELD. ALL CUTOUTS FOR THE CASEWORK SURROUND AROUND THE PHONE UNIT NEED TO BE VERIFIED WITH ITM UNIT IN THE FIELD. THE COUNTERTOPS + CASEWORK BELOW NEED TO GO FROM STOREFRONT WINDOW TO WALL FULL WIDTH. VERIFY IN FIELD.



3 A101 ITM ELEVATION DETAIL
SCALE: 1" = 1'-0"



GROSS SQ FT = 1284
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 DISCREPENCIES OR AMBIGUITIES OF INFORMATION THAT CAUSE DOUBT AS TO THE MEANING 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 JURISTDICTION, 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 THERIN 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 NAD 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 AN 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 ARCHITEICT TO MAKE THE PROJECT HABITABLE.

10. THOSE ITEMS NOT NOTED, BUT IMPLIED AS NECESSARY FOR THE COMPLETINON 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.

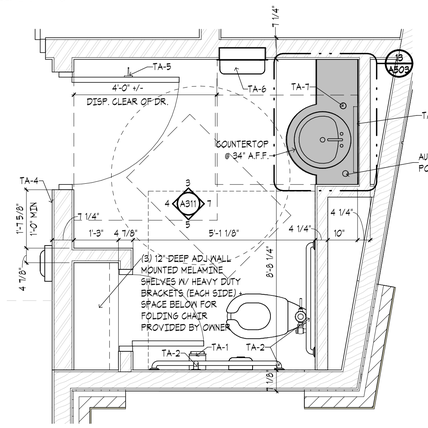
12. THE ARCHITECT AND/OR DESIGNER SHALL HAVE NO CONTROL OVER AND SHALL HAVE NO RESPONSIBILITY FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, OR PROCEDURES.

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 DISTATE 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.



TOILET/WALL ACCESSORY

TA-1 - TOILET PAPER HOLDER - AMERICAN SPECIALTIES INC. 20030 SURFACE MOUNTED TWIN HIDE-A ROLL TOILET TISSUE DISPENSER STAINLESS STEEL. CONTINUOUS FEED.

TA-2 - GRAB BAR - AMERICAN SPECIALTIES INC. 3800 STAINLESS STEEL SIZES PER TYPICAL ELEVATIONS

TA-3 - MIRROR - KOHLER ESSENTIAL K-26052BLL 22" X 34" RECTANGLE DEGORATIVE MIRROR IN MATTE BLACK.

TA-4 - SIGN - VERIFY WITH OWNER ON SIGNAGE PRIOR TO ORDERING. AT UNISEX TOILET - ROCKWOOD BFM684 UNISEX W/ BRAILLE.

TA-5 - HAT & COAT HOOK - AMERICAN SPECIALTIES INC. 0751 SURFACE MOUNTED HEAVY DUTY ROBE HOOK CHROME FINISH

TA-6 - PAPER TOWEL DISPENSER/WASTE RECEPTACLE - AMERICAN SPECIALTIES INC. 20469 RECESSED MOUNTED PAPER TOWEL DISPENSER AND WASTE RECEPTACLE STAINLESS STEEL

TA-7 - SOAP DISPENSER - AMERICAN SPECIALTIES INC. 0393-1AC VANITY MOUNTED A/C AUTOMATIC FOAM SOAP DISPENSER CHROME FINISH. ASI 0390 TOP FILL

TA-8 - MOP HOLDER/UTILITY SHELF - TO BE SUPPLIED BY PLUMBING CONTRACTOR SEE PLUMBING PLANS FOR MORE INFORMATION.

1 A101 ENLARGED TOILET ROOM
SCALE: 1/2" = 1'-0"

Consumers CU Marshall
1114 W. Michigan Avenue, Marshall, Michigan 49068

2022-XX-XX NOT FOR CONSTRUCTION XX-XX-2022
ISSUED

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bosch ARCHITECTURE ENGINEERING & INTERIOR DESIGN

PN: 23074
11/3/2023 10:52:03 AM

8686 Vineyard Parkway
Kalamazoo, MI 49009
(269) 321-5151
Boscharch.com

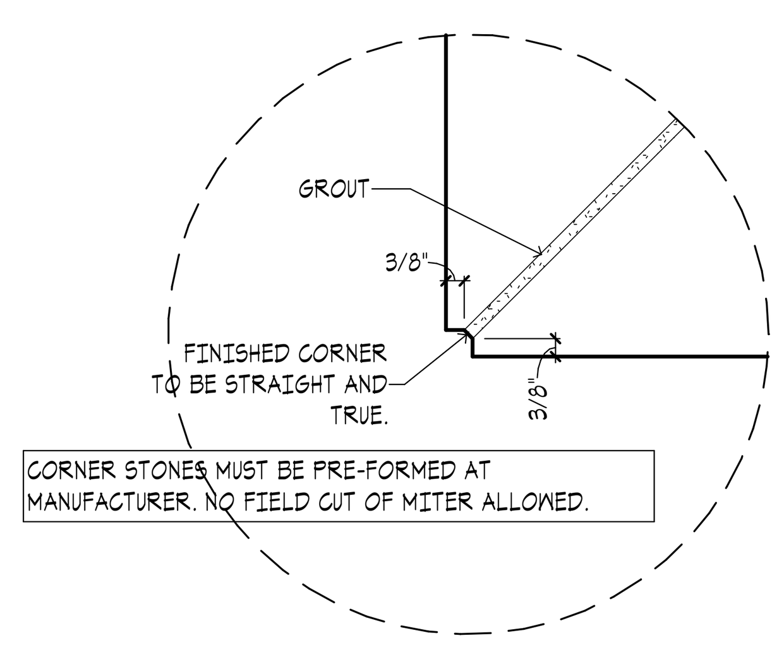
A101 FIRST LEVEL FLOOR PLAN

EXTERIOR MATERIAL SELECTION SCHEDULE

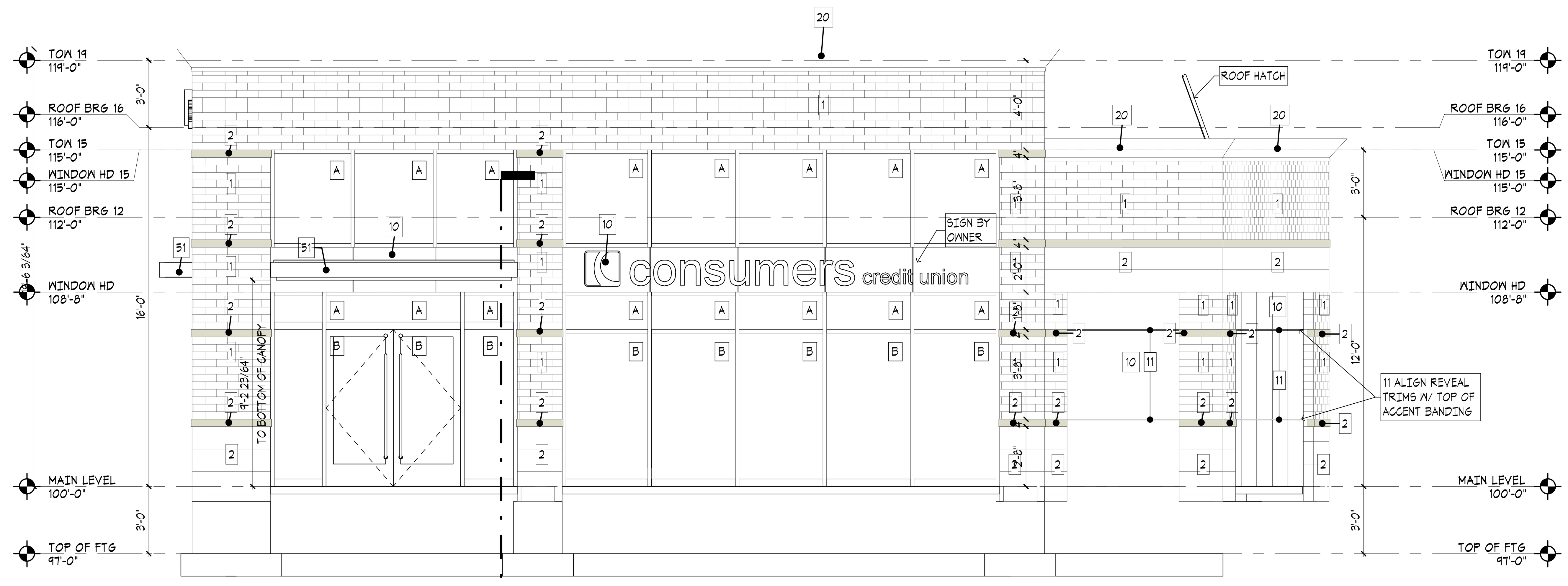
TAG #	MATERIAL	MANUFACURER/PRODUCT NO.	COLOR/COLOR NO	REMARKS
BRICK: (0-9)				
1	FACE BRICK: UTILITY BRICK (TYPE 1)	GLEN GERY	(RED SMOOTH UTIITY - PITTSBURG PLANT)	FINAL APPROVAL BY OWNER, NO SUBSTITUTIONS ALLOWED. 2/3 BOND INSTALL FOR THE BRICK
2	CAST STONE	SUPERIOR PRECAST PRODUCTS 4"X12"X24" UNITS @ BASE; 4"X4"X24" @ RUNNING COURSES	(102 LIMESTONE)	SUPERIOR PRECAST PRODUCTS 1950 RAVINE ROAD, KALAMAZOO, MI, 344-7690. NO SUBSTITUTIONS ALLOWED. 1/2 BOND INSTALL FOR THE CAST STONE
FIBER CEMENT BOARD: (10-19)				
10	BOARD ONLY	JAMES HARDIE	BENJAMIN MOORE- (NEWBURG GREEN HC158)	ORDER UNFINISHED BOARD, INSTALL W/FINISH NAIL FILLED W/COLOR MATCH PAINTABLE CAULK AND 2 COATS OF PAINT
11	TRIMS/REVEALS	FRY REGLET	BENJAMIN MOORE- (NEWBURG GREEN HC158)	ALL TRIMS TO BE ALUM FINISHED OR PRIMED AND FINISHED WITH THE FIBER CMENT BOARD. USE TRIMS AS REQ. FOR DIFFERENT LOCATIONS, OPTIONS FOR TRIMS: BASE, DRIP CAP, J-CHANNEL, DOUBLE HORIZONTAL, T-PIECE, INSIDE CORNER, F-MOLDING, OR OTHERES APPROVED BY ARCHITECT, AT ANGLED BUMPOUTS USE EASY TRIM REVEALS MULTI-ANGLE OUTSIDE AND INSIDE CORNER TRIM. ALTERNATE OPTION TO USE COORDINATING EASY TRIM REVEALS INSTEAD OF FRY REGLET TRIMS OR A COMBINATION OF BOTH
12	SOFFIT			
METALS: (20-29)				
20	METAL COPING	ALUM FASCIA PAC-LOC SYSTEM BY PAC-CLAD; FIELD BREAK	(SANDSTONE)	
22	SEE CHANNEL OR COLUMN	---	PAINTED (SEE 61 BELOW FOR EXTERIOR PAINT)	SEE STRUC PLAN FOR SIZING
ROOFING: (30-39)				
30			(SANDSTONE)	
WINDOWS AND DOORS: SEE SHEET A150 FOR MORE INFORMATION: (40-49)				
40	ALUMINUM STOREFRONT	TUBELITE 14000	LIGHT BRONZE	SEE SCHEDULE FOR MORE INFORMATION
CANOPIES AND AWNINGS: (50-59)				
50	CANOPIES	MAPES, SUPER LUMIDECK	CUSTOM PAINT TO MATCH BM NEWBURG GREEN	FACTORY APPLIED, SEE 62 BELOW
51	AWNINGS	MAPES, LUMISHADE	CUSTOM PAINT TO MATCH BM NEWBURG GREEN	FACTORY APPLIED, SEE 62 BELOW
60	EXTERIOR PAINT	BENJAMIN MOORE	HC-158 (NEWBURG GREEN)	EXTERIOR ACCENT PAINT
61	EXTERIOR METAL TO MATCH (NEWBERG GREEN)	LINETEC	LT4823293 70% (NEWBURG GREEN)	2 COAT INHOUSE BLEN
EXAMPLE OF TAG # INDICATED ON EXTERIOR ELEVATIONS IN BOXES				

GLASS SPECIFICATIONS

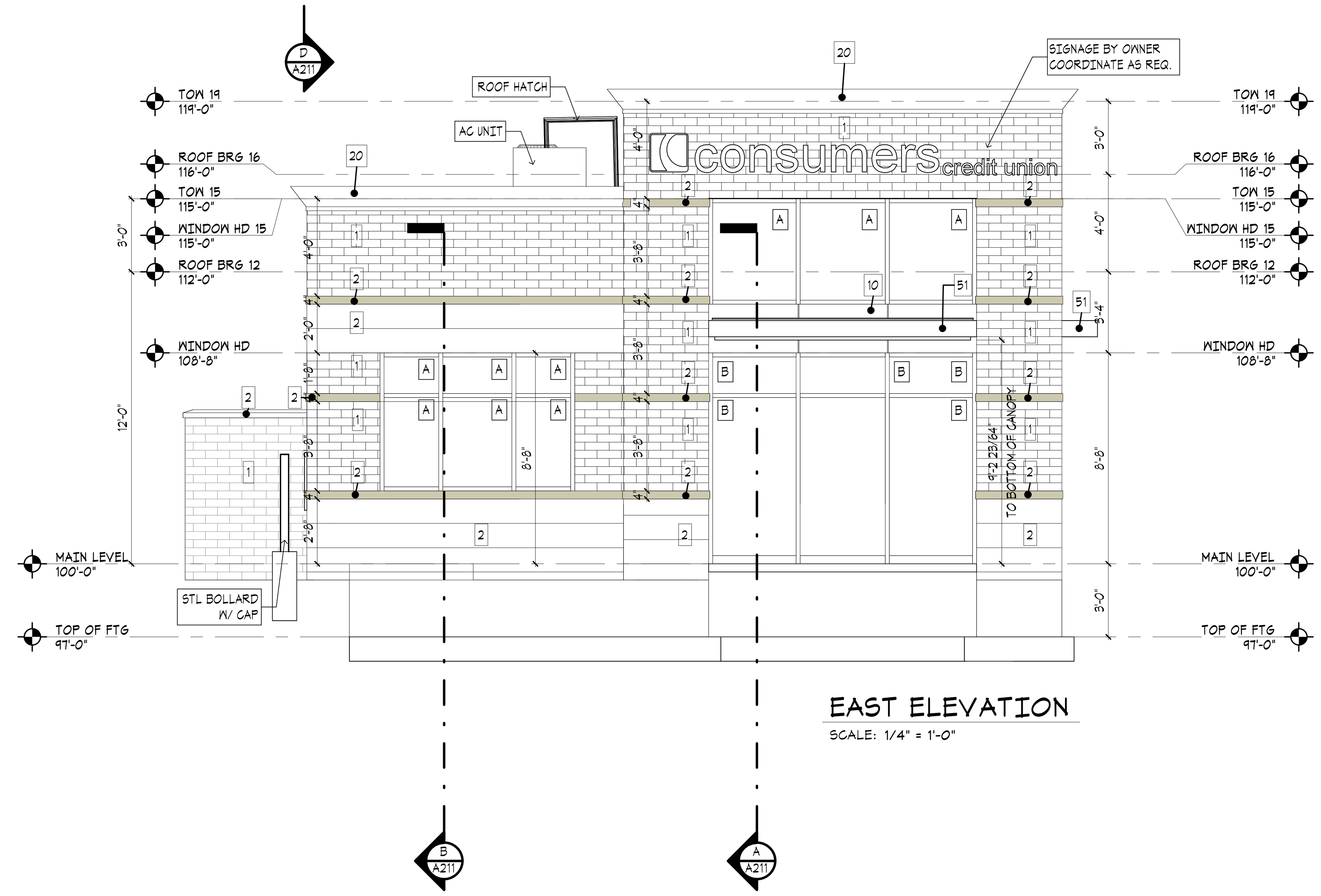
TYPE	DESCRIPTION (BASED ON GUARDIAN GLASS)
A	EXTERIOR: 1" INSULATED GLASS, SN 68 GUARDIAN SUNGUARD GLASS WITH REFLECTIVE COATING ON THE #2 HS SURFACE (CLEAR/CLEAR). U FACTOR-0.29 SOLAR HEAT GAIN COEFFICIENT-0.38 TRANSMITTANCE VISIBLE 68-71%, UV-30%
A1	EXTERIOR SPANDREL: 1" INSULATED GLASS, SN 68 GUARDIAN SUNGUARD GLASS WITH REFLECTIVE COATING ON THE #2 HS SURFACE (CLEAR/SPANDREL BLACK). SPANDREL COATING ON #3 SURFACE. U FACTOR-0.29 SOLAR HEAT GAIN COEFFICIENT-0 TRANSMITTANCE VISIBLE 0%, UV-0%
B	EXTERIOR TEMPERED: 1" INSULATED GLASS, SN 68 GUARDIAN SUNGUARD GLASS WITH REFLECTIVE COATING ON THE #2 HS SURFACE (CLEAR/CLEAR). U FACTOR-0.29 SOLAR HEAT GAIN COEFFICIENT-0.38 TRANSMITTANCE VISIBLE 68-71%, UV-30%
C	INTERIORS: 1/4" TEMPERED CLEAR SAFETY GLASS, MEETING CODE REQ.
D	INTERIORS: 1/4" CLEAR GLASS USED WHERE SAFETY GLASS IS NOT REQ.



1 A201 CORNER DETAIL AT PRECAST STONE
SCALE: 3" = 1'-0"



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



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

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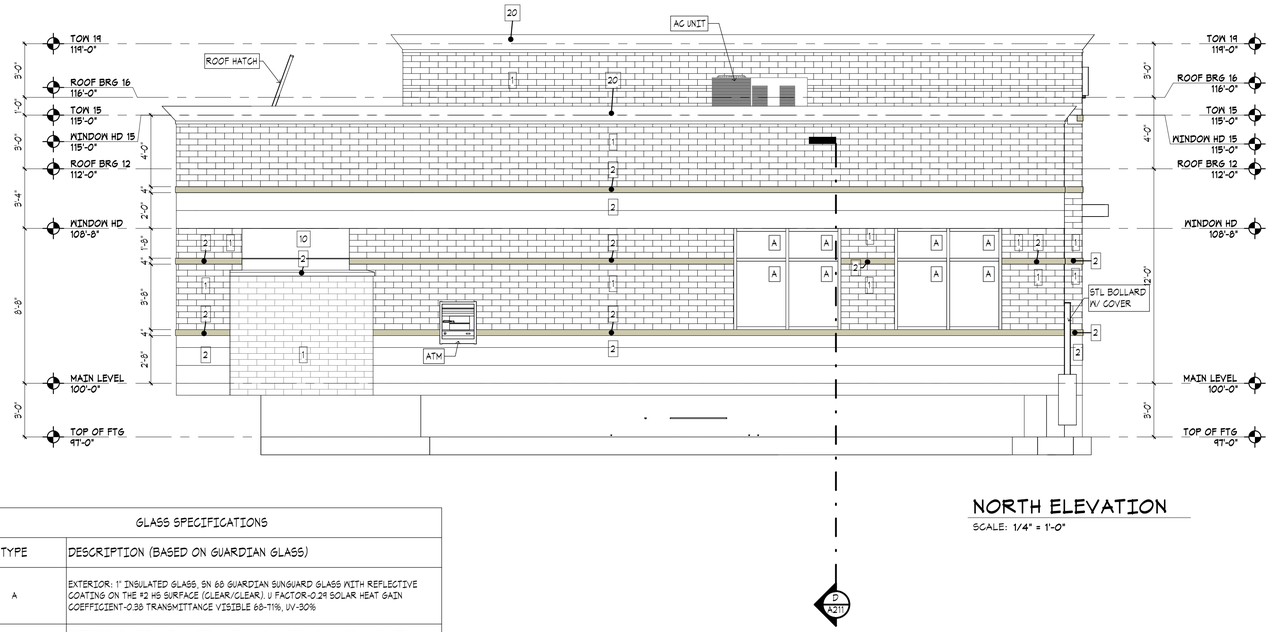
A201 EXTERIOR ELEVATIONS

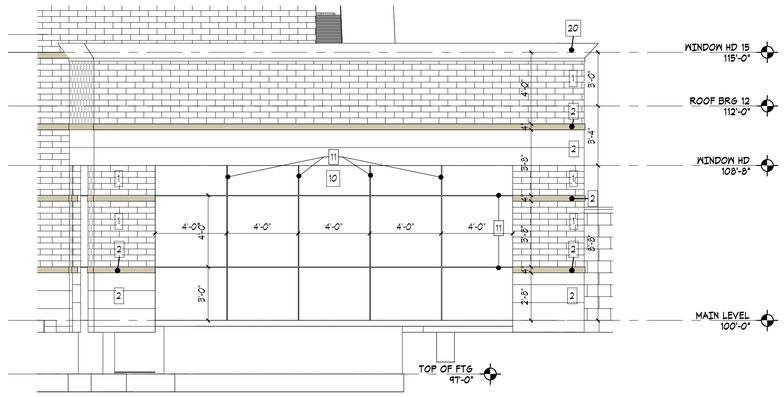
EXTERIOR MATERIAL SELECTION SCHEDULE

TAG #	MATERIAL	MANUFACURER/PRODUCT NO.	COLOR/COLOR NO	REMARKS
BRICK: (0-9)				
1	FACE BRICK: UTILITY BRICK (TYPE 1)	GLEN GERY	(RED SMOOTH UTIITY - PITTSBURG PLANT)	FINAL APPROVAL BY OWNER, NO SUBSTITUTIONS ALLOWED. 2/3 BOND INSTALL FOR THE BRICK
2	CAST STONE	SUPERIOR PRECAST PRODUCTS 4"X12"X24" UNITS @ BASE; 4"X4"X24" @ RUNNING COURSES	(102 LIMESTONE)	SUPERIOR PRECAST PRODUCTS 1950 RAVINE ROAD, KALAMAZOO, MI, 344-7640, NO SUBSTITUTIONS ALLOWED. 1/2 BOND INSTALL FOR THE CAST STONE
FIBER CEMENT BOARD: (10-19)				
10	BOARD ONLY	JAMES HARDIE	BENJAMIN MOORE- (NEWBURG GREEN HC158)	ORDER UNFINISHED BOARD, INSTALL W/FINISH NAIL FILLED W/COLOR MATCH PAINTABLE CAULK AND 2 COATS OF PAINT
11	TRIMS/REVEALS	FRY REGLET	BENJAMIN MOORE- (NEWBURG GREEN HC158)	ALL TRIMS TO BE ALUM FINISHED OR PRIMED AND FINISHED WITH THE FIBER CMENT BOARD. USE TRIMS AS REQ. FOR DIFFERENT LOCATIONS, OPTIONS FOR TRIMS: BASE, DRIP CAP, J-CHANNEL, DOUBLE HORIZONTAL, T-PIECE, INSIDE CORNER, F-MOLDING, OR OTHERES APPROVED BY ARCHITECT, AT ANGLED BUMPOUTS USE EASY TRIM REVEALS MULTI-ANGLE OUTSIDE AND INSIDE CORNER TRIM. ALTERNATE OPTION TO USE COORDINATING EASY TRIM REVEALS INSTEAD OF FRY REGLET TRIMS OR A COMBINATION OF BOTH
12	SOFFIT			
METALS: (20-29)				
20	METAL COPING	ALUM FASCIA PAC-LOC SYSTEM BY PAC-CLAD; FIELD BREAK	(SANDSTONE)	
22	SEE CHANNEL OR COLUMN	---	PAINTED (SEE 61 BELOW FOR EXTERIOR PAINT)	SEE STRUC PLAN FOR SIZING
ROOFING: (30-39)				
30			(SANDSTONE)	
WINDOWS AND DOORS: SEE SHEET A150 FOR MORE INFORMATION: (40-49)				
40	ALUMINUM STOREFRONT	TUBELITE 14000	LIGHT BRONZE	SEE SCHEDULE FOR MORE INFORMATION
CANOPIES AND AWNINGS: (50-59)				
50	CANOPIES	MAPES, SUPER LUMIDECK	CUSTOM PAINT TO MATCH BM NEWBURG GREEN	FACTORY APPLIED, SEE 62 BELOW
51	AWNINGS	MAPES, LUMISHADE	CUSTOM PAINT TO MATCH BM NEWBURG GREEN	FACTORY APPLIED, SEE 62 BELOW
60	EXTERIOR PAINT	BENJAMIN MOORE	HC-158 (NEWBURG GREEN)	EXTERIOR ACCENT PAINT
61	EXTERIOR METAL TO MATCH (NEWBERG GREEN)	LINETEC	LT4823293 70% (NEWBURG GREEN)	2 COAT INHOUSE BLEN
EXAMPLE OF TAG # INDICATED ON EXTERIOR ELEVATIONS IN BOXES				

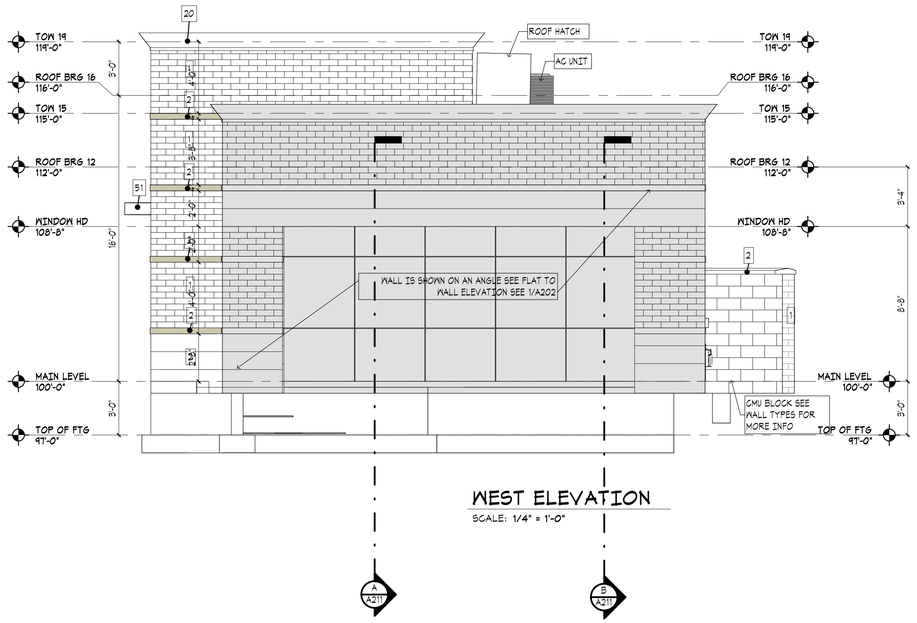


NORTH ELEVATION
SCALE: 1/4" = 1'-0"

GLASS SPECIFICATIONS	
TYPE	DESCRIPTION (BASED ON GUARDIAN GLASS)
A	EXTERIOR: 1" INSULATED GLASS, SN 68 GUARDIAN SUNGUARD GLASS WITH REFLECTIVE COATING ON THE #2 HS SURFACE (CLEAR/CLEAR). U FACTOR-0.29 SOLAR HEAT GAIN COEFFICIENT-0.38 TRANSMITTANCE VISIBLE 68-71%, UV-30%
A1	EXTERIOR SPANDREL: 1" INSULATED GLASS, SN 68 GUARDIAN SUNGUARD GLASS WITH REFLECTIVE COATING ON THE #2 HS SURFACE (CLEAR/SPANDREL BLACK). SPANDREL COATING ON #3 SURFACE. U FACTOR-0.29 SOLAR HEAT GAIN COEFFICIENT-0 TRANSMITTANCE VISIBLE 0%, UV-0%
B	EXTERIOR TEMPERED: 1" INSULATED GLASS, SN 68 GUARDIAN SUNGUARD GLASS WITH REFLECTIVE COATING ON THE #2 HS SURFACE (CLEAR/CLEAR). U FACTOR-0.29 SOLAR HEAT GAIN COEFFICIENT-0.38 TRANSMITTANCE VISIBLE 68-71%, UV-30%
C	INTERIORS: 1/4" TEMPERED CLEAR SAFETY GLASS, MEETING CODE REQ.
D	INTERIORS: 1/4" CLEAR GLASS USED WHERE SAFETY GLASS IS NOT REQ.



1 / A202 WEST ELEVATION FLAT TO WALL
SCALE: 1/4" = 1'-0"



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

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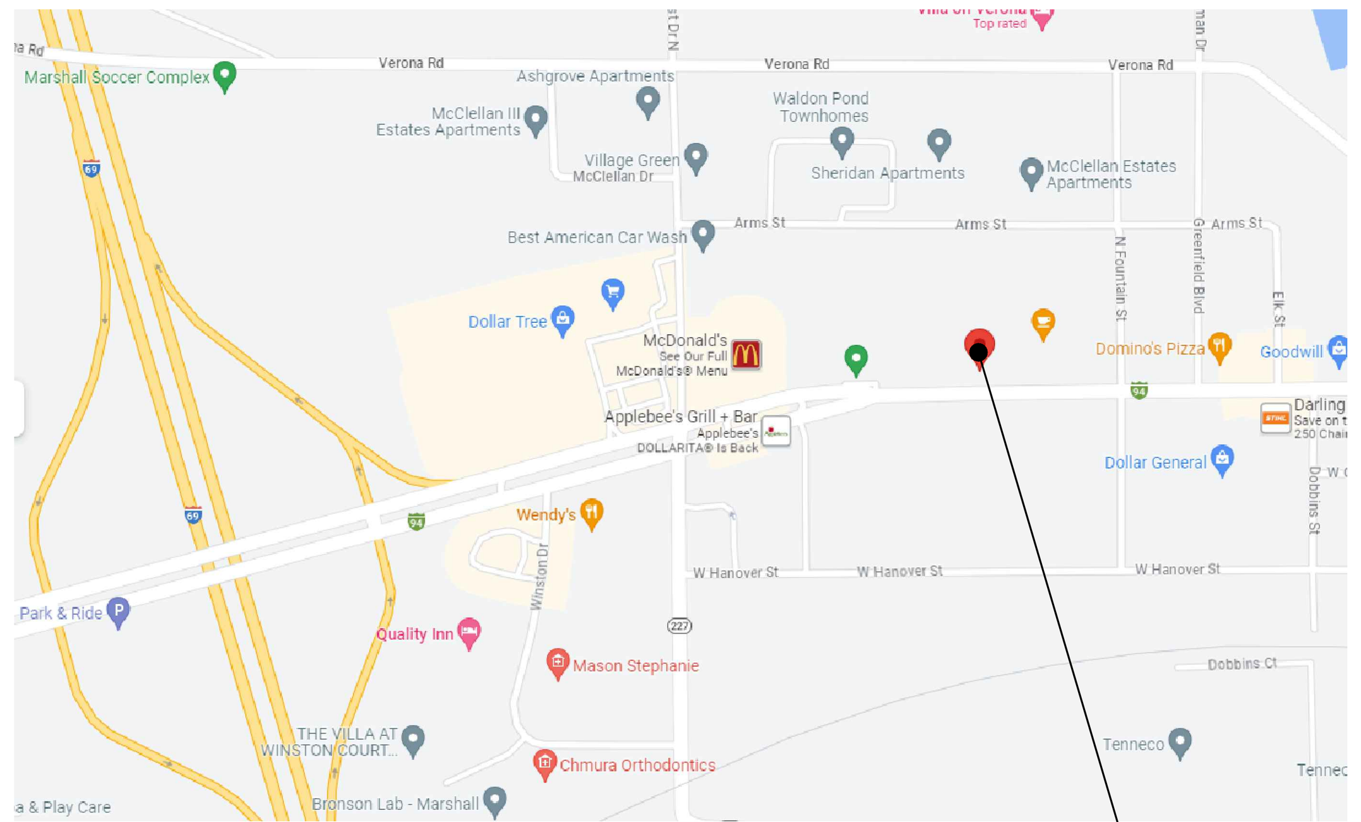
A202
EXTERIOR ELEVATIONS

SCHEDULE "A" LEGAL DESCRIPTION
FROM: SUN TITLE AGENCY OF MICHIGAN, LLC
COMMITMENT NO.: 224670 (COMMITMENT DATE: AUGUST 24, 2023)

LAND SITUATED IN THE CITY OF MARSHALL, CALHOUN COUNTY, MICHIGAN:

THE EAST 115 FEET OF THE SOUTH 250 FEET OF LOT 12 OF FARMERS LOAN AND TRUST COMPANY'S SUBDIVISION OF THE NORTHWEST 1/4 OF SECTION 26, TOWN 2 SOUTH, RANGE 6 WEST, ACCORDING TO THE PLAT THEREOF RECORDED IN LIBER 30 OF DEEDS, ON PAGE 454.

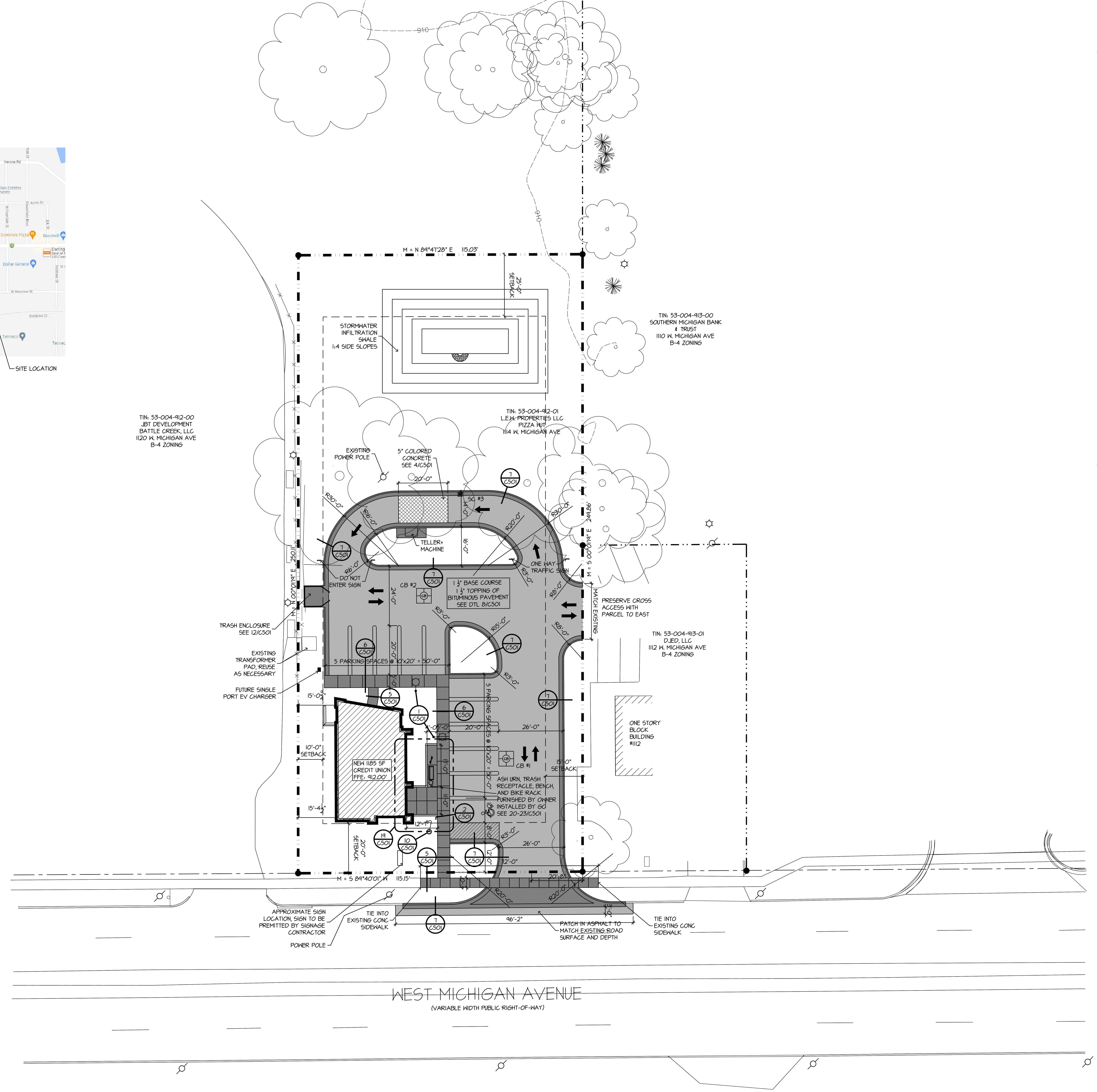


SITE LOCATION

LOCATION MAP
NOT TO SCALE

CONCRETE/BITUMINOUS SURFACE KEY

- BITUMINOUS SURFACE (8/C501)
- CONCRETE SURFACE (5/C501)
- COLORED CONCRETE SURFACE-"COAL DARK" BY PRISM CORP. SYNERGY INTEGRAL COLORS; (4/C501); REFER TO ARCHITECTURAL PLANS
- PAVER EDGING (9/C501)



SITE DEVELOPMENT PLAN
SCALE: 1" = 20'

SITE INFORMATION

1. PARCEL ADDRESS: 1114 W. MICHIGAN AVENUE, MARSHALL, MI 49068, PIN: 53-004-912-01
2. OWNER: CONSUMERS CREDIT UNION, 7200 ELM VALLEY DRIVE, KALAMAZOO, MI 49009
3. ARCHITECT: BOSCH ARCHITECTURE, 8065 VINEYARD PKWY, KALAMAZOO, MI. 49009, (269) 321-5151
4. SURVEY: DRIESENGA & ASSOCIATES
5. ZONING: B-4 ZONING
4. PROPOSED LAND USE: CREDIT UNION
5. TOTAL SITE AREA: 28,769.92 SF
6. LAND USE PERCENT (%): OPEN: 60.2%, BUILD: 4.1%, PAVEMENT: 35.7%
7. BUILDING TYPE(S): 1185 SF CREDIT UNION
8. MAXIMUM BUILDING HEIGHT: 35' MAXIMUM, 20' ACTUAL
9. REQUIRED PARKING:
   BANK: (1) STALL REQUIRED PER 250 SF UFA PLUS 4) VEHICLE STACKING SPACES AT ATM AND EACH DRIVE UP WINDOW.

   BANK PORTION: 1185 SF / 200 = 5 SPACES REQUIRED.
   5 SPACES REQUIRED
   5 x 1.20 = 6 SPACES MAXIMUM ALLOWED
   11 SPACES PROVIDED
   REQUEST FOR ADDITIONAL SPACES BASED ON USE OF BUILDING, 3 EMPLOYEES + 6-7 MEMBERS = 11 SPACES REQUESTED
10. LANDSCAPING: SEE L001
11. LEGAL DESCRIPTION: SEE THIS SHEET
12. OCC. CLASSIFICATION: B - BUSINESS
13. CONSTRUCTION TYPE: 5B
15. 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 1-800-482-7171 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 COMPACTION SHALL BE PERFORMED TO A MINIMUM DENSITY OF 95 MAXIMUM DRY DENSITY AS DETERMINED BY ASTM DESIGNATION D-1557 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, 5% 10'-0" OUT FROM BLDG.
h. ALL TOPOGRAPHICAL INFORMATION WAS FURNISHED BY EXXEL 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 MARSHALL

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 L001 FOR PLANTING DETAILS.

APPROPRIATE PERMITS TO BE OBTAINED FROM THE CITY OF MARSHALL.

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.

STATE OF MICHIGAN
NICHOLAS J. LOEKS
ENGINEER NO. 6201052606
LICENSED PROFESSIONAL ENGINEER

Consumers Marshall
1114 W. Michigan Avenue, Marshall, MI 49068

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C001
SITE DEVELOPMENT PLAN

STORM SEWER STRUCTURES

CB #1
RIM = 910.75'
NW INV 12" SOLID PIPE = 905.90'
W INV 6" ROOF LINE = 907.00'

CB #2
RIM = 910.50'
SE INV 12" SOLID PIPE = 905.53'
N INV 12" SOLID PIPE = 905.53'

SC #3
MANUFACTURED TREATMENT UNIT
RIM = 910.00'
S INV 12" SOLID PIPE = 905.30'
N INV 12" SOLID PIPE = 905.30'

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	28,710 SF
BUILDINGS	1,185 SF
IMPERVIOUS PAVING	10,216 SF
LAWN/LANDSCAPE AREA	17,309 SF

2 YR - 24 HR STORM (2.53")
C VALUES
ROOF - 0.90
IMPERVIOUS AREAS - 0.90
LAWN - 0.10

WEIGHTED C
0.9(1,185/28,710) + 0.90(10,216/28,710) + 0.10(17,309/28,710) = 0.419

CALCULATED RUNOFF
0.419 * (2.53)/12 * 28,710 = 2,542 CF

STORAGE PROVIDED
POND (TO 908.00' ELEVATION) = 3,218 CF
12" STORM PIPES = 0.785 CF/FT x 178 FT = 140 CF
(3) 4' DIA BASINS x 6' TALL = 50 CF/ BASIN = 150 CF

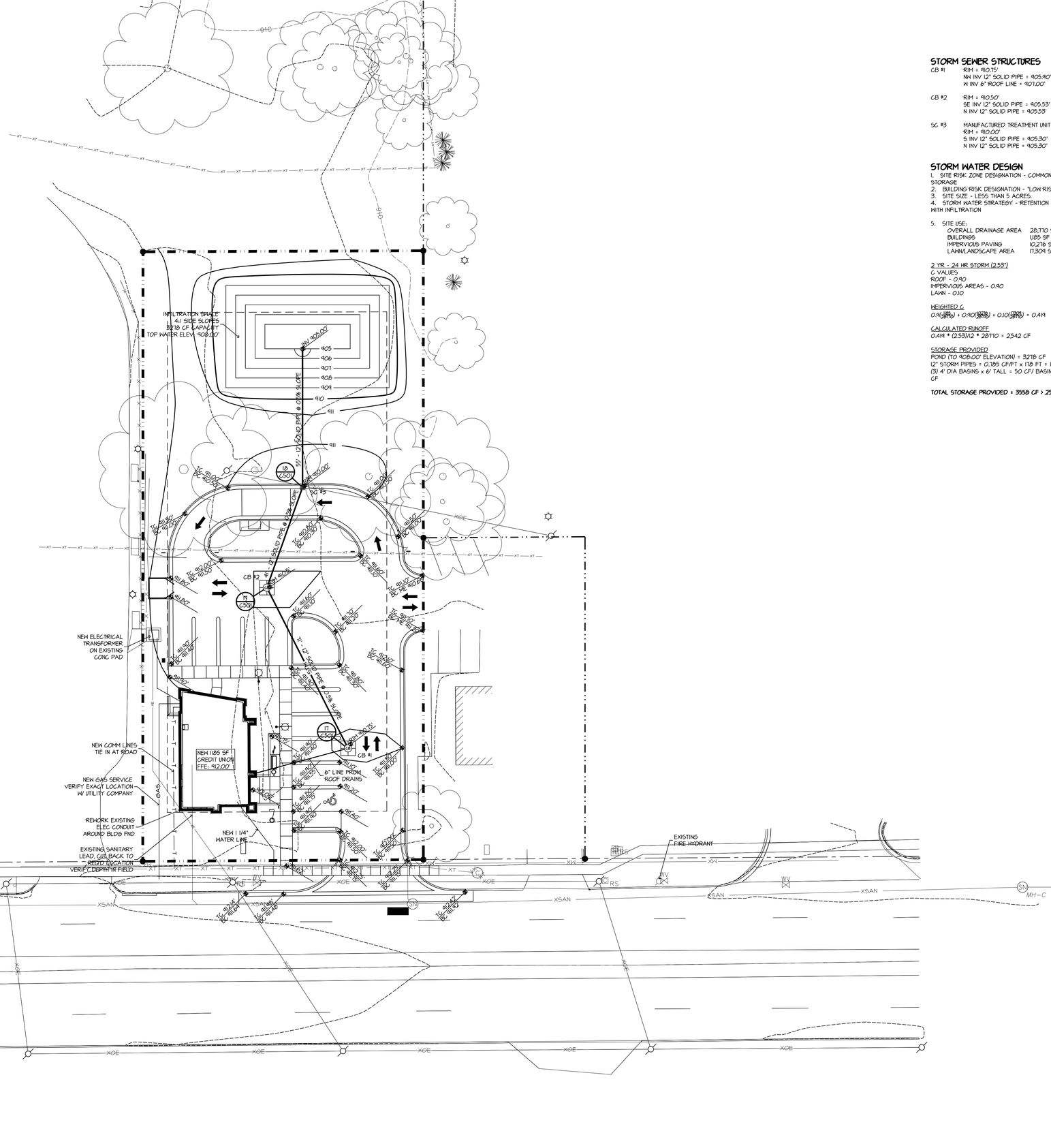
TOTAL STORAGE PROVIDED = 3558 CF > 2542 CF

TYPICAL MATERIALS, SYMBOLS AND INDICATIONS

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

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

72 HOURS
BEFORE YOU DIG
CALL MISS DIG
1-800-482-7171



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PROFESSIONAL ENGINEER

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C002
SITE GRADING AND UTILITY PLAN

Schedule

Symbol	Label	Image	QTY	Manufacturer	Catalog	Description	Number Lamps	Lamp Output	LLF	Input Power	Polar Plot
	A		1	Lithonia Lighting	DSX1 LED P2 40K 70CRI TFTM	D-Series Size 1 Area Luminaire P2 Performance Package 4000K CCT 70 CRI Forward Throw	1	9977	1	67.79	 Max: 8989cd
	B		1	Lithonia Lighting	DSX1 LED P2 40K 70CRI T2M	D-Series Size 1 Area Luminaire P2 Performance Package 4000K CCT 70 CRI Type 2 Medium	1	9651	1	67.79	 Max: 8788cd

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NICHOLAS J. LOEKS
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NOT FOR SITE PLAN REVIEW

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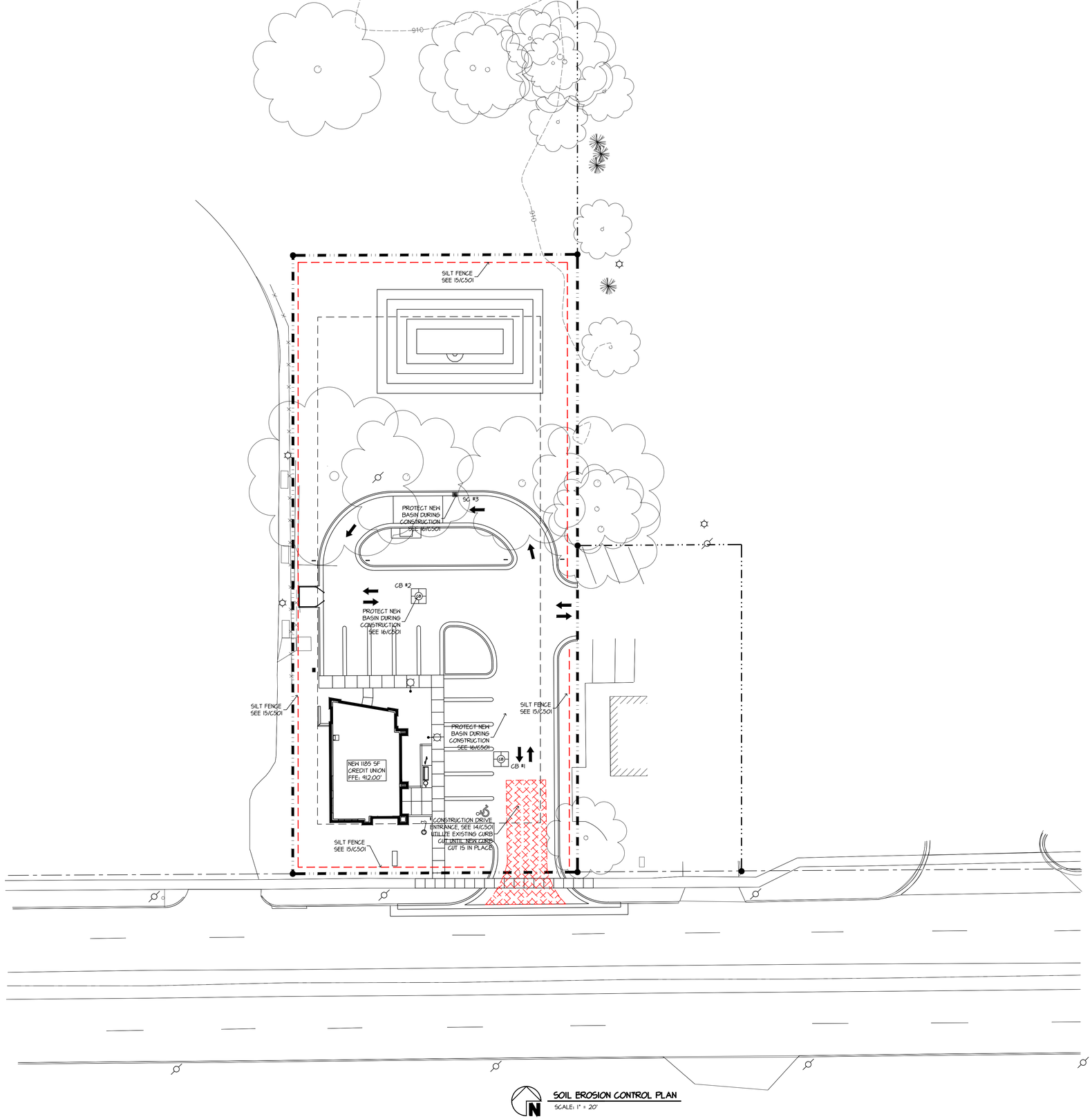
C003

SITE PHOTOMETRIC PLAN



SOIL EROSION CONTROL PLAN
SCALE: 1" = 20'

SOIL EROSION CONTROL NOTES

1. ALL SITE INFRASTRUCTURE WILL BE CONSTRUCTED AT ONCE. PHASING OF THE 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 WOVEN 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.

STATE OF MICHIGAN
NICHOLAS J. LOEKS
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SOIL EROSION CONTROL PLAN REVIEW

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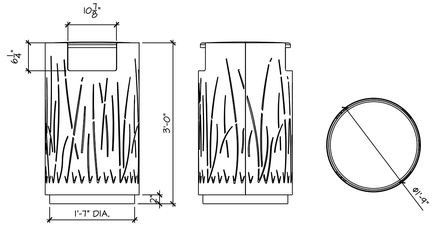
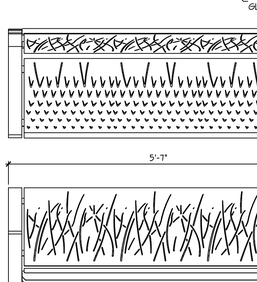
C004
SOIL EROSION CONTROL PLAN



20 C501 **LANDSCAPE FORMS LAKESIDE LITTER RECEPTACLE**
SCALE: 3/4" = 1'-0"

PROVIDE WITH GRASS SIDE PANEL, TITANIUM COLOR

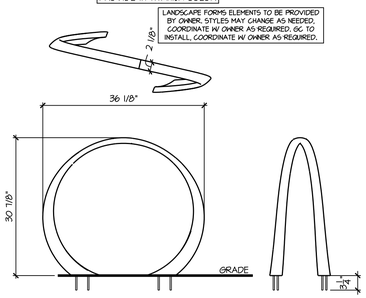
LANDSCAPE FORMS ELEMENTS TO BE PROVIDED BY OWNER. STYLES MAY CHANGE AS NEEDED. COORDINATE W/ OWNER AS REQUIRED. GC TO INSTALL, COORDINATE W/ OWNER AS REQUIRED.



21 C501 **LANDSCAPE FORMS GRENADIER ASH URN**
SCALE: 3/4" = 1'-0"

PROVIDE IN TITANIUM COLOR

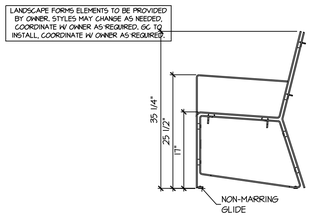
LANDSCAPE FORMS ELEMENTS TO BE PROVIDED BY OWNER. STYLES MAY CHANGE AS NEEDED. COORDINATE W/ OWNER AS REQUIRED. GC TO INSTALL, COORDINATE W/ OWNER AS REQUIRED.



22 C501 **LANDSCAPE FORMS LOOP BIKE RACK**
SCALE: 3/4" = 1'-0"

PROVIDE IN OCEAN COLOR

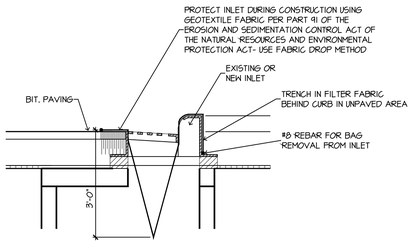
LANDSCAPE FORMS ELEMENTS TO BE PROVIDED BY OWNER. STYLES MAY CHANGE AS NEEDED. COORDINATE W/ OWNER AS REQUIRED. GC TO INSTALL, COORDINATE W/ OWNER AS REQUIRED.



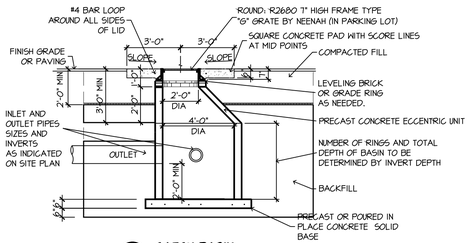
23 C501 **LANDSCAPE FORMS LAKESIDE BENCH**
SCALE: 3/4" = 1'-0"

PROVIDE WITH GRASS PATTERN, TITANIUM COLOR

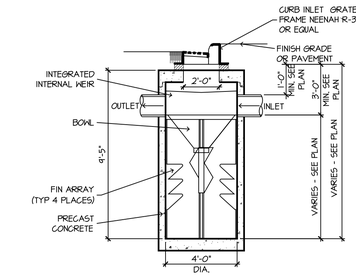
LANDSCAPE FORMS ELEMENTS TO BE PROVIDED BY OWNER. STYLES MAY CHANGE AS NEEDED. COORDINATE W/ OWNER AS REQUIRED. GC TO INSTALL, COORDINATE W/ OWNER AS REQUIRED.



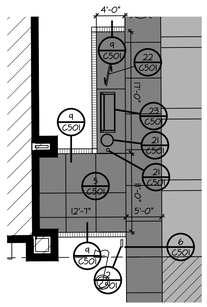
16 C501 **TYPICAL INLET PROTECTION - FABRIC DROP**
SCALE: 1/2" = 1'-0"



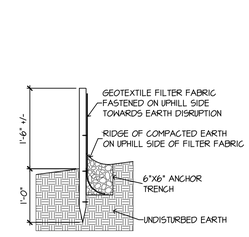
17 C501 **CATCH BASIN**
SCALE: 1/4" = 1'-0"



18 C501 **ADS BARRACUDA S4 STORMCEPTOR**
SCALE: 1/4" = 1'-0"



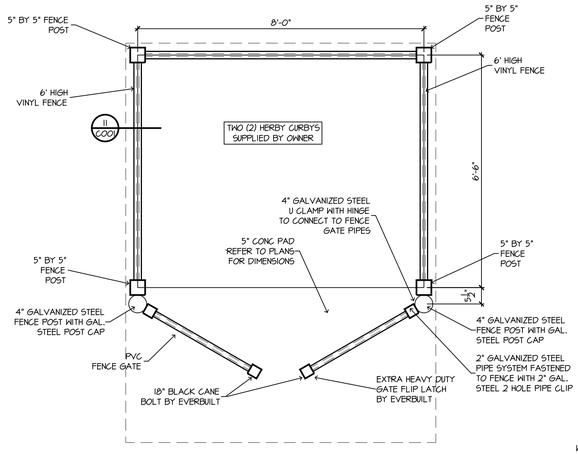
19 C501 **ENTRY ENLARGEMENT**
SCALE: 1" = 10'



NEW WHITE POLYVINYL PRIVACY FENCE SYSTEM BY SUPERIOR. ACCEPTABLE STYLES: NEWBURY, CAMBRIDGE, NANTUCKET, MANOR. PROVIDE SHOP DRAWINGS

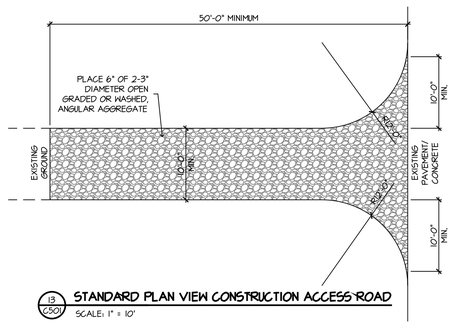
15 C501 **SILT FENCE**
SCALE: 3/4" = 1'-0"

11 C501 **VINYL FENCE DETAIL**
SCALE: 1/2" = 1'-0"

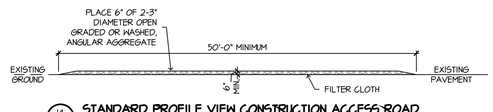


12 C501 **DUMPSTER ENCLOSURE**
SCALE: 1/2" = 1'-0"

NEW WHITE POLYVINYL PRIVACY FENCE SYSTEM BY SUPERIOR. ACCEPTABLE STYLES: NEWBURY, CAMBRIDGE, NANTUCKET, MANOR. PROVIDE SHOP DRAWINGS



13 C501 **STANDARD PLAN VIEW CONSTRUCTION ACCESS ROAD**
SCALE: 1" = 10'

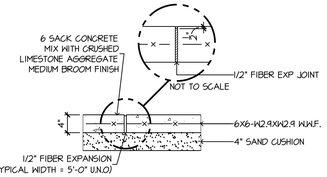


14 C501 **STANDARD PROFILE VIEW CONSTRUCTION ACCESS ROAD**
SCALE: 1" = 10'

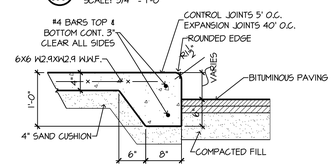
CONSTRUCTION ACCESS ROAD NOTES

SIDE SLOPES TO BE NO STEEPER THAN 2H:1V

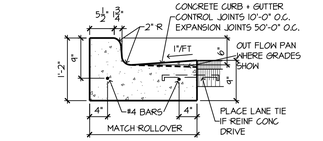
UNDERLAY ACCESS ROAD WITH NONWOVEN GEOTEXTILE FABRIC



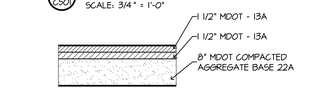
2 C501 **CONCRETE WALK DETAIL**
SCALE: 3/4" = 1'-0"



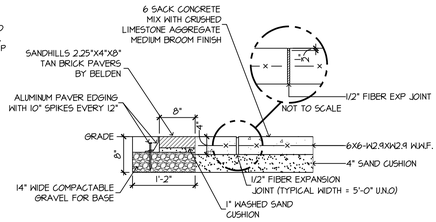
6 C501 **THICKENED EDGE CONCRETE WALK**
SCALE: 3/4" = 1'-0"



1 C501 **MDOT TYPE F CONC. CURB/GUTTER**
SCALE: 3/4" = 1'-0"



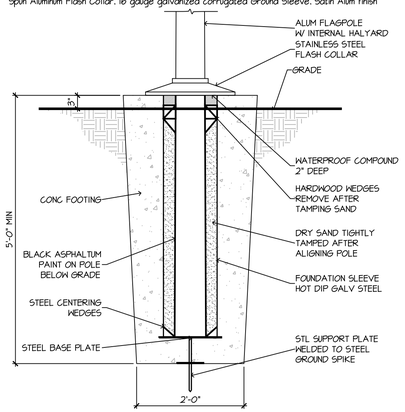
8 C501 **SITE BITUMINOUS ASPHALT PAVING**
SCALE: 3/4" = 1'-0"



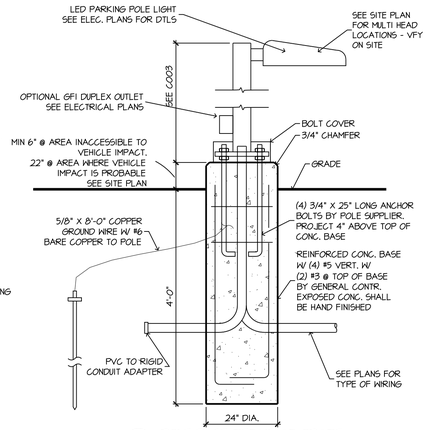
9 C501 **PAVER EDGING DETAIL**
SCALE: 3/4" = 1'-0"

The flag pole is specified as follows: Mfg: the flag pole company 1-800-805-9128 http://theflagpoleco.com

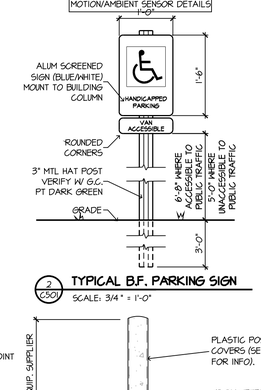
1. Overall Length: 27ft Exposed Height: 25ft Top Diameter: 3" Butt Diameter: 5"
2. Wall Thickness: .125 Flagpole Weight: 113 lbs Max Unflagged Wind Speed: 144 mph
3. Max Flagged Wind Speed: 110 mph Cast Aluminum Revolving Truck Assembly
4. 5/5 Bearing Concealed Inside a Cylindrical Hood. 5/5 Aircraft Cable Halyard.
5. 2 Chrome Plated Swivel Bronze Snaphooks. Internal Winch With Removable Hand Crank. Machine Spun Aluminum Flash Collar. 16 gauge galvanized corrugated Ground Sleeve. Satin Alum Finish



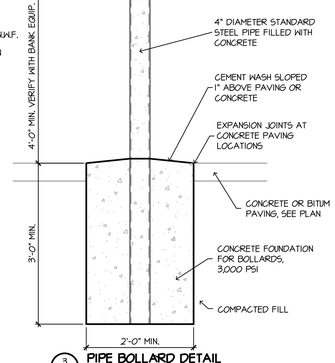
10 C501 **FLAG POLE BASE DETAIL**
SCALE: 3/4" = 1'-0"



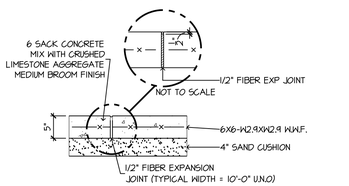
1 C501 **POLE BASE DETAIL AT GRADE**
SCALE: 3/4" = 1'-0"



2 C501 **TYPICAL B.F. PARKING SIGN**
SCALE: 3/4" = 1'-0"



3 C501 **PIPE BOLLARD DETAIL**
SCALE: 3/4" = 1'-0"



4 C501 **5" CONCRETE APRON DETAIL**
SCALE: 3/4" = 1'-0"

CONCRETE SLAB FOR CANOPIES TO BE PRISM 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.

NICHOLAS J. LOEKS
ENGINEER NO: 6201052606
STATE OF MICHIGAN
REGISTERED PROFESSIONAL ENGINEER

Consumers Marshall
1114 W. Michigan Avenue, Marshall, MI 49068

addenda SITE PLAN REVIEW
ISSUED

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bosch ARCHITECTURE ENGINEERING & INTERIOR DESIGN
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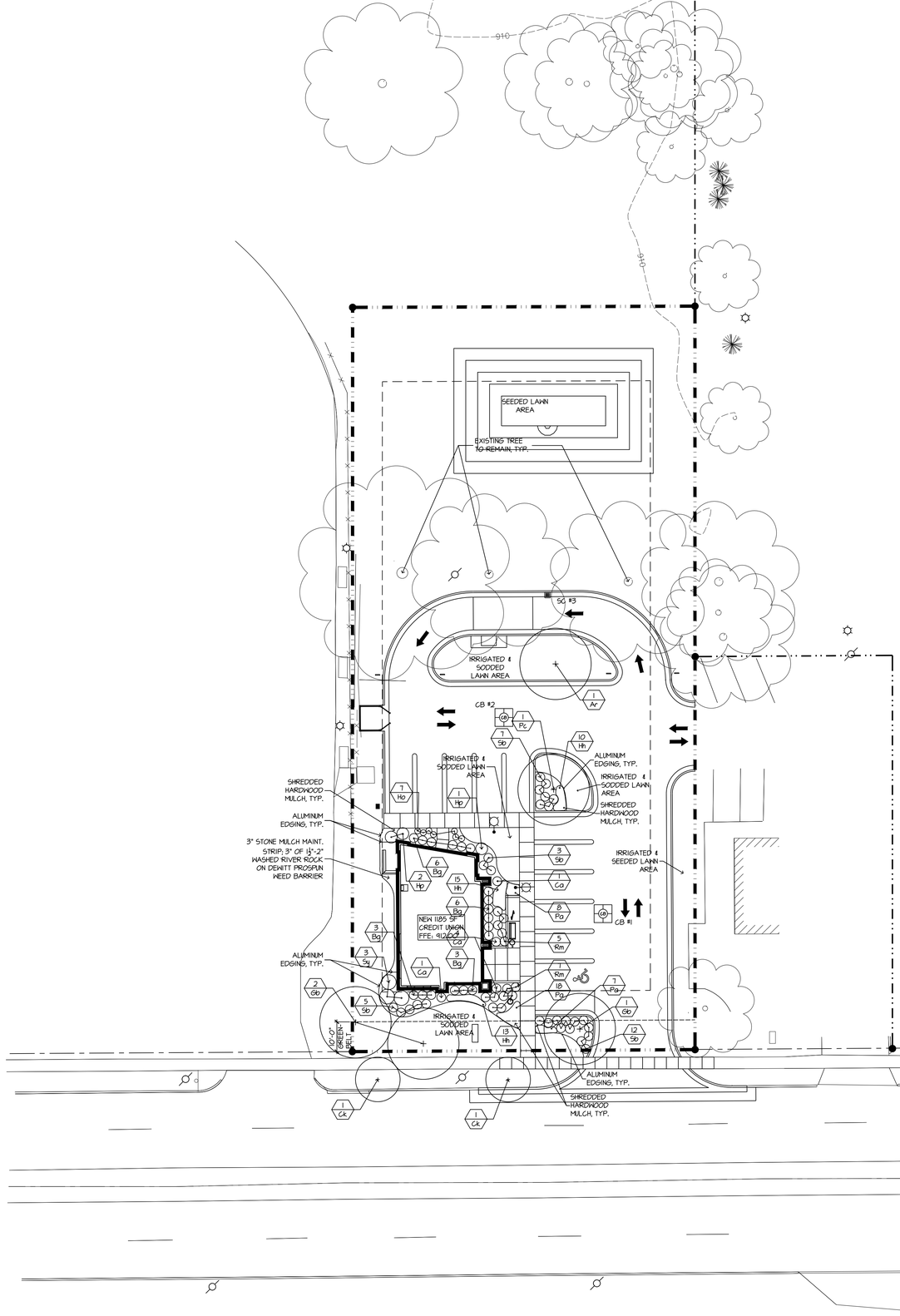
PN: 23074
File Name: 23074Sht.dwg

C501
SITE DETAILS



LANDSCAPING PLAN
SCALE: 1" = 20'

PLANT LIST

KEY	BOTANIC NAME	COMMON NAME	SIZE	QTY
CANOPY TREES				
Ar	*Acer rubrum 'Franksred'*	Red Sunset Maple	2 1/2" cal. min.	1
Gb	*Ginkgo biloba 'Princeton Sentry'*	Princeton Sentry Ginkgo	2 1/2" cal. min.	3
Pc	*Pyrus calleryana 'Redspire'*	Redspire Pear	2 1/2" cal. min.	1
ORNAMENTAL TREES:				
Ck	*Cornus kousa*	Kousa Dogwood	1½" cal/ 6' ht. min.	2
EVERGREEN SHRUBS:				
Bg	*Buxus 'Green Velvet'*	Green Velvet Boxwood	3 gallon	18
DECIDUOUS SHRUBS:				
Hp	*Hydrangea paniculata 'Little Quickfire'*	Little Quickfire Hydrangea	36" ht.	3
Rm	*Rosa 'Novarampop'*	Popcorn Drift Rose	3 gallon	12
Sb	*Spiraea bumalda 'Goldflame'*	Goldflame Spirea	30" ht. min.	27
Sy	*Syringa x 'Bloomerang Dark Purple'*	Bloomerang Dark Purple Lilac	36" ht.	3
PERENNIALS/ORNAMENTAL GRASSES				
Ca	*Calamagrostis x acutiflora 'Karl Foerster'*	Karl Foerster Feather Reed Grass	1 gallon	6
Hh	*Hemerocallis 'Happy Returns'*	Happy Returns Daylily	1 gallon	38
Ho	*Hosta 'Patriot'*	Patriot Hosta	1 gallon	7
Pa	*Pennisetum alopecuroides 'Little Bunny'*	Little Bunny Fountain Grass	1 gallon	33

**QUANTITIES PROVIDED FOR INFORMATIONAL PURPOSES ONLY; CONTRACTOR RESPONSIBLE FOR FURNISHING PLANT MATERIAL AS DESCRIBED ON PLAN

LANDSCAPING REQUIREMENTS

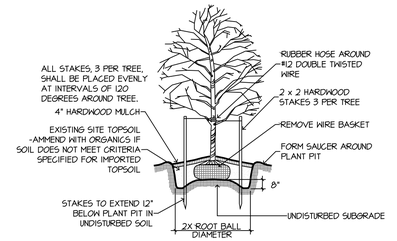
1. STREET TREES: (2) TREES REQUIRED FOR EACH LOT GREATER THAN 80 LF OF FRONTAGE
   LOT WIDTH 115.15 LF = (2) TREES REQUIRED
   (2) TREES PROVIDED (ORNAMENTAL TREES UTILIZED DUE TO OVERHEAD POWER LINES)

2. GREENBELT: 10' MIN. WIDTH REQUIRED ON ALL LAND ABUTTING PUBLIC R.O.W.; INCLUDE (1) TREE AND (4) SHRUBS PER 40 LF OF FRONTAGE.
   115.5 LF / 40 LF= 2.88
   (3) TREES REQUIRED/PROVIDED
   (12) SHRUBS REQUIRED/ PROVIDED (ALSO FULFILL PARKING LOT SCREENING REQUIREMENT)

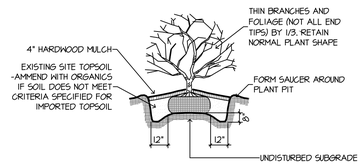
3. INTERIOR LANDSCAPING: MINIMUM OF 5% OF LOT AREA EXCLUDING OTHER REQUIRED ELEMENTS; (1) TREE PER EACH 400 SF REQUIRED AND (6) SHRUBS PER EACH 250 SF REQUIRED
   28,769.2 SF (TOTAL AREA) - 1,151.5 SF (10' GREENBELT X 115.15LF) = 27,618.42 SF
   27,618.42 SF * 5% = 1380.92 SF OF LANDSCAPED AREA REQUIRED/ 10,082 SF PROVIDED
   1380.92 SF / 400 = (4) TREES REQUIRED / (4) PROVIDED (3 EXISTING TREES PLUS ONE NEW EXCLUSIVE OF TREES PROVIDED TO SATISFY GREENBELT AND STREET TREE PLANTINGS)
   1380.92 SF / 250 = (6) SHRUBS REQUIRED / (51) PROVIDED

4. PARKING LOT PERIMETER: SCREEN FROM PUBLIC R.O.W.- SCREENING PROVIDED ON SOUTH SIDE OF PARKING LOT

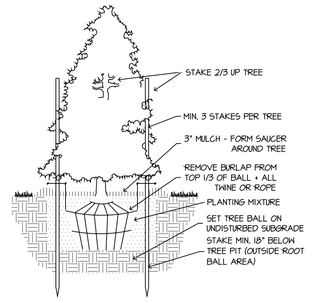
5. PARKING LOT INTERIOR: PROVIDE ISLANDS AT END OF ROWS OF PARKING AT A RATE OF 20 SF PER PARKING SPACE WITH A MINIMUM OF 180 SF PER ISLAND. (1) DECIDUOUS TREE REQUIRED PER EACH 10 SPACES PLUS 25% OF ISLAND IS TO BE COVERED WITH LAWN OR PLANTINGS MAX. 30" HT.
   11 TOTAL PARKING SPACES * 20 SF = 220 SF REQUIRED / 575 SF PROVIDED
   11 TOTAL PARKING SPACES PROVIDED/10= (1) TREE REQUIRED / PROVIDED



DECIDUOUS TREE PLANTING DETAIL
NOT TO SCALE



SHRUB PLANTING DETAIL
NOT TO SCALE



CONIFER TREE PLANTING DETAIL
NOT TO SCALE

STATE OF MICHIGAN
NICHOLAS J. LOEKS
ENGINEER NO: 6201052606
LICENSED PROFESSIONAL ENGINEER

Consumers Marshall
1114 W. Michigan Avenue, Marshall, MI 49068

SUBMITTED FOR PLAN REVIEW

ISSUED

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Boscharch.com

L001
LANDSCAPING PLAN

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 Elect contractor. Irrigation to be installed from back of curb to back of curb around entire site including right of way areas.

ELECTROMECHANICAL CONTROLLERS

ESP Modular: ESP-4M, ESP-4Mi
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 59 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/1-31day 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 effect 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) retrieve a custom default program 3) bypass an 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 as "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 semiautomatic 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 @lock-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/Part 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" (FNPT) 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-Ramp1 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 "flow-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 hosing protective, non-clogging filter screens or pressure compensating screens (PCS) under the nozzles. The 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" (15/21) 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 nozzling. 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 house a fully-encapsulated, one-piece solenoid. The solenoid shall have a captured plunger with a removable retainer for easy servicing, and a leverage handle for easy turning. This 24 VAC 50/60 Hz solenoid shall open with 19.6 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 dripline 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 dripline zones with flows from 0.2 to 5.0 GPM (0,8 to 18,9 lpm), including low flow valve (LFV) and pressure regulating filter (PRF).
   a. Available model numbers:
      1) XCZ-075-PRF [¾" (19 mm) Low Flow valve and ¾" (19 mm) PR filter]
      2) XCZ-LF-100-PRF [1" (25 mm) Low Flow valve and ¾" (19 mm) PR filter]
      3) XACZ-075-PRF [¾" (19 mm) Low Flow Anti-siphon valve and ¾" (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 90 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.

   (or)

3. Rain Bird Medium Flow Control Zone Kit for dripline 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 90 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.

   (or)

4. Rain Bird Medium Flow Commercial Control Zone Kit for dripline 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 90 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 Dripline Components

1. General Information
   a. Provide flexible dual-layered pressure-compensating inline XF Series Dripline manufactured by Rain Bird, with emitter spacing and dripline 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 Dripline with pressure-compensating inline emitters.
a. Available Rain Bird XFD On-Surface Dripline model numbers for POTABLE water systems; brown colored dripline tubing with emitter flow rates and spacing as shown:
   1) Rain Bird XFD-06-12: 0.6 GPH (2,3 lph) emitters spaced 12" (30,5 cm) on-center
   2) Rain Bird XFD-06-18: 0.6 GPH (2,3 lph) emitters spaced 18" (45,7 cm) on-center
   3) Rain Bird XFD-06-24: 0.6 GPH (2,3 lph) emitters spaced 24" (61 cm) on-center
   4) Rain Bird XFD-09-12: 0.9 GPH (3,4 lph) emitters spaced 12" (30,5 cm) on-center
   5) Rain Bird XFD-09-18: 0.9 GPH (3,4 lph) emitters spaced 18" (45,7 cm) on-center
   6) Rain Bird XFD-09-24: 0.9 GPH (3,4 lph) emitters spaced 24" (61 cm) on-center

b. Available Rain Bird XFDP On-Surface Dripline model numbers for NON-POTABLE water systems; purple colored dripline tubing with emitter flow rates and spacing as shown:
   1) Rain Bird XFDP-06-12: 0.6 GPH (2,3 lph) emitters spaced 12" (30,5 cm) on-center
   2) Rain Bird XFDP-06-18: 0.6 GPH (2,3 lph) emitters spaced 18" (45,7 cm) on-center
   3) Rain Bird XFDP-06-24: 0.6 GPH (2,3 lph) emitters spaced 24" (61 cm) on-center
   4) Rain Bird XFDP-09-12: 0.9 GPH (3,4 lph) emitters spaced 12" (30,5 cm) on-center
   5) Rain Bird XFDP-09-18: 0.9 GPH (3,4 lph) emitters spaced 18" (45,7 cm) on-center
   6) Rain Bird XFDP-09-24: 0.9 GPH (3,4 lph) emitters spaced 24" (61 cm) on-center

c. Dripline 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 0.049 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 0.049 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 dripline 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 contract price.

3.02 DRIPLINE LAYOUT OF WORK

A. Stake out dripline irrigation system. Items staked include manifold/header pipe and tubing, sleeves, control zone assemblies, flush valves, air relief valves, and check valves.
B. Dripline Irrigation System Layout Review: Dripline 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 DRIPLINE 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 dripline components (distance from top of pipe to finish grade):
   1. Buried PVC manifold and supply header pipe to dripline grid layouts: 12" (305 cm) to top of pipe.
   2. Buried dripline lateral pipe downstream PVC manifold and supply header pipe: 4" (10 cm) to top of pipe
3. On-grade dripline 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 2" (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.
b. Cure for thirty (30) minutes before handling and twenty-four (24) hours before pressurizing or installing with vibratory plow.
c. 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. Dripline Tubing and Fittings:
   1. Use only Rain Bird XF-Series Insert Fittings or Rain Bird Easy Fit Compression Fittings for Rain Bird XF-Series dripline tubing connections or transitions as recommended by the Manufacturer's representative for the specific site and system conditions.
   2. Dripline Insert Fittings:
      a. Install dripline tubing and fittings in manner recommended by manufacturer and in accordance with accepted industry practices.
   3. Dripline Compression Fittings:
      a. Install dripline tubing and fittings in manner recommended by manufacturer and in accordance with accepted industry practices.

3.05 INSTALLATION OF DRIPLINE IRRIGATION COMPONENTS

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.

B. Lateral Piping and Dripline Tubing:
   1. Install lateral piping and dripline 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 dripline tubing immediately upon installation.
C. Air Relief Valve Kit Assembly: Install at all high points in dripline tubing grid as shown and directed on drawings and installation details.
D. Flush Point Assembly: Install in flush header or at ends of each dripline 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 dripline zone boundary, each air relief valve assembly, each flush point assembly, and other dripline 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".

D. Provide "Record Drawings" to Owner's Representative. Completion of Record Drawings is required prior to final construction review at completion of irrigation system installation.

3.07 WINTERIZATION AND SPRING START-UP

A. Winterize irrigation system in fall 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.

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 after landscape maintenance operation.

3.09 CLEANUP

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

Valve Box Specifications

VB-6RND SERIES 6" Round Valve Boxes
Valve boxes shall be used as durable, rigid enclosures for valves or other irrigation system components requiring subsurface protection for installation or maintenance. The valve box shall be made of HDPE resin that is resistant to UV light, weather, moisture, and chemical action of soils.

The body shall have two openings molded into the sides.

The valve box shall have corrugated sides.

Lids shall have beveled edges to prevent or minimize potential damage from lawn equipment.

The valve box shall be manufactured by Rain Bird Corporation, Glendora, California.

VB-10RND 10" Round Valve Boxes
Valve boxes shall be used as durable, rigid enclosures for valves or other irrigation system components requiring subsurface protection for installation or maintenance. The valve box shall be made of structural foam HDPE resin that is resistant to UV light, weather, moisture, and chemical action of soils.

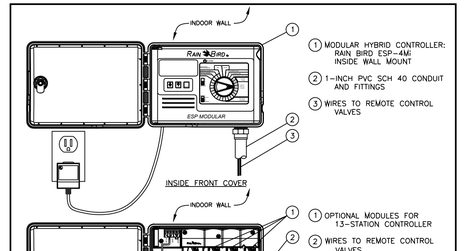
The body shall have knock-outs molded into the sides that can easily be removed. The knock-outs shall remain an integral part of the body unless to run pipes or wires through the valve box.

The valve box shall have corrugated sides. The valve box shall have a stepped feature on the bottom that securely interlocks two boxes together when mated bottom - to- bottom for use in a deep installation.

There shall be no hole in the valve box lid unless the bolt-hole knock-out is removed in order to use the locking bolt. Lids shall have beveled edges to minimize potential damage from lawn equipment. Lids shall be clearly marked with the words "Irrigation Control Valve" molded onto the top. Lids shall have a marking area measuring at least 6" by 2" that is suitable for branding or other means of identification.

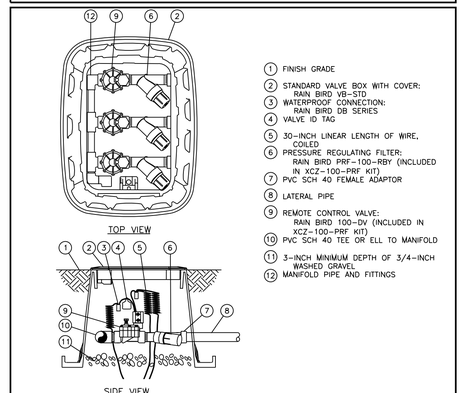
The locking bolt, washer, and clip shall be made of stainless steel.

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



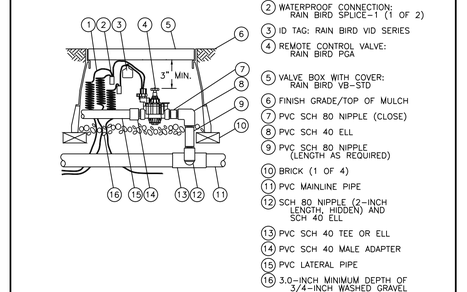
MODULAR HYBRID CONTROLLER ESP-MODULAR SERIES (OUTDOOR)

NOT TO SCALE



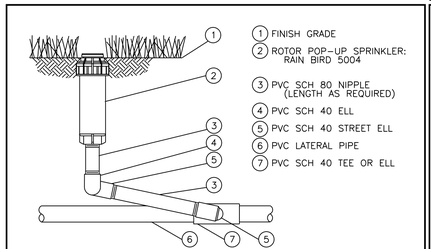
XCZ-100-PRF 1" CONTROL ZONE KIT IN SQUARE VALVE BOX

NOT TO SCALE



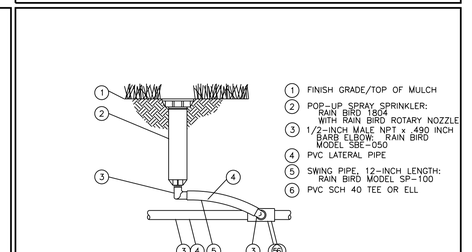
ELECTRIC REMOTE-CONTROL VALVE PGA SERIES

NOT TO SCALE



ROTOR POP-UP SPRINKLER - 5004

NOT TO SCALE



POP-UP SPRAY SPRINKLER 1804 WITH SWING PIPE

NOT TO SCALE

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STATE OF MICHIGAN
PROFESSIONAL ENGINEER

Consumers Marshall
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ISSUED

L002
IRRIGATION SPECIFICATIONS AND DETAILS

TOPOGRAPHIC / BOUNDARY SURVEY

STORM STRUCTURE DATA

CB#1 - 2'Ø CONCRETE/BLOCK
RIM 911.94
INV (N) 14" CONC=905.81
SUMP=904.74

MH#2 - 4'Ø CONCRETE/BLOCK
RIM 912.24
INV (N) 14" CONC=905.84
INV (S) 14" CONC=905.84
INV (E) 18" CONC=904.84
INV (W) 18" CONC=905.34
SUMP=904.84

MH#3 - 4'Ø CONCRETE/BLOCK
RIM 911.14
INV (N) 14" CONC=904.39
INV (S) 14" CONC=904.39
INV (W) 18" CONC=904.14
INV (E) 24" CONC=903.94

CB#4 - 2'Ø CONCRETE/BLOCK
RIM 910.74
INV (N) 14" CONC=904.44
SUMP=902.84

CB#5 - 2'Ø CONCRETE/BLOCK
RIM 910.80
INV (S) 14" CONC=905.20
SUMP=903.30

CB#6 - 2'Ø CONCRETE/BLOCK
RIM 911.68
INV (NW) 6" CONC=909.58
INV (S) 14" CONC=906.88
SUMP=905.68

CB#7
RIM 910.98
NO PIPES VISIBLE - FULL OF DEBRIS

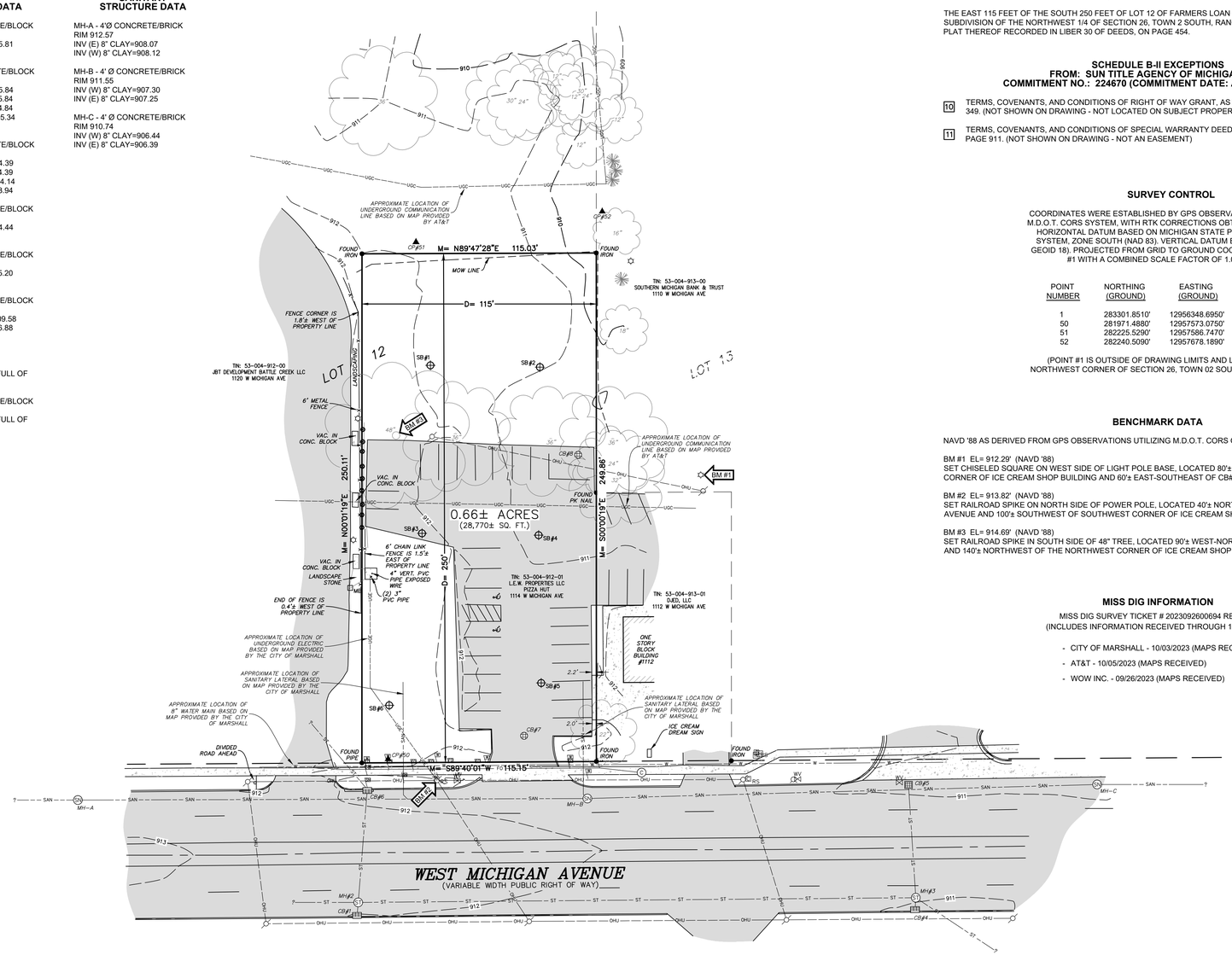
CB#8 - 3'Ø CONCRETE/BLOCK
RIM 910.09
NO PIPES VISIBLE - FULL OF DEBRIS

SANITARY STRUCTURE DATA

MH-A - 4'Ø CONCRETE/BRICK
RIM 912.57
INV (E) 8" CLAY=908.07
INV (W) 8" CLAY=908.12

MH-B - 4' Ø CONCRETE/BRICK
RIM 911.55
INV (W) 8" CLAY=907.30
INV (E) 8" CLAY=907.25

MH-C - 4' Ø CONCRETE/BRICK
RIM 910.74
INV (W) 8" CLAY=906.44
INV (E) 8" CLAY=906.39



SCHEDULE "A" LEGAL DESCRIPTION
FROM: SUN TITLE AGENCY OF MICHIGAN, LLC
COMMITMENT NO.: 224670 (COMMITMENT DATE: AUGUST 24, 2023)

LAND SITUATED IN THE CITY OF MARSHALL, CALHOUN COUNTY, MICHIGAN:

THE EAST 115 FEET OF THE SOUTH 250 FEET OF LOT 12 OF FARMERS LOAN AND TRUST COMPANY'S SUBDIVISION OF THE NORTHWEST 1/4 OF SECTION 26, TOWN 2 SOUTH, RANGE 6 WEST, ACCORDING TO THE PLAT THEREOF RECORDED IN LIBER 30 OF DEEDS, ON PAGE 454.

SCHEDULE B-II EXCEPTIONS
FROM: SUN TITLE AGENCY OF MICHIGAN, LLC
COMMITMENT NO.: 224670 (COMMITMENT DATE: AUGUST 24, 2023)

10 TERMS, COVENANTS, AND CONDITIONS OF RIGHT OF WAY GRANT, AS RECORDED IN LIBER 934 ON PAGE 349. (NOT SHOWN ON DRAWING - NOT LOCATED ON SUBJECT PROPERTY)

11 TERMS, COVENANTS, AND CONDITIONS OF SPECIAL WARRANTY DEED, AS RECORDED IN LIBER 2033 ON PAGE 911. (NOT SHOWN ON DRAWING - NOT AN EASEMENT)

SURVEY CONTROL

COORDINATES WERE ESTABLISHED BY GPS OBSERVATION, UTILIZING THE M.D.O.T. CORS SYSTEM, WITH RTK CORRECTIONS OBTAINED ON 09-13-2023. HORIZONTAL DATUM BASED ON MICHIGAN STATE PLANE COORDINATE SYSTEM, ZONE SOUTH (NAD 83). VERTICAL DATUM BASED ON (NAVD 88 GEOID 18). PROJECTED FROM GRID TO GROUND COORDINATES AT POINT #1 WITH A COMBINED SCALE FACTOR OF 1.0000752342.

POINT NUMBER	NORTHING (GROUND)	EASTING (GROUND)	ELEVATION (NAVD '88)
1	283301.8510'	12956348.6950'	912.36'
50	281971.4880'	12957573.0750'	912.34'
51	282225.5290'	12957586.7470'	911.98'
52	282240.5090'	12957678.1890'	909.50'

(POINT #1 IS OUTSIDE OF DRAWING LIMITS AND LOCATED AT THE NORTHWEST CORNER OF SECTION 26, TOWN 02 SOUTH, RANGE 06 WEST)

BENCHMARK DATA

NAVD '88 AS DERIVED FROM GPS OBSERVATIONS UTILIZING M.D.O.T. CORS GEOID 18

BM #1 EL= 912.29' (NAVD '88)
SET CHISELED SQUARE ON WEST SIDE OF LIGHT POLE BASE, LOCATED 80'± NORTHEAST OF NORTHWEST CORNER OF ICE CREAM SHOP BUILDING AND 60'± EAST-SOUTHEAST OF CB#8 IN PARKING LOT.

BM #2 EL= 913.82' (NAVD '88)
SET RAILROAD SPIKE ON NORTH SIDE OF POWER POLE, LOCATED 40'± NORTH OF CENTERLINE OF MICHIGAN AVENUE AND 100'± SOUTHWEST OF SOUTHWEST CORNER OF ICE CREAM SHOP BUILDING.

BM #3 EL= 914.69' (NAVD '88)
SET RAILROAD SPIKE IN SOUTH SIDE OF 48" TREE, LOCATED 90'± WEST-NORTHWEST OF CB#8 IN PARKING LOT AND 140'± NORTHWEST OF THE NORTHWEST CORNER OF ICE CREAM SHOP BUILDING.

MISS DIG INFORMATION

MISS DIG SURVEY TICKET # 2023092600694 REV: 000
(INCLUDES INFORMATION RECEIVED THROUGH 10-09-2023)

- CITY OF MARSHALL - 10/03/2023 (MAPS RECEIVED)
- AT&T - 10/05/2023 (MAPS RECEIVED)
- WOW INC. - 09/26/2023 (MAPS RECEIVED)

LOCATION MAP - NO SCALE

LEGEND

	EXISTING
BENCHMARK	BM #1
SET CAPPED REBAR #47948	○
FOUND IRON	●
CONTROL POINT	▲
PLATTED	P=
MEASURED	M=
STORM SEWER MANHOLE	ST
CATCH BASIN	
SANITARY SEWER MANHOLE	SN
FIRE HYDRANT	
VALVE (WATER & GAS)	
GAS METER	G
UTILITY RISERS	RS
UTILITY POLE	
LIGHT POLE	
GUY ANCHOR	
HAND HOLE (ELECTRIC)	H
ELECTRIC METER	E
SIGN	
SOIL BORING	SB
BOLLARD POST	
POST	
UNDERGROUND COMMUNICATIONS LINE MARKER	
UNDERGROUND ELECTRIC LINE MARKER	
UNDERGROUND GAS LINE MARKER	
GATE	
FENCE LINE	X
OVERHEAD UTILITIES	OHU
UNDERGROUND ELECTRIC	UGE
COMMUNICATIONS	UGC
TELEPHONE	TEL
FIBER OPTIC	FO
GAS LINE	GAS
EXISTING WATER LINE	W
EXISTING STORM SEWER	ST
EXISTING SANITARY SEWER	SAN
BITUMINOUS SURFACE	
CONCRETE SURFACE	
GRAVEL SURFACE	
CONIFEROUS TREE	
DECIDUOUS TREE	
ORNAMENTAL BUSH	

SURVEYOR'S NOTES

1. UTILITIES SHOWN ARE APPROXIMATE LOCATIONS DERIVED FROM ACTUAL FIELD MEASUREMENTS AND AVAILABLE RECORDS. THIS MAP IS NOT TO BE INTERPRETED AS SHOWING EXACT LOCATIONS OR SHOWING ALL UTILITIES IN THE AREA.
2. NOTE TO CONTRACTORS: THREE WORKING DAYS BEFORE YOU DIG - CALL MISS DIG AT 811.
3. CONTOUR INTERVAL = 1 FOOT.
4. BY GRAPHIC PLOTTING ONLY, THIS PROPERTY IS IN ZONE UNSHADED ZONE "X" OF THE FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NO. 26025C0238C, WHICH BEARS AN EFFECTIVE DATE OF APRIL 04, 2011. UNSHADED ZONE "X" AREAS DETERMINED TO BE AREAS OF MINIMAL FLOOD HAZARD.
5. THE FIELD WORK WAS COMPLETED ON SEPTEMBER 22, 2023.

811 Know what's below. Call before you dig.

Tax Parcel No.: 13-53-004-912-01

STATE OF MICHIGAN
Matthew George Reinking
License No. 4001054057
LICENSED PROFESSIONAL SURVEYOR

Matthew George Reinking P.S. No. 4001054057

THE DESCRIPTION WAS GIVEN TO US BY THE PERSON CERTIFIED TO, OR WAS PREPARED BY US FROM INFORMATION OR DOCUMENTS GIVEN TO US BY THE PERSON CERTIFIED TO, AND SHOULD BE COMPARED WITH THE ABSTRACT OF TITLE OR TITLE INSURANCE POLICY FOR ACCURACY, EASEMENTS OR EXCEPTIONS.

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Lansing, MI 517-889-6210
Ypsilanti, MI 734-368-9483

1114 WEST MICHIGAN AVENUE
1114 WEST MICHIGAN AVENUE, MARSHALL, MI 49068
SECTION 26, T02S, R06W, CITY OF MARSHALL, CALHOUN CO.
-FOR-
BOSCH ARCHITECTURE
8065 VINEYARD PARKWAY, KALAMAZOO, MI 49009

REVISIONS	
1	

Drawn By: WSB
Scale: 1"=30'
Date: 09-28-2020
Project # 2350738.5A
Sheet Title: TOPOGRAPHIC / BOUNDARY SURVEY
Sheet # V-101
1 of 1

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