BLOSSOM DENTAL

CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN

SITE PLAN FOR PLANNING COMMISSION APPROVAL

OWNER/APPLICANT

3680 PACKARD ROAD, LLC
1820 CHICORY RIDGE
ANN ARBOR, MICHIGAN 48103
CONTACT: ELIZABETH BARBER

ENGINEER/SURVEYOR/LANDSCAPE ARCH.

MIDWESTERN CONSULTING, LLC
3815 PLAZA DRIVE
ANN ARBOR, MICHIGAN 48108
CONTACT: CANDICE BRIERE
734-995-0200

ARCHITECT

FUNCHITECTURE
111 E COURT STREET, SUITE 3D
FLINT, MICHIGAN 48502
CONTACT: SHANNON WHITE
810-287-6668

PROJECT NARRATIVE

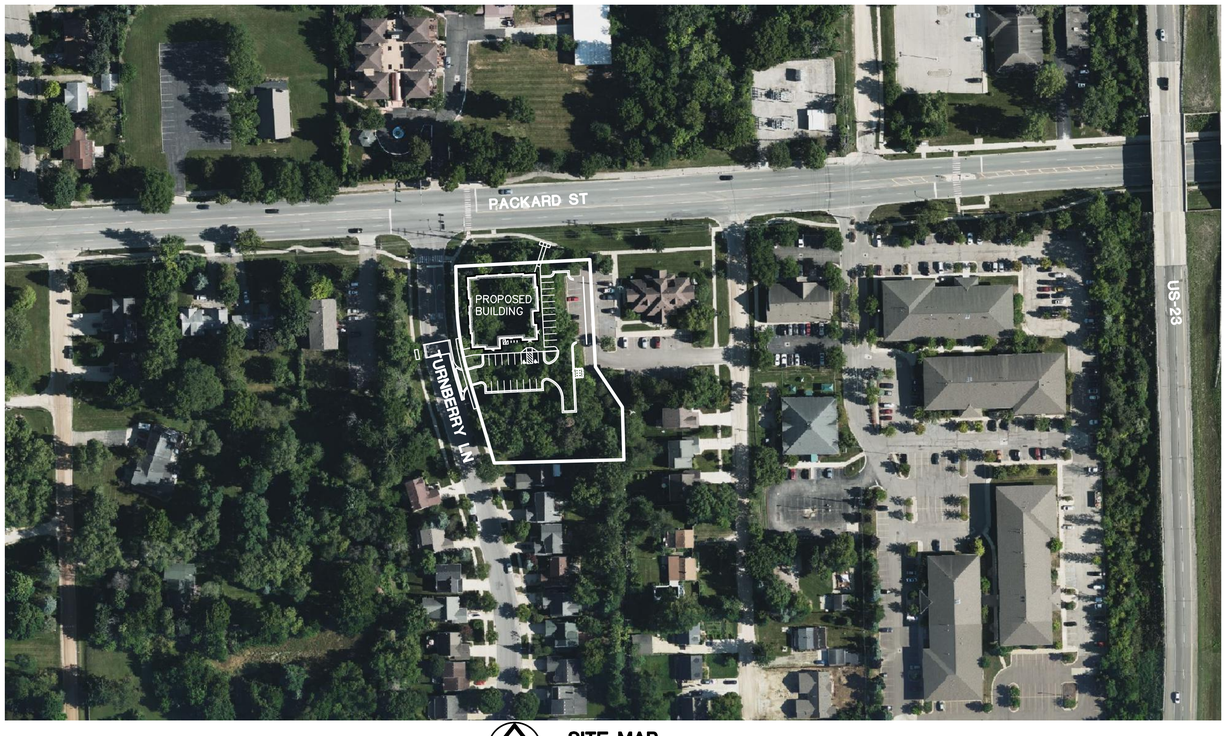
BLOSSOM DENTAL IS REQUESTING THE NECESSARY APPROVALS AND PERMITS TO ALLOW FOR A PROPOSED DEVELOPMENT AT 3680 PACKARD ROAD. THE SITE IS CURRENTLY VACANT. THE PROPOSED PROJECT INCLUDES CONSTRUCTION OF A NEW DENTAL OFFICE, AS WELL AS THE ASSOCIATED PARKING, STORM WATER MANAGEMENT SYSTEM, UTILITY, AND LANDSCAPING IMPROVEMENTS.

THE EXISTING SITE IS 1.21 ACRES IN SIZE AND IS ZONED O: OFFICE. THE PROPOSED BUILDING WILL BE ONE STORY, WITH THE DENTAL OFFICE ON THE FIRST FLOOR AND A PARTIAL BASEMENT FOR STORAGE AND MECHANICAL EQUIPMENT. A SMALL PORTION OF THE FIRST FLOOR WILL BE DEDICATED FOR USE BY A POTENTIAL FUTURE TENANT. THE TOTAL FLOOR AREA OF THE BUILDING, INCLUDING THE BASEMENT, WILL BE 13,273 SF. SITE WORK WILL INCLUDE NEW ASPHALT PARKING AREAS, AN UNDERGROUND STORM WATER MANAGEMENT SYSTEM, WATER AND SANITARY SEWER CONNECTIONS, AND INSTALLATION OF NEW LANDSCAPING, INCLUDING DECIDUOUS AND EVERGREEN TREE PLANTINGS AND SHRUBS. THE SITE INCLUDES TEN EXISTING PARKING SPACES, DRIVE AISLES, AND A SOLID WASTE ENCLOSURE THAT ARE LOCATED WITHIN EXISTING EASEMENTS AND ARE CURRENTLY BEING USED BY THE ADJACENT PROPERTY TO THE EAST, THE ANN ARBOR CAT CLINIC. THE PARKING SPACES, DRIVE AISLES, AND SOLID WASTE ENCLOSURE WILL REMAIN AND WILL BE INCORPORATED INTO THE PROPOSED SITE IMPROVEMENTS. USE OF THE TEN PARKING SPACES AND DUMPSTER WILL BE SHARED BETWEEN THE PROPOSED DENTAL OFFICE AND THE EXISTING CAT CLINIC.

WATER SERVICE WILL BE PROVIDED TO THE BUILDING FROM A NEW CONNECTION TO THE EXISTING 12-INCH WATER MAIN WITHIN THE TURNBERRY LANE RIGHT-OF-WAY. SANITARY SEWER SERVICE WILL BE PROVIDED FROM A NEW CONNECTION TO THE EXISTING 10-INCH SEWER LINE WITHIN THE TURNBERRY LANE RIGHT-OF-WAY. A NEW UNDERGROUND DETENTION SYSTEM IS BEING PROVIDED AS PART OF THE PROPOSED SITE IMPROVEMENTS TO HELP MANAGE STORM WATER RUNOFF. ACCESS TO THE SITE WILL BE PROVIDED VIA ONE NEW CURB CUT ON TURNBERRY LANE.

CITY OF ANN ARBOR REQUIRED NOTES

1. THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO THE CITY OF ANN ARBOR PUBLIC SERVICES STANDARD SPECIFICATIONS WHICH ARE INCLUDED BY REFERENCE.
2. THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR FROM THIS REQUIREMENT. THE WORK SHALL BE PERFORMED IN COMPLETE CONFORMANCE WITH THE CURRENT CITY OF ANN ARBOR PUBLIC SERVICES DEPARTMENT STANDARD SPECIFICATIONS AND DETAILS.
3. SIDEWALKS CONSTRUCTED IN THE PUBLIC RIGHT-OF-WAY SHALL MEET ALL REQUIREMENTS AND GUIDELINES AS SET FORTH IN THE ADA STANDARDS FOR ACCESSIBLE DESIGN. SIDEWALK AND CURB RAMP GRADES WILL BE REVIEWED DURING CONSTRUCTION PLAN SUBMITTALS.
4. ALL SIDEWALKS SHALL BE KEPT AND MAINTAINED IN GOOD REPAIR BY THE OWNER OF THE LAND ADJACENT TO AND ABUTTING THE SAME. PRIOR TO THE ISSUANCE OF THE FINAL CERTIFICATE OF OCCUPANCY FOR THIS SITE, ALL EXISTING SIDEWALKS IN NEED OF REPAIR MUST BE REPAIRED IN ACCORDANCE WITH CITY STANDARDS.
5. PAVEMENT MARKINGS DISTURBED DUE TO PAVEMENT CUTS OR CONSTRUCTION RELATED ACTIVITIES SHALL BE REPLACED. REPLACEMENT DURING CONSTRUCTION MAY BE CONSIDERED TEMPORARY, WITH FINAL PAVEMENT MARKING RESTORATION TO OCCUR AT THE END OF THE PROJECT.
6. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING PUBLIC ROAD PAVEMENT. DAMAGE TO THE PUBLIC ROAD PAVEMENT DURING CONSTRUCTION MAY NECESSITATE MILLING AND RESURFACING OF THE DAMAGED AREAS.



SITE MAP
SCALE : NTS

VICINITY MAP
SCALE : NTS

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05	REMOVALS PLAN
06	DIMENSIONAL LAYOUT PLAN
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A301	EXTERIOR RENDERINGS

The underground utilities shown have been located from field survey information and existing records. The surveyor makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in-service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated. Although the surveyor does certify that they are located as accurately as possible from the information available.

BLOSSOM DENTAL

JOB No. **22127**

DATE: 2/28/23
SHEET 01 OF 22
CADD: CAR
ENG: TPH
PM: CMB
TECH:
/22127CV01

01

REVISIONS:	REV. DATE
REVISED PER CITY REVIEW	05/24/23
REVISED PER CITY REVIEW	06/29/23

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3815 Plaza Drive Ann Arbor, Michigan 48108
(734) 995-0200 • www.midwesternconsulting.com
Land Development • Land Survey • Institutional • Municipal
Wireless Communications • Transportation • Landfill Services

RELEASED FOR:	DATE
SITE PLAN SUBMITTAL	03/14/2023
SITE PLAN RESUBMITTAL	05/24/2023
SITE PLAN RESUBMITTAL	06/29/2023

STATE OF MICHIGAN
THEODORE HIRSCH
ENGINEER
No. 65179
LICENSED PROFESSIONAL ENGINEER

THEODORE P. HIRSCH
P.E. #65179

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DEVELOPMENT SUMMARY

GENERAL PROJECT INFORMATION

3680 Packard Road, LLC (Elizabeth Barber) owns the property located at 3680 Packard Road, Ann Arbor, Michigan, and is requesting site plan approval from the Planning Commission for a new dental office. The site is currently zoned O: Office and no amendment to the zoning is proposed. Proposed site improvements include a new building, asphalt parking areas, underground storm water management system, utility connections, and landscaping. One landscape modification is being requested to allow for the existing trees and vegetation to satisfy the screening requirements for the conflicting land use buffer along the south and east property lines.

3680 Packard Road, LLC does not own any land contiguous to this site.

DEVELOPMENT PROGRAM

- The proposed development includes construction of a new 1-story, 13,273 sf dental office building.
- A total of 29 new parking spaces are being provided, including ADA and EV parking spaces, as well as 4 Class A and 6 Class C bicycle spaces. Additionally, the 10 existing parking spaces within the easement will be shared evenly between the proposed dental office and the adjacent property to the east (Ann Arbor Cat Clinic). The proposed vehicular use area will be 14,859 sf.
- The site will be accessed from one new curb cut on Turnberry Lane.
- Site improvements will include new parking areas and driveways, site lighting, an underground storm water management system, utility connections, solid waste management facilities, and landscaping.
- All improvements are proposed to be completed in one phase.

COMMUNITY ANALYSIS

i. IMPACT ON PUBLIC SCHOOLS
The development does not include any residential units and no impact to public schools is anticipated. The development will provide additional tax revenue for schools.

ii. RELATIONSHIP TO NEIGHBORING USES
The current South Area Future Land Use Map within the City of Ann Arbor Master Plan Land Use Element identifies this parcel for use as office. The proposed development as a dental office is consistent with the current zoning classification (O: Office) and the future land use designation. The dental office will serve the surrounding residential neighborhood and will also provide convenient access along the Packard Road corridor. Existing trees and vegetation along the south property line and a portion of the east property line will provide a buffer and screening of the proposed development from the adjacent residential parcels.

iii. IMPACT OF ADJACENT USES ON PROPOSED DEVELOPMENT
Adjacent sites are zoned for office and residential uses that will have no negative impact on the proposed development. The proposed use is complementary to the existing veterinary clinic to the east, and it is anticipated that residents within the surrounding residential neighborhood will utilize the proposed dental office.

iv. IMPACT ON AIR AND WATER QUALITY AND EXISTING NATURAL FEATURES
- There will be no anticipated negative impact on air quality.
- A new underground detention system is being provided as part of the proposed site improvements to help manage storm water runoff by pre-treating, detaining, and releasing the runoff into the public storm sewer at a controlled rate.
- Water quality controls will be implemented to ensure that runoff during construction is controlled and managed.

v. IMPACT ON HISTORIC SITES OR STRUCTURES
- The site is not located in an historic district and has not been identified by the City as an individual historic property.

vi. TRAFFIC STATEMENT
The following is a trip generation for the proposed dental office at 3680 Packard Road, Ann Arbor. Based on data and equations in the ITE Trip Generation Manual 11th Edition, the table below summarizes the trip generation characteristics of a medical office. Existing sidewalks, bike lanes, and bus stops in the vicinity of the site encourage non-motorized trips, so the estimated vehicular trips will likely decrease as other modes of travel are available and utilized.

	ITE	Size	Weekday	AM Peak Hour			PM Peak Hour		
Land Use	Code	SF	24 Hour	Enter	Exit	Total	Enter	Exit	Total
Medical Dental Office (Veh)	720	9,000	279	22	6	28	10	24	34
Persons (Driving)	1.37*Veh		382	30	8	38	14	33	47
Persons (Walking/Other)				2	0	2	0	2	2
Total Persons				32	8	40	14	35	49

Please refer to the Trip Generation prepared by Midwestern Consulting dated May 5, 2023 for additional information.

vii. PUBLIC SIDEWALK MAINTENANCE STATEMENT
Provided. See Notes on the Cover Sheet.

viii. IMPACT ON NATURAL FEATURES
- No known endangered species habitats exist on this site.
- Per the ALTA/NSPS Land Title survey: This parcel is located in Zone X of the Flood Insurance Rate Map Number 26161C0406E which bears an effective date of 4/3/2012 and is not in a Special Flood Hazard Area.
- No woodlands are located on this site. No street trees will be removed as part of this project.
- There are 6 landmark trees located throughout the site. Five landmark trees will be removed as part of the proposed project. Construction fence will be installed at the limits of the critical root zone for all trees to remain.
- No steep slopes exist on this site.
- No existing or proposed watercourses are located on this site.
- No identified wetlands exist on this site.

Please refer to the Natural Features Plan for additional information.

SITE DATA

		Existing / Required Zoning O: Office		Proposed Zoning O: Office	
Zoning					
	Permitted Use	Medical / Dental Office		Dental Office	
	Site Area	6,000	sf min.	52,537	sf
		0.14	ac min.	1.21	ac
	Lot Width	50	ft min.	187	ft (Packard)
Building					
	Floor Area (gross)	NA	sf	13,273	sf total
				8,762	sf ground floor
				4,511	sf basement
	Lot Coverage	NA	% max.	16.68	%
	Floor Area Ratio	75	% max.	25.26	%
	Building Height	55 *	ft max.	27 ft - 9 in	
		4 *	stories max.	1	story
		*when within 300 ft of abutting R zone			
Setbacks					
		15	ft min.	15	ft (Packard)
	Front	40	ft max.	15	ft (Turnberry)
		0	ft min.		
	Side	30	ft min. abutting R	75	ft (east)
		0	ft min.		
	Rear	30	ft min. abutting R	159	ft (south)
Vehicular Parking					
	Design Standards	Width: 9 ft; Length: 18 ft; Aisle: 22 ft		Width: 9 ft; Length: 18 ft; Aisle: 22 ft	
	Required Parking	0	spaces min.	34 **	spaces
		74	spaces max.	**includes 5 of 10 existing spaces	
	Medical / Dental Office	1 per 180 sf max.			
	EV Parking			13	spaces
		25	% EV-C	9 (26.5%)	EV-C spaces
		10	% EV-I	4 (11.8%)	EV-I spaces
Bicycle Parking					
		9	spaces min.	10	spaces
	Medical / Dental Office	1 per 1,500 sf min.			
		30	% Class A	4	Class A spaces
		70	% Class C	6	Class C spaces
Open Space					ac
		NA	sf	25,093	sf
		NA	ac	0.58	ac
Impervious Surface Coverage					
		NA	%	52.24	%

LEGAL DESCRIPTION

(PER FIRST AMERICAN TITLE INSURANCE COMPANY, COMMITMENT NO.NCS-1145090-MICH, COMMITMENT DATE: AUGUST 22, 2022)

LAND IN THE CITY OF ANN ARBOR, WASHTENAW COUNTY, MI, DESCRIBED AS FOLLOWS:

PART OF THE EAST HALF OF SECTION 11, TOWN 3 SOUTH, RANGE 6 EAST, COMMENCING AT THE NORTHEAST CORNER OF SECTION 11, THENCE SOUTH 87 DEGREES 30 MINUTES 27 SECONDS WEST 1492.61 FEET, THENCE SOUTH 1 DEGREE 23 MINUTES 33 SECONDS EAST 296.33 FEET ALONG THE CENTERLINE OF CHERRY TREE LANE, THENCE SOUTH 87 DEGREES 30 MINUTES 27 SECONDS WEST 165.22 FEET TO THE POINT OF BEGINNING, THENCE SOUTH 1 DEGREE 7 MINUTES 33 SECONDS EAST 73.65 FEET, THENCE SOUTH 89 DEGREES 0 MINUTES 35 SECONDS WEST 181.17 FEET, THENCE NORTH 15 DEGREES 59 MINUTES 25 SECONDS WEST 130.99 FEET, THENCE 98.50 FEET ALONG THE ARC OF A CURVE HAVING A RIGHT RADIUS 376.26 FEET ON A CHORD THAT BEARS NORTH 8 DEGREES 29 MINUTES 26 SECONDS WEST 98.22 FEET, THENCE NORTH 0 DEGREES 59 MINUTES 25 SECONDS WEST 52 FEET, THENCE NORTH 87 DEGREES 30 MINUTES 27 SECONDS EAST 187.55 FEET, THENCE SOUTH 2 DEGREES 29 MINUTES 33 SECONDS EAST 150 FEET, THENCE SOUTH 33 DEGREES 22 MINUTES 33 SECONDS EAST 67.76 FEET TO THE POINT OF BEGINNING.

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DR. ELIZABETH BARBER, DDS, MS, PC
734-645-6063

BLOSSOM DENTAL

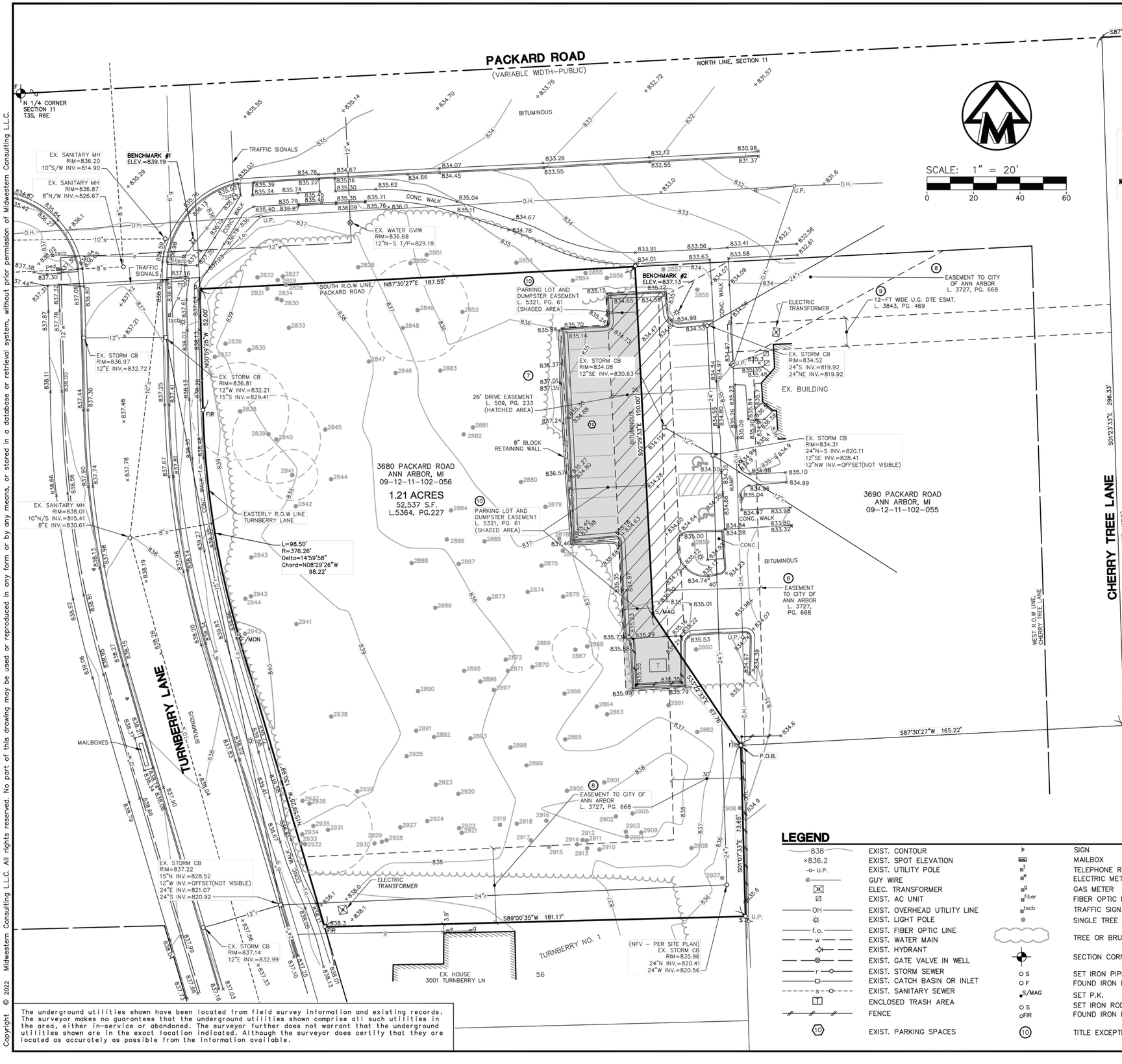
SITE PLAN
COMPLIANCE INFORMATION

01A

JOB No. 22127

REVISIONS:	REV. DATE
REVISED PER CITY REVIEW	05/17/23
REVISED PER CITY REVIEW	06/29/23

DATE: 2/28/23
SHEET 01A OF 22
CADD: CAR
ENG.: TPH
PM: CMB
TECH:
/22127CV01



VICINITY MAP
SCALE : NTS

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

LEGAL DESCRIPTION

(PER FIRST AMERICAN TITLE INSURANCE COMPANY, COMMITMENT NO.NCS-1145090-MICH, COMMITMENT DATE: AUGUST 22, 2022)

Land in the City of Ann Arbor, Washtenaw County, MI, described as follows:

Part of the East half of Section 11, Town 3 South, Range 6 East, commencing at the Northeast corner of Section 11, thence South 87 degrees 30 minutes 27 seconds West 1492.61 feet, thence South 1 degree 23 minutes 33 seconds East 296.33 feet along the Centerline of Cherry Tree Lane, thence South 87 degrees 30 minutes 27 seconds West 165.22 feet to the Point of Beginning, thence South 1 degree 7 minutes 33 seconds East 73.65 feet, thence South 89 degrees 0 minutes 35 seconds West 181.17 feet, thence North 15 degrees 59 minutes 25 seconds West 130.99 feet, thence 98.50 feet along the arc of a curve having a right radius 376.26 feet on a chord that bears North 8 degrees 29 minutes 26 seconds West 98.22 feet, thence North 0 degrees 59 minutes 25 seconds West 52 feet, thence North 87 degrees 30 minutes 27 seconds East 187.55 feet, thence South 2 degrees 29 minutes 33 seconds East 150 feet, thence South 33 degrees 22 minutes 33 seconds East 67.76 feet to the Point of Beginning.

EXCEPTIONS

(PER FIRST AMERICAN TITLE INSURANCE COMPANY, COMMITMENT NO.NCS-1145090-MICH, COMMITMENT DATE: AUGUST 22, 2022)

7. The terms, provisions and easement(s) contained in the document entitled "Declaration of Cross Access Driveway Easement" recorded October 3, 1997 as Liber 3509, Page 233 of Official Records. (PLOTTED - PER SITE PLAN LOCATION. NO DESCRIPTION PROVIDED) SEE SHEET 2 OF 2 FOR DETAIL

8. The terms, provisions and easement(s) contained in the document entitled "Grant of Easement" recorded August 4, 1998 as Liber 3727, Page 668 of Official Records. (PLOTTED)

9. The terms, provisions and easement(s) contained in the document entitled "Detroit Edison Underground Easement (Right of Way) No. Right of Way # 167395" recorded January 22, 1999 as Liber 3843, Page 469 of Official Records. (PLOTTED - ON ADJACENT SITE)

10. The terms, provisions and easement(s) contained in the document entitled "Easement Agreement" recorded September 23, 2019 as Liber 5321, Page 61 of Official Records. (PLOTTED) SEE SHEET 2 OF 2 FOR DETAIL

BENCHMARKS

BENCHMARK #1
TOP NUT OF HYDRANT AT SOUTHEAST CORNER OF TURNBERRY LANE AND PACKARD ROAD, 11 FEET NORTH OF SIDEWALK.
ELEVATION = 839.19 (NAVD 88 DATUM)

BENCHMARK #2
TOP OF WEST SIDE OF CONCRETE LIGHTPOLE BASE IN THE NORTHEAST CORNER OF PARKING LOT, LOCATED AT 3690 PACKARD ROAD.
ELEVATION = 837.13 (NAVD 88 DATUM)

NOTES

1) THIS SURVEY WAS PREPARED USING FIRST AMERICAN TITLE INSURANCE COMPANY COMMITMENT NO. NCS-1145090-MICH WITH AN EFFECTIVE DATE OF AUGUST 22, 2022.

2) THE LEGAL DESCRIPTION DESCRIBES THE SAME PROPERTY AS INSURED IN THE TITLE COMMITMENT AND ANY EXCEPTIONS HAVE BEEN NOTED HEREIN.

3) SAID DESCRIBED PROPERTY IS LOCATED WITHIN ZONE "X" AREAS OF MINIMAL FLOODING, PER FLOOD INSURANCE RATE MAP NO. 26161C0406E, WITH AN EFFECTIVE DATE OF APRIL 3, 2012, FOR COMMUNITY NUMBER 260213, IN WASHTENAW COUNTY, STATE OF MICHIGAN, WHICH IS THE CURRENT FLOOD INSURANCE RATE MAP FOR THE COMMUNITY IN WHICH SAID PROPERTY IS SITUATED.

4) THE PARCEL HEREIN DESCRIBED HAS 10 REGULAR STRIPED PARKING SPACES AND 0 HANDICAP SPACES AS OF THE DATE OF THIS SURVEY.

5) THERE IS NO EVIDENCE OF CURRENT EARTH MOVING WORK, BUILDING CONSTRUCTION, OR BUILDING ADDITIONS.

LEGEND

838	EXIST. CONTOUR	⚐	SIGN
×836.2	EXIST. SPOT ELEVATION	MB	MAILBOX
-o- U.P.	EXIST. UTILITY POLE		TELEPHONE RISER
	GUY WIRE		ELECTRIC METER
	ELEC. TRANSFORMER	G	GAS METER
	EXIST. AC UNIT	fiber	FIBER OPTIC MARKER
OH	EXIST. OVERHEAD UTILITY LINE	tscb	TRAFFIC SIGNAL CONTROL BOX
	EXIST. LIGHT POLE		SINGLE TREE
f.o.	EXIST. FIBER OPTIC LINE		TREE OR BRUSH LIMIT
w	EXIST. WATER MAIN		
	EXIST. HYDRANT		SECTION CORNER
	EXIST. GATE VALVE IN WELL		
r	EXIST. STORM SEWER	○ S	SET IRON PIPE
	EXIST. CATCH BASIN OR INLET	○ F	FOUND IRON PIPE
s	EXIST. SANITARY SEWER	S/MAG	SET P.K.
T	ENCLOSED TRASH AREA	○ S	SET IRON ROD
	FENCE	○ FIR	FOUND IRON ROD
(10)	EXIST. PARKING SPACES	(10)	TITLE EXCEPTION NUMBER

SURVEYORS CERTIFICATE

To: Dr. Elizabeth A. Barber; 3680 Packard Road, LLC, a Michigan limited liability company; JP Morgan Chase, NA; Dickinson Wright PLLC; and First American Title Insurance Company:

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2021 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes Items 1, 2, 3, 4, 5, 7a, 8, 9 and 16 of Table A thereof. The fieldwork was completed on 9/22/2022.

MIDWESTERN CONSULTING, LLC.

By: Mark Vander Veen
Mark Vander Veen, P.S. No. 56788

Date: October 13, 2022

STATE OF MICHIGAN – MARK VANDER VEEN – PROFESSIONAL SURVEYOR – No. 40010056788 – LICENSED PROFESSIONAL SURVEYOR

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CLIENT
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ANN ARBOR, MI 48103
DR. LIZZIE BARBER
734-645-6063

3680 PACKARD ROAD

ALTA/NSPS LAND TITLE SURVEY OF A PARCEL OF LAND
LOCATED IN THE NORTHEAST 1/4 OF SECTION 11, T3S, R6E,
CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN

02

DATE: 10/3/2022
SHEET 1 OF 2
CADD: MST
ENG:
PM: MST
TECH: TJC
22127_SV1
FB# 1072

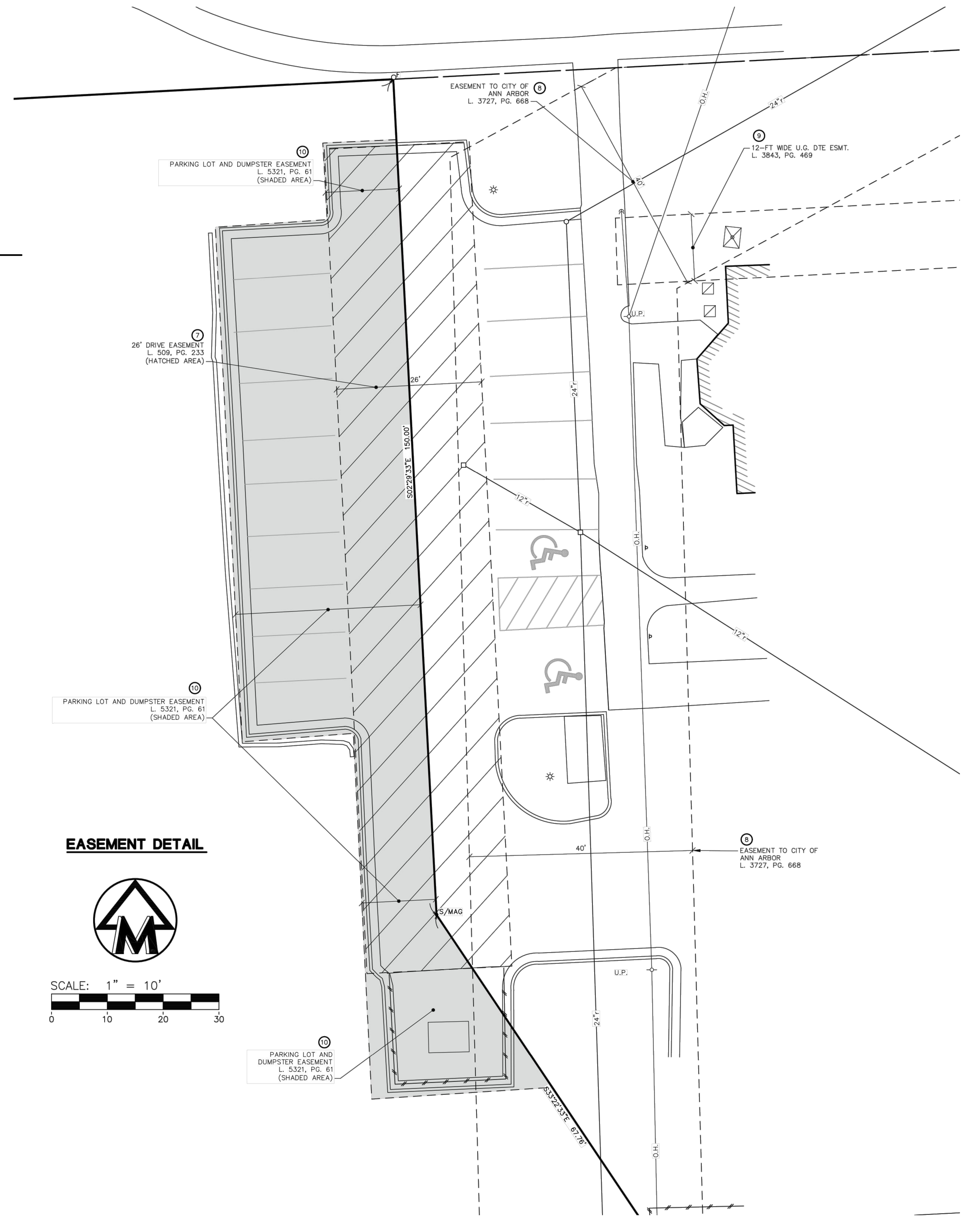
REV.	DATE

JOB No. 22127
REVISIONS:

TREE TABLE

TAG#	DBH	COMMON NAME	GENUS/SPECIES	STEMS	SCORE	LM	INV	RM
2826	8"	Black Walnut	Juglans nigra					
2828	10"	Sugar Maple	Acer saccharum					
2827	8"	Sugar Maple	Acer saccharum					
2829	8"	Sugar Maple	Acer saccharum					
2830	11"	Sugar Maple	Acer saccharum					
2831	10"	Sugar Maple	Acer saccharum					
2832	7"	Sugar Maple	Acer saccharum					
2833	6"	American Elm	Ulmus americana					X
2834	7"	Sugar Maple	Acer saccharum					
2835	13"	Black Walnut	Juglans nigra					X
2836	9"	Northern Hackberry	Celtis occidentalis					X
2837	7"	Sugar Maple	Acer saccharum					X
2838	21"	Black Walnut	Juglans nigra			X		X
2839	11"	Black Walnut	Juglans nigra					X
2840	19"	Black Walnut	Juglans nigra			X		X
2841	11"	Redbud	Cercis canadensis			X		X
2842	6"	Redbud	Cercis canadensis					X
2843	12"	Box Elder	Acer negundo					X
2844	14"	Black Cherry	Prunus serotina		40%			X
2845	11"	Black Walnut	Juglans nigra					X
2846	14"	Black Walnut	Juglans nigra					X
2847	16"	Black Walnut	Juglans nigra					X
2848	7"	Black Walnut	Juglans nigra					X
2849	22"	Sugar Maple	Acer saccharum			X		X
2850	7"	Box Elder	Acer negundo	twin				
2851	8"	American Elm	Ulmus americana					
2852	13"	Black Walnut	Juglans nigra					X
2853	15"	Sugar Maple	Acer saccharum					
2854	15"	Scotch Pine	Pinus sylvestris				X	
2855	11"	Black Walnut	Juglans nigra					
2856	6"	Blue Spruce	Picea pungens					
2857	10"	Blue Spruce	Picea pungens					
2858	15"	Bradford Pear	Pyrus calleryana					
2859	14"	Bradford Pear	Pyrus calleryana					
2860	13"	Bradford Pear	Pyrus calleryana					
2861	9"	Black Pine	Pinus nigra				X	
2862	9"	Black Pine	Pinus nigra				X	
2863	11"	Sweet Cherry	Prunus avuim	twin			X	
2864	8"	Box Elder	Acer negundo					
2865	11"	Black Walnut	Juglans nigra					X
2866	11"	Black Walnut	Juglans nigra					X
2867	10"	Butternut	Juglans cinerea			X		X
2868	9"	Black Cherry	Prunus serotina					X
2869	8"	American Elm	Ulmus americana					X
2870	6"	Black Cherry	Prunus serotina					X
2871	6"	American Elm	Ulmus americana					X
2872	6"	American Elm	Ulmus americana					X
2873	17"	Scotch Pine	Pinus sylvestris				X	X
2874	6"	Sugar Maple	Acer saccharum					X
2875	16"	Scotch Pine	Pinus sylvestris				X	X
2876	7"	Sugar Maple	Acer saccharum					X
2877	7"	Black Cherry	Prunus serotina					X
2878	10"	American Elm	Ulmus americana					X
2879	9"	Red Elm	Ulmus rubra					X
2880	14"	Sugar Maple	Acer saccharum					X
2881	9"	American Elm	Ulmus americana					X
2882	7"	Sugar Maple	Acer saccharum					X
2883	9"	Sugar Maple	Acer saccharum					X
2884	8"	Black Cherry	Prunus serotina	twin	40%			X
2885	7"	Black Cherry	Prunus serotina					X

TAG#	DBH	COMMON NAME	GENUS/SPECIES	STEMS	SCORE	LM	INV	RM
2886	9"	Sugar Maple	Acer saccharum					X
2887	12"	Sugar Maple	Acer saccharum					X
2888	9"	Black Cherry	Prunus serotina					X
2889	8"	American Elm	Ulmus americana					X
2890	14"	Black Cherry	Prunus serotina					X
2891	10"	Black Cherry	Prunus serotina					
2892	11"	Black Cherry	Prunus serotina					
2893	8"	Red Elm	Ulmus rubra					
2894	7"	Black Cherry	Prunus serotina					
2895	12"	Box Elder	Acer negundo					X
2896	7"	American Elm	Ulmus americana					X
2897	7"	Black Cherry	Prunus serotina					X
2898	8"	Black Walnut	Juglans nigra					
2899	14"	Black Cherry	Prunus serotina					
2900	10"	Black Cherry	Prunus serotina					
2901	15"	American Elm	Ulmus americana					
2902	9"	Black Cherry	Prunus serotina					
2903	10"	Black Pine	Pinus nigra				X	
2904	7"	Box Elder	Acer negundo					
2905	13"	Black Cherry	Prunus serotina					
2906	12"	Black Walnut	Juglans nigra					
2907	9"	Siberian Elm	Ulmus pumila				X	
2908	14"	Cottonwood	Populus deltoides					
2909	7"	Siberian Elm	Ulmus pumila				X	
2910	9"	Box Elder	Acer negundo	twin				
2911	12"	Black Pine	Pinus nigra				X	
2912	13"	Black Pine	Pinus nigra				X	
2913	11"	Black Pine	Pinus nigra				X	
2914	18"	Black Pine	Pinus nigra				X	
2915	8"	Sugar Maple	Acer saccharum					
2916	12"	Sweet Cherry	Prunus avuim				X	
2917	14"	Black Pine	Pinus nigra				X	
2918	9"	Black Pine	Pinus nigra				X	
2919	12"	Black Cherry	Prunus serotina					
2920	12"	Black Cherry	Prunus serotina					
2921	14"	Sweet Cherry	Prunus avuim				X	
2922	15"	Red Oak	Quercus rubra					
2923	6"	Black Cherry	Prunus serotina					
2924	11"	Black Cherry	Prunus serotina					
2925	11"	Black Cherry	Prunus serotina					
2926	8"	Black Cherry	Prunus serotina					
2927	8"	American Elm	Ulmus americana					
2928	15"	American Elm	Ulmus americana					
2929	8"	American Elm	Ulmus americana					
2930	14"	Black Pine	Pinus nigra				X	
2931	19"	Bur Oak	Quercus macrocarpa			X		
2932	14"	Black Pine	Pinus nigra				X	
2933	9"	Black Pine	Pinus nigra				X	
2934	13"	Black Pine	Pinus nigra				X	
2935	9"	Black Pine	Pinus nigra				X	
2936	6"	American Elm	Ulmus americana					
2937	11"	American Elm	Ulmus americana					
2938	12"	Black Walnut	Juglans nigra					
2939	10"	Box Elder	Acer negundo					
2940	7"	Redbud	Cercis canadensis					
2941	11"	Black Walnut	Juglans nigra					X
2942	15"	American Elm	Ulmus americana					X
2943	7"	Box Elder	Acer negundo					X
2944	12"	American Elm	Ulmus americana					X



EASEMENT DETAIL

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ANN ARBOR, MI 48103
DR. LIZZY BARBER
734-645-6063

3680 PACKARD ROAD

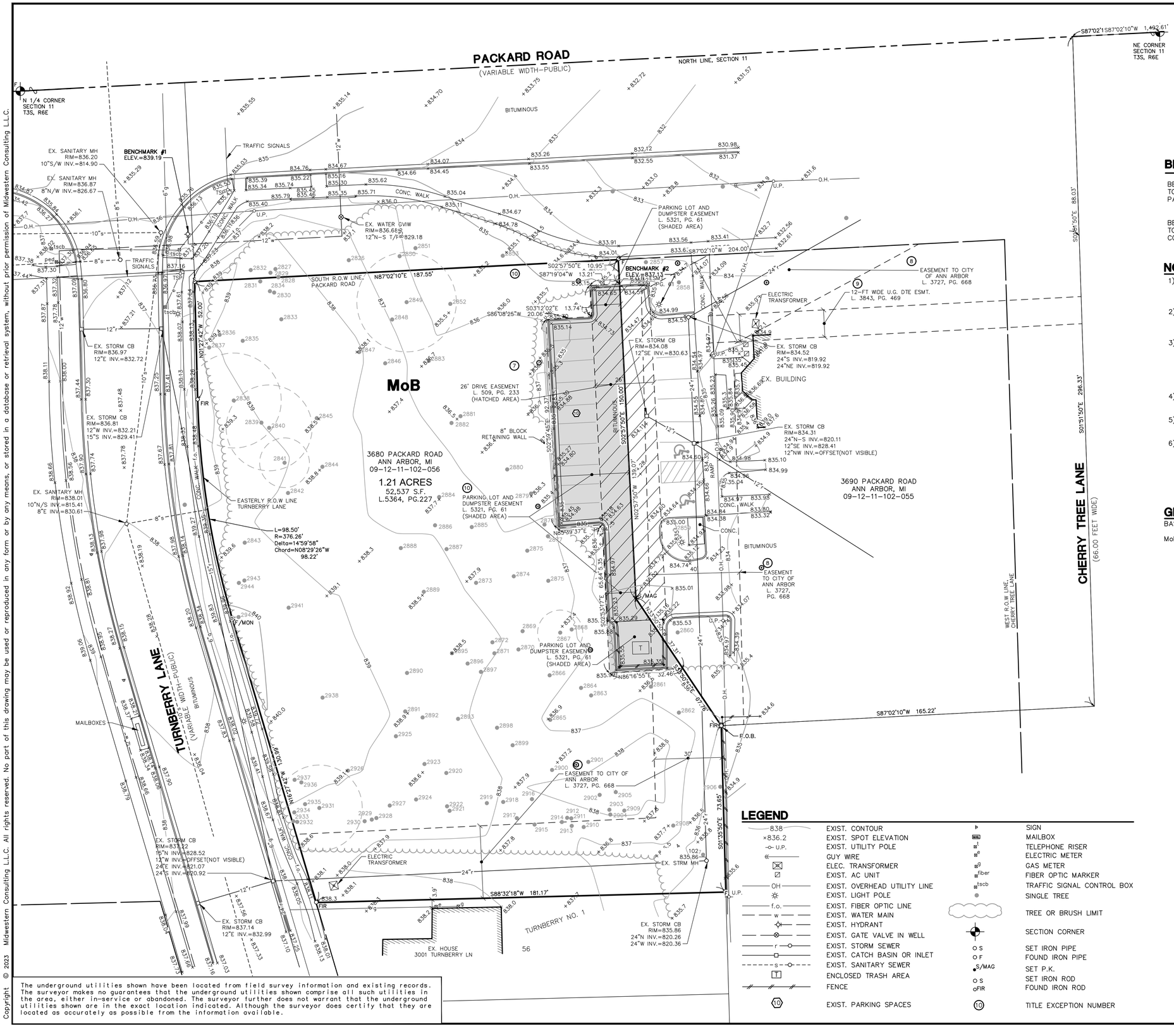
ALTA/NSPS LAND TITLE SURVEY OF A PARCEL OF LAND LOCATED IN THE NORTHEAST 1/4 OF SECTION 11, T3S, R6E, CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN

03

DATE: 10/3/2022
SHEET 2 OF 2
CADD: MST
ENG:
PM: MST
TECH: JJC
22127_SV1
FB#1072

REV. DATE
REVISIONS:

JOB No. 22127



BENCHMARKS

BENCHMARK #1
TOP NUT OF HYDRANT AT SOUTHEAST CORNER OF TURNBERRY LANE AND PACKARD ROAD, 11 FEET NORTH OF SIDEWALK.
ELEVATION = 839.19 (NAVD 88 DATUM)

BENCHMARK #2
TOP OF WEST SIDE OF CONCRETE LIGHTPOLE BASE IN THE NORTHEAST CORNER OF PARKING LOT, LOCATED AT 3690 PACKARD ROAD.
ELEVATION = 837.13 (NAVD 88 DATUM)

NOTES

1) THIS SURVEY WAS PREPARED USING FIRST AMERICAN TITLE INSURANCE COMPANY COMMITMENT NO. NCS–1145090–MICH WITH AN EFFECTIVE DATE OF AUGUST 22, 2022.

2) THE LEGAL DESCRIPTION DESCRIBES THE SAME PROPERTY AS INSURED IN THE TITLE COMMITMENT AND ANY EXCEPTIONS HAVE BEEN NOTED HEREIN.

3) SAID DESCRIBED PROPERTY IS LOCATED WITHIN ZONE "X" AREAS OF MINIMAL FLOODING, PER FLOOD INSURANCE RATE MAP NO. 26161C0406E, WITH AN EFFECTIVE DATE OF APRIL 3, 2012, FOR COMMUNITY NUMBER 260213, IN WASHTENAW COUNTY, STATE OF MICHIGAN, WHICH IS THE CURRENT FLOOD INSURANCE RATE MAP FOR THE COMMUNITY IN WHICH SAID PROPERTY IS SITUATED.

4) THE PARCEL HEREIN DESCRIBED HAS 10 REGULAR STRIPED PARKING SPACES AND 0 HANDICAP SPACES AS OF THE DATE OF THIS SURVEY.

5) THERE IS NO EVIDENCE OF CURRENT EARTH MOVING WORK, BUILDING CONSTRUCTION, OR BUILDING ADDITIONS.

6) THE BASE SURVEY WAS PREPARED BY MIDWESTERN CONSULTING IN SEPTEMBER 2022. ALL UNDERGROUND UTILITIES AND STRUCTURES HAVE BEEN SHOWN TO A REASONABLE DEGREE OF ACCURACY AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THEIR EXACT LOCATION AND TO AVOID DAMAGE THERETO. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO COMMENCING WORK.

GENERAL SOILS DESCRIPTION

BASED ON SOIL SURVEY OF WASHTENAW COUNTY MICHIGAN

MoB – MORLEY LOAM, 2 TO 6 PERCENT SLOPES

LEGEND

838	EXIST. CONTOUR	▷	SIGN
×836.2	EXIST. SPOT ELEVATION	MB	MAILBOX
U.P.	EXIST. UTILITY POLE	T^{t}	TELEPHONE RISER
	GUY WIRE	E^{e}	ELECTRIC METER
	ELEC. TRANSFORMER	G^{g}	GAS METER
	EXIST. AC UNIT	F^{fiber}	FIBER OPTIC MARKER
OH	EXIST. OVERHEAD UTILITY LINE	S^{tscb}	TRAFFIC SIGNAL CONTROL BOX
	EXIST. LIGHT POLE		SINGLE TREE
f.o.	EXIST. FIBER OPTIC LINE		TREE OR BRUSH LIMIT
w	EXIST. WATER MAIN		
	EXIST. HYDRANT		SECTION CORNER
	EXIST. GATE VALVE IN WELL		
r	EXIST. STORM SEWER	O S	SET IRON PIPE
	EXIST. CATCH BASIN OR INLET	O F	FOUND IRON PIPE
s	EXIST. SANITARY SEWER	S/MAG	SET P.K.
T	ENCLOSED TRASH AREA	O S	SET IRON ROD
	FENCE	OFIR	FOUND IRON ROD
10	EXIST. PARKING SPACES	10	TITLE EXCEPTION NUMBER

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

SCALE: 1" = 20'
0 20 40 60

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ANN ARBOR, MI 48103
DR. ELIZABETH BARBER, DDS, MS, PC
734-645-6063

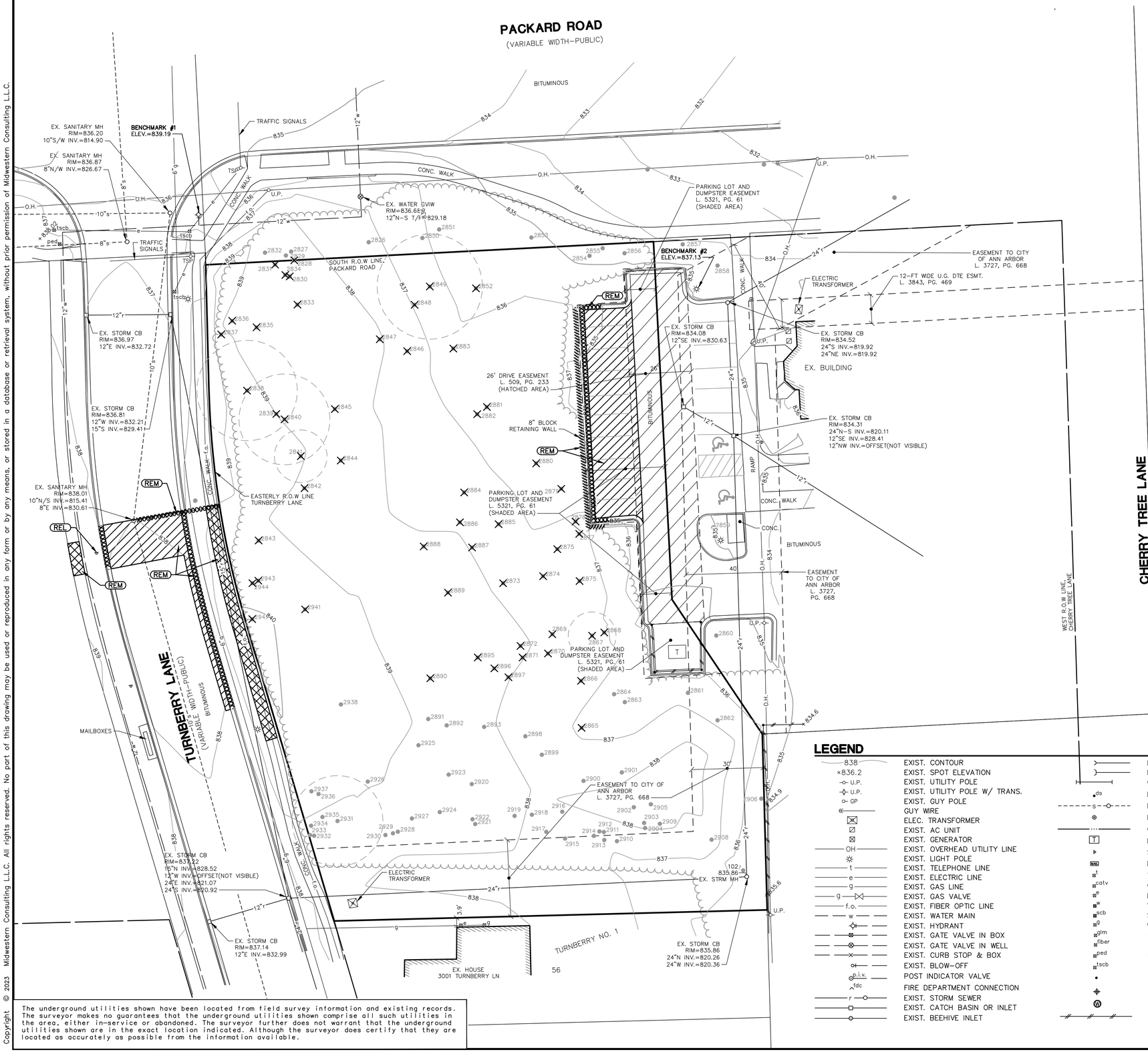
BLOSSOM DENTAL
SITE PLAN
EXISTING CONDITIONS

04

DATE: 02/28/23
SHEET 04 OF 22
CADD: CAR
ENG.: TPH
PM: CMB
TECH:
22127EX01

JOB No. 22127

REVISIONS:	REV. DATE
REVISED PER CITY REVIEW	05/24/23
REVISED PER CITY REVIEW	06/29/23



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

SCALE: 1" = 20'

0 20 40 60

NOTES

1. ALL UNDERGROUND UTILITIES AND STRUCTURES HAVE BEEN SHOWN TO A REASONABLE DEGREE OF ACCURACY AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THEIR EXACT LOCATION AND TO AVOID DAMAGE THERETO. THE CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO COMMENCING WORK.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEMOLISHING OR RELOCATING ANY SITE FEATURES ACCORDING TO PLAN OR AS APPROPRIATE TO FACILITATE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS.
3. ANY ITEM NOT INDICATED FOR REMOVAL SHALL REMAIN AND BE PROTECTED BY THE CONTRACTOR DURING ALL PHASES OF CONSTRUCTION. ANY SUCH ITEM THAT IS REMOVED AND/OR DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED TO THE REQUIRED STANDARD AT THE CONTRACTOR'S EXPENSE.
4. ALL CONCRETE AND ASPHALT PAVEMENT TO BE REMOVED SHALL BE SAW CUT TO THE FULL DEPTH OF PAVEMENT. THE CONTRACTOR SHALL TAKE CARE TO MAINTAIN A CLEAN EDGE OF PAVEMENT.
5. PRIOR TO REMOVING, RELOCATING, OR PERFORMING ANY WORK ON A UTILITY, THE CONTRACTOR SHALL COORDINATE WITH THE RESPECTIVE UTILITY OWNER. ALL EXISTING UNUSED UTILITY SERVICE LEADS ARE TO BE KILLED AT THE MAIN.
6. REMOVAL OF EXISTING LANDSCAPING SHALL INCLUDE STUMPS.
7. ALL DEMOLISHED MATERIAL SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN LEGALLY DESIGNATED DISPOSAL AREA.
8. ALL WORK SHALL COMPLY WITH CURRENT CITY OF ANN ARBOR STANDARDS.
9. ALL EXISTING FRANCHISE UTILITIES ARE TO BE REMOVED BY OR PER THE PARTY HAVING JURISDICTION.
10. CONTRACTOR TO VERIFY EXISTENCE OF MANHOLE LOCATED AT THE END OF THE EXISTING SANITARY LEAD TO BE REMOVED.
11. ALL EASEMENTS WITHIN THE PROJECT BOUNDARY SHALL REMAIN.

LEGEND

838	EXIST. CONTOUR	SINGLE TREE	
×836.2	EXIST. SPOT ELEVATION	TREE OR BRUSH LIMIT	
U.P.	EXIST. UTILITY POLE	SET IRON PIPE	S
U.P.	EXIST. UTILITY POLE W/ TRANS.	FOUND IRON PIPE	F
GP	EXIST. GUY POLE	SET MONUMENT	S
	GUY WIRE	FOUND MONUMENT	F
	ELEC. TRANSFORMER	SET P.K.	spk
	EXIST. AC UNIT	FOUND P.K.	FPK
	EXIST. GENERATOR	SET IRON ROD	S
OH	EXIST. OVERHEAD UTILITY LINE	FOUND IRON ROD	FIR
	EXIST. LIGHT POLE	CONTROL PT.	
t	EXIST. TELEPHONE LINE	CENTERLINE	
e	EXIST. ELECTRIC LINE	PROPERTY LINE	
g	EXIST. GAS LINE		
g	EXIST. GAS VALVE		
f.o.	EXIST. FIBER OPTIC LINE		
w	EXIST. WATER MAIN	CONCRETE TO BE REMOVED	
	EXIST. HYDRANT		
	EXIST. GATE VALVE IN BOX	BITUMINOUS TO BE REMOVED	
	EXIST. GATE VALVE IN WELL		
	EXIST. CURB STOP & BOX	SITE FEATURE TO BE REMOVED	
	EXIST. BLOW–OFF		
p.i.v.	POST INDICATOR VALVE	CURB TO BE REMOVED	
fdc	FIRE DEPARTMENT CONNECTION		
r	EXIST. STORM SEWER	TREE TO BE REMOVED	
	EXIST. CATCH BASIN OR INLET	ITEM TO BE RELOCATED	REL
	EXIST. BEEHIVE INLET	ITEM TO BE REMOVED	REM
	END SECTION		
	HEAD WALL		
	CULVERT		
ds	EXIST. DOWNSPOUT		
s	EXIST. SANITARY SEWER		
	EXIST. CLEANOUT		
	C/L OF DITCH		
T	ENCLOSED TRASH AREA		
	SIGN		
MAIL	MAILBOX		
	TELEPHONE RISER		
catv	CABLE TELEVISION RISER		
e	ELECTRIC METER		
w	WATER METER		
scb	SPRINKLER CONTROL BOX		
g	GAS METER		
glm	GAS LINE MARKER		
fiber	FIBER OPTIC MARKER		
ped	PEDESTRIAN CROSSING SIGNAL		
tscb	TRAFFIC SIGNAL CONTROL BOX		
	POST		
	EXIST. BOLLARD		
W	WELL		
	FENCE		

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734-645-6063

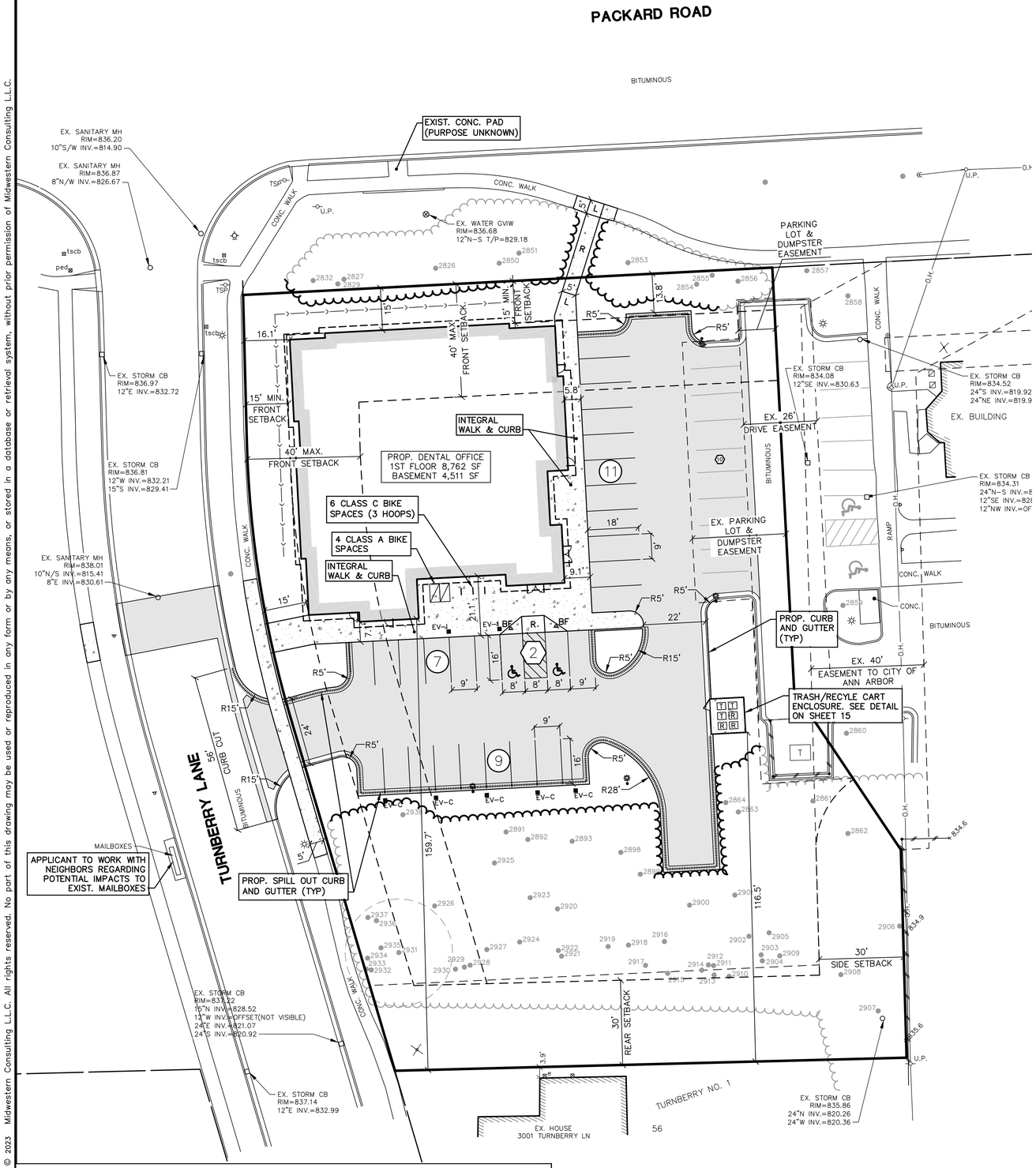
BLOSSOM DENTAL
SITE PLAN
REMOVALS PLAN

05

DATE: 02/28/23
SHEET 05 OF 22
CADD: CAR
ENG: TPH
PM: CMB
TECH:
/22127RM01

JOB No. 22127

REVISIONS:	REV. DATE
REVISED PER CITY REVIEW	06/29/23
REVISED PER CITY REVIEW	



Know what's below. Call before you dig.

SCALE: 1" = 20'

0 20 40 60

NOTES

1. ALL DIMENSIONS ARE MEASURED TO THE PAINT LINE OR FACE OF CURB UNLESS OTHERWISE NOTED. ALL RADII DIMENSIONS SHOWN ARE TO BACK OF CURB UNLESS OTHERWISE NOTED.
2. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH CURRENT STANDARDS, SPECIFICATIONS, AND GENERAL CONDITIONS OF THE AUTHORITY HAVING JURISDICTION.
3. REFER TO THE ARCHITECTURAL PLANS FOR DETAILS REGARDING THE SCOPE OF WORK FOR THE BUILDING ELEVATIONS, INTERIORS, AND APPURTENANCES.
4. THE CONTRACTOR SHALL CONTACT THE OWNER AND/OR ENGINEER PRIOR TO COMMENCING WORK SHOULD THERE BE ANY FIELD CONFLICTS WITH THE DESIGN INTENT.
5. PROPOSED SIGNAGE SHALL BE PERMITTED SEPARATELY FOLLOWING SITE PLAN APPROVAL IN ACCORDANCE WITH CITY REQUIREMENTS.

LEGEND

(0)	NUMBER OF STANDARD PARKING SPACES IN ROW
[0]	NUMBER OF SMALL CAR PARKING SPACES IN ROW
⟨0⟩	NUMBER OF BARRIER FREE PARKING SPACES IN ROW
BF	BARRIER FREE PARKING SIGN
L R	BARRIER FREE SIDEWALK RAMP & LANDING
	PROP. CURB & GUTTER
	PROP.SPILL OUT CURB & GUTTER
	PROP. BITUMINOUS PAVEMENT
	PROP. CONCRETE PAVEMENT
	PROP. HEAVY DUTY CONCRETE
	SIGN
	PROP. SINGLE LIGHT
EV-I	PROP. VEHICLE CHARGING STATION-INSTALLED
EV-C	PROP. VEHICLE CHARGING STATION-CAPPED FOR FUTURE

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734-645-6063

BLOSSOM DENTAL

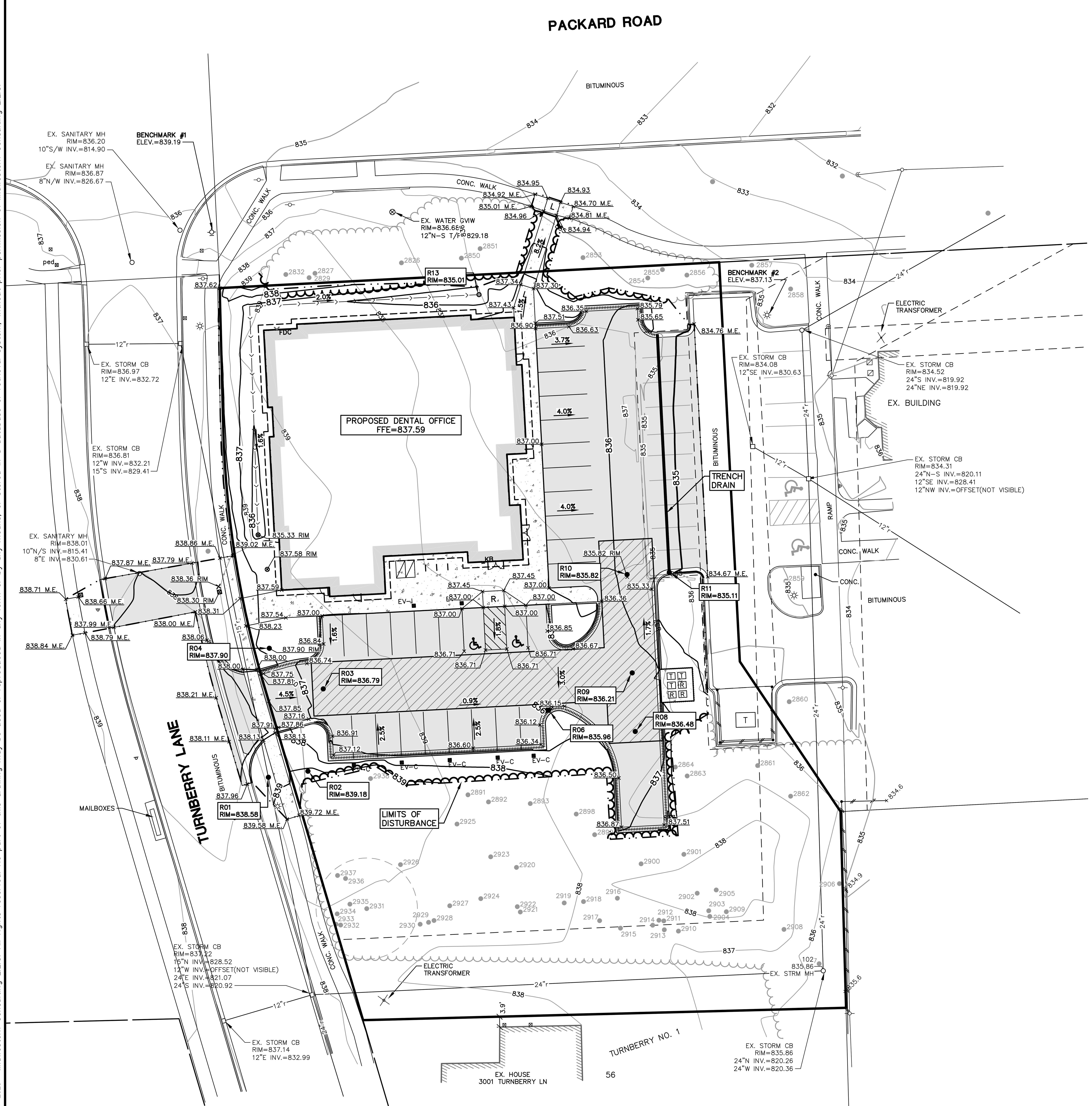
SITE PLAN
DIMENSIONAL LAYOUT PLAN

06

JOB No. 22127

REVISIONS:	REV. DATE
REVISED PER CITY REVIEW	04/28/23
REVISED PER CITY REVIEW	06/29/23

DATE:
SHEET 06 OF 22
CADD: CAR
ENG: TPH
PM: CMB
TECH:
/22127SP01



NOTES

1. GRADES AT ADA ACCESS AISLES AND BARRIER FREE PARKING STALLS SHALL NOT EXCEED 2.0% SLOPE.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING POSITIVE DRAINAGE DURING AND AFTER CONSTRUCTION, AND NO ADVERSE IMPACTS WILL OCCUR TO NEIGHBORING PROPERTIES DURING OR AFTER COMPLETION OF CONSTRUCTION.
3. ALL STORM SEWER AND UTILITY STRUCTURE RIMS SHALL BE FLUSH WITH PAVEMENT OR FINISHED GRADE.
4. ALL DISTURBED AREAS TO BE RESTORED AS NOTED ON PLAN.
5. PROPOSED CURB & GUTTER, PAVEMENT AND SIDEWALK TO MATCH EXISTING PAVEMENT/SIDEWALK GRADE AT REMOVAL LIMITS.
6. SIDEWALKS CONSTRUCTED IN THE PUBLIC RIGHT-OF-WAY SHALL MEET ALL REQUIREMENTS AND GUIDELINES AS SET FORTH IN THE ADA STANDARDS FOR ACCESSIBLE DESIGN.
7. THE DESIGN OF THE PROPOSED DRIVE APPROACH WILL RESULT IN A RELATIVELY SMALL PORTION OF THE PUBLIC ROAD RIGHT-OF-WAY DRAINING ONTO THE SUBJECT PARCEL. THE OWNER OF THE PROPERTY, 3680 PACKARD ROAD, LLC, ACKNOWLEDGES AND ACCEPTS THIS PUBLIC ROADWAY DRAINAGE.

LEGEND

838	EXIST. CONTOUR
838	PROP. CONTOUR
×836.2	EXIST. SPOT ELEVATION
36.60	PROP. SPOT ELEVATION
U.P.	EXIST. UTILITY POLE
U.P.	EXIST. UTILITY POLE W/ TRANS.
	GUY WIRE
	ELEC. TRANSFORMER
	EXIST. AC UNIT
	EXIST. GENERATOR
OH	EXIST. OVERHEAD UTILITY LINE
	EXIST. LIGHT POLE
	PROP. LIGHT POLE
t	EXIST. TELEPHONE LINE
e	EXIST. ELECTRIC LINE
g	EXIST. GAS LINE
g	EXIST. GAS VALVE
f.o.	EXIST. FIBER OPTIC LINE
w	EXIST. WATER MAIN
W	PROP. WATER MAIN
	EXIST. HYDRANT
	PROP. HYDRANT
	EXIST. GATE VALVE IN BOX
	PROP. GATE VALVE IN BOX
	EXIST. GATE VALVE IN WELL
	PROP. GATE VALVE IN WELL
	EXIST. CURB STOP & BOX
	PROP. CURB STOP & BOX
	REDUCER
	EXIST. BLOW-OFF
	PROP. BLOW-OFF
p.i.v.	POST INDICATOR VALVE
P.I.V.	POST INDICATOR VALVE
	THRUST BLOCK
KB	PROP. KNOXBOX
fdc	EXIST. FIRE DEPARTMENT CONNECTION
FDC	PROP. FIRE DEPARTMENT CONNECTION
r	EXIST. STORM SEWER
R	PROP. STORM SEWER
	EXIST. CATCH BASIN OR INLET
	PROP. CATCH BASIN OR INLET
	EXIST. BEEHIVE INLET
	PROP. BEEHIVE INLET
RD	PROP. ROOF DRAIN
	END SECTION
	HEAD WALL
	CULVERT
ds	EXIST. DOWNSPOUT
DS	PROP. DOWNSPOUT
s	EXIST. SANITARY SEWER
S	PROP. SANITARY SEWER
	EXIST. CLEANOUT
	PROP. CLEANOUT
	C/L OF DITCH
	DRAINAGE DIRECTION
	SIGN
	SINGLE TREE
	TREE OR BRUSH LIMIT
	FENCE
	LIMITS OF DISTURBANCE
FF	FINISH FLOOR ELEVATION
GF	GARAGE FLOOR ELEVATION
BFF	BASEMENT FINISH FLOOR ELEVATION

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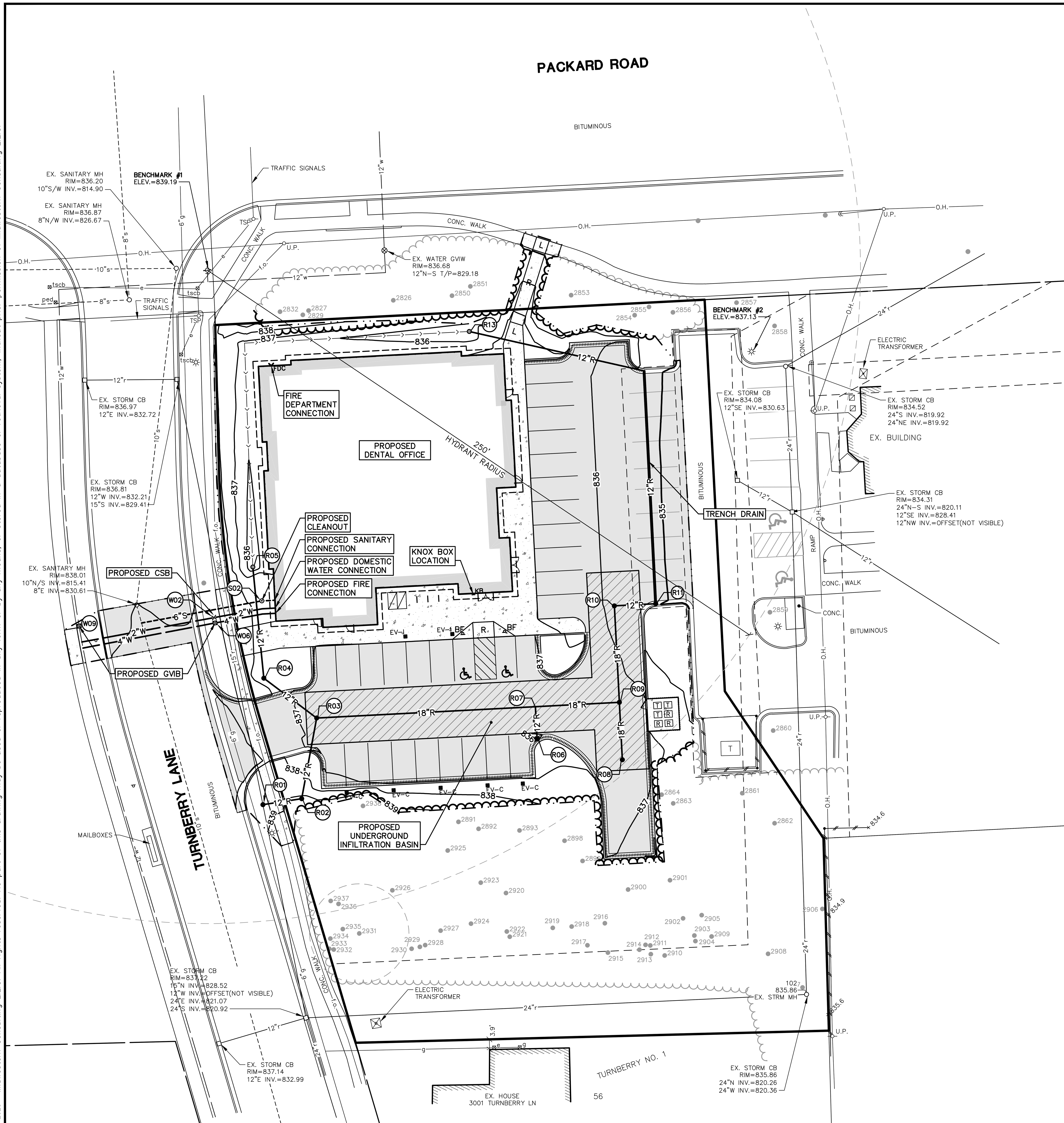
ANN ARBOR, MI 48103
DR. ELIZABETH BARBER, DDS, MS, PC
734-645-6063

BLOSSOM DENTAL
SITE PLAN
GRADING PLAN

07

JOB No. 22127	REV. DATE	DATE: 02/28/23
REVISIONS:		SHEET 07 OF 22
REVISED PER CITY REVIEW	05/24/23	CADD: CAR
REVISED PER CITY REVIEW	06/29/23	ENG: TPH
		PM: CMB
		TECH:
		22127GP01

M:\Civil3d_Proj\22127\Site Plan\22127GP01.dwg, 6/29/2023 5:01 PM, Charity A. Richards, 07 GRADING PLAN, MCLLC PDF.pc3



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SCALE: 1" = 20'

0 20 40 60

Know what's below. Call before you dig.

NOTES

1. ALL UTILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ANN ARBOR STANDARD DETAILS AND SPECIFICATIONS.
2. ALL BUILDING ROOF DRAINS TO TIE INTO PROPOSED STORM SEWER SYSTEM.
3. NO FIRE WALLS ARE PROPOSED WITHIN THE BUILDING
4. BOOSTER PUMPS WILL NOT BE REQUIRED FOR PROPOSED WATER SERVICE LEADS.
5. ALL STORM SEWER TO BE C-76 CL. IV RCP UNLESS OTHERWISE NOTED
6. ALL SANITARY SEWER TO BE SDR 35 PVC UNLESS OTHERWISE NOTED.
7. 4" AND LARGER PROPOSED WATER MAIN PIPE MATERIAL SHALL BE CL50 OR PRESSURE CL350 DIP W/POLYWRAP, UNLESS OTHERWISE SPECIFIED.
8. ALL WATER MAIN 2" AND SMALLER TO BE TYPE K COPPER

SANITARY SEWER MITIGATION CALCS

SANITARY SEWER FLOW MITIGATION CALCULATIONS

Design Flow
Based on the City of Ann Arbor's sanitary sewer flow evaluation Table 'A', the design dry weather flow rate will be:

8,796 sf Medical Office Space (dentist)	0.10 gpd/sf =	880 gpd
	Total	**880 gpd**

Existing Flow
There is no existing flow to account for in this phase of the project.

Mitigation Flow
Mitigation Flow = (Proposed Flow - Existing Flow) * 4(peaking factor) * 1.1(recovery)
Mitigation Peak Flow = 880 gpd x 4(peaking factor) x 1.1(recovery) = 3872.0 gpd
= **2.7 gpm**
= **3.0 gpm**

LEGEND

Symbol	Description	Symbol	Description
U.P.	EXIST. UTILITY POLE	r	EXIST. STORM SEWER
U.P.	EXIST. UTILITY POLE W/ TRANS.	R	PROP. STORM SEWER
GP	EXIST. GUY POLE		EXIST. CATCH BASIN OR INLET
	GUY WIRE		PROP. CATCH BASIN OR INLET
	ELEC. TRANSFORMER		EXIST. BEEHIVE INLET
	EXIST. AC UNIT		PROP. BEEHIVE INLET
	EXIST. GENERATOR	RD	PROP. ROOF DRAIN
OH	EXIST. OVERHEAD UTILITY LINE		END SECTION
	EXIST. LIGHT POLE		HEAD WALL
	PROP. LIGHT POLE		CULVERT
	PROP. BUILDING LIGHT	ds	EXIST. DOWNSPOUT
t	EXIST. TELEPHONE LINE	DS	PROP. DOWNSPOUT
T	PROP. TELEPHONE LINE	s	EXIST. SANITARY SEWER
e	EXIST. ELECTRIC LINE	S	PROP. SANITARY SEWER
E	PROP. ELECTRIC LINE		EXIST. CLEANOUT
g	EXIST. GAS LINE		PROP. CLEANOUT
G	PROP. GAS LINE	t	TELEPHONE RISER
g	EXIST. GAS VALVE	catv	CABLE TELEVISION RISER
f.o.	EXIST. FIBER OPTIC LINE	e	ELECTRIC METER
F.O.	PROP. FIBER OPTIC LINE	w	WATER METER
w	EXIST. WATER MAIN	scb	SPRINKLER CONTROL BOX
W	PROP. WATER MAIN	g	GAS METER
	EXIST. HYDRANT	glm	GAS LINE MARKER
	PROP. HYDRANT	fiber	FIBER OPTIC MARKER
	EXIST. GATE VALVE IN BOX	ped	PEDESTRIAN CROSSING SIGNAL
	PROP. GATE VALVE IN BOX	tscb	TRAFFIC SIGNAL CONTROL BOX
	EXIST. GATE VALVE IN WELL	W	WELL
	PROP. GATE VALVE IN WELL		EXIST. SPRINKLER HEAD
	EXIST. CURB STOP & BOX	gfc	EXIST. GAS FILLER CAP
	PROP. CURB STOP & BOX	vcs	EXIST. VEHICLE CHARGING STATION
	REDUCER	VCS	PROP. VEHICLE CHARGING STATION
	EXIST. BLOW-OFF		
	PROP. BLOW-OFF		
p.i.v.	POST INDICATOR VALVE		
P.I.V.	POST INDICATOR VALVE		
	THRUST BLOCK		
fdc	EXIST. FIRE DEPARTMENT CONNECTION		
FDC	PROP. FIRE DEPARTMENT CONNECTION		
KB	PROP. KNOXBOX		

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BLOSSOM DENTAL

SITE PLAN
UTILITY PLAN

08

DATE: 02/28/23
SHEET 08 OF 22
CADD: CAR
ENG: TPH
PM: CMB
TECH:
/22127UP01

JOB No. 22127

REVISIONS:	REV. DATE
REVISED PER CITY REVIEW	05/24/23
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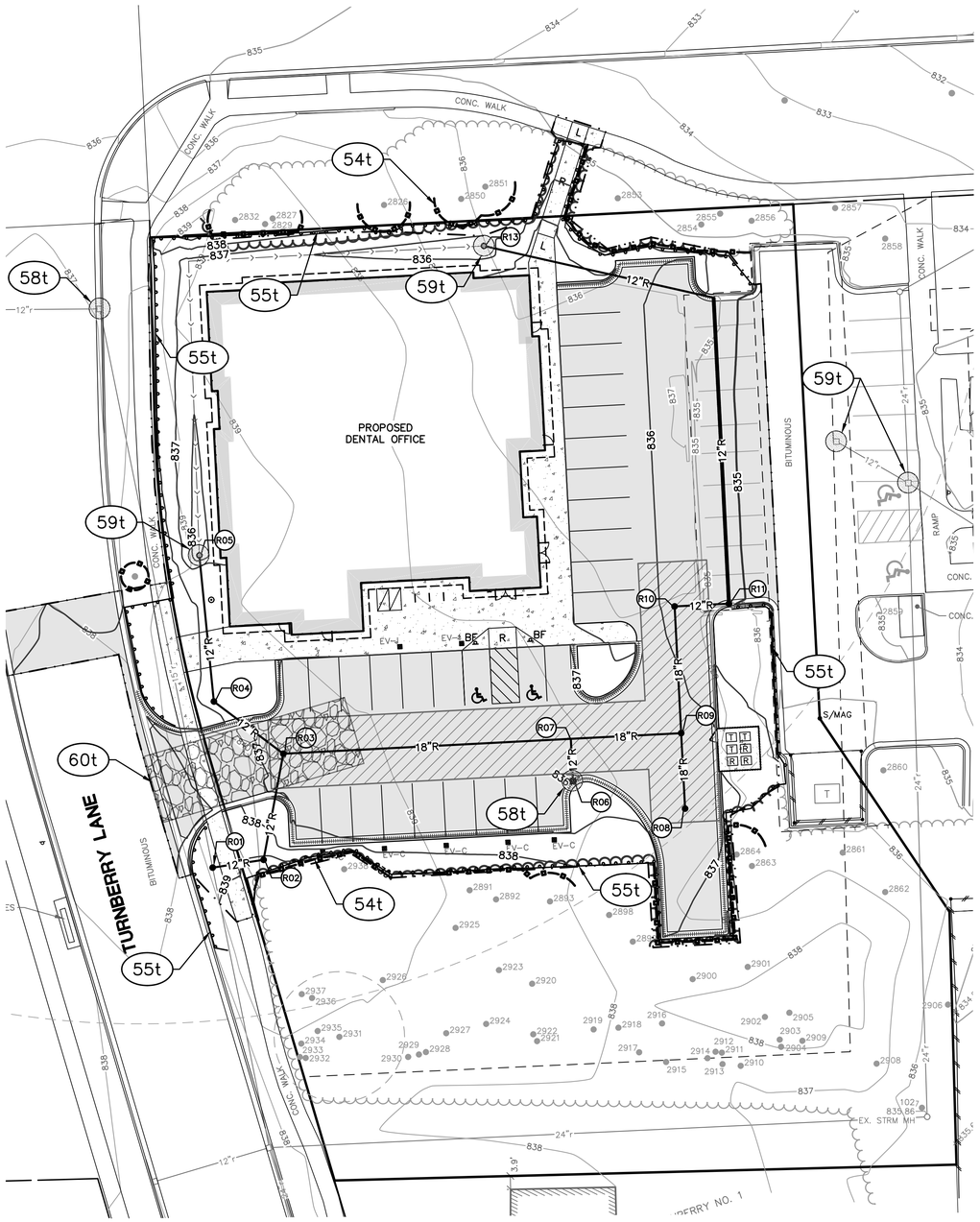

SOIL EROSION CONSTRUCTION NOTES

1. ALL SOIL EROSION CONTROL MEASURES SHALL COMPLY WITH THE CURRENT CITY OF ANN ARBOR ORDINANCES, WASHTENAW COUNTY STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND STATE OF MICHIGAN "SOIL EROSION AND SEDIMENTATION CONTROL ACT" (ACT #347).
2. PRIOR TO COMMENCING EARTHMOVING OPERATIONS, THE GRADING CONTRACTOR SHALL INSTALL THE MUD TRACKING MAT, THE SILT FENCE AND TEMPORARY GRAVEL FILTER(S) SHOWN ON THE PLANS.
3. ANY LAWN AREA WHICH WILL HAVE A SLOPE STEEPER THAN 6:1 (6 FT. MEASURED HORIZONTALLY AND 1 FT. MEASURED VERTICALLY) SHALL BE SODDED AND PEGGED OR SEEDED AND MULCHED USING A SOIL EROSION CONTROL FABRIC OR BLANKET. HYDROSEEDING MAY BE USED IN LIEU OF SEED AND MULCH OR SOD WHERE SLOPES ARE FLATTER THAN 6:1.
4. THE ACTUAL LOCATION OF THE MUD TRACKING MATS AND THE GRAVEL FILTERS MAY BE ADJUSTED BY THE CONTRACTOR TO MATCH CONTRACTOR'S OPERATIONS AND FIELD CONDITIONS BUT ONLY IF APPROVED BY THE ENGINEER.
5. ALL DISTURBED AREAS, EVEN WHERE FUTURE PAVEMENT AND BUILDINGS ARE PROPOSED, ARE TO BE REVEGETATED PER COUNTY STANDARDS FOR TEMPORARY SEEDING.
6. 950 CY CUT AND 103 CY FILL. THIS IS AN ESTIMATE ONLY AND IS NOT TO BE USED FOR CONSTRUCTION OR ESTIMATING PURPOSES.
7. THE ESTIMATED COST OF PROTECTING ALL EXPOSED SURFACES FROM EROSION SHOULD CONSTRUCTION CEASE IS $3,000. (RESPREAD 3" TOPSOIL AND SEEDING)

CONSTRUCTION SEQUENCE (FALL 2023 - SUMMER 2024)

1. SESC PRE-GRADING MEETING
2. INVENTORY SITE:
   - IDENTIFY CONSTRUCTION LIMITS.
   - INSTALL CONSTRUCTION FENCING.
   - DEFINE THE SITE ACCESS AND INSTALL MUD TRACKING MATS AS NEEDED.
   - DEFINE THE CONSTRUCTION STORAGE AREAS WITHIN THE GRADING LIMITS AS DEFINED ON THE PLANS.
3. DEMOLITION AND REMOVALS:
   - MAINTAIN EXISTING CONTROLS.
   - INSTALL SILT FENCE.
   - INSTALL STONE FILTERS ON EXISTING INLETS TO REMAIN.
   - TREE AND STUMP REMOVAL.
   - STRUCTURE AND UTILITY REMOVALS.
4. CONSTRUCT DETENTION SYSTEM:
   - MAINTAIN EXISTING CONTROLS.
   - CONSTRUCT THE STORM SEWER.
   - CONSTRUCT THE DETENTION CHAMBERS AND OUTLET (SEE MANUFACTURER'S INSTALLATION NOTES FOR SPECIFIC INSTRUCTIONS). THE DETENTION SYSTEM SHALL BE AS-BUILT VERIFIED PRIOR TO THE ISSUANCE OF A BUILDING PERMIT. REMOVAL OF ACCUMULATED SEDIMENT WILL BE REQUIRED PRIOR TO THE ISSUANCE OF CERTIFICATES OF OCCUPANCY.
   - INSTALL INLET FILTERS ON INLETS INTO THE DETENTION SYSTEM AFTER THEY HAVE BEEN BACKFILLED. INSTALL SEDIMENT FILTERS ON COMPLETED CATCH BASINS AND INLETS.
5. MASS GRADING AND UTILITY CONSTRUCTION:
   - MAINTAIN EXISTING CONTROLS.
   - MASS GRADE THE SITE.
   - CONNECT WATER AND SANITARY SERVICE LEADS IN TURNBERRY LANE.
   - TEMPORARY SEED AND MULCH DISTURBED AREAS WHERE PRACTICAL.
   - CONSTRUCT AND MAINTAIN FIRE DEPARTMENT ACCESS TO FLAMMABLE MATERIALS. SUPPORTING HYDRANTS SHALL BE INSTALLED AND OPERATIONAL PRIOR TO ISSUANCE OF INDIVIDUAL BUILDING PERMITS.
6. PAVEMENT BASE COURSE CONSTRUCTION:
   - MAINTAIN EXISTING CONTROLS.
   - THE AGGREGATE BASE COURSE FOR THE PARKING LOT SHALL BE INSTALLED PRIOR TO THE ISSUANCE OF FOUNDATION PERMIT FOR THE BUILDING.
7. BUILDING FOUNDATION CONSTRUCTION:
   - MAINTAIN EXISTING CONTROLS.
   - EXCAVATE FOR BUILDING FOUNDATION.
   - CONSTRUCT BUILDING FOUNDATION.
8. PAVE DRIVEWAYS AND PARKING LOT:
   - MAINTAIN EXISTING CONTROLS.
   - THE FIRST COURSE OF ASPHALT PAVING AND ALL ASSOCIATED CURBING TO BE IN PLACE PRIOR TO THE COMMENCEMENT OF VERTICAL CONSTRUCTION WITH COMBUSTIBLE MATERIALS.
   - SEED AND MULCH (SEED AND MAT SLOPES GREATER THAN 3:1) DISTURBED AREAS BEHIND CURB WITHIN 5 DAYS OF ESTABLISHING FINAL GRADES.
9. FINE GRADE AND BUILDING CONSTRUCTION:
   - MAINTAIN EXISTING CONTROLS.
   - CONSTRUCT BUILDING.
   - FINE GRADE THE SITE.
   - REMOVE ACCUMULATED SEDIMENT FROM THE DETENTION SYSTEM.
   - SEED AND MULCH (SEED AND MAT SLOPES GREATER THAN 3:1) DISTURBED AREAS BEHIND CURB WITHIN 5 DAYS OF ESTABLISHING FINAL GRADES.
   - PLANT TREES, SHRUBS AND LANDSCAPE ITEMS PRIOR TO ISSUANCE OF THE CERTIFICATES OF OCCUPANCY.
   - INSTALL PERMANENT FENCING.
10. CLEAN-UP SITE:
    - SEED AND MULCH OR SOD AREAS THAT HAVE NOT TAKEN.
    - MAINTAIN EXISTING CONTROLS.
11. FOLLOW-UP AFTER THE SITE IS STABILIZED:
    - REMOVE SILT FENCE AND STONE FILTERS.
    - REMOVE CATCH BASIN FILTERS OR SILT SACKS.
    - REMOVE SILT FROM THE STORM SEWER SYSTEM.
    - FINAL REMOVAL OF SEDIMENT FROM THE DETENTION SYSTEM, IF NEEDED.
12. FINALIZE BUILDING CONSTRUCTION:
    - MAINTAIN PERMANENT SOIL EROSION CONTROL MEASURES
    - REMOVE CONSTRUCTION FENCING

NOTE: THE CONSTRUCTION SEQUENCE AND SCHEDULE IS PRELIMINARY AND SUBJECT TO ADJUSTMENT IN RESPONSE TO FORCES BEYOND OUR CONTROL. THESE MAY INCLUDE WEATHER, MATERIAL AVAILABILITY, LABOR UNREST, POLITICAL AND REGULATORY DELAYS, OR OTHER UNFORESEEN CIRCUMSTANCES.

SOIL EROSION MAINTENANCE REQUIREMENTS

1. ALL STRAW BALE AND/OR SILT FENCE SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. IF AT ANY TIME THE DEPTH OF SILT AND SEDIMENT COMES TO WITHIN 6" OF THE TOP OF ANY STRAW BALE OR WITHIN 12" OF THE TOP OF ANY SILT FENCE, ALL SILT AND SEDIMENT SHALL BE REMOVED TO ORIGINAL GRADE.
2. ALL TEMPORARY GRAVEL FILTERS SHOULD BE ADJUSTED AS TO LOCATION PER ACTUAL FIELD CONDITIONS. THE REMOVAL OF TRAPPED SEDIMENT AND THE CLEANOUT OR REPLACEMENT OF CLOGGED STONE MAY BE NECESSARY AFTER EACH STORM EVENT DURING THE PROJECT.
3. ONLY UPON STABILIZATION OF ALL DISTURBED AREAS MAY THE SILT FENCE, AND TEMPORARY GRAVEL FILTERS BE REMOVED. ALSO, ALL STORM SEWERS MUST BE CLEANED OF ALL SEDIMENT.

PROGRAM PROPOSAL

THE PROPOSED DEVELOPMENT IS INTENDED FOR DENTAL OFFICE USE. THE OWNER SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND REPLACEMENT, IF NECESSARY, OF ANY AND ALL OF THE PERMANENT SOIL EROSION CONTROL FEATURES ASSOCIATED WITH SEDIMENT AND SOIL EROSION CONTROL WITHIN THE DEVELOPMENT. THE FINANCIAL IMPLICATIONS OF SAID MAINTENANCE WILL BE ADMINISTERED IN THE SAME MANNER AS OTHER MAINTENANCE NEEDS AS DETERMINED BY THE CITY OF ANN ARBOR.

Know what's below. Call before you dig.

SCALE: 1" = 20'

0 20 40 60

LEGEND

838	EXIST. CONTOUR
838	PROP. CONTOUR
×836.2	EXIST. SPOT ELEVATION
36.60	PROP. SPOT ELEVATION
U.P.	EXIST. UTILITY POLE
U.P.	EXIST. UTILITY POLE W/ TRANS.
	GUY WIRE
	ELEC. TRANSFORMER
	EXIST. AC UNIT
	EXIST. GENERATOR
OH	EXIST. OVERHEAD UTILITY LINE
	EXIST. LIGHT POLE
	PROP. LIGHT POLE
t	EXIST. TELEPHONE LINE
e	EXIST. ELECTRIC LINE
g	EXIST. GAS LINE
g	EXIST. GAS VALVE
f.o.	EXIST. FIBER OPTIC LINE
w	EXIST. WATER MAIN
W	PROP. WATER MAIN
	EXIST. HYDRANT
	PROP. HYDRANT
	EXIST. GATE VALVE IN BOX
	PROP. GATE VALVE IN BOX
	EXIST. GATE VALVE IN WELL
	PROP. GATE VALVE IN WELL
	EXIST. CURB STOP & BOX
	PROP. CURB STOP & BOX
	REDUCER
o	EXIST. BLOW-OFF
	PROP. BLOW-OFF
P.I.V.	POST INDICATOR VALVE
P.I.V.	POST INDICATOR VALVE
	THRUST BLOCK
KB	PROP. KNOXBOX
fdc	EXIST. FIRE DEPARTMENT CONNECTION
FDC	PROP. FIRE DEPARTMENT CONNECTION
r	EXIST. STORM SEWER
R	PROP. STORM SEWER
	EXIST. CATCH BASIN OR INLET
	PROP. CATCH BASIN OR INLET
	EXIST. BEEHIVE INLET
	PROP. BEEHIVE INLET
RD	PROP. ROOF DRAIN
	END SECTION
	HEAD WALL
	CULVERT
ds	EXIST. DOWNSPOUT
DS	PROP. DOWNSPOUT
s	EXIST. SANITARY SEWER
S	PROP. SANITARY SEWER
	EXIST. CLEANOUT
	PROP. CLEANOUT
	C/L OF DITCH
	DRAINAGE DIRECTION
	SIGN
	SINGLE TREE
	TREE OR BRUSH LIMIT
	FENCE
	SILTFENCE
	LIMITS OF DISTURBANCE
	CONSTRUCTION FENCE
FF	FINISH FLOOR ELEVATION
GF	GARAGE FLOOR ELEVATION
BFF	BASEMENT FINISH FLOOR ELEVATION

MAINTENANCE TASK AND SCHEDULE DURING CONSTRUCTION (by Contractor)

TASKS:	Storm Sewer System	Catch Basin Sumps	Catch Basin Inlet Silt Sacks	Catch Basin Stone Filters	Outlet Control Structures	Detention System Foreboy Units	Rain Garden	SCHEDULE:	ESTIMATED COST:
Inspect for sediment accumulation	X	X	X	X	X	X	X	Weekly and after every 1" storm event	$ 1,000
Removal of sediment accumulation	X	X	X	X	X	X	X	As needed and prior to turnover	$ 4,000
Inspect for floatable and debris	X	X	X	X	X	X	X	Quarterly and after every 1" storm event	$ 500
Cleaning of floatable and debris	X	X	X	X	X	X	X	Quarterly, as needed, and at turnover	$ 1,500
Make adjustments or replacements as determined by pre-turnover inspection	X	X	X	X	X	X	X	As needed	$ 5,000
								Total Construction Phase Cost Estimate	$ 12,000

* And as required for NPDES
* "As Needed" means when sediment has accumulated to one foot depth.

MAINTENANCE TASK AND SCHEDULE AFTER CONSTRUCTION (by Owner)

TASKS:	Catch Basin Sumps	Outlet Control Structures	Detention System Foreboy Units	Rain Garden	SCHEDULE:	ESTIMATED COST:
Inspect for sediment accumulation	X	X	X	X	Yearly and after every 1" storm event	$ 200
Removal of sediment accumulation	X	X	X	X	As needed	$ 1,200
Inspect for floatable and debris	X	X	X	X	Yearly and after every 1" storm event	$ 100
Cleaning of floatable and debris	X	X	X	X	As needed	$ 200
					Total Annual Cost Estimate	$ 1,700

* "As Needed" means when sediment has accumulated to one foot depth.

SOIL EROSION CONTROL MEASURES

t = temporary p = permanent

54 CONSTRUCTION FENCE OR SNOW FENCE

55 GEOTEXTILE SILT FENCE

58 CURB INLET FILTER

59 C.B./INLET FILTER

60 MUD TRACKING MAT

The underground utilities shown have been located from field survey information and existing records. The surveyor makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in-service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated. Although the surveyor does certify that they are located as accurately as possible from the information available.

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BLOSSOM DENTAL

SITE PLAN
SOIL EROSION CONTROL PLAN

09

JOB No. 22127

REVISIONS:
REVISED PER CITY REVIEW

REV. DATE
05/24/23

DATE: 02/28/23
SHEET 09 OF 22
CADD: CAR
ENG: TPH
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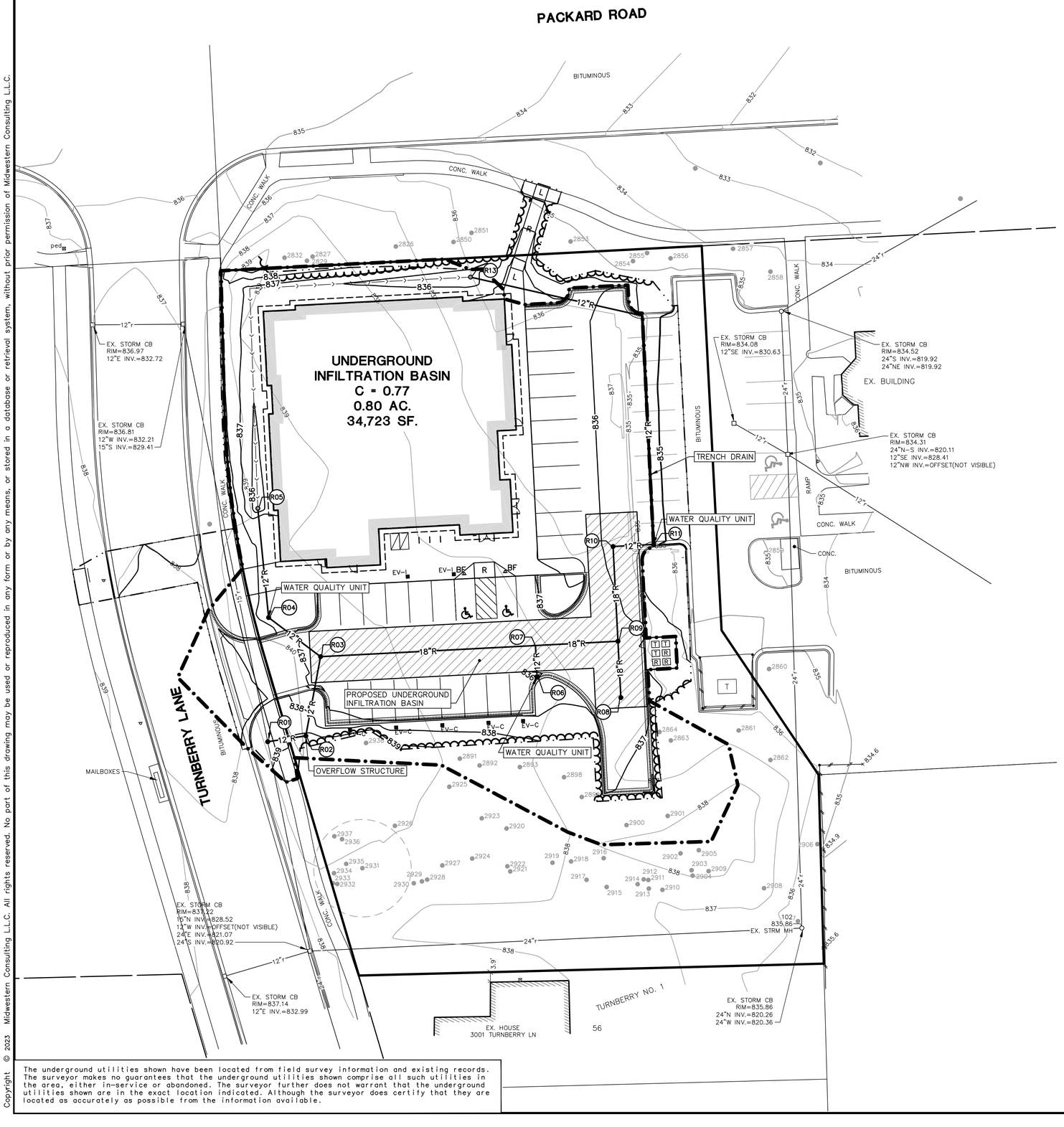
22127SE01



SCALE: 1" = 20'

0 20 40 60

Know what's below. Call before you dig.

LEGEND

- EXIST. STORM SEWER
- PROP. STORM SEWER
- EXIST. CATCH BASIN OR INLET
- PROP. CATCH BASIN OR INLET
- PROP. ROOF DRAIN
- EXIST. CLEANOUT
- PROP. CLEANOUT
- PROP. DRAINAGE AREA BOUNDARY
- 1.17 AC PROP. DRAINAGE AREA LABEL

STORMWATER MANAGEMENT NARRATIVE

THE SITE CURRENTLY CONTAINS NO STORM WATER TREATMENT OR DETENTION FACILITIES. THE MAJORITY OF THE SITE SHEET FLOWS TOWARD THE NORTHEAST CORNER AND INTO THE PUBLIC STORM SEWER IN PACKARD ROAD. A SMALLER PORTION OF THE SITE SHEET FLOWS TOWARD THE WEST SIDE AND INTO THE PUBLIC STORM SEWER IN TURNBERRY LANE.

THE PROPOSED DEVELOPMENT INCLUDES NEW IMPERVIOUS BUILDING ROOF, PAVEMENT, AND SIDEWALK AREAS ESTIMATED AT APPROXIMATELY 0.58 ACRES. APPROXIMATELY 0.80 ACRES OF THE PROPOSED DEVELOPMENT AREA (INCLUDING BOTH IMPERVIOUS AND GRASS AREAS) IS DESIGNED TO BE CONVEYED THROUGH THE PROPOSED STORM SEWER NETWORK AND INTO THE PROPOSED UNDERGROUND INFILTRATION BASIN. THE INFILTRATION BASIN IS TO BE TIED INTO THE EXISTING PUBLIC STORM SEWER IN TURNBERRY LANE.

PORTIONS OF LAND THAT ARE NOT TO BE DEVELOPED WITH BUILDING, ROADWAYS, OR SIDEWALKS WILL CONTINUE TO DRAIN AS THEY DO TODAY.

STORMWATER MAINTENANCE SCHEDULE

Components		
	Infiltration Basin	Schedule
Inspect for sediment accumulation	X	Annually and following storms of 1 inch or more
Removal of sediment accumulation	X	Annually
Inspect for floatables and debris	X	Annually and after major storms
Cleaning of floatables and debris	X	Annually and after major storms
Inspect System for erosion	X	Annually and after major storms
Re-Establish Permanent Vegetation on Eroded Areas	X	As needed

STORMWATER MAINTENANCE PLAN

1. Responsibility for Maintenance:
   a. During construction, it is the contractor's responsibility to perform maintenance.
   b. Following construction, it will be the responsibility of the owner to perform maintenance.

2. Maintenance Tasks and Schedule:
   a. See the chart on this sheet. The chart describes maintenance tasks to be performed.
   b. Immediately following construction, the developer will have the stormwater management system inspected by an engineer to verify grades of the infiltration basin and make recommendations for any necessary sediment removal.

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SITE PLAN
STORMWATER MANAGEMENT PLAN

10

JOB No. 22127

DATE: 02/28/23
SHEET 10 OF 22
CADD: CAR
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22127DA01

REVISIONS:	REV. DATE
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DETENTION CALCULATIONS

Underground Infiltration Basin Stormwater Calculations

6/15/2023

W1 - Determining Post-Development Cover Types, Areas, Curve Numbers, and Runoff Coefficients

Rational Method Variables

Cover Type	Soil Type	Area (sft)	Area (ac)	Runoff Coeff. (C)	(C) x (Area)
Building/Pavement		25,249	0.58	0.95	0.55
Grass	C	9,474	0.22	0.30	0.07
Total		34,723	0.80		0.62

Weighted C = (Sum(C)x(Area))/(Area Total)= 0.77

NRCS Variables (Pervious)

Cover Type	Soil Type	Area (sft)	Area (ac)	Curve Number	(CN) x (Area)
Grass	C	9,474	0.22	79	0.17
Total		9,474	0.22		0.17

Weighted CN = (Sum(CN)x(Area))/(Area Total)= 79

NCRS Variables (Impervious)

Cover Type	Soil Type	Area (sft)	Area (ac)	Curve Number	(CN) x (Area)
Building/Pavement		25,249	0.58	98	0.57
Total		25,249	0.58		0.57

Weighted CN = (Sum(CN)x(Area))/(Area Total)= 98

W2 - W2 - First Flush Runoff Calculations (Vrf)

A. Vrf = 1" x 1'/12" x 43560 sft/ac x A x C where A= 0.80 and where C= 0.77

Vrf = 1" x 1'/12" x 43560 sft/ac x 0.80 x 0.77 = 2,228 cf

W3 - W3 - Pre-Development Bankfull Runoff Calculations ($V_{bf\text{-}pre}$)

A. 2 year / 24 hour storm event: P= 2.35 in
B. Pre-Development CN (Good Cover Woods, Type D Soils) CN= 79
C. S = (1000 / CN) - 10 S= 2.658 in
D. Q = [(P-0.2S)^2] / [P+0.8S] Q= 0.739 in
E. Total Site Area excluding "Self-Crediting" BMPs 34,723 sft
F. $V_{bf\text{-}pre}$ = Q x (1/12) x Area $V_{bf\text{-}pre}$ = 2,137 cft

W4 - Pervious Cover Post-Development Bankfull Runoff Calculations ($V_{bf\text{-}per\text{-}post}$)

A. 2 year / 24 hour storm event: P= 2.35 in
B. Pervious Cover CN From Worksheet 1 CN= 79
C. S = (1000 / CN) - 10 S= 2.658 in
D. Q = [(P-0.2S)^2] / [P+0.8S] Q= 0.739 in
E. Pervious Cover Area from Worksheet 1 9,474 sft
F. $V_{bf\text{-}per\text{-}post}$ = Q x (1/12) x Area $V_{bf\text{-}per\text{-}post}$ = 583 cft

W5 - W5 - Impervious Cover Post-Development Bankfull Runoff Calculations ($V_{bf\text{-}imp\text{-}post}$)

A. 2 year / 24 hour storm event: P= 2.35 in
B. Impervious Cover CN From Worksheet 1 CN= 98
C. S = (1000 / CN) - 10 S= 0.204 in
D. Q = [(P-0.2S)^2] / [P+0.8S] Q= 2.122 in
E. Impervious Cover Area from Worksheet 1 25,249 sft
F. $V_{bf\text{-}imp\text{-}post}$ = Q x (1/12) x Area $V_{bf\text{-}imp\text{-}post}$ = 4,464 cft

W6 - W6 - Pervious Cover Post-Development 100-Year Runoff Calculations ($V_{100\text{-}per\text{-}post}$)

A. 100 year / 24 hour storm event: P= 5.11 in
B. Pervious Cover CN From Worksheet 1 CN= 79
C. S = (1000 / CN) - 10 S= 2.658 in
D. Q = [(P-0.2S)^2] / [P+0.8S] Q= 2.897 in
E. Pervious Cover Area from Worksheet 1 9,474 sft
F. $V_{100\text{-}per\text{-}post}$ = Q x (1/12) x Area $V_{100\text{-}per\text{-}post}$ = 2,287 cft

W7 - W7 - Impervious Cover Post-Development 100-Year Runoff Calculations ($V_{100\text{-}imp\text{-}post}$)

A. 2 year / 24 hour storm event: P= 5.11 in
B. Impervious Cover CN From Worksheet 1 CN= 98
C. S = (1000 / CN) - 10 S= 0.204 in
D. Q = [(P-0.2S)^2] / [P+0.8S] Q= 4.873 in
E. Impervious Cover Area from Worksheet 1 25,249 sft
F. $V_{bf\text{-}imp\text{-}post}$ = Q x (1/12) x Area $V_{bf\text{-}imp\text{-}post}$ = 10,253 cft

W8 - Time of Concentration (Tc-hrs)

A. Assume 15-minute minimum time of concentration Tc= 0.25 hr

W9 - Runoff Summary & On-Site Infiltration Requirement

A. Summary from Previous Worksheets

First Flush Volume (Vff)	**2,228 cft**
Pre-Development Bankfull Runoff Volume (Vbf-pre)	**2,137 cft**
Pervious Cover Post-Development Bankfull Volume (Vbf-per-post)	*583 cft*
Impervious Cover Post-Development Bankfull Volume (Vbf-imp-post)	*4,464 cft*
Total BF Volume (Vbf-post)	**5,047 cft**
Pervious Cover Post-Development 100-Year Volume (V100-per-post)	*2,287 cft*
Impervious Cover Post-Development 100-Year Volume (V100-imp-post)	*10,253 cft*
Total 100-Year Volume (V100)	**12,540 cft**

B. Determine Onsite Infiltration Requirement

Subtract the Pre-Development Bankfull from the Post-Development Bankfull Volume	
Total Post-Development Bankfull Volume (Vbf-post)	5,047 cft
Pre-Development Bankfull Runoff Volume (Vbf-pre)	2,137 cft
Bankfull Volume Difference	**2,910 cft**
Infiltration Requirement (Vinf)	**2,910 cft**

W10 - Detention/Retention Requirement

A. Q_p = 238.6 Tc^-0.82	743.63 cfs/(in x sq. mi)
B. Total Site Area excluding "Self-Crediting" BMPs	0.80 ac
C. Q_{100} = $Q_{100\text{-}per}$ + $Q_{100\text{-}imp}$ (from W6 and W7, respectively)	7.770 in
D. Peak Flow (PF) = Q_p x Q_{100} x Area / 640	7.20 cfs
E. Delta = PF - 0.15 x Area (ac)	7.08 cfs
[0.15 x Area (ac)]	*0.12 cfs*
F. V_{det} = Delta / PF x V_{100}	12,332 cft
Required Detention not including infiltration credit or penalty. Sediment Forebay Volume Required (5% of V100)	627 cft

Retention

A. Vret = 2 x V_{100}	25,080 cft

W11 - Determine Applicable BMPs and Associated Volume Credits

		Storage Volume (cft)		Design Infilt. Rate	Infilt. Volume in 6-hr	Total Volume
Proposed BMP	Area (sft)	Surface	In Soil	(in/hr)	Drawdown (cft)	Reduction (cft)
Subsurface Infiltration Bed	3720		837	10.00	18,600	19,437
				Total Volume Reduction Credit by Proposed Structural BMPs (cft)		12,332
				Runoff Volume Infiltration Requirement (Vinf) from W9 (cft)		2,910
				Runoff Volume Credit (cft)		9,422

W12 - Natural Features Inventory

There are no natural features located on this site due to it being an existing built out urban site.
Refer to **Sheet 14** for location and size of natural features.

Existing Natural Resources	Mapped (Yes, No, N/A)	Total Area (ac)	Protected Area (ac)
Water Bodies	N/A		
Floodplains	N/A		
Riparian Areas	N/A		
Wetlands	N/A		
Woodlands	N/A		
Natural Drainage Area	N/A		
Steep Slopes, 15%-25%	N/A		
Steep Slopes, over 25%	N/A		
Special Habitat Areas	N/A		
Other	N/A		
Total Existing		**0.00**	**0.00**

W13 - Site Summary of Infiltration & Detention

A. Stormwater Management Summary

Min Infiltration Requirement (V_{inf})	2,910 cft
Designed/Provided Infiltration Volume	12,332 cft
% Minimum Required Infiltration Provided	424 %
Total Calculated Detention Volume, V_{det}	12,332 cft
Net Required Detention Volume (V_{det} - Designed/Provided Infiltration Volume)	0 cft

Detention Outlet Calcualcations

A. Required Detention Volumes (Reduced by 6-hour infiltration)

Storm Event	Req'd Volume	less	Infil. Credit	=	Final Volume
First Flush	2,228 cft	-	12,332 cft	=	**(10,104)** cft
Bankfull	5,047 cft	-	12,332 cft	=	**(7,284)** cft
100 -year	12,332 cft	-	12,332 cft	=	**0** cft
100-year + Req'd Penalty	12,332 cft	-	12,332 cft	=	**0** cft
Forebay Volume Required (5% of 100-yr)				=	**0** cft

B. Detention Volumes Provided

Aggregate Bed

Elevation (ft)	Area (sft)	Depth (ft)	Volume (cft)	Cum. Volume (cft)
828.0	3,720	0.00	0	0
829.0	3,720	1.00	1,076	1,076
830.0	3,720	1.00	1,064	2,140
831.0	3,720	1.00	1,116	3,256
832.00	3,720	1.00	1,116	4,372
832.33	3,720	0.33	368	4,740
			Total Volume =	4,740

Perf. Pipe

Elevation (ft)	Area (sft)	Length (ft)	Depth (ft)	Volume (cft)	Cum. Volume (cft)
828.0	0	175	0.00	0	0
829.0	0.76	175	0.00	133	133
830.0	1.00	175	0.00	175	308
831.0	0.00	0.00	0.00	0	308
832.00	0.00	0.00	0.00	0	308
832.33	0.00	0.00	0.00	0	308
				Total Volume =	308

Total Detention

Elevation (ft)	Area (sft)	Depth (ft)	Volume (cft)	Cum. Volume (cft)
828.0	3,992	0.00	0	0
829.0	3,992	1.00	1,209	1,209
830.0	3,992	1.00	1,239	2,448
831.0	3,992	1.00	1,116	3,564
832.00	3,992	1.00	1,116	4,680
832.33	3,992	0.33	368	5,048
			Total Volume =	5,048

Storage Elevation Calculation

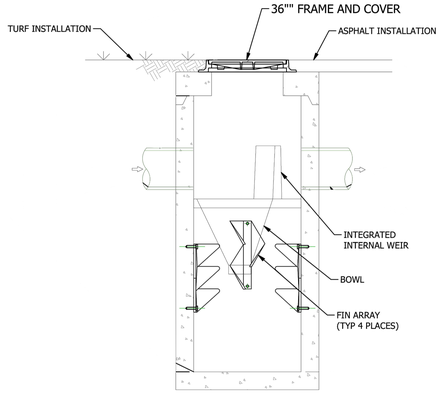
First Flush Elevation (Xff)= (830 - 829) / (2,448 - 1,209) = (Xff - 829) / (2,228 - 1,209) Xff = 829.82 ft

Bankfull Elevation (Xbf)= (832 - 832) / (5,048 - 4,680) = (Xbf - 832) / (5,047 - 4,680) Xbf = 832.33 ft

C. Full Infiltration Design

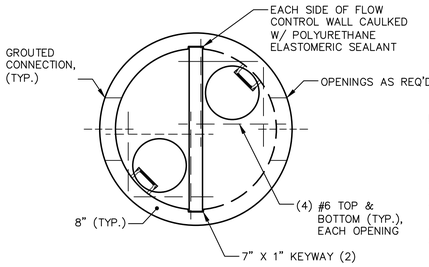
Total Storage Volume	12,332 cft
Infiltration Area	3720 sft
Infiltration Rate, Average	10.00 in/hr
Infiltration Flow Rate	3100.00 cft/hr
Time to Fully Drain	**4.0 hr**

This is less than 48 hours max, so the basin complies with the drawdown requirement.



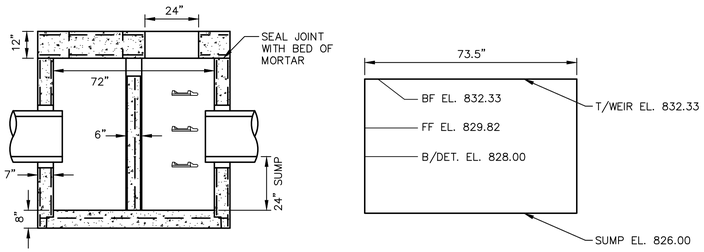
ADS BARRACUDA WATER QUALITY UNIT

SCALE : NTS



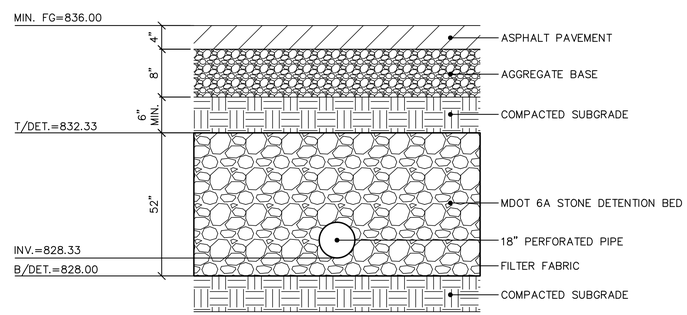
NOTES:

1. MANHOLE SECTIONS TO BE MANUFACTURED TO ASTM C-478 SPECIFICATIONS AND IN ACCORDANCE WITH NORTHERN CONCRETE PIPE, INC. (800-222-9918).
2. REINFORCING SHOWN FOR SCHEMATIC ONLY.
3. CONTRACTOR TO SEAL BETWEEN PRECAST WALL & BASE W/BUTYL ROPE.
4. INLET & OUTLET PIPES SIZE VARIES.
5. NUMBER, SIZE AND ELEVATION OF HOLES IN THE FLOW RESTRICTOR WALL SHALL BE IN ACCORDANCE WITH THE GOVERNING AGENCY.



OVERFLOW STRUCTURE (R02)

SCALE : NTS



UNDERGROUND DETENTION BED CROSS SECTION

SCALE : NTS

The underground utilities shown have been located from field survey information and existing records. The surveyor makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in-service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated. Although the surveyor does certify that they are located as accurately as possible from the information available.

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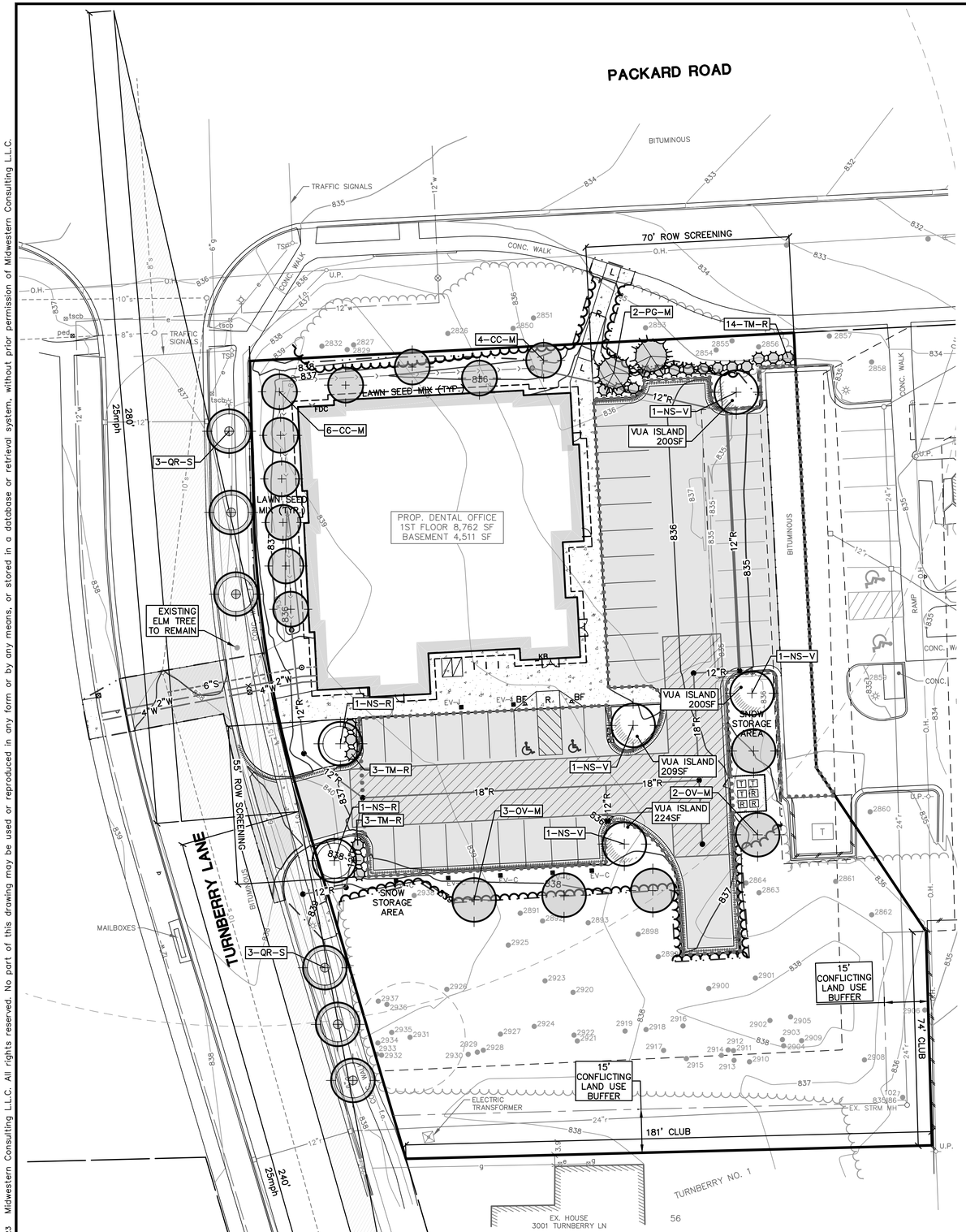
BLOSSOM DENTAL
SITE PLAN
STORMWATER MANAGEMENT DETAILS

11

DATE: 02/28/23
SHEET 11 OF 22
CADD: CAR
ENG.: TPH
PM: CMB
TECH: HJT
Y22127DA01

JOB No. 22127

REVISIONS:	REV. DATE
REVISED PER CITY REVIEW	05/15/23
REVISED PER CITY REVIEW	06/29/23



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LANDSCAPE REQUIREMENTS

	Required	Proposed
Right-of-Way Screening		
	10ft when VUA viewed from ROW 1 tree per 30lf; continuous hedge/screen 30inches in ht 70ft / 30ft = 3 trees and shrubs (Packard) 55ft / 30ft = 2 trees and shrubs (Turnberry)	Packard: 3 existing trees (2854,2855,2856), 14 proposed shrubs Turnberry: 2 proposed trees, 6 proposed shrubs
Vehicle Use Area		
Interior islands	1:20sf ratio for islands 14,859sf / 20 = 743sf islands	833 sf proposed
Bioretention island	if >750sf island required; 50% bioretention	Not applicable - Required interior landscape area less than 750sf
Interior island trees	1 tree per island; 1 tree per 250sf required island area; 743sf / 250sf = 3 trees	4 proposed trees
Snow pile storage	Identify locations on plan	Identified on Landscape Plan
Street Trees		
Street trees	1 tree per 45lf frontage minus curb cuts 188lf / 45lf = 5 trees (Packard) 256lf / 45lf = 6 trees (Turnberry)	Packard: 7 existing trees (2826,2827,2829,2832,2850,2851,2853) Turnberry: 6 proposed trees
Street tree canopy loss fee	total dbh removed - caliper replacement trees x $244 per inch	Not applicable - No street trees proposed to be removed
Conflicting Land Use Buffer		
When O adjacent to residential properties	15ft wide; 1 tree per 15lf, 50% evergreen; continuous screening 4ft high 74lf / 15lf = 5 trees and screening (east) 181lf / 15 lf = 13 trees and screening (south)	Landscape Modification Requested - Existing trees and vegetation satisfy screening requirement; planting required landscaping materials would be more detrimental to existing vegetation and would result in conditions less desirable or effective for landscaping and screening
Tree Mitigation		
	50% dbh of LM trees removed 83 inches x 0.5 = 41.5 inches 41.5 inches / 2.5 = 17 trees required	17 trees provided on site
Outdoor Refuse/Recycling		
		Screening enclosure around trash/recycle cart area

* When applying for a grading permit, a ROW Street Tree Permit will also be required. There is no cost for this permit. Include the project number on the application. If required, the Canopy Loss Fee will be invoiced through that permit.

PLANT SCHEDULE

Total	Street (-S)	VUA (-V)	ROW (-R)	Mitigation (-M)	Symbol	Botanical Name	Common Name	Size	Spacing	Root	Remarks
Trees											
10				10	CC	Cercis canadensis	Redbud	2.5" cal.	15' o.c.	B&B	
6		4	2		NS	Nyssa sylvatica	Black Gum	2.5" cal.	15' o.c.	B&B	Single Stem
5				5	OV	Ostrya virginiana	Hop Hornbeam	2.5" cal.	15' o.c.	B&B	
2				2	PG	Picea glauca	White Spruce	8' ht	15' o.c.	B&B	Full
6	6				QR	Quercus robur x alba 'Crimschmidt'	Crimson Spire Oak	2.5" cal.	10' o.c.	B&B	fastigiate
29	6	4	2	17	Total						
Shrubs											
20			20		TM	Taxus x media 'Densiformis'	Densiformis yew	18-24" ht	5' o.c.	#5 cont.	

ALL SPECIES DEVIATIONS MUST BE APPROVED IN WRITING BY THE CITY OF ANN ARBOR PRIOR TO INSTALLATION

LANDSCAPE LEGEND

- PROPOSED CANOPY TREE (INTERIOR VUA)
- PROPOSED CANOPY TREE (RIGHT-OF-WAY SCREEN)
- PROPOSED CANOPY TREE (STREET TREE)
- PROPOSED CANOPY TREE (MITIGATION)
- PROPOSED EVERGREEN TREE (MITIGATION)
- PROPOSED DECIDUOUS SHRUBS
- PROPOSED EVERGREEN SHRUBS
- EXISTING TREE TO REMAIN
- PROPOSED LAWN AREA
- PROPOSED EDGING
- VEHICULAR USE AREA LIMITS
- CONFLICTING LAND USE BUFFER
- SIGHT TRIANGLE

SCALE: 1" = 20'

0 20 40 60

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BLOSSOM DENTAL
SITE PLAN
LANDSCAPE PLAN

12

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722127LP01

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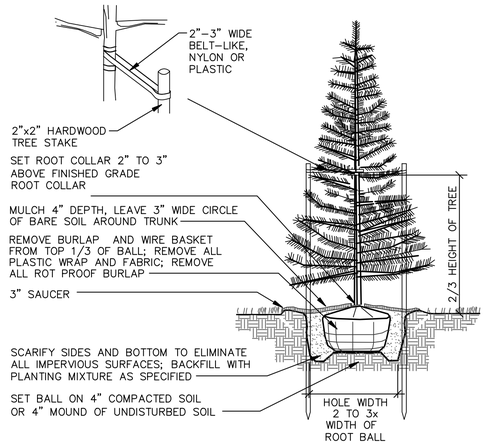
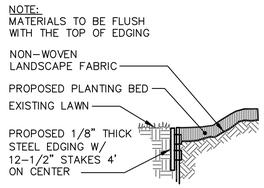
NOTE: A: STAKING IS ONLY REQUIRED IF THE SITE IS WINDY OR THE TREES ARE GREATER THAT 3" CALIPER. IF TREES MUST BE STAKED, THE STAKED SHALL BE REMOVED IN ONE YEAR.



EVERGREEN TREE PLANTING DETAIL

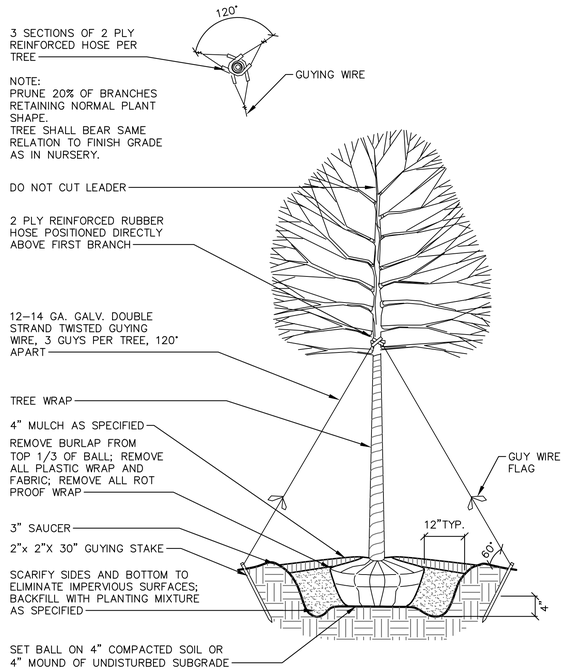
NOT TO SCALE

NOTE:
MATERIALS TO BE FLUSH WITH THE TOP OF EDGING



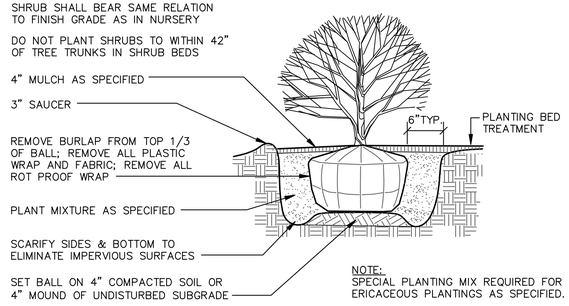
STEEL EDGING DETAIL

NOT TO SCALE



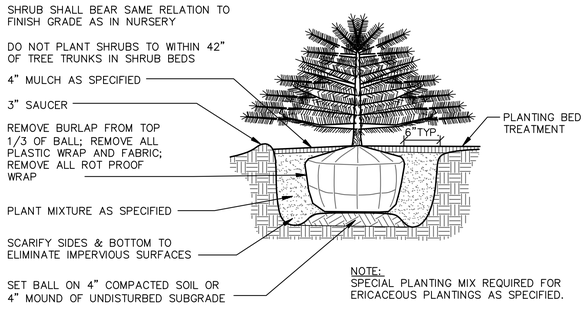
DECIDUOUS TREE - PLANTING DETAIL

NOT TO SCALE



SHRUB PLANTING DETAIL

NOT TO SCALE



EVERGREEN SHRUB PLANTING DETAIL

NOT TO SCALE

LANDSCAPE NOTES

1. For any plant quantity discrepancies between the plan view and the plant schedules, the plant schedule shall take precedence.
2. Plant materials shall be selected and installed in accordance with standards established by the City of Ann Arbor.
3. In-ground automatic irrigation shall be provided for all landscaped areas or water outlets shall be provided within 150 feet of all required plantings.
4. All diseased, damaged or dead material shown on the site plan as proposed plantings shall be replaced by the end of the following growing season.
5. Restore disturbed areas with a minimum of four (4) inches of topsoil and then seed/ fertilize/mulch.
6. All disturbed areas not to be seeded with seed mixes identified on the Landscape Plan shall be lawn areas. Fertilizer for the initial installation of lawns shall provide not less than one (1) pound of actual nitrogen per 1,000 sq ft of lawn area and shall contain not less than two percent (2%) potassium and four percent (4%) phosphoric acid.
   Lawn (turfgrass) seed mix shall consist of:
   - 15% Rugby Kentucky Bluegrass
   - 10% Park Kentucky Bluegrass
   - 40% Ruby Creeping Red Fescue
   - 15% Pennifine Perennial Ryegrass
   - 20% Scaldis Hard Fescue

   Seed shall be applied at a rate of five pounds (5 lbs) per 1000 sq ft. Mulch within 24 hours with two (2) tons of straw per acre, or 71 bales of excelsior mulch per acre. Anchor straw mulch with spray coating of adhesive material applied at the rate of 150 gals. / acre.
7. After the first growing season, only fertilizers that contain NO phosphorus shall be used on the site.
8. All seeded areas with slopes less than 1:3 (one vertical foot for every 3 horizontal feet) shall be mulched with straw mulch at the rate of two (2) bales per 1,000 square feet. All seeded areas with slopes greater than 1:3 shall be seeded and biodegradable erosion control blanket North American Green SC150, or equivalent, shall be applied with biodegradable stakes.
9. Deciduous plants shall be planted between March 1 and May 15 and from October 1 until the prepared soil becomes frozen. Evergreen plants shall be planted between March 1 and June 1 and from August 15 to September 15.
10. All planting beds are to receive four (4) inches of shredded hardwood bark mulch.
11. All trees to be located a minimum of 10 feet from public utilities.
12. All single trunk, deciduous trees shall have a straight and a symmetrical crown with a central leader. One sided trees or those with thin or open crowns shall not be accepted.
13. All evergreen trees shall be branched fully to the ground, symmetrical in shape and have not been sheared in the last three (3) growing seasons.
14. All compacted subgrade soils in proposed landscape areas shall be tilled to a minimum 12-inch depth prior to placement of topsoil, geotextile fabric, or other planting media as specified.
15. Proposed trees will be planted a minimum of 15 feet apart.
16. Planting Soil: Existing, in-place or stockpiled topsoil. Supplement with imported topsoil as needed. Verify suitability of existing surface soil to produce viable planting soil. Final approval of soil composition shall be provided by the landscape contractor. Remove stones, roots, plants, sod, clods, clay lumps, pockets of coarse sand, concrete slurry, concrete layers or chunks, cement, plaster, building debris, and other extraneous materials harmful to plant growth. Mix surface soil with the following soil amendments to produce planting soil:
    a. Ratio of Loose Compost to Topsoil by Volume: 1:4.
    b. Weight of Lime per 1000 Sq. Ft.: Amend with lime only on recommendation of soil test to adjust soil pH.
    c. Weight of Sulfur or Aluminum Sulfate per 1,000 Sq. Ft.: Amend with sulfur or aluminum sulfate only on recommendation of soil test to adjust soil pH.
    d. Volume of Sand: Amend with sand only on recommendation of Landscape Architect to adjust soil texture.
    e. Weight of Slow-Release Fertilizer per 1,000 Sq. Ft.: Amend with fertilizer only on recommendation of soil test to adjust soil fertility.
17. Snow storage areas are located along the edges and corners of parking areas as shown on the plan.
18. During the establishment period for the installed deciduous mitigation trees (1-2 years as to be determined by certified arborist):
    a. The trunk of young trees shall be wrapped in late autumn and wrap shall be removed in early spring
    b. Burlap screening or wrapping shall be installed on the southwest and windward sides from late autumn to early spring.
    c. Trees shall be watered in spring and autumn and during dry conditions at a frequency determined by certified arborist.
    d. Mulching around trees shall be maintained at a depth of 2 to 3 inches.
19. All landscaping or other screening material within a sight triangle shall be no greater than 30 inches tall, and all trees within a sight triangle shall have all branches trimmed to provide clear vision for a vertical height of 8 feet above the roadway surface. Evergreen trees shall not be permitted within sight triangles.
20. All species deviations must be approved in writing by the City of Ann Arbor prior to installation.
21. The City of Ann Arbor has adopted an ordinance limiting phosphorus in fertilizer to assist in compliance with the State mandated TMDL for phosphorus within the Middle Huron River basin. Applications of fertilizer beyond the initial topsoil and seeding shall be a fertilizer with no phosphorus.

Maintenance:

1. Maintain plantings by pruning, cultivating, watering, weeding, fertilizing, mulching, restoring planting saucers, adjusting and repairing tree-stabilization devices, resetting to proper grades or vertical position, and performing other operations as required to establish healthy, viable plantings. Spray or treat as required to keep trees and shrubs free of insects and disease.
2. Fill in as necessary soil subsidence that may occur because of settling or other processes. Replace mulch materials damaged or lost in areas of subsidence.
3. Apply treatments as required to keep plant materials, planted areas, and soils free of pests and pathogens or disease. Use integrated pest management practices whenever possible to minimize the use of pesticides and reduce hazards. Treatments include physical controls such as hosing off foliage, mechanical controls such as traps, and biological control agents.
4. Contractor shall warranty all plant material and trees to remain alive and be in healthy, vigorous and like new condition for the specified period from installation to Substantial Completion. The entire Landscaping Project, including but not limited to: plants (perennials), trees, shrubs, mulches, shrubs, etc are to be under Warranty for One Year after Substantial Completion date of the Project. At the end of the specified One Year Warranty period the Owner's Representative will inspect plant material for compliance. Contractor shall replace, in accordance with the drawings and specifications, all plants, trees, shrubs, etc or as determined by the Owner's Representative, are in an unhealthy or unsightly condition. Warranty shall not include damage or loss of plants, trees, and shrubs caused by fires, floods, freezing rains, lightning storms, or winds over 75 miles per hour, acts of vandalism or negligence on the part of the owner, or any other incident beyond landscape contractor's control.
5. Watering: The contractor shall keep seed moist for optimum plant growth (1" of total water per week, including rainfall) until the grass and/or flowers are four (4) inches high typical.
6. Protection from traffic and erosion in newly seeded areas is the responsibility of the contractor. Safety fences and/or silt fence with appropriate signage may be used at the contractor's expense until the grasses and flowers are fully established.
7. Erosion shall be repaired by the contractor.
8. Turf installations shall meet the following criteria as determined by Owner:
    a. Satisfactory Seeded Turf: At end of maintenance period, a healthy, uniform, close stand of grass has been established, free of weeds and surface irregularities, with coverage exceeding 90 percent over any 10 sq. ft. and bare spots not exceeding 5 by 5 inches.
    b. Satisfactory Sodded Turf: At end of maintenance period, a healthy, well-rooted, even-colored, viable turf has been established, free of weeds, open joints, bare areas, and surface irregularities.
    c. Use specified materials to reestablish turf that does not comply with requirements and continue maintenance until turf is satisfactory.

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BLOSSOM DENTAL

SITE PLAN
LANDSCAPE NOTES AND DETAILS

13

DATE: 02/28/23
SHEET 13 OF 22
CADD: CAR
ENG: TPH
PM: CMB
TECH: HJT
/22127LP01

JOB No. 22127

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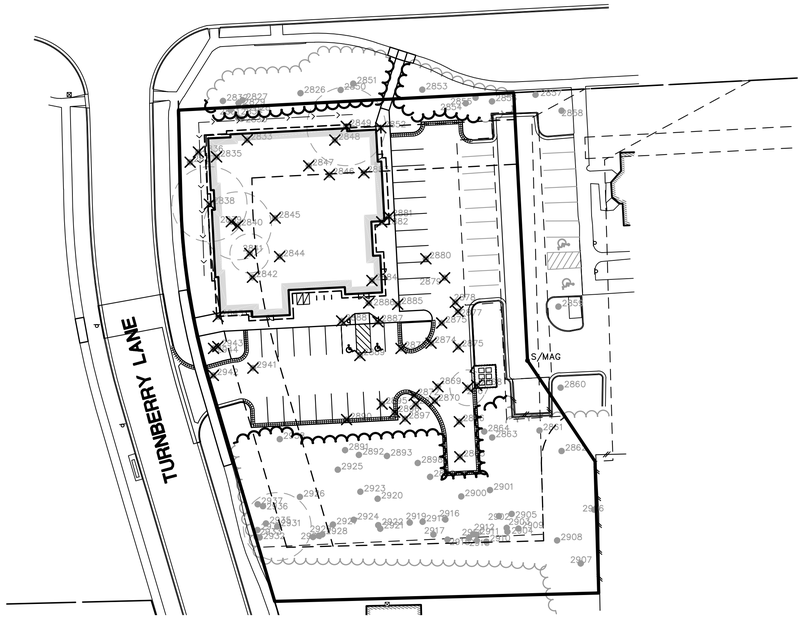
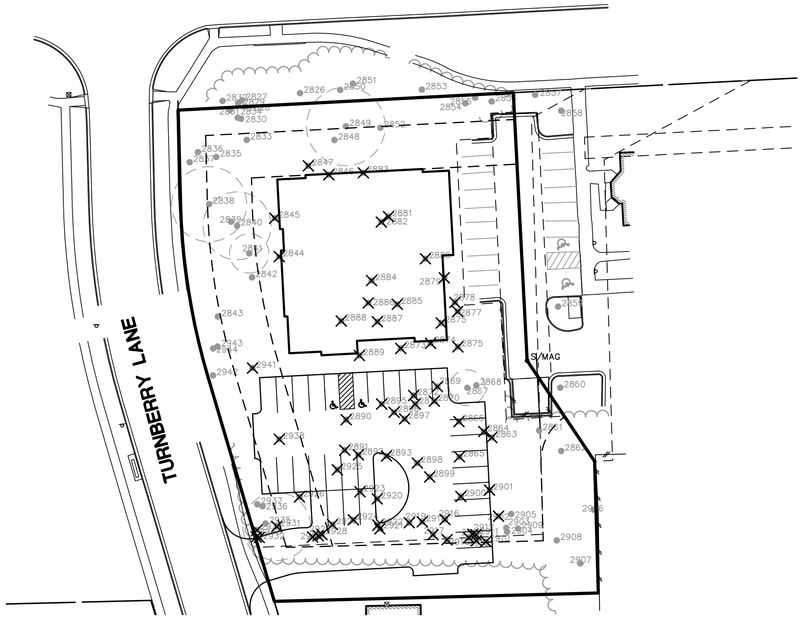


PROS:
- BUILDING PLACEMENT TO MEET REQUIRED FRONT SETBACKS
- GOOD PEDESTRIAN ACCESS TO BUILDING
- ACCESS DRIVE OPTIMAL DISTANCE FROM INTERSECTION AND RESIDENTIAL PROPERTIES
- PARKING BEHIND BUILDING (NO PARKING IN FRONT YARD)
- UTILIZES EXISTING PARKING EASEMENT WITH PROPERTY TO EAST
- MAINTAINS LARGE NATURAL VEGETATION BUFFER TO RESIDENTIAL PROPERTIES TO SOUTH AND SOUTHEAST
- ADEQUATE EMERGENCY VEHICLE AND SOLID WASTE ACCESS
- PRESERVES 1 LANDMARK TREE

CONS:
- REMOVAL OF 5 LANDMARK TREES

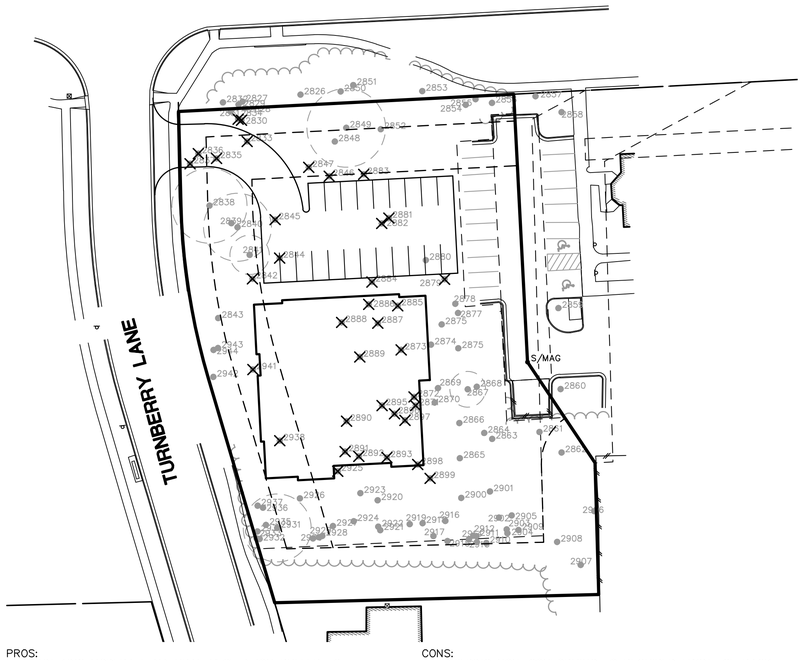
PROPOSED SITE LAYOUT - NATURAL FEATURES PLAN



PROS:
- PARKING BEHIND BUILDING (NO PARKING IN FRONT YARD)
- UTILIZES EXISTING PARKING EASEMENT WITH PROPERTY TO EAST
- PRESERVES 5 LANDMARK TREES

CONS:
- BUILDING NON-CONFORMING TO REQUIRED FRONT SETBACKS
- ACCESS DRIVEWAY AND PARKING LOT IMMEDIATELY ADJACENT TO RESIDENTIAL PROPERTY TO SOUTH
- POOR EMERGENCY VEHICLE AND SOLID WASTE ACCESS
- REMOVAL OF 1 LANDMARK TREE
- REMOVAL OF NEARLY ALL VEGETATION ON SITE

ALTERNATIVE SITE LAYOUT #1



PROS:
- MAINTAINS MODERATE NATURAL VEGETATION BUFFER TO RESIDENTIAL PROPERTIES TO SOUTH AND SOUTHEAST
- PRESERVES ALL 6 LANDMARK TREES

CONS:
- BUILDING NON-CONFORMING TO REQUIRED FRONT SETBACK ON PACKARD ROAD
- POOR PEDESTRIAN ACCESS TO BUILDING
- ACCESS DRIVE TOO CLOSE TO INTERSECTION
- PARKING IN FRONT YARD ALONG PACKARD ROAD
- DOES NOT UTILIZE EXISTING PARKING EASEMENT WITH PROPERTY TO EAST
- POOR EMERGENCY VEHICLE AND SOLID WASTE ACCESS

ALTERNATIVE SITE LAYOUT #2

SCALE: 1" = 40'

0 40 80 120

Know what's below. Call before you dig.

NATURAL FEATURES SUMMARY

1. NO KNOWN ENDANGERED SPECIES HABITATS EXIST ON THIS SITE.
2. PER THE ALTA/NSPS LAND TITLE SURVEY: THIS PARCEL IS LOCATED IN ZONE X OF THE FLOOD INSURANCE RATE MAP NUMBER 26161C0406E WHICH BEARS AN EFFECTIVE DATE OF 4/3/2012 AND IS NOT IN A SPECIAL FLOOD HAZARD AREA.
3. NO WOODLANDS ARE LOCATED ON THIS SITE.
4. NO STREET TREES WILL BE REMOVED AS PART OF THIS PROJECT.
5. THERE ARE SIX (6) LANDMARK TREES LOCATED THROUGHOUT THE SITE. FIVE (5) LANDMARK TREES WILL BE REMOVED AS PART OF THE PROPOSED PROJECT. CONSTRUCTION FENCE WILL BE INSTALLED AT THE LIMITS OF THE CRITICAL ROOT ZONE FOR ALL LANDMARK TREES TO REMAIN.
6. NO STEEP SLOPES EXIST ON THIS SITE.
7. NO EXISTING OR PROPOSED WATERCOURSES ARE LOCATED ON THIS SITE.
8. NO IDENTIFIED WETLANDS EXIST ON THIS SITE.

TREE MITIGATION SUMMARY

MITIGATION IS PROVIDED ON-SITE; SEE LANDSCAPE PLAN FOR ADDITIONAL MITIGATION DETAILS.

LEGEND

838	EXIST. CONTOUR
838	PROP. CONTOUR
U.P.	EXIST. UTILITY POLE
	GUY WIRE
OH	EXIST. OVERHEAD UTILITY LINE
	PROP. LIGHT POLE
	FENCE
	SILTFENCE
	LIMITS OF DISTURBANCE
	CONSTRUCTION FENCE
	EXISTING TREE
	EXISTING LANDMARK TREE AND CRITICAL ROOT ZONE
	TREE TO BE REMOVED

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734-645-6063

BLOSSOM DENTAL

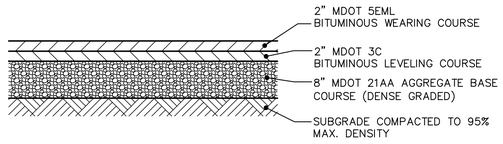
SITE PLAN
NATURAL FEATURES AND ALTERNATIVE ANALYSIS PLAN

14

JOB No. 22127

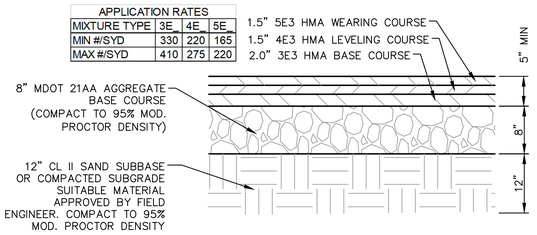
DATE: 02/28/23
SHEET 14 OF 22
CADD: CAR
ENG: TPH
PM: CMB
TECH: HJT
/22127NF01

REVISIONS:	REV. DATE
REVISED PER CITY REVIEW	05/01/23
REVISED PER CITY REVIEW	06/29/23



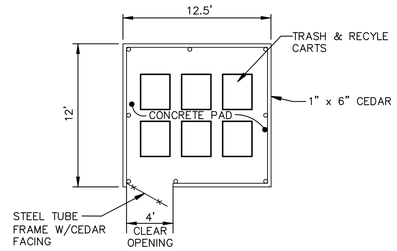
TYPICAL PARKING LOT CROSS SECTION DETAIL

NOT TO SCALE
MINIMUM REQUIREMENT

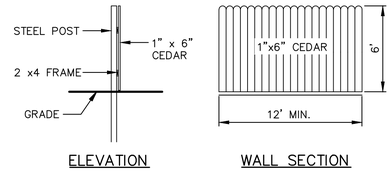


BITUMINOUS PAVEMENT - PUBLIC R.O.W.

NOT TO SCALE



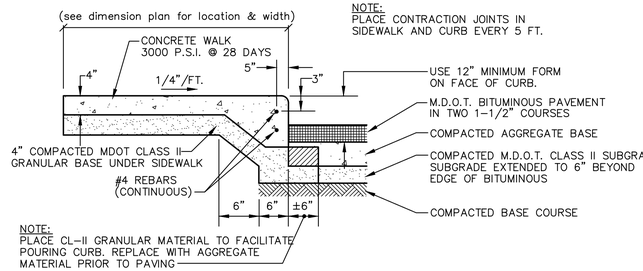
PLAN VIEW



ELEVATION WALL SECTION

TRASH/RECYLE CART ENCLOSURE DETAIL

NOT TO SCALE

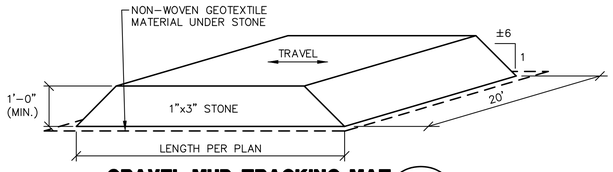


NOTE:
PLACE CONTRACTION JOINTS IN SIDEWALK AND CURB EVERY 5 FT.

NOTE:
PLACE CL-II GRANULAR MATERIAL TO FACILITATE POURING CURB. REPLACE WITH AGGREGATE MATERIAL PRIOR TO PAVING

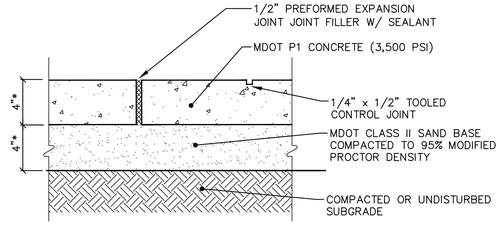
TYPICAL INTEGRAL WALK & CURB

NOT TO SCALE



GRAVEL MUD TRACKING MAT (60t)

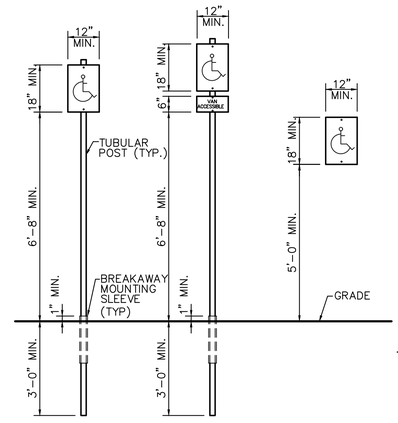
NOT TO SCALE



NOTE:
* INCREASE CONCRETE WALK TO 6" WHEN CROSSING A SINGLE-FAMILY OR DOUBLE-FAMILY DRIVEWAY, AND TO 8" FOR COMMERCIAL DRIVE CROSSINGS. USE 6" CLASS II SAND BASE AT RESIDENTIAL DRIVE CROSSINGS, AND 8" 21AA AGGREGATE BASE (98% MODIFIED PROCTOR) AT COMMERCIAL DRIVE CROSSINGS.

CONCRETE WALK DETAIL

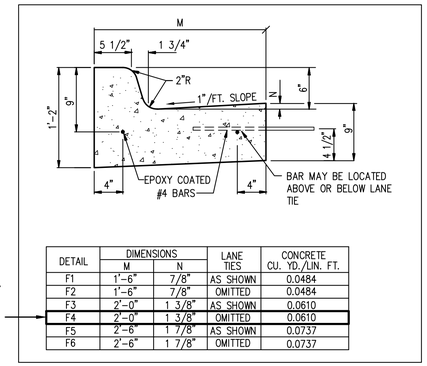
NOT TO SCALE



POST MOUNTED SIGNS WALL MOUNTED SIGNS

TYPICAL HANDICAP PARKING SIGNS

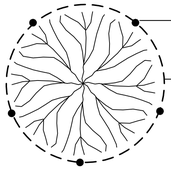
SCALE: 1/2" = 1'-0"

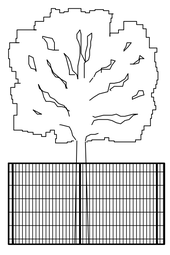


DETAIL	DIMENSIONS M	DIMENSIONS N	LANE TIES	CONCRETE CU. YD./LIN. FT.
F1	1'-6"	7/8"	AS SHOWN	0.0484
F2	1'-6"	7/8"	OMITTED	0.0484
F3	2'-0"	1 3/8"	AS SHOWN	0.0610
F4	2'-0"	1 3/8"	OMITTED	0.0610
F5	2'-6"	1 7/8"	AS SHOWN	0.0737
F6	2'-6"	1 7/8"	OMITTED	0.0737

MDOT TYPE F CONCRETE CURB / GUTTER

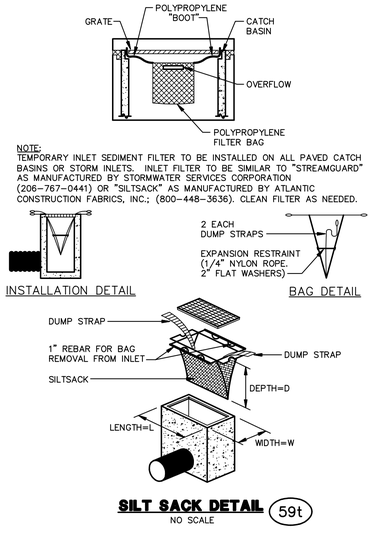
NOT TO SCALE





TREE PROTECTION DETAIL (54t)

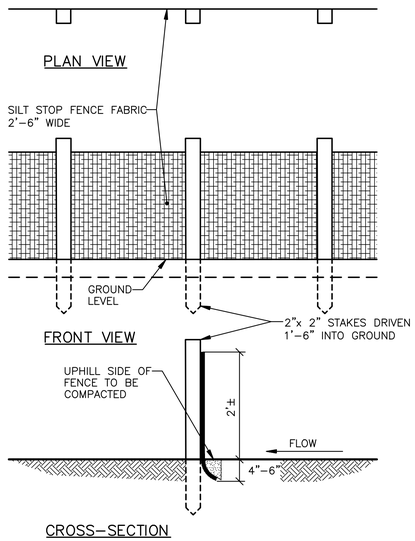
NOT TO SCALE



NOTE:
TEMPORARY INLET SEDIMENT FILTER TO BE INSTALLED ON ALL PAVED CATCH BASINS OR STORM INLETS. INLET FILTER TO BE SIMILAR TO "STREAMGUARD" AS MANUFACTURED BY STORMWATER SERVICES CORPORATION (206-767-0441) OR "SILTSACK" AS MANUFACTURED BY ATLANTIC CONSTRUCTION FABRICS, INC.; (800-448-3636). CLEAN FILTER AS NEEDED.

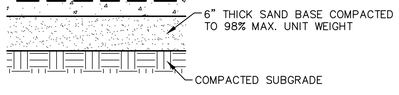
SILT SACK DETAIL (59t)

NO SCALE



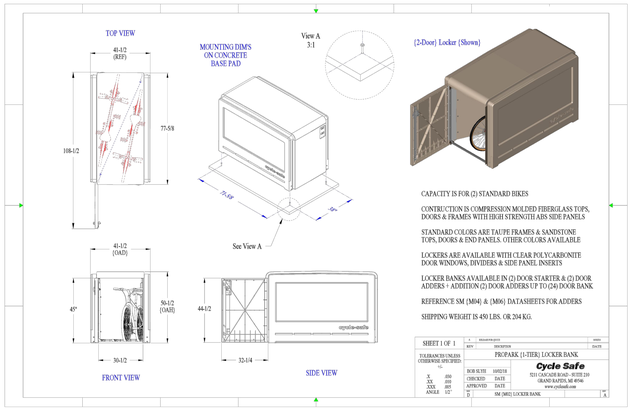
SILT FENCE DETAIL (55t)

NOT TO SCALE



8" REINFORCED CONCRETE PAD

NOT TO SCALE



TYPICAL HANDICAP PARKING SIGNS

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

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BLOSSOM DENTAL

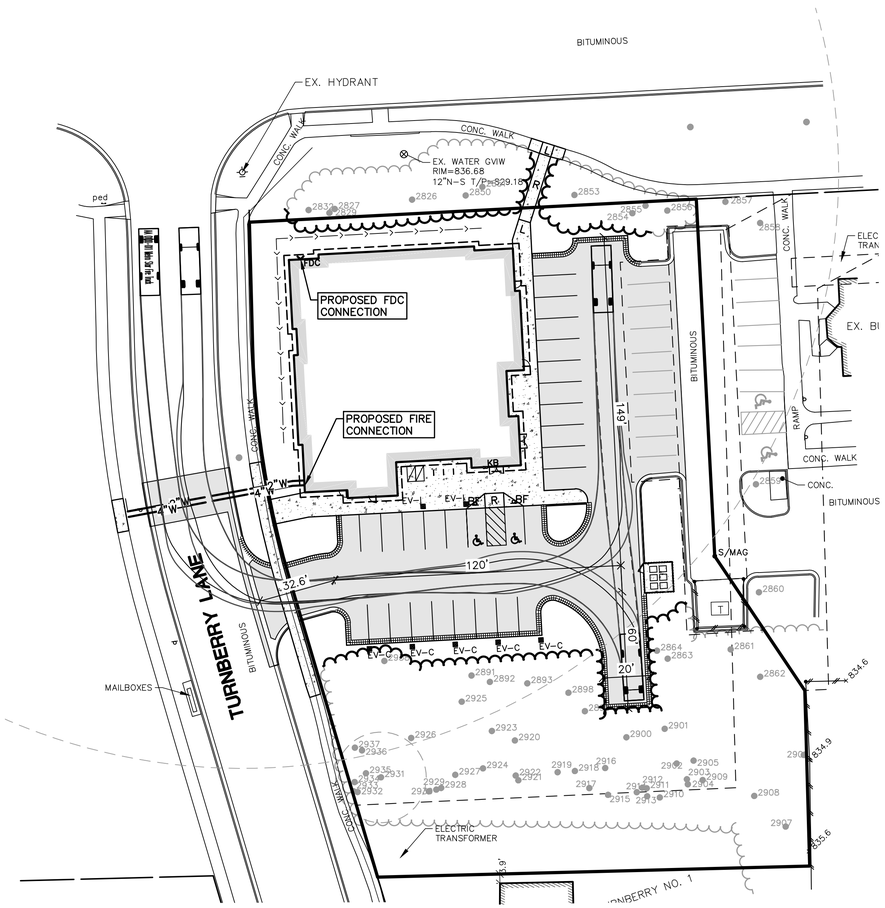
SITE PLAN DETAILS

15

DATE: 02/28/23
SHEET 15 OF 22
CADD: CAR
ENG: TPH
PM: CMB
TECH:
/22127DT01

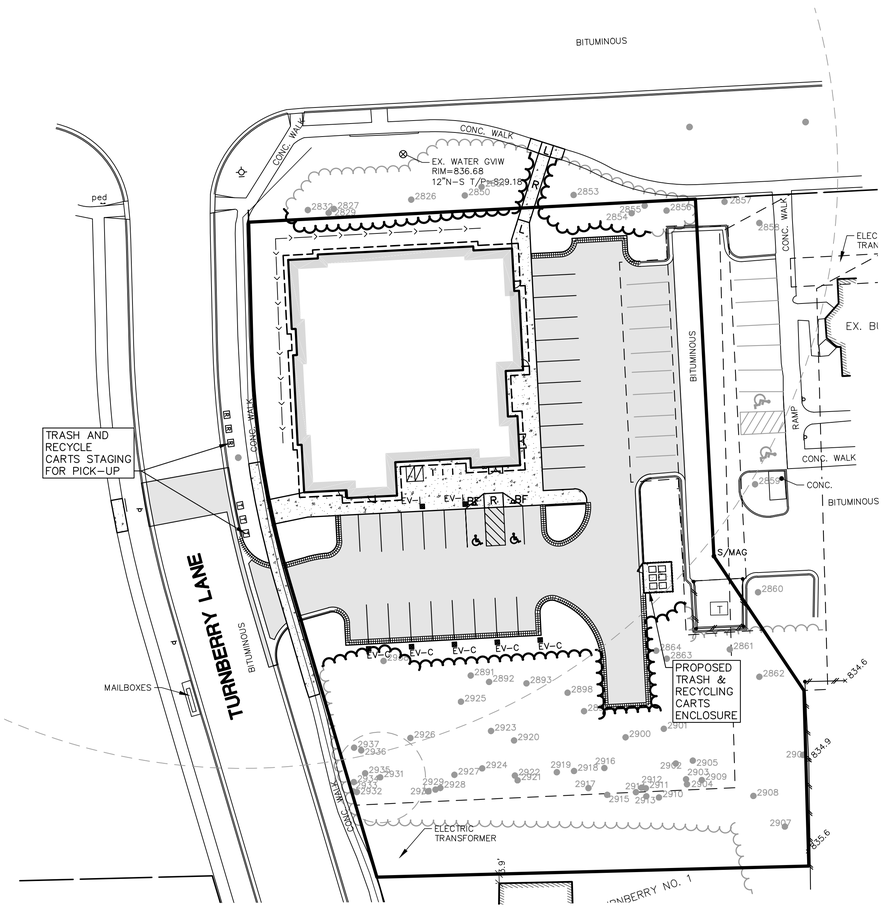
REVISIONS:	REV.	DATE
REVISED PER CITY REVIEW	1	05/26/23
REVISED PER CITY REVIEW	2	06/29/23

JOB No. 22127



FIRE PROTECTION PLAN

SCALE: 1"=30'

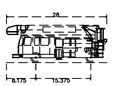


SOLID WASTE PLAN

SCALE: 1"=30'

FIRE PROTECTION NOTES

1. ALL BUILDINGS ARE WITHIN A 250' HYDRANT RADIUS.
2. ALL PARTS OF EXTERIOR WALLS ARE WITHIN A 400' HOSE LAY.
3. CONSTRUCTION SEQUENCE
   - A. HYDRANTS SHALL BE IN SERVICE PRIOR TO VERTICAL BUILDING CONSTRUCTION.
   - B. HYDRANTS PROVIDING COVERAGE FOR BUILDINGS SHALL BE IN SERVICE BEFORE COMBUSTIBLE MATERIALS ARE PLACED.
   - C. STORAGE AREAS FOR CONSTRUCTION MATERIAL MUST BE SO AS NOT TO INTERFERE WITH EMERGENCY SITE ACCESS.
4. ANY NEW OR RELOCATED HYDRANTS WITH STEAMER CONNECTIONS MUST BE INSTALLED SUCH THAT THE STEAMER CONNECTION IS FACING THE FIRE LANE.
5. DURING DETAILED ENGINEERING, THE SITE ADDRESS LOCATION(S) WILL BE COORDINATED WITH THE FIRE DEPARTMENT TO ENSURE THEY ARE CLEARLY LABELED AND VISIBLE WHEN APPROACHING THE BUILDING UNITS.
6. STORAGE AREA FOR CONSTRUCTION MATERIALS SHALL NOT INTERFERE WITH FIRE/EMERGENCY SITE ACCESS.
7. EXISTING FIRE HYDRANTS SHALL REMAIN IN SERVICE DURING CONSTRUCTION.
8. EMERGENCY RESPONDER RADIO COVERAGE MUST MEET REQUIREMENTS AS SPECIFIED IN THE IFC SECTION 510.



AA 0100-011 Metro Star Fire Truck

Overall Length	28.000ft
Overall Width	8.250ft
Overall Body Height	10.432ft
Min Body Ground Clearance	0.862ft
Track Width	8.000ft
Lock-to-Lock time	6.00s
Curb to Curb Turning Radius	29.470ft

FIRE ENGINE DETAIL

SCALE : NTS

SOLID WASTE NOTES

1. SOLID WASTE GENERATED BY THE BUILDING IS TO BE SERVED BY ONE DUMPSTER. THE OWNER HAS REACHED AN AGREEMENT WITH THE ADJACENT PROPERTY OWNER TO EAST (ANN ARBOR CAT CLINIC) TO SHARE USE OF EXISTING DUMPSTER LOCATED ON PROPERTY WITHIN EASEMENT. PROPOSED SOLID WASTE ENCLOSURE TO BE USED FOR STORAGE OF RECYCLING CARTS.
2. REFUSE TO BE COLLECTED ONCE PER WEEK PER CURRENT SCHEDULE.
3. SITE SHALL BE FULLY SERVICED BY CARTS IF SHARED DUMPSTER USE CANNOT BE ACCOMMODATED. SOLID WASTE ENCLOSURE SHALL BE BUILT TO ADEQUATELY STORE ALL CARTS NECESSARY TO SERVICE BOTH TRASH AND RECYCLING.

LEGEND

- EXIST. WATER MAIN
- PROP. WATER MAIN
- EXIST. HYDRANT
- PROP. HYDRANT
- EXIST. GATE VALVE IN BOX
- PROP. GATE VALVE IN BOX
- EXIST. GATE VALVE IN WELL
- PROP. GATE VALVE IN WELL
- EXIST. CURB STOP & BOX
- PROP. CURB STOP & BOX
- REDUCER
- EXIST. BLOW-OFF
- PROP. BLOW-OFF
- POST INDICATOR VALVE
- POST INDICATOR VALVE
- THRUST BLOCK
- EXIST. FIRE DEPARTMENT CONNECTION
- PROP. FIRE DEPARTMENT CONNECTION
- PROP. KNOXBOX

The underground utilities shown have been located from field survey information and existing records. The surveyor makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in-service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated. Although the surveyor does certify that they are located as accurately as possible from the information available.

SCALE: 1" = 30'

0 30 60 90

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BLOSSOM DENTAL

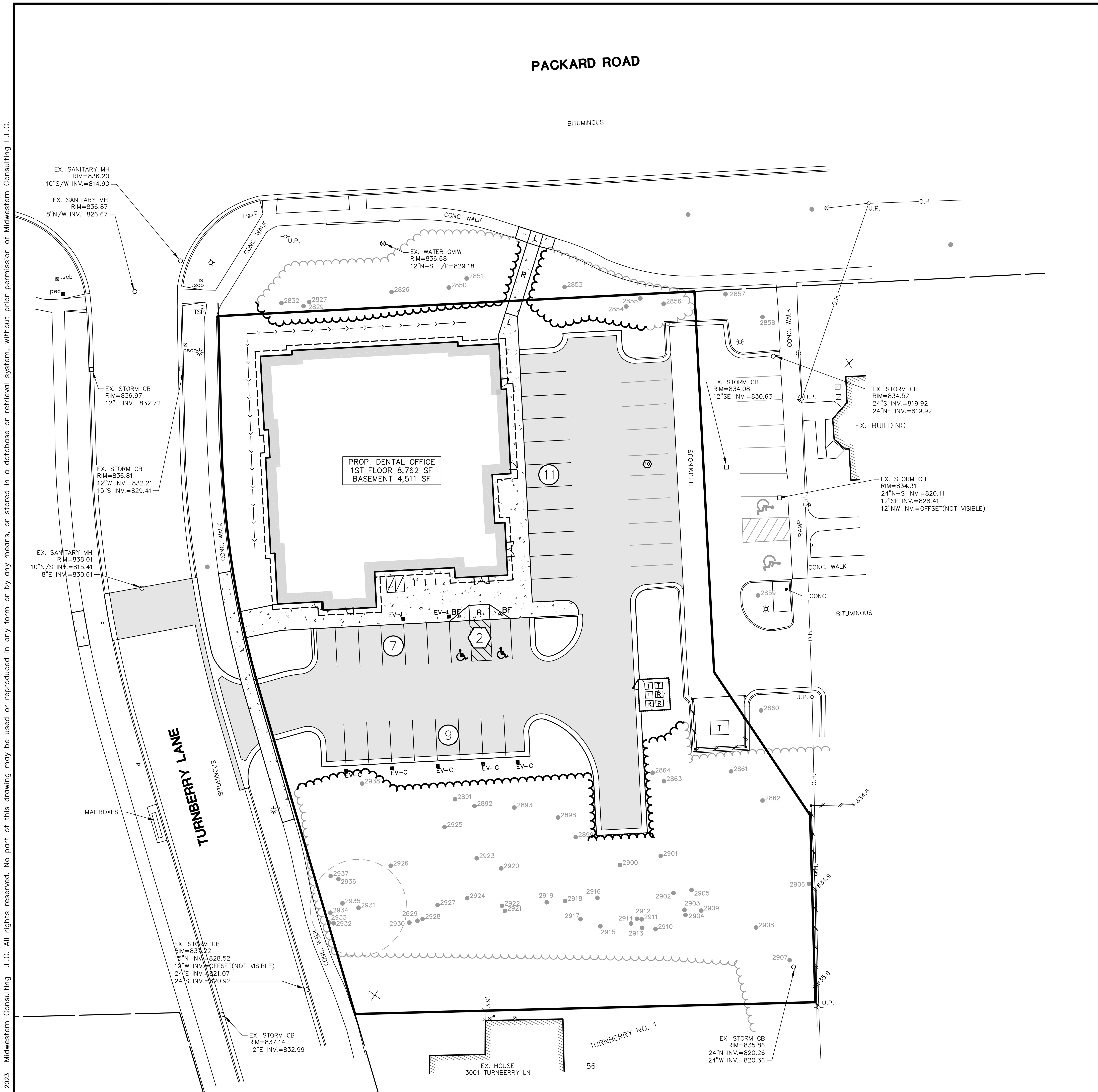
SITE PLAN
FIRE PROTECTION & SOLID WASTE PLAN

16

JOB No. 22127

REVISIONS:	REV. DATE
REVISED PER CITY REVIEW	05/17/23
REVISED PER CITY REVIEW	06/29/23

DATE: 02/28/23
SHEET 16 OF 22
CADD: CAR
ENG: TPH
PM: CMB
TECH: HJT
/22127FP01



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

SCALE: 1" = 20'

0 20 40 60

LEGEND

- NUMBER OF STANDARD PARKING SPACES IN ROW
- NUMBER OF SMALL CAR PARKING SPACES IN ROW
- NUMBER OF BARRIER FREE PARKING SPACES IN ROW
- BF BARRIER FREE PARKING SIGN
- L R BARRIER FREE SIDEWALK RAMP & LANDING
- PROP. CURB & GUTTER
- PROP.SPILL OUT CURB & GUTTER
- PROP. BITUMINOUS PAVEMENT
- PROP. CONCRETE PAVEMENT
- PROP. HEAVY DUTY CONCRETE
- SIGN
- PROP. SINGLE LIGHT
- EV-I PROP. VEHICLE CHARGING STATION-INSTALLED
- EV-C PROP. VEHICLE CHARGING STATION-CAPPED FOR FUTURE

EV PARKING SUMMARY

Use	Max Parking	Parking Provided	EV Ordinance Requirements			
			EV-I Type	Ordinance	Required	Provided
Medical/Dental Office	74	34	EV-I	10%	4	4
			EV-C	25%	9	9
				Total	13	13

Parking Requirements			
Use Type	Total SF	Space/SF	Max Total Spaces
Medical/Dental Office	13,273	1 per 180SF Max	74

CHARGEPOINT EV CHARGING STATION

DEVELOPER PROPOSING TO USE CHARGEPOINT CT4000 LEVEL 2 COMMERCIAL CHARGING STATIONS. THIS MODEL ALLOWS FOR 2 ELECTRIC VEHICLE CHARGING STATIONS TO BE ON ONE SERVICE PEDESTAL. THIS IS SUBJECT TO CHANGE BASED UPON ANALYSIS OF ALL OPTIONS FOR EV STATION PROVIDERS AND FINAL DETERMINATION BY DEVELOPER.

The underground utilities shown have been located from field survey information and existing records. The surveyor makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in-service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated. Although the surveyor does certify that they are located as accurately as possible from the information available.

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BLOSSOM DENTAL

SITE PLAN
ELECTRIC VEHICLE PARKING PLAN

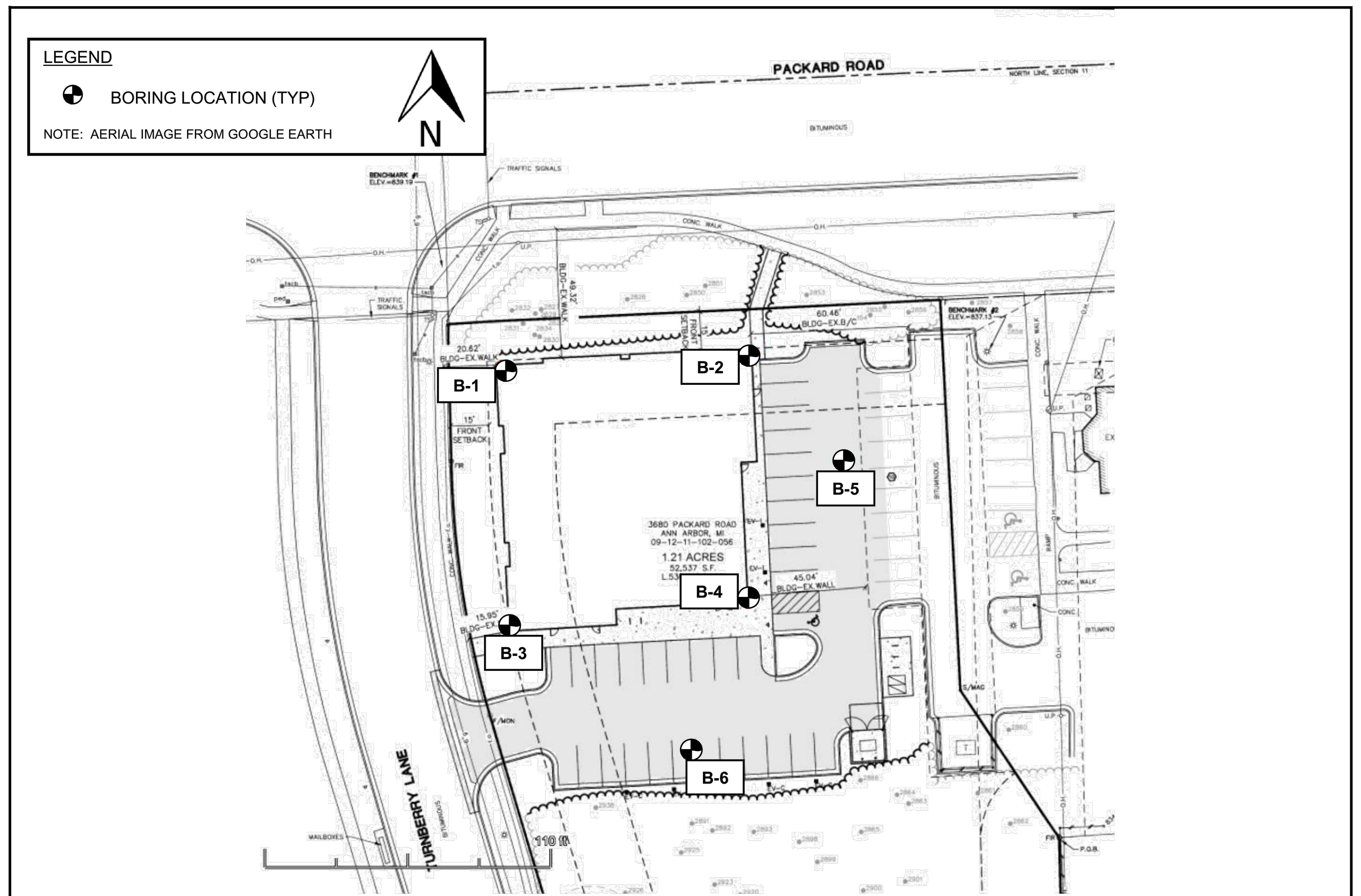
17

REVISIONS:	REV. DATE
REVISED PER CITY REVIEW	05/24/23
REVISED PER CITY REVIEW	06/29/23

DATE: 02/28/23
SHEET 17 OF 22
CADD: CAR
ENG: TPH
PM: CMB
TECH:
/22127SP01

JOB No. 22127

BORING LOCATION PLAN



TITLE: BORING LOCATION PLAN – PROPOSED CONDITIONS		PROJECT: BLOSSOM DENTAL
SCALE: AS SHOWN	DATE: 02/24/2023	PROJECT NO.: 231061
FIG. NO.: 2	DR. BY: RS	REV. BY: RW

MTC MATERIALS TESTING CONSULTANTS

LOG OF BORING B-1

Project No.: 231061 | Boring No.: B-1 | Sheet: 1 of 1

Project: Blossom Dental
Client: Dr. Elizabeth Barber, c/o: Midwestern Consulting
Location: Ann Arbor, Michigan
Drill Type: CME 45
Crew Chief: GS Field Eng.: IA Rev. By: RS
Coordinates:
Elevation: 839.3 ft Datum: NAVD 88 (GPS Observation)
Notes:
Plugging Record: Backfilled borehole with compacted cuttings. Cave in at 5.5 ft.
Date Begin: 02/15/2023 Date End: 02/15/2023
Depth Drilled: 20.0 ft.

Tooling	Type	Dia.	Groundwater, ft.	
Casing	HSA	4 1/4"	During	None
Sampler	SPT	2"	End	NA
Core			Seepage	
Tube			Date	Depth, ft.
SPT Hammer	Auto			

Component Percentages: Trace < 5%, Few 5-10%, Little 15-25%, Some 30-45%, Mostly 50-100% QP = Calibrated Penetrometer (tons/sq. ft.)

Elev. FT.	Depth FT.	Sample Number	Recov. FT.	Penetration (Blows Per 6") ASTM D 1586	*USCS Group Symbol	*DESCRIPTION	QP tsf	MST %	DD pcf	REMARKS
838.3	1	S-1	1.5	3-3-4 N=7		16" Sandy Topsoil 1.3				
837.3	2					Brown poorly graded SAND with gravel; mostly coarse to fine sand, little coarse to fine gravel, trace silty fines, moist				
836.3	3									
835.3	4									
834.3	5	S-2	1.5	8-8-8 N=16						
833.3	6				SP					
832.3	7	S-3	0.8	9-14-22 N=36						S-3: Poor recovery; possible coarse gravel / COBBLE
831.3	8									
830.3	9					9.0				
829.3	10	S-4	1.5	8-8-8 N=16		Brown poorly graded SAND; mostly coarse to fine sand, trace silty fines, moist				
828.3	11									
827.3	12									
826.3	13									
825.3	14									
824.3	15	S-5	1.5	8-8-8 N=16	SP					
823.3	16									
822.3	17									
821.3	18									
820.3	19									
819.3	20	S-6	1.5	8-10-11 N=21		Grades with trace coarse to fine gravel 20.0				
						End of Boring				

* Visual estimate following ASTM D 2488 unless laboratory testing has been performed. Stratification changes are approximated between samples.

LOG OF BORING B-2

Project No.: 231061 | Boring No.: B-2 | Sheet: 1 of 1

Project: Blossom Dental
Client: Dr. Elizabeth Barber, c/o: Midwestern Consulting
Location: Ann Arbor, Michigan
Drill Type: CME 45
Crew Chief: GS Field Eng.: IA Rev. By: RS
Coordinates:
Elevation: 835.4 ft Datum: NAVD 88 (GPS Observation)
Notes:
Plugging Record: Backfilled borehole with compacted cuttings. Cave in at 9.0 ft.
Date Begin: 02/15/2023 Date End: 02/15/2023
Depth Drilled: 20.0 ft.

Tooling	Type	Dia.	Groundwater, ft.	
Casing	HSA	4 1/4"	During	None
Sampler	SPT	2"	End	NA
Core			Seepage	
Tube			Date	Depth, ft.
SPT Hammer	Auto			

Component Percentages: Trace < 5%, Few 5-10%, Little 15-25%, Some 30-45%, Mostly 50-100% QP = Calibrated Penetrometer (tons/sq. ft.)

Elev. FT.	Depth FT.	Sample Number	Recov. FT.	Penetration (Blows Per 6") ASTM D 1586	*USCS Group Symbol	*DESCRIPTION	QP tsf	MST %	DD pcf	REMARKS
834.4	1	S-1	2.0	2-3-3-6 N=6		12" Clayey Topsoil 1.0				
833.4	2					Brown lean CLAY; mostly clayey fines, trace coarse to fine sand, moist	4.0			
832.4	3	S-2	2.0	4-6-9-12 N=15						
831.4	4				CL					
830.4	5	S-3	2.0	14-24-25-29 N=49			4.5+			
829.4	6									
828.4	7	S-4	1.5	15-13-16 N=29		7.0	4.5+			
827.4	8				SP-SM	Brown poorly graded SAND with silt and gravel; mostly coarse to fine sand, few silty fines, little coarse to fine gravel, moist 7.5				
826.4	9					Brown poorly graded SAND; mostly coarse to fine sand, few coarse to fine gravel, trace silty fines, moist				
825.4	10	S-5	1.5	10-10-10 N=20						
824.4	11									
823.4	12									
822.4	13									
821.4	14				SP					
820.4	15	S-6	0.7	7-6-6 N=12						S-6: Poor recovery; possible coarse gravel / COBBLE
819.4	16									
818.4	17									
817.4	18									
816.4	19									
815.4	20	S-7	1.5	12-12-11 N=23		20.0				
						End of Boring				

* Visual estimate following ASTM D 2488 unless laboratory testing has been performed. Stratification changes are approximated between samples.

LOG OF BORING B-3

Project No.: 231061 | Boring No.: B-3 | Sheet: 1 of 1

Project: Blossom Dental
Client: Dr. Elizabeth Barber, c/o: Midwestern Consulting
Location: Ann Arbor, Michigan
Drill Type: CME 45
Crew Chief: GS Field Eng.: IA Rev. By: RS
Coordinates:
Elevation: 834.4 ft Datum: NAVD 88 (GPS Observation)
Notes:
Plugging Record: Backfilled borehole with compacted cuttings. Cave in at 7.0 ft.
Date Begin: 02/15/2023 Date End: 02/15/2023
Depth Drilled: 20.0 ft.

Tooling	Type	Dia.	Groundwater, ft.	
Casing	HSA	4 1/4"	During	None
Sampler	SPT	2"	End	NA
Core			Seepage	
Tube			Date	Depth, ft.
SPT Hammer	Auto			

Component Percentages: Trace < 5%, Few 5-10%, Little 15-25%, Some 30-45%, Mostly 50-100% QP = Calibrated Penetrometer (tons/sq. ft.)

Elev. FT.	Depth FT.	Sample Number	Recov. FT.	Penetration (Blows Per 6") ASTM D 1586	*USCS Group Symbol	*DESCRIPTION	QP tsf	MST %	DD pcf	REMARKS
833.4	1	S-1	1.5	1-2-2 N=4		11" Clayey Topsoil 0.9				
832.4	2					Dark brown lean CLAY with gravel; mostly clayey fines, little coarse to fine gravel, moist				
831.4	3				CL					
830.4	4					4.0				
829.4	5	S-2	1.2	5-7-7 N=14		Light brown poorly graded SAND with silt; mostly medium to fine sand, few silty fines, few coarse to fine gravel, moist				S-2: Poor recovery; possible coarse gravel / COBBLE
828.4	6									
827.4	7	S-3	1.5	7-9-12 N=21						
826.4	8									
825.4	9					Grades with trace coarse to fine gravel				
824.4	10	S-4	1.5	10-14-19 N=33						
823.4	11									
822.4	12									
821.4	13				SP-SM					
820.4	14									
819.4	15	S-5	1.5	7-9-10 N=19						
818.4	16									
817.4	17									
816.4	18									
815.4	19									
814.4	20	S-6	1.5	11-15-15 N=30		20.0				
						End of Boring				

* Visual estimate following ASTM D 2488 unless laboratory testing has been performed. Stratification changes are approximated between samples.

LOG OF BORING B-4

Project No.: 231061 | Boring No.: B-4 | Sheet: 1 of 1

Project: Blossom Dental
Client: Dr. Elizabeth Barber, c/o: Midwestern Consulting
Location: Ann Arbor, Michigan
Drill Type: CME 45
Crew Chief: GS Field Eng.: IA Rev. By: RS
Coordinates:
Elevation: 837.9 ft Datum: NAVD 88 (GPS Observation)
Notes:
Plugging Record: Backfilled borehole with compacted cuttings. Cave in at 13.0 ft.
Date Begin: 02/15/2023 Date End: 02/15/2023
Depth Drilled: 20.0 ft.

Tooling	Type	Dia.	Groundwater, ft.	
Casing	HSA	4 1/4"	During	None
Sampler	SPT	2"	End	NA
Core			Seepage	
Tube			Date	Depth, ft.
SPT Hammer	Auto			

Component Percentages: Trace < 5%, Few 5-10%, Little 15-25%, Some 30-45%, Mostly 50-100% QP = Calibrated Penetrometer (tons/sq. ft.)

Elev. FT.	Depth FT.	Sample Number	Recov. FT.	Penetration (Blows Per 6") ASTM D 1586	*USCS Group Symbol	*DESCRIPTION	QP tsf	MST %	DD pcf	REMARKS
836.9	1	S-1	1.5	3-3-4 N=7		12" Clayey Topsoil 1.0				
835.9	2				CL	Brown lean CLAY; mostly clayey fines, trace coarse to fine gravel, moist	4.0			
834.9	3					3.0				
833.9	4					Brown poorly graded SAND; mostly coarse to fine sand, few coarse to fine gravel, moist				S-2: Poor recovery; possible coarse gravel / COBBLE
832.9	5	S-2	0.9	17-17-19 N=36	SP					
831.9	6									
830.9	7	S-3	1.5	9-10-10 N=20		7.0				
829.9	8				SP-SM	Light brown poorly graded SAND with silt; mostly medium to fine sand, few silty fines, moist				
828.9	9					9.4				
827.9	10	S-4	1.5	7-8-10 N=18		Light brown poorly graded SAND with gravel; mostly coarse to fine sand, little medium to fine gravel, moist				
826.9	11									
825.9	12									
824.9	13									
823.9	14				SP					
822.9	15	S-5	1.5	10-11-11 N=22						
821.9	16									
820.9	17					17.0				
819.9	18					Brown lean CLAY; mostly clayey fines, few coarse to fine gravel, moist				
818.9	19				CL		4.5+			
817.9	20	S-6	1.5	15-16-20 N=36		20.0				
						End of Boring				

* Visual estimate following ASTM D 2488 unless laboratory testing has been performed. Stratification changes are approximated between samples.

LOG OF BORING B-5

Project No.: 231061 | Boring No.: B-5 | Sheet: 1 of 1

Project: Blossom Dental
Client: Dr. Elizabeth Barber, c/o: Midwestern Consulting
Location: Ann Arbor, Michigan
Drill Type: CME 45
Crew Chief: GS Field Eng.: IA Rev. By: RS
Coordinates:
Elevation: 836.6 ft Datum: NAVD 88 (GPS Observation)
Notes:
Plugging Record: Backfilled borehole with compacted cuttings. Cave in at 4.0 ft.
Date Begin: 02/15/2023 Date End: 02/15/2023
Depth Drilled: 10.0 ft.

Tooling	Type	Dia.	Groundwater, ft.	
Casing	HSA	4 1/4"	During	None
Sampler	SPT	2"	End	NA
Core			Seepage	
Tube			Date	Depth, ft.
SPT Hammer	Auto			

Component Percentages: Trace < 5%, Few 5-10%, Little 15-25%, Some 30-45%, Mostly 50-100% QP = Calibrated Penetrometer (tons/sq. ft.)

Elev. FT.	Depth FT.	Sample Number	Recov. FT.	Penetration (Blows Per 6") ASTM D 1586	*USCS Group Symbol	*DESCRIPTION	QP tsf	MST %	DD pcf	REMARKS
835.6	1	S-1	1.5	3-3-3 N=6		12" Clayey Topsoil 1.0				
834.6	2					Brown lean CLAY; mostly clayey fines, trace fine gravel, moist	4.0			
833.6	3									
832.6	4									
831.6	5	S-2	1.5	9-14-20 N=34	CL		4.5			
830.6	6									
829.6	7	S-3	1.5	12-12-12 N=24		7.0	4.5+			
828.6	8				SM	Light brown silty SAND; mostly medium to fine sand, some silty fines, moist				
827.6	9					9.0				
826.6	10	S-4	1.5	8-6-5 N=11	SP	Brown poorly graded SAND with gravel; mostly coarse to fine sand, little medium to fine gravel, moist 10.0				
						End of Boring				

* Visual estimate following ASTM D 2488 unless laboratory testing has been performed. Stratification changes are approximated between samples.

LOG OF BORING B-6

Project No.: 231061 | Boring No.: B-6 | Sheet: 1 of 1

Project: Blossom Dental
Client: Dr. Elizabeth Barber, c/o: Midwestern Consulting
Location: Ann Arbor, Michigan
Drill Type: CME 45
Crew Chief: GS Field Eng.: IA Rev. By: RS
Coordinates:
Elevation: 837.9 ft Datum: NAVD 88 (GPS Observation)
Notes:
Plugging Record: Backfilled borehole with compacted cuttings. Cave in at 7.0 ft.
Date Begin: 02/15/2023 Date End: 02/15/2023
Depth Drilled: 10.0 ft.

Tooling	Type	Dia.	Groundwater, ft.	
Casing	HSA	4 1/4"	During	None
Sampler	SPT	2"	End	NA
Core			Seepage	
Tube			Date	Depth, ft.
SPT Hammer	Auto			

Component Percentages: Trace < 5%, Few 5-10%, Little 15-25%, Some 30-45%, Mostly 50-100% QP = Calibrated Penetrometer (tons/sq. ft.)

Elev. FT.	Depth FT.	Sample Number	Recov. FT.	Penetration (Blows Per 6") ASTM D 1586	*USCS Group Symbol	*DESCRIPTION	QP tsf	MST %	DD pcf	REMARKS
836.9	1	S-1	1.5	2-3-3 N=6		14" Clayey Topsoil 1.2				
835.9	2					Brown lean CLAY; mostly clayey fines, trace medium to fine sand, moist				
834.9	3									
833.9	4					Grades with trace silty fines				
832.9	5	S-2	1.5	9-11-13 N=24	CL					
831.9	6									
830.9	7	S-3	1.5	8-7-5 N=12		7.0				
829.9	8					Light brown poorly graded SAND with silt and gravel; mostly coarse to fine sand, few silty fines, little coarse to fine gravel, moist				
828.9	9				SP-SM					
827.9	10	S-4	1.5	3-4-5 N=9		10.0				
						End of Boring				

* Visual estimate following ASTM D 2488 unless laboratory testing has been performed. Stratification changes are approximated between samples.

TEST DRILLING AND SAMPLING PROCEDURES

Test Drilling Methods:
- X Hollow stem auger, ASTM D6151
- ____ Mud rotary, ASTM D5783
- ____ Casing advancer, ASTM D5872
- ____ Rock coring, ASTM D2113
- ____ Core/Hand Auger

Note: Cone penetration test data can be used to interpret subsurface stratigraphy and can provide data on engineering properties of soils. The ASTM procedure does not include a procedure for determining soil classification from CPT testing. Soil classifications shown on CPT logs are based on published procedures and are not based on physical ASTM soil classification tests.

Sampling Methods:
- X SPT, ASTM D1586, Auto hammer (140 lb., 30" drop, 2" OD split spoon sampler)
- ____ Thin-walled tube sampler (Shelby), ASTM D1587

Note: The number of hammer blows required to drive the SPT sampler 12 inches, after seating 6 inches, is termed the soil N-value and provides an indication of the soil's relative density and strength parameters at the sample location. SPT blow counts in 6 inch increments are recorded on the boring logs.

Drill Rig:
- ____ CME 55 LC (ATV)
- ____ CME 750 Rubber tired (ATV)
- X CME 45 Truck
- ____ Geoprobe Direct Push
- ____ Geoprobe Rotary Sonic

Boreholes Backfilled With:
- X Excavated soil
- ____ Cement bentonite grout
- ____ Piezometer or Monitoring Well (see notes on logs)
- ____ Concrete or asphalt patch where appropriate

Sample Handling and Disposition:
- X Samples labeled, placed in jars, returned to MTC Laboratory
- X Discard after 60 days

BORING LOG TERMINOLOGY AND ASTM D 2488 CLASSIFICATION OUTLINE

TERMS DESCRIBING CONSISTENCY OR CONDITION

COARSE-GRAINED SOILS (major portions retained on No. 200 sieve): includes (1) clean gravel and sands and (2) silty or clayey gravels and sands. Condition is rated according to relative density as determined by laboratory tests or standard penetration resistance tests.

Descriptive Terms	Relative Density	SPT Blow Count
Very loose	0 to 15 %	< 5
Loose	15 to 35 %	5 to 10
Medium dense	35 to 65 %	10 to 30
Dense	65 to 85 %	30 to 50
Very dense	85 to 100 %	> 50

Per ASTM D2487, the following conditions must be met based on laboratory testing to justify the label 'well graded' in a soil description.

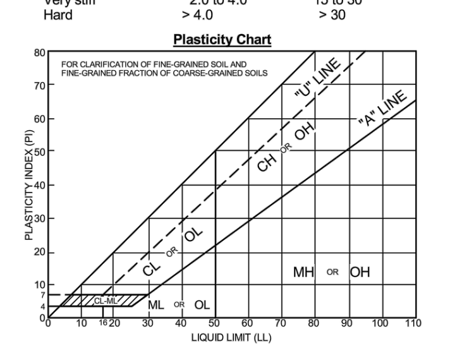
Gravel: $C_U = \frac{D_{60}}{D_{10}}$ greater than 4; $C_C = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ between 1 and 3

Sand: $C_U = \frac{D_{60}}{D_{10}}$ greater than 6; $C_C = \frac{(D_{30})^2}{D_{10} \times D_{60}}$ between 1 and 3

FINE-GRAINED SOILS (major portions passing on No. 200 sieve): includes (1) inorganic and organic silts and clays, (2) gravelly, sandy, or silty clays, and (3) clayey silts. Consistency is rated according to shearing strength, as indicated by penetrometer readings, SPT blow count, or unconfined compression tests.

Descriptive Terms	Unconfined Compressive Strength TSF	SPT Blow Count
Very soft	< 0.25	< 2
Soft	0.25 to 0.5	2 to 4
Medium stiff	0.5 to 1.0	4 to 8
Stiff	1.0 to 2.0	8 to 15
Very stiff	2.0 to 4.0	15 to 30
Hard	> 4.0	> 30

Plasticity Chart



MAJOR DIVISIONS				TYPICAL NAMES
COARSE-GRAINED SOILS MORE THAN HALF IS COARSER THAN NO. 200 SIEVE	GRAVELS MORE THAN HALF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE	CLEAN GRAVELS WITH LESS THAN 15% FINES	GW	WELL-GRADED GRAVELS WITH OR WITHOUT SAND
			GP	POORLY-GRADED GRAVELS WITH OR WITHOUT SAND
		GRAVELS WITH 15% OR MORE FINES	GM	SILTY GRAVELS WITH OR WITHOUT SAND
			GC	CLAYEY GRAVELS WITH OR WITHOUT SAND
	SANDS MORE THAN HALF COARSE FRACTION IS FINER THAN NO. 4 SIEVE SIZE	CLEAN SANDS WITH LESS THAN 15% FINES	SW	WELL-GRADED SANDS WITH OR WITHOUT GRAVEL
			SP	POORLY-GRADED SANDS WITH OR WITHOUT GRAVEL
			SP-SM	POORLY-GRADED SANDS WITH SILT WITH OR WITHOUT GRAVEL
		SANDS WITH 15% OR MORE FINES	SM	SILTY SANDS WITH OR WITHOUT GRAVEL
			SC	CLAYEY SANDS WITH OR WITHOUT GRAVEL
FINE-GRAINED SOILS MORE THAN HALF IS FINER THAN NO. 200 SIEVE	SILTS AND CLAYS LIQUID LIMIT 50% OR LESS		ML	INORGANIC SILTS OF LOW TO MEDIUM PLASTICITY WITH OR WITHOUT SAND OR GRAVEL
			CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY WITH OR WITHOUT SAND OR GRAVEL
			OL	ORGANIC SILTS OR CLAYS OF LOW TO MEDIUM PLASTICITY WITH OR WITHOUT SAND OR GRAVEL
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50%		MH	INORGANIC SILTS OF HIGH PLASTICITY WITH OR WITHOUT SAND OR GRAVEL
			CH	INORGANIC CLAYS OF HIGH PLASTICITY WITH OR WITHOUT SAND OR GRAVEL
			OH	ORGANIC SILTS OR CLAYS OF HIGH PLASTICITY WITH OR WITHOUT SAND OR GRAVEL
HIGHLY ORGANIC SOILS			PT/OL	PEAT AND OTHER HIGHLY ORGANIC SOILS

GENERAL NOTES

1. Classifications are based on the United Soil Classification System and include consistency, moisture, and color. Field descriptions have been modified to reflect results of laboratory tests where deemed appropriate.
2. "Grades with" or "Grades without" may be used to describe soil when characteristics vary within a stratum.
3. Preserved soil samples will be discarded after 60 days unless alternate arrangements have been made.

GROUNDWATER OBSERVATIONS:
During - indicates water level encountered during the boring
End - indicates water level immediately after drilling
Date and Depth - Measurements at indicated date

SAMPLE TYPES AND NUMBERING

S	SPT, split barrel sample, ASTM D1586
U	Shelby tube sample, ASTM D1587
R	Rock core run
*S	Other than 2" split barrel sample
L	SPT with liner, ASTM D1586
A	Auger cuttings
G	Geoprobe liner

MINOR COMPONENT QUANTIFYING TERMS

Less than 5%	TRACE
5 to 10%	FEW
15 to 25%	LITTLE
30 to 40%	SOME
50 to 100%	MOSTLY

GRAIN SIZE

BOULDER	>12"
COBBLE	12" to 3"
COARSE GRAVEL	3" to 0.75"
FINE GRAVEL	0.75" to No. 4
COARSE SAND	No. 4 to No. 10
MEDIUM SAND	No. 10 to No.40
FINE SAND	No. 40 to No. 200

M I D W E S T E R N
C O N S U L T I N G
3815 Plaza Drive Ann Arbor, Michigan 48108
(734) 995-0200 • www.midwesternconsulting.com
Land Development • Land Survey • Institutional • Municipal
Wireless Communications • Transportation • Landfill Services

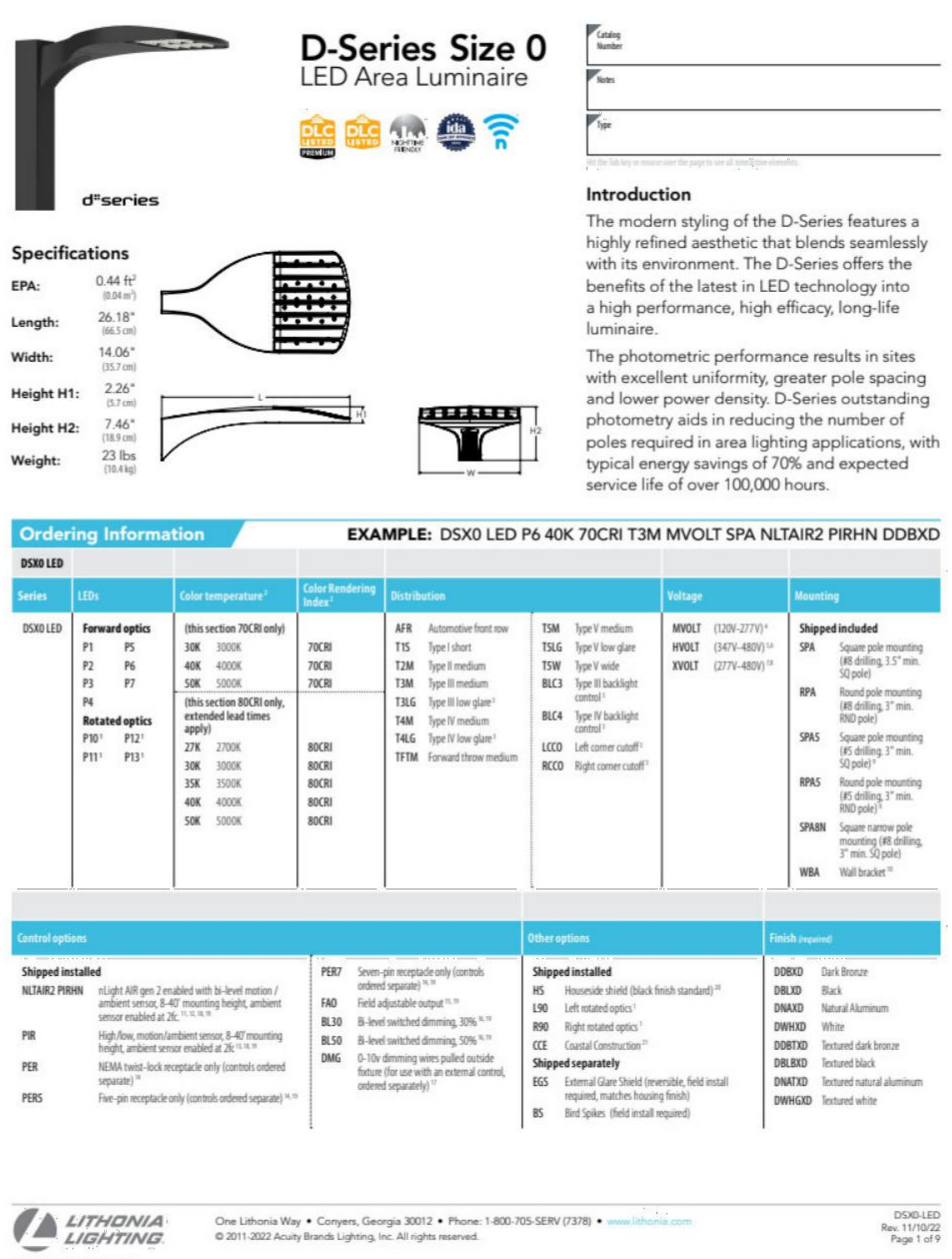
CLIENT
3680 PACKARD ROAD, LLC
1820 CHICORY RIDGE
ANN ARBOR, MI 48103
DR. ELIZABETH BARBER, DDS, MS, PC
734-645-6063

BLOSSOM DENTAL
SITE PLAN
SOIL BORINGS

18

REVISIONS:	REV. DATE
REVISED PER CITY REVIEW	05/24/23
REVISED PER CITY REVIEW	06/29/23

JOB No. 22127
DATE:
SHEET 18 OF 22
CADD: CAR
ENG: TPH
PM: CMB
TECH:
/22127DT01



D-Series Size 0
LED Area Luminaire

d"series

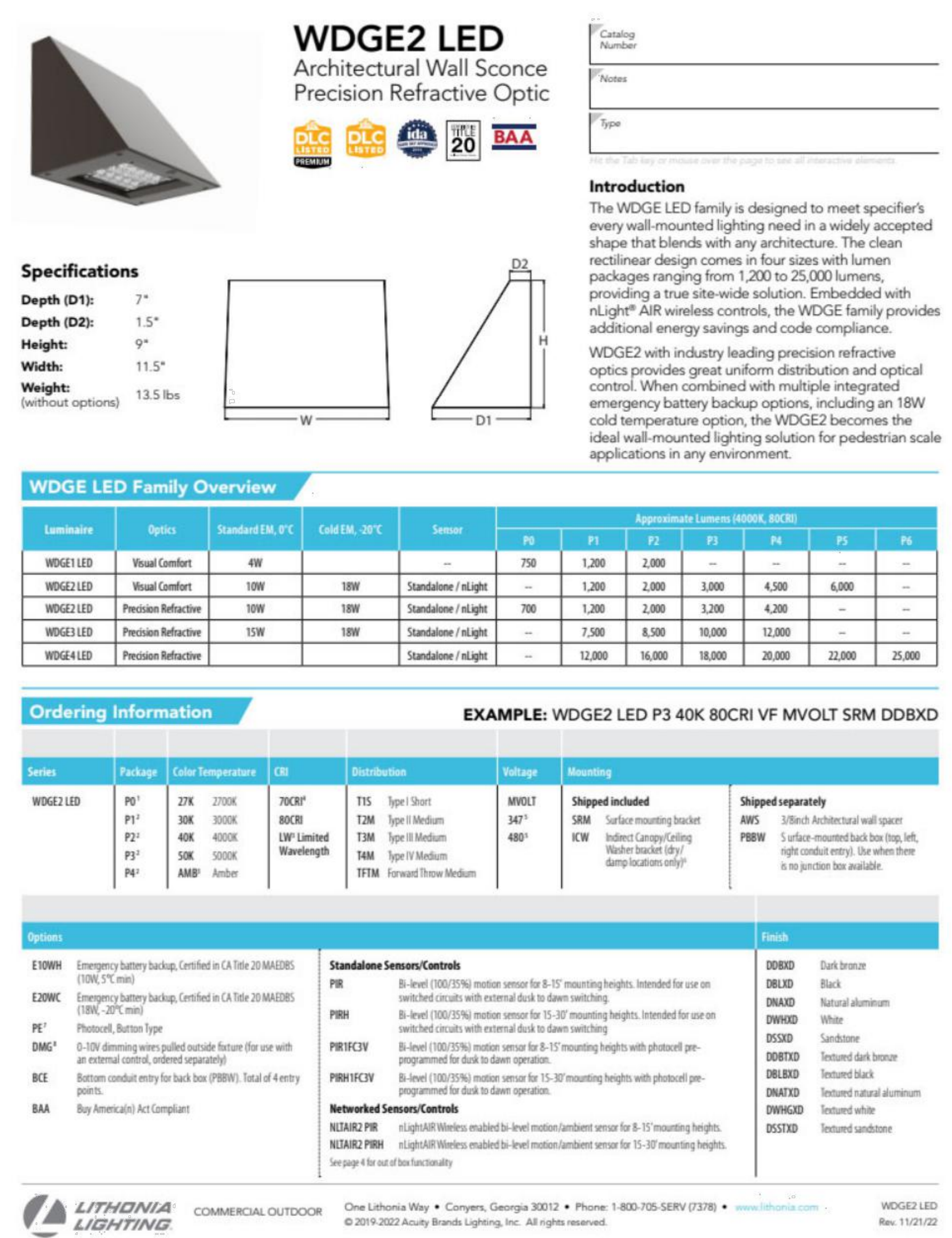
Introduction
The modern styling of the D-Series features a highly refined aesthetic that blends seamlessly with its environment. The D-Series offers the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

The photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. D-Series outstanding photometry aids in reducing the number of poles required in area lighting applications, with typical energy savings of 70% and expected service life of over 100,000 hours.

Specifications

EPA:	0.44 ft² (0.04 m²)
Length:	26.18" (66.5 cm)
Width:	14.06" (35.7 cm)
Height H1:	2.26" (5.7 cm)
Height H2:	7.46" (18.9 cm)
Weight:	23 lbs (10.4 kg)

Ordering Information
EXAMPLE: DSX0 LED P6 40K 70CRI T3M MVOLT SPA NLTAIR2 PIRHN DDBXD



WDGE2 LED
Architectural Wall Sconce
Precision Refractive Optic

Introduction
The WDGE LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean rectilinear design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing a true site-wide solution. Embedded with nLight® AIR wireless controls, the WDGE family provides additional energy savings and code compliance.

WDGE2 with industry leading precision refractive optics provides great uniform distribution and optical control. When combined with multiple integrated emergency battery backup options, including an 18W cold temperature option, the WDGE2 becomes the ideal wall-mounted lighting solution for pedestrian scale applications in any environment.

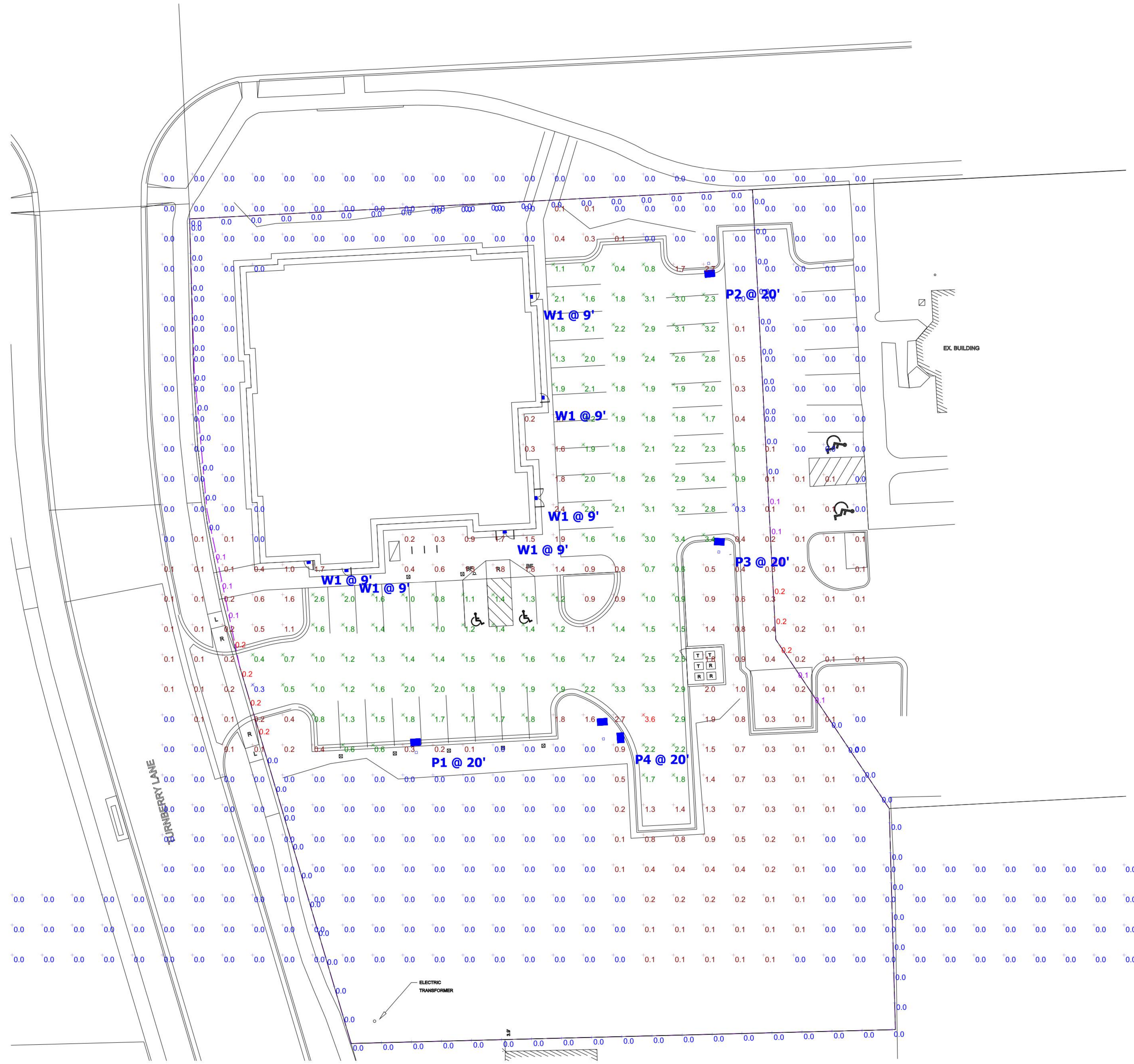
Specifications

Depth (D1):	7"
Depth (D2):	1.5"
Height:	9"
Width:	11.5"
Weight: (without options)	13.5 lbs

WDGE LED Family Overview

Luminaire	Optics	Standard EM, 0°C	Cold EM, -20°C	Sensor	P0	P1	P2	P3	P4	P5	P6
WDGE1 LED	Visual Comfort	4W		--	750	1,200	2,000	--	--	--	--
WDGE2 LED	Visual Comfort	10W	18W	Standalone / nLight	--	1,200	2,000	3,000	4,500	6,000	--
WDGE2 LED	Precision Refractive	10W	18W	Standalone / nLight	700	1,200	2,000	3,200	4,200	--	--
WDGE3 LED	Precision Refractive	15W	18W	Standalone / nLight	--	7,500	8,500	10,000	12,000	--	--
WDGE4 LED	Precision Refractive			Standalone / nLight	--	12,000	16,000	18,000	20,000	22,000	25,000

Ordering Information
EXAMPLE: WDGE2 LED P3 40K 80CRI VF MVOLT SRM DDBXD



Plan View
Scale - 1" = 20ft

NOTES

1. ALL PROPOSED SITE LIGHTING FIXTURES ARE AIMED AT THE GROUND, ARE FULLY SHIELDED, AND COMPLY WITH TRESPASS AND GLARE SPECIFICATIONS. PROPOSED SITE LIGHTING FIXTURES ALSO COMPLY WITH INTERNATIONAL DARKSKY REQUIREMENTS.
2. NO LIGHTING FOR ABOVE GRADE OR VERTICAL TARGETS IS PROPOSED.
3. ALL PROPOSED WALL–MOUNTED LIGHTING IS FULLY SHIELDED AND COMPLIES WITH TRESPASS AND GLARE SPECIFICATIONS. THE MAXIMUM AVERAGE ILLUMINANCE ON THE FACADE SHALL BE 3 FOOT–CANDLES AS MEASURED AT A DISTANCE OF 10 FEET FROM THE FACADE.
4. NO LANDSCAPING OR DECORATIVE FACADE LIGHTING IS CURRENTLY BEING PROPOSED. IF PROVIDED IN THE FUTURE, SUCH LIGHTING WILL BE TURNED OFF BETWEEN 12:00AM AND 6:00AM.
5. NO MOTION–ACTIVATED LIGHTING SYSTEMS ARE CURRENTLY BEING PROPOSED. IF PROVIDED IN THE FUTURE, MOTION–ACTIVATED LIGHTING SYSTEMS WILL NOT BE ACTIVATED BY MOVEMENT BEYOND THE SITE.
6. ALL PROPOSED SITE LIGHTING FIXTURES ARE MOUNTED AT 0–DEGREE TILT.

General Note

1. SEE SCHEDULE FOR LUMINAIRE MOUNTING HEIGHT.
2. CALCULATIONS ARE SHOWN IN FOOTCANDLES AT: 0' - 0"
3. LIGHTING ALTERNATES REQUIRE NEW PHOTOMETRIC CALCULATION AND RESUBMISSION TO CITY FOR APPROVAL.

THE ENGINEER AND/OR ARCHITECT MUST DETERMINE APPLICABILITY OF THE LAYOUT TO EXISTING / FUTURE FIELD CONDITIONS. THIS LIGHTING LAYOUT REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS. MOUNTING HEIGHTS INDICATED ARE FROM GRADE AND/OR FLOOR UP.

THESE LIGHTING CALCULATIONS ARE NOT A SUBSTITUTE FOR INDEPENDENT ENGINEERING ANALYSIS OF LIGHTING SYSTEM SUITABILITY AND SAFETY. THE ENGINEER AND/OR ARCHITECT IS RESPONSIBLE TO REVIEW FOR MICHIGAN ENERGY CODE AND LIGHTING QUALITY COMPLIANCE.

UNLESS EXEMPT, PROJECT MUST COMPLY WITH LIGHTING CONTROLS REQUIRMENTS DEFINED IN ASHRAE 90.1 2013. FOR SPECIFIC INFORMATION CONTACT GBA CONTROLS GROUP AT ASG@GASSERBUSH.COM OR 734-266-6705.

FOR ORDERING INQUIRIES CONTACT GASSER BUSH AT QUOTES@GASSERBUSH.COM OR 734-266-6705.

THIS DRAWING WAS GENERATED FROM AN ELECTRONIC IMAGE FOR ESTIMATION PURPOSE ONLY. LAYOUT TO BE VERIFIED IN FIELD BY OTHERS.

MOUNTING HEIGHT IS MEASURED FROM GRADE TO FACE OF FIXTURE. POLE HEIGHT SHOULD BE CALCULATED AS THE MOUNTING HEIGHT LESS BASE HEIGHT.

Schedule

Symbol	Label	Quantity	Manufacturer	Catalog Number	Lamp	Light Loss Factor
	P1	1	Lithonia Lighting	DSX0 LED 30K 70CRI	LED	0.9
	P2	1	Lithonia Lighting	DSX0 LED 30K 70CRI	LED	0.9
	P3	1	Lithonia Lighting	DSX0 LED 30K 70CRI	LED	0.9
	P4	1	Lithonia Lighting	[...]	[...]	0.9
			Lithonia Lighting	DSX0 LED 30K 70CRI		0.9
			Lithonia Lighting	DSX0 LED 30K 70CRI		0.9
	W1	6	Lithonia Lighting	WDGE2 LED 30K 70CRI	LED	0.9

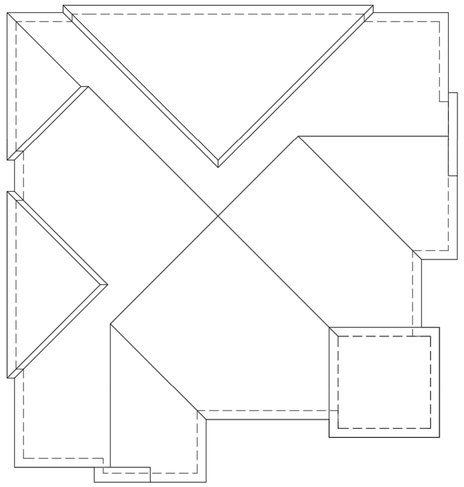
Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min	Avg/Max
OVERALL	+	0.5 fc	3.6 fc	0.0 fc	N/A	N/A	0.1:1
Parking Lot	✱	1.8 fc	3.6 fc	0.3 fc	12.0:1	6.0:1	0.5:1
Property Line	+	0.0 fc	0.2 fc	0.0 fc	N/A	N/A	0.0:1

BLOSSOM DENTAL
PHOTOMETRIC PLAN
PREPARED FOR: MIDWESTERN CONSULTING
GASSER BUSH ASSOCIATES
WWW.GASSERBUSH.COM

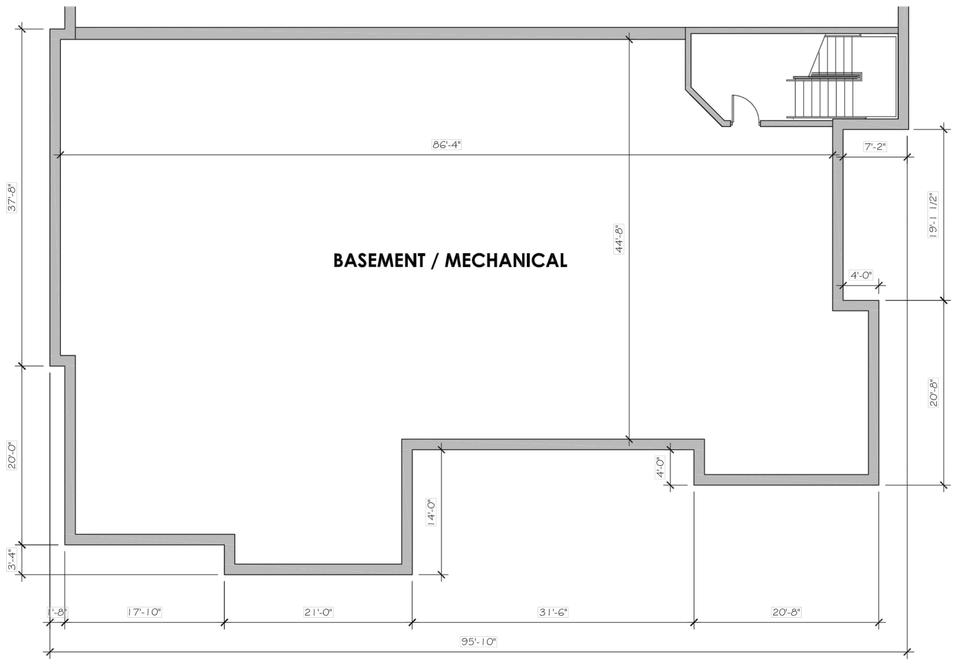
19

Designer
DS
Date
02/24/2023
REV. 05/22/2023
Scale
Not to Scale
Drawing No.
#23-12277 V2



ROOF PLAN

1/16" = 1'-0"



PARTIAL
BASEMENT PLAN

1/8" = 1'-0" | 4,511 SF

FLOOR PLAN

1/8" = 1'-0" | 8,762 SF

NO.	REVISIONS / SUBMISSIONS	DATE
5		
4		
3		
2		
1		

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NEW BUILDING FOR:
BLOSSOM
PEDIATRIC DENTISTRY
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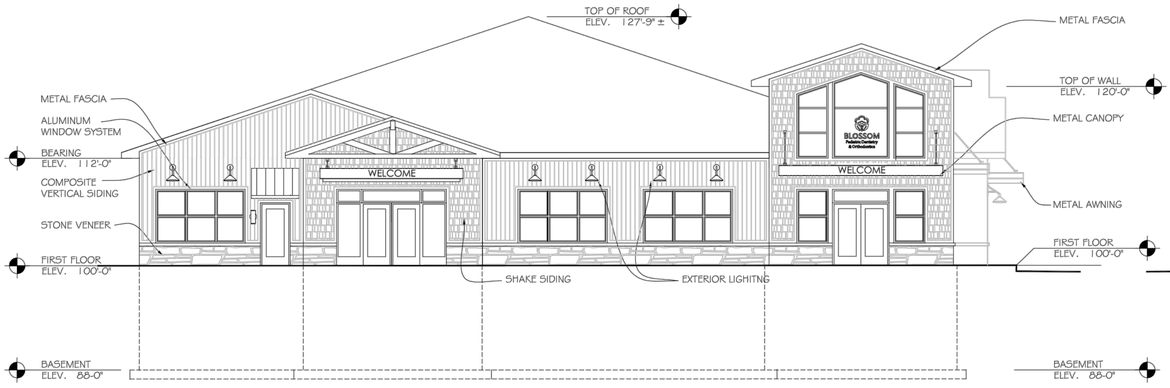
ANN ARBOR, MI

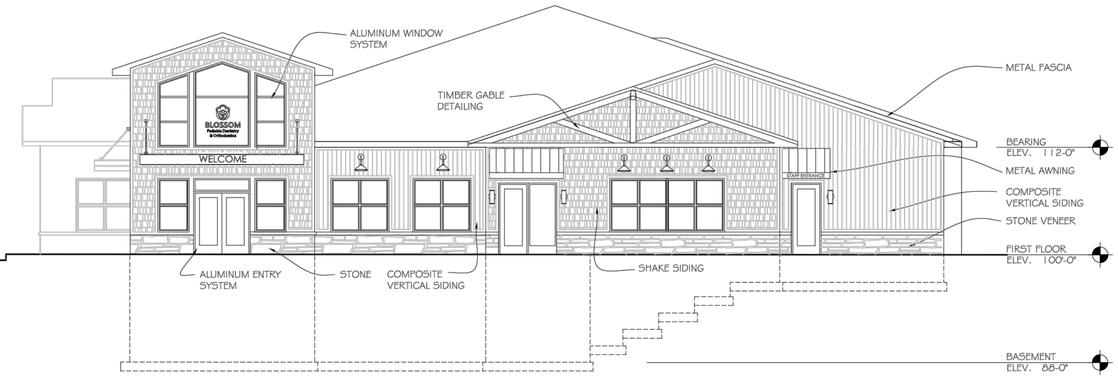
DRAWING TITLE
FLOOR PLAN

SEAL	DRAWN	PROJECT NO.
		CAD FILE NO.
	REVIEWED	DRAWING NO. A101
	DATE 5-10-2023	SHEET NO. OF
	SCALE 1/8" = 1'-0"	



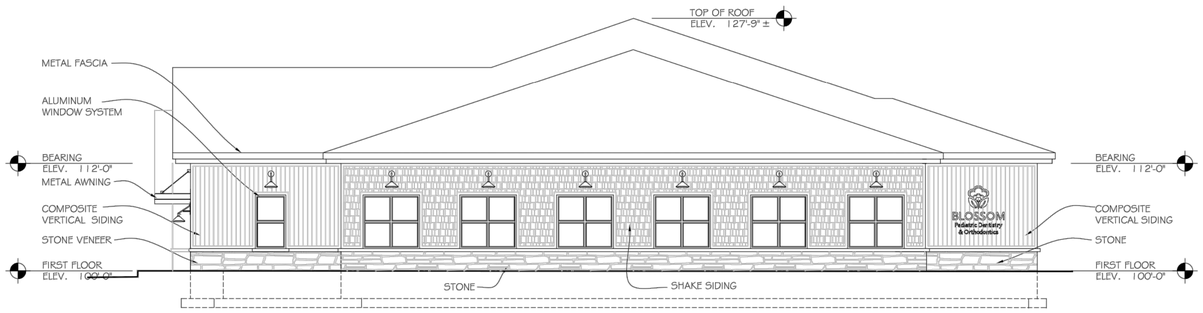
SOUTH ELEVATION

1/8" = 1'-0"



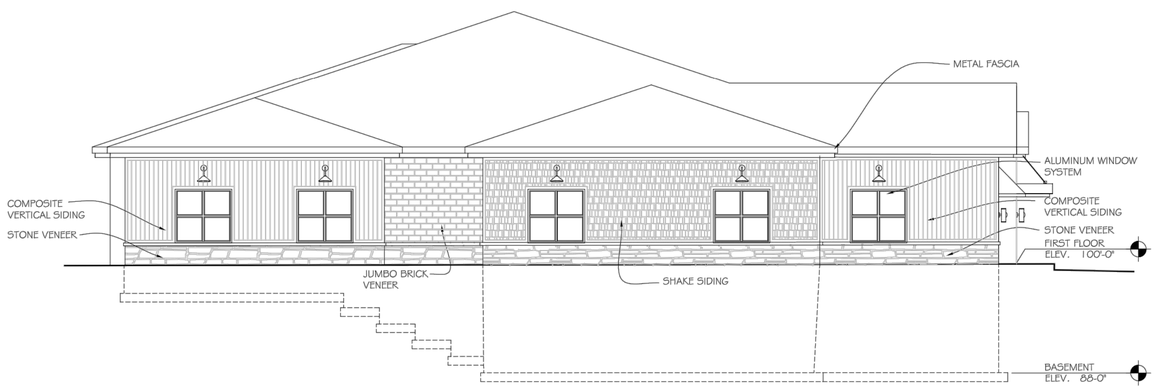
EAST ELEVATION

1/8" = 1'-0"



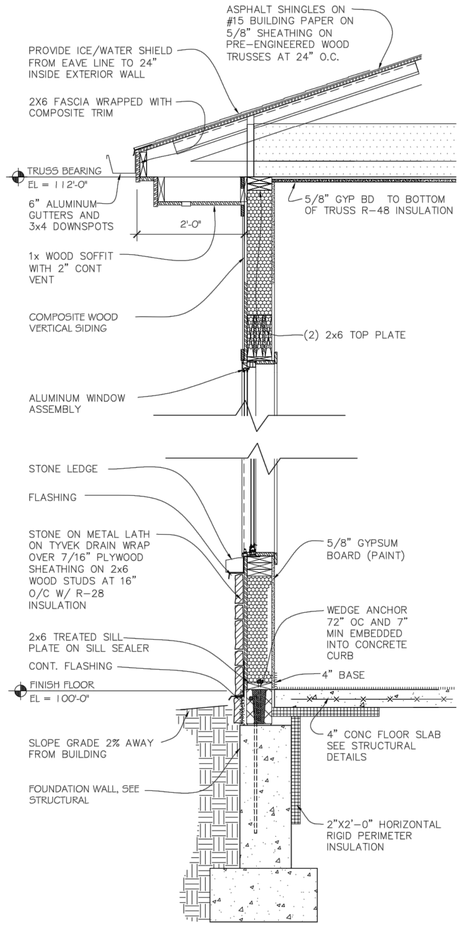
NORTH ELEVATION

1/8" = 1'-0"



WEST ELEVATION

1/8" = 1'-0"



TYPICAL WALL SECTION

3/4" = 1'-0"

NO.	REVISIONS / SUBMISSIONS	DATE
6		
4		
3		
2		
1		

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NEW BUILDING FOR:

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EXTERIOR ELEVATIONS

SEAL	DRAWN	PROJECT NO.
		CAD FILE NO.
	REVIEWED	DRAWING NO. A201
	DATE 5-10-2023	SHEET NO. OF
	SCALE 1/8" = 1'-0"	

NO.	REVISIONS / SUBMISSIONS	DATE
5		
4		
3		
2		
1		

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DRAWING TITLE

EXTERIOR RENDERINGS

SEAL	DRAWN	PROJECT NO.
		CAD FILE NO.
	REVIEWED	DRAWING NO. A301
	DATE 5-10-2023	SHEET NO. OF
	SCALE	