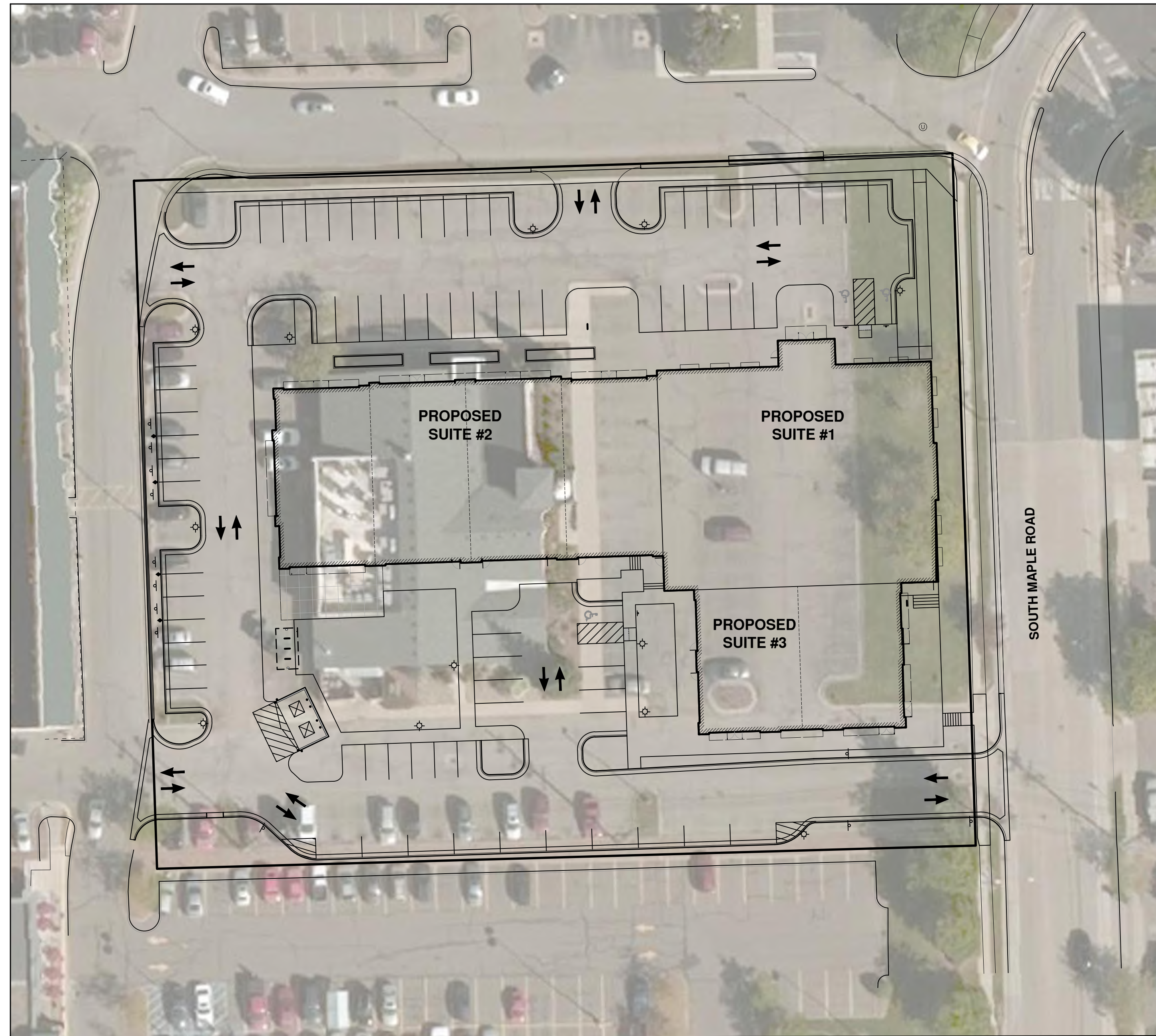
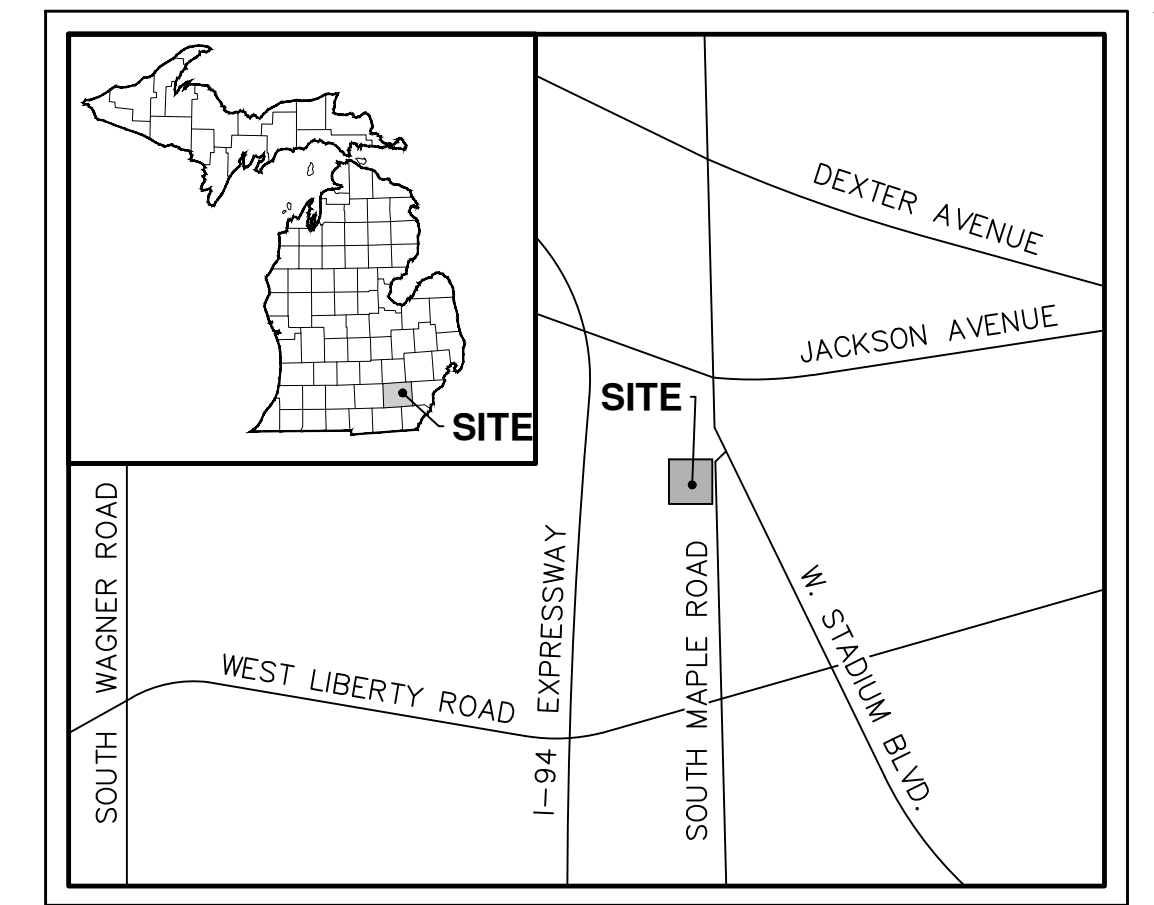


LEWIS JEWELERS SITE PLAN FOR CITY COUNCIL APPROVAL

300 S. MAPLE ROAD, CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN



OVERALL AREA MAP



VICINITY MAP
NOT TO SCALE

SITE ADDRESS: 300 SOUTH MAPLE ROAD / TAX ID#: 09-08-25-103-006

LAND DEVELOPMENT SUMMARY

DEVELOPMENT PROGRAM

- THE PROPOSED DEVELOPMENT INCLUDES DEMOLITION OF THE EXISTING BUILDING AND CONSTRUCTION OF THREE NEW COMMERCIAL BUILDINGS.
 - PROPOSED BUILDING #1: +/-9,408 SF JEWELRY STORE (LEWIS JEWELERS)
 - PROPOSED BUILDING #2: +/-10,575 SF RETAIL BUILDING (4 UNITS)
 - PROPOSED BUILDING #3: +/-4,546 SF RETAIL/RESTAURANT BUILDING (2 UNITS)
- ALL EXISTING PAVEMENT WILL BE REMOVED AND REPLACED, AND THE PROPOSED VEHICULAR USE AREA WILL BE APPROXIMATELY 31,035 SF INCLUDING THE PARKING SPACES AND DRIVE AISLES.
- PROPOSED SIDEWALKS AND RAMPS WILL MEET CURRENT ADA STANDARDS.
- THE SITE LANDSCAPING WILL BE BROUGHT UP TO CURRENT CITY REQUIREMENTS AND STANDARDS.
- ALL IMPROVEMENTS ARE PROPOSED TO BE COMPLETED IN ONE PHASE.

COMMUNITY ANALYSIS

- THE PROPOSED PROJECT WILL HAVE NO IMPACT ON PUBLIC SCHOOLS.
- THE PROPOSED PROJECT IS PART OF AN EXISTING RETAIL CENTER AND IS COMPATIBLE WITH THE SURROUNDING USES.
- ADJACENT LAND USES WILL NOT HAVE A SIGNIFICANT IMPACT ON THE PROPOSED PROJECT.
- THE PROPOSED PROJECT WILL HAVE NO SIGNIFICANT IMPACT ON AIR OR WATER QUALITY. THERE ARE NO NATURAL FEATURES ON OR ADJACENT TO THE SITE THAT WILL BE IMPACTED BY THE PROPOSED RENOVATION PROJECT.
- WE ARE NOT AWARE OF ANY HISTORIC SITES OR STRUCTURES LOCATED ON THE SITE.

SITE ANALYSIS

- THE SITE IS PART OF A LARGER COMMERCIAL RETAIL CENTER. IT IS LOCATED AT THE WEST SIDE OF SOUTH MAPLE ROAD. THE SITE IS CURRENTLY VACANT BUT WAS PREVIOUSLY USED AS A RESTAURANT.
- THE SOIL SURVEY OF WASHTENAW COUNTY INDICATES THAT THE PREDOMINANT SOIL TYPES ON SITE ARE URBAN LAND AND WAWASEE LOAM.
- WE DO NOT BELIEVE THERE ARE ANY ENDANGERED SPECIES OR HABITATS LOCATED ON THIS PREVIOUSLY DEVELOPED SITE.
- THIS SITE IS LOCATED IN AN AREA OF MINIMAL FLOOD HAZARD (ZONE X) AND OUTSIDE THE 100-YEAR FLOOD PLAIN PER FEMA COMMUNITY PANEL NUMBER 26161C0244E DATED 04/03/2012.
- TWO LANDMARK TREES ARE LOCATED ON THE SITE. THEY WILL BE REMOVED AND REPLACEMENT TREES PROVIDED.
- THERE ARE NO STEEP SLOPES LOCATED ON SITE AS DEFINED BY THE CITY OF ANN ARBOR ZONING ORDINANCE.
- THERE ARE NO OPEN WATERCOURSES LOCATED ON THIS SITE. THE RECEIVING WATERS FOR THIS SITE IS THE WEST PARK FAIRGROUNDS DRAIN.
- THERE ARE NO WETLANDS LOCATED ON SITE.
- THERE ARE NO WOODLANDS LOCATED ON SITE.
- EXISTING BUILDINGS, WITH ASSOCIATED DRIVES AND PARKING AREAS, WILL REMAIN ADJACENT TO THIS SITE.
- THE EXISTING CURB CUT ONTO SOUTH MAPLE ROAD WILL BE MODIFIED TO ACCOMMODATE THE PROPOSED BUILDING, AND THE EXISTING ACCESS POINT TO THE NORTH WILL BE RELOCATED. THE REMAINING CURB CUTS AND ACCESS POINTS SERVING THE SITE WILL NOT BE ALTERED.
- THE SITE IS CURRENTLY SERVED BY EXISTING PUBLIC AND FRANCHISE UTILITIES. EXISTING WATER, SANITARY SEWER AND GAS ARE LOCATED WITHIN THE SOUTH MAPLE ROAD RIGHT-OF-WAY. OVERHEAD ELECTRIC LINES ARE LOCATED ALONG THE EAST SIDE OF THE SITE.
- THE SITE SURFACE GENERALLY DRAINS FROM WEST TO EAST AND MOST LIKELY ULTIMATELY DISCHARGES INTO THE NORTH BRANCH OF FELLOWS CREEK. THIS SITE DOES NOT APPEAR TO RECEIVE DRAINAGE FROM ADJACENT SITES.

TRAFFIC ANALYSIS

- PLEASE REFERENCE THE TRAFFIC IMPACT STUDY PREPARED BY ROWE FOR ADDITIONAL TRAFFIC DATA RELATED TO THE PREVIOUS AND PROPOSED LAND USES.

PUBLIC SIDEWALK MAINTENANCE STATEMENT

- 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.

TRASH AND RECYCLING COLLECTION

- TRASH AND RECYCLING WILL BE REMOVED FROM THE BUILDING AND DEPOSITED IN THE APPROPRIATE DUMPSTERS DAILY. TRASH AND RECYCLING WILL BE COLLECTED FROM THE DUMPSTERS ONCE WEEKLY.

PROJECT CONTACTS

OWNER

DNL HOLDINGS, LLC
2000 WEST STADIUM BLVD.
ANN ARBOR, MI 48107

ARCHITECT

METRO GROUP ARCHITECTS
P.O. BOX 7363
ANN ARBOR, MI 48107
PHONE: 734.747.8999

CONTRACTOR / DEVELOPER

A. R. BROUWER COMPANY
CONTACT: DAVID NISWONGER
2830 BAKER ROAD, #100
DEXTER, MI 48130
PHONE: 734.426.9980

ENGINEER / SURVEYOR

METRO CONSULTING ASSOCIATES
CONTACT: CHRISTOPHER SUTTON
45345 FIVE MILE ROAD
PLYMOUTH, MI 48170
PHONE: 800.525.6016
EMAIL: CSUTTON@METROCA.NET

MUNICIPALITY

CITY OF ANN ARBOR
301 EAST HURON STREET
ANN ARBOR, MI 48104
PHONE: 734.994.2700 OR 734.794.6320

PROJECT NARRATIVE

LEWIS JEWELERS IS RESPECTFULLY REQUESTING SITE PLAN APPROVAL TO ALLOW FOR REDEVELOPMENT OF THE EXISTING SITE AT 300 S MAPLE ROAD TO BE USED FOR NEW RETAIL BUILDINGS.

THE OVERALL EXISTING PARCEL IS 1.98 ACRES IN SIZE AND IS ZONED C3: FRINGE COMMERCIAL DISTRICT. THE SITE IS CURRENTLY VACANT AND WAS MOST RECENTLY USED AS THE QUARTER BISTRO RESTAURANT. THE EXISTING BUILDING AND SITE IMPROVEMENTS WILL BE DEMOLISHED TO ACCOMMODATE THREE NEW COMMERCIAL BUILDINGS TOTALING 24,529 SF OF FLOOR AREA. SITE WORK WILL INCLUDE NEW PARKING SPACES AND DRIVE AISLES, A SIDEWALK CONNECTION FROM MAPLE ROAD TO THE WESTGATE SHOPPING CENTER, BIORETENTION AREAS, AN UNDERGROUND DETENTION SYSTEM, AND LANDSCAPING.

WATER SERVICE WILL BE PROVIDED TO THE BUILDINGS VIA A NEW 4" FIRE SERVICE AND 2" DOMESTIC SERVICE CONNECTED TO THE EXISTING 12" WATER MAIN ON THE SOUTH SIDE OF THE SITE. SANITARY SEWER SERVICE WILL BE PROVIDED FROM THE EXISTING 6" SANITARY SEWER ON THE NORTH SIDE OF THE SITE. STORMWATER MANAGEMENT WILL BE HANDLED VIA TWO UNDERGROUND DETENTION SYSTEMS ON THE NORTH AND SOUTH SIDES OF THE SITE. ADDITIONALLY, THERE WILL BE SIX BIORETENTION AREAS THROUGHOUT THE SITE. THE WIDTH OF THE EXISTING CURB CUT ONTO S MAPLE ROAD WILL BE REDUCED TO ACCOMMODATE THE PROPOSED BUILDINGS WHILE STILL PROVIDING TWO LANES OF TRAFFIC. THREE ACCESS POINTS TO THE EXISTING DRIVEWAYS FOR THE WESTGATE SHOPPING CENTER WILL ALSO BE MAINTAINED.

CITY OF ANN ARBOR GENERAL 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 STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTORS OF THEIR OBLIGATION TO CONSTRUCT ITEMS IN COMPLETE ACCORDANCE WITH THE PUBLIC SERVICES STANDARD SPECIFICATIONS.
- 3) USE OF LINE STOPS IS REQUIRED WHERE EXISTING WATER MAINS CANNOT BE SUFFICIENTLY ISOLATED TO COMPLETE THE WORK. THE COST OF ANY LINE STOP ISOLATION IS THE RESPONSIBILITY OF THE DEVELOPER AND/OR CONTRACTOR.
- 4) PAVEMENT MARKINGS DISTURBED DUE TO PAVEMENT CUTS OR CONSTRUCTION RELATED ACTIVITIES SHALL BE REPLACED AS DIRECTED BY ENGINEER. REPLACEMENT DURING CONSTRUCTION OF THE PROJECT MAY BE CONSIDERED TEMPORARY, WITH FINAL PAVEMENT MARKING RESTORATION TO OCCUR AT THE END OF THE PROJECT.

OPEN SPACE SUMMARY

EXISTING OPEN SPACE AREA: 18,960 SF (0.435 AC)
PROPOSED OPEN SPACE AREA: 12,664 SF (0.291 AC)

SHEET INDEX

01	COVER SHEET
02	ALTA SURVEY
03	DEMOLITION PLAN
04	LAYOUT PLAN
05	GRADING & SOIL EROSION CONTROL PLAN
06	SOIL EROSION CONTROL NOTES AND DETAILS
07	UTILITY PLAN
08	STORM WATER MANAGEMENT PLAN
09	STORM WATER MANAGEMENT CALCULATIONS - NORTH
10	STORM WATER MANAGEMENT CALCULATIONS - SOUTH
11	STORM WATER MANAGEMENT DETAILS
12	TYPICAL DETAILS
13	TYPICAL DETAILS
14	LANDSCAPE PLAN
15	LANDSCAPE NOTES, CALCULATIONS & NATURAL FEATURES
16	LANDSCAPE DETAILS
A2.0	OVERALL FLOOR PLAN
A5.0	OVERALL EXTERIOR ELEVATIONS
A7.0	OVERALL BUILDING SECTIONS
A8.0	SITE AND BUILDING RENDERINGS
PH-1	PHOTOMETRIC PLAN



THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

CONSTRUCTION SITE SAFETY IS THE RESPONSIBILITY OF THE CONTRACTOR. NEITHER THE OWNER NOR THE ENGINEER SHALL BE EXPECTED TO ASSUME ANY RESPONSIBILITY FOR SAFETY OF THE WORK, OF PERSONS ENGAGED IN THE WORK, OF ANY NEARBY STRUCTURES, OR OF ANY OTHER PERSONS.

Revisions	Date	Description
△	08.27.2020	SITE PLAN SUBMISSION
△	09.28.2020	REVISED PER SITE PLAN REVIEW #1
△	10.22.2020	REVISED PER SITE PLAN REVIEW #2
△	12.07.20	REVISED PER SITE PLAN REVIEW #3
△	12.21.20	REVISED PER PLANNING COMMISSION



Project Number: 1051-19-9457 Date: 08/26/2020

Checked by: CB, Drawn by: CB, KMW, Crew/Book: CB

Client: AR BROUWER COMPANY

Project: LEWIS JEWELERS

Site Address: 300 S. MAPLE ROAD ANN ARBOR, MICHIGAN 48103

County: WASHTENAW Community: ANN ARBOR
Township: 2S Range: 5E Section: 25

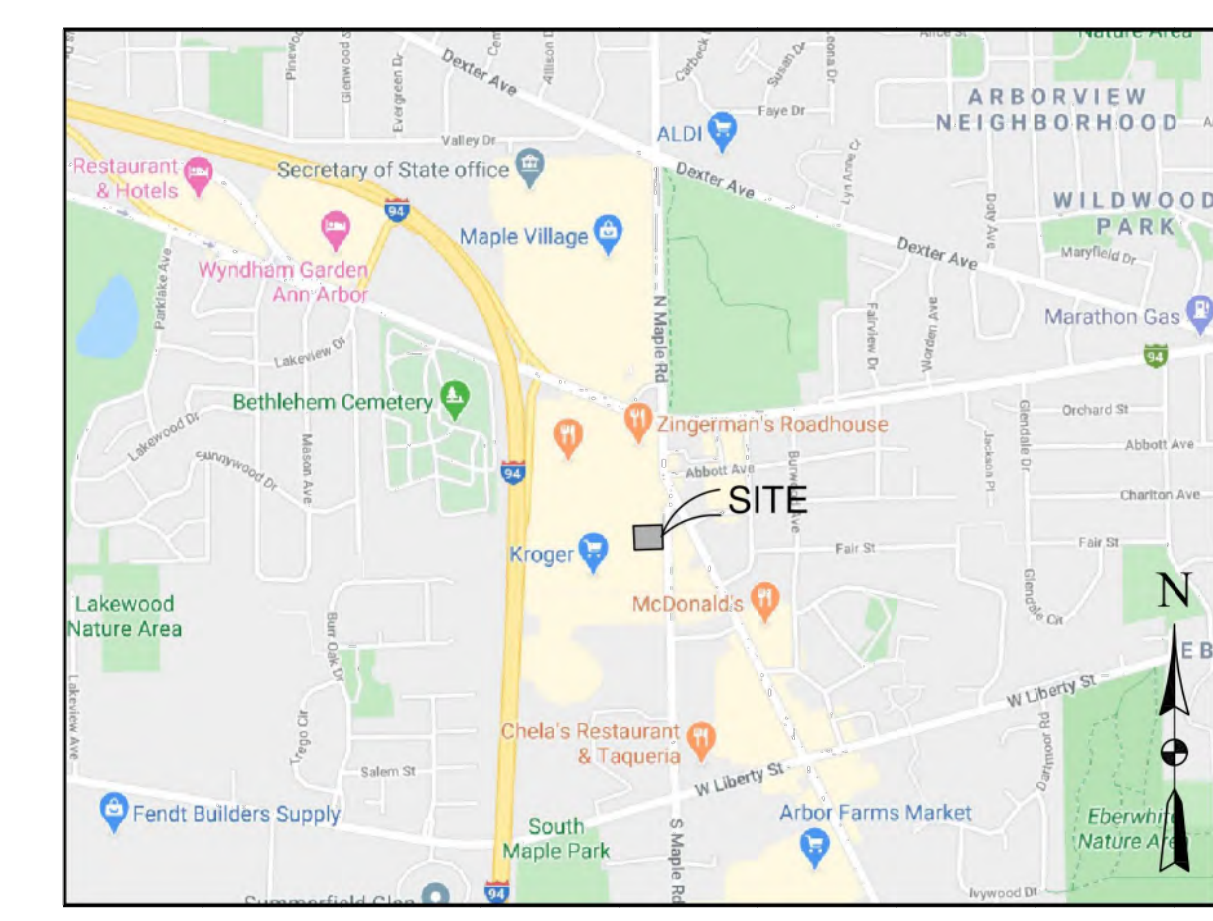
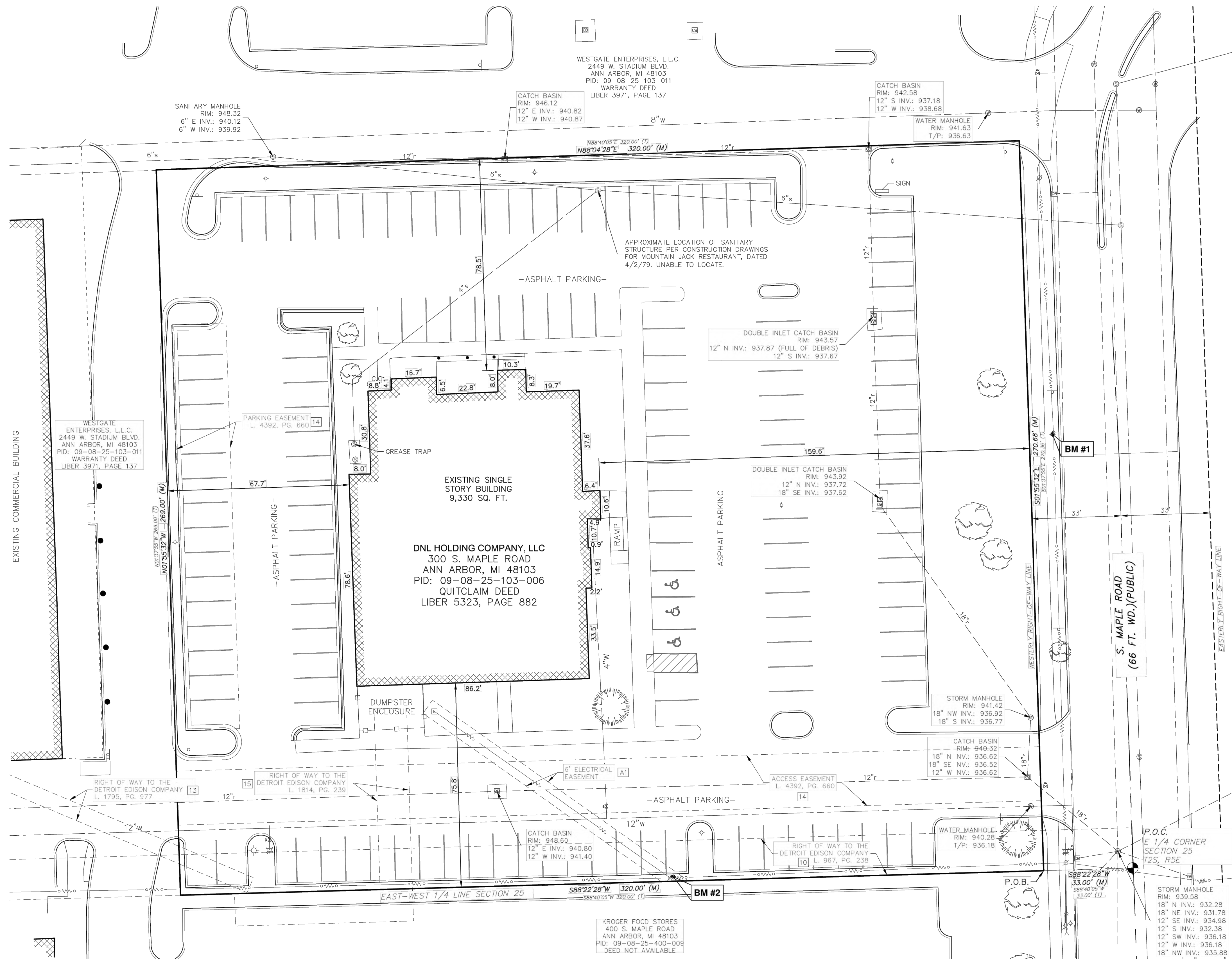
Professional Name: CHRISTOPHER SUTTON, PE Date: --

Title: SITE PLAN COVER SHEET

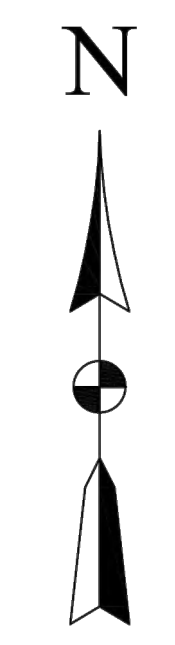
Drawing Scale: 1" = 30' Sheet Number: 01

ALTA/NSPS LAND TITLE SURVEY

IN THE NORTHEAST 1/4 OF SECTION 25, TOWN 2 SOUTH, RANGE 5 EAST,
CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN



VICINITY MAP
NOT TO SCALE



DESCRIPTION:
(PER STEWART TITLE GUARANTY COMPANY, COMMITMENT FILE NO. LIB104235 REVISION NO. 2, WITH AN EFFECTIVE DATE OF JULY 19, 2019 AT 8:00 AM)

The land referred to in this Commitment is situated in the City of Ann Arbor, Washtenaw County, State of Michigan described as follows:

PARCEL 1:
Commencing at the East quarter corner of Section 25, Town 2 South, Range 5 East, City of Ann Arbor, Washtenaw County, Michigan, thence South 88° 40' 05" West 33.00 feet along the East-West quarter line of said Section 25 to the **Place of Beginning**; thence continuing South 88° 40' 05" West 320.00 feet along the East-West quarter line of said Section 25; thence North 01° 37' 55" West 269.00 feet; thence North 88° 22' 05" East 320.00 feet; thence South 01° 37' 55" East 270.36 feet along the West right of way line of Maple Road (total width 66.00 feet) to the Place of Beginning. Being part of the Northeast quarter of said Section 25, City of Ann Arbor, Washtenaw County, Michigan.

PARCEL 2:
Lot(s) 45, 46, 47 and the Northwesterly 30 feet of Lot 44, Johnson-Youngs Subdivision, according to the recorded Plat thereof, as recorded in Liber 13 of Plat(s), Page 57, Washtenaw County Records

- SCHEDULE B II EXCEPTIONS:**
(PER STEWART TITLE GUARANTY COMPANY, COMMITMENT FILE NO. LIB104235 REVISION NO. 2, WITH AN EFFECTIVE DATE OF JULY 19, 2019)
- 1-2 NOT A SURVEY MATTER
 - 3 Encroachments, overlaps, boundary line disputes, or other matters which would be disclosed by an accurate survey or inspection of the Land. (AS SHOWN)
 - 4-9 NOT A SURVEY MATTER
 - 10 Pole Line Permit in favor of The Detroit Edison Company, as recorded in Liber 799, page 454 (PORTION OF THIS RIGHT-OF-WAY GRANT RELEASED BY LIBER 967, PAGE 238) and as Modified in Liber 967, page 238, Washtenaw County Records, as to Parcel 1. (THIS DOCUMENT RELEASES PORTION OF THE RIGHT-OF-WAY GRANT AS DESCRIBED IN ITEM 10A OF THIS SURVEY.) (AFFECTS PARCEL 1 - AS SHOWN)
 - 11 Mutual Parking Agreement and the terms and provisions contained therein, as recorded in Liber 1176, page 397, Washtenaw County Records, as to Parcel 1. (MUTUAL PARKING EASEMENT TERMINATED BY ITEM 14 OF THIS SURVEY.)
 - 12 Building and use Restrictions as recorded in Liber 959, page 375; Liber 961, page 511, Washtenaw County Records, but omitting any covenant or Restriction based on race, color, religion, sex, handicap, familial status, or national origin, as to Parcel 1. (AFFECTS PARCEL 1) (NOT A SURVEY MATTER)
 - 13 Right of Way in favor of The Detroit Edison Company, as recorded in Liber 1795, page 977, Washtenaw County Records, as to Parcel 1. (AFFECTS PARCEL 1 - AS SHOWN) (LOCATION IS APPROXIMATE AND BASED ON THE FURNISHED DRAWING. NO OBSERVED EVIDENCE OF LOCATION AT THE TIME OF SURVEY.)
 - 14 Easement Agreement and the terms and provisions contained therein, as recorded in Liber 4392, page 660, Washtenaw County Records, as to Parcel 1. (THIS DOCUMENT TERMINATES THE MUTUAL PARKING EASEMENT AS DESCRIBED IN ITEM 11 OF THIS SURVEY. DOCUMENT CONTAINS A SCRIVENER'S ERROR IN THE PAGE NUMBER OF THE RECORDED MUTUAL PARKING EASEMENT. THE PAGE NUMBER 398 REPRESENTS THE SECOND PAGE OF SAID DOCUMENT. THE CORRECT PAGE NUMBER SHOULD BE 397.) (AFFECTS PARCEL 1 - AS SHOWN) (THERE IS A 15-1-FOOT GAP BETWEEN THE 'SMA PARKING PARCEL' AND 'SMA ACCESS PARCEL' AS SHOWN. THERE ALSO NEEDS TO BE AN ADDITIONAL 150.39 FOOT X 20.00 FOOT 'SMA ACCESS PARCEL' ALONG THE EASTERLY EDGE OF THE 'SMA PARKING PARCEL'.) (DOCUMENT ALSO CREATES BENEFITTING NON-EXCLUSIVE EASEMENTS FOR VEHICLE PARKING AND ACCESS, KNOWN AS THE 'WE EASEMENT PARCELS'. DOCUMENT ALLOWS THEM TO BE RELOCATED FROM TIME TO TIME, WHICH MAKES THEM BLANKET IN NATURE AND NOT PLOTTABLE.)
 - 15 Right of Way in favor of The Detroit Edison Company, as recorded in Liber 1814, page 239, Washtenaw County Records, as to Parcel 1. (AFFECTS PARCEL 1 - AS SHOWN) (LOCATION IS APPROXIMATE AND BASED ON THE FURNISHED DRAWING. NO OBSERVED EVIDENCE OF LOCATION AT THE TIME OF SURVEY.)
 - 16 Easements as shown on the recorded plat, as to Parcel 2. (AFFECTS PARCEL 2 - NOT PLOTTED) (PARCEL 2 IS NOT PART OF THIS SURVEY.)
 - 17 Building and use Restrictions as recorded in Liber 832, page 323, Washtenaw County Records, but omitting any covenant or Restriction based on race, color, religion, sex, handicap, familial status, or national origin, as to Parcel 2. (AFFECTS PARCEL 2 - NOT PLOTTED) (PARCEL 2 IS NOT PART OF THIS SURVEY.)
 - 18 NOT A SURVEY MATTER

- SURVEYORS NOTES:**
- BEARING BASIS: MICHIGAN STATE PLANE COORDINATE SYSTEM NAD83 (2011), SOUTH ZONE, INTERNATIONAL FEET.
 - DATUM OF ELEVATIONS: NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88)
 - I HEREBY CERTIFY THAT THE PARCEL SHOWN HEREON DOES NOT LIE WITHIN A SPECIAL FLOOD HAZARD ZONE ACCORDING TO THE FLOOD INSURANCE RATE MAP PUBLISHED BY THE FEDERAL INSURANCE ADMINISTRATION FOR THE COUNTY OF WASHTENAW, STATE OF MICHIGAN, COMMUNITY NUMBER - 26013, MAP NUMBER - 26161C0244E, AN EFFECTIVE DATE OF APRIL 3, 2012. THEREFORE, AS NOTED IN SAID DOCUMENT, THE SCALED LOCATION OF THE EASTERLY PORTION OF THE SUBJECT PROPERTY IS IN ZONE X (UNSHADED), TO THE BEST OF MY KNOWLEDGE AND BELIEF. IN ADDITION, I HEREBY CERTIFY THAT THE PARCEL SHOWN HEREON DOES NOT LIE WITHIN A SPECIAL FLOOD HAZARD ZONE ACCORDING TO THE FLOOD INSURANCE RATE MAP INDEX PUBLISHED BY THE FEDERAL INSURANCE ADMINISTRATION FOR THE COUNTY OF WASHTENAW, STATE OF MICHIGAN, MAP NUMBER - 26161C0244E, AN EFFECTIVE DATE OF APRIL 3, 2012. THEREFORE, AS NOTED (PANEL NOT PRINTED - NO SPECIAL FLOOD HAZARD AREAS) IN SAID DOCUMENT, THE SCALED LOCATION OF THE WESTERLY PORTION OF THE SUBJECT PROPERTY RESIDES IN PANEL 26161C0243E, TO THE BEST OF MY KNOWLEDGE AND BELIEF.
 - DATE OF SURVEY: APRIL 30, 2020.
 - SOME FEATURES SHOWN ON SURVEY MAY BE OUT OF SCALE FOR CLARITY.
 - DIMENSIONS ON THIS SURVEY ARE EXPRESSED IN FEET AND DECIMAL PARTS THEREOF UNLESS OTHERWISE NOTED.
 - SQUARE FOOTAGE:
 - A. EXTERIOR FOOTPRINT OF ALL BUILDINGS AT GROUND LEVEL - 9,330 SQUARE FEET - 1 STORY BUILDING.
 - B. GROSS FLOOR AREA OF ALL BUILDINGS - 9,330 SQUARE FEET - TOTAL.
 - C. GROSS LAND AREA OF PARCEL - 1.98 ACRE, (86,348 SQUARE FEET).
 - D. NET LAND AREA OF PARCEL (DOES NOT INCLUDE ROAD RIGHT-OF-WAY) N/A - NO ROAD RIGHT-OF-WAY LOCATED ON PARCEL
 - AS PERTAINING TO GENERAL REQUIREMENTS, 4. RECORDS RESEARCH - THE CURRENT RECORD DESCRIPTIONS OF ADJOINERS, RECORDS WERE RESEARCHED BY METRO CONSULTING ASSOCIATES (NOT PROVIDED) ON MAY 6, 2020.
 - PARCEL 2 OF THE FURNISHED TITLE COMMITMENT IS NOT PART OF THIS SURVEY.

SURVEYORS CERTIFICATE:

To: (i) DNL Holdings, LLC, a Michigan limited liability company; and (ii) Stewart Title Guaranty Company.

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2016 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS. The fieldwork was completed on 04/30/2020.

Trevor A. McMann, PS
Professional Surveyor No. 50442
tmcman@metroca.net

Dated: 05/06/2020

LEGEND

— EX. PROPERTY LINE	— EX. UTILITY POLE
— EX. SECTION LINE	— EX. GUY WIRE
— EX. EASEMENT LINE	— EX. TELEPHONE RISER
— EX. CURB/PAVEMENT	— EX. BOLLARD
— EX. WOOD FENCE	— EX. LIGHT POLE
— EX. SIGN	— EX. DECIDUOUS TREE
— FOUND MONUMENTATION AS NOTED	— EX. CONIFEROUS TREE
— EX. WATER MAIN	— TITLE EXCEPTION PARCEL 1
— EX. HYDRANT	— SECTION CORNER
— EX. WATER VALVE	— TITLE DISTANCE
— EX. SANITARY SEWER	— FIELD MEASURED DISTANCE
— EX. SANITARY MANHOLE	— P.O.C.
— EX. STORM INLET/CATCH BASIN	— P.O.B.
— EX. STORM SEWER	
— EX. OVERHEAD ELECTRIC	
— EX. UNDERGROUND ELECTRIC	
— EX. TRANSFORMER	

BENCHMARKS:

BM #1: BENCH-TIE ON SOUTHWEST FACE OF UTILITY POLE
ELEV: 941.37 (NAVD 88)

BM #2: BENCH-TIE ON NORTHEAST FACE OF UTILITY POLE
ELEV: 948.31 (NAVD 88)

ADDITIONAL EXCEPTION:
(NOT PART OF FURNISHED TITLE COMMITMENT)

[A1] Six Foot Electrical Easement as per Sheet E-1 of the Mountain Jacks Restaurant prepared by Odwell Reg Hornacek Okinowo Incorporated dated April 2, 1979. (AFFECTS PARCEL 1-AS SHOWN)

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

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

CONSTRUCTION SITE SAFETY IS THE RESPONSIBILITY OF THE CONTRACTOR. NEITHER THE OWNER NOR THE ENGINEER SHALL BE EXPECTED TO ASSUME ANY RESPONSIBILITY FOR SAFETY OF THE WORK, OF PERSONS ENGAGED IN THE WORK, OF ANY NEARBY STRUCTURES, OR OF ANY OTHER PERSONS.

Revisions

DATE	DESCRIPTION

Project Number	1051-19-9457	Date	5-4-2020
P.M.	MT	Checked by	MT/JM/NFA
Client	A.R. BROUWER CO., LLC		
Project	LEWIS JEWELER'S		

RELATIONSHIPS - REPUTATION - RESULTS
800.525.6016

Site Address	300 S. MAPLE ROAD ANN ARBOR, MI 48103		
County	Washtenaw	Community	ANN ARBOR
Township	2S	Range	5E
Section	25		

Professional Name _____ Date _____

Title _____

ALTA/NSPS LAND TITLE SURVEY

Drawing Scale Sheet Number **02**

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

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Revisions

08.27.2020	SITE PLAN SUBMISSION
09.28.2020	REVISED PER SITE PLAN REVIEW #1
10.22.2020	REVISED PER SITE PLAN REVIEW #2
12.07.20	REVISED PER SITE PLAN REVIEW #3
12.21.20	REVISED PER PLANNING COMMISSION

LEGEND

- PROPERTY LINE
- EX. CONTOUR
- EX. STRIPING
- EX. SIGN
- EX. TREE (CONIFEROUS)
- EX. TREE (DECIDUOUS)
- EX. LIGHTPOLE
- TREE PROTECTION FENCE
- REMOVE EXISTING TREE
- EX. BUILDING DEMOLITION
- PR. CONCRETE DEMOLITION
- PR. ASPHALT DEMOLITION
- PR. TURF / STONE SURFACE DEMOLITION

DEMOLITION NOTES:

- THE CONTRACTOR SHALL BE RESPONSIBLE TO DEMOLISH OR RELOCATE ANY SITE FEATURES AS ACCORDING TO PLAN OR AS APPROPRIATE TO FACILITATE THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS.
- ALL WORK SHALL COMPLY WITH THE CITY OF ANN ARBOR STANDARDS AND SPECIFICATIONS.
- CONTRACTOR IS RESPONSIBLE FOR PRESERVING LANDSCAPED AREAS THROUGHOUT CONSTRUCTION. ANY PLANTINGS, VEGETATION, OR GROUNDCOVER DAMAGED DURING CONSTRUCTION SHALL BE REPLACED WITH NEW TO MATCH EXISTING AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL CALL 811 "MISS DIG" AT LEAST THREE WORKING DAYS PRIOR TO CONSTRUCTION.
- A SOIL EROSION CONTROL PERMIT FROM THE AUTHORITY HAVING JURISDICTION IS REQUIRED AND SOIL EROSION CONTROL BMP'S SHALL BE IN PLACE PRIOR TO THE COMMENCEMENT OF DEMOLITION ACTIVITIES.
- THE CONTRACTOR SHALL INDEPENDENTLY VERIFY THE LOCATION AND DEPTH OF EXISTING UTILITIES PRIOR TO DEMOLITION ACTIVITIES.
- PRIOR TO REMOVING, RELOCATING, OR PERFORMING ANY WORK ON A UTILITY, THE CONTRACTOR SHALL COORDINATE WITH THE RESPECTIVE UTILITY OWNER.
- ALL DEMOLISHED MATERIAL SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN A LEGALLY DESIGNATED DISPOSAL AREA. PERMITS AND FEES FOR DISPOSAL OF DEMOLITION MATERIAL SHALL BE OBTAINED AND PAID FOR BY THE CONTRACTOR.
- PAVEMENTS TO BE REMOVED SHALL BE SAW CUT TO THE FULL DEPTH OF THE PAVEMENT. THE CONTRACTOR SHALL TAKE CARE TO MAINTAIN A CLEAN EDGE OF PAVEMENT.
- ALL UNUSED SERVICE LEADS SHALL BE PERMANENTLY KILLED AT ITS RESPECTIVE MAIN

EXISTING CONDITIONS NOTES:

- THIS PLAN IS BASED ON THE TOPOGRAPHIC SURVEY PREPARED BY METRO CONSULTING ASSOCIATES DATED FEBRUARY 13, 2020.
- ELEVATIONS SHOWN HEREIN ARE BASED ON DATUM - NATIONAL GEODETIC VERTICAL DATUM OF 1988 (NAVD88)
- THE BEARING BASIS FOR THE SITE IS STATE PLANE, MICHIGAN SOUTH ZONE, INTERNATIONAL FEET.
- THE PARCEL SHOWN IS WITHIN AN AREA OF MINIMAL FLOOD HAZARD (ZONE X) ACCORDING TO FEMA FLOOD INSURANCE RATE MAP, 26161C0244E
- EXISTING UTILITIES ARE BASED ON FIELD OBSERVATIONS OF VISIBLE STRUCTURES IN CONJUNCTION WITH UTILITY MAPS OBTAINED AND/OR MARKED IN THE FIELD BY OTHERS. METRO CONSULTING ASSOCIATES (MCA) MAKES NO GUARANTEE AS TO THE ACCURACY OR COMPLETENESS OF THE EXISTING UTILITY INFORMATION SHOWN. ALL UTILITY LOCATIONS AND DEPTHS SHOULD BE INDEPENDENTLY VERIFIED PRIOR TO CONSTRUCTION. ANY DISCREPANCIES WITH THE PLANS SHOULD BE BROUGHT TO THE DESIGN PROFESSIONAL'S ATTENTION IMMEDIATELY.
- THE EXISTING BUILDING HAS NO BASEMENT.

BENCHMARKS:

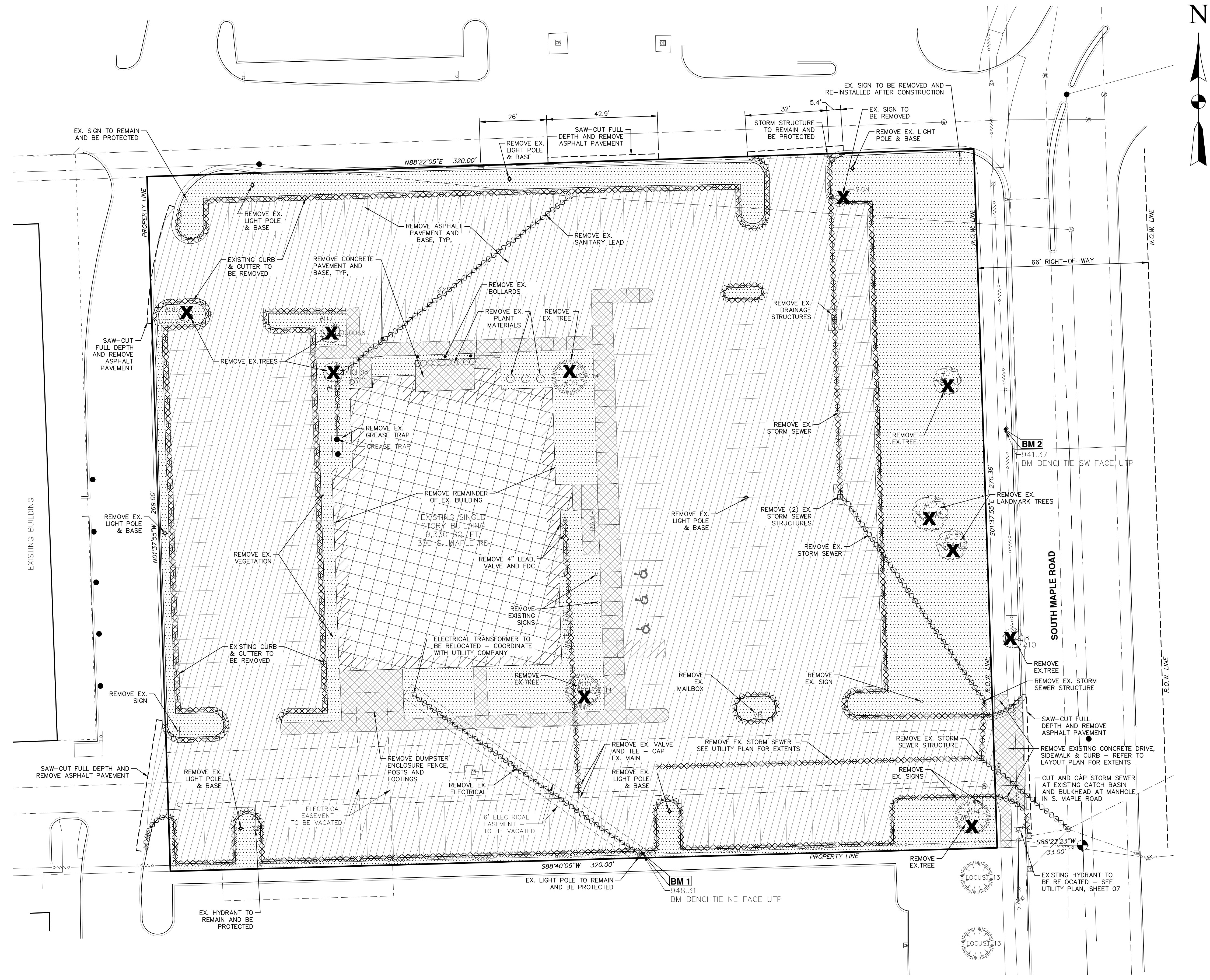
BM #1: BENCH TIE IN NORTHEAST FACE OF UTILITY POLE
ELEVATION: 948.31' (NAVD88)

BM #2: BENCH TIE IN SOUTHWEST FACE OF UTILITY POLE
ELEVATION: 941.37' (NAVD88)

EXISTING TREE LIST:

NO.	SIZE	SPECIES	STATUS
01	11" CAL.	CRAB APPLE TREE	TO BE REMOVED
02	14" CAL. (LM)	CRAB APPLE TREE	TO BE REMOVED
03	12" CAL. (LM)	CRAB APPLE TREE	TO BE REMOVED
04	14" CAL.	PINE TREE	TO BE REMOVED
05	14" CAL.	SPRUCE	TO BE REMOVED
06	3" CAL.	LOCUST TREE	TO BE REMOVED
07	8" CAL.	CRAB APPLE TREE	TO BE REMOVED
08	8" CAL.	CRAB APPLE TREE	TO BE REMOVED
09	14" CAL.	SPRUCE	TO BE REMOVED
10	8" CAL.	CRAB APPLE TREE	TO BE REMOVED

(LM) DESIGNATES ANN ARBOR LANDMARK TREE

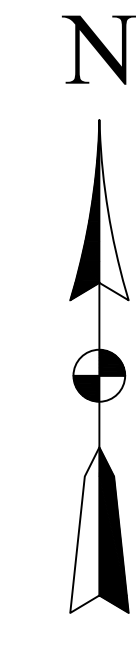


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Revisions

08.27.2020	SITE PLAN SUBMISSION
09.28.2020	REVISED PER SITE PLAN REVIEW #1
10.22.2020	REVISED PER SITE PLAN REVIEW #2
12.07.20	REVISED PER SITE PLAN REVIEW #3
12.21.20	REVISED PER PLANNING COMMISSION



LEGEND

	PROPERTY LINE
	PROPOSED BUILDING
	PR. STRIPING
	PR. CONCRETE
	PR. HEAVY-DUTY CONCRETE
	PR. ASPHALT
	PR. HANDICAP PARKING SYMBOL
	EX. LIGHTPOLE
	PR. LIGHTPOLE

LAYOUT NOTES:

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT STANDARDS, SPECIFICATION, AND GENERAL CONDITIONS OF THE JURISDICTION HAVING AUTHORITY.
- ALL DIMENSIONS ARE MEASURED TO THE PAINT LINE OR FACE OF CURB UNLESS OTHERWISE NOTED.
- ALL PARKING LOT STRIPING SHALL BE IN ACCORDANCE WITH THE "MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES"
- ALL ACCESSIBLE PARKING, SIGNAGE AND STRIPING SHALL BE IN ACCORDANCE WITH THE "ADA STANDARDS FOR ACCESSIBLE DESIGN", CURRENT EDITION.
- PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE OWNER AND/OR ENGINEER SHOULD THERE BE ANY FIELD CONFLICTS WITH THE DESIGN INTENT.
- REFER TO THE ARCHITECTURAL PLANS FOR COORDINATING THE SCOPE OF WORK RELATING TO THE BUILDING ELEVATIONS, INTERIOR, AND APPURTENANCES.
- CONTRACTOR IS RESPONSIBLE FOR PRESERVING LANDSCAPED AREAS THROUGHOUT CONSTRUCTION. ANY PLANTINGS, VEGETATION, OR GROUND COVER DAMAGED DURING CONSTRUCTION SHALL BE REPLACED WITH NEW TO MATCH EXISTING AT THE CONTRACTOR'S EXPENSE.
- 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.
- STORAGE AREA FOR CONSTRUCTION MATERIALS SHALL NOT INTERFERE WITH FIRE/EMERGENCY SITE ACCESS.
- ADDRESS SHALL BE CLEARLY VISIBLE WHEN APPROACHING THE BUILDING.
- THIS PROJECT WILL BE CONSTRUCTED/COMPLETED IN A SINGLE PHASE.
- THE DEVELOPER IS RESPONSIBLE FOR OBTAINING NECESSARY APPROVALS TO COMPLETE OFF-SITE WORK FROM THE NECESSARY PROPERTY OWNER(S).

SITE DATA

GROSS / NET LOT AREA	1.98 AC
EXISTING LAND USE	VACANT RESTAURANT
PROPOSED LAND USE	COMMERCIAL

SITE DEVELOPMENT DATA	ZONING	EXISTING			REQUIRED			PROPOSED		
		FRONT	SIDE	REAR	HEIGHT	FLOOR AREA	HEIGHT	FLOOR AREA	HEIGHT	FLOOR AREA
BUILDING SETBACKS	C3	159.64' EAST	78.58' NORTH	75.95' SOUTH	10'	0'	20'	10 EAST	73' NORTH	47' SOUTH
SUITE #1 INFORMATION (CONTAINING 1 UNIT)	C3	+/-28' / 1-STORY	55 FT / 4 STORIES	28' / 1-STORY	6,000 SF	9,408 SF	28' / 1-STORY	6,000 SF	10,575 SF	28' / 1-STORY
SUITE #2 INFORMATION (CONTAINING 4 UNITS)	C3	55 FT / 4 STORIES	28' / 1-STORY	6,000 SF	10,575 SF	28' / 1-STORY	6,000 SF	10,575 SF	28' / 1-STORY	6,000 SF
SUITE #3 INFORMATION (CONTAINING 2 UNITS)	C3	55 FT / 4 STORIES	28' / 1-STORY	6,000 SF	4,546 SF	28' / 1-STORY	6,000 SF	4,546 SF	28' / 1-STORY	6,000 SF
FLOOR AREA RATIO (% OF LOT AREA)					MAX. 200	28.4%				
PARKING INFORMATION (REGULAR CAR)	TOTAL SPACES				65					
	LENGTH				16' / 18' (MIN)	16' / 18'				
	WIDTH				9' (MIN)	9'				
	AISLE				22' (MIN)	22' MIN.				
PARKING INFORMATION (SMALL CAR)	TOTAL SPACES				16					
	LENGTH (PARALLEL)				18' (MIN)	18'				
	LENGTH (90)				14' / 16' (MIN)	14'				
	WIDTH				8' (MIN)	8'				
TOTAL COMBINED PARKING	TOTAL SPACES				142	79 (MIN.)*				
	TOTAL ADA SPACES				3	3 (MIN.)				
	CLASS B TYPE				0	4.5*				
	CLASS C TYPE				0	4.5*				

Project Number	1051-19-9457	Date	08/26/2020
P.M.	Checked by	Drawn by	Crew/Book
CB	CB	KMW	

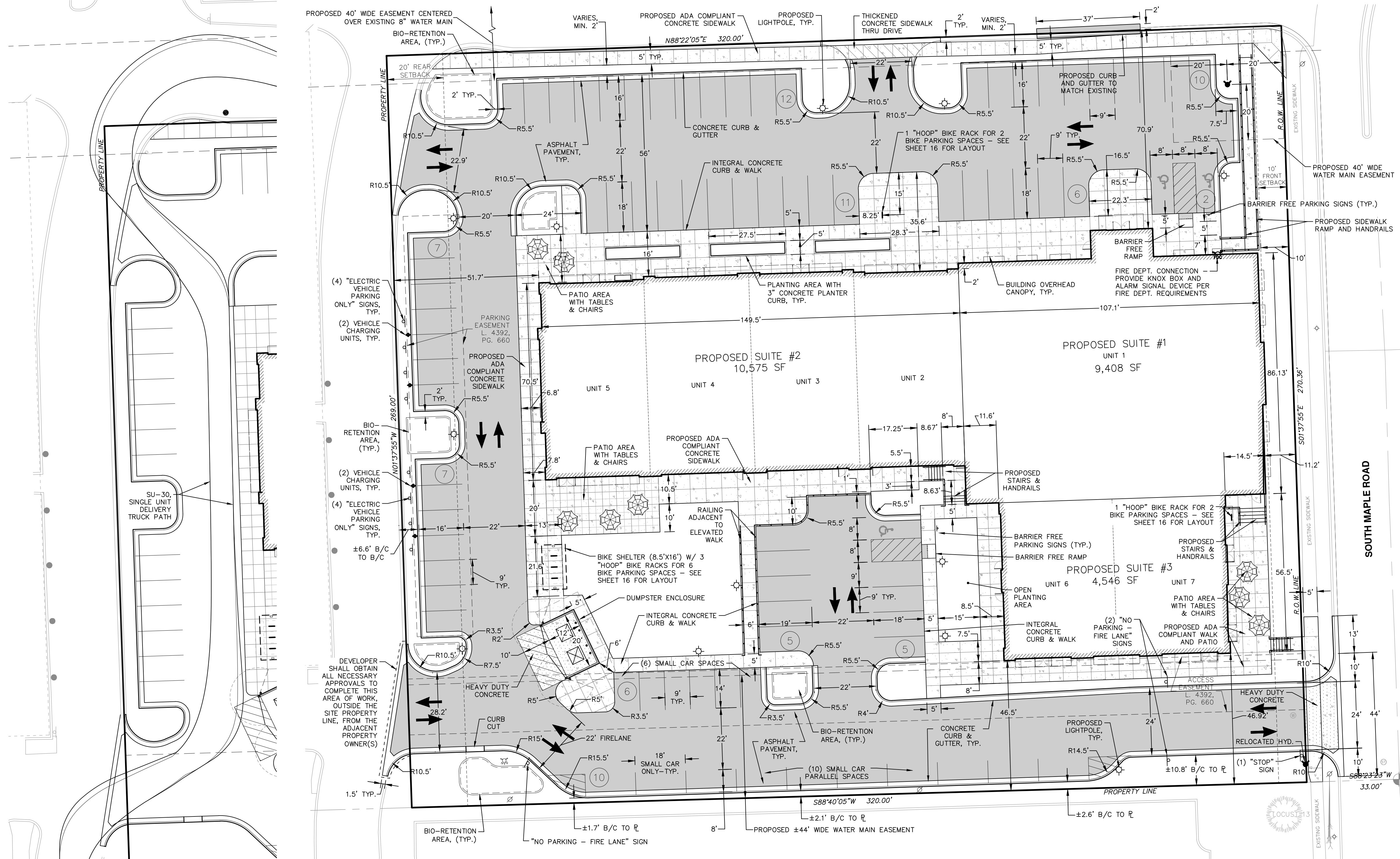
Client: **AR BROUWER COMPANY**

Project: **LEWIS JEWELERS**

Site Address: 300 S. MAPLE ROAD
ANN ARBOR, MICHIGAN 48103
County: WASHTEENAW Community: ANN ARBOR
Township: 2S Range: 5E Section: 2S

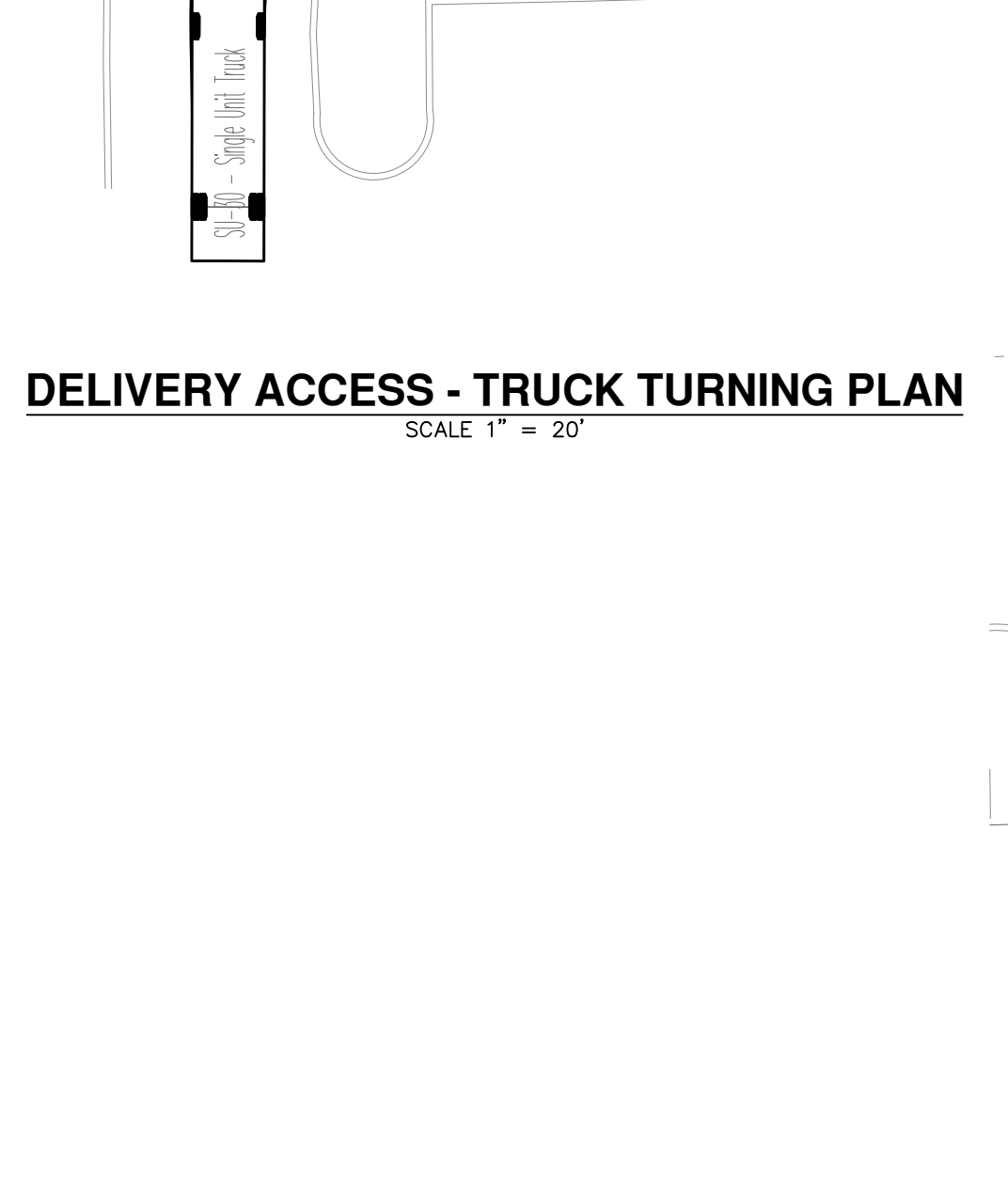
Professional Name: CHRISTOPHER SUTTON, PE
Date: --

Title: **SITE PLAN LAYOUT PLAN**

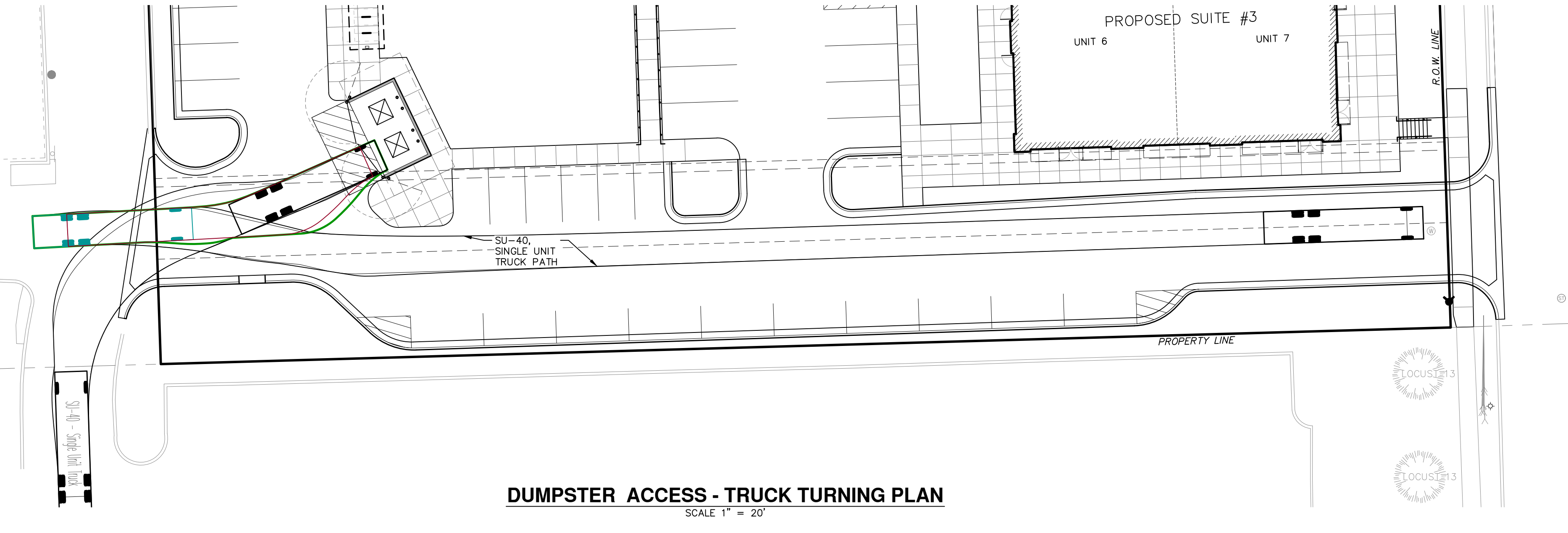


LAYOUT PLAN
SCALE 1" = 20'

DELIVERY ACCESS - TRUCK TURNING PLAN
SCALE 1" = 20'



DUMPSTER ACCESS - TRUCK TURNING PLAN
SCALE 1" = 20'



K:\2019\1051-19-9457\Drawings\Plan_Site_Site Plan\04-01-20.dwg

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Project Number	1051-19-9457	Date	08/26/2020
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		Drawn by	KMW
		Crew/Book	

Client: **AR BROUWER COMPANY**

Project: **LEWIS JEWELERS**

Site Address	300 S. MAPLE ROAD ANN ARBOR, MICHIGAN 48103
County	WASHTENAW
Community	ANN ARBOR
Township	2S
Range	5E
Section	25

Professional Name: CHRISTOPHER SUTTON, PE | Date: --

Title: **SITE PLAN**
GRADING & SOIL EROSION CONTROL PLAN

Drawing Scale	Sheet Number
1" = 20'	05

LEGEND

	EX. SPOT ELEVATION
	EX. CONTOUR
	EX. WETLAND LIMITS
	EX. ADJACENT PROPERTY LINE
	EX. SECTION LINE
	EX. EASEMENT LINE
	EX. CURB/PAVEMENT
	EX. FENCE
	EX. GRAVEL
	EX. DITCH
	EX. GUARDRAIL
	EX. TREE LINE
	EX. TREE (CONIFEROUS)
	EX. TREE (DECIDUOUS)
	EX. SIGN
	EX. MAILBOX
	FOUND IRON PIPE
	FOUND IRON ROD
	FOUND PK NAIL
	FOUND CONC. MONUMENT
	SET IRON ROD
	SET MAG NAIL
	EX. SECTION CORNER
	SOIL BORING
	EX. WATER MAIN
	EX. WATER VALVE
	EX. HYDRANT
	EX. WATER MANHOLE
	EX. WELL
	EX. WATER METER
	EX. STORM SEWER
	EX. STORM INLET/CATCH BASIN
	EX. STORM MANHOLE
	EX. STORM END SECTION
	EX. SANITARY SEWER
	EX. SANITARY MANHOLE
	EX. UNDERGROUND GAS
	EX. GAS VALVE
	EX. OVERHEAD ELECTRIC
	EX. UNDERGROUND ELECTRIC
	EX. UNDERGROUND CABLE
	EX. TELEPHONE MANHOLE
	EX. ELECTRIC MANHOLE
	EX. ELECTRIC METER
	EX. GAS METER
	EX. LIGHT POLE
	EX. TRAFFIC SIGNAL BOX
	EX. UNDERSIDE MANHOLE
	EX. TRAFFIC SIGNAL POLE
	EX. UTILITY POLE
	EX. GUY WIRE
	PR. SPOT ELEVATION
	PR. CONTOUR
	PR. DRAINAGE ARROW
	PR. EASEMENT LINE
	PR. SETBACK LINE
	PR. CURB/PAVEMENT
	PR. FENCE
	PR. SIDEWALK RAMP
	PR. ASPHALT PAVEMENT
	PR. CONCRETE
	PR. GUARDRAIL
	PR. SIGN
	PR. WATER MAIN
	PR. WATER VALVE
	PR. HYDRANT
	PR. WATER VALVE IN MANHOLE
	PR. WELL
	PR. REDUCER
	PR. STORM SEWER
	PR. STORM INLET/CATCH BASIN
	PR. STORM MANHOLE
	PR. STORM END SECTION
	PR. SANITARY SEWER
	PR. SANITARY MANHOLE
	PR. CLEANOUT
	PR. UTILITY CROSSING LOCATION
	PR. UNDERGROUND GAS
	PR. GAS VALVE
	PR. LIGHT POLE
	PR. TREE PROTECTION FENCE
	PR. INLET FILTER
	PR. TOP OF WALK
	PR. MATCH EXISTING
	PR. SILT FABRIC FENCE
	PR. SOIL DISTRICT LIMIT
	PR. SOIL TYPE DESIGNATION

BENCHMARKS:
 BM #1: BENCH TIE IN NORTHEAST FACE OF UTILITY POLE
 ELEVATION: 948.31' (NAVD88)
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 ELEVATION: 941.37' (NAVD88)

EARTHWORK ESTIMATE:

THE ESTIMATED COST OF EARTHWORK IS \$125,000
 ESTIMATED CUT = 2,177 CY
 ESTIMATED FILL = 973 CY
 THE ESTIMATED COST OF SITE STABILIZATION IS \$5,300

GRADING NOTES:

- THE PROPOSED CONTOURS AND SLOPES ARE APPROXIMATE AS SHOWN.
- ALL PROPOSED SPOT GRADES SHOWN AT THE EDGE OF METAL OR TOP EDGE OF WALK, UNLESS OTHERWISE NOTED. NOTATION CODES ARE AS FOLLOWS: FF=FINISHED FLOOR, FG=FINISHED GRADE, TP=TOP OF PAVEMENT, RIM=TOP OF GRATE OR MANHOLE, TW=TOP OF WALL, BW=BOTTOM OF WALL, TC=TOP OF CURB.
- ANY SOIL RETAINING SYSTEM OR WALL IF REQUIRED SHALL BE DESIGNED BY A QUALIFIED STRUCTURAL OR GEOTECHNICAL ENGINEER. A DETAIL OF THE RETAINING WALL WITH CALCULATIONS TO BE SUBMITTED TO THE REVIEW AGENCY AS REQUIRED.
- WHEN PAVED AREAS ARE EXCAVATED, ASPHALT AREAS SHALL BE SAW-CUT AND REMOVED TO A DISTANCE EQUAL TO THE DEPTH OF EXCAVATION. CONCRETE SHALL BE REMOVED TO THE FIRST JOINT PAST THE DISTANCE EQUAL TO THE DEPTH OF EXCAVATION. COMPACTED SAND BACKFILL IS REQUIRED IN ALL EXCAVATIONS WITHIN A 1:1 SLOPE OF EXISTING OR PROPOSED PAVEMENT.
- CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE POSITIVE DRAINAGE REMAINS DURING AND IN POST CONSTRUCTION CONDITIONS AND NO ADVERSE IMPACTS WILL OCCUR TO NEIGHBORING PROPERTIES DURING AND AFTER COMPLETION OF CONSTRUCTION.
- ALL SIDEWALK PLANNED TO BE ACCESSIBLE SHALL BE CONSTRUCTED WITH CROSS SLOPES LESS THAN 2%.
- ALL SIDEWALK CURB RAMPS SHALL BE CONSTRUCTED PER THE LATEST MICHIGAN DEPARTMENT OF TRANSPORTATION DETAILS AND IN COMPLIANCE WITH THE AMERICAN WITH DISABILITIES ACT.
- CONTRACTOR SHALL ADJUST ALL EXISTING MANHOLE/CATCH BASIN RIM ELEVATIONS AFFECTED BY THE PROPOSED WORK. WHERE NECESSARY, DUE TO EXCESSIVE ELEVATION CHANGE, CONTRACTOR SHALL RECONSTRUCT THE EXISTING STRUCTURE.
- CONTRACTOR SHALL REFER TO THE GEOTECHNICAL REPORT FOR RECOMMENDATIONS ON BACKFILL, TRENCHING, GROUND WATER CONDITIONS, ETC. UNSUITABLE MATERIAL, IF ENCOUNTERED, BENEATH THE BUILDING ADDITION OR PROPOSED PAVEMENT, SHALL BE REMOVED ENTIRELY AND REPLACED WITH ENGINEERED FILL. AREAS REQUIRING SUBSTANTIAL REMEDIATION SHALL BE BROUGHT TO THE OWNER AND THE OWNER'S ENGINEER FOR FURTHER RECOMMENDATION.
- ALL GRADES ARE TOP OF WALK OR TOP OF PAVEMENT UNLESS OTHERWISE SPECIFIED.
- PARKING SPACES AND REQUIRED BARRIER FREE SIGNAGE SHALL COMPLY WITH THE MICHIGAN BUILDING CODE.
- ALL CONSTRUCTION SHALL COMPLY WITH THE CITY OF ANN ARBOR STANDARDS AND SPECIFICATIONS.
- ALL PROPOSED PAVEMENT MARKINGS TO BE PAINTED TO CURRENT INDUSTRY STANDARDS.
- ADA PARKING STALLS AND AISLES SHALL NOT EXCEED 2% SLOPE IN ALL DIRECTIONS.
- INTERNAL AND EXTERNAL STREETS SHALL BE CLEANED OF ANY TRACKED MUD IMMEDIATELY FOLLOWING EACH MUD-TRACKING OCCURRENCE.

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EX SPOT ELEVATION	EX. CONTOUR	EX. WETLAND LIMITS	EX. ADJACENT PROPERTY LINE	EX. SECTION LINE	EX. EASEMENT LINE	EX. CURB/PAVEMENT	EX. FENCE	EX. GRAVEL	EX. DITCH	EX. GUARDRAIL	EX. TREELINE	EX. TREE (CONIFEROUS)	EX. TREE (DECIDUOUS)	EX. SIGN	EX. MAILBOX	FOUND IRON PIPE	FOUND IRON ROD	FOUND PK NAIL	FOUND CONC. MONUMENT	SET IRON ROD	SET MAG NAIL	EX. SECTION CORNER	SOIL BORING	EX. WATER MAIN	EX. WATER VALVE	EX. HYDRANT	EX. WATER MANHOLE	EX. WELL	EX. WATER METER	EX. STORM SEWER	EX. STORM INLET/CATCH BASIN	EX. STORM MANHOLE	EX. STORM END SECTION	EX. SANITARY SEWER	EX. SANITARY MANHOLE	EX. UNDERGROUND GAS	EX. GAS VALVE	EX. OVERHEAD ELECTRIC	EX. UNDERGROUND ELECTRIC	EX. UNDERGROUND CABLE	EX. TELEPHONE MANHOLE	EX. ELECTRIC MANHOLE	EX. ELECTRIC METER	EX. GAS METER	EX. LIGHT POLE	EX. TRAFFIC SIGNAL BOX	EX. UNIDENTIFIED MANHOLE	EX. TRAFFIC SIGNAL POLE	EX. UTILITY POLE	EX. GUY WIRE	PR. SPOT ELEVATION	PR. CONTOUR	PR. DRAINAGE ARROW	PR. EASEMENT LINE	PR. SETBACK LINE	PR. CURB/PAVEMENT	PR. FENCE	PR. SIDEWALK RAMP	PR. ASPHALT PAVEMENT	PR. CONCRETE	PR. GUARDRAIL	PR. SIGN	PR. WATER MAIN	PR. WATER VALVE	PR. HYDRANT	PR. WATER VALVE IN MANHOLE	PR. WELL	PR. REDUCER	PR. STORM SEWER	PR. STORM INLET/CATCH BASIN	PR. STORM MANHOLE	PR. STORM END SECTION	PR. SANITARY SEWER	PR. SANITARY MANHOLE	PR. CLEANOUT	PR. UTILITY CROSSING LOCATION	PR. UNDERGROUND GAS	PR. GAS VALVE	PR. LIGHT POLE
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LEGEND

EX SPOT ELEVATION	EX. CONTOUR	EX. WETLAND LIMITS	EX. ADJACENT PROPERTY LINE	EX. SECTION LINE	EX. EASEMENT LINE	EX. CURB/PAVEMENT	EX. FENCE	EX. GRAVEL	EX. DITCH	EX. GUARDRAIL	EX. TREELINE	EX. TREE (CONIFEROUS)	EX. TREE (DECIDUOUS)	EX. SIGN	EX. MAILBOX	FOUND IRON PIPE	FOUND IRON ROD	FOUND PK NAIL	FOUND CONC. MONUMENT	SET IRON ROD	SET MAG NAIL	EX. SECTION CORNER	SOIL BORING	EX. WATER MAIN	EX. WATER VALVE	EX. HYDRANT	EX. WATER MANHOLE	EX. WELL	EX. WATER METER	EX. STORM SEWER	EX. STORM INLET/CATCH BASIN	EX. STORM MANHOLE	EX. STORM END SECTION	EX. SANITARY SEWER	EX. SANITARY MANHOLE	EX. UNDERGROUND GAS	EX. GAS VALVE	EX. OVERHEAD ELECTRIC	EX. UNDERGROUND ELECTRIC	EX. UNDERGROUND CABLE	EX. TELEPHONE MANHOLE	EX. ELECTRIC MANHOLE	EX. ELECTRIC METER	EX. GAS METER	EX. LIGHT POLE	EX. TRAFFIC SIGNAL BOX	EX. UNIDENTIFIED MANHOLE	EX. TRAFFIC SIGNAL POLE	EX. UTILITY POLE	EX. GUY WIRE	PR. SPOT ELEVATION	PR. CONTOUR	PR. DRAINAGE ARROW	PR. EASEMENT LINE	PR. SETBACK LINE	PR. CURB/PAVEMENT	PR. FENCE	PR. SIDEWALK RAMP	PR. ASPHALT PAVEMENT	PR. CONCRETE	PR. GUARDRAIL	PR. SIGN	PR. WATER MAIN	PR. WATER VALVE	PR. HYDRANT	PR. WATER VALVE IN MANHOLE	PR. WELL	PR. REDUCER	PR. STORM SEWER	PR. STORM INLET/CATCH BASIN	PR. STORM MANHOLE	PR. STORM END SECTION	PR. SANITARY SEWER	PR. SANITARY MANHOLE	PR. CLEANOUT	PR. UTILITY CROSSING LOCATION	PR. UNDERGROUND GAS	PR. GAS VALVE	PR. LIGHT POLE
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BENCHMARKS:

BM #1: BENCH TIE IN NORTHEAST FACE OF UTILITY POLE ELEVATION: 948.31' (NAVD88)
 BM #2: BENCH TIE IN SOUTHWEST FACE OF UTILITY POLE ELEVATION: 941.37' (NAVD88)

UTILITY NOTES:

- PROPOSED ROOF LEADS SHALL BE SDR 23.5 PVC UNLESS OTHERWISE INDICATED AND/OR UNLESS OTHERWISE APPROVED BY THE AUTHORITY HAVING JURISDICTION.
- ALL EXISTING UNDERDRAINS FROM THE BUILDING SHALL BE DISCONNECTED.
- THE STORM SYSTEM WILL BE INSPECTED, AND WHEN NEEDED, CLEANED/SERVICED TO ENSURE THE SYSTEM IS 100% FUNCTIONAL.
- HYDRANTS SHALL BE IN SERVICE AND UNOBTSTRUCTURED DURING CONSTRUCTION.
- "1-HOUR" RATED FIREWALLS SHALL BE CONSTRUCTED BETWEEN EACH TENANT'S UNIT AND "2-HOUR" RATED FIREWALLS SHALL BE CONSTRUCTED BETWEEN EACH SUITE. SEE PLAN FOR CALLOUTS.
- THE PUBLIC WATER MAIN EASEMENT SHALL BE CLEAR OF OBSTRUCTIONS SUCH AS BUILDINGS, RETAINING WALL, DUMPSTER ENCLOSURES, OR ANY OTHER OBJECT WITH A FOUNDATION OR FOOTING.
- THE EXISTING LIGHT POLES LOCATED WITHIN THE PROPOSED WATER MAIN EASEMENT WILL BE THE RESPONSIBILITY OF THE PROPERTY OWNER IN THE EVENT OF UTILITY MAIN MAINTENANCE, REPAIR OR REPLACEMENT.
- THE SANITARY SEWER LEADS FOR 300 S. MAPLE ROAD AND 2449 W. STADIUM BOULEVARD ARE A SHARED SERVICE LEAD, WHICH IS NOT PERMITTED UNDER CURRENT CITY CODE. ADDITIONALLY, WE NOTE THAT THE EXISTING SANITARY SEWER LEAD FOR THE ADJACENT PARCEL, 2449 W. STADIUM BOULEVARD, CROSSES THE SUBJECT SITE PLAN PARCEL (300 S. MAPLE ROAD). UTILITY SERVICE LEADS SERVING A PARCEL MUST CONNECT TO THE PUBLIC UTILITY FRONTING THAT PARCEL AND MAY NOT CROSS OVER OR IN FRONT OF ANOTHER PARCEL. THIS EXISTING, NON-COMFORMING SITUATION WILL BE ALLOWED TO REMAIN UNTIL THE SERVICE LEAD TO 2449 W. STADIUM BOULEVARD SERVICE LEAD REQUIRES REPLACEMENT, AT WHICH TIME IT MUST BE CONSTRUCTED ON ITS OWN PROPERTY.
- NO BOOSTER PUMPS ARE PROPOSED FOR THIS PROJECT.

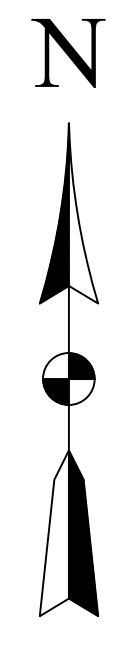
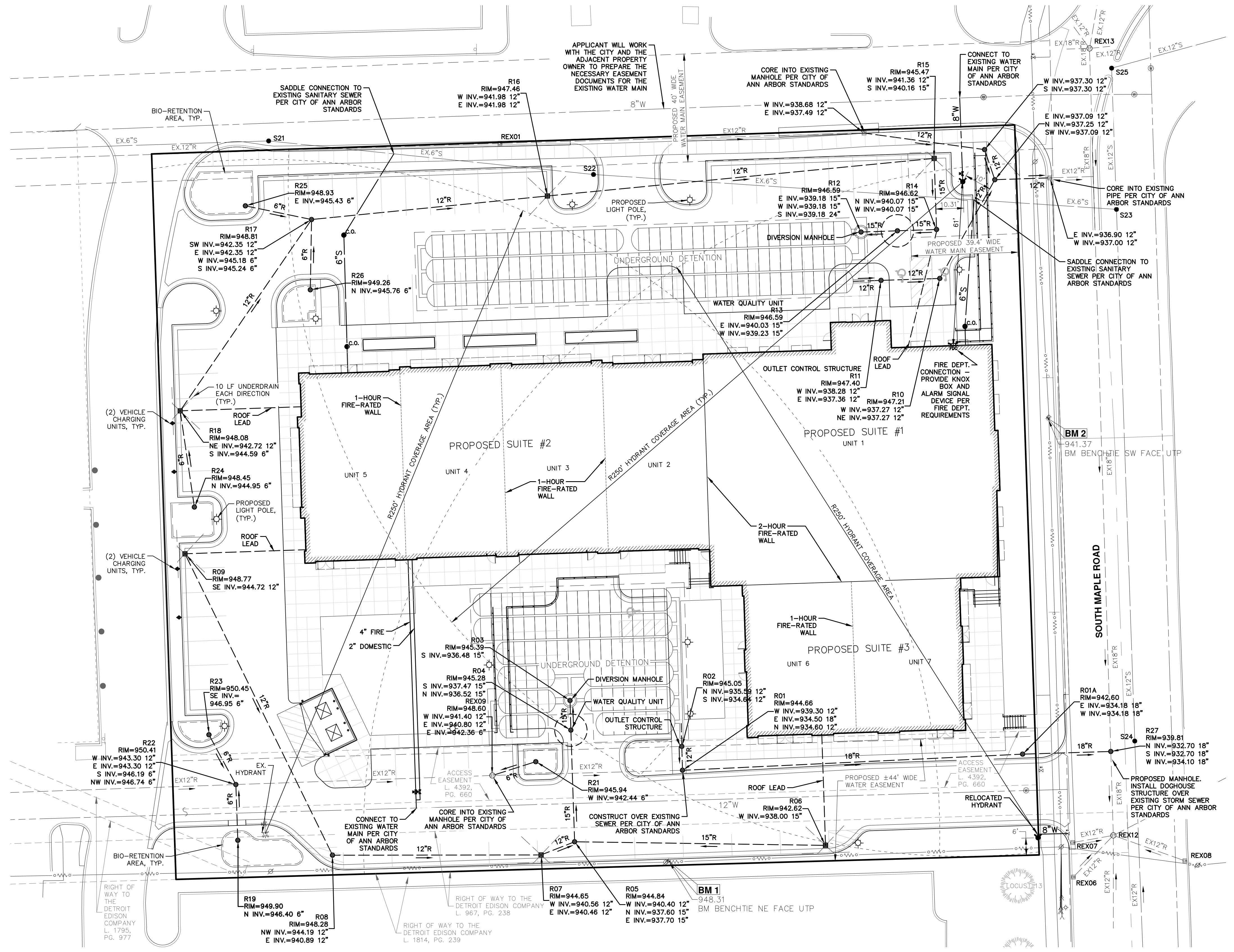
SANITARY SEWER FLOW MITIGATION CALCULATIONS

	# of Seats	Flow Rate For Given Use (gpd/seat)	Avg. Flow	
			(gpd)	(cfs)
Existing Site				
Uses: Restaurant	290	30	8,700	0.01346
Total Existing Flow			8,700	0.01346
	# of Units or ft² of Building Space	Flow Rate For Given Use (gpd/sf or gpd/unit)	Avg. Flow	
			(gpd)	(cfs)
Proposed Project				
Uses: Retail Store	19,982	0.03	599	0.00093
Uses: Restaurant	25	30	750	0.00116
Total Proposed Flow			1,349	0.00209
Net Change in Flow			7350.54	0.0114

Design Basis: Use the City of Ann Arbor "Table A" and "Michigan Criteria for Subsurface Sewage Disposal" Michigan Department of Public Health April 1994 & the "Ten States Standards"
 NOTE: Net reduction of sanitary flow. No sanitary sewer flow reuction is required on this project.

SANITARY SERVICE LEAD

THE NON-COMFORMING EXISTING SANITARY SERVICE LEAD FOR 2449 W. STADIUM BOULEVARD (WHICH CURRENTLY CROSSES THE PROPERTY OF 300 S. MAPLE ROAD) WILL REMAIN IN ITS EXISTING LOCATION UNTIL THE TIME THAT SERVICE LEAD REQUIRES REPLACEMENT. WHEN THE LEAD FOR 2449 W. STADIUM BOULEVARD REQUIRES REPLACEMENT, IT SHALL BE CONSTRUCTED ON ITS OWN PROPERTY TO COMPLY WITH THE CURRENT CITY CODE.



Project Number	1051-19-9457	Date	08/26/2020
P.M.	Checked by	Drawn by	Crew/Book
CB	CB	KMW	

Client: **AR BROUWER COMPANY**

Project: **LEWIS JEWELERS**

Site Address	300 S. MAPLE ROAD ANN ARBOR, MICHIGAN 48103
County	WASHTENAW
Community	ANN ARBOR
Township	2S
Range	5E
Section	25

Professional Name: CHRISTOPHER SUTTON, PE | Date: ---

Title: **SITE PLAN**
UTILITY PLAN

Drawing Scale	Sheet Number
1" = 20'	07

W1 SUBSURFACE DETENTION BASIN

DETERMINING POST-DEVELOPMENT COVER TYPES, AREAS, CURVE NUMBERS, AND RUNOFF COEFFICIENTS

Total Site Area= 39403 sf = 0.90 acres
Total Site Area Excluding "Self-Crediting" BMPs = 39403 sf = 0.90 acres

RATIONAL METHOD VARIABLES table with columns: Cover Type, Soil Type, Area (sf), Area (Ac), Runoff Coefficient, C*F

Total S*CN*A = 0.84
Area Total Z*ac = 0.90
Weighted C - S*CN*A/Z*ac = 0.92

NRCS VARIABLES table with columns: Pervious Cover Type, Soil Type, Area (sf), Area (Ac), Curve Number, CN*

Total S*CN*A = 2.51
Area Total Z*ac = 0.04
Weighted CN - S*CN*A/Z*ac = 69

NRCS VARIABLES table with columns: Impervious Cover Type, Soil Type, Area (sf), Area (Ac), Curve Number, CN*

Total S*CN*A = 85.09
Area Total Z*ac = 0.87
Weighted CN - S*CN*A/Z*ac = 98

W2 SUBSURFACE DETENTION BASIN
STANDARD METHOD RUNOFF VOLUME CALCULATIONS

First Flush Runoff Calculations
A= Total Site Area (ac) Excluding "Self-Crediting" BMPs from Worksheet 1 = 0.90
C= Weighted Runoff Coefficient from Worksheet 1 = 0.92

Vff = (1*(1/12)^(43560sf/1ac))*A*C
Vff (cf) = 3033.66

W3 SUBSURFACE DETENTION BASIN
STANDARD METHOD RUNOFF VOLUME CALCULATIONS

Pre-development Bankfull Runoff Calculations (Vbf-pre)

A. 2 year/24 hour storm event (in) P= 2.35

B. The pre-development land cover will be Good Cover Woods or Meadow. Determine the associated soil hydrologic group for the entire site and choose the curve number CN= 58

C. S=1000/CN-10 S(in)= 7.24

D. Q=(P-0.25)^2/(P+0.85) Q(in)= 0.10

E. Total Site Area (sf) excluding "Self-Crediting" BMPs A(sf)= 39403

F. Vbf-pre = Q(1/12)Area Vbf-pre (cf)= 327.87

W4 SUBSURFACE DETENTION BASIN
STANDARD METHOD RUNOFF VOLUME CALCULATIONS

Pervious Cover Post-Development Bankfull Runoff Calculations (Vbf-per-post)

A. 2 year/24 hour storm event (in) P= 2.35

B. Pervious Cover CN From Worksheet 1 CN= 69

C. S=1000/CN-10 S(in)= 4.49

D. Q=(P-0.25)^2/(P+0.85) Q(in)= 0.35

E. Pervious Cover Area from Worksheet 1 A(sf)= 1583

F. Vbf-per-post = Q(1/12)Area Vbf-per-post (cf)= 46.75

W5 SUBSURFACE DETENTION BASIN
STANDARD METHOD RUNOFF VOLUME CALCULATIONS

Impervious Cover Post-Development Bankfull Runoff Calculations (Vbf-imp-post)

A. 2 year/24 hour storm event (in) P= 2.35

B. Impervious Cover CN From Worksheet 1 CN= 98

C. S=1000/CN-10 S(in)= 0.20

D. Q=(P-0.25)^2/(P+0.85) Q(in)= 2.12

E. Impervious Cover Area from Worksheet 1 A(sf)= 37820

F. Vbf-imp-post = Q(1/12)Area Vbf-imp-post (cf)= 6686.81

W6 SUBSURFACE DETENTION BASIN
STANDARD METHOD RUNOFF VOLUME CALCULATIONS

Pervious Cover Post-Development 100-Year Storm Runoff Calculations (V100-per-post)

A. 100-year storm event (in) P= 5.11

B. Pervious Cover CN From Worksheet 1 CN= 69

C. S=1000/CN-10 S(in)= 4.49

D. Q=(P-0.25)^2/(P+0.85) Q(in)= 2.04

E. Pervious Cover Area from Worksheet 1 A(sf)= 1583

F. V100-per-post = Q(1/12)Area V100-per-post (cf)= 268.80

W7 SUBSURFACE DETENTION BASIN
STANDARD METHOD RUNOFF VOLUME CALCULATIONS

Impervious Cover Post-Development 100-Year Storm Runoff Calculations (V100-imp-post)

A. 100-year storm event (in) P= 5.11

B. Impervious Cover CN From Worksheet 1 CN= 98

C. S=1000/CN-10 S(in)= 0.20

D. Q=(P-0.25)^2/(P+0.85) Q(in)= 4.87

E. Impervious Cover Area from Worksheet 1 A(sf)= 37820

F. V100-imp-post = Q(1/12)Area V100-imp-post (cf)= 15358.07

W8 SUBSURFACE DETENTION BASIN
STANDARD METHOD RUNOFF VOLUME CALCULATIONS

Determine Time of Concentration for Applicable Flow Types (Tc-hrs)

Table with columns: Flow Type, K, Change in Elevation (ft), Length (ft), Slope %, vs, V=K*vs, Tc=L/(V^0.3600)

*Sheet flow cannot exceed 300 feet. Anything beyond this is considered overland flow.

W9 SUBSURFACE DETENTION BASIN
STANDARD METHOD RUNOFF VOLUME CALCULATIONS

Runoff Summary & Onsite Infiltration Requirement

Table with columns: Runoff Summary from Previous Worksheets, First Flush Volume (Vff), Pre-Development Bankfull Runoff Volume (Vbf-pre), Pervious Cover Post-Development Bankfull Volume (Vbf-per-post), Impervious Cover Post-Development Bankfull Volume (Vbf-imp-post), Total BF Volume (Vbf-post), Pervious Cover Post-Development 100-Year Volume (V100-per-post), Impervious Cover Post-Development 100-Year Volume (V100-imp-post), Total 100-Year Volume (V100-post)

B. Determine Onsite Infiltration Requirement

Table with columns: Subtract the Pre-Development Bankfull Volume from the Post-Development Bankfull Volume, Total Post-Development Bankfull Volume (Vbf-post), Pre-Development Bankfull Runoff Volume (Vbf-pre), Bankfull Volume Difference, Compare the Bankfull Volume Difference with the First Flush Volume, Requirement, Onsite Infiltration Requirement (Vinf)

W10 SUBSURFACE DETENTION BASIN
STANDARD METHOD RUNOFF VOLUME CALCULATIONS

Detention/Retention Requirement

Table with columns: A. Peak of the Unit Hydrograph, Tc From Worksheet 8, Qp=cfs/(in-mm)^2 = 743.63

B. Total Site Area (ac) excluding "Self-Crediting" BMPs Area (ac) = 0.90

Table with columns: C. Q100-per from Worksheet 6, Q100-imp from Worksheet 7, Q100 (in) = 6.91

D. Peak Flow (PF) = [Qp*Q100*A]/640 PF (cfs) = 7.26

E. Delta = PF - 0.15*A Delta (cfs) = 7.13

F. Vdet = Required Detention*1.2 Vdet = (A/PF)*V100*1.2 Vdet (cf) = 18,401.95

Retention Vret = 2*V100 Vret (cf) = 31,253.75

W11 SUBSURFACE DETENTION BASIN
STANDARD METHOD RUNOFF VOLUME CALCULATIONS

Determine Applicable BMPs and Associated Volume Credits

Table with columns: Proposed BMP, Area (sf), Storage Volume (cf), Ave. Design Infiltration Rate (in/hr), Infiltration Volume During Storm (cf), Total Volume Reductions (cf)

*Complete checklist from Chapter VI for each Structural BMP type
*Storage volume as defined in individual BMP write-ups
**Approximated as the average design infiltration rate over 6 hours multiplied by the BMP area: Infiltration Rate x 6 hours x BMP Area x Unit Conversions = Infiltration Volume (cf)

*Total Volume Reduction Credit is the sum of the Storage Volume and the Infiltration Volume During Storm

Project: Lewis Jewelers - North UG

Table with columns: Chamber Model - Imperial, Units - 112, Number of Chambers - 8, Number of End Caps - 25, Voids in the stone (porosity) - 938.32, Base of STORAGE Elevation - 43, Amount of Stone Above Chambers - 5, Amount of Stone Below Chambers - 4678

StormTech requires a minimum of 9 inches of stone below the chambers. This table is for modeling purposes only. Please see the engineer's drawings for the actual amount of stone under the chambers.

StormTech MC-4500 Cumulative Storage Volumes

Large table with columns: Height of System (mches), Incremental Single Chamber (cubic feet), Incremental Single End Cap (cubic feet), Incremental Chambers (cubic feet), Incremental End Cap (cubic feet), Incremental Stone (cubic feet), Incremental Ch. EC and Stone (cubic feet), Cumulative System (cubic feet), Elevation (feet)



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Revisions table with columns: Date, Description, Status



RELATIONSHIPS - REPUTATION - RESULTS 800.525.6016

Table with columns: Project Number, Date, Checked by, Drawn by, Crew/Book

Client: AR BROUWER COMPANY

Project: LEWIS JEWELERS

Table with columns: Site Address, County, Township, Range, Section

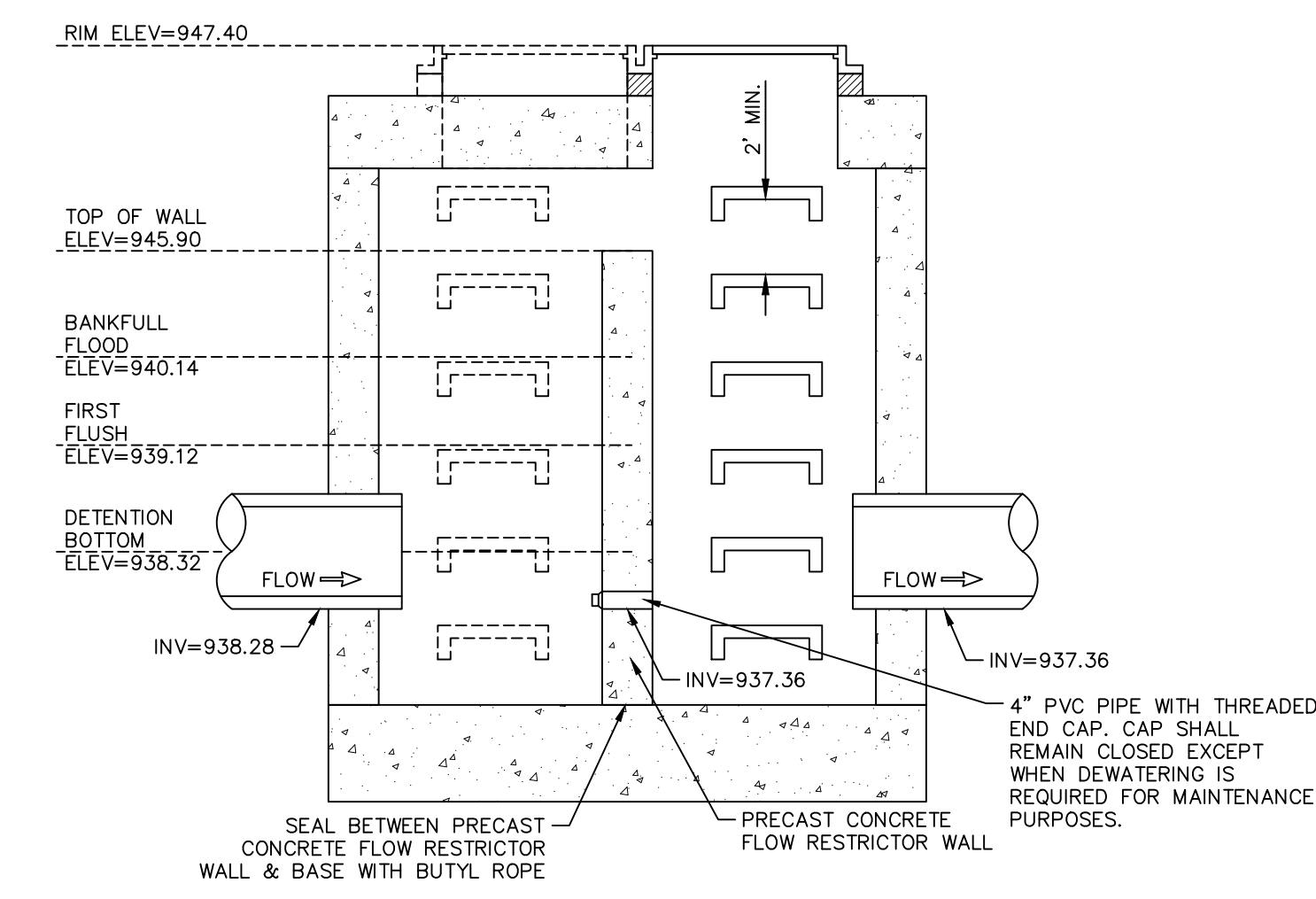
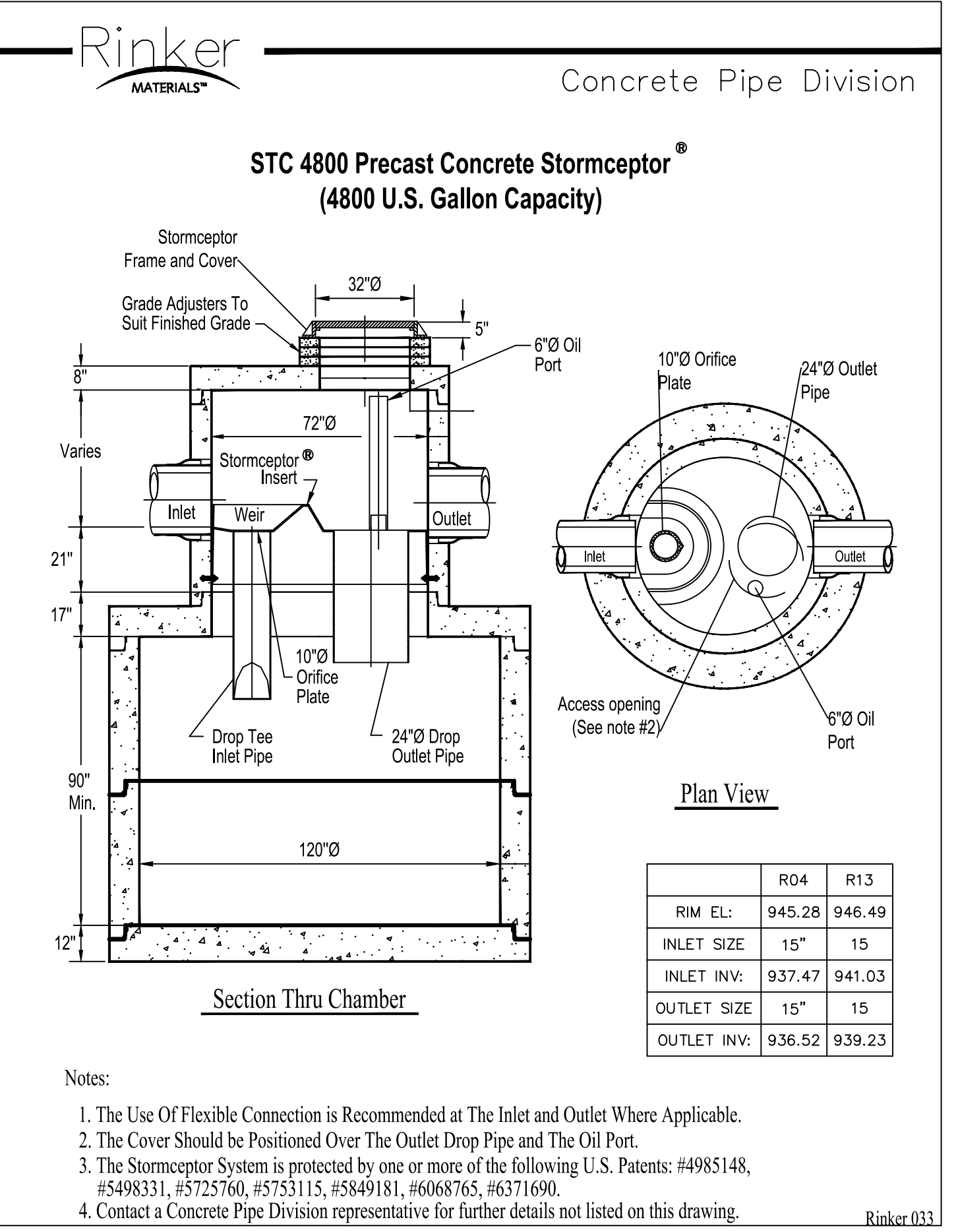
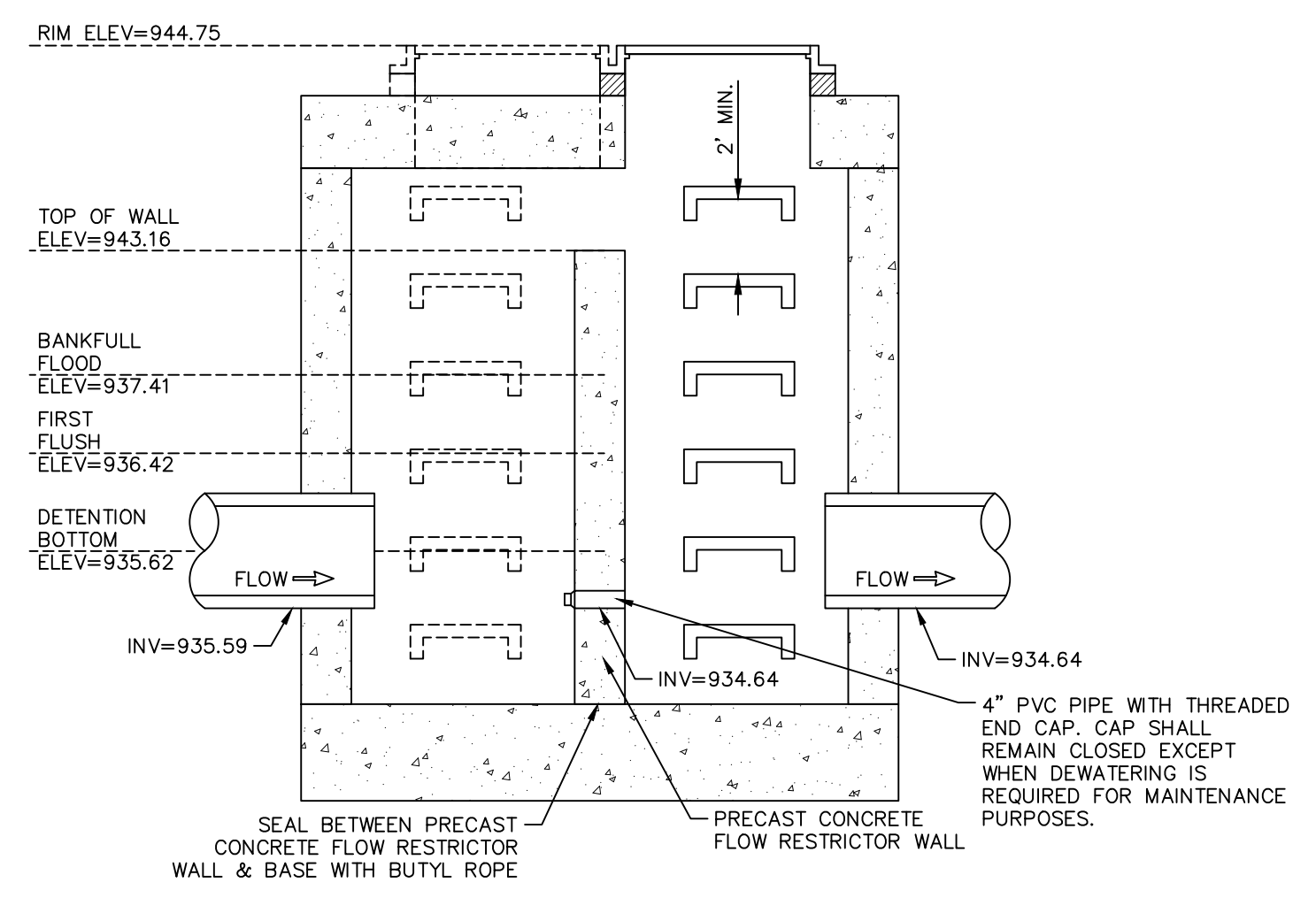
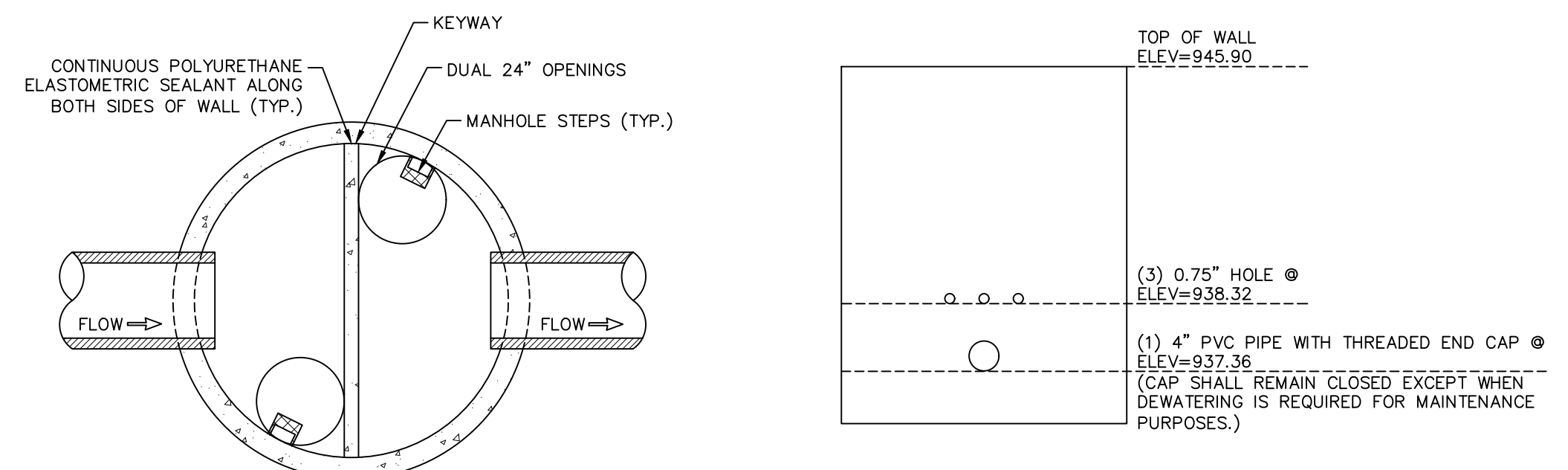
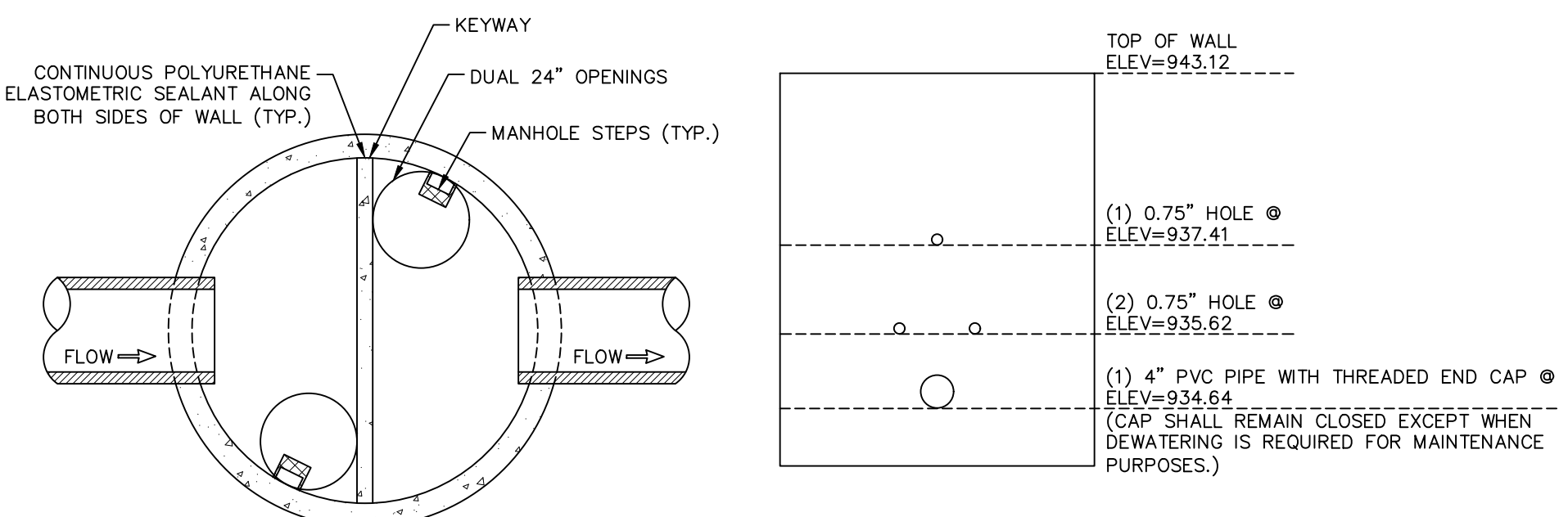
Professional Name: CHRISTOPHER SUTTON, PE

TITLE SITE PLAN

STORM WATER MANAGEMENT CALCULATIONS - NORTH

Table with columns: Drawing Scale, Sheet Number

09



SECTION "A-A"

- THIS TYPE OF FLOW RESTRICTOR STRUCTURE TO BE USED ONLY WITH UNDERGROUND DETENTION SYSTEMS.
- THE PRECAST REINFORCED FLOW RESTRICTOR STRUCTURE SHALL BE MANUFACTURED PER ASTM C-478 SPECIFICATIONS AND MEETING HS20 LOADING REQUIREMENTS
- CONTRACTOR TO PROVIDE SHOP DRAWING, INCLUDING REINFORCEMENT, PRIOR TO CONSTRUCTION.

OUTLET CONTROL STRUCTURE (R02)
NOT TO SCALE

Storage Elevations	Xo =	935.62	Xif =	936.42
	Xbf =	937.41	X100 =	943.16

SECTION "A-A"

- THIS TYPE OF FLOW RESTRICTOR STRUCTURE TO BE USED ONLY WITH UNDERGROUND DETENTION SYSTEMS.
- THE PRECAST REINFORCED FLOW RESTRICTOR STRUCTURE SHALL BE MANUFACTURED PER ASTM C-478 SPECIFICATIONS AND MEETING HS20 LOADING REQUIREMENTS
- CONTRACTOR TO PROVIDE SHOP DRAWING, INCLUDING REINFORCEMENT, PRIOR TO CONSTRUCTION.

OUTLET CONTROL STRUCTURE (R11)
NOT TO SCALE

Storage Elevations	Xo =	938.32	Xif =	939.12
	Xbf =	940.14	X100 =	945.90

WAYNE COUNTY NOTE:

THE STORMCEPTOR STRUCTURE MUST BE FABRICATED AS PER SHOP DRAWINGS THAT HAVE BEEN APPROVED BY WAYNE COUNTY. THE MANUFACTURER MUST CONTACT WAYNE COUNTY TESTING OFFICE AT (734) 595-6504 x2015 AT LEAST 3 WORKING DAYS PRIOR TO FABRICATION TO SCHEDULE INSPECTION DURING FABRICATION.

WATER QUALITY CONTROL STRUCTURE (R04, R13)
NOT TO SCALE

Outlet Control Structure

1. outlet holes sizing - "first flush" runoff
First Flush must be released in a minimum of 24 hours
 $Q_{ff} = V_{ff} / 24 \text{ hrs} / 3600 \text{ sec}$
 $h = 2/3 \times (X_{if} - X_o)$
 $A = Q_{ff} / .62 \times \text{sqrt}(2 \times 32.2 \times h)$
 The area of a 0.75" orifice
 Number of orifice holes
 $Q_{act} = 0.62 \times \# \text{orif} \times A_{orif} \times \text{sqrt}(2 \times 32.2 \times h)$
 $T_{ff} = V_{ff} / Q_{act}$

2. outlet holes sizing - "Bankfull flood" discharge
Bankfull must be detained between 36 to 48 hours
 $h = 2/3 \times (X_{bf} - X_o)$
 $Q_{bf} = 0.62 \times \# \text{orif} \times A_{orif} \times \text{sqrt}(2 \times 32.2 \times h)$
 $T_{bf} = V_{bf} / Q_{bf}$ (with first flush holes only)

3. outlet holes sizing - "100-yr flood" discharge
Area, a =
 $Q_a = 0.15 \times A$
 $Q_{ff} + Q_{bf} = 0.62 \times \# \text{orif} \times A_{orif} \times \text{sqrt}(64.4 \times (X_{100} - X_o)) + 0.62 \times \# \text{orif} \times A_{orif} \times \text{sqrt}(64.4 \times (X_{100} - X_{if}))$
 $Q_{100} = Q_a - (Q_{ff} + Q_{bf})$
 $A_{100} = Q_{100} / (0.62 \times \text{sqrt}(2 \times 32.2 \times (X_{100} - X_{bf})))$
 The area of a 0.75" orifice
 Number of orifice holes
 $Q_{ff} + Q_{bf} + 0.62 \times \# \text{orif} \times A_{100} \times \text{sqrt}(2 \times 32.2 \times h_{100}) < Q_a$
 $H_{all} = 2/3 \times (X_{100} - X_{bf}) + (X_{bf} - X_o)$
 $Q_{all} = 0.62 \times \# \text{orif} \times A_{orif} \times \text{sqrt}(2 \times 32.2 \times H_{all})$
 $H_{bf} = 2/3 \times (X_{100} - X_{bf}) + (X_{bf} - X_{if})$
 $Q_{bf-100} = 0.62 \times \# \text{orif} \times A_{orif} \times \text{sqrt}(2 \times 32.2 \times H_{bf})$
 $H_{100} = 2/3 \times (X_{100} - X_{bf})$
 $Q_{100avg} = 0.62 \times \# \text{orif} \times A_{100orif} \times \text{sqrt}(2 \times 32.2 \times H_{100})$
 $V_{rem} = V_{100} - V_{bf}$
 $T_{100} = T_{bf} + V_{rem} / (Q_{all} + Q_{bf-100} + Q_{all})$

Outlet Control Structure

1. outlet holes sizing - "first flush" runoff
First Flush must be released in a minimum of 24 hours
 $Q_{ff} = V_{ff} / 24 \text{ hrs} / 3600 \text{ sec}$
 $h = 2/3 \times (X_{if} - X_o)$
 $A = Q_{ff} / .62 \times \text{sqrt}(2 \times 32.2 \times h)$
 The area of a 0.75" orifice
 Number of orifice holes
 $Q_{act} = 0.62 \times \# \text{orif} \times A_{orif} \times \text{sqrt}(2 \times 32.2 \times h)$
 $T_{ff} = V_{ff} / Q_{act}$

2. outlet holes sizing - "Bankfull flood" discharge
Bankfull must be detained between 36 to 48 hours
 $h = 2/3 \times (X_{bf} - X_o)$
 $Q_{bf} = 0.62 \times \# \text{orif} \times A_{orif} \times \text{sqrt}(2 \times 32.2 \times h)$
 $T_{bf} = V_{bf} / Q_{bf}$ (with first flush holes only)

3. outlet holes sizing - "100-yr flood" discharge
Area, a =
 $Q_a = 0.15 \times A$
 $Q_{ff} + Q_{bf} = 0.62 \times \# \text{orif} \times A_{orif} \times \text{sqrt}(64.4 \times (X_{100} - X_o)) + 0.62 \times \# \text{orif} \times A_{orif} \times \text{sqrt}(64.4 \times (X_{100} - X_{if}))$
 $Q_{100} = Q_a - (Q_{ff} + Q_{bf})$
 $A_{100} = Q_{100} / (0.62 \times \text{sqrt}(2 \times 32.2 \times (X_{100} - X_{bf})))$
 The area of a 0.75" orifice
 Number of orifice holes
 $Q_{ff} + Q_{bf} + 0.62 \times \# \text{orif} \times A_{100} \times \text{sqrt}(2 \times 32.2 \times h_{100}) < Q_a$
 $H_{all} = 2/3 \times (X_{100} - X_{bf}) + (X_{bf} - X_o)$
 $Q_{all} = 0.62 \times \# \text{orif} \times A_{orif} \times \text{sqrt}(2 \times 32.2 \times H_{all})$
 $H_{bf} = 2/3 \times (X_{100} - X_{bf}) + (X_{bf} - X_{if})$
 $Q_{bf-100} = 0.62 \times \# \text{orif} \times A_{orif} \times \text{sqrt}(2 \times 32.2 \times H_{bf})$
 $H_{100} = 2/3 \times (X_{100} - X_{bf})$
 $Q_{100avg} = 0.62 \times \# \text{orif} \times A_{100orif} \times \text{sqrt}(2 \times 32.2 \times H_{100})$
 $V_{rem} = V_{100} - V_{bf}$
 $T_{100} = T_{bf} + V_{rem} / (Q_{all} + Q_{bf-100} + Q_{all})$

K:\2019\1051 JOB FOLDER\1051-19-4457 Drawings\Plan_Site_Site Plan\1051-19-4457-27.dwg

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Revisions
08/27/2020 SITE PLAN SUBMISSION
09/28/2020 REVISED PER SITE PLAN REVIEW #1
10/22/2020 REVISED PER SITE PLAN REVIEW #2
12/07/20 REVISED PER SITE PLAN REVIEW #3
12/21/20 REVISED PER PLANNING COMMISSION

MCA
METRO.CA.NET
RELATIONSHIPS - REPUTATION - RESULTS
800.525.6016

Project Number 1051-19-9457	Date 08/26/2020
P.M. CB	Checked by CB
	Drawn by KMW
	Crew/Book CB

Client
AR BROUWER COMPANY

Project
LEWIS JEWELERS

Site Address
300 S. MAPLE ROAD
ANN ARBOR, MICHIGAN 48103

County
WASHTENAW

Community
ANN ARBOR

Township
2S

Range
5E

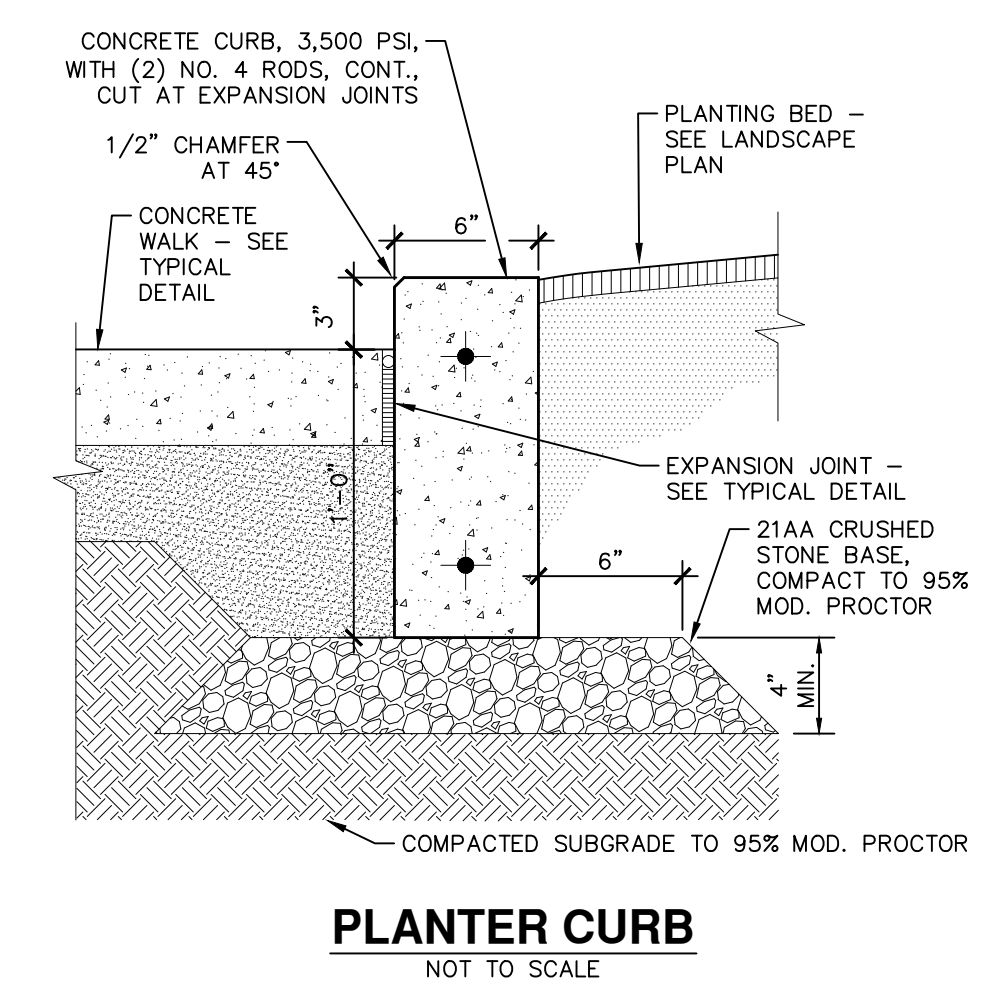
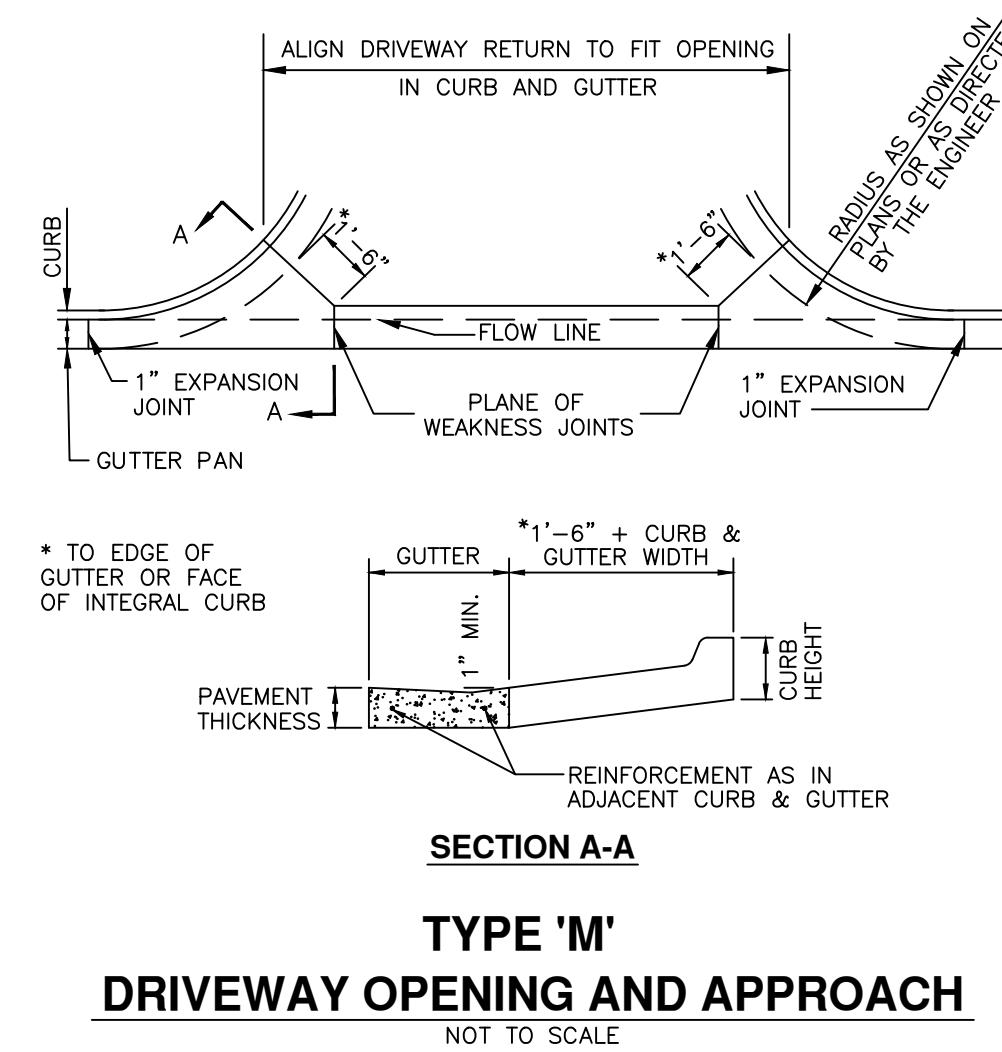
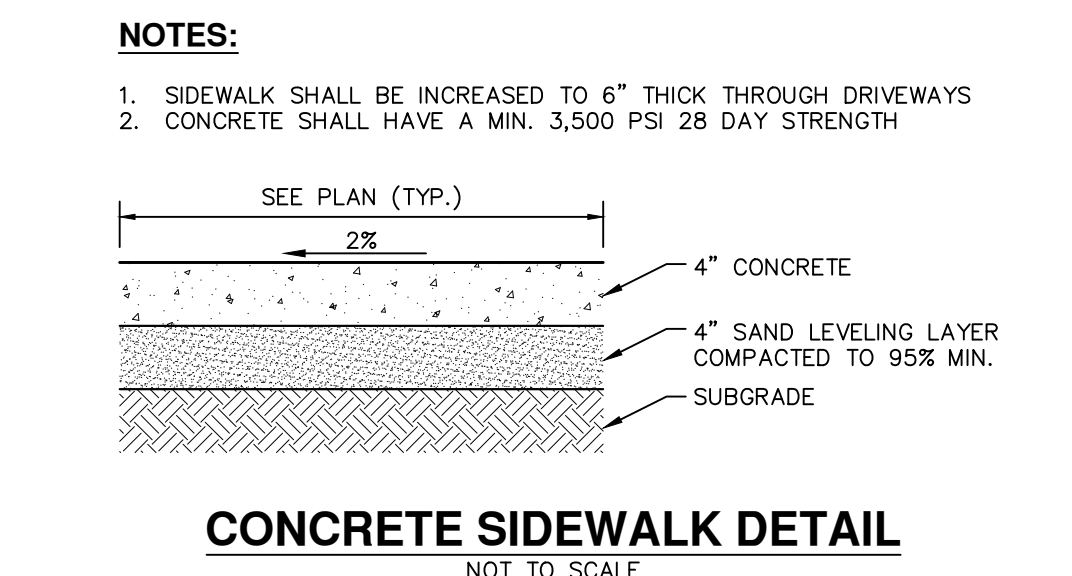
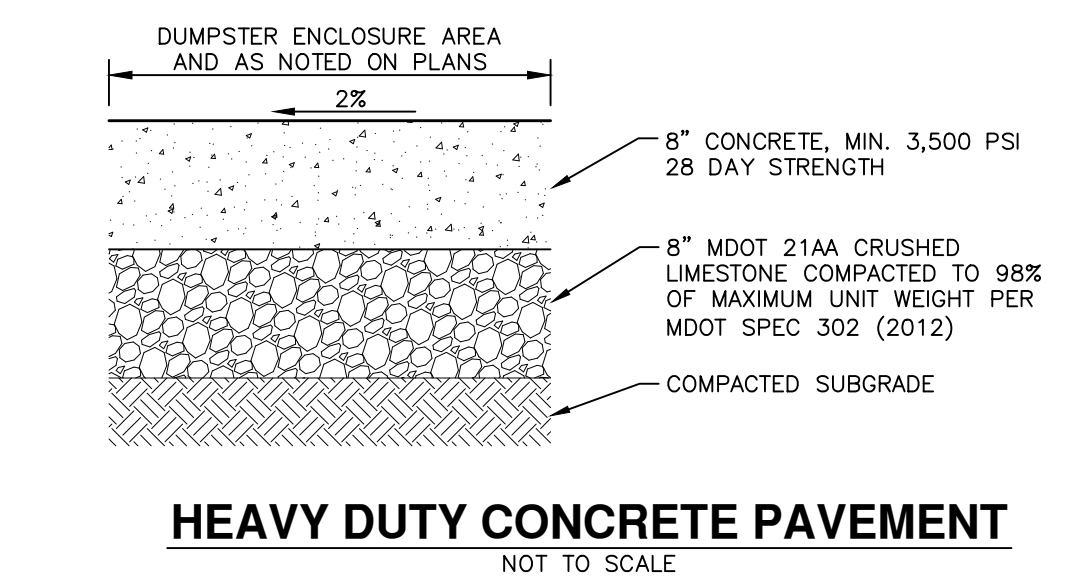
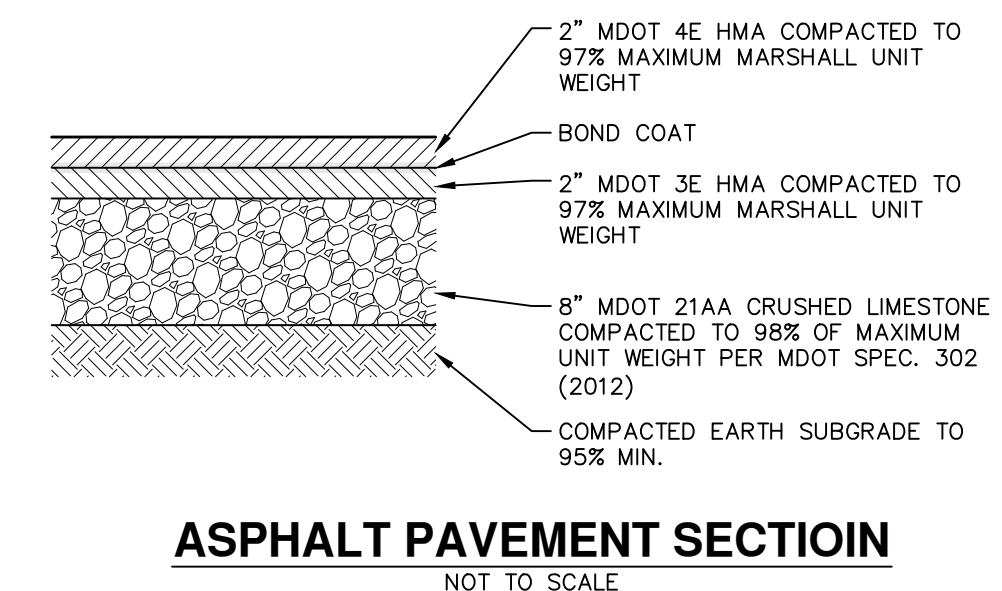
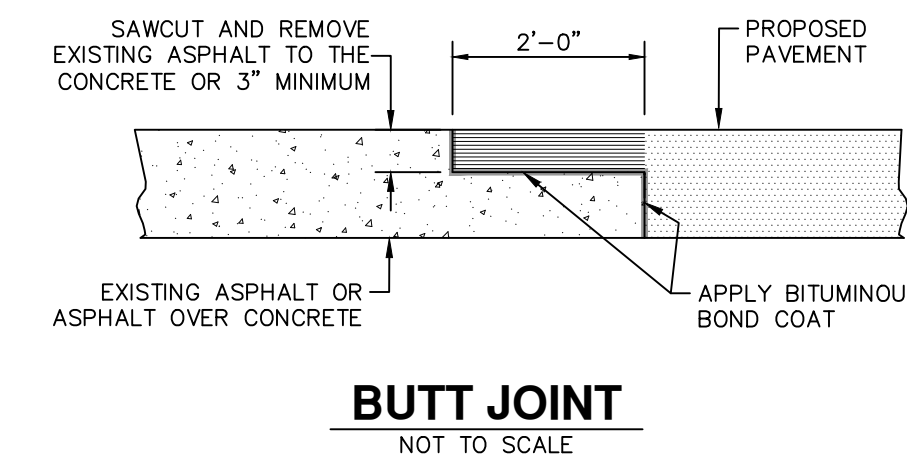
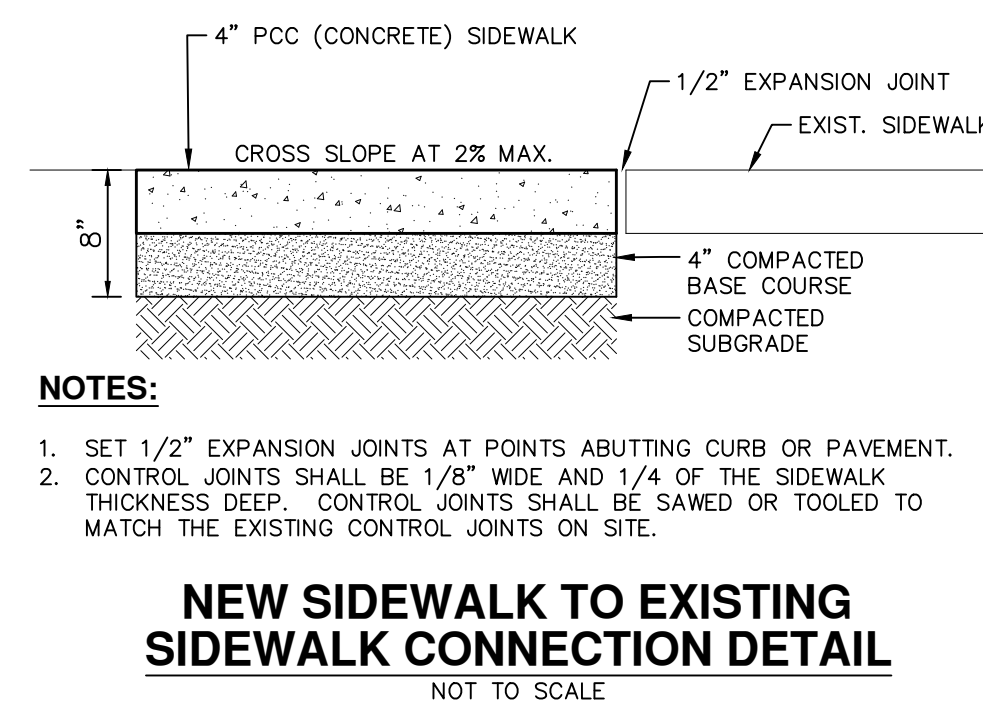
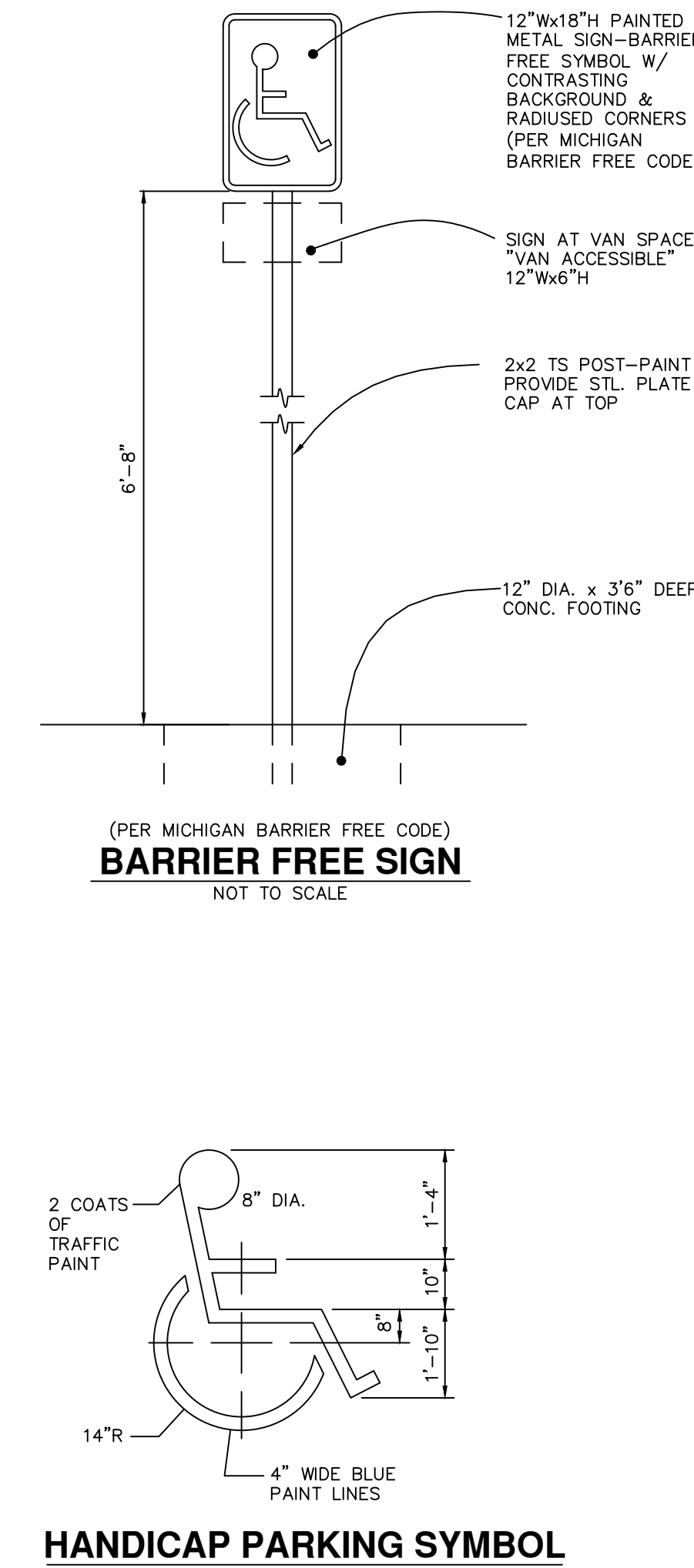
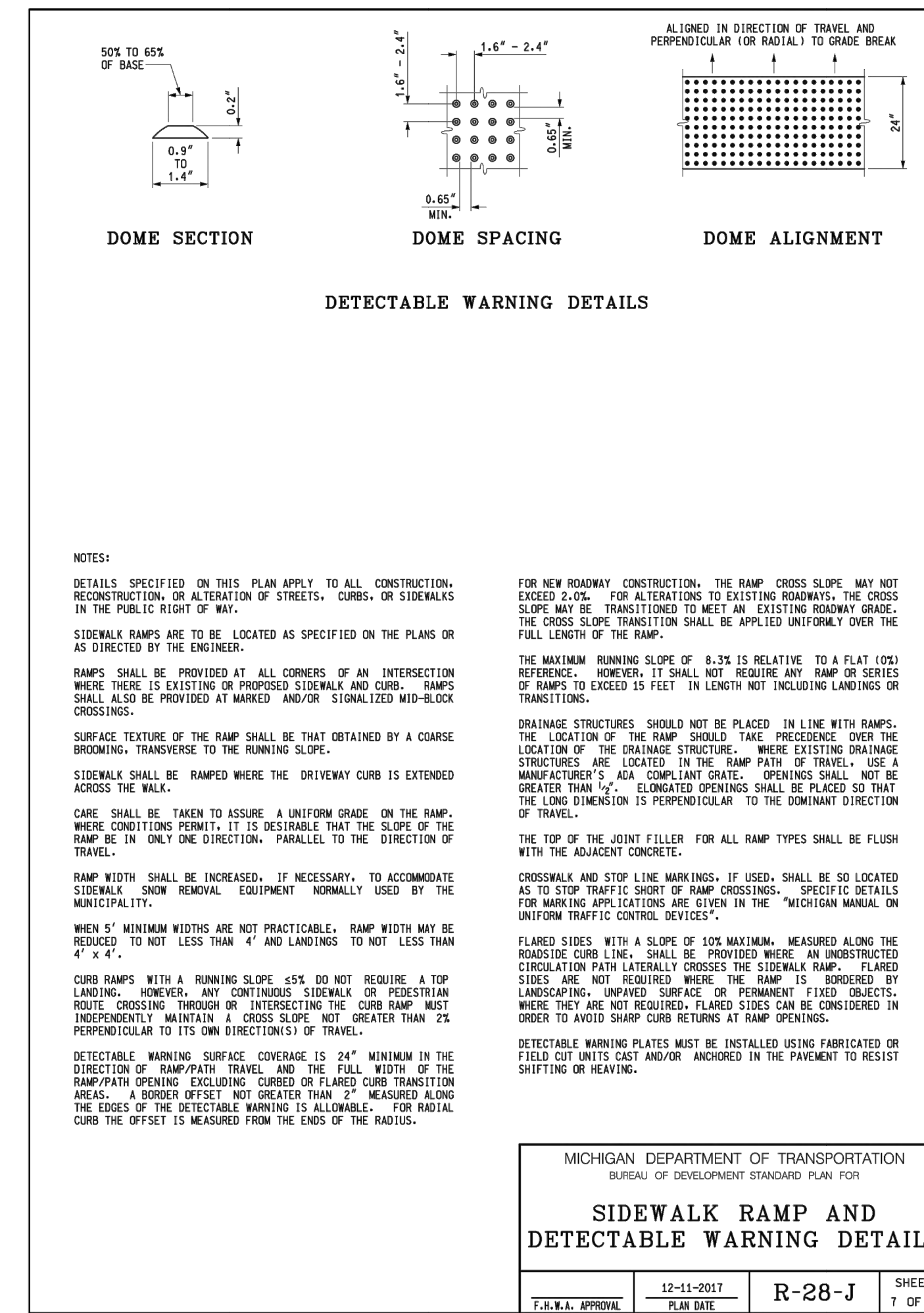
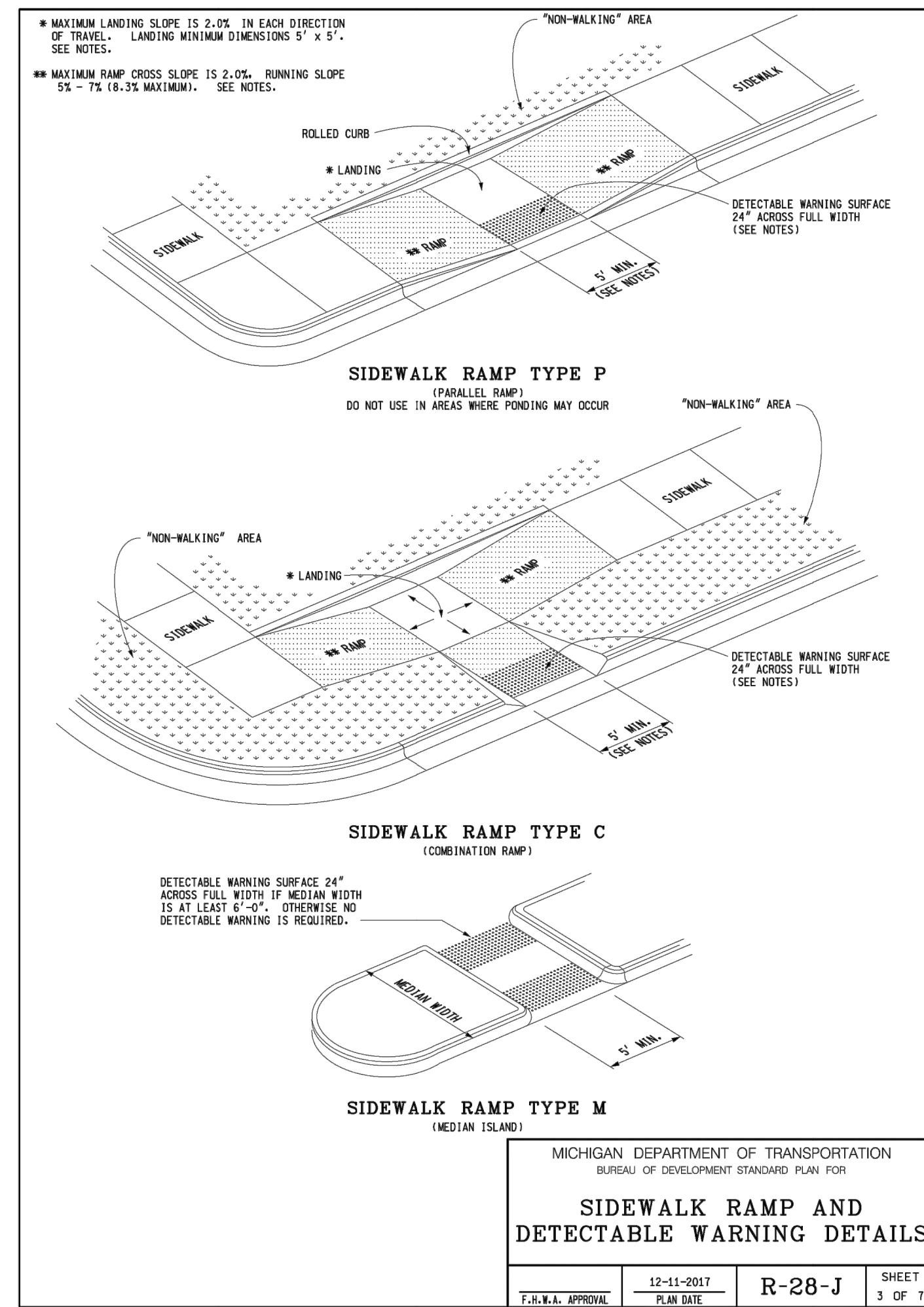
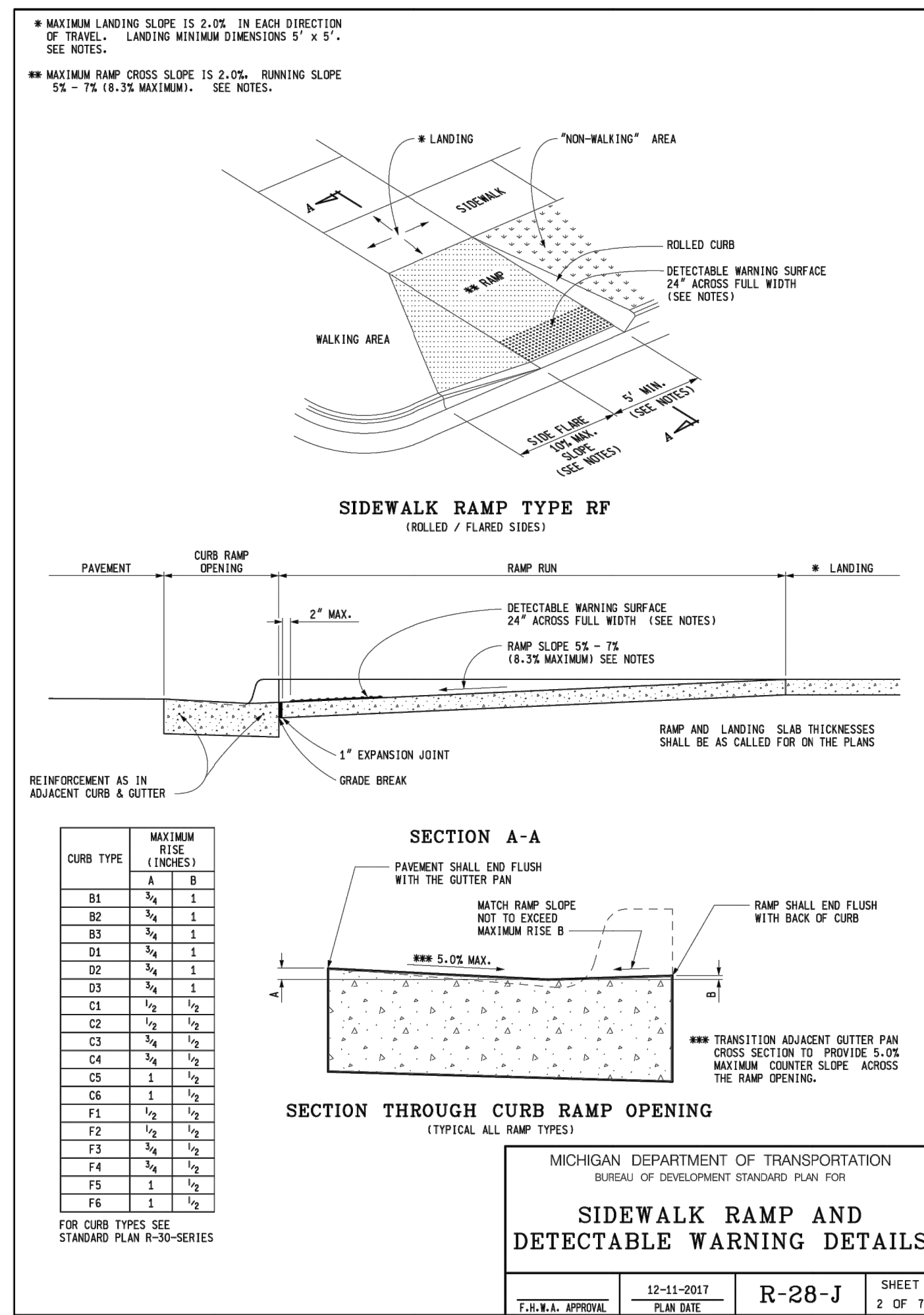
Section
25

Professional Name
CHRISTOPHER SUTTON, PE

Date
--

Title
SITE PLAN
STORM WATER
MANAGEMENT DETAILS

Drawing Scale	Sheet Number 11
---------------	---------------------------



TYPE OF JOINT	USE DESCRIPTION	DETAIL
A. CONTROL JOINT.	PLACE JOINT SO AS TO UNIFORMLY DIVIDE SLAB AS SHOWN ON DETAIL	JOINT SEALANT 3/4" DEEP (MIN.) HELD 1/4" BELOW SURFACE
B. EXPANSION JOINT	PLACE AGAINST EXISTING CONCRETE PAVEMENTS, STRUCTURES (BUILDINGS, CANOPY COLUMNS, TRENCH DRAINS, ETC.)	JOINT SEALANT 3/4" DEEP (MIN.) HELD 1/4" BELOW SURFACE EXISTING CONCRETE PAVEMENTS OR STRUCTURES 1/2" EXPANSION MATERIAL
C. CONSTRUCTION JOINT	CONSTRUCTION JOINTS MUST BE PLACED WHEN CONTINUOUS POUR OPERATIONS ARE SUSPENDED FOR MORE THAN 30 MINUTES.	3/4" MIN. NEW WORK 1:3 SLOPE 1 1/4"

CONCRETE JOINT DETAILS
NOT TO SCALE

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Revisions

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09/28/2020	REVISED PER SITE PLAN REVIEW #1
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12/21/2020	REVISED PER PLANNING COMMISSION

Project Number: 1051-19-9457 Date: 08/26/2020

P.M. Checked by: CB, KMW, Crew/Book

Client: **AR BROUWER COMPANY**

Project: **LEWIS JEWELERS**

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800.525.6016

Site Address: 300 S. MAPLE ROAD, ANN ARBOR, MICHIGAN 48103

County: WASHTENAW Community: ANN ARBOR

Township: 2S Range: 5E Section: 25

Professional Name: CHRISTOPHER SUTTON, PE Date: ---

Title: **SITE PLAN**

TYPICAL DETAILS

Drawing Scale: _____ Sheet Number: **12**

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

CONSTRUCTION SITE SAFETY IS THE RESPONSIBILITY OF THE CONTRACTOR. NEITHER THE OWNER NOR THE ENGINEER SHALL BE EXPECTED TO ASSUME ANY RESPONSIBILITY FOR SAFETY OF THE WORK, OF PERSONS ENGAGED IN THE WORK, OF ANY NEARBY STRUCTURES, OR OF ANY OTHER PERSONS.

Revisions

08.27.2020	SITE PLAN SUBMISSION
09.28.2020	REVISED PER SITE PLAN REVIEW #1
10.22.2020	REVISED PER SITE PLAN REVIEW #2
12.07.20	REVISED PER SITE PLAN REVIEW #3
12.21.20	REVISED PER PLANNING COMMISSION

DOUBLE BIN ENCLOSURE DETAIL

REV. NO.	DATE	DRAWN BY	CHECKED BY
00	06/05/18	OHM	CJE
SOLID WASTE STANDARD DETAILS			
DR. OHM	CH. CJE	DRAWING NO. PAGE 2	
SCALE N.T.S. DATE 12/29/15			

STANDARD BIN ENCLOSURE LAYOUTS

REV. NO.	DATE	DRAWN BY	CHECKED BY
00	06/05/18	OHM	CJE
SOLID WASTE STANDARD DETAILS			
DR. OHM	CH. CJE	DRAWING NO. PAGE 3	
SCALE N.T.S. DATE 12/29/15			

CLEARANCE REQUIREMENTS FOR FRONT LOAD SOLID WASTE VEHICLE

30 deg. SWEEP ANGLE:	20.6 deg.
60 deg. SWEEP ANGLE:	30.2 deg.
90 deg. SWEEP ANGLE:	35.0 deg.
120 deg. SWEEP ANGLE:	37.4 deg.
150 deg. SWEEP ANGLE:	38.7 deg.
180 deg. SWEEP ANGLE:	39.3 deg.

REV. NO.	DATE	DRAWN BY	CHECKED BY
00	06/05/18	OHM	CJE
SOLID WASTE STANDARD DETAILS			
DR. OHM	CH. CJE	DRAWING NO. PAGE 4	
SCALE N.T.S. DATE 12/08/15			

GENERAL NOTES:

- A CLEAR SPACE MUST BE MAINTAINED DIRECTLY IN FRONT OF THE SOLID WASTE ENCLOSURE. THE CLEAR SPACE SHALL BE A MINIMUM OF FIFTY (50) FEET LONG BY THE WIDTH OF THE INSIDE DIMENSION OF THE ENCLOSURE PLUS FOUR (4) FEET ON BOTH SIDES. A MINIMUM VERTICAL CLEARANCE OF AT LEAST TWENTY-FIVE (25) FEET MUST BE PROVIDED ABOVE THIS AREA.
- INGRESS AND EGRESS ROUTES MUST BE DEVELOPED BASED ON SOLID WASTE SWEEP PATH REQUIREMENTS. A MINIMUM HORIZONTAL CLEARANCE OF TWO (2) FEET FROM THE EDGE OF THE SWEEP PATH AND A MINIMUM VERTICAL CLEARANCE OF AT LEAST FIFTEEN (15) FEET MUST BE PROVIDED ALONG THE ENTIRE ROUTE.
- GATES ON ENCLOSURES MUST BE DESIGNED TO OPEN A MINIMUM OF 120 DEGREES FROM THE CLOSED POSITION. THE GATES MUST NOT REDUCE THE REQUIRED ENCLOSURE OPENING WIDTH, BLOCK ADJACENT PARKING SPOTS, OR BE IMPEDED BY ADJACENT CURBS OR LANDSCAPING.
- GATES SHALL BE DESIGNED TO BE FREE STANDING WITHOUT A CENTER POLE. IF A CENTER POLE DESIGN IS NECESSARY, 12-INCHES SHALL BE ADDED TO THE OVERALL WIDTH OF THE ENCLOSURE.
- GATE DESIGN SHALL INCLUDE A RELIABLE MEANS TO SECURE THE DOOR IN BOTH THE OPEN AND CLOSED POSITIONS.
- THE CONCRETE SLAB IN FRONT OF THE BIN ENCLOSURE SHALL HAVE PAVEMENT MARKINGS TO INDICATE "NO PARKING", AS APPROVED BY CITY.
- THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF NO PARKING SIGNS ALONG THE SOLID WASTE INGRESS/EGRESS ROUTE TO ENSURE THE ROUTE REMAINS FREE OF OBSTRUCTIONS.
- REFER TO ASSOCIATED STANDARD DETAILS FOR REQUIREMENTS ON SINGLE AND DOUBLE WIDE SOLID WASTE BIN ENCLOSURE LAYOUT AND DESIGN CRITERIA. THE CITY SHALL HAVE THE ABILITY TO MODIFY OR INTERPRET THESE DETAILS AS NECESSARY, TO ACCOMMODATE THE CITY OR CITY CONTRACTOR NEEDS IN REGARDS TO SOLID WASTE PICK-UP.
- SOLID WASTE ACCESS ROADS AND SERVICE AREA SURFACES SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF COLLECTION TRUCKS WEIGHING UP TO 66,000 LBS GROSS VEHICLE WEIGHT (GVW) AND SHALL BE PROVIDED WITH AN APPROVED SURFACE SO AS TO PROVIDE ALL WEATHER DRIVING CAPABILITIES. PROPERTY OWNER SHALL BE RESPONSIBLE FOR ALL SNOW AND ICE REMOVAL REQUIRED FOR SAFE ACCESS OF SOLID WASTE VEHICLES.
- THE SOLID WASTE COLLECTION LOCATION SHALL BE LOCATED A MINIMUM OF TEN (10) FEET AWAY FROM MAJOR ELECTRICAL EQUIPMENT, ABOVE GROUND UTILITY SERVICES, TREE BRANCHES, BALCONIES OR OTHER OVERHEAD OBSTRUCTIONS.

REV. NO.	DATE	DRAWN BY	CHECKED BY
00	06/05/18	OHM	CJE
SOLID WASTE STANDARD DETAILS			
DR. OHM	CH. CJE	DRAWING NO. PAGE 5	
SCALE N.T.S. DATE 02/01/16			

GENERAL NOTES CONTINUED:

- IF FORWARD ACCESS TO THE PUBLIC STREET IS NOT AVAILABLE FOR THE SOLID WASTE TRUCK, THE SITE DEVELOPMENT LAYOUT MUST ACCOMMODATE A TURN-AROUND LOCATION.
- FOR SITES THAT CANNOT ACCOMMODATE A TURN-AROUND, THE FOLLOWING REQUIREMENTS MUST BE MET:
 - SOLID WASTE TRUCKS MUST BE ABLE TO SERVICE DUMPSTERS WITHOUT IMPEDING THE PUBLIC STREET OR SIDEWALK.
 - THE DUMPSTER COLLECTION LOCATION SHALL BE CLEARLY DELINEATED AND NOT HAVE A SLOPE GREATER THAN 2% IN ANY DIRECTION.
 - BOLLARDS OR ADEQUATE CLEAR SPACE MUST BE PROVIDED BEHIND THE LIFT POINT SO THE DUMPSTERS ARE NOT POTENTIALLY PUSHED INTO ANY BUILDING OR ACCESS ROUTE.
 - ALL SWEEP-PATH CLEARANCE REQUIREMENTS PREVIOUSLY IDENTIFIED SHALL BE PROVIDED.
 - A VERTICAL CLEARANCE OF 25 FEET SHALL BE PROVIDED ABOVE THE COLLECTION LOCATION.
- FOR SITES THAT CANNOT ACCOMMODATE A STANDARD DUMPSTER ENCLOSURE, THE DUMPSTERS MAY BE ROLLED OUT OF A BUILDING OR ALTERNATE ENCLOSURE BY THE PROPERTY OWNER TO A PROPOSED COLLECTION LOCATION. A COLLECTION SCHEDULE FOR RECYCLING AND TRASH COLLECTION SHALL BE PROVIDED ON THE SITE PLAN.
- FOR SITES ADJACENT TO A PUBLIC ALLEY, SOLID WASTE TRUCKS ARE PERMITTED TO ACCESS THE PROPERTY THROUGH THE ALLEY IF SWEEP-PATH CLEARANCE REQUIREMENTS CAN BE PROVIDED.
- SOLID WASTE COLLECTION LOCATIONS MUST BE LOCATED WITHIN THE BOUNDARIES OF THE PROPERTY.

REV. NO.	DATE	DRAWN BY	CHECKED BY
00	06/05/18	OHM	CJE
SOLID WASTE STANDARD DETAILS			
DR. OHM	CH. CJE	DRAWING NO. PAGE 6	
SCALE N.T.S. DATE 02/01/16			



Project Number	Date
1051-19-9457	08/26/2020
P.M.	Checked by
CB	CB
	Drawn by
	KMW
	Crew/Book

Client: **AR BROUWER COMPANY**

Project: **LEWIS JEWELERS**

Site Address
300 S. MAPLE ROAD
ANN ARBOR, MICHIGAN 48103

County: WASHTEENAW Community: ANN ARBOR

Township: 2S Range: 5E Section: 2S

Professional Name: CHRISTOPHER SUTTON, PE | Date: --

Title: **SITE PLAN**

TYPICAL DETAILS

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

CONSTRUCTION SITE SAFETY IS THE RESPONSIBILITY OF THE CONTRACTOR. NEITHER THE OWNER NOR THE ENGINEER SHALL BE EXPECTED TO ASSUME ANY RESPONSIBILITY FOR SAFETY OF THE WORK, OF PERSONS ENGAGED IN THE WORK, OF ANY NEARBY STRUCTURES, OR OF ANY OTHER PERSONS.

Revisions

08.27.2020	SITE PLAN SUBMISSION
09.28.2020	REVISED PER SITE PLAN REVIEW #1
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12.07.20	REVISED PER SITE PLAN REVIEW #3
12.21.20	REVISED PER PLANNING COMMISSION

STREET TREES IN PUBLIC RIGHT-OF-WAY (S)

KEY	QTY.	SPECIES	MIN. SIZE	SPEC.
MRB	6	MALUS 'RED BARRON' RED BARRON CRABAPPLE	2" Cal.	B&B
6 PROVIDED				

LANDMARK MITIGATION TREES (LMT)

KEY	QTY.	SPECIES	MIN. SIZE	SPEC.
AS	4	ACER SACCHARUM SUGAR MAPLE	2" Cal.	B&B
CC	1	CARPINUS CAROLINIANA AMERICAN HOP HORNBEAM	2" Cal.	B&B
CO	1	CELTIS OCCIDENTALIS HACKBERRY	2" Cal.	B&B
NS	3	NYSSA SYLVATICA BLACKGUM	2" Cal.	B&B
LT	4	LIRIODENDRON TULIPIFERA TULIP TREE	2" Cal.	B&B
13 PROVIDED				

GENERAL PLANTINGS (G)

KEY	QTY.	SPECIES	MIN. SIZE	SPEC.
LS	78	CREeping LILYTURF LIRIOPE SPICATA	1 GAL.	CONT.
JSG	10	JUNIPERUS 'SEA GREEN' SEA GREEN JUNIPER	24" HT. & SPR.	CONT.
PA	33	PENNISSETUM A. 'HAMEL' DWARF FOUNTAIN GRASS	1 GAL.	CONT.
RA	31	RHUS AROMATICA 'GRO-LOW' GRO-LOW FRAGRANT SUMAC	24" HT. & SPR.	CONT.
SAW	9	SPIRAEA X BUMALDA ANTHONY WATERER SPIREA	24" HT. & SPR.	CONT.

MULCH
AREAS OF INDIVIDUAL TREES AND LANDSCAPE BEDS ARE TO BE MULCHED WITH A MINIMUM OF 4 INCHES OF SHREDDED HARDWOOD BARK. NO GROUND WOOD PALETTE MULCH PERMITTED

Client: AR BROUWER COMPANY

Project: LEWIS JEWELERS

Site Address: 300 S. MAPLE ROAD ANN ARBOR, MICHIGAN 48103

County: WASHTENAW Community: ANN ARBOR

Township: 2S Range: 5E Section: 2S

Professional Name: CHRISTOPHER SUTTON, PE | Date: ---

Title: SITE PLAN
LANDSCAPE PLAN

Drawing Scale: 1" = 20' | Sheet Number: 14

PLANT LIST

RIGHT-OF-WAY SCREENING (R)

KEY	QTY.	SPECIES	MIN. SIZE	SPEC.
CO	3	CELTIS OCCIDENTALIS HACKBERRY	2" Cal.	B&B
CC	1	CARPINUS CAROLINIANA AMERICAN HOP HORNBEAM	2" Cal.	B&B
4 PROVIDED				
TM	12	TAXUS X MEDIA 'DENSIFORMIS' DENSE YEW	30" Ht.	B&B
PF	10	POTENTILLA FRUTICOSA SHUBBY CINQUEFOIL	30" Ht.	CONT.

INTERIOR LANDSCAPE ISLANDS (I)

KEY	QTY.	SPECIES	MIN. SIZE	SPEC.
GT	3	GLEDITSIA TRIACANTHOS VAR INERMI THORNLESS HONEY LOCUST	2" Cal.	B&B
CO	4	CELTIS OCCIDENTALIS HACKBERRY	2" Cal.	B&B
CC	1	CARPINUS CAROLINIANA AMERICAN HOP HORNBEAM	2" Cal.	B&B
NS	1	NYSSA SYLVATICA BLACKGUM	2" Cal.	B&B
9 PROVIDED				

STREET TREES IN PUBLIC RIGHT-OF-WAY (S)

KEY	QTY.	SPECIES	MIN. SIZE	SPEC.
MRB	6	MALUS 'RED BARRON' RED BARRON CRABAPPLE	2" Cal.	B&B
6 PROVIDED				

LANDMARK MITIGATION TREES (LMT)

KEY	QTY.	SPECIES	MIN. SIZE	SPEC.
AS	4	ACER SACCHARUM SUGAR MAPLE	2" Cal.	B&B
CC	1	CARPINUS CAROLINIANA AMERICAN HOP HORNBEAM	2" Cal.	B&B
CO	1	CELTIS OCCIDENTALIS HACKBERRY	2" Cal.	B&B
NS	3	NYSSA SYLVATICA BLACKGUM	2" Cal.	B&B
LT	4	LIRIODENDRON TULIPIFERA TULIP TREE	2" Cal.	B&B
13 PROVIDED				

GENERAL PLANTINGS (G)

KEY	QTY.	SPECIES	MIN. SIZE	SPEC.
LS	78	CREeping LILYTURF LIRIOPE SPICATA	1 GAL.	CONT.
JSG	10	JUNIPERUS 'SEA GREEN' SEA GREEN JUNIPER	24" HT. & SPR.	CONT.
PA	33	PENNISSETUM A. 'HAMEL' DWARF FOUNTAIN GRASS	1 GAL.	CONT.
RA	31	RHUS AROMATICA 'GRO-LOW' GRO-LOW FRAGRANT SUMAC	24" HT. & SPR.	CONT.
SAW	9	SPIRAEA X BUMALDA ANTHONY WATERER SPIREA	24" HT. & SPR.	CONT.

MULCH
AREAS OF INDIVIDUAL TREES AND LANDSCAPE BEDS ARE TO BE MULCHED WITH A MINIMUM OF 4 INCHES OF SHREDDED HARDWOOD BARK. NO GROUND WOOD PALETTE MULCH PERMITTED

LANDSCAPE REQUIREMENT CALCULATIONS

5.20.3.A. VEHICULAR USE - RIGHT-OF-WAY SCREENING (R)

	REQUIRED	PROVIDED
VUA R.O.W. SCREENING LENGTH = 56 + 42 = 98 LF		
1 TREE / 30 LF REQUIRED		
98 LF / 30 LF = 3.3 = 4 TREES REQUIRED	4	4

5.20.3.B VEHICULAR USE / INTERIOR LANDSCAPE ISLANDS (I)

	REQUIRED	PROVIDED
VEHICULAR USE AREA = 31,035 SF		
INTERIOR LANDSCAPE AREA REQUIRED		
3,300 - 49,999 SF = 1:20 SF		
31,035 SF / 20 SF = 1,552 SF		
INTERIOR LANDSCAPE AREA REQUIRED	1,552 SF	2,450 SF
1 TREE REQUIRED / 250 SF OF AREA		
1,552 SF / 250 SF = 6.2 = 7 TREES REQUIRED	7 EA	9 EA
DEPRESSED BIORETENTION AREA REQUIRED		
1,552 SF > 750 SF		
1,552 SF X 50% =	776 SF	800 SF

5.20.4 CONFLICTING LAND USE BUFFERS NOT APPLICABLE

5.20.5 PRIVATE STREETS AND SHARED DRIVEWAY BUFFERS NOT APPLICABLE

5.20.10. STREET TREES IN THE PUBLIC RIGHT-OF-WAY (S)

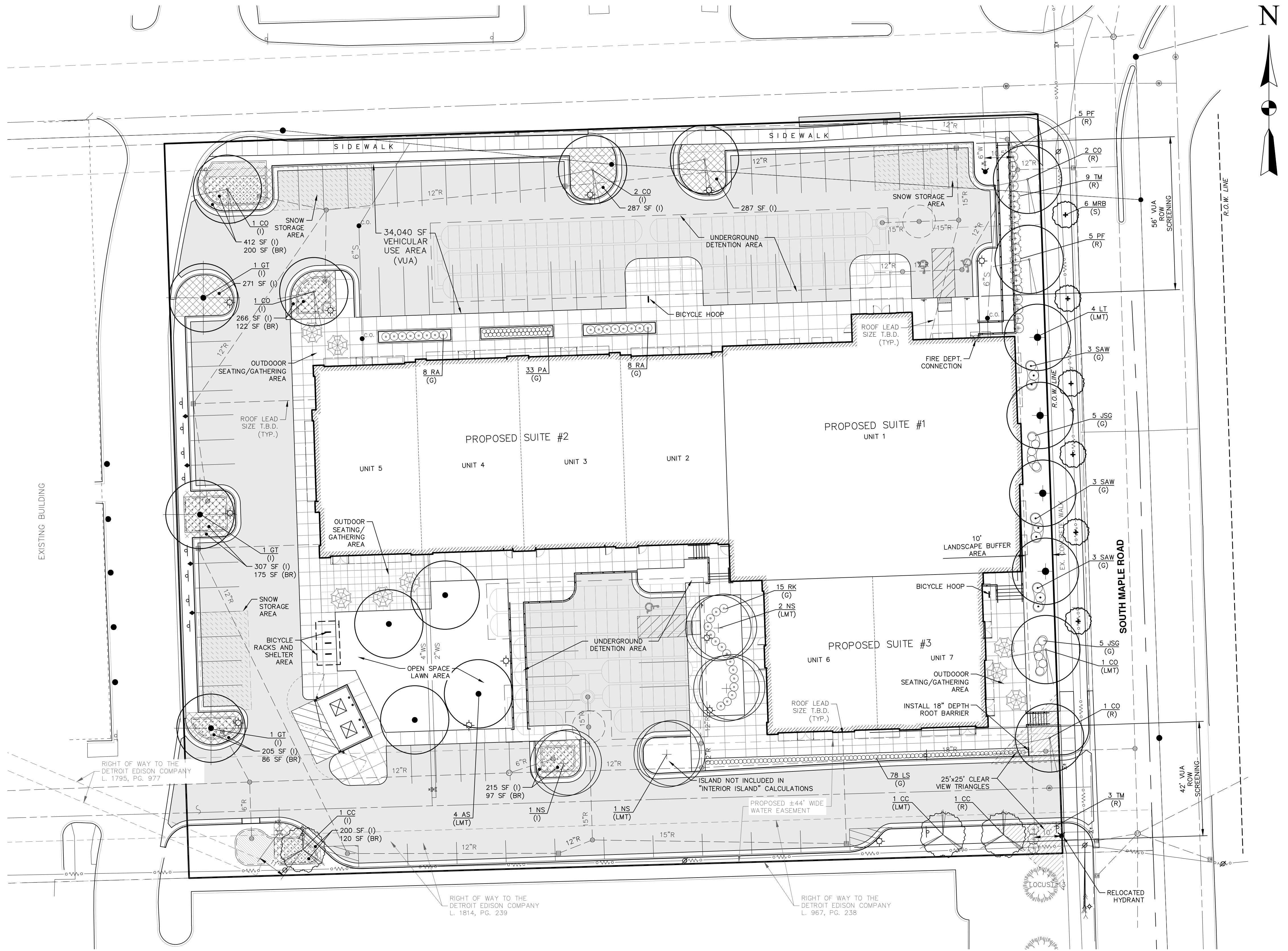
	REQUIRED	PROVIDED
R.O.W. WAY LENGTH = 270.36 LF		
1 TREE / 45 LF REQUIRED		
270.36 LF / 45 LF = 6 TREES REQUIRED	6	6

5.29.6.F.4 NATURAL FEATURE MITIGATION (LMT)

	REQUIRED	PROVIDED
LANDMARK TREE REPLACEMENT REQUIREMENT:		
50% CAL. INCH OF LANDMARK TREE REMOVED		
12" & 14" LANDMARK CRABAPPLE TO BE REMOVED		
26" LANDMARK TREE REMOVED X 50% =	13 TREES	13 TREES

STREET TREE ESCROW

	REQUIRED	PROVIDED
\$1.30 / LF OF STREET FRONTAGE		
270.36 LF SOUTH MAPLE ROAD STREET FRONTAGE		
\$1.30 X 270.36 LF =	\$351.47	\$351.47



LANDSCAPE NOTES:
SEE SHEET 15 FOR LANDSCAPE NOTES AND DETAILS

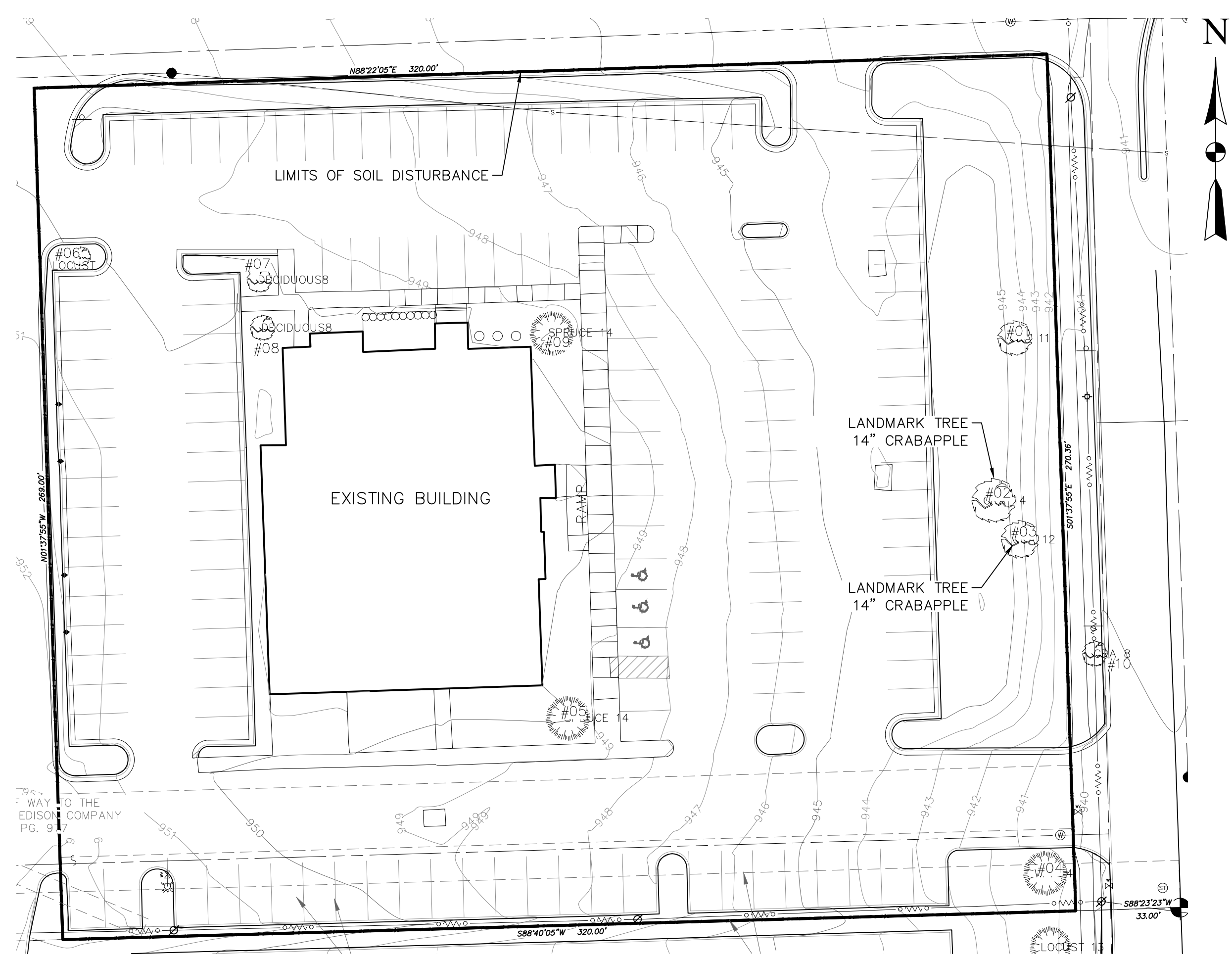
BIO-RETENTION AREAS (BR):
EACH BIO-RETENTION AREA TO RECEIVE "WETLAND BUFFER & UPLAND AREAS SEED MIX." SEE SHEET 16 FOR SEED MIX DETAILS

STREET TREE ESCROW CALCULATIONS
THE CURRENT STREET TREE ESCROW RATE IS \$1.30 PER LINEAL FOOT OF STREET FRONTAGE. BASED ON THE 270.36 LINEAL FEET OF SOUTH MAPLE ROAD FRONTAGE ON THIS PROJECT, THE REQUIRED STREET TREE ESCROW FOR THIS SITE IS \$351.47

THIS AMOUNT MUST BE PAID PRIOR TO ISSUING THE BUILDING PERMIT. THE DEVELOPER HAS PROVIDED THE REQUIRED STREET TREES FOR THIS SITE. THEREFORE THE ESCROW AMOUNT SHALL BE REFUNDED AFTER THE CITY FORESTRY DIVISION HAS APPROVED THE STREET TREE PLANTINGS.

LEGEND

x 656.5	EX. SPOT ELEVATION	EX. UNDERGROUND GAS
652	EX. CONTOUR	EX. GAS VALVE
---	EX. ADJACENT PROPERTY LINE	EX. OVERHEAD ELECTRIC
---	EX. SECTION LINE	EX. UNDERGROUND ELECTRIC
---	EX. EASEMENT LINE	EX. UNDERGROUND CABLE
---	EX. CURB/PAVEMENT	EX. TELEPHONE MANHOLE
---	EX. TREELINE	EX. ELECTRIC MANHOLE
---	EX. TREE (CONIFEROUS)	EX. ELECTRIC METER
---	EX. TREE (DECIDUOUS)	EX. GAS METER
---	EX. SIGN	EX. LIGHT POLE
---	EX. WATER MAIN	EX. TRAFFIC SIGNAL BOX
---	EX. WATER VALVE	EX. UNIDENTIFIED MANHOLE
---	EX. HYDRANT	EX. TRAFFIC SIGNAL POLE
---	EX. WATER MANHOLE	EX. UTILITY POLE
---	EX. WELL	EX. GUY WIRE
---	EX. WATER METER	PROPOSED BUILDING
---	EX. STORM SEWER	INTERIOR LANDSCAPE ISLAND AREA
---	EX. STORM INLET/CATCH BASIN	PORTION OF BIO-RETENTION AREA APPLYING TO REQUIREMENTS
---	EX. STORM MANHOLE	PORTION OF BIO-RETENTION AREA NOT APPLYING TO REQUIREMENTS
---	EX. SANITARY SEWER	SNOW STORAGE AREA
---	EX. SANITARY MANHOLE	



NATURAL FEATURES PLAN
SCALE 1" = 30'

NATURAL FEATURES PLAN NOTES

- LIMITS OF DISTURBANCE ARE SHOWN ON THE PLAN.
- NO ENDANGERED SPECIES HABITAT EXIST ON THIS SITE.
- PER THE ALTA SURVEY: THE PARCEL DOES NOT LIE WITHIN A SPECIAL FLOOD HAZARD ZONE ACCORDING TO THE FLOOD INSURANCE RATE MAP PUBLISHED BY THE FEDERAL INSURANCE ADMINISTRATION FOR THE COUNTY OF WASHTENAW, STATE OF MICHIGAN, COMMUNITY NUMBER - 26013, MAP NUMBER - 2616100244E, AN EFFECTIVE DATE OF APRIL 3, 2012. THEREFORE, AS NOTED IN SAID DOCUMENT, THE SCALED LOCATION OF THE EASTERLY PORTION OF THE SUBJECT PROPERTY IS IN ZONE X (UNSHADED).
- THE PARCEL DOES NOT LIE WITHIN A SPECIAL FLOOD HAZARD ZONE ACCORDING TO THE FLOOD INSURANCE RATE MAP INDEX PUBLISHED BY THE FEDERAL INSURANCE ADMINISTRATION FOR THE COUNTY OF WASHTENAW, STATE OF MICHIGAN, MAP NUMBER - 261610000A, AN EFFECTIVE DATE OF APRIL 3, 2012. THEREFORE, AS NOTED ("PANEL NOT PRINTED - NO SPECIAL FLOOD HAZARD AREAS) IN SAID DOCUMENT, THE SCALED LOCATION OF THE WESTERLY PORTION OF THE SUBJECT PROPERTY RESIDES IN PANEL 2616100243E.
- TWO LANDMARK TREES EXIST ON THIS SITE AND WILL BE REMOVED. THEIR LOCATION AND CONDITION IS NOTED ON THE PLAN.
- NO STEEP SLOPES EXIST ON THIS SITE.
- NO EXISTING OR PROPOSED WATER COURSE ARE ON THIS SITE.
- NO WETLANDS EXIST ON THIS SITE.

NATURAL FEATURES - STATEMENT OF IMPACT

THE PROPOSED PROJECT INCLUDES THREE COMMERCIAL BUILDINGS WITH A MAXIMUM POTENTIAL CAPACITY OF 6 BUSINESSES.

THE EXISTING NATURAL FEATURES ON THE SITE ARE LIMITED TO TWO LANDMARK TREES AS FOLLOWS:

TREE #02 14" CAL. CRABAPPLE TREE, GOOD CONDITION
TREE HEALTH / CONDITION FACTOR SCORE = 21

TREE #03 12" CAL. CRABAPPLE TREE, GOOD CONDITION
TREE HEALTH / CONDITION FACTOR SCORE = 21

SUMMARY:

TREE #02 14" CAL. CRABAPPLE TREE - REMOVE DUE TO EXISTING LOCATION ONSITE FALLING WITH PROPOSED BUILDING - BUILDING LOCATION AS REQUIRED BY ORDINANCE FOR FRONT SETBACK.

TREE #03 12" CAL. CRABAPPLE TREE - REMOVE DUE TO EXISTING LOCATION ONSITE FALLING WITH PROPOSED BUILDING - BUILDING LOCATION AS REQUIRED BY ORDINANCE FOR FRONT SETBACK.

EXISTING TREE LIST:

NO.	SIZE	SPECIES	STATUS
01	11" CAL.	CRAB APPLE TREE	TO BE REMOVED
02	14" CAL. (LM)	CRAB APPLE TREE	TO BE REMOVED
03	12" CAL. (LM)	CRAB APPLE TREE	TO BE REMOVED
04	14" CAL.	PINE TREE	TO BE REMOVED
05	14" CAL.	SPRUCE	TO BE REMOVED
06	3" CAL.	LOCUST TREE	TO BE REMOVED
07	8" CAL.	CRAB APPLE TREE	TO BE REMOVED
08	8" CAL.	CRAB APPLE TREE	TO BE REMOVED
09	14" CAL.	SPRUCE	TO BE REMOVED
10	8" CAL.	CRAB APPLE TREE	TO BE REMOVED

(LM) DESIGNATES ANN ARBOR LANDMARK TREE

LANDSCAPE NOTES:

- THIS PLAN IS FOR PLANTING LOCATIONS ONLY.
- SIZES SPECIFIED ARE MINIMUM SIZES TO BE INSTALLED.
- IN THE EVENT THE PLANT LIST DOES NOT MATCH THE PLAN, THE PLAN SHALL TAKE PRECEDENCE.
- ALL EXISTING TREES TO REMAIN THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED BY THE END OF THE FOLLOWING PLANTING SEASON.
- THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL UNDERGROUND AND OVERHEAD UTILITIES. PLANT MATERIAL IS TO BE LOCATED SUCH THAT IT WILL NOT INTERFERE WITH ANY UNDERGROUND OR OVERHEAD UTILITIES. PLANTINGS WITHIN 15 FEET OF A FIRE HYDRANT SHALL NOT EXCEED 6 INCHES IN HEIGHT.
- PLANT TREES AND SHRUBS AT THE SAME GRADE LEVEL AT WHICH THEY WERE GROWN IN THE NURSERY. IF HEAVY CLAY SOILS ARE EVIDENT, PLANT TREES AND SHRUBS IN LEVEL AREAS HIGHER, APPROXIMATELY 1/4 OF THE ROOT BALL ABOVE THE GRADE.
- REMOVE ALL TWINE, WIRE, NURSERY TREE GUARDS, TAGS AND INORGANIC MATERIAL FROM ROOT BALLS. PEEL BACK THE TOP 1/3 OF BURLAP FROM EARTH BALLS AND REMOVE ANY BURLAP AROUND TREE TRUNKS.
- ALL LANDSCAPE AREAS SHALL BE EXCAVATED OF ALL BUILDING / CONSTRUCTION MATERIAL AND POOR SOILS TO A DEPTH OF 18"-24" AND BACKFILLED WITH GOOD, MEDIUM TEXTURED PLANTING SOIL.
- ALL DISTURBED UNPAVED AREAS ARE TO BE SPREAD WITH A MINIMUM 4 INCHES OF TOPSOIL AND SODDED.
- AREAS OF INDIVIDUAL TREES AND LANDSCAPE BEDS ARE TO BE MULCHED WITH A MINIMUM OF 4 INCHES OF SHREDDED HARDWOOD BARK. (NO GROUND WOOD PALLETTE MULCH PERMITTED) MULCH SHALL BE SPREAD IN A 5-FOOT DIAMETER CIRCLE AROUND THE BASE OF EACH TREE, LEAVING A 6-INCH RADIUS CIRCLE OF BARE SOIL AROUND THE TRUNK OF THE TREE. ALL AREAS OUTSIDE OF THE MULCH RINGS SHALL BE SODDED. MULCH TO BE DOUBLE SHREDDED HARDWOOD BARK MULCH.
- IF AN APPROVED SPECIES IS NO LONGER ACCEPTABLE DUE TO SUCH THINGS AS INFESTATION OR DISEASE, A SUITABLE SIMILAR SPECIES SHALL BE USED AS REPLACEMENT. ANY PLANT SUBSTITUTIONS SHALL HAVE CITY OF ANN ARBOR APPROVAL PRIOR TO INSTALLATION.
- RECOMMENDED PLANTING DATES ARE MARCH 1 TO MAY 15 FOR ALL MATERIALS AND OCTOBER 15 TO DECEMBER 15 FOR DECIDUOUS MATERIALS. PLANTINGS OUTSIDE THESE DATES SHALL HAVE PRIOR CITY OF ANN ARBOR APPROVAL, AND MAY REQUIRE SPECIAL TREATMENT, SUCH AS EXTRA WATERING OR MULCHING, TO INCREASE SURVIVAL POTENTIAL.
- TREE "BALLED AND BURLAPPED" ROOT BALL SIZE SHALL BE A MINIMUM OF AT LEAST TEN TIMES THE TREE CALIPER SIZE.
- ANY SPECIES DEVIATIONS FROM THE APPROVED SITE PLAN MUST BE APPROVED IN WRITING BY THE CITY OF ANN ARBOR PRIOR TO INSTALLATION.

LANDSCAPE MAINTENANCE PLAN

LANDSCAPING REQUIRED BY THE CITY OF ANN ARBOR SHALL BE MAINTAINED IN A HEALTHY, NEAT AND ORDERLY APPEARANCE, FREE FROM REFUSE AND DEBRIS. SPECIFIC LANDSCAPE MAINTENANCE INCLUDES, BUT IS NOT LIMITED TO, CUTTING, PRUNING, AND MOWING OF REQUIRED LANDSCAPE AREAS AND REMOVAL OF TRIMMINGS.

APPLICATIONS OF FERTILIZERS, BEYOND THE INITIAL TOPSOIL AND SEEDING, SHALL BE A FERTILIZER WITH CONTAINING NO PHOSPHORUS.

ALL DISEASED, DAMAGED, OR DEAD PLANT MATERIAL SHALL BE REPLACED, IN ACCORDANCE WITH THE CITY OF ANN ARBOR'S UNIFIED DEVELOPMENT CODE, BY THE END OF THE FOLLOWING PLANTING SEASON AS A CONTINUING OBLIGATION FOR THE DURATION OF THE SITE PLAN.

THE OWNER SHALL INSURE PERPETUAL AND MANDATORY MAINTENANCE AND/OR REPLACEMENT OF VEGETATIVE PLANTINGS PURSUANT TO THE APPROVED LANDSCAPE PLAN.

IRRIGATION NOTE:

PROVIDE UNDERGROUND AUTOMATIC IRRIGATION SYSTEM. SYSTEM SHALL INCLUDE SEPARATE ZONES FOR LAWNS, SHRUBS PERENNIALS AND ANNUAL FLOWERS.

LANDSCAPE EDGING:

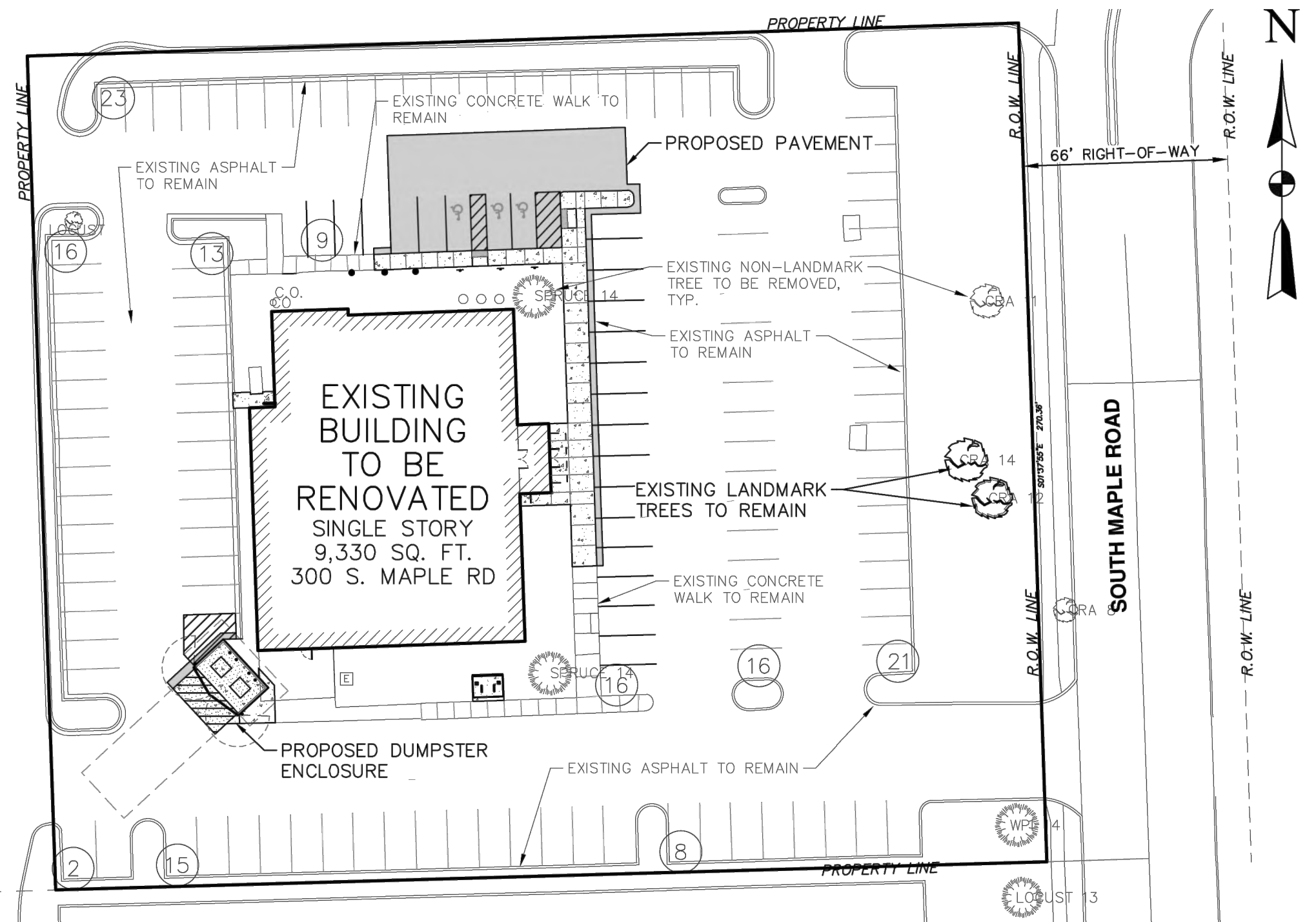
ALL LANDSCAPE EDGES ARE SHOVEL CUT.

COMPACTED SOILS

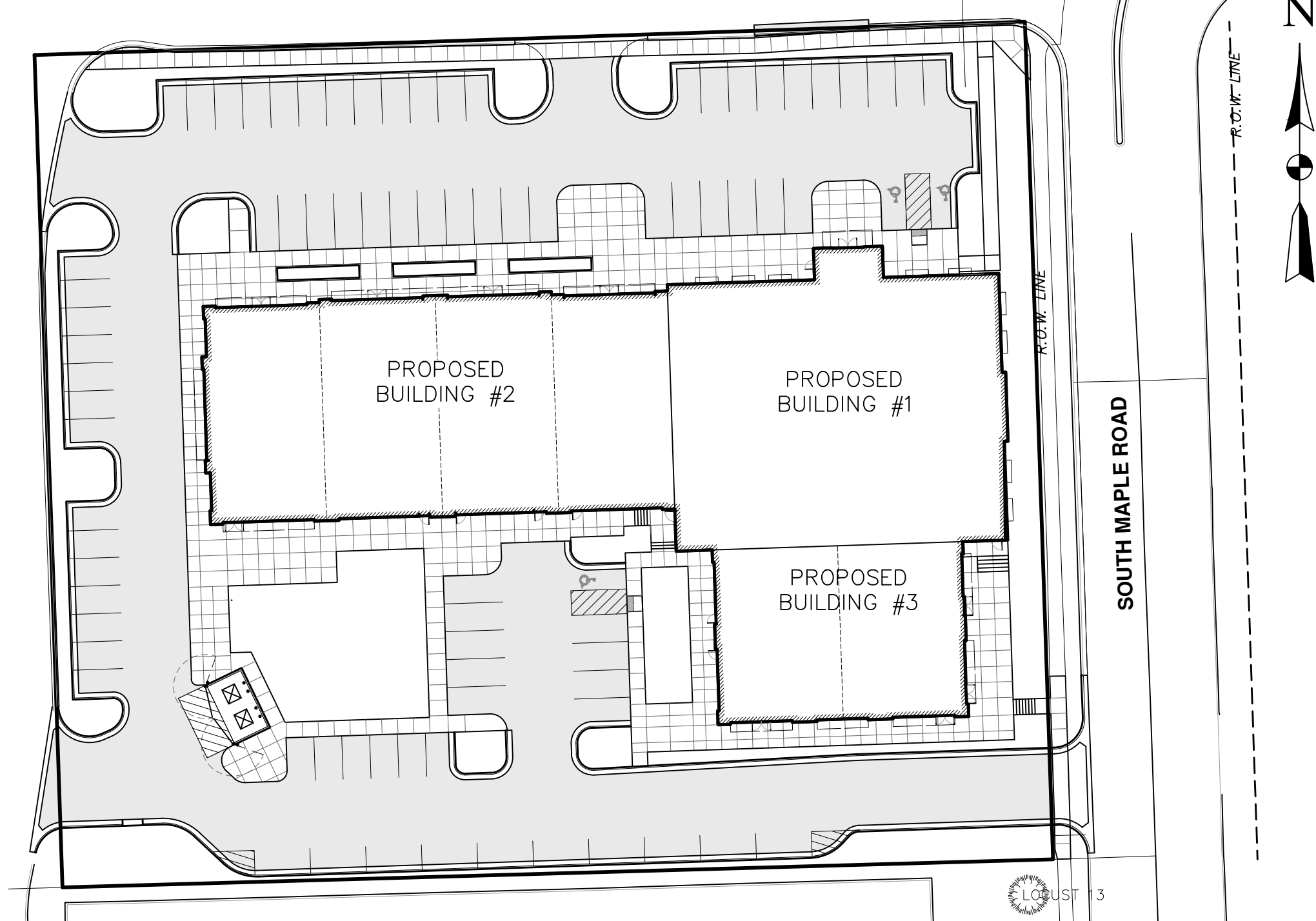
- NO MACHINERY IS TO BE USED OR PARKED WITHIN THE DRIPLINE OF EXISTING TREES.
- PROPOSED PLANT BEDS FOUND TO HAVE COMPACTED SOILS SHALL BE FULLY EXCAVATED TO DEPTH SHOWN ON DETAILS. THESE AREAS (NOT INDIVIDUAL PLANT HOLES) ARE TO RECEIVE CONTINUOUS PLANT MIX AS SPECIFIED BELOW:
 - A MIXTURE OF 70% LOAM TOPSOIL, 10% COMPOST, 20% SAND BACKFILLED IN THE PLANT BED.
 - ADDITIONALLY - HAND TILL TO A MINIMUM DEPTH OF 12", INTO EVERY 150 SQ. FT. BED AREA:
 - (1) 6 CU. FT. BALE ORGANIC COMPOST
 - (1) 40 LB BAG COMPOSTED POULTRY MANURE "CHICK MAGIC" 5-3-2 WWW.CHICKMAGIC.NET (262)495-6220
 - (1) 5 LB BAG 13-13-13 MULTI-PURPOSE FERTILIZER

SNOW STORAGE NOTE:

SNOW SHALL NOT BE PUSHED ON TO INTERIOR LANDSCAPE ISLANDS UNLESS THOSE AREAS HAVE BEEN DESIGNATED FOR SNOW STORAGE.



ALTERNATIVE ANALYSIS SITE PLAN
SCALE 1" = 40'



PROPOSED SITE PLAN
SCALE 1" = 40'

GROSS / NET LOT AREA		0.435 AC		
SITE DEVELOPMENT DATA		REQUIRED	EXISTING	PROPOSED
ZONING		C3	C3	C3
BUILDING SETBACKS	FRONT	10'	159.64' EAST	155.93' EAST
	SIDE	0'	78.58' NORTH	84.89' NORTH
	REAR	20'	75.95' SOUTH	75.95' SOUTH
BUILDING INFORMATION	HEIGHT	55 FT./4 STORIES	+/- 28'/1-STORY	28'/1-STORY
	FLOOR AREA	6,000 SF	+/- 9,330 SF	9,330 SF
PARKING INFORMATION	TOTAL SPACES	30 MIN.	142	139
	ADA SPACES	3 (MIN)	3	3
BICYCLE PARKING		4	0	4

ALTERNATIVE ANALYSIS NARRATIVE

THE ALTERNATE PLAN IS THE ORIGINALLY PROPOSED RENOVATION OF THIS PROJECT. DUE TO THE CONDITION OF THE EXISTING BUILDING, TOTAL DEMOLITION OF THAT BUILDING WAS NECESSARY.

IN COMPARISON OF THE ALTERNATIVE AND THE PROPOSED PROJECTS, THE ALTERNATIVE PROPOSAL LIMITED THE USE AND AESTHETICS OF THE PROPERTY.

THE CITY'S CURRENT UNIFIED DEVELOPMENT CODE REQUIRES A 10-FOOT FRONT SETBACK FOR ALL PROPOSED BUILDINGS. CONSTRUCTING A BUILDING IN THE LOCATION OF THE PREVIOUS RESTAURANT WOULD REQUIRE A SETBACK VARIANCE FROM THE ZONING BOARD OF APPEALS.

ALTERNATIVE SITE PLAN PROS & CONS

- PRO - ALLOWED FOR THE MAINTENANCE OF THE LANDMARK TREES
- CON - PLAN MAINTAINED PAVEMENT, WALKS, AND LANDSCAPE WHICH EXIST IN POOR CONDITION.
- CON - THE EXTERIOR OF THE BUILDING REQUIRED NUMEROUS IMPROVEMENTS FOR THE HEALTH AND SAFETY OF THE EMPLOYEES AND CUSTOMERS
- CON - DID NOT FULLY UTILIZE THE COMMERCIAL/TAXABLE ASPECTS OF THE PROPERTY
- CON - PROVIDED SUBSTANTIALLY MORE PARKING THAN NECESSARY FOR PROPOSED USE

PROPOSED SITE PLAN PROS & CONS

- PRO - PROVIDES SAFE AND HEALTHY ENVIRONMENT FOR EMPLOYEES AND CUSTOMERS
- PRO - OVERALL ENHANCED AESTHETICS AND FUNCTIONALITY FOR THE COMMUNITY
- PRO - FULLY UTILIZES THE POTENTIAL COMMERCIAL/TAXABLE REVENUE OF THE PROPERTY
- PRO - PROVIDES ADEQUATE RATHER THAN EXCESSIVE PARKING FOR PROPOSED USE
- PRO - INCLUDES NEW SIDEWALK FOR PEDESTRIAN CONNECTIVITY AND SAFETY IN ACCESSING EXISTING COMMERCIAL USES WEST OF THIS SITE
- PRO - PROVIDES FOR BOTH SHELTERED AND UN-SHELTERED BICYCLE PARKING
- PRO - PROVIDES NEW AREAS FOR OUTDOOR SEATING AND GATHERING
- PRO - PROVIDES AREA FOR NATURAL BIO-RETENTION AREA
- PRO - MEETS CITY DEVELOPMENT CODE FOR 10-FOOT BUILDING FRONT SETBACK.
- CON - LOSE OF TWO LANDMARK TREES

GROSS / NET LOT AREA		0.435 AC		
SITE DEVELOPMENT DATA		REQUIRED	PROPOSED	
BUILDING SETBACKS	FRONT	10'	10' EAST	
	SIDE	0'	73' NORTH	
	REAR	20'	47' SOUTH	
BUILDING #1 INFORMATION	HEIGHT	55 FT./4 STORIES	28'/1-STORY	
	FLOOR AREA	6,000 SF	9,408 SF	
BUILDING #2 INFORMATION	HEIGHT	55 FT./4 STORIES	10,575 SF	
	FLOOR AREA	6,000 SF	10,575 SF	
BUILDING #3 INFORMATION	HEIGHT	55 FT./4 STORIES	4,546 SF	
	FLOOR AREA	6,000 SF	4,546 SF	
PARKING INFORMATION	TOTAL SPACES	30 MIN.	81	
	ADA SPACES	3 (MIN)	3	
BICYCLE PARKING	WITH SHELTER	4.5	6	
	W/O SHELTER	4.5	4	

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

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Revisions

- 08.27.2020 SITE PLAN SUBMISSION
- 09.28.2020 REVISED PER SITE PLAN REVIEW #1
- 10.22.2020 REVISED PER SITE PLAN REVIEW #2
- 12.07.20 REVISED PER SITE PLAN REVIEW #3
- 12.21.20 REVISED PER PLANNING COMMISSION

Project Number: 1051-19-9457 Date: 08/26/2020
 P.M. Checked by: CB, KMW, Crew/Book

Client: **AR BROUWER COMPANY**

Project: **LEWIS JEWELERS**

Site Address: 300 S. MAPLE ROAD, ANN ARBOR, MICHIGAN 48103
 County: WASHTENAW Community: ANN ARBOR
 Township: 2S Range: 5E Section: 2S

Professional Name: CHRISTOPHER SUTTON, PE Date: --

Title: **SITE PLAN**

LANDSCAPE NOTES, CALCULATIONS & NATURAL FEATURES

Drawing Scale: Sheet Number: **15**

K:\2019\1051-19-9457\Drawings\Plan_Site_Site Plan V047-LS.dwg

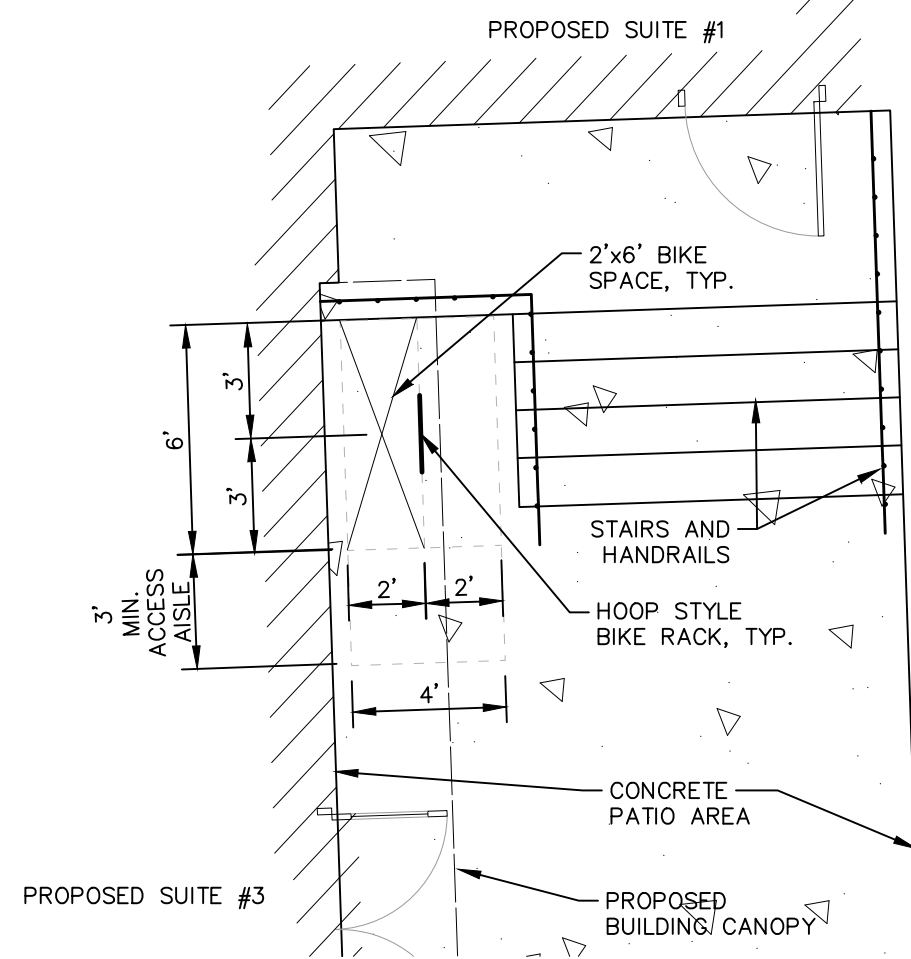
WETLAND BUFFER & UPLAND AREAS SEED MIX

THE SEED MIX BELOW IS A CUSTOMIZED VERSION OF THE GENESIS NURSERY'S STANDARD "LO PRO PRAIRIE FOR CLAY SOILS" MIX

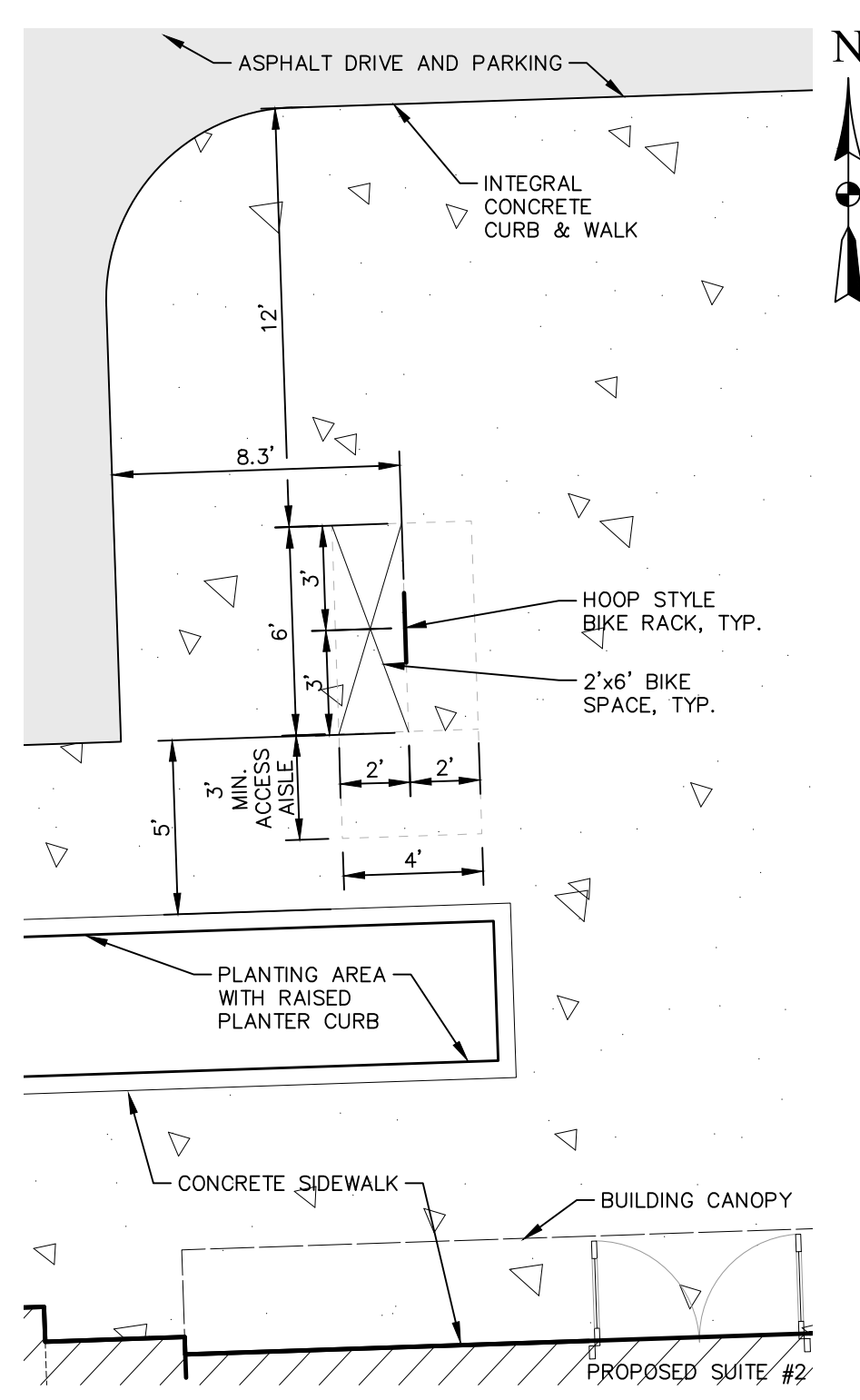
Quote 19223

16-Jan-2020

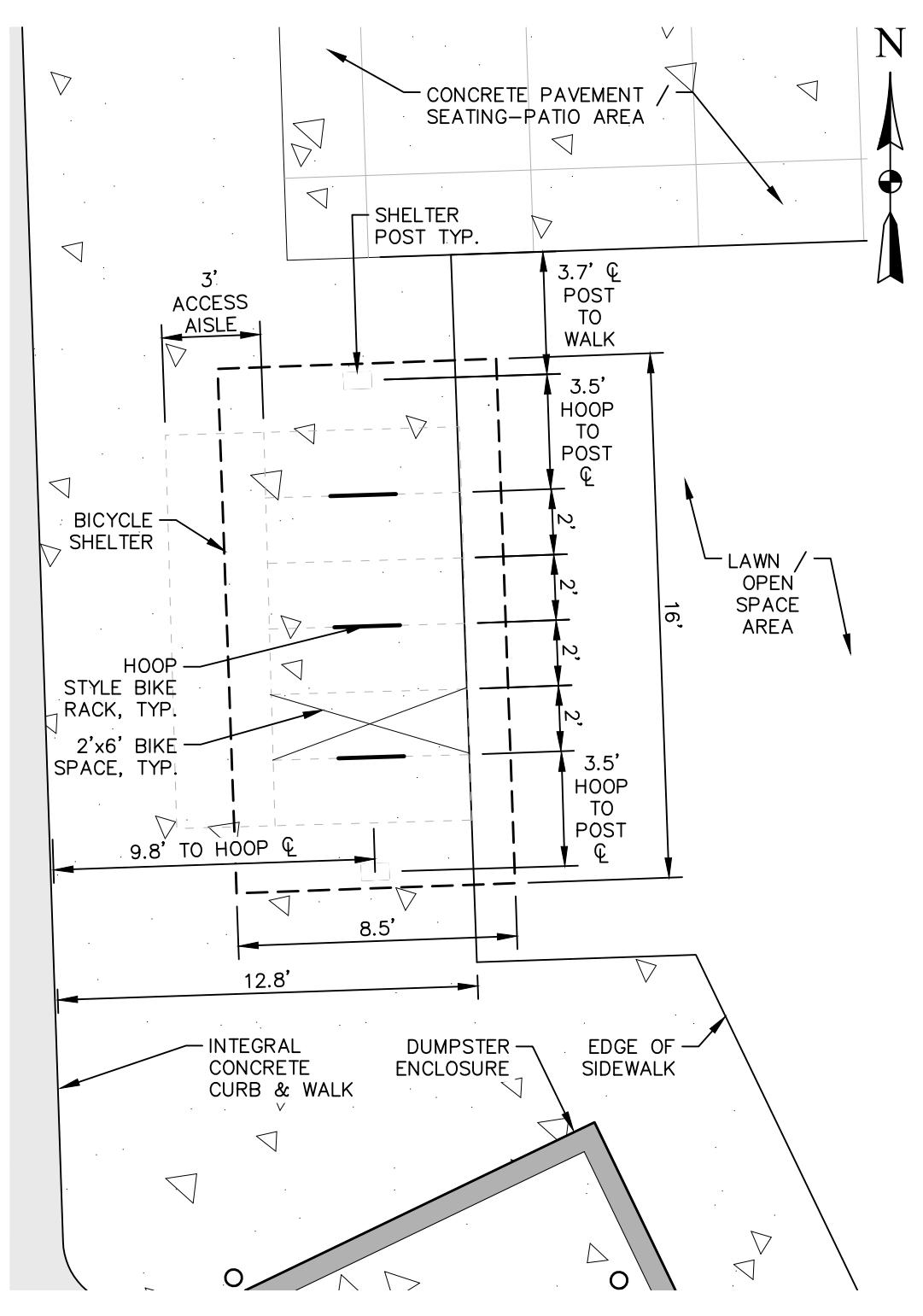
Species	Common Name	lb/ac	seeds per pound	permanent native seeds per acre	seeds per sq. ft.	% by ad ct
Agrostis stolonifera (A. alba palustris)	Bent Grass	0.063	7,442,823	468,885	10.76	6.41%
Allium subcorinifolium	Common Water Plantain	0.125	1,212,834	151,604	3.48	2.07%
Ammannia robusta	Scarlet Loosestrife	0.016	27,515,151	440,242	10.11	6.02%
Amorpha fruticosa	Indigo Bush	0.063	62,968	3,967	0.09	0.05%
Asclepias incarnata	Swamp Milkweed	0.125	83,146	7,894	0.18	0.11%
Bidens cernua	Nodding Burnerogold	0.063	305,660	19,257	0.44	0.26%
Bidens frondosa	Common Beggarstick	0.031	194,511	6,030	0.14	0.08%
Boltonia asteroides	False Aster	0.063	4,450,980	280,412	6.44	3.83%
Bulboschoenus fluviatilis (Scirpus f.)	River Bulrush	0.125	123,571	15,446	0.35	0.21%
Bulboschoenus maritimus (Scirpus paludosus)	Alkali Bulrush	0.063	222,000	13,386	0.32	0.19%
Carex Bebbii	Bebbs Sedge	0.063	2,203,883	138,845	3.19	1.90%
Carex lupuliformis	Knobbed Hop Sedge	0.125	97,758	12,220	0.28	0.17%
Carex nebraskensis	Nebraska Sedge	0.063	425,891	26,831	0.62	0.37%
Carex praegracilis	Expressway Sedge	0.125	637,640	79,705	1.83	1.09%
Carex scoparia	Pointed Broom Sedge	0.063	1,254,144	79,011	1.81	1.08%
Carex stipata	Awlfruted Sedge	0.063	650,430	40,877	0.94	0.56%
Carex vulpinoidea	Fox Sedge	0.500	1,864,000	98,015	22.54	13.43%
Cephalanthus occidentalis	Button Bush	0.125	112,043	14,005	0.32	0.19%
Dactyloctenium aegyptium	Salt Grass	0.500	560,000	280,000	6.43	3.83%
Echinochloa crusgalli	Barnyard Grass	2.000	135,482	270,964	6.22	3.70%
Eleocharis obtusa	Blunt Spikerush	0.031	2,508,287	77,757	1.79	1.06%
Eleocharis palustris	Marsh Spikerush	0.063	1,181,250	74,419	1.71	1.02%
Elymus virginicus	Virginia Rye	5.000	117,252	586,260	13.46	8.02%
Eurostium maculatum (Eupatorium m.)	Spotted Joeeyeweed	0.031	1,586,013	113	1.13	0.67%
Glyceria striata	Fowl Mania Grass	0.031	2,043,243	63,341	1.45	0.87%
Helenium autumnale	Sneezeweed	0.063	3,310,948	208,590	4.79	2.85%
Juncus arcticus balticus (J. b. littoralis)	Lake Shore Rush	0.016	9,639,574	154,533	3.55	2.11%
Juncus effusus	Soft Rush	0.016	22,700,000	363,200	8.34	4.97%
Juncus nodosus	Joint Rush	0.016	26,705,882	427,294	9.81	5.84%
Juncus torreyi	Torrey's Rush	0.016	23,402,062	374,433	8.60	5.12%
Leersia oryzoides	Rice Cut Grass	0.125	354,688	44,336	1.02	0.61%
Mimulus ringens	Monkey Flower	0.031	2,579,545	79,966	1.84	1.09%
Penthorum sedoides	Ditch Stonecrop	0.008	43,283,095	346,265	7.95	4.73%
Panicaria pennsylvanica (Polygonum p.)	Giant Smartweed	2.000	69,810	139,620	3.21	1.91%
Rubricola leucostachya	Green Coneflower	0.063	219,536	13,831	0.32	0.19%
Sagittaria latifolia	Duck Potato	0.031	2,025,000	62,775	1.44	0.86%
Schoenoplectus acutus (Scirpus a.)	Hardstem Bulrush	0.063	879,545	55,411	1.27	0.76%
Schoenoplectus pungens (Scirpus p.)	Chambers Rush	0.125	189,246	23,656	0.54	0.32%
Schoenoplectus tabernaemontani (Scirpus vall.)	Great Bulrush	0.125	530,374	66,297	1.52	0.91%
Scirpus atrovirens	Dark Green Bush	0.031	7,877,536	747,655	6.57	3.92%



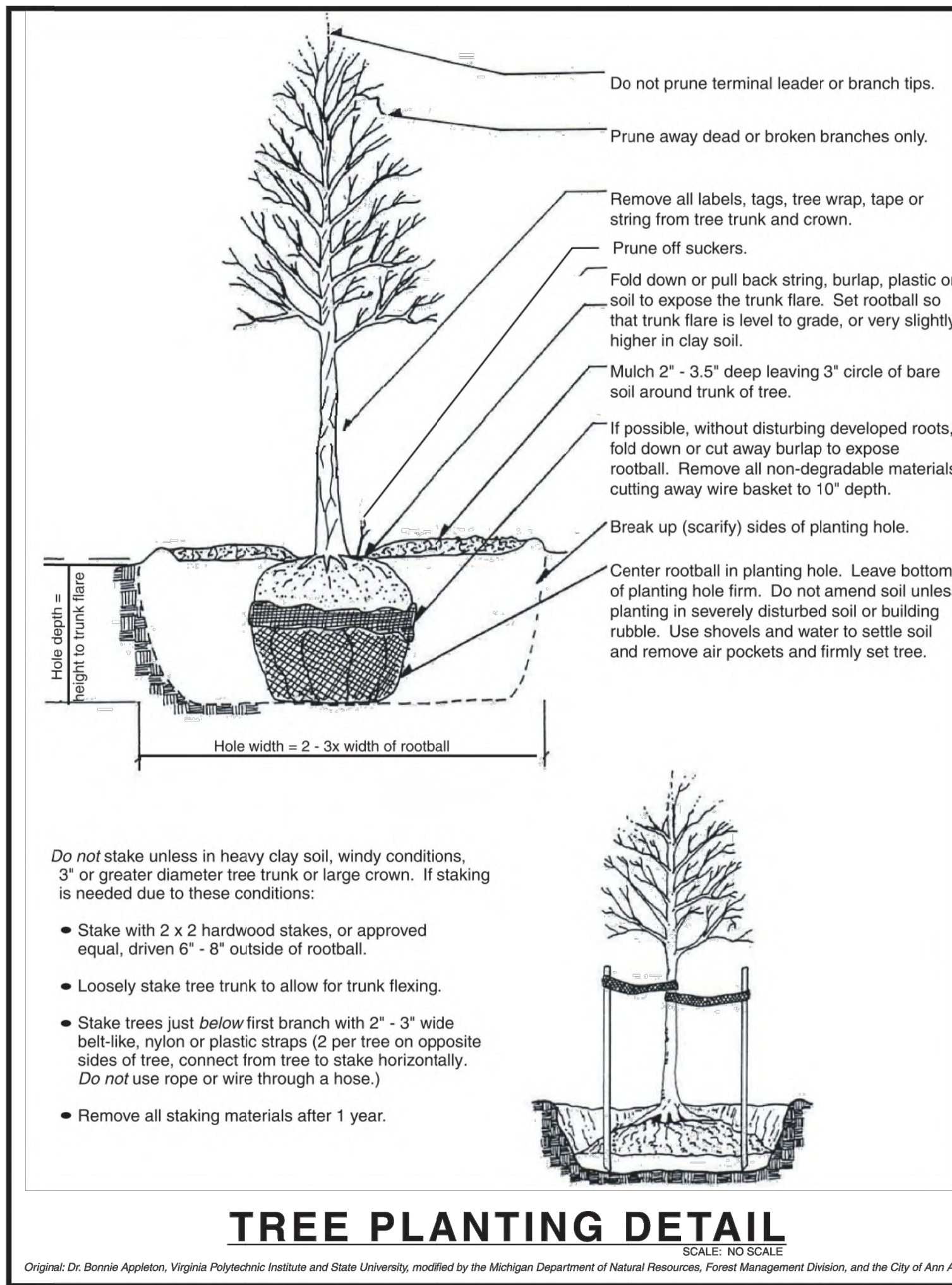
2 BICYCLE SPACE LAYOUT - EAST
SCALE: 1" = 5'



2 BICYCLE SPACE LAYOUT - NORTH
SCALE: 1" = 5'

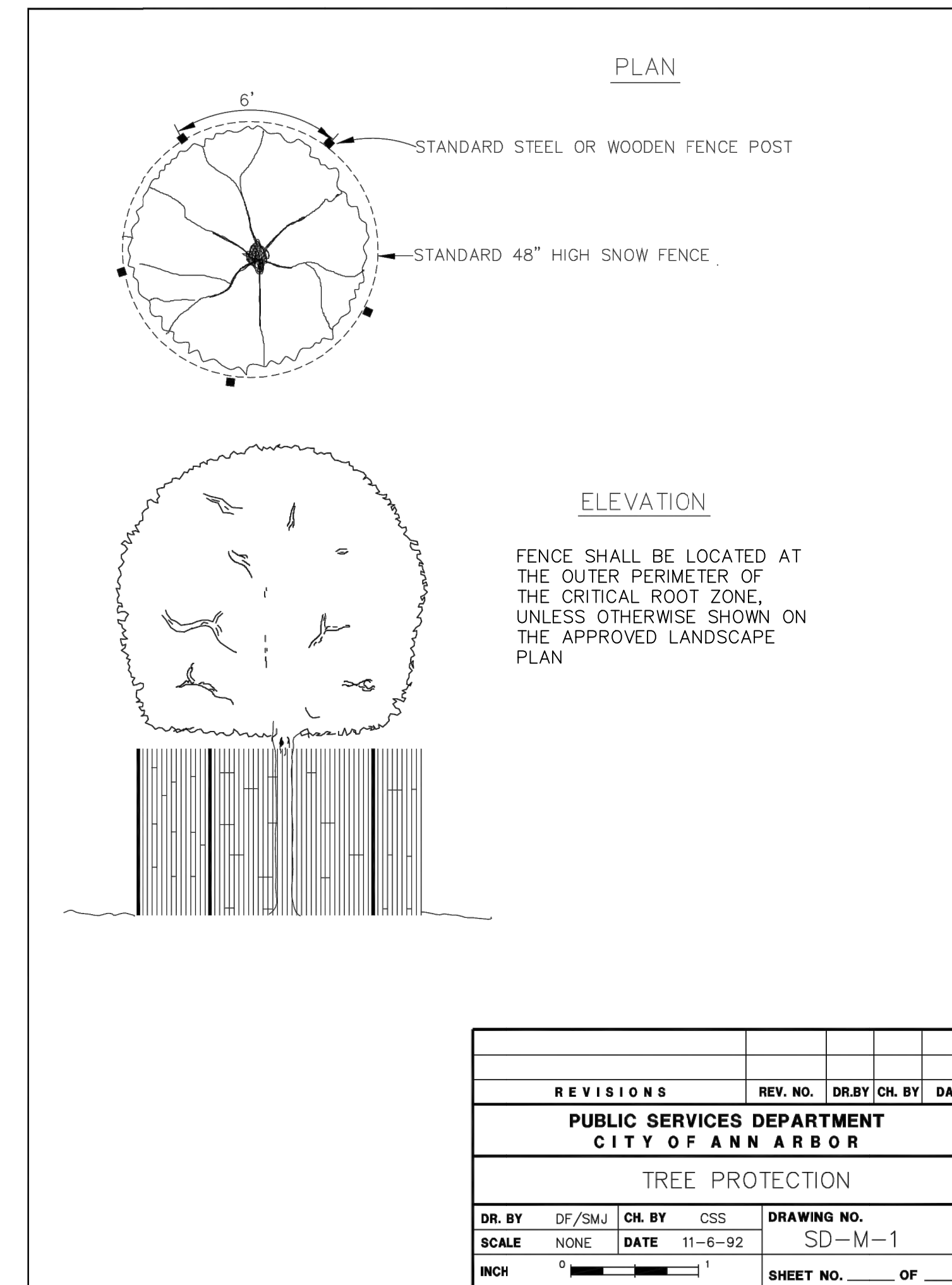


6 BICYCLE SPACE WITH SHELTER LAYOUT
SCALE: 1" = 5'



TREE PLANTING DETAIL

Original: Dr. Bonnie Appleton, Virginia Polytechnic Institute and State University, modified by the Michigan Department of Natural Resources, Forest Management Division, and the City of Ann Arbor.

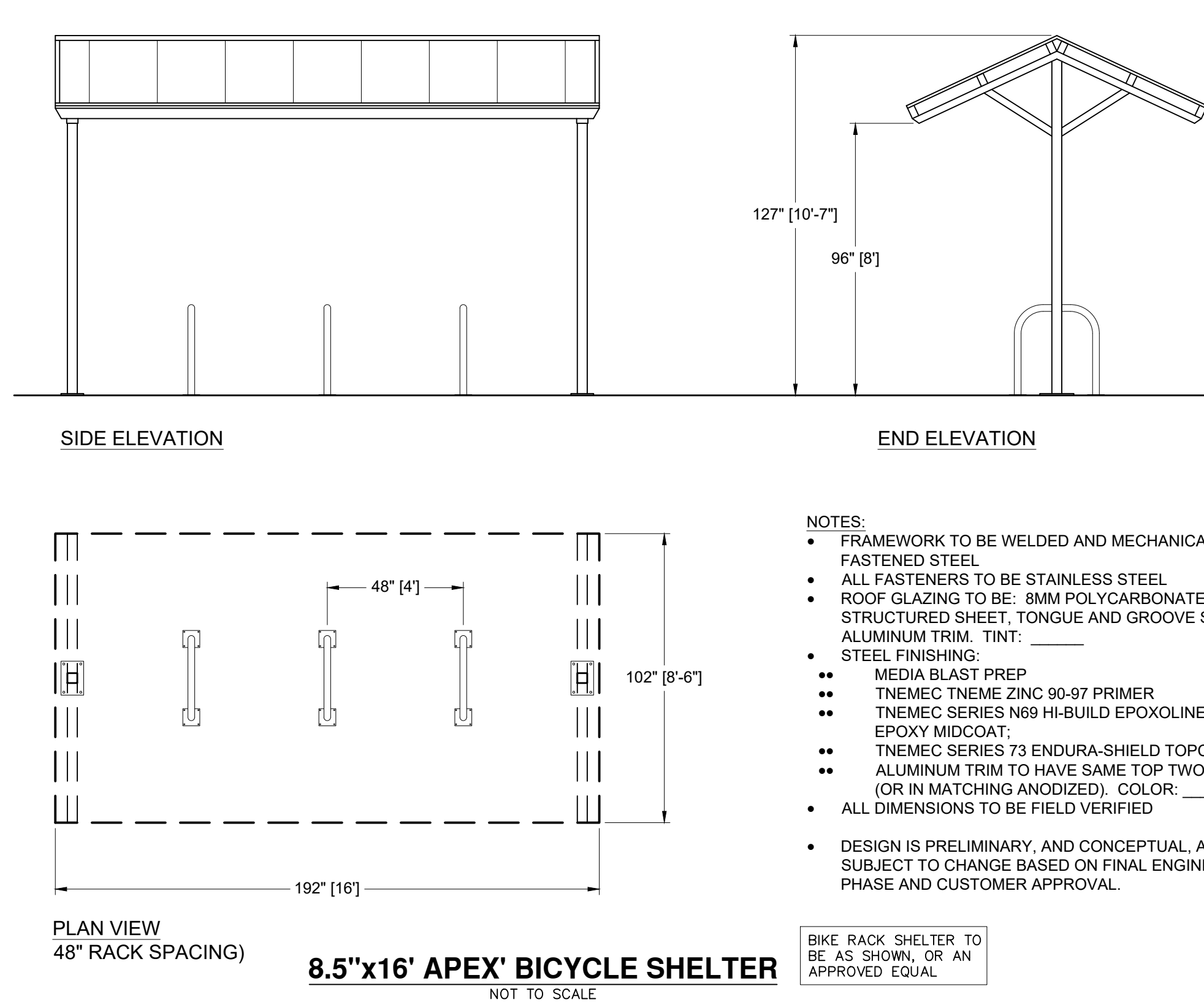


REVISIONS				
REV. NO.	DR. BY	CH. BY	DATE	
08/27/2020				
09/28/2020				
10/22/2020				
12/07/20				
12/21/20				

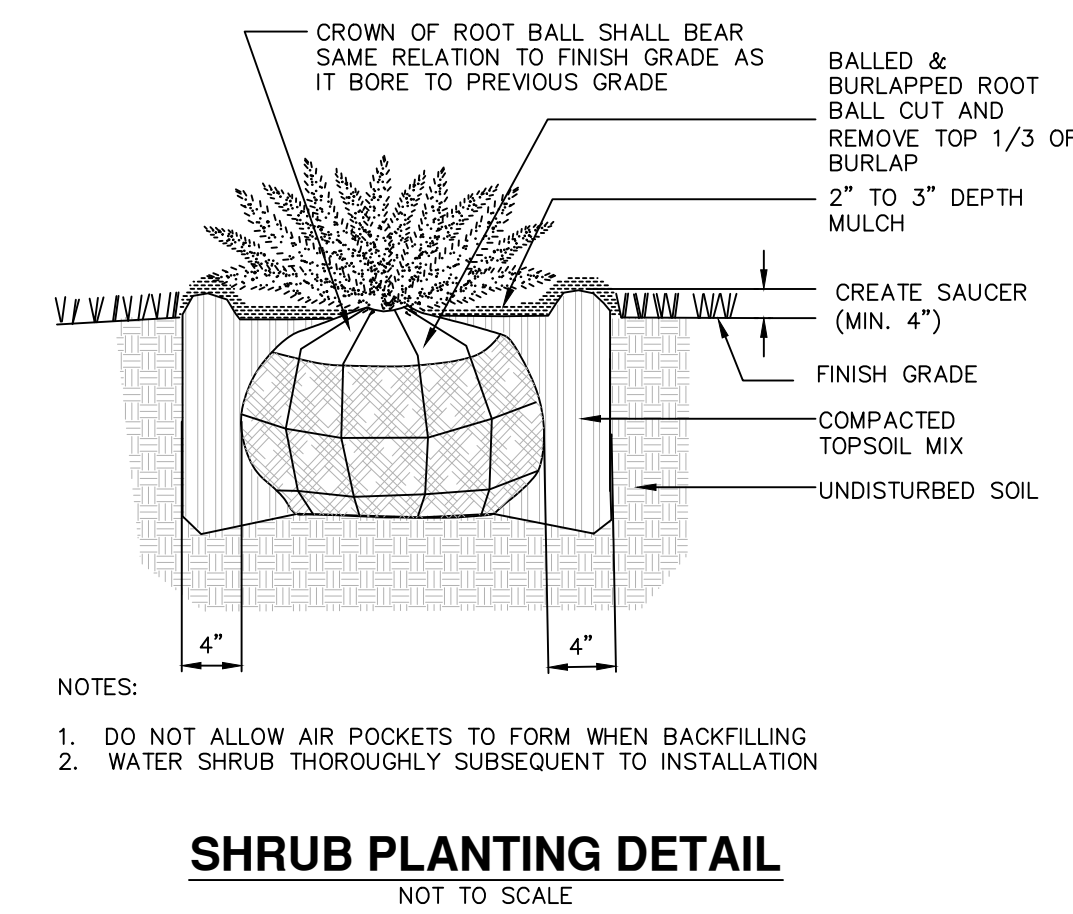
PUBLIC SERVICES DEPARTMENT
CITY OF ANN ARBOR

TREE PROTECTION

DR. BY	DF/SMJ	CH. BY	CSS	DRAWING NO.
SCALE	NONE	DATE	11-6-92	SD-M-1
INCH	0	1		SHEET NO. OF



8.5"x16' APEX BICYCLE SHELTER
NOT TO SCALE



SHRUB PLANTING DETAIL
NOT TO SCALE



BIKE RACK DETAIL
NOT TO SCALE



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Project Number	1051-19-9457	Date	08/26/2020
P.M.	CB	Checked by	CB
Client	AR BROUWER COMPANY	Drawn by	CB
Project	LEWIS JEWELERS	Crew/Book	KMW

Client: AR BROUWER COMPANY

Project: LEWIS JEWELERS

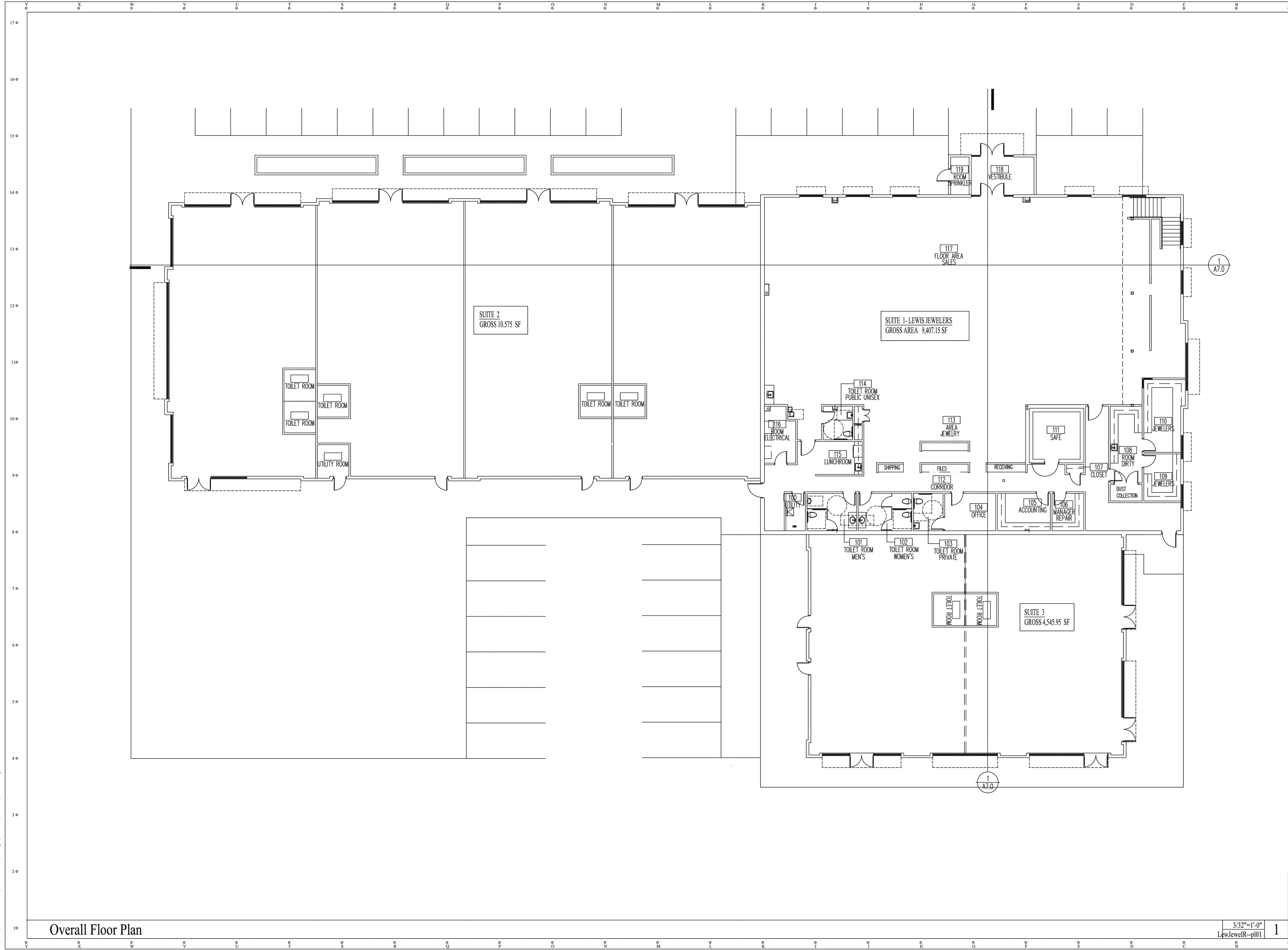
Site Address: 300 S. MAPLE ROAD ANN ARBOR, MICHIGAN 48103
County: WASHTENAW Community: ANN ARBOR
Township: 2S Range: 5E Section: 2S

Professional Name: CHRISTOPHER SUTTON, PE
Date: ---

Title: SITE PLAN
LANDSCAPE DETAILS

Drawing Scale: Sheet Number: 16

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Overall Floor Plan

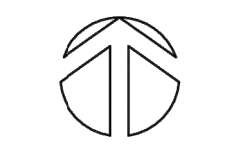
3/32"=1'-0"
LewJewelR-p101 1

METRO GROUP ARCHITECTS
P.O. Box 7363
Ann Arbor, Michigan 48107
Phone: (734) 747-8999

Lewis Jewelers
New Construction
300 South Maple
Ann Arbor, Michigan

12/21/20 Plan Comm. Response
9/28/20 Plan Review Response
8/27/20 Site Plan Sub. #1
8/20/20 Pre-Submission

Drawn: MMH Checked: RDK



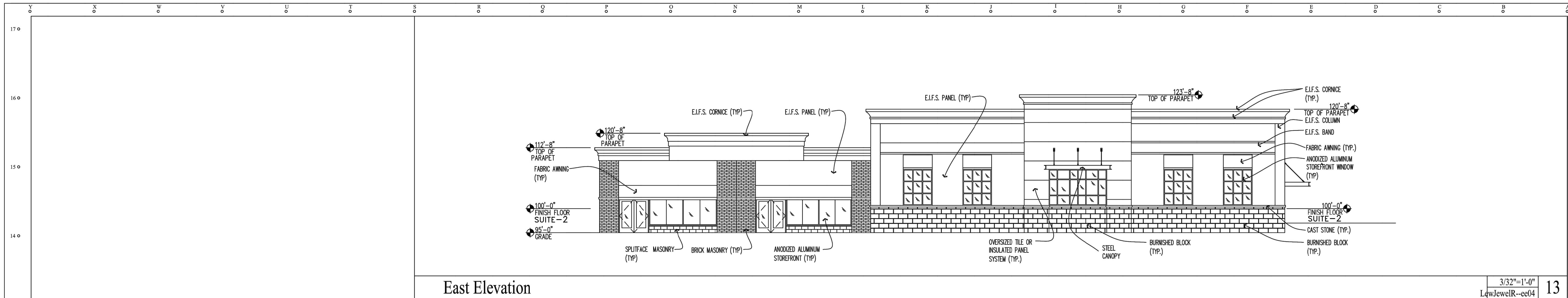
Reference North

200722

Overall Floor Plan

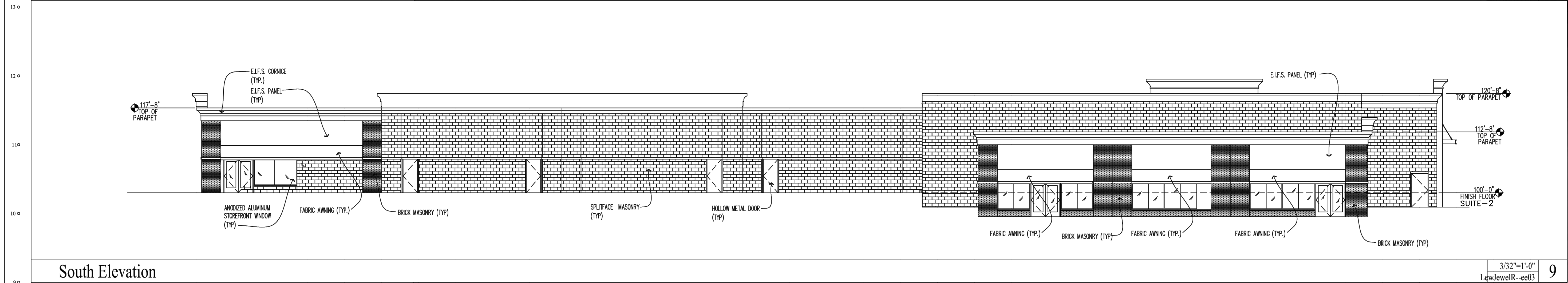
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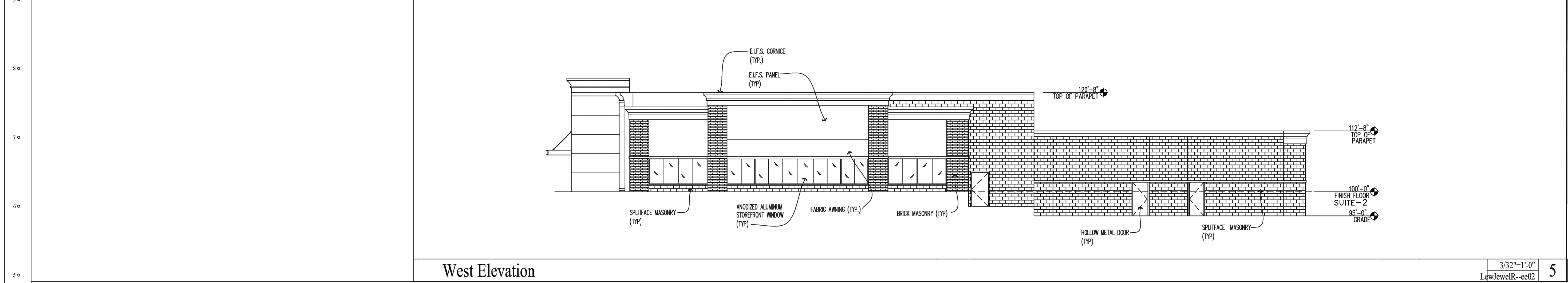
East Elevation

3/32"=1'-0" 13
LewJewelR--ee04



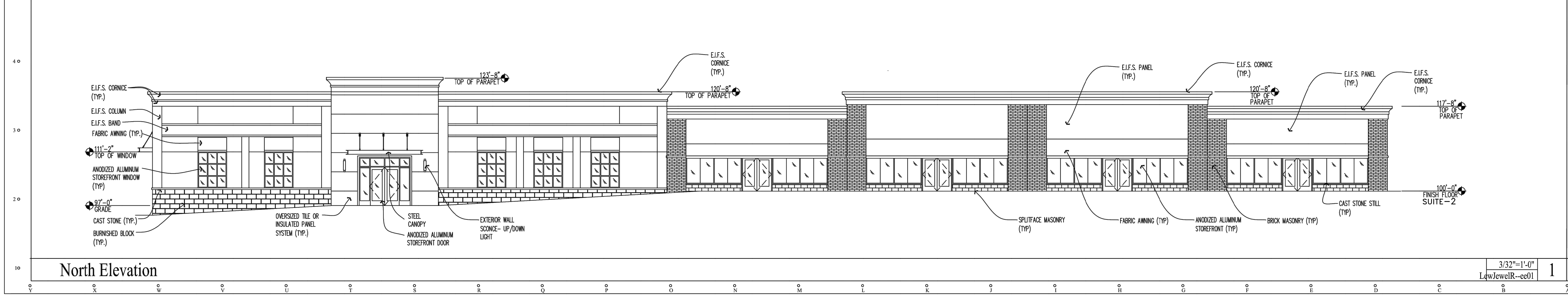
South Elevation

3/32"=1'-0" 9
LewJewelR--ee03



West Elevation

3/32"=1'-0" 5
LewJewelR--ee02



North Elevation

3/32"=1'-0" 1
LewJewelR--ee01

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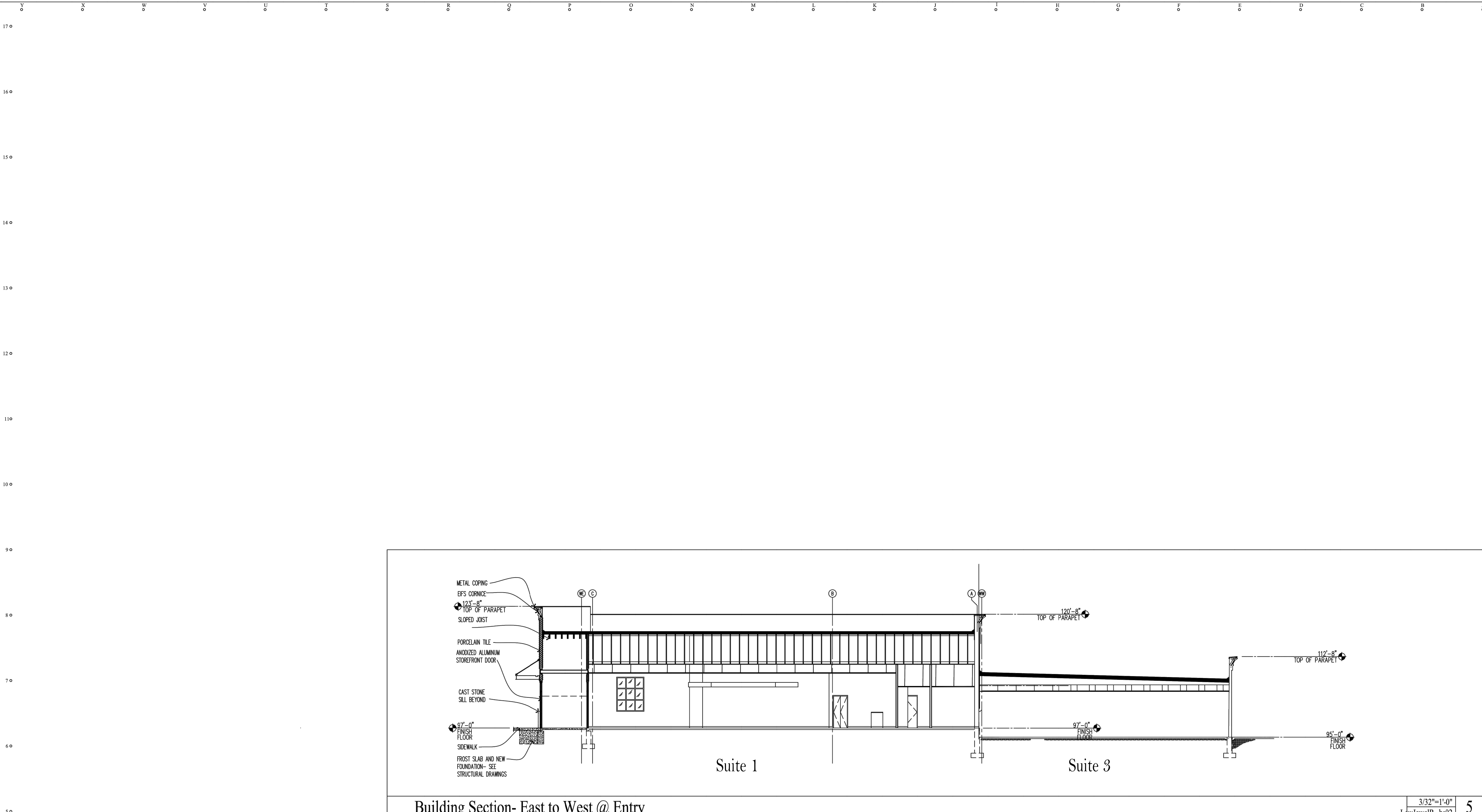
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New Construction
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8/27/20 Site Plan Sub #1
8/20/20 Pre-Submission
Drawn: MMH Checked: RDK

200722
Overall Exterior Elevations

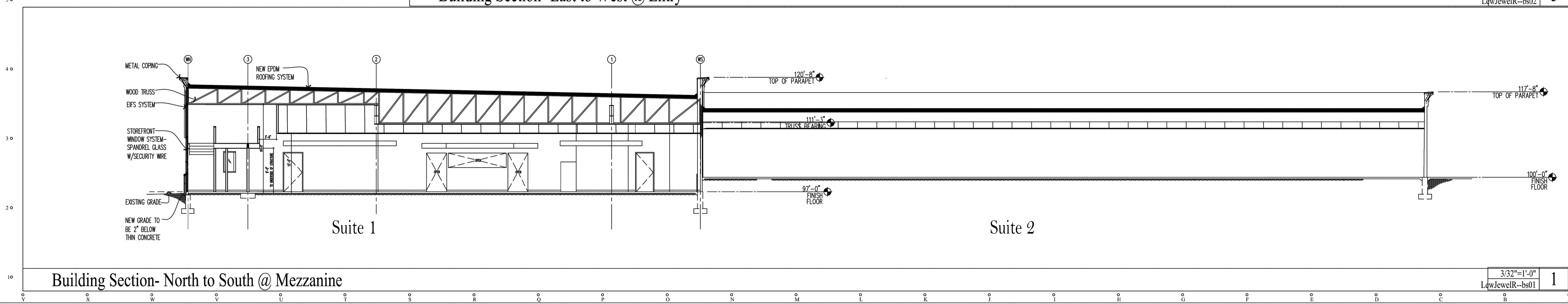
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Building Section- East to West @ Entry

3/32"=1'-0" 5
LqwJewelR-bs02



Building Section- North to South @ Mezzanine

3/32"=1'-0" 1
LqwJewelR-bs01

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200722

Overall Building Sections

A7.0



NORTH ELEVATION



WEST ELEVATION



SOUTH ELEVATION



EAST ELEVATION



SITE PLAN



OVERALL VIEW TO SOUTH WEST



OVERALL VIEW TO NORTH EAST



AREA PLAN

METRO GROUP ARCHITECTS

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Ann Arbor, Michigan 48107
Phone: (734) 747-8999

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New Construction

300 South Maple
Ann Arbor, Michigan

12/21/20 Plan Comm. Response

9/28/2020 Site Plan Sub #2

8/27/20 Site Plan Sub #1

Revisions

Drawn: MMH Check: RDK

200722

Site and
Building
Renderings

A8.0