

PLANNING AND DEVELOPMENT SERVICES STAFF REPORT

For Planning Commission Meeting of December 18, 2018

**SUBJECT: 830 Henry Street Site Plan for City Council Approval
Project No. SP18-040**

PROPOSED CITY PLANNING COMMISSION MOTION

The Ann Arbor City Planning Commission hereby recommends that the Mayor and City Council approve the 830 Henry Street Site Plan.

STAFF RECOMMENDATION

Staff recommends that the site plan petition be **approved** because the contemplated development would comply with all applicable state, local and federal law, ordinances, standards and regulations; the development would limit the disturbance of natural features to the minimum necessary to allow a reasonable use of the land; the development would not cause a public or private nuisance and would not have a detrimental effect on the public health, safety or welfare.

LOCATION

This site is located on the southwest intersection of Henry Street and S. Industrial Highway. It is in the South Area planning area and the Malletts Creek watershed. Ward 4.

DESCRIPTION OF PETITION

The petitioners seek approval to demolish three rental structures totaling approximately 5,975-square feet and construct a new three-story, 26,000-square foot eleven-unit apartment building built in one phase. Four lots are to be combined for a lot area of 25,235-square feet and are zoned R4C, Multiple-Family Residential. The eleven proposed units would each have six bedrooms and are intended to be student rentals.

The four lots currently have three driveways off Henry Street. The site plan proposes closing these curb cuts and utilizing one curb cut on the west side of the site off Henry Street. This drive leads to eighteen parking spaces located below grade. Class A and B bicycle parking spaces are also proposed below grade with 4 Class C spaces located at the South Industrial building entrance. Estimated cost of this development is \$5,500,000.

There is one 27-inch Black Walnut landmark tree located on the southeast corner of the site that is to be removed. The petitioner proposes planting more mitigation trees than is required by code, which are planted throughout the site.

A 15-foot wide conflicting land use buffer (CLUB) is required along the south side and the western rear of the property as this site is adjacent to residential uses.

The proposed site layout is more than 10,000 square feet and less than 15,000 square feet of impervious surface, which requires detention for a bankfull storm event. The proposed storm water plan includes a rain garden located in the southwest corner yard area to collect storm run-off along the west side of the side. Catch basins lead to two subgrade open-bottom tanks located along the north property line that infiltrate into the soil. Infiltration takes place for both the underground system and the rain garden.

CITIZEN PARTICIPATION

The petitioner notified property owners and persons within 500 feet of the site by mail that a site plan petition was submitted. Staff received a call regarding concern with possible on-street parking due to this development and directed the neighbor to inquire about the neighborhood residential parking program.

SURROUNDING LAND USES AND ZONING

	LAND USE	ZONING
NORTH	Parks & Vacant	PL (Public Land)
EAST	Parks and Medical Office	PL & O (Office)
SOUTH	Residential Multiple-Family	R3 (Townhouse District)
WEST	Residential Single & Multiple- Family	R4C (Multiple Family District)

COMPARISION CHART

		EXISTING	PROPOSED	REQUIRED/PERMITTED
Zoning		R4C Multiple Family	R4C Multiple Family	R4C Multiple Family
Gross Lot Area		25,235 sq ft*	25,235 sq ft*	8,500 sq ft
Minimum Lot Width		143 ft	143 ft	60 ft
Minimum Open Space		NA	43%	40%
Active Open Space		NA	986 sq ft/dwelling unit	300 sq ft/dwelling unit
Setbacks	Henry St	22-25 ft	20.3 ft **	25 ft**
	S. Industrial	Vacant	23.5 ft**	25 ft**
	Side	NA	21 ft***	12 ft***
	Rear	NA	30 ft	30 ft
Building Height		2-stories	29.7 ft	30 ft MAX
Vehicle Parking		1 space/dwelling	18 spaces	17 spaces MIN
Bicycle Parking		NA	6- Class A 10- Class B 4- Class C	2 Class A MIN 1 Class B MIN

*Combined Lots

**Averaged front setback

***Additional side setback required for building length over 50 ft.

HISTORY AND PLANNING BACKGROUND

The three homes to be removed are currently rental units and were all built in the 1920's. The Master Plan: Land Use Element recommends multiple-family uses for these sites.

SERVICE UNIT COMMENTS

Engineering – As the project proposes a new domestic and fire service connection, the applicant must submit a backflow prevention and metering arrangement drawing for the City to review and approve prior to the start of construction. Approval of site or construction plans by the City does not relieve the applicant of complying with City standards on backflow prevention and metering. It is the responsibility of the applicant to submit appropriate plans to the City for review when available, and no later than the start of construction.

Parks - Parks requests a \$6,875 contribution based on 11 dwelling units to be used on any of the following parks: Rose, White or Frisinger.

Planning - The proposed structure meets the minimum required front, side and rear setbacks of the R4C zoning district, and meets the rear and southern side setback requirements with 15-foot wide conflicting land use buffers (CLUB). Before issuance of permits, the four lots are to be combined.

Staff supports redevelopment of this site as multiple-family residential. The proposed re-development of this site will result in residential uses consistent with the neighborhood. On-street parking exists along Henry Street and bus stops are nearby on E. Stadium Blvd.

Prepared by Chris Cheng
Reviewed by Brett Lenart
12/12/18

Attachments: [Parcel and Zoning Map](#)
[Aerial Photo](#)
[Site Plan/Landscape Plan/Floor Plan/Elevations](#)
[Public Notification](#)
[830 Henry Draft Development Agreement](#)
[Criteria for Residential Parking](#)

c: Petitioner: Prentice Partners Ann Arbor, LLC (Heidi Mitchell)
PO Box 70
Port Costa, CA

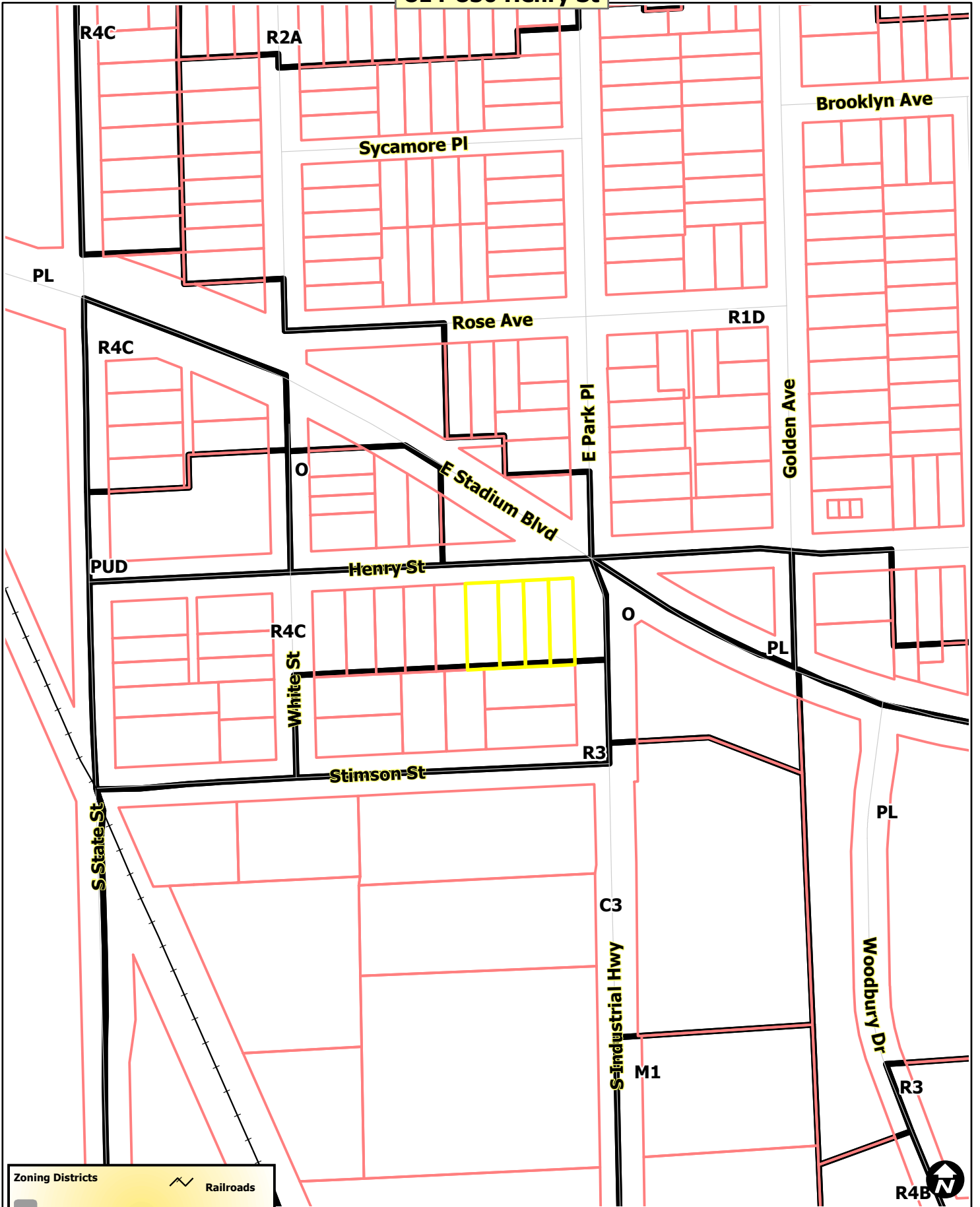
Petitioner's Agents: Matt Bush, PE
Atwell, LLC
311 N. Main St.

Ann Arbor, MI 48104

Robb Burroughs
OX Studios Inc.
302 S. State St.
Ann Arbor, MI 48104

Project No. SP18-040

814-830 Henry St



Zoning Districts	Railroads
Township Islands	Huron River
City Zoning Districts	Tax Parcels



Map date: 8/20/2018
 Any aerial imagery is circa 2018 unless otherwise noted
 Terms of use: www.a2gov.org/terms

814-830 Henry St



-  Railroads
-  Huron River
-  Tax Parcels

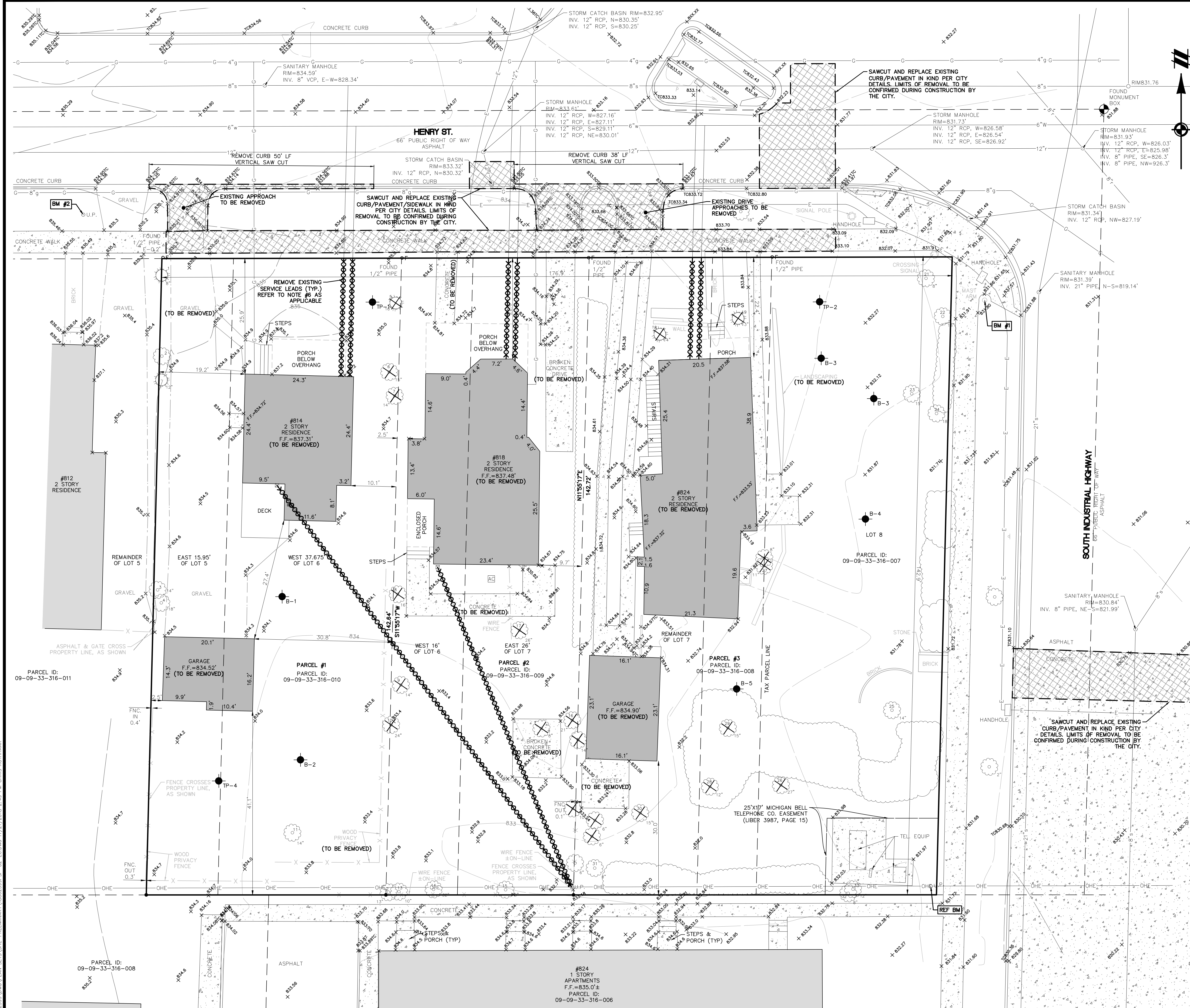


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814-830 Henry St



Map date: 8/20/2018
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LEGEND	
	SET 1/2" REBAR WITH CAP P.S. 32341
	FOUND MONUMENT (AS NOTED)
	RECORD AND MEASURED DIMENSION
	RECORD DIMENSION
	MEASURED DIMENSION
	ELECTRIC METER
	UTILITY POLE
	SANITARY MANHOLE
	SQUARE CATCH BASIN
	STORM DRAIN MANHOLE
	AIR CONDITIONING UNIT
	LIGHTPOST/LAMP POST
	SINGLE POST SIGN
	DECIDUOUS TREE (AS NOTED)
	CONIFEROUS TREE (AS NOTED)
	PARCEL BOUNDARY LINE
	PLATTED LOT LINE
	ADJOINER PARCEL LINE
	EASEMENT (AS NOTED)
	EASEMENT CENTERLINE
	BUILDING
	BUILDING OVERHANG
	CONCRETE CURB
	EDGE OF CONCRETE (CONC.)
	EDGE OF ASPHALT (ASPH.)
	EDGE OF BRICK
	EDGE OF GRAVEL
	FENCE (AS NOTED)
	OVERHEAD UTILITY LINE
	GAS LINE
	SANITARY LINE
	STORM LINE
	WATER LINE
	MINOR CONTOUR LINE
	MAJOR CONTOUR LINE
	BUILDING HATCH
	CONCRETE HATCH
	PROPOSED DEMOLITION
	SOIL BORING
	INFILTRATION TEST PIT LOCATION

- ### DEMOLITION NOTES
1. ALL ON-SITE WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT SPECIFICATIONS AND STANDARD DETAILS OF THE CITY OF ANN ARBOR, UNLESS OTHERWISE SPECIFIED. A SEPARATE CITY PERMIT WILL BE REQUIRED FOR ANY DEMOLITION ACTIVITIES.
 2. THE CONTRACTOR SHALL DEMOLISH OR RELOCATE ANY SITE FEATURES AS APPROPRIATE TO FACILITATE THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS.
 3. ALL DEMOLITION MATERIALS SHALL BE PROPERLY REMOVED FROM THE SITE AND DISPOSED OF IN A LEGALLY DESIGNATED DISPOSAL AREA.
 4. THE CONTRACTOR SHALL OBTAIN THE NECESSARY PERMITS AND NOTIFY ALL AFFECTED UTILITY COMPANIES PRIOR TO THE DEMOLITION OF ANY EXISTING STRUCTURES.
 5. THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE. PRIOR TO THE START OF ANY DEMOLITION OR CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES AND FIELD LOCATE EXISTING UTILITIES.
 6. ALL EXISTING SERVICE LEADS TO THE EXISTING BUILDINGS SHALL BE REMOVED AND DEACTIVATED AT THE RESPECTIVE MAIN, OR AS DIRECTED BY THE CITY OF ANN ARBOR. THE APPROXIMATE LOCATIONS OF THESE SERVICE LEADS ARE SHOWN ON THIS PLAN.
 7. PUBLIC STREET REMOVAL LIMITS WILL BE TO LANE LINES AND PERPENDICULAR TO THE RIGHT-OF-WAY. FINAL DETERMINATION WILL BE MADE BY THE ENGINEERING INSPECTOR.
 8. ALL DEBRIS SHALL BE HAULED AWAY FROM THE SITE AND DISPOSED OF AT AN APPROVED LOCATION.

- ### GENERAL NOTES:
1. EXISTING INFORMATION AND LEGAL DESCRIPTION SHOWN IN THESE PLANS IS PER A BOUNDARY AND TOPOGRAPHIC SURVEY PROVIDED BY KEM-TEC & ASSOCIATES, JOB NO. 18-02048, DATED 6/25/2018. THIS SURVEY HAS BEEN PROVIDED TO ATWELL FOR USE BY THE OWNER.
 2. SOIL TYPES REFERENCED IN THESE PLANS PER SOIL SURVEY STAFF, NATURAL RESOURCES CONSERVATION SERVICE, UNITED STATES DEPARTMENT OF AGRICULTURE, WASHENAW COUNTY WEB SOIL SURVEY, AVAILABLE ONLINE AT [HTTP://WEBSOILSURVEY.NRC.S.USA.GOV/](http://websoilsurvey.nrcs.usda.gov/).
 3. REFER TO GEOTECHNICAL INVESTIGATION REPORT PROVIDED BY G2 CONSULTING GROUP, JOB # 1833451, DATED 8/13/18 AND THE INFILTRATION EVALUATION REPORT PROVIDED BY G2 CONSULTING GROUP JOB # 1833451, DATED 11/12/18. SOIL BORING AND TEST PIT LOCATIONS SHOWN IN THESE PLANS REFER TO THE ABOVE REFERENCED REPORTS.
 4. TREE SURVEY INFORMATION IS PROVIDED BY OTHERS (CERTIFIED ARBORIST #M-3758A) WITH THE DATE OF THE TREE SURVEY PROVIDED ON 7/19/18. SURVEY TREE LOCATIONS ARE PROVIDED BY KEM-TEC & ASSOCIATES.

SOIL TYPES

MATHERTON SANDY LOAM, 0 TO 4% SLOPES (Msa)

BENCHMARK INFORMATION:

REFERENCE BENCHMARK
NAIL ON EASTERLY FACE OF UTILITY POLE AT THE SOUTHWEST CORNER OF LOT 8 ON THE WEST SIDE OF INDUSTRIAL HIGHWAY.
ELEVATION = 833.32' (NAVD 88 DATUM).

SITE BENCHMARK #1
TOP OF WESTERLY BOLT ON THE BASE OF MAST ARM POLE AT THE SOUTHWEST CORNER OF THE INTERSECTION OF HENRY STREET AND INDUSTRIAL HIGHWAY.
ELEVATION = 833.09' (NAVD 88 DATUM).

SITE BENCHMARK #2
SET NAIL ON SOUTHWEST FACE OF UTILITY POLE, AT THE NORTHWEST CORNER OF PARCEL #1, ON THE SOUTH SIDE OF HENRY STREET IN FRONT OF 812 HENRY STREET.
ELEVATION = 836.34' (NAVD 88 DATUM).

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 BY THE OWNER OR ITS REPRESENTATIVE. 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 OCCURRED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

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

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ANN ARBOR, MI 48104
734.994.4000

SECTION 33	TOWN 2 SOUTH, RANGE 6 EAST	CITY OF ANN ARBOR	WASHENAW COUNTY, MICHIGAN
OX STUDIO	HENRY STREET RESIDENTIAL PRELIMINARY SITE PLAN	EXISTING CONDITIONS AND DEMOLITION PLAN	
CLIENT	DATE		
AUGUST 23, 2018			
10/17/18: CITY REVIEW			
11/20/18: CITY REVIEW			
REVISIONS			
<p>SCALE: 1" = 10 FEET</p>			
DR. STK	CH. ---		
P.M. MB			
BOOK ---			
JOB 18002399			
SHEET NO.	02		

CAD FILE: 18002399SP-02-EC.DWG

LEGEND	
	BOUNDARY LINE
	EXIST. EASEMENT
	SECTION LINE
	BOUNDARY/PROPERTY LINE
	EXIST. SETBACK
	EXIST. TREE LINE
	EXIST. CURB AND GUTTER
	EXIST. FENCE
	EXIST. GRAVEL
	EXIST. BUILDING
	EXIST. WETLAND BUFFER
	PROP. SETBACK
	PROP. BUILDING
	PROP. BUILDING INTERIOR
	PROP. WALL
	PROP. PARKING STRIPE
	PROP. BACK OF CURB
	EXIST. CONC. WALK
	PROP. CONC. WALK
	PROP. PERVIOUS CONC. WALK
	PROP. CONC. DRIVE

GENERAL LAYOUT NOTES:

- RADIi DIMENSIONS MEASURED FROM THE BACK OF CURB UNLESS OTHERWISE NOTED.
- THE PROPOSED PARKING AREA IS ENCLOSED (COVERED). THIS PARKING AREA DOES NOT QUALIFY AS A PROPOSED VEHICULAR USE AREA UNDER CITY OF ANN ARBOR CODE OF ORDINANCES 5:601 AND NOT SUBJECT TO VEHICULAR USE AREA LANDSCAPING AND SCREENING REQUIREMENTS PER 5:602. PER 5:602 (2) V.U.A. IS LESS THAN 3,300 SQFT SO NO LANDSCAPE ISLANDS ARE REQUIRED. BIO-RETENTION IS NOT REQUIRED.
- APPROXIMATE LIMITS OF PAVEMENT REMOVAL HAVE BEEN SHOWN. LIMITS OF PAVEMENT REMOVALS WILL BE DETERMINED DURING CONSTRUCTION BY CITY ENGINEERING.
- BASEMENT WALL AND FOOTING LOCATIONS SHOWN AS APPROXIMATE PER THE ARCHITECT. THESE ITEMS MAY BE SUBJECT TO CHANGE BASED ON ADDITIONAL STRUCTURAL ANALYSIS AND DESIGN.
- USEABLE OPEN SPACE AS SHOWN IS 10,800 SQUARE FEET (43%). THIS OPEN SPACE INCLUDES USABLE ONSITE PERIMETER PATHWAYS (POROUS CONCRETE) AND SETBACKS.
- SIGHT DISTANCE TRIANGLES SHOWN FOR A 3.5' EYE HEIGHT IN ACCORDANCE WITH MDOT TRAFFIC AND SAFETY STANDARDS, FEBRUARY 6, 2008 (2004 AASHTO, EXHIBITS 9-55, 661).
 - SIGHT DISTANCE A: 335' SIGHT DISTANCE TO CL NEAREST NB LANE (SPEED LIMIT 25 MPH; DESIGN SPEED 30 MPH)
 - SIGHT DISTANCE B: 335' SIGHT DISTANCE TO CL NEAREST SB LANE (SPEED LIMIT 25 MPH; DESIGN SPEED 30 MPH). SHOWN BUT NOT NECESSARY FOR TRAFFIC ANTICIPATION, AS HENRY STREET IS AN EAST TO WEST ONE-WAY ROAD.

SIDEWALK REPAIR AND MAINTENANCE NOTES:

- ALL SIDEWALKS AREA TO 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.
- ALL SIDEWALKS CONSTRUCTED IN THE PUBLIC RIGHT-OF-WAY AND/OR PUBLIC PATHS SHALL MEET ALL REQUIREMENTS AND GUIDELINES AS SET FORTH IN THE ADA STANDARDS FOR ACCESSIBLE DESIGN.

BUILDING SETBACKS:

- FRONT SETBACK (HENRY ST.): 20'-3" (AVERAGE EXISTING PER 5:57)*
- FRONT SETBACK (INDUSTRIAL HWY.): 23'-5" (AVERAGE EXISTING PER 5:57)*
- SIDE YARD SETBACK: 21'-0" (BUILDING LENGTH CALC PER 5:34)*

* REFER TO ARCHITECTURAL DRAWINGS FOR DETAILS ON SETBACK CALCULATIONS

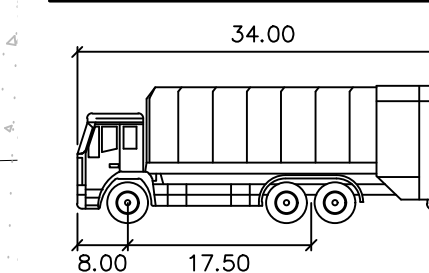
SOLID WASTE NOTES:

- SOLID WASTE GENERATION CALCULATIONS PER GUIDELINES FOR ESTIMATING SOLID WASTED GENERATION BASED ON DATA FROM NATION WIDE AVERAGES WITH VARYING WEIGHTS PER CUBIC YARD.
- FOR PURPOSES OF THIS SITE PLAN, IT IS ASSUMED THAT THE PROPOSED DUMPSTER WILL BE EMPTIED ONE TIME A WEEK.
- THE PROPOSED INTERNAL TENANTS TRASH COLLECTION WILL BE SHARED FOR THE PROPOSED PROJECT.
- GATE PINS ARE TO BE ADDED FOR THE OPEN AND CLOSED GATE POSITIONS.
- DUE TO SITE CONSTRAINTS, THE MAXIMUM SWING OPENING HAS BEEN MODIFIED ON THE WEST GATE TO BE 100 DEGREES AS SHOWN. FUNCTIONALITY OF THE DUMPSTER WILL STILL BE MAINTAINED.
- THE CONCRETE SLAB IN FRONT OF THE BIN ENCLOSURE WILL HAVE PAVEMENT MARKINGS TO INDICATE 'NO PARKING', AS APPROVED BY THE CITY.
- REFER TO SOLID WASTE DETAILS ON SHEET 11 FOR THE REQUIRED BOLLARDS IN THE ENCLOSURE AREA.

SOLID WASTE GENERATION CALCULATIONS:

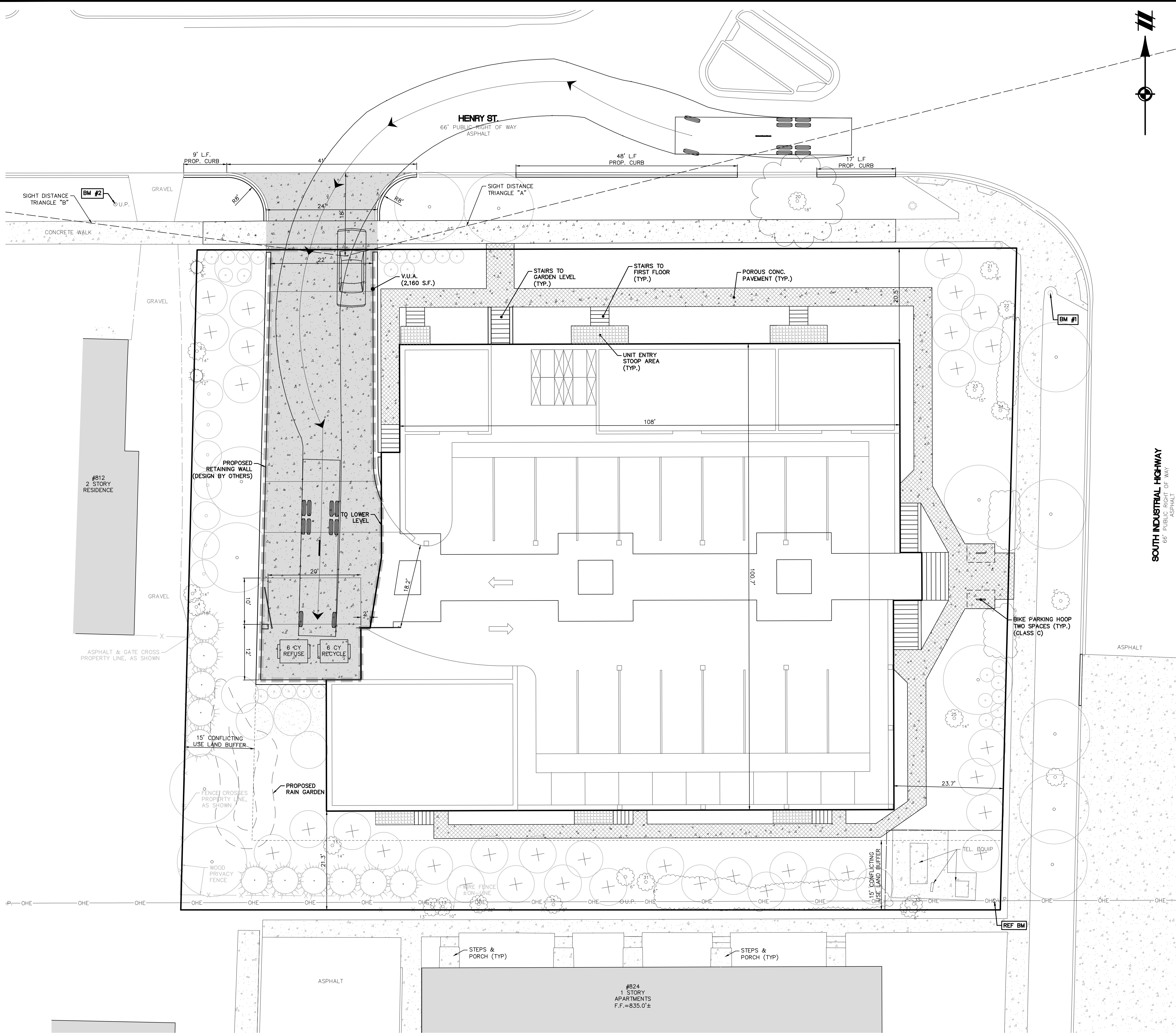
PROPOSED NUMBER OF UNITS (APARTMENTS):	11 UNITS
TRASH GENERATION RATE (APARTMENTS):	1.5 CU. YDS.
REQUIRED STORAGE (PER MONTH):	16.5 CU. YDS.
NUMBER OF ANTICIPATED PICKUPS (PER WEEK):	1.0 PICKUP
REQUIRED STORAGE (PER WEEK):	4.1 CU. YDS.
PROPOSED STORAGE:	6 CU. YDS.

WASTE TRUCK TEMPLATE DETAIL:

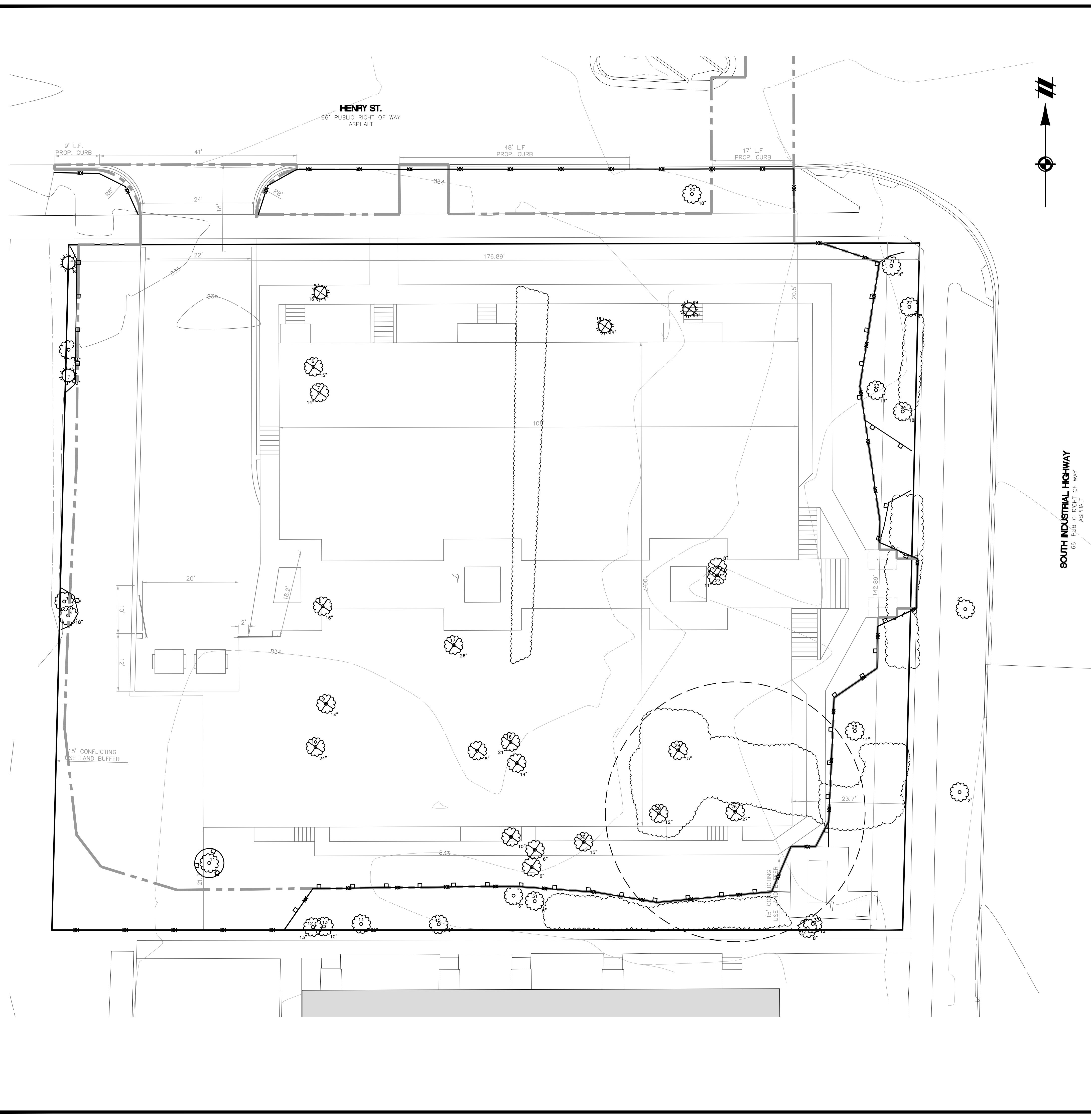


SOLID WASTE	feet
Width	: 8.50
Track	: 8.20
Lock to Lock Time	: 6.0
Steering Angle	: 40.0

PER CITY OF ANN ARBOR SOLID WASTE STANDARD DETAILS



K:\18002399\DWG\PLAN_SETS\SITE-PRELIMINARY\18002399SP-03-LDWG 11/21/2018 2:49 PM CHRIS ROTHHAAR



LEGEND

	BOUNDARY LINE
	EXIST. TREE LINE
	EXIST. CURB AND GUTTER
	EXIST. FENCE
	EXIST. GRAVEL
	EXIST. BUILDING
	EXIST. SIGN
	EXIST. TREE
	EXIST. LANDMARK TREE
	EXIST. OVERHEAD ELEC. LINE
	EXIST. GAS
	EXIST. CONTOUR
	PROP. TREE PROTECTION FENCE
	PROP. SILT FENCE
	PROP. LIMITS OF DISTURBANCE

- NATURAL FEATURES NOTES:**
1. THERE IS NO ENDANGERED SPECIES HABITAT.
 2. THERE IS NO NEAR-BY 100 YEAR FLOODPLAIN, PER FEMA MAP PANEL 2616100263E.
 3. THERE ARE FIVE LANDMARK TREES ON OR NEAR THE SITE. ONE OF THE LANDMARK TREES IS BEING REMOVED AND WILL BE REPLACED PER CITY OF ANN ARBOR STANDARDS.
 4. THERE ARE NO STEEP SLOPES ON-SITE. EXISTING CONTOURS ARE SHOWN ON SHEET 02.
 5. THERE ARE NO WATERCOURSES ON OR NEAR THE SITE.
 6. THERE ARE NO WETLANDS ON OR NEAR THE SITE.
 7. THERE ARE NO WOODLANDS ON OR NEAR THE SITE.

TREE INVENTORY:

Certified Arborist: #MI-3758A Date: 7-19-18

Tree ID	Genus/Species	Common Name	DBH	Invasive	Landmark	To be Removed	Notes
1	Pinus Sylvestris	Scot's Pine	8"	No	No	No	
2	Acer Platanoides	Norway Maple	14"	Yes	No	No	
3	Acer Platanoides	Norway Maple	14"	Yes	No	No	
4	Pinus Sylvestris	Scot's Pine	18"	No	No	No	
5	Pinus Sylvestris	Scot's Pine	16"	No	No	Yes	TBM
6	Juglans Nigra	Black Walnut	15"	No	No	Yes	TBM
7	Juglans Nigra	Black Walnut	14"	No	No	Yes	TBM
8	Acer Platanoides	Norway Maple	16"	Yes	No	Yes	
9	Acer Platanoides	Norway Maple	14"	Yes	No	Yes	
10	Morus Nigra	Mulberry	24"	No	No	Yes	TBM
11	Acer Platanoides	Norway Maple	14"	Yes	No	No	
12	Alianthus Altissima	Tree Of Heaven	13"	Yes	No	No	
13	Acer Platanoides	Norway Maple	10"	Yes	No	No	
14	Tilia Americana	American Linden aka Basswood	32"	No	No	No	
15	Alianthus Altissima	Tree Of Heaven	8"	Yes	No	No	
16	Alianthus Altissima	Tree Of Heaven	21"	Yes	No	Yes	
17	Morus Nigra	Mulberry	26"	No	No	Yes	TBM
18	Picea Pungens	Colorado Spruce	14"	No	No	Yes	TBM
19	Picea Pungens	Colorado Spruce	13"	No	No	Yes	TBM
20	Acer Platanoides	Norway Maple	18"	Yes	No	No	
21	Acer Platanoides	Norway Maple	9"	Yes	No	No	
22	Gleditsia Triacanthos	Honey Locust	18"	No	No	No	
23	Acer Platanoides	Norway Maple	15"	Yes	No	No	
24	Gleditsia Triacanthos	Honey Locust	18"	No	No	No	
25	Ulmus Pumila	Siberian Elm	14"	Yes	No	No	
26	Juglans Nigra	Black Walnut	27"	No	Yes	Yes	TBM
27	Acer Platanoides	Norway Maple	11"	Yes	No	Yes	Almost Dead
28	Juglans Nigra	Black Walnut	12"	No	No	Yes	TBM
29	Acer Negundo	Boxelder	15"	No	No	Yes	
30	Juglans Nigra	Black Walnut	15"	No	No	Yes	TBM
31	Ulmus Pumila	Siberian Elm	6"	Yes	No	No	
32	Ulmus Pumila	Siberian Elm	8"	Yes	No	No	
33	Ulmus Pumila	Siberian Elm	12"	Yes	No	No	

TBM = To Be Mitigated

Know what's below. Call before you dig.

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SECTION 33

TOWN 2 SOUTH, RANGE 6 EAST

CITY OF ANN ARBOR

WASHTENAW COUNTY, MICHIGAN

CLIENT

OX STUDIO

HENRY STREET RESIDENTIAL PRELIMINARY SITE PLAN

NATURAL FEATURES & NATURAL FEATURES OVERLAY PLAN

DATE

AUGUST 23, 2018

10/17/18: CITY REVIEW

11/20/18: CITY REVIEW

REVISIONS

SCALE: 1" = 10 FEET

DR. STK CH. --

P.M. MB

BOOK --

JOB 18002399

SHEET NO. 04

K:\18002399\DWG\PLAN_SETS\SITE-PRELIMINARY\18002399P-05-NFO.DWG 11/27/2018 2:49 PM CHRIS.ROTHHAAR

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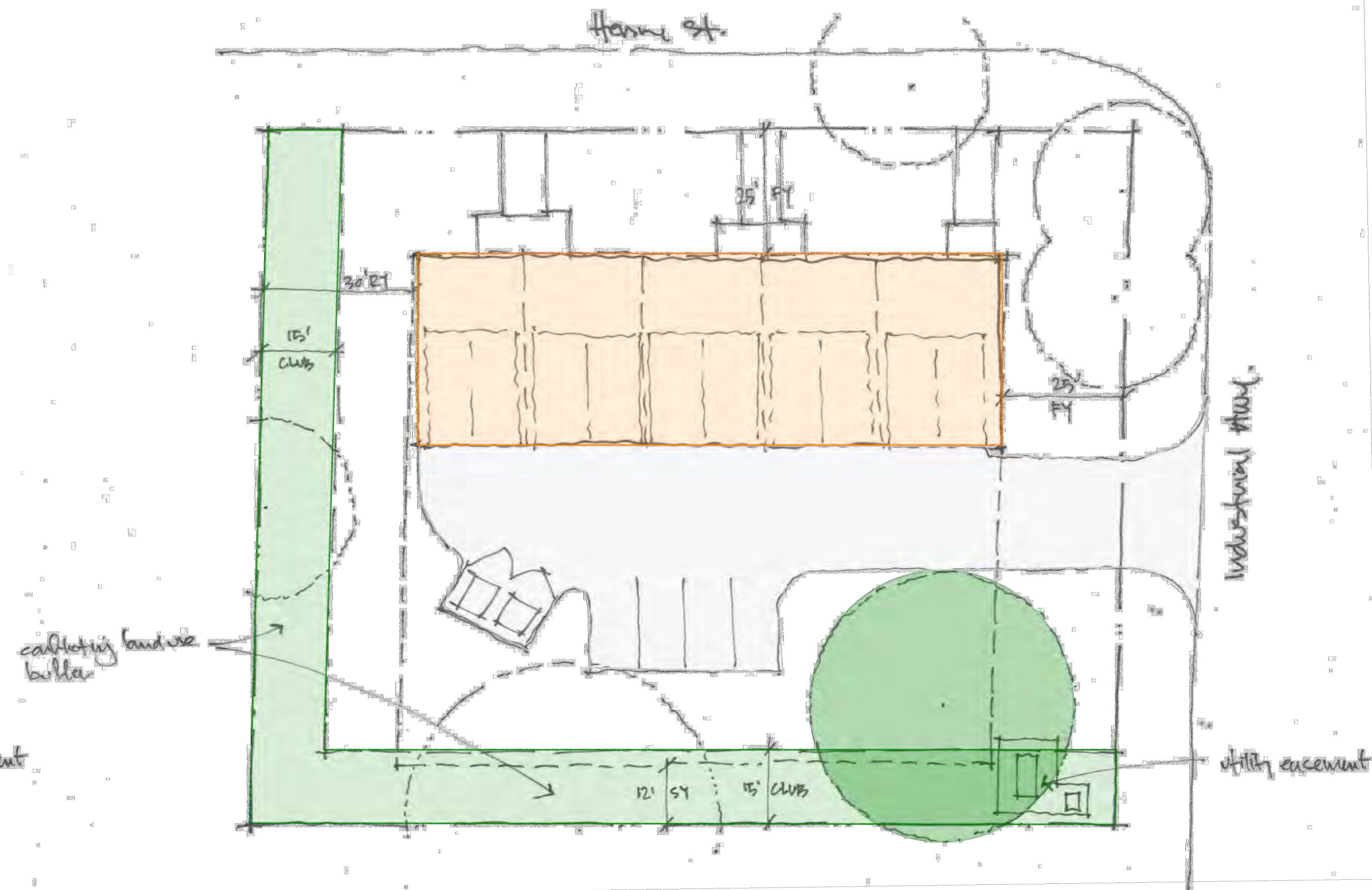
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ALTERNATE ANALYSIS SKETCH 1 (LANDMARK TREES):



ALTERNATE ANALYSIS SKETCH 2 (LANDMARK TREES):



ALTERNATE ANALYSIS SKETCH 3 (LANDMARK TREES):



ALTERNATE ANALYSIS STUDY 1:

- 5 UNITS TOTAL (6 UNITS EXISTING OVER COMBINED PARCELS) – NOTE THAT 11 UNITS ARE ALLOWED BY ORDINANCE
- 5TH UNIT (FRONTING INDUSTRIAL) ENCLOSES BUT DOES NOT ELIMINATE EXISTING LANDMARK TREE
- SEPARATION OF UNITS INCREASED DENSITY BUT RENDERS FULLY SEPARATED BUILDINGS
- SURFACE PARKING ONLY
- NO CONTINUITY OF URBAN EDGE CONDITION

ALTERNATE ANALYSIS STUDY 2:

- 5 UNITS TOTAL (6 UNITS EXISTING OVER COMBINED PARCELS) – NOTE THAT 11 UNITS ARE ALLOWED BY ORDINANCE
- ACCESS DRIVE IS OFF OF INDUSTRIAL – DIFFICULT ACCESS CONDITION AND LIMITED INGRESS/EGRESS CAPACITY
- PARKING FOR EACH UNIT IS UNDER BUILDING IN GARAGE TYPE STRUCTURE – NOT PREFERRED FOR CONSIDERATION OF RENTAL UNITS
- ADDITIONAL ONSITE PARKING SURFACE ONLY
- VEHICULAR DRIVE TAKES UP EXCESSIVE AMOUNT OF SITE AREA BASED UPON ACCESS NEEDS
- BUILDING ONLY FRONTS HENRY STREET – NO CONTINUITY OF URBAN EDGE CONDITION

ALTERNATE ANALYSIS STUDY 3:

- INCREASE IN DENSITY – TOTAL OF 11 UNITS NOW PROVIDED
- INCREASED DENSITY ALLOWS THE DEVELOP TO CONTAIN PARKING PARTIALLY BELOW GRADE IN A STRUCTURED ARRANGEMENT – PARKING IS NOW HIDDEN FROM THE STREET
- DRIVE IS DEFINED TO FURTHEST WESTERN BUILDING BOUNDARY, FOCUSING ATTENTION AND BUILDING AS CLOSE TO THE
- DEFINES AND ESTABLISHES AN URBAN EDGE CONDITION ALONG BOTH STREET FRONTAGES
- DEVELOPMENT OF A INTERIOR COMMONS, OR MEWS, BETWEEN BOTH UNIT CLUSTERS ALLOWS FOR SHARED COMMUNAL SPACE
- PERIMETER OF BUILDING IS SURROUNDED BY BUILDING ACCESS POINTS AND COMMON STAIRS TO PROMOTE INTERCONNECTED WALKS AND PEDESTRIAN INTERACTION ON SITE
- LOWER LEVEL HAS THE CAPACITY TO CONTAIN DEDICATED RESIDENT FUNCTION AREAS SUCH AS FITNESS AND FLEX SPACE

SECTION 33

TOWN 2 SOUTH, RANGE 6 EAST
CITY OF ANN ARBOR
WASHTENAW COUNTY, MICHIGAN

OX STUDIO
HENRY STREET RESIDENTIAL
PRELIMINARY SITE PLAN
NATURAL FEATURES
ALTERNATIVE ANALYSIS PLANS

CLIENT

DATE
AUGUST 23, 2018

10/17/18: CITY REVIEW
11/20/18: CITY REVIEW

REVISIONS

NA	NA	NA
N/A		

DR. STK CH. --

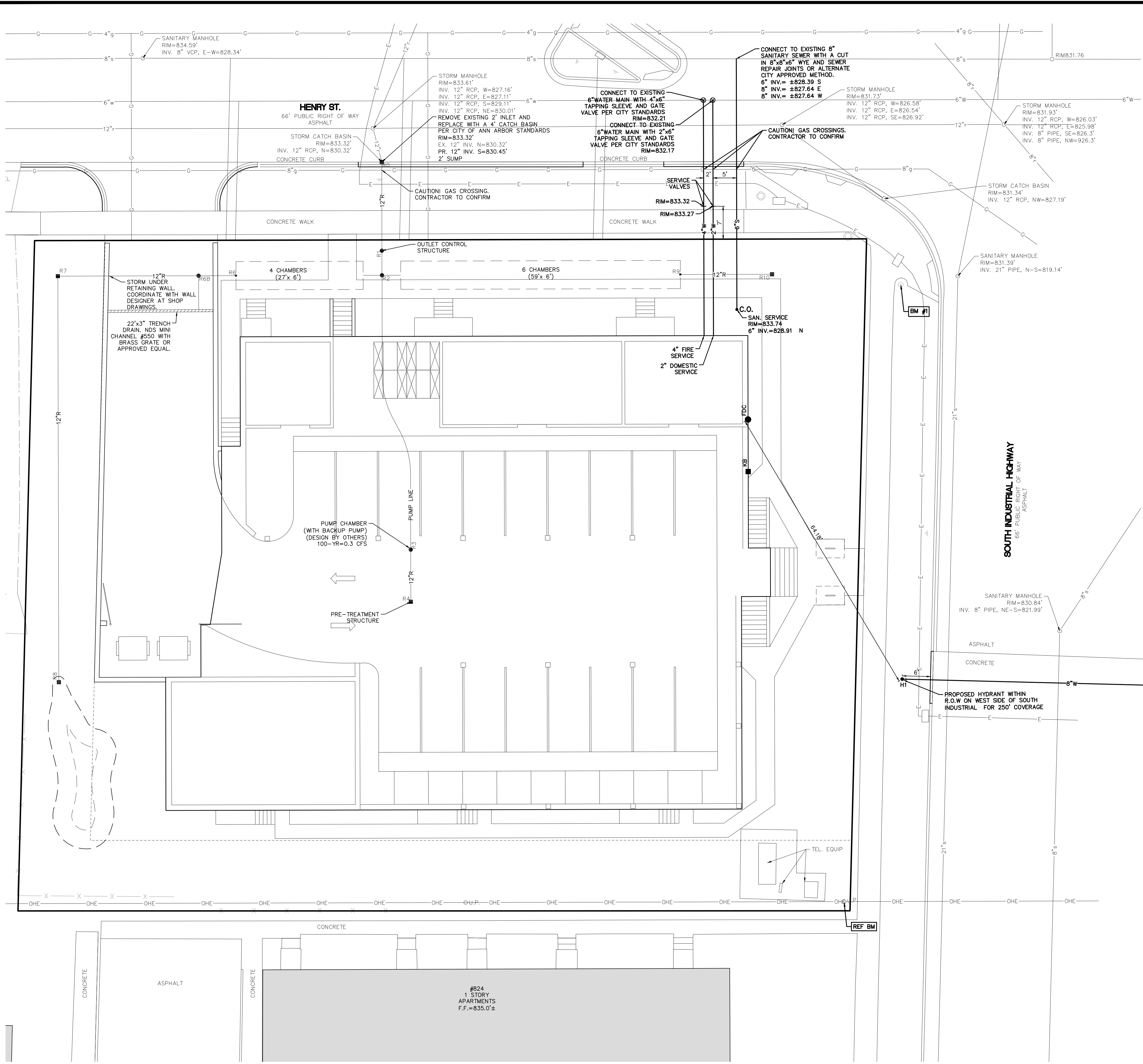
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BOOK --

JOB 18002399

SHEET NO.

04B



- ### UTILITY NOTES:
- PROPOSED UTILITIES ARE TO MEET THE REQUIREMENTS OF THE CITY OF ANN ARBOR.
 - UTILITY TRENCHES SHALL BE IN ACCORDANCE WITH CITY OF ANN ARBOR DIV X STANDARD DETAILS.
 - WATER LEADS SHALL CONTAIN 5.5' OF FINAL GRADE COVER (5'-6.5' ALLOWABLE TOLERANCE).
 - A MINIMUM HORIZONTAL CLEARANCE OF 10' FOR SANITARY & STORM SEWERS AND 5' FOR ALL OTHER UTILITIES SHALL BE MAINTAINED.
 - A MINIMUM VERTICAL CLEARANCE OF 18" FOR SEWERS AND 12" FOR ALL OTHER UTILITIES. WATER MAIN BELL SHALL NOT BE LOCATED AT POINT OF CROSSING.
 - MINIMUM COVER FOR SEWER LEADS IS 4 FEET.
 - DOWNSPOUTS, WEEPTILE, FOOTING DRAINS, SUMP PUMP DISCHARGES, OR ANY OTHER CONDUIT THAT CARRIES STORM OR GROUND WATER SHALL NOT BE ALLOWED TO DISCHARGE INTO SANITARY SEWER SERVICE LEADS OR LATERAL SEWER.
 - IF FOOTING DRAINS ARE CONNECTED TO THE SANITARY SEWER SYSTEM, THEY MUST BE REMOVED AS A CONDITION OF SITE PLAN APPROVAL.
 - THE WATER SERVICE LEAD WILL BE INSTALLED ENTIRELY WITH PUSH-ON RESTRAINED JOINTS IN THE EVENT VERTICAL BENDS ARE REQUIRED.
 - DOMESTIC/FIRE SERVICE LEAD TO BE 4" POLYWRAPPED D.I.P. CL50.
 - LINE STOPS SHALL BE INSTALLED WHERE EXISTING WATER MAINS CANNOT BE SUFFICIENTLY ISOLATED TO COMPLETE THE WORK. THE COST OF ANY LINE STOP INSTALLATION IS THE RESPONSIBILITY OF THE DEVELOPER AND/OR CONTRACTOR.
 - WATER SERVICE METERING SHALL OCCUR AT THE POINT THE SERVICE LEADS ENTER THE BUILDING.
 - THE CONTRACTOR MUST SUBMIT A BACKFLOW PREVENTION AND METERING ARRANGEMENT DRAWING FOR THE CITY TO REVIEW AND APPROVE PRIOR TO THE START OF CONSTRUCTION.
 - REFER TO THE BUILDING DRAWINGS FOR ADDITIONAL CONSTRUCTION INFORMATION. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY CONFLICTS BETWEEN BUILDING DRAWINGS THESE PLANS PRIOR TO CONSTRUCTION.
 - THE USE OF BOOSTER PUMPS IS NOT ANTICIPATED. THIS WILL BE CONFIRMED DURING FINAL BUILDING DESIGN.

- ### FIRE DEPARTMENT NOTES:
- THE BUILDING ADDRESS SHALL BE CLEARLY VISIBLE WHEN APPROACHING THE BUILDING FROM BOTH HENRY STREET AND SOUTH INDUSTRIAL.
 - A KNOX BOX SHALL BE MOUNTED ON AN APPROVED EXTERIOR BUILDING LOCATION ON THE STREET SIDE FOR EMERGENCY ACCESS TO THE BUILDING. PROPOSED LOCATION HAS BEEN SHOWN ON THIS PLAN (KB).
 - THE PROPOSED BUILDING WILL NOT HAVE ANY FIREWALLS.
 - FIRE PROTECTION IS ASSUMED TO BE PER NFPA 13R BECAUSE OF RESIDENTIAL OCCUPANCY. A MAXIMUM 4" FIRE LINE IS ANTICIPATED, TO BE COMBINED WITH THE DOMESTIC LINE. FIRE SUPPRESSION DESIGN AND LEAD SIZING TO BE CONFIRMED BY A MEP DESIGNER PRIOR TO CONSTRUCTION.
 - CONSTRUCTION MATERIAL STORAGE SHALL NOT INTERFERE WITH FIRE/EMERGENCY SITE ACCESS.
 - HYDRANTS SHALL BE IN SERVICE DURING CONSTRUCTION.
 - HYDRANTS PROVIDING PROTECTION COVERAGE FOR THE BUILDING SHALL BE IN SERVICE AND APPROVED BY BOTH PLANNING AND FIRE DEPARTMENT BEFORE FIRE DEPARTMENT WILL SUPPORT PERMIT ISSUANCE FOR NEW CONSTRUCTION PHASE AND BEFORE COMBUSTIBLE MATERIAL ARE PLACED ON THE JOB SITE.

SANITARY SEWER OFFSET MITIGATION PROGRAM:

Units	'Table A' Design flow	Average Flow	Peaking Factor	System Recovery Factor	Peak Flow (GPD)	Peak Flow (GPM)
Proposed New Uses						
Apartments greater than 1200 sqft	11	300.00	3,300	4	1.1	14,520
Underground Parking	18	27.00	486	4	1.1	2,138
Current Existing Uses						
Residential	3	300.00	900	4	1.1	3,960
Total (proposed minus existing)			2,886	4	1.1	12,698
Required GPM to mitigate						8.8 GPM

SANITARY SEWER FLOW ESTIMATES:

Units	'Table A' Design flow	Average Flow	Peaking Factor	Peak Flow (GPD)	Peak Flow (GPM)
Proposed New Uses					
Apartments	11	300.00	3,300	4	13,200
Underground Parking	18	27.00	486	4	1,944
Total		3,786		13,200	10.5

Size (ft)	n	A (ft ²)	R	S	Q (cfs)	Q (GPM)
Design Capacity of 6" Pipe @ 1.00%	0.5	0.013	0.1963	0.125	0.01	5626
						252.5

LEGEND

- BOUNDARY LINE
- EXIST. CONTOUR
- EXIST. TREE LINE
- EXIST. CURB AND GUTTER
- EXIST. FENCE
- EXIST. GRAVEL
- EXIST. BUILDING
- EXIST. SIGN
- EXIST. TREE
- EXIST. OVERHEAD ELEC. LINE
- EXIST. GAS
- PROPERTY LINE
- EXIST. CONTOUR
- EXIST. STORM SEWER
- EXIST. MANHOLE
- EXIST. CATCH BASIN/INLET
- END SECTION/HEAD WALL
- CULVERT
- EXIST. SANITARY SEWER
- EXIST. CLEANOUT
- EXIST. WATERMAIN
- EXIST. HYDRANT
- EXIST. VALVE
- PROP. INLET FILTER
- PROP. CONTOUR
- PROP. TREE PROTECTION FENCE
- PROP. SILT FENCE
- PROP. STORM SEWER
- PROP. SANITARY SEWER
- PROP. WATER MAIN
- PROP. END SECTION
- PROP. CATCH BASIN/INLET
- PROP. WATER VALVE
- PROP. FIRE HYDRANT
- PROP. MANHOLE
- PROP. CLEANOUT

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 BY THE OWNER OR ITS REPRESENTATIVE. 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 OCCURRED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

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

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866.850.4200
ANN ARBOR, MI 48104
734.994.4000

SECTION 33

TOWN 2 SOUTH, RANGE 6 EAST

CITY OF ANN ARBOR

WASHTENAW COUNTY, MICHIGAN

OX STUDIO

HENRY STREET RESIDENTIAL PRELIMINARY SITE PLAN

UTILITY PLAN

CLIENT

DATE

AUGUST 23, 2018

10/17/18: CITY REVIEW

11/20/18: CITY REVIEW

REVISIONS

SCALE: 1" = 10 FEET

DR. STK CH. --

P.M. MB

BOOK --

JOB 18002399

SHEET NO. 06

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THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. 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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LEGEND table with symbols for boundary lines, contours, manholes, catch basins, etc.

GRADING NOTES:

- 1. ALL PROPOSED SPOT GRADES ARE AT EDGE/TOP OF PAVEMENT UNLESS OTHERWISE NOTED. NOTATION IS AS FOLLOWS: "FF" = FINISHED FLOOR, "FG" = FINISHED GRADE, "BC" = BACK OF CURB, "GU" = GUTTER, "BW" = GRADE AT BOTTOM OF WALL, "TW" = GRADE AT TOP OF WALL "M" = MATCH EXISTING.
2. REFER TO BUILDING DRAWINGS FOR ADDITIONAL CONSTRUCTION INFORMATION. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY CONFLICTS BETWEEN BUILDING DRAWINGS AND THESE PLANS PRIOR TO CONSTRUCTION.

STORMWATER MANAGEMENT NOTES:

- 1. THE PROPOSED IMPERVIOUS SURFACE IS GREATER THAN 10,000 SQUARE FEET AND LESS THAN 15,000 SQUARE FEET. INFILTRATION IS REQUIRED FOR THE FIRST FLUSH STORM EVENT AND DETENTION IS REQUIRED FOR THE BANKFUL STORM EVENT IN ACCORDANCE WITH CITY OF ANN ARBOR CODE OF ORDINANCES 5:655.2(B)(1). INFILTRATION OF THE FIRST FLUSH STORM EVENT IS BEING PROVIDED BY THE PROPOSED OPEN BOTTOM UNDERGROUND DETENTION SYSTEM.
2. THE SITE SOILS AT THE DEPTH OF PROPOSED INFILTRATION CONSISTS PRE-DOMINANTLY OF NATURAL GRANULAR SANDY SOILS. INFILTRATION RATES OF 21 IN/HR TO 49 IN/HR WITH A FACTOR OF SAFETY OF 2 WAS RECOMMENDED PER THE INFILTRATION TESTING AND GEOTECHNICAL INVESTIGATION REPORT. REFER TO "REPORT OF GEOTECHNICAL INVESTIGATION" PREPARED BY G2 CONSULTING GROUP, DATED 08/13/2018. THE CREDITED INFILTRATION RATE WAS CONSERVATIVELY LIMITED TO 10 IN/HR IN ACCORDANCE WITH WCWR RECOMMENDATIONS.
3. A STORM WATER PUMP WILL BE REQUIRED FOR THE INCIDENTAL DRIVEWAY DRAINAGE TO THE LOWER GARDEN LEVEL AS SHOWN. PUMP DESIGN IS TO BE PROVIDED BY OTHERS WITH THE BUILDING DESIGN. PUMP SHALL BE DESIGNED TO HANDLE A DESIGN FLOW OF 0.3 GFS AND REDUNDANCY IN THE DESIGN IS RECOMMENDED.

SESC PLAN DETAILS:

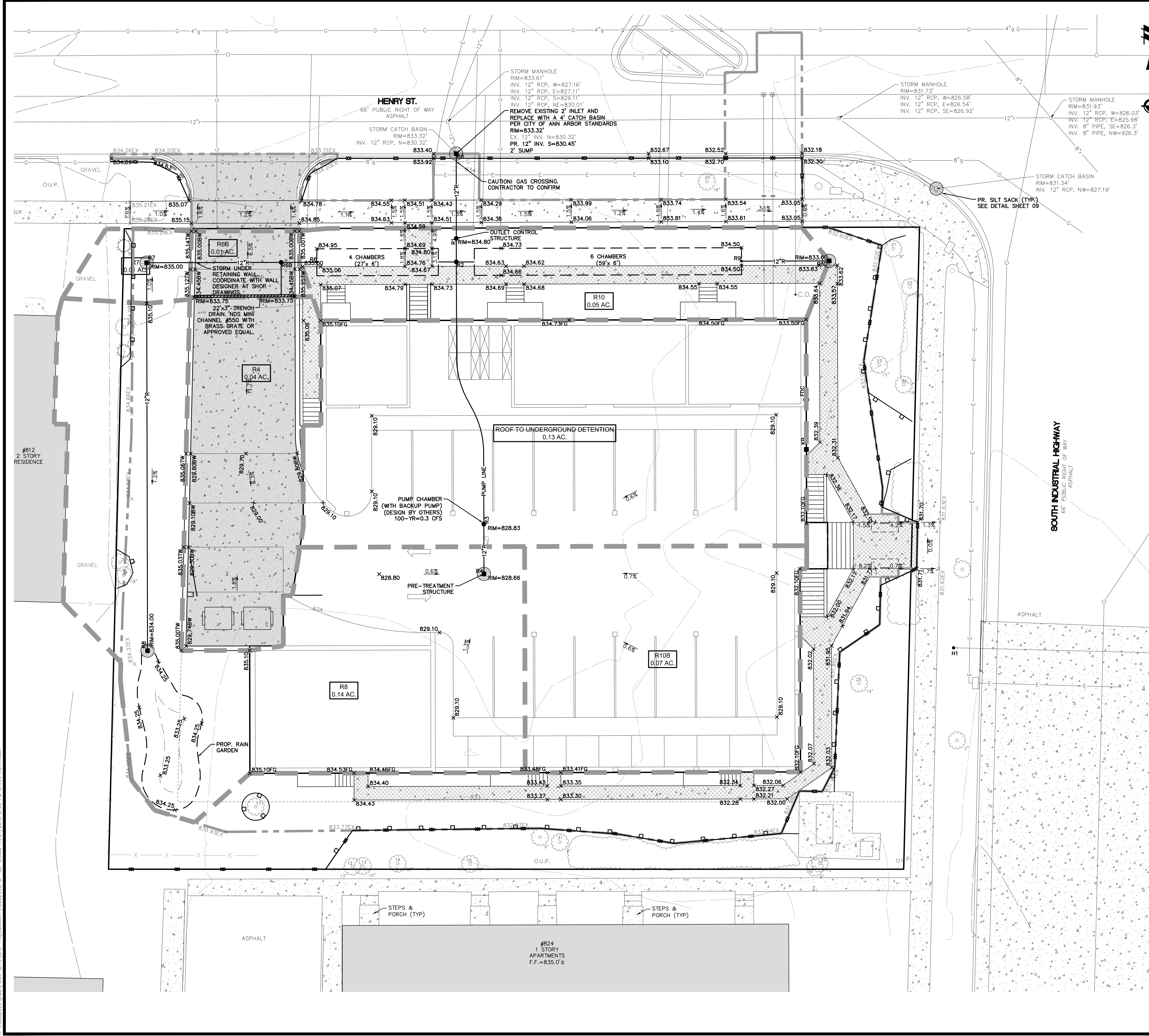
- 1. SOIL TYPES: MGA - MATHERTON SANDY LOAM, 0 TO 4 PERCENT SLOPES (PER WASHTENAW COUNTY SOIL SURVEY)
2. UNDERLYING SOIL TYPES: BROWN SAND WITH TRACE SILT AND GRAVEL
3. OUTLET: CITY STORM SEWER SYSTEM IN HENRY STREET
4. TOTAL AREA OF DISTURBANCE: ±0.52 ACRES

SESC GENERAL NOTES

- 1. DEVELOPER SHALL SUBMIT A DETAILED EROSION CONTROL PLAN, COMPLETED APPLICATION AND CHECKLIST FORMS, PAY ALL FEES AND POST AN EROSION CONTROL PERFORMANCE BOND, AS REQUIRED, PRIOR TO ANY EARTH CHANGE.
2. CONSTRUCTION OPERATION SHALL BE SCHEDULED AND PERFORMED SO THAT PREVENTATIVE SOIL EROSION CONTROL MEASURES ARE IN PLACE PRIOR TO EXCAVATION IN CRITICAL AREAS AND TEMPORARY STABILIZATION MEASURES ARE IN PLACE IMMEDIATELY FOLLOWING BACKFILLING.
3. BORROW AND FILL DISPOSAL AREAS WILL BE SELECTED BY THE CONTRACTOR WITH FULL CONSIDERATION FOR SOIL EROSION AND SEDIMENT CONTROL.
4. SPECIAL PRECAUTIONS WILL BE TAKEN IN THE USE OF CONSTRUCTION EQUIPMENT TO PREVENT SITUATIONS THAT PROMOTE EROSION.
5. CLEANUP WILL BE DONE IN A MANNER TO ENSURE THAT EROSION CONTROL MEASURES ARE NOT DISTURBED.
6. THE PROJECT WILL CONTINUALLY BE INSPECTED FOR SOIL EROSION AND SEDIMENT CONTROL COMPLIANCE. DEFICIENCIES WILL BE CORRECTED BY THE CONTRACTOR WITHIN 24 HOURS.
7. ESTIMATED COST OF SOIL EROSION CONTROL MEASURES AND SITE STABILIZATION SHOULD CONSTRUCTION CEASE IS \$4,000.
8. ESTIMATED AMOUNT OF EXCAVATION FOR THE PROJECT IS ±2,600 CY.
9. INSTALL A TEMPORARY MUD TRACKING MAT AT THE DESIGNATED CONSTRUCTION ENTRANCE FOR THE SITE.
10. STREETS WILL BE SCRAPPED AND CLEANED OF ANY TRACKED MUD IMMEDIATELY FOLLOWING EACH MUD-TRACKING OCCURRENCE.
11. SEE SHEET 09 FOR SESC DETAILS

CONSTRUCTION SEQUENCE (SESC)

- 1. SOIL EROSION AND SEDIMENTATION CONTROL PRE-GRADING MEETING
2. COMMENCEMENT OF CONSTRUCTION (EST. MARCH 2019)
3. INSTALL TEMPORARY EROSION AND SEDIMENTATION MEASURES
4. DEMOLISH EXISTING INFRASTRUCTURE
5. MASS GRADING / EXCAVATION
6. INSTALL STORMWATER MANAGEMENT SYSTEM
11. AS-BUILT CERTIFICATION OF THE STORM WATER DETENTION SYSTEM
12. COMMENCE BUILDING FOUNDATION WORK
13. INSTALL UTILITIES
14. PAVING ACTIVITIES
15. COMMENCE VERTICAL CONSTRUCTION OF BUILDING
16. FINAL GRADING AND LANDSCAPING
17. INSPECT AND CLEAN ALL CATCH BASINS, STORM SEWERS, AND DETENTION FACILITIES
18. REMOVE ALL TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES
19. COMPLETE CONSTRUCTION OF BUILDING
20. COMPLETION OF PROJECT (EST SEPT. 2019)



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ADS DESIGN TOOL CALCULATIONS:



User Inputs

Chamber Model	SC-310
Outlet Control Structure	Yes (Outlet)
Project Name	Henry Street
Engineer	Atwell
Project Location	Ann Arbor
Project Date	08/21/2018
Measurement Type	Imperial
Required Storage Volume	386 cubic ft.
Stone Porosity	30%
Stone Foundation Depth	6 in.
Stone Above Chambers	6 in.
Average Cover Over Chambers	18 in.
Design Constraint	Width
Design Constraint Dimension	6 ft.

Results

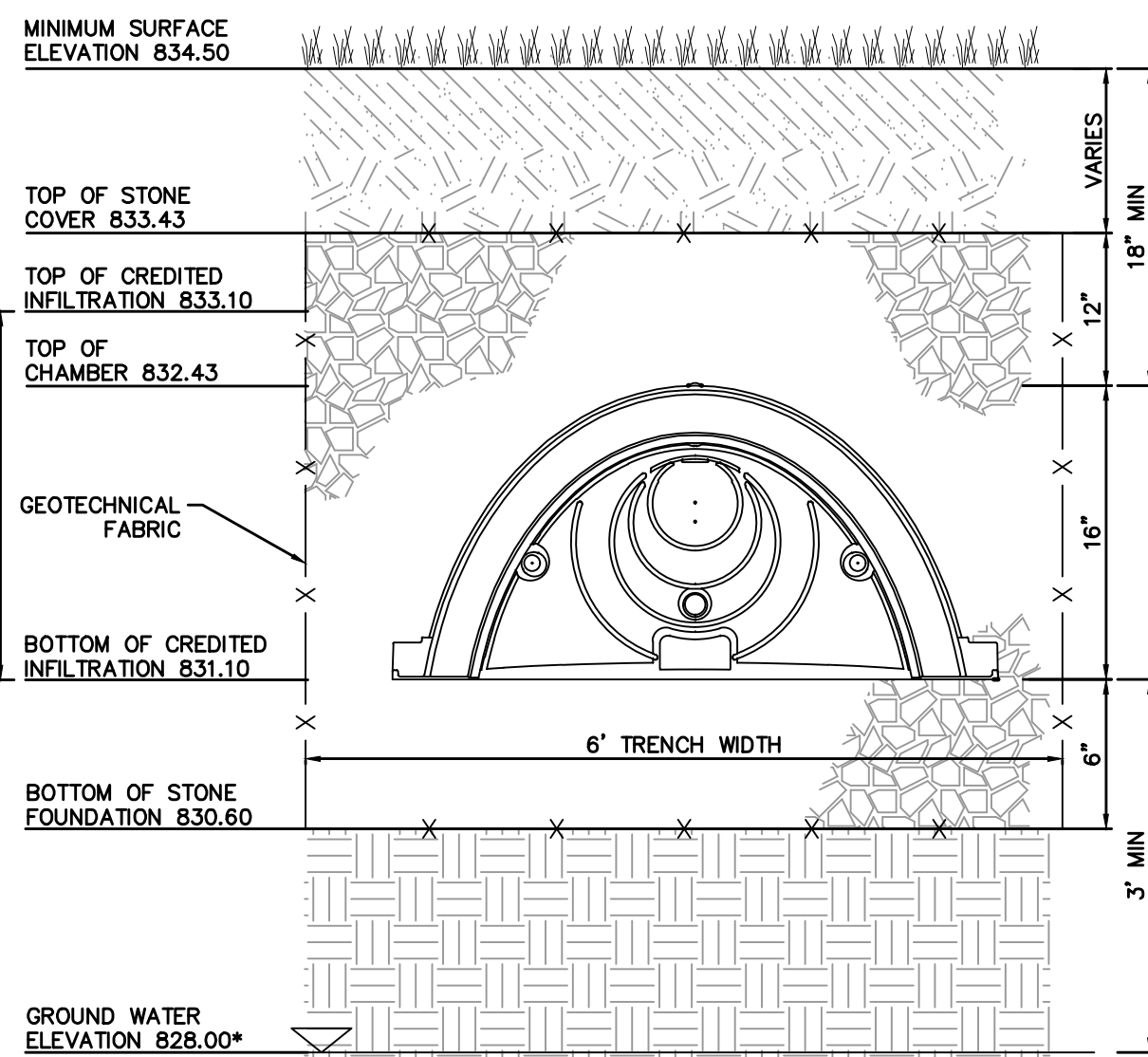
System Volume and Bed Size

Installed Storage Volume	413 cubic ft.
Storage Volume Per Chamber	26.90 cubic ft.
Number Of Chambers Required	10 each
Number Of End Caps Required	2 each
Rows/Chambers	1 row(s) of 10 chamber(s)
Maximum Length	81.44 ft.
Maximum Width	5.43 ft.
Approx. Bed Size Required	443 square ft.

System Components

Amount Of Stone Required	33 cubic yards
Volume Of Excavation (Not Including Fill)	38 cubic yards
Non-woven Filter Fabric Required	140 square yards
Length Of Isolator Row	72.37 ft.
Non-Woven Isolator Row Fabric	40 square yards
Woven Isolator Row Fabric	32 square yards

NOTE: PRELIMINARY DESIGN PROVIDED FOR THE PURPOSES OF SITE PLANNING. MANUFACTURER TO PROVIDE CONTRACT DESIGN DRAWINGS FOR APPROVAL DURING DETAILED ENGINEERING.



NOTE: PRELIMINARY DESIGN PROVIDED FOR THE PURPOSES OF SITE PLANNING. MANUFACTURER TO PROVIDE CONTRACT DESIGN DRAWINGS FOR APPROVAL DURING DETAILED ENGINEERING.

TYPICAL DETENTION CHAMBER SECTION DETAIL

(PER ADS STORMTECH® MODEL SC-310) NOT TO SCALE

DETENTION STAGE-STORAGE AND OUTLET CALCULATIONS:

I. Total Volume of Detention Area: Bankfull Storm Event

Detention Storage Required	0 cf*
Total Detention Required [W12] =	0 cf*
Required First Flush Detention Volume	0 cf*
Total FF Volume [W2] - Total Volume Reduction Credit [W11] =	0 cf*
Required Bankfull Detention Volume	0 cf*
Total BF Volume [W9] - Total Volume Reduction Credit [W11] =	0 cf*

*TOTAL FIRST FLUSH AND BANKFULL VOLUMES INFILTRATED, THUS NO DETENTION REQUIRED

WCRC STORMWATER MANAGEMENT CALCULATIONS:

W1 Determining Post-Development Cover Types, Areas, Curve Numbers and runoff coefficients

Rational Method Variables	Cover Type	Soil Type	Area (sf)	Area (ac)	Runoff Coef	(c)(Area)
	Paved Parking Lots, roofs, driveways	B	14,440	0.33	0.95	13,718
	Developed Open Space, Good Condition	B	10,825	0.25	0.30	3,247
Total - Sum (c)(Area) =						16,965
Area Total (sf) =						25,265
Weighted C-Sum(c)(Area)/Sum(ac) or Sum(sf) =						0.67

NRCS Variables	Pervious Cover Type	Soil Type	Area (sf)	Area (ac)	Curve Number	(CN)(Area)
	Developed Open Space, Good Condition	B	10,825	0.25	61	660,313
Total - Sum (CN)(Area) =						660,313
Area Total - Sum(ac) of Sum(sf) =						10,825
Weighted CN-Sum(CN)(Area)/Sum(ac) or Sum(sf) =						61

NRCS Variables	Impervious Cover Type	Soil Type	Area (sf)	Area (ac)	Curve Number	(CN)(Area)
	Paved Parking Lots, roofs, driveways	B	14,440	0.33	98	1,415,120
Total - Sum (CN)(Area) =						1,415,120
Area Total - Sum(ac) of Sum(sf) =						14,440
Weighted CN-Sum(CN)(Area)/Sum(ac) or Sum(sf) =						98

W2 First Flush Runoff Calculations (Vff)

A	Vff = (1") (1/12) (43560/1) (C) AC =	1,411	cf
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W3 Predevelopment Bankfull Runoff Calculations (Vbf-pre)

A	2 year/24 hour storm event	P =	2.35	in
B	Pervious Cover CN (pasture, grassland or range, good)	CN =	61	
C	S = (1000/CN) - 10	S =	6.39	in
D	Q = (P-0.2S)^2/(P+0.8S)	Q =	0.15	in
E	Pervious Cover Area	Area =	25,265	sf
F	Vbf-pre = Q(1/12)Area	Vbf-pre =	324	cf

W4 Pervious Cover Post-development Bankfull Runoff Calculations (Vbf-per-post)

A	2 year/24 hour storm event	P =	2.35	in
B	Pervious Cover CN	CN =	61	
C	S = (1000/CN) - 10	S =	6.39	in
D	Q = (P-0.2S)^2/(P+0.8S)	Q =	0.15	in
E	Pervious Cover Area	Area =	10,825	sf
F	Vbf-per-post = Q(1/12)Area	Vbf-per-post =	139	cf

W5 Impervious Cover Post-development Bankfull Runoff Calculations (Vbf-imp-post)

A	2 year/24 hour storm event	P =	2.35	in
B	Impervious Cover CN	CN =	98	
C	S = (1000/CN) - 10	S =	0.20	in
D	Q = (P-0.2S)^2/(P+0.8S)	Q =	2.12	in
E	Impervious Cover Area	Area =	14,440	sf
F	Vbf-imp-post = Q(1/12)Area	Vbf-imp-post =	2,553	cf

W8 Determine Time of Concentration (Tc-hrs)

User specified; assume 15 minutes	Total Time of Concentration (hrs) =	0.25
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W9 Retention / Infiltration Requirement

Per City Ordinance 5.655(2)(b), the infiltration requirement is equal to the first flush (<15,000 sf impervious)	First Flush Volume (Vff) =	1,411	cf
--	----------------------------	-------	----

W10 Detention Requirement

Per City Ordinance 5.655(2)(b), the detention requirement is the bankfull storm event (<15,000 sf impervious)	Total Bankfull Volume (Vbf) =	2,692	cf
---	-------------------------------	-------	----

W11 Determine Applicable BMPs and Associated Volume Credits

Proposed BMP	Area (ft ²)	Storage Depth (ft)	Storage Volume (ft ³)	Ave. Design Infil. Rate (in/hr)	Infil. During Storm (ft ³)	Total Volume Reduction (ft ³)
Subsurface Infiltration Bed	516	2.0	310	5.25	1,355	1,664
Raingarden Infiltration Bed	350	0.7	70	6	1,050	1,120

Total Volume Reduction Credit by Proposed Structural BMPs (Vinf) = **2,784** cf

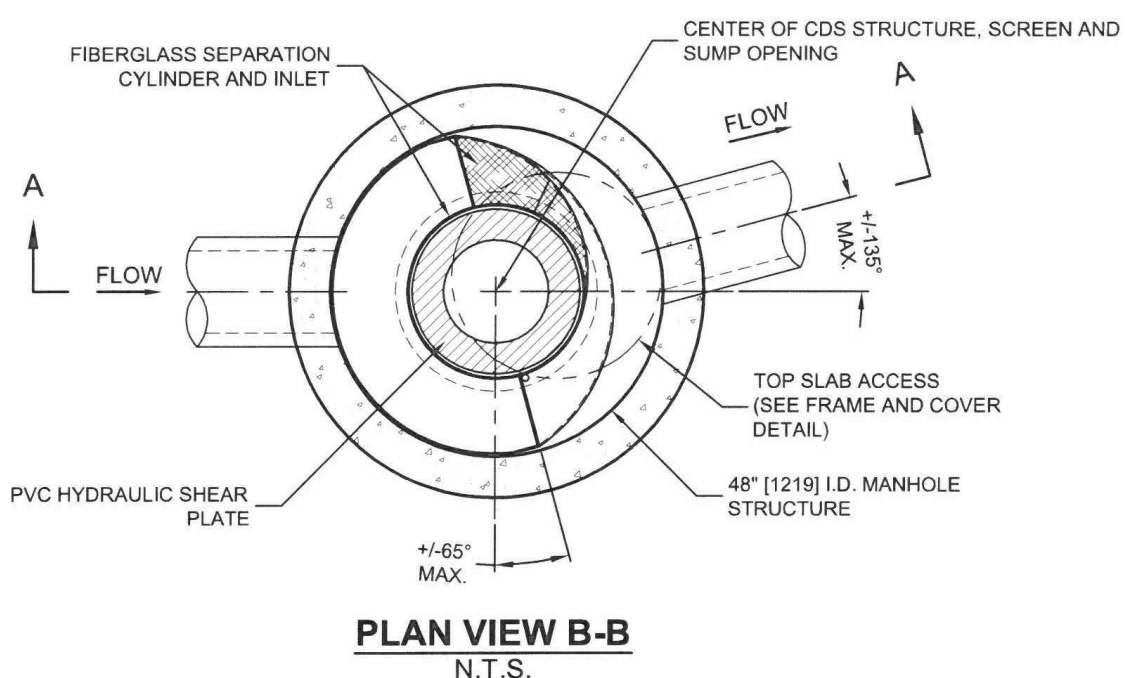
Proposed BMP	Ave. Design Infil. Rate (ft/hr)*	Volume	Estimated Drawdown Time (hrs)
Subsurface Infiltration Bed	0.4375	226	1.37

* The subsurface site soils consist pre-dominantly of granular sandy soils. An infiltration rate ranging from 10.5 in/hr to 12 in/hr with a factor of safety of 2 was recommended per the geotechnical investigation.

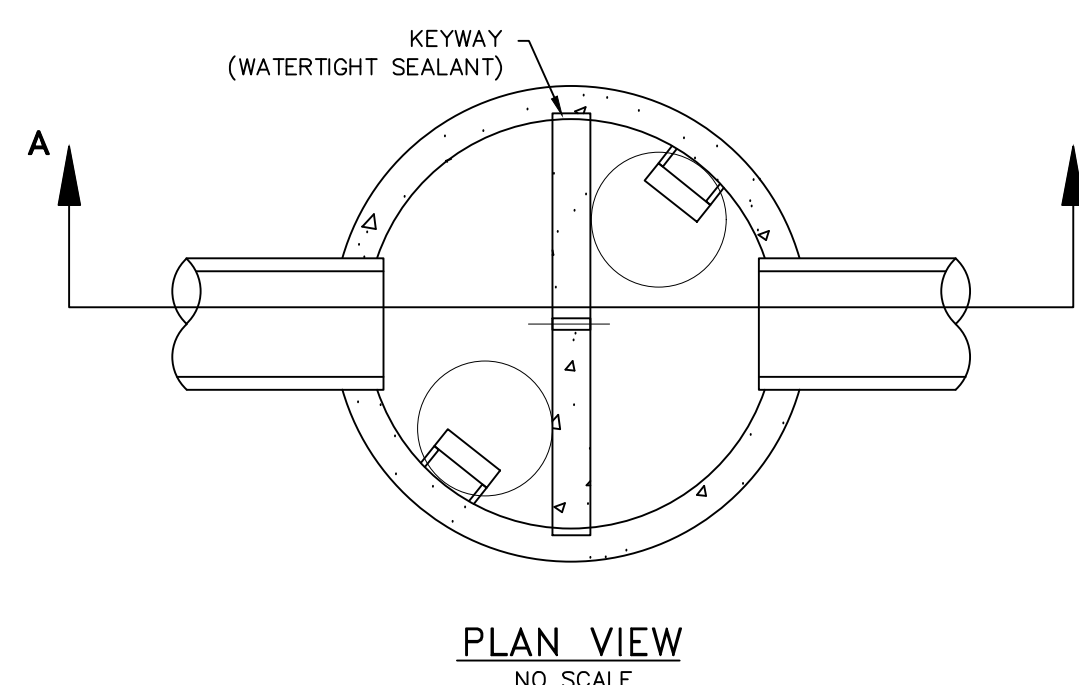
W12 Infiltration / Detention Summary

Total Retention / Infiltration Required (per City rules):	1,411	cf
Total Retention / Infiltration Provided:	2,784	cf
Difference:	1,373	cf

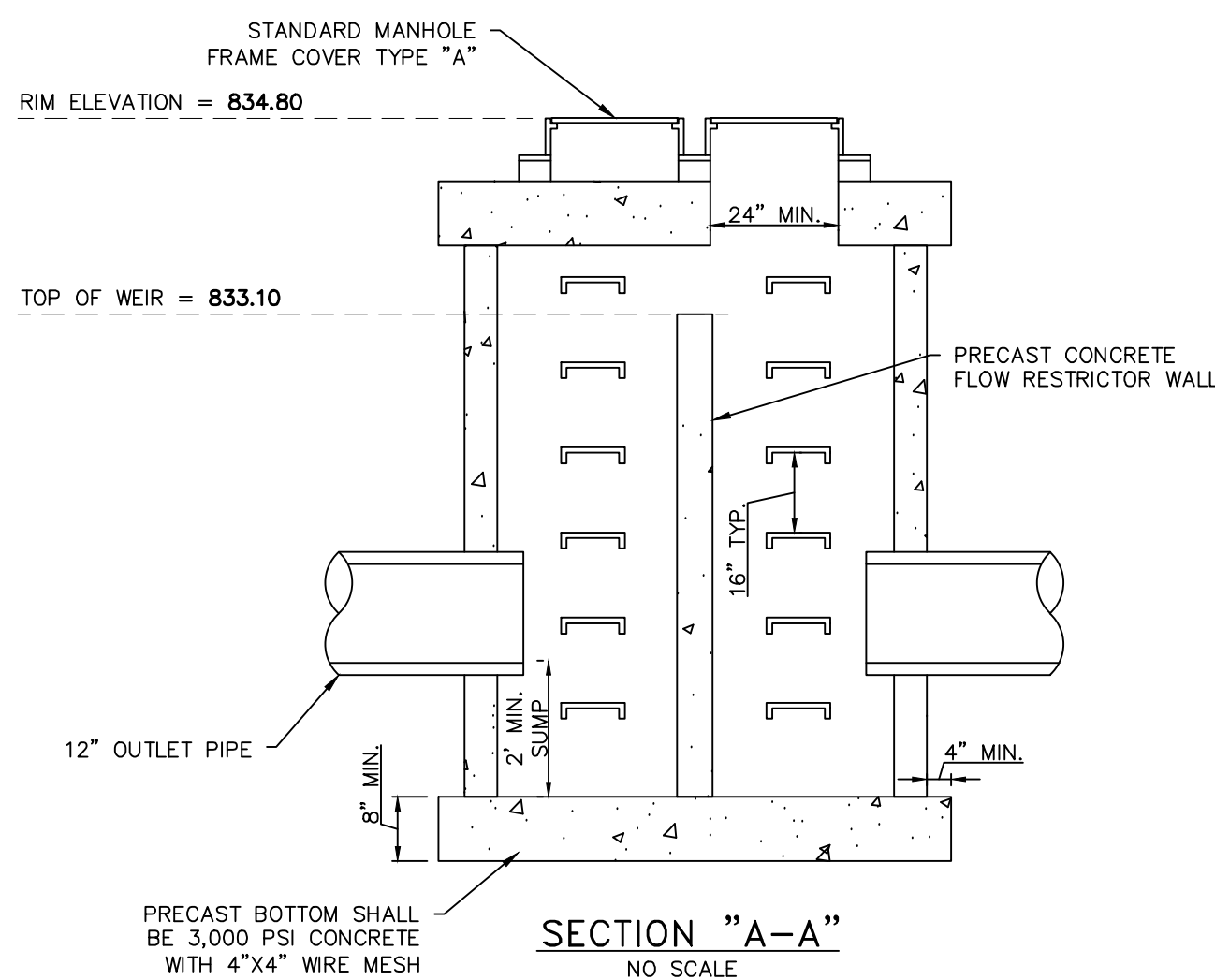
Total Detention Required (per City rules):	2,692	cf
Total Detention Required (Detention - Provided Infiltration):	(92)	cf



PLAN VIEW B-B
N.T.S.



PLAN VIEW
NO SCALE



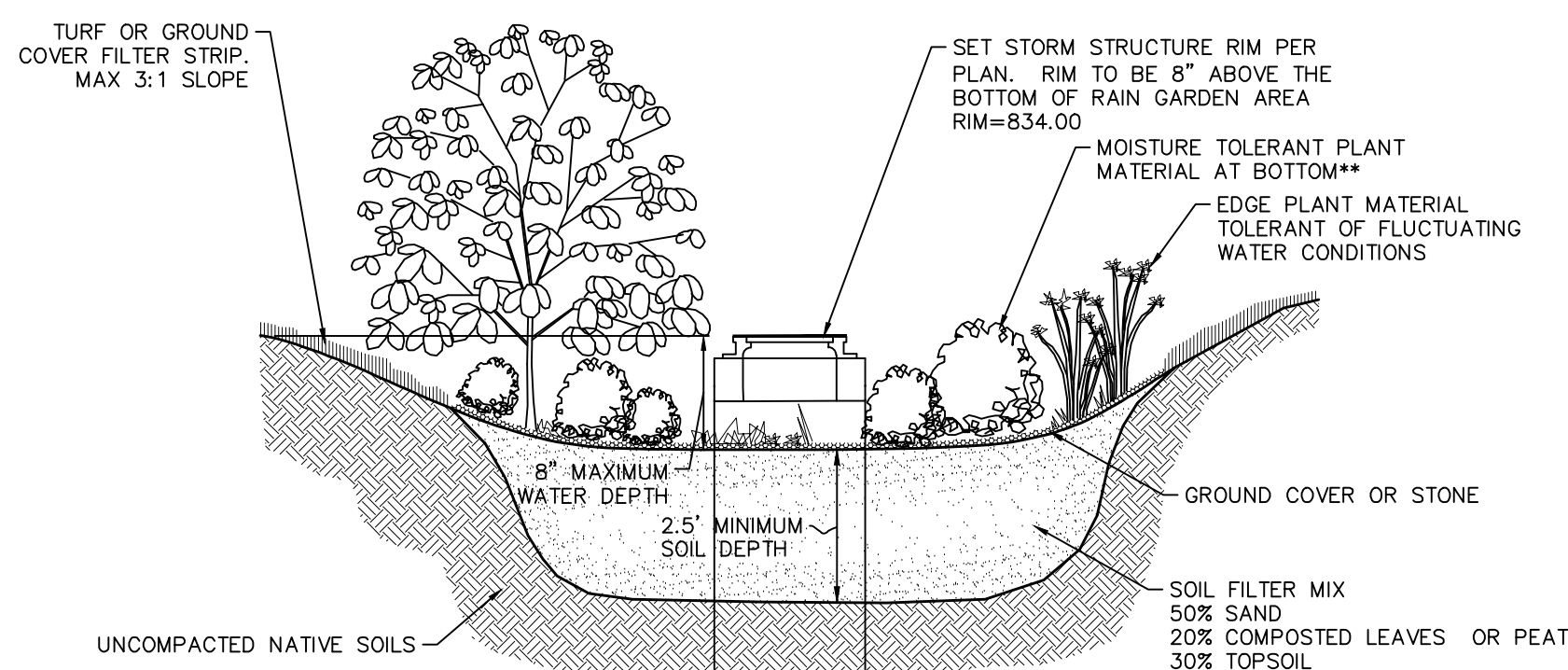
SECTION "A-A"
NO SCALE

NOTES:

1. THE PRECAST REINFORCED FLOW RESTRICTOR STRUCTURE SHALL BE MANUFACTURED PER ASTM C478 SPECIFICATIONS.
2. ALL JOINTS SHALL BE MADE WATERTIGHT.
3. CONTRACTOR TO PROVIDE DETAILED SHOP DRAWINGS OF CONTROL STRUCTURE PRIOR TO CONSTRUCTION.

OUTLET CONTROL STRUCTURE DETAIL

NOT TO SCALE



** SWALE SEED MIX, PER JF NEW NURSERY - WALKERTON, ID (574) 586-3400, OR EQUAL. THE SEED MIX CONTAINS NATIVE PLANTS THAT WILL HELP FILTER POLLUTANTS FROM YARD AND ROOF RUNOFF. THE MIX CAN BE USED IN YARD AREAS THAT RETAIN WATER FOR SOME TIME AFTER A RAIN EVENT. THE SEED MIX CONTAINS NATIVE GRASS, SEDGES AND FORB SPECIES INCLUDING BIG BLUE STERN, BRISTLY SEDGE, PORCUPINE SEDGE, BROWN FOX SEDGE, CANADA WILD RYE, FOWL MANNA GRASS, SWITCH GRASS, DARK GREEN RUSH, WOOL GRASS, WATER PLANTAIN, SWAMP MILKWEED, NEASTER, TALL COREOPSIS, SPOTTED JOE-PYE WEED, BLUE FLAG IRIS, MARSH MORNING STAR, CAROLINA FLOWER, BLUE LOBELIA, ARROWHEAD, ROUGH GOLDENROD, BLUE VERVAIN, GOLDEN ALEXANDERS AND TEMPORARY COVER OF SEED OATS, SEEDING RATE: 26.44 LBS. PER ACRE.

RAIN GARDEN TYPICAL DETAIL

NO SCALE

STORM SEWER CONVEYANCE CALCULATIONS:

$B/(T+D) \wedge E$ $B = 275.0$ $D = 25.0$ $E = 1$
 $C = \text{varies}$
 $T = 20$ (min.)

FROM MH INPUT	TO MH	INCRE- MENT ACRES (A)	C	EQUIV. AREA 100% ACRES CA	TOTAL AREA 100% ACRES SUM CA	T TIME (MIN.)	I (IN PER HOUR)	Q=CIA C.F.S. FLOW	CAPAC- ITY OF SEWER (C.F.S.)	DIAM. OF PIPE (IN.)	LENGTH OF LINE (FT.)	SLOPE OF PIPE (%)	MIN HG BASED ON "Q" (%)	HG FOR 2.5 FPS GIVEN "D" (%)	ACTUAL HG (%)	VEL. FLOW FULL (FT./ SEC.)	TIME OF FLOW (MIN.)	H.G.L. ELEV. UPPER END	H.G.L. ELEV. LOWER END	GROUND ELEV. UPPER END	GROUND ELEV. LOWER END	INVERT ELEV. UPPER END	INVERT ELEV. LOWER END
R2	R1	0.00	0.00	0.00	0.00	20.00	6.11	0.00	1.95	12	5	0.30	0.00	0.30	0.30	2.5	0.0	831.52	831.51	834.68	834.65	830.52	830.51
R1	R0	0.00	0.00	0.00	0.00	20.00	6.11	0.00	1.95	12	19	0.30	0.00	0.30	0.30	2.5	0.1	831.51	831.45	834.80	833.32	830.51	830.45
R4	R3	0.04	0.95	0.04	0.04	20.00	6.11	0.25	1.95	12	11	0.30	0.00	0.30	0.30	2.5	0.1	825.64	825.61	828.66	828.83	824.64	824.61
R8	R7	0.14	0.62	0.09	0.09	20.00	6.11	0.53	1.95	12	86	0.30	0.02	0.30	0.30	2.5	0.6	832.45	832.19	834.00	835.00	831.55	831.29
R7	R6B	0.01	0.25	0.00	0.09	20.60	6.03	0.53	1.95	12	30	0.30	0.02	0.30	0.30	2.5	0.2	832.19	832.10	835.00	834.55	831.19	831.10
R10	R9	0.12	0.55	0.07	0.07	20.00	6.11	0.40	1.95	12	20	0.30	0.01	0.30	0.30	2.5	0.1	832.16	832.10	833.60	834.37	831.16	831.10

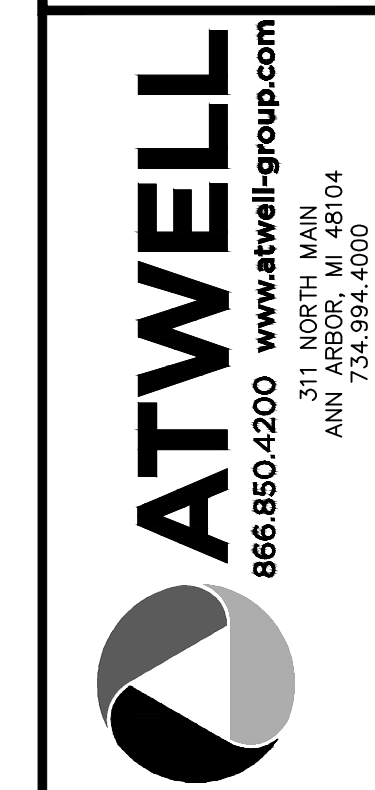


Know what's below. Call before you dig.

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREE 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.

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

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SECTION 33
 TOWN 2 SOUTH, RANGE 6 EAST
 CITY OF ANN ARBOR
 WASHENAW COUNTY, MICHIGAN

OX STUDIO
 HENRY STREET RESIDENTIAL
 PRELIMINARY SITE PLAN
 STORMWATER CALCULATIONS

CLIENT

DATE
 AUGUST 23, 2018

10/17/18: CITY REVIEW
 11/20/18: CITY REVIEW

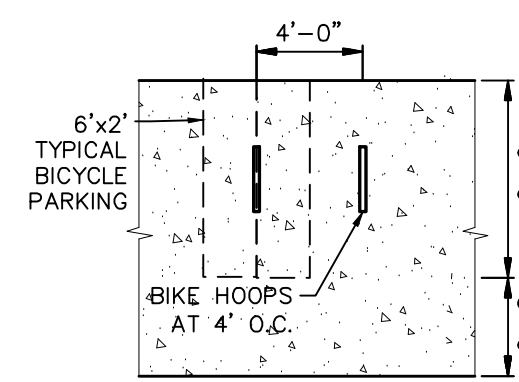
DR.	STK	CH.	---
P.M.	MB		
BOOK	---		
JOB	18002399		
SHEET NO.	08		

REVISIONS

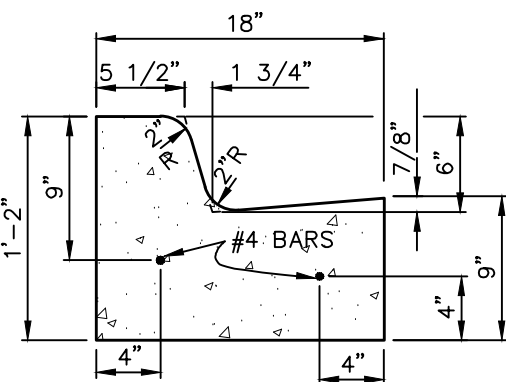
NA NA NA
 N/A

08

K:\18002399\DWG\PLAN SETS\SITE-PRELIMINARY\18002399-08-C.DWG 11/21/2018 2:49 PM CHRIS BOOTHAR



BIKE RACK DETAIL
NO SCALE

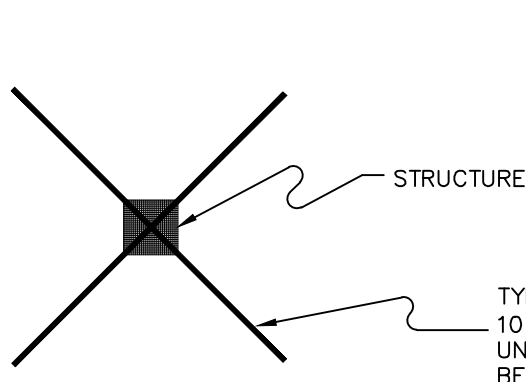


PITCH IN CURB

BASE AND SUBBASE AGGREGATES TO EXTEND MINIMUM 1'-0" BEHIND BACK OF CURB.

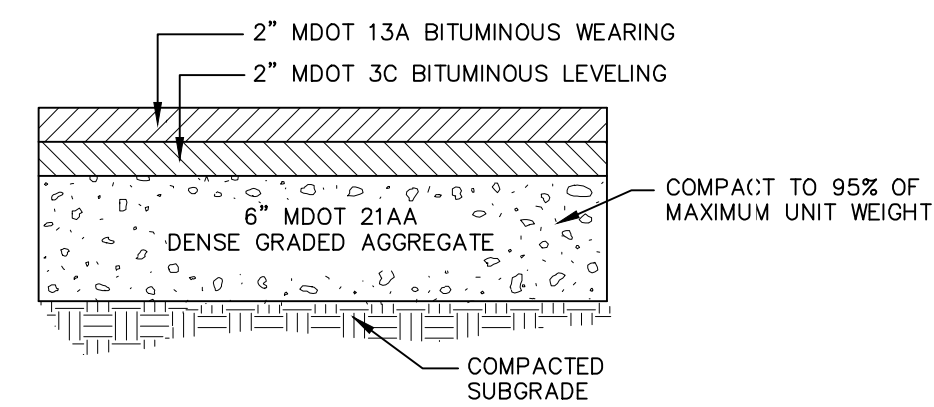
PITCH OUT CURB

F2 CURB DETAIL
NO SCALE

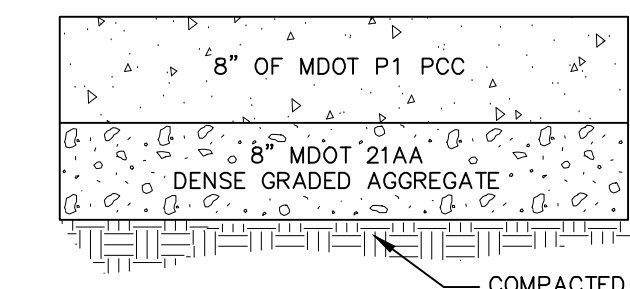


FINGER DRAIN DETAIL

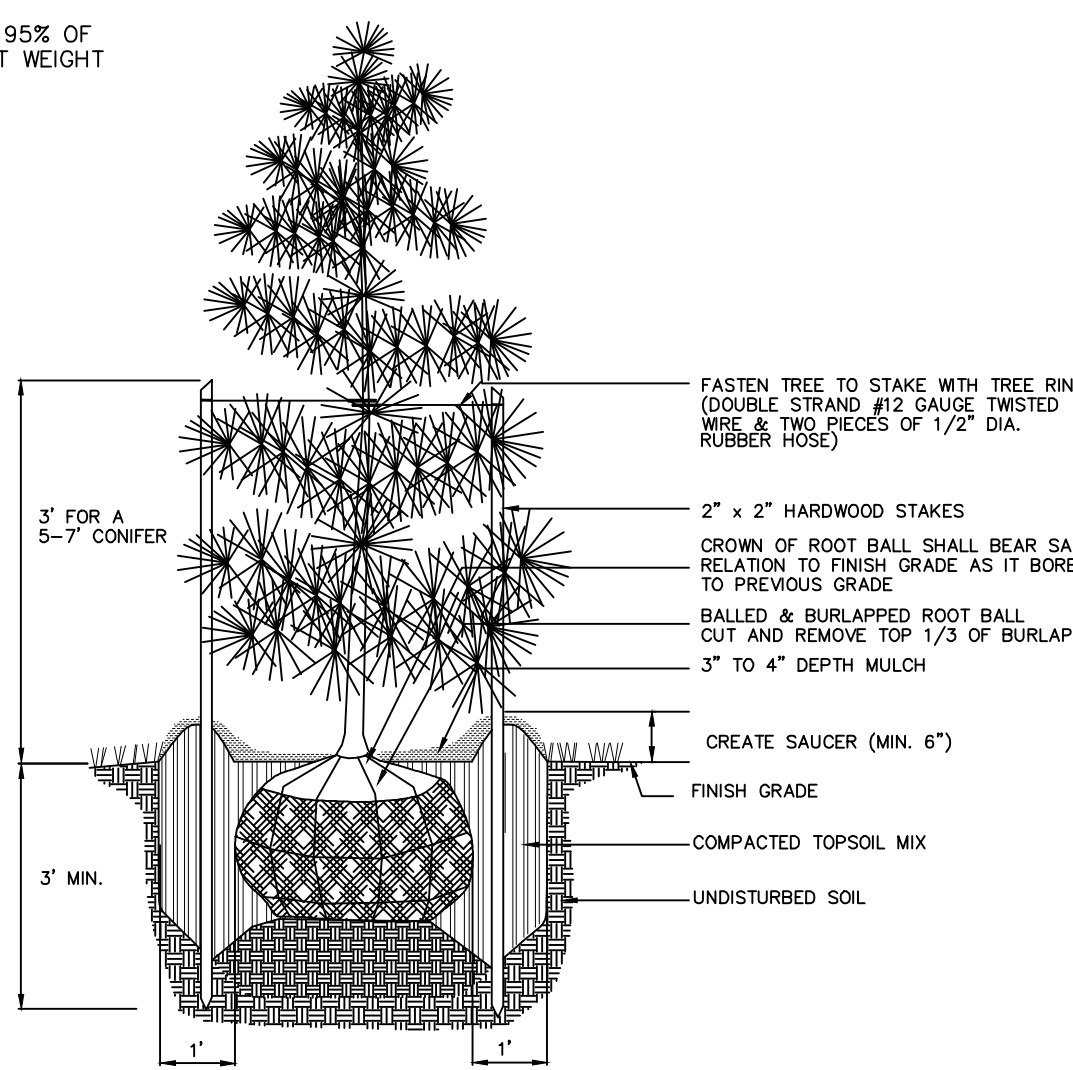
NO SCALE
(FOR USE ON STRUCTURES WITHIN PAVEMENT)



NOTE:
NOT APPLICABLE WITHIN PUBLIC RIGHT-OF-WAY. FOR ON-SITE USE ONLY. PAVEMENT WITHIN THE RIGHT OF WAY SHALL CONFORM TO CITY OF ANN ARBOR STANDARDS.
PER GEOTECHNICAL REPORT
NO SCALE

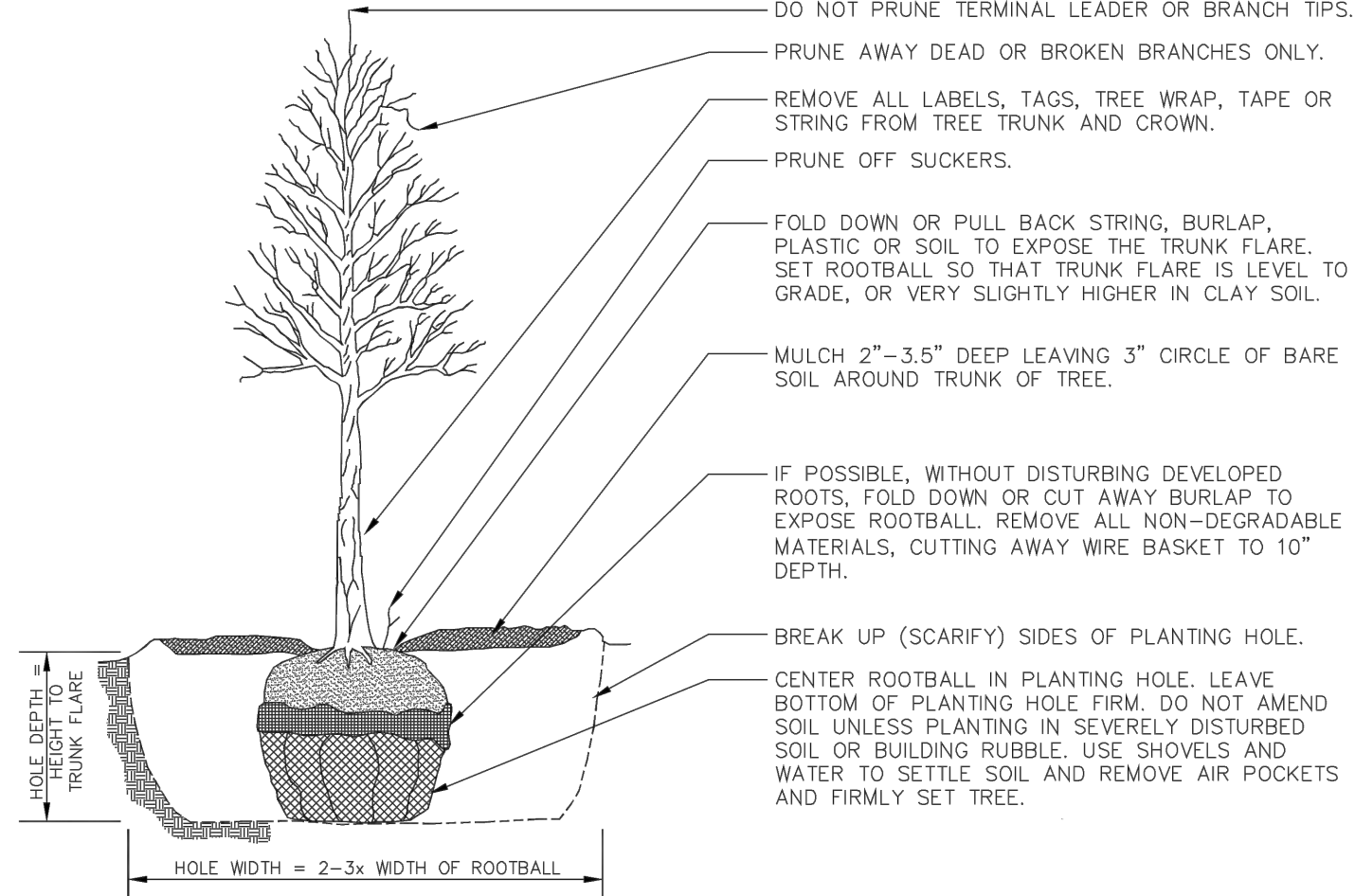


CONCRETE PAVING SECTION
CONFIRM SECTION WITH GEOTECHNICAL REPORT
NO SCALE

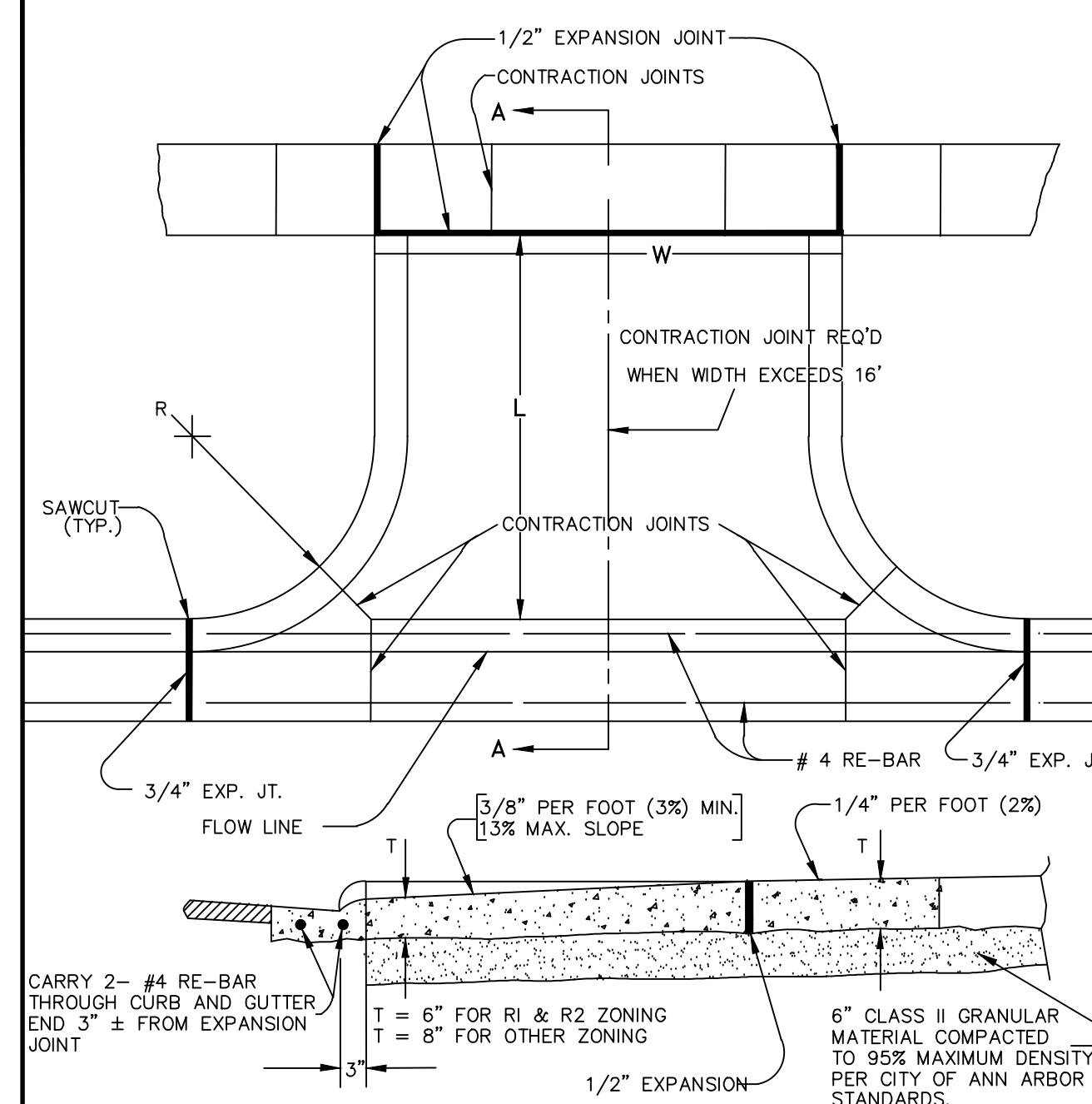


NOTES:
1. DO NOT ALLOW AIR POCKETS TO FORM WHEN BACKFILLING
2. DO NOT DAMAGE MAIN ROOTS OR DESTROY ROOT BALL WHEN INSTALLING TREE STAKE
3. REMOVE TREE RINGS AND STAKES TWO YEARS AFTER INSTALLATION
4. WATER TREE THOROUGHLY SUBSEQUENT TO INSTALLATION

CONIFEROUS TREE PLANTING DETAIL
BALLED AND BURLAPPED
NO SCALE



TREE PLANTING DETAIL



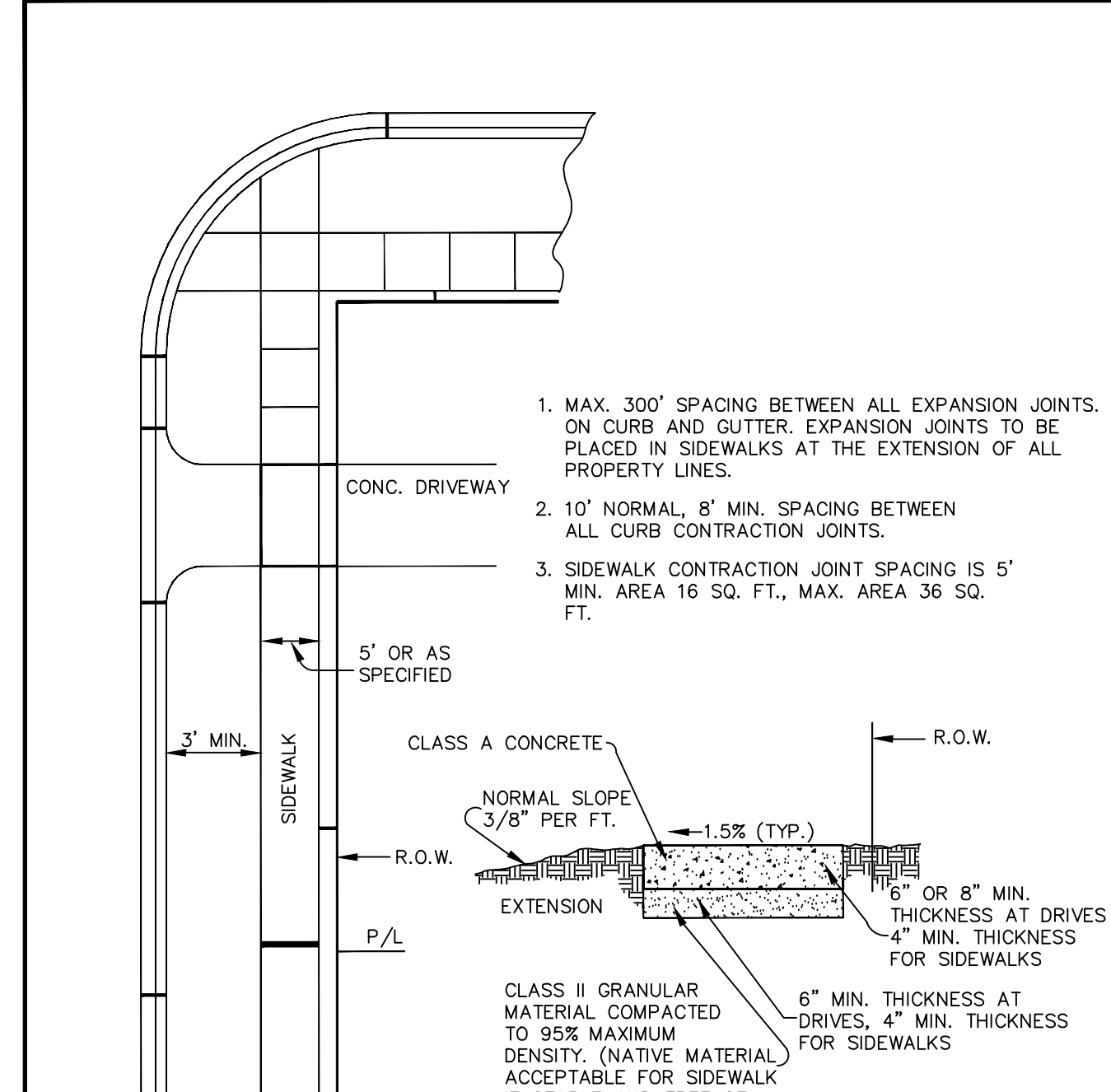
MEASUREMENT OF AREA
 $W \times L = \text{AREA}$

NOTE: DRIVE APPROACH TO BE CLASS 'A' CONCRETE

NOTE: R(RADIUS) AND W(WIDE WIDTH) AS REQUIRED FOR ZONING BY CITY CODE

NOTE: IF GUTTER IS OVERLAPPED, GUTTER OF THE APPROACH SHALL BE AT SAME ELEVATION AS EXISTING GUTTER AND ASPHALT WEDGE SHALL BE PLACED IN THE APPROACH.

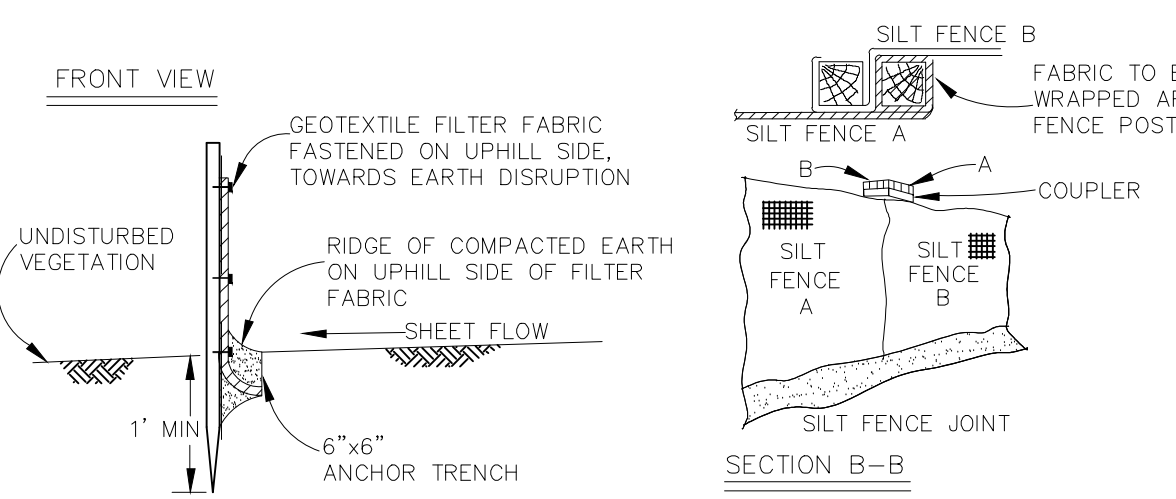
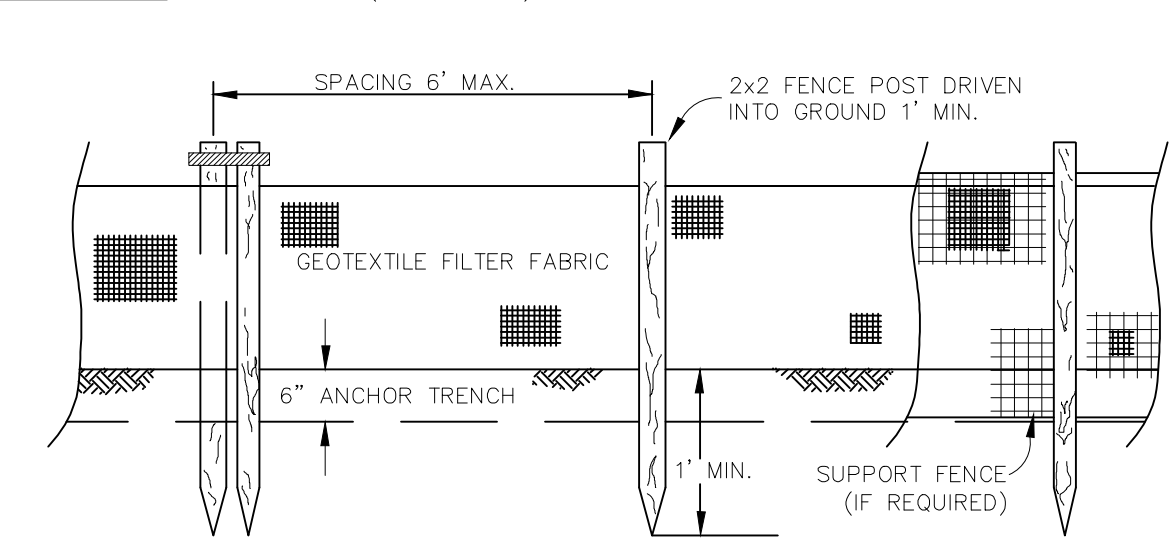
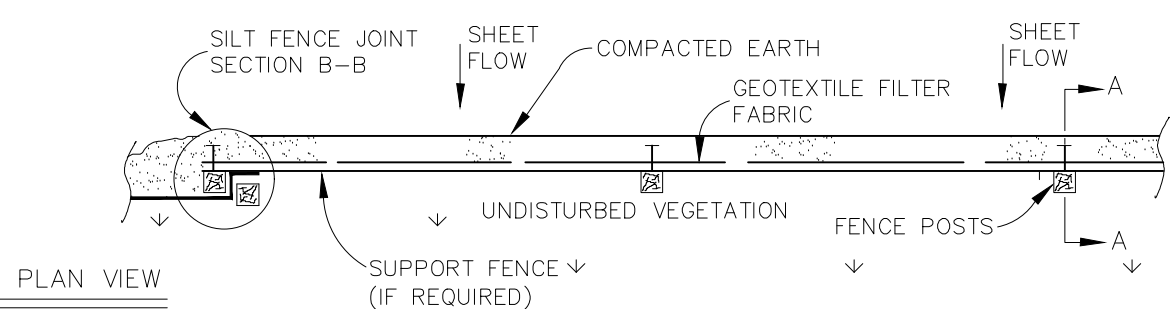
S/W GRADE REVISED	1	NCF	CSS	1-31-94
REVISIONS	REV. NO.	DR BY	CH BY	DATE
PUBLIC SERVICES DEPARTMENT CITY OF ANN ARBOR				
TYPE 'M' DRIVE APPROACH (FOR USE ON ASPHALT STREETS WITH BARRIER CURB)				
DR. BY	DF	CH. BY	CSS	DRAWING NO.
SCALE	NONE	DATE	11-6-92	SD-R-6
INCH	0	1		SHEET NO. OF



LEGEND:

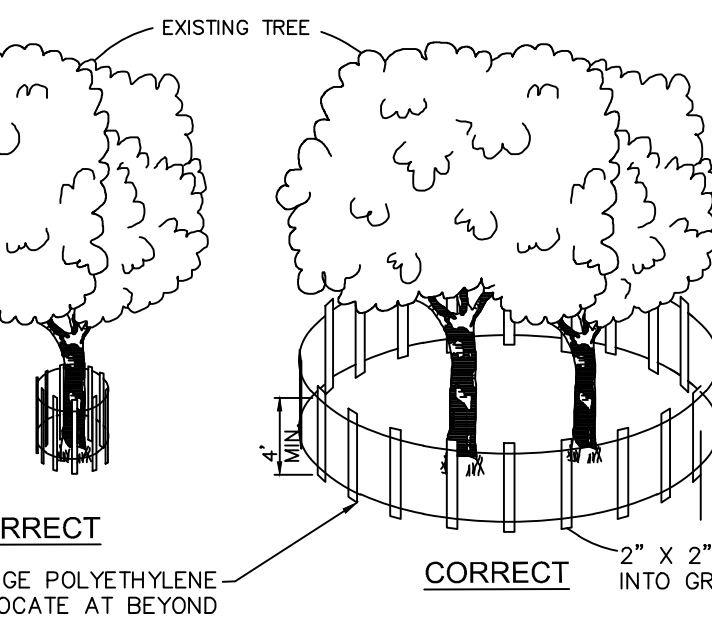
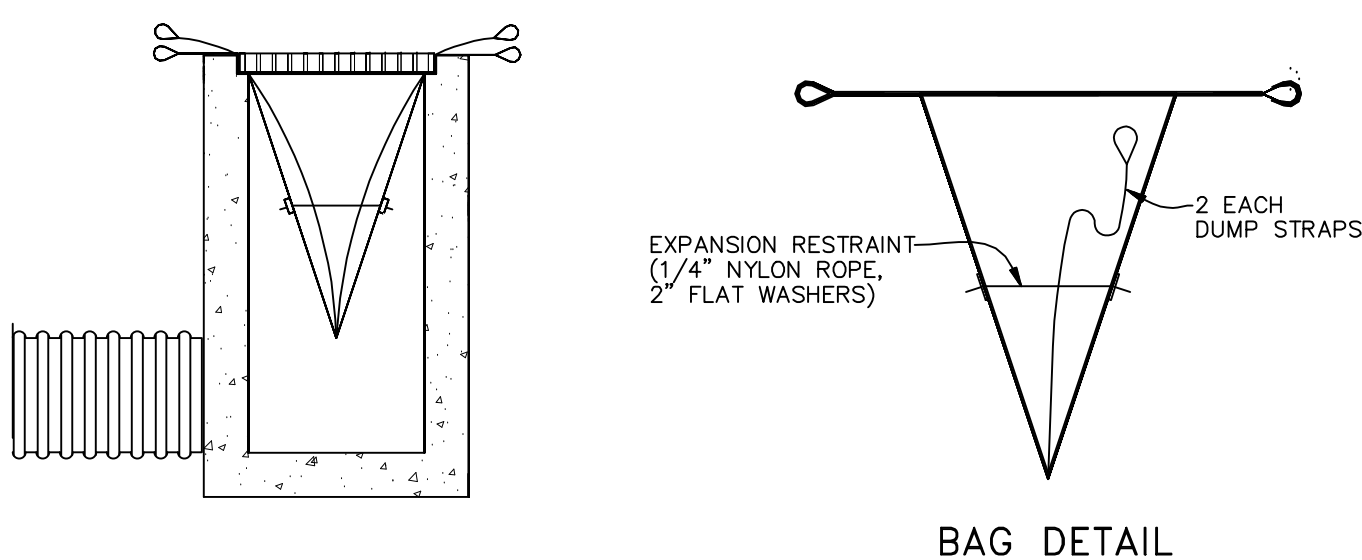
- CONTRACTION JOINTS
- 1/2" EXPANSION JOINTS
- 3/4" EXPANSION JOINTS

ADA COMPLIANCE REVS.	2	DPF	TB/DC/MGN
TRANSVERSE GRADE REV.	1	NCF	CSS
REVISIONS	REV. NO.	DR BY	CH BY
PUBLIC SERVICES AREA CITY OF ANN ARBOR			
SIDEWALK & CURB & GUTTER JOINTS			
DR. BY	DPF	CH. BY	CSS
SCALE	NONE	DATE	11-6-92
INCH	0	1	SHEET NO. 1 OF 1



REVISIONS	REV. NO.	DR BY	CH BY	DATE
PUBLIC SERVICES DEPARTMENT CITY OF ANN ARBOR				
SILT FENCE				
DR. BY	DF/SMJ	CH. BY	CSS/DF	DRAWING NO.
SCALE	NONE	DATE	11-6-92	SD-EC-3
INCH				SHEET NO. OF

SILT FENCE DETAIL
NO SCALE

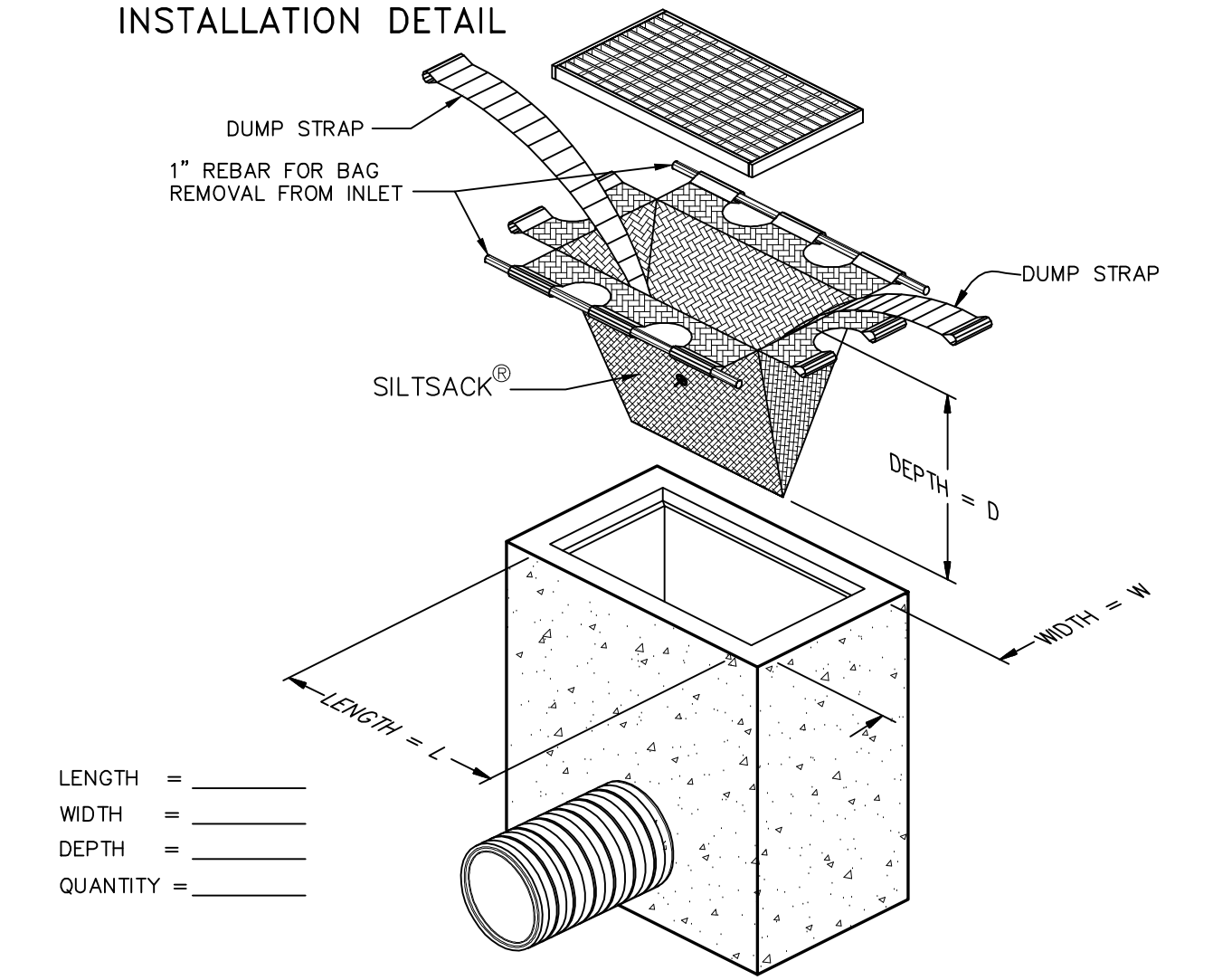


INCORRECT: PROTECTIVE FENCING ORANGE POLYETHYLENE LAMINAR GRID FENCE. LOCATE AT BEYOND DRIP LINE OF TREE.

CORRECT: 2" X 2" PICKETS DRIVEN INTO GROUND.

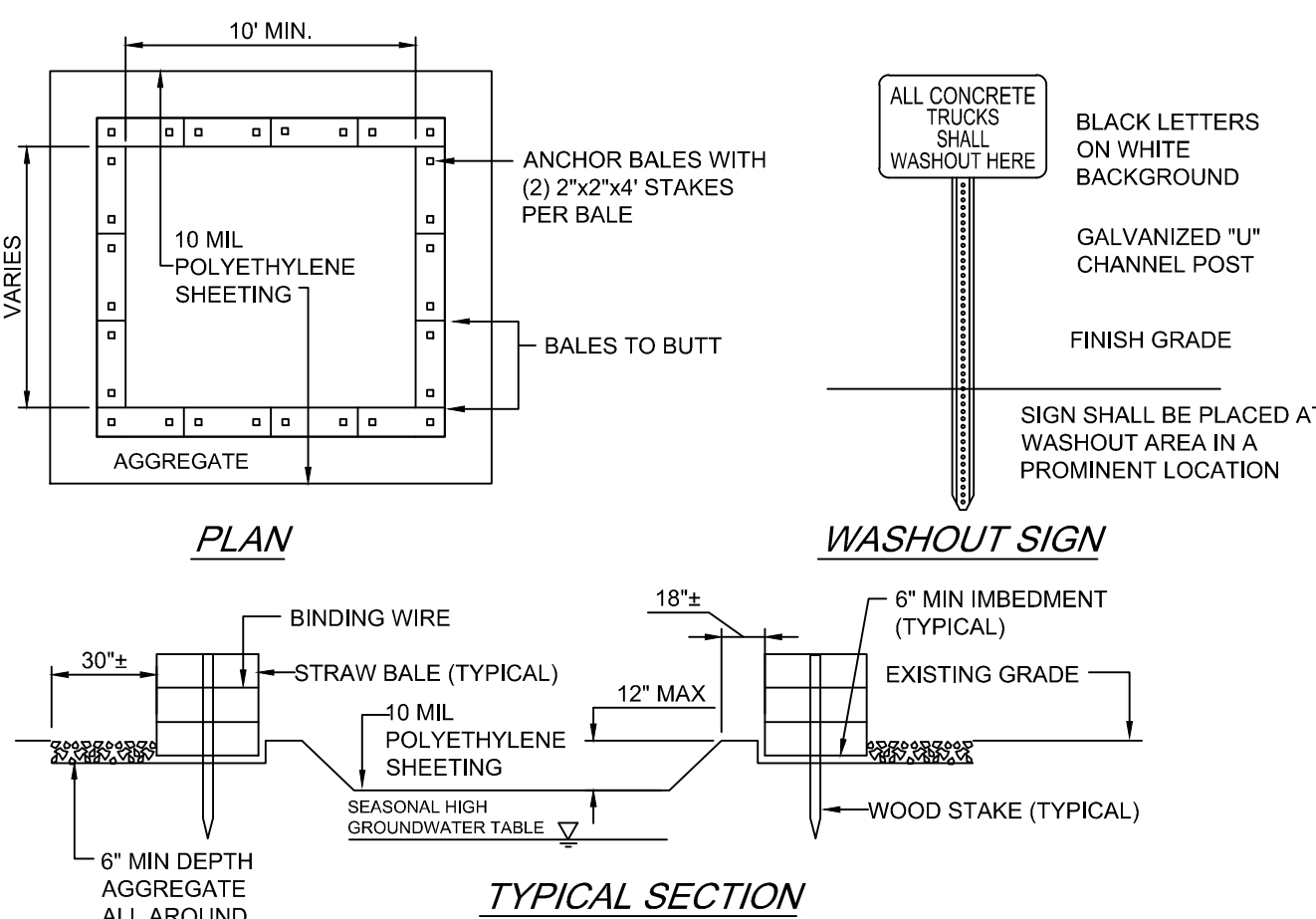
NOTES:
1. BARRIER TO BE INSTALLED AT DRIP LINE OF TREE BRANCHES. USE HIGHLY VISIBLE "HAZARD" FENCE IN VIBRANT COLOR (YELLOW OR ORANGE).
2. TREE PROTECTION BARRIERS MUST BE PLACED AROUND TREES TO BE RETAINED WHEN AN AREA WHERE LAND ALTERATION AND CONSTRUCTION ACTIVITIES WILL OCCUR. TREES TO REMAIN SHALL BE INDICATED ON THE PLANS.
3. TREE PROTECTION BARRIER MUST REMAIN IN PLACE UNTIL GRADING AND CONSTRUCTION ACTIVITY IS COMPLETE OR UNTIL COMMENCEMENT OF FINISH GRADING AND SOODING.
4. BARRIERS SHALL BE PLACED AROUND TREES AT THE DRIPLINE EXCEPT WHERE LAND ALTERATION OR CONSTRUCTION ACTIVITIES ARE APPROVED WITHIN THE DRIPLINE.
5. THE DRIPLINE OF A TREE IS THE IMAGINARY VERTICAL LINE THAT EXTENDS DOWNWARD FROM THE OUTERMOST TIPS OF THE TREE'S BRANCHES TO THE GROUND.
6. AREAS SURROUNDED BY TREE PROTECTION BARRIERS SHALL BE PROTECTED FROM VEGETATION REMOVAL, PLACEMENT OF SOIL, DEBRIS, SOLVENTS, CONSTRUCTION MATERIAL, MACHINERY OR OTHER EQUIPMENT OF ANY KIND.
7. ALL TREE ROOTS WITHIN AREA TO BE GRADED AND OPERATING FROM A PROTECTED TREE SHALL BE SAVED CLEANLY AT THE LIMITS OF THE PROTECTED AREA.
8. ALL TREE BRANCHES AND TRIMMING ON ANY TREE TO BE RETAINED SHALL BE PERFORMED BY AN ARBORIST CERTIFIED BY THE AMERICAN SOCIETY OF ARBORICULTURE (ASA).
9. 2" X 2" TREE PROTECTION SIGNS SPACED A MINIMUM OF 30' ON EACH END EVERY 300' SHALL CONTAIN THE WORDING "TREE PROTECTION ZONE - KEEP OUT."

TREE PROTECTION FENCE
NO SCALE



LENGTH = _____
WIDTH = _____
DEPTH = _____
QUANTITY = _____

SILT SACK INLET FILTER
NO SCALE



NOTES:
1. CONTAINMENT MUST BE STRUCTURALLY SOUND AND LEAK FREE AND CONTAIN ALL LIQUID WASTES.
2. CONTAINMENT DEVICES MUST BE OF SUFFICIENT QUANTITY OR VOLUME TO COMPLETELY CONTAIN THE LIQUID WASTES GENERATED.
3. WASHOUT MUST BE CLEANED OR NEW FACILITIES CONSTRUCTED AND READY TO USE ONCE ASHOUT IS 75% FULL.
4. WASHOUT AREA(S) SHALL BE INSTALLED IN A LOCATION EASILY ACCESSIBLE BY CONCRETE TRUCKS.
5. ONE OR MORE AREAS MAY BE RELOCATED AS CONSTRUCTION PROGRESSES.
6. AT LEAST WEEKLY REMOVE ACCUMULATION OF SAND AND AGGREGATE AND DISPOSE OF PROPERLY.

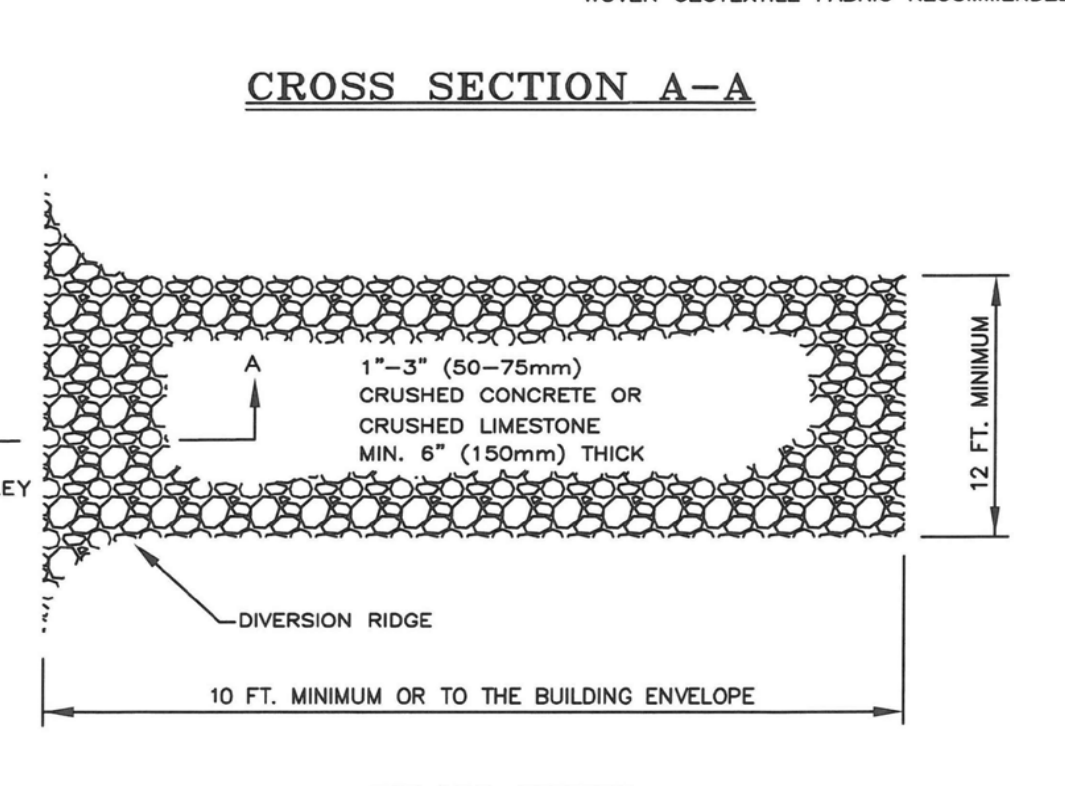
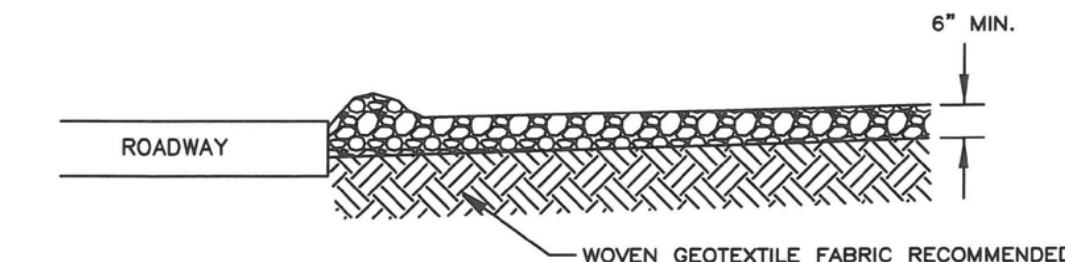
CONCRETE WASHOUT AREA
NO SCALE

TASKS	Storm Sewer System	Catch Basin Sumps	Catch Basin Inlet Casings	Ditches and Swales	Outflow Control Structure	Rip-Rap	Filtration Basins	Storm Detention Areas	Wetlands	Emergency Overflow	SCHEDULE
Inspect for sediment accumulation	X	X		X	X	X	X	X	X	X	Weekly
Removal of sediment accumulation	X	X		X	X	X	X	X	X	X	As needed* & prior to turnover
Inspect for floatables and debris	X	X	X	X	X	X	X	X	X	X	Quarterly
Cleaning of floatables and debris	X	X	X	X	X	X	X	X	X	X	Quarterly & at turnover
Inspect Stormwater system components during wet weather and compare to as-built plans						X		X			Annually and at turnover
Make adjustments as determined by annual wet weather inspection	X	X	X	X	X	X	X	X	X	X	As needed

*as needed means when sediment has accumulated to a maximum of one foot depth.
STORM WATER MAINTENANCE TASKS AND SCHEDULE DURING CONSTRUCTION
DURING CONSTRUCTION THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF THE STORMWATER SYSTEM

TASKS	COST
Annual inspection for sediment accumulation	\$600.00
Removal of sediment accumulation every 2 years as needed	\$3,000.00
Inspect for floatables and debris annually and after major storms	\$600.00
Removal of floatables and debris annually and after major storms	\$900.00
Inspect structural elements during wet weather and compare to as-built plans every 2 years	\$900.00
Make structural adjustments or replacements as determined by inspection as needed	\$2,400.00
Have professional engineer carry out emergency inspections upon identification of severe problems	\$1,200.00
A. Total Annual Budget	\$9,600.00

STORM WATER MAINTENANCE TASKS ANNUAL BUDGET
POST CONSTRUCTION THE BUILDING OWNER IS RESPONSIBLE FOR MAINTENANCE OF THE STORMWATER SYSTEM



TEMPORARY STONE TRACKING MAT
NO SCALE

811
Know what's below.
Call before you dig.
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ANN ARBOR, MI 48104
734.994.4000

SECTION 33
TOWN 2 SOUTH, RANGE 6 EAST
CITY OF ANN ARBOR
WASHTENAW COUNTY, MICHIGAN

OX STUDIO
HENRY STREET RESIDENTIAL
PRELIMINARY SITE PLAN
DETAIL SHEET

CLIENT
DATE
AUGUST 23, 2018
10/17/18: CITY REVIEW
11/20/18: CITY REVIEW
REVISIONS
NA NA NA
N/A
DR. STK CH. ---
P.M. MB
BOOK ---
JOB 18002399
SHEET NO. 09

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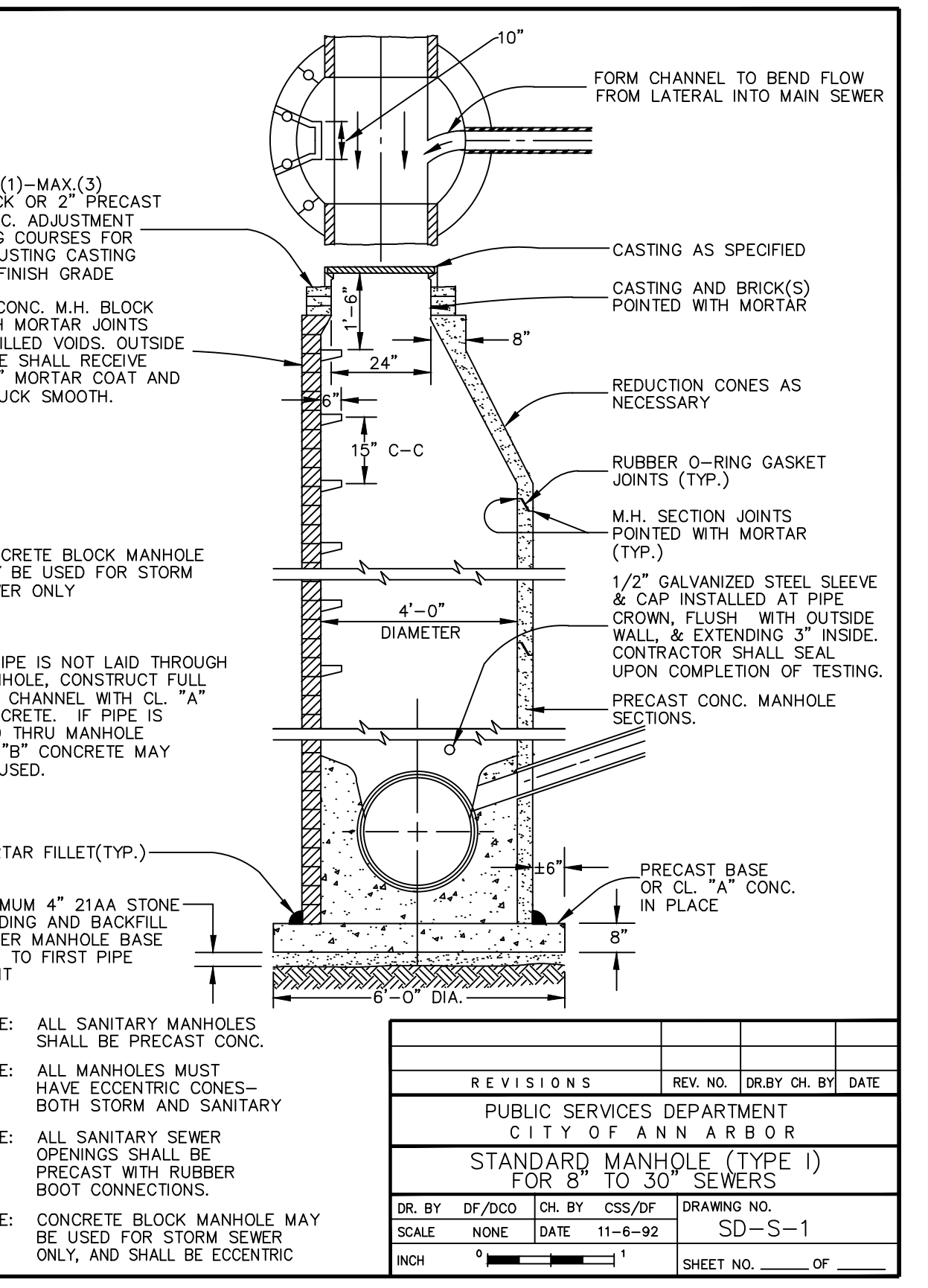
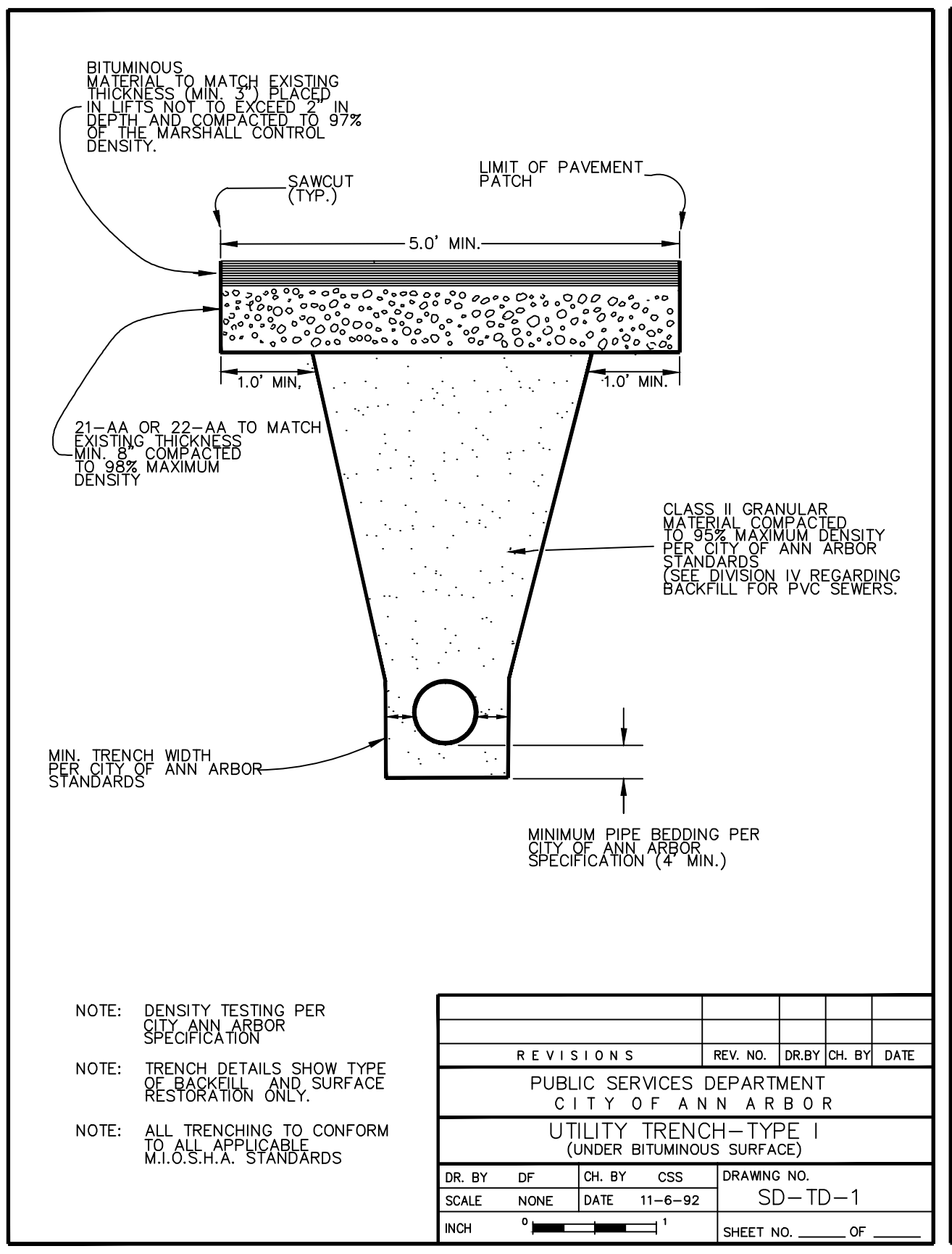
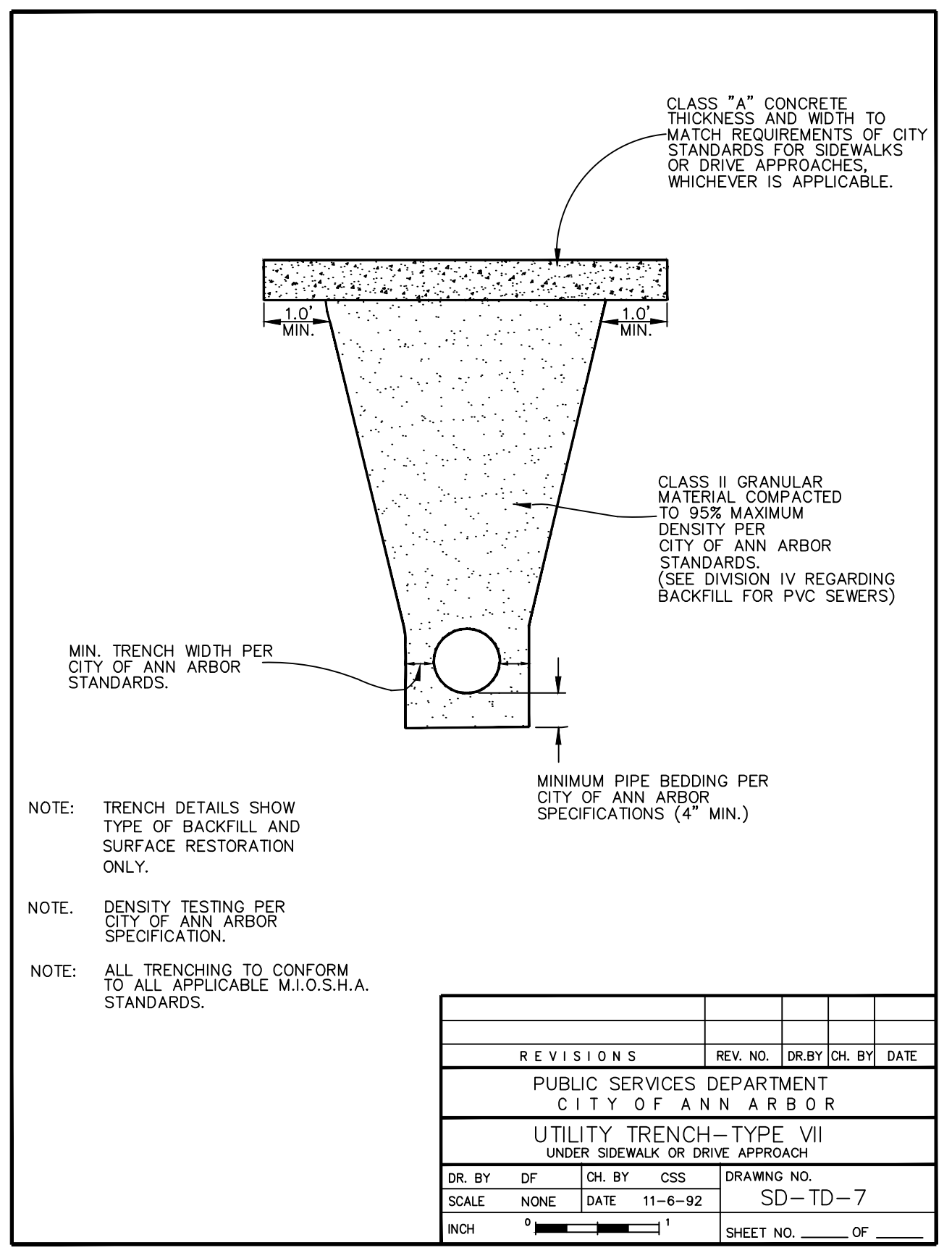
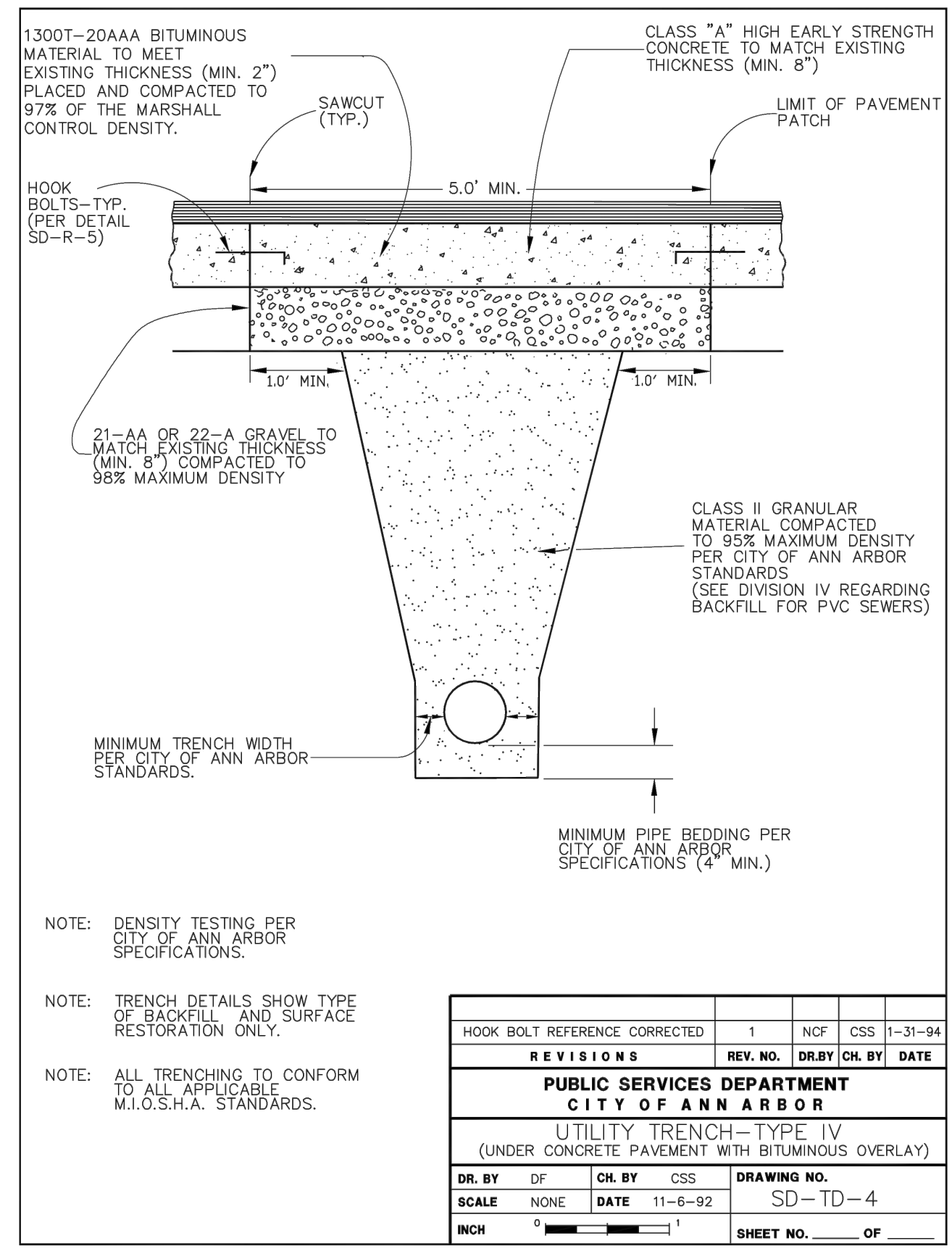
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375 N. WESTERN AVENUE
ANN ARBOR, MI 48104
734.994.4000

SECTION 33
TOWN 2 SOUTH, RANGE 6 EAST
CITY OF ANN ARBOR
WASHTENAW COUNTY, MICHIGAN

OX STUDIO
HENRY STREET RESIDENTIAL
PRELIMINARY SITE PLAN
CITY OF ANN ARBOR DETAILS

CLIENT
DATE
AUGUST 23, 2018
10/17/18: CITY REVIEW
11/20/18: CITY REVIEW

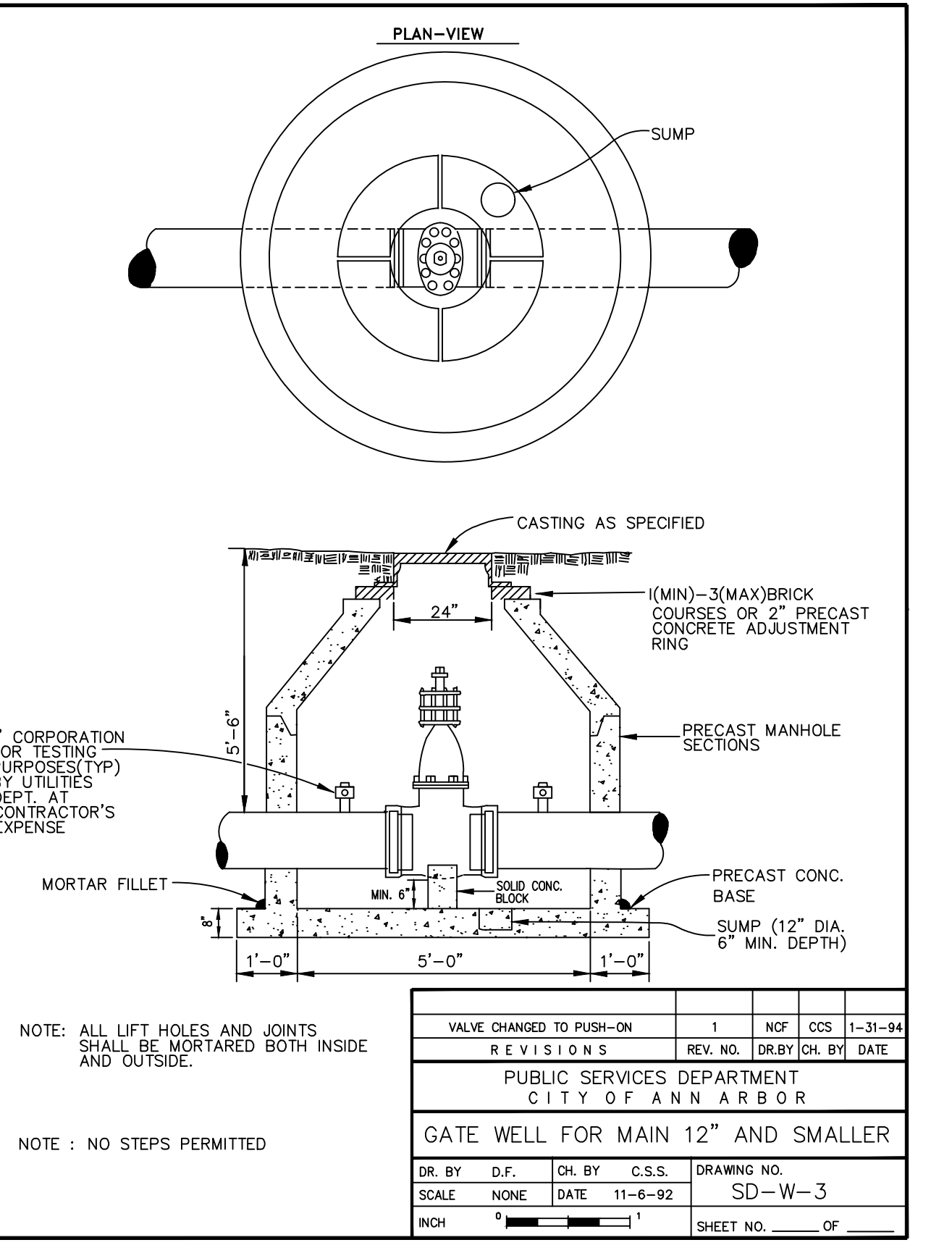
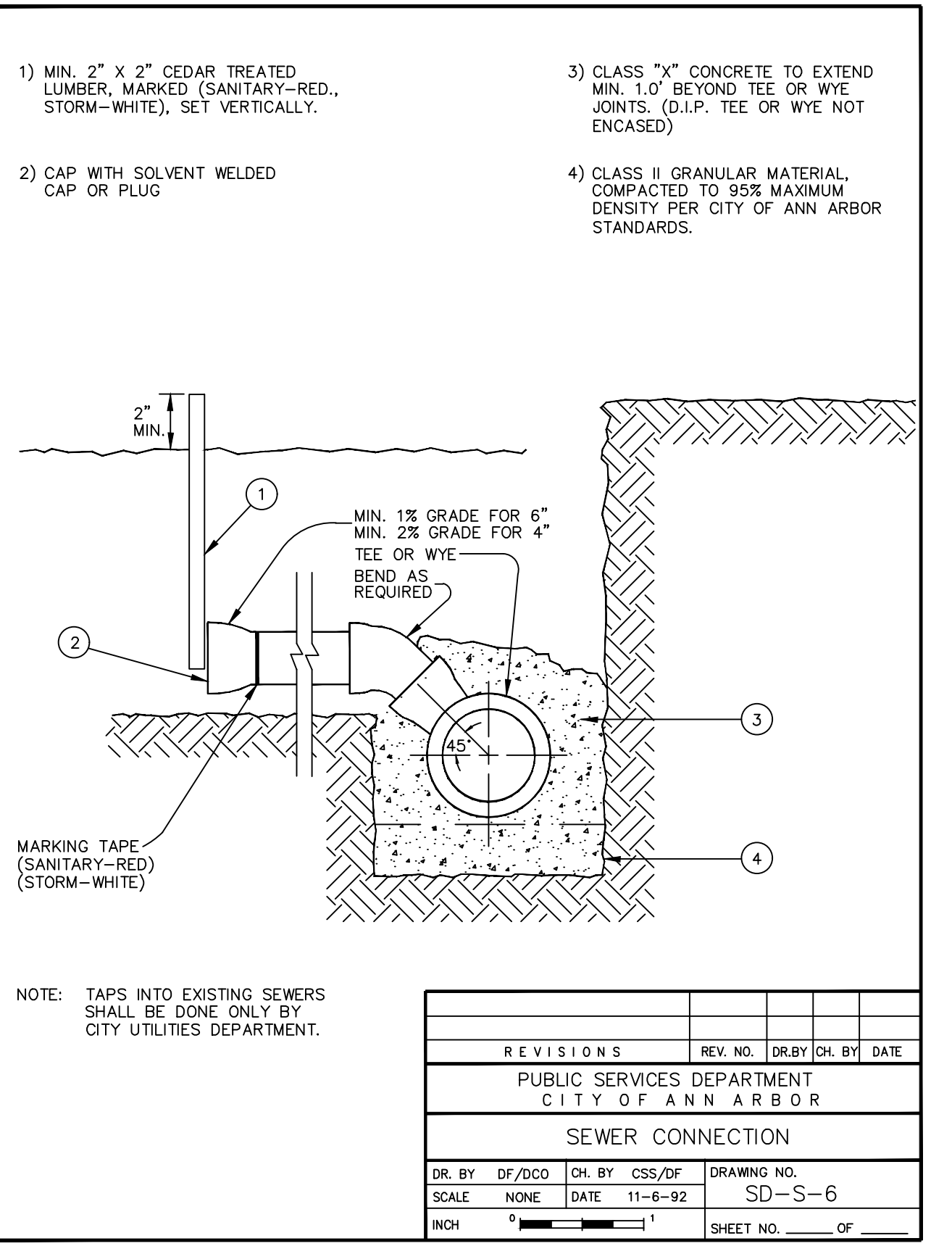
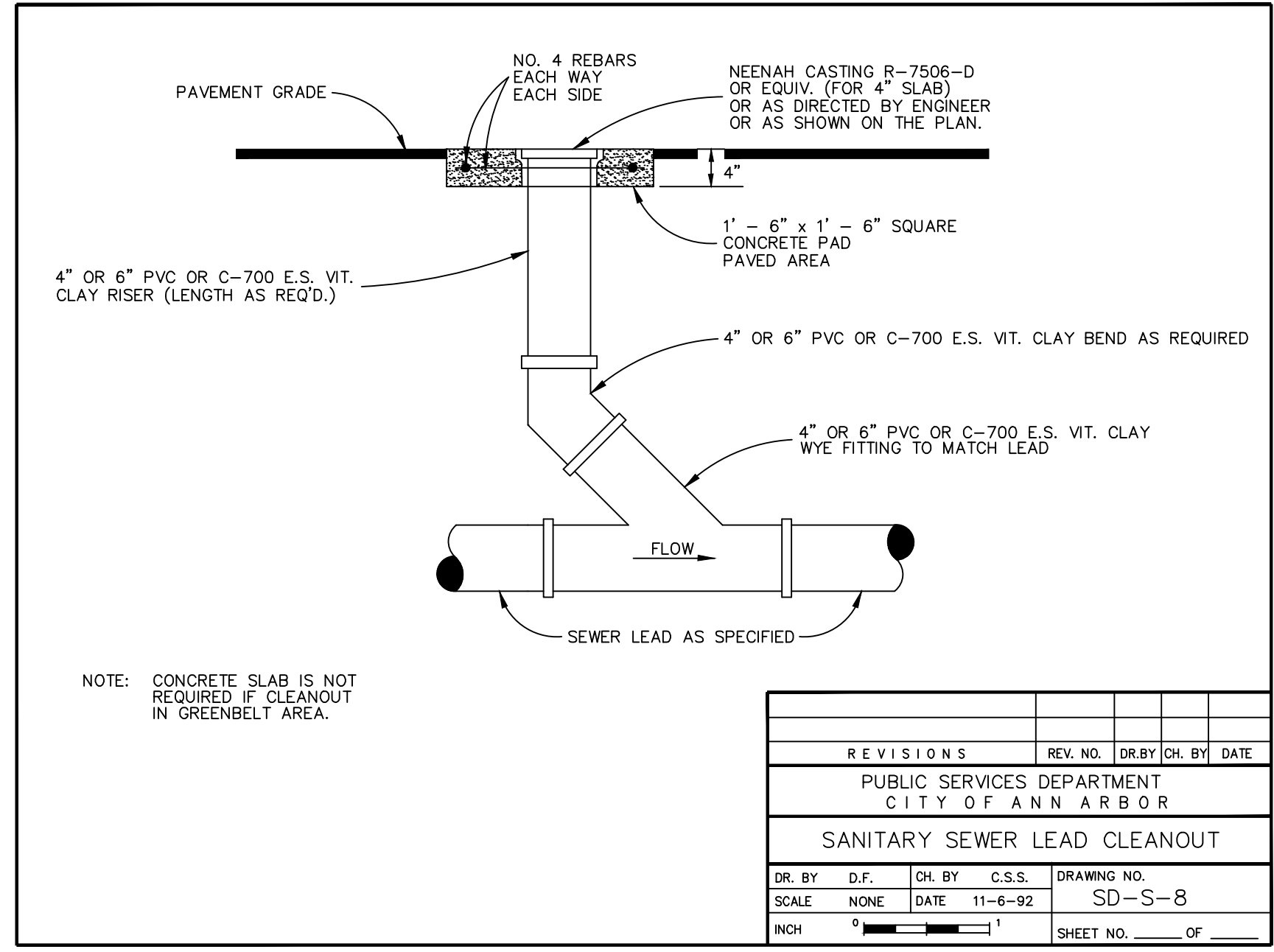
REVISIONS
NA NA NA
N/A
DR. STK CH. ---
P.M. MB
BOOK ---
JOB 18002399
SHEET NO. 10



TYPE OF CASTING	NEEHAH FOUNDRY	EAST JORDAN IRON WORKS
Barrier Curb Inlet	R-3013B, Type S grate (500 Pounds)	7045, Type M1 grate (490 Pounds)
Barrier Curb Double Inlet	R-3249F, Type S grate (410 Pounds)	N/A
Mountable Curb Inlet	R-3034B, Type S grate (500 Pounds)	7065, Type M1 grate (470 Pounds)
Gutter Inlet	R-3448C, Type S grate (285 Pounds)	5080, Type M2 grate (315 Pounds)
Gutter Double Inlet	R-3448B, Type S grate (285 Pounds)	5000, Type M2 grate (285 Pounds)
Yard Drain	R-2560-E1 (355 Pounds)	1040, Type O2 grate (355 Pounds)
Yard Drain in City Park	N/A	1040, Type M1 grate (400 Pounds)
*Manhole Frame & Cover	R-1642, Type C Cover (380 Pounds)	1040, Type A Cover (400 Pounds)
**Watertight Manhole Frame and Cover	N/A	1040-WT (400 Pounds)
Monument Box	N/A	8360 (100 Pounds)

*Frames and covers must have machined bearing surfaces. Covers must have two (2) 1" vent holes located opposite each other and 6" from the edge of the cover. Each cover shall have "Sewer", "S" or "Water", "W" cast in the surface, whichever is applicable.

**Frames and covers must have machined bearing surfaces. Each cover shall have "Sewer", "S" or "Water", "W" cast in the surface, whichever is applicable.



NOTE: THE OMISSION OF ANY CURRENT STANDARD DETAIL DOES NOT RELIEVE THE CONTRACTOR FROM THE REQUIREMENT. THE WORK SHALL BE PERFORMED IN COMPLETE CONFORMANCE WITH THE CURRENT PUBLIC SERVICES DEPARTMENT STANDARD SPECIFICATIONS AND DETAILS.

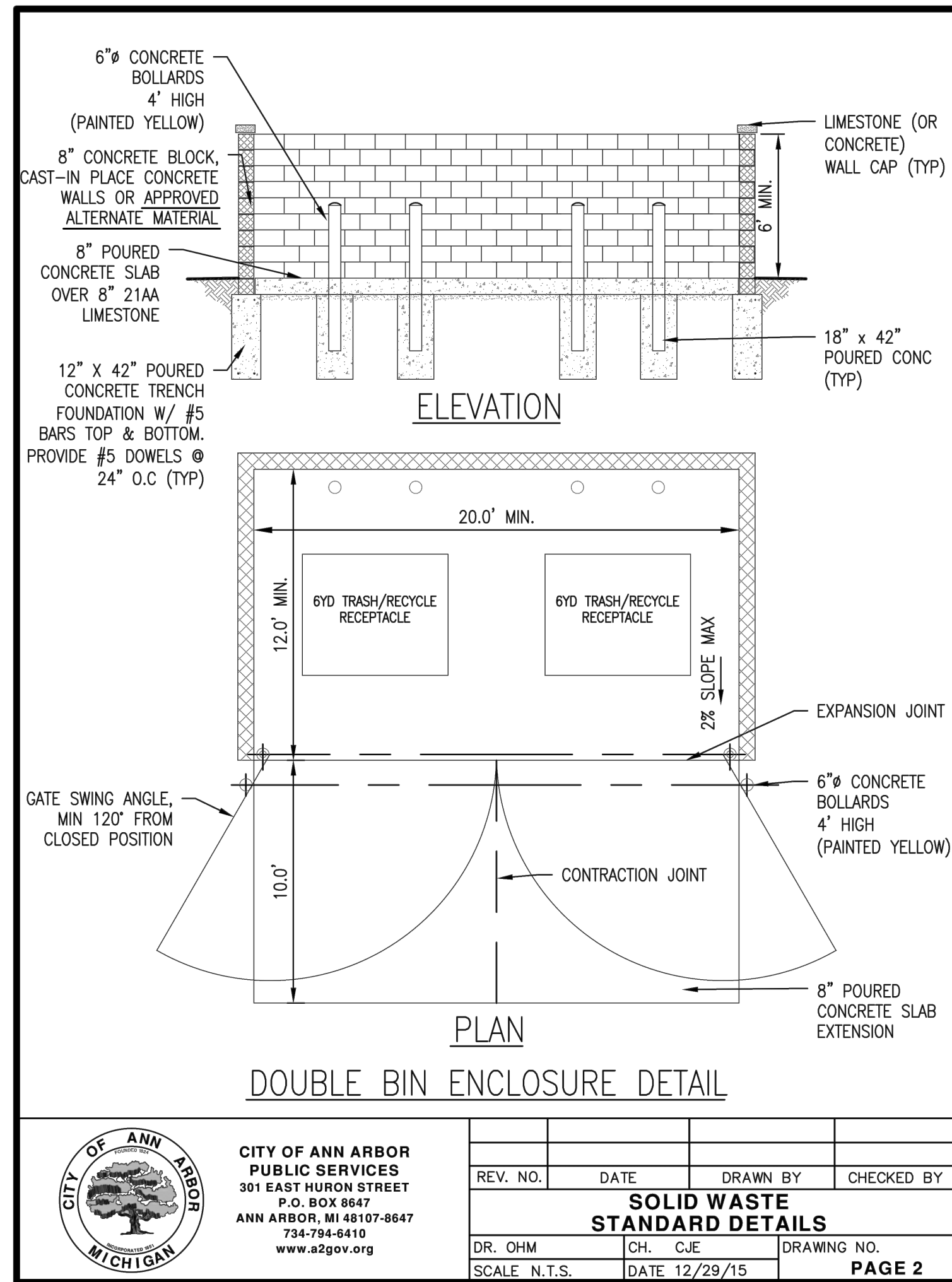
REVISIONS	REV. NO.	DR. BY	CH. BY	DATE

PUBLIC SERVICES DEPARTMENT
CITY OF ANN ARBOR

STANDARD CASTING SCHEDULE

DR. BY	JPB	CH. BY	CSS	DRAWING NO.
				SD-GU-5

SCALE NONE DATE 6-12-92 SHEET NO. OF



GENERAL NOTES:

1. 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.
2. 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.
3. 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.
4. 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.
5. GATE DESIGN SHALL INCLUDE A RELIABLE MEANS TO SECURE THE DOOR IN BOTH THE OPEN AND CLOSED POSITIONS.
6. THE CONCRETE SLAB IN FRONT OF THE BIN ENCLOSURE SHALL HAVE PAVEMENT MARKINGS TO INDICATE "NO PARKING", AS APPROVED BY CITY.
7. 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.
8. 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.
9. 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.
10. 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.

CITY OF ANN ARBOR PUBLIC SERVICES 301 EAST HURON STREET P.O. BOX 8647 ANN ARBOR, MI 48107-8647 734-794-6410 www.a2gov.org			
00	06/05/18	OHM	CJE
REV. NO.	DATE	DRAWN BY	CHECKED BY
SOLID WASTE STANDARD DETAILS			
DR. OHM	CH. CJE	DRAWING NO.	
SCALE N.T.S.	DATE 02/01/16	PAGE 5	

GENERAL NOTES CONTINUED:

11. 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.
12. FOR SITES THAT CANNOT ACCOMMODATE A TURN-AROUND, THE FOLLOWING REQUIREMENTS MUST BE MET:
 - 12.1. SOLID WASTE TRUCKS MUST BE ABLE TO SERVICE DUMPSTERS WITHOUT IMPEDING THE PUBLIC STREET OR SIDEWALK.
 - 12.2. THE DUMPSTER COLLECTION LOCATION SHALL BE CLEARLY DELINEATED AND NOT HAVE A SLOPE GREATER THAN 2% IN ANY DIRECTION.
 - 12.3. 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.
 - 12.4. ALL SWEEP-PATH CLEARANCE REQUIREMENTS PREVIOUSLY IDENTIFIED SHALL BE PROVIDED.
 - 12.5. A VERTICAL CLEARANCE OF 25 FEET SHALL BE PROVIDED ABOVE THE COLLECTION LOCATION.
13. 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.
14. 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.
15. SOLID WASTE COLLECTION LOCATIONS MUST BE LOCATED WITHIN THE BOUNDARIES OF THE PROPERTY.

CITY OF ANN ARBOR PUBLIC SERVICES 301 EAST HURON STREET P.O. BOX 8647 ANN ARBOR, MI 48107-8647 734-794-6410 www.a2gov.org			
00	06/05/18	OHM	CJE
REV. NO.	DATE	DRAWN BY	CHECKED BY
SOLID WASTE STANDARD DETAILS			
DR. OHM	CH. CJE	DRAWING NO.	
SCALE N.T.S.	DATE 02/01/16	PAGE 6	

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 BY THE OWNER OR ITS REPRESENTATIVE. 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.

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

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ATWELL
www.atwell-group.com
866.850.4200
ANN ARBOR, MI 48104
734.994.4000

SECTION 33
TOWN 2 SOUTH, RANGE 6 EAST
CITY OF ANN ARBOR
WASHTENAW COUNTY, MICHIGAN

CLIENT
OX STUDIO
HENRY STREET RESIDENTIAL PRELIMINARY SITE PLAN
CITY OF ANN ARBOR SOLID WASTE DETAILS

DATE
AUGUST 23, 2018

10/17/18: CITY REVIEW
11/20/18: CITY REVIEW

REVISIONS
NA NA NA
N/A

DR. STK CH. ---
P.M. MB
BOOK ---
JOB 18002399
SHEET NO. 11

CAD FILE: 18002399SP-08-D1.DWG

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Henry Street Residential

814-830 Henry Street - Ann Arbor, MI

Released For: Site Plan Review

Release Date: 08/20/2018

O|X Project Number: HSR18

Project Description

The proposed project is a multi-family townhome development located at the southwest intersection of Henry Streets and Industrial Highway. The site is located at a unique intersection of Ann Arbor. The uses specific to this block include single-family and multi-family projects sequestered in a landlocked district between several arterial streets - Stadium Boulevard (immediately proximate to the eastern approach rise to the Stadium bridge) to the north; State Street to the west and Industrial to the east. Surrounding land uses include large format convenience retail and entertainment (Lucky's, CVS Pharmacy, Revel & Roll) and smaller sundry retail and food service establishments that promote pedestrian interaction and connectivity throughout the entire neighborhood. Of course, the primary University of Michigan athletic campus is located along State Street connecting to both the north and south and directly accessible via both pedestrian, transit and vehicular routes.

There are both small and large apartment complexes located in proximity to the development the enhance the pedestrian character of the neighborhood. These include city-owned housing, older homes converted to multi-family residences, single family homes, and even such large apartment complexes as Woodbury Gardens. The predominant nature of the neighborhood is rental.

The overall composition of the proposed project is 11 6-bedroom townhomes seated on top of a partially below-grade parking level. The parking area is accessed via a curb cut to the western edge of the property along Henry Street with a two-way ramp for vehicular ingress and egress. 18 vehicular parking spaces are provided (17 required) within this zone along with 10 protected bicycle parking spaces (2 Type A required). Solid waste storage is provided within the ramp zone and additional utility/mechanical spaces are likewise accommodated underneath the structural plinth. Stairs are provided for exit and convenience egress and access to the parking zone.

Each townhome is designed to be a stand-alone unit, sharing only the exterior areas as collective commons space. The units are arrayed in "rows" of 5 (north) and 6 (south) unit clusters based upon a relatively common unit layout. The design accommodates a common "mews" condition that allows for communal access and gathering between the units will likewise providing additional windows for expansive daylighting and natural ventilation. Each unit will have an independent front door access from the primary frontage (north and south) condition and will likewise have a second door that is accessed from the mews area.

The typical units are conceived as three-story walk up units. The first floor will be the common living area and will include kitchen, dining and living/gathering spaces. The second and third floors are exclusively bedrooms with the second floor containing four bedrooms and four bathrooms (each bedroom has its own bathroom). The third floor, crafted out of the gable roof volume, is composed of two bedrooms sharing a common bathroom. A central stair provides access to all the floors internal to each townhome.

R4C Multi-Family Schedule of Area, Height and Placement Regulations:

Per 5:34	
Minimum Lot Area per Dwelling Unit	= 2,175 sf
Minimum Usable Open Space in Percentage of Lot Area	= 40%
Required Setback Line Minimum, Front Yard	= 25 ft
Required Setback Line Minimum, Side Yard	= 12 ft
Required Setback Line Minimum, Rear Yard	= 30 ft
Maximum Building Height in Feet	= 30 ft
Minimum Gross Lot Size, Area in Square Feet	= 8,500 sf
Minimum Gross Lot Size, Width in Feet	= 60 ft

Existing Front Yard Setback Table:

Per 5:57. - Averaging an existing front setback line:

In a residential zoning district, where the average of the established front setbacks of structures on all adjacent lots, which are located within 100 feet of either side of a lot and on which there are existing buildings, is greater than the required front setback specified in this chapter, a required setback line shall be provided on the lot equal to this greater average depth but not to exceed 40 feet. Where such average of the established front setbacks is less than minimum required front setback, the required setback line may be reduced to this lesser average depth, but in no case to less than 10 feet. For the purpose of computing such average, an adjacent vacant lot shall be considered as having the minimum required front setback specified for that zoning district, in which it is located.

Address	Existing Front Setback	Address	Existing Front Setback
812 Henry St	19' - 1"	S Industrial Hwy	24' - 5"
810 Henry St	16' - 8"	S Industrial Hwy	22' - 5"
808 Henry St	25' - 0"		
Average Setback:	20' - 3"	Average Setback:	23' - 5"

Side Yard Setback Calculation:

Per 5:34 R4C - Building Setbacks:

(1) In the R3, R4A, R4B, R4C, R4D, and R4E multiple family dwelling districts, the required side setback line minimum dimension, as set forth in the schedule of area, height and placement regulations (sections 5:25 through 5:49), shall be increased 3 inches for each foot of building height above 35 feet and 1 1/2 inches for each foot of building length over 50 feet. The rear required setback line the minimum dimensions, as set forth in the schedule of area, height and placement regulations (section 5:25 through 5:49), shall be increased 1 1/2 inches for each foot of building height over 35 feet and 1 1/2" for each foot of building width over 50 feet. The building length shall be the dimension of that side, which is parallel to the side lot line, of a rectangle within which the building may be located. The building width shall be the dimension of that side which is parallel to the front lot line, of a rectangle within which the building may be located.

Building Length = 122' - 0" --> 122' - 50' = 72' --> 1.5" x 72 = 108" or 9' --> Side Yard Setback = 12' + 9' = 21'

Project Team

Owner: Prentice Partners (824 Henry, LLC)
Contact: Heidi Mitchell
17 Canyon Lake Drive, Port Costa, CA 94569
(614) 205-2509
hcaroline19@gmail.com

Architect: O|X Studio, Inc.
Contact: Robb Burroughs, RA
302 S. State St., Suite B, Ann Arbor, MI 48104
(734) 929-9000
Robb@oxstudioinc.com

Civil Engineer: Atwell, LLC
Contact: Matt Bush, PE, LEED AP
311 North Main St., Ann Arbor, MI 48104
(810) 923-6878
mbush@atwell-group.com

Structural Engineer: TBD

MEP Engineer: TBD

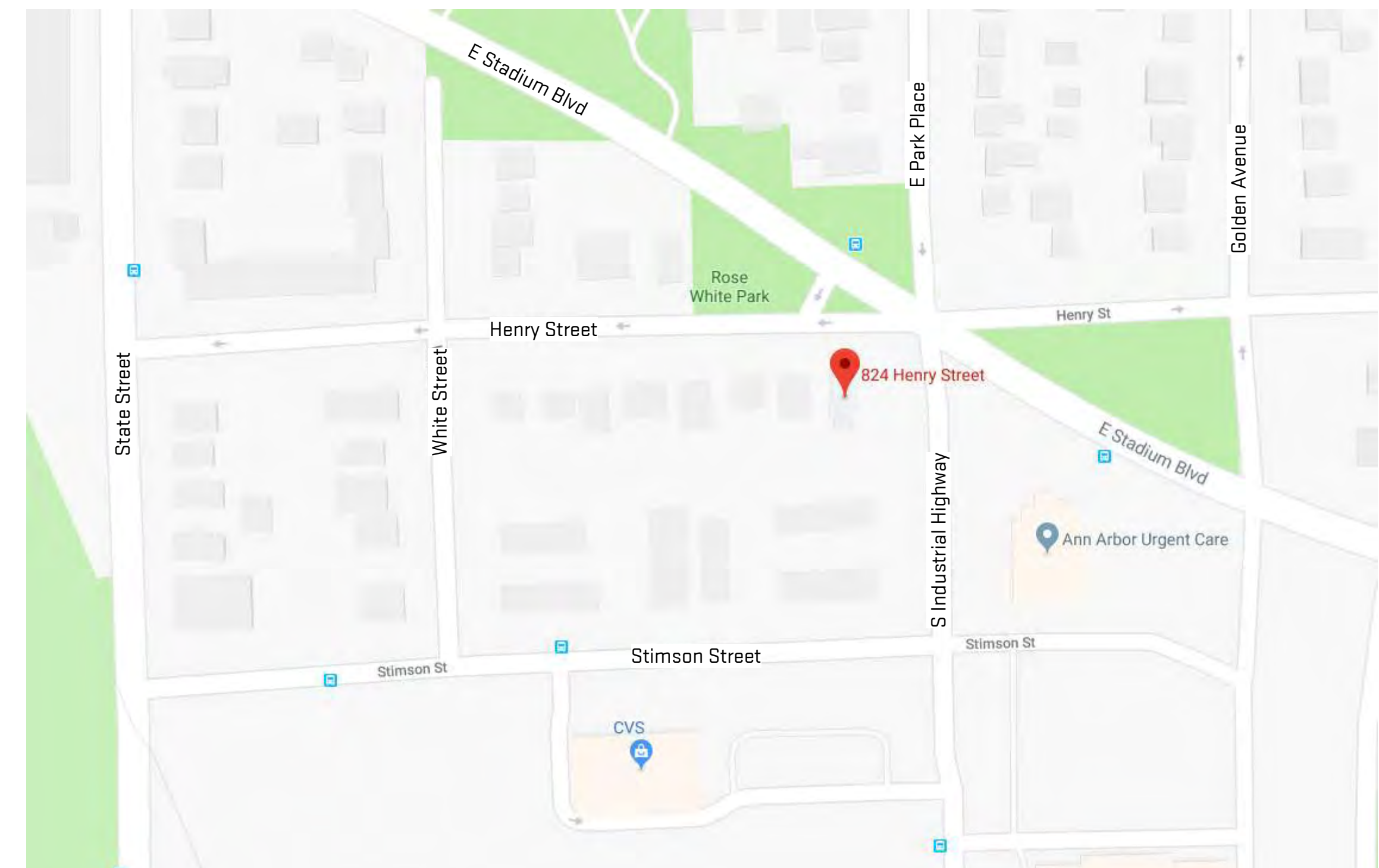
General Contractor: TBD

Area Tabulation:

Garden Level/Parking:	11,370 sf (covered under concrete plinth)
Level 1:	9,987 sf
Level 2:	10,424 sf
Level 3:	6,033 sf
TOTAL AREA:	37,814 sf

Drawing List

Sheet Number	Sheet Name	Current Revision Description	Current Revision Date
Architectural			
A-01	Title Sheet	Site Plan Review	08/20/2018
A-02	Unit Plans	Site Plan Review	08/20/2018
A-03	Typical Unit Floor Plans	Site Plan Review	08/20/2018
A-04	Exterior Elevations	Site Plan Review	08/20/2018
A-05	Building Section	Site Plan Review	08/20/2018
A-06	Exterior Rendering	Site Plan Review	08/20/2018
A-07	Exterior Rendering	Site Plan Review	08/20/2018



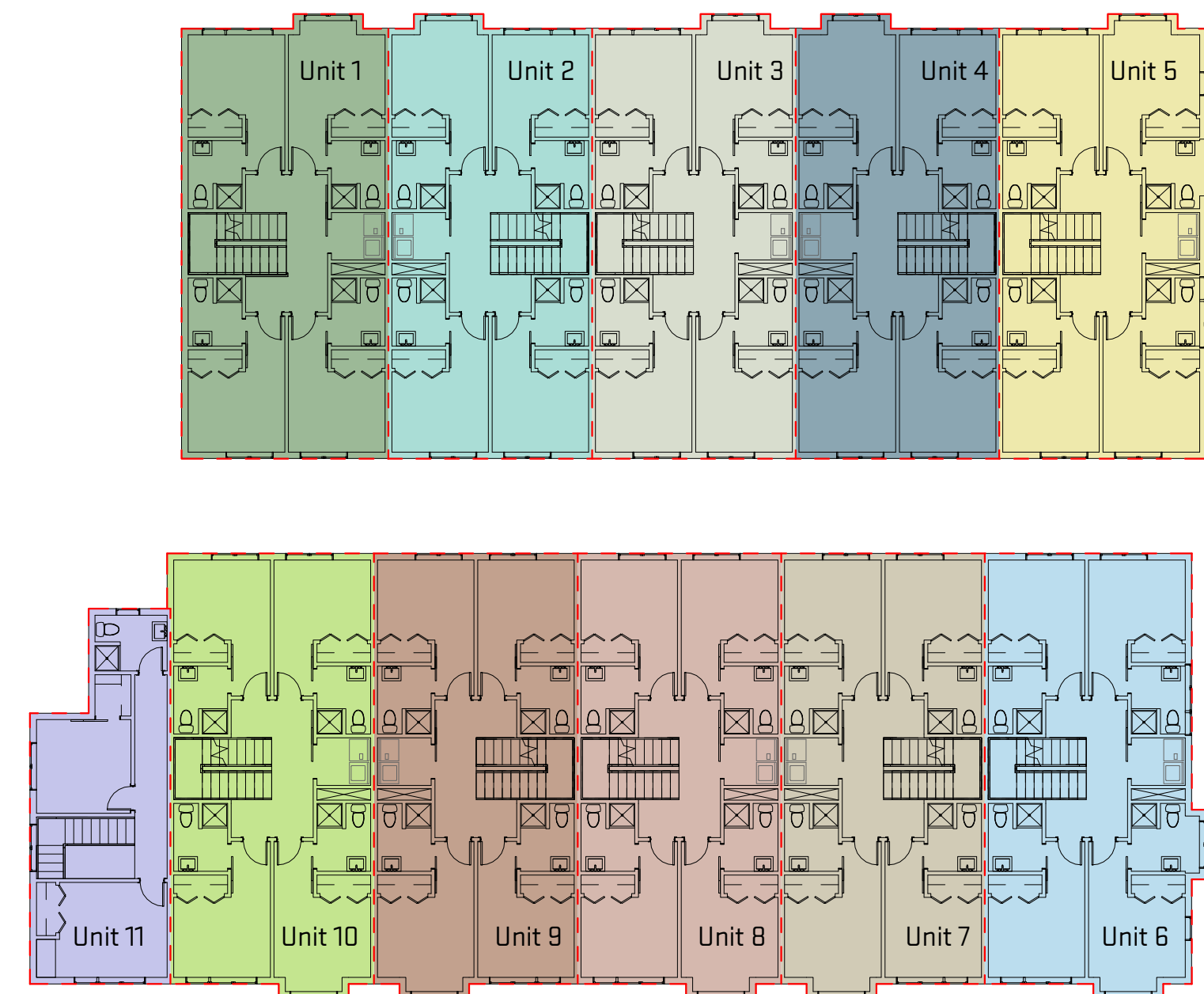
Vicinity Map

Scales listed are for 22x34 drawing size





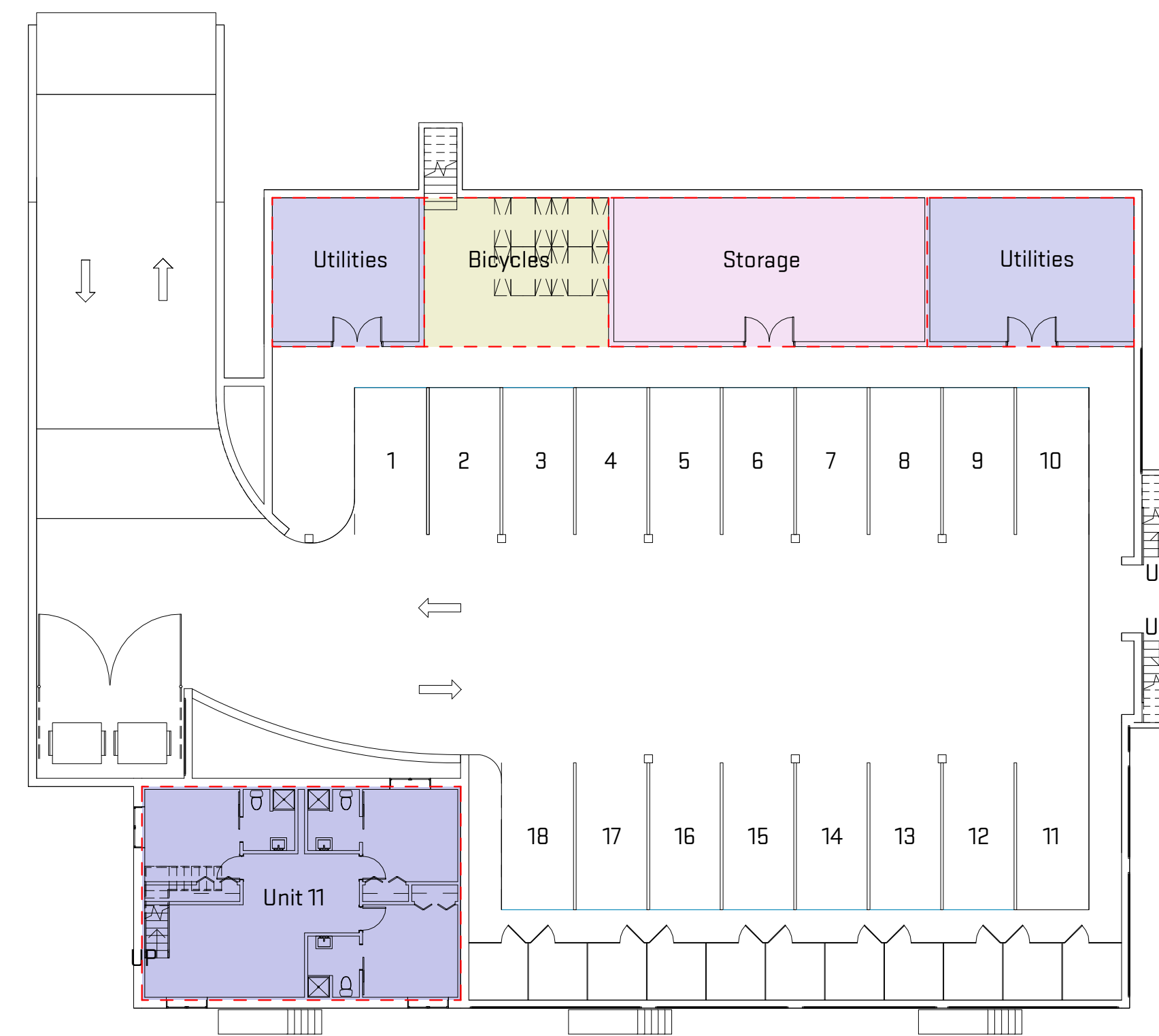
4 Level 3 Units
A-02 1/16" = 1'-0"



3 Level 2 Units
A-02 1/16" = 1'-0"



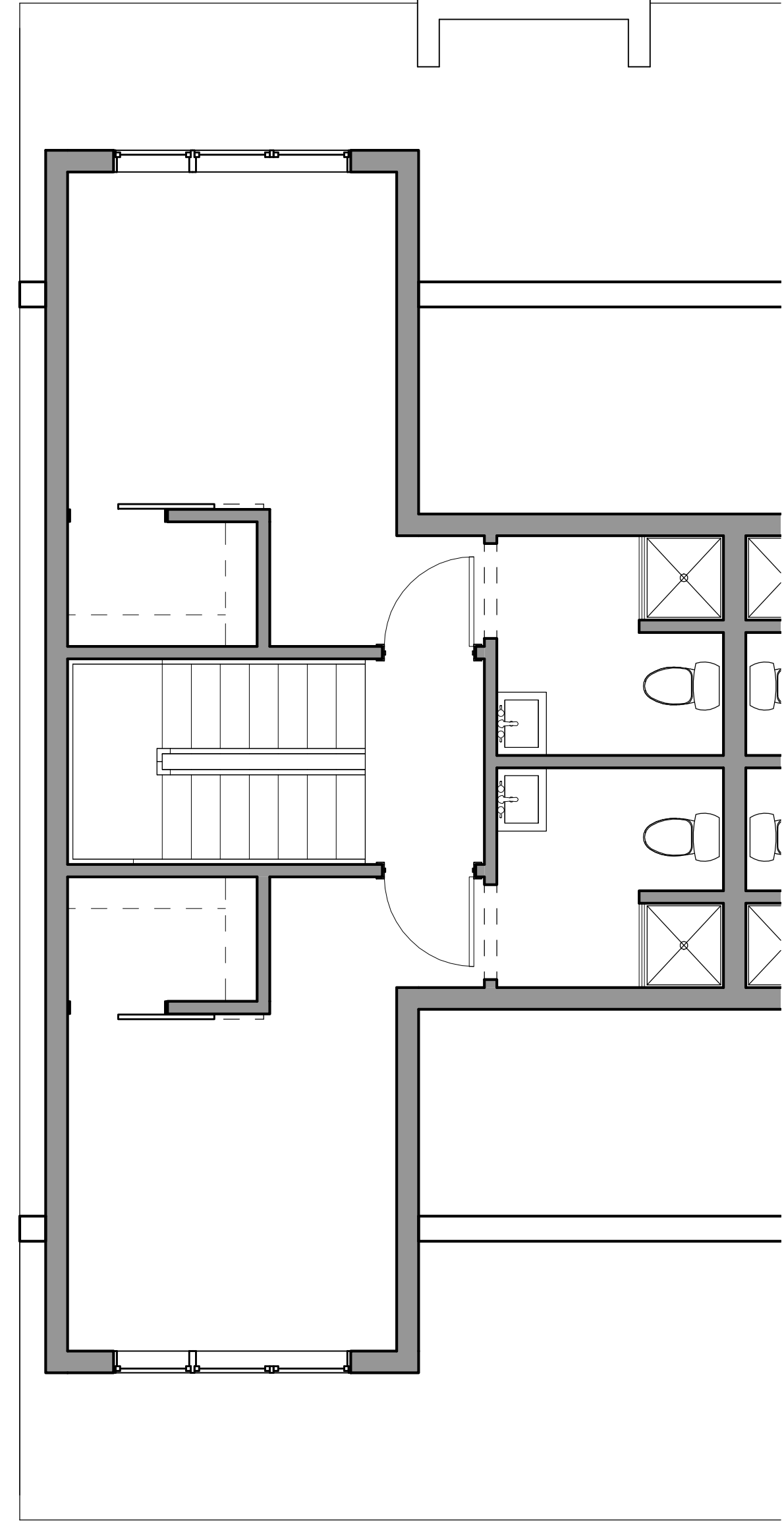
2 Level 1 Units
A-02 1/16" = 1'-0"



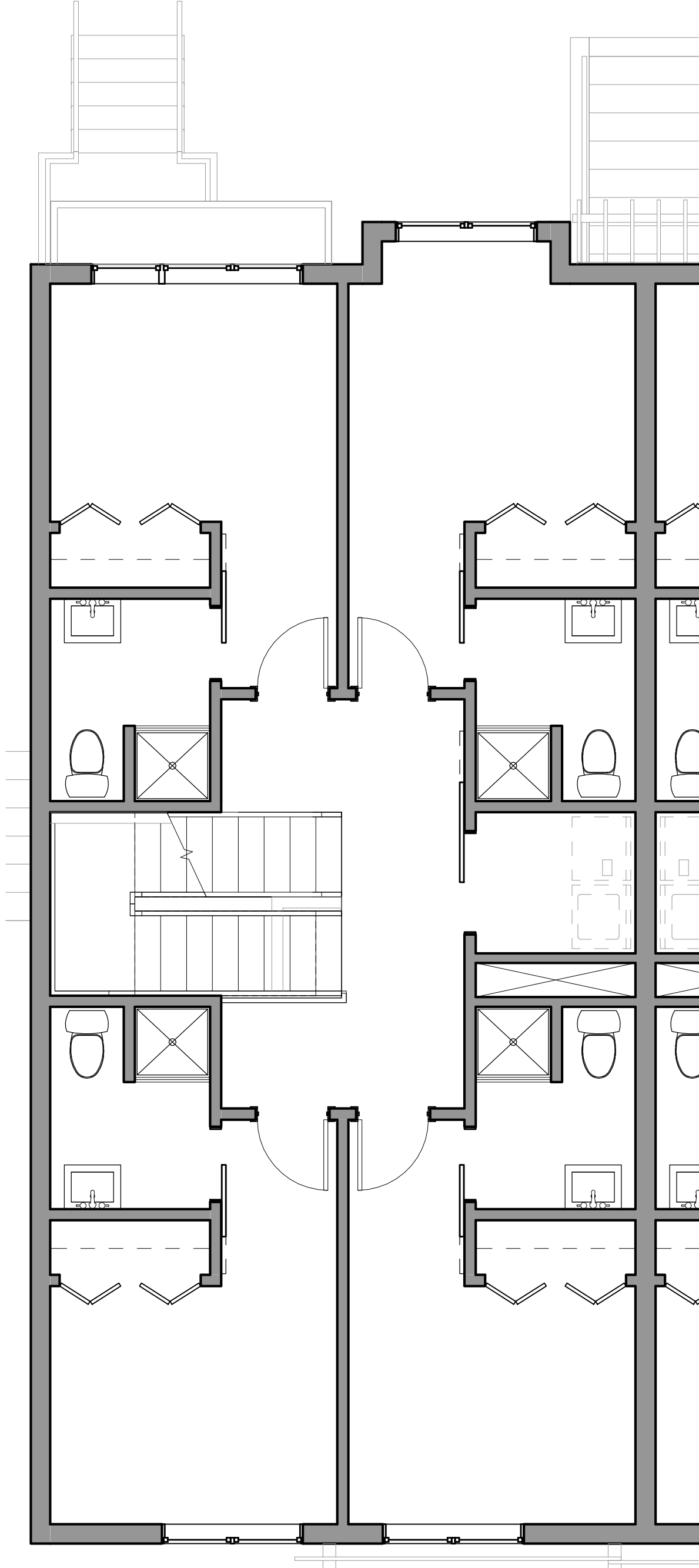
1 Lower Level Units
A-02 1/16" = 1'-0"

Scales listed are for 22x34 drawing size

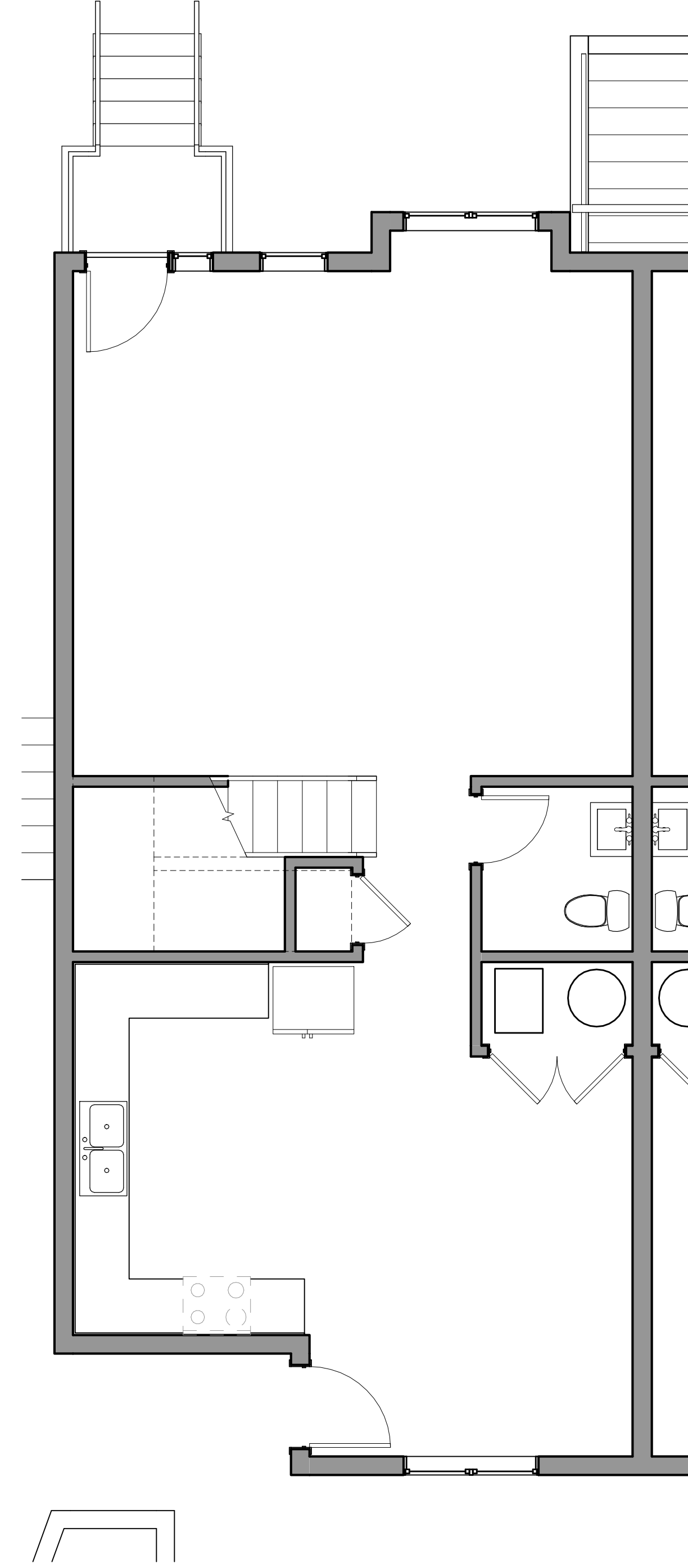




3 Level 3 Floor Plan
A-03 1/4" = 1'-0"



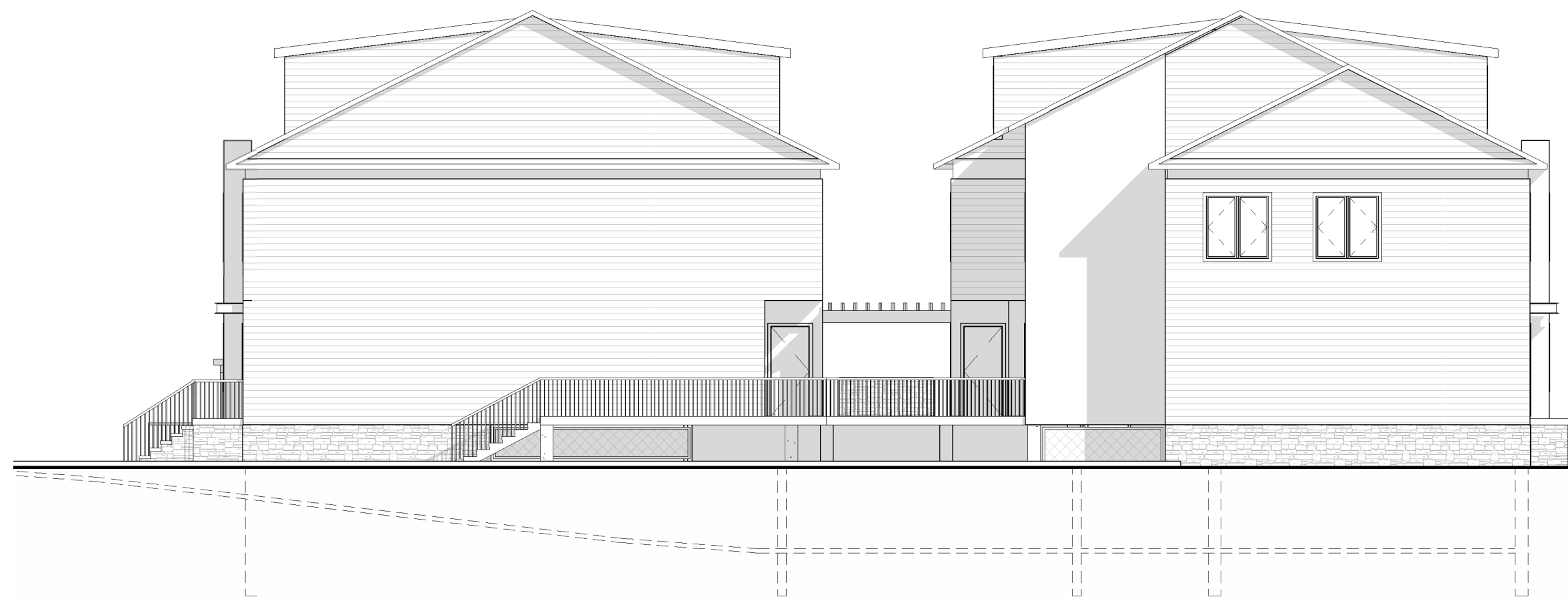
2 Level 2 Floor Plan
A-03 1/4" = 1'-0"



1 Level 1 Floor Plan
A-03 1/4" = 1'-0"

Scales listed are for 22x34 drawing size

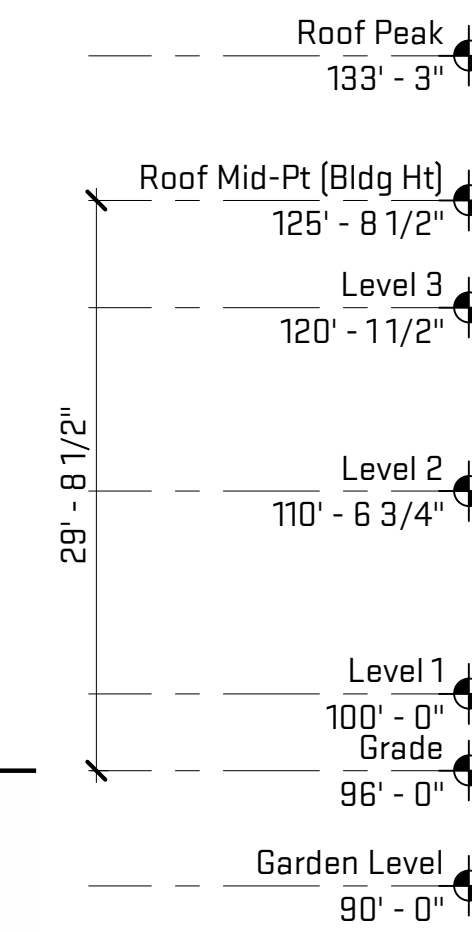




4 West Elevation
A-04 1" = 10'-0"



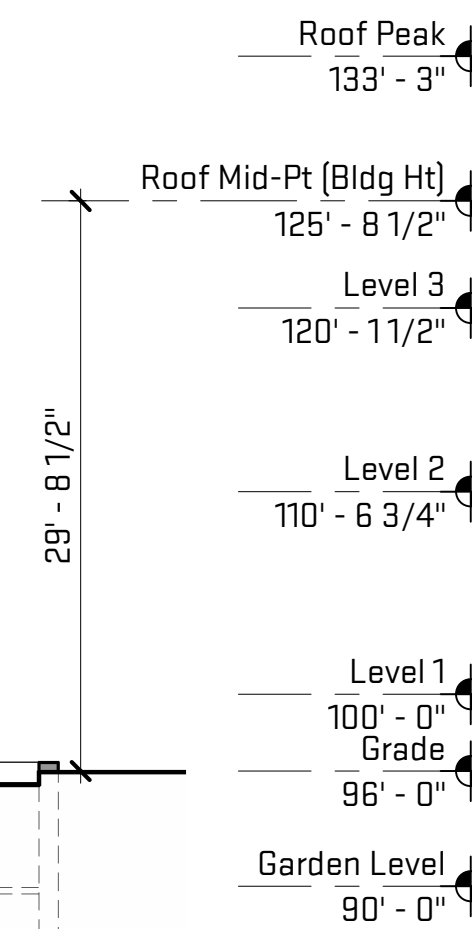
3 South Elevation
A-04 1" = 10'-0"



2 East Elevation
A-04 1" = 10'-0"



1 North Elevation
A-04 1" = 10'-0"



Released For: Site Plan Review



1 Building Section - North/South
 A-05 1/4" = 1'-0"

Scales listed are for 22x34 drawing size

Released For: Site Plan Review

Job Title: Henry Street Residential

OIX STUDIO INC.



A-05



Aerial View



Aerial View



View from Industrial Hwy



View from Henry St





View from Industrial Rd

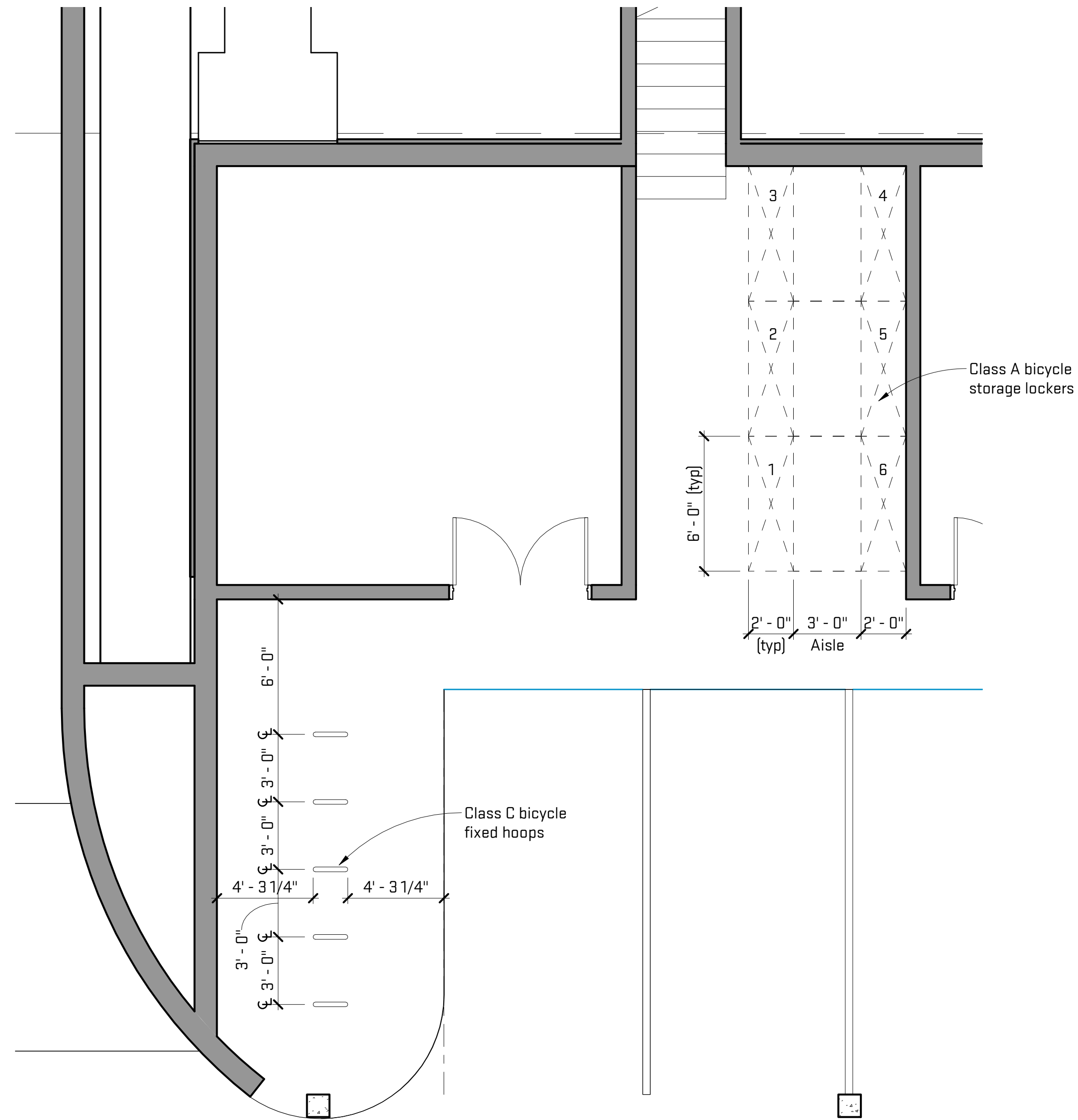


View Along Mews Entrance



View from Tenant Entries





1 Bicycle Storage Plan
A-08 1/4" = 1'-0"

Bicycle Parking Facilities:

Per 5:167:

R4C
Required Bicycle Spaces: 1 space per 5 units
Required Bicycle Class: A - 50%, C - 50%

11 Units = 3 bicycle spaces required

Provided:
(6) Class A + (5) Class C = 11 bicycle spaces provided

Bicycle Parking Facilities:

Per 5:168.1: Design of Bicycle Parking Facilities

Facility standards. When bicycle spaces are required by this chapter, the total number of spaces shall be provided by 1 or a combination of the following 3 classifications of bicycle facilities in accordance with section 5:167.

Class A (medium to long-term parking)—Enclosed bicycle storage —Enclosed bicycle storage shall be in the form of individual enclosed storage lockers, an enclosed bicycle parking shed, a room within a building which contains individual storage lockers or rack spaces, or individual private garages. All types of enclosed bicycle storage shall be easily accessible, secure, well lighted and weather resistant. If racks within a room are used, 1 standard bicycle parking space shall consist of a space not less than 2 feet wide by 6 feet long with a minimum clear access aisle width of 3 feet. Credit can be extended for creative designs that use the available space more efficiently and store the equivalent number of bicycles in a smaller area. Asphalt, concrete, porous pavement, pavers or brick shall connect the enclosed bicycle storage area to a sidewalk or driveway. Enclosed bicycle storage constructed exterior to a building shall comply with the zoning regulations for accessory structures.

Class B (short to medium-term parking)—Covered bicycle racks —Covered bicycle racks, such as hoop style racks or another type of rack that meets these standards, shall be securely anchored in pavement and designed so that both wheels and the frame of a bicycle may be securely locked with either a chain, cable or padlock. One standard bicycle parking space shall consist of a space not less than 2 feet wide by 6 feet long with a minimum clear access aisle width of 3 feet. Credit can be extended for creative designs that use the available space more efficiently and store the equivalent number of bicycles in a smaller area. Pavement shall meet city public services department standards. The racks shall be covered by a building overhang or a self-standing cover with a minimum clearance of 7 feet above grade. Asphalt, concrete, porous pavement, pavers or brick shall connect the covered bicycle racks to a sidewalk or driveway. All covered bicycle racks shall comply with zoning regulations for accessory structures.

Class C (short-term parking)—Fixed bicycle racks —Fixed bicycle racks, such as hoop style racks or another type of rack that meets these standards, shall be securely anchored in pavement and designed so that both wheels and the frame of a bicycle may be securely locked with a chain, cable or padlock. One bicycle parking space shall consist of a space not less than 2 feet wide by 6 feet long with a minimum clear access aisle width of 3 feet. Pavement shall meet City Public Services Department standards. Asphalt, concrete, porous pavement, pavers or brick shall connect the fixed bicycle racks to a sidewalk or driveway.

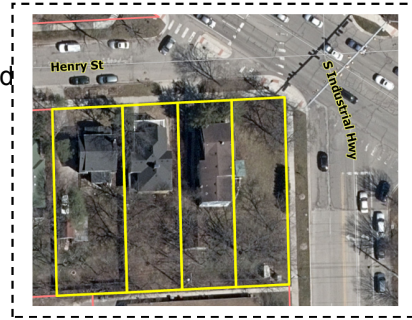


NOTICE OF THE HENRY TOWNHOUSES

Citizen Participation Opportunity

Postcards are sent to all property owners within 500 feet of a project site to give notice that a project petition has been submitted on 08/23/18. This postcard is intended to invite you to contact project developers so that you can learn, ask questions, and express concerns regarding the proposed project. Your comments will be considered by the developer when finalizing plans and then incorporated into a report for City Planning Commission.

Project Location



Project Description

The Petitioner has respectfully submitted plans to the City for the redevelopment of the properties located at 814, 818, 824/830 Henry Street for the purposes of constructing eleven townhomes situated over partial below grade parking.

Questions or Comments

Questions or comments may be directed *Heidi Mitchell* at 830henrystreet@gmail.com or during business hours at (614) 205-2509.

Return Address

*Prentice Partners Ann Arbor, LLC
PO Box 70
Port Costa, CA 94569*

Proposed Site Plan for City Council Approval

In accordance with the City of Ann Arbor's Citizen Participation Ordinance, you are being notified that a proposal for *Site Plan Approval* has been submitted to the City of Ann Arbor's Planning Department. Details about how you can learn more and comment upon this project are described on the opposite side of this card. Visit www.a2gov.org/participation for more information about citizen participation in Ann Arbor.



Place address label here

830 HENRY - DEVELOPMENT AGREEMENT

THIS AGREEMENT, made this ____ day of _____, 2019, by and between the City of Ann Arbor, a Michigan municipal corporation, with principal address at 301 East Huron Street, Ann Arbor, Michigan 48107, hereinafter called the CITY; and Prentice Partners Ann Arbor, LLC, a Wyoming Foreign Limited Liability Corporation, with principal address at 4420 Jackson Rd., Suite 102, Ann Arbor, MI 48103, hereinafter called the DEVELOPER, witnesses that:

WHEREAS, the DEVELOPER owns certain land in the City of Ann Arbor, described below and site planned as 830 Henry Street, and

WHEREAS, the DEVELOPER has caused certain land in the City of Ann Arbor, described below to be surveyed, mapped and site planned as 830 Henry Street, and desires site plan and development agreement approval thereof, and

WHEREAS, the CITY desires to ensure that all of the Improvements required by pertinent CITY ordinances and regulations be properly made, and that the DEVELOPER will install these Improvements prior to any permits being issued.

THE DEVELOPER(S) HEREBY AGREE(S):

(P-1) To install all water mains, storm sewers, and sanitary sewers, pursuant to CITY approved plans and specifications, necessary to connect the site with existing CITY systems adjacent to the site prior to the issuance of any building permits.

(P-2) To indemnify, defend and hold the CITY harmless from any claims, losses, liabilities, damages or expenses (including reasonable attorney fees) suffered or incurred by the CITY based upon or resulting from any acts or omissions of the DEVELOPER, its employees, agents, subcontractors, invitees, or licensees in the design, construction, maintenance or repair of any of the Improvements required under this Agreement and the approved site plan.

(P-3) For the benefit of the residents of the DEVELOPER'S development, to make a park contribution of \$6,875 to the CITY Parks and Recreation Services Unit prior to the issuance of certificates of occupancy for Improvements to Frisinger or Rose White Parks.

(P-4) To construct, repair and/or adequately maintain on-site storm water management system. If the DEVELOPER fails to construct, repair and/or maintain the private storm water management system, the CITY may send notice via first class mail to the DEVELOPER at the address listed above, requiring it to commence and complete the items stated in the notice within the time set forth in the notice. The CITY may cause the work to be completed at the expense of the DEVELOPER if the DEVELOPER does not complete the work within the time set forth in the notice.

(P-5) After construction of the private on-site storm water management system, to commission an annual inspection of the system by a registered professional engineer evaluating

its operation and stating required maintenance or repairs, and to provide a written copy of this evaluation to the CITY Public Services Area.

(P-6) To remove all discarded building materials and rubbish from the development at least once each month during construction of the development Improvements, and within one month after completion or abandonment of construction.

(P-7) No lot in 830 Henry may be divided such that an additional building parcel is created.

(P-8) DEVELOPER is the sole title holder in fee simple of the land described below except for any mortgage, easements and deed restrictions of record and that the person(s) signing below on behalf of DEVELOPER has legal authority and capacity to enter into this Agreement for DEVELOPER.

(P-9) Failure to construct, repair and/or maintain the site pursuant to the approved site plan and/or failure to comply with any of this approved Agreement's terms and conditions shall constitute a material breach of the Agreement and the CITY shall have all remedies in law and/or in equity necessary to ensure that the DEVELOPER complies with the approved site plan and/or the terms and conditions of the approved Agreement. The DEVELOPER shall be responsible for all costs and expenses including reasonable attorney fees incurred by the CITY in enforcing the terms and conditions of the approved site plan and/or Agreement.

(P-10) In addition to any other remedy set forth in this Agreement or in law or equity, if DEVELOPER fails to make a timely or full payments to the CITY as set forth elsewhere in the Agreement to the CITY in the agreed upon manner, any unpaid amount(s) shall become a lien, as provided under Ann Arbor City Code and recorded with the Washtenaw County Register of Deeds, against the land described below and may be placed on the CITY tax roll as a single lot assessment, or if the development is converted to condominium ownership, every owner of a portion of the property shall pay a pro-rata share of the amount of the payments attributable to each condominium unit. If the unpaid amount(s), in whole or in part, has been recorded as a lien on the CITY'S tax roll and with the Washtenaw County Register of Deeds, upon payment of the amount in full along with any penalties and interest, the CITY, upon request, will execute an instrument in recordable form acknowledging full satisfaction of this condition.

(P-11) To pay for the cost of recording this Agreement with the Washtenaw County Register of Deeds, and to pay for the cost of recording all documents granting easements to the CITY.

THE CITY HEREBY AGREES:

(C-1) In consideration of the above undertakings, to approve the 830 Henry Street Site Plan.

(C-2) To use the park contribution described above for Improvements to Rose White and/or Frisinger Park.

(C-4) To provide timely and reasonable CITY inspections as may be required during construction.

(C-5) To record this Agreement with the Washtenaw County Register of Deeds.

(C-6) Other items as needed.

GENERAL TERMS

Both the DEVELOPER and the CITY agree as follows:

(T-1) This Agreement is not intended to create a contractual right for third parties.

(T-2) This Agreement and any of its terms, conditions, or provisions cannot be modified, amended, or waived unless in writing and unless executed by both parties to this Agreement. Any representations or statements, whether oral or in writing, not contained in this Agreement shall not be binding on either party.

(T-3) This Agreement and any of its terms or conditions shall not be assigned or transferred to any other individual or entity unless prior approval of the CITY is received. Such approval shall not be withheld unreasonably.

(T-4) The obligations and conditions on the DEVELOPER, as set forth above in this Agreement and in the approved site plan, shall be binding on any successors and assigns in ownership of the following described parcel:

City of Ann Arbor, Washtenaw County, Michigan

THE LAND SITUATED IN THE CITY OF ANN ARBOR, COUNTY OF WASHTENAW, STATE OF MICHIGAN IS DESCRIBED AS FOLLOWS:

THE EAST 15.95 FEET OF LOT 5 AND ALL OF LOTS 6, 7 AND 8, BLOCK 9, HAMILTON ROSE AND SHEEHAN'S ADDITION, ACCORDING TO THE RECORDED PLAT THEREOF, AS RECORDED IN LIBER 1 OF PLAT(S), PAGE 24, WASHTENAW COUNTY RECORDS.

Parcel ID Nos.:09-09-33-316-007
09-09-33-316-008
09-09-33-316-009
09-09-33-316-010

(T-5) In addition to any other remedy in law or in equity failure to comply with all of the above paragraphs on the part of the DEVELOPER, or any part of the approved site plan, in part or in whole, shall give the CITY adequate basis and cause to issue a stop work order for any previously-issued building permits and shall be an adequate basis and cause for the CITY to deny the issuance of any building permits, certificates of occupancy, or any other permits unless and until the CITY has notified the DEVELOPER in writing that the DEVELOPER has satisfactorily corrected the item(s) the DEVELOPER has failed to perform.

(T-6) This Agreement shall be interpreted, enforced and governed under the laws of the State of Michigan and Ann Arbor City Code.

CRITERIA FOR RESIDENTIAL PARKING

1. Each requesting area must have a neighborhood association registered with the City's Planning and Development Services Unit.
2. Each association will be responsible for contacting residents, circulating a petition, and obtaining signatures for 60% or more of the households in the area. In these criteria, "household" means street address; "area" is defined as a residence with a street address on a street being requested for residential parking.
3. The petition must specify a requested maximum time limit beyond which it will be illegal to park a vehicle without first obtaining and displaying a valid residential parking permit for that specific zone.
4. The petition must encompass a minimal area of four square blocks, 16 block faces, or equivalent area or distance, all contiguous and all zoned for residential uses. This requirement may be amended by staff due to extenuating circumstances unique to a specific area.
5. Each applicant must be able to show proof of residency and must live in the residential parking permit area.
6. Except as otherwise specifically provided in these criteria, annual residential permits will be issued on the basis of a maximum of one (1) permit per vehicle per applicant residing within the parking district. For Group Housing within a parking district, the City will only accept applications from the management company or designee, completed with resident, residence, and vehicle information.
7. Each vehicle must be registered to the applicant, spouse, or licensed dependent living at the address (or parent of the student applicant). If a resident drives an employer assigned vehicle, the resident must provide written documentation of this assignment from their employer in addition to a copy of the vehicle registration.
8. Applicant's vehicle must be free of all outstanding parking violations prior to receiving a permit.
9. Applicants must pay the required fee as determined by Council Resolution. Residents with handicapper permits shall have their fee waived. Upon proof of financial hardship the Administrator may authorize fees to be reduced or canceled.
10. Applicant must permanently affix the permit in the area specified on the application.
11. Annual residential permits become null and void if found on a vehicle other than the one listed on the application.
12. Annual residential permits are available to residents only.
13. In neighborhoods contiguous with the University of Michigan central campus and designated by the City for residential parking, in addition to all other criteria contained in these guidelines, a maximum of four (4) permits will be issued per household. Also in these neighborhoods, for the sole purpose of issuing permits, "duplex" and "Group Housing" (such as a fraternity or sorority) will be considered as two households and be eligible for up to 8 permits. The management company of a Group Housing household may request, in writing, an increase from the limit of 8 permits to the number of legal on-street parking spaces, as verified by City staff, that exist on that portion of a street(s) that is included in the district and is adjacent to the Group Housing's property. Permits are issued for use within the assigned district and in no way assign or reserve spaces to a specific household.
14. A Set-up Fee for establishing new or expanded residential permit areas shall be as established by Council resolution. Such fee shall be submitted at the time of petition submittal requesting establishment

of a Residential Permit Parking Area. In the event the Residential Permit Parking Area is not established, such fee will be refunded to the Association filing the petition.

15. A household with property adjacent to a street in an approved residential parking permit district, but which has a street address on a block that is not in the district and on which block no residential permit parking is established will be treated as if it is located within the approved district. A resident of such a household may obtain a residential parking permit for parking on streets within the approved district under the same terms and conditions as provided in these Criteria for residents of a household with a street address on a street that is within the approved district.
16. The resident innkeeper of a bed and breakfast (B & B), as defined by any state law definition of B & B, may apply for and receive a maximum of eight (8) annual transferable permits for use by B & B guests only. These permits shall be available at the same cost established by council resolution for residential permits. The resident innkeeper and other residents of the B & B may also obtain permits under the same terms and conditions as provided in these Criteria for residents of a household.
17. Except as otherwise provided for districts contiguous with the U of M central campus, each Participating Household, which includes duplexes and Group Housing, is eligible for a maximum of one annual transferable visitor placard. A Participating Household is defined as a household in which at least one resident holds a valid annual residential permit issued by the City. For RPP Districts contiguous with the U of M central campus, residents of Participating Households that are not Group Housing may purchase up to four transferable visitor placards as long as the total of permits and placards issued to the household residents does not exceed five. For RPP Districts contiguous with the U of M central campus, the management company of a Group Housing household may purchase up to eight transferable visitor placards as long as the total of permits and placards issued to the Group Housing household does not exceed the number of annual residential permits for which the Group Housing is eligible plus one (i.e. 9 or one plus the number of legal on-street parking spaces as provided in Criteria #13). The fee for each visitor placard(s) is the same as established by council resolution for annual residential permits.
18. The Public Services Administrator may grant exceptions to one or more (except the provisions in paragraph 8) of these criteria when a request is received in writing from a resident with unique circumstances. The Public Services Administrator will evaluate the circumstances and may grant a "Special Exception" on a case-by-case basis provided the exception is in harmony with the general purpose and intent of City ordinance on residential parking districts.
19. Any decision regarding this residential parking program may be appealed to the City Administrator in accordance with the procedures established by Ann Arbor Ordinance Section 1:16. All appeals must be in writing and explain the decision being appealed, the reason why the decision should be overturned, and the remedy sought.
20. Upon approval of Council of criteria changes, a copy of the new criteria will be posted to the City website and sent to the Neighborhood Association's contact on file with the City's Planning and Development Unit and will serve as notice to the Association regarding changes to the program.

Adopted by Council 6/5/89, as amended by Council on 8/17/92, 4/19/04, 5/16/05, 8/1/05, 11/10/05, 1/23/06, and 2/21/06.