



GENOA CHARTER TOWNSHIP APPLICATION
Planned Unit Development (PUD)

APPLICANT NAME: GRAND RIVER DORR, LLC (Mark Kassab)
APPLICANT EMAIL: MKASSAB@MSHAPIROREALESTATE.COM
APPLICANT ADDRESS & PHONE: 31550 Northwestern Hwy, Suite 200 Farmington Hill, MI 48334 (248) 865-0066
OWNER'S NAME: Grand River Dorr, LLC
OWNER ADDRESS & PHONE: same as above
TAX CODE(S): 47-11-11-200-014, 47-11-14-100-002

QUALIFYING CONDITIONS (To be filled out by applicant)

- 1. A PUD zoning classification may be initiated only by a petition.
2. It is desired and requested that the foregoing property be rezoned to the following type of PUD designation:
[X] Residential Planned Unit Development (RPUD)
[] Planned Industrial District (PID)
[] Mixed Use Planned Unit Development (MUPUD)
[] Redevelopment Planned Unit Development (RDPUD)
[] Non-residential Planned Unit Development (NRPUD)
[] Town Center Planned Unit Development (TCPUD)
3. The planned unit development site shall be under the control of one owner or group of owners and shall be capable of being planned and developed as one integral unit.

EXPLAIN The development will be developed, owned and operated by a single ownership entity

- 4. The site shall have a minimum area of twenty (20) acres of contiguous land, provided such minimum may be reduced by the Township Board as follows:
A. The minimum area requirement may be reduced to five (5) acres for sites served by both public water and public sewer.
B. The minimum lot area may be waived for sites zoned for commercial use (NSD, GCD or RCD) where the site is occupied by a nonconforming commercial, office or industrial building, all buildings on such site are proposed to be removed and a new use permitted within the underlying zoning district is to be established.

minimum necessary to allow redevelopment of the site, while still meeting the spirit and intent of the ordinance.

- C. The PUD site plan shall provide one or more of the following benefits not possible under the standards of another zoning district, as determined by the Planning Commission:
- preservation of significant natural or historic features
 - a complementary mixture of uses or a variety of housing types
 - common open space for passive or active recreational use
 - mitigation to offset impacts
 - redevelopment of a nonconforming site where creative design can address unique site constraints.
- D. The site shall be served by public sewer and water. The Township may approve a residential PUD that is not served by public sewer or water, provided all lots shall be at least one (1) acre in area and the requirements of the County Health Department shall be met.

Size of property is 51.9+/- acres.

DESCRIBE BELOW HOW THE REQUESTED PUD DESIGNATION COMPLIES WITH AFOREMENTIONED MINIMUM LOT SIZE REQUIREMENTS.

The proposed development is over 51 acres. The development will preserve natural features and provided common open space opportunities for the residents, including walking trails, a community building and swimming pool. The site is constrained by regulated wetlands and create design is required to address the constraints. The site has access to public water supply and sanitary sewer.

STANDARDS FOR REZONING TO PLANNED UNIT DEVELOPMENT (RESPOND HERE OR WITHIN THE IMPACT STATEMENT)

1. How would the PUD be consistent with the goals, policies and future land use map of the Genoa Township Master Plan, including any subarea or corridor studies. If conditions have changed since the Master Plan was adopted, the consistency with recent development trends in the area;

The future land use map for Genoa Township identifies mixed use town center. However, a change in need for retail services has been observed in the market. There is a lack of ability to attract new retail to compete with the existing retail services already located in the area. The proposed use is consistent with the high intensity use along the Grand River Corridor. This is consistent with surrounding land use and provides a transition to the residential areas to the south.

2. The compatibility of all the potential uses in the PUD with surrounding uses and zoning in terms of land suitability, impacts on the environment, density, nature of use, traffic impacts, aesthetics, infrastructure and potential influence on property values;

The RPUD with an HDR underlying zoning is a transitional residential zoning that is typically found adjacent to high and medium intensity uses. This is consistent with this property and its surrounding uses. In this situation the property is surrounded by industrial, general business and office. There is residential to the north (higher density) and the south (lower density). The RPUD allows for additional open space, protection of natural features, and is supported by the existing infrastructure.

3. The capacity of infrastructure and services sufficient to accommodate the uses permitted in the requested district without compromising the "health, safety and welfare" of the Township;

The proposed development will be compatible with past planning efforts and therefore the infrastructure is present to support it. The township services planned for this area will not be overtaxed by the development.

4. The apparent demand for the types of uses permitted in the PUD; Successful development area reaching various age demographics that seek amenities, less maintenance nature preservation and convenience to restaurants and shopping. This location is well located between Brighton and Howell where downtown shopping and restaurants are available as well as the Genoa retail and restaurant area at Latson and Grand River.

AFFIDAVIT

The undersigned says that they are the Owner (owner, lessee, or other specified interest) involved in this petition and that the foregoing answers and statements herein contained and the information herewith submitted are in all respects true and correct to the best of his/her knowledge and belief.

BY: Mark Kassab, Grand River Dorr, LLC

ADDRESS: 315550 Northwestern Hwy, ste 200 Farmington Hills 48334

Contact Information - Review Letters and Correspondence shall be forwarded to the following:

Jonathan Curry of PEA Group at jcurry@peagroup.com
Name Business Affiliation E-mail

FEE EXCEEDANCE AGREEMENT

As stated on the site plan review fee schedule, all site plans are allocated two (2) consultant reviews and one (1) Planning Commission meeting. If additional reviews or meetings are necessary, the applicant will be required to pay the actual incurred costs for the additional reviews. If applicable, additional review fee payment will be required concurrent with submittal to the Township Board. By signing below, applicant indicates agreement and full understanding of this policy.

PROJECT NAME: Grand River Dorr

PROJECT LOCATON & DESCRIPTION: 6080 W Grand River (Grand River/Dorr)

SIGNATURE: [Signature] DATE: 6/2/22

PRINT NAME: MARK KASSAB PHONE: 248-865-0066

COMPANY NAME & ADDRESS: 315550 Northwestern Hwy, ste 200 Farmington Hills 48334



GENOA CHARTER TOWNSHIP
Application for Re-Zoning

APPLICANT NAME: Grand River Dorr, LLC ADDRESS: 315550 Northwestern Highway, ste 200 Farmington Hills, 48334
OWNER NAME: same as above ADDRESS: _____
PARCEL #(s): 47-11-11-200-014, 47-11-14-100-002 PRIMARY PHONE: (248) 865-0066
EMAIL 1: Mkassab@mshapirorealestate.com EMAIL 2: _____

We, the undersigned, do hereby respectfully make application to and petition the Township Board to amend the Township Zoning Ordinance and change the zoning map of the township of Genoa as hereinafter requested, and in support of this application, the following facts are shown:

A. REQUIRED SUBMITTAL INFORMATION

1. A legal description and street address of the subject property, together with a map identifying the subject property in relation to surrounding properties;
2. The name, signature and address of the owner of the subject property, a statement of the applicant's interest in the subject property if not the owner in fee simple title, and proof of consent from the property owner;
3. It is desired and requested that the foregoing property be rezoned from:
NSD/ MDR /TOWN CENTER to HDR/PUD
4. A site plan illustrating existing conditions on the site and adjacent properties; such as woodlands, wetlands, soil conditions, steep slope, drainage patterns, views, existing buildings, sight distance limitations, relationship to other developed sites, and access points in the vicinity;
5. A conceptual plan demonstrating that the site could be developed with representative uses permitted in the requested zoning district meeting requirements for setbacks, wetland buffers access spacing, any requested service drives and other site design factors;
6. A written environmental impact assessment, a map of existing site features as described in Article 18 describing site features and anticipated impacts created by the host of uses permitted in the requested zoning district;
7. A written description of how the requested rezoning meets Sec. 22.04 "Criteria for Amendment of the Official Zoning Map."
8. The property in question shall be staked prior to the Planning Commission Public Hearing.

B. DESCRIBE HOW YOUR REQUESTED RE-ZONING MEETS THE ZONING ORDINANCE CRITERIA FOR AMENDING THE OFFICIAL ZONING MAP:

1. How is the rezoning consistent with the goals, policies and future land use map of the Genoa Township Master Plan, including any subareas or corridor studies. If not consistent, describe how conditions have changed since the Master Plan was adopted?

SEE ATTACHED

2. Are the site's physical, geological, hydrological and other environmental features suitable for the host of uses permitted in the proposed zoning district?

SEE ATTACHED

3. Do you have any evidence that a reasonable return on investment cannot be received by developing the property with one (1) of the uses permitted under the current zoning?

SEE ATTACHED

4. How would all the potential uses allowed in the proposed zoning district be compatible with surrounding uses and zoning in terms of views, noise, air quality, the environment, density, traffic impacts, drainage and potential influence on property values?

SEE ATTACHED

5. Are infrastructure capacity (streets, sanitary sewer, water, and drainage) and services (police and fire protection, etc.) sufficient to accommodate the uses permitted in the requested district?

SEE ATTACHED

6. Is there a demonstrated demand in Genoa Township or the surrounding area for the types of uses permitted in the requested zoning district? If yes, explain how this site is better suited for the zoning than others which may be planned or zoned to accommodate the demand.

SEE ATTACHED

7. If you have a particular use in mind, is another zoning district more appropriate? Why should the Township re-zone the land rather than amend the list of uses allowed in another zoning district to accommodate your intended use?

SEE ATTACHED

8. Describe any deed restrictions which could potentially affect the use of the property.

C. AFFIDAVIT

The undersigned says that they are the owner (owner, lessee, or other specified interest) involved in this petition and that the foregoing answers and statements herein contained and the information herewith submitted are in all respects true and correct to the best of his/her knowledge and belief.

BY: Mark Kassab, Grand River Dorr, LLC

ADDRESS: 31550 Northwestern Highway, ste 200 Farmington Hills, MI 48334

SIGNATURE: 

The following contact should also receive review letters and correspondence:

Name: Jonathan Curry, P.E. Email: jcurry@peagroup.com

Business Affiliation: PEA Group

FEE EXCEEDANCE AGREEMENT

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PROJECT NAME: Grand River Dorr

PROJECT LOCATON & DESCRIPTION: 6080 W. Grand River Road

SIGNATURE: 

DATE: 6/2/22

PRINT NAME: Mark Kassab

PHONE: 248-865-0066

COMPANY NAME & ADDRESS: 31550 Northwestern Hwy, Farmington Hills, MI 48334

B. 1.

Development conditions have changed since the approval of the Master Plan. Retail has seen a steep decline throughout the state. The ability of individuals to order online and have delivered to their home is one of the main reasons for this. It was further exasperated during covid pandemic and lock downs. Residents became used to online ordering.

High density residential is an acceptable use in the Town Center Overlay, however, this zoning is tied to being placed above retail. The existing zoning would allow for 28 units per acre when tied to retail. The proposed rezoning to HDR /RPUD reduces the density by allowing for 8 units per acre. This will reduce the burden on the township service and infrastructure.

2.

The southern side of the site consists of a regulated EGLE wetland and wooded areas. These natural features are desirable to protect. The proposed rezoning to HDR/RPUD allows for limiting disturbance to the natural features, while obtaining a financially viable project that provides the end user with desired environmental features.

3.

The evidence that a reasonable return on investment cannot be received by developing the property with one of the permitted uses under current zoning is evidenced by the lack of interest in the property. The property is in a desirable area; however, this area is located between developed areas that meet the residential services needs and retail for the area. Obtaining retail or residential service providers for this area is difficult because of the existing competition.

4.

As stated above, the proposed zoning was considered compatible with the master plan. However, it is desired to remove the retail component and town center overlay. The surrounding land uses along the Grand River corridor are higher intensity uses. The proposed use will be compatible with the existing users and could be considered a transitional zoning against the higher intensity industrial use to the west and the residential to the south.

5.

Infrastructure is available to service this site with the proposed rezoning. This area was master planned to provide the services necessary to develop this property successfully. The property is located adjacent to Grand River and Dorr Road. Sanitary sewer and public water main are available adjacent to the property as well.

6.

There is a demonstrated demand for the proposed uses allowed under HDR/RPUD. Genoa is in need of additional HDR/RPUD locations to assist residents wishing to downsize or even for younger residents to

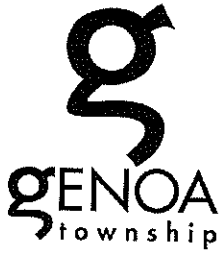
enter into the area. The desire for younger and older residents is less maintenance with amenities. This site provides a club house with a pool, as well as the beauty of its existing nature areas left preserved.

7.

Currently, the town center does not appear to be desirable to developers. This is a prime location that should have developed. A rezoning at this time would provide additional developers options for this property should this development not continue for any reason.

8.

Currently there are no deed restrictions that would affect the property. However, if rezoned a deed restriction will be in place to protect the natural features and EGLE regulated wetland.



GENOA CHARTER TOWNSHIP
Application for Site Plan Review

TO THE GENOA TOWNSHIP PLANNING COMMISSION AND TOWNSHIP BOARD:

APPLICANT NAME & ADDRESS: Grand River Dorr, LLC
If applicant is not the owner, a letter of Authorization from Property Owner is needed.

OWNER'S NAME & ADDRESS: Grand River Dorr, LLC

SITE ADDRESS: 6080 W Grand River PARCEL #(s): 47-11-11-200-014,

APPLICANT PHONE: (248) 865-0066 OWNER PHONE: () 47-11-14-100-002

OWNER EMAIL: mkassab@mshapriorealestate.com

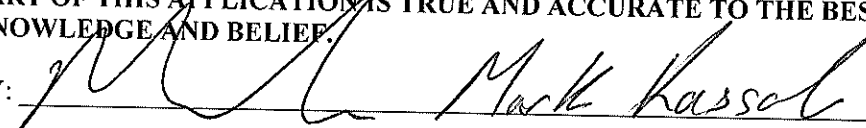
LOCATION AND BRIEF DESCRIPTION OF SITE: .51.9 acres +/- at the South East Corner of
Grand River and Dorr Road

BRIEF STATEMENT OF PROPOSED USE: _____

The proposed use will be a RPUD - multifamily development consisting of 204 apartment homes in 18 buildings, with a community clubhouse and pool.

THE FOLLOWING BUILDINGS ARE PROPOSED: _____
18 buildings in 12-plex or 6-plex configuration, and a community clubhouse.

I HEREBY CERTIFY THAT ALL INFORMATION AND DATA ATTACHED TO AND MADE PART OF THIS APPLICATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

BY:  Mark Kassal

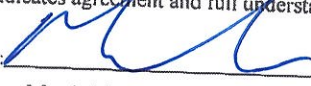
ADDRESS: 315550 Northwestern Hwy., Farmington Hills, MI 48334

Contact Information - Review Letters and Correspondence shall be forwarded to the following:

1.) Mark Kassab of Grand River Dorr, LLC at mkassab@mshapirorealestate.com
Name Business Affiliation E-mail Address

FEE EXCEEDANCE AGREEMENT

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SIGNATURE:  DATE: 6/2/22
PRINT NAME: Mark Kassab PHONE: 248-865-0066
ADDRESS: 315550 Northwestern Highway, ste 200 Farmington Hills 48334

GRAND RIVER DORR LLC

DBA

THE LEGACY APARTMENT HOMES

OWNER:

GRAND RIVER DORR LLC

PREPARED BY: MARK KASSAB

31550 NORTHWESTERN, STE 220

FARMINGTON HILLS, MI 48334

248-865-0066

THE LEGACY APARTMENT HOMES

CONCEPTUAL PUD SITE PLAN

APPLICATION & COMMUNITY IMPACT STATEMENT

COMMUNITY IMPACT STATEMENT

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COMMUNITY IMPACT STATEMENT

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SECTION 1: GENERAL PROJECT INFORMATION

1.1 Project Overview

The Legacy Apartment Homes is a proposed residential community consisting of 204 attached apartments with an associated clubhouse and pool. The project shall include open space and other elements as set forth in this Agreement and the PD plan. The project will include approximately 29 acres of total open space. This site is currently vacant and is zoned Neighborhood Services District (NSD) and Medium Density Residential (MDR) with Town Overlay and currently petitioning to be rezoned to High-Density Residential (HDR), and Residential Planned Unit Development (RPUD).

The proposed land use consists of multi-family apartment homes. The project will have 3.92 units per acre based on 52 +/- gross acreage and 6.23 units per acre based on 32.77 net acreage. The proposed development will be compatible with past planning efforts and therefore the infrastructure is present to support it. The township services planned for this area will not be overtaxed by the development.

Unit counts and densities for the proposed The Legacy Apartment Homes are as follows:

204 Multi-Family Dwelling Units (51 gross Acres/33 Net Acres):

3.92	DU/Gross Acre
6.23	DU/Net Acre

1.2 Master Plan Analysis

- **Value communities and neighborhoods** – The Legacy Apartment Homes will be an exclusive neighborhood community targeting demographics of multiple ages. The development will focus on quality building materials and attention to architecture details. This location is well located between Brighton and Howell where downtown shopping and restaurants are available as well as the Genoa retail and restaurant area at Latson and Grand River.
- **Walkable neighborhoods** – In addition to sidewalk proposed on both sides of the planned internal roadways, the development will also have a system of pathways within the extensive open space areas.

- **Variety of recreational facilities** – The Legacy Apartment Homes proposes a successful development area reaching various age demographics that seek amenities, less maintenance, nature preservation and convenience to restaurants and shopping. sidewalks and interconnectivity within the community, dog park, gazebo, EV Charging Stations throughout, benches, clubhouse, Amazon Hub station, pool and fitness center consisting of a Yoga room, business center, dog wash to accommodate residents of all ages, interests, and physical abilities.

Refer to the Conceptual PUD for additional information of the neighborhood layout and representative architectural details.

1.3 Existing Surrounding Uses

As shown within the attached zoning map, the existing surrounding uses for the subject site are uses of varying densities. These existing uses are as follows:

- **North:** GCD- General Commercial District
- **East:** OSD
- **West:** Industrial
- **South:** Rural Residential

SECTION 2: COMMUNITY AND FACILITY SERVICES

2.1 Police and Fire Demand

The Livingston County Sheriff in addition to the Michigan State Police will be providing Public Safety services required to accommodate the proposed use.

The Brighton Area Fire Department, as part of an existing Governmental agreement will provide fire protection services. There will be numerous fire hydrants located on the subject property. Fire Department Connections (FDC's) will be located on each building in addition to the buildings having an internal fire suppression system. Station 34 on Dorr Road is located approximately ¼ mile away from the subject property.

The property is accessed from Grand River and Dorr Road. Both entrances are designed to accommodate emergency vehicle access.

A fiscal impact statement is prepared and attached to the CIS to determine the annual tax revenue. The additional net annual tax revenue at full buildout will be approximately \$836,662. The additional tax revenues are in addition to the one-time utility connection charges in the amount of \$3,080,400.

2.2 Utilities

Utility services will be provided by existing public water and sewer systems in the area. The development proposes a total of 204 apartment unit connections to the existing public utilities. We estimate an average daily usage of 36,500 gallons per year per person with an annual usage of approximately 19,000,000 gallons per year.

All utility lines, structures, and trenches shall be constructed in accordance with the standards and requirements of Genoa Township, the Livingston County and MDOT. All hydrants will be a minimum of 4.5' from back of curb.

Water main connections to the existing mains will be completed to provide for a looped system in accordance with the Township standards and placed within public easements. The proposed site water mains will be 8" in diameter and placed in public easements, and will connect to the existing 12" main on Dorr Road 16" main on Grand River Rd.

Site Storm sewer will be privately owned and designed to convey runoff to appropriately sized stormwater management facilities.

2.3 Stormwater Management

Stormwater management for quality treatment and flood storage will be provided in proposed detention basin optimally located at the southeast corner of Grand River and Dorr Road. These basin will be designated and approved in accordance with Livingston County Drain Commission standards to accommodate the 100-year frequency storm runoff from the proposed development.

LEGEND

DETENTION BASIN CALCULATIONS POND 1:

(BASED ON THE RULES OF THE LIVINGSTON COUNTY DRAIN COMMISSIONER)

Total Disturbed Area, A	=	13.40	acres	
Parking and Road	=	3.90	acres	C1 = 0.90
Sidewalks Pool and Deck	=	1.18	acres	C2 = 0.90
Buildings	=	2.78	acres	C3 = 0.90
Grass/Landscape Area	=	5.37	acres	C4 = 0.25
Wet Pond Surface	=	0.17	acres	C5 = 1.0
Compound Run-off Coefficient, C	=	0.64		
Design Constant, K = A°C	=	8.58		
Allowable Outflow Rate, Qo	=	0.2 cfs/acre		
	=	2.68	CFS	

1	2	3	4	5	6	7
Duration (min)	Duration (sec)	100-year intensity (In/Hr)	Col#2*Col#3 (inches)	Inflow Volume (CF) = Col#4*K	Allowable Outflow Volume (CF) = Col#2*Qo	Storage Volume (CF) = Col#5-Col#6
5	300	9.17	2,750	23,584	804	22,780
10	600	7.86	4,714	40,430	1,608	38,822
15	900	6.88	6,188	53,064	2,412	50,652
20	1200	6.11	7,333	62,891	3,216	59,675
30	1800	5.00	9,000	77,184	4,824	72,360
60	3600	3.24	11,647	99,885	9,648	90,237
70	4200	2.89	12,158	104,266	11,256	93,010
80	4800	2.62	12,571	107,813	12,864	94,949
90	5400	2.39	12,913	110,742	14,472	96,270
120	7200	1.90	13,855	117,107	19,296	97,811
140	8400	1.67	14,000	120,064	22,512	97,552
145	8700	1.62	14,074	120,695	23,316	97,379

Detention Volume Required for 100-yr Storm Event = 97,811 CF
 Sediment Forebay Capacity = 5% of 100-yr volume = 4,891 CF

Volume Provided in Detention Basin

Elevation	Surface Area (SF)	Volume (CF)	Total Volume (CF)
978	30,451		
977	29,594	28,066	116,489
976	26,537	25,041	88,424
975	23,545	22,101	63,383
974	20,696	18,877	41,262
973	17,097	15,477	22,406
972	13,657	6,929	
971		0	

Storage Volume Provided = 116,489 CF

Volume Provided in Sediment Forebay

Elevation	Surface Area (SF)	Volume (CF)	Total Volume (CF)
975			7,877
974	5,006	4,458	
973	3,910	3,419	
972	2,527		

Sedimentation Volume Provided = 7,877 CF

TOTAL VOLUME PROVIDED = 124,366

DETENTION BASIN CALCULATIONS (POND 2):

(BASED ON THE RULES OF THE LIVINGSTON COUNTY DRAIN COMMISSIONER)

Total Disturbed Area, A	=	10.47	acres	
Parking and Road	=	2.85	acres	C1 = 0.90
Sidewalks	=	0.53	acres	C2 = 0.90
Buildings	=	2.20	acres	C3 = 0.90
Grass/Landscape Area	=	4.89	acres	C4 = 0.25
Compound Run-off Coefficient, C	=	0.60		
Design Constant, K = A°C	=	6.24		
Allowable Outflow Rate, Qo	=	0.2 cfs/acre		
	=	2.09	CFS	

1	2	3	4	5	6	7
Duration (min)	Duration (sec)	100-year intensity (In/Hr)	Col#2*Col#3 (inches)	Inflow Volume (CF) = Col#4*K	Allowable Outflow Volume (CF) = Col#2*Qo	Storage Volume (CF) = Col#5-Col#6
5	300	9.17	2,750	17,172	628	16,544
10	600	7.86	4,714	29,438	1,296	28,142
15	900	6.88	6,188	38,638	1,885	36,753
20	1200	6.11	7,333	45,793	2,513	43,280
30	1800	5.00	9,000	56,201	3,769	52,431
60	3600	3.24	11,647	72,730	7,538	65,192
70	4200	2.89	12,158	75,920	8,795	67,125
80	4800	2.62	12,571	78,502	10,051	68,451
90	5400	2.39	12,913	80,636	11,308	69,328
120	7200	1.90	13,855	85,270	15,077	70,193
140	8400	1.67	14,000	87,423	17,500	69,923
145	8700	1.62	14,074	87,882	18,218	69,664

Detention Volume Required for 100-yr Storm Event = 70,193 CF
 Sediment Forebay Capacity = 5% of 100-yr volume = 3,510 CF

Volume Provided in Detention Basin

Elevation	Surface Area (SF)	Volume (CF)	Total Volume (CF)
990.5			
979.5	34,968	32,571	80,267
978.5	30,174	27,959	47,666
977.5	25,743	19,737	19,737
976.5	13,731	0	0

Storage Volume Provided = 80,267 CF

Volume Provided in Sediment Forebay

Elevation	Surface Area (SF)	Volume (CF)	Total Volume (CF)
979.5	4,641	3,929	6,537
978.5	3,217	2,608	
977.5	1,999	0	

Sedimentation Volume Provided = 6,537 CF

TOTAL POND VOLUME PROVIDED 86,804 CF

SECTION 3: ECONOMICS

3.1 Tax Revenue Analysis

A fiscal impact analysis was prepared to determine the anticipated annual tax revenue to be generated as a result of the development. Based on this analysis, we anticipate Legacy Apartment Homes will have a taxable value of approximately \$22,950,000 and will generate an annual revenue gain of approximately \$911,139. Currently the property is generating \$24,659 in annual taxes.

3.2 Jobs Created

Legacy Apartment Homes will be a residential development. Legacy Apartment Homes will create 100 +/- construction jobs during the installation of the infrastructure and the building of the apartment buildings on the site. In addition,

The Legacy Apartments will employ 5-6 permanent leasing and maintenance staff.

Refer to **Exhibit A** for the Fiscal Impact Analysis Calculations

SECTION 4: ENVIRONMENT

4.1 Natural Resources Analysis

The proposed development is approximately 52 acres. The development will preserve natural features and provided common open space opportunities for the residents, including walking trails, a community building and swimming pool. The site is constrained by regulated wetlands to the South and Southeast portion of the property. The area of proposed development is primarily vacant farmed land with minimal to no tree removal required.

Storm water runoff for the site will be detained and treated in accordance with applicable Township, County and State requirements prior to discharge from the site. No significant impact or pollution to offsite water bodies is anticipated with the development.

The proposed development will seek to preserve existing wooded areas around the perimeter of the development where grading would allow, to serve as a buffer between the development and neighboring properties. New trees will be planted in the proposed development in accordance with an approved Landscaping Plan.

4.2 Hazardous Materials

No hazardous materials are planned to be manufactured, used, or stored on site.

4.3 Air Quality Impact

Legacy Apartment Homes is a residential development that does not plan to have any significant impact to the air quality of the area. No quantifiable type or quantities of pollutants are expected to be released in the air. During construction, special measures will be included within the Soil Erosion and Sedimentation (SESC) Plan to mitigate any potential dust creation during dryer site conditions, including the use of water trucks.

4.4 Groundwater Impact

Legacy Apartment Homes is a residential development that will utilize connections to the existing public utilities in the area. The development fits within

the master planned unit density for the area and does not plan to have any significant impact to the groundwater levels within the area.

4.5 **Noise**

Legacy Apartment Homes is a residential development that does not plan to have any significant impact to the increased noise in the area. During construction, the development intends to minimize noise as reasonable and follow the Township's ordinance regarding hours of allowed construction operation.

SECTION 5: TRAFFIC

Legacy Apartment Homes is a residential project consisting of a multi-family dwelling units that are proposed to have access off Grand River Road in addition to Dorr Road. The main access to the community will be from Grand River Road which is a State Road. There is a secondary access off Door Road.

A Traffic Impact Study (TIS) has been prepared by Rowe Engineering in accordance with the Township Ordinance. The report was completed in accordance with the requirements specified by the Michigan Department of Transportation (MDOT), the Road Commission for Oakland County (RCOC), and Genoa Township.

A copy of the TIS attached as **Exhibit B**.

DEVELOPER'S STATEMENT

After a five decades of residential building in Michigan, MJC Companies® is proud to be one of the state's largest privately-owned and operated builders, as well as one of the top 100 builders in the nation. Since 1972, the company has garnered a reputation of value and innovation with single-family homes and condominiums that offer a carefree lifestyle in desirable neighborhoods.

And that reputation still holds true today. With deep roots in an array of communities in Livingston, Macomb, Oakland and Wayne counties, MJC Companies® is excited to be a part of Michigan's rich history and is confident in the future of the state and dedicated to the families who live here.

Specializing in new construction, MJC Apartment homes and condominiums offer a wide choice of locations, flexible floor plans, and an abundance of the most desired amenities within pleasant communities including some with pools, walking trails and ponds.

MJC Companies® looks forward to enduring its longstanding presence in Southeast Michigan as it continues to develop communities of choice for generations to come.

Charities, Sponsorships & Clubs

- Alzheimer's Association
- Building Industry Association - Charitable and Education Foundation
- Capuchin Soup Kitchen
- Cardinal Mooney Catholic High School
- Children's Charities at Adios
- Club Calabria
- Club Terrasini
- Club Di Santa Fara
- De La Salle Collegiate High School
- Fraternal Order of Police
- Interfaith Volunteer Caregivers
- Italain American Culture Society
- Karmanos Cancer Institute
- Mackinac Island Historical Preservation
- March of Dimes
- Men of the Sacred Heart
- Michigan Historical Society
- Mat Gaberty Heart Fund
- Macomb Foundation
- Mt. Clemens General –Board Member
- Mt. Clemens Regional Oncology
- Multiple Sclerosis Foundation
- MPURE – Department of Urology at William Beaumont Hospital
- Muscular Dystrophy Association
- National Italian American Foundation
- Northville Park & Recreation
- Nothdurft Pediatric Endowment
- Special Olympics
- St. John Health Foundation
- St. John Hospital Guild
- St. Lawrence Athletics
- St. Louis Center– (helping to raise, \$800,000 dollars in the last 10 years)
- Utica Community Schools
- USC Shoah Foundation

EXHIBIT A

FISCAL IMPACT STATEMENT

**The Legacy Apartments Homes - 204-Unit Community
Fiscal Impact**

Property Development

Property Tax Revenue

Housing Type	Market Value Per Unit	State Equalized Value Per Unit	Taxable Value Per unit	Total Units	Estimated Market Value	Estimated Taxable Value
Apartment Homes	\$ 225,000	\$ 225,000	\$ 112,500	204	\$ 45,900,000	\$ 22,950,000
				<u>204</u>		<u>\$ 22,950,000</u>

	Current Millage Rate	Estimated Taxable Value	Tax Generated
<u>SUMMER TAX REVENUE GENERATION</u>			
State Ed Tax	6.0000	\$ 22,950,000	\$ 137,700
County Tax	3.2391	\$ 22,950,000	\$ 74,337
HO School Oper	18.0000	\$ 22,950,000	\$ 413,100
HO School Debt	2.7500	\$ 22,950,000	\$ 63,113
Livingston ISD	3.2315	\$ 22,950,000	\$ 74,163
BR Fire Auth	0.8733	\$ 22,950,000	\$ 20,042
<u>WINTER TAX REVENUE GENERATION</u>			
County Ambulance	0.2863	\$ 22,950,000	\$ 6,571
HCMA-Parks	0.2089	\$ 22,950,000	\$ 4,794
Veterans Relief	0.1127	\$ 22,950,000	\$ 2,586
Genoa Alloc	0.7855	\$ 22,950,000	\$ 18,027
HO School Debt	2.7500	\$ 22,950,000	\$ 63,113
HO Library	1.0382	\$ 22,950,000	\$ 23,827
BR Fire Auth	1.5000	\$ 22,950,000	\$ 34,425
Total Estimated Annual Revenue from Property Taxes			\$ 935,798
			<u>\$ 24,659</u>
Less Current Property Tax Revenue Generation			
Total Net annual Revenue from Property Taxes			<u>\$ 911,139</u>

Estimated Residents

Land Use	Units	Unit Factor Per Us Census	Projected Population
Residential	204	2.55	<u>520</u>

Utility Revenue

Water and Sewer Capital Connection Fee	Water Capital Fee	Sewer Capital Fee	Total Capital Charges	Total Units	Total Estimated Fee
Building Type					
Units	\$ 7,900.00	\$ 7,200.00	\$ 15,100	204	\$ 3,080,400
					\$ -
Total Estimated Connection Fee		(Fees per. DPS)		204	<u>\$ 3,080,400</u>

Annual Water/Sewer Usage Fees	Estimated Population	Annual Usage (Gal); Assume 36,500 gal/yr/person	Usage fee/1000 Gal.	Total Estimated Fees
Apartments	520	18,987,300	\$11.28	\$ 214,177
		Annual Water Usage Fees		\$ 214,177
Total Utility-Related Fees				<u>\$ 214,177</u>

Township Expenditures Per Budget

Total Expenditures - 2022 Budget (per Genoa.org)	\$ 6,412,166
Township Population (per 2020 SEMCOG)	<u>20,692</u>
Township Expenditures Per Resident	\$ 309.89

	# Residents	Expenditure per Resident	Total
Total Annual Expenditures for Legacy Apartment	520	\$ 309.89	\$ 161,202.82

The Legacy Apartment - One-Time Utility Connection Revenue	\$ 3,080,400
The Legacy Apartment - Annual Revenue Gain (Loss)	\$ 964,113

APPENDIX B

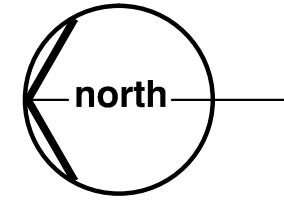
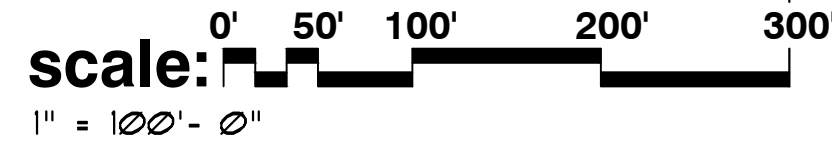
CONCEPTUAL PUD PLANS

site plan study for:

A Proposed Multi-Family Residential Community

Genoa Township, Michigan

note
 preliminary concept plan for inspection purposes
 only and in no way official or approved for record
 purposes.



landscape requirements:

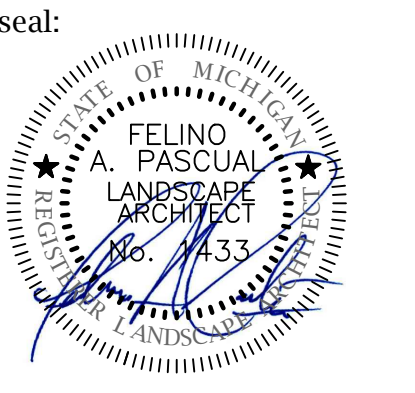
	REQUIRED	PROVIDED
greenbelt (Grand River Avenue)		
TOTAL LIN.FT. OF GREENBELT FRONTAGE	945±	
ONE (1) 2 1/2" CANOPY OR EVERGREEN TREE PER 40 LIN.FT. (945 LIN.FT. / 40 LIN.FT. = 24.8 TREES)	25	25
greenbelt (Dorr Road)		
TOTAL LIN.FT. OF GREENBELT FRONTAGE	1570±	
ONE (1) 2 1/2" CANOPY OR EVERGREEN TREE PER 40 LIN.FT. (1570 LIN.FT. / 40 LIN.FT. = 39.25 TREES)	39	39
street trees (interior residential streets)		
TOTAL NO. OF RESIDENTIAL UNITS PROVIDED	204	
TWO (2) 2 1/2" CANOPY TREES PER RESIDENTIAL UNIT (204 UNITS X 2 TREES = 408 TREES)	408	408
landscape screening		
TOTAL LIN.FT. OF BOUNDARY FRONTAGE	721±	
ONE (1) 2 1/2" CANOPY OR EVERGREEN TREE PER 20 LIN.FT. (721 LIN.FT. / 20 LIN.FT. = 36.05 TREES)	36	36
OR FOUR (4) SHRUBS PER 20 LIN.FT. (721 LIN.FT. / 20 LIN.FT. = 36.05 X 4-SHRUBS=144.2)	144	144
detention pond-A		
TOTAL LIN.FT. OF POND PERIMETER	727±	
ONE (1) DECIDUOUS OR EVERGREEN TREE PER 50 LIN.FT. (727 LIN.FT. / 50 LIN.FT. = 14.5 TREES)	15	15
TEN (10) SHRUBS PER 50 LIN.FT. (727 LIN.FT. / 50 LIN.FT. = 14.5 X 10-SHRUBS=145)	145	145
detention pond-B		
TOTAL LIN.FT. OF POND PERIMETER	932±	
ONE (1) DECIDUOUS OR EVERGREEN TREE PER 50 LIN.FT. (932 LIN.FT. / 50 LIN.FT. = 18.64 TREES)	19	19
TEN (10) SHRUBS PER 50 LIN.FT. (932 LIN.FT. / 50 LIN.FT. = 18.64 X 10-SHRUBS=186.4)	186	186

landscape sheet index

- LSC-1 OVERALL PLAN VIEW
- LSC-2 PLANTING DETAIL PLAN
- LSC-3 PLANTING DETAIL PLAN
- LSC-4 SITE AMENITY PLAN
- LSC-5 ENTRY DETAIL PLAN

landscape legend

- deciduous trees**
(Maples, Hackberry, Zelkova, Oaks, Lindens, Locust, etc...)
- ornamental trees**
(Redbud, Crabs, Hawthorn, Serviceberry, Dogwood, etc...)
- evergreen trees**
(Pines, Spruces, Fir)
- deciduous shrubs**
(Viburnum, Forsythia, Hydrangea, Hollies, Dogwood, etc...)
- evergreen shrubs**
(Junipers, Yews, Arborvitae, Boxwood, etc...)
- perennials and/or seasonal flowers**
(Daylily, Sedum, Ornamental Grasses, Black Eyed Susan, Coneflowers, etc...)



client:
LAUTREC
 31550
 Northwestern
 HWY. Suite 200
 Farmington Hills,
 Michigan 48334

project:
**DORR ROAD
 AND GRAND
 RIVER AVE.**

project location:
 Genoa Township,
 Michigan
 12 Mile Road

sheet title:
 CONCEPTUAL
 LANDSCAPE PLAN

job no./issue/revision date:
 LS21.096.08 SPA 8-18-2021
 LS21.096.10 SPA 10-8-2021
 LS21.096.10 SPA 10-24-2021
 LS21.096.12 SPA 12-13-2021
 LS22.028.02 SPA 2-24-2022
 LS22.028.04 SPA 4-18-2022

drawn by:
JP, HP, DK
 checked by:
FP
 date:
2-22-2022

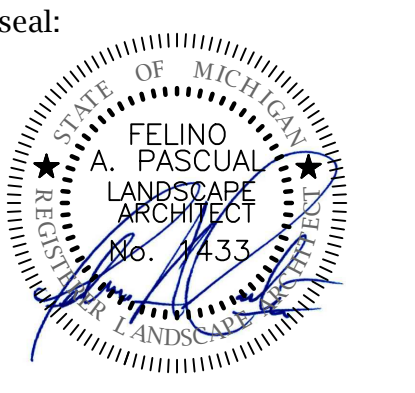
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 drawing are only approximate; no guarantee
 is either expressed or implied as to the
 completeness of accuracy; contractor shall be
 exclusively responsible for determining the
 exact location and elevation prior to the start
 of construction

project no:
LS22.028.02

sheet no:
LSC-1



client:
LAUTREC
 31550
 Northwestern
 HWY. Suite 200
 Farmington Hills,
 Michigan 48334

project:
**DORR ROAD
 AND GRAND
 RIVER AVE.**

project location:
 Genoa Township,
 Michigan
 12 Mile Road

sheet title:
**CONCEPTUAL
 LANDSCAPE
 PLANTING PLAN**

job no./issue/revision date:

LS21.096.08 SPA	8-18-2021
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LS21.096.10 SPA	10-24-2021
LS21.096.12 SPA	12-13-2021
LS22.028.02 SPA	2-24-2022
LS22.028.04 SPA	4-18-2022

drawn by:
JP, HP, DK

checked by:
FP

date:
2-22-2022

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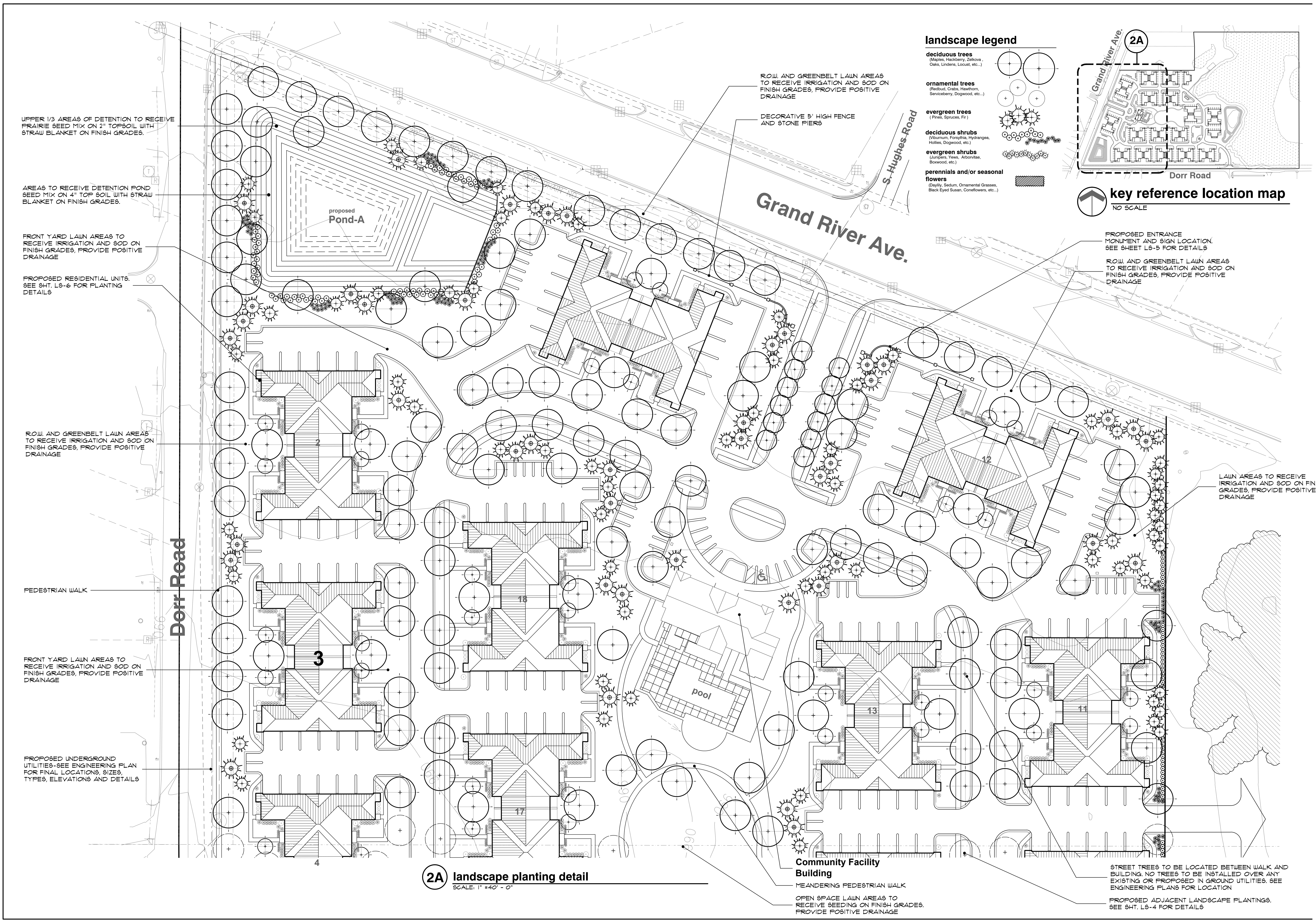
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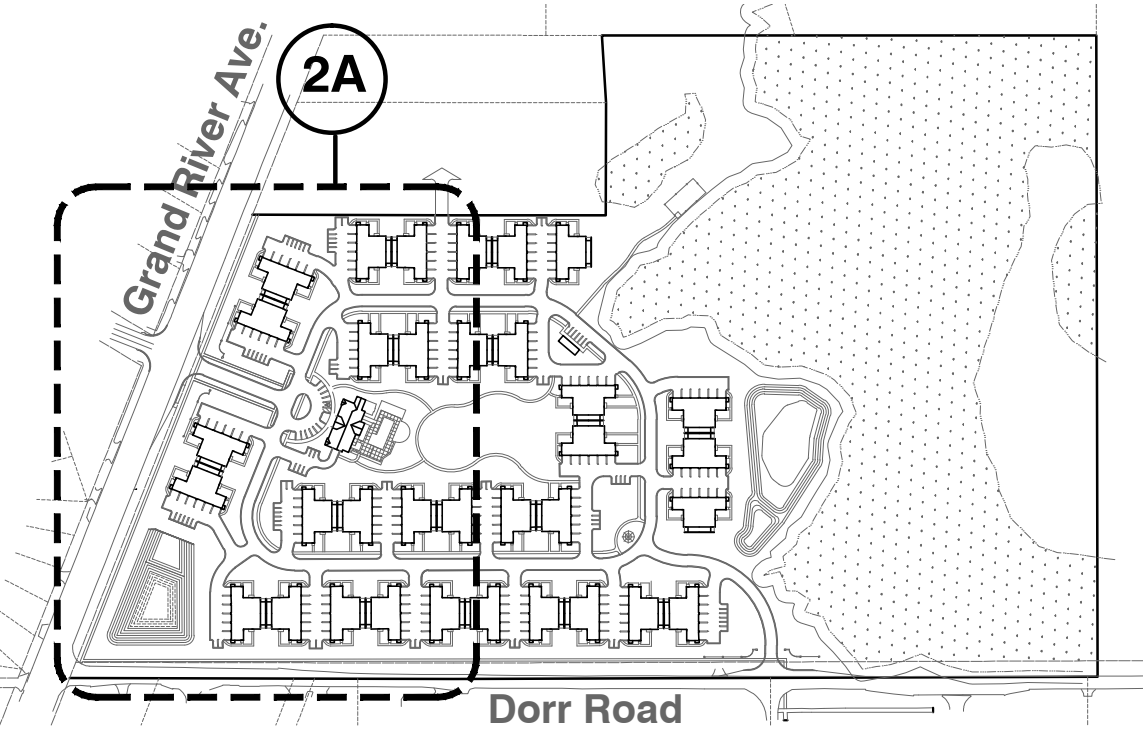
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sheet no:
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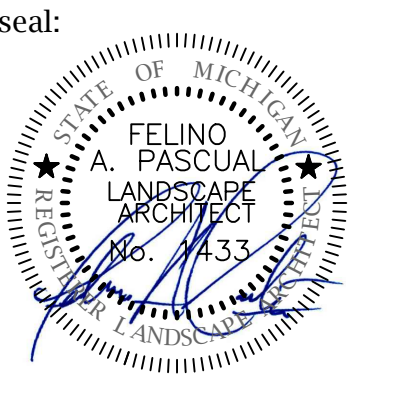


landscape legend

- deciduous trees**
(Maples, Hackberry, Zelkova, Oaks, Lindens, Locust, etc.)
- ornamental trees**
(Redbud, Crabs, Hawthorn, Serviceberry, Dogwood, etc.)
- evergreen trees**
(Pines, Spruces, Fir)
- deciduous shrubs**
(Viburnum, Forsythia, Hydrangea, Hollies, Dogwood, etc.)
- evergreen shrubs**
(Junipers, Yews, Arborvitae, Boxwood, etc.)
- perennials and/or seasonal flowers**
(Daylily, Sedum, Ornamental Grasses, Black-Eyed Susan, Coneflowers, etc.)



2A landscape planting detail
 SCALE: 1" = 40' - 0"



client:
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 31550
 Northwestern
 HWY. Suite 200
 Farmington Hills,
 Michigan 48334

project:
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 AND GRAND
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project location:
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 12 Mile Road

sheet title:
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 LANDSCAPE
 PLANTING PLAN**

job no./issue/revision date:
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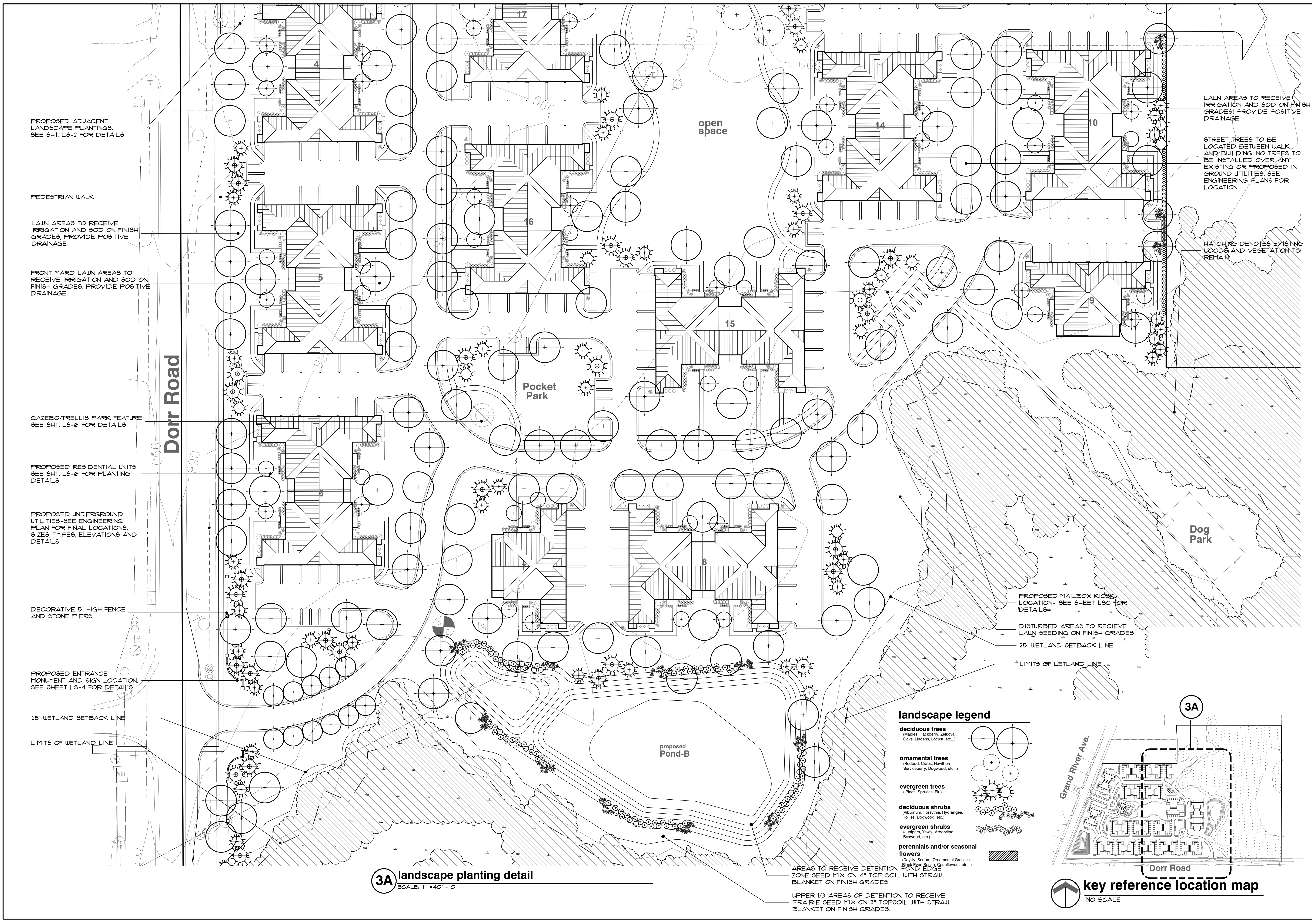
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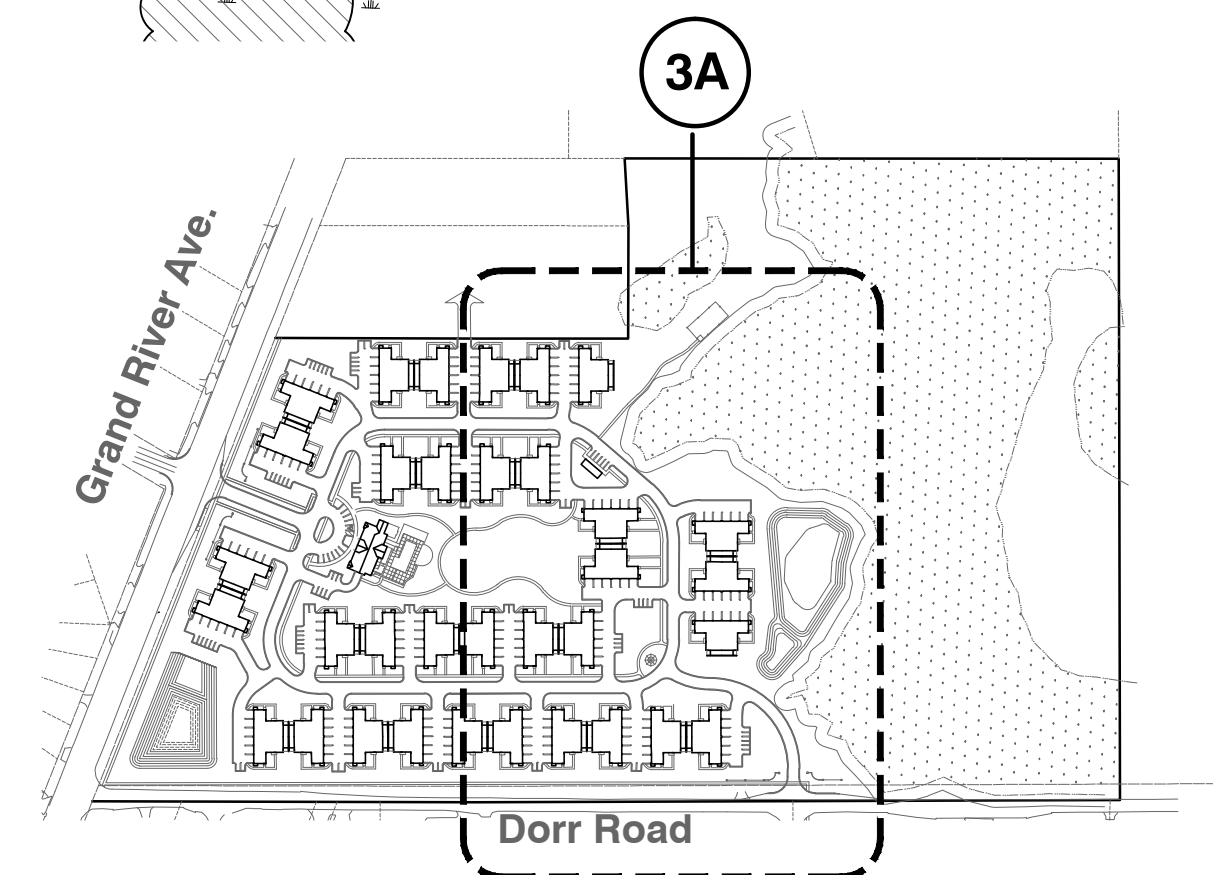
project no:
LS22.028.02

sheet no:
LSC-3



3A landscape planting detail
 SCALE: 1" = 40' - 0"

- landscape legend**
- deciduous trees**
 (Maples, Hackberry, Zelkova, Oaks, Lindens, Locust, etc.)
 - ornamental trees**
 (Redbud, Crab, Hawthorn, Serviceberry, Dogwood, etc.)
 - evergreen trees**
 (Pines, Spruces, Fir)
 - deciduous shrubs**
 (Viburnum, Forsythia, Hydrangea, Hollies, Dogwood, etc.)
 - evergreen shrubs**
 (Junipers, Yews, Arborvitae, Boxwood, etc.)
 - perennials and/or seasonal flowers**
 (Sedum, Ornamental Grasses, Black-eyed Susan, Coneflowers, etc.)





client:
LAUTREC
 31550
 Northwestern
 HWY. Suite 200
 Farmington Hills,
 Michigan 48334

project:
**DORR ROAD
 AND GRAND
 RIVER AVE.**

project location:
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 Michigan
 12 Mile Road

sheet title:
**CONCEPTUAL SITE
 AMENITY PLAN**

job no./issue/revision date:
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 LS21.096.10 SPA 10-24-2021
 LS21.096.12 SPA 12-13-2021
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project no:
LS22.028.02

sheet no:
LSC-4 of 5



L EV charging station
 TOTAL OF 4-CONDITIONS



K pet waste station
 TOTAL OF 5-CONDITIONS



J pond fountain
 TOTAL OF 2-CONDITIONS



I dog park



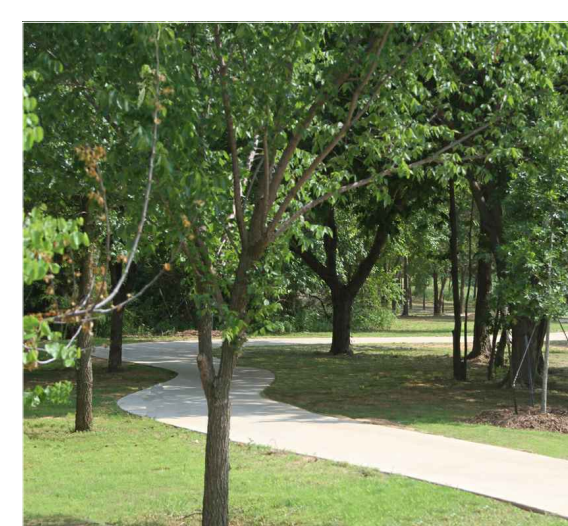
H park bench seating
 TOTAL OF 3-CONDITIONS



G decorative bench seating
 TOTAL OF 1-CONDITIONS



F gazebo feature
 (1-CONDITIONS)
 STICK BUILT OR KIT FORM.
 TO BE BUILT BY MANUFACTURER
 STANDARDS



**E meandering interior
 pedestrian walk**



D bicycle rack
 (2-CONDITIONS)
 BIKE RACK BY DUMOR, INC.
 MODEL NO. 180-20 (S-2
 SURFACE PLATE MOUNT) 2 3/8"
 O.D. BLACK POWDER-COATED
 LOOP OR EQUAL



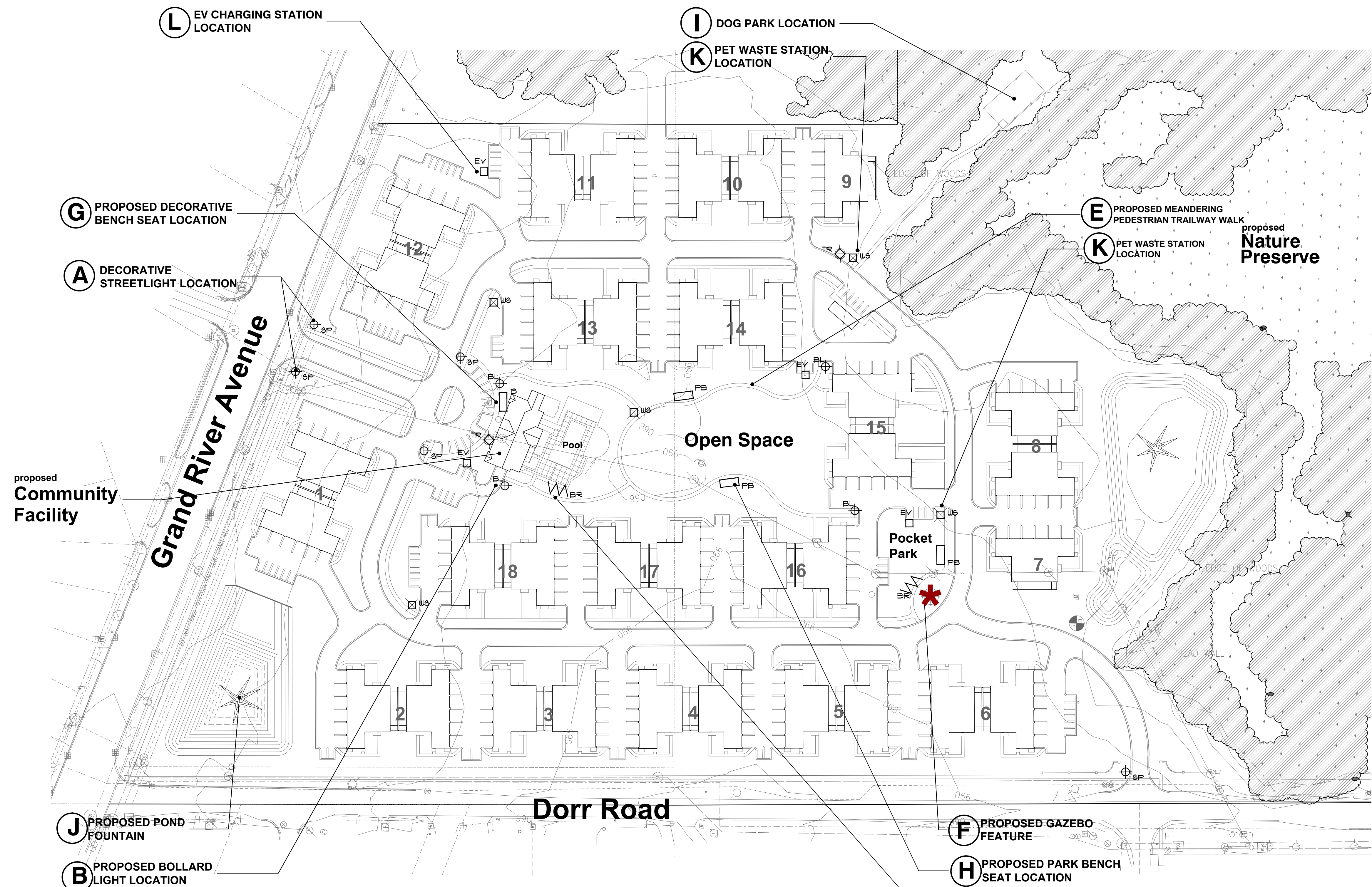
C trash receptacle
 (2-CONDITIONS)
 MANUFACTURED BY BY
 ANOVA, INC.
 WWW.ANOVAFURNISHINGS.COM
 DESCRIPTION: 32 GAL
 FINISH: TEXTURE PEPPER



B bollard light
 BY LITHONIA LIGHTS OR
 EQUAL MODEL: DSXB LED
 (D-SERIES LED BOLLARD
 8" DIA. X 42" HGT.) OR
 EQUAL (4-CONDITIONS)



**A decorative pole
 and light**
 (5-CONDITIONS)
 DECORATIVE BLVD. ISLAND
 SITE FIXTURE LIGHTS AND
 ALUMINUM POLE.



4A site amenity reference location map
 NO SCALE

site amenity key

- BIKE RACK
- PARK BENCH SEAT
- BENCH SEAT
- BOLLARD LIGHT
- STREET POLE LIGHT
- GAZEBO or PERGOLA
FEATURE
- PET WASTE STATION
- TRASH RECEPTACLE
- EV CHARGING STATION

MANUFACTURED BY BY
 ANOVA, INC.
 WWW.ANOVAFURNISHINGS.COM
 DESCRIPTION: 6' WIDE CONTOUR BENCH
 FINISH: TEXTURE PEPPER

6' WIDE PARK BENCH SEAT BY DUMOR, INC.
 MODEL NO. 34-60D (S-1)
 SUPPORT: 5-1 EMBEDMENT
 FINISH: BLACK POWDER-COATED

BY ZERO WASTE USA
 12516 WORLD TRADE
 DRIVE #102
 SAN DIEGO, CA 92128
 PH. 800-784-2563
 WWW.ZEROWASTEUSA.COM

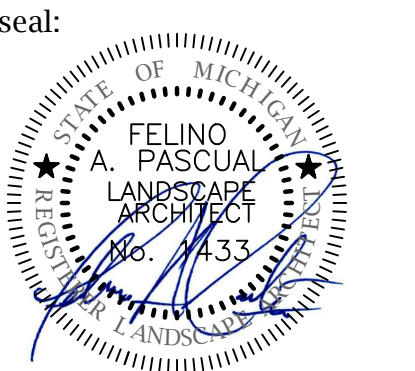
MODEL NO. LEXC6
 DESCRIPTION: 6' WIDE CONTOUR BENCH
 FINISH: TEXTURE PEPPER

DESCRIPTION: SENTRY
 DOG WASTE STATION
 (73"H X 13"W)

DESCRIPTION: SENTRY
 DOG WASTE STATION
 (73"H X 13"W)

DESCRIPTION: SENTRY
 DOG WASTE STATION
 (73"H X 13"W)

DESCRIPTION: SENTRY
 DOG WASTE STATION
 (73"H X 13"W)



client:
LAUTREC
 31550
 Northwestern
 HWY. Suite 200
 Farmington Hills,
 Michigan 48334

project:
**DORR ROAD
 AND GRAND
 RIVER AVE.**

project location:
 Genoa Township,
 Michigan
 12 Mile Road

sheet title:
**CONCEPTUAL ENTRY
 SIGN MONUMENT**

job no./issue/revision date:
 LS21.096.08 SPA 8-18-2021
 LS21.096.10 SPA 10-8-2021
 LS21.096.10 SPA 10-24-2021
 LS21.096.12 SPA 12-13-2021
 LS22.028.02 SPA 2-24-2022
 LS22.028.04 SPA 4-18-2022

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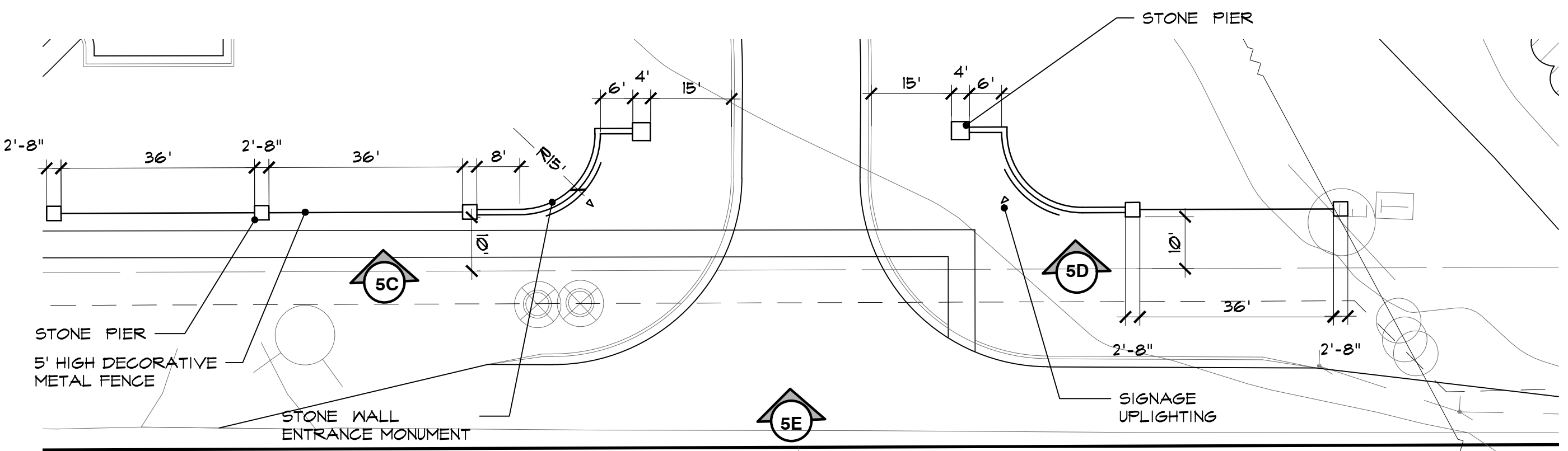
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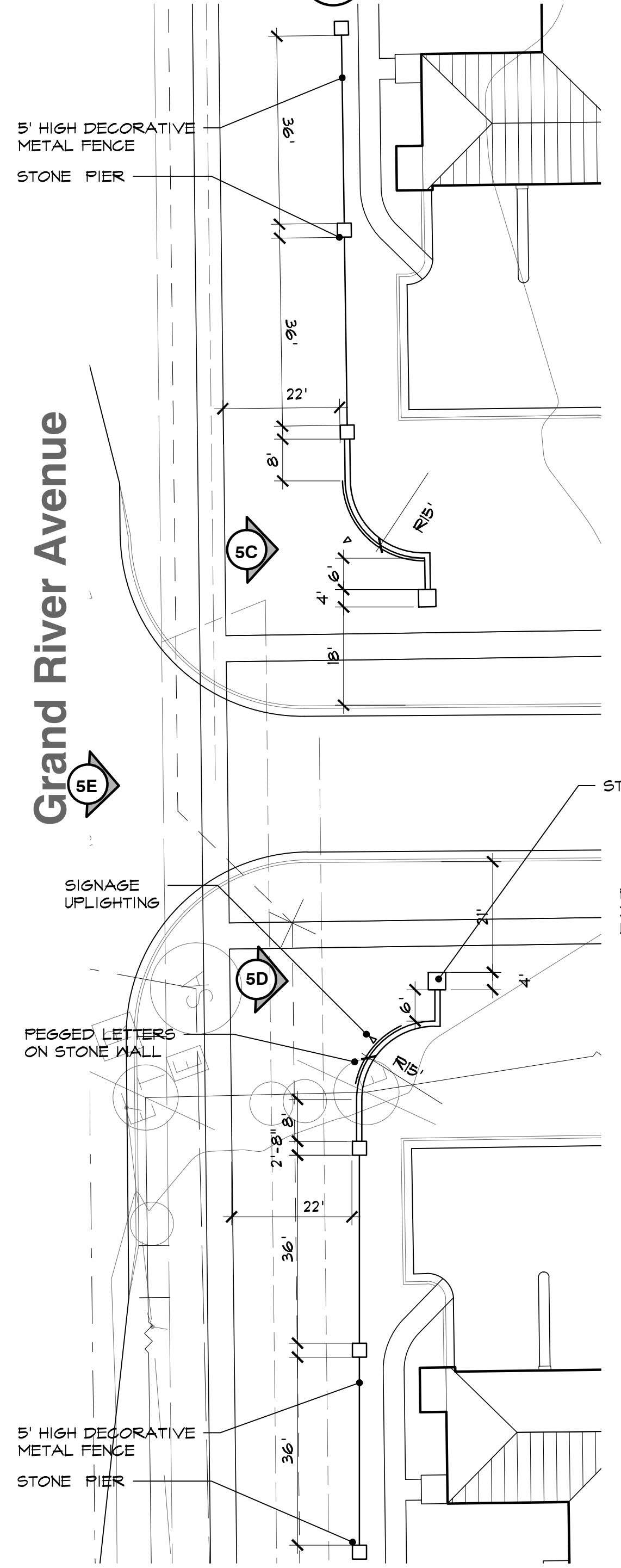
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project no:
LS22.028.02

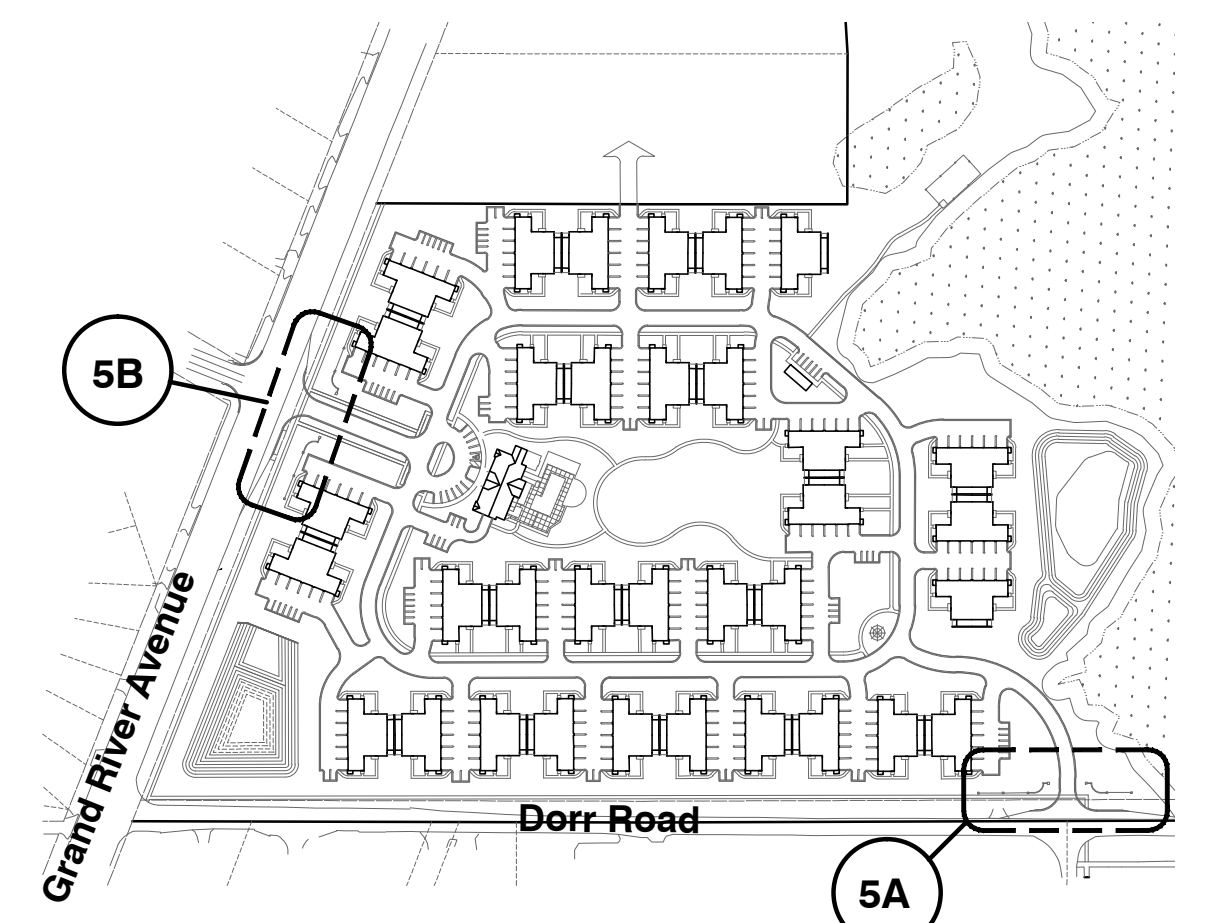
sheet no:
LSC-5 of 5



5A entry sign monument site plan
 SCALE: 1" = 20' - 0"



5B entry sign monument site plan
 SCALE: 1" = 20' - 0"



key reference location map
 NO SCALE

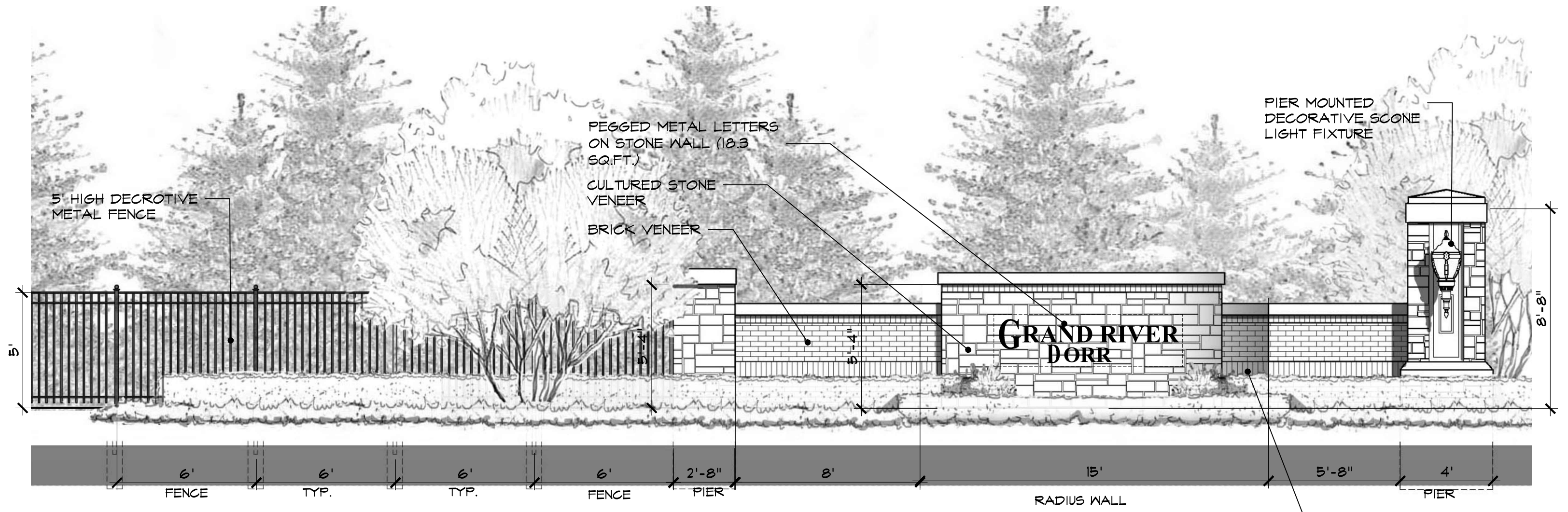
entry wall monument / pier / signage / notes:

1. LOCATE AND STAKE ALL EXISTING AND PROPOSED UTILITIES PRIOR TO CONSTRUCTION. COORDINATE ANY ADJUSTMENTS WITH LANDSCAPE ARCHITECT.
2. ALL ENTRY WALL LIGHTING SHALL BE CONTROLLED WITH A 'PHOTO-EYE' SWITCH. ALL LIGHTING SHALL BE SHIELDED FROM PUBLIC ROW'S AND ADJACENT PROPERTIES.
3. SEE LANDSCAPE PLAN FOR PROPOSED PLANTINGS ADJACENT TO PROPOSED ENTRY SIGN MONUMENT ON SHT. LS-2
4. VERIFY SOIL BEARING CAPACITY PRIOR TO ENTRY SIGN MONUMENT & PIER CONSTRUCTION. IF SOIL BEARING CAPACITY FALLS BELOW STANDARD REQUIREMENTS, CONSULT STRUCTURAL ENGINEER FOR RECOMMENDATION OF FINAL ENTRY MONUMENT & PIER FOOTING DESIGN.
5. SIGNAGE TEXT AND LOGO TO BE METAL PRISMATIC DIMENSIONAL LETTERS. PRIOR TO SIGN INSTALLATION, PERMITS TO BE OBTAINED PER GENOA TOWNSHIP REQUIREMENTS AND APPROVALS.
6. ALL INFORMATION CONTAINED HEREIN IS SUBJECT TO APPROVAL, AND PERMITS PERMITS TO BE OBTAINED PRIOR TO CONSTRUCTION.
7. FOOTINGS SHALL BEAR ON FIRM, UNDISTURBED SOIL WITH AN ASSUMED SAFE BEARING CAPACITY OF 2000 P.S.I. IF SOIL OF THIS CAPACITY IS NOT FOUND AT THE ELEVATIONS INDICATED, FOOTINGS SHALL BE ENLARGED OR LOWERED AT THE DIRECTION OF THE ARCHITECT. VERIFY FOUNDATION SOIL BEARING PRESSURE IN FIELD BY SOILS ENGINEER.
8. MINIMUM CONCRETE STRENGTH TO BE 3000 P.S.I. @ 28 DAYS, U.O.N.; SLABS SHALL BE 3500 P.S.I. MIN. U.O.N.; EXPOSED CONCRETE SHALL BE 4000 P.S.I. WITH 6% ± 1% ENTRAINED AIR U.O.N.
9. ALL CONCRETE WORK AND PLACEMENT SHALL CONFORM TO THE LATEST RECOMMENDATIONS OF ACI.
10. PROVIDE DOUELS INTO FOUNDATION TO MATCH SIZE AND SPACING OF VERTICAL REINFORCEMENT AT ALL WALLS, UNLESS OTHERWISE NOTED.
11. PROVIDE MINIMUM 3" CONCRETE COVER FOR REINFORCEMENT BARS BELOW GRADE AND MINIMUM 2" CONCRETE COVER FOR REINFORCEMENT BARS ABOVE GRADE.

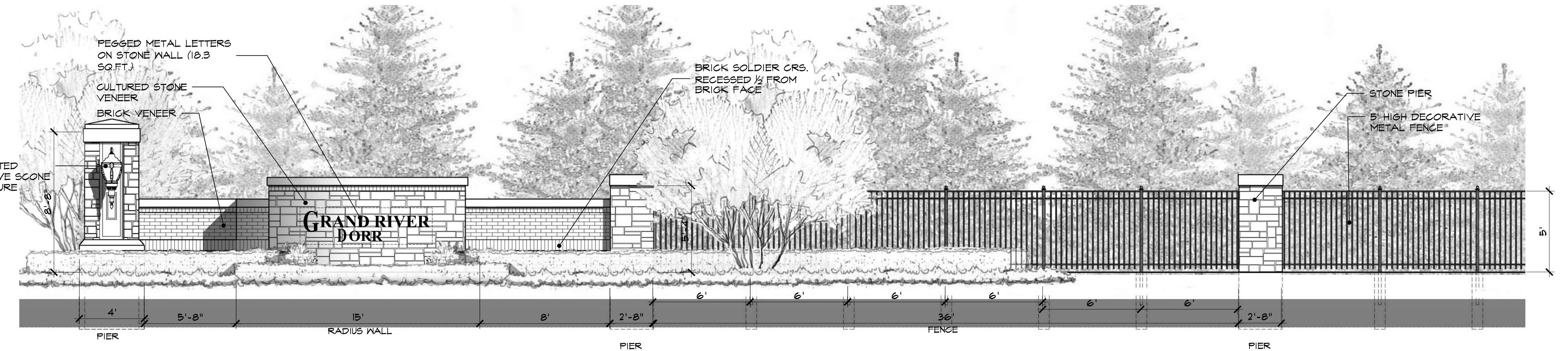


sign panel uplighting
 (4-CONDITIONS)

MANUFACTURER:
 ACUITY BRANDS LIGHTING
 ONE LITHONIA WAY
 CONYERS, GA 30012
 PEACHTREE, GA 30069
 PH. 770-322-9000
 BRAND: HYDREL
 MODEL: 4750SF or EQUAL
 (LED 4000K)
 FINISH : BRONZE



5C entry sign monument elevation
 SCALE: 1/4" = 1' - 0"



5D entry sign monument elevation
 SCALE: 1/4" = 1' - 0"



5E entry sign monument elevation
 SCALE: 1/8" = 1' - 0"

CONCEPTUAL P.U.D. PLANS

THE LEGACY APARTMENT HOMES

6080 W. GRAND RIVER
GENOA TOWNSHIP, LIVINGSTON COUNTY

PERMIT / APPROVAL SUMMARY		
DATE SUBMITTED	DATE APPROVED	PERMIT / APPROVAL



LOCATION MAP
1"=500'

INDEX OF DRAWINGS	
SHEET NUMBER	SHEET TITLE
C-0.0	COVER SHEET
C-1.1	TOPOGRAPHICAL SURVEY-OVERALL
C-1.2	TOPOGRAPHICAL SURVEY-NORTH
C-1.3	TOPOGRAPHICAL SURVEY-SOUTH
C-1.4	TREE LIST
C-2.1	OVERALL PUD SITE PLAN
C-2.2	CONCEPTUAL PUD SITE PLAN-NORTH
C-2.3	CONCEPTUAL PUD SITE PLAN-SOUTH
C-3.1	CONCEPTUAL STORM WATER MANAGEMENT PLAN
C-4.1	CONCEPTUAL UTILITY PLAN
C-4.2	CONCEPTUAL UTILITY PLAN
C-5.1	VEHICLE TRACKING
L-1.0 - 5.0	CONCEPTUAL LANDSCAPE PLAN
A -1.0 - 6.0	ARCHITECTURAL FLOOR PLANS AND ELEVATIONS

DESIGN TEAM

OWNER/APPLICANT/DEVELOPER
GRAND RIVER DORR, LLC
315550 NORTHWESTERN HIGHWAY
FARMINGTON HILL, MI 48334
CONTACT: MARK KASSAB
PHONE: 248.865.0066
EMAIL: MKASSAB@MSHAPIROREALESTATE.COM

CIVIL ENGINEER
PEA GROUP
7927 NEMCO WAY, STE. 115
BRIGHTON, MI 48116
CONTACT: JONATHAN E. CURRY, PE
PHONE: 844.813.2949
EMAIL: JCURRY@PEAGROUP.COM

ARCHITECT
BURMANN ASSOCIATES INC.
119 W. ST. CLAIR
ROMEO, MICHIGAN 58065-4655
PHONE: 586.752.5010 , MOBILE: 586.201.1602
EMAIL: GREATARCHITECTS@CHARTER.NET

SURVEYOR

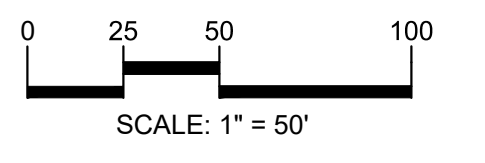
HUBBELL ROTH AND CLARK
555 HULET DRIVE
BLOOMFIELD HILLS, MICHIGAN 48303
CONTACT: MELISSA COATTE, P.E.
PHONE: 248-454-6300
EMAIL: mcoatta@hrcengr.com

LANDSCAPE ARCHITECT/PLANNER

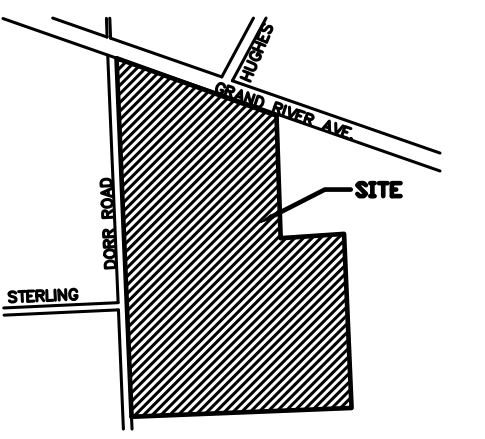
FELINO A. PASCUAL AND ASSOCIATES
24333 ORCHARD LAKE ROAD SUITE G
CONTACT: FELINO A. PASCUAL, RLA, CLARB
PHONE: 248.557.5588



REVISIONS	
DESCRIPTION	DATE
ORIGINAL ISSUE DATE	5/24/2022
REVISED FOR TOWNSHIP COMMENTS	6/23/2022



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CLIENT
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315550 NORTHWESTERN HIGHWAY
FARMINGTON HILLS, MI 48334

PROJECT TITLE
THE LEGACY APARTMENT HOMES
6080 W GRAND RIVER
GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

REVISIONS	
REVISED PER TWP COMMENTS	6.23.22

ORIGINAL ISSUE DATE:
MAY 24, 2022

DRAWING TITLE
TOPOGRAPHICAL SURVEY-NORTH

PEA JOB NO.	2021-0578
P.M.	JEC
DN.	JMR
DES.	JMR
DRAWING NUMBER:	

LEGEND	
BUILDING	[Symbol]
ASPHALT	[Symbol]
CONCRETE	[Symbol]
GRAVEL	[Symbol]
STORM	[Symbol]
SAUNTRY	[Symbol]
WATERMAIN	[Symbol]
GAS	[Symbol]
UND. TELEPHONE	[Symbol]
UND. ELECTRICAL	[Symbol]
TRAVERSE LINE & TRAVERSE POINT	[Symbol]
BENCH MARK SYMBOL	[Symbol]
PARKING BOLLARD	[Symbol]
FENCE	[Symbol]
MANHOLE - TELEPHONE	[Symbol]
MANHOLE - ELECTRIC	[Symbol]
CALL BOX	[Symbol]
GAS METER	[Symbol]
ELECTRIC OUTLET	[Symbol]
GAS TANK ABOVE GROUND	[Symbol]
SO. & RD. CATCH BASINS & INLETS IN PAVEMENT	[Symbol]
STORM MANHOLE & PIPE END	[Symbol]
UNSPECIFIED MH	[Symbol]
RISER & DOWN SPOUT	[Symbol]
PUMP STATION	[Symbol]
FIRE HYDRANT	[Symbol]
GATE & VALVE, & WELL	[Symbol]
CISTERN & WELL	[Symbol]
WATER STOP BOX & SPRINKLER HEAD	[Symbol]
WATER TOWER BASE & METER PIT	[Symbol]
UTILITY POLE	[Symbol]
LIGHT POLE	[Symbol]
CUT WIRE ANCHOR	[Symbol]
UNDERGROUND MARKER	[Symbol]
RISER	[Symbol]
GAS BOX & BLOW OFF	[Symbol]
BUILD. CORNER & 1st FLOOR ELEV.	[Symbol]
C. OF DITCH	[Symbol]
ATICE OF SLOPE	[Symbol]
TOP OF BERM & RIDGE	[Symbol]
ATICE OF BERM	[Symbol]
EDGE OF WATER & WATER SURFACE	[Symbol]
HEADWALL & RETAINING WALL	[Symbol]
SIGNS & SIGN POST	[Symbol]
LOCAL LOW POINT & LOCAL HIGH POINT	[Symbol]
FOUND IRON ROD	[Symbol]
FOUND MONUMENT	[Symbol]
SET IRON ROD	[Symbol]
NUMBER OF PARKING SPACES	[Symbol]
NUMBER OF HANDICAPPED PARKING SPACES	[Symbol]
WATER DISTRIBUTION BOX	[Symbol]
SAUNTRY CLEANOUT	[Symbol]

BM NO. 300
ARROW ON HYDRANT EAST SIDE OF DORR ROAD
OPPOSITE ENTRANCE TO 2200 DORR ROAD.
ELEV = 980.69

BM 301
ARROW ON HYDRANT EAST SIDE DORR ROAD 100'+/-
NORTH OF STERLING DRIVE.
ELEV = 990.00

BM NO. 302
MAG NAIL NORTHWEST FACE UTILITY POLE 350'+/-
EAST OF DORR ROAD 250'+/- NORTH OF STERLING DRIVE.
ELEV = 987.92

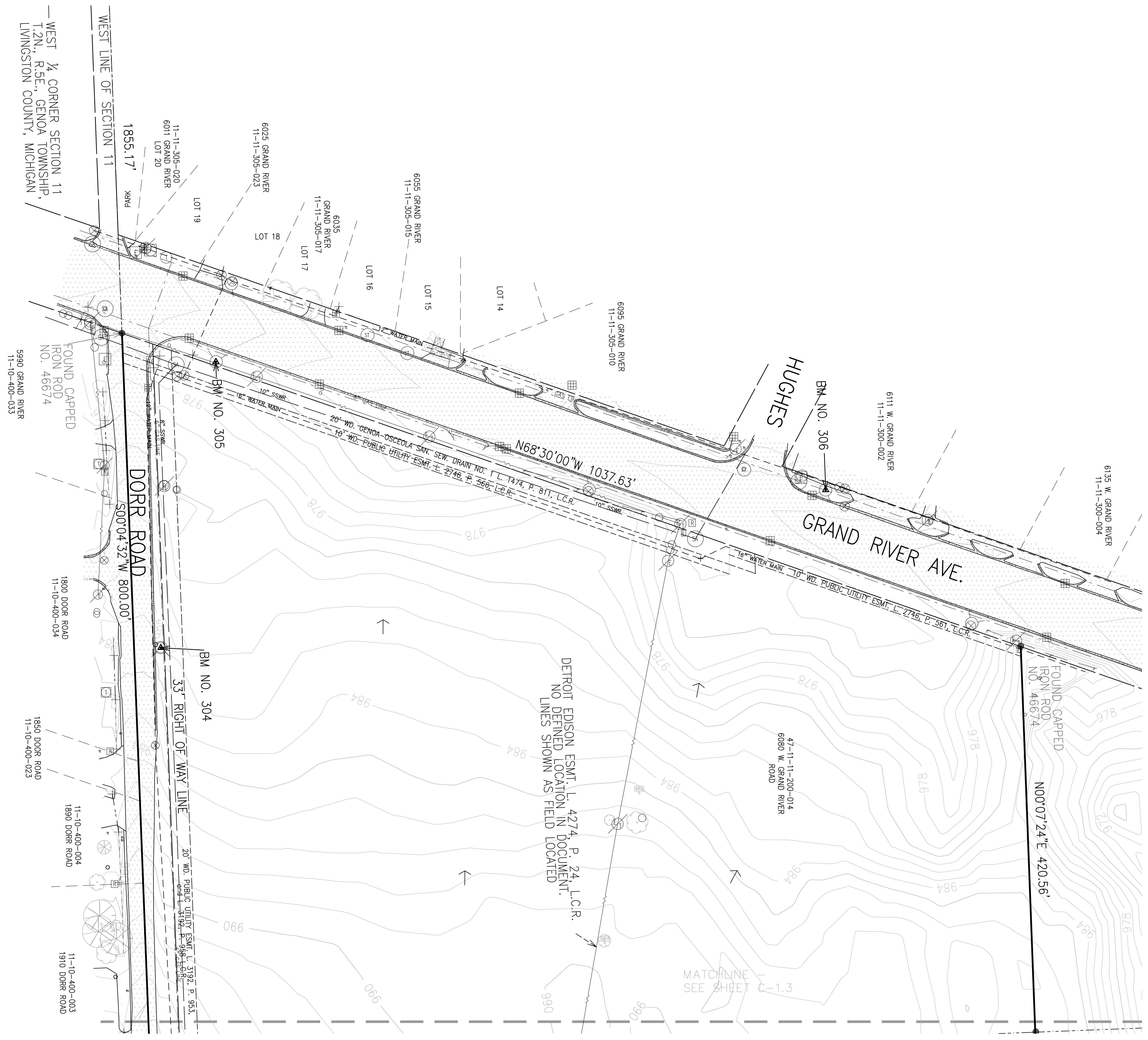
BM 303
ARROW ON HYDRANT EAST SIDE DORR ROAD 100'+/-
SOUTH OF 1920 DORR ROAD.
ELEV = 988.44

BM NO. 304
ARROW ON HYDRANT EAST SIDE DORR ROAD, 385'+/-
SOUTH OF CENTERLINE OF GRAND RIVER ROAD.
ELEV = 986.61

BM NO. 305
ARROW ON HYDRANT SOUTH SIDE GRAND RIVER 100'+/-
EAST OF CENTERLINE OF DORR ROAD.
ELEV = 978.96

BM 306
ARROW ON HYDRANT NORTH SIDE GRAND RIVER 75'+/-
EAST OF HUGHES ROAD
ELEV = 975.81

BM 307
ARROW ON HYDRANT NORTH SIDE OF GRAND RIVER
AT 6161 GRAND RIVER
ELEV = 978.92



MATCHLINE
SEE SHEET C-1.3

DETROIT EDISON ESMT, L. 4274, P. 24, L.C.R.
NO DEFINED LOCATION IN DOCUMENT.
LINES SHOWN AS FIELD LOCATED

WEST 1/4 CORNER SECTION 11
T.2N., R.5E., GENOA TOWNSHIP,
LIVINGSTON COUNTY, MICHIGAN

NOT FOR CONSTRUCTION

C-1.2

15/05/2022 10:00 AM C:\PEA\2021-0578\DRAWING\TOPO\TOPO_SURVEY_NORTH.dwg

SITE DATA TABLE:

SITE AREA	ORDINANCE	PROPOSED
	20.0 ACRES MIN.	51.94 ACRES GROSS 32.77 ACRES NET
DENSITY	8 UNITS/ACRE	6.23 UNITS/ACRE
ZONING:	EXISTING: NSD AND MDR WITH TOWN CENTER OVERLAY	
	PROPOSED: HDR, RPUD	
USE:	EXISTING: VACANT	
	PROPOSED: 204 MULTI-FAMILY DWELLING UNITS, CLUBHOUSE AND POOL	

BUILDING INFORMATION:
 MAXIMUM ALLOWABLE BUILDING HEIGHT = 40 FEET (3 STORIES)
 PROPOSED BUILDING HEIGHT = 27 FEET (2 STORIES)
 BUILDING FOOTPRINT AREA = 5,898 - 11,981 SQ.FT.
 CLUBHOUSE = 6,658 SQ. FT.
 TOTAL BUILDING FOOTPRINT AREA = 203,492 SQ.FT.

LOT COVERAGE	REQUIRED	PROPOSED (BASED ON NET ACRES)
	35% MAX	14.3%
PERCENT IMPERVIOUS	REQUIRED	
	50% MAX	41.4%

SETBACK REQUIREMENTS:

FRONT:	REQUIRED	PROPOSED
	INTERIOR	20'
EXTERIOR	35'	45.5' MIN
	15'	20.2' MIN
REAR:	30'	77'

DENSITY CALCULATION

ALLOWED	PROPOSED OVERALL ACREAGE	PROPOSED USEABLE ACREAGE
8 UNITS/AC	3.92 UNITS/AC	6.23 UNITS/AC

PARKING CALCULATIONS:
 TOTAL REQUIRED PARKING REQUIRED 2 SPACES PER 2 BEDROOM OR MORE UNIT = 408 SPACES

TOTAL PROPOSED PARKING SPACES = 700 SPACES (408 GARAGE + 204 IN DRIVEWAYS + 88 ADDITIONAL SPACES INCLUDING 1 H/C SPACE)

OPEN SPACE:
 MINIMUM OPEN SPACE REQUIRED = 25%
 PROVIDED OPEN SPACE = 29.0 AC, = 55.8%

SITE SOILS INFORMATION:
 ACCORDING TO THE USDA NATURAL RESOURCES CONSERVATION SERVICE WEB SOIL SURVEY FOR LIVINGSTON COUNTY, THE SITE CONSISTS OF THE FOLLOWING SOIL TYPES:
 Cc, Cvaob, Frb, Frc, FE, Gr, HIB, HIC, Ho, MoB, MoC, MoD, MqE, MoF, Rf, W, Wh

ORDINANCE MODIFICATIONS:

ZONING	10.03.01 (C)	THE OPEN SPACE ALONG THE EXTERIOR PUBLIC ROADS SHALL GENERALLY HAVE A DEPTH OF AT LEAST ONE HUNDRED (100) FEET EITHER LANDSCAPED OR PRESERVED IN A NATURAL WOODED CONDITION.
13.02.04 d.		REQUEST FOR GRADING UPTO 10' FROM REGULATED WETLAND.
14.02.06		REQUEST TO EXCEED PARKING SPACE REQUIREMENT MORE THAN 20%
14.06.09		PARKING LOTS AND RELATED MANEUVERING AISLES SHALL MEET MINIMUM SETBACKS FROM ADJACENT STREET R-O-W AS SHOWN IN THE SCHEDULE OF REGULATIONS AND HAVE PARKING LOT LANDSCAPING
14.06.10		PARKING LOTS SHALL HAVE MINIMUM REAR AND SIDE YARD SETBACKS INCLUDING BERMING AND LANDSCAPING.

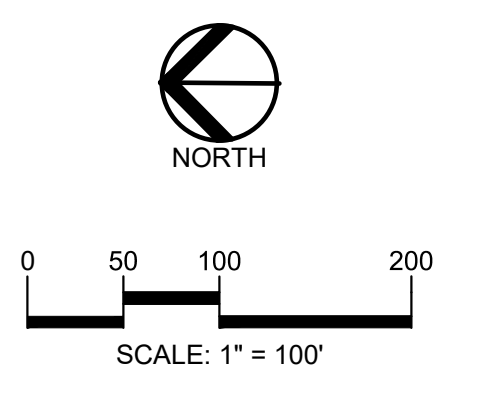
NOTE:

- PROPERTY WILL BE DEVELOPED OWNED AND OPERATED BY A SINGLE OWNERSHIP ENTITY.
- TRASH COLLECTION WILL BE PROVIDED VIA INDIVIDUAL TRASH CARTS FOR EACH UNIT WITH CURB SIDE TRASH COLLECTION.

LEGEND:

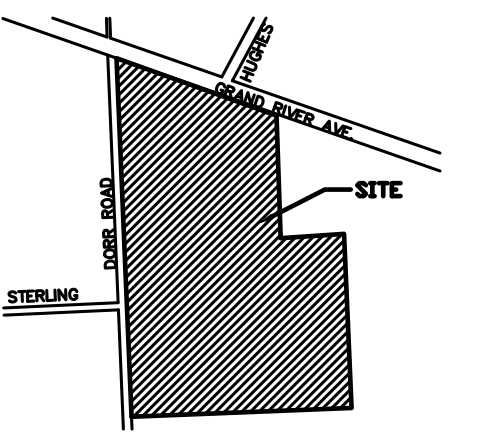
[Symbol]	CONCRETE PAVEMENT
[Symbol]	ASPHALT PAVEMENT
[Symbol]	GRAVEL
[Symbol]	WETLAND
[Symbol]	CONCRETE CURB AND GUTTER
[Symbol]	REVERSE GUTTER PAN
[Symbol]	SETBACK LINE
[Symbol]	SIGN
[Symbol]	LIGHTPOLE
[Symbol]	FENCE
[Symbol]	GUARD RAIL

PEA GROUP
 t. 844.813.2949
 www.peagroup.com



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

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GRAND RIVER DORR LLC.
 315550 NORTHWESTERN HIGHWAY
 FARMINGTON HILLS, MI 48334

PROJECT TITLE
THE LEGACY APARTMENT HOMES
 6080 W GRAND RIVER
 GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

REVISIONS
 REVISED PER TWP COMMENTS 6.23.22

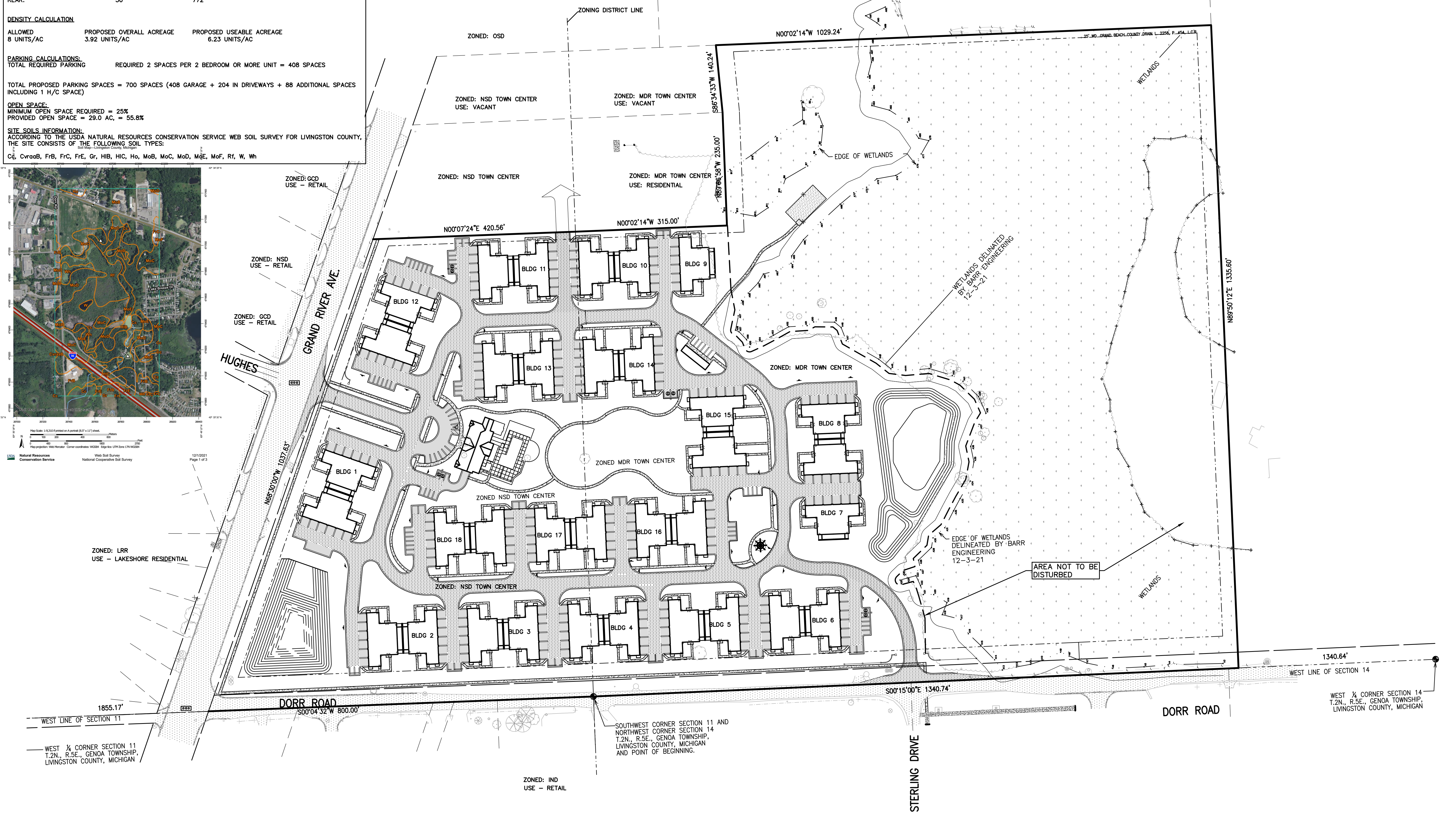
ORIGINAL ISSUE DATE:
 MAY 24, 2022

DRAWING TITLE
OVERALL PUD SITE PLAN

PEA JOB NO.	2021-0578
P.M.	JEC
DN.	JMR
DES.	JMR
DRAWING NUMBER:	



13/02/23
 Page 1 of 3



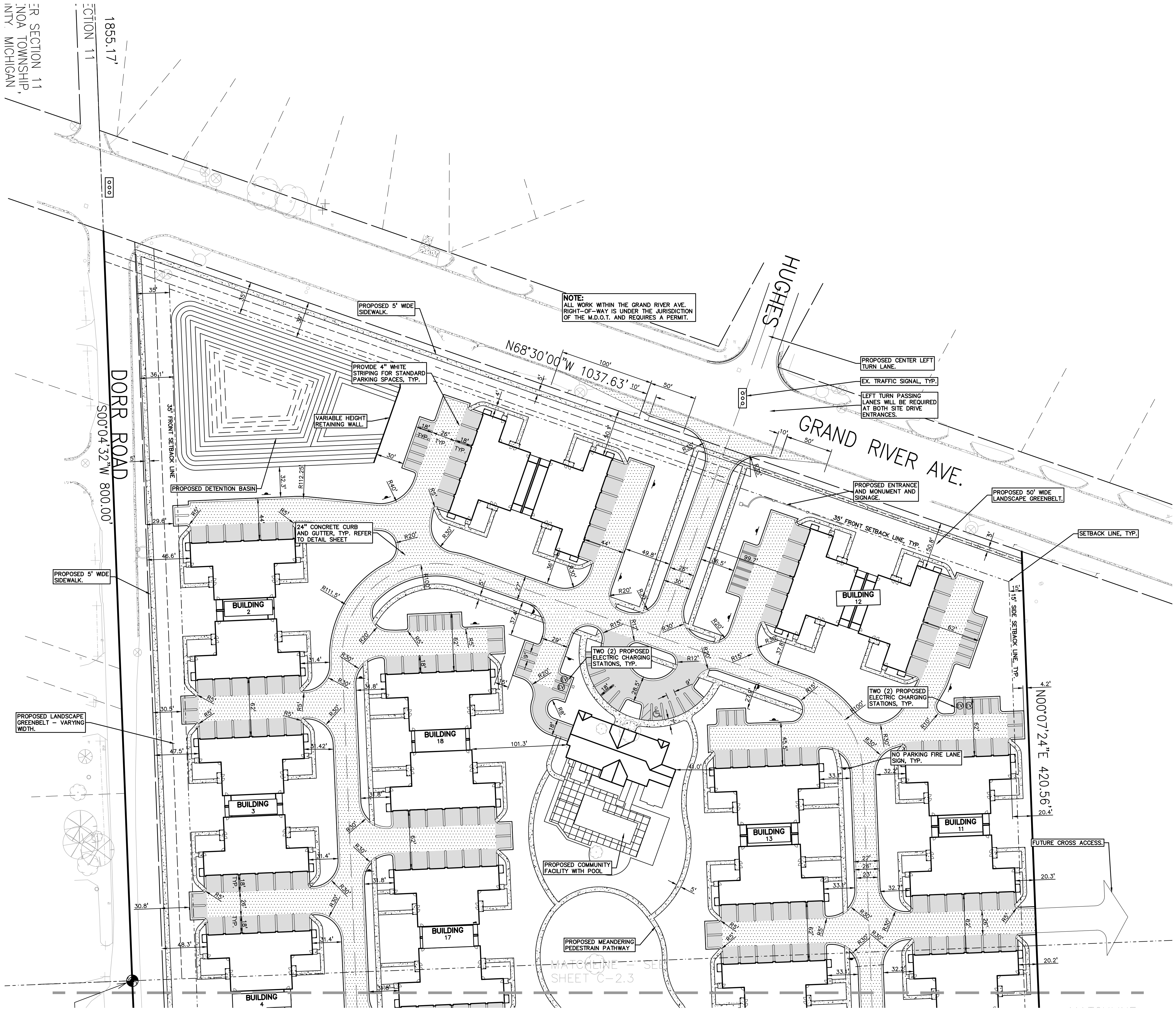
NOT FOR CONSTRUCTION C-2.1

S:\PROJECTS\2021\0578 LAUREL GENOA TOWNSHIP\CONCEPTUAL\C-2.0 CONCEPT DW 21-0578.rvt

SECTION 11
NOA TOWNSHIP,
MICHIGAN

1855.17'
SECTION 11

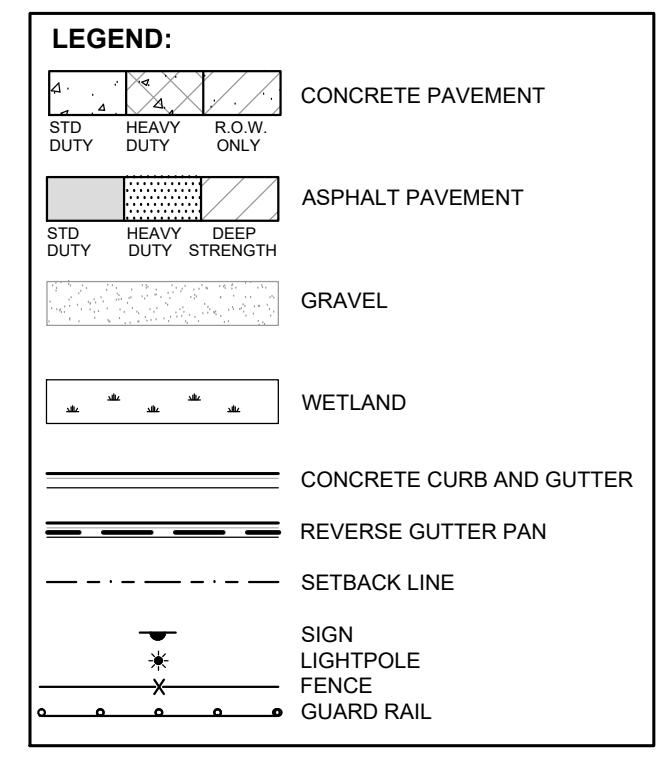
DORR ROAD
S00°04'32"W 800.00'



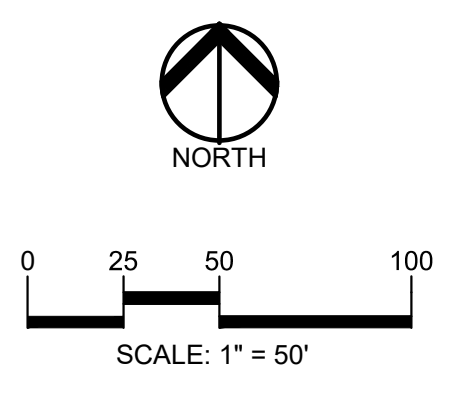
NOTE:
ALL WORK WITHIN THE GRAND RIVER AVE.
RIGHT-OF-WAY IS UNDER THE JURISDICTION
OF THE M.D.O.T. AND REQUIRES A PERMIT.

GENERAL NOTES:
THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT.

- ALL DIMENSIONS SHOWN ARE TO FACE OF CURB, FACE OF SIDEWALK, OUTSIDE FACE OF BUILDING, PROPERTY LINE, CENTER OF MANHOLE/CATCH BASIN OR CENTERLINE OF PIPE UNLESS OTHERWISE NOTED.
- 'NO PARKING-FIRE LANE' SIGNS SHALL BE POSTED ALONG ALL FIRE LANES AT 50'-100' FOOT INTERVALS OR AS DIRECTED BY THE FIRE OFFICIAL.

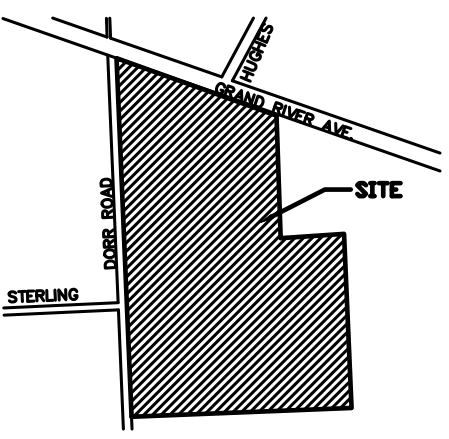


PEA GROUP
t. 844.813.2949
www.peagroup.com



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

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PROJECT TITLE
THE LEGACY APARTMENT HOMES
6080 W GRAND RIVER
GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

REVISIONS
REVISED PER TWP COMMENTS 6.23.22

ORIGINAL ISSUE DATE:
MAY 24, 2022

DRAWING TITLE
CONCEPTUAL PUD SITE PLAN-NORTH

PEA JOB NO. 2021-0578
P.M. JEC
DN. JMR
DES. JMR
DRAWING NUMBER:

NOT FOR CONSTRUCTION

C-2.2

S:\PROJECTS\2021\0578\LAUREL GENOA TOWNSHIP\CONCEPTUAL\C-2.0 CONCEPT DW 21-0578.rvt

LEGEND:

- CONCRETE PAVEMENT
- ASPHALT PAVEMENT
- GRAVEL
- WETLAND
- CONCRETE CURB AND GUTTER
- REVERSE GUTTER PAN
- SETBACK LINE
- SIGN
- LIGHTPOLE
- FENCE
- GUARD RAIL

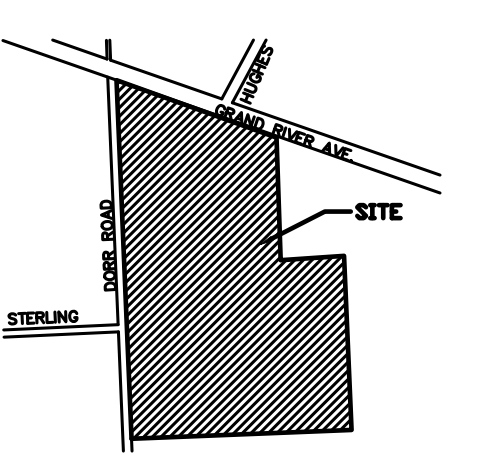
NORTH

0 25 50 100

SCALE: 1" = 50'

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 31550 NORTHWESTERN HIGHWAY
 FARMINGTON HILLS, MI 48334

PROJECT TITLE
THE LEGACY APARTMENT HOMES
 6080 W GRAND RIVER
 GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

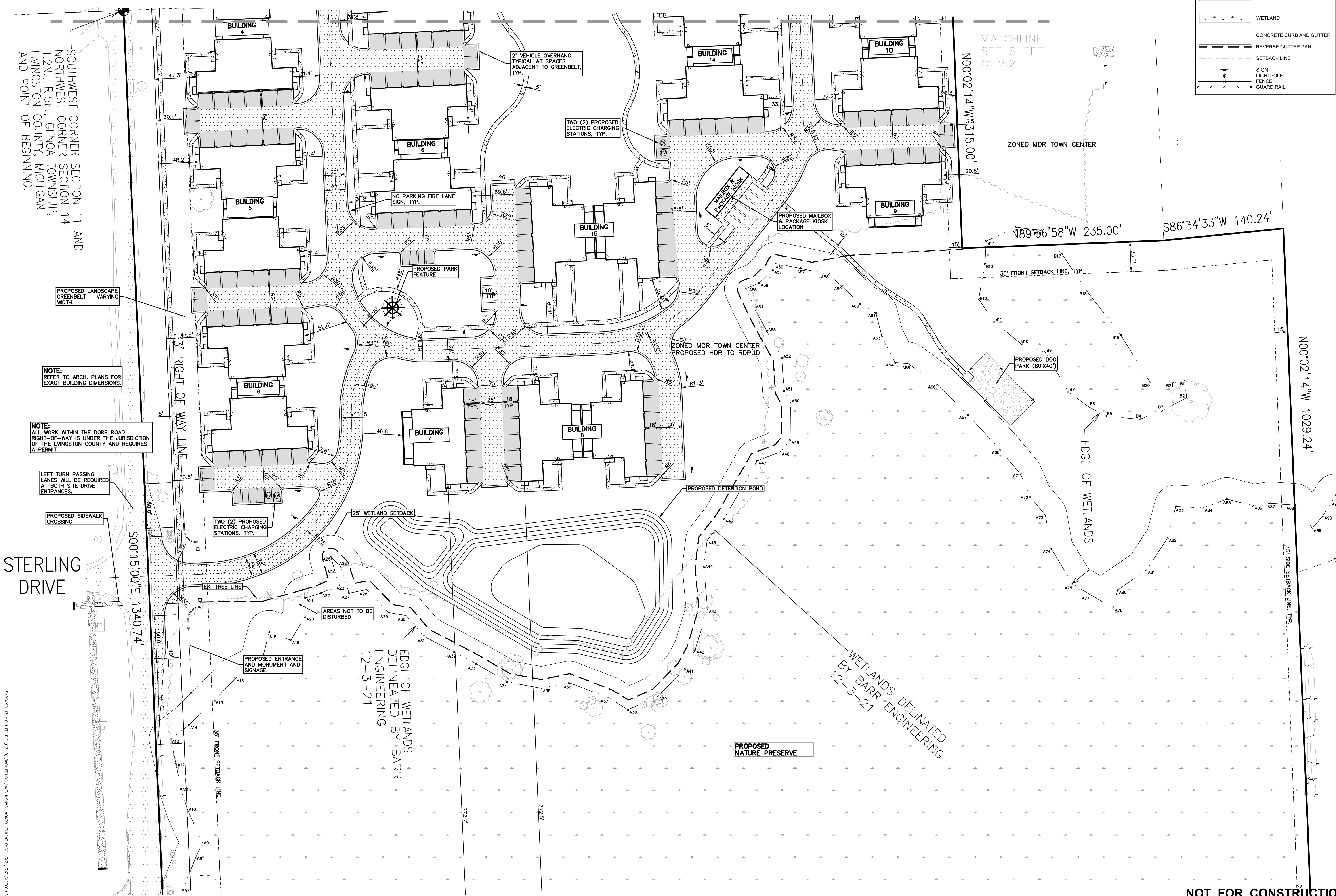
REVISIONS

REVISED PER TWP COMMENTS	6.23.22
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ORIGINAL ISSUE DATE:
 MAY 24, 2022

DRAWING TITLE
CONCEPTUAL PUD SITE PLAN-SOUTH

PEA JOB NO.	2021-0578
P.M.	JEC
DN.	JMR
DES.	JMR
DRAWING NUMBER:	



SOUTHWEST CORNER SECTION 11 AND NORTHWEST CORNER SECTION 14, T.2N., R.5E., GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN AND POINT OF BEGINNING.

PROPOSED LANDSCAPE GREENBELT - VARYING WIDTH.

NOTE: REFER TO ARCH. PLANS FOR EXACT BUILDING DIMENSIONS.

NOTE: ALL WORK WITHIN THE DORR ROAD RIGHT-OF-WAY IS UNDER THE JURISDICTION OF THE LIVINGSTON COUNTY AND REQUIRES A PERMIT.

LEFT TURN PASSING LANES WILL BE REQUIRED AT BOTH SITE DRIVE ENTRANCES.

PROPOSED SIDEWALK CROSSING

STERLING DRIVE

3' RIGHT OF WAY LINE

TWO (2) PROPOSED ELECTRIC CHARGING STATIONS, TYP.

PROPOSED ENTRANCE AND MONUMENT AND SIGNAGE.

EDGE OF WETLANDS DELINEATED BY BARR ENGINEERING 12-3-21

WETLANDS DELINEATED BY BARR ENGINEERING 12-3-21

PROPOSED NATURE PRESERVE

MATCHLINE - SEE SHEET C-2.2

ZONED MDR TOWN CENTER

N89°06'58"W 235.00'

S86°34'33"W 140.24'

35' FRONT SETBACK LINE, TYP.

EDGE OF WETLANDS

N00°02'14"W 1029.24'

15' SIDE SETBACK LINE, TYP.

NOT FOR CONSTRUCTION

C-2.3

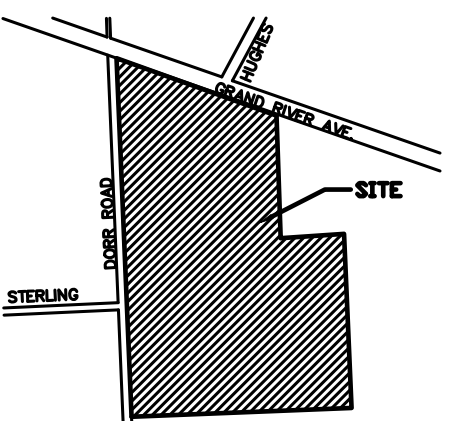
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0 25 50 100
SCALE: 1" = 50'



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ORIGINAL ISSUE DATE:
MAY 24, 2022

DRAWING TITLE
CONCEPTUAL UTILITY PLAN

PEA JOB NO. 2021-0578

P.M. JEC

DN. JMR

DES. JMR

DRAWING NUMBER:

C-4.1

GENERAL UTILITY NOTES:

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF MHOG AND GENOA TOWNSHIP.
2. ALL TRENCHES UNDER OR WITHIN THREE (3) FEET OR THE FORTY-FIVE (45) DEGREE ZONE OF INFLUENCE LINE OF EXISTING AND/OR PROPOSED PAVEMENT, BUILDING PAD OR DRIVE APPROACH SHALL BE BACKFILLED WITH MDOT CLII SAND COMPACTED TO AT LEAST NINETY-FIVE (95) PERCENT OF MAXIMUM UNIT WEIGHT (ASTM D-1557). ALL OTHER TRENCHES TO BE COMPACTED TO 90% OR BETTER.
3. WHERE EXISTING MANHOLES OR SEWER PIPE ARE TO BE TAPPED, DRILL HOLES 4" CENTER TO CENTER, AROUND PERIPHERY OF OPENING TO CREATE A PLANE OF WEAKNESS JOINT BEFORE BREAKING SECTION OUT.
4. THE LOCATIONS AND DIMENSIONS SHOWN ON THE PLANS FOR EXISTING UTILITIES ARE IN ACCORDANCE WITH AVAILABLE INFORMATION WITHOUT UNCOVERING AND MEASURING. THE DESIGN ENGINEER DOES NOT GUARANTEE THE ACCURACY OF THIS INFORMATION OR THAT ALL EXISTING UNDERGROUND FACILITIES ARE SHOWN. CONTRACTOR SHALL FIELD VERIFY UTILITIES.
5. THE CONTRACTOR SHALL COORDINATE TO ENSURE ALL REQUIRED PIPES, CONDUITS, CABLES AND SLEEVES ARE PROPERLY PLACED FOR THE INSTALLATION OF GAS, ELECTRIC, PHONE, CABLE, IRRIGATION, ETC. IN SUCH A MANNER THAT WILL FACILITATE THEIR PROPER INSTALLATION PRIOR TO THE PLACEMENT OF THE PROPOSED PAVEMENT AND LANDSCAPING.
6. CONTRACTOR SHALL INSPECT ALL EXISTING PUBLIC STORM SEWER, SANITARY SEWER AND WATER MAIN STRUCTURES WITHIN THE LIMITS OF CONSTRUCTION AND WITH THE GOVERNING AGENCY INSPECTOR PRIOR TO ESTABLISHING FINAL GRADE. NOTIFY THE ENGINEER, OWNER/DEVELOPER, AND GOVERNING AGENCY IF STRUCTURE IS DEEMED TO BE STRUCTURALLY UNSOUND AND/OR IN NEED OF REPAIR.

STORM SEWER NOTES:

1. ALL STORM SEWER 12" DIAMETER OR LARGER SHALL BE REINFORCED CONCRETE PIPE (RCP C-76) CLASS IV WITH MODIFIED TONGUE AND GROOVE JOINT WITH RUBBER GASKETS UNLESS SPECIFIED OTHERWISE (ASTM C-443).
2. ALL STORM SEWER LEADS SHALL BE CONSTRUCTED AT 1.00% MINIMUM SLOPE.
3. ALL STORM SEWER 10" OR LESS AND/OR LEADS SHALL BE HDPE SCHEDULE 40.
4. STORM SEWER WILL BE PRIVATE AND PLACED IN A 20' WIDE MINIMUM EASEMENT.

WATER MAIN NOTES:

1. ALL WATER MAIN SHALL BE INSTALLED WITH A MINIMUM COVER OF 5.5' BELOW FINISH GRADE. WHEN WATER MAINS MUST DIP TO PASS UNDER A STORM SEWER OR SANITARY SEWER, THE SECTIONS WHICH ARE DEEPER THAN NORMAL SHALL BE KEPT TO A MINIMUM LENGTH BY THE USE OF VERTICAL TWENTY TWO AND A HALF (22.5°) DEGREE BENDS, PROPERLY ANCHORED.
2. ALL TEES, BENDS, CONNECTIONS, ETC. ARE CONSIDERED INCIDENTAL TO THE JOB.
3. PHYSICAL CONNECTIONS SHALL NOT BE MADE BETWEEN EXISTING AND NEW WATER MAINS UNTIL REQUIRED TESTING IS SATISFACTORILY COMPLETED.
4. MAINTAIN 10' HORIZONTAL CLEARANCE BETWEEN OUTER EDGE OF WATERMAIN AND ANY SANITARY/STORM SEWER OR STRUCTURE.
5. NO PHYSICAL CONNECTION TO THE EXISTING WATER MAIN CAN BE MADE UNTIL ALL NEW WATER MAIN PASSES PRESSURE AND BACTERIOLOGICAL TESTS TO THE SATISFACTION OF THE MARION, HOWELL, OCEOLA, GENOA (MHOG) SEWER AND WATER AUTHORITY.
6. ALL WATER MAIN AND FITTINGS (3" DIAMETER AND LARGER) SHALL BE DUCTILE IRON, CLASS 52.
7. WATER MAIN SERVICE LEADS SHALL BE TYPE 'K' ANNEALED SEAMLESS COPPER WITH FLARED FITTINGS, UNLESS OTHERWISE NOTED.
8. ALL FIRE HYDRANTS SHALL BE E.J.W. #58R MODEL #250 PER MHOG STANDARDS.
9. ALL HYDRANTS TO BE A MINIMUM OF 4.5' FROM BACK OF CURB, TYP.
10. ALL NECESSARY FITTINGS, THRUST BLOCKS, RESTRAINING GLANDS, BLOW OFFS, ETC. FOR WATER MAIN ARE CONSIDERED INCIDENTAL TO THIS PROJECT. THE CONTRACTOR SHALL INSTALL THESE ITEMS AS NECESSARY AND AS REQUIRED BY THE MHOG.
11. THE WATER MAIN CONTRACTOR SHALL NOTIFY THE INSPECTION SECTION OF THE MHOG/GENOA TOWNSHIP AT 810-227-5225 AT LEAST THREE WORKING DAYS IN ADVANCE OF STARTING CONSTRUCTION.

FIRE DEPARTMENT NOTES:

1. WATER METER ROOMS/FIRE SPRINKLER ROOMS SHALL BE LOCATED ON THE STREET SIDE OF THE BUILDINGS. FIRE SPRINKLER RISER ROOMS SHALL BE PROVIDED WITH SIGNAGE IDENTIFYING THE ROOM AND ITS ADDRESS WITH RED LETTERS ON WHITE BACKGROUND.
2. THE WATER METER/FIRE SPRINKLER RISER ROOMS SHALL BE PROVIDED WITH HEAT AND INSULATION TO MAINTAIN THE ROOM TEMPERATURE ABOVE 40 DEGREES FAHRENHEIT.
3. THE FDC FOR EACH BUILDING MAY BE LOCATED IMMEDIATELY OUTSIDE THE WATER METER/FIRE SPRINKLER RISER ROOM. THE FDC FOR THE CLUBHOUSE SHALL BE LOCATED ON THE FRONT OF THE BUILDING REGARDLESS OF THE LOCATION OF THE RISER ROOM.
4. ALL FIRE ACCESS DRIVES ARE TO BE PROVIDED WITH VERTICAL CLEARANCE OF 13.5 FEET. THIS INCLUDES BUT IS NOT LIMITED TO PORTE-COCHERE, LIGHTING, AND LARGE CANOPY TREES.
5. EACH BUILDING SHALL INCLUDE THE BUILDING NUMBERS A MINIMUM OF 6" HIGH LETTERS/NUMBERS OF CONTRASTING COLORS AND BE CLEARLY VISIBLE FROM THE STREET. EACH UNIT ADDRESS SHALL BE A MINIMUM OF 4" HIGH WHITE UNIT ADDRESSES LOCATED ON THE NON-STREET-SIDE OF THE BUILDINGS. ADDITIONAL YARD SIGNS VISIBLE FROM THE PARKING AREAS WILL BE REQUIRED. EACH WATER METER/FIRE SPRINKLER RISER ROOM SHALL BE PROVIDED WITH THEIR OWN ADDRESS. THE LOCATION AND SIZE OF THE ADDRESS LABELING SHALL BE COORDINATED AND APPROVED PRIOR TO INSTALLATION. ALL WATER MAIN SHALL BE INSTALLED WITH A MINIMUM COVER OF 5.5' BELOW FINISH GRADE.

SANITARY SEWER NOTES:

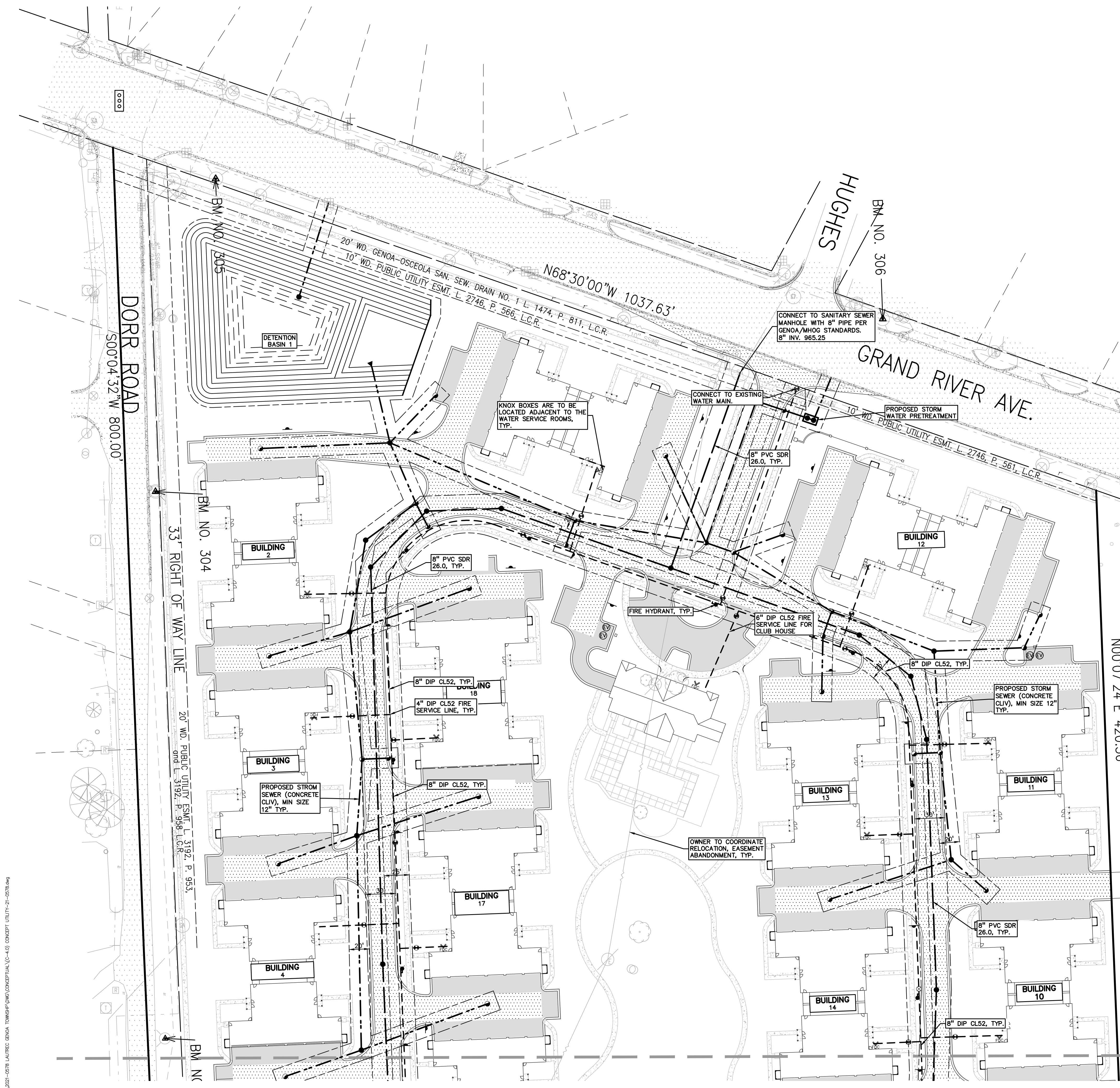
1. DOWNSPOUTS, WEEP TILE, FOOTING DRAINS OR ANY CONDUIT THAT CARRIES STORM OR GROUND WATER SHALL NOT BE ALLOWED TO DISCHARGE INTO A SANITARY SEWER.
2. ALL SANITARY LEADS SHALL BE CONSTRUCTED AT 1.00% MINIMUM SLOPE.
3. ALL SANITARY SEWER 8" OR LARGER SHALL BE PVC SDR 26 TYPE PSM SEWER PIPE WITH BELL AND SPIGOT ENDS FOR GASKETED JOINTS. (FITTINGS ASTM D 3034, PVC BELL ENDS, GASKETS ASTM F 477, ELASTOMERIC SEALS).
4. ALL SANITARY SEWER LEADS SHALL BE POLYVINYL CHLORIDE (PVC) SDR 23.5 PIPE AND FITTINGS. ALL JOINTS TO BE ELASTOMERIC GASKET JOINTS PER ASTM D3212 UNLESS OTHERWISE NOTED.
5. SANITARY LEADS SHALL BE PROVIDED WITH CLEANOUTS EVERY 100 FEET AND AT EVERY BEND AS SHOWN. ALL CLEANOUTS TO BE PROVIDED WITH E.I.I.W. #1565 BOX OR EQUAL.

UTILITY LEGEND:

-OH-ELEC-W-O-	EX. OH. ELEC. POLE & GUY WIRE
-UG-CATV-	EX. U.G. CABLE TV & PEDESTAL
-UG-COMM-	EX. U.G. COMMUNICATION LINE, PEDESTAL & MANHOLE
-UG-ELEC-MH-	EX. U.G. ELEC. MANHOLE, METER & HANDHOLE
-GAS-	EX. GAS LINE
⊕	EX. GAS VALVE & GAS LINE MARKER
⊗	EX. TRANSFORMER & IRRIGATION VALVE
—	EX. WATER MAIN
⊕	EX. HYDRANT, GATE VALVE & POST INDICATOR VALVE
⊗	EX. WATER VALVE BOX & SHUTOFF
⊕	EX. SANITARY SEWER
⊗	EX. SANITARY CLEANOUT & MANHOLE
⊕	EX. COMBINED SEWER MANHOLE
⊗	EX. STORM SEWER
⊕	EX. CLEANOUT & MANHOLE
⊗	EX. SQUARE, ROUND, & BEEHIVE CATCH BASIN
⊕	EX. YARD DRAIN & ROOF DRAIN
⊗	EX. UNIDENTIFIED STRUCTURE
-	PROPOSED WATER MAIN
⊕	PROPOSED HYDRANT AND GATE VALVE
⊗	PROPOSED TAPPING SLEEVE, VALVE & WELL
⊕	PROPOSED POST INDICATOR VALVE
-	PROPOSED SANITARY SEWER
⊕	PROPOSED SANITARY CLEANOUT & MANHOLE
⊗	PROPOSED STORM SEWER
⊕	PROPOSED STORM SEWER CLEANOUT & MANHOLE
⊗	PROPOSED CATCH BASIN, INLET & YARD DRAIN

MATCHLINE - SEE SHEET C-4.2

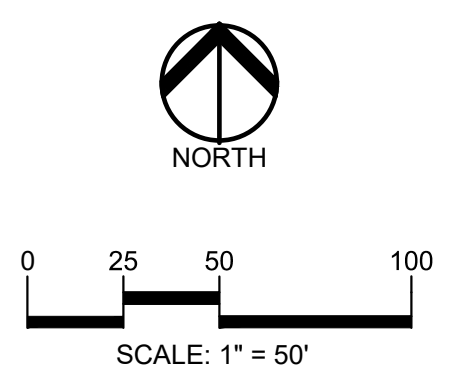
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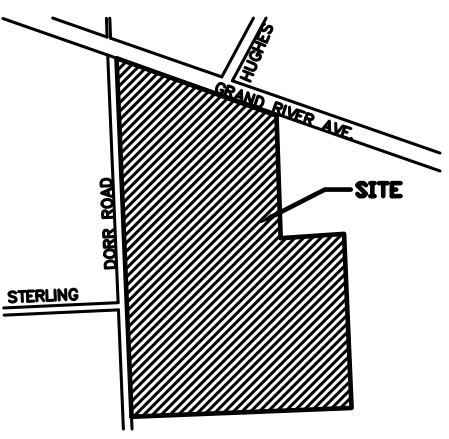
S:\PROJECTS\2021\0578 LAUREL GENOA TOWNSHIP\CONCEPTUAL\C-4.0 CONCEPT UTILITY-2-0218.dwg

UTILITY LEGEND:

	EX. OH, ELEC, POLE & GUY WIRE
	EX. U.G. CABLE TV & PEDESTAL
	EX. U.G. COMMUNICATION LINE, PEDESTAL & MANHOLE
	EX. U.G. ELEC. MANHOLE, METER & HANDHOLE
	EX. GAS LINE
	EX. GAS VALVE & GAS LINE MARKER
	EX. TRANSFORMER & IRRIGATION VALVE
	EX. WATER MAIN
	EX. HYDRANT, GATE VALVE & POST INDICATOR VALVE
	EX. WATER VALVE BOX & SHUTOFF
	EX. SANITARY SEWER
	EX. SANITARY CLEANOUT & MANHOLE
	EX. COMBINED SEWER MANHOLE
	EX. STORM SEWER
	EX. CLEANOUT & MANHOLE
	EX. SQUARE, ROUND, & BEEHIVE CATCH BASIN
	EX. YARD DRAIN & ROOF DRAIN
	EX. UNIDENTIFIED STRUCTURE
	PROPOSED WATER MAIN
	PROPOSED HYDRANT AND GATE VALVE
	PROPOSED TAPPING SLEEVE, VALVE & WELL
	PROPOSED POST INDICATOR VALVE
	PROPOSED SANITARY SEWER
	PROPOSED SANITARY CLEANOUT & MANHOLE
	PROPOSED STORM SEWER
	PROPOSED STORM SEWER CLEANOUT & MANHOLE
	PROPOSED CATCH BASIN, INLET & YARD DRAIN



CAUTION!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR VERIFYING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.



CLIENT
GRAND RIVER DORR LLC.
315550 NORTHWESTERN HIGHWAY
FARMINGTON HILLS, MI 48334

PROJECT TITLE
THE LEGACY APARTMENT HOMES
6080 W GRAND RIVER
GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

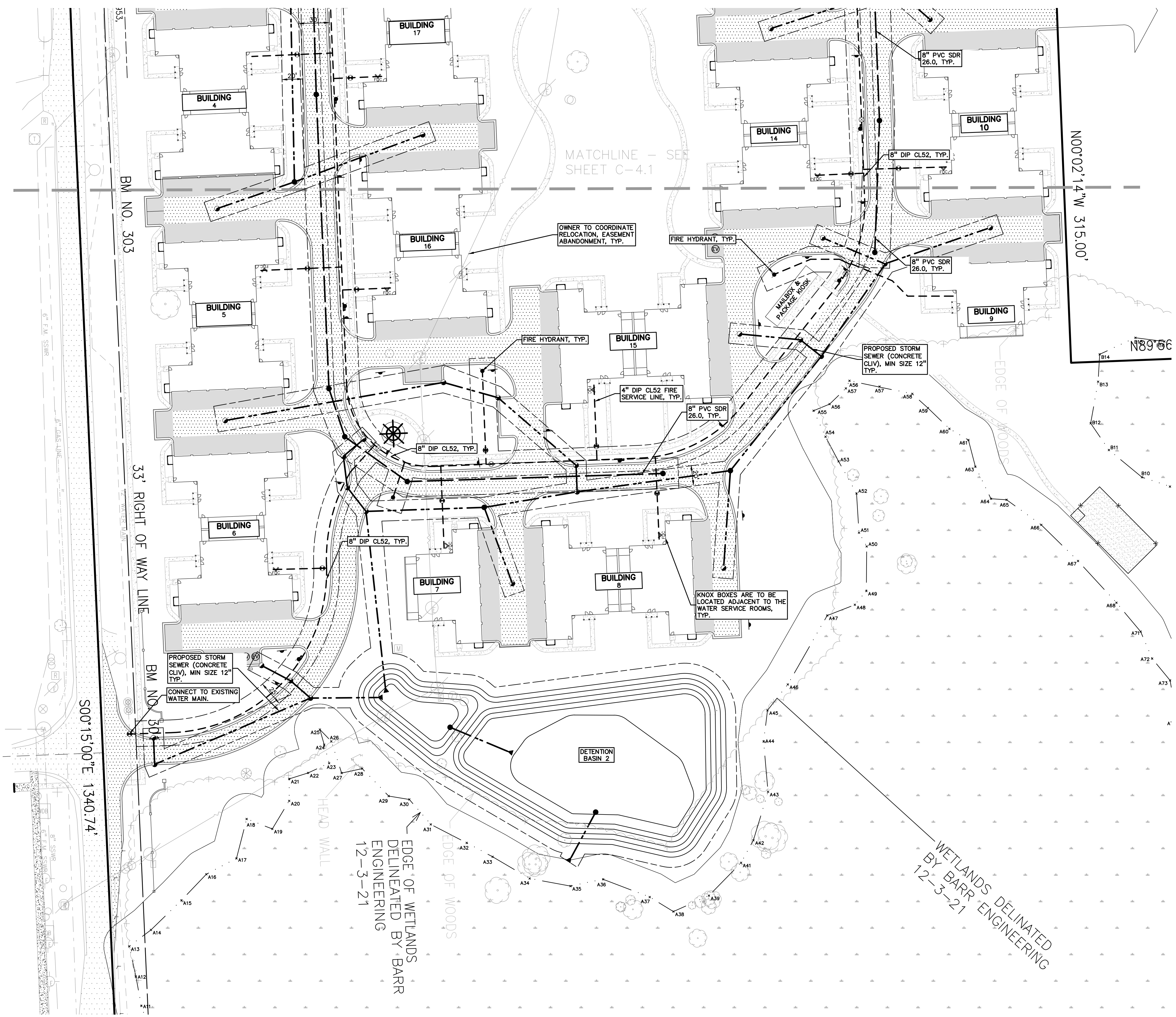
REVISIONS

REVISED PER TWP COMMENTS	6.23.22
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ORIGINAL ISSUE DATE:
MAY 24, 2022

DRAWING TITLE
CONCEPTUAL UTILITY PLAN

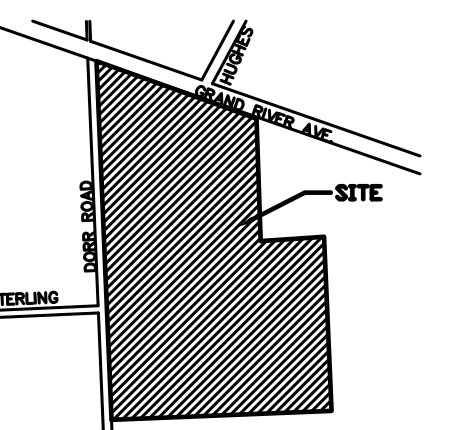
PEA JOB NO.	2021-0578
P.M.	JEC
DN.	JMR
DES.	JMR
DRAWING NUMBER:	



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CAUTION!!
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CLIENT
GRAND RIVER DORR LLC.
 31555 NORTHWESTERN HIGHWAY
 FARMINGTON HILLS, MI 48334

PROJECT TITLE
THE LEGACY APARTMENT HOMES
 6080 W GRAND RIVER
 GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

REVISIONS
 REVISED PER TWP COMMENTS 6.23.22

ORIGINAL ISSUE DATE:
 MAY 24, 2022

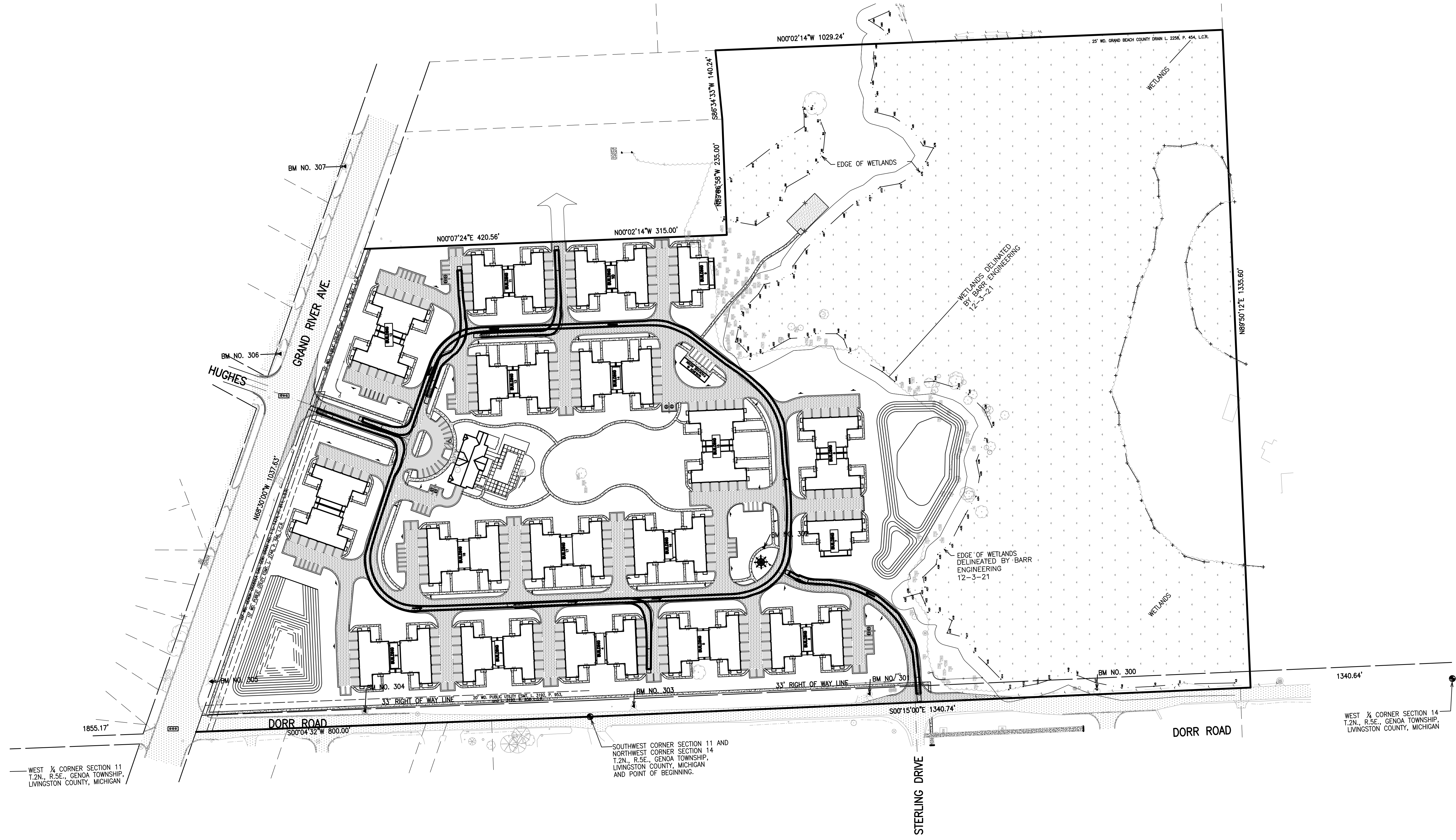
DRAWING TITLE

VEHICLE TRACKING

PEA JOB NO.	2021-0578
P.M.	JEC
DN	JMR
DES.	JMR
DRAWING NUMBER:	

NOT FOR CONSTRUCTION

C-5.1



S:\PROJECTS\2021\0578 LAUREL GENOA TOWNSHIP\CONCEPTUAL\C-5.01 CONCEPT VEHICLE TRACKING 21-0578.dwg

WEST 1/4 CORNER SECTION 11
 T.2N., R.5E., GENOA TOWNSHIP,
 LIVINGSTON COUNTY, MICHIGAN

SOUTHWEST CORNER SECTION 11 AND
 NORTHWEST CORNER SECTION 14
 T.2N., R.5E., GENOA TOWNSHIP,
 LIVINGSTON COUNTY, MICHIGAN
 AND POINT OF BEGINNING.

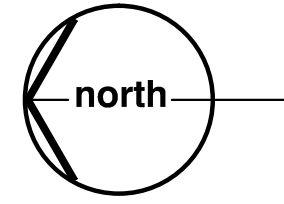
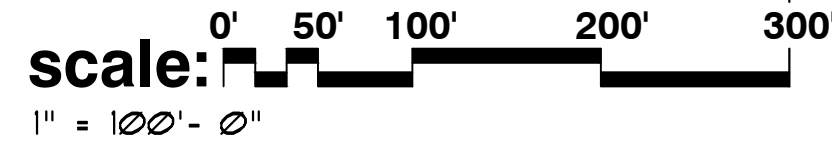
WEST 1/4 CORNER SECTION 14
 T.2N., R.5E., GENOA TOWNSHIP,
 LIVINGSTON COUNTY, MICHIGAN

site plan study for:

A Proposed Multi-Family Residential Community

Genoa Township, Michigan

note
 preliminary concept plan for inspection purposes
 only and in no way official or approved for record
 purposes.



landscape requirements:

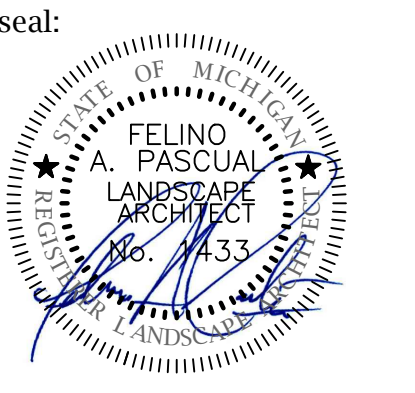
	REQUIRED	PROVIDED
greenbelt (Grand River Avenue)		
TOTAL LIN.FT. OF GREENBELT FRONTAGE	945±	
ONE (1) 2 1/2" CANOPY OR EVERGREEN TREE PER 40 LIN.FT. (945 LIN.FT. / 40 LIN.FT. = 24.8 TREES)	25	25
greenbelt (Dorr Road)		
TOTAL LIN.FT. OF GREENBELT FRONTAGE	1570±	
ONE (1) 2 1/2" CANOPY OR EVERGREEN TREE PER 40 LIN.FT. (1570 LIN.FT. / 40 LIN.FT. = 39.25 TREES)	39	39
street trees (interior residential streets)		
TOTAL NO. OF RESIDENTIAL UNITS PROVIDED	204	
TWO (2) 2 1/2" CANOPY TREES PER RESIDENTIAL UNIT (204 UNITS X 2 TREES = 408 TREES)	408	408
landscape screening		
TOTAL LIN.FT. OF BOUNDARY FRONTAGE	721±	
ONE (1) 2 1/2" CANOPY OR EVERGREEN TREE PER 20 LIN.FT. (721 LIN.FT. / 20 LIN.FT. = 36.05 TREES)	36	36
OR FOUR (4) SHRUBS PER 20 LIN.FT. (721 LIN.FT. / 20 LIN.FT. = 36.05 X 4-SHRUBS=144.2)	144	144
detention pond-A		
TOTAL LIN.FT. OF POND PERIMETER	727±	
ONE (1) DECIDUOUS OR EVERGREEN TREE PER 50 LIN.FT. (727 LIN.FT. / 50 LIN.FT. = 14.5 TREES)	15	15
TEN (10) SHRUBS PER 50 LIN.FT. (727 LIN.FT. / 50 LIN.FT. = 14.5 X 10-SHRUBS=145)	145	145
detention pond-B		
TOTAL LIN.FT. OF POND PERIMETER	932±	
ONE (1) DECIDUOUS OR EVERGREEN TREE PER 50 LIN.FT. (932 LIN.FT. / 50 LIN.FT. = 18.64 TREES)	19	19
TEN (10) SHRUBS PER 50 LIN.FT. (932 LIN.FT. / 50 LIN.FT. = 18.64 X 10-SHRUBS=186.4)	186	186

landscape sheet index

- LSC-1 OVERALL PLAN VIEW
- LSC-2 PLANTING DETAIL PLAN
- LSC-3 PLANTING DETAIL PLAN
- LSC-4 SITE AMENITY PLAN
- LSC-5 ENTRY DETAIL PLAN

landscape legend

- deciduous trees**
(Maples, Hackberry, Zelkova, Oaks, Lindens, Locust, etc...)
- ornamental trees**
(Redbud, Crabs, Hawthorn, Serviceberry, Dogwood, etc...)
- evergreen trees**
(Pines, Spruces, Fir)
- deciduous shrubs**
(Viburnum, Forsythia, Hydrangea, Hollies, Dogwood, etc...)
- evergreen shrubs**
(Junipers, Yews, Arborvitae, Boxwood, etc...)
- perennials and/or seasonal flowers**
(Daylily, Sedum, Ornamental Grasses, Black Eyed Susan, Coneflowers, etc...)



client:
LAUTREC
 31550
 Northwestern
 HWY. Suite 200
 Farmington Hills,
 Michigan 48334
 project:

**THE LEGACY
 APARTMENT HOMES**

project location:
 Genoa Township,
 Michigan
 12 Mile Road

sheet title:
 CONCEPTUAL
 LANDSCAPE PLAN

job no./issue/revision date:
 LS21.096.08 SPA 8-18-2021
 LS21.096.10 SPA 10-8-2021
 LS21.096.10 SPA 10-24-2021
 LS21.096.12 SPA 12-13-2021
 LS22.028.02 SPA 2-24-2022
 LS22.028.04 SPA 4-18-2022

drawn by:
JP, HP, DK
 checked by:
FP
 date:
2-22-2022

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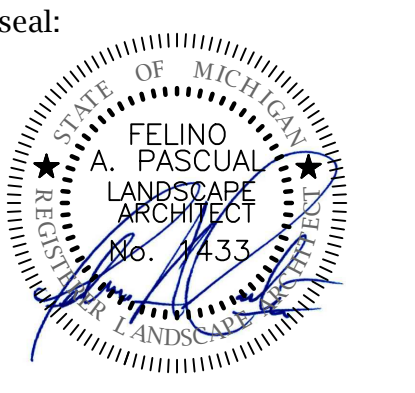
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The location and elevations of existing
 underground utilities as shown on this
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 completeness of accuracy; contractor shall be
 exclusively responsible for determining the
 exact location and elevation prior to the start
 of construction

project no:
LS22.028.02

sheet no:
LSC-1



client:
LAUTREC
 31550
 Northwestern
 HWY. Suite 200
 Farmington Hills,
 Michigan 48334

**THE LEGACY
 APARTMENT HOMES**

project location:
 Genoa Township,
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sheet title:
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 LANDSCAPE
 PLANTING PLAN**

project no./issue/revision date:

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LS22.028.02 SPA	2-24-2022
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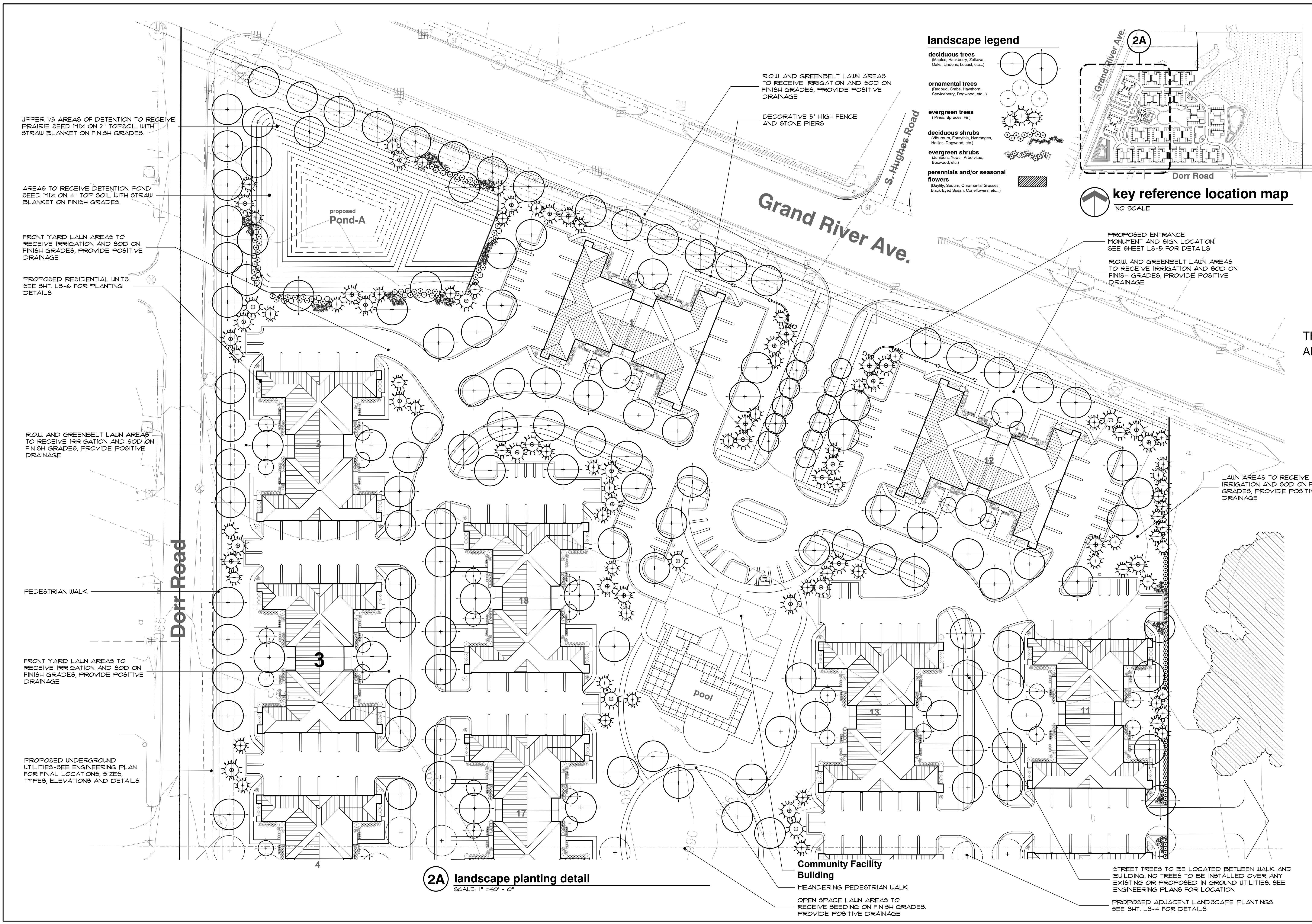
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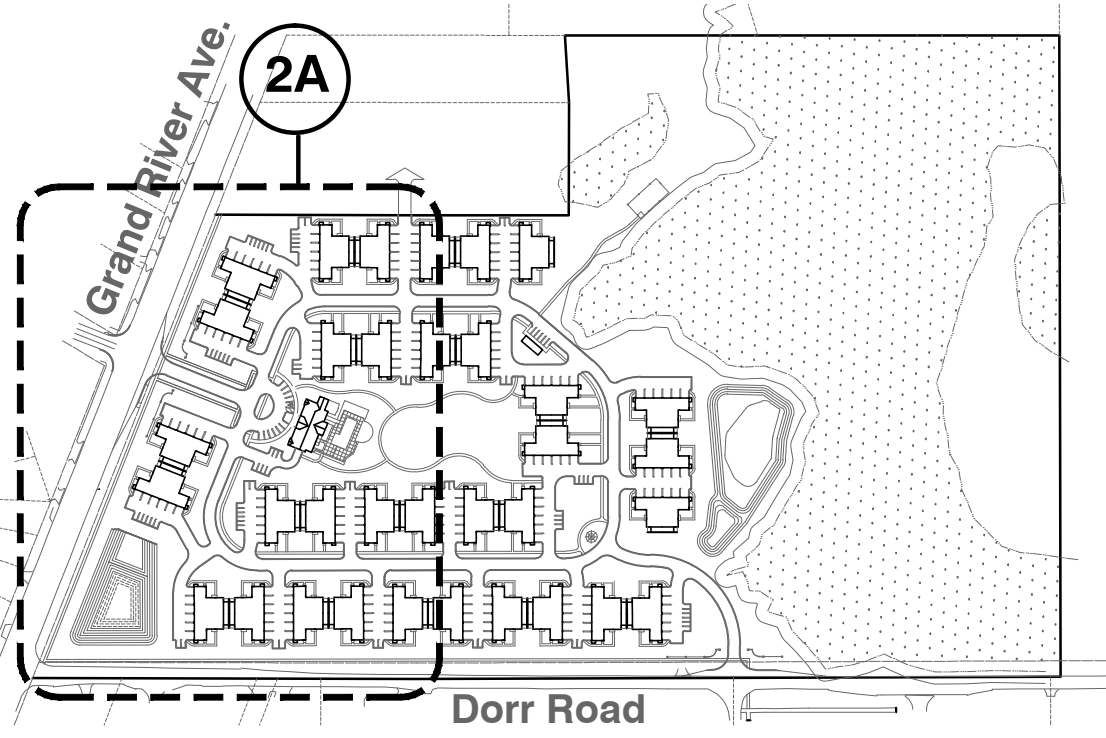
project no:
LS22.028.02

sheet no:
LSC-2



landscape legend

- deciduous trees**
 (Maples, Hackberry, Zelkova, Oaks, Lindens, Locust, etc.)
- ornamental trees**
 (Redbud, Crabs, Hawthorn, Serviceberry, Dogwood, etc.)
- evergreen trees**
 (Pines, Spruces, Fir)
- deciduous shrubs**
 (Vitumnm, Forsythia, Hydrangea, Hollies, Dogwood, etc.)
- evergreen shrubs**
 (Junipers, Yews, Arborvitae, Boxwood, etc.)
- perennials and/or seasonal flowers**
 (Daylily, Sedum, Ornamental Grasses, Black Eyed Susan, Coneflowers, etc.)



key reference location map
 NO SCALE

UPPER 1/3 AREAS OF DETENTION TO RECEIVE PRAIRIE SEED MIX ON 2" TOPSOIL WITH STRAW BLANKET ON FINISH GRADES.

AREAS TO RECEIVE DETENTION POND SEED MIX ON 4" TOP SOIL WITH STRAW BLANKET ON FINISH GRADES.

FRONT YARD LAWN AREAS TO RECEIVE IRRIGATION AND SOD ON FINISH GRADES, PROVIDE POSITIVE DRAINAGE

PROPOSED RESIDENTIAL UNITS. SEE SHT. LS-6 FOR PLANTING DETAILS

ROW, AND GREENBELT LAWN AREAS TO RECEIVE IRRIGATION AND SOD ON FINISH GRADES, PROVIDE POSITIVE DRAINAGE

PEDESTRIAN WALK

FRONT YARD LAWN AREAS TO RECEIVE IRRIGATION AND SOD ON FINISH GRADES, PROVIDE POSITIVE DRAINAGE

PROPOSED UNDERGROUND UTILITIES-SEE ENGINEERING PLAN FOR FINAL LOCATIONS, SIZES, TYPES, ELEVATIONS AND DETAILS.

ROW, AND GREENBELT LAWN AREAS TO RECEIVE IRRIGATION AND SOD ON FINISH GRADES, PROVIDE POSITIVE DRAINAGE

DECORATIVE 5' HIGH FENCE AND STONE PIERS

PROPOSED ENTRANCE MONUMENT AND SIGN LOCATION. SEE SHEET LS-5 FOR DETAILS

ROW, AND GREENBELT LAWN AREAS TO RECEIVE IRRIGATION AND SOD ON FINISH GRADES, PROVIDE POSITIVE DRAINAGE

LAWN AREAS TO RECEIVE IRRIGATION AND SOD ON FINISH GRADES, PROVIDE POSITIVE DRAINAGE

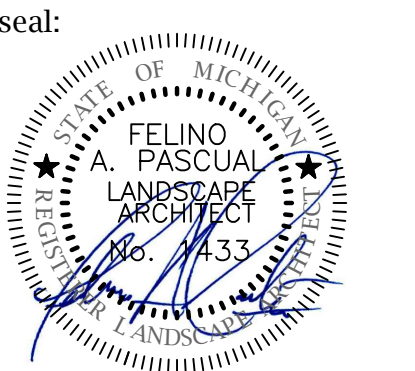
2A landscape planting detail
 SCALE: 1" = 40' - 0"

Community Facility Building
 MEANDERING PEDESTRIAN WALK

OPEN SPACE LAWN AREAS TO RECEIVE SEEDING ON FINISH GRADES. PROVIDE POSITIVE DRAINAGE

STREET TREES TO BE LOCATED BETWEEN WALK AND BUILDING. NO TREES TO BE INSTALLED OVER ANY EXISTING OR PROPOSED IN GROUND UTILITIES. SEE ENGINEERING PLANS FOR LOCATION

PROPOSED ADJACENT LANDSCAPE PLANTINGS. SEE SHT. LS-4 FOR DETAILS



client:
LAUTREC
 31550
 Northwestern
 HWY. Suite 200
 Farmington Hills,
 Michigan 48334

**THE LEGACY
 APARTMENT HOMES**

project location:
 Genoa Township,
 Michigan
 12 Mile Road

sheet title:
**CONCEPTUAL
 LANDSCAPE
 PLANTING PLAN**

job no./issue/revision date:

LS21.096.08 SPA	8-18-2021
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drawn by:
JP, HP, DK
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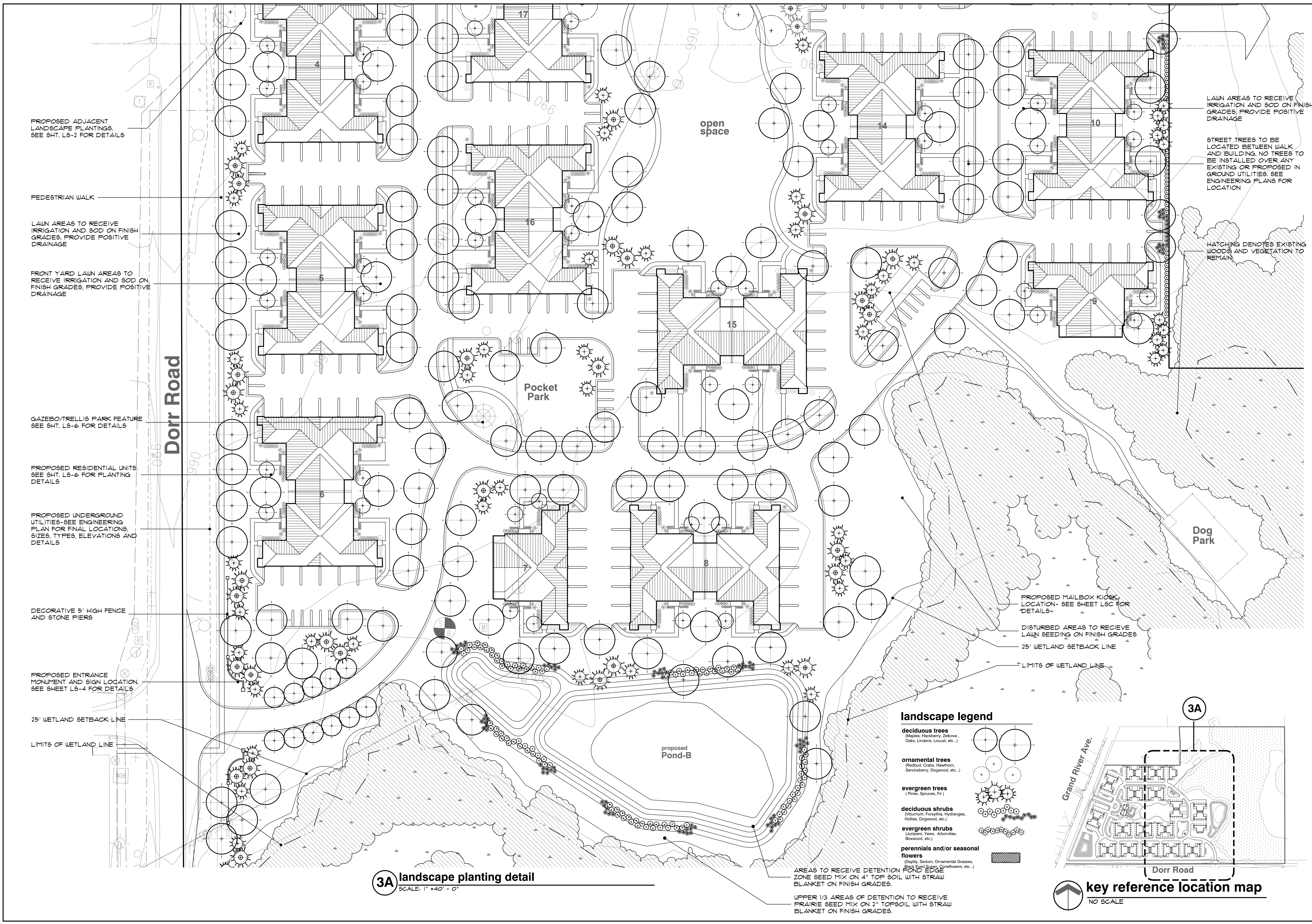
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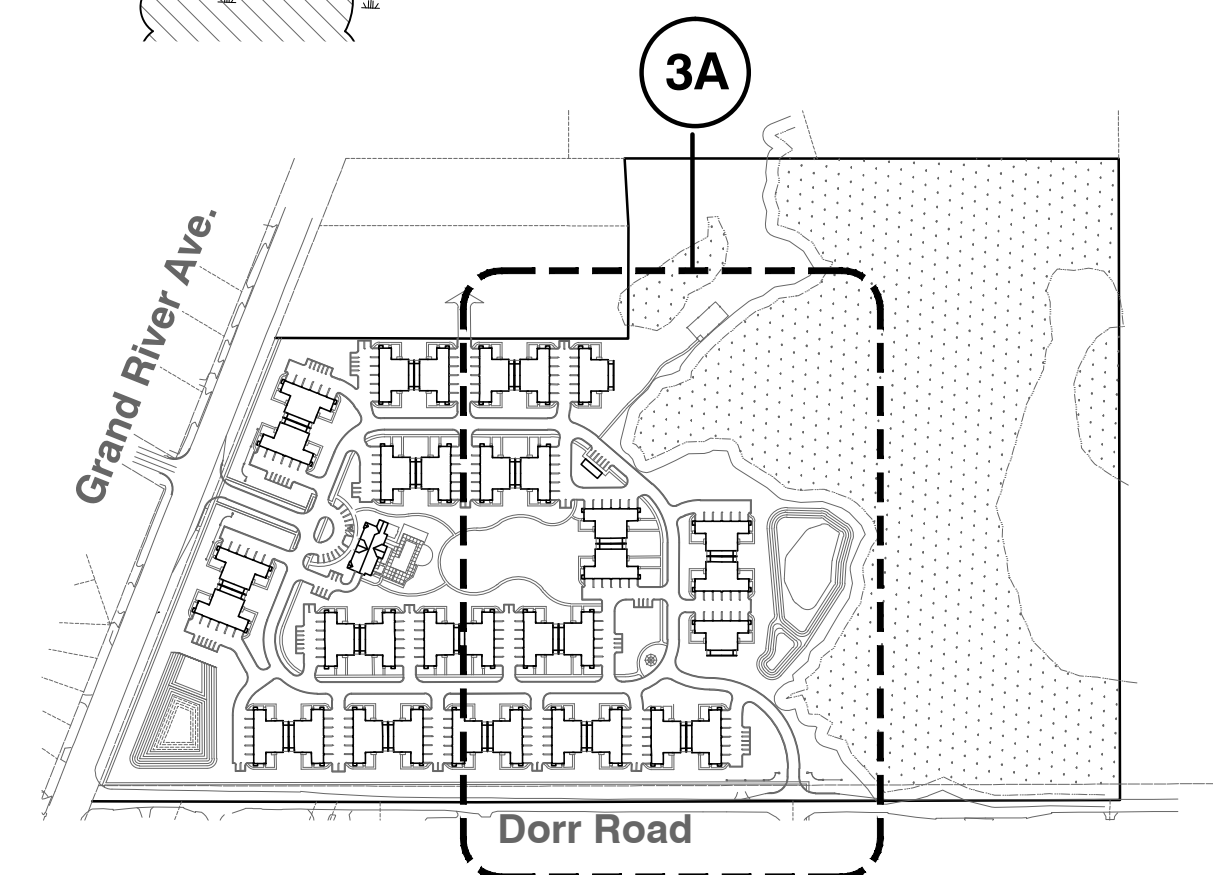
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project no:
LS22.028.02

sheet no:
LSC-3



- landscape legend**
- deciduous trees**
 (Maples, Hackberry, Zelkova, Oaks, Lindens, Locust, etc.)
 - ornamental trees**
 (Redbud, Crab, Hawthorn, Serviceberry, Dogwood, etc.)
 - evergreen trees**
 (Pines, Spruces, Fir)
 - deciduous shrubs**
 (Viburnum, Forsythia, Hydrangea, Hollies, Dogwood, etc.)
 - evergreen shrubs**
 (Junipers, Yews, Arborvitae, Boxwood, etc.)
 - perennials and/or seasonal flowers**
 (Sedum, Ornamental Grasses, Black-eyed Susan, Coneflowers, etc.)





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LAUTREC
 31550
 Northwestern
 HWY. Suite 200
 Farmington Hills,
 Michigan 48334
 project:

**THE LEGACY
 APARTMENT HOMES**

project location:
 Genoa Township,
 Michigan
 12 Mile Road

sheet title:

**CONCEPTUAL SITE
 AMENITY PLAN**

job no./issue/revision date:

LS21.096.08 SPA	8-18-2021
LS21.096.10 SPA	10-8-2021
LS21.096.10 SPA	10-24-2021
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project no:
LS22.028.02

sheet no:



L EV charging station
 TOTAL OF 4-CONDITIONS



K pet waste station
 TOTAL OF 5-CONDITIONS



J pond fountain
 TOTAL OF 2-CONDITIONS



I dog park



H park bench seating
 TOTAL OF 3-CONDITIONS

6' WIDE PARK BENCH SEAT BY DUMOR, INC.
 MODEL NO. 34-60D (5-1)
 SUPPORT: 5-1 EMBEDMENT
 FINISH: BLACK POWER-COATED

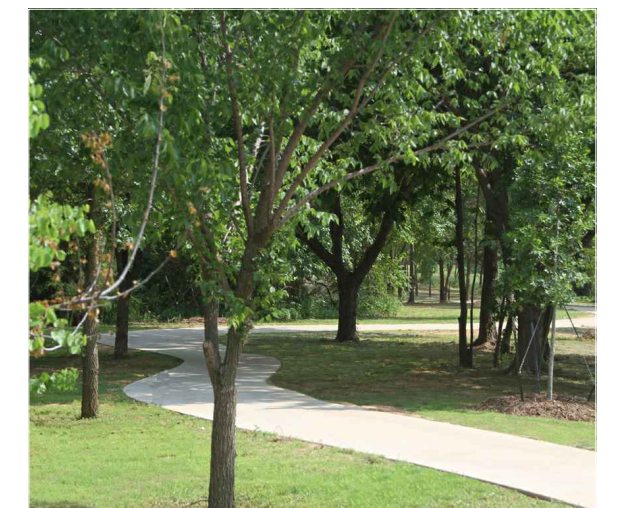


G decorative bench seating
 TOTAL OF 1-CONDITIONS

MANUFACTURED BY BY ANOVA, INC.
 WWW.ANOVAFURNISHINGS.COM
 MODEL NO. LEXC6
 DESCRIPTION: 6' WIDE CONTOUR BENCH
 FINISH: TEXTURE PEKTER



F gazebo feature
 (1-CONDITIONS)
 STICK BUILT OR KIT FORM.
 TO BE BUILT BY MANUFACTURER STANDARDS



E meandering interior pedestrian walk



D bicycle rack
 (2-CONDITIONS)
 BIKE RACK BY DUMOR, INC.
 MODEL NO. 130-20 (S-2
 SURFACE PLATE MOUNT) 2 3/8"
 O.D. BLACK POWER-COATED
 LOOP OR EQUAL



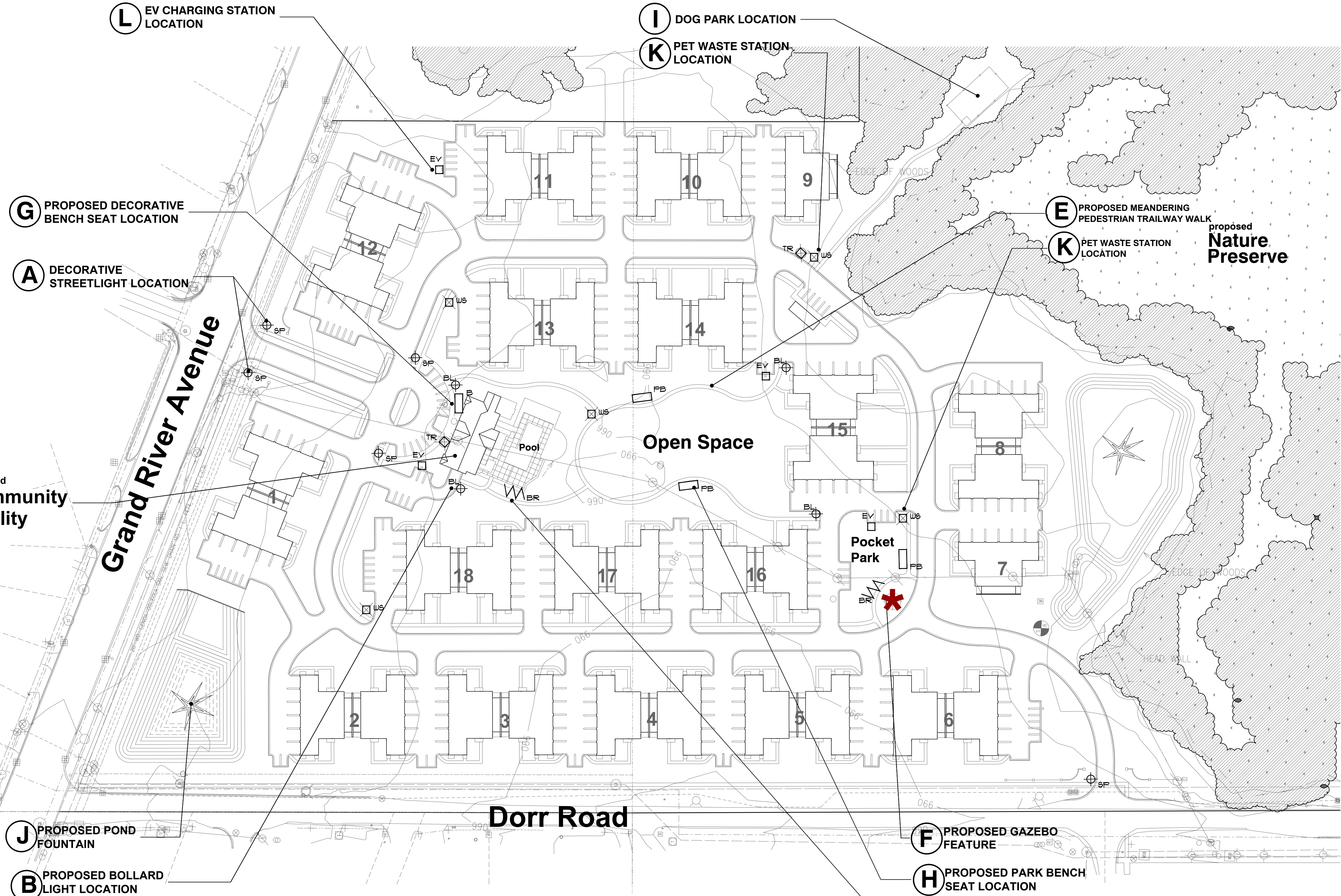
C trash receptacle
 (2-CONDITION)
 MANUFACTURED BY BY
 ANOVA, INC.
 WWW.ANOVAFURNISHINGS.COM
 DESCRIPTION: 32 GAL
 FINISH: TEXTURE PEKTER



B bollard light
 BY LITHONIA LIGHTS OR
 EQUAL MODEL: DSXB LED
 (D-SERIES LED BOLLARD
 8" DIA. X 42" HGT.) OR
 EQUAL (4-CONDITIONS)



A decorative pole and light
 (5-CONDITION)
 DECORATIVE BLVD. ISLAND
 SITE FIXTURE LIGHTS AND
 ALUMINUM POLE.



4A site amenity reference location map
 NO SCALE

site amenity key

- BIKE RACK
- PARK BENCH SEAT
- BENCH SEAT
- BOLLARD LIGHT
- STREET POLE LIGHT
- GAZEBO or PERGOLA FEATURE
- PET WASTE STATION
- TRASH RECEPTACLE
- EV CHARGING STATION



A decorative pole and light
 (5-CONDITION)
 DECORATIVE BLVD. ISLAND
 SITE FIXTURE LIGHTS AND
 ALUMINUM POLE.



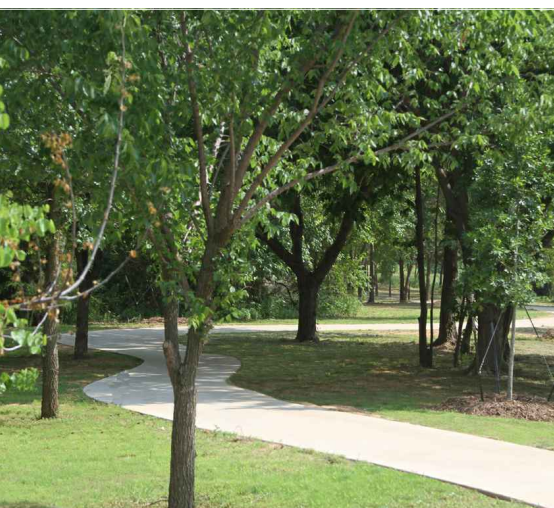
B bollard light
 BY LITHONIA LIGHTS OR
 EQUAL MODEL: DSXB LED
 (D-SERIES LED BOLLARD
 8" DIA. X 42" HGT.) OR
 EQUAL (4-CONDITIONS)



C trash receptacle
 (2-CONDITION)
 MANUFACTURED BY BY
 ANOVA, INC.
 WWW.ANOVAFURNISHINGS.COM
 DESCRIPTION: 32 GAL
 FINISH: TEXTURE PEKTER



D bicycle rack
 (2-CONDITIONS)
 BIKE RACK BY DUMOR, INC.
 MODEL NO. 130-20 (S-2
 SURFACE PLATE MOUNT) 2 3/8"
 O.D. BLACK POWER-COATED
 LOOP OR EQUAL



E meandering interior pedestrian walk



F gazebo feature
 (1-CONDITIONS)
 STICK BUILT OR KIT FORM.
 TO BE BUILT BY MANUFACTURER STANDARDS

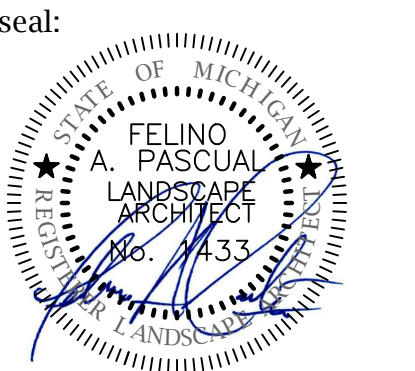


G decorative bench seating
 TOTAL OF 1-CONDITIONS

MANUFACTURED BY BY ANOVA, INC.
 WWW.ANOVAFURNISHINGS.COM
 MODEL NO. LEXC6
 DESCRIPTION: 6' WIDE CONTOUR BENCH
 FINISH: TEXTURE PEKTER

H park bench seating
 TOTAL OF 3-CONDITIONS

6' WIDE PARK BENCH SEAT BY DUMOR, INC.
 MODEL NO. 34-60D (5-1)
 SUPPORT: 5-1 EMBEDMENT
 FINISH: BLACK POWER-COATED



client:
LAUTREC
 31550
 Northwestern
 HWY. Suite 200
 Farmington Hills,
 Michigan 48334

project:
**THE LEGACY
 APARTMENT HOMES**

project location:
 Genoa Township,
 Michigan
 12 Mile Road

sheet title:
**CONCEPTUAL ENTRY
 SIGN MONUMENT**

job no./issue/revision date:
 LS21.096.08 SPA 8-18-2021
 LS21.096.10 SPA 10-8-2021
 LS21.096.10 SPA 10-24-2021
 LS21.096.12 SPA 12-13-2021
 LS22.028.02 SPA 2-24-2022
 LS22.028.04 SPA 4-18-2022

drawn by:
JP, HP, DK
 checked by:
FP
 date:
2-22-2022

notice:
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 and Associates

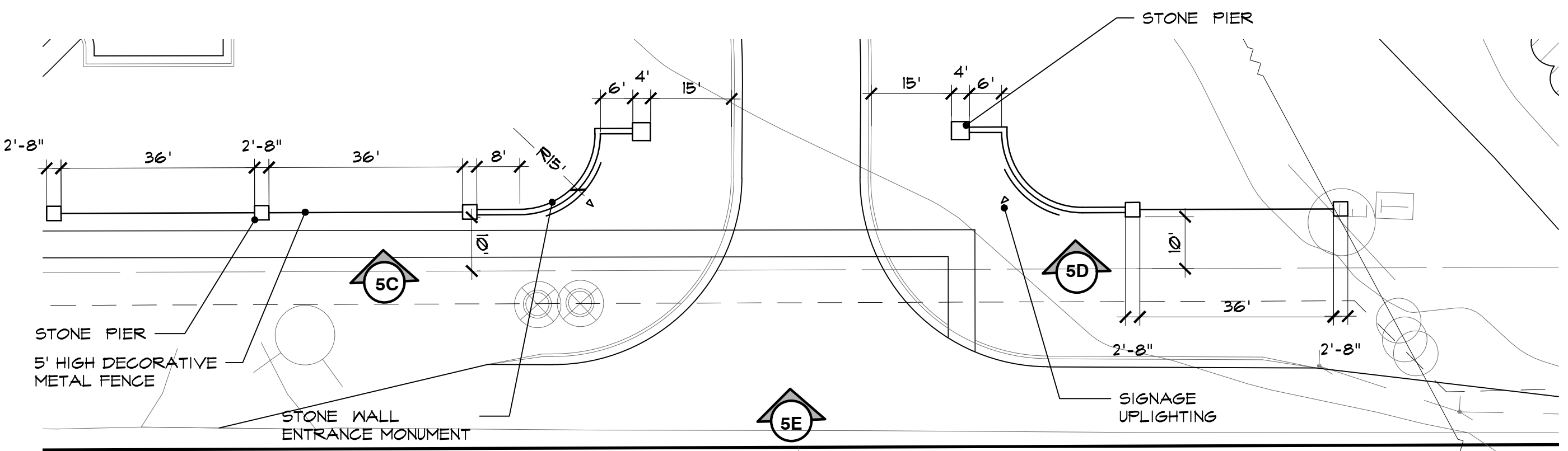
Do Not scale drawings. Use
 figured dimensions only



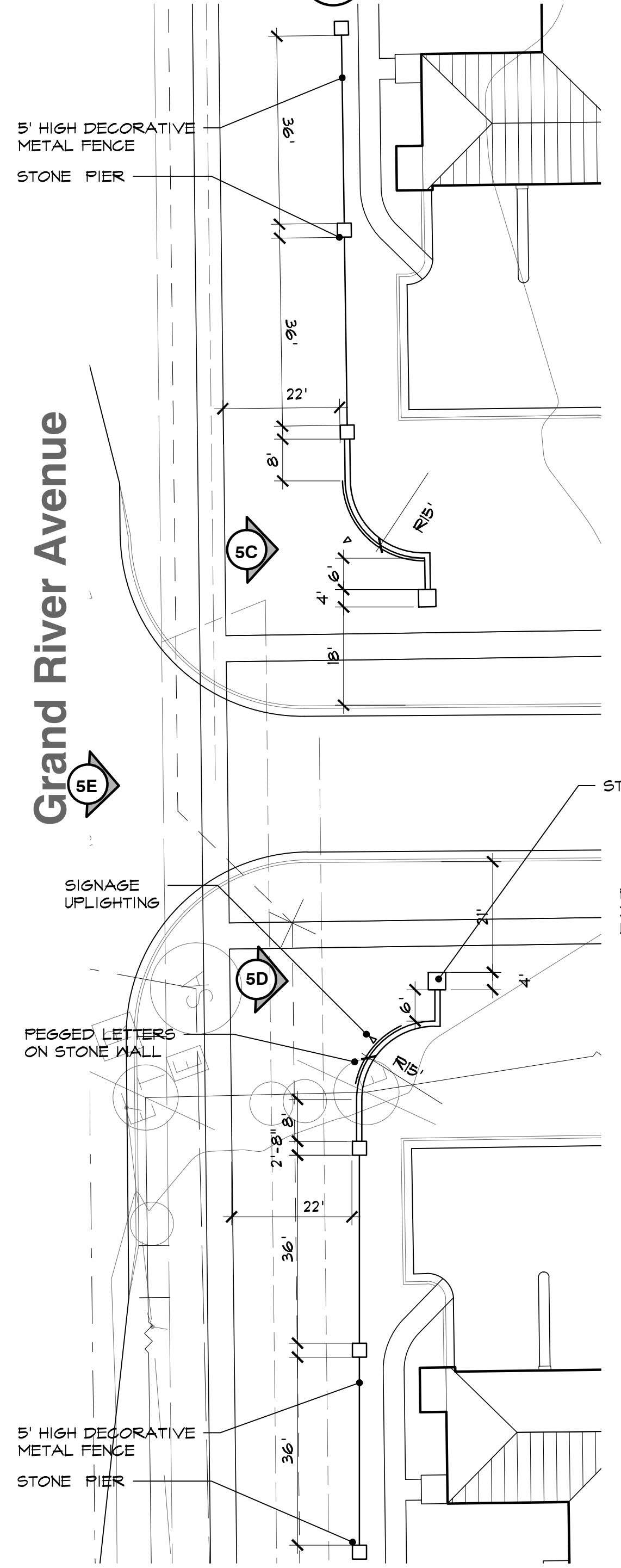
The location and elevations of existing
 underground utilities as shown on this
 drawing are only approximate; no guarantee
 is either expressed or implied as to the
 completeness of accuracy; contractor shall be
 exclusively responsible for determining the
 exact location and elevation prior to the start
 of construction

project no:
LS22.028.02

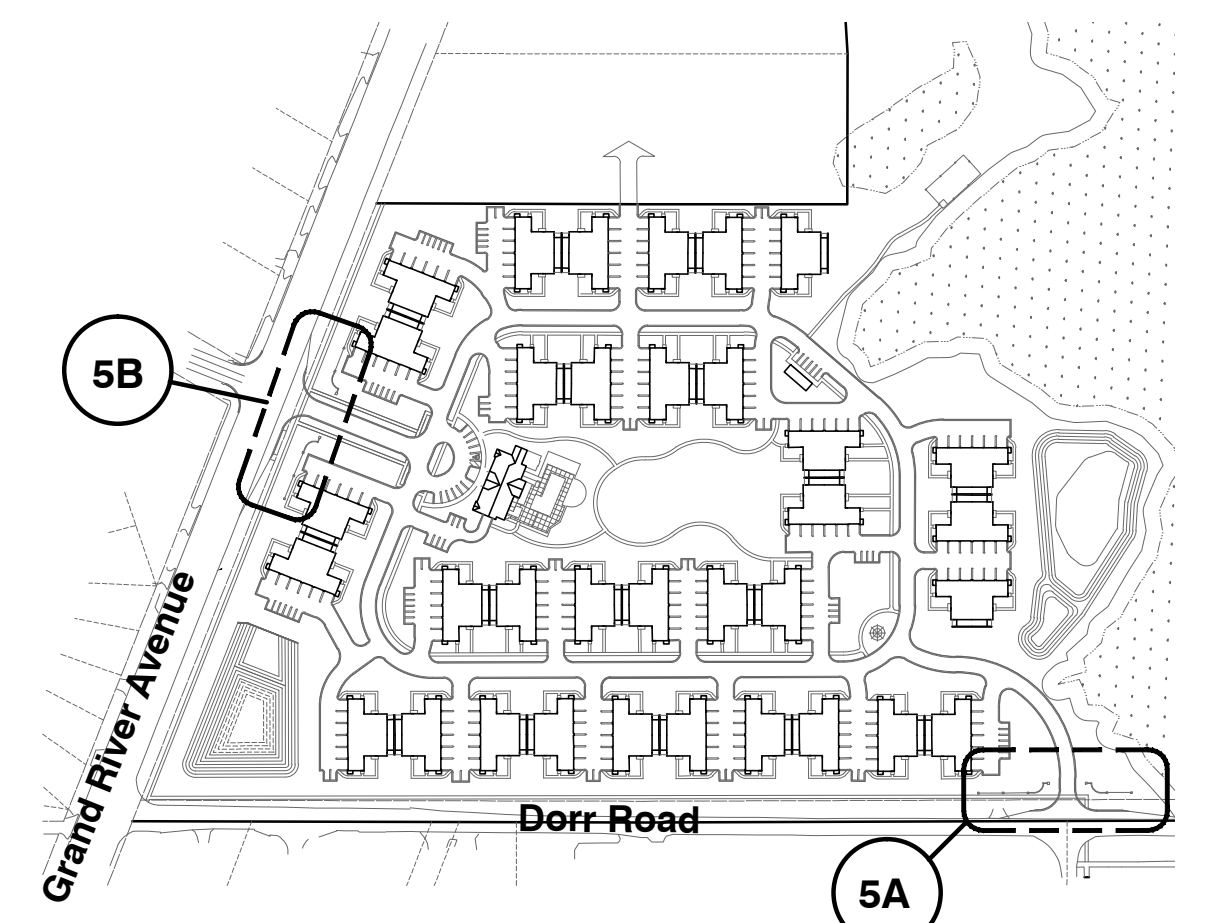
sheet no:
LSC-5 of 5



5A entry sign monument site plan
 SCALE: 1" = 20' - 0"



5B entry sign monument site plan
 SCALE: 1" = 20' - 0"



5A key reference location map
 NO SCALE

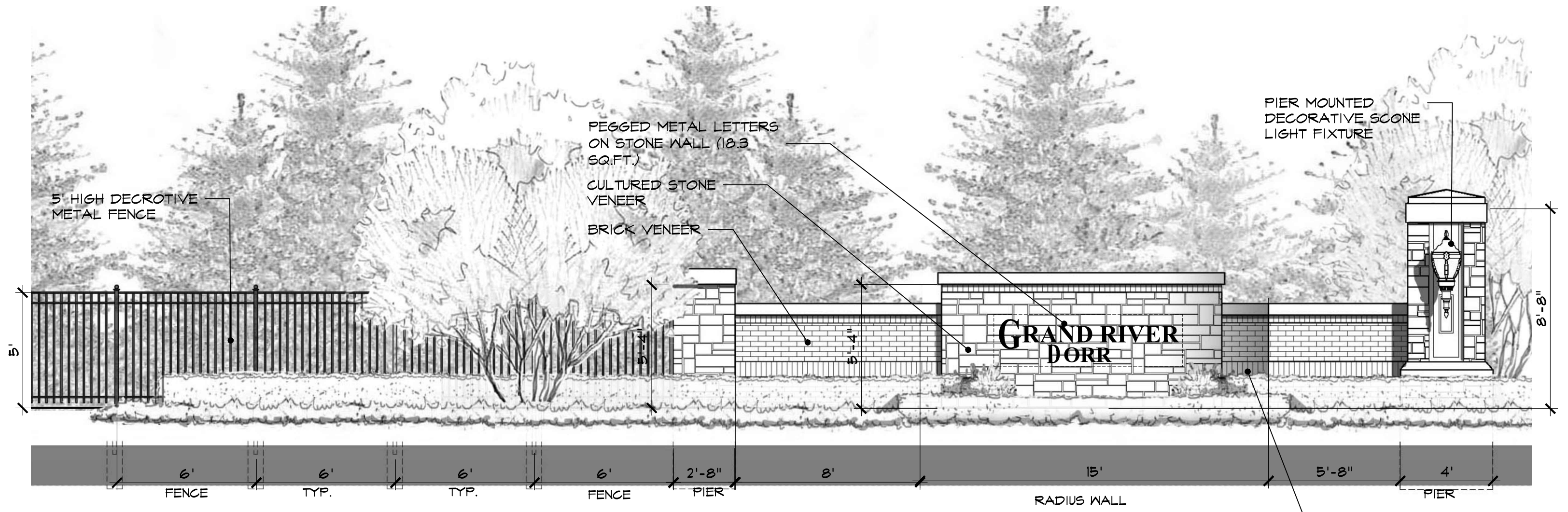
entry wall monument / pier / signage / notes:

1. LOCATE AND STAKE ALL EXISTING AND PROPOSED UTILITIES PRIOR TO CONSTRUCTION. COORDINATE ANY ADJUSTMENTS WITH LANDSCAPE ARCHITECT.
2. ALL ENTRY WALL LIGHTING SHALL BE CONTROLLED WITH A "PHOTO-EYE" SWITCH. ALL LIGHTING SHALL BE SHIELDED FROM PUBLIC ROW'S AND ADJACENT PROPERTIES.
3. SEE LANDSCAPE PLAN FOR PROPOSED PLANTINGS ADJACENT TO PROPOSED ENTRY SIGN MONUMENT ON SHT. LS-2
4. VERIFY SOIL BEARING CAPACITY PRIOR TO ENTRY SIGN MONUMENT & PIER CONSTRUCTION. IF SOIL BEARING CAPACITY FALLS BELOW STANDARD REQUIREMENTS, CONSULT STRUCTURAL ENGINEER FOR RECOMMENDATION OF FINAL ENTRY MONUMENT & PIER FOOTING DESIGN.
5. SIGNAGE TEXT AND LOGO TO BE METAL PRISMATIC DIMENSIONAL LETTERS. PRIOR TO SIGN INSTALLATION, PERMITS TO BE OBTAINED PER GENOA TOWNSHIP REQUIREMENTS AND APPROVALS.
6. ALL INFORMATION CONTAINED HEREIN IS SUBJECT TO APPROVAL, AND PERMITS PERMITS TO BE OBTAINED PRIOR TO CONSTRUCTION.
7. FOOTINGS SHALL BEAR ON FIRM, UNDISTURBED SOIL WITH AN ASSUMED SAFE BEARING CAPACITY OF 2000 P.S.I. IF SOIL OF THIS CAPACITY IS NOT FOUND AT THE ELEVATIONS INDICATED, FOOTINGS SHALL BE ENLARGED OR LOWERED AT THE DIRECTION OF THE ARCHITECT. VERIFY FOUNDATION SOIL BEARING PRESSURE IN FIELD BY SOILS ENGINEER.
8. MINIMUM CONCRETE STRENGTH TO BE 3000 P.S.I. @ 28 DAYS, U.O.N.; SLABS SHALL BE 3500 P.S.I. MIN. U.O.N.; EXPOSED CONCRETE SHALL BE 4000 P.S.I. WITH 6% ± 1% ENTRAINED AIR U.O.N.
9. ALL CONCRETE WORK AND PLACEMENT SHALL CONFORM TO THE LATEST RECOMMENDATIONS OF ACI.
10. PROVIDE DOUELS INTO FOUNDATION TO MATCH SIZE AND SPACING OF VERTICAL REINFORCEMENT AT ALL WALLS, UNLESS OTHERWISE NOTED.
11. PROVIDE MINIMUM 3" CONCRETE COVER FOR REINFORCEMENT BARS BELOW GRADE AND MINIMUM 2" CONCRETE COVER FOR REINFORCEMENT BARS ABOVE GRADE.

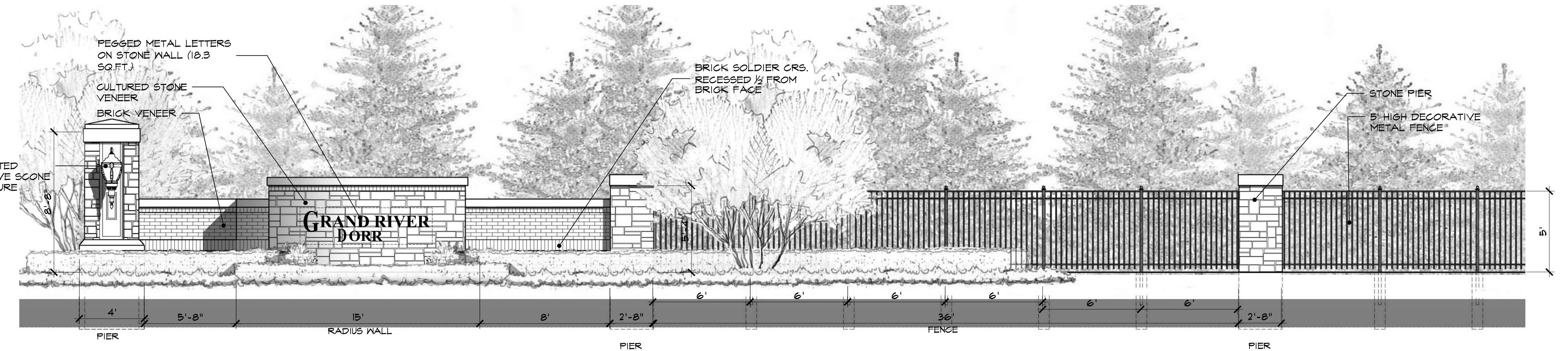


sign panel uplighting
 (4-CONDITIONS)

MANUFACTURER:
 ACUITY BRANDS LIGHTING
 ONE LITHONIA WAY
 CONYERS, GA 30012
 PEACHTREE, GA 30269
 PH. 770-322-9000
 BRAND: HYDREL
 MODEL: 4750SF or EQUAL
 (LED 4000K)
 FINISH : BRONZE



5C entry sign monument elevation
 SCALE: 1/4" = 1' - 0"



5D entry sign monument elevation
 SCALE: 1/4" = 1' - 0"



5E entry sign monument elevation
 SCALE: 1/8" = 1' - 0"

Notes:

Applicable Building Codes:

MICHIGAN BUILDING CODE 2015
STATE OF MICHIGAN ELECTRICAL CODE 2017 w/PART 8 AMENDMENTS
MICHIGAN MECHANICAL CODE 2015
MICHIGAN PLUMBING CODE 2015
ANSI A117.1 - 2009 ACCESSIBILITY CODE
INTERNATIONAL FIRE CODE 2015
MICHIGAN 2015 USE TYPE : R-2 (Apartments) U (Private Garages)
MICHIGAN 2015 CONSTRUCTION TYPE: V-B

Areas:

Table with 4 columns: Unit, R-2, U, Total. Rows include UNIT "A", UNIT "B", UNIT "C", TOTAL PER QUADRANT, and TOTAL FOR HALF BUILDING.

A 2 HOUR FIRE WALL IS REQUIRED BETWEEN THE RIGHT & LEFT HALVES OF THE BUILDING.
A 1 HOUR SEPERATION WILL BE PROVIDED BETWEEN THE 2 QUADRANTS.
A 1 HOUR SEPERATION WILL PROVIDED BETWEEN THE FIRST FLOOR AND THE SECOND FLOOR
A 1 HOUR SEPERATION WILL BE PROVIDED BETWEEN THE APARTMENTS AND THE PRIVATE GARAGE AREA.
A 1 HOUR SEPERATION WILL BE PROVIDED BETWEEN THE SECOND FLOOR AREA AND THE ATTIC

Occupancies:

1 OCCUPANT PER 200 s/f OF AREA PER TABLE 1004.1.2

Table with 2 columns: Unit, Occupancy. Rows include UNIT "A", UNIT "B", UNIT "C", TOTAL PER QUADRANT, and TOTAL PER BUILDING.

Fire Supression:

A NFPA 13-R 2010 AUTOMATIC FIRE SUPPRESSION SYSTEM SHALL BE PROVIDED THROUGHOUT ALL AREAS OF THE BUILDING INCLUDING GARAGES, BALCONIES AND GROUND FLOOR PATIOS AS PER CHAPTER 9 OF THEMBC- 2012.
SMOKE ALARMS TO BE PROVIDED AS PER SECTION 907.2.9.2 & 907.2.11.2 OF THE MBC-2012.
CARBON MONOXIDE ALARMS TO BE PROVIDED AS PER SECTION 908.7 OF THE MBC-2012.

ATTIC DRAFT STOPS:

EACH OF THE ATTICS ABOVE THE SECOND FLOOR UNITS ARE SEPERATED BY THE EXTENSION OF THE FIRE WALLS BELOW SEPERATING EACH UNIT. THESE WALLS EXTEND TO THE UNDERSIDE OF THE ROOF DECK. THE WALL SEPERATING THE RIGHT HALF OF THE BUILDING FROM THE LEFT HALF IS A 2 HOUR FIRE RATED WALL. THE WALL SEPERATING THE FRONT UNITS FROM THE REAR UNITS ARE A 1 HOUR WALL. EACH OF THE ATTIC SPACES IS LESS THAN THE MAXIMUM OF 3,000 s/f.

Seperate Submittals

- 1. SHOP DRAWINGS FOR ENGINEERED FLOOR JOIST SYSTEMS & PRE-ENGINEERED ROOF TRUSSES SYSTEMS. ALL DRAWINGS TO BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER IN THE STATE OF MICHIGAN.
2. FIRE SUPPRESSION SYSTEM DESIGN DRAWINGS. ALL DRAWINGS TO BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER IN THE STATE OF MICHIGAN.
3. ALL INTERIOR FINISHES SHALL MEET A CLASS C FLAME SPREAD INDEX 76-200 AND SMOKE-DEVELOPED INDEX 0-450. PROVIDE PRODUCT CUT SHEETS TO THE BUILDING DEPARTMENT SHOWING COMPLIANCE.

Special Inspections:

ALL SPECIAL INSPECTIONS SHALL BE DONE BY McDOWELL & ASSOCIATES
- GEOTECHNICAL TESTING
- SOIL BEARING CAPACITIES
- CONCRETE TESTING

COPIES OF ALL REPORTS TO BE SUBMITTED TO THE BUILDING DEPARTMENT OF MACOMB TOWNSHIP

Proposed New Apartments for:

M J C Avalon

Attic Areas & Ventilation Requirements

(PER MBC 2015 SEC 1203)

ATTIC AREAS

Above Unit B: 1,611 S.F.
Above Unit C: 1,726 S.F.

VENTILATION AREA REQUIRED: 1/300 ALLOWED (Per 1203.2) IF: MORE THAN 50% AND LESS THAN 80% OF REQUIRED VENTILATION TO BE LOCATED IN THE UPPER PORTION OF THE ATTIC SPACE

Unit B: 1,611 S.F. x 1/300 = 5.37 S.F.
Unit C: 1,726 S.F. x 1/300 = 5.75 S.F.

VENTILATION AREA PROVIDED:

Unit B: 36'-0" L.F. Soffit Vent @ 5 Sq. In./Ft. = 180 Sq. In.
144 Sq. In. per 36 Sq. Ft.
Unit B: (10) Style 600 Roof Vents @ 60 Sq. = 600 Sq. In.
144 Sq. In. per 36 Sq. Ft.

Unit B: Total Ventilation Area = 5.42 S.F. > 5.37 S.F. Required (77% OF VENTILATION IN UPPER PORTION OF ATTIC)

Unit C: 80'-0" L.F. Soffit Vent @ 5 Sq. In./Ft. = 400 Sq. In.
144 Sq. In. per 36 Sq. Ft.
Unit C: (11) Style 600 Roof Vents @ 60 Sq. = 660 Sq. In.
144 Sq. In. per 36 Sq. Ft.

Unit C: Total Ventilation Area = 7.36 S.F. > 5.75 S.F. Required (62% OF VENTILATION IN UPPER PORTION OF ATTIC)

- 1. ROOF VENT SPECS. PROVIDED ARE BY "LOMANCO VENTS"
2. PERFORATED SOFFIT/EAVE VENTS ARE JAMES HARDIE
3. ALUM. ROOF VENTS ARE LOMANCO - 600 SERIES

Project Professionals:

Architects:
Burmman Associates Inc.
119 W. St. Clair
Romeo, Michigan 48065
o.586-752-5010 c.586-201-1602
greatarchitects@charter.net
Richard E. Burmann R.A.
Michigan #20749

Structural Engineering:
Simpson Engineering L.L.C.
119 W. St. Clair
Romeo, Michigan 48065
o.586-752-9872 c.810-614-5696
mpsimpson1959@yahoo.com
Mark P. Simpson P.E.
Michigan #33208

Mechanical Engineering:
Beechwood Engineering, P.L.C.
3462 Beechwood
Farmington Hills, Michigan 48335
248-408-8178
krj@sbcbglobal.net
Kenneth R. Jenkins P.E.
Michigan #20003

Electrical Engineering:
Current Design L.L.C.
1290 Brook Lane
Rochester Hills, Michigan 48306
248-651-3681
currentdm@aol.com
Dominic A. Mocerri

SEPARATE SUBMITTAL:

CIVIL ENGINEERING DESIGN & DRAWINGS ARE DONE BY OTHERS AND ARE NOT PART OF THIS SUBMITTAL

FIRE SUPPRESSION DESIGN & DRAWINGS ARE DONE BY OTHERS AND ARE NOT PART OF THIS SUBMITTAL

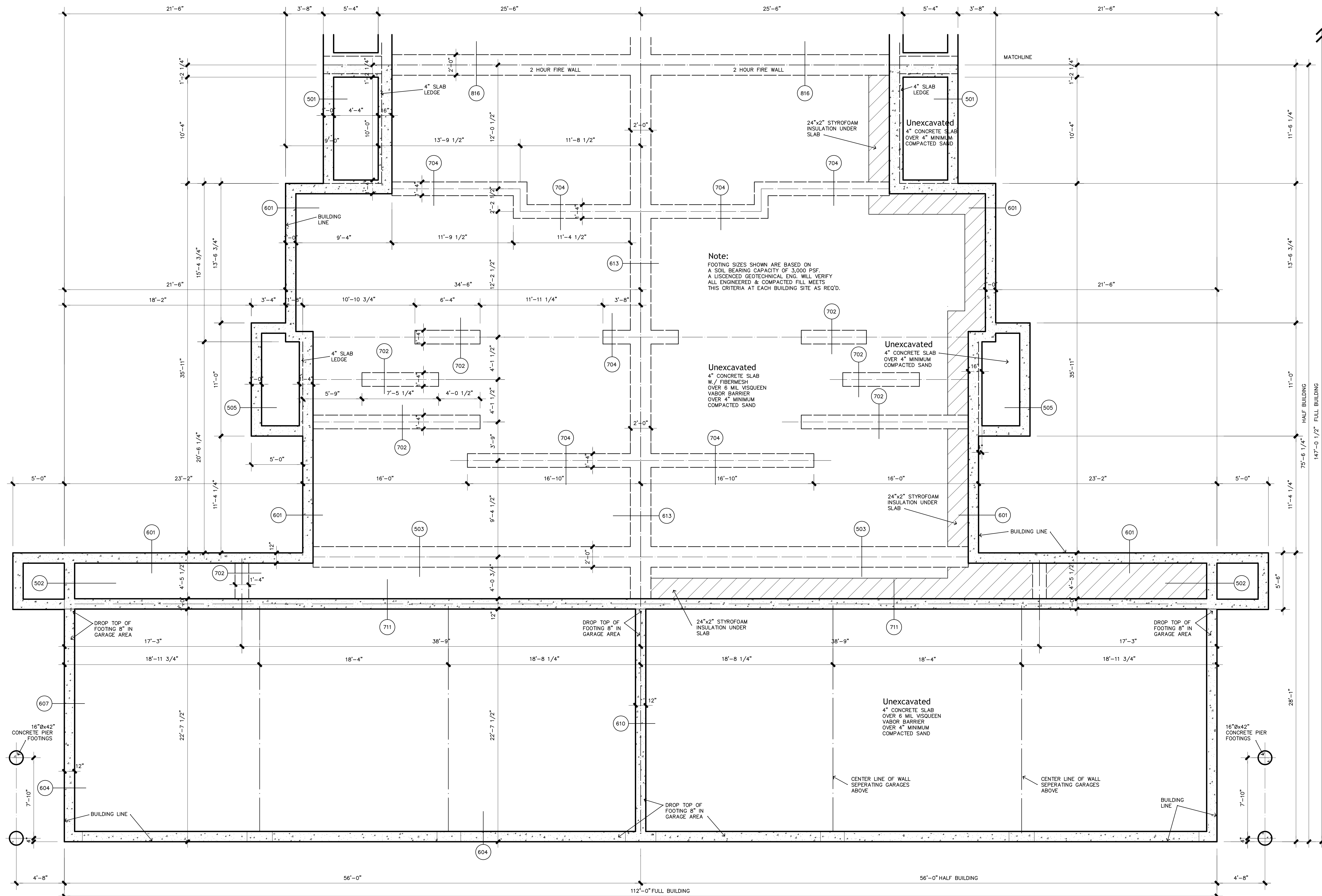
Sheet Index:

Table with 2 columns: Sheet Name, Page Number. Includes Cover Page, Foundation Plan, First Floor Plan, Second Floor Plan, Elevations, Building Sections, Wall Sections, Wall Sections & Details, Specifications, and Door Schedule.

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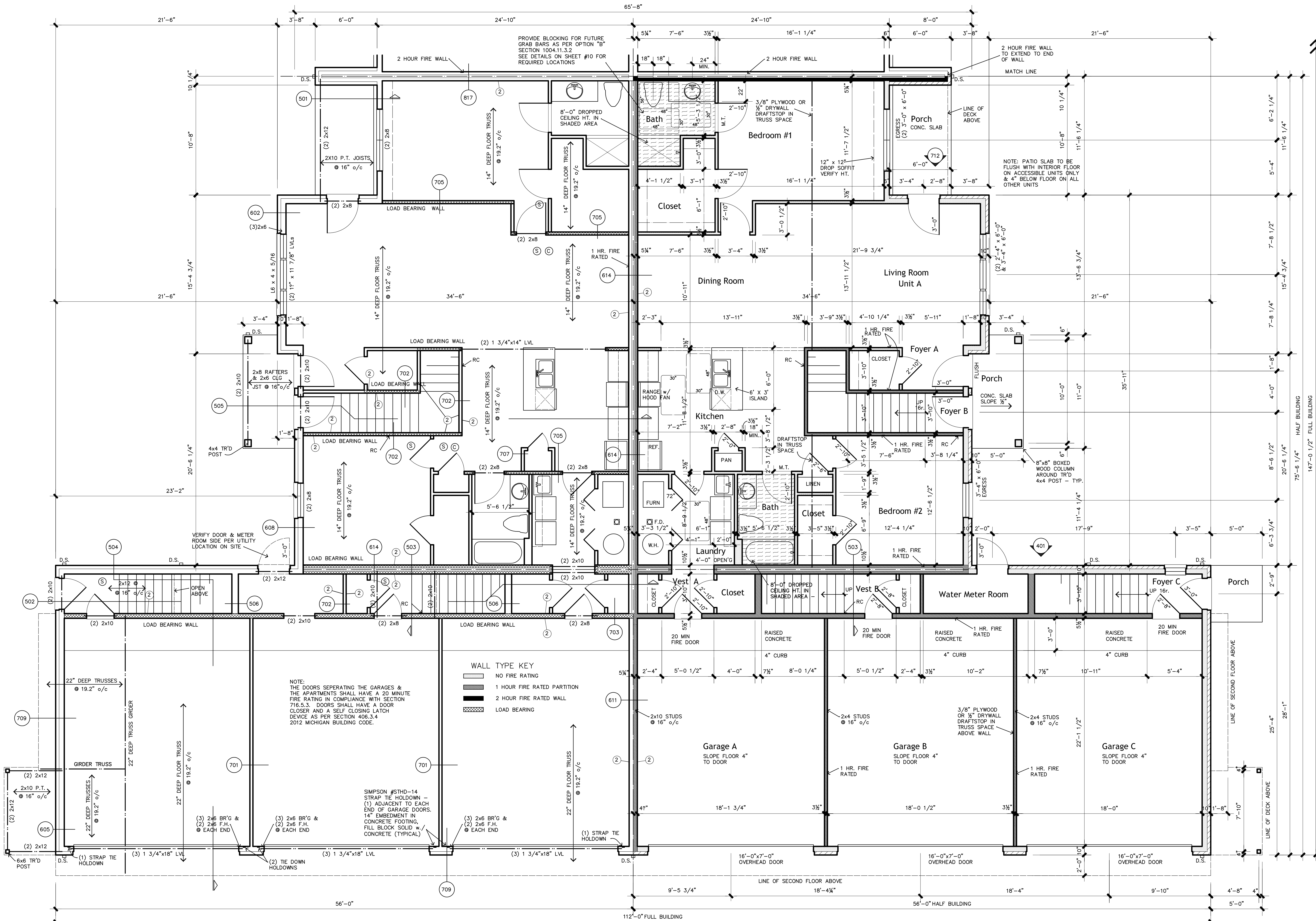
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Note:
 FOOTING SIZES SHOWN ARE BASED ON
 A SOIL BEARING CAPACITY OF 3,000 PSF.
 A LICENSED GEOTECHNICAL ENG. WILL VERIFY
 ALL ENGINEERED & COMPACTED FILL MEETS
 THIS CRITERIA AT EACH BUILDING SITE AS REQ'D.

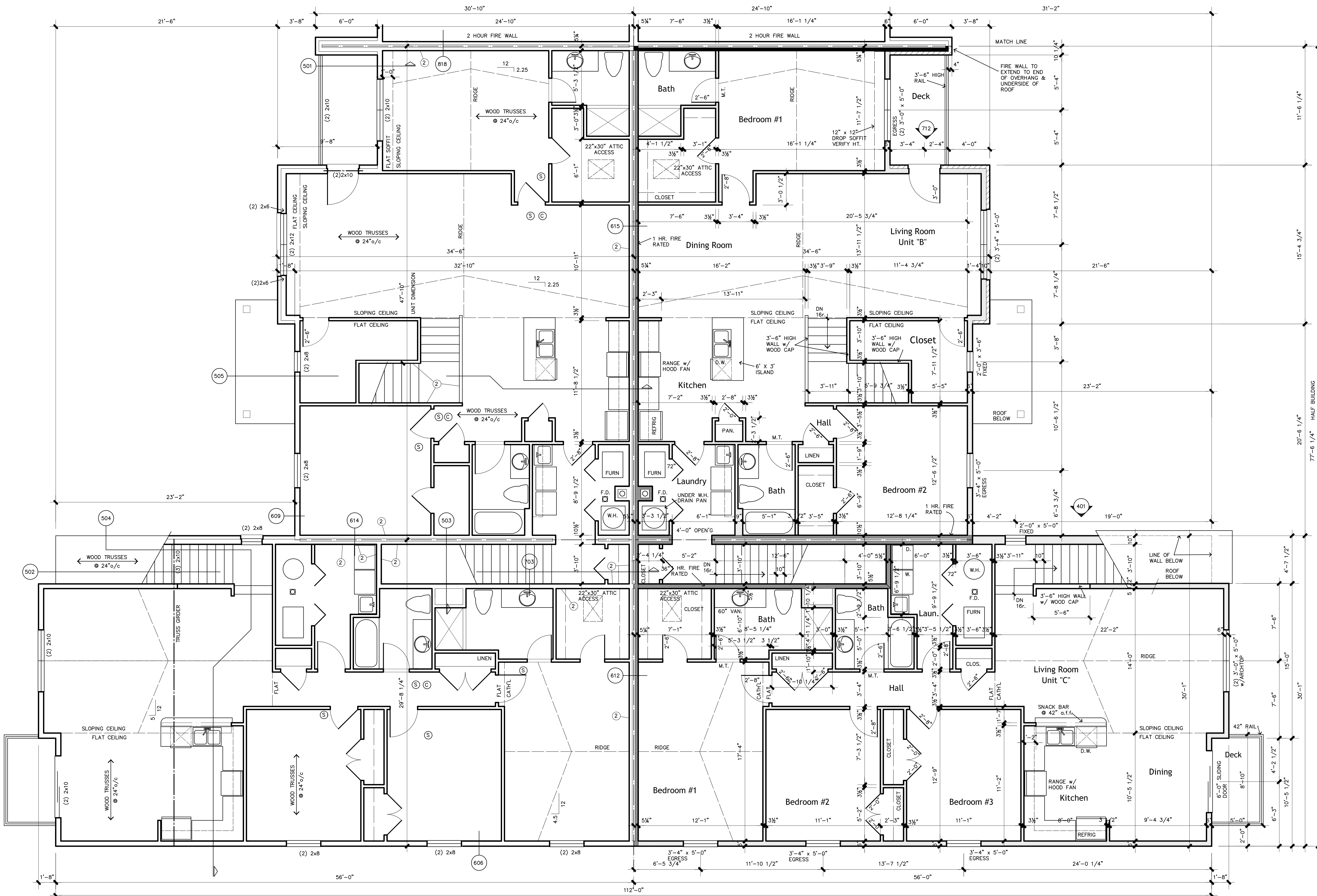
Foundation Plan
 Scale: 1/4" = 1'-0"



First Floor Plan
 Scale: 1/4" = 1'-0"

Type "B" Units
 ALL UNITS EXCEPT FOR:
 BUILDINGS #3, #4 & #9 - SEE SHEET #10
 BUILDING #10 - SEE SHEET #11

REPRODUCTION OF PRINTS IS PROHIBITED.

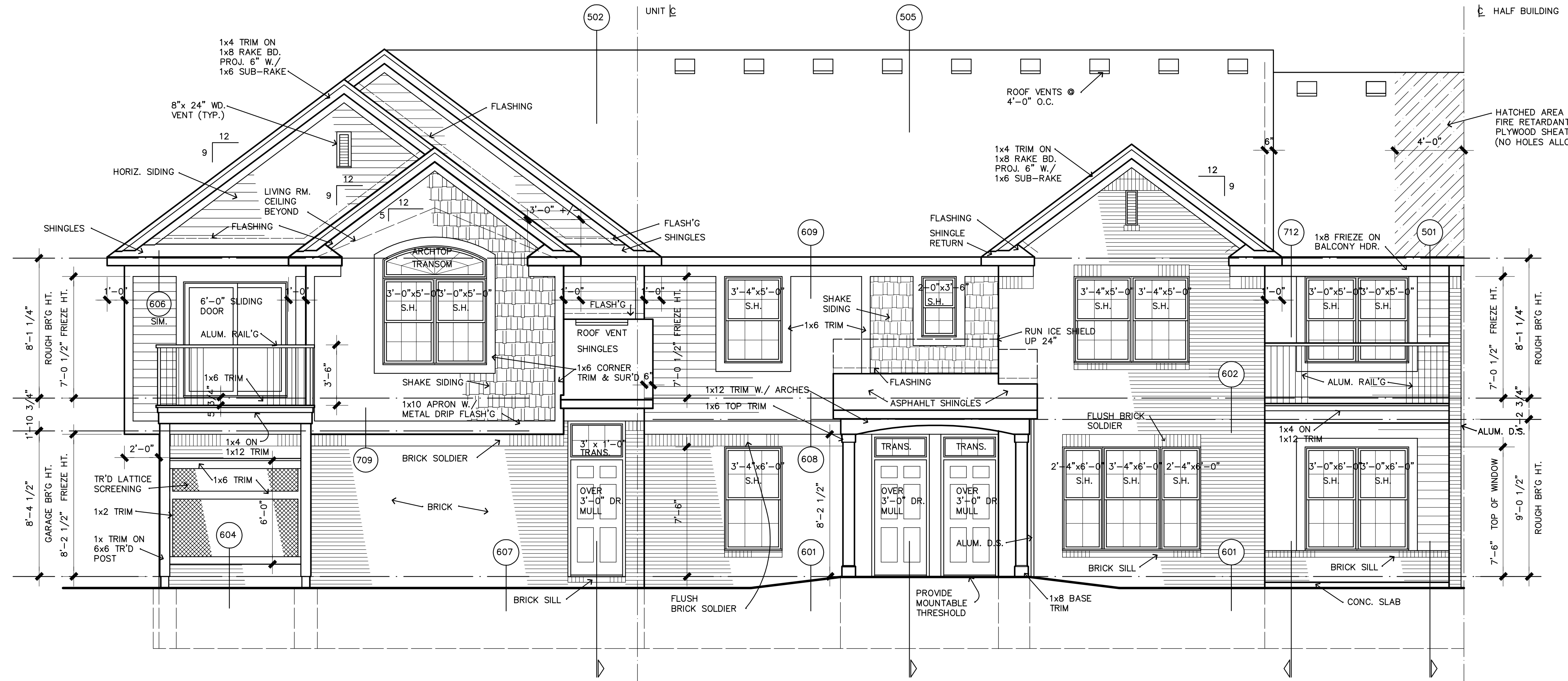


WALL TYPE KEY

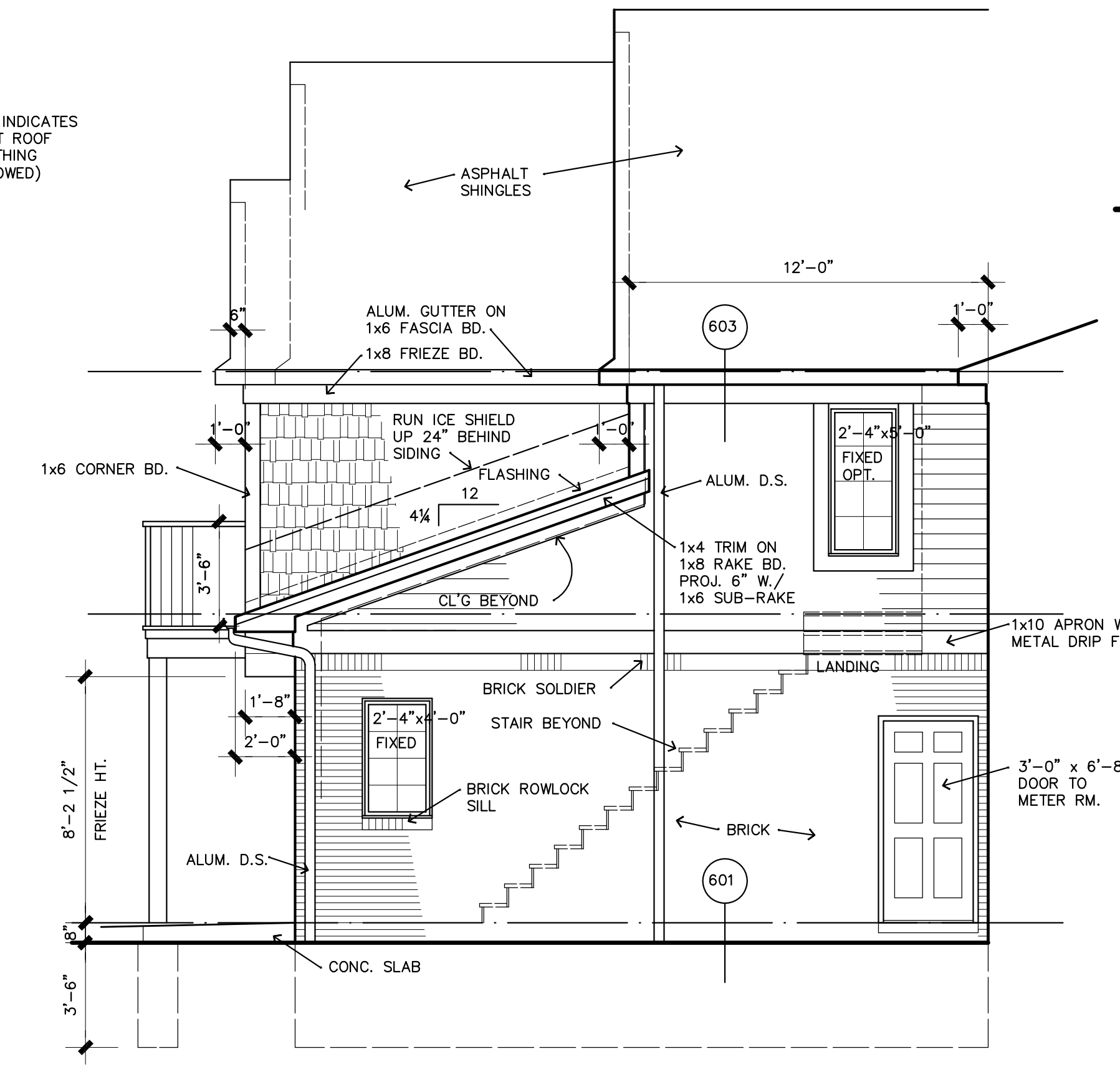
[Symbol]	NO FIRE RATING
[Symbol]	1 HOUR FIRE RATED PARTITION
[Symbol]	2 HOUR FIRE RATED WALL
[Symbol]	LOAD BEARING

Second Floor Plan
 Scale: 1/4" = 1'-0"

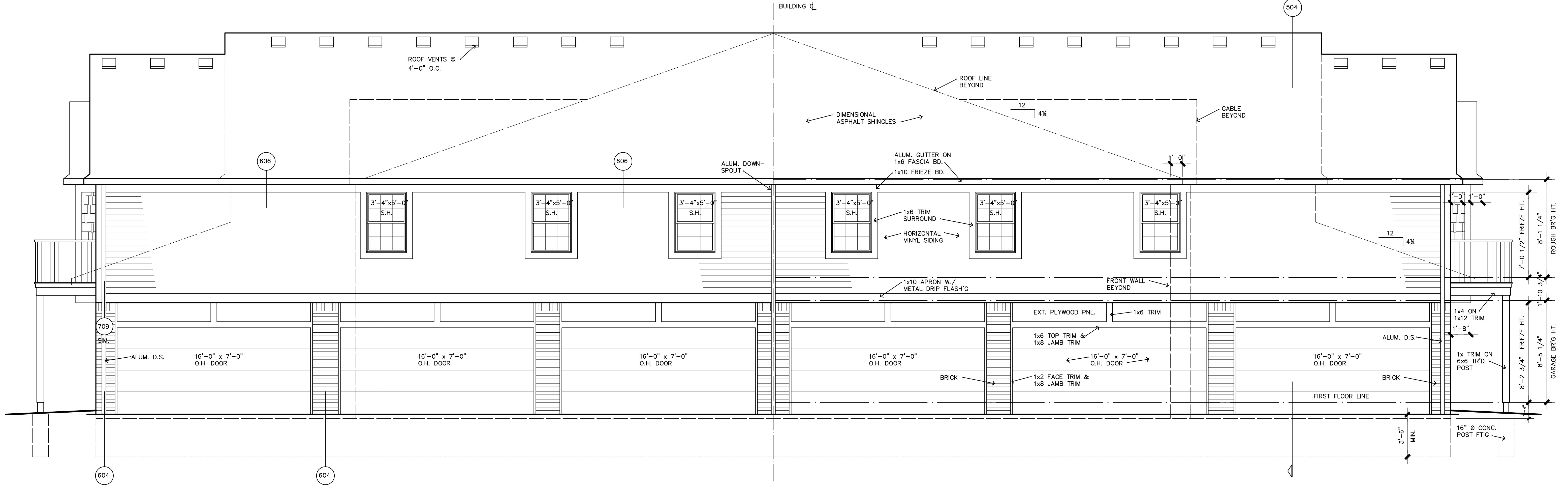
ALL UNITS "B" & "C" ARE NOT ACCESSIBLE UNITS.



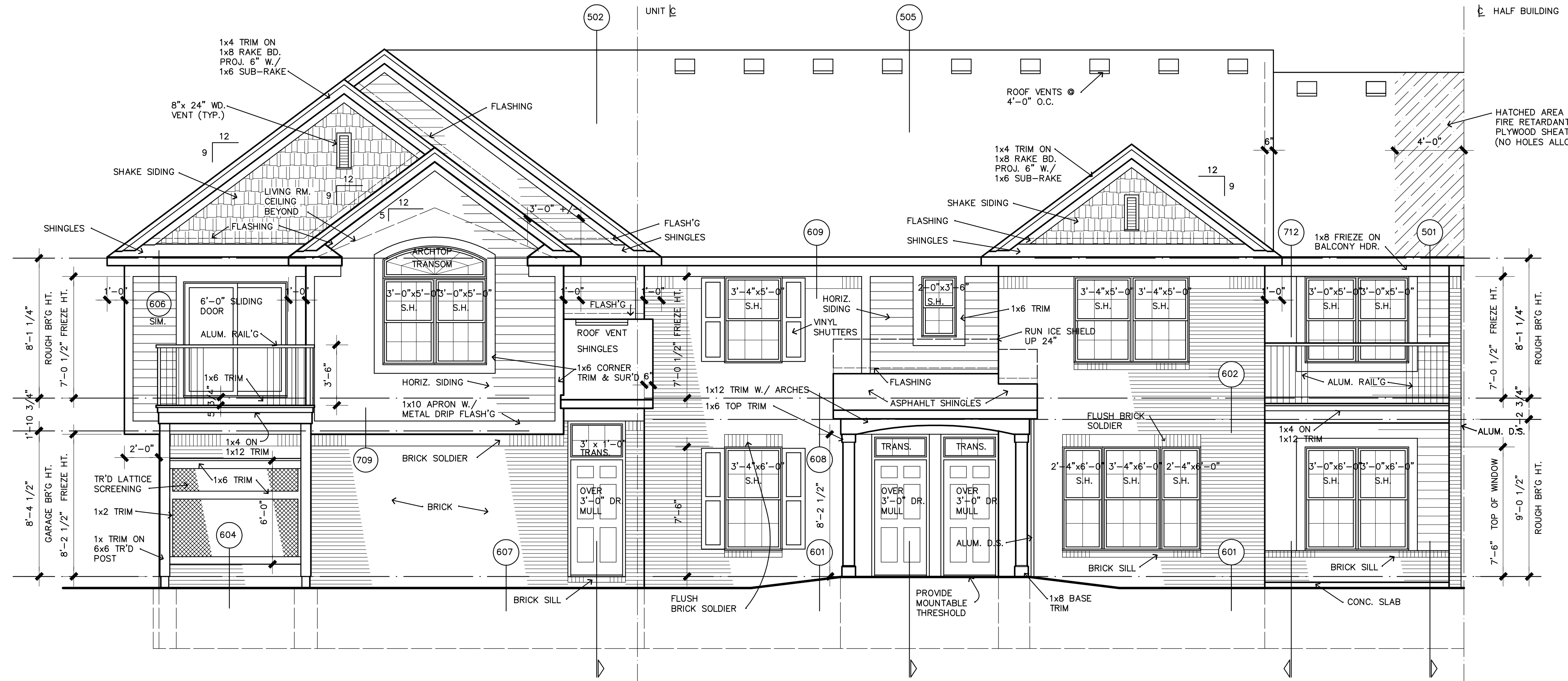
Front/Rear Elevation "A"
 Scale: 1/4" = 1'-0"



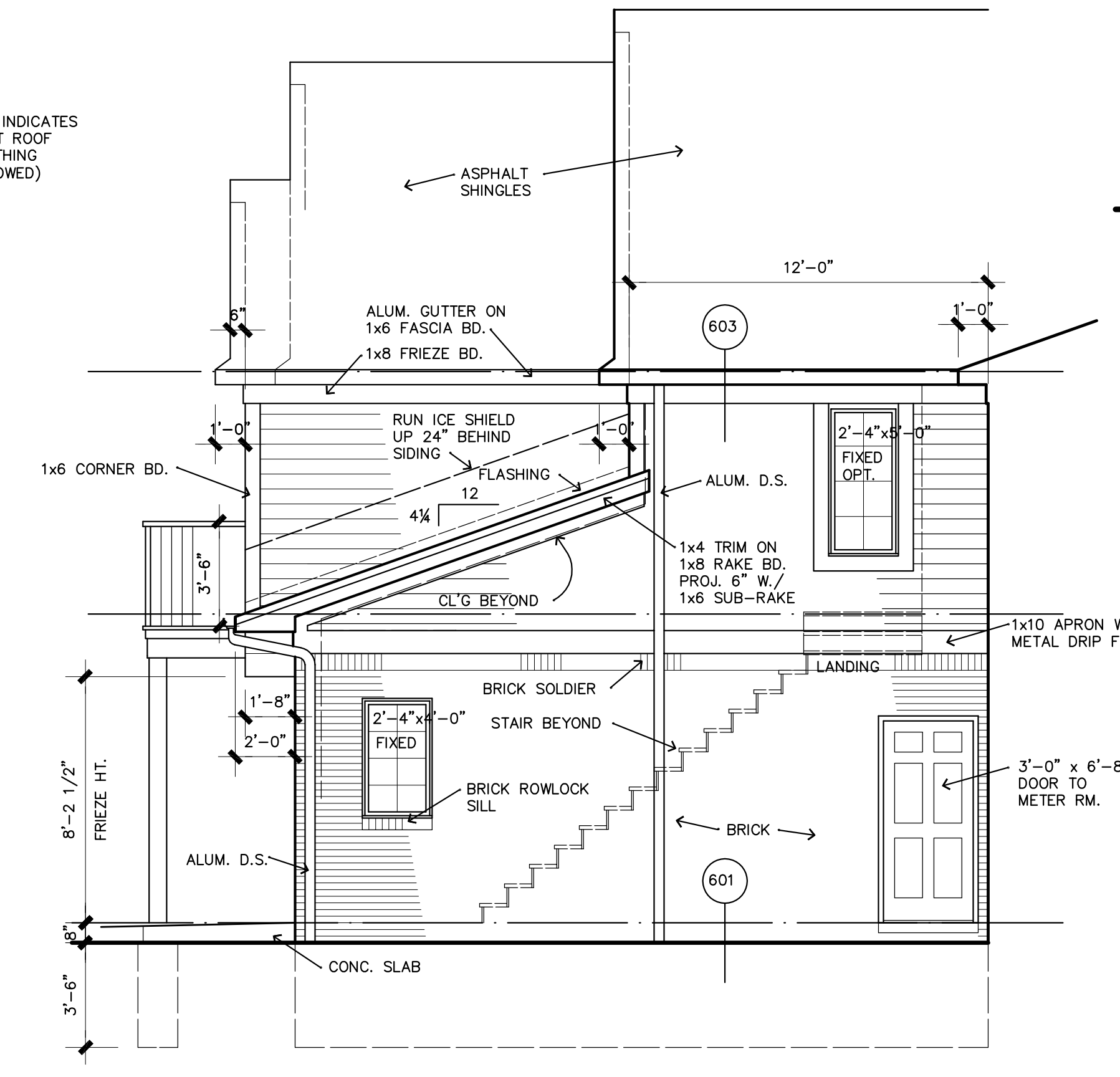
Partial Elevation "A"
 Scale: 1/4" = 1'-0"



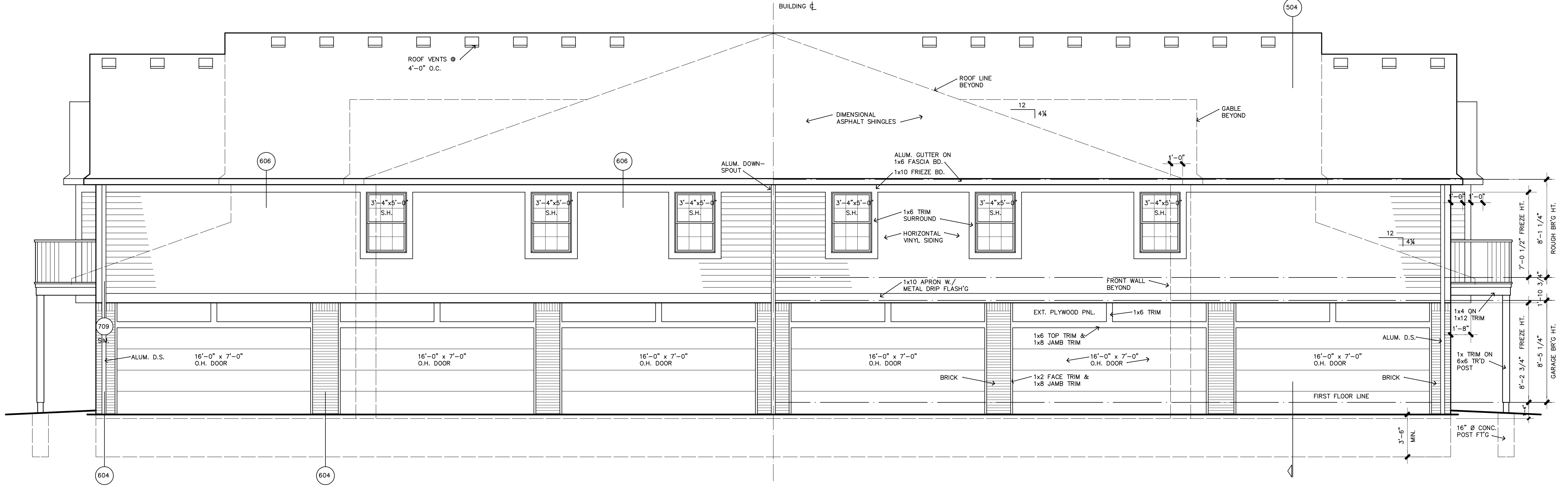
Side Elevation "A"
 Scale: 1/4" = 1'-0"



Front/Rear Elevation "B"
 Scale: 1/4" = 1'-0"



401 Partial Elevation "B"
 Scale: 1/4" = 1'-0"



Side Elevation "B"
 Scale: 1/4" = 1'-0"