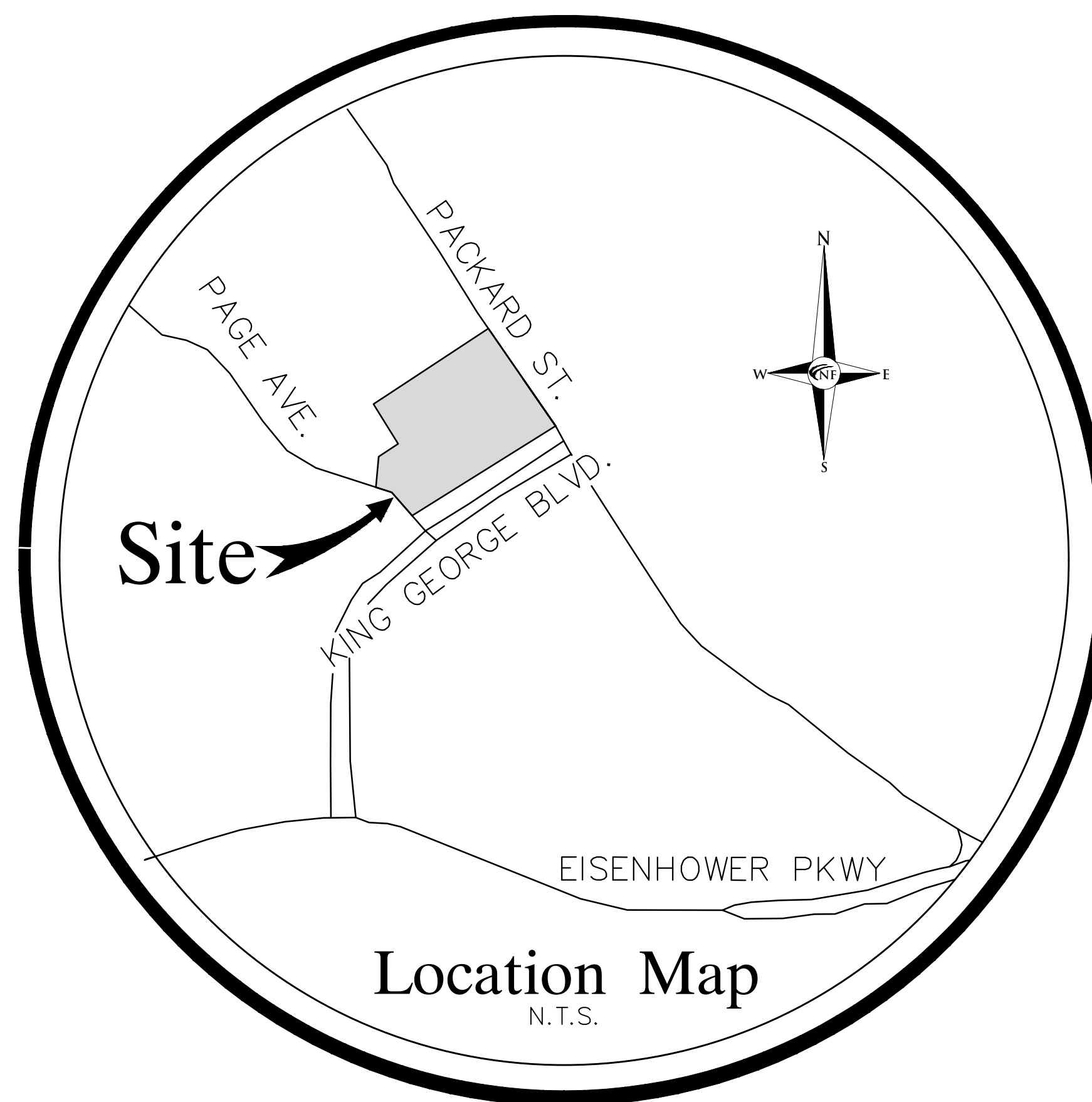


City of Ann Arbor,
Washtenaw County, Michigan
"The George" - proposed Phase 2
Site Plan for Planning Commission

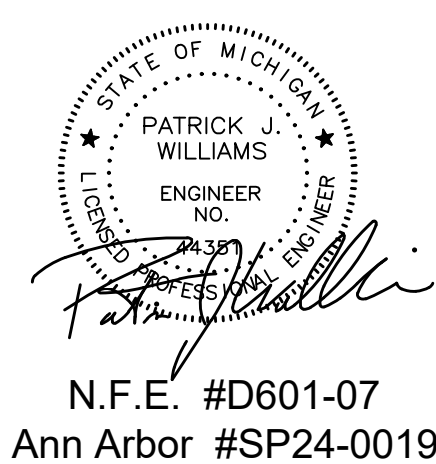
| DEVELOPMENT SUMMARY AND ZONING COMPLIANCE | | | | |
|---|---|--|---------------------------|---|
| PROJECT DESCRIPTION: | | New construction of a 4-story residential building on the site of The George, an existing residential complex. | | |
| SUSTAINABILITY CHECKLIST: | | | | |
| Include on-site solar. | The project does not propose any on-site solar. | | | |
| Pair on-site solar with on-site energy storage. | The project does not propose any on-site energy storage. | | | |
| Achieve full building electrification. | The project will achieve full electrification. | | | |
| Please specify all-electric heating sources. | All-electric heating is proposed. | | | |
| Use only high-efficiency appliances and interior lighting. | The project will utilize all electric appliances (including kitchen ranges), Energy Star certified where available, and high-efficiency LED lighting in all spaces. | | | |
| Achieve net zero energy performance or a green building certification | The project does not anticipate green building certification. | | | |
| Consult an Aging in Place (AIP) specialist (for residential projects) | The project is not planning to consult an AIP specialist. | | | |
| Include compost waste bin designations. | The project will include an area designated for compost and organic waste on site. | | | |
| Consider materials used throughout structure | The project will consider the use of responsibly sourced materials with low embodied carbon and end-of-life | | | |
| Provide building life cycle assessment. | The project does not anticipate providing an individual building life cycle assessment. | | | |
| Implement a construction and demolition waste management plan. | The project will implement a construction and demolition waste plan with the selected General Contractor. | | | |
| DEVELOPMENT COMPARISON CHART | | | | |
| | EXISTING/REQUIRED | | PROPOSED | |
| SITE AREA: | 3,000 SF | | 283,931 SF | 6.52 ACRES |
| LOT WIDTH: | NO MINIMUM | | 456' | |
| ZONING: | C1B | | C1B | |
| LAND USE: | RESIDENTIAL | | RESIDENTIAL | |
| BUILDING AREA | | | | |
| FLOOR AREA (ATTRIBUTABLE FAR): | MAX 150% | 363,356 | 414,565 SF | |
| FLOOR AREA RATIO: | MAX 150% | 128% | 146% | |
| BUILDING UNITS: | N/A | 249 EXISTING | 46 NEW | |
| BEDROOMS: | N/A | 387 EXISTING | 58 NEW | |
| BUILDING HEIGHT - IN STORIES | | | | |
| (TABLE 5.17-4) | MIN | MAX | | |
| | N/A | 4 | 4 | |
| BUILDING HEIGHT - IN FEET | | | | |
| (TABLE 5.17-4) | MIN | MAX | | |
| | N/A | 50' | 50' | |
| UNIT TYPES / No. | | | | See architectural plans. |
| VEHICULAR PARKING (TABLE 5.19-2): | | | | |
| EV PARKING | None required. | | EV-I | EXISTING TO REMAIN |
| | EV-C | | 10% | 2 EXISTING EV-I SPACES TO BE RELOCATED |
| | 90% | | | 10 NEW EV-I SPACES TO BE PROVIDED IN EX GARAGE |
| BICYCLE PARKING (TABLE 5.19-1): | | | | |
| 1 SPACE / 5 DWELLINGS | 50% CLASS A 31 BIKE(S) | 0% CLASS B | 50% CLASS C 30 BIKE(S) | 56 CLASS A SPACES EXIST, 8 CLASS C EXIST, EXISTING PARKING MEETS REQUIREMENTS |
| SETBACKS (TABLE 5.17-6): | | | | |
| | EXPOSURE | MIN | MAX | |
| | FRONT | 10' | 25' | 10' |
| | SIDE-EAST | 0' | 30' @ R DIST. | EXIST |
| | SIDE-WEST | 0' | 30' @ R DIST. | EXIST |
| | REAR | 0' | 30' @ R DIST. | EXIST |



2502 PACKARD STREET
PART OF THE SE. 1/4 OF SECTION 4, AND PART OF
THE NE 1/4 OF SECTION 9, T. 3 S, R. 6 E, CITY OF
ANN ARBOR, WASHTENAW COUNTY, MICHIGAN

LEGAL DESCRIPTION:

OUTLOT A, SMOKLER HUTZEL SUBDIVISION, OF PART OF THE SOUTHEAST ONE-QUARTER (1/4) OF SECTION 4 AND PART OF THE NORTHEAST ONE-QUARTER (1/4) OF SECTION 9, TOWN 3 SOUTH, RANGE 6 EAST, CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN, ACCORDING TO THE PLAT THEREOF AS RECORDED IN LIBER 17 OF PLATS, PAGES 41, 42 AND 43, WASHTENAW COUNTY RECORDS.



SHEET INDEX:

| | |
|-------|--|
| SP-00 | COVER SHEET |
| SP-01 | ALTA & TOPOGRAPHIC SURVEY |
| SP-02 | DEMOLITION PLAN |
| SP-03 | GENERAL SITE PLAN |
| SP-04 | PAVING & GRADING PLAN |
| SP-05 | UTILITY PLAN |
| SP-06 | STORM WATER MANAGEMENT PLAN |
| SP-07 | SOIL EROSION & DRAINAGE AREAS PLAN |
| SP-08 | REFUSE TRUCK & FIRE APPARATUS PLAN |
| SP-09 | CALCULATIONS & STORM DETENTION DETAILS |

| | |
|----|-----------------------------|
| L1 | TREE PRESERVATION PLAN |
| L2 | OVERALL LANDSCAPE PLAN |
| L3 | DETAILED LANDSCAPE PLAN |
| L4 | LANDSCAPE NOTES AND DETAILS |

SP 1.01 PHOTOMETRIC PLAN
A-010 SOLID WASTE DETAILS
A-100 FIRST FLOOR PLAN
A-101 FIRST FLOOR LOFT PLAN
A-102 TYPICAL UPPER FLOOR PLAN
A-300 EXTERIOR ELEVATIONS
A-301 RENDERINGS
A-400 BUILDING SECTION

Project Description:

Currently the property is in the C1B Zone and consists of 291 residential rental apartments. Somerset seeks to construct a new 4-story building with approximately 46 residential units and 1,593 S.F. of retail space adjacent to the existing building. The existing vehicular access around the courtyard will be restricted to pedestrian access and emergency vehicles, as necessary.

Community Analysis per UDC Chapter 55:

- i) Impact of proposed Development on public schools: No impact
- ii) Relationship of intended use to neighboring uses: No change
- iii) Impact of adjacent uses on proposed development or Special Exception Use: N/A
- iv) Impact of proposed Development on the air and water quality, and on existing Natural Features of the Site and neighboring Sites: No additional impact
- v) Impact of the proposed use on historic Sites or structures which are located within a historic district or listed on the National Register of Historic Places: N/A
- vi) Public sidewalk maintenance statement: All public sidewalk fronting the property on Paige and Packard shall be maintained and kept free of snow, ice and debris
- vii) Additional information for Site Plans: Natural Features General Descriptions and Impacts: N/A

Developer / Proprietor

Somerset Development
101 Crawfords Corner Rd.
Holmdel, NJ 07733
Contact:
Ken Gold
Tel: 732.415-7171

Principal Architect

Bowers & Associates, Inc.
2400 South Huron Parkway
Ann Arbor, MI 48104
Contact:
Scott Bowers
Tel: 734.975-2400

Consulting Architect

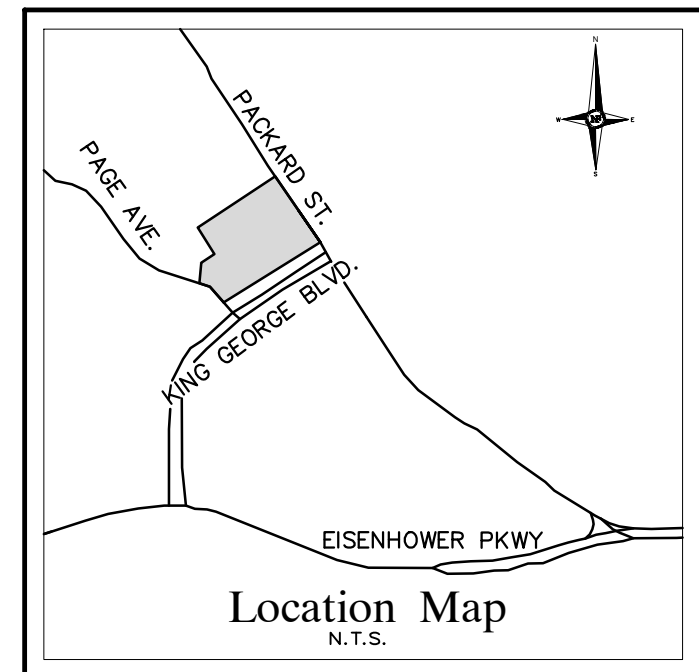
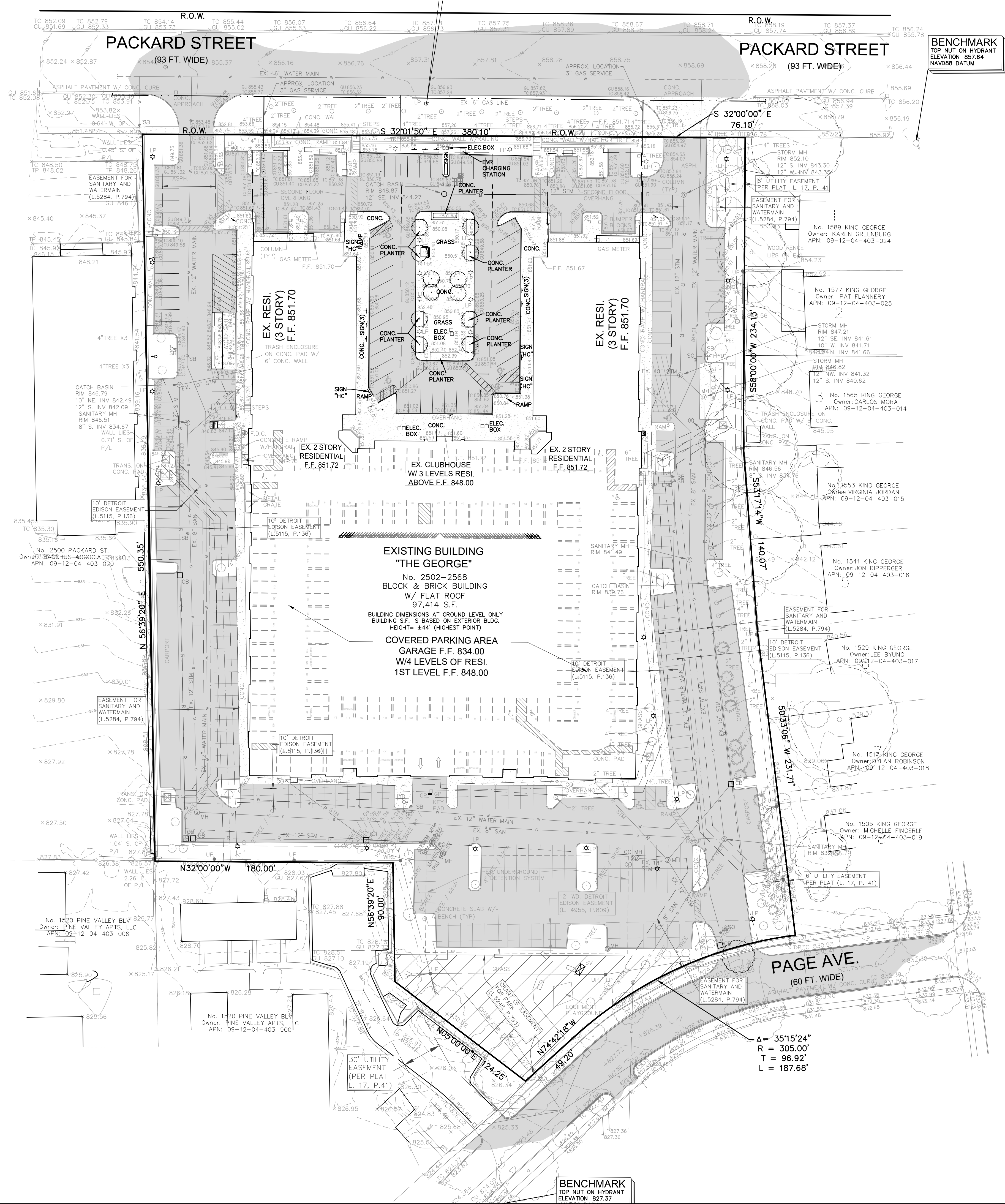
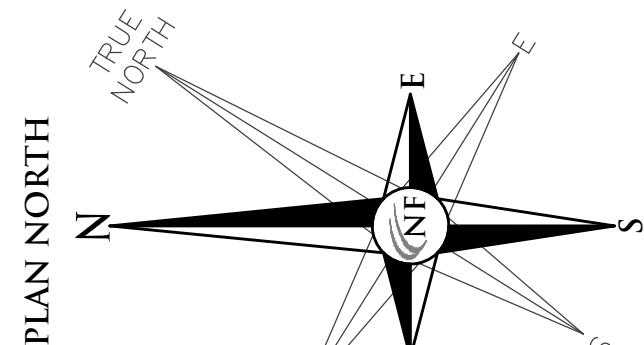
**J. Bradley Moore & Associates
Architects, Inc.**
4844 Jackson Rd., Suite #150
Ann Arbor, MI 48103
Contact:
Brad Moore
Tel: 734.930-1500

Civil Engineer

Nowak & Fraus Engineers
46777 Woodward Ave.
City of Pontiac, MI 48342
Contact:
Andrew Wiseman
Tel: 248.332-7931

Landscape Architect

Nowak & Fraus Engineers
46777 Woodward Ave.
City of Pontiac, MI 48342
Contact:
George Ostrowski
Tel: 248.332-7931



NF
ENGINEERS
CIVIL ENGINEERS
LAND SURVEYORS
LAND PLANNERS

NOWAK & FRAUS ENGINEERS
46777 WOODWARD AVE.
PONTIAC, MI 48342-5032
TEL. (248) 332-7931
FAX. (248) 332-8257
WWW.NOWAKFRAUS.COM

SEAL

PROJECT

The George
2502 Packard St.
Ann Arbor, MI 48009

CLIENT

Somerset Development
101 Crawfords Corner Rd.
Holmdel, NJ 07733

Contact:

Ken Gold
Tel: 732.415-7171

PROJECT LOCATION

Part of the 1/4 of
Section 4
T. 3 South, R. 6 East
City of Ann Arbor,
Washtenaw County,
Michigan

SHEET

ALTA / NSPS
Land Title Survey
& Topographic Survey



Know what's below
Call before you dig.

| DATE | ISSUED FOR / REVISED |
|----------|------------------------|
| 08-15-24 | Issued for City Review |
| 10-29-24 | Revised per Client |
| 11-18-24 | Revised per City |
| 02-04-25 | Revised per City |
| 03-10-25 | Revised per City |
| 07-17-25 | Per City Review #3 |

DRAWN BY:
D. McConkey

DESIGNED BY:

A. Wiseman

APPROVED BY:

P. Williams

DATE:

July 15, 2024

SCALE: 1" = 40'

40 20 0 20 40 60

NFE JOB NO.

D601-07

SHEET NO.

SP-01

LEGAL DESCRIPTION

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

OUTLOT A, SMOKLER HUTZEL SUBDIVISION OF PART OF THE SOUTHEAST 1/4 OF SECTION 4 AND PART OF THE NORTHEAST 1/4 OF SECTION 9, TOWN 3 SOUTH, RANGE 6 EAST, CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN, ACCORDING TO THE PLAT THEREOF AS RECORDED IN LIBER 17 OF PLATS, PAGES 41, 42 AND 43, WASHTENAW COUNTY RECORDS.

PARCEL NO. 09-12-04-403-010
COMMONLY KNOWN AS: 2502-2568 PACKARD ROAD, ANN ARBOR, MI

BASIS OF BEARING NOTE

The basis of bearing for this survey was established by Outlot A, Smoker Hutzel Subdivision, according to the plat thereof as recorded in Liber 17 of Plats, Pages 41, 42 and 43, Washtenaw County Records

SITE DATA

Gross Land Area: 283,943 Square Feet or 6.52 Acres.
Zoned: C1B - Community Convenience Center
Building Setbacks: Per City of Ann Arbor

Front= 10' (Minimum)
25' (Maximum)
Sides= None, except 30' where abutting residentially zoned land, Plus 1 foot of additional setback for each foot of building height above 30 feet when abutting residentially zoned land.
Rear= None, except 30' where abutting residentially zoned land, Plus 1 foot of additional setback for each foot of building height above 30 feet when abutting residentially zoned land.

Building Setbacks Per Liber 1134, Page 133:

4. All Residential dwellings in this subdivision constructed without an attached garage shall be erected so as to provide side yards of not less than 14 feet, with a minimum distance of 10 feet on the drive side area, and a minimum distance of 4 feet on opposite side yard area. The provisions of this paragraph shall not apply to lots abutting corners on which the side yard abutting the street shall not be less than 15 feet when rear yards abut rear yards. If there is an attached garage to the structure, there shall be 10 feet between structures, with a requirement of a 5 foot side yard on both sides.

5. All dwellings erected on any residential lot shall be located not less than 25 feet from the front lot line, which shall establish the building line for the street. On any lot having a curved front line, the dwelling shall be located not less than 25 feet from the midpoint of the front lot line. For the purposes of the covenant, eaves, steps and open porches shall not be considered as a part of a building.

Max. Building Height permitted: 4 stories/50'

Total Parking: 305 spaces including 8 barrier free spaces.
151 underground spaces including 16 barrier free spaces
(per management)

NOTE: The setbacks & height restrictions noted above are for reference purposes only and should not be used for design or construction and should not be used to determine compliance. A surveyor cannot make a certification on the basis of an interpretation or opinion of another party. A zoning endorsement letter should be obtained from City of Ann Arbor to insure conformity as well as make a final determination of the required building setback & height requirements.

FLOOD HAZARD NOTE

The Property described on this survey does not lie within a Special Flood Hazard Area as defined by the Federal Emergency Management Agency; the property lies within Zone X of the Flood Insurance Rate Map identified as Map No. 26161C0401E bearing an effective date of 04-03-2012.

CEMETERY NOTE

There was no observable evidence of cemeteries or burial grounds within the subject property.

UTILITY NOTE

All utilities are underground unless otherwise noted.

The utilities shown on this survey were determined by field observation. All locations are approximate. The location of any other underground services which may exist can only be depicted if a Utility Plan is furnished to the surveyor.

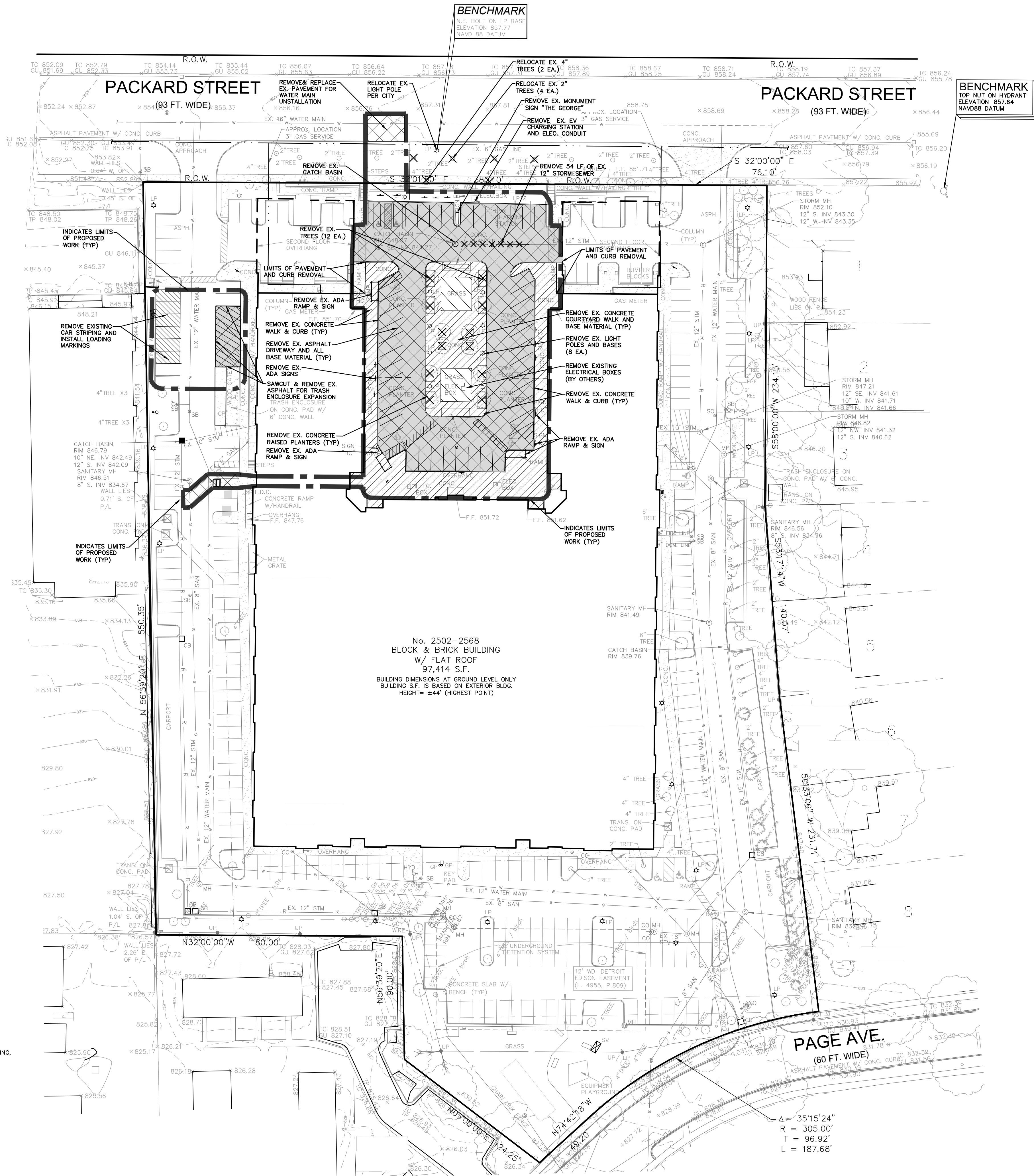
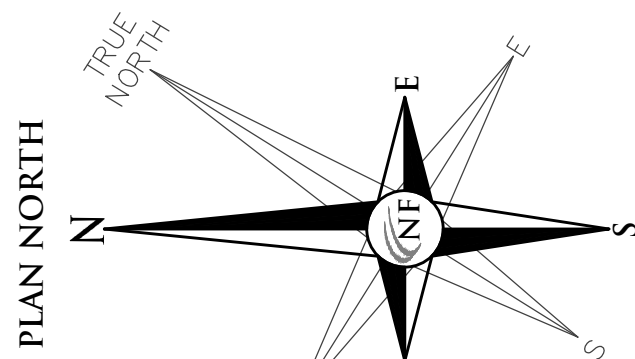
NOTE: DTE has new regulations that may impact development outside their easement or the public right of way. Client shall contact DTE to determine the 'New Structures and Power Line' requirements as they may apply to any future building or renovation of a structure. DTE Energy can be contacted at 800-477-4747

CERTIFICATE OF SURVEY

We hereby certify that we have surveyed the property herein described

KEVIN CHRISTOPHER NAVAROLI
License No. 4001053503

Kevin Navaroli, PLS
Date: 06-07-2024
No.: 53503



DEMOLITION NOTES
DEMOLITION OF SITE IMPROVEMENTS SHALL BE ALLOWED ONLY AFTER AN APPROVED PERMIT HAS BEEN SECURED FROM THE PUBLIC AGENCY HAVING JURISDICTION OVER SAID DEMOLITION.

FOR ANY DEMOLITION WITHIN PUBLIC RIGHT-OF-WAY, THE CONTRACTOR SHALL PAY FOR, AND SECURE, ALL NECESSARY PERMITS AND LICENSES AND SHALL ARRANGE FOR ALL SITE INSPECTIONS.

SITE DEMOLITION INCLUDES THE COMPLETE REMOVAL OF SITE IMPROVEMENTS AND OFF-SITE DISPOSAL. DEBRIS SHALL BE TRANSPORTED TO AN APPROPRIATE DISPOSAL FACILITY THAT IS LICENSED FOR THAT TYPE OF DEBRIS.

THE CONTRACTOR SHALL COORDINATE TRUCK ROUTES WITH THE MUNICIPALITY PRIOR TO COMMENCEMENT OF SITE DEMOLITION. ALL TRUCKS SHALL BE TARPED OR PROPERLY SECURED TO CONTAIN DEMOLITION DEBRIS PRIOR TO LEAVING SITE.

EXISTING ON-SITE UNDERGROUND UTILITIES AND BUILDING SERVICES HAVE BEEN INDICATED BASED UPON THE BEST AVAILABLE UTILITY RECORDS AND/OR ON-SITE INSPECTION. NO GUARANTEE IS MADE BY THE DESIGN ENGINEER, AS TO THE COMPLETENESS OR ACCURACY OF UTILITY DATA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF UTILITY INFORMATION (THE DESIGN ENGINEER MAKES NO GUARANTEE NOR ASSUMES ANY LIABILITY AS TO THE COMPLETENESS AND/OR ACCURACY OF UTILITY DATA).

PRIOR TO THE REMOVAL OR ABANDONMENT OF ANY EXISTING UNDERGROUND UTILITY OR BUILDING SERVICE LINES CALLED FOR IN THE PLANS OR DISCOVERED DURING EXCAVATION, THE CONTRACTOR MUST DETERMINE IF THE UTILITY LINE OR BUILDING SERVICE IS STILL IN USE. IF THE UTILITY LINE OR BUILDING SERVICE IS STILL IN USE/ACTIVE, THE CONTRACTOR MUST TAKE ALL THE NECESSARY STEPS TO GUARANTEE THAT THE UTILITY LINE OR BUILDING SERVICE IS RECONNECTED WITHOUT AN INTERRUPTION IN SERVICE. THE RECONNECTION OF THE UTILITY LINE OR BUILDING SERVICE MUST BE IN ACCORDANCE WITH THE STANDARDS AND REQUIREMENTS OF THE APPROPRIATE GOVERNMENTAL AGENCY OR PRIVATE UTILITY COMPANY.

SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED BY THE CONTRACTOR PRIOR TO SITE DEMOLITION.

* THE CONTRACTOR SHALL NOTIFY MISS DIG (1-800-482-7171) A MINIMUM OF THREE (3) WORKING DAYS PRIOR TO THE START OF THE SITE DEMOLITION.

THE CONTRACTOR SHALL COORDINATE THE REMOVAL AND/OR RELOCATION OF EXISTING UTILITY POLES AND BUILDING SERVICES WITH UTILITY COMPANY. REMOVAL OF THE UTILITY COMPANIES ELECTRICAL SERVICES SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND REQUIREMENTS OF THE UTILITY COMPANY.

THE CONTRACTOR SHALL COORDINATE THE REMOVAL AND/OR RELOCATION OF EXISTING UTILITY POLES AND BUILDING SERVICES WITH UTILITY COMPANY. REMOVAL OF THE UTILITY COMPANY GAS SERVICES SHALL BE IN ACCORDANCE WITH THE STANDARDS AND REQUIREMENTS OF THE UTILITY COMPANY.

THE CONTRACTOR SHALL COORDINATE THE REMOVAL AND/OR RELOCATION OF EXISTING UTILITY POLES AND BUILDING SERVICES WITH THE UTILITY COMPANY. REMOVAL OF THE UTILITY COMPANIES COMMUNICATION SERVICES SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND REQUIREMENTS OF THE UTILITY COMPANY.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFICATION OF PRIVATE UTILITY COMPANIES AND COORDINATE UTILITY SERVICE SHUT OFF/DISCONNECT, PRIOR TO DEMOLITION OF EXISTING STRUCTURES OR PROPERTIES.

ALL UTILITY METERS SHALL BE REMOVED BY THE APPROPRIATE UTILITY COMPANY.

ANY ON-SITE STORM SEWER FACILITIES LOCATED DURING DEMOLITION SHALL BE REMOVED AND BULK HEADED AT THE PROPERTY LINE IF INDICATED FOR REMOVAL ON THE PLANS.

PRIOR TO BUILDING DEMOLITION, ALL HAZARDOUS MATERIAL SHALL BE REMOVED BY OTHERS. THE DEMOLITION CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER SHOULD ANY SUSPICIOUS MATERIAL BE FOUND.

WATER SERVICES AND/OR STOP-BOX SHALL BE PRESERVED AND BULK HEADED AT THE PROPERTY LINE OR AS DIRECTED BY THE OWNER'S REPRESENTATION.

WHERE EXISTING BUILDINGS PLANNED FOR DEMOLITION FALL WITHIN PROPOSED BUILDING FOOT PRINTS, BASEMENT FLOOR SLABS, FOUNDATION WALLS AND FOOTINGS SHALL BE COMPLETELY REMOVED AND BACK FILLED WITH MOIST CLASS II GRANULAR MATERIAL AND BE MACHINE COMPACTED TO A MINIMUM OF 98% OF MATERIALS MAXIMUM DENSITY.

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

OUTLOT A, SHOKLER HUTZEL SUBDIVISION OF PART OF THE SOUTHEAST 1/4 OF SECTION 4 AND PART OF THE NORTHEAST 1/4 OF SECTION 9, TOWN 3 SOUTH, RANGE 6 EAST, CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN, ACCORDING TO THE PLAT THEREOF AS RECORDED IN LIBER 17 OF PLATS, PAGES 41, 42 AND 43, WASHTENAW COUNTY RECORDS.

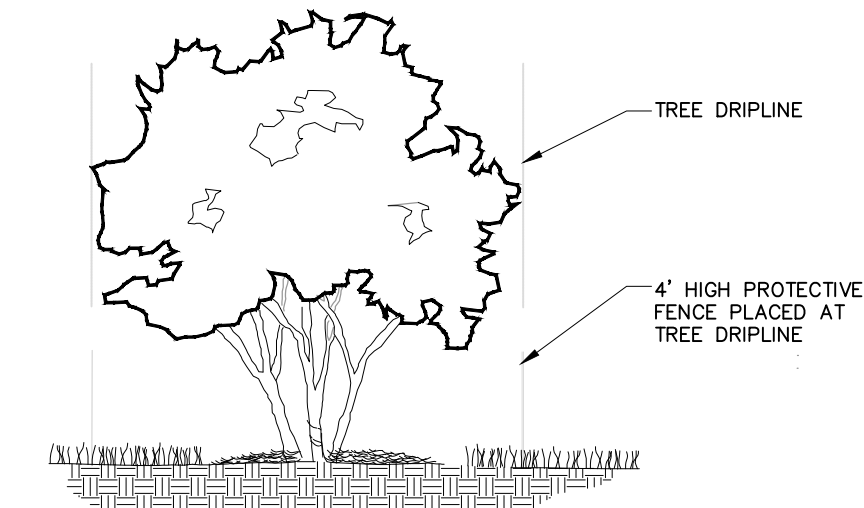
PARCEL NO. 09-12-04-403-010
COMMONLY KNOWN AS: 2502-2568 PACKARD ROAD, ANN ARBOR, MI

| REMOVAL LEGEND | |
|----------------|--|
| | INDICATES EXISTING LANDSCAPE REMOVAL |
| | INDICATES AREAS OF ASPHALT PAVEMENT TO BE REMOVED |
| | INDICATES AREAS OF CONCRETE PAVEMENT/ SIDEWALK TO BE REMOVED |

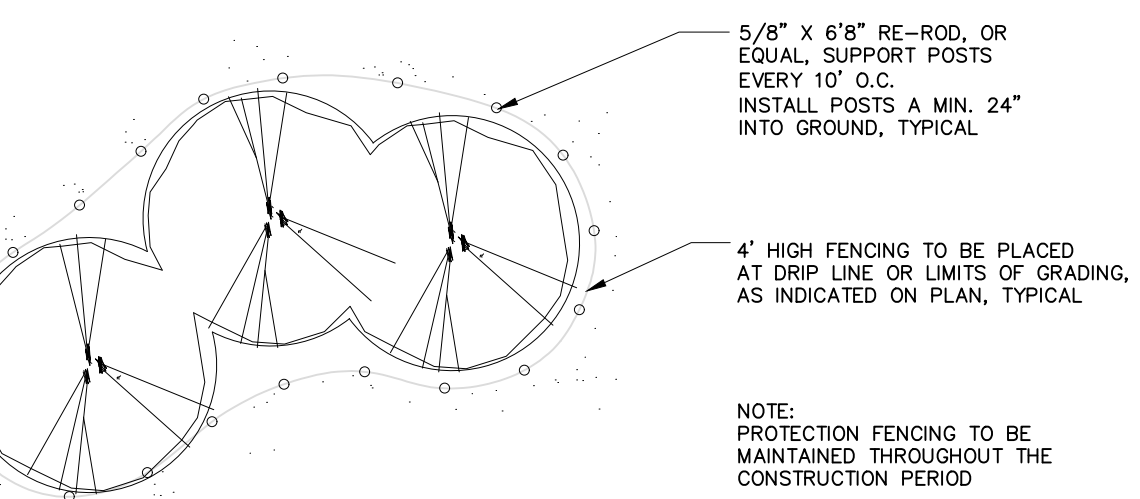
| LEGEND | |
|--------|--|
| | MANHOLE |
| | HYDRANT |
| | GATE VALVE |
| | MANHOLE CATCH BASIN |
| | UTILITY POLE |
| | GUY POLE |
| | GUY WIRE |
| | EXISTING BURIED CABLES |
| | OVERHEAD LINES |
| | LIGHT POLE |
| | SIGN |
| | EXISTING GAS MAIN |
| | EXISTING UTILITY OR CURB TO BE REMOVED |
| | EXISTING UTILITY TO BE ABANDONED |
| | CONSTRUCTION/TREE PROTECTION FENCING |
| | INDICATES EXISTING TREE TO BE REMOVED |

GENERAL TREE PROTECTION NOTES

- APPROVED TREE PROTECTION SHALL BE ERECTED PRIOR TO THE START OF CONSTRUCTION ACTIVITIES, AND SHALL REMAIN IN PLACE UNTIL THE IN PLACE UNTIL CONSTRUCTION IS COMPLETE.
- ALL UNDERSTORY VEGETATION WITHIN THE LIMITS OF PROTECTIVE FENCING SHALL BE PRESERVED.
- NO PERSON MAY CONDUCT ANY ACTIVITY WITHIN THE DRIP LINE OF ANY TREE DESIGNATED TO REMAIN, INCLUDING BUT NOT LIMITED TO, PLACING SOLVENTS, BUILDING MATERIALS, CONSTRUCTION EQUIPMENT, OR SOIL DEPOSITS WITHIN THE DRIP LINE. WHERE GROUPINGS OF TREES ARE TO REMAIN, TREE FENCING SHALL BE PLACED AT THE LIMITS OF SPREADING LINE.
- DURING CONSTRUCTION, NO PERSON SHALL ATTACH ANY DEVICE OR WIRE TO ANY TREE, SCHEDULED TO REMAIN.
- ALL UTILITY SERVICE REQUESTS MUST INCLUDE NOTIFICATION TO THE INSTALLER THAT PROTECTED TREES MUST BE AVOIDED. ALL TRENCHING SHALL OCCUR OUTSIDE OF THE PROTECTIVE FENCING.
- SWALES SHALL BE ROUTED TO AVOID THE AREA WITHIN THE DRIP LINES OF PROTECTED TREES.
- TREES LOCATED ON ADJACENT PROPERTIES THAT MAY BE AFFECTED BY CONSTRUCTION ACTIVITIES MUST BE PROTECTED.
- ROOT ZONES OF PROTECTED TREES SHOULD BE SURROUNDED WITH RIGIDLY STAKED FENCING.
- THE PARKING OF IDLE AND RUNNING EQUIPMENT SHALL BE PROHIBITED UNDER THE DRIP LINE OF PROTECTED TREES.
- THE STRIPPING OF TOPSOIL FROM AROUND PROTECTED TREES SHALL BE PROHIBITED. ALL TREES TO BE REMOVED SHALL BE CUT AWAY FROM TREES TO REMAIN.
- THE GRUBBING OF UNDERSTORY VEGETATION WITHIN CONSTRUCTION AREAS SHOULD BE CLEARED BY CUTTING VEGETATION AT THE GROUND WITH A CHAIN SAW OR MINIMALLY WITH A HYDRO-AXE.
- THE CONTRACTOR IS RESPONSIBLE FOR THE REPLACEMENT PER ORDINANCE GUIDELINES, FOR THE DAMAGE OR REMOVAL OF ANY TREE DESIGNATED TO REMAIN.
- TREES TO BE REMOVED SHALL BE FIELD VERIFIED, EVALUATED AND FLAGGED FOR REMOVAL, BY THE LANDSCAPE ARCHITECT OR FORESTER, ONLY AS DIRECTED BY THE OWNER OR OWNERS REPRESENTATIVE.



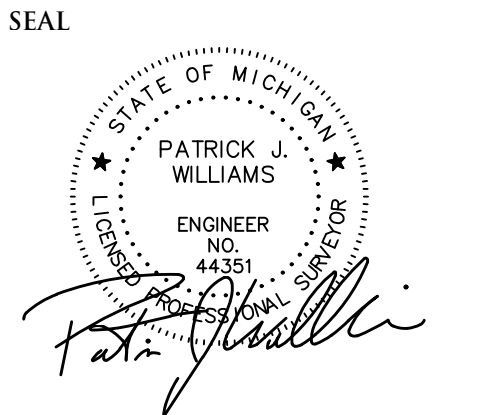
TREE PROTECTION DETAIL-SECTION



TREE PROTECTION DETAIL-PLAN



NOWAK & FRAUS ENGINEERS
46777 WOODWARD AVE.
PONTIAC, MI 48342-5032
TEL (248) 332-7931
FAX (248) 332-8257
WWW.NOWAKFRAUS.COM



PROJECT
The George
2502 Packard St.
Ann Arbor, MI 48109

CLIENT
Somerset Development
101 Crawfords Corner Rd.
Holmdel, NJ 07733

Contact:
Ken Gold
Tel: 732.415-7171

PROJECT LOCATION
Part of the 1/4 of
Section 4
T. 3 South, R. 6 East
City of Ann Arbor,
Washtenaw County,
Michigan

SHEET
Demolition Plan



| DATE | ISSUED FOR / REVISED |
|----------|--------------------------|
| 08-15-24 | Issued for Client Review |
| 10-29-24 | Revised per Client |
| 11-18-24 | Revised per City |
| 02-04-25 | Revised per City |
| 03-10-25 | Revised per City |
| 07-17-25 | Per City Review #3 |

DRAWN BY:
A. Wiseman
DESIGNED BY:
A. Wiseman
APPROVED BY:
P. Williams
DATE:
July 15, 2024
SCALE: 1" = 40'
40 20 0 20 40 60
NFE JOB NO. D601-07
SHEET NO. SP-02

GENERAL PAVING NOTES

PAVEMENT SHALL BE OF THE TYPE, THICKNESS AND CROSS SECTION AS INDICATED ON THE PLANS AND AS FOLLOWS:

CONCRETE
PORTLAND CEMENT TYPE 1A (AIR-ENTRAINED) WITH A MINIMUM CEMENT CONTENT OF SIX SACKS PER CUBIC YARD, MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3,500 PSI AND A SLUMP OF 1 1/2 TO 3 INCHES.

ASPHALT
BASE COURSE - MDT BITUMINOUS MIXTURE NO. 1100L, 20AA, SURFACE COURSE - MDT BITUMINOUS MIXTURE NO. 1100T, 20AA, ASPHALT CEMENT PENETRATION GRADE 85-100, BOND COAT - MDT SS-1H EMULSION AT 0.10 GALLON PER SQUARE YARD; MAXIMUM 2 INCH LIFT.

PAVEMENT BASE SHALL BE COMPACTED TO 98% OF THE MAXIMUM DENSITY (MODIFIED PROCTOR) PRIOR TO PLACEMENT OF PROPOSED PAVEMENT. EXISTING SUB-BASE SHALL BE PROOF-ROLLED IN THE PRESENCE OF THE ENGINEER TO DETERMINE STABILITY.

ALL CONCRETE PAVEMENT, DRIVEWAYS, CURB & GUTTER, ETC., SHALL BE SPRAY CURED WITH WHITE MEMBRANE CURING COMPOUND IMMEDIATELY FOLLOWING FINISHING OPERATION.

ALL CONCRETE PAVEMENT JOINTS SHALL BE FILLED WITH HOT POURED RUBBERIZED ASPHALT JOINT SEALING COMPOUND IMMEDIATELY AFTER SAWCUT OPERATION. FEDERAL SPECIFICATION SS-5164.

ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE MUNICIPALITY AND THE MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, CURRENT EDITION.

ALL TOP OF CURB ELEVATIONS, AS SHOWN ON THE PLANS, ARE CALCULATED FOR A 6" CONCRETE CURB UNLESS OTHERWISE NOTED.

ALL SIDEWALK RAMPS, CONFORMING TO PUBLIC ACT NO. 8, 1993, SHALL BE INSTALLED AS INDICATED ON THE PLANS.

CONSTRUCTION OF A NEW OR RECONSTRUCTED DRIVE APPROACH CONNECTING TO AN EXISTING STATE OR COUNTY ROADWAY SHALL BE ALLOWED ONLY AFTER AN APPROVED PERMIT HAS BEEN SECURED FROM THE AGENCY HAVING JURISDICTION OVER SAID ROADWAY.

FOR ANY WORK WITHIN THE PUBLIC RIGHT-OF-WAY, THE CONTRACTOR SHALL PAY FOR AND SECURE ALL NECESSARY PERMITS AND LIKEWISE ARRANGE FOR ALL INSPECTION.

EXISTING TOPSOIL, VEGETATION AND ORGANIC MATERIALS SHALL BE STRIPPED AND REMOVED FROM PROPOSED PAVEMENT AREA PRIOR TO PLACEMENT OF BASE MATERIALS.

EXPANSION JOINTS SHOULD BE INSTALLED AT THE END OF ALL INTERSECTION RADII.

SIDEWALK RAMPS, CONFORMING TO PUBLIC ACT NO. 8, 1973, SHALL BE INSTALLED AS SHOWN AT ALL STREET INTERSECTIONS AND AT ALL BARRIER FREE PARKING AREAS AS INDICATED ON THE PLANS.

ALL PAVEMENT AREAS SHALL BE PROOF-ROLLED UNDER THE SUPERVISION OF A GEOTECHNICAL ENGINEER PRIOR TO THE PLACEMENT OF BASE MATERIALS AND PAVING MATERIALS.

FILL AREAS SHALL BE MACHINE COMPACTED IN UNIFORM LIFTS NOT EXCEEDING 9 INCHES TO 98% OF THE MAXIMUM DENSITY (MODIFIED PROCTOR) PRIOR TO PLACEMENT OF THICK PROPOSED PAVEMENT.

SOLID WASTE GENERAL NOTES:

1. MAINTAIN A CLEAR SPACE DIRECTLY IN FRONT OF THE SOLID WASTE ENCLOSURE. THE CLEAR SPACE SHALL BE A MINIMUM OF FIFTY (50) FEET LONG BY THE WIDTH OF THE INSIDE DIMENSION (I.D.) OF THE ENCLOSURE WALLS PLUS FOUR (4) FEET ON EACH SIDE. A MINIMUM VERTICAL CLEARANCE OF AT LEAST TWENTY-FIVE (25) FEET MUST BE PROVIDED ABOVE THIS AREA.
2. INGRESS AND EGRESS ROUTES MUST BE DEVELOPED BASED ON SOLID WASTE SWEEP PATH REQUIREMENTS FOR SD-SW-4. A MINIMUM HORIZONTAL CLEARANCE OF FOUR (4) FEET FROM THE EDGE OF THE SWEEP PATH AND A MINIMUM VERTICAL CLEARANCE OF AT LEAST FIFTEEN (15) FEET MUST BE PROVIDED ALONG THE ENTIRE SOLID WASTE COLLECTION ROUTE.
3. PROVIDE TEN (10) FEET MINIMUM HORIZONTAL CLEARANCE FROM SOLID WASTE ENCLOSURE TO MAJOR ELECTRICAL EQUIPMENT, ABOVE GROUND UTILITY SERVICES, AND EDGE OF OVERHEAD OBSTRUCTIONS SUCH AS TREE BRANCHES, SKIDWAYS, AND OVERHANGS.
4. IF FORWARD ACCESS TO THE PUBLIC STREET IS NOT AVAILABLE FOR THE SOLID WASTE VEHICLE, THE SITE DEVELOPMENT LAYOUT MUST ACCOMMODATE A TURN-AROUND LOCATION MEETING REQUIREMENTS WITHIN SOLID WASTE REFERENCE SPECIFIC TURN-AROUND DETAIL (SD-SW-5) AND ACCEPTABLE TO THE PSA.
5. FOR SITES THAT CANNOT ACCOMMODATE A TURN-AROUND, THE FOLLOWING ADDITIONAL REQUIREMENTS MUST BE MET:
 - 5.1. SOLID WASTE VEHICLES MUST BE ABLE TO SERVICE DUMPSTERS WITHOUT IMPEDING THE PUBLIC STREET OR SIDEWALK.
 - 5.2. THE COLLECTION LOCATION SHALL BE CLEARLY DELINEATED AND NOT HAVE A SLOPE GREATER THAN 2% IN ANY DIRECTION.
 - 5.3. BOLLARDS OR ADEQUATE CLEAR SPACE MUST BE PROVIDED BEHIND THE LIFT POINT SO THE DUMPSTERS ARE NOT PUSHED INTO ANY BUILDING OR ACCESS ROUTE.
 - 5.4. ALL SWEEP-PATH CLEARANCE AND VERTICAL CLEARANCE REQUIREMENTS PREVIOUSLY IDENTIFIED SHALL BE PROVIDED.
 - 5.5. SOLID WASTE VEHICLE BACK-UP DISTANCES MUST BE LESS THAN 30' ALONG SERVICED ROUTE.
6. GATES ON BIN ENCLOSURES SHALL OPEN A MINIMUM OF 120 DEGREES FROM THE CLOSED POSITION. THE GATES SHALL NOT IMPED ON THE REQUIRED BIN ENCLOSURE OPENING WIDTH, SHALL NOT BLOCK ADJACENT PARKING SPOTS, AND NOT BE IMPEDED BY ADJACENT CURBS OR LANDSCAPING.
7. GATES SHALL BE DESIGNED TO BE FREE STANDING WITHOUT CENTER POLE DESIGN. IF CENTER POLE DESIGN IS NECESSARY, 12 INCHES SHALL BE ADDED TO THE MINIMUM INTERIOR WIDTH OF THE ENCLOSURE.
8. GATE DESIGN SHALL INCLUDE A RELIABLE MEANS TO SECURE THE DOOR IN BOTH THE OPEN AND CLOSED POSITIONS.
9. THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF NO PARKING SIGNS ALONG THE SOLID WASTE INGRESS/EGRESS ROUTE TO ENSURE THE ROUTE REMAINS FREE OF VEHICLES.
10. REFER TO ASSOCIATED STANDARD DETAILS SD-SW-1 AND SD-SW-2 FOR REQUIREMENTS ON SINGLE AND DOUBLE NO SOLID WASTE BIN ENCLOSURE LAYOUT AND DESIGN CRITERIA. THE CITY SHALL HAVE THE ABILITY TO MODIFY OR INTERPRET THESE DETAILS AS NECESSARY TO ACCOMMODATE THE CITY OR CITY CONTRACTOR'S NEEDS FOR SOLID WASTE PICK-UP.
11. SOLID WASTE EQUIPMENT ACCESS ROADS AND SERVICE AREA SURFACES SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPROVED LOADS OF COLLECTION VEHICLES WEIGHING UP TO 66,000 LBS CROSS VEHICLE WEIGHT (GVW) AND SHALL BE PROVIDED WITH AN APPROVED SURFACE SO AS TO PROVIDE ALL WEATHER DRIVING CAPABILITIES. PROPERTY OWNER SHALL BE RESPONSIBLE FOR ALL SNOW AND ICE REMOVAL REQUIRED FOR SAFE ACCESS.
12. FOR SITES THAT CANNOT ACCOMMODATE A STANDARD DUMPSTER ENCLOSURE, THE DUMPSTERS MAY BE ROLLED OUT OF A BUILDING OR ALTERNATE ENCLOSURE BY THE PROPERTY OWNER TO AN APPROVED COLLECTION LOCATION.
13. SOLID WASTE COLLECTION LOCATIONS MUST BE LOCATED WITHIN THE BOUNDARIES OF THE PROPERTY UNLESS AN APPROPRIATE EASEMENT IS OBTAINED.

REFUSE COLLECTION NOTE:

DRIVERS OF REFUSE TRUCKS WILL NOT LEAVE THEIR VEHICLES TO MOVE OR SERVICE THE RECYCLE DUMPSTERS.

AN ON-SITE BUILDING MAINTENANCE PERSON SHALL BE RESPONSIBLE FOR OPENING / CLOSING GATES AND MOVING THE RECYCLABLE DUMPSTERS FOR REFUSE TRUCK COLLECTION.

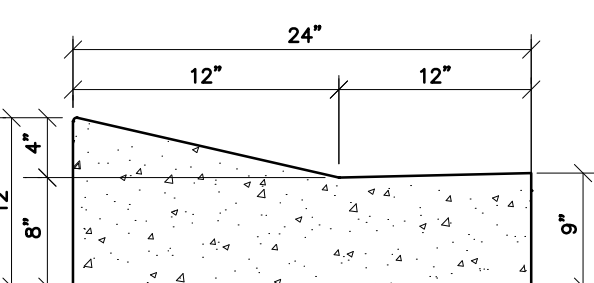
RECYCLE PICKUP SERVICE IS MONDAY THROUGH FRIDAY.

THE PROPERTY OWNER IS RESPONSIBLE FOR ALL SNOW AND ICE REMOVAL REQUIRED FOR SAFE ACCESS TO THE ENCLOSURES AND SERVICING ALL SOLID WASTE CONTAINERS.

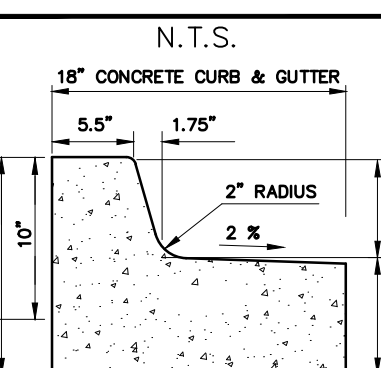
REFUSE COLLECTION NARRATIVE:

CURRENTLY, THE COMPACTED GARBAGE BINS ARE USED ONLY BY THE MAIN BUILDING AND ARE PICKED UP 5 DAYS A WEEK (MON-FRI). ONCE THE COMPACTED BIN IS COLLECTED BY WASTE MANAGEMENT, MAINTENANCE SWAPS THE EMPTY COMPACTED BIN WITH THE FULL COMPACTED BIN LOCATED IN THE TRASH ROOMS. THE 4 YD STATIONARY BINS ARE PICKED UP 3 DAYS A WEEK (MON/WED/FRI) AND ARE PRIMARILY USED BY LOFT RESIDENTS AND FOR OVERFLOW. MINIMAL WORK IS REQUIRED BY MAINTENANCE WITH THE STATIONARY BINS. THE RECYCLE BINS ARE PICKED UP 3 DAYS A WEEK (MON/WED/FRI) AND ARE MOVED BY MAINTENANCE INTO THE CORRALS AFTER PICKUP AS THE BINS ARE VERY LIGHT AND WILL ROLL AWAY WHEN EMPTY. RESIDENTS PUT MAJORITY OF RECYCLABLES DOWN RECYCLABLE CHUTE, WHICH MAINTENANCE THEN RELOCATES TO THE BINS DAILY, OR RESIDENTS PUT ITEMS DIRECTLY INTO THE RECYCLE BINS.

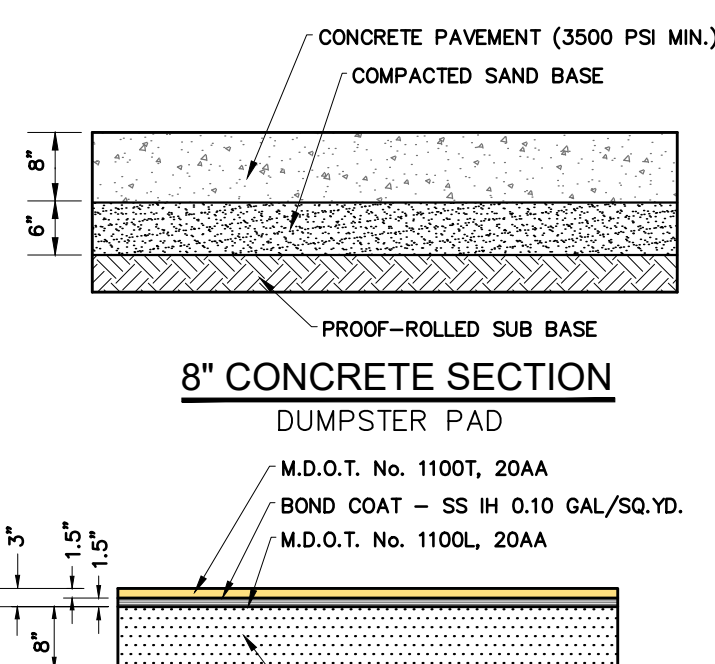
WITH THE ADDITIONAL BUILDING, "NO PARKING" SIGNS WILL BE ADDED AT NECESSARY LOCATIONS TO FACILITATE GARBAGE COLLECTION. THE OPERATIONS OF THE COMPACTED BINS WOULD REMAIN THE SAME AS THEY ARE ONLY FOR THE MAIN BUILDING AND NO BINS WOULD BE STORED IN THE NEW BUILDING. PROVIDING APPROPRIATE SPACE, AN ADDITIONAL 4-YD DUMPSTER WOULD BE ADDED ON BOTH THE NORTH AND SOUTH SIDE OF THE BUILDING, FOR A TOTAL OF 4 STATIONARY BINS, AND COLLECTION WOULD BE INCREASED TO 5 DAYS (MON-FRI) AS OPPOSED TO 3 DAYS DUE TO THE INCREASE IN THE NUMBER OF RESIDENTS. THIS WOULD STILL REQUIRE MINIMAL WORK BY OUR MAINTENANCE TEAM AS THESE BINS ARE STATIONARY. IN ADDITION, A REQUEST WOULD BE MADE FOR RECYCLE TO BE COLLECTED 5 DAYS A WEEK DUE TO THE INCREASE IN RESIDENTS. MAINTENANCE WOULD BE RESPONSIBLE FOR RELOCATING THE BINS AFTER EACH PICKUP TO AVOID THE BINS ROLLING AWAY.



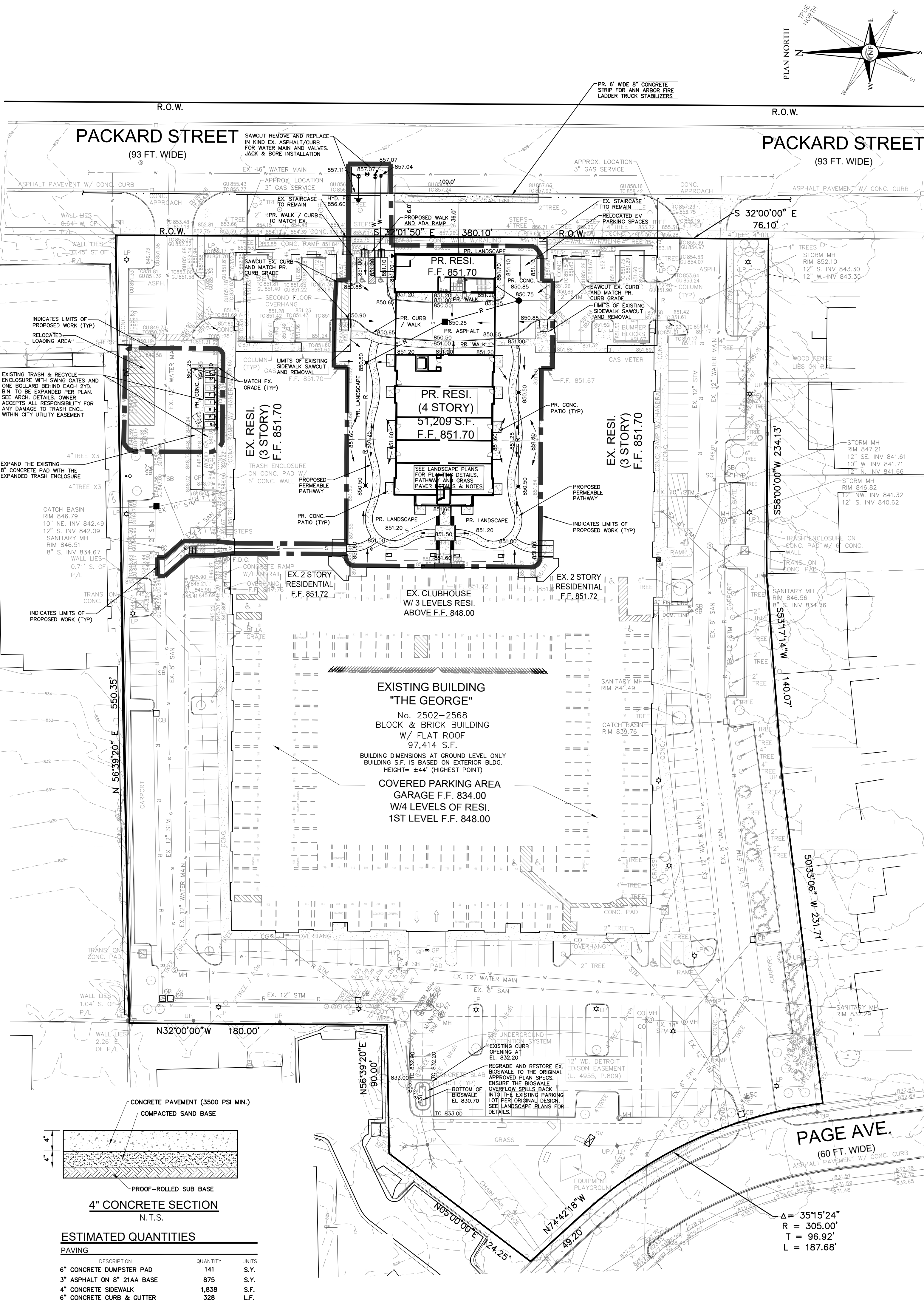
MOUNTABLE CURB AND GUTTER DETAIL



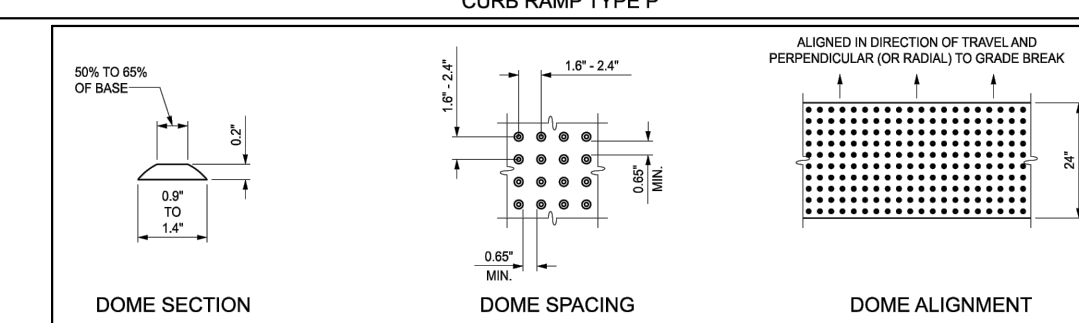
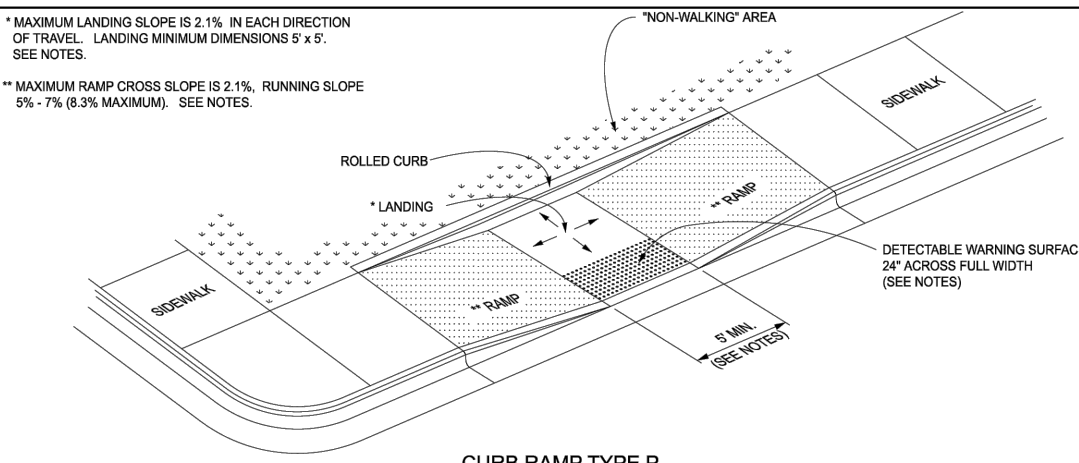
CONCRETE CURB DETAIL A' ON SITE ONLY



3" ASPHALT PAVING SECTION ON SITE ONLY



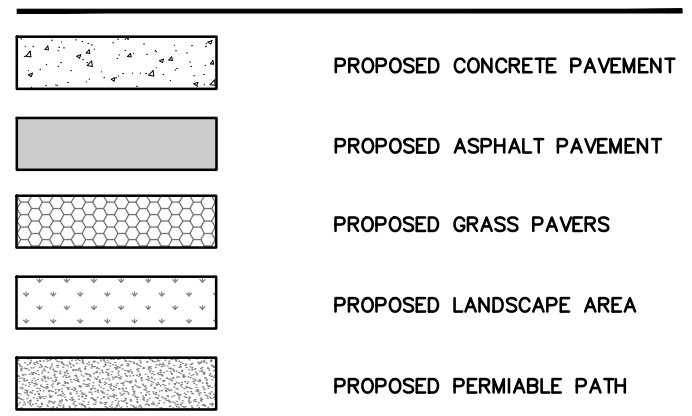
BENCHMARK
TOP NUT ON HYDRANT
ELEVATION 857.64
NAVD85 DATUM



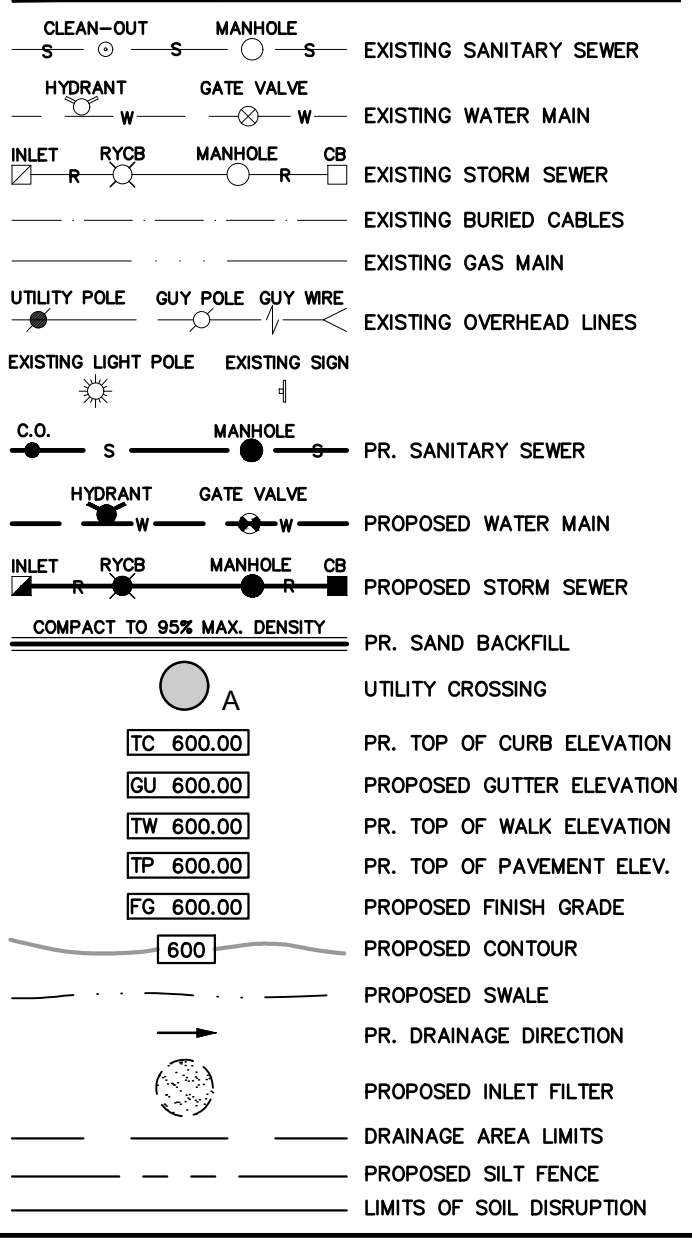
DETECTABLE WARNING DETAILS

NOTES:
DETAILS SPECIFIED ON THIS PLAN APPLY TO ALL CONSTRUCTION, RECONSTRUCTION OR ALTERATION OF STREETS, CURBS OR SIDEWALKS IN THE PUBLIC RIGHT OF WAY.
CURB RAMPS ARE TO BE LOCATED AS SPECIFIED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
RAMPS SHALL BE PROVIDED AT ALL CORNERS OF AN INTERSECTION WHERE THERE IS EXISTING OR PROPOSED SIDEWALK AND CURB. RAMPS SHALL ALSO BE PROVIDED AT WALKWAYS AND SIDEWALKS CROSSING CROSSINGS.
SURFACE TEXTURE OF THE RAMP SHALL BE THAT OBTAINED BY A COARSE BROOMING, TRANSVERSE TO THE RUNNING BROOM.
STRUCTURES ARE LOCATED WITHIN THE RIGHT-OF-WAY OF TRAVEL. AREA SIDEWALK SHALL BE RAMPED WHERE THE DRIVEWAY CURB IS EXTENDED ACROSS THE WALK.
CARE SHALL BE TAKEN TO ASSURE A UNIFORM GRADE ON THE RAMP WHERE CONDITIONS PERMIT IT IS DESIRABLE THAT THE SLOPE OF THE RAMP BE IN ONLY ONE DIRECTION, PARALLEL TO THE DIRECTION OF TRAVEL.
RAMP WIDTH SHALL BE INCREASED, IF NECESSARY, TO ACCOMMODATE SIDEWALK BROOM REMOVAL EQUIPMENT NORMALLY USED BY THE MUNICIPALITY.
WHEN A MINIMUM WIDTHS ARE NOT FEASIBLE, RAMP WIDTH MAY BE REDUCED TO NOT LESS THAN 4' AND LANDINGS TO NOT LESS THAN 4'x4'.
CURB RAMPS WITHIN RUNNING SLOPE 4% DO NOT REQUIRE A TOP LANDING. HOWEVER, ANY CONTINUOUS SIDEWALK OR PERMANENTLY ROUTE CROSSING THROUGH OR INTERSECTING THE CURB RAMP MUST BE WIDER THAN 4' ELIMINATED FORMER SHALL BE PLACED SO THAT THE LONG DIMENSION IS PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL.
DETECTABLE WARNING SURFACE COVERAGE IS 24" MINIMUM IN THE DIRECTION OF TRAVEL. PARALLEL TO THE CURB RAMP TRANSITION AREA. AVOIDER OFFSET NOT GREATER THAN 2' MEASURED ALONG THE EDGE OF THE DETECTABLE WARNING IS ALLOWABLE. FOR SOCIAL CURB THE OFFSET IS MEASURED FROM THE FACE OF THE CURB.

PAVING LEGEND



LEGEND



ESTIMATED QUANTITIES

| PAVING | DESCRIPTION | QUANTITY | UNITS |
|--------|-------------------------|----------|-------|
| 6" | CONCRETE DUMPSTER PAD | 141 | S.Y. |
| 3" | ASPHALT ON 8" 21AA BASE | 875 | S.Y. |
| 4" | CONCRETE SIDEWALK | 1,838 | S.F. |
| 6" | CONCRETE CURB & GUTTER | 328 | L.F. |

NOWAK & FRAUS ENGINEERS
4677 WOODWARD AVE.
PONTIAC, MI 48342-5032
TEL. (248) 332-7931
FAX. (248) 332-8257
WWW.NOWAKFRAUS.COM

SEAL



PROJECT

The George
2502 Packard St.
Ann Arbor, MI 48109

CLIENT

Somerset Development
101 Crawfords Corner Rd.
Holmdel, NJ 07733

Contact:

Ken Gold
Tel: 732.415-7171

PROJECT LOCATION

Part of the 1/4 of
Section 4
T. 3 South, R. 6 East
City of Ann Arbor,
Washtenaw County,
Michigan

SHEET

Paving & Grading Plan



| DATE | ISSUED FOR / REVISED |
|----------|------------------------|
| 08-15-24 | Issued for City Review |
| 10-29-24 | Revised per Client |
| 11-18-24 | Revised per City |
| 02-04-25 | Revised per City |
| 03-10-25 | Revised per City |
| 07-17-25 | Per City Review #3 |

DRAWN BY:
A. Wiseman

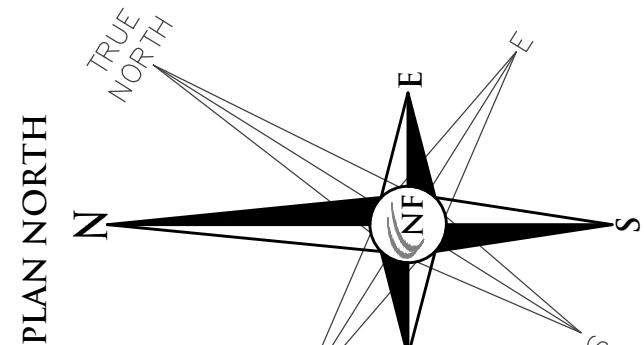
DESIGNED BY:
A. Wiseman

APPROVED BY:
P. Williams

DATE:
July 15, 2024

SCALE: 1" = 40'

NFE JOB NO. **D601-07** SHEET NO. **SP-04**



SITE UTILITY NOTES

CONTRACTOR IS RESPONSIBLE FOR REPAIRS OR DAMAGE TO ANY EXISTING UTILITY DURING CONSTRUCTION AT NO COST TO THE OWNER.

SEE SPECIFICATIONS FOR BACKFILLING AND COMPACTION REQUIREMENTS ON UTILITY TRENCHES.

ALL FILL MATERIAL IS TO BE IN PLACE, AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.

CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITIES INSPECTORS 72 HOURS BEFORE CONNECTING TO ANY EXISTING LINE.

ALL UTILITIES SHOULD BE KEPT TEN (10') FEET APART (PARALLEL) OR WHEN CROSSING 18" VERTICAL CLEARANCE (OUTSIDE EDGE OF PIPE TO OUTSIDE EDGE OF PIPE).

ALL UTILITIES SHOULD BE KEPT TEN (10') FEET APART (PARALLEL) OR WHEN CROSSING 18" VERTICAL CLEARANCE (OUTSIDE EDGE OF PIPE TO OUTSIDE EDGE OF PIPE).

TOPS OF EXISTING MANHOLES SHALL BE RAISED AS NECESSARY TO BE FLUSH WITH PROPOSED PAVEMENT ELEVATION WITH WATER TIGHT LIDS.

DRAWINGS DO NOT PURPORT TO SHOW ALL EXISTING UTILITIES. EXISTING UTILITIES SHALL BE VERIFIED IN FIELD PRIOR TO INSTALLATION OF ANY NEW LINES.

REFER TO INTERIOR PLUMBING DRAWINGS FOR TIE-IN OF ALL UTILITIES.

CONTRACTOR IS RESPONSIBLE FOR COMPLYING TO THE SPECIFICATIONS OF THE LOCAL AUTHORITIES (CITY OF ANN ARBOR/WASHTENAW COUNTY) WITH REGARDS TO MATERIALS AND INSTALLATION OF THE WATER AND SEWER LINES.

THE CONTRACTOR MUST CALL "811" AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN.

ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL CONNECTION OF SERVICE.

CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS.

CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ACTUAL LOCATION OF ALL UTILITY ENTRANCES TO INCLUDE SANITARY SEWER LATERALS, DOMESTIC AND FIRE PROTECTION WATER SERVICE, ELECTRICAL, TELEPHONE AND GAS SERVICE.

CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES, IN SUCH A MANNER AS TO AVOID CONFLICTS, AS WELL AS COORDINATING WITH CITY UTILITY REQUIREMENTS AS TO ASSURE PROPER LOCATION AND SCHEDULING FOR TIE-INS/CONNECTIONS PRIOR TO CONNECTING TO EXISTING UTILITIES.

THE CONTRACTOR SHALL CONDUCT ALL REQUIRED TESTS TO THE SATISFACTION OF THE RESPECTIVE UTILITY COMPANIES AND THE OWNER'S INSPECTING AUTHORITIES.

CONTRACTOR SHALL COMPLY TO THE FULLEST EXTENT WITH THE LATEST STANDARDS OF OSHA DIRECTIVES OR ANY OTHER AGENCY HAVING JURISDICTION FOR EXCAVATION AND TRENCHING PROCEDURES. THE CONTRACTOR SHALL USE SUPPORT SYSTEMS, SLOPING, BENCHING, AND OTHER MEANS OF PROTECTION, THIS TO INCLUDE BUT NOT LIMITED FOR ACCESS AND EGRESS EXCAVATION AND TRENCHING.

CONTRACTOR IS RESPONSIBLE TO COMPLY WITH PERFORMANCE FROM ALL CRITERIA FOR OSHA.

PIPE BEDDING FOR WATER MAIN SHALL BE MINIMUM 4" THICK CITY OF ANN ARBOR CLASS II SAND BACKFILL.

CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.

ALL STORM SEWER SHALL BE PREMIUM JOINT (RUBBER GASKET)

ALL SANITARY SEWER SHALL BE SUBJECT TO AIF AND MANDREL TESTING AND TELEVISION INSPECTION.

NOTES

ALL CONSTRUCTION SHALL CONFORM TO THE PUBLIC SERVICES DEPARTMENT STANDARD SPECIFICATIONS DATED JANUARY 8, 2025, AND INCLUDE ALL UPDATES ISSUED AT THE TIME OF CONSTRUCTION PLAN APPROVAL.

IF THE CONSTRUCTION TO BE INSPECTED BY PUBLIC SERVICES DOES NOT COMMENCE WITH ONE YEAR OF THE DATE OF THE PUBLIC SERVICES INSPECTION REQUEST APPROVAL, THIS APPROVAL WILL EXPIRE AND THE CONSTRUCTION PLANS SHALL BE SUBJECT TO RE-REVIEW AND PAYMENT OF ALL APPLICABLE PLAN REVIEW FEES WILL BE REQUIRED.

THE PUBLIC SERVICES TECHNICIAN'S COPY OF THE STAMPED, APPROVED PLANS SHALL GOVERN CONSTRUCTION.

THE PUBLIC SERVICES TECHNICIAN HAS THE RIGHT TO HALT CONSTRUCTION ACTIVITIES AND REQUIRE THAT ITEMS THAT DO NOT MEET CITY STANDARDS BY REDONE/ REPLACED/ RECONSTRUCTED.

MISS-DIG MUST BE NOTIFIED THREE (3) WORKING DAYS PRIOR TO CONSTRUCTION @ (800) 482-7171.

ALL PERMITS AND APPROVED PLANS ARE TO BE ON-SITE AT ALL TIMES.

DISCONNECTION IS REQUIRED IN ACCORDANCE WITH CURRENT CITY SPECIFICATIONS OF ALL EXISTING BUILDING FOOTING DRAINS. FOOTING DRAINS REMOVED MAY OFFSET REQUIRED MITIGATION.

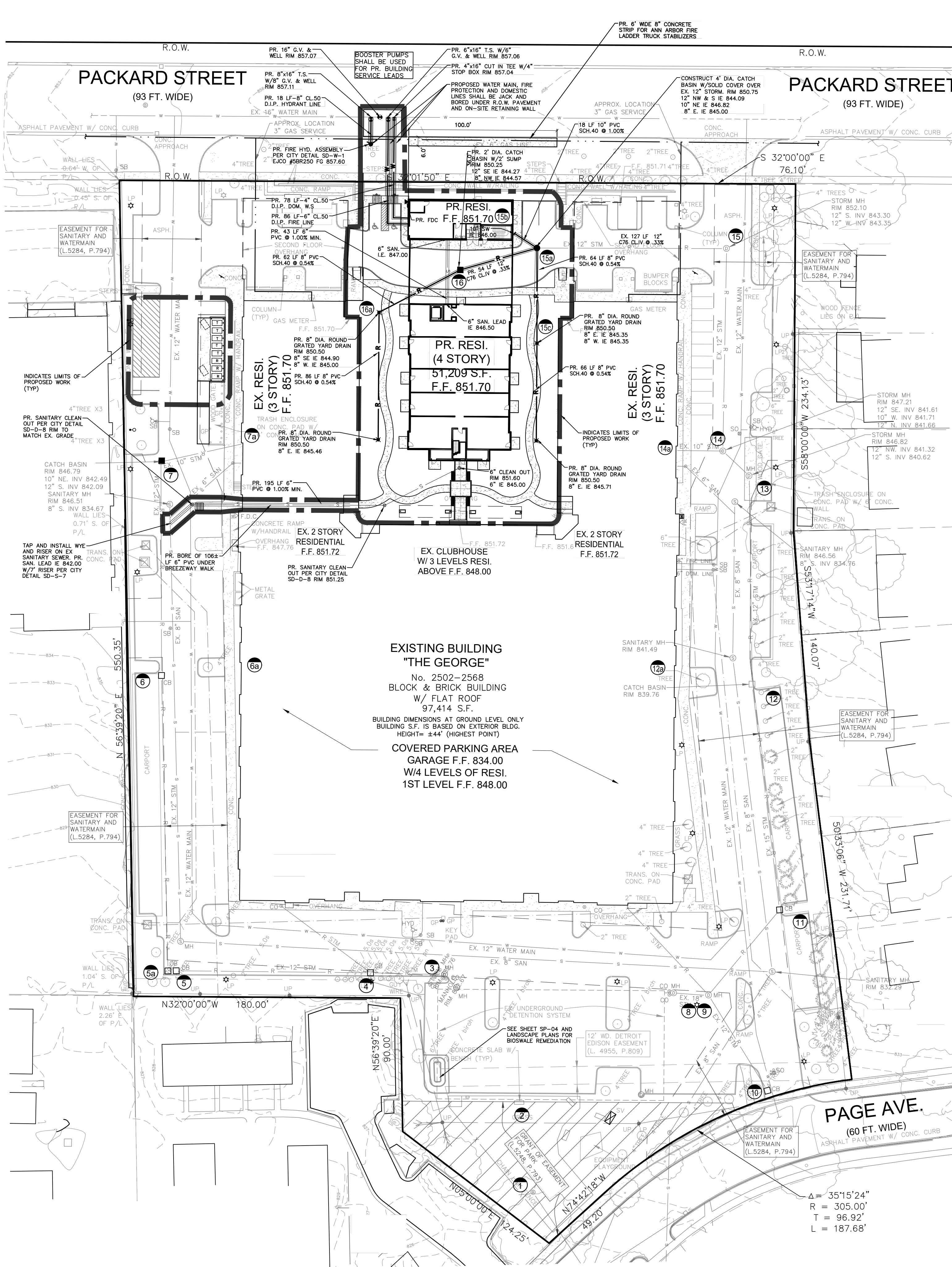
UTILITY NOTES

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

NO FIRE WALLS ARE PROPOSED FOR THE PROPOSED BUILDING.

NO SURFACE, ROOF OR FOUNDATION DRAINAGE SHALL CONNECT TO PROPOSED SANITARY SEWER.

PROPOSED SAND BACKFILL SHALL BE CL. II SAND BACKFILL AT 95% COMPACTION UNDER ROADWAYS, PARKING, AND SIDEWALKS.



BENCHMARK
TOP NUT ON HYDRANT
ELEVATION: 857.64
NAVD83 DATUM

Sanitary Sewer Mitigation Calculations - Ex. Packard Sq. & "The George" phase 1

Corner of Packard Street and King George Blvd., City of Ann Arbor, Washtenaw County, Michigan

Design Guidelines: Ann Arbor "Table A"; "Michigan Criteria for Subsurface Sewage Disposal, 1994 Edition; Recommended Standards for Wastewater Facilities, 2004 Edition - Ten States Standards

| Existing Use Flow: | Packard Square Apartments and Retail | | |
|---------------------------------------|--------------------------------------|---|--------------------|
| | Sq.Ft. or Unit | Design dry weather flow rate (gpd/sq.ft.(unit)) | Average Flow (gpd) |
| Retail - Dry Storage | 15,485.00 | 0.03 | 464.55 |
| Retail - Wet Storage | 7,977.00 | 0.15 | 1,196.55 |
| Club House | 5,652.00 | 0.30 | 1,695.60 |
| Apartments (up to 600 sq.ft.) | 23.00 | 175.00 | 4,025.00 |
| Apartments (601 to 1200 sq.ft.) | 214.00 | 250.00 | 53,500.00 |
| Apartments (greater than 1200 sq.ft.) | 12.00 | 300.00 | 3,600.00 |
| Parking Garage (150 spaces) | 1.00 | 3375.00 | 3,375.00 |
| | | | 67,856.70 |

Existing Use Flow Totals:

Proposed Use Flow: "The George" Phase 1

| Proposed Use Flow Totals: | "The George" Phase 1 | | |
|---------------------------------------|----------------------|---|--------------------|
| | Sq.Ft. or Unit | Design dry weather flow rate (gpd/sq.ft.(unit)) | Average Flow (gpd) |
| Club House | 5,652.00 | 0.30 | 1,695.60 |
| Apartments (up to 600 sq.ft.) | 23.00 | 175.00 | 4,025.00 |
| Apartments (up to 600 sq.ft.) | 42.00 | 175.00 | 7,350.00 |
| Apartments (601 to 1200 sq.ft.) | 214.00 | 250.00 | 53,500.00 |
| Apartments (greater than 1200 sq.ft.) | 12.00 | 300.00 | 3,600.00 |
| Parking Garage (150 spaces) | 1.00 | 3375.00 | 3,375.00 |
| | | | 73,545.60 |

Proposed Use Flow Totals:

Adjusted Proposed Flow: (73,545.6 (Proposed) - 67,856.7 (Existing))

Multiple by Peaking Factor of 4:

Multiple by System Recovery of 1.1:

Convert to GPM:

Proposed Peak Flow to be Mitigated:

| Proposed Use Flow Totals: | "The George" Phase 2 | | |
|---------------------------------------|----------------------|---|--------------------|
| | Sq.Ft. or Unit | Design dry weather flow rate (gpd/sq.ft.(unit)) | Average Flow (gpd) |
| Retail | 1,593.00 | 0.03 | 47.79 |
| Apartments (up to 600 sq.ft.) | 0.00 | 175.00 | 0.00 |
| Apartments (601 to 1200 sq.ft.) | 46.00 | 250.00 | 11,500.00 |
| Apartments (greater than 1200 sq.ft.) | 0.00 | 300.00 | 0.00 |
| | | | 11,547.79 |

| Proposed Use Flow Totals: | Multiple by Peaking Factor of 4: | | |
|-------------------------------------|----------------------------------|------------------|-----|
| | = | 46,191.16 | GPD |
| Multiple by System Recovery of 1.1: | = | 50,810.28 | GPD |
| | = | 35.28 | GPM |
| Convert to GPM: | = | 35 | GPM |
| Proposed Peak Flow to be Mitigated: | = | 35 | GPM |

OFFSET MITIGATION NOTE:

CAPACITY CONSTRAINTS DURING WET WEATHER EVENTS HAVE BEEN IDENTIFIED IN THE TRUNKLINE SANITARY SEWERS DOWNSTREAM FROM THIS DEVELOPMENT. THEREFORE, IN ACCORDANCE WITH THE DEVELOPMENT SEWAGE FLOW OFFSET MITIGATION PROGRAM, THE FLOW MITIGATION MUST BE PERFORMED WITHIN THE APPROPRIATE DEVELOPER OFFSET MITIGATION ZONE AS APPROVED BY CITY COUNCIL IN JUNE 2015.

ESTIMATED QUANTITIES

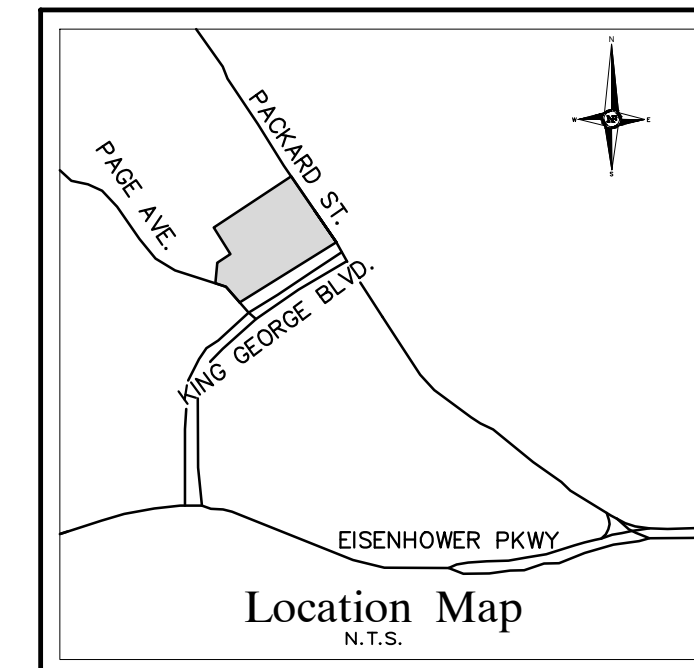
| DESCRIPTION | QUANTITY | UNITS |
|-------------------------------------|----------|-------|
| 12" C-76 CLASS IV SEWER PIPE | 54 | L.F. |
| 10" PVC SCHEDULE 40 SEWER PIPE | 10 | L.F. |
| 8" PVC SCHEDULE 40 SEWER PIPE | 222 | L.F. |
| 2" DIA. INLET W/2" SUMP | 1 | EA. |
| 4" DIA. CATCH BASIN W/ 2' SUMP | 1 | EA. |
| 8" YARD DRAIN | 4 | EA. |
| WATER MAIN | | |
| 8" D.I. CLASS 50 D.I.P. W/POLY | 18 | L.F. |
| 6" D.I. CLASS 50 D.I.P. F.L. W/POLY | 86 | L.F. |
| 4" D.I. CLASS 50 D.I.P. DOM. W.S. | 78 | L.F. |
| 6" HYDRANT ASSEMBLY | 1 | EA. |
| 16" GATE VALVE & WELL | 1 | EA. |
| 8"x16" T. S. W/8" G.V. & WELL | 1 | EA. |
| 6"x16" T. S. W/8" G.V. & WELL | 1 | EA. |
| 4"x16" CUT IN TEE W/4" STOP BOX | 1 | EA. |
| SANITARY SEWER | | |
| 6" PVC SEWER PIPE | 253 | L.F. |
| 6" SANITARY CLEAN OUT | 2 | EA. |
| TAP/CONNECTION | 1 | EA. |

LEGAL DESCRIPTION

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

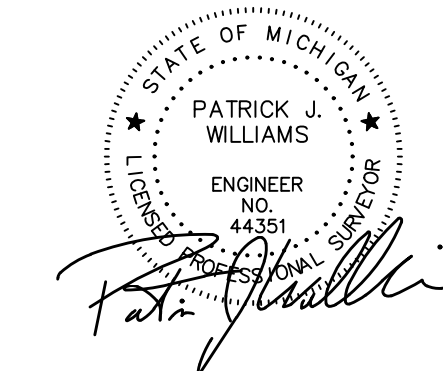
OUTLOT A, SMOKER HUTZEL SUBDIVISION OF PART OF THE SOUTHEAST 1/4 OF SECTION 4 AND PART OF THE NORTHEAST 1/4 OF SECTION 9, TOWN 3 SOUTH, RANGE 6 EAST, CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN, ACCORDING TO THE PLAT THEREOF AS RECORDED IN LIBER 17 OF PLATS, PAGES 41, 42 AND 43, WASHTENAW COUNTY RECORDS.

PARCEL NO.: 08-12-04-403-010
COMMONLY KNOWN AS: 2502-2568 PACKARD ROAD, ANN ARBOR, MI



NOWAK & FRAUS ENGINEERS
46777 WOODWARD AVE.
PONTIAC, MI 48342-5032
TEL. (248) 332-7931
FAX. (248) 332-8257
WWW.NOWAKFRAUS.COM

SEAL



PROJECT

The George
2502 Packard St.
Ann Arbor, MI 48009

CLIENT

Somerset Development
101 Crawfords Corner Rd.
Holmdel, NJ 07733

Contact:

Ken Gold
Tel: 732.415-7171

PROJECT LOCATION

Part of the 1/4 of
Section 4
T. 3 South, R. 6 East
City of Ann Arbor,
Washtenaw County,
Michigan

SHEET

Utility Plan



Know what's below
Call before you dig.

| DATE | ISSUED FOR/ REVISED |
|----------|------------------------|
| 08-15-24 | Issued for City Review |
| 10-29-24 | Revised per Client |
| 11-18-24 | Revised per City |
| 02-04-25 | Revised per City |
| 03-10-25 | Revised per City |
| 07-17-25 | Per City Review #3 |

DRAWN BY:
A. Wiseman

DESIGNED BY:
A. Wiseman

APPROVED BY:
P. Williams

DATE:
July 15, 2024

SCALE: 1" = 40'

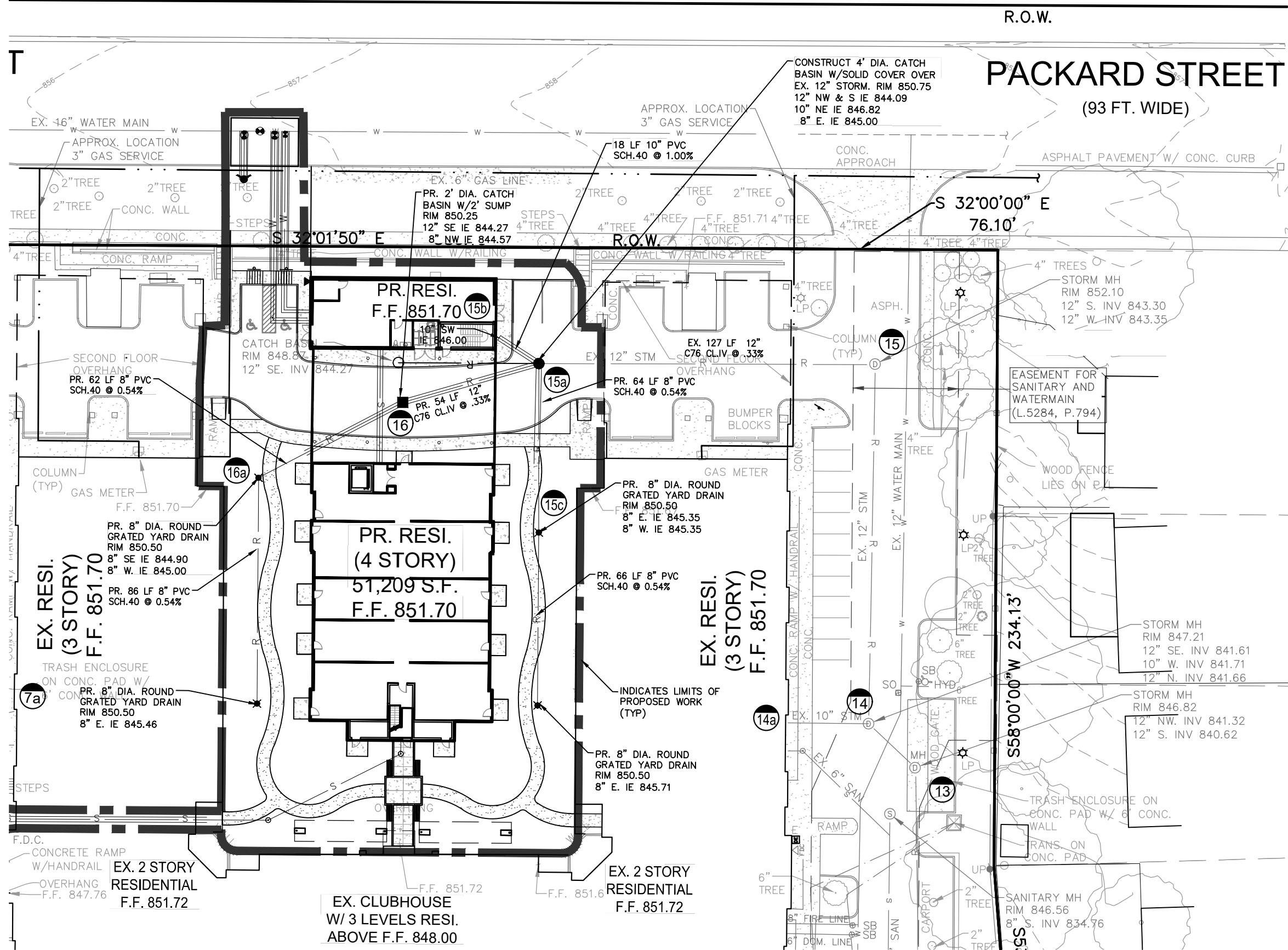
40 20 0 20 40 60

NFE JOB NO.

D601-07

SHEET NO.

SP-05



Maintenance Plan and Budget

Storm Water Management System Maintenance Plan for;

Somerset Development (owner)

- Responsibility for Maintenance
 - During construction, it is the developer's responsibility to perform the maintenance.
 - Following construction, it will be the responsibility of the owner to perform the maintenance.
- Source of Financing

The owner is required to pay for all maintenance activities on a continuing basis.
- Maintenance Tasks and Schedule
 - See the charts below: The first describes maintenance tasks during construction to be performed by the developer, the second describes maintenance tasks by the owner.
 - Immediately following construction, the developer will have the storm water management system inspected by an engineer to verify grades of the detention and filtration areas and make recommendations for any necessary sediment removal.

| Maintenance Tasks and Schedule during Construction | | | | | | | |
|---|--------------------|-------------------|----------------------------|----------------------------|-------------------------|----------------------|-------------------------------|
| | Components | | | | | | Schedule |
| | Storm Sewer System | Catch Basin Sumps | Catch Basin Inlet Castings | Outflow Control Structures | Water Quality Structure | Storm Detention Pipe | |
| Tasks | | | | | | | |
| Inspect for Sediment accumulation | X | X | X | X | X | X | Weekly |
| Removal of sediment accumulation | X | X | X | X | X | X | As needed & prior to turnover |
| Inspect for floatables and debris | | X | | X | X | | Quarterly |
| Cleaning of floatables and debris | | X | | X | X | | Quarterly & at turnover |
| Make adjustments or replacements as determined by pre-turnover inspection | X | X | X | X | X | X | As needed |

STORMWATER NARRATIVE:

ALL STORMWATER GENERATED FROM THE PROPOSED DEVELOPMENT SHALL DISCHARGE VIA PROPOSED AND EXISTING STORM SEWER PIPES TO THE EXISTING UNDERGROUND DETENTION SYSTEM THAT WAS SIZED TO ACCOMMODATE RUNOFF FROM THE PROPOSED DEVELOPMENT AREA. THE SIZE OF THE CONTRIBUTING DRAINAGE AREA TO EXISTING STRUCTURES REMAINS THE SAME AS ORIGINALLY DESIGNED. THE REDUCTION OF THE COEFFICIENT OF RUNOFF, WITH THE PROPOSED USE OF THIS AREA, WILL RESULT IN A LOWER COEFFICIENT OF RUNOFF FOR THIS DRAINAGE AREA THEREFORE NOT HAVE AN ADVERSE IMPACT ON THE EXISTING PIPE CAPACITIES OR INCREASE THE ENTIRE SITE DRAINAGE REQUIREMENTS.

| Permanent Maintenance Tasks and Schedule | | | | | | |
|---|--------------------|---------------------------|---------------------------|-------------------------|----------------------|-------------------------|
| | Components | | | | | Schedule |
| | Storm Sewer System | Catch Basin Inlet Casings | Outflow Control Structure | Water Quality Structure | Storm Detention Pipe | |
| Tasks | | | | | | |
| Inspect for Sediment accumulation | X | X | X | X | X | Annually |
| Removal of sediment accumulation | X | X | X | X | X | Every 2 years as needed |
| Inspect for floatables and debris | | X | X | X | X | Annually |
| Cleaning of floatables and debris | | X | X | X | X | Annually |
| Inspect structural elements during wet weather | X | X | X | X | X | Annually |
| Make adjustments or replacements as determined by annual wet weather inspection | X | X | X | X | X | As Needed |
| Keep records of all inspections and maintenance activities and report to owner | | | | | | Annually |
| Keep records of all costs for inspections, maintenance and repairs. Report to owner | | | | | | Annually |

| Maintenance Plan Budget | |
|---|------------|
| Annual inspection for sediment accumulation | \$200.00 |
| Removal of sediment accumulation every 2 years as needed | \$600.00 |
| Inspect for floatables and debris annually and after major storms | \$150.00 |
| Removal of floatables and debris annually and after major storms | \$200.00 |
| Inspect structural elements during wet weather and compare to as-built plans every 2 years | \$150.00 |
| Make structural adjustments or replacements as determined by inspection as needed | \$400.00 |
| Have professional engineer carry out emergency inspections upon identification of severe problems | \$600.00 |
| Total Annual Budget | \$2,300.00 |



NOWAK & FRAUS ENGINEERS
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PONTIAC, MI 48342-5032
TEL. (248) 332-7931
FAX. (248) 332-8257
WWW.NOWAKFRAUS.COM

SEAL



PROJECT

The George
2502 Packard St.
Ann Arbor, MI 48009

CLIENT

Somerset Development
101 Crawfords Corner Rd.
Holmdel, NJ 07733

Contact:

Ken Gold
Tel: 732.415-7171

PROJECT LOCATION

Part of the 1/4 of
Section 4
T. 3 South, R. 6 East
City of Ann Arbor,
Washtenaw County,
Michigan

SHEET

Storm Water Management
Plan



DATE ISSUED FOR / REVISED
08-15-24 Issued for City Review
11-18-24 Revised per City
02-04-25 Revised per City
03-10-25 Revised per City
06-17-25 Per City Review #3

DRAWN BY:

A. Wiseman

DESIGNED BY:

A. Wiseman

APPROVED BY:

P. Williams

DATE:

July 15, 2024

SCALE: 1" = 40'

40 20 0 20 40 60

NFE JOB NO.

D601-07

SHEET NO.

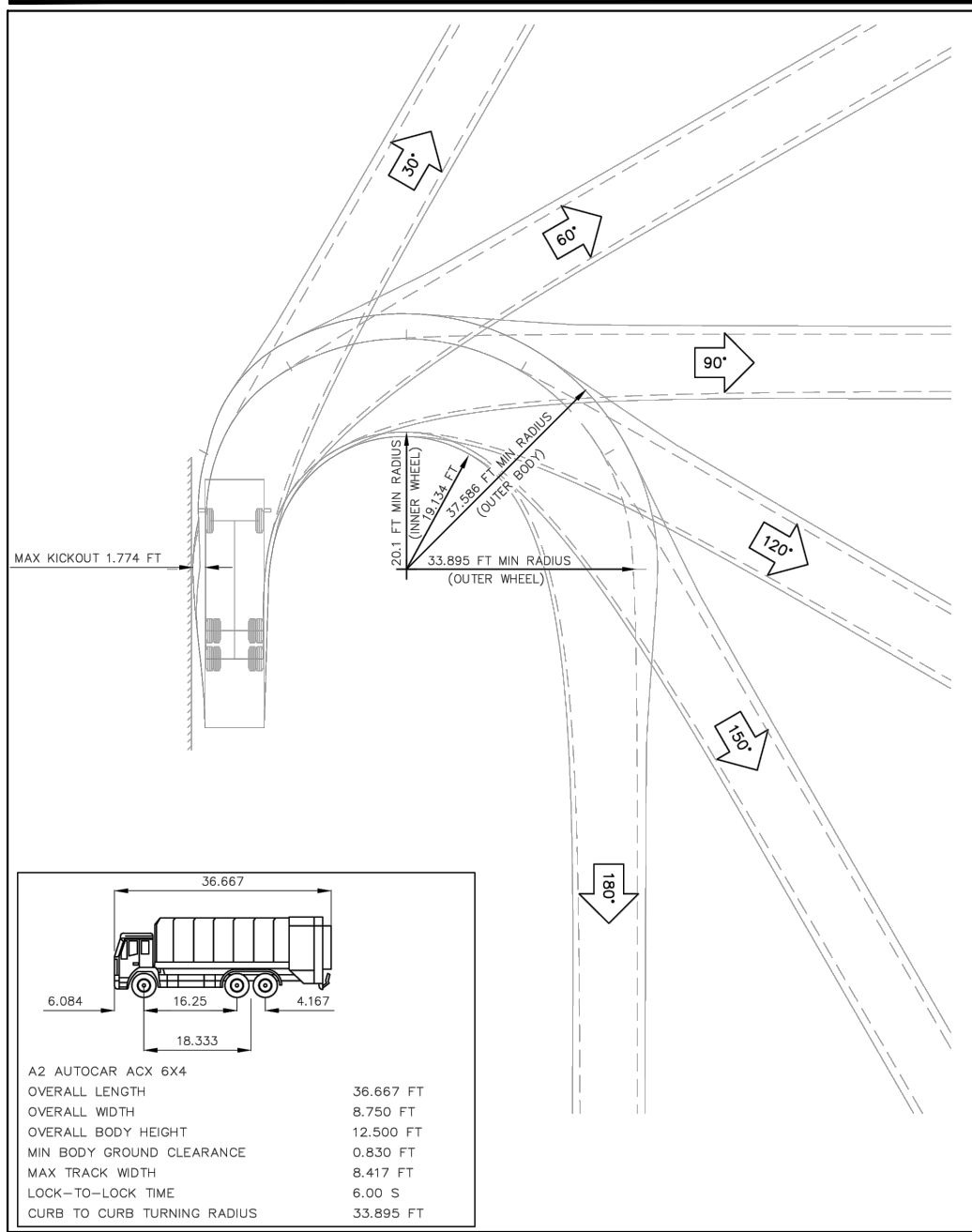
SP-06

LEGAL DESCRIPTION
LAND IN THE CITY OF ANN ARBOR, WASHTENAW COUNTY, MI, DESCRIBED AS FOLLOWS:
OUTLOT A, SMOKLER HUTZEL SUBDIVISION OF PART OF THE SOUTHEAST 1/4 OF SECTION 4 AND PART OF THE NORTHEAST 1/4 OF SECTION 9, TOWN 3 SOUTH, RANGE 6 EAST, CITY OF ANN ARBOR, WASHTENAW COUNTY, MICHIGAN, ACCORDING TO THE PLAT THEREOF AS RECORDED IN LIBER 17 OF PLATS, PAGES 41, 42 AND 43, WASHTENAW COUNTY RECORDS.
PARCEL NO: 09-12-04-403-010
COMMONLY KNOWN AS: 2502-2568 PACKARD ROAD, ANN ARBOR, MI

SOLID WASTE GENERAL NOTES:

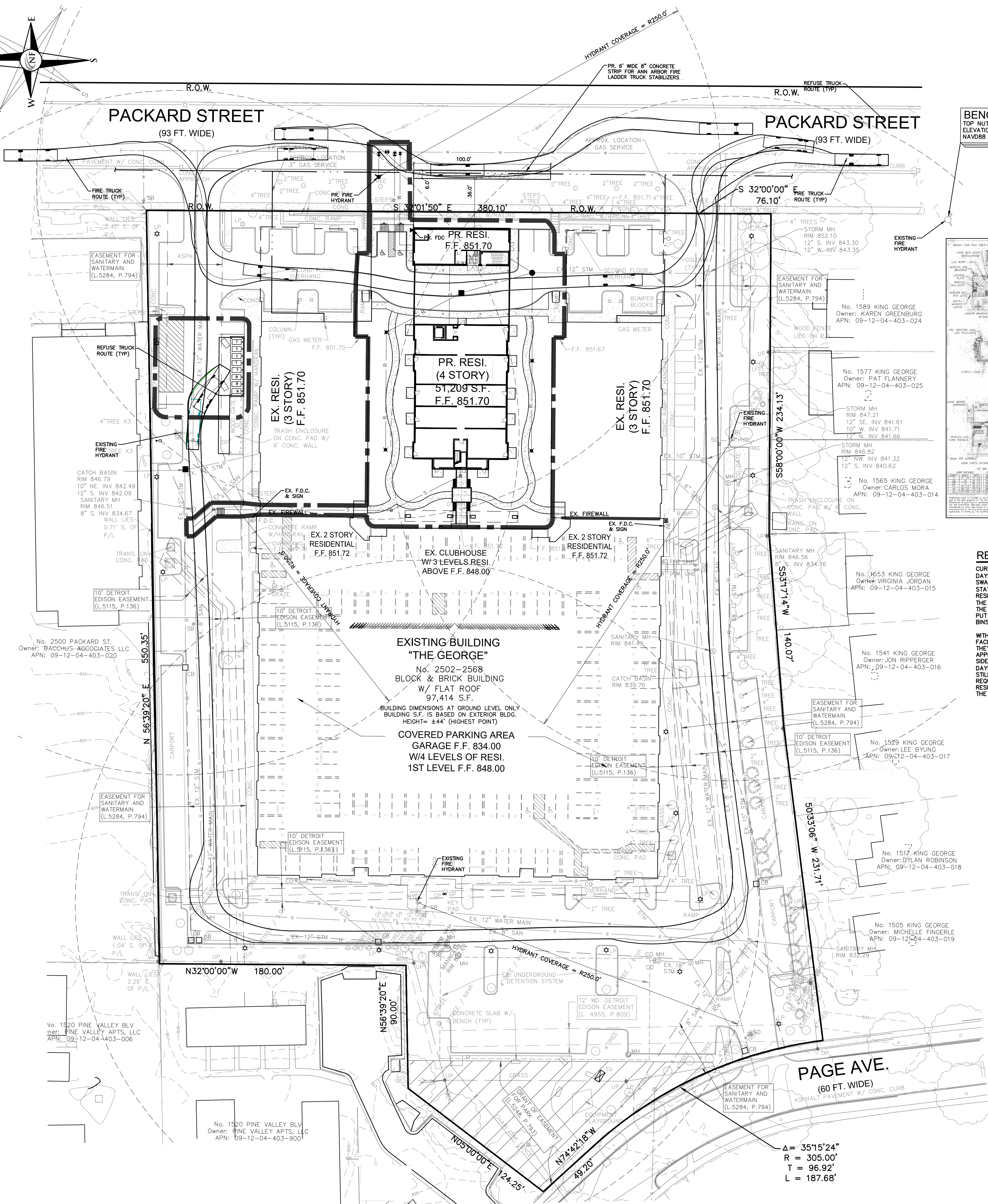
1. MAINTAIN A CLEAR SPACE DIRECTLY IN FRONT OF THE SOLID WASTE ENCLOSURE. THE CLEAR SPACE SHALL BE A MINIMUM OF FIFTY (50) FEET LONG BY THE WIDTH OF THE INSIDE DIMENSION (I.D.) OF THE ENCLOSURE WALLS PLUS FOUR (4) FEET ON EACH SIDE. A MINIMUM VERTICAL CLEARANCE OF AT LEAST TWENTY-FIVE (25) FEET MUST BE PROVIDED ABOVE THIS AREA.
2. INGRESS AND EGRESS ROUTES MUST BE DEVELOPED BASED ON SOLID WASTE SWEEP PATH REQUIREMENTS PER SD-SW-4. A MINIMUM HORIZONTAL CLEARANCE OF FOUR (4) FEET FROM THE EDGE OF THE SWEEP PATH AND A MINIMUM VERTICAL CLEARANCE OF AT LEAST FIFTEEN (15) FEET MUST BE PROVIDED ALONG THE ENTIRE SOLID WASTE COLLECTION ROUTE.
3. PROVIDE TEN (10) FEET MINIMUM HORIZONTAL CLEARANCE FROM SOLID WASTE ENCLOSURE TO MAJOR ELECTRICAL EQUIPMENT, ABOVE GROUND UTILITY SERVICES, AND EDGE OF OVERHEAD OBSTRUCTIONS SUCH AS TREE BRANCHES, BALCONIES, AND OVERHANGS.
4. IF FORWARD ACCESS TO THE PUBLIC STREET IS NOT AVAILABLE FOR THE SOLID WASTE VEHICLE, THE SITE DEVELOPMENT LAYOUT MUST ACCOMMODATE A TURN-AROUND LOCATION MEETING REQUIREMENTS WITHIN SOLID WASTE REFERENCE SPECIFIC TURN-AROUND DETAIL (SD-SW-5) AND ACCEPTABLE TO THE PSAA.
5. FOR SITES THAT CANNOT ACCOMMODATE A TURN-AROUND, THE FOLLOWING ADDITIONAL REQUIREMENTS MUST BE MET:
 - 5.1. SOLID WASTE VEHICLES MUST BE ABLE TO SERVICE DUMPSTERS WITHOUT IMPEDING THE PUBLIC STREET OR SIDEWALK.
 - 5.2. THE COLLECTION LOCATION SHALL BE CLEARLY DELINEATED AND NOT HAVE A SLOPE GREATER THAN 2% IN ANY DIRECTION.
 - 5.3. BOLLARDS OR ADEQUATE CLEAR SPACE MUST BE PROVIDED BEHIND THE LIFT POINT SO THE DUMPSTERS ARE NOT PUSHED INTO ANY BUILDING OR ACCESS ROUTE.
 - 5.4. ALL SWEEP-PATH CLEARANCE AND VERTICAL CLEARANCE REQUIREMENTS PREVIOUSLY IDENTIFIED SHALL BE PROVIDED.
 - 5.5. SOLID WASTE VEHICLE BACK-UP DISTANCES MUST BE LESS THAN 30' ALONG SERVICING ROUTE.
6. GATES ON BIN ENCLOSURES SHALL OPEN A MINIMUM OF 120 DEGREES FROM THE CLOSED POSITION. THE GATES SHALL NOT IMPEDE ON THE REQUIRED BIN ENCLOSURE OPENING WIDTH, SHALL NOT BLOCK ADJACENT PARKING SPOTS, AND NOT BE IMPEDED BY ADJACENT CURBS OR LANDSCAPING.
7. GATES SHALL BE DESIGNED TO BE FREE STANDING WITHOUT CENTER POLE DESIGN. IF CENTER POLE DESIGN IS NECESSARY, 12 INCHES SHALL BE ADDED TO THE MINIMUM INTERIOR WIDTH OF THE ENCLOSURE.
8. GATE DESIGN SHALL INCLUDE A RELIABLE MEANS TO SECURE THE DOOR IN BOTH THE OPEN AND CLOSED POSITIONS.
9. THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF NO PARKING SIGNS ALONG THE SOLID WASTE INGRESS/EGRESS ROUTE TO ENSURE THE ROUTE REMAINS FREE OF VEHICLES.
10. REFER TO ASSOCIATED STANDARD DETAILS SD-SW-1 AND SD-SW-2 FOR REQUIREMENTS ON SINGLE AND DOUBLE WIDE SOLID WASTE BIN ENCLOSURE LAYOUT AND DESIGN CRITERIA. THE CITY SHALL HAVE THE ABILITY TO MODIFY OR INTERPRET THESE DETAILS AS NECESSARY TO ACCOMMODATE THE CITY OR CITY CONTRACTOR'S NEEDS FOR SOLID WASTE PICK-UP.
11. SOLID WASTE EQUIPMENT ACCESS ROADS AND SERVICE AREA SURFACES SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF COLLECTION VEHICLES WEIGHING UP TO 66,000 LBS GROSS VEHICLE WEIGHT (GVW) AND SHALL BE PROVIDED WITH AN APPROVED SURFACE SO AS TO PROVIDE ALL WEATHER DRIVING CAPABILITIES. PROPERTY OWNER SHALL BE RESPONSIBLE FOR ALL SNOW AND ICE REMOVAL REQUIRED FOR SAFE ACCESS.
12. FOR SITES THAT CANNOT ACCOMMODATE A STANDARD DUMPSTER ENCLOSURE, THE DUMPSTERS MAY BE ROLLED OUT OF A BUILDING OR ALTERNATE ENCLOSURE BY THE PROPERTY OWNER TO AN APPROVED COLLECTION LOCATION.
13. SOLID WASTE COLLECTION LOCATIONS MUST BE LOCATED WITHIN THE BOUNDARIES OF THE PROPERTY UNLESS AN APPROPRIATE EASEMENT IS OBTAINED.

SWEEP PATH REQUIREMENTS FOR FRONT LOAD SOLID WASTE VEHICLE

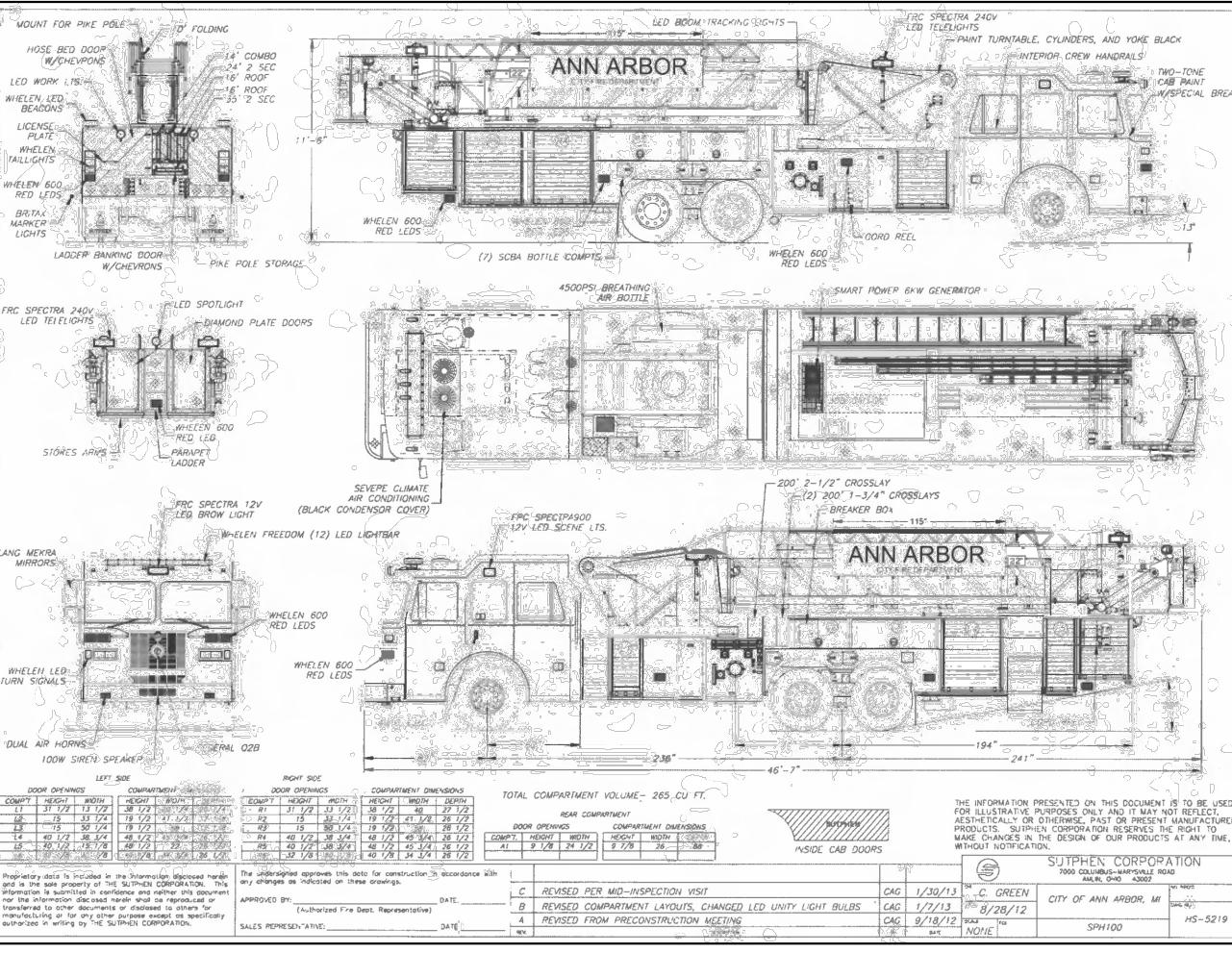
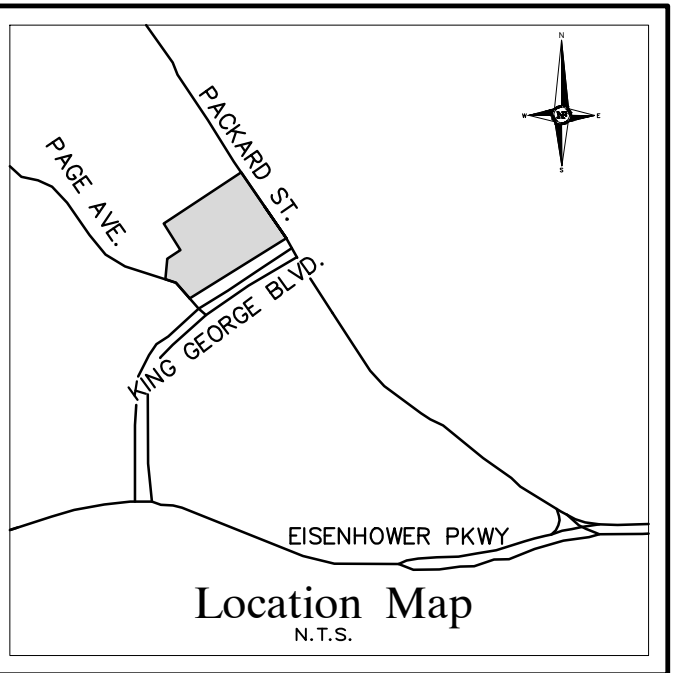


REFUSE COLLECTION NOTE:

- DRIVERS OF REFUSE TRUCKS WILL NOT LEAVE THEIR VEHICLES TO MOVE OR SERVICE THE RECYCLE DUMPSTERS.
- AN ON-SITE BUILDING MAINTENANCE PERSON SHALL BE RESPONSIBLE FOR OPENING / CLOSING GATES AND MOVING THE RECYCLABLE DUMPSTERS FOR REFUSE TRUCK COLLECTION.
- RECYCLE PICKUP SERVICE IS MONDAY THROUGH FRIDAY.
- THE PROPERTY OWNER IS RESPONSIBLE FOR ALL SNOW AND ICE REMOVAL REQUIRED FOR SAFE ACCESS TO THE ENCLOSURES AND SERVICING ALL SOLID WASTE CONTAINERS.
- FIRE DEPARTMENT NOTES**
- FIRE PROTECTION ALARM AND DETECTION SYSTEMS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE CODES ADOPTED BY THE CITY OF ANN ARBOR.
- KNOX BOX SHALL BE MOUNTED ON AN APPROVED EXTERIOR LOCATION FOR EMERGENCY ACCESS TO BUILDING AND THE FIRE COMMAND CENTER.
- CONSTRUCTION SEQUENCING:**
1. HYDRANTS MUST BE IN SERVICE AND APPROVED DURING CONSTRUCTION.
 2. HYDRANTS PROVIDING PROTECTION COVERAGE FOR THE BUILDING MUST BE IN SERVICE AND APPROVED BY BOTH THE FIRE DEPARTMENT AND ENGINEERING BEFORE FIRE DEPARTMENT WILL SUPPORT PERMIT ISSUANCE FOR NEW CONSTRUCTION PHASE AND BEFORE COMBUSTIBLE MATERIAL ARE PLACED ON THE JOB SITE.
 3. STORAGE AREA FOR CONSTRUCTION MATERIALS MUST BE APPROVED SO AS NOT TO INTERFERE WITH FIRE/EMERGENCY SITE ACCESS.
 4. IF SITE ACCESS IS TO BE RESTRICTED DURING CONSTRUCTION, KNOX BOX LOCK FOR GATES IS TO BE PROVIDED.



BENCHMARK
TOP NUT ON HYDRANT
ELEVATION 857.64
NAVD88 DATUM

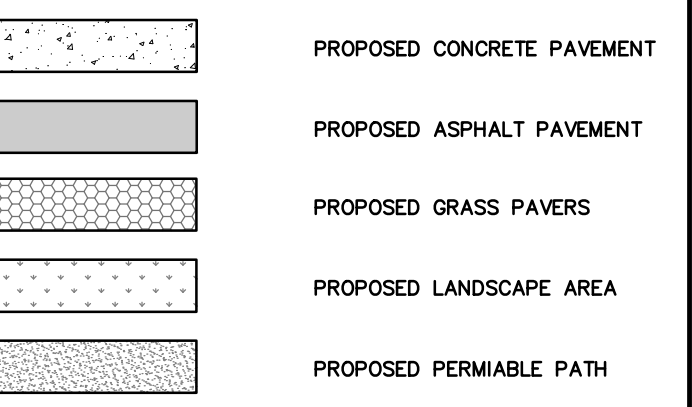


REFUSE COLLECTION NARRATIVE:

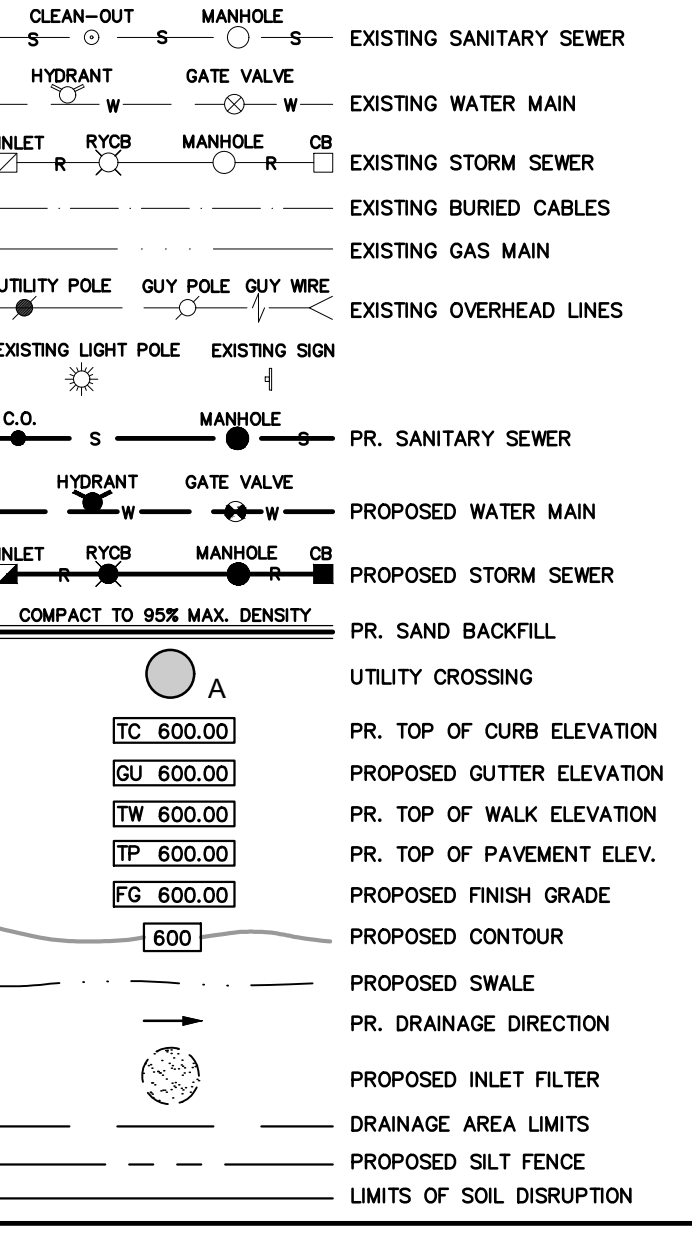
CURRENTLY, THE COMPACTED GARBAGE BINS ARE USED ONLY BY THE MAIN BUILDING AND ARE PICKED UP 5 DAYS A WEEK (MON-FRI). ONCE THE COMPACTED BIN IS COLLECTED BY WASTE MANAGEMENT, MAINTENANCE SWAPS THE EMPTY COMPACTED BIN WITH THE FULL COMPACTED BIN LOCATED IN THE TRASH ROOMS. THE 4 YD STATIONARY BINS ARE PICKED UP 3 DAYS A WEEK (MON/WED/FRI) AND ARE PRIMARILY USED BY LOFT RESIDENTS AND FOR OVERFLOW. MINIMAL WORK IS REQUIRED BY MAINTENANCE WITH THE STATIONARY BINS. THE RECYCLE BINS ARE PICKED UP 3 DAYS A WEEK (MON/WED/FRI) AND ARE MOVED BY MAINTENANCE INTO THE CORRALS AFTER PICKUP AS THE BINS ARE VERY LIGHT AND WILL ROLL AWAY WHEN EMPTY. RESIDENTS PUT MAJORITY OF RECYCLABLES DOWN THE RECYCLE CHUTE, WHICH MAINTENANCE THEN RELOCATES TO THE BINS DAILY, OR RESIDENTS PUT ITEMS DIRECTLY INTO THE RECYCLE BINS.

WITH THE ADDITIONAL BUILDING, 'NO PARKING' SIGNS WILL BE ADDED AT NECESSARY LOCATIONS TO FACILITATE GARBAGE COLLECTION. THE OPERATIONS OF THE COMPACTED BINS WOULD REMAIN THE SAME AS THEY ARE ONLY FOR THE MAIN BUILDING AND NO BINS WOULD BE STORED IN THE NEW BUILDING. PENDING APPROPRIATE SPACE, AN ADDITIONAL 4-YD DUMPSTER WOULD BE ADDED ON BOTH THE NORTH AND SOUTH SIDE OF THE BUILDING, FOR A TOTAL OF 4 STATIONARY BINS, AND COLLECTION WOULD BE INCREASED TO 5 DAYS (MON-FRI) AS OPPOSED TO 3 DAYS DUE TO THE INCREASE IN THE NUMBER OF RESIDENTS. THIS WOULD STILL REQUIRE MINIMAL WORK BY OUR MAINTENANCE TEAM AS THESE BINS ARE STATIONARY. IN ADDITION, A REQUEST WOULD BE MADE FOR RECYCLE TO BE COLLECTED 5 DAYS A WEEK DUE TO THE INCREASE IN RESIDENTS. MAINTENANCE WOULD BE RESPONSIBLE FOR RELOCATING THE BINS AFTER EACH PICKUP TO AVOID THE BINS ROLLING AWAY.

PAVING LEGEND



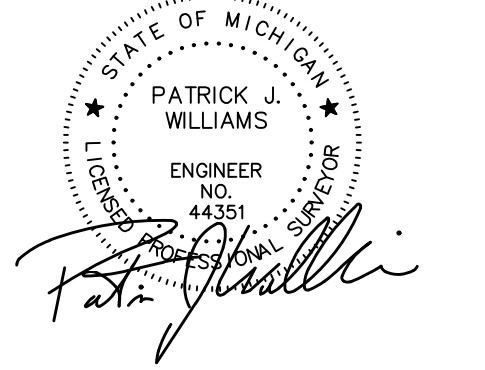
LEGEND



NF ENGINEERS
CIVIL ENGINEERS
LAND SURVEYORS
LAND PLANNERS

NOWAK & FRAUS ENGINEERS
46777 WOODWARD AVE.
PONTIAC, MI 48342-5032
TEL. (248) 332-7931
FAX. (248) 332-8257
WWW.NOWAKFRAUS.COM

SEAL



PROJECT

The George
2502 Packard St.
Ann Arbor, MI 48109

CLIENT

Somerset Development
101 Crawfords Corner Rd.
Holmdel, NJ 07733

Contact:

Ken Gold
Tel: 732.415-7171

PROJECT LOCATION

Part of the 1/4 of
Section 4
T. 3 South, R. 6 East
City of Ann Arbor,
Washtenaw County,
Michigan

SHEET

Fire Protection & Refuse
Truck Maneuvering Plan



| DATE | ISSUED FOR / REVISED |
|----------|------------------------|
| 08-15-24 | Issued for City Review |
| 10-29-24 | Revised per Client |
| 11-18-24 | Revised per City |
| 02-04-25 | Revised per City |
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| 07-17-25 | Per City Review #3 |

DRAWN BY:
A. Wiseman

DESIGNED BY:
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APPROVED BY:
P. Williams

DATE:
July 15, 2024

SCALE: 1" = 40'

NFE JOB NO. SHEET NO.
D601-07 SP-08

UPDATED STORM CALCULATIONS PER THE GEORGE 2 DEVELOPMENT AREA

| T = 15 Minutes | | Time of Concentration | | City of Ann Arbor, Washtenaw County, Michigan | | | | | | | | | | | | Project No: D601 | | | | | | | |
|------------------|---------------|---------------------------------|--------------------------|---|------------------------|---------------------------------|---------------------------------|------------------------|--------------------|----------------------|--------------------|--------------------------|------------------------|--------------------------|------------------------|--------------------------|-----------------------|---------------------------------|--------------------------|----------------------------|-------------------------------|-------------------------------|--------|
| I = 170 / (T+23) | | 10 Year Storm Event Intensity | | Storm Sewer Calculations | | | | | | | | | | | | Project Name: The George | | | | | | | |
| n (Conc.) 0.013 | | Manning's Roughness Coefficient | | | | | | | | | | | | | | Location: Ann Arbor | | | | | | | |
| n (Pvc) 0.011 | | Manning's Roughness Coefficient | | | | | | | | | | | | | | Dated: November 13, 2010 | | | | | | | |
| | | | | | | | | | | | | | | | | Revised: 07/17/25 | | | | | | | |
| From Struc. No. | To Struc. No. | Drainage Area (Acres) | Drainage Coefficient (C) | Equivalent Area (C * A) | Total Area (Sum C * A) | Time of Concentration (Minutes) | Rainfall Intensity (Inches/Hr.) | Actual Discharge (CFS) | Pipe Size (Inches) | Pipe Slope (% Slope) | Pipe Length (Feet) | Flow Velocity (Ft / Sec) | Time of Flow (Minutes) | Full Pipe Capacity (CFS) | H. G. Upper End (Feet) | H. G. Lower End (Feet) | Elev. Slope (% Slope) | Theoretical Velocity (Ft / Sec) | Ground Elevation (Upper) | Change in Elevation (Feet) | Invert Elev. Upper End (Feet) | Invert Elev. Lower End (Feet) | |
| 16a | 16 | A | 0.20 | 0.30 | 0.060 | 0.060 | 15.00 | 4.474 | 0.268 | 8 | 0.54 | 62 | 2.544 | 0.41 | 0.89 | 845.13 | 845.10 | 0.049 | 0.77 | 850.50 | 0.33 | 844.90 | 844.57 |
| 16 | 15a | A | 0.11 | 0.84 | 0.092 | 0.152 | 15.41 | 4.426 | 0.675 | 12 | 0.33 | 54 | 2.602 | 0.35 | 2.04 | 844.91 | 844.89 | 0.036 | 0.86 | 850.25 | 0.18 | 844.27 | 844.09 |
| 15b | 15a | A | 0.30 | 0.84 | 0.252 | 0.252 | 15.00 | 4.474 | 1.127 | 10 | 1.00 | 18 | 4.017 | 0.07 | 2.19 | 846.53 | 846.49 | 0.265 | 2.07 | 851.70 | 0.18 | 846.00 | 845.82 |
| 15c | 15a | A | 0.20 | 0.30 | 0.060 | 0.060 | 15.00 | 4.474 | 0.268 | 8 | 0.54 | 62 | 2.544 | 0.41 | 0.89 | 845.13 | 845.10 | 0.049 | 0.77 | 850.50 | 0.33 | 844.90 | 844.57 |
| 15a | 15 | A | 0.00 | 0.84 | 0.000 | 0.464 | 15.75 | 4.387 | 2.037 | 12 | 0.33 | 127 | 2.606 | 0.81 | 2.05 | 844.89 | 844.47 | 0.327 | 2.59 | 850.75 | 0.42 | 844.09 | 843.67 |
| 15 | 14 | A | 0.00 | 0.84 | 0.000 | 0.464 | 16.56 | 4.297 | 1.995 | 12 | 0.74 | 135 | 3.902 | 0.58 | 3.06 | 843.80 | 843.38 | 0.314 | 2.54 | 852.30 | 1.00 | 843.58 | 842.58 |
| 14a | 14 | C | 0.36 | 0.84 | 0.302 | 0.302 | 15.00 | 4.474 | 1.353 | 10 | 1.00 | 31 | 4.017 | 0.13 | 2.19 | 843.47 | 843.36 | 0.381 | 2.48 | 852.00 | 0.31 | 843.00 | 842.69 |
| 14 | 13 | B | 0.00 | 0.84 | 0.000 | 0.767 | 17.14 | 4.235 | 3.247 | 12 | 1.44 | 24 | 5.444 | 0.07 | 4.28 | 843.13 | 842.93 | 0.831 | 4.13 | 847.68 | 0.35 | 842.48 | 842.13 |
| 13 | 12 | B | 0.28 | 0.84 | 0.235 | 1.002 | 17.21 | 4.227 | 4.236 | 12 | 4.00 | 142 | 9.073 | 0.26 | 7.13 | 838.21 | 836.20 | 1.413 | 5.39 | 846.60 | 5.68 | 841.08 | 835.40 |
| 12a | 12 | E | 0.85 | 0.84 | 0.714 | 0.714 | 15.00 | 4.474 | 3.194 | 12 | 1.00 | 52 | 4.536 | 0.19 | 3.56 | 836.70 | 836.28 | 0.804 | 4.07 | 843.00 | 0.52 | 836.00 | 835.48 |
| 12 | 11 | D | 0.33 | 0.84 | 0.277 | 1.993 | 17.48 | 4.200 | 8.372 | 15 | 4.36 | 156 | 10.991 | 0.24 | 13.49 | 832.02 | 829.40 | 1.680 | 6.82 | 839.70 | 6.80 | 835.20 | 828.40 |
| 11 | 9 | F | 0.36 | 0.84 | 0.302 | 2.296 | 17.71 | 4.176 | 9.586 | 15 | 3.00 | 73 | 9.117 | 0.13 | 11.19 | 828.72 | 827.11 | 2.202 | 7.81 | 832.90 | 2.19 | 828.30 | 826.11 |
| 10 | 9 | G | 0.48 | 0.84 | 0.403 | 0.403 | 15.00 | 4.474 | 1.804 | 12 | 1.00 | 75 | 4.536 | 0.28 | 3.56 | 826.44 | 826.25 | 0.256 | 2.30 | 830.40 | 0.75 | 826.20 | 825.45 |
| 9 | 8 | - | 0.00 | 0.84 | 0.000 | 2.699 | 17.85 | 4.162 | 11.233 | 18 | 1.50 | 21 | 7.280 | 0.05 | 12.87 | 826.18 | 825.94 | 1.143 | 6.36 | 832.45 | 0.32 | 825.05 | 824.74 |
| 8 | 96" | - | 0.00 | 0.84 | 0.000 | 2.699 | 17.89 | 4.157 | 11.219 | 18 | 1.50 | 8 | 7.280 | 0.02 | 12.87 | 825.81 | 825.72 | 1.141 | 6.35 | 833.25 | 0.12 | 824.64 | 824.52 |
| 7a | 7 | H | 0.36 | 0.84 | 0.302 | 0.302 | 15.00 | 4.474 | 1.353 | 10 | 1.00 | 55 | 4.017 | 0.23 | 2.19 | 844.73 | 844.52 | 0.381 | 2.48 | 852.00 | 0.55 | 844.40 | 843.85 |
| 7 | 6 | I | 0.30 | 0.84 | 0.252 | 0.554 | 15.23 | 4.447 | 2.465 | 12 | 4.35 | 145 | 9.456 | 0.26 | 7.43 | 838.09 | 837.40 | 0.479 | 3.14 | 847.10 | 6.30 | 842.90 | 836.60 |
| 6a | 6 | J | 0.86 | 0.84 | 0.722 | 0.722 | 15.00 | 4.474 | 3.232 | 12 | 1.00 | 55 | 4.536 | 0.20 | 3.56 | 838.05 | 837.60 | 0.823 | 4.11 | 843.50 | 0.55 | 837.35 | 836.80 |
| 6 | 5a | K | 0.32 | 0.84 | 0.269 | 1.546 | 15.48 | 4.417 | 6.828 | 12 | 4.59 | 200 | 9.719 | 0.34 | 7.63 | 835.16 | 827.82 | 3.672 | 8.69 | 840.80 | 9.18 | 836.20 | 827.02 |
| 5a | 5 | - | 0.00 | 0.84 | 0.000 | 1.546 | 15.83 | 4.378 | 6.767 | 15 | 2.00 | 5 | 7.444 | 0.01 | 9.14 | 827.77 | 827.72 | 1.097 | 5.51 | 831.50 | 0.10 | 826.82 | 826.72 |
| 5 | 4 | L | 0.35 | 0.84 | 0.294 | 1.840 | 15.83 | 4.378 | 8.055 | 15 | 2.00 | 139 | 7.444 | 0.31 | 9.14 | 827.10 | 824.94 | 1.555 | 6.56 | 831.50 | 2.78 | 826.72 | 823.94 |
| 4 | 3 | M | 0.83 | 0.84 | 0.697 | 2.537 | 16.14 | 4.344 | 11.019 | 18 | 1.20 | 49 | 6.512 | 0.13 | 11.51 | 824.89 | 824.35 | 1.100 | 6.24 | 831.15 | 0.59 | 823.74 | 823.15 |
| 3 | 96" | - | 0.00 | 0.84 | 0.000 | 2.537 | 16.26 | 4.330 | 10.984 | 18 | 1.20 | 6 | 6.512 | 0.02 | 11.51 | 824.24 | 824.18 | 1.093 | 6.22 | 832.25 | 0.07 | 823.05 | 822.98 |
| 96" | 2 | - | 0.00 | 0.84 | 0.000 | 5.236 | 15.00 | 4.474 | 23.422 | 24 | 1.20 | 8 | 7.888 | 0.02 | 24.78 | 823.09 | 823.00 | 1.072 | 7.46 | 833.60 | 0.10 | 821.50 | 821.40 |
| 2 | 1 | - | 0.00 | 0.84 | 0.000 | 5.236 | 15.02 | 4.472 | 23.412 | 24 | 1.27 | 55 | 8.115 | 0.11 | 25.49 | 822.79 | 822.20 | 1.071 | 7.45 | 832.75 | 0.70 | 821.30 | 820.60 |

UPDATED SANITARY CALCULATIONS PER THE GEORGE 2 DEVELOPMENT AREA

SANITARY SEWER BASIS OF DESIGN

| Existing Conditions: | |
|-----------------------|--|
| Existing Health Club | |
| Unit Factor = | 1.00 Units per 4500 SF |
| Units = | 5,652.00 SF * (1.00 Units / 4,500 SF) = 1.26 Units |
| Existing Apartments | |
| Unit Factor = | 0.60 per Unit |
| Units = | 291.00 (91 Units*0.60) = 174.60 Units |
| Total Existing Units: | 175.86 Units |

| Existing Sanitary Flow Data: | |
|---|--|
| Equivalent Population (Total Units*3.2) | = 563 People |
| Average Flow | = 0.087 CFS |
| Peak Factor | = 3.95 |
| Peak Flow | = 0.34 CFS |
| Waste Generated: | = 0.087 CFS * 646,272 (Gallons/Day)/CFS = 56,274 GPD - Average |
| | = 0.344 CFS * 646,272 (Gallons/Day)/CFS = 222,128 GPD - Peak |

Peak Factor = $\frac{18 + (\# \text{ of Persons}/1000) \wedge 0.50}{4 + (\# \text{ of Persons}/1000) \wedge 0.50}$

| | Residential | REUs | Retail (sf) | REUs | Health Club (sf) | REUs | Total REUs | Total Population |
|---------------------|-------------|-------|--------------|--------|------------------|------|------------|------------------|
| Average Flow: | 291 | 174.6 | 0 | 0.0 | 5,652 | 1.3 | 175.9 | 615 |
| Peak Factor: | 0.095 | cfs | | | | | | |
| Peak Flow: | 3.93 | | | | | | | |
| Available Capacity: | 0.37 | cfs | | | | | | |
| | | | 8 In. Dia. @ | 0.50 % | | | 0.854 CFS | |

Proposed Conditions:

| Proposed Retail | |
|------------------------------------|--|
| Unit Factor = | 0.48 Units per 1000 SF |
| Units = | 1,593.00 SF * (0.48 Units / 1,000 SF) = 0.76 Units |
| Proposed Apartments | |
| Unit Factor = | 0.60 per Unit |
| Units = | 46.00 (46 Units*0.60) = 27.60 Units |
| Total Proposed Units: | 28.36 Units |
| Total Existing Units: | 175.86 Units |
| Total Existing and Proposed Units: | 204.22 Units |

| Proposed Sanitary Flow Data: | |
|---|--|
| Equivalent Population (Total Units*3.2) | = 654 People |
| Average Flow | = 0.101 CFS |
| Peak Factor | = 3.91 |
| Peak Flow | = 0.40 CFS |
| Waste Generated: | = 0.101 CFS * 646,272 (Gallons/Day)/CFS = 65,351 GPD - Average |
| | = 0.396 CFS * 646,272 (Gallons/Day)/CFS = 255,624 GPD - Peak |

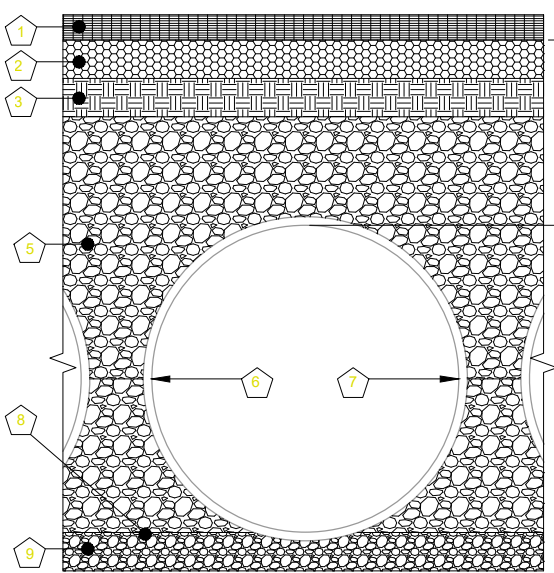
Peak Factor = $\frac{18 + (\# \text{ of Persons}/1000) \wedge 0.50}{4 + (\# \text{ of Persons}/1000) \wedge 0.50}$

| | Residential | REUs | Retail (sf) | REUs | Health Club (sf) | REUs | Total REUs | Total Population |
|---------------------|-------------|-------|--------------|--------|------------------|------|------------|------------------|
| Average Flow: | 291 | 174.6 | 1,412 | 0.7 | 0 | 0.0 | 175.3 | 613 |
| Peak Factor: | 0.095 | cfs | | | | | | |
| Peak Flow: | 3.93 | | | | | | | |
| Available Capacity: | 0.37 | cfs | | | | | | |
| | | | 8 In. Dia. @ | 0.50 % | | | 0.854 CFS | |

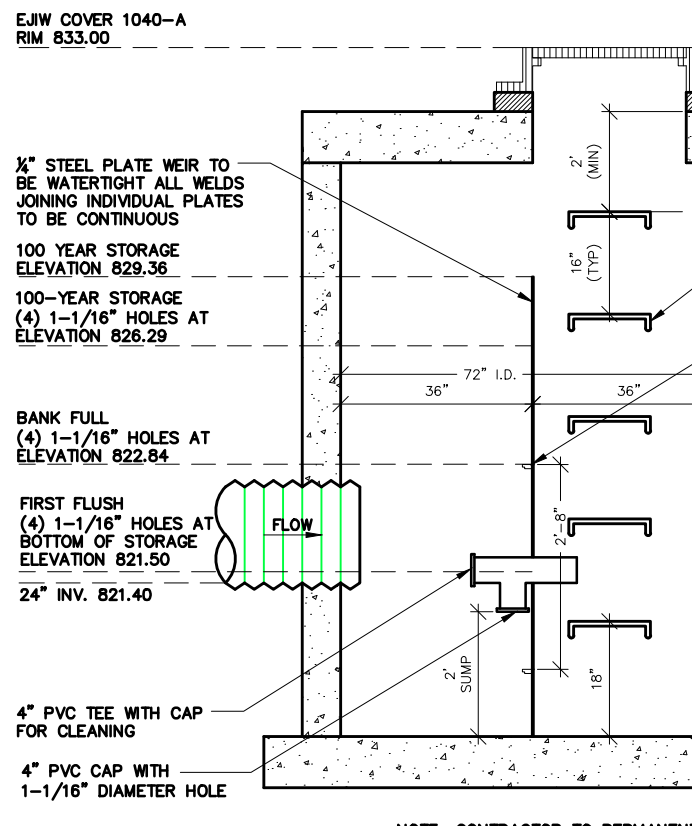
- 1) RIGID OR FLEXIBLE PAVEMENT
- 2) GRANULAR ROAD BASE (MOOT 21-AA OR EQUAL)
- 3) MOOT CLASS II SAND PLACED IN 8" LIFTS AND COMPACTED TO MINIMUM 90% STANDARD DENSITY PER ASTM D 1557
- 4) 12" MIN. FOR DIAMETERS THROUGH 18" 18" MIN. FOR DIAMETERS FROM 18" AND LARGER, MEASURED TO TOP OF RIGID OR BOTTOM OF FLEXIBLE PAVEMENT
- 5) CRUSHED STONE ANGULAR FILL SUCH AS #1, #57, MOOT #A, 30, 30, 340 OR APPROVED EQUAL, COMPACTED TO MINIMUM 90% STANDARD DENSITY PER ASTM D 1557
- 6) 6"12" THRU 6"44" 2"20" X 12" CSP, GAGE PER ASTM SECTION 12 OR MOOT 2003 STANDARD SPECIFICATION FOR CONSTRUCTION
- 7) 6"12" THRU 6"44" 2" X 1" OR 2" X 1" CSP GAGE PER ASTM SECTION 12 OR MOOT 2003 STANDARD SPECIFICATIONS FOR CONSTRUCTION
- 8) CONTECH C40 4 OUNCE NON-WOVEN GEOTEXTILE #8 REQUIRED BY ENGINEER OF RECORD TO PREVENT SOIL MIGRATION
- 9) RELATIVELY LOOSE GRANULAR BEDDING, ROUGHLY SHAPED TO FIT BOTTOM OF PIPE, 4" TO 12" IN DEPTH
- 10) CMP COATING DAMAGED DURING INSTALLATION SHALL BE REPAIRED WITH ZINC RICH PAINT PER ASTM A 780

EXISTING 96" CMP DETENTION TRENCH CROSS SECTION

EXISTING



- FOUNDATION BEDDING PREPARATION**
PRIOR TO PLACING THE BEDDING, THE FOUNDATION MUST BE CONSTRUCTED TO A UNIFORM AND STABLE GRADE. IN THE EVENT THAT UNSUITABLE FOUNDATION MATERIALS ARE ENCOUNTERED DURING EXCAVATION, THEY SHALL BE REMOVED AND BROUGHT BACK TO THE GRADE WITH A FILL MATERIAL AS APPROVED BY THE ENGINEER. ONCE THE FOUNDATION PREPARATION IS COMPLETE, THE 4 INCHES OF A WELL-GRADED GRANULAR MATERIAL SHALL BE PLACED AS THE BEDDING.
- BACKFILL**
THE BACKFILL SHALL BE AN A1, A2 OR A3 GRANULAR FILL PER ASTM M-48 OR A WELL-GRADED GRANULAR FILL AS APPROVED BY THE ENGINEER. (SEE INSTALLATION GUIDELINES). THE MATERIAL SHALL BE PLACED IN 6 INCH LAYERS/LIFTS AND COMPACTED TO 90% ASTM D 1557 STANDARD PROCTOR DENSITY.
- WHEN PLACING THE FIRST LIFT OF BACKFILL IT IS IMPORTANT TO MAKE SURE THAT THE BACKFILL IS PROPERLY COMPACTED UNDER AND AROUND THE PIPE BRANCHES. BACKFILL SHALL BE PLACED SUCH THAT THERE IS NO MORE THAN A TWO (2) INCH DIFFERENTIAL BETWEEN ANY OF THE PIPES AT ANY TIME DURING THE BACKFILL PROCESS. THE BACKFILL SHALL BE ADVANCED ALONG THE LENGTH OF THE DETENTION SYSTEM AT THE SAME RATE TO AVOID DIFFERENTIAL LOADING ON THE PIPE.
- OTHER ALTERNATE BACKFILL MATERIAL MAY BE ALLOWED DEPENDING ON SITE SPECIFIC CONDITIONS. REFER TO TYPICAL BACKFILL DETAIL FOR MATERIAL REQUIRED.



SECTION A-A

NOTE: CONTRACTOR TO PERMANENTLY AFFIX PVC TEE TO STEEL PLATE

6" DIA. OUTLET CONTROL STRUCTURE

EXISTING

6" DIA. OUTLET CONTROL STRUCTURE

N.T.S.

Proposed Underground Detention Volume Provided in 96" Perforated CMP:

| Detention Volume Data: | Storage Elevation: | 829.50 |
|---------------------------|--------------------|----------|
| | Base Elevation: | 821.50 |
| Total Linear Feet of Pipe | = | 1,107.00 |

| Elevation | Incremental Volume (Inc. 30% of stone volume) | Cumulative Volume |
|-----------|---|-------------------|
| 821.50 | 0 | |
| 822.50 | 6,465 | 6,465 |
| 823.50 | 8,457 | 14,922 |
| 824.50 | 9,387 | 24,310 |
| 825.50 | 9,786 | 34,096 |
| 826.50 | 9,786 | 43,881 |
| 827.50 | 9,387 | 53,269 |
| 828.50 | 8,487 | 61,756 |
| 829.50 | 6,465 | 68,221 |
| 830.50 | 3,653 | 71,874 |

Volume Provided: 71,874 Cubic Feet

Determine Elevation of First Flush & Bank Full Flood Volumes

| | CUBIC FEET | | Elevation (Z) |
|------------|------------|----------------|---------------|
| V(t,ff) = | 9,299 | is provided at | 822.84 |
| V(t,bf) = | 41,859 | is provided at | 826.29 |
| V(t,100) = | 67,330 | is provided at | 829.36 |

DETENTION CALCULATION PER APPROVED ORIGINAL PACKARD SQUARE PROJECT

| Washtenaw County Storm Water Management Calculations - 100 Year Storm | | | |
|--|---------------------|----------------|------------------------|
| Determine Site Runoff Coefficient: | | | |
| Proposed Land Use: | Runoff Coefficient: | Drainage Area: | |
| Pavement | 0.95 | 2.830 | Acres |
| Building | 0.95 | 2.043 | Acres |
| Landscape / Open Space: | 0.30 | 1.647 | Acres |
| Total Acreage: | | 6.520 | Acres |
| Weighted Runoff Coefficient "C" Factor = | | 0.786 | |
| Detention Calculation - Washtenaw County Method (100 Year Storm Event - With Outlet (Orifice)) | | | |
| Contributing Acreage: | | 6.52 | Acres |
| Allowable Outflow, Q _o : | | 0.150 | CFS / Acre |
| Runoff Coefficient, C: | | 0.786 | Imperviousness |
| Maximum Allowable Outflow, Q _o : | | 0.191 | CFS / (Acre * Imperv.) |
| Ts Storage Time (100 Year): | | 207.431 | Minutes |
| Vs Storage Volume (100 Year): | | 13,141.44 | CFS / (Acre * Imperv.) |
| Vt Total Volume (100 Year): | | 67,329.53 | Cubic Feet |
| Volume Required: | | 67,329.53 | Cubic Feet |
| Determine Bank Full Flood Volume Calculation | | | |
| Formula: Bank Flood Volume, V _{tbf} = 8,170 x A x C | | | |
| Contributing Acreage: | | 6.52 | Acres |
| Runoff Coefficient, C: | | 0.786 | Imperviousness |
| Volume V _{tbf} Required: | | 41,859 | Cubic Feet |
| Determine First Flush Volume Calculation | | | |
| Formula: First Flush Volume: 1,815 x A x C | | | |



PLANT SCHEDULE

| KEY | QTY | BOTANICAL/COMMON NAME | SIZE | SPACING | ROOT | COMMENT |
|-------------------------|-----|--|------------|----------|------|----------------------|
| TREES | | | | | | |
| AL | 8 | Amelanchier laevis 'Snowcloud' Snowcloud Serviceberry | 2.5-3" CAL | SEE PLAN | B&B | SINGLE STEM |
| CC | 6 | Cercis canadensis 'Forest Pansy' Forest Pansy Redbud | 3" CAL | SEE PLAN | B&B | FULLY BRANCHED HEADS |
| SHRUBS | | | | | | |
| TO | 40 | Thuja occidentalis 'DeGroot's Spire' De Groot's Spire Arborvitae | 5' HT | 42" OC | B&B | WELL-ROOTED |
| GROUNDCOVERS/PERENNIALS | | | | | | |
| AC | 140 | Aquilegia 'Clementine Salmon Rose' Clementine Salmon Rose Columbine | 1 GAL | 18" OC | CONT | WELL-ROOTED |
| DF | 76 | Dryopteris filix-mas 'Undulato Robusta' Robust Male Fern | 2 GAL | 30" OC | CONT | WELL-ROOTED |
| HK | 64 | Hakonechloa macra Japanese Forest Grass | 1 GAL | 30" OC | CONT | WELL-ROOTED |
| HO | 46 | Hosta 'Krossa Regal' Krossa Regal Hosta | 2 GAL | 30" OC | CONT | WELL-ROOTED |



NOWAK & FRAUS ENGINEERS
46777 WOODWARD AVE.
PONTIAC, MI 48342-5032
TEL. (248) 332-7931
FAX. (248) 332-8257

SEAI



PROJECT
The George
2502 Packard St.
Ann Arbor, MI 48009

CLIENT
Somerset Development
101 Crawfords Corner Rd.
Holmdel, NJ 07733

Contact:
Ken Gold
Tel: 732.415-7171

PROJECT LOCATION
Part of the 1/4 of Section 4
T. 3 South, R. 6 East
City of Ann Arbor,
Washtenaw County,
Michigan

SHEET
Detailed Landscape Plan



Know what's **below**
Call before you dig

REVISIONS
2024/08/15 ISSUED FOR CITY REVIEW
2024/11/05 REVISED PER CITY REVIEW
2024/11/18 REVISED PER CITY REVIEW
2025/03/10 REVISED PER CITY REVIEW
2025/04/22 REVISED PER FIRE REVIEW
2025/07/17 CITY REVIEW #3

DRAWN BY:
G. Ostrowski

DESIGNED BY:
G. Ostrowski

APPROVED BY:
G. Ostrowski

DATE:
07/15/2024

SCALE: 1" = 20'

20 10 0 10 20

NFE JOB NO. SHEET NO.

D601-07 **L3**

IRRIGATION NOTE:

ALL PROPOSED LANDSCAPE AREAS SHALL BE IRRIGATED.
EXISTING SYSTEM SHALL BE RETROFITTED, OR EXPANDED AS
NECESSARY TO FULLY COVER IRRIGATE ALL NEW LANDSCAPE
AREAS

GENERAL LANDSCAPE NOTES

- [illegible]

SHADY PLACE MIX:

ALL LAWN AREAS DESIGNATED TO BE SEEDED SHALL BE DONE SO WITH SHADY PLACE MIX, AT A RATE OF 8 LBS/1,000 S.F.
SEED AVAILABLE FROM:
LACROSSE SEED
T: 800-356-SEED
* MIX IS COMPRISED OF:
40% CREEPING RED FESCUE
40% CHEWINGS FESCUE
10% KENTUCKY BLUE GRASS
10% PERENNIAL RYEGRASS

KEY LEGEND

- ① SHADY PLACE SEED AREAS, SOWN ON 3" TOPSOIL
- ② 4' DIA SPADE CUT EDGE W/ 3" SHREDDED BARK MULCH
- ③ 3" DEPTH DOUBLE SHREDDED HARDWOOD BARK MULCH
- ④ 3/4" - 1 1/2" STONE MULCH, 3-4" DEPTH ON WEEED BARRIER
- ⑤ 3/16" X 4" STEEL EDGING, STAKED PER MANUFACTURER
- ⑥ 3" DEPTH, 5' WIDE COMPACTED DECOMPOSED STABILIZED GRANITE PATHWAY
- ⑦ CONCRETE STRIP FOR FIRE DEPARTMENT LADDER TRUCK STABILIZERS, 6' WIDE
- ⑧ REPURPOSED PARC VUE BENCH

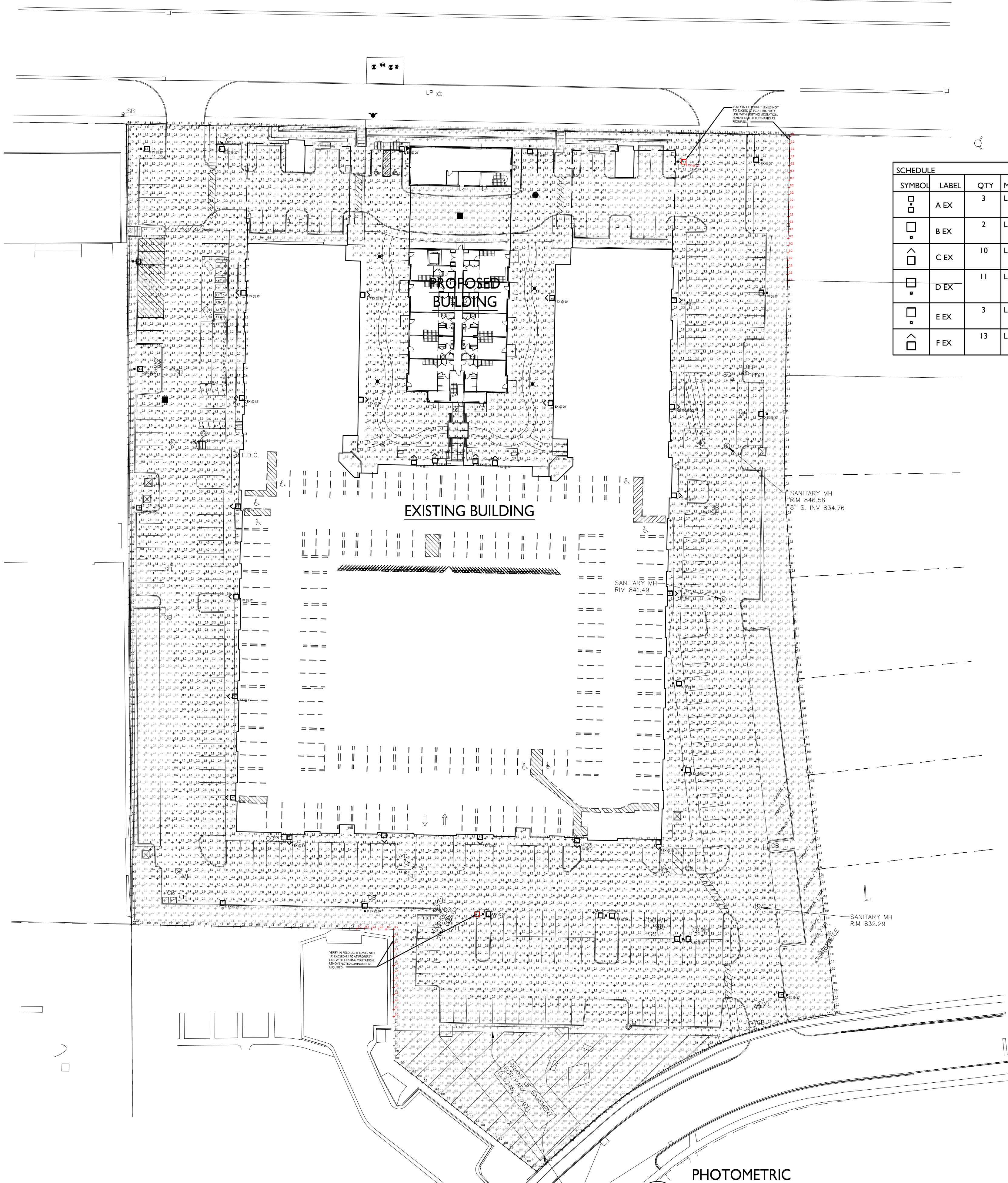
NOTE:

ALL DISEASED, DAMAGED OR DEAD PLANT MATERIAL SHALL BE REPLACED IN ACCORDANCE W/CHAPTER 62 OF THE CITY OF ANN ARBOR CODE, BY THE END OF THE FOLLOWING PLANTING SEASON. ALL PLANTINGS SHALL BE MAINTAINED IN ACCORDANCE WITH THE STANDARDS OF THE CITY OF ANN ARBOR. ALL PROPOSED TREE PLANTINGS SHALL BE MINIMUM 15' APART

A-1 DETAILED LANDSCAPE PLAN

\\Ponfiac Jobs - Pre G507M D000-FILES\D401-07 The George-2024\Landscapex\D401-07 LS-rev.dwg, 7/17/2025 10:39:53 AM

(2) 2-YD COMPACTED TRASH DUMPSTERS
IN ADJACENT ENCLOSURE ARE PICKED UP
(5) DAYS A WEEK.

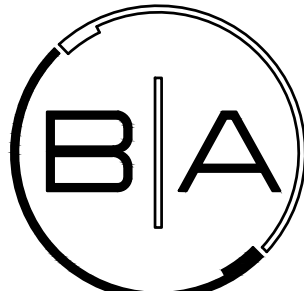


PHOTOMETRIC
LIGHTING PLAN

SCALE: 1" = 40'

| SCHEDULE | | | | | | |
|----------|-------|-----|-------------------|-----------------------------------|--|----------------|
| SYMBOL | LABEL | QTY | MANUFACTURER | CATALOG | DESCRIPTION | LAMP OUTPUT |
| | A EX | 3 | LITHONIA LIGHTING | DSXI LED P3 30K 70CRI TSW EGS | D-SERIES SIZE 1 AREA LUMINAIRE P3 PERFORMANCE PACKAGE 3000K CCT 70 CRI TYPE 5 WIDE EXTERNAL GLARE SHIELD | 9685.199 |
| | B EX | 2 | LITHONIA LIGHTING | DSXI LED P3 30K 70CRI T3M EGS | D-SERIES SIZE 1 AREA LUMINAIRE P3 PERFORMANCE PACKAGE 3000K CCT 70 CRI TYPE 3 MEDIUM EXTERNAL GLARE SHIELD | 8651.12 |
| | C EX | 10 | LITHONIA LIGHTING | DSXI LED P3 30K 70CRI T3M EGS | D-SERIES SIZE 1 AREA LUMINAIRE P3 PERFORMANCE PACKAGE 3000K CCT 70 CRI TYPE 3 MEDIUM EXTERNAL GLARE SHIELD | 8651.12 |
| | D EX | 11 | LITHONIA LIGHTING | DSXI LED P4 30K 70CRI BLC4 EGS | D-SERIES SIZE 1 AREA LUMINAIRE P4 PERFORMANCE PACKAGE 3000K CCT 70 CRI TYPE 4 EXTREME BACKLIGHT CONTROL EXTERNAL GLARE SHIELD | 10635.15 |
| | E EX | 3 | LITHONIA LIGHTING | DSXI LED P3 30K 70CRI T4M EGS | D-SERIES SIZE 1 AREA LUMINAIRE P3 PERFORMANCE PACKAGE 3000K CCT 70 CRI TYPE 4 MEDIUM EXTERNAL GLARE SHIELD | 11129.06 |
| | F EX | 13 | LITHONIA LIGHTING | DSXI LED P1 30K 70CRI T4M | D-SERIES SIZE 1 AREA LUMINAIRE P1 PERFORMANCE PACKAGE 3000K CCT 70 CRI TYPE 4 MEDIUM | 7395.159 |

| STATISTICS | | | | |
|----------------------|--------|--------|--------|--------|
| DESCRIPTION | SYMBOL | AVG | MAX | MIN |
| PROP LINE ADJ NW COM | + | 0.2 FC | 1.4 FC | 0.0 FC |
| PROP LINE ADJ SE RES | + | 0.1 FC | 0.2 FC | 0.0 FC |
| PROP LINE ADJ SW ROW | + | 0.5 FC | 2.9 FC | 0.0 FC |
| PROP LINE ADJ W RES | + | 0.1 FC | 0.5 FC | 0.0 FC |
| PROP LINE AT NE ROW | + | 0.7 FC | 3.9 FC | 0.0 FC |
| OVERALL SITE | + | 1.9 FC | 6.4 FC | 0.0 FC |



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CONSULTANT + NAME

PROJECT + INFORMATION

THE
GEORGE

2502 Packard St
ANN ARBOR, MI 48009

PROJECT + NUMBER

24-205

ISSUE + DATE

13 JAN 2025 REV
27 MAR 2025 SITE PLAN
17 JUL 2025 SITE PLAN

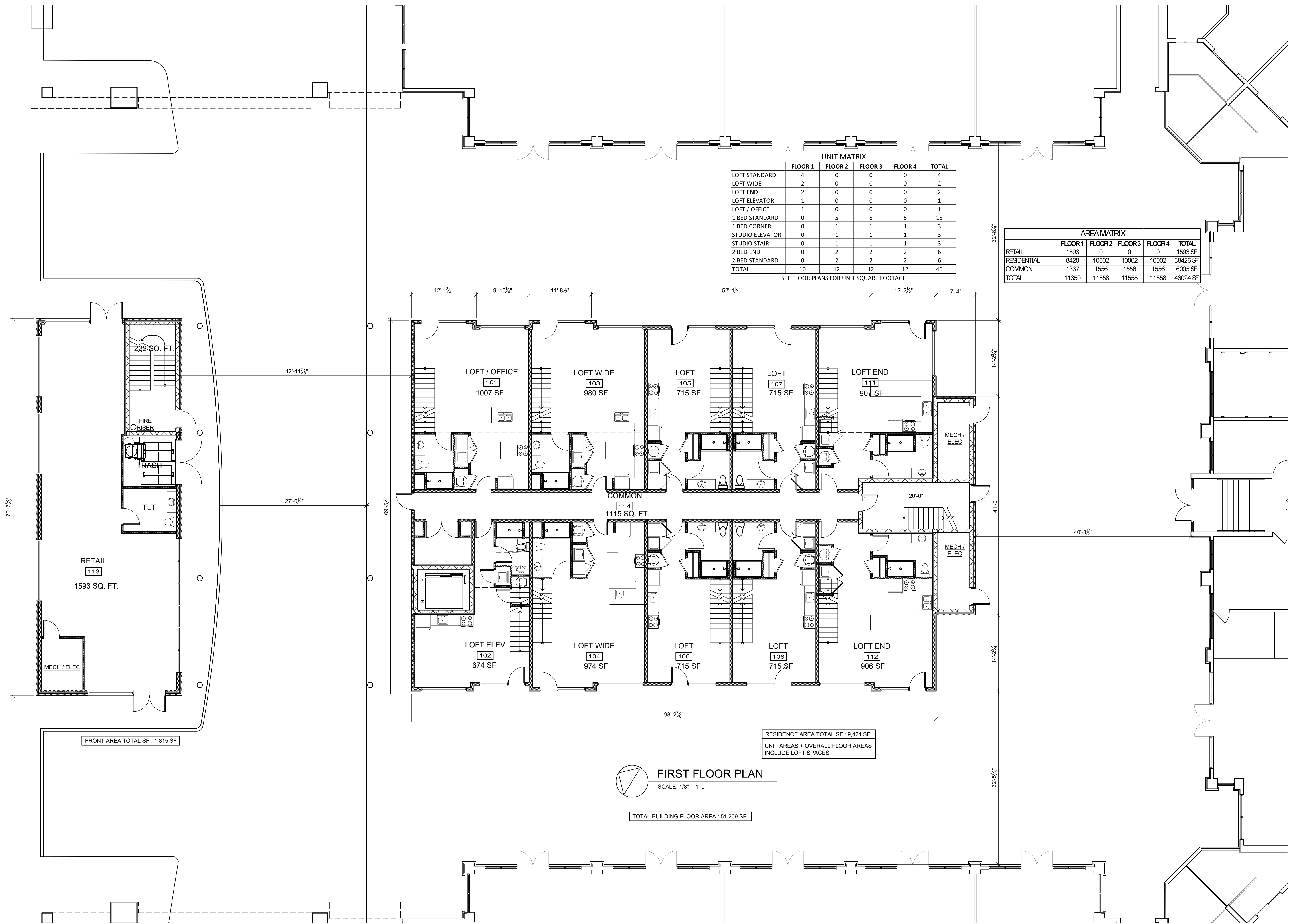
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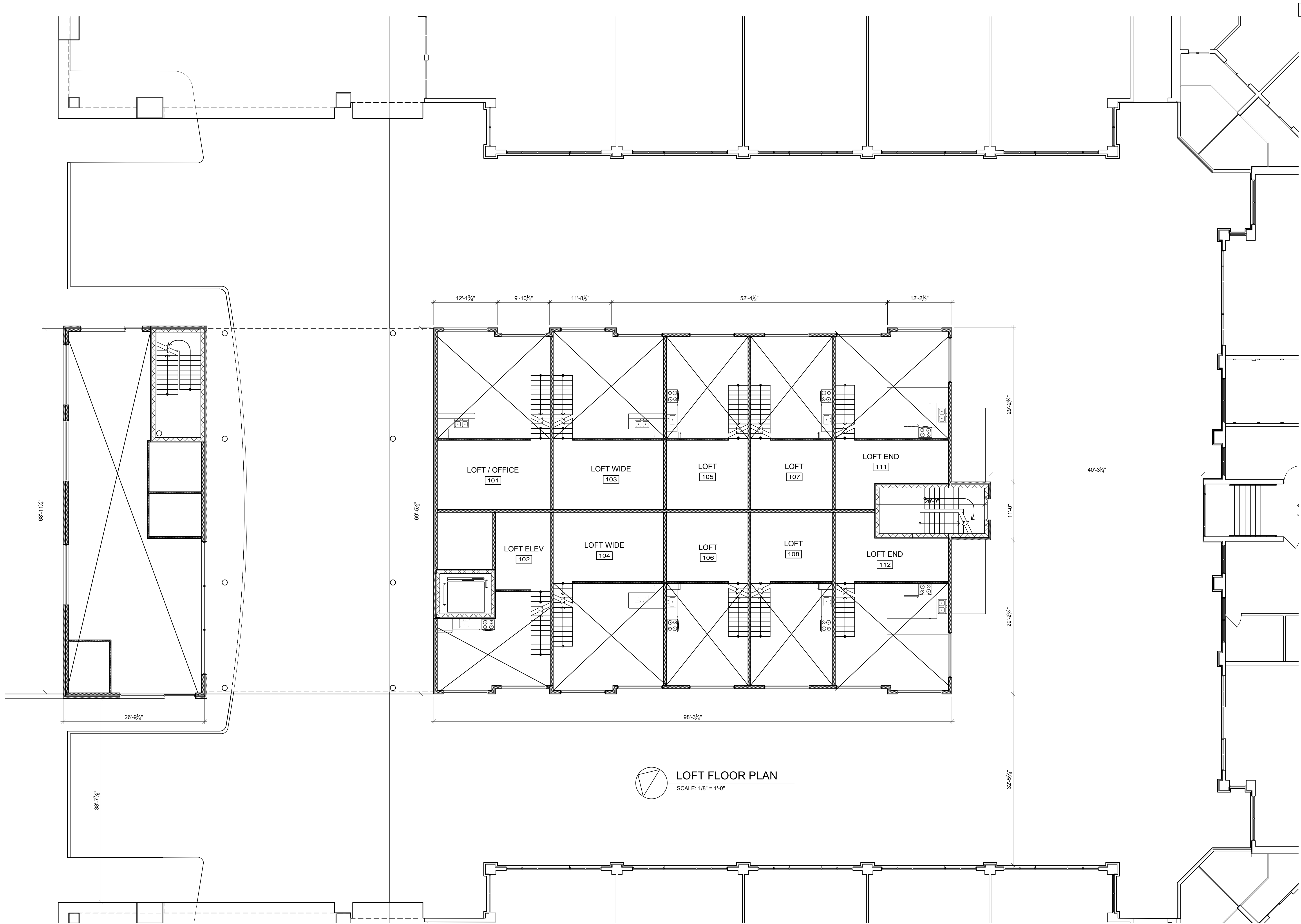
PHOTOMETRIC
LIGHTING PLAN


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| 15 AUG 2024 | SITE PLAN |
| 14 OCT 2024 | REV |
| 16 JAN 2025 | SITE PLAN |
| 27 MAR 2025 | SITE PLAN |
| 18 JUL 2025 | SITE PLAN |

SHEET + TITLE

FIRST FLOOR
LOFT PLAN

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SHEET + NUMBER

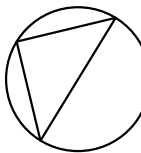
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| UNIT MATRIX | | | | | |
|-----------------|---------|---------|---------|---------|-------|
| | FLOOR 1 | FLOOR 2 | FLOOR 3 | FLOOR 4 | TOTAL |
| LOFT STANDARD | 4 | 0 | 0 | 0 | 4 |
| LOFT WIDE | 2 | 0 | 0 | 0 | 2 |
| LOFT END | 2 | 0 | 0 | 0 | 2 |
| LOFT ELEVATOR | 1 | 0 | 0 | 0 | 1 |
| LOFT / OFFICE | 1 | 0 | 0 | 0 | 1 |
| 1 BED STANDARD | 0 | 5 | 5 | 5 | 15 |
| 1 BED CORNER | 0 | 1 | 1 | 1 | 3 |
| STUDIO ELEVATOR | 0 | 1 | 1 | 1 | 3 |
| STUDIO STAIR | 0 | 1 | 1 | 1 | 3 |
| 2 BED END | 0 | 2 | 2 | 2 | 6 |
| 2 BED STANDARD | 0 | 2 | 2 | 2 | 6 |
| TOTAL | 10 | 12 | 12 | 12 | 46 |

SEE FLOOR PLANS FOR UNIT SQUARE FOOTAGE



TYPICAL UPPER
FLOOR PLAN

SCALE: 1/8" = 1'-0"

RESIDENCE AREA TOTAL SF : 11,497 SF

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ANN ARBOR, MI 48009

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| 15 AUG 2024 | SITE PLAN |
| 14 OCT 2024 | REV |
| 16 JAN 2025 | SITE PLAN |
| 27 MAR 2025 | SITE PLAN |
| 18 JUL 2025 | SITE PLAN |

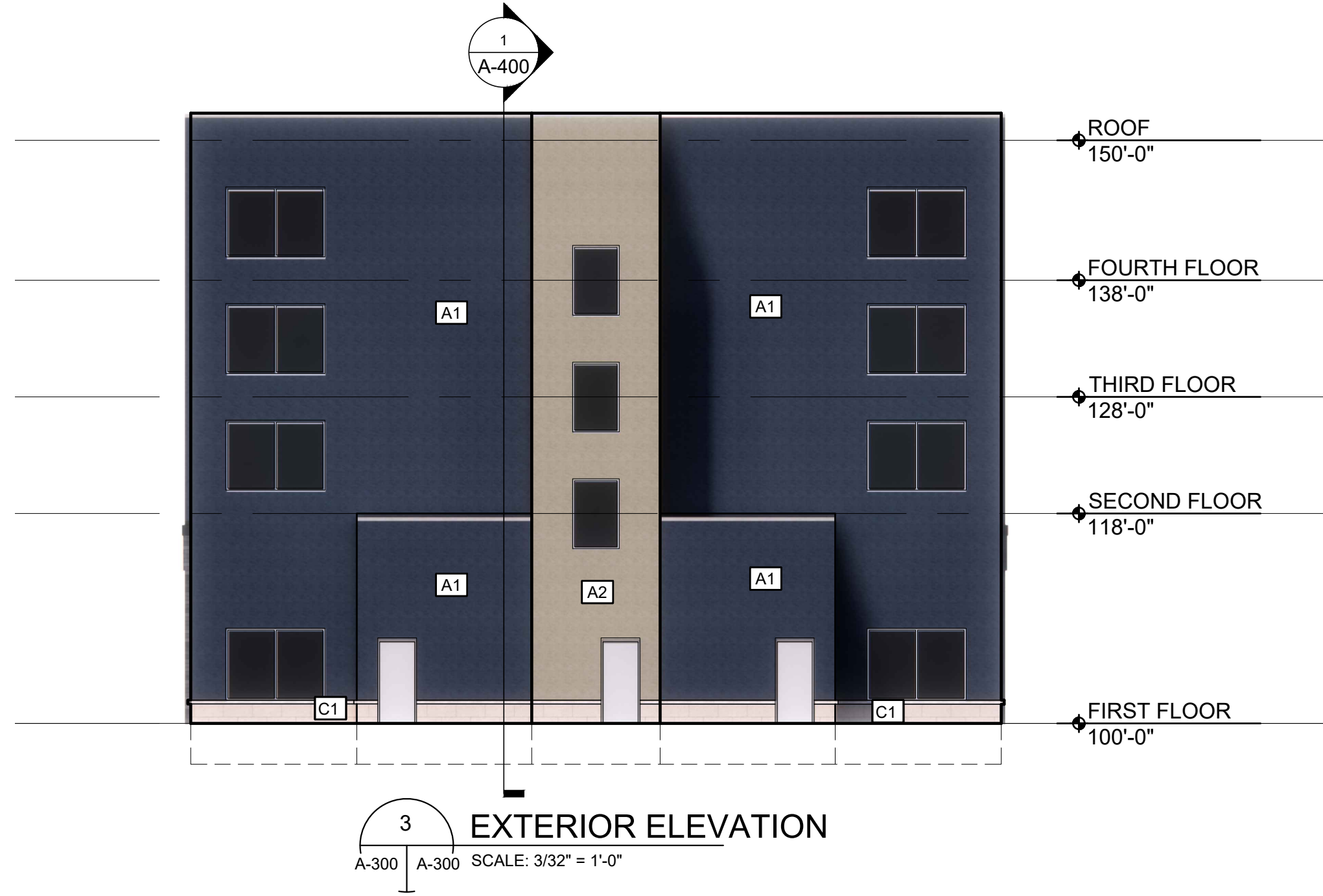
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TYPICAL UPPER
FLOOR PLAN

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B | A
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| MATERIAL LEGEND | |
|-----------------|---|
| TAG | DESCRIPTION |
| A1 | CEMENTITIOUS LAP SIDING - TO MATCH EX. (BLUE) |
| A2 | CEMENTITIOUS LAP SIDING - TO MATCH EX. (SAND) |
| C1 | SPLIT FACE CMU |
| M1 | MASONRY - TBD |





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ANN ARBOR, MI 48109

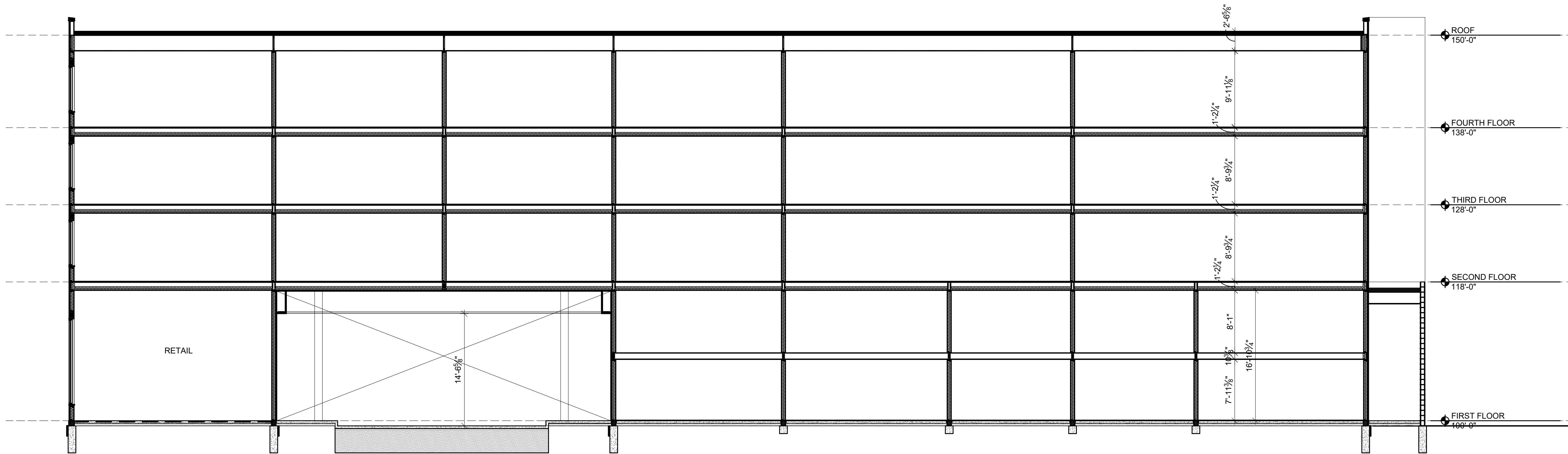
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10 MAR 2025 SITE PLAN
17 JUL 2025 SITE PLAN

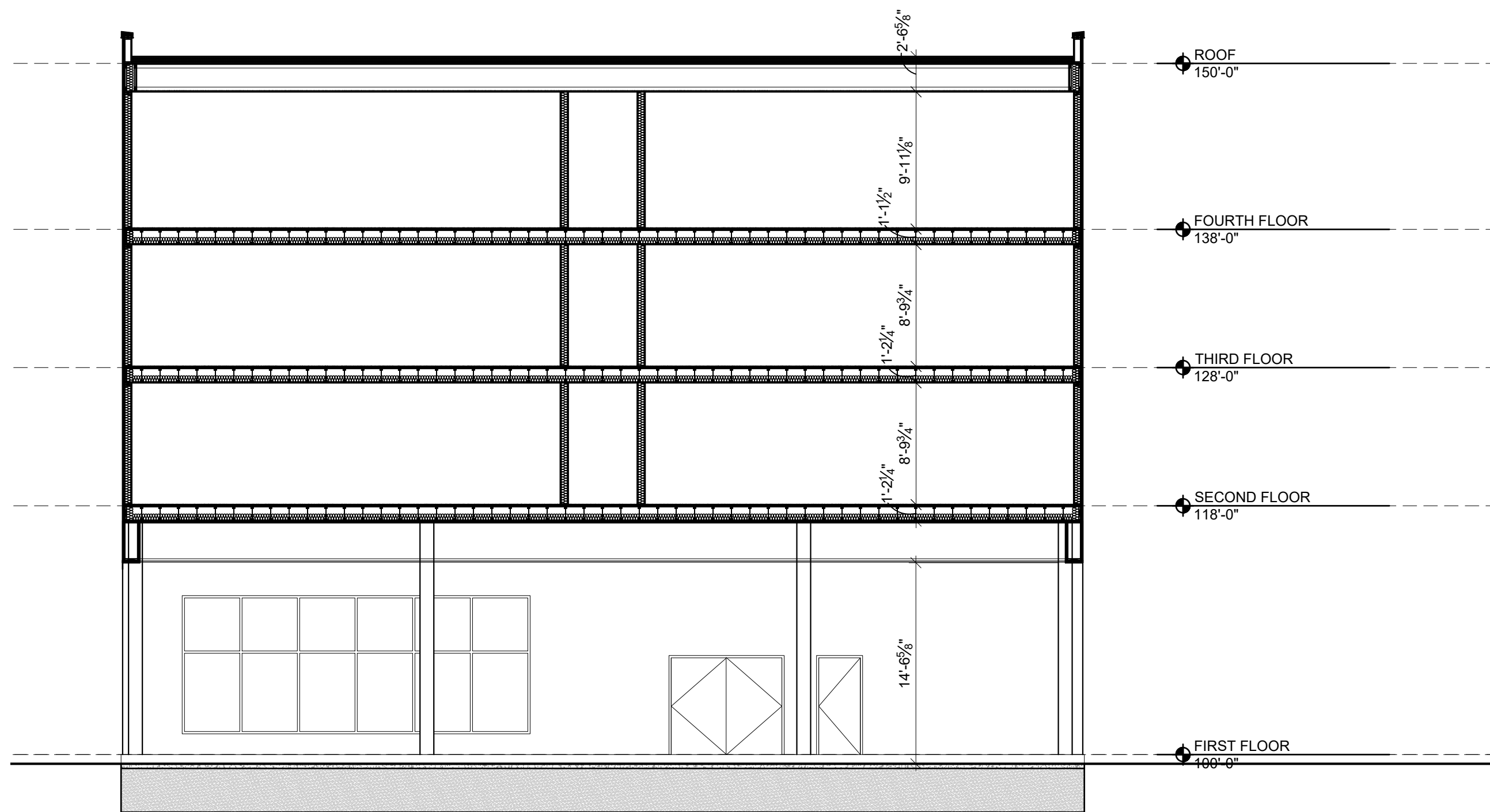
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EXTERIOR
RENDERS
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1 BUILDING SECTION
A-400 A-100 SCALE: 1/8" = 1'-0"
A-101 A-102



2 BUILDING SECTION
A-400 A-100 SCALE: 1/8" = 1'-0"
A-101 A-102



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ISSUE + DATE

| | |
|-------------|-----------|
| 14 JUN 2024 | PRELIM |
| 16 JAN 2025 | SITE PLAN |
| 17 JUL 2025 | SITE PLAN |

SHEET + TITLE

BUILDING
SECTION

24205a4xx.dwg

SHEET + NUMBER

A-400

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