



500 West Big Beaver
Troy, MI 48084
troymi.gov

248.524.3364
planning@troymi.gov

PLANNING COMMISSION MEETING AGENDA REGULAR MEETING

Marianna Perakis, Chair, Lakshmi Malalahalli, Vice Chair
Toby Buechner, Carlton Faison, Tyler Fox, Michael W. Hutson, Tom Krent,
Dave Lambert and John J. Tagle

May 28, 2024

7:00 P.M.

Council Chambers

1. ROLL CALL
2. APPROVAL OF AGENDA
3. APPROVAL OF MINUTES – May 14, 2024
4. PUBLIC COMMENT – For Items Not on the Agenda

PLANNED UNIT DEVELOPMENT

5. PLANNED UNIT DEVELOPMENT (File Number PUD 020 JPLN2023-0021) – CONCEPT DEVELOPMENT PLAN (CDP) AND PRELIMINARY DEVELOPMENT PLAN (PD) APPROVAL – The Village of Hastings PUD, East side of Livernois, north of Square Lake, PIN 88-20-03-301-088, -023, -024, -025 and 88-20-03-351-004, Section 3, Presently zoned NN (Neighborhood Node “Q”) and R-1B (One Family Residential) Zoning Districts.

PRELIMINARY SITE PLAN APPROVAL

6. PRELIMINARY SITE PLAN APPROVAL (JPLN2023-0031) –. Proposed Wattles Square Apartments, South side of Wattles and east of John R (PIN 88-20-24-100-039), Section 24, Zoned NN (Neighborhood Node “F”) Zoning District.

SPECIAL USE APPROVAL

7. PUBLIC HEARING – SPECIAL USE APPROVAL AND PRELIMINARY SITE PLAN REVIEW (SU JPLN2024-0006) – Proposed Jax Kar Wash, South side of Long Lake, East of Livernois (102 East Long Lake Road), Section 15, Currently Zoned NN (Neighborhood Node “M”) Zoning District.

NOTICE: People with disabilities needing accommodations for effective participation in this meeting should contact the City Clerk by e-mail at clerk@troymi.gov or by calling (248) 524-3317 at least two working days in advance of the meeting. An attempt will be made to make reasonable accommodations

Televised Live, Government Channel WTRY (10 WideOpenWest and 17 Comcast) Replayed Wednesdays 3:00 pm, 6:00 pm and 11:00 pm

OTHER ITEMS

8. PUBLIC COMMENT – For Items on the Agenda
9. PLANNING COMMISSION COMMENT
10. ADJOURN

Chair Perakis called the Regular meeting of the Troy City Planning Commission to order at 7:02pm on May 14, 2024, in the Council Chamber of the Troy City Hall. Chair Perakis presented opening remarks relative to the role of the Planning Commission and procedure of tonight’s meeting.

1. ROLL CALL

Present:

- Toby Buechner
- Carlton M. Faison
- Tyler Fox
- Michael W. Hutson
- Tom Krent
- David Lambert
- Marianna Perakis
- John J. Tagle

Absent:

- Lakshmi Malalahalli

Also Present:

- R. Brent Savidant, Community Development Director
- Ben Carlisle, Carlisle Wortman Associates
- Allan Motzny, Assistant City Attorney
- Jackie Ferencz, Planning Department staff

2. APPROVAL OF AGENDA

Resolution # PC-2024-05-22

- Moved by: Fox
- Support by: Tagle

RESOLVED, To approve agenda as prepared.

- Yes: All present (8)
- Absent: Lakshmi Malalahalli

MOTION CARRIED

3. APPROVAL OF MINUTES – April 23, 2024

Resolution # PC-2024-05-23

- Moved by: Lambert
- Support by: Buechner

RESOLVED, To approve the minutes of April 23, 2024 Regular meeting as submitted.

- Yes: All present (8)
- Absent: Lakshmi Malalahalli

MOTION CARRIED

4. PUBLIC COMMENT – For Items Not on the Agenda

SPECIAL USE APPROVAL

5. PUBLIC HEARING – SPECIAL USE APPROVAL AND PRELIMINARY SITE PLAN REVIEW (SU JPLN2024-0010) – Proposed Motor City Church addition and site improvements, South side of Wattles, East of Coolidge (1349 W. Wattles), Section 20, Currently Zoned R-1B (One-Family Residential) Zoning District.

Planning Commission member, John Tagle, recused himself. Motor City Church is a client of John Tagle Associates.

Ben Carlisle, of Carlisle Wortman Associates, presented on proposed Motor City Church addition and site improvements project.

Applicants, Michelle Sargent with John Tagle Associates and Dave Martin, Pastor of Motor City Church, spoke.

There was discussion by Board members related to:

- how a Special Use must be re-approved when there are changes
- parking
- tree placement

Chair Perakis opened the floor for public comment.

Chair Perakis closed the floor for public comment.

Resolution # PC-2024-05-24

Moved by: Fox
Seconded by: Lambert

RESOLVED, That Special Use Approval and Preliminary Site Plan Approval for the proposed church addition and other site improvements, South side of Wattles, East of Coolidge (1349 W. Wattles), Section 20, Currently Zoned R-1B (One Family Residential) District, be **granted** with waivers for tree and excess parking.

Yes: All (8)
Absent: Lakshmi Malalahalli
Recused: John Tagle

MOTION CARRIED

Mr. Tagle returned to meeting at 7:35pm

6. PUBLIC HEARING – SPECIAL USE AND PRELIMINARY SITE PLAN REVIEW (SU JPLN2021-024) - Proposed Starbucks with drive through, North side of Big Beaver, West of John R (1735 E. Big Beaver), Section 23, Currently Zoned CB (Community Business) Zoning District.

Mr. Carlisle presented proposed Starbuck with drive through project.

There was discussion by Board members related to:

- Crosswalks
- Tree placement
- Speed tables
- Traffic Circulation

Applicants Jim Butler, PEA Group; Dennis Bostick, Troy Sports Center LLC; Brian Neeper, Brian Neeper Architecture presented their application.

Chair Perakis opened public comment

Chair Perakis closed public comment

Planning Commission Discussion

Resolution # PC-2024-05-25

Moved by: Fox

Seconded by: Buechner

RESOLVED, That Special Use Approval and Preliminary Site Plan Approval for the proposed Starbucks with drive through, North side of Big Beaver, West of John R (1735 E. Big Beaver), Section 23, Currently Zoned CB (Community Business) District, be **postponed** for the following reasons:

Applicant to provide:

- a photometric plan
- larger context circulation plan
- dumpster plans
- pedestrian safety improvements
- tree ordinance compliance plan

Yes: All (8)

Absent: Lakshmi Malalahalli

MOTION CARRIED

PRELIMINARY SITE PLAN APPROVAL

- 7. PRELIMINARY SITE PLAN APPROVAL (JPLN2023-0028) – Proposed John R Commons Townhome Development, West side of John R, North of Big Beaver (PIN 88-20-23-476-017), Section 23, Zoned MF (Multi-Family Residential) Zoning District.

Mr. Carlisle presented on Proposed John R Commons Townhome Development project

Applicants Greg Bono, PEA Group; Dennis Bostick, Troy Sports Center LLC; Greg Neeper, Brian Neeper Architecture, spoke on application.

Chair Perakis opened Public Comment

Chair Perakis closed Public Comment

Planning Commission Discussion

RESOLVED, That Preliminary Site Plan Approval, pursuant to Article 8 of the Zoning Ordinance, as requested for the proposed John R Gardens Townhome Development, located on the East side of John R, North of Big Beaver, Section 23, Zoned MF (Multi-Family Residential) District, be postponed for the following reasons:

Resolution # PC-2024-05-26

Moved by: Fox
Seconded by: Tagle

Yes: All (8)
Absent: Lakshmi Malalahalli

MOTION CARRIED

OTHER ITEMS

- 8. PUBLIC COMMENT – For Items on the Agenda
- 9. PLANNING COMMISSION COMMENT
- 10. ADJOURN

The Regular meeting of the Planning Commission adjourned at 9:22 p.m.

Respectfully submitted,

Marianna J. Perakis, Chair

Jackie Ferencz, Planning Department Staff

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ITEM #5

DATE: May 22, 2024

TO: Planning Commission

FROM: R. Brent Savidant, Community Development Director

SUBJECT: PLANNED UNIT DEVELOPMENT (File Number PUD 020 JPLN2023-0021) – CONCEPT DEVELOPMENT PLAN (CDP) AND PRELIMINARY DEVELOPMENT PLAN (PD) APPROVAL – The Village of Hastings PUD, East side of Livernois, north of Square Lake, PIN 88-20-03-301-088, -023, -024, -025 and 88-20-03-351-004, Section 3, Presently zoned NN (Neighborhood Node “Q”) and R-1B (One Family Residential) Zoning Districts

The applicant GFA Development, Inc. seeks Conceptual Development Plan (CDP) and Preliminary Development Plan (PDP) approval for the Village of Hastings Planned Unit Development (PUD). The project features a total of 33 residential units comprised of 4 different housing types (single family detached, ranch style detached, single family attached and duplex). The Planning Commission is a recommending body for this application.

The Planning Commission considered the item on April 9, 2024 and passed the following resolution:

Resolution # PC-2024-04-018

Moved by: Fox
Seconded by: Buechner

RESOLVED, To postpone The Village of Hastings PUD, East side of Livernois, North of Square Lake, to allow the applicant to make improvements and provide updated elevations for the ranch style homes as specified in the Site Plan Review Design Standards, Section 8.06 of the Zoning Ordinance, as well as provide signage for the EVA, and address any outstanding items as identified in the Planning Consultant report dated March 15, 2024.

Yes: Buechner, Faison, Fox, Krent, Malalahalli, Perakis, Tagle
No: Hutson, Lambert

MOTION CARRIED

The attached report prepared by Carlisle/Wortman Associates, Inc. (CWA), the City’s Planning Consultant, summarizes the project as revised. CWA prepared the report with input from various City departments including Planning, Engineering, Public Works and Fire. City Management supports the findings of fact contained in the report and the recommendations included therein.

Attachments:

1. Maps
2. Minutes from April 9, 2024 Planning Commission Regular meeting (excerpt)
3. Report prepared by Carlisle/Wortman Associates, Inc.
4. PUD Application/Site Plan
5. Public comment submitted after April 9, 2024 Planning Commission meeting.

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PLANNED UNIT DEVELOPMENT (File Number PUD 020 JPLN2023-0021) – CONCEPT DEVELOPMENT PLAN (CDP) AND PRELIMINARY DEVELOPMENT PLAN (PD) APPROVAL

– The Village of Hastings PUD, East side of Livernois, north of Square Lake, PIN 88-20-03-301-088, -023, -024, -025 and 88-20-03-351-004, Section 3, Presently zoned NN (Neighborhood Node “Q”) and R-1B (One Family Residential) Zoning Districts

Resolution # PC-2024-05-

Moved by:
Seconded by

WHEREAS, The applicant GFA Development, Inc. seeks Conceptual Development Plan (CDP) and Preliminary Development Plan (PDP) approval for the Village of Hastings Planned Unit Development (PUD), located on the east side of Livernois, north of Square Lake, in Section 3, approximately 6.05 acres in area; and

WHEREAS, The Village of Troy PUD features 3 detached single-family homes, 8 ranch style single family homes, 18 two-story attached homes and 4 single family duplex homes, for a total of 33 residential units; and

WHEREAS, The proposed development accomplishes a sufficient number of the Standards of Approval as per Section 11.03.B.

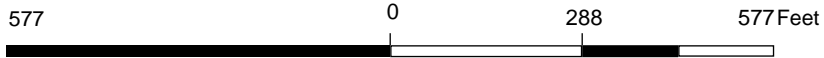
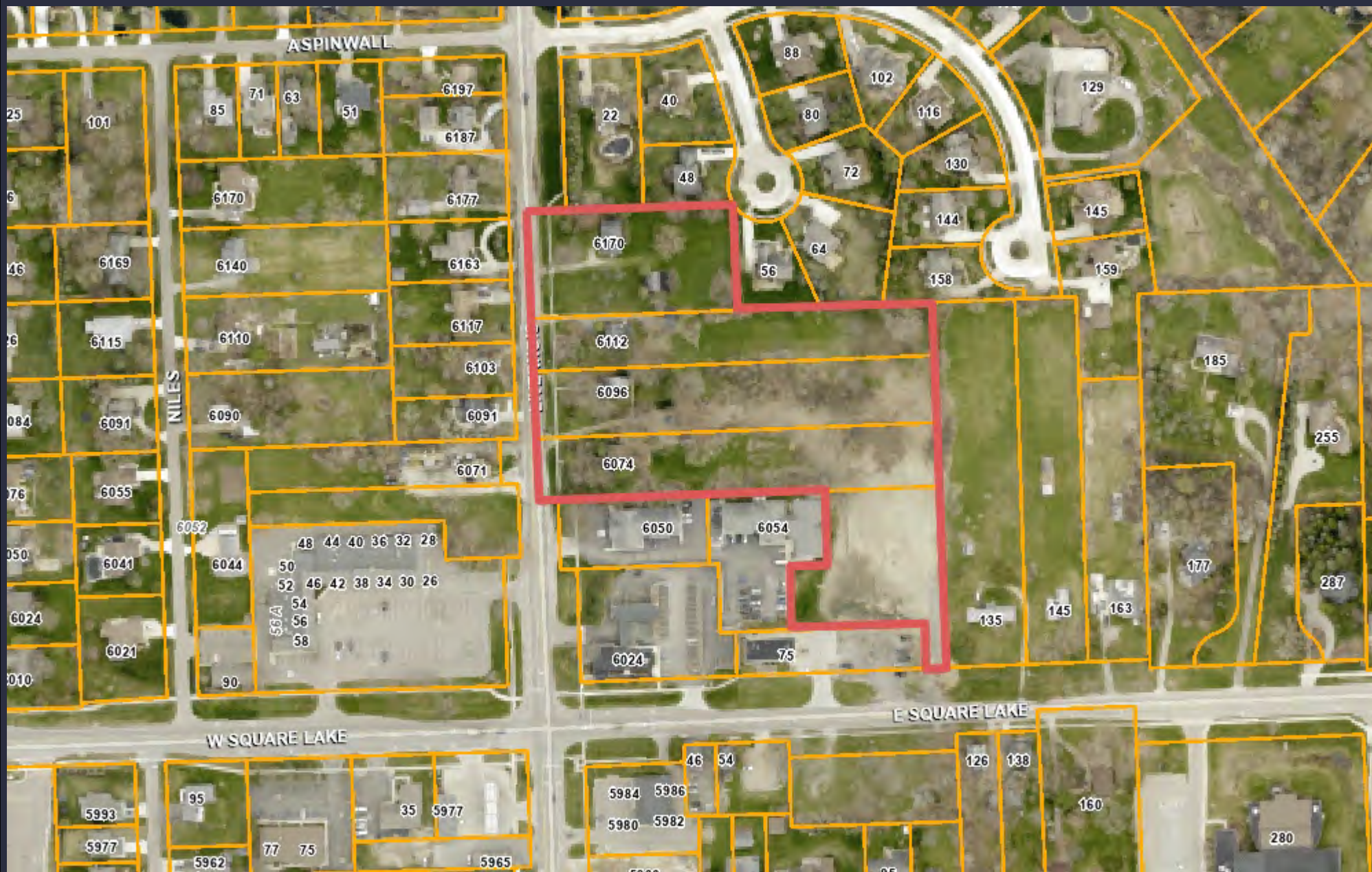
BE IT RESOLVED, That the Planning Commission recommends to City Council that Concept Development Plan Approval and Preliminary Development Plan Approval for the proposed Village of Hastings, be granted, subject to the following design considerations:

Yes:
No:
Absent:

MOTION CARRIED/FAILED



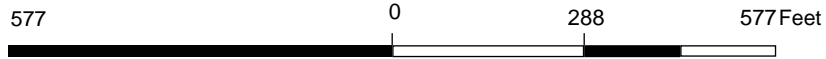
GIS Online



Note: The information provided by this application has been compiled from recorded deeds, plats, tax maps, surveys, and other public records and data. It is not a legally recorded map survey. Users of this data are hereby notified that the source information represented should be consulted for verification.



GIS Online



Note: The information provided by this application has been compiled from recorded deeds, plats, tax maps, surveys, and other public records and data. It is not a legally recorded map survey. Users of this data are hereby notified that the source information represented should be consulted for verification.

PLANNED UNIT DEVELOPMENT

7. PUBLIC HEARING - PLANNED UNIT DEVELOPMENT (File Number PUD 020 JPLN2023-0021) - CONCEPT DEVELOPMENT PLAN (CDP) AND PRELIMINARY DEVELOPMENT PLAN (PDP) APPROVAL – The Village of Hastings PUD, East Side of Livernois, North of Square Lake, (PIN 88-20-03-301-088, -023, -024, -025 and 88-20-03-351-004), Section 3, Presently Zoned NN (Neighborhood Node “Q”) and R-1B (One Family Residential) Zoning Districts

Mr. Carlisle provided a brief background of The Village of Hastings PUD application. He stated the applicant removed the privacy fence between the existing older homes and the adjacent new housing units and reduced the number of duplex units to two (2). Mr. Carlisle said the applicant has not provided building materials or an architectural color scheme. He asked the Planning Commission to hold a public hearing and consider public testimony. He said as part of the deliberations, the Planning Commission should consider if the project is consistent with the Master Plan, whether it meets the Site Plan Review Design Standards and whether it meets the PUD Standards.

In summary, Mr. Carlisle said any approval of the PUD application should be subject to the conditions as identified in his report dated March 15, 2024.

Applicant Gary Abitheira gave a PowerPoint presentation. He addressed the reduction of units, reorientation of entrance doors on units 9 through 12, the City Traffic Consultant report, traffic volume data from the RCOC (Road Commission of Oakland County) website, internal vehicular circulation, comparisons of density with previously approved PUD developments and the missing middle ranch style homes he is proposing. Mr. Abitheira walked through the PUD Standards one by one to substantiate how he feels the application meets the PUD Standards.

There was discussion, some comments related to:

- Applicant to keep the historic nature of the older homes, place them on the market for sale and incorporate such terms in the PUD Agreement.
- Walkability of the site.
- EVA (Emergency Vehicle Access); access and signage.
- Extension of sidewalk along Square Lake.
- Potential to provide a pedestrian crosswalk on Square Lake.
- Potential for additional green space in detention area.
- Circulation improvements requested by the City Traffic Consultant OHM; applicant has met.
- Trash pickup arrangement.
- Public amenities.
- Sustainability features.
- Design of ranch units as relates to the Site Plan Review Design Standards.
- Building materials and color scheme.
- Patios and/or decks on units.
- Inconsistency of building and lot dimension designations on the site plan.

It was the consensus of the Board members that the application does not meet the PUD Standard that references *innovative and creative site and building designs, solutions and materials*, and that the applicant could focus more on the Site Plan Review Design Standards.

It was clarified that the Long Lake and Crooks PUD development is the development that Ms. Dufrane referenced in a previous meeting stating it set a high bar for approval of a PUD development.

PUBLIC HEARING OPENED

- Michael Johnson, 450 E Square Lake; expressed support for the development, that any additional traffic that might be generated is negligible, concerns expressed by community and Board members have been addressed by applicant.
- Mary Rettig, 6860 Westaway; addressed definitions applied to different styles of housing units, square footage of units, concerns with parking and traffic.
- Allyson Wyckhuysen, 56 Telford; addressed orientation of her home as relates to the development and proposed public amenities.
- Sheila Lenz-Shomo, 6464 Fredmoor; addressed concerns with traffic, acceleration and deceleration lanes, density, internal vehicular circulation, and application meeting PUD Standards.
- Nanette Gearhart, 6197 Livernois; voiced opposition to the development, addressed concerns with parking and transition to existing neighborhood, would prefer the by-right proposal of single family residential.
- Leasa Williams, 159 Telford; voiced opposition to the PUD application, would prefer the by-right proposal of single family residential.
- Jeff Williams, 159 Telford; addressed PUD Standards that he feels application has not met.
- Ann Coleman, 6091 Livernois; addressed PUD Standards that she feels application has not met, support by-right proposal of single family residential.
- Dave Pampreen, 6408 Canmoor; addressed density of application in comparison to surrounding residential, concerns with artesian well allegedly on site.
- John Malott, 72 Telford; addressed comments of residents he surveyed within differential distances of the proposed PUD development, in support of the by-right proposal of single family residential.
- Debora Louzecky, 6327 Donaldson; voiced opposition of the PUD development, prefer by-right proposal of single family residential, addressed PUD Standards that she feels are not met, concerns with residents west of Square Lake losing property.

PUBLIC HEARING CLOSED

Mr. Carlisle stated an application to develop single family residential at this site has not been submitted nor has it been through the site plan approval process. He said at this point it is not clear how many units might be allowed under the R-1B zoning classification.

Several board members shared comments as relates to a single family residential by-right development in comparison to the proposed PUD development.

Mr. Abitheira stepped forward to ask the Board's consideration in postponing the item because of the lateness of the meeting and that it would allow him the opportunity to improve the architectural design of the ranch style homes.

Resolution # PC-2024-04-018

Moved by: Fox
Seconded by: Buechner

RESOLVED, To postpone The Village of Hastings PUD, East side of Livernois, North of Square Lake, to allow the applicant to make improvements and provide updated elevations for the ranch style homes as specified in the Site Plan Review Design Standards, Section 8.06 of the Zoning Ordinance, as well as provide signage for the EVA, and address any outstanding items as identified in the Planning Consultant report dated March 15, 2024.

Yes: Buechner, Faison, Fox, Krent, Malalahalli, Perakis, Tagle
No: Hutson, Lambert

MOTION CARRIED



Carlisle | Wortman
ASSOCIATES, INC.

117 NORTH FIRST STREET SUITE 70 ANN ARBOR, MI 48104 734.662.2200 734.662.1935 FAX

Date: October 10, 2023
December 19, 2023
February 21, 2024
March 15, 2024
May 14, 2024

PUD and Preliminary Development Plan Approval Review For City of Troy, Michigan

Applicant: GFA Development Inc

Project Name: Village of Hastings

Plan Date: January 24, 2024

Location: East side of Livernois, north of Square Lake

Zoning: R-1B, Single Family Residential (approx. 4.9 acres) & NN-Q
Neighborhood Node, (approx. 1.1 acres)

Proposed Zoning: Planned Unit Development

Action Requested: PUD and Preliminary Development Plan Approval Review

BACKGROUND

An application has been submitted to conditionally rezone a +/-6.0 acre site to PUD in order to construct thirty (30) new residential units and preserve three (3) existing homes on site. Eight (8) will be ranch style single-family homes, eighteen (18) will be two-story attached row homes, and four (4) will be single-family duplex homes. The site currently has four (4) existing single-family homes of which three (3) will be preserved and incorporated into the entire development. The site includes five (5) parcels. Approximately 4.9 acres of the site is currently zoned R-1B, which does not permit multi-family residential; while approximately 1.1 acres of the site is zoned Neighborhood Node, which does allow multi-family residential.

The subject site is located on the east side of Livernois, north of Square Lake. Access is via a new twenty-eight (28) foot wide private road off Livernois along with an emergency vehicle access road off Square Lake in the southeast corner of the development. The 30-units will be distributed in the format outlined below:

- Four (4) one (1) unit detached ranches. Four (4) units total.
- Two (2) two (2) unit attached ranches. Four (4) units total.
- Three (3) five (5) unit multi-unit row homes. Fifteen (15) units total.
- One (1) three (3) unit multi-unit row homes. Three (3) units total.
- Two (2) two (2) unit single-family duplex homes. Four (4) units total.
- Three (3) existing (1) unit single family homes. Three (3) units total.

Total of Units: 30 new units + 3 existing units = 33 units.

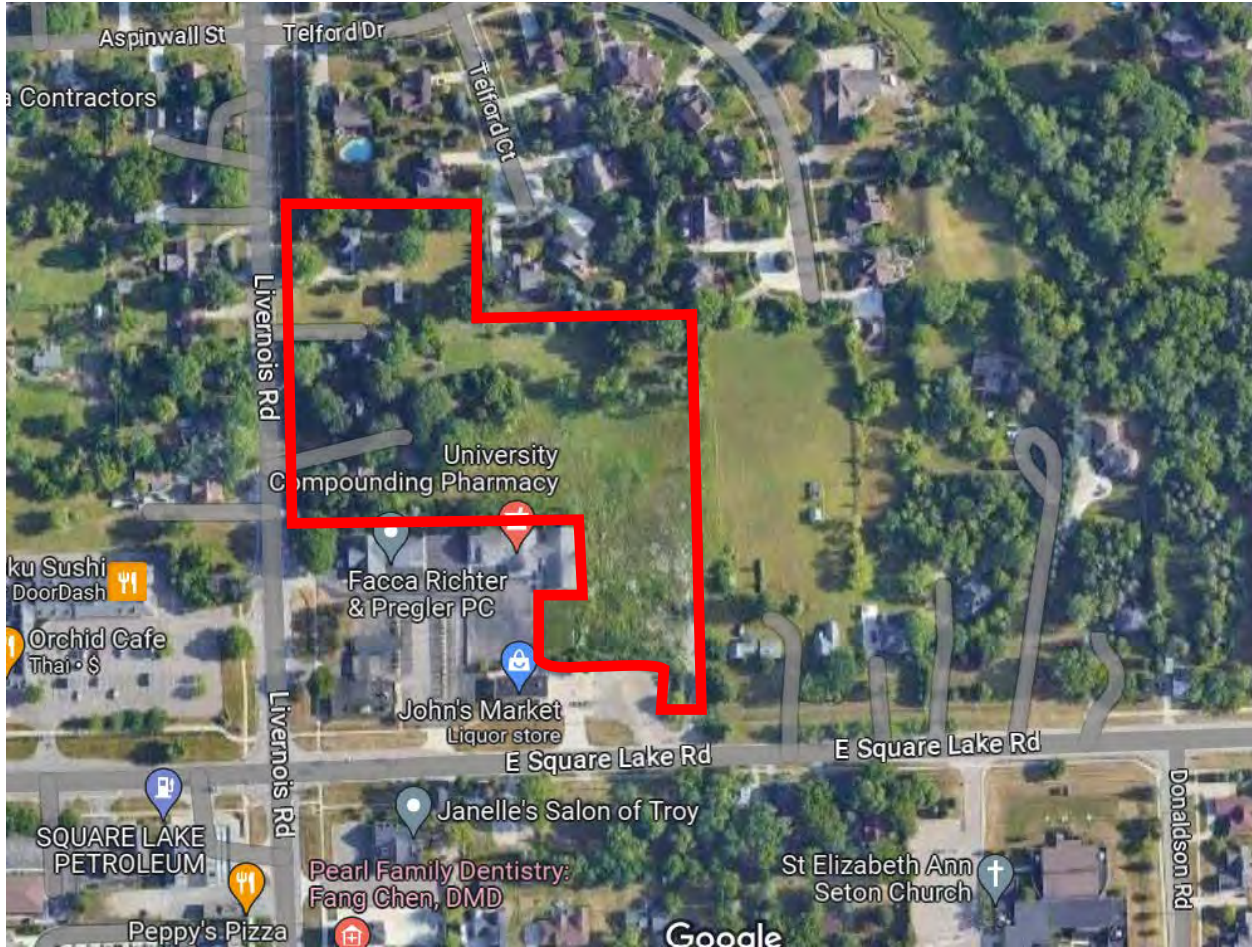
All duplex and multi-unit row homes are two stories. One (1) duplex unit measures roughly 1,900 square feet and one (1) row home unit measures roughly 2,000 square feet.

The following benefits have been noted by the applicant:

1. *Preservation of three existing homes built.*
2. *Offer multiple styles of housing.*
3. *Emergency Vehicle Access from Square Lake Road.*
4. *1.3 acres of open space including communal sport court, putting green, and butterfly garden.*
5. *Landscaping will be viable, interesting, and inviting to encourage outdoor recreation and exercise.*
6. *Extensive interior sidewalks to promote walkability.*
7. *Maximum Building Height shall not exceed 2 stories or 30' in height.*
8. *Maximum lot area covered by buildings will be 18%.*

If the PUD is recommended for approval by the Planning Commission, a PUD Agreement will be drafted between the applicant and the City Attorney's office prior to consideration by the City Council.

Location of Subject Site:



Current Zoning:

R-1B, Single Family Residential & NN-Q Neighborhood Node.

Proposed Uses of Subject Parcels:

Thirty-three (33) multi-family and single-family dwelling units.

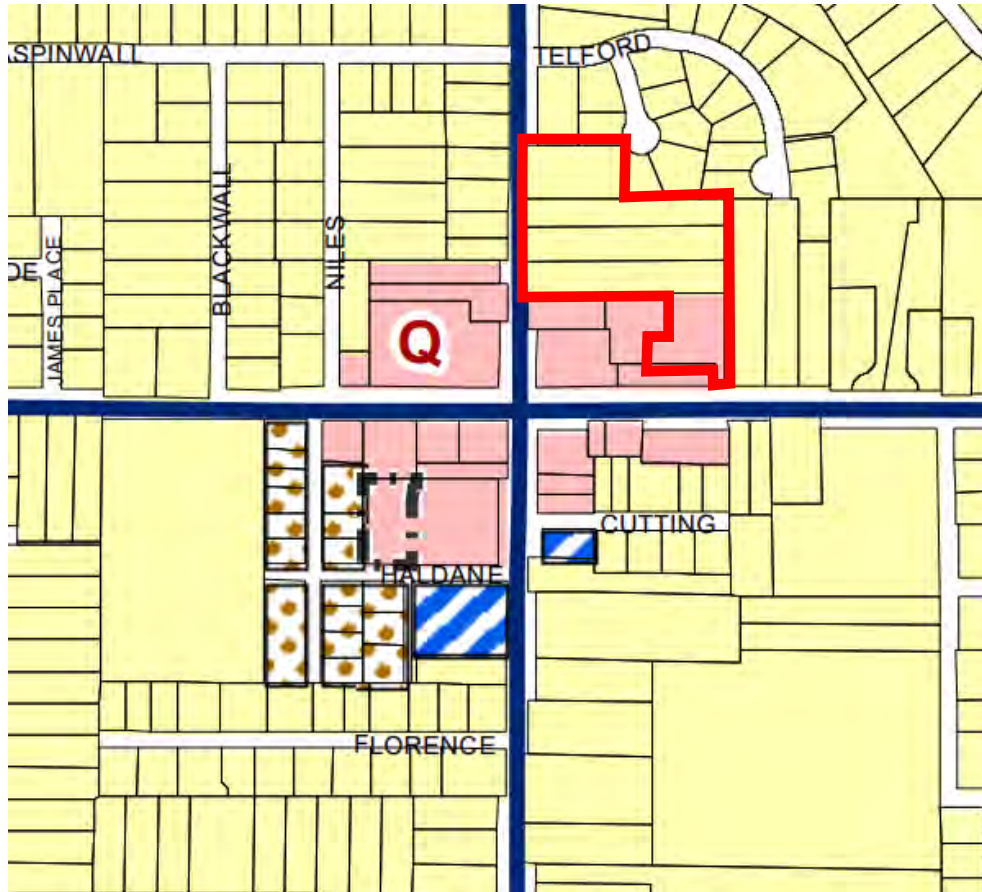
Current Use of Subject Properties:

Single Family Homes and undeveloped land.

Surrounding Property Details:

Direction	Zoning	Use
North	R-1B	Single Family Housing
South	NN-Q	Commercial / Office
East	R-1B	Single Family Housing
West	R-1B / NN-Q	Single Family Housing / Commercial

ZONING



The site includes a mix of zoned R1-B (one family residential) and NN, Neighborhood Node Zoning. Uses along this portion of Livernois and Square Lake Road are primarily low intensity office and retail located near the intersection. Institutional uses exist along Square Lake Road with Troy Preschool to the west of the intersection and Saint Elizabeth Ann Seton Church to the east of the intersection. Newer dense multi-family housing does exist south of the intersection along Livernois.

PUD PROCESS

A Planned Unit Development project is viewed as an integrated development concept. To that end, the provisions of this Article are not intended to be used as a device for avoiding the zoning requirements that would otherwise apply, but rather to allow flexibility and mixture of uses, and to improve the design, character and quality of new development. The use of a Planned Unit Development to permit variations from other requirements of this Ordinance shall only be approved when such approval results in improvements to the public health, safety and welfare in the area affected, and in accordance with the intent of this Article.

The approval of a Planned Unit Development (PUD) is a three-step process:

Step 1-Concept Plan: *The first step shall be application for and approval of a Concept Development Plan, which requires a legislative enactment amending the zoning district map so as to reclassify the property as a Planned Unit Development. A proposed Development Agreement shall be included and incorporated with the Concept Development Plan, to be agreed upon and approved coincident with said Plan. The Concept Development Plan and Development Agreement shall be approved by the City Council following the recommendation of the Planning Commission. Such action, if and when approved, shall confer upon the applicant approval of the Concept Development Plan and shall rezone the property to PUD in accordance with the terms and conditions of the Concept Development Plan approval.*

Step 2- Preliminary Development Plan Approval: *The second step of the review and approval process shall be the application for and approval of a Preliminary Development Plan (preliminary site plan) for the entire project, or for any one or more phases of the project. City Council shall have the final authority to approve and grant Preliminary Development Plan approvals, following a recommendation by the Planning Commission.*

Step 3- Final Development Plan Approval: *The third step of the review and approval process shall be the review and approval of a Final Development Plan (final site plan) for the entire project, or for any one or more phases of the project, and the issuance of building permits. Final Development Plans for Planned Unit Developments shall be submitted to the Zoning Administrator for administrative review, and the Zoning Administrator, with the recommendation of other appropriate City Departments, shall have final authority for approval of such Final Development Plans.*

The applicant is seeking a recommendation of approval for their Preliminary Development Plan.

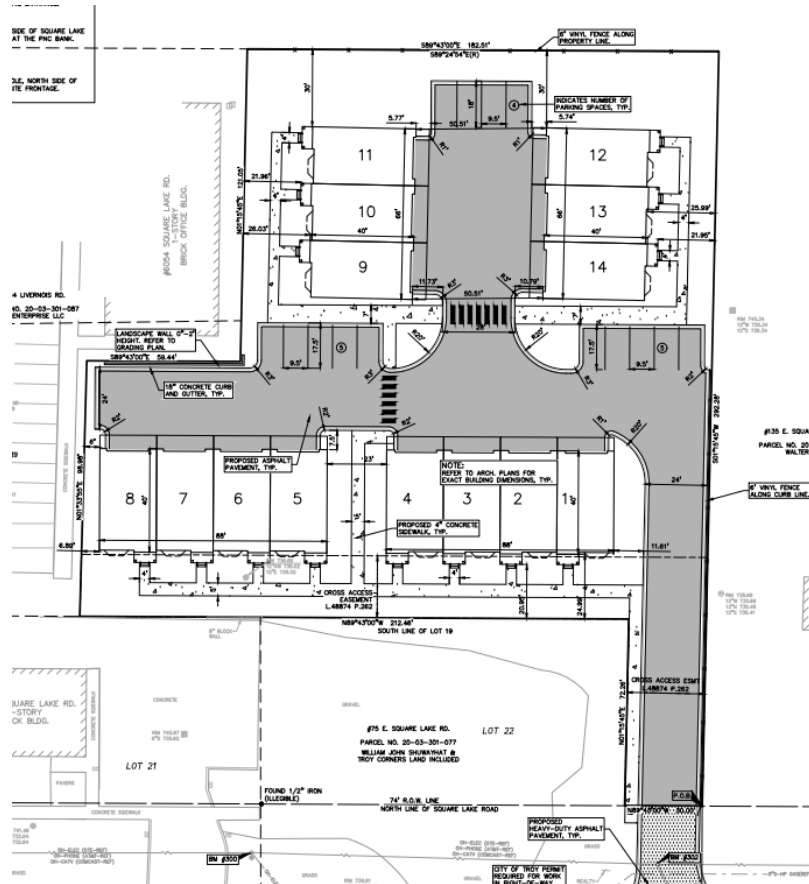
PUD INTENT

As set forth in Section 11.01, the intent of the Planned Unit Development option is to permit flexibility in the design and use of residential and non-residential land which, through the implementation of an overall development plan, when applicable to the site, will:

1. Encourage developments that will result in a long-term contribution to social, environmental and economic sustainability in the City of Troy.
2. Permit development patterns that respond to changing public and private needs.
3. Encourage flexibility in design and use that will result in a higher quality of development and a better overall project than would be accomplished under conventional zoning, and which can be accommodated without sacrificing established community values.
4. Provide for the long-term protection and/or preservation of natural resources, natural features, and/or historic and cultural resources.
5. Promote the efficient use and conservation of energy.
6. Encourage the use, redevelopment and improvement of existing sites where current ordinances do not provide adequate protection and safeguards for the site or its surrounding areas, or where current ordinances do not provide the flexibility to consider redevelopment, replacement, or adaptive re-use of existing structures and sites.
7. Provide for enhanced housing, employment, recreation, and shopping opportunities for the citizens of Troy.
8. Ensure the compatibility of design and use between various components within the PUD and with neighboring properties and uses.
9. Ensure development that is consistent with the intent of the Master Plan.

PREVIOUS PLANNING COMMISSION REVIEWS

The following 14-unit townhome development was approved in 2018:



2018 approved 14-unit site plan.

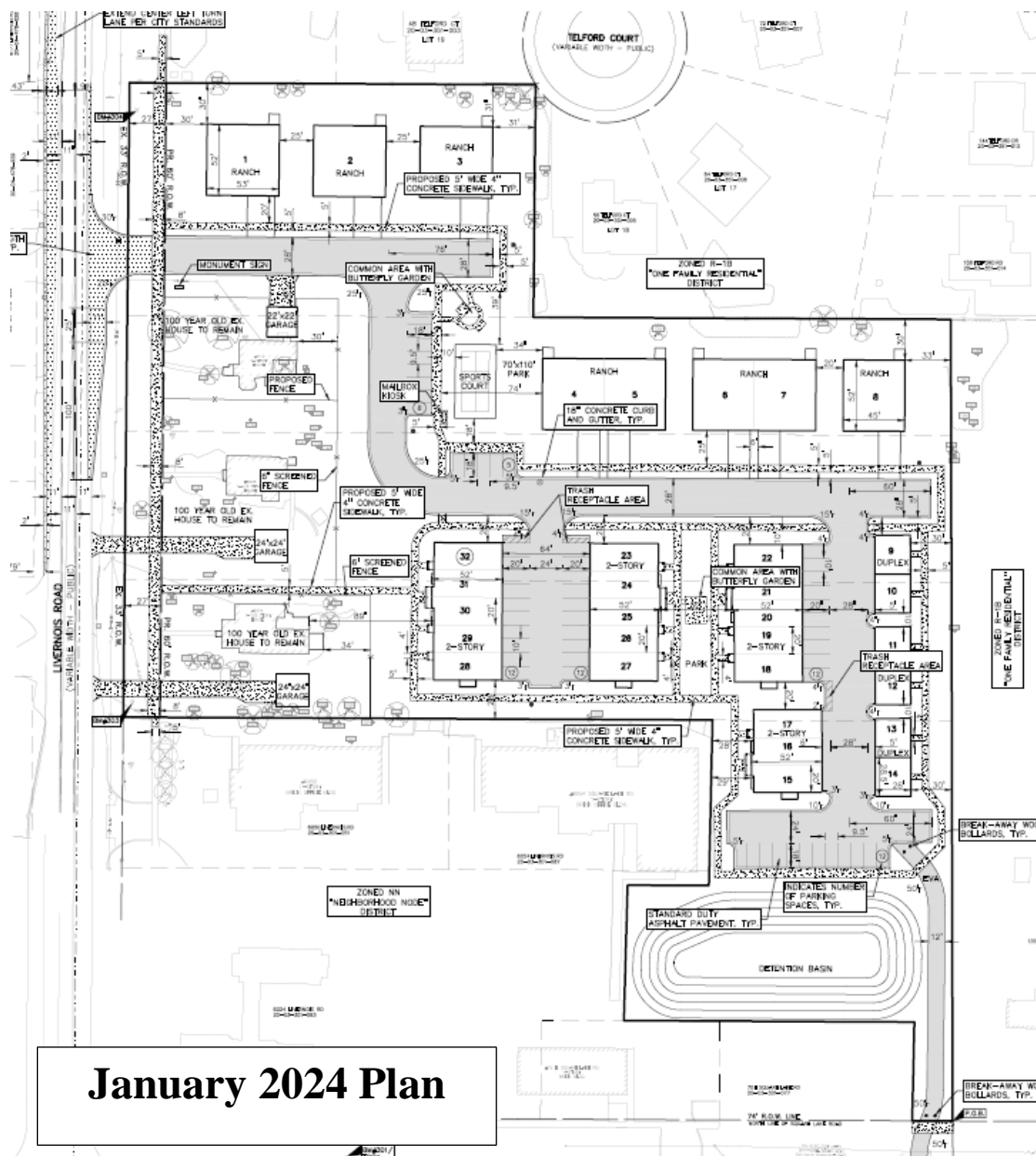
The applicant is revising the approved site layout shown above and expanding the project to the northwest.

The Concept Plan was first reviewed by the Planning Commission in July 2022. Discussion included:

- Previously approved development, housing types, timing and validity of approval, currently in engineering process
- Existing homes; historical in nature, and listed in Historic Preservation Chapter
- Neighborhood Node “Q” toured by Planning Commission and City Council
- Public benefit, preservation of two existing homes, housing types offered
- Intent of PUD development: provide flexibility from Zoning Ordinance regulations to allow a more creative and negotiable product

- Planning Commission members expressed opposition to 3-story tall buildings
- Applicant was encouraged to:
 - Create more green space
 - Retain “old Troy” feel of neighborhood
 - Create a community feel; a village
 - Create a different and unique development
 - Let element of historical homes shine on their own

On January 9, 2024, the Planning Commission considered a revised plan. After public commentary and lengthy deliberation, a vote to recommend approval of the plan to the City Council failed 4-5. No further action was taken.

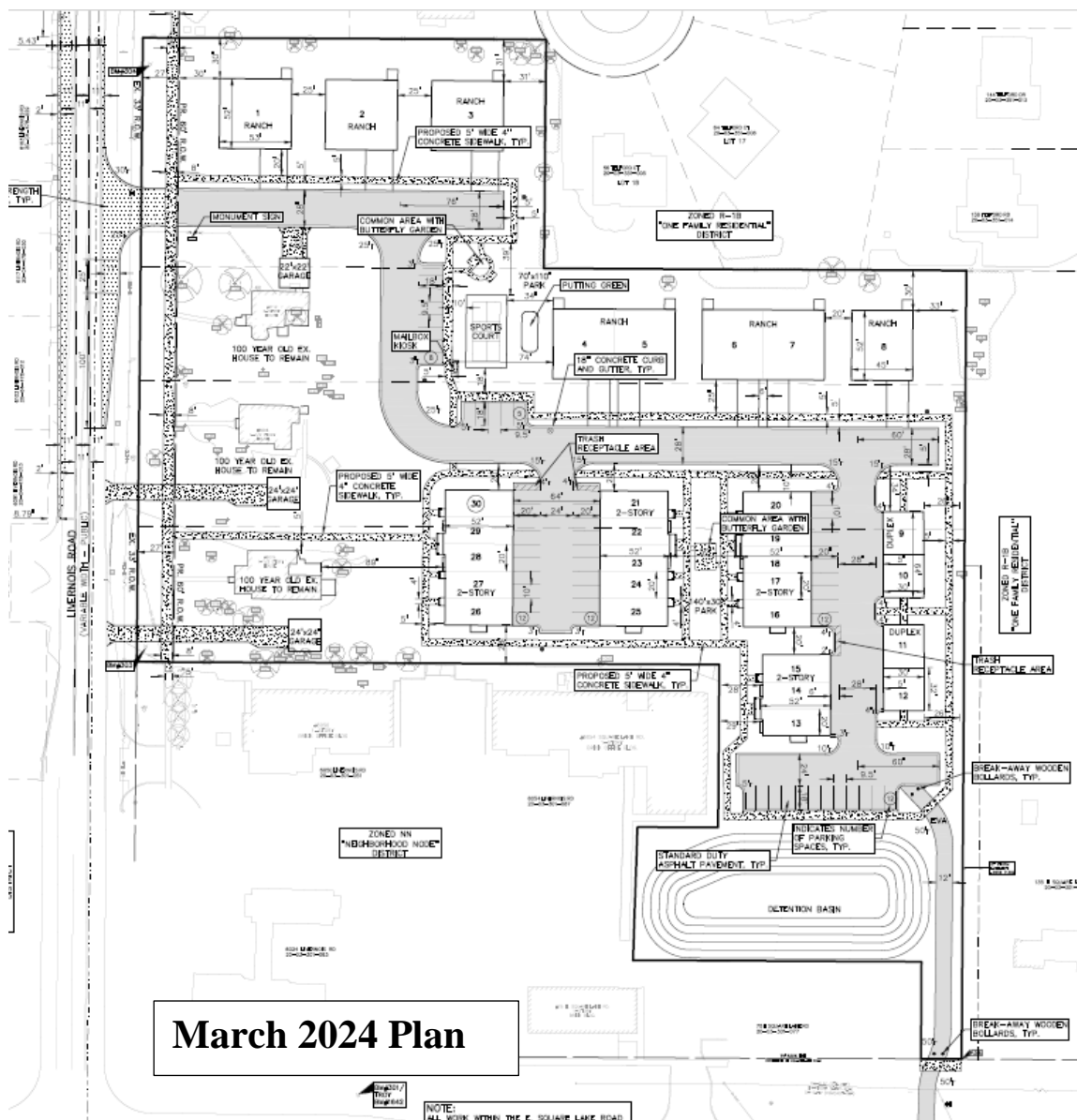


January 2024 Plan

REVISED PLANS

The applicant requested to submit a revised plan for further Planning Commission consideration. Per further discussion at the January 9, 2024 meeting, the applicant provided the following revisions in March 2024:

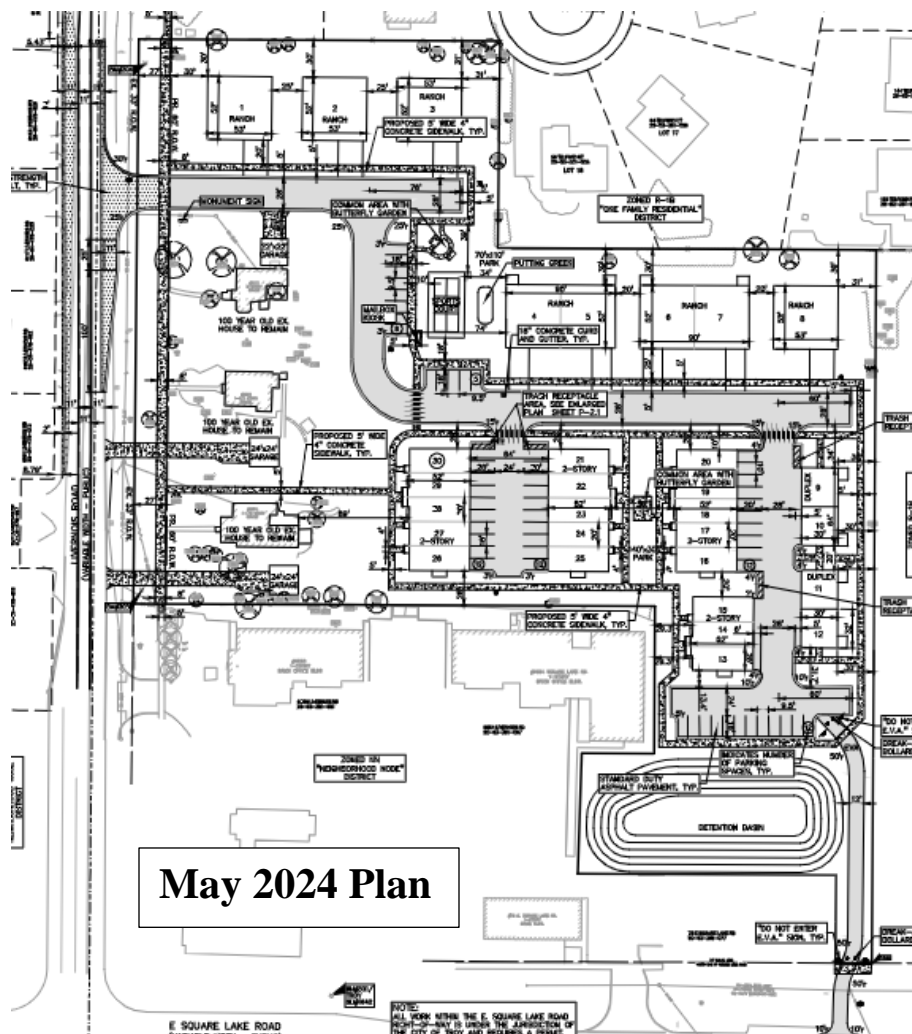
- Removal of the proposed privacy fence between the existing older homes and the adjacent new housing units.
- Reduction of two (2) units. Revisions include the removal of two (2) duplex units on the east side of the development.
- The four (4) remaining duplex units have a new footprint and layout.



The applicant brought the revised site plans to the Planning Commission meeting on April 9, 2024. Discussion at this meeting included:

- Preserving historic nature of older homes through terms in the PUD agreement
- Walkability of the site; extension of sidewalks and inclusion of crosswalks
- EVA (Emergency Vehicle Access); access and signage
- Additional green space, public amenities, and sustainability features
- Trash pickup arrangement
- Design, materials, and color scheme of units
- Inconsistency of building and lot dimension designations on the site plan

On May 14, 2024, the applicant submitted newly revised plans to the City's Planning Department. Through these revised plans, the applicant has addressed several concerns raised at the April 9th meeting, such as EVA access and signage, crosswalks, and the trash pickup arrangement. However, some concerns were not addressed, such as additional green space, public amenities, and sustainability features. These points are discussed further throughout this report.



NATURAL FEATURES

Topography: A topographic survey has been provided on sheet P-1.0. The site is relatively flat with the exception of the southeast corner where a natural depression exists and will be converted into the detention basin.

Wetlands: There are no state regulated wetlands on the site.

Floodplain: The site is not located within a flood hazard zone.

Woodlands: A tree inventory and replacement plan have been provided on Sheet T.1.0-T.1.1. The applicant surveyed a total of 305 trees on site. The composition of trees is predominantly woodland and invasive species with a small amount of landmark trees. Invasive species include silver maples, box elder, black walnut, elm, white mulberry, american elm, norway maple, catalpa, white poplar, green ash and cottonwood. Of the 305 on-site trees, 44 woodland trees and 5 landmark trees will be saved. Preserved trees will be primarily along the borders of the site and adjacent to the three (3) existing homes.

Replacement Details		
Protected Tree	Inches Removed	Replacement Required
Landmark	172 inches	172 inches
Woodland	329 inches	165 inches
Protected Tree	Inches Preserved	Credit
Landmark	94 inches	188 inches
Woodland	440 inches	880 inches
Protected Replacement Required	337 Inches	
Preservation Credit	1,068 Inches	
Total	0 inches of replacement required	
Total Tree Mitigation	0 inches of replacement required	

Items to be Addressed: None.

SITE ARRANGEMENT/SETBACKS/HEIGHT CONSIDERATION

The applicant is proposing to construct thirty (30) new residential units and maintain three (3) existing houses on site. Eight (8) new units will be ranch style single-family homes, eighteen (18) will be two-story attached row homes, and four (4) will be single-family duplex homes. The site currently has four (4) existing single-family homes of which three (3) will be preserved and incorporated into the entire development.

A detention basin is proposed for the southeastern portion of the site, which will be bordered by neighboring properties to the south and west, the site emergency vehicle access drive to the east, and on-site parking to the north. The plans include two (2) outdoor recreational areas: the northern central portion of the site features a sports court, butterfly garden, and putting green; and the southern central portion features a 420 square foot park with butterfly garden.

We note that our previous reports raised concerns about inconsistent setbacks found on the site plans. The applicant has addressed and alleviated these concerns with the latest site plan submitted on May 14, 2024. The applicant has shifted Units 13, 14, and 15, one-foot to the west to provide a compliant 30-foot rear setback.

Items to be Addressed: None.

PARKING

Section 13.06.G of the Zoning Ordinance requires:

	Required	Provided	Complies
Multiple-Family Residential			
1 space per each efficiency dwelling unit 2 spaces per each dwelling unit	2*33 units= 66 spaces	25 surface lot spaces 42 driveway spaces 30 garage spaces = 97 total	Complies

Items to be Addressed: None

SITE ACCESS AND CIRCULATION

Vehicular Access

The site will be accessed from Livernois Road via a two-lane entry. There is a one-lane Emergency Vehicular Access (EVA) proposed from Square Lake Road into the southeastern portion of the development. Based on Planning Commission comments on April 9, 2024, the applicant has provided signage around the EVA to inform that this lane is meant for emergency vehicles only.

Pedestrian Circulation

Five (5) foot wide sidewalks are shown throughout the development providing pedestrian connection to multiple units and open space amenities. To address concerns raised at the April 9, 2024 Planning Commission meeting, the applicant has also provided three (3) crosswalks in areas expected to have heavier pedestrian traffic. One (1) crosswalk connects the sidewalk south of the sports court to the adjacent sidewalk north of Unit 30. On the south side of the main road,

two (2) more crosswalks are provided where the sidewalk ends for vehicular entry into each parking lot.

Items to be Addressed: None.

LANDSCAPING

A landscaping plan has been provided on Sheets L-1.0 and L-1.1. The following table discusses the development’s compliance with the landscape requirements set forth in Section 13.02.

	Required	Provided	Compliance
Greenbelt Planting			
Livernois: 1 tree per 30 feet of frontage	463 / 30 = 15	15	Complies
Property Lines			
<u>North (Residential):</u> 1 large evergreen tree per 10 lineal feet OR 1 narrow evergreen tree per 3 lineal feet	297-feet along western half / 10 = 30 trees	30 large evergreen trees	Complies
	305-feet along eastern half / 10 = 31 trees	31 large evergreen trees	Complies
<u>East (Residential):</u> 1 large evergreen tree per 10 lineal feet OR 1 narrow evergreen tree per 3 lineal feet	170-feet along northern quarter/3 = 57 trees	57 narrow evergreen trees	Complies
	586-feet along southern three quarters/3 = 195 trees	195 narrow evergreen trees	Complies
<u>South (Office):</u> Not required	N/A	2 trees	N/A
Parking Lot			
1 tree per 8 surface lot parking spaces	25 / 8 = 3 trees	None in parking lot; but 52 provided along the road	Complies
Subdivision and Site Condominium Landscaping			
1 tree per 50 lineal feet of public or private road frontage	1,281 LF / 50= 26 trees	52 trees	Complies

Overall			
Site landscaping: A minimum of 20% of the site area shall be comprised of landscape material	20%	26%	Complies

Trash Pickup

Ranch home residents will utilize private trash cans which shall be set along the road for pickup. Then, four (4) trash receptacles are provided within the parking lots for residents in the ROW and duplex style units. The four (4) trash receptacles are dispersed in a manner convenient for all units. We note that initially only three (3) trash receptacles were proposed on-site, and the applicant added a fourth trash receptacle following the April 9th Planning Commission meeting.

Items to be Addressed: None.

TRAFFIC

In an August 23rd, 2023 memo, OHM has reviewed traffic.

Traffic Counts:

Land Use	Number of Units	ITE Land Use Code	Number of Site Generation Trips								
			AM Peak Hour			PM Peak Hour			Daily		
			In	Out	Total	In	Out	Total	In	Out	Total
Single Family Detached	6	210	1	5	6	4	3	7	38	38	76
Single Family Attached	38	215	4	10	14	11	8	19	120	120	240
Site Totals – 44 units			5	15	20	15	11	26	158	158	316

OHM Conclusion

Traffic volumes are closely correlated with the number of residential units. Essentially all the trips generated by the Village of Hastings development will be delivered directly to Livernois Road, an arterial roadway, which will increase slightly over current conditions. The traffic generated by the proposed development would be minimal, adding less than 30 vehicle trips during the peak (“busiest”) hour. This equates to approximately one vehicle every 2-3 minutes during the peak hours. The traffic impact of this site on the adjacent road network is negligible and would be imperceptible to the majority of road users.

Items to be Addressed: None.

PHOTOMETRICS

The types of fixtures and footcandle measurements proposed are compliant with lighting standards. In regard to fixture height, the applicant notes: “No fixture to be mounted greater than 25 feet above grade. Fixtures at sports court to be no more than 15 feet above grade.”

Items to be Addressed: None.

FLOOR PLAN AND ELEVATIONS

Floor Plans

Ranch Unit:

The front façade of the ranch allows entry into the unit via the front door and through the garage. The unit features three (3) bedrooms, two (2) restrooms, a great room, kitchen, nook area, and laundry room. Ranch units can be built with either a 2-car garage or 3-car garage. The applicant has confirmed that this choice shall be made by the buyer at the time of sale. Ranch units with a 3-car garage will be slightly larger in width and will include a covered patio in the rear yard.

Ranch Duplex Unit:

Each ranch duplex unit is accessed via the front door or the 2-car garage. The unit includes (3) bedrooms, two (2) restrooms, a great room, kitchen, nook area, laundry room, and mud room.

2-story Duplex Unit:

The first floor of each 2-story duplex unit includes a 2-car garage, mechanical equipment area, and stairs. The main door entrance is located on the side of the unit. The second floor includes the living room, kitchen, laundry area, two (2) bedrooms, and one (1) restroom.

Multi-Unit ROW Homes/Townhouse:

The first floor of these units is where the 19' x 20' garage, living room, dining area, kitchen, pantry, and one (1) restroom are located. The second floor includes three (3) bedrooms, two (2) restrooms, and a laundry room. One (1) restroom is located in a common area and the other is solely accessible through the primary bedroom.

Elevations

The maximum proposed height of all housing units is 30 feet tall.

Building Materials

Overall, the same general building materials are proposed for all housing types at this development. These materials include asphalt shingles, brick veneer, board and batten siding, painted wood trim, and insulated vinyl windows. The only notable differences in materials are that the ROW homes also contain limestone veneer and the ranch duplexes have a couple of small areas with metal roofing. Colored renderings indicate that all housing types shall have a similar color scheme, including shades of red, orange, brown, white, gray, and black.

We note that since the April 9th Planning Commission meeting, the applicant has revised aspects of the building design to address architectural concerns. The “snout nose” appearance of the ranch units has been reduced, and more windows and architectural details have been incorporated to enhance natural light and building appearance. See the latest colored renderings below.

Rendering of Detached Ranch Unit, Dated May 14, 2024.



Rendering of Ranch Duplex Unit, Dated May 14, 2024.



Rendering of 2-story Duplex Unit, Dated May 14, 2024.



Rendering of Multi-Unit Townhouse, Dated May 14, 2024.



In light of these changes, we recommend the Planning Commission evaluate the proposed architecture in accordance with Site Plan Review Design Standards of Section 8.06.

Items to be Addressed: *Planning Commission to evaluate proposed architecture in accordance with Site Plan Review Design Standards of Section 8.06.*

PUD STANDARDS

As set forth in section 11.03, Standards for Approval, it should be demonstrated that the following standards will be met, as reasonably applicable to the site:

1. *The applicant shall demonstrate that through the use of the PUD option, the development will accomplish a sufficient number of the following objectives, as are reasonably applicable to the site, providing:*
2. *A mixture of land uses that would otherwise not be permitted without the use of the PUD provided that other objectives of this Article are also met.*
3. *A public improvement or public facility (e.g. recreational, transportation, safety and security) which will enhance, add to or replace those provided by public entities, thereby furthering the public health, safety and welfare.*
4. *A recognizable and material benefit to the ultimate users of the project and to the community, where such benefit would otherwise be infeasible or unlikely to be achieved absent these regulations.*
5. *Long-term protection and preservation of natural resources, natural features, and historic and cultural resources, of a significant quantity and/or quality in need of protection or preservation, and which would otherwise be unfeasible or unlikely to be achieved absent these regulations.*
6. *A compatible mixture of open space, landscaped areas, and/or pedestrian amenities.*
7. *Appropriate land use transitions between the PUD and surrounding properties.*
8. *Design features and techniques, such as green building and low impact design, which will promote and encourage energy conservation and sustainable development.*
9. *Innovative and creative site and building designs, solutions and materials.*
10. *The desirable qualities of a dynamic urban environment that is compact, designed to human scale, and exhibits contextual integration of buildings and city spaces.*
11. *The PUD will reasonably mitigate impacts to the transportation system and enhance non-motorized facilities and amenities.*
12. *For the appropriate assembly, use, redevelopment, replacement and/ or improvement of existing sites that are occupied by obsolete uses and/or structures.*
13. *A complementary variety of housing types that is in harmony with adjacent uses.*
14. *A reduction of the impact of a non-conformity or removal of an obsolete building or structure.*
15. *A development consistent with and meeting the intent of this Article, which will promote the intent of the Master Plan or the intent of any applicable corridor or sub-area plans. If conditions have changed since the Plan, or any applicable corridor or sub-area plans were adopted, the uses shall be consistent with recent development trends in the area.*
16. *Includes all necessary information and specifications with respect to structures, heights, setbacks, density, parking, circulation, landscaping, amenities and other design and layout features, exhibiting a due regard for the relationship of the development to the surrounding properties and uses thereon, as well as to the relationship between the various elements within the proposed Planned Unit Development. In determining whether these relationships have been appropriately addressed, consideration shall be given to the following:*
 - a. *The bulk, placement, and materials of construction of the proposed structures and other site improvements.*
 - b. *The location and screening of vehicular circulation and parking areas in relation to surrounding properties and the other elements of the development.*

- c. *The location and screening of outdoor storage, loading areas, outdoor activity or work areas, and mechanical equipment.*
 - d. *The hours of operation of the proposed uses.*
 - e. *The location, amount, type and intensity of landscaping, and other site amenities.*
17. *Parking shall be provided in order to properly serve the total range of uses within the Planned Unit Development. The sharing of parking among the various uses within a Planned Unit Development may be permitted. The applicant shall provide justification to the satisfaction of the City that the shared parking proposed is sufficient for the development and will not impair the functioning of the development, and will not have a negative effect on traffic flow within the development and/or on properties adjacent to the development.*
18. *Innovative methods of stormwater management that enhance water quality shall be considered in the design of the stormwater system. 18. The proposed Planned Unit Development shall be in compliance with all applicable Federal, State and local laws and ordinances, and shall coordinate with existing public facilities.*

SITE PLAN REVIEW STANDARDS

Site Plan review standards provide the Planning Commission with direction when reviewing the proposed site plan and design features of this development.

Section 8.06 outlines Site Plan Review Design Standards.

1. *Development shall ensure compatibility to existing commercial districts and provide a transition between land uses.*
 - a. *Building design shall enhance the character of the surrounding area in relation to building and parking placement, landscape and streetscape features, and architectural design.*
 - b. *Street fronts shall provide a variety of architectural expression that is appropriate in its context and prevents monotony.*
 - c. *Building design shall achieve a compatible transition between areas with different height, massing, scale, and architectural style.*
2. *Development shall incorporate the recognized best architectural building design practices.*
 - a. *Foster a lasting impact on the community through the provision of high quality design, construction, and detailing.*
 - b. *Provide high quality, durable materials, such as but not limited to stone, brick, glass, and metal. E.I.F.S. or material equivalent shall only be used as an accent material.*
 - c. *Develop buildings with creativity that includes balanced compositions and forms.*
 - d. *Design roofs that are appropriate to the architectural style of the building and create an appropriate visual exterior mass of the building given the context of the site.*

- e. *For commercial buildings, incorporate clearly defined, highly visible customer entrances using features such as canopies, porticos, arcades, arches, wing walls, ground plane elements, and/or landscape planters.*
 - f. *Include community amenities that add value to the development such as patio/seating areas, water features, art work or sculpture, clock towers, pedestrian plazas with park benches or other features located in areas accessible to the public.*
3. *Enhance the character, environment and safety for pedestrians and motorists.*
- a. *Provide elements that define the street and the pedestrian realm.*
 - b. *Create a connection between the public right of way and ground floor activities.*
 - c. *Create a safe environment by employing design features to reduce vehicular and pedestrian conflict, while not sacrificing design excellence.*
 - d. *Enhance the pedestrian realm by framing the sidewalk area with trees, awnings, and other features.*
 - e. *Improve safety for pedestrians through site design measures.*

SUMMARY

The Planning Commission has seen several revisions of the proposed project. We recommend the Planning Commission discuss whether the current proposal is consistent with the Master Plan, whether it meets the site plan design standards, and whether it meets the PUD standards.

Sincerely,



CARLISLE/WORTMAN ASSOC., INC.
Benjamin R. Carlisle, AICP, LEED AP
President



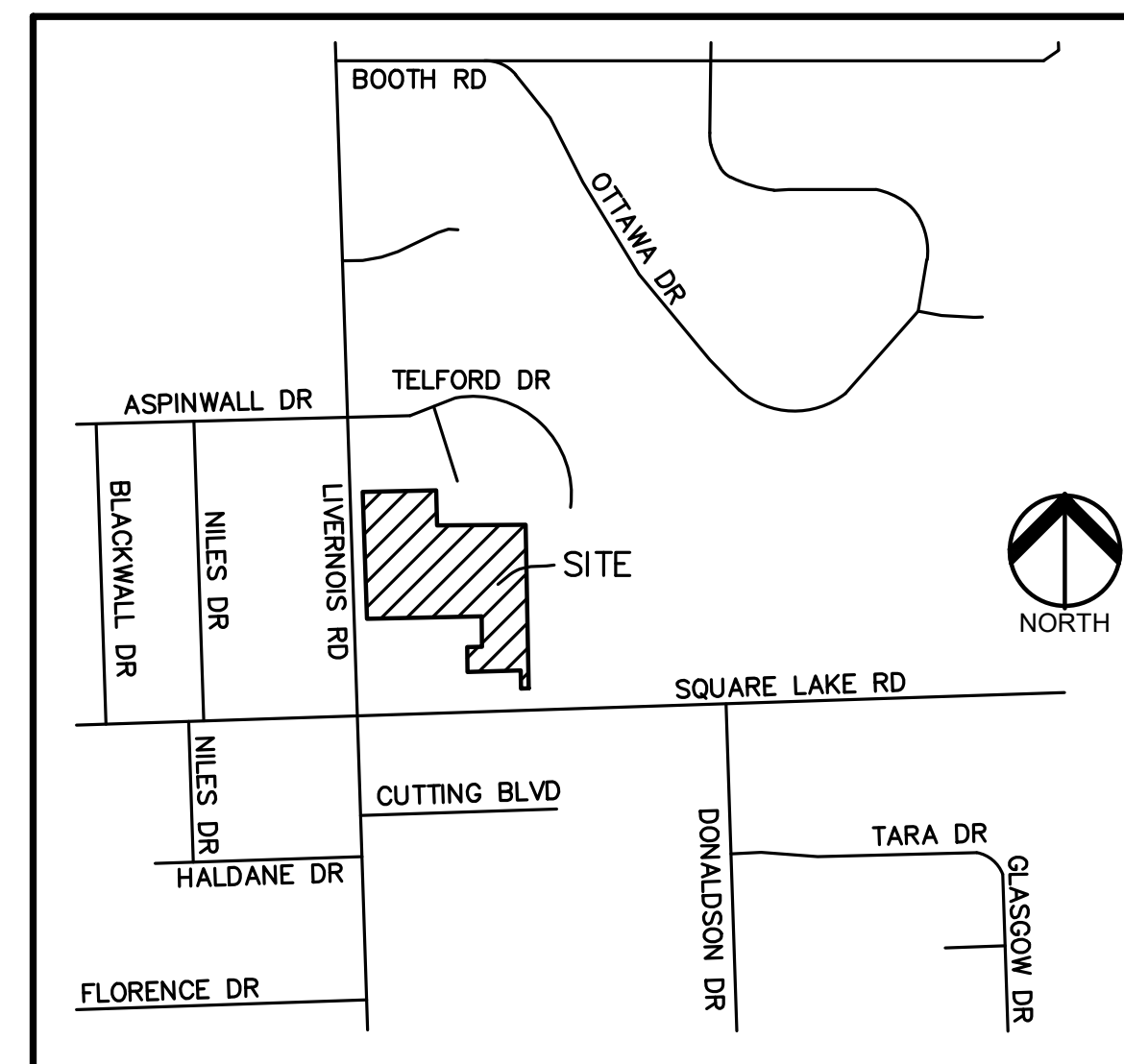
CARLISLE/WORTMAN ASSOC., INC.
Shana Kot
Community Planner

PLANNED UNIT DEVELOPMENT
CONCEPT DEVELOPMENTAL PLAN

THE VILLAGE OF HASTINGS

PART OF THE SW 1/4 OF SECTION 3, T. 02N., R. 11E.,
CITY OF TROY, OAKLAND COUNTY, MICHIGAN

PERMIT / APPROVAL SUMMARY		
DATE SUBMITTED	DATE APPROVED	PERMIT / APPROVAL



LOCATION MAP
NO SCALE

INDEX OF DRAWINGS	
NUMBER	TITLE
	COVER SHEET
P-1.0	TOPOGRAPHIC SURVEY
P-2.0	PRELIMINARY SITE PLAN
P-2.1	ADDITIONAL SITE DETAILS
P-2.2	TRASH VEHICLE CIRCULATION PLAN
P-3.0	PRELIMINARY GRADING PLAN
P-4.0	PRELIMINARY UTILITY PLAN
L-1.0	PRELIMINARY LANDSCAPE PLAN
L-1.1	LANDSCAPE DETAILS
T-1.0	TREE PRESERVATION PLAN
T-1.1	TREE PRESERVATION LIST
<u>ARCHITECTURAL PLANS</u>	
A100	FIRST FLOOR UNIT PLAN
A200	ELEVATIONS
A300	3D VIEWS
A100	FIRST FLOOR UNIT PLAN
A200	ELEVATIONS - OPTION A
A200	ELEVATIONS - OPTION B
A300	3D VIEWS - OPTION A
A300	3D VIEWS - OPTION B
A100	FIRST FLOOR UNIT PLAN
A200	ELEVATIONS
A300	3D VIEWS
A101	FIRST FLOOR UNIT PLANS
A102	STANDARD SECOND FLOOR UNIT PLANS
A200	STANDARD NORTH & SOUTH ELEVATIONS
A201	STANDARD EAST & WEST ELEVATION
A400	STANDARD AXONMETRIC VIEWS
A100	FIRST FLOOR PLAN
A101	SECOND FLOOR PLAN
A200	ELEVATIONS
A300	3D VIEWS

DESIGN TEAM

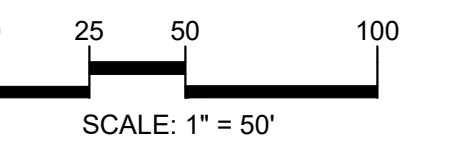
OWNER/APPLICANT/DEVELOPER	CIVIL ENGINEER
GFA DEVELOPMENT, INC. 986 ELMSFORD DRIVE TROY, MI 48063 CONTACT: GARY ABITHEIRA PHONE: 248.840.2828 EMAIL: GABITHEIRA@WIDOPENWEST.COM	PEA GROUP 1849 POND RUN AUBURN HILLS, MI 48326 CONTACT: JOHN B. THOMPSON, PE PHONE: 844.813.2949 EMAIL: JTHOMPSON@PEAGROUP.COM

ARCHITECT	LANDSCAPE ARCHITECT
MOISEEV/GORDON ASSOCIATES, INC. 4351 DELEMERE COURT ROYAL OAK, MI 48073 CONTACT: ANDREW MOISEEV, RA PHONE: 248.549.4500 EMAIL: ANDREW@MGA-ARCHITECTS.NET	PEA GROUP 45 W. GRAND RIVER AVE., STE. 501 DETROIT, MI 48226 CONTACT: KIMBERLY DIETZEL, RLA PHONE: 844.813.2949 EMAIL: KDIEZEL@PEAGROUP.COM



REVISIONS		
DESCRIPTION	DATE	
ORIGINAL ISSUE DATE	6/1/2023	
REVISED PER PLANNER COMMENTS DATED 6/2/2023	8/9/2023	
REVISED PER PLANNER COMMENTS DATED 8/24/2023	11/17/2023	
REVISED PER PLANNING COMMISSION COMMENTS DATED 11/28/2023	12/7/2023	
REVISED PER PLANNING COMMISSION COMMENTS DATED 1/9/2024	1/24/2024	
REVISED PER PLANNING COMMISSION COMMENTS DATED 4/9/2024	4/22/2024	
REVISED PER PLANNING REVIEW DATED 3/15/2024	4/23/2024	
REVISED PER PLANNING COMMENTS DATED 5/6/2024	5/13/2024	





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CLIENT
GFA DEVELOPMENT, INC.
5301 MIRAGE DRIVE
TROY, MI 48063

PROJECT TITLE
THE VILLAGE OF HASTINGS
PART OF THE SW 1/4 OF SECTION 3, T. 02N., R. 11E., TROY, MI

REVISIONS

REV. PER COMMENTS 6/2/2023	8/9/2023
REV. PER COMMENTS 8/24/2023	11/17/2023
REV. PER PC COMMENTS 11/28/2023	12/7/2023
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REV. PER PC COMMENTS 4/9/2024	4/22/2024
REV. PER REVIEW 3/15/2024	4/23/2024
REV. PER PLANNING 5/6/2024	5/13/2024

ORIGINAL ISSUE DATE:
JUNE 1, 2023

DRAWING TITLE
TOPOGRAPHIC SURVEY

PEA JOB NO.	2017-009
P.M.	KR
DN.	EH
DES.	EH
DRAWING NUMBER:	

LEGEND

- IRON FOUND
 - ⊗ IRON SET
 - NAIL FOUND
 - ⊗ NAIL & CAP SET
 - ⊗ BRASS PLUG SET
 - ⊗ MONUMENT FOUND
 - ⊗ MONUMENT SET
 - ⊗ SEC. CORNER FOUND
 - R RECORDED
 - M MEASURED
 - C CALCULATED
- EXISTING**
- OH-ELEC—W—W— ELEC. PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
 - UG-CATV— UG. CABLE TV, CATV PEDESTAL
 - ⊗-UG-PHONE-⊗ TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
 - ⊗-UG-ELEC-⊗ ELECTRIC U.G. CABLE, MANHOLE, METER & MANHOLE
 - ⊗-GAS VALVE & GAS LINE MARKER
 - ⊗ WATER MAIN, HYD. GATE VALVE, TAPPING BLEEVE & VALVE
 - ⊗ SANITARY SEWER, CLEANOUT & MANHOLE
 - ⊗ STORM SEWER, CLEANOUT & MANHOLE
 - ⊗ COMBINED SEWER & MANHOLE
 - ⊗ SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN
 - ⊗ POST INDICATOR VALVE
 - ⊗ WATER VALVE BODY/HYDRANT VALVE BOX, SERVICE SHUTOFF
 - ⊗ MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
 - ⊗ UNIDENTIFIED STRUCTURE
 - ⊗ SPOT ELEVATION
 - 670— CONTOUR LINE
 - X—X— FENCE
 - X—X— GUARDRAIL
 - X—X— STREET LIGHT
 - X—X— SIGN
 - CONC. CONCRETE
 - ASPH. ASPHALT
 - GRAVEL SHOULDER GRAVEL SHOULDER
 - WETLAND WETLAND

REFERENCE DRAWINGS

- PRELIMINARY ALTA/NSPS SURVEY, PEA JOB NO. 2017-009, DATED JANUARY 24, 2018
- COMCAST MAP NO. 1319-404, DATED 4/03/07
- DTG MAP 316-404 & 319-404, DATED 2/15/2017
- ELECTRIC AT&T SKETCH VIA EMAIL, DATED 01/15/2017
- GAS CONSUMERS ENERGY QUARTER SECTION MAP NO. 02-61-03-3, DATED 10-16-14
- CITY OF TROY GIS ONLINE
- CITY OF TROY GIS ONLINE
- CITY OF TROY GIS ONLINE
- CITY OF TROY GIS ONLINE
- OKLAHOMA COUNTY WATER RESOURCES COMMISSION - KING DRAIN MAP SHEET #11 SW SECTION 3
- KING DRAIN, OKLAHOMA COUNTY DRAIN COMMISSIONER JOB NO. 88019, SHEET NO. 3, DATED 09-10-93, 43'-BUILT 09-10-98
- STORM DRAIN SYSTEMS, SHEET 011, WATER RESOURCES COMMISSIONER

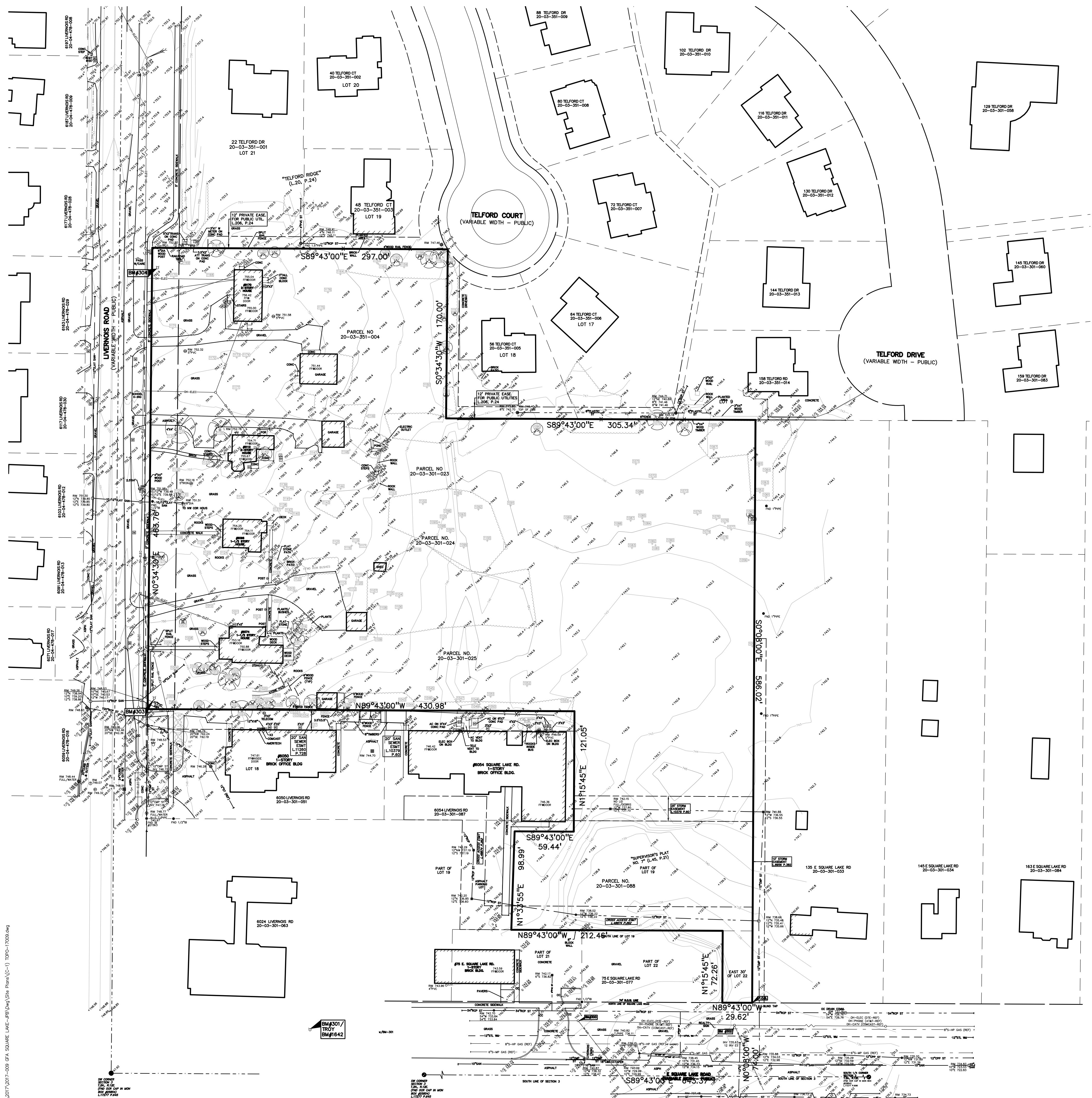
Legal Description

(Combined Parcel Per PEA Group)

Part of Lots 19 and 22 of "Supervisors Plat No. 7" as recorded in Liber 45 on pages 21 and 21A, Oakland County Records, together with part of the Southwest 1/4 of Section 3, Town 2 North, Range 11 East, City of Troy, Oakland County Michigan and being more particularly described as Commencing at the Southwest Corner of said Section 3; thence along the south line of said section, S89°43'00"E, 643.50 feet; thence N00°08'00"W, 74.00 feet to the north line of East Square Lake Road, 74' half width; thence along said north line, N89°43'00"W, 29.62 feet; thence N01°15'45"E, 72.26 feet to the north line of said Lot 22, said line also being the south line of said Lot 19; thence along said south line N89°43'00"W, 212.46 feet; thence N01°33'55"E, 98.99 feet; thence S89°43'00"E, 59.44 feet; thence N01°15'45"E, 121.05 feet to the easterly extension of the north line of Lot 18 of said Supervisors Plat; thence along said line, N89°43'00"W, 430.98 feet to the east line of Livernois Road, 33' half width; thence along said east line, N00°34'30"E, 483.76 feet to the easterly extension of the south line of "Telford Ridge" as recorded in Liber 206, page 24 Oakland County Records; thence along said south line, S89°43'00"E, 297.00 feet to the west line of said Telford Ridge; thence along said west line, S00°34'30"W, 170.00 feet to the south line of said Telford Ridge, said line also being the north line of the south 660 feet of the southwest 1/4 of said Section 3; thence along said south line, S89°43'00"E, 305.34 feet to the west line of tax parcel 20-03-301-033; thence along said west line, S00°08'00"E, 586.02 feet to the aforementioned north line of East Square Lake Road and the Point of Beginning. Containing 6.313 acres of land more or less.

BENCHMARKS

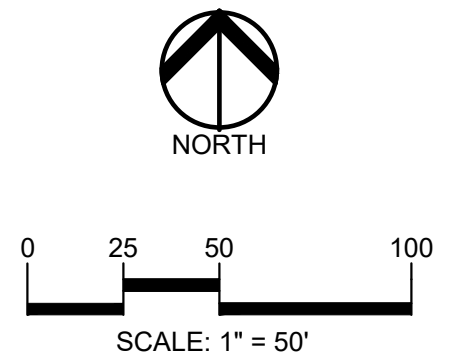
- (CITY OF TROY DATUM)
- BM #300 SET BENCHMARK IN SOUTHEAST FACE OF POWER LIGHT POLE, NORTH SIDE OF SQUARE LAKE ROAD APPROX. 70' SOUTHEAST OF SOUTHEAST BUILDING CORNER OF JOHN'S MARKET AT EAST SIDE OF DRIVE ENTRANCE. ELEV. - 743.36
 - BM #301 - CITY OF TROY BM #1642 ARROW ON A HYDRANT LOCATED ON THE NORTH SIDE OF SQUARE LAKE ROAD, APPROX. 200' EAST OF LIVERNOIS ROAD AT THE PNC BANK. ELEV. - 750.08
 - BM #302 FOUND BOAT SPIKE IN SOUTH FACE OF UTILITY POLE, NORTH SIDE OF SQUARE LAKE ROAD, AT THE CENTERLINE OF 30' WIDE SITE FRONTAGE. ELEV. - 737.51
 - BM #303 ARROW ON HYDRANT, EAST SIDE OF LIVERNOIS, APPROX. 75' SOUTHWEST OF #6074 LIVERNOIS. ELEV. - 750.66
 - BM #304 ARROW ON HYDRANT, EAST SIDE OF LIVERNOIS, APPROX. 80' WEST OF #6170 LIVERNOIS. ELEV. - 755.18



NOT FOR CONSTRUCTION

P-1.0

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REV. PER PC COMMENTS 4/9/2024	4/22/2024
REV. PER REVIEW 3/15/2024	4/23/2024
REV. PER PLANNING 5/6/2024	5/13/2024

ORIGINAL ISSUE DATE:
JUNE 1, 2023

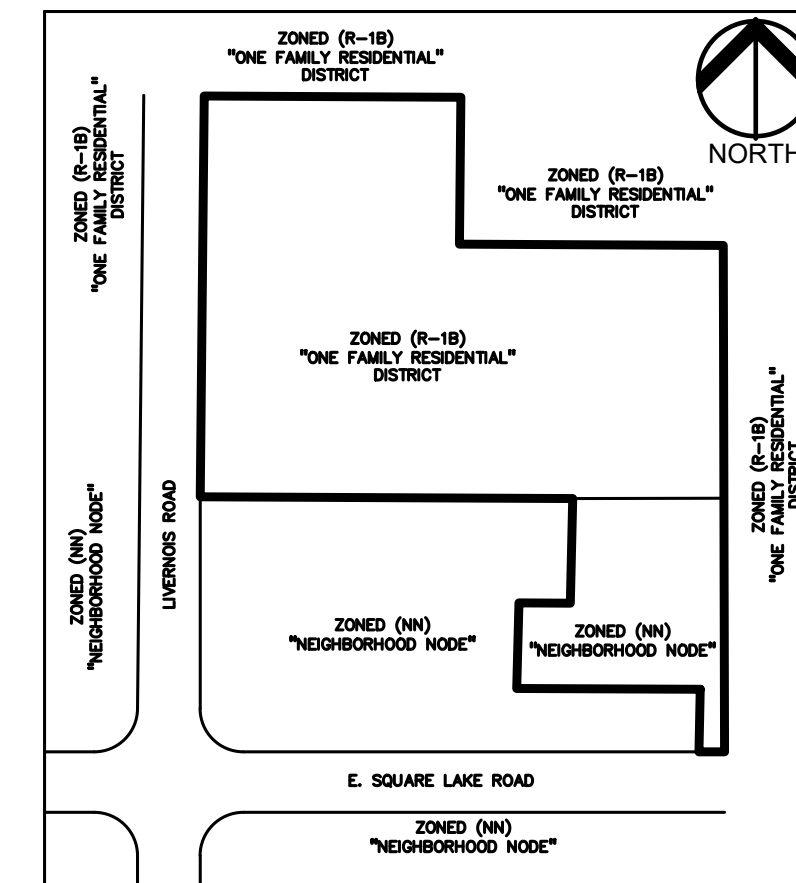
DRAWING TITLE
PRELIMINARY SITE PLAN

PEA JOB NO.	2017-009
P.M.	JBT
DN.	KMB
DES.	DSK
DRAWING NUMBER:	

P-2.0

LEGEND

- | | | |
|------------------|------------------|---------------------|
| ● IRON FOUND | ⊗ BRASS PLUG SET | ⊙ SEC. CORNER FOUND |
| ⊗ IRON SET | ⊗ MONUMENT FOUND | ⊙ R. RECORDED |
| ⊗ NAIL FOUND | ⊗ MONUMENT SET | ⊙ M. MEASURED |
| ⊗ NAIL & CAP SET | | ⊙ C. CALCULATED |
-
- | | |
|-------------|--|
| — OH-ELEC— | ELEC. PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE |
| — UG-CATV— | UNDERGROUND CABLE TV, CATV PEDESTAL |
| — UG-PHONE— | TELEPHONE U.G. CABLE, MANHOLE, METER & MANHOLE |
| — UG-ELEC— | ELECTRIC U.G. CABLE, MANHOLE, METER & MANHOLE |
| — GAS— | GAS MAIN, VALVE & GAS LINE MARKER |
| — W— | WATERMAIN, HYD. GATE VALVE, TAPPING GLEEVE & VALVE |
| — S— | SANITARY SEWER, CLEANOUT & MANHOLE |
| — ST— | STORM SEWER, CLEANOUT & MANHOLE |
| — CS— | COMBINED SEWER & MANHOLE |
| — S&W— | SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN |
| — R— | POST INDICATOR VALVE |
| — W— | WATER VALVE BODY/DRYANT VALVE BOX, SERVICE SHUTOFF |
| — M— | MAILBOX, TRANSFORMER, IRRIGATION CONTROL VALVE |
| — U— | UNIDENTIFIED STRUCTURE |
| — S— | SPOT ELEVATION |
| — C— | CONTOUR LINE |
| — F— | FENCE |
| — G— | GUARD RAIL |
| — S— | STREET LIGHT |
| — S— | SIGN |
| — C— | CONCRETE |
| — A— | ASPHALT |
| — G— | GRAVEL SHOULDER |
| — W— | WETLAND |
-
- | | |
|--------|----------|
| — 670— | PROPOSED |
| — 671— | PROPOSED |
| — 672— | PROPOSED |
| — 673— | PROPOSED |
| — 674— | PROPOSED |
| — 675— | PROPOSED |
| — 676— | PROPOSED |
| — 677— | PROPOSED |
| — 678— | PROPOSED |
| — 679— | PROPOSED |
| — 680— | PROPOSED |
| — 681— | PROPOSED |
| — 682— | PROPOSED |
| — 683— | PROPOSED |
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| — 692— | PROPOSED |
| — 693— | PROPOSED |
| — 694— | PROPOSED |
| — 695— | PROPOSED |
| — 696— | PROPOSED |
| — 697— | PROPOSED |
| — 698— | PROPOSED |
| — 699— | PROPOSED |
| — 700— | PROPOSED |



ZONING SKETCH
NOT TO SCALE

SITE DATA:

LOCATION OF PROJECT:
LIVERNOIS ROAD, NORTH OF SQUARE LAKE ROAD

SIZE OF PROPERTY: 6.31 ACRES GROSS, 6.05 ACRES NET

PROPOSED USE OF PROPERTY: THREE (3) EXISTING HOMES TO REMAIN, EIGHT (8) RANCH STYLE SINGLE FAMILY HOMES, EIGHTEEN (18) 2 STORY ATTACHED SINGLE FAMILY HOMES, FOUR (4) SINGLE FAMILY DUPLEX HOMES.

CURRENT ZONING: R-1B, ONE-FAMILY RESIDENTIAL DISTRICT AND (NN) NEIGHBORHOOD NODE Q, SITE TYPE NN-B, BUILDING FORM: C

PROPOSED ZONING: PUD, PLANNED RESIDENTIAL DEVELOPMENT

SUBROUNDING PROPERTY DETAILS:

DIRECTION	ZONING	USE
NORTH	R-1B, ONE-FAMILY RESIDENTIAL DISTRICT	SINGLE-FAMILY HOMES
SOUTH	COMMERCIAL	COMMERCIAL
EAST	R-1B, ONE-FAMILY RESIDENTIAL DISTRICT	SINGLE-FAMILY HOMES
WEST	NEIGHBORHOOD NODE Q	COMMERCIAL

REQUIRED AND PROVIDED LOT DIMENSIONS:

	REQUIRED:	PROVIDED:
FRONT	10'(NN) & 40'(R-1B) SETBACK	30' SETBACK
REAR	30'(NN) & 45'(R-1B) SETBACK	30' SETBACK
SIDES	N/A(NN) & 12.5'(R-1B) SETBACK	29.3' SETBACK
MAXIMUM HEIGHT	4 STORIES/55'(NN), 2.5 STORIES/30'(R-1B)	30 FEET, 2 STORY
OPEN SPACE	15%(NN)	26%
LOT COVERAGE BY ALL BLDGS	30%(NN)	18%

PARKING:
REQUIRED: 2 SPACES PER DWELLING UNIT = 2 SPACES x 30 UNITS = 60 REQUIRED PARKING SPACES
PROVIDED: 25 SURFACE LOT SPACES + 42 DRIVEWAY SPACES + 30 GARAGES SPACES = 97 PARKING SPACES

PROJECT AND SITE DESCRIPTION:
PROPOSED DEVELOPMENT OF A 33-UNIT RESIDENTIAL CONDOMINIUM LOCATED ON LIVERNOIS ROAD NORTH OF SQUARE LAKE ROAD. THE SITE CONSISTS OF 26 ATTACHED UNITS AND 4 DETACHED SINGLE FAMILY UNITS, ACCOMPANYING THE DEVELOPMENT IS THE PRESERVATION OF 3 CENTENNIAL SINGLE FAMILY HOMES. ACCESS TO ALL UNITS WILL BE VIA CONNECTION TO LIVERNOIS ROAD, WITH TWO OF THE PRESERVED HOUSES HAVING DIRECT ACCESS TO LIVERNOIS, AND AN EMERGENCY VEHICLE ACCESS (EVA) WILL BE PROVIDED TO SQUARE LAKE ROAD. THE PROPOSED RESIDENTIAL USE IS PERMITTED BY-RIGHT IN THE (NN) NEIGHBORHOOD NODE Q DISTRICT AND THE R-1B PORTION OF THE SITE. DUE TO THE MIXED HOUSING PRODUCTS AND MIXED ZONING A PUD IS PROPOSED FOR THIS PROPERTY.

NATURAL RESOURCES:
THE SITE CURRENTLY HAS MODERATE TREE COVER.

FLOODPLAIN:
THE PROPERTY IS NOT LOCATED WITHIN THE FLOOD HAZARD AREA INDICATED BY FLOOD INSURANCE RATE MAP (FIRM) NO. 26125C0532Z DATED: SEPTEMBER 29, 2006 (ZONE X).

WETLAND:
PER THE 2022 SEMCOG WETLAND DATA, THE SITE CONTAINS NO WETLANDS.

ACCESS AND CIRCULATION:

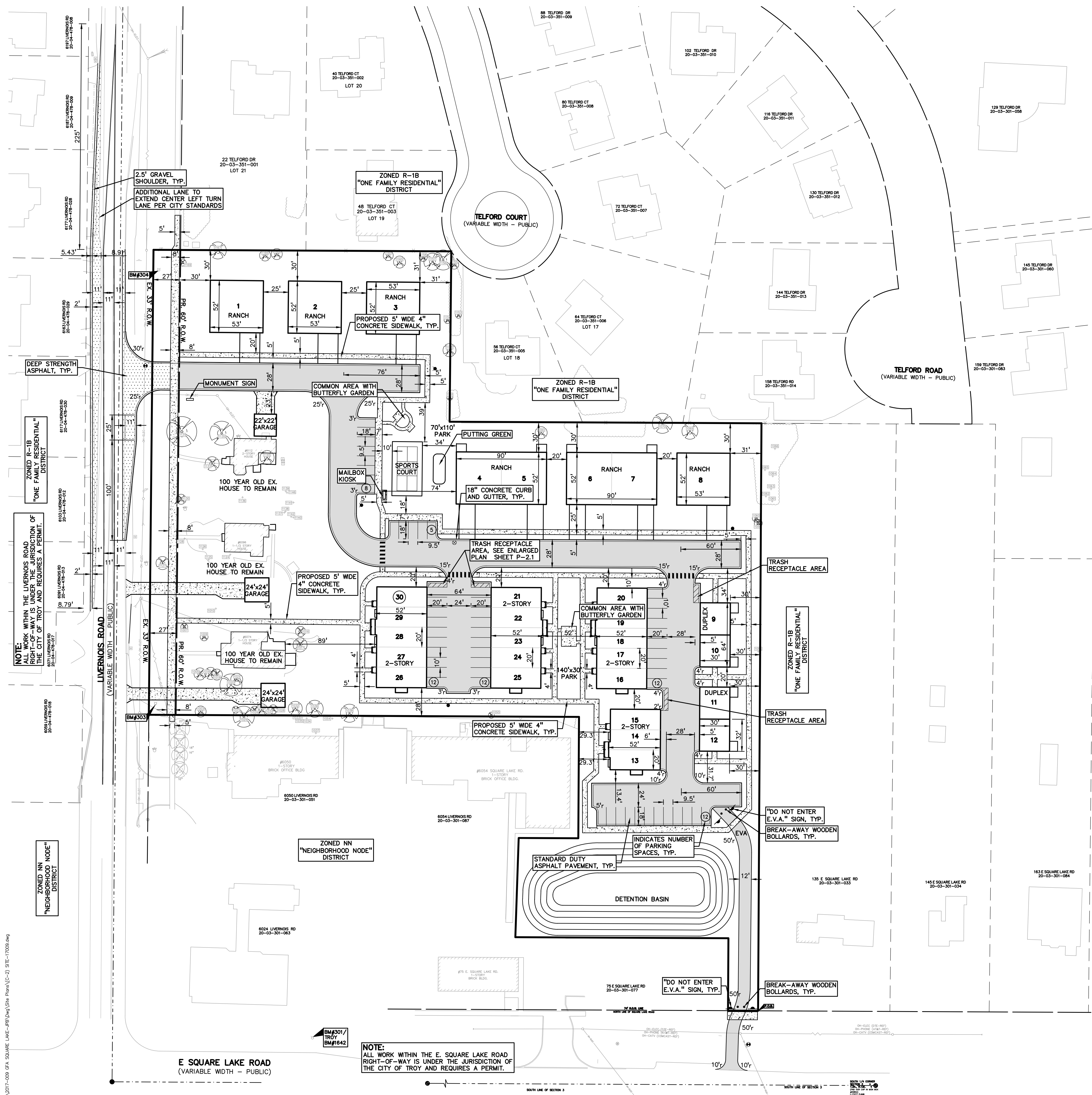
VEHICULAR ACCESS AND CIRCULATION:
VEHICULAR ACCESS TO ALL UNITS WILL BE VIA A PRIVATE ROAD OFF OF LIVERNOIS ROAD. THE NEW ROAD WILL HAVE A TWENTY-EIGHT (28) FOOT WIDE ACCESS AGREEMENT. AN EVA WILL BE PROVIDED TO SQUARE LAKE ROAD.

PEDESTRIAN ACCESS AND CIRCULATION:
SIDEWALKS ARE PROVIDED AT BUILDING ENTRANCES TO PARKING FIELDS. THIS WILL BE A WALK FRIENDLY DEVELOPMENT WITH CIRCULATION THROUGHOUT THE DEVELOPMENT WITH CONNECTIONS TO LIVERNOIS ROAD VIA THE EVA.

UTILITIES:
UTILITIES ARE PLACED WITHIN EASEMENTS APPROVED AS TO SIZE AND LOCATION BY THE CITY ENGINEER.

ALL SITES ARE SERVED BY PUBLIC WATER, SANITARY SEWER, STORM WATER AND DETENTION/RETENTION SYSTEMS CONSTRUCTED TO CITY STANDARDS. AT THE EXPENSE OF THE DEVELOPER, EASEMENTS OVER THESE SYSTEMS SHALL BE CONVEYED AND RECORDED BEFORE OCCUPANCY PERMITS ARE ISSUED FOR DWELLING UNITS.

100-YEAR DETENTION IS PROPOSED WITH A RESTRICTED OUTLET DISCHARGING THROUGH CITY OF TROY STORM SEWER.



NOTE:
ALL WORK WITHIN THE E. SQUARE LAKE ROAD RIGHT-OF-WAY IS UNDER THE JURISDICTION OF THE CITY OF TROY AND REQUIRES A PERMIT.

NOTE:
ALL WORK WITHIN THE LIVERNOIS ROAD RIGHT-OF-WAY AND REQUIRES A PERMIT.

S:\PROJECTS\2017\2017-009_GFA_SQUARE LAKE - #181 (Dwg) (Shr) Plans\1(C-2) SITE-17000.dwg

COUNTY DRAIN

NOT FOR CONSTRUCTION

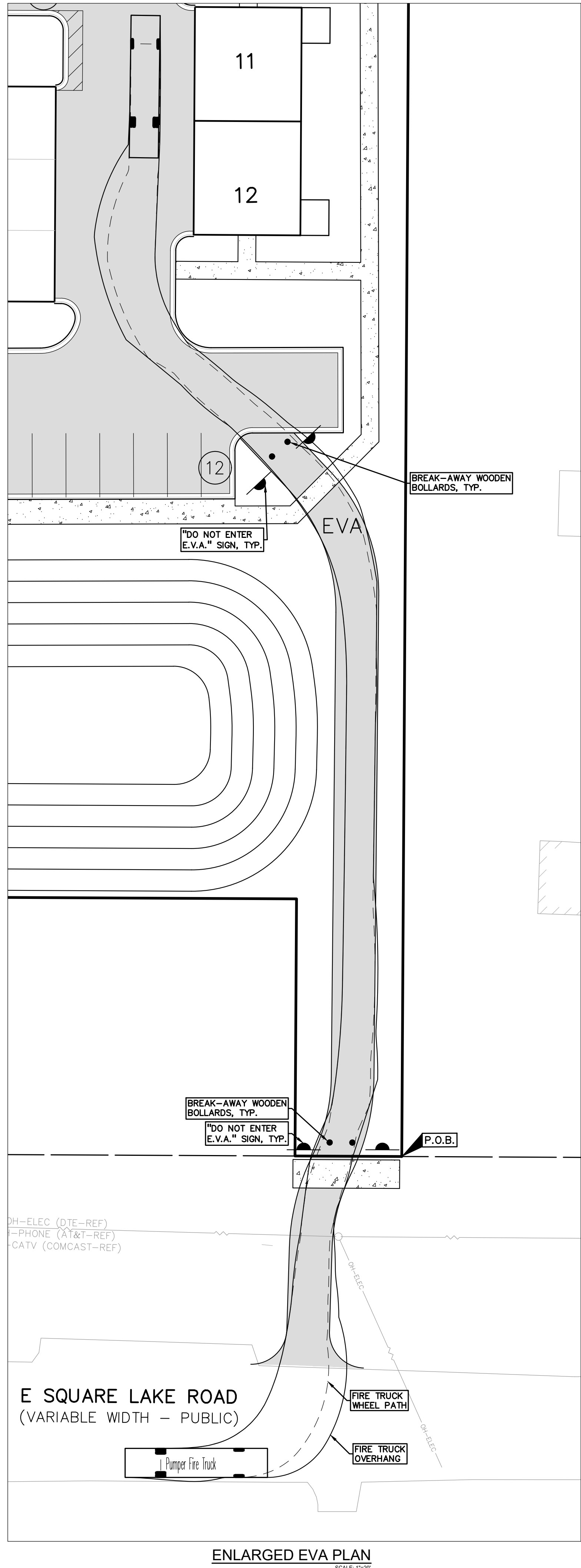


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LEGEND

● IRON FOUND	⊗ BRASS PLUG SET	⊙ SEC. CORNER FOUND
⊗ IRON SET	⊗ MONUMENT FOUND	R RECORDED
⊗ NAIL FOUND	⊗ MONUMENT SET	M MEASURED
⊗ NAIL & CAP SET		C CALCULATED

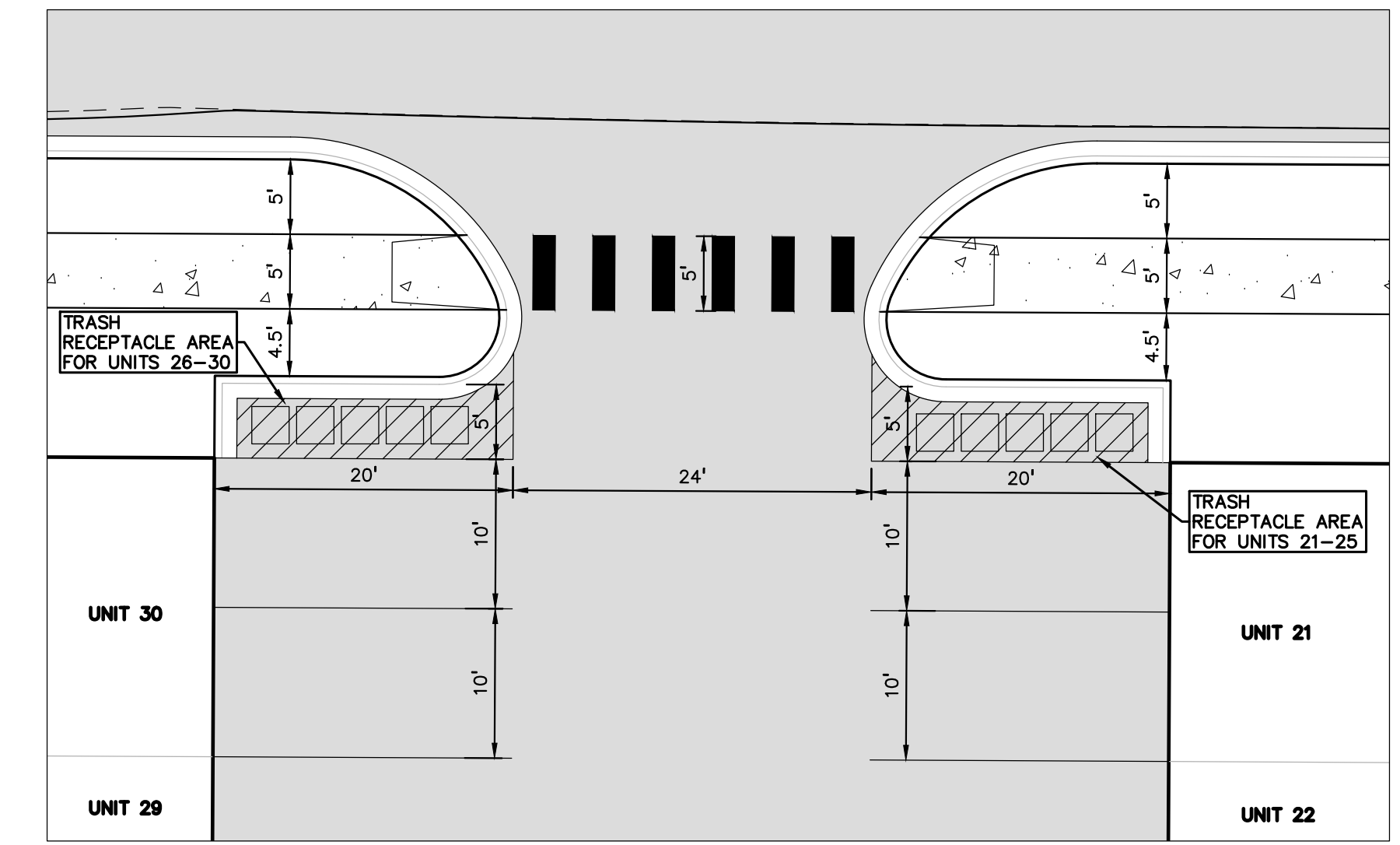
—OH-ELEC—	ELEC. PHONE OR CABLE TV O.H. LINE, POLE & GUY WIRE
—UG-CATV—	UNDERGROUND CABLE TV, CATV PEDESTAL
—UG-PHONE—	TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
—UG-ELEC—	ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE
—GAS—	GAS MAIN, VALVE & GAS LINE MARKER
—WATER—	WATERMAIN, HYD., GATE VALVE, TAPPING BLEEVE & VALVE
—SEWER—	SANITARY SEWER, CLEANOUT & MANHOLE
—STORM—	STORM SEWER, CLEANOUT & MANHOLE
—COMBINED—	COMBINED SEWER & MANHOLE
—SQUARE—	SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN
—POST—	POST INDICATOR VALVE
—WATER VALVE—	WATER VALVE BODY/HYDRANT VALVE BOX, SERVICE SHUTOFF
—M&B—	M&B BOX, TRANSFORMER, IRRIGATION CONTROL VALVE
—UNIDENTIFIED—	UNIDENTIFIED STRUCTURE
—SPOT—	SPOT ELEVATION
—CONTOUR—	CONTOUR LINE
—FENCE—	FENCE
—RAIL—	GUARD RAIL
—LIGHT—	STREET LIGHT
—SIGN—	SIGN
—CONC.—	CONCRETE
—ASPH.—	ASPHALT
—GRAVEL—	GRAVEL SHOULDER
—WETLAND—	WETLAND



ENLARGED EVA PLAN
SCALE: 1"=20'



EXAMPLE EVA PHOTO



ENLARGED TRASH RECEPTACLE AREA PLAN
SCALE: 1"=10'

CLIENT
GFA DEVELOPMENT, INC.
3301 MIRAGE DRIVE
TROY, MI 48063

PROJECT TITLE
THE VILLAGE OF HASTINGS
PART OF THE SW 1/4 OF SECTION 3, T. 02N., R. 11E., TROY, MI

REVISIONS

REV. PER COMMENTS	8/24/2023	8/9/2023
REV. PER COMMENTS	11/28/2023	11/17/2023
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ORIGINAL ISSUE DATE:
JUNE 1, 2023

DRAWING TITLE
ADDITIONAL SITE DETAILS

PEA JOB NO.	2017-009
P.M.	JBT
DN.	KMB
DES.	DSK
DRAWING NUMBER:	

NOT FOR CONSTRUCTION

S:\PROJECTS\2017\2017-009_GFA_SQUARE LAKE-1818\Drawings_Plan\1(C)-2 SITE-17000.dwg

LEGEND

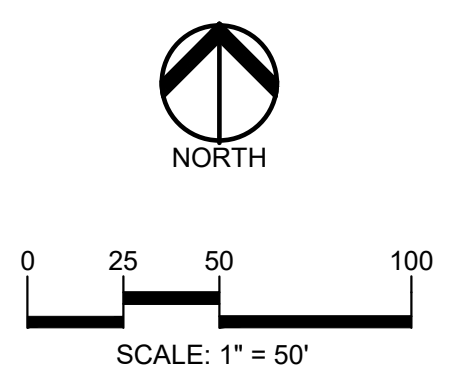
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⊗ IRON SET	⊗ MONUMENT SET	R RECORDED
⊗ NAIL FOUND	⊗ NAIL & CAP SET	M MEASURED
⊗ NAIL & CAP SET		C CALCULATED

EXISTING

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- UG-CATV- UNDERGROUND CABLE TV, CATV PEDESTAL
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- STORM- STORM SEWER, CLEANOUT & MANHOLE
- COMB- COMBINED SEWER & MANHOLE
- SQUARE- SQUARE, ROUND & BEEHIVE CATCH BASIN, YARD DRAIN
- POST- POST INDICATOR VALVE
- WATER- WATER VALVE BODY/DRYANT VALVE BOX, SERVICE SHUTOFF
- MTR- MTR BOX, TRANSFORMER, IRRIGATION CONTROL VALVE
- UNID- UNIDENTIFIED STRUCTURE
- SPOT- SPOT ELEVATION
- CONTOUR- CONTOUR LINE
- FENCE- FENCE
- GUARD- GUARD RAIL
- STREET- STREET LIGHT
- SIGN- SIGN
- CONC- CONCRETE
- ASPH- ASPHALT
- GRAVEL- GRAVEL SHOULDER
- WETLAND- WETLAND

PROPOSED

- 310 HEAVY FLOW DUTY ONLY
- 310 HEAVY FLOW DUTY STRENGTH



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CLIENT
GFA DEVELOPMENT, INC.
3301 MRAGE DRIVE
TROY, MI 48063

PROJECT TITLE
THE VILLAGE OF HASTINGS
PART OF THE SW 1/4 OF SECTION 3, T. 02N., R. 11E., TROY, MI

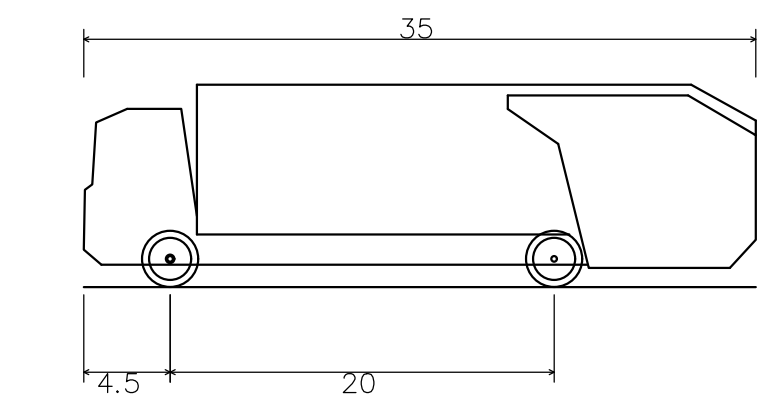
REVISONS

REV.	PER	COMMENTS	DATE
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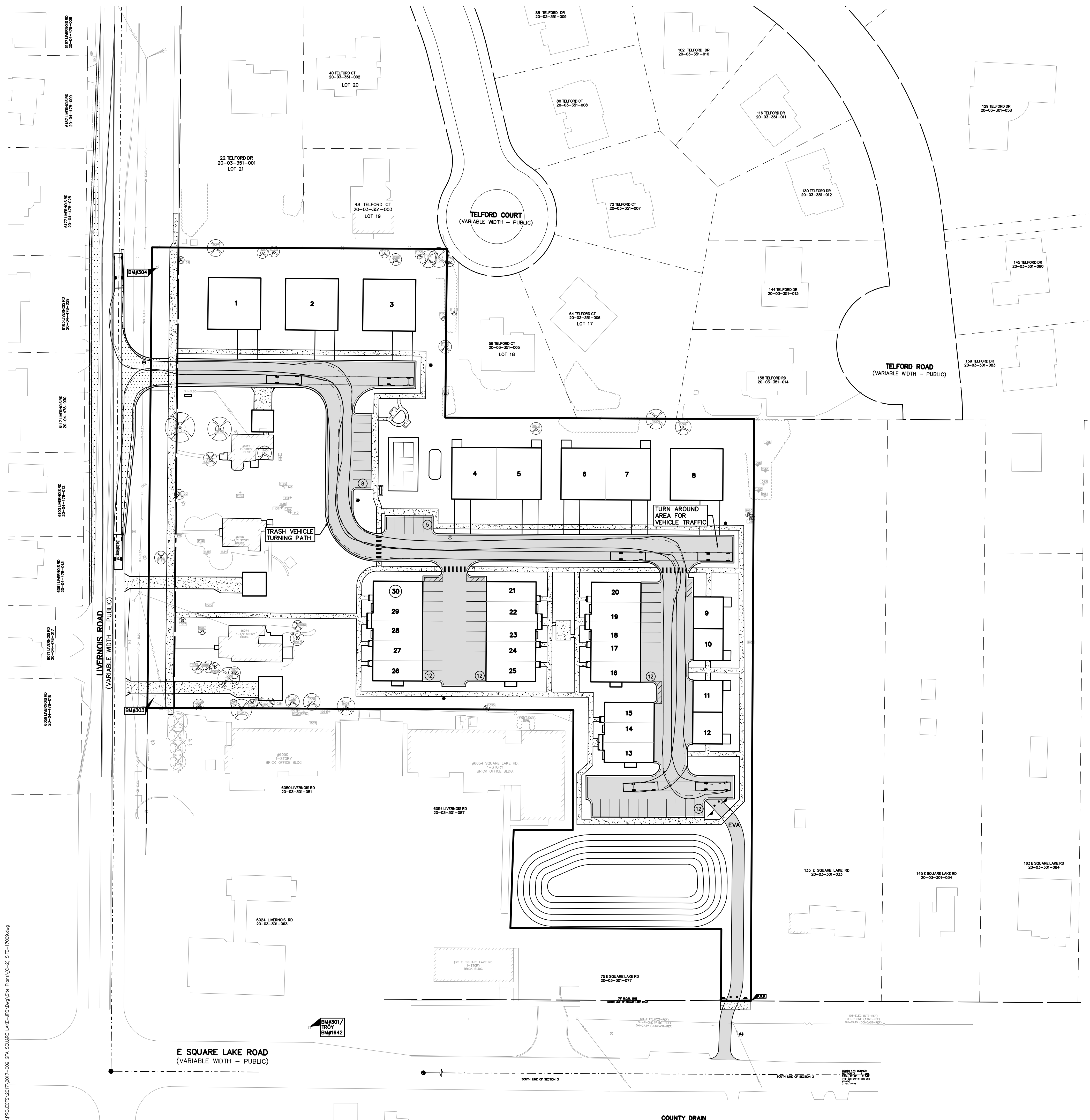
DRAWING TITLE
TRASH VEHICLE CIRCULATION PLAN

PEA JOB NO.	2017-009
P.M.	JBT
DN.	KMB
DES.	DSK
DRAWING NUMBER:	



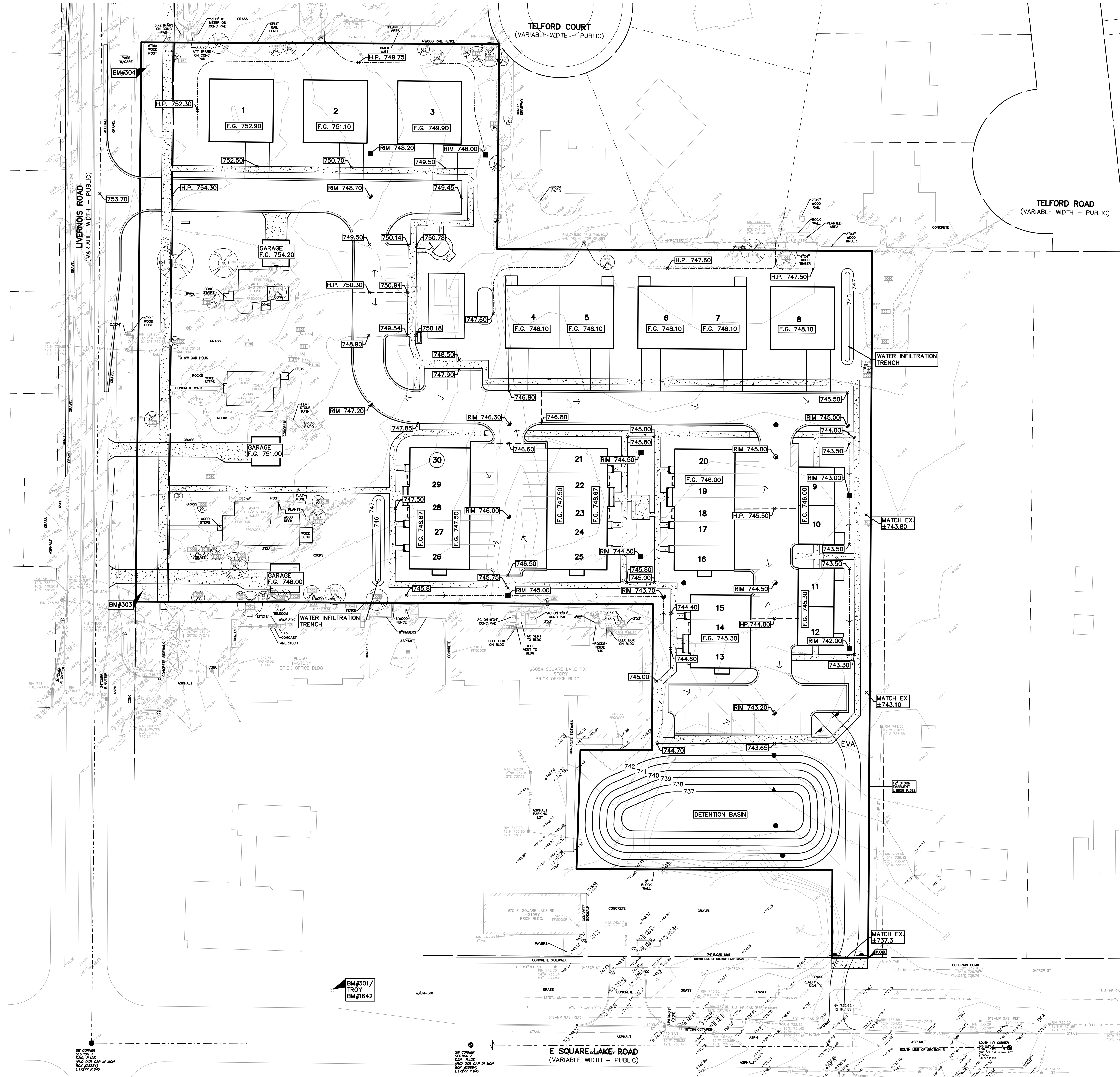
Rear-Load Garbage Truck
Overall Length 35.000ft
Overall Width 8.375ft
Overall Body Height 10.546ft
Min Body Ground Clearance 1.000ft
Track Width 8.375ft
Lock-to-lock time 6.00s
Curb to Curb Turning Radius 29.300ft

REAR-LOAD GARBAGE TRUCK



NOT FOR CONSTRUCTION

S:\PROJECTS\2017\009_GFA_SQUARE LAKE_PEA\Drawings\Plan\10-2 SITE-17000.dwg



LEGEND

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⊗ IRON SET	⊙ MONUMENT FOUND	⊙ R. RECORDED
⊗ NAIL FOUND	⊙ MONUMENT SET	⊙ M. MEASURED
⊗ NAIL & CAP SET		⊙ C. CALCULATED

EXISTING

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- UG-CATV— UNDERGROUND CABLE TV, CATV PEDESTAL
- UG-PHONE— TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
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- GAS VALVE & GAS LINE MARKER
- WATERMAN, HYD., GATE VALVE, TAPPING BLEEVE & VALVE
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- CONTOUR LINE
- FENCE
- GUARD RAIL
- STREET LIGHT
- SIGN
- CONC. CONCRETE
- ASPH. ASPHALT
- GRAVEL GRAVEL SHOULDER
- WETLAND

PROPOSED

- 671—
- 671.21—
- 622.50—
- 922—
- 310 HEAVY FLOW DUTY ONLY
- 310 HEAVY DEEP DUTY STRENGTH

SYMBOLS: GRADING

PROPOSED SPOT ELEVATION: TYPICALLY TOP OF PAVEMENT IN PAVED AREAS, GUTTER GRADE IN CURB LINES.

PROPOSED CONTOUR LINE

ABBREVIATIONS:

- T/C = TOP OF CURB
- G = GUTTER GRADE
- T/P = TOP OF PAVEMENT
- T/S = TOP OF SIDEWALK
- T/W = TOP OF WALL
- B/W = BOTTOM OF WALL
- F.G. = FINISH GRADE
- RIM = RIM ELEVATION

BENCHMARKS
(CITY OF TROY DATUM)

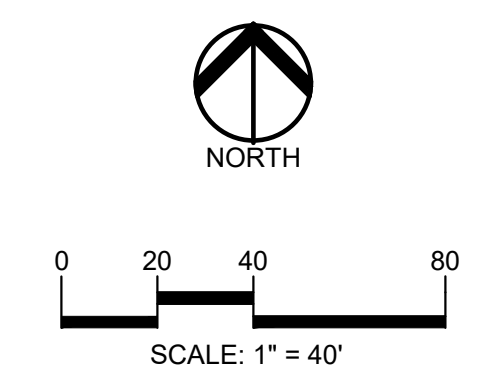
BM #300
SET BENCHMARK IN SOUTHEAST FACE OF POWER LIGHT POLE, NORTH SIDE OF SQUARE LAKE ROAD APPROX. 70' SOUTHEAST OF SOUTHEAST BUILDING CORNER OF JOHN'S MARKET AT EAST SIDE OF DRIVE ENTRANCE.
ELEV. - 743.36

BM #301 - CITY OF TROY BM #1642
ARROW ON A HYDRANT LOCATED ON THE NORTH SIDE OF SQUARE LAKE ROAD, APPROX. 200' EAST OF LIVERNOIS ROAD AT THE PNC BANK.
ELEV. - 750.08

BM #302
FOUND BOAT SPIKE IN SOUTH FACE OF UTILITY POLE, NORTH SIDE OF SQUARE LAKE ROAD, AT THE CENTERLINE OF 30' WIDE SITE FRONTAGE.
ELEV. - 737.51

BM #303
ARROW ON HYDRANT, EAST SIDE OF LIVERNOIS, APPROX. 75' SOUTHWEST OF #6074 LIVERNOIS.
ELEV. - 750.66

BM #304
ARROW ON HYDRANT, EAST SIDE OF LIVERNOIS, APPROX. 80' WEST OF #6170 LIVERNOIS.
ELEV. - 755.18



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

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CLIENT
GFA DEVELOPMENT, INC.
 5301 MRAGE DRIVE
 TROY, MI 48063

PROJECT TITLE
THE VILLAGE OF HASTINGS
 PART OF THE SW 1/4 OF SECTION 3, T. 02N., R. 11E., TROY, MI

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DRAWING TITLE
PRELIMINARY GRADING PLAN

PEA JOB NO.	2017-009
P.M.	JBT
DN.	KMB
DES.	DSK
DRAWING NUMBER:	

S:\PROJECTS\2017\2017-009_GFA_SQUARE LAKE - #1642\DWG\Site Plans\G-3 GRADING-170209.dwg

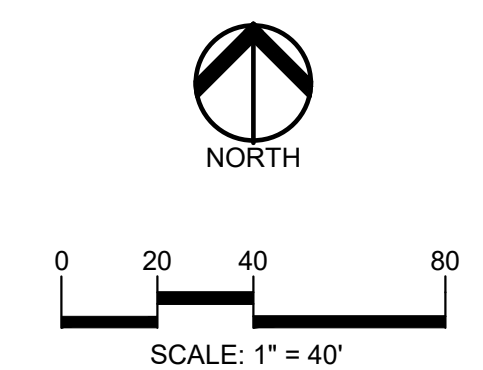
LEGEND

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- SPOT ELEVATION
- CONTOUR LINE
- FENCE
- GUARDRAIL
- STREET LIGHT
- SIEN
- CONC.: CONCRETE
- ASPH.: ASPHALT
- GRAVEL: GRAVEL SHOULDER
- WETLAND

PROPOSED

- SEC. CORNER FOUND
- R: RECORDED
- M: MEASURED
- C: CALCULATED
- 330: HEAVY FLOW DUTY ONLY
- STD: HEAVY DEEP DUTY DUTY STRENGTH



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DRAWING TITLE
PRELIMINARY UTILITY PLAN

PEA JOB NO.	2017-009
P.M.	JBT
DN.	KMB
DES.	DSK
DRAWING NUMBER:	

WATER MAIN BASIS OF DESIGN:
(Unit Factors Based on Oakland County Unit Assignment Factors)
Residential Dwelling

ULTIMATE DESIGN

Number of Units	41.0
REU	41.0
People / REU	3.5
Population (P)	144 People
Average Flow (150 GPCPD)	21,600 G.P.D.
	0.033 C.F.S.
	0.022 M.G.D.
Design Max. Flow = (2*avg)	43,200 G.P.D.
	0.067 C.F.S.
	0.043 M.G.D.

SQUARE LAKE SANITARY SEWER BASIS OF DESIGN:
(Unit Factors Based on Oakland County Unit Assignment Factors)
Residential Dwelling

ULTIMATE DESIGN

Number of Units	35.0
REU (1.0 Per Dwelling)	35.0
People / REU	3.5
Population (P)	123 People
Average Flow (100 GPCPD)	12,300 G.P.D.
	0.019 C.F.S.
P (1000s)	0.123
Peaking Factor (PF)	4.22
PF = (18+sqrt(P))/(4+sqrt(P))	
Peak Flow (G.D.P.)	51,880 G.P.D.
Peak Flow (C.F.S.)	0.080 C.F.S.
8" Pipe Capacity Provided	0.906 C.F.S.

LIVERNOIS SANITARY SEWER BASIS OF DESIGN:
(Unit Factors Based on Oakland County Unit Assignment Factors)
Residential Dwelling

ULTIMATE DESIGN

Number of Existing Units	4.0
Number of Existing Units Removed	2.0
Number of Proposed Units	6.0
Net REUs Added (1.0 Per Dwelling)	4.0
People / REU	3.5
Population (P)	14 People
Average Flow (100 GPCPD)	1,400 G.P.D.
	0.002 C.F.S.
P (1000s)	0.014
Peaking Factor (PF)	4.40
PF = (18+sqrt(P))/(4+sqrt(P))	
Peak Flow (G.D.P.)	6,159 G.P.D.
Peak Flow (C.F.S.)	0.010 C.F.S.
8" Pipe Capacity Provided	0.906 C.F.S.

Site Drainage Data

Select County: **Oakland**

Existing Natural Greenspace area:	0.00 acre	C = 0.35
Select NCRS Soil type:	D	
Select NCRS Soil type:	D	
Impervious Area:	0.00 acre	C = 0.95
Greenbelt Area:	6.31 acre	C = 0.35
Total Area (A):	6.31 acre	
Weighted Coefficient of Runoff (C):	0.35	

Proposed

Natural Greenspace area:	0.00 acre	C = 0.35
Select NCRS Soil type:	D	
Improved Greenspace area:	3.07 acre	C = 0.35
Select NCRS Soil type:	D	
Wooded Area:	0.00 acre	C = 0.35
Select NCRS Soil type:	D	
Impervious Area:	2.96 acre	C = 0.95
Greenbelt Area:	3.07 acre	C = 0.35
Total Area (A):	6.03 acre	
Weighted Coefficient of Runoff (C):	0.64	

Rainfall Intensity
Flood Control Time of Concentration, Tc = **20.00 min**

Rainfall Intensity

Time of Concentration (Tc)	20.00 min
Since 15<Tc<60, use intensity equation	
I1 = 30.2 / ((T + 9.17)^0.81)	1.97 in/hr
I10 = 50.12 / ((T + 9.17)^0.81)	3.26 in/hr
I100 = 83.3 / ((T + 9.17)^0.81)	5.42 in/hr

CPVC: Channel Protection Volume Control Volume
Vcpvc = (4719)CA
18,212 cf

CPVC: Channel Protection Rate Control Volume: Extended Detention
VED = (8897)CA
26,617 cf

CPVC Allowable Outlet Rate
Qved = VED / (48*60*60)
0.15 cfs

Water Quality Control
Forebay Volume = (545)CA
2,103 cf
Forebay Release Rate: QVF = VFI/(48*60*60)
0.012 cfs

100-Year Allowable Outlet Rate
Since 2-A<100, Qarr = 1.1055-0.206ln(A)
Qv100 = 0.74 cfs/ac

100-Year Peak Allowable Discharge
Q100P = Qv100(A)
4.43 cfs

100-Year Runoff Volume
V100R = (18,985)CA
73,267 cf

100-Year Peak Inflow
Q100P = C100P(A)
20.92 cfs

Storage Curve Factor (N/Vr)
R = 0.206-0.15 * ln(Q100P/Q100IN)
0.439

100-Year Storage Volume
Vs = R(V100R)
32,164 cf

No infiltration will be provided, so no CPVC deduction is taken.
V100 = Vs
32,164 cf

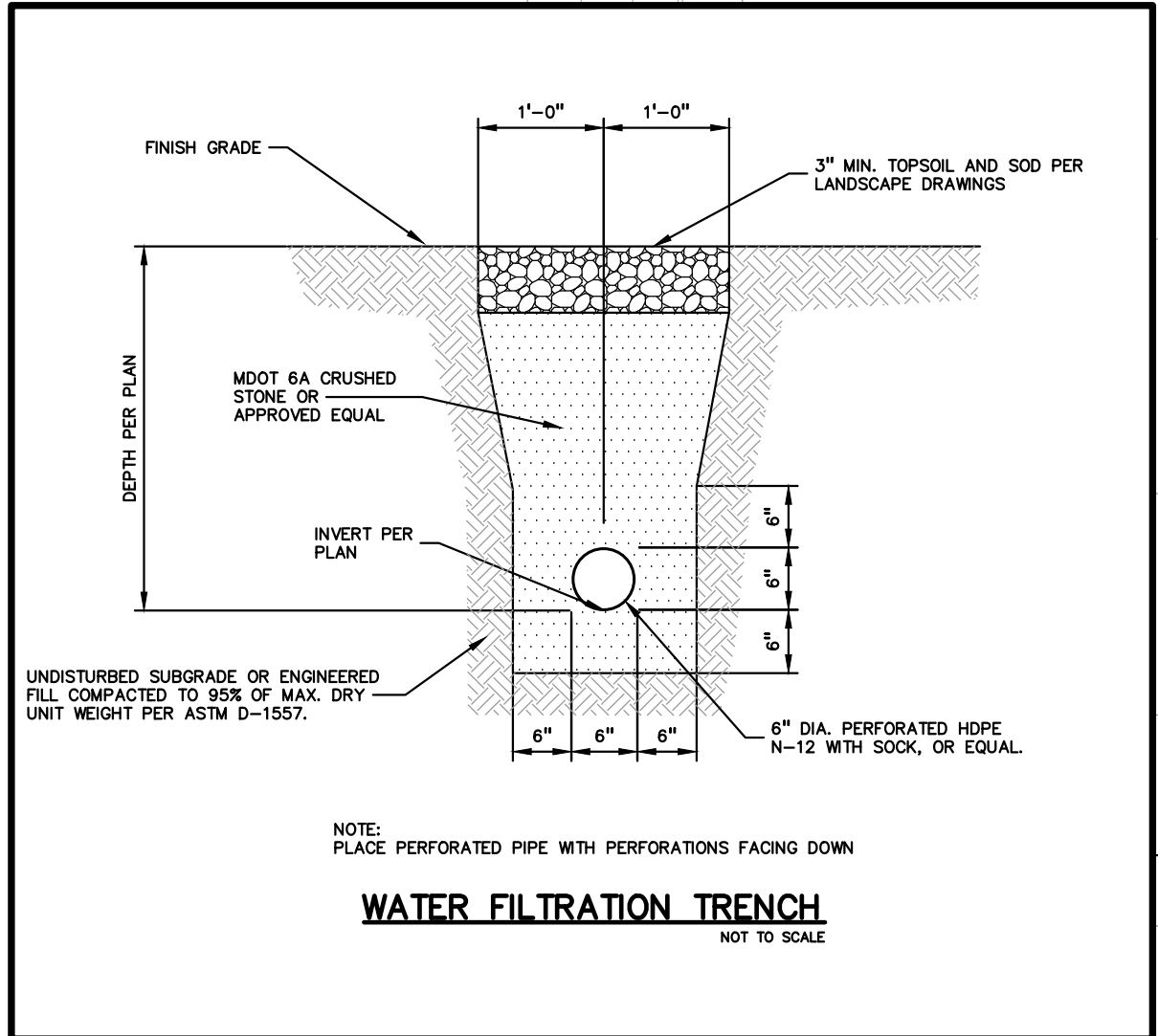
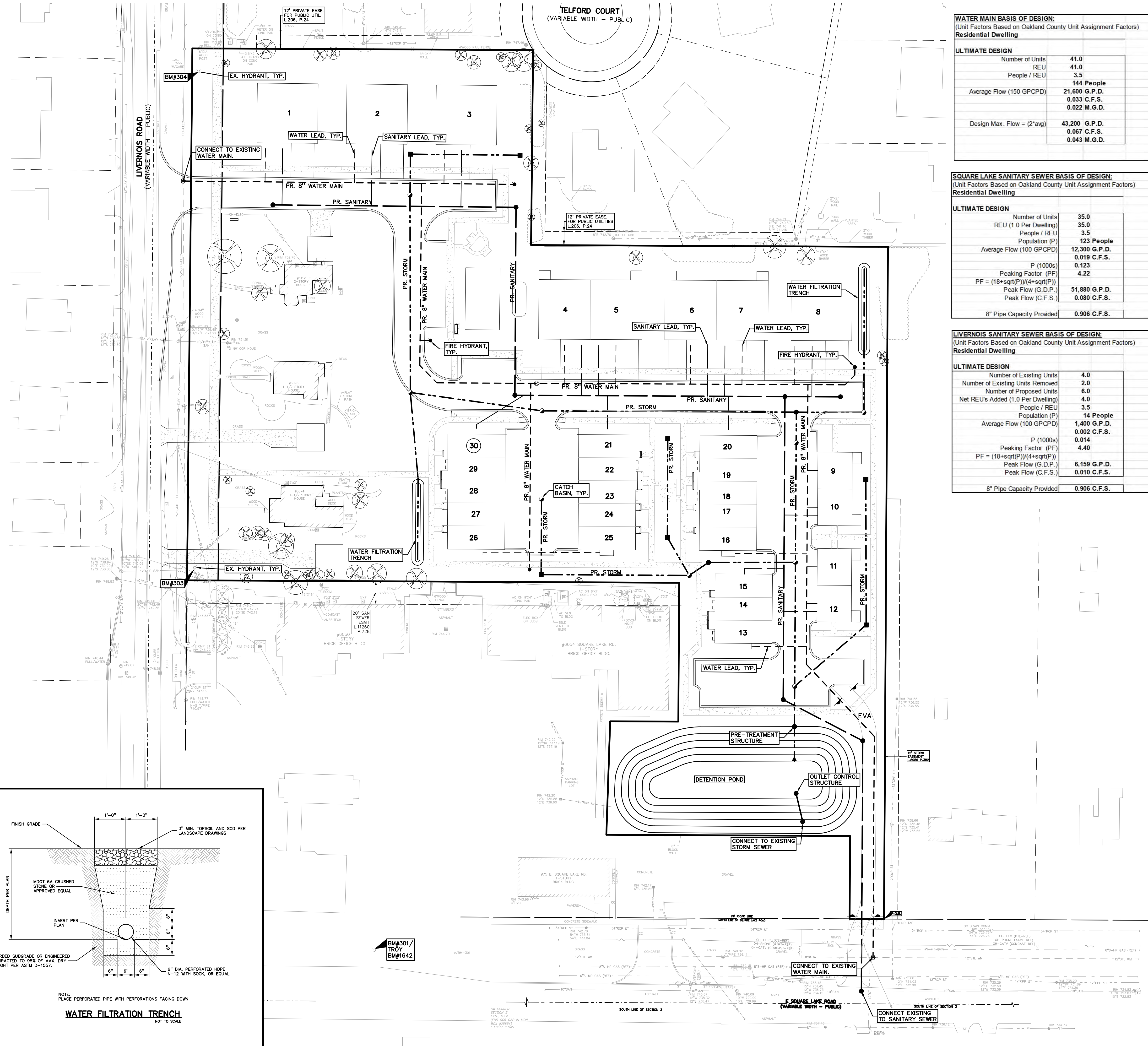
V100 must be larger or equal to VED:
Is V100 >= VED? **Yes**

Design Requirements

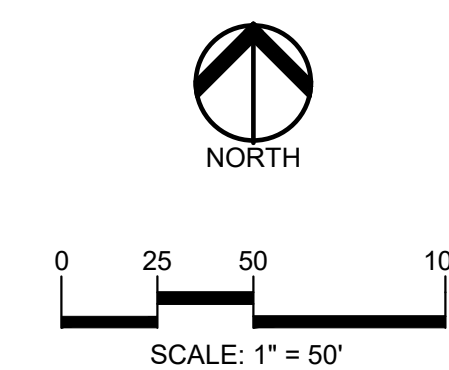
CPVC Storage Volume: Vcpvc	NA cf
CPVC Storage Outflow Rate: Qcpvc	NA cfs
CPVC Extended Detention: VED	26,617 cf
CPVC Allowable Outlet Rate: Qved	0.15 cfs
100-Year Storage Volume: V100R	32,164 cf
100-Year Allowable Outlet Rate: Qv100	4.43 cfs
100 Year Peak Inflow: Q100P	20.92 cfs

Detention Basin

CPVC Storage Elevation:	740.00	26,617 cf	
100-yr Storage Elevation:	740.42	32,164 cf	
Elev. (ft)	Area (sf)	Vol. (cf)	Total Vol. (cf)
736.00	0	0	0
737.00	4,675	2,288	2,288
738.00	6,817	5,696	7,984
739.00	9,236	8,027	16,010
740.00	11,880	10,568	26,568
741.00	14,751	13,316	39,884



S:\PROJECTS\2017\2017-009 GFA SQUARE LAKE - 481 (Dwg) (Shr) Plans\1(C-4) UTILITY-17000.dwg



CAUTION!
THE LOCATIONS 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 OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

CLIENT
GFA DEVELOPMENT, INC.
5301 MIRAGE DRIVE
TROY, MI 48063

PROJECT TITLE
THE VILLAGE OF HASTINGS
PART OF THE SW 1/4 OF SECTION 3, T. 02N., R. 11E., TROY, MI

REVISIONS

REV. PER COMMENTS 6/2/2023	8/9/2023
REV. PER COMMENTS 8/24/2023	11/17/2023
REV. PER PC COMMENTS 11/28/2023	12/7/2023
REV. PER PC COMMENTS 1/9/2024	1/24/2024
REV. PER PC COMMENTS 4/9/2024	4/22/2024
REV. PER REVIEW 3/15/2024	4/23/2024
REV. PER PLANNING 5/6/2024	5/13/2024

ORIGINAL ISSUE DATE:
JUNE 1, 2023

DRAWING TITLE
PRELIMINARY LANDSCAPE PLAN

PEA JOB NO. 2017-009
P.M. JBT
DN. LAW
DES. LAW
DRAWING NUMBER:

LANDSCAPE CALCULATIONS:
PER CITY OF TROY ZONING ORDINANCE - FORM BASE DISTRICT (NN) NEIGHBORHOOD NODE Q; SITE TYPE NN:B; BUILDING FORM C

5.03 C-1a - GENERAL SITE LANDSCAPE:
REQUIRED: 15% OF SITE AREA SHALL BE LANDSCAPE MATERIAL
274,863.6 SF * 15% = 41,229.5 SQ FT REQUIRED
PROVIDED: 71,465 SQ FT LANDSCAPE (26X)

13.02 B - SCREENING BETWEEN USES:
REQUIRED: ABUTS R-1B USE SPACE TO THE NORTH AND EAST REQUIRES SCREEN ALT. 1 (1 NARROW EVG. / 3') OR ALT. 2 (1 LARGE EVG. TREE / 10 LF)
NORTH PROPERTY LINE - WESTERN SEGMENT 297 LF AND EASTERN SEGMENT 305 LF. ALT. 2: 297 LF / 10 = 30 AND 305 LF / 10 = 31 LARGE EVG. TREES
PROVIDED: WESTERN SEGMENT: 30 8' HT LARGE EVG. TREES EASTERN SEGMENT: 31 8' HT LARGE EVG. TREES

EAST PROPERTY LINE -
NORTHERN SEGMENT 170 LF AND SOUTHERN SEGMENT 586 LF. ALT 1: 170 LF / 3 = 57 AND 586 LF / 3 = 195 NARROW EVG. TREES
PROVIDED: NORTHERN SEGMENT: 57, 6' HT. NARROW EVG. / 3' OC. SOUTHERN SEGMENT: 195, 6' HT. NARROW EVG. / 3' OC.

13.02 F. INTERIOR STREET TREES:
REQUIRED: 1 TREE PER 50 LF OF INTERIOR STREETS
1281 LF / 50 = 26 TREES REQUIRED (EACH SIDE)
PROVIDED: 52 PROPOSED TREES

13.02 D2. GREENBELT:
REQUIRED: 1 TREE / 30 LF OF FRONTAGE TO PUBLIC RD.
LIVERNOS ROAD - 463 LF FRONTAGE / 30 = 15 TREES
E. SQUARE LAKE ROAD - 42 LF FRONTAGE / 30 = 2 TREES
PROVIDED: LIVERNOS ROAD: 15 TREES
E. SQUARE LAKE ROAD: 2 TREES

REPLACEMENT TREES:
SEE SHT. T-1.0 AND T-1.1 FOR EXISTING TREE LIST AND TREE PRESERVATION PLAN.
REQUIRED: 35" DBH TO REPLACE REMOVED REGULATED TREES
PROVIDED: 14 TREES AT 2.5" (14 * 2.5 = 35") PROVIDED

GENERAL PLANTING NOTES:

- LANDSCAPE CONTRACTOR SHALL VISIT SITE, INSPECT EXISTING SITE CONDITIONS AND REVIEW PROPOSED PLANTING AND RELATED WORK. IN CASE OF DISCREPANCY BETWEEN PLAN AND PLANT LIST, PLAN SHALL GOVERN QUANTITIES. CONTACT LANDSCAPE ARCHITECT WITH ANY CONCERNS.
- CONTRACTOR SHALL VERIFY LOCATIONS OF ALL ON SITE UTILITIES PRIOR TO BEGINNING CONSTRUCTION ON HIS/HER PHASE OF WORK. ELECTRIC, GAS, TELEPHONE, CABLE TELEVISION MAY BE LOCATED BY CALLING MISS DIG 1-800-482-7171. ANY DAMAGE OR INTERRUPTION OF SERVICES SHALL BE THE RESPONSIBILITY OF CONTRACTOR. CONTRACTOR SHALL COORDINATE ALL RELATED ACTIVITIES WITH OTHER TRADES ON THE JOB AND SHALL REPORT ANY UNACCEPTABLE JOB CONDITIONS TO OWNER'S REPRESENTATIVE PRIOR TO COMMENCING.
- ALL PLANT MATERIAL TO BE PREMIUM GRADE NURSERY STOCK AND SHALL SATISFY AMERICAN ASSOCIATION OF NURSERYMEN STANDARD FOR NURSERY STOCK. ALL LANDSCAPE MATERIAL SHALL BE NORTHERN GROWN, NO. 1, GRADE.
- CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON LANDSCAPE PLAN PRIOR TO PRICING THE WORK.
- THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REJECT ANY PLANT MATERIAL NOT MEETING SPECIFICATIONS.
- ALL SINGLE STEM SHADE TREES TO HAVE STRAIGHT TRUNKS AND SYMMETRICAL CROWNS.
- ALL SINGLE TRUNK SHADE TREES TO HAVE A CENTRAL LEADER; TREES WITH FORKED OR IRREGULAR TRUNKS WILL NOT BE ACCEPTED.
- ALL MULTI STEM TREES SHALL BE HEAVILY BRANCHED AND HAVE SYMMETRICAL CROWNS. ONE SIDED TREES OR THOSE WITH THIN OR OPEN CROWNS SHALL NOT BE ACCEPTED.
- ALL EVERGREEN TREES SHALL BE HEAVILY BRANCHED AND FULL TO THE GROUND, SYMMETRICAL IN SHAPE AND NOT SHEARED FOR THE LAST FIVE GROWING SEASONS.
- ALL TREES TO HAVE CLAY OR CLAY LOAM BALLS, TREES WITH SAND BALLS WILL BE REJECTED.
- NO MACHINERY IS TO BE USED WITHIN THE DRIP LINE OF EXISTING TREES; HAND GRADE ALL LAWN AREAS WITHIN THE DRIP LINE OF EXISTING TREES.
- ALL TREE LOCATIONS SHALL BE STAKED BY LANDSCAPE CONTRACTOR AND ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF THE PLANT MATERIAL.
- IT IS MANDATORY THAT POSITIVE DRAINAGE IS PROVIDED AWAY FROM ALL BUILDINGS.
- ALL PLANTING BEDS SHALL RECEIVE 3" SHREDDED HARDWOOD BARK MULCH WITH PRE EMERGENT; SEE SPECIFICATIONS. SHREDDED PALETTE AND DYED MULCH WILL NOT BE ACCEPTED.
- ALL LANDSCAPED AREAS SHALL RECEIVE 3" COMPACTED TOPSOIL.
- SEE SPECIFICATIONS FOR ADDITIONAL COMMENTS, REQUIREMENTS, PLANTING PROCEDURES AND WARRANTY STANDARDS.
- FOR NON-LAWN SEED MIX AREAS, AS NOTED ON PLAN, BRUSH MOW ONCE SEASONALLY FOR INVASIVE SPECIES CONTROL.
- CONTRACTOR SHALL NOT INSTALL PLANTS UNDER BUILDING OVERHANG AND SHALL NOTIFY LANDSCAPE ARCHITECT IF DRAWINGS CONFLICT WITH BUILDING OVERHANGS.
- TREES SHALL NOT CONFLICT/ BLOCK PROPOSED REGULATORY/ DIRECTION SIGNAGE, MONUMENT SIGNS, ADDRESS OR LIGHT POLES. SHIFT TREES AS NECESSARY TYP.

DECIDUOUS TREE LIST:

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC
13	AB2.5	Bowhall Maple	<i>Acer rubrum 'Bowhall' (columnar)</i>	2.5" Cal.	B&B
9	AG8	Autumn Brilliance Serviceberry	<i>Amelanchier x grandiflora 'Autumn Brilliance'</i>	8-10' Ht.	B&B
9	CB2.5	European Hornbeam	<i>Carpinus betulus</i>	2.5" Cal.	B&B
11	CC8	Eastern Redbud	<i>Cercis canadensis</i>	8-10' Ht.	B&B
9	CF2.5	Cherokee Brave Flowering Dogwood	<i>Cornus florida 'Combo NO.1'</i>	2.5" Cal.	B&B
2	GD2.5	Kentucky Coffee Tree	<i>Gymnocladus dioica- male only</i>	2.5" Cal.	B&B
8	LS2.5	Sweetgum	<i>Liquidambar styraciflua</i>	2.5" Cal.	B&B
8	LT2.5	Tulip Tree	<i>Liriodendron tulipifera</i>	2.5" Cal.	B&B
10	MS2.5	Royal Star Magnolia	<i>Magnolia stellata 'Royal Star'</i>	2.5" Cal.	B&B
8	QP2.5	Regal Prince Oak	<i>Quercus robur x bicolor 'Long' (columnar)</i>	2.5" Cal.	B&B
7	QR2.5	Red Oak	<i>Quercus rubra</i>	2.5" Cal.	B&B
5	TB2.5	Boulevard Linden	<i>Tilia americana 'Boulevard' (columnar)</i>	2.5" Cal.	B&B
99	TOTAL DEC				

EVERGREEN TREE PLANT LIST:

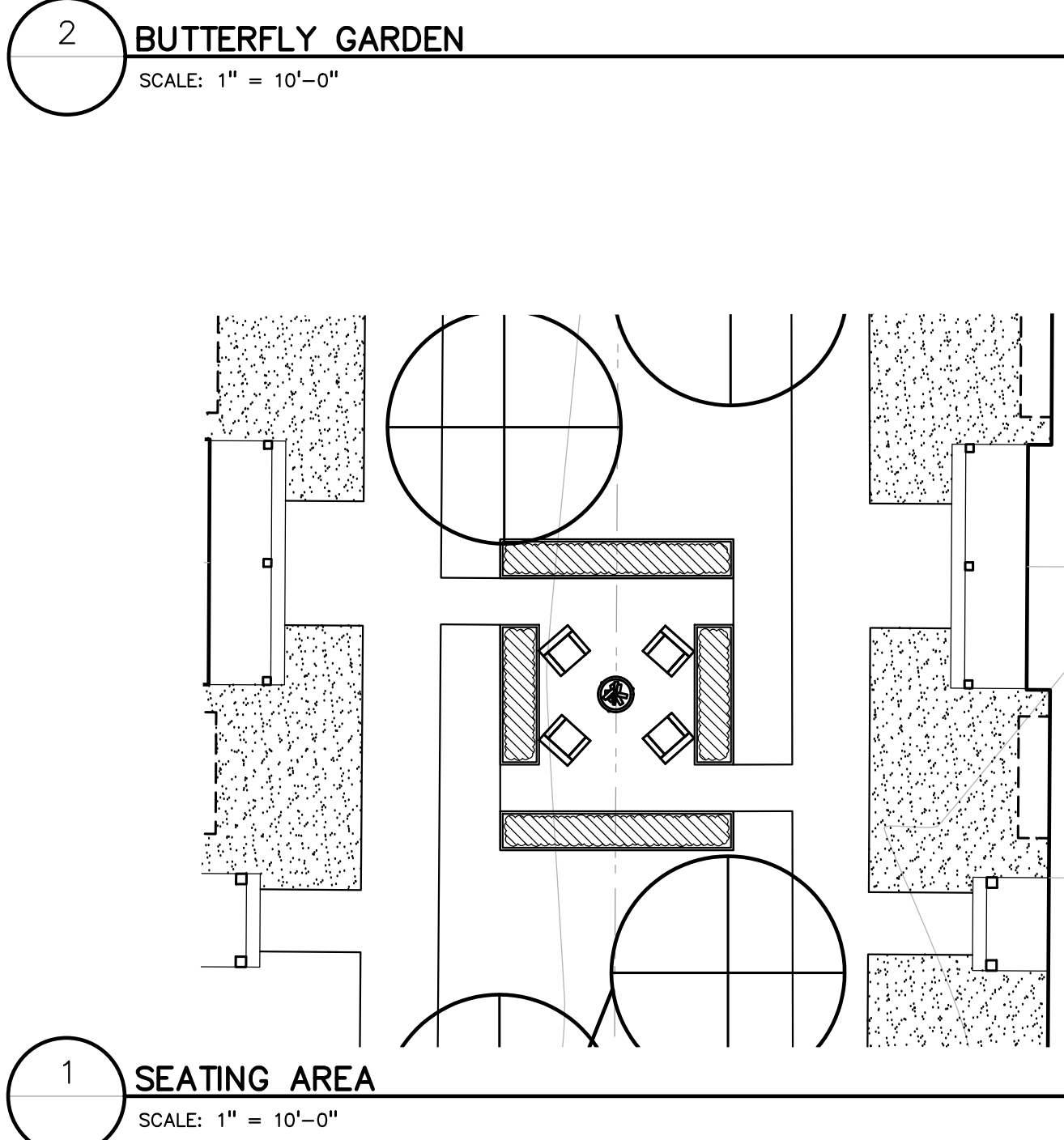
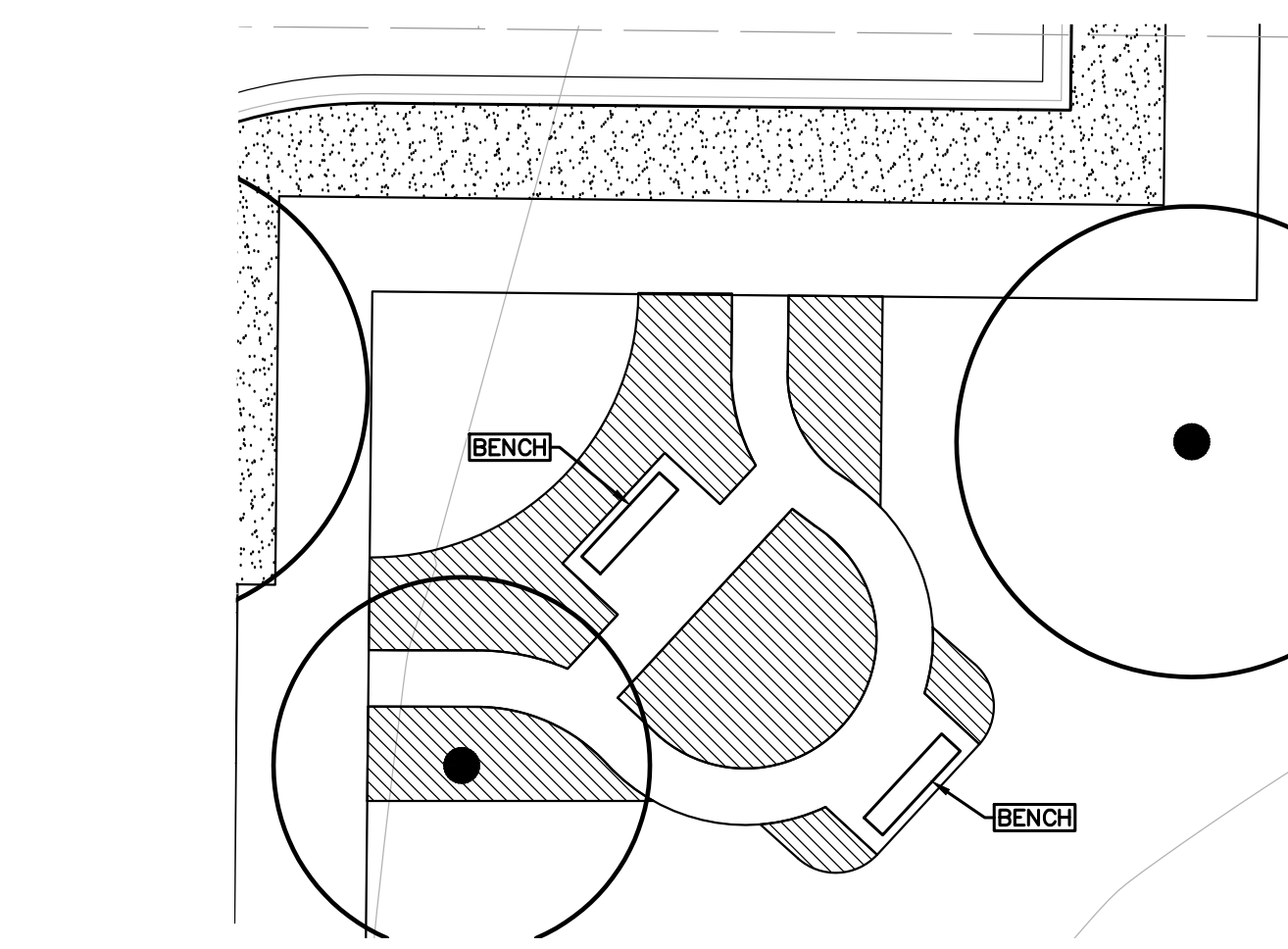
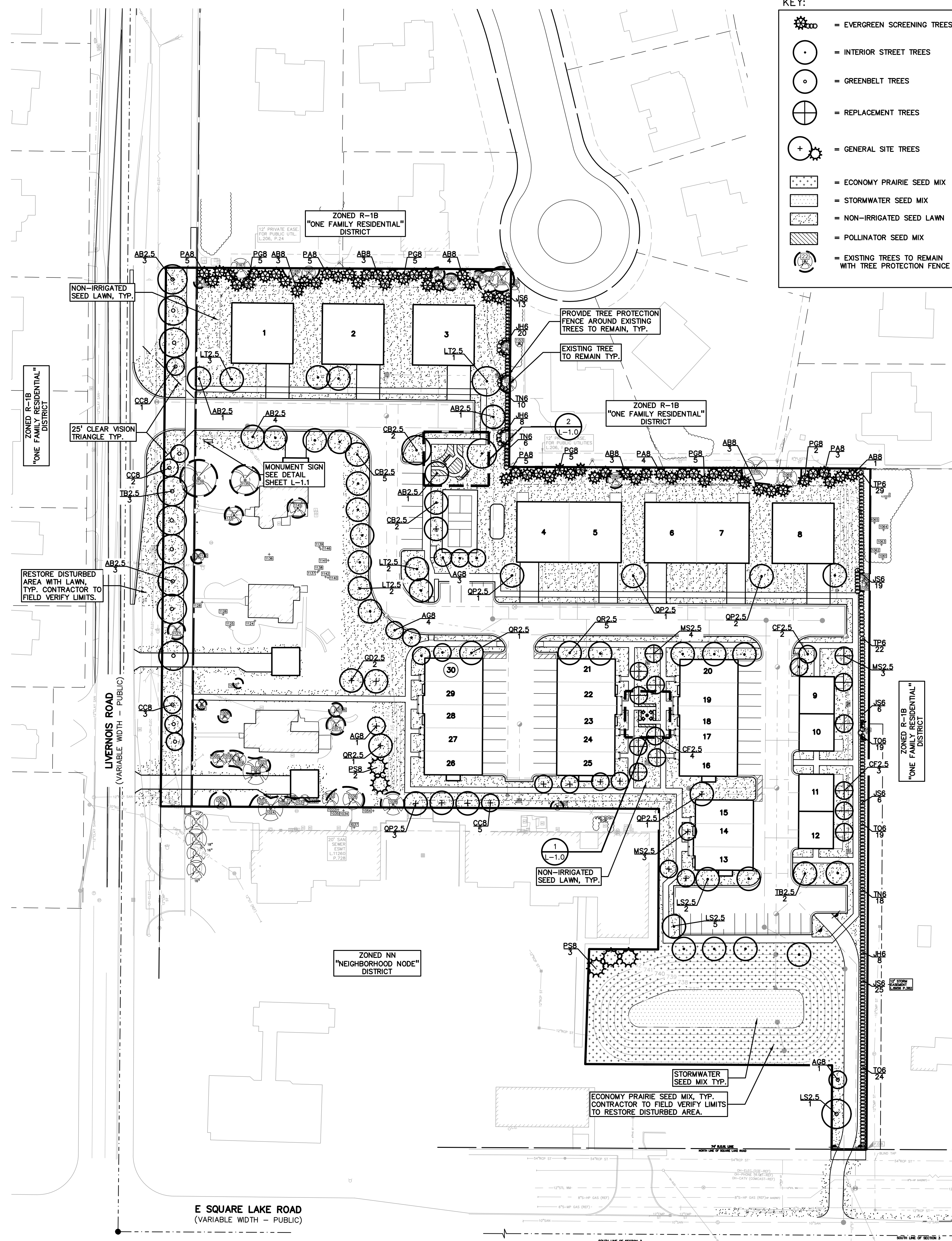
QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC
17	AB8	Balsam Fir	<i>Abies balsamea</i>	8' Ht.	B&B
22	PA8	Norway Spruce	<i>Picea abies</i>	8' Ht.	B&B
22	PG8	Black Hills Spruce	<i>Picea glauca 'Densata'</i>	8' Ht.	B&B
5	PS8	Eastern White Pine	<i>Pinus strobus</i>	8' Ht.	B&B
66	TOTAL EVERGREEN				

NARROW EVERGREEN LIST:

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC
62	TO6	Techny Arborvitae	<i>Thuja occidentalis 'Techny'</i>	6' Ht.	B&B
34	TN6	Dark Green Arborvitae	<i>Thuja occidentalis 'Nigra'</i>	6' Ht.	B&B
51	TP6	Pyramidal Arborvitae	<i>Thuja occidentalis 'Pyramidalis'</i>	6' Ht.	B&B
36	JH6	Hetz Columnar Juniper	<i>Juniperus chinensis 'Hetzii Columnaris'</i>	6' Ht.	B&B
69	JS6	Blue Arrow Juniper	<i>Juniperus scopulorum 'Blue Arrow'</i>	6' Ht.	B&B
252	TOTAL NARROW EVERGREEN				

KEY:

- = EVERGREEN SCREENING TREES
- = INTERIOR STREET TREES
- = GREENBELT TREES
- = REPLACEMENT TREES
- = GENERAL SITE TREES
- = ECONOMY PRAIRIE SEED MIX
- = STORMWATER SEED MIX
- = NON-IRRIGATED SEED LAWN
- = POLLINATOR SEED MIX
- = EXISTING TREES TO REMAIN WITH TREE PROTECTION FENCE



S:\PROJECTS\2017\2017-009_GFA_SQUARE LAKE - #181 (DWG) (Sht. Plans)\L-1.0 LANDSCAPE-17009.dwg

FOR ALL SEED MIXES, PROVIDE EROSION MAT ON SLOPES AND AREAS OF WASH OUT TYP. INSTALL AND PREP PER MANUFACTURES SPECIFICATIONS.

Economy Prairie Seed Mix
Stantec Native Plant Nursery 574-586-2412
stantec.com/native-plant-nursery

Botanical Name	Common Name
Permanent Grasses/Sedges/Rushes:	
<i>Andropogon gerardii</i>	Big Bluestem
<i>Buteloua curtipendula</i>	Side Oats Grama
<i>Carex spp.</i>	Prairie Sedge Mix
<i>Elymus canadensis</i>	Canada Wild Rye
<i>Panicum virgatum</i>	Switch Grass
<i>Schizachyrium scoparium</i>	Little Bluestem
<i>Sorghastrum nutans</i>	Indian Grass

Temporary Cover:	Common Oat
<i>Avena sativa</i>	Common Oat
<i>Lolium multiflorum</i>	Annual Rye

Forbs & Shrubs:	Common Milkweed
<i>Asclepias syriaca</i>	Butterfly Weed
<i>Asclepias tuberosa</i>	Partridge Pea
<i>Chamaecrista fasciculata</i>	Sand Coreopsis
<i>Coreopsis lanceolata</i>	Broad-leaved Purple Coneflower
<i>Echinacea purpurea</i>	False Sunflower
<i>Heliopsis helianthoides</i>	Wild Lupine
<i>Lupinus perennis</i>	Wild Bergamot
<i>Monarda fistulosa</i>	Yellow Coneflower
<i>Penstemon digitalis</i>	Common Mountain Mint
<i>Pycnanthemum virginianum</i>	Yellow Coneflower
<i>Ratibida pinnata</i>	Black-Eyed Susan
<i>Rudbeckia hirta</i>	Showy Goldenrod
<i>Solidago speciosa</i>	Smooth Blue Aster
<i>Symphoricarum laeve</i>	New England Aster
<i>Symphoricarum novae-angliae</i>	New England Aster

Stormwater Seed Mix
Stantec Native Plant Nursery 574-586-2412
stantec.com/native-plant-nursery

Botanical Name	Common Name
Permanent Grasses/Sedges/Rushes:	
<i>Boboschoenus fluviatilis</i>	River Bulrush
<i>Carex cristatella</i>	Crested Oval Sedge
<i>Carex laxifolia</i>	Bottlebrush Sedge
<i>Carex vulpinoidea</i>	Brown Fox Sedge
<i>Elymus virginicus</i>	Virginia Wild Rye
<i>Glyceria striata</i>	Fowl Manna Grass
<i>Juncus effusus</i>	Common Rush
<i>Leersia oryzoides</i>	Rice Cut Grass
<i>Panicum virgatum</i>	Switch Grass
<i>Schoenoplectus tabernaemontani</i>	Softstem Bulrush
<i>Scirpus atrovirens</i>	Dark Green Rush
<i>Scirpus cyperinus</i>	Wool Grass

Temporary Cover:	Common Oat
<i>Avena sativa</i>	Common Oat
<i>Lolium multiflorum</i>	Annual Rye

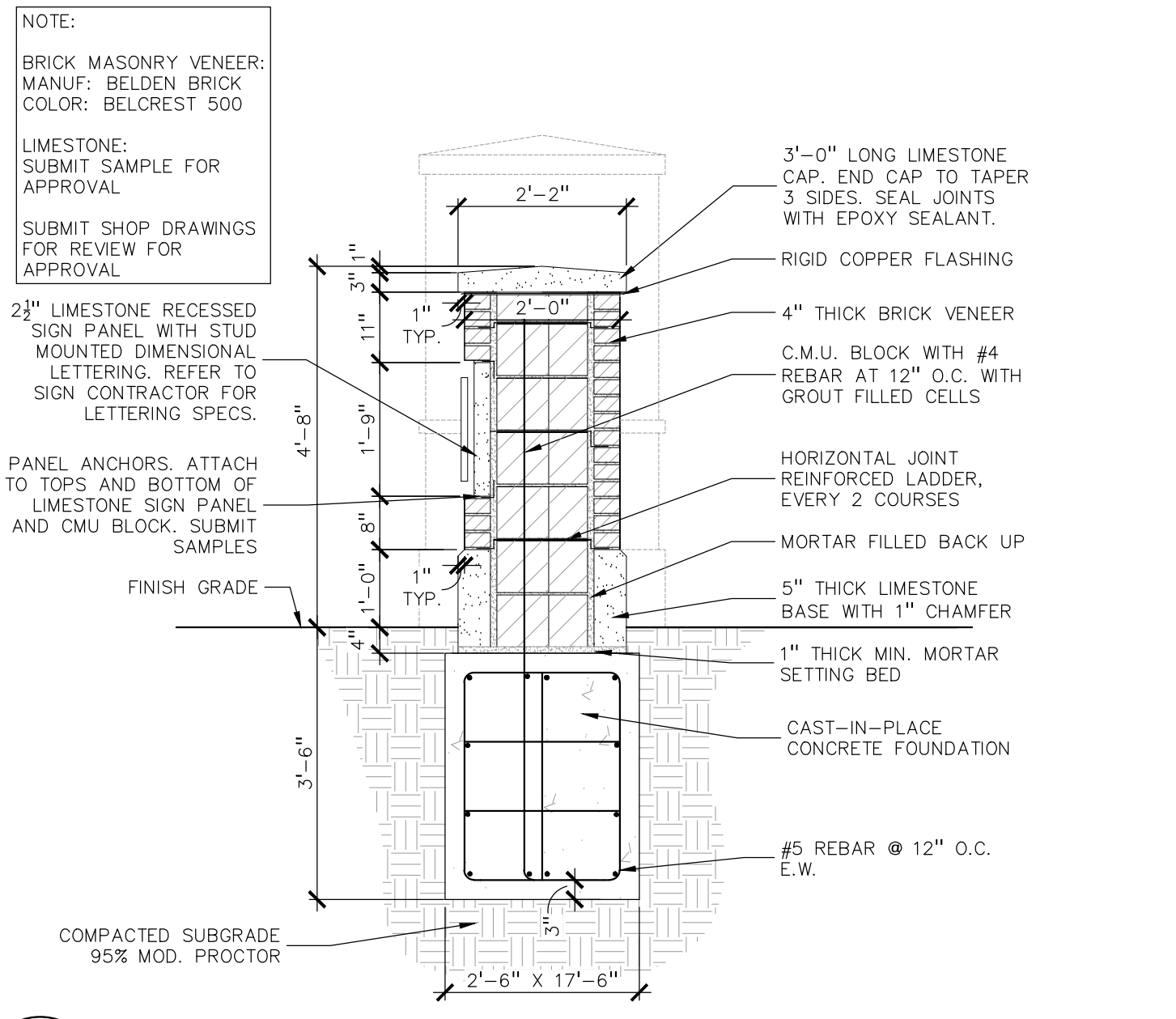
Forbs & Shrubs:	Water Plantain (Various Mix)
<i>Alisma spp.</i>	Swamp Milkweed
<i>Asclepias incarnata</i>	Bidens (Various Mix)
<i>Bidens spp.</i>	Sneezeweed
<i>Helenium autumnale</i>	Blue Flag
<i>Iris virginica</i>	Common Water Horehound
<i>Lycopus americanus</i>	Monkey Flower
<i>Mimulus ringens</i>	Riddell's Goldenrod
<i>Oligoneuron riddellii</i>	Ditch Stonecrop
<i>Penthorum sedoides</i>	Pinkweed (Various Mix)
<i>Polygonum spp.</i>	Sweet Black-Eyed Susan
<i>Rudbeckia subtomentosa</i>	Rudbeckia triloba
<i>Rudbeckia triloba</i>	Brown-Eyed Susan
<i>Sagittaria latifolia</i>	Common Arrowhead
<i>Senna hebecarpa</i>	Wild Senna
<i>Symphoricarum novae-angliae</i>	New England Aster
<i>Thalictrum dasycarpum</i>	Purple Meadow Rue

Solar Pollinator Habitat Mix
Stantec Native Plant Nursery 574-586-2412
stantec.com/native-plant-nursery

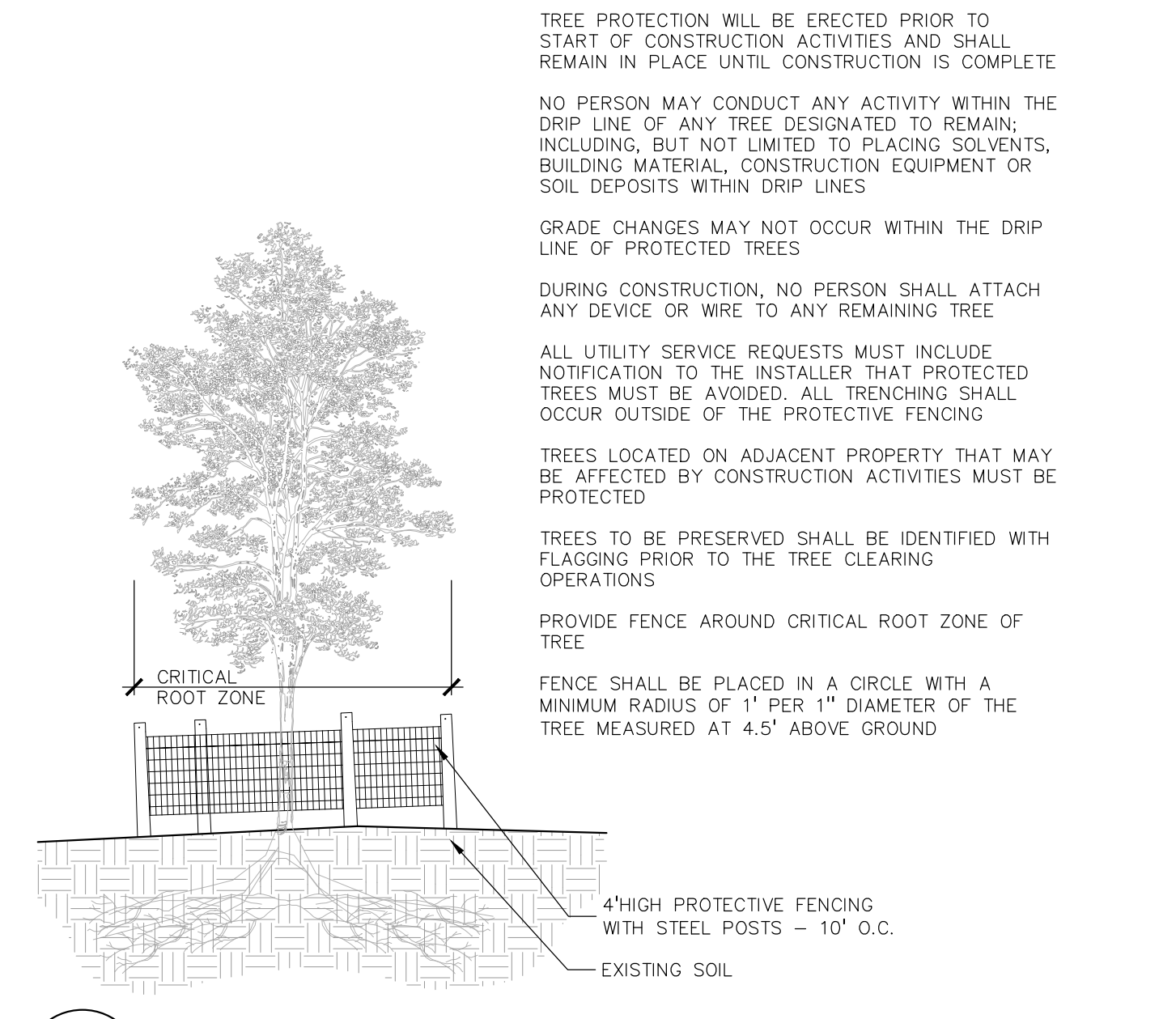
Botanical Name	Common Name
Permanent Grasses:	
<i>Buteloua curtipendula</i>	Side-Oats Grama
<i>Carex bicknellii</i>	Copper-Shouldered Oval Sedge
<i>Koeleria macrantha</i>	June Grass
<i>Schizachyrium scoparium</i>	Little Bluestem
<i>Sporobolus heterolepis</i>	Prairie Dropseed

Temporary Cover:	Common Oat
<i>Avena sativa</i>	Common Oat

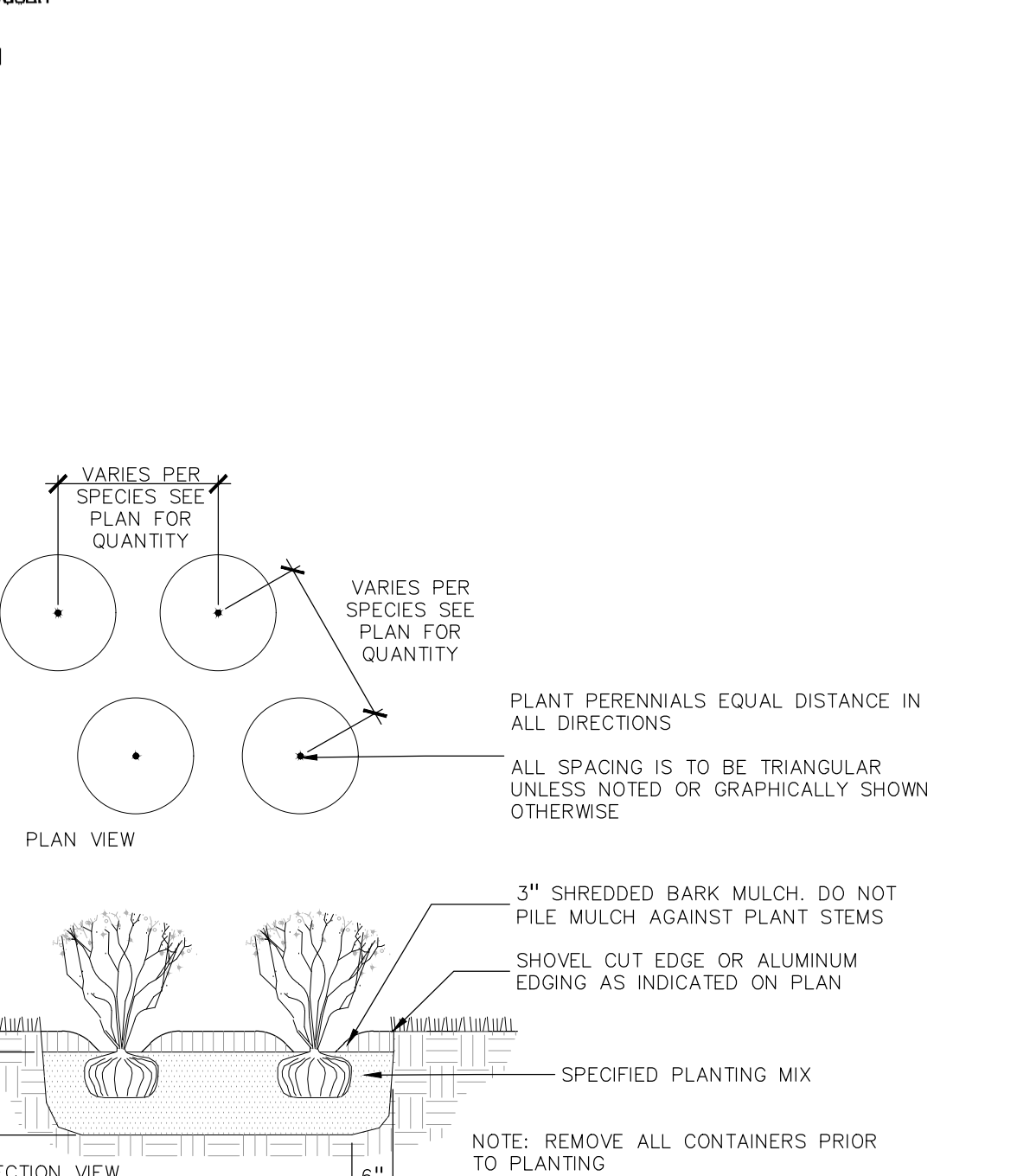
Forbs:	Nodding Onion
<i>Allium cernuum</i>	Wild Columbine
<i>Aquilegia canadensis</i>	Common Milkweed
<i>Asclepias syriaca</i>	Partridge Pea
<i>Chamaecrista fasciculata</i>	Sand Coreopsis
<i>Coreopsis lanceolata</i>	Purple Prairie Clover
<i>Dalea purpurea</i>	Rough Blazing Star
<i>Liatris aspera</i>	Wild Lupine
<i>Lupinus perennis v. occidentalis</i>	Horse Mint
<i>Monarda punctata</i>	Hairy Beard Tongue
<i>Penstemon hirsutus</i>	Old-Field Goldenrod
<i>Solidago nemoralis</i>	Heath Aster
<i>Symphoricarum encoides</i>	Golden Alexanders
<i>Zizia aurea</i>	Golden Alexanders



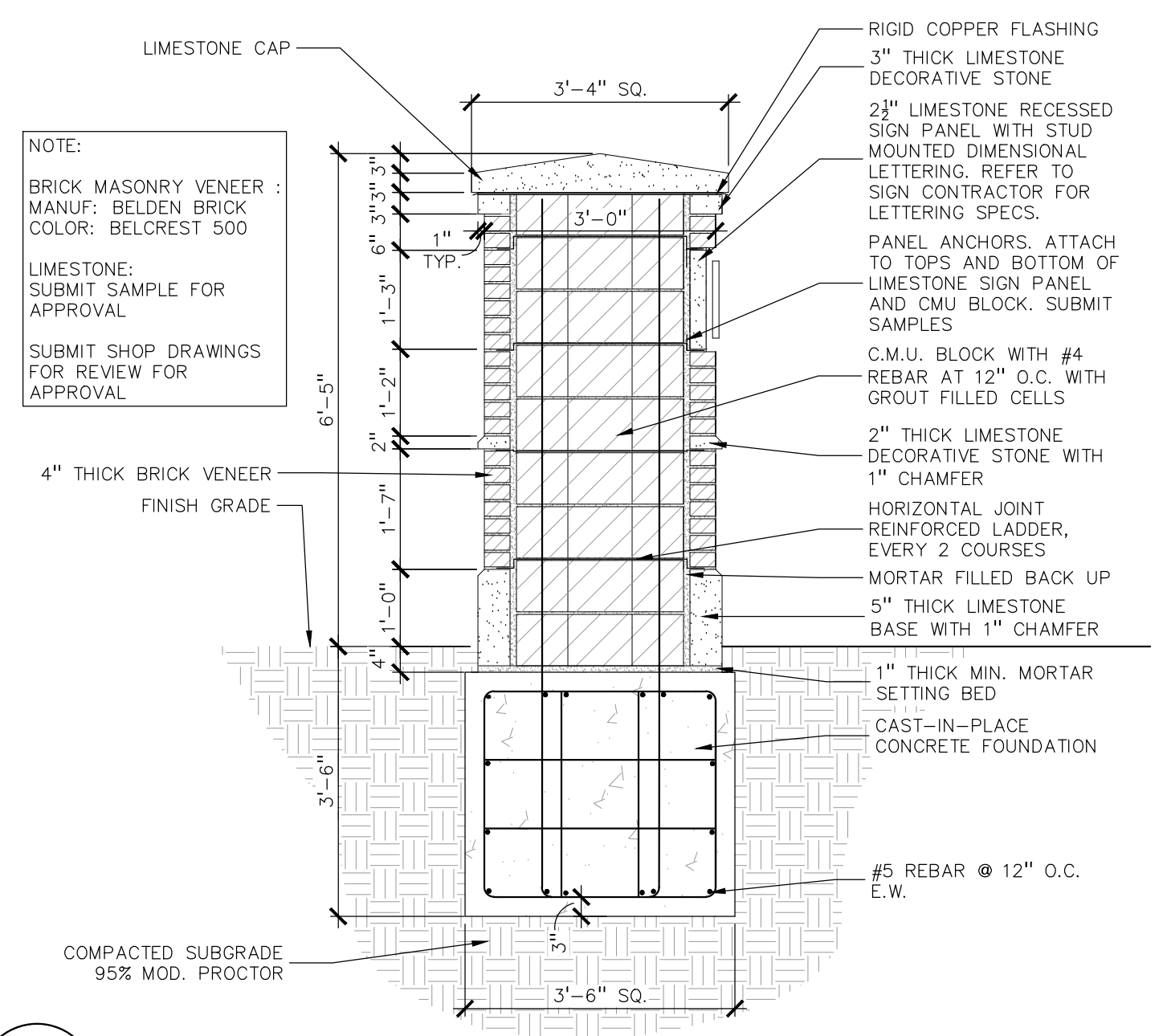
6 MASONRY WALL DETAIL
SCALE: 1/8" = 1'-0"



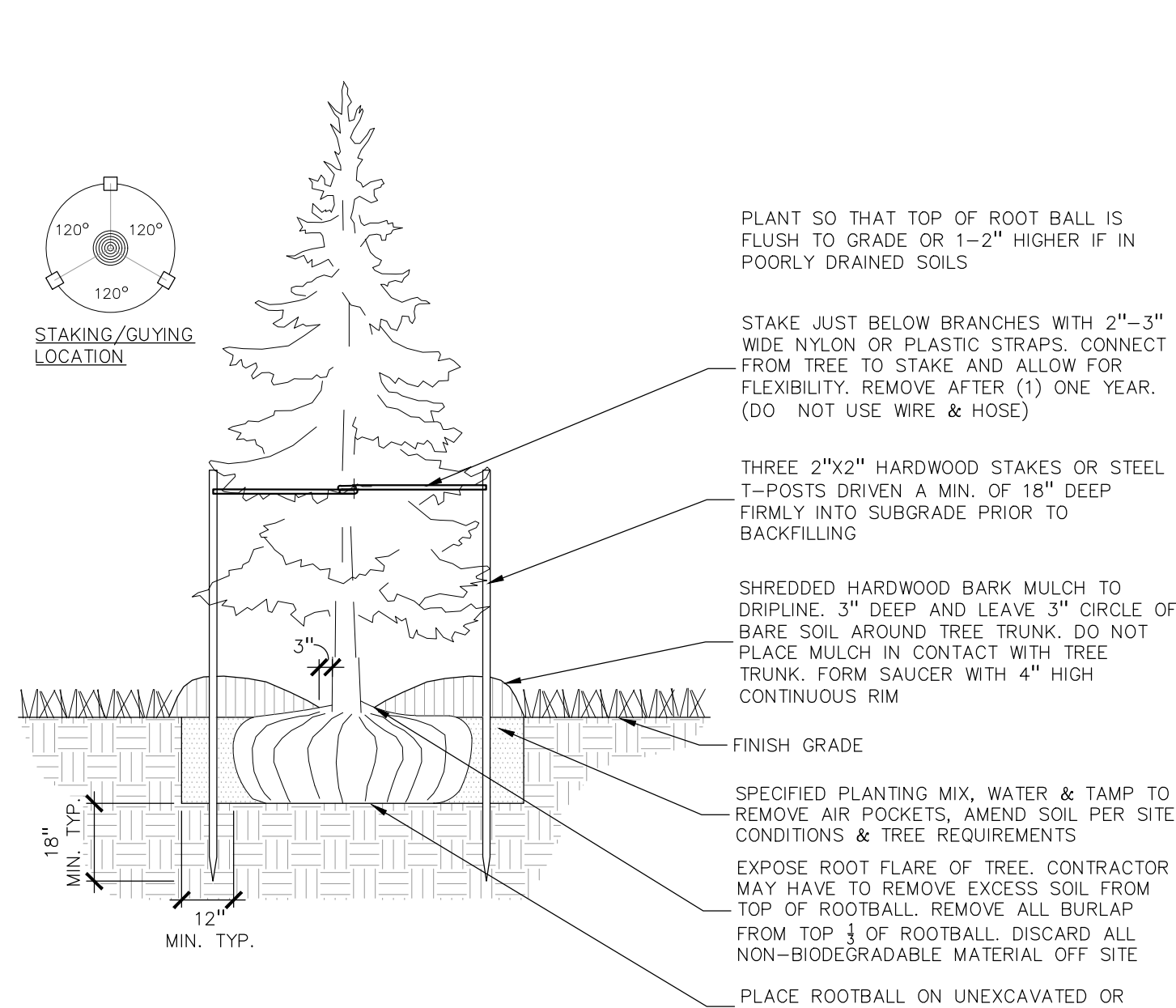
3 TREE PROTECTION DETAIL
SCALE: 1" = 3'-0"



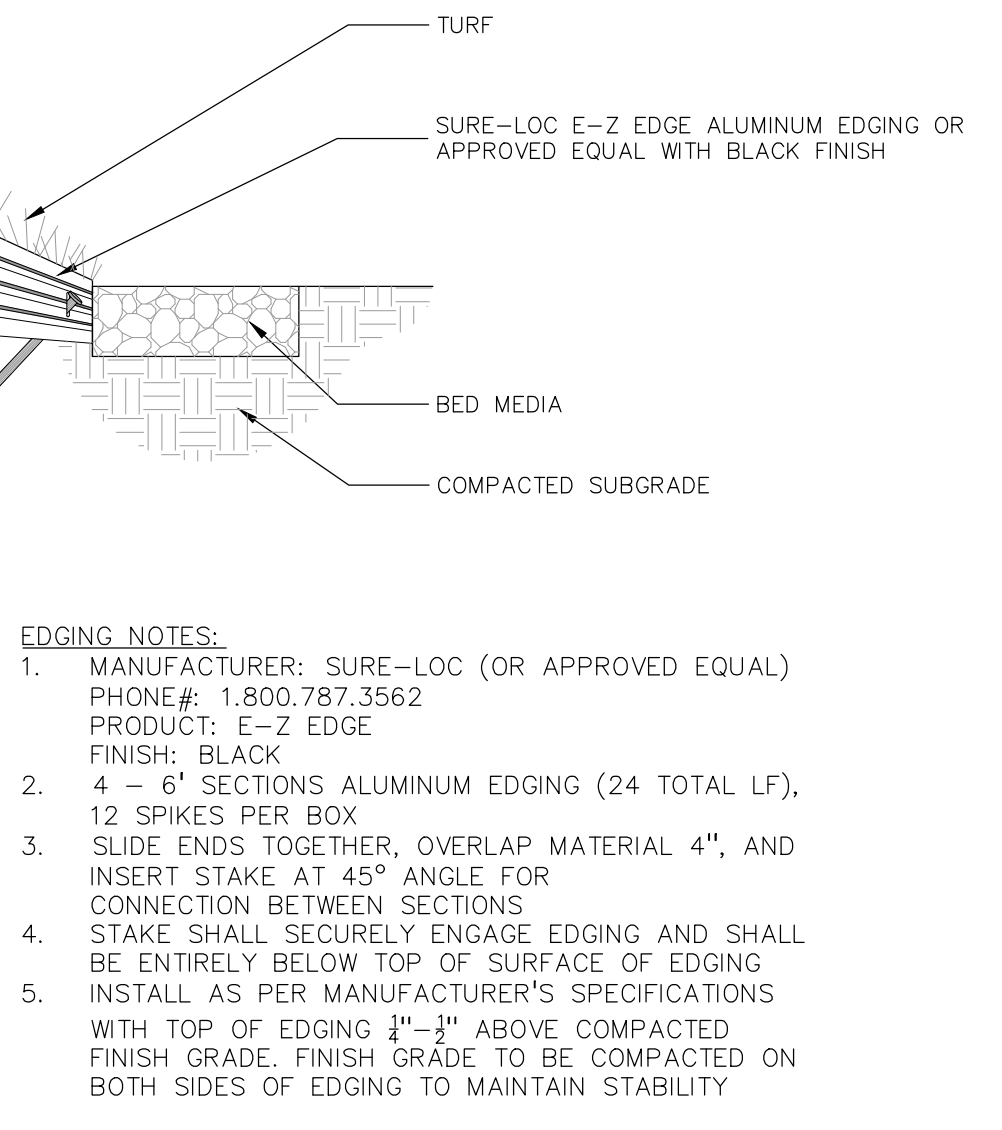
8 PERENNIAL PLANTING DETAIL
SCALE: 1" = 2'-0"



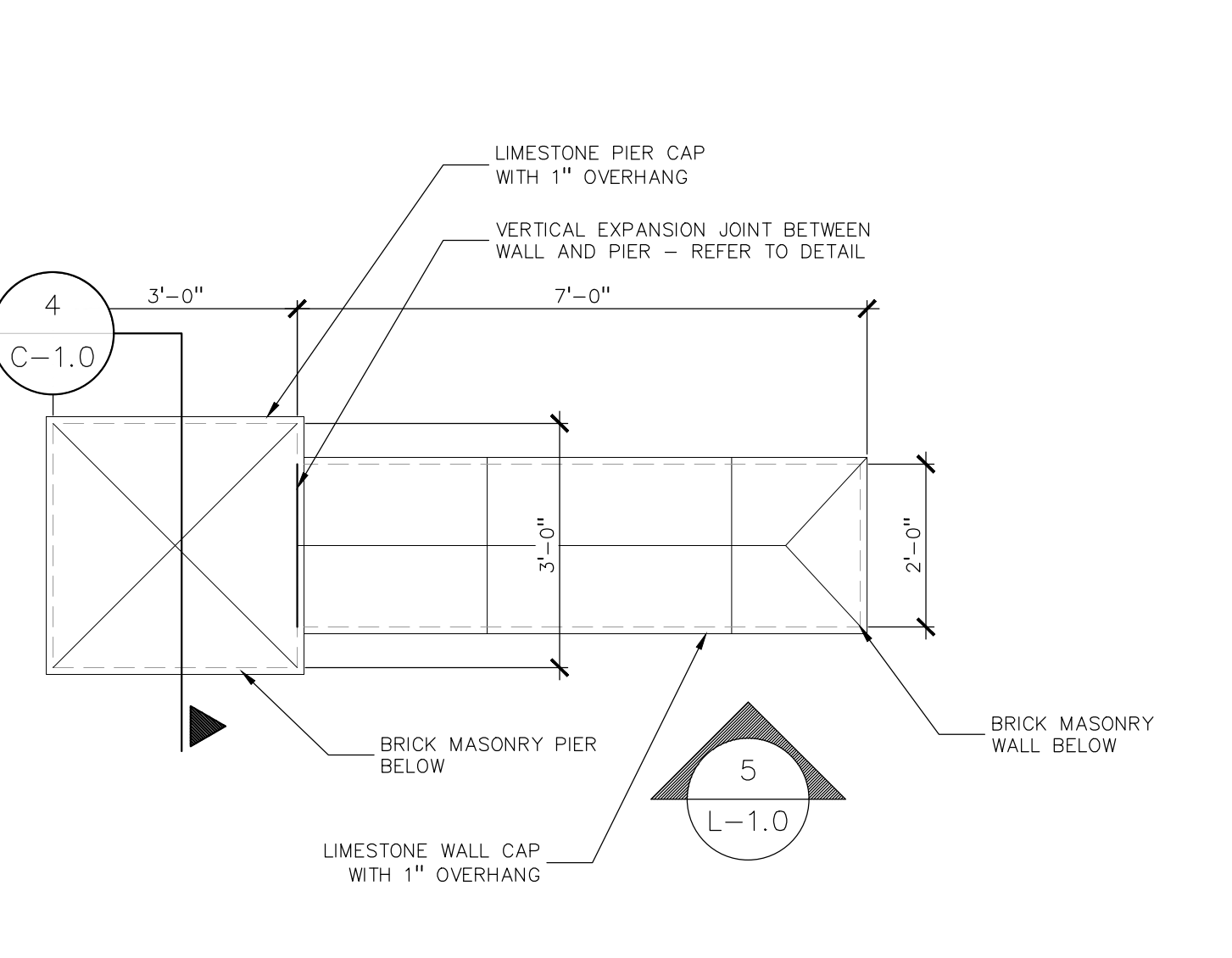
5 MASONRY PIER DETAIL
SCALE: 1/8" = 1'-0"



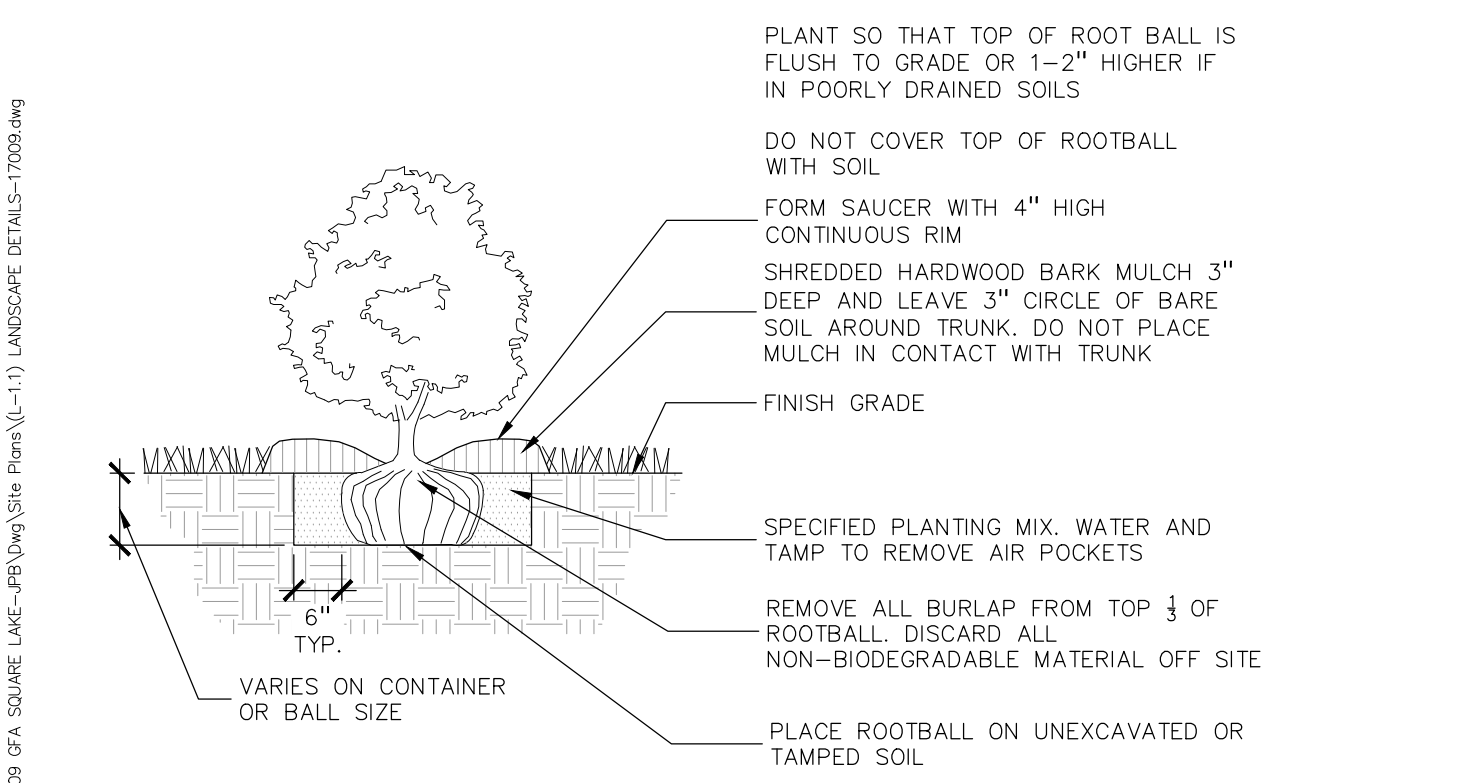
2 EVERGREEN TREE PLANTING DETAIL
SCALE: 1" = 3'-0"



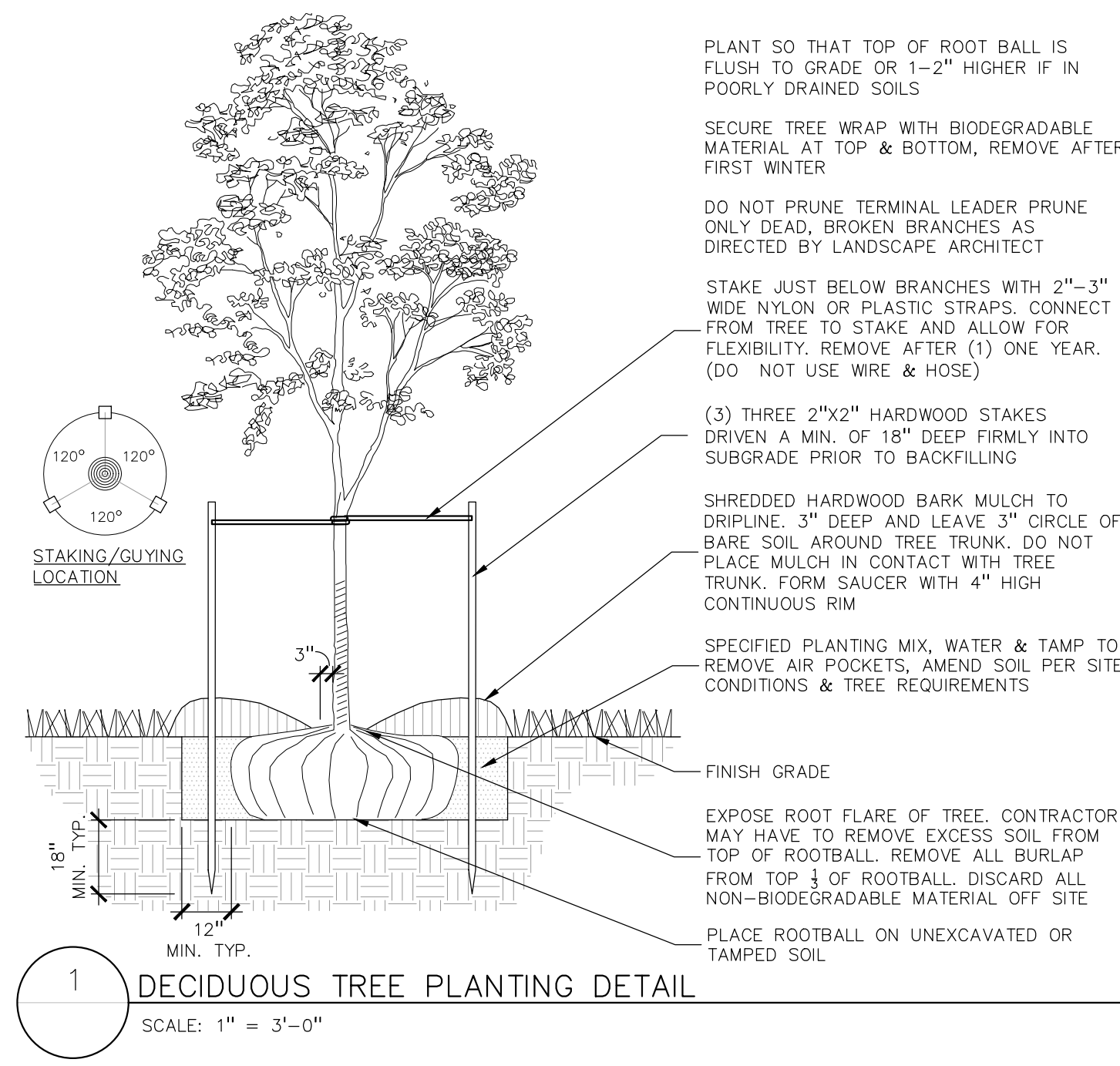
7 ALUMINUM EDGE DETAIL
SCALE: 1/2" = 1'-0"



4 MASONRY WALL AND PIER PLAN ENLARGEMENT
SCALE: 1/8" = 1'-0"



9 SHRUB PLANTING DETAIL
SCALE: 1" = 2'-0"



1 DECIDUOUS TREE PLANTING DETAIL
SCALE: 1" = 3'-0"



CAUTION!
THE LOCATIONS 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 OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

CLIENT
GFA DEVELOPMENT, INC.
3301 MIRAGE DRIVE
TROY, MI 48063

PROJECT TITLE
THE VILLAGE OF HASTINGS
PART OF THE SW 1/4 OF SECTION 3, T. 02N., R. 11E., TROY, MI

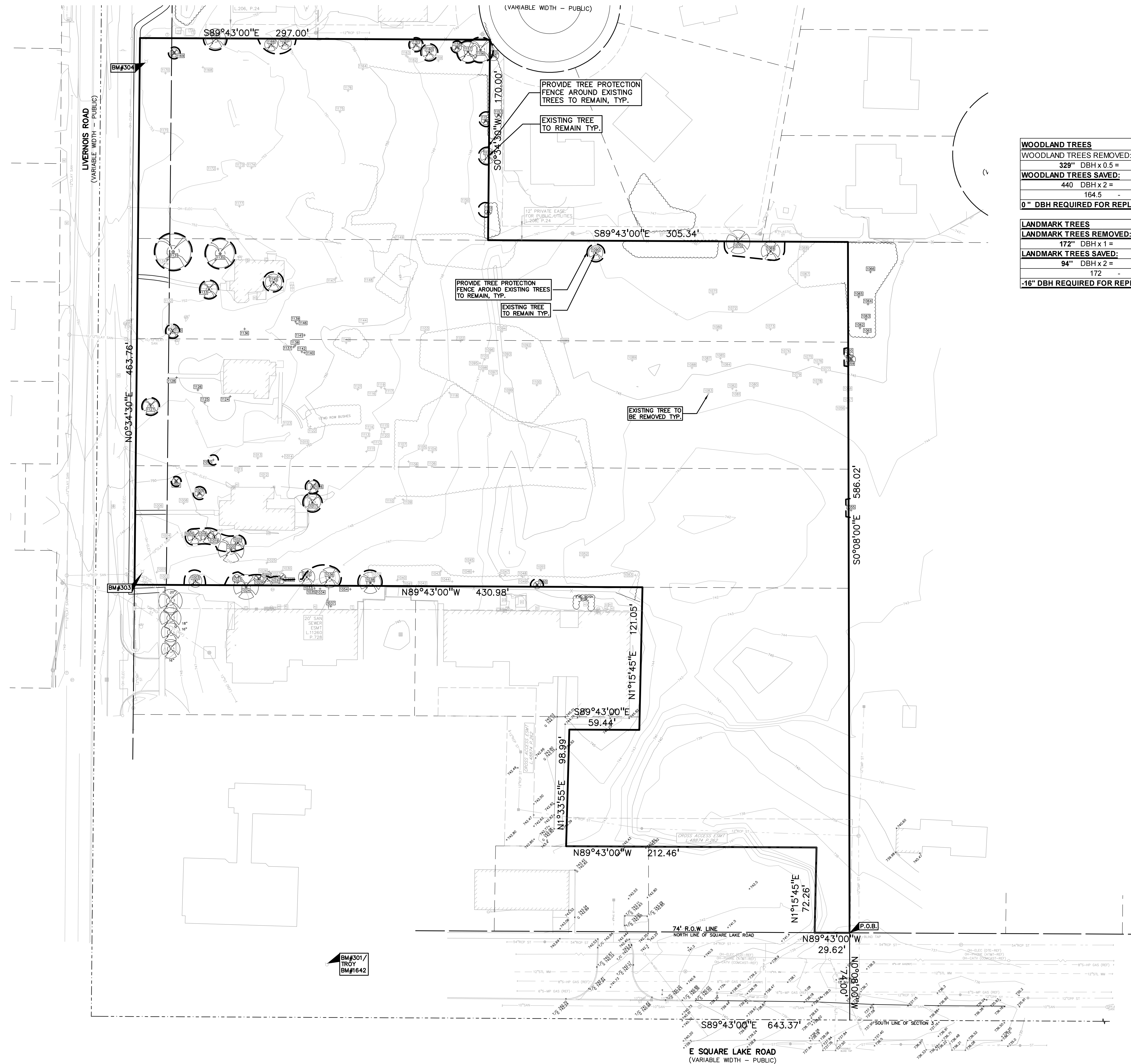
REVISIONS	REV.	PER COMMENTS	8/2/2023	8/9/2023
	REV.	PER COMMENTS	8/24/2023	11/17/2023
	REV.	PER PC COMMENTS	11/28/2023	12/7/2023
	REV.	PER PC COMMENTS	1/9/2024	1/24/2024

ORIGINAL ISSUE DATE:
JUNE 1, 2023

DRAWING TITLE
LANDSCAPE DETAILS

PEA JOB NO.	2017-009
P.M.	JBT
DN.	LAW
DES.	LAW

DRAWING NUMBER:



KEY

- = EXISTING TREE / TAG TO REMAIN
- = EXISTING TREE / TAG TO BE REMOVED
- = TREE PROTECTION FENCE

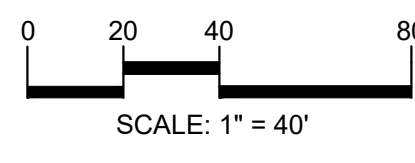
WOODLAND TREES

WOODLAND TREES REMOVED:	30	(REPLACE AT 50% OF REMOVED DBH)
329" DBH x 0.5 =	165"	REPLACEMENT
WOODLAND TREES SAVED:	44	(CREDIT OF 2X DBH)
440 DBH x 2 =	880"	CREDIT
164.5 -	880	= -715.5
0" DBH REQUIRED FOR REPLACEMENT		

LANDMARK TREES

LANDMARK TREES REMOVED:	10	(REPLACE AT 100% OF REMOVED DBH)
172" DBH x 1 =	172"	REPLACEMENT
LANDMARK TREES SAVED:	5	(CREDIT OF 2X DBH)
94" DBH x 2 =	188"	CREDIT
172 -	188	= -16
-16" DBH REQUIRED FOR REPLACEMENT		

PEA GROUP
t. 844.813.2949
www.peagroup.com



CAUTION!
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CLIENT
GFA DEVELOPMENT, INC.
3301 MIRAGE DRIVE
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PROJECT TITLE
THE VILLAGE OF HASTINGS
PART OF THE SW 1/4 OF SECTION 3, T. 02N., R. 11E., TROY, MI

REVISIONS

REV. PER COMMENTS	6/2/2023	8/9/2023
REV. PER COMMENTS	8/24/2023	11/17/2023
REV. PER PC COMMENTS	11/28/2023	12/7/2023
REV. PER PC COMMENTS	1/9/2024	1/24/2024

ORIGINAL ISSUE DATE:
JUNE 1, 2023

DRAWING TITLE
TREE PRESERVATION PLAN

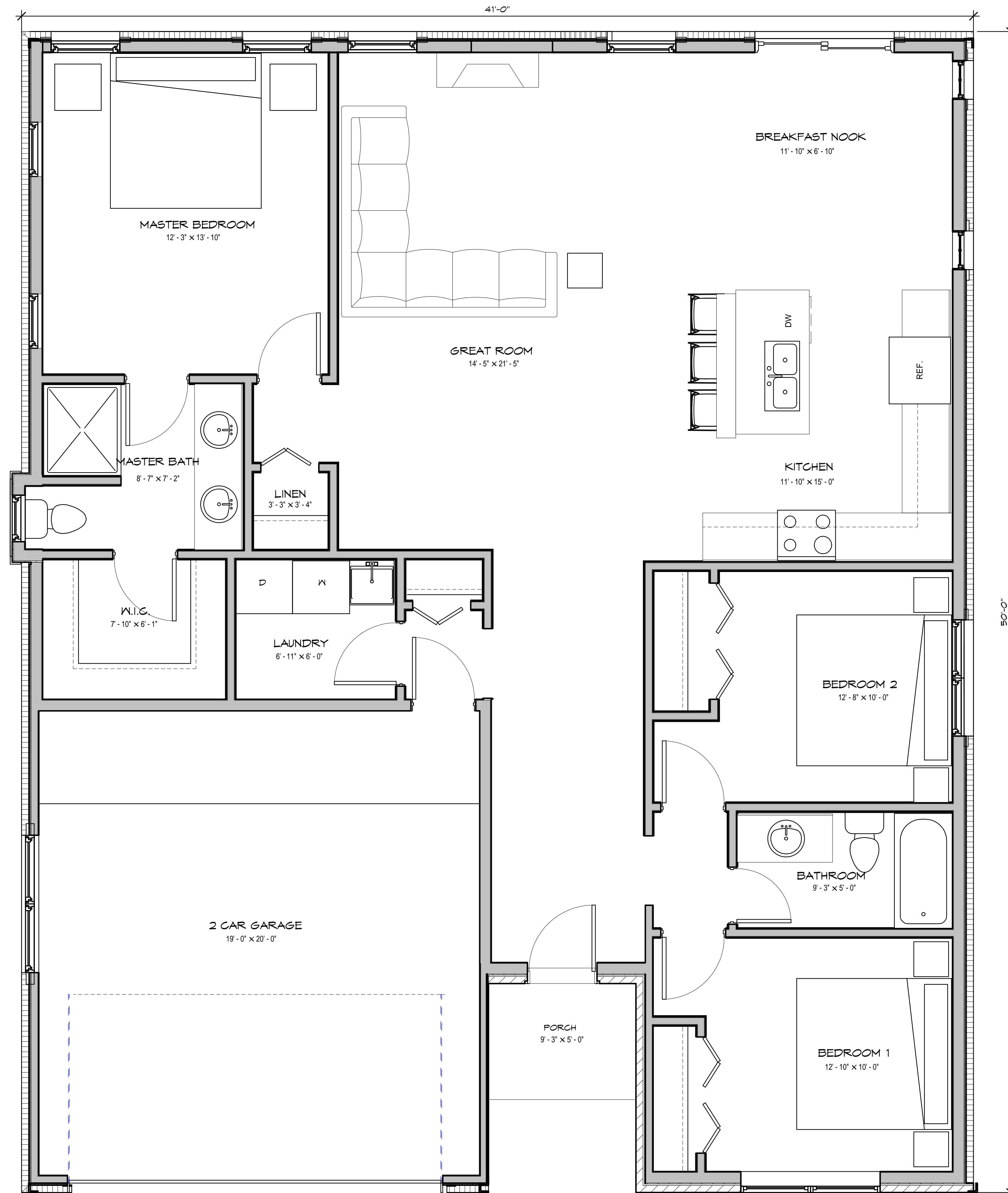
PEA JOB NO.	2017-009
P.M.	JBT
DN.	LAW
DES.	LAW

DRAWING NUMBER:

NOT FOR CONSTRUCTION

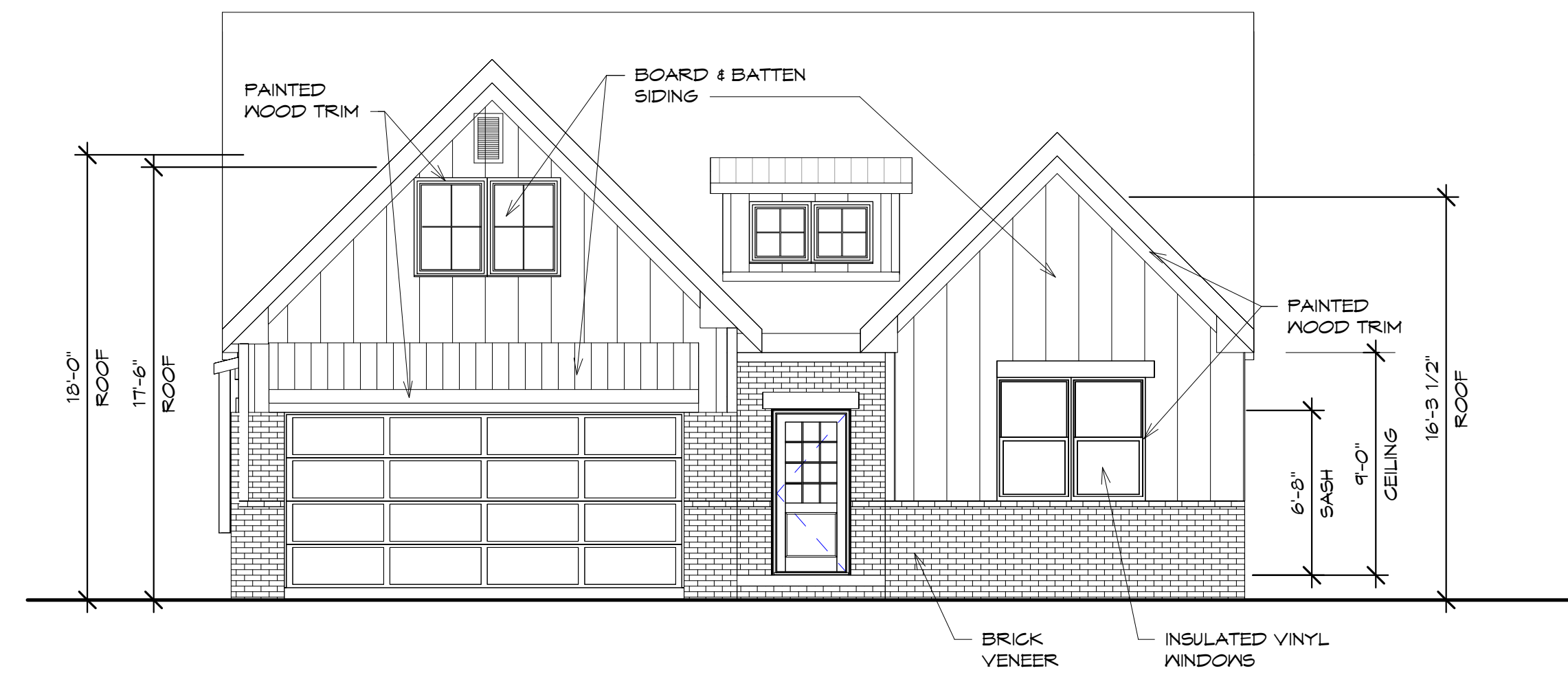
T-1.0

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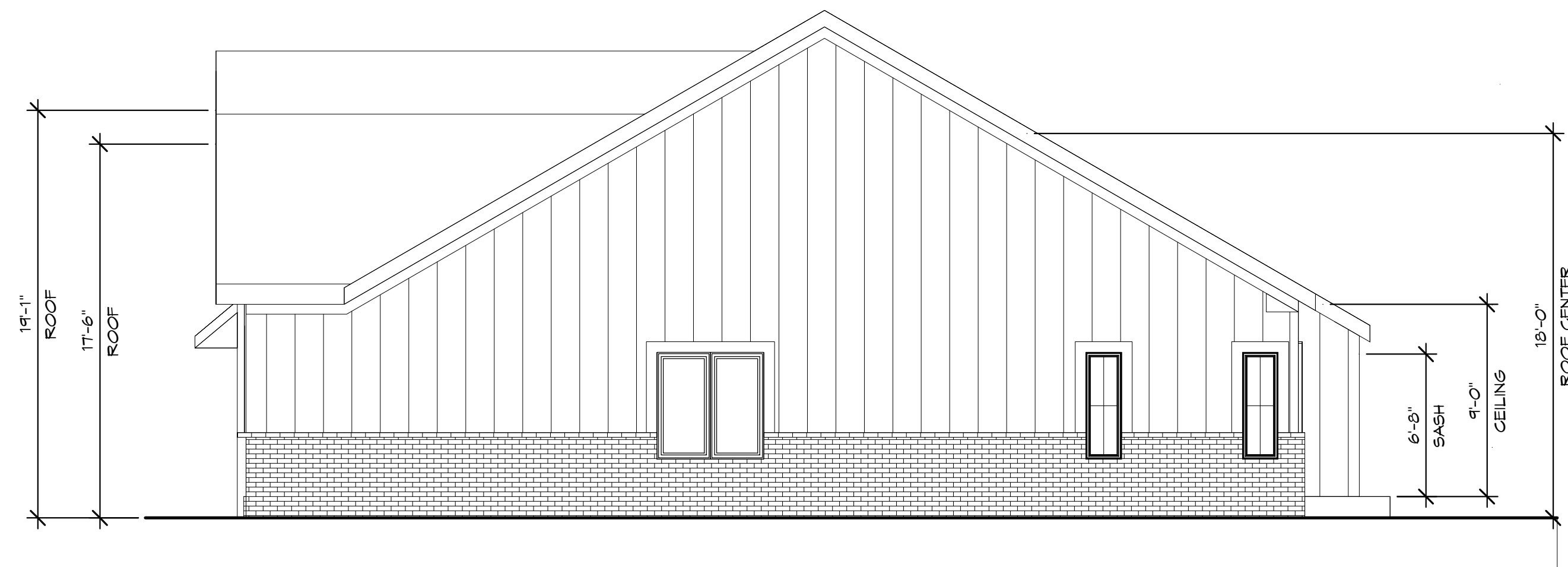


FIRST FLOOR PLAN

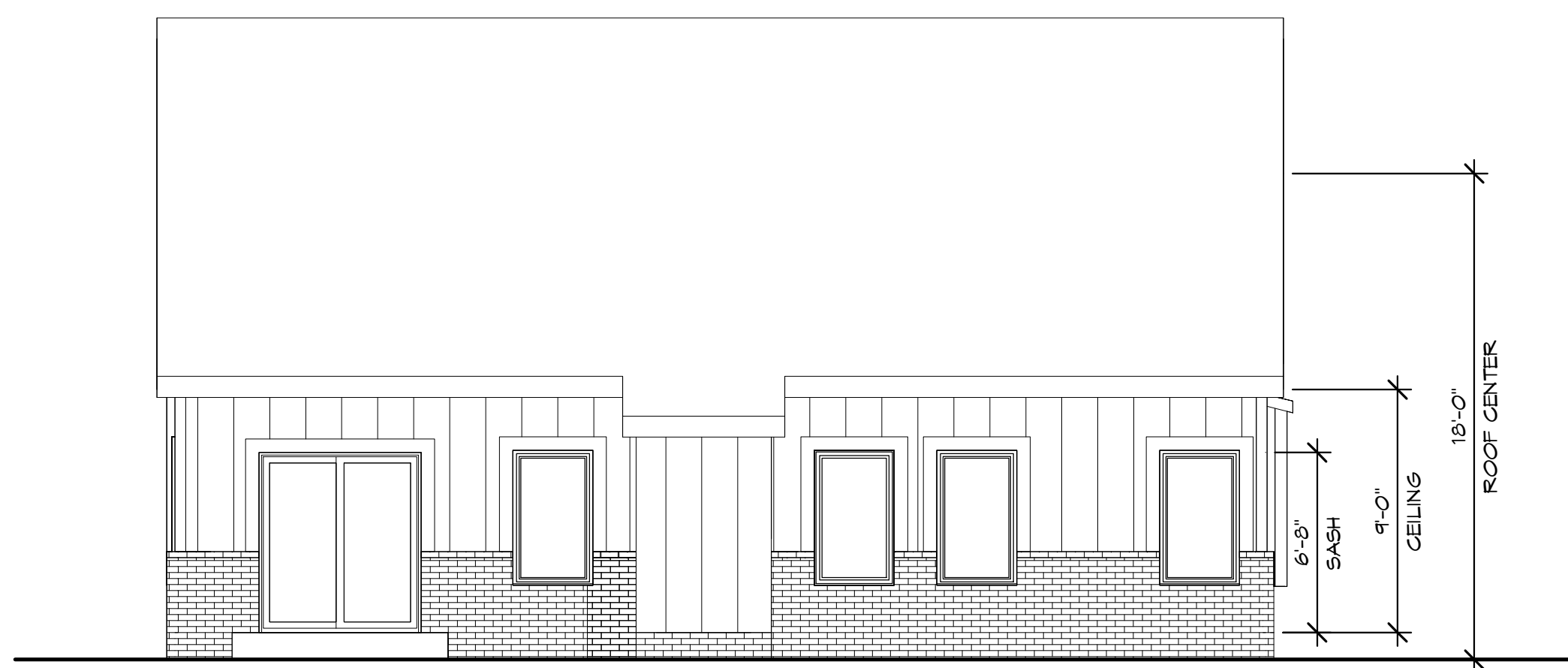
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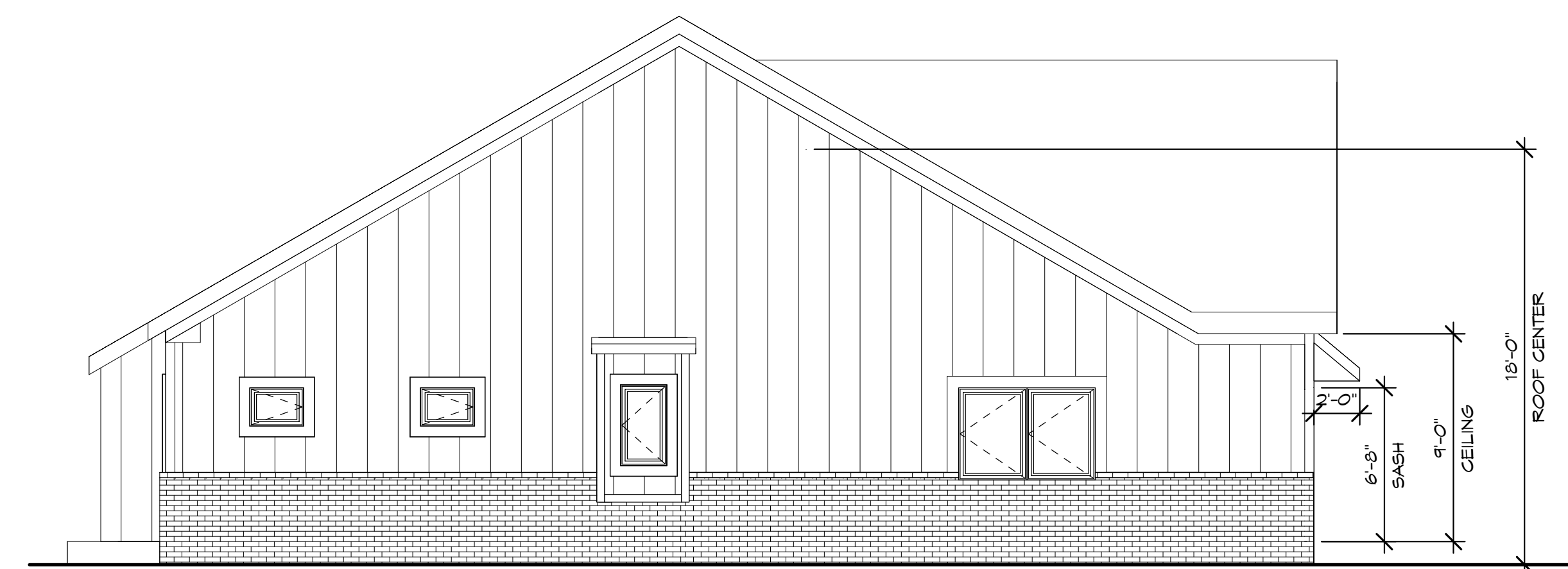
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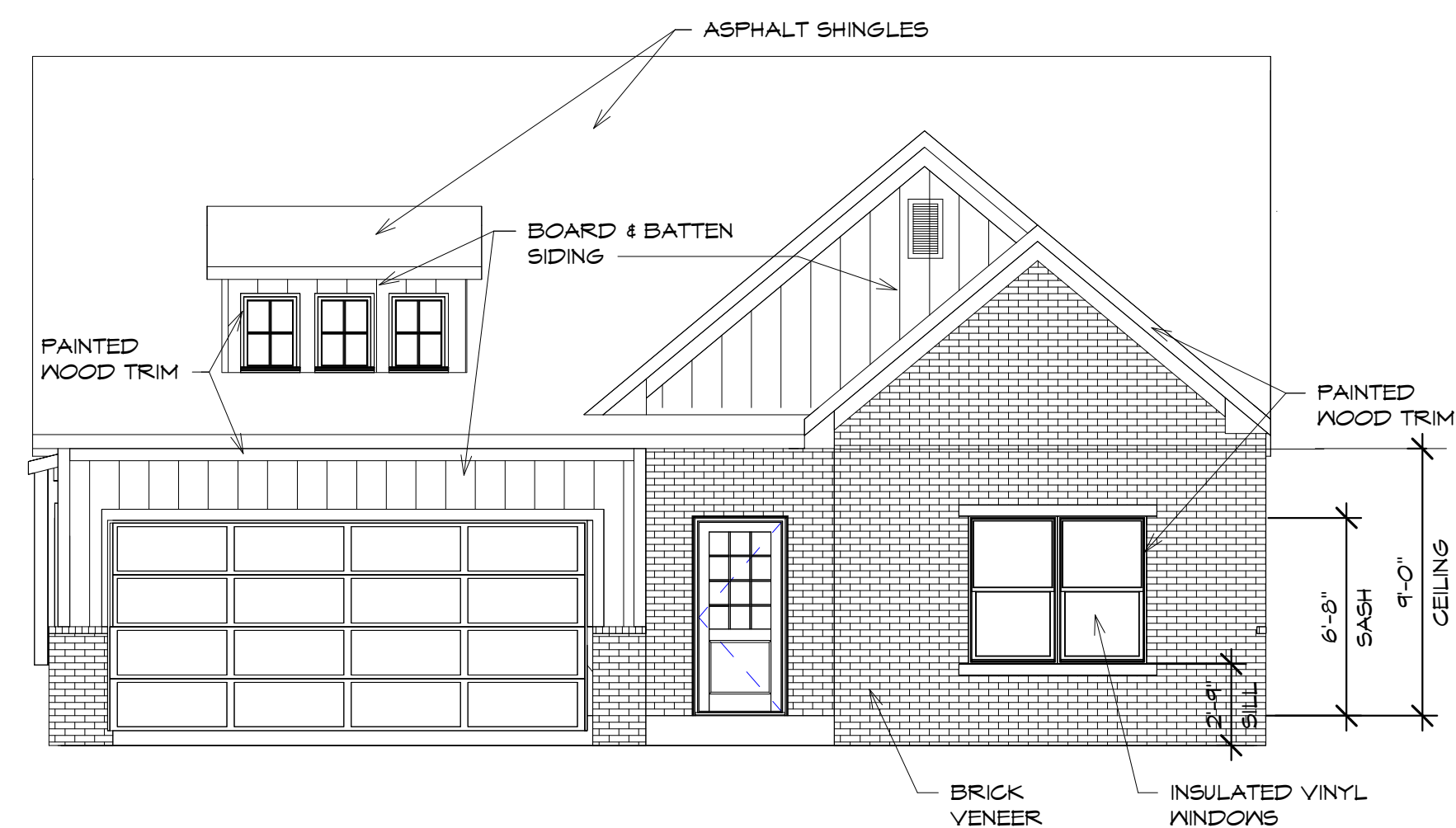
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Scale: 3/16" = 1'-0"



2 REAR ELEVATION
Scale: 3/16" = 1'-0"

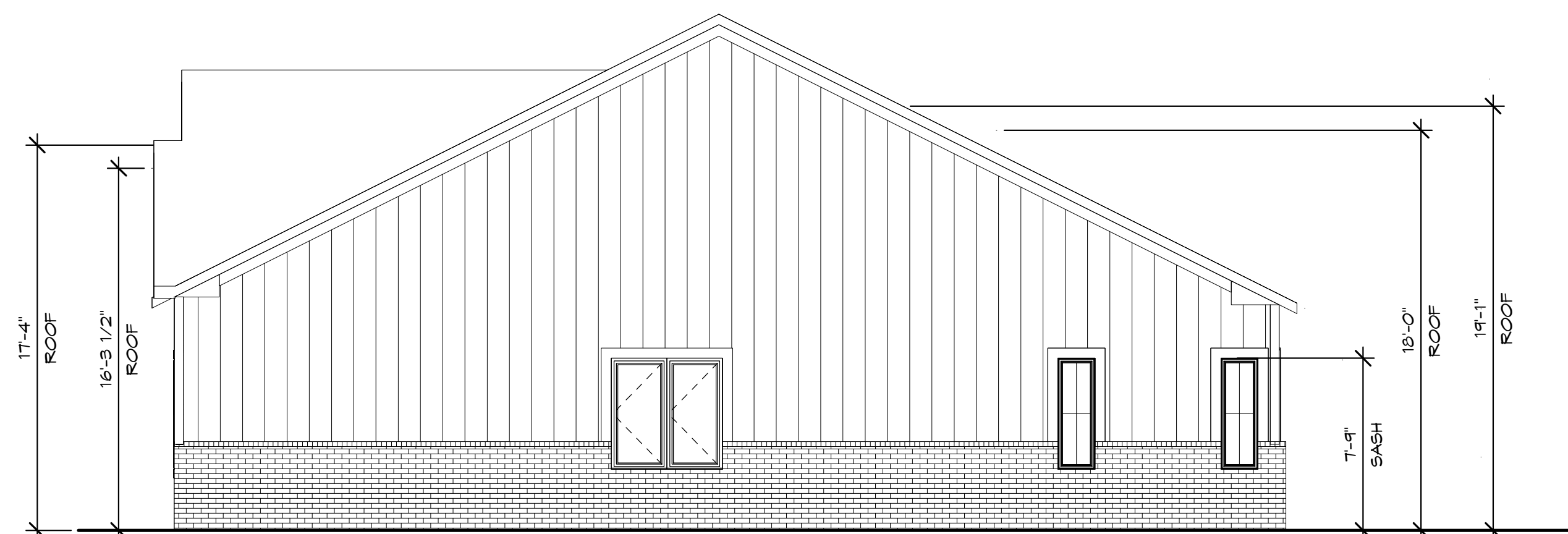


3 LEFT ELEVATION
Scale: 3/16" = 1'-0"



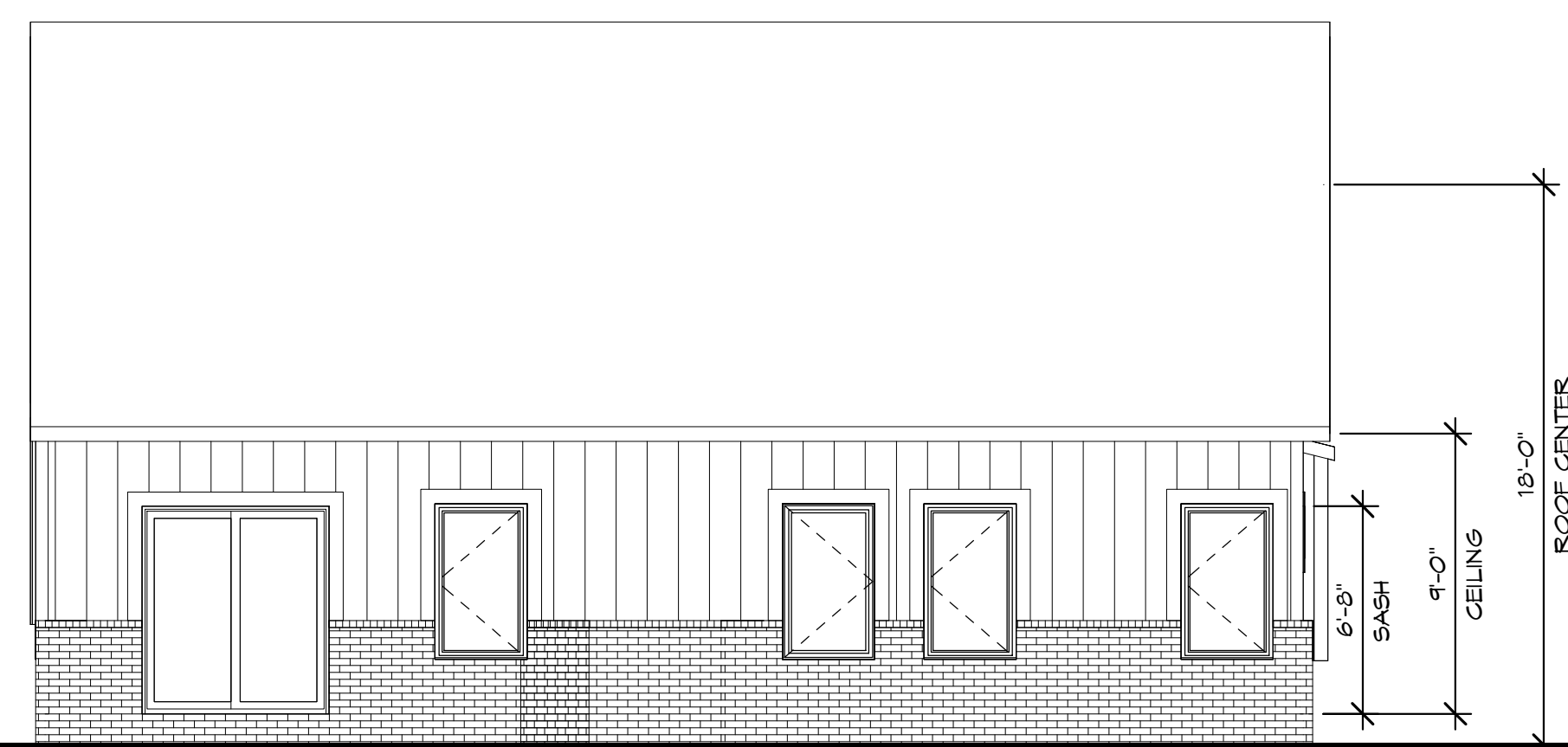
1 FRONT ELEVATION

Scale: 3/16" = 1'-0"



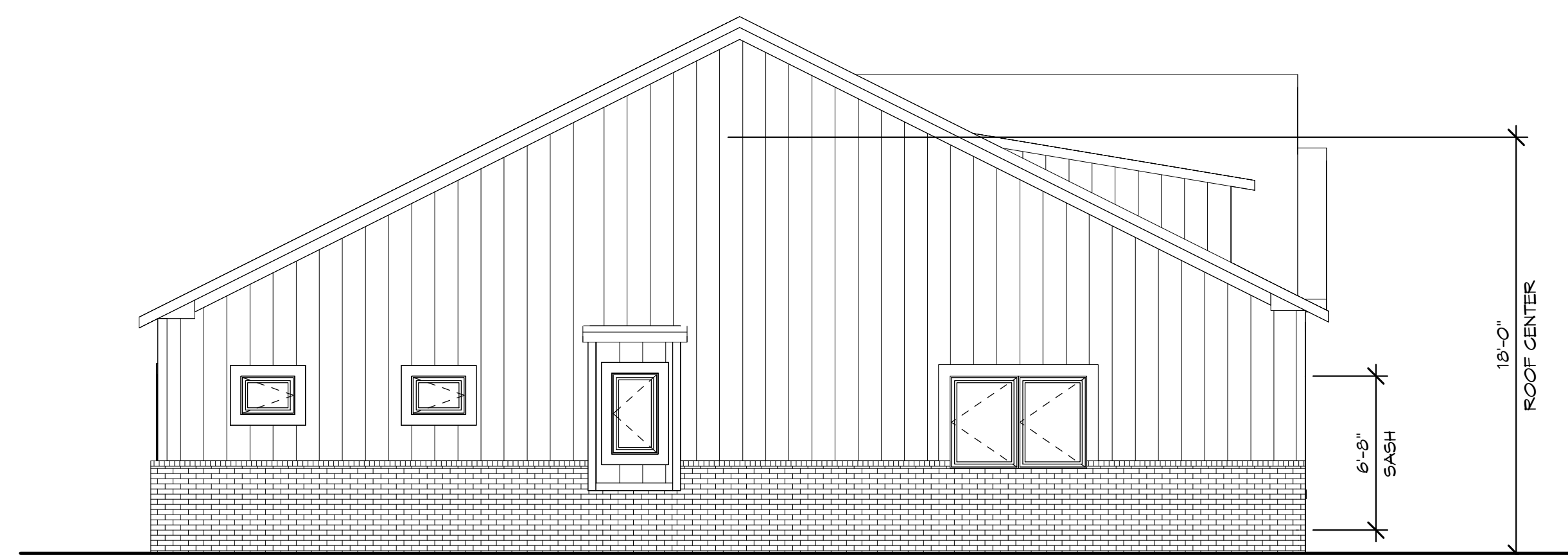
4 RIGHT ELEVATION

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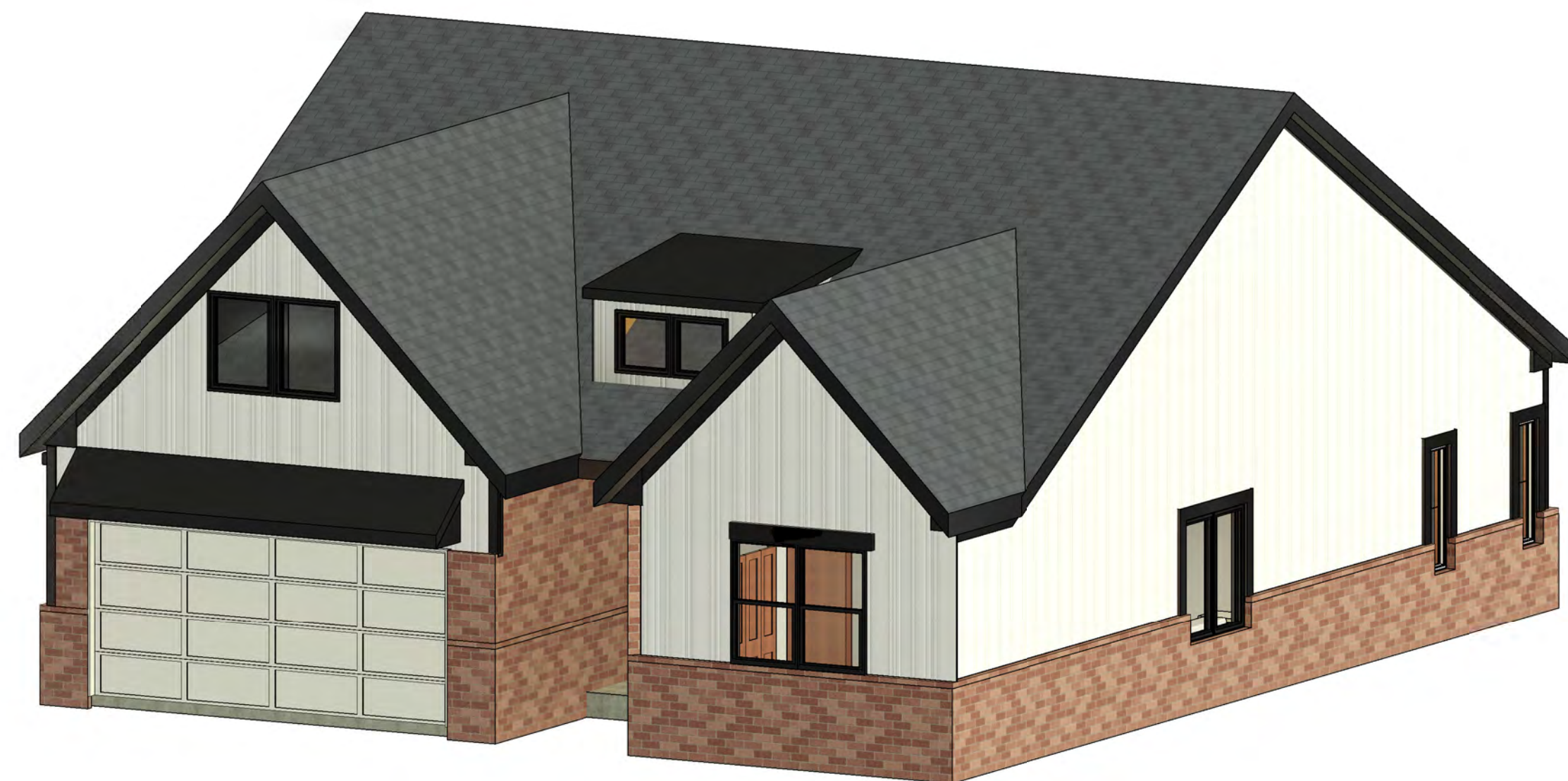
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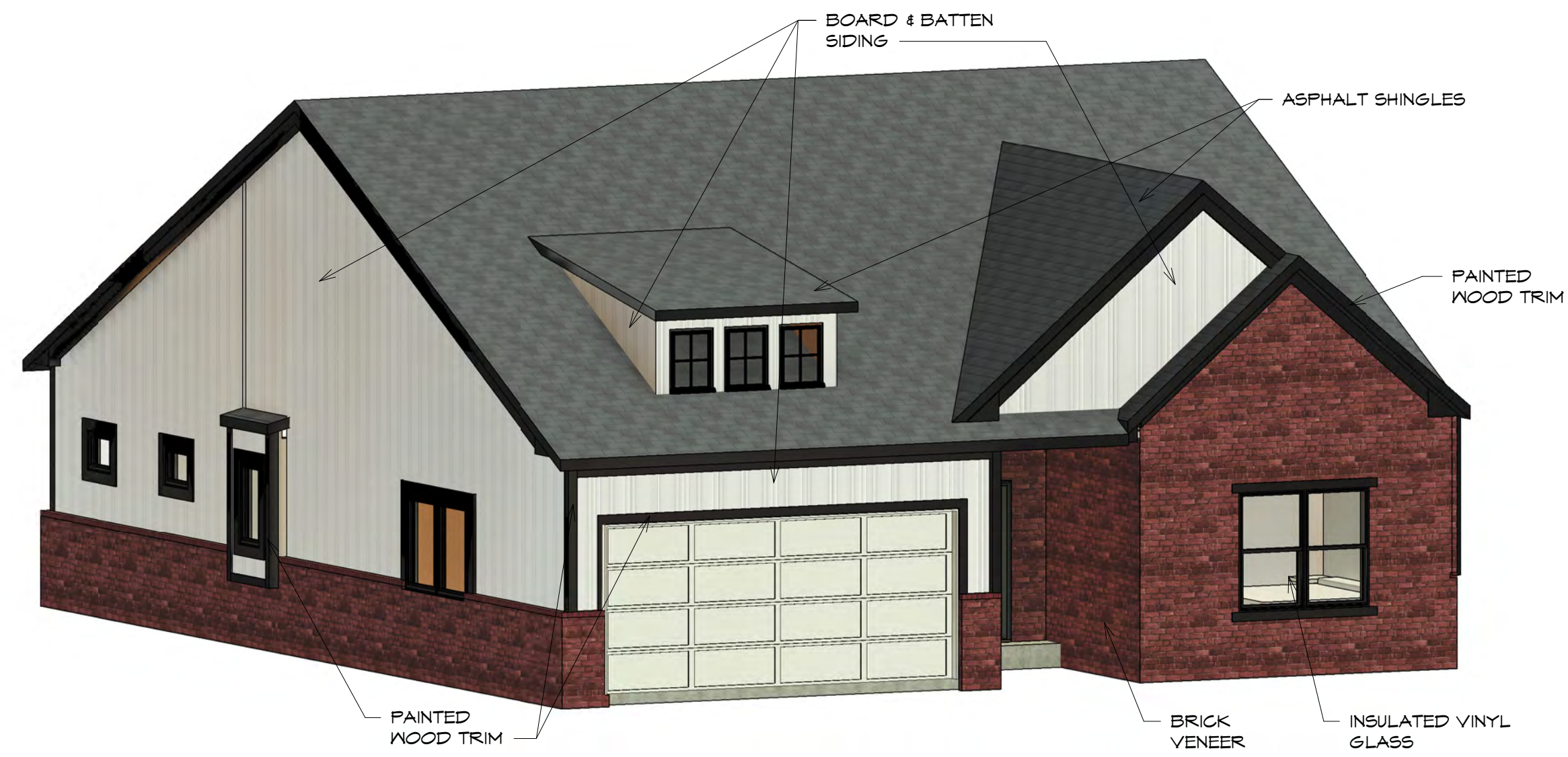
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3 LEFT ELEVATION

Scale: 3/16" = 1'-0"





3D VIEW 1



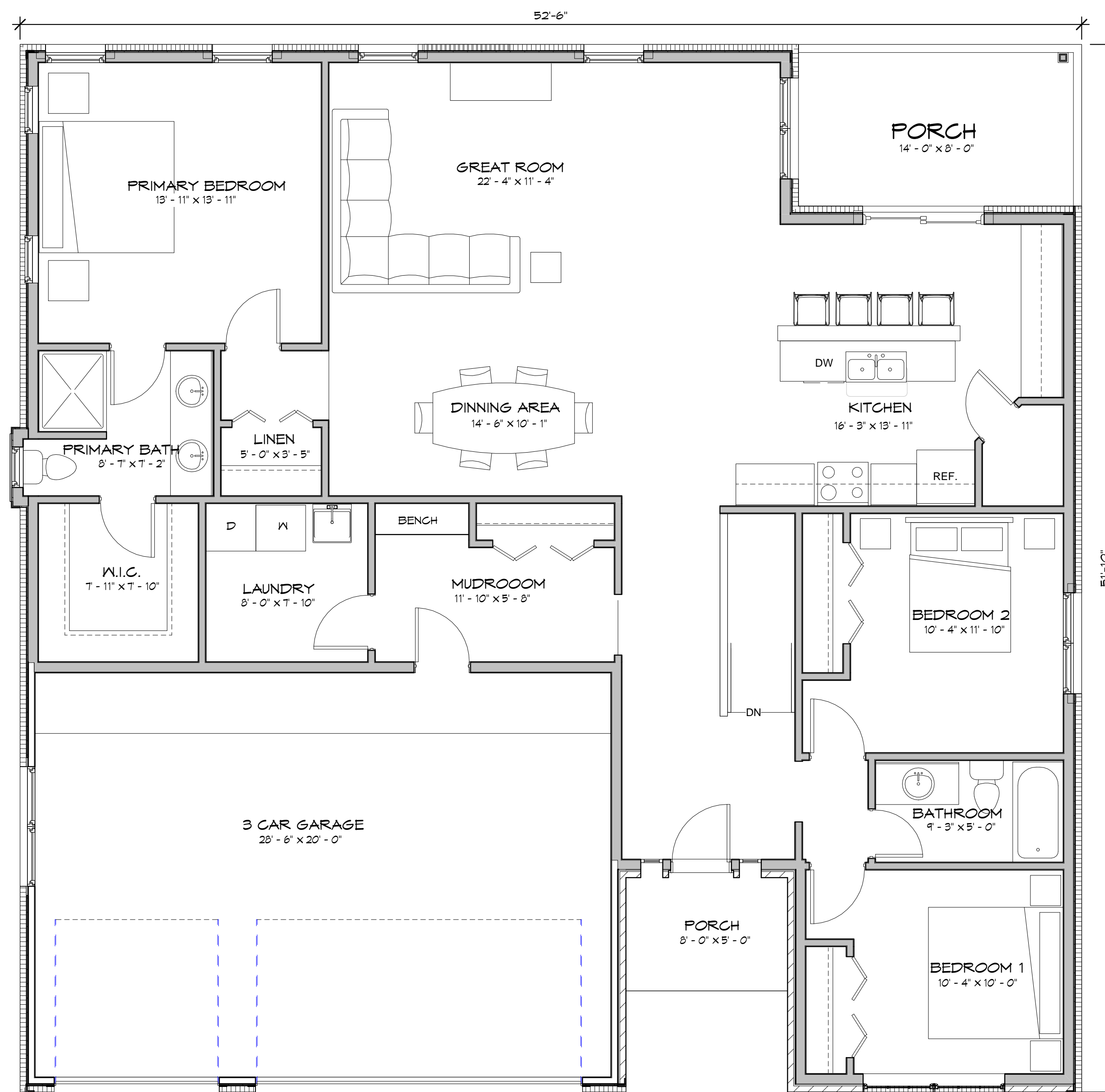
3D VIEW 2



3D VIEW 3



3D VIEW 4

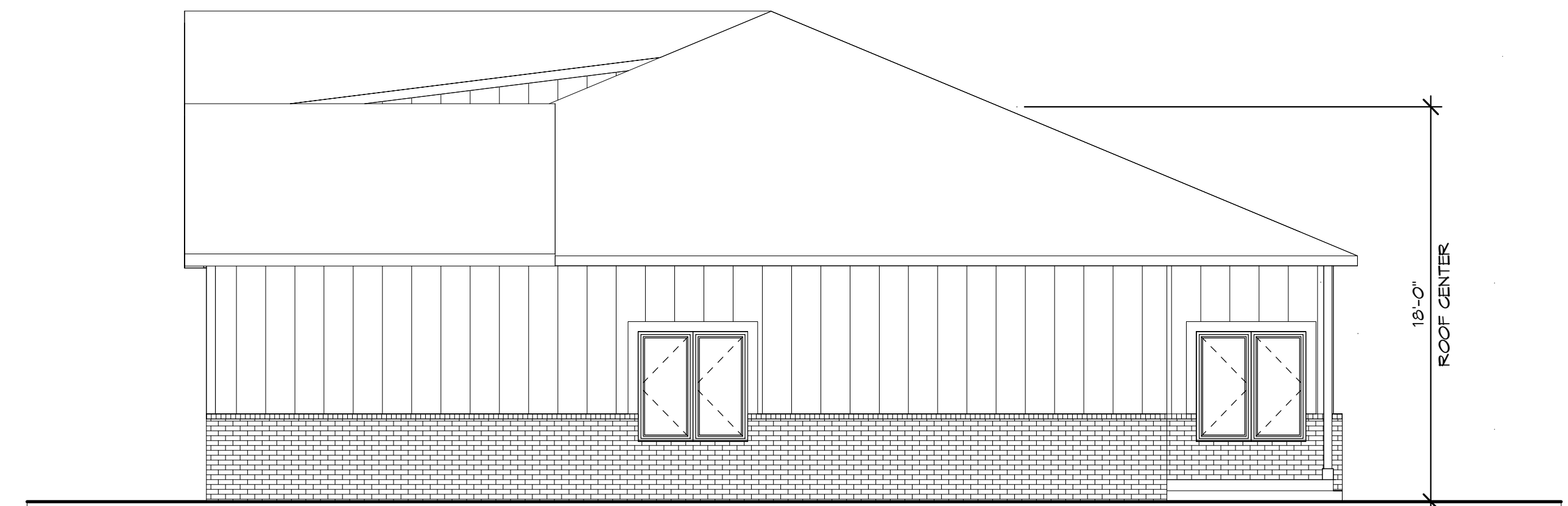


FIRST FLOOR PLAN

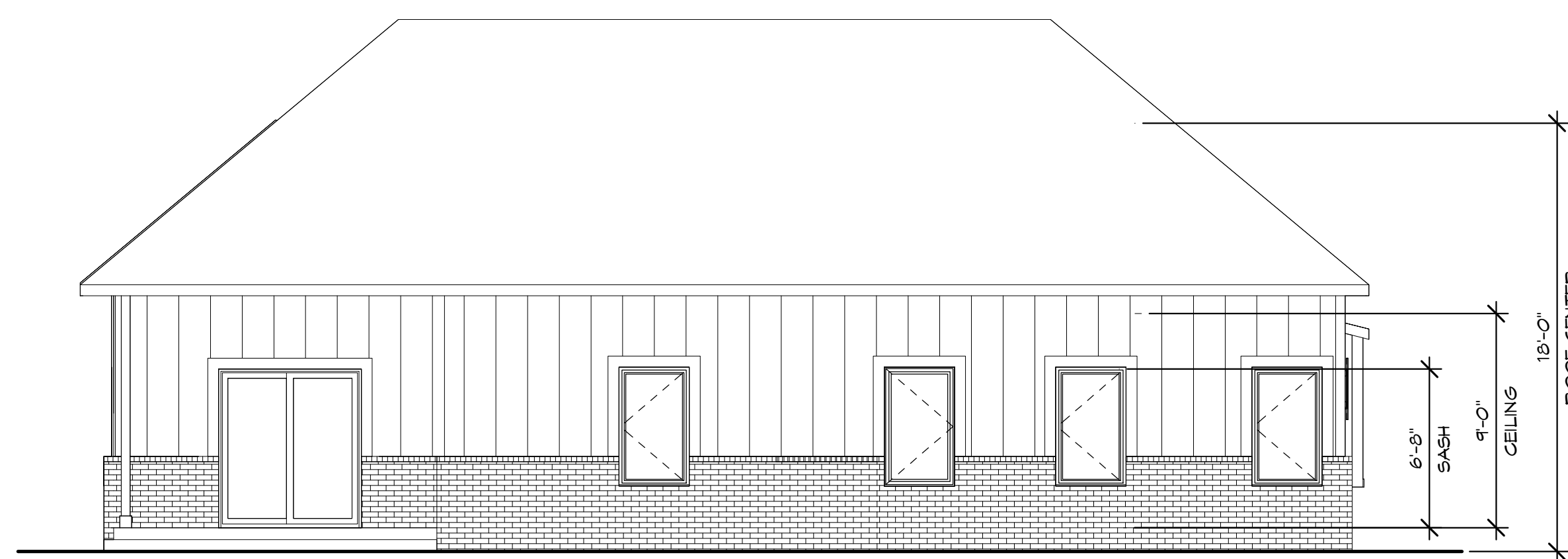
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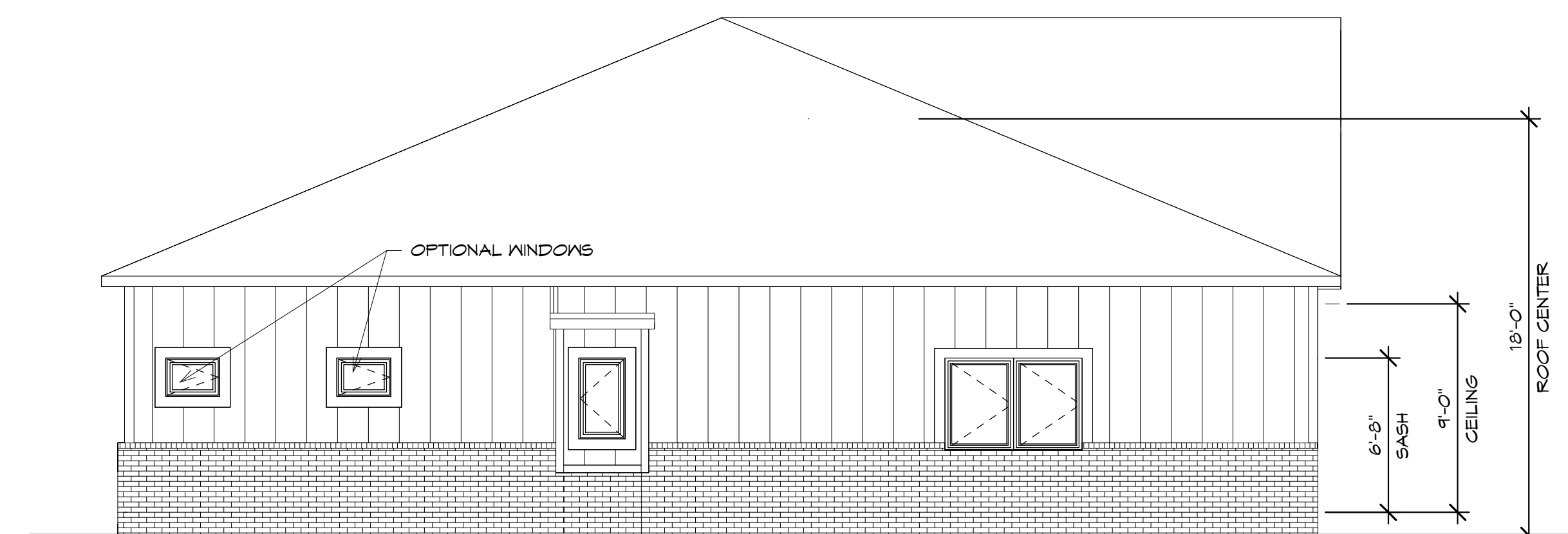
1 FRONT ELEVATION
Scale: 3/16" = 1'-0"



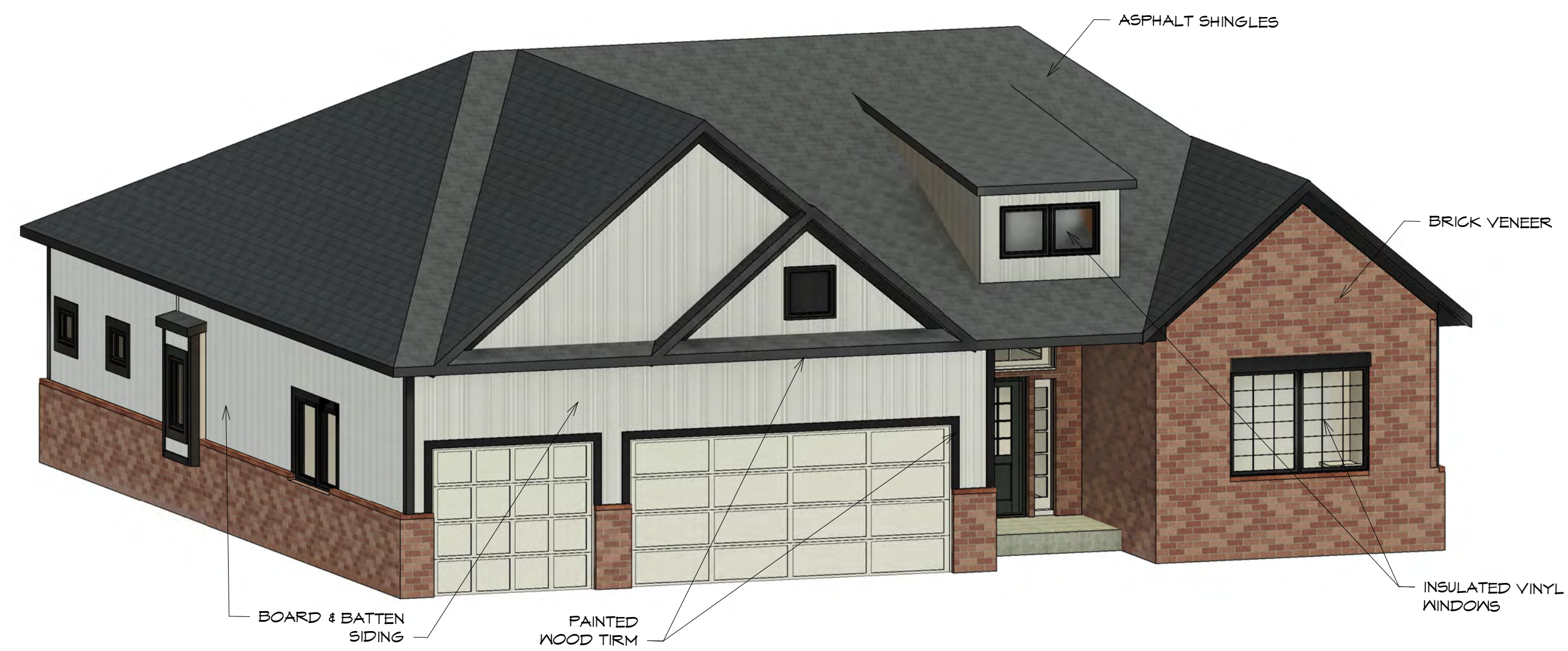
4 RIGHT ELEVATION
Scale: 3/16" = 1'-0"



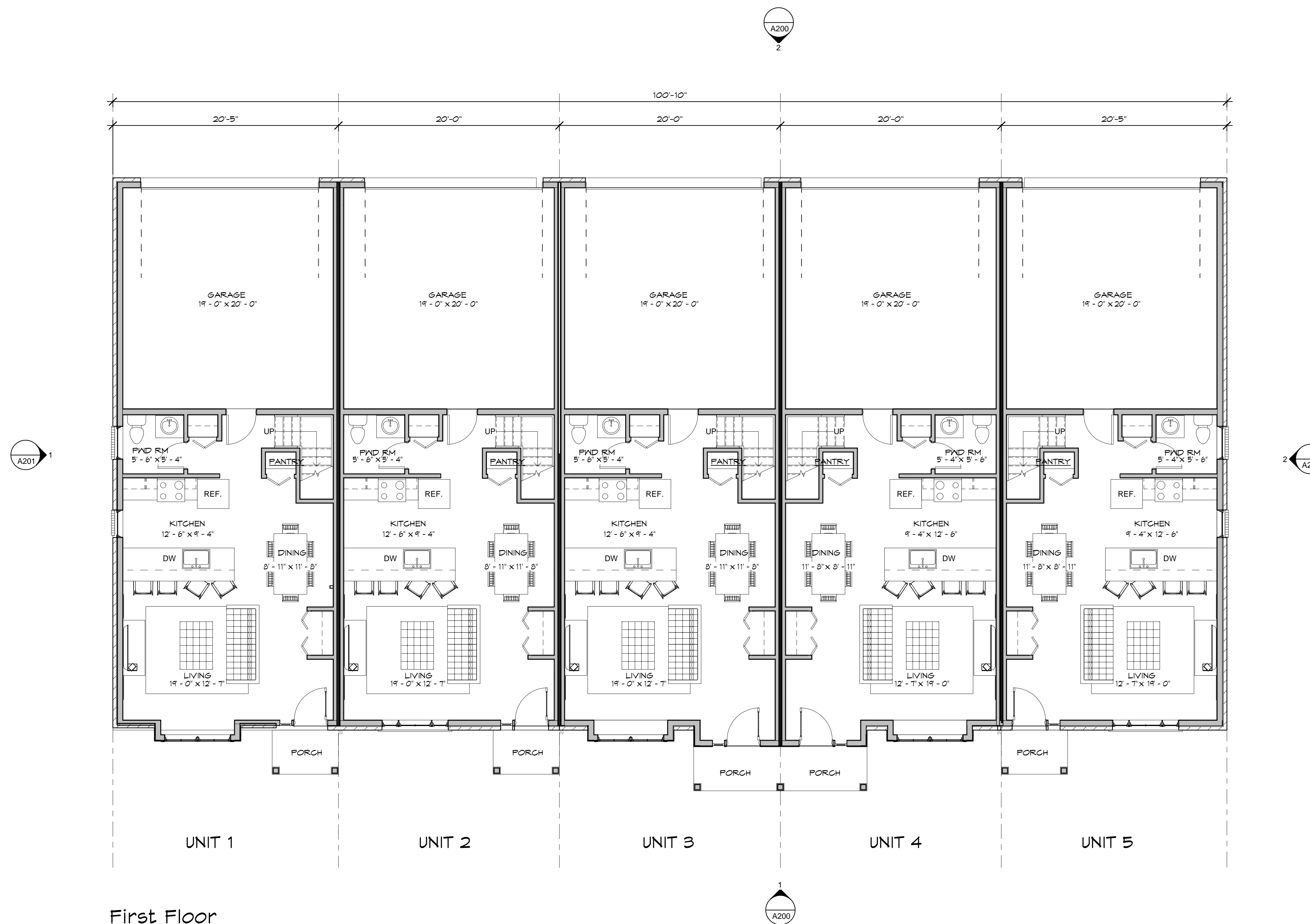
2 REAR ELEVATION
Scale: 3/16" = 1'-0"



3 LEFT ELEVATION
Scale: 3/16" = 1'-0"



RANCH UNIT -
3 CAR
GARAGE



First Floor

Scale: 3/16" = 1'-0"



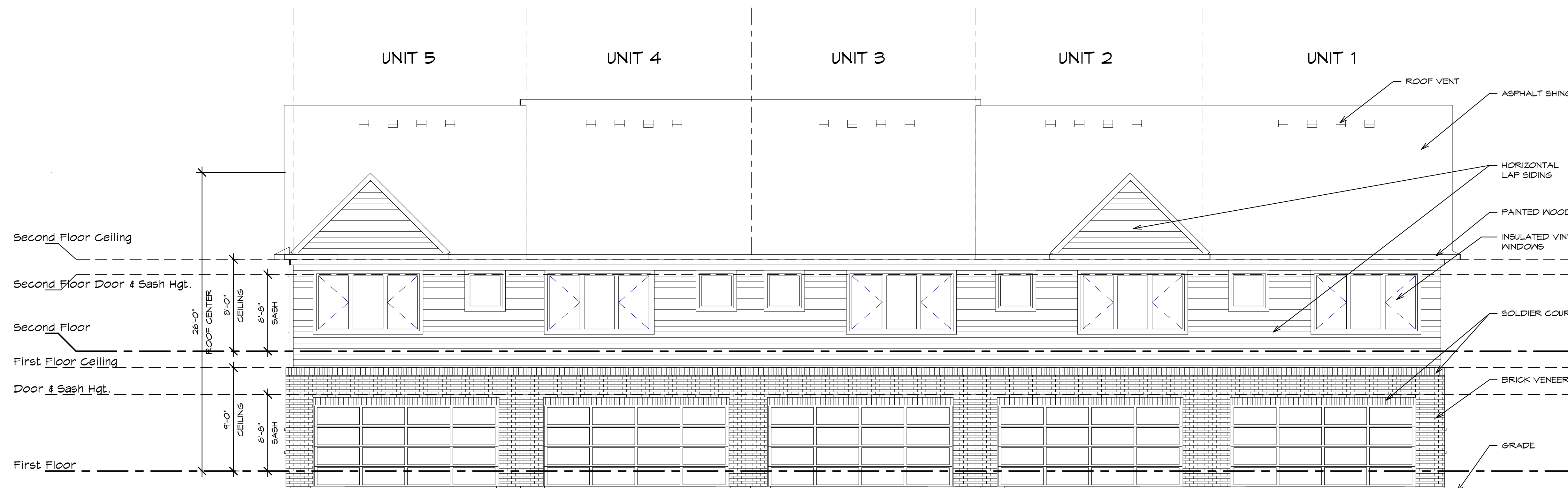
Second Floor

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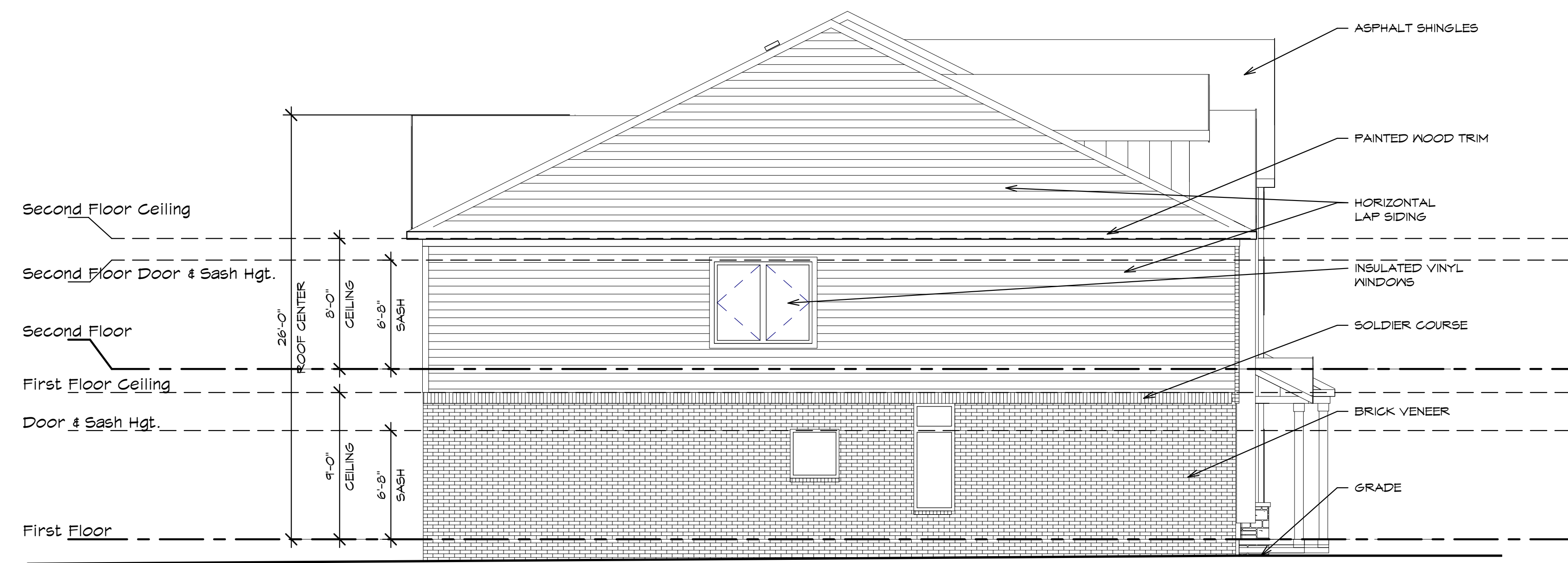




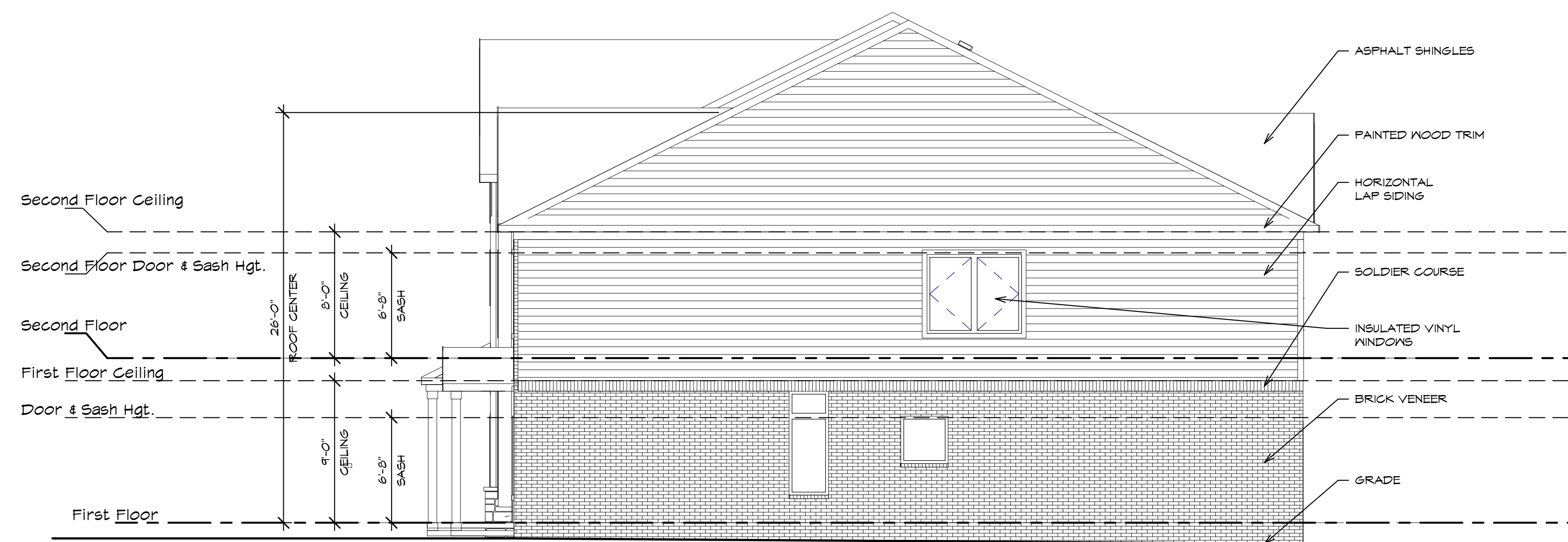
1 SOUTH ELEVATION
Scale: 3/16" = 1'-0"



2 NORTH ELEVATION
Scale: 3/16" = 1'-0"

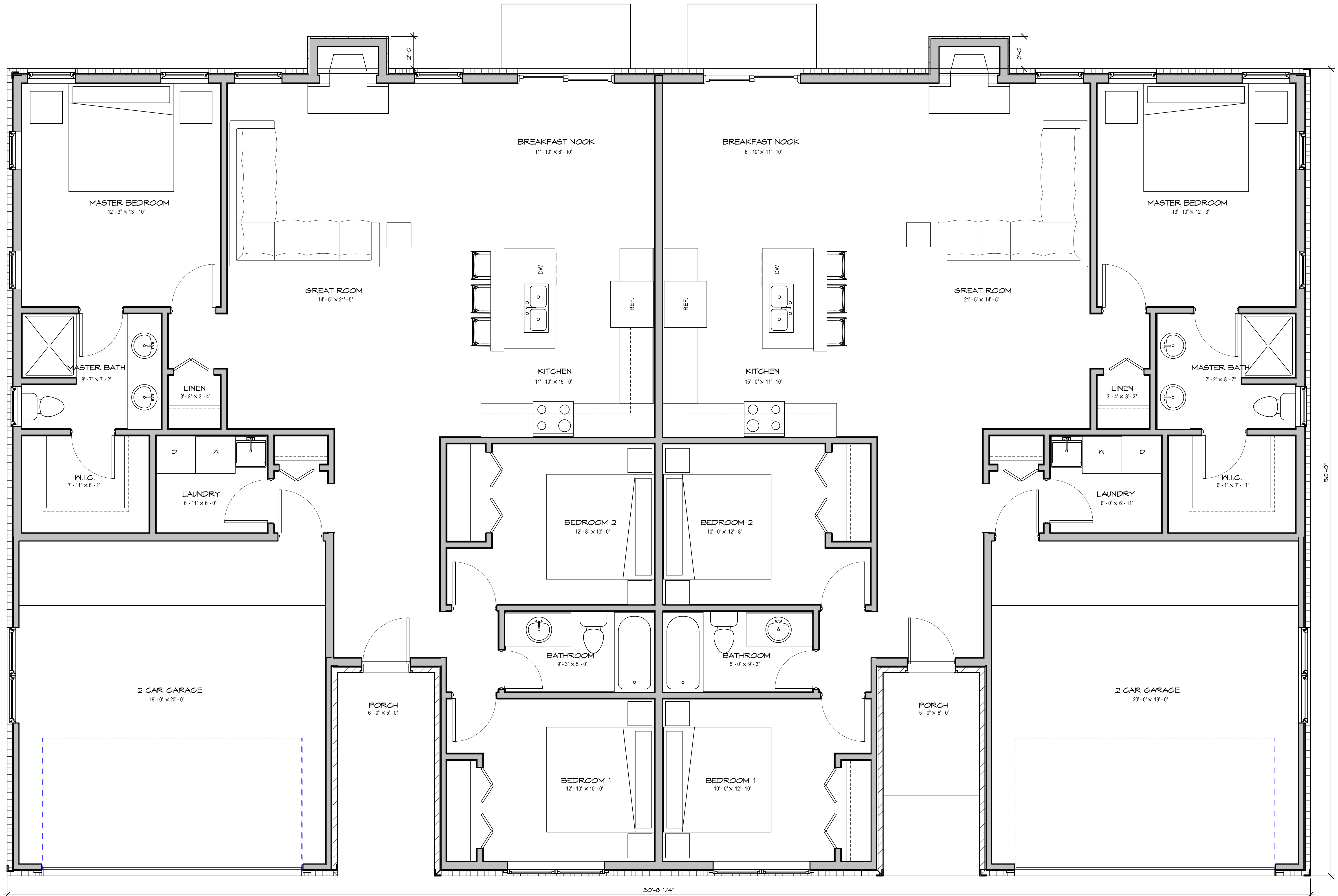


1 WEST ELEVATION
A101 Scale: 3/16" = 1'-0"



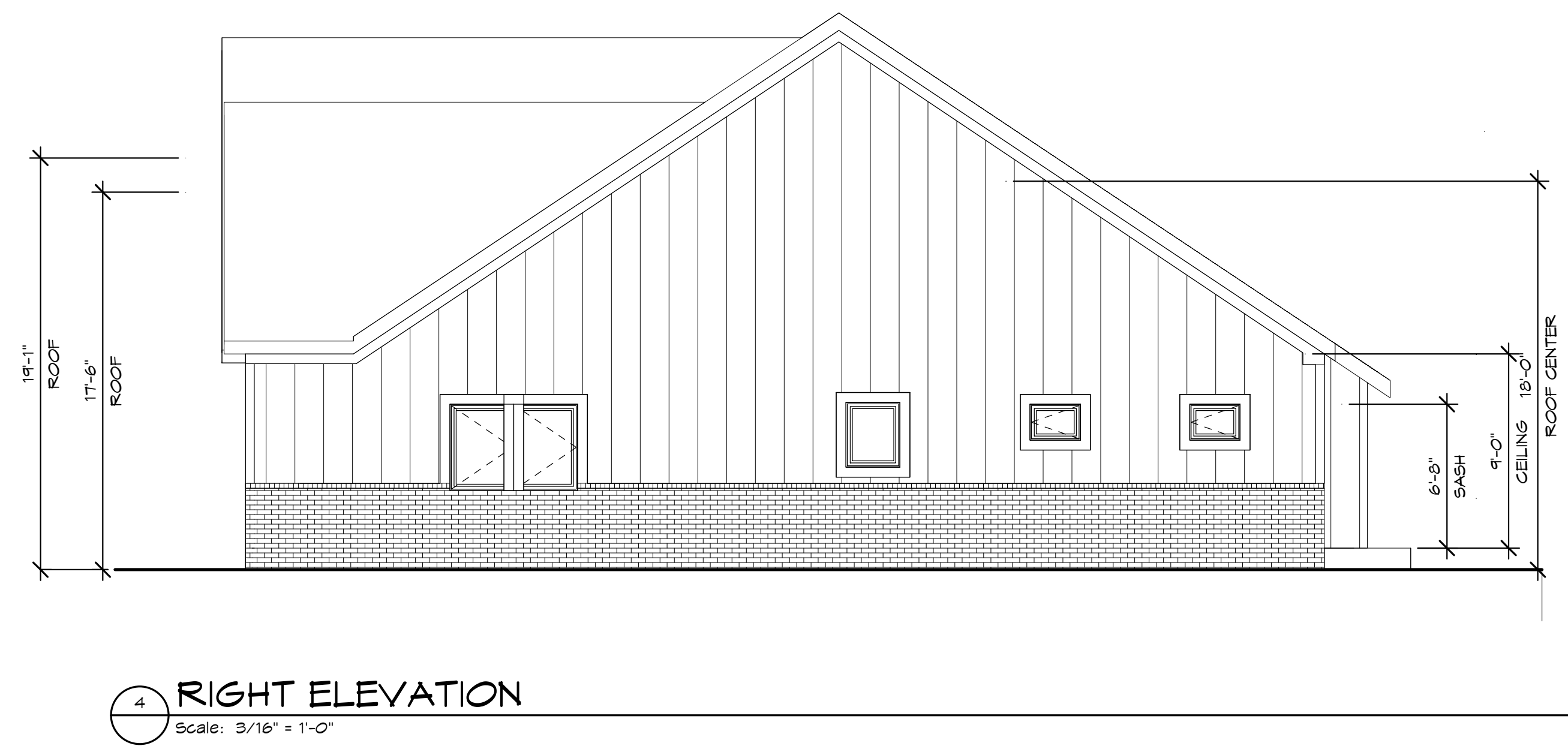
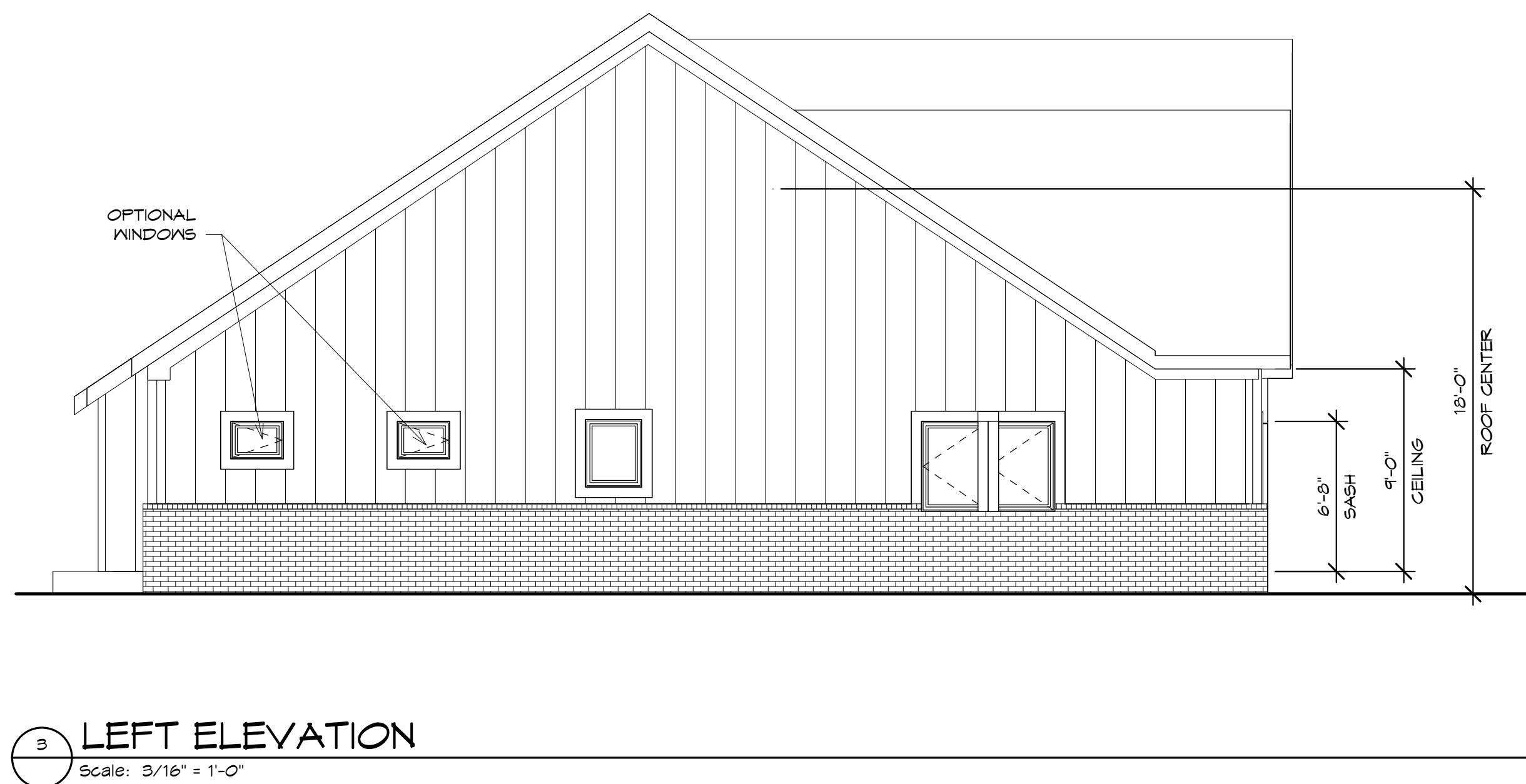
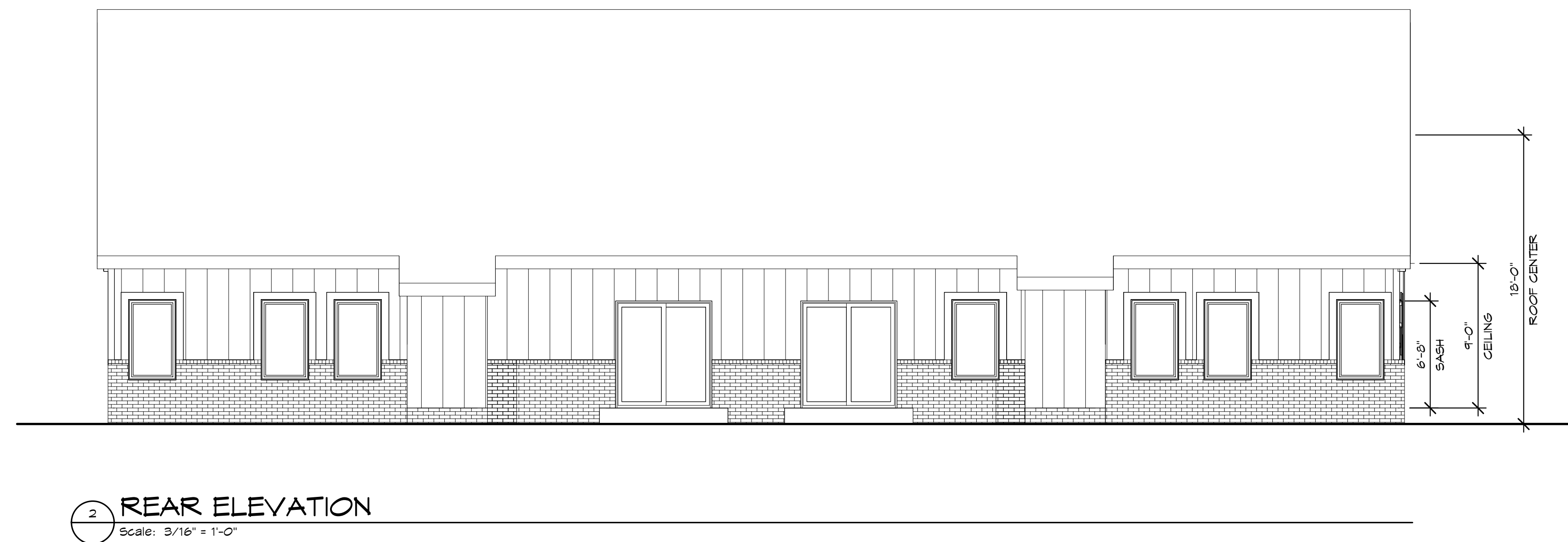
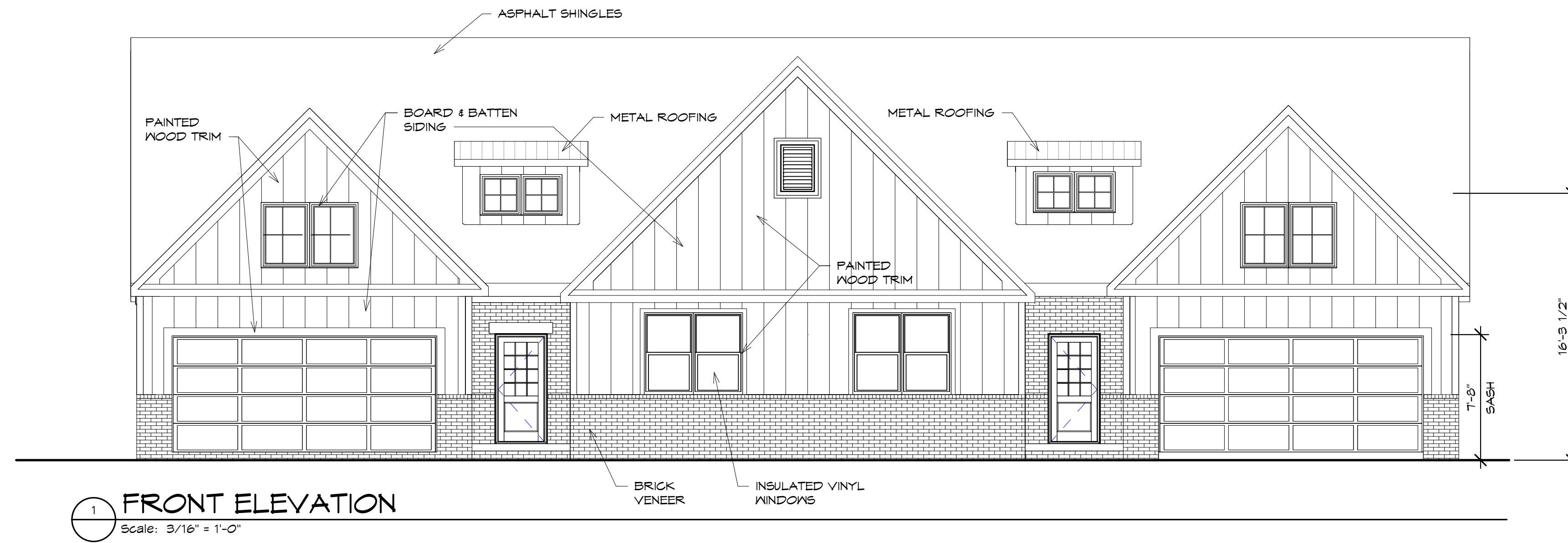
2 EAST ELEVATION
A101 Scale: 3/16" = 1'-0"



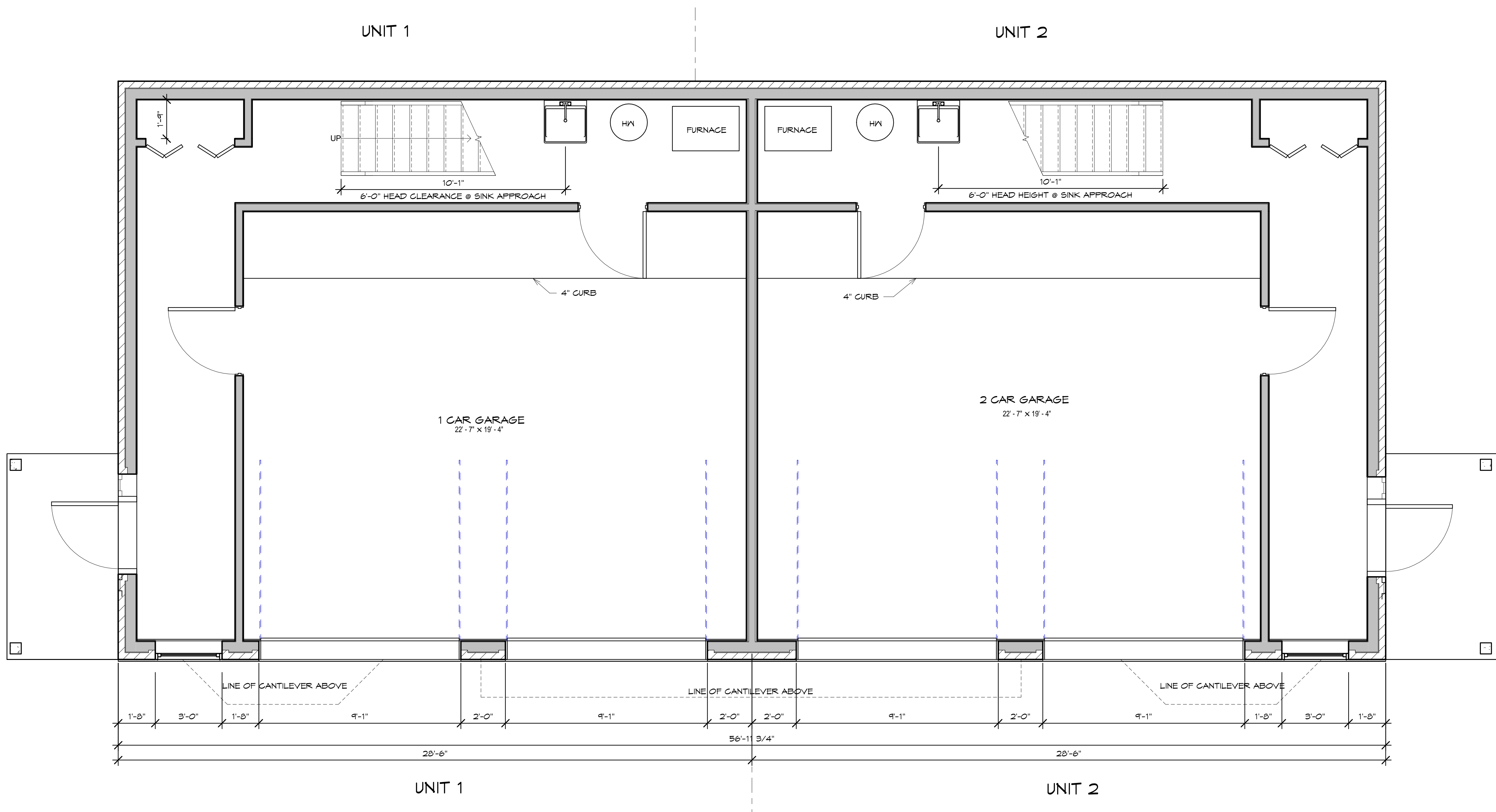


FIRST FLOOR PLAN

Scale: 3/8" = 1'-0"

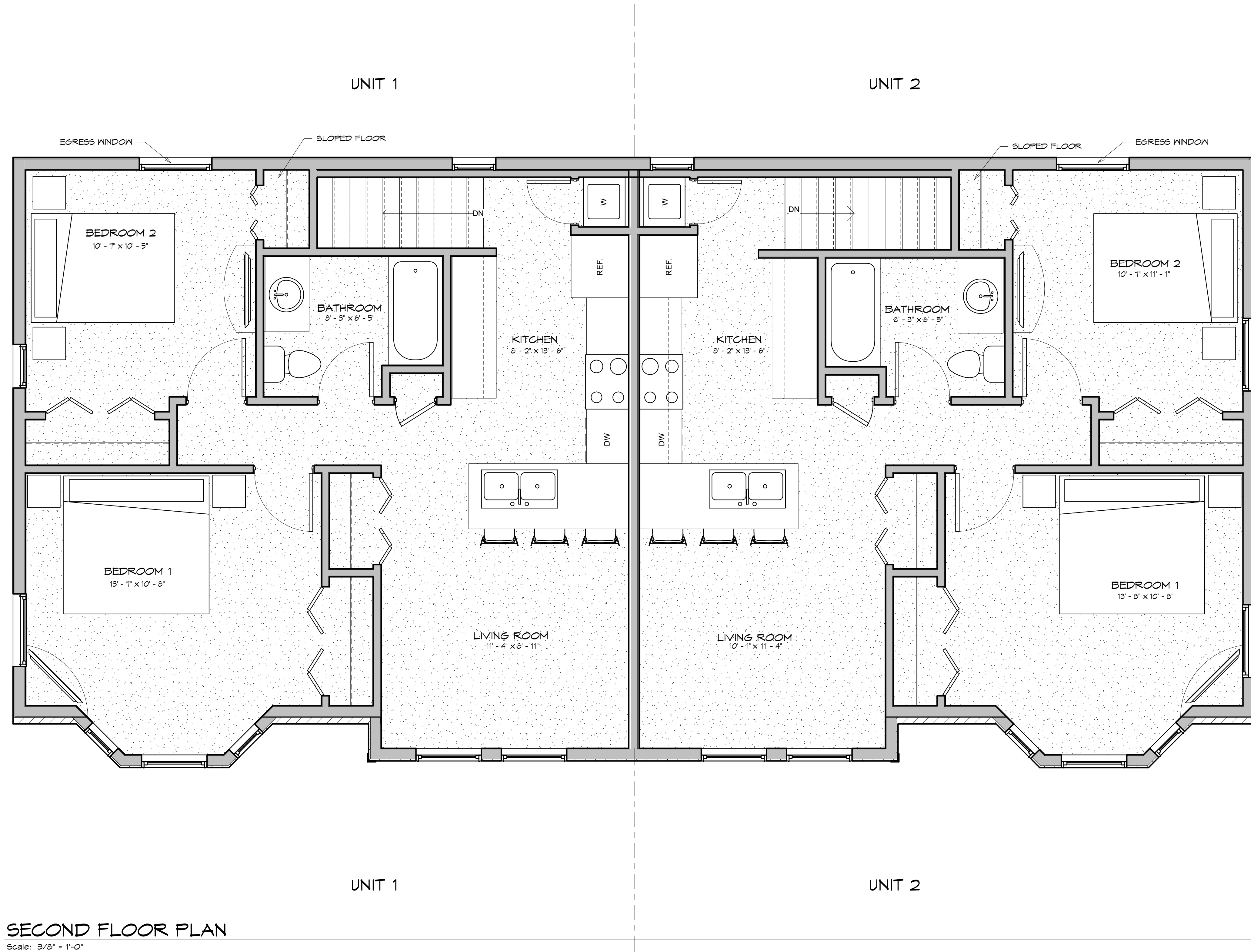






FIRST FLOOR PLAN

Scale: 3/8" = 1'-0"



SECOND FLOOR PLAN

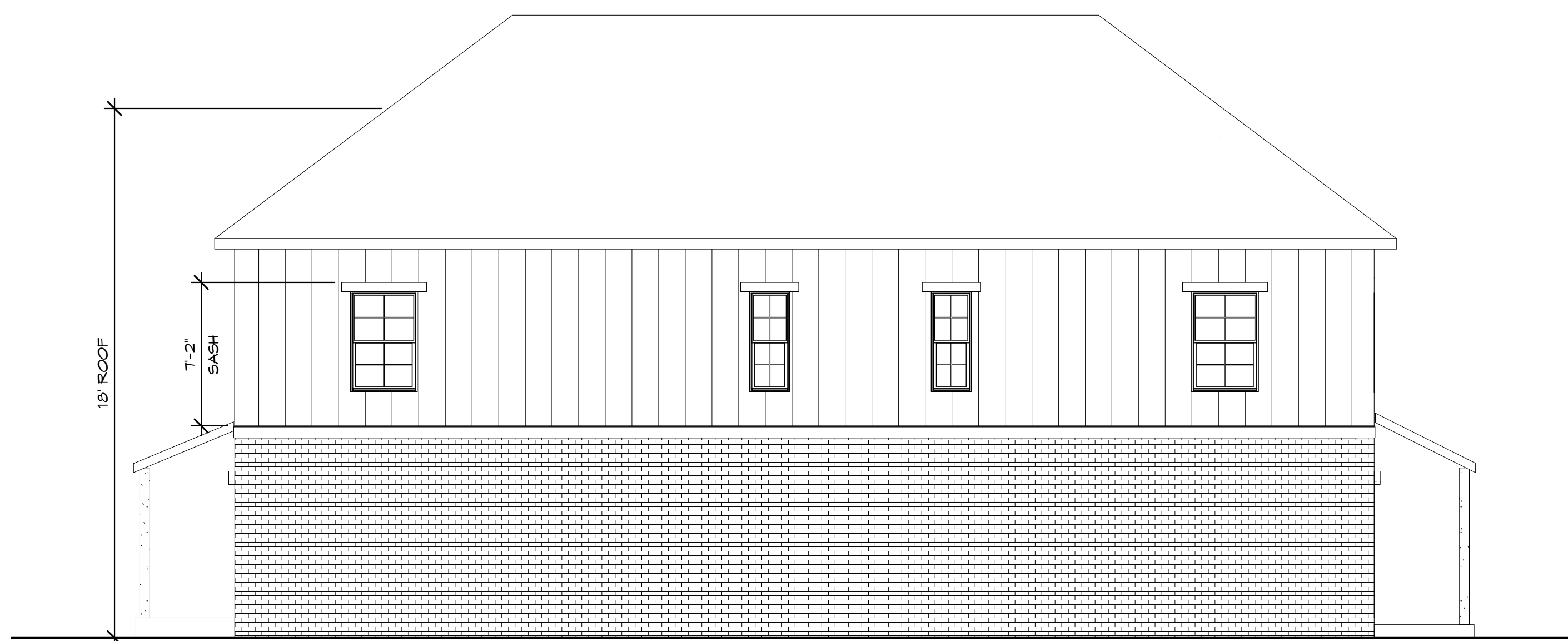
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1 FRONT ELEVATION
Scale: 3/16" = 1'-0"



3 RIGHT ELEVATION
Scale: 3/16" = 1'-0"

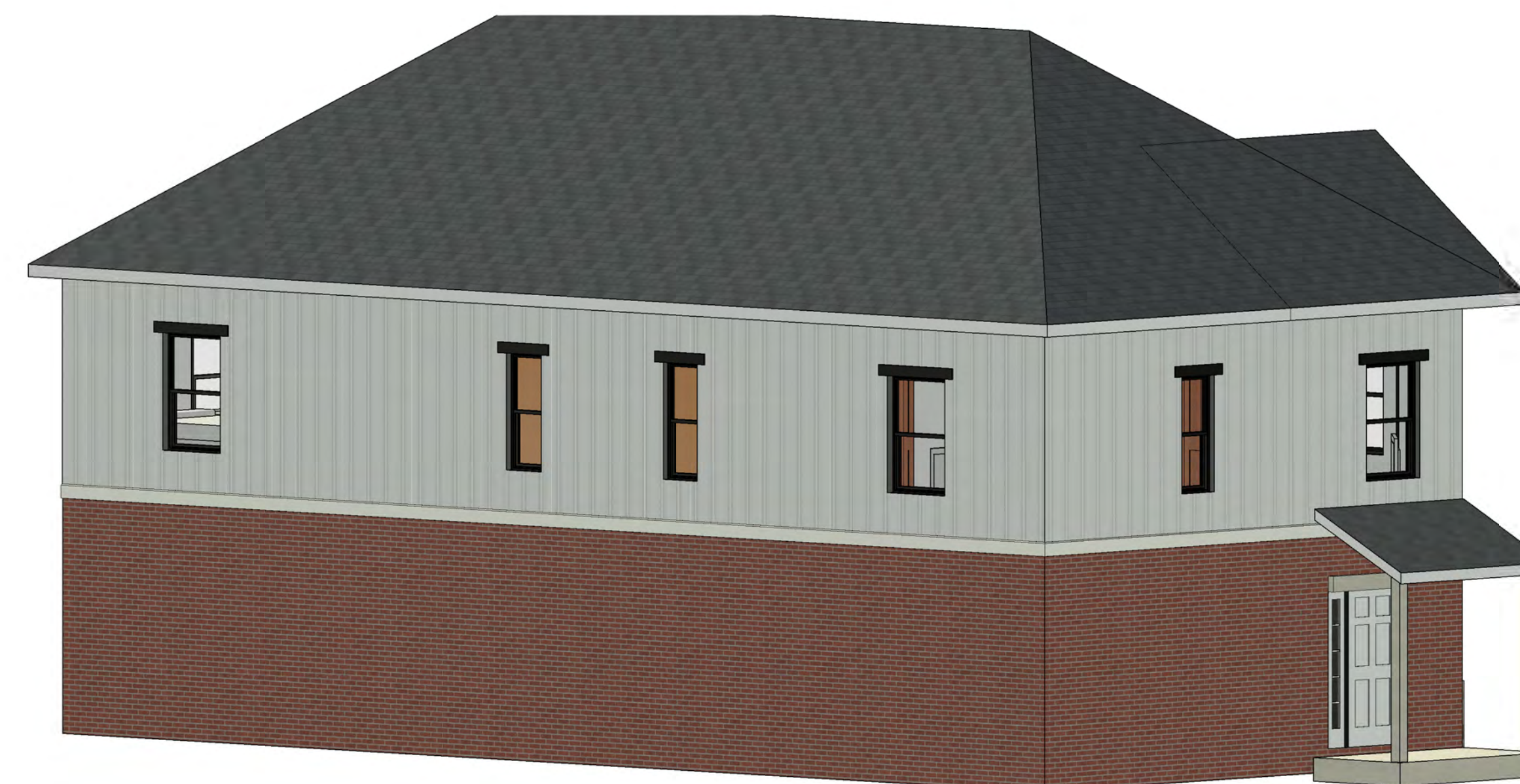
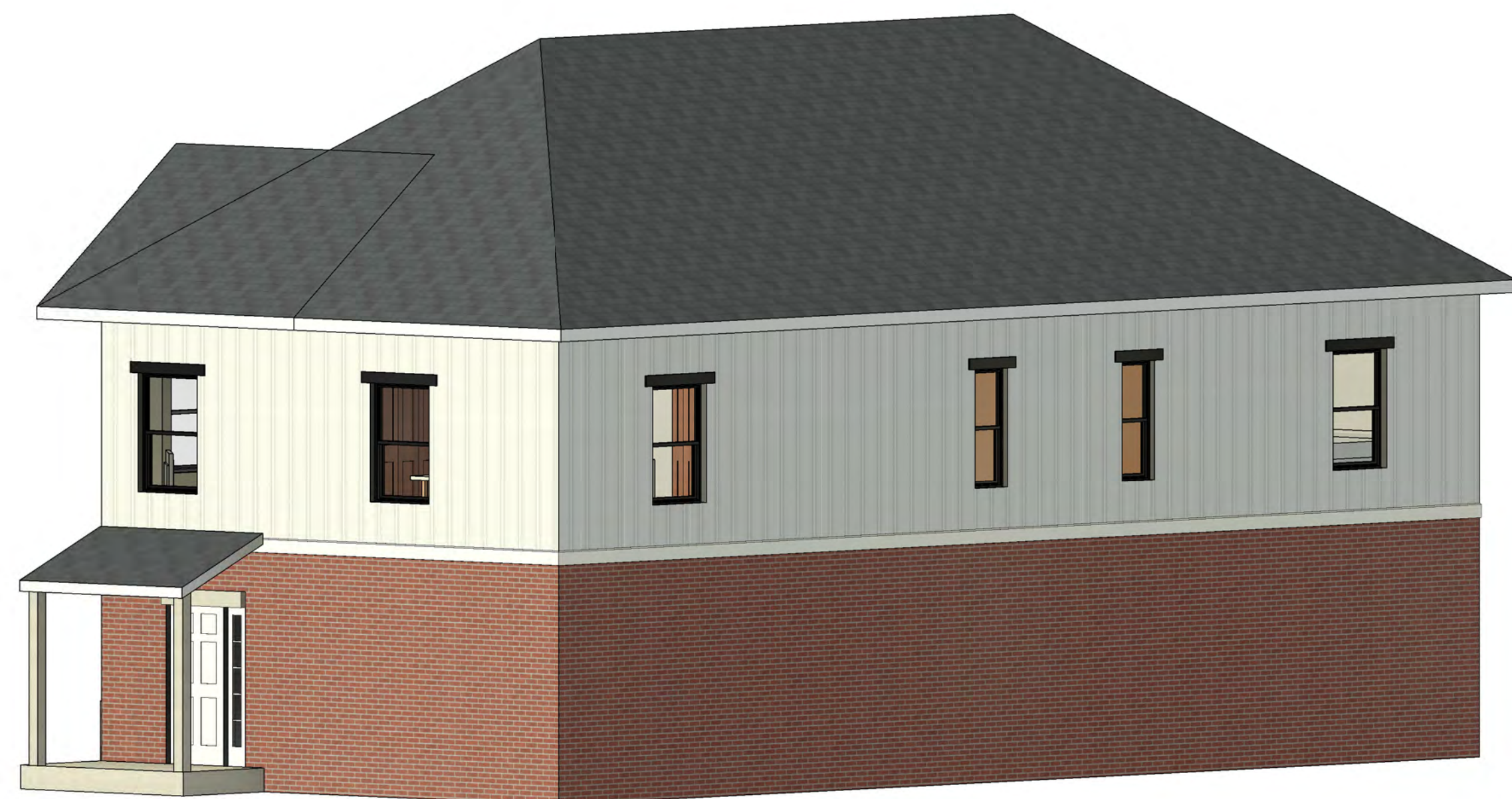


2 REAR ELEVATION
Scale: 3/16" = 1'-0"

**DUPLEX
HEIGHTS**



4 LEFT ELEVATION
Scale: 3/16" = 1'-0"





Ranch Duplex Units
Village of Hasting

MGA Project Number 22312

May 14, 2024

Moiseev/Gordon Associates, Inc.
4351 Delemere Court Royal Oak, MI 48073

www.mga-architects.net
248.549.4500 voice 248.549.7300 faxes

MGA
Architects/Designers
www.mga-architects.net
info@mga-architects.net
248.549.4500



3 – Car Ranch Unit
Village of Hasting

MGA Project Number 22312

May 14, 2024

Moiseev/Gordon Associates, Inc.
4351 Delemere Court Royal Oak, MI 48073

www.mga-architects.net
248.549.4500 voice 248.549.7300 facs

MGA
Architects/Designers
www.mga-architects.net
info@mga-architects.net
248.549.4500



5 Unit – Townhouse
Village of Hasting

MGA Project Number 22312

April 30, 2024

Moiseev/Gordon Associates, Inc.
4351 Delemere Court Royal Oak, MI 48073

www.mga-architects.net
248.549.4500 voice 248.549.7300 faxes

MGA
Architects/Designers
www.mga-architects.net
info@mga-architects.net
248.549.4500



Ranch Duplex Units
Village of Hasting

MGA Project Number 22312

May 14, 2024

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info@mga-architects.net
248.549.4500



2 Story Duplex Unit
Village of Hasting

MGA Project Number 22312

April 29, 2024

Moiseev/Gordon Associates, Inc.
4351 Delemere Court Royal Oak, MI 48073

www.mga-architects.net
248.549.4500 voice 248.549.7300 faxes

MGA
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www.mga-architects.net
info@mga-architects.net
248.549.4500

From: [Jen Gillie](#)
To: [Planning](#)
Subject: Re: Stop Rezoning of Troy Corners Development
Date: Monday, April 22, 2024 7:21:26 PM

[You don't often get email from jenniferrobingillie@gmail.com. Learn why this is important at <https://aka.ms/LearnAboutSenderIdentification>]

CAUTION: This email did not originate from within the City of Troy. Do not click links or open attachments unless you recognize the sender and know the content is safe.

I am newer to the neighborhood and live at 212 Booth Rd. It took my family 5 years to find a house in this neighborhood. We choose this neighborhood because we love the big yards and not having neighbors so close. We moved from Royal Oak. We chose this neighborhood because of the community, we have over 10 families with kids around my son's age of 9, some younger. My son didn't learn to ride a bike until this past summer because the streets of Royal Oak, the houses were so congested you never knew if someone would be backing out of their driveway!

My biggest concern is the safety of my child and the children who ride their bikes and scooters in the street, if the builder ends up connecting our neighborhood to his multi family home plan this could increase the traffic on our streets by more than 68 cars based on his 34 unit development. 68 more cars driving our streets.

My next concern is our infrastructure, my yard is partially under water now, I feel this could cause more problems for our area adding that kind of density.

I understand that Troy Corners will at some point be developed. Let's keep the same look and feel of our community. Single family homes on 1/2 acres lots! We moved to this area for a reason!! Less congestion and more room for our family and our children to stay safe!

My other concern is possible redevelopment of our beautiful neighborhood. If Gary gets his way and connects our neighborhood through 400 Ottawa. Family's could start moving out and selling and then our beautiful ranches could all turn into multi family homes. Living in Royal Oak the last 18 years was a sad site to see all of the big foot homes moving in as they tore down the small ranches. When I first moved here I would stare out my back kitchen window and watch the sunrise! The most beautiful and relaxing view I had ever seen! And I have it here in Troy and didn't need to be on vacation to have such a beautiful view. Something I had not seen in years living in royal oak. All I could see were houses! Please let's keep our community in tact and keep the same feel that I am sure is the reason why we all live here. We do not want to live on top of each other and would like a safe place for our kids to grow up!

It would be a win for everyone if Gary would do single family homes, he would still make money as that's all he truly cares about! And it would keep the families of Troy Corners happy and this long drawn out fight would be over.

Sincerely,
Jennifer Gillie

> On Dec 9, 2023, at 12:22 PM, Jen Gillie <jenniferrobingillie@gmail.com> wrote:

>

> I am a resident on Booth Rd, just north of the Troy corners site. I am not ok with this being zoned for PUD. This area needs to stay single family homes to maintained the integrity of our neighborhoods we love so much!

>

> We recently moved from the Royal Oak area for the quiet neighborhood with a small town feel. We do not approve or desire to have high rise buildings. This will add unnecessary congestion to our area and the need to do future upgrades of our roads that we do not need today!

- >
- > Keep our small town feel, please do not approve this to be rezoned!
- >
- > Jennifer Gillie

From: [Shelley Stenger](#)
To: [Hirak Chanda](#); [David Hamilton](#); [Ellen C Hodorek](#); [Mark A Gunn](#); [Ethan Baker](#); [Planning](#); [Rebecca A. Chamberlain-Creanga](#); [Theresa Brooks](#)
Subject: PUD and Troy Corners
Date: Monday, May 13, 2024 8:43:21 PM

Some people who received this message don't often get email from shellsellshomes1@gmail.com. [Learn why this is important](#)

CAUTION: This email did not originate from within the City of Troy. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Dear Planning Commision and City Council members,

I am out of town so I wanted to send this to be included in the public remarks at the next meeting. I will keep this short and sweet.

My mom and I live on 437 E Hurst Drive near historic Troy Corners. My mom has lived here for 62 years after my dad built our house. We love our neighborhood but we do not like what has been happening in our area in the last handful of years.... beginning with the townhouses next to Peppy's Pizza.

I have attended the previous planning and council meetings and am afraid that we are not being heard. I believe there is some confusion about what the residents want and I want to be clear.

I know that there are other townhomes already approved on Square Lake Road by John's party store. But we are very **opposed to the PUD** that is proposed for the northeast corner of the intersection. We would much rather only have the townhouses on Square Lake Road ~ but with a larger setback than the buildings next to Peppy's. The PUD does not meet the requirements, plain and simple. Please hear our plea and do not approve the PUD.

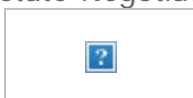
We also agree with the majority of the neighbors regarding our Node, no high density, no three- story, etc. Please, please keep any more large developments off of our 2 lane road. Too much traffic already. And we need to keep property values up in Troy! We are not a low income neighborhood.

Thank you for all of your time and effort in this matter. We really do appreciate your hard work!

Shelley Stenger & Shirley Hardwick



Certified Pricing Strategy Advisor
Certified Real Estate Negotiation Expert



Website: Shellsellshomes1.com

Ann Coleman
6091 Livernois Road
Troy, MI 48098

City of Troy Planning Commission
500 W Big Beaver Road
Troy, MI 48084

April 14, 2024

Dear Planning Commission,

I am writing to follow up on the topic of rezoning R1B to PUD that was discussed Tuesday April 9, 2024.

It was not my, nor do I believe anyone's intent, to create surprise among the commission. I and my neighbors have put many, many hours of learning, exploring, and thought into the proposal to rezone the R1B at Square Lake and Livernois roads to PUD.

An either-or choice was presented to the Telford HOA by the developer. The developer has not reached out to talk to me, or anyone on the west side of Livernois Road that I know of. In addition, I have repeatedly heard at commission meetings that the developer has the right to build the 14 units on Square Lake because of past decisions, he is within his rights, unless the PUD development can go in. So, I truly believe that we have an either-or choice. I respect the developer's rights.

In thinking about the loss of old/historic homes to build new single-family homes with adjacent unit development on Square Lake, vs keeping the homes and seeing unit development behind them, I would rather see the new homes in R1B. For 3 reasons:

- 1) *The developer has not maintained the old/historic homes from the curb view.* The landscape has overgrown, a chopped wood fence has fallen apart (although on Sunday the 14th I saw a man repairing it after years), and mold/mildew covers the siding. This tells me that he truly does not care about these homes as assets to the neighborhood. I do not trust his words that say he will repair them. I trust his previous actions. And there is no guarantee that a new owner would maintain them as historic. It would be a niche sale.
- 2) *The intent of this area has not changed, and I agree with the intent of the master plan for this area.* "The Master Plan recognizes that **single-family residential neighborhoods are vital components of the City**.... The R-1A through R-1E Districts are further intended to **preserve and improve upon the quality of residential neighborhoods while permitting a limited number of other compatible uses** which support residential neighborhoods."
- 3) If the precedent is set to increase density of housing this will lead to a ripple effect of widening the road and *I will lose my house because it sits close it.* It is obvious that the properties on the east side of Livernois, south of Square Lake are likely going to be re-developed, along with the area to the east that the developer says he owns. We have many more homes getting built. Any density greater than R1B is concerning.

I believe that community development, when there is conflict, ought to be worked out through discussion and compromise. I believe I am a stakeholder. If I am wrong about these things, I humbly ask for correction.

Thank you, as always, for your service.

Respectfully submitted,

Ann Coleman

Brent Savidant

From: Rosemarie Thommes <rthommes@aol.com>
Sent: Sunday, May 12, 2024 11:09 AM
To: Planning
Cc: Ethan Baker
Subject: Strong Opposition to Proposed PUD at Livernois Rd and Square Lake Rd

You don't often get email from rthommes@aol.com. [Learn why this is important](#)

CAUTION: This email did not originate from within the City of Troy. Do not click links or open attachments unless you recognize the sender and know the content is safe.

To: City of Troy Planning Commission

I am writing to reiterate my strong opposition to the proposed Planned Unit Development (PUD) near the Neighborhood Node at Livernois Rd and Square Lake Rd. This letter serves as a continuation of my previous communications on this matter.

My opposition is based on several key concerns:

- **Traffic Congestion:** Livernois Rd and Square Lake Rd are only two-lane roads, and I, along with many other residents, believe the traffic studies underestimate the significant impact this PUD will have. These roads cannot handle the additional traffic generated by a high-density development.
- **Neighborhood Character:** This proposal disrupts the established character of our neighborhood. The existing single-family homes, many over 100 years old, contribute significantly to the charm of the area. A PUD with multi-family units would be a stark contrast and not a welcome addition. It would disrupt the look and feel of the community, similar to the negative impact of the 3-story townhomes built on Livernois.
- **Inaccurate Comparisons:** The builder's argument referencing other approved PUDs is irrelevant. Those developments were situated on major roads with multiple lanes, unlike the narrow, local roads surrounding this proposed site.
- **Unaffordable Housing:** GFA's claim of providing affordable housing solutions is misleading. With starting prices of \$600,000 for homes and \$350,000 for townhomes, these units will be out of reach for most residents seeking affordability.

Alternative Solutions:

Instead of this ill-suited PUD, I urge the Commission to consider alternative locations for such developments:

- **Vacant Office Buildings:** There are numerous vacant office buildings in Troy that could be repurposed for multi-family housing.
- **Demolished Hotel Site:** The vacant site at Crooks Rd and I-75, where a hotel once stood, presents another perfect opportunity for a PUD with existing infrastructure already in place.
- **Long Lake Rd and Crooks Rd PUD:** The proposed PUD at this location seems like a much better fit and makes far more sense, with existing infrastructure capable of supporting additional traffic.

The entire community surrounding the proposed PUD at Livernois Rd and Square Lake Rd strongly opposes this development. We urge the Commission to maintain the current zoning and protect the character of our neighborhood.

Thank you for your time and consideration.

Sincerely,
Rosemarie Thommes
335 Ottawa Drive

ITEM #6

DATE: May 22, 2024
TO: Planning Commission
FROM: R. Brent Savidant, Community Development Director
SUBJECT: PRELIMINARY SITE PLAN APPROVAL (JPLN2023-0031) – Proposed Wattles Square Apartments, South side of Wattles and east of John R (PIN 88-20-24-100-039), Section 24, Zoned NN (Neighborhood Node “F”) Zoning District.

The petitioner Atto Construction submitted the above referenced Preliminary Site Plan application for a 54-unit townhome development. The property is currently zoned NN (Neighborhood Node “F”) Zoning District. Multi-family residential is permitted by right in this district, subject to height and setback limitations as well as transparency requirements. The Planning Commission is responsible for granting Preliminary Site Plan approval for this item.

The Planning Commission considered this item on April 23, 2024 and passed the following resolution:

Resolution # PC-2024-04-021

Moved by: Lambert
Seconded by: Faison

RESOLVED, That Preliminary Site Plan Approval, pursuant to Article 8 of the Zoning Ordinance, as requested for the proposed Wattles Square Apartments, located on the South side of Wattles, East of John R, Section 24, Zoned NN (Neighborhood Node “F”) Zoning District be postponed, for the following reasons:

1. To increase transparency on all sides of the units.
2. To address appropriate concerns on the first level balconies and lower level egress areas.
3. Add a bicycle rack.

Yes: All present (9)

MOTION CARRIED

The attached report prepared by Carlisle/Wortman Associates, Inc. (CWA), the City’s Planning Consultant, summarizes the project. CWA prepared the report with input from various City departments including Planning, Engineering, Public Works and Fire. City Management supports the findings of fact contained in the report and the recommendations included therein.

Attachments:

1. Maps
2. Minutes from April 23, 2024 Planning Commission Regular meeting.
3. Report prepared by Carlisle/Wortman Associates, Inc.
4. Preliminary site plan

G:\SITE PLANS\SP_JPLN2023-0031_WATTLES SQUARE APARTMENTS\PC Memo 2024 05 28.docx

PROPOSED RESOLUTION

PRELIMINARY SITE PLAN APPROVAL (JPLN2023-0031) –. Proposed Wattles Square Apartments, South side of Wattles and east of John R (PIN 88-20-24-100-039), Section 24, Zoned NN (Neighborhood Node “F”) Zoning District.

Resolution # PC-2024-05-

Moved by:

Seconded by:

RESOLVED, That Preliminary Site Plan Approval, pursuant to Article 8 of the Zoning Ordinance, as requested for the proposed Wattles Square Apartments, located on the South side of Wattles, east of John R, Section 24, Zoned NN (Neighborhood Node “F”) Zoning District, be granted, subject to applicant the following:

_____) or

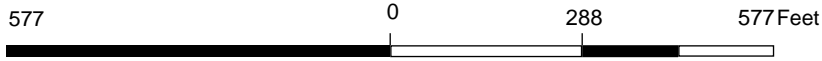
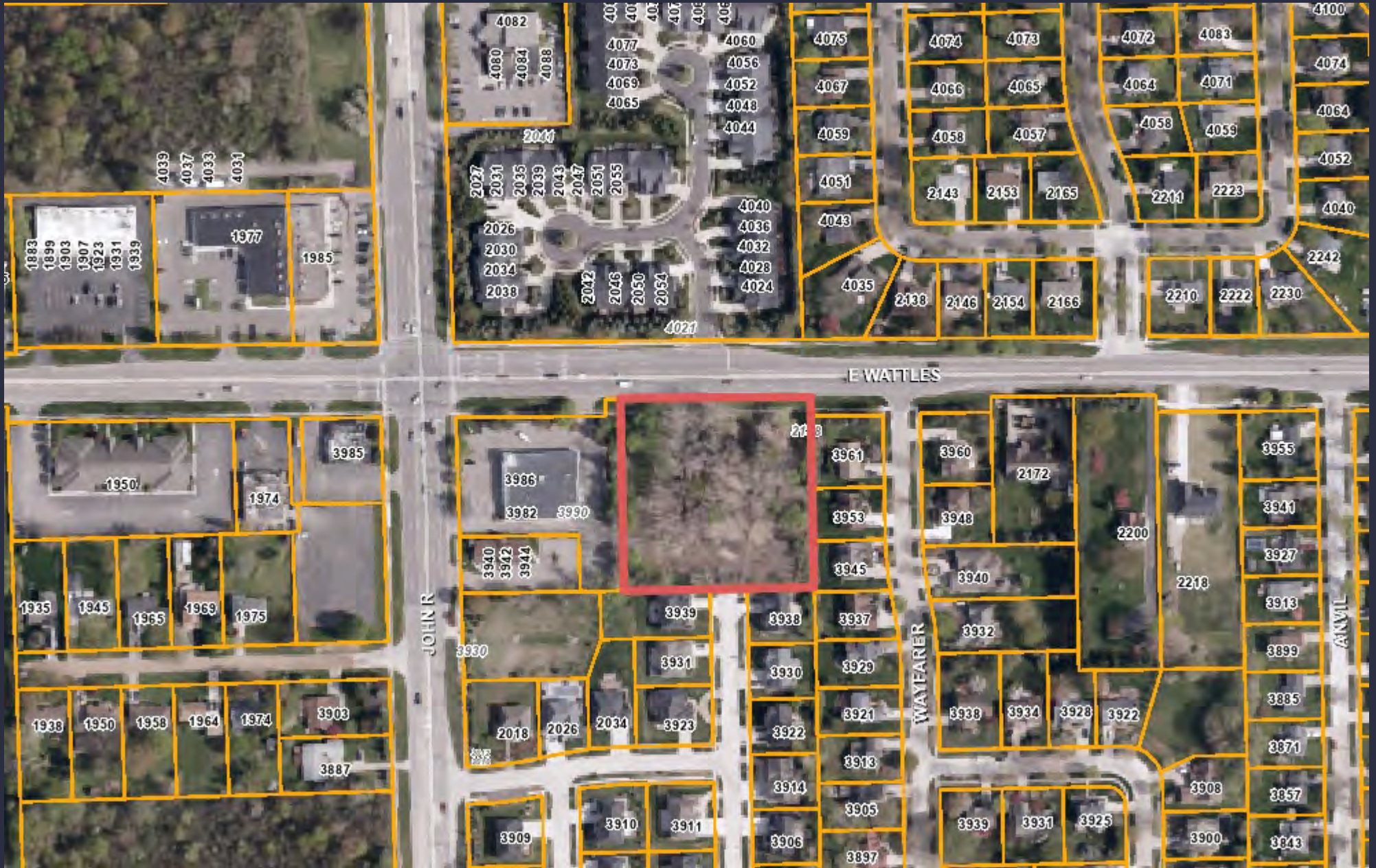
(denied, for the following reasons: _____) or

(postponed, for the following reasons: _____)

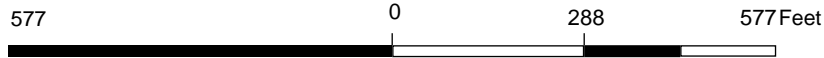
Yes:

No:

MOTION CARRIED/FAILED



Note: The information provided by this application has been compiled from recorded deeds, plats, tax maps, surveys, and other public records and data. It is not a legally recorded map survey. Users of this data are hereby notified that the source information represented should be consulted for verification.



Note: The information provided by this application has been compiled from recorded deeds, plats, tax maps, surveys, and other public records and data. It is not a legally recorded map survey. Users of this data are hereby notified that the source information represented should be consulted for verification.

PRELIMINARY SITE PLAN

5. PRELIMINARY SITE PLAN APPROVAL (JPLN2023-0031) – Proposed Wattles Square Apartments, South side of Wattles and East of John R (PIN 88-20-24-100-039), Section 24, Zoned NN (Neighborhood Node “F”) Zoning District

Mr. Savidant provided background information on the Preliminary Site Plan application for Wattles Square Apartments. He addressed the intent of the Neighborhood Node “F” zoning district, how the application relates to the Master Plan and specific site design and building design attributes. Mr. Savidant said the application proposes a first true ‘garden style’ building concept where a portion of the ground floor is below grade. He said there was extensive dialogue between the administration and the applicant on building height, what constitutes a story and the Zoning Ordinance definition of a basement.

Mr. Savidant asked to go on record with an apology to the Planning Commission and to the applicant for some errors in the Planning Consultant report dated April 12, 2024. He stated the application itself is more compliant than what the report narrates. Mr. Savidant noted the application meets all parking requirements with an exception of adding a bicycle rack. He reported the parking lot island trees and tree replacement are compliant. Mr. Savidant noted the one row of landscaping proposed on the north side of the site would have to be removed for future right of way purposes.

Mr. Savidant reported the application does not meet the transparency requirements on the Wattles frontage and east and south facades. He noted though transparency requirements relate more to commercial use than residential use. He said the applicant is seeking Planning Commission approval to incorporate transparency alternatives, and the Planning Commission has the authority to grant flexibility of the transparency requirements. Mr. Savidant also reported there are safety concerns with the head-clearance of the first floor balconies and the lower level units below grade.

Mr. Savidant asked the Planning Commission to consider in its deliberations the following:

- Does the Planning Commission support the proposed transparency alternatives?
- Does the proposed garden level apartment style meet the Neighborhood Node design requirements?
- Does the Planning Commission support the proposed floor plans (including the community building), elevations and balcony clearance?

In summary, Mr. Savidant asked any approval to be subject to the applicant providing the required bicycle rack and to confirm transparency requirements (30%) on the south and east sides of the buildings. He said the Planning Commission may approve the transparency alternatives for the north elevation.

Some of the comments during discussion among the administration related to:

- Transparency requirements on all facades.
- Design and transparency requirements of front elevation in relation to right of way.
- Horizontal mixed use complies with the Neighborhood Node zoning district.
- Neighborhood Node zoning requirements with future adoption of the Master Plan.
- Safety concerns of balcony head-clearance and lower level units below grade.
- Confirmation that a flat roof is proposed for both buildings.
- Compliance of landscape requirements on north side with removal of landscaping along right of way.

Chair Perakis called a recess at 7:30 p.m. to allow the Information Technology department to resolve audio issues. Chair Perakis called the meeting back in session at 7:40 p.m.

Richard Atto, property owner of subject site and Rite Aid property to the west, introduced family members in the audience and project team members business partner Brian Najor, Landscape Architect Stacey Hadeed and Project Engineer Greg Bono. Mr. Atto gave a brief history of his family background and real estate/development career. He identified several design aspects he feels would be desirous of a potential resident that are incorporated in the development.

Mr. Atto said his short-term goal is to obtain a tenant for the vacant Rite Aid store and a long-term goal would be to potentially expand the development given any future changes in the Neighborhood Node zoning district.

Ms. Hadeed distributed handouts to the Planning Commission and gave a brief history of her career path. She addressed in detail the proposed development as relates to living units, building height and stories, landscaping, parking, traffic circulation, three dimensional views from several directional perspectives, roof design, elevations, outdoor amenities, transparency calculations, site design attributes, building materials and color scheme.

There was discussion, some comments related to:

- Parking, as relates to Rite Aid existing spaces, designated spaces for residents, walking distance to residential units.
- Proposed garden style units as relates to creativity, urban look, massing, unique design, low profile.
- Examples of similar apartment styles in the City with below grade lower level units.
- Community center amenities, as relates to arrangement of work-out area and social gathering space.
- Options to mitigate safety concerns of below grade lower level units and head-clearance of balconies.
- Transparency requirements; measures applicant could apply to meet requirements, consideration of alternative options.

- Approval of application would be conditioned on applicant combining the parcels, as noted on the site plan.
- Nonconforming status of vacant Rite Aid building as relates to Neighborhood Node zoning district if demolished and/or renovated.

Mr. Hutson stated he does not support the application because of the proposed below grade lower level units and floor plans.

Chair Perakis opened the floor for public comment.

- Susan Kuhn, 2172 E Wattles; addressed existing swampy land near Wayfarer Street connection to new homes on John R, parking, management of apartment complex.

Chair Perakis closed the floor for public comment.

Discussion continued among Board members on options applicant could take to mitigate safety concerns of the balconies, to mitigate safety concerns and install egress windows on below grade lower level units, to reconfigure floor space in the community center and to meet transparency requirements.

Mr. Najor said finding a good tenant to lease the Rite Aid property is a step in the right direction. He addressed the subjectivity of transparency requirements for residential use compared to commercial use. Mr. Najor said they will work with the City to mitigate any concerns discussed this evening and meet all code requirements for the egress windows and balconies to assure compliance.

Resolution # PC-2024-04-021

Moved by: Lambert

Seconded by: Faison

RESOLVED, That Preliminary Site Plan Approval, pursuant to Article 8 of the Zoning Ordinance, as requested for the proposed Wattles Square Apartments, located on the South side of Wattles, East of John R, Section 24, Zoned NN (Neighborhood Node “F”) Zoning District be postponed, for the following reasons:

1. To increase transparency on all sides of the units.
2. To address appropriate concerns on the first level balconies and lower level egress areas.
3. Add a bicycle rack.

Yes: All present (9)

MOTION CARRIED

Mr. Savidant informed the applicant of the specific transparency requirements for each elevation.



Carlisle | Wortman
ASSOCIATES, INC.

117 NORTH FIRST STREET SUITE 70 ANN ARBOR, MI 48104 734.662.2200 734.662.1935 FAX

Date: November 1, 2023
Revised: February 7, 2024
April 12, 2024
May 14, 2024

**Preliminary Site Plan
For
City of Troy, Michigan**

Applicant: Atto Construction
Project Name: Wattles Square Apartment
Plan Date: DecembePLANNING COMMISSION
Location: REGULAR MEETING –FINAL APRIL
Zoning: 23, 2024r 5, 2023
Action Requested: South side of Wattles, east of John

PROJECT AND SITE DESCRIPTION

An application has been submitted for a proposed multiple family stacked flat project along the south side of Wattles, east of John R. The site is approximately 2 acres 3.47 acres in area and is currently vacant but encumbered with tree cover. The site is directly east of an existing RiteAid and abuts residential uses on its north, east, and south sides.

The applicant proposes a total of 54 units, divided into two (2) buildings. The first building is directly adjacent to Wattles and the second building is set behind the first. The buildings are stacked flats totaling three (3) stories, but we note that the applicant has lowered the grade of the site so the first story is below grade. The level below grade (noted as “garden level”) and the level above (noted as “first floor”) are one unit. The third level (noted as “second floor”) is a separate unit.

The proposed development is heavily intertwined with the RiteAid site to the east. The applicant is utilizing a portion of the existing RiteAid site for sidewalks, open space, seven (7) parking spaces, and a shared dumpster/recycling enclosure. Furthermore, the applicant proposes to convert a 500 sq/ft section of the existing RiteAid building into a community building for tenants. The existing RiteAid site is owned by the same owner and they will combine the lots to make them one zoning lot.

The site is zoned NN, Neighborhood Node. The proposed multiple family residential use is permitted in the NN, Neighborhood Node, Site Type B.

Location of subject site:

South side of Wattles, east of John R.

Location and Aerial Image of Subject Site



Size of subject site:

The property is approximately 3.47 acres in area.

Proposed use of subject site:

The proposed use is for 54 apartment units.

Current use of subject site:

The property is currently vacant.

Current Zoning:

The property is currently zoned NN, Neighborhood Node, Site Type B.

Surrounding Property Details:

Direction	Zoning	Use
North	NN, Neighborhood Node	Attached Residential
South	R1-C, One Family Residential District	Single Family Residential
East	R1-C, One Family Residential District	Single Family Residential
West	NN, Neighborhood Node	RiteAid

PREVIOUS PLANNING COMMISSION REVIEWS

The Concept Plan was first reviewed by the Planning Commission on April 23, 2024. Discussion primarily focused on:

- Safety issues posed by the balcony arrangement (garden level ‘balcony’ seen as open hole in the ground; first floor balcony seen as head clearance hazard)
- Structural and dimensional details of the egress windows
- Non-compliance with minimum transparency requirements

CHANGES SINCE PLANNING COMMISSION REVIEW

At the April 23, 2024 Planning Commission meeting, Commissioners voiced concerns with the arrangement of the garden level and first floor balconies. The garden level ‘balcony’ was seen as a hole with no barrier protection, making it a hazard to children and wildlife specifically. The first floor balcony was seen as a head clearance hazard for both adults and children, as the bottom of the balcony was proposed only 3’10” above grade.

The applicant utilized feedback from the Planning Commission to revise the layout of the balconies. While the original site plans featured a ‘floating’ first floor balcony, the revised site plans show support beams between the first floor and garden level balconies. The support beams are not necessary from a structural standpoint, but they mitigate concerns of children (and possibly adults) running into corners of the balcony.

Similarly, revised site plans feature a guard rail around the garden level ‘balcony,’ minimizing its appearance as a hole in the ground. Colored renderings show planter boxes hanging on the guard rail. See below for a comparison of the original balcony design versus the revised balcony design.

Original Balcony Design



Revised Balcony Design, Dated May 7, 2024.



MASTER PLAN

The site is Master Planned for Neighborhood Node. The intended purpose of the neighborhood nodes are to:

- Work together with Social Neighborhoods to create a more livable community.
- Mixed use.
- Provide neighborhood gathering places.
- Accommodate the daily needs of residents.

In addition, neighborhood nodes include specific site design and building design attributes:

SITE DESIGN ATTRIBUTES

- Buildings should be separated from the right-of-way line by a landscaped greenbelt, one lane of off-street parking or a pedestrian walk, or a combination of these.
- Primary parking areas will be located within rear or interior side yards.
- Off-street parking should be screened from the public right-of-way by a knee wall or low decorative fence with a hedge of plantings.
- Walks will connect adjacent developments and the public sidewalks.
- Well-defined crosswalks with timed signalization will permit safe crossings.
- Flexible use of space allowing modest outdoor gathering spaces, such as plazas, will be encouraged.

BUILDING DESIGN ATTRIBUTES

- Buildings should be between two and three stories, although one-story structures accommodating gas stations or other special situations may be permitted.
- One-story buildings should have a minimum exterior height of sixteen feet.
- A ground level story should have a minimum height of twelve feet from finished floor to finished ceiling.
- Facades facing major thoroughfares will be treated as fronts and should have a minimum of half transparent glass and special architectural design treatments.
- Fenestration (the arrangement of windows and doors) should be highlighted through the use of awnings, overhangs or trim detailing.
- Lighting will be carefully managed so as not to encroach on adjacent residential areas.

NATURAL RESOURCES

Topography: The site is relatively flat with minor elevation changes.

Wetlands/Floodplain: The site is not encumbered with wetlands or located in a floodplain.

Woodlands: A tree survey has been provided to inventory the natural features that exist onsite. The survey identified a total of approximately 78 trees on

site. Most of the trees are invasive species such as cottonwood and box elder. Full replacement and preservation details are shown in the table below:

Replacement Details		
Protected Tree	Inches Removed	Replacement Required
Landmark	85 inches	85 inches
Woodland	137 inches	69 inches
Preservation/Mitigation	Inches Preserved	Credit
Landmark	0 inches	0 inches
Woodland	0 inches	0 inches
Total	154 inches required for replacement.	

Items to be Addressed: None.

SITE ARRANGEMENT

The applicant proposes a total of 54 units, divided into two (2) buildings. One building is directly adjacent to Wattles and the second building is set behind the first. The buildings are stacked flats totaling three (3) stories, but we note that the applicant has lowered the grade of the site so the first floor is below grade. The below grade (noted as “garden level”) and the level above (noted as “first floor”) are one unit. The “second floor” is a separate unit.

Parking is located in three (3) main areas: along the east side of the site, in the center of the site between the two (2) apartment buildings, and behind the second apartment building (south end of site). The applicant proposes one (1) access point off Wattles and one (1) shared access with the RiteAid property.

The plans propose for the development to share certain site features with the RiteAid site directly to the west. The applicant proposes to utilize a portion of the RiteAid site for sidewalks, open space, seven (7) parking spaces, and a dumpster enclosure. The proposed use of the RiteAid site will remove approximately 20 spaces from the RiteAid site. The applicant’s parking calculations for RiteAid have been provided and are detailed in the “Parking” section.

Additional supplemental information has been provided regarding the connection between the proposed development and the RiteAid site. The applicant states that a portion of the RiteAid site is being used so that some site features can be shared, helping to make the development more efficient and sustainable, such as using the driveway from John R and the shared dumpster/recycling enclosure. The existing RiteAid site is owned by the same owner and they will combine the lots to make them one zoning lot.

The applicant proposes to convert a 500 sq/ft section of the existing RiteAid building into a community building for tenants. This separate 500 sq/ft area is located in the southwest corner

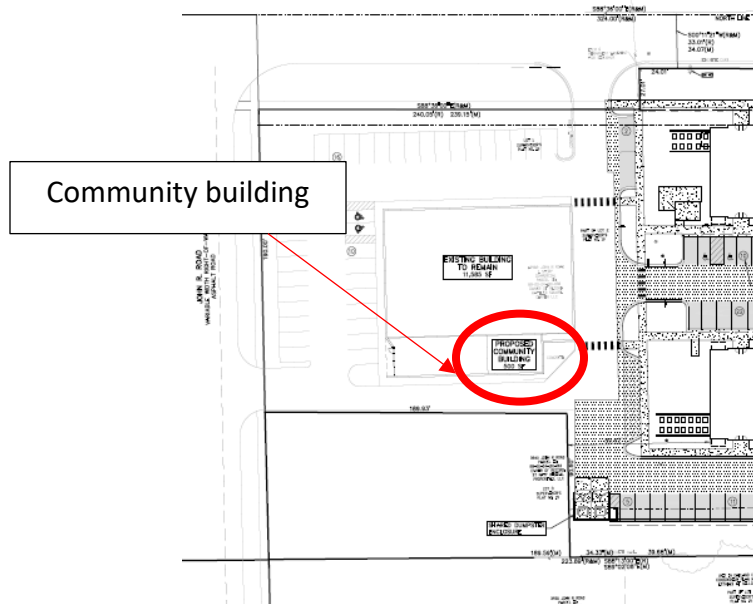
of the RiteAid building and is currently vacant. Floor plans provided by the applicant indicate that the community building includes one (1) large, open-concept room and one (1) restroom. The large community room includes: a living room area with a 60-inch flat screen and sitting furniture; a dining area with a table, six (6) chairs, and counter space with a sink and 24-inch mini-fridge; and a workout area with four (4) pieces of equipment and two (2) ADA compliant drinking fountains.

Additionally, colored renderings provided by the applicant show the inclusion of a small patio near the community room entrance. Renderings indicate enough patio space for two (2) small tables, one (1) box plant, and a small group of people. A transformer with a 64-inch screening wall is also shown on the patio.

Community Building/Room as Presented in Colored Renderings



Community Building/Room Location in Context of Surrounding Area



Items to be Addressed: None.

AREA, WIDTH, HEIGHT, SETBACKS

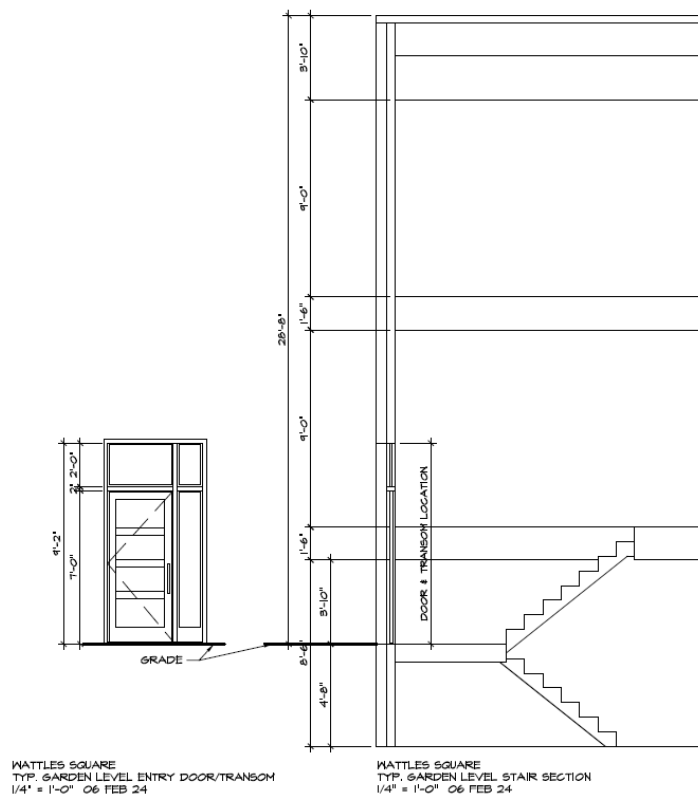
	Required/Allowed	Provided	Compliance
Front (north)	10 feet	10 feet	Complies
Rear (south)	30 feet	72 feet	Complies
Side (west/RiteAid)	0 feet	89 feet	Complies
Side (east)	20 feet	90 feet	Complies
Setbacks Adjacent to Residential (east, south)	Where a property is abutting a one-family or one-family attached district, all setbacks abutting said district shall be equal to the height of the building.	90 feet (east) 72 feet (south)	Complies
Maximum Height	2.5 stories/30 feet	30 feet	Complies
Maximum Lot Area Covered by Buildings (combined lots)	30%	21,280 SF/85,737= 25%	Complies

Garden Style Apartment Design:

The applicant proposes a garden style apartment where a portion of the “ground” floor is below grade. This is being done to essentially provide a three-story building and comply with the 2.5 story/30-foot height requirement. The applicant states that the ground floor does not constitute a story and is considered a basement per ordinance definitions. The Zoning Ordinance defines a “Basement” as follows:

- *“That portion of a building which is partly or wholly below grade but is so located that the vertical distance from the average grade to the floor is greater than the vertical distance from the average grade to the ceiling. A basement shall not be counted as a story.”*

The applicant states that the ground floor is 4’-8” underground and 3-10” is above grade, thus they conclude that more than “ fifty (50) percent by cubic content, is below the height level of the adjoining ground”, and thus does not constitute a story. See the cross section below.



Despite its compliance with building height requirements, the garden style apartment still raised concerns from a design perspective.

Items to be Addressed:-Planning Commission evaluation of revised balcony design.

SITE ACCESS AND CIRCULATION

Vehicular Access:

There are two (2) proposed points of access off Wattles, one (1) of which is a shared access with RiteAid. We note an existing access point to RiteAid off John R, which will also be usable by tenants. Circulation and access have been reviewed by the Engineering and Fire Department and no issues were noted. A traffic review was not required as part of the Engineering review.

Pedestrian Circulation:

There is a continuous sidewalk around both apartment buildings, across the driveway, and then connecting to the existing sidewalk on Wattles. One (1) crosswalk is shown leading towards the proposed Community Building and one (1) crosswalk is shown leading towards RiteAid. Required signage has been added.

Items to be Addressed: None.

PARKING

Section 13.06.G of the Zoning Ordinance requires:

	Required	Provided	Complies
Multiple-Family Residential			
1 space per each efficiency dwelling unit 2 spaces per each dwelling unit	54 units*2= 108	108	Complies
Barrier Free	5	5	Complies
Bicycle	2	Bike Rack	Complies
Retail			
1 space per 250 SF of gross floor area	11,585 SF/250= 46	46	Complies
Barrier Free	2	2	Complies

Parking calculations confirm that on-site parking will remain sufficient for both the subject site and the RiteAid site.

Items to be Addressed: None.

LANDSCAPING

Landscaping is regulated by Section 13.02:

	Required	Provided	Complies
<u>Site landscaping:</u> A minimum of twenty percent (20%) of the site area shall be comprised of landscape material. Up to twenty-five percent (25%) of the required landscape area may be brick, stone, pavers, or other public plaza elements, but shall not include any parking area or required sidewalks.	20%	35%	Complies
<u>Screening between uses:</u> Table 13.02A and 13.02B set forth screening requirements relating to adjacent land uses. Applicant selected one (1) large evergreen tree per ten (10) lineal feet.	East: 303 feet = 31 trees South: 380 feet = 38 trees	East: 31 South: 38	Complies
<u>Parking Lot Trees:</u> 1 per 8 spaces	114 spaces = 14 trees	15 trees	Complies
<u>Mitigation:</u> Replace 50% of Woodland DBH Replace 100% of Landmark DBH	154 inches of DBH	156 inches	Complies

Trash Enclosure:

The applicant intends to remove the existing RiteAid dumpster/enclosure and utilize a shared use dumpster/recycling enclosure between the two (2) sites. The proposed shared dumpster is located at the southwest corner of the site near the RiteAid property. The enclosure is a 6-foot masonry block wall matching the finish of the buildings.

Equipment:

Mechanical equipment is proposed at the northwest corner of the property. The applicant has provided details for a 3-foot-tall brick screening wall.

Items to be Addressed: Provide required interior parking lot landscaping.

LIGHTING

The applicant is proposing to light the site with 10 pole lights and 28 lighted bollards. The fixtures and photometrics meet ordinance requirements. The pole lights will measure 15 feet in height.

Items to be Addressed: None.

FLOOR PLANS AND ELEVATIONS

Floorplans:

34 out of 54 proposed units are two (2) level units. In these 34 units, the “garden level” begins four (4) feet 8 inches below grade and contains a bedroom, bathroom, walk-in closet, and storage/utility room. Upstairs, the “first floor” contains a foyer area, living room, kitchen, bathroom, and second bedroom.

20 out of 54 proposed units are one (1) level units on the “second floor” of each building (above the garden level and first floor). These 20 units include a foyer area, two (2) bedrooms, living room, kitchen, two (2) bathrooms, walk-in closet, and laundry room.

All units are accessed by stairs and no elevators are included in the buildings. With that said, the units are not ADA accessible by default. However, the applicant has noted that certain units can become ADA accessible with the inclusion of stair lifts.

Elevations:

The apartment buildings feature a flat-roof design with an overall height of 30 feet.

Egress Windows:

As requested by the Planning Commission at the April 23, 2024 meeting, the applicant has provided details on the structure and dimensions of the egress windows. Egress window details are available in the Planning Commission meeting packet.

Balcony Clearance:

See “Area, Width, Height, Setbacks” section for discussion on balcony clearance.

Building Materials:

Proposed building materials include brick veneer (colors medium and light gray), concrete block (light cream), metal siding (charcoal and light walnut), stone veneer (light gray), and canvas awning (marine blue).

Transparency:

Transparency calculations are fully compliant for each apartment building. First floor transparency facing Wattles shall be 50% and all first floor facades facing a parking area shall be 30% transparent.

Items to be Addressed: None.

SITE PLAN REVIEW STANDARDS

Section 8.06 outlines Site Plan Review Design Standards.

1. *Development shall ensure compatibility to existing commercial districts and provide a transition between land uses.*
 - a. *Building design shall enhance the character of the surrounding area in relation to building and parking placement, landscape and streetscape features, and architectural design.*
 - b. *Street fronts shall provide a variety of architectural expression that is appropriate in its context and prevents monotony.*
 - c. *Building design shall achieve a compatible transition between areas with different height, massing, scale, and architectural style.*

2. *Development shall incorporate the recognized best architectural building design practices.*
 - a. *Foster a lasting impact on the community through the provision of high quality design, construction, and detailing.*
 - b. *Provide high quality, durable materials, such as but not limited to stone, brick, glass, and metal. E.I.F.S. or material equivalent shall only be used as an accent material.*
 - c. *Develop buildings with creativity that includes balanced compositions and forms.*
 - d. *Design roofs that are appropriate to the architectural style of the building and create an appropriate visual exterior mass of the building given the context of the site.*
 - e. *For commercial buildings, incorporate clearly defined, highly visible customer entrances using features such as canopies, porticos, arcades, arches, wing walls, ground plane elements, and/or landscape planters.*
 - f. *Include community amenities that add value to the development such as patio/seating areas, water features, art work or sculpture, clock towers, pedestrian plazas with park benches or other features located in areas accessible to the public.*

3. *Enhance the character, environment and safety for pedestrians and motorists.*
 - a. *Provide elements that define the street and the pedestrian realm.*
 - b. *Create a connection between the public right of way and ground floor activities.*
 - c. *Create a safe environment by employing design features to reduce vehicular and pedestrian conflict, while not sacrificing design excellence.*
 - d. *Enhance the pedestrian realm by framing the sidewalk area with trees, awnings, and other features.*
 - e. *Improve safety for pedestrians through site design measures.*

SUMMARY

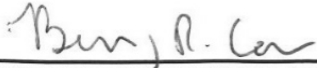
As part of the deliberation, the Planning Commission should discuss the following topics:

1. *Compliance with Site Plan Review standards set forth in Section 8.06*
2. *Evaluation of revised balcony design.*

Wattles Square Apartments
May 14, 2024

3. *How well the proposed project meets the overall site and building design standards of the Neighborhood Nodes.*

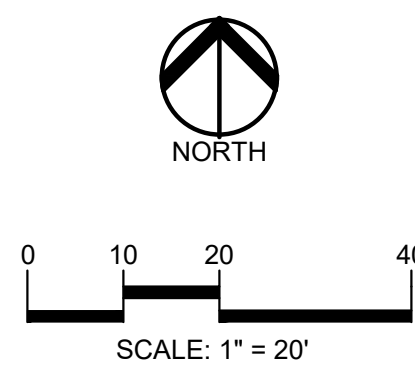
Sincerely,



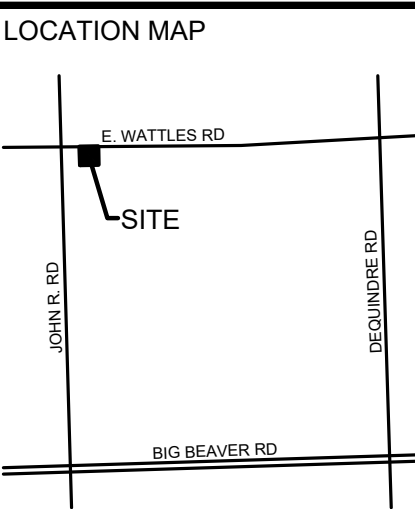
CARLISLE/WORTMAN ASSOC., INC.
Benjamin R. Carlisle, AICP, LEED AP
President



CARLISLE/WORTMAN ASSOC., INC.
Shana Kot
Community Planner



CAUTION!!
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 OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.



CLIENT
ATTO CONSTRUCTION, INC.
2150 FRANKLIN ROAD
BLOOMFIELD HILLS, MI 48302

PROJECT TITLE
WATTLES SQUARE APARTMENTS
E. WATTLES RD. & JOHN R. RD.
TROY, MI 48063

REVISIONS

CITY COMMENTS	11/15/23
SITE PLAN APPROVAL	12/5/23
CITY COMMENTS	3/6/24

ORIGINAL ISSUE DATE:
SEPTEMBER 22, 2023

DRAWING TITLE
PRELIMINARY SITE PLAN

PEA JOB NO.	22-1309
P.M.	GMB
DN	KRD
DES.	KRD
DRAWING NUMBER:	

LEGEND:

	CONCRETE PAVEMENT
	ASPHALT PAVEMENT
	GRAVEL
	WETLAND
	CONCRETE CURB AND GUTTER
	REVERSE SLOPEWAY
	SETBACK LINE
	SIGN
	LIGHTPOLE
	FENCE
	GUARDRAIL

- GENERAL NOTES:**
- THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT.
- ALL DIMENSIONS SHOWN ARE TO BACK 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 100 FOOT INTERVALS OR AS DIRECTED BY THE FIRE OFFICIAL.
 - REFER TO NOTES & DETAILS SHEET FOR ON-SITE PAVING DETAILS.
 - REFER TO NOTES & DETAILS SHEET FOR ON-SITE SIDEWALK RAMP DETAILS.

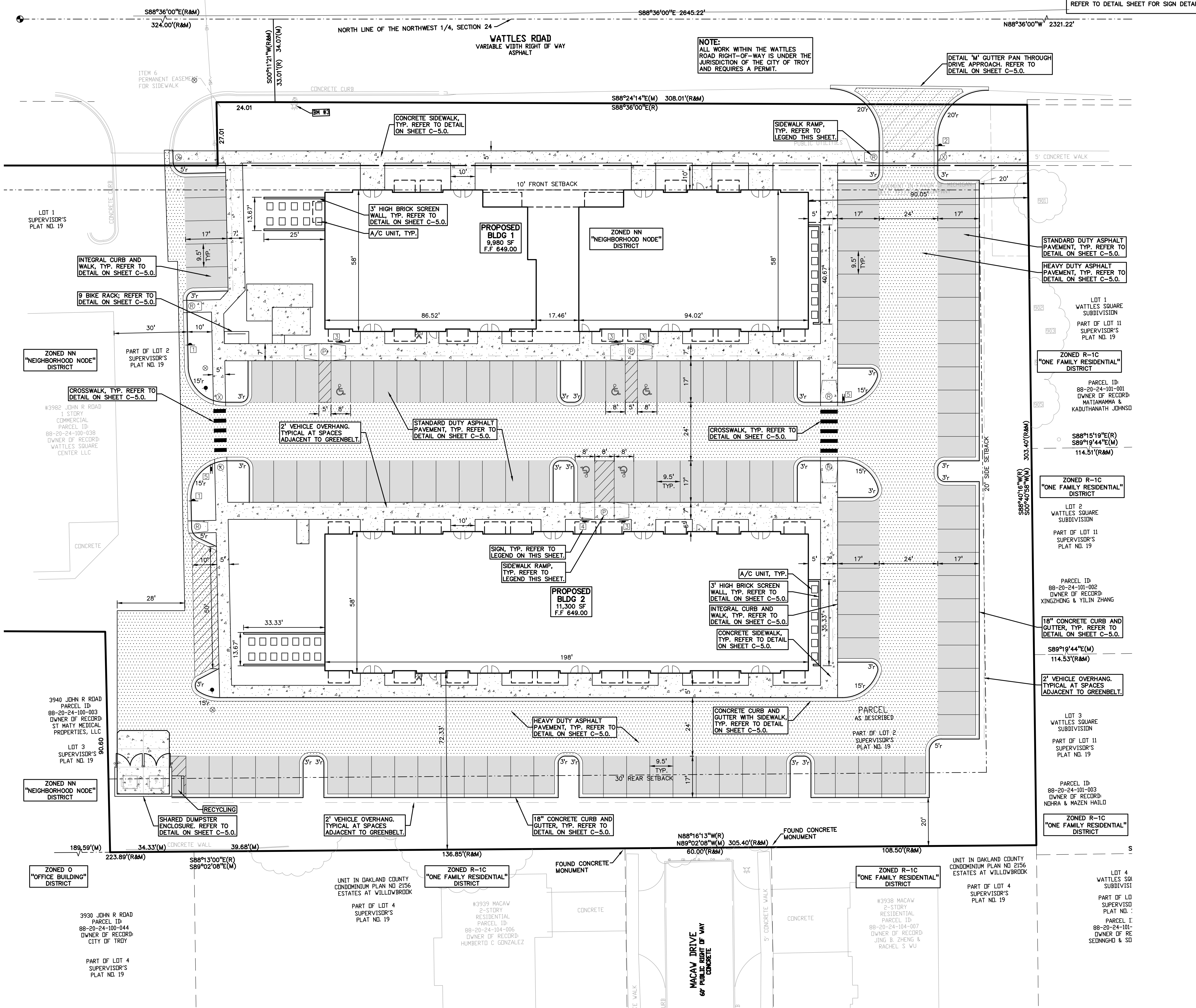
SIDEWALK RAMP LEGEND:

	SIDEWALK RAMP 'TYPE P'
	SIDEWALK RAMP 'TYPE R'
	CURB DROP ONLY

SIGN LEGEND:

	'NO PARKING-FIRE LANE' SIGN
	'STOP' SIGN
	'BARRIER FREE PARKING' SIGN
	'VAN ACCESSIBLE' SIGN
	'CROSSWALK' SIGN

REFER TO DETAIL SHEET FOR SIGN DETAILS



NOTE:
ALL WORK WITHIN THE WATTLES ROAD RIGHT-OF-WAY IS UNDER THE JURISDICTION OF THE CITY OF TROY AND REQUIRES A PERMIT.

DETAIL 'M' GUTTER PAN THROUGH DRIVE APPROACH. REFER TO DETAIL ON SHEET C-5.0.

STANDARD DUTY ASPHALT PAVEMENT, TYP. REFER TO DETAIL ON SHEET C-5.0.

HEAVY DUTY ASPHALT PAVEMENT, TYP. REFER TO DETAIL ON SHEET C-5.0.

ZONED R-1C "ONE FAMILY RESIDENTIAL" DISTRICT

PARCEL ID: 88-20-24-101-001
OWNER OF RECORD: MATTIAMMA & KADUTHANATH JOHNSD

ZONED R-1C "ONE FAMILY RESIDENTIAL" DISTRICT

PARCEL ID: 88-20-24-101-002
OWNER OF RECORD: XINGZHONG & YILIN ZHANG

18" CONCRETE CURB AND GUTTER WITH SIDEWALK, TYP. REFER TO DETAIL ON SHEET C-5.0.

2' VEHICLE OVERHANG, TYPICAL AT SPACES ADJACENT TO GREENBELT.

PARCEL ID: 88-20-24-101-003
OWNER OF RECORD: NIHRA & MAZEN HAILD

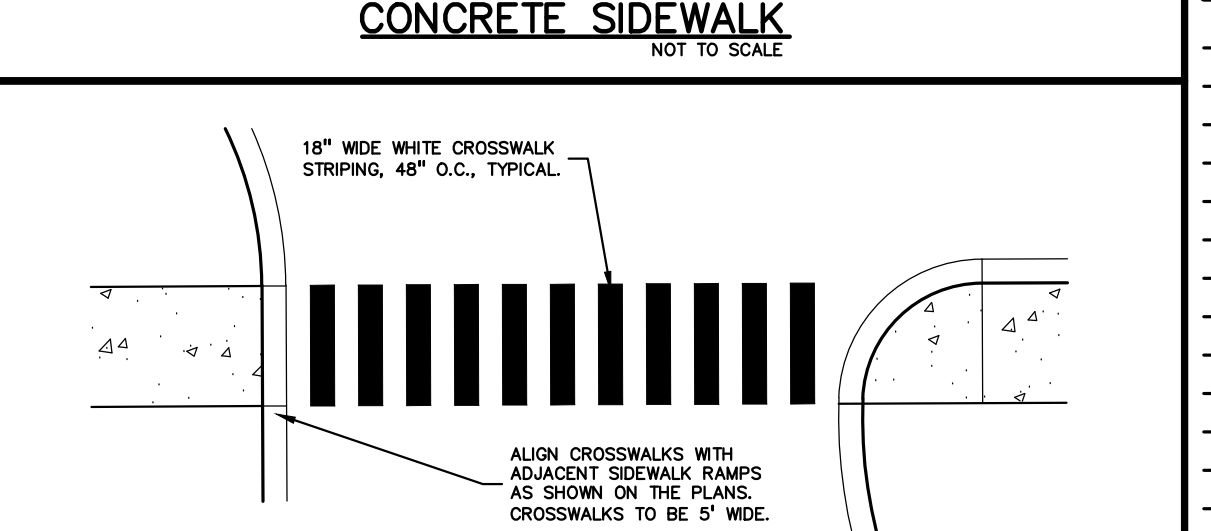
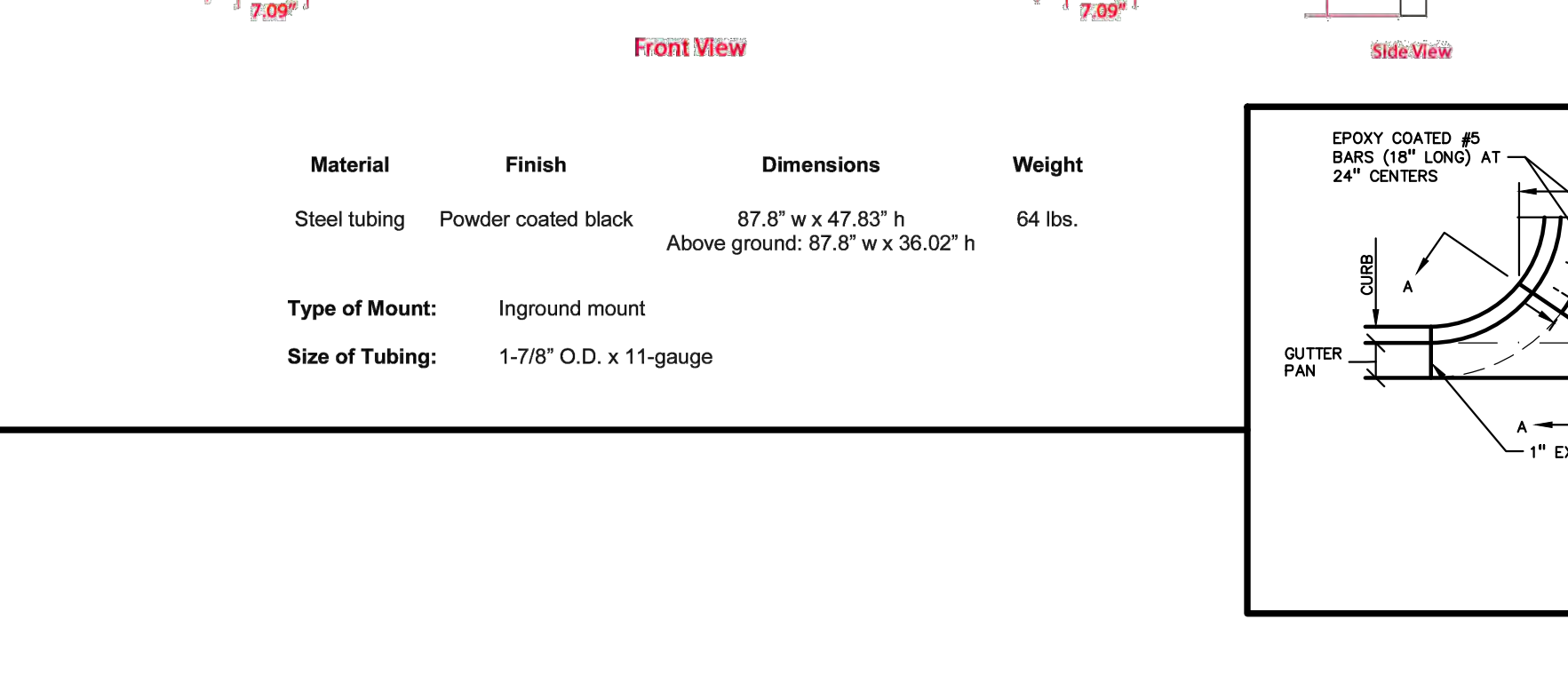
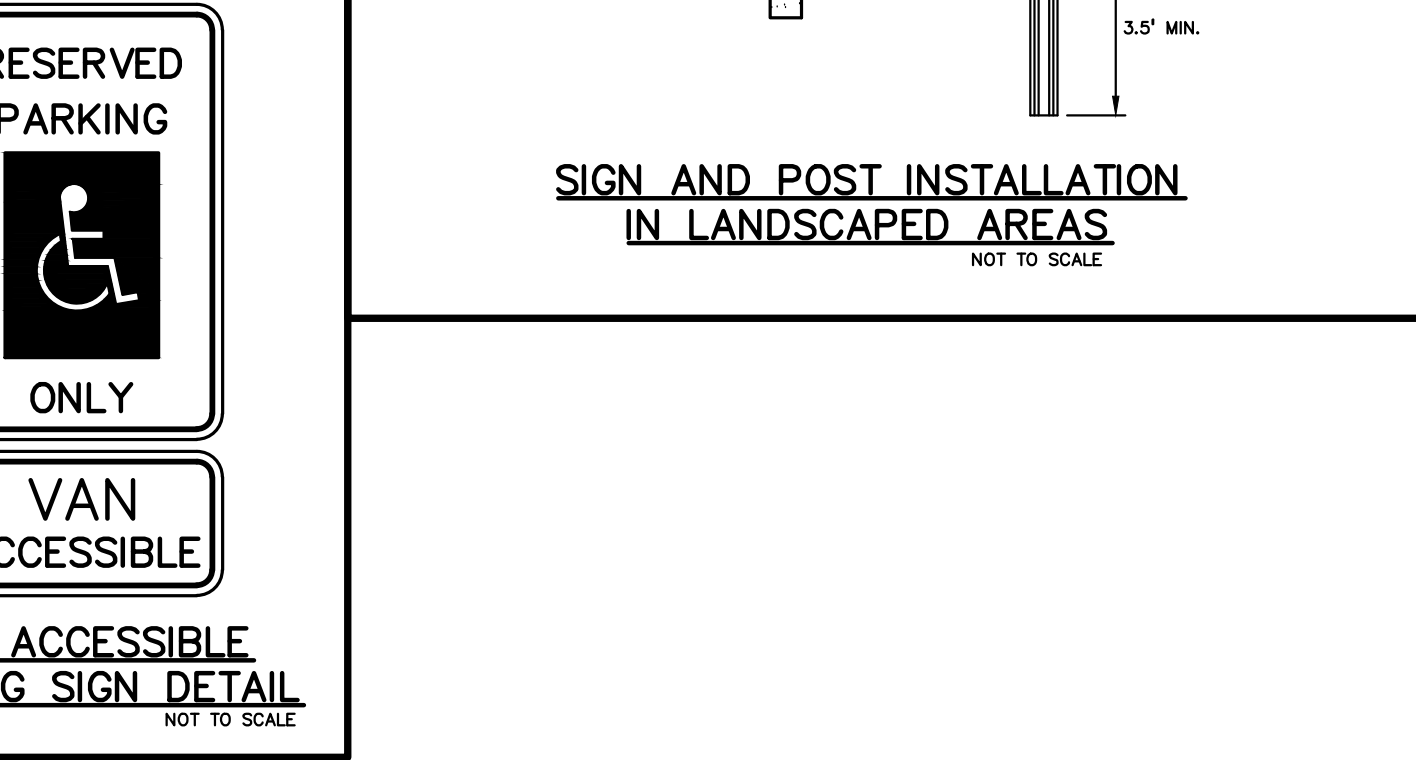
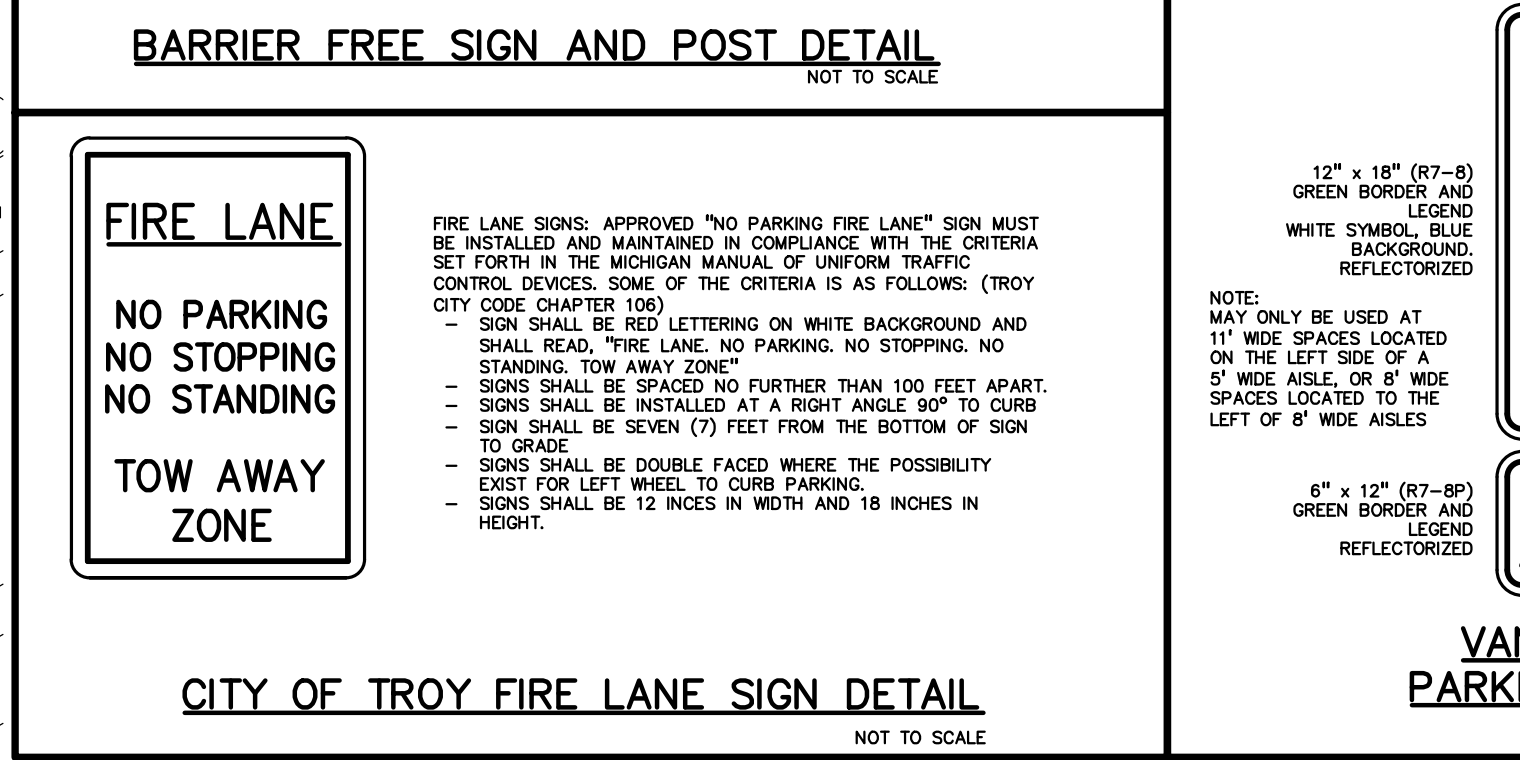
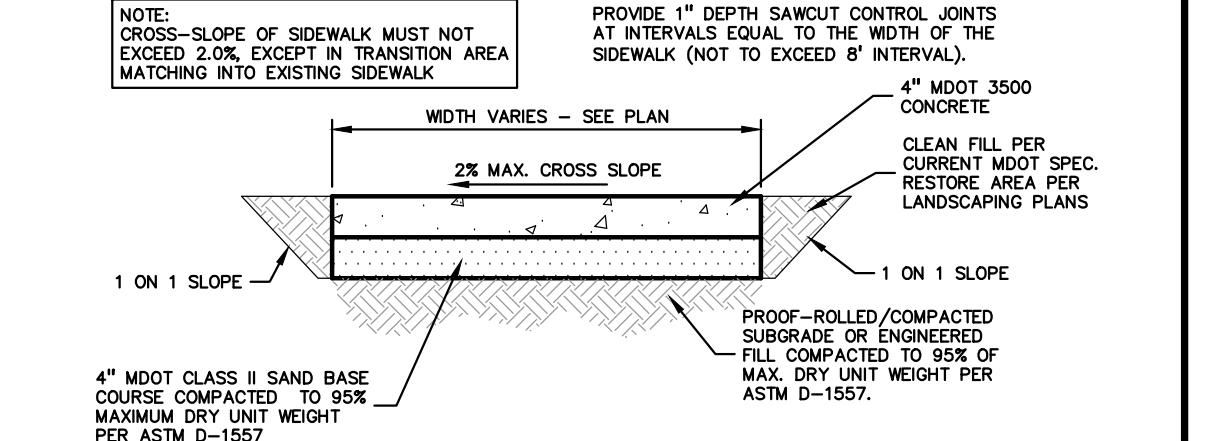
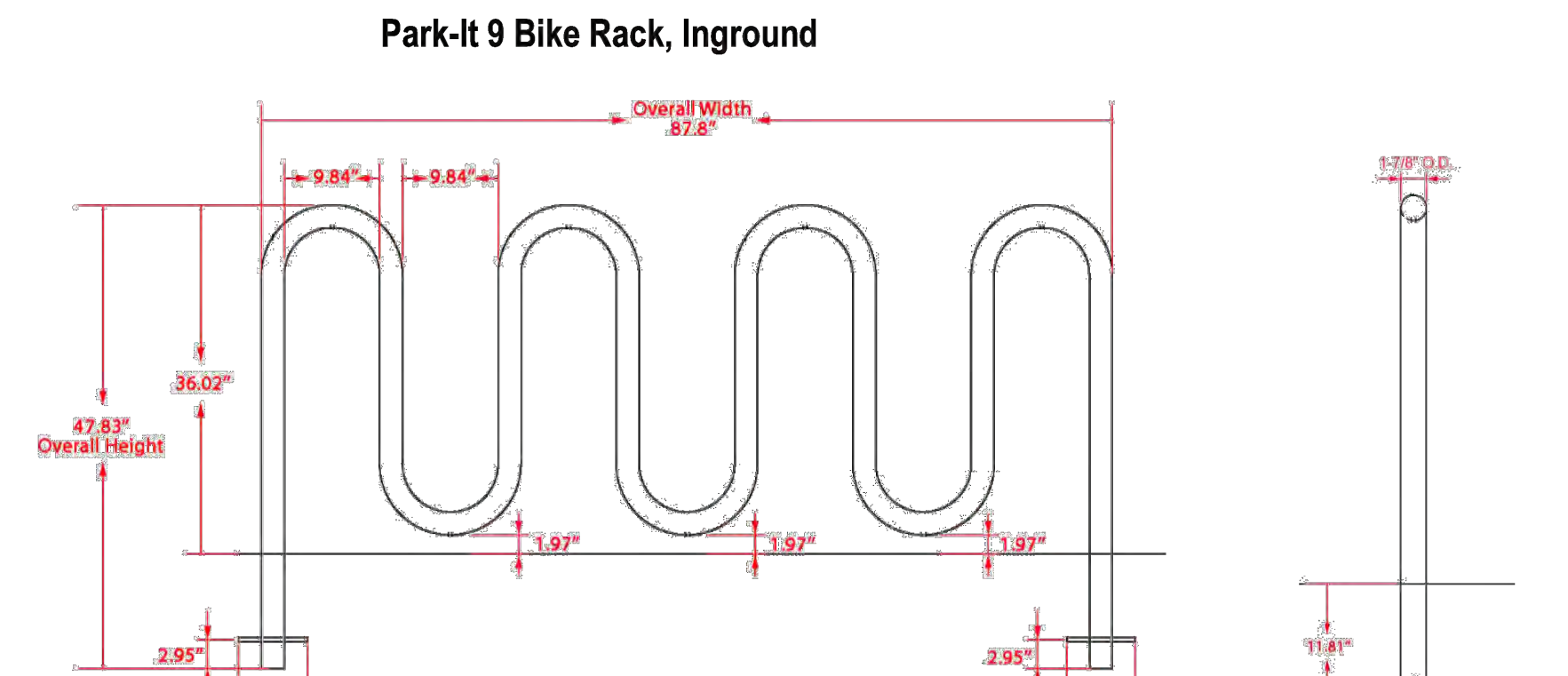
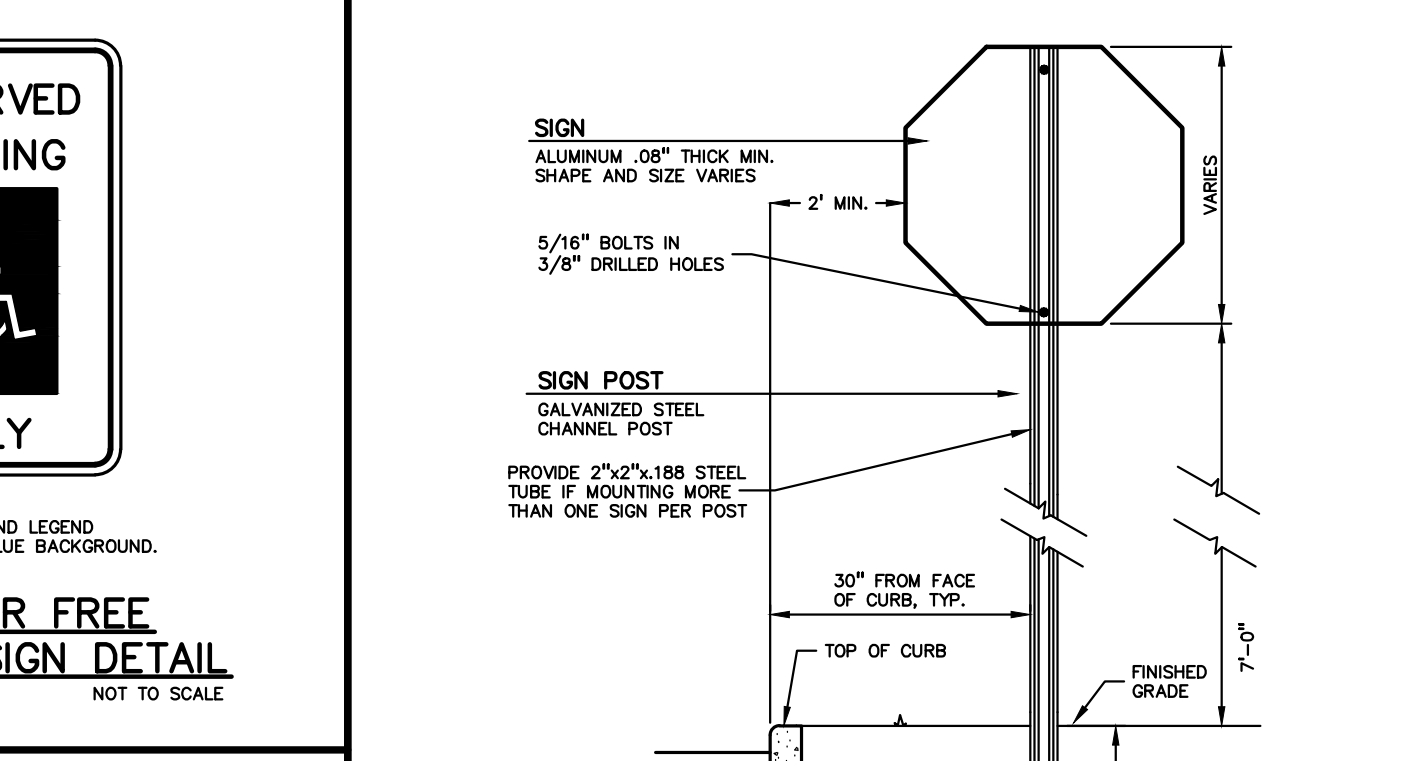
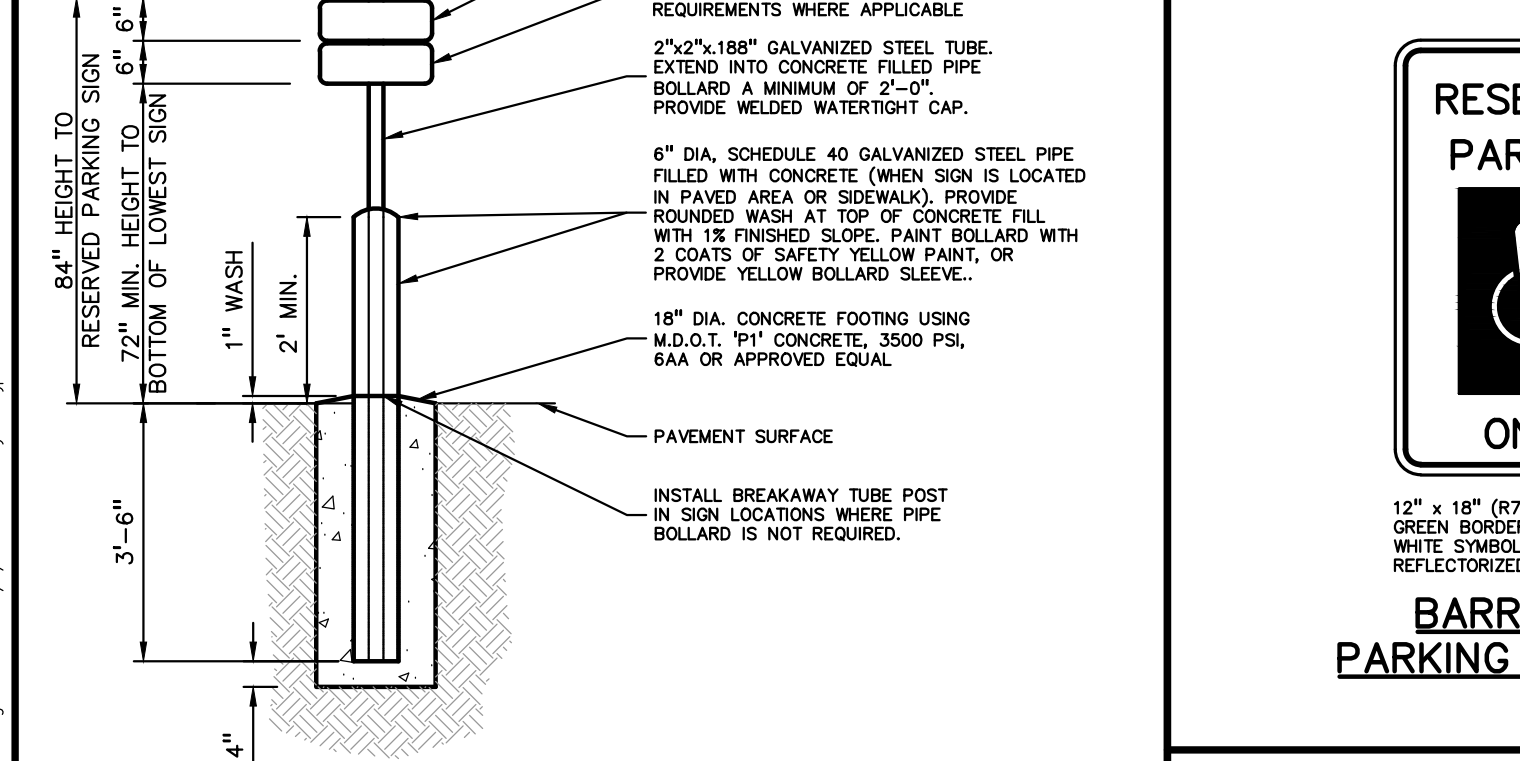
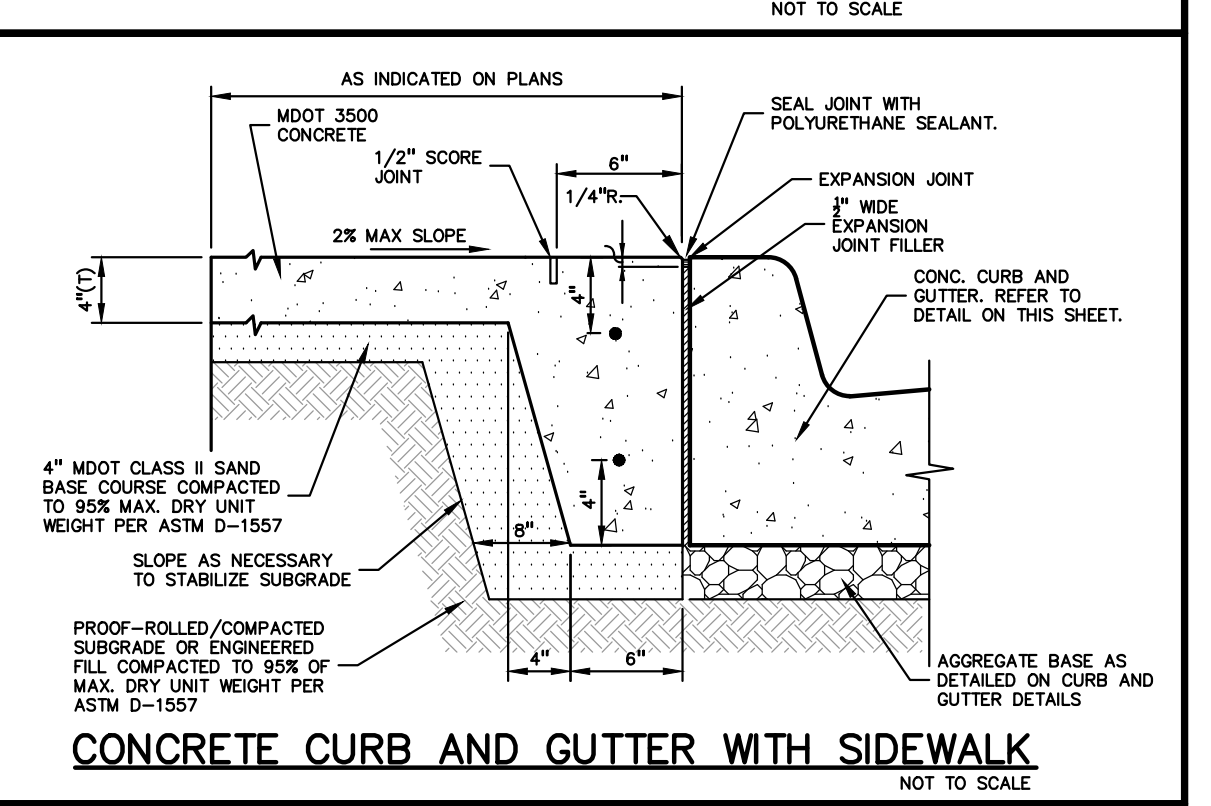
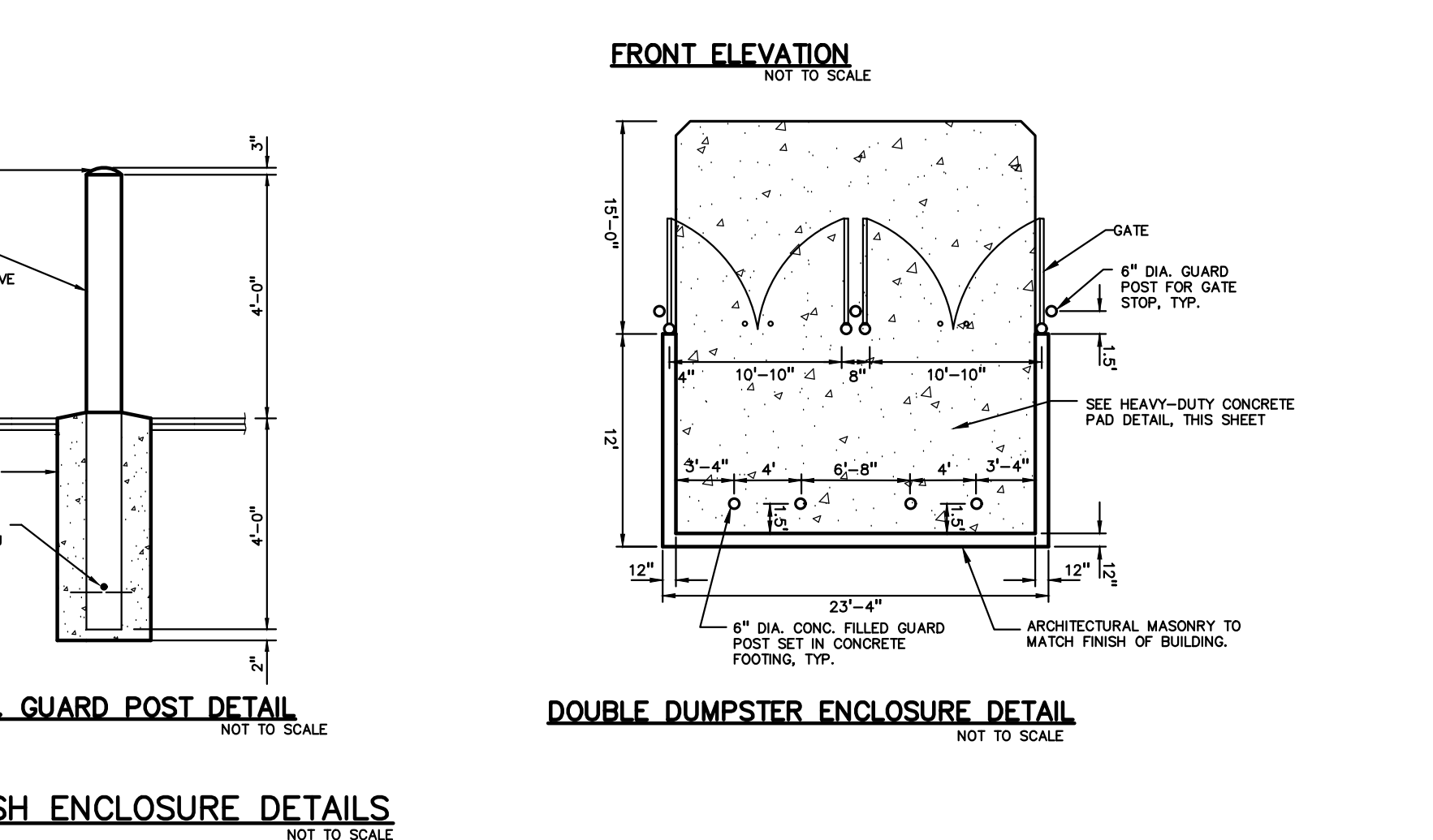
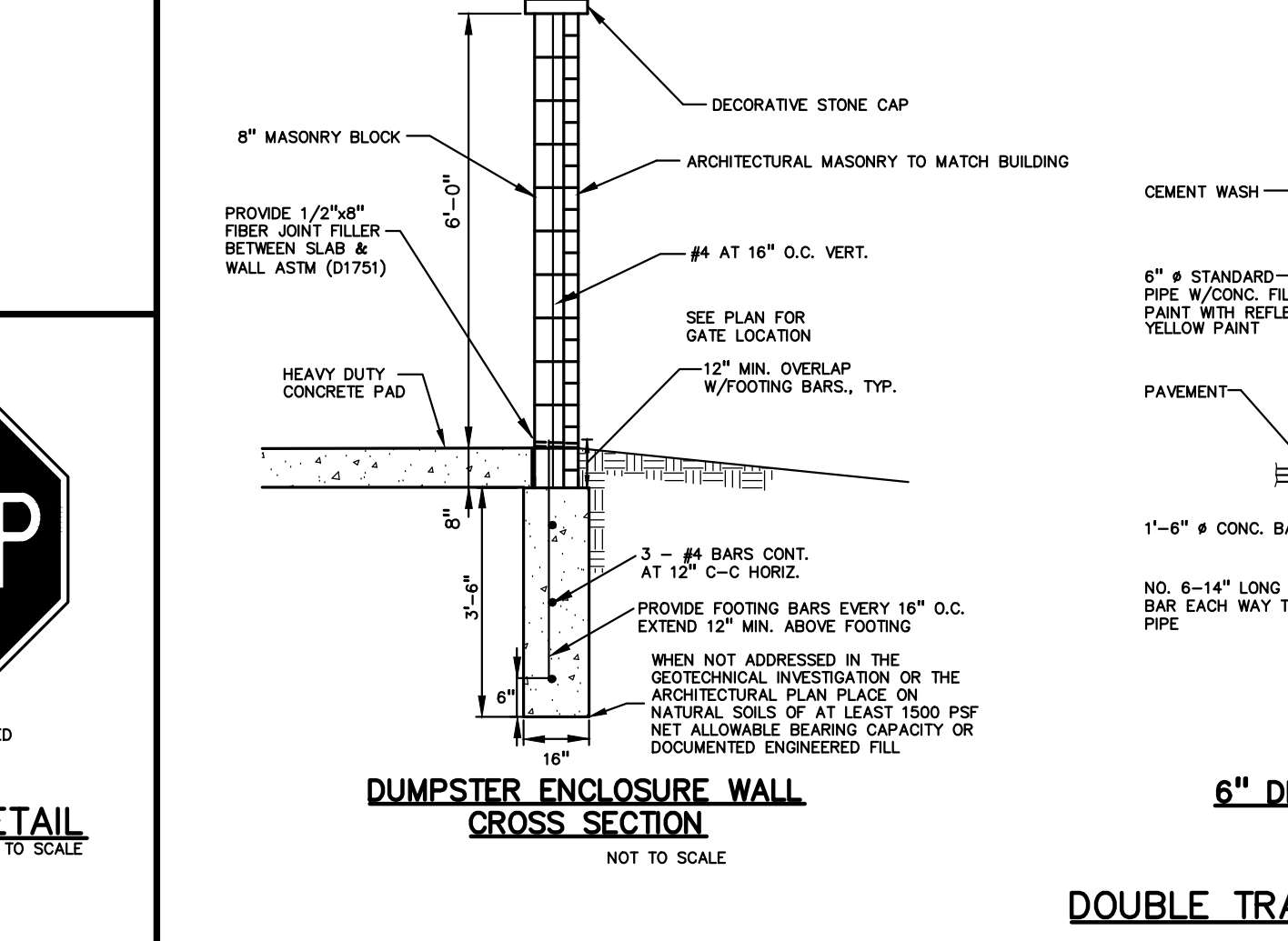
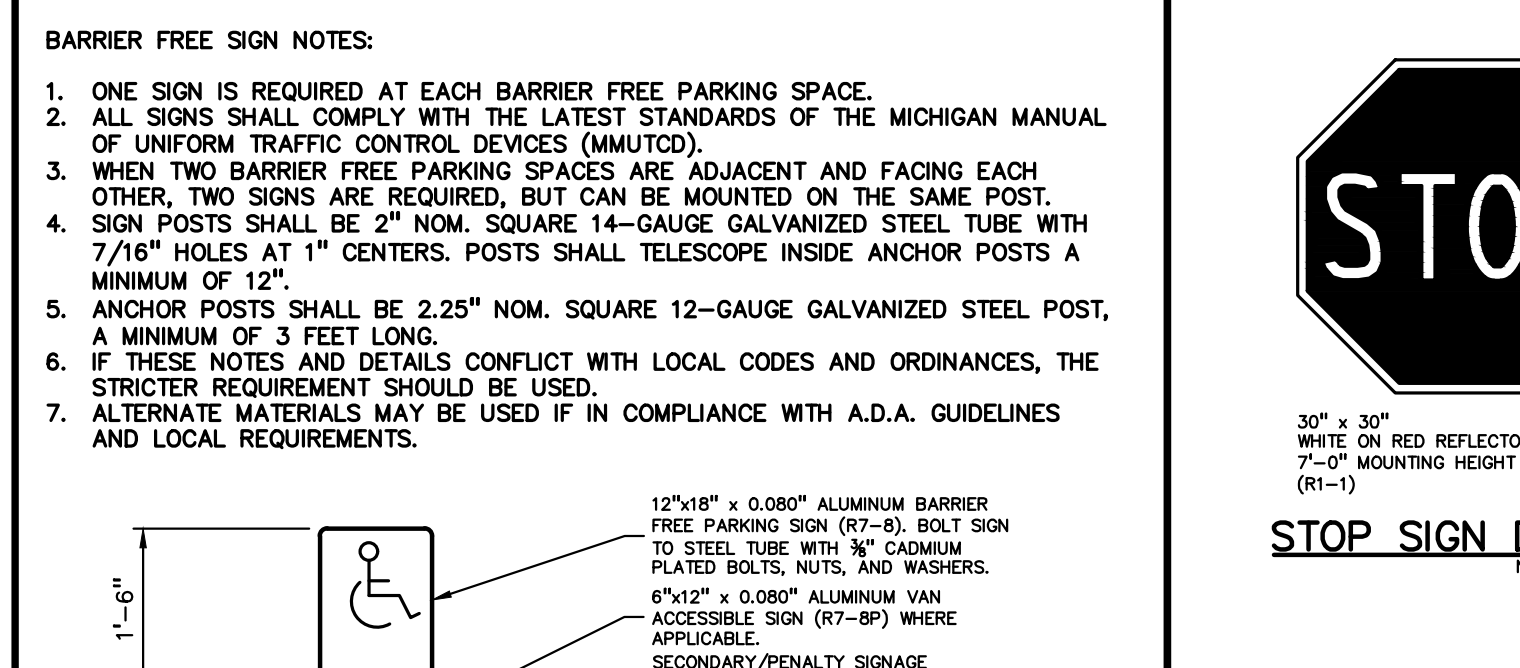
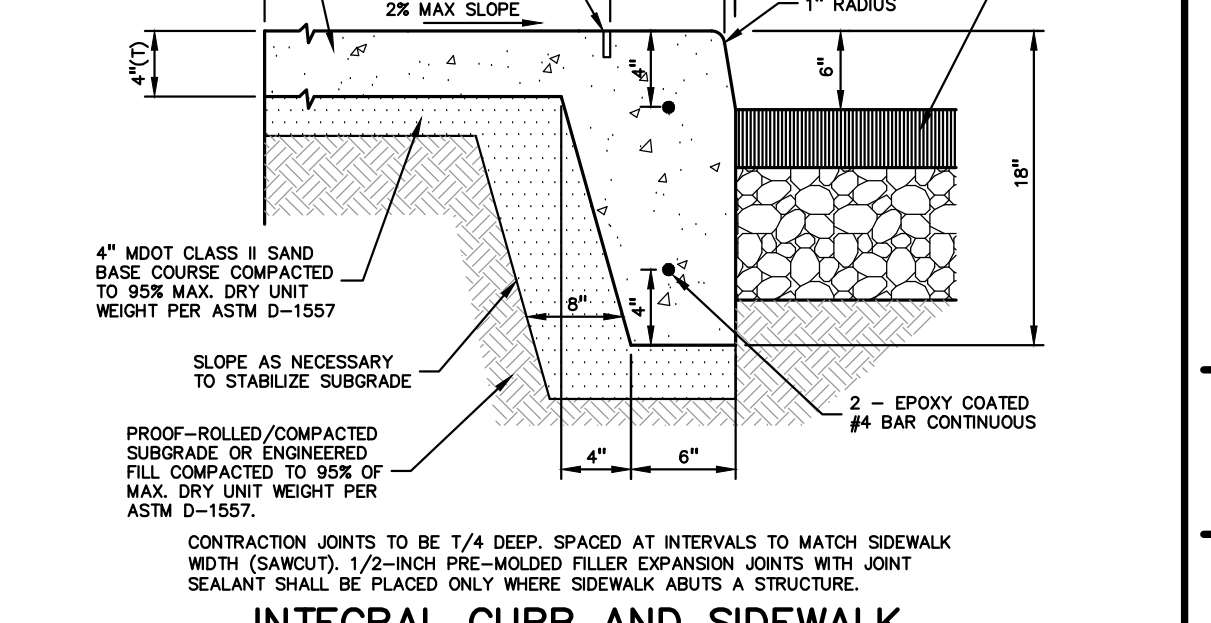
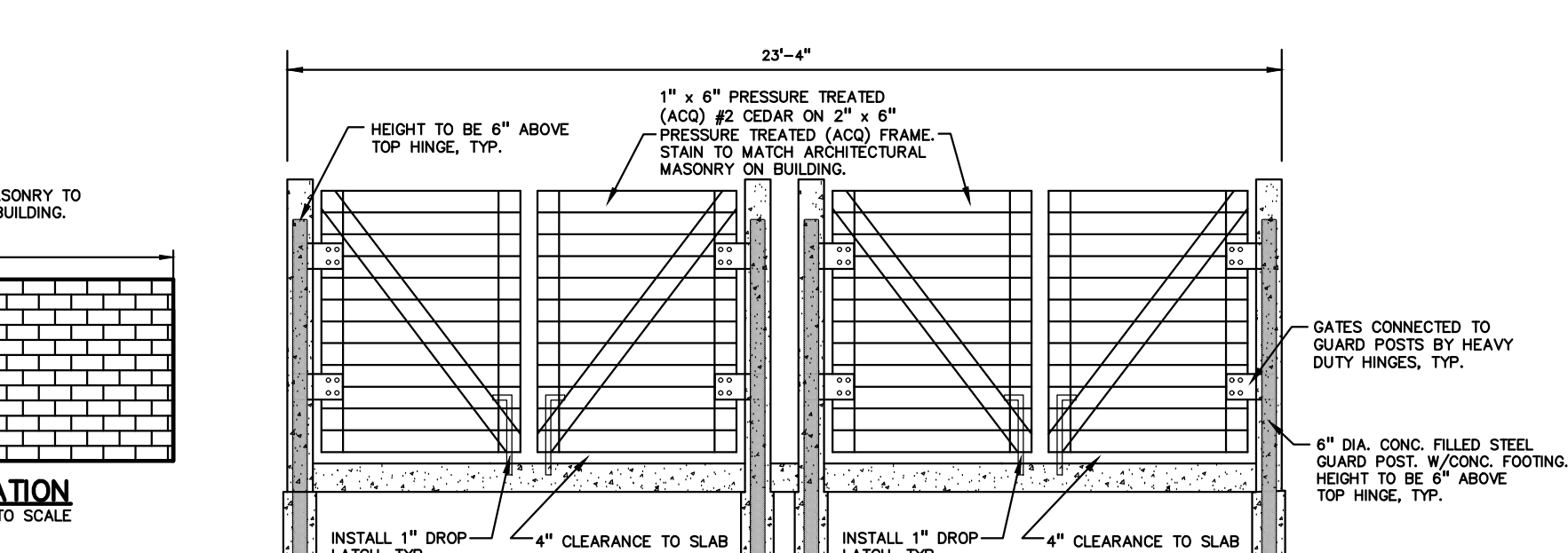
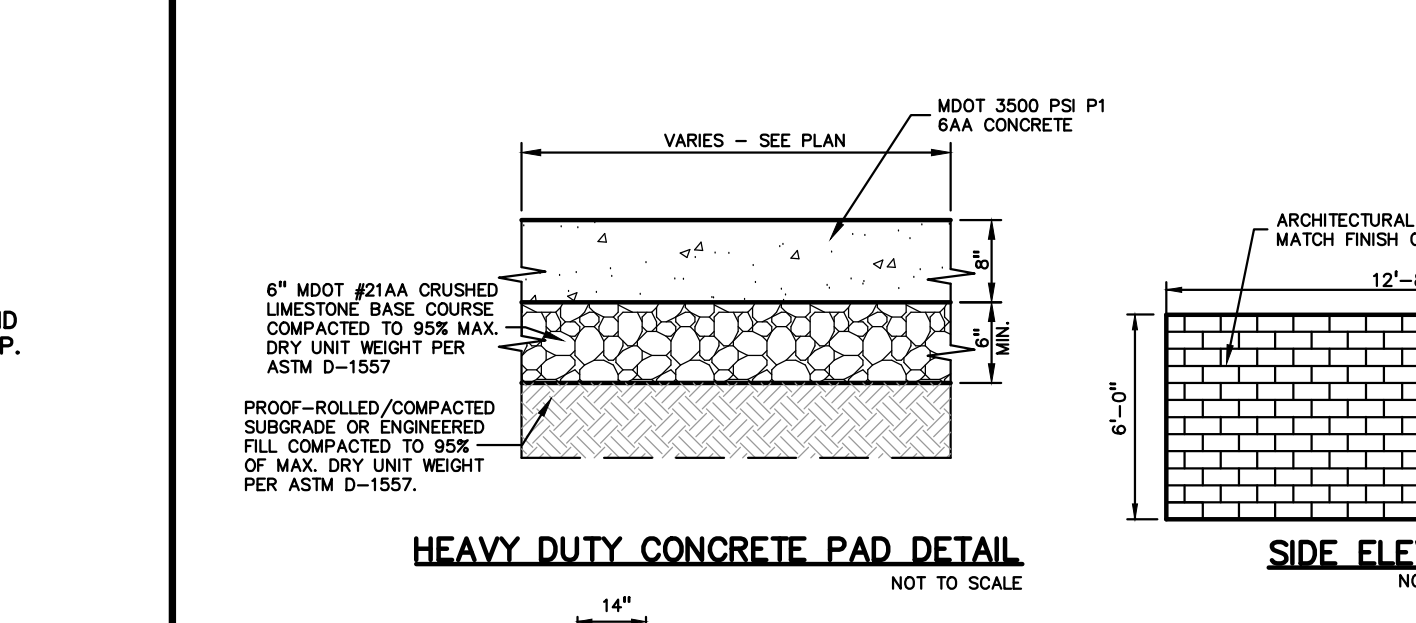
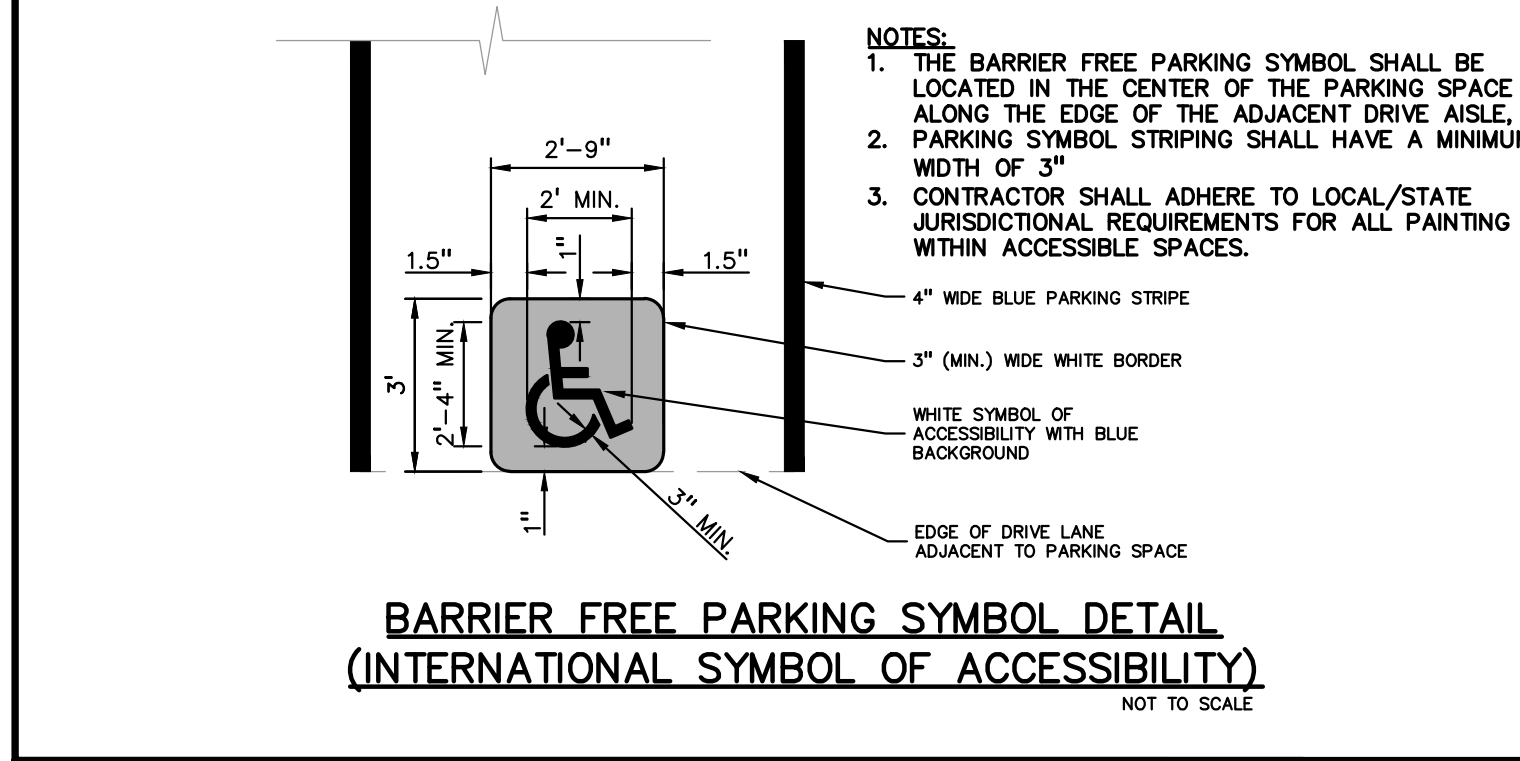
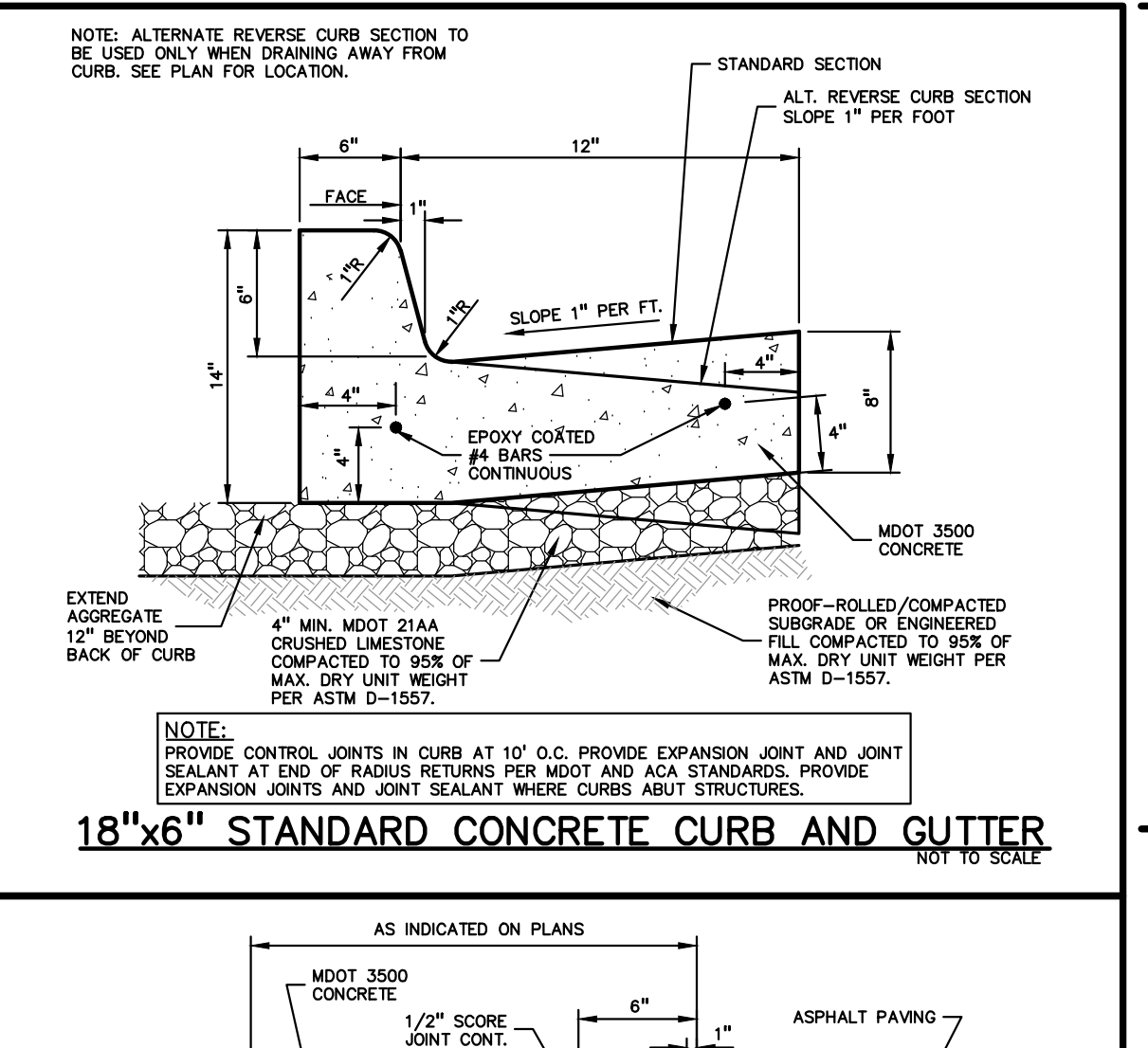
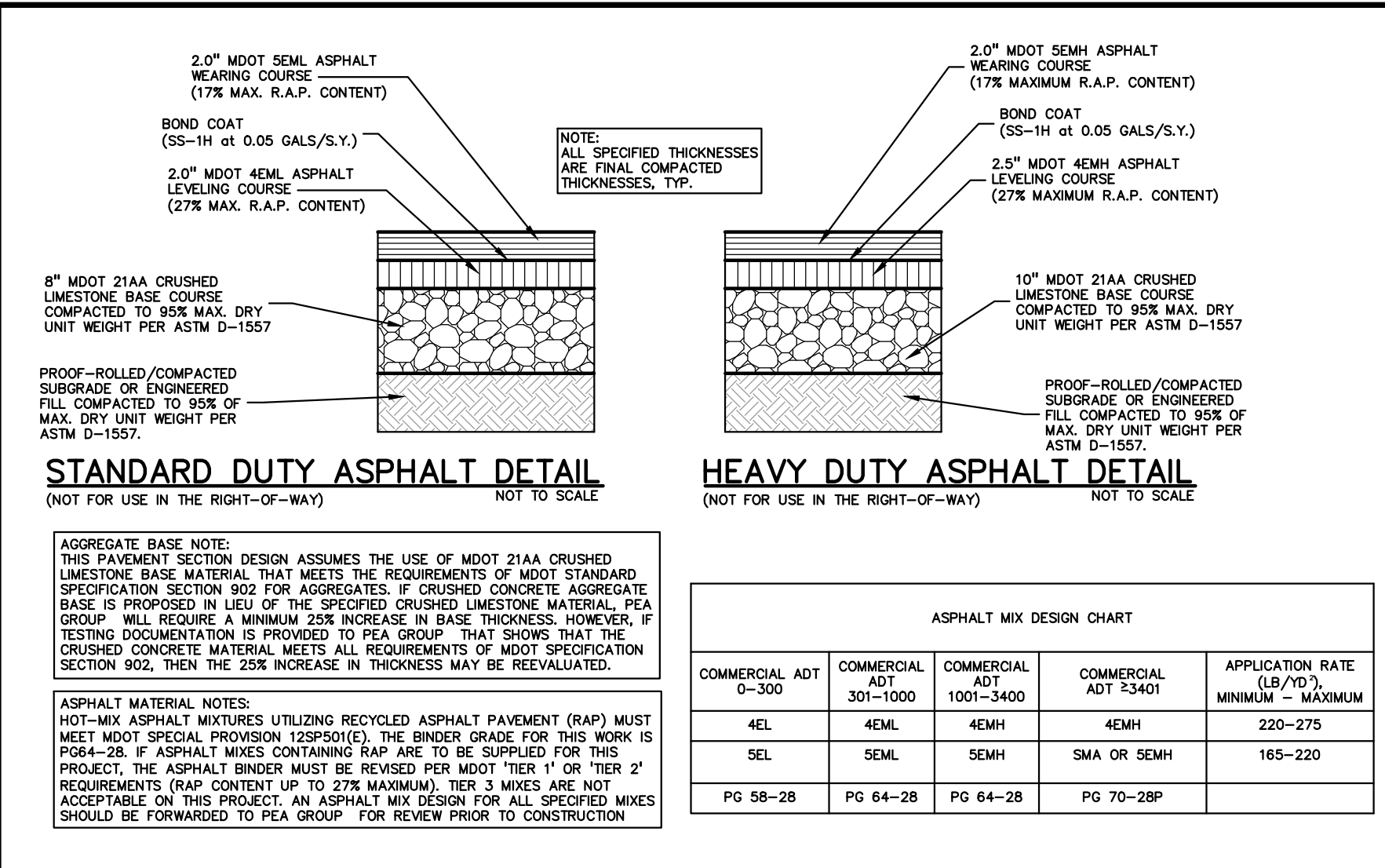
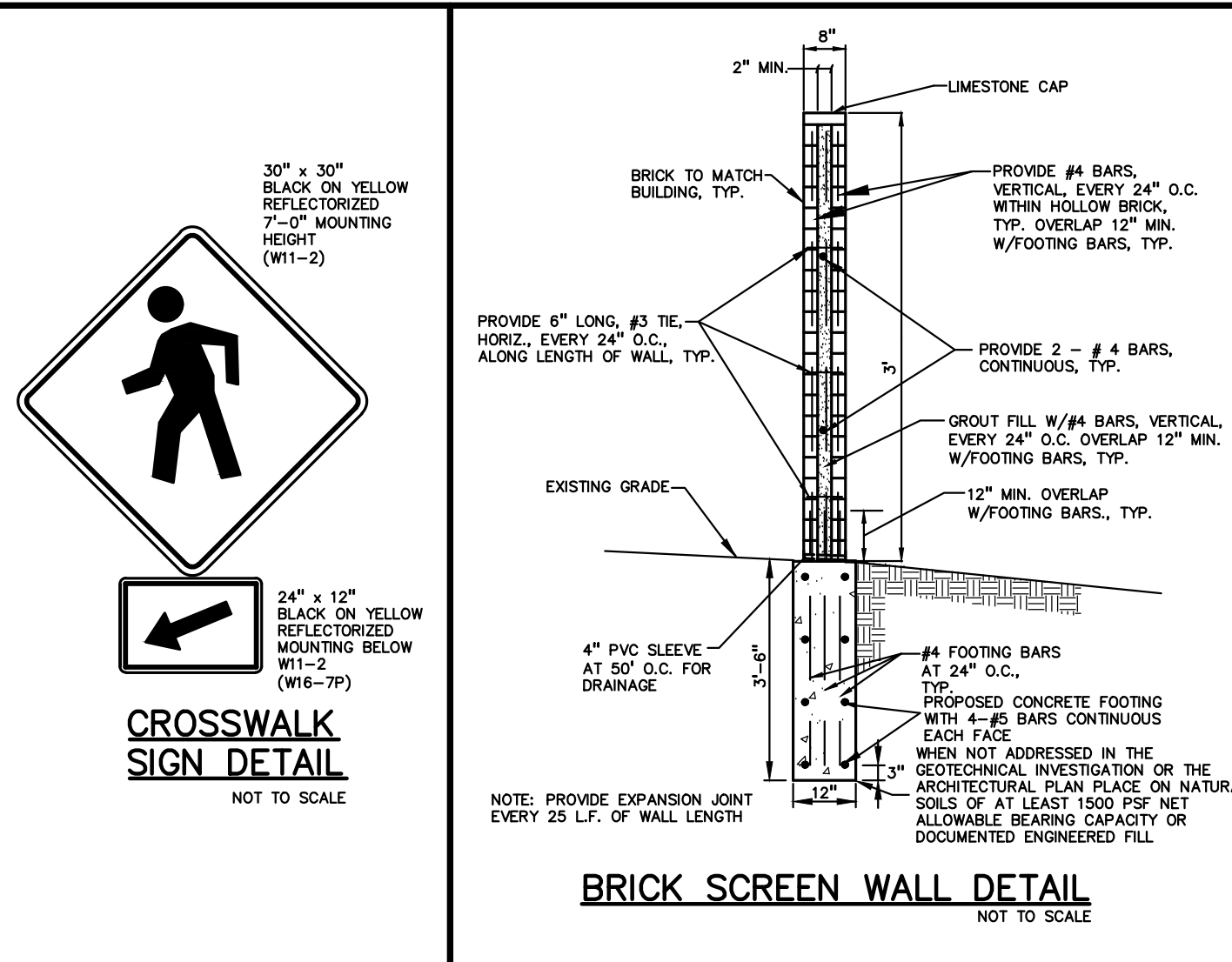
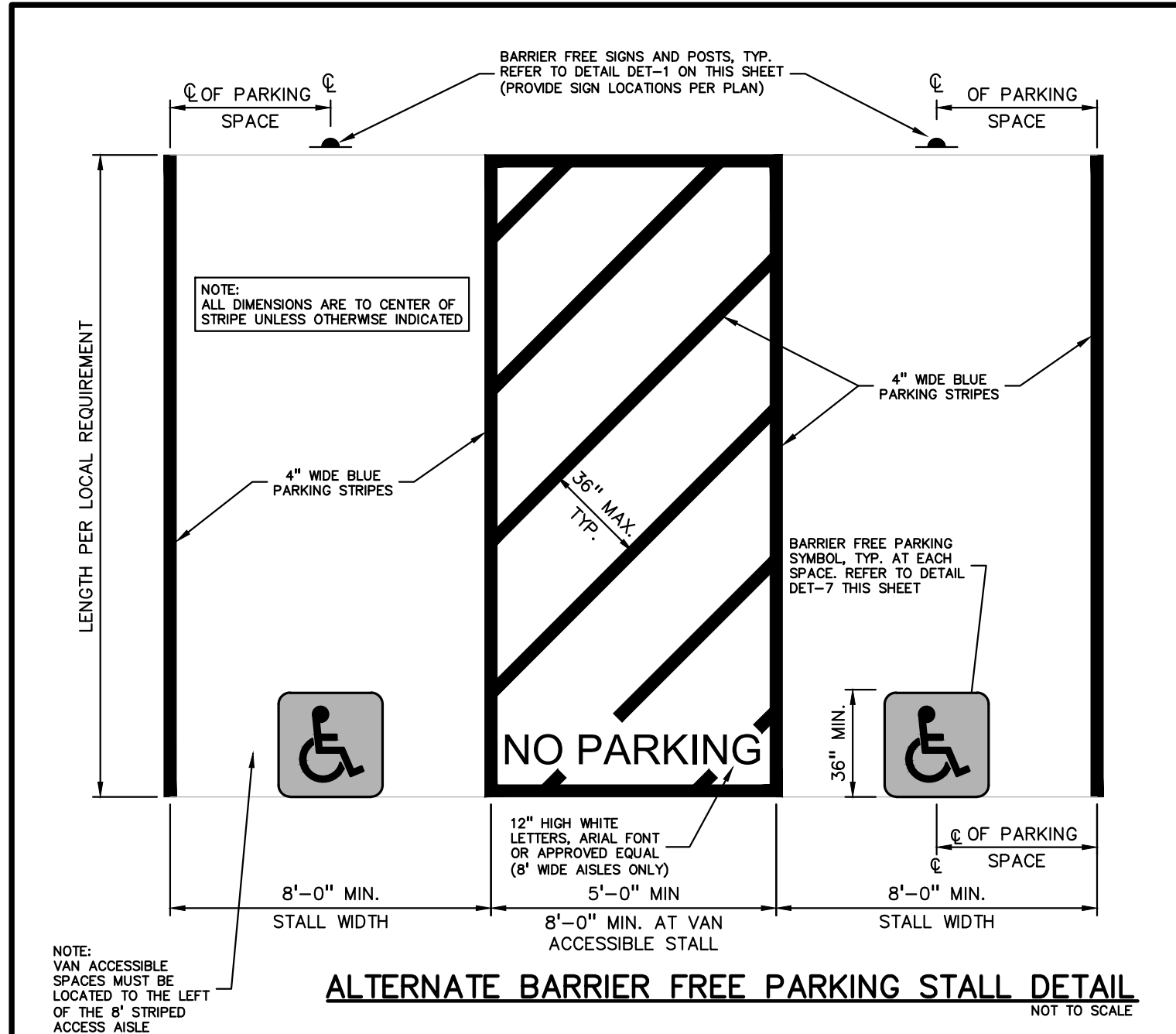
ZONED R-1C "ONE FAMILY RESIDENTIAL" DISTRICT

UNIT IN OAKLAND COUNTY CONDOMINIUM PLAN NO 2156 ESTATES AT WILLOWBROOK

PARCEL ID: 88-20-24-104-007
OWNER OF RECORD: JING B. ZHENG & RACHEL S. WU

PARCEL ID: 88-20-24-101-004
OWNER OF RECORD: SEDNNGHO & SD

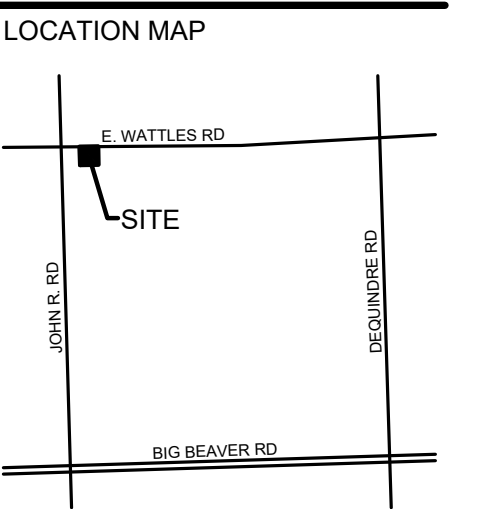
S:\PROJECTS\2022\2022-1309 WATTLES APARTMENTS\DWG\SITE_PLAN\C-5.100A.dwg PLOT DATE: 5/7/2024 BY: KRM, Slogana



NOT FOR CONSTRUCTION



CAUTION!!
THE LOCATION AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.



CLIENT
ATTO CONSTRUCTION, INC.
2150 FRANKLIN ROAD
BLOOMFIELD HILLS, MI 48302

PROJECT TITLE
WATTLES SQUARE APARTMENTS
E. WATTLES RD. & JOHN R. RD.
TROY, MI 48063

REVISIONS	CITY COMMENTS	DATE
		11/15/23
		12/5/23
		3/6/24

ORIGINAL ISSUE DATE:
SEPTEMBER 22, 2023

DRAWING TITLE
NOTES AND DETAILS

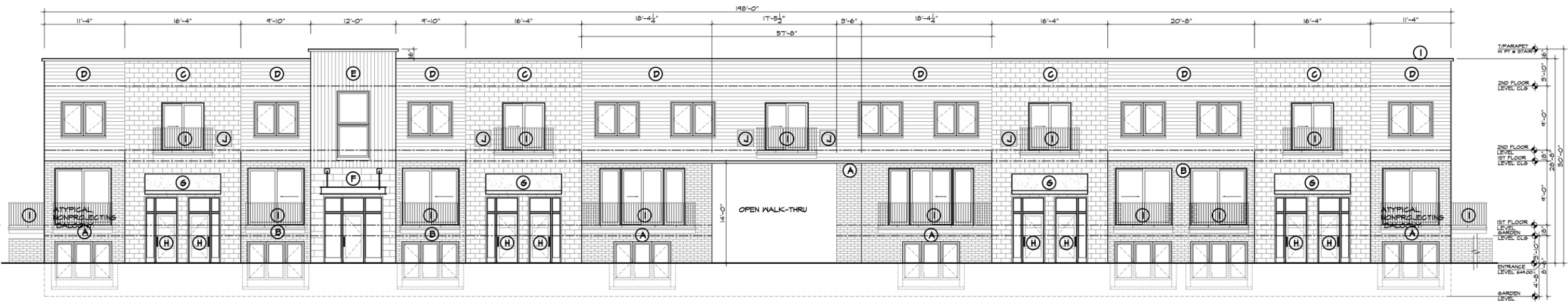
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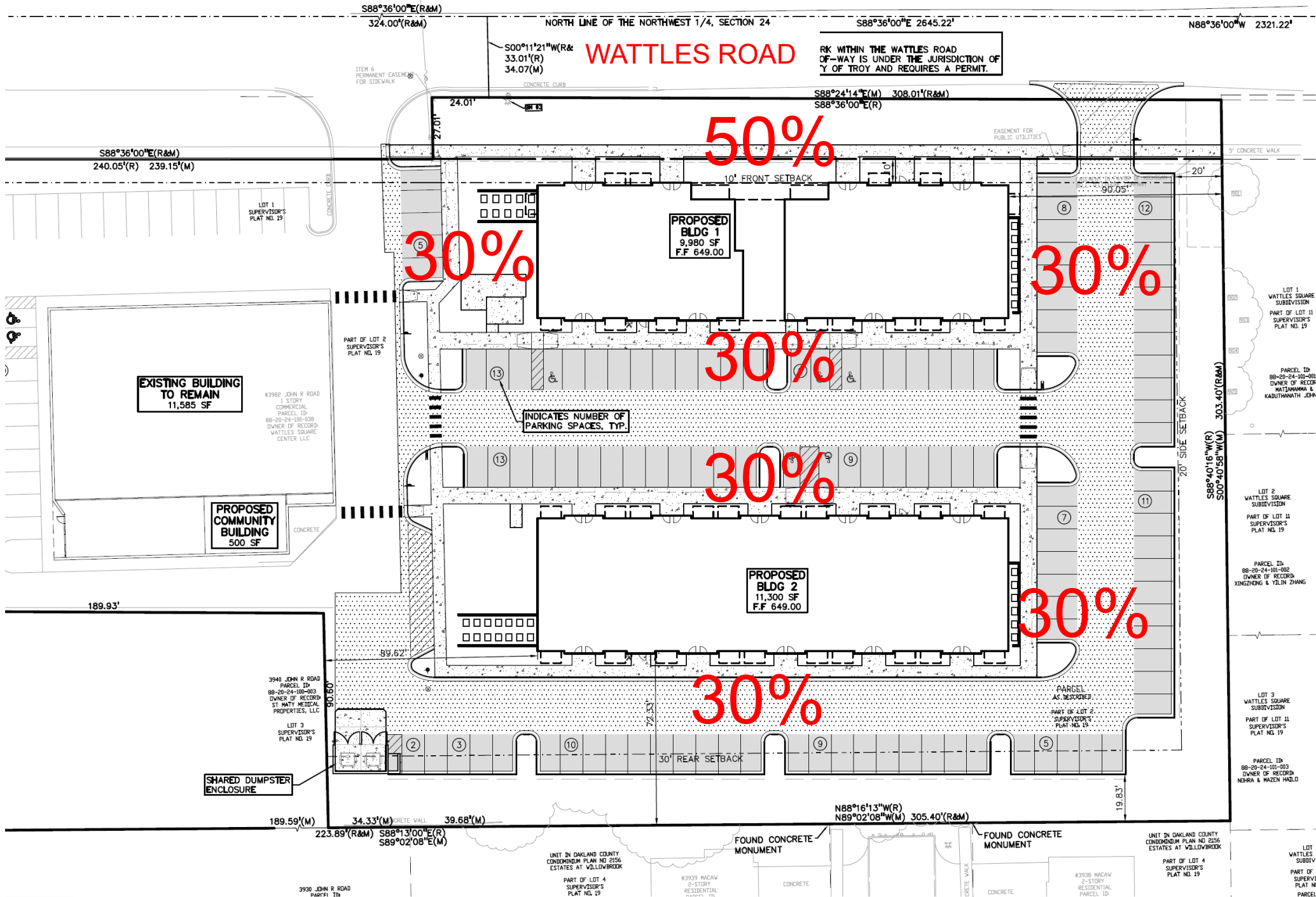
P.M. GMB
DN. KRK
DES. KRK

DRAWING NUMBER:
C-5.0

WATTLES SQUARE APARTMENTS - TRANSPARENCY REQUIREMENTS

4-30-2024





NORTH LINE OF THE NORTHWEST 1/4, SECTION 24

WATTLES ROAD

RK WITHIN THE WATTLES ROAD
OF-WAY IS UNDER THE JURISDICTION OF
Y OF TROY AND REQUIRES A PERMIT.

50%

30%

30%

30%

30%

30%

30%

PROPOSED
BLDG 1
9,980 SF
F.F 649.00

PROPOSED
BLDG 2
11,300 SF
F.F 649.00

EXISTING BUILDING
TO REMAIN
11,585 SF

PROPOSED
COMMUNITY
BUILDING
500 SF

INDICATES NUMBER OF
PARKING SPACES, TYP.

ITEM 6
PERMANENT EASEMENT
FOR SIDEWALK

CONCRETE CURB

EASEMENT FOR
PUBLIC UTILITIES

5' CONCRETE WALK

LOT 1
SUPERVISOR'S
PLAT NO. 19

PART OF LOT 2
SUPERVISOR'S
PLAT NO. 19

LOT 1
WATTLES SQUARE
SUBDIVISION
PART OF LOT 11
SUPERVISOR'S
PLAT NO. 19

PARCEL ID:
88-20-24-101-001
OWNER OF RECORD:
WATTAMAH &
KARUTHANATH JOHN

LOT 2
WATTLES SQUARE
SUBDIVISION
PART OF LOT 11
SUPERVISOR'S
PLAT NO. 19

PARCEL ID:
88-20-24-101-002
OWNER OF RECORD:
XINGZHONG & YELIN ZHANG

LOT 3
WATTLES SQUARE
SUBDIVISION
PART OF LOT 11
SUPERVISOR'S
PLAT NO. 19

PARCEL ID:
88-20-24-101-003
OWNER OF RECORD:
NEHRA & MAZEN HAID

LOT
WATTLES
SUBDIV
PART OF
SUPERV
PLAT NO.
PARCEL

#3982 JOHN R ROAD
1 STORY
COMMERCIAL
PARCEL ID:
88-20-24-101-003
OWNER OF RECORD:
WATTLES SQUARE
CENTER LLC

3940 JOHN R ROAD
PARCEL ID:
88-20-24-101-003
OWNER OF RECORD:
ST MARY MEDICAL
PROPERTIES, LLC

SHARED DUMPSTER
ENCLOSURE

PARCEL
AS RECORDED
PART OF LOT 2
SUPERVISOR'S
PLAT NO. 19

UNIT IN OAKLAND COUNTY
CONDOMINIUM PLAN NO. 2156
ESTATES AT WILLOWBROOK

FOUND CONCRETE
MONUMENT

FOUND CONCRETE
MONUMENT

UNIT IN OAKLAND COUNTY
CONDOMINIUM PLAN NO. 2156
ESTATES AT WILLOWBROOK

PART OF LOT 4
SUPERVISOR'S
PLAT NO. 19

3930 JOHN R ROAD
PARCELF 10

PART OF LOT 4
SUPERVISOR'S
PLAT NO. 19

#3939 MACAW
2-STORY
RESIDENTIAL
PARCEL ID:

#3938 MACAW
2-STORY
RESIDENTIAL
PARCEL ID:

S88°36'00"E(R&M)

NORTH LINE OF THE NORTHWEST 1/4, SECTION 24

S88°36'00"E 2645.22'

N88°36'00"W 2321.22'

324.00'(R&M)

S00°11'21"W(R&M)
33.01'(R)
34.07(M)

WATTLES ROAD

RK WITHIN THE WATTLES ROAD
OF-WAY IS UNDER THE JURISDICTION OF
Y OF TROY AND REQUIRES A PERMIT.

ITEM 6
PERMANENT EASEMENT
FOR SIDEWALK

CONCRETE CURB

S88°24'14"E(M) 308.01'(R&M)
S88°36'00"E(R)

BUILDING 1 NORTH ELEVATION

EASEMENT FOR
PUBLIC UTILITIES

S88°36'00"E(R&M)
240.05'(R) 239.15'(M)

LOT 1
SUPERVISOR'S
PLAT NO. 19

10' FRONT SETBACK

PROPOSED
BLDG 1
9,980 SF
F.F 649.00

5' CONCRETE WALK

20'

EXISTING BUILDING
TO REMAIN
11,585 SF

#3982 JOHN R ROAD
1 STORY
COMMERCIAL
PARCEL ID
88-20-24-101-001
OWNER OF RECORD
WATTLES SQUARE
CENTER LLC

PROPOSED
COMMUNITY
BUILDING
500 SF

INDICATES NUMBER OF
PARKING SPACES, TYP.

LOT 1
WATTLES SQUARE
SUBDIVISION
PART OF LOT 11
SUPERVISOR'S
PLAT NO. 19

PARCEL ID
88-20-24-101-001
OWNER OF RECORD
WATTAMAH &
KABUTHANATH JOHN

LOT 2
WATTLES SQUARE
SUBDIVISION
PART OF LOT 11
SUPERVISOR'S
PLAT NO. 19

PARCEL ID
88-20-24-101-002
OWNER OF RECORD
XINGZHONG & YELIN ZHANG

LOT 3
WATTLES SQUARE
SUBDIVISION
PART OF LOT 11
SUPERVISOR'S
PLAT NO. 19

PARCEL ID
88-20-24-101-003
OWNER OF RECORD
NEHRA & MAZEN HAJLO

189.93'

PROPOSED
BLDG 2
11,300 SF
F.F 649.00

20' SIDE SETBACK

S88°40'16"W(R)
S00°40'58"W(M)

303.40'(R&M)

SHARED DUMPSTER
ENCLOSURE

189.59'(M)

34.33'(M)

39.68'(M)

3930 JOHN R ROAD
PARCEL ID

3930 JOHN R ROAD
PARCEL ID

UNIT IN OAKLAND COUNTY
CONDOMINIUM PLAN NO. 2156
ESTATES AT VILLOWBROOK

PART OF LOT 4
SUPERVISOR'S
PLAT NO. 19

#3939 MACAW
2-STORY
RESIDENTIAL
PARCEL ID

FOUND CONCRETE
MONUMENT

CONCRETE

FOUND CONCRETE
MONUMENT

CONCRETE

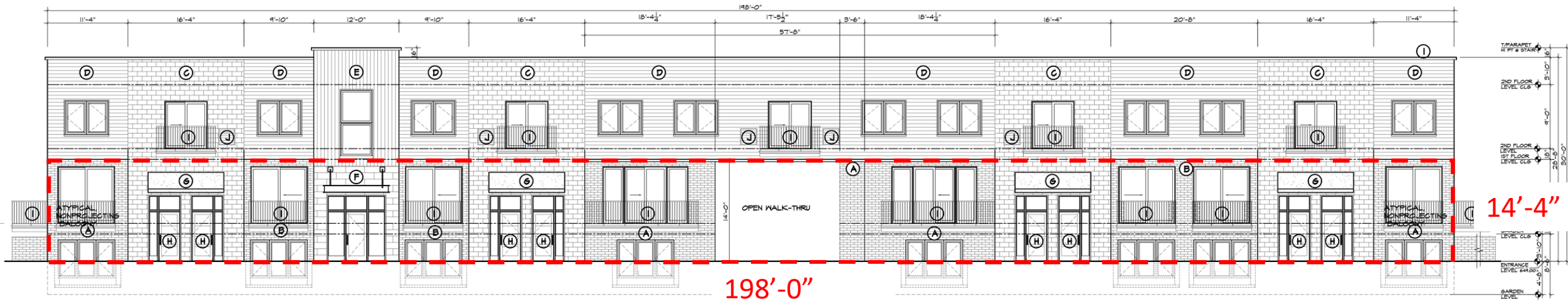
#3938 MACAW
2-STORY
RESIDENTIAL
PARCEL ID

UNIT IN OAKLAND COUNTY
CONDOMINIUM PLAN NO. 2156
ESTATES AT VILLOWBROOK

PART OF LOT 4
SUPERVISOR'S
PLAT NO. 19

LOT
WATTLES
SUBDIV
PART OF
SUPERV
PLAT N
PARCEL

50% TRANSPARENCY REQUIRED AT WATTLES FACADE



198 x 14.3 = 2831 SF of facade

BUILDING 1– NORTH ELEVATION

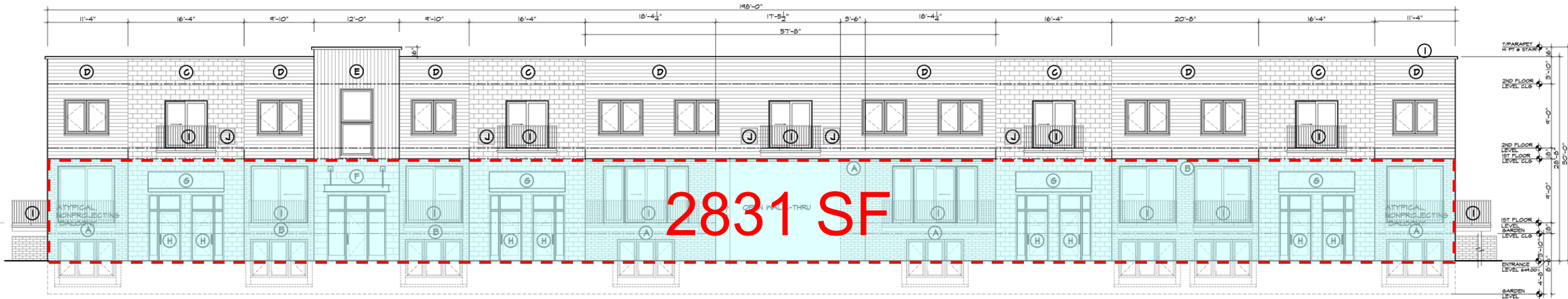
198' x 14.3' = 2831 SF of façade

2831 SF / 2 = 1415 SF

50% transparency
= 1415 SF

50% TRANSPARENCY REQUIRED AT WATTLES FACADE

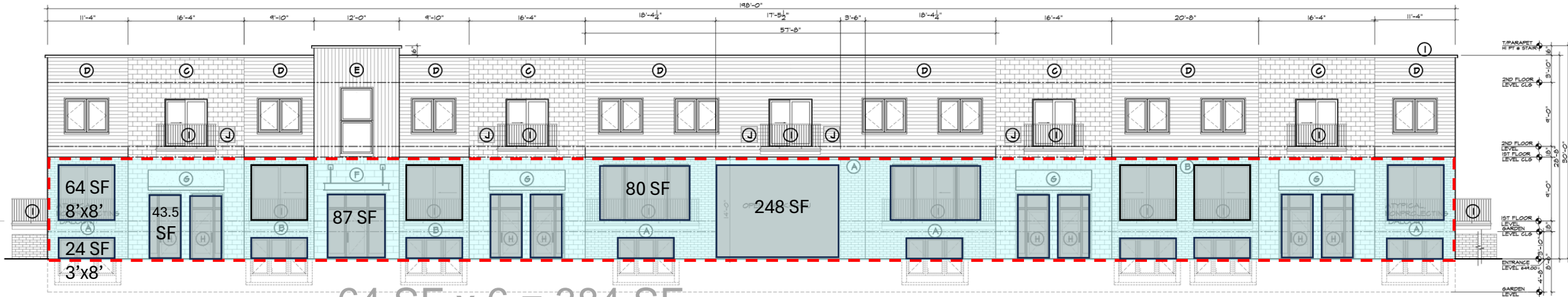
50% transparency = 1415 SF



BUILDING 1– NORTH ELEVATION

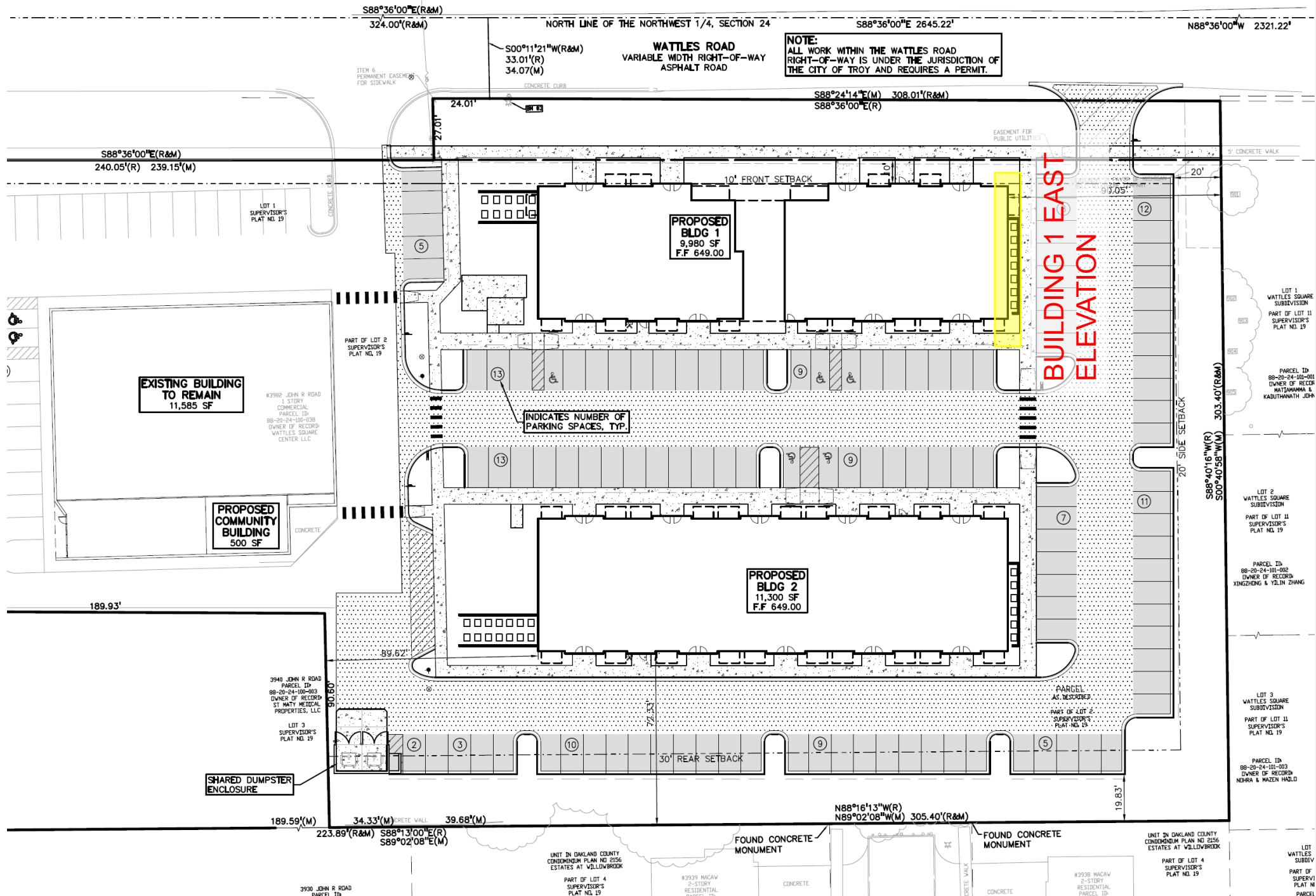
50% TRANSPARENCY REQUIRED AT WATTLES FACADE

$384 + 192 + 348 + 87 + 160 + 248 = 1419 \text{ SF}$



$$\begin{array}{r} 64 \text{ SF} \times 6 = 384 \text{ SF} \\ 24 \text{ SF} \times 8 = 192 \text{ SF} \\ 43.5 \text{ SF} \times 8 = 348 \text{ SF} \\ 87 \text{ SF} \\ 80 \text{ SF} \times 2 = 160 \text{ SF} \\ 248 \text{ SF} \\ \hline 1419 \text{ SF} \end{array}$$

BUILDING 1– NORTH ELEVATION



NORTH LINE OF THE NORTHWEST 1/4, SECTION 24

WATTLES ROAD
VARIABLE WIDTH RIGHT-OF-WAY
ASPHALT ROAD

NOTE:
ALL WORK WITHIN THE WATTLES ROAD
RIGHT-OF-WAY IS UNDER THE JURISDICTION OF
THE CITY OF TROY AND REQUIRES A PERMIT.

**PROPOSED
BLDG 1**
9,980 SF
F.F. 649.00

**PROPOSED
BLDG 2**
11,300 SF
F.F. 649.00

**EXISTING BUILDING
TO REMAIN**
11,585 SF

**PROPOSED COMMUNITY
BUILDING**
500 SF

**BUILDING 1 EAST
ELEVATION**

INDICATES NUMBER OF
PARKING SPACES, TYP.

20' SIDE SETBACK

30' REAR SETBACK

FOUND CONCRETE
MONUMENT

FOUND CONCRETE
MONUMENT

UNIT IN OAKLAND COUNTY
CONDOMINIUM PLAN NO. 2156
ESTATES AT VILLOWBROOK

UNIT IN OAKLAND COUNTY
CONDOMINIUM PLAN NO. 2156
ESTATES AT VILLOWBROOK

3939 MACAW
2-STORY
RESIDENTIAL
PARCEL ID:

3939B MACAW
2-STORY
RESIDENTIAL
PARCEL ID:

LOT
WATTLES
SUBDIV
PART OF
SUPERV
PLAT NO. 19

PARCEL ID:
88-20-24-101-003
OWNER OF RECORD:
NEHRA & MAZEN HAJLO

PARCEL ID:
88-20-24-101-002
OWNER OF RECORD:
XINGZHONG & YELIN ZHANG

LOT 2
WATTLES SQUARE
SUBDIVISION
PART OF LOT 11
SUPERVISOR'S
PLAT NO. 19

PARCEL ID:
88-20-24-101-001
OWNER OF RECORD:
MATTAMARAH &
KARUTHANATH JOHN

LOT 1
WATTLES SQUARE
SUBDIVISION
PART OF LOT 11
SUPERVISOR'S
PLAT NO. 19

S88°36'00"E(R&M)
324.00'(R&M)

S88°36'00"E 2645.22'

N88°36'00"W 2321.22'

S88°36'00"E(R&M)
240.05'(R) 239.15'(M)

S88°24'14"E(M) 308.01'(R&M)
S88°36'00"E(R)

S00°11'21"W(R&M)
33.01'(R)
34.07(M)

LOT 1
SUPERVISOR'S
PLAT NO. 19

PART OF LOT 2
SUPERVISOR'S
PLAT NO. 19

83982 JOHN R ROAD
1-STORY
COMMERCIAL
PARCEL ID:
88-20-24-101-001
OWNER OF RECORD:
WATTLES SQUARE
CENTER LLC

LOT 3
SUPERVISOR'S
PLAT NO. 19

SHARED DUMPSTER
ENCLOSURE

189.59'(M)

3930 JOHN R ROAD
PARCELS ID:

223.89'(R&M) S88°13'00"E(R)
S89°02'08"E(M)

34.33'(M) CONCRETE WALL 39.68'(M)

189.93'

89.62'

19.83'

N88°16'13"W(R)
N89°02'08"W(M) 305.40'(R&M)

ITEM 6
PERMANENT EASEMENT
FOR SIDEWALK

EASEMENT FOR
PUBLIC UTILITIES

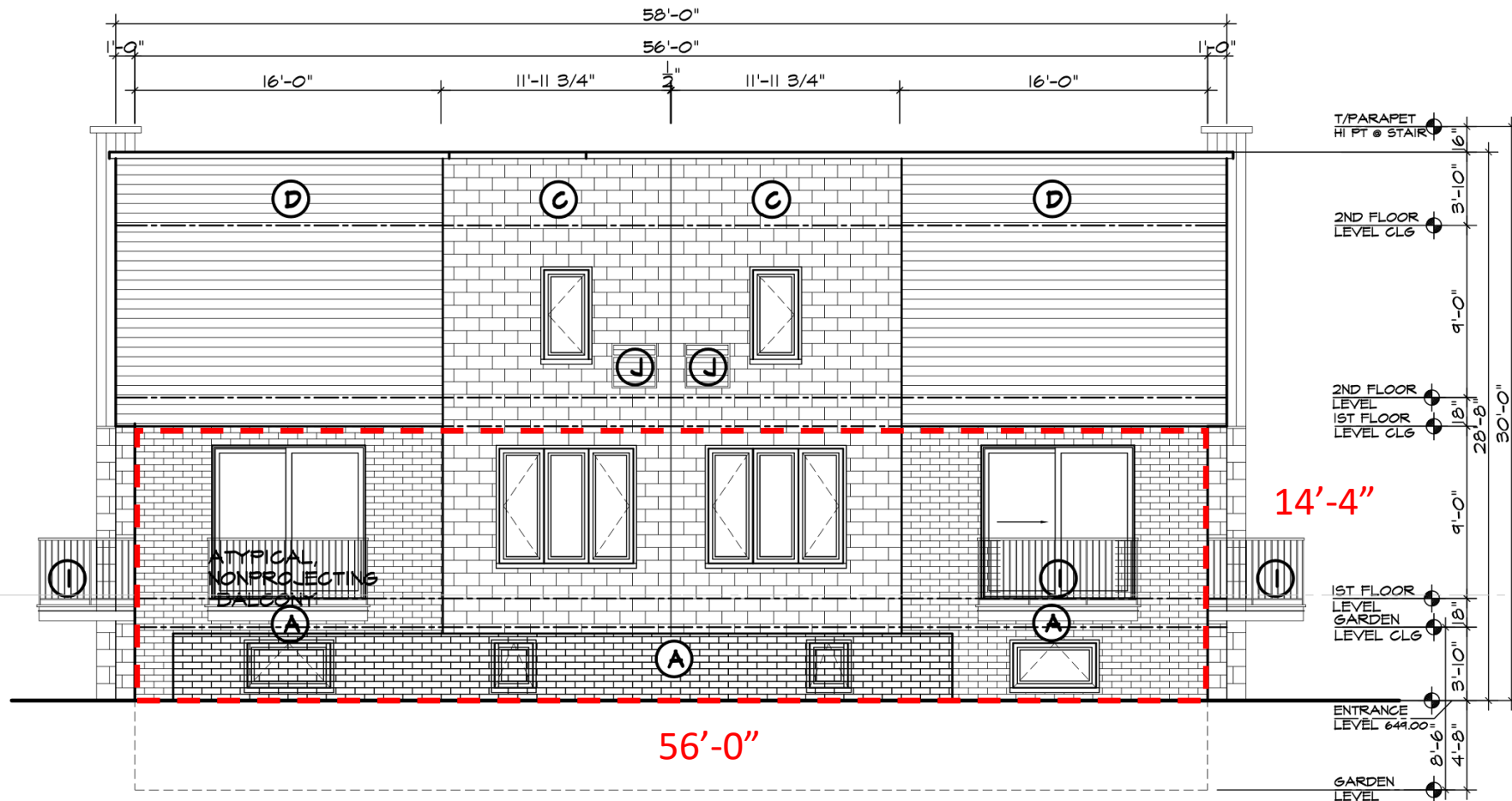
5' CONCRETE WALK

CONCRETE

CONCRETE

CONCRETE

30% TRANSPARENCY REQUIRED AT PARKING LOTS AND SIDE YARDS



56 x 14.3 = 800 SF of facade

BUILDING 1- EAST ELEVATION

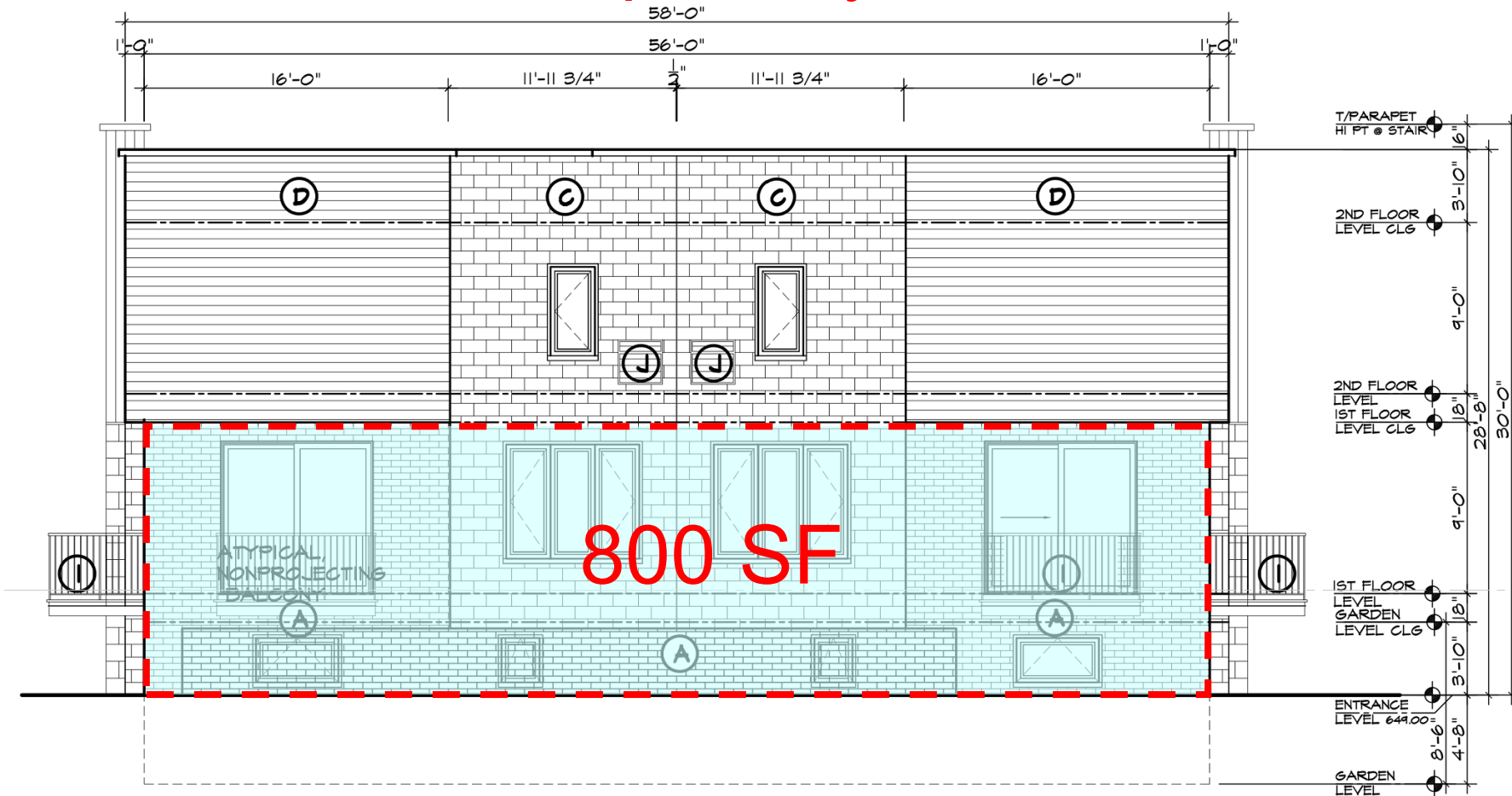
56' x 14.3' = 800 SF of façade

800 SF x .3 = 240 SF

30% transparency
= 240 SF

30% TRANSPARENCY REQUIRED AT PARKING LOTS AND SIDE YARDS

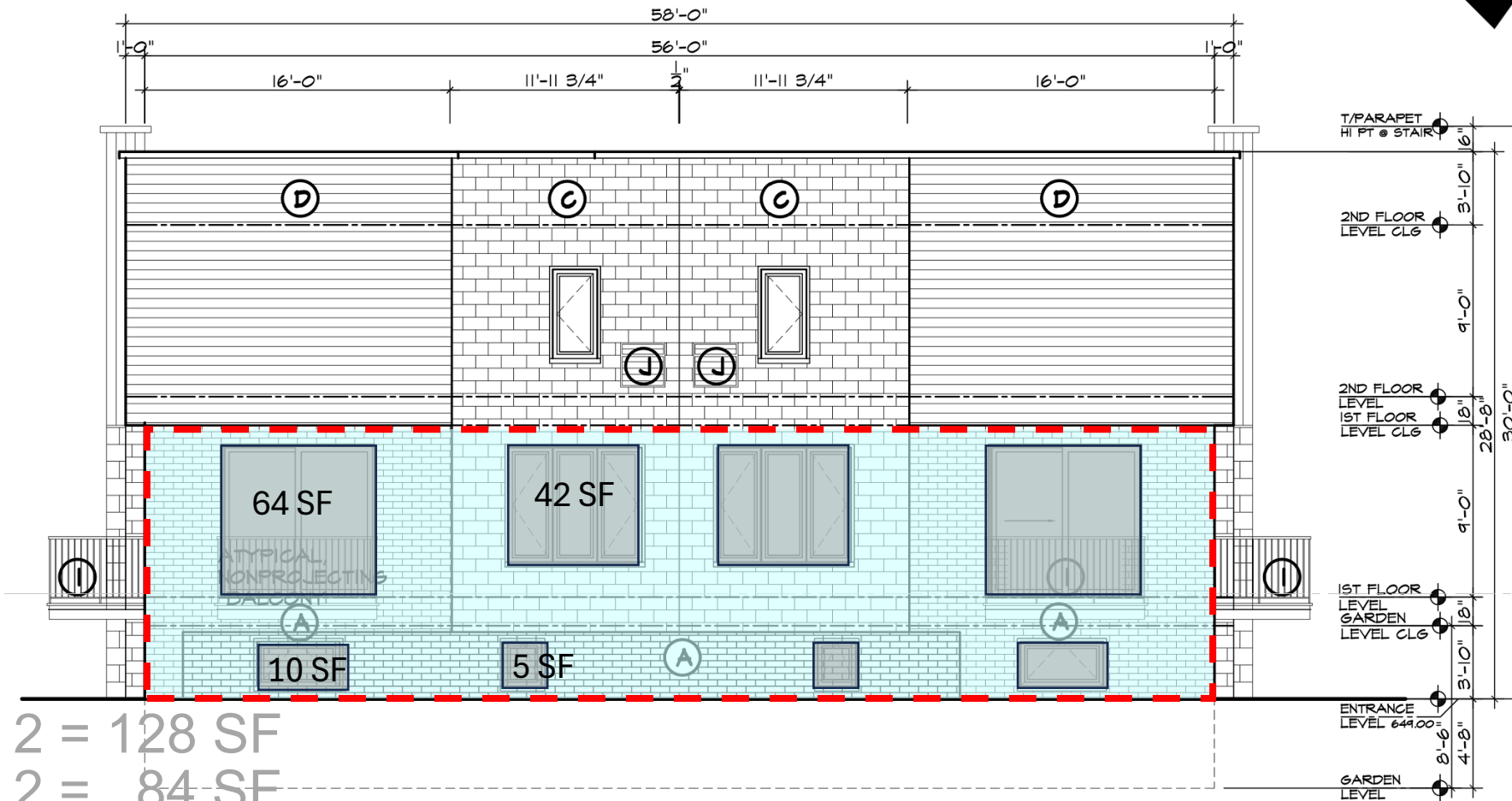
30% transparency = 240 SF



BUILDING 1- EAST ELEVATION

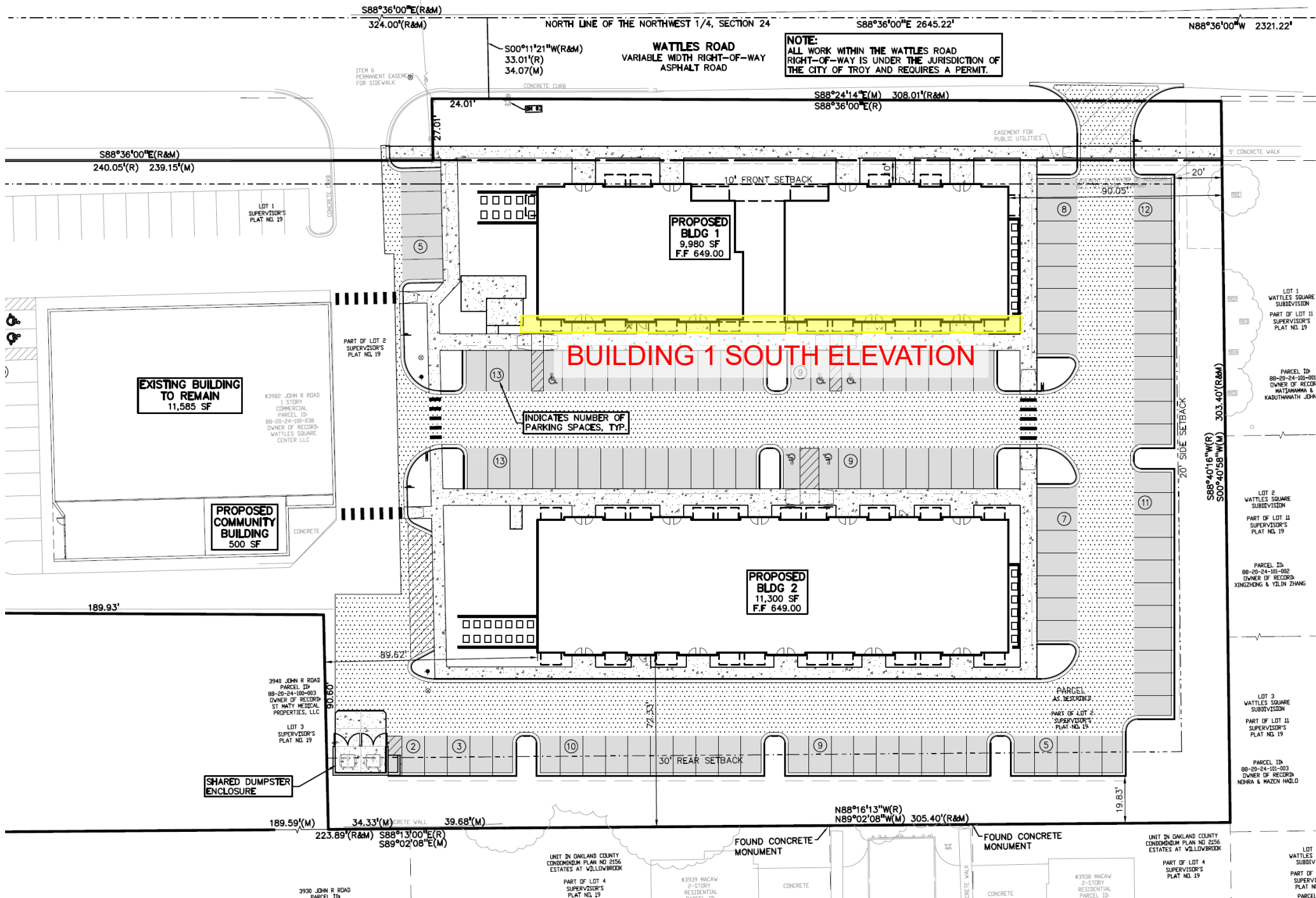
30% TRANSPARENCY REQUIRED AT PARKING LOTS AND SIDE YARDS

$$128 + 84 + 20 + 10 = 242 \text{ SF}$$

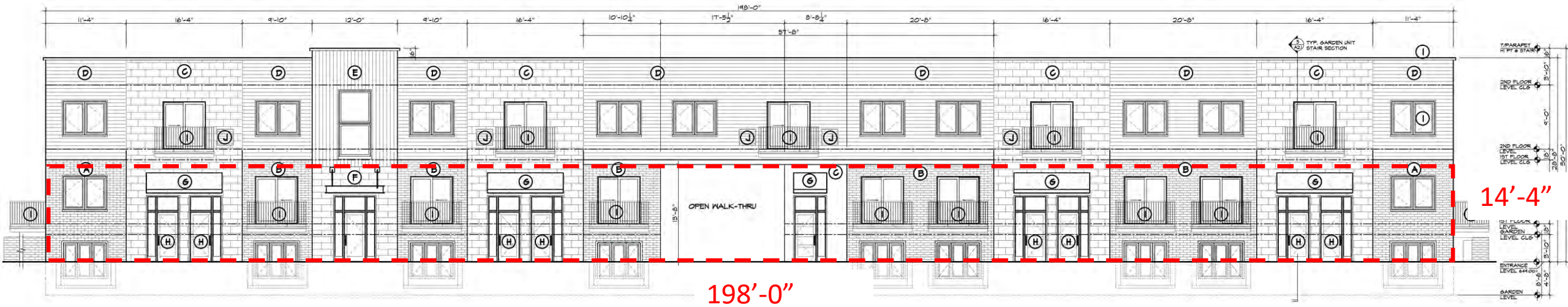


$$\begin{array}{r} 64 \text{ SF} \times 2 = 128 \text{ SF} \\ 42 \text{ SF} \times 2 = 84 \text{ SF} \\ 10 \text{ SF} \times 2 = 20 \text{ SF} \\ 5 \text{ SF} \times 2 = 10 \text{ SF} \\ \hline 242 \text{ SF} \end{array}$$

BUILDING 1- EAST ELEVATION



30% TRANSPARENCY REQUIRED AT PARKING LOTS AND SIDE YARDS



$198 \times 14.3 = 2831 \text{ SF of facade}$

BUILDING 1– SOUTH ELEVATION

198' x 14.3' = 2831 SF of façade

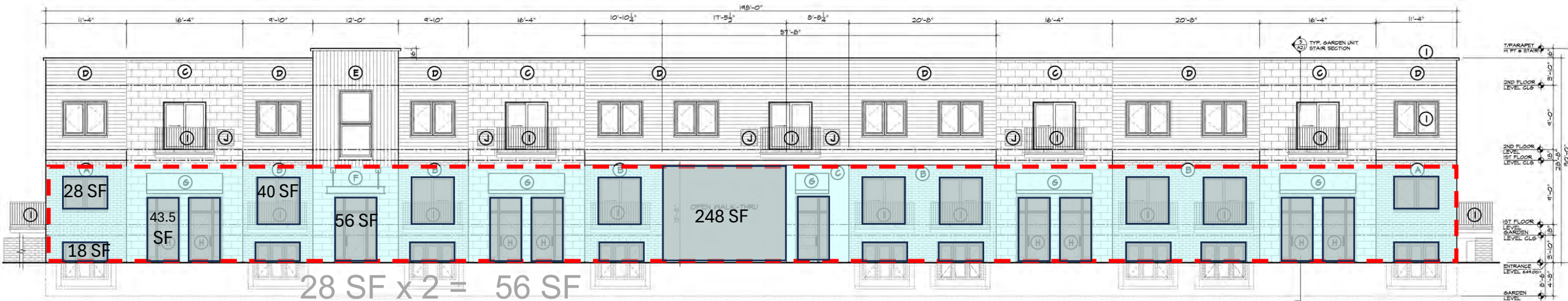
2831 SF x .3 = 849 SF

30% transparency
= 849 SF

30% TRANSPARENCY REQUIRED AT PARKING LOTS AND SIDE YARDS

$$56 + 162 + 391 + 56 + 280 + 248 = 1193 \text{ SF}$$

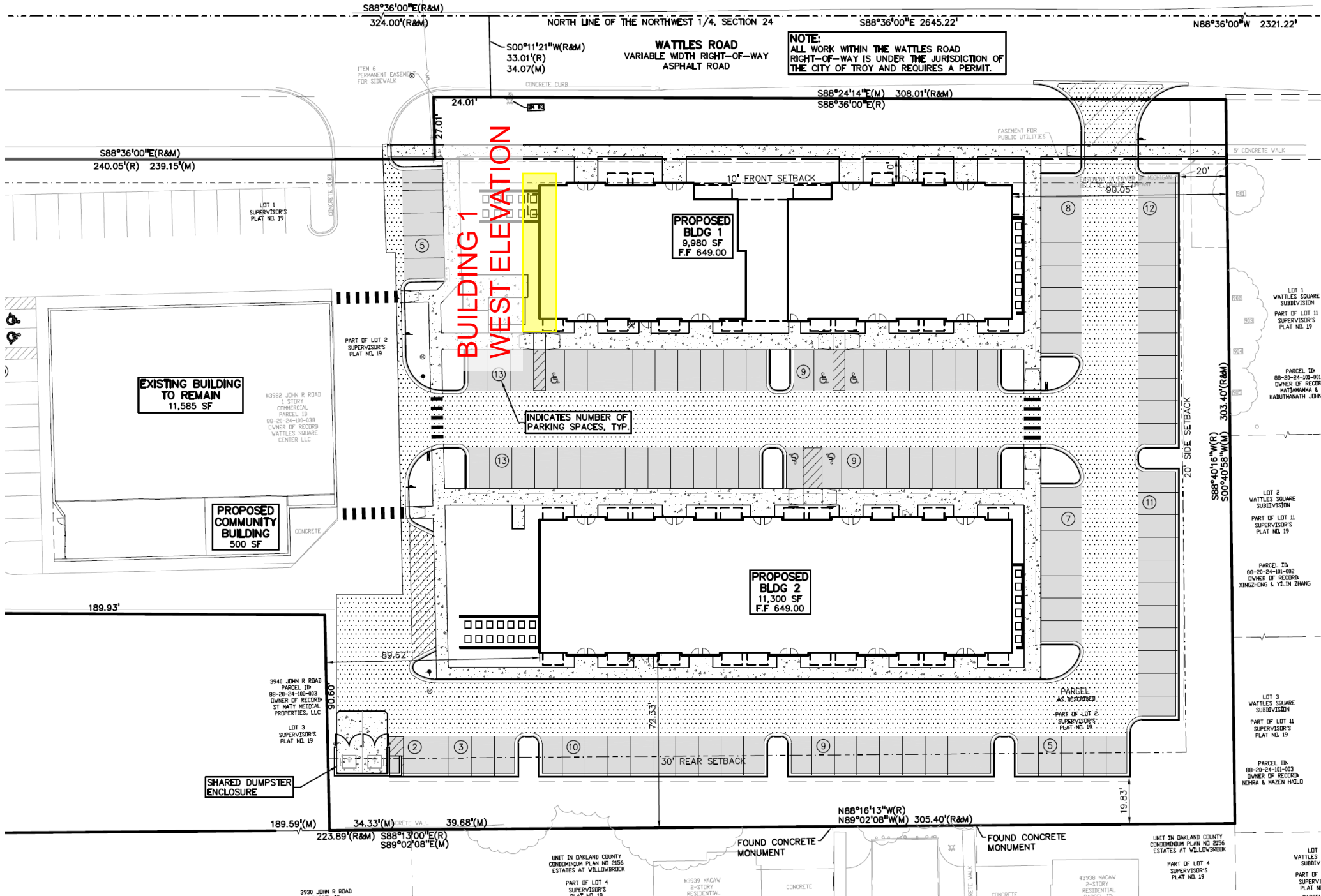
$$1193 > 849 \text{ SF}$$



$$\begin{aligned} 28 \text{ SF} \times 2 &= 56 \text{ SF} \\ 18 \text{ SF} \times 9 &= 162 \text{ SF} \\ 43.5 \text{ SF} \times 9 &= 391 \text{ SF} \\ &56 \text{ SF} \\ 40 \text{ SF} \times 7 &= 280 \text{ SF} \\ &248 \text{ SF} \end{aligned}$$

1193 SF

BUILDING 1- SOUTH ELEVATION



BUILDING 1
WEST ELEVATION

PROPOSED
BLDG 1
9,980 SF
F.F. 649.00

PROPOSED
BLDG 2
11,300 SF
F.F. 649.00

EXISTING BUILDING
TO REMAIN
11,585 SF

PROPOSED
COMMUNITY
BUILDING
500 SF

INDICATES NUMBER OF
PARKING SPACES, TYP.

NOTE:
ALL WORK WITHIN THE WATTLES ROAD
RIGHT-OF-WAY IS UNDER THE JURISDICTION OF
THE CITY OF TROY AND REQUIRES A PERMIT.

UNIT IN OAKLAND COUNTY
CONDOMINIUM PLAN NO. 2156
ESTATES AT WILLOWBROOK

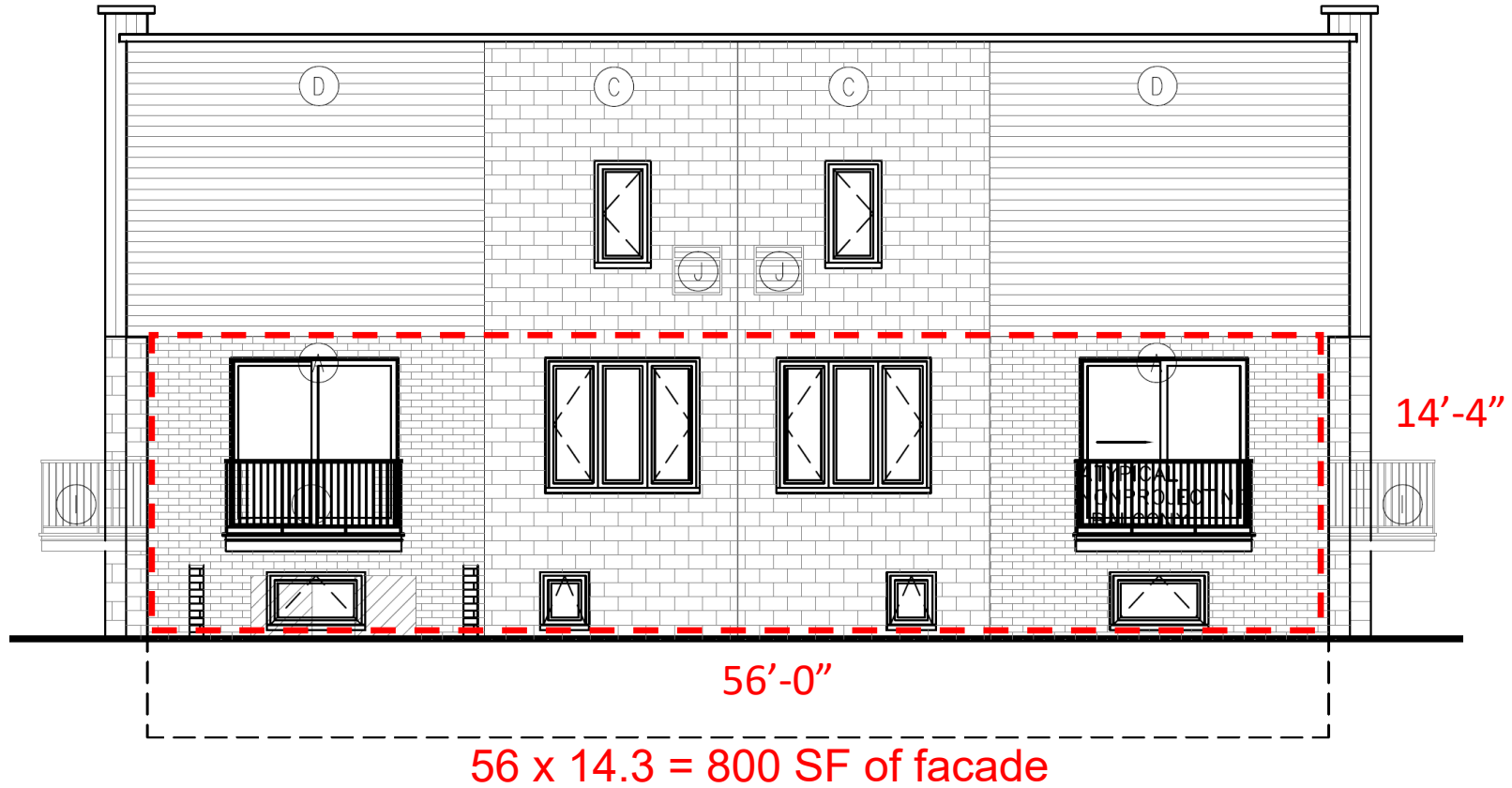
FOUND CONCRETE
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MONUMENT

UNIT IN OAKLAND COUNTY
CONDOMINIUM PLAN NO. 2156
ESTATES AT WILLOWBROOK

LOT
WATTLES
SUBDIV
PART OF
SUPERV
PLAT NO.
PARCEL

30% TRANSPARENCY REQUIRED AT PARKING LOTS AND SIDE YARDS



BUILDING 1– WEST ELEVATION

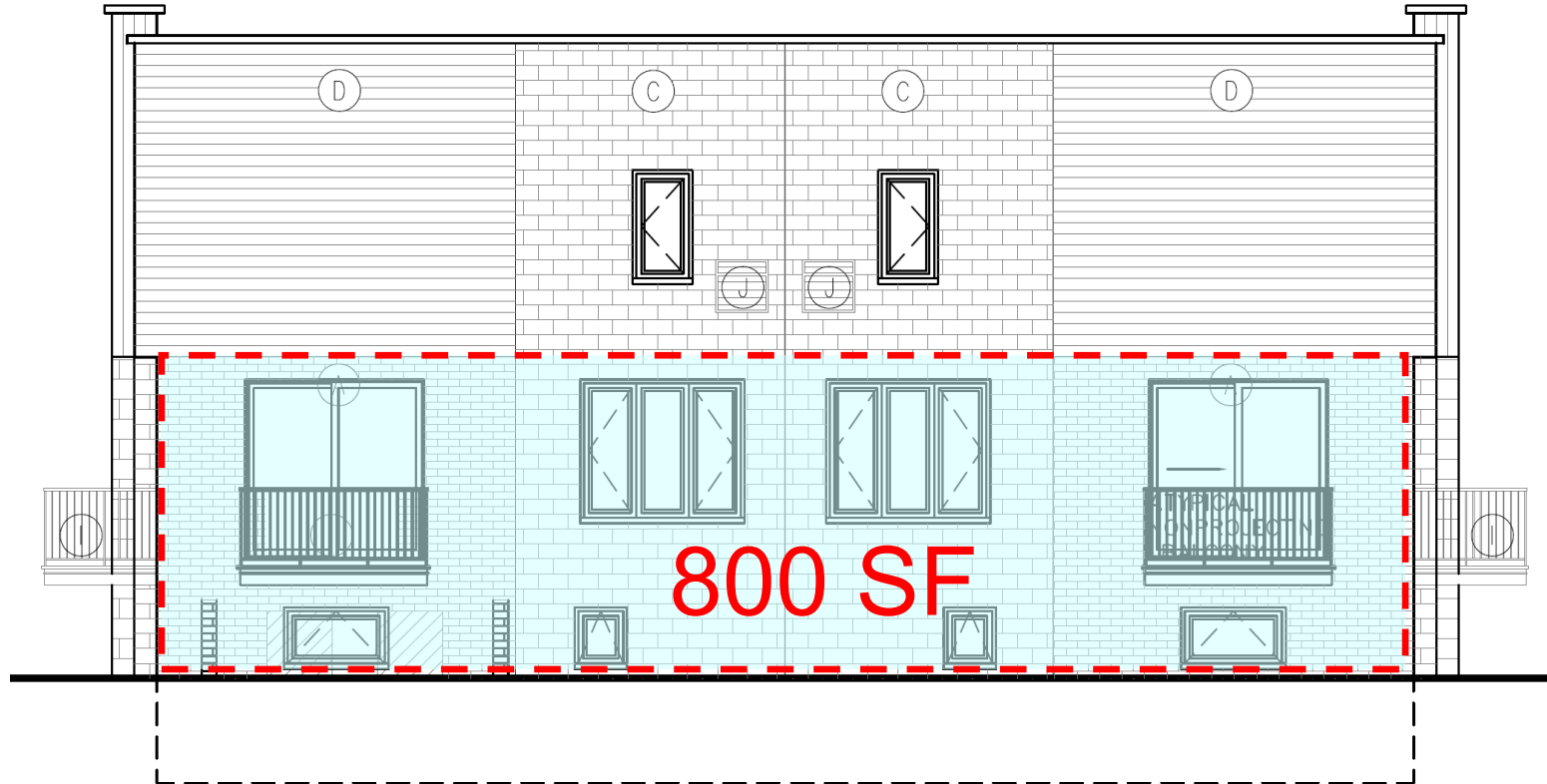
56' x 14.3' = 800 SF of façade

800 SF x .3 = 240 SF

30% transparency
= 240 SF

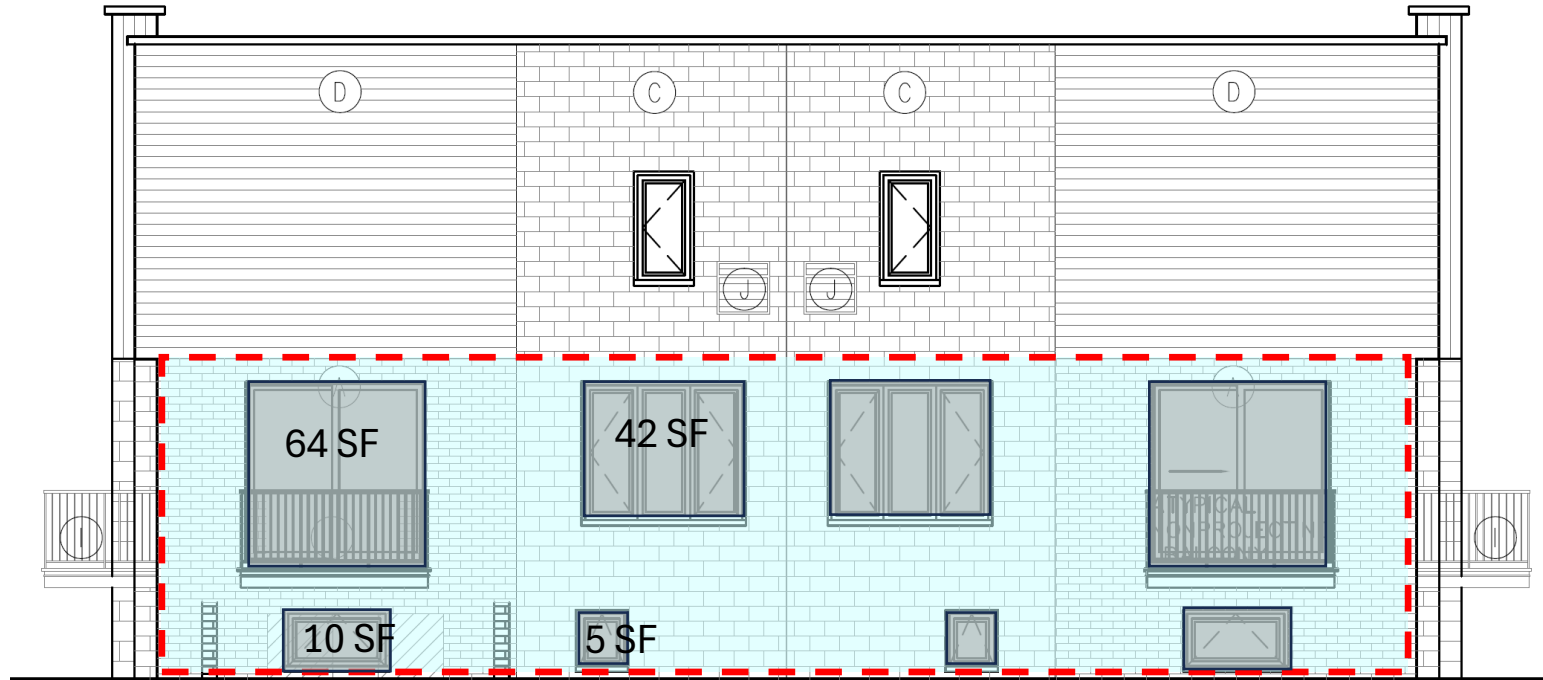
30% TRANSPARENCY REQUIRED AT PARKING LOTS AND SIDE YARDS

30% transparency = 240 SF



30% TRANSPARENCY REQUIRED AT PARKING LOTS AND SIDE YARDS

$$128 + 84 + 20 + 10 = 242 \text{ SF}$$
$$242 > 240 \text{ SF}$$



$$\begin{array}{r} 64 \text{ SF} \times 2 = 128 \text{ SF} \\ 42 \text{ SF} \times 2 = 84 \text{ SF} \\ 10 \text{ SF} \times 2 = 20 \text{ SF} \\ 5 \text{ SF} \times 2 = 10 \text{ SF} \\ \hline 242 \text{ SF} \end{array}$$

BUILDING 1- WEST ELEVATION

S88°36'00"E(R&M)

324.00'(R&M)

NORTH LINE OF THE NORTHWEST 1/4, SECTION 24

S88°36'00"E 2645.22'

N88°36'00"W 2321.22'

WATTLES ROAD

RK WITHIN THE WATTLES ROAD
OF-WAY IS UNDER THE JURISDICTION OF
Y OF TROY AND REQUIRES A PERMIT.

S00°11'21"W(R&M)
33.01'(R)
34.07(M)

S88°24'14"E(M) 308.01'(R&M)
S88°36'00"E(R)

S88°36'00"E(R&M)
240.05'(R) 239.15'(M)

LOT 1
SUPERVISOR'S
PLAT NO. 19

EXISTING BUILDING
TO REMAIN
11,585 SF

#3982 JOHN R ROAD
1 STORY
COMMERCIAL
PARCEL ID
88-20-24-101-001
OWNER OF RECORD
WATTLES SQUARE
CENTER LLC

PROPOSED
COMMUNITY
BUILDING
500 SF

CONCRETE

189.93'

189.59'(M)

3930 JOHN R ROAD
PARCELS 10

223.89'(R&M) S88°13'00"E(R)
S89°02'08"E(M)

34.33'(M) CONCRETE WALL

39.68'(M)

UNIT IN OAKLAND COUNTY
CONDOMINIUM PLAN NO. 2156
ESTATES AT WILLOWBROOK

PART OF LOT 4
SUPERVISOR'S
PLAT NO. 19

#3939 MACAW
2-STORY
RESIDENTIAL
PARCEL ID

CONCRETE

#3938 MACAW
2-STORY
RESIDENTIAL
PARCEL ID

UNIT IN OAKLAND COUNTY
CONDOMINIUM PLAN NO. 2156
ESTATES AT WILLOWBROOK

PART OF LOT 4
SUPERVISOR'S
PLAT NO. 19

LOT
WATTLES
SUBDIV
PART OF
SUPERV
PLAT N
PARCEL

ITEM 6
PERMANENT EASEMENT
FOR SIDEWALK

CONCRETE CURB

EASEMENT FOR
PUBLIC UTILITIES

5' CONCRETE WALK

10' FRONT SETBACK

PROPOSED
BLDG 1
9,980 SF
F.F 649.00

INDICATES NUMBER OF
PARKING SPACES, TYP.

BUILDING 2 NORTH ELEVATION

PROPOSED
BLDG 2
11,300 SF
F.F 649.00

30' REAR SETBACK

N88°16'13"W(R)
N89°02'08"W(M) 305.40'(R&M)

FOUND CONCRETE
MONUMENT

CONCRETE

UNIT IN OAKLAND COUNTY
CONDOMINIUM PLAN NO. 2156
ESTATES AT WILLOWBROOK

PART OF LOT 4
SUPERVISOR'S
PLAT NO. 19

LOT
WATTLES
SUBDIV
PART OF
SUPERV
PLAT N
PARCEL

LOT 1
WATTLES SQUARE
SUBDIVISION
PART OF LOT 11
SUPERVISOR'S
PLAT NO. 19

PARCEL ID
88-20-24-101-001
OWNER OF RECORD
WATTAMAH &
KARUTHANATH JOHN

LOT 2
WATTLES SQUARE
SUBDIVISION
PART OF LOT 11
SUPERVISOR'S
PLAT NO. 19

PARCEL ID
88-20-24-101-002
OWNER OF RECORD
XINGZHONG & YELIN ZHANG

LOT 3
WATTLES SQUARE
SUBDIVISION
PART OF LOT 11
SUPERVISOR'S
PLAT NO. 19

PARCEL ID
88-20-24-101-003
OWNER OF RECORD
NEHRA & MAZEN HAJLO

S88°40'16"W(R)
S00°40'58"W(M) 303.40'(R&M)

20' SIDE SETBACK

19.83'

20'

90.05'

20'

20'

20'

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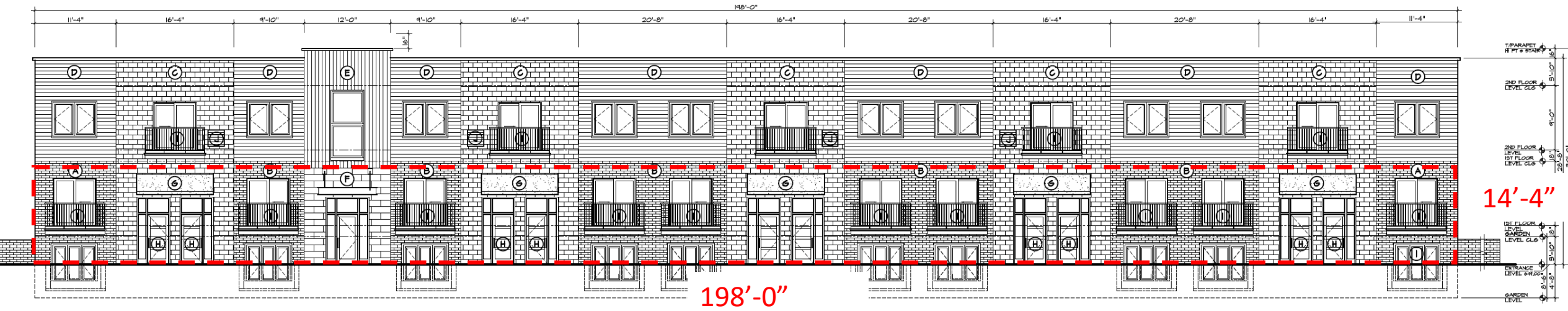
20'

20'

20'

20'

30% TRANSPARENCY REQUIRED AT PARKING LOTS AND SIDE YARDS



BUILDING 2– NORTH ELEVATION

$198 \times 14.3 = 2831 \text{ SF of facade}$

198' x 14.3' = 2831 SF of façade

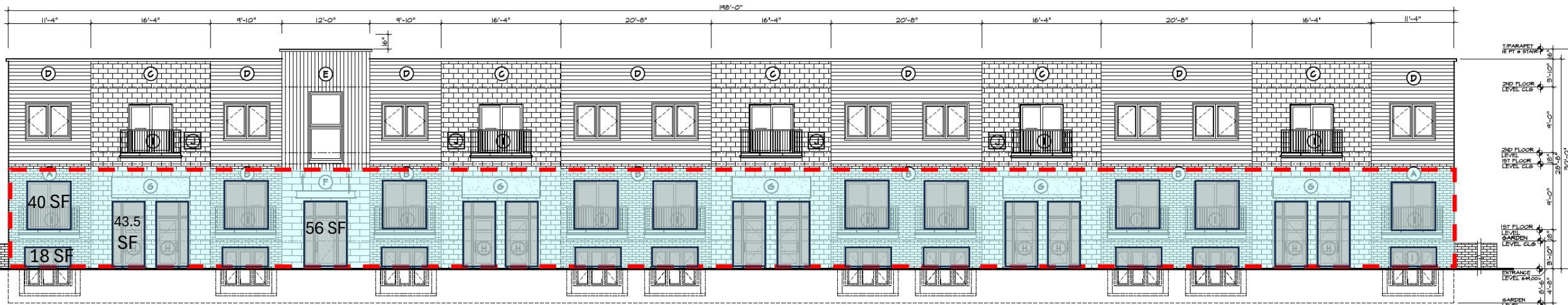
2831 SF x .3 = 849 SF

30% transparency
= 849 SF

30% TRANSPARENCY REQUIRED AT PARKING LOTS AND SIDE YARDS

$$400 + 180 + 435 + 56 = 1071 \text{ SF}$$

$$1071 > 849 \text{ SF}$$



$$\begin{array}{r} 40 \text{ SF} \times 10 = 400 \text{ SF} \\ 18 \text{ SF} \times 10 = 180 \text{ SF} \\ 43.5 \text{ SF} \times 10 = 435 \text{ SF} \\ 56 \text{ SF} \\ \hline 1071 \text{ SF} \end{array}$$

BUILDING 2– NORTH ELEVATION

S88°36'00"E(R&M)

324.00'(R&M)

NORTH LINE OF THE NORTHWEST 1/4, SECTION 24

S88°36'00"E 2645.22'

N88°36'00"W 2321.22'

WATTLES ROAD

RK WITHIN THE WATTLES ROAD
OF-WAY IS UNDER THE JURISDICTION OF
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S00°11'21"W(R&M)
33.01'(R)
34.07(M)

S88°24'14"E(M) 308.01'(R&M)
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SUPERVISOR'S
PLAT NO. 19

EXISTING BUILDING
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11,585 SF

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COMMERCIAL
PARCEL ID:
88-20-24-101-001
OWNER OF RECORD:
WATTLES SQUARE
CENTER LLC

PROPOSED
COMMUNITY
BUILDING
500 SF

CONCRETE

189.93'

189.59'(M)

3940 JOHN R ROAD
PARCEL ID:
88-20-24-101-003
OWNER OF RECORD:
ST MARYS MEDICAL
PROPERTIES, LLC

SHARED DUMPSTER
ENCLOSURE

3930 JOHN R ROAD
PARCELFY ID:

34.33'(M) CONCRETE WALL 39.68'(M)
223.89'(R&M) S88°13'00"E(R)
S89°02'08"E(M)

UNIT IN OAKLAND COUNTY
CONDOMINIUM PLAN NO. 2156
ESTATES AT VILLOWBROOK

PART OF LOT 4
SUPERVISOR'S
PLAT NO. 19

#3939 MACAW
2-STORY
RESIDENTIAL
PARCEL ID:

FOUND CONCRETE
MONUMENT

CONCRETE

FOUND CONCRETE
MONUMENT

CONCRETE

#3938 MACAW
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UNIT IN OAKLAND COUNTY
CONDOMINIUM PLAN NO. 2156
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LOT
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PART OF
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PLAT N

PARCEL

LOT 1
WATTLES SQUARE
SUBDIVISION
PART OF LOT 11
SUPERVISOR'S
PLAT NO. 19

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88-20-24-101-001
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WATTLES SQUARE
&
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LOT 2
WATTLES SQUARE
SUBDIVISION
PART OF LOT 11
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PARCEL ID:
88-20-24-101-002
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20' SIDE SETBACK

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5' CONCRETE WALK

EASEMENT FOR PUBLIC UTILITIES

CONCRETE CURB

ITEM 6 PERMANENT EASEMENT FOR SIDEWALK

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PROPOSED
BLDG 1
9,980 SF
F.F 649.00

PROPOSED
BLDG 2
11,300 SF
F.F 649.00

INDICATES NUMBER OF
PARKING SPACES, TYP.

BUILDING 2 SOUTH ELEVATION

10' FRONT SETBACK

30' REAR SETBACK

24.01'

27.01'

20'

90.05'

13

9

13

9

8

12

7

11

2

3

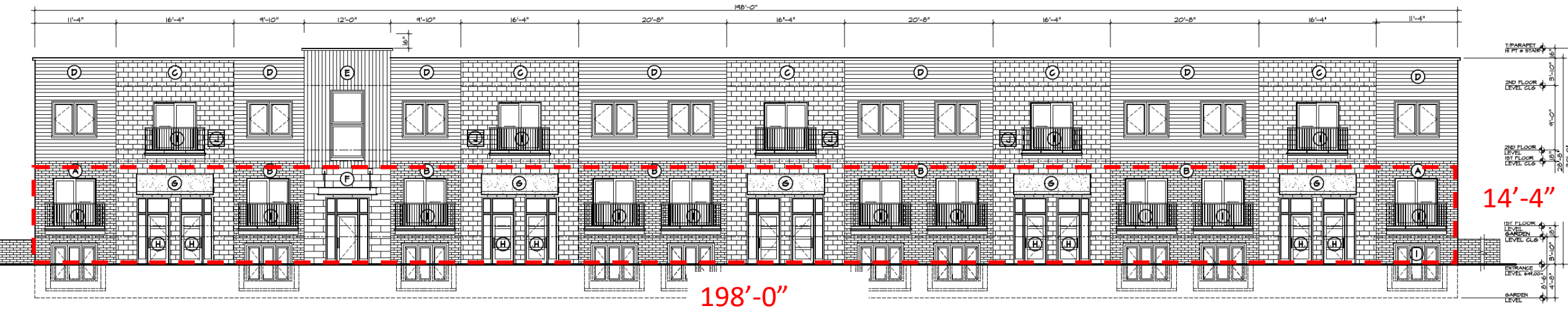
10

9

5

19.83'

30% TRANSPARENCY REQUIRED AT PARKING LOTS AND SIDE YARDS



BUILDING 2– SOUTH ELEVATION

198 x 14.3 = 2831 SF of facade

198' x 14.3' = 2831 SF of façade

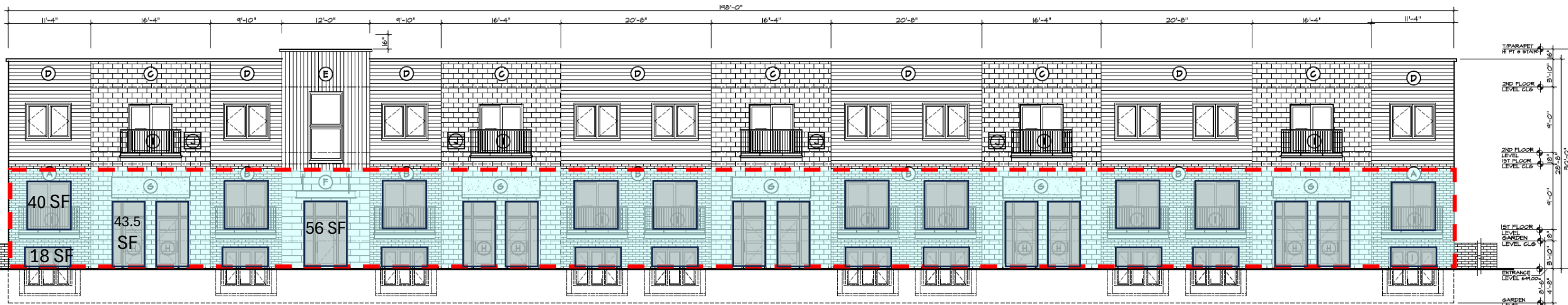
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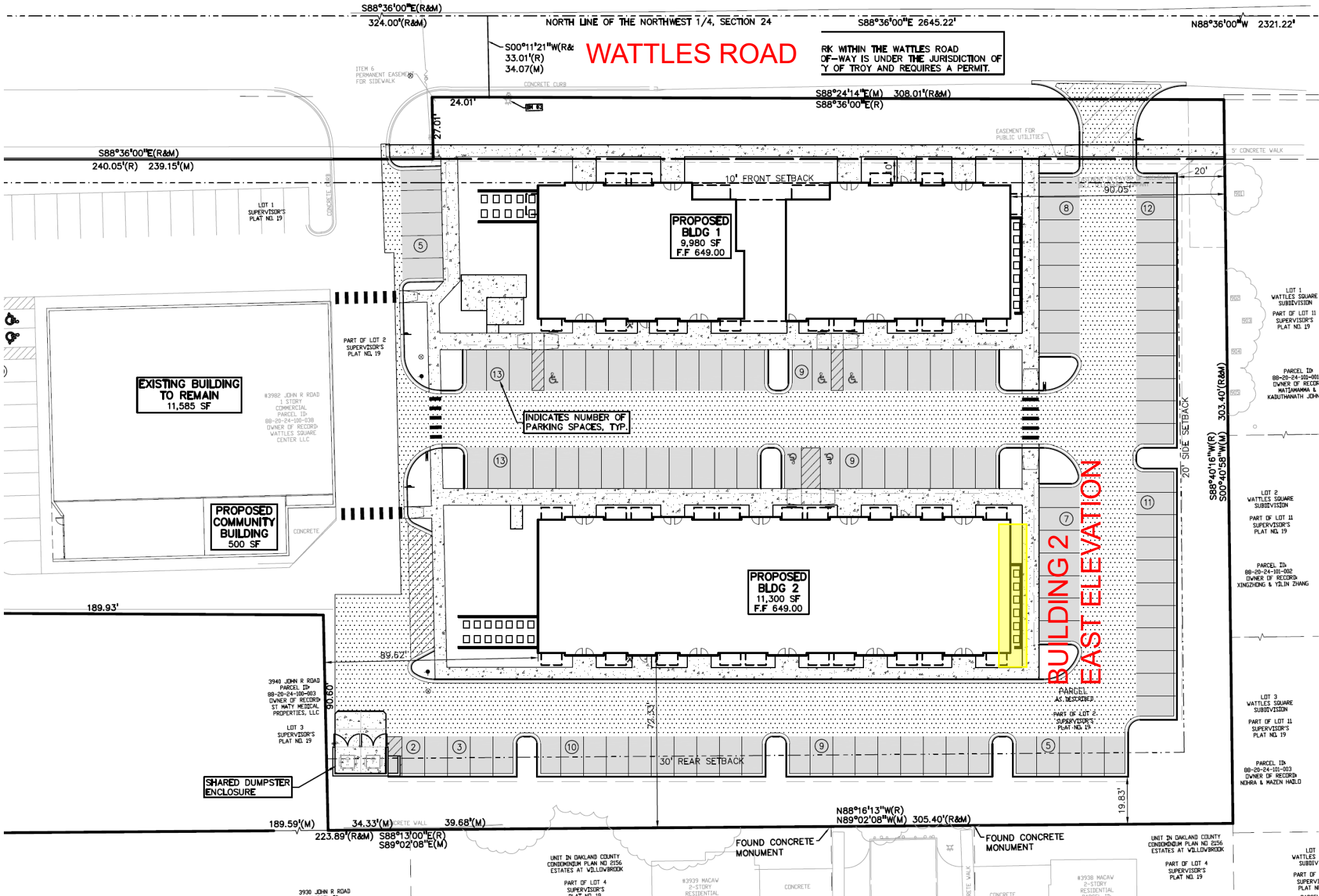


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BUILDING 2– SOUTH ELEVATION

WATTLES ROAD

RM WITHIN THE WATTLES ROAD OF-WAY IS UNDER THE JURISDICTION OF CITY OF TROY AND REQUIRES A PERMIT.



PROPOSED
BLDG 1
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F.F. 649.00

PROPOSED
BLDG 2
11,300 SF
F.F. 649.00

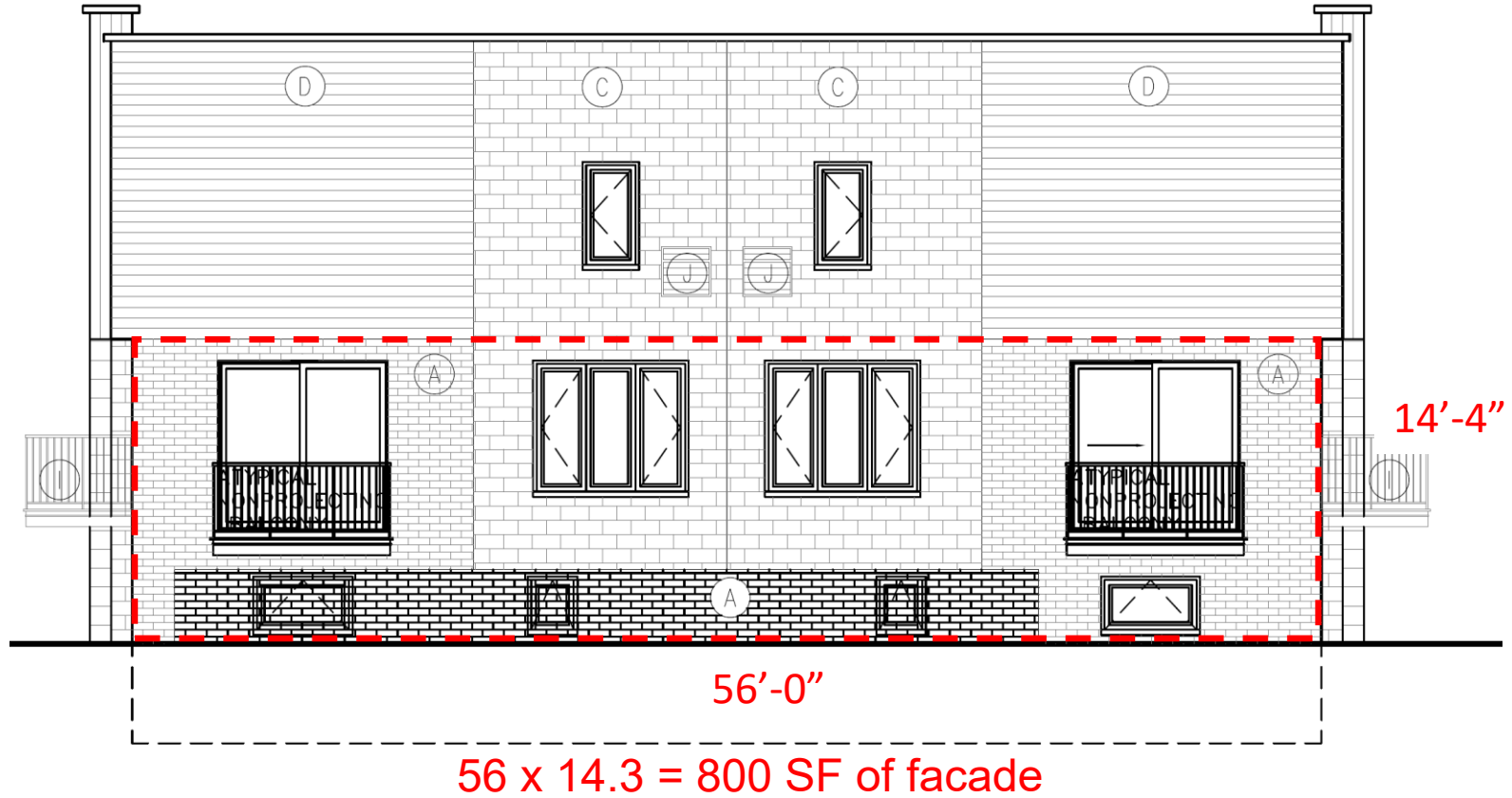
EXISTING BUILDING
TO REMAIN
11,585 SF

PROPOSED
COMMUNITY
BUILDING
500 SF

INDICATES NUMBER OF
PARKING SPACES, TYP.

BUILDING 2
EAST ELEVATION

30% TRANSPARENCY REQUIRED AT PARKING LOTS AND SIDE YARDS



BUILDING 2– EAST ELEVATION

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800 SF x .3 = 240 SF

30% transparency
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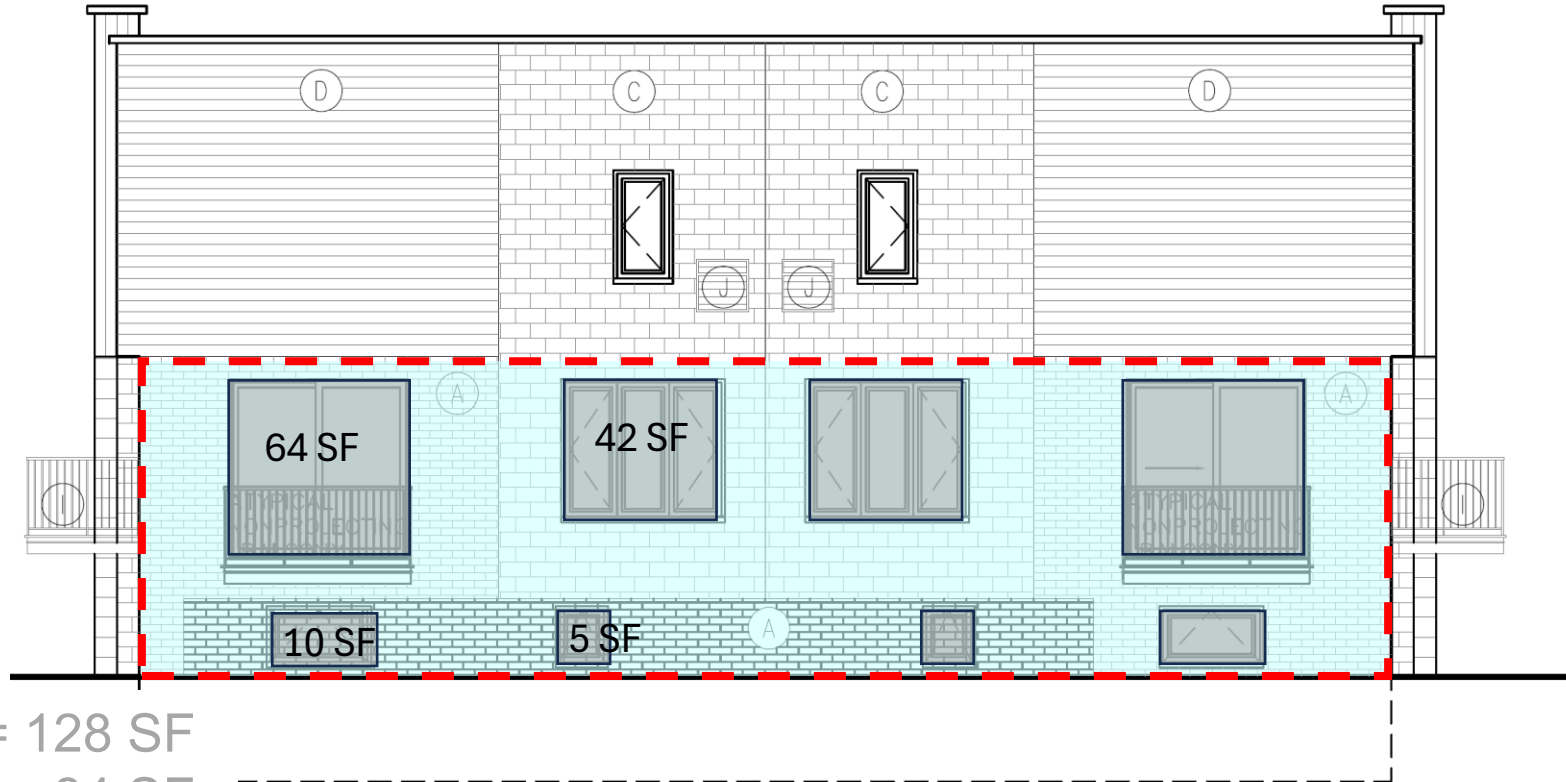
30% transparency = 240 SF



BUILDING 2– EAST ELEVATION

30% TRANSPARENCY REQUIRED AT PARKING LOTS AND SIDE YARDS

$$128 + 84 + 20 + 10 = 242 \text{ SF}$$



$$64 \text{ SF} \times 2 = 128 \text{ SF}$$

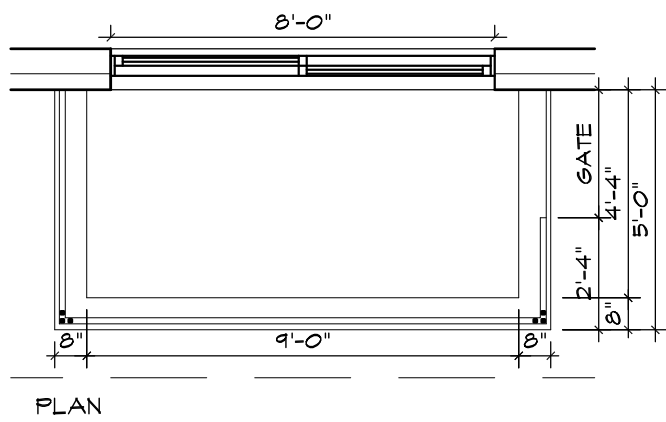
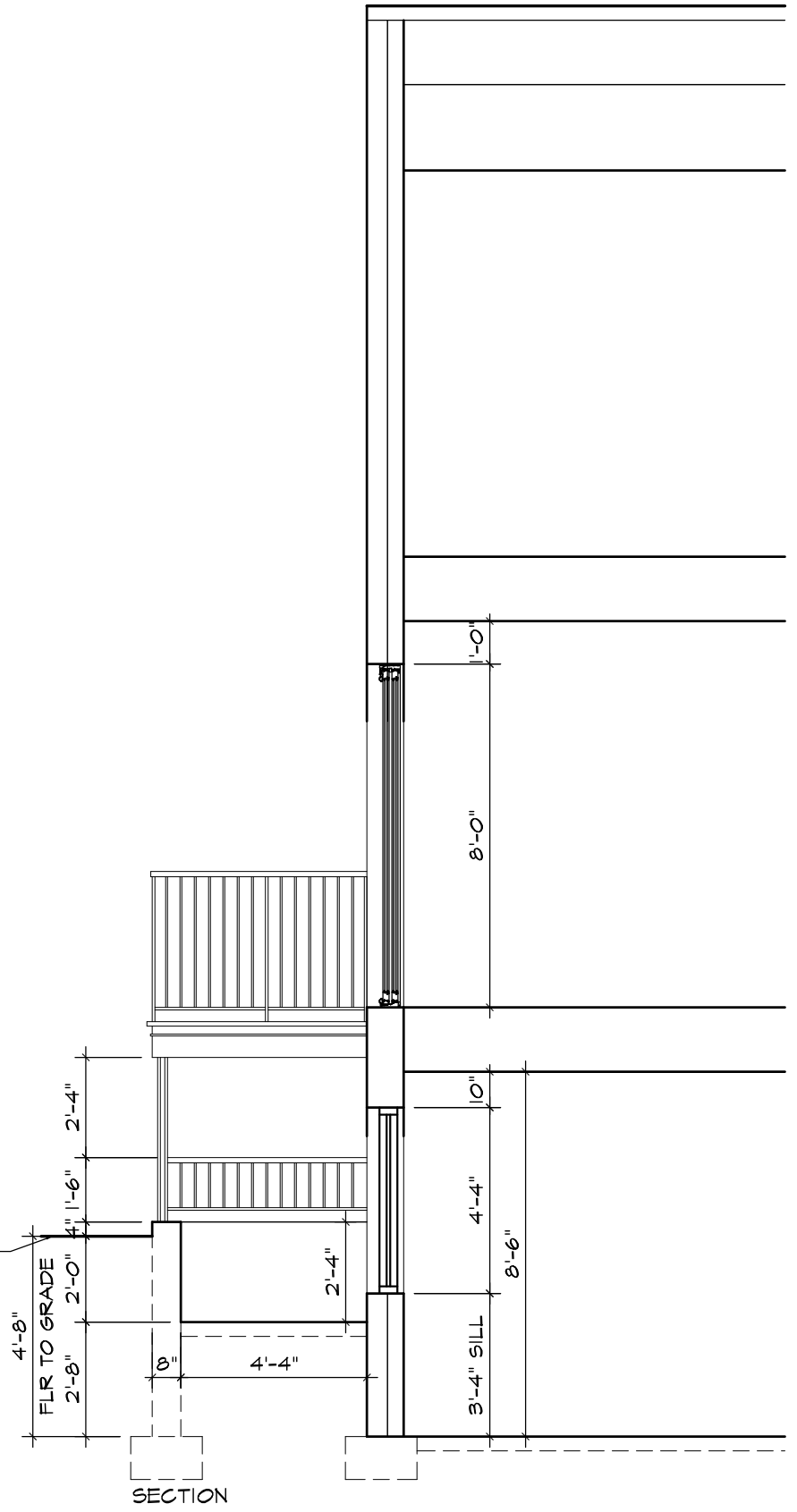
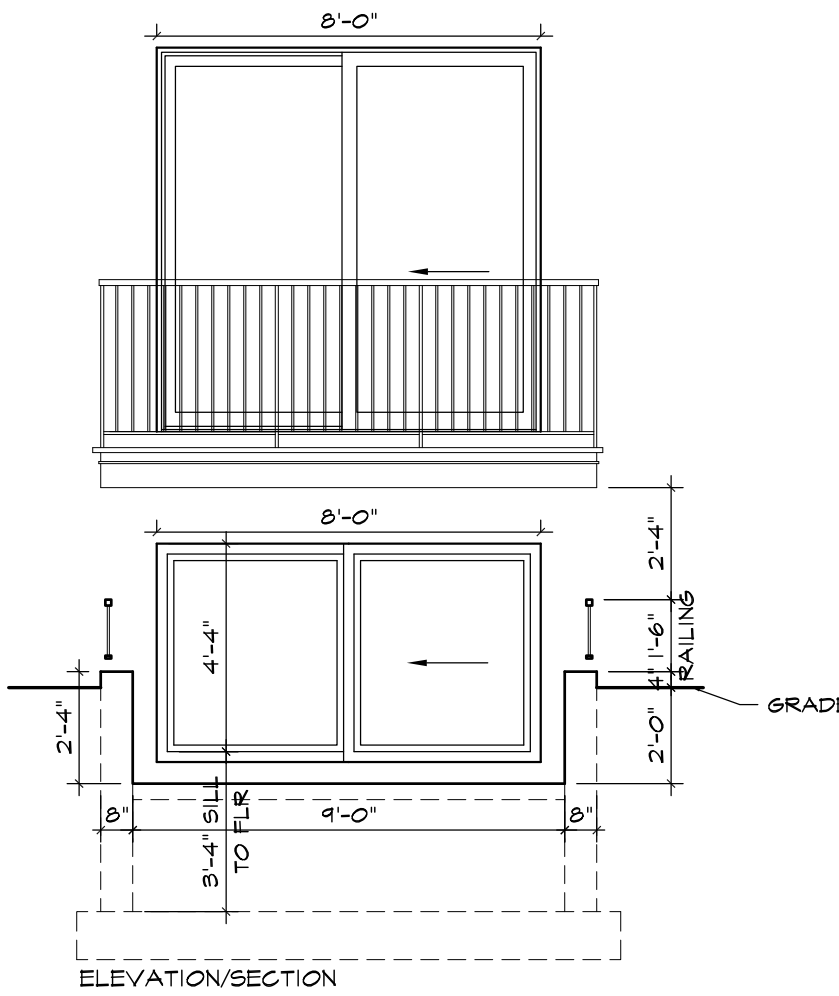
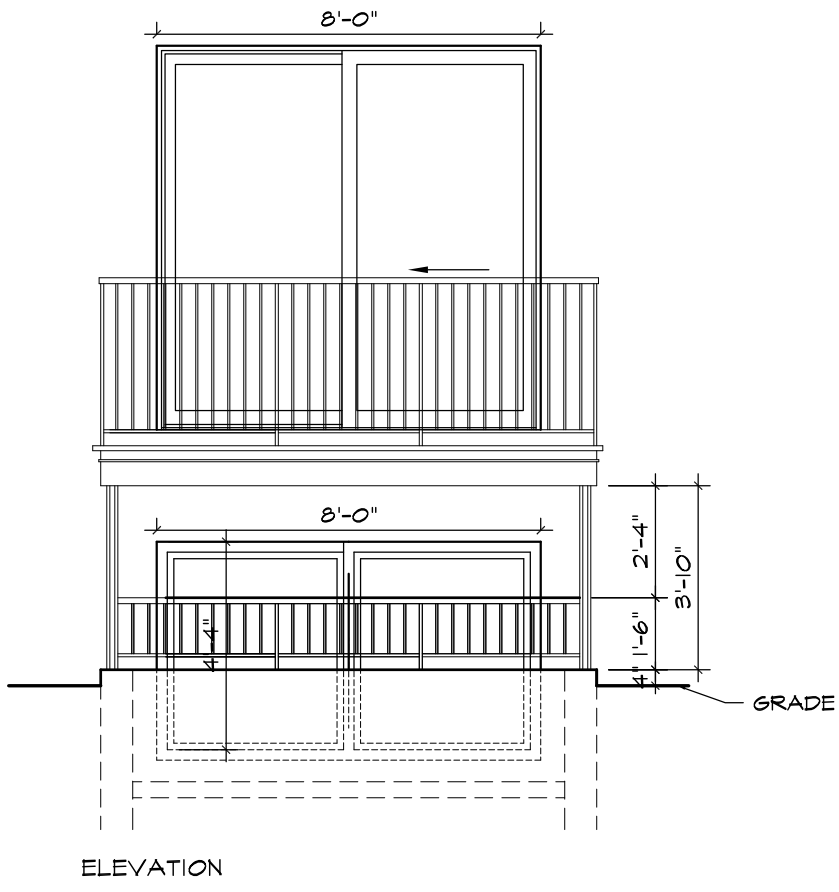
$$42 \text{ SF} \times 2 = 84 \text{ SF}$$

$$10 \text{ SF} \times 2 = 20 \text{ SF}$$

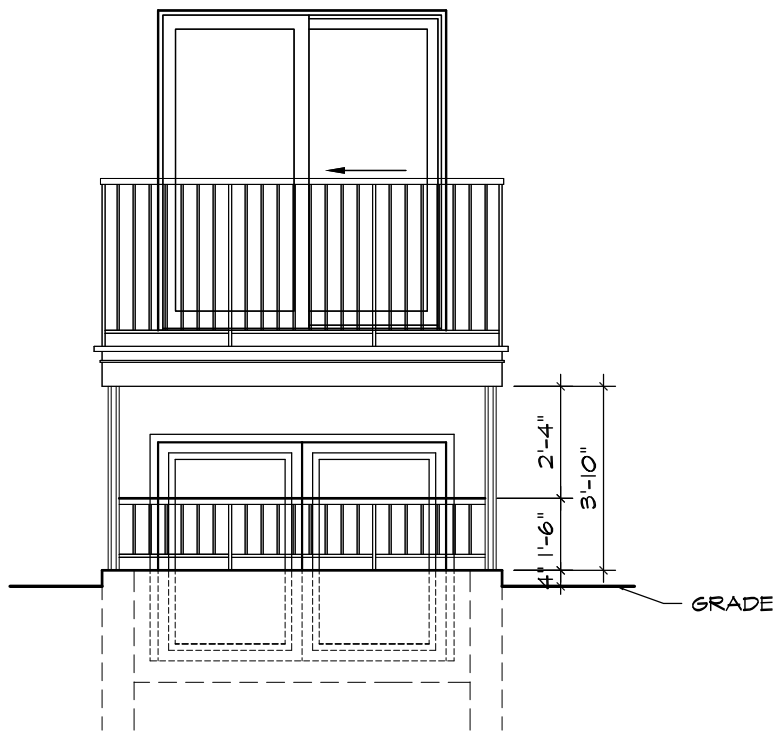
$$5 \text{ SF} \times 2 = 10 \text{ SF}$$

$$242 \text{ SF}$$

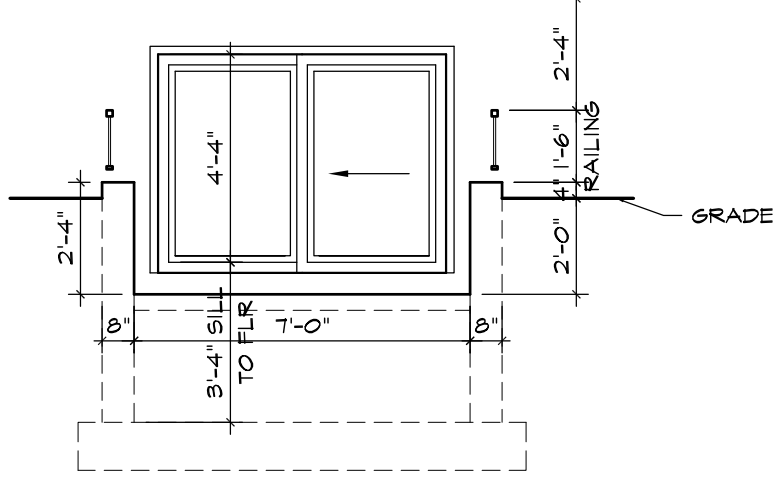
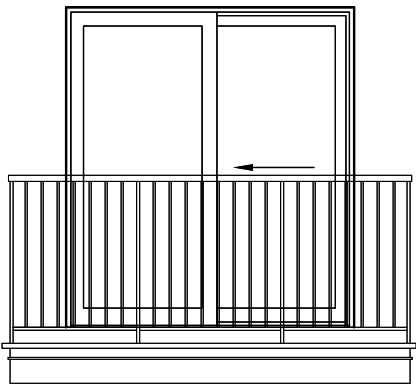
BUILDING 2- EAST ELEVATION



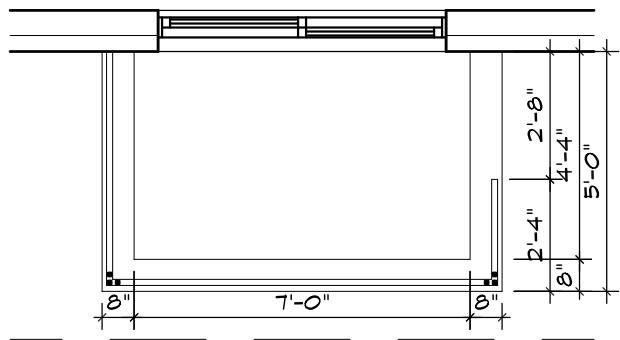
WATTLES SQUARE GARDEN LEVEL WINDOW WELL
 NORTH ELEVATION BLDG. 1 ONLY
 SECTION/PLAN/ELEVATIONS
 1/4" = 1'-0" 07 MAY 24



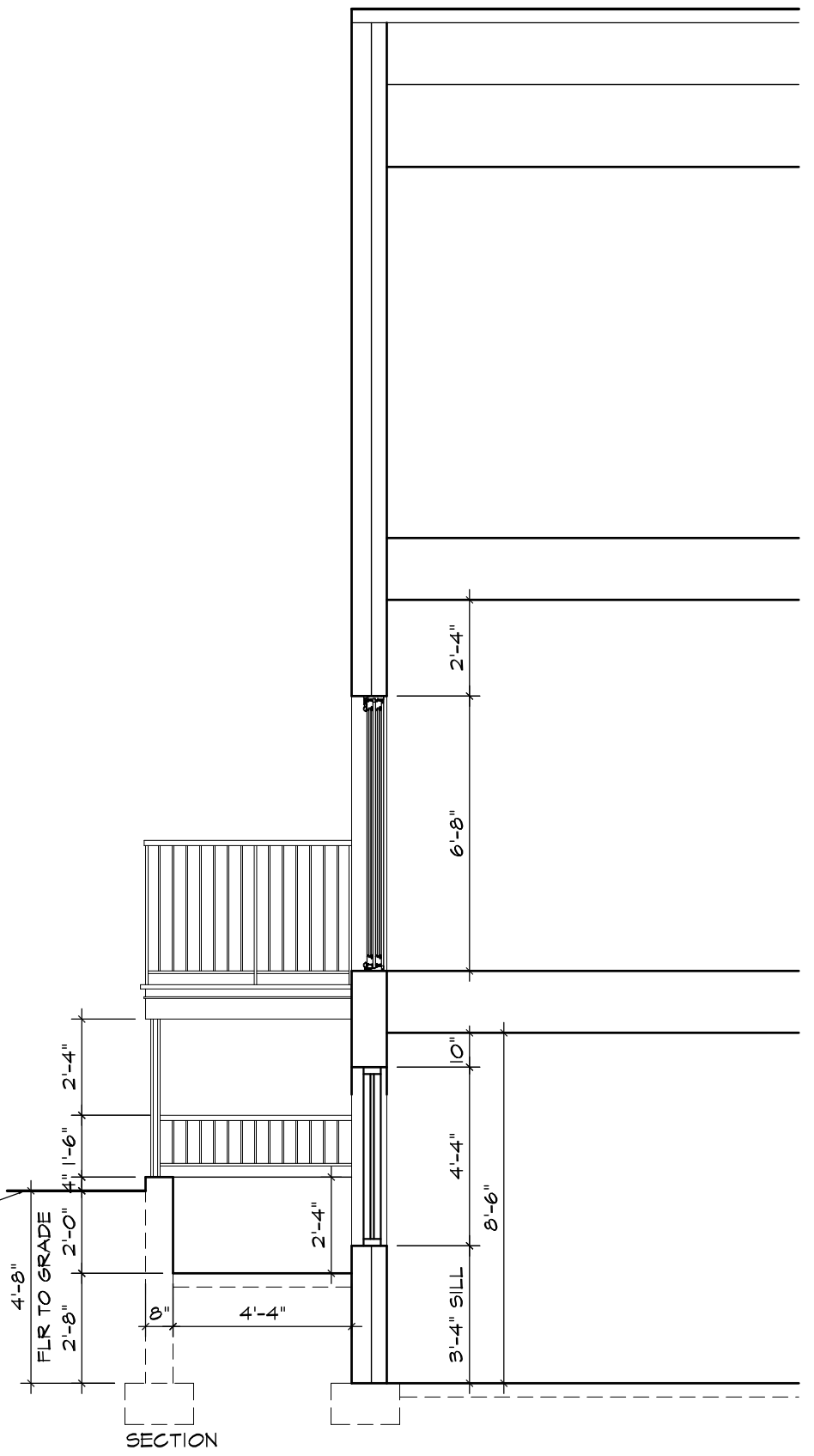
ELEVATION



ELEVATION/SECTION



PLAN



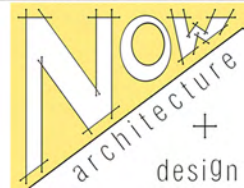
SECTION

WATTLES SQUARE GARDEN LEVEL WINDOW WELL
 TYP. ALL ELEVATIONS EXCEPT BLDG. | NORTH ELEVATION
 SECTION/PLAN/ELEVATIONS
 1/4" = 1'-0" 07 MAY 24



Wattles Square Apartments - 3D view at balcony

MAY 7, 2024



ITEM #7

DATE: May 22, 2024

TO: Planning Commission

FROM: R. Brent Savidant, Community Development Director

SUBJECT: PUBLIC HEARING – SPECIAL USE APPROVAL AND PRELIMINARY SITE PLAN REVIEW (SU JPLN2024-0006) – Proposed Jax Kar Wash, South side of Long Lake, East of Livernois (102 East Long Lake Road), Section 15, Currently Zoned NN (Neighborhood Node “M”) Zoning District.

The petitioner BMW Kar Wash, LLC submitted the above referenced Special Use Approval and Preliminary Site Plan Approval application for a proposed Jax Kar Wash. Vehicle washes are permitted in the NN district, subject to special use approval.

The attached report prepared by Carlisle/Wortman Associates, Inc. (CWA), the City's Planning Consultant, summarizes the application. CWA prepared the report with input from various City departments including Planning, Engineering, Public Works and Fire. City Management supports the findings of fact contained in the report and recommends approval of the project, as noted.

Attachments:

1. Maps
2. Report prepared by Carlisle/Wortman Associates, Inc.
3. Special Use/Preliminary Site Plan application
4. Car Wash Community Noise Impact Study, prepared by K&S Engineers, LLC

G:\SPECIAL USE\SU_JPLN2024-0006_JAX KAR WASH\PC Memo 05 28 2024.docx

PROPOSED RESOLUTION

PUBLIC HEARING – SPECIAL USE APPROVAL AND PRELIMINARY SITE PLAN REVIEW (SU JPLN2024-0006) – Proposed Jax Kar Wash, South side of Long Lake, East of Livernois (102 East Long Lake Road), Section 15, Currently Zoned NN (Neighborhood Node “M”) Zoning District.

Resolution # PC-2024-05-

Moved by:

Seconded by:

RESOLVED, That Special Use Approval and Preliminary Site Plan Approval for the proposed Jax Kar Wash, South side of Long Lake, East of Livernois (102 East Long Lake), Section 15, Currently Zoned NN (Neighborhood Node “M”) District, be (granted, subject to the following conditions):

_____) or

(denied, for the following reasons: _____) or

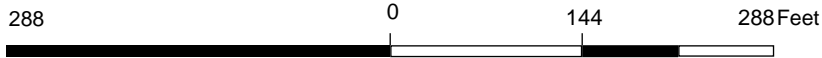
(postponed, for the following reasons: _____)

Yes:

No:

Absent:

MOTION CARRIED / FAILED



Note: The information provided by this application has been compiled from recorded deeds, plats, tax maps, surveys, and other public records and data. It is not a legally recorded map survey. Users of this data are hereby notified that the source information represented should be consulted for verification.



288 0 144 288 Feet



Note: The information provided by this application has been compiled from recorded deeds, plats, tax maps, surveys, and other public records and data. It is not a legally recorded map survey. Users of this data are hereby notified that the source information represented should be consulted for verification.



Carlisle | Wortman
ASSOCIATES, INC.

117 NORTH FIRST STREET SUITE 70 ANN ARBOR, MI 48104 734.662.2200 734.662.1935 FAX

Date: April 10, 2024
May 21, 2024

Preliminary Site Plan and Special Use Approval For City of Troy, Michigan

Applicant: BMW Kar Wash LLC

Project Name: Jax Troy

Location: 103 E Long Lake Road

Plan Date: March 8, 2024

Zoning: NN, Neighborhood Nodes (“M”)

Action Requested: Preliminary Site Plan and Special Use Approval

SITE DESCRIPTION

An application has been submitted to construct a Jax Car Wash at 103 E Long Lake Road. This is the site of the former Kim’s Restaurant, which closed in 2019 and has since remained vacant. The applicant intends to remove the existing building and reconfigure the site to accommodate a car wash facility. The site plans include a new 5,434 square foot building, nineteen (19) outdoor vacuum stations, and two (2) stacking lanes, with fourteen (14) stacking spaces.

The site is zoned NN-Neighborhood Nodes, Site Type A, in which auto/transportation uses require Special Use Approval.

Site Location:



Proposed Use of Subject Parcel:

One-story 5,434 square foot automatic car wash.

Current Zoning:

The property is currently zoned NN, Neighborhood Nodes (M) Form Based District, Site Type A.

Surrounding Property Details:

Direction	Zoning	Use
North	NN, Neighborhood Nodes (M)	Kroger/Multi-Tenant Building
South	R1-B, Single Family Residential	Single-Family Residential
East	NN, Neighborhood Nodes (M)	Childtime Learning Center
West	NN, Neighborhood Nodes (M)	Community Choice Credit Union

NATURAL FEATURES

Topography/Wetlands/Drain: The subject site is not located in a floodplain and contains no wetlands. Most of the site has already been graded for previous development.

Woodlands: A tree inventory has been provided by the applicant. No existing trees at this site are considered Landmark or Woodland trees. There are seven (7) existing trees on site, all of which are invasive species including American Elm, Box Elder, and Black Locust. The applicant proposes to remove five (5) and save two (2) trees. As invasive species, replacement of the five (5) trees is not required. One (1) Box Elder in fair condition and one (1) American Elm in good condition are being saved.

Replacement Details		
Protected Tree	Inches Removed	Replacement Required
Landmark	0 inches	0 inches
Woodland	0 inches	0 inches
Preservation/Mitigation	Inches Preserved	Credit
Landmark	0 inches	0 inches
Woodland	0 inches	0 inches
Total	0 inches required for replacement.	

Items to be Addressed: None.

MASTER PLAN

While still zoned Neighborhood Node (NN), in the adopted version of the Master Plan, the future land use for this site was removed from Neighborhood Nodes. The recommendation is to rezone this intersection for general commercial uses.

AREA, WIDTH, HEIGHT, SETBACKS

The proposed building is being reviewed under Building Form A.

	Required	Provided	Compliance
Front (North)	10-foot build-to-line	10 feet	Complies
Side (East)	N/A, building may be placed up to property line	33.71 feet	Complies
Side (West)	N/A, building may be placed up to property line	82.62 feet	Complies
Rear (South)	30-foot minimum setback	151.75 feet	Complies
Building Height (Neighborhood Nodes)	Any building, or portion of a building, on a parcel abutting a one-family residentially zoned parcel shall not exceed 2.5 stories/30 feet in height	1 story, 25.58 feet	Complies
Open Space	30%	42%	Complies

Items to be Addressed: None.

PARKING

	Required	Provided	Compliance
Vehicle Wash: 2 spaces, plus 12 stacking spaces per bay 1 space per employee on largest typical shift	(2 spaces + 12 stacking spaces) = 14 spaces + (1 space * 3 employees) = 3 spaces = 17 spaces total	26 stacking spaces + 6 standard spaces + 19 vacuum spaces = 51 spaces total	See Below
Loading	1 space	1 space	Complies
Barrier Free	1 space	1 space	Complies

Including parking for vacuum spaces, the applicant has proposed 200% more parking than is required. Excessive parking increases heat island effect and contributes to high rates of stormwater runoff. For these reasons, the City requires applicants to receive approval when exceeding parking requirements by over 20%. We requested an explanation and documented evidence as to why additional stacking spaces and the total number of vacuum stations are needed.

When asked about the number of vacuum stations the applicants response:

Based upon Jax Kar Wash years of experience operating multiple car wash locations in the Detroit Area, they feel that the number of vacuum spaces provided is appropriate for the effective operation of this car wash. The projected volume for this site is how they determine the number of vacuum and stacking spaces. They are also based upon the demographics in the area.

Items to be Addressed: Planning Commission to discuss the number of vacuum spaces.

TRAFFIC and CIRCULATION

Vehicular Traffic:

The site has one (1) point of access via Long Lake. The access point allows for two-way traffic via a 25-foot wide aisle. Upon entry, there are two (2) areas on site in which patrons will occupy: the car wash lane and/or the vacuum station area.

The car wash stacking lane begins at the south end of the site with traffic heading east via two (2) 11-foot wide lanes, each with their own kiosk at the end. Once patrons visit the kiosk, these (2) stacking lanes merge into one (1) 13-foot wide stacking lane and traffic heads north towards the entrance of the building. Patrons then move westbound through the automatic car wash and turn right (north) to exit the site. For patrons who choose to exit the stacking lane prior to receiving a car wash, a 13-foot wide exit route is provided, allowing drivers to then move westbound through the vacuum area and leave the site.

Automatic vacuum stations are located in a parking lot behind the building, in the center of the site. The parking lot includes a 24-foot wide aisle which allows for two-way traffic; however, there is no exit to the east. Drivers must turn around within the lot and exit the area from the access point to the west.

Pedestrian Access:

The applicant is increasing the sidewalk along Long Lake to 8-feet in width, and tying the new sidewalk to the building.

Traffic and circulation has been reviewed by the City’s Engineering and Fire Departments. Those comments have been addressed by the applicant.

Items to be Addressed: None

LANDSCAPING

A landscaping plan has been provided on Sheet L-1.0. The following table discusses the development’s compliance with the landscape requirements set forth in Section 13.02.

	Required	Provided	Compliance
<u>Long Lake Road:</u> One (1) deciduous tree for every thirty (30) lineal feet, or fraction thereof, of frontage abutting a public road right-of-way.	250 LF/30= 8 trees	9 trees	Complies
<u>Site Landscaping:</u> A minimum of 20% of the site area shall be comprised of landscape material.	20%	43.18%	Complies
<u>Screening Between Uses:</u> South/Residential: One (1) large evergreen tree per ten (10) lineal feet and/or wall OR One (1) narrow evergreen tree per five (5) lineal feet and/or wall West/Retail: One (1) narrow evergreen tree per three (3) lineal feet and/or wall	South: 205 LF/10= 20.5 trees West: 149 LF/3 = 53 trees	South: 25 large evergreen trees and existing concrete wall West: One (1) narrow evergreen tree per three (3) lineal feet and/or wall	South: Complies West: Complies
<u>Parking Lot Trees:</u> 1 per 8 spaces	25 parking lot spaces/8= 3 parking lot trees	5 trees	Complies

Mechanical Equipment:

The plans indicate that an electric transformer shall be placed upon a concrete pad with no screening and screened with landscaping.

Trash Enclosure:

The trash enclosure will be screened with a 6-foot tall masonry block wall. The wall shall match the architecture of the building.

Stormwater Management:

No information has been provided regarding water reclamation and recycling. Similarly, the applicant has not addressed the potential runoff of pollutants or freezing concerns.

The applicant has noted:

The project does not propose the installation of a water reclamation/recycling system. The storm water for the development will be collected, treated, and managed on-site with the proposed underground storm water management system.

We encourage water reclamation and recycling system. Applicant should describe why a water reclamation and recycling system is not used.

Items to be Addressed: Describe why a water reclamation and recycling system is not used.

PHOTOMETRICS

The applicant proposes six (6) freestanding pole lights and fourteen (14) wall mounted lights. Proposed fixture designs and lighting levels are compliant with zoning regulations. Each pole light shall measure 20 feet in height and each wall mounted light shall measure 10 feet in height.

Items to be Addressed: None.

FLOOR PLAN AND ELEVATIONS

Floor Plans:

The building on site is roughly 132-feet wide and 46-feet deep. The front portion of the building (north side) is roughly 26-feet deep and contains the wash tunnel where patrons will receive their car wash. The rear portion of the building is roughly 20-feet deep and includes an equipment area, break room, cleaning room, manager's office, and two (2) individual restrooms.

The equipment area and vacuum room are accessible via the wash tunnel and/or an entry on the west side of the building. The area with the break room, cleaning room, office, and restrooms is accessible via the wash tunnel and/or rear entry on the south side of the building. There is no direct connection between the equipment area/vacuum room and these other rooms.

South of the building are nineteen (19) outdoor vacuum stations arranged in two (2) rows.

Elevations:

Overall building height is 25 feet 7 inches. The applicant has provided 50% transparency for the front façade and over 30% for each façade facing a side yard or parking area.

Several materials are proposed for all four (4) building façades. Exterior walls are largely comprised of full dimensional veneer and horizontal lap siding. Other materials include brick veneer, recessed brick soldier course, fascia trim, and asphalt shingles. Tinted windows and doorways with clear windows are proposed along each façade with metal coping and metal frames. Exterior building colors are dark blue, yellow, white, and light brown as shown below.

Colored Renderings Received May, 22, 2024.



Colored Renderings Received May, 22, 2024.



Items to be Addressed: None.

CARWASH USE

We have noted a significant increase in the number of carwash applications in the Troy and the region. Recently, the City approved a carwash at Oakland Mall, considered a Jax Carwash on Big Beaver, and have an application for a carwash at Long Lake and Dequindre.

The proliferation in carwashes is due to private equity funding and shift to monthly subscription based model:

<https://www.bloomberg.com/news/features/2024-02-21/car-washes-are-taking-over-the-us-here-s-why?embedded-checkout=true>

While reusing dilapidated and vacant sites, carwashes are also land consumptive, generate few jobs, and can lead to increased traffic congestion and environmental concerns. Of particular concern is that carwash buildings require heavy ongoing investments, resource dependent, and are singular use and cannot be repurposed, such as a retail store, office, or hotel.

In response the applicant has noted:

Jax Kar Wash has an extensive history of owning and operating successful car washes in the Detroit Area for over 70 years. They do extensive research to determine the potential locations for new facilities.

There are no car washes on Long Lake Road. The population in this area is very dense. 6,300 within 1 mile and 74,457 within 3 miles. Traffic counts (VPD) are also extremely strong at 39,262 VPD on East Long Lake and 27,986 VPD on Livernois Road. It also fills a geographical need for Jax. 75% of Jax customers use multiple Jax locations. This location on East Long Lake falls in the middle of our existing Troy location (3.7 miles to the south) and our Rochester location (3.4 miles to the north).

If this site should “fail”, it would likely be rebranded for use as a car wash by another operator. If the car wash operation in this location is not viable for another operator, it would be likely completely redeveloped for another commercial use.

Items to be Addressed: *Planning Commission to consider the use.*

SPECIAL USE APPROVAL STANDARDS

Table 5.06.C-1 illustrates that auto/transportation uses are considered a special use for Neighborhood Nodes Site Type NN:A.

For any special use, according to Section 9.02.D, the Planning Commission shall “...review the request, supplementary materials either in support or opposition thereto, as well as the Planning

Department's report, at a Public Hearing established for that purpose, and shall either grant or deny the request, table action on the request, or grant the request subject to specific conditions." Section 9.03 states that before approving any requests for Special Use Approval, the Planning Commission shall consider:

1. *Compatibility with Adjacent Uses.*
2. *Compatibility with the Master Plan.*
3. *Traffic Impact.*
4. *Impact on Public Services.*
5. *Compliance with Zoning Ordinance Standards.*
6. *Impact on the Overall Environment. The proposed Special Use shall no*
7. *Special Use Approval Specific Requirements.*

Items that the Planning Commission should consider when reviewing the application:

- General context of the property
- Intended automotive use of the property
- The use and number of carwashes in the city and general area
- Traffic and circulation
- Impacts (noise, light, odor, etc) upon adjacent properties

SITE PLAN REVIEW STANDARDS

Section 8.06 outlines Site Plan Review Design Standards.

1. *Development shall ensure compatibility with existing commercial districts and provide a transition between land uses.*
 - a. *Building design shall enhance the character of the surrounding area in relation to building and parking placement, landscape and streetscape features, and architectural design.*
 - b. *Street fronts shall provide a variety of architectural expression that is appropriate in its context and prevents monotony.*
 - c. *Building design shall achieve a compatible transition between areas with different height, massing, scale, and architectural style.*
2. *Development shall incorporate the recognized best architectural building design practices.*
 - a. *Foster a lasting impact on the community through the provision of high quality design, construction, and detailing.*
 - b. *Provide high quality, durable materials, such as but not limited to stone, brick, glass, and metal. E.I.F.S. or material equivalent shall only be used as an accent material.*
 - c. *Develop buildings with creativity that includes balanced compositions and forms.*
 - d. *Design roofs that are appropriate to the architectural style of the building and create an appropriate visual exterior mass of the building given the context of the site.*

Jax Troy
May 21, 2024

- e. *For commercial buildings, incorporate clearly defined, highly visible customer entrances using features such as canopies, porticos, arcades, arches, wing walls, ground plane elements, and/or landscape planters.*
 - f. *Include community amenities that add value to the development such as patio/seating areas, water features, art work or sculpture, clock towers, pedestrian plazas with park benches or other features located in areas accessible to the public.*
3. *Enhance the character, environment and safety for pedestrians and motorists.*
- a. *Provide elements that define the street and the pedestrian realm.*
 - b. *Create a connection between the public right of way and ground floor activities.*
 - c. *Create a safe environment by employing design features to reduce vehicular and pedestrian conflict, while not sacrificing design excellence.*
 - d. *Enhance the pedestrian realm by framing the sidewalk area with trees, awnings, and other features.*
 - e. *Improve safety for pedestrians through site design measures.*

SUMMARY

The Planning Commission is asked to consider the proposed use, consumer demand, hold a public hearing, consider testimony, and deliberate the following:

1. Compliance with Special Use Standards
2. Compliance with Site Plan Review Standards
3. Why is a water reclamation and recycling system not used?

Sincerely,



CARLISLE/WORTMAN ASSOC., INC.
Benjamin R. Carlisle, AICP, LEED AP
President



CARLISLE/WORTMAN ASSOC., INC.
Shana Kot
Community Planner

1849 Pond Run
Auburn Hills, MI 48326

844.813.2949
peagroup.com

April 29, 2024
Project No.: 23-1373

Mr. R. Brent Savidant, Community Development Director
City of Troy Planning Department
755 West Big Beaver
Troy, Michigan 48083

RE: Jax Kar Wash (102 East Long Lake Road)

Dear Mr. Savidant:

Our office is in receipt of the various review letters prepared by the various City Department and the City's Planning and Traffic consultants regarding the subject parcel. Based upon the review comments in the various review letters received, please note following response regarding the comments:

OHM (4-24-2024)

It appears that this building is not set back from Big Beaver appropriately. Verify that the master plan ROW is 150' and adjust the location of the building.

The plans have been revised to reflect the additional right-of-way.

The site driveway needs to be 30-feet wide at the road right-of-way line. It can then taper to the 25' width noted on the plans.

The plans have been revised to provide for the requested 30' wide drive width.

The sidewalk within the site does not connect to each other and appears randomly placed. Organize a smoother pedestrian route throughout the site, including a connection to the path along Big Beaver Rd.

Based upon the revised site plan layout the sidewalks have been revised to provide better routing.

How are the stacking lanes delineated? Will there be striping, curbs? Label accordingly.

The staking lanes will be delineated with pavement striping.

Provide DO NOT ENTER and WRONG WAY signs for the parking / vacuum area so customers don't try to enter the queue for the car wash.

The requested signs have been added to the revised plans.

The path along Big Beaver must cross this site's driveway at right angles, not angled as shown. Adjust the angled sidewalk segment on the northeast corner of the driveway approach.

Based upon the revised site plan layout the sidewalks have been revised to provide better routing.

The sidewalk along the west side of the site aligns with vehicles exiting the car wash. This needs to be changed. It might be better to run sidewalk along the west side of the site driveway and cross where the 7-foot site sidewalk starts.

Due to the proposed use, we do not feel that a walkway connection to Long Lake Road is necessary. This section of the internal sidewalk is provided for two specific purposes; (1) to allow access from the building to the trash dumpster; (2) to allow access to the loading/unloading area. If the City and its consultant determine that this section of sidewalk is necessary, we will open to installing it. Please be advised this will eliminate a section of the landscaping requested by the Planning Consultant in their review letter.

The sidewalk ramp should not be placed in the middle of the sidewalk. It should instead be adjacent to the hatched our parking space.

The sidewalk ramp has been revised.

CWA (04-10-2024):

Provide explanation and documented evidence to justify additional stacking spaces and the number of vacuum stations.

Based upon Jax Kar Wash years of experience operating multiple car wash locations in the Detroit Area, they feel that the number of vacuum spaces provided is appropriate for the effective operation of this car wash. The projected volume for this site is how they determine the number of vacuum and stacking spaces. They are also based upon the demographics in the area. See below for the demographics noted in the respond to the customer demand.

Address circulation issues identified in report.

Based upon the revised site plan layout the sidewalks have been revised to provide better routing.

Address traffic and circulation identified by OHM, and the Engineering and Fire Department.

The traffic and circulation issues have been addressed with the plan revisions.

Provide landscape screening on the west lot line.

Landscape screening had been added along the west property line. Please be advised that the Traffic Consultant has requested that "the sidewalk along the west side of the site aligns with vehicles exiting the car wash. This needs to be changed. It might be better to run sidewalk along the west side of the site driveway and cross where the 7-foot site sidewalk starts". If this section of sidewalk is installed it will eliminate a section of the landscaping requested.

Provide parking lot landscaping in compliance with Section 13.02(C).

The required parking lot landscaping requirement has been addressed with the revised plans.

Provide mechanical equipment screening.

The ground mounted equipment screening has been provided.

Describe systems in place for water reclamation and recycling, mitigation of runoff, and freezing concerns.

The project does not propose the installation of a water reclamation/recycling system. The storm water for the development will be collected, treated, and managed on-site with the proposed underground storm water management system.

Provide fully transparent windows.

Fully transparent windows have been provided.

Provide evidence of consumer demand for this site and how the building could be repurposed if the use were to fail.

Jax Kar Wash has an extensive history of owning and operating successful car washes in the Detroit Area for over 70 years. They do extensive research to determine the potential locations for new facilities.

There are no car washes on Long Lake Road. The population in this area is very dense. 6,300 within 1 mile and 74,457 within 3 miles. Traffic counts (VPD) are also extremely strong at 39,262 VPD on East Long Lake and 27,986 VPD on Livernois Road. It also fills a geographical need for Jax. 75% of Jax customers use multiple Jax locations. This location on East Long Lake falls in the middle of our existing Troy location (3.7 miles to the south) and our Rochester location (3.4 miles to the north).

If this site should “fail”, it would likely be rebranded for use as a car wash by another operator. If the car wash operation in this location is not viable for another operator, it would be likely completely redeveloped for another commercial use.

Engineering Department by Antonio Cicchetti

What is the proposed pathway of refuse collection trucks? It appears they may need to turn around inside the parking lot which will be difficult with parked vehicles in the way.

Based upon our turning analysis, the trash truck can make the necessary movement without impacting the parked cars in the vacuum spaces.

The relocated hydrant is too close to the proposed building. Needs to be minimum 25' away from all sides.

Noted.

Provide a demolition plan showing the limits of all the removals, including the existing 24" storm sewer.

A demolition plan will be provided during the engineering review.

Show the existing 12' wide storm sewer easement across this property and into the property to the east. A portion of this easement will need to be vacated and replaced with a new easement based on the route of the proposed storm sewer.

The easement has been provided.

No permanent structures are allowed along the path of the existing and new storm sewer easement.

Noted.

The existing sanitary lead for the old building should be used if it is in good condition. It will need to be located during demolition, cleaned, and televised.

Noted.

The internal sidewalk along the exit of the car wash appears to serve no purpose. Remove or provide explanation.

This section of the internal sidewalk is provided for two specific purposes; (1) to allow access from the building to the trash dumpster; (2) to allow access to the loading/unloading area.

The proposed sidewalk & approach improvements at the site entrance are unacceptable. The proposed sidewalk does not align with the existing sidewalk to the west. Also, the proposed ramps are directing pedestrians right into vehicles exiting the car wash. Also, the radius crosses the property line extended. The whole layout needs to be re-designed.

The plans have been revised to improve the issues noted above.

A 30' wide approach is required for commercial developments.

The plans have been revised to provide for the requested 30' wide drive width.

Storm Detention calculations will be required during final site plan review.

Noted.

RCOC Permit required for work in Long Lake Road ROW.

Noted.

Traffic Engineer by Scott Finlay

The master plan right of way at this location on Long Lake is 150 feet. 75 feet on each side, the proposed site needs to be built to the master plan right of way, not the existing 60 feet.

The plans have been revised to reflect the additional right-of-way.

The sidewalk needs to cross driveways perpendicular and cannot cross into the exit for cars leaving the car wash.

Based upon the revised site plan layout the sidewalks have been revised to provide better routing.

Parking stalls can be 17 feet as opposed to 20 feet as shown on the plans.

The Jax Kar Wash Standard parking stall depths are 20'. This is done for the purpose of allow for sufficient space for the vacuuming of cars.

All sidewalk along Long Lake will need to be removed and replaced.

The plans have been revised to reflect this request.

Provide acceleration taper.

The plans have been revised to reflect this request.

Water & Sewer by Water & Sewer

If hydrant is relocated requires new hydrant with two four inch nozzles.

Noted.

If you should have any questions, please feel free to contact this office.

Sincerely,

PEA Group



James P. Butler, PE
Principal/Project Executive

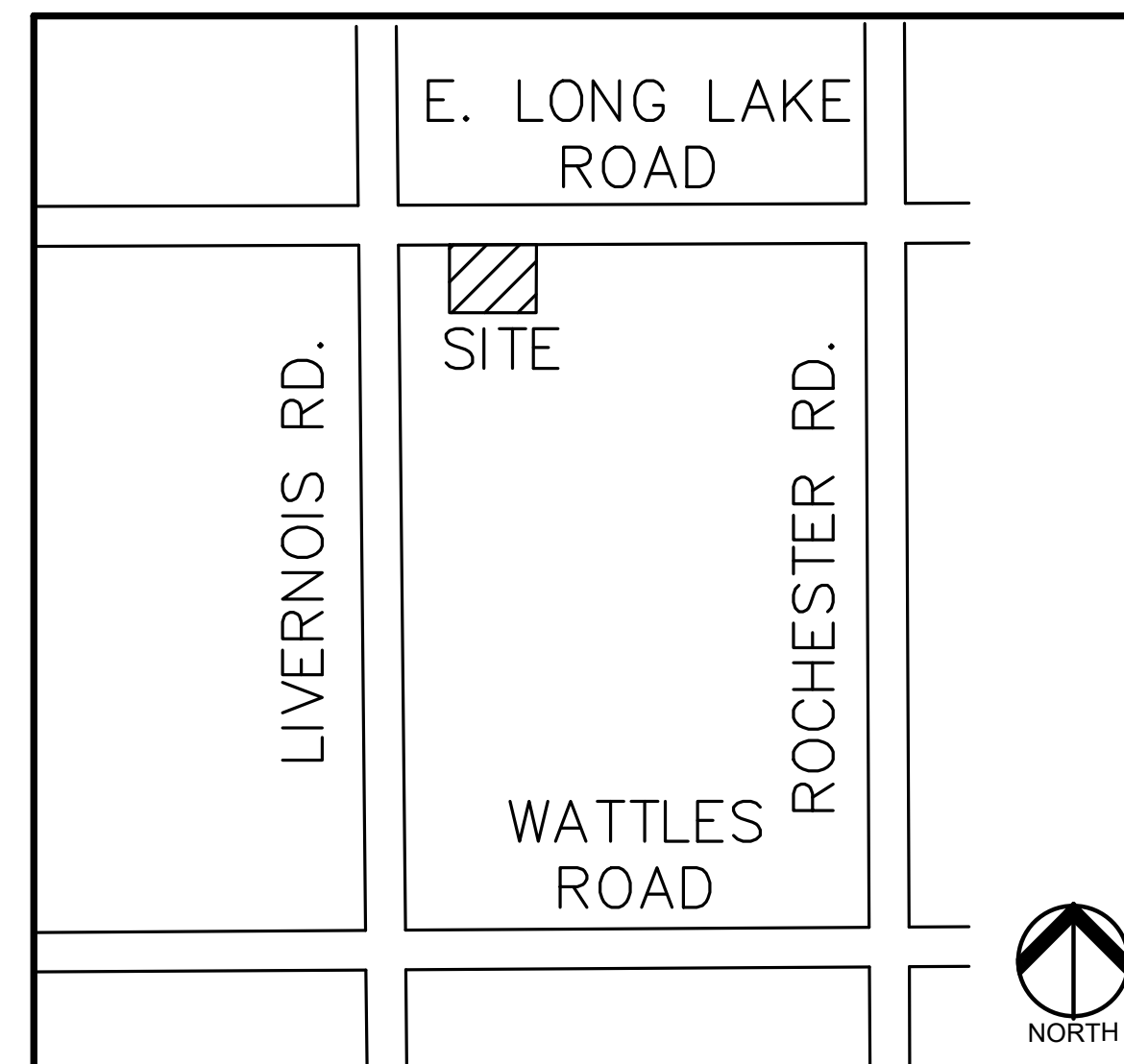
PRELIMINARY SITE PLANS

JAX TROY

103 EAST LONG LAKE ROAD
CITY OF TROY, OAKLAND COUNTY, MICHIGAN



PERMIT / APPROVAL SUMMARY		
DATE SUBMITTED	DATE APPROVED	PERMIT / APPROVAL



LOCATION MAP
NO SCALE

INDEX OF DRAWINGS	
NUMBER	TITLE
	COVER SHEET
C-1.0	TOPOGRAPHIC SURVEY
C-3.0	PRELIMINARY SITE PLAN
C-4.0	PRELIMINARY GRADING PLAN
C-6.0	PRELIMINARY UTILITY PLAN
C-9.0	NOTES AND DETAILS
L-1.0	LANDSCAPE PLAN
L-1.1	LANDSCAPE DETAILS
<u>ARCHITECTURAL PLANS</u>	
PE-4A	BUILDING ELEVATIONS
PE-4B	PAY STATION/VACCUM ELEVATIONS
PFP-4	PRELIMINARY OVERALL FLOOR PLAN
PH-1	PHOTOMETRIC PLAN

DESIGN TEAM

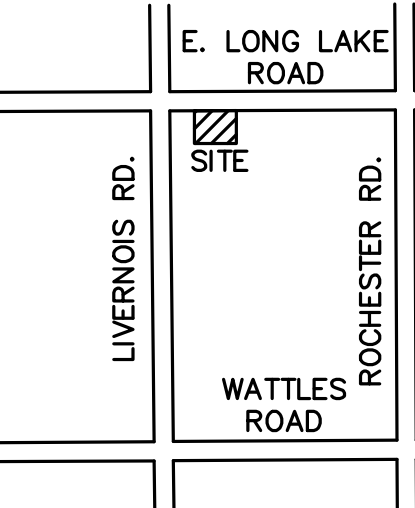
<p>APPLICANT</p> <p>BMW KAR WASH, LLC 26777 CENTRAL PARK, S-180 SOUTHFIELD, MI 48034 CONTACT: TODD GESUND PHONE: 7248-514-5565 EMAIL: TODD@JAXKARWASH.NET</p>	<p>CIVIL ENGINEER</p> <p>PEA GROUP 1849 POND RUN AUBURN HILLS, MI 48326 CONTACT: JAMES P. BUTLER, PE PHONE: 844.813.2949 EMAIL: JBUTLER@PEAGROUP.COM</p>
<p>ARCHITECT</p> <p>F.A. STUDIO 28281 EVERGREEN ROAD SOUTHFIELD, MI CONTACT: DAVID BRINKMEIER PHONE: 248.619.2354 EMAIL: DBRINKMEIER@FA.STUDIO</p>	<p>LANDSCAPE ARCHITECT</p> <p>PEA GROUP 7927 NEMCO WAY, STE. 115 BRIGHTON, MI 48116 CONTACT: JANET EVANS, PLA PHONE: 844.813.2949 EMAIL: JEVANS@PEAGROUP.COM</p>



REVISIONS	
DESCRIPTION	DATE
ORIGINAL ISSUE DATE	3/8/2024
BUILDING SHIFT	4/26/2024

NOT FOR CONSTRUCTION

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE OR OTHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.



CLIENT
CUNNINGHAM LIMP COMPANY
28970 CABOT DR.
NOVI, MI 48377

PROJECT TITLE
JAX TROY
102 E. LONG LAKE RD.
TROY, MICHIGAN

REVISIONS	
BUILDING SHIFT	4.26.24

ORIGINAL ISSUE DATE:
MARCH 8, 2024

DRAWING TITLE
TOPOGRAPHIC SURVEY

PEA JOB NO.	2023-1373
P.M.	JPB
DN.	SWS
DES.	SWS
DRAWING NUMBER:	

C-1.0

BENCHMARKS
(GPS DERIVED - NAVD88)
BM #300
SET PUNCH MARK ON HYDRANT ARROW 40.7' NORTH OF NORTHEAST CORNER OF KIMS RESTAURANT SOUTH SIDE OF EAST LONG LAKE ROAD ELEV. - 708.64
BM #301
SET PUNCH MARK ON HYDRANT ARROW 155.1' NORTH OF NORTHEAST CORNER OF KIMS RESTAURANT IN MEDIAN OF EAST LONG LAKE ROAD ELEV. - 708.27
BM #302
SET PUNCH MARK ON NORTH BOLT OF TOP FLANGE OF HYDRANT 56.8' NORTH OF NORTHWEST CORNER OF CHILDTIME LEARNING CENTERS SOUTH SIDE OF EAST LONG LAKE ROAD ELEV. - 705.55

FLOODPLAIN:
BY GRAPHIC PLOTTING, THE SUBJECT PARCEL IS IN "AREAS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN." (ZONE X) PER FEMA FLOOD INSURANCE RATE MAP PANEL NUMBER 26125C0534F, EFFECTIVE DATE FEBRUARY 29, 2006

THERE WAS NO EVIDENCE OF POTENTIAL WETLANDS OBSERVED ON THE SUBJECT PROPERTY AT THE TIME THE SURVEY WAS CONDUCTED. THE SURVEYOR HAS NOT BEEN PROVIDED ANY DOCUMENTATION OF ANY WETLANDS BEING LOCATED ON THE SUBJECT PROPERTY.

TREE LIST

TAG	CODE	DBH	COMMON NAME	LATIN NAME	COND	COMMENTS
162	E	6	American Elm	Ulmus americana	Fair	x1
163	BX	8	Box elder	Acer negundo	Good	x4
164	BL	7	Black Locust	Robinia pseudoacacia	Fair	
165	BX	8	Box elder	Acer negundo	Fair	
166	BL	7	Black Locust	Robinia pseudoacacia	Dead	
167	BX	6	Box elder	Acer negundo	Fair	
168	E	8	American Elm	Ulmus americana	Good	

REFERENCE DRAWINGS:
CITY OF TROY, GIS MAP, DATED 7/15/2019
DTE, FACILITY MAP, DATED 7/24/2019
CONSUMERS ENERGY MAP, DATED 1/31/2024

LEGEND

● IRON FOUND
⊗ IRON SET
● NAIL FOUND
⊗ NAIL & CAP SET

⊗ SEC. CORNER FOUND
R RECORDED
M MEASURED
C CALCULATED

EXISTING

- OH-ELEC-YY- ELEC. PHONE OR CABLE TV OH. LINE, POLE & GUY WIRE
- UG-CATV- UNDERGROUND CABLE TV, CATV PEDESTAL
- UG-PHONE- TELEPHONE U.G. CABLE, PEDESTAL & MANHOLE
- UG-ELEC- ELECTRIC U.G. CABLE, MANHOLE, WELDER & HANDHOLE
- ⊗ GAS MAN. VALVE & GAS LINE MARKER
- ⊗ WATERMAIN, HYD. GATE VALVE, TAPPING SLAVE & VALVE
- ⊗ SANITARY SEWER, CLEANOUT & MANHOLE
- ⊗ STORM SEWER, CLEANOUT & MANHOLE
- ⊗ COMBINED SEWER & MANHOLE
- ⊗ SQUARE, ROUND & RECTANGULAR CATCH BASIN, YARD DRAIN
- ⊗ POST INDICATOR VALVE
- ⊗ WATER VALVE BOX/HYDRANT VALVE BOX, SERVICE SHUTOFF
- ⊗ MALBOX, TRANSFORMER, IRRIGATION CONTROL VALVE
- ⊗ UNIDENTIFIED STRUCTURE

SPOT ELEVATION
CONTOUR LINE
FENCE
GUARD RAIL
STREET LIGHT
SIGN

CONC. CONCRETE
ASPH. ASPHALT
GRAVEL SHOULDER
WETLAND

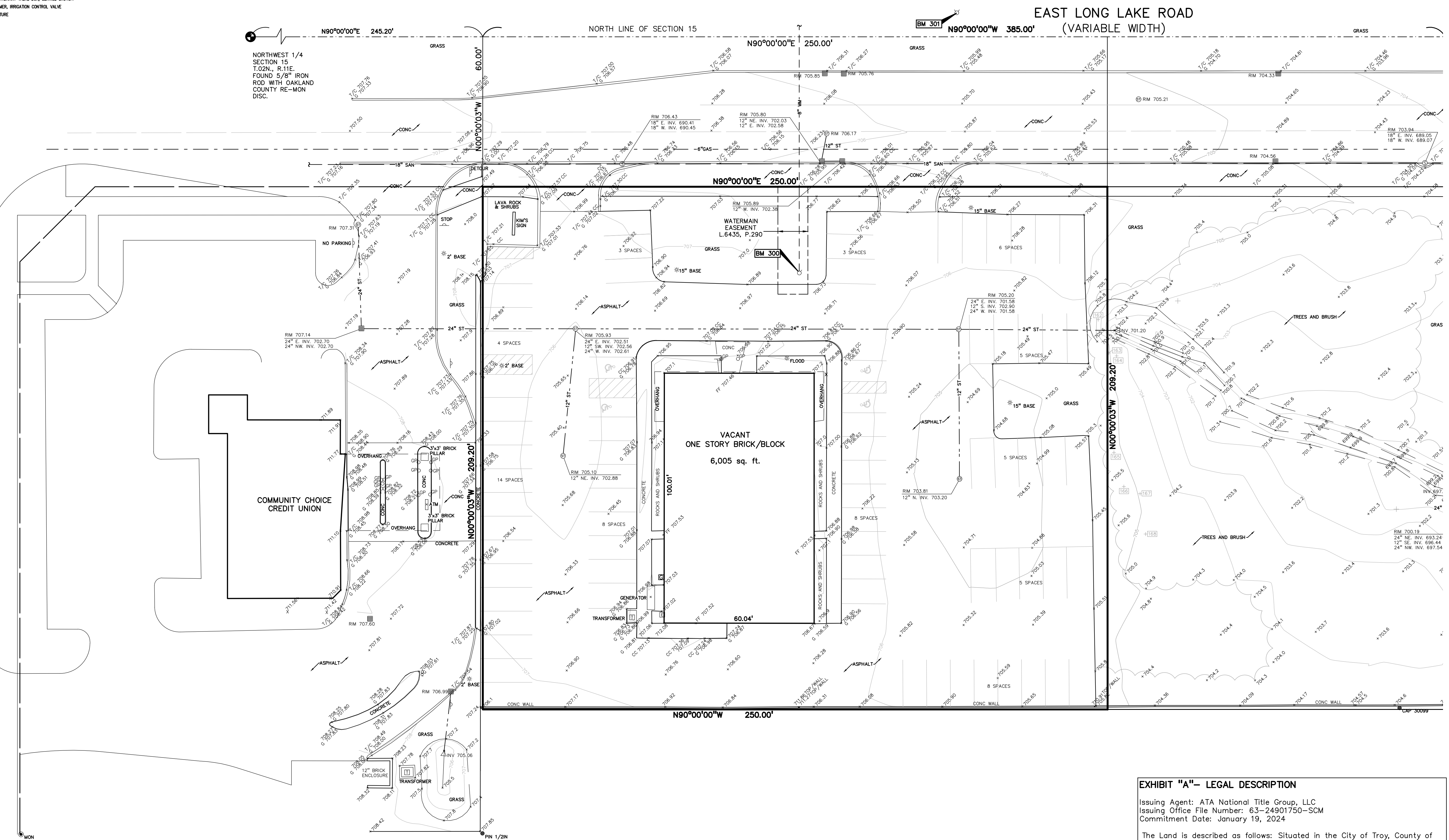


EXHIBIT "A" - LEGAL DESCRIPTION

Issuing Agent: ATA National Title Group, LLC
Issuing Office File Number: 63-24901750-SCM
Commitment Date: January 19, 2024

The Land is described as follows: Situated in the City of Troy, County of Oakland, State of Michigan

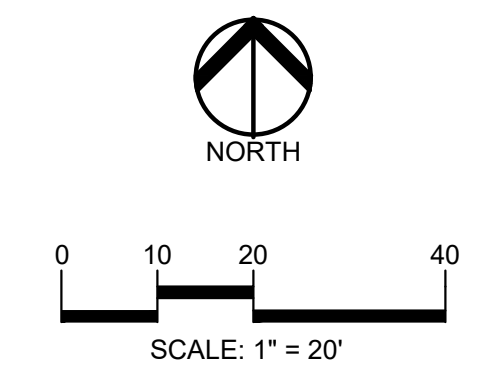
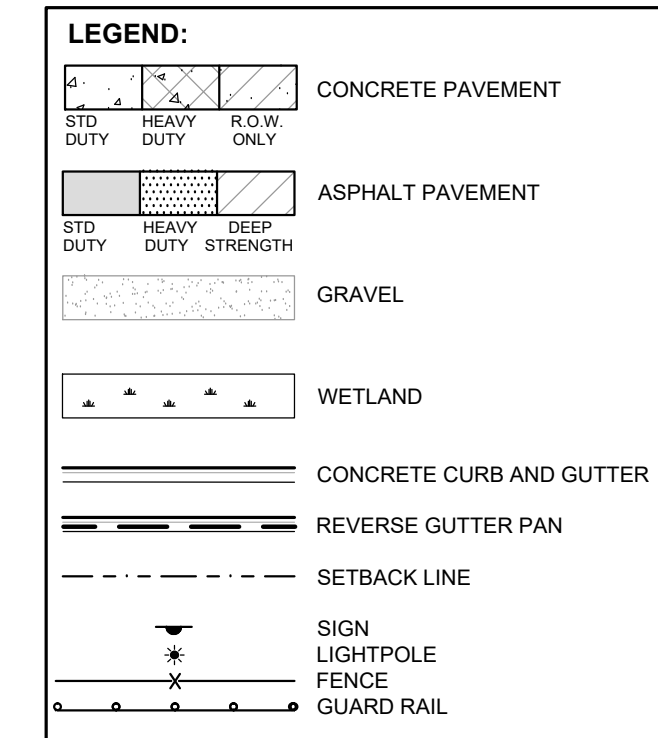
Fee Parcel
The East 250.00 feet of the West 495.20 feet of the North 269.20 feet of the Northwest 1/4 of the Northwest 1/4 of Section 15, Town 2 North, Range 11 East, City of Troy, Oakland County, Michigan, EXCEPT the North 60.00 feet used for road purposes.

Easement Parcel
Together with the rights and easements as created, limited and defined in Cross Access-Joint Drive Easement recorded in Liber 37677, Page 639, Oakland County Records.

NOT FOR CONSTRUCTION

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

1. ALL DIMENSIONS SHOWN ARE TO BACK OF CURB, FACE OF SIDEWALK, OUTSIDE FACE OF BUILDING, PROPERTY LINE, CENTER OF MANHOLE/CATCH BASIN OR CENTERLINE OF PIPE UNLESS OTHERWISE NOTED.
2. 'NO PARKING-FIRE LANE' SIGNS SHALL BE POSTED ALONG ALL FIRE LANES AT 100 FOOT INTERVALS OR AS DIRECTED BY THE FIRE OFFICIAL.
3. REFER TO NOTES & DETAILS SHEET FOR ON-SITE PAVING DETAILS.
4. REFER TO NOTES & DETAILS SHEET FOR ON-SITE SIDEWALK RAMP DETAILS.



SIDEWALK RAMP LEGEND:

- SIDEWALK RAMP "TYPE R"
- SIDEWALK RAMP "TYPE P"

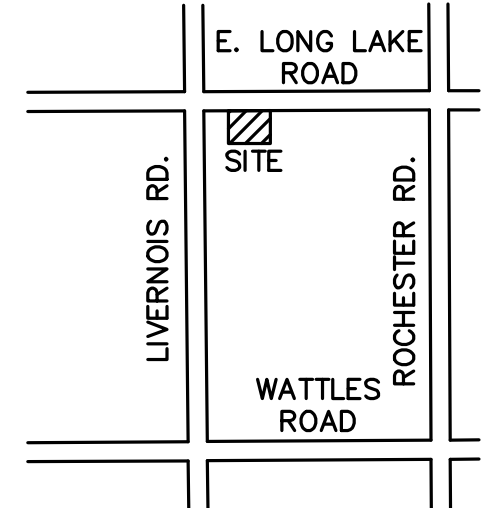
REFER TO LATEST MDT R-28 STANDARD RAMP AND DETECTABLE WARNING DETAILS

SIGN LEGEND:

- 'NO PARKING FIRE LANE' SIGN
- 'STOP' SIGN
- 'BARRIER FREE PARKING' SIGN
- 'VAN ACCESSIBLE' SIGN
- 'WRONG WAY' SIGN
- 'DO NOT ENTER' SIGN

REFER TO DETAIL SHEET FOR SIGN DETAILS

CAUTION!!
THE LOCATION AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE AS TO ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATION AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.



CLIENT
CUNNINGHAM LIMP COMPANY
28970 CABOT DR.
NORVIL, IL 60457

PROJECT TITLE
JAX TROY
102 E. LONG LAKE RD.
TROY, MICHIGAN

REVISIONS

REVISION	DATE
BUILDING SHIFT	4.26.24

ORIGINAL ISSUE DATE:
MARCH 8, 2024

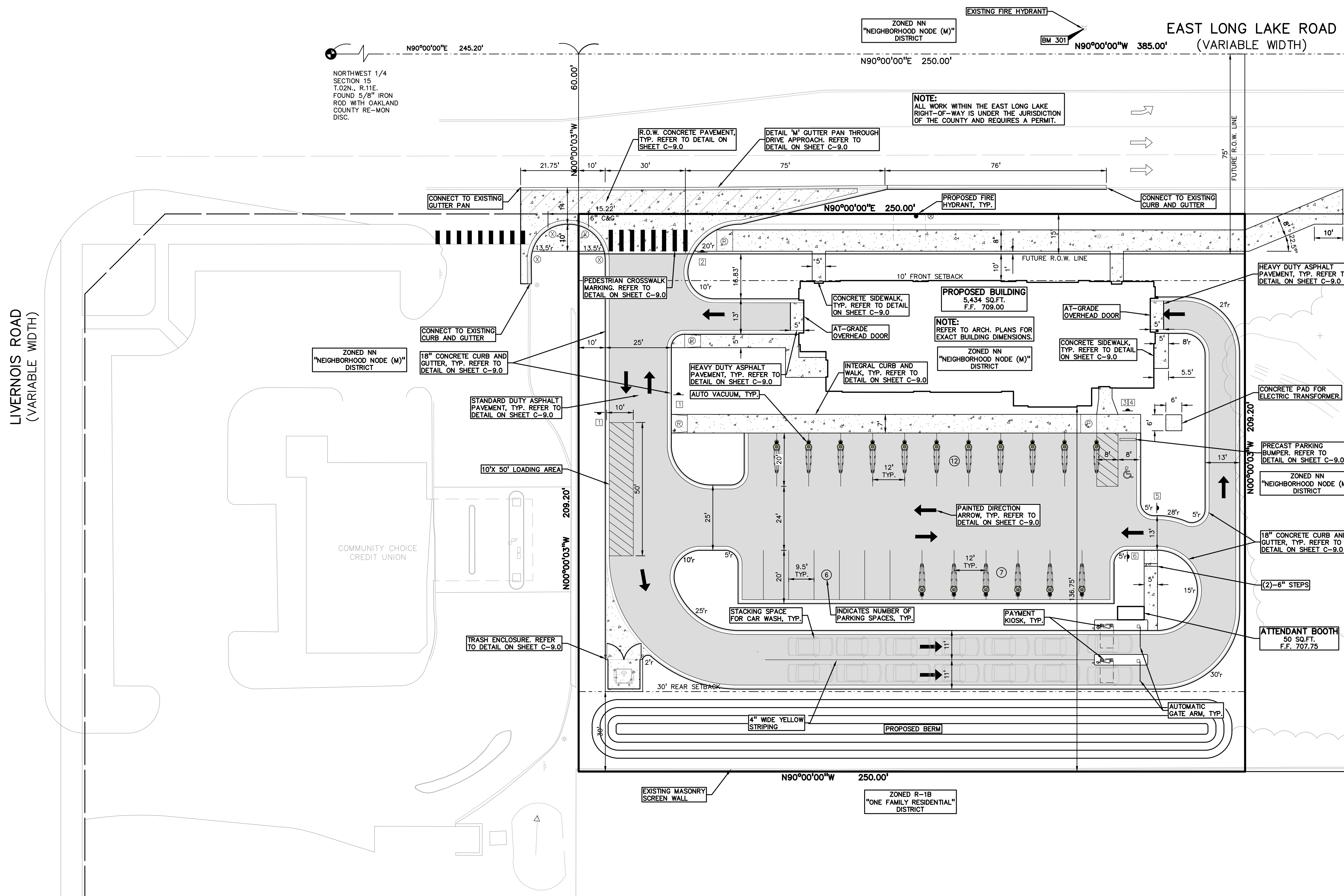
DRAWING TITLE
PRELIMINARY SITE PLAN

PEA JOB NO. 2023-1373

P.M. JPB
DN. SWS
DES. SWS

DRAWING NUMBER:

NOT FOR CONSTRUCTION C-3.0



SITE DATA TABLE:

SITE AREA: 1.20 ACRES (52,300 SQ.FT.) GROSS; 1.11 ACRES (48,550 SQ FT) NET
 ZONING: NN - NEIGHBORHOOD NODES (M) - SITE TYPE NN: A
 PROPOSED USE: VEHICLE WASH (AUTOMATIC) (5,434 SF) + ATTENDANT BOOTH (50 SF)

BUILDING INFORMATION:
 MAXIMUM ALLOWABLE BUILDING HEIGHT = 45 FEET (3 STORIES)
 PROPOSED BUILDING HEIGHT = 22'-5" (1 STORY)
 BUILDING FOOTPRINT AREA = 5,434 SQ.FT. + 50 SQ.FT. = 5,484 SQ.FT.
 BUILDING LOT COVERAGE = 5,484 / 48,546 = 11.3%

SETBACK REQUIREMENTS:

REQUIRED:	PROPOSED:
FRONT (NORTH): 10'	10'
SIDE (EAST): N/A	33.71'
SIDE (WEST): N/A	82.82'
REAR (SOUTH): 30'	151.75'

PARKING CALCULATIONS:
 VEHICLE WASH SPACES = 1 SPACE PER EMPLOYEE ON LARGEST SHIFT
 STACKING SPACES = 2 SPACES + 12 STACKING SPACES PER BAY

REQUIRED:
 VEHICLE WASH SPACES = 6 EMPLOYEES X 1 SPACE/EMPLOYEE = 6 PARKING SPACES
 STACKING SPACES = 2 + (12 X 1 BAY) = 14 STACKING SPACES

PROVIDED:
 VEHICLE WASH SPACES = 6 PARKING SPACES
 STACKING SPACES = 14 STACKING SPACES

LOADING CALCULATIONS:
 LOADING REQUIRED = 1 SPACE (10' x 50')
 LOADING PROVIDED = 1 SPACE

OPEN SPACE:
 MINIMUM OPEN SPACE REQUIRED = 30%
 PROVIDED OPEN SPACE = 18,216 / 48,550 = 37.5%

SITE SOILS INFORMATION:
 ACCORDING TO THE USDA NATURAL RESOURCES CONSERVATION SERVICE WEB SOIL SURVEY FOR OAKLAND COUNTY, THE SITE CONSISTS OF THE FOLLOWING SOIL TYPES:
 - LENAWEE SILTY CLAY LOAM, 0 TO 1 PERCENT SLOPES
 - METAMORA SANDY LOAM, 0 TO 3 PERCENT SLOPES
 - URBAN LAND

S:\PROJECTS\2023\03-1373 JAX TROY (2) DWG\2_SITE_PLAN\03-1373-001-01-001.dwg PLOT DATE: 4/26/2024 8:51:50AM

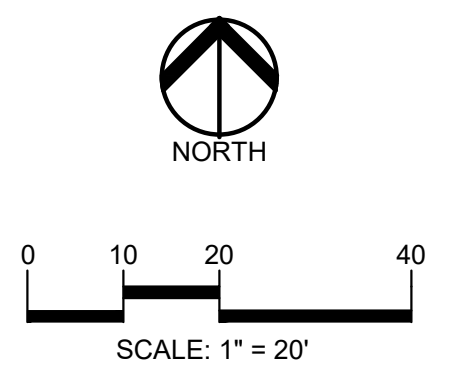
EARTHWORK BALANCING NOTE:
THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPORTING OR EXPORTING ALL MATERIALS AS REQUIRED TO PROPERLY GRADE THIS PROJECT TO THE FINISHED ELEVATIONS SHOWN ON THE APPROVED PLANS. THE CONTRACTOR SHALL MAKE THEIR OWN DETERMINATION OF CUT AND FILL QUANTITIES AND ALLOW FOR REMOVAL OF EXCESS OR IMPORTATION OF ADDITIONAL MATERIAL AT NO ADDITIONAL COST TO THE OWNER.

GRADING LEGEND:

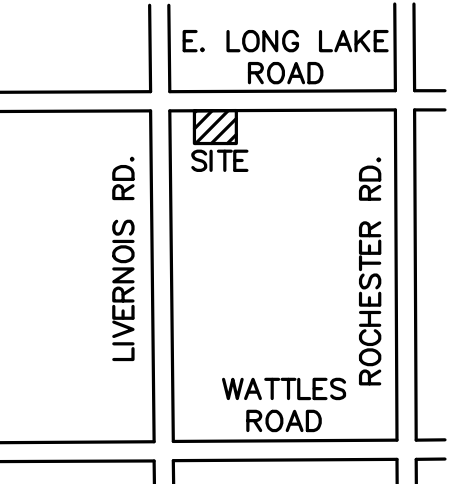
 4208.91 EXISTING SPOT ELEVATION
 622.50 PROPOSED SPOT ELEVATION: TYPICALLY TOP OF PAVEMENT IN PAVED AREAS, GUTTER GRADE IN CURB LINES.
 670 EXISTING CONTOUR
 922 PROPOSED CONTOUR
 PROPOSED REVERSE GUTTER PAN
 PROPOSED RIDGE LINE
 PROPOSED SWALE/DITCH

SIDEWALK RAMP LEGEND:
 SIDEWALK RAMP 'TYPE R'
 SIDEWALK RAMP 'TYPE P'
 REFER TO LATEST MDOT R-28 STANDARD RAMP AND DETECTABLE WARNING DETAILS

ABBREVIATIONS
 T/C = TOP OF CURB G = GUTTER GRADE
 T/P = TOP OF PAVEMENT FF = FINISH FLOOR
 T/S = TOP OF SIDEWALK FG = FINISH GRADE
 TW = TOP OF WALL RIM = RIM ELEVATION
 BW = BOTTOM OF WALL
 REFER TO GRADING NOTES ON THIS SHEET



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CLIENT
CUNNINGHAM LIMP COMPANY
 28970 CABOT DR.
 NOVI, MI 48217

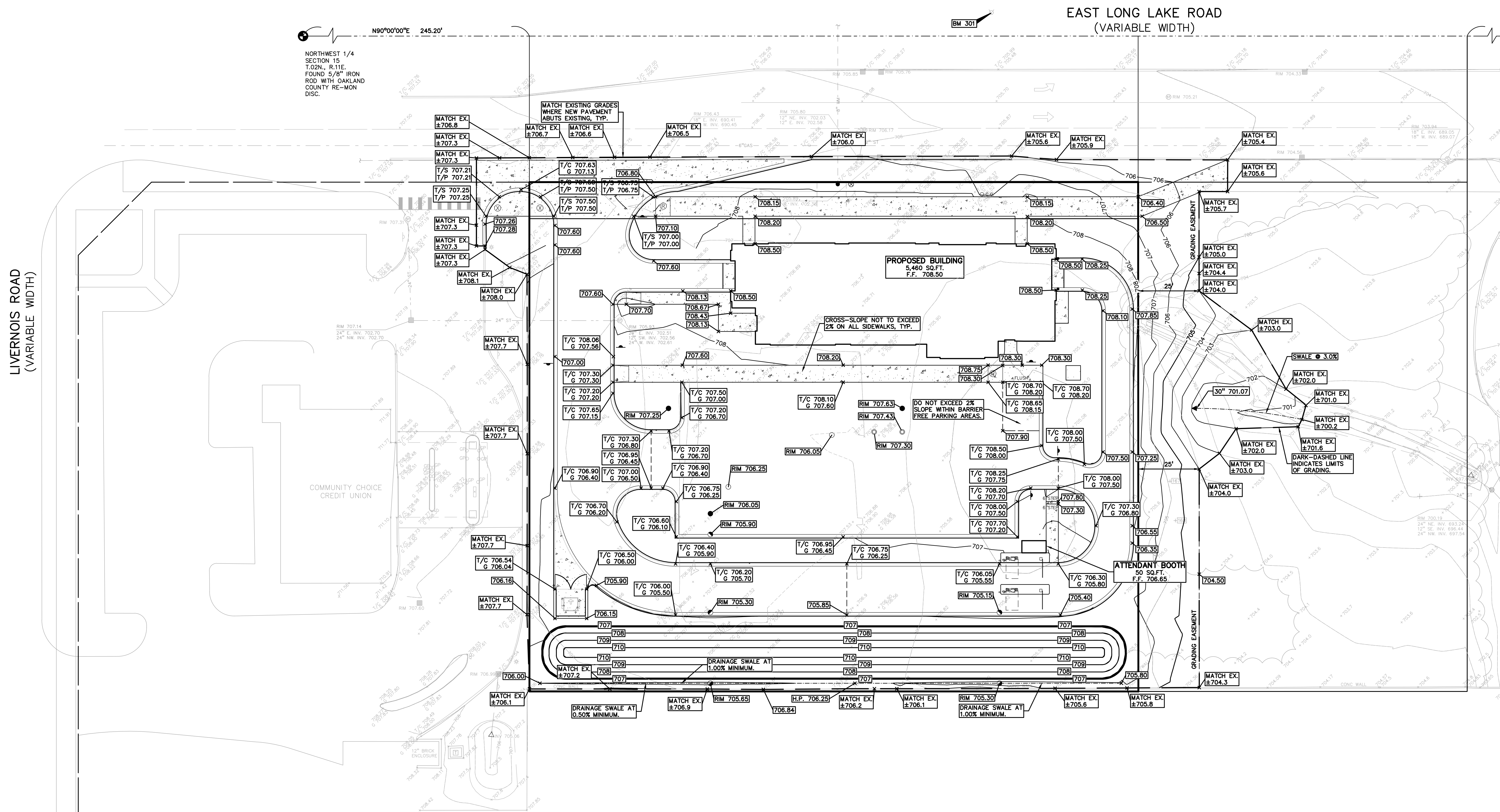
PROJECT TITLE
JAX TROY
 102 E. LONG LAKE RD.
 TROY, MICHIGAN

REVISIONS
 BUILDING SHIFT 4.26.24

ORIGINAL ISSUE DATE:
 MARCH 8, 2024

DRAWING TITLE
PRELIMINARY GRADING PLAN

PEA JOB NO. 2023-1373
 P.M. JPB
 DN. SWS
 DES. SWS
 DRAWING NUMBER:



NOT FOR CONSTRUCTION

C-4.0

S:\PROJECTS\2023\03-1373_JAX_TROY (2)\DWG\2_SHEET_PLAN\0-40\PRAC-23-1373.dwg PLOT DATE: 4/26/2024 BY: SWS

STORM STRUCTURES	
MH 2	(6" DIA./0' SUMP) RIM = 707.63 18" S 704.26 24" W 701.69 6" N 703.89 30" E 701.29
PS 3	(6" DIA./0' SUMP) RIM = 707.43 18" W 698.75 18" N 704.29
OC 4	(6" DIA./0' SUMP) RIM = 707.30 18" W 698.78 18" E 698.78
WQU 7	(4" DIA./0' SUMP) RIM = 706.05 18" S 699.72 18" N 699.02
CB 8	(4" DIA./0' SUMP) RIM = 705.90 12" S 700.15 18" N 699.75
CB 9	(4" DIA./0' SUMP) RIM = 705.30 12" E 700.27 6" S 701.17 12" N 700.27
CB 10	(4" DIA./0' SUMP) RIM = 705.15 6" S 701.15 12" W 700.75
CB 11	(4" DIA./0' SUMP) RIM = 705.30 6" N 701.44
CB 12	(4" DIA./0' SUMP) RIM = 705.65 6" N 701.46
MH 13	(6" DIA./0' SUMP) RIM = 707.25 24" NW 702.27 24" E 702.27
EX 14	(4" DIA./0' SUMP) RIM = 708.10 24" SE 702.51

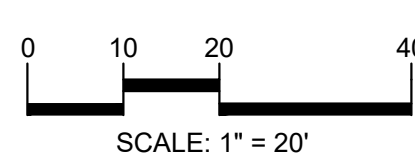
END SECTIONS	
1	END SECTION 30" 701.07

HYDRANTS	
a	HYDRANT ASSEMBLY F.G. = 707.80

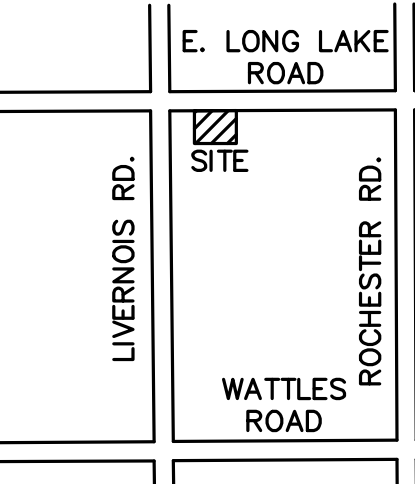
WATER MAIN STRUCTURES	
b	2" VALVE IN BOX RIM = 707.80

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 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



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CLIENT
CUNNINGHAM LIMP COMPANY
28970 CABOT DR.
NOKLE MI 48377

PROJECT TITLE
JAX TROY
102 E. LONG LAKE RD.
TROY, MICHIGAN

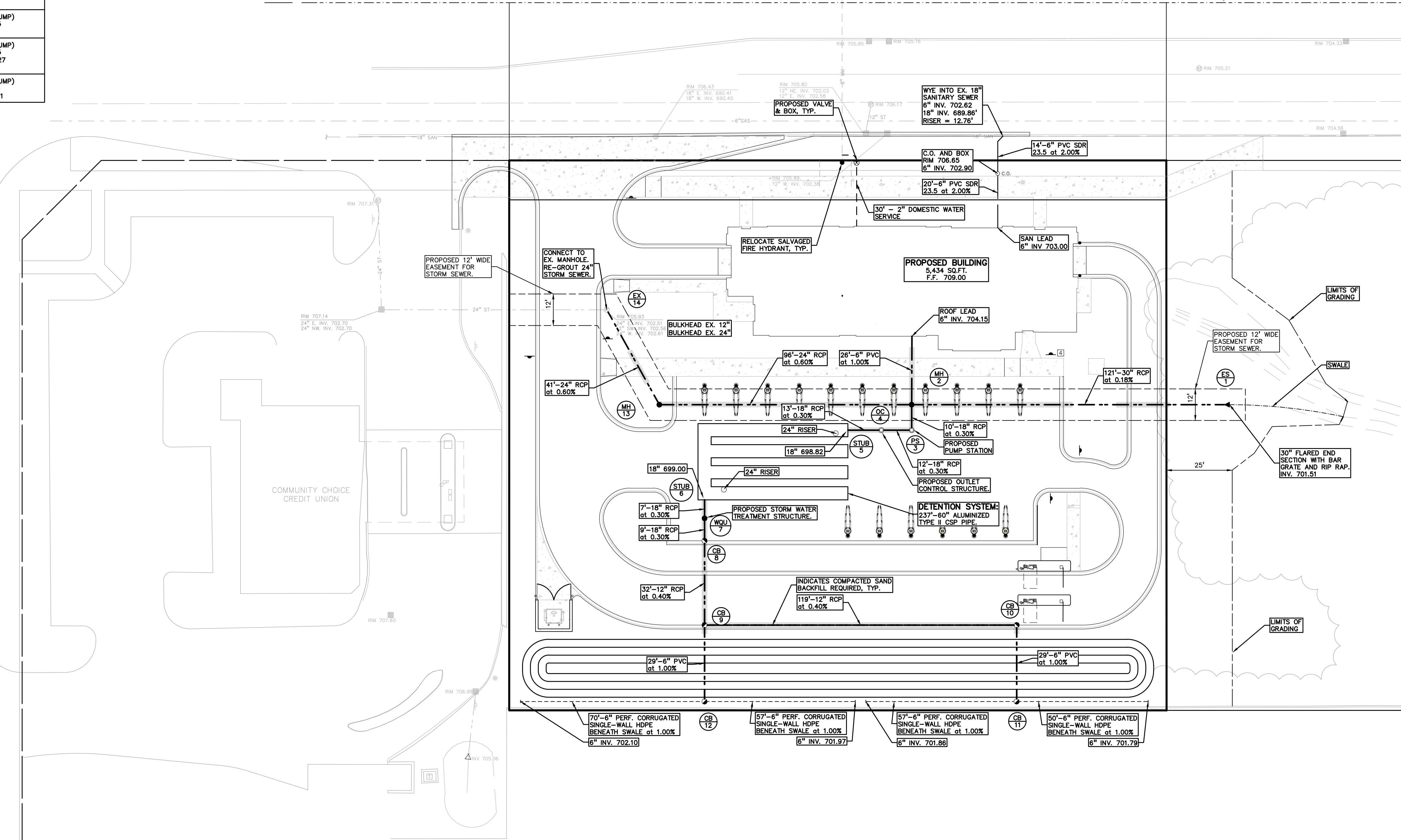
REVISIONS	
BUILDING SHIFT	4.26.24

ORIGINAL ISSUE DATE:
MARCH 8, 2024
DRAWING TITLE
PRELIMINARY UTILITY PLAN

PEA JOB NO.	2023-1373
P.M.	JPB
DN.	SWS
DES.	SWS
DRAWING NUMBER:	

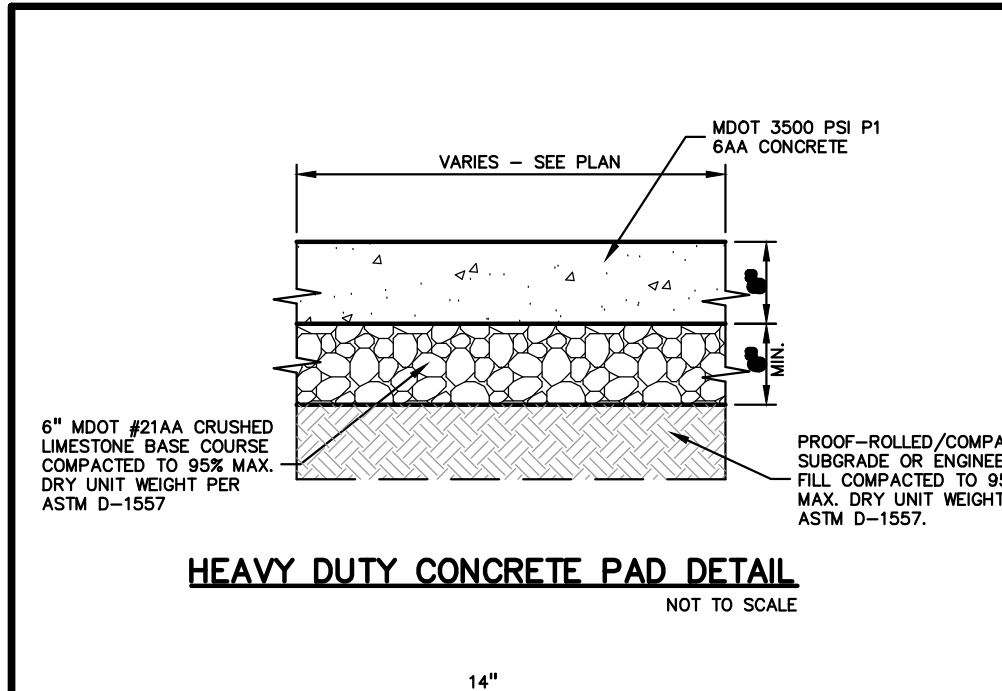
LIVERNOS ROAD
(VARIABLE WIDTH)

EAST LONG LAKE ROAD
(VARIABLE WIDTH)

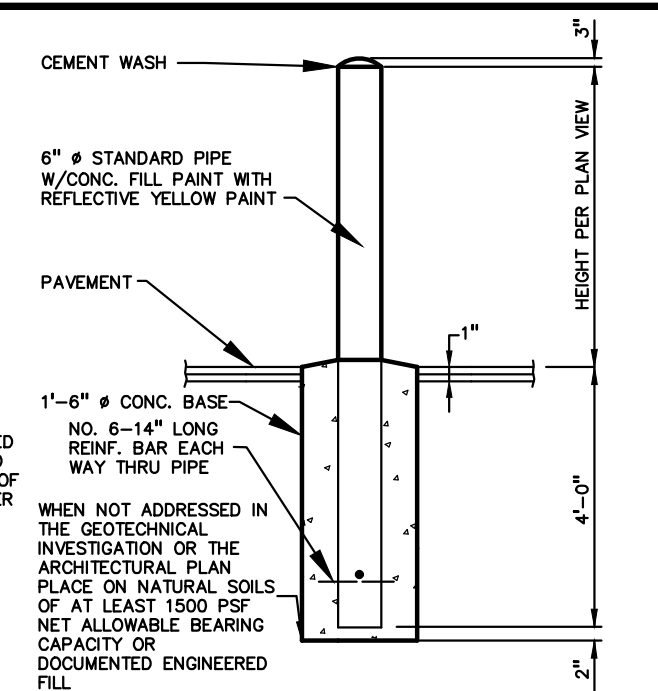


S:\PROJECTS\2023\03-1373 - JAX TROY (2) \DWG\2_PIE_PLAN(C-6.0) - 23-1373.dwg PLOT DATE: 4/26/2024 BY: 5041

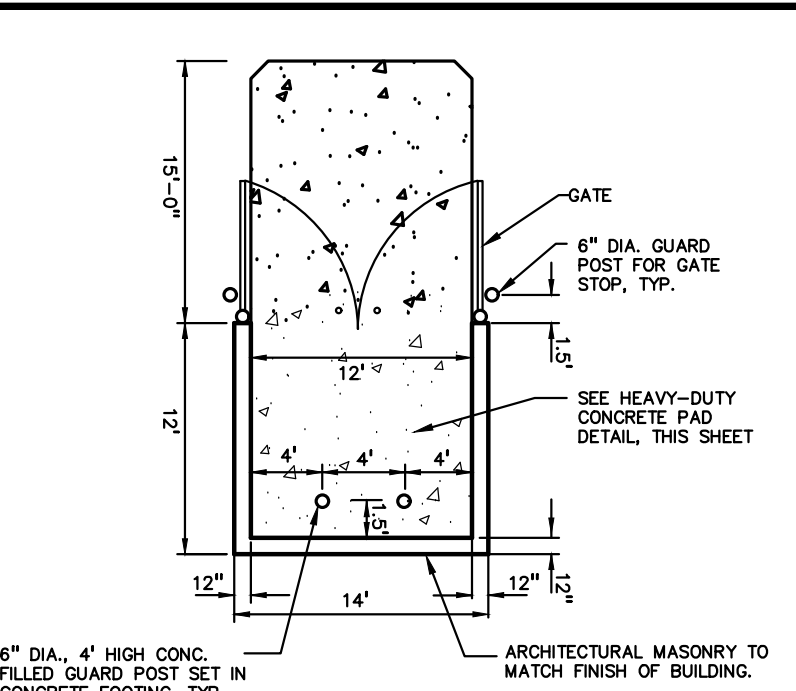
NOT FOR CONSTRUCTION **C-6.0**



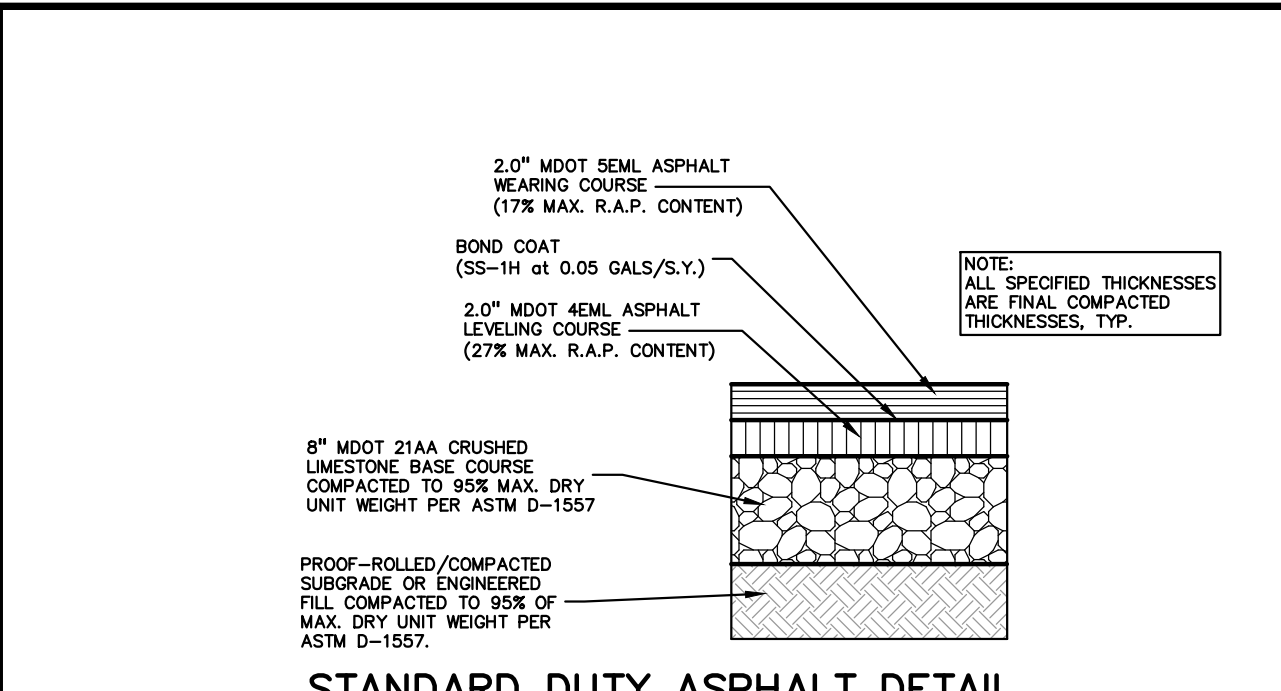
HEAVY DUTY CONCRETE PAD DETAIL
NOT TO SCALE



6\"/>



SINGLE DUMPSTER ENCLOSURE DETAIL
NOT TO SCALE



STANDARD DUTY ASPHALT DETAIL
(NOT FOR USE IN THE RIGHT-OF-WAY)

AGGREGATE BASE NOTE:
THIS PAVEMENT SECTION DESIGN ASSUMES THE USE OF MDOT 21AA CRUSHED LIMESTONE BASE MATERIAL THAT MEETS THE REQUIREMENTS OF MDOT STANDARD SPECIFICATION SECTION 902 FOR AGGREGATES. IF CRUSHED CONCRETE AGGREGATE BASE IS PROPOSED IN LEV OF THE SPECIFIED CRUSHED LIMESTONE MATERIAL, PEA GROUP WILL REQUIRE A MINIMUM 25% INCREASE IN BASE THICKNESS. HOWEVER, IF TESTING DOCUMENTATION IS PROVIDED TO PEA GROUP THAT SHOWS THAT THE CRUSHED CONCRETE MATERIAL MEETS ALL REQUIREMENTS OF MDOT SPECIFICATION SECTION 902, THEN THE 25% INCREASE IN THICKNESS MAY BE REEVALUATED.

ASPHALT MIX DESIGN CHART

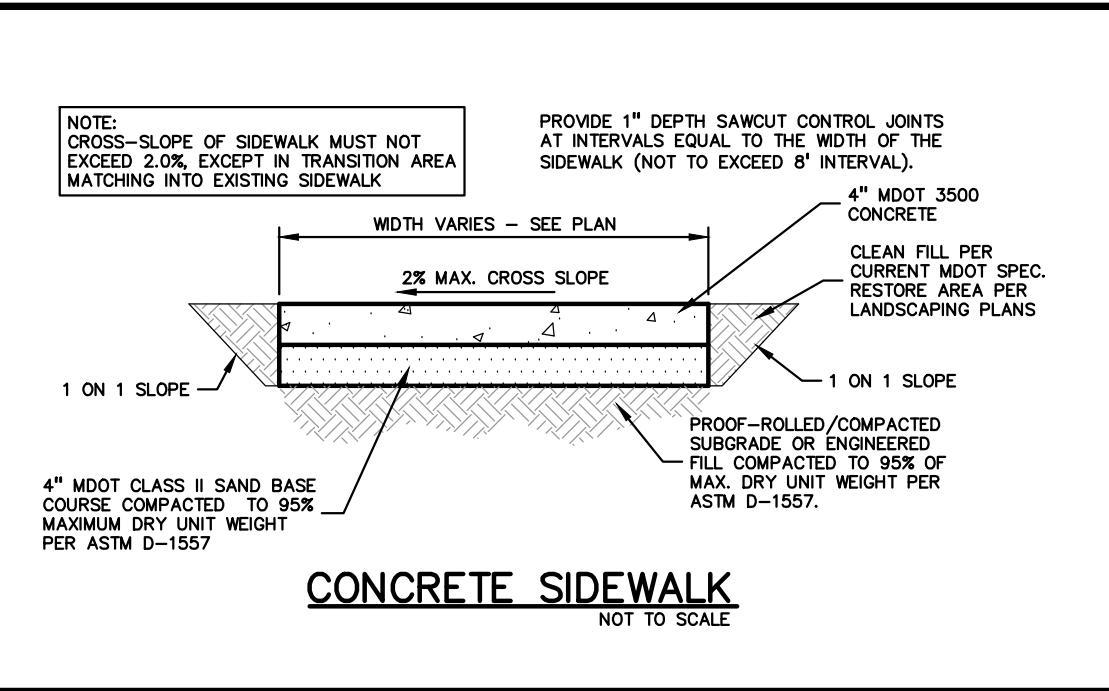
COMMERCIAL ADT 0-300	COMMERCIAL ADT 301-1000	COMMERCIAL ADT 1001-3400	COMMERCIAL ADT 3401	APPLICATION RATE (LB/SG)	COURSE APPLICATION
2EL	2EML	2EMH	2EH	435-550	BASE
3EL	3EML	3EMH	3EH	330-410	BASE AND/OR LEVELING
4EL	4EML	4EMH	4EH	220-275	LEVELING AND/OR TOP
5EL	5EML	5EMH	5EH	165-220	TOP

PG 58-28 PG 64-28 PG 64-28 PG 70-28P

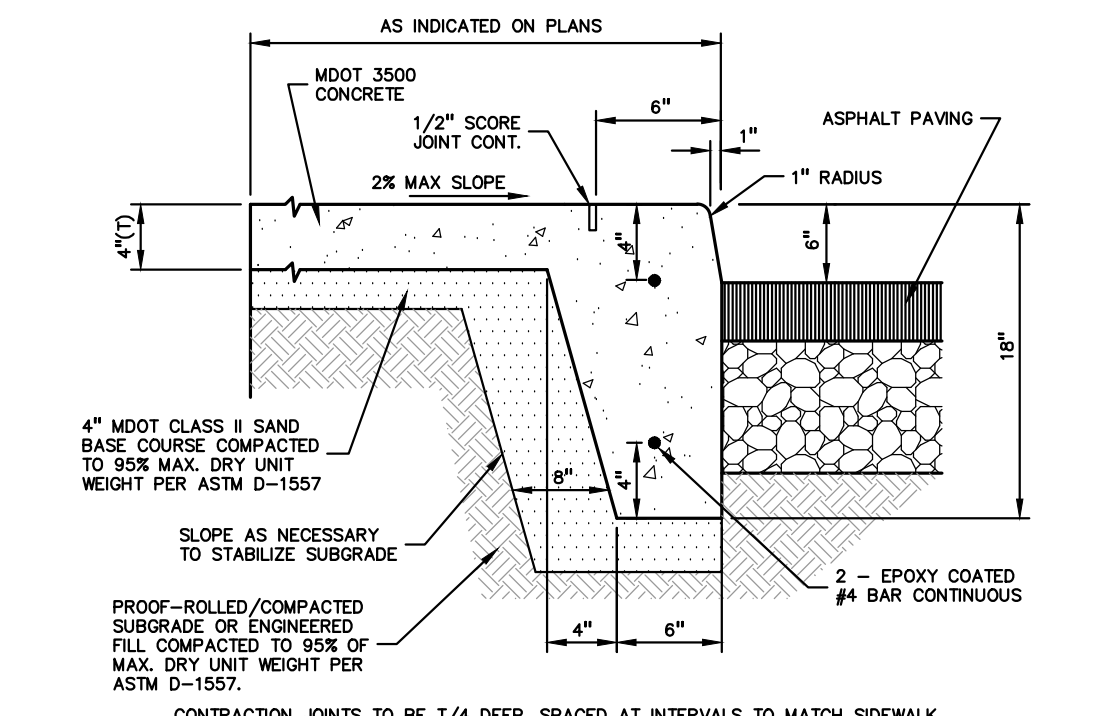
ASPHALT MIX DESIGN CHART

COMMERCIAL ADT 0-300	COMMERCIAL ADT 301-1000	COMMERCIAL ADT 1001-3400	COMMERCIAL ADT 3401	APPLICATION RATE (LB/SG)	COURSE APPLICATION
2EL	2EML	2EMH	2EH	435-550	BASE
3EL	3EML	3EMH	3EH	330-410	BASE AND/OR LEVELING
4EL	4EML	4EMH	4EH	220-275	LEVELING AND/OR TOP
5EL	5EML	5EMH	5EH	165-220	TOP

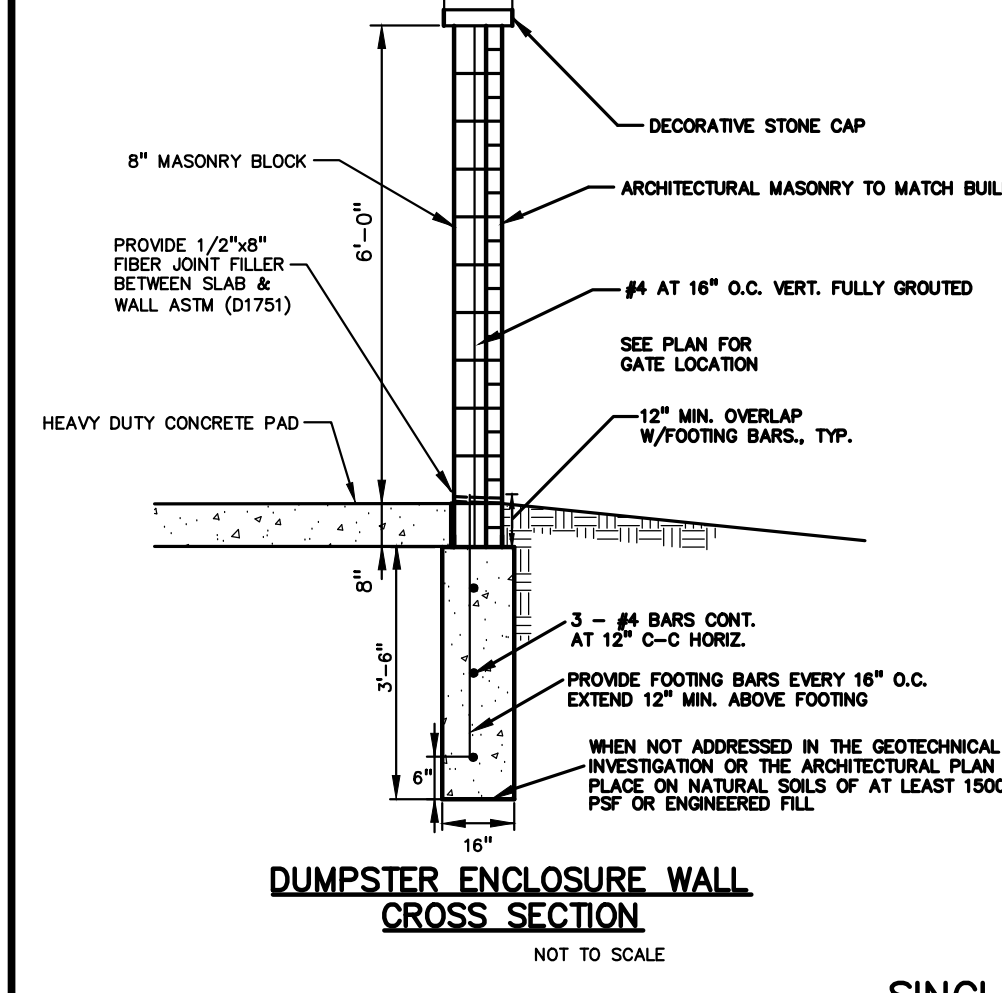
PG 58-28 PG 64-28 PG 64-28 PG 70-28P



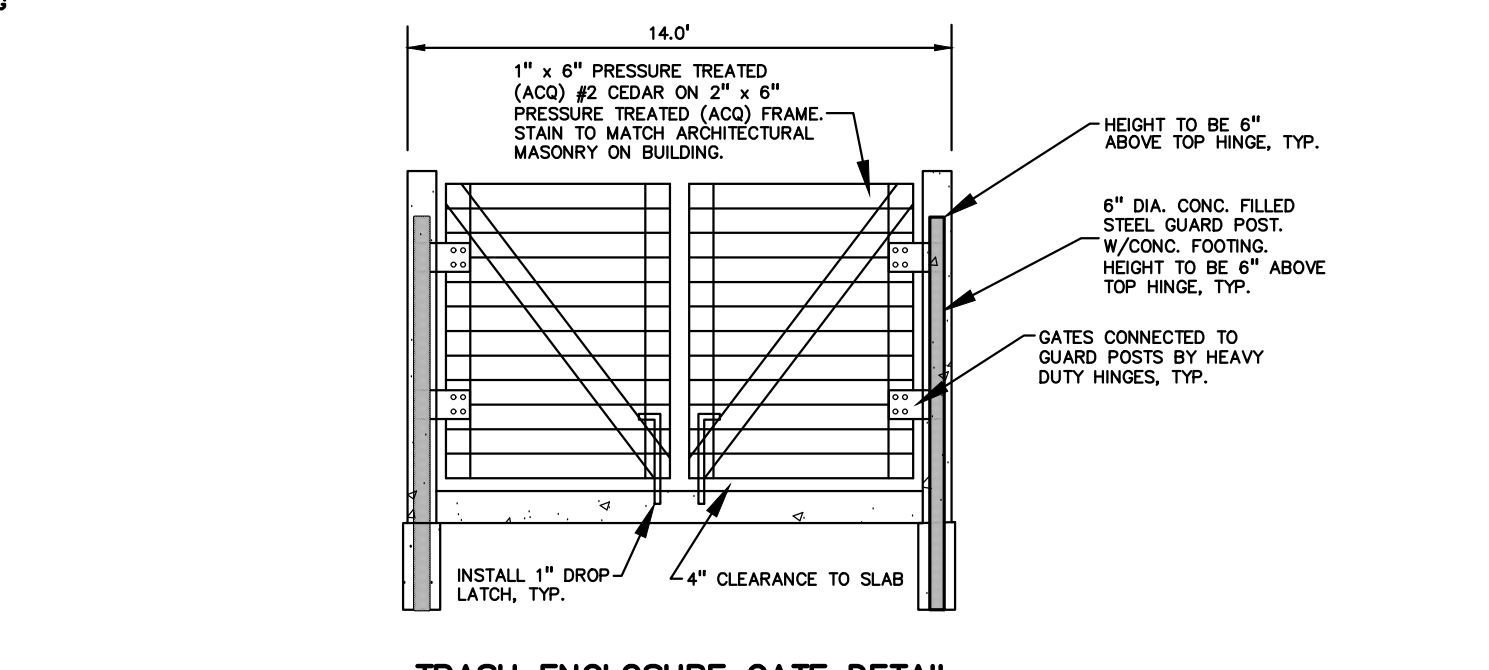
CONCRETE SIDEWALK DETAIL
NOT TO SCALE



INTEGRAL CURB AND SIDEWALK DETAIL
NOT TO SCALE

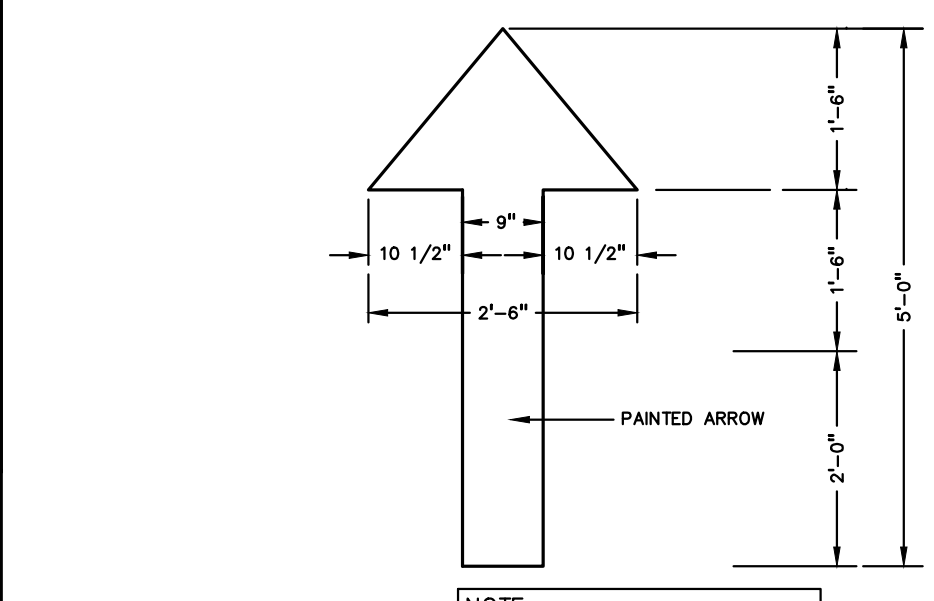


DUMPSTER ENCLOSURE WALL CROSS SECTION
NOT TO SCALE

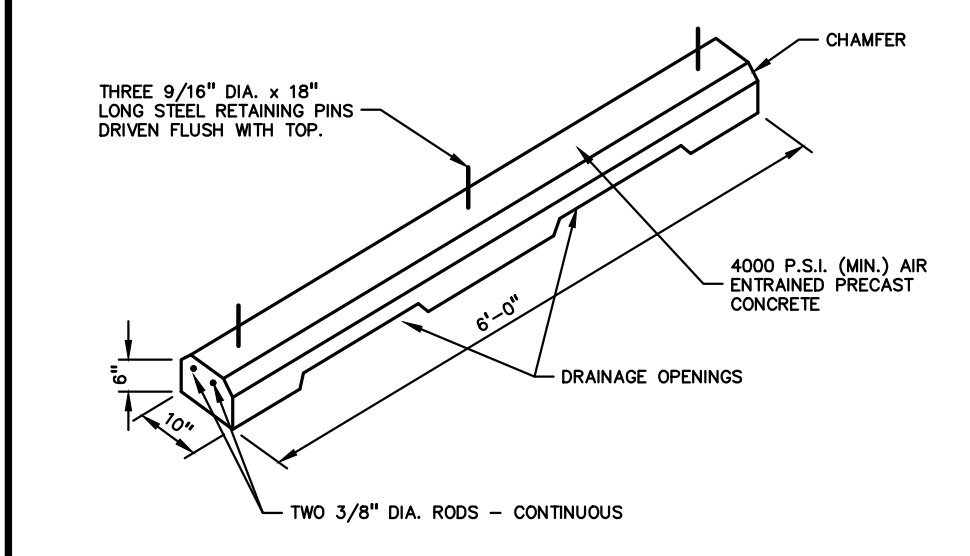


TRASH ENCLOSURE GATE DETAIL
NOT TO SCALE

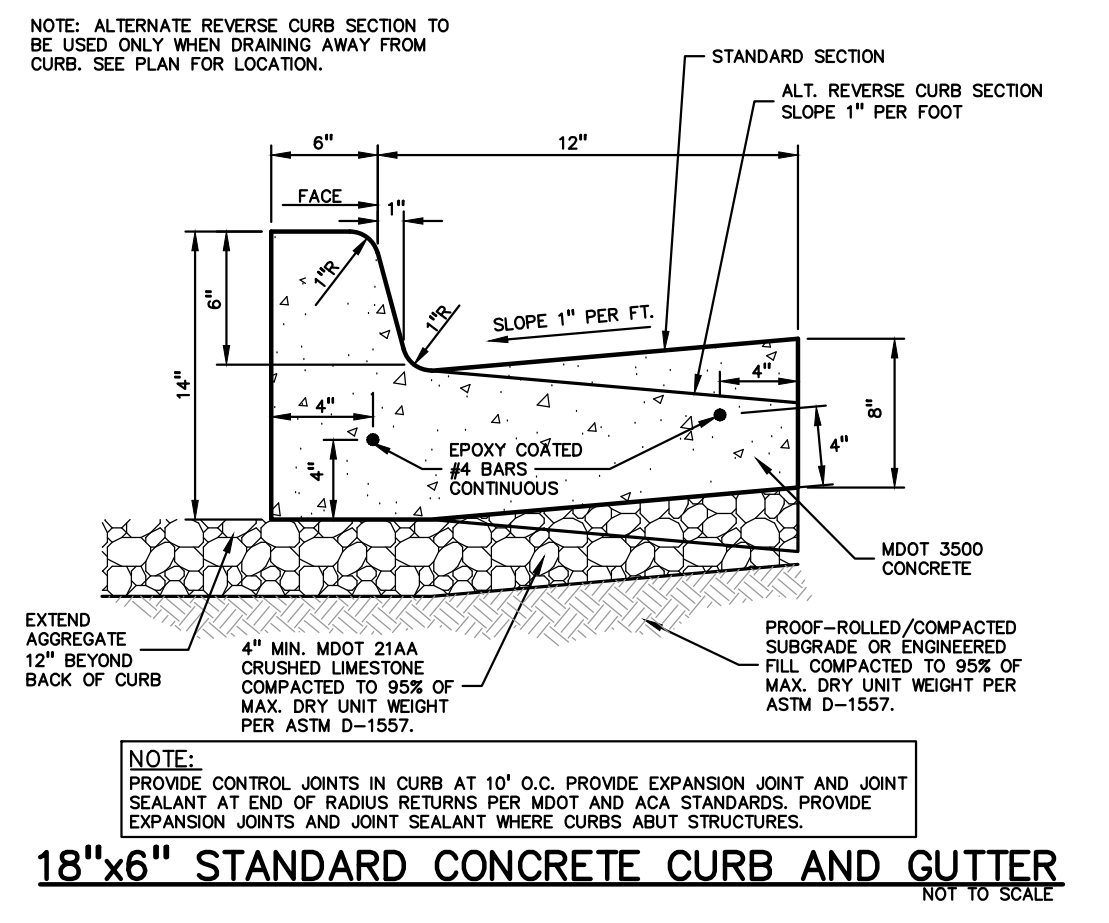
SINGLE TRASH ENCLOSURE DETAILS
NOT TO SCALE



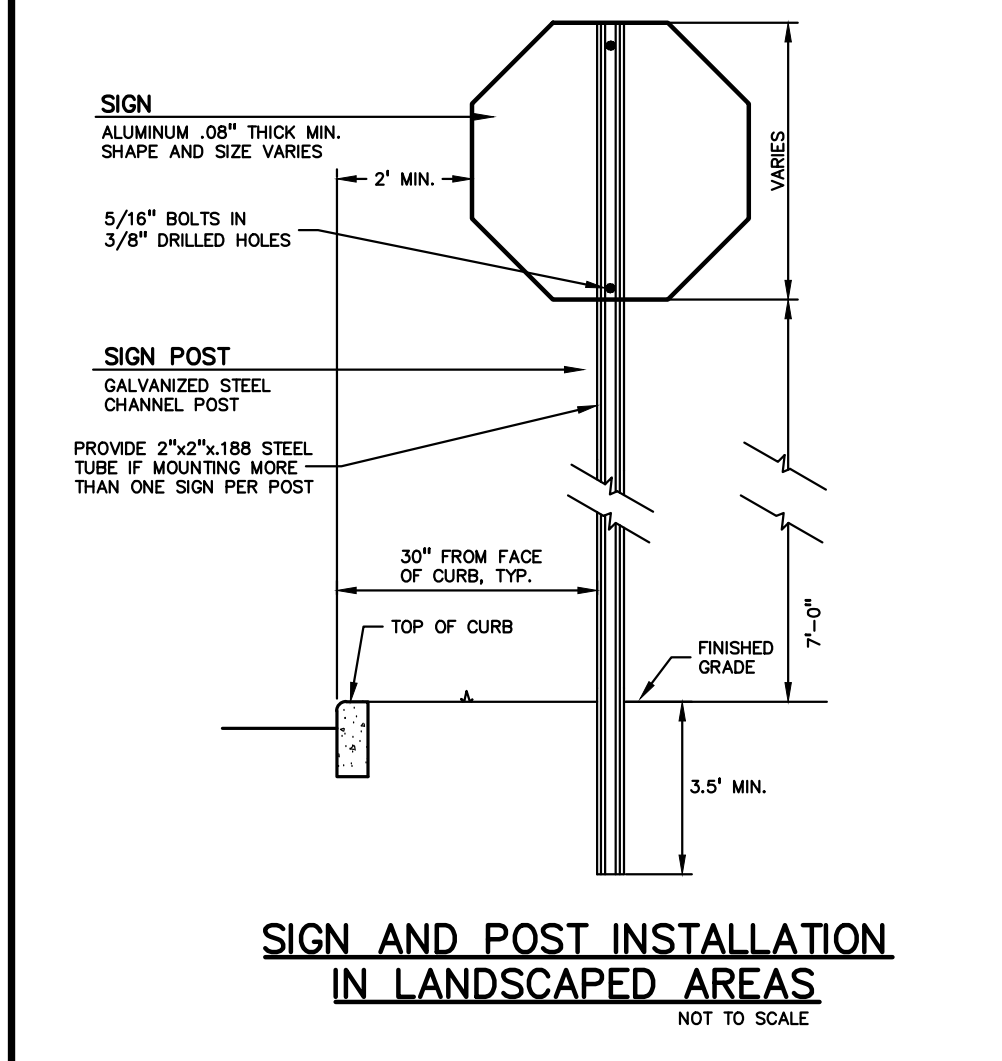
PAINTED DIRECTIONAL ARROW
NOT TO SCALE



CONCRETE PARKING BUMPER
NOT TO SCALE

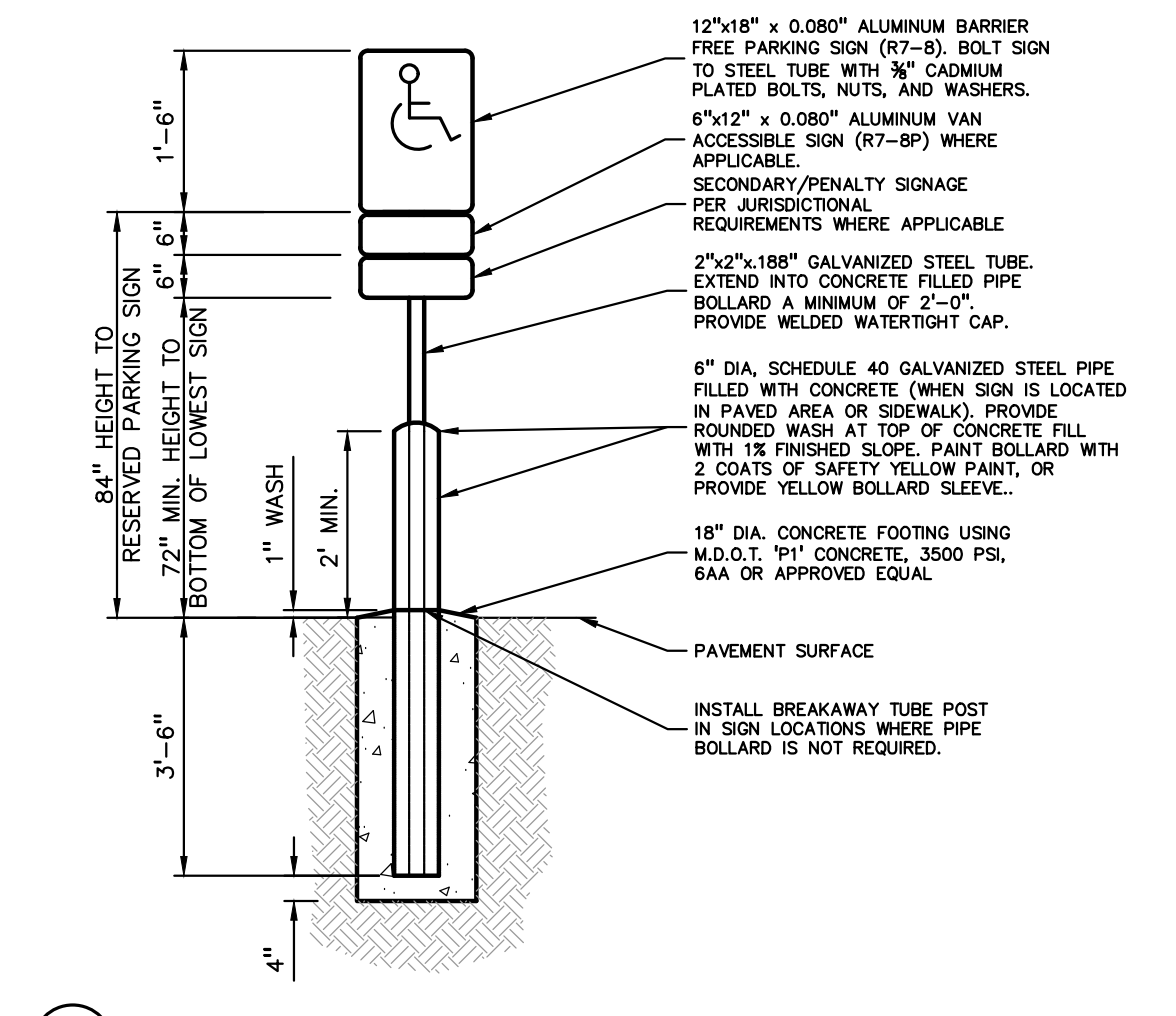


18\"/>

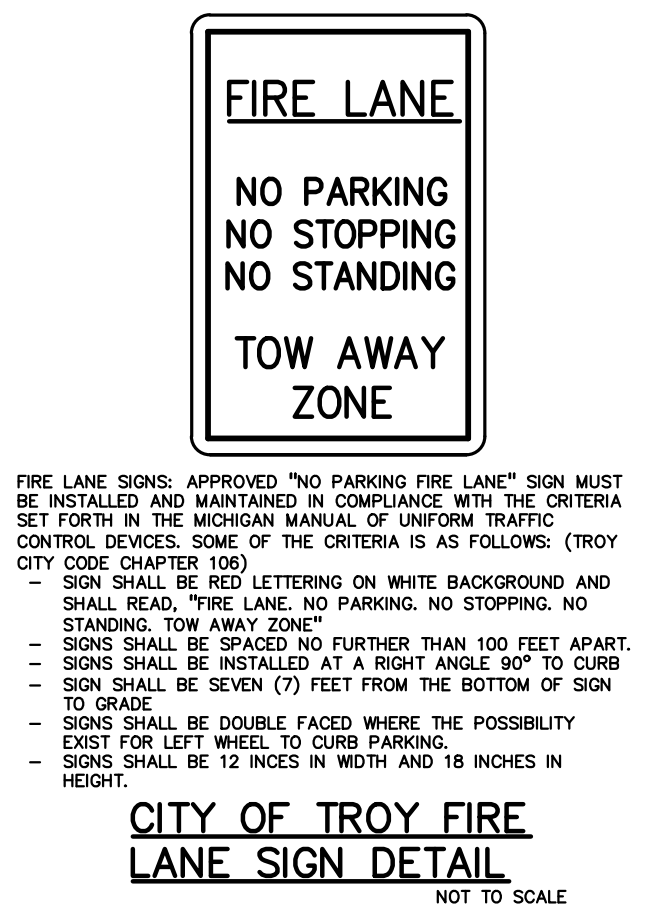


SIGN AND POST INSTALLATION IN LANDSCAPED AREAS
NOT TO SCALE

- BARRIER FREE SIGN NOTES:**
- ONE SIGN IS REQUIRED AT EACH BARRIER FREE PARKING SPACE.
 - ALL SIGNS SHALL COMPLY WITH THE LATEST STANDARDS OF THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD).
 - WHEN TWO BARRIER FREE PARKING SPACES ARE ADJACENT AND FACING EACH OTHER, TWO SIGNS ARE REQUIRED, BUT CAN BE MOUNTED ON THE SAME POST.
 - SIGN POSTS SHALL BE 2\"/>



BARRIER FREE SIGN AND POST DETAIL
NOT TO SCALE



CITY OF TROY FIRE LANE SIGN DETAIL
NOT TO SCALE



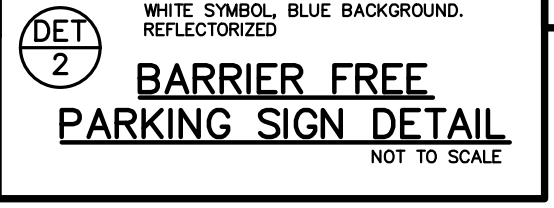
VAN ACCESSIBLE PARKING SIGN DETAIL
NOT TO SCALE



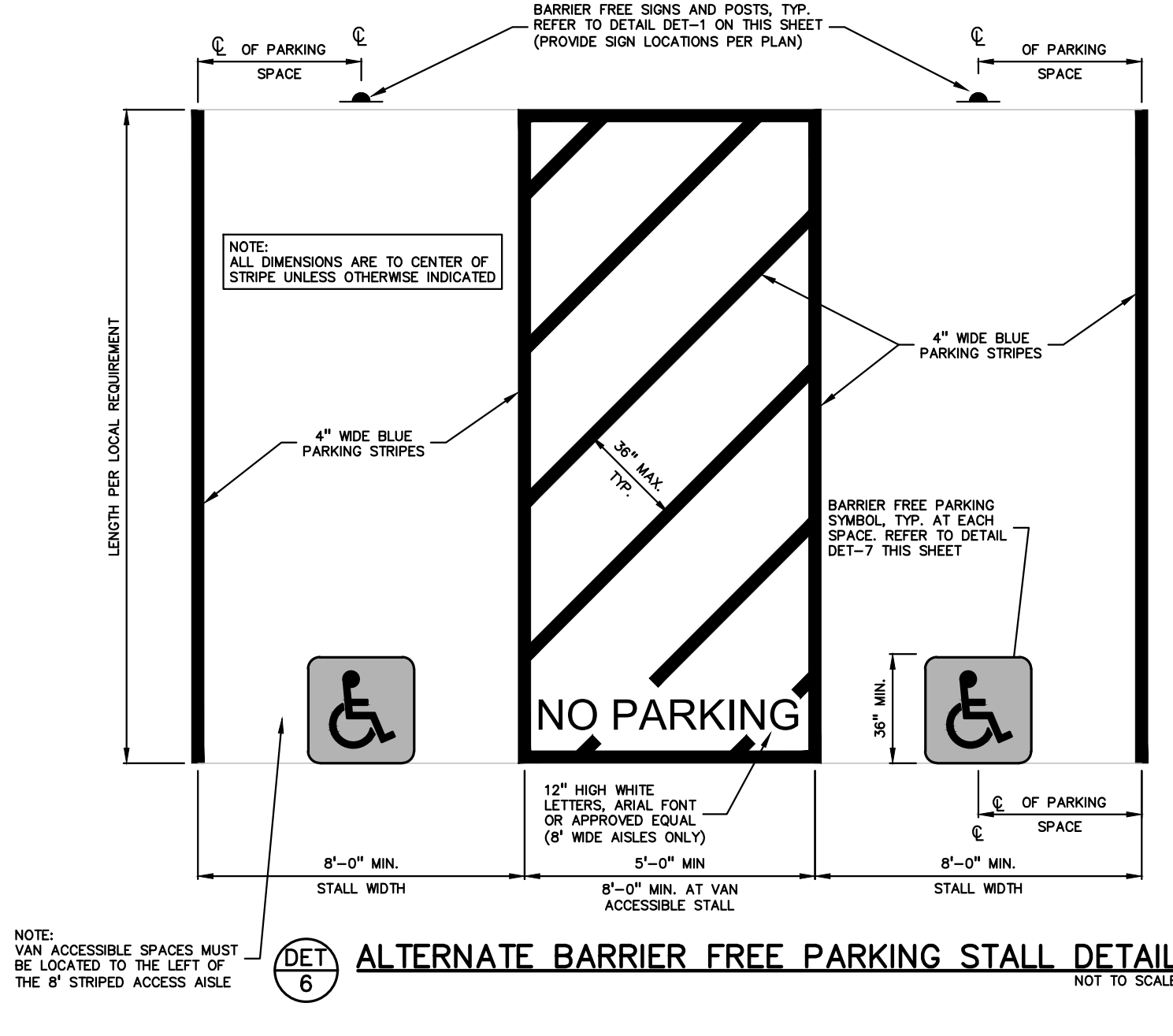
RESERVED PARKING ONLY SIGN DETAIL
NOT TO SCALE



STOP SIGN DETAIL
NOT TO SCALE

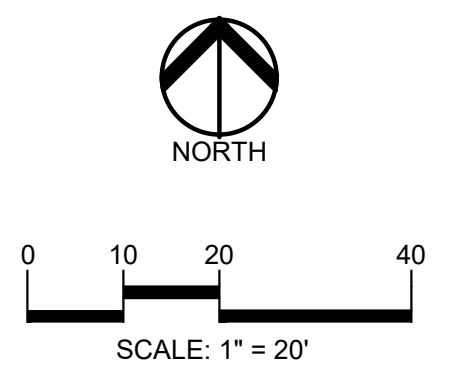


BARRIER FREE PARKING SIGN DETAIL
NOT TO SCALE



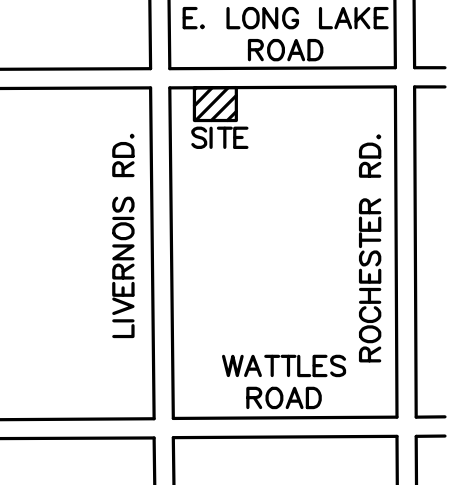
ALTERNATE BARRIER FREE PARKING STALL DETAIL
NOT TO SCALE

S:\PROJECTS\2023\03-1371_LAN_TROY\01\DWG\SITE_PLAN\DWG-9-02DETAILS-23-1371.dwg PLOT DATE: 4/29/2024 9:25:01 AM



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

CAUTION!!
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CLIENT
CUNNINGHAM LIMP COMPANY
28970 CABOT DR.
MOUNTAIN VIEW, MI 48377

PROJECT TITLE
JAX TROY
102 E. LONG LAKE RD.
TROY, MICHIGAN

REVISIONS

BUILDING SHIFT	DATE
	4.26.24

ORIGINAL ISSUE DATE:
MARCH 8, 2024
DRAWING TITLE
NOTES AND DETAILS

PEA JOB NO. 2023-1373
P.M. JPB
D.N. SWS
DES. SWS
DRAWING NUMBER:

PLANT SCHEDULE

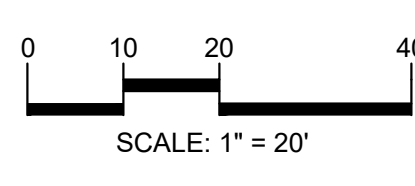
CODE	QTY	BOTANICAL / COMMON NAME	SIZE	CONTAINER	SPACING
DECIDUOUS TREES					
ASB2.5	3	ACER SACCHARUM 'BARRETT COLE' / APOLLO® SUGAR MAPLE	2.5" CAL.	B&B	PER PLAN
GBF2.5	6	GINKGO BILOBA 'FASTIGIATA' / FASTIGIATE MAIDENHAIR TREE	2.5" CAL.	B&B	PER PLAN
QA2.5	1	QUERCUS ALBA / WHITE OAK	2.5" CAL.	B&B	PER PLAN
QP2.5	4	QUERCUS ROBUR X BICOLOR 'LONG' / REGAL PRINCE® OAK	2.5" CAL.	B&B	PER PLAN
	14	SUBTOTAL:			
EVERGREEN TREES					
AC8	5	ABIES CONCOLOR / WHITE FIR	8" HT.	B&B	PER PLAN
PG8	4	PICEA GLAUCA / WHITE SPRUCE	8" HT.	B&B	PER PLAN
PS8	5	PINUS STROBUS / EASTERN WHITE PINE	8" HT.	B&B	PER PLAN
TG8	6	THUJA STANDISHII X PLICATA 'GREEN GIANT' / GREEN GIANT ARBORVITAE	8" HT.	B&B	PER PLAN
TSC8	5	TSUGA CANADENSIS / EASTERN HEMLOCK	8" HT.	B&B	PER PLAN
	25	SUBTOTAL:			
SHRUBS					
TH36	17	TAXUS X MEDIA 'HICKSII' / HICKS ANGLO-JAPANESE YEW	3" HT.	CONT.	30" O.C.
TOS6	53	THUJA OCCIDENTALIS 'SMARAGD' / EMERALD GREEN ARBORVITAE	6" HT.	B&B	36" O.C.
	70	SUBTOTAL:			

TAG	CODE	DBH	LATIN NAME	COMMON NAME	COND	NOTES	SAVE (S) / REMOVE (X)
462	E	6	Ulmus americana	American Elm	Fair	x1	X
463	BX	8	Acer negundo	Box elder	Good	x4	X
464	BL	7	Robinia pseudoacacia	Black Locust	Fair		X
465	BX	8	Acer negundo	Box elder	Fair		X
466	BL	7	Robinia pseudoacacia	Black Locust	Fair		X
167	BX	6	Acer negundo	Box elder	Fair		S
168	E	8	Ulmus americana	American Elm	Good		S

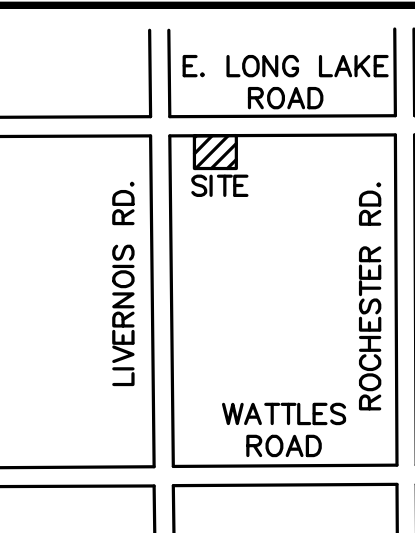
TREE REPLACEMENT	
NON-EXEMPT TREES REMOVED	0
EXEMPT TREES REMOVED	5
REPLACEMENT REQUIRED	0

KEY:

- DECIDUOUS TREES
- TREE PROTECTION
- EVERGREEN BUFFER TREE
- SHRUBS
- TREE TAG (SAVE)
- TREE TAG (REMOVE)
- ROCK, SEE DETAIL SHEET L-1.1
- RESTORE LAWN
- IRRIGATED SEED LAWN
- FOUNDATION PLANTINGS TO BE DETAILED DURING CONSTRUCTION DWGS (TO BE IRRIGATED)
- SEE SHEET L-1.1 FOR LANDSCAPE DETAILS
- P = PARKING LOT TREE
- G = GREENBELT TREE



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CLIENT
CUNNINGHAM LIMP COMPANY
28970 CABOT DR.
NOVIL MI 48377

PROJECT TITLE
JAX TROY
102 E. LONG LAKE RD.
TROY, MICHIGAN

REVISIONS	
BUILDING SHIFT	4.26.24

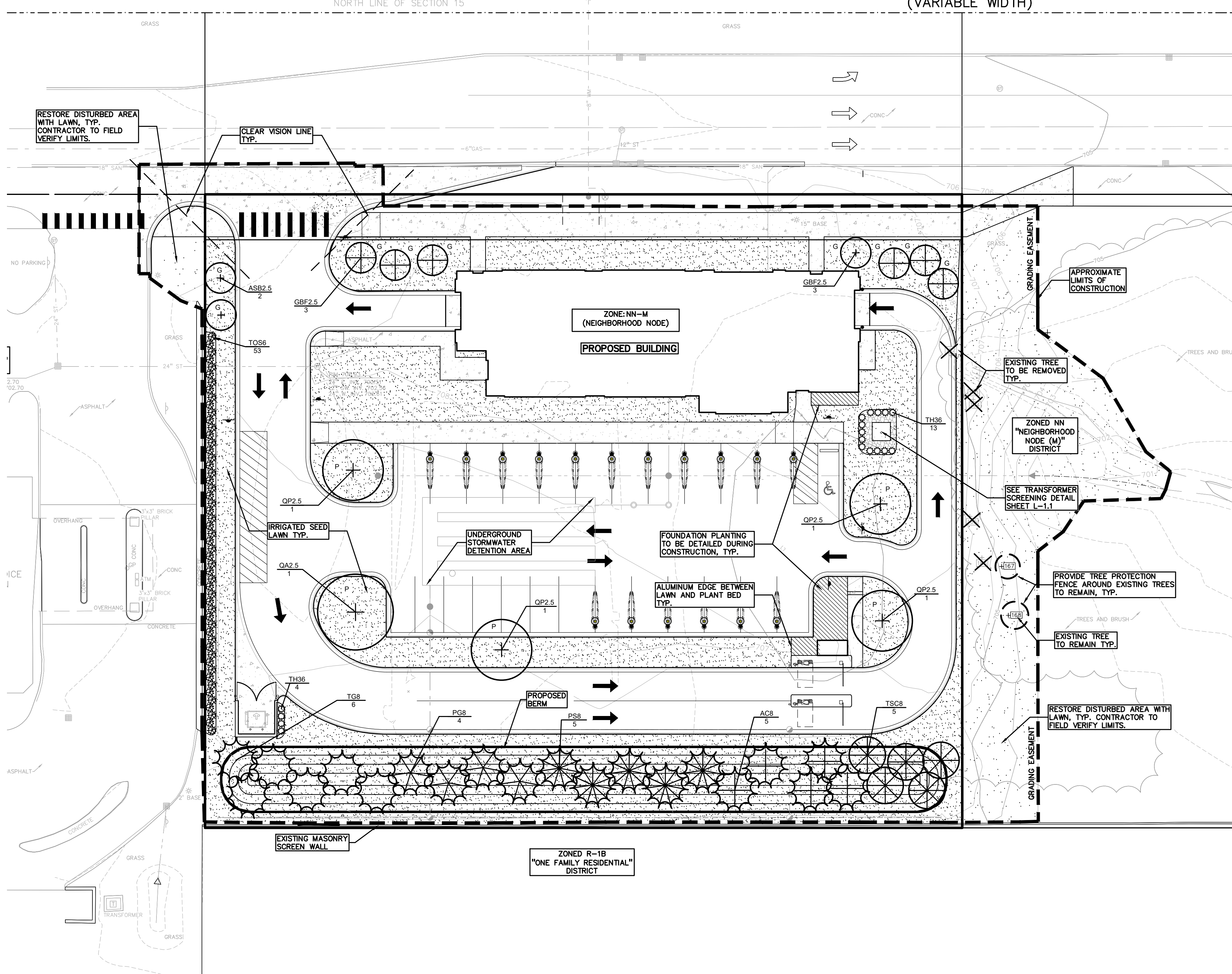
ORIGINAL ISSUE DATE:
MARCH 8, 2024

DRAWING TITLE
PRELIMINARY LANDSCAPE PLAN

PEA JOB NO.	2023-1373
P.M.	JPB
DN	CAL
DES.	JLE

DRAWING NUMBER:

EAST LONG LAKE ROAD
(VARIABLE WIDTH)



LANDSCAPE CALCULATIONS:

PER CITY OF TROY ZONING ORDINANCE:
ZONING: NN - NEIGHBORHOOD NODES (M) - SITE TYPE NN: A

PARKING LOT LANDSCAPING = P
REQUIRED: 1 TREE / 6 PARKING SPACES AND 200 SF MINIMUM PARKING ISLANDS
25 PARKING SPACES / 5 TREE
PROVIDED: 5 PROPOSED DEC. TREE

GREENBELT ON E. LONG LAKE RD. = G
REQUIRED: 1 DEC TREE / 30 LF OF STREET FRONTAGE
250 LF / 30 = 9 TREES
PROVIDED: 9 PROPOSED DEC. TREES

GENERAL SITE LANDSCAPE
REQUIRED: 20% OF SITE AREA SHALL BE LANDSCAPE MATERIAL:
1.20 ACRES (52,300 SQ.FT.) * 20% = 10,460 SQ FT
PROVIDED: 22,585 SQ FT OF SOFT-SCAPE/52,300 = 43.18 % LAWN & PLANT BEDS

SCREENING BETWEEN LAND USES
REQUIRED: 1 LARGE EVG PER 10 LF/1 NARROW EVG PER 5 LF OR WALL WHEN CONTIGUOUS WITH RESIDENTIAL/OFFICE LAND USES. 205 / 10 = 25 TREES
PROVIDED AT SOUTH BOUNDARY: 25 LARGE EVG. AND CONCRETE WALL

REQUIRED: 1 NARROW EVG PER 3 LF
WEST BOUNDARY: 149 LF / 3 = 53 NARROW EVG
PROVIDED: 53 NARROW EVG

EQUIPMENT SCREENING
REQUIRED: AT GRADE EQUIPMENT SHALL BE SCREENED BY EVG LANDSCAPE MATERIALS AND DUMPSTER.
PROVIDED: PROPOSED UPRIGHT EVG SHRUBS

GENERAL PLANTING NOTES:

- LANDSCAPE CONTRACTOR SHALL VISIT SITE, INSPECT EXISTING SITE CONDITIONS AND REVIEW PROPOSED PLANTING AND RELATED WORK. IN CASE OF DISCREPANCY BETWEEN PLAN AND PLANT LIST, PLAN SHALL GOVERN QUANTITIES. CONTACT LANDSCAPE ARCHITECT WITH ANY CONCERNS.
- CONTRACTOR SHALL VERIFY LOCATIONS OF ALL ON SITE UTILITIES PRIOR TO BEGINNING CONSTRUCTION ON HIS/HER PHASE OF WORK. ELECTRIC, GAS, TELEPHONE, CABLE TELEVISION MAY BE LOCATED BY CALLING MISS DIG 1-800-482-7171. ANY DAMAGE OR INTERRUPTION OF SERVICES SHALL BE THE RESPONSIBILITY OF CONTRACTOR. CONTRACTOR SHALL COORDINATE ALL RELATED ACTIVITIES WITH OTHER TRADES ON THE JOB AND SHALL REPORT ANY UNACCEPTABLE JOB CONDITIONS TO OWNER'S REPRESENTATIVE PRIOR TO COMMENCING.
- ALL PLANT MATERIAL TO BE PREMIUM GRADE NURSERY STOCK AND SHALL SATISFY AMERICAN ASSOCIATION OF NURSERYMEN STANDARD FOR NURSERY STOCK. ALL LANDSCAPE MATERIAL SHALL BE NORTHERN GROWN, NO. 1. GRADE.
- CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON LANDSCAPE PLAN PRIOR TO PRICING THE WORK.
- THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REJECT ANY PLANT MATERIAL NOT MEETING SPECIFICATIONS.
- ALL SINGLE STEM SHADE TREES TO HAVE STRAIGHT TRUNKS AND SYMMETRICAL CROWNS.
- ALL SINGLE TRUNK SHADE TREES TO HAVE A CENTRAL LEADER; TREES WITH FORKED OR IRREGULAR TRUNKS WILL NOT BE ACCEPTED.
- ALL MULTI STEM TREES SHALL BE HEAVILY BRANCHED AND HAVE SYMMETRICAL CROWNS. ONE SIDED TREES OR THOSE WITH THIN OR OPEN CROWNS SHALL NOT BE ACCEPTED.
- ALL EVERGREEN TREES SHALL BE HEAVILY BRANCHED AND FULL TO THE GROUND, SYMMETRICAL IN SHAPE AND NOT SHEARED FOR THE LAST FIVE GROWING SEASONS.
- ALL TREES TO HAVE CLAY OR CLAY LOAM BALLS, TREES WITH SAND BALLS WILL BE REJECTED.
- NO MACHINERY IS TO BE USED WITHIN THE DRIP LINE OF EXISTING TREES; HAND GRADE ALL LAWN AREAS WITHIN THE DRIP LINE OF EXISTING TREES.
- ALL TREE LOCATIONS SHALL BE STAKED BY LANDSCAPE CONTRACTOR AND ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF THE PLANT MATERIAL.
- IT IS MANDATORY THAT POSITIVE DRAINAGE IS PROVIDED AWAY FROM ALL BUILDINGS.
- ALL PLANTING BEDS SHALL RECEIVE 3" SHREDDED HARDWOOD BARK MULCH WITH PRE EMERGENT, SEE SPECIFICATIONS. SHREDDED PALETTE AND DYED MULCH WILL NOT BE ACCEPTED.
- ALL LANDSCAPED AREAS SHALL RECEIVE 3" COMPACTED TOPSOIL.
- SEE SPECIFICATIONS FOR ADDITIONAL COMMENTS, REQUIREMENTS, PLANTING PROCEDURES AND WARRANTY STANDARDS.
- FOR NON-LAWN SEED MIX AREAS, AS NOTED ON PLAN, BRUSH MOW ONCE SEASONALLY FOR INVASIVE SPECIES CONTROL.
- CONTRACTOR SHALL NOT INSTALL PLANTS UNDER BUILDING OVERHANG AND SHALL NOTIFY LANDSCAPE ARCHITECT IF DRAWINGS CONFLICT WITH BUILDING OVERHANGS.
- TREES SHALL NOT CONFLICT / BLOCK PROPOSED REGULATORY / DIRECTION SIGNAGE, MONUMENT SIGNS, ADDRESS OR LIGHT POLES. SHIFT TREES AS NECESSARY TYP.
- ALL LANDSCAPE AREAS WILL BE IRRIGATED OR HAVE A READILY AVAILABLE AND ACCEPTABLE WATER SUPPLY.

NOT FOR CONSTRUCTION

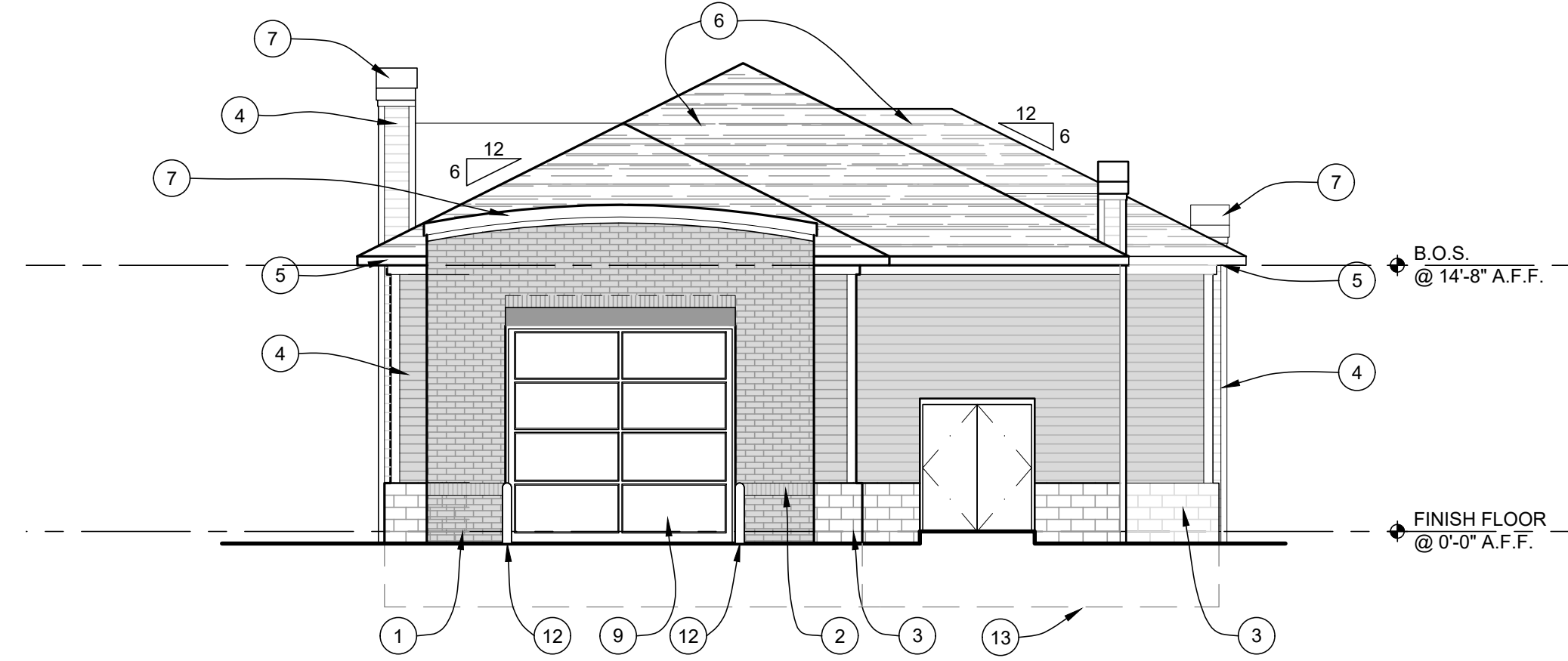
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S:\PROJECTS\2023\03-1373_JAX_TROY (2)\DWG\LANDSCAPE\1-01_LANDSCAPE-23-1373.dwg PLOT DATE: 4/29/2024 8:24:05 AM

GLASS	
TOTAL WALL AREA: 30%	693.3 S.F. 208 S.F.
GLASS & DOOR AREA PROPOSED: 30.5% = 211.2 S.F.	

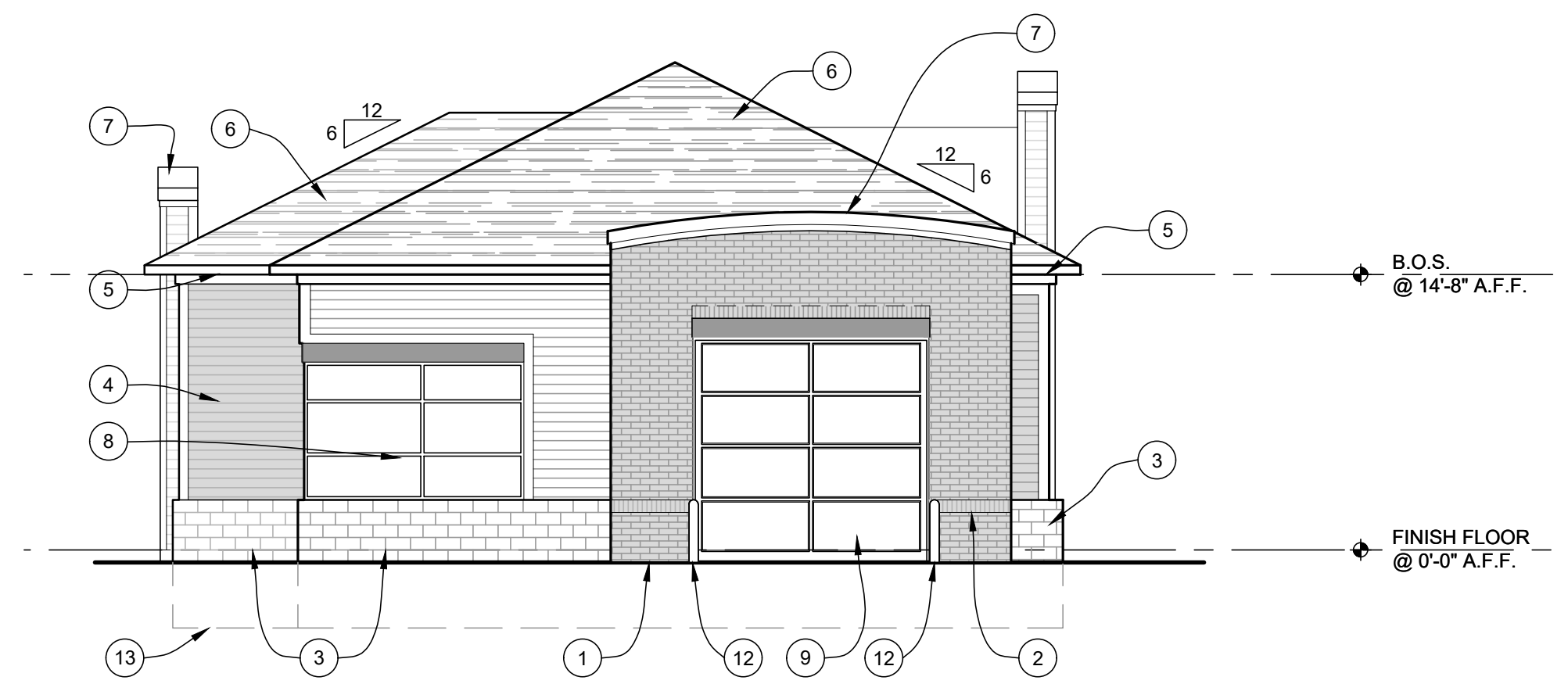
GLASS	
TOTAL WALL AREA: 30%	689.5 S.F. 206.9 S.F.
GLASS & DOOR AREA PROPOSED: 38.1% = 262.4 S.F.	

EXTERIOR MATERIAL SCHEDULE	
1	FULL DIMENSIONAL BRICK VENEER (FIELD COLOR)
2	1/2" RECESSED BRICK SOLDIER COURSE (ACCENT COLOR)
3	FULL DIMENSIONAL VENEER (ACCENT COLOR)
4	HORIZONTAL LAP SIDING W/ TRIM
5	1X6 FASCIA BOARD OVER 1X TRIM BOARD
6	ASPHALT SHINGLES
7	PRE-FINISHED METAL COPING
8	1" CLEAR LOW 'E' INSUL. GLAZING IN CLEAR ANOD. ALUM. THERMAL BREAK FRAMES. SHADED PARTS ARE SPANDREL GLAZING.
9	12'W x 12'H GLASS SECTIONAL INSULATED OVERHEAD GRADE DOOR w/ MOTOR OPERATED OPENER & INSULATED
10	CLEAR ANOD. ALUM. ENTRY DOOR W/ CLEAR TEMPERED GLASS
11	HOLLOW METAL DOOR & FRAME
12	6" DIA. CONC. FILLED STEEL GUARD POSTS
13	CONCRETE TRENCH FOOTING BELOW
14	DASHED LINE DENOTED PROPOSED SIGNAGE LOCATION
15	1" TINTED INSUL. SPANDREAL IN CLEAR ANOD. ALUM. THERMAL BREAK FRAMES.
16	10'W x 10'H GLASS SECTIONAL INSULATED OVERHEAD GRADE DOOR w/ MOTOR OPERATED OPENER & INSULATED
17	PRE-FINISHED ARCHITECTURAL METAL ROOFING.
18	TYP. VACUUM STATIONS (HOSE / VACUUM ARM / VERTICAL POST)



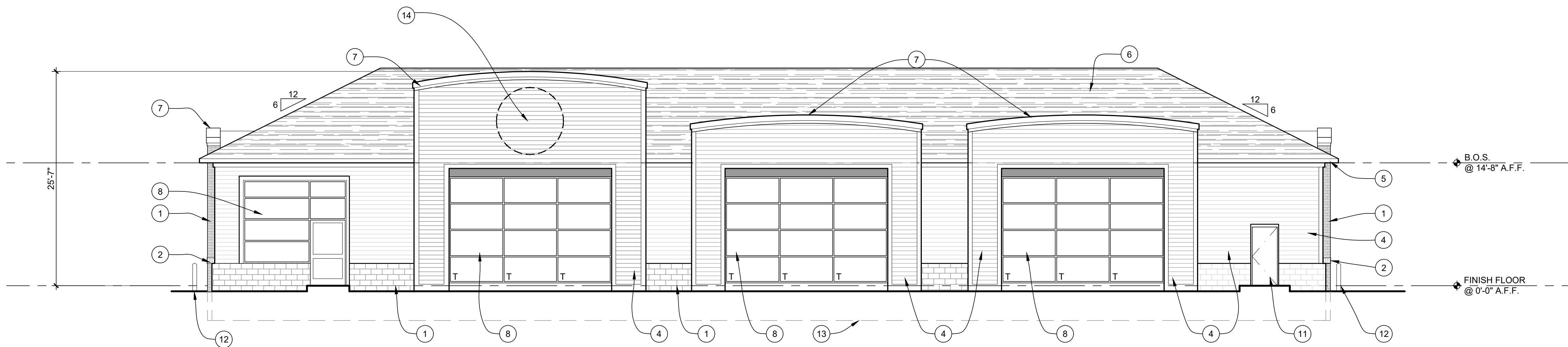
WEST ELEVATION
SCALE: 1/8" = 1'-0"

4



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

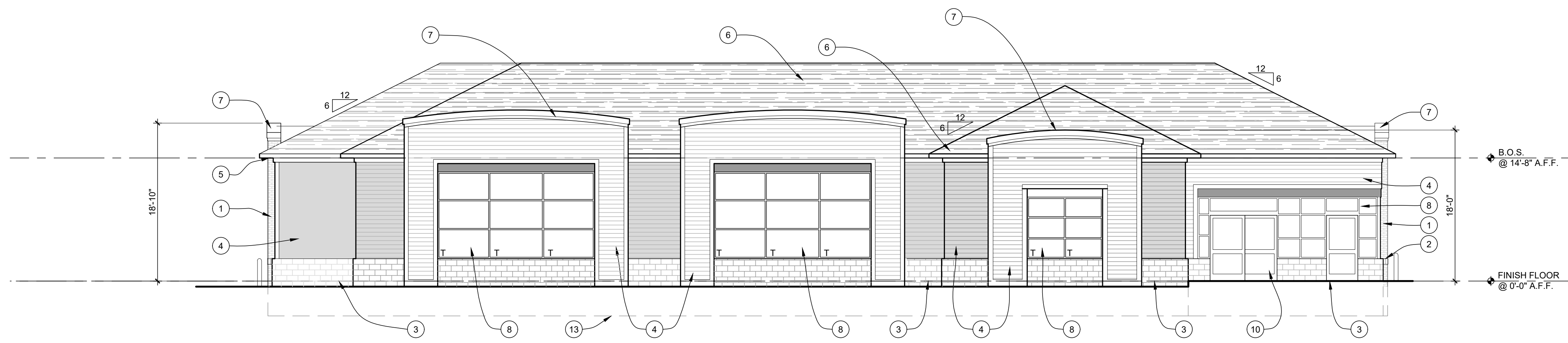
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NORTH ELEVATION
SCALE: 1/8" = 1'-0"

2

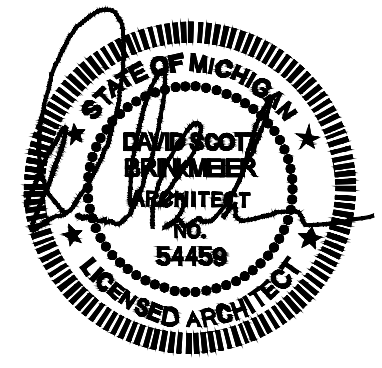
GLASS	
TOTAL WALL AREA: 50%	2024.7 S.F. 1012.4 S.F.
GLASS & DOOR AREA PROPOSED: 50% = 1012.7 S.F.	



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

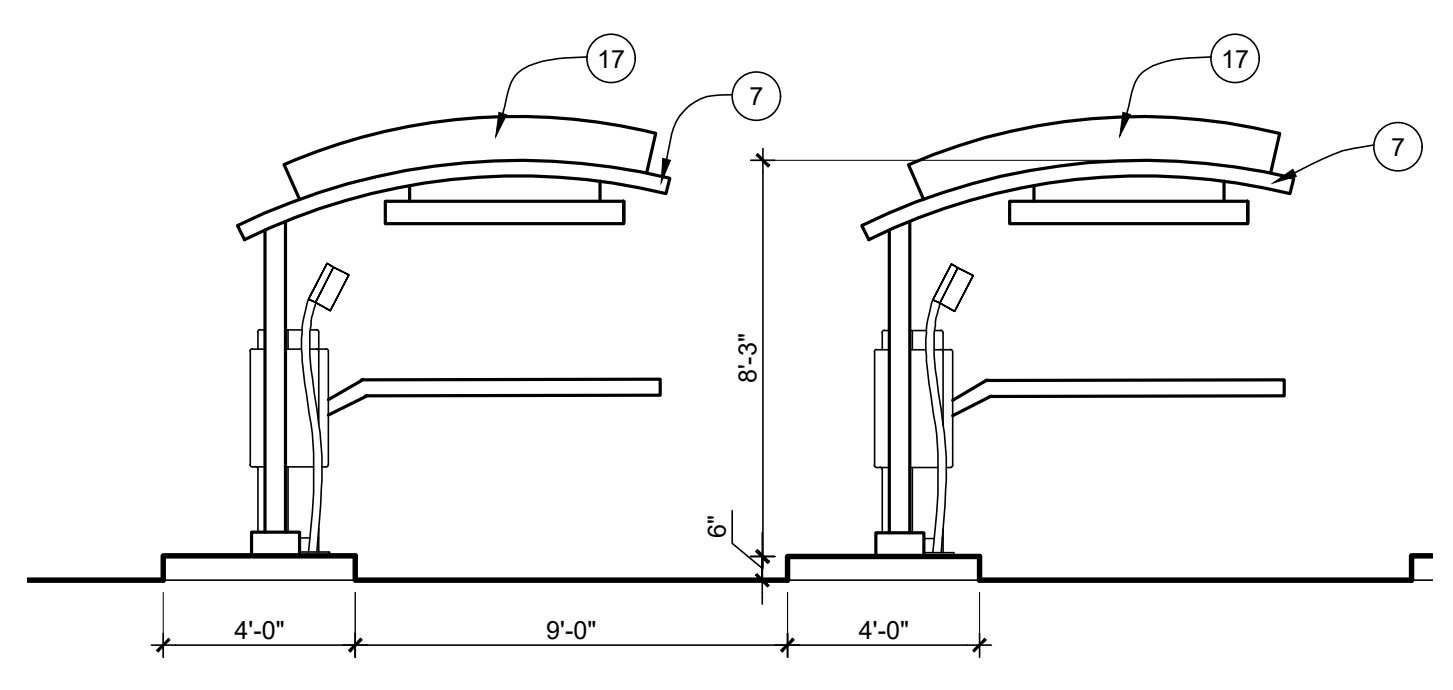
1

GLASS	
TOTAL WALL AREA: 30%	2013.6 S.F. 604.1 S.F.
GLASS & DOOR AREA PROPOSED: 35.4% = 713.1 S.F.	

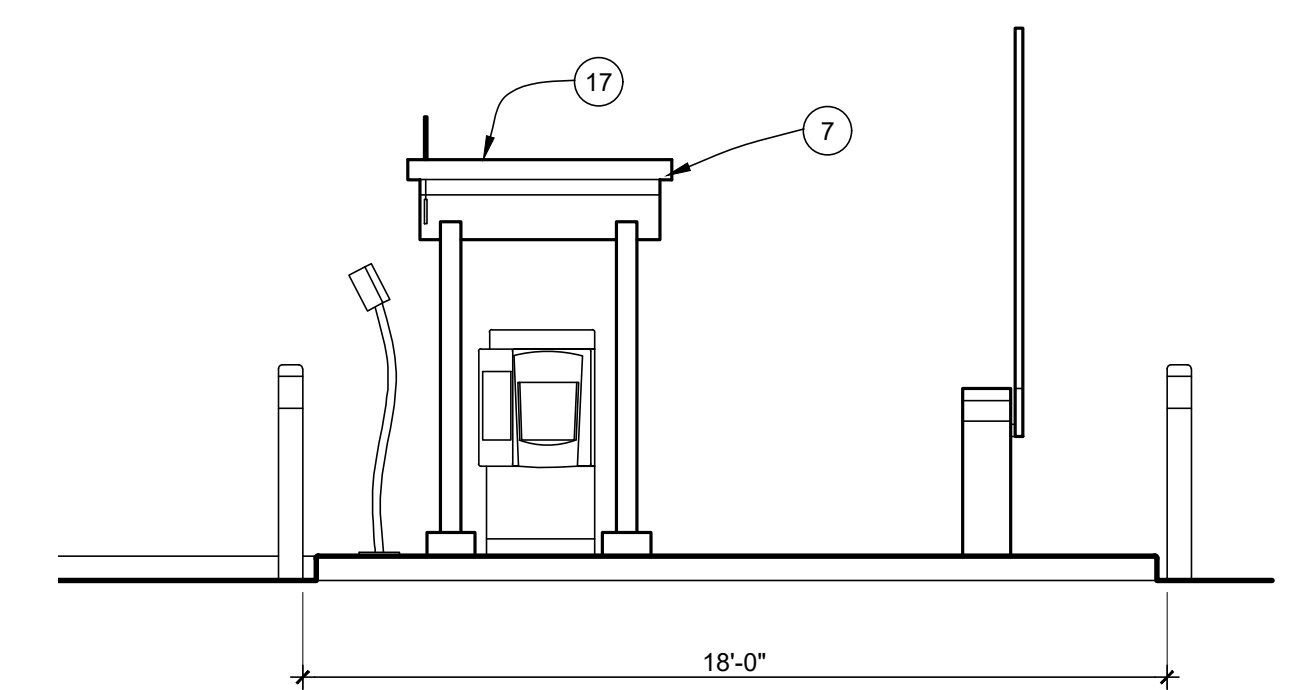


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Southfield, MI 48076 | 248.619.2354

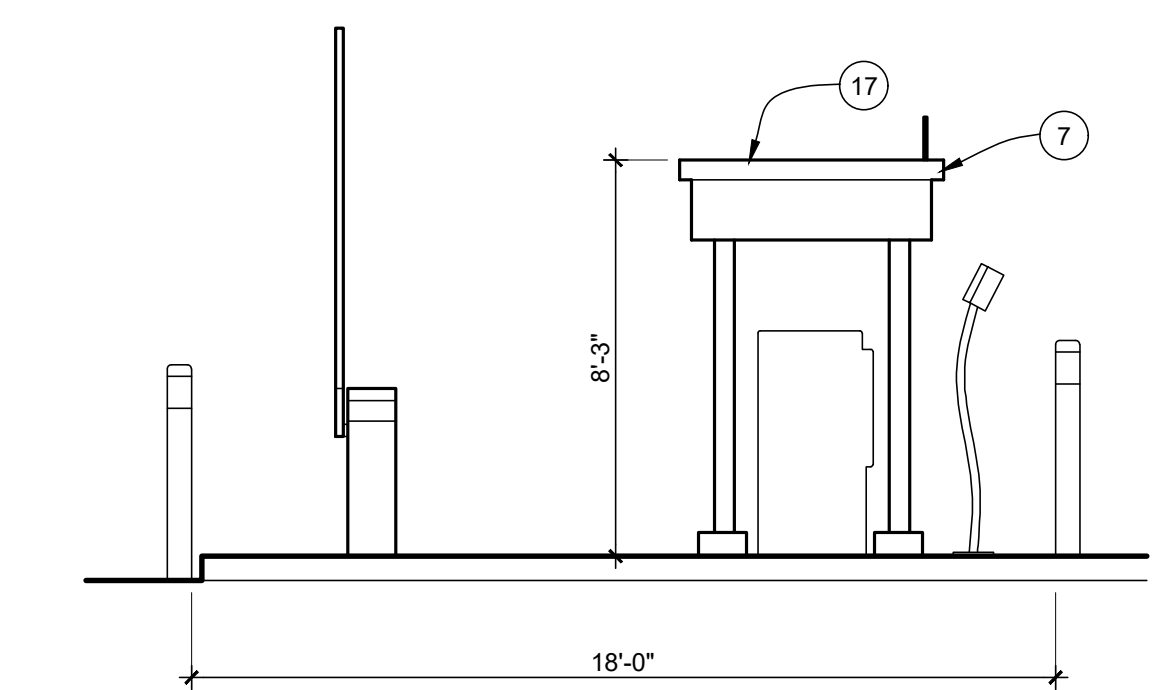
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2	1/2" RECESSED BRICK SOLDIER COURSE (ACCENT COLOR)
3	FULL DIMENSIONAL VENEER (ACCENT COLOR)
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17	PRE-FINISHED ARCHITECTURAL METAL ROOFING.
18	TYP. VACUUM STATIONS (HOSE / VACUUM ARM / VERTICAL POST)



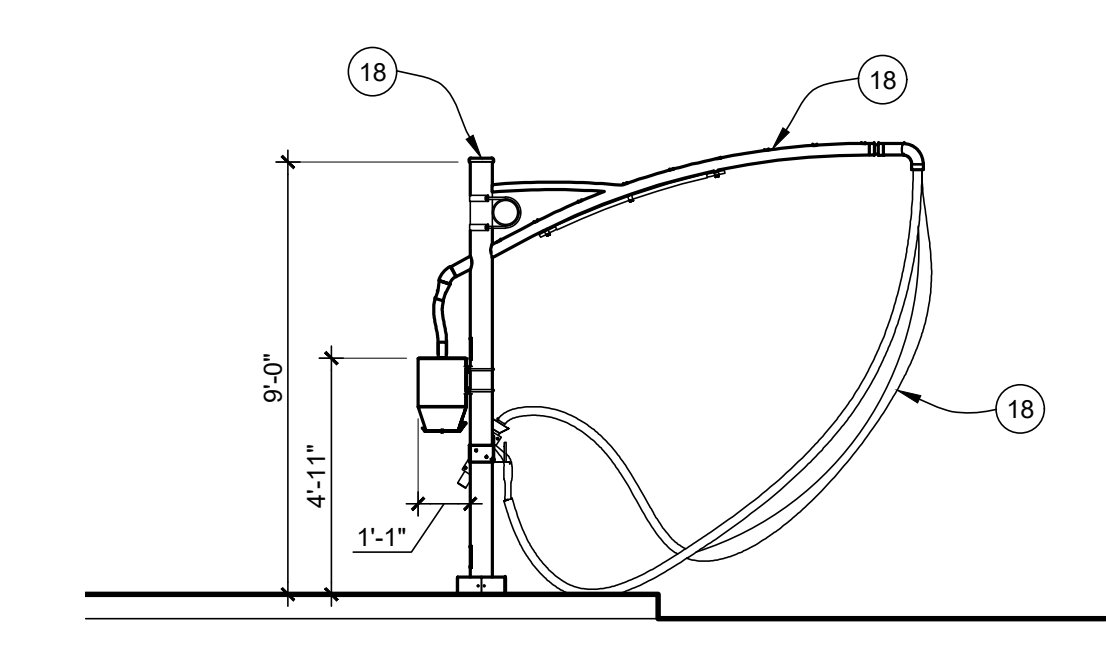
WEST ELEVATION
SCALE: 1/4" = 1'-0"
3



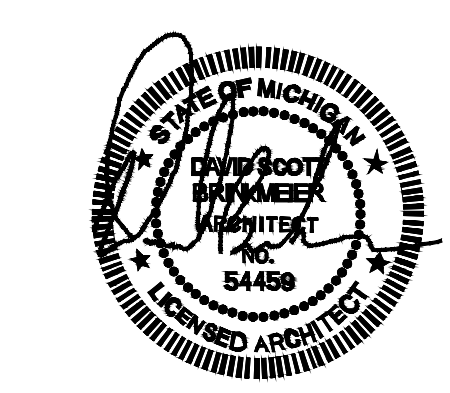
NORTH ELEVATION
SCALE: 1/4" = 1'-0"
2



SOUTH ELEVATION
SCALE: 1/4" = 1'-0"
1



TYP. VACUUM STATION ELEVATION
SCALE: 1/4" = 1'-0"
4



PROJECT NAME:
JAX CAR WASH
TROY, MI

DATE:	ISSUED FOR:
2-29-24	PRELIM. SITE PLAN APPROVAL
4-24-24	RE-SUB SPA
DRAWING DATE:	4-24-24
PROJECT NUMBER:	24021
SHEET NUMBER:	PE-4B

CODE COMPLIANCE

APPLICABLE CODE REQUIREMENTS:

THIS BUILDING HAS BEEN DESIGNED IN ACCORDANCE WITH THE FOLLOWING:
 - 2015 MICHIGAN BUILDING CODE (MBC)
 - 2018 MICHIGAN PLUMBING CODE (MPC)
 - 2015 MICHIGAN MECHANICAL CODE (MMC)
 - 2017 NATIONAL ELECTRIC CODE WITH PART 8 AMENDMENTS (NEC)
 - PART 10 MICHIGAN UNIFORM ENERGY CODE PART 10A RULES (ANSI/ASRAE 90.1-CODE 2015)
 - MICHIGAN BARRIER FREE DESIGN LAW (PA 1 OF 1966 AS AMENDED),
 INCORPORATING THE 2012 MICHIGAN BUILDING CODE WITH ICC/ANSI A-117.1, 2009
 - NFPA 13-2013 FIRE SPRINKLER SYSTEM
 - NFPA 72-2013 FIRE ALARM SYSTEM

OCCUPANCY CLASSIFICATION:

- USE GROUP 'B' (BUSINESS) - CAR WASH MBC 304.1
 - USE GROUP 'S-1' (STORAGE), NON SEPARATED MIXED USES -
 MOST RESTRICTIVE 'S-1' USE SHALL BE APPLIED TO ENTIRE BUILDING (MBC 508.3.1)

CONSTRUCTION CLASSIFICATION:

- TYPE VB (MBC 602.5)

FIRE SUPPRESSION REQUIREMENTS:

- BUILDING IS NOT PROTECTED BY A FIRE SUPPRESSION AUTOMATIC FIRE
 SPRINKLER SYSTEM (MBC 903.2)
 - PROPOSED BUILDING DOES NOT HAVE ANY HIGH PILE STORAGE
 - PROPOSED BUILDING DOES NOT HAVE ANY REQUIREMENTS FOR STANDPIPES
 - PROPOSED BUILDING WILL NOT HAVE A GENERATOR

BUILDING AREA:

- TOTAL BUILDING AREA= 5,609 S.F. (GROSS)

ALLOWABLE AREA:

- TYPE V B, MBC 506.2
 - PROPOSED BUILDING IS 5609 S.F. ≤ 9,000 S.F. - ACCEPTABLE

ALLOWABLE BUILDING HEIGHT:

- PER 'B', TYPE V B: 40 FEET, 3 STORIES (MBC TABLE 504.3, 504.4)
 - PROPOSED BUILDING 21'-10", ONE-STORY - ACCEPTABLE

BUILDING OCCUPANCY:

- PER MBC TABLE 1004.1.2

TOTAL BUILDING AREA: 5,602 S.F. MINUS 498 S.F. PERIMETER WALL THICKNESS = 5,104 S.F.

'B' USE BUSINESS	929 S.F. / 100 S.F. PER OCC.	= 9 OCCUPANTS
STORAGE/MECH. SPACE	4,175 S.F. / 300 S.F. PER OCC.	= 14 OCCUPANTS
TOTAL BUILDING OCCUPANTS		= 23 OCCUPANTS

MINIMUM NUMBER OF EXITS:

- MBC TABLE 1006.3.1

23 OCCUPANTS = 2 EXITS REQUIRED | 5 EXITS PROVIDED

EXIT WIDTH REQUIREMENTS:

- DOORS (MBC 1005.3.2)

23 OCCUPANTS X 0.2' PER OCCUPANT = 5.0' TOTAL DOOR WIDTH REQUIRED
 AT 33" CLEAR WIDTH PROVIDED PER 36" DOOR, A MINIMUM OF 2 EXIT DOORS ARE REQUIRED
 5 EXIT DOORS ARE PROVIDED

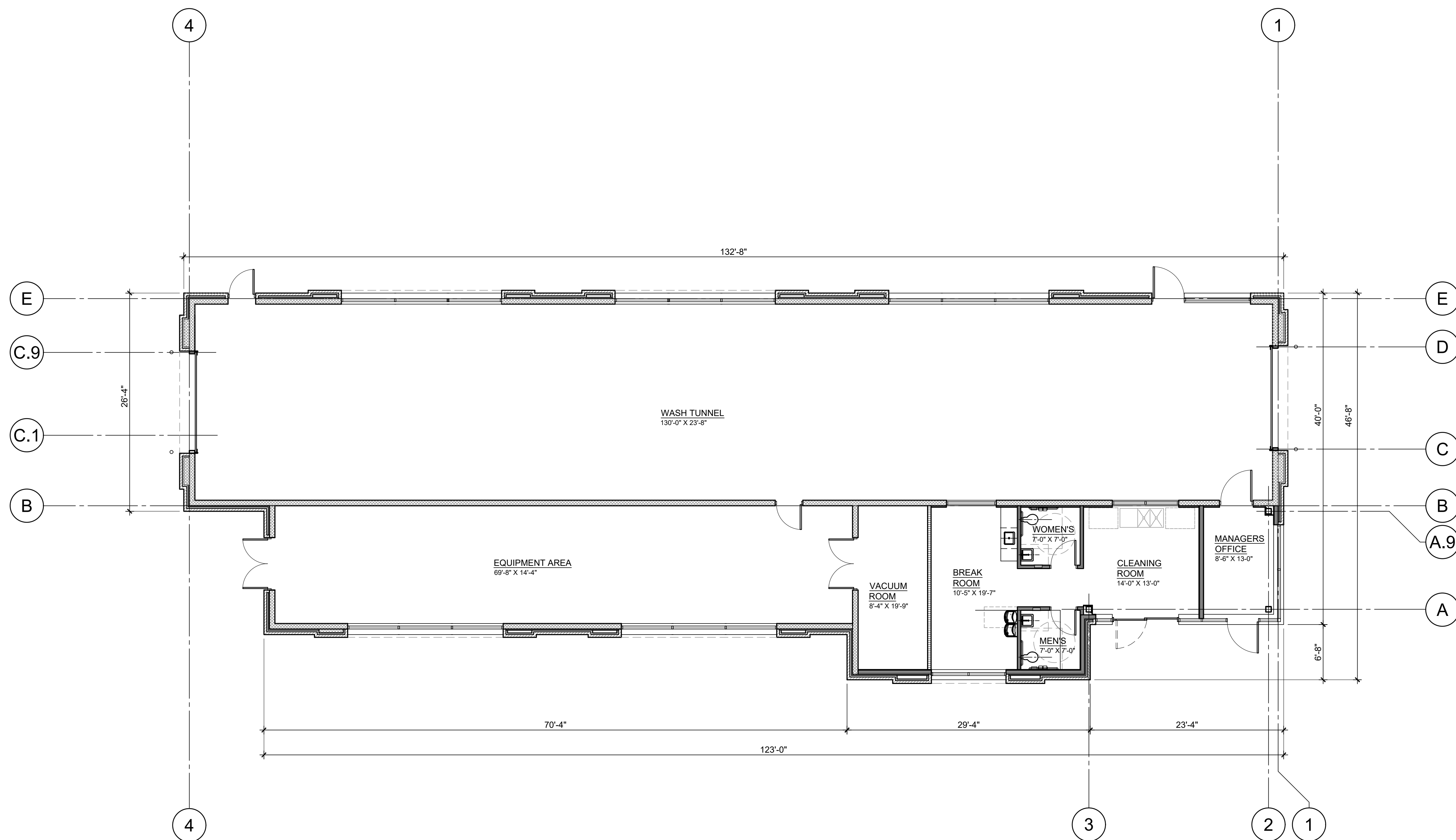
EXIT DISTANCE LIMITATIONS:

- 200' MAX ALLOWED (MBC TABLE 1017.2)
 - ALL OCCUPANTS ARE WITHIN 200 FEET OF AN EXIT
 - REQUIRED EXIT DOOR SEPARATION IS GREATER THAN 1/3 OF THE LENGTH OF MAXIMUM OVERALL
 DIAGONAL DIMENSION OF THE AREAS SERVED (MBC 1007.1.1 EXCEPTION 2)

FIRE RESISTANCE RATINGS OF BUILDING ELEMENTS:

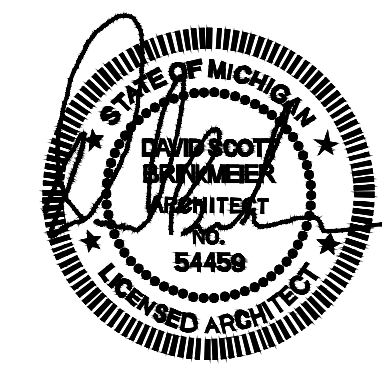
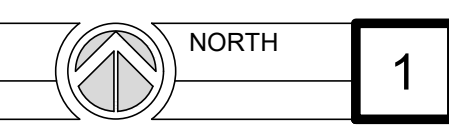
- TYPE 'II B' CONSTRUCTION

STRUCTURAL FRAME	0 HR. (MBC TABLE 601)
BEARING WALLS - EXTERIOR	0 HR. (MBC TABLE 601)
BEARING WALLS - INTERIOR	0 HR. (MBC TABLE 601)
NON-BEARING WALLS - EXTERIOR	0 HR. (MBC TABLE 601)
NON-BEARING WALLS - INTERIOR	0 HR. (MBC TABLE 601)
FLOOR CONSTRUCTION	0 HR. (MBC TABLE 601)
ROOF CONSTRUCTION	0 HR. (MBC TABLE 601)
SHAFTS	N/A
STAIR WELL	N/A
FIRE WALL	N/A




PRELIMINARY OVERALL FLOOR PLAN

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



ISSUED FOR:	PRELIM. SITE PLAN APPROVAL
DATE:	2-29-24
DRAWING DATE:	2-29-24
PROJECT NUMBER:	24021
SHEET NUMBER:	PFP-4

WDGE1 LED Architectural Wall Sconce



Specifications
 Depth (D1): 3.5"
 Depth (D2): 1.5"
 Height: 8"
 Width: 9"
 Weight: 0.8 lbs (without options)

Introduction
 The WDGE1 family is designed to meet specific every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean, rectangular design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing true site-wide solution. WDGE1 delivers up to 2,000 lumens with a soft, non-pixelated light source, creating a visually comfortable environment. The compact size of WDGE1 with its integrated emergency battery backup option, makes it an ideal over-the-door wall-mounted lighting solution.

WDGE1 LED Family Overview

Category	Standard (W x H)	Standard (D1 x D2)	Standard (H)	Standard (W)	Standard (D1)	Standard (D2)
WDGE1 LED	4W	---	---	1,200	2,000	---
WDGE1 LED	30W	16W	Standard height	1,200	2,000	3,000
WDGE1 LED	15W	16W	Standard height	1,200	8,500	16,000
WDGE1 LED	---	---	Standard height	12,000	16,000	20,000

Ordering Information

EXAMPLE: WDGE1 LED P2 40K 80CRI VF MVOLT SRM PE DDBXK

Symbol	Package	Color Temperature	CR	Beam Spread	Mounting	Notes
W1	P1	27K	80CRI	15°	VF	Standard mounting
W1	P2	30K	90CRI	15°	VF	Standard mounting
W1	P3	40K	90CRI	15°	VF	Standard mounting
W1	P4	50K	90CRI	15°	VF	Standard mounting

Notes

Symbol	Description
EMER	Emergency battery backup, Comfy (UL 924) or 20 (UL 924) (UL 924) (UL 924)
FR	Flame Retardant (FR)
IS	Instant Start (IS)
SRM	Standard mounting (SRM)
VF	Vertical mounting (VF)
W1	Wall-mounted luminaire (W1)
W2	Recessed luminaire (W2)
W3	Recessed luminaire (W3)
W4	Recessed luminaire (W4)
W5	Recessed luminaire (W5)
W6	Recessed luminaire (W6)
W7	Recessed luminaire (W7)
W8	Recessed luminaire (W8)
W9	Recessed luminaire (W9)
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W96	Recessed luminaire (W96)
W97	Recessed luminaire (W97)
W98	Recessed luminaire (W98)
W99	Recessed luminaire (W99)
W100	Recessed luminaire (W100)

LITHONIA LIGHTING COMMERCIAL OUTDOOR

One Lithonia Way • Conley, Georgia 30121 • Phone: 1-800-705-SEMI (7376) • www.lithonia.com

D-Series Size 1 LED Area Luminaire



Specifications
 Efficacy: 120 lm/w
 Length: 14.25"
 Width: 14.25"
 Height H1: 3.00"
 Height H2: 2.75"
 Weight: 3.4 lbs

Introduction
 The modern styling of the D-Series features a highly refined aesthetic that blends seamlessly with its environment. The D-Series offers the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire. The photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. D-Series outstanding photometry aids in reducing the number of poles required in area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

Ordering Information

EXAMPLE: DSX1 LED P7 40K 70CRI T3M 3MVOLT SPA NLAIR2 PRH9 DDBXK

Symbol	Package	Color Temperature	CR	Beam Spread	Mounting	Notes
P1	P1	27K	80CRI	15°	VF	Standard mounting
P2	P2	30K	90CRI	15°	VF	Standard mounting
P3	P3	40K	90CRI	15°	VF	Standard mounting
P4	P4	50K	90CRI	15°	VF	Standard mounting
P5	P5	60K	90CRI	15°	VF	Standard mounting
P6	P6	70K	90CRI	15°	VF	Standard mounting
P7	P7	80K	90CRI	15°	VF	Standard mounting
P8	P8	90K	90CRI	15°	VF	Standard mounting
P9	P9	100K	90CRI	15°	VF	Standard mounting
P10	P10	110K	90CRI	15°	VF	Standard mounting
P11	P11	120K	90CRI	15°	VF	Standard mounting
P12	P12	130K	90CRI	15°	VF	Standard mounting
P13	P13	140K	90CRI	15°	VF	Standard mounting
P14	P14	150K	90CRI	15°	VF	Standard mounting
P15	P15	160K	90CRI	15°	VF	Standard mounting
P16	P16	170K	90CRI	15°	VF	Standard mounting
P17	P17	180K	90CRI	15°	VF	Standard mounting
P18	P18	190K	90CRI	15°	VF	Standard mounting
P19	P19	200K	90CRI	15°	VF	Standard mounting
P20	P20	210K	90CRI	15°	VF	Standard mounting
P21	P21	220K	90CRI	15°	VF	Standard mounting
P22	P22	230K	90CRI	15°	VF	Standard mounting
P23	P23	240K	90CRI	15°	VF	Standard mounting
P24	P24	250K	90CRI	15°	VF	Standard mounting
P25	P25	260K	90CRI	15°	VF	Standard mounting
P26	P26	270K	90CRI	15°	VF	Standard mounting
P27	P27	280K	90CRI	15°	VF	Standard mounting
P28	P28	290K	90CRI	15°	VF	Standard mounting
P29	P29	300K	90CRI	15°	VF	Standard mounting
P30	P30	310K	90CRI	15°	VF	Standard mounting
P31	P31	320K	90CRI	15°	VF	Standard mounting
P32	P32	330K	90CRI	15°	VF	Standard mounting
P33	P33	340K	90CRI	15°	VF	Standard mounting
P34	P34	350K	90CRI	15°	VF	Standard mounting
P35	P35	360K	90CRI	15°	VF	Standard mounting
P36	P36	370K	90CRI	15°	VF	Standard mounting
P37	P37	380K	90CRI	15°	VF	Standard mounting
P38	P38	390K	90CRI	15°	VF	Standard mounting
P39	P39	400K	90CRI	15°	VF	Standard mounting
P40	P40	410K	90CRI	15°	VF	Standard mounting
P41	P41	420K	90CRI	15°	VF	Standard mounting
P42	P42	430K	90CRI	15°	VF	Standard mounting
P43	P43	440K	90CRI	15°	VF	Standard mounting
P44	P44	450K	90CRI	15°	VF	Standard mounting
P45	P45	460K	90CRI	15°	VF	Standard mounting
P46	P46	470K	90CRI	15°	VF	Standard mounting
P47	P47	480K	90CRI	15°	VF	Standard mounting
P48	P48	490K	90CRI	15°	VF	Standard mounting
P49	P49	500K	90CRI	15°	VF	Standard mounting
P50	P50	510K	90CRI	15°	VF	Standard mounting
P51	P51	520K	90CRI	15°	VF	Standard mounting
P52	P52	530K	90CRI	15°	VF	Standard mounting
P53	P53	540K	90CRI	15°	VF	Standard mounting
P54	P54	550K	90CRI	15°	VF	Standard mounting
P55	P55	560K	90CRI	15°	VF	Standard mounting
P56	P56	570K	90CRI	15°	VF	Standard mounting
P57	P57	580K	90CRI	15°	VF	Standard mounting
P58	P58	590K	90CRI	15°	VF	Standard mounting
P59	P59	600K	90CRI	15°	VF	Standard mounting
P60	P60	610K	90CRI	15°	VF	Standard mounting
P61	P61	620K	90CRI	15°	VF	Standard mounting
P62	P62	630K	90CRI	15°	VF	Standard mounting
P63	P63	640K	90CRI	15°	VF	Standard mounting
P64	P64	650K	90CRI	15°	VF	Standard mounting
P65	P65	660K	90CRI	15°	VF	Standard mounting
P66	P66	670K	90CRI	15°	VF	Standard mounting
P67	P67	680K	90CRI	15°	VF	Standard mounting
P68	P68	690K	90CRI	15°	VF	Standard mounting
P69	P69	700K	90CRI	15°	VF	Standard mounting
P70	P70	710K	90CRI	15°	VF	Standard mounting
P71	P71	720K	90CRI	15°	VF	Standard mounting
P72	P72	730K	90CRI	15°	VF	Standard mounting
P73	P73	740K	90CRI	15°	VF	Standard mounting
P74	P74	750K	90CRI	15°	VF	Standard mounting
P75	P75	760K	90CRI	15°	VF	Standard mounting
P76	P76	770K	90CRI	15°	VF	Standard mounting
P77	P77	780K	90CRI	15°	VF	Standard mounting
P78	P78	790K	90CRI	15°	VF	Standard mounting
P79	P79	800K	90CRI	15°	VF	Standard mounting
P80	P80	810K	90CRI	15°	VF	Standard mounting
P81	P81	820K	90CRI	15°	VF	Standard mounting
P82	P82	830K	90CRI	15°	VF	Standard mounting
P83	P83	840K	90CRI	15°	VF	Standard mounting
P84	P84	850K	90CRI	15°	VF	Standard mounting
P85	P85	860K	90CRI	15°	VF	Standard mounting
P86	P86	870K	90CRI	15°	VF	Standard mounting
P87	P87	880K	90CRI	15°	VF	Standard mounting
P88	P88	890K	90CRI	15°	VF	Standard mounting
P89	P89	900K	90CRI	15°	VF	Standard mounting
P90	P90	910K	90CRI	15°	VF	Standard mounting
P91	P91	920K	90CRI	15°	VF	Standard mounting
P92	P92	930K	90CRI	15°	VF	Standard mounting
P93	P93	940K	90CRI	15°	VF	Standard mounting
P94	P94	950K	90CRI	15°	VF	Standard mounting
P95	P95	960K	90CRI	15°	VF	Standard mounting
P96	P96	970K	90CRI	15°	VF	Standard mounting
P97	P97	980K	90CRI	15°	VF	Standard mounting
P98	P98	990K	90CRI	15°	VF	Standard mounting
P99	P99	1000K	90CRI	15°	VF	Standard mounting
P100	P100	1010K	90CRI	15°	VF	Standard mounting

Notes

Symbol	Description
EMER	Emergency battery backup, Comfy (UL 924) or 20 (UL 924) (UL 924) (UL 924)
FR	Flame Retardant (FR)
IS	Instant Start (IS)
SRM	Standard mounting (SRM)
VF	Vertical mounting (VF)
W1	Wall-mounted luminaire (W1)
W2	Recessed luminaire (W2)
W3	Recessed luminaire (W3)
W4	Recessed luminaire (W4)
W5	Recessed luminaire (W5)
W6	Recessed luminaire (W6)
W7	Recessed luminaire (W7)
W8	Recessed luminaire (W8)
W9	Recessed luminaire (W9)
W10	Recessed luminaire (W10)
W11	Recessed luminaire (W11)
W12	Recessed luminaire (W12)
W13	Recessed luminaire (W13)
W14	Recessed luminaire (W14)
W15	Recessed luminaire (W15)
W16	Recessed luminaire (W16)
W17	Recessed lum



Proposed Exterior Renderings for:



Cunningham-Limp
Building Better Communities

F.A.studio
design to inspire



Proposed Exterior Renderings for:



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design to inspire



Proposed Exterior Renderings for:



Cunningham-Limp
Building Better Communities

F.A.studio
design to inspire



2024-004
April 18, 2024

Mr. Todd Gesund
Vice-President
Jax Kar Wash
26777 Central Park Blvd., Suite 180
Southfield, MI 48076

Subject: **Car Wash Community Noise Impact Study**
re: Jax Kar Wash – Troy, MI

Dear Mr. Gesund:

At your request and authorization, K & S Engineers, LLC (K&SE) has conducted an investigation to provide a community noise impact study for the proposed car wash. This investigation projects the expected sounds from the proposed car wash to the nearby residential properties and compares the results to ambient sound level measurements and the City of Troy noise ordinance. This evaluation compares the noise from various sources including car wash and vacuum station related sound sources.

Proposed Site

The location of the proposed Jax Kar Wash is to the south of E Long Lake Road, 300-feet east of Livernois Road. Properties to the south of the proposed car wash are zoned residential. **Exhibit 1** provides an aerial view of the proposed car wash site.

Sound level predictions were based on the location of property lines, and measured sound levels of car wash equipment. The following document was utilized for the predictions:

- PEA Group plan, Jax Kar Wash – Troy, MI dated 2/5/2024.

City of Troy Noise Code

The City of Troy provides objective noise limits in their Zoning Ordinance Section 12.06 *Environmental Performance Standards*, subsection *H*. The ordinance excerpt reads:

H. Noise. The emission of measurable noises from the premises shall not exceed sixty-five (65) decibels as measured at the boundary property line, except that where normal street traffic noises exceed sixty-five (65) decibels during such periods, the measurable noise emanating from premises may equal, but not exceed such traffic noises. Within the IB district, sound levels not exceeding seventy (70) decibels may be permitted.

These limits apply at the residential properties to the south.

Understanding Sound and How it is Measured

To aid in the understanding of the results of this investigation, we have provided some discussion on the basics of sound and sound measurements. Sound is a rapid fluctuation of air pressure that occurs in a range that is detectable by human hearing. Sound pressure can be measured in units of Pascals (Pa), though would range from 2×10^{-5} to over 10 million! To compress this tremendous scale to manageable numbers, as well to create a scale that reflects human perception of sound, the decibel sound scale was developed. The decibel sound scale is a unit of measure based on a logarithmic equation with specific reference to the human threshold of hearing. Because of the logarithmic nature, sound levels in decibels do not add, or subtract by simple arithmetic. Similarly, human response to sound is logarithmic rather than linear in nature.

The decibel sound scale generally ranges from 0 dB to 180 dB, where 0 dB is the threshold where we begin to hear and 180 dB is an approximate maximum audible level, though pain associated with hearing starts at 120-140 dB. Relative to human perception of sound, a 3-dB increase (or decrease) in level is the threshold at which people begin to notice a change. A change less than a 3 dB is generally undetectable to the normal populace. Additionally, a 3-dB increase is an actual doubling of sound energy, though it takes a 10 dB increase for humans to perceive a doubling of loudness. For reference, a quiet library typically has an ambient sound level of 20-30 dB. Normal speech at a 3-foot distance is approximately 60 to 65 dB. **Appendix A** provides a chart of sound levels for some typical sound sources encountered in daily living.

Measured Ambient Sound Levels

To determine the current ambient sound levels experienced at residential properties adjacent to the proposed Jax Kar Wash, we conducted sound level measurements near the residential property line, at the south end of the proposed site. The measurements were conducted at a location 210-feet south of E Long Lake Road, and 470-feet east of Livernois Road. **EXHIBIT 2** provides an aerial image of the measurement location relative to proposed Jax Kar Wash site and residential properties to the south.

Measurements were conducted for a continuous 24-hour period using a calibrated real-time environmental noise analyzer, with a precision microphone and a preamplifier assembly. Calibration was performed prior to and after the measurements using a Brüel and Kjær type 4231 Acoustic Calibrator.

The results of our measurements are provided as a sound level versus time plot provided in **EXHIBIT 3**. The results of these measurements show that average sound levels near the residential properties were 57 dB(A) during daytime hours when the car wash is expected to operate. These sound level values are lower than the ordinance limit of 65 dB(A).

Additionally, we conducted sound level measurements at a representative Jax Kar Wash at 26550 Greenfield Road, Oak Park, MI. Measurements were conducted to quantify the sound produced by the various sound sources of the proposed Jax Kar Wash. These sources include: the entrance and

exit of the car wash building during washing and drying activities, vacuum equipment, compressed air nozzles, and vehicles moving on site.

Advanced Computer Modeling Noise Prediction

Sound is a physical phenomenon that can be readily projected and predicted with reasonable accuracy. To help evaluate the sounds created by the proposed Jax Kar Wash and determine what noise impact may occur at the adjacent residential boundaries, we developed an advanced three-dimensional, outdoor acoustical model. This model allows accurate projection and prediction of sound levels created by the operation of known building mechanical systems, vehicle movements, and delivery operations. The computer program we use for this modeling relies on international standards (such as ISO 9613) to properly calculate and predict sound levels. The computer program relies on user inputs of terrain, structures, foliage, obstacles, sound reflective and absorptive surfaces, receiver positions, as well as the type of sound source, including point sources (small individual devices, such as small fans), line sources (numerous sources in a line, such as road traffic), and area sources (sources with large surface areas, such as transformers). By using this predictive tool, we have constructed virtual acoustic model of the proposed car wash and have developed sound level projections and predictions for its operation.

Predictions of the Proposed Jax Kar Wash

The proposed car wash will have various sources of sound from the equipment on site and patron activities. Jax Kar Wash sources include:

- Wash operation sound generated from wash equipment and dryers, emitting from the entrance and exit.
- A centralized vacuum system with the vacuum motor located within the building, and vacuum lines running underground from the building to the vacuum stations.
- Compressed air nozzles at the vacuum stations, with compressed air lines running underground, supplied from a central compressor within the building.
- Vehicles moving on site at slow speeds, typically less than 10 MPH.

The results of our model predictions are presented in **EXHIBIT 4**. The results provide the expected sound levels from the operations of the Jax Kar Wash along the residential property lines. The results show that the car wash sound levels are expected to be below the ordinance noise limits. Additionally, the predicted sound levels are expected to be similar to the daytime ambient sound levels along the residential property lines, in most locations. That is to say, sound levels are expected to be within 3 dB of the average ambient levels (see *Understanding Sound and How it is Measured*, above).

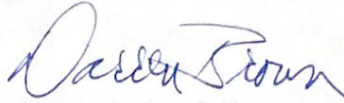
Based on our measurements and evaluation of the Jax Kar Wash operations, we expected the proposed car wash to comply with the local ordinance noise limits at all residential properties.

Mr. Todd Gesund
Jax Kar Wash

Page 4 of 5
April 18, 2024

Mr. Gesund, we hope the information from our investigation is informative and helpful. Should you need additional information regarding this work or additional assistance, don't hesitate to contact us.

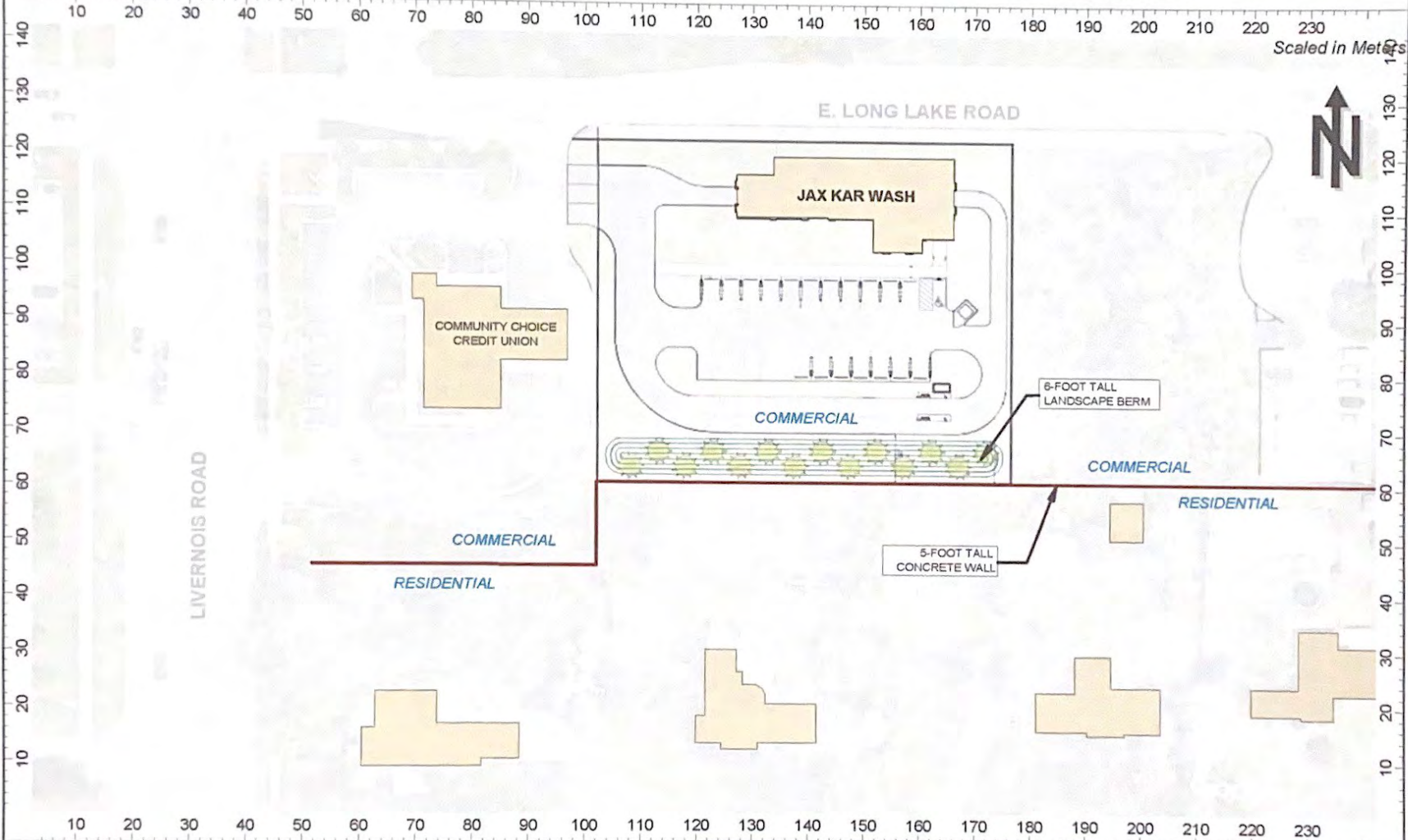
Sincerely,
K & S ENGINEERS, LLC

A handwritten signature in blue ink that reads "Darren Brown". The signature is written in a cursive style with a large, stylized initial 'D'.

Darren Brown, P.E.
INCE Board Certified
Principal Consultant

EXHIBIT 1

SITE PLAN OF THE PROPOSED JAX KAR WASH WITH SURROUNDING PROPERTIES



K & S Engineers, LLC
Wixom, MI 48393
248-674-4100 www.kandse.com

Project Name: **Proposed Jax Kar Wash - E Long Lake Road, Troy**
Study Conducted for: Jax Kar Wash
Project No. : 2024-003
Analysis Date (day.mo.yr): 18.04.24

EXHIBIT 2

AERIAL IMAGE OF THE PROPOSED JAX KAR WASH SITE
DETAILING THE LOCATION OF AMBIENT 24-HOUR SOUND LEVEL MEASUREMENTS

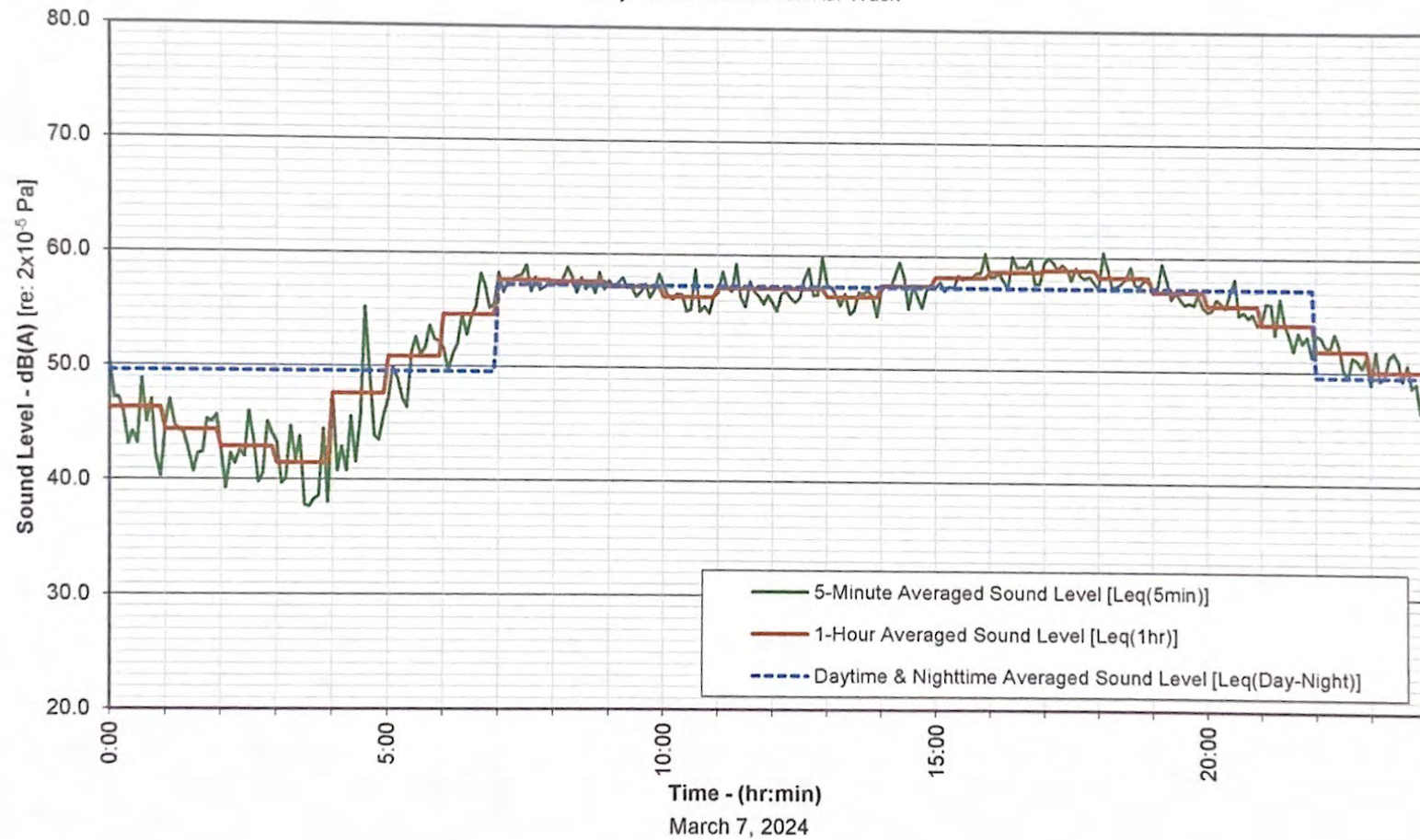


EXHIBIT 3

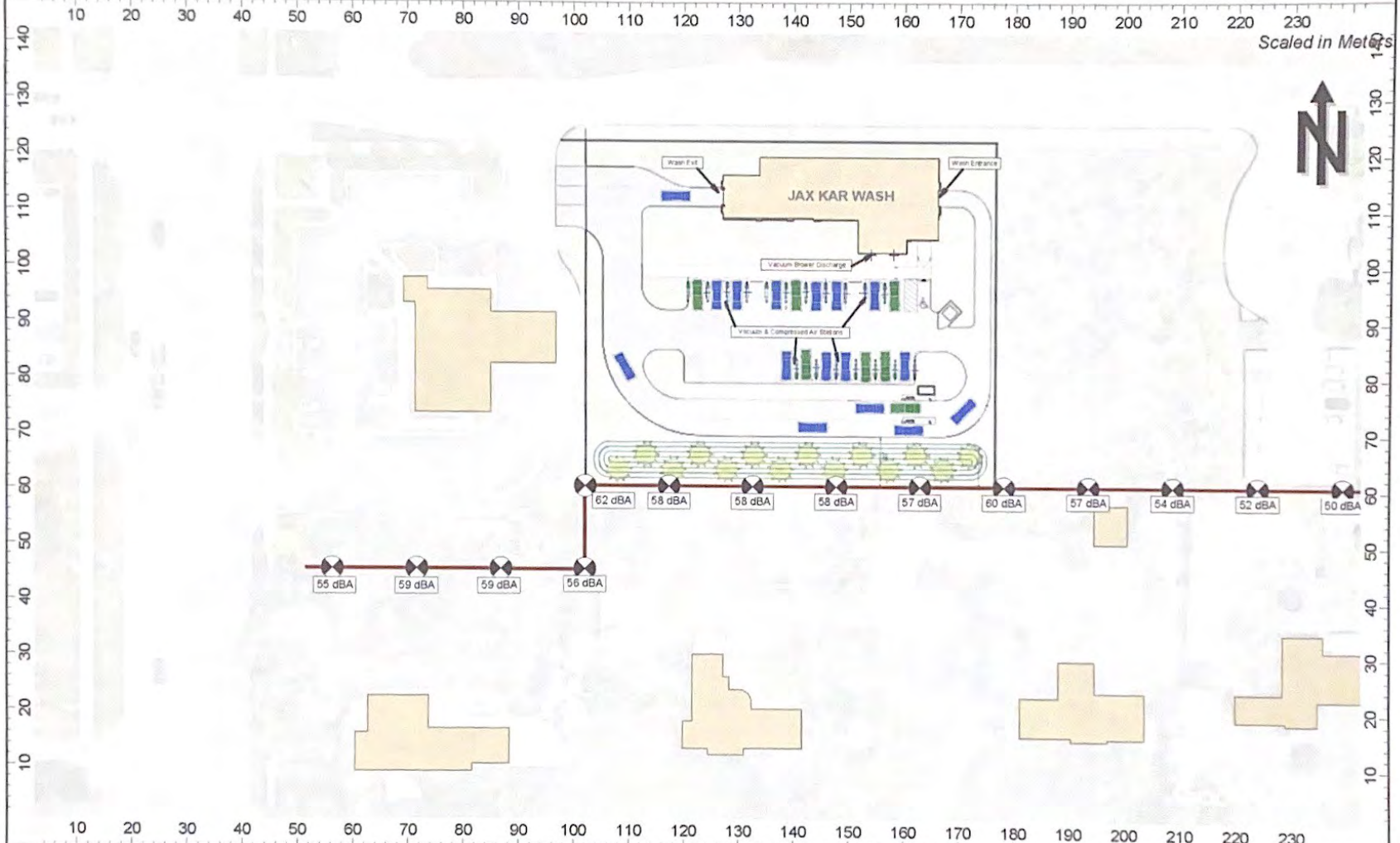
Ambient Sound Levels at the Proposed Jax Kar Wash Site

Measured at a Position 210-ft South of E. Long Lake Rd., and 470-ft East of Livernois Rd.

Study Conducted For: Jax Kar Wash



**EXHIBIT 4
PREDICTED SOUND LEVELS OF THE PROPOSED JAX KAR WASH OPERATIONS
INCLUDING VACUUMS, COMPRESSED AIR & VEHICLES ON SITE**



K & S Engineers, LLC
Wixom, MI 48393
248-674-4100 www.kandse.com

Project Name: Proposed Jax Kar Wash - E Long Lake Road, Troy
Study Conducted for: Jax Kar Wash
Project No.: 2024-003
Analysis Date (day.mo.yr): 18.04.24

APPENDIX A

Sound Level of Typical Sources			
Sound Level dB(A)	Subjective Impression	Outdoor	Indoor
180		Rocket Launch, Artillery Fire	
160	Extremely Loud	Rifle Shot at Shooters Ear	
130	Pain	Fire Cracker at 30 Feet	
120	Uncomfortable	Jet Plane Taking Off at 200 Feet	
110		Jet Flyover at 1000 Feet	Rock Concert, Dance Club
100	Very Loud	Motorcycle pass-by at 25 Feet	
90		Lawn Mower at 5 Feet	Food Blender at 3ft.
80	Moderately Loud	Diesel Truck Pass-by (50mph) at 50 Feet	Vacuum Cleaner at 4ft.
70		Car pass-by (50mph) at 50 Feet	
60		Residential Air Cond. Condenser at 15 Feet	Normal Conversation at 5ft.
50	Quiet	Large transformer at 100 Feet	
40		Bird Calls at 100 Feet	Open office with low activity
30	Very Quiet		Soft Whisper at 5ft.
20		Tree Leaves Rustling In Wind	Quiet Bedroom
10	Just Audible		Normal Breathing
0	Hearing Threshold		

It should be noted that sound level is a function of sound power and distance from the source. The examples given are approximate and show the general range where they are normally heard.