

SOIL EROSION AND SEDIMENTATION CONTROL NOTES:

- CONTRACTOR SHALL COMPLY WITH REQUIREMENTS OF THE SOIL EROSION AND SEDIMENTATION CONTROL ACT OF THE STATE OF MICHIGAN, PART 91 OR ACT 451, OF THE PUBLIC ACTS OF 1994 AND THE REQUIREMENTS OF OAKLAND TOWNSHIP AND THE OAKLAND COUNTY WATER RESOURCE COMMISSION.
- A SOIL EROSION AND SEDIMENTATION CONTROL PERMIT WILL BE REQUIRED FROM THE OAKLAND COUNTY WATER RESOURCES COMMISSIONER'S OFFICE.
- THE CONTRACTOR SHALL CONDUCT OPERATIONS IN A MANNER THAT WILL REDUCE ACCELERATED EROSION TO THE PRACTICAL MINIMUM AND PREVENT DAMAGING SILTATION TO EXISTING SEWERS AND WATER COURSES LEADING FROM THE WORK SITE.
- THE CONTRACTOR SHALL CONDUCT WORK IN SUCH A MANNER AS TO PREVENT THE ENTRY OF FUELS, OILS, BITUMINOUS MATERIALS, CHEMICALS, SEWERAGE OR OTHER HARMFUL MATERIALS INTO NEARBY LAKES AND STREAMS.
- WASTE DISPOSAL AREAS SHALL BE SELECTED BY THE CONTRACTOR WITH FULL CONSIDERATION OF EROSION AND SEDIMENT CONTROL, SELECTION OF DISPOSAL SITE, AND CONTROL OF OPERATIONS AND THE RESTORATION OF SAID AREAS SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.
- EXCAVATION FROM THE RIGHT-OF-WAY, CHANNELS, OR OTHER MATERIAL SHALL NOT BE DEPOSITED IN OR NEAR RIVERS, STREAMS OR PONDS WHERE IT MAY ENTER THE WATERWAY.
- AT THE COMPLETION OF EACH DAY'S CONSTRUCTION, CARE SHALL BE TAKEN TO ENSURE THAT MINIMAL EROSION WILL OCCUR IN TRENCHES AND TO STOCKPILED MATERIALS UNTIL RESUMPTION OF WORK.
- CONTRACTOR SHALL CONFINE OPERATIONS TO THE MINIMUM AMOUNT OF WORKING SPACE PRACTICAL TO MINIMIZE SOIL EROSION.
- THE PROJECT WILL BE CONTINUALLY INSPECTED BY THE ENGINEER FOR EROSION CONTROL COMPLIANCE. DEFICIENCIES WILL BE CORRECTED BY THE CONTRACTOR IMMEDIATELY UPON NOTICE OF SUCH DEFICIENCIES. FAILURE TO CORRECT THE DEFICIENCIES MAY RESULT IN THE ISSUANCE OF A STOP WORK ORDER AND THERE WILL BE NO CONTRACT TIME EXTENSION GRANTED FOR THIS TYPE OF STOPPAGE.
- TEMPORARY SOIL EROSION CONTROL MEASURES CONSISTING OF SILT FENCE, INLET FILTERS, MULCHING, AND GEOTEXTILE AND STONE SHALL BE IMPLEMENTED THROUGHOUT THE ENTIRE CONSTRUCTION PHASE OF THE PROJECT, AND SHALL BE REMOVED BY THE CONTRACTOR AFTER THE PERMANENT SOIL EROSION MEASURES HAVE BEEN COMPLETED.
- STRAW MULCH WITH NETTING TIE DOWN, HIGH VELOCITY MULCH BLANKET OR OTHER APPROVED MULCH SHALL BE PLACED ON DISTURBED SLOPES WHERE DIRECTED BY THE ENGINEER.
- STREET SWEEPING OR MUD REMOVAL SHALL BE PERFORMED DAILY FOR MUD TRACKED ONTO PUBLIC STREETS.
- SILT FENCE SHALL BE INSTALLED AND MAINTAINED ALONG THE DOWN-SLOPE SURFACE, PERPENDICULAR TO THE DIRECTION OF SHEET FLOW, FOR ALL OPEN-CUT SEWER INSTALLATION AREAS.
- PERMANENT SOIL EROSION MEASURES CONSISTING OF STORM SEWER, BIOTREATMENT STRUCTURES, AND THE MIXTURE SEED AND MULCH BLANKET SHALL BE COMPLETED WITHIN 5 CALENDAR DAYS OF FINAL GRADING. IN THE EVENT IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE THE AREA DUE TO SITE CONDITIONS AND/OR SEASONAL LIMITATIONS, THE TEMPORARY MEASURES SHALL REMAIN IN FORCE AND SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL SUCH TIME AS IT IS PRACTICAL TO COMPLETE THE PERMANENT SOIL EROSION CONTROL MEASURES.
- THE ENGINEER SHALL HAVE FULL AUTHORITY TO TEMPORARILY SUSPEND WORK IN THE EVENT THAT ANY OF THE ABOVE REQUIREMENTS ARE NOT BEING MET BY THE CONTRACTOR, OR IF CONDITIONS INDICATE THAT ADDITIONAL TEMPORARY CONTROL MEASURES ARE WARRANTED, IN THE OPINION OF THE ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE SOIL EROSION CONTROL MEASURES WITHIN THE CONSTRUCTION AREA UNTIL FULL COMPLETION OF THE PROJECT.
- THE SOIL EROSION CONTROLS WILL BE MAINTAINED WEEKLY AND AFTER EVERY STORM EVENT BY THE CONTRACTOR.
- ACTIVITIES WITHIN WETLAND LIMITS AND CONSERVATION EASEMENT WILL REQUIRE PERMIT FROM MDEQ.

NOTE:

- NO EROSION CONTROL MATTING IS PERMITTED IN THE WETLAND AREAS PER EGLE PERMIT. EROSION CONTROL BLANKETS WITHOUT PLASTIC ARE ALLOWED IN THE UPLAND.

SITE DATA:

AREA OF DISTURBANCE: 0.28 ACRES
 DISTANCE TO NEAREST LAKE OR STREAM: LAKE ORION LOCATED ON THE PROPERTY
 SOIL TYPES: 59 - URBAN LAND, 60B,C - URBAN LAND-MARLETTE COMPLEX
 TEMPORARY SOIL EROSION MEASURES: SILT FENCE, MUD MAT, MULCH BLANKET, DUST CONTROL
 PERMANENT SOIL EROSION MEASURES: TOPSOIL, SEED, & MULCH, NATIVE VEGETATION, RIP RAP

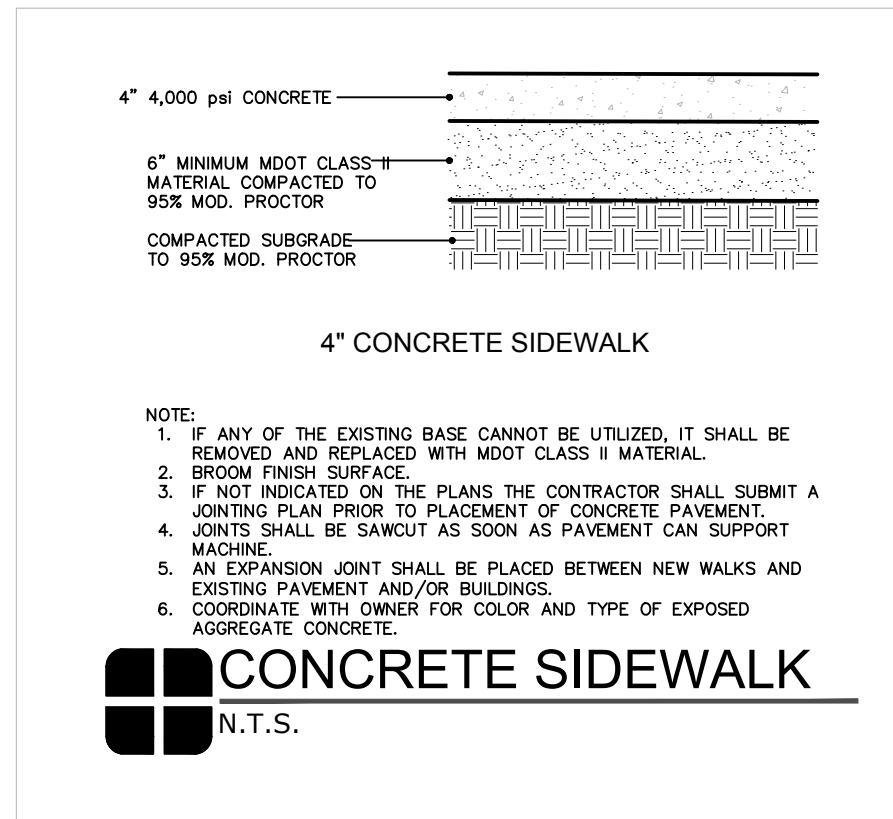
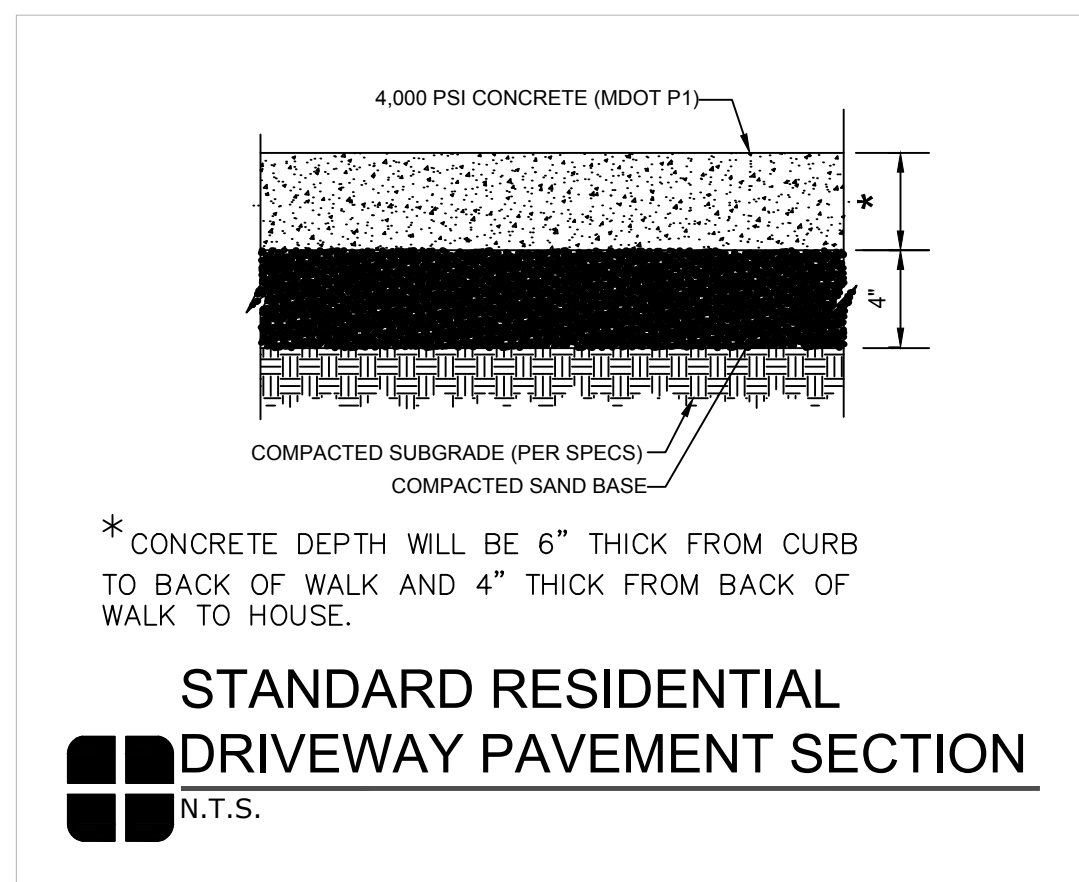
MAINTENANCE SCHEDULE:

THE CONTRACTOR SHALL INSPECT SESC MEASURES WEEKLY UNDER NORMAL CONDITIONS, WITHIN 24 HOURS OF EACH RAIN EVENT, AND DAILY DURING A PROLONGED RAIN EVENT BY DESIGNATED CONTRACTOR.

| MEASURE | MAINTENANCE SCHEDULE |
|-------------------|---|
| SILT FENCE | INSTALL AT THE START OF CONSTRUCTION PER PLAN. REMOVE ACCUMULATED SEDIMENTS WHEN DEPTH REACHES 1/3 TO 1/2 THE HEIGHT OF THE FENCE. FABRIC SHALL BE REPLACED IF DAMAGED. |
| DUST CONTROL | WATER SHALL BE APPLIED TO EXPOSED AREAS BY THE CONTRACTOR IN THE EVENT OF EXCESSIVE AIRBORNE DUST. DUST CONTROL SHALL BE APPLIED AS DIRECTED BY THE ENGINEER OR SOIL EROSION PERMITTING AGENCY. |
| VEGETATION (PERM) | SEED SHALL BE WATERED AND MULCH MAINTAINED UNTIL VIGOROUS TURF HAS BEEN ESTABLISHED. |
| MUD MAT | INSTALL AT THE START OF CONSTRUCTION PER PLAN. REMOVE ACCUMULATED SEDIMENTS, ADD STONE AS NEEDED AND REQUIRED BY THE ENGINEER, AND REPLACE GEOTEXTILE IF DAMAGED. |

CONSTRUCTION SEQUENCE:

- MOBILIZATION
- INSTALL SILT FENCE AND INLET FILTERS AT EXISTING CATCH BASINS PER PLAN
- REMOVALS PER PLAN
- EARTHWORK OPERATIONS
- UTILITY INSTALLATION
- PAVEMENT INSTALLATION
- RESTORATION
- SITE CLEAN UP
- REMOVE SESC MEASURES AFTER STABILIZATION



Sanitary Sewer Basis of Design
 Project Name Snug Harbor
 Project Number 20107.40

Prepared By NMS
 Working Date 02.26.2024

| MH 103-105 | | | | |
|--|---------------|---------------------|---|------------------------|
| Multi-Family | 0.60 per unit | x | 4 | = 2.4 |
| | | | | Total = 2.4 REU |
| Population= 2.44 people per REU | | | | |
| = 2.4 REU | x | 2.44 people per REU | | |
| = 6 people | | | | |
| Average Flow= Population x Per Capita Capacity | | | | |
| = 6 people | x | 100 gpcpd | | |
| = 600.00 gpd | = | 0.0009 cfs | | |
| = 0.42 gpm | | | | |
| Peaking Factor= $\frac{18}{4} + \sqrt{\frac{6}{5.86}}$ people / 1,000 people / 1,000 | | | | |
| = 4.43 | | | | |
| Peak Flow= Population x Per Capita Capacity x Peaking Factor | | | | |
| = 6 people | x | 100 gpcpd | x | 4.43 |
| = 2,596.86 gpd | = | 0.0040 cfs | | |
| = 1.80 gpm | | | | |

The selected size of the proposed sewer (8" pipe @ 0.4% = 0.76 cfs) is adequate for the calculated flows.

Watermain Basis of Design
 Project Name Snug Harbor
 Project Number 20107.40

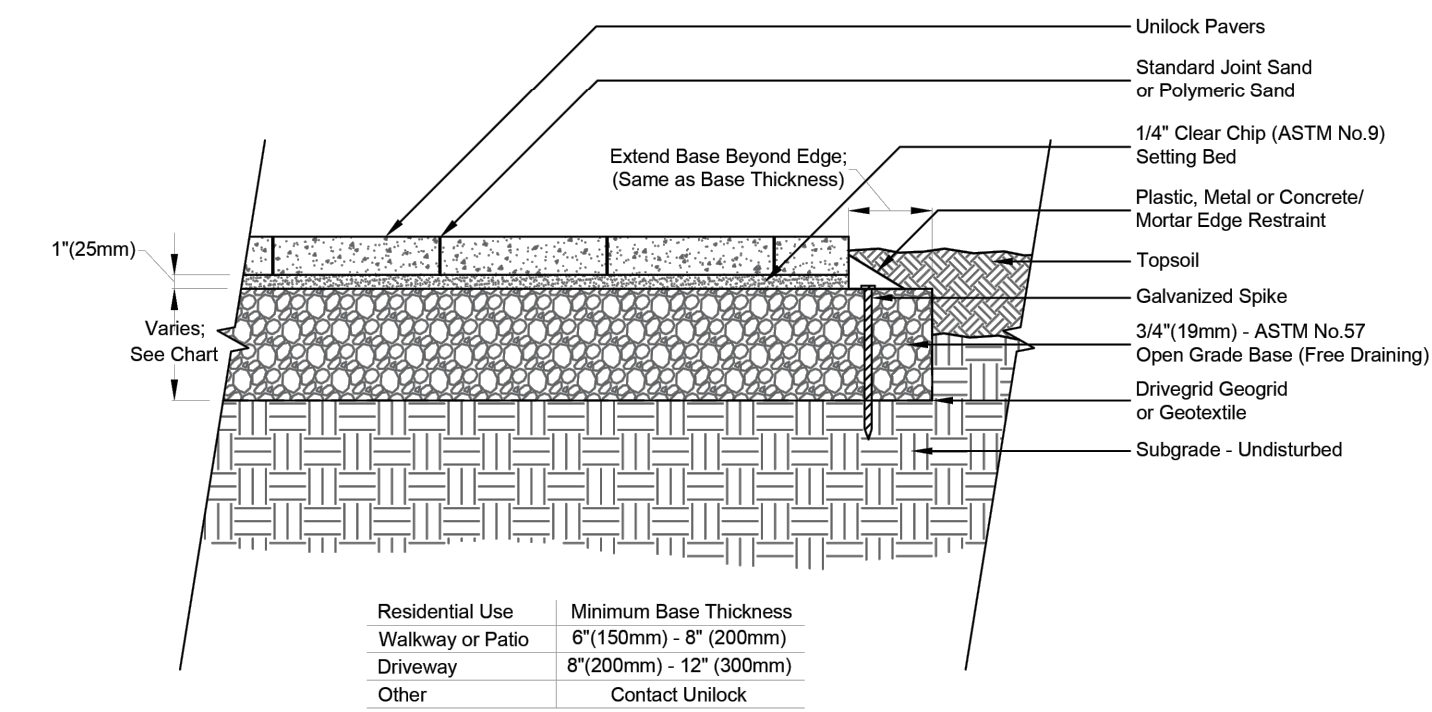
Prepared By NMS
 Working Date 02.26.2024

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| = 6 people | | | | |
| Average Flow= Population x Per Capita Capacity | | | | |
| = 6 people | x | 100 gpcpd | | |
| = 600.00 gpd | = | 0.0009 cfs | | |
| = 0.42 gpm | | | | |
| Peak Flow= Population x Per Capita Capacity x 2 | | | | |
| = 6 people | x | 100 gpcpd | x | 2.00 |
| = 1,171.20 gpd | = | 0.0012 mgd | | |
| = 0.81 gpm | | | | |

PERMEABLE PAVER

CROSS SECTION

Residential Patio - Permeable Base



Note:
 This cross section is intended for preliminary design purposes only. Confirm site conditions and consult with a qualified design professional or installer prior to installation.

PERMEABLE PAVER PATIO

N.T.S.

OR APPROVED EQUAL

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Know what's below.
 Call before you dig.

| DATE: | ISSUE: |
|------------|---------------------------------|
| 02.29.2024 | SUBMIT FOR SITE PLAN APPROVAL |
| 04.04.2024 | RESUBMIT FOR SITE PLAN APPROVAL |

Developed For:

MOCERI COMPANIES
 3500 UNIVERSITY DRIVE
 AUBURN HILLS, MI
 48326
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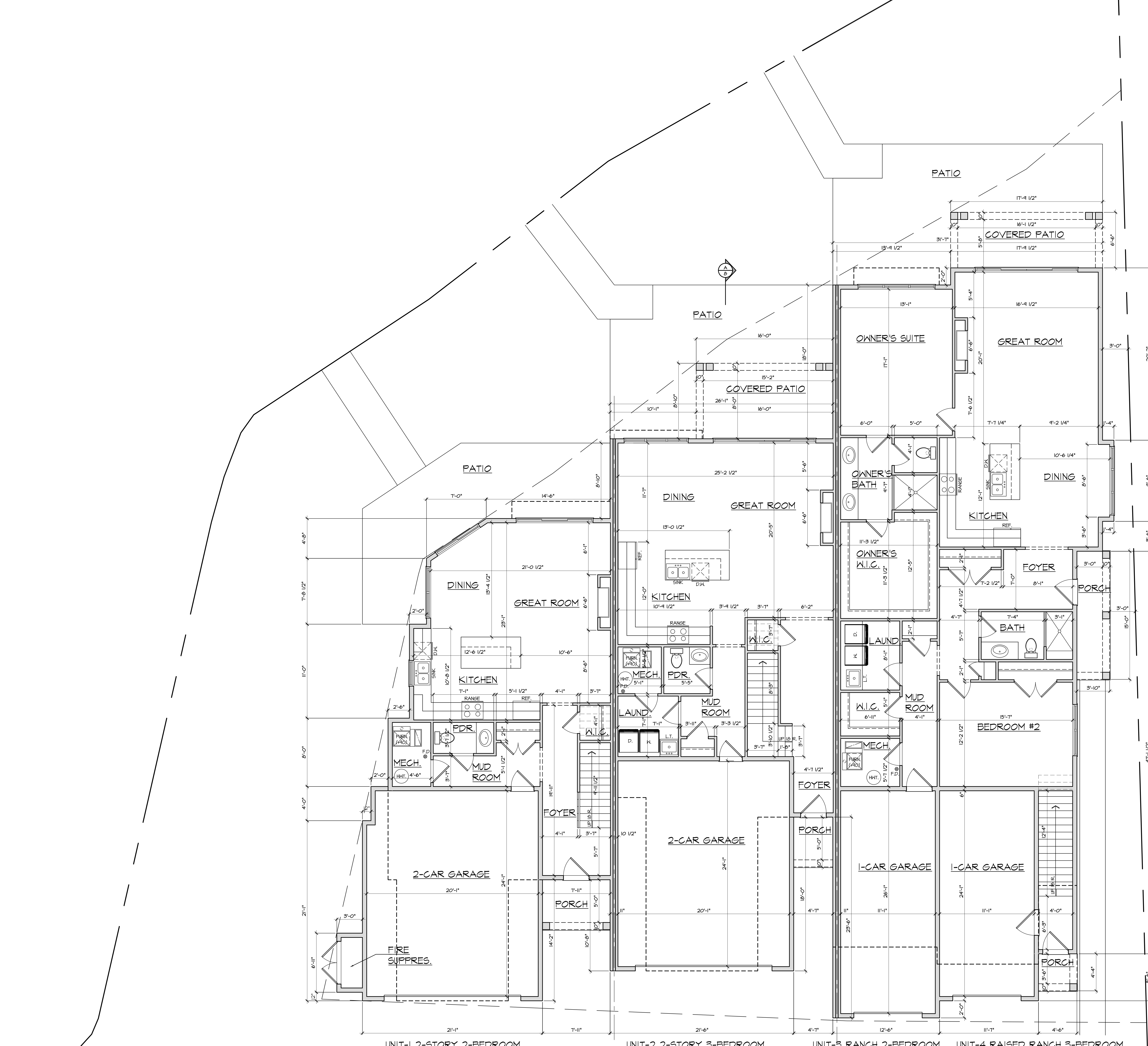
SITE NOTES AND DETAILS

SNUG HARBOR

VILLAGE OF LAKE ORION
 OAKLAND COUNTY
 MICHIGAN

Date: 02.29.2024
 Scale: NA
 Sheet: C5
 Project: 20107.40

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UNIT-1 2-STORY 2-BEDROOM UNIT-2 2-STORY 3-BEDROOM UNIT-3 RANCH 2-BEDROOM UNIT-4 RAISED RANCH 3-BEDROOM
FIRST FLOOR PLAN - FOR LEASE PRODUCT 4-UNITS
 SCALE: 1/4" = 1'-0"

**UNIT #1 2-STORY
2 BEDROOM
SQUARE FOOTAGE**
 1ST FLOOR = 897 SQUARE FEET
 2ND FLOOR = 1026 SQUARE FEET
 TOTAL = 1923 SQUARE FEET

**UNIT #2 2-STORY
3 BEDROOM
SQUARE FOOTAGE**
 1ST FLOOR = 1020 SQUARE FEET
 2ND FLOOR = 1191 SQUARE FEET
 TOTAL = 2211 SQUARE FEET

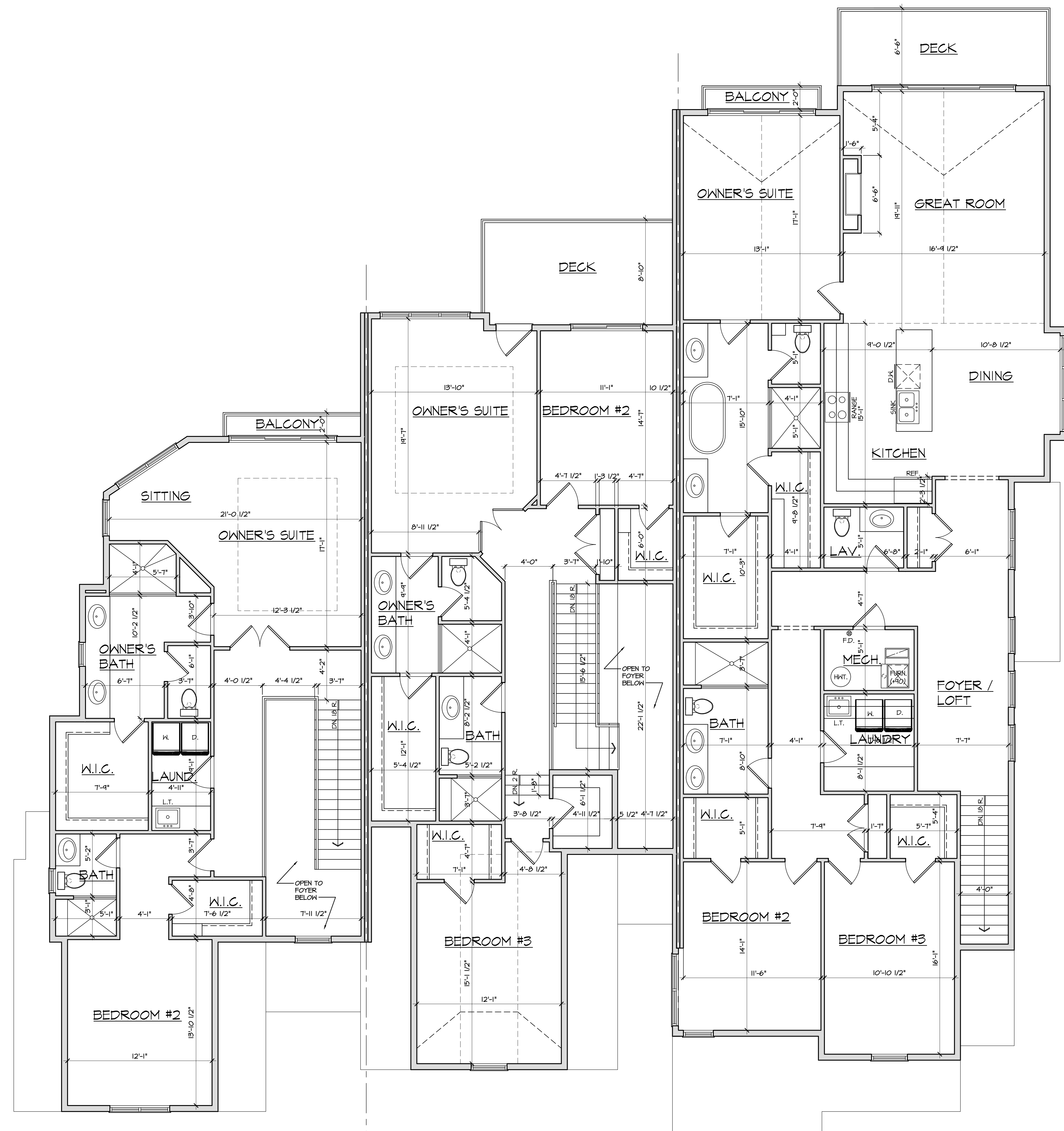
**UNIT #3 1-STORY
2 BEDROOM
SQUARE FOOTAGE**
 1ST FLOOR = 1806 SQUARE FEET

**UNIT #4 2ND STORY
3 BEDROOM
SQUARE FOOTAGE**
 1ST FLOOR = 185 SQUARE FEET
 2ND FLOOR = 2086 SQUARE FEET
 TOTAL = 2271 SQUARE FEET

ALL WINDOW NUMBERS REFER TO GENERIC SIZES (NO SPECIFIC MANUFACTURER)
 EXAMPLE:
 2040-2 = 2'-0" X 4'-0", 2-WIDE WINDOW UNIT

ALL DOOR NUMBERS REFER TO GENERIC SIZES (NO SPECIFIC MANUFACTURER)
 EXAMPLE:
 3080 = 3'-0" X 8'-0"

NOTE:
 ALL FIRST FLOOR CEILING HEIGHTS TO BE 10'-1 1/8" HIGH UNLESS NOTED OTHERWISE.



UNIT-1 2-STORY 2-BEDROOM UNIT-2 2-STORY 3-BEDROOM UNIT-3 RANCH 2-BEDROOM UNIT-4 RAISED RANCH 3-BEDROOM
SECOND FLOOR PLAN - FOR LEASE PRODUCT 4-UNITS
 SCALE: 1/4" = 1'-0"

MOCERI
 STRUCTURE-INTEGRITY-TRADITION

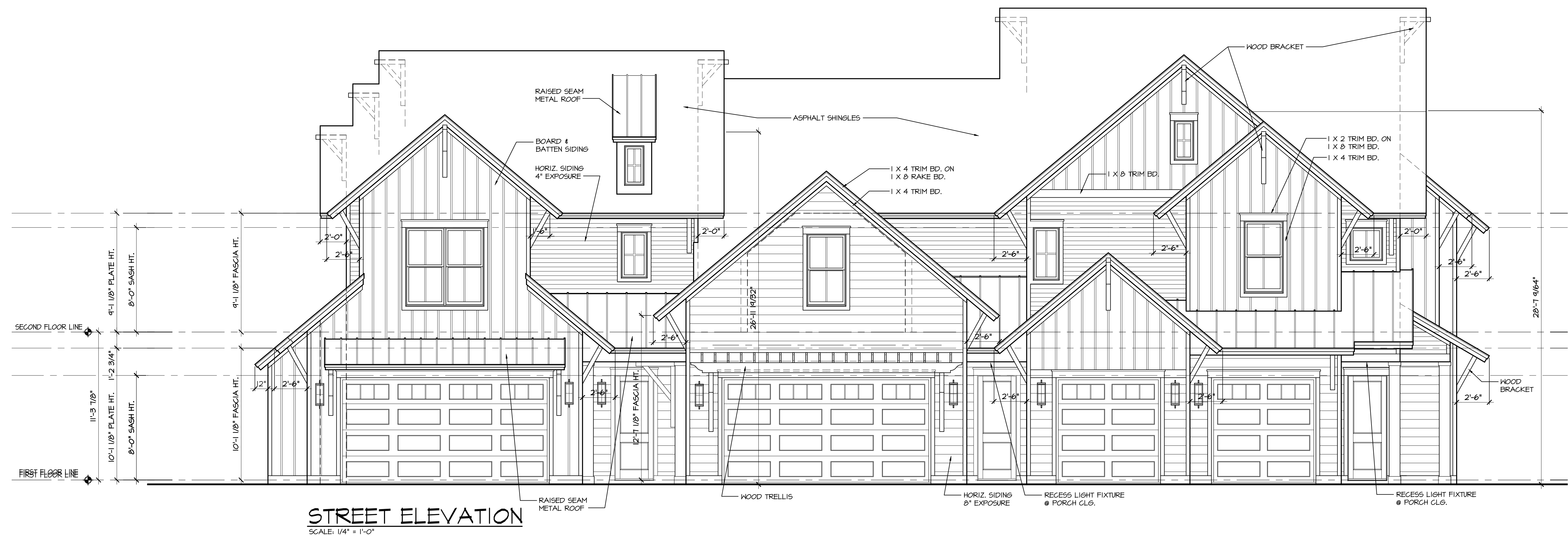
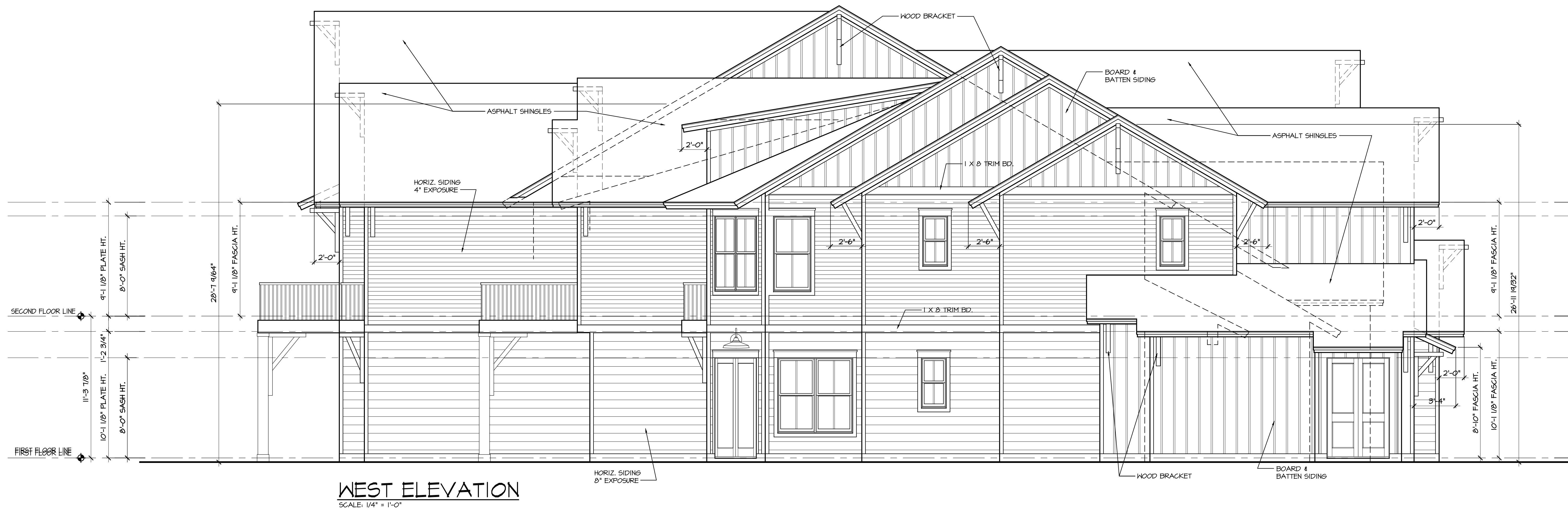
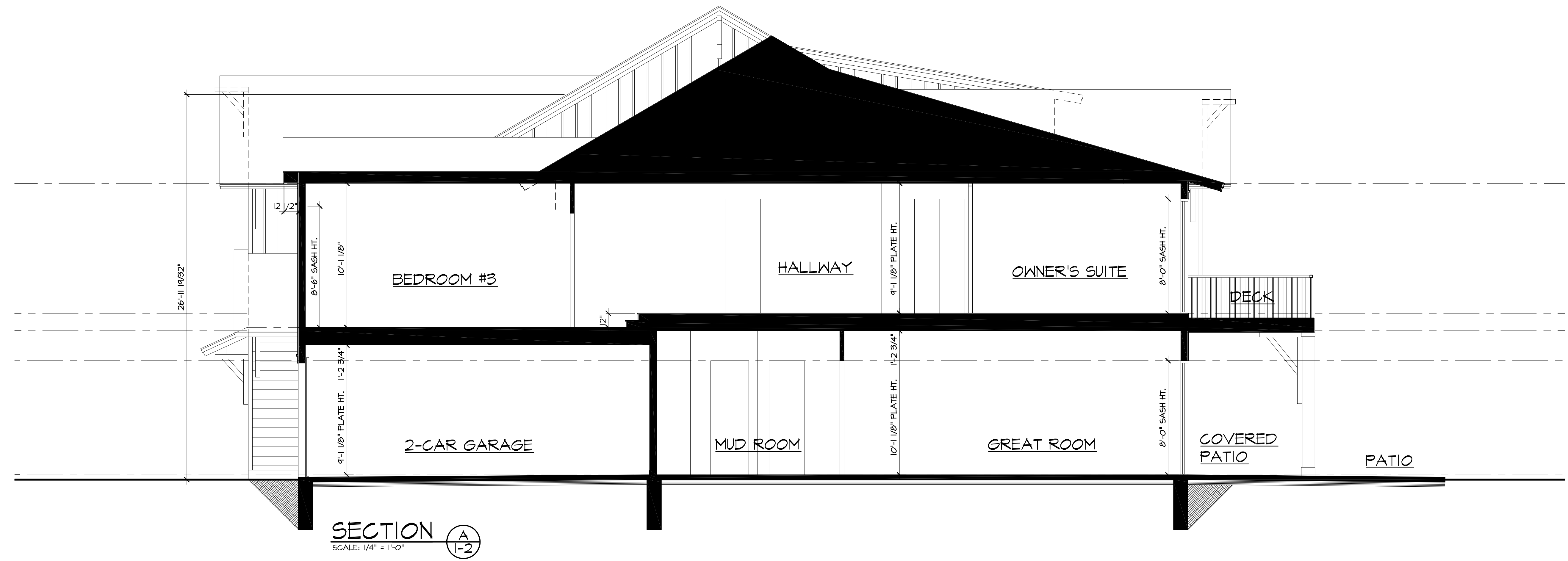
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MOCERI CUSTOM HOMES
 SNUG HARBOR
 4-UNIT BUILDING

| | |
|-------------|---------------|
| Review Set: | 02/21/24 |
| Drawn: | |
| Checked: | |
| Design: | |
| Scale: | |
| Drawn: | B.J.H. |
| Checked: | X.X. |
| Scale: | |
| Sheet No.: | 24010 |
| Page No.: | 2 OF 5 |

NOTE:
 ALL SECOND FLOOR CEILING HEIGHTS TO BE 8'-0" HIGH UNLESS NOTED OTHERWISE.







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



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