APPLICANT MOCERI COMPANIES 3005 UNIVERSITY DRIVE AUBURN HILLS, MI 48326 PHONE: (248) 340-9400

SITE AND CONSTRUCTION PERMIT PLANS

SNUG HARBOR

PARCEL NO. 09-11-403-006 VILLAGE OF LAKE ORION, OAKLAND COUNTY, MICHIGAN

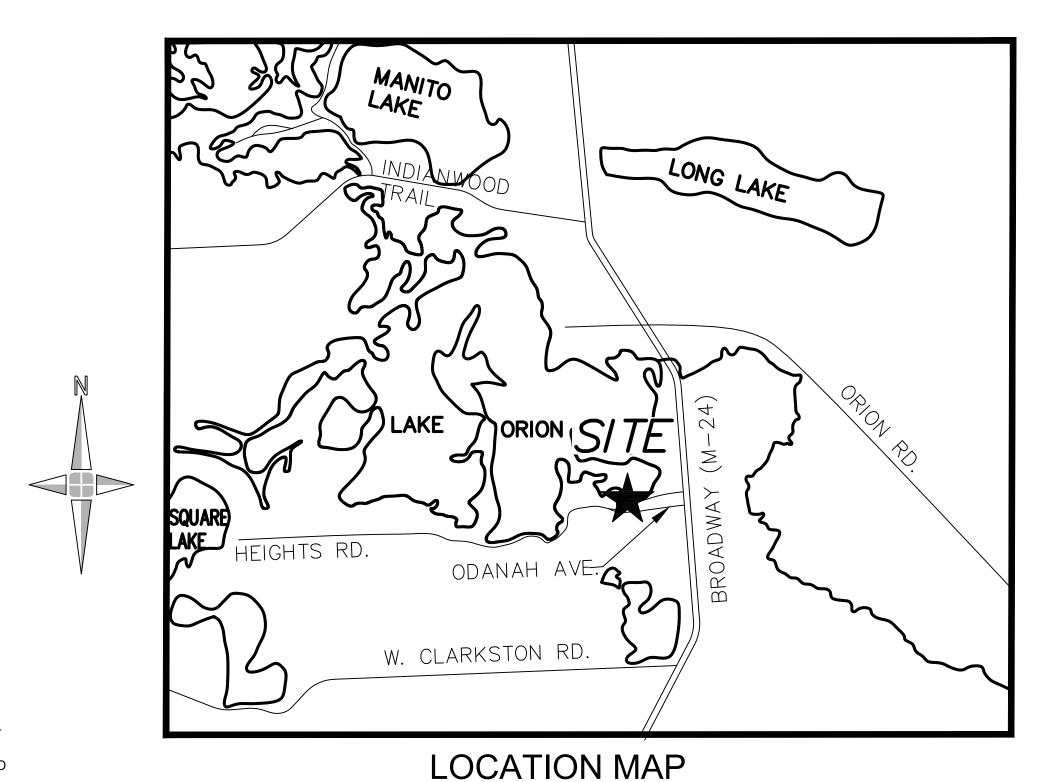
ENGINEER GIFFELS WEBSTER MS. NANCY STANDISH, PE 1025 E. MAPLE, SUITE 100 BIRMINGHAM, MI 48009 PHONE: (248) 852-3100

SURVEYOR GIFFELS WEBSTER MR. CHRIS ASIALA, PS 1025 E. MAPLE, SUITE 100 BIRMINGHAM, MI 48009 PHONE: (248) 852-3100

LANDSCAPE ARCHITECT **GIFFELS WEBSTER** MR. MARK HANSEN 1025 E. MAPLE, SUITE 100 BIRMINGHAM, MI 48009 PHONE: (248) 852-3100

GENERAL NOTES:

- 2. ALL WORK WITHIN THE OAKLAND COUNTY ROAD COMMISSION OR MDOT RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH SUPPLEMENTAL PERMIT SPECIFICATIONS AND BY PERMIT ONLY
- 3. ALL PERMITS REQUIRED SHALL BE OBTAINED BY THE CONTRACTOR. ALL PERMIT FEES, BONDS, AND INSURANCE REQUIRED BY THE ISSUING AGENCIES SHALL BE PROVIDED BY THE CONTRACTOR, AND MUST BE KEPT CURRENT. THE CONTRACTOR IS RESPONSIBLE FOR ALL OTHER FEES, INSPECTION COSTS, ETC., AND SHALL ADHERE TO ALL REQUIREMENTS SET FORTH IN SAID
- 4. 72 HOURS PRIOR TO EXCAVATION, THE CONTRACTOR SHALL NOTIFY MISS DIG (1-800-482-7171) FOR LOCATION OF UNDERGROUND AND CABLE FACILITIES, AND SHALL NOTIFY REPRESENTATIVES OF OTHER UTILITIES LOCATED IN THE VICINITY
- 5. UTILITY INFORMATION SHOWN ON THE PLANS WAS OBTAINED FROM UTILITY OWNERS AND MAY OR MAY NOT BE ACCURATE AND COMPLETE. CONTRACTOR SHALL VERIFY AND/OR OBTAIN ANY INFORMATION NECESSARY REGARDING THE PRESENCE OF UNDERGROUND UTILITIES WHICH MIGHT HAVE AN EFFECT ON THIS PROJECT, AND SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY PUBLIC OR PRIVATE UTILITIES, SHOWN OR NOT SHOWN ON THE PLANS.
- 6. THE UTILITY POLES SHOWN ON THESE DRAWINGS ARE INTENDED TO SHOW ONLY THE LOCATION OF EXISTING POLES. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE QUANTITY AND DIRECTION OF OVERHEAD LINES.
- 7. THE CONTRACTOR SHALL PROVIDE FOR CONTROLLED ACCESS TO THE SITE FOR USE BY THE VARIOUS WORK FORCES, EMERGENCY VEHICLES, OCCUPANTS, VISITORS, ETC. THROUGHOUT CONSTRUCTION, THIS ACCESS MUST PROVIDE FOR THE REMOVAL OF MUD FROM VEHICLES TIRES. ROADWAYS AND DRIVEWAYS SHALL BE MAINTAINED AND OPEN FOR EMERGENCY VEHICLES AT ALL TIMES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE RESIDENTS AND BUSINESSES, WHOSE DRIVEWAYS ARE AFFECTED BY HIS SCHEDULE, 24 HOURS IN ADVANCE. CONTRACTOR SHALL SCHEDULE CONSTRUCTION AT NON-PEAK USE HOURS AND SHALL MINIMIZE DRIVEWAY CLOSURE BY EXPEDITING CONSTRUCTION.
- 8. DURING CONSTRUCTION, CONTRACTOR MAY ENCOUNTER SPRINKLER HEADS, PIPING, LIGHTING, AND BURIED ELECTRICAL CABLE, MAILBOXES, FENCES, SIGNS, ETC. CONTRACTOR SHALL REPLACE AND/OR RESTORE ALL COMPONENTS OF SUCH SYSTEMS. THIS WORK SHALL BE INCIDENTAL TO THE PROJECT.
- 9. RIGHT-OF-WAYS AND FRONT OF LOTS DISTURBED BY CONSTRUCTION SHALL BE RESTORED BY TOPSOIL, SEED AND MULCH.
- 10. THE CONTRACTOR IS REQUIRED TO CONFINE CONSTRUCTION ACTIVITIES TO THE LIMITS OF THE SITE AS SHOWN ON THE CONSTRUCTION PLANS. ANY DAMAGE OR DISRUPTION TO ADJACENT SITES IS THE RESPONSIBILITY OF THE CONTRACTOR TO CORRECT IMMEDIATELY. NO OFF-SITE WORK SHALL BE PERFORMED OUTSIDE OF PUBLIC RIGHTS-0F-WAY OR DEDICATED EASEMENTS WITHOUT PRIOR WRITTEN APPROVAL OF THE PROPERTY OWNER.
- 11. GREAT CARE SHALL BE TAKEN TO AVOID DAMAGE TO VEGETATION OUTSIDE THE CLEARING AND GRUBBING LIMITS. NO DRIVING OR PARKING OF VEHICLES AND/OR STORAGE OF MATERIALS AND SUPPLIES SHALL BE PERMITTED OUTSIDE THE LIMITS OF CONSTRUCTION.
- 12. THE PROTECTION OF EXISTING TREES, AS REQUIRED, SHALL BE SOLELY THE CONTRACTOR'S RESPONSIBILITY.
- 13. FINAL CLEANUP AND RESTORATION SHALL CONSIST OF FINE GRADING OF CONSTRUCTION AREAS, REMOVAL OF CONSTRUCTION SIGNS, ETC. TOPSOIL SHALL BE SPREAD OVER ALL DISTURBED AREAS, FOLLOWED BY SEED, FERTILIZER AND EROSION MAT OR STRAW MULCH, OR AS FURTHER REQUIRED BY THE LANDSCAPING PLANS AND SPECIFICATIONS. ALL REQUIRED RESTORATION ITEMS NOT SPECIFICALLY IDENTIFIED AS A PAY ITEM SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
- 14. ALL RESTORATION SHALL BE SPECIFIED ON THE PLANS AND IN THE SPECIFICATIONS. NON PAY ITEMS SHALL BE INCIDENTAL TO THE PROJECT.
- 15. THE CONTRACTOR AND/OR HIS SUBCONTRACTORS SHALL NOTIFY THE VILLAGE OF LAKE ORION, ORION TOWNSHIP FIRE DEPARTMENT, THE ORION TOWNSHIP POLIC DEPARTMENT, MDOT AND THE OAKLAND COUNTY ROAD COMMISSION TWO (2) WEEKS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- 16. THE CONTRACTOR SHALL PROVIDE NECESSARY SIGNS, BARRICADES, AND LIGHTS TO PROTECT THE TRAFFIC AND THE WORK AS DIRECTED BY THE FIELD ENGINEER OR THE ROADWAY JURISDICTIONAL AGENCY. ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD.)
- 17. ALL LOT MARKERS AND MONUMENT POINTS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED BY A REGISTERED LAND SURVEYOR AT THE EXPENSE OF THE CONTRACTOR.
- 18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEWATERING REQUIRED TO CONSTRUCT THE PROPOSED UTILITIES AND SHALL BE DONE PER APPROVED DEWATERING PLAN. COST OF DEWATERING SHALL BE INCIDENTAL TO THE PROJECT.



NOT TO SCALE

APPROVALS AND PERMITS

NAME	SUBMITTAL DATE	APPROVAL DATE	PERMIT NO.
SITE PLAN	02.29.2024	-	-
VILLAGE ENGINEERING APPROVAL	-	-	-
VILLAGE SANITARY APPROVAL	-	-	-
OAKLAND COUNTY SANITARY APPROVAL	-	-	-
VILLAGE WATERMAIN APPROVAL	-	-	-
OCWRC SESC PERMIT	-	-	-
RCOC UTILITY PERMIT	-	-	-
RCOC APPROACH PERMIT	-	-	-
EGLE WETLAND PERMIT	-	-	-

SHEET INDEX

ENGINEERING PLANS

TOPOGRAPHIC AND BOUNDARY SURVEY

LANDSCAPE AND LIGHTING

LANDSCAPE PLAN LANDSCAPE DETAILS LIGHTING PLAN

SHEETS BY OTHERS

ARCHITECTURAL

BUILDING FLOOR PLANS AND ELEVATIONS

MUNICIPAL DETAILS

PROPERTY DESCRIPTION

LOTS 22 & 23 OF THE CUTCHEON SUBDIVISION, LIBER 27, PAGE 8 OF PLATS, OAKLAND COUNTY RECORDS.

(PER TAX RECORD)

SANITARY SEWER DETAILS AND NOTES

SOIL EROSION AND SEDIMENTATION CONTROL DETAILS

STORM DRAIN NOTES AND DETAILS WATER MAIN STANDARD DETAILS

COVER SHEET

SITE AND PAVING PLAN **GRADING AND UTILITY PLAN** SITE NOTES AND DETAILS

Designer:

Quality Control:



giffels

webster

Landscape Architects

1025 East Maple Road

Birmingham, MI 48009

p (248) 852-3100

f (313) 962-5068

www.giffelswebster.com

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SUBMIT FOR SITE PLAN APPROVAL
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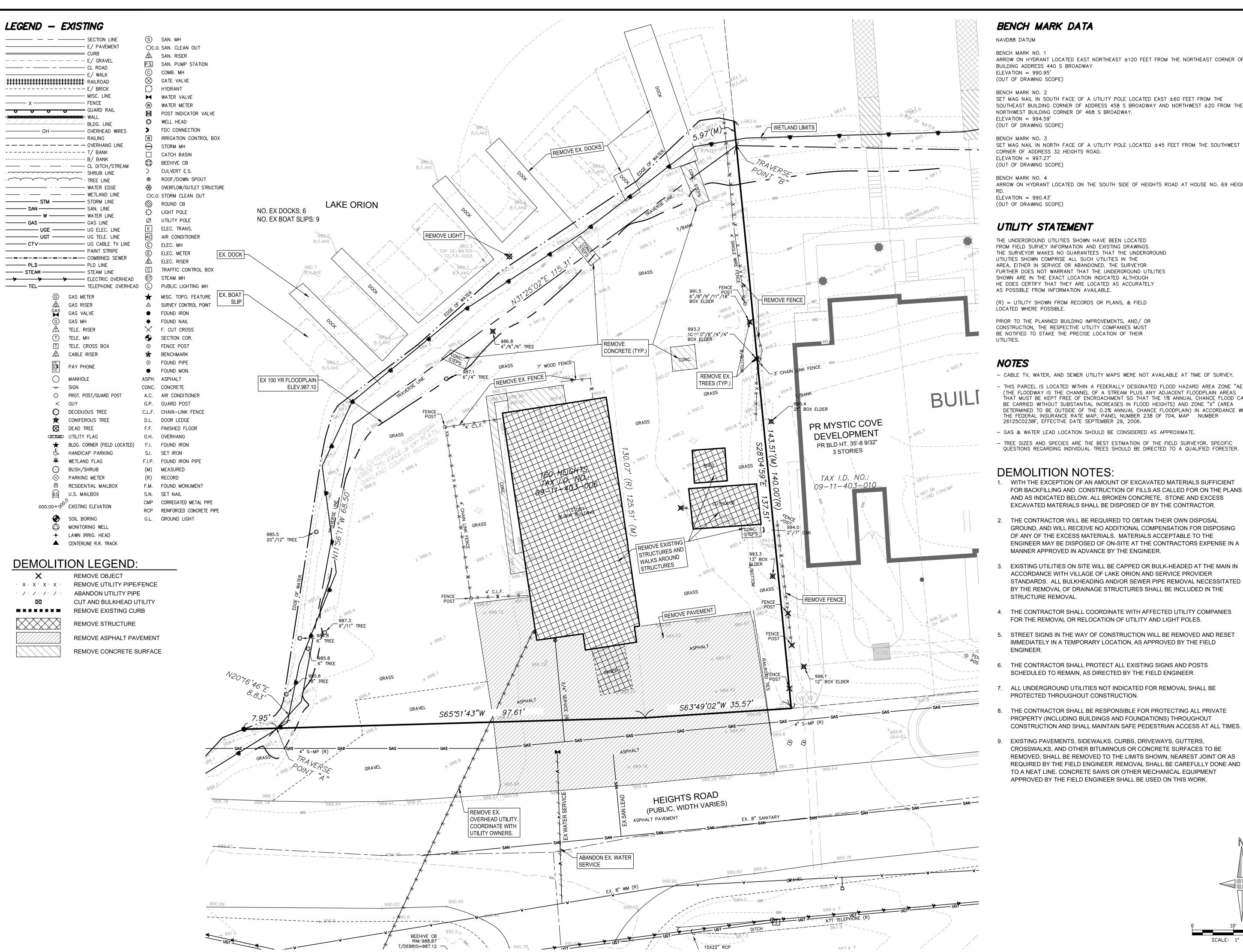
COVER SHEET

SNUG HARBOR

VILLAGE OF LAKE ORION OAKLAND COUNTY MICHIGAN

ate:	02.29.2024			
Scale:	NA			
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roject: 20107.40				
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BENCH MARK DATA

BENCH MARK NO. 1 ARROW ON HYDRANT LOCATED EAST NORTHEAST ±120 FEET FROM THE NORTHEAST CORNER OF BUILDING ADDRESS 440 S BROADWAY ELEVATION = 990.95

(OUT OF DRAWING SCOPE) BENCH MARK NO. 2

SET MAG NAIL IN SOUTH FACE OF A UTILITY POLE LOCATED EAST ±60 FEET FROM THE SOUTHEAST BUILDING CORNER OF ADDRESS 458 S BROADWAY AND NORTHWEST ±20 FROM THE NORTHWEST BUILDING CORNER OF 468 S BROADWAY. ELEVATION = 994.59

(OUT OF DRAWING SCOPE)

SET MAG NAIL IN NORTH FACE OF A UTILITY POLE LOCATED ±45 FEET FROM THE SOUTHWEST CORNER OF ADDRESS 32 HEIGHTS ROAD. ELEVATION = 997.27

BENCH MARK NO. 4

ARROW ON HYDRANT LOCATED ON THE SOUTH SIDE OF HEIGHTS ROAD AT HOUSE NO. 69 HEIGHTS

ELEVATION = 990.43(OUT OF DRAWING SCOPE)

UTILITY STATEMENT

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE.

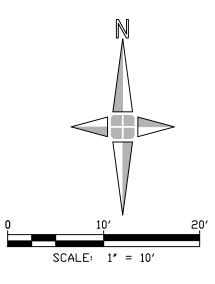
(R) = UTILITY SHOWN FROM RECORDS OR PLANS, & FIELD LOCATED WHERE POSSIBLE.

PRIOR TO THE PLANNED BUILDING IMPROVEMENTS, AND/ OR CONSTRUCTION, THE RESPECTIVE UTILITY COMPANIES MUST BE NOTIFIED TO STAKE THE PRECISE LOCATION OF THEIR

- CABLE TV, WATER, AND SEWER UTILITY MAPS WERE NOT AVAILABLE AT TIME OF SURVEY.

- THIS PARCEL IS LOCATED WITHIN A FEDERALLY DESIGNATED FLOOD HAZARD AREA ZONE "AE" (THE FLOODWAY IS THE CHANNEL OF A STREAM PLUS ANY ADJACENT FLOODPLAIN AREAS THAT MUST BE KEPT FREE OF ENCROACHMENT SO THAT THE 1% ANNUAL CHANCE FLOOD CAN BE CARRIED WITHOUT SUBSTANTIAL INCREASES IN FLOOD HEIGHTS) AND ZONE "X" (AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN) IN ACCORDANCE WITH THE FEDERAL INSURANCE RATE MAP, PANEL NUMBER 238 OF 704, MAP NUMBER 26125C0238F, EFFECTIVE DATE SEPTEMBER 29, 2006.
- GAS & WATER LEAD LOCATION SHOULD BE CONSIDERED AS APPROXIMATE.
- TREE SIZES AND SPECIES ARE THE BEST ESTIMATION OF THE FIELD SURVEYOR. SPECIFIC QUESTIONS REGARDING INDIVIDUAL TREES SHOULD BE DIRECTED TO A QUALIFIED FORESTER.

- 1. WITH THE EXCEPTION OF AN AMOUNT OF EXCAVATED MATERIALS SUFFICIENT FOR BACKFILLING AND CONSTRUCTION OF FILLS AS CALLED FOR ON THE PLANS AND AS INDICATED BELOW, ALL BROKEN CONCRETE, STONE AND EXCESS EXCAVATED MATERIALS SHALL BE DISPOSED OF BY THE CONTRACTOR.
- 2. THE CONTRACTOR WILL BE REQUIRED TO OBTAIN THEIR OWN DISPOSAL GROUND, AND WILL RECEIVE NO ADDITIONAL COMPENSATION FOR DISPOSING OF ANY OF THE EXCESS MATERIALS. MATERIALS ACCEPTABLE TO THE ENGINEER MAY BE DISPOSED OF ON-SITE AT THE CONTRACTORS EXPENSE IN A MANNER APPROVED IN ADVANCE BY THE ENGINEER.
- EXISTING UTILITIES ON SITE WILL BE CAPPED OR BULK-HEADED AT THE MAIN IN ACCORDANCE WITH VILLAGE OF LAKE ORION AND SERVICE PROVIDER STANDARDS. ALL BULKHEADING AND/OR SEWER PIPE REMOVAL NECESSITATED BY THE REMOVAL OF DRAINAGE STRUCTURES SHALL BE INCLUDED IN THE STRUCTURE REMOVAL.
- 4. THE CONTRACTOR SHALL COORDINATE WITH AFFECTED UTILITY COMPANIES FOR THE REMOVAL OR RELOCATION OF UTILITY AND LIGHT POLES.
- STREET SIGNS IN THE WAY OF CONSTRUCTION WILL BE REMOVED AND RESET IMMEDIATELY IN A TEMPORARY LOCATION, AS APPROVED BY THE FIELD ENGINEER.
- THE CONTRACTOR SHALL PROTECT ALL EXISTING SIGNS AND POSTS SCHEDULED TO REMAIN, AS DIRECTED BY THE FIELD ENGINEER.
- ALL UNDERGROUND UTILITIES NOT INDICATED FOR REMOVAL SHALL BE
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL PRIVATE PROPERTY (INCLUDING BUILDINGS AND FOUNDATIONS) THROUGHOUT
- EXISTING PAVEMENTS, SIDEWALKS, CURBS, DRIVEWAYS, GUTTERS, CROSSWALKS, AND OTHER BITUMINOUS OR CONCRETE SURFACES TO BE REMOVED, SHALL BE REMOVED TO THE LIMITS SHOWN, NEAREST JOINT OR AS REQUIRED BY THE FIELD ENGINEER. REMOVAL SHALL BE CAREFULLY DONE AND TO A NEAT LINE. CONCRETE SAWS OR OTHER MECHANICAL EQUIPMENT





Engineers Surveyors Planners

Landscape Architects 1025 East Maple Road

Suite 100 Birmingham, MI 48009 p (248) 852-3100

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02.29.2024	SUBMIT FOR SITE PLAN APPROVAL
04.04.2024	RESUBMIT FOR SITE PLAN APPROVAL

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TOPOGRAPHIC AND BOUNDARY SURVEY

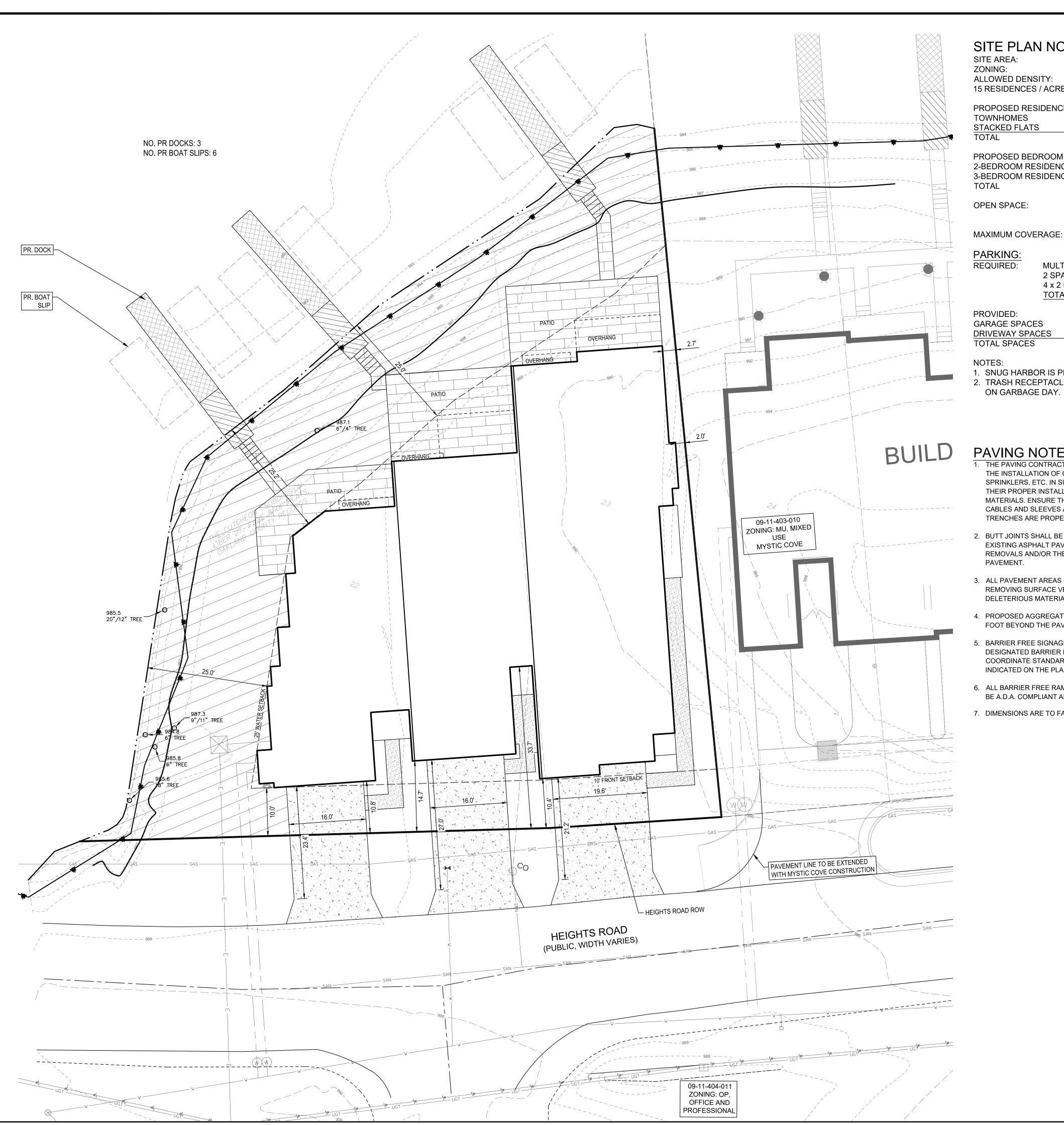
SNUG HARBOR

VILLAGE OF LAKE ORION OAKLAND COUNTY MICHIGAN

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SITE PLAN NOTES:

SITE AREA: 12,878 SF, 0.296 ACRES **ZONING:** MU, MIXED USE 15 RESIDENCES/ACRE ALLOWED DENSITY: 15 RESIDENCES / ACRE x 0.296 ACRES: 4.43 RESIDENCES

PROPOSED RESIDENCES: TOWNHOMES 2 RESIDENCES STACKED FLATS 2 RESIDENCES

PROPOSED BEDROOM BREAKDOWN:

2-BEDROOM RESIDENCES 2 RESIDENCES 3-BEDROOM RESIDENCES 2 RESIDENCES 4 RESIDENCES

4,067 SF / 0.089 ACRES **OPEN SPACE:** 31.5%

PARKING:

MULTI-FAMILY REQUIREMENTS

2 SPACES PER UNIT 4 x 2 = 8 SPACES TOTAL REQUIRED: 8 SPACES

GARAGE SPACES

6 SPACES 6 SPACES **DRIVEWAY SPACES** TOTAL SPACES 12 SPACES

1. SNUG HARBOR IS PROPOSED MULTI-FAMILY RESIDENCE COMMUNITY.

2. TRASH RECEPTACLES WILL BE STORED IN THE RESIDENCE GARAGES AND ROLLED OUT

4 RESIDENCES

ON GARBAGE DAY.

PAVING NOTES:

- 1. THE PAVING CONTRACTOR SHALL BE REQUIRED TO COORDINATE THE INSTALLATION OF GAS, ELECTRIC, PHONE, CABLE, SPRINKLERS, ETC. IN SUCH A MANNER THAT WILL FACILITATE THEIR PROPER INSTALLATION PRIOR TO PLACING THE PAVEMENT MATERIALS. ENSURE THAT ALL REQUIRED PIPES, CONDUITS, CABLES AND SLEEVES ARE PROPERLY PLACED AND THAT THE TRENCHES ARE PROPERLY BACKFILLED AND COMPACTED.
- 2. BUTT JOINTS SHALL BE PLACED AT ALL LOCATIONS WHERE AN EXISTING ASPHALT PAVEMENT SURFACE IS BEING DISTURBED BY REMOVALS AND/OR THE INSTALLATION OF NEW ASPHALT PAVEMENT.
- 3. ALL PAVEMENT AREAS SHOULD BE CLEARED AND GRUBBED BY REMOVING SURFACE VEGETATION, TOPSOIL, DEBRIS AND OTHER DELETERIOUS MATERIALS.
- 4. PROPOSED AGGREGATE BASE SHALL EXTEND A MINIMUM OF 1 FOOT BEYOND THE PAVEMENT EDGE/BACK OF CURB.
- BARRIER FREE SIGNAGE SHALL BE PLACED IN FRONT OF EVERY DESIGNATED BARRIER FREE STALL. THE CONTRACTOR SHALL COORDINATE STANDARD AND VAN ACCESSIBILITY SIGNAGE AS INDICATED ON THE PLANS.
- 6. ALL BARRIER FREE RAMPS, WALK, LANDINGS AND CURBS SHALL BE A.D.A. COMPLIANT AND MEET MOOT STANDARD PLAN R-28.
- 7. DIMENSIONS ARE TO FACE OF CURB.

AREA, HEIGHT, BULK AND PLACEMENT REGULATIONS:

SETBACKS

	PROPOSED	REQUIRED
FRONT (MINIMUM)	10'	10'
FRONT (MAXIMUM)	33.7'	25'
WATER	25'	25'
SIDE	2'	0'
MAX. LOT COVERAGE	42%	50%

BUILDING HEIGHT: 28' - 7 \(\frac{9}{64}\)"

EXISTING

TOTAL AREA - 12,878 SF IMPERVIOUS AREA - 3,819.64 SF, 29.7% PERVIOUS AREA - 9,058.36, 70.3%

PROPOSED

IMPERVIOUS TOTAL - 6,728 SF, 52.2% IMPERVIOUS PAVEMENT - 1,301 SF IMPERVIOUS BUILDING - 5,427 SF

PERVIOUS TOTAL - 6,150 SF, 47.8% PERVIOUS PAVEMENT - 1,400 SF PERVIOUS GREEN SPACE - 4,750 SF

LEGEND PR VALVE AND BOX PR WATERMAIN PR CLEAN OUT PR SANITARY SEWER PR UNDERGROUND ELECTRIC SERVICE PR TRANSFORMER PR SPOT ELEVATION

> PR SWALE PR CONCRETE WALK

PR OPEN SPACE AREA

PR CONCRETE DRIVE PR PERMEABLE PAVERS



Engineers

Suite 100 Birmingham, MI 48009 p (248) 852-3100 f (313) 962-5068

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SITE AND PAVING PLAN

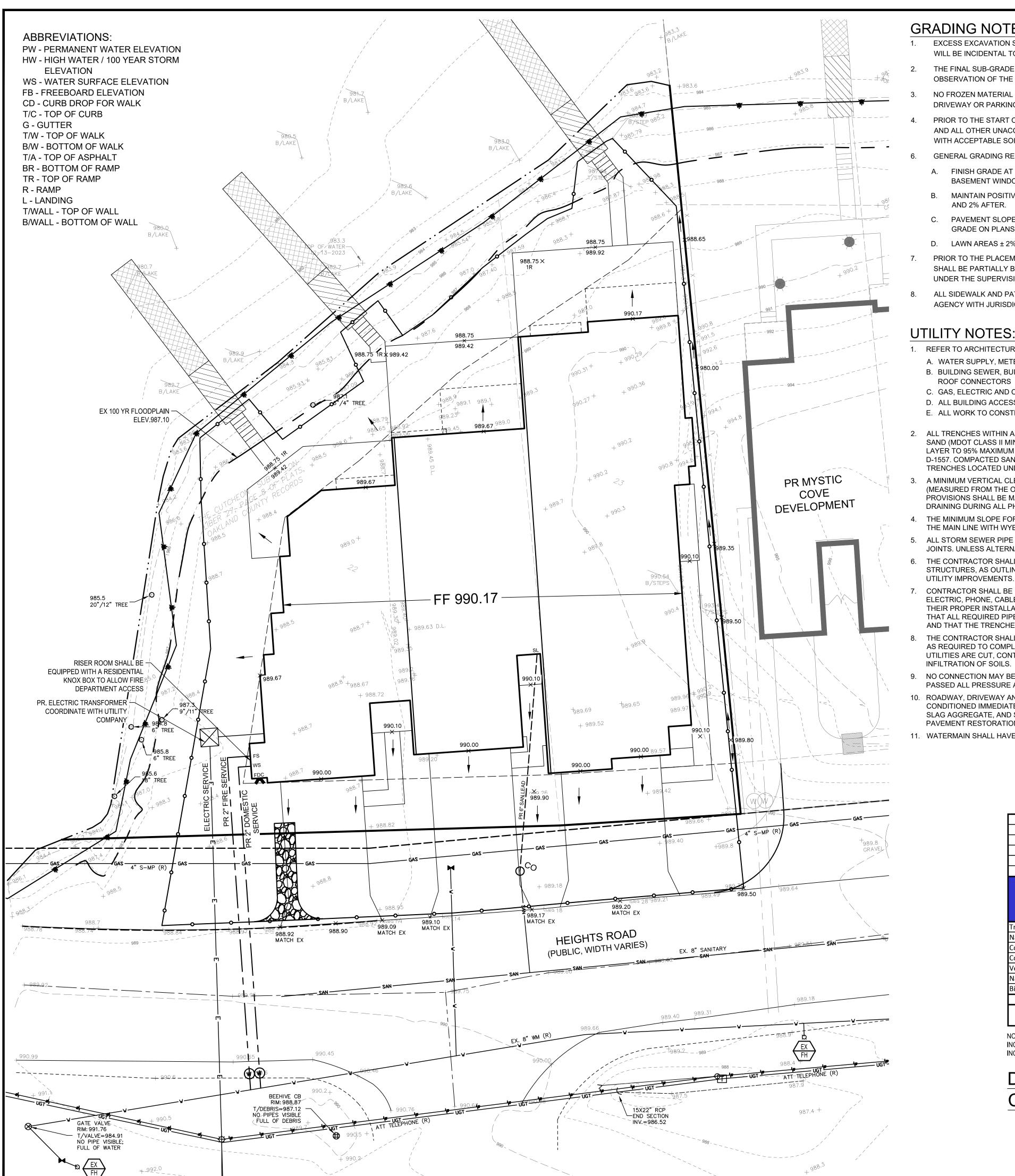
SNUG HARBOR

VILLAGE OF LAKE ORION OAKLAND COUNTY MICHIGAN

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SCALE: 1" = 10'



GRADING NOTES:

- EXCESS EXCAVATION SHALL BE DISPOSED OF BY THE CONTRACTOR. COST OF DISPOSAL WILL BE INCIDENTAL TO THE PROJECT.
- THE FINAL SUB-GRADE SHALL BE THOROUGHLY PROOF-ROLLED UNDER THE OBSERVATION OF THE SOILS ENGINEER.
- NO FROZEN MATERIAL SHALL BE PERMITTED AS BACKFILL UNDER ANY ROADWAY, DRIVEWAY OR PARKING AREA.
- PRIOR TO THE START OF ANY FILLING, THE CONTRACTOR SHALL REMOVE ALL TOPSOIL AND ALL OTHER UNACCEPTABLE SOIL FROM THE FILL AREAS, AND PROPERLY BACKFILL WITH ACCEPTABLE SOIL.
- GENERAL GRADING REQUIREMENTS ARE AS FOLLOWS:
- FINISH GRADE AT EXISTING BUILDING SHALL MATCH BRICK LEDGES, DOORWAYS OR
- MAINTAIN POSITIVE DRAINAGE AWAY FROM ALL BUILDING: 5% WITHIN THE FIRST 10' AND 2% AFTER.
- PAVEMENT SLOPES (1.0% MINIMUM, 4.0% MAXIMUM) UNIFORMLY BETWEEN FINISH **GRADE ON PLANS**
- LAWN AREAS ± 2% MINIMUM TO 33% MAXIMUM
- PRIOR TO THE PLACEMENT OF ANY BASE ASPHALT OR LEVELING COURSE, THE CURBS SHALL BE PARTIALLY BACKFILLED AND THE SUB-GRADE SHALL BE PROOF-ROLLED UNDER THE SUPERVISION OF THE SOILS ENGINEER.
- ALL SIDEWALK AND PATHWAYS IN ANY PUBLIC R.O.W. SHALL BE INSPECTED BY THE AGENCY WITH JURISDICTION.

UTILITY NOTES:

- 1. REFER TO ARCHITECTURAL PLANS TO COORDINATE ALL:
- A. WATER SUPPLY, METERING, SPRINKLER AND FDC PIPING, DESIGN AND COORDINATION B. BUILDING SEWER, BUILDING DRAIN DESIGN AND CONNECTIONS TO CLEAN OUTS AND ROOF CONNECTORS
- C. GAS, ELECTRIC AND COMMUNICATION SERVICES, AND LIGHTING DETAILS
- D. ALL BUILDING ACCESS WALKS AND ENTRY DETAILS, INCLUDING SUPPORTED SLABS
- E. ALL WORK TO CONSTRUCT THE BUILDING AND ALL ITEMS CONNECTED TO IT
- ALL TRENCHES WITHIN A ONE ON ONE SLOPE OF PAVEMENT SHALL BE BACKFILLED WITH SAND (MDOT CLASS II MINIMUM) AND MECHANICALLY COMPACTED IN NOT MORE THAN 9" LAYER TO 95% MAXIMUM DRY DENSITY PER MODIFIED PROCTER COMPACTION TEST ASTM D-1557. COMPACTED SAND BACKFILL SHALL ALSO BE PROVIDED FOR ALL SEWER TRENCHES LOCATED UNDER, OR WITHIN, THREE FEET OF PAVEMENT
- A MINIMUM VERTICAL CLEARANCE OF 18 INCHES IS REQUIRED AT UTILITY CROSSINGS (MEASURED FROM THE OUTSIDE OF PIPE TO THE OUTSIDE OF PIPE). POSITIVE PROVISIONS SHALL BE MADE TO ENSURE THAT ALL UTILITY TRENCHES ARE FREE DRAINING DURING ALL PHASES OF CONSTRUCTION.
- 4. THE MINIMUM SLOPE FOR A BUILDING LEAD IS 1%. LEADS SHALL ONLY BE CONNECTED TO THE MAIN LINE WITH WYES.
- ALL STORM SEWER PIPE SHALL BE CONSTRUCTED WITH RUBBER GASKET (PREMIUM) JOINTS. UNLESS ALTERNATE APPROVED BY CITY ENGINEER.
- THE CONTRACTOR SHALL COORDINATE THE REMOVAL OF ALL UTILITY LINES AND STRUCTURES, AS OUTLINED ON THE DEMOLITION PLAN, WITH THE INSTALLATION OF
- CONTRACTOR SHALL BE REQUIRED TO COORDINATE THE INSTALLATION OF GAS, ELECTRIC, PHONE, CABLE, SPRINKLERS ETC., IN SUCH A MANNER THAT WILL FACILITATE THEIR PROPER INSTALLATION PRIOR TO PLACING THE PAVEMENT MATERIALS. ENSURE THAT ALL REQUIRED PIPES, CONDUITS, CABLES AND SLEEVES ARE PROPERLY PLACED AND THAT THE TRENCHES ARE PROPERLY BACKFILLED AND COMPACTED.
- THE CONTRACTOR SHALL REMOVE UTILITIES, WHICH HAVE BEEN ABANDONED IN PLACE, AS REQUIRED TO COMPLETE INSTALLATION OF NEW UTILITIES. WHENEVER ABANDONED UTILITIES ARE CUT, CONTRACTOR SHALL COMPLETELY CAP BOTH ENDS TO PREVENT THE INFILTRATION OF SOILS.
- 9. NO CONNECTION MAY BE MADE TO ANY EXISTING WATER MAIN UNTIL THE NEW MAIN HAS PASSED ALL PRESSURE AND BACTERIOLOGICAL TESTING.
- 10. ROADWAY, DRIVEWAY AND PARKING AREA CROSSINGS SHALL BE TEMPORARILY CONDITIONED IMMEDIATELY AFTER CROSSING BY PLACING 8" OF MDOT 22A GRAVEL OR SLAG AGGREGATE, AND SHALL BE MAINTAINED IN GOOD, DUST FREE CONDITION UNTIL PAVEMENT RESTORATION IS MADE.
- 11. WATERMAIN SHALL HAVE A MINIMUM OF 5.5 FEET OF COVER.

PR GATE VALVE AND WELL PR HYDRANT PR VALVE AND BOX PR WATERMAIN PR STORM CATCH BASIN PR STORM MANHOLE PR STORM REAR YARD PR STORM END SECTION PR GROUTED RIP RAP _____ PR STORM SEWER ---- PR PERFORATED UNDERDRAIN PR CLEAN OUT PR SANITARY MANHOLE ---- PR SANITARY SEWER

PR UNDERGROUND ELECTRIC SERVICE PR LIGHT FIXTURE (SEE LIGHTING PLAN FOR TYPE OF FIXTURE) PR TRANSFORMER PR UNDERGROUND GAS SERVICE PR UNDERGROUND TELEPHONE SERVICE PR UTILITY CROSSING

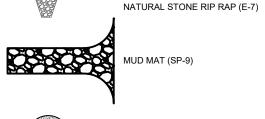
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LEGEND

PR CONTOUR MINOR (1') —940—---- PR CONTOUR MAJOR (5') PR SPOT ELEVATION PR SWALE PR CURB AND GUTTER PR REVERSE CURB AND GUTTER

SILT FENCE (SP-2 OR SP-2A)

INLET FILTER CURB INLETS (SI-2 OR SI-2A) PAVEMENT INLETS (SI-4 OR SI-4A) RY (SI-3 OR SI-3A)



RESTRICTED OUTLET STRUCTURE

BENCH MARK DATA

NAVD88 DATUM

BENCH MARK NO. 1 ARROW ON HYDRANT LOCATED EAST NORTHEAST ±120 FEET FROM THE NORTHEAST CORNER OF BUILDING ADDRESS 440 S BROADWAY

ELEVATION = 990.95'(OUT OF DRAWING SCOPE)

ELEVATION = 994.59'

(OUT OF DRAWING SCOPE)

BENCH MARK NO. 2 SET MAG NAIL IN SOUTH FACE OF A UTILITY POLE LOCATED EAST ±60 FEET FROM THE SOUTHEAST BUILDING CORNER OF ADDRESS 458 S BROADWAY AND NORTHWEST ±20 FROM THE NORTHWEST BUILDING CORNER OF 468 S BROADWAY.

BENCH MARK NO. 3 SET MAG NAIL IN NORTH FACE OF A UTILITY POLE LOCATED ±45 FEET FROM THE SOUTHWEST CORNER OF ADDRESS 32 HEIGHTS ROAD. ELEVATION = 997.27(OUT OF DRAWING SCOPE)

BENCH MARK NO. 4 ARROW ON HYDRANT LOCATED ON THE SOUTH SIDE OF HEIGHTS ROAD AT HOUSE ELEVATION = 990.43'(OUT OF DRAWING SCOPE)

UTILITIES

CONNECT NOTE: | CONNECT

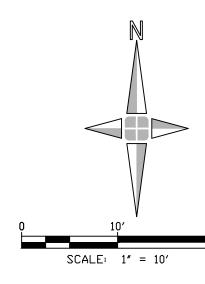
CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT ALL PROPOSED CONNECTIONS AND CROSSINGS AND SUPPLY ELEVATIONS AND LOCATIONS TO THE DESIGN ENGINEER TO CONFIRM OR ADJUST DESIGN.

NOTES:

1. CGM - COMPACTED CL II GRANULAR MATERIAL

UTILITY PIPE MATERIALS:

SL - SANITARY LEAD, 6" PVC SDR 23.5 WS - WATER LEAD, SDR9 POLY BLUE PVC 200 PSI PIPE OR APPROVED EQUAL FS - FIRE LEAD, COPPER TYPE 'K"



GRADING AND UTILITY PLAN

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AUBURN HILLS, MI 48326

248.340.9400

Developed For:

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Surveyors

Planners

Landscape Architects

1025 East Maple Road

Suite 100

Birmingham, MI 48009

p (248) 852-3100

f (313) 962-5068

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Manager:

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Section:

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APPROVAL

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DATE: ISSUE:

02.29.2024

04.04.2024

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T-04-N R-10-E

SNUG HARBOR

VILLAGE OF LAKE ORION OAKLAND COUNTY MICHIGAN

02.29.2024 1"=10' C4 20107.40 No reproduction shall be made without the

prior written consent of Giffels Webster.

12,878.00 Total Development Area (sf) 5,427.00 Buildings (sf) 1,301.00 Pavement (sf) 6,728.00 Site Impervious Area (sf) MEP Area Required (sf) Note: 15% of the site's imp area Max. Allowed Conserved Area (sf) Note: 50% of MEP Area

ВМР	Runoff Not Directed to BMP		Runoff Directed to BMP	
	BMP Area (sf)	MEP Area (sf)	BMP Area (sf)	MEP Area (sf)
Trees	5,000.00	5,000.00		
Native Plantings	2,655.86	2,655.86		
Conserving Wetlands				
Conserving Woodlands				
Vegetated Roof				
Natural Pond (Enhanced Det.)				
Bio. w/underdrain				
Totals:		7,655.86		-
		Requirerd N	IEP Area (sf):	1,009.20

NOTE: CALCULATIONS ARE BASED ON OCWRC PRESENTATION ON XX.XX.2024 AND ARE NOT INCLUDED IN THE CURRENT MANUAL. CALCULATIONS ARE IN THE PROCESS OF BEING INCORPORATED INTO THE OCWRC STORMWATER MANUAL.

Site's Total MEP Area (sf): 7,655.86

DRAFT OCWRC MEP **CALCULATIONS**

SOIL EROSION AND SEDIMENTATION CONTROL NOTES:

- 1. 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.
- 2. A SOIL EROSION AND SEDIMENTATION CONTROL PERMIT WILL BE REQUIRED FROM THE OAKLAND COUNTY WATER RESOURCES COMMISSIONER'S OFFICE.
- 3. 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
- 4. 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
- 5. 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.
- 6. 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. 7. 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. 8. CONTRACTOR SHALL CONFINE OPERATIONS TO THE MINIMUM AMOUNT OF WORKING SPACE PRACTICAL TO MINIMIZE
- 9. 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. 10. 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.
- 11. STREET SWEEPING OR MUD REMOVAL SHALL BE PERFORMED DAILY FOR MUD TRACKED ONTO PUBLIC STREETS.
- 12. 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.
- 13. 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
- 14. 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.
- 15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE SOIL EROSION CONTROL MEASURES WITHIN THE CONSTRUCTION AREA UNTIL FULL COMPLETION OF THE PROJECT.
- 16. THE SOIL EROSION CONTROLS WILL BE MAINTAINED WEEKLY AND AFTER EVERY STORM EVENT BY THE
- CONTRACTOR. 17. ACTIVITIES WITHIN WETLAND LIMITS AND CONSERVATION EASEMENT WILL REQUIRE PERMIT FROM MDEQ.

NOTE:

MH 103-105

1. 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:

MUD MAT

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

SILT FENCE, MUD MAT, MULCH TEMPORARY SOIL EROSION MEASURES:

PERMANENT SOIL EROSION MEASURES: TOPSOIL, SEED, & MULCH, NATIVE VEGETATION. RIP RAP

BLANKET, DUST CONTROL

- 1. MOBILIZATION
- EXISTING CATCH BASINS PER PLAN

- RESTORATION
- 9. REMOVE SESC MEASURES AFTER STABILIZATION

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 \(\frac{1}{3}\) TO \(\frac{1}{2}\) 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.

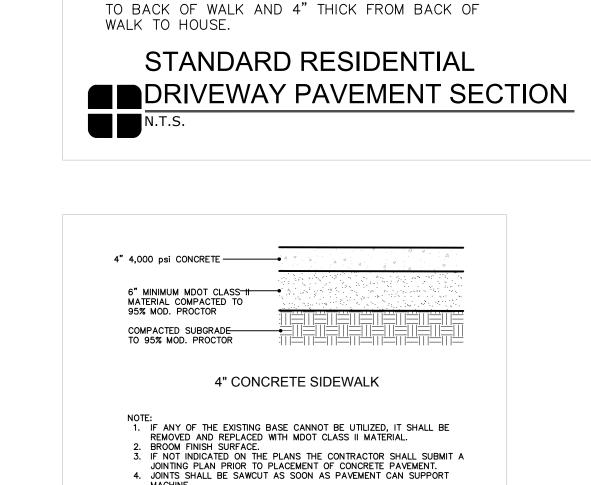
ACCUMULATED SEDIMENTS, ADD STONE AS NEEDED AND REQUIRED BY THE ENGINEER, AND REPLACE GEOTEXTILE IF

INSTALL AT THE START OF CONSTRUCTION PER PLAN. REMOVE

DAMAGED.

CONSTRUCTION SEQUENCE:

- 2. INSTALL SILT FENCE AND INLET FILTERS AT
- 3. REMOVALS PER PLAN
- 4. EARTHWORK OPERATIONS
- 5. UTILITY INSTALLATION
- 6. PAVEMENT INSTALLATION
- 8. SITE CLEAN UP



MACHINE.
5. AN EXPANSION JOINT SHALL BE PLACED BETWEEN NEW WALKS AND

6. COORDINATE WITH OWNER FOR COLOR AND TYPE OF EXPOSED AGGREGATE CONCRETE.

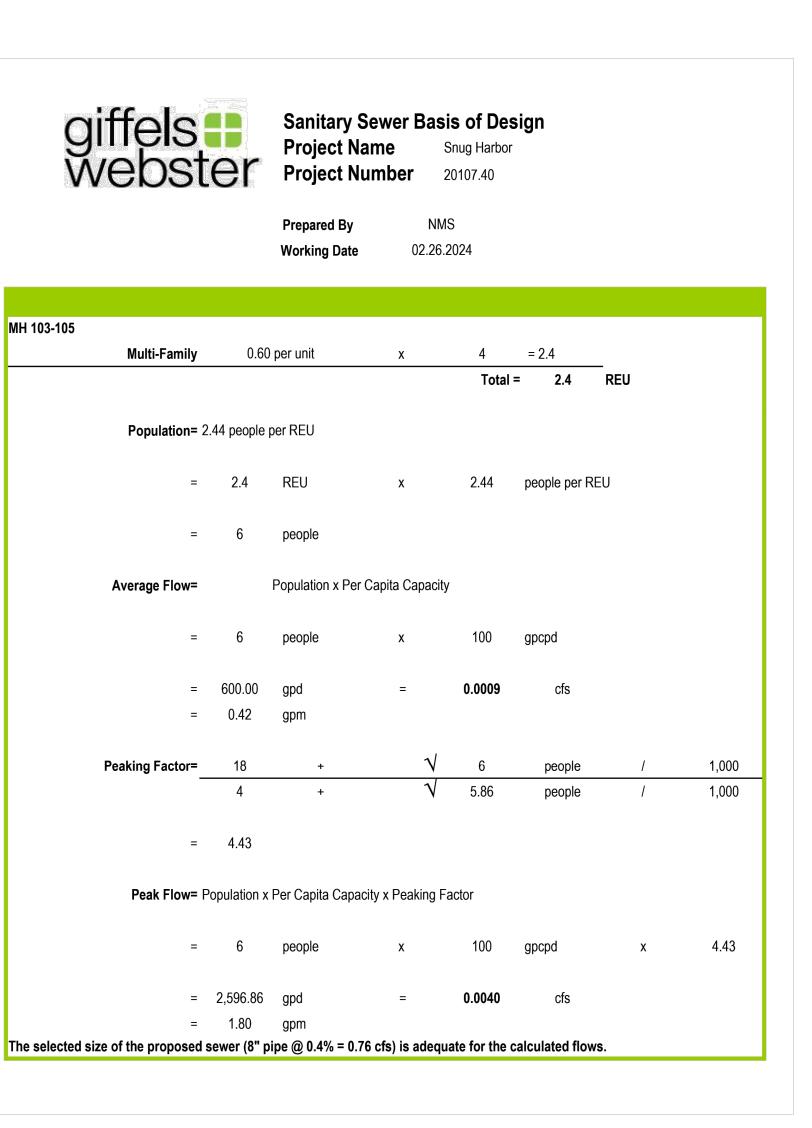
■ CONCRETE SIDEWALK

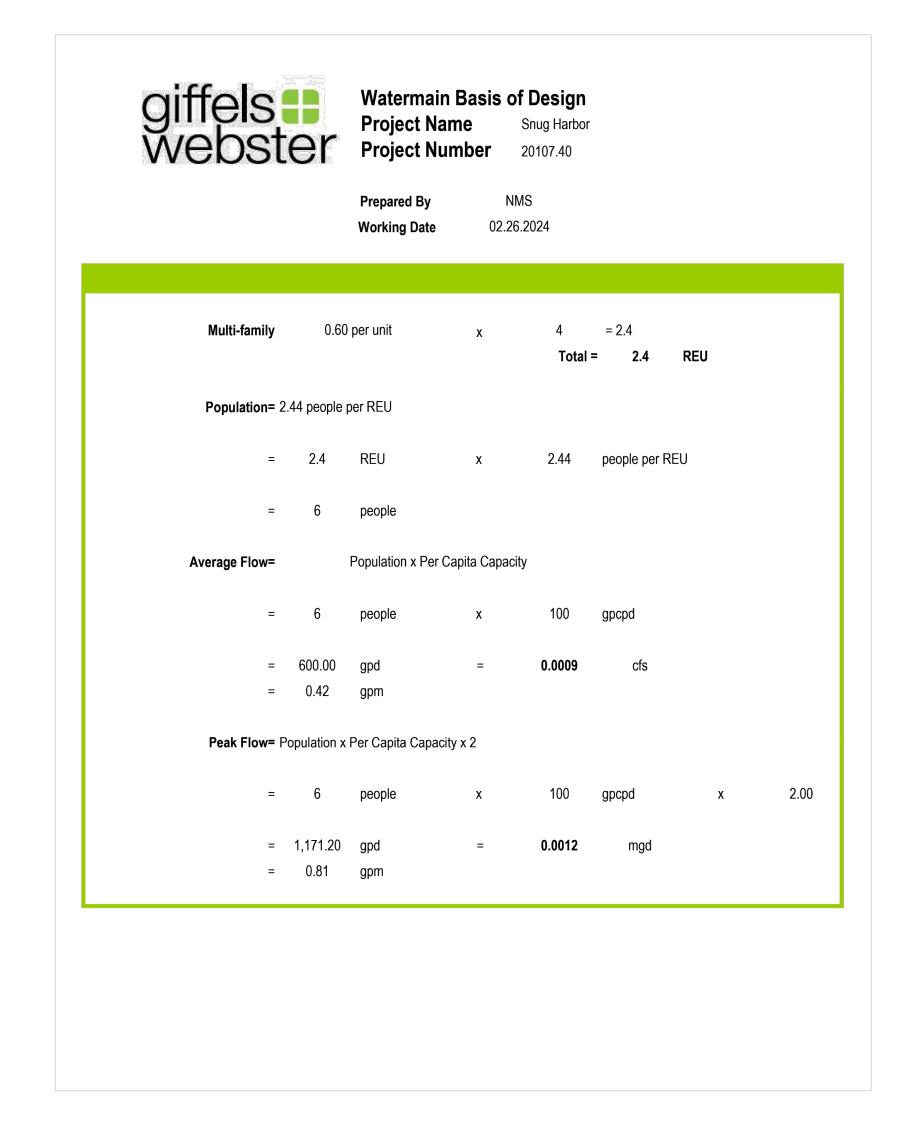
COMPACTED SUBGRADE (PER SPECS)

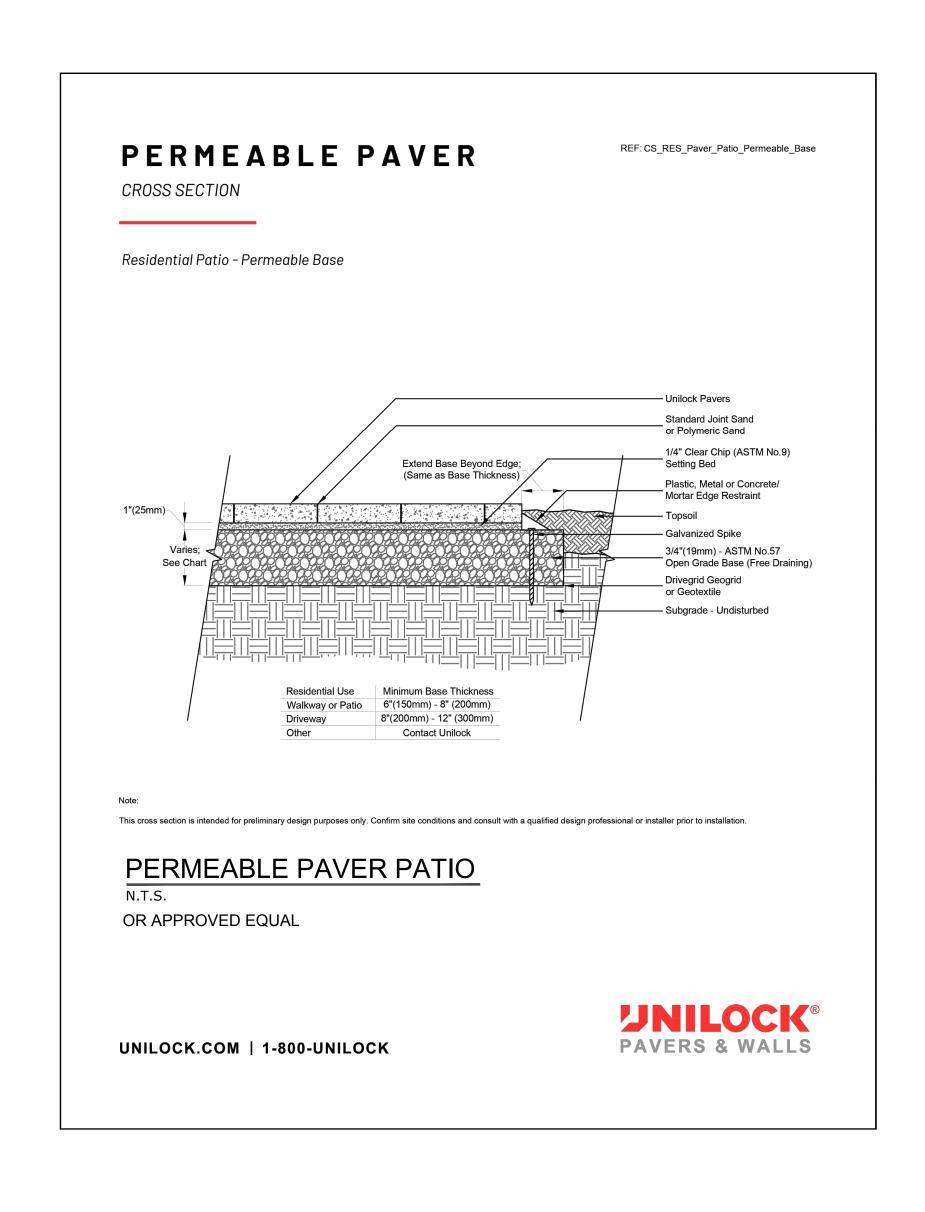
st concrete depth will be 6" thick from curb

COMPACTED SAND BASE—

4,000 PSI CONCRETE (MDOT P1)-









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Developed For:

MOCERI COMPANIES 3500 UNIVERSITY DRIVE

AUBURN HILLS, MI

248.340.9400

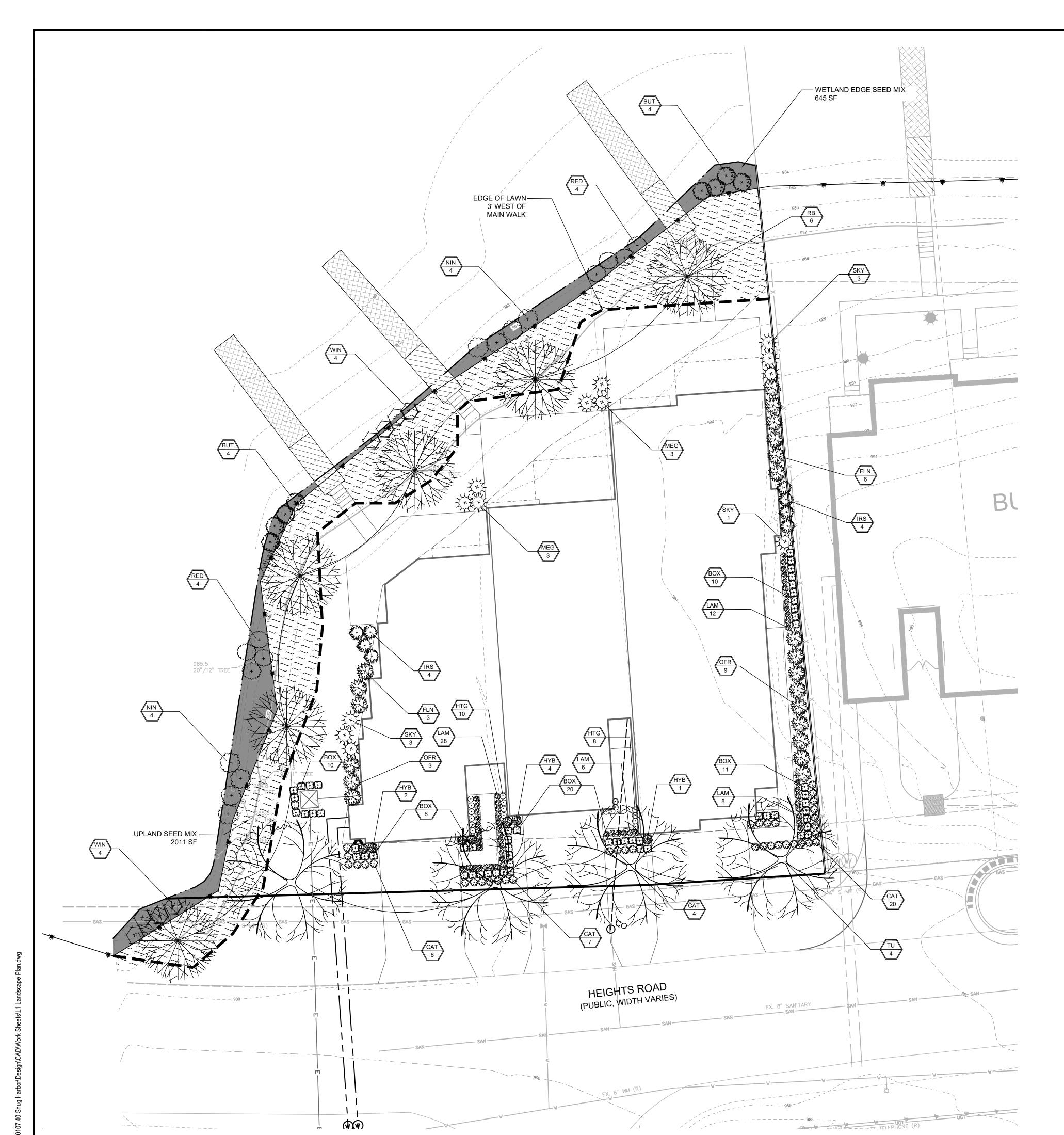
SITE NOTES AND **DETAILS**

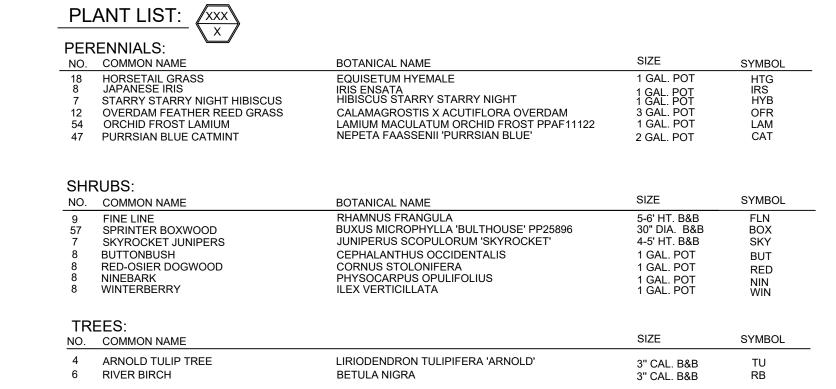
SNUG HARBOR

VILLAGE OF LAKE ORION OAKLAND COUNTY MICHIGAN

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

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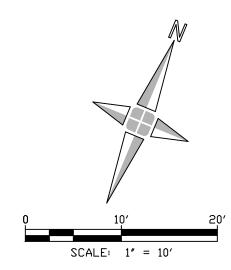


WETLAND EDGE SEED MIX:	
SEDGES AND GRASSES: CAREX CRISTATELLA CAREX LURIDA CAREX VULPINOIDEA ELEOCHARIS PALUSTRIS ELYMUS VIRGINICUS GLYCERIA STRIATA LEERSIA ORYZOIDES SCIRPUS ATROVIRENS SCIRPUS CYPERNIUS SPARGANIUM EURYCARPUM	CRESTED OVAL SEDGE BOTTLEBRUSH SEDGE FOX SEDGE SPIKERUSH VIRGINIA WILD RYE FOWL MANNA GRASS RICE CUTGRASS GREEN BULRUSH WOOLGRASS BURREED
TEMPORARY GRASSESER: AVENA SATIVA LOLIUM MULTIFLORUM	COMMON OATS ANNUAL RYE
FORBS: ACORUS CALAMUS VERBESINA ALTERNIFOLIA ALISMA SPP. ASCLEPIAS INCARNATA ASTER PUNICEUS BIDENS SPP. HELENIUM AUTUMNALE IRIS VIRGINICA LOBELIA SIPHILITICA PELTANDRA VIRGINICA RUDBECKIA LACINIATA SAGITTARIA LATIFOLIA CASSIA HEBECARPA THALICTRUM DASYCARPUM VERBENA HASTATA	SWEET FLAG WINGSTEM WATER PLANTAIN SWAMP MILKWEED BRISTLY ASTER BEGGAR'S TICK SNEEZEWEED BLUE FLAG IRIS GREAT BLUE LOBELIA ARROW ARUM WILD GOLDEN GLOW ARROWHEAD WILD SENNA LATE MEADOW RUE

UPLAND SEED MIX:	
BOTANICAL NAME	COMMON NAME
PERMANENT GRASSES/SEDGES CALAMAGROSTIS CANADENSIS CAREX CRISTATELLA CAREX LURIDA CAREX SPP. CAREX STIPATA CAREX VULPINOIDEA ELYMUS CANADENSIS ELYMUS VIRGINICUS GLYCERIA STRIATA JUNCUS EFFUSUS JUNCUS TENUIS	BLUEJOINT GRASS CRESTED OVAL SEDGE BOTTLEBRUSH SEDGE PRAIRIE SEDGE SPECIES COMMON FOX SEDGE BROWN FOX SEDGE CANADA WILD RYE VIRGINIA WILD RYE FOWL MANNA GRASS COMMON RUSH PATH RUSH
TEMPORARY COVER AVENA SATIVA	COMMON OAT
FORBS ALISMA SUBCORDATUM EUTHAMIA GRAMINIFOLIA GOLDENROD	COMMON WATER PLANTAIN COMMON GRASS—LEAVED
IRIS SPP. LIATRIS SPICATA LOBELIA SIPHILITICA LYCOPUS AMERICANUS MIMULUS RINGENS PYCNANTHEMUM VIRGINIANUM RUDBECKIA HIRTA RUDBECKIA TRILOBA ZIZIA AUREA	BLUE FLAG SPECIES MARSH BLAZING STAR GREAT BLUE LOBELIA COMMON WATER HOREHOUND MONKEY FLOWER COMMON MOUNTAIN MINT BLACK—EYED SUSAN BROWN—EYED SUSAN GOLDEN ALEXANDERS

NOTE:

- NO EROSION CONTROL MATTING IS PERMITTED IN THE WETLAND AREAS PER EGLE PERMIT. EROSION CONTROL BLANKETS WITHOUT PLASTIC ARE ALLOWED IN THE UPLAND.
- 2. WATER'S EDGE SHRUBS PER EGLE PERMIT. ALTERNATE VARIETIES LISTED BELOW ARE ALLOWED IF NECESSARY DUE TO AVAILABILITY. QUANTITY OF SPECIMENS SHOULD BE THE SAME AND THERE SHOULD BE A MINIMUM OF THREE NATIVE SPECIES INSTALLED.





Engineers
Surveyors
Planners
Landscape Architects

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eveloped For:

MOCERI COMPANIES

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LANDSCAPE PLAN

SNUG HARBOR

VILLAGE OF LAKE ORION OAKLAND COUNTY MICHIGAN

Date:	02.29.2024
Scale:	1"=10'
Sheet:	L1
Project:	20107.40

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PLANT NOTES:

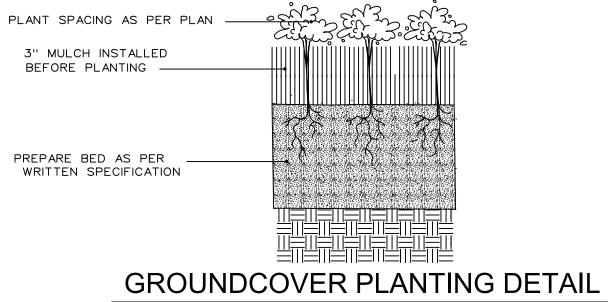
- 1. Plant materials shall be sound, heathy vigorous, free from plant diseases and insects or their eggs, and shall have normal, healthy root systems. Caliper measurements shall be taken 6: above the ground level. All other measurements shall be in accordance with the latest edition of "American Standard for Nursery Stock" (ANSI Z-60.1 + A3002004.)
- 2. Planting bed soil for annuals shall be screened topsoil. To deter weed growth during the establishment of annual, & perennial bed, apply a pre-emergent ('Preen' or equal) after
- planting 2-3 times per growing season, at a rate per recommendation of product manufacturer. 3. Planting pockets shall be no deeper than the height of the root ball, saucer shall be made on the edges of the plant pocket.
- 4. All tree wrap shall be removed upon planting.
- 5. Mulch shall be shredded hardwood bark, free from deleterious materials and suitable as a top
- dressing of planting beds and individual tree plantings. 6. Trees shall be mulched with minimum of 3" deep hardwood bark mulch.
- 7. Grass seed shall be certified turf grass seed complying with A.S.P.A. specifications, and free of weed seeds and undesirable native grasses. Seeded areas shall not be permitted to dry out. All lawn areas shall be fertilized and watered as required during the first growing season to maintain a dense and vigorous growing lawn.
- 8. Plants shall be guaranteed for two complete growing seasons (24 months). Dead material shall be replaced as needed prior to the expiration of the guarantee period, in accordance with the local ordinance requirements.
- 9. Contractor shall provide in writing a list of recommended maintenance procedures for the first
- two (2) growing seasons. 10. Remove top $\frac{1}{3}$ of burlap on root ball or all if wrapped in plastic covering and/or nylon cord.
- 11. Plant materials shall be used in compliance with the provisions of the local ordinance and shall be nursery grown, free of pests and diseases, hardy in this county, in conformance with the standards of the American Association of Nurserymen, and shall have passed inspections required under state regulations. In addition, plant materials shall conform to the standard of the county cooperative extension service.

GENERAL NOTES:

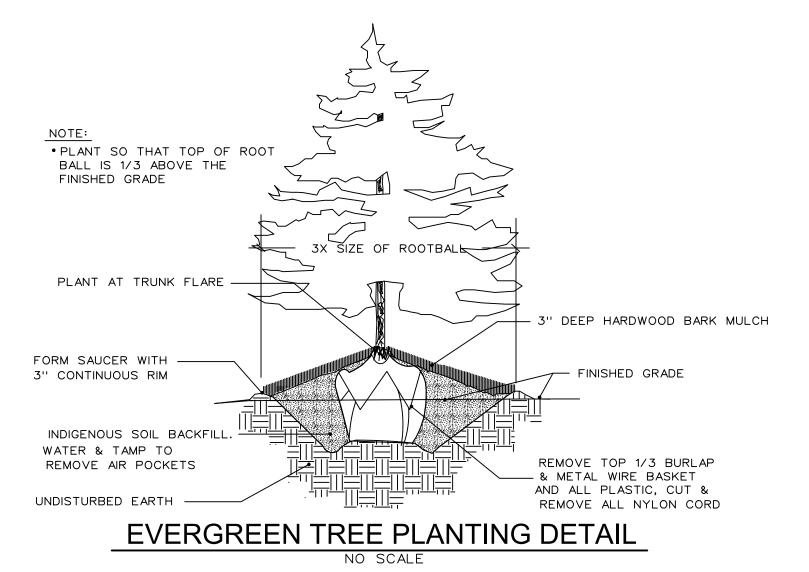
- 1. All Construction shall conform to the current standards and specifications of local ordinances. 2. All areas not built, landscaped, or paved upon shall be seeded or sodded. Terra seed system or approved equal is encouraged.
- 3. Contractor to provide tree gaters, one per tree as shown on plan, to convey water for the first
- 4. Two (2) year guarantee period begins at Final Inspection of landscape material by the City's representative, a landscape architect or nurseryman, and prior to the authorization of the occupancy permit. This is the first of two (1 of 2) required City inspections of the Landscape Plan installation.
- 5. Building Department will not release construction bonds until City approved landscape architect or nurseryman has inspected the site and approved the installation of landscape plans. Final bond will not be released until the two (2) year guarantee expires and final inspection is made.
- 6. Owner is then responsible for care and maintenance of all plants upon return of bonds. All plant material is to be maintained for the natural life of the plant. No removal of any plants material is permitted without replacement.

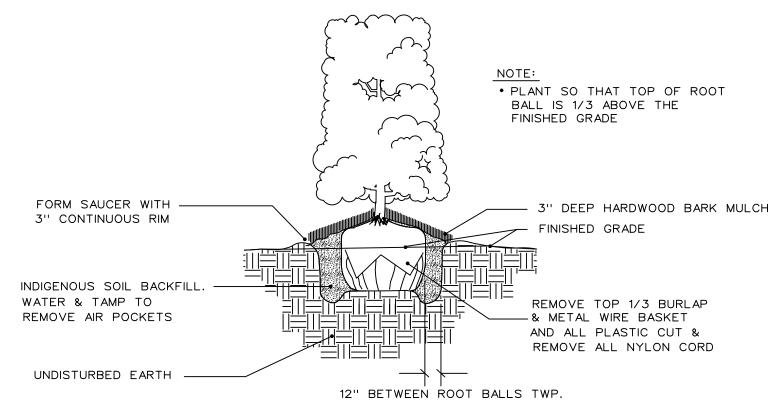
LANDSCAPE CONTRACTOR'S "TWO-YEAR IRRIGATION REQUIREMENT PERIOD"

It shall be the responsibility of the landscape contractor to program and periodically adjust the irrigation system (provided by others) as required to ensure delivery of proper and adequate water supply to all plant material, and seeded lawn areas serviced by the same irrigation system, to ensure the establishment of healthy plant material and lawn for their first year of growth. Following the landscape contractor's two-year irrigation requirement period, the contractor shall provide the owner with suggested irrigation maintenance schedule for their use.



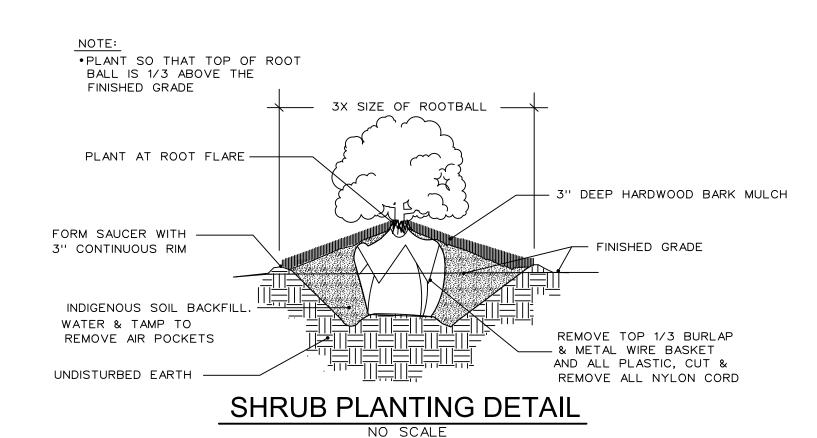
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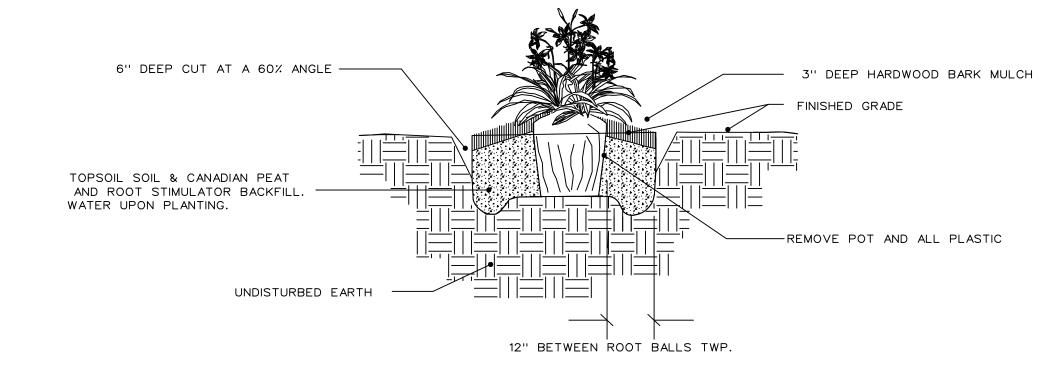




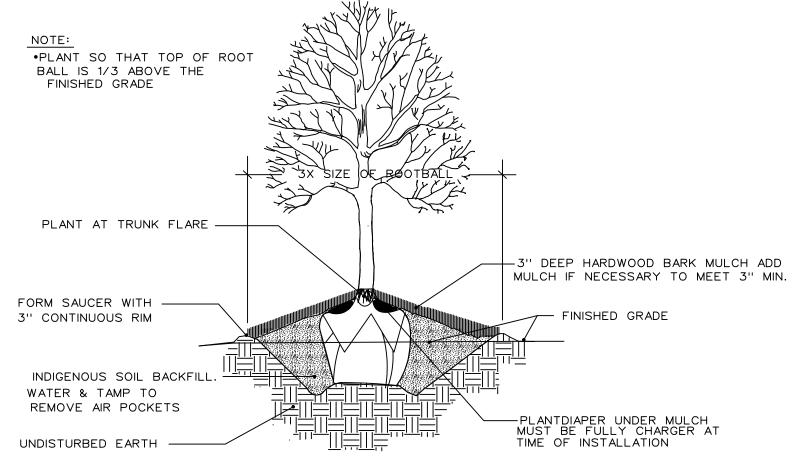
SHRUB HEDGE PLANTING DETAIL

NO SCALE





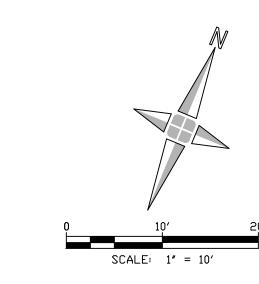
PERENNIAL PLANTING DETAIL



TREE / SHRUB PLANT DIAPER DETAIL

LAWN SEED MIX:

- 30% PERENNIAL RYGRASS
- 20% PARK KENTUCKY BLUEGRASS
- 45% CREEPING RED FESCUE
- 5% ANNUAL RYEGRASS
- 4*/1000 S.F. SEEDING RATE





Engineers

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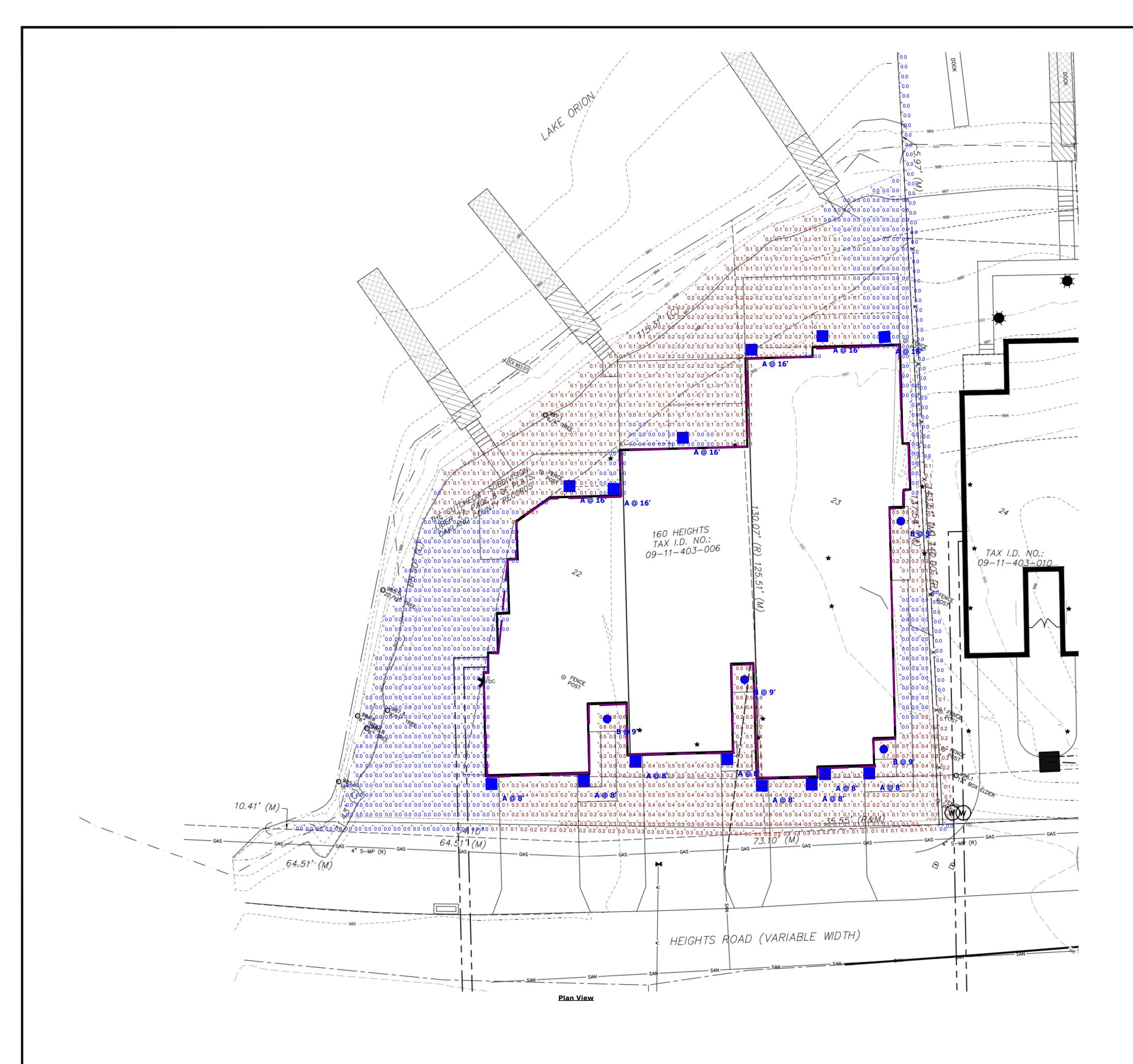
LANDSCAPE **DETAILS**

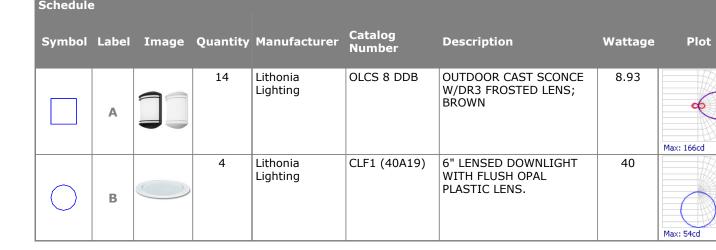
SNUG HARBOR

VILLAGE OF LAKE ORION OAKLAND COUNTY MICHIGAN

Date:	02.29.2024	
Scale:	NA	
Sheet:	L2	
Project: 20107.40		
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Statistics			
Description	Symbol	Avg	Max
Property Line	+	0.1 fc	0.5 fc
Within Property Boundary	+	0.1 fc	0.9 fc

Mounting Height Note

Mounting height is measured from grade to face of fixture. Pole height chould be calculated as the mounting height less base height.

General Note

The Engineer and/or Architect must determine applicability of the layout to existing/future field conditions. This lighting layout represents illumination levels calculated from laboratory date taken under controlled conditions in accordance with illuminating engineering society approved methods. Actual performance of any manufacturer's luminaire may vary due to cariation in electrical voltage, tolerance in lamps, and other variable field conditions. Mounting heights indicated are from grade and/or floor up.

These lighting calculations are not a substitute for independent engineering analysis of lighting system suitability and safety. The Engineer and/or Architect is responsible to review for Michigan Energy Code and Lighting Quality Compliance.

Unless exempt, project must comply with lighting controls requirements defined in ASHRAE 90.1 2013.

Time unawing was generated from an electroinc image for estimation purpose only. Layout to be verified in field by others. Site to comply with all lighting requirements.

Surveyors

Landscape Architects 1025 East Maple Road

Suite 100 Birmingham, MI 48009 p (248) 852-3100 f (313) 962-5068

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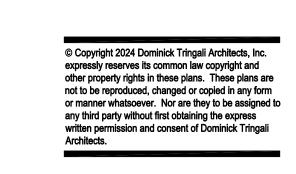
LIGHTING PLAN

SNUG HARBOR

VILLAGE OF LAKE ORION OAKLAND COUNTY MICHIGAN

Date:	08.05.2022
Scale:	
Sheet:	LI-1
Project:	20107.40

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MOCERI CUSTOM HOMES SNUG HARBOR 4-UNIT BUILDING

Review Set: O2/27/2

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"

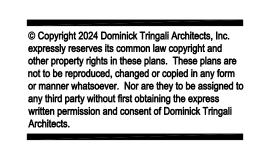
SPECIFIC MANUFACTURER)

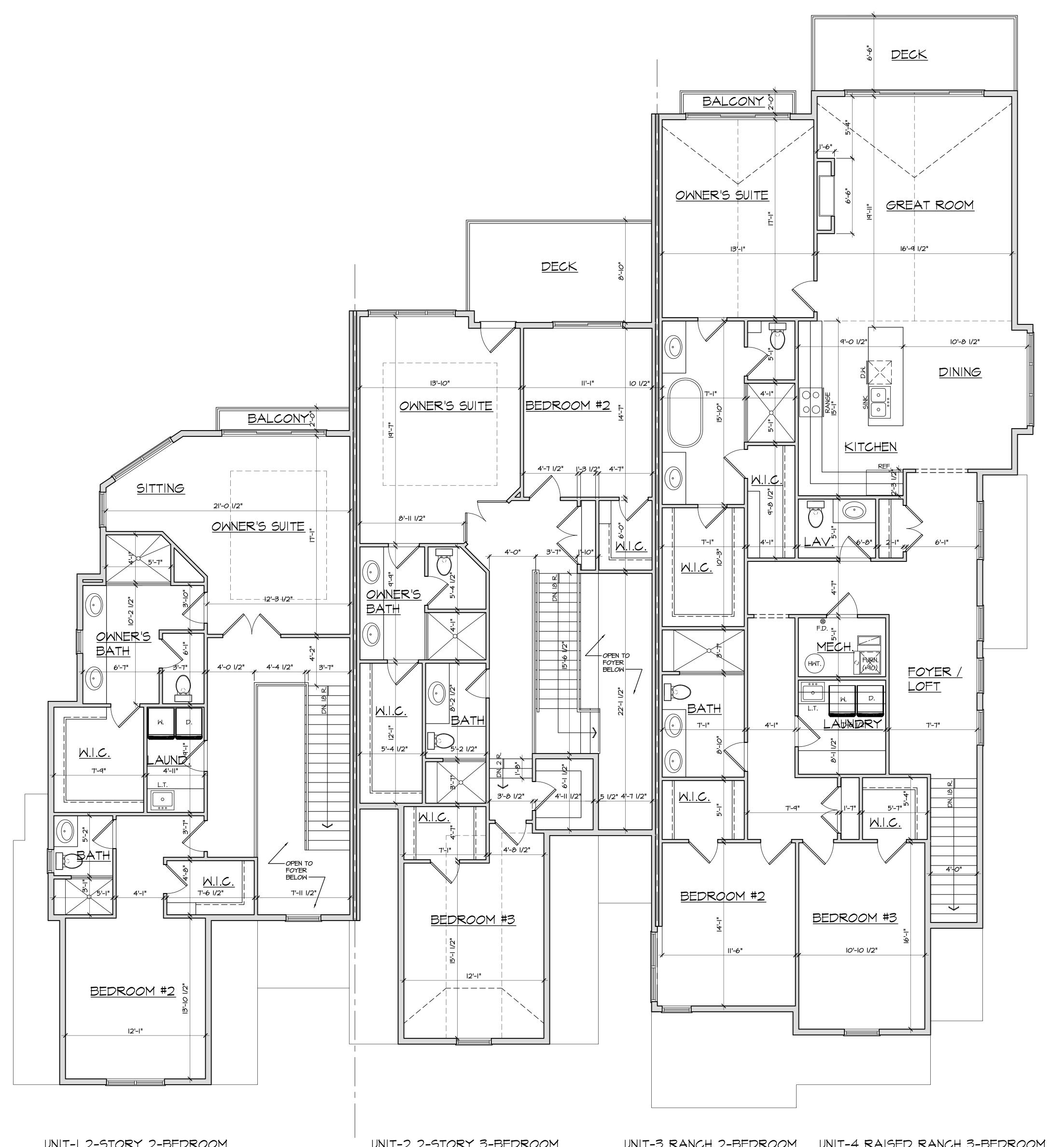
'-O" X 8'-O"

Sheet No.

NOTE:

ALL FIRST FLOOR CEILING
HEIGHTS TO BE IO'-I I/8" HIGH
UNLESS NOTED OTHERWISE.





UNIT-I 2-STORY 2-BEDROOM UNIT-2 2-STORY 3-BEDROOM SECOND FLOOR PLAN - FOR LEASE PRODUCT 4-UNITS

UNIT-3 RANCH 2-BEDROOM UNIT-4 RAISED RANCH 3-BEDROOM

MOCERI CUSTOM HOMES SNUG HARBOR 4-UNIT BUILDING

STRUCTURE · INTEGRITY · TRADITION®

Permit:
Final Set:
Revisions:

Drwn: B.H.
Chkd: x.x.

Job No.

24010

Sheet No.
2 0 = 5

LIFESTYLE BY DESIGN

NOTE:
ALL SECOND FLOOR CEILING
HEIGHTS TO BE 9'-1 1/8" HIGH
UNLESS NOTED OTHERWISE.









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lls MI 48326

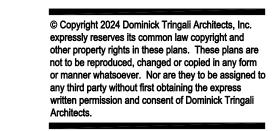
MOCERI CUSTOM HOMES SNUG HARBOR 4-UNIT BUILDING

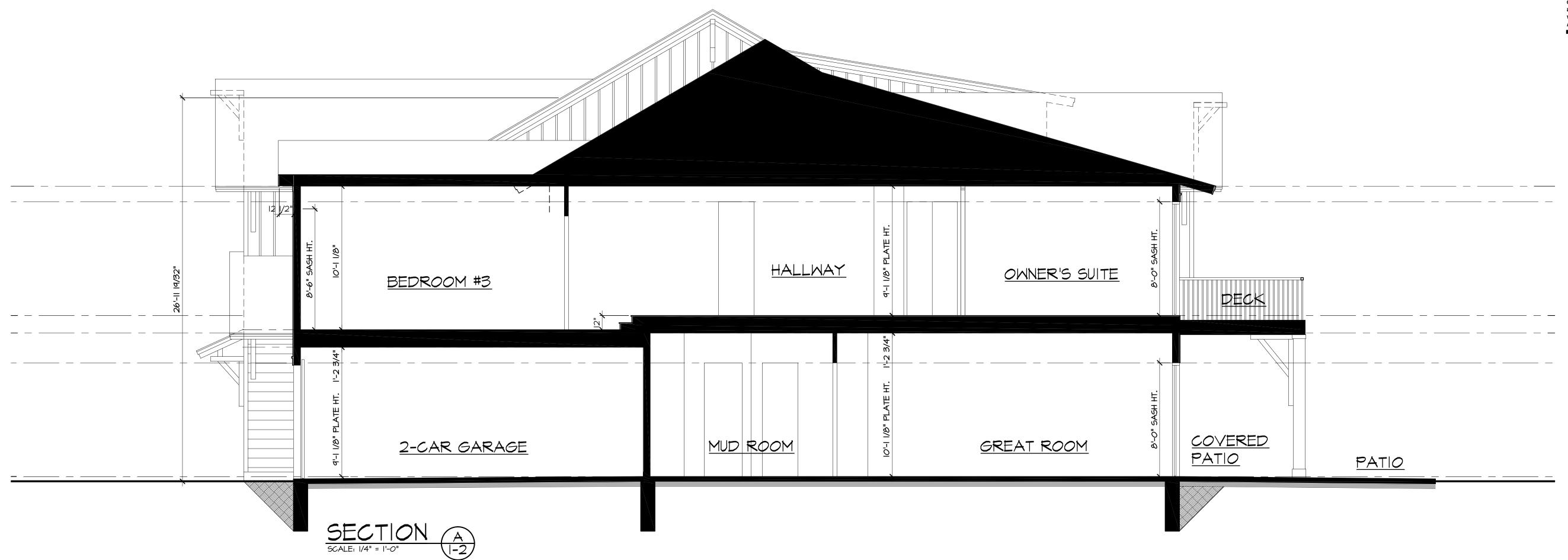
Review Set: O2/27/24
Permit:
Final Set:

Drwn: B.H.
Chkd: X.X.

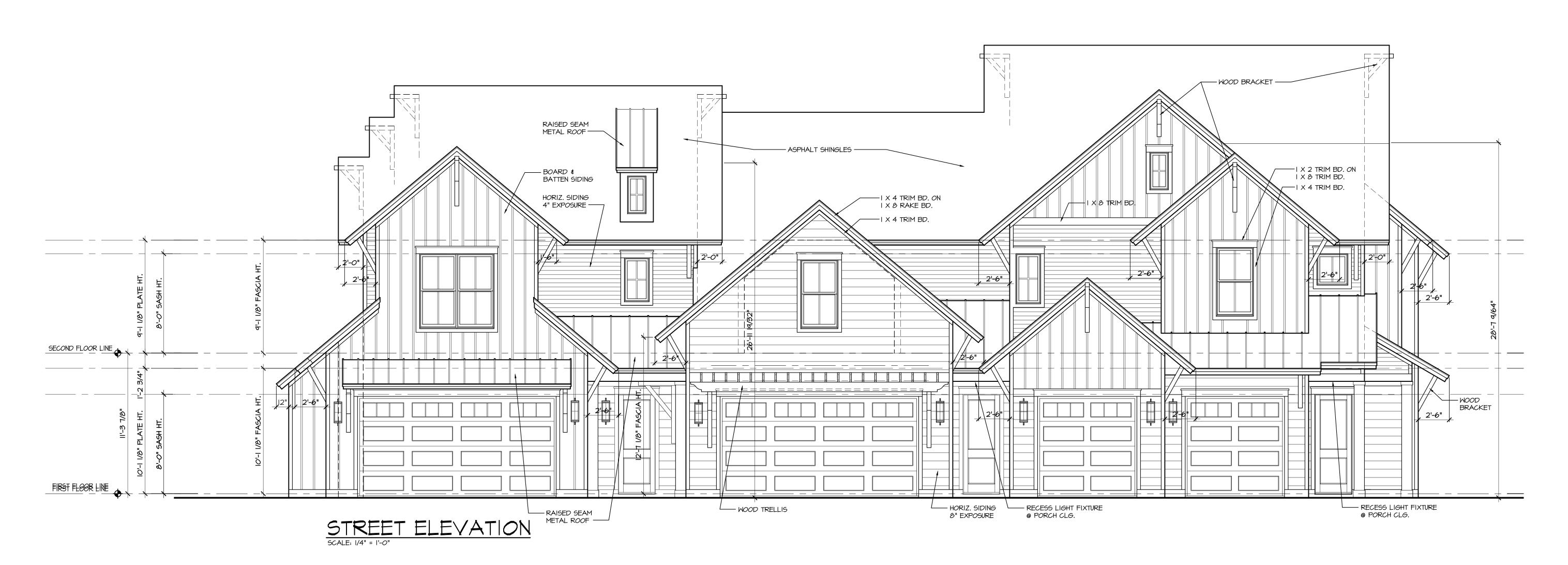
Job No. 24010

LIFESTYLE BY DESIGN



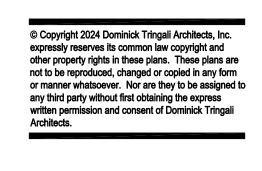


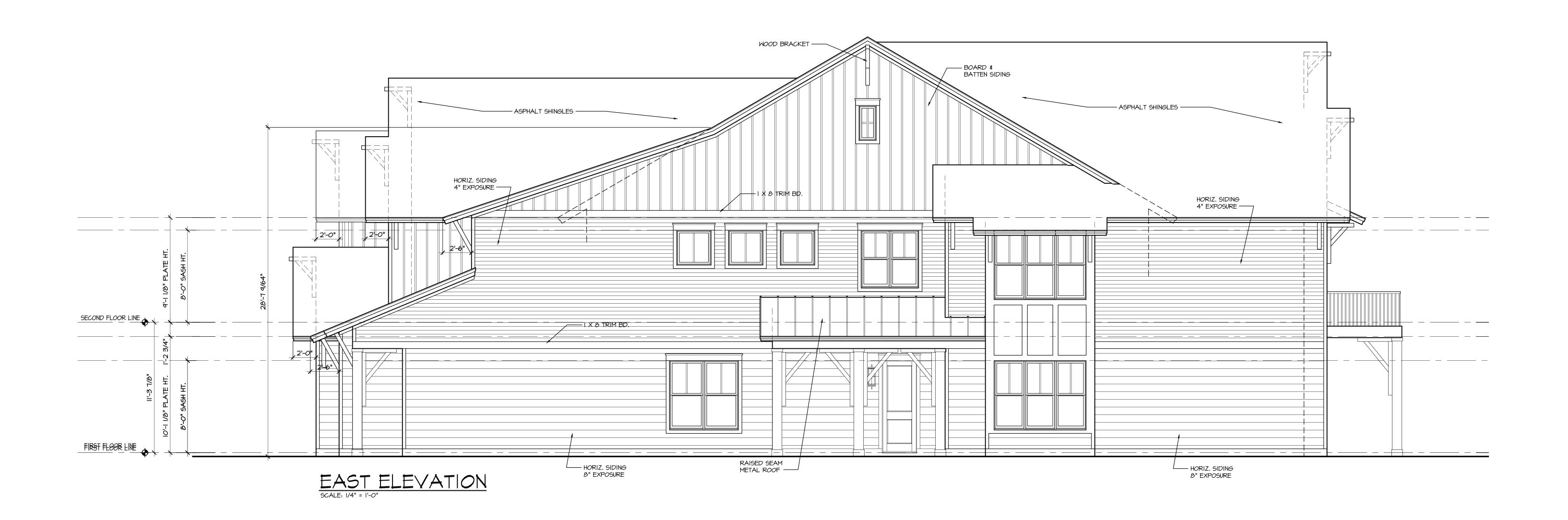






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DOMINICKTRINGALI
ARCHITECTS
3005 University Suite 100 Tel 248 340 9400
Auburn Hills MI 48326

www.DTArchitects.com

MOCERI CUSTOM HOMES SNUG HARBOR 4-UNIT BUILDING

Review Set: O2/27/24

Permit:

Final Set:

Revisions:

Drwn: B.H.
Chkd: X.X.
Job No.

24010 Sheet No. 5 0 = 5

LIFESTYLE BY DESIGN