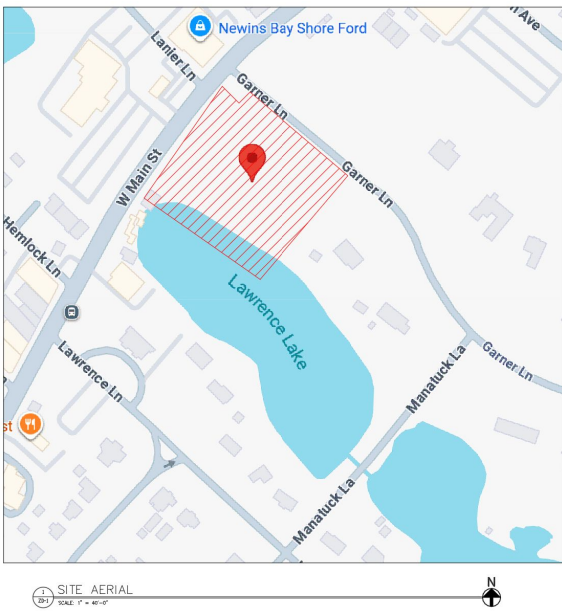
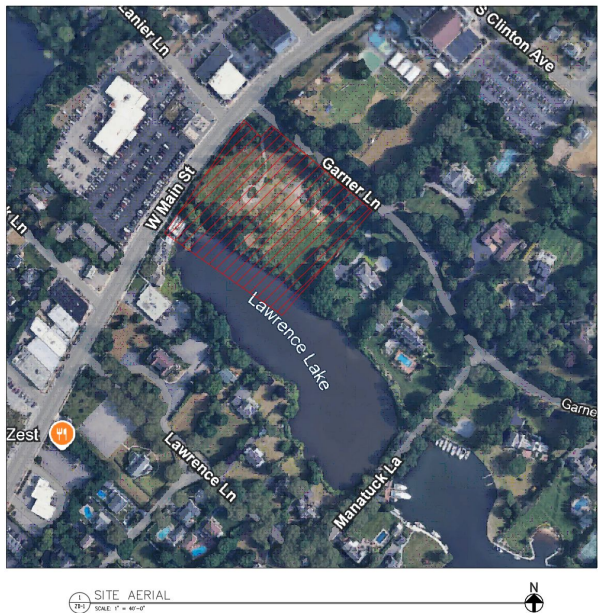
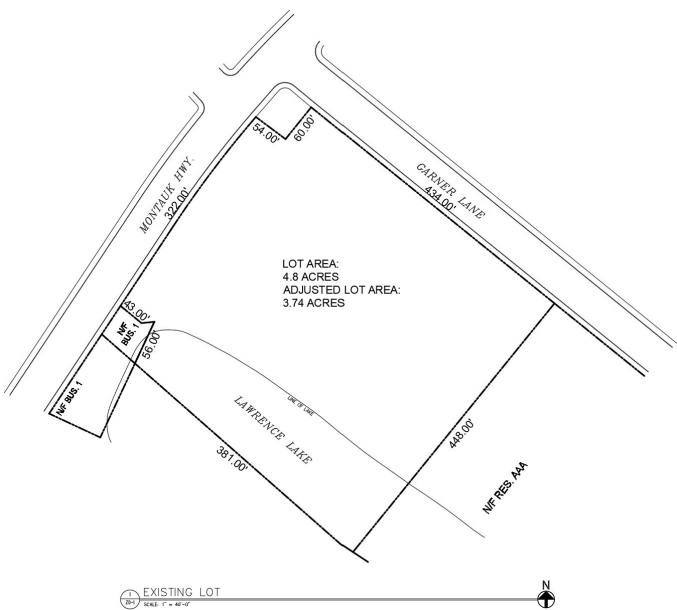


SITE ANALYSIS OF 2 GARNER LANE, BAY SHORE EXISTING SITE PLAN

PHILIP ODDO & STEVEN BERG
DESIGN V
ARC 486
FALL 2025
PROFESSOR LOPICCOLO

LOT SIZE, SITE AERIAL, LOCATION PLAN

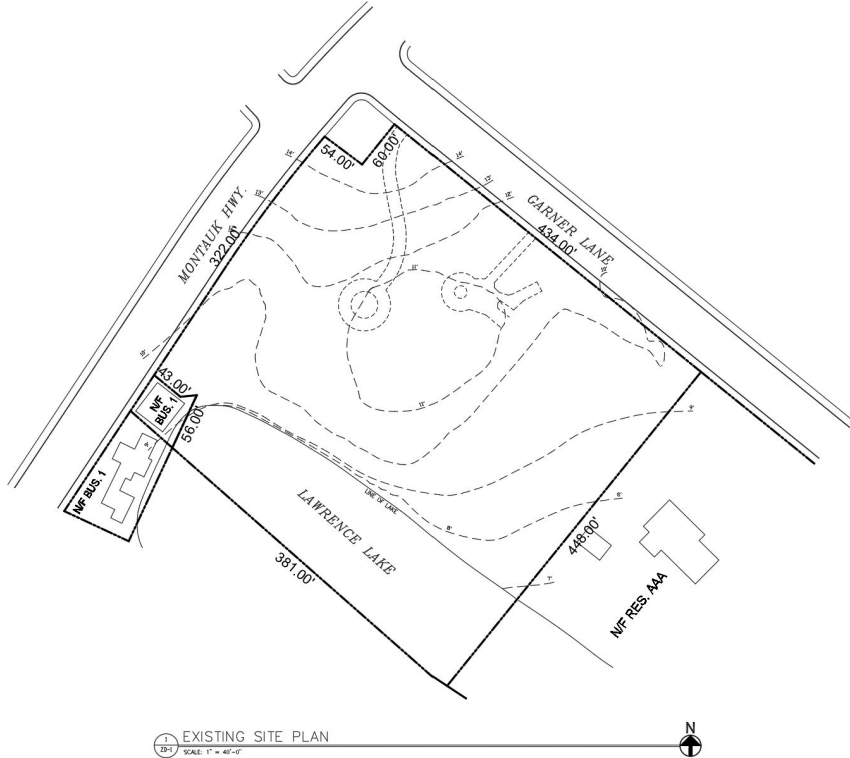


ZONING INFORMATION

BULK REQUIREMENTS		
REQUIREMENT	BUS. DISTRICT 1	PROPOSED
MIN. LOT AREA	7,500 SF	20,9088 SF
MIN. FRONT YARD	10 FT	
MIN. SIDE YARD	10 FT/20 FT BOTH	
MIN. REAR YARD	10 FT	
MAX. BLDG. HEIGHT	35'	
MAX. FAR	0.4	
MIN. LANDSCAPE	20% (10% FRONT)	
PARKING		
MIN. STALL SIZE: 9' X18' REQ.		
MIN. AISLE WIDTH: 24' REQ.		
LOCATED MIN. 8'-0" FROM PROP. LINES		

TOPOGRAPHY & INFRASTRUCTURE

- EXISTING SEWER CONNECTION
- EXISTING ELECTRICAL INFRASTRUCTURE ON NEARBY STREETS
- EXISTING PAVEMENT FROM PREVIOUS STRUCTURE ON SITE
- NORTH OF SITE 7' HIGHER THAN SOUTH



* EXISTING PAVEMENT ON SITE TO BE REMOVED

PREVAILING WINDS & SUN POSITIONING

PREVAILING WINTER WINDS:

NORTHWEST

PREVAILING SPRING WINDS:

MIX OF WESTERN AND SOUTHERN

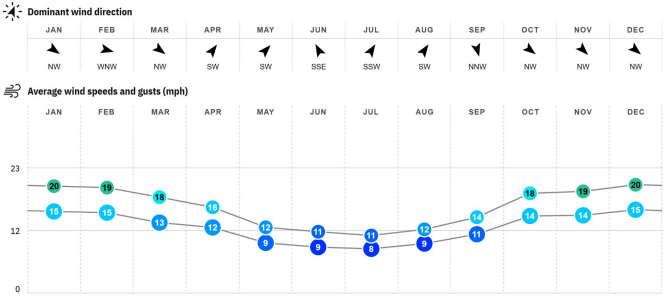
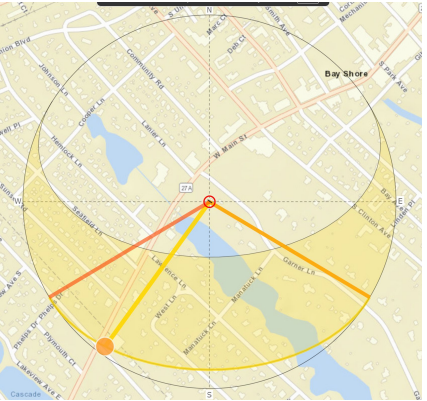
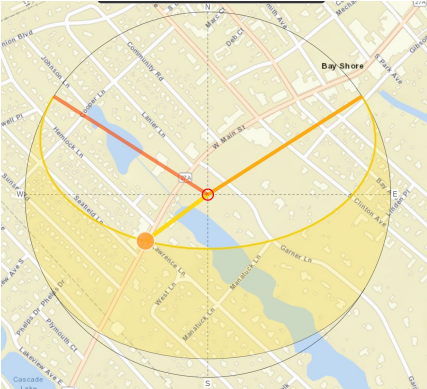
PREVAILING SUMMER WINDS:

SOUTHWEST

PREVAILING FALL WINDS:

MIX OF WESTERN AND SOUTHERN

Summer Solstice

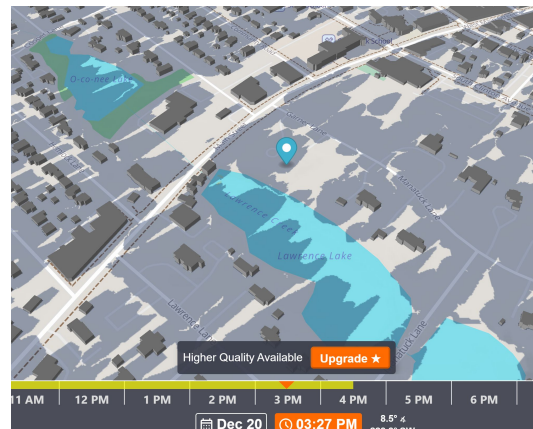
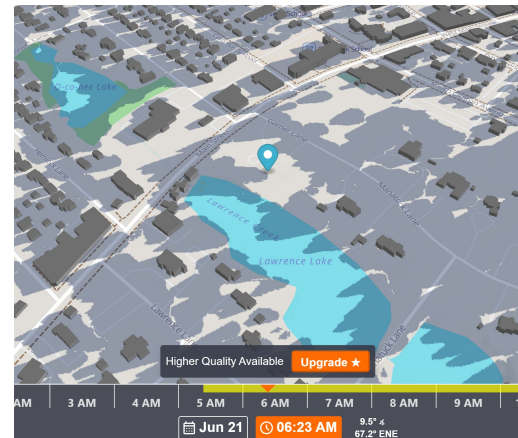


SURROUNDING SHADOWS AND SUN ANGLE



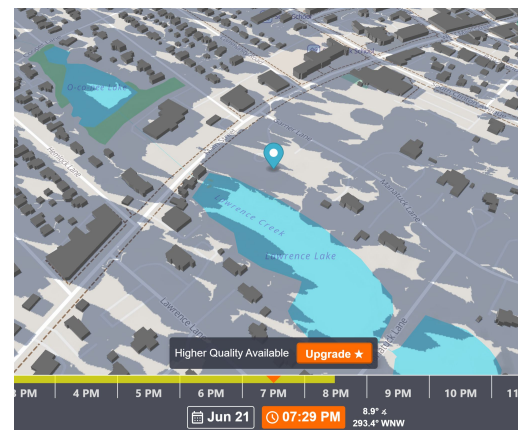
Winter
Solstice
Sunrise

Summer
Solstice
Sunrise



Winter
Solstice
Sunset

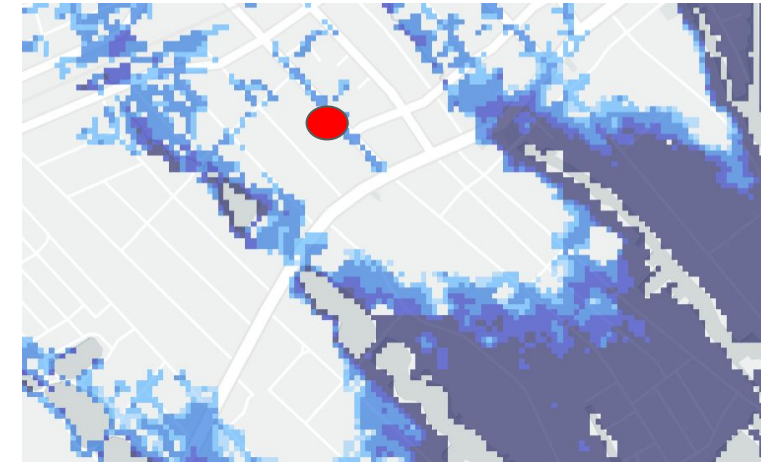
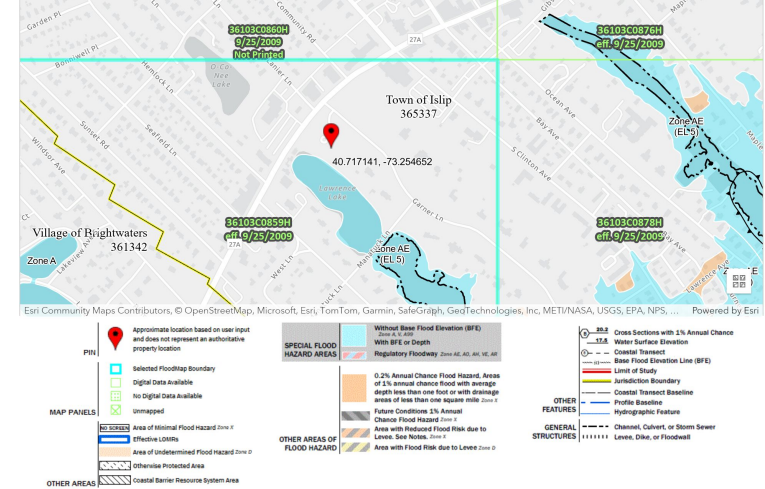
Summer
Solstice
Sunset



FLOODPLAIN INFO

THE SITE IS NEAR THE GREAT SOUTH BAY AND THE AREA IS PRONE TO FLOODING. ALONG WITH THIS, IT IS LOCATED DIRECTLY ON A LAKE IN WHICH IS CONNECTED TO A CANAL THAT FLOWS INTO THE GREAT SOUTH BAY. ITS LOWEST POINT IS ~7' ABOVE SEA LEVEL IN THE SOUTH CORNER, AND ITS HIGHEST POINT IS ~ 14' ABOVE SEA LEVEL IN THE NORTHERN CORNER.

- THERE IS A FLOOD RISK ON HEAVY RAINS
- FLASH FLOODS ARE POSSIBLE BUT NOT LIKELY
- A BASEMENT AND POOL IS NOT RECOMMENDED



ENVIRONMENTAL

- SITE IS LOCATED NEAR WATER
- SEASONAL HIGH WATER TABLE: 11'-0"
- ALL STORM WATER SHOULD BE RETAINED OR MANAGED ON SITE
- SEPTIC MUST BE COORDINATED WITH LAKE ON SITE
- SITE HAS A SEPTIC ALLOWANCE OF 2,244 GALLONS A DAY AND MUST BE COORDINATED WITH ITS TWO DIFFERENT FUNCTIONS
- THE LAKE ADJACENT TO THE SITE HAS LITTLE TO NO WAVE ACTION SO EROSION IS VERY LIMITED AND NOT AN ISSUE
- FILL MATERIAL REQUIRED FOR SANDY/LOAMY SOIL NEAR LAKE - IF ANY STRUCTURES ARE DESIRED

CONTEXT

- SITE IS LOCATED AT THE ENTRANCE OF A RESIDENTIAL AREA, ON THE CORNER
- ON THE SIDE OF THE SITE FACING MONTAUK HIGHWAY MAINLY COMMERCIAL SITES ARE NEARBY
- NEAR THE ENTRANCE OF BAYSHORE VILLAGE
- SEVERAL CHURCHES LOCATED NEARBY ALONG WITH THE LOCAL YMCA
- LAKE IS PART OF SITE ON ITS SOUTH WESTERN SIDE
- LAKE IS NOT DIRECTLY CONNECTED WITH BAY
- RESIDENTIAL AREAS HAVE HIGH PERCENTAGE OF LANDSCAPING
- EXISTING NATURE BARRIERS EXIST ALONG WITH ENTRANCES FROM PREVIOUS SITE
- HEAVY USE OF FOLIAGE IN SURROUNDING RESIDENTIAL PARTS TO CREATE PRIVACY
- LOCATED ON RELATIVELY BUSY PART OF MONTAUK HIGHWAY
- MOST SITES SHARING THE LAKE ARE RESIDENTIAL
- LARGER SCALE/HIGHER END HOMES LOCATED IN THE NEIGHBORHOOD



VIEWS



VIEW OF SITE LOOKING EAST FROM MONTAUK HIGHWAY



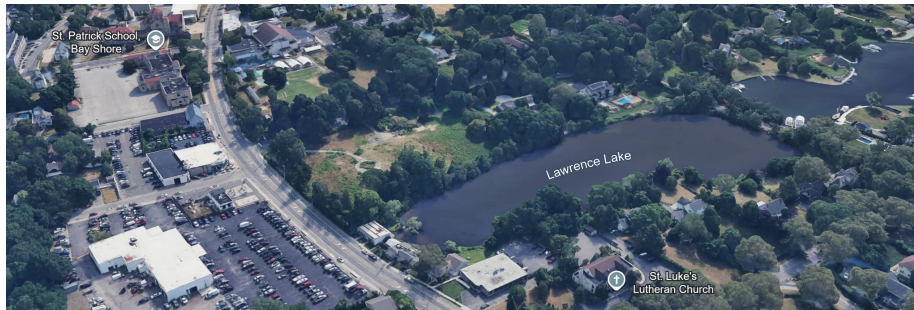
VIEW OF SITE LOOKING SOUTH FROM GARNER LN



VIEW OF SITE LOOKING WEST FROM GARNER LN



VIEW OF SITE LOOKING NORTH ACROSS THE LAKE FROM MANATUCK LN



3D VIEW SHOWING COMMERCIAL ADJACENCY (LEFT) AND RESIDENTIAL CONTEXT (TOP/RIGHT)

PROGRAM

Fitness Center and Canoe Club 6,580 max		
Circulation 10%	1	658
Entry / Lobby / Check-in	1	300
Admin Office (Fitness + Canoe Club)	1	180
Trainer Workroom / Desk	1	80
Fitness Area(cardio + strength)	1	2,100
Stretch / Warm-up Zone	1	120
Yoga/Pilates studio	1	650
Multipurpose Room (spin/HIIT)	1	450
Storage – Studios (mats/bikes/props)	1	120
Storage – Equipment (cages, extra weights)	1	80
Men’s Locker + Showers + Toilets	1	400
Women’s Locker + Showers + Toilets	1	400
All-gender / Family Changing + Shower	1	82
Laundry / Linen	1	60
Janitor Closet (w/mop sink)	1	50
IT Closet	1	50
Mechanical / Electrical Service	1	150
Staff Break / Kitchenette	1	50
Canoe Boat Storage Bay (16 boats on racks)	1	360
Canoe Gear Cage (PFDs, paddles, drybags)	1	120
Canoe Repair/Wash-down (floor drain)	1	120
Fitness Center and Canoe Club Total GFA		6580

HIIT = High-Intensity Interval Training

PFD = Personal Flotation Device

Café 1,800 max		
Seating for 16 people (+ Additional Space)	1	488
Restrooms Two ADA	56	112
Circulation (10-15%) Use 15%	1	270
Customer space at counter (5 SF net)	10	50
Food/Drink prep	1	180
Kitchen	1	250
Cold Storage	1	50
Dry Storage	1	200
Cashier/Customer Service Area	1	64
Mechanical Room	1	80
Office/Managers Office	1	56
Café Total GFA		1800

BASIC CODE REVIEW - PART I

- NYS Building Code occupancy types: Mixed Occupancy, Assembly Group A-3 and A-2
- Maximum NYS Building height: TYPE IIB - 55'
- Maximum NYS number of stories: TYPE IIB NS - 2 Stories
- Maximum NYS floor area: TYPE IIB SM - 9,500 SF

- Sprinkler system not needed because it is TYPE IIB construction, under 55', has a fire area less than 12,000 sqft, and an occupant load less than 300.

BASIC CODE REVIEW - PART II

- TYPE 1: Fire resistive, non combustible with a high level of fire protection
 - Hospital made of steel and concrete (Places where people need lots of time to escape)
- TYPE 2: Less Fire resistive, non combustible with little or no fireproofing on structural elements
 - Hotels and Schools made of steel, concrete, etc.. (Places with many people who can escape in a relatively fast time)
- TYPE 3: Exterior walls are non combustible, and interior building elements are made of material permitted by fire code.
 - Warehouses and certain houses (Places with minimal people who can escape relatively easily)
- TYPE 4: Exterior walls are made of non combustible materials and the interior is made of wood
 - Typically Heavy Timber, such as a Church (Places in which people need time to escape)
- TYPE 5: Interior and exterior walls are made of any materials permitted by code
 - A single family home (Minimal users who could be expected to escape in a timely manner)

TABLE 601 FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (HOURS)

BUILDING ELEMENT	TYPE I		TYPE II		TYPE III		TYPE IV		TYPE V	
	A	B	A	B	A	B	A	B	A	B
Primary structural frame ¹ (see Section 202)	3 ^{a, b}	2 ^{a, b}	1 ^b	0	1 ^b	0	HT		1 ^b	0
Bearing walls	3	2	1	0	2	2	2		1	0
Exterior ^{a, f}	3 ^a	2 ^a	1	0	1	0	1/HT		1	0
Interior										
Nonbearing walls and partitions	See Table 602									
Exterior										
Nonbearing walls and partitions	See Section 2304.11.2									
Interior ^d										
Floor construction and associated secondary members (see Section 202)	2	2	1	0	1	0	HT		1	0
Roof construction and associated secondary members (see Section 202)	1 1/2 ^b	1 ^{b, c}	1 ^{b, c}	0 ^c	1 ^{b, c}	0	HT		1 ^{b, c}	0

For 1 ft: 1 foot = 304.8 mm.

a. Roof supports: Fire-resistance ratings of primary structural frame and bearing walls are permitted to be reduced by 1 hour where supporting a roof only.

b. Except in Group F-1, H, M and S-1 occupancies, fire protection of structural members in roof construction shall not be required, including protection of primary structural frame members, roof framing and decking where every part of the roof construction is 20 feet or more above any floor immediately below. Fire-retardant-treated wood members shall be allowed to be used for such unprotected members.

c. In all occupancies, heavy timber complying with Section 2304.11 shall be allowed where a 1-hour or less fire-resistance rating is required.

d. Not less than the fire-resistance rating required by other sections of this code.

e. Not less than the fire-resistance rating based on fire separation distance (see Table 602).

f. Not less than the fire-resistance rating as referenced in Section 704.10.

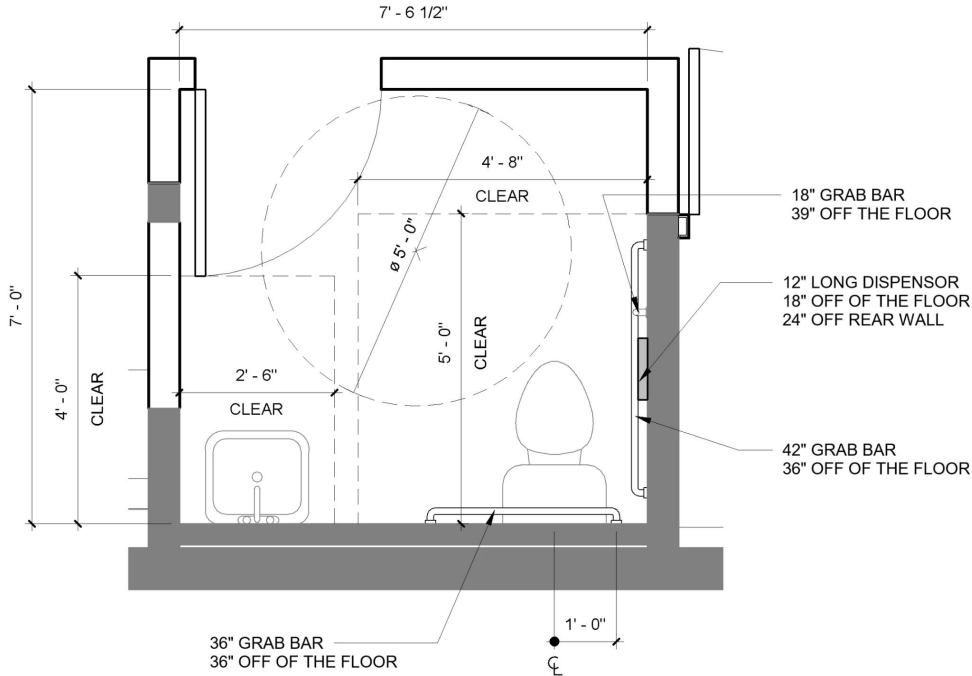
BASIC CODE REVIEW - PART III

- Occupancy Load $>49 = 2$ means of egress minimum
- Minimum Stair Dimensions:
 - Width: 44"
 - Head Height: 80"
 - Riser: 7"
 - Tread: 10"
- Minimum Ramp Dimensions:
 - Pitch: 1"/12"
 - Width: 36" min.
 - Head Room: 80"
 - Every 30' traveled, a 60" landing must be accompanied
- Minimum Hallway Dimensions:
 - Width: 44"
- Minimum # of Exits per Story: 2

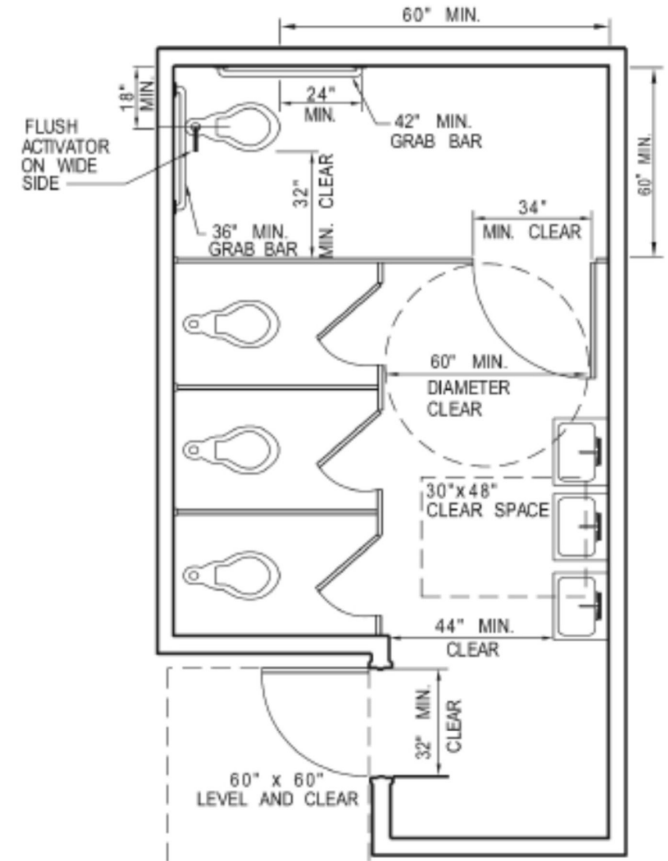
BASIC CODE REVIEW - PART III

- Fire Resistive Rating: 2 hours (Assembly A) - for fire barriers, fire walls, and horizontal assemblies
 - Note: If the areas are separated - they need to be separated by fire ratings (horizontal 2 hours) - if they share corridors and exits then they do not need to be separated by fire requirements
- Maximum Exit Access Travel Distance: 200' (Assembly A, Non Sprinklered)
- Assembly: Cafe: Male Water Closets - 1 per 75, Female Water Closets - 1 per 75, Lavatories for Both Male and Female - 1 per 200, Drinking Fountains - 1 per 500, 1 service sink
- Assembly: Fitness Center: Male Water Closets - 1 per 125, Female Water Closets - 1 per 65, Lavatories for Both Male and Female - 1 per 200, Drinking Fountains - 1 per 500, 1 service sink

ADA RESTROOM LAYOUT EXAMPLES



<https://www.dauntlessdc.com/blog/2019/8/6/handicap-bathrooms>



<https://accessories.toiletpartitions.com/wp-content/uploads/2020/03/ADA-PATH-OF-TRAVEL.jpeg>