

EL MODENA HIGH SCHOOL SWIMMING POOL

School Board Presentation

Schematic Options

Dennis Berkshire, Aquatics Design Group

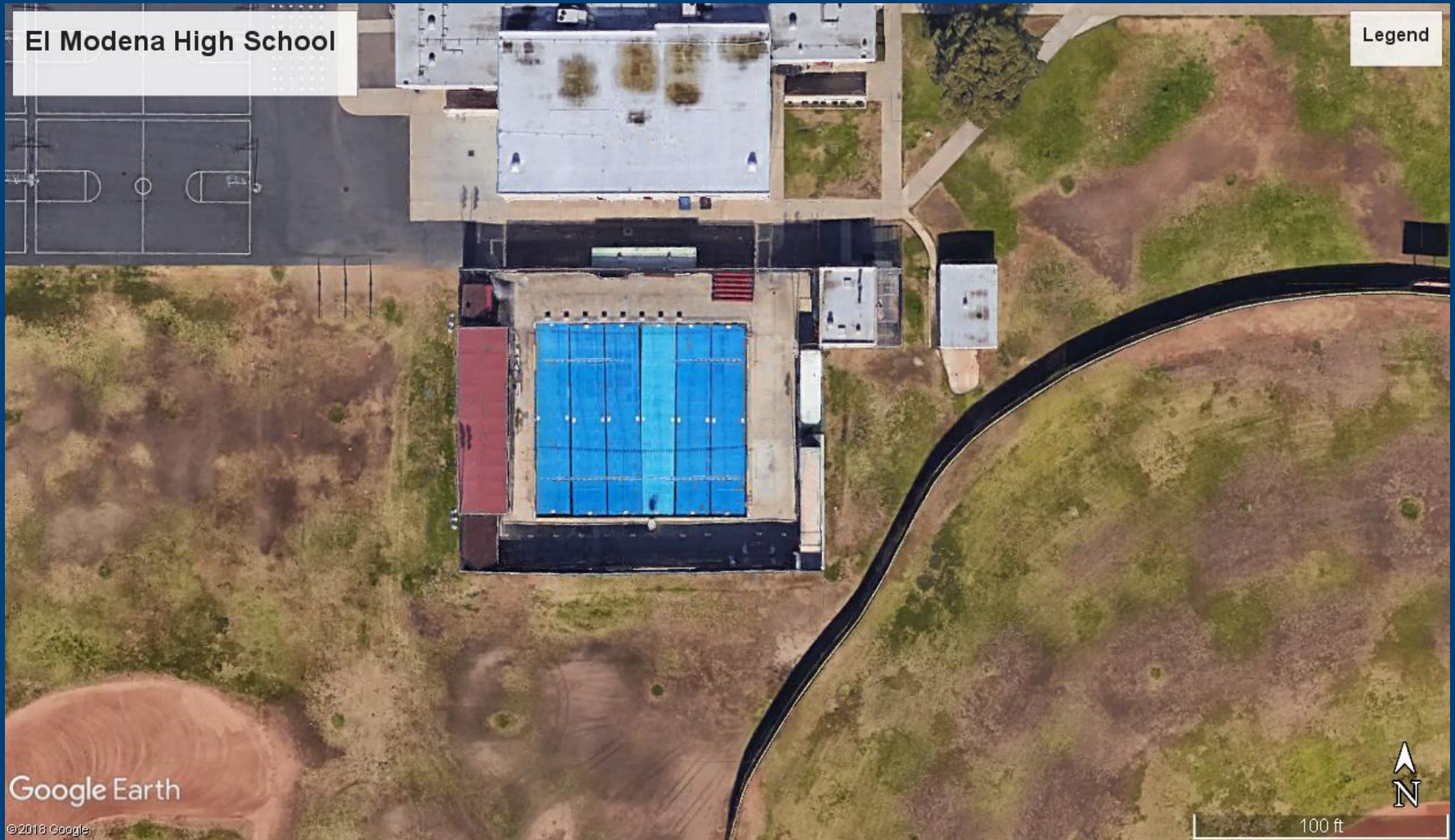
January 17, 2019



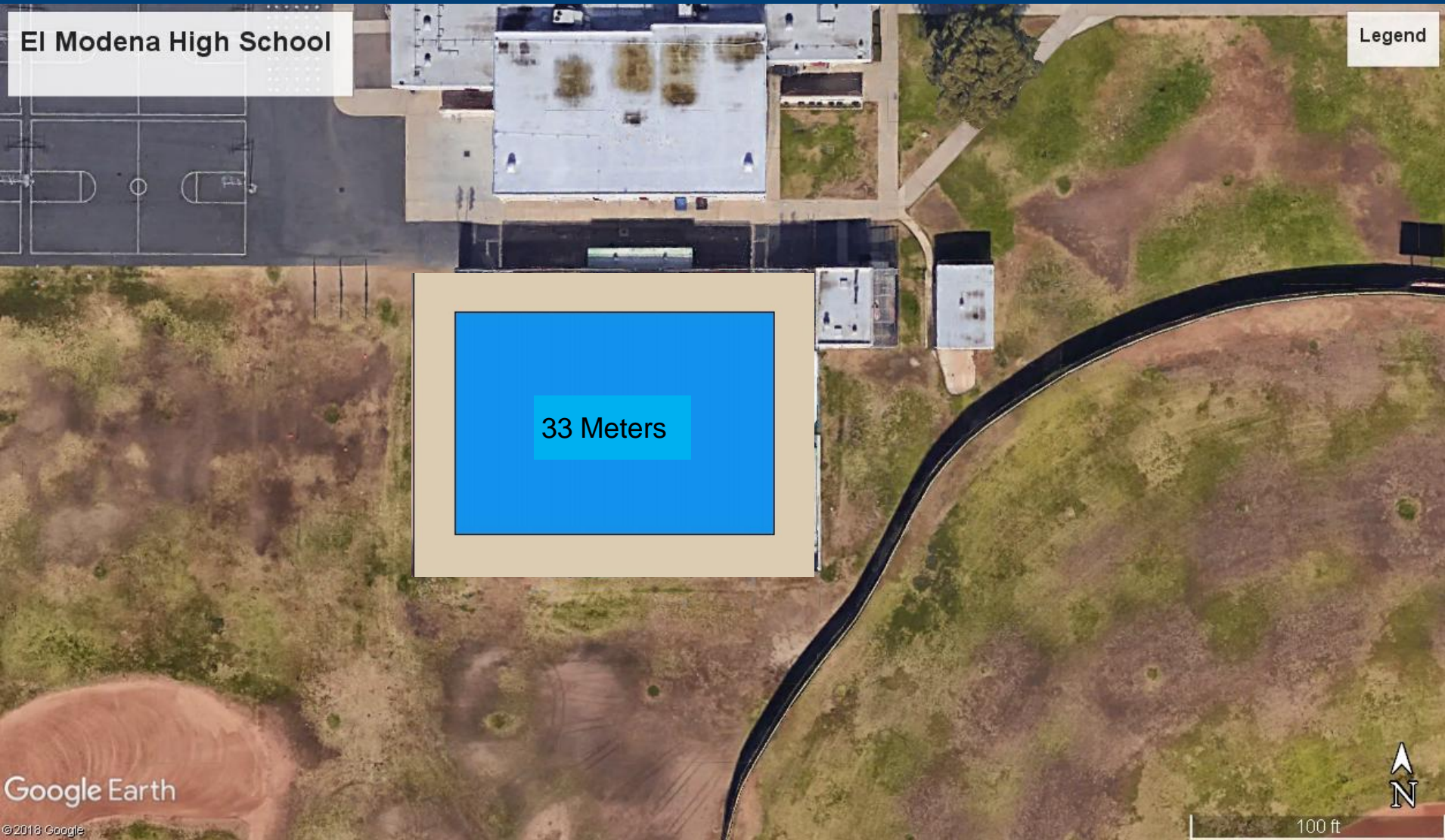
El Modena High School



Current El Modena HS Pool



Preliminary Pool to test site

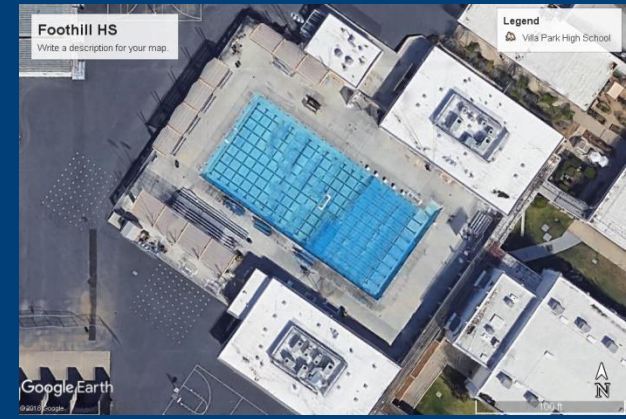
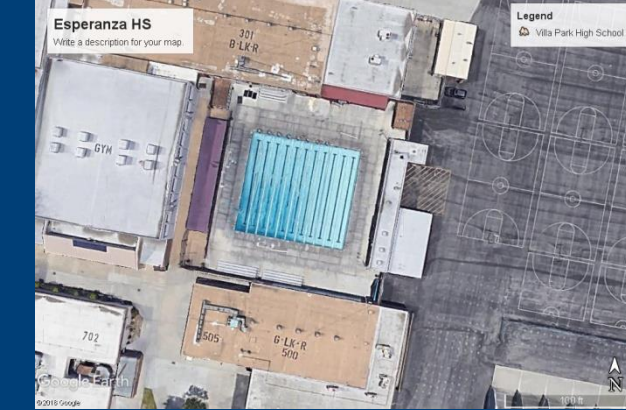
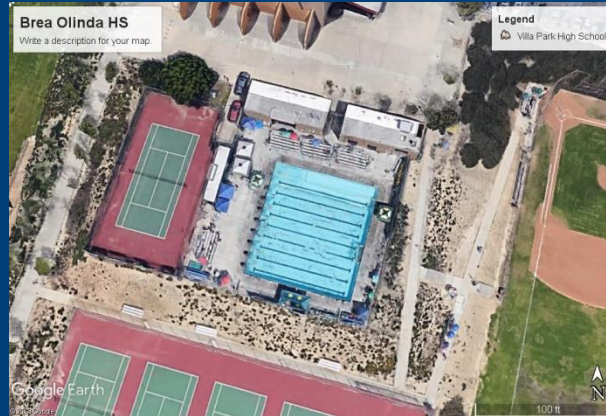


Competing League Facilities

FACILITY	POOL SIZE	Lanes	FLOATING H ₂ O POLO	WALL GOAL H ₂ O POLO
Esperanza HS	25M x 25YD	11	No	Yes
Foothill HS	50M x 25YD	20	Yes	Yes
Santa Ana HS	25M x 25YD	10	No	Yes
Garden Grove HS	25M x 25YD	10	Yes	Yes
Los Amigos HS	6-Lane	6	No	No
Tustin HS	50M x 25YD	20	Yes	Yes
Villa Park HS	25M x 25YD	11	No	Yes
Brea Olinda HS	25M x 25YD	11	No	Yes
Canyon HS	25M x 25YD	11	Yes	Yes
Yorba Linda HS	37M x 25YD	15	Yes	Yes
El Dorado HS	35M x 25YD	12	Yes	Yes
Bolsa Grande HS	6-Lane	6	No	No

COMPETING LEAGUE FACILITIES

- 💧 25-Meter Pools = 50%
- 💧 50-Meter Pools = 16.7%
- 💧 6-Lane Pools = 16.7%
- 💧 30+ Meter Pools = 16.7%



STAKEHOLDER & COMMUNITY PROCESS

Stakeholder Group Attendees Included:

- 💧 El Modena HS Administrators
- 💧 El Modena, Villa Park, and Canyon HS Swim and Water Polo Coaches
- 💧 El Modena Aquatics and Water Polo Booster Parents
- 💧 Athletic Directors from all HS locations
- 💧 Outside aquatics organization ORCA
- 💧 Superintendent, Executive Directors and Facilities Staff

STAKEHOLDER & COMMUNITY MEETING #1

SUMMARY

Programs

- ☐ H.S. Swim
- ☐ H.S. H₂O Polo
- ☐ City - Swim Lessons
- ☐ " Rec Programs
- ☐ Club Programs
- ☐ P.E.
- ☐ Masters Swim & H₂O Polo

El Modena H.S. Notes

H.S. Swim

- ☐ 80-100 STUDENTS
- ☐ PARTICIPATION SPORT
- ☐ 4-6/LAKE PROF. 3-5
- ☐ SPRING SPORT
- ☐ W/PREP PROGRAMS 12MO/YR.
- ☐ AM PRACTICE
- ☐ ~80°-81°
- ☐ 203.4 SHALLOW LAKE.

Swim Meet

- ☐ 1X/YEAR 12 LAKES / 6 MEET
- ☐ 10 LAKES - NEED
7' LAKES PREFERRED
- ☐ 4-5 WARM-UP LAKES.
UP TO 8 LAKES FOR DUAL
- ☐ ADEQUATE DECK SPACE
IF RACING COMPETITOR / TRADE SPACE / WALK
- ☐ SPECTATOR AREA
SMALL < 200 LG. 200-400
- ☐ SITE LIGHT 30 F.C.
- ☐ SHADY BEACHES.
- ☐ RESTROOMS 2-3 DECK SPACE
- ☐ LOCKER ROOMS
- ☐ TIMING SYS. 1st PREFERRED
- ☐ SCOREBOARD

STAKEHOLDER & COMMUNITY PROCESS

▵ Programs Considered:

- ▵ High School Swim
- ▵ High School Water Polo
- ▵ City Program- Swim Lessons
- ▵ City Recreational Programs
- ▵ Outside Organization/Club Programs
- ▵ High School Physical Education
- ▵ Master Swim and Water Polo (Club)

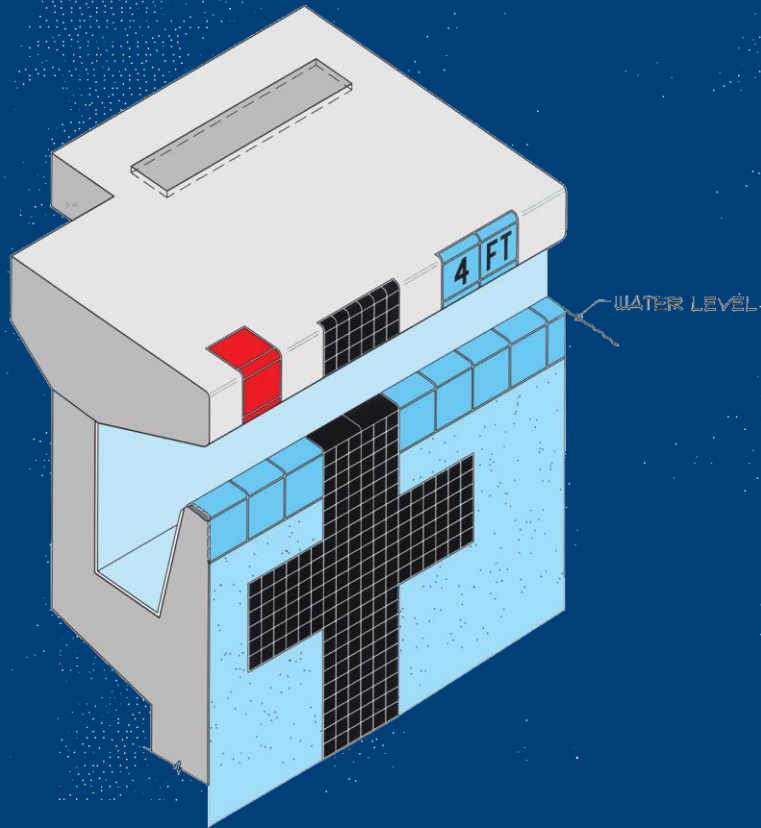
STAKEHOLDER & COMMUNITY PROCESS

💧 Factors Considered:

1. Swim Meet: Number of Lanes Needed for Swim Meets
2. Swim Meet: Number of Warm Up Swim Lanes Needed
3. Swim Meet: Total Number of Swim Lanes For Meets
4. Swim Practice: Total Number of Swim Lanes For Practice
5. Water Polo Match: Floating Goals or No Floating Goals
6. Water Polo Practice: Number of Practice Wall Goals
7. P.E.: 2 Lanes of Shallow Water Lanes Needed
8. Water Polo: Simultaneous Floating Goal and Wall Goal
9. Club Swim: 50-M Long Course Swimming

Other: Pool Configuration Gutter Type

STAKEHOLDERS' DESIRED GUTTER



STAKEHOLDER MEETING #2 SUMMARY

ITEM	DESCRIPTION	POOL'	POOL SIZE	STAKEHOLDER
	REQUIREMENTS			
1	Swim meets need 10 deep water lanes for large swim meet	72'	25-Meters	Swim Coaches, Athletic Directors
2	Swim meets need 4-6 lanes for warm-ups	42'	35-Meters	Swim Coaches, Athletic Directors
3	Total swim meet number of lanes is 16	114'	35-Meters	Swim Coaches, Athletic Directors, Boosters, ORCA
4	Swim Practice needs 16 lanes for simultaneous swim (<i>teams could be total 80-100 students</i>)	114'	35-Meters	Swim Coaches, Athletic Directors, ORCA
5	Water Polo match requires 25-yard floating goal field	86'	35-Meters	Water Polo Coaches, ORCA, Booster Parents
6	Water Polo practice requires two wall goal fields (<i>teams could be 40 men and 40 women</i>)	94'	35-Meters	Water Polo Coaches, ORCA, Booster Parents
7	P.E. requires a minimum 2 lanes of shallow water which fits within the practice lanes for swim meets (<i>60-70 students per class with 20% that need shallow water</i>)	14'	35-Meters	Athletic Director, PE Teachers/Swim Coaches

STAKEHOLDER MEETING #2 SUMMARY

ITEM	DESCRIPTION	POOL'	POOL SIZE	STAKEHOLDER
	<i>DESIRES</i>			
8	Simultaneous Floating Goal and Wall Goal water polo fields of play	164'	50-Meters	User Groups, ORCA
9	50-Meter long course swimming	164'	50-Meters	User Groups, ORCA

REVISIONS

NO.	DATE	DESCRIPTION

ARCHITECT

DRAWING TITLE
SWIMMING POOL LAYOUT PLAN (OPTION 1)

PROJECT NO. 2018-004
DRAWN BY: NRV
CHECKED BY: S.F.
DATE: 10/26/2018
DRAWING NO.

SP-1

SWIMMING POOL DATA

SURFACE AREA = 8886 SQ. FT.
PERIMETER = 391 FT.
DEPTH = 3'-6" TO 11'-3"
VOLUME = 43,893 GAL.
6 HR TURNOVER = 1/20 GPM

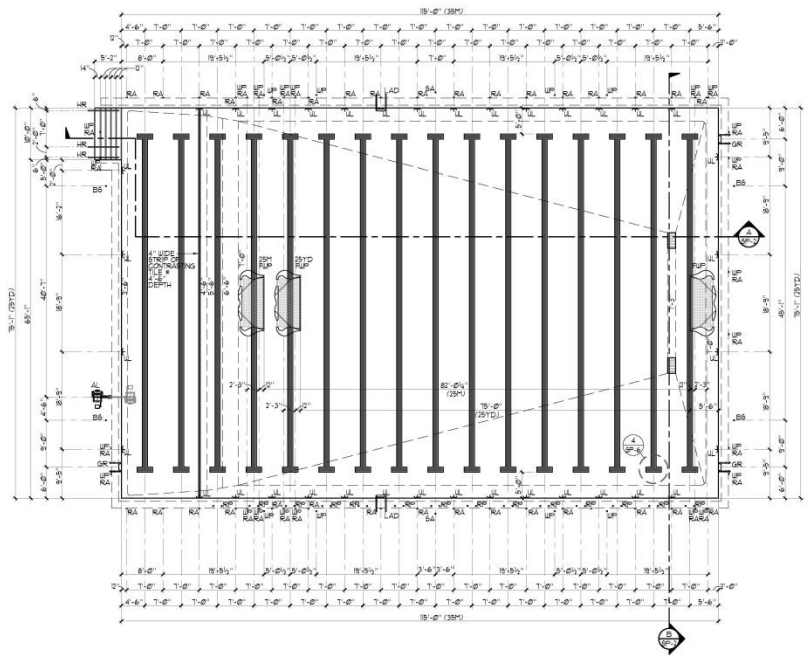
LEGEND

- MD = MAIN DECK
- UL = UNDERWATER LIGHT
- BS = BACKSTROKE STANCHION
- RP = RACING PLATFORM
- HR = HANDRAIL
- WP = WATER POLO
- FUP = FLOATING WATERPOLO
- SA = STANCHION ANCHOR
- GR = GRABRAIL
- BH = BULKHEAD

CERTIFICATION REQUIREMENTS

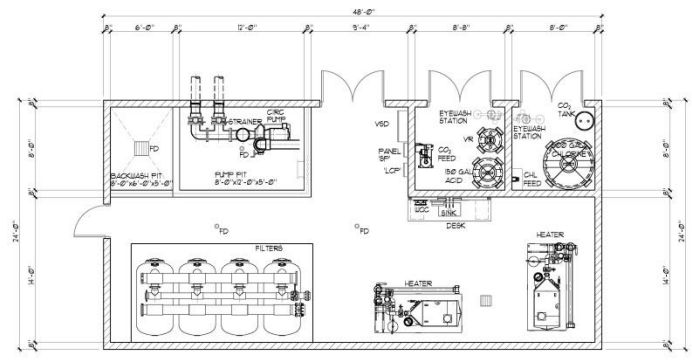
IF THE CONTRACTOR SHALL RETAIN AN INDEPENDENT LICENSED SURVEYOR TO PROVIDE CERTIFICATION OF COMPLIANCE FOR REQUIRED POOL DEPTHS IN ACCORDANCE WITH CALIFORNIA REGULATIONS, THE SURVEYOR SHALL SUBMIT THE COMPLETED FORM TO THE SIGHTING NATIONAL EVENT'S DEPARTMENT AND PROVIDE COPIES TO OWNER AND ARCHITECT.

SHORT COURSE DECKS (ALLOW FOR TOUCH PADS AT ONE END) 20" (1") ABOVE AND 20" (1") BELOW THE SURFACE OF THE WATER AT ALL POINTS OF BOTH END WALLS TYPE OF ALL COURSES.



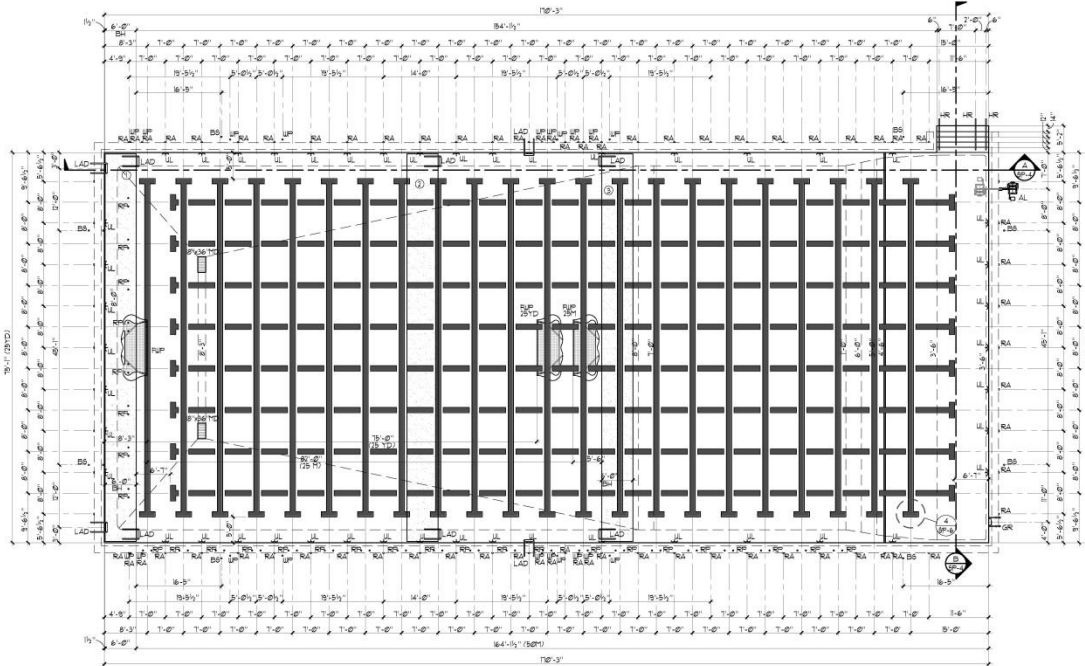
1 SWIMMING POOL LAYOUT PLAN (OPTION 1) 1/4" = 1'-0"

35-Meter
16-Lanes
96 Swimmers

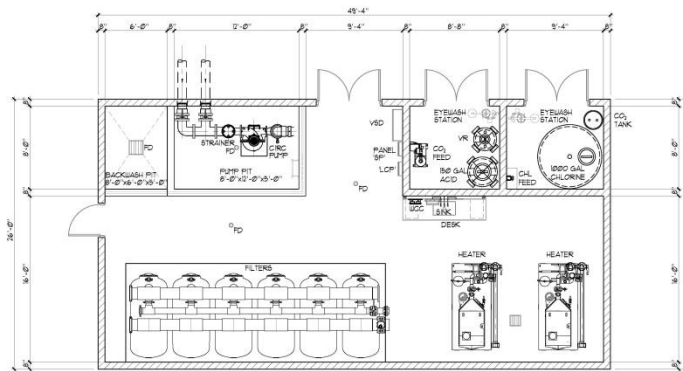


2 MECHANICAL ROOM PLAN LAYOUT (OPTION 1) 1/4" = 1'-0" (1/32 SQ. FT.)

51-Meters
23-Lanes
132
Swimmers



SWIMMING POOL LAYOUT PLAN (OPTION 2) 1/8"=1'-0"



MECHANICAL ROOM LAYOUT PLAN (OPTION 2) 1/4"=1'-0" (1283 SQ. FT.)

COMPETITION POOL DATA

SURFACE AREA	x	12,832 SQ. FT.
PERIMETER	x	500 FT.
DEPTH	x	3'-6" TO 8'-3"
VOLUME	x	63636 GAL.
6-HR TURNOVER	x	1534 GPM

LEGEND

MD	x	MAIN DRAIN	(1)
UL	x	UNDERWATER LIGHT	(2)
BS	x	BACKSTROKE STATION	(3)
RP	x	RACING PLATFORM	(4)
HR	x	HANDRAIL	(5)
WP	x	WATER POLO	(6)
FUP	x	FLOATING WATERPOLO	(7)
GR	x	GRABRAIL	(8)
BH	x	BULKHEAD	(9)

CERTIFICATION REQUIREMENTS

IF THE CONTRACTOR SHALL RETAIN AN INDEPENDENT LICENSED SURVEYOR TO PROVIDE CERTIFICATION OF COMPLIANCE FOR REQUIRED POOL LENGTH IN ACCORDANCE WITH USA SWIMMING REGULATIONS THE SURVEYOR SHALL SUBMIT THE COMPLETED FORM TO USA SWIMMING NATIONAL EVENTS DEPARTMENT AND PROVIDE COPIES TO OWNER AND ARCHITECT.
LONG COURSE-50YD (ALLOW FOR TOUCH PADS AT BOTH ENDS) 84-1/8" MIN. 84-1/8" MAX.
SHORT COURSE-25YD (ALLOW FOR TOUCH PADS AT ONE END) 70'-0 5/8" MIN. 70'-1 3/8" MAX.
TOLERANCE AGAINST LENGTH SHALL EXTEND IN A VERTICAL PLANE 6" (12") ABOVE AND 6" (12") BELOW THE SURFACE OF THE WATER AT ALL POINTS OF BOTH END WALLS TYPE OF ALL COURSES.

BULKHEAD POSITIONS

1. 50Y LONG COURSE SWIMMING
2. POSITIONED BETWEEN 1 - 49YDS SWP COURSES
3. POSITIONED BEHIND 25 YD AND 25M FUP COURSES

REVISIONS

NO.	DATE	DESCRIPTION

ARCHITECT

DRAWING TITLE

SWIMMING
POOL LAYOUT
PLAN
(OPTION 2)

PROJECT NO.

2018-009

DRAWN BY

MMV

CHECKED BY

SJP

DATE

10/30/2018

DRAWING NO.

SP-3



2

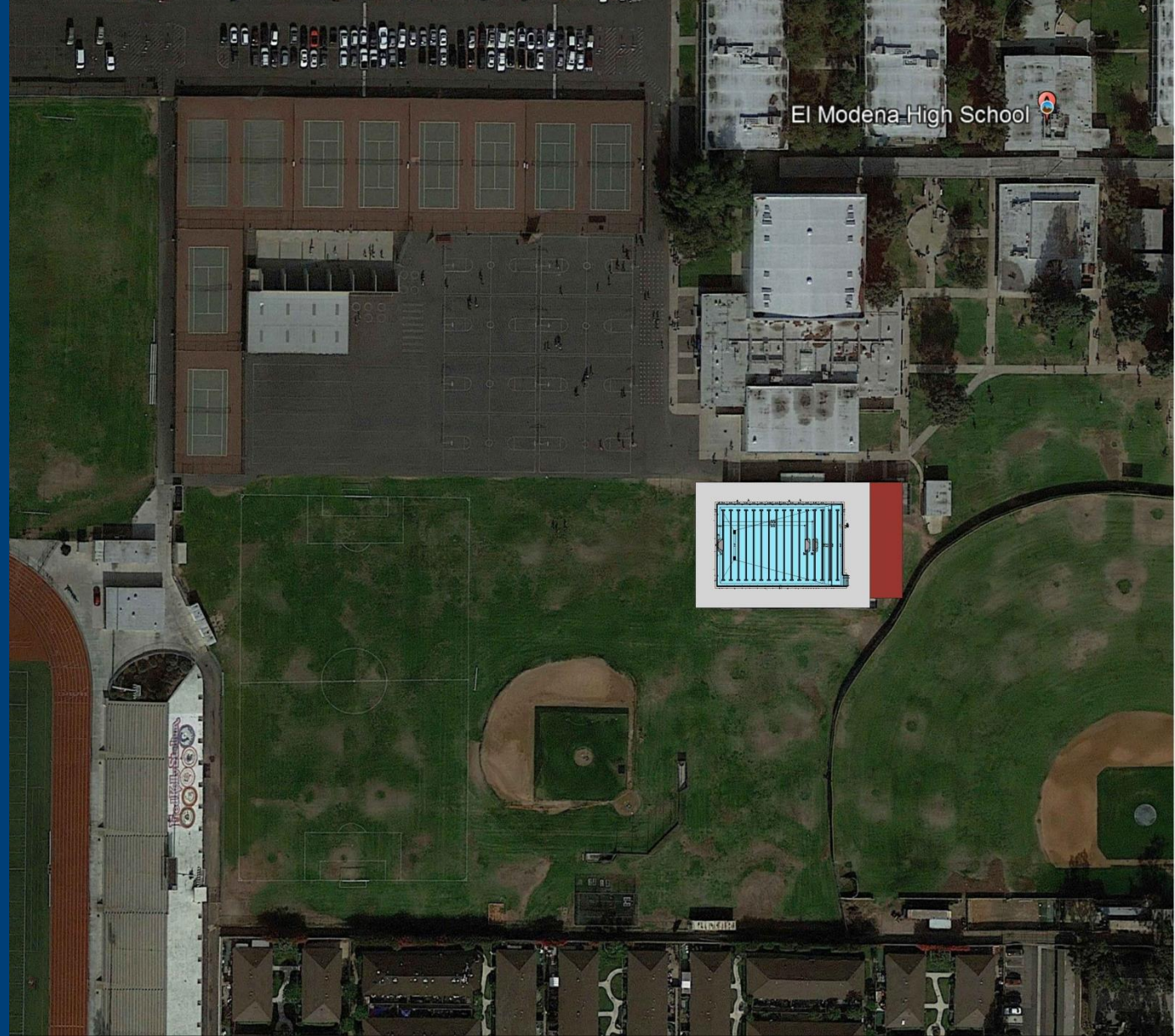
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Option I

Existing Site

35-Meter Pool

3,200 Sq. Ft.
Bathhouse &
Mechanical
Building



El Modena High School

Option 2

51-M Pool

3,600 Sq. Ft.
Bathhouse &
Mechanical
Building



35-Meter

ITEM	DESCRIPTION	QTY	UNIT	UNIT PRICE	EXTENSIONS
1.0	CONSTRUCTION COSTS				
1.1	Mobilization	1	LS	\$ 60,000.00	\$ 60,000.00
1.2	Site Preparation/Demolition	1	LS	\$ 120,000.00	\$ 120,000.00
1.3	Utility Allowance	1	LS	\$ 75,000.00	\$ 75,000.00
1.4	Soil Preparation Retaining Walls	1	LS	\$ 100,000.00	\$ 100,000.00
1.5	35-Meter x 25-Yard Pool & Mech. Equip.	8,660	SF	\$ 215.00	\$ 1,861,900.00
1.6	Pool Surge Tank	1	LS	\$ 40,000.00	\$ 40,000.00
1.7	Pool Decks (assumes a 20' band)	9,165	SF	\$ 35.00	\$ 320,775.00
1.8	Shade Structures	1	LS	\$ 100,000.00	\$ 100,000.00
1.9	Pool Area Fencing	540	LF	\$ 250.00	\$ 135,000.00
1.10	Site Lighting	1	LS	\$ 150,000.00	\$ 150,000.00
1.11	New Bathhouse/Mechanical Building	3,206	SF	\$ 500.00	\$ 1,603,000.00
1.12	Landscape/Site	1	LS	\$ 50,000.00	\$ 50,000.00
1.13	TOTAL CONSTRUCTION COSTS				\$ 4,615,675.00
2.0	EQUIPMENT COSTS (FF&E)				
2.1	Deck Equipment	1	LS	\$ 69,380.00	\$ 69,380.00
2.2	Competitive Equipment	1	LS	\$ 154,300.00	\$ 154,300.00
2.3	TOTAL EQUIPMENT COSTS				\$ 223,680.00
3.0	SOFT COSTS				
3.1	General Contractor Mark-Up/Overhead	15%			\$ 725,903.25
3.2	Construction Contingency Costs	10%			\$ 483,935.50
3.3	Design Contingency	5%			\$ 241,967.75
3.4	Time/Inflation Escalation Index	5%			\$ 241,967.75
3.5	DSA Fees & Inspection				\$ 200,000.00
3.6	Construction Manager				\$ 250,000.00
3.7	TOTAL SOFT COSTS				\$ 2,143,774.25
4.0	TOTAL ESTIMATED PROJECT COST				\$ 6,983,129.25



El Modena High School



51-Meter

ITEM	DESCRIPTION	QTY	UNIT	UNIT PRICE	EXTENSIONS
1.0	CONSTRUCTION COSTS				
1.1	Mobilization	1	LS	\$ 60,000.00	\$ 60,000.00
1.2	Site Preparation/Demolition	1	LS	\$ 250,000.00	\$ 250,000.00
1.3	Utility Allowance	1	LS	\$ 200,000.00	\$ 200,000.00
1.4	Soil Preparation	1	LS	\$ 100,000.00	\$ 100,000.00
1.5	51-Meter x 25-Yard Pool & Mech. Equip.	12,628	SF	\$ 215.00	\$ 2,715,020.00
1.6	Pool Surge Tank	1	LS	\$ 45,000.00	\$ 45,000.00
1.7	Pool Decks (assumes a 20' band)	11,300	SF	\$ 35.00	\$ 395,500.00
1.8	Shade Structures	1	LS	\$ 100,000.00	\$ 100,000.00
1.9	Pool Area Fencing	646	LF	\$ 250.00	\$ 161,500.00
1.10	Site Lighting	1	LS	\$ 205,000.00	\$ 205,000.00
1.11	New Bathhouse/Mechanical Building	3,593	SF	\$ 500.00	\$ 1,796,500.00
1.12	Landscape/Site	1	LS	\$ 50,000.00	\$ 50,000.00
1.13	Moveable Bulkhead	1	LS	\$ 300,000.00	\$ 300,000.00
1.14	TOTAL CONSTRUCTION COSTS				\$ 6,378,520.00
2.0	EQUIPMENT COSTS (FF&E)				
2.1	Deck Equipment	1	LS	\$ 69,380.00	\$ 69,380.00
2.2	Competitive Equipment	1	LS	\$ 154,300.00	\$ 154,300.00
2.3	TOTAL EQUIPMENT COSTS				\$ 223,680.00
3.0	SOFT COSTS				
3.1	General Contractor Mark-Up/Overhead	15%			\$ 990,330.00
3.2	Construction Contingency Costs	10%			\$ 660,220.00
3.3	Design Contingency	5%			\$ 330,110.00
3.4	Time/Inflation Escalation Index	5%			\$ 330,110.00
3.5	DSA Fees & Inspection				\$ 250,000.00
3.6	Construction Manager				\$ 300,000.00
3.7	TOTAL SOFT COSTS				\$ 2,860,770.00
4.0	TOTAL ESTIMATED PROJECT COST				\$ 9,462,970.00



El Modena High School



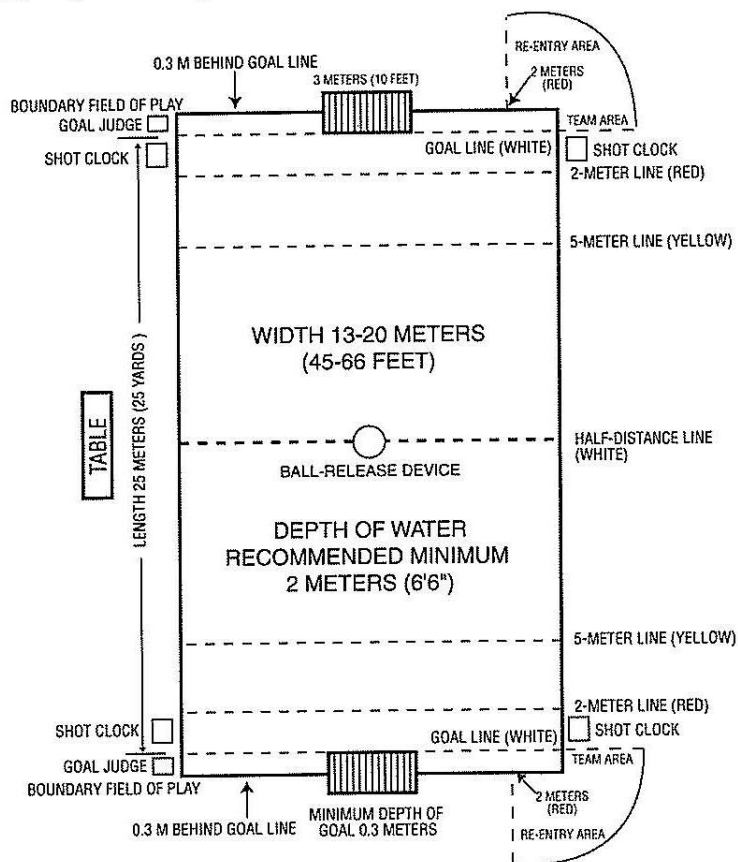
EL MODENA POOL EXPENSES

OPTION	PROJECT COST	ANNUAL OPERATING
💧 <u>25m x 25yd</u>	Existing Pool (Actuals)	\$ 80,000
💧 <u>35m x 25yd</u>	\$ 6,983,130.00	\$ 110,000
💧 <u>51m x 25yd</u>	\$ 9,462,970.00	\$ 160,000



Thank You !

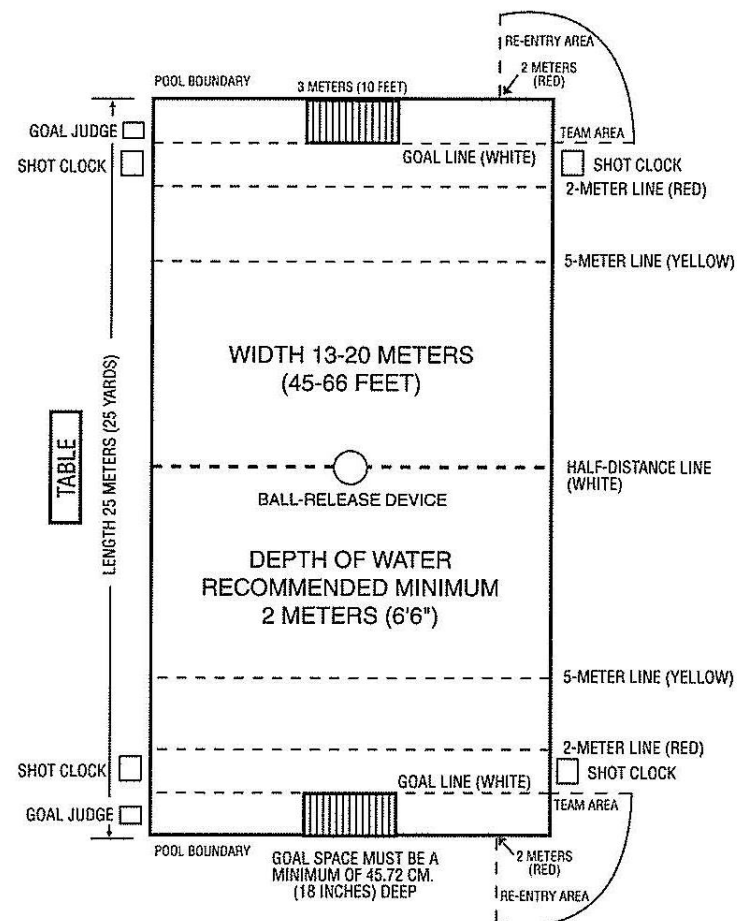
Pool Diagram – Floating Goal Pool



NOTE: Minimum distance from goal line to pool wall recommended to be a minimum of 1.66 meters.

Hereinafter set forth, information on the diagrams in this book is suggestive only; it is not required by NFHS rules. The construction and layout of all venues used for high school competition are subject to any controlling laws and building codes, and to the sound judgement of the persons in charge of the facilities.

Pool Diagram – Wall-mounted Goal Pool



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