



TEST PIT LOG

TP#1	ELEV = 147.0 ±	TP #2	ELEV = 148.8 ±
0 - 6"	ORGANIC LAYER	0 - 8"	ORGANIC LAYER
6 - 21"	4/3 10YR LOAMY SAND	8 - 26"	6/8 10YR LOAMY SAND
21 - 52"	6/8 5YR LOAMY SAND	26 - 64"	6/8 10YR SANDY LOAM
52 - 78"	7/8 5YR SANDY LOAM	64 - 72"	6/1 10YR SAND
78 - 97"	7/8 10YR SANDY CLAY LOAM W/ 7/1 CM	72 - 99"	7/8 5YR SANDY CLAY LOAM
97 - 120"	7/1 10YR SANDY LOAM W/ 7/8 CM	99 - 118"	7/1 10YR SANDY LOAM W/ 5 YR 8/8 CM
	SHWT @ 78", ELEV. 140.5 NO WATER ENCOUNTERED		SHWT @ 99", ELEV. 140.6 NO WATER ENCOUNTERED
TP#3	ELEV = 161.5 ±	TP #4	ELEV = 137.5 ±
0 - 9"	ORGANIC LAYER	0 - 16"	ORGANIC LAYER
9 - 22"	5/8 10YR LOAMY SAND	16 - 33"	6/8 5YR SANDY LOAM
22 - 39"	5/8 5YR SAND	33 - 67"	6/8 5YR SILTY CLAY
39 - 70"	6/8 10YR SAND	67 - 96"	7/8 5YR CLAY
70 - 92"	7/4 10YR SAND	96 - 118"	6/8 10YR LOAM
92 - 100"	5/3 10YR LOAMY SAND		SHWT @ 67", ELEV. 131.9 WATER ENCOUNTERED @ 96"
100 - 118"	7/3 10YR LOAMY SAND		
	SHWT @ >118", ELEV. <151.5 NO WATER ENCOUNTERED		
TP#5	ELEV = 138.8 ±		
0 - 14"	ORGANIC LAYER		
14 - 31"	6/4 5YR SANDY LOAM		
31 - 48"	7/1 5/8 5YR SANDY CLAY LOAM		
48 - 72"	7/8 5YR LOAM		
72 - 120"	6/8 10YR LOAM		
	SHWT @ 72", ELEV. 132.8 WATER ENCOUNTERED @ 94"		
TEST PITS 1-5 PERFORMED BY PDS, LLC ON MARCH 3, 2017.			
TP#6	ELEV = 161.0 ±	TP #7	ELEV = 164.0 ±
0 - 6"	ORGANIC LAYER	0 - 8"	ORGANIC LAYER
6 - 21"	4/3 10YR LOAMY SAND	8 - 35"	6/8 10YR LOAMY SAND
21 - 89"	6/8 5YR LOAMY SAND	35 - 92"	6/8 10YR SANDY LOAM
89 - 126"	7/6 5YR SANDY LOAM	92 - 132"	7/1 10YR SANDY LOAM
126 - 132"	7/2 10YR SANDY LOAM W/ 6/8 CM		NO SHWT ENCOUNTERED NO WATER ENCOUNTERED
	SHWT @ 126", ELEV. 150.5 NO WATER ENCOUNTERED		
TP#8	ELEV = 145.0 ±	TP #9	ELEV = 138.5 ±
0 - 9"	ORGANIC LAYER	0 - 16"	ORGANIC LAYER
9 - 22"	5/8 10YR LOAMY SAND	16 - 33"	6/8 5YR SANDY LOAM
22 - 39"	5/8 5YR SAND	33 - 67"	6/8 5YR SILTY CLAY
39 - 70"	6/8 10YR SAND	67 - 88"	7/8 5YR CLAY
70 - 120"	7/3 10YR SAND W/ 10YR 6/8 CM	88 - 120"	6/8 10YR LOAM
	SHWT @ >70", ELEV. <139.2 NO WATER ENCOUNTERED		SHWT @ 67", ELEV. 132.9 NO WATER ENCOUNTERED
TP#10	ELEV = 141.0 ±		
0 - 8"	ORGANIC LAYER		
8 - 40"	6/4 5YR SANDY LOAM		
40 - 65"	7/1 5/8 5YR SANDY CLAY LOAM		
65 - 98"	7/8 5YR LOAM		
98 - 120"	6/8 10YR SANDY LOAM W/ 7/4 CM		
	SHWT @ 98", ELEV. 132.8 NO WATER ENCOUNTERED		
TEST PITS 6-10 PERFORMED BY PDS, LLC ON SEPTEMBER 7, 2017.			

LEGEND

EXISTING SPOT GRADE	127.50
PROPOSED SPOT GRADE	115.10 +
EXISTING CONTOUR	126
PROPOSED CONTOUR	91
PROPOSED INLET	■
PROPOSED STORM MANHOLE	●
PROPOSED FLARED END SECTION	▶
PROPOSED STORM PIPE	---
PROPOSED ROOF DRAINAGE	----
PROPOSED CLEAN OUT	○
PROPOSED TEST PIT	TP

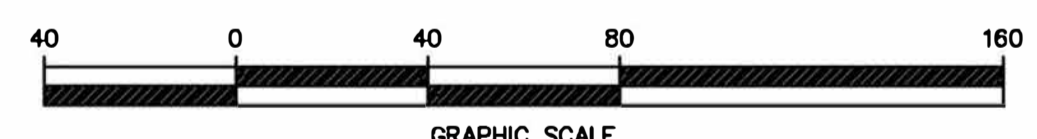
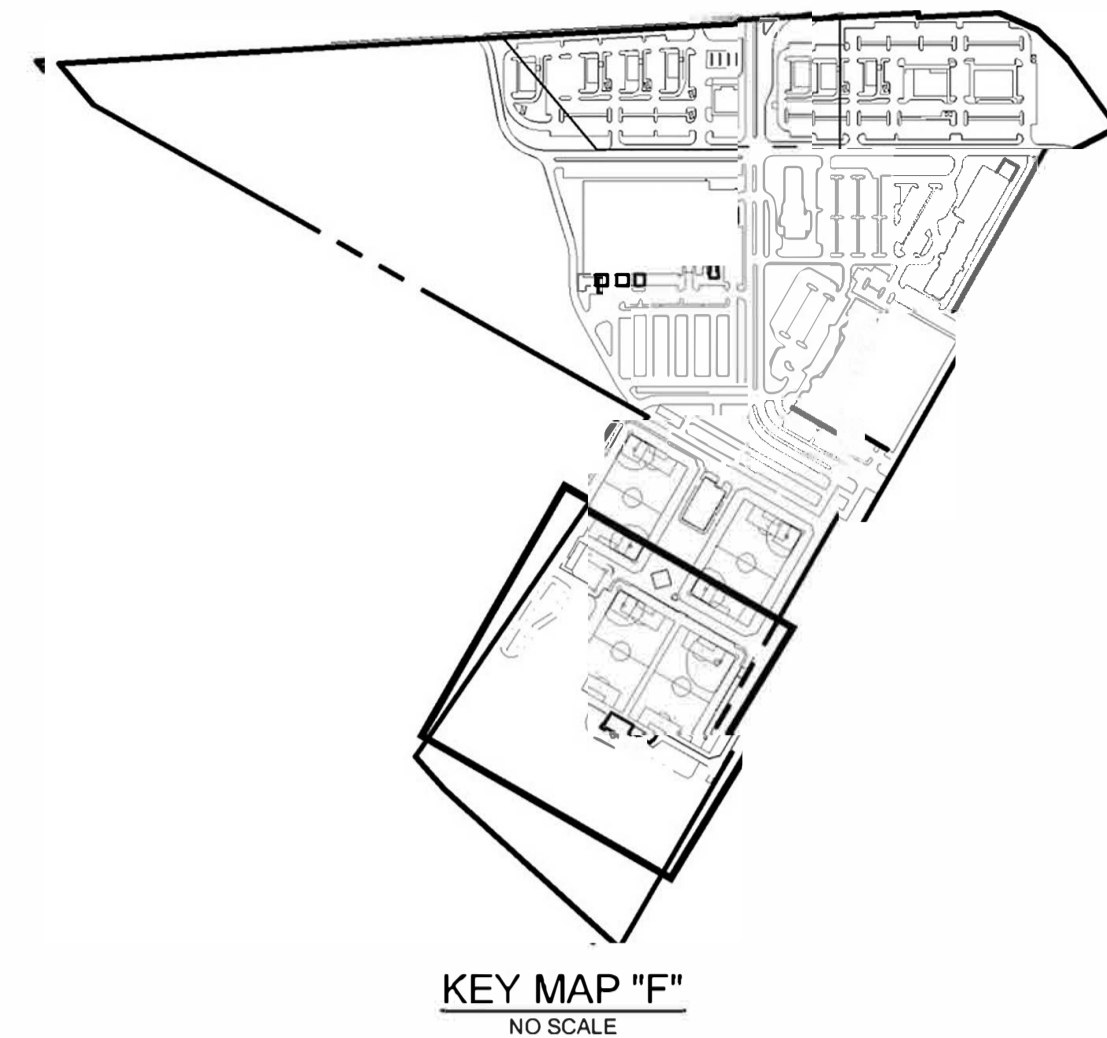
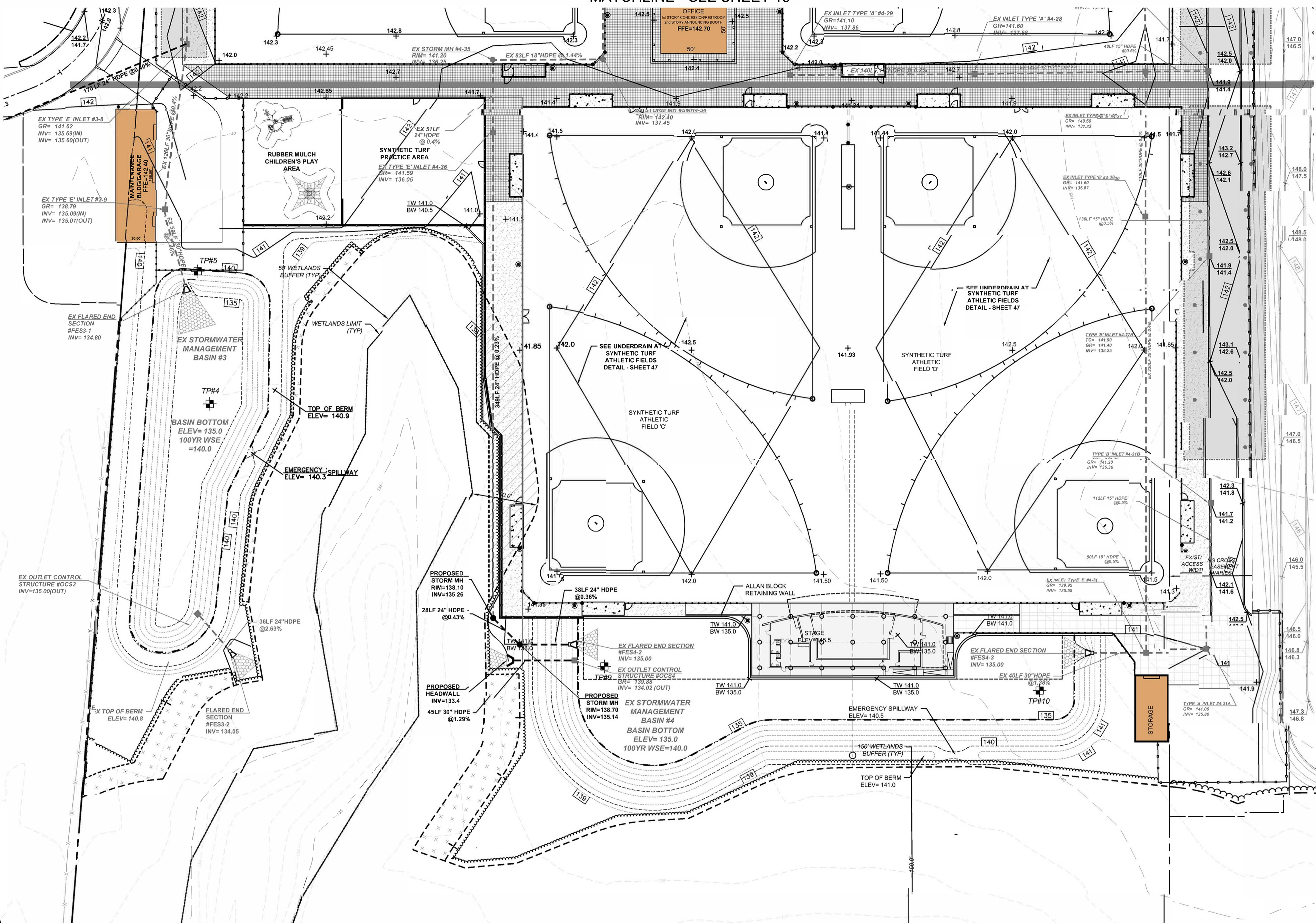


DEVELOPERS • CONSTRUCTION • LEASING



FROM: MAPPRODUCTION\LEGAT...LAYOUTS\2-2-14\166441.DWG - OVERALL GRADING PLAN (REVISED) - 03/05/2014 - 02/20/14

MATCHLINE - SEE SHEET 16



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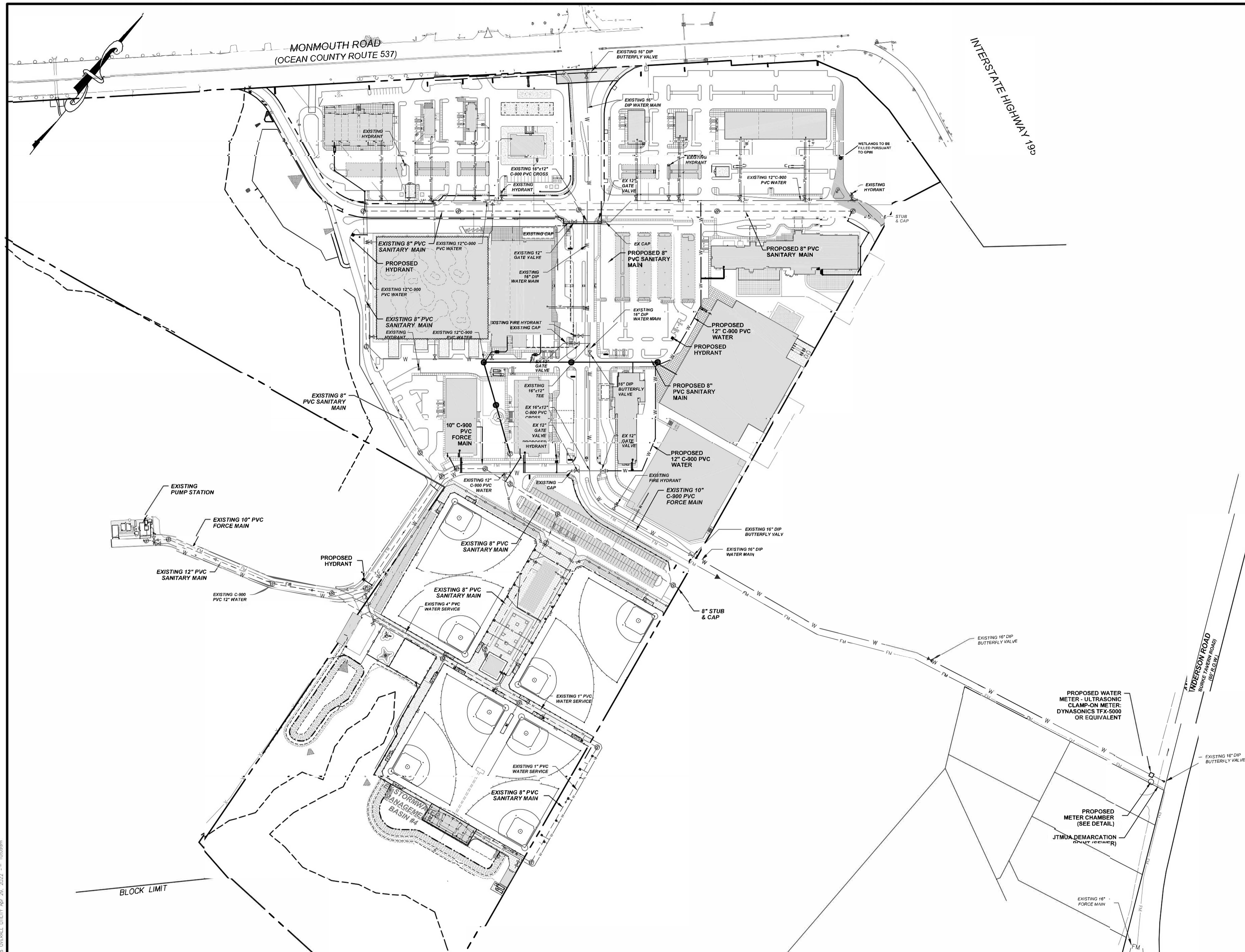


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PROJECT: 16641 - LOTS 2-3-4 - 16641-1 - TRACT 17 - GRADING & STORM DRAIN PLANS - 05/2022 - 5/31/2022



- GENERAL UTILITY NOTES:**
- THRUST BLOCKS ARE TO BE PROVIDED AT ALL WATER MAINS, BENDS AND FITTINGS.
 - FIRE HYDRANTS MUST BE SUPPLIED BY A MINIMUM OF 6" WATER LINES.
 - ALL SANITARY LATERALS SHALL BE INSTALLED WITH A MINIMUM SLOPE OF 1/4" PER FOOT.
 - AT THE SANITARY LATERAL WYE OR TEE, MATCH THE CROWN OF THE SEWER MAINS AND THE WATER MAINS.
 - WATER MAINS MUST HAVE A MINIMUM HORIZONTAL SEPARATION OF TEN FEET AND A MINIMUM VERTICAL SEPARATION OF 18 INCHES BETWEEN BOTH SEWER MAINS AND FORCE MAINS. IF SUCH LATERAL SEPARATION IS NOT POSSIBLE, THE PIPES SHALL BE IN SEPARATE TRENCHES WITH THE SEWERFORCE MAIN AT LEAST 18 INCHES BELOW THE BOTTOM OF THE WATER MAIN. WHERE SEPARATION IS NOT MAINTAINED BETWEEN THE WATER AND SEWERFORCE MAINS, INSTALL THE SEWERFORCE MAIN WITH DUCTILE IRON PIPE WITH WATER TIGHT JOINTS THAT ARE A DISTANCE OF AT LEAST 10 FEET ON EITHER SIDE OF THE WATER MAIN.
 - AT CROSSING OF SEWER MAINS AND:
 WATER MAINS: INSTALL THE SEWERFORCE MAIN A MINIMUM OF 18" BELOW THE WATER MAIN. IF THE VERTICAL CLEARANCE BETWEEN MAINS IS LESS THAN THIS, THE SEWERFORCE MAIN MUST BE DUCTILE IRON WITH WATER TIGHT JOINTS THAT ARE A DISTANCE OF AT LEAST 10 FEET ON EITHER SIDE OF THE WATER MAIN. IF THE MAIN MUST CROSS BENEATH THE SEWERFORCE MAIN TO MAINTAIN COVER, THE DUCTILE IRON PIPE SHALL BE PROVIDED AS NOTED ABOVE REGARDLESS OF VERTICAL CLEARANCE.
 ALL OTHER PIPING AND UTILITIES EXCEPT WATER MAINS: PROVIDE 12" MINIMUM VERTICAL CLEARANCE BETWEEN SEWER MAINS AND OTHER PIPING OR UTILITIES CROSSING EITHER ABOVE OR BELOW. IF OTHER PIPING OR UTILITIES CROSS 12" - 18" ABOVE THE SEWER, SUPPORT THE TOP PIPING OR UTILITY WITH CONCRETE CRADLES.
 - PROVIDE 4'-0" MINIMUM COVER OVER PVC SEWER MAINS AND 3'-0" MINIMUM COVER OVER DIP SEWER MAINS. PROVIDE 3'-0" MINIMUM COVER OVER SEWER LATERALS.
 - ALL SANITARY SEWER SHALL BE P.V.C. CONFORMING TO ASTM D-3034; SDR-35 WITH PUSH ON JOINTS, EXCEPT THAT SEWER HAVING A DEPTH GREATER THAN 15 FEET MUST BE SDR-26.
 - ALL WATER MAINS SHALL BE C-900 P.V.C. RATED AT 150 PSI MINIMUM. PIPE JOINTS SHALL BE OF PUSH-ON TYPE OR MECHANICAL JOINT TYPE.
 - PROVIDE 4'-0" MINIMUM COVER OVER WATER MAINS.
 - ALL WATER SERVICES AND PLUMBING SHALL CONFORM WITH THE PLUMBING SUBCODE NJAC 5:23-3.15.
 - ALL WATER VALVES SHALL BE RESILIENT WEDGE TYPE IN ACCORDANCE WITH THE AMERICAN WATER WORKS ASSOCIATION STANDARD SPECIFICATION C-505.
 - VALVES SHALL BE PLACED ON WATER DISTRIBUTION MAINS NOT MORE THAN 1,000 FEET APART.
 - A HYDRANT OR BLOW OFF VALVE SHALL BE LOCATED BEYOND THE LAST SERVICE CONNECTION ON TEMPORARY DEAD ENDS.
 - THE FORCE MAIN WITHIN ANDERSON ROAD WILL BE OWNED, OPERATED AND MAINTAINED BY THE JTMUA. ALL ONSITE GRAVITY MAINS, PUMP STATION AND FORCE MAIN WILL BE OWNED AND MAINTAINED BY THE PROPERTY OWNER.
 - THE DESIGN AND LAYOUT OF ALL GREASE TRAPS SUBJECT TO FINAL ARCHITECTURAL DESIGN. GREASE TRAP SIZING CALCULATIONS SHALL BE PROVIDED FOR ALL FACILITIES WITH FOOD PREPARATION ON-SITE.
 - WATER METERS SUBJECT TO FINAL ARCHITECTURAL DESIGN. ALL WATER METERS WILL BE LOCATED WITHIN THE BUILDINGS.
 - BACKFLOW PREVENTERS TO BE PROVIDED WITHIN EACH BUILDING FOR THE FIRE SERVICE.
 - A BACKFLOW PREVENTION DEVICE MUST BE INSTALLED RIGHT AFTER THE WATER METER ON THE SERVICE LINE SERVING THE STATIONS. A PHYSICAL CONNECTION PERMIT TO INSTALL THE BACKFLOW PREVENTION DEVICE MUST BE OBTAINED PRIOR TO PUTTING THE SERVICES LINE IN SERVICE. ONCE THE BACKFLOW PREVENTION DEVICE IS INSTALLED, A PERMIT TO OPERATE SAID DEVICE MUST BE OBTAINED.
 - THE SEWERAGE SYSTEM FOR THIS PROJECT WILL BE PRIVATELY OWNED AND OPERATED. THE SYSTEM IS A PUBLIC WASTEWATER COLLECTION SYSTEM WHICH CONVEYS MORE THAN 25,000 GALLONS OF WASTEWATER PER DAY WHICH IS REGULATED BY THE DEPARTMENT PURSUANT TO THE WATER POLLUTION CONTROL ACT, N.J.S.A. 58:10A-1 et seq. PURSUANT TO NJAC 7:10A A LICENSED OPERATOR HOLDING A C1 LICENSE WILL BE RESPONSIBLE FOR THE OPERATION, MAINTENANCE AND RECORD-KEEPING FOR THE SYSTEM IN ACCORDANCE WITH 7-10A-7.
 - ALL EXISTING SEWER & WATER CONSTRUCTED IS SUBJECT TO VERIFICATION BY AS-BUILT SURVEY.

UTILITY LEGEND

	EXISTING WATER LINE
	PROPOSED WATER LINE
	EXISTING WATER VALVE
	PROPOSED WATER VALVE
	EXISTING FIRE HYDRANT
	PROPOSED FIRE HYDRANT
	YARD HYDRANT
	EXISTING CORPORATION STOP
	PROPOSED CORPORATION STOP
	EXISTING WATER METER
	PROPOSED WATER METER
	EXISTING SANITARY FORCE MAIN
	PROPOSED SANITARY FORCE MAIN
	EXISTING SANITARY MAIN
	PROPOSED SANITARY MAIN
	EXISTING SANITARY LATERAL
	PROPOSED SANITARY LATERAL
	EXISTING SANITARY MANHOLE

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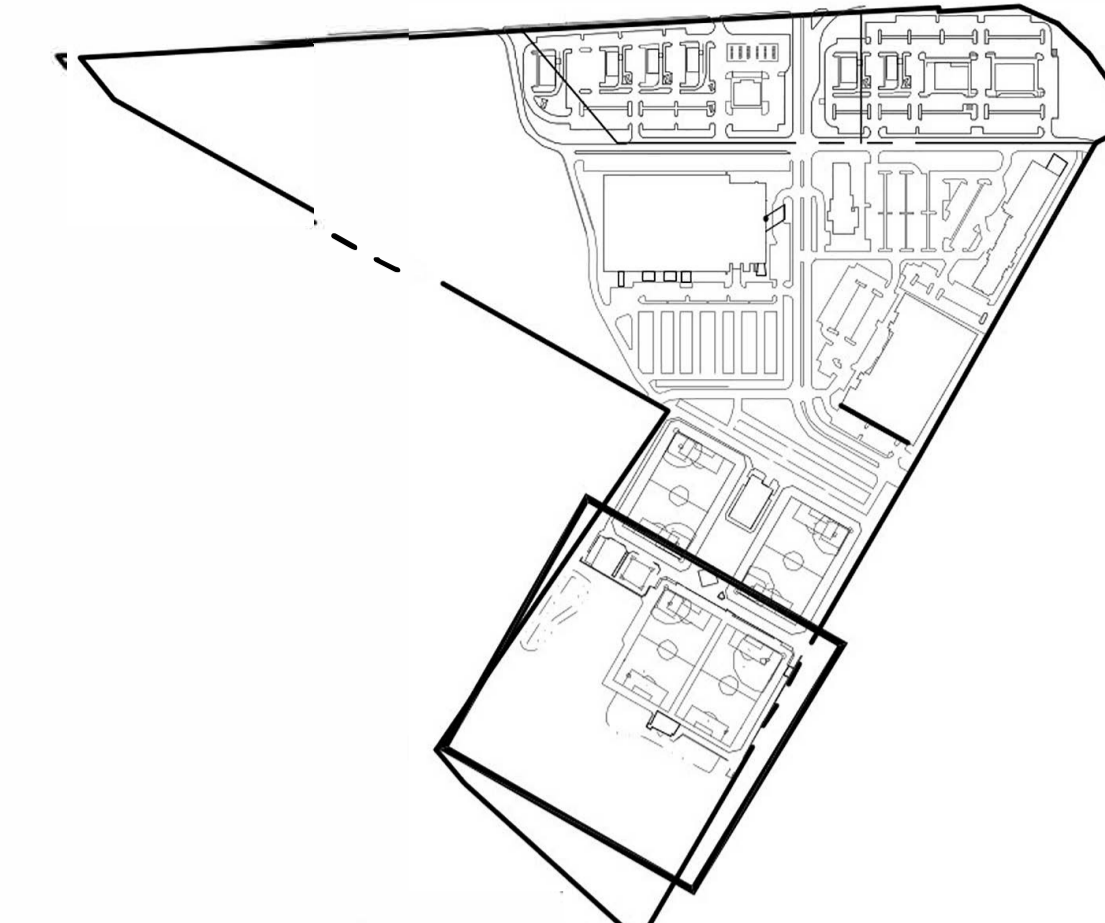
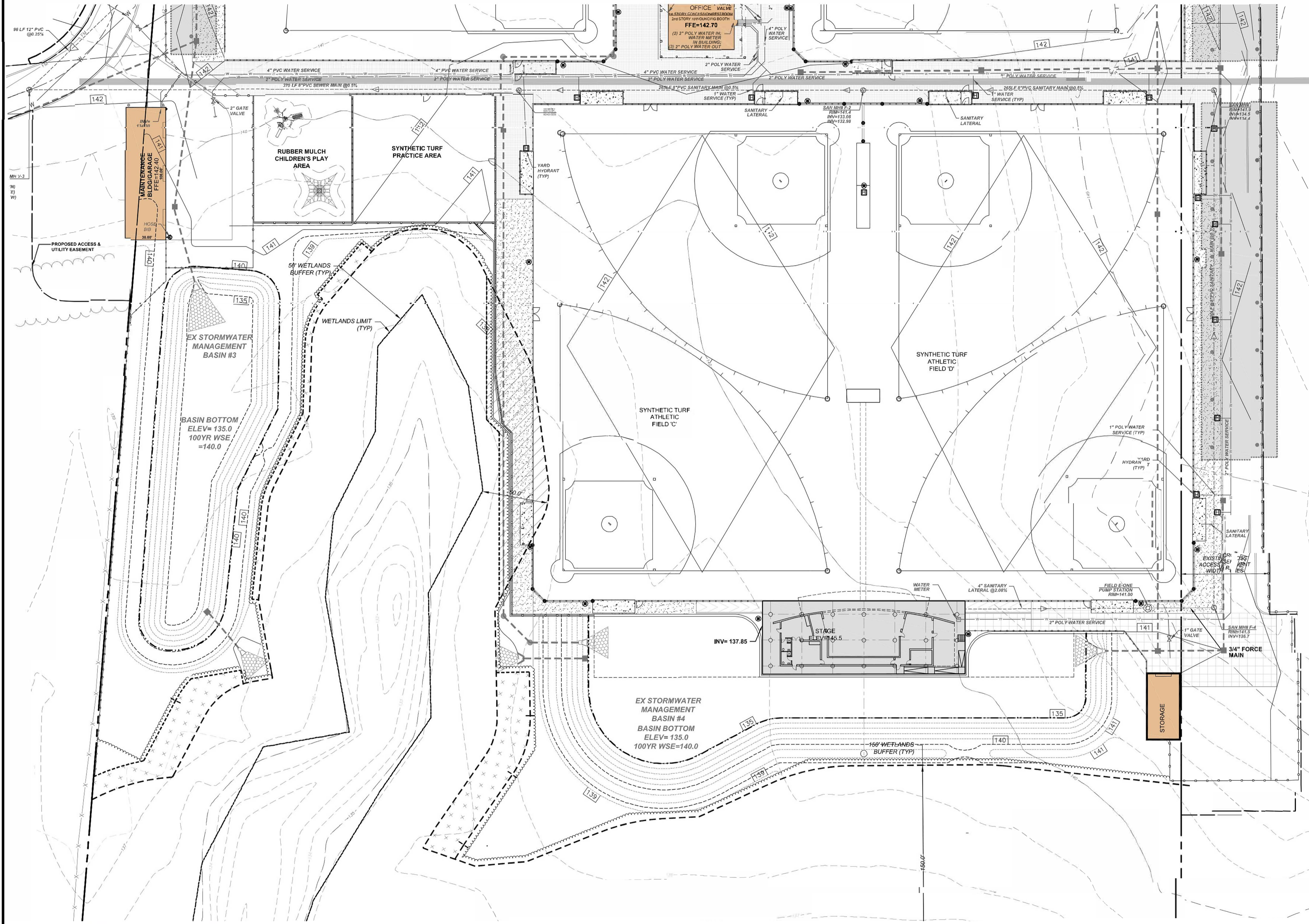


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MATCHLINE - SEE SHEET 23

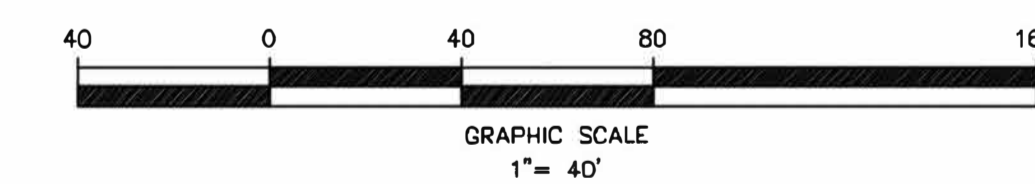


KEY MAP "F"
NO SCALE

UTILITY LEGEND

	EXISTING WATER LINE
	PROPOSED WATER LINE
	EXISTING WATER VALVE
	PROPOSED WATER VALVE
	EXISTING FIRE HYDRANT
	PROPOSED FIRE HYDRANT
	YARD HYDRANT
	EXISTING CORPORATION STOP
	PROPOSED CORPORATION STOP
	EXISTING WATER METER
	PROPOSED WATER METER
	EXISTING SANITARY FORCE MAIN
	PROPOSED SANITARY FORCE MAIN
	EXISTING SANITARY MAIN
	PROPOSED SANITARY MAIN
	EXISTING SANITARY LATERAL
	PROPOSED SANITARY LATERAL
	EXISTING SANITARY MANHOLE
	PROPOSED SANITARY MANHOLE
	EXISTING SANITARY CLEANOUT
	PROPOSED SANITARY CLEAN-OUT

- UTILITY NOTES**
1. ALL JOINTS AND FITTINGS SHALL BE RESTRAINED IN ACCORDANCE WITH THE JTMUA JOINT RESTRAINT SCHEDULE. SEE DETAILS.
 2. FIELD YARD HYDRANTS ARE FOR MAINTENANCE PURPOSES ONLY TO PERIODICALLY CLEAN.
 3. ALL EXISTING SEWER & WATER CONSTRUCTED IS SUBJECT TO VERIFICATION BY AS-BUILT SURVEY.



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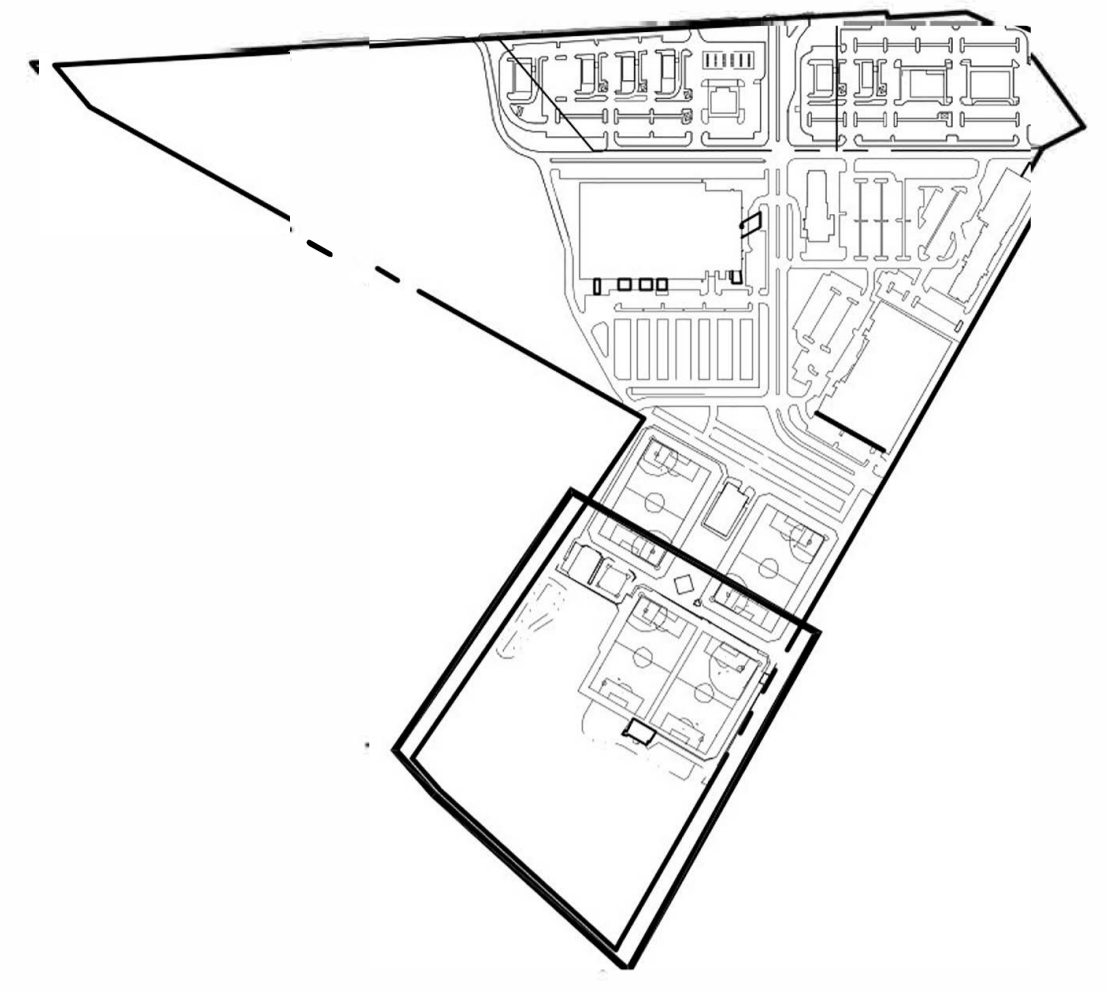
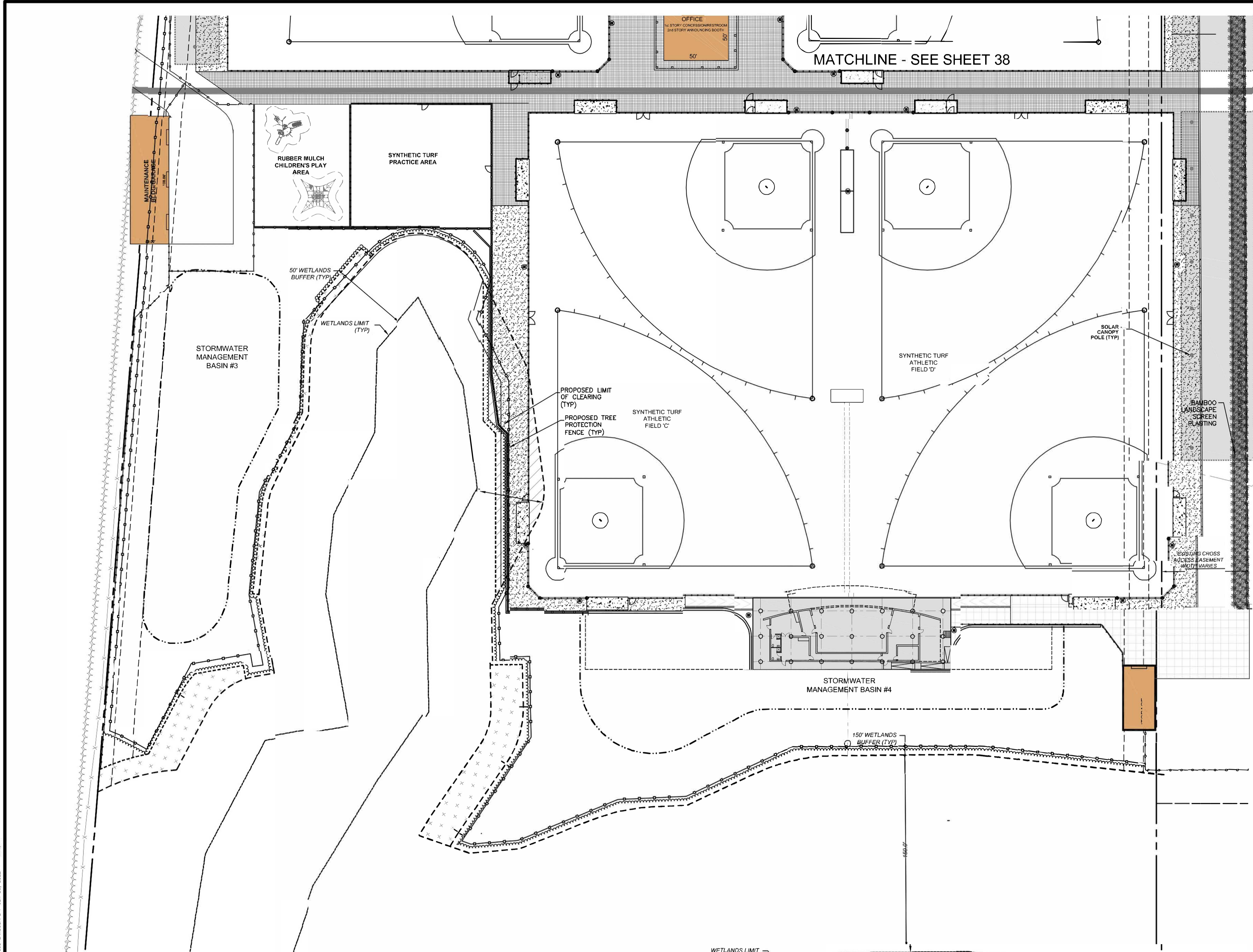
NO.	DATE	DESCRIPTION	BY
12	12/09/2021	AMENDED PROJECT	KNL
11	11/18/2021	REVISED WATER AS PER NJDEP	KNL
10	10/19/2021	REVISED WATER METER LOCATION	KNL
9	06/29/2021	GENERAL REVISIONS	KNL
8	03/22/2021	REVISED PER TRC	KNL



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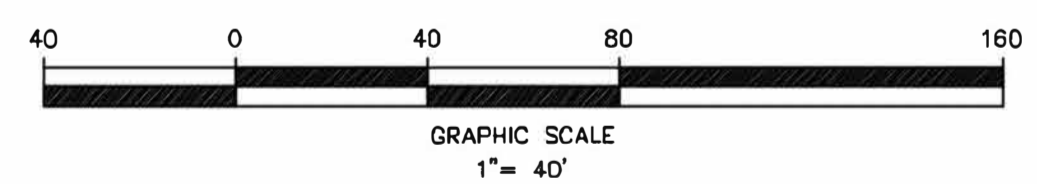
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KEY MAP F
NO SCALE

LEGEND

- SHADE TREE
- ORNAMENTAL TREE
- EVERGREEN
- SHRUB
- BAMBOO SCREEN
- EXISTING TREE
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- TREE CLEARING LIMIT
- TREE PROTECTION FENCE
- PLANT KEY
- PLANT QUANTITY



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