
EXISTING SEWER. DURING FLUSHING WATER WILL BE PUMPED FROM THE SEWER SYSTEM TO AN ACCEPTABLE DISCHARGE LOCATION. A VISUAL INSPECTION SHALL BE MADE AND ALL OBSTRUCTIONS REMOVED. THE CONTRACTOR SHALL NOTIFY THE

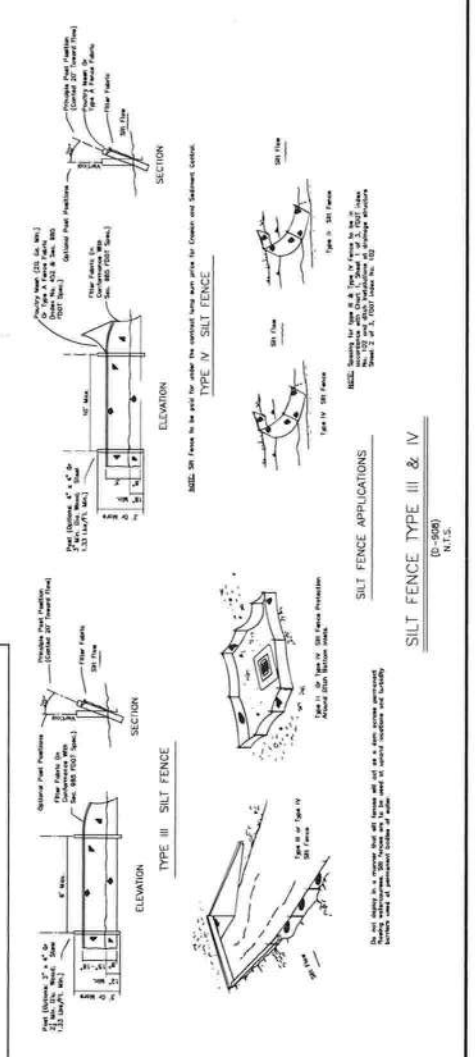
MADE AND ALL OBSTRUCTIONS REMOVED. THE CONTRACTOR SHALL NOTIFY THE

10. ALL PIPE, PIPE FITTINGS, PIPE JOINT PACKING AND JOINTING MATERIALS, VALVES, FIRE HYDRANTS, AND METERS INSTALLED UNDER THIS PROJECT SHALL CONFORM TO APPLICABLE AMERICAN WATER WORKS ASSOCIATION (AWWA) STANDARDS.

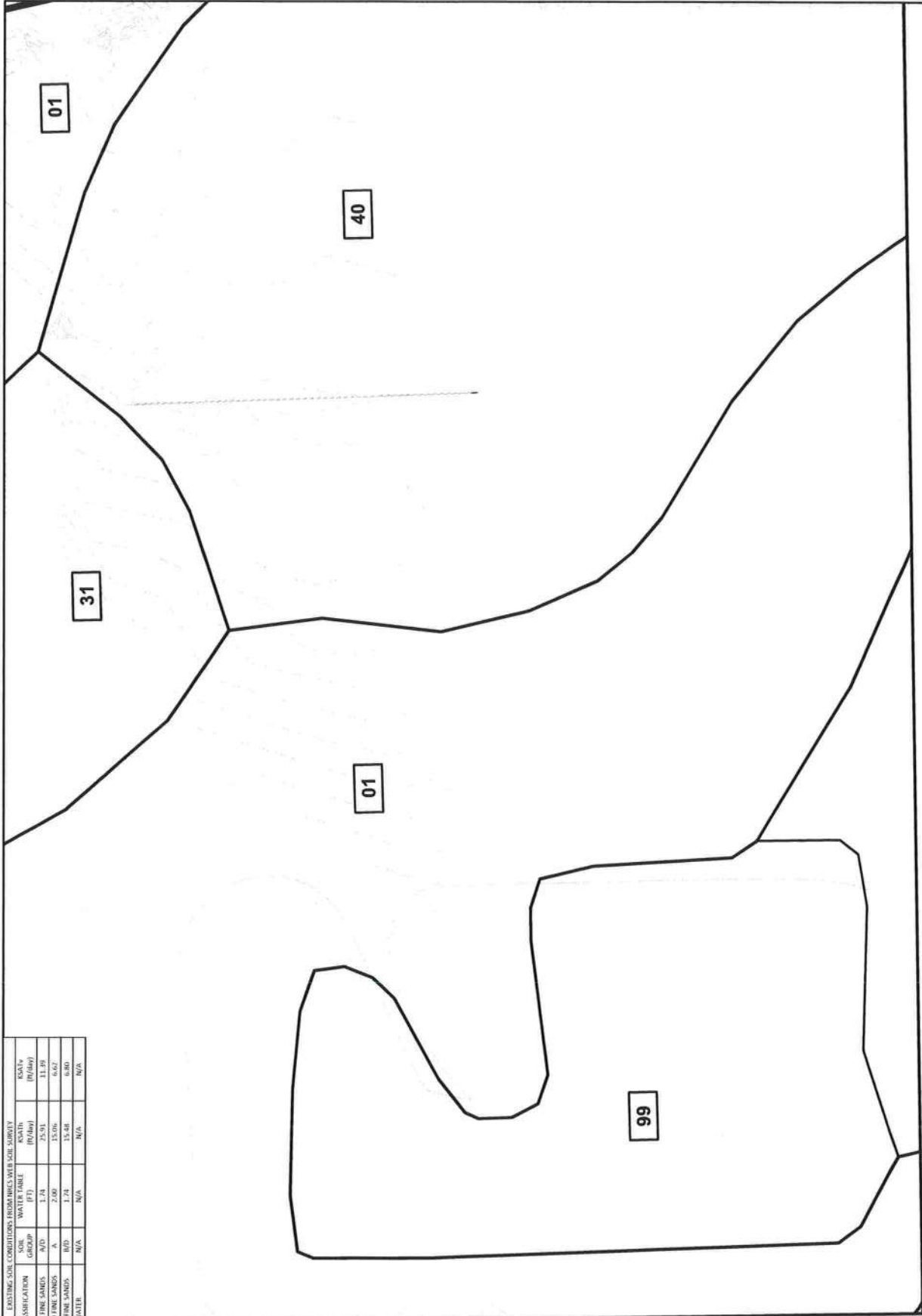
APPLICABLE INSUFFICIENT WATER FUNDATION (WATER) STANDARD(S).

LONG-TERM VEGETATION AND QUICK GROWING SHORT-TERM VEGETATION FOR FOLLOWING CONDITIONS. FOR THE MONTHS FROM SEPTEMBER THROUGH MARCH MIX SHALL CONSIST OF 70 POUNDS PER ACRE OF LONG-TERM SEED AND 20 POUNDS

Project: 20220220426CPA_HCADOU220426CPA_gen V010 GENERAL NOTES



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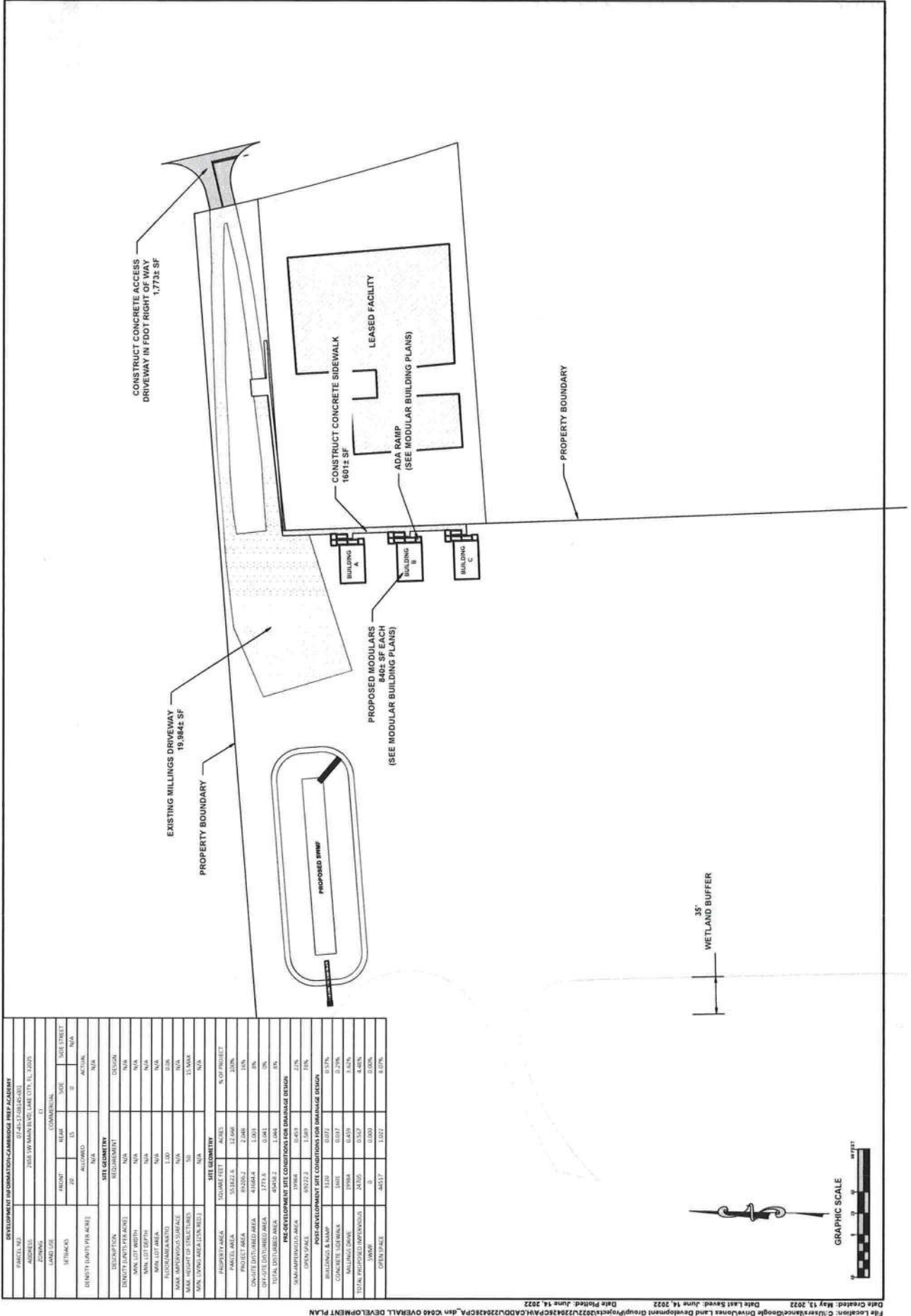
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			AR CIBONGSOD
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ANDRINA NORRASE			ELEVO 09/1975

CAMBRIDGE PREP ACADEMY
EXISTING CONDITIONS
COLUMBIA COUNTY, FL

JONES

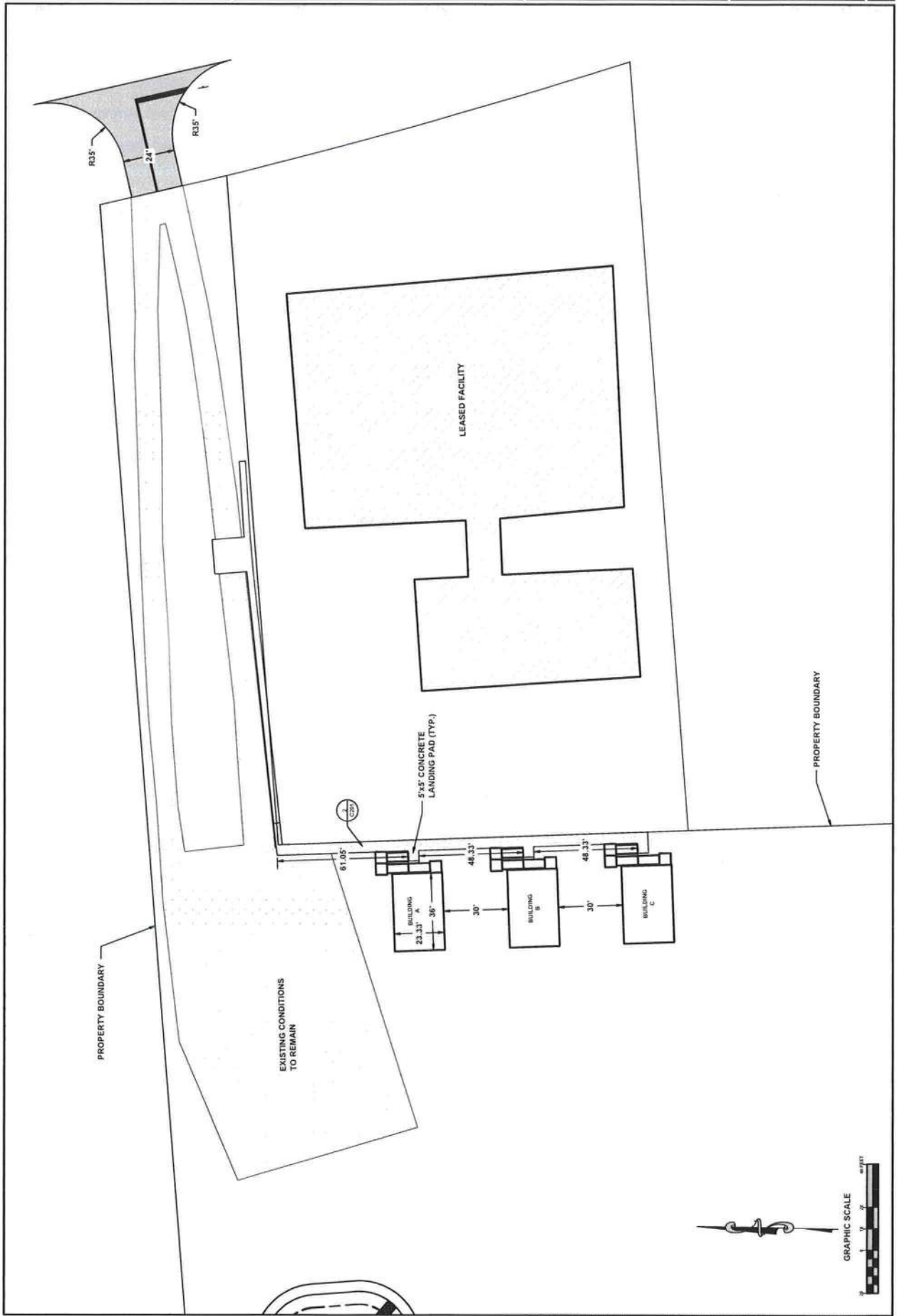
ENGINEERING & CONSULTING, LLC

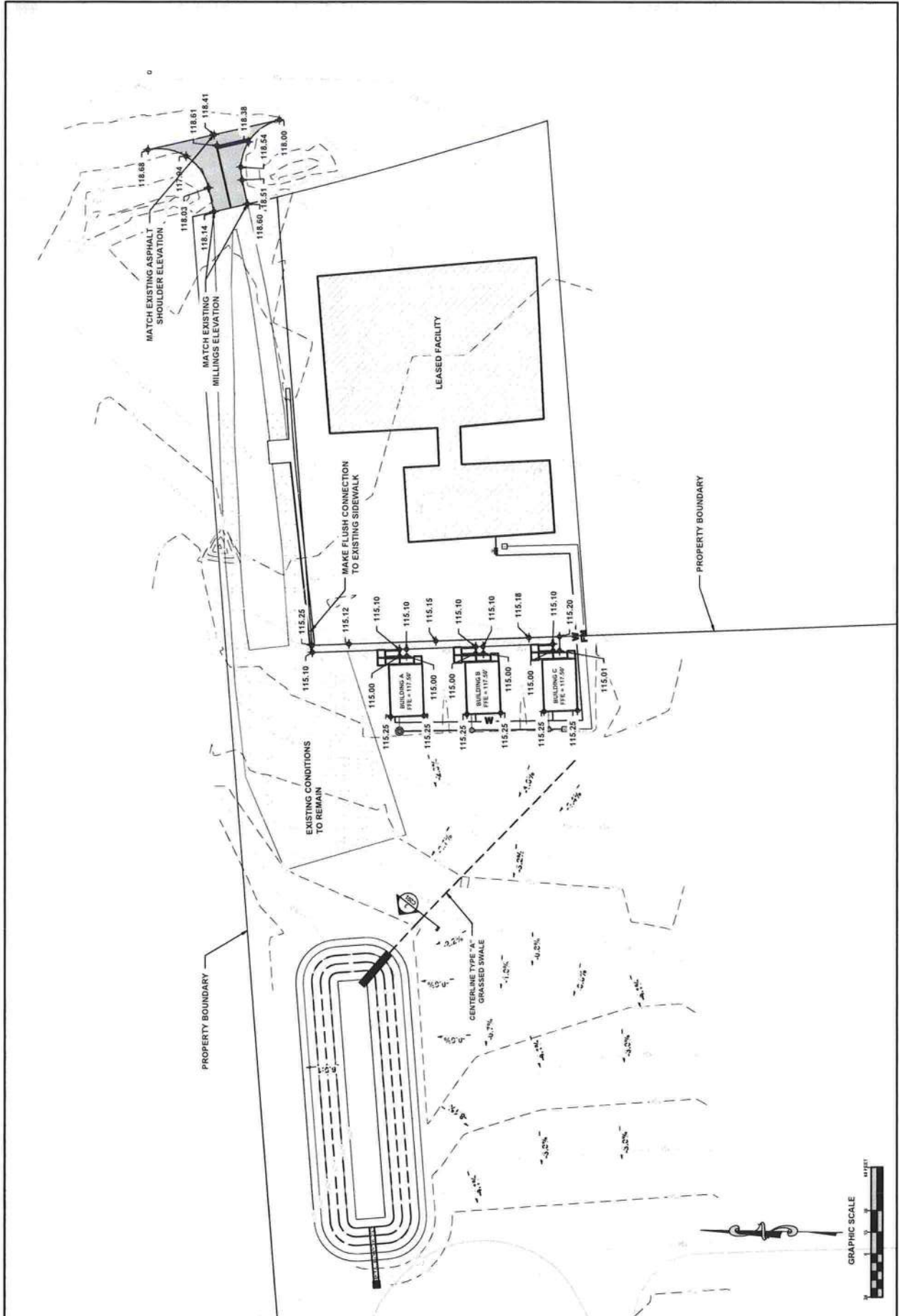
4605 EAST HWY 90 LAKE CITY, FL 32025
PHONE: 386.955.9000 FAX: 386.955.9001



REVISION	DATE	DESCRIPTION
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2	06/14/2022	ISSUED FOR PERMIT
3	06/14/2022	ISSUED FOR PERMIT
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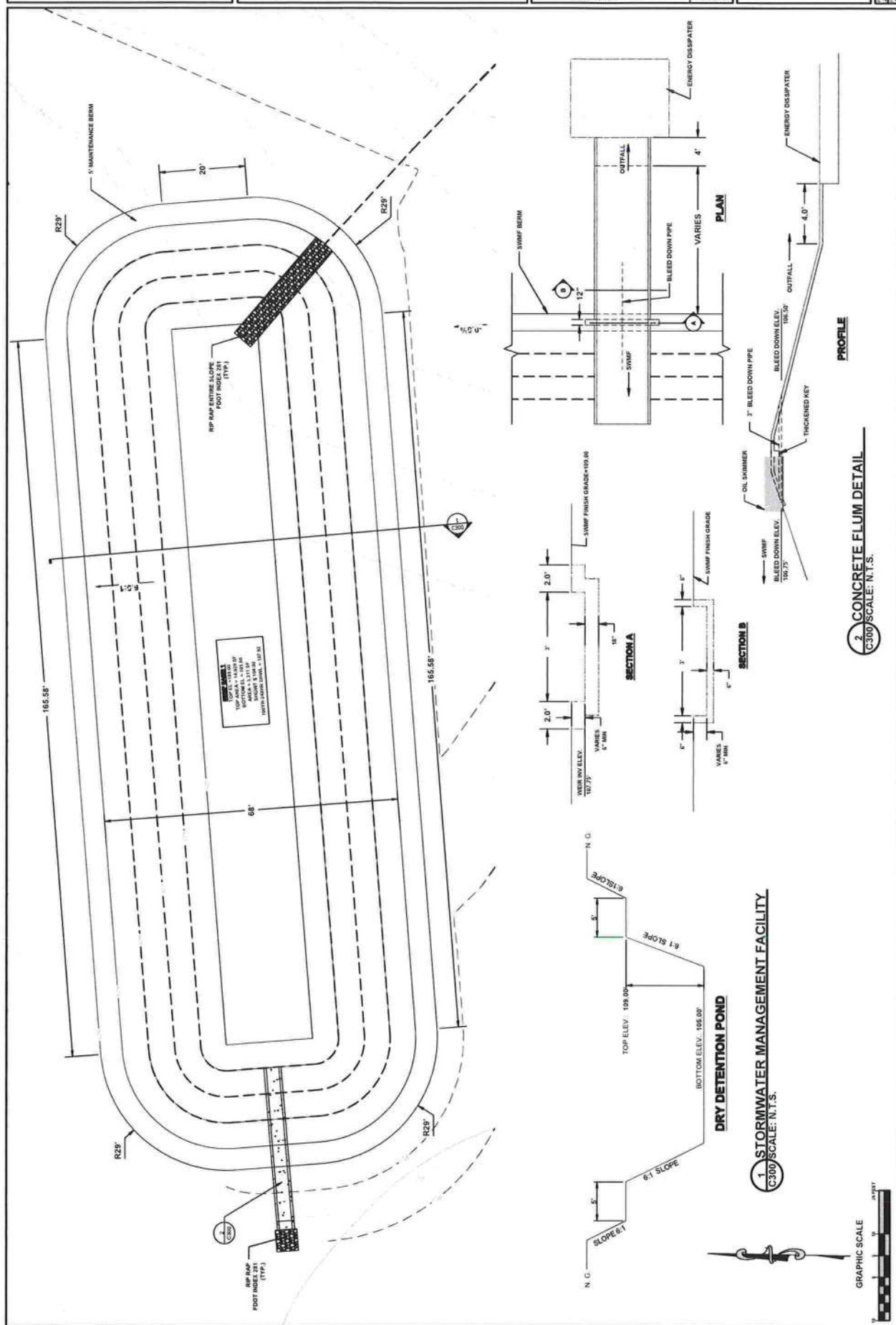
PROJECT NO.	22022-001
DATE	06/14/2022
SCALE	C100
PROJECT NAME	CAMBRIDGE PREP ACADEMY
LOCATION	COLUMBIA COUNTY, FL



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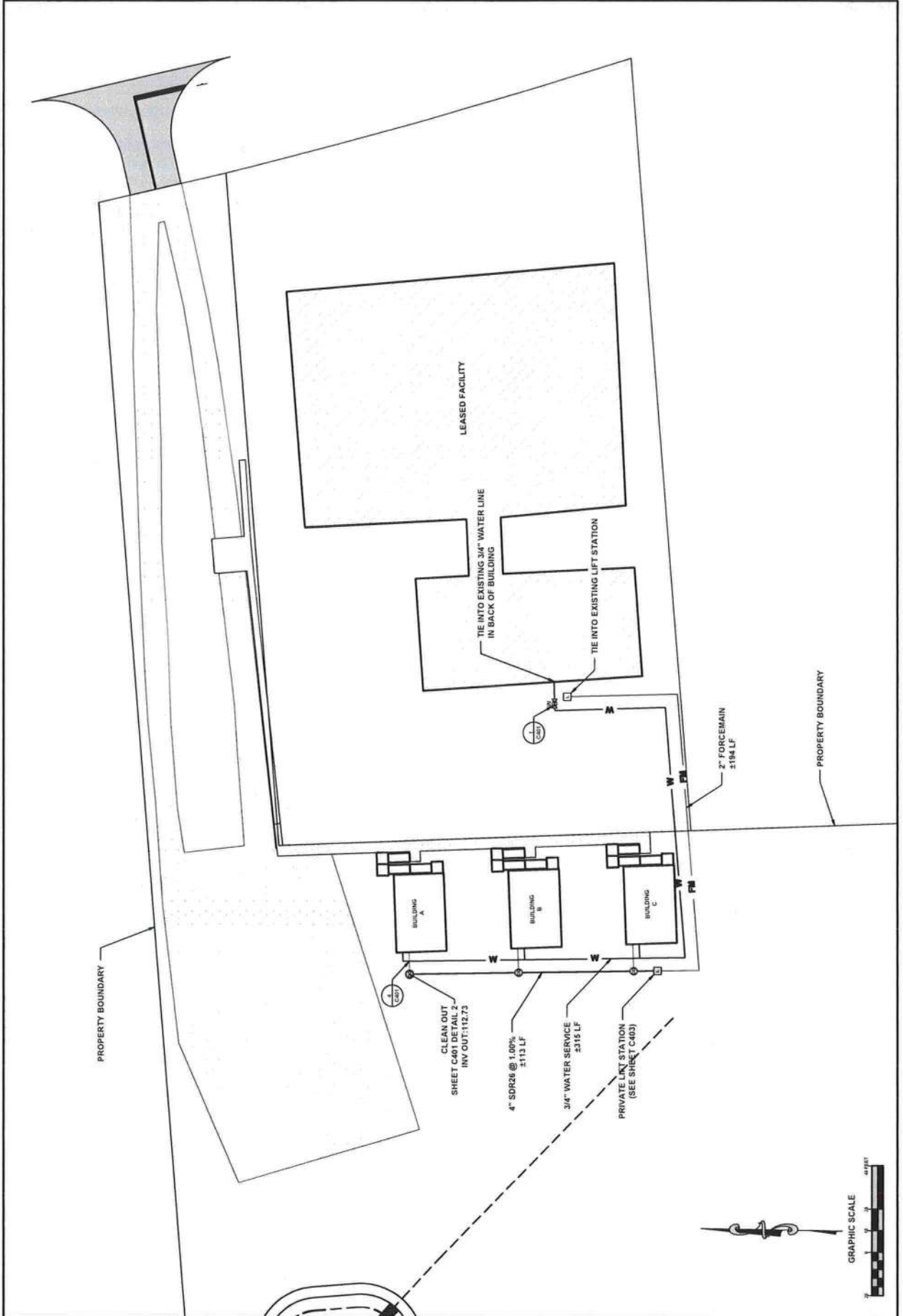
2 TYPICAL SIDEWALK SECTION
C201 SCALE: N.T.S.

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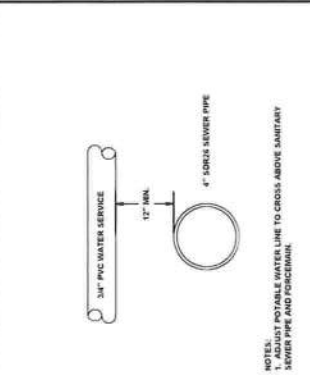
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11/15/2022	SCALE
11/15/2022	PROJECT
11/15/2022	SHEET
11/15/2022	OF

PROJECT NO.	2204000000
SHEET NO.	C406
DATE	11/15/2022
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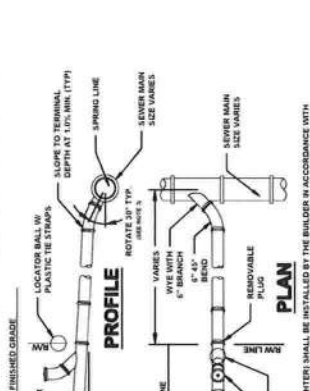


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CHECKED BY	NO.	DATE	
APPROVED BY	NO.	DATE	
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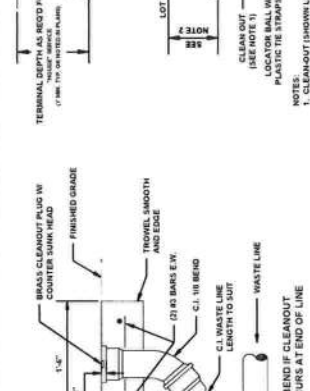
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PROJECT LOCATION	NO.	DATE	
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PROJECT APPROVED BY	NO.	DATE	



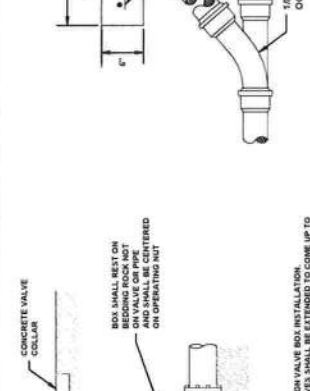
1 VALVE & BOX DETAIL
C407 SCALE: N.T.S.



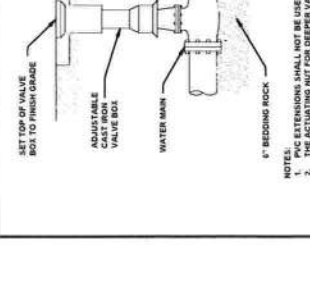
2 CLEAN OUT DETAIL
C407 SCALE: N.T.S.



3 SANITARY SEWER SERVICE LATERAL
C407 SCALE: N.T.S.



4 TRENCH & BACKFILL DETAIL
C407 SCALE: N.T.S.



5 WATER/SEWER SEPARATION DETAIL
C407 SCALE: N.T.S.

6 PIPE CONFLICT DETAIL
C407 SCALE: N.T.S.

LENGTH (L) TO BE RESTRAINED

REDUCERS		TEES (NOTE 5)	
SIZE	L (FT.)	RUN SIZE	BRANCH SIZE
6X4	35	4"	4"
8X6	35	6"	4"
8X4	35	6"	6"
10X8	35	8"	4" < LESS
10X6	35	8"	6"
12X10	35	10"	8"
12X10	35	10"	10"
14	16X12	14	8"
16X10	35	16"	6" < LESS
20X18	35	12"	12"
20X16	35	10"	10"
20X12	35	8"	8" < LESS
24X20	65	16"	16"
24X18	95	12"	12"
24X16	120	10"	10" < LESS
30X24	80	20"	20"
30X20	150	12"	12" < LESS
30X30	80	24"	24"
36X24	150	24"	20"
42X36	80	12"	12" < LESS
42X30	150	30"	30"
48X42	80	30"	24"
48X36	150	24"	20"
48X30	150	16"	16" < LESS
48X24	150	12"	12" < LESS
48X18	150	10"	10" < LESS
48X16	150	8"	8" < LESS
48X12	150	6"	6" < LESS
48X10	150	4"	4" < LESS
48X8	150	3"	3" < LESS
48X6	150	2"	2" < LESS
48X4	150	1"	1" < LESS
48X3	150	1"	1" < LESS
48X2	150	1"	1" < LESS
48X1	150	1"	1" < LESS

REDUCERS		TEES (NOTE 5)	
SIZE	L (FT.)	RUN SIZE	BRANCH SIZE
6X4	35	4"	4"
8X6	35	6"	4"
8X4	35	6"	6"
10X8	35	8"	4" < LESS
10X6	35	8"	6"
12X10	35	10"	8"
12X10	35	10"	10"
14	16X12	14	8"
16X10	35	16"	6" < LESS
20X18	35	12"	12"
20X16	35	10"	10"
20X12	35	8"	8" < LESS
24X20	65	16"	16"
24X18	95	12"	12"
24X16	120	10"	10" < LESS
30X24	80	20"	20"
30X20	150	12"	12" < LESS
30X30	80	24"	24"
36X24	150	24"	20"
42X36	80	12"	12" < LESS
42X30	150	30"	30"
48X42	80	30"	24"
48X36	150	24"	20"
48X30	150	16"	16" < LESS
48X24	150	12"	12" < LESS
48X18	150	10"	10" < LESS
48X16	150	8"	8" < LESS
48X12	150	6"	6" < LESS
48X10	150	4"	4" < LESS
48X8	150	3"	3" < LESS
48X6	150	2"	2" < LESS
48X4	150	1"	1" < LESS
48X3	150	1"	1" < LESS
48X2	150	1"	1" < LESS
48X1	150	1"	1" < LESS

NOMINAL PIPE SIZE (IN.)	HORIZONTAL BENDS				VERTICAL OFFSETS		VALVES OR DEAD-ENDS	
	90° BENDS L (FT.)	45° BENDS L (FT.)	22.5° BENDS L (FT.)	11.25° BENDS L (FT.)	45° BENDS (SEE NOTE 4)	BRANCH SIZE	L	
4	20	8	4	2	20	3	50	
6	28	10	5	2	28	4	70	
8	36	14	6	3	36	5	90	
10	40	18	8	4	45	6	110	
12	50	20	9	4	52	8	120	
14	56	23	10	5	60	9	140	
16	60	26	11	6	67	10	160	
18	69	29	12	6	74	12	180	
20	75	32	13	7	80	13	195	
24	76	33	15	7	81	14	200	
30	88	36	18	9	97	16	235	
36	100	40	20	10	110	20	270	
42	115	48	23	11	125	24	300	
48	125	52	25	12	140	30	340	

PVC PIPE RESTRAINT NOTES:

- THIS SCHEDULE SHALL BE UTILIZED ON ALL WATER, SEWER FORCE MAIN OR RAINWATER LINES. ALL RESTRAINTS SHALL BE INSTALLED IN ACCORDANCE WITH THE SCHEDULE INDICATED ON THE ABOVE SCHEDULE AT A MINIMUM, UNLESS OTHERWISE INDICATED. ALL REQUIRED RESTRAINTS SHALL BE INCLUDED IN PRICE OF FITTING, VALVE OR PIPE.
- ASSUMPTIONS: PVC PIPE, SAFETY FACTOR = 1.5, TEST PRESSURE = 160 P.S.I., SOIL = GM OR SIA, TRENCH TYPE 3, DEPTH OF COVER = 30 INCHES FOR 20" AND SMALLER PIPE SIZE OR 38 INCHES FOR 24" AND LARGER PIPE SIZE.
- BENDS AND VALVES: SHALL BE RESTRAINED ON EACH SIDE OF FITTING.
- VERTICAL OFFSETS: ARE APPROX. 3 FEET COVER ON TOP AND APPROX. 8 FEET COVER ON BOTTOM. PER THE DETAILS, L₄ IS THE RESTRAINED LENGTH FOR THE UPPER (TOP) LEVEL, L₁ IS THE RESTRAINED LENGTH FOR THE LOWER (DEEPER) LEVEL. ASSUME 45 DEGREE BENDS.
- TEES: TOTAL LENGTH BETWEEN FIRST JOINTS OR RESTRAINED LENGTH ON EITHER SIDE OF TEE (RUN) SHALL BE A TOTAL DISTANCE OF 30 FEET (MIN). SEE SCHEDULE ABOVE FOR RESTRAINT LENGTH ON TEE "BRANCH" LINE.
- HOPE TO PVC TRANSITION: THE PVC PIPE SIDE SHALL BE RESTRAINED 35 FT (MIN).
- THE INSTALLATION OF BELL HARNESS RESTRAINTS AT PVC JOINTS (DR & JS PIPE) SHALL BE COMPLETED PER THE MANUFACTURERS RECOMMENDATIONS. THE HARNESS SHALL BE COMPLETED PER THE MANUFACTURERS RECOMMENDATIONS. INCLUDES NOT OVER TIGHTENING THE PARALLEL RODS/NUTS. THESE NUTS SHOULD ONLY BE SNUG TIGHT. THE HOME MARKS ON THE PIPE SHOULD ALWAYS BE VISIBLE AFTER THE RESTRAINT IS INSTALLED. OVERTIGHTING THE JOINT MAY CAUSE A FAILURE AT THE BELL, RESULTING IN A SERVICE OUTAGE.

PVC PIPE RESTRAINT NOTES:

1. THIS SCHEDULE SHALL BE UTILIZED ON ALL WATER, SEWER FORCE MAIN OR REGULAR WATER SYSTEMS. ALL FITTINGS SHALL BE RESTRAINED TO LENGTHS INDICATED ON THE ABOVE SCHEDULE. AT A MINIMUM, ALLOW OTHERWISE INDICATED, ALL REQUIRED RESTRAINTS SHALL BE INCLUDED IN PRICE OF FITTING, VALVE OR PIPE.
2. ASSUMPTIONS: PVC PIPE, SAFETY FACTOR = 1.5, TEST PRESSURE = 16 PSI, SOIL = GM OR SM, TRENCH TYPE, 1' DEPTH OF COVER = 30" INCHES FOR 20" AND SMALLER PIPE SIZE OR 30 INCHES FOR 24" AND LARGER PIPE SIZE.
3. BENDS AND VALVES: SHALL BE RESTRAINED ON EACH SIDE OF FITTING.
4. VERTICAL OFFSETS: ARE APPROX. 3 FEET COVER ON TOP AND APPROX. 8 FEET COVER ON BOTTOM. PER THE DETAILS, L/1 IS THE RESTRAINED LENGTH FOR THE UPPER JOINT AND L/2 IS THE RESTRAINED LENGTH FOR THE LOWER (DEEPER) LEVEL. ASSUME 45 DEGREE BENDS.
5. TEES: TOTAL LENGTH BETWEEN FIRST JOINTS OR RESTRAINED LENGTH ON EITHER SIDE OF TEE (RUN) SHALL BE A TOTAL DISTANCE OF 30 FEET (MIN). SEE SCHEDULE ABOVE FOR RESTRAINT LENGTH ON TEE "BRANCH" LINE.
6. HOPE TO PVC TRANSITION: THE PVC PIPE SIDE SHALL BE RESTRAINED 35 FT (MIN).
7. THE INSTALLATION OF BELL HARNESS RESTRAINTS AT PVC JOINTS (DR-18 & 25 PIPE) SHALL BE COMPLETED PER THE MANUFACTURERS RECOMMENDATION, WHICH INCLUDES NOT OVER TIGHTENING THE PARALLEL RODS/NUTS. THESE NUTS SHOULD BE TIGHTENED TO THE POINT WHERE THE PIPE SHOULD ALWAYS BE VISIBLE AFTER THE RESTRAINT IS INSTALLED. OVER TIGHTENING THE JOINT MAY CAUSE A FAILURE AT THE BELL RESULTING IN A SERVICE OUTAGE.

2 PVC PIPE RESTRAINT JOINT SCHEDULE
C402/SCALE: N.T.S.



THRUST BLOCK FOR BENDS

SIZE	90° BEND			SQ. FT. BEARING SURFACE			45° BEND			SQ. FT. BEARING SURFACE			22 1/2° BEND			SQ. FT. BEARING SURFACE			11 1/4° BEND			SQ. FT. BEARING SURFACE		
	A	C	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
4"	16"	16"	18"	1.78	14"	16"	18	1.56	14"	16"	18"	1.56	14"	16"	18"	1.56	14	16"	18"	1.56	14	16"	18"	1.56
6"	22"	32"	18"	4.89	16"	18"	18	2.00	14"	16"	18"	1.56	14	16"	18"	1.56	14	16"	18"	1.56	14	16"	18"	1.56
8"	32"	36"	18"	8.00	24"	28"	18	4.67	16"	18"	18"	2.00	14	16"	18"	1.56	14	16"	18"	1.56	14	16"	18"	1.56
10"	36"	48"	18"	11.50	28"	36"	18	6.50	20"	24"	18"	3.33	14	18"	18"	1.75	14	18"	18"	1.75	14	18"	18"	1.75
12"	44"	56"	24"	17.11	32"	40"	24	8.89	24"	30"	24"	5.00	16	20"	24	2.22	16	20"	24	2.22	16	20"	24	2.22
14"	52"	62"	24"	22.39	36"	48"	24	12.00	26"	36"	24"	6.50	20	24"	24	3.33	20	24"	24	3.33	20	24"	24	3.33
16"	58"	72"	24"	29.00	40"	54"	24	15.00	32"	38"	24"	8.44	22	26"	24	3.97	22	26"	24	3.97	22	26"	24	3.97
18"	64"	80"	24"	35.56	46"	60"	24	19.17	36"	42"	24"	10.50	24	32"	24	5.33	24	32"	24	5.33	24	32"	24	5.33
20"	72"	88"	24"	44.00	52"	66"	24	23.83	38"	48"	24"	12.67	26	36"	24	6.50	26	36"	24	6.50	26	36"	24	6.50
24"	96"	96"	24"	63.78	64"	76"	24	34.67	46"	56"	24"	17.89	32	40"	24	8.89	32	40"	24	8.89	32	40"	24	8.89
30"	122"	102"	24"	86.11	72"	94"	24	47.00	56"	62"	24"	24.11	36	48"	24	12.00	36	48"	24	12.00	36	48"	24	12.00
36"	166"	104"	24"	123.33	88"	108	24	86.00	64"	78"	24"	34.67	44	54"	24	16.50	44	54"	24	16.50	44	54"	24	16.50

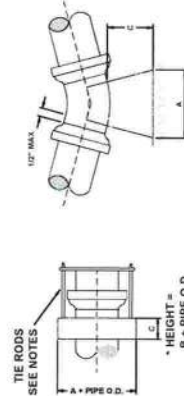
**THRUST BLOCK
FOR TEES & PLUGS**

SIZE	TEE			SQ. FT. BEARING
	A	B	C	
4"	16"	16"	18"	1.78
6"	20"	24"	18"	3.33
8"	26"	32"	18"	5.78
10"	32"	40"	18"	8.89
12"	38"	48"	24"	12.00
14"	40"	56"	24"	15.56
16"	48"	60"	24"	20.00
18"	58"	64"	24"	14.89
20"	60"	76"	24"	31.67
24"	72"	90"	24"	45.00
30"	86"	102"	24"	60.67
36"	116"	108"	24"	86.11

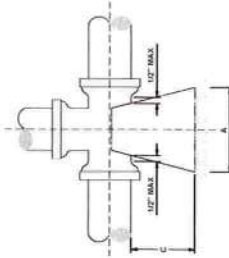
NOTES:

1. ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED SOIL.
2. THESE TABLES SHOW MINIMUM SIZES FOR THRUST BLOCKS IN GOOD SOIL (A-1 THRU A-3, CLEAN SANDS AND GRAVELS) WITH MINIMUM BEARING CAPACITY OF 2000 PSI.
3. POOR SOILS (A-4 THRU A-6, SILTY SOILS, CLAYS, MUCK, AND PEAT) WILL REQUIRE LARGER THRUST BLOCKING.
4. BOTH CONCRETE THRUST BLOCKS AND THE RODS MUST BE USED WHEN, IN THE JUDGEMENT OF THE ENGINEER, THE NATURE AND CRITICALITY OF AN INSTALLATION IS SUCH AS TO REQUIRE POSITIVE ASSURANCE OF STABILITY.
5. THE USE OF THRUST BLOCKS SHALL BE LIMITED TO SITUATIONS SUCH AS POINT REPAIR WHERE EXPOSING SEVERAL JOINTS OF PIPE IS NOT FEASIBLE DUE TO EXISTING GROUND CONDITIONS.
6. CONCRETE COLLARS WITH THE RODS MAY BE USED ON DEAD END LINES AT THE CONTRACTOR'S DISCRETION. NUMBER OF THE RODS SHALL BE AS FOLLOWS:

3" - 8" DIAMETER MAIN	-- 2 THE RODS PER JOINT
10" - 12" DIAMETER MAIN	-- 4 THE RODS PER JOINT
14" - 20" DIAMETER MAIN	-- 6 THE RODS PER JOINT
24" - 36" DIAMETER MAIN	-- 8 THE RODS PER JOINT
42" - 48" DIAMETER MAIN	-- 10 THE RODS PER JOINT
7. MAXIMUM TEST PRESSURE TO BE 150 PSI.



1 THRUST BLOCK SIZE CHART
C402 SCALE: N.T.S.

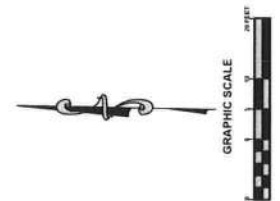
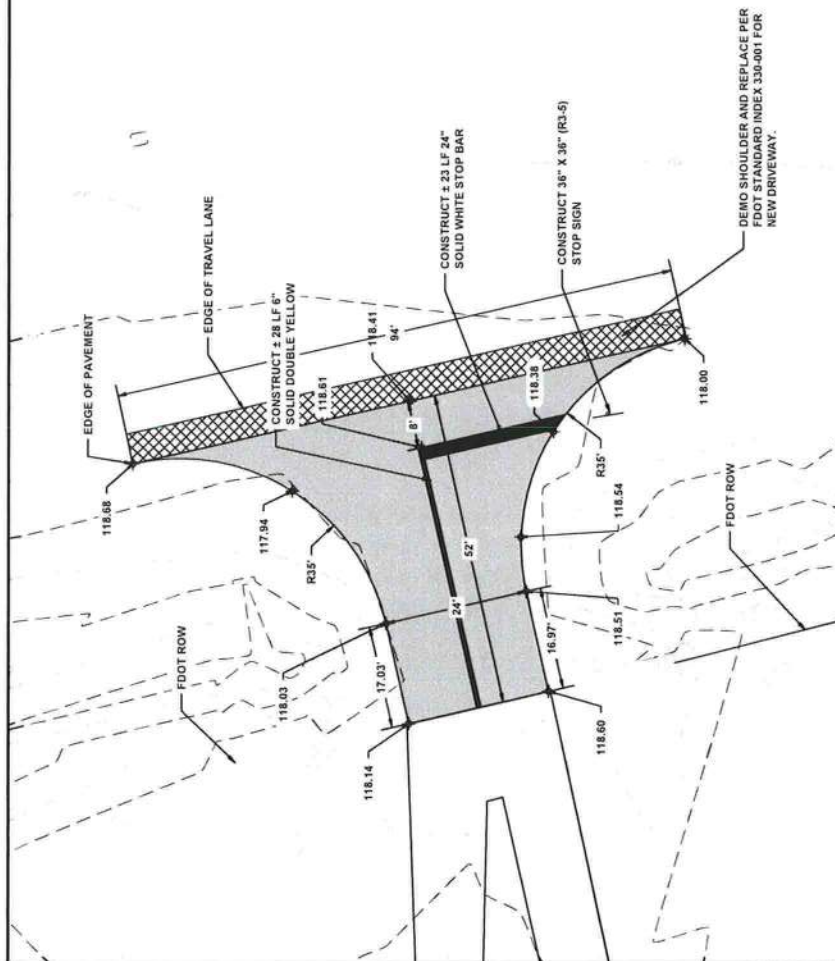


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FDOT CONNECTION NOTES:

1. CONSTRUCT DRIVEWAY PER FOOT STANDARD INDEX 330-001 FOR NEW DRIVEWAY.
2. MATCH EXISTING ELEVATIONS FOR EDGE OF TRAVEL LANE, EDGE OF PAVEMENT, AND MILLINGS DRIVEWAY.
3. THE EXISTING ASPHALT PAVED SHOULDER SHALL BE MECHANICALLY SAW CUT AND REMOVED AS WELL AS ALL PRE-EXISTING SUBGRADE MATERIALS WITHIN THE LIMITS OF THE PROJECT IMPROVEMENTS WORK ZONE OR AS MAY BE CALLED FOR UNDER THE STATE FOOT PERMIT.
4. ALL PERMITTED PAVEMENT STRIPING PERTAINING TO THIS ACCESS PERMIT SHALL ACQUIRE CERTIFIED LEAD FREE, THERMOPLASTIC MARKING MATERIALS AS THE FINAL PLACEMENT ITEM. TEMPORARY TRAFFIC BEARING SHALL BE REQUIRED TO BE IN PLACE 30 MINUTES BEFORE OFFICIAL SUNDOWN. BOTH TEMPORARY TRAFFIC BEARING PATNS AND THERMOPLASTIC MARKING MATERIALS SHALL BE LEAD FREE AND SHALL MEET/EXCEED FOOT MINIMUM SPECIFICATIONS FOR NIGHT REFLECTIVITY. TEMPORARY RPM'S SHALL BE INSTALLED DURING BOTH TEMPORARY AND PERMANENT STRIPING PHASES. REMOVAL OF EXISTING STRIPING SHALL BE HYDRO-BLASTED.
5. FAILURE BY THE PERMITTEE AND/OR HIS/HER CONTRACTOR TO HAVE A CERTIFIED STRIPING CREW ON SITE BEFORE THE START OF PAVING CAN BE REASON TO SUSPEND THE APPROVED PERMIT UNTIL SUCH TIME AS THE PERMITTEE AND/OR HIS/HER CONTRACTOR CORRECTS THE SITUATION TO THE SATISFACTION OF THE ON-SITE STATE FOOT PERMITS PERSONNEL/INSPECTOR.
6. FOR MAINTENANCE OF TRAFFIC PLAN REFER TO FOOT STANDARD PLANS 102-600, 102-601, 102-602, 102-603, AND 102-625.
7. 24 INCH STOP BARS TO BE PLACED AT ALL INTERSECTIONS IN ACCORDANCE WITH CURRENT EDITION FOOT DESIGN STANDARDS INDEX 17346.
8. THE PERMITTEE SHALL CONTACT THE FOOT PERMITS OFFICE A MINIMUM OF 48 HOURS IN ADVANCE OF THE PLANNED CONNECTION.



MISSION HISTORY		NO.	DATE	DESCRIPTION	1	2	3
				RECEIVED BY			
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	PROJECT AND FUNDING AGENCY DATE CHRISTOPHER S. JONES PALM BEACH 04/01/2002	
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