

Reviewer	Agency	Date
Walker, James J	Fire Reviewer	08/29/2024
Smith, Keri A	ERM Reviewer	09/30/2024
ePZB Approval Data		

B-2023-049030-0000



**C&S**  
COMPANIES

C&S Engineers, Inc.  
605 E. Robinson Street, Suite 210  
Orlando, FL 32801  
Phone: 407-422-1118  
Fax: 407-841-9179  
FL L.B. No. 7513  
COA No. 7602  
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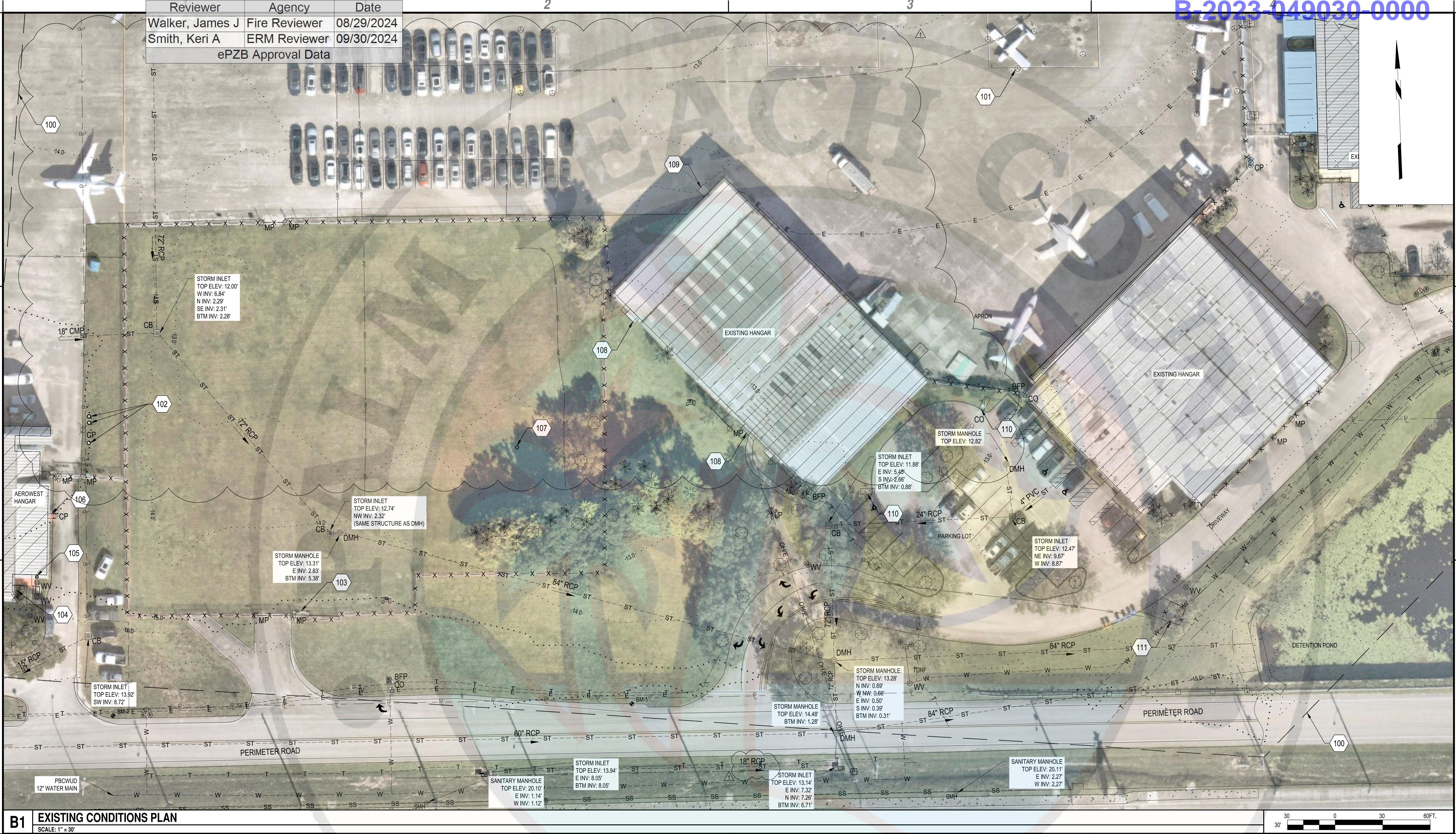


ATLANTIC AVIATION FLORIDA, INC.  
PBI HANGARS - PHASE 1

MARK	DATE	DESCRIPTION
Δ	05/17/24	REVISION
REVISIONS		
PROJECT NO: K98.002.001		
DATE: OCTOBER 2023		
DRAWN BY: M. MARCHEWKA		
DESIGNED BY: M. MARCHEWKA		
CHECKED BY: D.R. SAUNDERS		
CONTRACTOR SHALL VERIFY ALL CONDITIONS ON JOB SITE & NOTIFY THE OWNER OF ANY VARIATIONS FROM DIMENSIONS SHOWN ON THESE DRAWINGS BEFORE PROCEEDING WITH ANY CONSTRUCTION		

EXISTING  
CONDITIONS PLAN

VF101



**B1** EXISTING CONDITIONS PLAN  
SCALE: 1" = 30'

- 100. LIMIT OF TOPOGRAPHIC SURVEY (TYP.)
- 101. EXISTING AIRCRAFT TIE DOWN (TYP.)
- 102. 2.5" DIA PLASTIC LID FOR A/C CONDENSATION TANK
- 103. GATE CONTROLS
- 104. A/C PAD
- 105. POST INDICATOR
- 106. CONCRETE STAIRS
- 107. 3" METAL PIPE
- 108. AIR COMPRESSOR
- 109. PLASTIC BIN
- 110. MAILBOX
- 111. GARBAGE ENCLOSURE

**A1** KEYED NOTES  
SCALE: NOT TO SCALE

NOTES:  
1. SURVEY PERFORMED BY BROWN & PHILIPS, INC. APRIL 2023

**A3** SHEET NOTES  
SCALE: NOT TO SCALE

POINT TABLE				
POINT NO.	NORTHING	EASTING	ELEV.	DESCRIPTION
BM-1	853,103.00	950,407.95	15.22	BENCHMARK
BM-2	853,108.97	950,080.80	16.42	BENCHMARK

**A4** SURVEY CONTROL POINTS  
SCALE: NOT TO SCALE

July 24, 2024 - 10:28AM  
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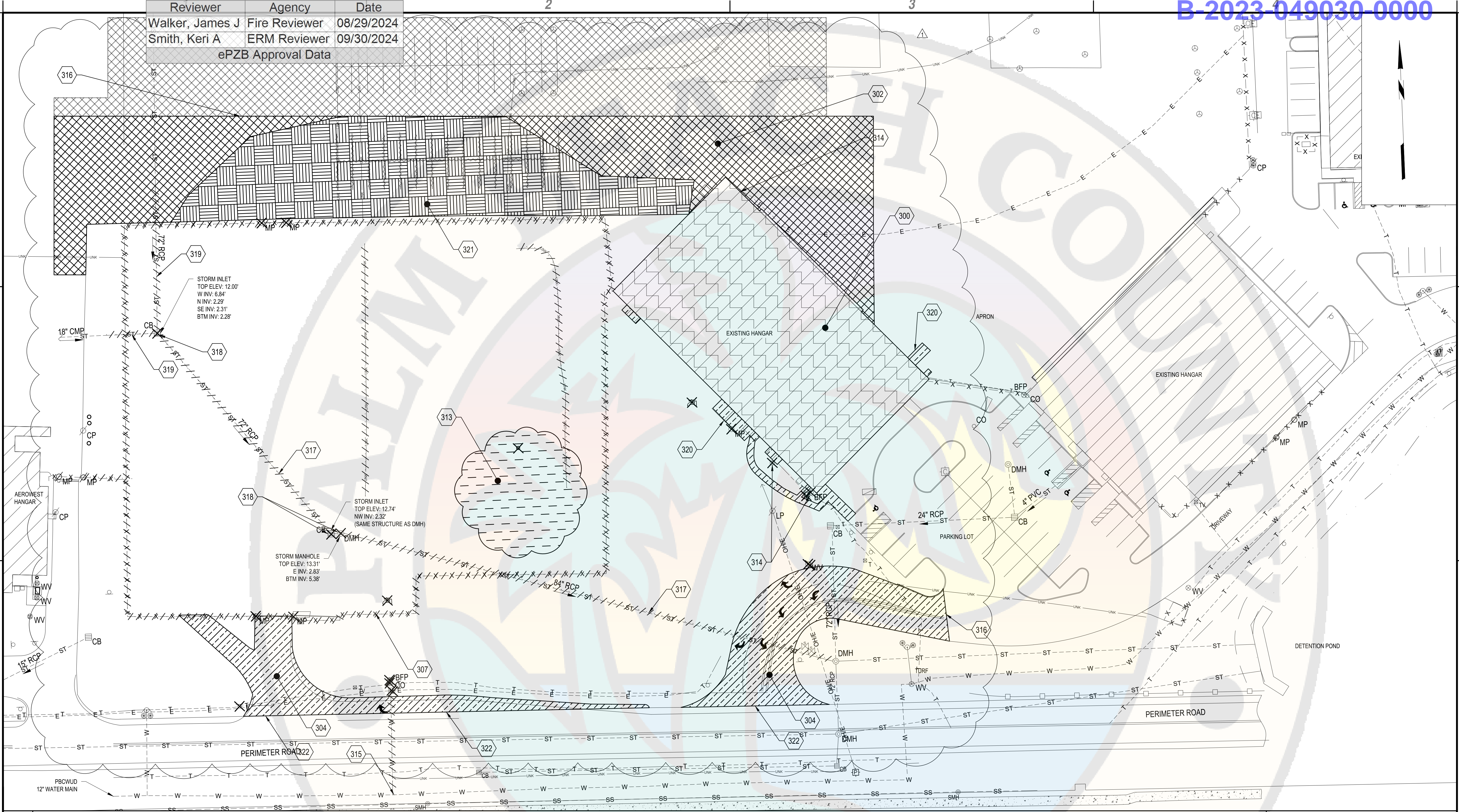
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PBI HANGARS - PHASE 1



**B1** DEMOLITION PLAN  
SCALE: 1" = 30'



300. REMOVE EXISTING HANGAR. CONTRACTOR TO FOLLOW SPECIFICATION 003123 FOR REMOVAL OF ASBESTOS CONTAINING MATERIAL

302. PROFILE MILL EXISTING ASPHALT TO 4" BELOW PROPOSED GRADE, ITEM P-101, SEE DEMOLITION SECTION A3/CD501

304. EXISTING PAVEMENT TO BE REMOVED FULL DEPTH, ITEM P-101, SEE DEMOLITION SECTION A3/CD501

307. LIMIT OF EXISTING FENCE REMOVAL, ITEM F-162

313. GEOTECHNICAL INVESTIGATION, ORGANIC SOIL WAS FOUND AT A DEPTH UP TO 6' BELOW EXISTING GRADE. ORGANIC SOIL LAYER REMOVAL IS REQUIRED WITHIN AND 5' OUTSIDE OF THE PROPOSED BUILDING AND PARKING LOT LAYOUT. A FIELD REVIEW BY THE GEOTECHNICAL ENGINEER WILL BE REQUIRED ONCE ORGANIC LAYERS ARE REMOVED.

314. DISCONNECT LINE FROM BUILDING

315. DISCONNECT LINE FROM WATER MAIN

316. REFER TO SHEET CS101 FOR LIMITS OF REMOVAL

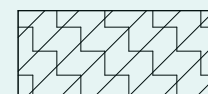
317. REMOVE EXISTING STORM LINE

318. REMOVE EXISTING STORM STRUCTURE
319. REMOVE SECTION OF STORM PIPE. REFER TO CK101 FOR TIE IN LOCATION WITH NEW STRUCTURE


320. REMOVE EXISTING CONCRETE SIDEWALK / PAD

321. REMOVE EXISTING ASPHALT PAVEMENT FULL DEPTH AND PARTIAL LIMEROCK BASE REMOVAL WHERE NECESSARY, REFER TO DETAIL A2/CD501. EXISTING LIMEROCK BASE TO REMAIN. (CORES WITHIN THIS AREA SHOWS ASPHALT RANGES FROM 5-14 INCHES)

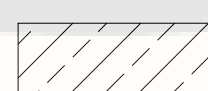
322. SAWCUT PAVEMENT FULL DETPH PRIOR TO REMOVAL

- 

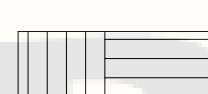
HANGAR BUILDING DEMOLITION




PROFILE MILL ASPHALT PAVEMENT 4" BELOW PROPOSED GRADE




FULL DEPTH PAVEMENT REMOVAL



PARTIAL DEPTH PAVEMENT DEPTH REMOVAL



ORGANIC SOIL REMOVAL



PROFILE MILL ASPHALT PAVEMENT 4" BELOW PROPOSED GRADE

- NOTES:**
- PAVEMENTS UNDER EXISTING HANGARS SHALL BE REMOVED
  - DISCONNECT ALL UTILITIES TO EXISTING HANGAR TO BE REMOVED. CONTRACTOR TO COORDINATE WITH FACILITY MANAGER, AIRPORT MAINTENANCE TEAM AND UTILITY PROVIDERS FOR REQUIREMENTS TO DISCONNECT UTILITIES FROM THE EXISTING HAGAR TO BE REMOVED.
  - REFER TO SHEETS LS101 AND LS501 FOR TREE DISPOSITION PLAN AND DISPOSITION TABLE
  - CONTRACTOR TO FIELD VERIFY UNKNOWN UTILITIES WHEN ENCOUNTERED AND DISCUSS NECESSARY DEMOLITION OR DISCONNECT WITH ENGINEER/ CLIENT/ AIRPORT

**A1** KEYED NOTES  
SCALE: NOT TO SCALE

**A2** LEGEND  
SCALE: NOT TO SCALE

**A4** SHEET NOTES  
SCALE: NOT TO SCALE

**DEMOLITION PLAN**

CD101

July 23, 2023 - 10:15AM  
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PALM BEACH FLORIDA

ATLANTIC AVIATION FLORIDA, INC.

PBI HANGARS - PHASE 1

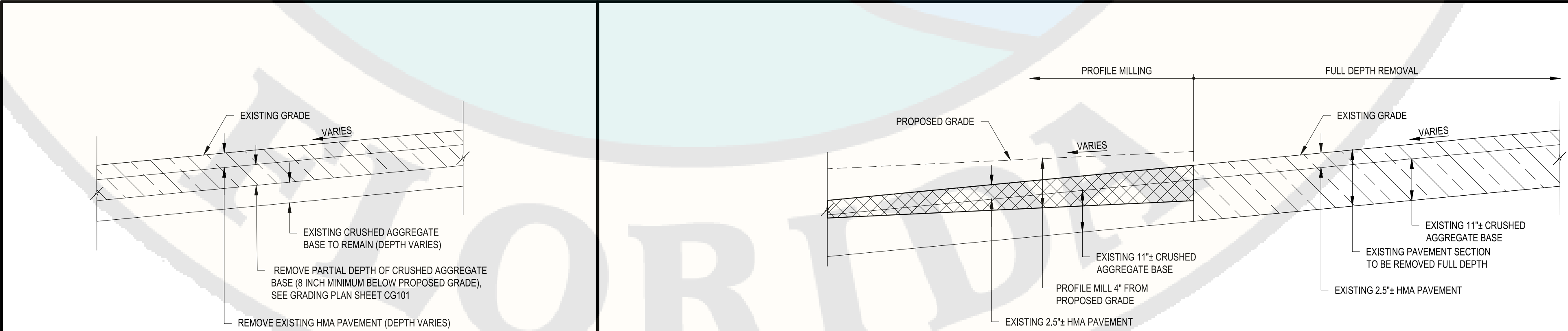
MARK	DATE	DESCRIPTION

REVISIONS	
PROJECT NO:	K98.002.001
DATE:	OCTOBER 2023
DRAWN BY:	M. MARCHEWKA
DESIGNED BY:	M. MARCHEWKA
CHECKED BY:	D.R. SAUNDERS

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DEMOLITION DETAILS

CD501



A2 DEMOLITION SECTION FOR PARTIAL DEPTH REMOVAL  
SCALE: NOT TO SCALE

A3 DEMOLITION SECTION FOR PROFILE MILL AND FULL DEPTH REMOVAL  
SCALE: NOT TO SCALE



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ATLANTIC AVIATION FLORIDA, INC.

PBI HANGARS - PHASE 1

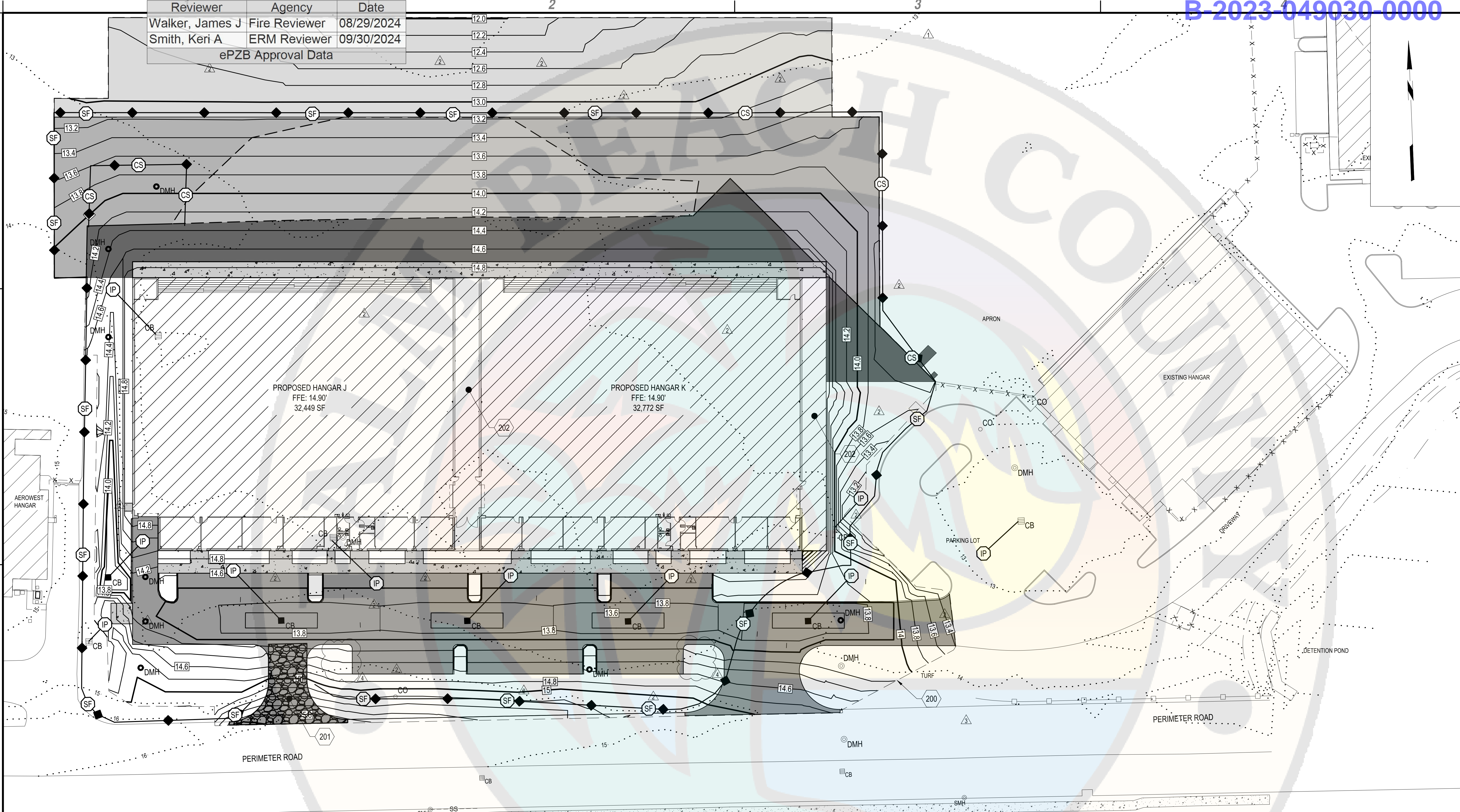
MARK	DATE	DESCRIPTION
4	8/15/24	PERMIT REVISION
3	8/01/24	PERMIT REVISION
2	5/17/24	PERMIT REVISION
1	2/20/24	FFE/PERMIT REVISION

REVISIONS	
PROJECT NO:	K98.002.001
DATE:	OCTOBER 2023
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SOIL EROSION AND SEDIMENT CONTROL PLAN

CE101



**B1 SOIL EROSION AND SEDIMENT CONTROL PLAN**  
SCALE: 1" = 30'

- A1 KEYED NOTES**  
SCALE: NOT TO SCALE
- 200. PROPOSED GRADING LIMIT (TYP.)
  - 201. TEMPORARY GRAVEL CONSTRUCTION ENTRANCE, SEE DETAIL A1/CE501
  - 202. PROVIDE EROSION CONTROL FOR PROPOSED FACILITY DRAINAGE SYSTEM. REFER TO PLUMBING DRAWINGS FOR LOCATIONS

- A3 LEGEND**  
SCALE: NOT TO SCALE
-  PROPOSED SILT FENCE, ITEM C-102, SEE DETAIL C3/CE501
  -  PROPOSED COMPOST FILTER SOCK, SEE DETAIL D3/CE501
  -  PROPOSED STORM DRAIN INLET PROTECTION, ITEM C-102, SEE DETAIL A2/CE501

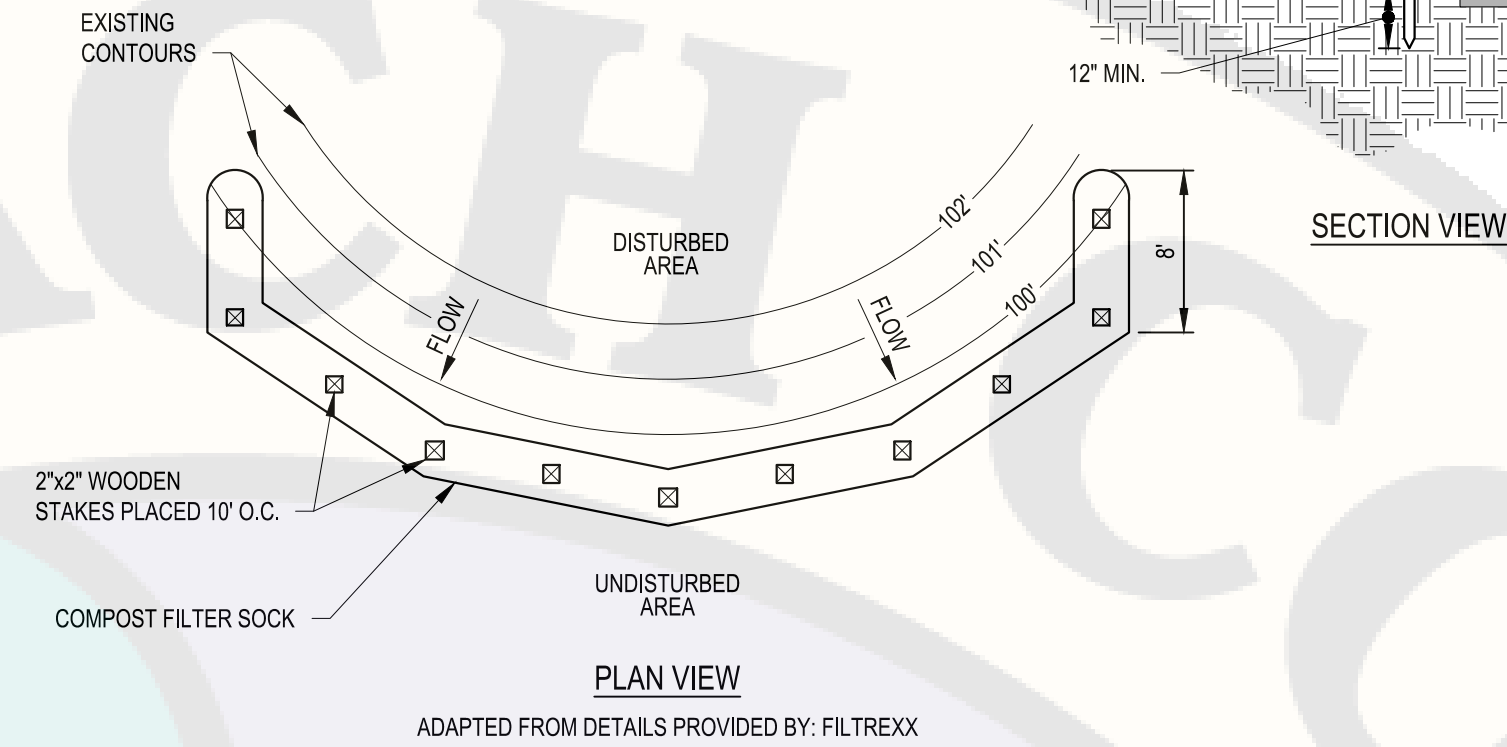
August 1, 2024 - 2:29PM  
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Reviewer	Agency	Date
Walker, James J	Fire Reviewer	08/29/2024
Smith, Keri A	ERM Reviewer	09/30/2024
ePZB Approval Data		

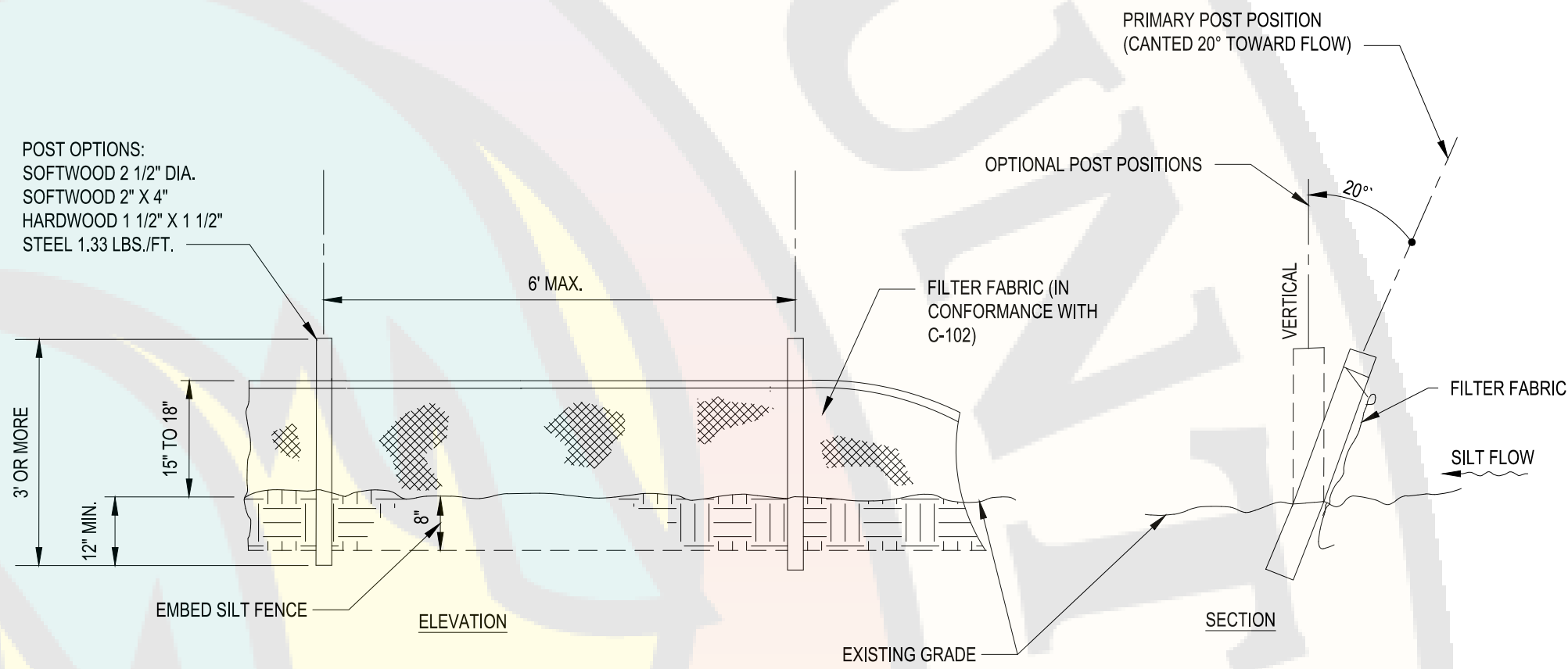
B-2023-049030-0000

COMPOST STANDARDS TABLE	
ORGANIC MATTER CONTENT	25% - 100% (DRY WEIGHT)
ORGANIC PORTION	FIBROUS AND ELONGATED
PH	6.0 - 8.0
MOISTURE CONTENT	30% - 60%
PARTICLE SIZE	100% PASSING A 1" SCREEN 10-50% PASSING A 3/8" SCREEN
SOLUBLE SALT CONCENTRATION	5.0 ds/M (mmhos/cm) MAX.

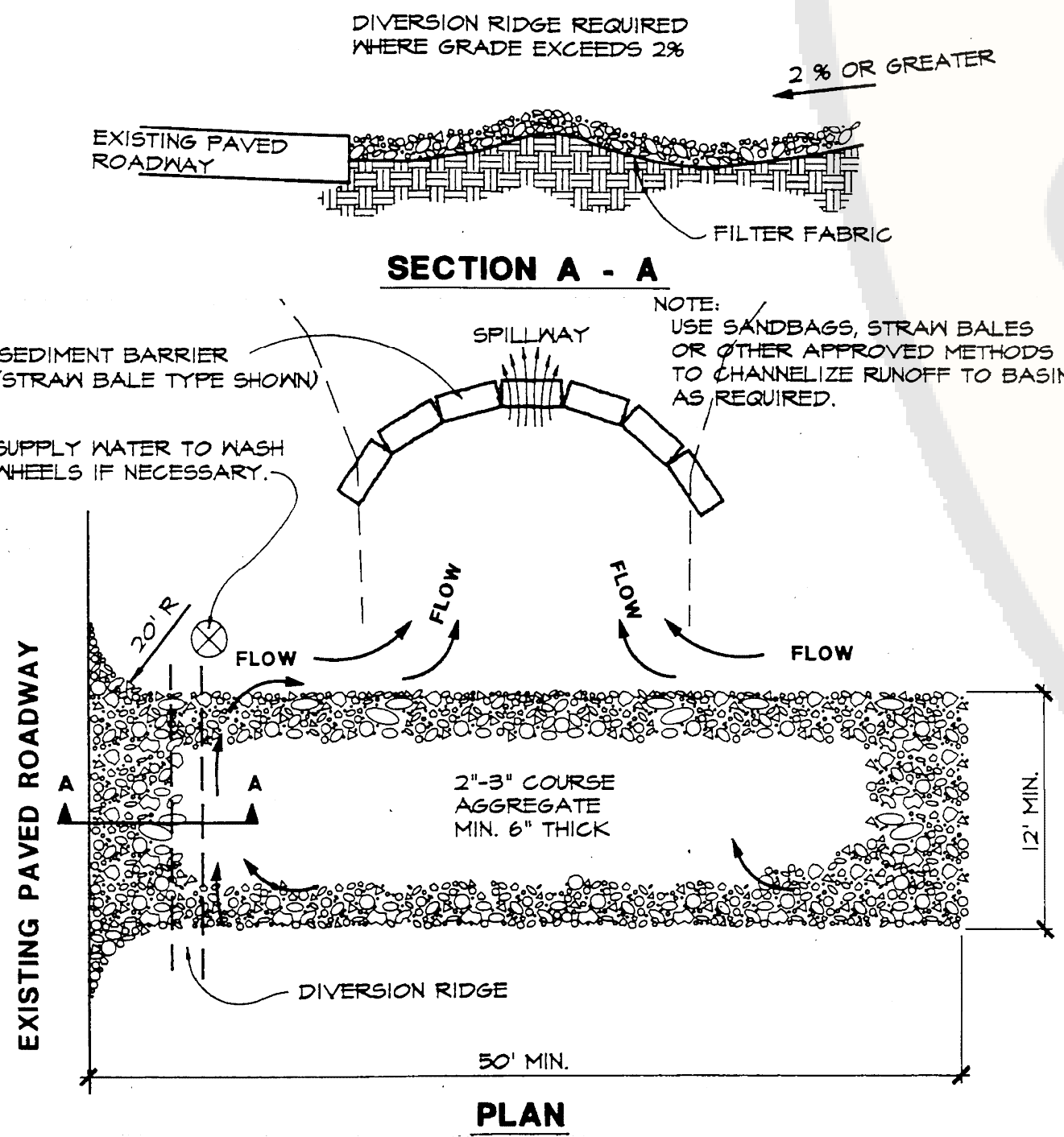


- COMPOST FILTER SOCK NOTES:**
1. SOCK FABRIC AND COMPOST SHALL MEET STANDARDS OF ABOVE TABLE.
  2. COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45° TO THE MAIN SOCK ALIGNMENT (FIGURE 5.2). STAKES MAY BE INSTALLED IMMEDIATELY DOWNSLOPE OF THE SOCK IF SO SPECIFIED BY THE MANUFACTURER.
  3. TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.
  4. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE ABOVE GROUND HEIGHT OF THE SOCK AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.
  5. SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.
  6. BIODEGRADABLE FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
  7. UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCKS, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

**D3 COMPOST FILTER SOCK DETAIL** (CS)  
SCALE: NOT TO SCALE

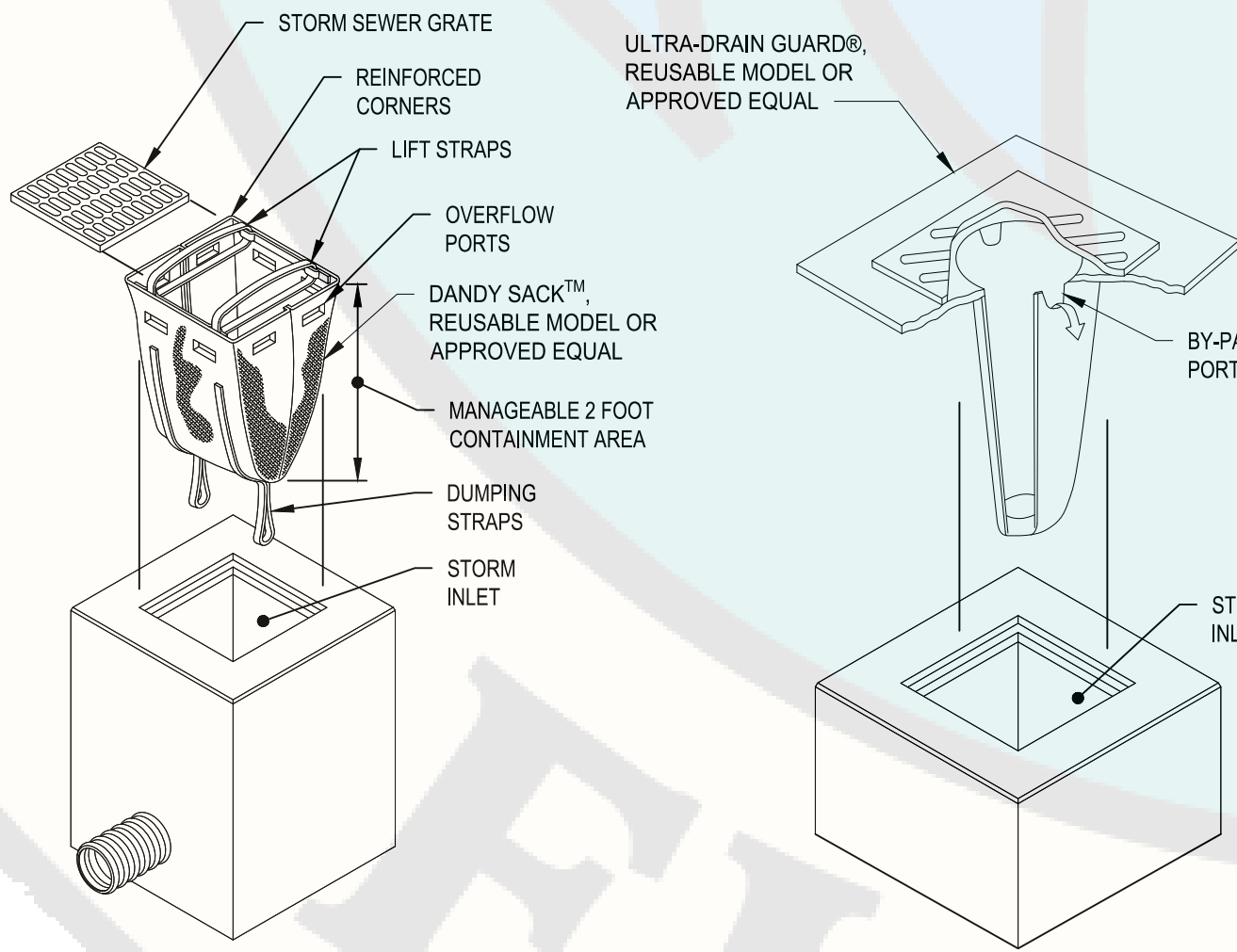


**C3 SILT FENCE DETAIL** (SF)  
SCALE: NOT TO SCALE



- NOTES:**
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
  2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
  3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

**A1 TEMPORARY GRAVEL CONSTRUCTION ENTRANCE**  
SCALE: NOT TO SCALE



- STORM DRAIN INLET PROTECTION NOTES:**
1. CONTRACTOR SHALL VERIFY DIMENSIONS OF STRUCTURES WITH MANUFACTURER PRIOR TO ORDERING FOR CORRECT SIZING.
  2. THE STORM DRAIN INLET PROTECTION INSERT SHALL BE INSTALLED, MAINTAINED AND REMOVED PER MANUFACTURER RECOMMENDATIONS.
  3. THE LOCATIONS SHOWN ON THE PLAN FOR PLACEMENT OF THIS DEVICE MAY VARY FROM WHERE THEY ARE ACTUALLY INSTALLED. THE DEVICES SHALL BE PLACED IN STORM DRAINS DURING CONCRETE SAW CUTTING AND DRILLING OPERATIONS, DURING REMOVAL OF CURING COMPOUND, AND AT ALL OTHER TIMES THAT THERE WILL BE WATER FLOWING INTO THE CATCH BASINS WHICH MAY CONTAIN DUST, DIRT OR OTHER FINE MATERIAL WHICH MAY CAUSE SILTATION DOWNSTREAM OF THE CONSTRUCTION SITE.
  4. ALL STORM WATER THAT NEEDS TO BE PUMPED FROM THE SITE SHALL BE PUMPED INTO ONE OF THESE DEVICES. THE FLOW RATE PUMPED INTO THIS DEVICE SHALL NOT EXCEED THE MANUFACTURER'S RECOMMENDED TREATMENT FLOW RATE. DURING THE PUMPING PROCESS, THE DEVICE SHALL BE MONITORED IN ORDER TO DETERMINE THAT IT IS TREATING THE WATER. IF THE WATER IS UTILIZING THE OVERFLOW PORT AND IS NOT BEING CLEANED BY THE DEVICE, THE PUMPING SHALL BE STOPPED AND THE DEVICE SHALL BE CLEANED PER MANUFACTURER'S RECOMMENDATIONS AND THEN REINSTALLED.
  5. MAINTENANCE SHALL BE PROVIDED BY THE CONTRACTOR WHEN THE CAPACITY IS REDUCED BY APPROXIMATELY 50 PERCENT OR DIRECTED BY THE ENGINEER.
  6. THE MEASUREMENT OF THE STORM DRAIN INLET PROTECTION FOR INSTANCES OF A PROPOSED / MODIFIED STRUCTURE BEING INSTALLED IN THE SAME LOCATION AS AN EXISTING ONE SHALL BE CONSIDERED AS ONE DEVICE AND ANY ADDITIONAL COSTS SHALL BE CONSIDERED INCIDENTAL.
  7. THIS DEVICE SHALL BE PAID FOR UNDER THE UNIT COST PER EACH FOR STORM DRAIN INLET PROTECTION. THIS COST SHALL INCLUDE ALL THE COSTS FOR MAINTENANCE, INSTALLATION, REPLACEMENT, IF NEEDED, AND ALL LABOR, EQUIPMENT AND TOOLS AND INCIDENTALS TO INSTALL PER THE MANUFACTURER'S RECOMMENDATIONS AND REMOVE.

**A2 STORM DRAIN INLET PROTECTION** (IP)  
SCALE: NOT TO SCALE

- EROSION CONTROL NOTES:**
- THE FOLLOWING EROSION CONTROL PROCEDURE SHALL BE ADHERED TO BY THE CONTRACTOR:
1. INSTALL TEMPORARY SILT FENCE BARRIERS AS SHOWN ON THE PLAN TO PREVENT SEDIMENT MIGRATION. ALL SILT FENCE/SOCK BARRIERS SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS.
  2. THE TOPSOIL SHALL BE STRIPPED & STOCKPILED ON SITE FOR RE-USE AS DIRECTED BY THE OWNER. ALL LOCAL ORDINANCES REGARDING THE SALE AND/OR REMOVAL OF TOPSOIL FROM THE SITE MUST BE FOLLOWED.
  3. ALL SILT FENCES/SOCKS SHALL BE REPLACED WHENEVER THEY BECOME CLOGGED OR INOPERABLE.
  4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE & REMOVAL OF TEMPORARY SEDIMENTATION CONTROLS.
  5. THE CONTRACTOR MUST CONTROL DUST DURING CONSTRUCTION. DURING EARTHWORK OPERATIONS, WATER SPREADING EQUIPMENT SHALL BE PROVIDED BY THE CONTRACTOR AND WATER APPLIED AS NECESSARY AND AS DIRECTED BY THE OWNER IN ORDER TO CONTROL DUST.
  6. DIRT OR DEBRIS LEFT ON LOCAL PUBLIC ROADS AS A RESULT OF THIS CONSTRUCTION PROJECT SHALL BE REMOVED & ROAD SURFACES CLEANED BY THE CONTRACTOR ON A DAILY BASIS.
  7. ALL DISTURBED AREAS (EXCEPT AREAS TO BE PAVED OR BUILT UPON) SHALL BE TOPSOILED TO A MINIMUM 4" DEPTH & SEEDED IMMEDIATELY AFTER FINE GRADING TAKES PLACE & AS SOON AS PHYSICALLY POSSIBLE.
  8. THE CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF DOWNSTREAM STORM SEWERS, DITCHES & CULVERTS. SILT BUILDUP FOUND TO BE A RESULT OF THIS SITE CONSTRUCTION WORK SHALL BE REMOVED FROM DOWNSTREAM CULVERTS BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER OR THE CITY.
  9. IN ADDITION TO STORM WATER DISCHARGES, THE FOLLOWING NON-STORM WATER DISCHARGES MAY CONTRIBUTE TO THE RUN-OFF FROM THE SITE:
    - WATER FROM WATER SERVICE FLUSHINGS
    - WATER USED TO WASH DOWN CONSTRUCTION VEHICLES (NO DETERGENTS)
    - WATER USED FOR DUST CONTROL
    - UNCONTAMINATED GROUNDWATER
  10. THE ABOVE NON-STORM WATER FLOWS SHALL BE TREATED IN THE SAME MANNER AS STORM WATER FLOWS INDICATED HEREIN.

**A4 EROSION CONTROL NOTES**  
SCALE: NOT TO SCALE

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PALM BEACH FLORIDA

ATLANTIC AVIATION FLORIDA, INC.  
PBI HANGARS - PHASE 1

PALM BEACH INTERNATIONAL AIRPORT

MARK	DATE	DESCRIPTION
REVISIONS		
PROJECT NO:	K98.002.001	
DATE:	OCTOBER 2023	
DRAWN BY:	M. MARCHEWKA	
DESIGNED BY:	M. MARCHEWKA	
CHECKED BY:	D.R. SAUNDERS	
CONTRACTOR SHALL VERIFY ALL CONDITIONS ON JOB SITE & NOTIFY THE OWNER OF ANY VARIATIONS FROM DIMENSIONS SHOWN ON THESE DRAWINGS BEFORE PROCEEDING WITH ANY CONSTRUCTION		

**SOIL EROSION AND SEDIMENT CONTROL DETAILS**

**CE501**



Reviewer	Agency	Date
Stark, Vincent E	Zoning Reviewer	08/30/2024
Walker, James J	Fire Reviewer	08/29/2024
Smith, Keri A	ERM Reviewer	09/30/2024
ePZB Approval Data		



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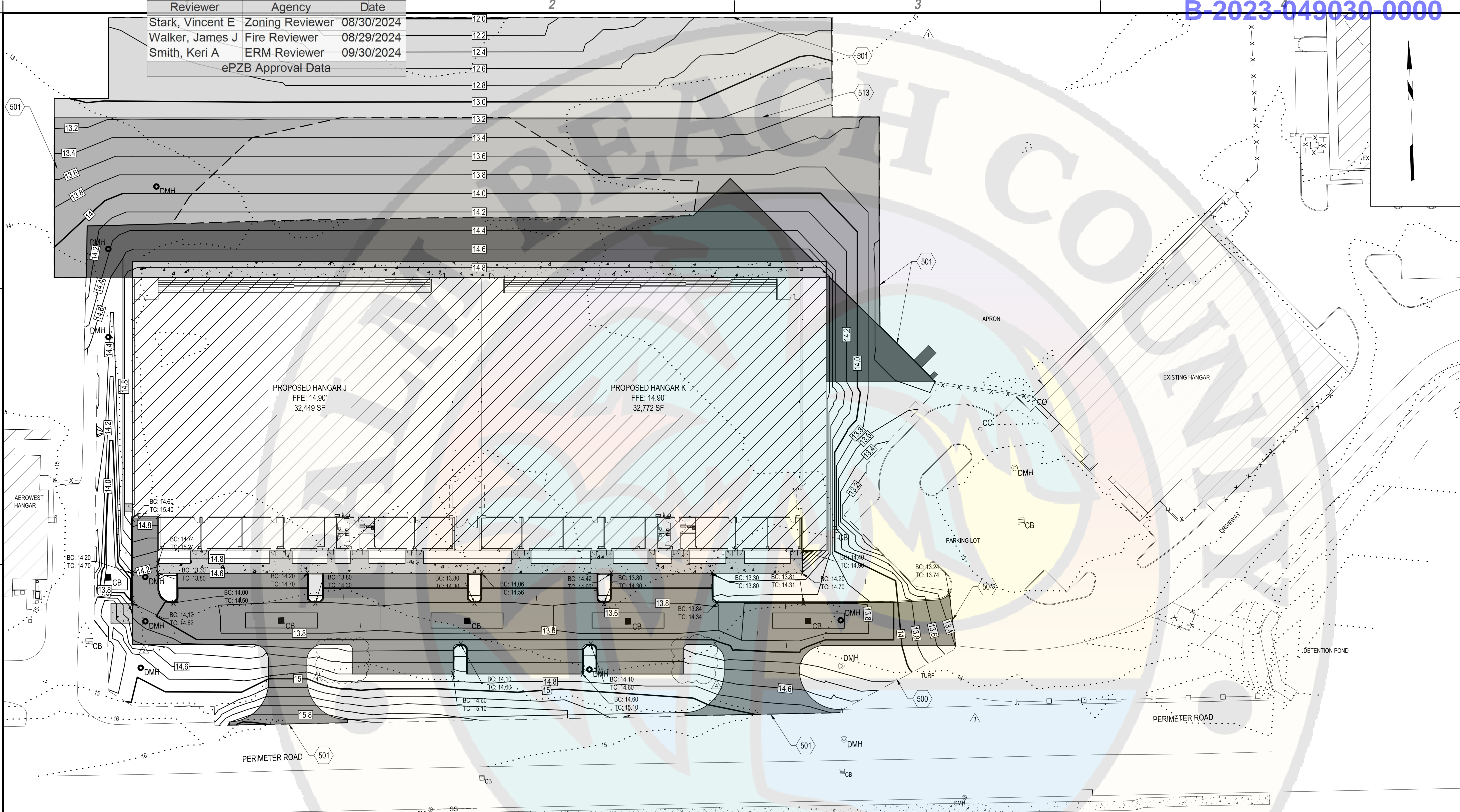
ATLANTIC AVIATION FLORIDA, INC.

PBI HANGARS - PHASE 1

MARK	DATE	DESCRIPTION
4	8/15/24	PERMIT REVISION
3	8/01/24	PERMIT REVISION
2	5/17/24	PERMIT REVISION
1	2/20/24	FFE/PERMIT REVISION
REVISIONS		
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GRADING PLAN

CG101



**B1 GRADING PLAN**  
SCALE: 1" = 30'

- A1 KEYED NOTES**  
SCALE: NOT TO SCALE
- 500. GRADING LIMIT LINE (TYP.)
  - 501. MATCH EXISTING GRADE
  - 513. MATCH EXISTING GRADE OF FUTURE APRON PROJECT

- A3 SHEET NOTES**  
SCALE: NOT TO SCALE
- 1. ALL ELEVATIONS REFER TO NAVD 88 VERTICAL DATUM.
- 

**ZONING DIVISION**  
**REVIEWED FOR ZONING COMPLIANCE**  
DEVELOPMENT SHALL COMPLY WITH THE PALM BEACH COUNTY UNIFIED LAND DEVELOPMENT CODE (ULDC) AND ALL APPLICABLE DEVELOPMENT ORDERS  
**REVIEWED BY: VSTARK**  
**DATE: 8/30/2024, 9:15:13 AM**





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PALM BEACH, FLORIDA

ATLANTIC AVIATION FLORIDA, INC.

PBI HANGARS - PHASE 1

5	07/26/24	PERMIT COMMENTS
4	05/03/24	PERMIT COMMENTS
3	03/11/24	SFWMD RAI No. 2
2	02/06/24	PERMIT COMMENTS
1	12/01/23	FFE ADJUSTMENTS
MARK	DATE	DESCRIPTION

REVISIONS	
PROJECT NO:	K98.002.001
DATE:	AUGUST 2023
DRAWN BY:	M. MARCHEWKA
DESIGNED BY:	M. MARCHEWKA
CHECKED BY:	D.R. SAUNDERS

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## DRAINAGE PLAN

**CK101**

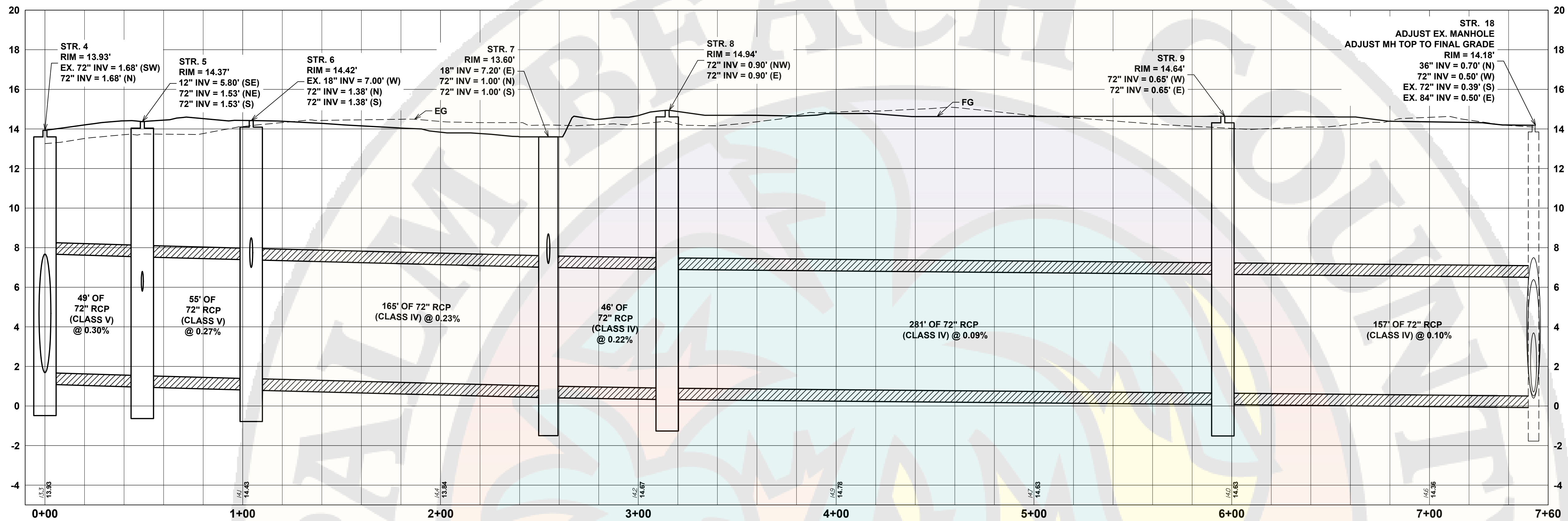
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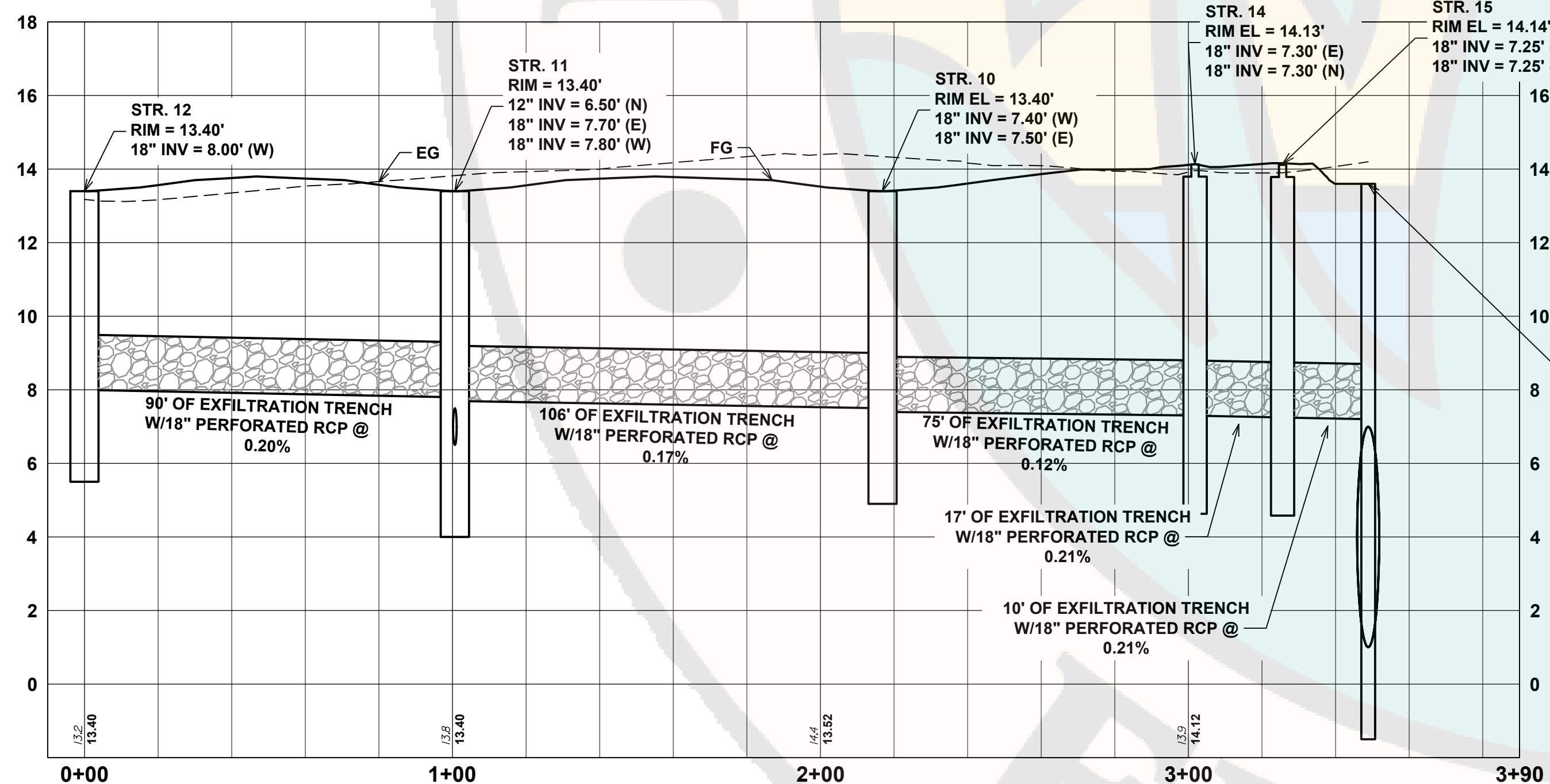
## STR. 4 TO EX. STORM MANHOLE

SCALE: 1"=30' HORZ | 1"=3' VERT



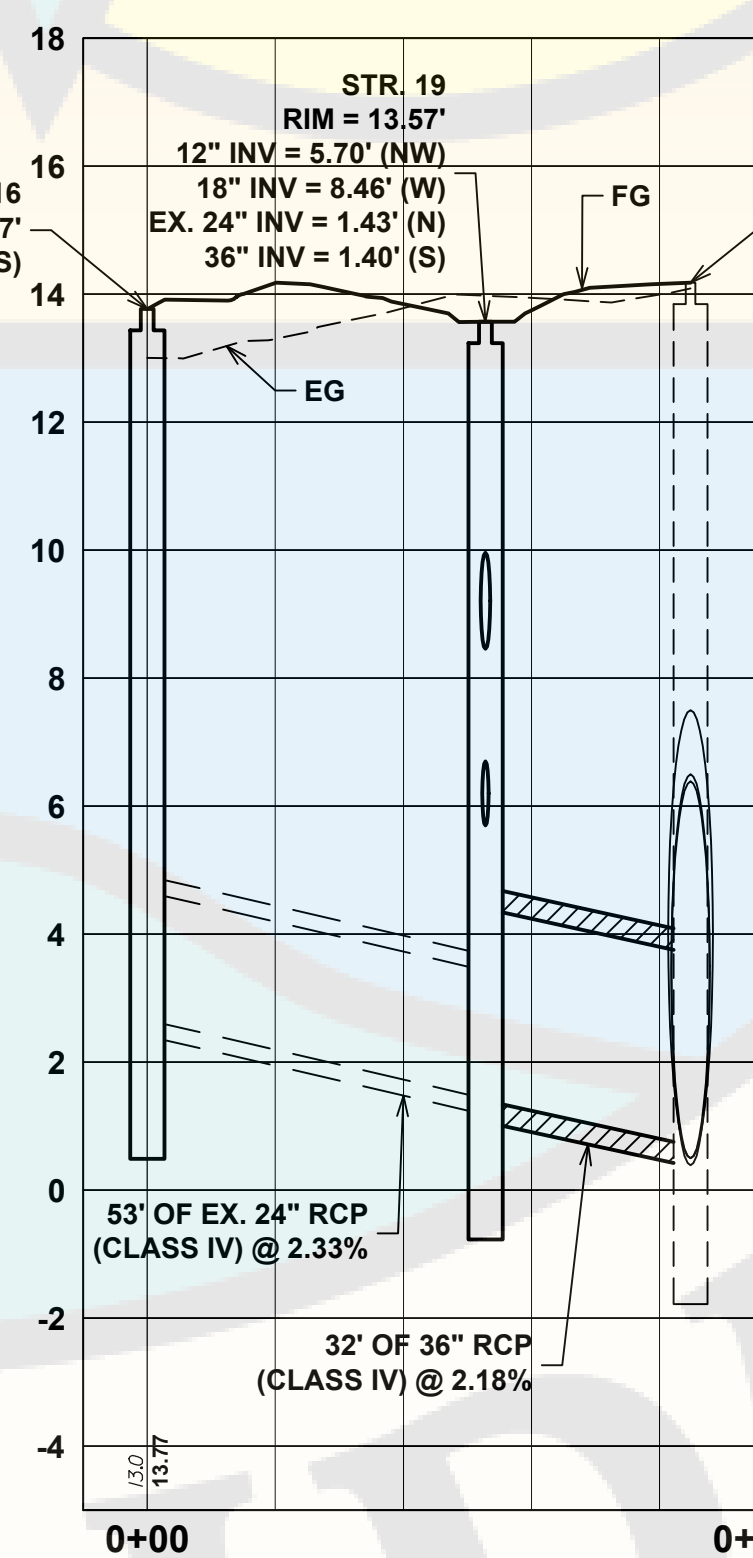
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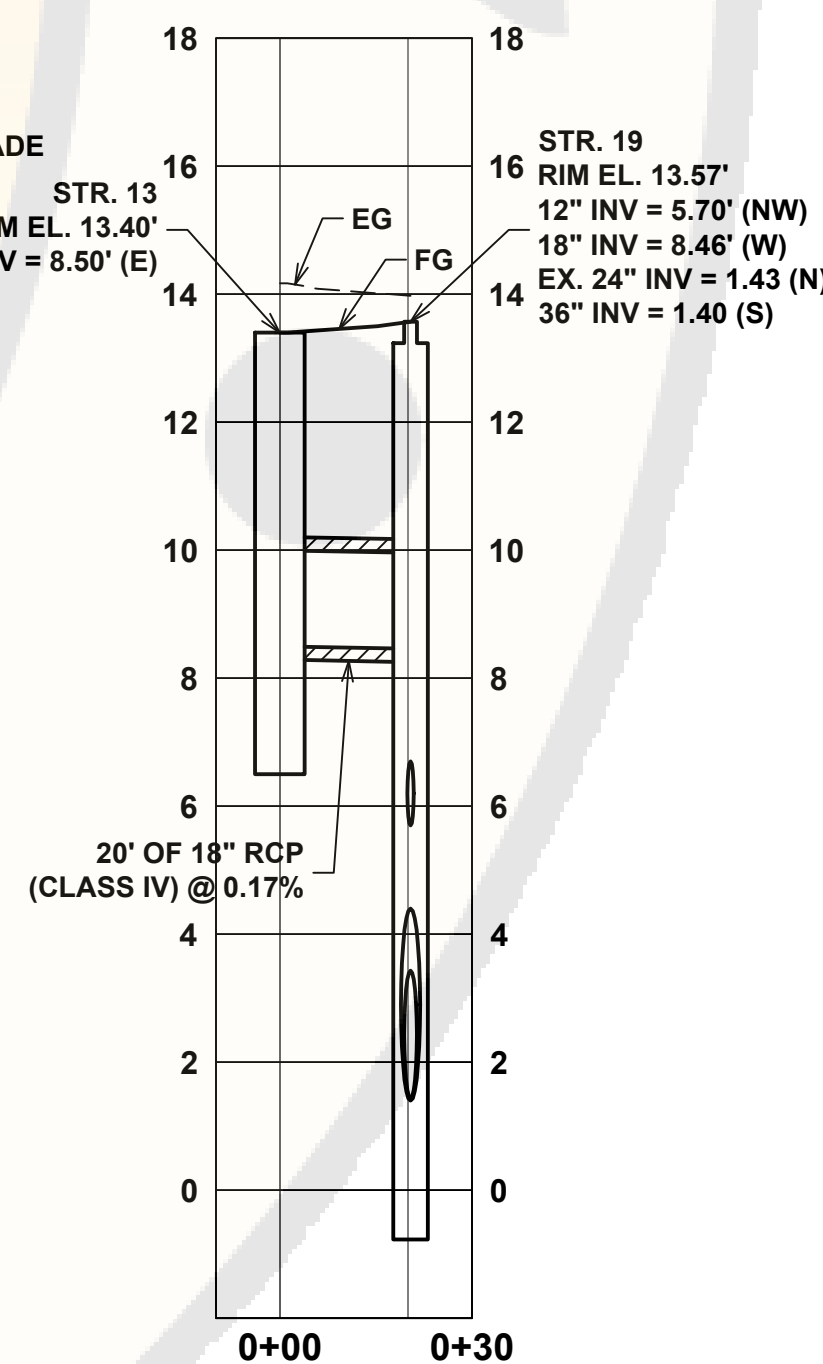
## STR. 16 TO EX. STORM MANHOLE

SCALE: 1"=30' HORZ | 1"=3' VERT



## STR. 13 TO STR. 19

SCALE: 1"=30' HORZ | 1"=3' VERT



MARK	DATE	DESCRIPTION
△	05/03/24	PERMIT COMMENTS
△	03/11/24	SFWM RAI No. 02
△	02/06/24	PERMIT COMMENTS
△	12/01/23	FEE ADJUSTMENTS
REVISIONS		
PROJECT NO: K98.002.001		
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**STORM DRAIN STRUCTURE** ePZB Approval Data

STRUCTURE NAME	STRUCTURE DETAILS	COMMENTS
STR.4	RIM = 13.93' INV OUT = 1.68' (72" RCP) INV OUT = 1.68' (EX. 72" RCP)	FDOT TYPE 7 MANHOLE INDEX NO. 425-001
STR.5	RIM = 14.37' INV IN = 5.80' (12" HDPE) INV IN = 1.53' (72" RCP) INV OUT = 1.53' (72" RCP)	FDOT TYPE 7 MANHOLE INDEX NO. 425-001
STR.6	RIM = 14.42' INV IN = 7.00' (EX. 18" CMP) INV IN = 1.38' (72" RCP) INV OUT = 1.38' (72" RCP)	FDOT TYPE 7 MANHOLE INDEX NO. 425-001
STR.7	RIM = 13.60' WEIR ELEV. = 9.70' INV IN = 7.20' (18" RCP) INV IN = 1.00' (72" RCP) INV OUT = 1.00' (72" RCP)	FDOT TYPE H INLET INDEX NO. 425-052
STR.8	RIM = 14.94' INV IN = 0.90' (72" RCP) INV OUT = 0.90' (72" RCP)	FDOT TYPE 7 MANHOLE INDEX NO. 425-001
STR.9	RIM = 14.64' INV IN = 0.65' (72" RCP) INV OUT = 0.65' (72" RCP)	FDOT TYPE 7 MANHOLE INDEX NO. 425-001
STR.10	RIM = 13.40' INV IN = 7.50' (18" RCP) INV OUT = 7.40' (18" RCP)	TYPE G INLET w/SKIMMER INDEX NO. 425-053
STR.11	RIM = 13.40' INV IN = 6.50' (12" HDPE) INV IN = 7.80' (18" RCP) INV OUT = 7.70' (18" RCP)	TYPE G INLET w/SKIMMER INDEX NO. 425-053
STR.12	RIM = 13.40' INV OUT = 8.00' (18" RCP)	TYPE G INLET w/SKIMMER INDEX NO. 425-053
STR.13	RIM = 13.40' INV OUT = 8.50' (18" RCP)	TYPE G INLET INDEX NO. 425-053
STR. 14	RIM = 14.13' INV IN = 7.30' (18" RCP) INV OUT = 7.30' (18" RCP)	FDOT TYPE 7 MANHOLE W/SKIMMER INDEX NO. 425-001
STR. 15	RIM = 14.14' INV IN = 7.25' (18" RCP) INV OUT = 7.25' (18" RCP)	FDOT TYPE 7 MANHOLE W/SKIMMER INDEX NO. 425-001
STR.16	RIM = 13.77' INV OUT = 2.66' (EX. 24" RCP)	INDEX NO. 425-010, TABLE 5 - SLAB DESIGN (CONVERT EX. CB TO JB W/MANHOLE)
STR.18	RIM = 14.18' INV IN = 0.70' (36" RCP) INV IN = 0.50' (72" RCP) INV IN = 0.50' (EX. 84" RCP) INV OUT = 0.39' (EX. 72" RCP)	FDOT TYPE 7 MANHOLE INDEX NO. 425-001 (ADJUST MH TOP TO FINAL GRADE)
STR.19	RIM = 13.57' INV IN = 5.70' (12" HDPE) INV IN = 8.46' (18" RCP) INV IN = 1.43' (EX. 24" RCP) INV OUT = 1.40' (36" RCP)	FDOT TYPE 7 MANHOLE INDEX NO. 425-001

**NOTE:**  
REFER TO THE FOLLOWING FDOT STANDARD PLANS FOR DETAILS.

INDEX 425-001  
INDEX 425-010  
INDEX 425-053  
INDEX 443-001  
INDEX 443-002

**REFER TO THE FOLLOWING SPECIFICATIONS FOR PIPES INSTALLED WITHIN THE APRON.  
FAA AC 150/5370 - 10H ITEM NO. D-701**

**REFER TO THE FOLLOWING SPECIFICATIONS FOR AIRCRAFT RATED STRUCTURES.**  
**FAA AC 150/5370 - 10H ITEM NO. D-751**

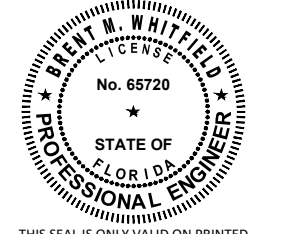
PIPE NAME	SIZE	LENGTH (FT)	SLOPE	START STRUCTURE	START INVERT (FT)	END STRUCTURE	END INVERT (FT)
SD-4	72" RCP (CL-V) FAA 150/5730-10H ITEM D-701	49	0.30%	STR. 4	1.68	STR. 5	1.53
SD-5	72" RCP (CL-V) FAA 150/5730-10H ITEM D-701	55	0.27%	STR. 5	1.53	STR. 6	1.38
SD-6	72" RCP (CL-IV)	165	0.23%	STR. 6	1.38	STR. 7	1.00
SD-7	72" RCP (CL-IV)	46	0.22%	STR. 7	1.00	STR. 8	0.90
SD-8	72" RCP (CL-IV)	281	0.09%	STR. 8	0.90	STR. 9	0.65
SD-9	72" RCP (CL-IV)	157	0.10%	STR. 9	0.65	STR. 18	0.50
SD-10	EXFILTRATION TRENCH w/18" RCP FDOT INDEX NO. 443-001	75	0.12%	STR. 10	7.40	STR. 14	7.30
SD-11	EXFILTRATION TRENCH w/18" RCP FDOT INDEX NO. 443-001	106	0.17%	STR. 11	7.70	STR. 10	7.50
SD-12	EXFILTRATION TRENCH w/18" RCP FDOT INDEX NO. 443-001	90	0.20%	STR. 12	8.00	STR. 11	7.80
SD-13	18" RCP (CL-IV)	20	0.17%	STR. 13	8.50	STR. 19	8.46
SD-14	EXFILTRATION TRENCH w/18" RCP FDOT INDEX NO. 443-001	17	0.21%	STR. 14	7.30	STR. 15	7.25
SD-15	EXFILTRATION TRENCH w/18" RCP FDOT INDEX NO. 443-001	10	0.21%	STR. 15	7.25	STR. 7	7.20
SD-19	36" RCP (CL-IV)	32	2.18%	STR. 19	1.40	EX. STR. 18	0.70
SD-23	12" HDPE	18	5.97%	CONNECT TO DOWNSPOUT	6.90	STR. 5	5.80
SD-24	12" HDPE	30	2.19%	CONNECT TO DOWNSPOUT	7.15	STR. 11	6.50
SD-26	12" HDPE	36	4.05%	CONNECT TO DOWNSPOUT	7.15	STR. 19	5.70



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**561.746.6900**  
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BRENT M. WHITFIELD, PE  
LICENSE NO. 65720  
DATE: 8/2/2024







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ATLANTIC AVIATION FLORIDA, INC.

# PBI HANGARS - PHASE 1

	05/03/24	PERMIT COMMENTS
	03/11/24	SFWM D RAI No. 2
	02/06/24	PERMIT COMMENTS
	12/01/23	FFE ADJUSTMENTS
MARK	DATE	DESCRIPTION

## REVISIONS

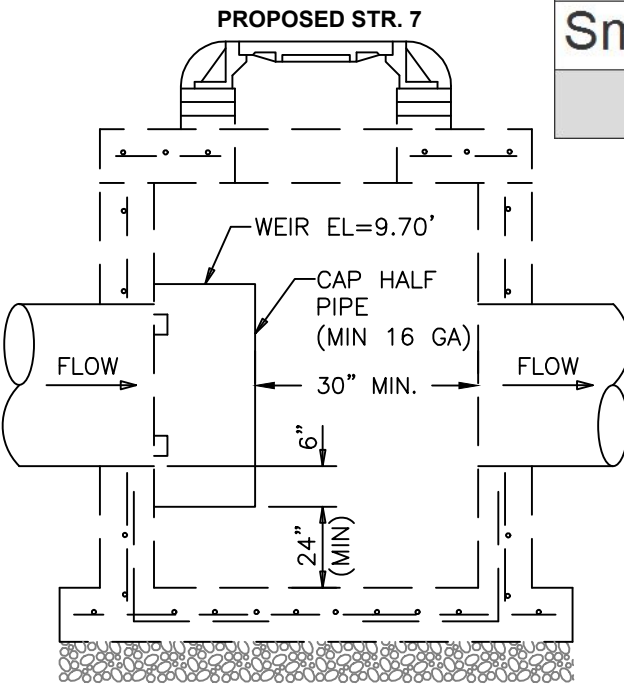
PROJECT NO:	K98.002.001
DATE:	AUGUST 2023
DRAWN BY:	M. MARCHEWKA
DESIGNED BY:	M. MARCHEWKA
CHECKED BY:	D.R. SAUNDERS

CONTRACTOR SHALL VERIFY ALL CONDITIONS ON  
JOB SITE & NOTIFY THE OWNER OF ANY VARIATION  
FROM DIMENSIONS SHOWN ON THESE DRAWINGS  
BEFORE PROCEEDING WITH ANY CONSTRUCTION

## DRAINAGE STRUCTURE SUMMARY

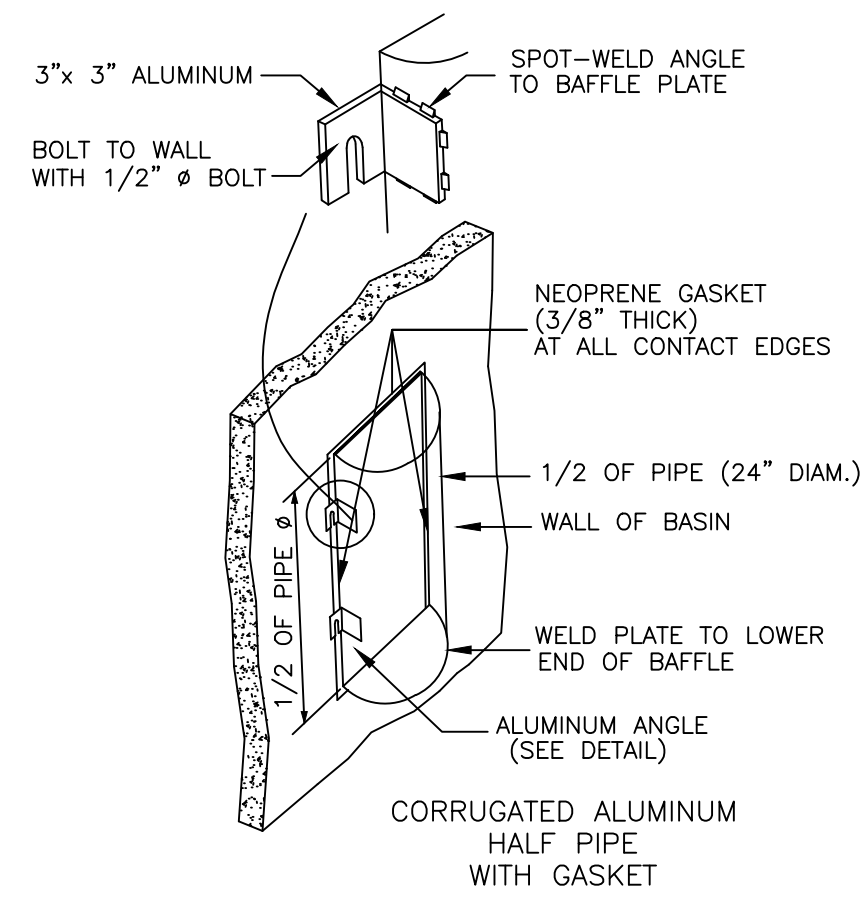
# CK501





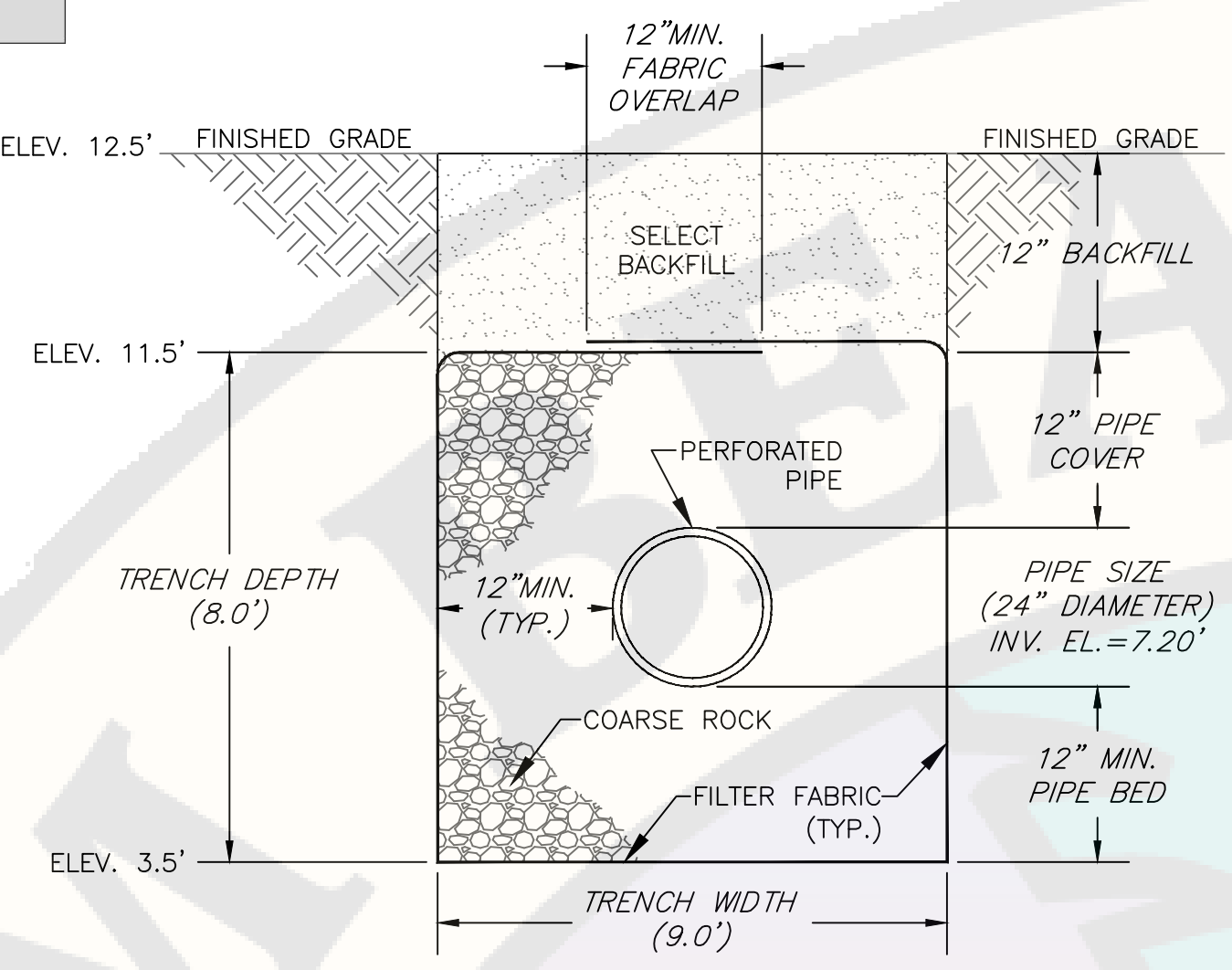
DISCHARGE PIPE DIAMETER	WEIR DIAMETER (1)	WEIR DIAMETER (2)	GAUGE
15"	21"	21"	16
18"	24"	24"	16
24"	30"	36"	16
30"	36"	42"	14
36"	42"	48"	14
42"	48"	54"	14
48"	54"	60"	14
54"	60"	66"	14

(1) RECTANGULAR STRUCTURE  
(2) ROUND STRUCTURE



- NOTES:
1. ALUMINUM SHEET OF SAME THICKNESS (GAUGE) AS PIPE SHALL BE WELDED TO CLOSE THE OPENING AT THE BOTTOM OF THE HALF PIPE.
  2. NEOPRENE ADHESIVE BACKED GASKET, OR APPROVED EQUAL (1"x3") SHALL BE INSTALLED ON THE SIDES AND TOP OF ALL WEIR PIPES.
  3. WEIRS TO BE FASTENED IN PLACE WITH 3/8" x 4" STAINLESS STEEL "RED HEADS" OR APPROVED EQUAL.
  4. MOUNTING BRACKETS MAY BE ADDED TO FLAT BARS TO EASE INSTALLATION IN ROUND STRUCTURES. SPACING TO MATCH HOLES IN FLAT BARS.
  5. REFER TO PLANS AND DETAILS FOR STRUCTURE DIMENSIONS.

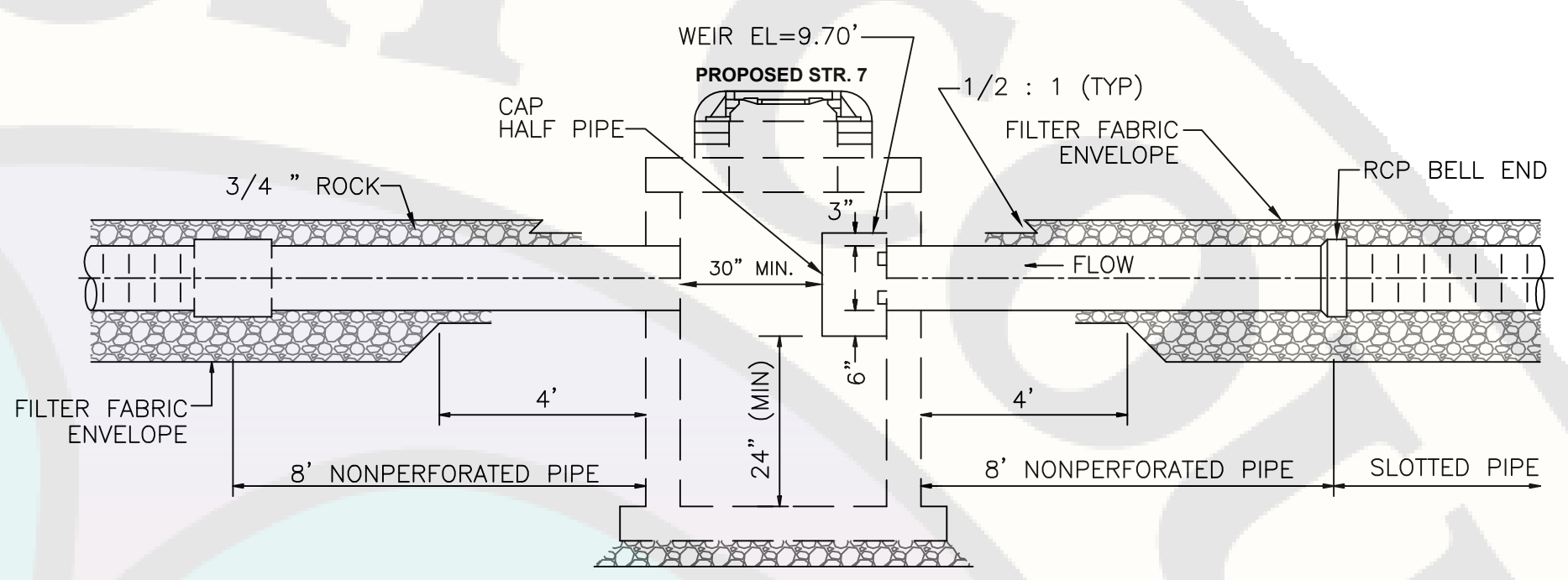
1 STORMWATER SYSTEM WEIR DETAIL  
N.T.S.



FILTER FABRIC SHALL BE SUBSURFACE DRAINAGE TYPE MEETING THE REQUIREMENTS OF FOOT STANDARD SPECIFICATIONS SECTION 985. ALL FILTER FABRIC JOINTS SHALL LAP A MINIMUM OF ONE (1) FOOT.

ALL ELEVATIONS SHOWN ARE IN NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)  
CONVERSION FACTOR:  
NAVD88 + 1.576 = NGVD29 IN THIS AREA.

2 STORMWATER SYSTEM EXFILTRATION TRENCH  
N.T.S.



3 TYPICAL EXFILTRATION TRENCH - LONGITUDINAL SECTION  
N.T.S.

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BRENT M. WHITFIELD, PE  
LICENSE NO. 68720  
DATE: 8/2/2024

BRENT M. WHITFIELD  
No. 68720  
STATE OF  
FLORIDA  
PROFESSIONAL ENGINEER

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PALM BEACH, FLORIDA

ATLANTIC AVIATION FLORIDA, INC.

PBI HANGARS - PHASE 1

	03/11/24	SFWMD RAI No. 2
	02/06/24	PERMIT COMMENTS
	12/01/23	FEE ADJUSTMENTS
MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO:	K98.002.001
DATE:	AUGUST 2023
DRAWN BY:	M. MARCHEWKA
DESIGNED BY:	M. MARCHEWKA
CHECKED BY:	D.R. SAUNDERS

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EXFILTRATION  
TRENCH  
DETAILS

CK502

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Reviewer	Agency	Date
Walker, James J	Fire Reviewer	08/29/2024
Smith, Keri A	ERM Reviewer	09/30/2024
ePZB Approval Data		

B-2023-049030-0000



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PALM BEACH FLORIDA

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PBI HANGARS - PHASE 1

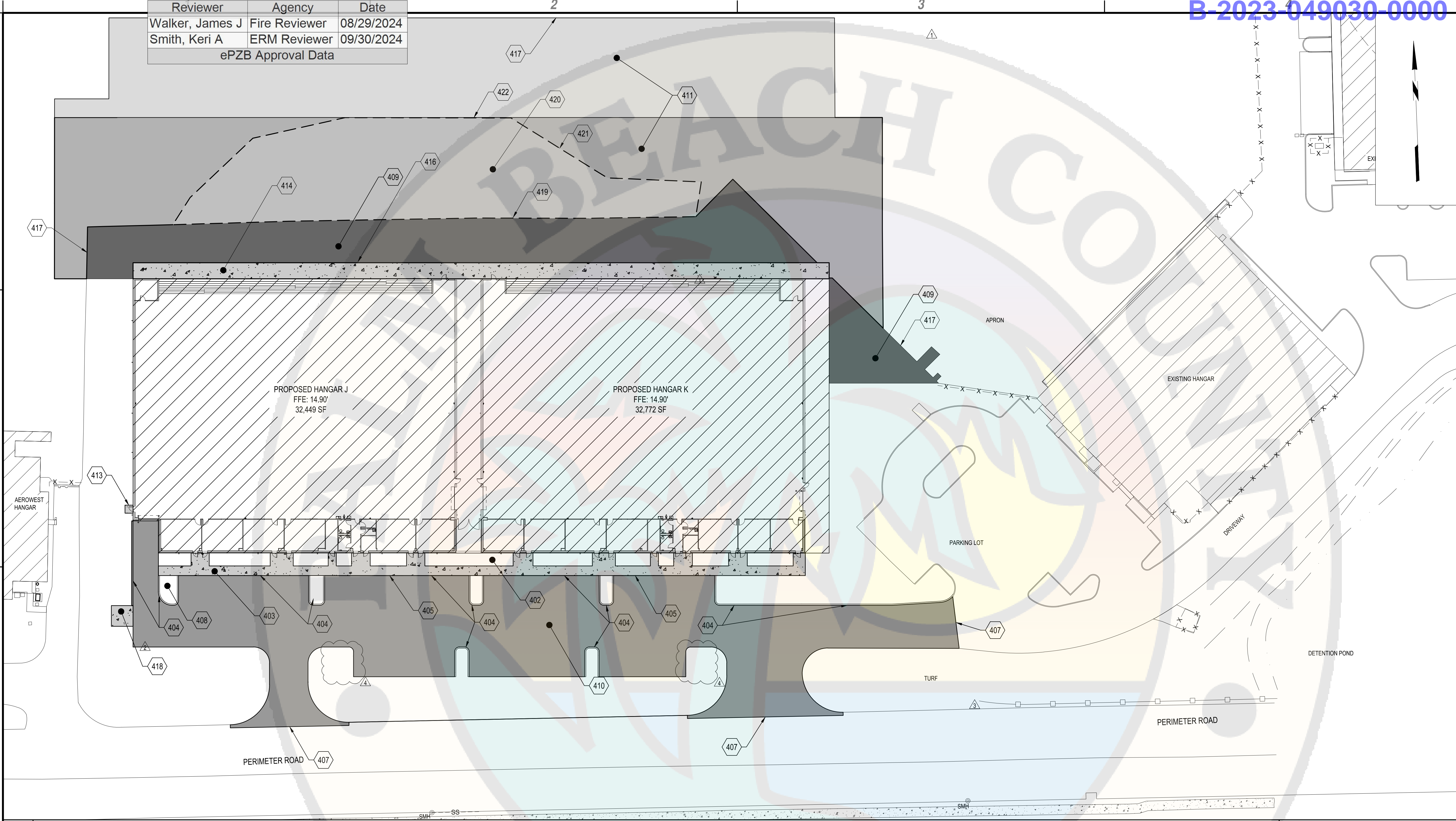
MARK	DATE	DESCRIPTION
4	8/15/24	PERMIT REVISION
3	8/01/24	PERMIT REVISION
2	5/17/24	PERMIT REVISION
1	2/20/24	FFE/PERMIT REVISION

REVISIONS	
PROJECT NO:	K98.002.001
DATE:	OCTOBER 2023
DRAWN BY:	M. MARCHEWKA
DESIGNED BY:	M. MARCHEWKA
CHECKED BY:	D.R. SAUNDERS

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**PAVEMENT AND JOINTING PLAN**

**CP101**



**B1 PAVEMENT AND JOINTING PLAN**  
SCALE: 1" = 30'

- A1 KEYED NOTES**  
SCALE: NOT TO SCALE

  - 402. PROPOSED 8' LANDSCAPE STRIP (TYP.), SEE LANDSCAPE PLANS FOR FURTHER DETAIL 413.
  - 403. PROPOSED 6" PCC SIDEWALK (TYP.), ITEM FDOT 522, SEE DETAIL B2/CG301. SEE FDOT STANDARD DRAWING 522-001 FOR CONCRETE SIDEWALK JOINTING INFORMATION.
  - 404. PROPOSED 6" CONCRETE CURB (TYP.), ITEM FDOT 520 TYPE D, SEE DETAIL FDOT INDEX 520-001.
  - 405. PROPOSED SIDEWALK RAMP AND DETECTABLE WARNING STRIP, ITEM FDOT 522, SEE DETAIL FDOT INDEX 522-002.
  - 407. KEYING DETAIL, PARKING LOT TO EXISTING ROAD, SEE DETAIL B4/CP501.
  - 408. PROPOSED LANDSCAPE ISLAND (TYP.), SEE LANDSCAPE PLANS FOR FURTHER DETAIL.
  - 409. PROPOSED HMA FULL DEPTH APRON SECTION, SEE DETAIL A2/CS301.
  - 410. PROPOSED HMA PARKING LOT SECTION, FOR TYPICAL SECTION SEE DETAIL B1/CG301.
  - 411. PROPOSED HMA OVERLAY APRON SECTION, SEE DETAIL C2/CG301.
- 413. PROPOSED 5' x 5' CONCRETE EXIT DOOR PLATFORM, SEE DETAIL C1/CS301.
  - 414. PROPOSED 10' WIDE CONCRETE STRIP, SEE STRUCTURAL DRAWINGS FOR FURTHER DETAIL.
  - 416. CONSTRUCTION JOINT, SEE DETAIL C4/CP501.
  - 417. KEYING DETAIL, PROPOSED APRON PAVEMENT TO EXISTING, SEE DETAIL A4/CP501.
  - 418. PROPOSED DUMPSTER PAD, SEE DETAIL A2/XM-501.
  - 419. TYPICAL PAVEMENT, APRON AND APRON OVERLAY SECTION, SEE DETAIL A3/CS301.
  - 420. PROPOSED HMA RECONSTRUCTION APRON SECTION, SEE DETAIL C2/CS301.
  - 421. LIMITS OF PROPOSED HMA RECONSTRUCTION APRON SECTION BASED ON PROPOSED GRADES.
  - 422. KEYING DETAIL, PROPOSED APRON PAVEMENT TO TIE INTO FUTURE APRON PROJECT, SEE DETAIL A4/CP501.

**A3 SHEET NOTES**  
SCALE: NOT TO SCALE

August 15, 2024 - 11:37AM  
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July 18, 2023 - 9:17AM  
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Reviewer	Agency	Date
Walker, James J	Fire Reviewer	08/29/2024
Smith, Keri A	ERM Reviewer	09/30/2024
ePZB Approval Data		

B-2023-049030-0000



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PALM BEACH FLORIDA

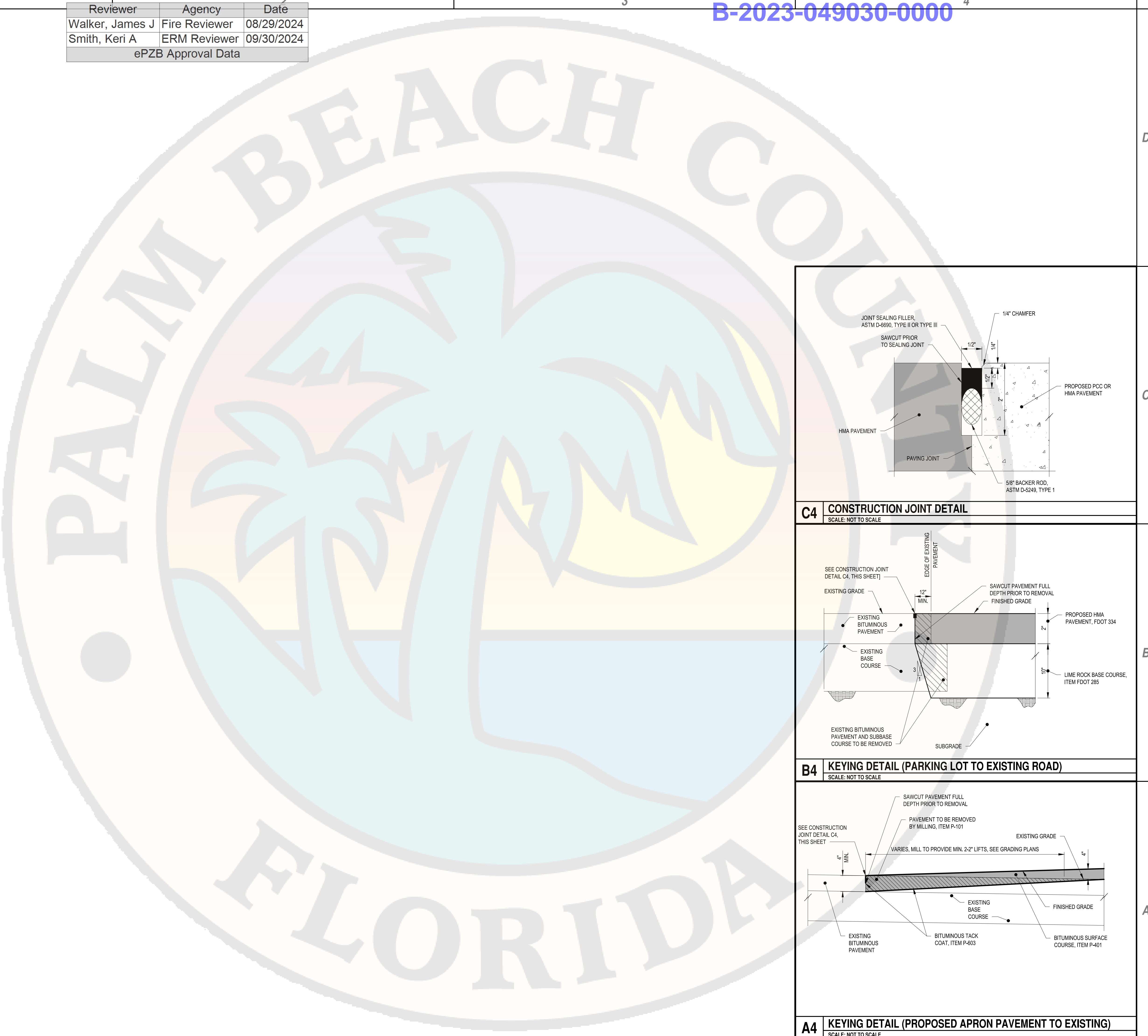
ATLANTIC AVIATION FLORIDA, INC.

PBI HANGARS - PHASE 1

PULPI BEACH W/ TENNIS COURT IMPROV		
MARK	DATE	DESCRIPTION
REVISIONS		
PROJECT NO:		K98.002.001
DATE:		OCTOBER 2023
DRAWN BY:		M. MARCHEWKA
DESIGNED BY:		M. MARCHEWKA
CHECKED BY:		D.R. SAUNDERS
CONTRACTOR SHALL VERIFY ALL CONDITIONS ON JOB SITE & NOTIFY THE OWNER OF ANY VARIATIONS FROM DIMENSIONS SHOWN ON THESE DRAWINGS BEFORE PROCEEDING WITH ANY CONSTRUCTION		

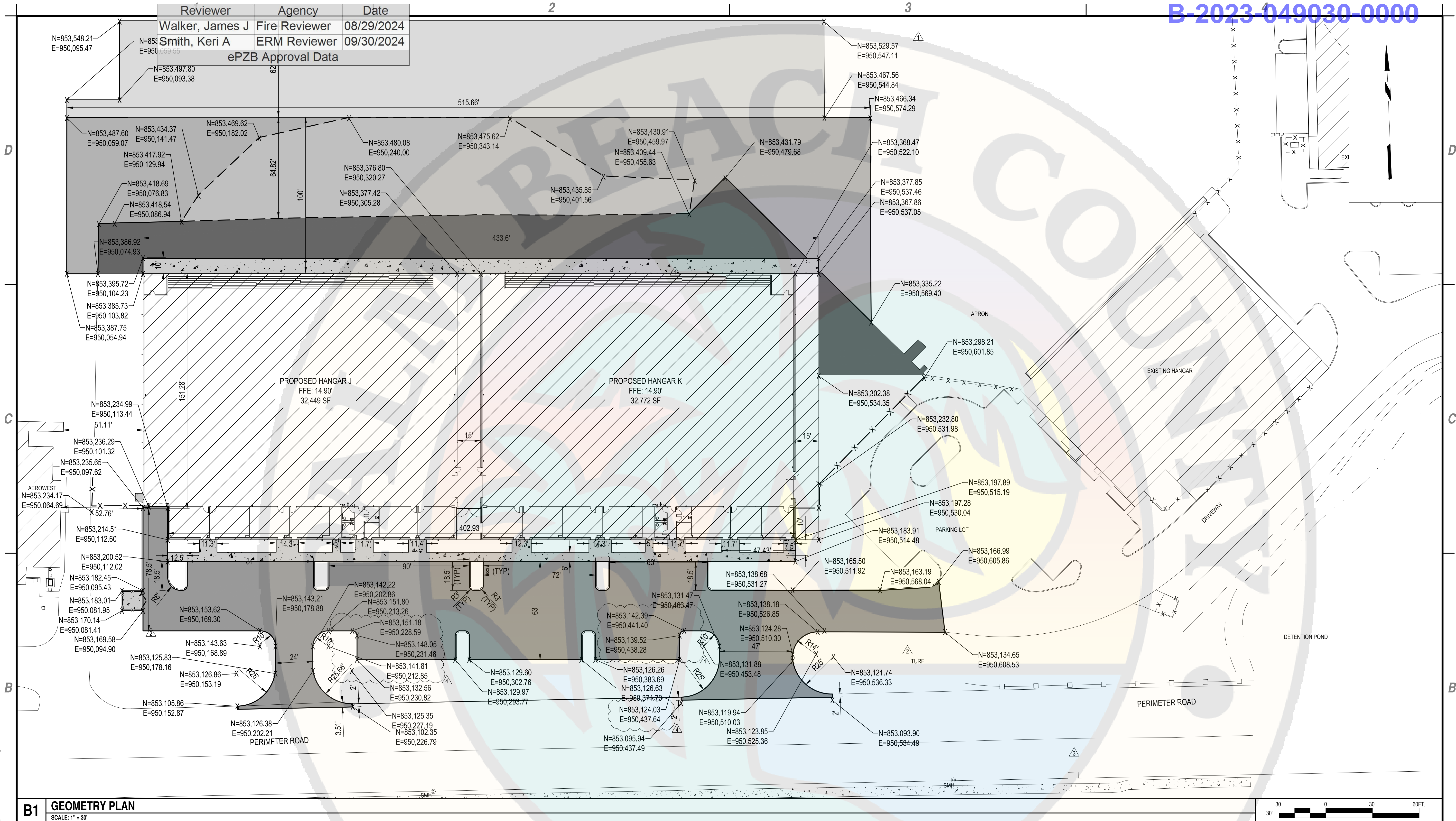
PAVEMENT AND JOINTING DETAILS

CP501





August 15, 2024 - 12:15PM  
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**B1** GEOMETRY PLAN  
SCALE: 1" = 30'

**A1** KEYED NOTES  
SCALE: NOT TO SCALE

**A3** LEGEND  
SCALE: NOT TO SCALE

- HMA FULL DEPTH PARKING LOT PAVEMENT
- HMA FULL DEPTH APRON PAVEMENT
- HMA OVERLAY APRON PAVEMENT
- HMA RECONSTRUCTION APRON PAVEMENT
- CONCRETE
- HMA OVERLAY APRON PAVEMENT

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ATLANTIC AVIATION FLORIDA, INC.  
  
PBI HANGARS - PHASE 1

MARK	DATE	DESCRIPTION
4	8/15/24	PERMIT REVISION
3	8/01/24	PERMIT REVISION
2	5/17/24	PERMIT REVISION
1	2/20/24	FFE/PERMIT REVISION

REVISIONS	
PROJECT NO:	K98.002.001
DATE:	OCTOBER 2023
DRAWN BY:	M. MARCHEWKA
DESIGNED BY:	M. MARCHEWKA
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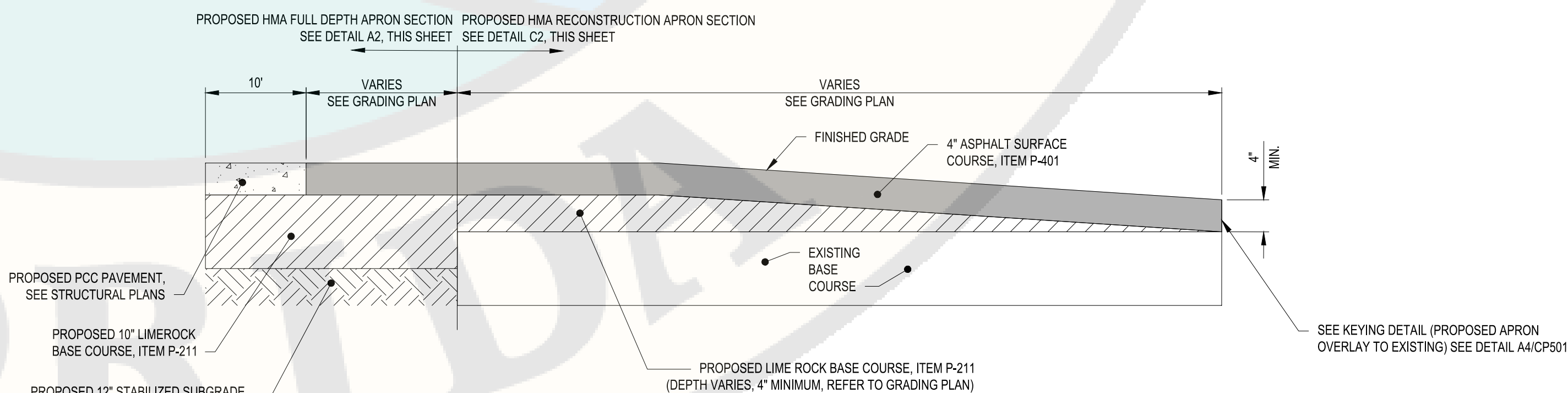
GEOMETRY PLAN

CS101

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**B-2023-049030-0000**

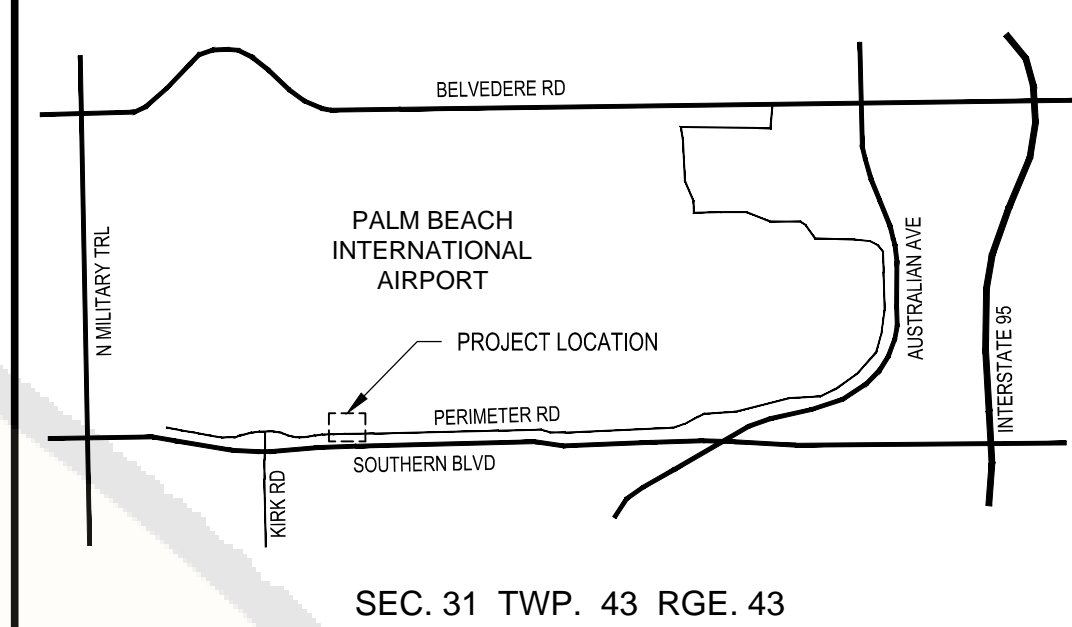


# CS301



Reviewer	Agency	Date
Stark, Vincent E	Zoning Reviewer	08/30/2024
Walker, James J	Fire Reviewer	08/29/2024
Smith, Keri A	ERM Reviewer	09/30/2024
ePZB Approval Data		

B-2023-049030-0000

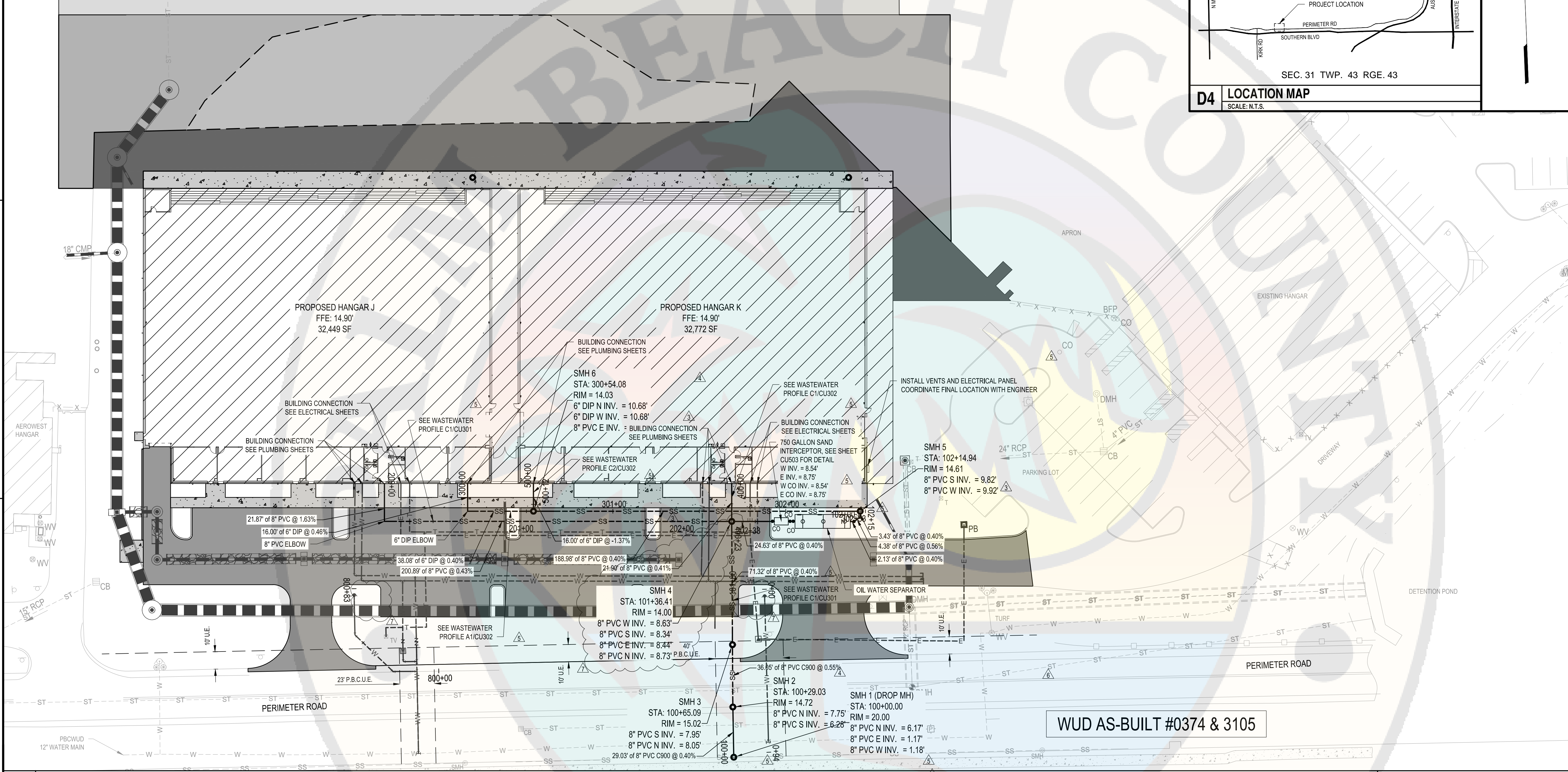


**D4 LOCATION MAP**  
SCALE: N.T.S.

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ATLANTIC AVIATION FLORIDA, INC.  
PBI HANGARS - PHASE 1



**B1 WASTEWATER PLAN**  
SCALE: 1" = 30'

- NOTES:**
- REFER TO SHEET CK101 FOR THE PROPOSED DRAINAGE PLAN.
  - ALL PROPOSED DOMESTIC, IRRIGATION, AND FIRE LINES ARE PRIVATELY OWNED AND MAINTAINED BY OWNER. CONTRACTOR SHALL CONSTRUCT PER PALM BEACH COUNTY WATER UTILITIES DEPARTMENT (PBCWUD) DETAILS AND STANDARDS. REFER TO SHEETS CW501 TO CW505 FOR REFERENCES TO THE POTABLE WATER STANDARD DETAILS.
  - ALL PROPOSED SANITARY SEWER PIPES AND MANHOLES ARE PRIVATELY OWNED AND MAINTAINED BY THE OWNER. CONTRACTOR SHALL CONSTRUCT PER PBCWUD DETAILS AND STANDARDS. REFER TO SHEETS CU503 TO CU507 FOR REFERENCES TO THE WASTEWATER STANDARD DETAILS.
  - CONTRACTOR TO FIELD VERIFY CONNECTION POINTS TO THE EXISTING WATER AND SANITARY SYSTEM.
  - CONTRACTOR TO FOLLOW THE PBCWUD STANDARDS REQUIREMENTS, INCLUDING ALL TESTING AND INSPECTIONS, FOR ALL CONNECTIONS TO THE EXISTING WATER AND SANITARY SYSTEM.
  - SEE WASTE WATER PROFILES SHEETS CU301 AND CU302 FOR ADDITIONAL INFORMATION ON STRUCTURE ELEVATIONS, INVERTS AND UTILITY CROSSINGS.
  - SEE ELECTRICAL SHEETS FOR ELECTRICAL AND TELECOM UTILITIES.
  - WM CROSSING WASTEWATER, STORM AND/OR RECLAIM WATER PIPES LESS THAN 12" VER SEP SHALL HAVE NO JOINT WITHIN 10' OF CROSSING BY EITHER PIPE TYPE.
- RECORD DRAWING NOTES:**
- RECORD DRAWINGS SHALL BE PREPARED IN THE STATE PLANE COORDINATE SYSTEM.
  - ALL UTILITY FEATURES SHALL BE SHOWN IN THEIR AS-BUILT LOCATION.
  - STATE PLANE COORDINATES SHALL BE DISPLAYED ON RECORD DRAWINGS FOR ALL FEATURES SPECIFIED IN PBCWUD STANDARDS.
- GENERAL WATER NOTES:**
- ALL WATER MAIN DUCTILE IRON PIPE AND PIPE FITTINGS SHALL BE PAINTED WITH A 4" WIDE CONTINUOUS BLUE LINE THAT RUNS PARALLEL TO THE AXIS OF THE PIPE AND IS LOCATED ALONG THE TOP OF THE PIPE.
  - ALL WATER MAINS SHALL BE MARKED WITH ONE CONTINUOUS STRIP OF 6" WIDE MAGNETIC BLUE CODED TAPE IMPRINTED WITH ONE AND A HALF (1 1/2) INCH HIGH LETTERING READING "CAUTION - WATER LINE BELOW" AND LOCATED APPROXIMATELY TWELVE (12) INCHES ABOVE THE CROWN OF THE PIPE. THE WORDING SHALL OCCUR EVERY THREE (3) FEET.
  - ALL WATER SERVICE BRASS FITTINGS ARE REQUIRED TO BE LEAD FREE.
  - EXISTING 2" WATER METER (ACCT. #100000989 - SERIAL 50088844766) IS TO BE REMOVED BY PBCWUD PERSONNEL ONLY.
- GENERAL SEWER NOTE:**
- ON-SITE SEWER LATERALS, GRAVITY SEWR MAIN AND MANHOLES UP TO THE NEW MANHOLE #SMH3 ARE PRIVATELY OWNED AND MAINTAINED.
  - SEWER CLEANOUT MINI-MANHOLES ARE REQUIRED ON ALL CLEANOUTS WITHIN PAVEMENT AREAS.
  - PVC ASTM 3034 SDR 26 WITH PVC SDR 35 FITTINGS AND PVC C900 ARE ACCEPTABLE PIPE MATERIAL FOR GRAVITY WASTEWATER LINES.
- GENERAL LANDSCAPE NOTE:**
- IF ANY NEW LANDSCAPE MATERIALS ARE INSTALLED AS PART OF THIS PROJECT THEN SOD ONLY WITH NO SHRUBS AND/OR TREES ARE TO BE INSTALLED WITHIN 5' OF ANY WATER METER AND WITHIN 7.5' OF ANY FIRE HYDRANT. TREES CANNOT BE INSTALLED WITHIN 10' OF ANY WUD WATER MAIN WITHOUT PRIOR PBCWUD APPROVAL AND THE INSTALLATION OF A ROOT BARRIER. IF ANY EXISTING TREE IS LESS THAN 10' MINIMUM OF ANY NEW WATER MAIN A ROOT BARRIER IS REQUIRED TO BE INSTALLED OR TREE RELOCATED/REMOVED.
- DECLARATION OF EASEMENT (PBCUE)**  
RECORDED IN:  
ORB: \_\_\_\_\_, PA: \_\_\_\_\_
- WUD #24-513**

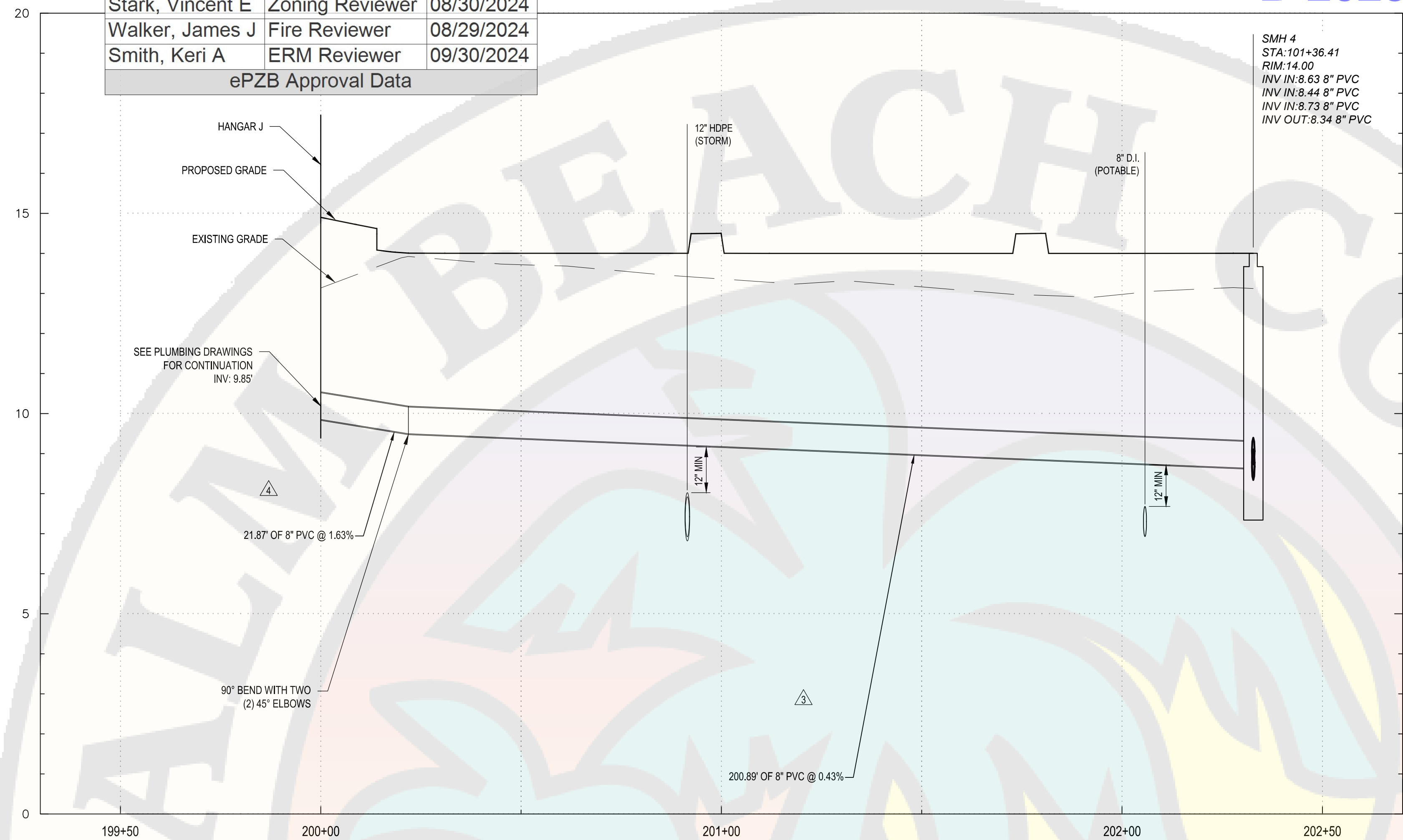
**A1 SHEET NOTES**  
SCALE: NOT TO SCALE

**WASTEWATER PLAN**

**CU101**

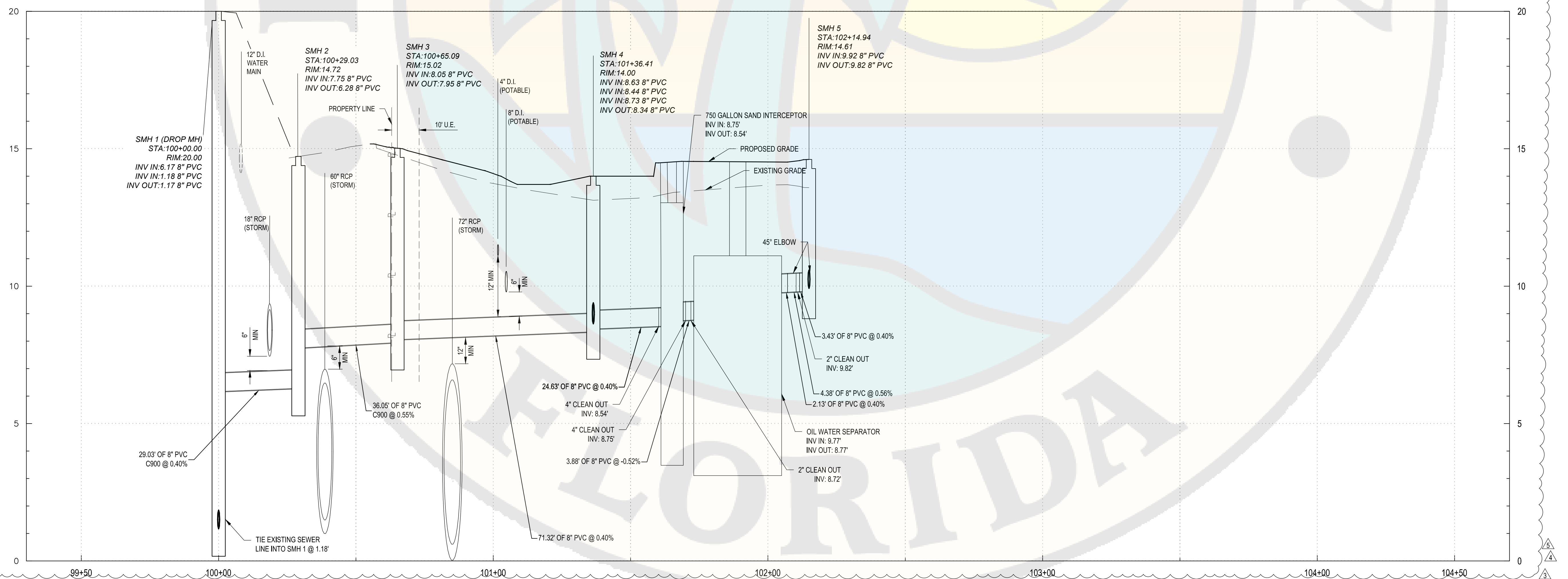


Reviewer	Agency	Date
Stark, Vincent E	Zoning Reviewer	08/30/2024
Walker, James J	Fire Reviewer	08/29/2024
Smith, Keri A	ERM Reviewer	09/30/2024
ePZB Approval Data		



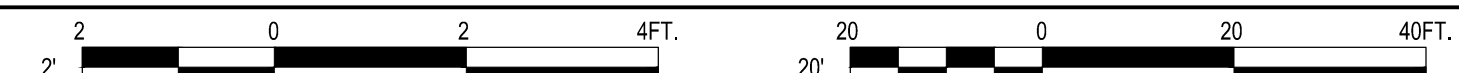
C1	WASTEWATER PROFILE
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SCALE: H: 1" = 20', V: 1" = 2'



<b>A1</b>	<b>WASTEWATER PROFILE</b>
-----------	---------------------------

SCALE: H: 1" = 20', V: 1" = 2'



**C&S Engineers, Inc.**  
605 E. Robinson Street, Suite 210  
Orlando, FL 32801  
Phone: 407-422-1118  
Fax: 407-841-9179  
FL. L.B. No. 7513  
COA No. 7602  
[www.cscos.com](http://www.cscos.com)



**PALM BEACH, FLORIDA**

ATLANTIC AVIATION FLORIDA, INC.

# PBI HANGARS - PHASE 1

**PALM BEACH INTERNATIONAL AIRPORT**

5	8/01/24	PERMIT REVISION
4	5/28/24	PERMIT REVISION
3	5/17/24	PERMIT REVISION
2	1/15/24	PERMIT REVISION
1	2/20/24	FFE/ PERMIT REVISION
MARK	DATE	DESCRIPTION

REVISIONS	
PROJECT NO:	K98.002.001
DATE:	OCTOBER 2023
DRAWN BY:	M. MARCHEWKA
DESIGNED BY:	M. MARCHEWKA
CHECKED BY:	D.R. SAUNDERS

CONTRACTOR SHALL VERIFY ALL CONDITIONS ON  
JOB SITE & NOTIFY THE OWNER OF ANY VARIATIONS  
FROM DIMENSIONS SHOWN ON THESE DRAWINGS  
BEFORE PROCEEDING WITH ANY CONSTRUCTION

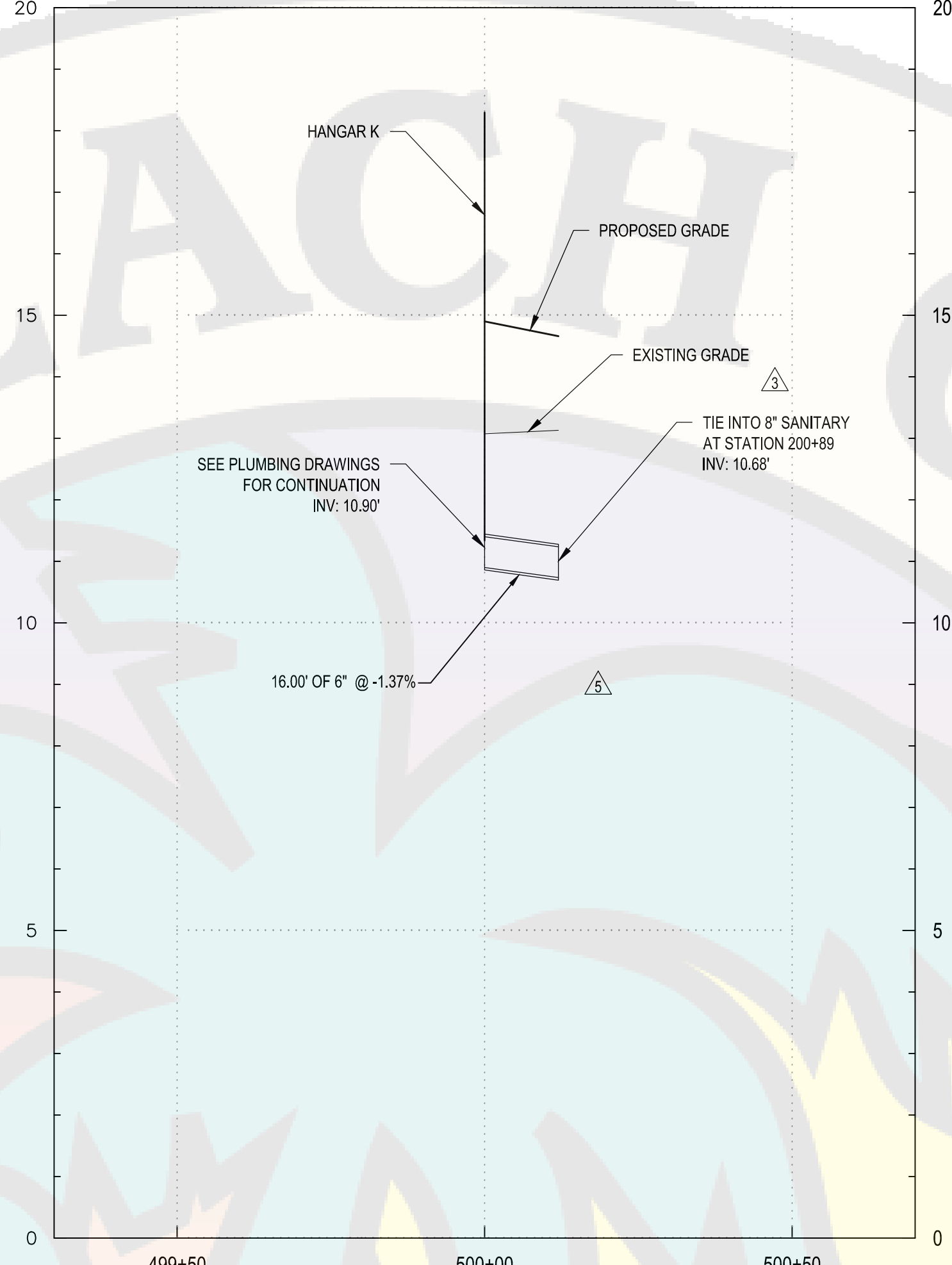
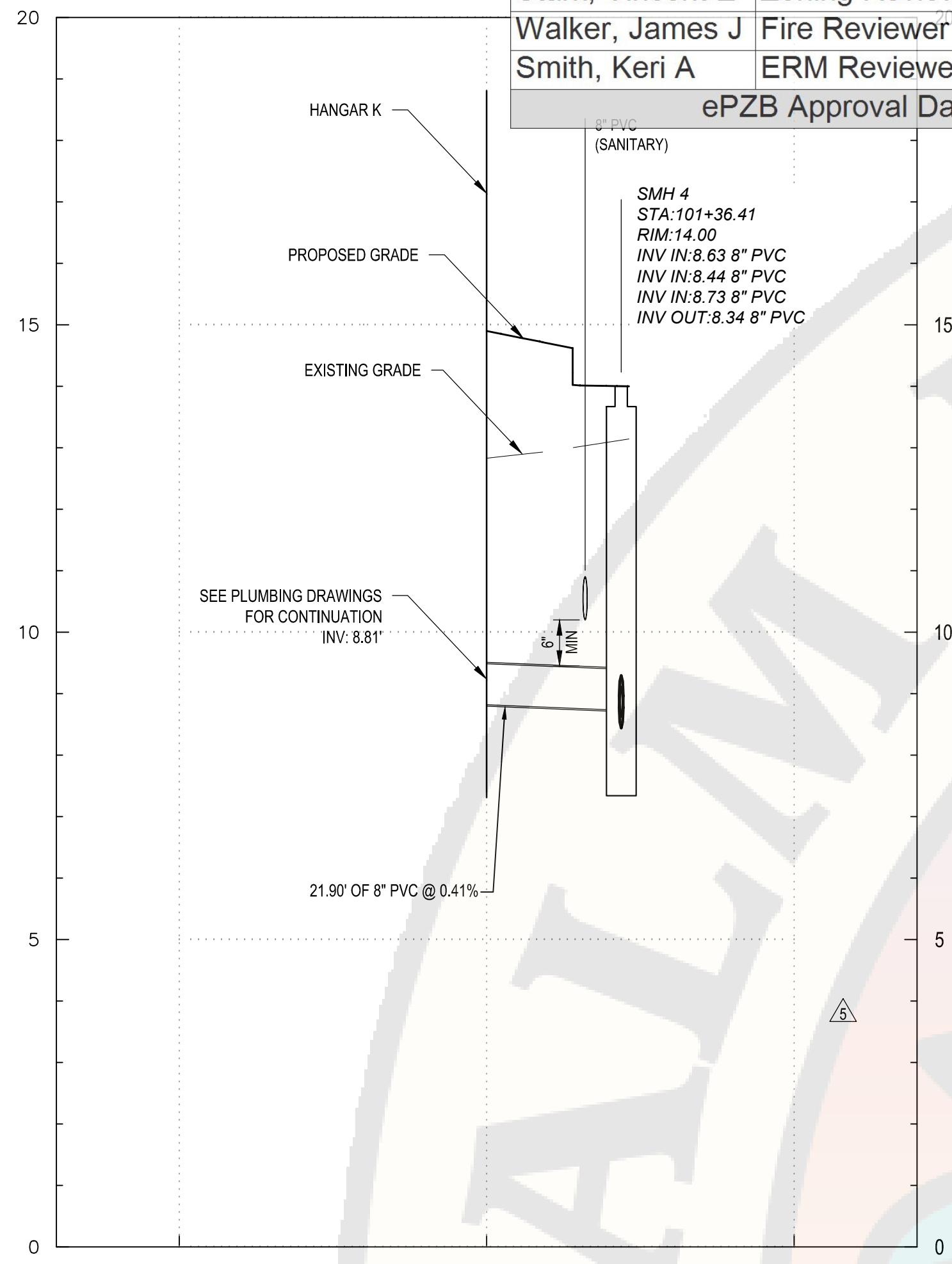
## WASTEWATER PROFILES

# CU301



August 1, 2024 - 10:17AM  
F:\Project\Y98 - Atlantic Aviation\Y98020201 - PBI Hangars - PH 2\Design\CADD\Sheet Files\Y98020201\_CW-PROFILES.dwg

Reviewer	Agency	Date
Stark, Vincent E	Zoning Reviewer	08/30/2024
Walker, James J	Fire Reviewer	08/29/2024
Smith, Keri A	ERM Reviewer	09/30/2024
ePZB Approval Data		



STRUCTURE TABLE					
STRUCTURE NAME:	DETAILS:	PIPES IN:	PIPES OUT:	NORTHING:	EASTING:
SMH 1 (DROP MH)	48" RIM = 20.00 SUMP = 0.7 INV IN = 6.17 8" PVC INV IN (N) = 6.17 8" PVC INV IN (W) = 1.18 INV OUT = 1.17	8" PVC INV IN (N) = 6.17 8" PVC INV IN (W) = 1.18	8" PVC INV OUT (E) = 1.17	853042.9207	950431.5479
SMH 2	48" RIM = 14.72 SUMP = 5.8 INV IN = 7.75 8" PVC INV IN (N) = 7.75 INV OUT = 6.28	8" PVC INV IN (N) = 7.75	8" PVC INV OUT (S) = 6.28	853071.9461	950432.2045
SMH 3	48" RIM = 15.02 SUMP = 7.4 INV IN = 8.05 8" PVC INV IN (N) = 8.05 INV OUT = 7.95	8" PVC INV IN (N) = 8.05	8" PVC INV OUT (S) = 7.95	853107.9776	950435.4772
SMH 4	48" RIM = 14.00 SUMP = 7.8 INV IN = 8.63 8" PVC INV IN (W) = 8.63 INV IN = 8.44 8" PVC INV IN (E) = 8.44 INV IN = 8.73 8" PVC INV IN (N) = 8.73 INV OUT = 8.34	8" PVC INV IN (W) = 8.63 8" PVC INV IN (E) = 8.44 8" PVC INV IN (N) = 8.73	8" PVC INV OUT (S) = 8.34	853179.2485	950435.9948
SMH 5	48" RIM = 14.61 SUMP = 9.3 INV IN = 9.92 8" PVC INV IN (W) = 9.92 INV OUT = 9.82	8" PVC INV IN (W) = 9.92	8" PVC INV OUT (S) = 9.82	853182.0523	950510.4667
SMH 6	48" RIM = 14.03 SUMP = 10.7 INV IN = 10.68 6" INV IN (W) = 10.68 INV OUT = 10.68 8" PVC INV OUT (N) = 10.68 8" PVC INV OUT (E) = 10.68	6" INV IN (W) = 10.68	6" INV OUT (N) = 10.68 8" PVC INV OUT (E) = 10.68	853189.8649	950321.6461

C1 WASTEWATER PROFILE

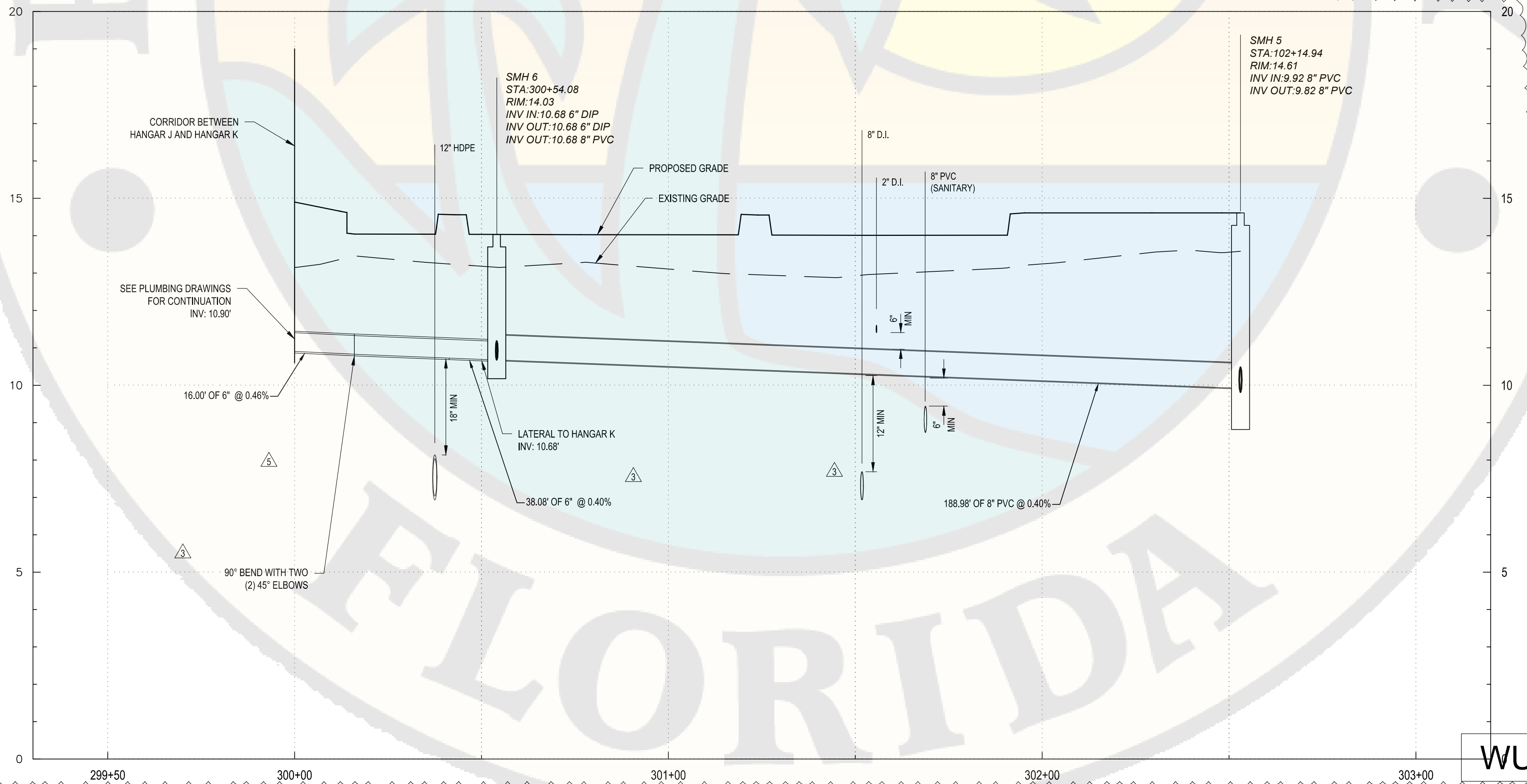
SCALE: H: 1" = 20', V: 1" = 2'

C2 WASTEWATER PROFILE

SCALE: H: 1" = 20', V: 1" = 2'

C4 WASTEWATER STRUCTURE TABLE

SCALE: N.T.S.



A1 WASTEWATER PROFILE

SCALE: H: 1" = 20', V: 1" = 2'

WUD #24-513

**C&S**  
COMPANIES

C&S Engineers, Inc.  
605 E. Robinson Street, Suite 210  
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Fax: 407-841-9179  
FL. L.B. No. 7513  
COA No. 7602  
www.cscos.com



PALM BEACH FLORIDA

ATLANTIC AVIATION FLORIDA, INC.  
PBI HANGARS - PHASE 1

PALM BEACH INTERNATIONAL AIRPORT

MARK	DATE	DESCRIPTION
Δ	8/01/24	PERMIT REVISION
Δ	6/28/24	PERMIT REVISION
Δ	5/29/24	PERMIT REVISION
Δ	5/17/24	PERMIT REVISION
Δ	1/15/24	PERMIT REVISION

REVISIONS	
PROJECT NO:	K98.002.001
DATE:	OCTOBER 2023
DRAWN BY:	M. MARCHEWKA
DESIGNED BY:	M. MARCHEWKA
CHECKED BY:	D.R. SAUNDERS

CONTRACTOR SHALL VERIFY ALL CONDITIONS ON JOB SITE & NOTIFY THE OWNER OF ANY VARIATIONS FROM DIMENSIONS SHOWN ON THESE DRAWINGS BEFORE PROCEEDING WITH ANY CONSTRUCTION

WASTEWATER  
PROFILES

CU302



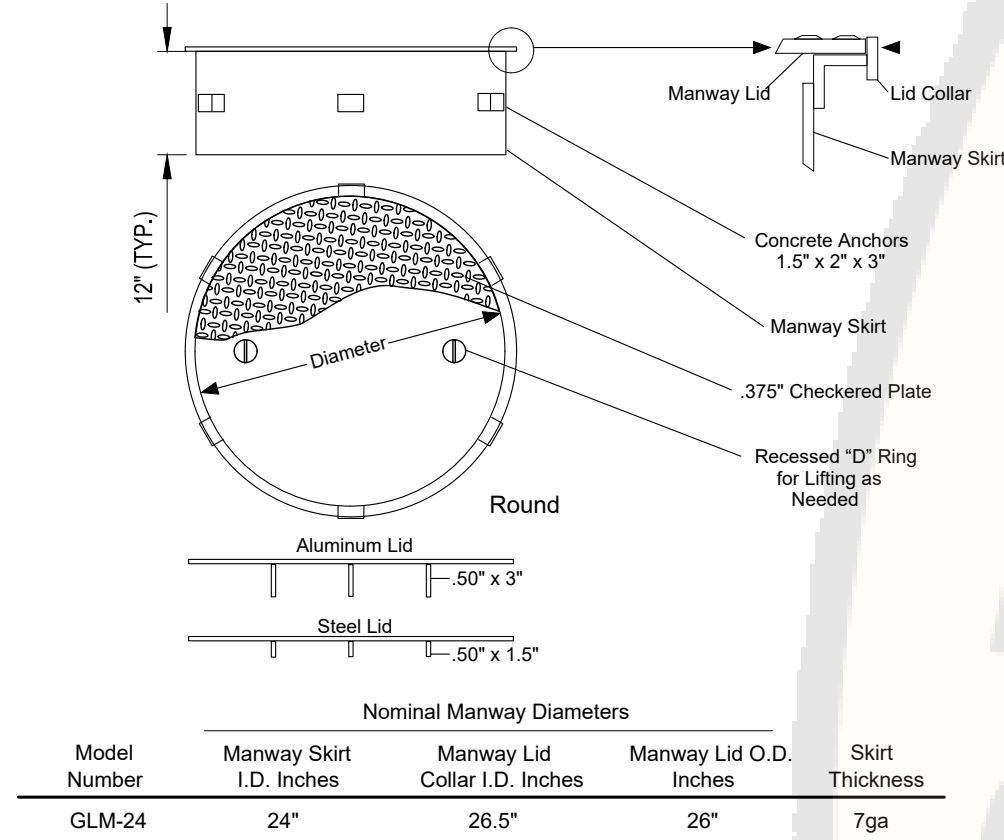
May 17, 2024 - 10:34AM  
F:\Project\938 - Atlantic Aviation\93802001 - PBI Hangars - PH 2\Design\CADD\Sheet Files\93802001\_CU-DETAILS.dwg

NOTES:

1. PIPING SHALL BE MOUNTED VERTICALLY ON HANGAR WALL WITH VENT CAPS TERMINATING A MINIMUM OF 5' ABOVE HANGAR OPENINGS AND 12' ABOVE GRADE. UNDERGROUND PIPING MUST SLOPE TOWARDS OIL WATER SEPARATOR. EXTEND VENTS ABOVE FINISHED GRADE WITH 2 INCH. GALVANIZED STEEL PIPE PAINTED TO MATCH COLOR OF BUILDING. PIPING UNDERGROUND MAY BE PVC. MANIFOLD THE THREE MAINWAYS TOGETHER AND SEPARATE VENTS FOR THE INLET AND OUTLET PIPE.
2. ELECTRICAL PANEL SHALL BE MOUNTED ON HANGAR WALL 5 FT ABOVE FINISHED GRADE.
3. COORDINATE THE LENGTH OF RISER PIPES AND INTEGRAL MAINWAY EXTENSIONS WITH THE OIL WATER SEPARATOR MANUFACTURER.
4. CONCRETE BEDMAN SYSTEM SHOULD BE USED WITH MIN. 2 STRAPS PER MANUFACTURER.
5. REFER TO PREVIOUS MINIMUM DESIGN STANDARDS, SECTION 3 - WASTEWATER SYSTEM, FOR SAND INTERCEPTOR AND OIL WATER SEPARATOR REQUIREMENTS.

Reviewer	Agency	Date
Stark, Vincent E	Zoning Reviewer	08/30/2024
Walker, James J	Fire Reviewer	08/29/2024
Smith, Keri A	ERM Reviewer	09/30/2024

ePZB Approval Data



GENERAL SPECIFICATIONS			
NO. REQ'D: (1)			
CAPACITY: 10000 GALLONS			
TYPE: HTC-G, HIGHGUARD, DW TYPE I 360			
MATERIAL: MILD CARBON STEEL			
FLOW RATE: 1000 GPM			
GAUGE: BASED ON 60" MAX BURIAL			
SHELL-		INNER	OUTER
HEADS-		1/4"	10 GA.
SURFACE PREP:		1/4"	7 GA.
SSPC NO.6 BLAST ALL EXTERIOR SURFACES			
SSPC NO.10 BLAST ALL INTERIOR SURFACES			
COATING:		MATERIAL	THICKNESS
EXTERIOR-		HIGHGUARD	(75 MILS)
INTERIOR-		CHEMLINE 4200 PW	(15 MILS)
CONSTRUCTION :			
LAP FIT & WELD ALL EXTERIOR SEAMS			
OPERATING PRESSURE : ATMOSPHERIC			

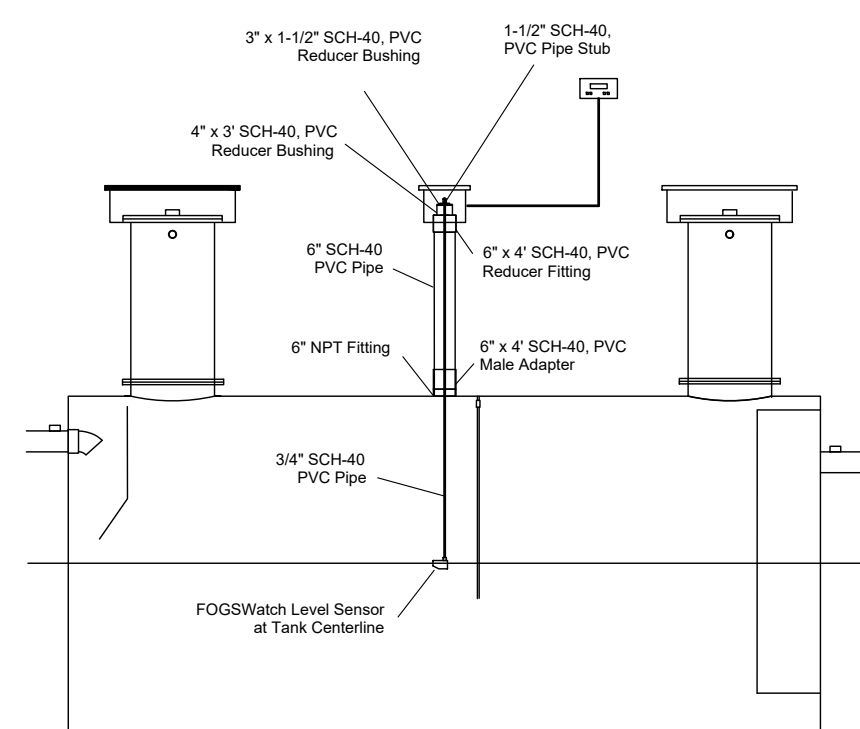
Sensing Fats, Oils, Grease & Solids

#### TRANSDUCER ASSEMBLY

##### FOGSwatch Component List

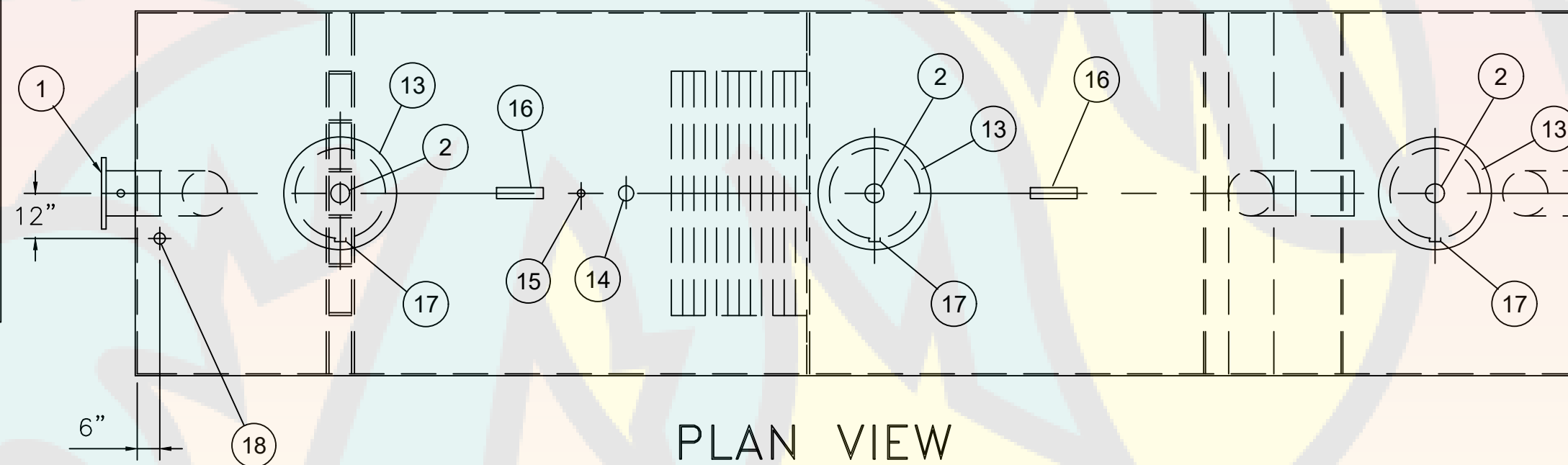
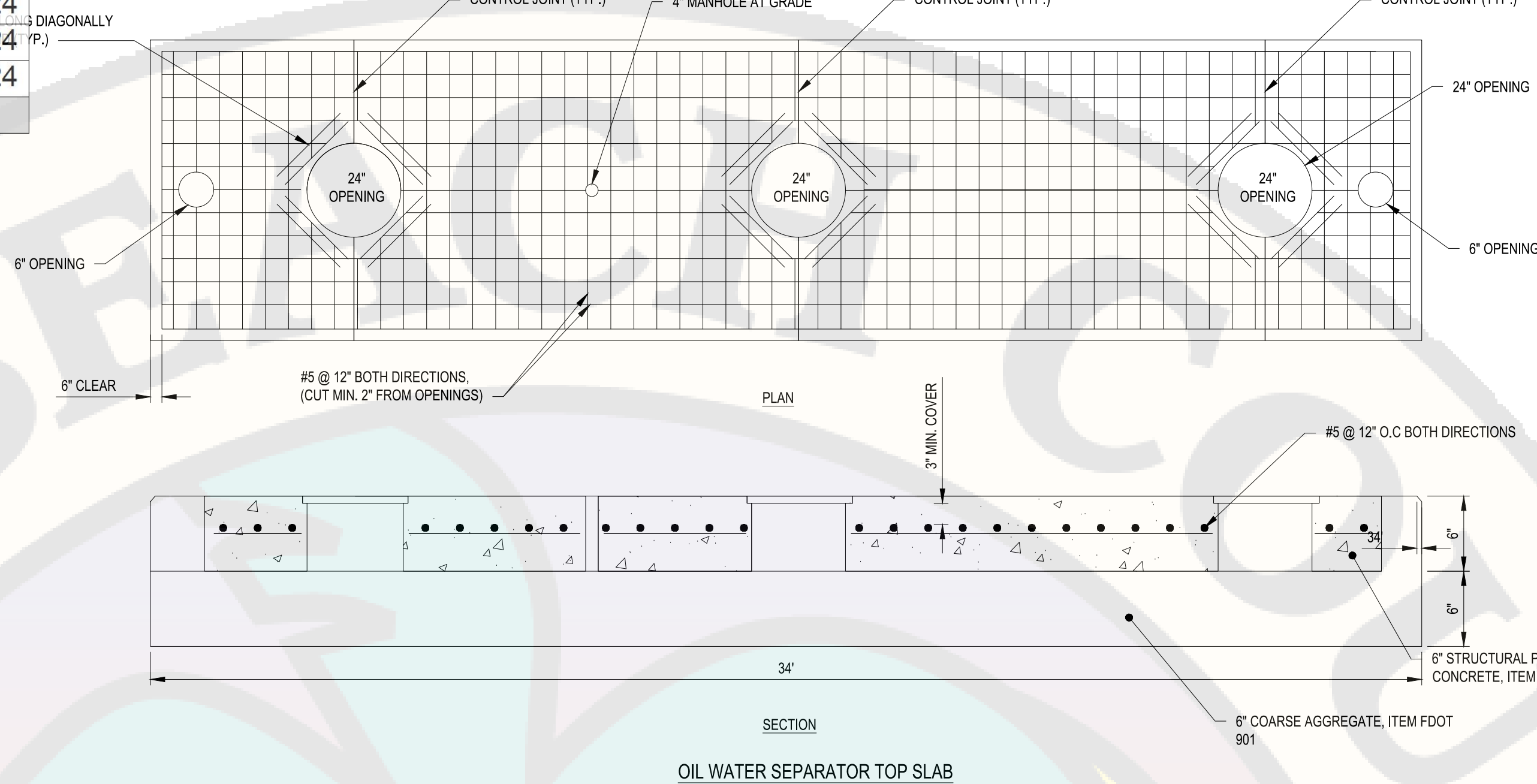
- (1) Transducer Assembly
- (1) Controller
- (1) PVC Top Cap
- (2) 3/4\"/>
- (1) PVC Sleeve,
- (1) 3/4\"/>
- (1) 100\"/>

#### FOGSwatch NPT INSTALL



CONTROL PANEL

NOTE:  
ALL RIGHTS RESERVED. THIS DRAWING OR ANY PART THEREOF MUST NOT BE REPRODUCED IN ANY FORM WITHOUT THE WRITTEN PERMISSION OF HIGHLAND TANK.  
HIGHLAND TANK SHALL BE RESPONSIBLE ONLY FOR ITEMS INDICATED ON THIS FABRICATION DRAWING UNLESS OTHERWISE NOTED. CUSTOMER IS RESPONSIBLE FOR VERIFYING CORRECTNESS OF SIZE / LOCATION OF FITTINGS, ACCESSORIES & COATINGS SHOWN ON THIS DRAWING



#### PROVIDED EQUIPMENT

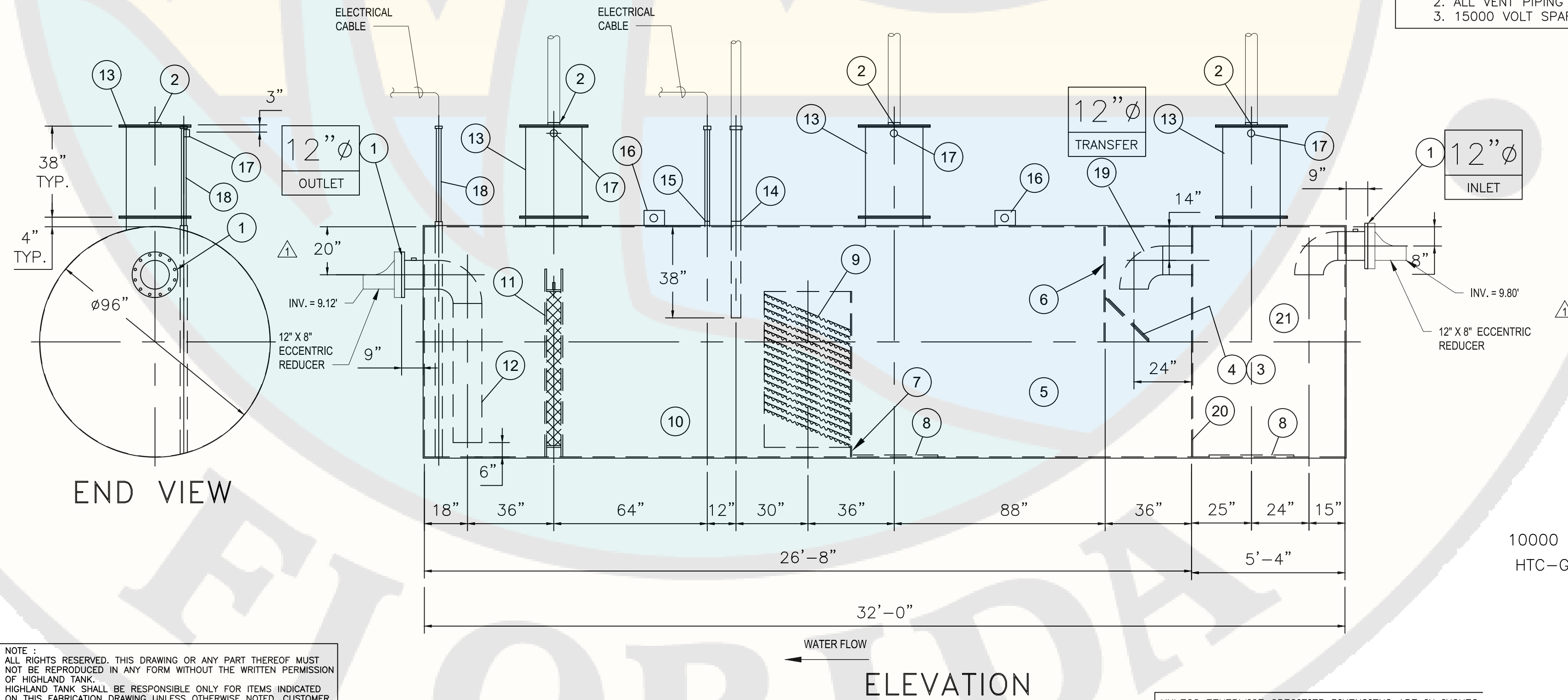
1. 150# R.F.S.O. FLANGE W/ 2\"/>
2. 4\"/>
3. VELOCITY HEAD DIFFUSION BAFFLE
4. WEAR PLATE
5. SEDIMENT CHAMBER
6. UNDERFLOW BAFFLE
7. SLUDGE BAFFLE
8. STRIKER PLATES
9. PARALLEL CORRUGATED PLATE COALESCER, CORELLA PVC PLATES (3\"/>
10. OIL/WATER SEPARATOR CHAMBER
11. 6\"/>
12. STEEL OUTLET DOWNCOMER
13. 24\"/>
14. 4\"/>
15. 2\"/>
16. LIFTING LUG
17. 2\"/>
18. 2\"/>
19. STEEL TRANSFER PIPING
20. 7 GA. BULKHEAD
21. SLUDGE CHAMBER

#### ANCILLARY PROVIDED EQUIPMENT

- (6) 24\"/>
- (6) SETS OF NUTS/BOLTS/WASHERS FOR 24\"/>

#### NOTES

1. POLYURETHANE HIGHGUARD TANK IS NOT APPROVED FOR THE STORAGE OF HEATED PRODUCTS
2. ALL VENT PIPING BY INSTALLER
3. 15000 VOLT SPARK TEST PROVIDED AT FACTORY



10000 GALLON OIL WATER SEPARATOR  
HTC-G, HIGHGUARD, DW TYPE I 360

10000HGDWHTCG

WUD #24-513



C&S Engineers, Inc.  
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COA No. 7602  
www.cscos.com



PALM BEACH FLORIDA

ATLANTIC AVIATION FLORIDA, INC.

PBI HANGARS - PHASE 1

PALM BEACH INTERNATIONAL AIRPORT

MARK	DATE	DESCRIPTION
Δ	6/28/24	PERMIT REVISION
Δ	2/20/24	FFE/PERMIT REVISION

#### REVISIONS

PROJECT NO:	K98.002.001
DATE:	OCTOBER 2023
DRAWN BY:	M. MARCHEWKA
DESIGNED BY:	M. MARCHEWKA
CHECKED BY:	D.R. SAUNDERS

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WASTEWATER  
DETAILS

CU502

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May 17, 2024 - 10:24AM  
F:\Project\Y88 - Atlantic Aviation\Y88020001 - PBI Hangars - PH 2\Design\CADD\Sheet Files\Y88020001\_CU-DETAILS.dwg

Reviewer	Agency	Date
Stark, Vincent E	Zoning Reviewer	08/30/2024
Walker, James J	Firm Reviewer	08/29/2024
Smith, Keri A	ERM Reviewer	09/30/2024
ePZB Approval Data		

B-2023-049030-0000

C&S  
COMPANIES

C&S Engineers, Inc.  
605 E. Robinson Street, Suite 210  
Orlando, FL 32801  
Phone: 407-422-1118  
Fax: 407-841-9179  
FL L.B. No. 7513  
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ATLANTIC

PALM BEACH, FLORIDA

ATLANTIC AVIATION FLORIDA, INC.

PBI HANGARS - PHASE 1

PALM BEACH INTERNATIONAL AIRPORT

NO.	DATE	REVISION / REMARKS
1	DEC 2023	GENERAL REVISION
2	JAN 2024	GENERAL REVISION

MARK	DATE	DESCRIPTION
1	5/17/24	PERMIT REVISION
2	2/20/24	FFET/PERMIT REVISION

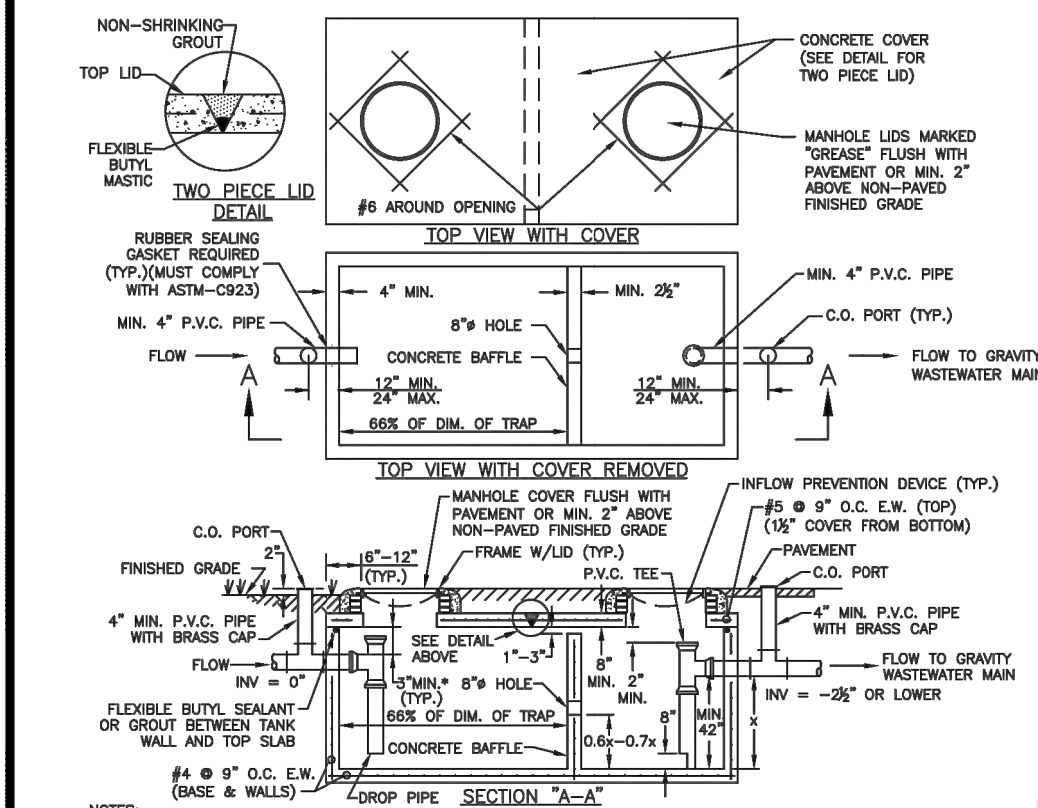
REVISIONS
PROJECT NO: K98.002.001
DATE: OCTOBER 2023
DRAWN BY: M. MARCHEWKA
DESIGNED BY: M. MARCHEWKA
CHECKED BY: D.R. SAUNDERS

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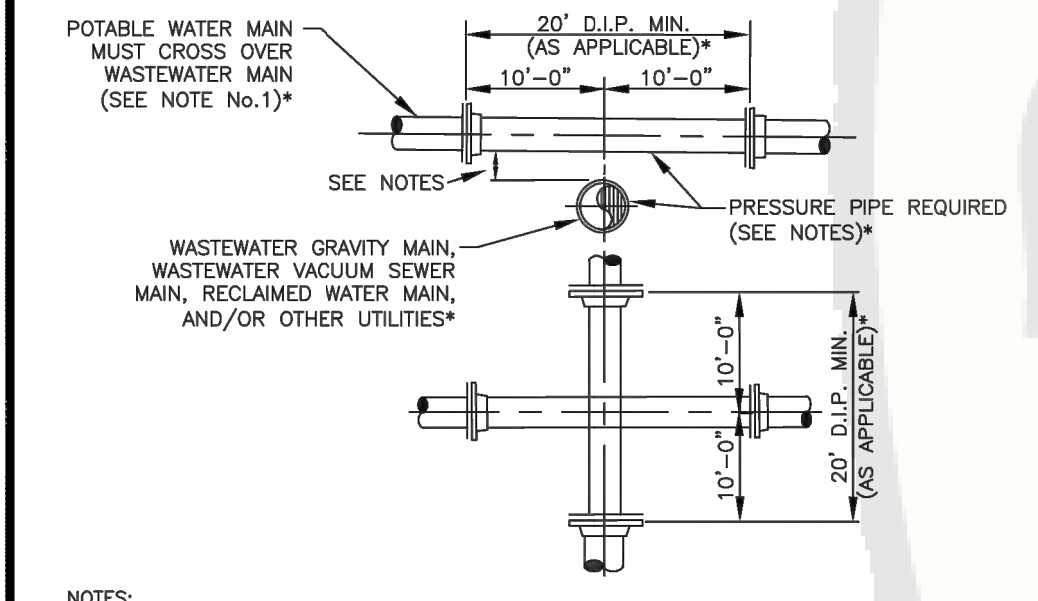
PBCWUD  
WASTEWATER  
DETAILS

CU503

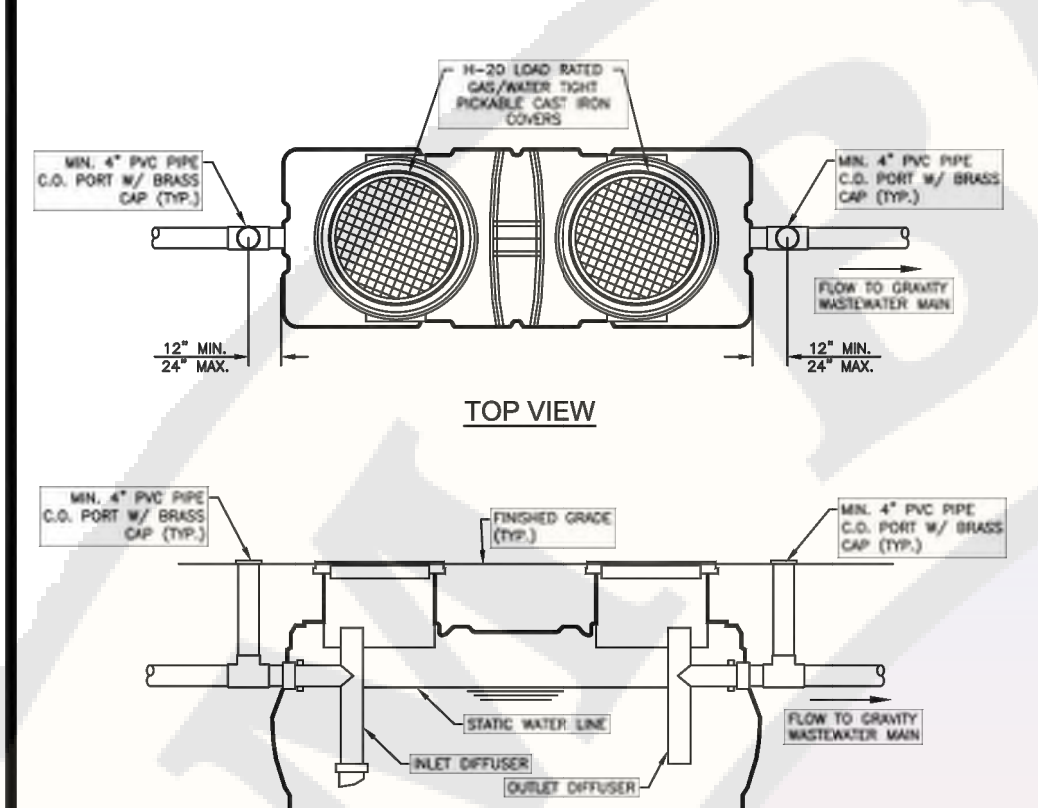
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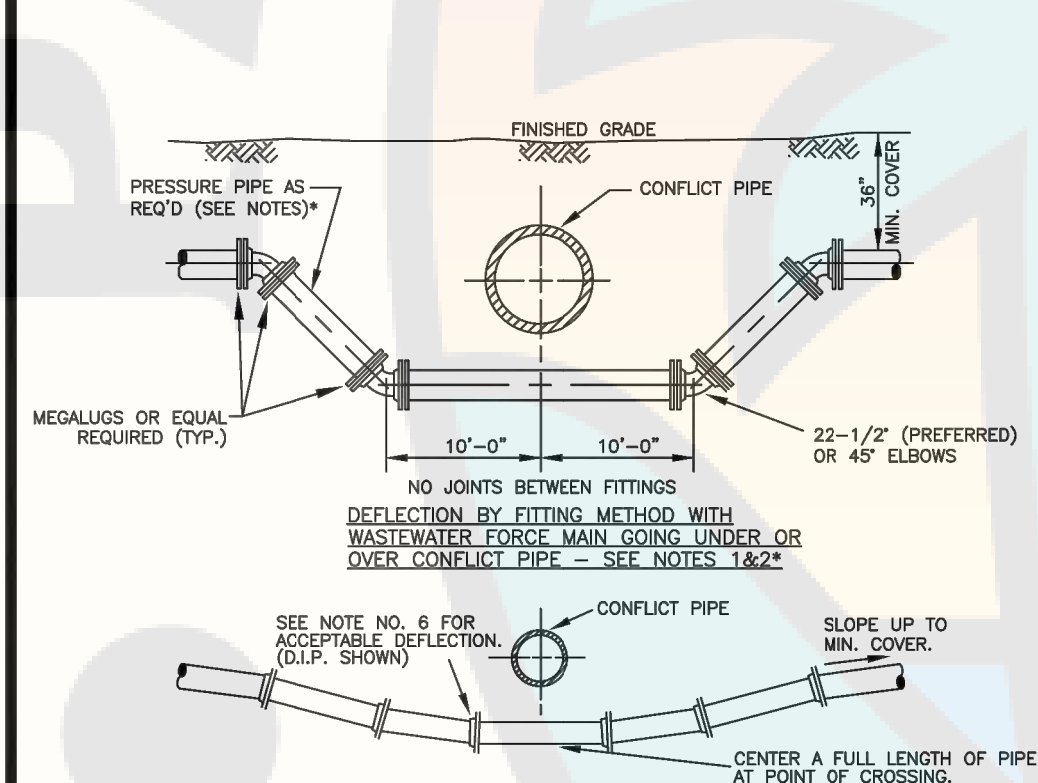
OIL / GREASE INTERCEPTOR  
CONCRETE STRUCTURE \* 1SA



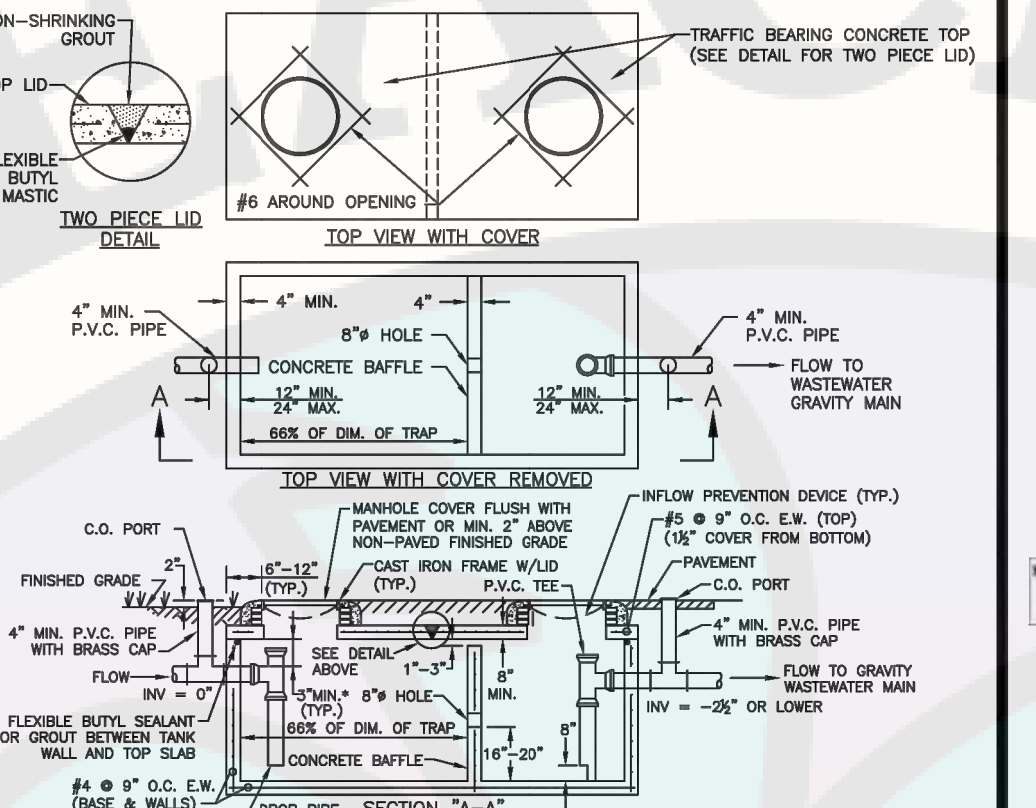
WASTEWATER MAIN CROSSING OTHER MAINS  
AND UTILITIES \* 4S



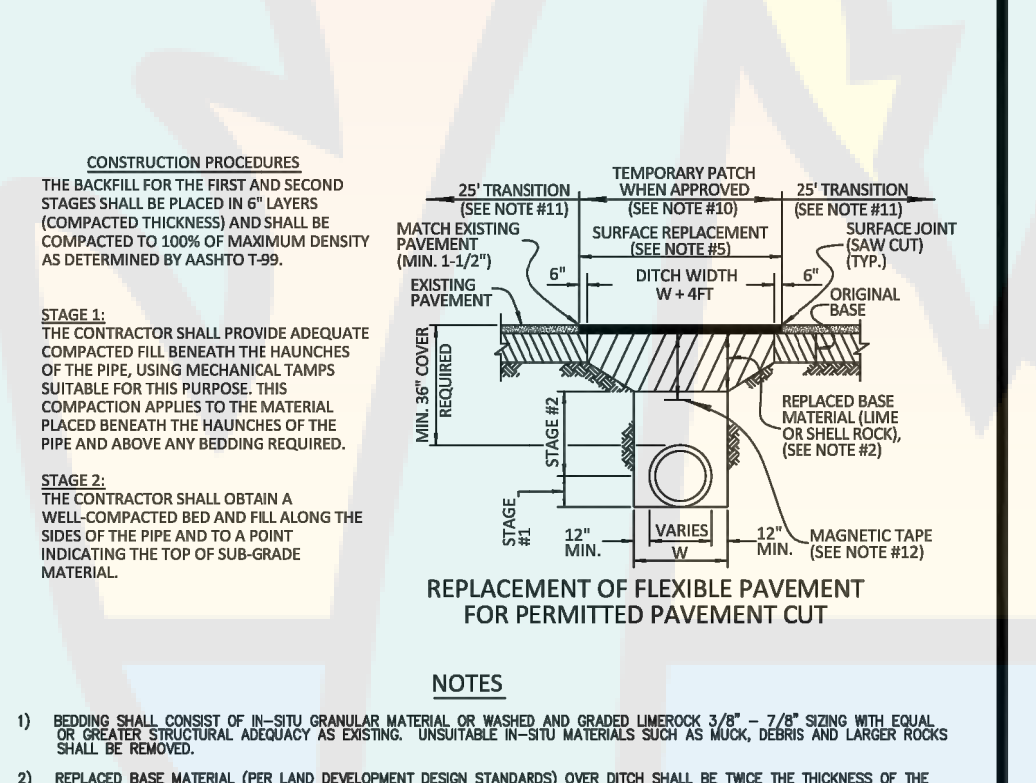
OIL / GREASE INTERCEPTOR  
FIBERGLASS STRUCTURE ONLY \* 1SB



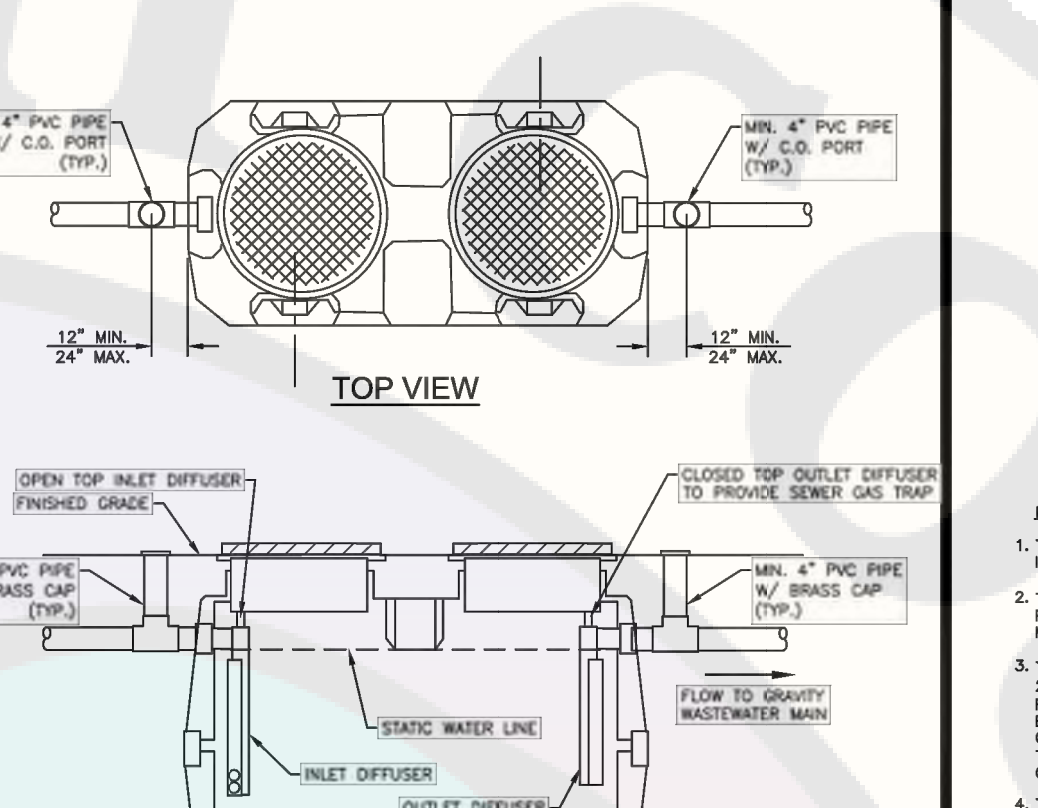
WASTEWATER MAIN CONFLICT  
DEFLECTION DETAIL \* 5S



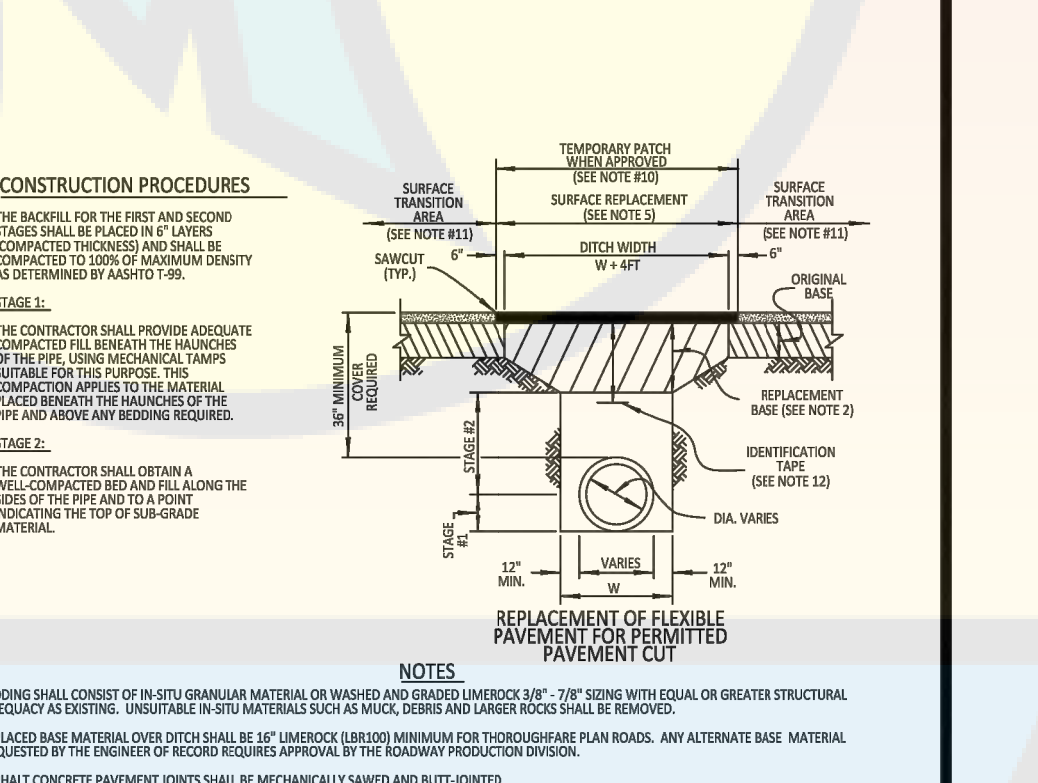
SAND / OIL INTERCEPTOR  
CONCRETE STRUCTURE \* 2SA



OPEN CUT PIPE INSTALLATION  
NON-THOROUGHFARE ROAD \* 6S



SAND / OIL INTERCEPTOR  
POLYETHYLENE/FIBERGLASS STRUCTURE ONLY \* 2SB



WASTEWATER #1  
STANDARD DETAILS

CONSULTANT:

DESIGNED BY: WUD

DRAWN BY: M. BUCKNER

CHECKED BY: J. LAMMERT

APPROVED BY: WUD

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CALL 48 HOURS BEFORE YOU DIG  
1-800-432-4770  
BUSHING HOLE PUNCHING  
UTILITIES NOTIFICATION CENTER

DESIGNED BY: WUD

DRAWN BY: M. BUCKNER

CHECKED BY: J. LAMMERT

APPROVED BY: WUD

Palmetto Beach County  
Water Utilities Department  
P.O. Box 16097  
West Palm Beach, FL 33416-6097

WUD PROJECT NO.  
24- 513

ATLANTIC AVIATION PBI  
HANGARS- PHASE 1

PALM BEACH COUNTY  
WATER UTILITIES DEPARTMENT  
P.O. BOX 16097  
WEST PALM BEACH, FL 33416  
(661)493-0000

NO.	DATE	REVISION / REMARKS
1	DEC 2023	GENERAL REVISION
2	JAN 2024	GENERAL REVISION

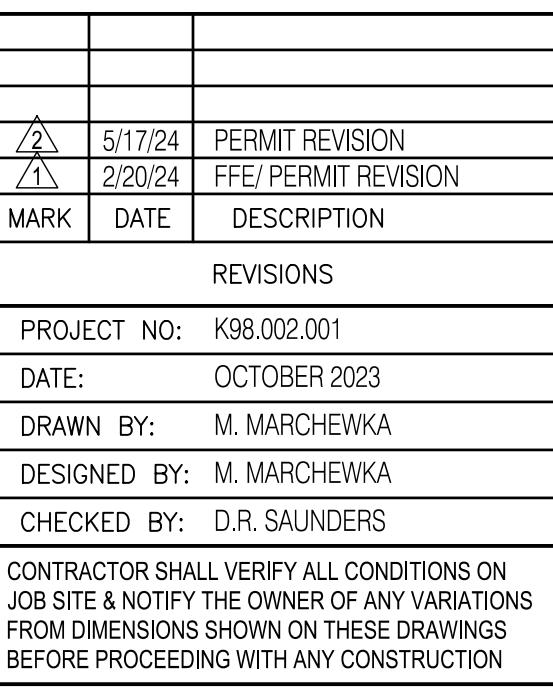
STD  
DETAILS

SHEET  
1  
OF  
6



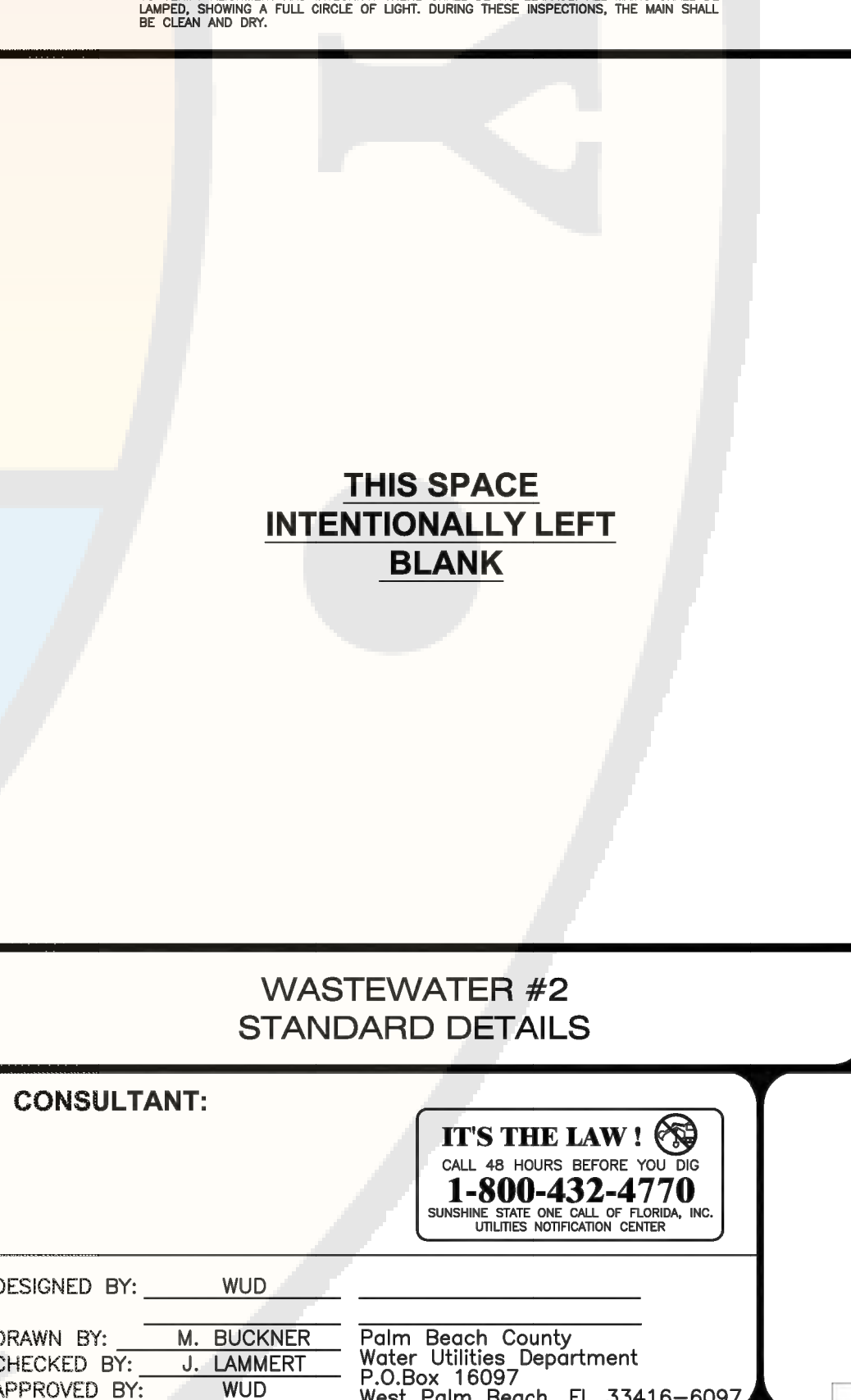
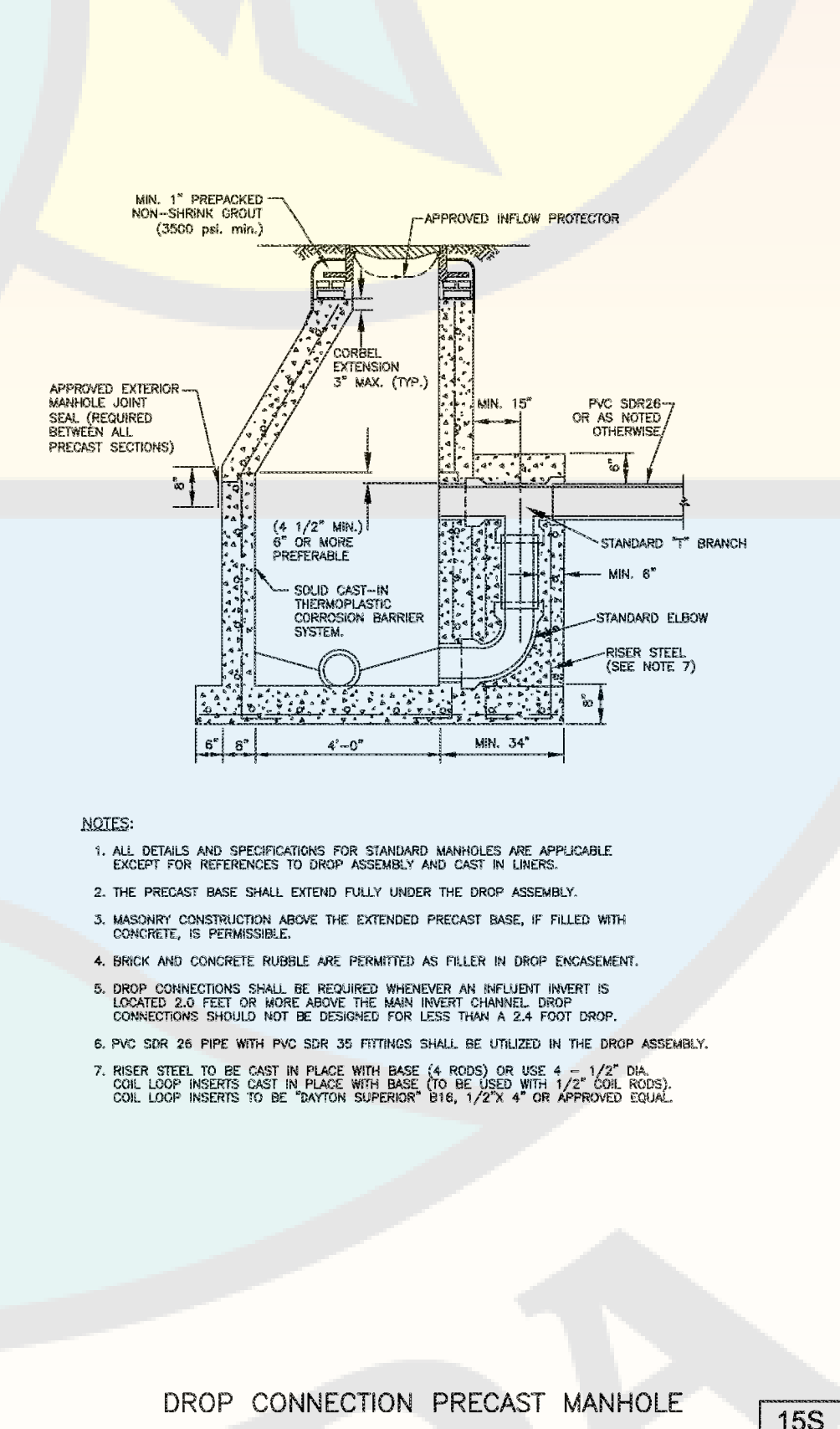
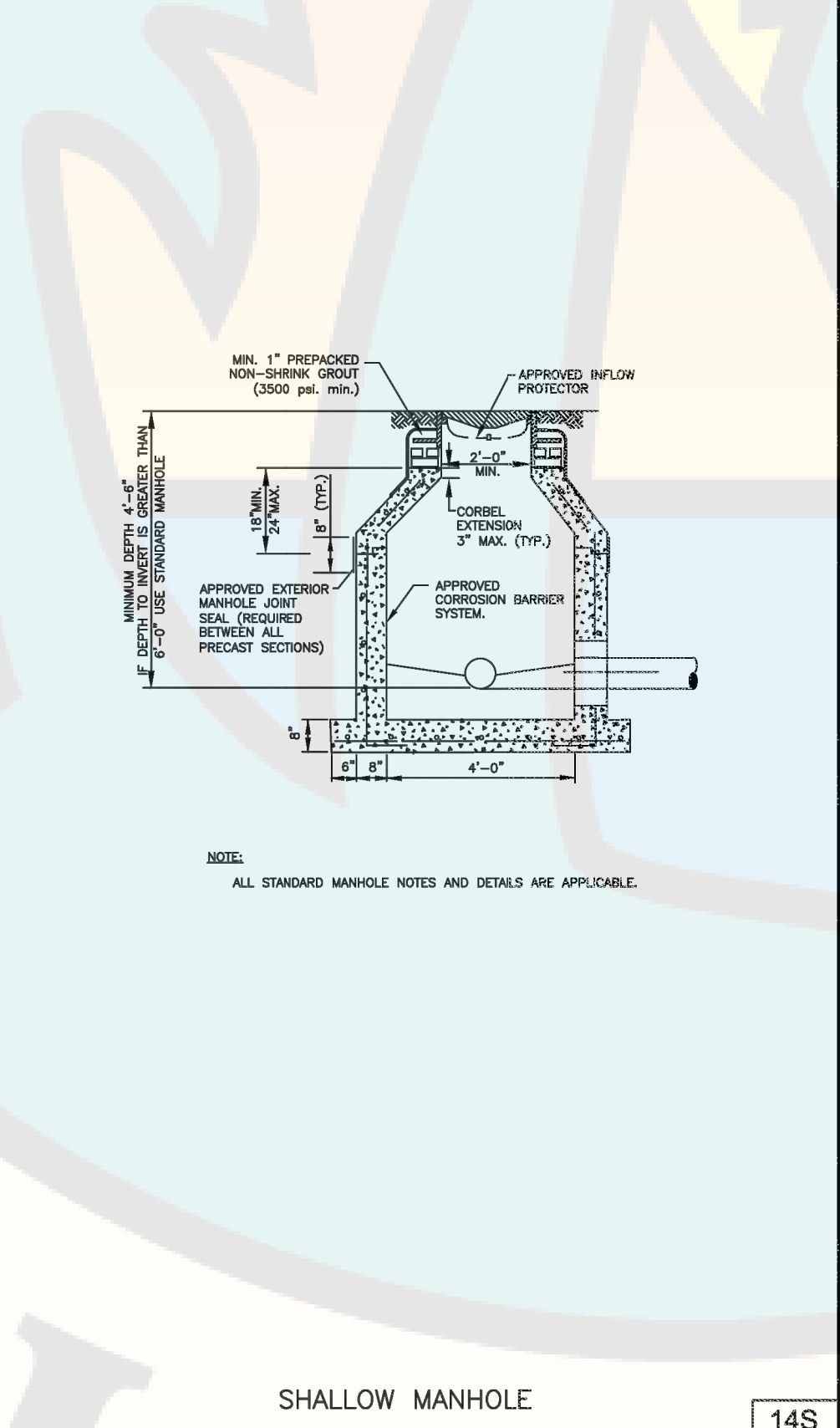
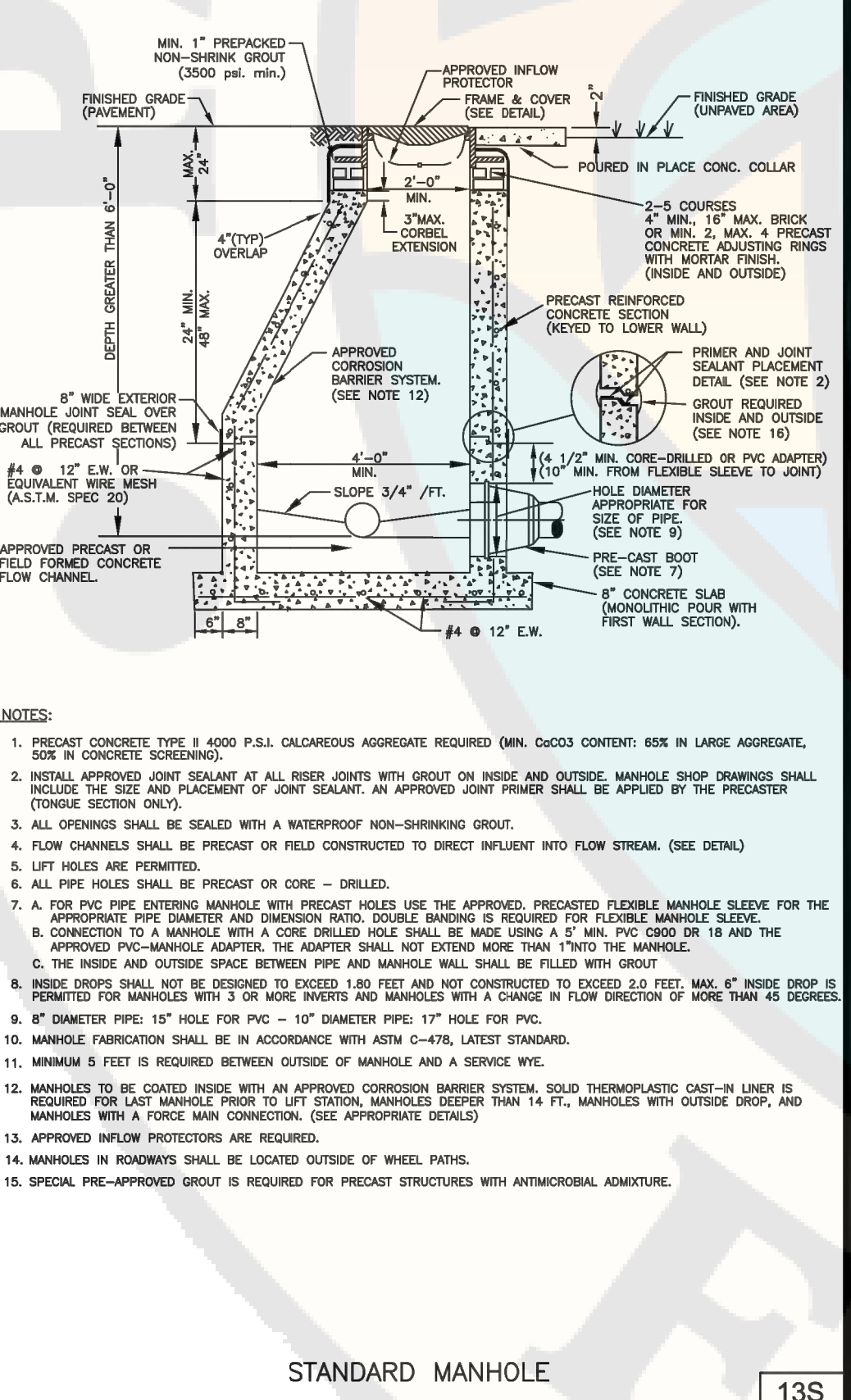
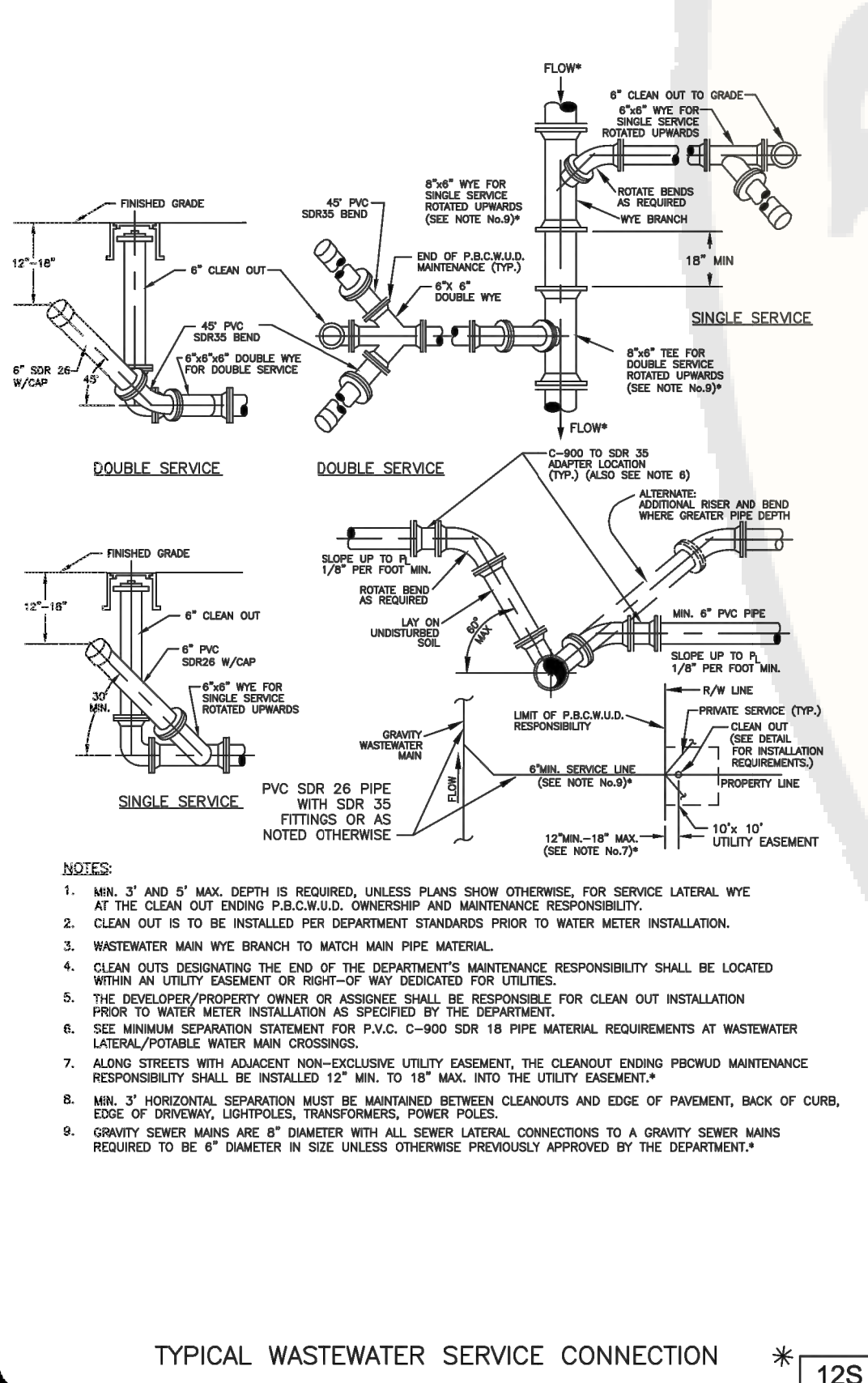
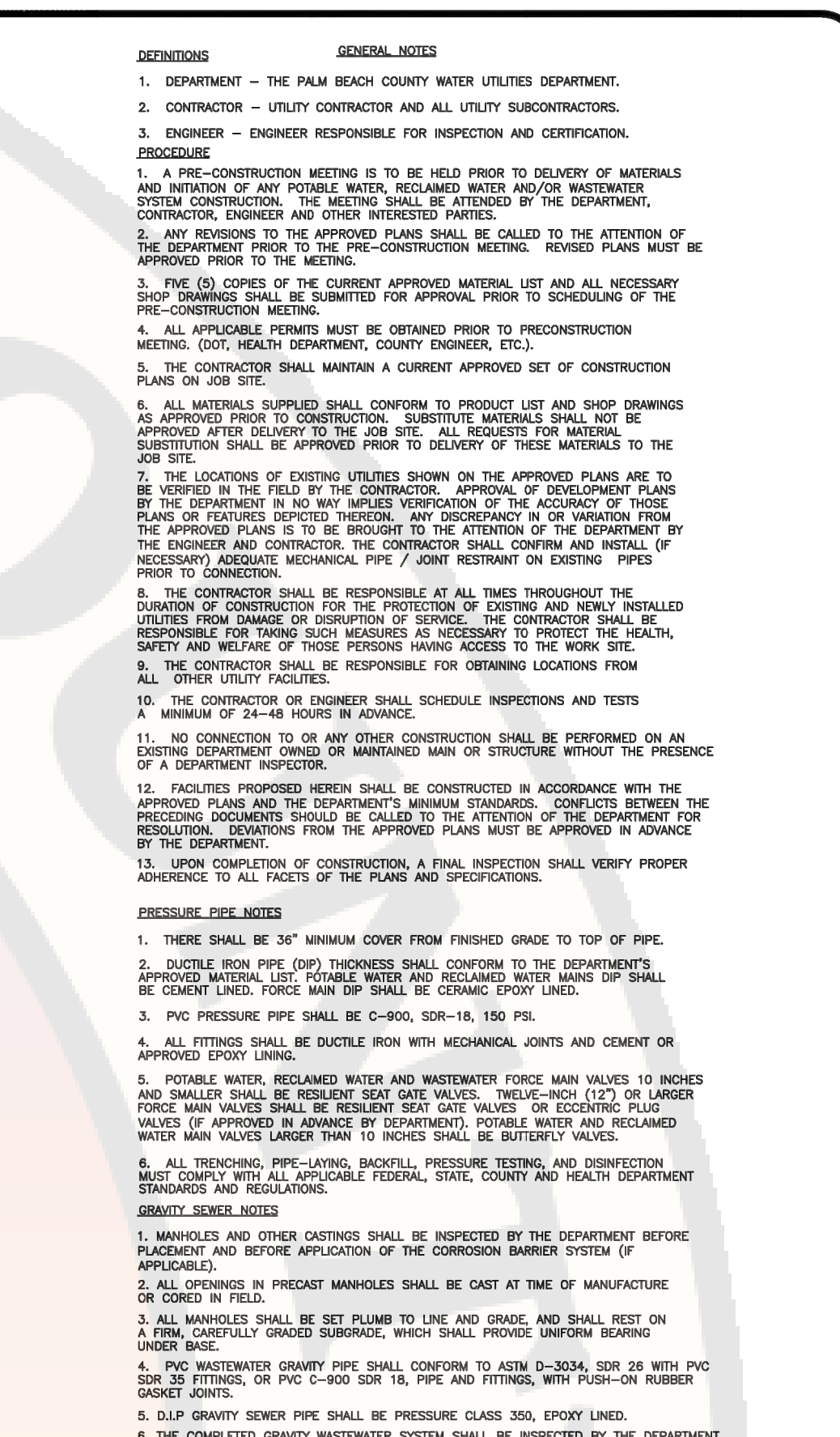
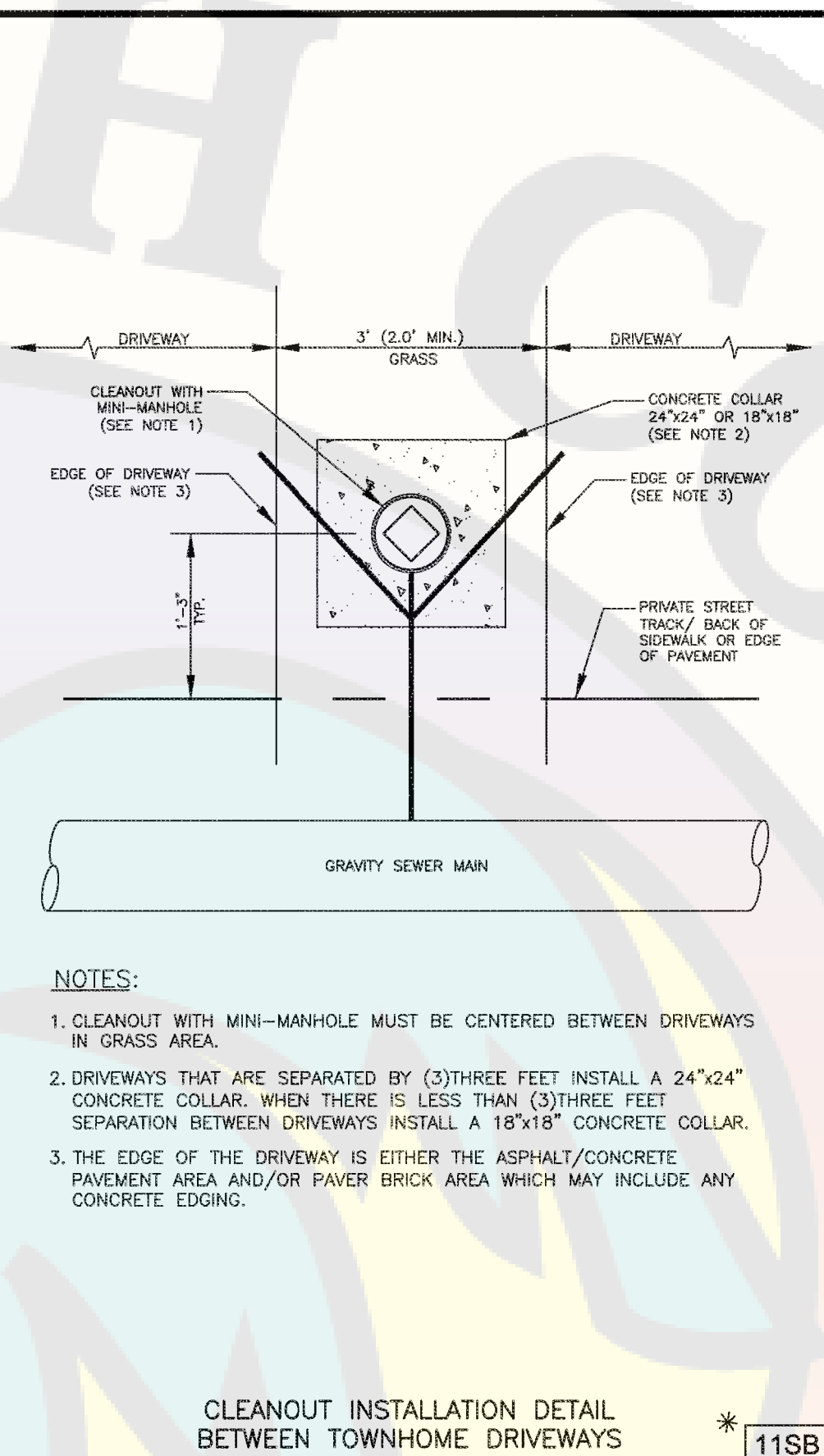
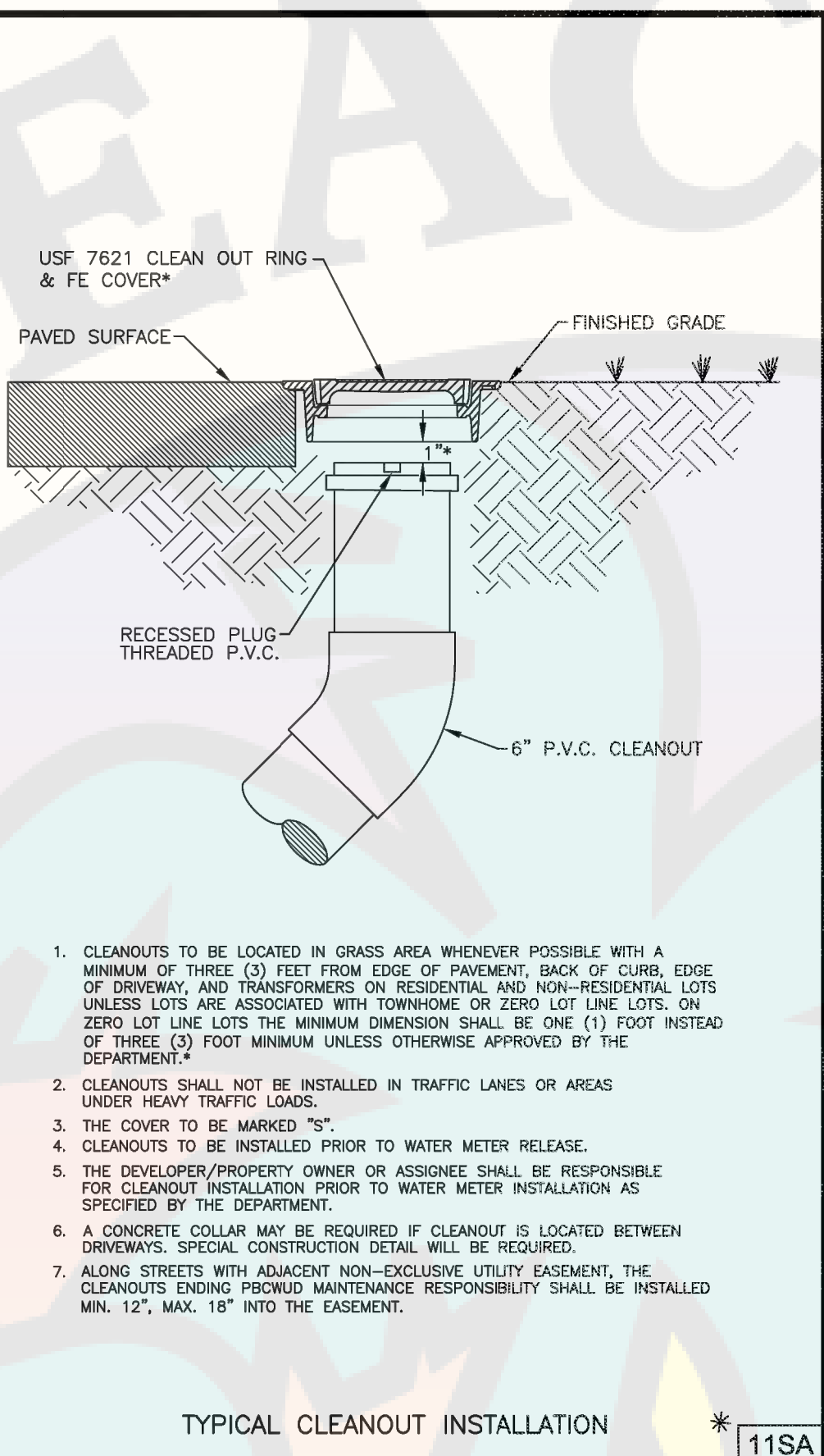
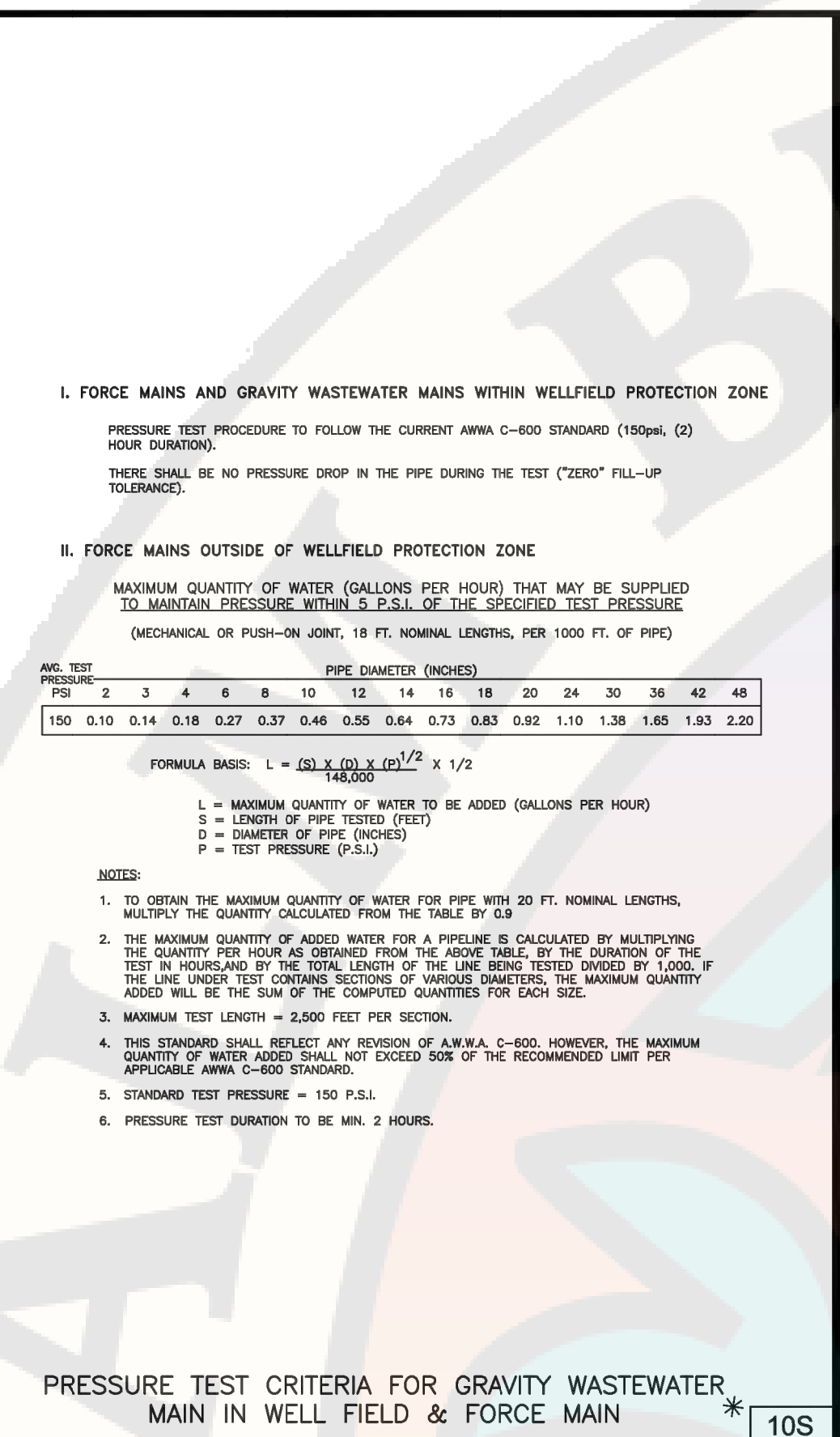
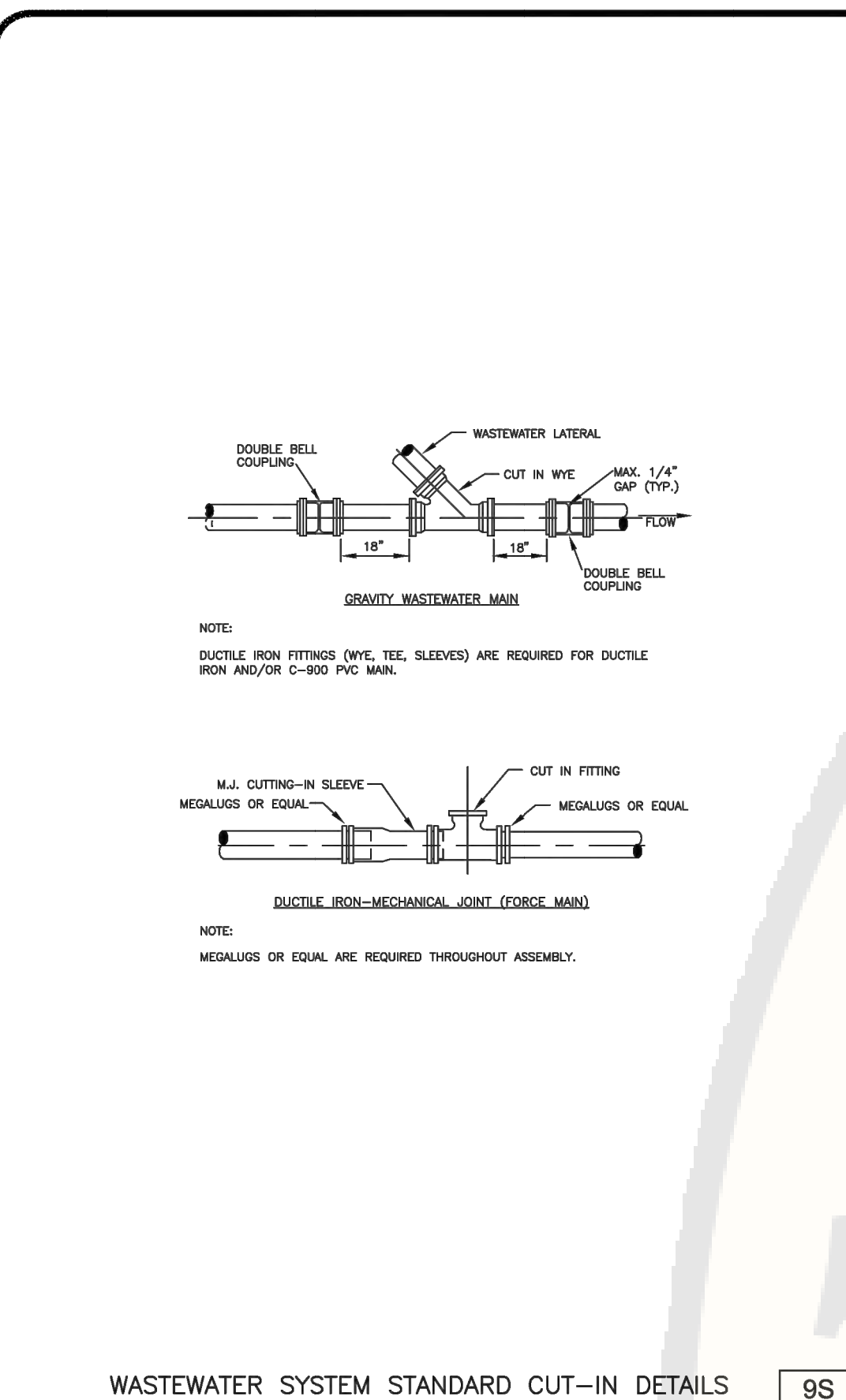
Reviewer	Agency	Date
Stark, Vincent E	Zoning Reviewer	08/30/2024
Walker, James J	Fire Reviewer	08/29/2024
Smith, Keri A	ERM Reviewer	09/30/2024
ePZB Approval Data		

~~B-2023-049030-0000~~

ATLANTIC AVIATION FLORIDA, INC.  
PBI HANGARS - PHASE 1

## PBCWUD WASTEWATER DETAILS

CU504

[illegible]







~~B-2023-049030-0000~~





WUD PROJECT No:  
24- 513

ATLANTIC AVIATION PBI  
HANGARS - PHASE 1



PALM BEACH COUNTY  
WATER UTILITIES DEPARTMENT  
P.O. BOX 18097  
WEST PALM BEACH, FL 33416  
(561)469-8000

DATE	NO.	REVISION / REMARKS
JUN 2019	1	GENERAL REVISION
OCT 2023	2	GENERAL REVISION
JAN 2024	3	GENERAL REVISION

STD  
DETAILS

SHEET  
NUMBER  
5  
OF  
6

CONSULTANT:

DESIGNED BY: WUD

DRAWN BY: M. BUCKNER

CHECKED BY: J. LAMMERT

APPROVED BY: WUD

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1-800-432-4770  
SUNSHINE STATE ONE CALL OF FLORIDA, INC.  
UTILITIES NOTIFICATION CENTER

FORCE MAIN ENTERING MANHOLE

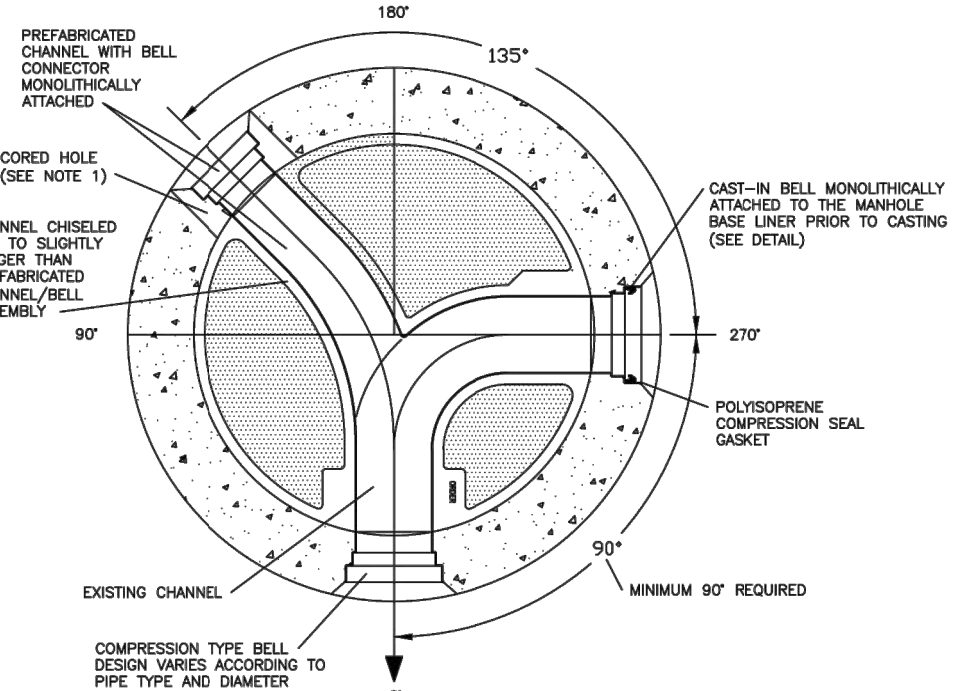
WASTEWATER #5  
STANDARD DETAILS

43S

DESIGNED BY: WUD

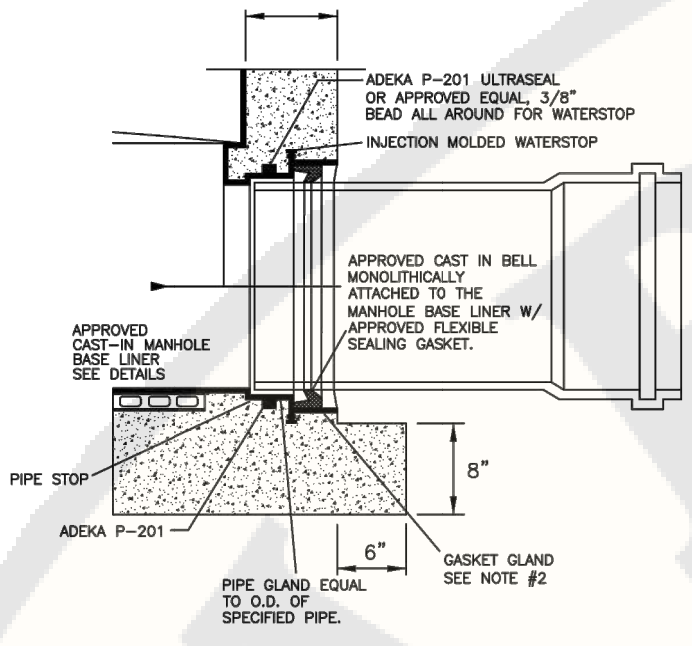
DRAWN BY: M. BUCKNER  
CHECKED BY: J. LAMMERT  
APPROVED BY: WUD

Palm Beach County  
Water Utilities Department  
P.O. Box 18097  
West Palm Beach, FL 33416-6097



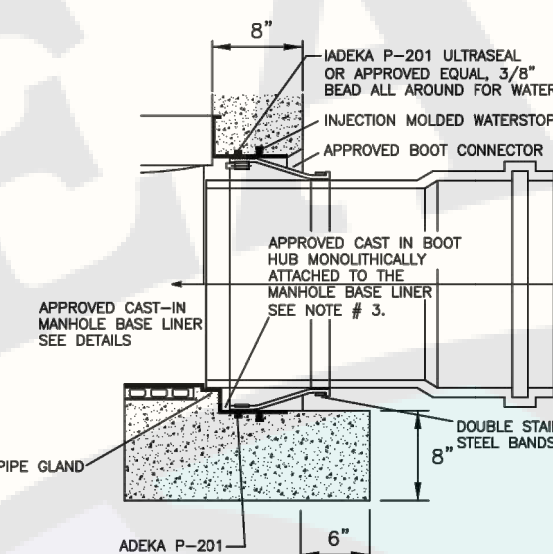
FLOW CHANNEL/ PIPE CONNECTION TO  
EXISTING CAST-IN BASE LINER

34S



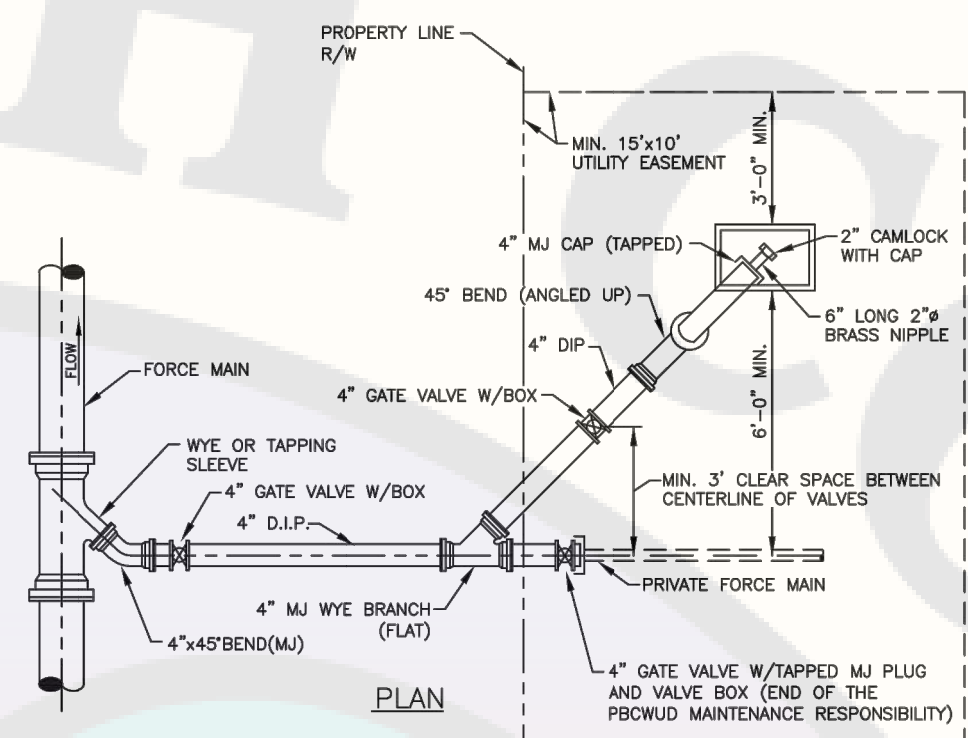
PIPE TO MANHOLE CONNECTION DETAIL  
TYPE "A" (GASKET)

35S



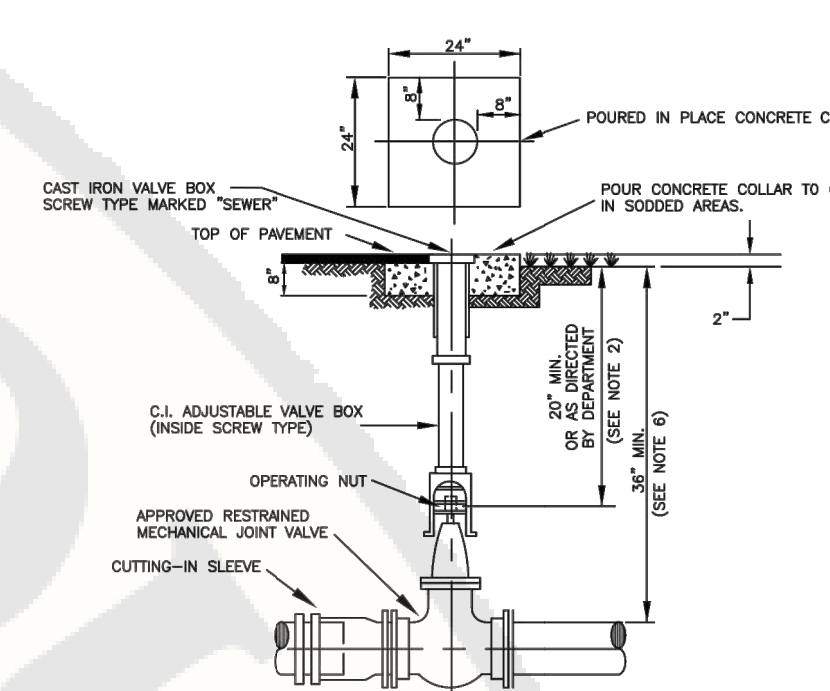
PIPE TO MANHOLE CONNECTION  
TYPE "B" (BOOT)

36S



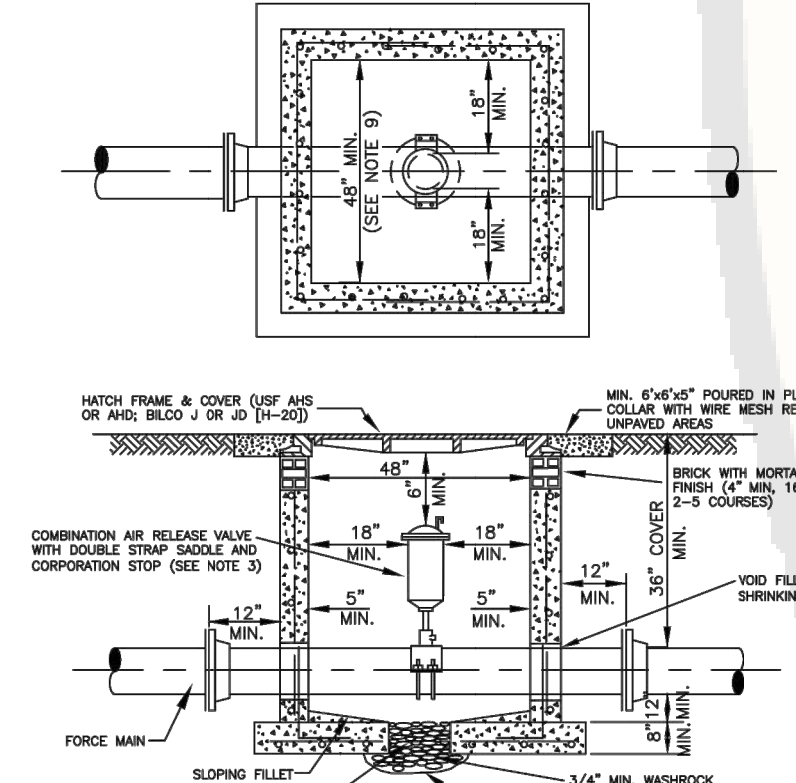
CONNECTION OF PRIVATE FORCE MAIN  
UNDER 4" IN DIAMETER

37S



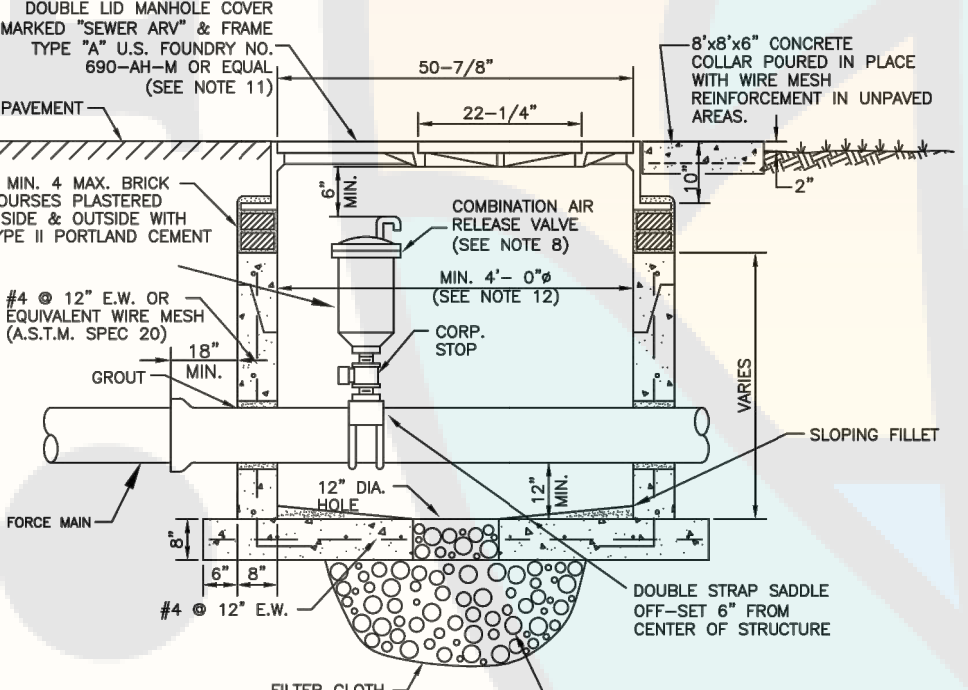
TYPICAL FORCE MAIN GATE VALVE SETTING  
AND CUT-IN DETAIL

38S



FORCE MAIN AIR RELEASE VALVE AND VAULT  
OUTSIDE OF R/W, NON-TRAFFIC AREAS

39S



FORCE MAIN AIR RELEASE VALVE AND MANHOLE  
IN PAVED AREAS AND ROAD R/W

40S

SOURCE: EBM ROBIN RUSHTON LENGTH CALCULATION PROGRAM FOR R/P, PIPE, FLANGE 3.1, AND PIPE RESTRAINT (SEE APPENDIX 1 FOR PIPE RESTRAINT RELEASE 3.2)		PIPE SIZE															
FITTING TYPE		4"	6"	8"	10"	12"	14"	16"	18"	20"	24"	30"	36"	42"	48"	60"	72"
90° HORIZ. BEND	UPPER	14	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
	LOWER	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
45° HORIZ. BEND	UPPER	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
	LOWER	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
22.5° HORIZ. BEND	UPPER	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	LOWER	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
90° VERT. OFFSET	UPPER	20	41	53	64	74	85	95	105	114	124	134	144	154	164	174	184
	LOWER	7	10	13	16	19	22	25	28	31	34	37	40	43	46	49	52
45° VERT. OFFSET	UPPER	12	19	24	29	34	39	44	49	54	59	64	69	74	79	84	89
	LOWER	6	9	12	14	17	19	22	25	27	30	32	34	37	40	42	45
22.5° VERT. OFFSET	UPPER	6	9	12	14	17	19	22	25	27	30	32	34	37	40	42	45
	LOWER	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
11.25° VERT. OFFSET	UPPER	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	LOWER	1	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
PLUG (DEAD END)	UPPER	32	45	59	70	83	97	109	121	131	141	151	161	171	181	191	201
	LOWER	32	45	59	70	83	97	109	121	131	141	151	161	171	181	191	201
TEE (BRANCH FITTING)	UPPER	23	33	43	53	63	73	83	93	103	113	123	133	143	153	163	173
	LOWER	8 1/2	21	35	49	63	77	91	105	119	133	147	161	175	189	203	217
90° ELBOW	UPPER	21	30	39	48	57	66	75	84	93	102	111	120	129	138	147	156
	LOWER	10 1/2	18	34	47	60	73	86	99	112	125	138	151	164	177	190	203
45° ELBOW	UPPER	10 1/2	16	22	28	34	40	46	52	58	64	70	76	82	88	94	100
	LOWER	5 1/2	8	11	14	17	20	23	26	29	32	35	38	41	44	47	50
TEE WITH PLUG	UPPER	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108
	LOWER	13	18	23	28	33	38	43	48	53	58	63	68	73	78	83	88
WYE OR TEE	UPPER	13	18	23	28	33	38	43	48	53	58	63	68	73	78	83	88
	LOWER	7	10	13	16	19	22	25	28	31	34	37	40	43	46	49	52
45° VERT. OFFSET	UPPER	7	10	13	16	19	22	25	28	31	34	37	40	43	46	49	52
	LOWER	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
22.5° VERT. OFFSET	UPPER	6	9	12	14	17	19	22	25	27	30	32	34	37	40	42	45
	LOWER	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
11.25° VERT. OFFSET	UPPER	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	LOWER	1	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8
PLUG (DEAD END)	UPPER	32	45	59	70	83	97	109	121	131	141	151	161	171	181	191	201
	LOWER	32	45	59	70	83	97	109	121	131	141	151	161	171	181	191	201
IN-LINE VALVE	UPPER	32	45	59	70	83	97	109	121	131	141	151	161	171	181	191	201
	LOWER	32	45	59	70	83	97	109	121	131	141	151	161	171	181	191	201



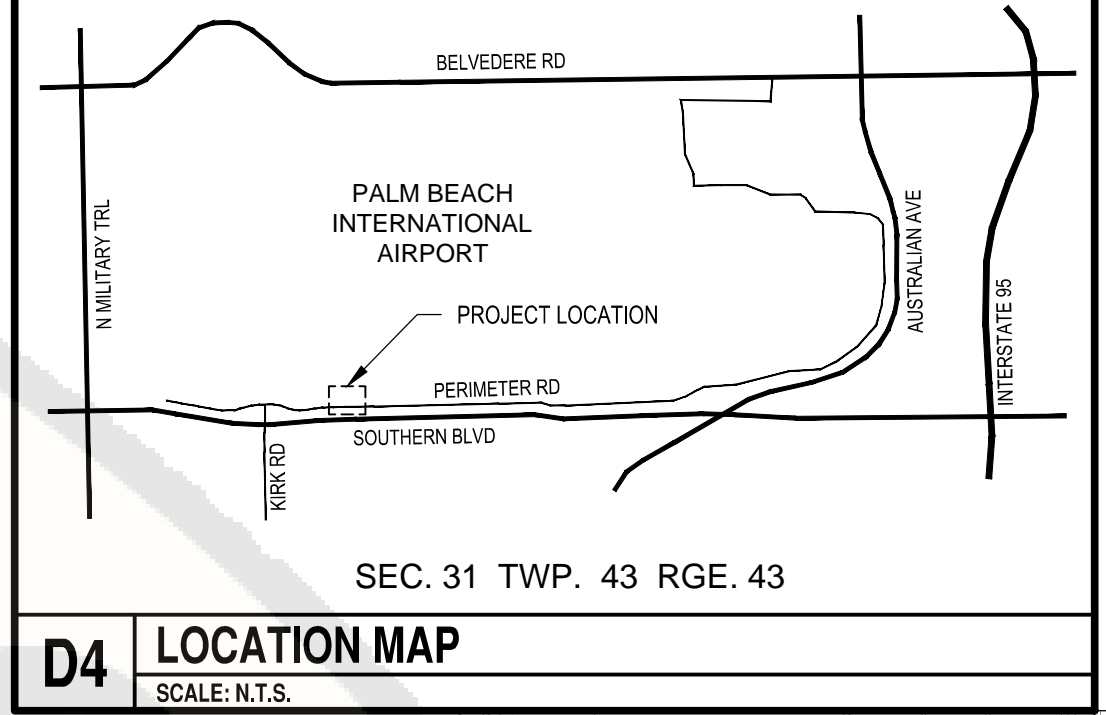
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Reviewer	Agency	Date
Walker, James J	Fire Reviewer	08/29/2024
Smith, Keri A	ERM Reviewer	09/30/2024
ePZB Approval Data		

B-2023-049030-0000



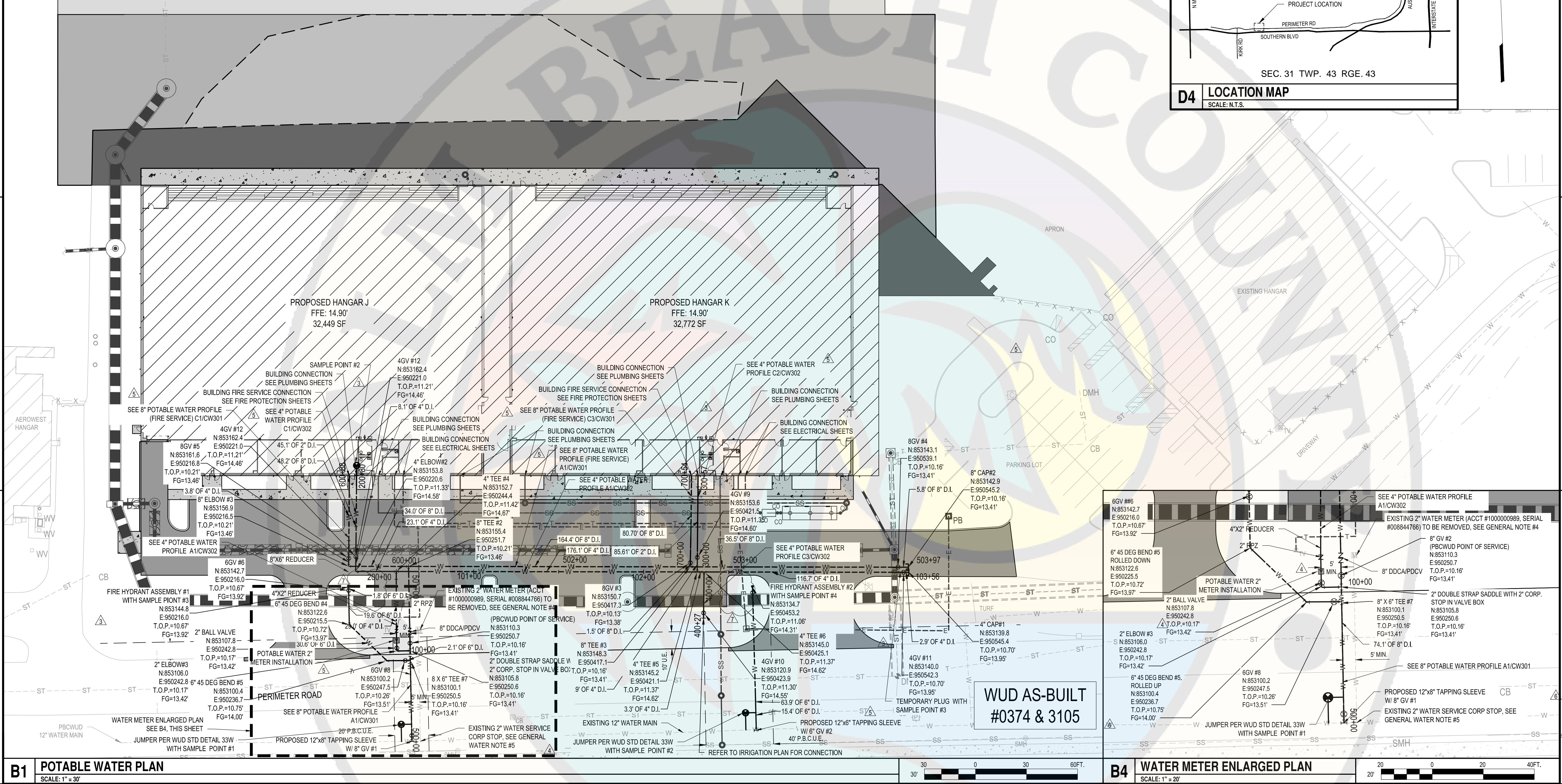
**C&S COMPANIES**

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FL L.B. No. 7513  
COA No. 7602  
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ATLANTIC AVIATION FLORIDA, INC.

PBI HANGARS - PHASE 1



- NOTES:**
- REFER TO SHEET CK101 FOR THE PROPOSED DRAINAGE PLAN.
  - ALL PROPOSED DOMESTIC, IRRIGATION, AND FIRE LINES ARE PRIVATELY OWNED AND MAINTAINED BY OWNER. CONTRACTOR SHALL CONSTRUCT PER PALM BEACH COUNTY WATER UTILITIES DEPARTMENT (PBCWUD) DETAILS AND STANDARDS. REFER TO SHEETS CW501 TO CW505 FOR REFERENCES TO THE POTABLE WATER STANDARD DETAILS.
  - ALL PROPOSED SANITARY SEWER PIPES AND MANHOLES ARE PRIVATELY OWNED AND MAINTAINED BY THE OWNER. CONTRACTOR SHALL CONSTRUCT PER PBCWUD DETAILS AND STANDARDS. REFER TO SHEETS CU503 TO CU507 FOR REFERENCES TO THE WASTEWATER STANDARD DETAILS.
  - CONTRACTOR TO FIELD VERIFY CONNECTION POINTS TO THE EXISTING WATER AND SANITARY SYSTEM.
  - CONTRACTOR TO FOLLOW THE PBCWUD STANDARDS REQUIREMENTS, INCLUDING ALL TESTING AND INSPECTIONS, FOR ALL CONNECTIONS TO THE EXISTING WATER AND SANITARY SYSTEM.
  - SEE POTABLE WATER PROFILES SHEETS CW301 AND CW302 FOR ADDITIONAL INFORMATION ON STRUCTURE ELEVATIONS, INVERTS AND UTILITY CROSSINGS.
  - SEE ELECTRICAL SHEETS FOR ELECTRICAL AND TELECOM UTILITIES.
  - WM CROSSING WASTEWATER, STORM AND/OR RECLAIM WATER PIPES LESS THAN 12" VERTICAL SEPARATION SHALL HAVE NO JOINT WITHIN 10' OF CROSSING BY EITHER PIPE TYPE.

- RECORD DRAWING NOTES:**
- RECORD DRAWINGS SHALL BE PREPARED IN THE STATE PLANE COORDINATE SYSTEM.
  - ALL UTILITY FEATURES SHALL BE SHOWN IN THEIR AS-BUILT LOCATION.
  - STATE PLANE COORDINATES SHALL BE DISPLAYED ON RECORD DRAWINGS FOR ALL FEATURES SPECIFIED IN PBCWUD STANDARDS.
- GENERAL WATER NOTES:**
- ALL WATER MAIN DUCTILE IRON PIPE AND PIPE FITTINGS SHALL BE PAINTED WITH A 4" WIDE CONTINUOUS BLUE LINE THAT RUNS PARALLEL TO THE AXIS OF THE PIPE AND IS LOCATED ALONG THE TOP OF THE PIPE.
  - ALL WATER MAINS SHALL BE MARKED WITH ONE CONTINUOUS STRIP OF 6" WIDE MAGNETIC BLUE CODED TAPE IMPRINTED WITH ONE AND A HALF (1 1/2) INCH HIGH LETTERING READING "CAUTION - WATER LINE BELOW" AND LOCATED APPROXIMATELY TWELVE (12) INCHES ABOVE THE CROWN OF THE PIPE. THE WORDING SHALL OCCUR EVERY THREE (3) FEET.
  - ALL WATER SERVICE BRASS FITTINGS ARE REQUIRED TO BE LEAD FREE.
  - EXISTING 2" WATER METER (ACCT. #1000000989 - SERIAL #008844766) IS TO BE REMOVED BY PBCWUD PERSONNEL ONLY.

- EXISTING WATER SERVICE LINE TO BE REMOVED BACK TO EXISTING WATER MAIN AND PLUG THE CORPORATION STOP.
  - ALL EXISTING PBCWUD FACILITIES (IE. VALVES) TO BE OPERATED BY PBCWUD PERSONNEL ONLY.
- GENERAL SEWER NOTE:**
- ON-SITE SEWER LATERALS, GRAVITY SEWER MAIN AND MANHOLES UP TO THE NEW MANHOLE #SMH3 ARE PRIVATELY OWNED AND MAINTAINED.
  - SEWER CLEANOUT MINI-MANHOLES ARE REQUIRED ON ALL CLEANOUTS WITHIN PAVEMENT AREAS.
  - PVC ASTM 3034 SDR 26 WITH PVC SDR 35 FITTINGS AND PVC C900 ARE ACCEPTABLE PIPE MATERIAL FOR GRAVITY WASTEWATER LINES.
- GENERAL LANDSCAPE NOTE:**
- IF ANY NEW LANDSCAPE MATERIALS ARE INSTALLED AS PART OF THIS PROJECT THEN SOD ONLY WITH NO SHRUBS AND/OR TREES ARE TO BE INSTALLED WITHIN 5' OF ANY WATER METER AND WITHIN 7.5' OF ANY FIRE HYDRANT. TREES CANNOT BE INSTALLED WITHIN 10' OF ANY WUD WATER MAIN WITHOUT PRIOR PBCWUD APPROVAL AND THE INSTALLATION OF A

ROOT BARRIER, IF ANY EXISTING TREE IS LESS THAN 10' MINIMUM OF ANY NEW WATER MAIN A ROOT BARRIER IS REQUIRED TO BE INSTALLED OR TREE RELOCATED/REMOVED.

DECLARATION OF EASEMENT (PBCUE)  
RECORDED IN:  
ORB: \_\_\_\_\_, PA. \_\_\_\_\_

WUD #24-513

MARK	DATE	DESCRIPTION
1	8/15/24	PERMIT REVISION
2	8/01/24	PERMIT REVISION
3	6/28/24	PERMIT REVISION
4	5/29/24	PERMIT REVISION
5	5/17/24	PERMIT REVISION

REVISIONS

PROJECT NO:	K98.002.001
DATE:	OCTOBER 2023
DRAWN BY:	M. MARCHEWKA
DESIGNED BY:	M. MARCHEWKA
CHECKED BY:	D.R. SAUNDERS

CONTRACTOR SHALL VERIFY ALL CONDITIONS ON JOB SITE & NOTIFY THE OWNER OF ANY VARIATIONS FROM DIMENSIONS SHOWN ON THESE DRAWINGS BEFORE PROCEEDING WITH ANY CONSTRUCTION

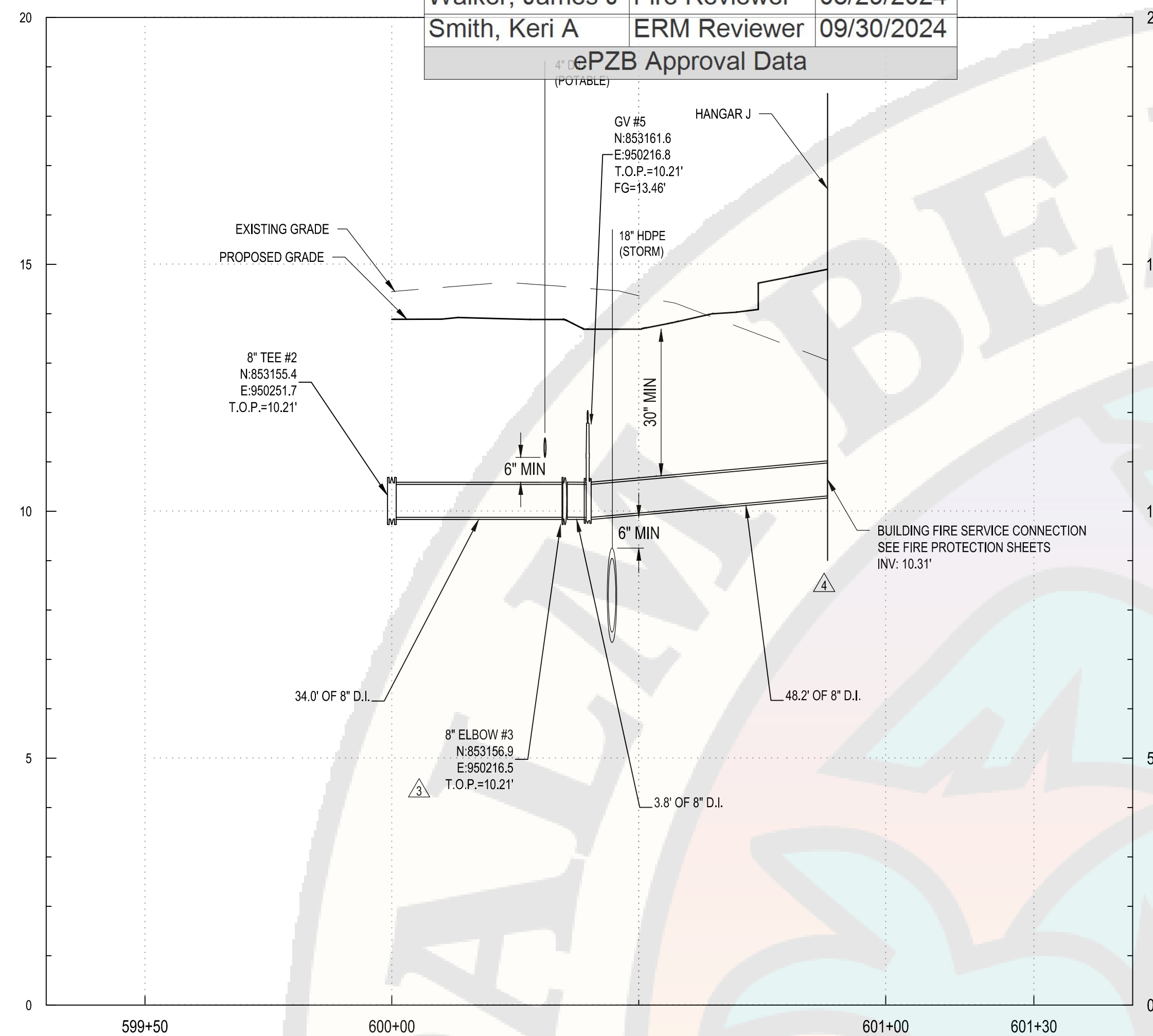
**POTABLE WATER PLAN**

CW101

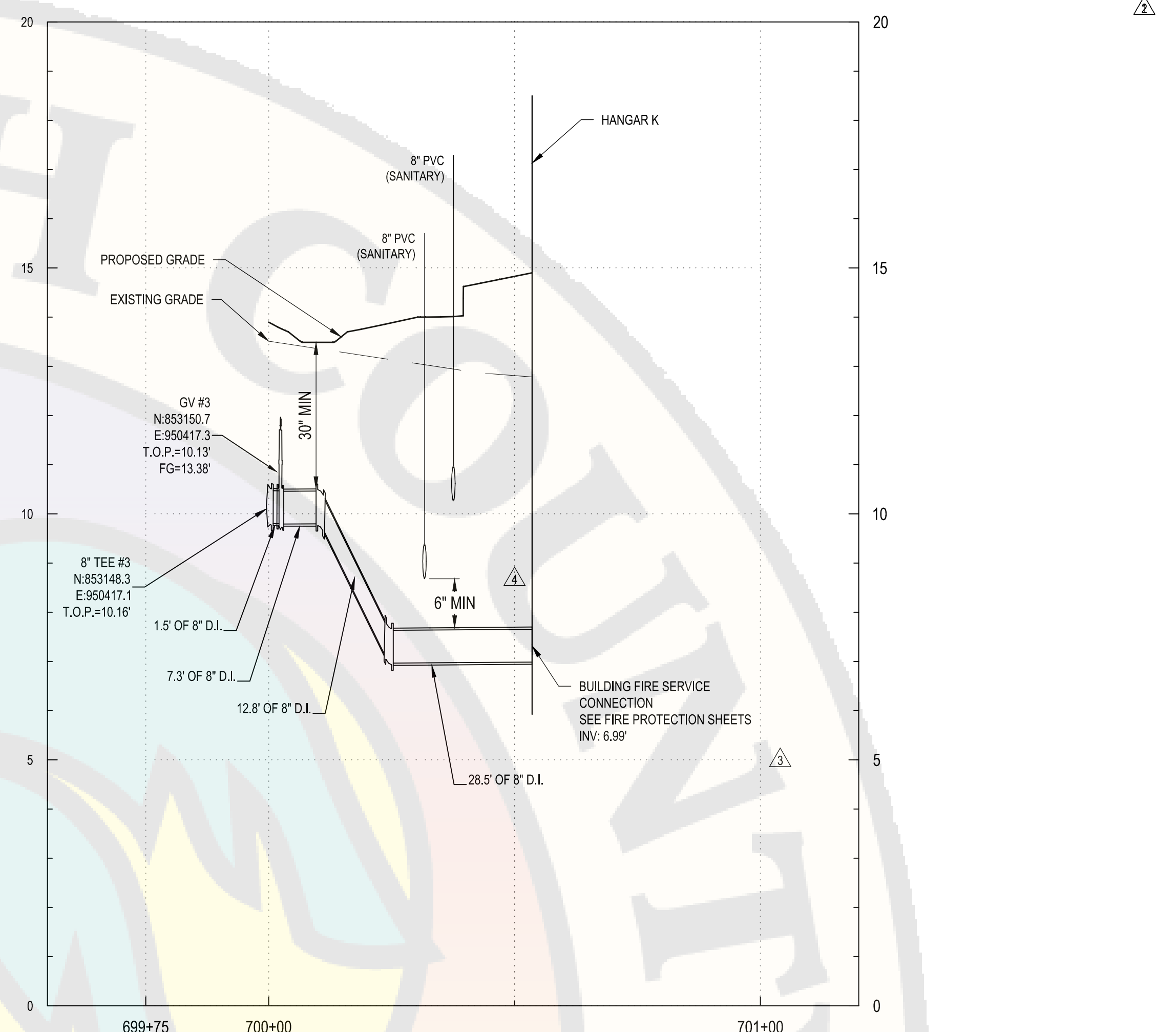
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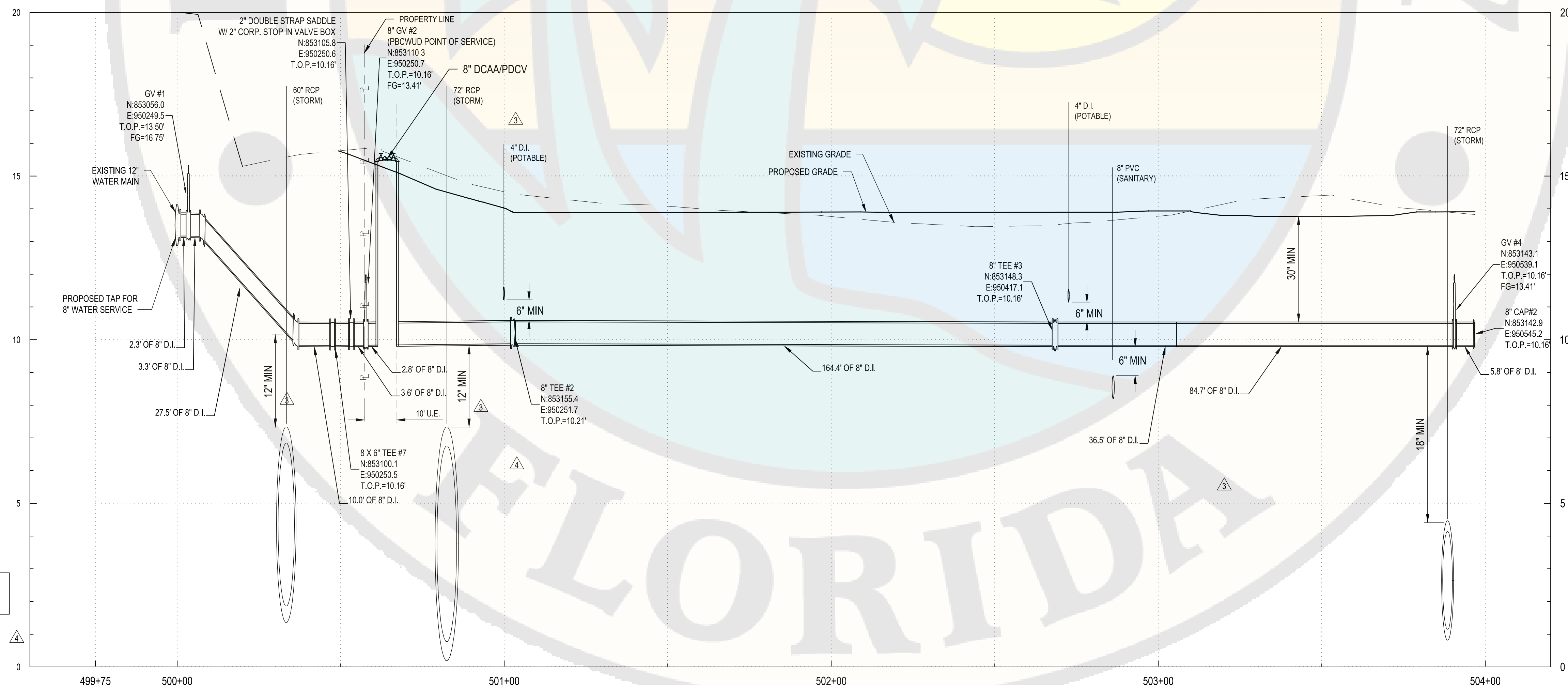
Reviewer	Agency	Date
Walker, James J	Fire Reviewer	08/29/2024
Smith, Keri A	ERM Reviewer	09/30/2024
ePZB Approval Data		



C1	8" POTABLE WATER PROFILE (FIRE SERVICE
----	--



C3	8" POTABLE WATER PROFILE (FIRE SERVICE)
----	---



<b>A1</b>	<b>8" POTABLE WATER PROFILE</b>
-----------	---------------------------------



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COA No. 7601  
[www.cscos.com](http://www.cscos.com)



PALM BEACH, FLORIDA

ATLANTIC AVIATION FLORIDA, INC.

# PBI HANGARS - PHASE 1

5	8/01/24	PERMIT REVISION
4	6/28/24	PERMIT REVISION
3	5/17/24	PERMIT REVISION
2	1/15/24	PERMIT REVISION
1	2/20/24	FFE/ PERMIT REVISION
MARK	DATE	DESCRIPTION

REVISIONS	
PROJECT NO:	K98.002.001
DATE:	OCTOBER 2023
DRAWN BY:	M. MARCHEWKA
DESIGNED BY:	M. MARCHEWKA
CHECKED BY:	D.R. SAUNDERS

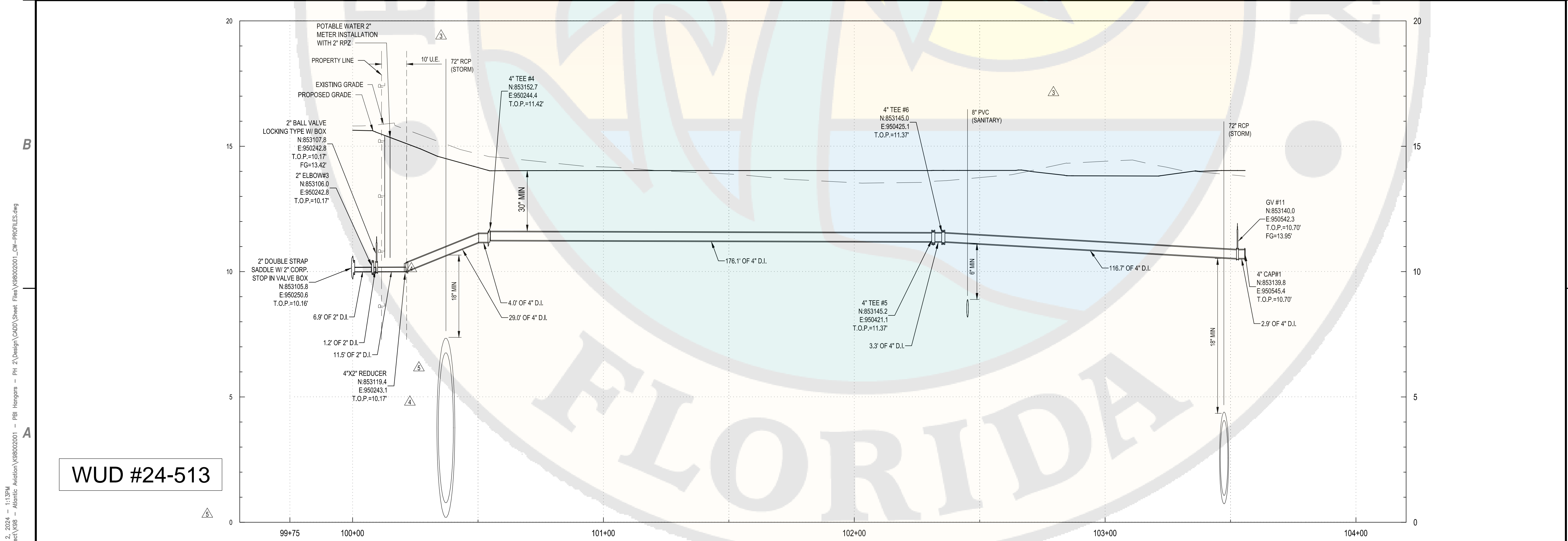
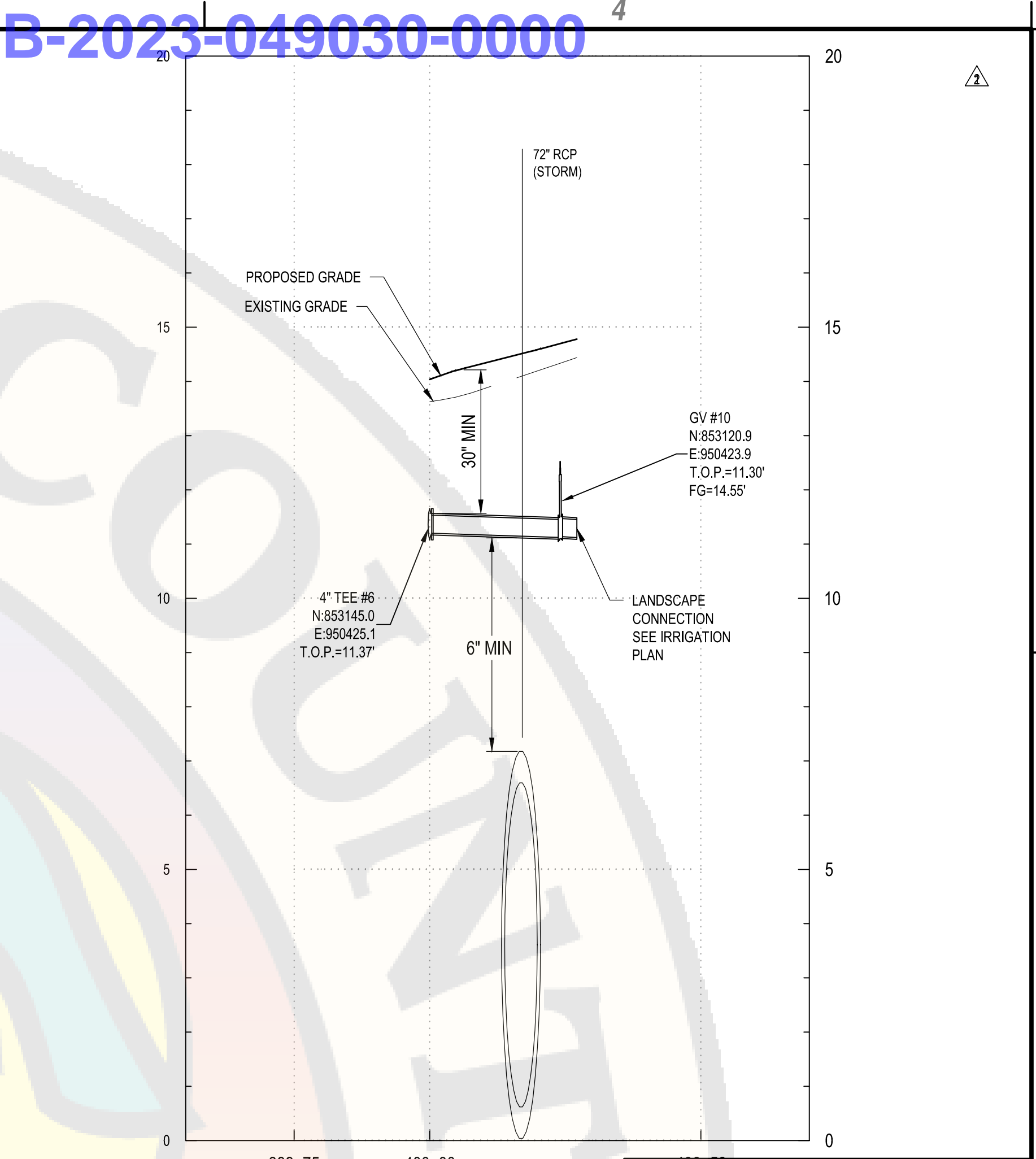
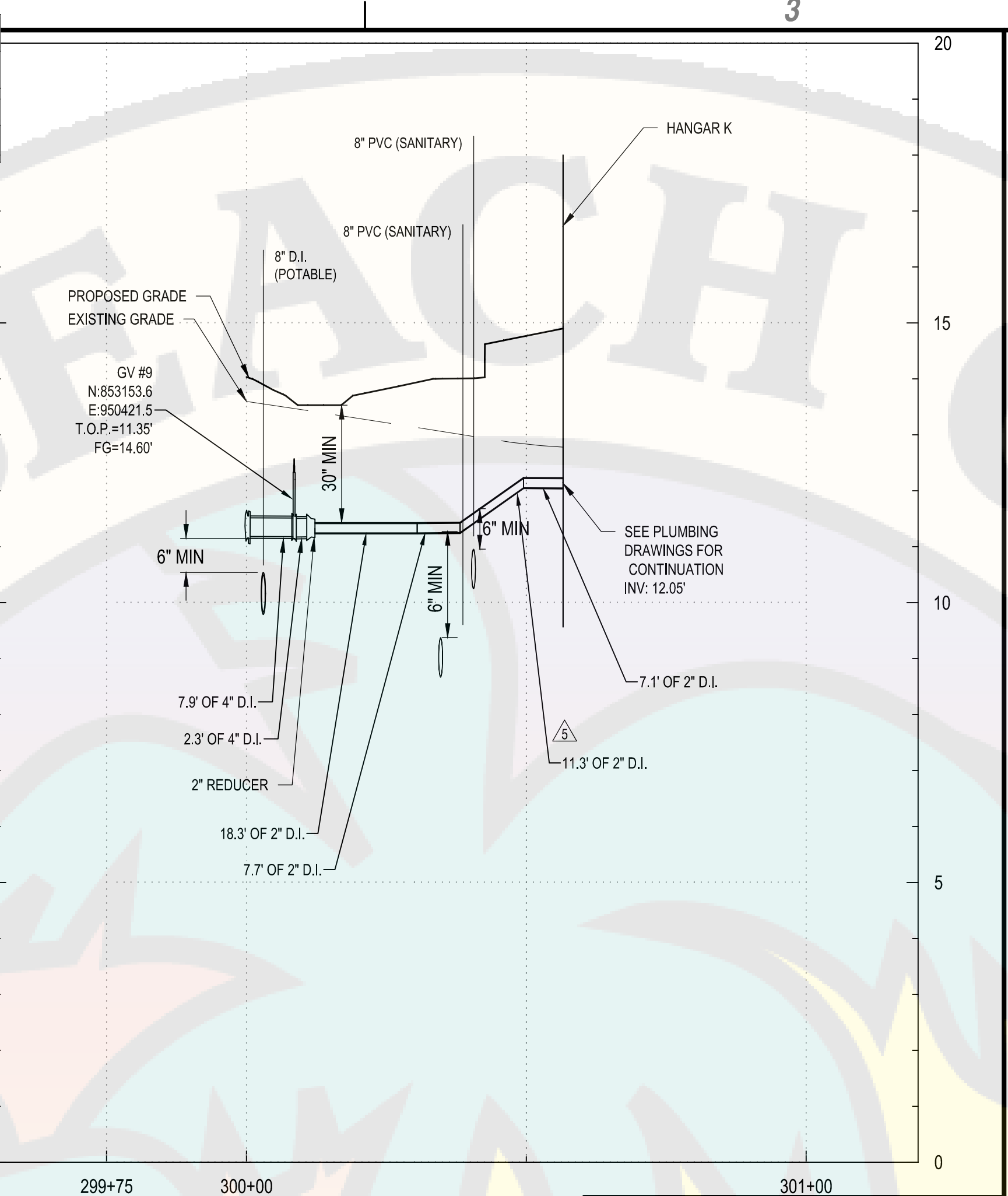
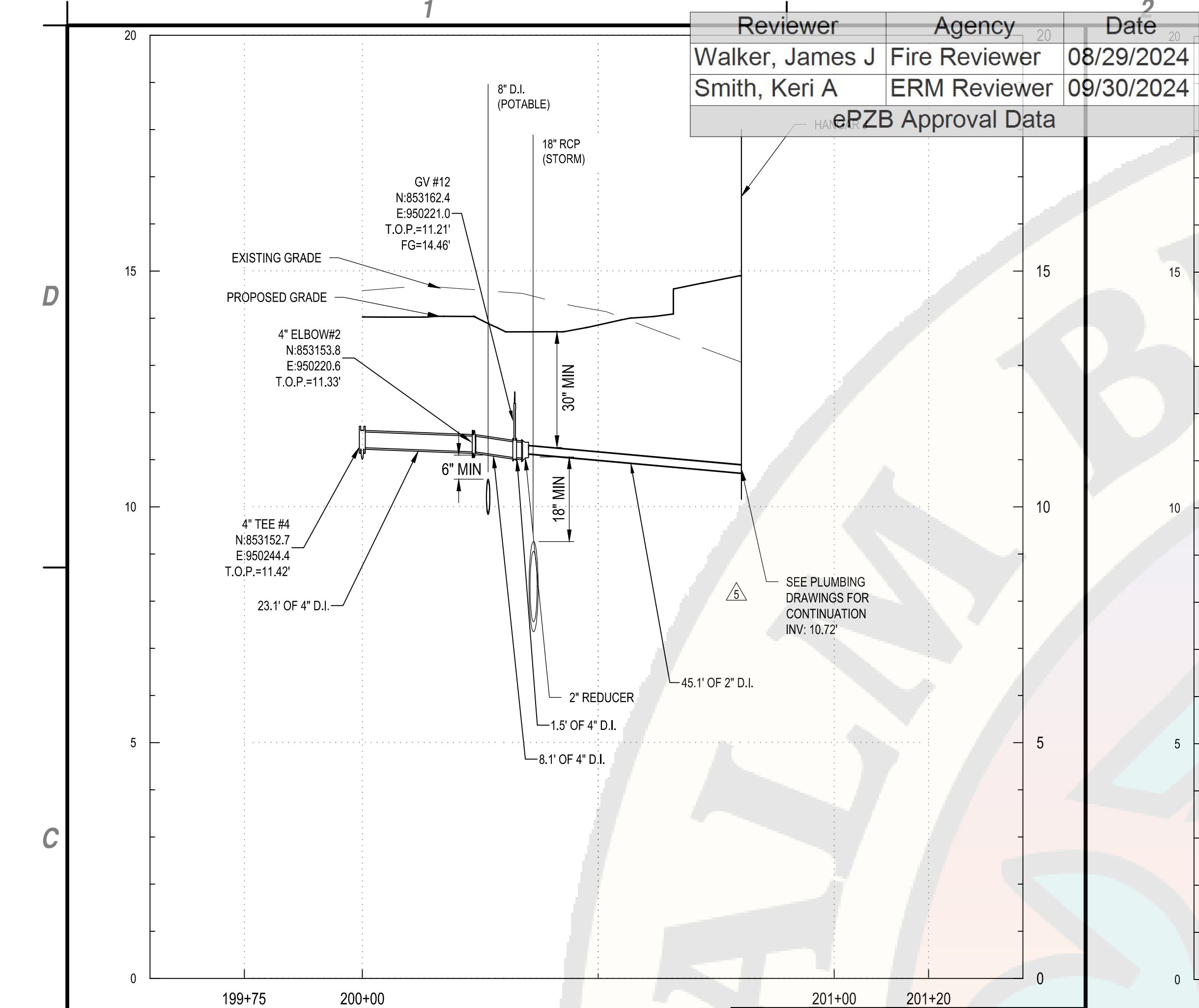
CONTRACTOR SHALL VERIFY ALL CONDITIONS ON  
JOB SITE & NOTIFY THE OWNER OF ANY VARIATION  
FROM DIMENSIONS SHOWN ON THESE DRAWINGS  
BEFORE PROCEEDING WITH ANY CONSTRUCTION

## POTABLE WATER PROFILES

**CW301**



August 2, 2024 - 11:37AM  
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PALM BEACH FLORIDA

ATLANTIC AVIATION FLORIDA, INC.

PBI HANGARS - PHASE 1

MARK	DATE	DESCRIPTION
Δ	8/01/24	PERMIT REVISION
Δ	6/28/24	PERMIT REVISION
Δ	5/29/24	PERMIT REVISION
Δ	5/17/24	PERMIT REVISION
Δ	1/15/24	PERMIT REVISION

REVISIONS

PROJECT NO: K98.002.001  
DATE: OCTOBER 2023  
DRAWN BY: M. MARCHEWKA  
DESIGNED BY: M. MARCHEWKA  
CHECKED BY: D.R. SAUNDERS

CONTRACTOR SHALL VERIFY ALL CONDITIONS ON JOB SITE & NOTIFY THE OWNER OF ANY VARIATIONS FROM DIMENSIONS SHOWN ON THESE DRAWINGS BEFORE PROCEEDING WITH ANY CONSTRUCTION

POTABLE WATER PROFILES

CW302

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Reviewer	Agency	Date
Walker, James J	Fire Reviewer	08/29/2024
Smith, Keri A	ERM Reviewer	09/30/2024
ePZB Approval Data		

B-2023-049030-0000



**C&S**  
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ATLANTIC AVIATION FLORIDA, INC.  
PBI HANGARS - PHASE 1

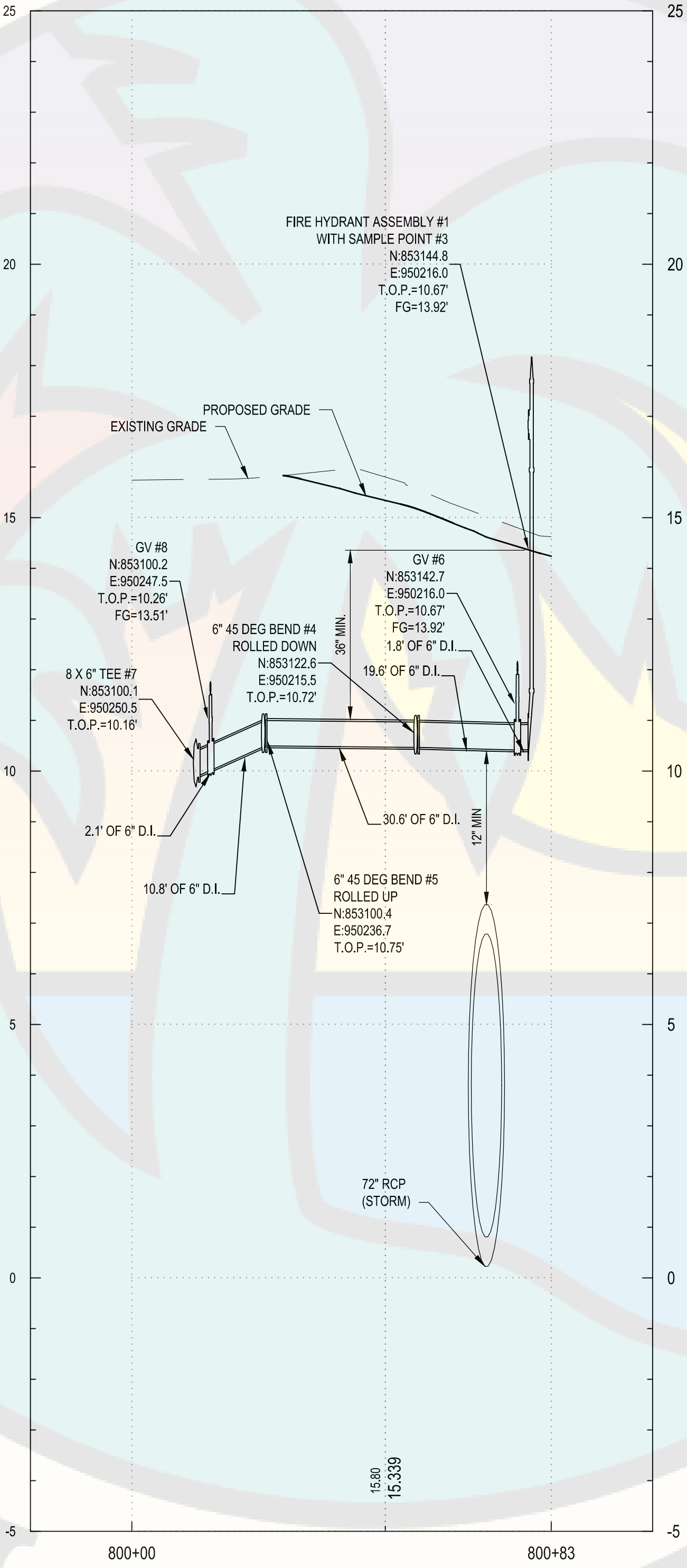
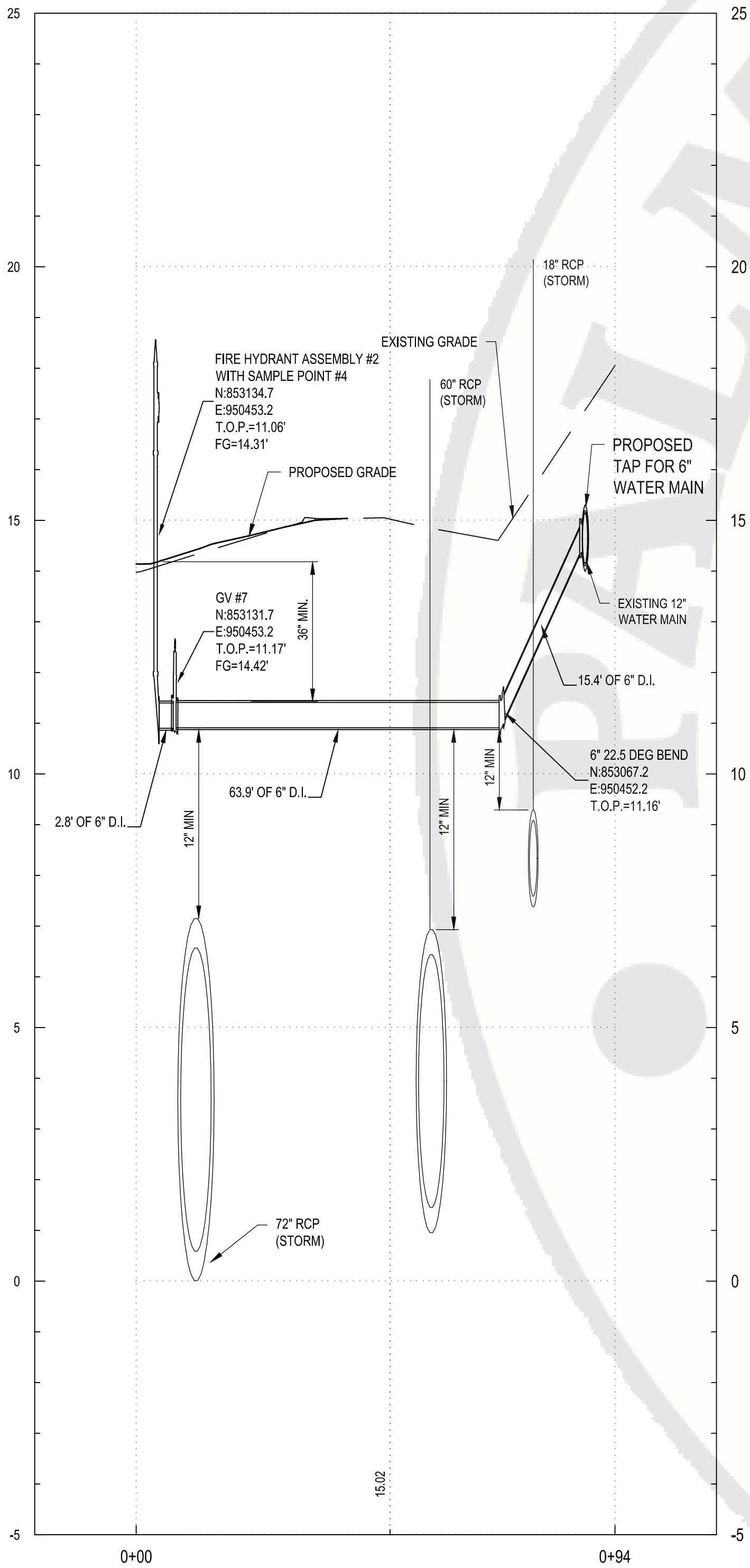
MARK	DATE	DESCRIPTION
Δ	8/01/24	PERMIT REVISIONS

REVISIONS	
PROJECT NO:	K98.002.001
DATE:	OCTOBER 2023
DRAWN BY:	M. MARCHEWKA
DESIGNED BY:	M. MARCHEWKA
CHECKED BY:	D.R. SAUNDERS

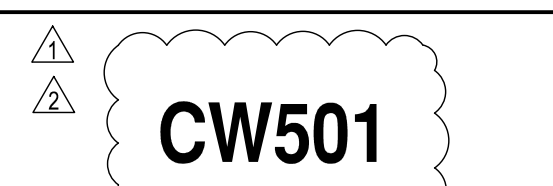
CONTRACTOR SHALL VERIFY ALL CONDITIONS ON JOB SITE & NOTIFY THE OWNER OF ANY VARIATIONS FROM DIMENSIONS SHOWN ON THESE DRAWINGS BEFORE PROCEEDING WITH ANY CONSTRUCTION

POTABLE WATER  
PROFILES

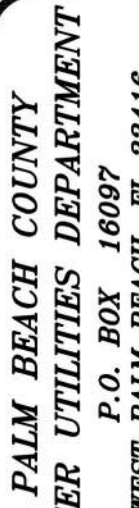
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ATLANTIC AVIATION FLORIDA, INC.

## PRI HANGARS - PHASE 1

## REVISIONS

PROJECT NO:	K98.002.001
DATE:	OCTOBER 2023
DRAWN BY:	M. MARCHEWKA
DESIGNED BY:	M. MARCHEWKA
CHECKED BY:	D.R. SAUNDERS
CONTRACTOR SHALL VERIFY ALL CONDITIONS ON JOB SITE & NOTIFY THE OWNER OF ANY VARIATIONS FROM DIMENSIONS SHOWN ON THESE DRAWINGS BEFORE PROCEEDING WITH ANY CONSTRUCTION	

## PBCWUD POTABLE WATER DETAILS

  **CW502**

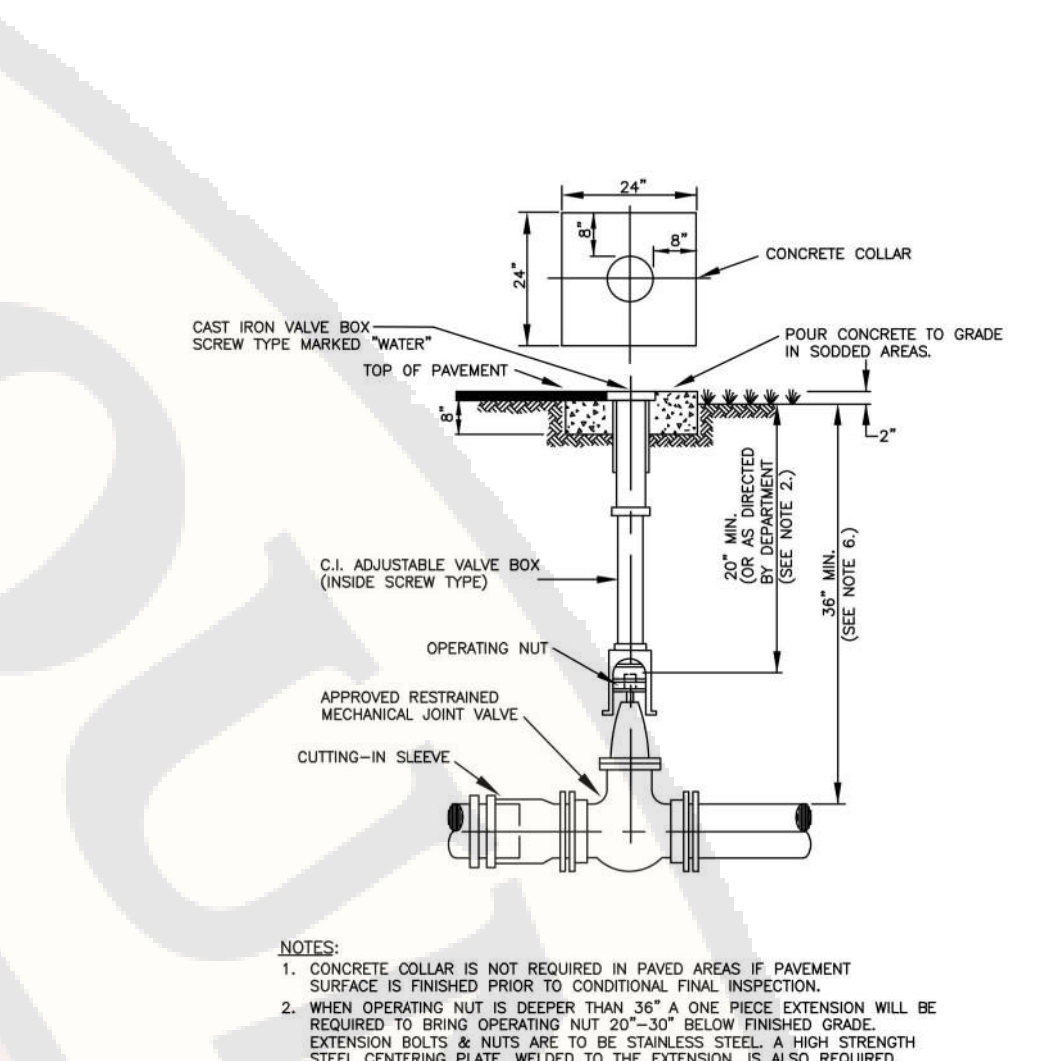
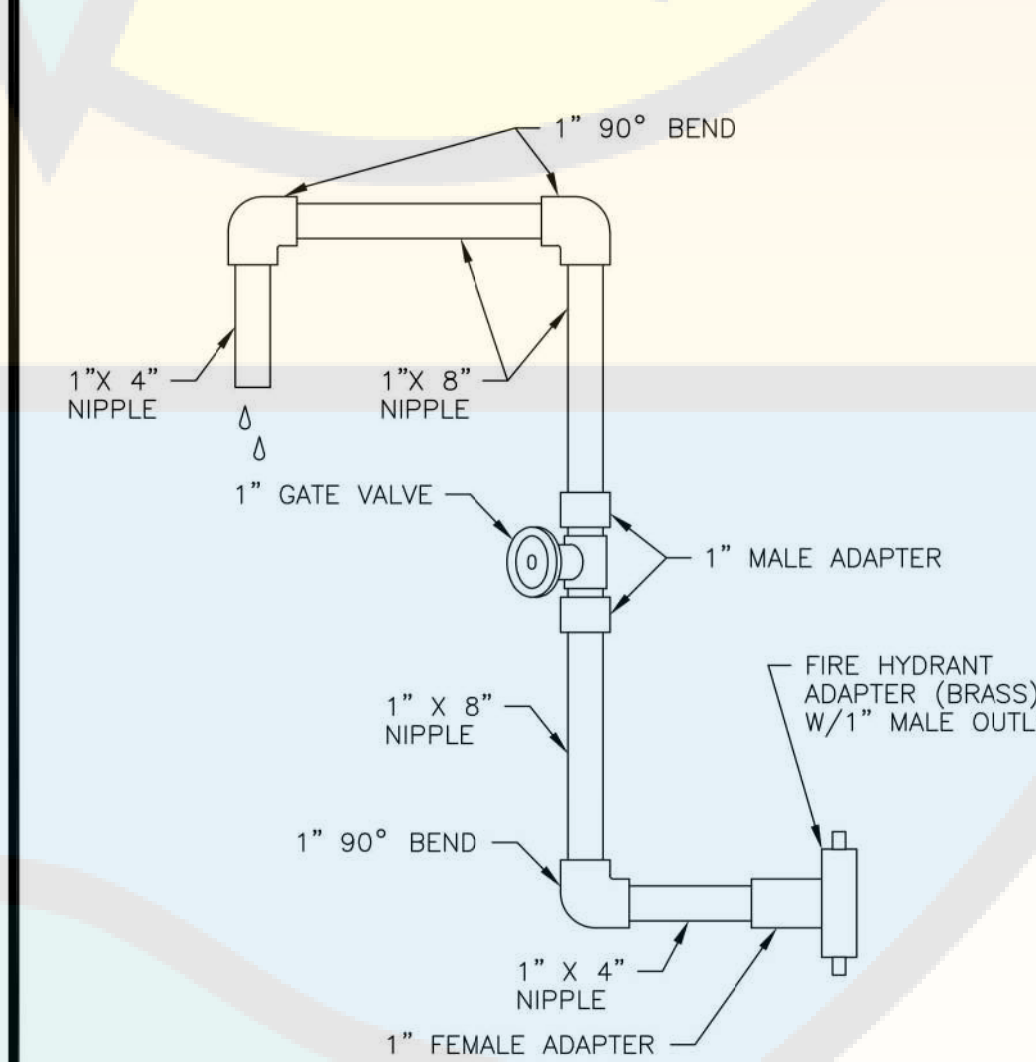


TABLE WATER MAIN TYPICAL GATE VALVE  
SETTING AND MAIN CUT-IN DETAIL



WATER MAIN FIRE HYDRANT SAMPLING POINT 17

THIS SPACE  
INTENTIONALLY LEFT  
BLANK

## POTABLE WATER #2 STANDARD DETAILS

CONSULTANT

**IT'S THE LAW !**   
CALL 48 HOURS BEFORE YOU DIG  
**1-800-432-4770**  
SUNSHINE STATE ONE CALL OF FLORIDA, INC.  
UTILITIES NOTIFICATION CENTER

DESIGNED BY: \_\_\_\_\_

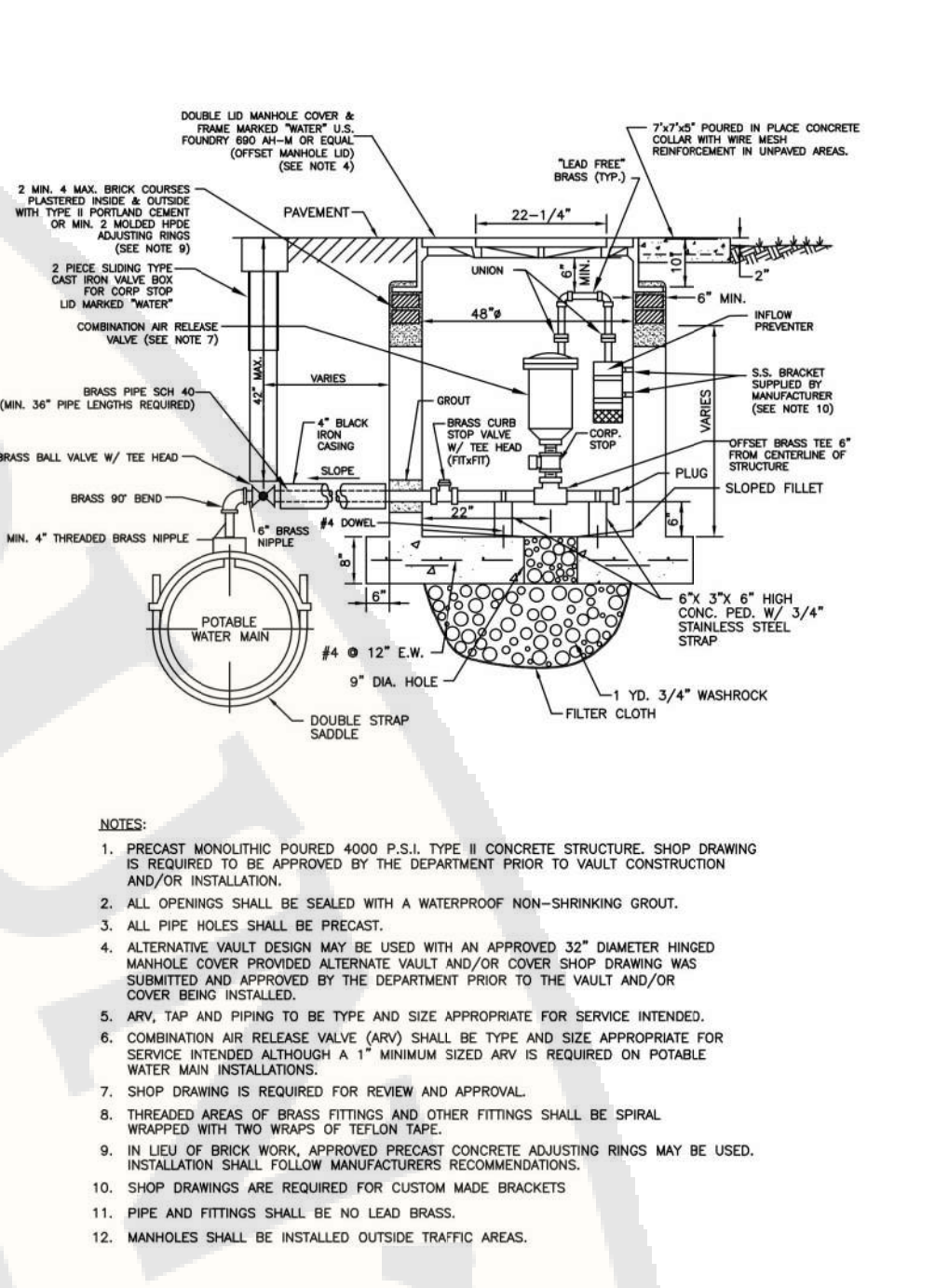
DRAWN BY:           M          

APPROVED BY: \_\_\_\_\_

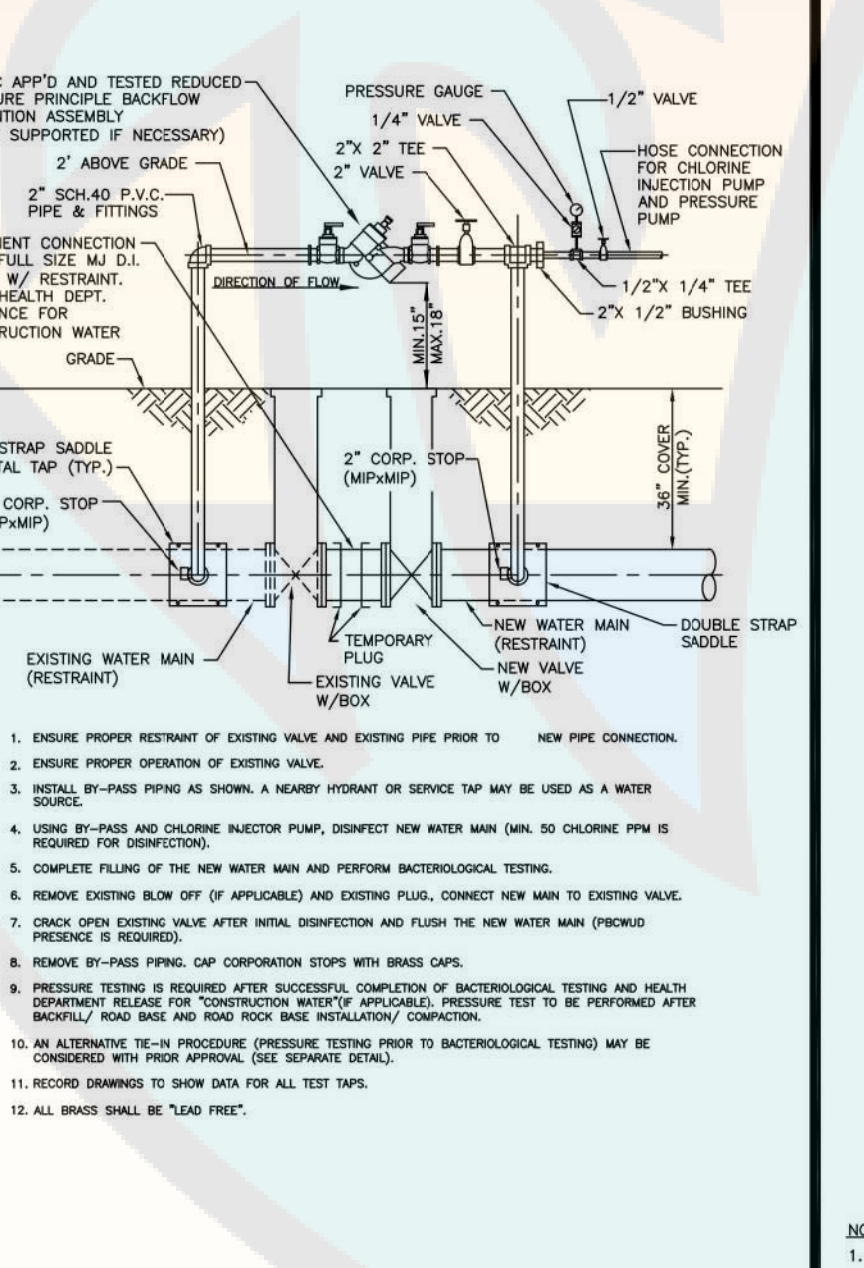








POTABLE WATER MAIN  
OFF-SET UNDERGROUND AIR RELEASE VALVE



MIN. LENGTH OF PIPE (FEET) TO BE RESTRAINED												
URCES: EBMA ROSTER, MINIMUM LENGTH OF CABLED PROGRAM FOR PVC PIPE, RELEASE 3.1, AND DUCTA TRIPPER PROGRAM FOR DUCTILE IRON PIPE, RELEASE 3.2												
FITTING TYPE	PIPE SIZE											
	4"	6"	8"	10"	12"	20"	24"	30"	36"	42"	48"	
0° HORIZ. BEND	14	20	25	30	35	45	54	63	68	112	124	135
5° HORIZ. BEND	6	8	11	13	15	19	22	26	41	46	51	56
2.5° HORIZ. BEND	3	4	5	6	7	9	11	12	19	22	25	27
1.25° HORIZ. BEND	2	3	4	5	6	7	8	9	11	12	13	13
90° VERT. OFFSET	29	41	53	64	74	95	115	134	214	246	276	304
45° VERT. OFFSET	7	10	13	16	19	25	30	37	66	74	83	
UPPER	12	19	24	29	34	39	48	56	89	102	114	126
LOWER	4	6	7	8	10	12	15	17	23	27	31	34
UPPER	6	9	12	14	17	19	23	27	43	49	55	60
LOWER	1	2	4	4	4	5	6	7	11	13	15	16
UPPER	3	4	6	7	8	9	11	13	21	24	27	30
LOWER	1	1	1	2	2	3	3	3	6	6	7	8
UPPER	32	45	58	70	82	94	106	118	214	276	304	
LOWER	35	45	55	65	75	85	95	105	120	125	140	155
UPPER	17	26	34	41	47	54	61	68	102	114	126	135
LOWER	10	16	22	28	34	40	46	52	78	89	100	110
UPPER	12	13	30	47	57	69						
LOWER	7	26	41	51	67	90						
UPPER	20	21	28	38	52	65	88	108				
LOWER	1	16	34	49	62	86	108	129				
UPPER	1	28	41	54	67	81	95	117	127	148		
LOWER	1	22	39	54	68	80	103	126	240			
UPPER	1	1	15	33	49	70	100	122	205	239	270	
LOWER	1	7	27	44	73	97	120	203	236	269	298	
UPPER	8	23										
LOWER	8	28	35									
UPPER	10	57	43	24								
LOWER	12	72	60	41								
UPPER	16	99	80	78	75	45						
LOWER	20	123	116	107	100	81	45					
UPPER	24	140	140	132	124	111	82	45				
LOWER	30	209	204	207	188	177	153	116	75			
UPPER	36	243	236	230	226	217	198	168	148	74		
LOWER	270	243	243	243	243	243	243	243	243	243	243	
UPPER	30	201	208	204	221	225	214	246	226	183	131	71

THE DATA IN THE ABOVE TABLE ARE BASED UPON THE FOLLOWING INSTALLATION CONDITIONS:

## GENERAL NOTES

1. DEPARTMENT – the PALM BEACH COUNTY WATER UTILITIES DEPARTMENT.
2. CONTRACTOR – UTILITY CONTRACTOR AND ALL UTILITY SUBCONTRACTORS.
3. ENGINEER – ENGINEER RESPONSIBLE FOR INSPECTION AND CERTIFICATION.

### PROCEDURE

1. A PRE-CONSTRUCTION MEETING IS TO BE HELD PRIOR TO DELIVERY OF MATERIALS AND INFILTRATION OF ANY POTABLE WATER, RECLAIMED WATER OR ANY WASTEWATER INTO THE EXISTING OR NEW MAINS. MEETING SHALL BE ATTENDED BY THE DEPARTMENT, CONTRACTOR, ENGINEER AND OTHER INTERESTED PARTIES.
2. ANY DISCREPANCIES BETWEEN THE APPROVED PLANS SHALL BE CALLED TO THE ATTENTION OF THE DEPARTMENT PRIOR TO THE PRE-CONSTRUCTION MEETING. REVISED PLANS MUST BE PROVIDED TO THE DEPARTMENT AND ENGINEER FOR REVIEW AND APPROVAL.
3. FIVE (5) COPIES OF THE CURRENT APPROVED MATERIAL LIST AND ALL NECESSARY DESP PATCHES SHALL BE SUBMITTED FOR APPROVAL PRIOR TO SCHEDULING OF THE PRE-CONSTRUCTION MEETING.
4. ALL APPLICABLE PERMITS MUST BE OBTAINED PRIOR TO PRECONSTRUCTION MEETING. COPIES OF THE PERMITS SHALL BE SUBMITTED TO THE DEPARTMENT.
5. THE CONTRACTOR SHALL MAINTAIN A CURRENT APPROVED SET OF CONSTRUCTION PLANS ON JOB SITE.
6. THE CONTRACTOR SHALL CONFORM TO PRODUCT LIST AND SHOP DRAWINGS AS APPROVED PRIOR TO CONSTRUCTION. SUBSTITUTE MATERIALS SHALL NOT BE APPROVED WITHOUT THE DEPARTMENT'S WRITTEN APPROVAL. THE CONTRACTOR SHALL SUBSTITUTION SHALL BE APPROVED PRIOR TO DELIVERY OF THESE MATERIALS TO THE JOB SITE.
7. THE LOCATIONS OF EXISTING UTILITIES SHOWN ON THE APPROVED PLANS ARE TO BE VERIFIED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY INFORMATION BY THE DEPARTMENT IN NO WAY IMPAIRS VERIFICATION OF THE ACCURACY OF THOSE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF UTILITIES FROM THE APPROVED PLANS IS TO BE BROUGHT TO THE ATTENTION OF THE DEPARTMENT BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND INSTALL OF NECESSARY ADEQUATE MECHANICAL PIPE / JOINT RESTRAINT ON EXISTING PIPES PRIOR TO CONNECTION.
8. THE CONTRACTOR SHALL BE RESPONSIBLE AT ALL TIMES THROUGHOUT THE DURATION OF CONSTRUCTION FOR THE PROTECTION OF EXISTING AND NEWLY INSTALLED UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING SUCH MEASURES AS NECESSARY TO PROTECT THE HEALTH, SAFETY AND WELL-BEING OF THE PUBLIC AND THE ENVIRONMENT.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING LOCATIONS FROM ALL OTHER UTILITIES.
10. THE CONTRACTOR OR ENGINEER SHALL SCHEDULE INSPECTIONS AND TESTS A MINIMUM OF 24-48 HOURS IN ADVANCE.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING OR ANY EXISTING DEPARTMENT OWNED OR MAINTAINED MAN OR STRUCTURE WITHOUT THE PRESENCE OF A DEPARTMENT REPRESENTATIVE.
12. FACILITIES PROPOSED HEREIN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS AND THE DEPARTMENT'S MINIMUM STANDARDS. CONFLICTS BETWEEN THE APPROVED PLANS AND THE DEPARTMENT'S MINIMUM STANDARDS SHALL BE RESOLVED BY THE DEPARTMENT. DEVIATIONS FROM THE APPROVED PLANS MUST BE APPROVED IN ADVANCE BY THE DEPARTMENT AND ENGINEER.
13. UPON COMPLETION OF CONSTRUCTION, A FINAL INSPECTION SHALL VERY PREFER ABILITY BE CONDUCTED ON ALL FACTS OF THE PLANS AND SPECIFICATIONS.

### PRESSURE PIPE NOTES

1. THERE SHALL BE 36" MINIMUM COVER FROM FINISHED GRADE TO TOP OF PIPE.
2. DUCTILE IRON PIPE (ODD THICKNESS SHALL CONFORM TO THE DEPARTMENT'S APPROVED MATERIALS LIST) SHALL BE USED. ALL JOINTS SHALL BE CEMENT LINED. SP. SHALL BE CEMENT LINED. FORCE MAIN DP SHALL BE CERAMIC UREY LINED.
3. PVC PRESSURE PIPE SHALL BE C-900, SDR-18, 150 PSI.

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STANDARD POTABLE WATER MAIN TIE-IN 33W

MINIMUM PIPE LENGTH ALONG TEE RUN-  
E RESTRAINED PIPE LENGTHS APPLY TO DUCTILE IRON AND PVC PIPE.  
JOINTS BETWEEN UPPER AND LOWER BENDS SHALL BE RESTRAINED.  
RESTRAINED PIPE LENGTHS APPLY TO PIPE ON BOTH SIDES OF VALVES AND FITTINGS.  
DUCTILITY PIPE LENGTH BY 1.4 FOR POLYETHYLENE ENCASED PIPE.  
RESTRAINED PIPE LENGTHS EQUAL TO AN "INLINE VALVE" CONDITION ARE REQUIRED AT EACH END OF  
RESTRAINED PIPE TO OTHER PIPE MATERIALS.  
DESIGN ENGINEER IS RESPONSIBLE TO PROPERLY SIZE THE RESTRAINED PIPE LENGTHS FOR THE PROJECT.

MECHANICAL RESTRAINT  
MINIMUM PIPE LENGTHS

34V

5. POTABLE WATER, RECLAIMED WATER AND WASTEWATER FORCE MAIN VALVES 10 INCHES AND SMALLER SHALL BE RESILIENT SEAT GATE VALVES. TWELVE-INCH (12") OR LARGER FORCE MAIN VALVES SHALL BE RESILIENT SEAT GATE VALVES, OR ECCENTRIC PLUG VALVES (IF APPROVED IN ADVANCE BY DEPARTMENT). POTABLE WATER AND RECLAIMED WATER MAIN VALVES LARGER THAN 10 INCHES SHALL BE BUTTERFLY VALVES.

6. ALL TRENCHING, PIPE-LAYING, BACKFILL, PRESSURE TESTING, AND DISINFECTION MUST COMPLY WITH ALL APPLICABLE FEDERAL, STATE, COUNTY AND HEALTH DEPARTMENT STANDARDS AND REGULATIONS.

**IT'S THE LAW!**   
CALL 48 HOURS BEFORE YOU DIG  
**1-800-432-4770**  
SUNSHINE STATE ONE CALL 97 FLORIDA INC.  
UTILITIES NOTIFICATION CENTER

NED BY: \_\_\_\_\_ WUD \_\_\_\_\_  
BY: M. BUCKNER  
BY: J. LAMMERT  
VED BY: \_\_\_\_\_ WUD \_\_\_\_\_



Palm Beach County  
Water Utilities Department  
P.O.Box 16097  
West Palm Beach, FL 33416-6097





ATLANTIC AVIATION FLORIDA, INC.

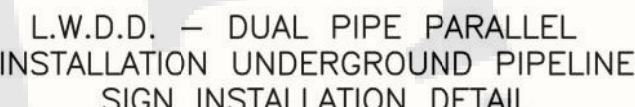
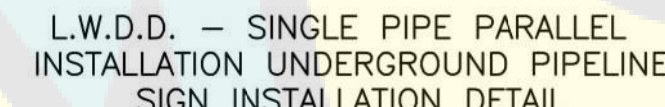
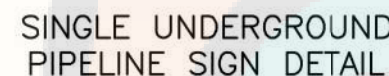
PBI HANGARS - PHASE 1

	5/17/24	PERMIT REVISION
	2/20/24	FFE/ PERMIT REVISION
MARK	DATE	DESCRIPTION

PROJECT NO:	K98.002.001
DATE:	OCTOBER 2023
DRAWN BY:	M. MARCHEWKA
DESIGNED BY:	M. MARCHEWKA
CHECKED BY:	D.R. SAUNDERS
CONTRACTOR SHALL VERIFY ALL CONDITIONS ON JOB SITE & NOTIFY THE OWNER OF ANY VARIATIONS FROM DIMENSIONS SHOWN ON THESE DRAWINGS BEFORE PROCEEDING WITH ANY CONSTRUCTION	

## PBCWUD POTABLE WATER DETAILS

**CW505**



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## POTABLE WATER #5 STANDARD DETAILS

**CONSULTANT:**

DESIGNED BY: \_\_\_\_\_ WUD

DRAWN BY: M. BUCKNER

APPROVED BY: WUD

**IT'S THE LAW!**   
CALL 48 HOURS BEFORE YOU DIG  
**1-800-432-4770**  
SUNSHINE STATE ONE CALL OF FLORIDA, INC.  
UTILITIES NOTIFICATION CENTER

Palm Beach County  
Water Utilities Department  
P.O.Box 16097  
West Palm Beach, FL 33416-6097

WUD PROJECT No  
24- 513

ATLANTIC AVIATION PBI  
HANGARS - PHASE 1

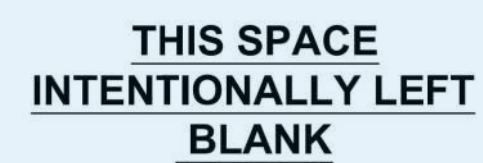
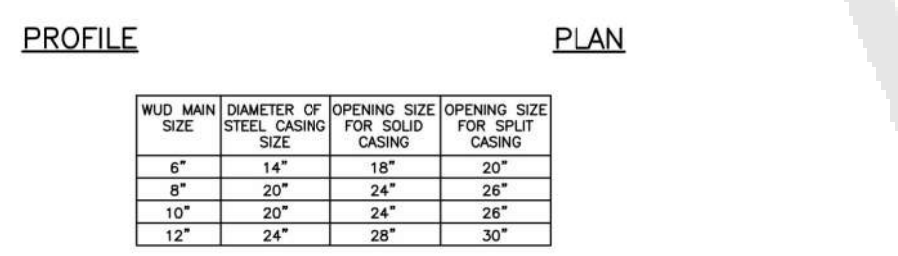
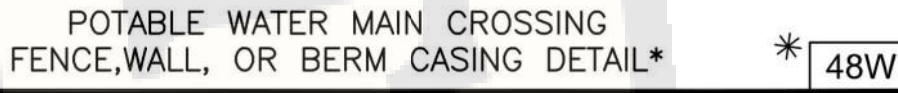
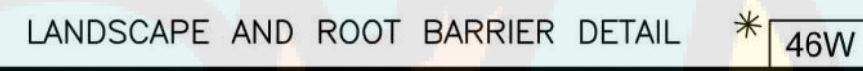
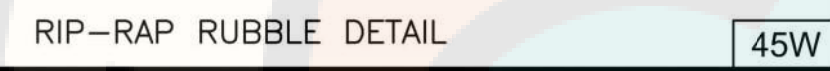
**PALM BEACH COUNTY  
WATER UTILITIES DEPARTMENT  
P.O. BOX 16097  
WEST PALM BEACH, FL 33416  
(561)493-6000**

NO.	DATE	REVISION / REMARKS		BY
		GENERAL	REVISION	
	JUNE 2019			J.L.
*	JAN 2023		GENERAL REVISION	J.L.

*STD  
DETAILS*

SHEET  
NUMBER  
**5**  
OF  
**6**





WUD PROJECT No.  
24- 513

ATLANTIC AVIATION PBI  
HANGARS - PHASE 1

**PALM BEACH COUNTY  
TER UTILITIES DEPARTMENT  
P.O. BOX 16097  
WEST PALM BEACH, FL 33416  
(561)493-6000**

NO.	DATE	REVISION /	REMARKS	BY
	JUNE 2019	GENERAL	REVISION	J.L.
*	JAN 2023	GENERAL	REVISION	J.L.

**STD  
DETAILS**

SHEET  
NUMBER

6  
OF  
6

**CONSULTANT:**



DESIGNED BY: WUD

DRAWN BY: M. BUCKNER Palm Beach County

CHECKED BY: J. LAMMERT Water Utilities Department

APPROVED BY: WUD P.O.Box 16097  
West Palm Beach, FL 33416-6097



Reviewer	Agency	Date
Walker, James J	Fire Reviewer	08/29/2024
Smith, Keri A	ERM Reviewer	09/30/2024
ePZB Approval Data		

B-2023-049030-0000



**C&S**  
COMPANIES

C&S Engineers, Inc.  
605 E. Robinson Street, Suite 210  
Orlando, FL 32801  
Phone: 407-422-1118  
Fax: 407-841-9179  
FL. L.B. No. 7513  
COA No. 7602  
www.cscos.com



PALM BEACH FLORIDA

ATLANTIC AVIATION FLORIDA, INC.

PBI HANGARS - PHASE 1

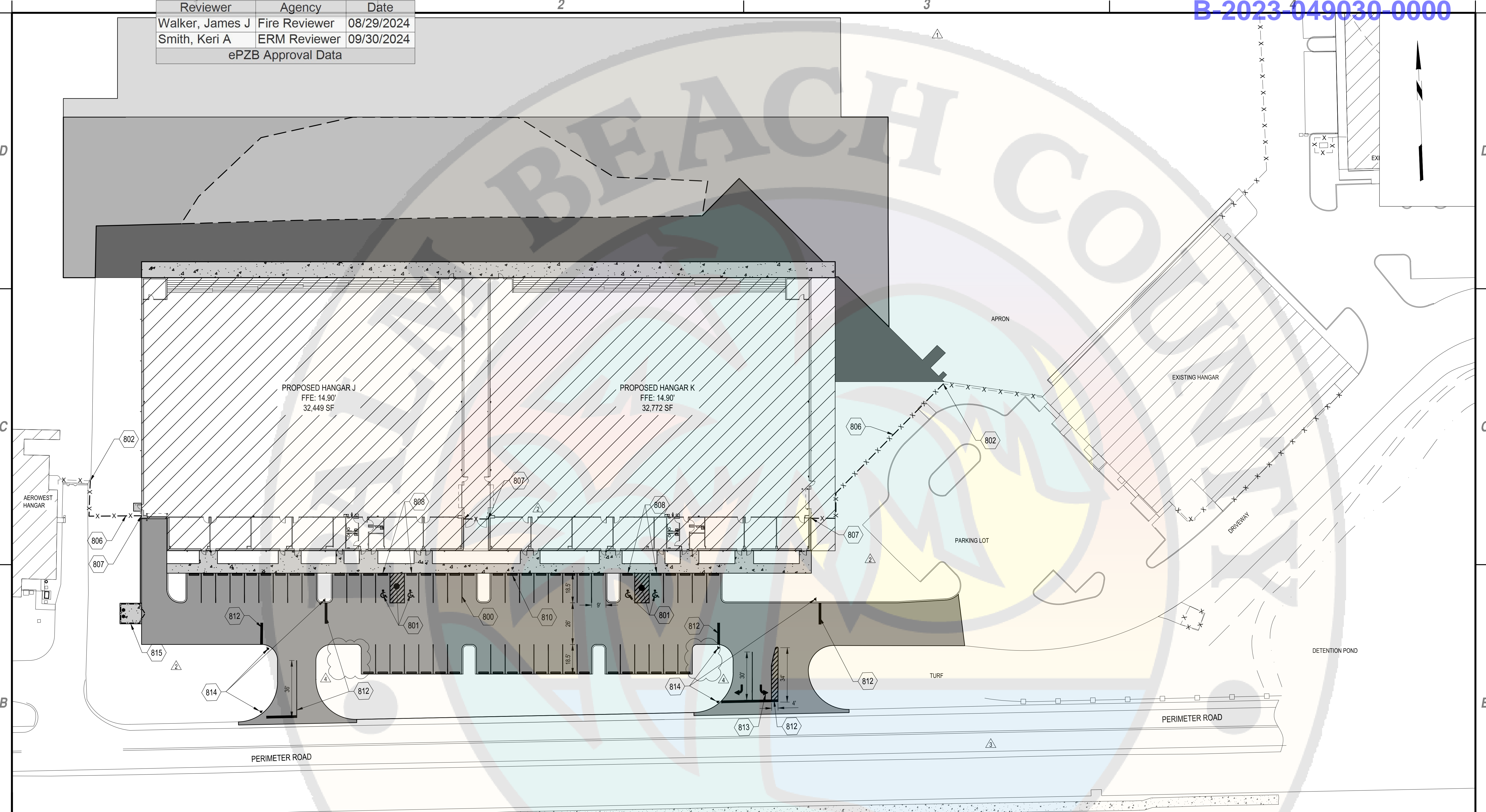
MARK	DATE	DESCRIPTION
4	8/15/24	PERMIT REVISION
3	8/01/24	PERMIT REVISION
2	5/17/24	PERMIT REVISION
1	2/20/24	FFE/PERMIT REVISION

REVISIONS	
PROJECT NO:	K98.002.001
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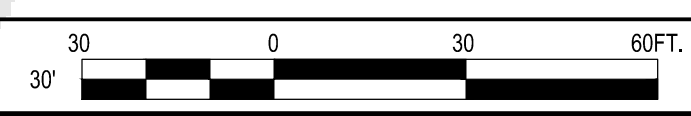
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**MARKING, SIGNAGE AND FENCE PLAN**

**XM101**



**B1 MARKING, SIGNAGE AND FENCE PLAN**  
SCALE: 1" = 30'



- 800. VEHICLE PARKING STALL MARKING (TYP.), 6" WIDE, WHITE, ITEM P-620, SEE STANDARD PARKING STALL DETAIL B3/XM501
- 801. ACCESSIBLE PARKING STALL MARKING DETAIL, TYPE "B", ITEM P-620, SEE DETAIL, A4/XM501
- 802. TIE INTO EXISTING 8' CHAIN LINK FENCE WITH BARBED WIRE, ITEM F-162
- 806. PROPOSED 8' CHAIN LINK FENCE WITH BARBED WIRE, ITEM F-162, SEE DETAIL A1/XM501
- 807. CONNECT 8' CHAIN LINK FENCE TO PROPOSED HANGAR, ITEM F-162
- 808. INSTALL ACCESSIBILITY SIGNS (TYP.), SEE DETAILS D2/XM501 AND D3/XM501
- 810. CONCRETE BUMPER GUARD (TYP.), SEE FDOT 520-001
- 812. PARKING LOT STRIPING DETAIL (TYP.), SEE DETAIL A3/XM501
- 813. TURN LANE USE ARROW (TYP.), SEE DETAIL D1/XM502
- 814. TRAFFIC STOP SIGN DETAIL, SEE DETAIL C1/XM502
- 815. SINGLE CHAINLINK FENCE DUMPSTER ENCLOSURE, SEE DETAIL A2/XM501

**A1 KEYED NOTES**  
SCALE: NOT TO SCALE

- NOTES:**
- REFER TO GEOMETRY PLAN SHEET CS101 FOR FENCE COORDINATES.

**A3 SHEET NOTES**  
SCALE: NOT TO SCALE

May 21, 2024 - 10:25AM  
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