APPENDIX M

Engineering Reports

M.1 | SIGNATURE EAST – ENGINEER'S REPORT

M.2 | SIGNATURE EAST – SITE DRAWINGS

M.3 | SIGNATURE SOUTH – ENGINEER'S REPORT

M.4 | SIGNATURE SOUTH – SITE DRAWINGS

APPENDIX M.2

Signature East – Site Drawings

Luminaire Schedule:								
Symbol	Qty	Mounting Height	Label	Arrangement	LLF	Description	Lum. Lumens	Pole
	2	20'-0" AFG	P5W	SINGLE	0.900	LITHONIA LIGHTING DSX1 SERIES LED AREA LIGHT (P5 40K 80CRI T5W)	17162	HOLOPHANE FRSS ROUND STRAIGH STEEL POLE (FRSS 20 40B-D01-NDR-BZ)
	5	15'-0" AFF	W2M	SINGLE	0.900	LITHONIA LIGHTING DSXW1 SERIES LED WALL MOUNTED LIGHT (P5 40K 80CRI T2M)	4822	--

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Ground Level Calcs	Illuminance	Fc	0.48	2.2	0.0	N.A.	N.A.
Sidewalk Calcs	Illuminance	Fc	1.64	2.2	0.5	3.28	4.40
Parking Area	Illuminance	Fc	1.13	2.2	0.7	1.61	3.14

BLOCK 203
LOT 1

BLOCK 203
LOT 1

PROPOSED LEASE AREA
AREA=228,743 S.F. OR 5.251 ACRES

PROP. HANGAR
(36,000 SF)

PROP. SHOPS
& OFFICE
(4,500 S.F.)

ANY PROPOSED ARCHITECTURA_
BUILDING MOUNTED LIGHTS HAVE NOT
BEEN MODELED FOR THIS DESIGN (TYP)

W2M

P5W

ANY EXISTING BUILDING MOUNTED
LIGHTS HAVE NOT BEEN MODELED
FOR THIS DESIGN (TYP)

METAL BUILDING
1 STORY (TALL)
"BUILDING E-4H"
(HANGER)

2 STORY
MASONRY
BUILDING
(OFFICES)

AVIATION MUSEUM
HALL OF FAME

F.A.A. CONTROL
TOW OF TOWER
ELEV = 89.3'+/-

LEASE LINE FOR
BUILDING E-3H & E-4H

CONC. #1
ROOF O.H.

ROOF O.H.
(TYP.)

ROOF O.H. (TYP.)

ROOF O.H.

N74°30'35"E
240.00'

S74°30'35"W
38.00'

S74°30'35"W

N74°30'35"E
240.00'

N74°30'35"E
162.33'

S74°30'35"W
162.33'

44.13'

404.97'

21.04'

FRED WEHRAN DRIVE
(A.K.A RISER ROAD)



LITHONIA LIGHTING DSX1
SERIES LED AREA LIGHT (P5W)
NOT TO SCALE



LITHONIA LIGHTING
DSXW1 SERIES LED WALL
MOUNTED LIGHT (W2M)
NOT TO SCALE

GENERAL LIGHTING NOTES:

1. THE GENERAL NOTES, FOUND ON THE NOTES PAGE OF THIS PLAN SET, MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE ELECTRICAL CONTRACTOR MUST BECOME FAMILIAR WITH, REFER TO AND FULLY COMPLY WITH THESE NOTES, IN THEIR ENTIRETY.
2. THE ELECTRICAL CONTRACTOR MUST COMPLY WITH ALL APPLICABLE CONTRACTOR REQUIREMENTS INDICATED IN THIS LIGHTING PLAN, INCLUDING BUT NOT LIMITED TO GENERAL NOTES, GRADING AND UTILITY NOTES, SITE SAFETY, AND ALL APPLICABLE AGENCY AND GOVERNMENTAL REGULATIONS. THE LIGHTING PLAN DEPICTS PROPOSED, SUSTAINED ILLUMINATION LEVELS CALCULATED USING DATA PROVIDED BY THE NOTED MANUFACTURER(S). ACTUAL SUSTAINED SITE ILLUMINATION LEVELS AND PERFORMANCE OF LUMINAIRES MAY VARY DUE TO VARIATIONS IN WEATHER, ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, MAINTENANCE, THE SERVICE LIFE OF EQUIPMENT AND LUMINAIRES AND OTHER RELATED VARIABLE FIELD CONDITIONS.
3. THE LIGHTING VALUES AND CALCULATION POINTS DEPICTED ON THIS PLAN ARE ANALYZED ON A HORIZONTAL GEOMETRIC PLANE AT GROUND LEVEL UNLESS OTHERWISE NOTED. ILLUMINATION LEVELS ARE SHOWN IN FOOTCANDLES (FC).
4. THE LIGHTING PLAN IS INTENDED TO SHOW THE LOCATIONS AND TYPE OF LUMINAIRES. POWER SYSTEM, CONDUITS, WIRING, CONTROLS, AND OTHER ELECTRICAL COMPONENTS ARE SOLELY THE ARCHITECT'S, ELECTRICAL ENGINEER'S AND/OR ELECTRICAL CONTRACTOR'S RESPONSIBILITY, AS INDICATED IN THE CONSTRUCTION CONTRACT DOCUMENTS. THE CONTRACTOR MUST COORDINATE WITH THE PROJECT ARCHITECT AND/OR ELECTRICAL ENGINEER REGARDING ANY AND ALL POWER SOURCES AND TIMING DEVICES NECESSARY TO MEET THE DESIGN INTENT. THESE ITEMS MUST BE INSTALLED AS REQUIRED BY FEDERAL, STATE AND LOCAL REGULATIONS. CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF LIGHTING FIXTURES AND APPURTENANCES IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE (NEC) AND ALL APPLICABLE BUILDING AND LOCAL ELECTRICAL CODES.
5. THE ELECTRICAL CONTRACTOR MUST BRING IMMEDIATELY, IN WRITING, ANY LIGHT LOCATIONS THAT CONFLICT WITH DRAINAGE, UTILITIES, OR OTHER STRUCTURE(S) TO THE PROFESSIONAL OF RECORD'S ATTENTION, PRIOR TO THE START OF CONSTRUCTION.
6. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE TO ENSURE THAT ALL LIGHTING IS INSTALLED PER THIS LIGHTING PLAN, INCLUDING THE LOCATION, ORIENTATION, SHIELDING, AND/OR ROTATED OPTICS ARE INSTALLED AS INDICATED ON THE PLAN IN ORDER TO ACHIEVE THE LIGHTING LEVELS DEPICTED ON THIS PLAN. EXISTING POLES AND FOUNDATIONS ARE NOT TO BE REUSED.
7. UPON OWNER'S ACCEPTANCE OF THE COMPLETED PROJECT, THE OWNER SHALL BE RESPONSIBLE FOR ALL MAINTENANCE, SERVICING, REPAIR AND INSPECTION OF THE LIGHTING SYSTEM AND ALL OF ITS COMPONENTS AND RELATED SYSTEMS. THE LUMINAIRES, LAMPS AND LENSES MUST BE REGULARLY INSPECTED/MAINTAINED TO ENSURE THAT THEY FUNCTION PROPERLY. THIS WORK SHOULD INCLUDE, BUT IS NOT LIMITED TO, VISUAL OBSERVATION, CLEANING OF LENSES, AND OTHER MAINTENANCE SPECIFIED BY THE MANUFACTURER. FAILURE TO FOLLOW THE ABOVE STEPS COULD RESULT IN IMPROPER LIGHT DISTRIBUTION AND FAILURE TO COMPLY WITH THE APPROVED DESIGN.
8. THE LIGHT LOSS FACTORS (LLF) DEPICTED IN THE LUMINAIRE SCHEDULE ON THIS PLAN ARE BASED ON DATA PROVIDED BY THE MANUFACTURER FOLLOWING IES LM-80-21 TESTING (OR MOST RECENT EDITION). THE LIGHT LEVELS DEPICTED ON THIS PLAN WERE CALCULATED BASED ON THE LLF LISTED IN THE LUMINAIRE SCHEDULE.
9. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE SUBMITTALS TO BOHLER FOR REVIEW AND APPROVAL. SUBSTITUTION REQUESTS MUST BE ACCOMPANIED BY A HORIZONTAL PHOTOMETRIC STUDY DEMONSTRATING THAT THE LUMINAIRE(S) IN QUESTION WILL MEET THE DESIGN INTENT OF THIS PLAN. SUBSTITUTION REQUESTS WITHOUT A PHOTOMETRIC STUDY WILL BE REJECTED.
10. LIGHT POLE FOUNDATIONS ARE SHOWN ON THE PLAN IN THE INTENDED LOCATION BASED ON THE LIGHTING CALCULATIONS, UNLESS OTHERWISE NOTED. LIGHT SYMBOLS ARE SHOWN LARGER THAN ACTUAL SIZE, HOWEVER FOUNDATION SIZE IS SHOWN AT ACTUAL SIZE.

REFER TO DETAIL SHEET FOR LIGHT POLE FOUNDATION DETAIL

THIS PLAN TO BE UTILIZED FOR LIGHTING PURPOSES ONLY

40 20 10 0 40
SCALE: 1" = 40'

BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

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REV	DATE	COMMENT	DRAWN BY / CHECKED BY

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PROJECT No.:	NJC240059.00-0E
DRAWN BY:	CTC
CHECKED BY:	BE
DATE:	10/28/2025
CAD I.D.:	P-CIVL-LGHT

PROJECT:

SITE DEVELOPMENT PLANS

FOR

SIGNATURE AVIATION USA, LLC

SIGNATURE AVIATION

PROPOSED EAST SIDE RAMP EXPANSION & HANGAR

TETERBORO AIRPORT
FRED WEHRAN DRIVE
BOROUGH OF TETERBORO
BERGEN COUNTY, NEW JERSEY

BOHLER
BOHLER ENGINEERING NJ, LLC
125 HALF MILE ROAD, SUITE 207
RED BANK, NJ 07701
Phone: (732) 825-6800
www.BohlerEngineering.com
NJ CERT. OF AUTHORIZATION NO. 24GA28161700 & MH000122

J.A. HOLZAPFEL
NEW JERSEY LICENSE NO. 24GE05000500
PROFESSIONAL ENGINEER

SHEET TITLE:

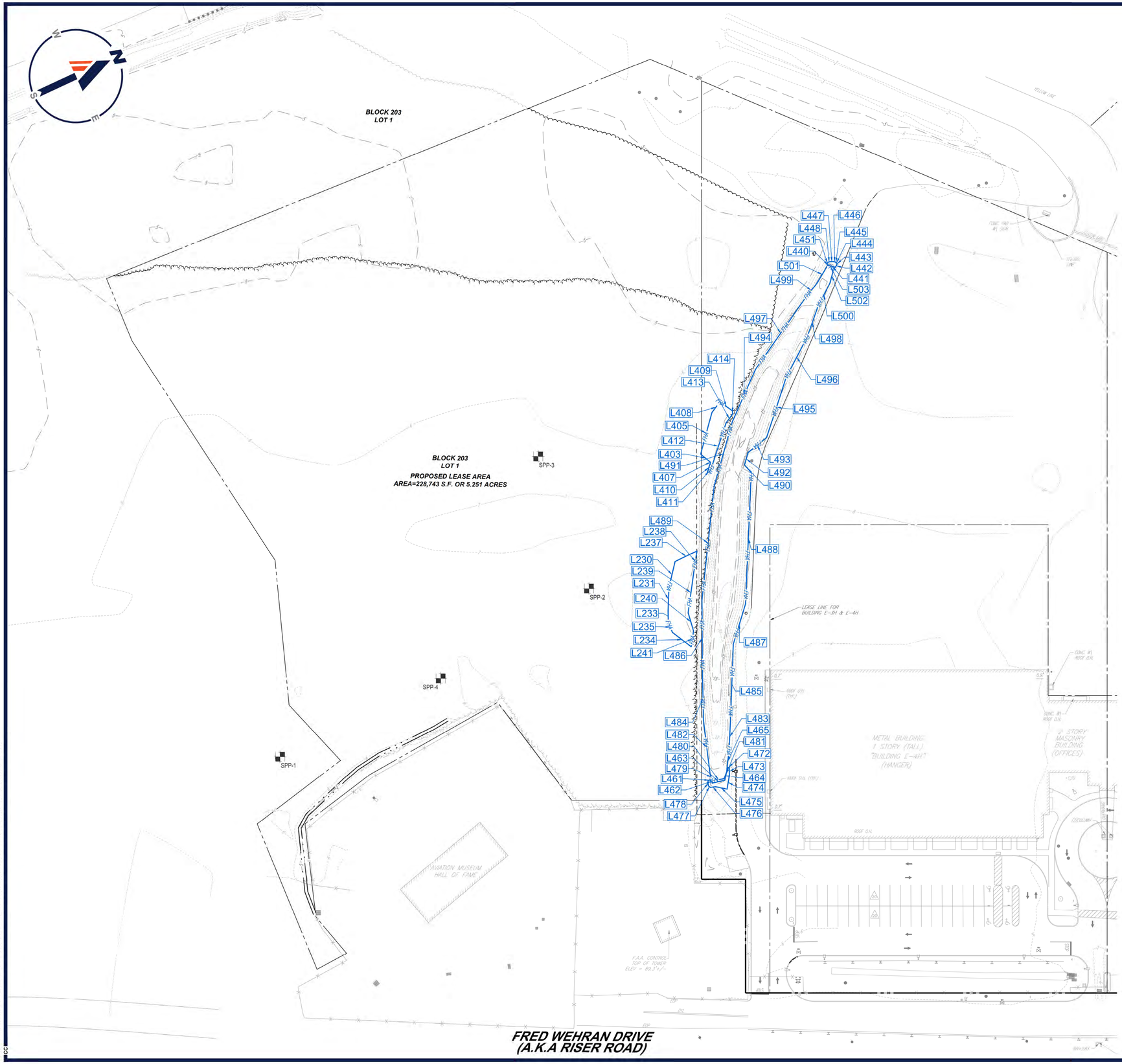
LIGHTING PLAN

SHEET NUMBER:

17
OF 17

ORG. DATE - 10/28/2025

I:\BOHLER\ENG NET\SHARE\NJ-PROJECTS\2024\NJC240059.00\CAD\DRAWINGS\PLAN SETS\CIVIL SITE PLANS\P-CIVL-LGHT-NJC240059.00-0E ——— LAYOUT: L-101 LIGHT



FLOOD HAZARD AREA

Line Table		
Line #	Length	Direction
L237	20.952	S01° 01' 53.05"E
L238	18.694	N56° 41' 05.70"W
L239	35.312	N57° 16' 36.23"W
L240	16.328	N81° 39' 36.53"W
L241	13.946	N57° 08' 09.73"W
L234	20.682	N62° 42' 12.01"E
L235	9.497	S87° 01' 32.10"E
L233	9.707	S65° 55' 32.48"E
L231	19.828	S63° 04' 23.75"E
L230	23.377	S51° 59' 10.29"E
L403	10.795	S83° 58' 00.91"W
L407	0.178	S00° 13' 32.26"W
L410	10.204	N48° 29' 48.83"W
L411	4.783	S21° 55' 28.98"E
L412	41.881	S47° 03' 31.06"E
L413	9.807	S29° 43' 03.04"E
L414	2.687	S68° 04' 02.77"E
L409	13.242	N59° 57' 20.27"E
L408	11.374	N28° 03' 05.08"W
L405	37.298	N49° 59' 48.01"W
L440	2.739	S50° 42' 13.37"W
L441	5.184	S37° 29' 01.94"W
L442	2.656	S35° 33' 34.04"E
L443	0.987	S59° 35' 49.87"E
L444	1.150	N46° 25' 08.57"E
L445	0.398	S53° 51' 31.05"E
L446	2.326	N41° 15' 22.88"E
L447	2.665	N23° 05' 13.38"E
L448	1.930	N10° 09' 59.73"E
L451	2.204	N32° 50' 02.35"W
L461	1.961	S15° 43' 19.21"W
L462	3.228	S79° 24' 35.26"W
L463	10.783	S12° 13' 55.08"W
L481	11.622	S51° 05' 18.64"E

Line Table		
Line #	Length	Direction
L472	1.229	S30° 04' 02.98"W
L473	6.992	N65° 30' 01.82"W
L474	11.865	N55° 41' 24.68"W
L475	10.174	N36° 26' 32.54"E
L476	4.562	N17° 33' 09.93"E
L477	2.180	N63° 34' 31.50"E
L478	4.676	S68° 33' 39.69"E
L503	6.059	N53° 06' 08.26"E
L501	18.060	N34° 06' 16.63"W
L499	15.350	N26° 46' 40.09"W
L497	75.674	N30° 15' 52.23"W
L494	49.107	N41° 13' 04.67"W
L491	58.080	N49° 21' 44.01"W
L489	99.032	N59° 02' 44.40"W
L486	65.753	N65° 32' 37.10"W
L484	37.836	N66° 23' 47.81"W
L482	47.238	N72° 10' 09.14"W
L479	6.041	N89° 33' 50.92"W
L480	9.551	S15° 32' 54.93"W
L464	5.993	S43° 32' 30.52"E
L465	19.122	S58° 34' 23.42"E
L483	23.341	S82° 28' 58.12"E
L485	68.560	S82° 59' 35.19"E
L487	36.083	S48° 10' 18.59"E
L488	113.670	S82° 40' 36.57"E
L490	8.791	N73° 13' 15.58"E
L492	11.193	S48° 46' 09.08"E
L493	20.533	S14° 09' 45.37"E
L495	55.328	S47° 04' 42.91"E
L496	37.941	S37° 28' 34.68"E
L498	28.377	S45° 38' 34.91"E
L500	23.290	S38° 18' 41.69"E
L502	12.364	S50° 11' 01.09"E

FLOOD HAZARD NOTES:

(REV. 03/2025)

1. CONTOUR ELEVATIONS ARE REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NAVD29).
2. THE STATE OF NEW JERSEY HAS DETERMINED THAT ALL OR A PORTION OF THIS LOT LIES IN A FLOOD HAZARD AREA (FHA) AND/OR RIPARIAN ZONE. CERTAIN ACTIVITIES IN FLOOD HAZARD AREAS AND RIPARIAN ZONES ARE REGULATED BY THE NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND SOME ACTIVITIES MAY BE PROHIBITED ON THIS SITE OR MAY FIRST REQUIRE A FLOOD HAZARD AREA PERMIT. CONSULT WWW.NJ.GOV/DEP/LANDUSE OR CONTACT THE DIVISION OF LAND USE REGULATION AT (609) 777-0454 FOR MORE INFORMATION PRIOR TO ANY CONSTRUCTION ONSITE.
3. BASED ON THE PRELIMINARY FEMA MAP NUMBER 34003C256J, DATED AUGUST 29, 2014, THE SITE, OR A PORTION OF THE SITE LIES IN A NEW JERSEY FLOOD HAZARD AREA DESIGN FLOOD AT ELEVATIONS 8 (NAVD88). THIS ELEVATION WAS DETERMINED USING METHOD 2 (FEMA TIDAL METHOD) AS PER N.J.A.C. 7:13-3.4(D).
4. AS LOCAL REGULATIONS, LAWS AND ORDINANCES ARE ADOPTED, REVISED, OR UPDATED; INFORMATION ON THIS PLAN IS SUBJECT TO CHANGE. PRIOR TO RELYING ON THE FLOOD HAZARD LINE AND ELEVATION SHOWN ON THIS PLAN, ALL USERS AND ANYONE RELYING ON THIS INFORMATION MUST VERIFY THE INFORMATION SHOWN IS THE MOST CURRENT AVAILABLE. ANY USES OR ACTIVITIES PROPOSED ON SITE SHOULD BE VERIFIED WITH THE APPROPRIATE AGENCY TO ENSURE THAT THE PLANNED USE OR ACTIVITY DOES NOT (A) VIOLATE ANY LAWS, OR (B) REQUIRE AN ADDITIONAL PERMIT.
5. TO CONVERT FROM NAVD88 DATUM TO NGVD29 DATUM, ADD 1.027 FEET TO THE NAVD88 ELEVATION.
   ON-SITE FHA DESIGN FLOOD ELEVATION - 8 (NAVD88)
   ON-SITE FHA DESIGN FLOOD ELEVATION - 9.027 (NGVD29)
6. THE SUBJECT SITE IS LOCATED IN THE TIDAL FLOOD HAZARD AREA OF THE HACKENSACK RIVER. THE SITE IS APPROXIMATELY 160' FROM THE NEAREST CHANNEL, THEREFORE NO MODIFICATION OR ADVERSE IMPACTS TO ANY CHANNEL OR RIPARIAN ZONES IS EXPECTED.
7. THE SUBJECT SITE NOT LOCATED WITHIN A FLOODWAY OF ANY REGULATED WATER.
8. THE SUBJECT SITE NOT LOCATED WITHIN A RIPARIAN ZONE OF ANY REGULATED WATER.

40 20 10 0 40
SCALE: 1" = 40'

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SITE CIVIL AND CONSULTING ENGINEERING
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PROJECT No.: NJC240059.00-0D
DRAWN BY: CTC
CHECKED BY: BE
DATE: 10/28/2025
CAD I.D.: P-FHAP-SITE

PROJECT:
FLOOD HAZARD AREA PERMITTING EXHIBIT
FOR
SIGNATURE AVIATION USA, LLC
SIGNATURE AVIATION
PROPOSED EAST SIDE RAMP EXPANSION & HANGER
TETERBORO AIRPORT
FRED WEHRAN DRIVE
BOROUGH OF TETERBORO
BERGEN COUNTY, NEW JERSEY

BOHLER
BOHLER ENGINEERING NJ, LLC
125 HALF MILE ROAD, SUITE 207
RED BANK, NJ 07701
Phone: (732) 825-6800
www.BohlerEngineering.com
NJ CERT. OF AUTHORIZATION NO: 24GA28161700 & MH000122

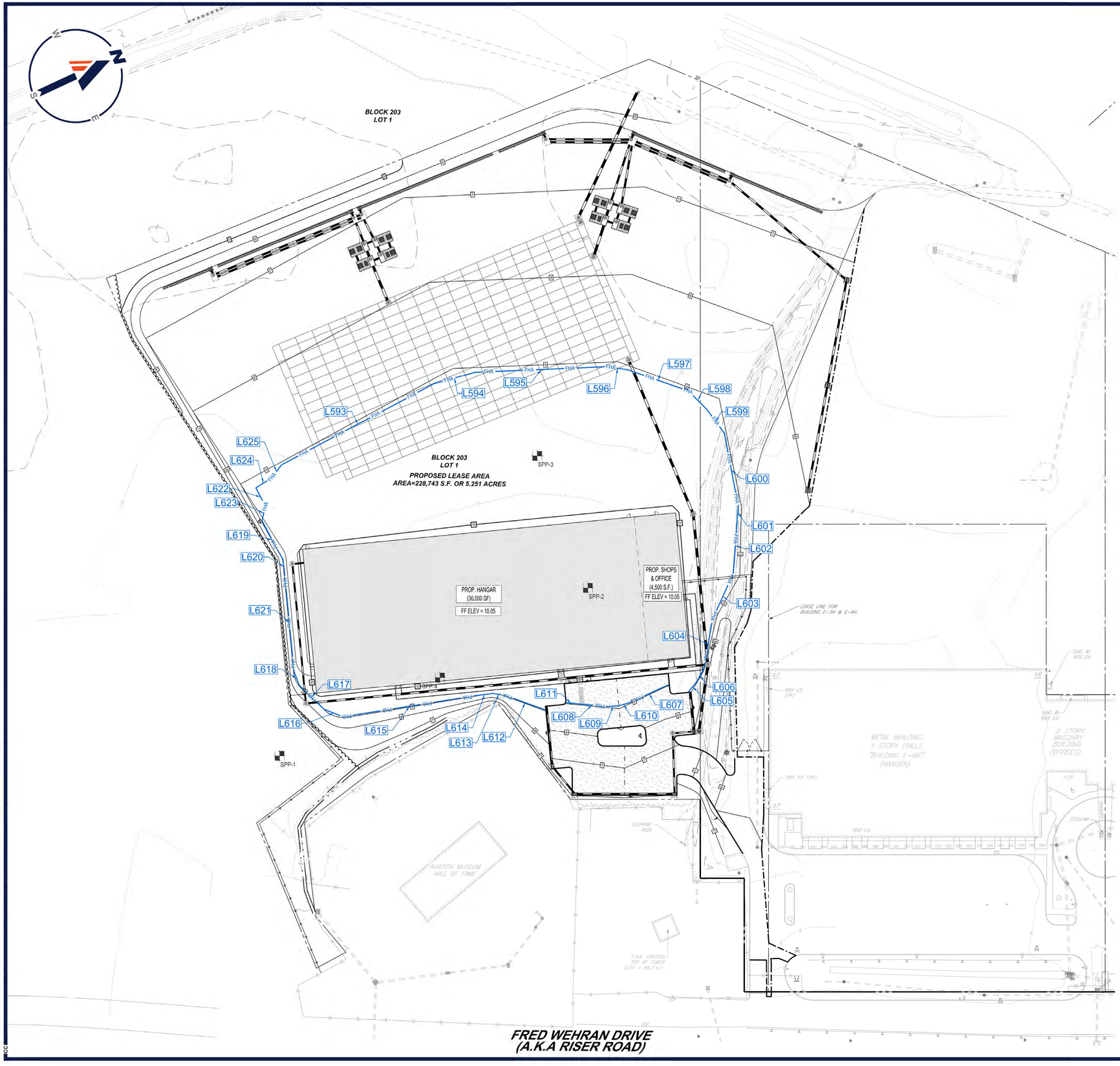
J.A. HOLZAPFEL
STATE OF NEW JERSEY — JOSEPH ANTHONY HOLZAPFEL — NO. 24GE05...
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE NO. 24500
PROFESSIONAL ENGINEER

SHEET TITLE:
EXISTING FLOOD HAZARD AREA EXHIBIT

SHEET NUMBER:
1 OF 2

ORG. DATE - 10/28/2025

G:\2024\NJC240059.00\CAD\DRAWINGS\PLAN SET\EFLOOD HAZARD AREA PERMITTING\P-FHAP-SITE-NJC240059.00-0D---1LAYOUT, C-001 EXIST



FLOOD HAZARD AREA

Line Table		
Line #	Length	Direction
L617	29.826	S68° 45' 50.41"W
L605	11.874	S26° 15' 10.81"E
L606	12.121	S36° 24' 04.81"E
L604	43.682	S54° 56' 27.17"E
L603	43.680	S41° 01' 04.80"E
L602	48.100	S60° 57' 42.86"E
L601	9.508	S59° 56' 06.28"E
L600	64.722	S75° 52' 19.79"E
L599	25.054	N78° 38' 06.51"E
L598	22.971	N69° 49' 05.88"E
L597	55.540	N44° 09' 49.40"E
L596	17.932	N33° 31' 50.09"E
L595	114.174	N22° 24' 36.69"E
L594	37.388	N09° 16' 06.92"E
L593	148.493	N03° 08' 04.27"W
L625	15.536	N26° 54' 15.70"W
L624	15.223	N06° 56' 40.28"W

Line Table		
Line #	Length	Direction
L622	17.958	S87° 20' 57.30"W
L623	12.796	N51° 29' 34.57"W
L619	38.043	S86° 25' 12.69"W
L620	12.770	N71° 48' 23.26"W
L621	84.523	N70° 40' 17.71"W
L618	12.864	N86° 02' 01.69"W
L616	17.505	S46° 19' 40.83"W
L615	116.616	S15° 50' 24.68"W
L614	14.340	S17° 32' 04.37"W
L613	10.585	S33° 31' 00.18"W
L612	37.309	S44° 31' 33.46"W
L611	8.644	S30° 19' 17.41"W
L608	28.058	S29° 58' 01.30"W
L609	8.680	S21° 53' 53.60"W
L610	9.707	S08° 44' 59.09"W
L607	38.148	S00° 14' 12.68"W

FLOOD HAZARD NOTES:

(REV. 03/2025)

1. CONTOUR ELEVATIONS ARE REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NAVD29).
2. THE STATE OF NEW JERSEY HAS DETERMINED THAT ALL OR A PORTION OF THIS LOT LIES IN A FLOOD HAZARD AREA (FHA) AND/OR RIPARIAN ZONE. CERTAIN ACTIVITIES IN FLOOD HAZARD AREAS AND RIPARIAN ZONES ARE REGULATED BY THE NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND SOME ACTIVITIES MAY BE PROHIBITED ON THIS SITE OR MAY FIRST REQUIRE A FLOOD HAZARD AREA PERMIT. CONSULT WWW.NJ.GOV/DEP/LANDUSE OR CONTACT THE DIVISION OF LAND USE REGULATION AT (609) 777-0454 FOR MORE INFORMATION PRIOR TO ANY CONSTRUCTION ONSITE.
3. BASED ON THE PRELIMINARY FEMA MAP NUMBER 34003C256J, DATED AUGUST 29, 2014, THE SITE, OR A PORTION OF THE SITE LIES IN A NEW JERSEY FLOOD HAZARD AREA DESIGN FLOOD AT ELEVATIONS 8 (NAVD88). THIS ELEVATION WAS DETERMINED USING METHOD 2 (FEMA TIDAL METHOD) AS PER N.J.A.C. 7:13-3.4(D).
4. AS LOCAL REGULATIONS, LAWS AND ORDINANCES ARE ADOPTED, REVISED, OR UPDATED; INFORMATION ON THIS PLAN IS SUBJECT TO CHANGE. PRIOR TO RELYING ON THE FLOOD HAZARD LINE AND ELEVATION SHOWN ON THIS PLAN, ALL USERS AND ANYONE RELYING ON THIS INFORMATION MUST VERIFY THE INFORMATION SHOWN IS THE MOST CURRENT AVAILABLE. ANY USES OR ACTIVITIES PROPOSED ON SITE SHOULD BE VERIFIED WITH THE APPROPRIATE AGENCY TO ENSURE THAT THE PLANNED USE OR ACTIVITY DOES NOT (A) VIOLATE ANY LAWS, OR (B) REQUIRE AN ADDITIONAL PERMIT.
5. TO CONVERT FROM NAVD88 DATUM TO NGVD29 DATUM, ADD 1.027 FEET TO THE NAVD88 ELEVATION.

   ON-SITE FHA DESIGN FLOOD ELEVATION - 8 (NAVD88)
   ON-SITE FHA DESIGN FLOOD ELEVATION - 9.027 (NGVD29)
6. THE SUBJECT SITE IS LOCATED IN THE TIDAL FLOOD HAZARD AREA OF THE HACKENSACK RIVER. THE SITE IS APPROXIMATELY 160' FROM THE NEAREST CHANNEL, THEREFORE NO MODIFICATION OR ADVERSE IMPACTS TO ANY CHANNEL OR RIPARIAN ZONES IS EXPECTED.
7. THE SUBJECT SITE NOT LOCATED WITHIN A FLOODWAY OF ANY REGULATED WATER.
8. THE SUBJECT SITE NOT LOCATED WITHIN A RIPARIAN ZONE OF ANY REGULATED WATER.

40 20 10 0 40
SCALE: 1" = 40'

G:\2024\NJC240059.00\CAD\DRAWINGS\PLAN SETS\FLOOD HAZARD AREA PERMITTING\P-FHAP-SITE-NJC240059.00-0D-----LAYOUT: C-002 PROP

CCC

BOHLER

SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
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PERMITTING SERVICES
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AUTHORIZATION FROM BOHLER. ONLY APPROVED AND SEALED PLANS SHALL BE UTILIZED FOR CONSTRUCTION PURPOSES.
CC BOHLER

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REV	DATE	COMMENT	DRAWN BY / CHECKED BY

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PROJECT No.:	NJC240059.00-0D
DRAWN BY:	CTC
CHECKED BY:	BE
DATE:	10/28/2025
CAD I.D.:	P-FHAP-SITE

PROJECT:

FLOOD HAZARD AREA PERMITTING EXHIBIT

FOR

SIGNATURE AVIATION USA, LLC

SIGNATURE AVIATION

PROPOSED EAST SIDE RAMP EXPANSION & HANGER

TETERBORO AIRPORT
FRED WEHRAN DRIVE
BOROUGH OF TETERBORO
BERGEN COUNTY, NEW JERSEY

BOHLER
BOHLER ENGINEERING NJ, LLC
125 HALF MILE ROAD, SUITE 207
RED BANK, NJ 07701
Phone: (732) 825-6800
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NJ CERT. OF AUTHORIZATION NO. 24GA28161700 & MH000122

J.A. HOLZAPFEL
NO. 24GE05735
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE NO. 24GE05735
PROFESSIONAL ENGINEER

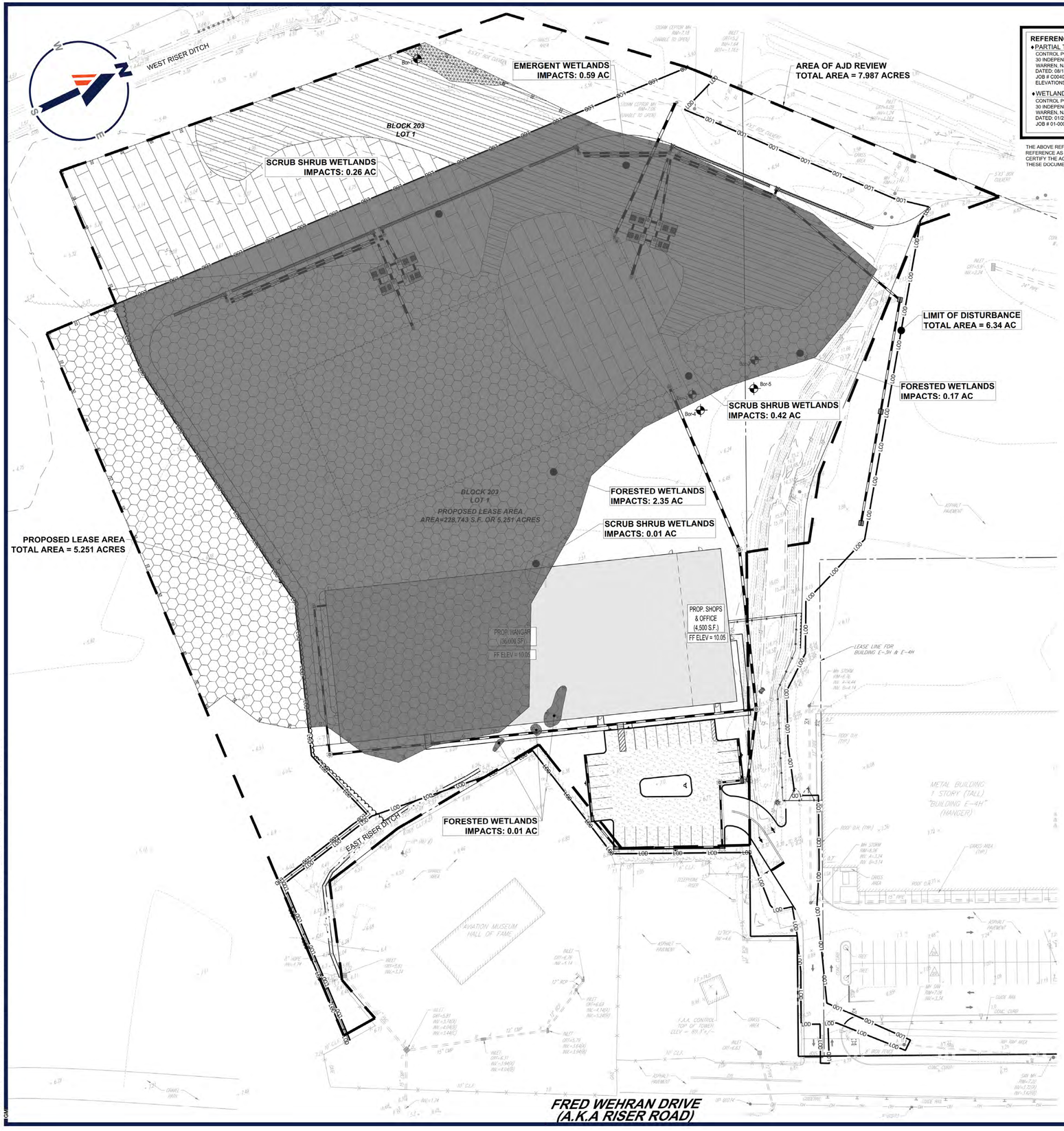
SHEET TITLE:

PROPOSED FLOOD HAZARD AREA EXHIBIT

SHEET NUMBER:

2 OF 2

ORG. DATE - 10/28/2025



REFERENCES

REFERENCES

- PARTIAL TOPOGRAPHIC, LOCATION & UTILITY SURVEY:
  CONTROL POINT ASSOCIATES, INC.
  30 INDEPENDENCE BLVD., SUITE 100
  WARREN, NJ 07059
  DATED: 08/17/2012 (REV. 04/14/2015)
  JOB # C00404.09
  ELEVATIONS: NGVD 1929
- WETLAND STAKEOUT SKETCH:
  CONTROL POINT ASSOCIATES, INC.
  30 INDEPENDENCE BLVD., SUITE 100
  WARREN, NJ 07059
  DATED: 01/25/2023 (REV. 03/24/2023)
  JOB # 01-000404-09

THE ABOVE REFERENCED DOCUMENTS ARE INCORPORATED BY REFERENCE AS PART OF THESE PLANS, HOWEVER, BOHLER DOES NOT CERTIFY THE ACCURACY OF THE WORK REFERENCED OR DERIVED FROM THESE DOCUMENTS, BY OTHERS.

NOTES

1. PROPERTY KNOWN AS BLOCK 203, PORTION OF LOT 1, AS SHOWN ON THE OFFICIAL TAX MAP OF TETERBORO, BERGEN COUNTY, NEW JERSEY.
2. WETLANDS WERE DELINEATED BY BOHLER WETLAND SCIENTISTS ON 03/20/2015. ON SEPTEMBER 29, 2017, THE USACE-NYD ISSUED AN APPROVED JURISDICTIONAL DETERMINATION FOR THAT SITE WHICH DETERMINED THAT THE WETLAND DELINEATION ACCURATELY REFLECTED THE EXTENT OF WATERS OF THE UNITED STATES PRESENT. ON FEBRUARY 6, 2023, PRINCETON HYDRO, LLC. REASSESSED THE EXTENT OF WATERS OF THE UNITED STATES ON-SITE AND MADE MINOR CHANGES TO THE LIMITS PREVIOUSLY APPROVED BY USACE.
3. THE MERIDIAN OF THIS PLAN IS REFERENCED TO NEW JERSEY STATE PLAN COORDINATE SYSTEM OF 1983 (NAD83)
4. ELEVATIONS SHOWN ARE REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29).
5. DELINEATION OF VEGETATIVE COMMUNITIES WAS PRESENTED TO BOHLER BY PRINCETON HYDRO, LLC ON 04/10/2023.

LEGEND

- PROPOSED LEASE AREA
- AREA OF AJD REVIEW
- Bor-1 DATA POINT
- JURISDICTIONAL WETLANDS WITHIN PROJECT AREA - 5.346 ACRES
- SCRUB SHRUB WETLAND
- GRAY BIRCH / RED MAPLE SUCCESSIONAL FORESTED WETLANDS
- COMMON REED EMERGENT WETLAND
- JAPANESE KNOTWEED WETLAND
- MAINTAINED LAWN WETLAND
- WETLAND IMPACTS

JURISDICTIONAL WATERS OF THE UNITED STATES WITHIN THE PROJECT AREA

IDENTIFIED FEATURE	CCORDINATED (CENTERPOINT)	WETLAND TYPE (COWARDIN CLASSIFICATION)	VEGETATIVE COMMUNITIES	WATER OF U.S. CLASSIFICATION	AREA (ACRES)	WETLAND IMPACTS (ACRES)
WETLAND 'A'	40.8526° N 74.0568° W	PFO1E	GREY BIRCH / RED MAPLE SUCCESSIONAL FORESTED WETLANDS	WETLAND ADJACENT TO A RPW (BARRY'S CREEK UNT)	3.177	2.521
		PSS1E	SCRUB SHRUB WETLANDS	WETLAND ADJACENT TO A RPW (BARRY'S CREEK UNT)	1.168	0.673
		PEM5E	COMMON REED EMERGENT WETLAND	WETLAND ADJACENT TO A RPW (BARRY'S CREEK UNT)	0.952	0.593
		PEM1E	JAPANESE KNOTWEED WETLAND	WETLAND ADJACENT TO A RPW (BARRY'S CREEK UNT)	0.013	0.013
		PEM1E	MAINTAINED LAWN WETLAND	WETLAND ADJACENT TO A RPW (BARRY'S CREEK UNT)	0.026	0
WETLAND 'I'	40.8526° N 74.0559° W	PFO1E	GREY BIRCH / RED MAPLE SUCCESSIONAL FORESTED WETLANDS	WETLAND ADJACENT TO A RPW (BARRY'S CREEK UNT)	0.001	0.001
WETLAND 'IA'	40.8527° N 74.0559° W	PFO1E	GREY BIRCH / RED MAPLE SUCCESSIONAL FORESTED WETLANDS	WETLAND ADJACENT TO A RPW (BARRY'S CREEK UNT)	0.001	0.001
WETLAND 'IB'	40.8527° N 74.0560° W	PFO1E	GREY BIRCH / RED MAPLE SUCCESSIONAL FORESTED WETLANDS	WETLAND ADJACENT TO A RPW (BARRY'S CREEK UNT)	0.008	0.008
				TOTAL	5.346	3.810

IDENTIFIED FEATURE	CCORDINATED (CENTERPOINT)	WATER TYPE	WATER OF THE U.S. CLASSIFICATION	LENGTH (FEET)	AREA (ACRES)
EAST RISER DITCH	40.8521° N 74.0558° W	DITCH	RPW (BARRY'S CREEK UNT)	237	0.014

GRAPHIC SCALE: 40 0 20 40 80 160 — 1 INCH = 40 FEET

BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
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LANDSCAPE ARCHITECTURE
SUSTAINABILITY SERVICES
PERMITTING SERVICES
TRANSPORTATION SERVICES

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REVISIONS

REV	DATE	COMMENT	DRAWN BY / CHECKED BY

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PROJECT No.:	-WETI-0A
DRAWN BY:	CTC
CHECKED BY:	BE
DATE:	11/10/2025
CAD I.D.:	NJC240059.0

PROJECT:

WETLAND IMPACT PLAN

FOR

SIGNATURE AVIATION USA, LLC

SIGNATURE AVIATION

PROPOSED EAST SIDE RAMP EXPANSION & HANGAR

TETERBORO AIRPORT
FRED WEHRAN DRIVE
BOROUGH OF TETERBORO
BERGEN COUNTY, NEW JERSEY

BOHLER
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125 HALF MILE ROAD, SUITE 207
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J.A. HOLZAPFEL
STATE OF NEW JERSEY
NO. GE56735
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE NO. 43500

SHEET TITLE:

WETLAND IMPACT PLAN

SHEET NUMBER:

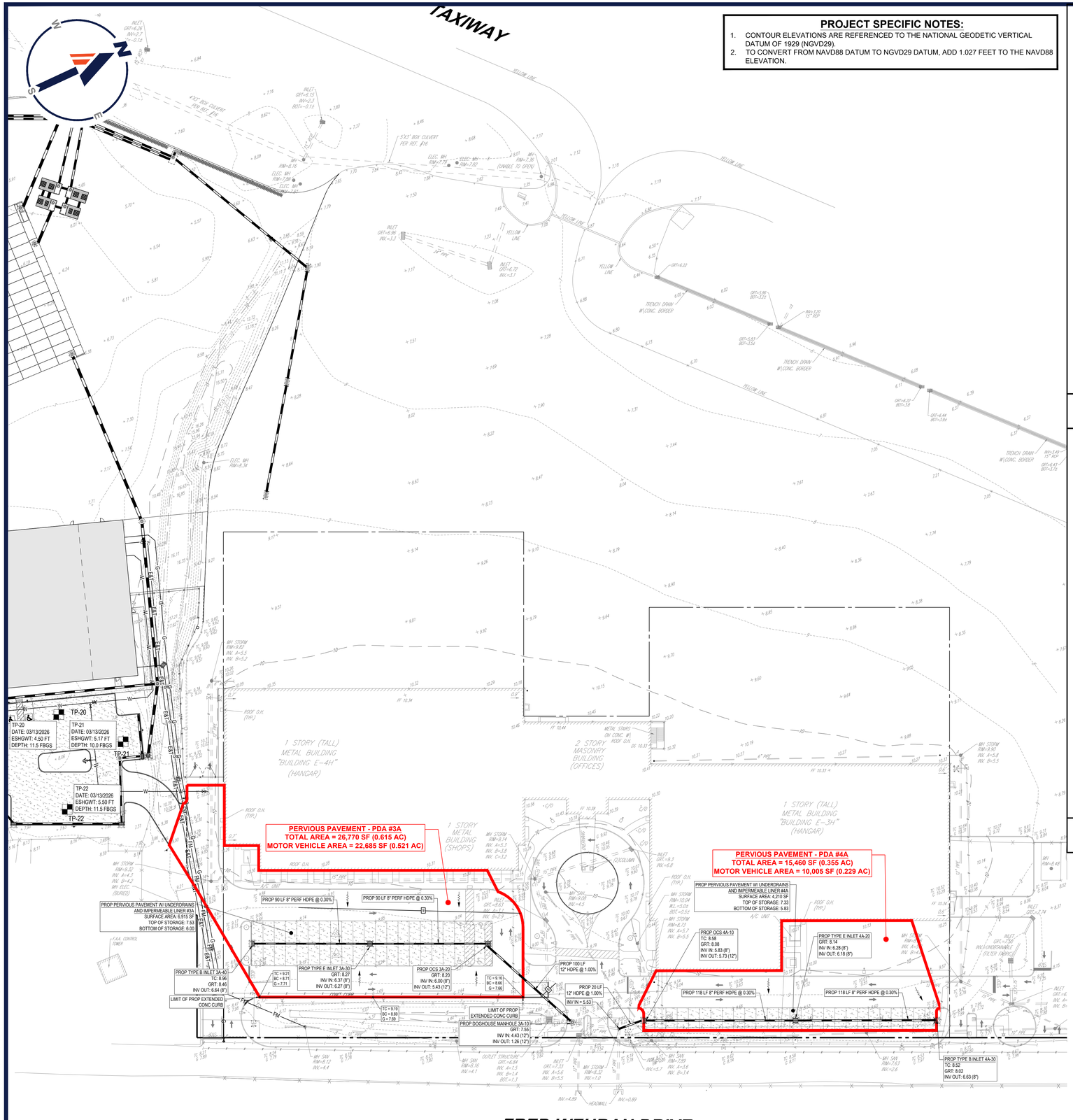
1 OF 1

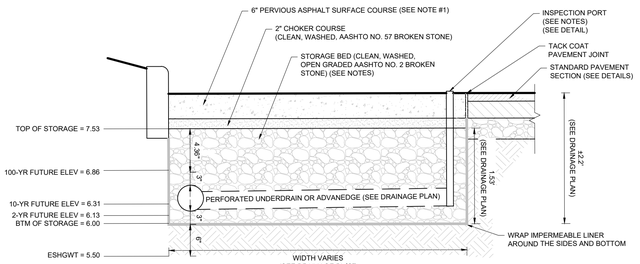
ORG. DATE - 11/10/2025

\\BOHLERENG.NET\SHARE\ENJ-PROJECTS\2024\NJC240059.00\CAD\DRAWINGS\EXHIBITS\WETLAND IMPACT EXHIBIT\NJC240059.00-WETI-0A-----LAYOUT C-01 WETE

PROJECT SPECIFIC NOTES:

1. CONTOUR ELEVATIONS ARE REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29).
2. TO CONVERT FROM NAVD88 DATUM TO NGVD29 DATUM, ADD 1.027 FEET TO THE NAVD88 ELEVATION.



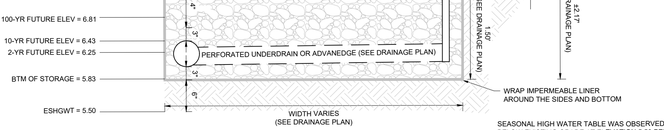


SEASONAL HIGH WATER TABLE WAS OBSERVED AT 12-24" BELOW EXISTING GRADE AT ELEVATION 5.50 PER GZA GEOENVIRONMENTAL, INC. TEST PIT TP-22 DATED 3/13/2026. THE PROPOSED STORAGE BED OF THE PERVIOUS PAVEMENT SYSTEM IS TO BE WRAPPED IN AN IMPERMEABLE LINER TO PREVENT GROUNDWATER FROM SEEPING INTO THE SYSTEM.

NOTES:
1. PERMEABLE ASPHALT SURFACE COURSE TO HAVE 15-25% POROSITY. FOR PARKING AREAS, A POLYMER MODIFIED BINDER PG 64E-22 MUST BE USED. PERVIOUS PAVEMENT SURFACE COURSE TO HAVE MINIMUM TESTED INFILTRATION RATE OF 6.4 IN/HR (20 IN/HR IF USED FOR STORMWATER QUALITY CONTROL). REFER TO GEOTECHNICAL ENGINEERING/REPORT FOR THICKNESS.
2. REFER TO NJ SWBMP MANUAL CHAPTER 9.6 AND NJDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION FOR OPEN-GRADED FRICTION COURSE COMPOSITION, MIX DESIGN, & INSTALLATION TEMPERATURE SPECIFICATIONS.
3. STORAGE BED AGGREGATE MUST BE PLACED IN LOOSE LIFTS NOT TO EXCEED 6 INCHES AND COMPACTED USING PLATE COMPACTORS PER NJ SWBMP MANUAL.
4. AT LEAST ONE INSPECTION PORT, WITH A REMOVABLE CAP, MUST BE PROVIDED AT THE UPSTREAM AND DOWNSTREAM ENDS OF THE PERFORATED SECTION OF THE NETWORK OF PIPES WITH ITS LOCATION DENOTED IN THE MAINTENANCE PLAN. THE INSPECTION PORT MUST BE PLACED AT LEAST 3 FEET FROM ANY EDGE. ADDITIONALLY, EACH INSPECTION PORT MUST BE FLUSH WITH THE SURFACE OF THE SURFACE LAYER AND EXTEND DOWN TO THE UNDERDRAIN PIPE NETWORK. THE SIZE OF THE INSPECTION PORT MUST BE LARGE ENOUGH TO ALLOW FOR MAINTENANCE ACTIVITIES.
5. SEALANT, TOP COAT, AND OTHER TREATMENTS SHALL NOT BE USED ON THE PERVIOUS ASPHALT PAVEMENT COURSE. CONSTRUCTION MAY NOT TAKE PLACE DURING RAIN OR SNOW, NOR WHEN THE SUBSOIL IS FROZEN.
6. POST-CONSTRUCTION TESTING OF THE PERMEABLE ASPHALT SURFACE COURSE IS REQUIRED AND MUST CONFORM TO THE METHODS OF EITHER ASTM C1701: STANDARD TEST METHOD FOR INFILTRATION RATE OF IN-PLACE PERVIOUS CONCRETE OR ASTM C1781: STANDARD TEST METHOD FOR SURFACE INFILTRATION RATE OF PERMEABLE UNIT PAVEMENT SYSTEMS. AT LEAST THREE LOCATIONS MUST BE USED FOR THE TEST, AND THEY SHOULD BE SPACED EVENLY ACROSS THE PERVIOUS PAVING SYSTEM. FAILURE TO ACHIEVE THE MINIMUM DESIGN INFILTRATION RATE OF THE SURFACE COURSE AT ONE OR MORE LOCATION INDICATES THE SYSTEM CANNOT BE PUT IN SERVICE UNTIL THE SYSTEM IS CORRECTED TO YIELD ALL PASSING VALUES. UNLIKE THE TEST METHODOLOGY OUTLINED IN THE ASTM STANDARDS, THE TEST RESULTS MUST NOT BE AVERAGED. INCLUDE A LOG FOR RECORDING EACH LOCATION AND ITS TEST RESULT FOR FUTURE REFERENCE IN THE MAINTENANCE PLAN.
7. PERVIOUS PAVEMENT AREA SHALL BE PROTECTED FROM SEDIMENT-LADEN RUNOFF DURING CONSTRUCTION TO AVOID REDUCED POROSITY.

1 ***PERVIOUS ASPHALT PAVEMENT WITH UNDERDRAIN #3A***

NOT TO SCALE (NJ-S010103 - 01/2025)



SEASONAL HIGH WATER TABLE WAS OBSERVED AT 12-24" BELOW EXISTING GRADE AT ELEVATION 5.50 PER GZA GEOENVIRONMENTAL, INC. TEST PIT TP-22 DATED 3/13/2026. THE PROPOSED STORAGE BED OF THE PERVIOUS PAVEMENT SYSTEM IS TO BE WRAPPED IN AN IMPERMEABLE LINER TO PREVENT GROUNDWATER FROM SEEPING INTO THE SYSTEM.

NOTES:
1. PERMEABLE ASPHALT SURFACE COURSE TO HAVE 15-25% POROSITY. FOR PARKING AREAS, A POLYMER MODIFIED BINDER PG 64E-22 MUST BE USED. PERVIOUS PAVEMENT SURFACE COURSE TO HAVE MINIMUM TESTED INFILTRATION RATE OF 6.4 IN/HR (20 IN/HR IF USED FOR STORMWATER QUALITY CONTROL). REFER TO GEOTECHNICAL ENGINEERING/REPORT FOR THICKNESS.
2. REFER TO NJ SWBMP MANUAL CHAPTER 9.6 AND NJDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION FOR OPEN-GRADED FRICTION COURSE COMPOSITION, MIX DESIGN, & INSTALLATION TEMPERATURE SPECIFICATIONS.
3. STORAGE BED AGGREGATE MUST BE PLACED IN LOOSE LIFTS NOT TO EXCEED 6 INCHES AND COMPACTED USING PLATE COMPACTORS PER NJ SWBMP MANUAL.
4. AT LEAST ONE INSPECTION PORT, WITH A REMOVABLE CAP, MUST BE PROVIDED AT THE UPSTREAM AND DOWNSTREAM ENDS OF THE PERFORATED SECTION OF THE NETWORK OF PIPES WITH ITS LOCATION DENOTED IN THE MAINTENANCE PLAN. THE INSPECTION PORT MUST BE PLACED AT LEAST 3 FEET FROM ANY EDGE. ADDITIONALLY, EACH INSPECTION PORT MUST BE FLUSH WITH THE SURFACE OF THE SURFACE LAYER AND EXTEND DOWN TO THE UNDERDRAIN PIPE NETWORK. THE SIZE OF THE INSPECTION PORT MUST BE LARGE ENOUGH TO ALLOW FOR MAINTENANCE ACTIVITIES.
5. SEALANT, TOP COAT, AND OTHER TREATMENTS SHALL NOT BE USED ON THE PERVIOUS ASPHALT PAVEMENT COURSE. CONSTRUCTION MAY NOT TAKE PLACE DURING RAIN OR SNOW, NOR WHEN THE SUBSOIL IS FROZEN.
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7. PERVIOUS PAVEMENT AREA SHALL BE PROTECTED FROM SEDIMENT-LADEN RUNOFF DURING CONSTRUCTION TO AVOID REDUCED POROSITY.

2 ***PERVIOUS ASPHALT PAVEMENT WITH UNDERDRAIN #4A***

NOT TO SCALE (NJ-S010103 - 01/2025)

LEGEND

APPROX LOCATION OF SOIL TEST PIT PER GZA GEOENVIRONMENTAL, INC. PLOT PLAN DATED 03/19/2026 — TP #

THIS PLAN TO BE UTILIZED FOR GRADING, DRAINAGE AND UTILITIES PURPOSES ONLY.

CONTRACTOR TO CONFIRM LOCATION AND DEPTH OF UTILITY CROSSINGS AND PIPE CONNECTIONS PRIOR TO CONSTRUCTION

PERVIOUS PAVEMENT DESIGN TO BE FINALIZED SUBJECT TO UPDATED SURVEY INFORMATION AND GEOTECHNICAL TESTING

NOTE: ALL OR A PORTION OF THIS LOT LIES IN A FLOOD HAZARD AREA. CERTAIN ACTIVITIES IN FLOOD HAZARD AREAS AND RIPARIAN ZONES ARE REGULATED BY THE NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND SOME ACTIVITIES MAY BE PROHIBITED ON THIS SITE OR MAY FIRST REQUIRE A FLOOD HAZARD AREA PERMIT. CONTACT THE DIVISION OF LAND USE REGULATION AT (609) 777-0454 FOR MORE INFORMATION PRIOR TO ANY CONSTRUCTION ONSITE.

40 20 10 0 40
SCALE: 1" = 40'

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PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
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REV	DATE	COMMENT	DRAWN BY / CHECKED BY

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PROJECT No.:	NJC240059.00-0A
DRAWN BY:	CTC
CHECKED BY:	BE
DATE:	07/09/2026
CAD I.D.:	P-SWSD-GDUL

PROJECT:

PERVIOUS PAVEMENT PLAN

FOR

SIGNATURE FLIGHT SUPPORT LLC

SIGNATURE AVIATION

PROPOSED EAST SIDE RAMP EXPANSION & HANGAR

TETERBORO AIRPORT
FRED WEHRAN DRIVE
BOROUGH OF TETERBORO
BERGEN COUNTY, NEW JERSEY

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J.A. HOLZAPFEL
PROFESSIONAL ENGINEER
NEW JERSEY LICENSE No. 73500

SHEET TITLE:

PERVIOUS PAVEMENT PLAN

SHEET NUMBER:

1 OF 1

ORG. DATE - 07/09/2026

P:\NJ\2024\NJC240059.00\CAD\DRAWINGS\PLAN SETS\STORMWATER MANAGEMENT SITE DEVELOPMENT PLANS\P-SWSD-GDUL-NJC240059.00-0A---LAYOUT C-201 UTIL

Summary for Pond 1P: PP-3A

Inflow Area = 0.615 ac,100.00% Impervious, Inflow Depth = 3.74" for 2-Year- Future event
Inflow = 2.55 cfs @ 12.05 hrs, Volume= 0.191 af
Outflow = 1.75 cfs @ 12.11 hrs, Volume= 0.191 af, Atten= 31%, Lag= 3.4 min
Primary = 1.75 cfs @ 12.11 hrs, Volume= 0.191 af
Routed to Link 3L : POA

Routing by Stor-Ind method, Time Span= 0.00-100.00 hrs, dt= 0.05 hrs
Peak Elev= 6.13' @ 12.11 hrs Surf.Area= 6,915 sf Storage= 349 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 0.9 min (749.5 - 748.6)

Volume	Invert	Avail.Storage	Storage Description
#1	6.00'	4,232 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 10,580 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
6.00	6,915	0	0
7.53	6,915	10,580	10,580

Device	Routing	Invert	Outlet Devices
#1	Primary	5.43'	**12.0" Round Culvert** L= 100.0' Ke= 0.200 Inlet / Outlet Invert= 5.43' / 4.43' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.74 cfs @ 12.11 hrs HW=6.12' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 1.74 cfs @ 4.22 fps)

Summary for Pond 5P: PP-4A

Inflow Area = 0.355 ac,100.00% Impervious, Inflow Depth = 3.74" for 2-Year- Future event
Inflow = 1.47 cfs @ 12.05 hrs, Volume= 0.110 af
Outflow = 0.91 cfs @ 12.12 hrs, Volume= 0.110 af, Atten= 38%, Lag= 4.0 min
Primary = 0.91 cfs @ 12.12 hrs, Volume= 0.110 af
Routed to Link 6L : POA

Routing by Stor-Ind method, Time Span= 0.00-100.00 hrs, dt= 0.05 hrs
Peak Elev= 6.25' @ 12.12 hrs Surf.Area= 4,210 sf Storage= 700 cf

Plug-Flow detention time= 13.0 min calculated for 0.110 af (100% of inflow)
Center-of-Mass det. time= 13.0 min (761.6 - 748.6)

Volume	Invert	Avail.Storage	Storage Description
#1	5.83'	2,526 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 6,315 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
5.83	4,210	0	0
7.33	4,210	6,315	6,315

Device	Routing	Invert	Outlet Devices
#1	Primary	5.73'	**12.0" Round Culvert** L= 20.0' Ke= 0.200 Inlet / Outlet Invert= 5.73' / 5.53' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=0.89 cfs @ 12.12 hrs HW=6.24' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 0.89 cfs @ 3.24 fps)

Summary for Pond 1P: PP-3A

Inflow Area = 0.615 ac,100.00% Impervious, Inflow Depth = 5.92" for 10-Year Future event
Inflow = 3.97 cfs @ 12.05 hrs, Volume= 0.303 af
Outflow = 2.51 cfs @ 12.12 hrs, Volume= 0.303 af, Atten= 37%, Lag= 3.9 min
Primary = 2.51 cfs @ 12.12 hrs, Volume= 0.303 af
Routed to Link 3L : POA

Routing by Stor-Ind method, Time Span= 0.00-100.00 hrs, dt= 0.05 hrs
Peak Elev= 6.31' @ 12.12 hrs Surf.Area= 6,915 sf Storage= 862 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 1.4 min (742.1 - 740.7)

Volume	Invert	Avail.Storage	Storage Description
#1	6.00'	4,232 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 10,580 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
6.00	6,915	0	0
7.53	6,915	10,580	10,580

Device	Routing	Invert	Outlet Devices
#1	Primary	5.43'	**12.0" Round Culvert** L= 100.0' Ke= 0.200 Inlet / Outlet Invert= 5.43' / 4.43' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=2.47 cfs @ 12.12 hrs HW=6.30' (Free Discharge)
↑**1=Culvert** (Barrel Controls 2.47 cfs @ 4.55 fps)

Summary for Pond 5P: PP-4A

Inflow Area = 0.355 ac,100.00% Impervious, Inflow Depth = 5.92" for 10-Year Future event
Inflow = 2.29 cfs @ 12.05 hrs, Volume= 0.175 af
Outflow = 1.52 cfs @ 12.11 hrs, Volume= 0.175 af, Atten= 34%, Lag= 3.7 min
Primary = 1.52 cfs @ 12.11 hrs, Volume= 0.175 af
Routed to Link 6L : POA

Routing by Stor-Ind method, Time Span= 0.00-100.00 hrs, dt= 0.05 hrs
Peak Elev= 6.43' @ 12.11 hrs Surf.Area= 4,210 sf Storage= 1,006 cf

Plug-Flow detention time= 13.2 min calculated for 0.175 af (100% of inflow)
Center-of-Mass det. time= 13.1 min (753.8 - 740.7)

Volume	Invert	Avail.Storage	Storage Description
#1	5.83'	2,526 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 6,315 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
5.83	4,210	0	0
7.33	4,210	6,315	6,315

Device	Routing	Invert	Outlet Devices
#1	Primary	5.73'	**12.0" Round Culvert** L= 20.0' Ke= 0.200 Inlet / Outlet Invert= 5.73' / 5.53' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.49 cfs @ 12.11 hrs HW=6.42' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 1.49 cfs @ 3.64 fps)

Summary for Pond 1P: PP-3A

Inflow Area = 0.615 ac,100.00% Impervious, Inflow Depth = 11.10" for 100-Year Future event
Inflow = 7.33 cfs @ 12.05 hrs, Volume= 0.568 af
Outflow = 3.62 cfs @ 12.25 hrs, Volume= 0.568 af, Atten= 51%, Lag= 11.9 min
Primary = 3.62 cfs @ 12.25 hrs, Volume= 0.568 af
Routed to Link 3L : POA

Routing by Stor-Ind method, Time Span= 0.00-100.00 hrs, dt= 0.05 hrs
Peak Elev= 6.86' @ 12.14 hrs Surf.Area= 6,915 sf Storage= 2,375 cf

Plug-Flow detention time= 2.7 min calculated for 0.568 af (100% of inflow)
Center-of-Mass det. time= 2.7 min (735.6 - 732.8)

Volume	Invert	Avail.Storage	Storage Description
#1	6.00'	4,232 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 10,580 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
6.00	6,915	0	0
7.53	6,915	10,580	10,580

Device	Routing	Invert	Outlet Devices
#1	Primary	5.43'	**12.0" Round Culvert** L= 100.0' Ke= 0.200 Inlet / Outlet Invert= 5.43' / 4.43' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=3.62 cfs @ 12.25 hrs HW=6.68' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 3.62 cfs @ 4.73 fps)

Summary for Pond 5P: PP-4A

Inflow Area = 0.355 ac,100.00% Impervious, Inflow Depth = 11.10" for 100-Year Future event
Inflow = 4.23 cfs @ 12.05 hrs, Volume= 0.328 af
Outflow = 2.90 cfs @ 12.11 hrs, Volume= 0.328 af, Atten= 31%, Lag= 3.5 min
Primary = 2.90 cfs @ 12.11 hrs, Volume= 0.328 af
Routed to Link 6L : POA

Routing by Stor-Ind method, Time Span= 0.00-100.00 hrs, dt= 0.05 hrs
Peak Elev= 6.81' @ 12.11 hrs Surf.Area= 4,210 sf Storage= 1,656 cf

Plug-Flow detention time= 13.6 min calculated for 0.328 af (100% of inflow)
Center-of-Mass det. time= 13.5 min (746.4 - 732.8)

Volume	Invert	Avail.Storage	Storage Description
#1	5.83'	2,526 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc) 6,315 cf Overall x 40.0% Voids

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
5.83	4,210	0	0
7.33	4,210	6,315	6,315

Device	Routing	Invert	Outlet Devices
#1	Primary	5.73'	**12.0" Round Culvert** L= 20.0' Ke= 0.200 Inlet / Outlet Invert= 5.73' / 5.53' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=2.86 cfs @ 12.11 hrs HW=6.80' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 2.86 cfs @ 4.23 fps)